

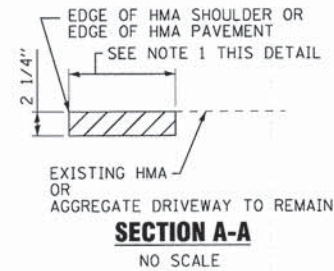
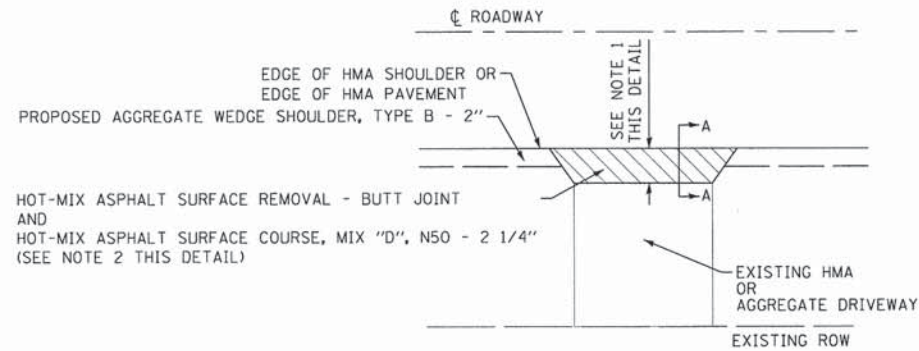


## HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424016-02	MID-BLOCK CURB RAMPS FOR SIDEWALKS
424026-01	ENTRANCE/ALLEY PEDESTRIAN CROSSINGS
442201-03	CLASS C AND D PATCHES
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
542401-01	METAL END SECTION FOR PIPE CULVERTS
542406-01	METAL END SECTIONS FOR PIPE ARCHES
602001-02	CATCH BASIN TYPE A
602306-03	INLET TYPE B
602601-03	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-04	FRAME AND LIDS TYPE 1
604036-03	GRATE, TYPE B
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS
B.L.R. 24-2	MAILBOX TURNOUT FOR LOCAL ROADS

## INDEX OF SHEETS

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2	INDEX OF SHEETS, HIGHWAY STANDARDS, BENCHMARKS AND DETAILS
3	GENERAL NOTES
4 - 6	SUMMARY OF QUANTITIES
7 - 9	TYPICAL SECTIONS AND HOT-MIX ASPHALT MIXTURE REQUIREMENTS
10	ROADWAY PLAN - INTERSECTION ALGONQUIN ROAD, PLUM TREE ROAD AND OLD HUNT ROAD
11	ROADWAY PLAN - ALGONQUIN ROAD
12	ROADWAY PLAN - ALGONQUIN ROAD
13	ROADWAY PLAN - PLUM TREE ROAD
14 - 15	ROADWAY PLAN AND PROFILE - DOYLE ROAD
16	DISTRICT 1 DETAIL - BD-01 DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W. AND FACE OF CURB AND EDGE OF SHOULDER $\geq$ 15' (4.5m)
17	DISTRICT 1 DETAIL - BD-08 FRAMES AND LIDS ADJUSTMENT WITH MILLING; AND FRAMES AND LIDS ADJUSTMENT WITHOUT FILLING
18	DISTRICT 1 DETAIL - BD-22 PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
19	DISTRICT 1 DETAIL - BD-24 CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
20	DISTRICT 1 DETAIL - BD-32 BUTT JOINTS AND HMA TAPER
21	DISTRICT 1 DETAIL - TC-10 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
22	DISTRICT 1 DETAIL - TC-13 TYPICAL PAVEMENT MARKINGS
23	DISTRICT 1 DETAIL - TC-16 PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
24	DISTRICT 1 DETAIL - TC-22 ARTERIAL ROAD INFORMATION SIGN
25	DISTRICT 1 DETAIL - TC-23 TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS
26	DISTRICT 1 DETAIL - TS-05 STANDARD TRAFFIC SIGNAL DESIGN DETAILS
27	DISTRICT 1 DETAIL - TS-07 DETECTOR LOOP INSTALLATION DETAIL FOR ROADWAY RESURFACING
28	CROSS SECTIONS - DOYLE ROAD



- NOTES:
- 3' MIN WHEN MATCHING EXISTING HMA DRIVEWAY UNLESS OTHERWISE DIMENSIONED  
3' MIN WHEN MATCHING EXISTING AGGREGATE DRIVEWAY UNLESS OTHERWISE DIMENSIONED
  - FOR COMMERCIAL DRIVEWAYS ON DOYLE ROAD SEE PLAN SHEETS

### HMA DRIVEWAY DETAIL

NO SCALE

## BENCHMARKS

BM#1	NORTHEAST TAG BOLT OF FIRE HYDRANT LOCATED APPROX 107 FEET SOUTHEAST OF THE SOUTHWEST CORNER OF IL ROUTE 22 (HALF DAY ROAD) AND DOYLE ROAD (EAST SIDE OF DOYLE ROAD) EL = 763.28
BM#2	MINI RAILROAD SPIKE IN WEST FACE OF UTILITY POLE LOCATED APPROX 107 FEET SOUTHEAST OF THE SOUTHWEST CORNER OF IL ROUTE 22 (HALF DAY ROAD) AND DOYLE ROAD (EAST SIDE OF DOYLE ROAD) EL = 764.17

NOTE: DATUM USED FOR THESE BENCHMARKS IS NAVD 88

- 3878 (ALGONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

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**BAXTER & WOODMAN**  
Consulting Engineers

DESIGNED - JDW	REVISED -
DRAWN - KAR	REVISED -
CHECKED - MWP	REVISED -
DATE - 1-29-15	FILE - 140536SHT-Index.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS,  
BENCHMARKS AND DETAILS

SCALE: NONE

STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	14-00025-00-RS	McHENRY	28	2
				CONTRACT NO. 61B36
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT M-4003(482)				



**SUMMARY OF QUANTITIES**

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
				RESURFACING 0005 STU
20200100	EARTH EXCAVATION	CU YD	40	40
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	162	162
20400800	FURNISHED EXCAVATION	CU YD	152	152
20800150	TRENCH BACKFILL	CU YD	97	97
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	415	415
21301048	EXPLORATION TRENCH 48" DEPTH	FOOT	10	10
21400100	GRADING AND SHAPING DITCHES	FOOT	310	310
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	8	8
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	8	8
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	8	8
25200110	SODDING, SALT TOLERANT	SQ YD	415	415
25200200	SUPPLEMENTAL WATERING	UNIT	7	7
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	9	9
28000305	TEMPORARY DITCH CHECKS	FOOT	110	110
28000510	INLET FILTERS	EACH	6	6

\* SPECIALTY ITEM  
# INDICATES SPECIAL PROVISION AND/OR GENERAL NOTE AND/OR DETAIL

**SUMMARY OF QUANTITIES**

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
				RESURFACING 0005 STU
# 30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	77	77
35101400	AGGREGATE BASE COURSE, TYPE B	TON	333	333
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	459	459
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	69	69
35102400	AGGREGATE BASE COURSE, TYPE B 12"	SQ YD	369	369
# 35800100	PREPARATION OF BASE	SQ YD	4,100	4,100
# 40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	18,884	18,884
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	8	8
# 40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	746	746
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	738	738
# 40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	738	738
# 40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1,711	1,711
42001300	PROTECTIVE COAT	SQ YD	599	599
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	210	210
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1,685	1,685

\* SPECIALTY ITEM  
# INDICATES SPECIAL PROVISION AND/OR GENERAL NOTE AND/OR DETAIL

3878 (ALGONQUIN ROAD)  
3879 (PLUM TREE ROAD)  
0014 (DOYLE ROAD)

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CHECKED - MWP	REVISED -
DATE - 1-29-15	FILE - 140536SHT-S00.dgn

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: NONE

STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	4
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT M-40034821			CONTRACT NO. 61B36	

**SUMMARY OF QUANTITIES**

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
				RESURFACING 0005 STU
42400410	PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH	SQ FT	1,104	1,104
# 42400800	DETECTABLE WARNINGS	SQ FT	92	92
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SQ YD	3,250	3,250
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	9,690	9,690
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	395	395
44000600	SIDEWALK REMOVAL	SQ FT	435	435
44201705	CLASS D PATCHES, TYPE II, 5 INCH	SQ YD	36	36
44201709	CLASS D PATCHES, TYPE III, 5 INCH	SQ YD	108	108
44201711	CLASS D PATCHES, TYPE IV, 5 INCH	SQ YD	60	60
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	72	72
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SQ YD	216	216
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	150	150
44201796	CLASS D PATCHES, TYPE IV, 12 INCH	SQ YD	35	35
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	108	108
50105220	PIPE CULVERT REMOVAL	FOOT	242	242

\* SPECIALTY ITEM  
# INDICATES SPECIAL PROVISION AND/OR GENERAL NOTE AND/OR DETAIL

**SUMMARY OF QUANTITIES**

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
				RESURFACING 0005 STU
542D1057	PIPE CULVERTS, CLASS D, TYPE 2 12"	FOOT	30	30
542D8203	PIPE CULVERTS, CLASS D, TYPE 2 EQUIVALENT ROUND-SIZE 18"	FOOT	82	82
54215547	METAL END SECTIONS 12"	EACH	1	1
54215763	METAL END SECTIONS, EQUIVALENT ROUND-SIZE 18"	EACH	2	2
550A2320	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 12"	FOOT	12	12
550A2340	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1 18"	FOOT	307	307
60240395	INLETS, TYPE B	EACH	3	3
# 60255500	MANHOLES TO BE ADJUSTED	EACH	2	2
60402210	GRATES, TYPE 8	EACH	3	3
67100100	MOBILIZATION	L SUM	1	1
# 70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1
# 70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1
# 70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	7,180	7,180
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	404	404

\* SPECIALTY ITEM  
# INDICATES SPECIAL PROVISION AND/OR GENERAL NOTE AND/OR DETAIL

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3879 (PLUM TREE ROAD)  
0014 (DOYLE ROAD)

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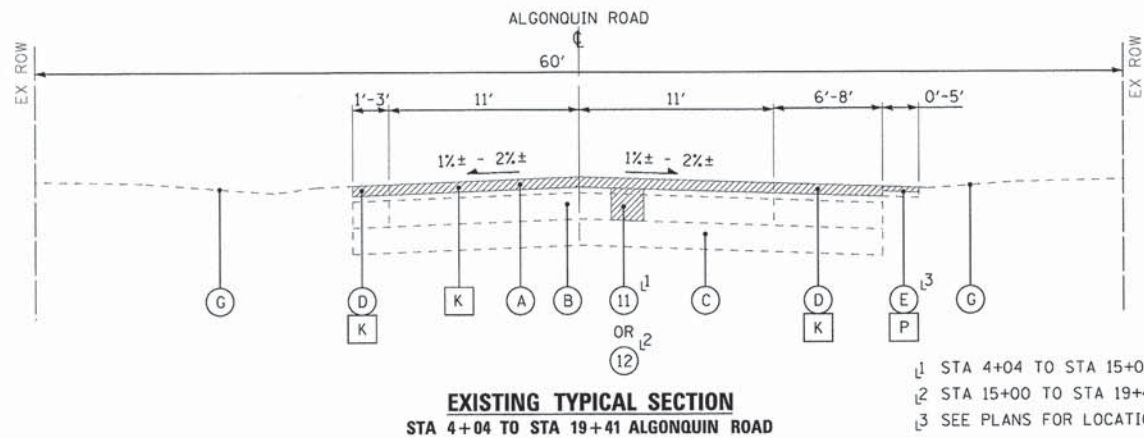
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUMMARY OF QUANTITIES**

SCALE: NONE STA. TO STA.

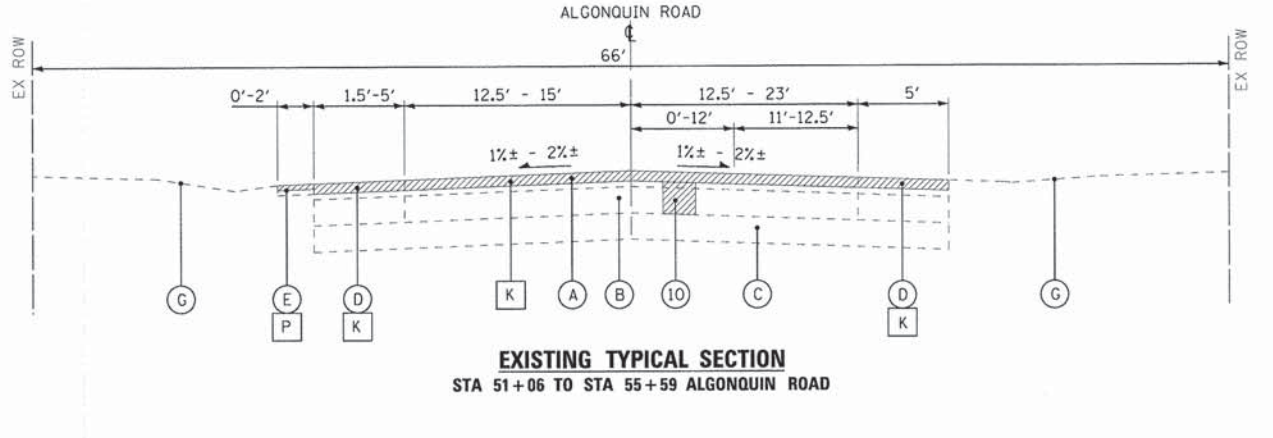
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003492			CONTRACT NO. 61B36	



