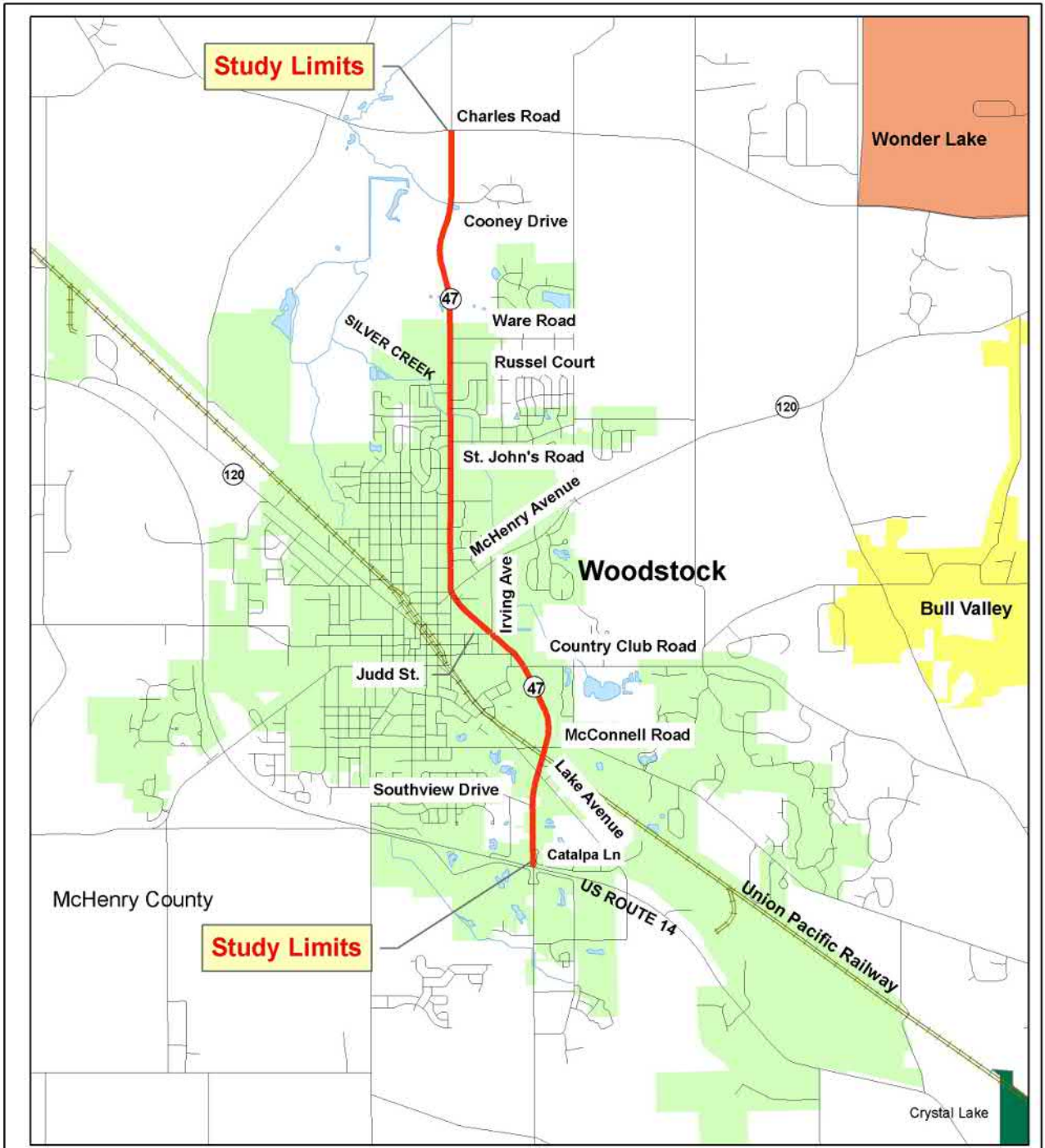
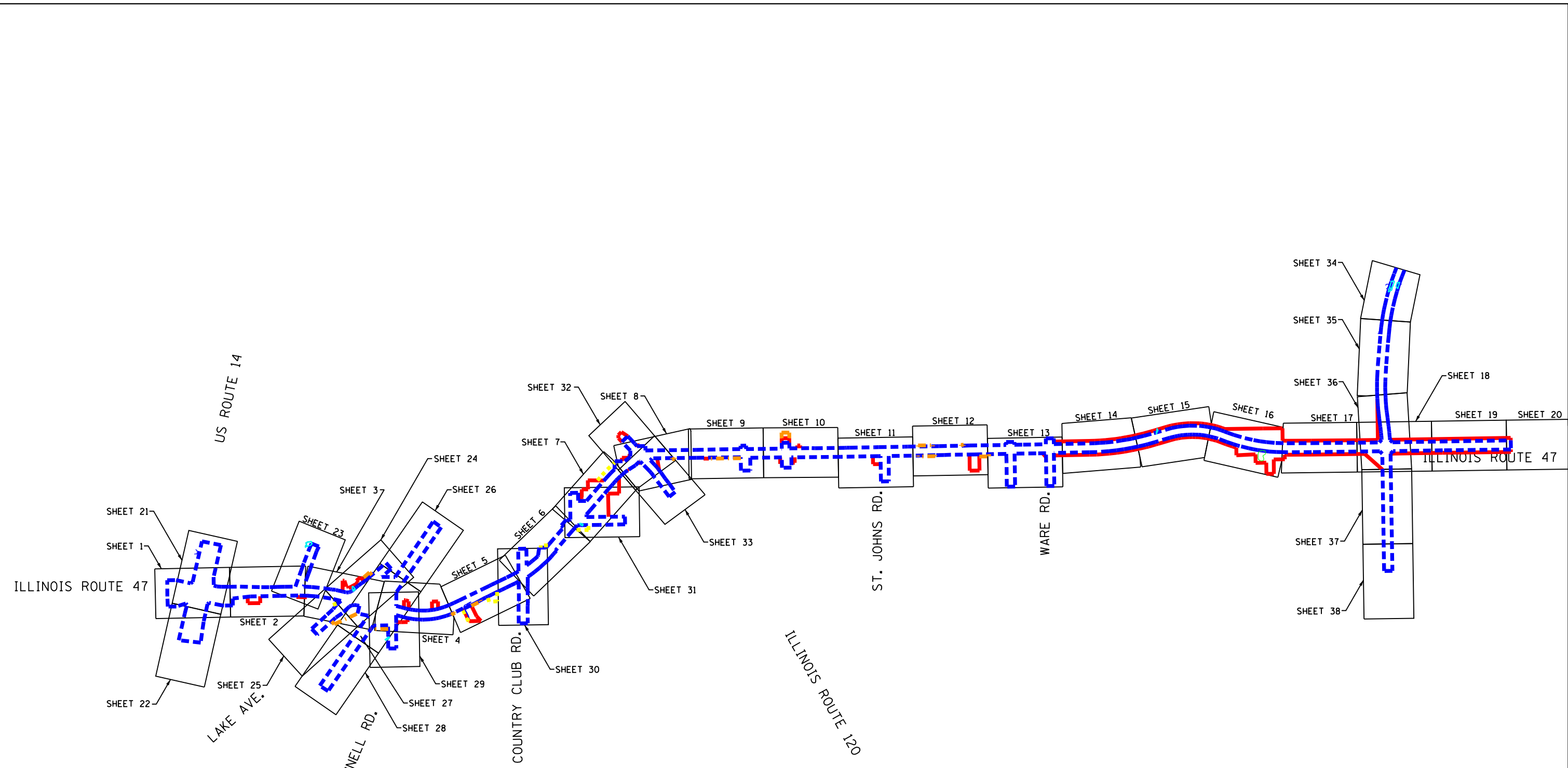


**EXHIBIT 1.1-1
PROJECT LOCATION MAP**

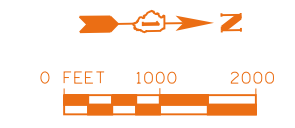


EXISTING CONDITIONS (ENVIRONMENTAL SURVEY REQUEST)
EXHIBIT 1.2-1

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAD\Sheet\ESR-00 INDEX.dgn



LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



SA STRAND ASSOCIATES
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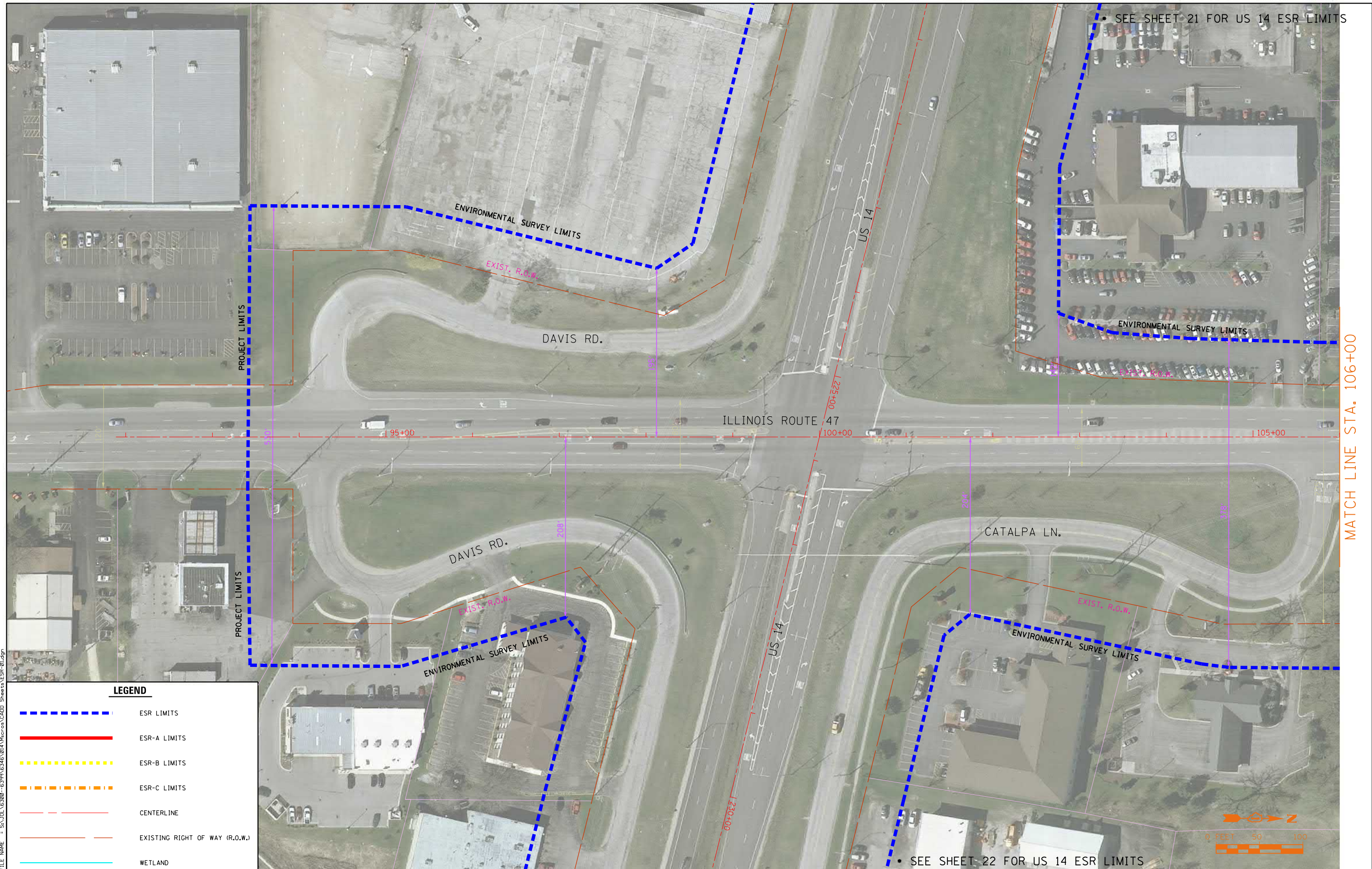
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	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST			
SCALE: N-T-S	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

SEE SHEET 21 FOR US 14 ESR LIMITS

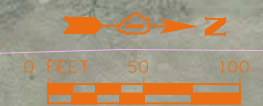


MATCH LINE STA. 106+00

SEE SHEET 22 FOR US 14 ESR LIMITS

FILE NAME = SA\JUL16300-6399\6346\014\Micro\CAD\ Sheets\ESR-01.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

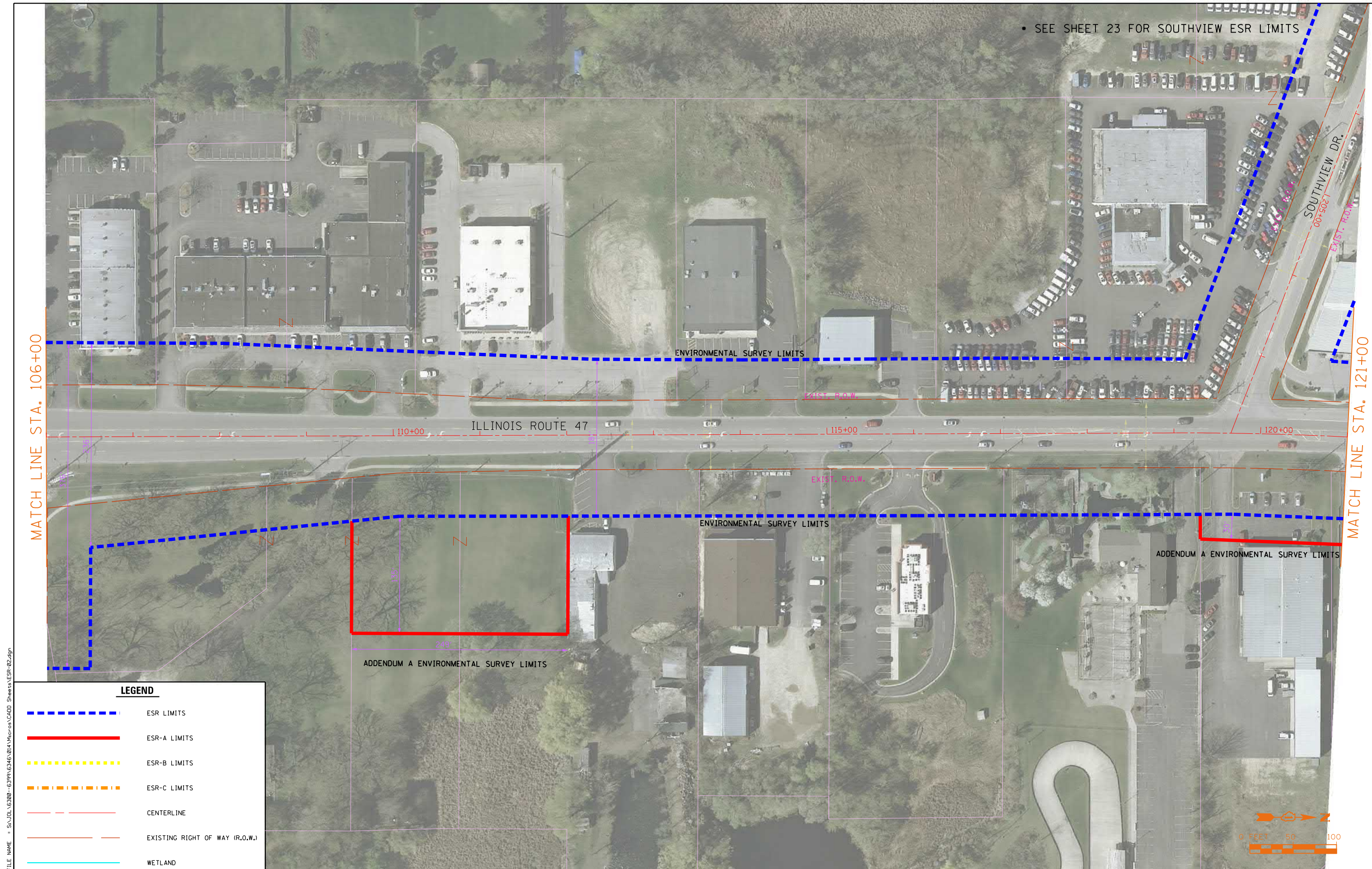
SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	1
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

• SEE SHEET 23 FOR SOUTHVIEW ESR LIMITS

MATCH LINE STA. 106+00

MATCH LINE STA. 121+00



LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- · · · · ESR-B LIMITS
- · - · - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-02.dgn

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PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

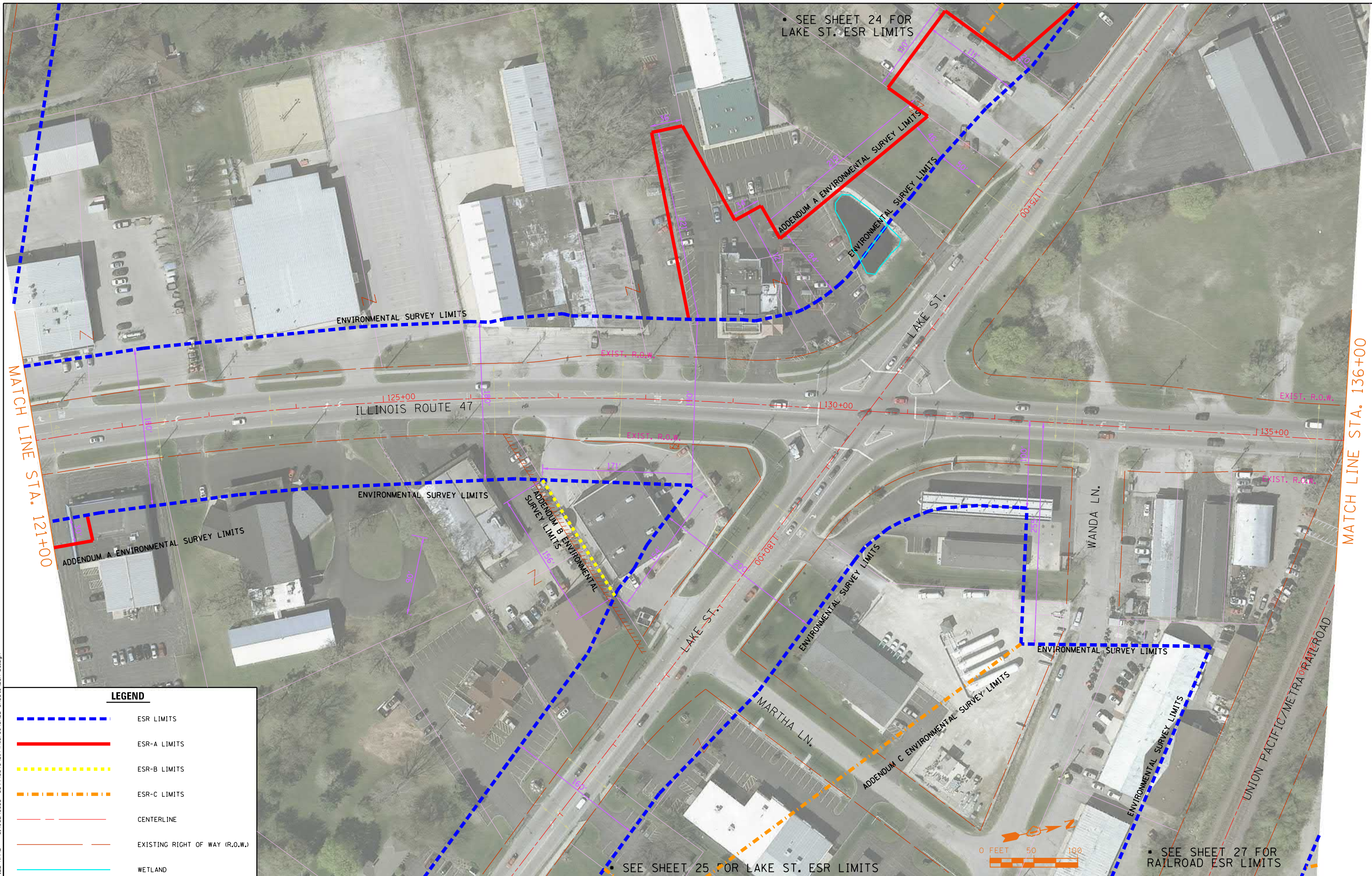
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	2
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

FILE NAME = SA\JUL163800-6399\6346\014\Micro\CA00D Sheets\ESR-03.dgn



LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

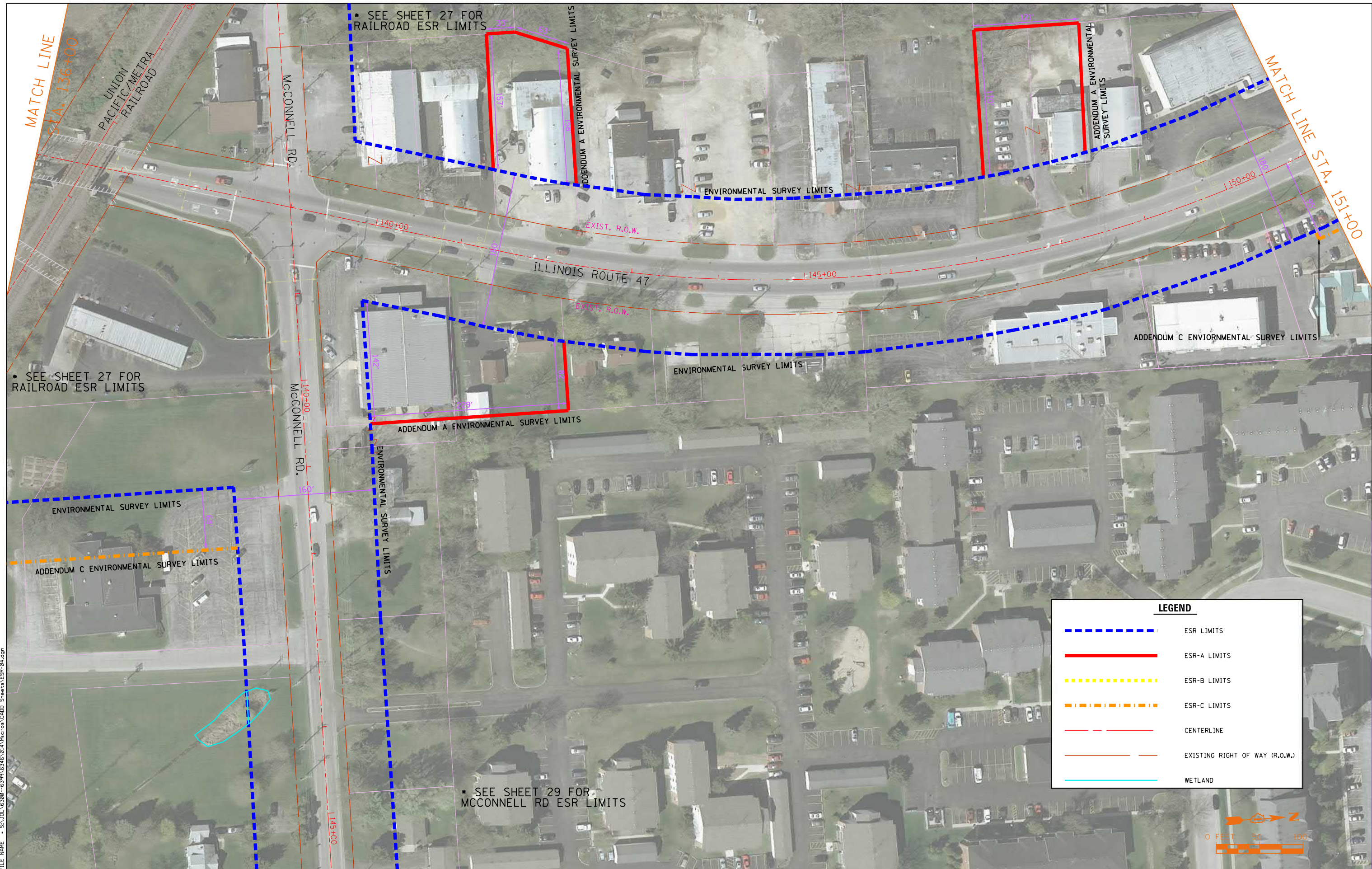
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DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	3
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



MATCH LINE
STA. 136+00

MATCH LINE STA. 151+00

* SEE SHEET 27 FOR RAILROAD ESR LIMITS

* SEE SHEET 27 FOR RAILROAD ESR LIMITS

* SEE SHEET 29 FOR MCCONNELL RD ESR LIMITS

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



FILE NAME = SA\JOL\63300-6399\6346\014\Micros\CA0D Sheets\ESR-04.dgn

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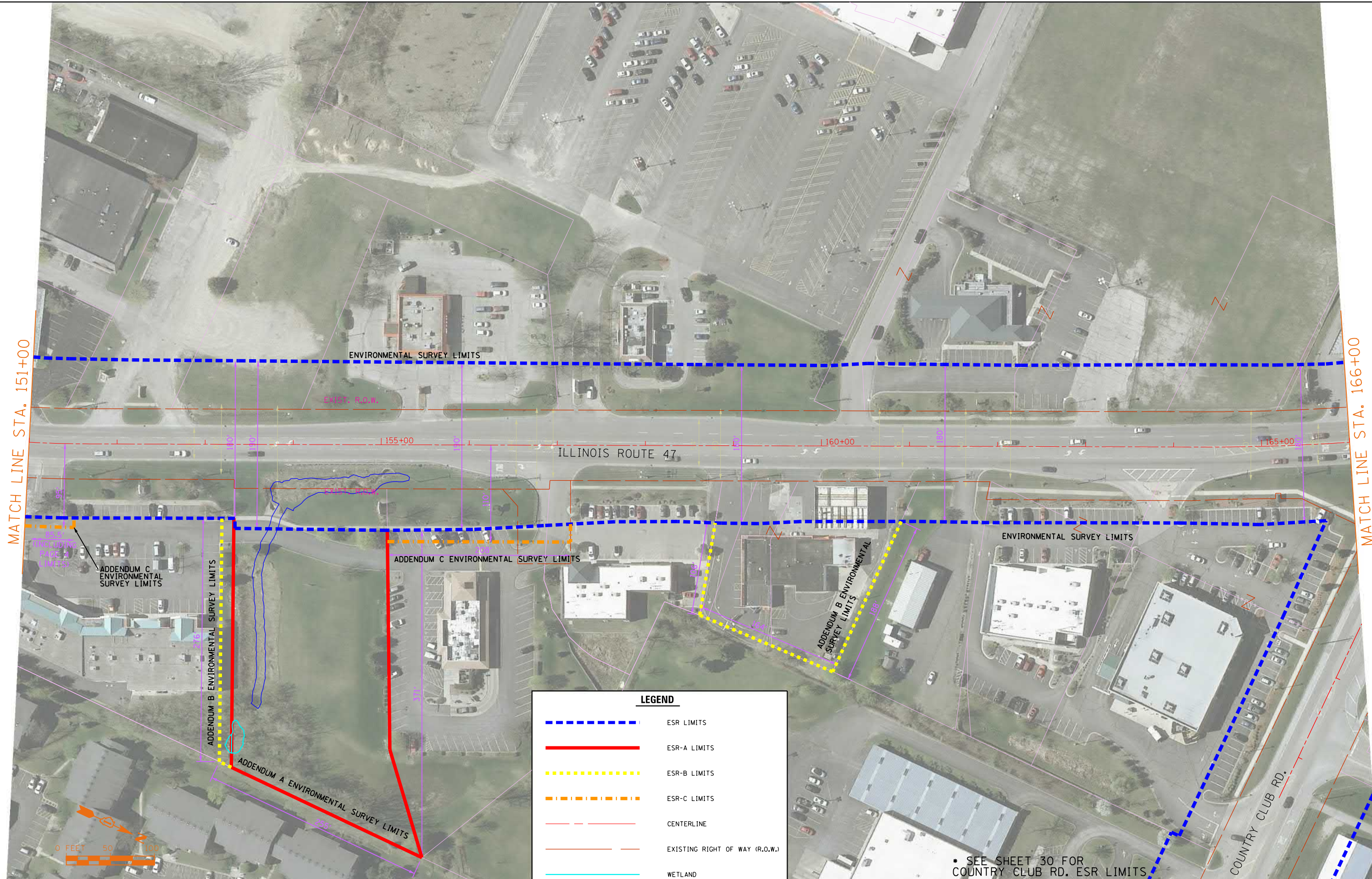
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	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	4
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 151+00

MATCH LINE STA. 166+00

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

SEE SHEET 30 FOR COUNTRY CLUB RD. ESR LIMITS

FILE NAME = SA\JUL16300-6399\6346\014\Micro\CA0D Sheets\ESR-05.dgn

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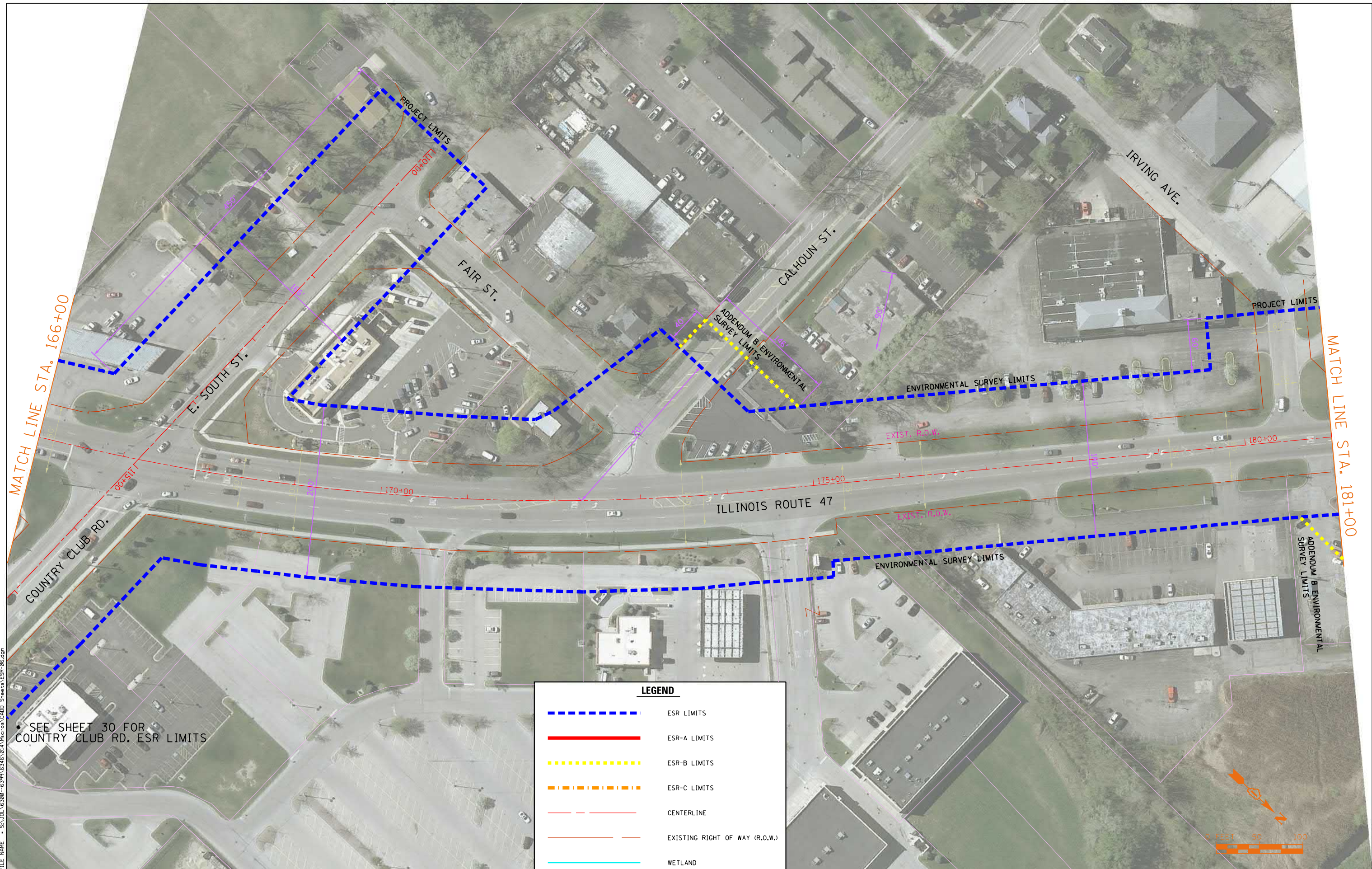
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PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	5
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



FILE NAME = SA\JUL163800-6399\6346\014\Micro\CAD Sheets\ESR-06.dgn

SEE SHEET 30 FOR COUNTRY CLUB RD. ESR LIMITS

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

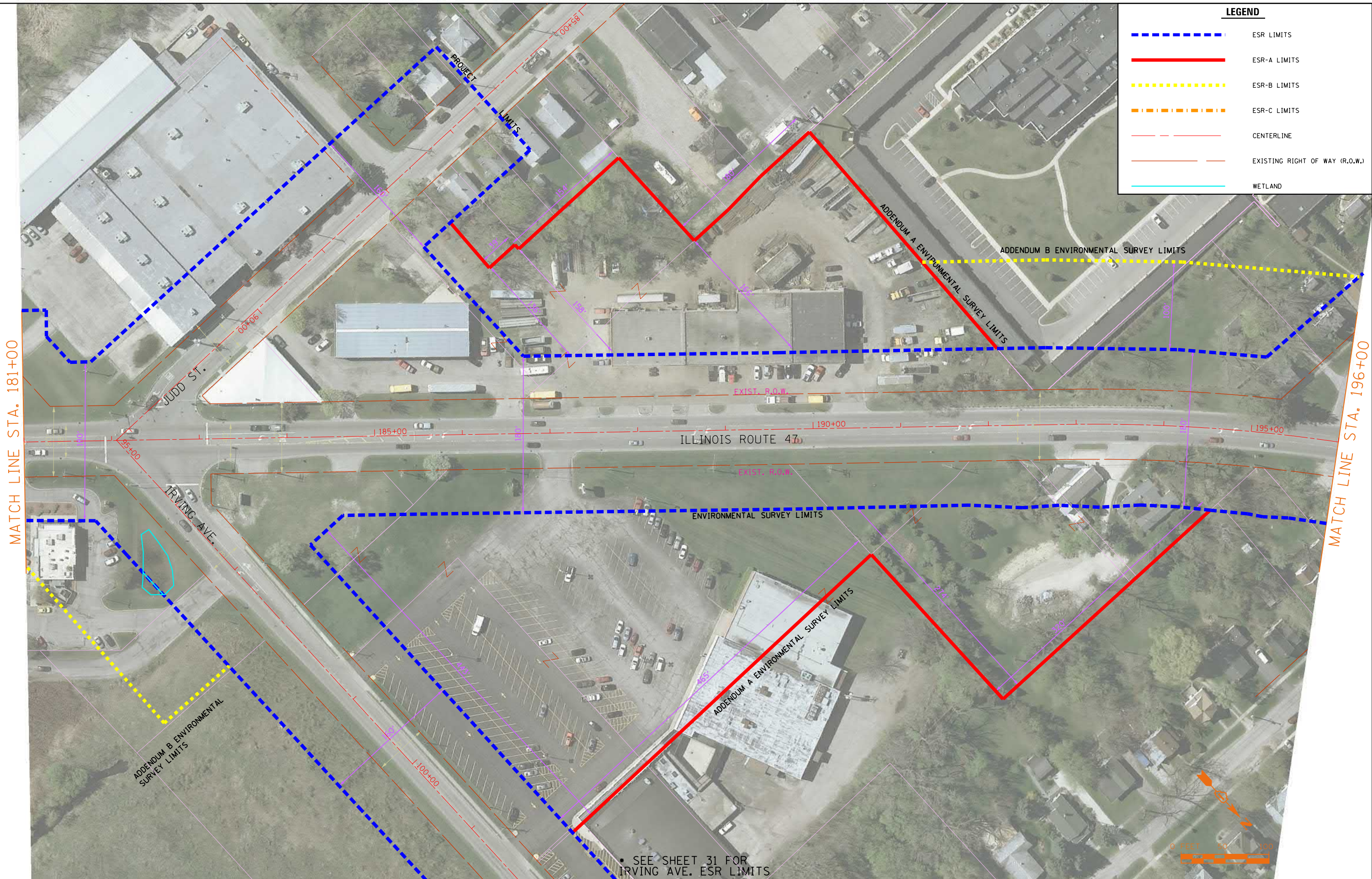
ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	6
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND



MATCH LINE STA. 181+00

MATCH LINE STA. 196+00

* SEE SHEET 31 FOR IRVING AVE. ESR LIMITS

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00D Sheets\ESR-07.dgn

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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST
 SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	7
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

• SEE SHEET 32 FOR
IL 120/McHENRY AVE.
ESR LIMITS

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

ENVIRONMENTAL SURVEY LIMITS

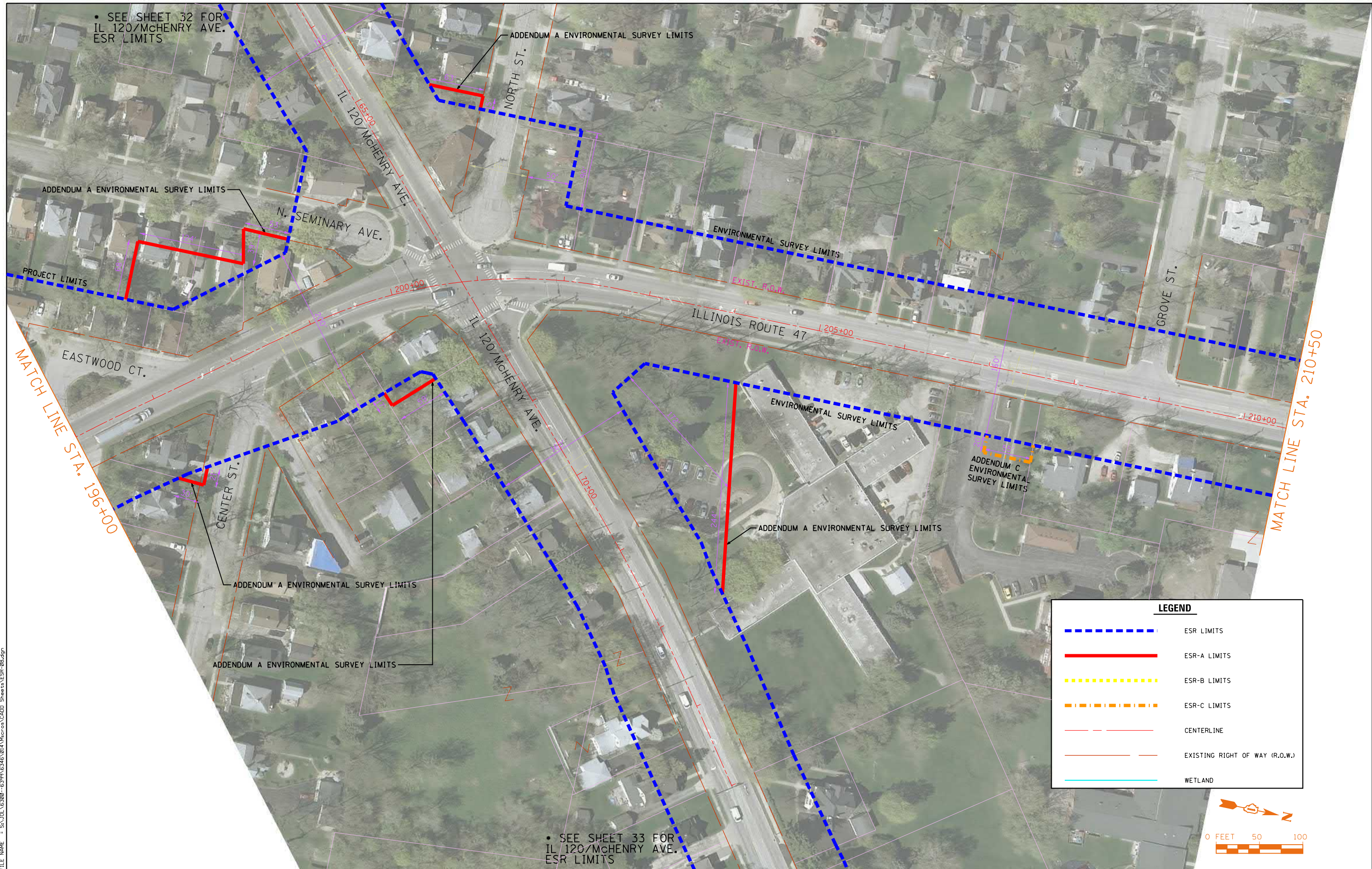
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ADDENDUM C
ENVIRONMENTAL
SURVEY LIMITS

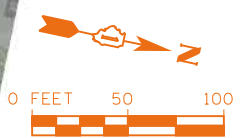
ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

• SEE SHEET 33 FOR
IL 120/McHENRY AVE.
ESR LIMITS



LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-08.dgn

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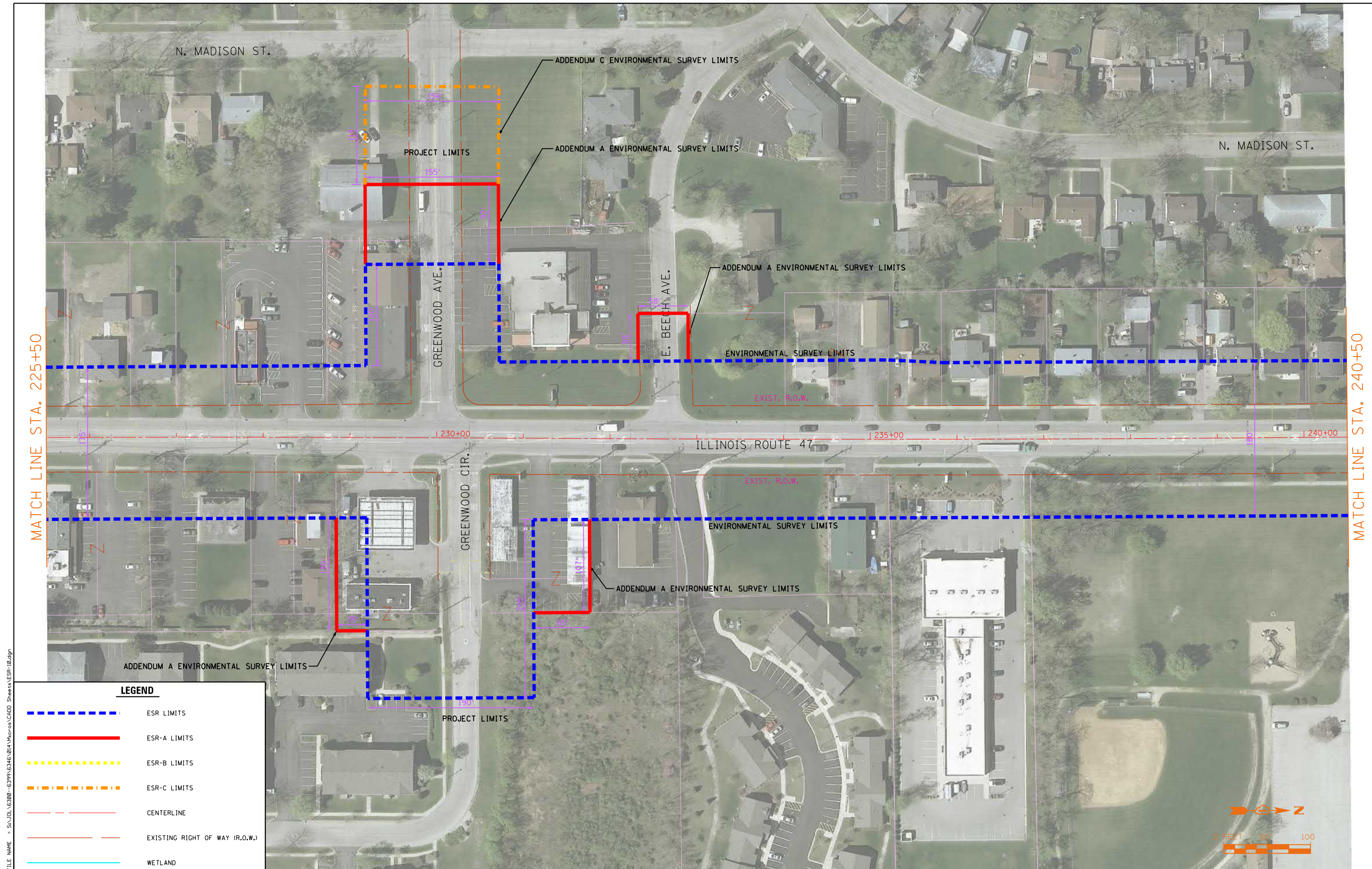
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PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	8
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



MATCH LINE STA. 225+50

MATCH LINE STA. 240+50

FILE NAME = SA\JUL163800-6399\6346\014\Micro\CAD\ Sheets\ESR-10.dgn

LEGEND

- - - - - ESR LIMITS
- - - - - ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- - - - - WETLAND

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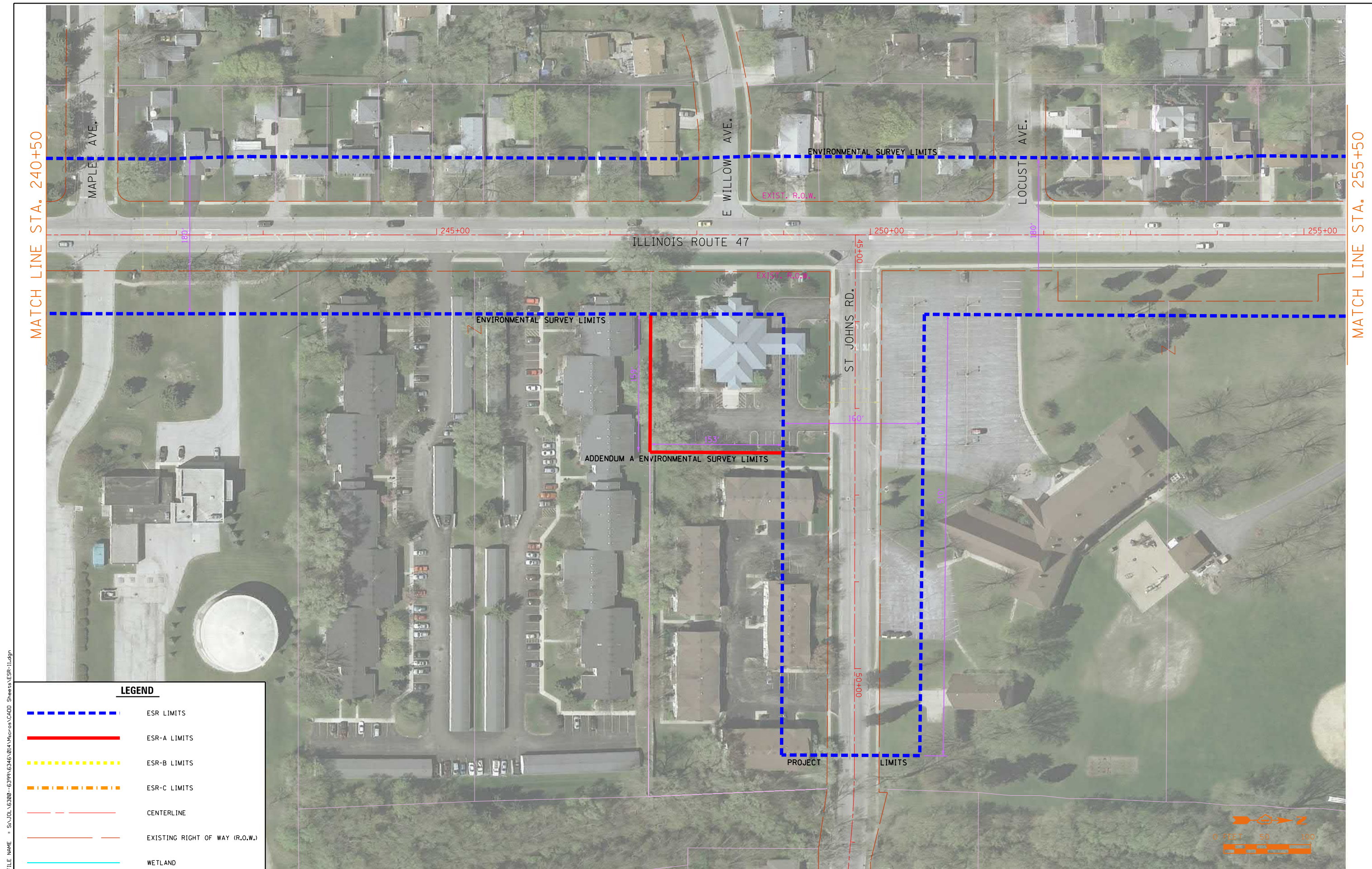
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PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.








F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	10
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 240+50

MATCH LINE STA. 255+50

FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-11.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



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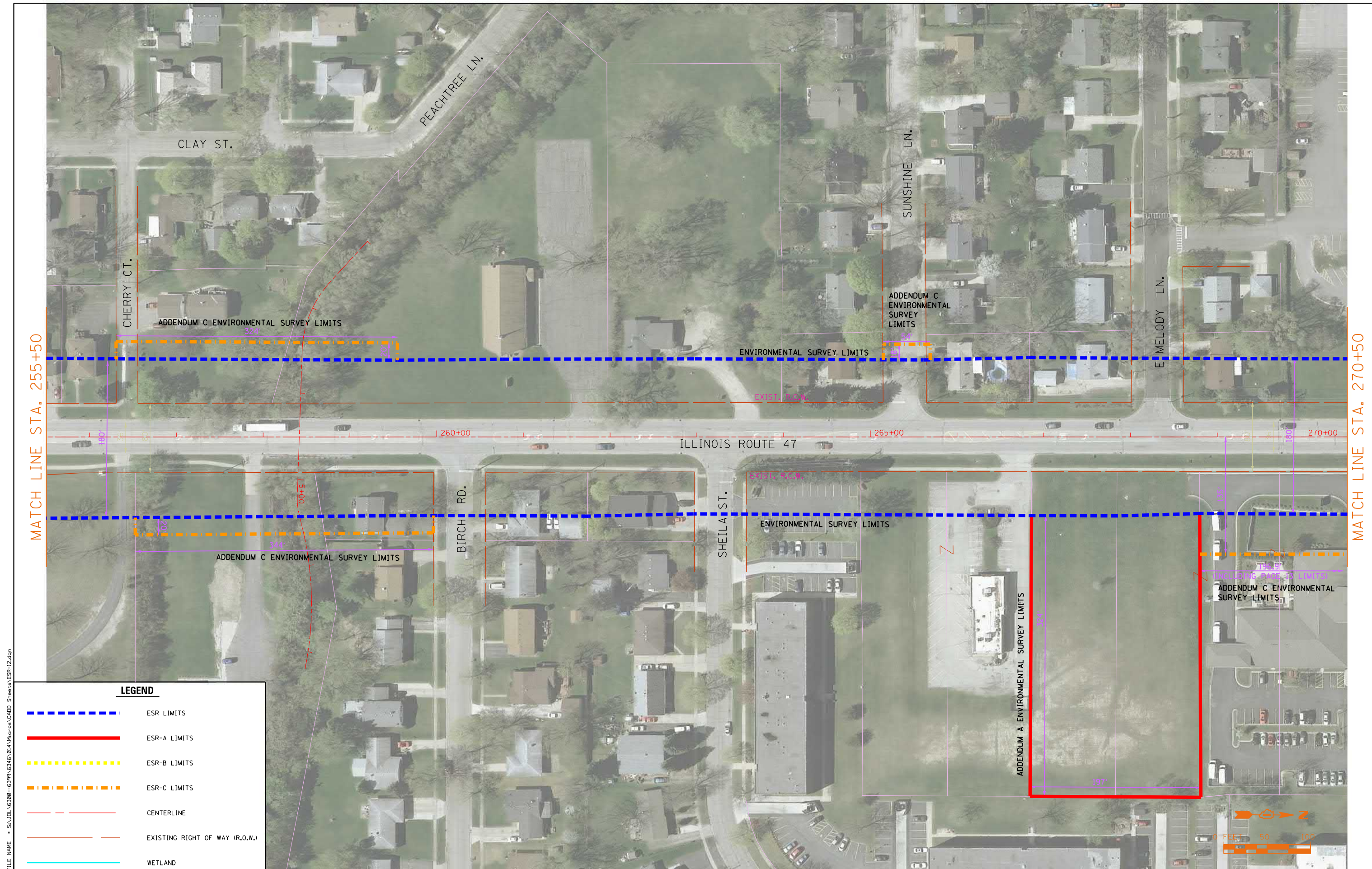
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PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	11
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 255+50

MATCH LINE STA. 270+50

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00D Sheets\ESR-12.dgn

LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

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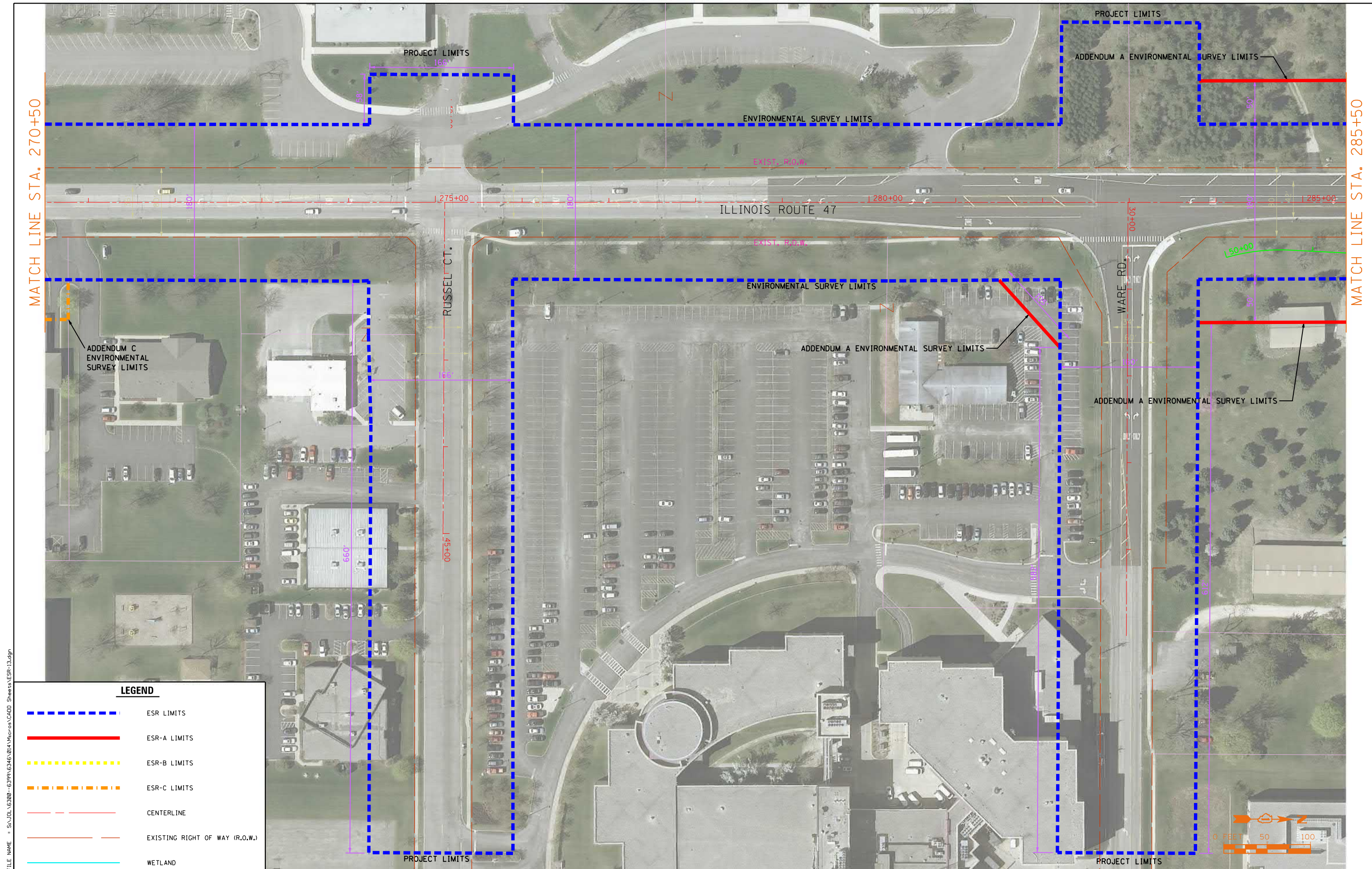
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PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	12
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



FILE NAME = SA\JUL16300-6399\6346\014\Micros\CADD Sheets\ESR-13.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

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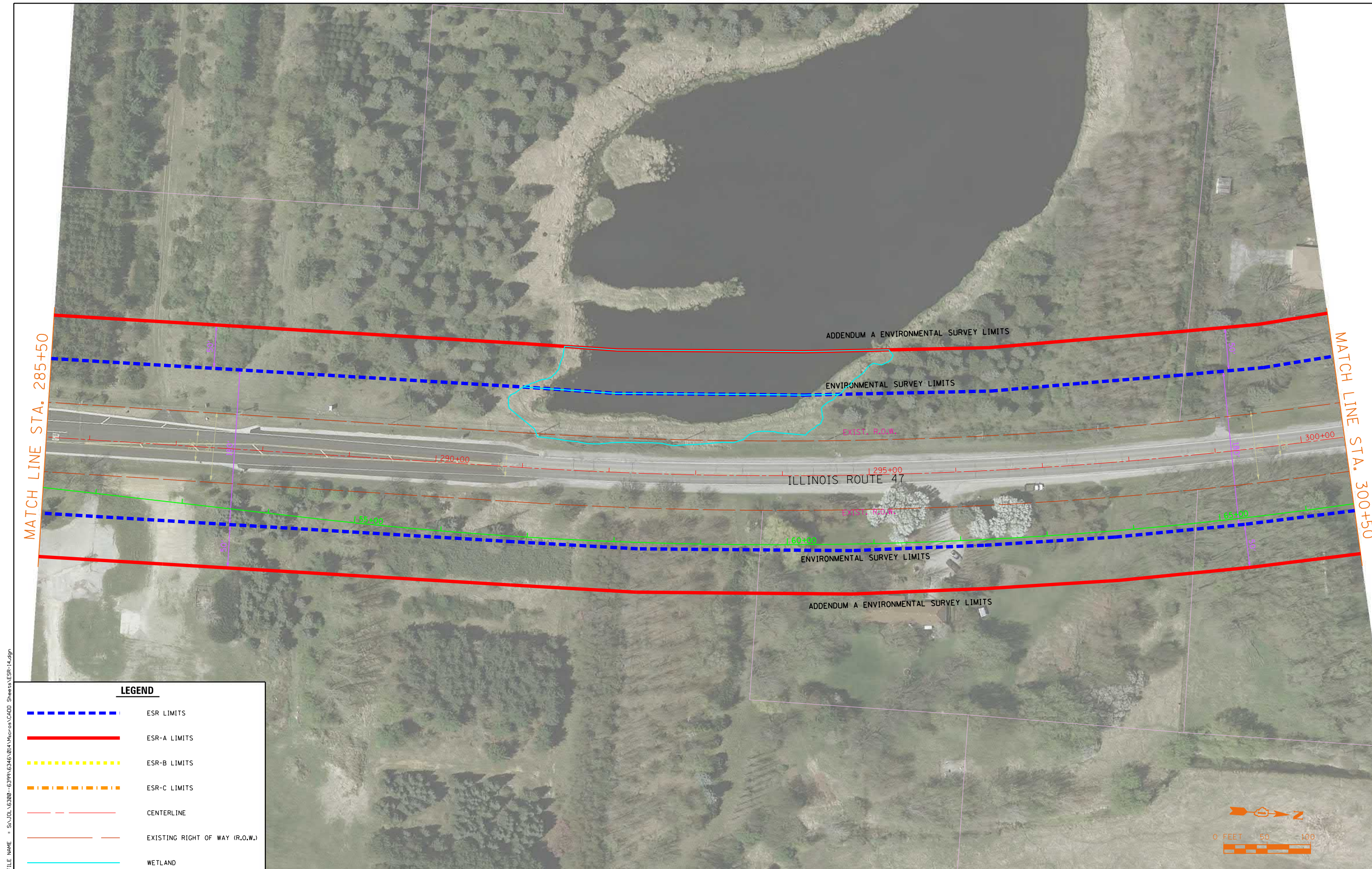
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PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	13
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 285+50

MATCH LINE STA. 300+50

FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-14.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



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USER NAME = B:11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	14
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-15.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

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 JOLIET, ILLINOIS 60431
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USER NAME = B:11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST			
SCALE: N-T-S	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	15
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 315+50

MATCH LINE STA. 330+50

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00D Sheets\ESR-16.dgn

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USER NAME = B.IIP	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	16
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

MATCH LINE STA. 330+50

MATCH LINE STA. 345+50

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

ENVIRONMENTAL SURVEY LIMITS

EXIST. R.O.W.

ILLINOIS ROUTE 47

335+00

340+00

345+00

EXIST. R.O.W.

100+00

105+00

110+00

ENVIRONMENTAL SURVEY LIMITS

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- . - . - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-17.dgn

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USER NAME = B:11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
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ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

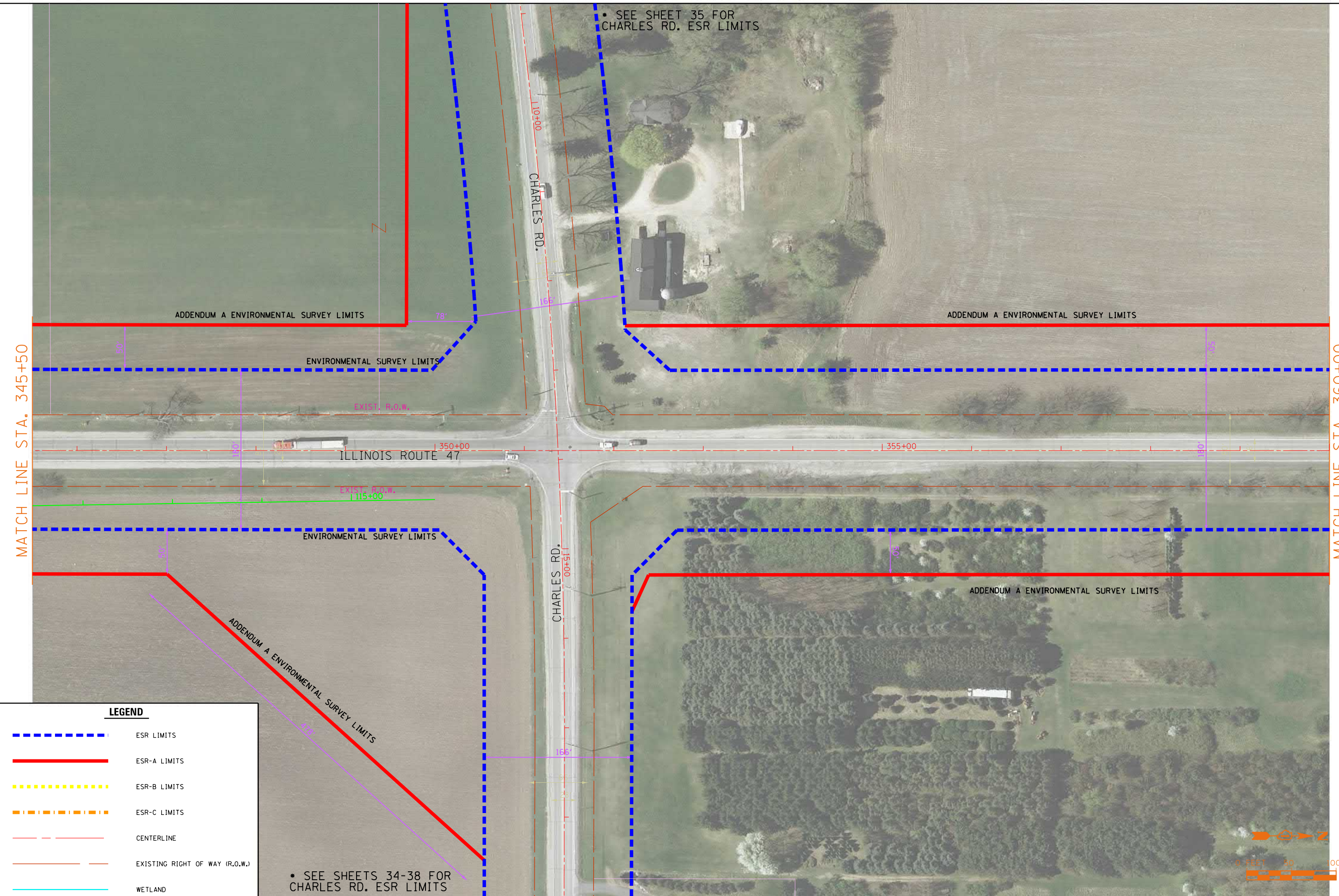
SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	17
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

• SEE SHEET 35 FOR CHARLES RD. ESR LIMITS

MATCH LINE STA. 345+50

MATCH LINE STA. 360+00



LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

• SEE SHEETS 34-38 FOR CHARLES RD. ESR LIMITS



FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-18.dgn

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 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B.i1P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

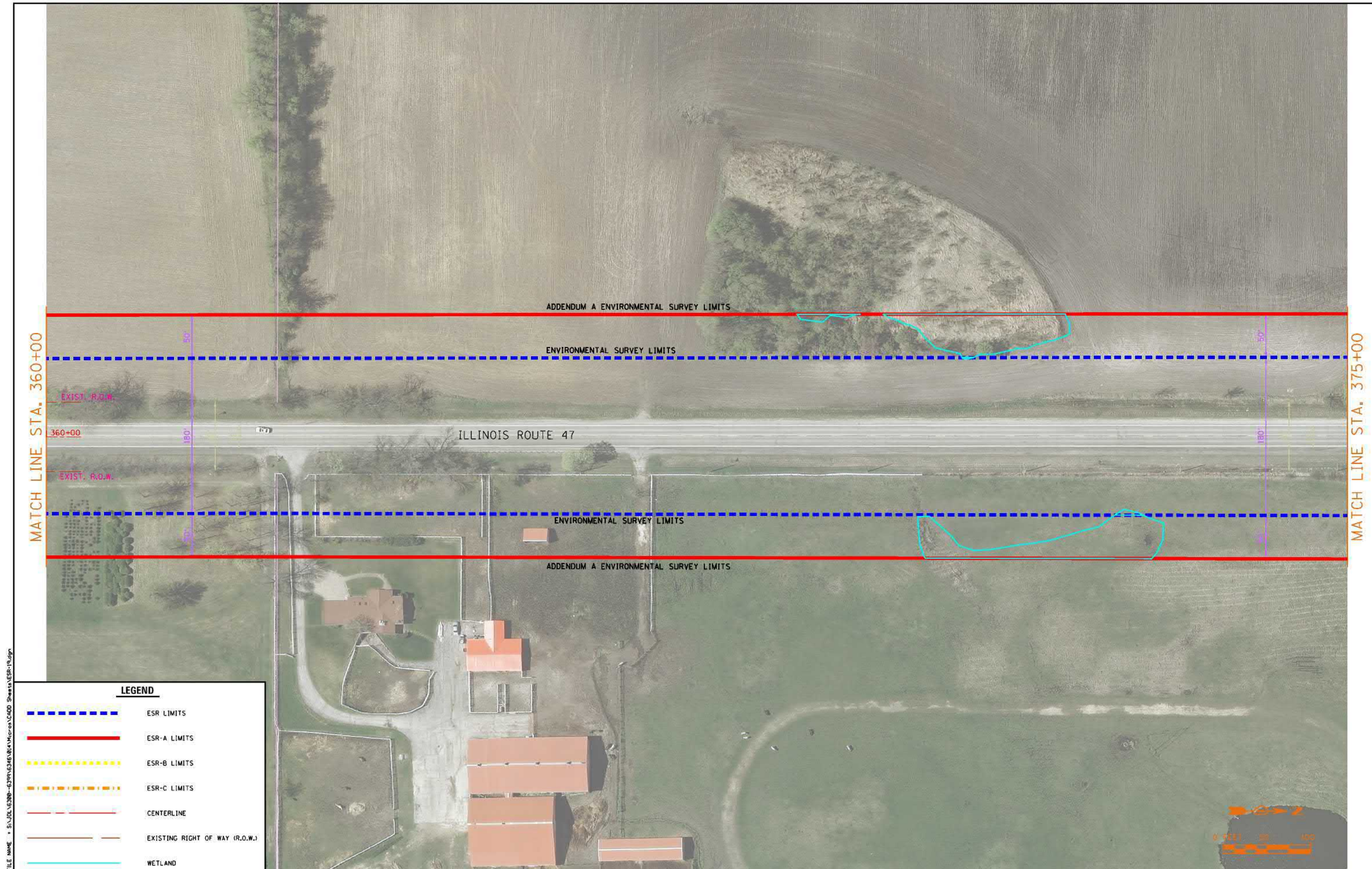
DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
--------------	-------	----	--------	------	----	------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	18
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



FILE NAME = S:\JUL16300-63916346\814\Micro\CoRD Sheets\ESR-R.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

SA STRAND ASSOCIATES
 1170 SOUTH HOUGHTON ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = BillP	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

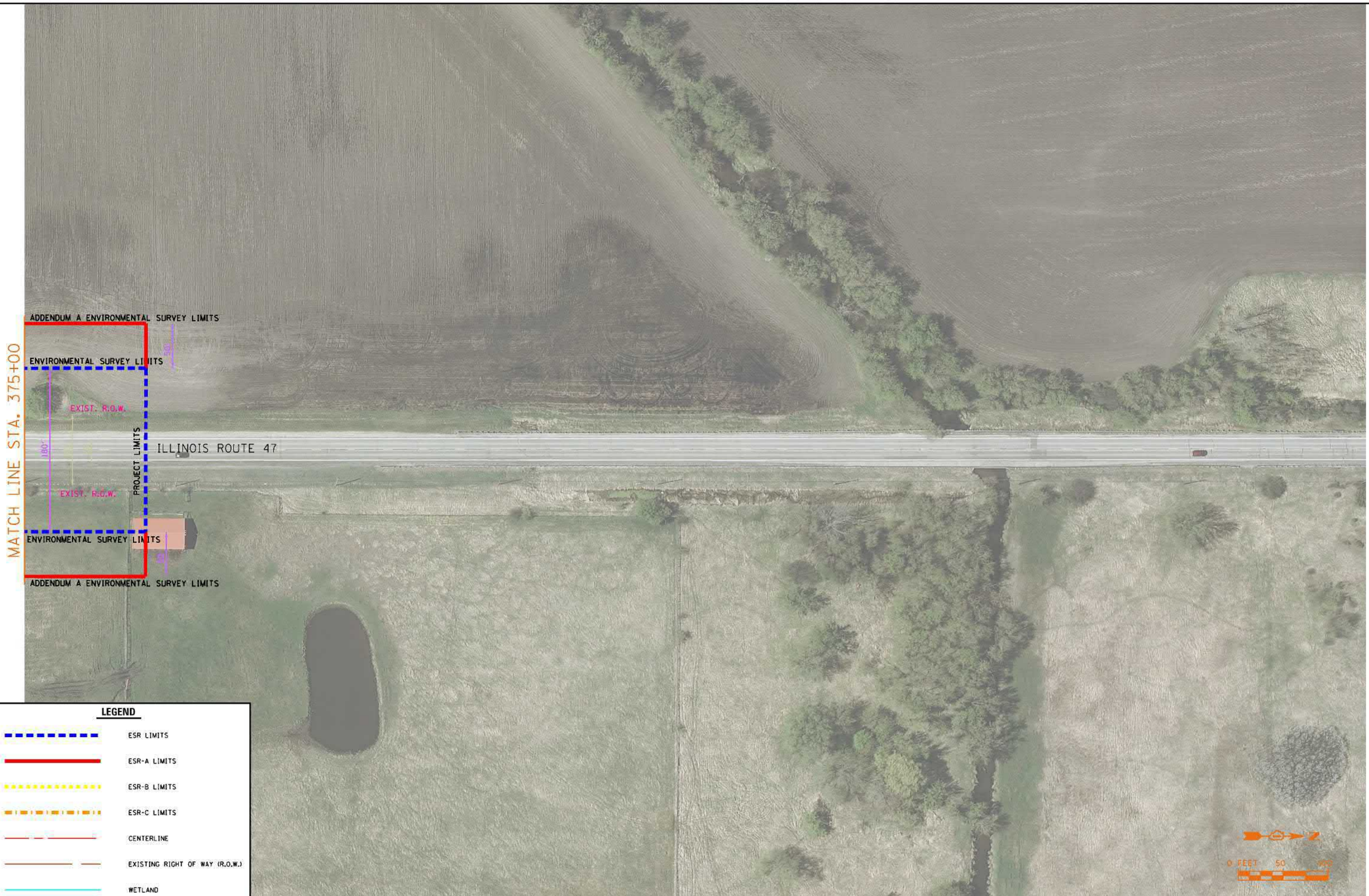
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	19
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = S:\JUL16300-63916346\814\Micro\CoRD Sheets\ESR-28.dgn



LEGEND

- ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- ESR-C LIMITS
- CENTERLINE
- EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

1170 SOUTH HOUGHTON ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = BillP	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

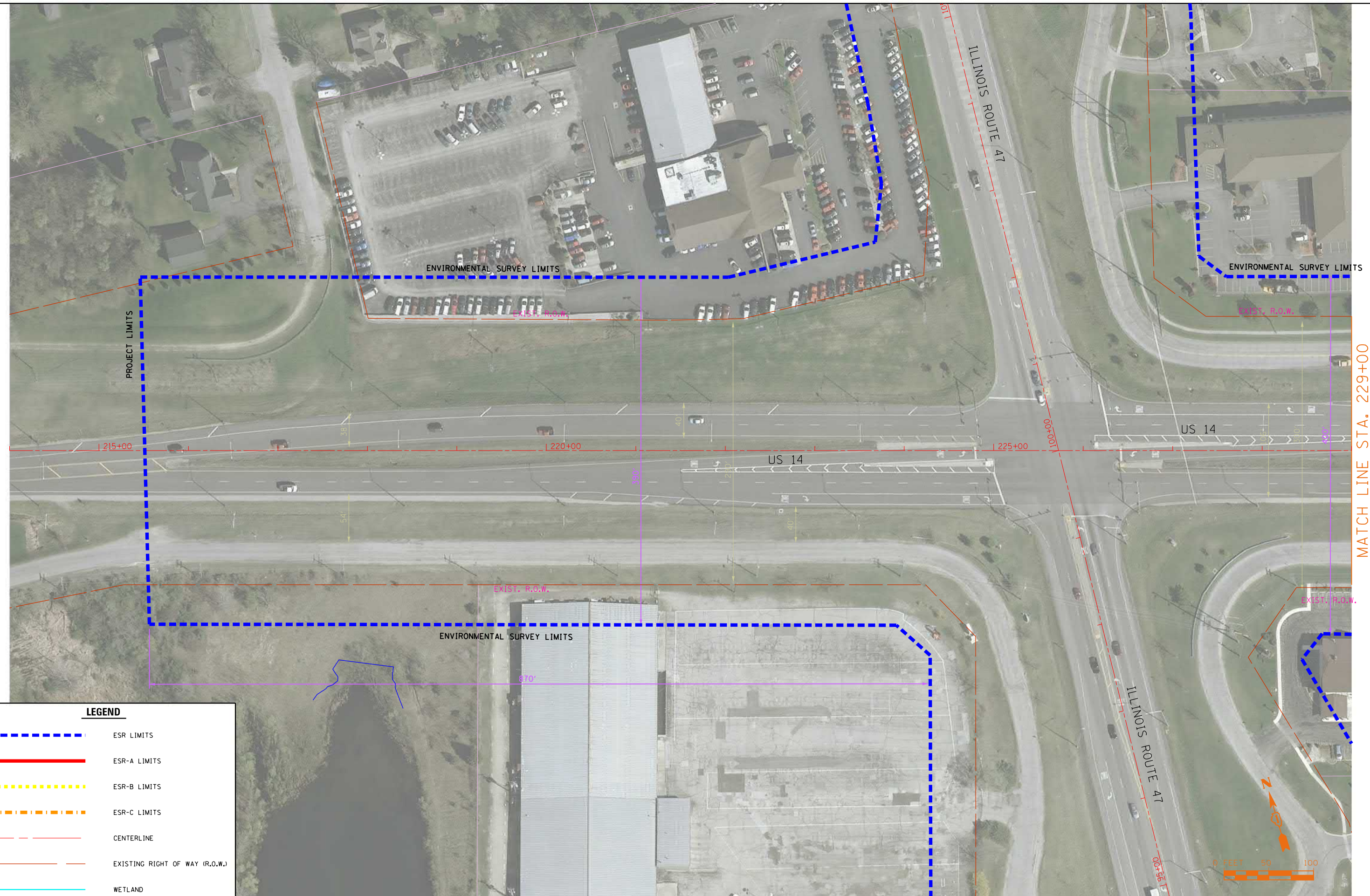
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	20
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00D Sheets\ESR-21-US14.dgn



LEGEND

- - - - - ESR LIMITS
- - - - - ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- - - - - WETLAND

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 (815) 744-4200








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PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

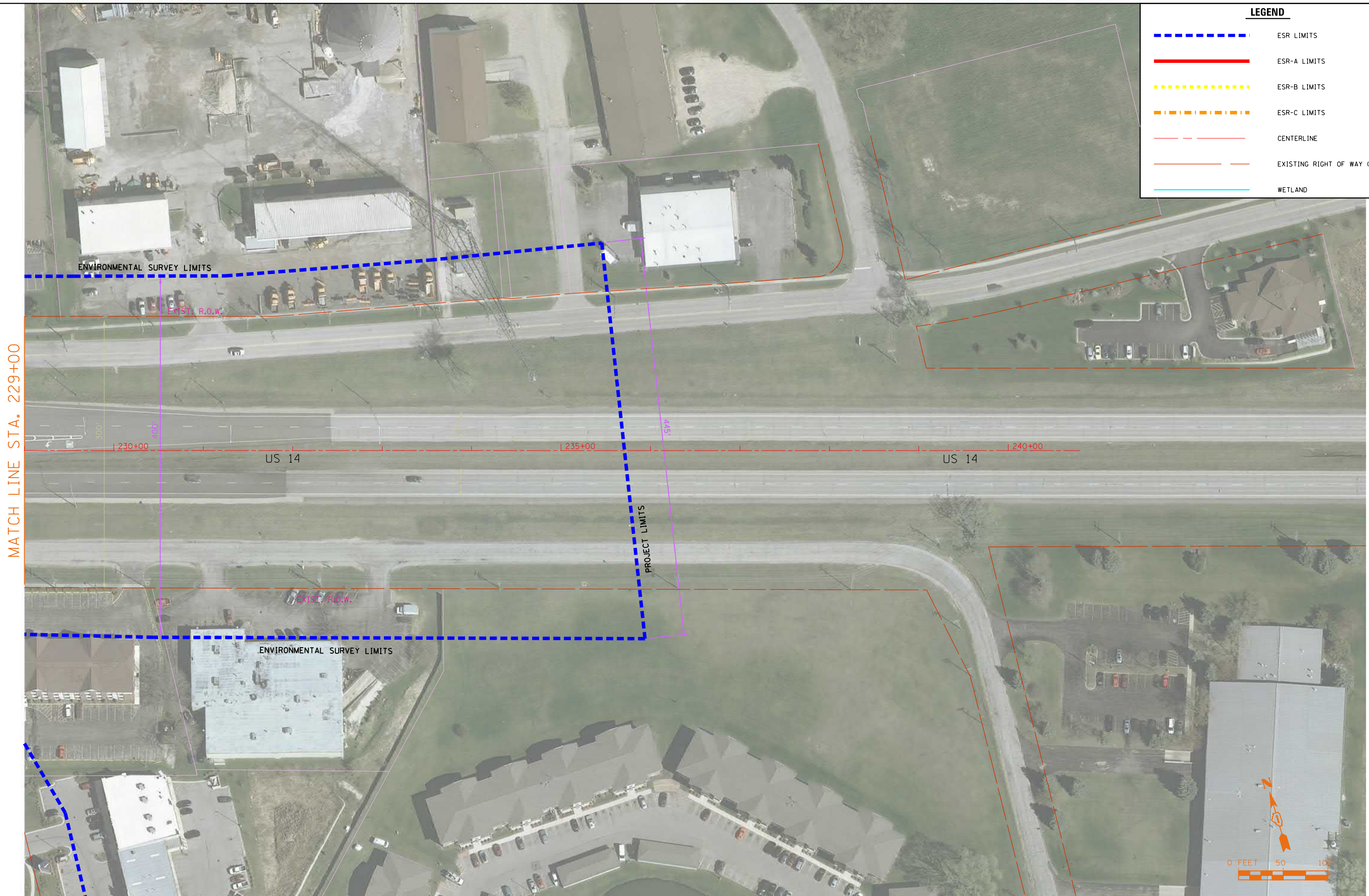
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	21
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



MATCH LINE STA. 229+00

FILE NAME = S:\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-22-US14.dgn



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JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	22
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-23-SOUTHVIEW.dgn



LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

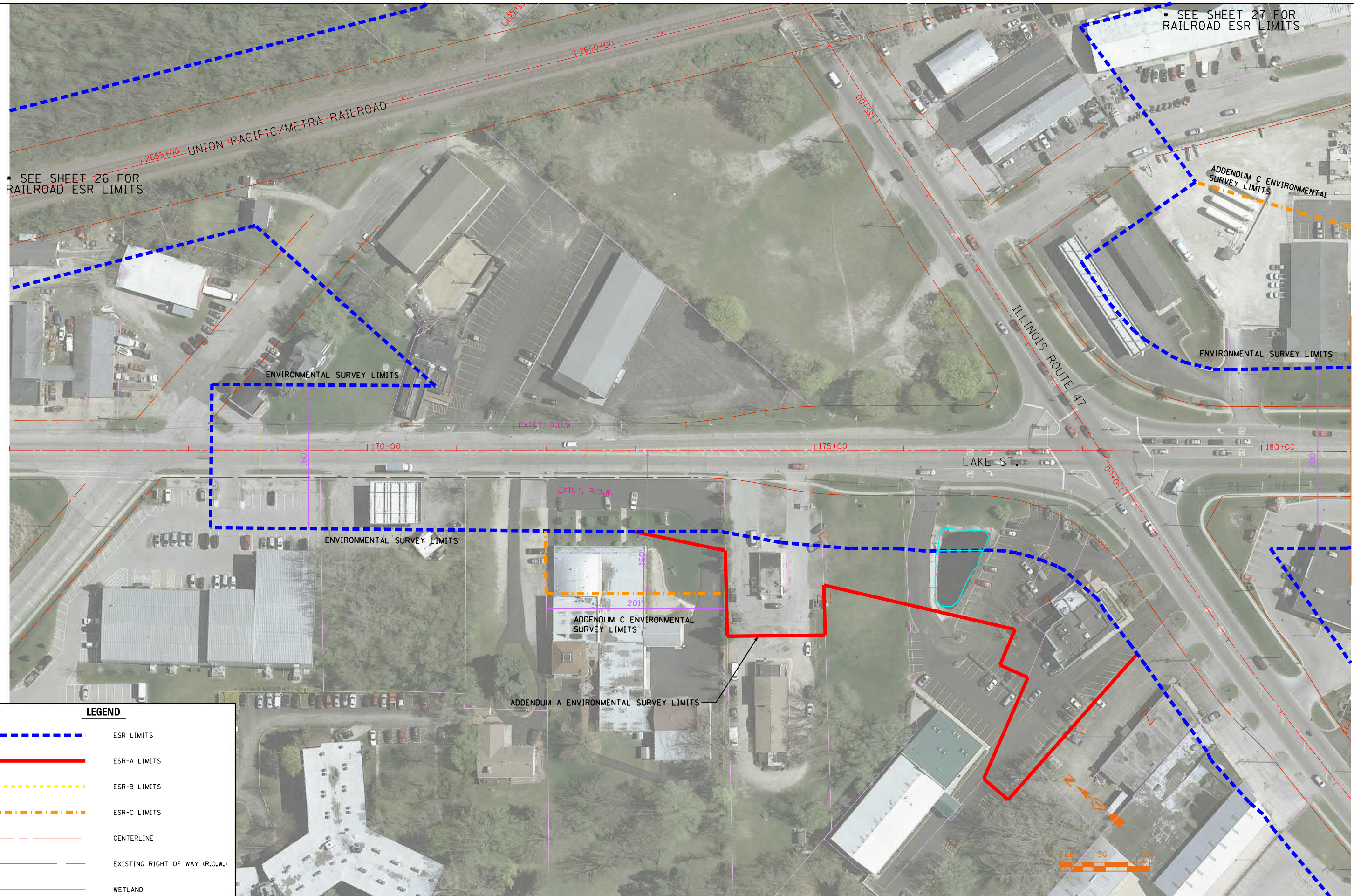
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	23
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-24-LAKE.dgn



SEE SHEET 26 FOR RAILROAD ESR LIMITS

SEE SHEET 27 FOR RAILROAD ESR LIMITS

ENVIRONMENTAL SURVEY LIMITS

ADDENDUM C ENVIRONMENTAL SURVEY LIMITS

ENVIRONMENTAL SURVEY LIMITS

ENVIRONMENTAL SURVEY LIMITS

ADDENDUM C ENVIRONMENTAL SURVEY LIMITS

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

MATCH LINE STA. 181+00

LEGEND

- ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- ESR-C LIMITS
- CENTERLINE
- EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND

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JOLIET, ILLINOIS 60431
(815) 744-4200








USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

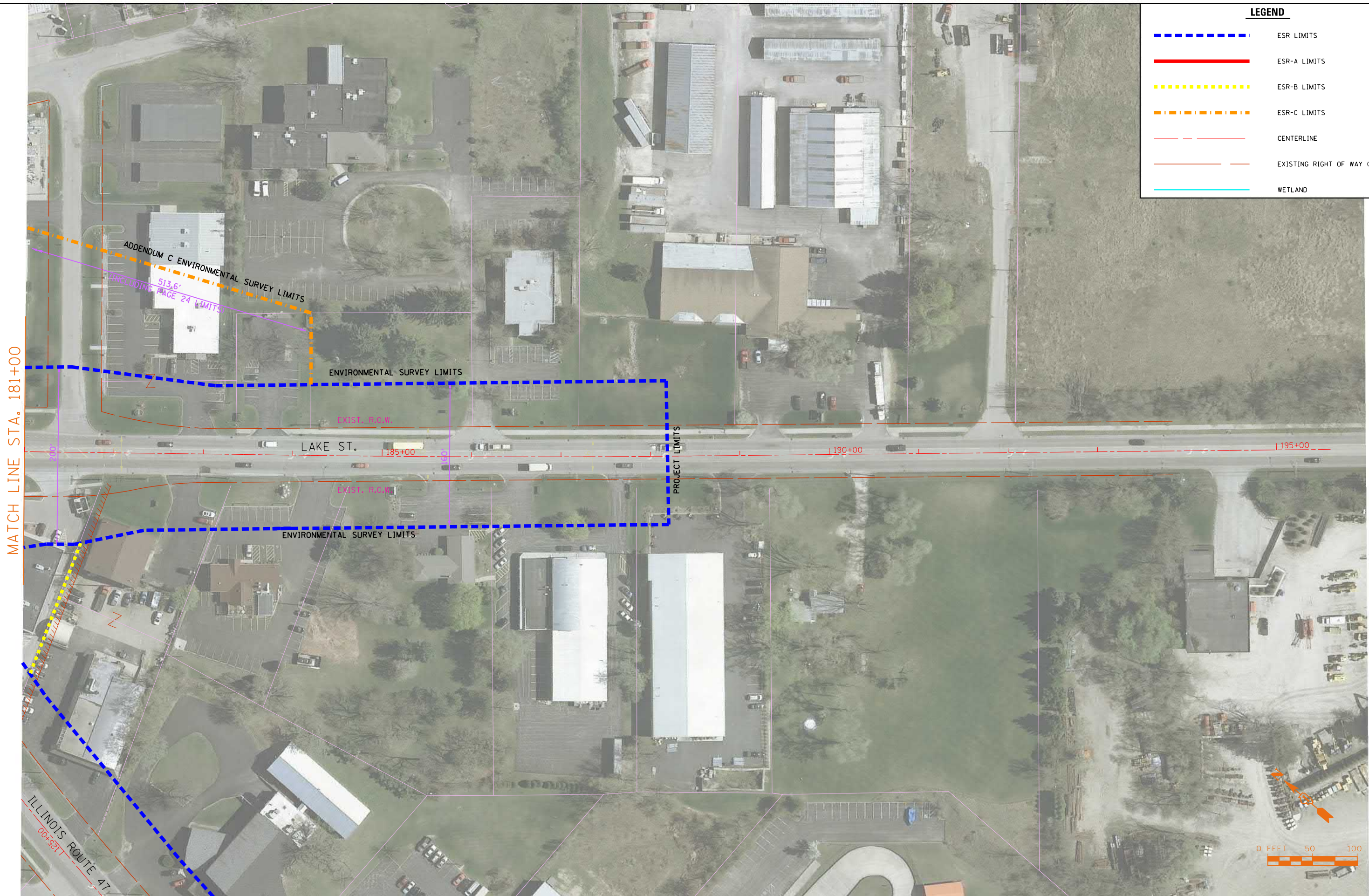
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	24
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



MATCH LINE STA. 181+00

FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CAD\ Sheets\ESR-25-LAKE.dgn



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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

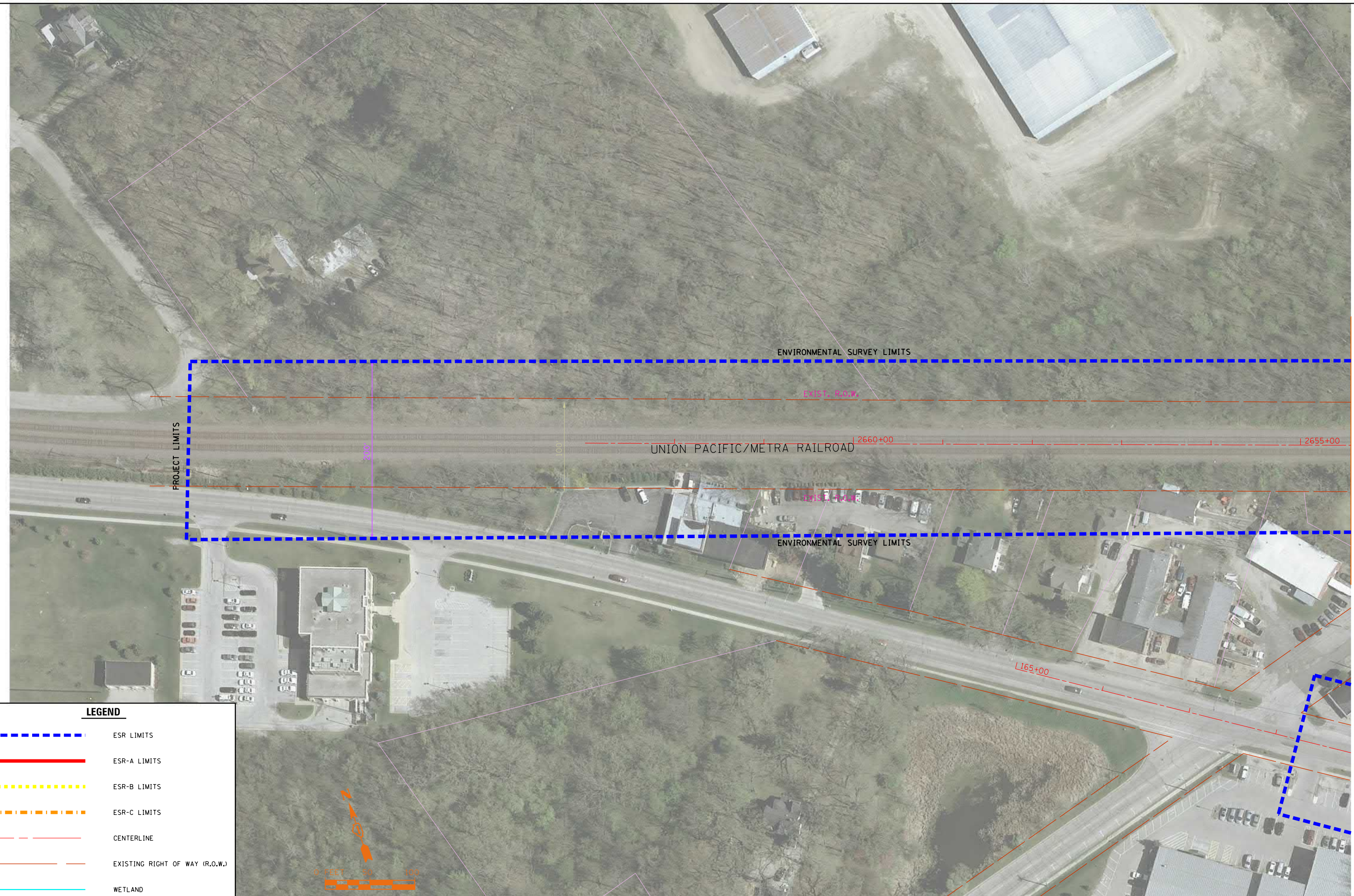
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	25
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-26-RAILROAD.dgn



MATCH LINE STA. 113+00

LEGEND

- - - - - ESR LIMITS
- - - - - ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- - - - - WETLAND

SA STRAND ASSOCIATES
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 (815) 744-4200








USER NAME = B:11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

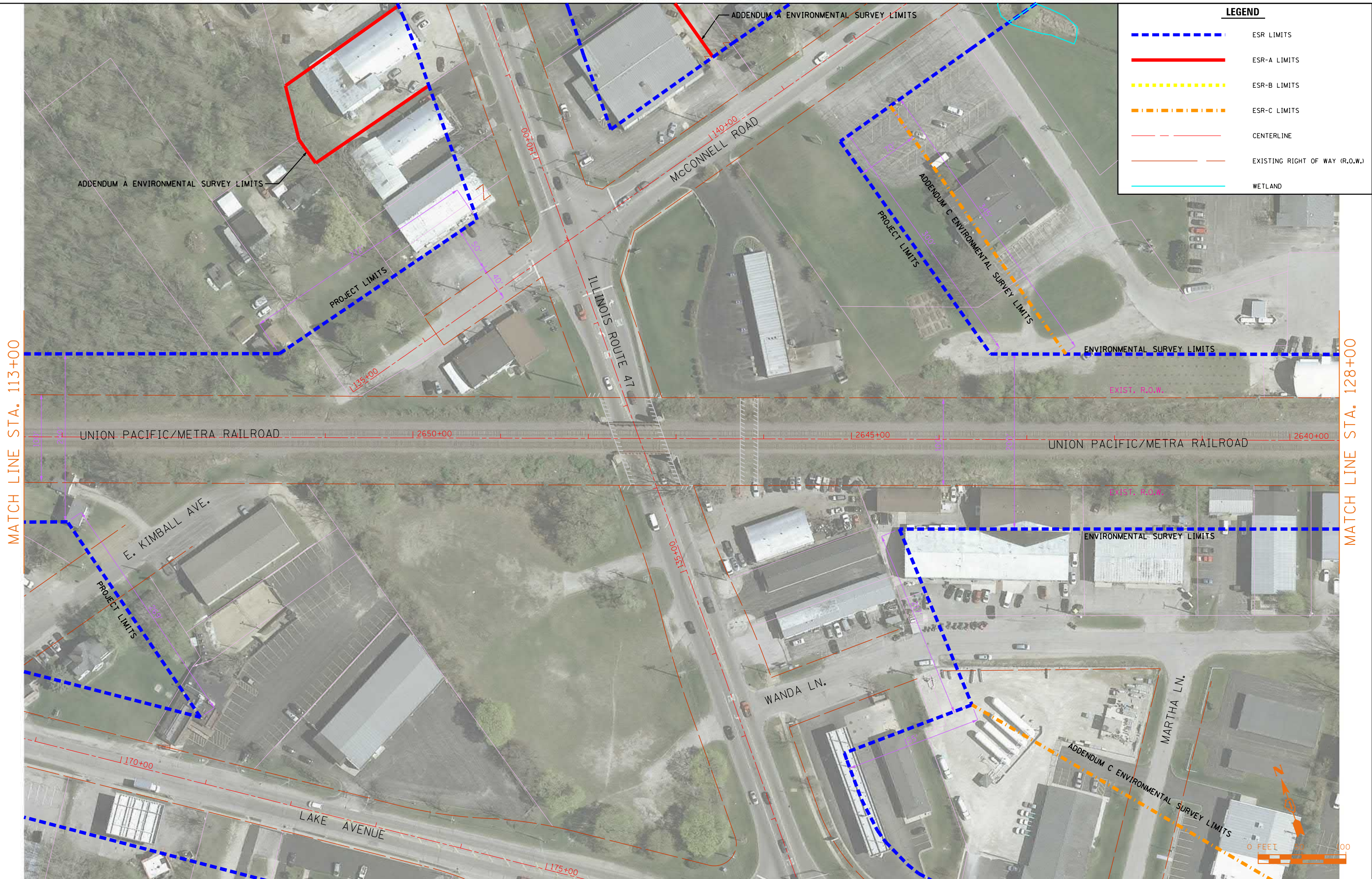
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	26
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAADD Sheets\ESR-27-RAILROAD.dgn



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USER NAME = B:11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

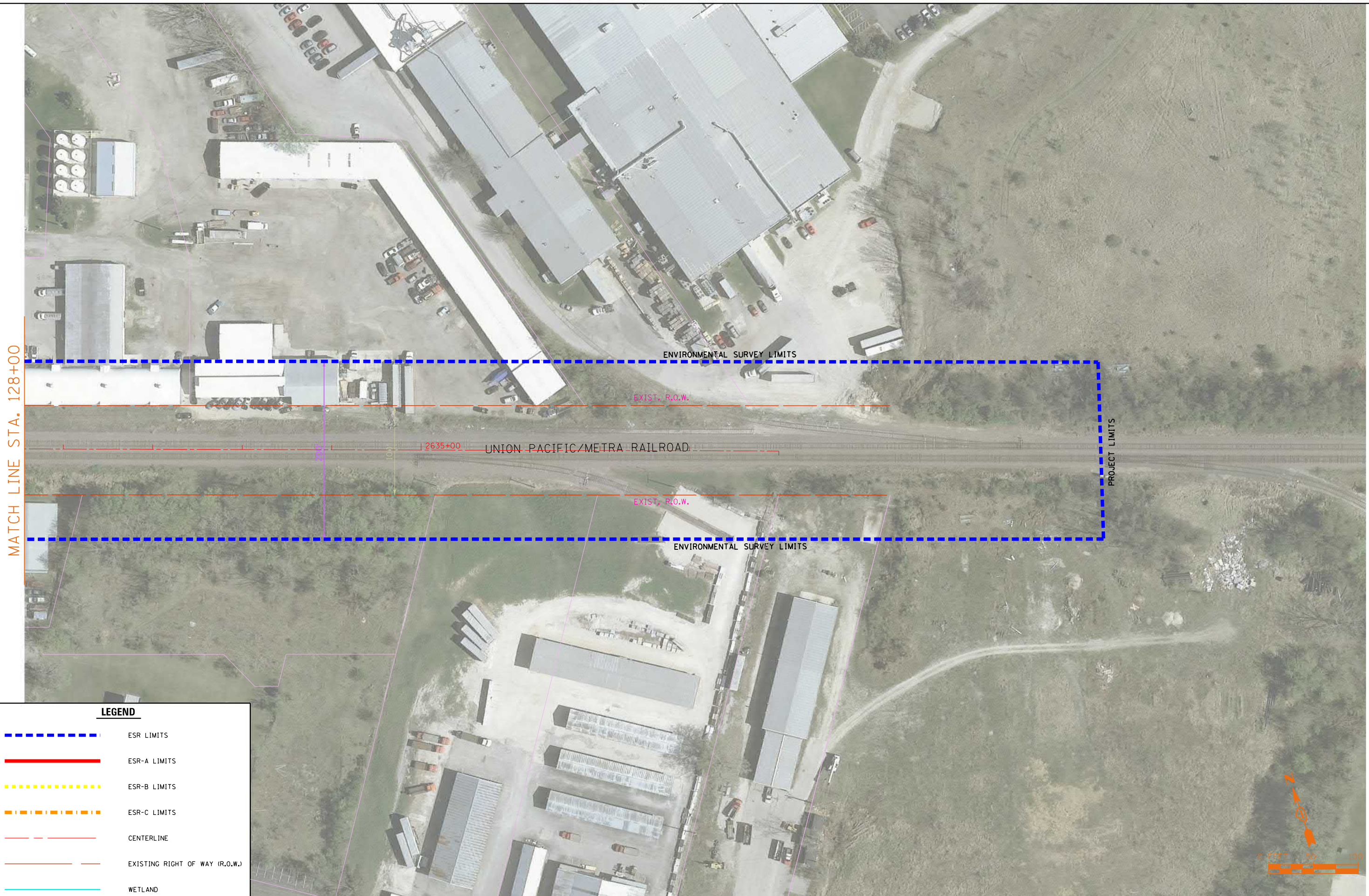
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	27
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JUL\63800-6399\6346\014\Micros\CADD Sheets\ESR-28-RAILROAD.dgn



MATCH LINE STA. 128+00

PROJECT LIMITS

ENVIRONMENTAL SURVEY LIMITS

EXIST. R.O.W.

2635+00

UNION PACIFIC/METRA RAILROAD

EXIST. R.O.W.

ENVIRONMENTAL SURVEY LIMITS

LEGEND

- - - - - ESR LIMITS
- - - - - ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- - - - - WETLAND

SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JULIET, ILLINOIS 60431
 (815) 744-4200








USER NAME = B11P	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 5/26/2017	DATE -	REVISED -

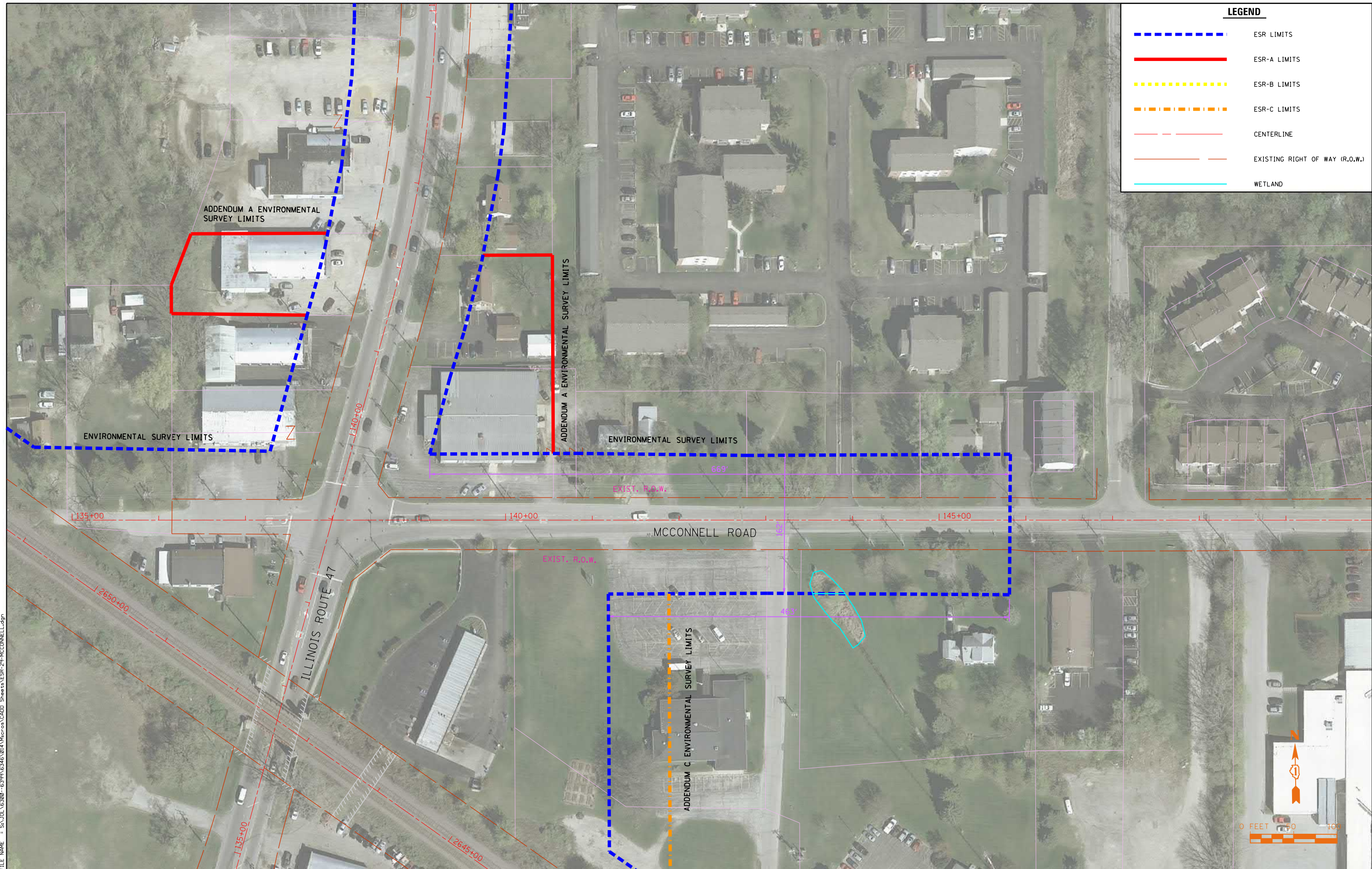
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	28
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00 Sheets\ESR-29-MCCONNELL.dgn

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 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

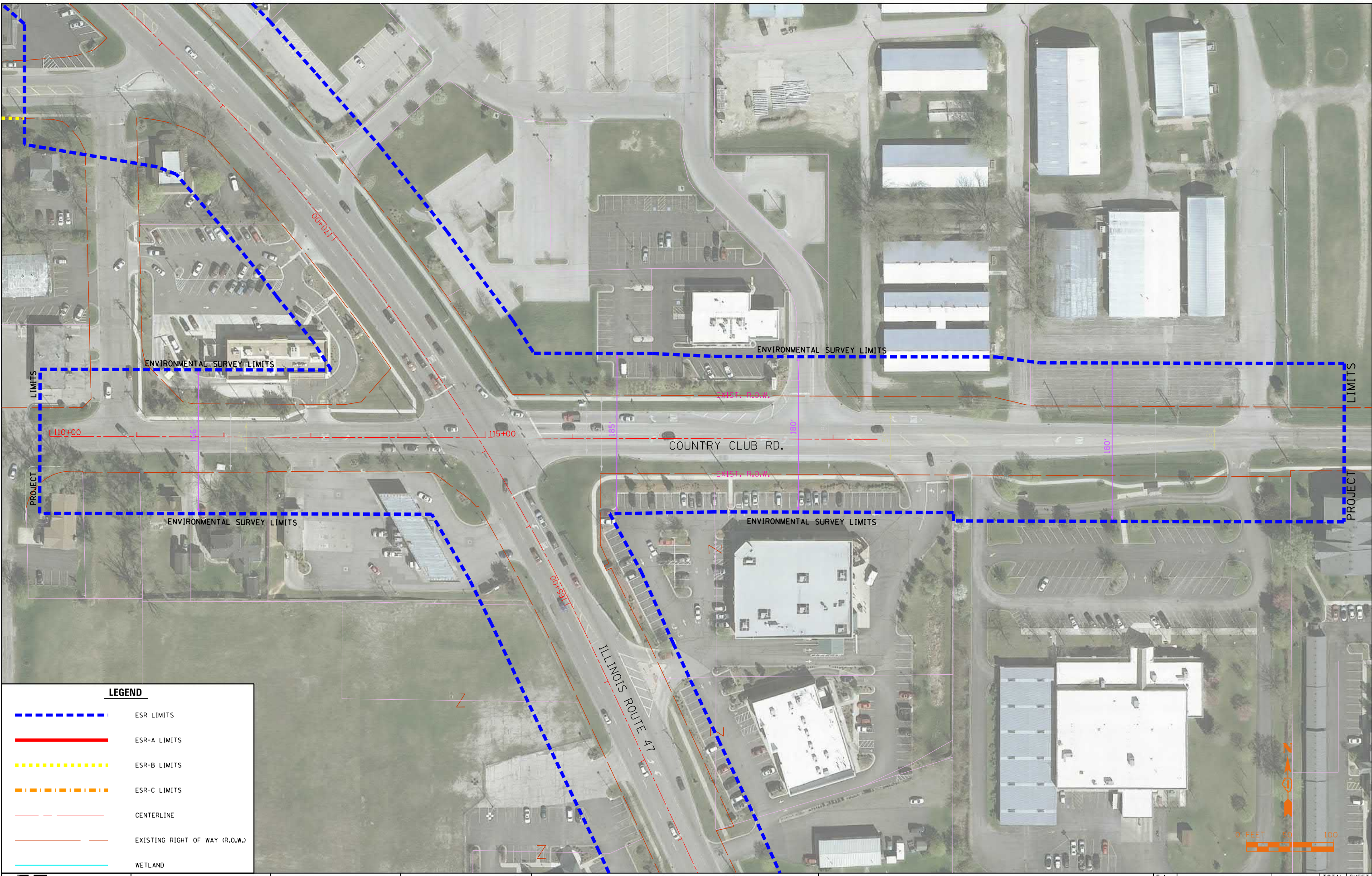
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PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST			
SCALE: N-T-S	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	29
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA0D Sheets\ESR-30-SOUTH.dgn



LEGEND

- - - - - ESR LIMITS
- - - - - ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- - - - - WETLAND



SA STRAND ASSOCIATES
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 JOLIET, ILLINOIS 60431
 (815) 744-4200








USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

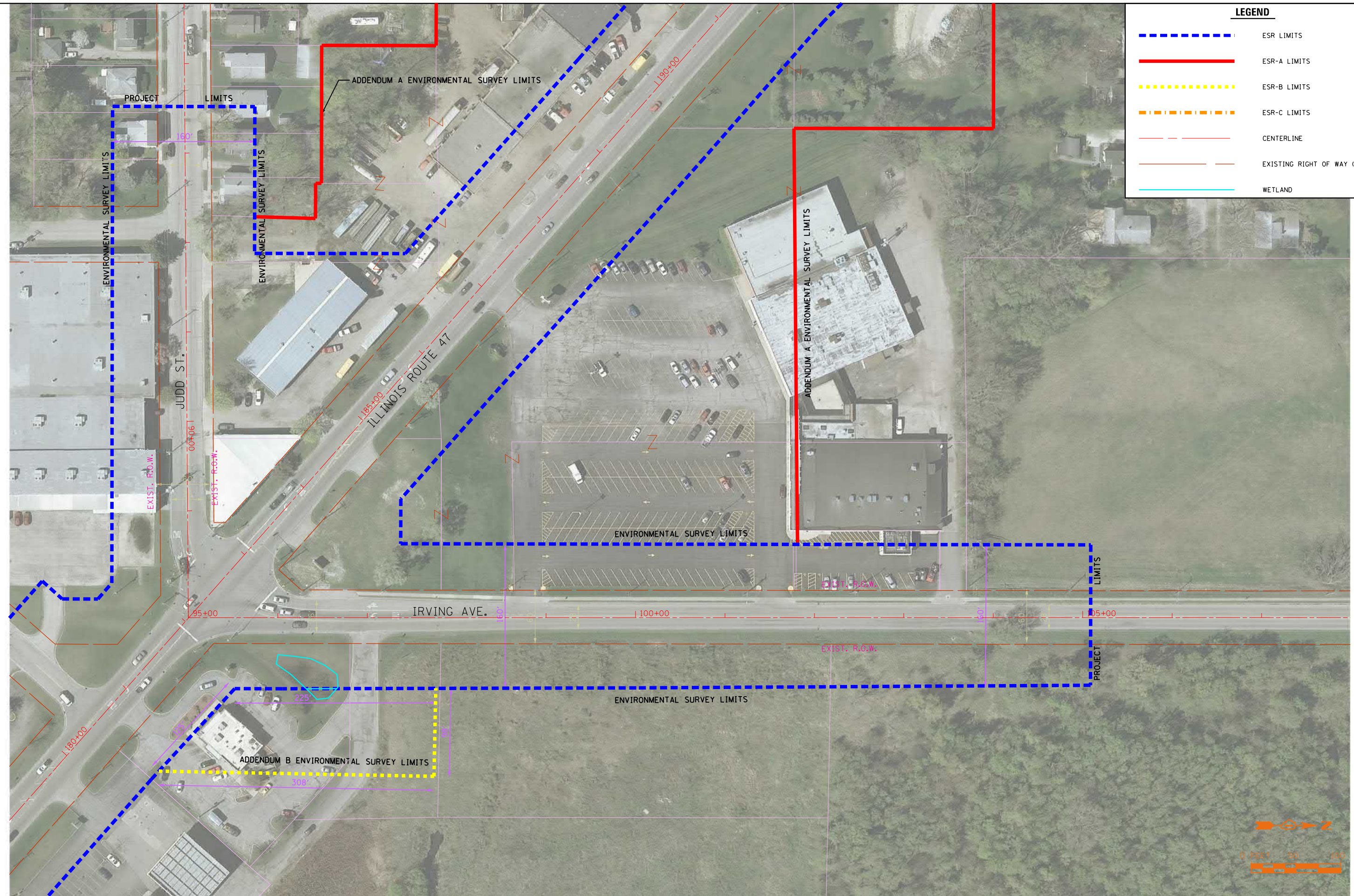
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	30
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micro\Coadd Sheets\ESR-31-IRVING.dgn

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 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

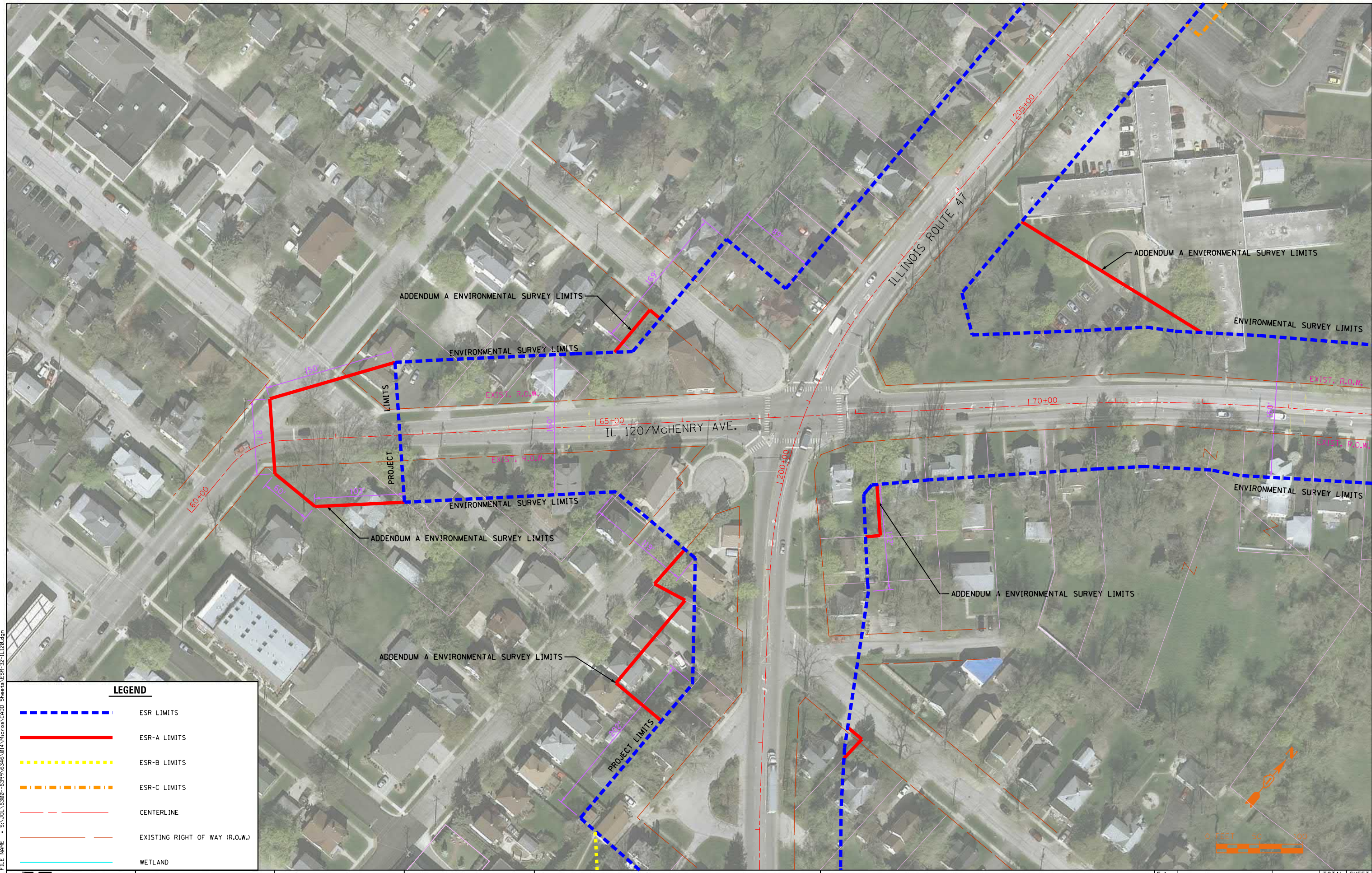
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	31
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA0D Sheets\ESR-32-IL120.dgn



LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- - - - - ESR-B LIMITS
- - - - - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND



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 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST
 SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	32
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND

FILE NAME = SA\JUL16380-6399\6346\014\Micro\CA0D Sheets\ESR-33-IL120.dgn

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USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

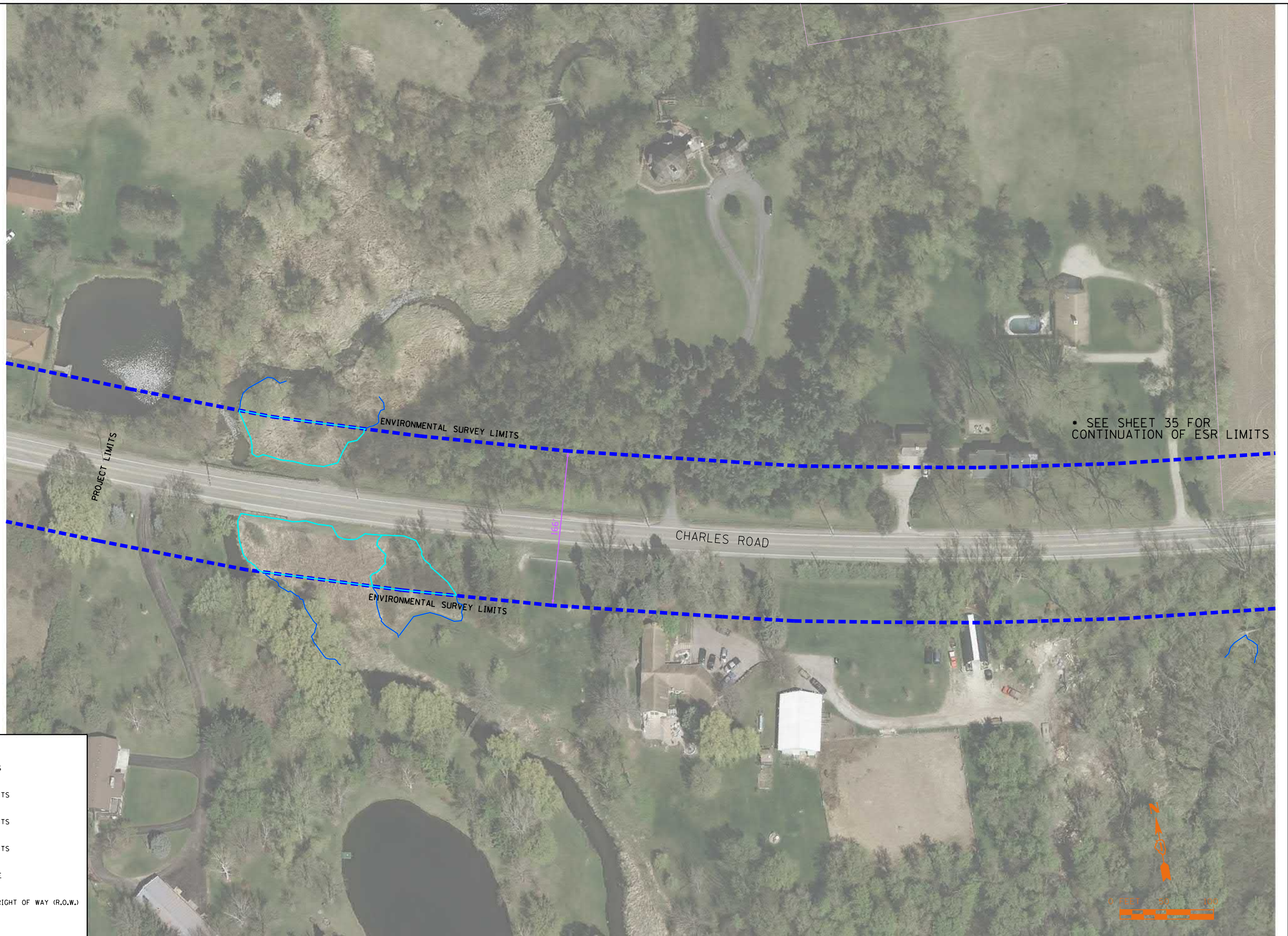
ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	33
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				










FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-34-CHARLES.dgn



SEE SHEET 35 FOR CONTINUATION OF ESR LIMITS

LEGEND

-  ESR LIMITS
-  ESR-A LIMITS
-  ESR-B LIMITS
-  ESR-C LIMITS
-  CENTERLINE
-  EXISTING RIGHT OF WAY (R.O.W.)
-  WETLAND

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 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / 1" =	CHECKED -	REVISED -
PLOT DATE = 5/26/2017	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	34
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JUL16300-6399\6346\014\Micro\CA00 Sheets\ESR-35-CHARLES.dgn



* SEE SHEET 34 FOR CONTINUATION OF ESR LIMITS

ENVIRONMENTAL SURVEY LIMITS

CHARLES ROAD

ENVIRONMENTAL SURVEY LIMITS

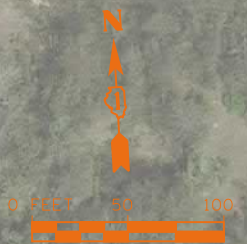
EXIST. R.O.W.