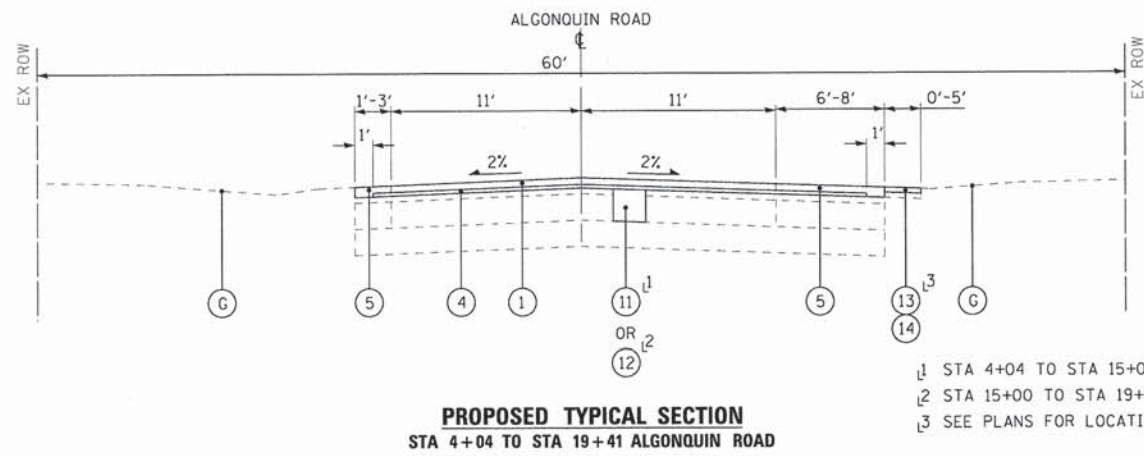


**EXISTING TYPICAL SECTION**  
STA 4+04 TO STA 19+41 ALGONQUIN ROAD

- 1 STA 4+04 TO STA 15+00
- 2 STA 15+00 TO STA 19+41
- 3 SEE PLANS FOR LOCATIONS

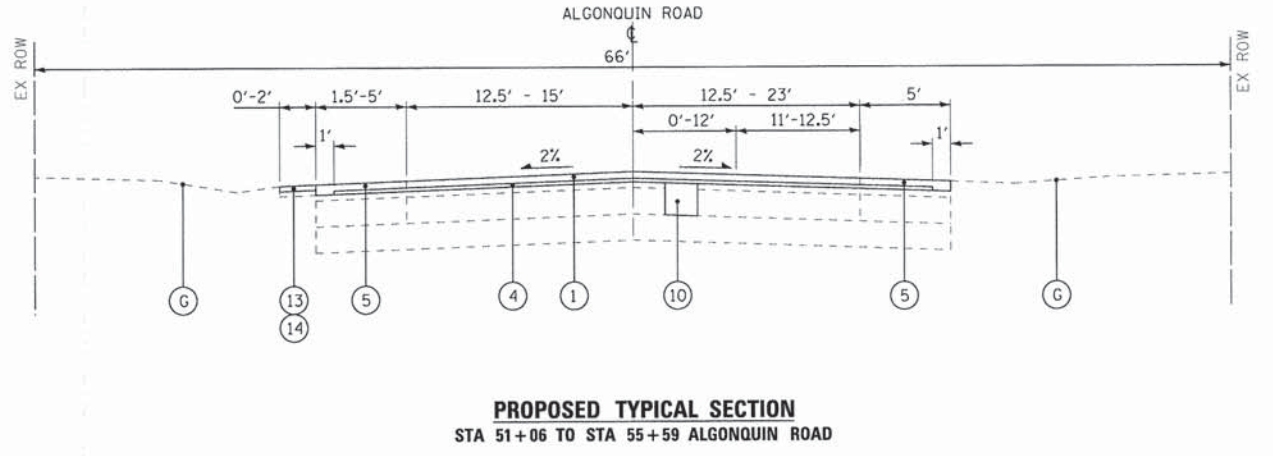


**EXISTING TYPICAL SECTION**  
STA 51+06 TO STA 55+59 ALGONQUIN ROAD



**PROPOSED TYPICAL SECTION**  
STA 4+04 TO STA 19+41 ALGONQUIN ROAD

- 1 STA 4+04 TO STA 15+00
- 2 STA 15+00 TO STA 19+41
- 3 SEE PLANS FOR LOCATIONS



**PROPOSED TYPICAL SECTION**  
STA 51+06 TO STA 55+59 ALGONQUIN ROAD

**EXISTING LEGEND**

- (A) EXISTING HOT-MIX ASPHALT PAVEMENT
- (B) EXISTING AGGREGATE BASE COURSE
- (C) EXISTING SUB-GRADE
- (D) EXISTING HOT-MIX ASPHALT SHOULDER
- (E) EXISTING AGGREGATE SHOULDER
- (F) EXISTING CURB AND GUTTER
- (G) EXISTING GROUND SURFACE
- (H) HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL
- (J) HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"
- (K) HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"
- (L) BASE COURSE REMOVAL (SPECIAL)
- (M) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (UNDERCUT)\*\*
- (N) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (TOPSOIL)
- (P) AGGREGATE SHOULDER REMOVAL, 2" MIN EXACT THICKNESS VARIES (MATCH HOT-MIX ASPHALT SURFACE REMOVAL UNLESS OTHERWISE NOTED) (NOT MEASURED FOR PAYMENT AND NOT PAID FOR SEPARATELY)
- (Q) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- (R) EXISTING SIDEWALK
- (S) EARTH EXCAVATION
- (Hatched) ITEM TO BE REMOVED

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"
- (2) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 2"
- (3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 - 3"
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4"
- (5) HOT-MIX ASPHALT SHOULDERS (PAID FOR AS (1) AND (4) OR (2) AND (3))
- (6) PREPARATION OF BASE
- (7) AGGREGATE BASE COURSE, TYPE B
- (8) AGGREGATE BASE COURSE, TYPE B 12"
- (9) AGGREGATE SUB-GRADE IMPROVEMENT\*\*
- (10) CLASS D PATCHES, 5-INCH
- (11) CLASS D PATCHES, 10-INCH
- (12) CLASS D PATCHES, 12-INCH
- (13) AGGREGATE WEDGE SHOULDER, TYPE B
- (14) GRADING AND SHAPING SHOULDERS
- (15) TOPSOIL FURNISH AND PLACE, 4"
- (16) SODDING, SALT TOLERANT
- (17) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH IN COMMERCIAL DRIVEWAYS)
- (18) AGGREGATE BASE COURSE, TYPE B 4" (AGGREGATE BASE COURSE, TYPE B 6" IN COMMERCIAL DRIVEWAYS)
- (19) FURNISHED EXCAVATION

\*\* AGGREGATE SUBGRADE IMPROVEMENT (ASI) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.

**HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

CONTRACTOR WILL MILL FIRST

MIXTURE TYPE	AIR VOIDS @ Ndes
<b>RESURFACING - ALGONQUIN ROAD AND PLUM TREE ROAD</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL 9.5mm); 1-1/2"	4% @ 50 Gyr.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50; 3/4"	3.5% @ 50 Gyr.
<b>RESURFACING - DOYLE ROAD</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50; (IL 9.5mm); 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 3"	4% @ 50 Gyr.
<b>DRIVEWAYS (COMMERCIAL) DOYLE ROAD</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50; (IL 9.5mm); 2"	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 3"	4% @ 50 Gyr.
<b>DRIVEWAYS (RESURFACING)</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, (IL 9.5mm); 1-1/2"	4% @ 50 Gyr.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50; 3/4"	3.5% @ 50 Gyr.
<b>PATCHING</b>	
CLASS D PATCHES (HMA BINDER, IL-19 mm, N50); 5", 10", 12"	4% @ 70 Gyr.

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.  
THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.  
FOR HMA FULL DEPTH "AC TYPE" SEE SPECIAL PROVISIONS.  
FOR "PERCENT OF RAP" SEE SPECIAL PROVISIONS.

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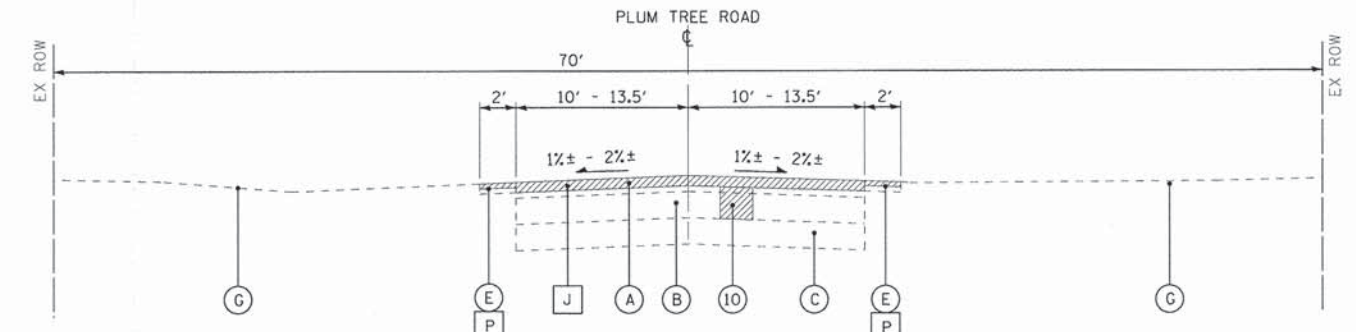
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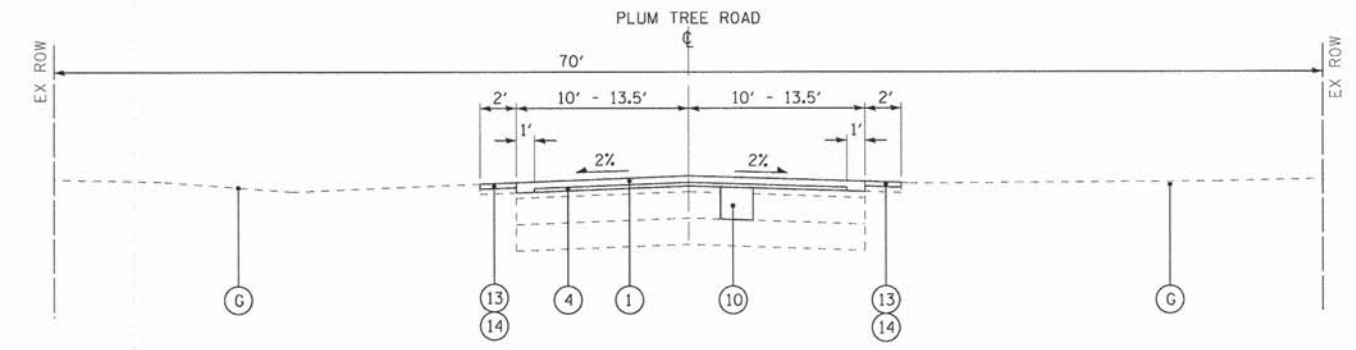
**TYPICAL SECTIONS AND HOT-MIX ASPHALT MIXTURE REQUIREMENTS**

SCALE: NONE STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-R5	McHENRY	28	7
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT M-4003(482)			CONTRACT NO. 61B36	



**EXISTING TYPICAL SECTION**  
STA 20+55 TO STA 33+67 PLUM TREE ROAD



**PROPOSED TYPICAL SECTION**  
STA 20+55 TO STA 33+67 PLUM TREE ROAD

**EXISTING LEGEND**

- (A) EXISTING HOT-MIX ASPHALT PAVEMENT
- (B) EXISTING AGGREGATE BASE COURSE
- (C) EXISTING SUB-GRADE
- (D) EXISTING HOT-MIX ASPHALT SHOULDER
- (E) EXISTING AGGREGATE SHOULDER
- (F) EXISTING CURB AND GUTTER
- (G) EXISTING GROUND SURFACE
- (H) HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL
- (J) HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"
- (K) HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"
- (L) BASE COURSE REMOVAL (SPECIAL)
- (M) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (UNDERCUT)\*\*
- (N) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (TOPSOIL)
- (P) AGGREGATE SHOULDER REMOVAL, 2" MIN EXACT THICKNESS VARIES (MATCH HOT-MIX ASPHALT SURFACE REMOVAL UNLESS OTHERWISE NOTED) (NOT MEASURED FOR PAYMENT AND NOT PAID FOR SEPARATELY)
- (Q) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- (R) EXISTING SIDEWALK
- (S) EARTH EXCAVATION
- [Hatched Box] ITEM TO BE REMOVED

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"
- (2) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 2"
- (3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 - 3"
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4"
- (5) HOT-MIX ASPHALT SHOULDERS (PAID FOR AS (1) AND (4) OR (2) AND (3))
- (6) PREPARATION OF BASE
- (7) AGGREGATE BASE COURSE, TYPE B
- (8) AGGREGATE BASE COURSE, TYPE B 12"
- (9) AGGREGATE SUB-GRADE IMPROVEMENT\*\*
- (10) CLASS D PATCHES, 5-INCH
- (11) CLASS D PATCHES, 10-INCH
- (12) CLASS D PATCHES, 12-INCH
- (13) AGGREGATE WEDGE SHOULDER, TYPE B
- (14) GRADING AND SHAPING SHOULDERS
- (15) TOPSOIL FURNISH AND PLACE, 4"
- (16) SODDING, SALT TOLERANT
- (17) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH IN COMMERCIAL DRIVEWAYS)
- (18) AGGREGATE BASE COURSE, TYPE B 4" (AGGREGATE BASE COURSE, TYPE B 6" IN COMMERCIAL DRIVEWAYS)
- (19) FURNISHED EXCAVATION

\*\* AGGREGATE SUBGRADE IMPROVEMENT (ASI) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.