CENT. R.O.W.

MATCH LINE STA. 3+00

LEGEND

- ESR LIMITS
- ESR-A LIMITS
- ESR-B LIMITS
- ESR-C LIMITS
- CENTERLINE
- EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND



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 (815) 744-4200

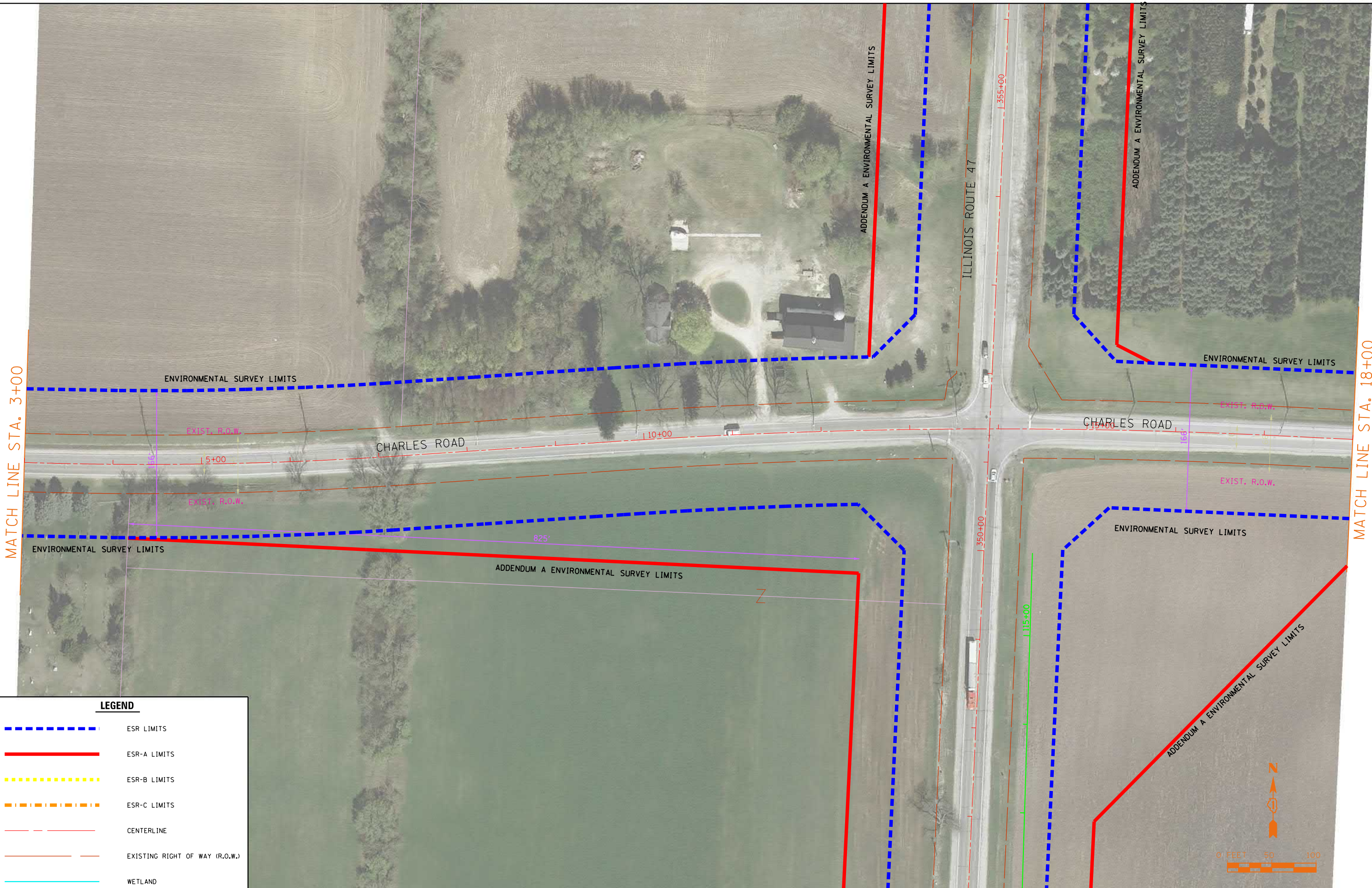
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PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST			
SCALE: N-T-S	SHEET	OF	SHEETS
	STA.		TO STA.








F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	35
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JUL163800-6399\6346\014\Micros\CADD Sheets\ESR-36-CHARLES.dgn



MATCH LINE STA. 3+00

MATCH LINE STA. 18+00

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S	SHEET	OF	SHEETS	STA.	TO	STA.
--------------	-------	----	--------	------	----	------

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	36
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

MATCH LINE STA. 18+00

• SEE SHEET 38 FOR CONTINUATION OF ESR LIMITS

ENVIRONMENTAL SURVEY LIMITS

CHARLES ROAD

ENVIRONMENTAL SURVEY LIMITS

ADDENDUM A ENVIRONMENTAL SURVEY LIMITS

LEGEND

- - - - - ESR LIMITS
- ESR-A LIMITS
- · - · - ESR-B LIMITS
- · - · - ESR-C LIMITS
- - - - - CENTERLINE
- - - - - EXISTING RIGHT OF WAY (R.O.W.)
- WETLAND



FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-37-CHARLES.dgn

SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B11P	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / 1" =	DRAWN -	REVISED -
PLOT DATE = 5/26/2017	CHECKED -	REVISED -
	DATE -	REVISED -

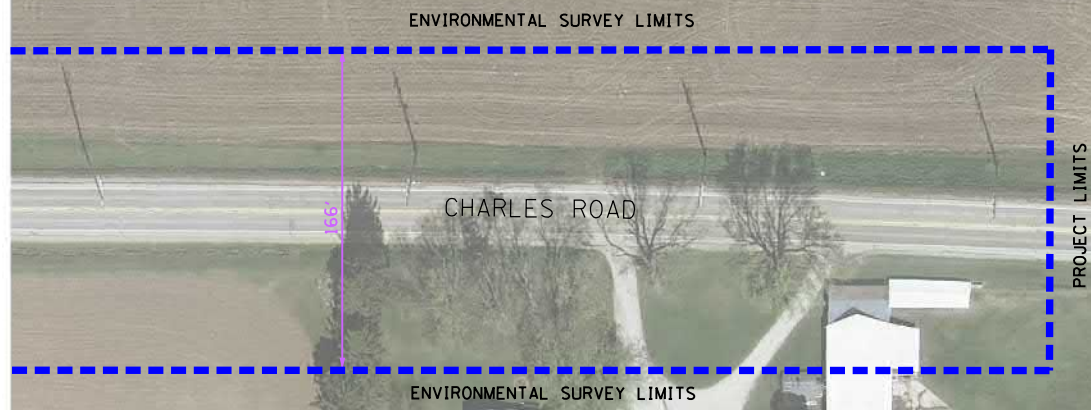
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	37
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

• SEE SHEET 37 FOR CONTINUATION OF ESR LIMITS



FILE NAME = SA\JOL\63800-6399\6346\014\Micros\CADD Sheets\ESR-38-CHARLES.dgn

LEGEND	
	ESR LIMITS
	ESR-A LIMITS
	ESR-B LIMITS
	ESR-C LIMITS
	CENTERLINE
	EXISTING RIGHT OF WAY (R.O.W.)
	WETLAND



SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = B:11P	DESIGNED -	REVISED -
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	DATE -	REVISED -

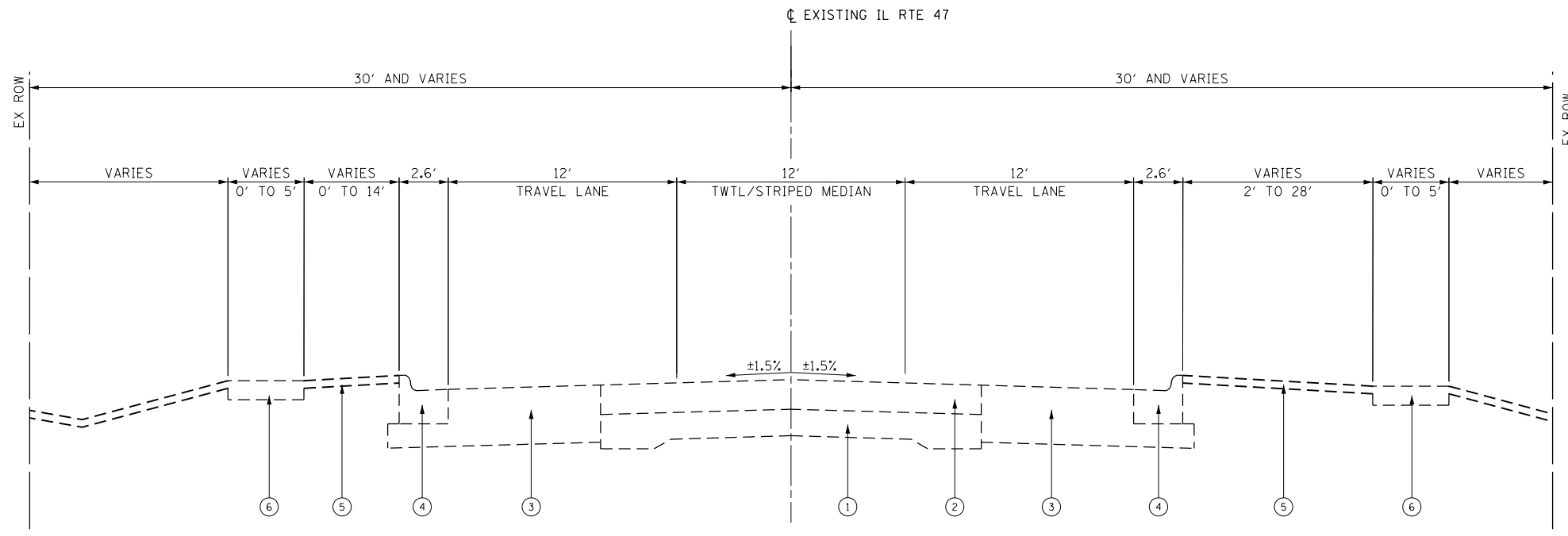
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ILLINOIS ROUTE 47 ADDENDUM C ENVIRONMENTAL SURVEY REQUEST

SCALE: N-T-S SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			38	38
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

**EXHIBIT 1.2-2
EXISTING TYPICAL SECTIONS**

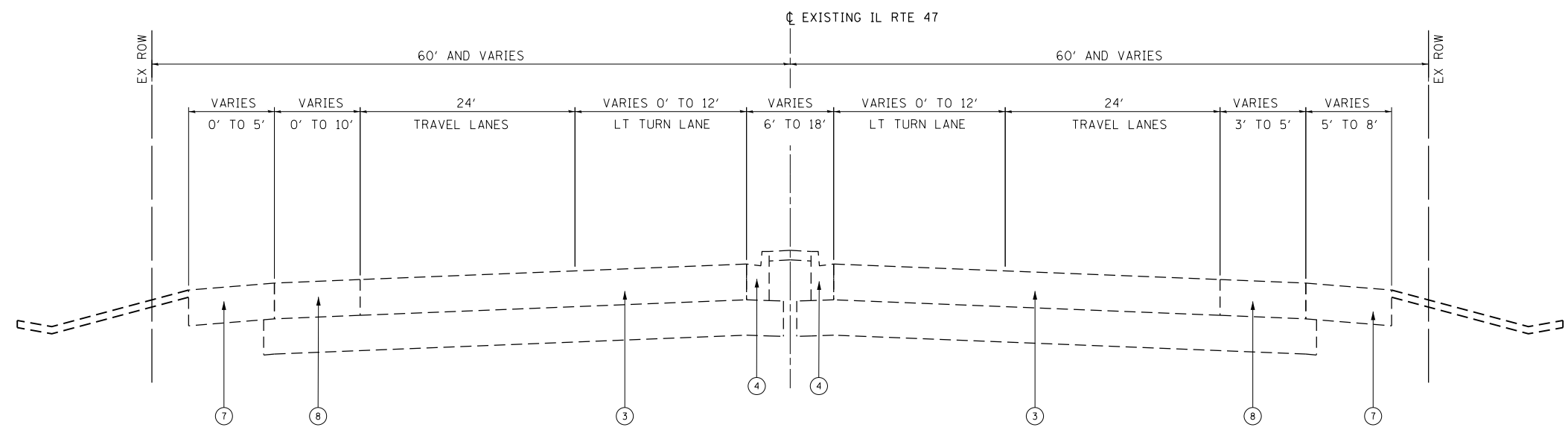


EXISTING TYPICAL SECTION

STA. 104+00.00 TO STA. 120+00.00
 STA. 123+00.00 TO STA. 136+00.00
 STA. 141+00.00 TO STA. 155+00.00
 STA. 173+00.00 TO STA. 280+00.00
 STA. 283+00.00 TO STA. 288+00.00

EXISTING LEGEND

- ① EX. P.C.C. PAVEMENT (9''-7''-9'')
- ② EX. HMA PAVEMENT, OVERLAY, 7.75''
- ③ EX. HMA PAVEMENT, 15''
- ④ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.24
- ⑤ EX. TURF AREA
- ⑥ EX. P.C.C. SIDEWALK-INTERMITTENT
- ⑦ EX. AGGREGATE SHOULDER, TYPE B
- ⑧ EX. ASPHALT SHOULDER
- ⑨ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.12



EXISTING TYPICAL SECTION

STA. 93+66.08 TO STA. 104+00.00

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SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

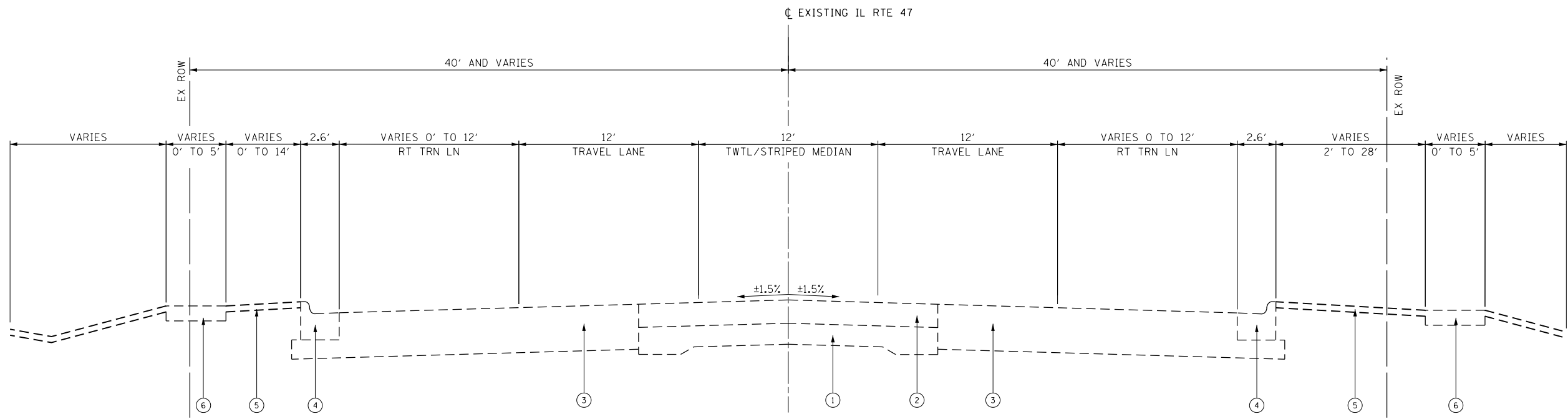
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CHECKED DWG	CHECKED DWG	REVISED -
DATE 3/10/17	DATE 3/10/17	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 1 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	1
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

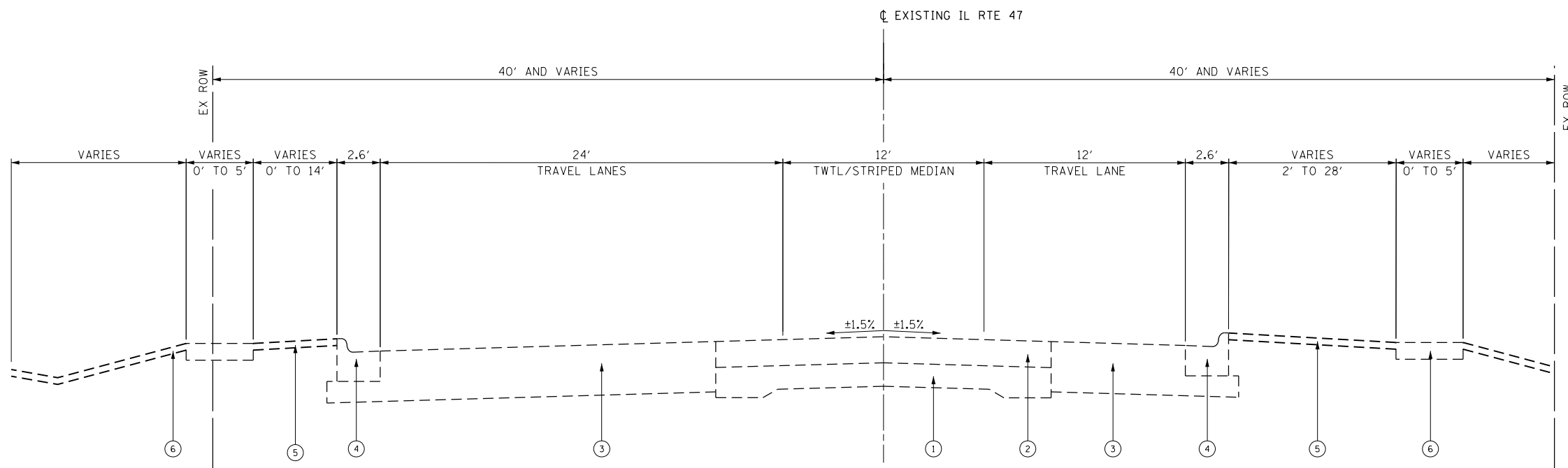


EXISTING TYPICAL SECTION

STA. 120+00.00 TO STA. 123+00.00
 STA. 136+00.00 TO STA. 141+00.00
 STA. 280+00.00 TO STA. 283+00.00

EXISTING LEGEND

- ① EX. P.C.C. PAVEMENT (9''-7''-9'')
- ② EX. HMA PAVEMENT, OVERLAY, 7.75''
- ③ EX. HMA PAVEMENT, 15''
- ④ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.24
- ⑤ EX. TURF AREA
- ⑥ EX. P.C.C. SIDEWALK-INTERMITTENT
- ⑦ EX. AGGREGATE SHOULDER, TYPE B
- ⑧ EX. ASPHALT SHOULDER
- ⑨ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.12



EXISTING TYPICAL SECTION

STA. 155+00.00 TO STA. 173+00.00

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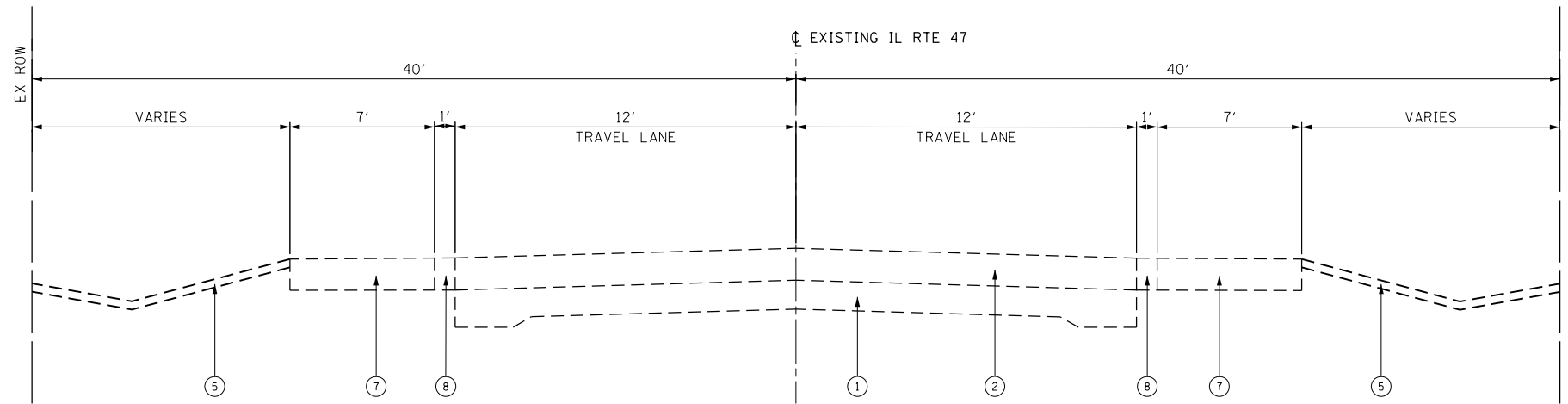
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PLOT DATE = 2/11/2019		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 2 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	2
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION
STA. 288+00 TO STA. 352+00

EXISTING LEGEND

- ① EX. P.C.C. PAVEMENT (9''-7''-9'')
- ② EX. HMA PAVEMENT, OVERLAY, 7.75''
- ③ EX. HMA PAVEMENT, 15''
- ④ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.24
- ⑤ EX. TURF AREA
- ⑥ EX. P.C.C. SIDEWALK-INTERMITTENT
- ⑦ EX. AGGREGATE SHOULDER, TYPE B
- ⑧ EX. ASPHALT SHOULDER
- ⑨ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.12

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SA STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED WRP	REVISED -
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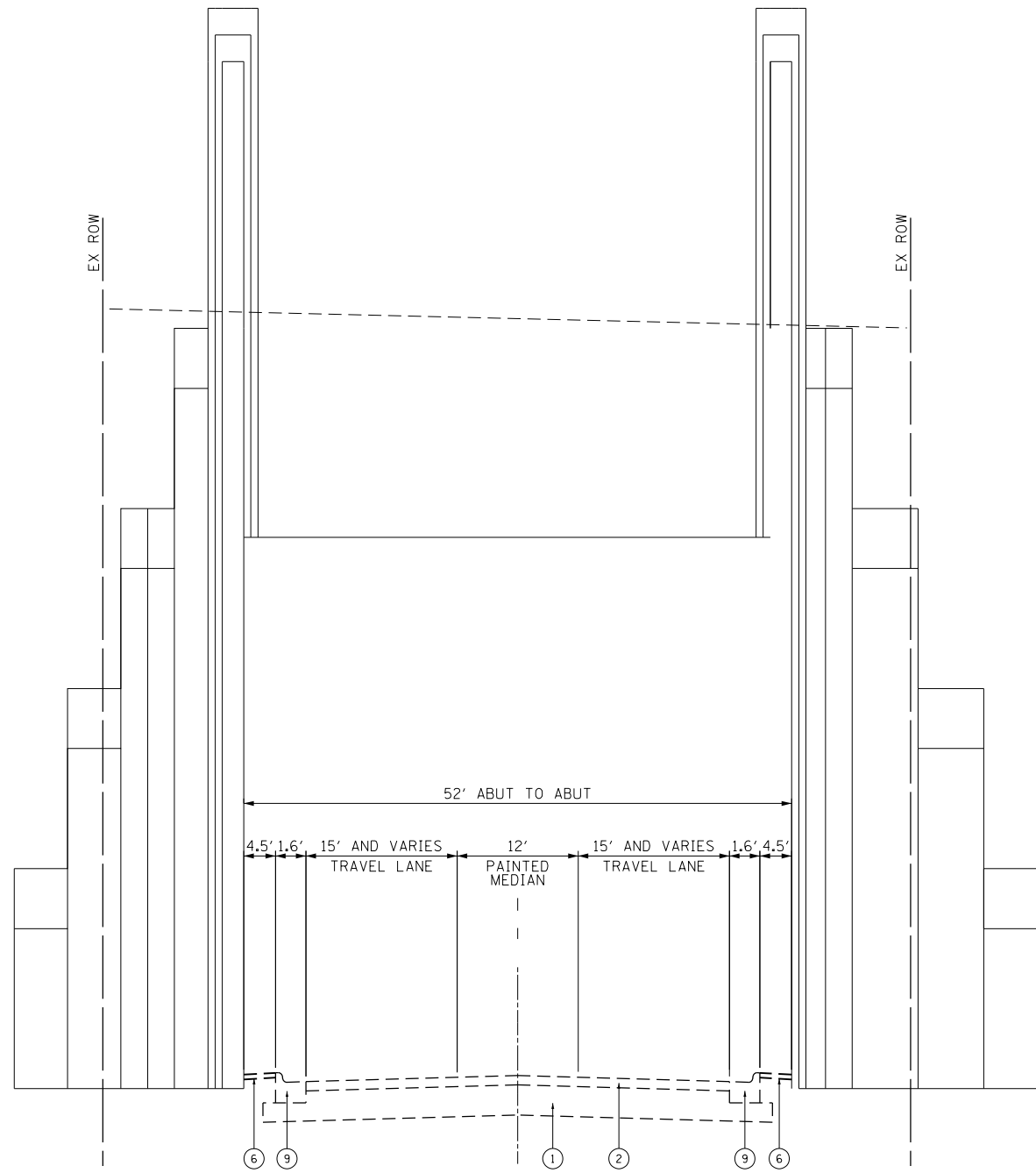
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS			
SCALE: N-T-S	SHEET 3 OF 9 SHEETS	STA. N/A	TO STA. N/A

F.A.U. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 9	SHEET NO. 3
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

Typical Sections

FILE NAME = SA\JOL\6300-6399\6346\014\Micro\CA00 Sheets\0812345-sh-typical.dgn



EXISTING TYPICAL SECTION

EXISTING LEGEND

- ① EX. P.C.C. PAVEMENT (9'-7"-9")
- ② EX. HMA PAVEMENT, OVERLAY, 7.75"
- ③ EX. HMA PAVEMENT, 15"
- ④ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.24
- ⑤ EX. TURF AREA
- ⑥ EX. P.C.C. SIDEWALK-INTERMITTENT
- ⑦ EX. AGGREGATE SHOULDER, TYPE B
- ⑧ EX. ASPHALT SHOULDER
- ⑨ EX. COMB. CONC. CURB AND GUTTER, TYPE B-6.12



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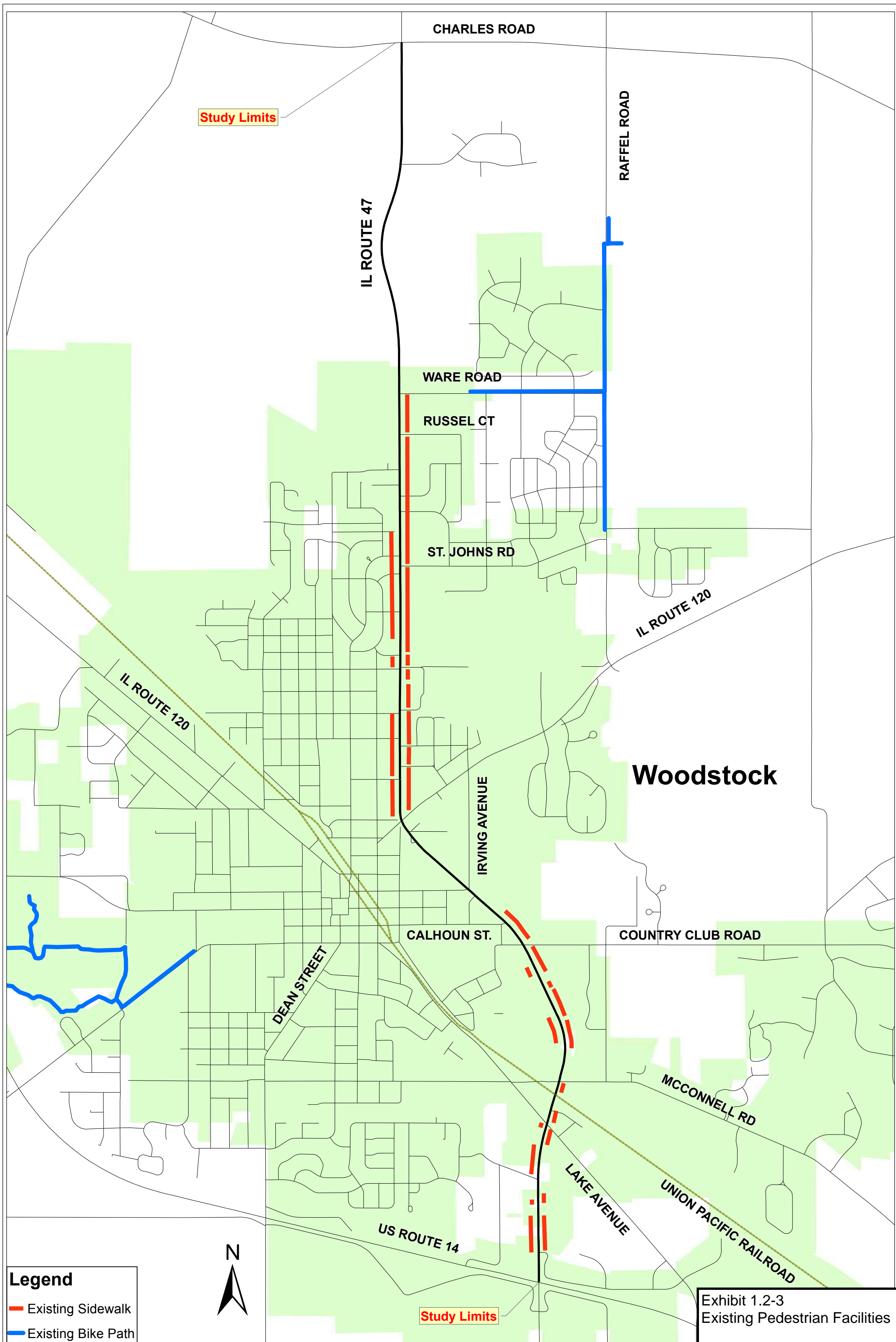
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 4 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	4
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

**EXHIBIT 1.2-3
EXISTING PEDESTRIAN FACILITIES**



Study Limits

CHARLES ROAD

RAFFEL ROAD

IL ROUTE 47

WARE ROAD

RUSSEL CT

ST. JOHNS RD

IL ROUTE 120

IL ROUTE 120

Woodstock

IRVING AVENUE

CALHOUN ST.

COUNTRY CLUB ROAD

DEAN STREET

MCCONNELL RD

LAKE AVENUE

US ROUTE 14

UNION PACIFIC RAILROAD

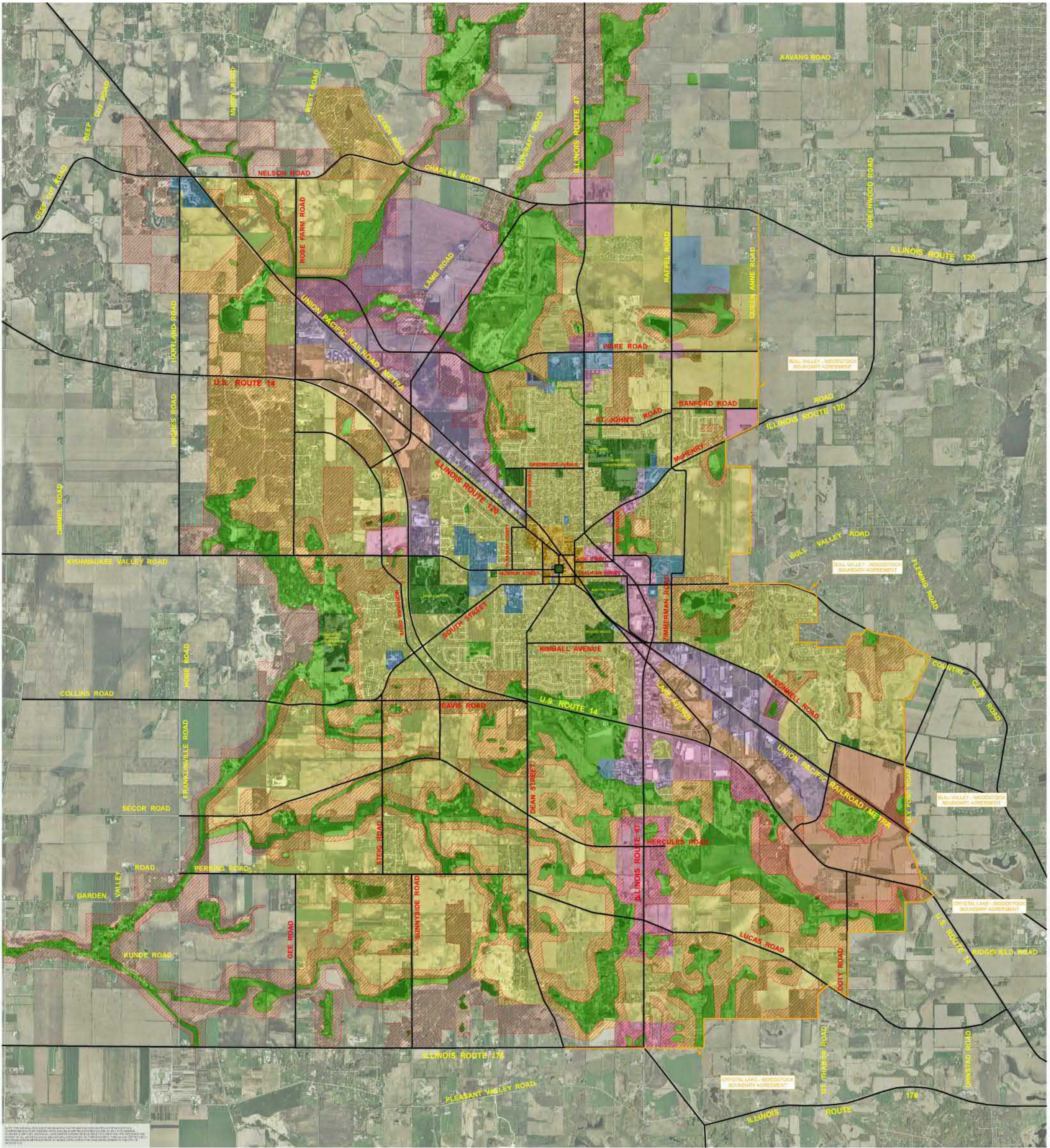
Study Limits

Legend

- Existing Sidewalk
- Existing Bike Path



Exhibit 1.2-3
Existing Pedestrian Facilities



WOODSTOCK - COMPREHENSIVE PLAN 2008

LAND USE MAP

Approved and Adopted by the City of Woodstock City Council on _____, 2008 as per Ordinance Number 08 - O - _____.











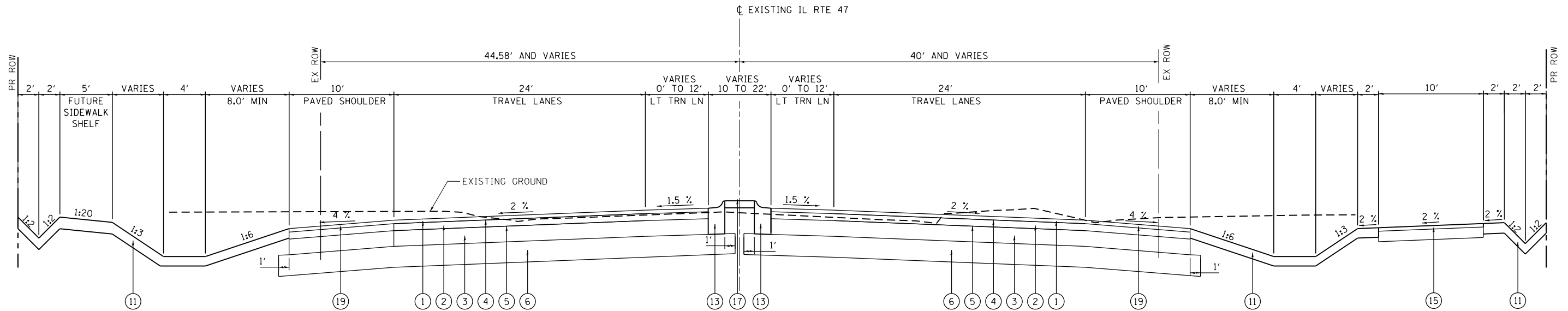
- | | | |
|---|---|--|
|  AGRICULTURE |  NEIGHBORHOOD DEVELOPMENT |  COMMERCIAL |
|  PARKS |  CIVIC |  COMMERCIAL, INDUSTRIAL, AND OFFICE MIXED USE |
|  RESOURCE CONSERVATION |  CENTRAL BUSINESS DISTRICT | |
|  RESOURCE CONSERVATION CORRIDOR |  INDUSTRIAL | |



EXHIBIT 2.3-1
TYPICAL SECTION ALTERNATIVES—WARE ROAD TO CHARLES ROAD



ALTERNATIVE 3
 LARGEST FOOTPRINT (OPEN DRAINAGE SYSTEM)
 BDE STANDARD FOOTPRINT

PROPOSED LEGEND

- | | |
|--|--|
| ① HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2" | ⑪ TOPSOIL FURNISH AND PLACE, 6" |
| ② HOT-MIX ASPHALT BINDER COURSE, IL19.0, N50, 4" | ⑫ EMBANKMENT |
| ③ HOT-MIX ASPHALT BASE COURSE, 9" | ⑬ COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24 |
| ④ BITUMINOUS MATERIALS (PRIME COAT) | ⑭ COMBINATION CURB AND GUTTER, B-6.24 |
| ⑤ AGGREGATE (PRIME COAT) | ⑮ SHARED USE PATH
HOT-MIX ASPHALT SURFACE COURSE, 3"
AGGREGATE BASE COURSE, 6" |
| ⑥ AGGREGATE SUBGRADE, 12" | ⑯ PORTLAND CEMENT CONCRETE SIDEWALK, 5" |
| ⑦ AGGREGATE SHOULDERS, TYPE B, 6" | ⑰ CONCRETE MEDIAN SURFACE, 4" |
| ⑧ HOT-MIX ASPHALT SHOULDERS, 6" | ⑱ ROUNDABOUT TRUCK APRON |
| ⑨ STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | ⑲ HOT-MIX ASPHALT SHOULDERS |
| ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6" | |

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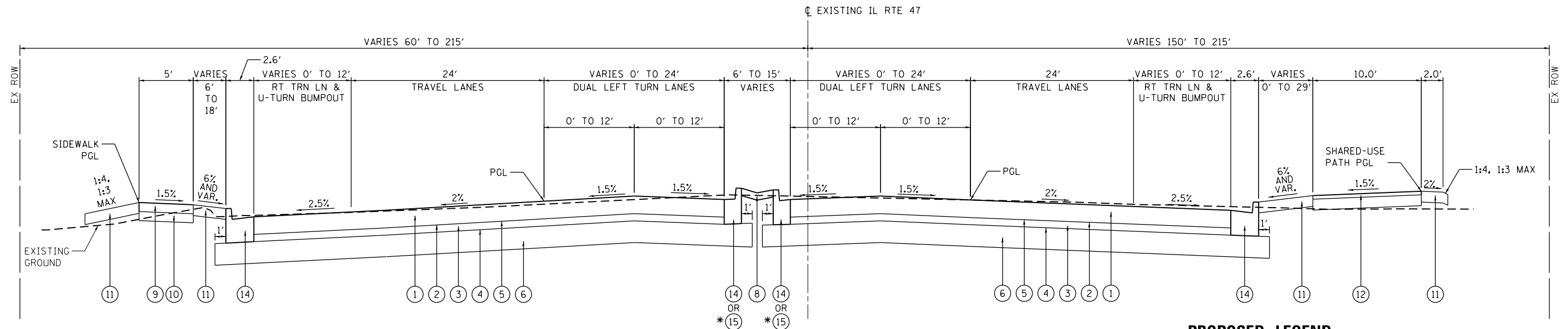
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: N-T-S SHEET OF 8 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

**EXHIBIT 3.3-1
PROPOSED TYPICAL SECTIONS**

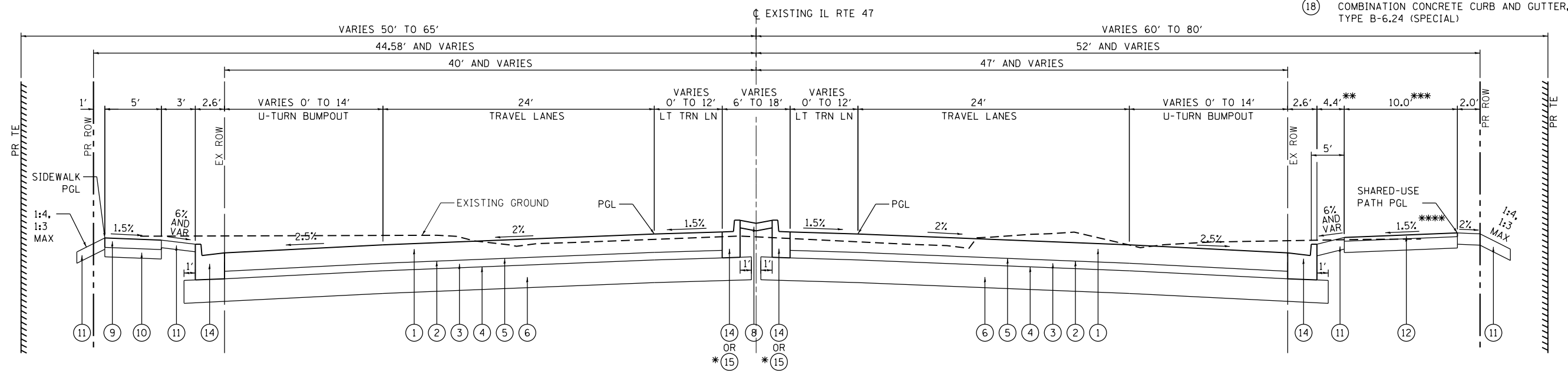


* ADJACENT TO TURN LANE WITHIN 6' MEDIAN

PROPOSED TYPICAL SECTION

STA. 94+13.24 TO STA. 105+11.58

- PROPOSED LEGEND**
- ① PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED), 9.75"
 - ② BITUMINOUS MATERIALS (TACK COAT)
 - ③ HOT-MIX ASPHALT STABILIZED SUBBASE, 4"
 - ④ BITUMINOUS MATERIALS (PRIME COAT)
 - ⑤ AGGREGATE (PRIME COAT)
 - ⑥ AGGREGATE SUBGRADE, 12"
 - ⑦ ROUNDABOUT TRUCK APRON
 - ⑧ CONCRETE MEDIAN SURFACE, 4"
 - ⑨ PORTLAND CEMENT CONCRETE SIDEWALK, 5"
 - ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6"
 - ⑪ TOPSOIL FURNISH AND PLACE, 4"
 - ⑫ SHARED USE PATH HOT-MIX ASPHALT SURFACE COURSE, 3" AGGREGATE BASE COURSE, 6"
 - ⑬ COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24
 - ⑭ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
 - ⑮ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
 - ⑯ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.12
 - ⑰ COMBINATION CONCRETE CURB AND GUTTER, TYPE M (MODIFIED)
 - ⑱ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL)



PROPOSED TYPICAL SECTION

STA. 105+11.58 TO STA. 126+86.09
 STA. 143+74.51 TO STA. 180+59.00
 STA. 210+71.00 TO STA. 271+35.93
 STA. 274+54.22 TO STA. 280+41.86

* ADJACENT TO TURN LANE WITHIN 6' MEDIAN

** SHARED-USE PATH OFFSET VARIES STA. 237+05.51 TO STA. 243+49.83

*** SHARED-USE PATH WIDTH VARIES 8-10 FT FROM STA. 121+39.51 TO STA. 127+18.74

**** SHARED-USE PATH AND EAST PARKWAY SLOPE AWAY FROM ROADWAY IN FOLLOWING STATION RANGES:
 - STA. 167+81.62 TO STA. 173+50.00
 - STA. 184+55.54 TO STA. 192+50.00
 - STA. 238+00.00 TO STA. 242+77.05
 - STA. 257+00.00 TO STA. 258+47.50

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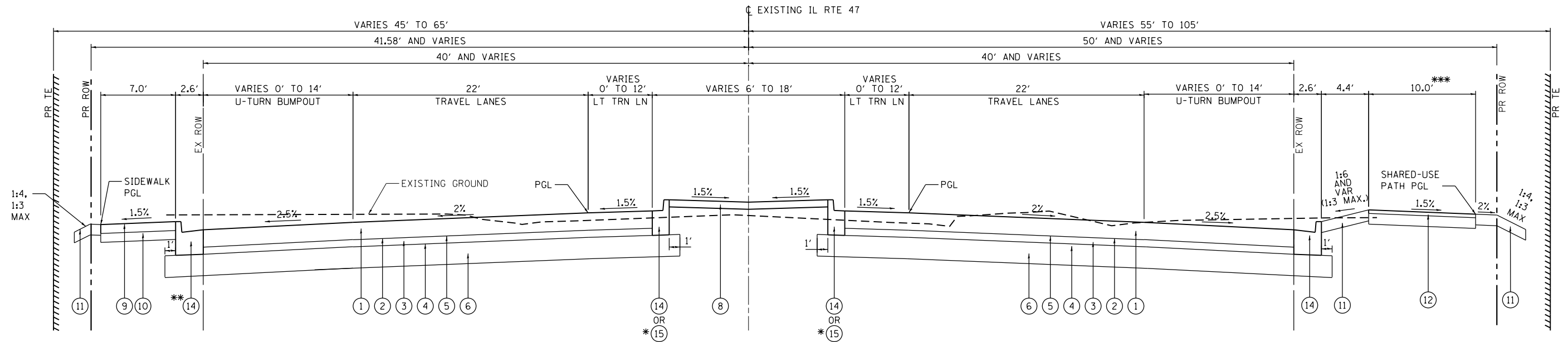
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PLOT DATE = 2/11/2019		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 5 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	5
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

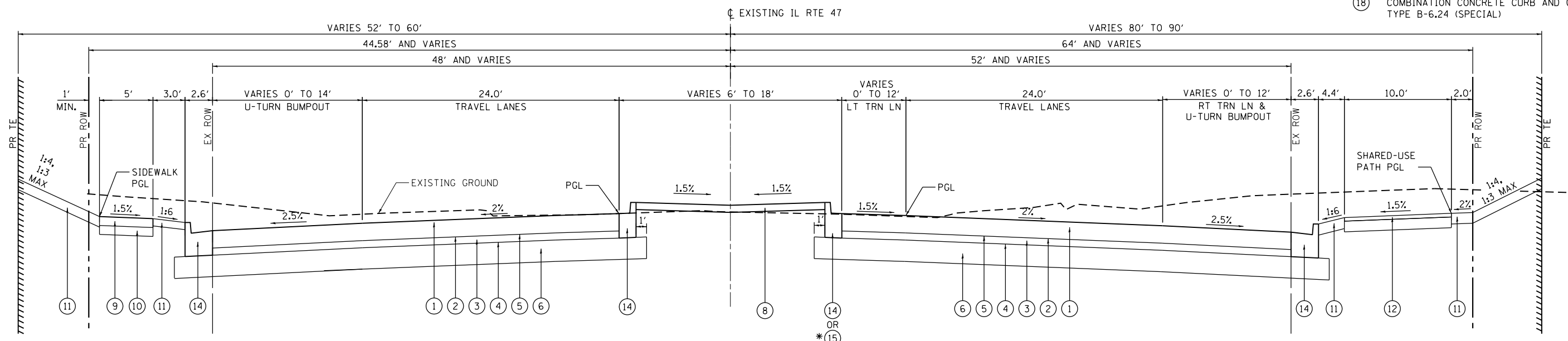


* ADJACENT TO TURN LANE WITHIN 6' MEDIAN
 ** M-6.24 MOUNTABLE CURB FROM STATION 786+00.00 TO 789+50.00.
 *** SHARED-USE PATH WIDTH VARIES 8-10 FT FROM STA. 202+30.14 TO STA. 211+63.07

PROPOSED TYPICAL SECTION
 STA. 187+45.80 TO STA. 210+71.00

PROPOSED LEGEND

- ① PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED), 9.75"
- ② BITUMINOUS MATERIALS (TACK COAT)
- ③ HOT-MIX ASPHALT STABILIZED SUBBASE, 4"
- ④ BITUMINOUS MATERIALS (PRIME COAT)
- ⑤ AGGREGATE (PRIME COAT)
- ⑥ AGGREGATE SUBGRADE, 12"
- ⑦ ROUNDABOUT TRUCK APRON
- ⑧ CONCRETE MEDIAN SURFACE, 4"
- ⑨ PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6"
- ⑪ TOPSOIL FURNISH AND PLACE, 4"
- ⑫ SHARED USE PATH HOT-MIX ASPHALT SURFACE COURSE, 3" AGGREGATE BASE COURSE, 6"
- ⑬ COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24
- ⑭ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑮ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- ⑯ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.12
- ⑰ COMBINATION CONCRETE CURB AND GUTTER, TYPE M (MODIFIED)
- ⑱ COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL)



PROPOSED TYPICAL SECTION
 STA. 271+35.93 TO STA. 274+54.22

* ADJACENT TO TURN LANE WITHIN 6' MEDIAN

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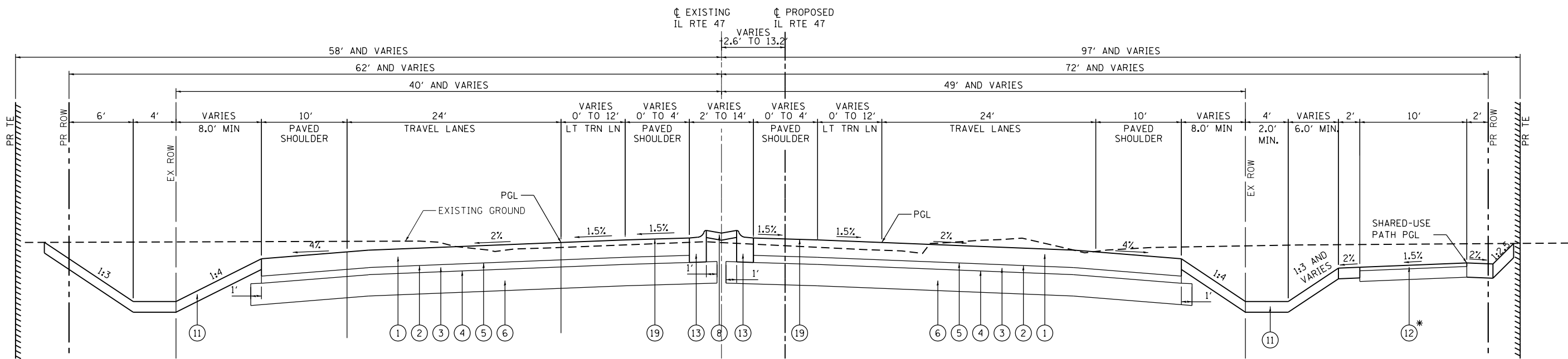
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PLOT DATE = 2/11/2019		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 6 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 9	SHEET NO. 6
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

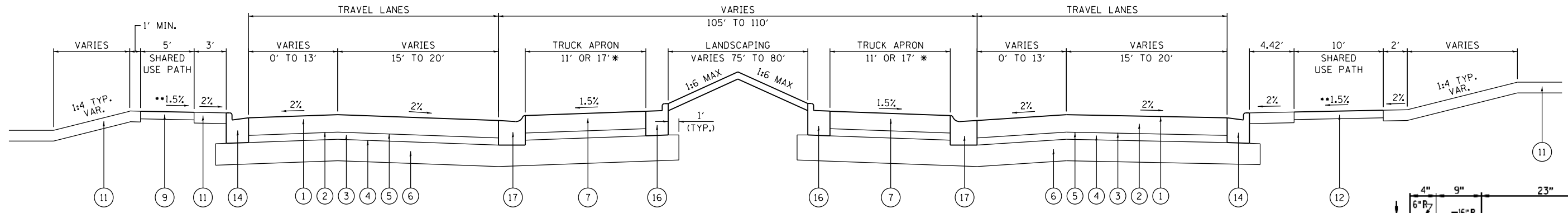


PROPOSED TYPICAL SECTION
 STA. 285+84.74 TO STA. 348+50.43

* SHARED-USE PATH LOCATED 5 FEET FROM
 PAVED SHOULDER AND SLOPED AWAY FROM
 ROADWAY IN FOLLOWING STATION RANGE:
 - STA. 294+00 TO STA. 303+00
 - STA. 322+00 TO STA. 329+00

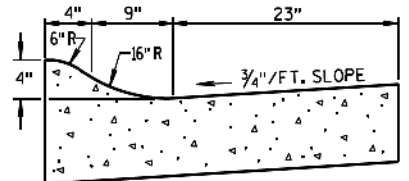
PROPOSED LEGEND

- ① PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED), 9.75"
- ② BITUMINOUS MATERIALS (TACK COAT)
- ③ HOT-MIX ASPHALT STABILIZED SUBBASE, 4"
- ④ BITUMINOUS MATERIALS (PRIME COAT)
- ⑤ AGGREGATE (PRIME COAT)
- ⑥ AGGREGATE SUBGRADE, 12"
- ⑦ ROUNDABOUT TRUCK APRON
- ⑧ CONCRETE MEDIAN SURFACE, 4"
- ⑨ PORTLAND CEMENT CONCRETE SIDEWALK, 5"
- ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6"
- ⑪ TOPSOIL FURNISH AND PLACE, 4"
- ⑫ SHARED USE PATH
HOT-MIX ASPHALT SURFACE COURSE, 3"
AGGREGATE BASE COURSE, 6"
- ⑬ COMBINATION CONCRETE CURB AND GUTTER,
TYPE M-4.24
- ⑭ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.24
- ⑮ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.12
- ⑯ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-9.12
- ⑰ COMBINATION CONCRETE CURB AND GUTTER,
TYPE M (MODIFIED)
- ⑱ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.24 (SPECIAL)
- ⑲ RUMBLE STRIPS



TYPICAL SECTION THROUGH ROUNDABOUTS

* 17' TRUCK APRON ONLY AT LAKE AVENUE ROUNDABOUT
 ** SHARED USE PATH SLOPES AWAY FROM ROADWAY AT CHARLES ROAD



DETAIL: COMBINATION CONCRETE CURB & GUTTER TYPE M (MODIFIED)

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CHECKED DWG	CHECKED DWG	REVISED -
DATE 3/10/17	DATE 3/10/17	REVISED -

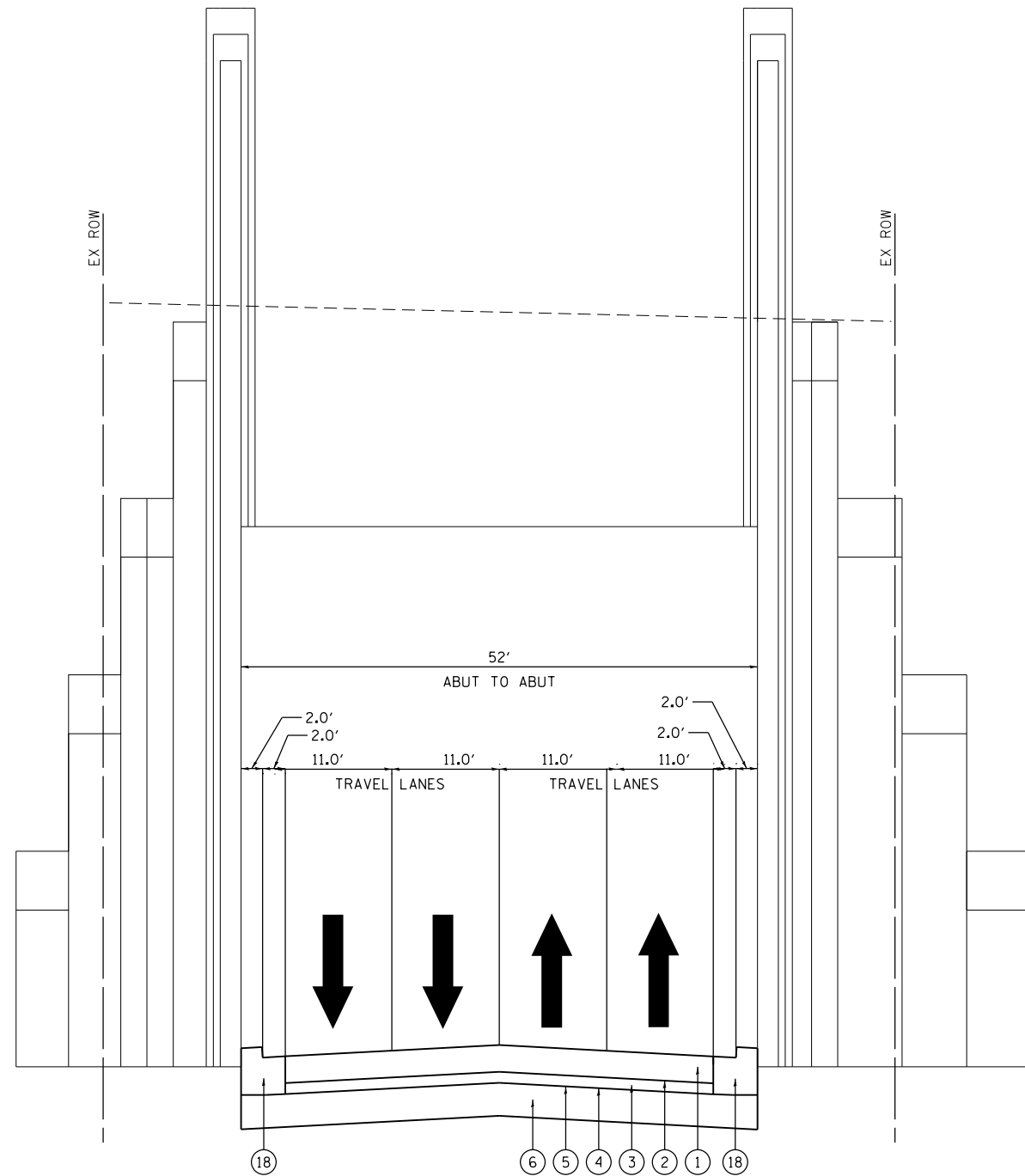
DESIGNED WRP	REVISED -
DRAWN MKM	REVISED -
CHECKED DWG	REVISED -
DATE 3/10/17	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 7 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 9	SHEET NO. 7
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



RAILROAD CROSSING TYPICAL SECTION

PROPOSED LEGEND

- | | |
|--|--|
| ① PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED), 9.75" | ⑪ TOPSOIL FURNISH AND PLACE, 4" |
| ② BITUMINOUS MATERIALS (TACK COAT) | ⑫ SHARED USE PATH
HOT-MIX ASPHALT SURFACE COURSE, 3"
AGGREGATE BASE COURSE, 6" |
| ③ HOT-MIX ASPHALT STABILIZED SUBBASE, 4" | ⑬ COMBINATION CONCRETE CURB AND GUTTER,
TYPE M-4.24 |
| ④ BITUMINOUS MATERIALS (PRIME COAT) | ⑭ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.24 |
| ⑤ AGGREGATE (PRIME COAT) | ⑮ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.12 |
| ⑥ AGGREGATE SUBGRADE, 12" | ⑯ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-9.12 |
| ⑦ ROUNDABOUT TRUCK APRON | ⑰ COMBINATION CONCRETE CURB AND GUTTER,
TYPE M (MODIFIED) |
| ⑧ CONCRETE MEDIAN SURFACE, 4" | ⑱ COMBINATION CONCRETE CURB AND GUTTER,
TYPE B-6.24 (SPECIAL) |
| ⑨ PORTLAND CEMENT CONCRETE SIDEWALK, 5" | |
| ⑩ SUBBASE GRANULAR MATERIAL, TYPE B 6" | |

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CA00D Sheets\0812345-sh1-typical.dgn

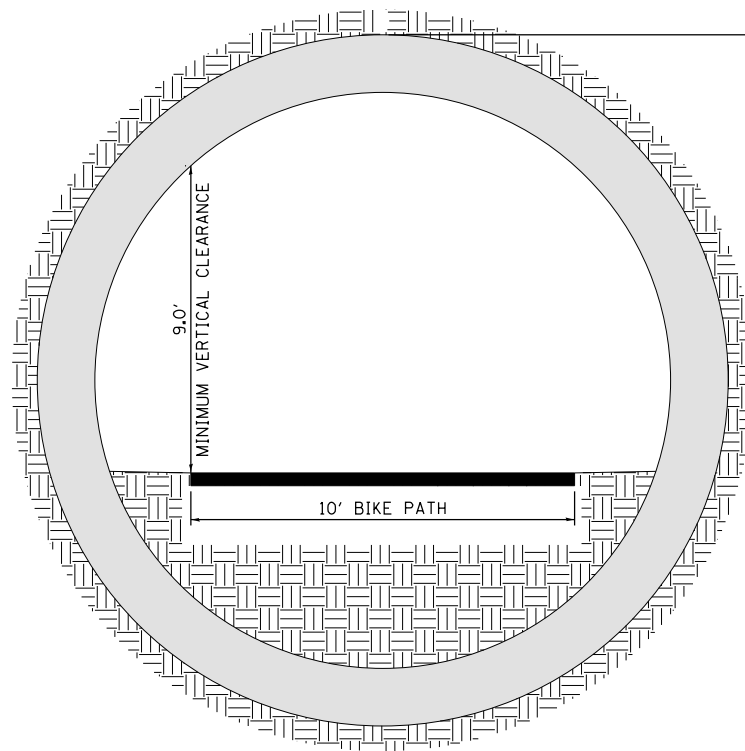
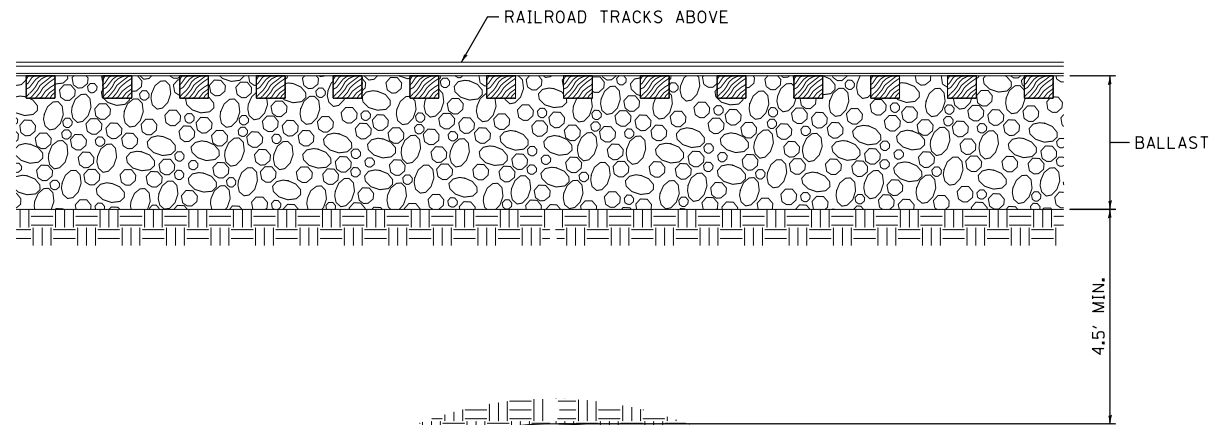
SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED WRP	REVISED -
DRAWN MKM	CHECKED DWG	REVISED -
PLOT SCALE = 10.0000' / 1"	DATE 3/10/17	REVISED -
PLOT DATE = 2/11/2019		

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS			
SCALE: N-T-S	SHEET 8 OF 9 SHEETS	STA. N/A	TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	8
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PEDESTRIAN TUNNEL TYPICAL SECTION

LOOKING NORTHERLY

FINAL DETERMINATION OF BOX CULVERT TUNNEL VERSUS CIRCULAR PIPE TUNNEL TO BE COMPLETED IN PHASE II.

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAD\ Sheets\0812345-sh-typical.dgn



USER NAME = MattG	DESIGNED WRP	REVISED -
	DRAWN MKM	REVISED -
PLOT SCALE = 10.0000' / 1"	CHECKED DWG	REVISED -
PLOT DATE = 2/11/2019	DATE 3/10/17	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL-47 TYPICAL SECTIONS

SCALE: N-T-S SHEET 9 OF 9 SHEETS STA. N/A TO STA. N/A

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	9	9
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

EXHIBIT 3.3-2
PROPOSED CONDITIONS (PLAN AND PROFILES)

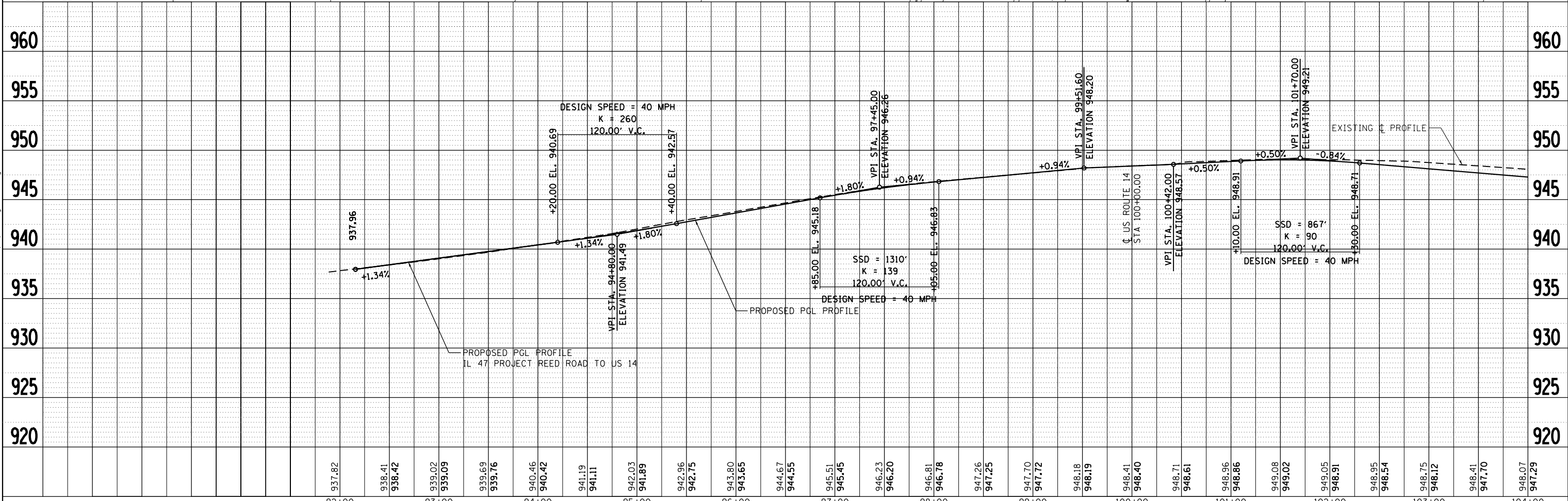
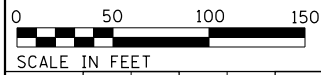
NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

BEGIN IMPROVEMENTS
STA 94+13.24

PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO. _____	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO. _____	



937.82	938.41	938.42	939.02	939.09	939.69	939.76	940.46	940.42	941.19	941.11	942.03	941.89	942.96	942.75	943.80	943.65	944.67	944.55	945.51	945.45	946.23	946.20	946.81	946.78	947.26	947.25	947.70	947.72	948.18	948.19	948.41	948.40	948.71	948.61	948.96	948.86	949.08	949.02	949.05	948.91	948.95	948.54	948.75	948.12	948.41	947.70	948.07	947.29
92+00			93+00				94+00				95+00				96+00				97+00			98+00			99+00			100+00			101+00			102+00			103+00			104+00								

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
STRAND ASSOCIATES®
(815) 744-4200

USER NAME = MattG
DESIGNED - MJG
DRAWN - DJW
CHECKED - DWG
DATE - 02/06/2019

REVISIONS
REVISED -
REVISED -
REVISED -
REVISED -

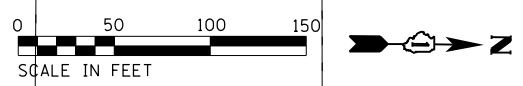
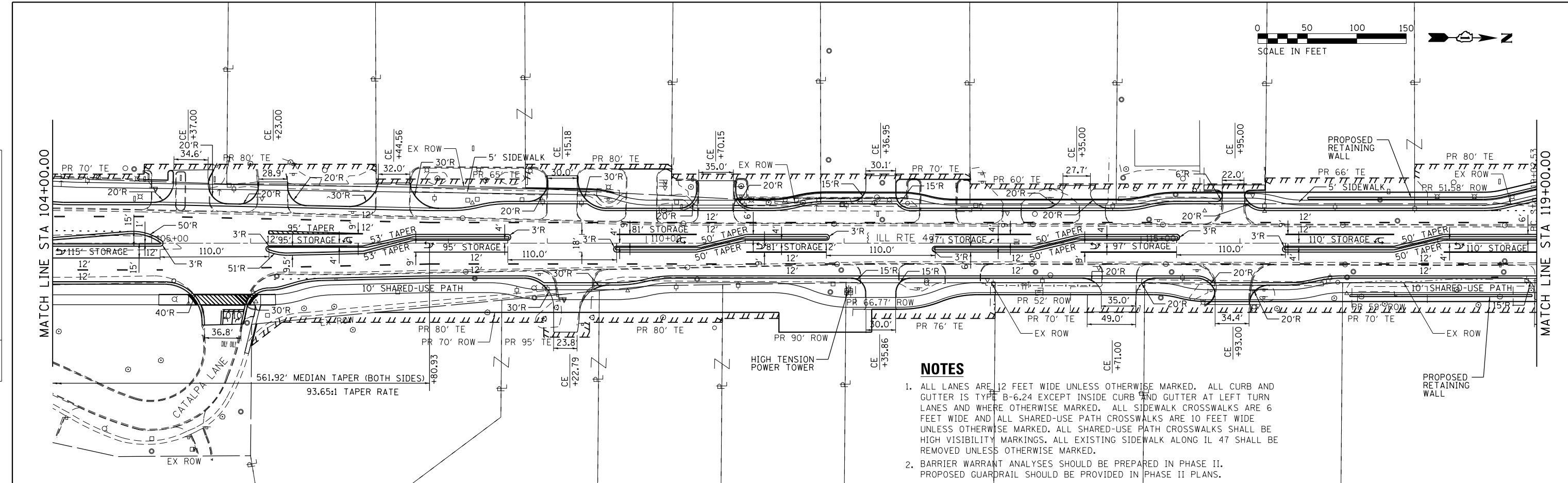
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
ILLINOIS ROUTE 47
SCALE: 1" = 50'
SHEET 1 OF 19 SHEETS
STA. 91+88.66 TO STA. 104+00.00

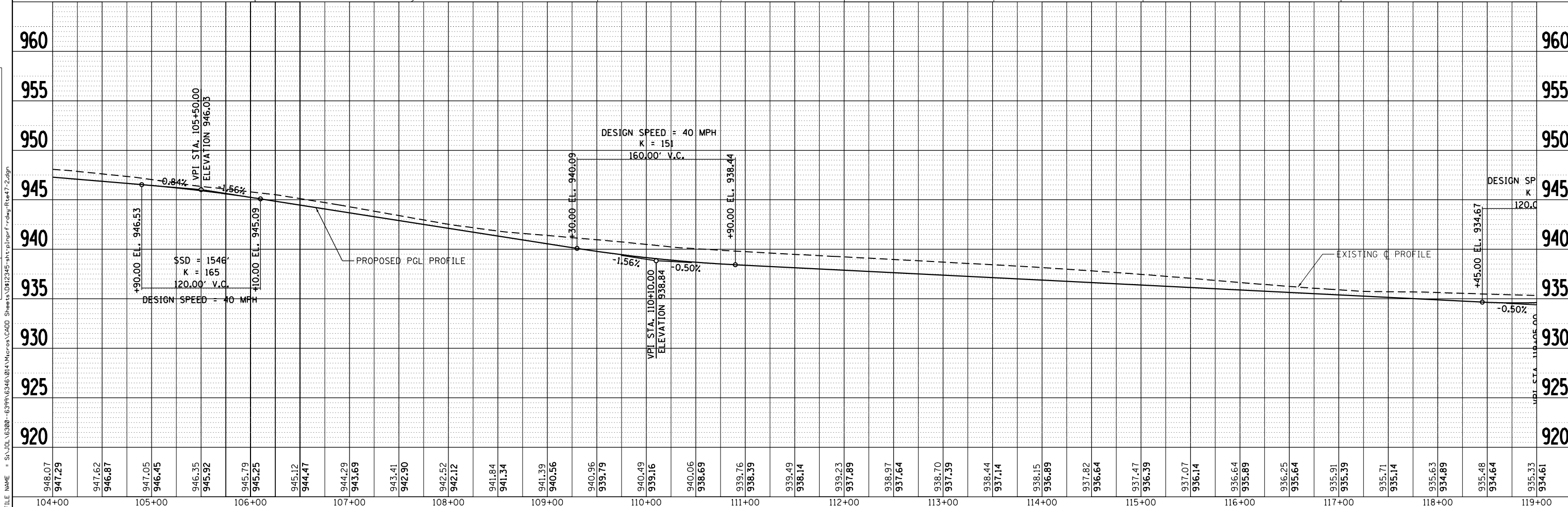
F.A.P. RT. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 1
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



- NOTES**
- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
 - BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



948.07	947.29	947.62	946.87	947.05	946.45	946.35	945.92	945.79	945.25	945.12	944.47	944.29	943.69	943.41	942.90	942.52	942.12	941.84	941.34	941.39	940.56	940.96	939.79	940.49	939.16	940.06	938.69	939.76	938.39	939.49	938.14	939.23	937.89	938.97	937.64	938.70	937.39	938.44	937.14	938.15	936.89	937.82	936.64	937.47	936.39	937.07	936.14	936.64	935.89	936.25	935.64	935.91	935.39	935.71	935.14	935.63	934.89	935.48	934.64	935.33	934.61
104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00	113+00	114+00	115+00	116+00	117+00	118+00	119+00																																														

STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

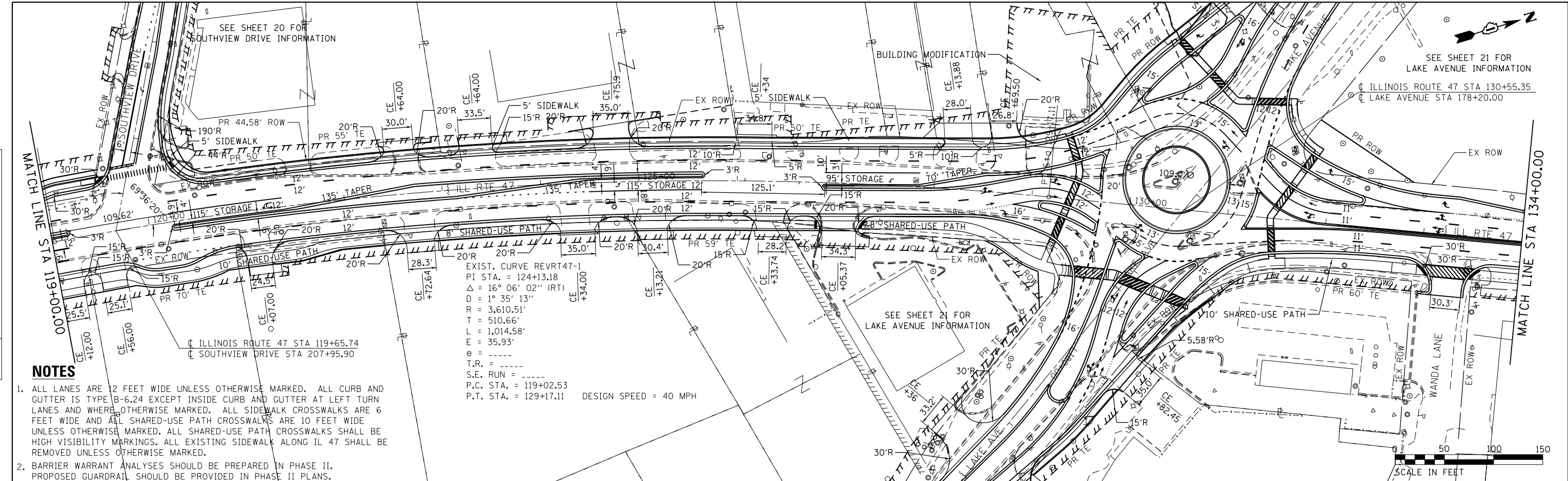
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE	
ILLINOIS ROUTE 47	
SCALE: 1" = 50'	SHEET 2 OF 19 SHEETS
STA. 104+00.00	TO STA. 119+00.00

F.A.P. RT. 326	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		MCHENRY	32	2
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

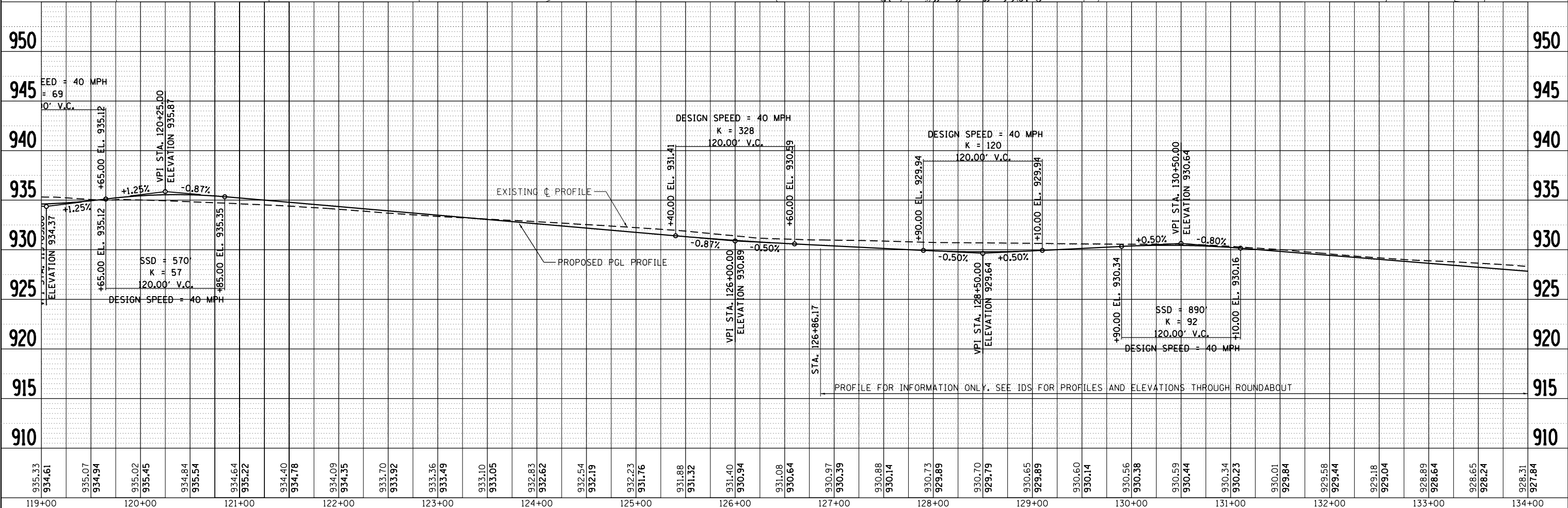
PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
	NO.	
	NO.	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NO.	
	NO.	
	NO.	



NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



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STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
ILLINOIS ROUTE 47**

SCALE: 1" = 50' SHEET 3 OF 19 SHEETS STA. 119+00.00 TO STA. 134+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 3
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

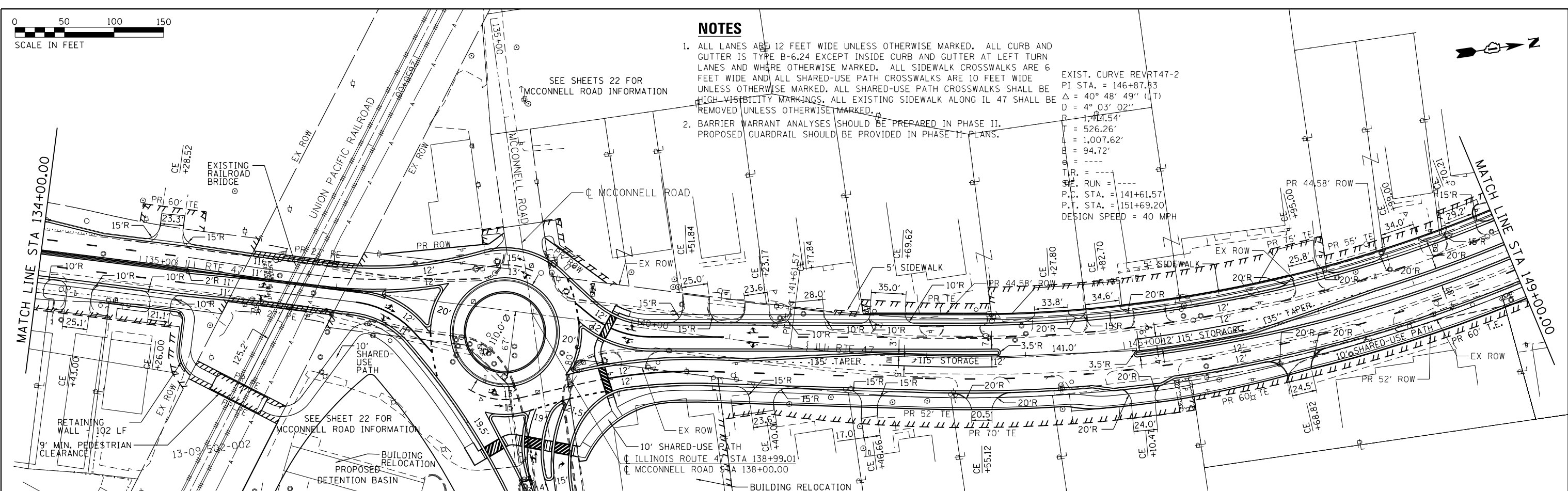


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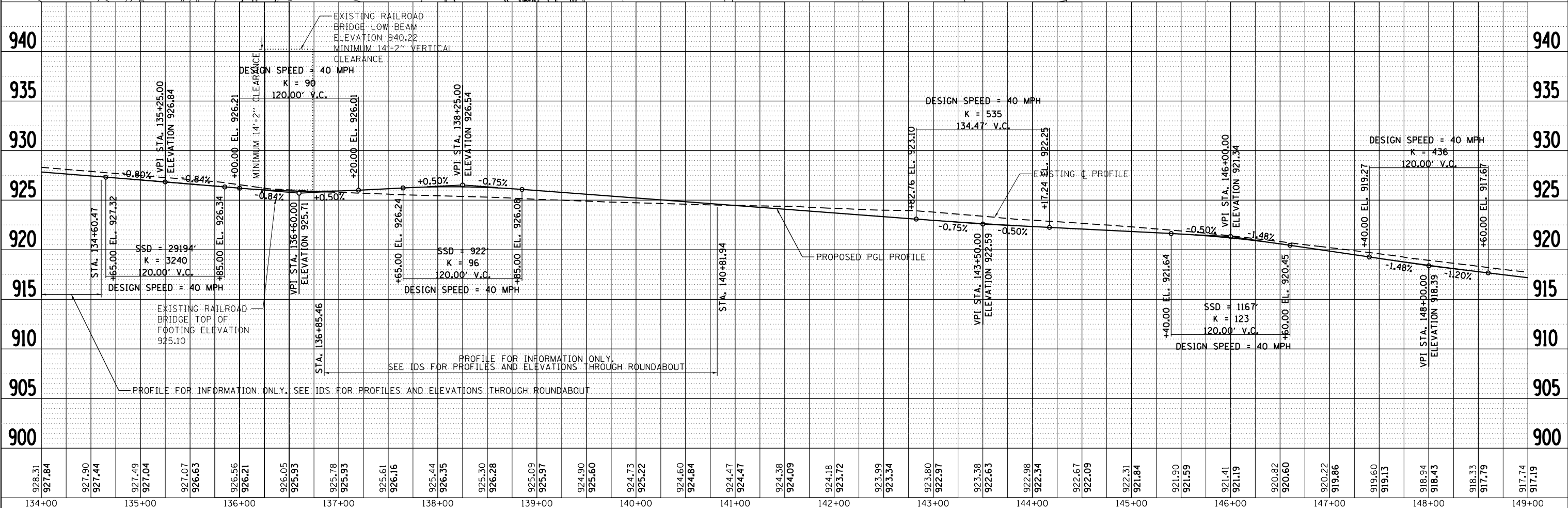
1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
2. BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

EXIST. CURVE REVRT47-2
 PI STA. = 146+87.83
 $\Delta = 40^\circ 48' 49''$ (LT)
 $D = 4^\circ 03' 02''$
 $R = 1,414.54'$
 $T = 526.26'$
 $L = 1,007.62'$
 $E = 94.72'$
 $M = 0.00'$
 $P.C. STA. = 141+61.57$
 $P.T. STA. = 151+69.20$
 DESIGN SPEED = 40 MPH

PLAN	SURVEYED	DATE
	PLOTTED	
	NOTED	
	CHECKED	
	APPROVED	
	FILE NAME	



PROFILE	SURVEYED	DATE
	PLOTTED	
	NOTED	
	CHECKED	
	APPROVED	
	FILE NAME	



STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

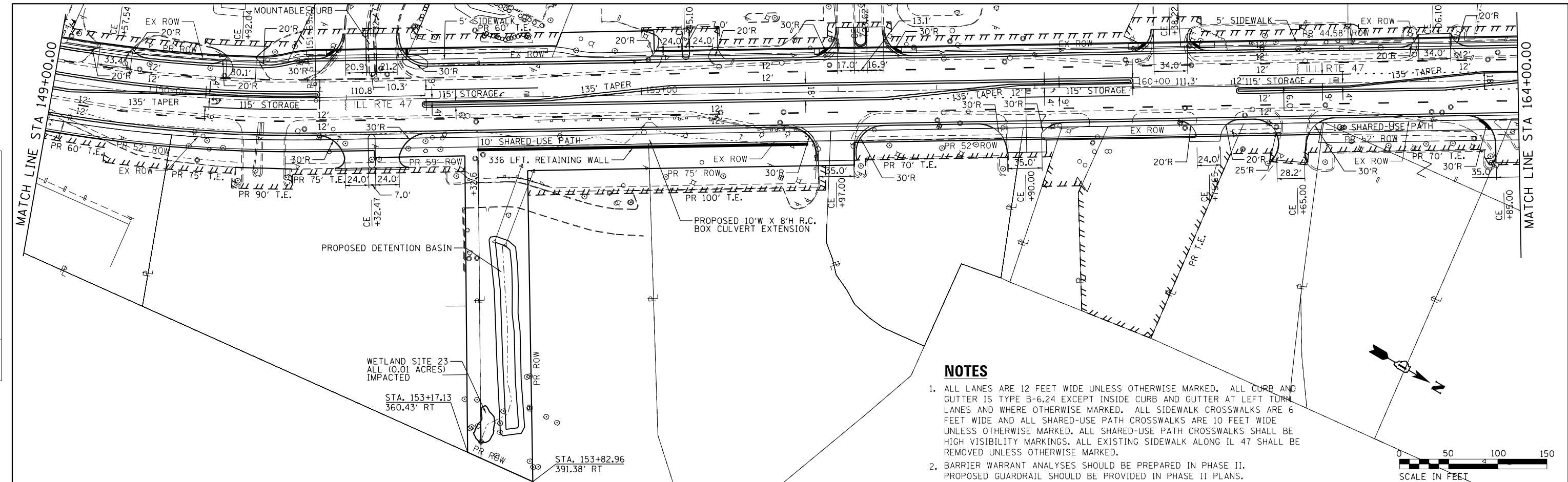
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE	
ILLINOIS ROUTE 47	
SCALE: 1" = 50'	SHEET 4 OF 19 SHEETS
STA. 134+00.00	TO STA. 149+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 4
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

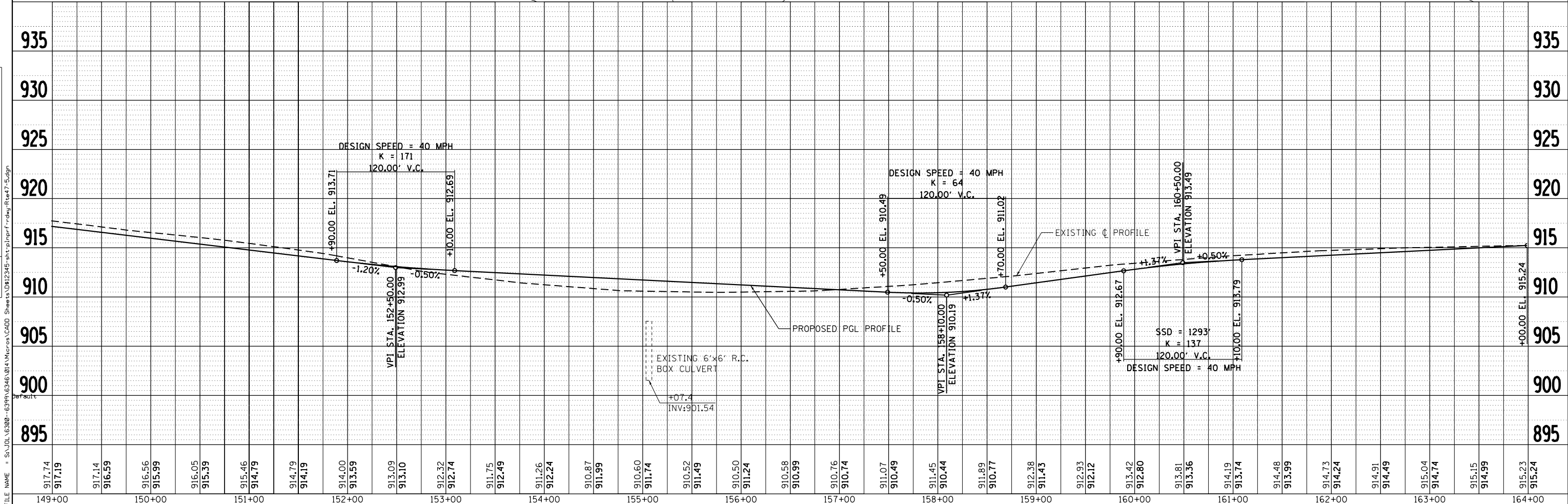
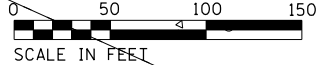
PLAN	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	NO.	
	CHECKED	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	NO.	
	CHECKED	
	FILE NAME	



NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



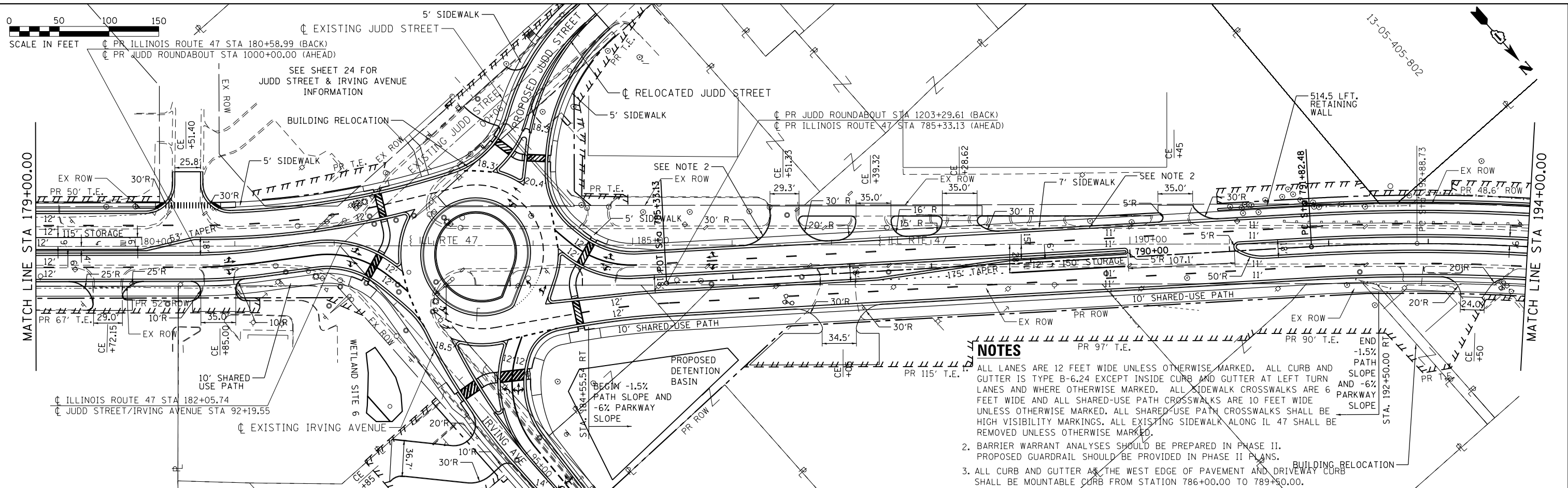
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 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
STRAND ASSOCIATES
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE ILLINOIS ROUTE 47			
SCALE: 1" = 50'	SHEET 5	OF 19 SHEETS	STA. 149+00.00 TO STA. 164+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 5
CONTRACT NO.				ILLINOIS FED. AID PROJECT

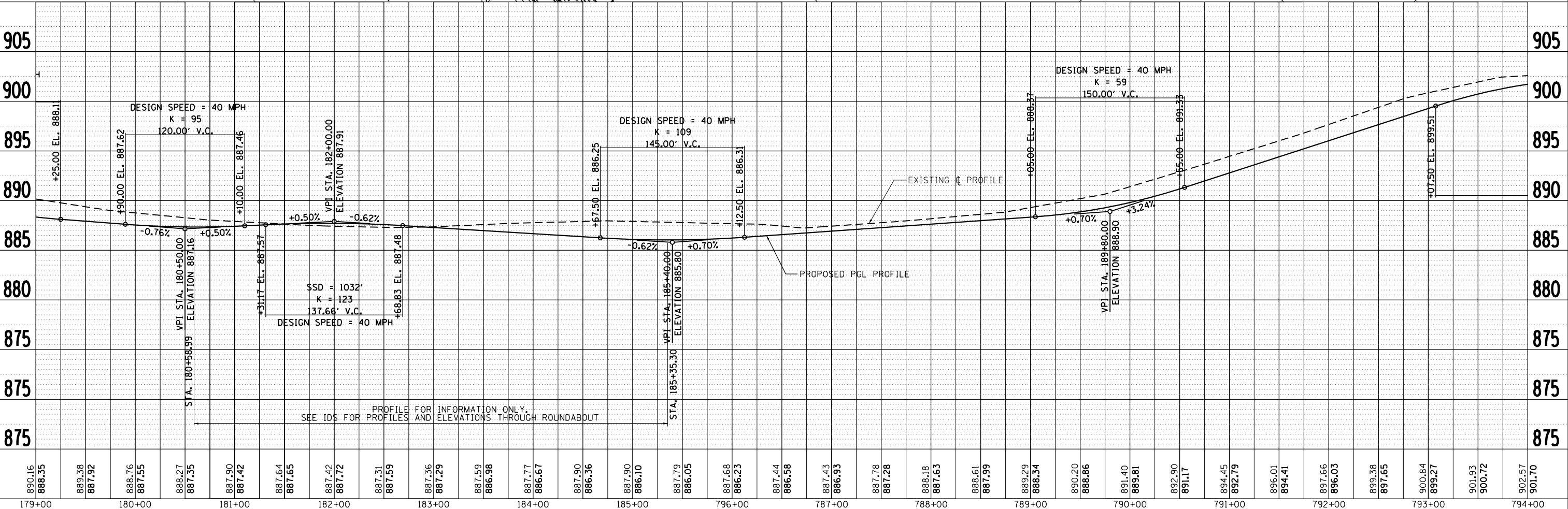


NOTES

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2. BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

3. ALL CURB AND GUTTER AT THE WEST EDGE OF PAVEMENT AND DRIVEWAY CURB SHALL BE MOUNTABLE CURB FROM STATION 786+00.00 TO 789+50.00.



PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
	NO.	
	BY	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	FILED	
	NO.	
	BY	

FILE NAME: S:\101_16300-6189\6345_01A_MicroStation\Drawings\179+00.00-194+00.00.dwg

STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE ILLINOIS ROUTE 47			
SCALE: 1" = 50'	SHEET 7	OF 19 SHEETS	STA. 179+00.00 TO STA. 194+00.00

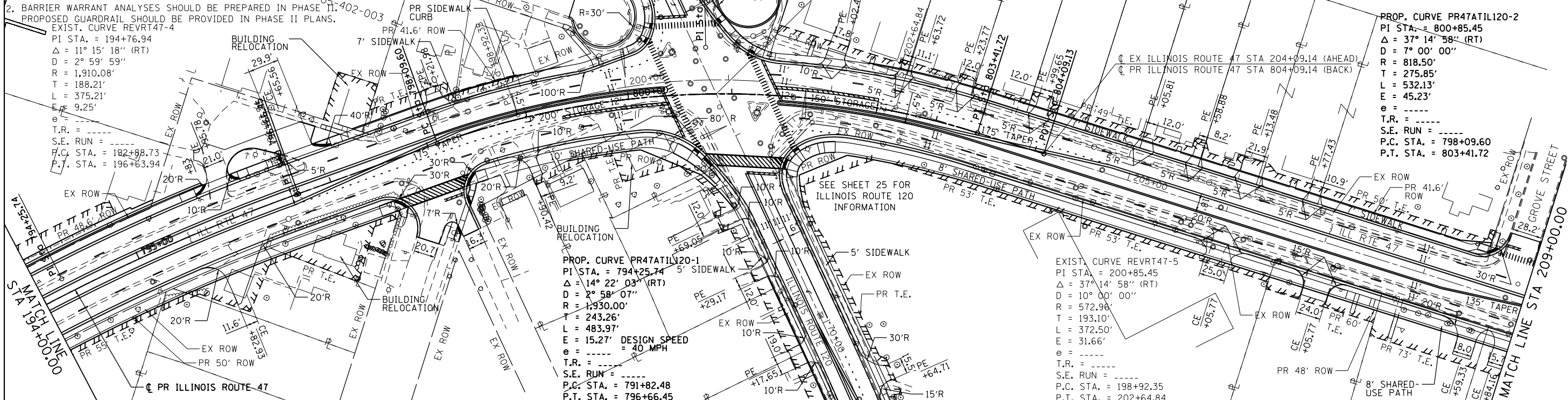
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CONTRACT NO.				ILLINOIS FED. AID PROJECT

NOTES

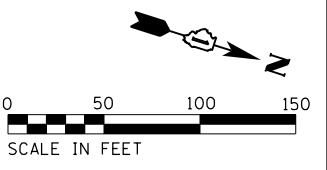
- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. 402-003 PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

DATE	
BY	
PLAN	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	

DATE	
BY	
PROFILE	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	



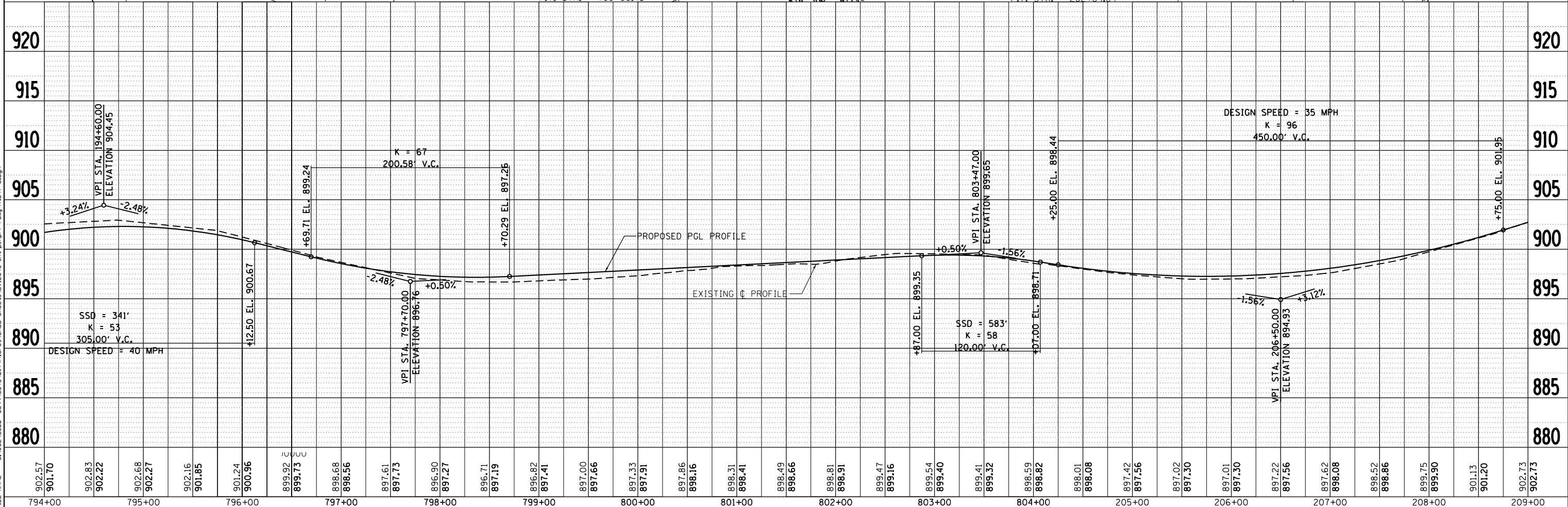
DESIGN SPEED = 40 MPH SOUTH OF IL ROUTE 120
DESIGN SPEED = 35 MPH NORTH OF IL ROUTE 120



PROP. CURVE PR47ATIL120-2
 PI STA. = 800+85.45
 $\Delta = 37^\circ 14' 58''$ (RT)
 D = 7° 00' 00"
 R = 818.50'
 T = 275.85'
 L = 532.13'
 E = 45.23'
 $e =$ -----
 T.R. = -----
 S.E. RUN = -----
 P.C. STA. = 798+09.60
 P.T. STA. = 803+41.72

PROP. CURVE PR47ATIL120-1
 PI STA. = 794+25.74
 $\Delta = 14^\circ 22' 03''$ (RT)
 D = 2° 58' 07"
 R = 1,930.00'
 T = 243.26'
 L = 483.97'
 E = 15.27' DESIGN SPEED
 $e =$ -----
 T.R. = -----
 S.E. RUN = -----
 P.C. STA. = 791+82.48
 P.T. STA. = 796+66.45

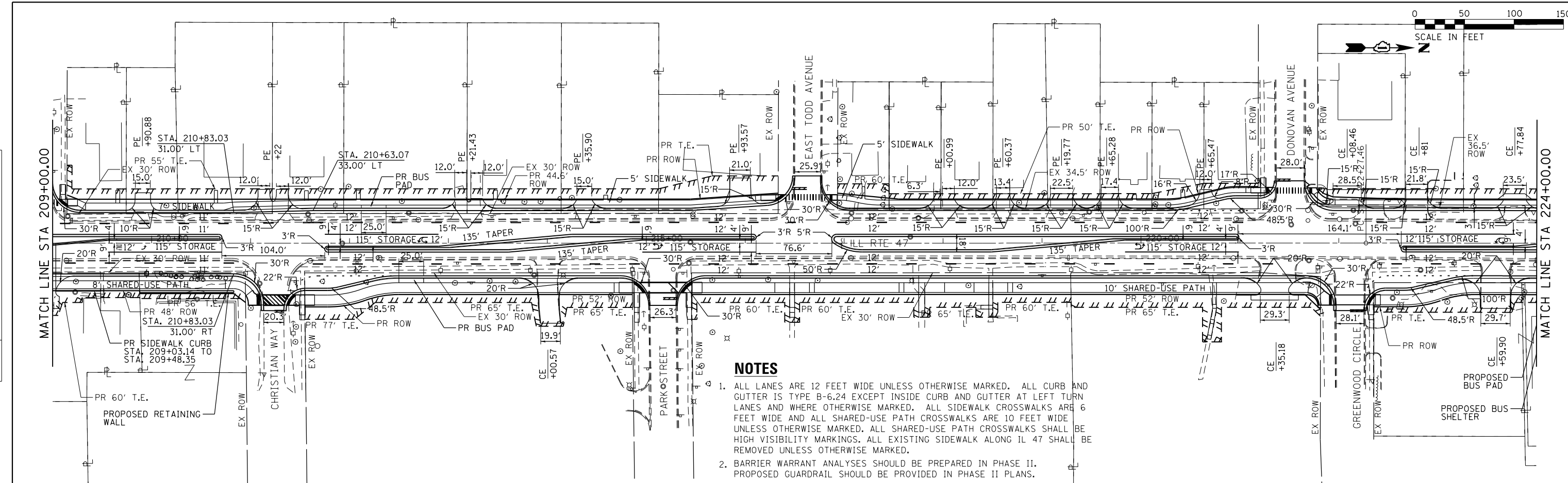
EXIST. CURVE REVRT47-5
 PI STA. = 200+85.45
 $\Delta = 37^\circ 14' 58''$ (RT)
 D = 10° 00' 00"
 R = 572.98'
 T = 193.10'
 L = 372.50'
 E = 31.66'
 $e =$ -----
 T.R. = -----
 S.E. RUN = -----
 P.C. STA. = 198+92.35
 P.T. STA. = 202+64.84



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200	USER NAME = MattG DESIGNED - MJG DRAWN - DJW CHECKED - DWG DATE - 02/06/2019	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE ILLINOIS ROUTE 47	SCALE: 1" = 50' SHEET 8 OF 19 SHEETS STA. 194+00.00 TO STA. 209+00.00	F.A.P. R.T.E. = 326 SECTION = COUNTY = MCHENRY CONTRACT NO. =	TOTAL SHEETS = 32 SHEET NO. = 8
	ILLINOIS FED. AID PROJECT						

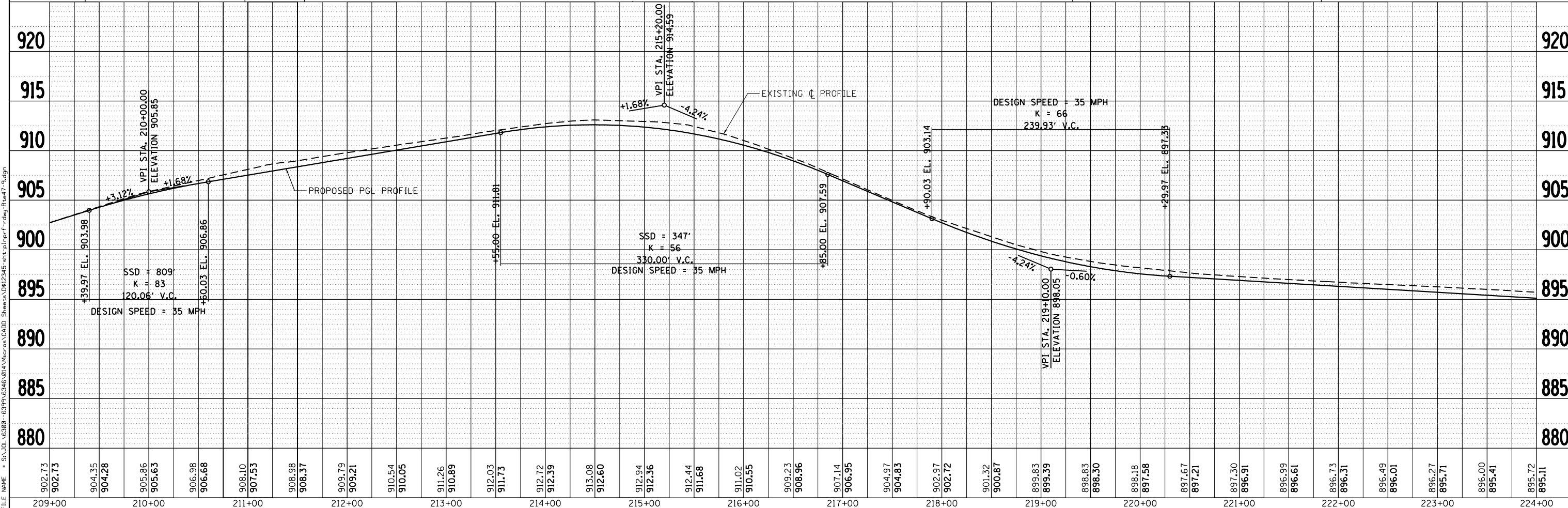
PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	



NOTES

1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
2. BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



902.73	902.73	904.35	904.28	905.86	905.63	906.98	906.68	908.10	907.53	908.98	908.37	909.79	909.21	910.54	910.05	911.26	910.89	912.03	911.73	912.72	912.39	913.08	912.60	912.94	912.36	912.44	911.68	911.02	910.55	909.23	908.96	907.14	906.95	904.97	904.83	902.97	902.72	901.32	900.87	899.83	899.39	898.83	898.30	898.18	897.58	897.67	897.21	897.30	896.91	896.99	896.61	896.73	896.31	896.49	896.01	896.27	895.71	896.00	895.41	895.72	895.11
209+00	210+00	211+00	212+00	213+00	214+00	215+00	216+00	217+00	218+00	219+00	220+00	221+00	222+00	223+00	224+00																																														

STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
ILLINOIS ROUTE 47**
SCALE: 1" = 50' SHEET 9 OF 19 SHEETS STA. 209+00.00 TO STA. 224+00.00

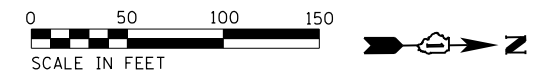
F.A.P. R.T.E. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 9
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

SEE SHEET 26 FOR
EAST GREENWOOD AVENUE &
GREENWOOD CIRCLE INFORMATION

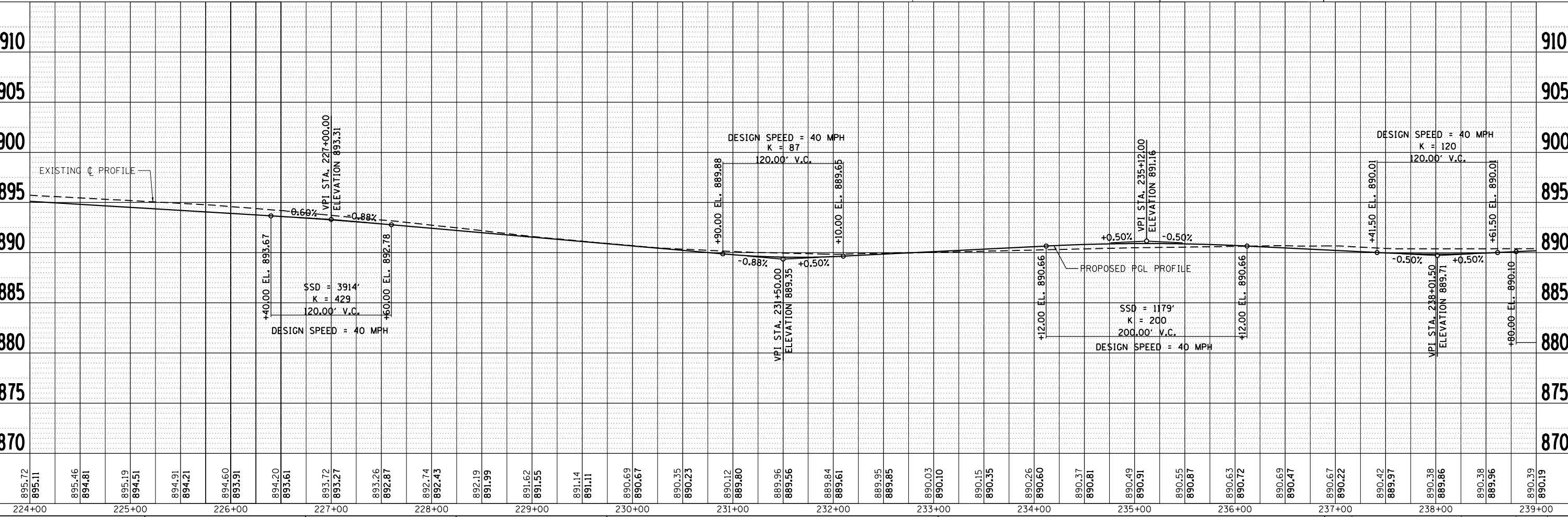
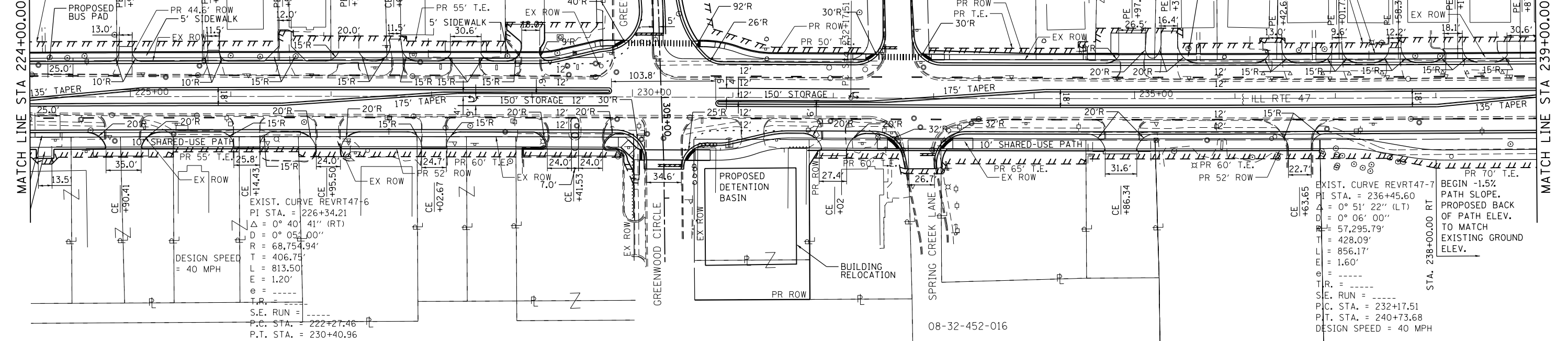
DESIGN SPEED = 35 MPH SOUTH OF GREENWOOD AVENUE
DESIGN SPEED = 40 MPH NORTH OF GREENWOOD AVENUE



PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CPAD	

PROFILE	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CPAD	

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STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

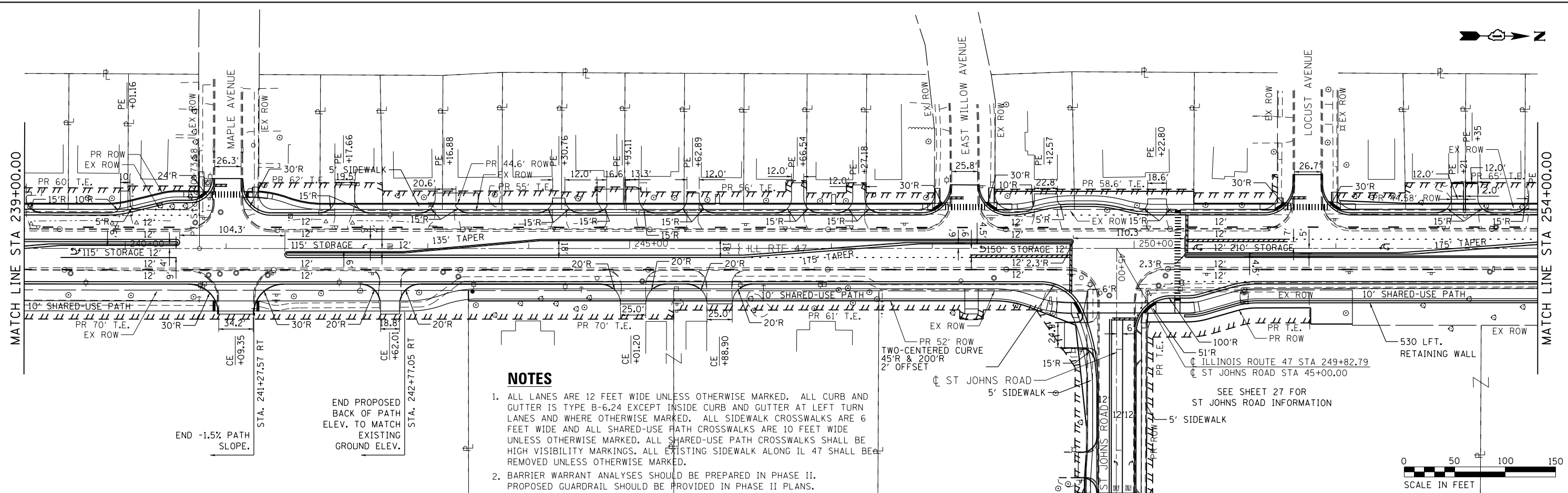
**PLAN & PROFILE
ILLINOIS ROUTE 47**
SCALE: 1" = 50' SHEET 10 OF 19 SHEETS STA. 224+00.00 TO STA. 239+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 10
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO.:	
	BY:	
	DATE:	