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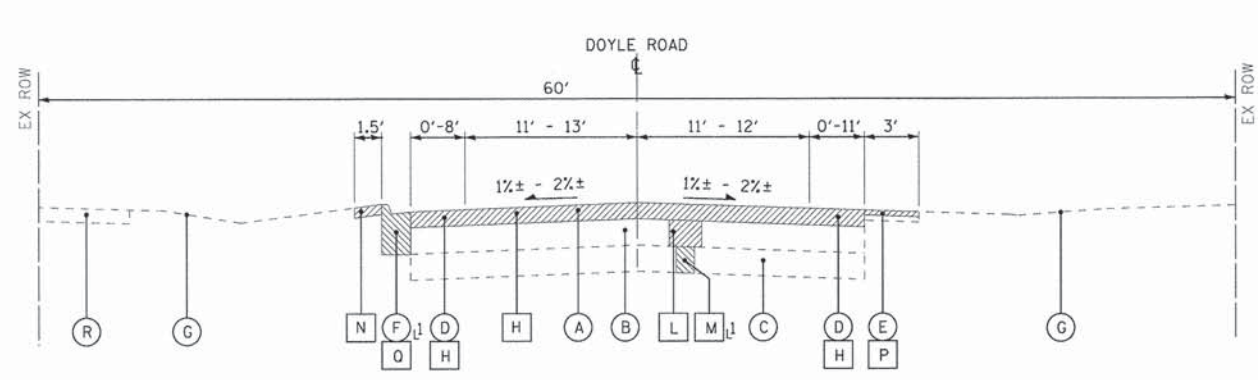
<b>BAXTER &amp; WOODMAN</b> Consulting Engineers	DESIGNED - JDW	REVISED -
	DRAWN - KAR	REVISED -
	CHECKED - MWP	REVISED -
	DATE - 1-29-15	FILE - 140536SHT-TypSec.dgn

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<b>TYPICAL SECTIONS</b>	
SCALE: NONE	STA. TO STA.

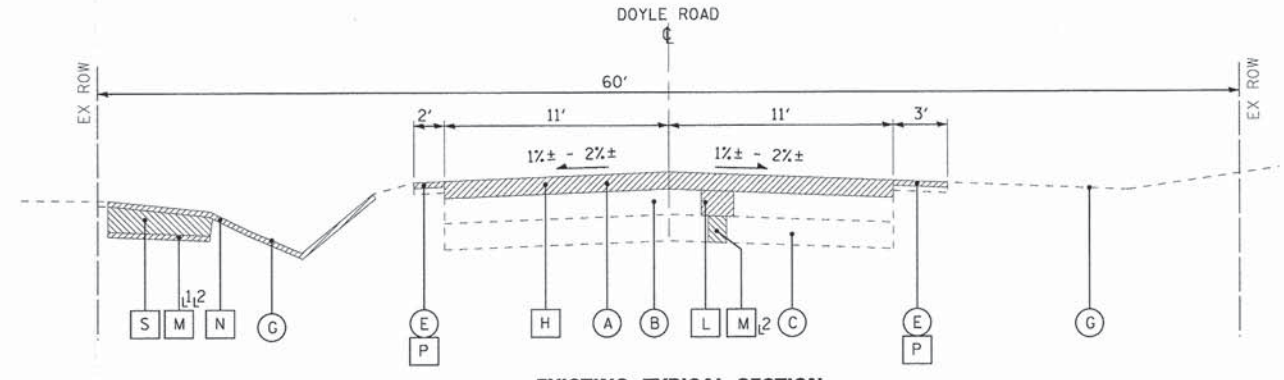
* 3878 (ALGONQUIN ROAD) 3879 (PLUM TREE ROAD) 0014 (DOYLE ROAD)		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-R5	McHENRY	28	8	CONTRACT NO. 61B36	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT M-4003(482)						





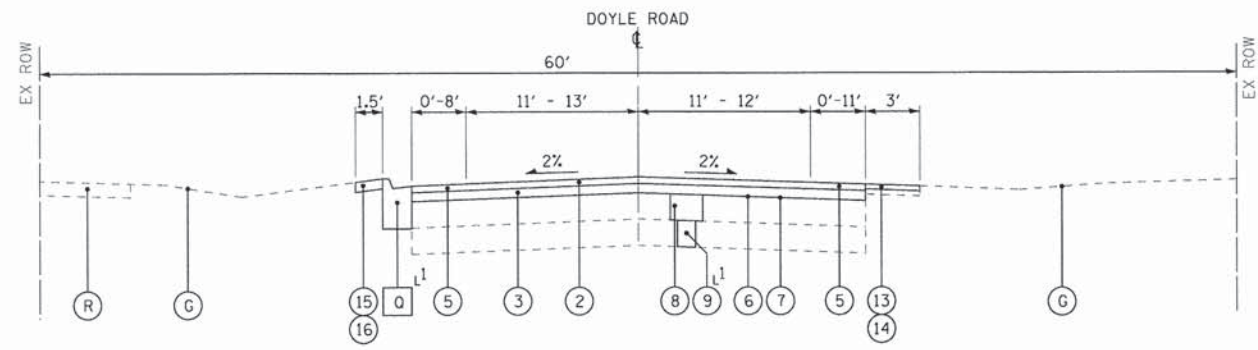
**EXISTING TYPICAL SECTION**  
 STA 3+09 TO STA 5+96 DOYLE ROAD  
 STA 9+34 TO STA 13+33 DOYLE ROAD

1 AS INDICATED IN PLANS OR AS DETERMINED BY THE ENGINEER



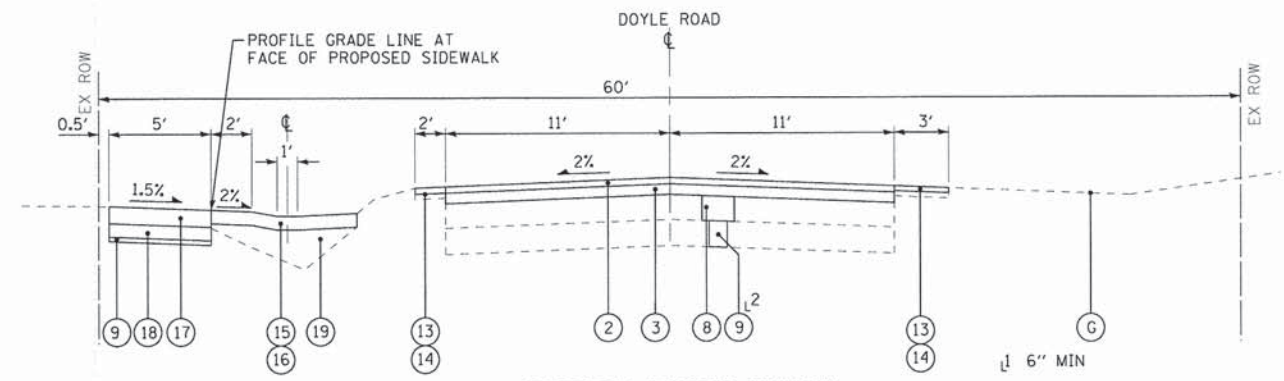
**EXISTING TYPICAL SECTION**  
 STA 5+96 TO STA 9+34 DOYLE ROAD

1 6" MIN  
 2 AS INDICATED IN PLANS OR AS DETERMINED BY THE ENGINEER



**PROPOSED TYPICAL SECTION**  
 STA 3+09 TO STA 5+96 DOYLE ROAD  
 STA 9+34 TO STA 13+33 DOYLE ROAD

1 AS INDICATED IN PLANS OR AS DETERMINED BY THE ENGINEER



**PROPOSED TYPICAL SECTION**  
 STA 5+96 TO STA 9+34 DOYLE ROAD

1 6" MIN  
 2 AS INDICATED IN PLANS OR AS DETERMINED BY THE ENGINEER

**EXISTING LEGEND**

- (A) EXISTING HOT-MIX ASPHALT PAVEMENT
- (B) EXISTING AGGREGATE BASE COURSE
- (C) EXISTING SUB-GRADE
- (D) EXISTING HOT-MIX ASPHALT SHOULDER
- (E) EXISTING AGGREGATE SHOULDER
- (F) EXISTING CURB AND GUTTER
- (G) EXISTING GROUND SURFACE
- (H) HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL
- (J) HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"
- (K) HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"
- (L) BASE COURSE REMOVAL (SPECIAL)
- (M) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (UNDERCUT)\*\*
- (N) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (TOPSOIL)
- (P) AGGREGATE SHOULDER REMOVAL, 2" MIN EXACT THICKNESS VARIES (MATCH HOT-MIX ASPHALT SURFACE REMOVAL UNLESS OTHERWISE NOTED) (NOT MEASURED FOR PAYMENT AND NOT PAID FOR SEPARATELY)
- (Q) COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
- (R) EXISTING SIDEWALK
- (S) EARTH EXCAVATION
- (Hatched) ITEM TO BE REMOVED

**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"
- (2) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 2"
- (3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 - 3"
- (4) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4"
- (5) HOT-MIX ASPHALT SHOULDERS (PAID FOR AS (1) AND (4) OR (2) AND (3))
- (6) PREPARATION OF BASE
- (7) AGGREGATE BASE COURSE, TYPE B
- (8) AGGREGATE BASE COURSE, TYPE B 12"
- (9) AGGREGATE SUB-GRADE IMPROVEMENT\*\*
- (10) CLASS D PATCHES, 5-INCH
- (11) CLASS D PATCHES, 10-INCH
- (12) CLASS D PATCHES, 12-INCH
- (13) AGGREGATE WEDGE SHOULDER, TYPE B
- (14) GRADING AND SHAPING SHOULDERS
- (15) TOPSOIL FURNISH AND PLACE, 4"
- (16) SODDING, SALT TOLERANT
- (17) PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH IN COMMERCIAL DRIVEWAYS)
- (18) AGGREGATE BASE COURSE, TYPE B 4" (AGGREGATE BASE COURSE, TYPE B 6" IN COMMERCIAL DRIVEWAYS)
- (19) FURNISHED EXCAVATION

\*\* AGGREGATE SUBGRADE IMPROVEMENT (ASI) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.

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CHECKED - MWP	REVISED -
DATE - 1-29-15	FILE - 140536SHT-TypSec.dgn

STATE OF ILLINOIS  
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**TYPICAL SECTIONS**

SCALE: NONE

STA. TO STA.

3878 (ALGONQUIN ROAD)  
 3879 (PLUM TREE ROAD)  
 0014 (DOYLE ROAD)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	14-00025-00-RS	McHENRY	28	9
			CONTRACT NO. 61B36	
FED. ROAD DIST. NO.   ILLINOIS FED. AID PROJECT M-40031482				



HOT-MIX ASPHALT SHOULDERS  
 (PAID FOR AS HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"  
 POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4" (AVG))

LINE 4" (DOUBLE YELLOW, 11" C-C)  
 LINE 12" (YELLOW 45° DIAGONAL LINE  
 @ 5' C-C)  
 (TYP)  
 COMBINATION CONCRETE CURB AND  
 GUTTER REMOVAL AND REPLACEMENT  
 END LINE 6" (YELLOW SKIP DASH  
 - 6' SKIP, 2' LINE)

BEGIN LINE 4" (DOUBLE YELLOW, 11" C-C)  
 END LINE 4" (DOUBLE YELLOW, 11" C-C)  
 BEGIN LINE 6" (YELLOW SKIP DASH  
 - 6' SKIP, 2' LINE)  
 BEGIN LINE 4" (WHITE EDGE LINE)

PROJECT LIMITS  
 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

SEE NOTE 2 THIS SHEET  
 LINE 24" (WHITE STOP BAR) (TYP)

BEGIN LINE 4" (WHITE EDGE LINE)

PROJECT LIMITS  
 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT



**ALGONQUIN ROAD**  
 MATCH LINE STA. 6+00 - SEE SHEET NO. 11

**OLD HUNT ROAD**

BEGIN IMPROVEMENTS  
 ALGONQUIN ROAD  
 STA 4+04

BEGIN LINE 4" (DOUBLE YELLOW, 11" C-C)

BEGIN LINE 4" (WHITE EDGE LINE)

FULL-WIDTH MILLING  
 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"  
 POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75,  
 N50 - 3/4" (AVG)

BEGIN LINE 6" (YELLOW SKIP  
 DASH 6' SKIP, 2' LINE)  
 BEGIN LINE 4" (DOUBLE  
 YELLOW, 11" C-C)

CL ALGONQUIN ROAD STA 4+66  
 CL PLUM TREE ROAD STA 19+55  
 CL OLD HUNT ROAD

GRADING AND SHAPING SHOULDERS  
 AGGREGATE WEDGE SHOULDER, TYPE B  
 (TYP)

END LINE 4" (DOUBLE YELLOW, 11" C-C)  
 BEGIN LINE 4" (WHITE EDGE LINE)  
 END LINE 6" (YELLOW SKIP DASH - 6' SKIP, 2' LINE)  
 BEGIN LINE 4" (DOUBLE YELLOW, 11" C-C)  
 EXISTING CURB AND GUTTER TO REMAIN

END IMPROVEMENTS ALGONQUIN ROAD  
 BEGIN IMPROVEMENTS PLUM TREE ROAD STA 20+55  
 FULL-WIDTH MILLING  
 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 - 1 1/2"  
 POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4" (AVG)

- NOTE:
- ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.
  - JURISDICTION LIMITS ARE  
 FOX RIVER GROVE STA 4+04 TO STA 5+12  
 ALGONQUIN TOWNSHIP ROAD DISTRICT STA 5+12 TO STA 6+44

• 3878 (ALGONQUIN ROAD)  
 3879 (PLUM TREE ROAD)  
 0014 (DOYLE ROAD)

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	CHECKED - MWP	REVISED -
	DATE - 1-29-15	FILE - 140536SHT-Plan1.dgn

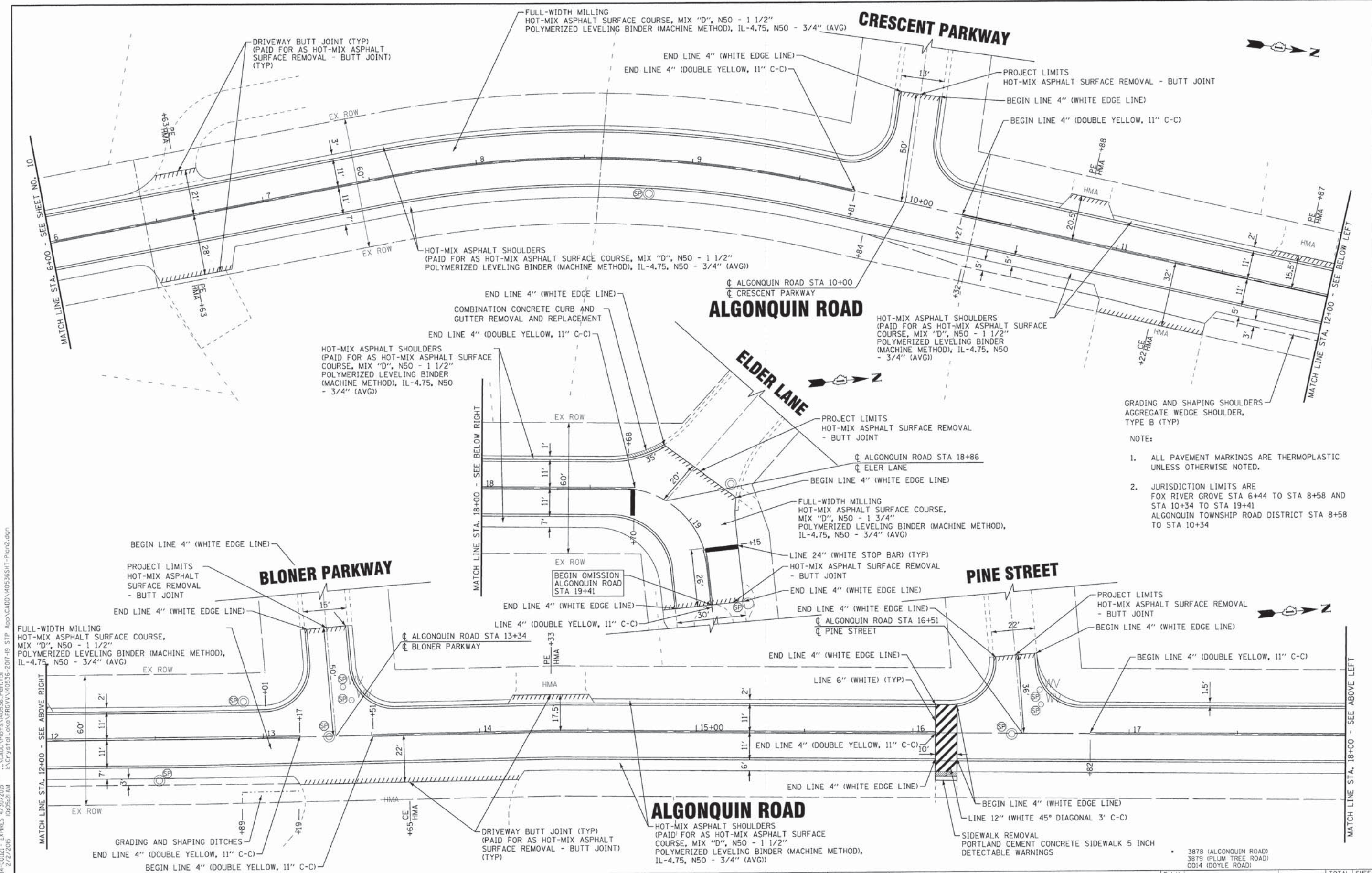
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN - INTERSECTION ALGONQUIN ROAD,  
 PLUM TREE ROAD AND OLD HUNT ROAD

SCALE: 1" = 20'

STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	10
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003482			CONTRACT NO. 61B36	



- NOTE:
1. ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.
  2. JURISDICTION LIMITS ARE FOX RIVER GROVE STA 6+44 TO STA 8+58 AND STA 10+34 TO STA 19+41 ALGONQUIN TOWNSHIP ROAD DISTRICT STA 8+58 TO STA 10+34

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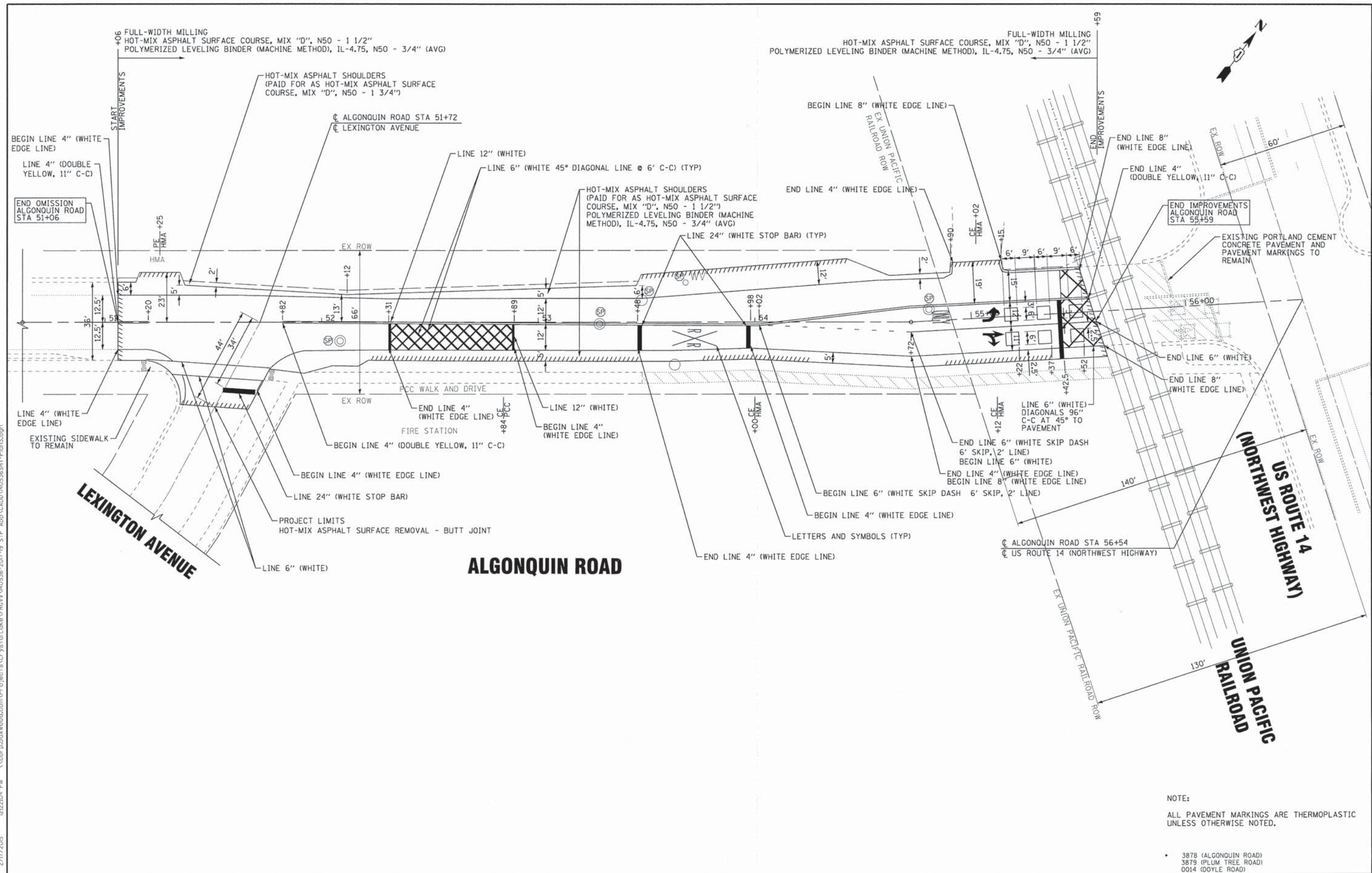
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN - ALGONQUIN ROAD**

SCALE: 1" = 20'  
STA. 6+00 TO STA. 19+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	11
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-4003482			CONTRACT NO. 61B36	



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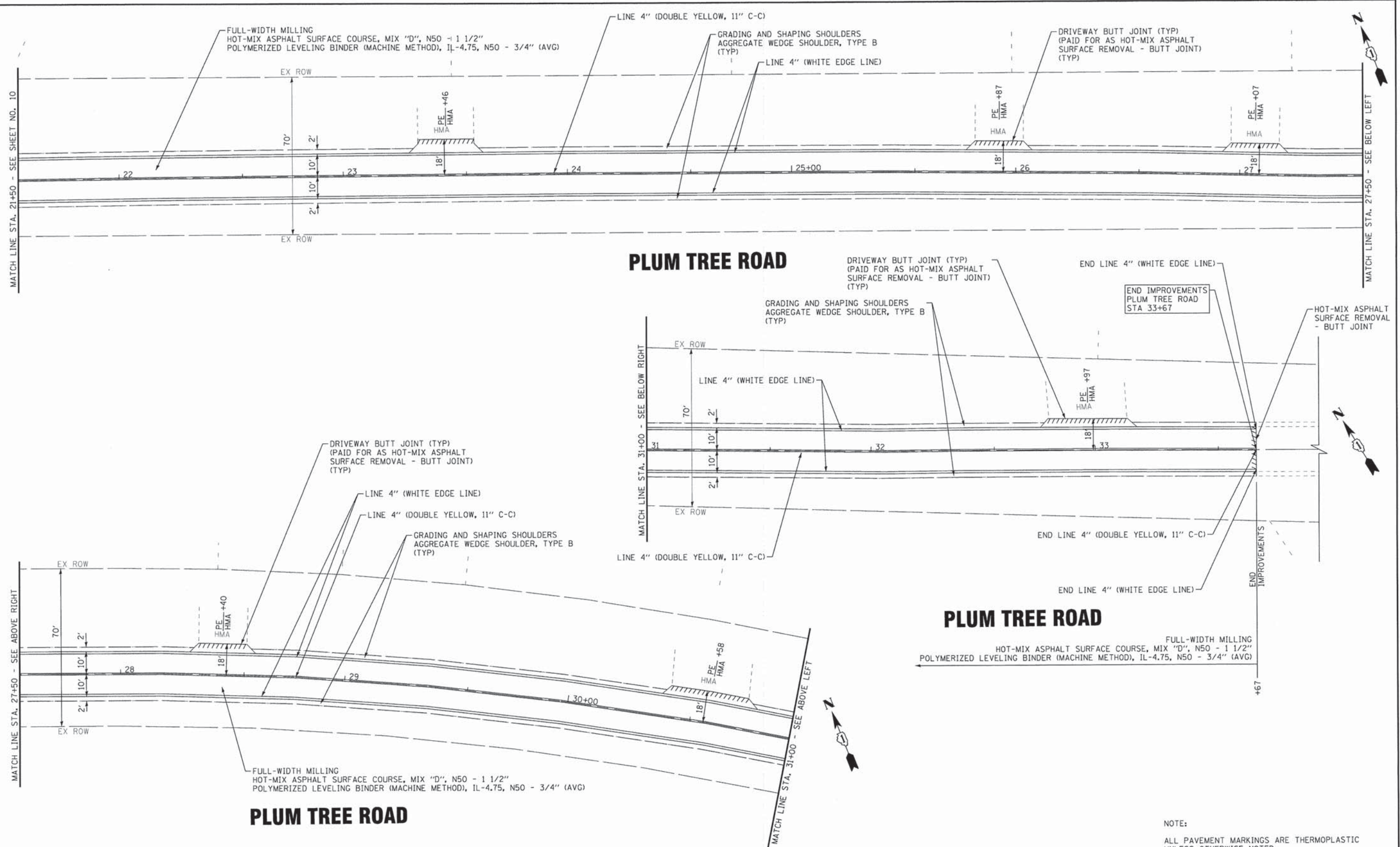
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>ROADWAY PLAN - ALGONQUIN ROAD</b>	
SCALE: 1" = 20'	STA. 51+06 TO STA. 55+59

NOTE:  
ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	14-00025-00-RS	McHENRY	28	12
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT M-400314821			CONTRACT NO. 61B36	



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DATE - 1-29-15	FILE - 140536SHT-Plan4.dgn

STATE OF ILLINOIS  
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ROADWAY PLAN - PLUM TREE ROAD

SCALE: 1" = 20'

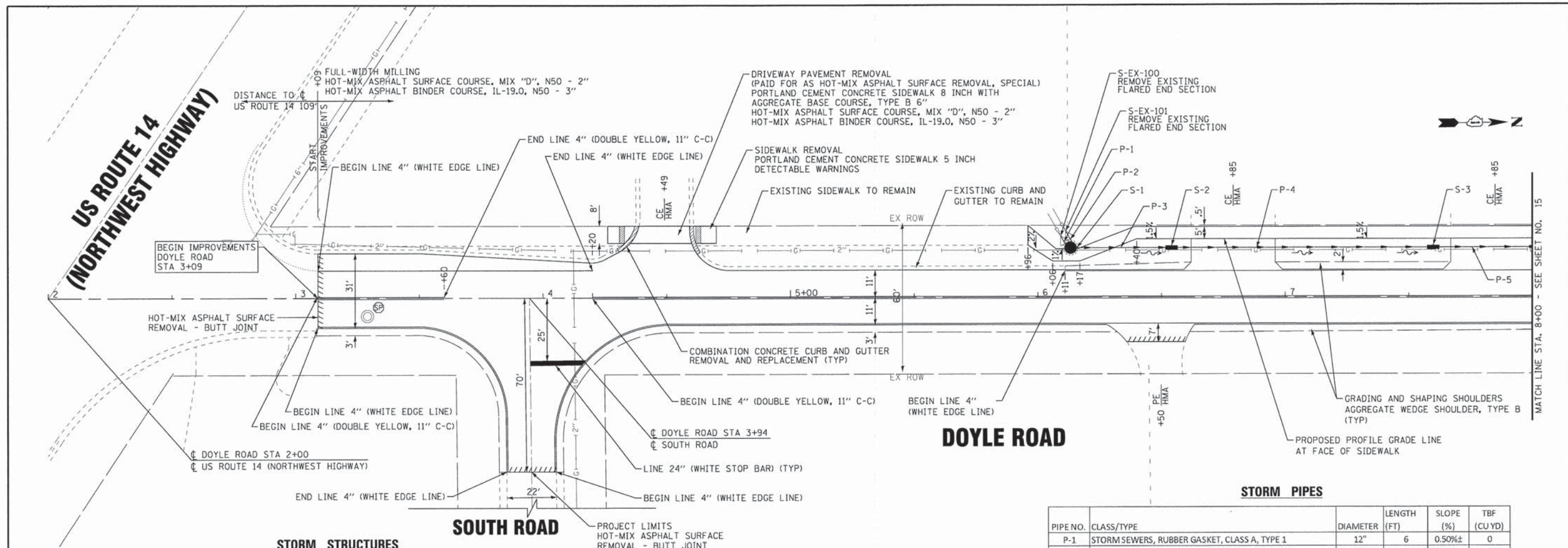
STA. 21+50 TO STA. 33+67

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	13
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT M-40034821	
			CONTRACT NO. 61B36	

NOTE:  
 ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.