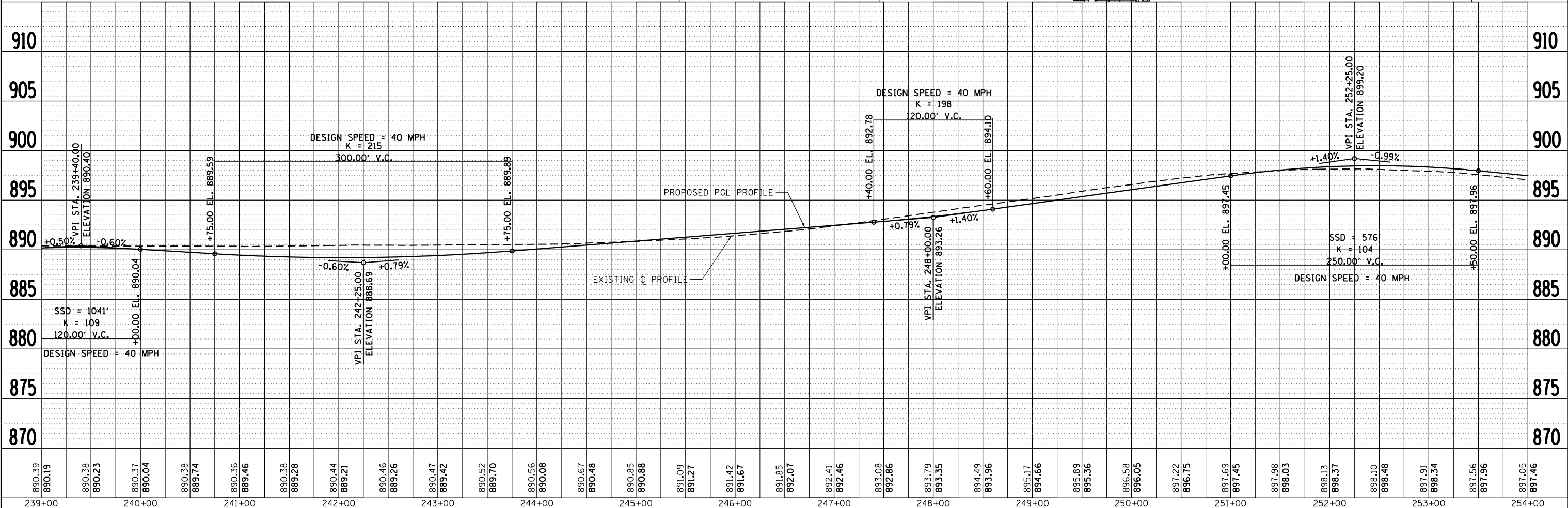
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	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO.:	
	BY:	
	DATE:	

FILE NAME = S:\JL\63300-63300\6346\01A\Micros\CADD Sheets\012345-shr-hp-rf-47-11.dgn



NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
 ILLINOIS ROUTE 47**
 SCALE: 1" = 50' SHEET 11 OF 19 SHEETS STA. 239+00.00 TO STA. 254+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 11
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

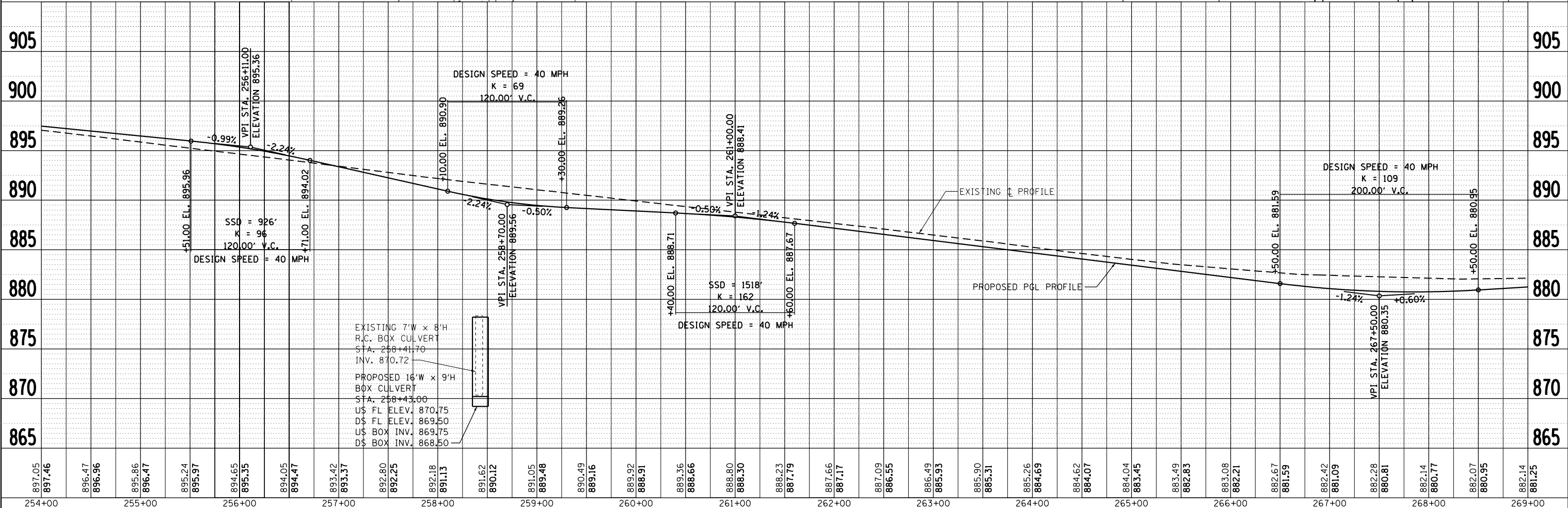
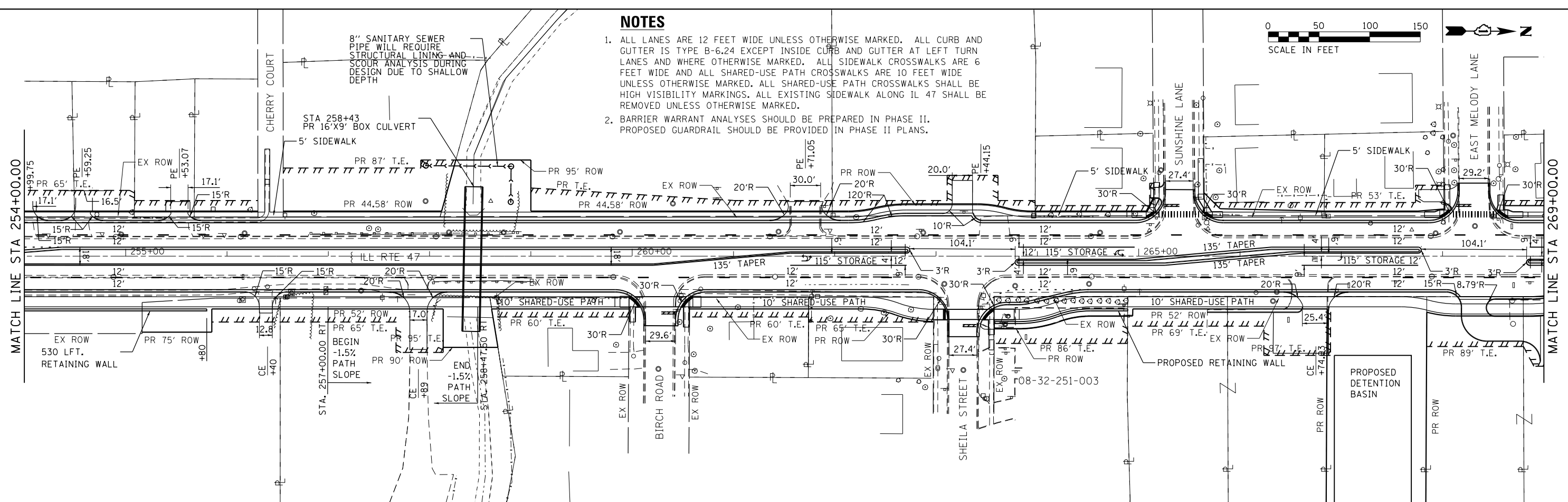
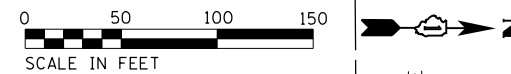
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	PLOTTED	
	ALIGNED	
	CHECKED	
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	NO. 2	
	NO. 3	
	NO. 4	
	NO. 5	
	NO. 6	
	NO. 7	
	NO. 8	
	NO. 9	
	NO. 10	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. 1	
	NO. 2	
	NO. 3	
	NO. 4	
	NO. 5	
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	NO. 7	
	NO. 8	
	NO. 9	
	NO. 10	

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NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



897.05	897.46	896.47	896.96	895.86	896.47	895.24	895.97	894.65	895.35	894.05	894.47	893.42	893.37	892.80	892.25	892.18	891.13	891.62	890.12	891.05	889.48	890.49	889.16	889.92	888.91	889.36	888.66	888.80	888.30	888.23	887.79	887.66	887.17	887.09	886.55	886.49	885.93	885.90	885.31	885.26	884.69	884.62	884.07	884.04	883.45	883.49	882.83	883.08	882.21	882.67	881.59	882.42	881.09	882.28	880.81	882.14	880.77	882.07	880.95	882.14	881.25
254+00	255+00	256+00	257+00	258+00	259+00	260+00	261+00	262+00	263+00	264+00	265+00	266+00	267+00	268+00	269+00																																														

STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

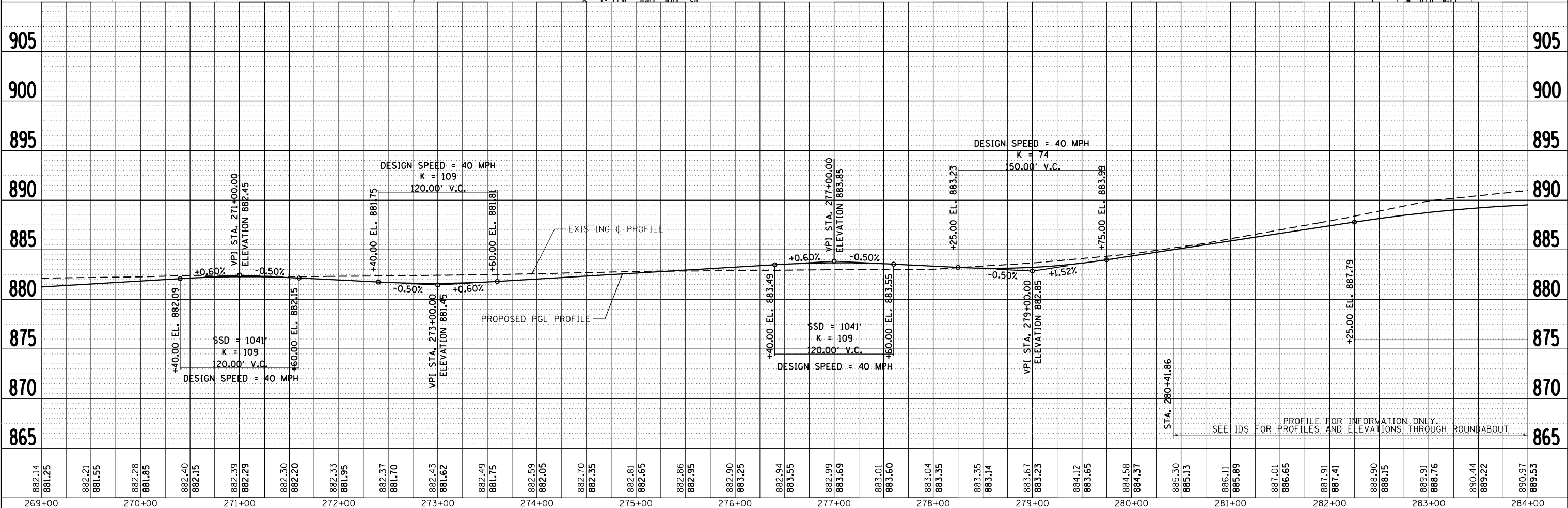
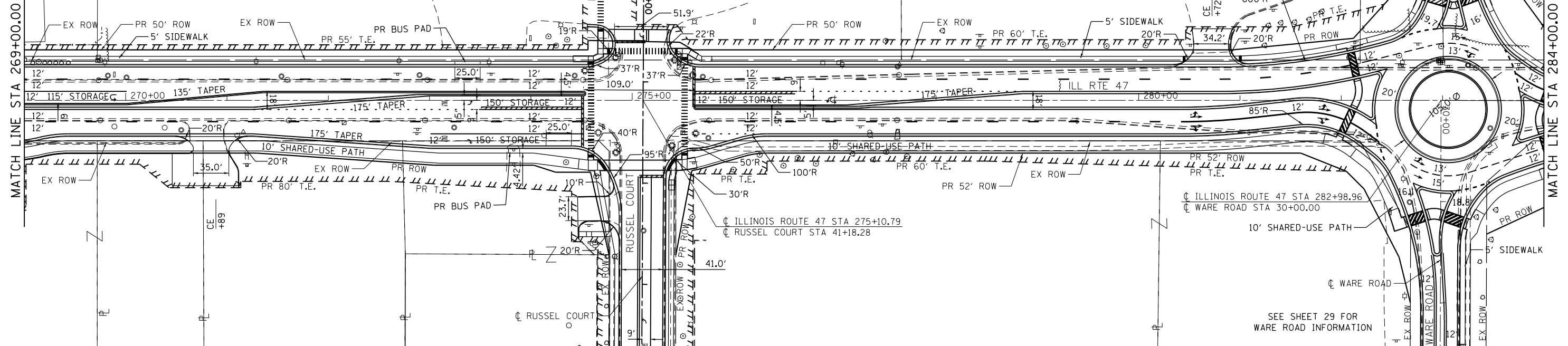
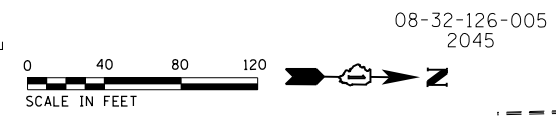
**PLAN & PROFILE
ILLINOIS ROUTE 47**
SCALE: 1" = 50'
SHEET 12 OF 19 SHEETS
STA. 254+00.00 TO STA. 269+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 12
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

DESIGN SPEED = 40 MPH SOUTH OF WARE ROAD
DESIGN SPEED = 50 MPH NORTH OF WARE ROAD



PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	CHECKED	
	STRUCTURE	
	NOTATIONS	
	FILE NAME	

PROFILE	SURVEYED	DATE
NOTE BOOK	GRADES CHECKED	BY
NO.	STRUCTURE	
	NOTATIONS	
	FILE NAME	

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269+00	270+00	271+00	272+00	273+00	274+00	275+00	276+00	277+00	278+00	279+00	280+00	281+00	282+00	283+00	284+00																																														

STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG
DESIGNED - MJG
DRAWN - DJW
CHECKED - DWG
DATE - 02/06/2019

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
ILLINOIS ROUTE 47**
SCALE: 1" = 50' SHEET 13 OF 19 SHEETS STA. 269+00.00 TO STA. 284+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 13
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.

4 FT PAVED INSIDE SHOULDERS TO BE ADDED BETWEEN WARE ROAD AND CHARLES ROAD

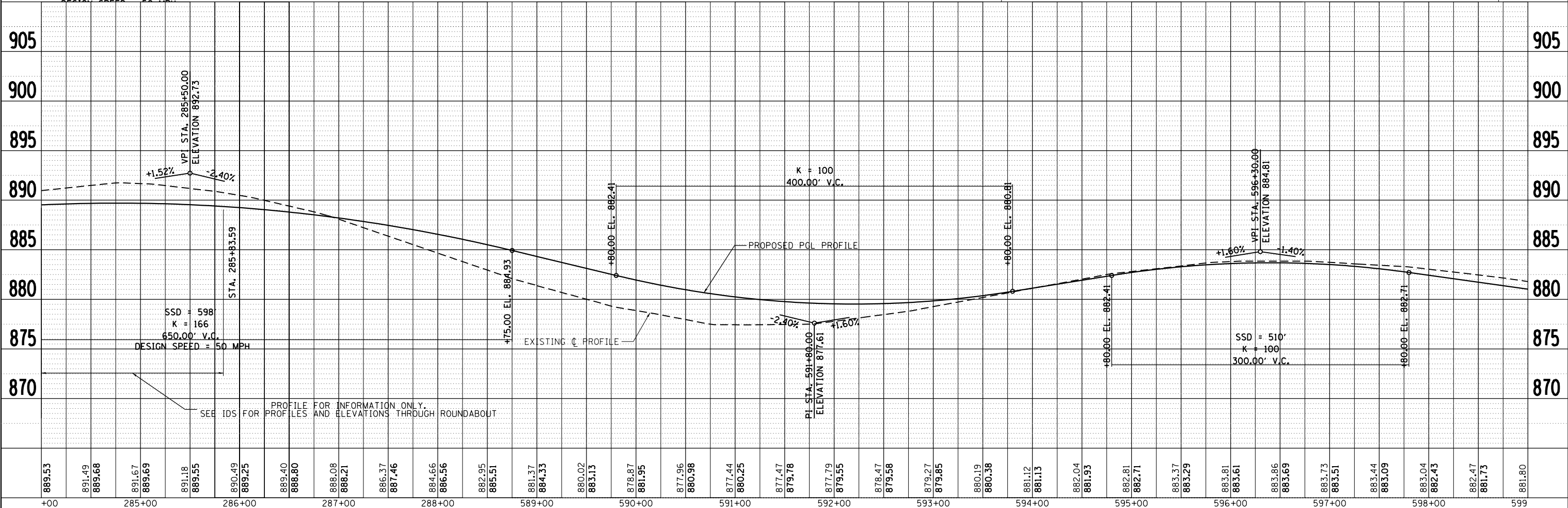
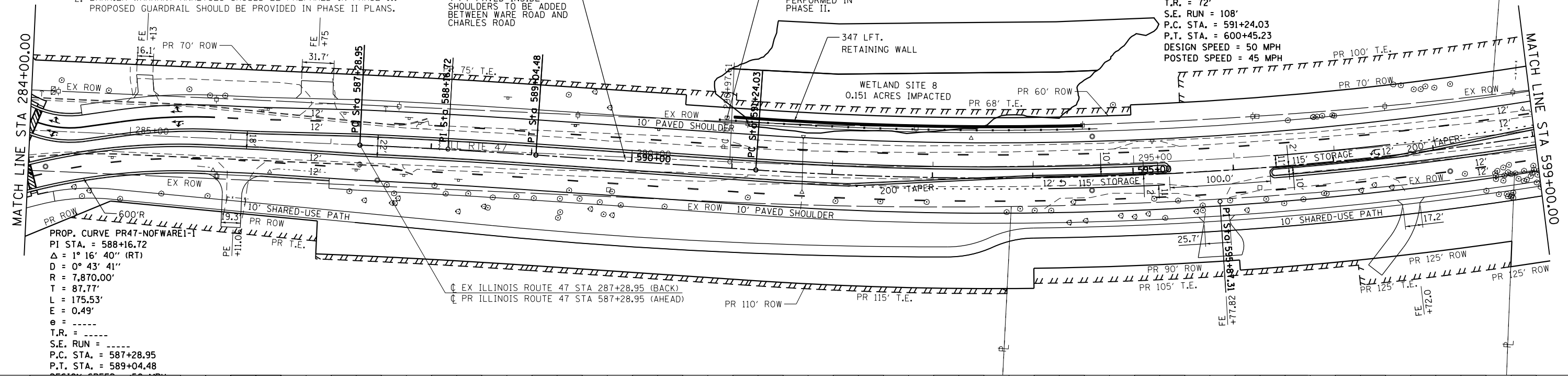
GUARDRAIL LOCATION SHOWN FOR GENERAL PURPOSES ONLY. BARRIER WARRANT ANALYSIS TO BE PERFORMED IN PHASE II.

PROP. CURVE PR47-NOFWARE1-2
 PI STA. = 595+87.31
 $\Delta = 15^{\circ} 04' 49''$ (LT)
 $D = 1^{\circ} 38' 13''$
 $R = 3,500.00'$
 $T = 463.28'$
 $L = 921.20'$
 $E = 30.53'$
 $e = 3.0\%$
 $T.R. = 72'$
 $S.E. RUN = 108'$
 $P.C. STA. = 591+24.03$
 $P.T. STA. = 600+45.23$
 DESIGN SPEED = 50 MPH
 POSTED SPEED = 45 MPH



PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	

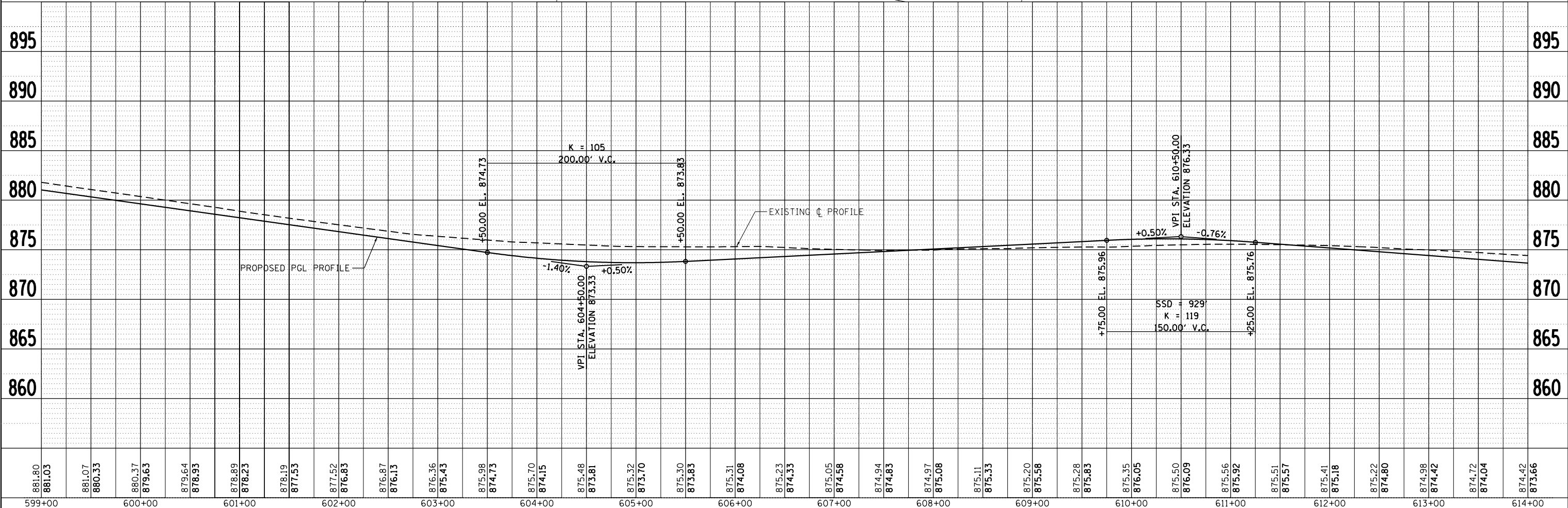
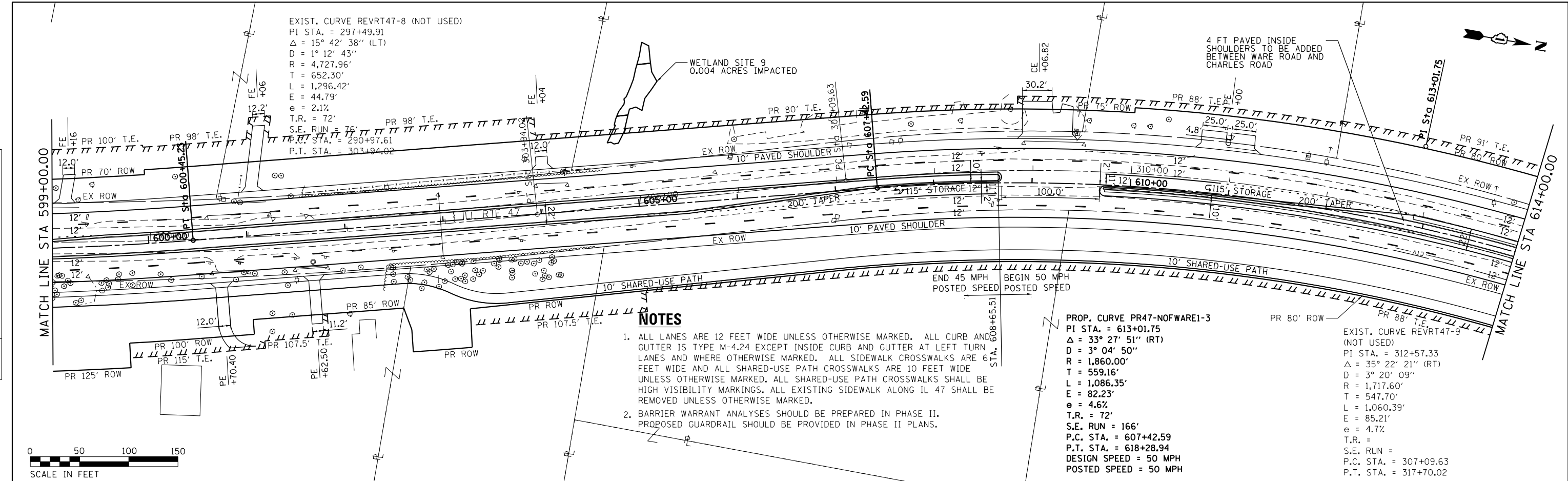
PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	



<p>1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200</p>	USER NAME = MattG DESIGNED - MJG DRAWN - DJW CHECKED - DWG DATE - 02/06/2019	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE ILLINOIS ROUTE 47		F.A.P. R.E. = 326 SECTION = COUNTY = MCHENRY CONTRACT NO. =	TOTAL SHEETS = 32 SHEET NO. = 14
	PLOT SCALE = 100.0000' / 1" = PLOT DATE = 2/12/2019	SCALE: 1" = 50' SHEET 14 OF 19 SHEETS STA. 284+00.00 TO STA. 599+00.00		ILLINOIS FED. AID PROJECT			

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	



881.80	881.03	881.07	880.33	880.37	879.63	879.64	878.93	878.89	878.23	878.19	877.53	877.52	876.83	876.87	876.13	876.36	875.43	875.98	874.73	875.70	874.15	875.48	873.81	875.32	873.70	875.30	873.83	875.31	874.08	875.23	874.33	875.05	874.58	874.94	874.83	874.97	875.08	875.11	875.33	875.20	875.58	875.28	875.83	875.35	876.05	875.50	876.09	875.56	875.92	875.51	875.57	875.41	875.18	875.22	874.80	874.98	874.42	874.72	874.04	874.42	873.66
599+00	600+00	601+00	602+00	603+00	604+00	605+00	606+00	607+00	608+00	609+00	610+00	611+00	612+00	613+00	614+00																																														

STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

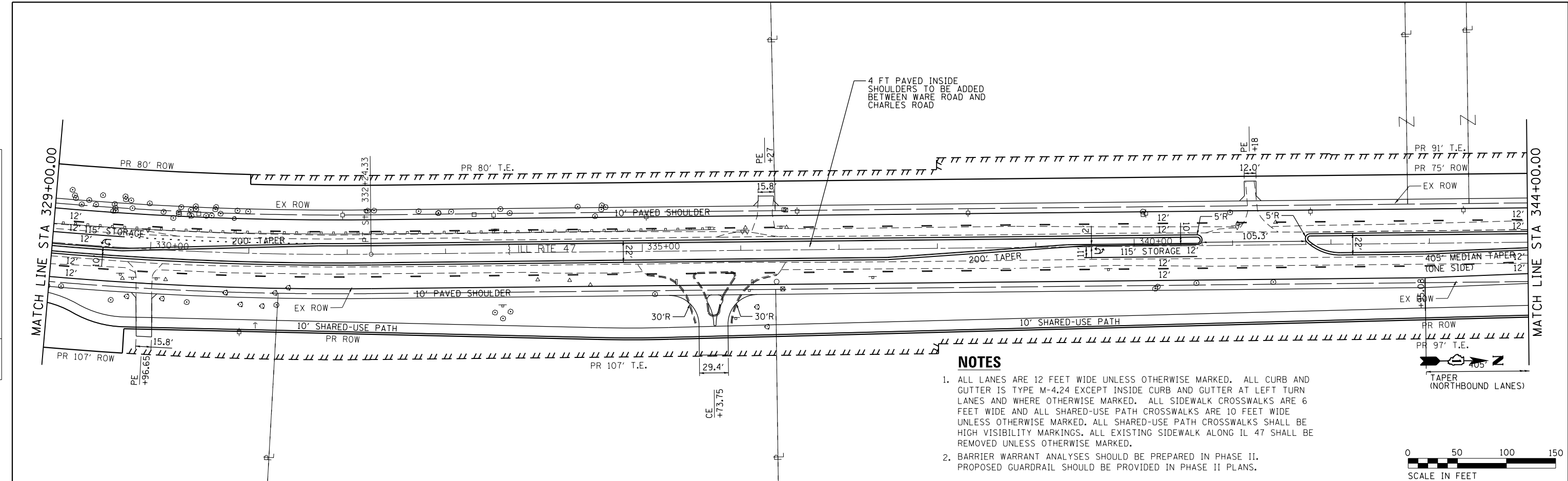
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
 ILLINOIS ROUTE 47
 SCALE: 1" = 50'
 SHEET 15 OF 19 SHEETS
 STA. 599+00.00 TO STA. 614+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 15
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

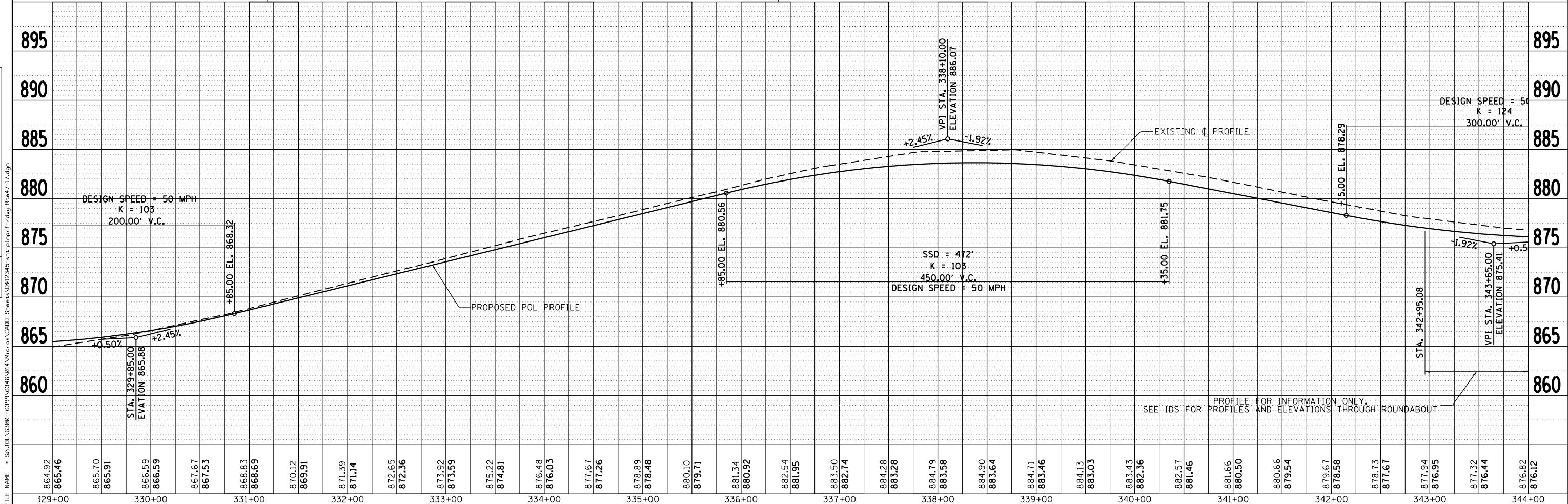
PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	ALIGNMENT CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. _____	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	ALIGNMENT CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. _____	
	FILE NAME	



NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE M-4.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
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864.92	865.46	865.70	865.91	866.59	866.59	867.67	867.53	868.83	868.69	870.12	869.91	871.39	871.14	872.65	872.36	873.32	873.59	875.22	874.81	876.48	876.03	877.67	877.26	878.89	878.48	880.10	879.71	881.34	880.92	882.54	881.95	883.50	882.74	884.28	883.28	884.79	883.58	884.90	883.64	884.71	883.46	884.13	883.03	883.43	882.36	882.57	881.46	881.66	880.50	880.66	879.54	879.67	878.58	878.73	877.67	877.94	876.95	877.32	876.44	876.82	876.12
329+00	330+00	331+00	332+00	333+00	334+00	335+00	336+00	337+00	338+00	339+00	340+00	341+00	342+00	343+00	344+00																																														

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

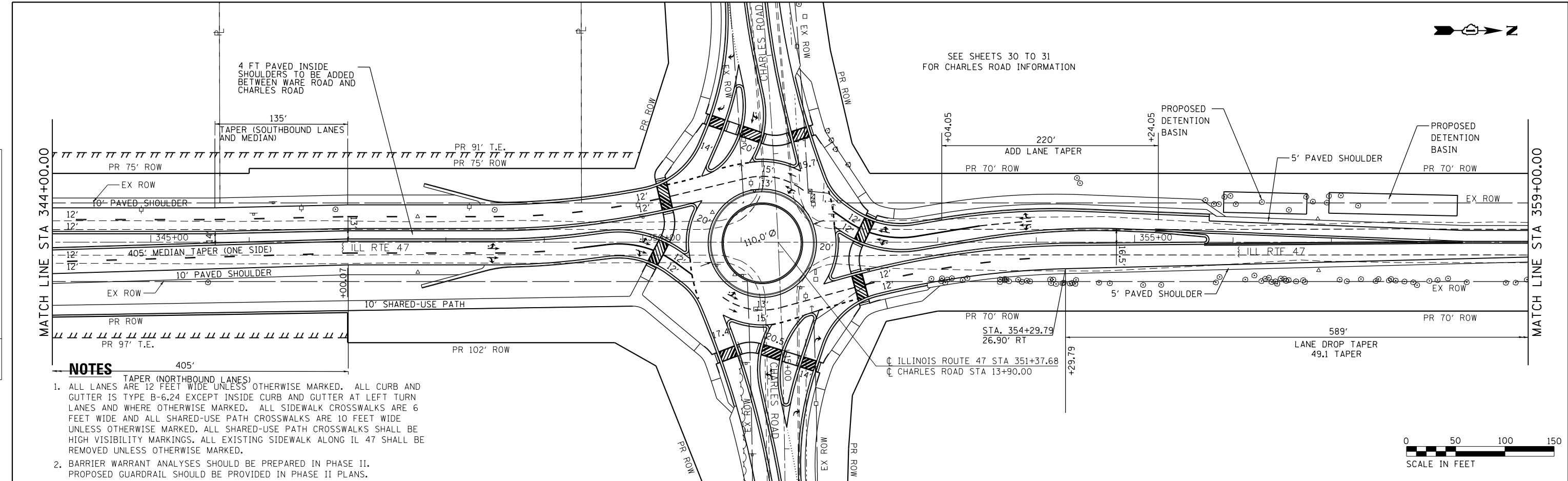
STATE OF ILLINOIS		PLAN & PROFILE	
DEPARTMENT OF TRANSPORTATION		ILLINOIS ROUTE 47	
SCALE: 1" = 50'	SHEET 17	OF 19 SHEETS	STA. 329+00.00 TO STA. 344+00.00

F.A.P. RTE. 326	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		MCHENRY	32	17
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

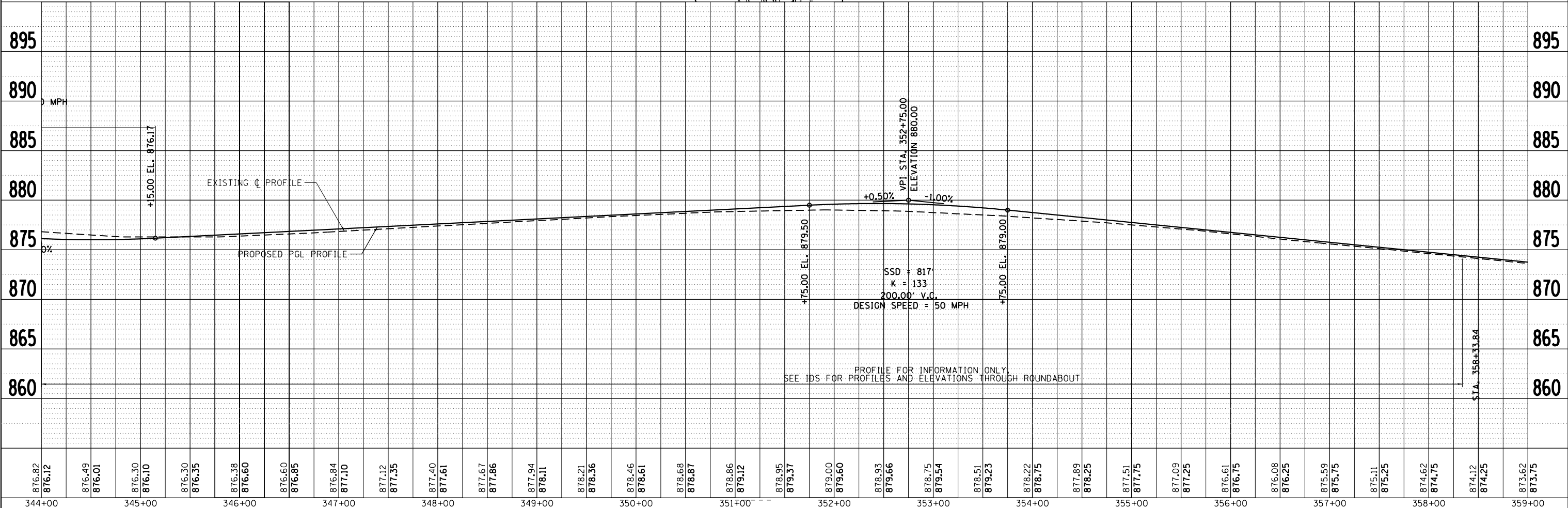
STRAND ASSOCIATES*
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	ALIGNED	
	CHECKED	
	FILE NAME	

PROFILE	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CPWD	



- NOTES**
- TAPER (NORTHBOUND LANES)
ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
 - BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



FILE NAME = S:\JL\63800-6399\6346\01A\Micros\CADD Sheets\012345-sh-11-11-11.dgn

STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

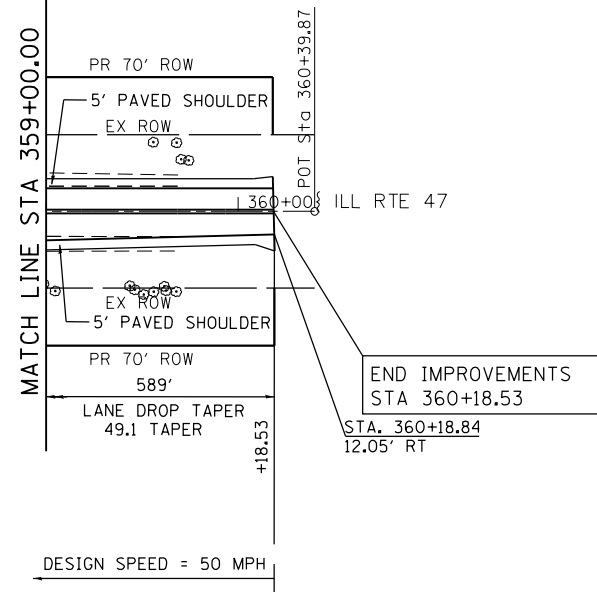
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
ILLINOIS ROUTE 47**
SCALE: 1" = 50' SHEET 18 OF 19 SHEETS STA. 344+00.00 TO STA. 359+00.00

F.A.P. RT. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 18
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
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	FILE NAME	
NOTE BOOK NO.		

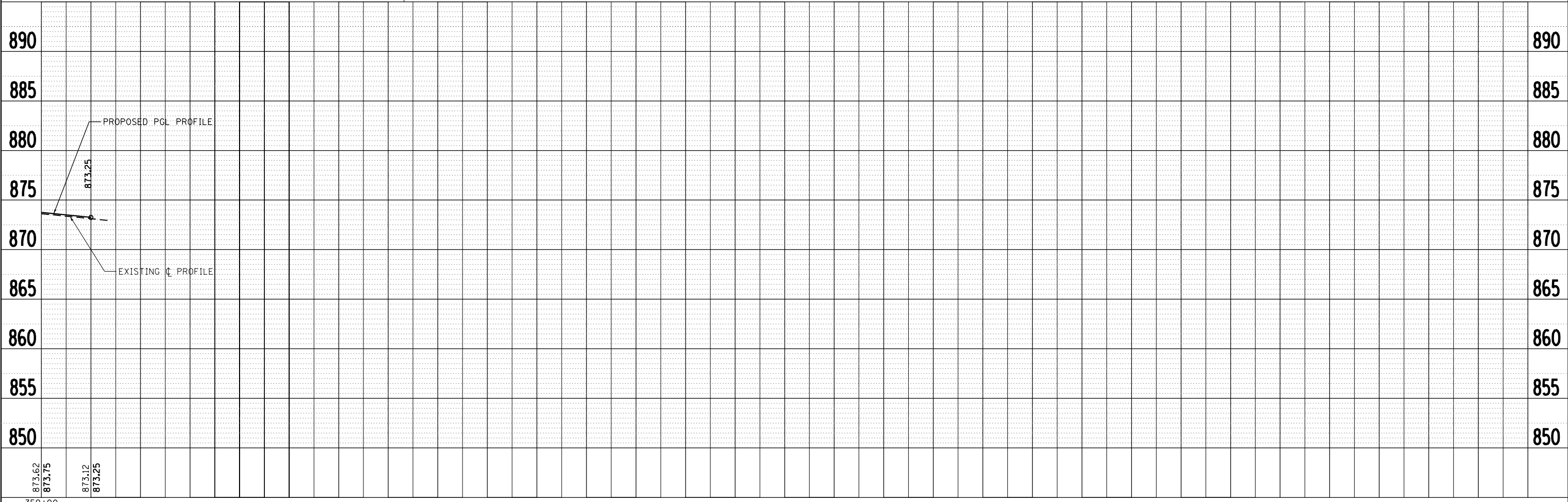


NOTES

1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
2. BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.		



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1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

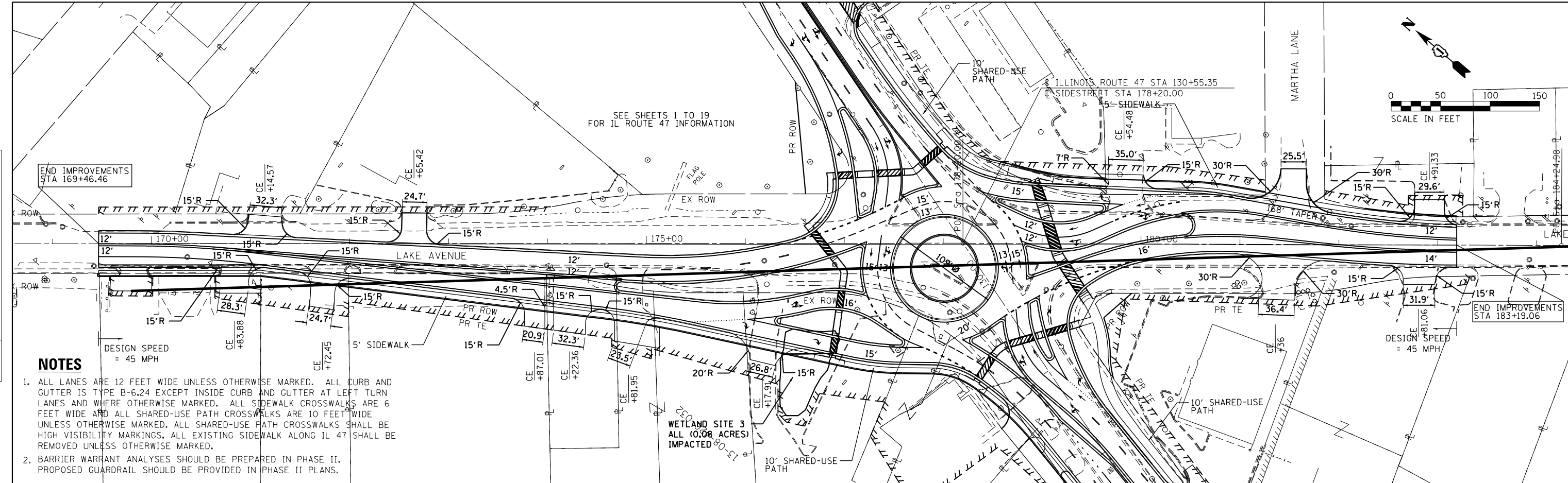
**PLAN & PROFILE
ILLINOIS ROUTE 47**

SCALE: 1" = 50' SHEET 19 OF 19 SHEETS STA. 359+00.00 TO STA. 360+39.87

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY	32	19
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

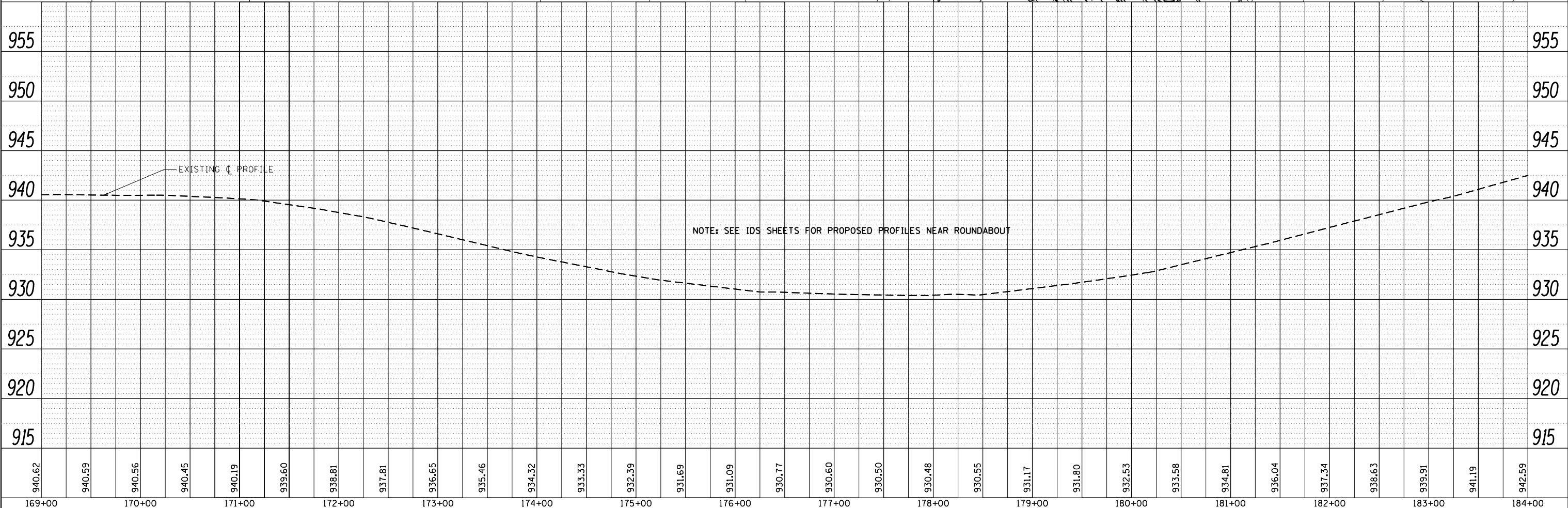
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	PLOTTED		
	ALIGNED		
	CHECKED		
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	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE		
	NOTATIS		
	NO. _____		
	FILE NAME		



NOTES

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940.62	940.59	940.56	940.45	940.19	939.60	938.81	937.81	936.65	935.46	934.32	933.33	932.39	931.69	931.09	930.77	930.60	930.50	930.48	930.55	931.17	931.80	932.53	933.58	934.81	936.04	937.34	938.63	939.91	941.19	942.59
169+00	170+00	171+00	172+00	173+00	174+00	175+00	176+00	177+00	178+00	179+00	180+00	181+00	182+00	183+00	184+00															

STRAND ASSOCIATES*
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

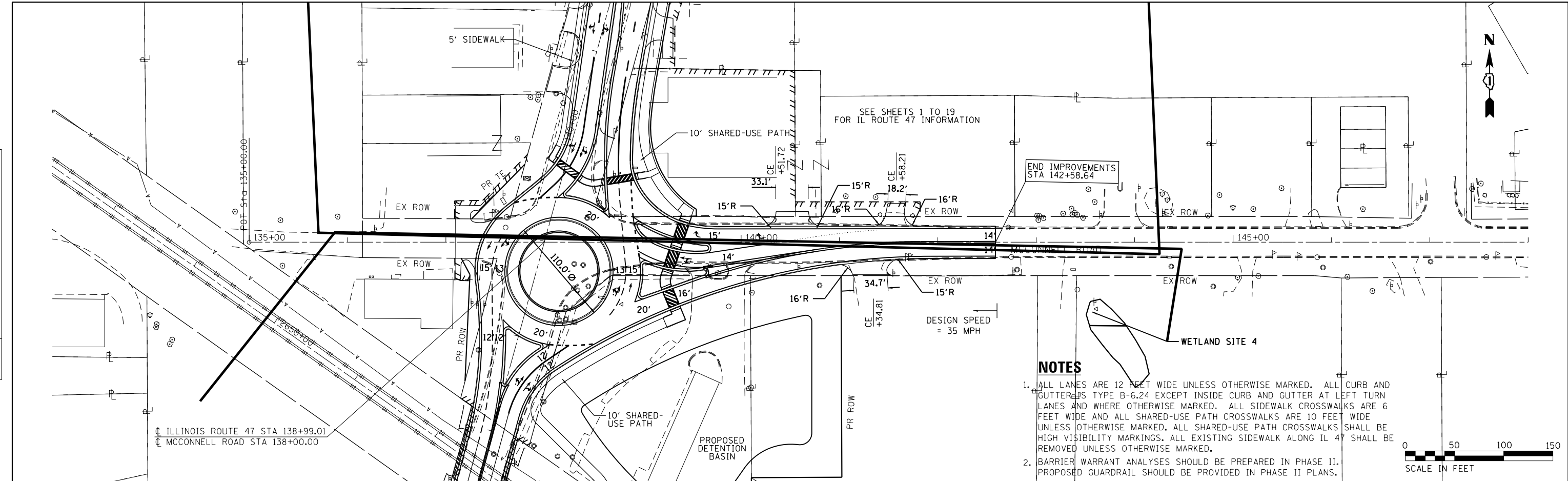
PLAN & PROFILE LAKE AVENUE	
SCALE: 1" = 50'	SHEET 1 OF 1 SHEETS STA. 169+00.00 TO STA. 184+00.00

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 21
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

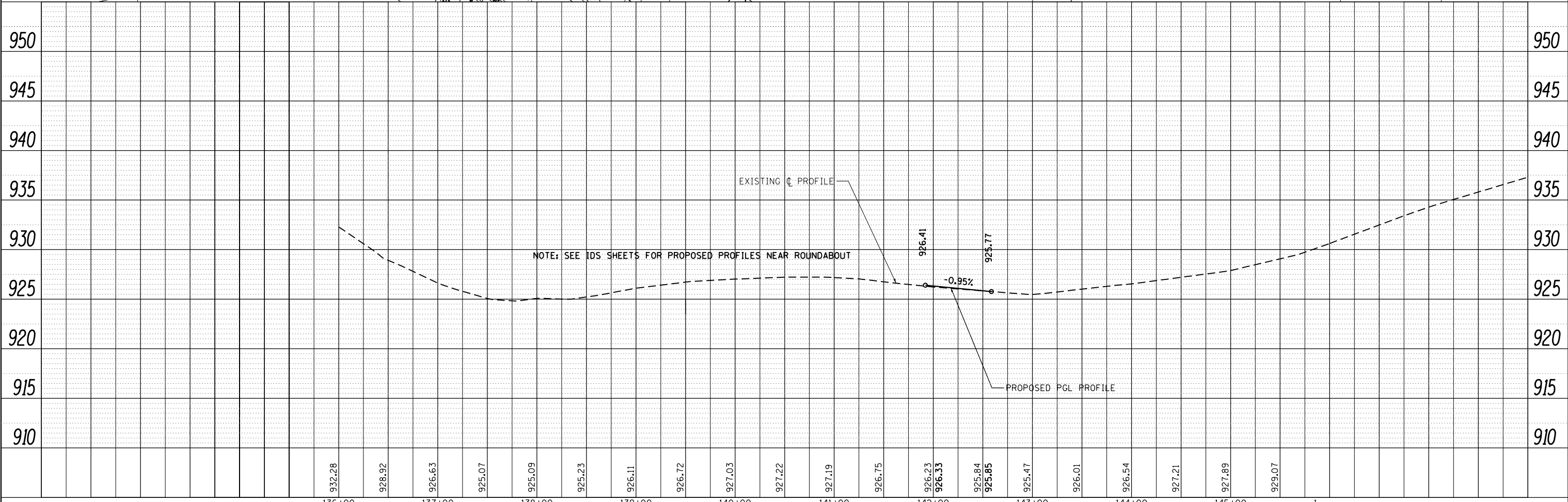
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	ALIGNED		
	CHECKED		
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	NO.		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES		
	CHECKED		
	STRUCTURE		
	NOTATIONS		
	CHKD		
	NO.		