- 3878 (ALGONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

**US ROUTE 14  
(NORTHWEST HIGHWAY)**

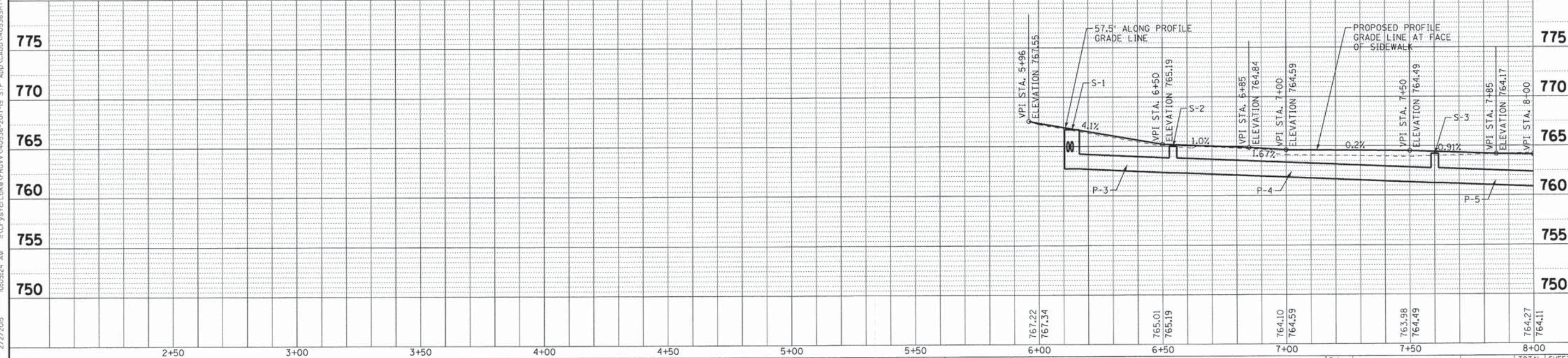


**STORM STRUCTURES**

STRUCTURE NUMBER	STATION	OFFSET	STRUCTURE	FRAME AND LID	RIM	INVERTS	
S-EX-100	6+11	21' LT	FLARED END SECTION	-	-	EX 764.54 12" (SW)	
S-EX-101	6+13	23' LT	FLARED END SECTION	-	-	EX 764.51 12" (SW)	
S-1	6+12	22' LT	CATCH BASINS, SPECIAL (TYPE A 7' DIA)	SPECIAL TYPE 1	766.70±	762.72 18" N	764.48± 12" SW 764.48± 12" SW
S-2	6+54	20' LT	INLET, TYPE B 3' DIA	TYPE 8	765.00±	762.30 18" N,S	
S-3	7+60	20' LT	INLET, TYPE B 3' DIA	TYPE 8	764.20±	761.24 18" N,S	

**STORM PIPES**

PIPE NO.	CLASS/TYPE	DIAMETER	LENGTH (FT)	SLOPE (%)	TBF (CU YD)
P-1	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	12"	6	0.50%±	0
P-2	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	12"	6	0.50%±	0
P-3	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	18"	42	1.00%	8
P-4	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	18"	106	1.00%	15
P-5	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	18"	106	1.00%	15



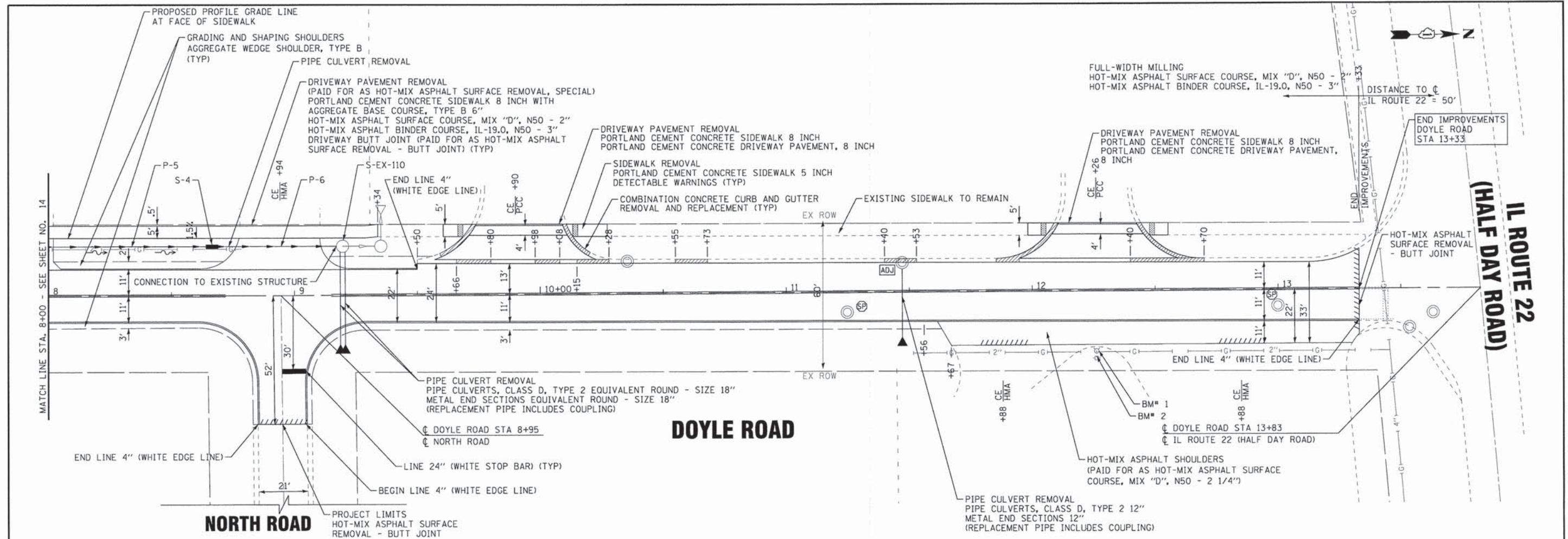
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PLAN AND PROFILE - DOYLE ROAD**

SCALE: H: 1"=20' V: 1"=5'	STA. 2+00 TO STA. 8+00	F.A.U. RTE. 14-0025-00-RS	COUNTY MCHENRY	TOTAL SHEETS 28	SHEET NO. 14
		CONTRACT NO. 61B36		ILLINOIS FED. AID PROJECT M-4003482	

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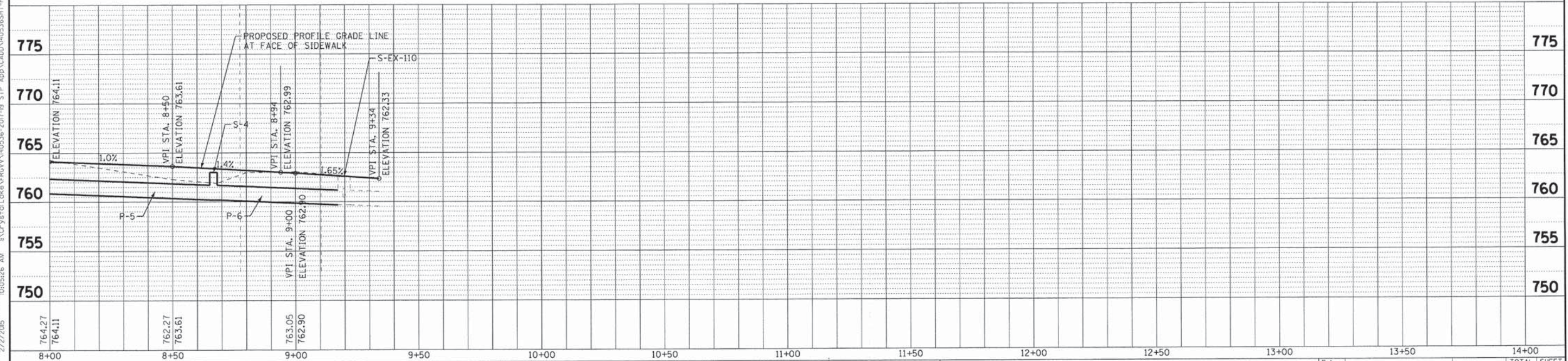
**STORM STRUCTURES**

STRUCTURE NUMBER	STATION	OFFSET	STRUCTURE	FRAME AND LID	RIM	INVERTS	
S-4	8+66	20' LT	INLET, TYPE B 3' DIA	TYPE 8	763.00±	760.18 18" N.S	
S-EX-110	9+19.5	20' LT	CATCH BASIN 5' DIA	TYPE 8	EX 762.56±	EX 759.65± 36" N. 18"E	EX 760.37± 12" S 759.65 18" S

**STORM PIPES**

PIPE NO.	CLASS/TYPE	DIAMETER	LENGTH (FT)	SLOPE (%)	TBF (CU YD)
P-5	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	18"	106	1.00%	15
P-6	STORM SEWERS, RUBBER GASKET, CLASS A, TYPE 1	18"	53	1.00%	14

• 3878 (ALGONQUIN ROAD)  
 3879 (PLUM TREE ROAD)  
 0014 (DOYLE ROAD)



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DRAWN - KAR	REVISED -
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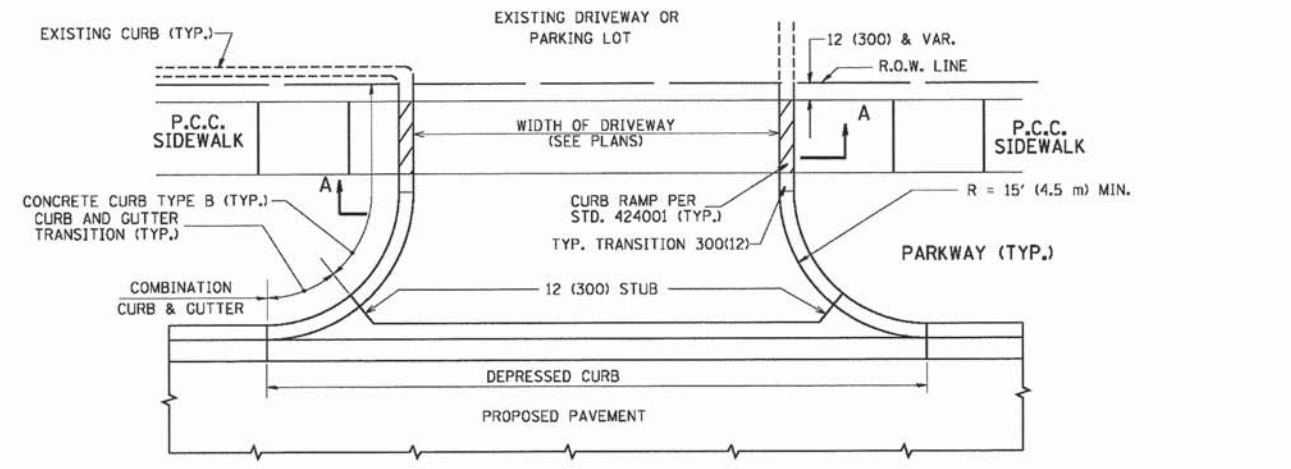
STATE OF ILLINOIS  
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ROADWAY PLAN AND PROFILE - DOYLE ROAD

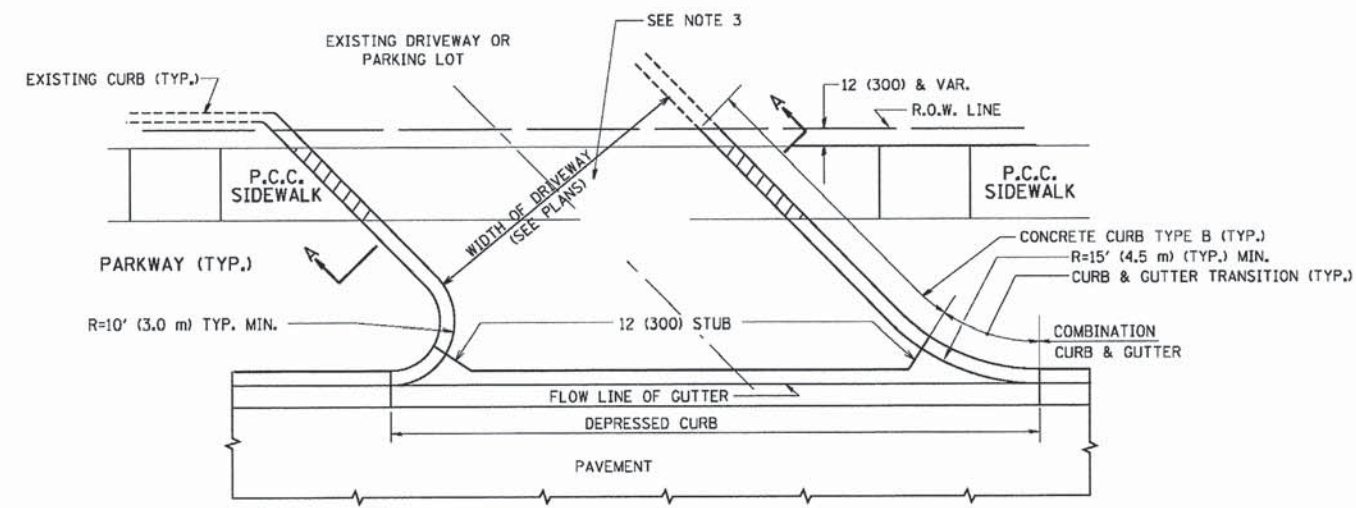
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 STA. 8+00 TO STA. 14+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14-00025-00-RS		MCHEMRY	28	15
CONTRACT NO. 61B36			ILLINOIS FED. AID PROJECT M-40034821	

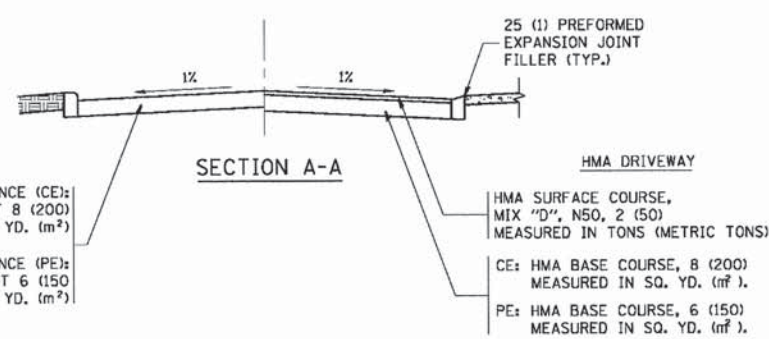
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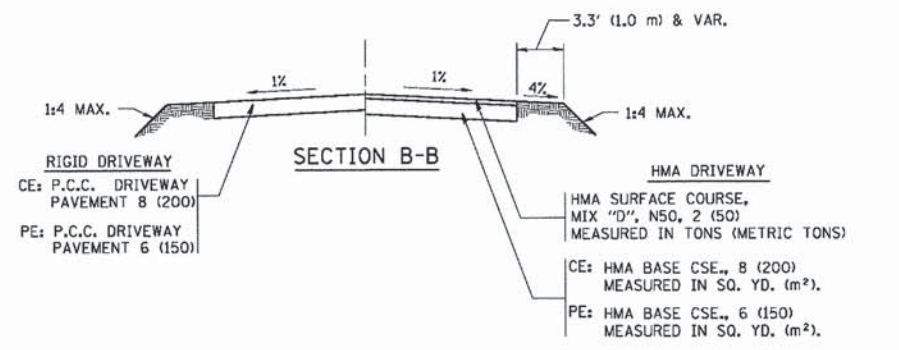
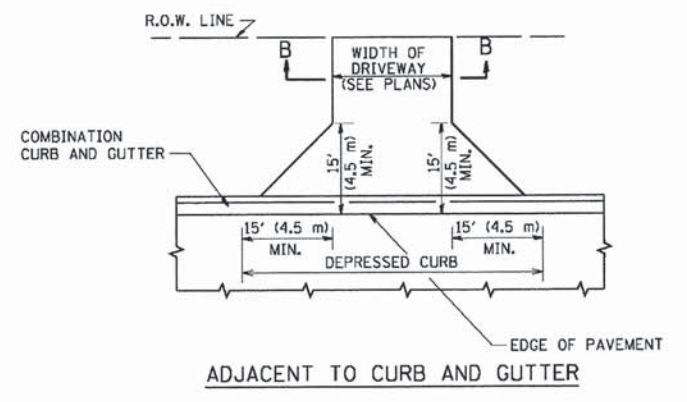
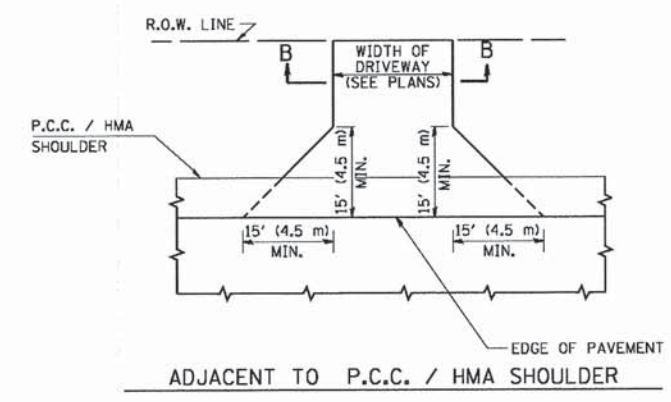
WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



SECTION A-A



RURAL FIELD ENTRANCE (FE)  
HMA SURFACE COURSE,  
MIX 'D', N50, 2 (50)  
MEASURED IN TONS (METRIC TONS)  
AGGREGATE BASE CSE., TYPE B, 8 (200)  
MEASURED IN SQ. YD. (m²).

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 ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT 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.

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.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

3878 (ALGONQUIN ROAD)  
3879 (PLUM TREE ROAD)  
0014 (DOYLE ROAD)

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 LICENSE NO. 184-00027 - EXPIRES 4/30/2015  
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FILE NAME =	USER NAME =	DESIGNED -	REVISED -
oi\p\work\p\dist\l\j\40536\2007-18-STP\40536\CADD\40536-DISTRICT ONE DETAILS - BD.dgn	lujan	R. SHAH	P. LoFLUER 04-15-03
		DRAWN -	REVISED -
			R. BORO 01-01-07
		CHECKED -	REVISED -
			R. BORO 06-11-08
		DATE -	REVISED -
		11-04-95	R. BORO 09-06-11

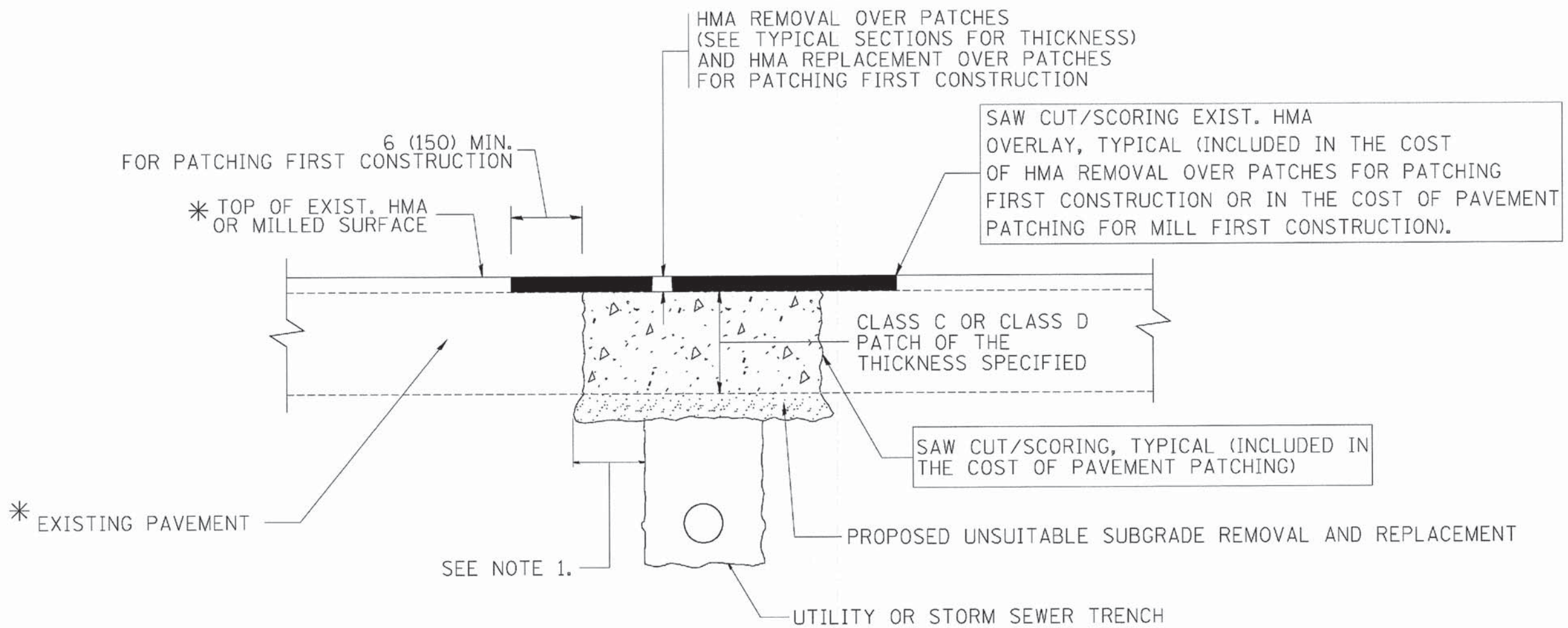
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.  
AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)  
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	16
BD0156-07 (BD-01)			CONTRACT NO. 61B36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(482)				







\* 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)

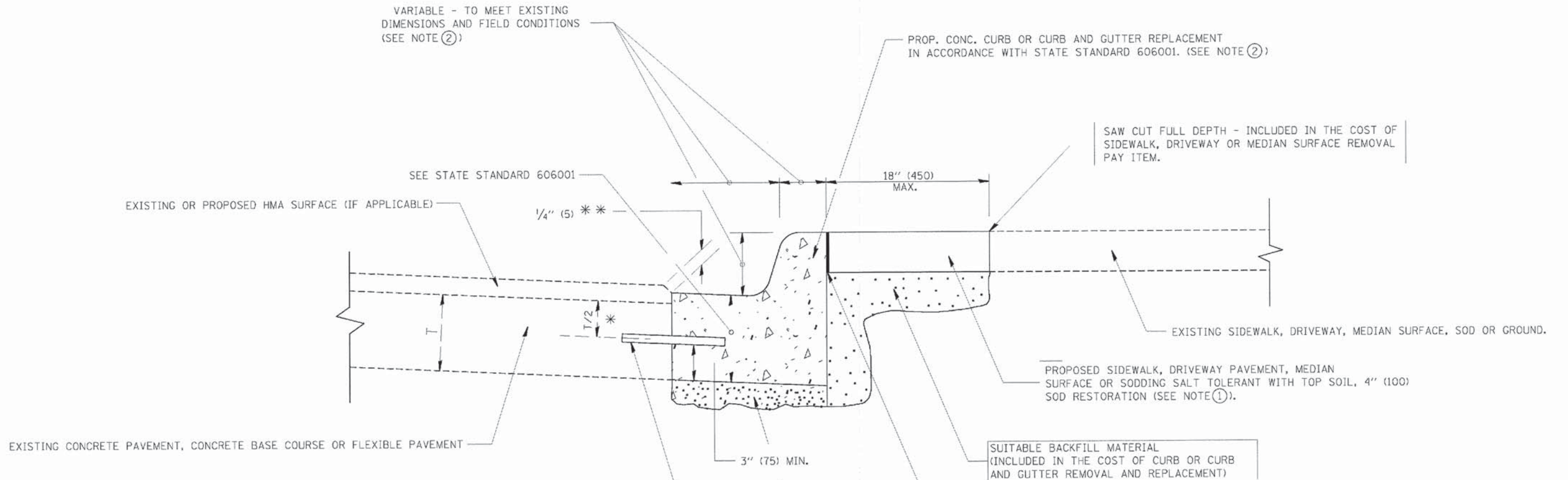
1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

\* 3878 (ALGONQUIN ROAD)  
3879 (PLUM TREE ROAD)  
0014 (DOYLE ROAD)

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

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 560600

FILE NAME = c:\projects\distsd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>		F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	14-00025-00-RS	MCHEMRY	28	18
		PLLOT SCALE = 50.000' / IN.	REVISED - R. BORO 09-04-07						<b>BD400-04 (BD-22)</b>	CONTRACT NO. 61B36		
		CHECKED -	REVISED - K. ENG 10-27-08						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40034821			
		PLLOT DATE = 10/27/2008	DATE = 10-25-94									



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

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

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

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

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

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

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

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

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

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

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

## CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

• 3878 (ALGONQUIN ROAD)  
3879 (PLUM TREE ROAD)  
0014 (DOYLE ROAD)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)  
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 DATE: 12/15/2009

DESIGNED	A. HOUSEH	REVISED	R. SHAH 10-03-96
DRAWN	-	REVISED	A. ABBAS 03-21-97
CHECKED	-	REVISED	M. GOMEZ 01-22-01
DATE	03-11-94	REVISED	R. BORO 12-15-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