- NOTES**
1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTERS ARE TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
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STRAND ASSOCIATES*
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

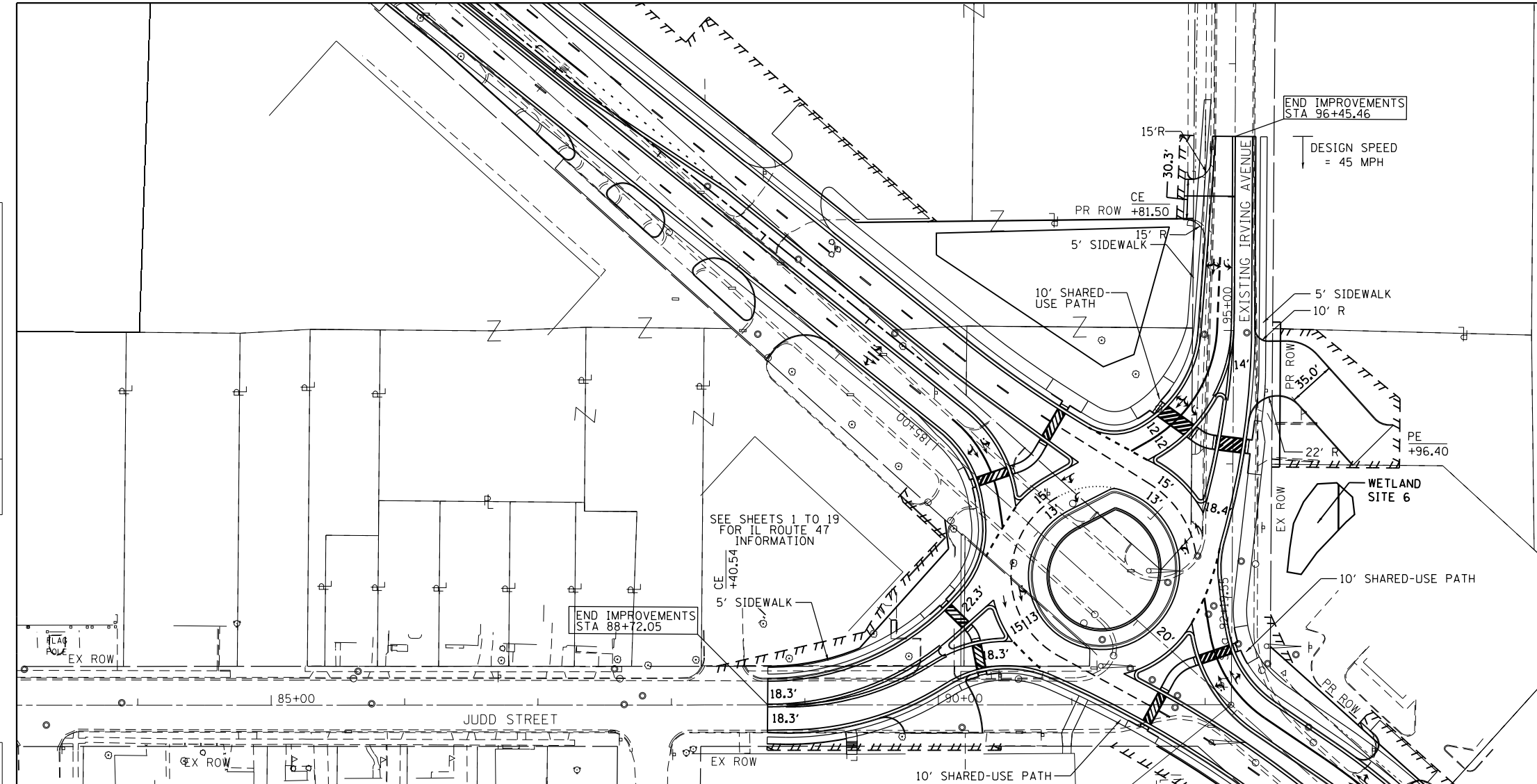
**PLAN & PROFILE
 MCCONNELL ROAD**

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 135+00.00 TO STA. 144+00.00

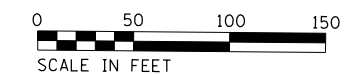
F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 22
CONTRACT NO.				ILLINOIS FED. AID PROJECT

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	DESIGNED	
	FILE NAME	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CHKD	
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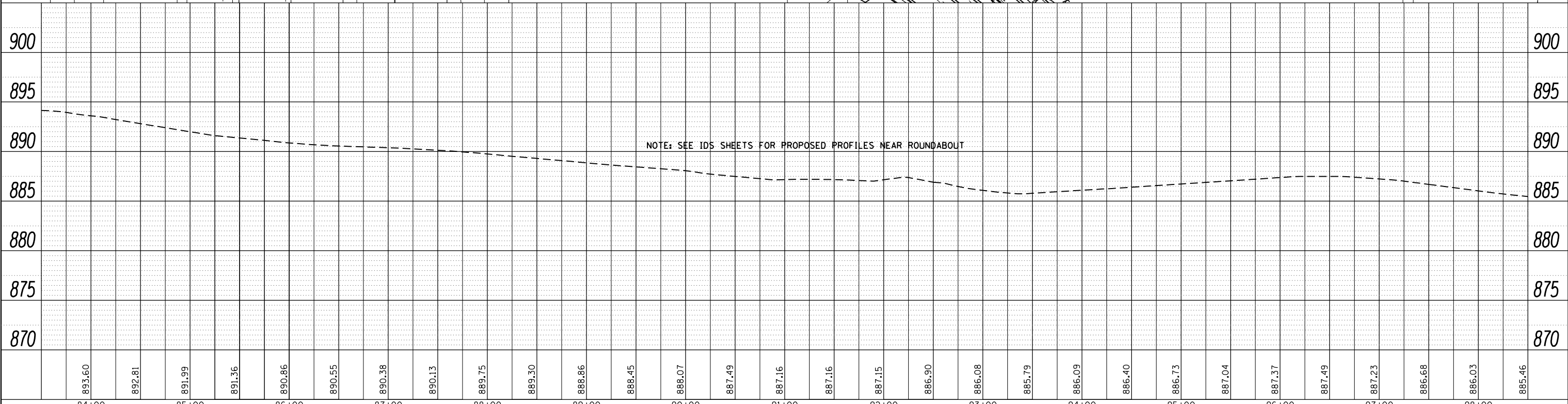


- NOTES**
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SEE SHEETS 1 TO 19 FOR IL ROUTE 47 INFORMATION

NOTE: SEE IDS SHEETS FOR PROPOSED PROFILES NEAR ROUNDABOUT

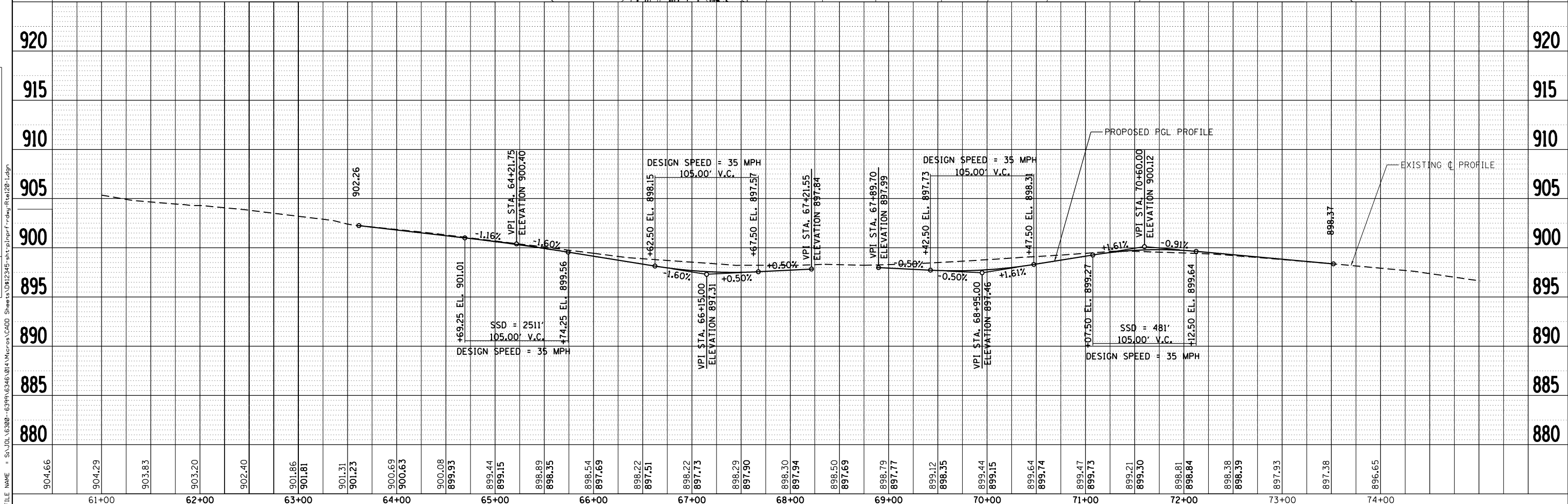
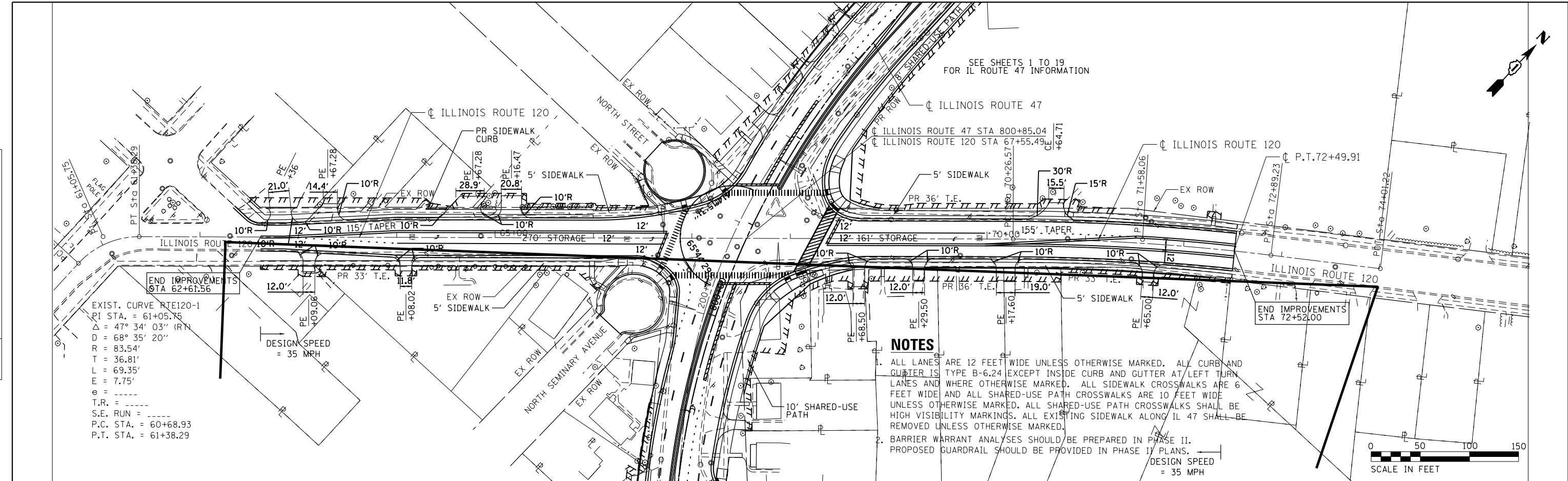


 1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 ASSOCIATES*	USER NAME = MattG DESIGNED - MJG DRAWN - DJW CHECKED - DWG DATE - 02/06/2019	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE PROPOSED JUDD STREET / IRVING AVENUE			F.A.P. RTE. 326 COUNTY MCHENRY CONTRACT NO.	TOTAL SHEETS 32 SHEET NO. 24
	PLOT SCALE = 100.0000' / 1"	SCALE: 1" = 50'		SHEET 1 OF 1 SHEETS	STA. 84+00.00 TO STA. 98+00.00	ILLINOIS FED. AID PROJECT		

Default

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	NO. _____	
	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NO. _____	
	FILE NAME	

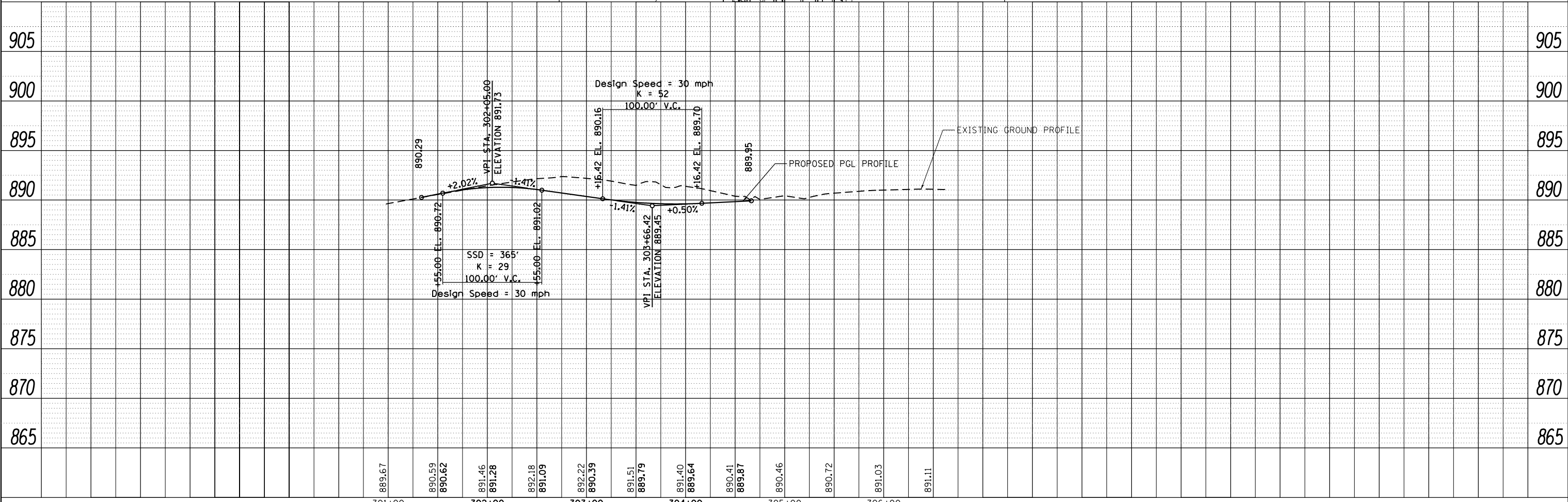
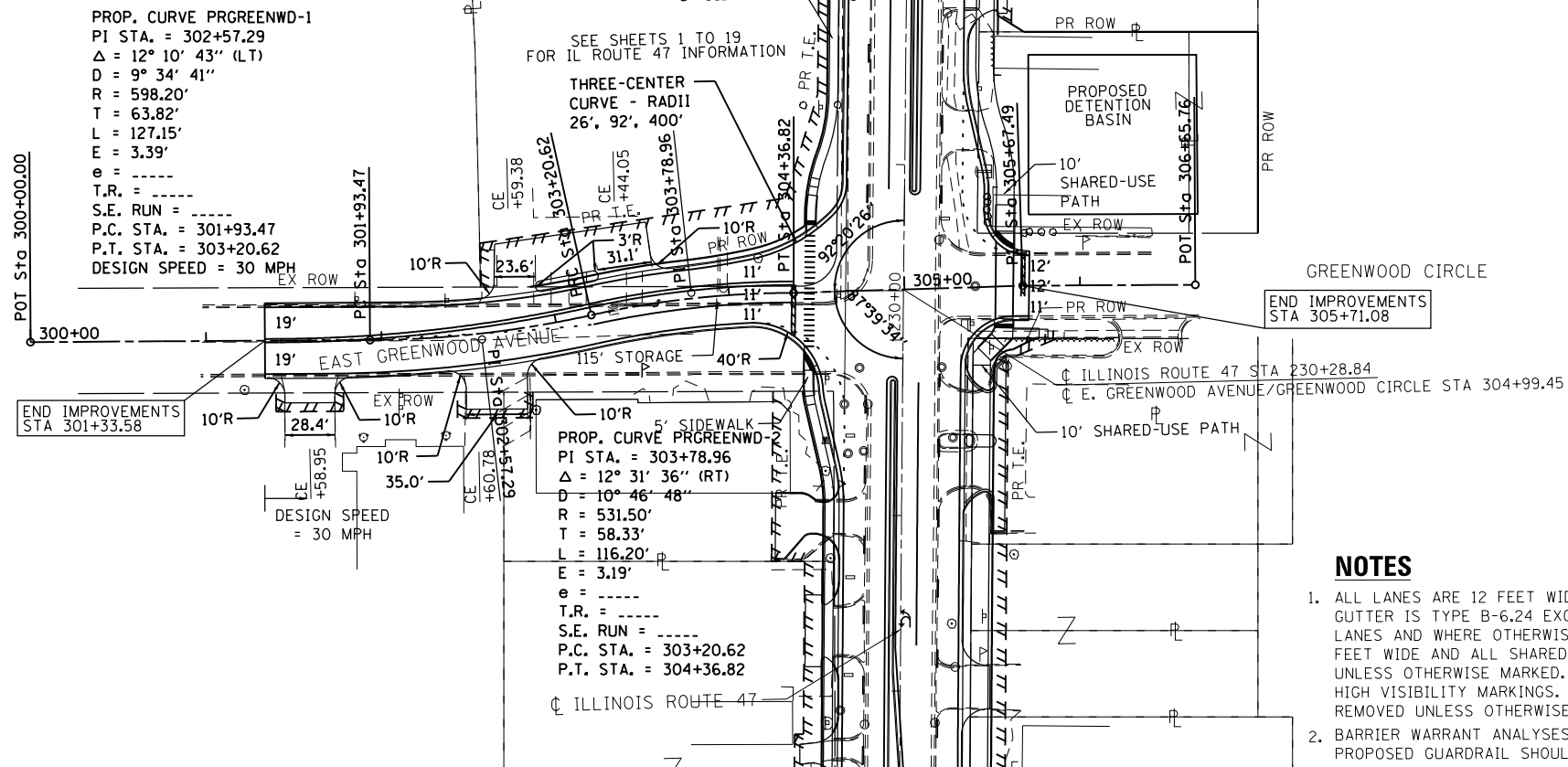


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USER NAME = MattG		DESIGNED - MJC	REVISED -	DRAWN - DJW		REVISED -	CHECKED - DWG		REVISED -	DATE - 02/06/2019		REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		PLAN & PROFILE ILLINOIS ROUTE 120		SCALE: 1" = 50'		SHEET 1 OF 1 SHEETS		STA. 61+00.00 TO STA. 74+01.23		F.A.P. RTE. 326		SECTION		COUNTY MCHENRY		TOTAL SHEETS 32		SHEET NO. 25		CONTRACT NO.		ILLINOIS FED. AID PROJECT																										

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
NO.	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
NO.	FILE NAME	

FILE NAME = S:\JOL\63300-6399\6346\01A\Microst\CADD Sheets\01A2345-sh-1-pln-pr-f-dwg-Greenwood-1.dgn



SA
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
STRAND
 ASSOCIATES*

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
GREENWOOD CIRCLE

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 300+00.00 TO STA. 306+65.76

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 26
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

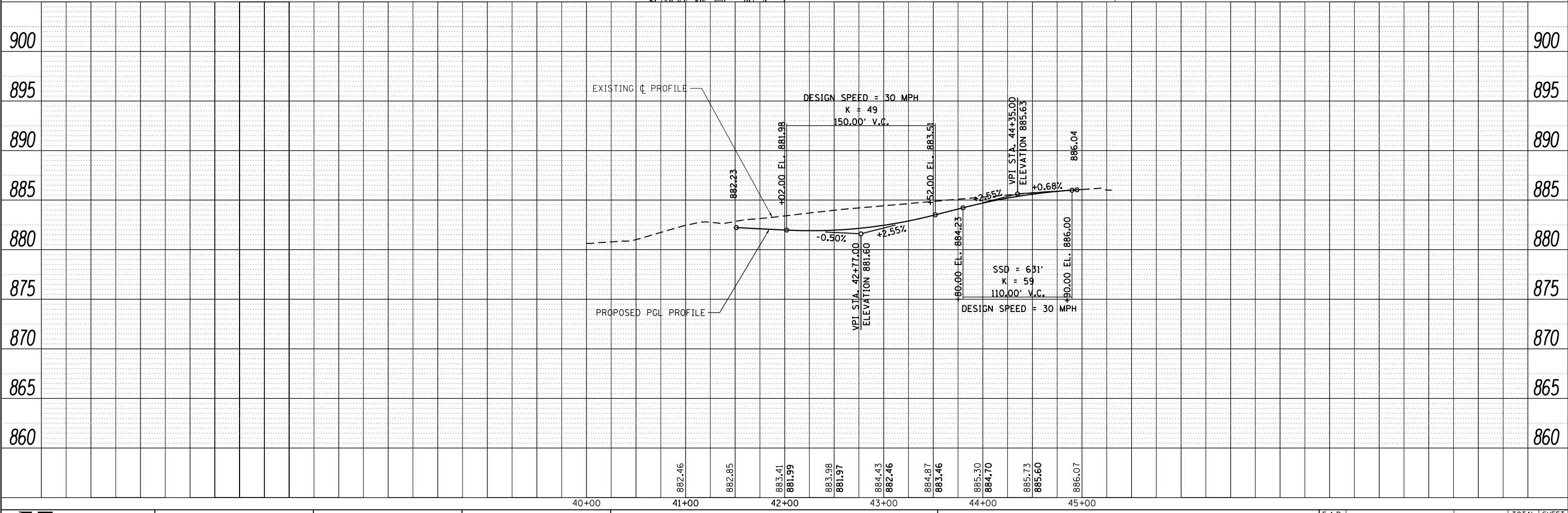
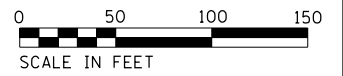
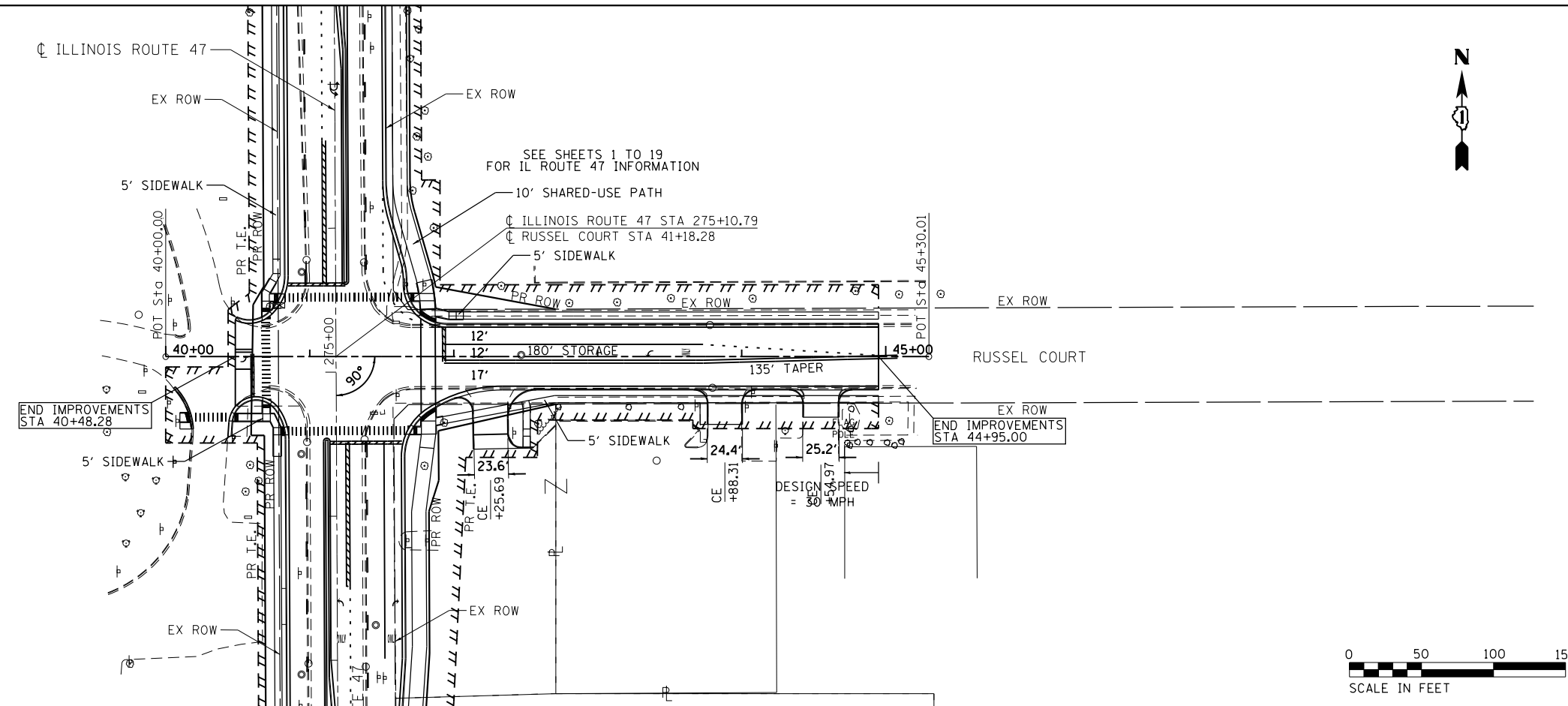
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	FILE NAME	

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NOTES

1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
2. BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



STRAND ASSOCIATES*
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG
PLOT SCALE = 100.0000' / 1"
PLOT DATE = 2/12/2019

DESIGNED - MJG	REVISED -
DRAWN - DJW	REVISED -
CHECKED - DWG	REVISED -
DATE - 02/06/2019	REVISED -

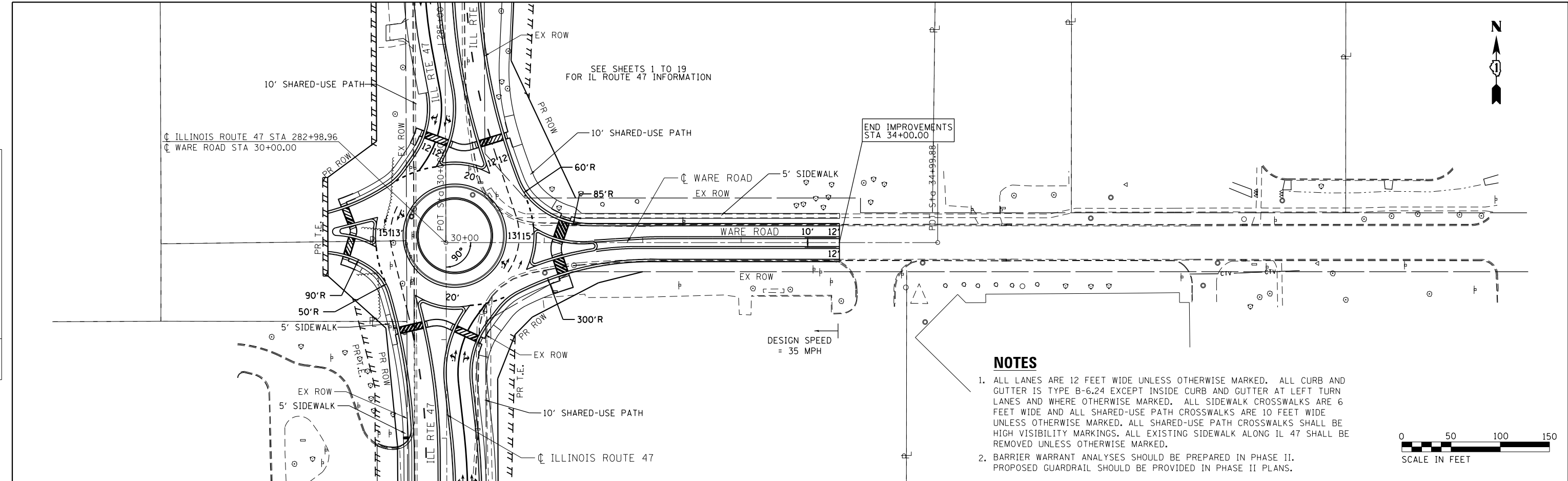
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE RUSSEL COURT			
SCALE: 1" = 50'	SHEET 1	OF 1 SHEETS	STA. 40+00.00 TO STA. 45+30.01

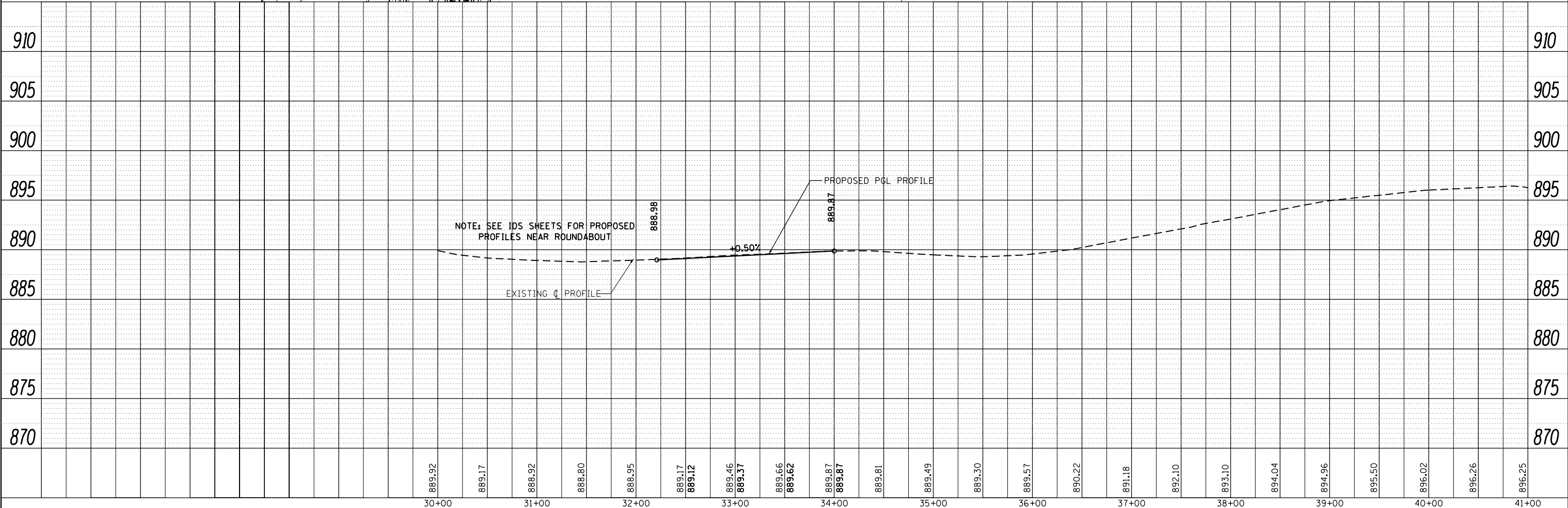
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CONTRACT NO.				ILLINOIS FED. AID PROJECT

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	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
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	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	FILE NAME	



- NOTES**
1. ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
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STRAND ASSOCIATES*
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
	DRAWN - DJW	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - DWG	REVISED -
PLOT DATE = 2/12/2019	DATE - 02/06/2019	REVISED -

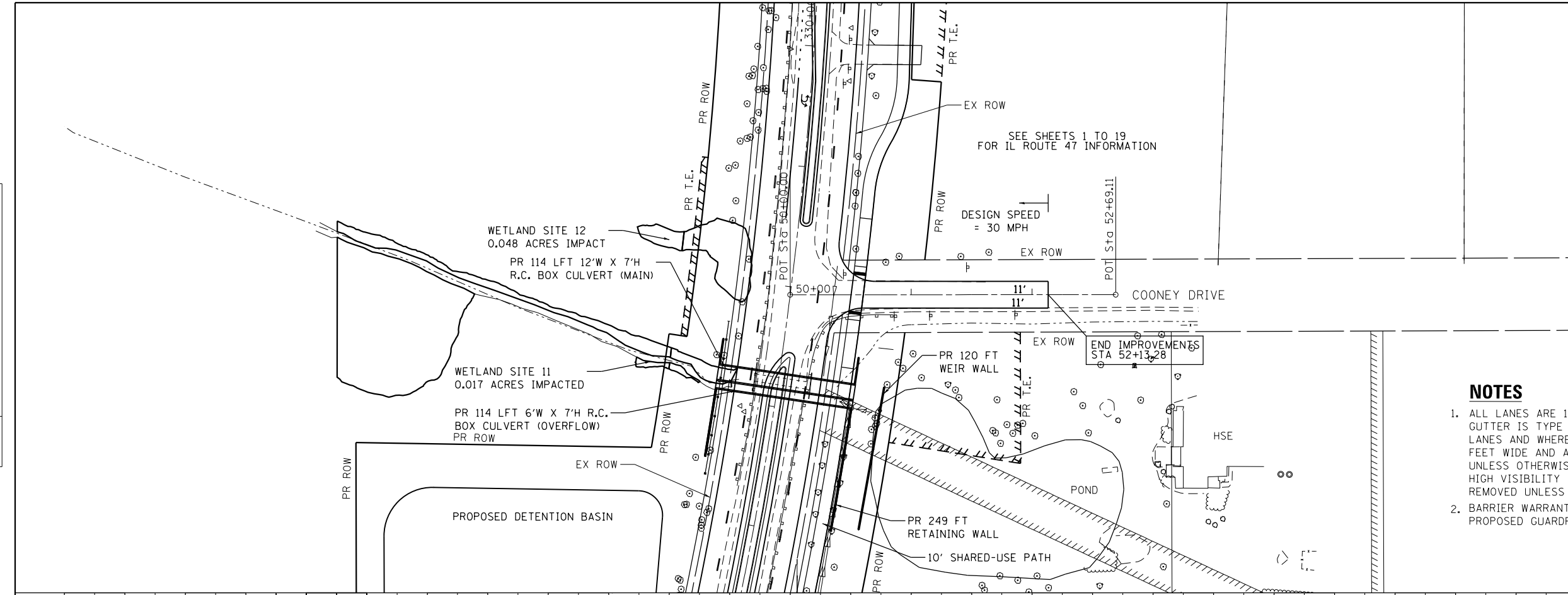
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN & PROFILE WARE ROAD			
SCALE: 1" = 50'	SHEET 1	OF 1 SHEETS	STA. 30+00.00 TO STA. 34+99.88

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 29
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

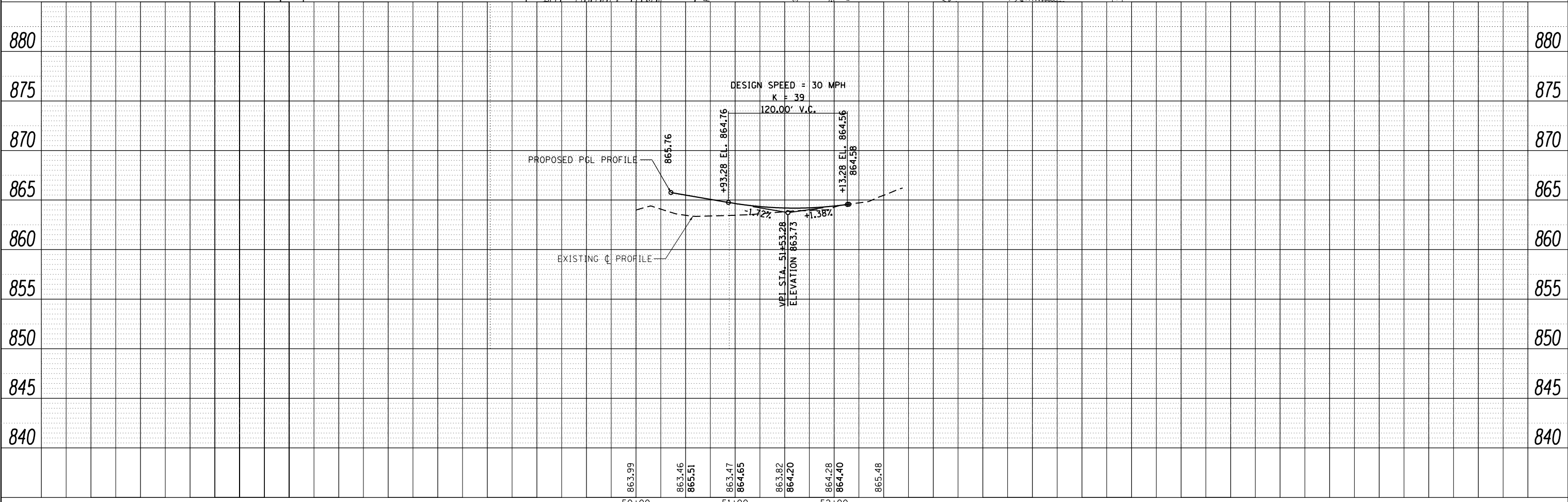
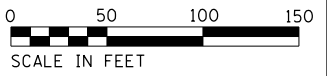
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	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	FILE NAME		



NOTES

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STRAND ASSOCIATES*
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG
PLOT SCALE = 100.0000' / 1"
PLOT DATE = 2/12/2019

DESIGNED - MJG	REVISED -
DRAWN - DJW	REVISED -
CHECKED - DWG	REVISED -
DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

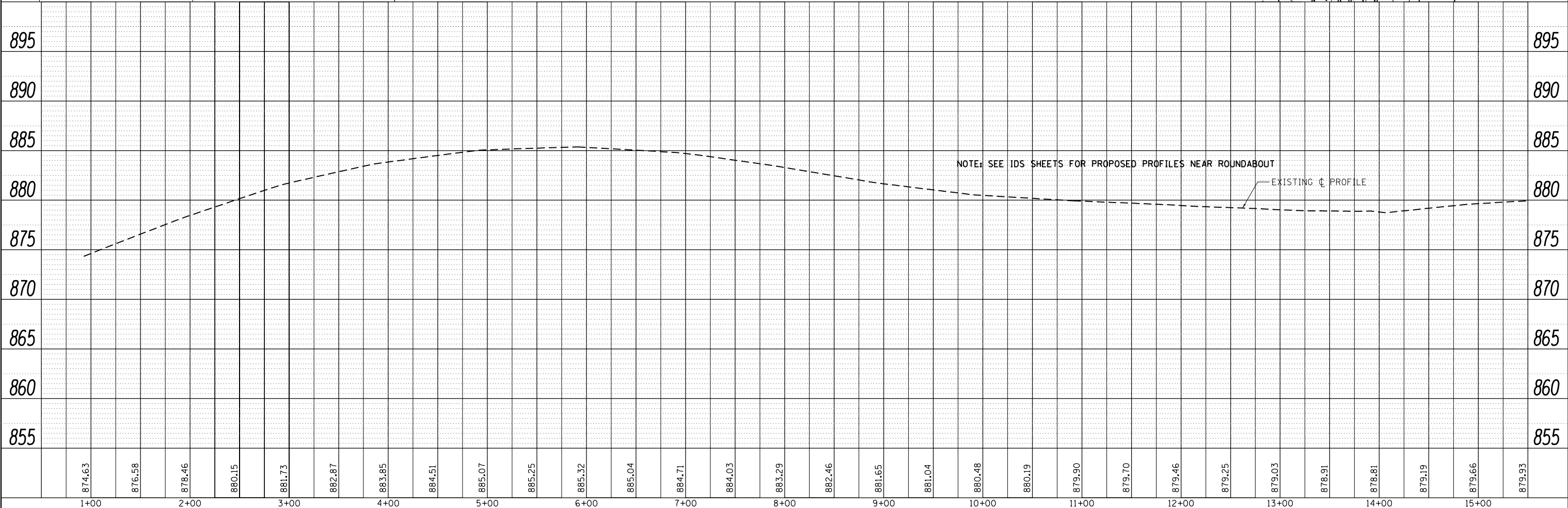
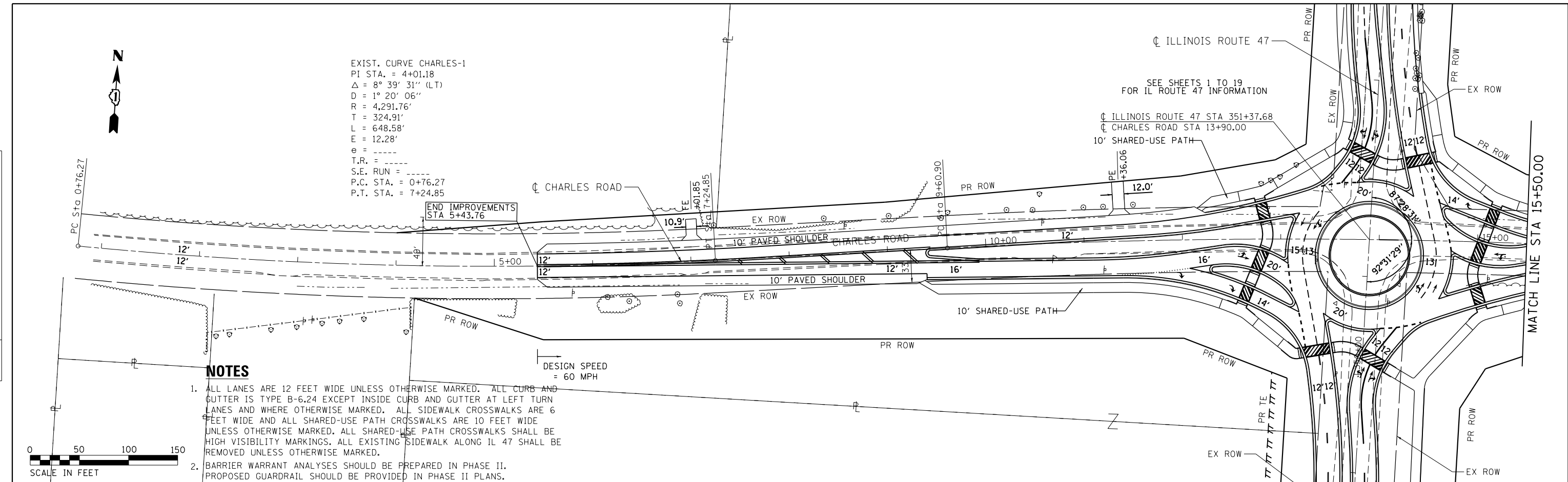
**PLAN & PROFILE
COONEY DRIVE**

SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 50+00.00 TO STA. 52+69.11

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 30
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

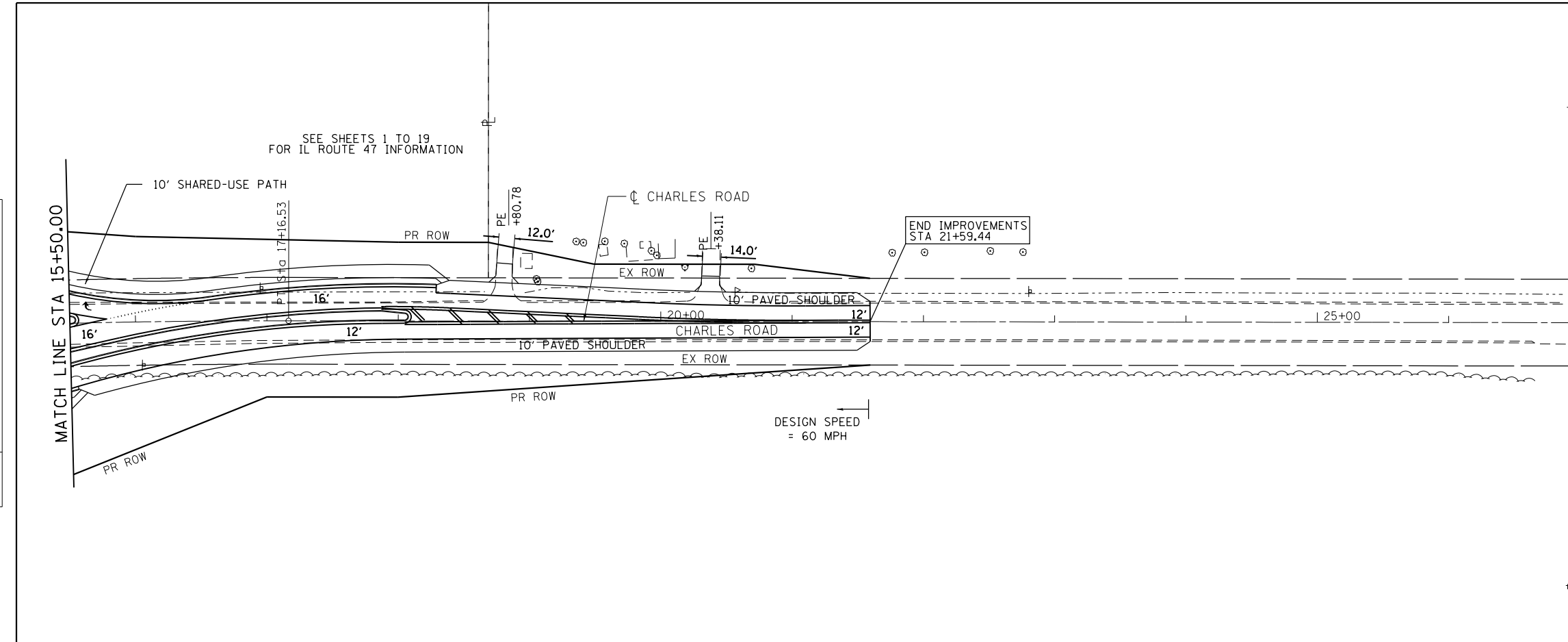
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	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
NOTE BOOK NO.	FILE NAME	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
NOTE BOOK NO.	FILE NAME	



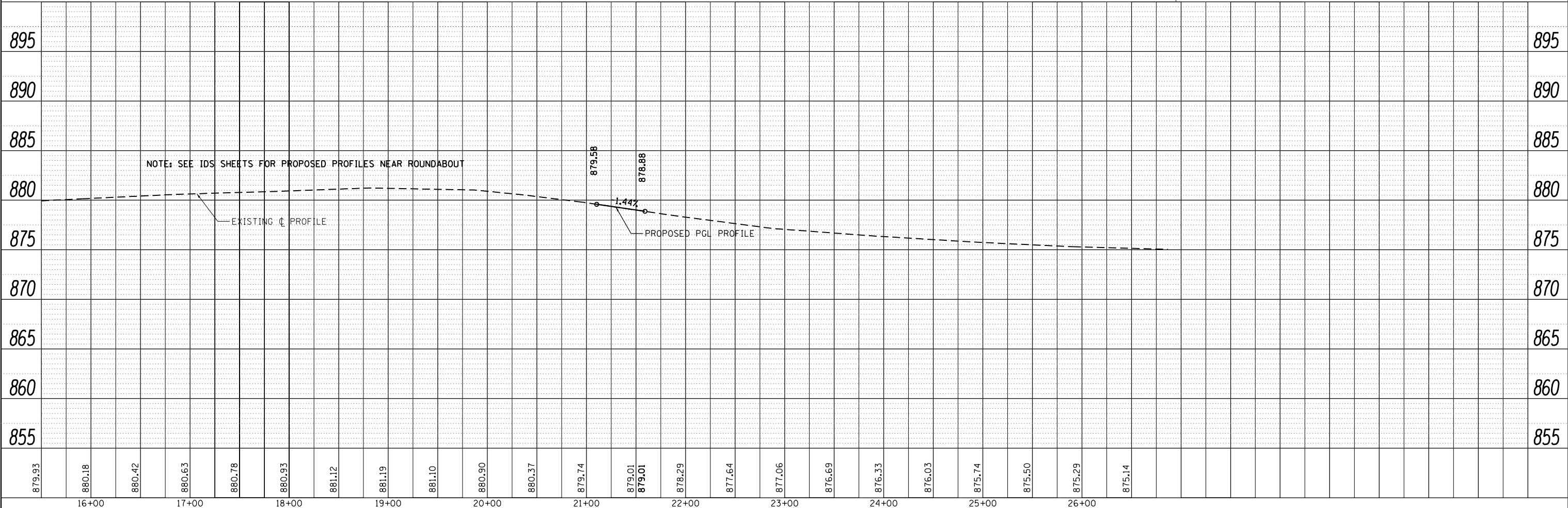
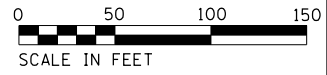
PLAN	SURVEYED	BY	DATE
	PLOTTED		
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NOTE BOOK NO.	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
NOTE BOOK NO.	FILE NAME		



NOTES

- ALL LANES ARE 12 FEET WIDE UNLESS OTHERWISE MARKED. ALL CURB AND GUTTER IS TYPE B-6.24 EXCEPT INSIDE CURB AND GUTTER AT LEFT TURN LANES AND WHERE OTHERWISE MARKED. ALL SIDEWALK CROSSWALKS ARE 6 FEET WIDE AND ALL SHARED-USE PATH CROSSWALKS ARE 10 FEET WIDE UNLESS OTHERWISE MARKED. ALL SHARED-USE PATH CROSSWALKS SHALL BE HIGH VISIBILITY MARKINGS. ALL EXISTING SIDEWALK ALONG IL 47 SHALL BE REMOVED UNLESS OTHERWISE MARKED.
- BARRIER WARRANT ANALYSES SHOULD BE PREPARED IN PHASE II. PROPOSED GUARDRAIL SHOULD BE PROVIDED IN PHASE II PLANS.



FILE NAME = S:\JUL\63808-6399\6346\01A\Micros\CADD Sheets\012345-shr-2.dwg Charles 2.dgn

STRAND ASSOCIATES*

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = MattG	DESIGNED - MJG	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - DJW	REVISED -
PLOT DATE = 2/12/2019	CHECKED - DWG	REVISED -
	DATE - 02/06/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PLAN & PROFILE
CHARLES ROAD**

SCALE: 1" = 50' SHEET 2 OF 2 SHEETS STA. 15+50.00 TO STA. 27+31.51

F.A.P. RTE. 326	SECTION	COUNTY MCHENRY	TOTAL SHEETS 32	SHEET NO. 32
CONTRACT NO.			ILLINOIS FED. AID PROJECT	

**EXHIBIT 3.5-1
DESIGN EXCEPTIONS SUMMARY TABLE**

Design Exceptions Summary Table

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
1	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 134+43.00 RT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
2	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 135+26.00 RT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway anticipated regarding other design elements, mobility, or traffic operations due leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are to this design exception.
3	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	10.0%	Driveway Profile Grade at Station 146+95.00 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
4	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	9.92%	Driveway Profile Grade at Station 150+92.04 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
5	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	9.86%	Driveway Profile Grade at Station 214+00.57 RT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
6	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	10.0%	Driveway Profile Grade at Station 215+93.57 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
7	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 222+08.46 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
8	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 223+59.90 RT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
9	Driveway Profile Grade	8.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	10.3%	Driveway Profile Grade at Station 226+53.68 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
10	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	9.85%	Driveway Profile Grade at Station 227+64.36 LT along Illinois Route 47	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
11	Driveway Profile Grade	8.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	9.4%	Driveway Profile Grade at Station 242+17.66 LT along Illinois Route 47	Providing the policy value for the driveway profile grade at this location would require raising the roadway profile on Illinois Route 47. There is no additional room to extend the driveway without relocating the house. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
12	Driveway Profile Grade	8.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	10.0%	Driveway Profile Grade at Station 64+67.28 LT along Illinois Route 120	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
13	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 204+19.00 RT along Southview Drive	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
14	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 112+86.74 RT along South Street	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.
15	Driveway Profile Grade	6.0% (BDE Manual 36-7.01(f) Figure 36-7.B)	8.0%	Driveway Profile Grade at Station 113+06.75 RT along South Street	Providing the policy value for the driveway profile grade is not feasible at this location. The driveway reconstruction limits would have to be extended to meet the policy value, impacting the property that this driveway leads to. The proposed value is geometrically compatible with adjacent sections as is, and no impacts are anticipated regarding other design elements, mobility, or traffic operations due to this design exception.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
16	Intersection Sight Distance	716 feet (BDE Manual 36-6)	560 feet	Christian Way Left-Turn Sight Distance at Station 211+22	Providing the proper sight distance for trucks at this location would require lowering the Illinois Route 47 roadway profile approximately 2 additional feet. The proposed roadway profile is already 0.5 feet lower than the existing roadway profile to accommodate drainage and grading. Lowering the roadway profile an additional foot would increase right-of-way needs and likely require additional property relocations. The sight distance of 560 feet proposed meets passenger vehicle sight distance requirements for the 35 mph design speed and meets truck sight distance requirements for a 30 mph design speed.
17	Horizontal Clearances	18 feet (BDE Figure 38-3.A)	15 feet	Retaining Wall along IL Route 47 between Station 591+00 and Station 594+50 LT.	The retaining walls are being proposed to reduce impacts to wetlands and a stream. To provide the required clear zone along Illinois Route 47, additional right-of-way, impacts to wetlands, and impacts to a stream, would be required.
18	Horizontal Clearances	18 feet (BDE Figure 38-3.A)	14.5 feet	Retaining Wall along IL Route 47 between Station 326+50 and Station 327+50 LT.	The retaining walls are being proposed to reduce impacts to wetlands and a stream. To provide the required clear zone along Illinois Route 47, additional right-of-way, impacts to wetlands, and impacts to a stream, would be required.
19	SRA Suburban	LOS C (BDE Figure 46-3.E)	LOS D	Illinois Route 47 Roundabout at Lake Avenue Northbound Through Movement (AM & PM)	The level of service at Lake Street is an LOS D because the intersection will be a 2-lane roundabout. Impacts to adjacent businesses would include relocations and additional right of way.
20	SRA Suburban	LOS D (BDE Figure 46-3.E)	LOS E	Illinois Route 47 Roundabout at Lake Avenue Northbound Left-Turn Movement (AM & PM)	The level of service at Lake Street is an LOS D because the intersection will be a 2-lane roundabout. Impacts to adjacent businesses would include relocations and additional right of way.
21	SRA Suburban	LOS C (BDE Figure 46-3.E)	LOS D	US Route 14 at Illinois Route 47 Westbound Through Movement (PM Only)	No work is proposed on US Route 14 for this project. Changing of the signal timings at this intersection to improve the US Route 14 through movement will decrease the level of service along Illinois Route 47 and for the US Route 14 turning movements.
22	Shared Use Path Width	10 feet (BDE Figure 17-2.X)	8 feet	Shared-Use Path from Station 122+00 to 128+00 RT	The proposed design exception is anticipated to cause less impacts to the businesses already being impacted by the shared use path. A wider shared use path would cause more parking loss, relocations, and impacts to the businesses.
23	Shared Use Path Width	10 feet (BDE Figure 17-2.X)	8 feet	Shared-Use Path from IL Route 120 to Christian Way (Station 802+00 to 211+00 RT)	The proposed design exception is anticipated to cause less impacts to the businesses already being impacted by the shared use path. A wider shared use path would cause more parking loss, relocations, and impacts to the businesses.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
24	Intersection Skew Angle	30 degrees (BDE Manual Section 36-1.05(a))	44 degrees	Illinois Route 47 and Calhoun Street intersection.	Following the existing alignment minimizes the amount of right-of-way and property relocations. Realigning the intersection to decrease skew angle would complicate roadway geometry approaching the intersection.
25	Intersection Skew Angle	30 degrees (BDE Manual Section 36-1.05(a))	32 degrees	Illinois Route 47 and Country Club Road.	Following the existing alignment minimizes the amount of right-of-way and property relocations. Realigning the intersection to decrease skew angle would require additional impacts and complicate roadway geometry approaching the intersection.
26	Median Treatment	Raised median only allowed at intersection approaches (BDE Manual 36-4.02(b))	Mountable median proposed along Illinois Route 47 from Ware Road to Charles Road. Mountable median is located inside of the 4-foot wide paved inside shoulder.	Along Illinois Route 47 from Ware Road to Charles Road (Station 284+00 - Station 350+50).	Using a depressed median increases the roadway footprint, increasing right-of-way needs and wetland impacts. Mountable curb is proposed to reduce the possibility of cars vaulting.
27	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	95 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length at Catalpa Lane (Station 106+50)	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
28	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	95 feet	Illinois Route 47 Northbound Left Turn Lane Storage Length (Station 107+70).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
29	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	81 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length (Station 110+00).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
30	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	81 feet	Illinois Route 47 Northbound Left Turn Lane Storage Length (Station 111+50)	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
31	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	97 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length (Station 113+25).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
32	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	97 feet	Illinois Route 47 Northbound Left Turn Lane Storage Length (Station 114+50).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
33	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	110 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length (Station 117+60)	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
34	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	110 feet	Illinois Route 47 Northbound Left-Turn Lane Storage Length at Southview Drive (Station 118+00).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
35	Turn-Lane Storage Length	150 feet (BDE 36-3.02(b) 2.C.) - SRA	95 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length (Station 127+00).	Providing shorter storage lengths helps drivers distinguish between major and minor intersections and increases access to corridor businesses.
36	Turn-Lane Storage Length	193 feet (BDE Manual (PM) Section 36-3.02.b, 3.03.a. Red-time Queue)	150 feet	Illinois Route 47 Northbound Left Turn Lane Storage Length at Country Club Road (Station 166+00)	Using 193 foot storage length will affect the ability to provide a compliant amount of storage at the intersection commercial left turn access to the south at Station 161+50. This will impact businesses and residents along the corridor.
37	Turn-Lane Storage Length	381 feet (BDE Manual (AM) Section 36-3.02.b, 3.03.a. Red-time Queue)	230 feet	Illinois Route 47 Southbound Left Turn Lane Storage Length at Country Club Road (Station 168+00)	Using 381 foot storage length will affect the ability to provide a compliant amount of storage at the intersection of Illinois Route 47 and Calhoun Street. This will impact businesses and residents along the corridor.
38	Turn-Lane Storage Length	536 feet (BDE Manual (PM) Section 36-3.02.b Red-time Queue)	135 feet	Country Club Road Westbound Right Turn Lane Storage Length (Station 116+50).	Using 536 foot storage length will affect the ability of residents to access a commercial property at the intersection of Country Club Road and Illinois Route 47.
39	Turn-Lane Storage Length	290 feet (BDE Manual (PM) Section 36-3.02.b, 3.03.a. Red-time Queue)	160 feet	Country Club Road Westbound Left Turn Lane Storage Length (Station 116+50).	Using 290 foot storage length will affect the ability of residents to access a commercial property at the intersection of Country Club Road and Illinois Route 47.
40	Turn-Lane Storage Length	547 feet (BDE Manual (AM) Section 36-3.02.b, 3.03.a. Red-time Queue)	270 feet	Illinois Route 120 Eastbound Left Turn Lane Storage Length (Station 66+00).	Using 547 foot storage length will affect the ability to provide a compliant amount of storage at the intersection of Illinois Route 120 and Illinois Route 47.
41	Dual Left-Turn Lane Taper Length	300 feet (BDE Manual Section 36-3.05(b))	255 feet	Illinois Route 47 northbound dual left-turn lane (Station 95+20) at the intersection of Illinois Route 47 and US Route 14.	Without this design exception, existing left turn access into Davis Road will be below 3R standards. Access in this area is important for the side street and access to businesses.
42	Dual Left-Turn Lane Taper Length	300 feet (BDE Manual Section 36-3.05(b))	258 feet	Illinois Route 47 southbound dual left-turn lane (Station 102+60) at the intersection of Illinois Route 47 and US Route 14.	Without this design exception, existing left turn access into Catalpa Lane will be below 3R standards. Access in this area is important for the side street and access to businesses.
43	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.I)	53 feet	Illinois Route 47 Northbound Left-Turn Lane Taper at Station 107+10	Without this design exception business access would be reduced.
44	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.I)	53 feet	Illinois Route 47 Southbound Left-Turn Lane Taper at Catalpa Lane (Station 107+60).	Without this design exception business access would be reduced.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
45	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Northbound Left Turn Lane Taper at Station 110+50.	Without this design exception business access would be reduced.
46	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 110+75.	Without this design exception business access would be reduced.
47	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Northbound Left Turn Lane Taper at Station 113+90	Without this design exception business access would be reduced.
48	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 114+25.	Without this design exception business access would be reduced.
49	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Northbound Left Turn Lane Taper at Station 117+50.	Without this design exception business access would be reduced.
50	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	50 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 117+75.	Without this design exception business access would be reduced.
51	Turn Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	135 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Country Club Road (Station 170+27).	Without this design exception, level of service at the Illinois Route 47 and County Club Road and/or the level of service at the Illinois Route 47 and Calhoun Street intersection would be negatively affected.
52	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	70 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 128+25.	Without this design exception business access would be reduced.
53	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.1)	53 feet	Illinois Route 47 Northbound Left Turn Lane Taper at Station 176+25.	Without this design exception business access would be reduced.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
54	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.I)	53 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 176+65.	Without this design exception business access would be reduced.
55	Turn-Lane Taper Length	175 feet (BDE Manual Figure 36-3.I)	53 feet	Illinois Route 47 Southbound Left Turn Lane Taper at Station 180+60.	Without this design exception business access would be reduced.
56	Turn-Lane Taper Length	155 feet (BDE Manual Figure 36-3.I)	60 feet	Country Club Road Westbound Left Turn Taper Rate (Station 117+00).	A design exception is necessary for the storage length taper at westbound Country Club Road left turn lane to allow for a left turn lane at the commercial entrance located in the northeast quadrant of the Illinois Route 47 and County Club Road intersection.
57	Turn-Lane Taper Length	155 feet (BDE Manual Figure 36-3.I)	100 feet	Country Club Road Westbound Right Turn Lane Taper Rate (Station 117+00).	A design exception is necessary for the storage length taper at westbound Country Club Road right turn lane to prevent the need for the taper to continue through the commercial entrance located in the northeast quadrant of the Illinois Route 47 and County Club Road intersection. This taper matches the existing conditions.
58	Turn-Lane Taper Length	155 feet (BDE Manual Figure 36-3.I)	115 feet	Illinois Route 120 Eastbound Left Turn Lane Tape Rate (Station 66+00).	A 115 foot storage length taper helps drivers distinguish between major and minor intersections.
59	Turn Lane Taper Length	265 feet (BDE Manual Section 36-3.I)	240 feet	Westbound US Route 14 at Illinois Route 47 Right-Turn Lane Taper Length (Station 230+00)	A design exception is necessary for the turn lane taper length because the existing taper of 240 feet is insufficient and no work is being proposed along US Route 14, outside adding a right-turn corner island.
60	Turn Lane Approach Taper Rate	35:1 (BDE Manual Figure 36-3.J) - Shadowed	Un-Shadowed	Westbound Russel Court at Illinois Route 47, Left Turn Lane Approach Taper Rate (Station 45+00)	A design exception is necessary for the approach taper rate to reduce driver confusion by not having the taper extend past additional commercial entrances, which could cause traffic delays as drivers try to enter/exit the entrances.

No.	Design Element	BDE Policy Value	Proposed Design Value (Exception)	Location	Justification
61	Turn Lane Approach Taper Rate	35:1 (BDE Manual Figure 36-3.J) - Shadowed	Un-Shadowed	Westbound St Johns Road at Illinois Route 47, Left Turn Lane Approach Taper Rate (Station 49+00)	A design exception is necessary for the approach taper rate to reduce driver confusion by not having the taper extend past additional commercial entrances.
62	Turn Lane Approach Taper Rate	40:1 (BDE Manual Figure 36-3.J) - Shadowed	Un-Shadowed	Eastbound Illinois Route 120 at Illinois Route 47, Left Turn Lane Approach Taper Rate (Station 63+00)	A design exception is necessary for the approach taper rate to reduce driver confusion by not having the taper extend past additional residential entrances and side streets.
63	Turn Lane Approach Taper Rate	40:1 (BDE Manual Figure 36-3.J) - Shadowed	Un-Shadowed	Eastbound Country Club Road (South Street) at Illinois Route 47, Left Turn Lane Approach Taper Rate (Station 111+00)	A design exception is necessary for the approach taper rate to reduce driver confusion by not having the taper extend past additional residential entrances and side streets.

SIGNALIZED CAPACITY DESIGN ANALYSIS

PROGRAM USED: SYNCHRO, VERSION: V8 SIGNAL TYPE: ACTUATED AREA TYPE:
 NUMBER OF PHASES: (A.M.) 8 (P.M.) 8 CYCLE LENGTH: (A.M.) 75 SEC. (P.M.) 75 SEC. PEAK HOUR FACTOR: 0.97
 INTERSECTION DELAY/LEVEL-OF-SERVICE A.M. 26.9 SECONDS LOS C P.M. 30.5 SECONDS LOS C

APPROACH	A			B			C			D		
LANE GROUP	L	TH	R	L	TH	R	L	TH	R	L	TH	R
NUMBER OF LANES	2	2	1	2	2	1	1	2	1	1	2	1
2040 30TH MAX. HOUR TRAFFIC (veh/h)	A.M. 140	795	120	180	800	155	185	1055	285	35	230	30
	P.M. 150	950	135	335	915	165	130	585	200	180	785	65
BASE SATURATION FLOW RATE (veh/h)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
LANE WIDTH (FT)	12	12	12	12	12	12	14	12	12	13	12	12
VOLUME OF RIGHT TURN ON RED (veh/h)	A.M. 88	P.M.	A.M. 109	P.M.	A.M. 122	P.M.	A.M. 21	P.M.				
PEDESTRIANS/HOUR (ped/h)	A.M. 0	P.M.	A.M. 0	P.M.	A.M. 0	P.M.	A.M. 0	P.M.				
ARRIVAL TYPE	3			3			3			3		
LANE UTILIZATION ADJ. FACTOR	0.97	0.95	1.0	0.97	0.95	1.0	1.0	0.95	1.0	1.0	0.95	1.0
GREEN TIME (SECONDS)	A.M. 8.0	19.0	19.0	8.0	19.0	19.0	9.0	22.0	8.0	6.0	19.0	8.0
	P.M. 8.0	23.0	23.0	12.0	27.0	27.0	6.0	14.0	12.0	6.0	14.0	8.0
GREEN RATIO (g/C)	A.M. 0.11	0.25	0.25	0.11	0.25	0.25	0.12	0.29	0.11	0.08	0.25	0.11
	P.M. 0.11	0.31	0.31	0.16	0.36	0.36	0.08	0.19	0.16	0.08	0.19	0.11
CAPACITY (c)	A.M. 274	1028	437	338	1065	447	454	1195	632	166	882	452
	P.M. 355	1199	503	511	1376	577	208	817	537	240	892	501
v/c RATIO (X)	A.M. 0.53	0.80	0.08	0.55	0.77	0.11	0.42	0.91	0.27	0.22	0.27	0.02
	P.M. 0.45	0.85	0.10	0.70	0.72	0.12	0.67	0.77	0.28	0.81	0.95	0.04
STORAGE QUEUE (FEET)	A.M. 70	335	101	94	353	137	180	414	280	38	102	31
	P.M. 73	358	102	152	317	114	130	257	182	176	338	61
LANE GROUP DELAY(SECONDS)	A.M. 33.9	28.3	18.9	32.8	26.2	17.8	15.3	33.8	14.3	21.2	21.6	17.1
	P.M. 32.4	29.4	17.4	34.6	21.8	15.3	31.6	31.7	17.9	40.5	46.4	17.7
LANE GROUP LEVEL-OF-SERVICE	A.M. C	C	B	C	C	B	B	C	B	C	C	B
	P.M. C	C	B	C	C	B	C	C	B	D	D	B
APPROACH DELAY (SECONDS/VEHICLE)	A.M.	26.1		28.0			27.9			21.1		
	P.M.	28.5		24.1			28.7			43.5		
APPROACH LEVEL-OF-SERVICE	A.M.	C		C			C			C		
	P.M.	C		C			C			D		

PLOT DATE = 12/27/2018
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 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:

F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: EASTWOOD DR. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y.
 EXISTING ADT: 16,300 VPD. DESIGN YEAR ADT: 28,000 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

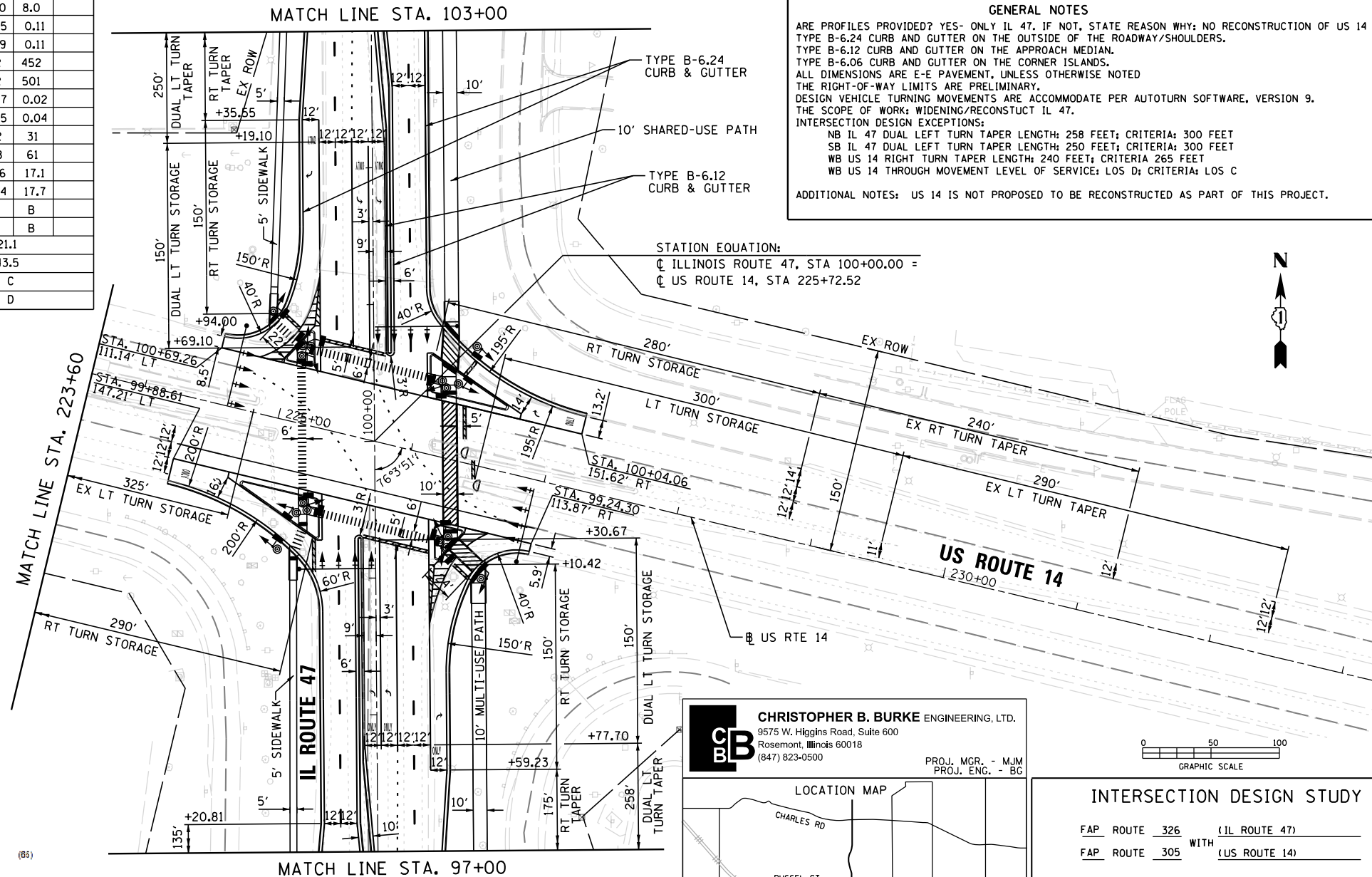
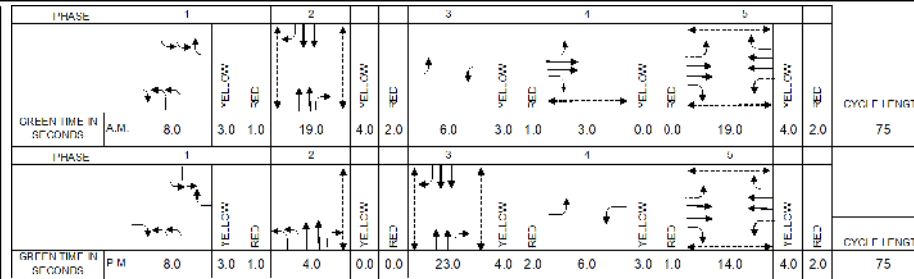
SECONDARY ROUTE:

F.A. ROUTE NUMBER: 2-305. MARKED ROUTE NUMBER: US-14.
 STREET NAME: US-14. SRA ROUTE? Y/N Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y.
 EXISTING ADT: 15,000 VPD. DESIGN YEAR ADT: 26,000 VPD.
 PROPOSED DESIGN SPEED: 60 MPH. PROPOSED POSTED SPEED: 55 MPH.

IMPROVEMENT TYPE: WIDENING/RECONSTRUCTION. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: SIGNAL.
 SIGNAL WARRANT: EX. SIGNAL.
 DESIGN VEHICLE: WB-65.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE DESIGNATION: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: STATE CLASS II.
 DESIGN CRITERIA IDOT URBAN SRA.

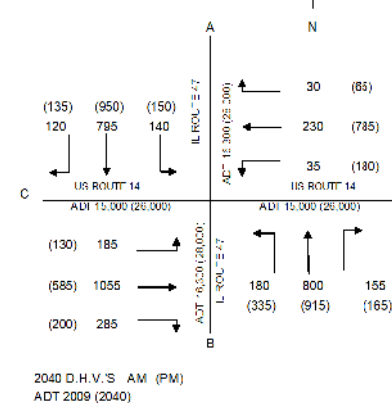
GENERAL NOTES

ARE PROFILES PROVIDED? YES- ONLY IL 47. IF NOT, STATE REASON WHY: NO RECONSTRUCTION OF US 14
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.12 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE B-6.06 CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: WIDENING/RECONSTRUCT IL 47.
 INTERSECTION DESIGN EXCEPTIONS:
 NB IL 47 DUAL LEFT TURN TAPER LENGTH: 258 FEET; CRITERIA: 300 FEET
 SB IL 47 DUAL LEFT TURN TAPER LENGTH: 250 FEET; CRITERIA: 300 FEET
 WB US 14 RIGHT TURN TAPER LENGTH: 240 FEET; CRITERIA 265 FEET
 WB US 14 THROUGH MOVEMENT LEVEL OF SERVICE: LOS D; CRITERIA: LOS C
 ADDITIONAL NOTES: US 14 IS NOT PROPOSED TO BE RECONSTRUCTED AS PART OF THIS PROJECT.

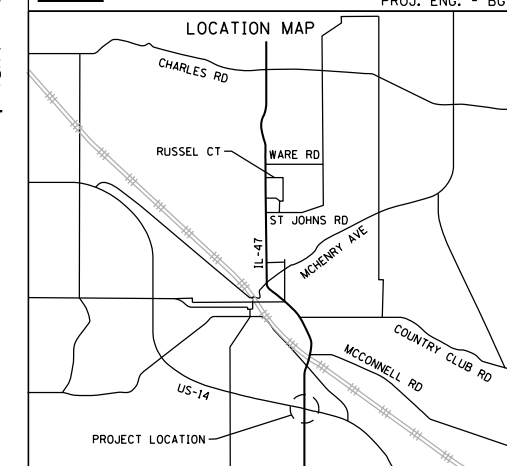


TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2018		YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.			A.M.	P.M.
AD (L)	49	73	8%	5%	186%	105%	140	150
AB (T)	427	555	8%	5%	86%	71%	795	950
AC (R)	61	88	8%	5%	97%	53%	120	135
BC (L)	115	216	13%	4%	57%	55%	180	335
BA (T)	448	531	13%	4%	79%	72%	800	915
BD (R)	76	82	13%	4%	104%	101%	155	165
CA (L)	110	69	6%	4%	68%	88%	185	130
CD (T)	527	292	6%	4%	100%	100%	1055	585
CB (R)	184	128	6%	4%	55%	56%	285	200
DB (L)	22	117	13%	2%	59%	54%	35	180
DC (T)	149	511	13%	2%	54%	54%	230	785
DA (R)	16	34	13%	2%	88%	91%	30	65
TOTAL A	1111	1350	10%	4%	86%	74%	2070	2345
TOTAL B	1272	1629	10%	4%	77%	69%	2250	2745
TOTAL C	1146	1304	8%	3%	79%	66%	2055	2170
TOTAL D	839	1109	8%	3%	96%	74%	1645	1930



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 Rosemont, Illinois 60018
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 PROJ. MGR. - MJM
 PROJ. ENG. - BG



INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 FAP ROUTE 305 WITH (US ROUTE 14)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY BOBBY GUNNELLS 12/10/2018

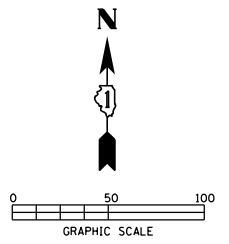
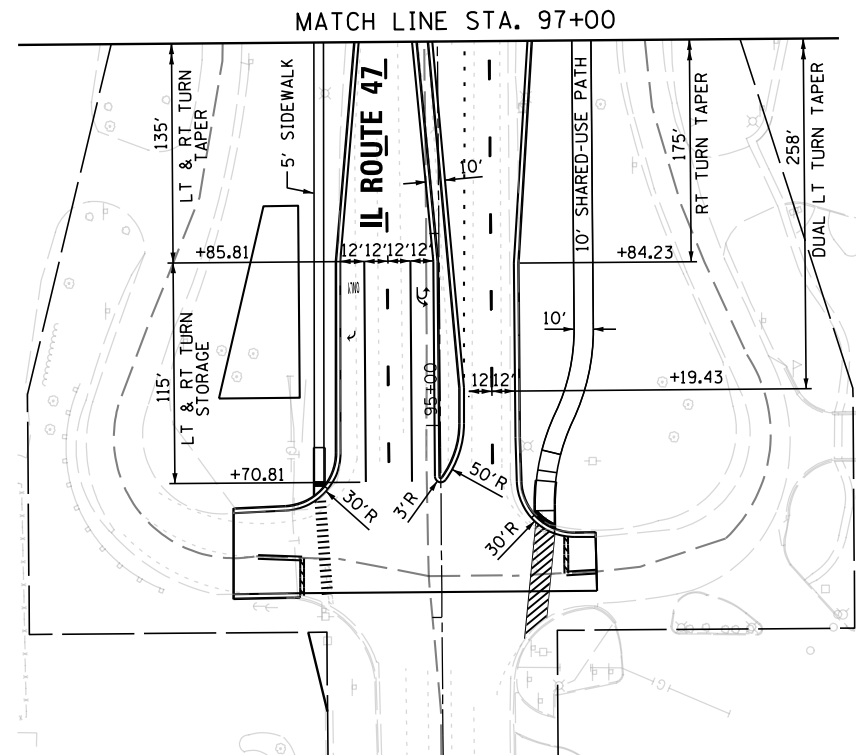
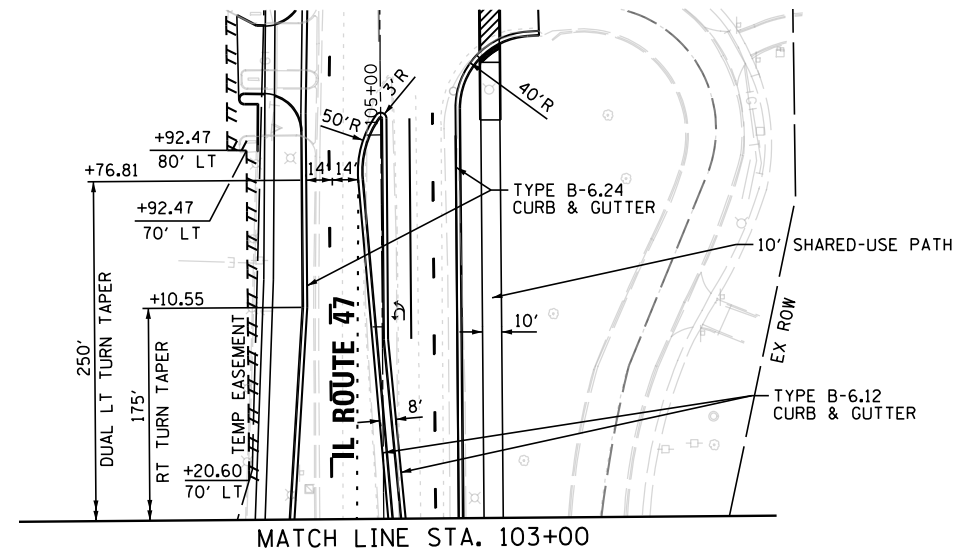
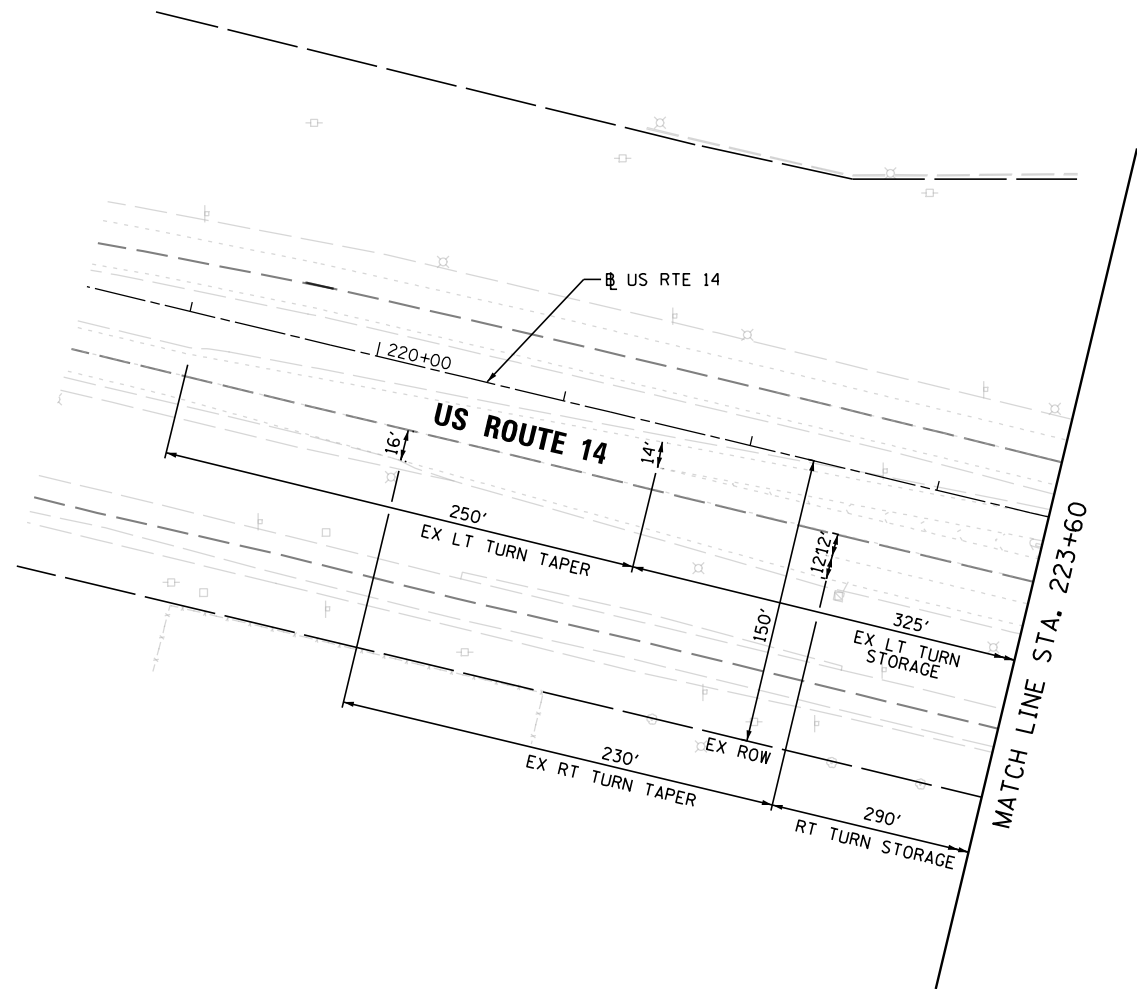
SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER DATE _____

CADD FILE NAME : () I.D.S. SHEET 1 OF 4

T = THROUGH, L = LEFT, R = RIGHT

PLOT DATE = 12/27/2018
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 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC

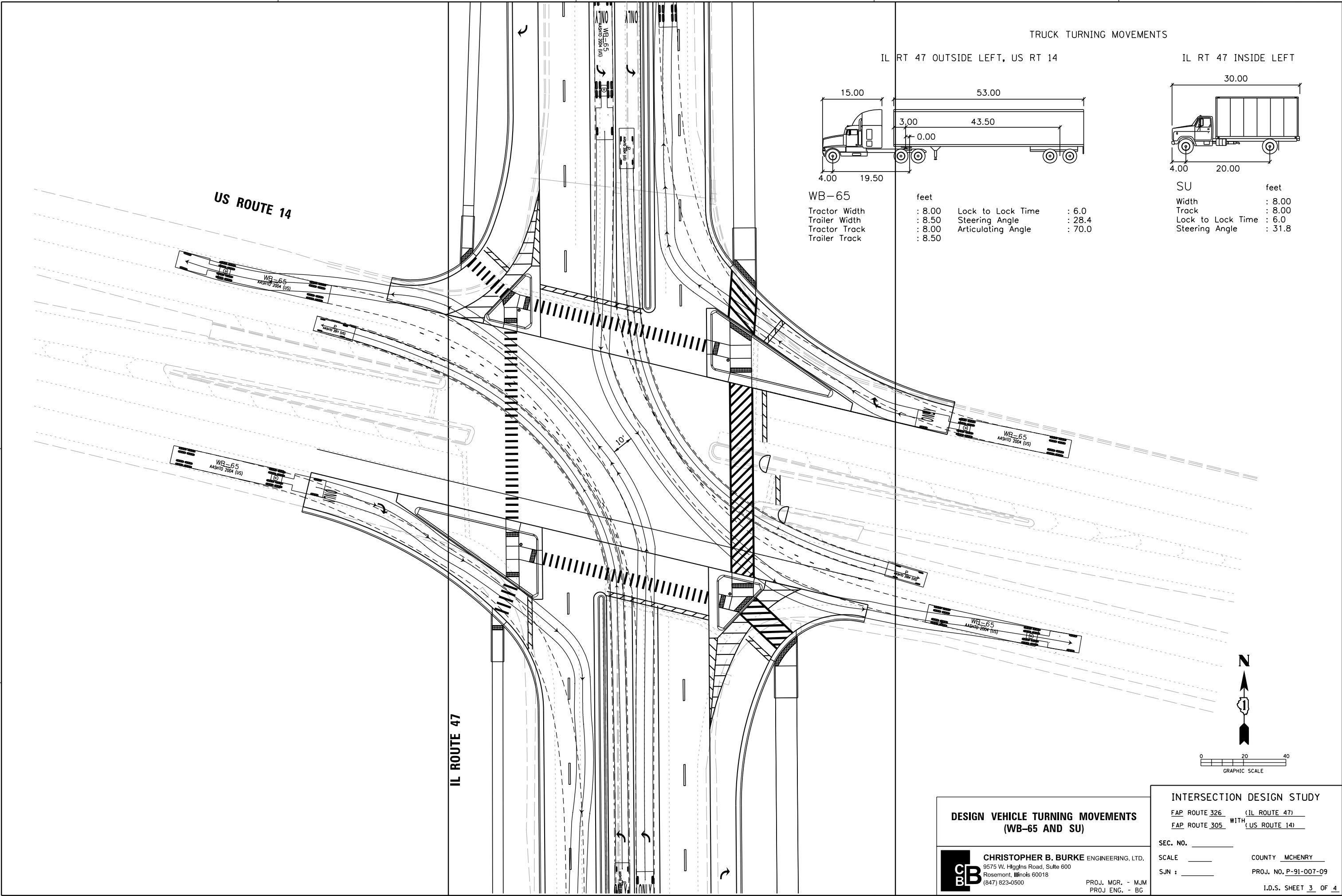


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 305 WITH (US ROUTE 14)

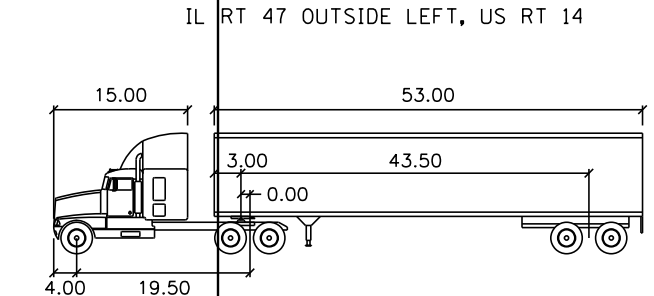
SEC. NO. _____
 SCALE 1' = 50'
 SJN : _____
 COUNTY MCHENRY
 PROJ. NO. P-91-007-09
 I.D.S. SHEET 2 OF 4

CB CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 PROJ. MGR. - MJM
 PROJ. ENG. - BC

PLOT DATE = 12/27/2018
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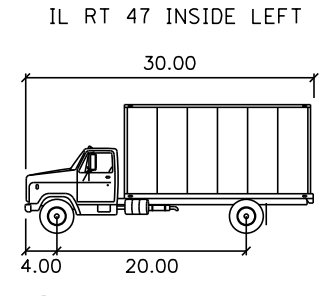


TRUCK TURNING MOVEMENTS



WB-65

feet	
Tractor Width	: 8.00
Trailer Width	: 8.50
Tractor Track	: 8.00
Trailer Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 28.4
Articulating Angle	: 70.0



SU

feet	
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

DESIGN VEHICLE TURNING MOVEMENTS
(WB-65 AND SU)

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 Rosemont, Illinois 60018
 (847) 823-0500

PROJ. MGR. - MJM
 PROJ. ENG. - BG

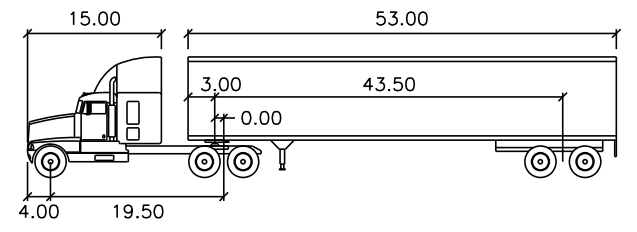
INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 305 WITH (US ROUTE 14)

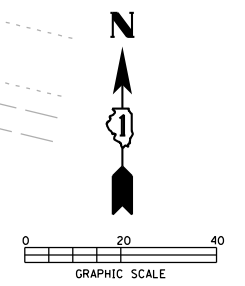
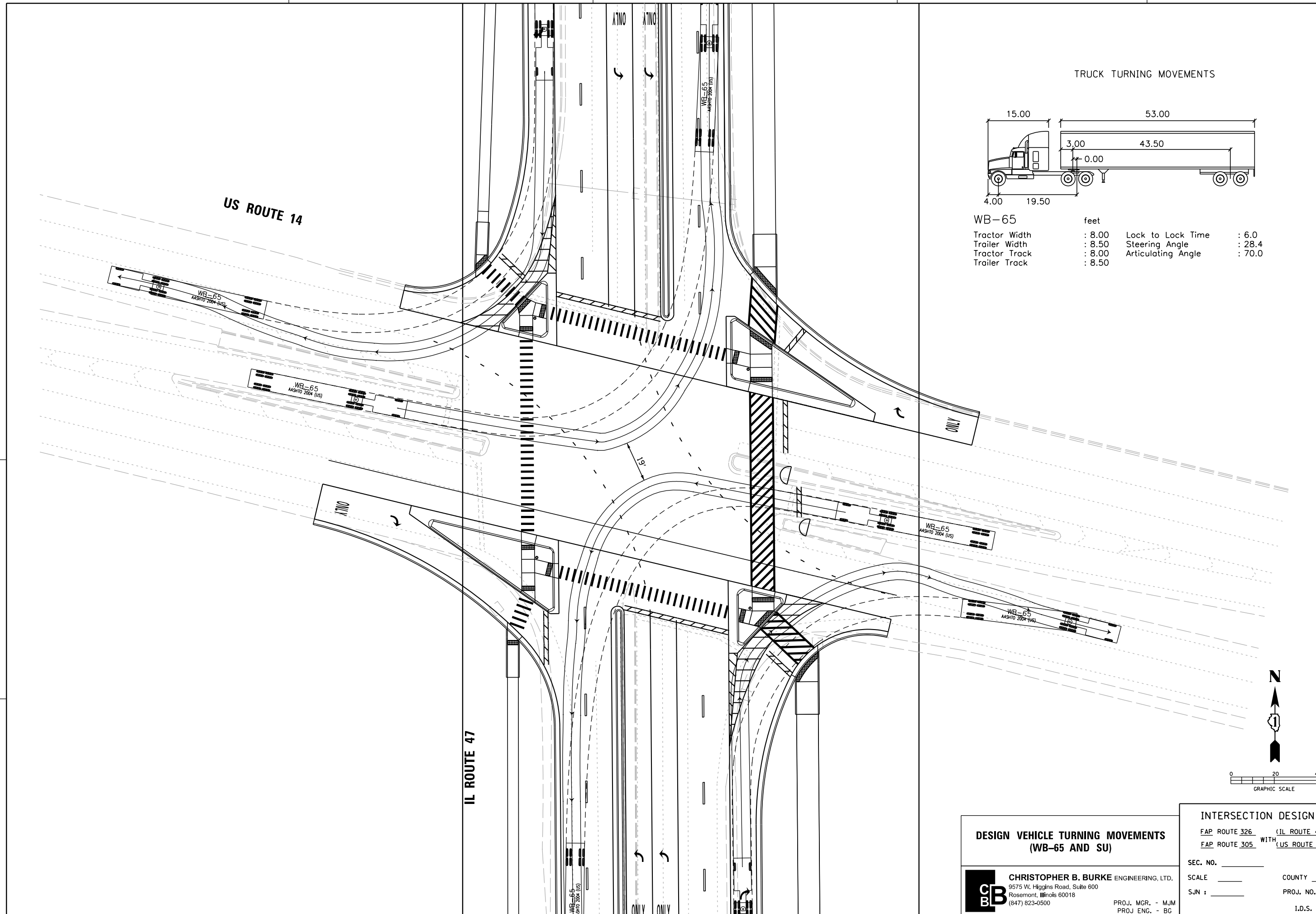
SEC. NO. _____
 SCALE _____ COUNTY MCHENRY
 SJN : _____ PROJ. NO. P-91-007-09
 I.D.S. SHEET 3 OF 4

PLOT DATE = 12/27/2018
 FILE NAME = S:\D\1\6390--6399\6346\01A\Micro\CAD\Sheets\0812345-ah1-rds-us14-Auto2.dgn
 PLOT SCALE = 40.0000 / in.
 USER NAME = MattC

TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



DESIGN VEHICLE TURNING MOVEMENTS
(WB-65 AND SU)

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 PROJ. MGR. - MJM
 PROJ. ENG. - BG

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 305 WITH (US ROUTE 14)
 SEC. NO. _____
 SCALE _____ COUNTY MCHENRY
 SJN : _____ PROJ. NO. P-91-007-09
 I.D.S. SHEET 4 OF 4

ROUNDABOUT CAPACITY DESIGN STUDY

PROGRAM USED SIDRA VERSION 7.0 AREA _____ PEAK HOUR FACTOR 0.92 (AM) 0.92 (PM)
 INTERSECTION CONTROL DELAY A.M. 14.8 SECONDS P.M. 17.8 SECONDS
 INTERSECTION LEVEL OF SERVICE A.M. B P.M. C

APPROACH	NEB IL RTE 47			SWB IL RTE 47			SEB LAKE AVENUE			NWB LAKE AVENUE		
LANE GROUP	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
2040 30TH HOUR TRAFFIC	A.M. 115	845	45	350	815	85	125	270	175	35	130	275
	P.M. 135	925	5	315	985	185	160	220	170	65	430	550
ENTRY FLOW RATE	A.M. 106	777	41	322	750	78	123	265	172	34	127	270
$v_{l, pce}$ (pc/h)	P.M. 124	851	5	290	906	170	157	216	167	64	421	539
PED/HOUR CROSSING THE APPROACH	A.M.	1			1			0			0	
	P.M.	0			0			1			1	
LANE MOVEMENTS	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
ENTRY FLOW RATE	A.M. 125	918	49	380	886	92	136	293	190	38	141	299
v_f (vph)	P.M. 147	1005	5	342	1071	201	174	239	185	71	467	598
LANE CAPACITY	A.M. 149	1095	830	706	1643	1295	214	462	785	298	1107	892
c_i (vph)	P.M. 166	1134	874	438	1369	1064	215	296	607	169	1119	785
x_i (v_f/c_i RATIO)	A.M. 0.84	0.84	0.06	0.54	0.54	0.07	0.64	0.64	0.24	0.13	0.13	0.34
	P.M. 0.89	0.89	0.01	0.78	0.78	0.19	0.81	0.81	0.30	0.42	0.42	0.76
95% QUEUE (FEET)	A.M. 346	404	10	99	99	9	118	118	34	16	19	54
	P.M. 422	492	1	208	224	25	186	186	46	62	72	214
LANE DELAY, d (SEC)	A.M. 38.1	29.3	7.8	12.0	5.6	4.7	17.3	11.4	7.2	13.6	6.9	6.5
	P.M. 40.8	31.9	6.8	18.0	10.5	5.6	24.9	18.9	8.0	15.5	8.4	13.7
LANE LEVEL OF SERVICE	A.M. E	D	A	B	A	A	C	B	A	B	A	A
	P.M. E	D	A	C	B	A	C	A	C	A	C	B
APPROACH CONTROL DELAY, d (SEC)	A.M.	29.3			7.3			11.4			7.2	
	P.M.	32.9			11.9			17.3			11.6	
APPROACH LEVEL OF SERVICE	A.M.	D			A			B			A	
	P.M.	D			B			C			B	

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:

F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: EASTWOOD DR. SRA ROUTE? Y/N Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 20,700 VPD. DESIGN YEAR ADT: 26,500 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

SECONDARY ROUTE:

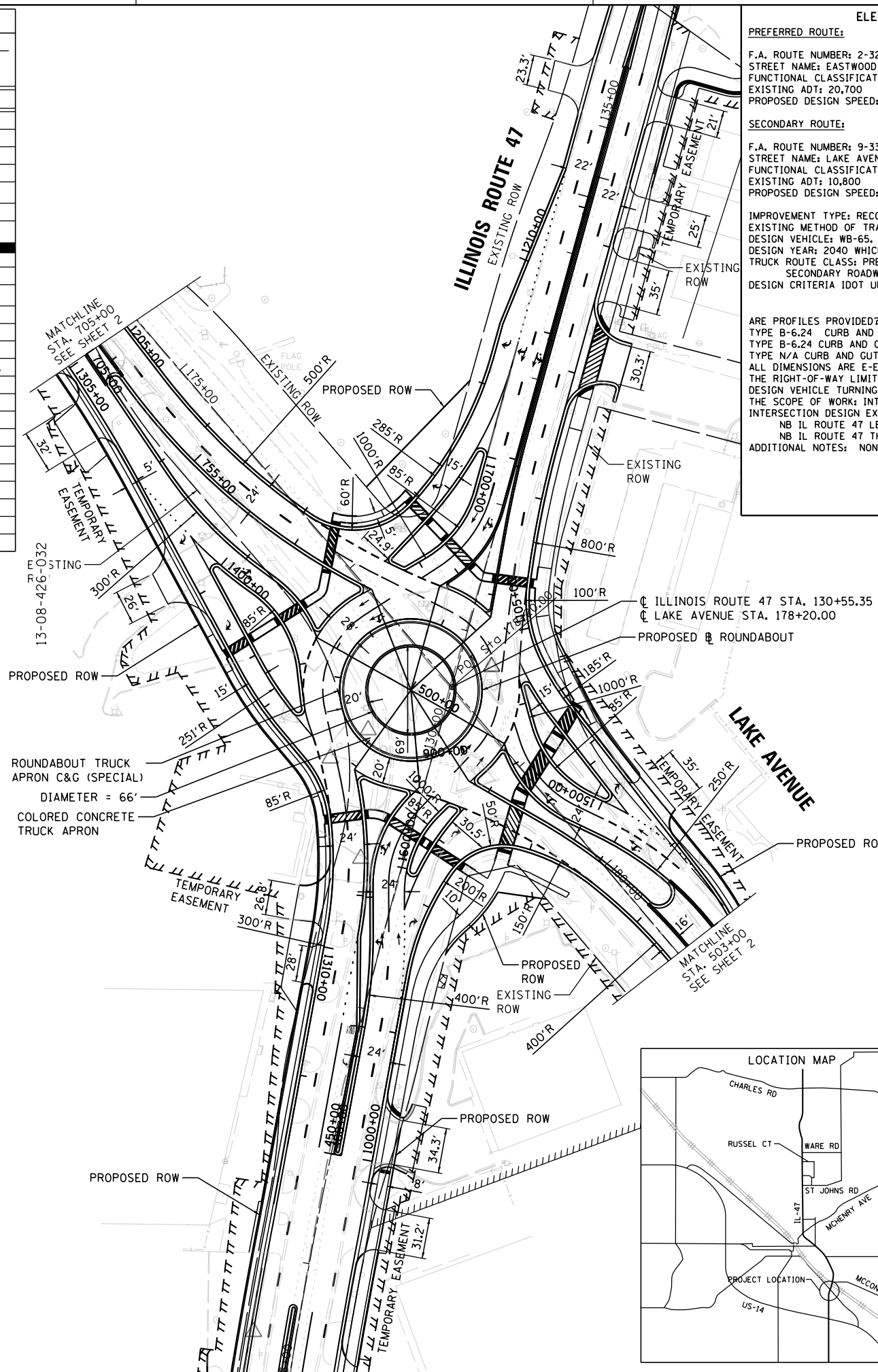
F.A. ROUTE NUMBER: 9-33. MARKED ROUTE NUMBER: LAKE AVENUE.
 STREET NAME: LAKE AVENUE. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 10,800 VPD. DESIGN YEAR ADT: 12,000 VPD.
 PROPOSED DESIGN SPEED: 45 MPH. PROPOSED POSTED SPEED: 40 MPH.

IMPROVEMENT TYPE: RECONSTRUCTION TO ROUNDABOUT. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: ROUNDABOUT.
 DESIGN VEHICLE: WB-65.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE CLASS: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: LOCAL CLASS II.
 DESIGN CRITERIA IDOT URBAN SRA.

GENERAL NOTES

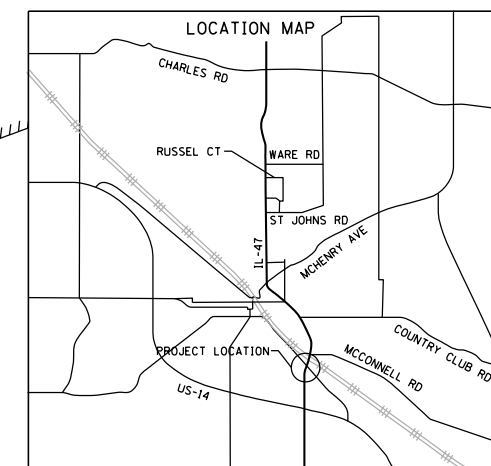
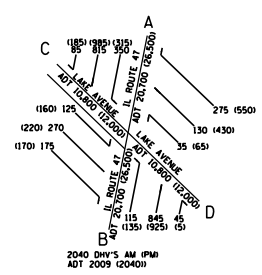
ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.24 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE N/A CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED.
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: INTERSECTION WIDENING AND RECONSTRUCTION TO ROUNDABOUT.
 INTERSECTION DESIGN EXCEPTIONS:
 NB IL ROUTE 47 LEFT TURN MOVEMENT LEVEL OF SERVICE: LOS E, CRITERIA: LOS D (AM AND PM)
 NB IL ROUTE 47 THROUGH MOVEMENT LEVEL OF SERVICE: LOS D, CRITERIA: LOS C (AM AND PM)
 ADDITIONAL NOTES: NONE.

PLOT DATE = 1/22/2019
 FILE NAME = S:\LDL\6390--6399\6346\01A\Micro\6346\01A\2345-shr-rds-ldl-Lake-Cover.dgn
 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC



TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2040 AM/PM	YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.
AD (L)	318	313	7.8	7.8	10/1	350	315
AB (T)	455	528	7.8	7.8	79/87	815	985
AC (R)	60	116	7.8	7.8	42/59	85	185
BC (L)	56	77	8.0	8.0	105/75	115	135
BA (T)	505	546	8.0	8.0	67/69	845	925
BD (R)	16	1	8.0	8.0	181/400	45	5
CA (L)	101	112	2.1	2.1	24/43	125	160
CD (T)	242	196	2.1	2.1	12/12	270	220
CB (R)	89	92	2.1	2.1	97/85	175	170
DB (L)	17	22	1.7	1.7	106/195	35	65
DC (T)	74	245	1.7	1.7	76/76	130	430
DA (R)	208	387	1.7	1.7	32/42	275	550
TOTAL A	1647	2002	7.8	7.8	51/56	2495	3120
TOTAL B	1183	1266	8.0	8.0	72/80	2030	2285
TOTAL C	566	838	2.1	2.1	59/55	900	1300
TOTAL D	875	1164	1.7	1.7	26/36	1105	1585

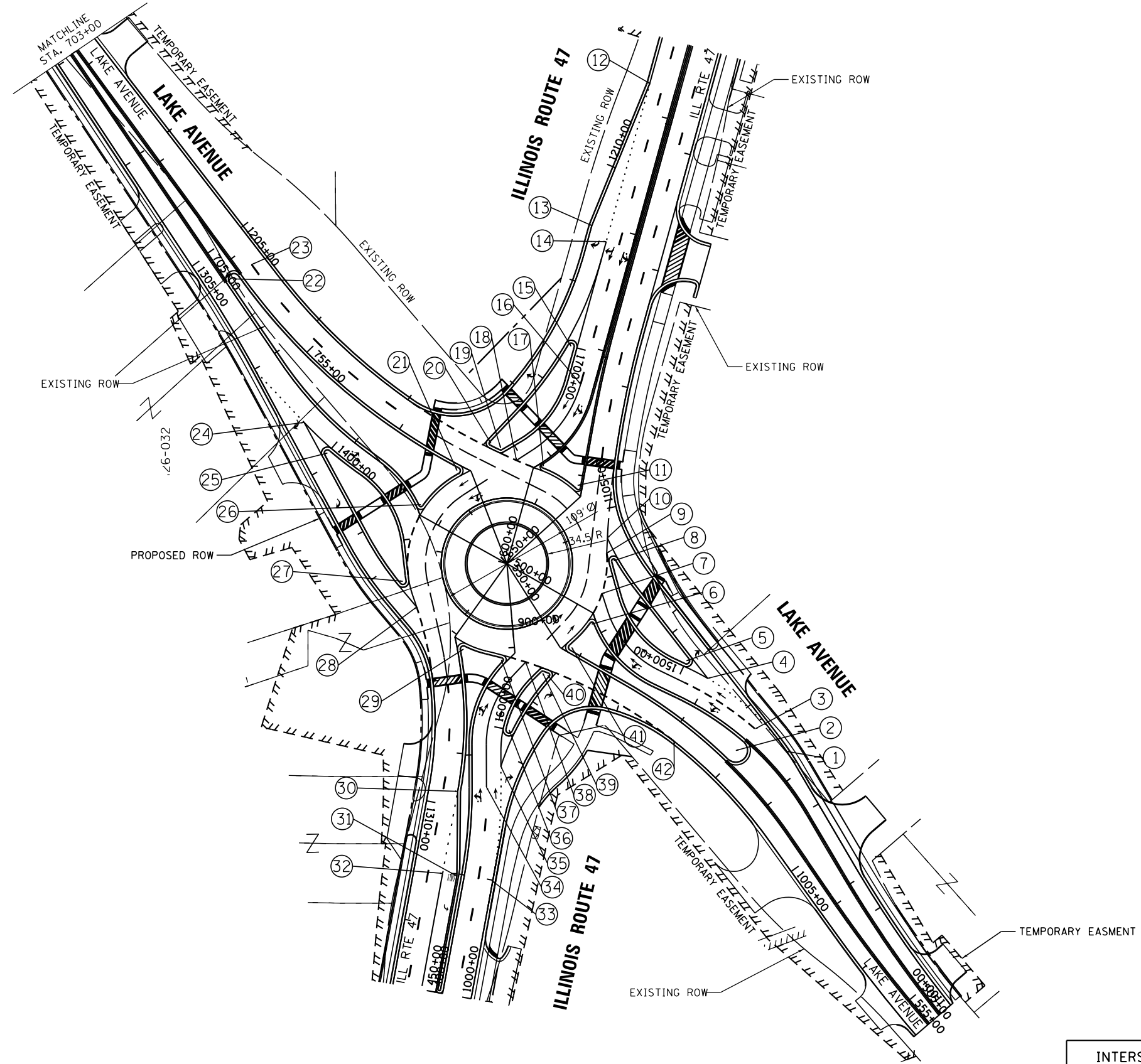
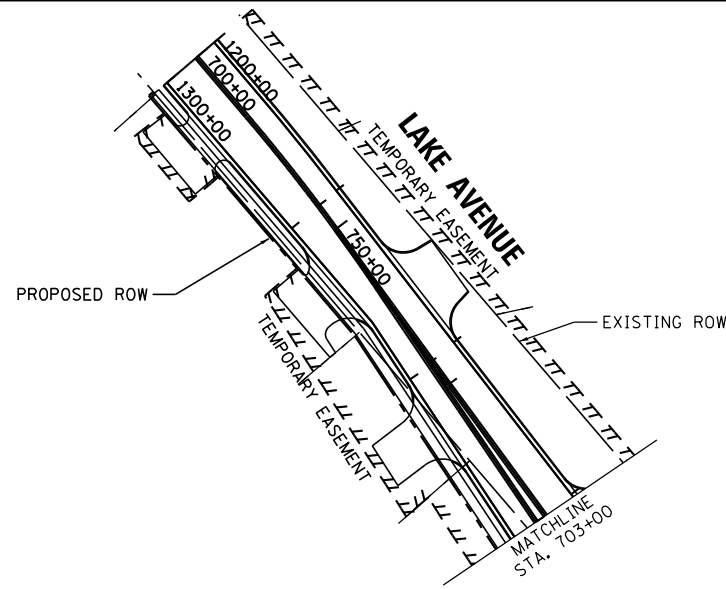


INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)
 SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____
 DESIGNED BY KYLE HENDERSON, P.E. 12/10/2018
 SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER DATE _____
 APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER DATE _____
 CADD FILE NAME : () I.D.S. SHEET 1 OF 21

T = THROUGH, L = LEFT, R = RIGHT

PLOT DATE = 12/27/2018
 FILE NAME = S:\JUL\6390--6399\6346\01A\Micro\CA00D Sheets\0812345-ah+rd+Lake-Points.dgn
 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC



DATA TABLE					
NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
1		502+81.6	17.0	LT	--
2	CC	502+51.4	12.0	RT	12'
3		502+51.9	12.2	LT	--
4		501+99.1	23.9	LT	--
5	CC	501+78.3	29.0	LT	5'
6	CC	500+90.6	4.0	RT	4'
7		500+80.8	17.7	LT	--
8	CC	500+75.7	46.1	LT	4'
9		500+67.6	48.7	LT	--
10		500+61.7	60.0	LT	--
11	CC	650+91.4	4.0	LT	5'
12		604+24.1	22.0	LT	--
13		602+97.6	37.0	LT	--
14		602+87.9	22.0	LT	--
15	CC	601+96.5	27.0	LT	5'
16		601+68.4	11.0	LT	--
17	CC	600+90.3	3.0	RT	4'
18		600+82.5	15.3	LT	--
19	CC	600+82.5	31.8	LT	4'
20	CC	600+82.5	40.6	LT	4'
21	CC	756+58.5	5.0	RT	5'
22	CC	754+15.0	6.9	RT	6.9'
23		754+14.0	12.4	LT	--
24		706+58.7	16.0	RT	--
25	CC	706+88.5	21.0	RT	5'
26	CC	707+74.8	4.0	LT	4'
27	CC	707+96.8	54.8	RT	5'
28		708+17.2	67.9	RT	--
29	CC	452+86.1	5.0	RT	5'
30		451+68.3	0.00	RT	--
31		450+98.1	0.00	RT	--
32		451+00.0	11.8	LT	--
33		400+99.1	24.0	RT	--
34		401+73.2	12.0	RT	--
35		401+90.4	24.0	RT	--
36	CC	402+26.0	29.9	RT	5'
37	CC	402+83.3	4.0	LT	4'
38		402+95.2	11.7	RT	--
39	CC	402+95.2	28.4	RT	4'
40	CC	402+95.2	32.7	RT	4'
41	CC	550+90.7	5.0	LT	5'
42		552+05.7	16.0	RT	--

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)
 SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 3 OF 21

PLT DATE = 12/17/2018
FILE NAME = N:\STRA\000_ILL47\000_Sheets\012345-ht-Lake-Basel.mxd
PLT SCALE = 1/80,000
USER NAME = pmagnelli

PROP. CURVE RAB.LAK.SB.RT-1
PI STA. = 1200+64.31
Δ = 2° 39' 57" (RT)
D = 5° 35' 43"
R = 1,024.00'
T = 23.83'
L = 47.65'
E = 0.28'
P.C. STA. = 1200+40.48
P.T. STA. = 1200+88.12

PROP. CURVE RAB.LAK.SB.RT-2
PI STA. = 1206+28.31
Δ = 17° 46' 34" (LT)
D = 11° 27' 33"
R = 500.00'
T = 78.19'
L = 155.13'
E = 6.08'
P.C. STA. = 1205+50.12
P.T. STA. = 1207+05.24

PROP. CURVE RAB.LAK.SB.RT-4
PI STA. = 1208+28.31
Δ = 12° 02' 30" (LT)
D = 20° 06' 14"
R = 285.00'
T = 30.06'
L = 59.90'
E = 1.58'
P.C. STA. = 1207+91.46
P.T. STA. = 1208+51.36

PROP. CURVE RAB.LAK.SB.EX-1
PI STA. = 452+33.69
Δ = 22° 49' 24" (LT)
D = 17° 41' 02"
R = 324.00'
T = 65.40'
L = 129.06'
E = 6.53'
P.C. STA. = 451+68.30
P.T. STA. = 452+97.36

PROP. CURVE RAB.LAK.EB.RT-1
PI STA. = 1305+50.48
Δ = 6° 00' 06" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 52.42'
L = 104.75'
E = 1.37'
P.C. STA. = 1304+98.05
P.T. STA. = 1306+02.80

PROP. CURVE RAB.LAK.EB.IS-1
PI STA. = 1400+15.89
Δ = 5° 45' 20" (LT)
D = 18° 07' 54"
R = 316.00'
T = 15.89'
L = 31.74'
E = 0.40'
P.C. STA. = 1400+00.00
P.T. STA. = 1400+31.74

PROP. CURVE RAB.LAK.EB.IS-5
PI STA. = 1401+70.92
Δ = 10° 59' 08" (RT)
D = 22° 49' 37"
R = 251.00'
T = 24.14'
L = 48.13'
E = 1.16'
P.C. STA. = 1401+46.78
P.T. STA. = 1401+94.90

PROP. CURVE RAB.LAK.NB.RT-1
PI STA. = 1001+88.53
Δ = 24° 53' 16" (RT)
D = 28° 38' 52"
R = 200.00'
T = 44.13'
L = 86.87'
E = 4.81'
P.C. STA. = 1001+44.40
P.T. STA. = 1002+31.27

PROP. CURVE RAB.LAK.NB.EN-1
PI STA. = 401+35.73
Δ = 10° 45' 42" (LT)
D = 14° 19' 26"
R = 400.00'
T = 37.68'
L = 75.13'
E = 1.77'
P.C. STA. = 400+98.05
P.T. STA. = 401+73.18

PROP. CURVE RAB.LAK.EB.EN-3
PI STA. = 700+95.41
Δ = 6° 12' 49" (RT)
D = 5° 39' 42"
R = 1,012.00'
T = 54.93'
L = 109.75'
E = 1.49'
P.C. STA. = 700+40.48
P.T. STA. = 701+50.23

PROP. CURVE RAB.LAK.SB.RT-3
PI STA. = 1207+57.71
Δ = 82° 19' 56" (LT)
D = 95° 29' 35"
R = 60.00'
T = 52.46'
L = 86.22'
E = 19.70'
P.C. STA. = 1207+05.24
P.T. STA. = 1207+91.46

PROP. CURVE RAB.LAK.SB.RT-5
PI STA. = 1208+88.15
Δ = 14° 42' 44" (LT)
D = 20° 06' 14"
R = 285.00'
T = 36.79'
L = 73.18'
E = 2.37'
P.C. STA. = 1208+51.36
P.T. STA. = 1209+24.54

PROP. CURVE RAB.LAK.SB.EN-1
PI STA. = 600+85.73
Δ = 0° 21' 42" (LT)
D = 5° 35' 43"
R = 1,024.00'
T = 3.23'
L = 6.47'
E = 0.01'
P.C. STA. = 600+82.50
P.T. STA. = 600+88.97

PROP. CURVE RAB.LAK.EB.RT-2
PI STA. = 1307+93.62
Δ = 11° 38' 25" (LT)
D = 21° 32' 23"
R = 266.00'
T = 27.11'
L = 54.04'
E = 1.38'
P.C. STA. = 1307+66.51
P.T. STA. = 1308+20.55

PROP. CURVE RAB.LAK.EB.IS-2
PI STA. = 1400+69.87
Δ = 48° 19' 01" (RT)
D = 67° 24' 24"
R = 85.00'
T = 38.13'
L = 71.68'
E = 8.16'
P.C. STA. = 1400+31.74
P.T. STA. = 1401+03.42

PROP. CURVE RAB.LAK.EB.IS-6
PI STA. = 1402+98.74
Δ = 159° 11' 20" (RT)
D = 114° 54' 56"
R = 5.00'
T = 27.23'
L = 13.89'
E = 22.68'
P.C. STA. = 1402+71.34
P.T. STA. = 1402+85.23

PROP. CURVE RAB.LAK.NB.RT-2
PI STA. = 1002+65.60
Δ = 68° 57' 03" (RT)
D = 114° 35' 30"
R = 50.00'
T = 34.33'
L = 60.11'
E = 10.65'
P.C. STA. = 1002+31.27
P.T. STA. = 1002+91.44

PROP. CURVE RAB.LAK.NB.EN-2
PI STA. = 402+48.35
Δ = 44° 54' 42" (RT)
D = 60° 18' 41"
R = 95.00'
T = 39.26'
L = 74.47'
E = 7.79'
P.C. STA. = 402+09.09
P.T. STA. = 402+83.55

STATION	EQUATION
(1)	900+00.00 403+15.21 RAB.LAK.NB.EN
(2)	900+25.90 550+54.50 RAB.LAK.EB.EX
(3)	900+52.36 500+54.50 RAB.LAK.WB.EN
(4)	901+20.95 650+54.50 RAB.LAK.NB.EX
(5)	901+51.59 600+54.50 RAB.LAK.SB.EN
(6)	901+86.53 756+96.69 RAB.LAK.WB.EX
(7)	902+24.20 708+10.49 RAB.LAK.EB.EN
(8)	903+03.88 453+17.36 RAB.LAK.SB.EX

PROP. CURVE RAB.LAK.SB.EN-2
PI STA. = 601+26.64
Δ = 0° 21' 42" (LT)
D = 60° 18' 41"
R = 95.00'
T = 37.67'
L = 71.73'
E = 7.20'
P.C. STA. = 600+88.97
P.T. STA. = 601+60.69

PROP. CURVE RAB.LAK.EB.RT-3
PI STA. = 1308+75.99
Δ = 33° 42' 30" (RT)
D = 67° 24' 24"
R = 85.00'
T = 25.75'
L = 50.01'
E = 3.81'
P.C. STA. = 1308+50.24
P.T. STA. = 1309+00.25

PROP. CURVE RAB.LAK.EB.IS-3
PI STA. = 1401+31.53
Δ = 2° 58' 30" (LT)
D = 69° 26' 58"
R = 82.50'
T = 2.14'
L = 4.28'
E = 0.03'
P.C. STA. = 1401+29.38
P.T. STA. = 1401+33.67

PROP. CURVE RAB.LAK.EB.IS-4
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.NB.RT-3
PI STA. = 1003+23.23
Δ = 23° 55' 35" (RT)
D = 38° 11' 50"
R = 150.00'
T = 31.78'
L = 62.64'
E = 3.33'
P.C. STA. = 1002+91.44
P.T. STA. = 1003+54.08

PROP. CURVE RAB.LAK.NB.EN-3
PI STA. = 402+89.38
Δ = 0° 39' 08" (RT)
D = 5° 35' 43"
R = 1,024.00'
T = 5.83'
L = 11.66'
E = 0.02'
P.C. STA. = 402+83.55
P.T. STA. = 402+95.21

PROP. CURVE RAB.LAK.EB.EN-1
PI STA. = 700+95.41
Δ = 6° 12' 49" (RT)
D = 5° 39' 42"
R = 1,012.00'
T = 54.93'
L = 109.75'
E = 1.49'
P.C. STA. = 700+40.48
P.T. STA. = 701+50.23

PROP. CURVE RAB.LAK.WB.EX-1
PI STA. = 755+46.91
Δ = 27° 09' 02" (LT)
D = 10° 56' 04"
R = 524.00'
T = 126.53'
L = 248.31'
E = 15.06'
P.C. STA. = 754+20.38
P.T. STA. = 756+68.69

PROP. CURVE RAB.LAK.NB.EX1
PI STA. = 651+88.81
Δ = 5° 14' 24" (RT)
D = 6° 58' 13"
R = 822.00'
T = 37.61'
L = 75.18'
E = 0.86'
P.C. STA. = 651+51.19
P.T. STA. = 652+26.37

PROP. CURVE RAB.LAK.EB.RT-4
PI STA. = 1309+44.21
Δ = 16° 40' 28" (RT)
D = 19° 05' 55"
R = 300.00'
T = 43.96'
L = 87.31'
E = 3.20'
P.C. STA. = 1309+00.25
P.T. STA. = 1309+87.56

PROP. CURVE RAB.LAK.EB.IS-6
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.EB.IS-1
PI STA. = 1401+31.53
Δ = 2° 58' 30" (LT)
D = 69° 26' 58"
R = 82.50'
T = 2.14'
L = 4.28'
E = 0.03'
P.C. STA. = 1401+29.38
P.T. STA. = 1401+33.67

PROP. CURVE RAB.LAK.EB.IS-2
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.NB.RT-4
PI STA. = 1004+10.41
Δ = 16° 01' 55" (RT)
D = 14° 19' 26"
R = 400.00'
T = 56.33'
L = 111.92'
E = 3.95'
P.C. STA. = 1003+54.08
P.T. STA. = 1004+66.01

PROP. CURVE RAB.LAK.WB.EN-1
PI STA. = 501+24.67
Δ = 47° 52' 06" (LT)
D = 60° 18' 41"
R = 95.00'
T = 42.17'
L = 79.37'
E = 8.94'
P.C. STA. = 500+82.50
P.T. STA. = 501+61.87

PROP. CURVE RAB.LAK.EB.EN-2
PI STA. = 706+60.12
Δ = 18° 59' 30" (LT)
D = 19° 05' 55"
R = 300.00'
T = 50.18'
L = 99.44'
E = 4.17'
P.C. STA. = 706+09.94
P.T. STA. = 707+09.38

PROP. CURVE RAB.LAK.WB.RT-1
PI STA. = 1100+70.33
Δ = 8° 08' 36" (RT)
D = 5° 47' 57"
R = 988.00'
T = 70.33'
L = 140.42'
E = 2.50'
P.C. STA. = 1100+00.00
P.T. STA. = 1101+40.42

PROP. CURVE RAB.LAK.WB.IS-1
PI STA. = 1500+48.16
Δ = 48° 09' 47" (RT)
D = 6° 24' 24"
R = 85.00'
T = 37.99'
L = 71.45'
E = 8.10'
P.C. STA. = 1500+10.17
P.T. STA. = 1500+81.62

PROP. CURVE RAB.LAK.SB.RT-5
PI STA. = 1500+96.73
Δ = 1° 43' 55" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 15.11'
L = 30.23'
E = 0.11'
P.C. STA. = 1500+81.62
P.T. STA. = 1501+11.85

PROP. CURVE RAB.LAK.SB.IS-2
PI STA. = 1700+61.95
Δ = 43° 25' 24" (RT)
D = 67° 24' 24"
R = 85.00'
T = 33.85'
L = 64.42'
E = 6.49'
P.C. STA. = 1700+28.11
P.T. STA. = 1700+92.53

PROP. CURVE RAB.LAK.EB.IS-4
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.EB.IS-3
PI STA. = 1401+31.53
Δ = 2° 58' 30" (LT)
D = 69° 26' 58"
R = 82.50'
T = 2.14'
L = 4.28'
E = 0.03'
P.C. STA. = 1401+29.38
P.T. STA. = 1401+33.67

PROP. CURVE RAB.LAK.NB.RT-5
PI STA. = 1006+18.55
Δ = 4° 49' 39" (LT)
D = 4° 37' 28"
R = 1,239.00'
T = 52.23'
L = 104.39'
E = 1.10'
P.C. STA. = 1005+66.32
P.T. STA. = 1006+70.71

PROP. CURVE RAB.LAK.WB.EN-2
PI STA. = 502+60.77
Δ = 33° 55' 30" (RT)
D = 22° 55' 06"
R = 250.00'
T = 76.25'
L = 148.03'
E = 11.37'
P.C. STA. = 501+84.51
P.T. STA. = 503+32.54

PROP. CURVE RAB.LAK.EB.EN-3
PI STA. = 707+55.79
Δ = 33° 09' 46" (RT)
D = 60° 18' 41"
R = 95.00'
T = 28.29'
L = 54.99'
E = 4.12'
P.C. STA. = 707+27.50
P.T. STA. = 707+82.49

PROP. CURVE RAB.LAK.WB.RT-2
PI STA. = 1102+50.26
Δ = 7° 18' 36" (LT)
D = 22° 55' 06"
R = 250.00'
T = 15.97'
L = 31.90'
E = 0.51'
P.C. STA. = 1102+34.29
P.T. STA. = 1102+66.18

PROP. CURVE RAB.LAK.WB.IS-2
PI STA. = 1500+96.73
Δ = 1° 43' 55" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 15.11'
L = 30.23'
E = 0.11'
P.C. STA. = 1500+81.62
P.T. STA. = 1501+11.85

PROP. CURVE RAB.LAK.SB.IS-1
PI STA. = 1700+61.95
Δ = 43° 25' 24" (RT)
D = 67° 24' 24"
R = 85.00'
T = 33.85'
L = 64.42'
E = 6.49'
P.C. STA. = 1700+28.11
P.T. STA. = 1700+92.53

PROP. CURVE RAB.LAK.EB.IS-5
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.EB.IS-6
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.EB.IS-4
PI STA. = 1401+52.49
Δ = 150° 14' 22" (RT)
D = 114° 54' 56"
R = 5.00'
T = 18.82'
L = 13.11'
E = 14.47'
P.C. STA. = 1401+33.67
P.T. STA. = 1401+46.78

PROP. CURVE RAB.LAK.NB.RT-1
PI STA. = 1004+10.41
Δ = 16° 01' 55" (RT)
D = 14° 19' 26"
R = 400.00'
T = 56.33'
L = 111.92'
E = 3.95'
P.C. STA. = 1003+54.08
P.T. STA. = 1004+66.01

PROP. CURVE RAB.LAK.WB.EN-3
PI STA. = 504+60.58
Δ = 8° 10' 03" (LT)
D = 5° 43' 46"
R = 1,000.00'
T = 71.40'
L = 142.55'
E = 2.55'
P.C. STA. = 503+89.18
P.T. STA. = 505+31.73

PROP. CURVE RAB.LAK.CENT-1
PI STA. = 900+54.82
Δ = 90° 19' 58" (LT)
D = 105° 07' 48"
R = 54.50'
T = 54.82'
L = 85.92'
E = 22.80'
P.C. STA. = 900+00.00
P.T. STA. = 900+85.92