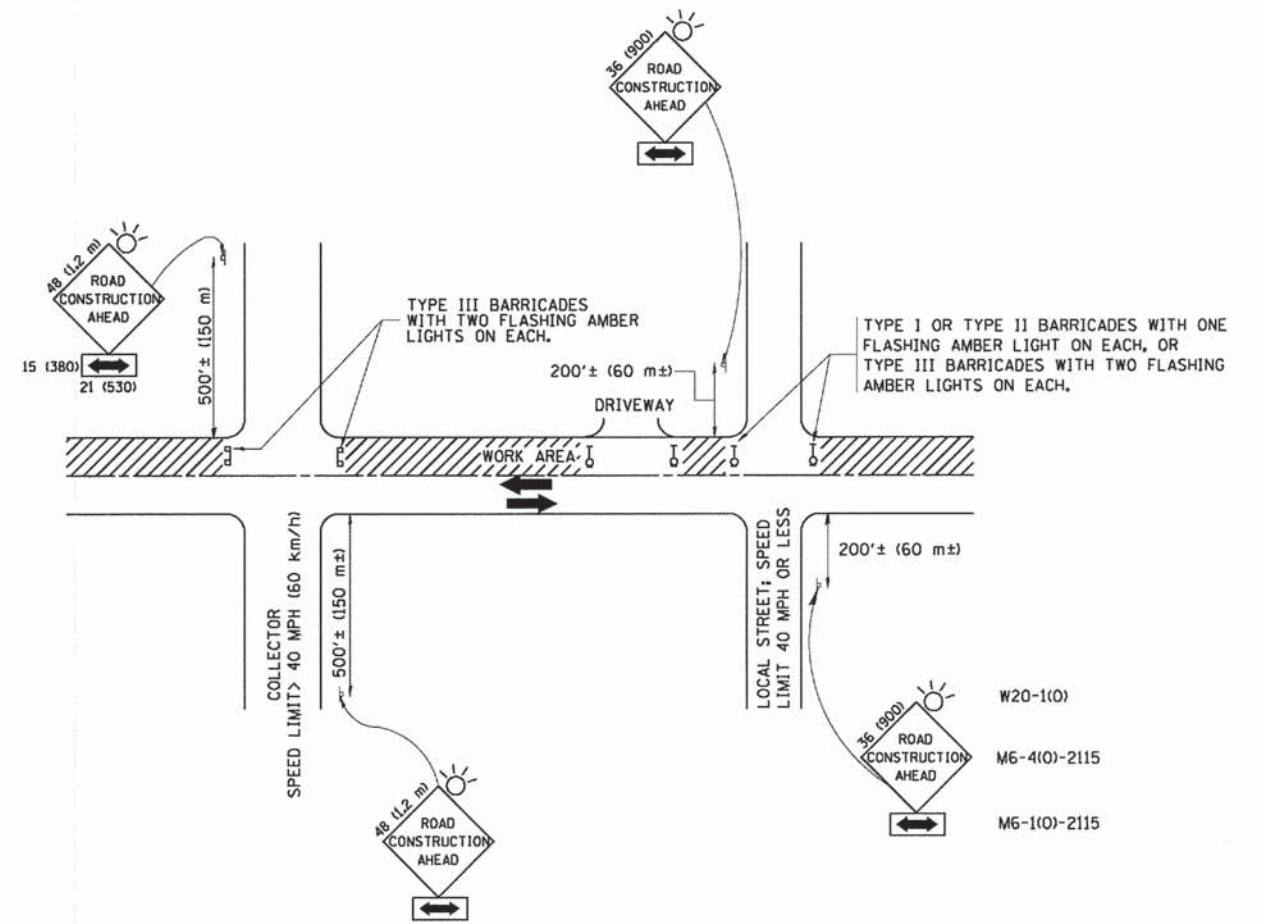
CURB OR CURB AND GUTTER  
REMOVAL AND REPLACEMENT

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14-00025-00-RS		McHENRY	28	19
BD600-06 (BD-24)			CONTRACT NO. 61B36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(482)				



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**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.

- 3878 (ALGONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

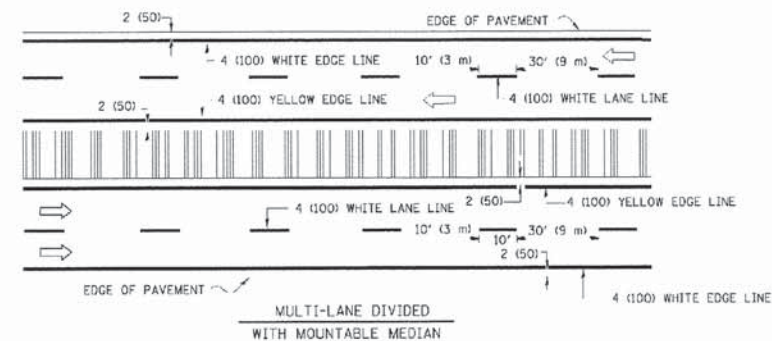
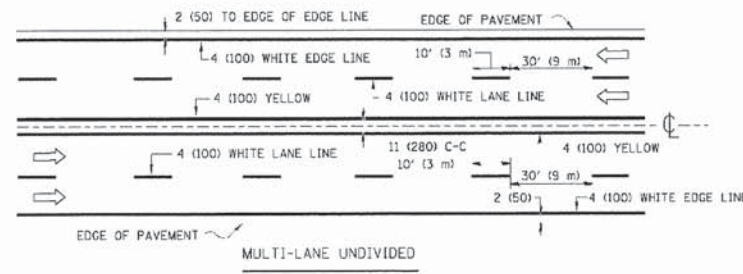
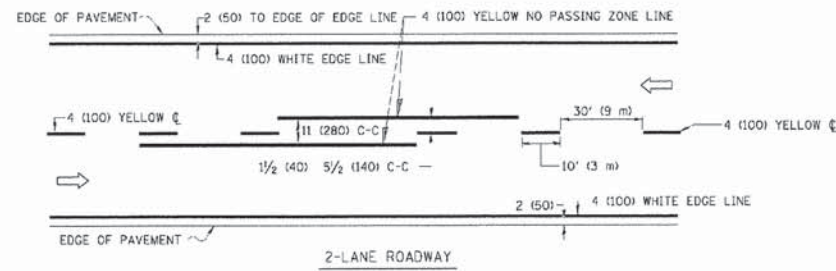
All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME =	USER NAME = gnglianob	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
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	PLOT SCALE = 58.800' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

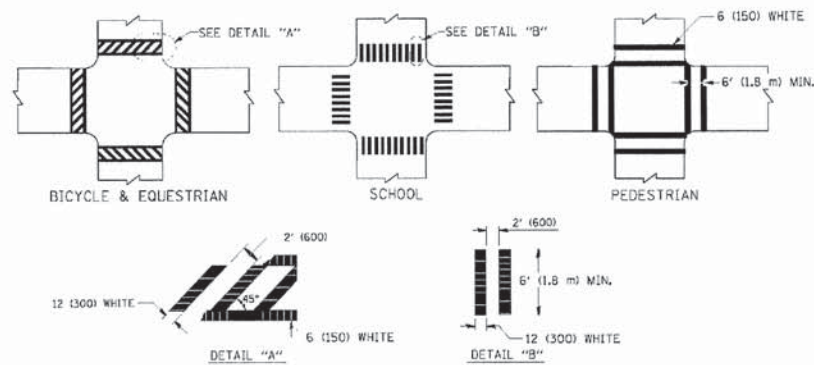
<b>TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS</b>			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	14-00025-00-RS	McHENRY	28	21
<b>TC-10</b>			<b>CONTRACT NO. 61B36</b>	
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT M-4003(482)				

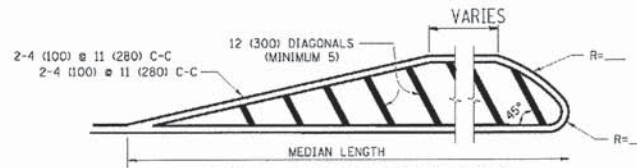
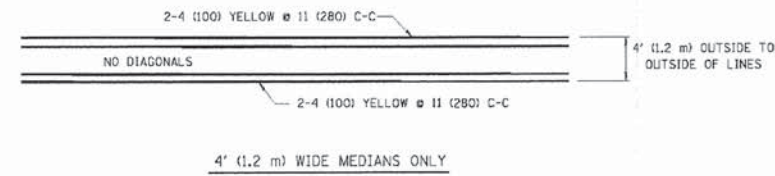


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE.

**TYPICAL LANE AND EDGE LINE MARKING**

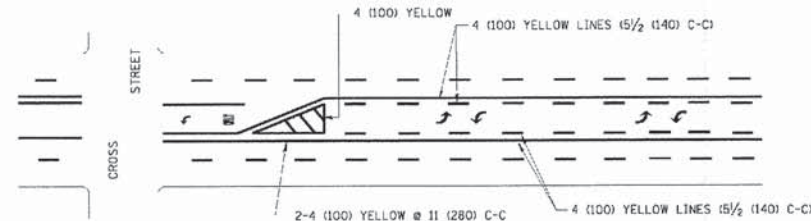


**TYPICAL CROSSWALK MARKING**

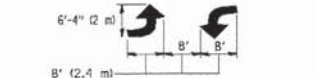


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.  
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

**MEDIANS OVER 4' (1.2 m) WIDE**

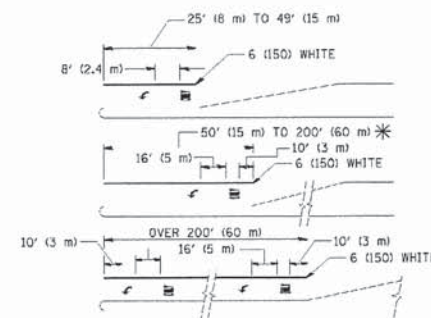


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



**MEDIAN WITH TWO-WAY LEFT TURN LANE**

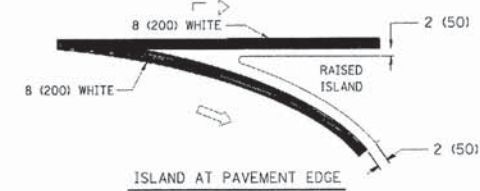
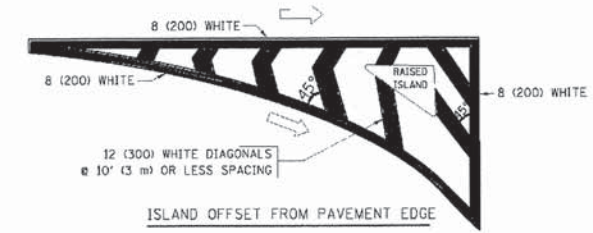
**TYPICAL PAINTED MEDIAN MARKING**



FULL SIZE LETTERS 8" (2.4 m) AND ARROWS SHALL BE USED.  
 \* 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 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C DMIT 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 1/2 (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 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) 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.

- 3878 (ALGONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

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 14-00025-00-RS  
 2/22/2016

DESIGNED	EVERS	REVISED	T. RAMMACHER 10-27-94
DRAWN	-	REVISED	-C. JUCIUS 09-09-09
CHECKED	-	REVISED	-
DATE	03-19-90	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

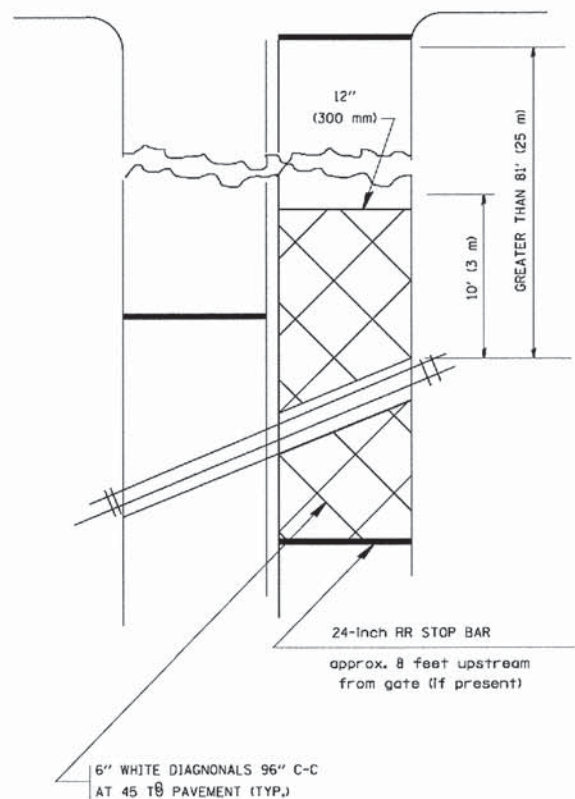
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14-00025-00-RS		McHENRY	28	22
TC-13			CONTRACT NO. 61B36	
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT M-4003482				



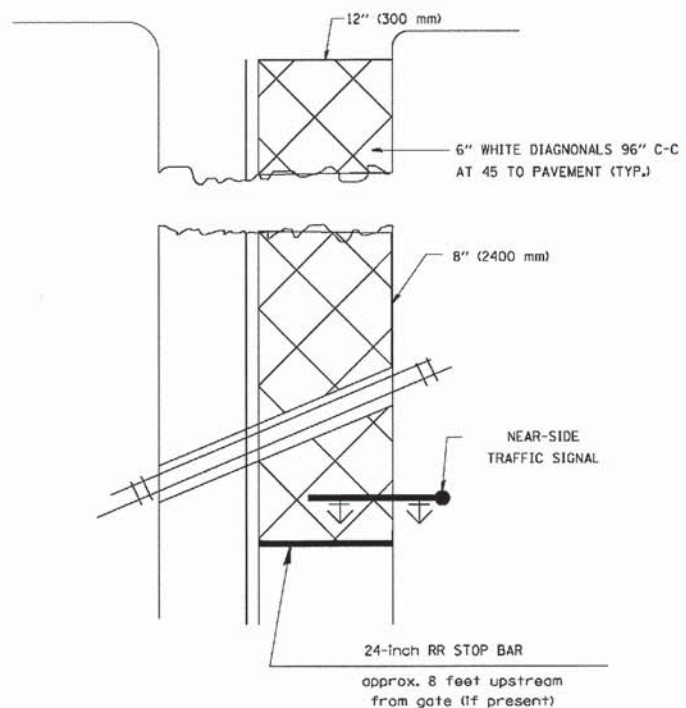




WITH INTERSECTION TRAFFIC SIGNALS  
(SEE NOTE 1)

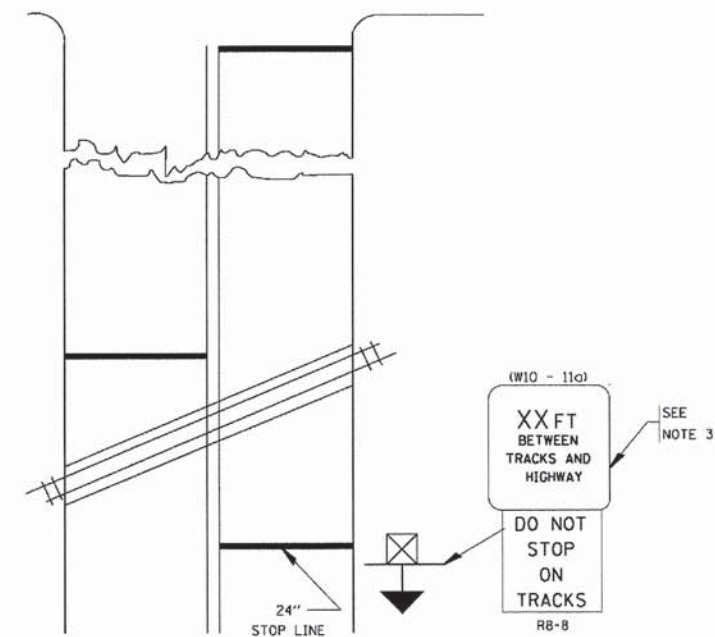


WITH NEAR-SIDE TRAFFIC SIGNALS  
(SEE NOTE 1 & 2)



PLAN  
N. T. S.

WITH NONSIGNALIZED INTERSECTION  
81' (25 m) OR LESS TO CLOSEST RAIL



PLAN  
N. T. S.

NOTES:

- PAVEMENT MARKINGS TO BE INSTALLED ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED, THE PAVEMENT MARKINGS EXTENDS TO THE INTERSECTION.
- DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET (1.8 m) FROM THE RAIL CLOSEST TO THE INTERSECTION TO THE STOP LINE OR CROSSWALK, WHICHEVER IS CLOSEST, ROUNDED DOWN TO THE NEAREST 5 FEET (1.5 m). WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE THE DRIVER HAS A VIEW OF APPROACHING TRAFFIC. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6- FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION.

- 3878 (ALGONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

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FILE NAME =	USER NAME = drivaokgn	DESIGNED -	REVISED - 02-25-11
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	PLOT SCALE = 5/8" = 1' / 3/4"	CHECKED -	REVISED -
	PLOT DATE = 5/7/2012	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

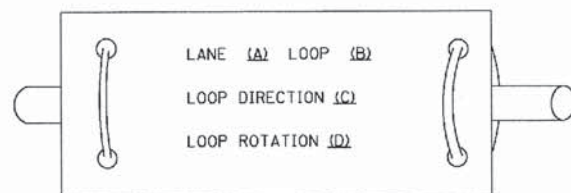
TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	14-00025-00-RS	MCHENRY	28	25
TC-23			CONTRACT NO. 61B36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003(482)				

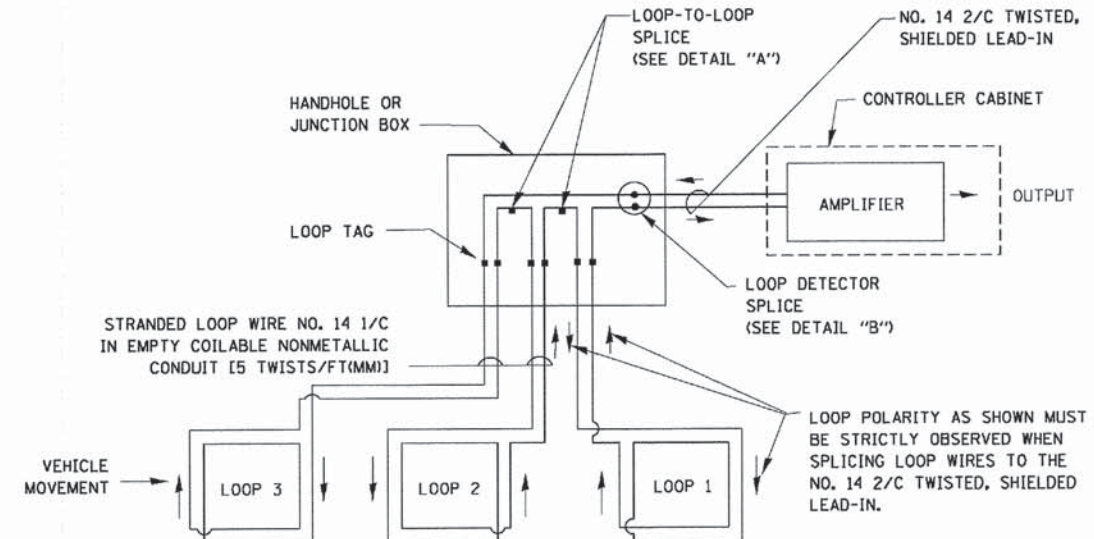
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

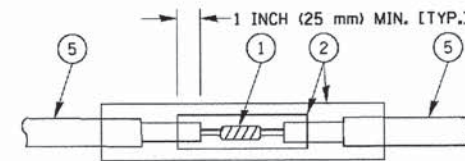


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

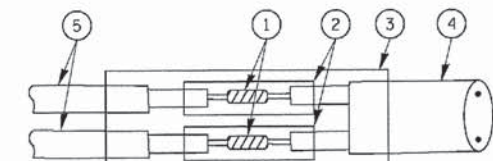


**DETECTOR LOOP WIRING SCHEMATIC**

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

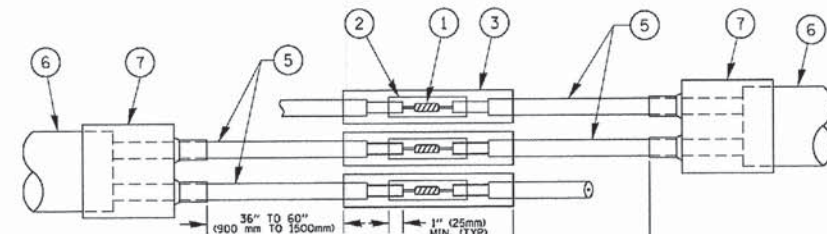


DETAIL "A"  
LOOP-TO-LOOP SPLICE

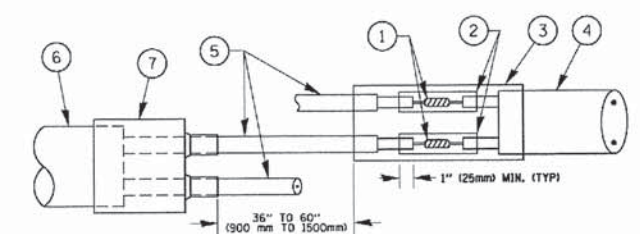


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

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

3878 (ALCONQUIN ROAD)  
 3879 (PLUM TREE ROAD)  
 0014 (DOYLE ROAD)

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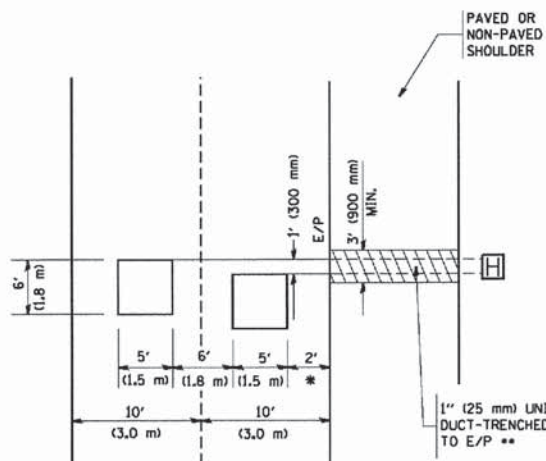
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	14-00025-00-RS	McHENRY	28	26
TS-05			CONTRACT NO. 61B36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003482				

**LOOPS NEXT TO SHOULDERS**

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

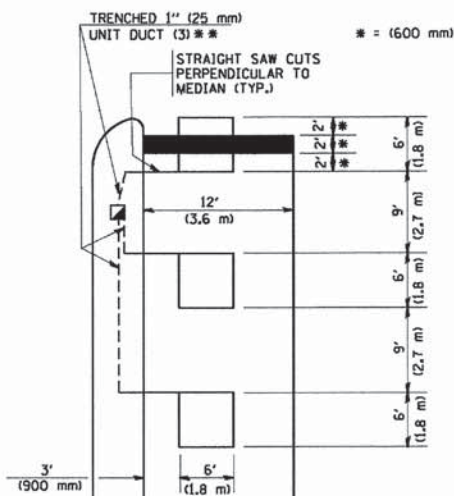


\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**

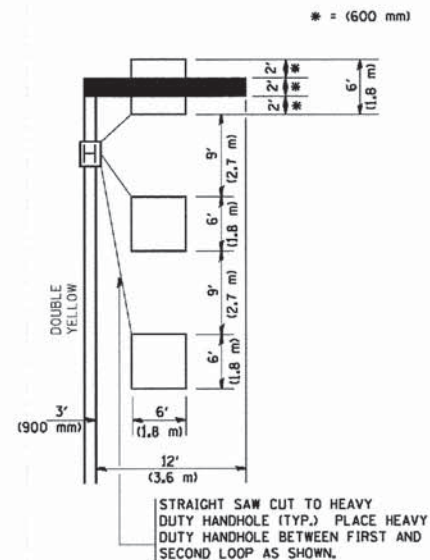
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

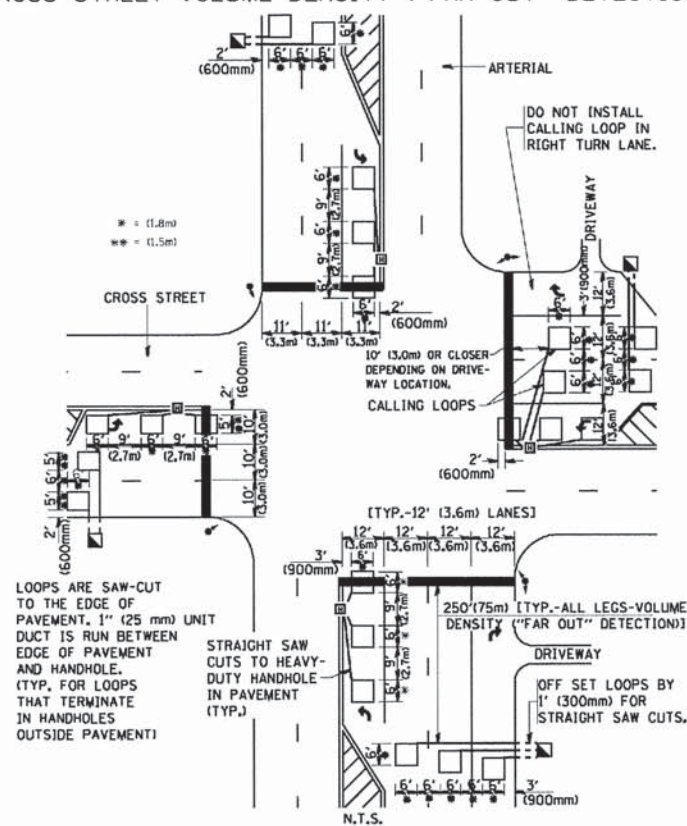
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**



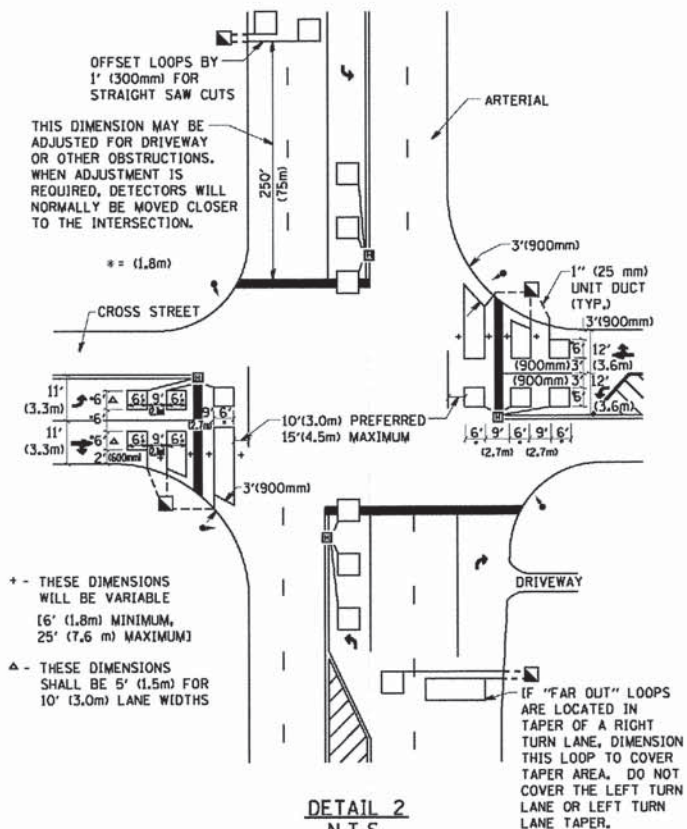
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**



**DETAIL 1  
N.T.S.**

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



**DETAIL 2  
N.T.S.**

**NOTES:**

**VEHICLES LOOP DETECTORS**

- ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

**PLACEMENT OF DETECTORS**

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DIMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

**NOTE:**

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

- 3878 (ALCONQUIN ROAD)
- 3879 (PLUM TREE ROAD)
- 0014 (DOYLE ROAD)

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 DISTRICT 1 - DETECTOR LOOP INSTALLATION  
 DETAILS FOR ROADWAY RESURFACING  
 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.  
 F.A.U. RTE. SECTION COUNTY TOTAL SHEETS NO. 14-0025-00-RS MCHENRY 28 27  
 TS-07 CONTRACT NO. 61B36  
 FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40034821

FILE NAME =	USER NAME = gnglienabt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 - DETECTOR LOOP INSTALLATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
M:\disto\22x34\ts07.dgn		DRAWN -	REVISED -		DETAILS FOR ROADWAY RESURFACING		*	14-0025-00-RS	MCHENRY	28	27
PLOT SCALE = 5/8"=1'-0"		CHECKED - R.K.F.	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.		TS-07		CONTRACT NO. 61B36		
PLOT DATE = 1/4/2008		DATE -	REVISED -				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-40034821				