PROP. CURVE RAB.LAK.WB.RT-3
PI STA. = 1104+57.55
Δ = 14° 07' 32" (RT)
D = 30° 58' 14"
R = 185.00'
T = 22.92'
L = 45.61'
E = 1.41'
P.C. STA. = 1104+34.63
P.T. STA. = 1104+80.24

PROP. CURVE RAB.LAK.WB.IS-3
PI STA. = 1501+42.16
Δ = 164° 57' 50" (RT)
D = 1432° 23' 40"
R = 4.00'
T = 30.31'
L = 11.52'
E = 26.57'
P.C. STA. = 1501+11.85
P.T. STA. = 1501+23.36

PROP. CURVE RAB.LAK.SB.IS-2
PI STA. = 1701+01.68
Δ = 1° 02' 57" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 4.00'
L = 8.92'
E = 0.04'
P.C. STA. = 1700+92.53
P.T. STA. = 1701+10.84

PROP. CURVE RAB.LAK.SB.IS-5
PI STA. = 1701+29.04
Δ = 107° 12' 41" (RT)
D = 1432° 23' 40"
R = 4.00'
T = 5.43'
L = 7.48'
E = 2.74'
P.C. STA. = 1701+23.62
P.T. STA. = 1701+31.10

PROP. CURVE RAB.LAK.CENT-1
PI STA. = 900+54.82
Δ = 90° 19' 58" (LT)
D = 105° 07' 48"
R = 54.50'
T = 54.82'
L = 85.92'
E = 22.80'
P.C. STA. = 900+00.00
P.T. STA. = 900+85.92

PROP. CURVE RAB.LAK.NB.IS-1
PI STA. = 1600+00.00
Δ = 32° 45' 31" (RT)
D = 67° 24' 24"
R = 85.00'
T = 24.98'
L = 48.60'
E = 3.60'
P.C. STA. = 1600+00.00
P.T. STA. = 1600+48.60

PROP. CURVE RAB.LAK.NB.IS-2
PI STA. = 1600+48.60
Δ = 0° 33' 42" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 4.90'
L = 9.80'
E = 0.01'
P.C. STA. = 1600+48.60
P.T. STA. = 1600+58.40

PROP. CURVE RAB.LAK.NB.IS-3
PI STA. = 1600+58.40
Δ = 14° 19' 26"
R = 400.00'
T = 2.24'
L = 4.47'
E = 0.01'
P.C. STA. = 1600+62.93
P.T. STA. = 1600+67.40

PROP. CURVE RAB.LAK.CENT-2
PI STA. = 901+82.80
Δ = 121° 16' 45" (LT)
D = 105° 07' 48"
R = 54.50'
T = 96.88'
L = 115.36'
E = 56.66'
P.C. STA. = 900+85.92
P.T. STA. = 902+01.29

PROP. CURVE RAB.LAK.WB.RT-4
PI STA. = 1105+08.11
Δ = 31° 08' 55" (RT)
D = 57° 17' 45"
R = 100.00'
T = 27.87'
L = 54.36'
E = 3.81'
P.C. STA. = 1104+80.24
P.T. STA. = 1105+34.60

PROP. CURVE RAB.LAK.WB.IS-4
PI STA. = 1501+37.78
Δ = 8° 14' 38" (LT)
D = 28° 38' 52"
R = 200.00'
T = 14.41'
L = 28.78'
E = 0.52'
P.C. STA. = 1501+23.36
P.T. STA. = 1501+52.14

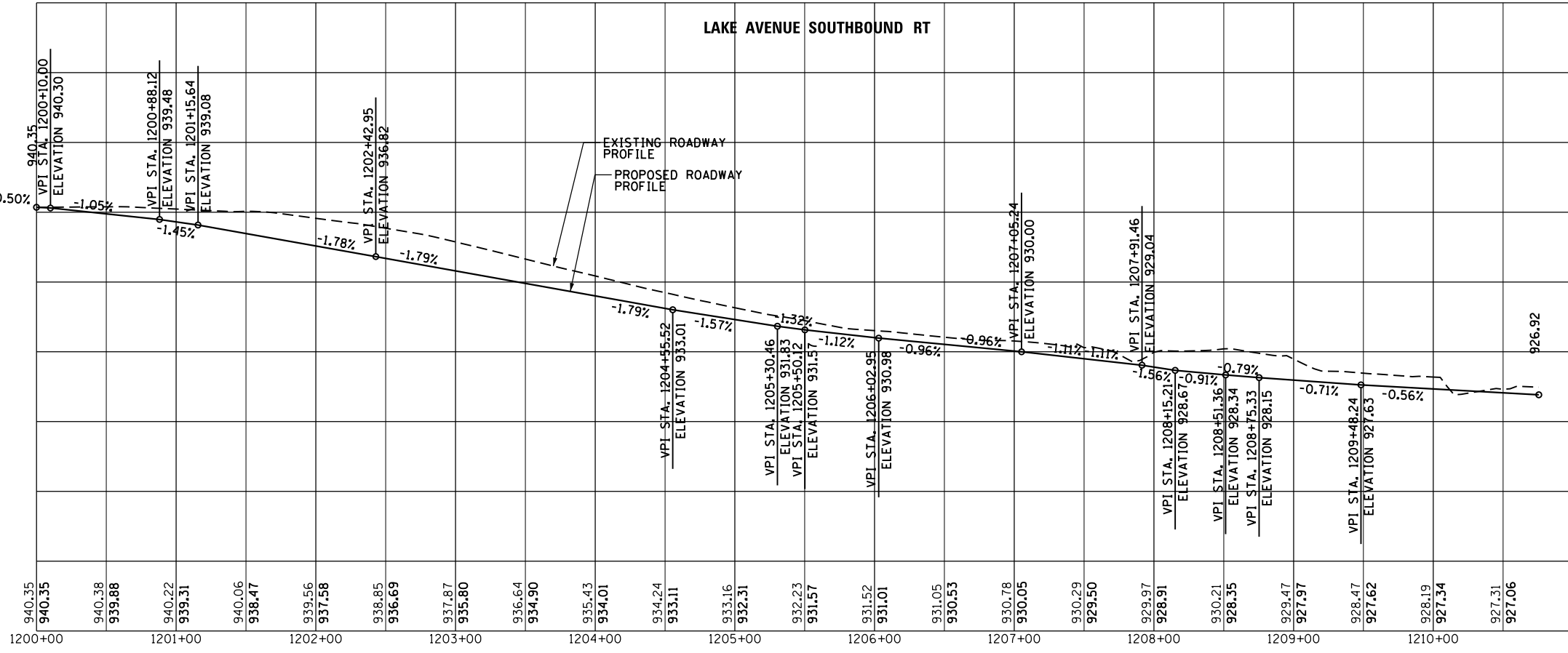
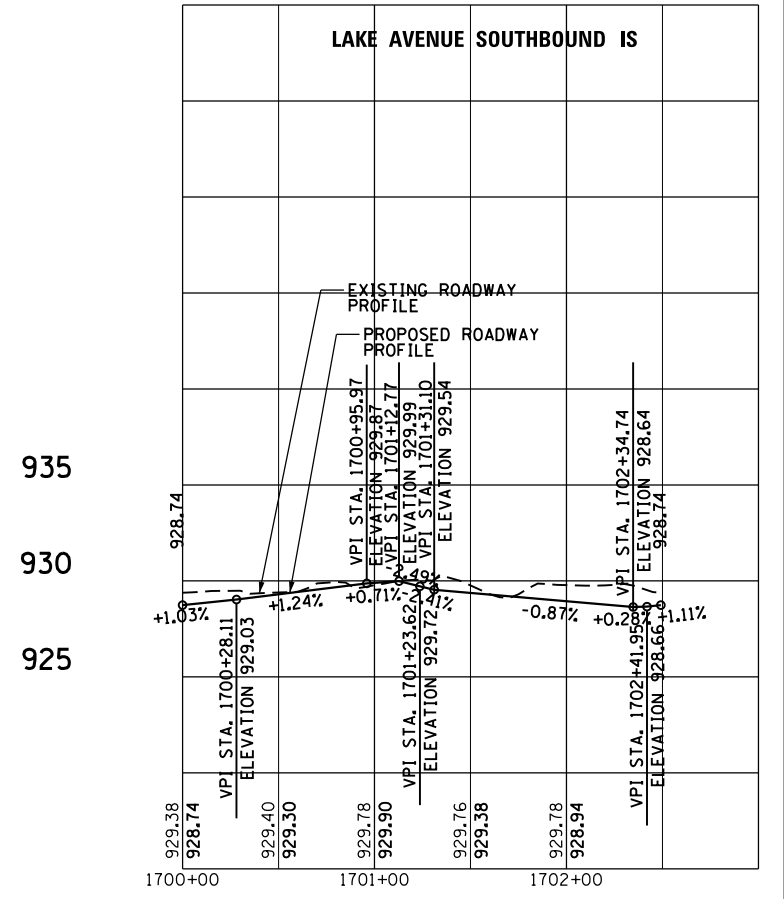
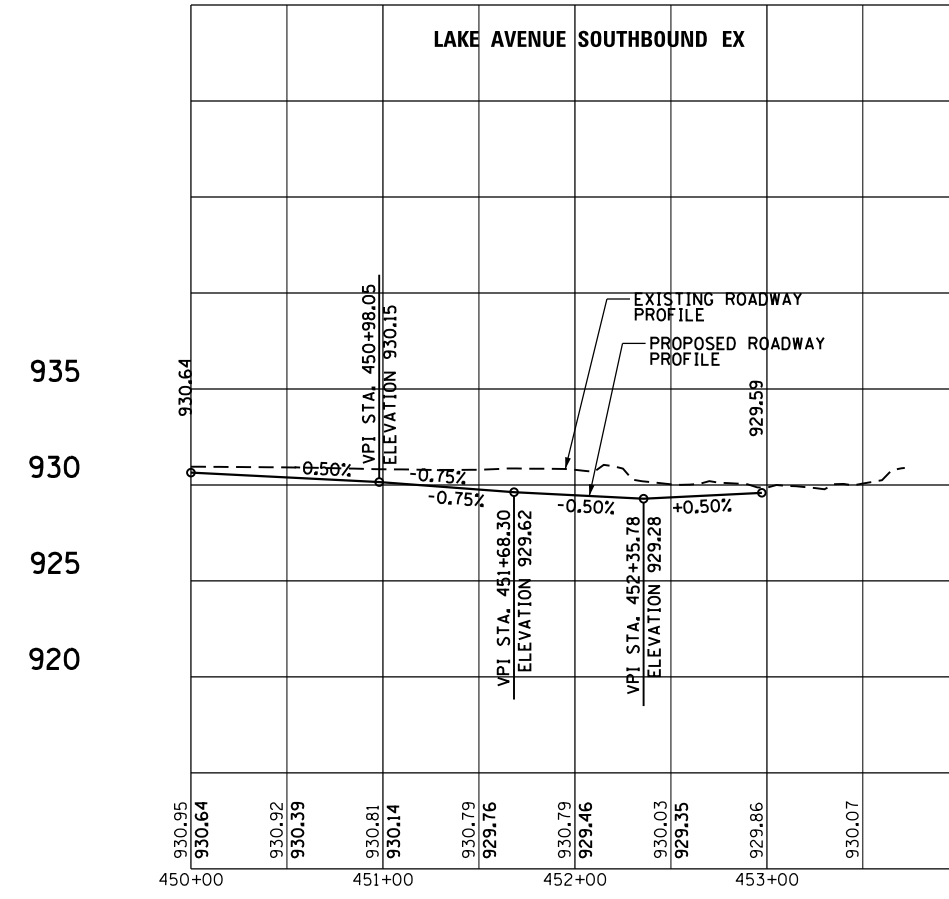
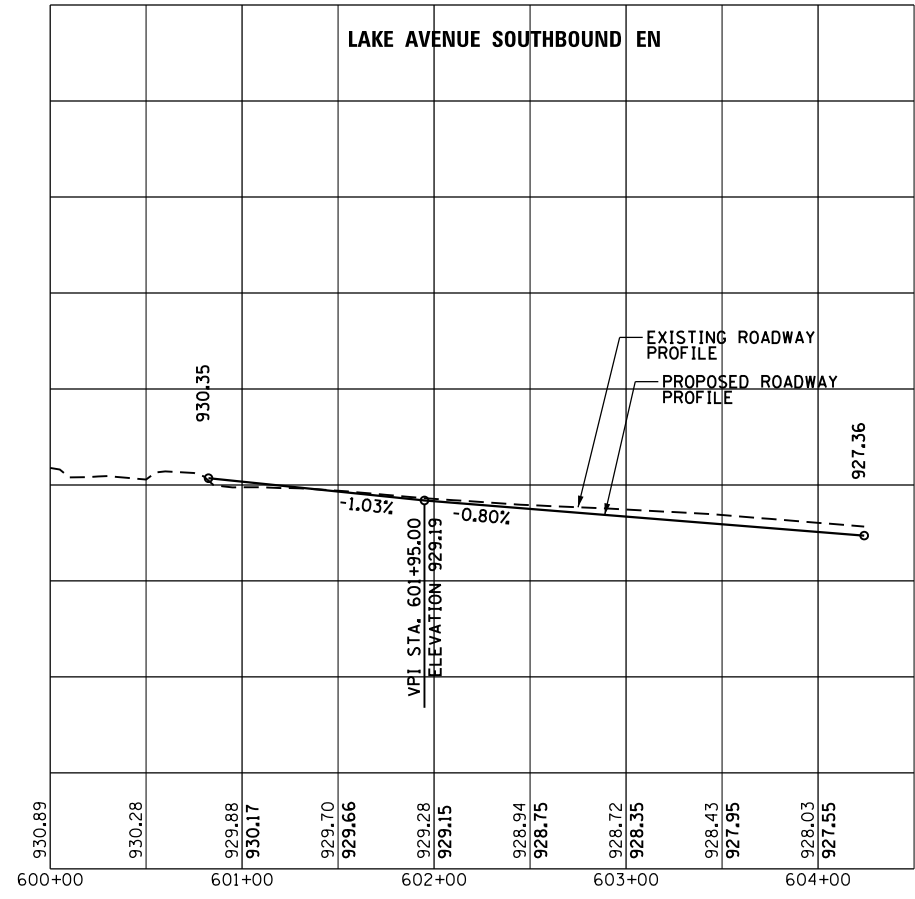
PROP. CURVE RAB.LAK.SB.IS-3
PI STA. = 1701+12.93
Δ = 55° 13' 59" (RT)
D = 1432° 23' 40"
R = 4.00'
T = 2.09'
L = 3.86'
E = 0.51'
P.C. STA. = 1701+10.84
P.T. STA. = 1701+14.69

PROP. CURVE RAB.LAK.SB.IS-6
PI STA. = 1702+00.26
Δ = 13° 13' 37" (LT)
D = 19° 05' 55"
R = 300.00'
T = 34.78'
L = 69.26'
E = 2.01'
P.C. STA. = 1701+65.48
P.T. STA. = 1702+34.74

PROP. CURVE RAB.LAK.NB.IS-1
PI STA. = 1600+53.50
Δ = 0° 33' 42" (RT)
D = 5° 43' 46"
R = 1,000.00'
T = 4.90'
L = 9.80'
E = 0.01'
P.C. STA. = 1600+48.60
P.T. STA. = 1600+58.40

PROP. CURVE RAB.LAK.NB.IS-2
PI STA. = 1600+58.40
Δ = 14° 19' 26"
R = 400.00'
T =

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PROFILES
SOUTHBOUND LAKE AVENUE

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH ROUTE LAKE AVENUE

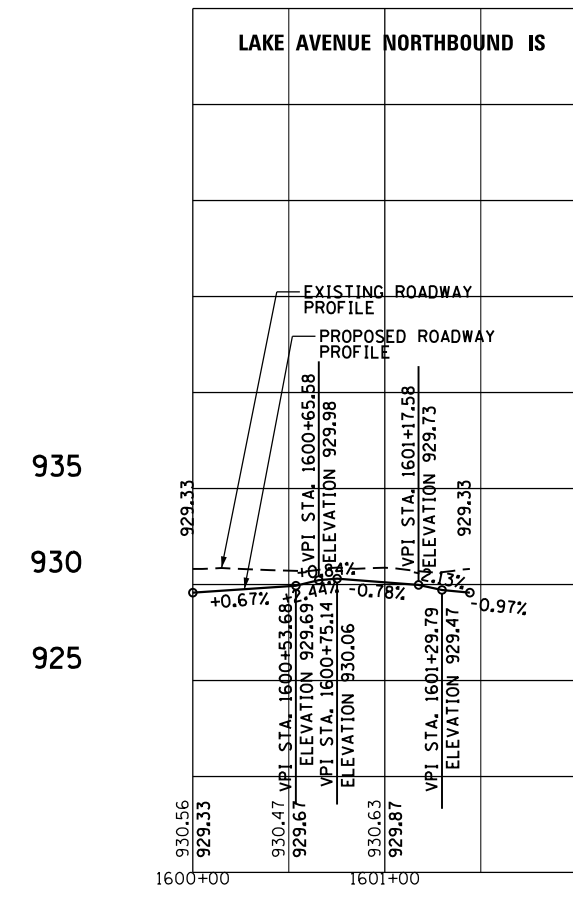
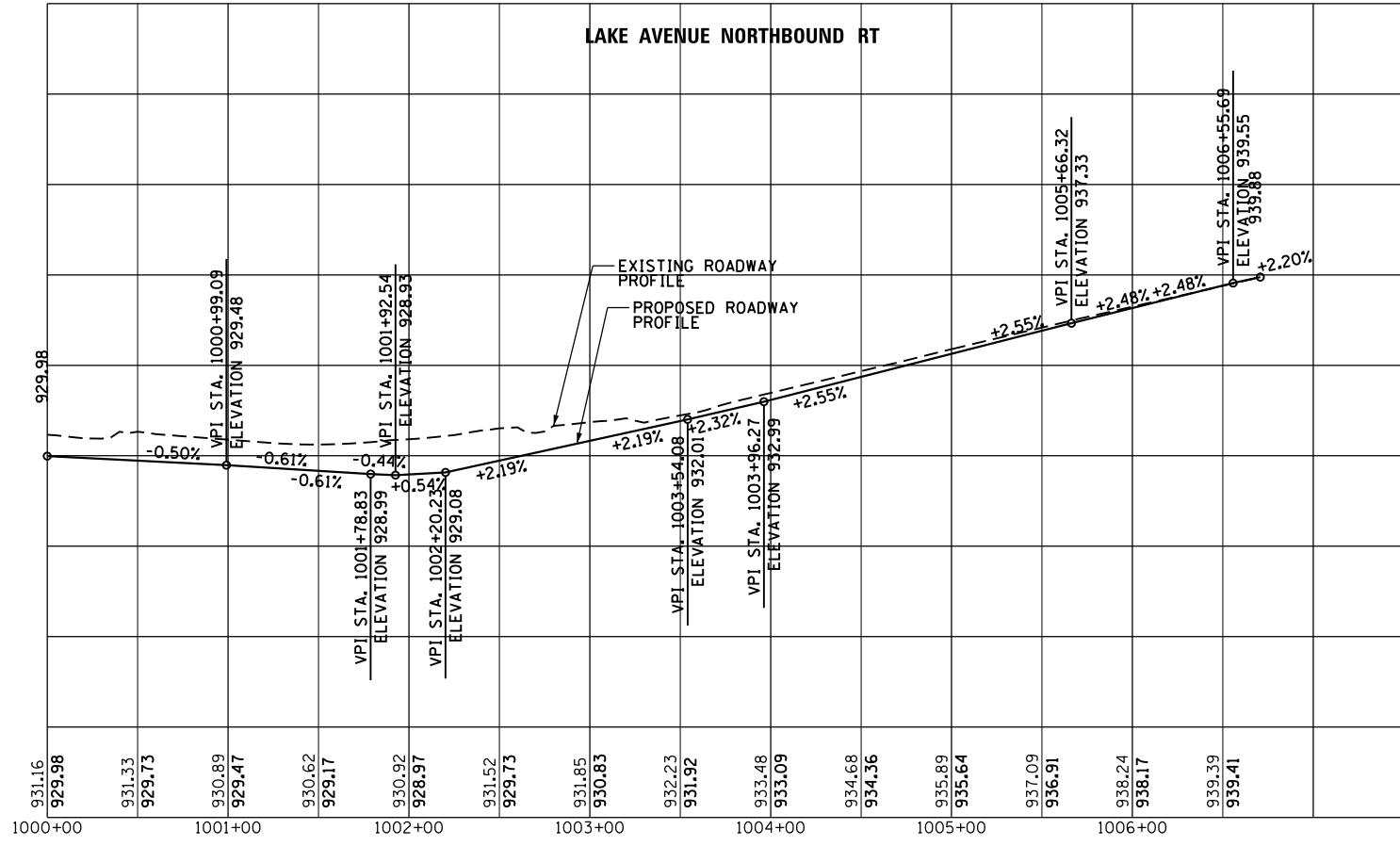
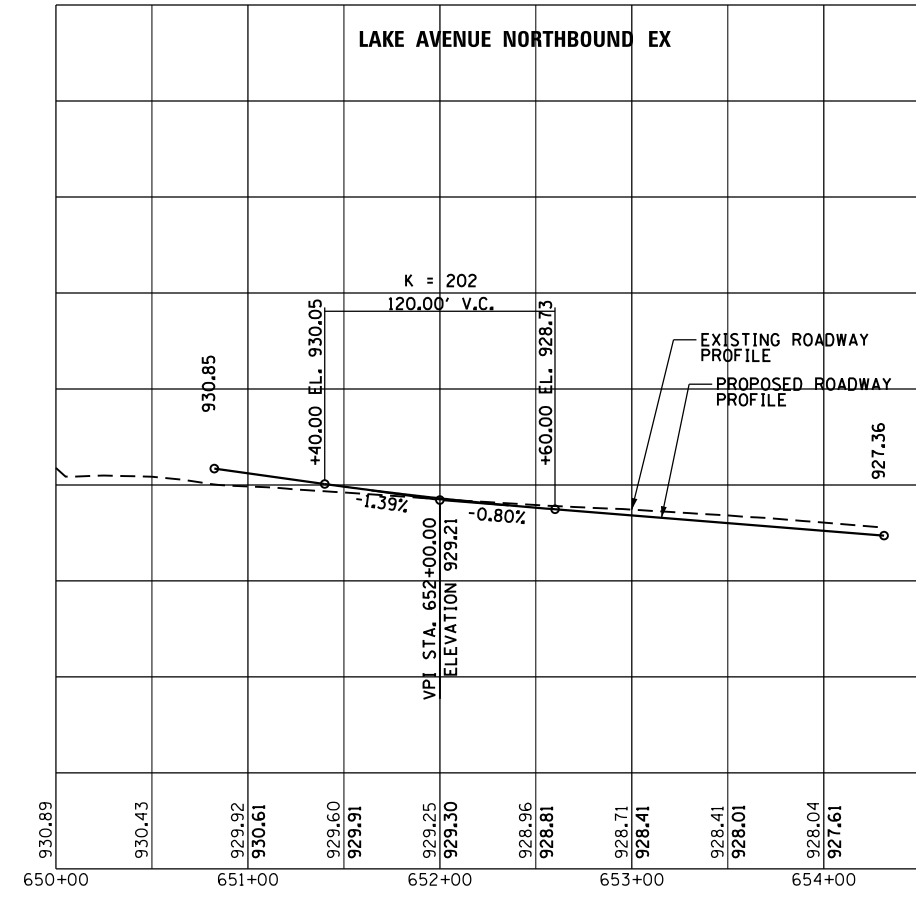
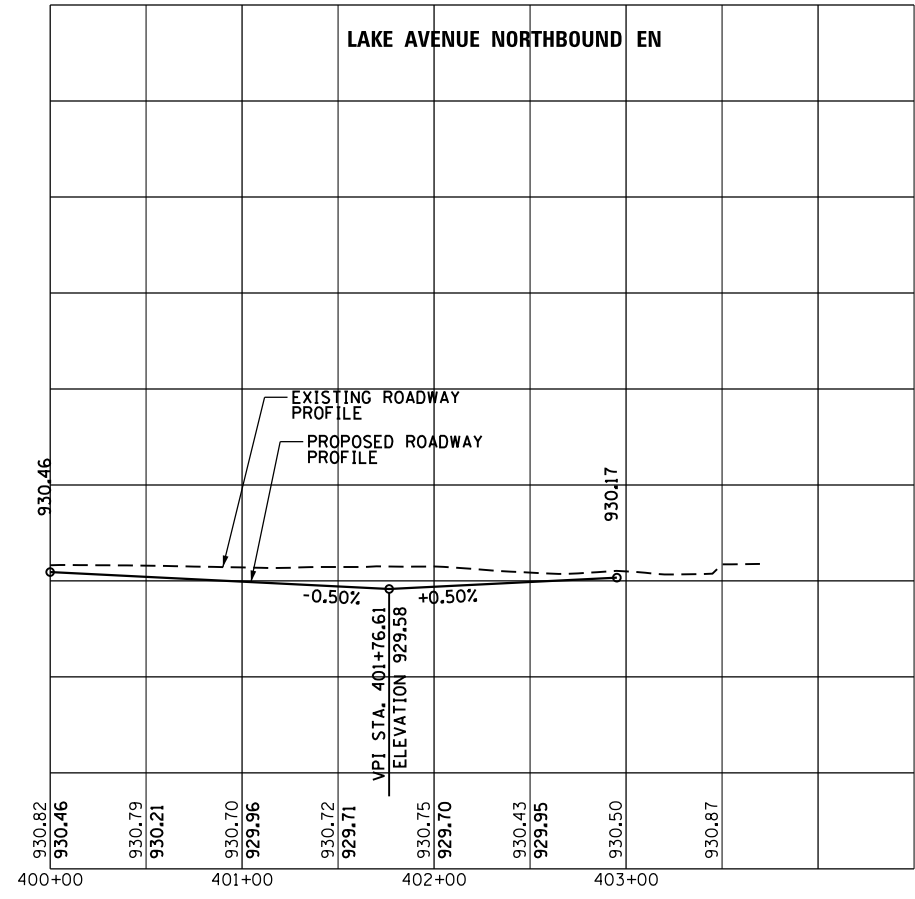
SEC. NO. _____

SCALE 1"=50' COUNTY MCHENRY

SJN : P-91-007-09 PROJ. NO. _____

I.D.S. SHEET 5 OF 21

PLOT DATE = 8/21/2018
 FILE NAME = N:\STANDARD\04a_IL47\CADD_Sheets\0812345\ht-Lake-Profile1.dgn
 PLOT SCALE = 50.00' / 1" = 5000
 USER NAME = pmagnelli



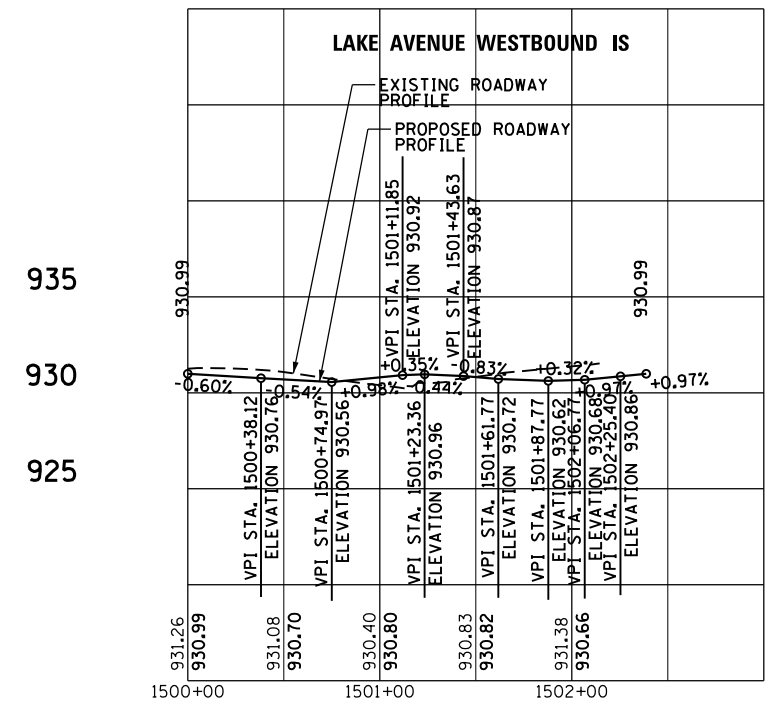
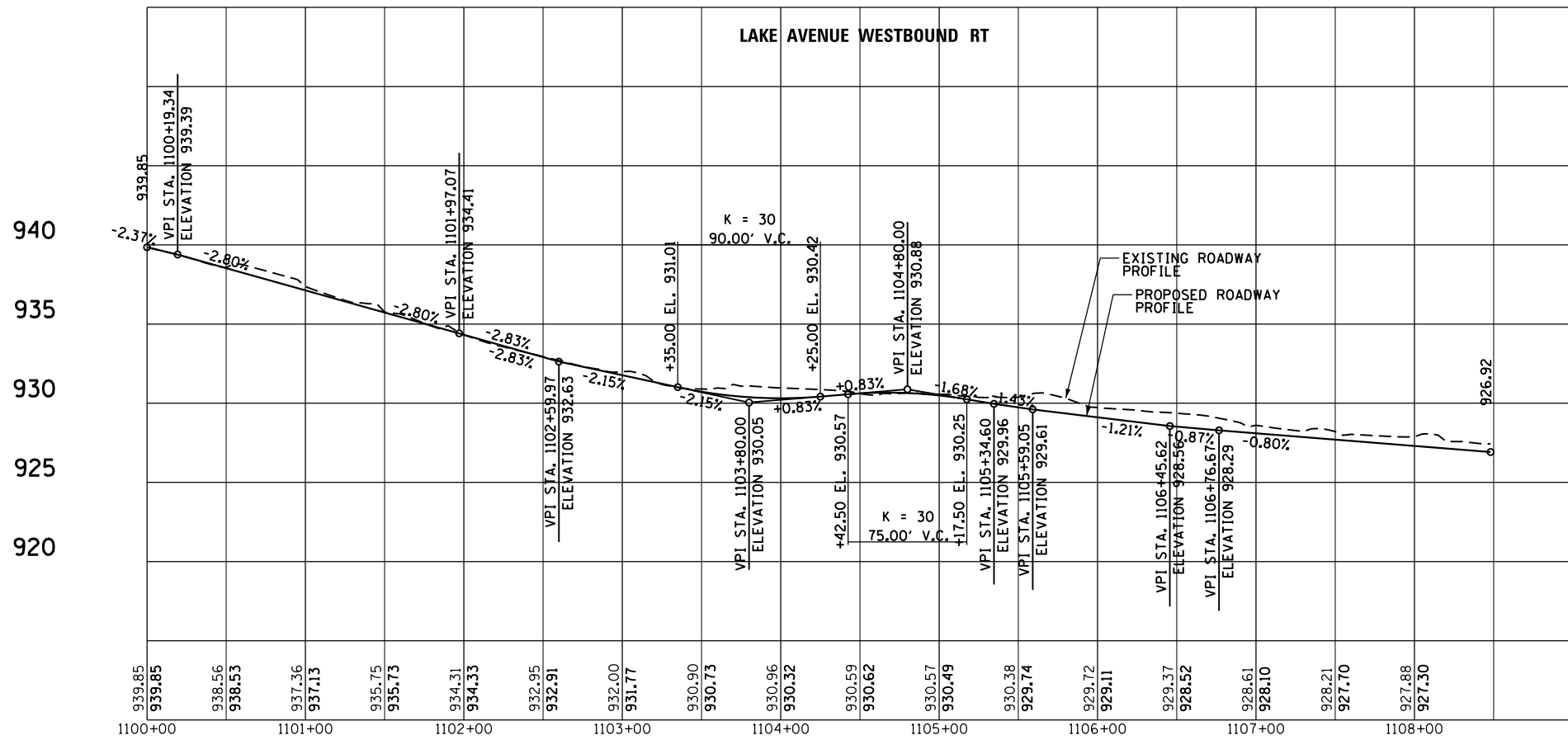
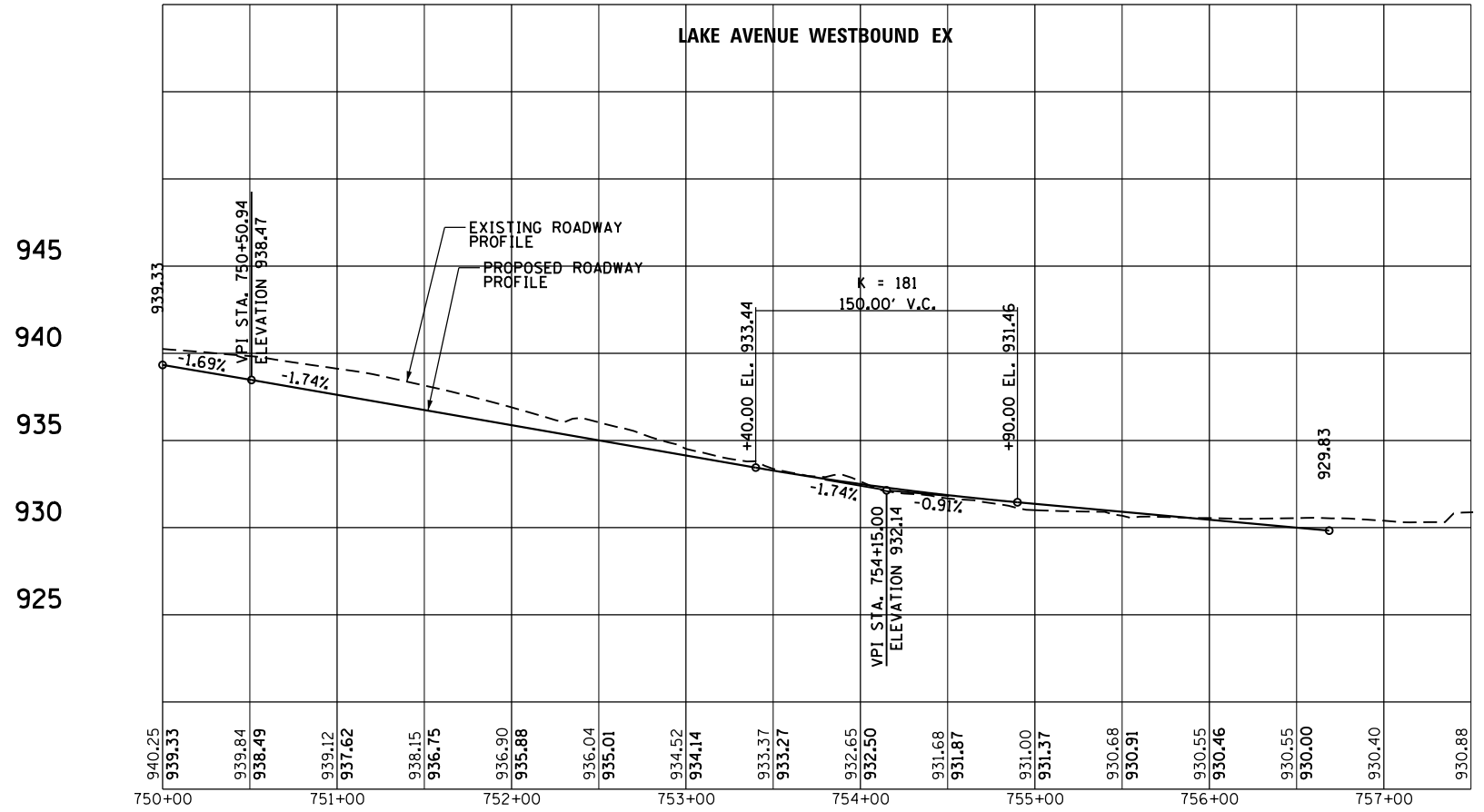
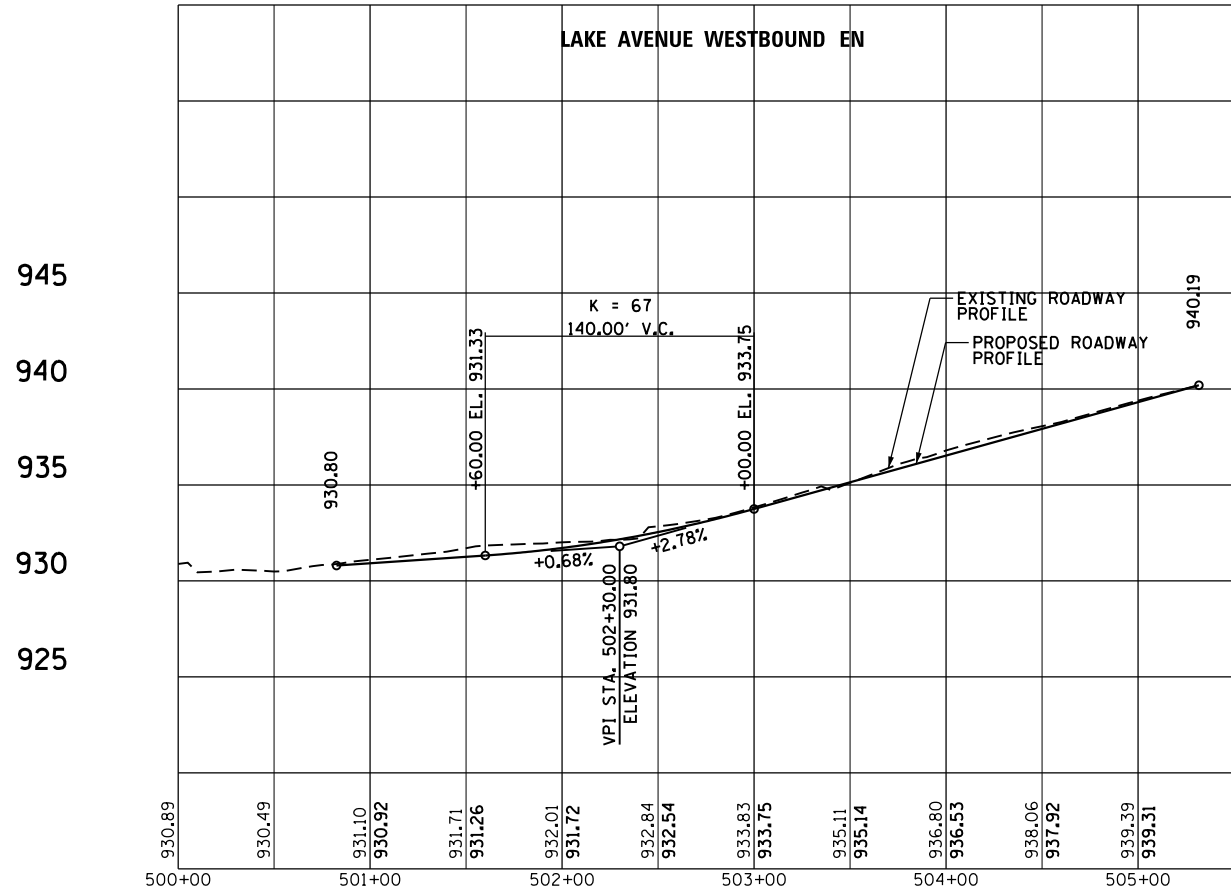
**PROFILES
NORTHBOUND LAKE AVENUE**

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH LAKE AVENUE

SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____
 I.D.S. SHEET 6 OF 21

PLOT DATE = 8/21/2018
 FILE NAME = N:\STANDARD\04-IL47\0400_Sheets\0412345-ht-Lake-Profile.dgn
 PLOT SCALE = 50.00' / 1" = 5000
 USER NAME = pmagnelli



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH ROUTE LAKE AVENUE

SEC. NO. _____

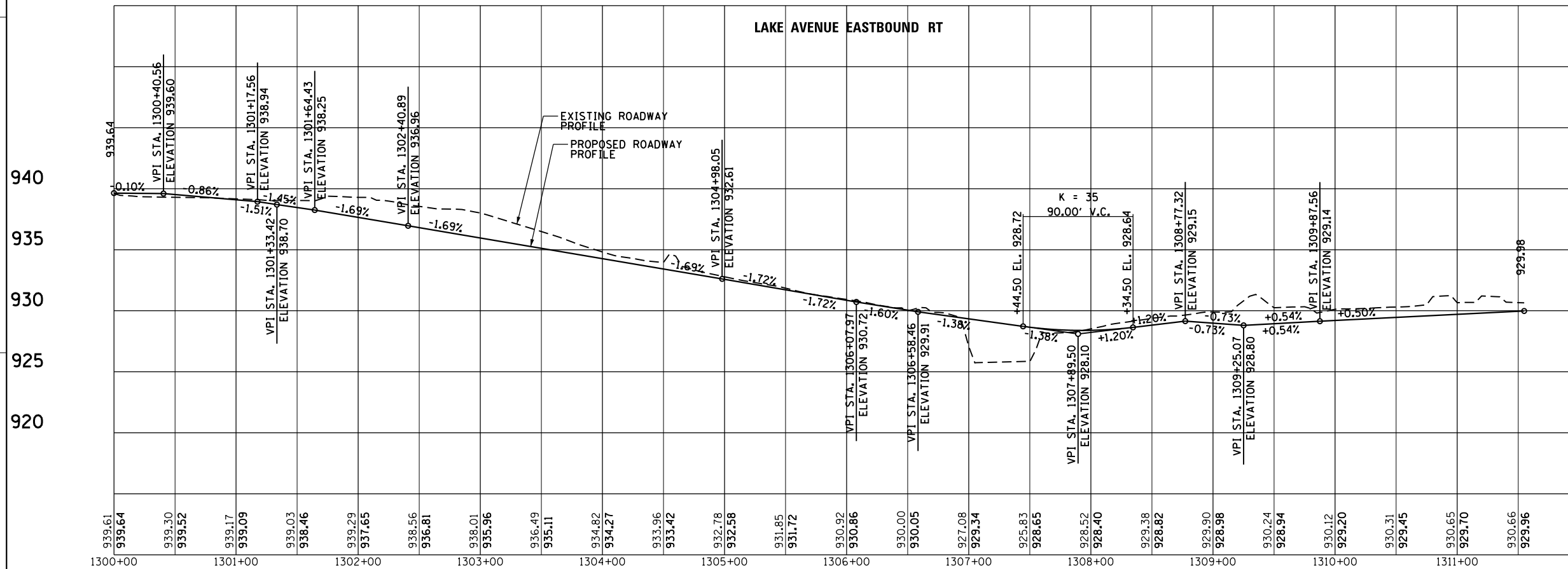
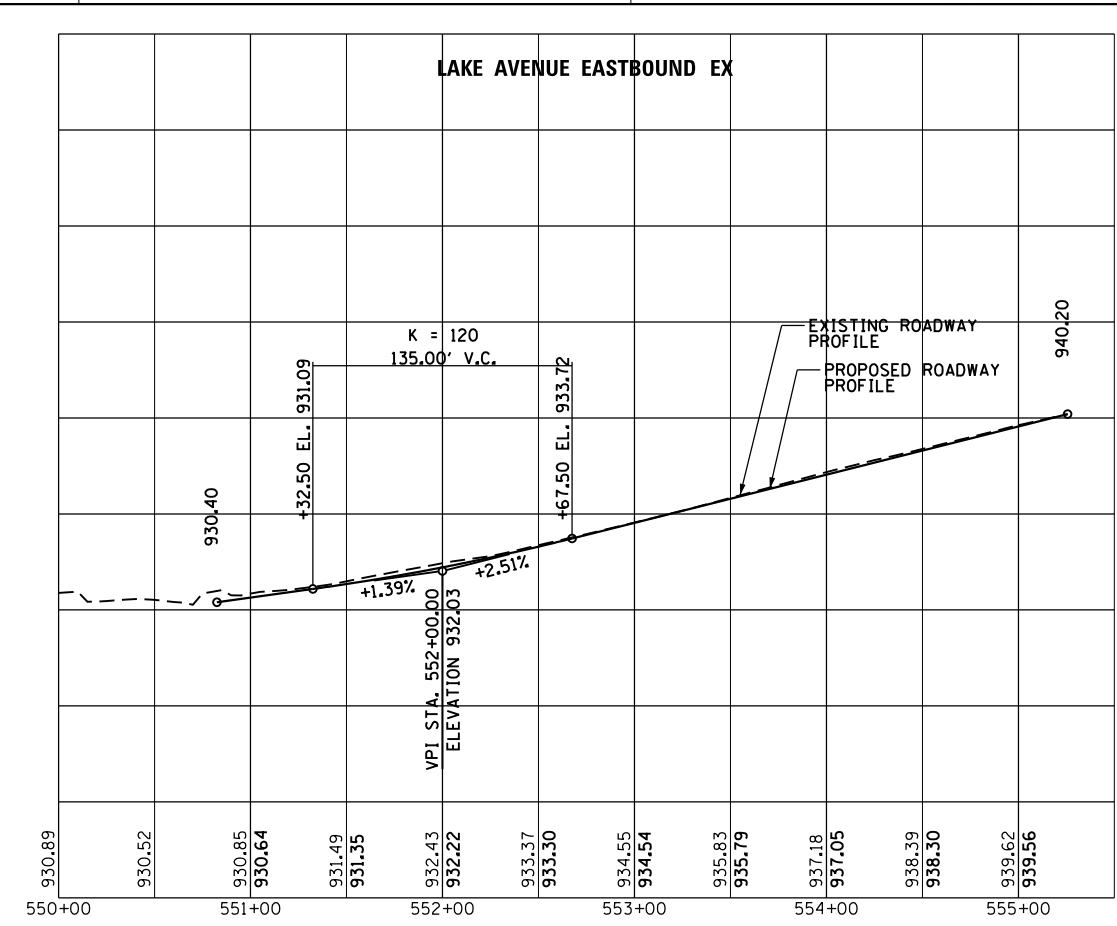
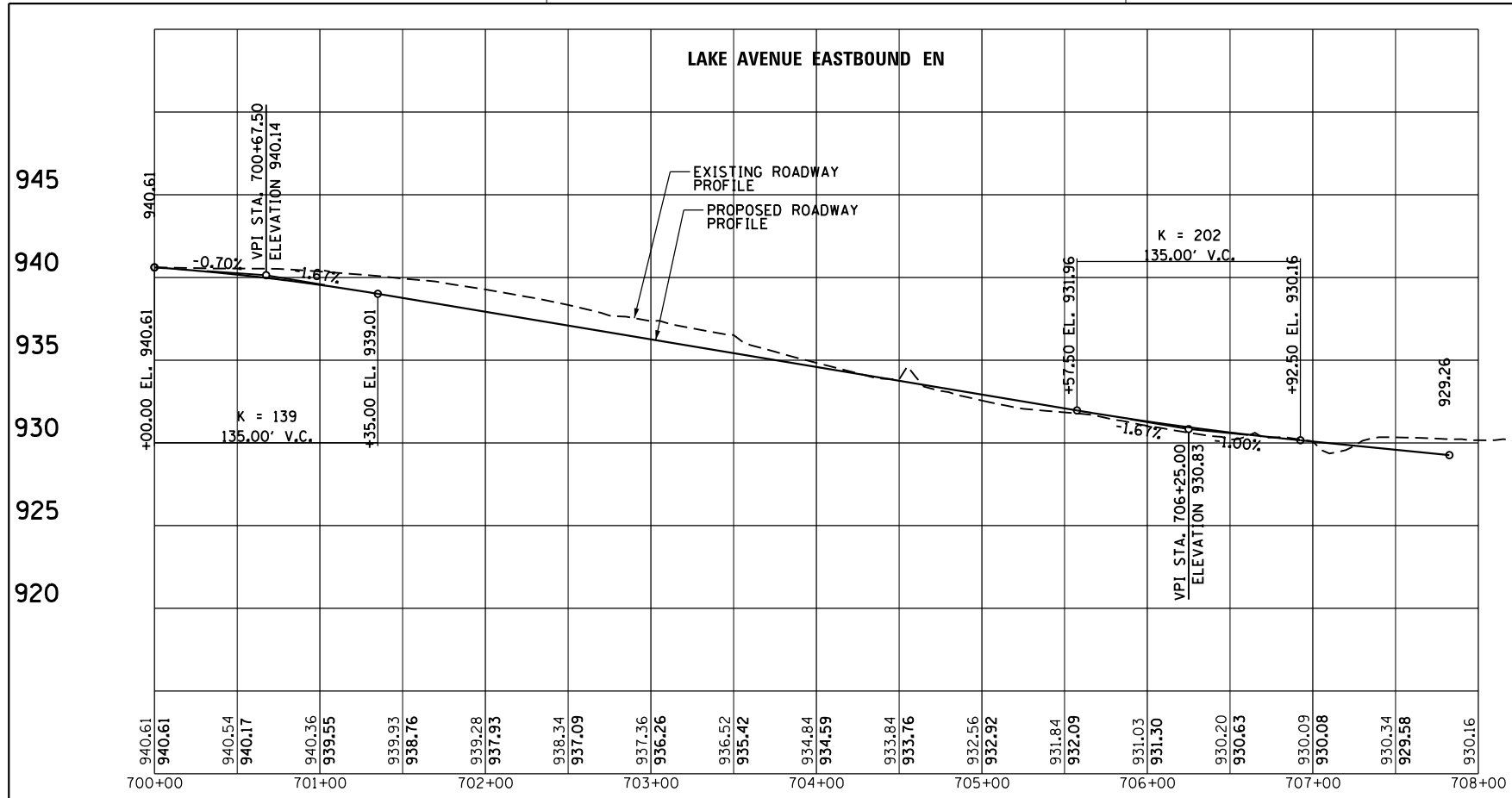
SCALE 1"=50' COUNTY MCHENRY

SJN : P-91-007-09 PROJ. NO. _____

I.D.S. SHEET 7 OF 21

**PROFILES
WESTBOUND LAKE AVENUE**

PLOT DATE = 8/21/2018
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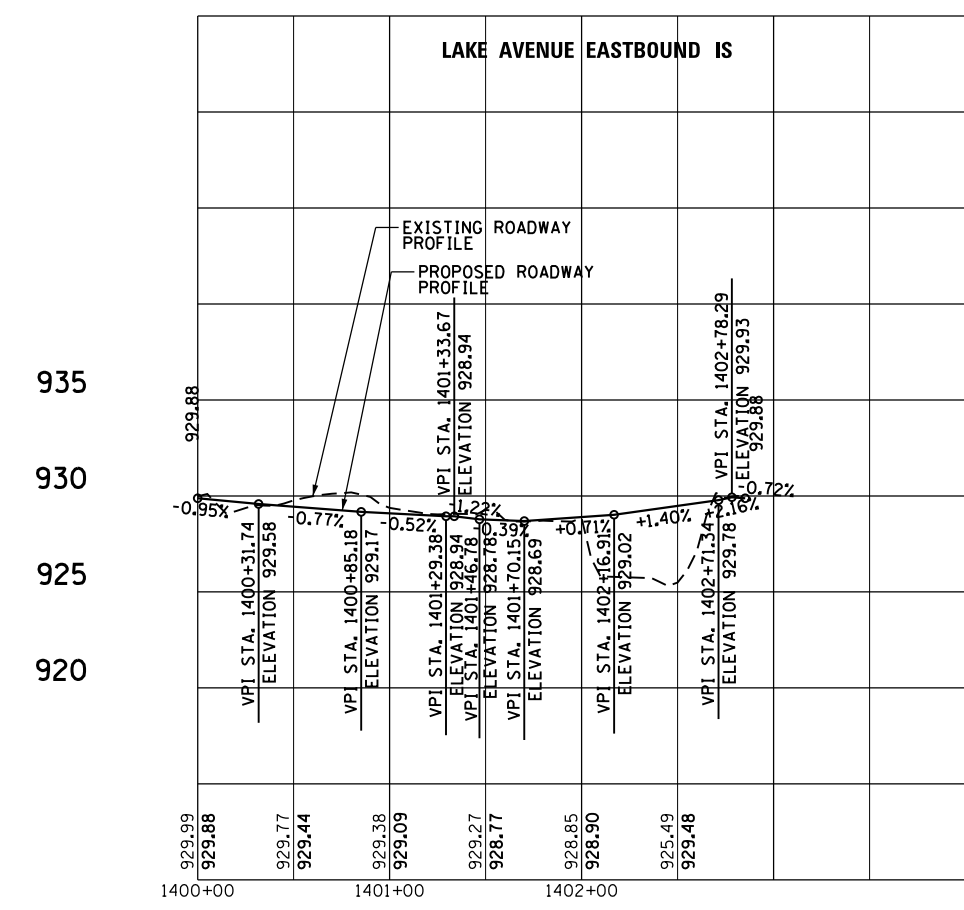
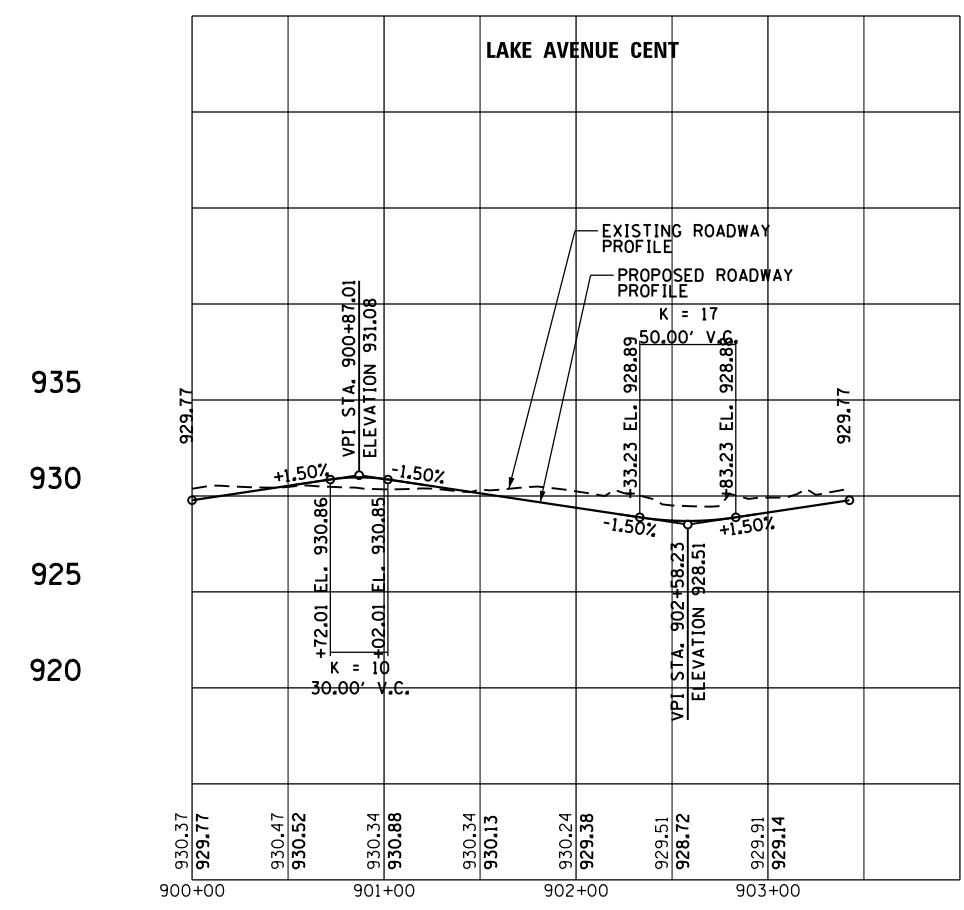


**PROFILES
 EASTBOUND LAKE AVENUE**

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH LAKE AVENUE

SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____

PLOT DATE = 8/21/2018
 FILE NAME = N:\STANDARD\04a_IL47\CADD_Sheets\0812345\ht-Lake-Profile.dgn
 PLOT SCALE = 50.00' / in.
 USER NAME = pmagnelli



PROFILES
LAKE AVENUE EASTBOUND IS,
LAKE AVENUE CENT

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH ROUTE _____ (LAKE AVENUE)

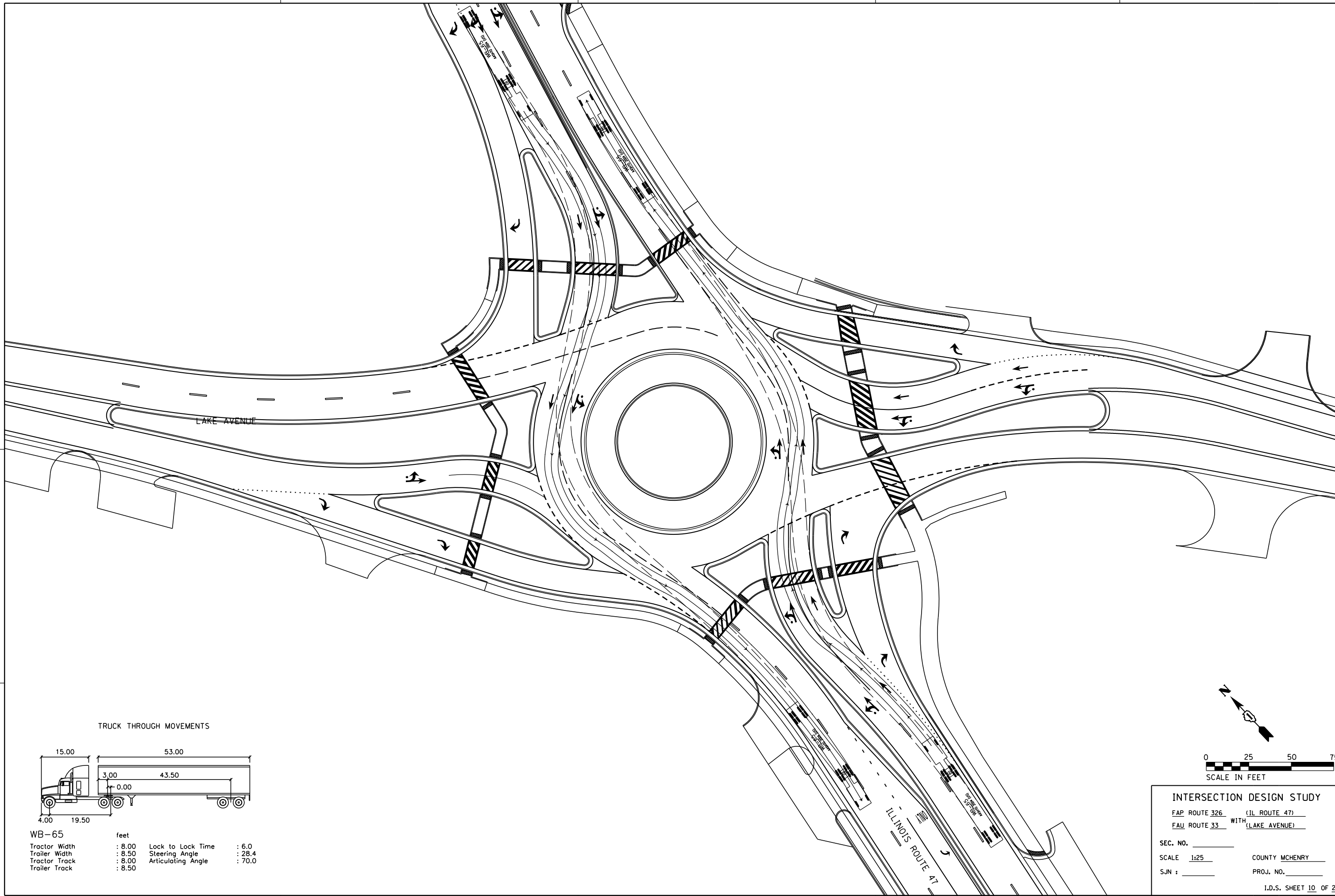
SEC. NO. _____

SCALE 1"=50' COUNTY MCHENRY

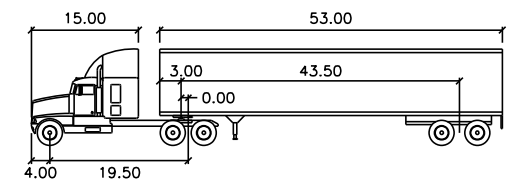
SJN : P-91-007-09 PROJ. NO. _____

I.D.S. SHEET 9 OF 21

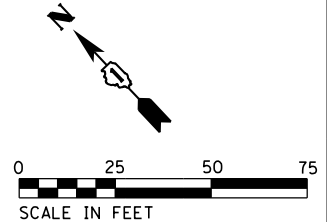
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 USER NAME = MattC



TRUCK THROUGH MOVEMENTS

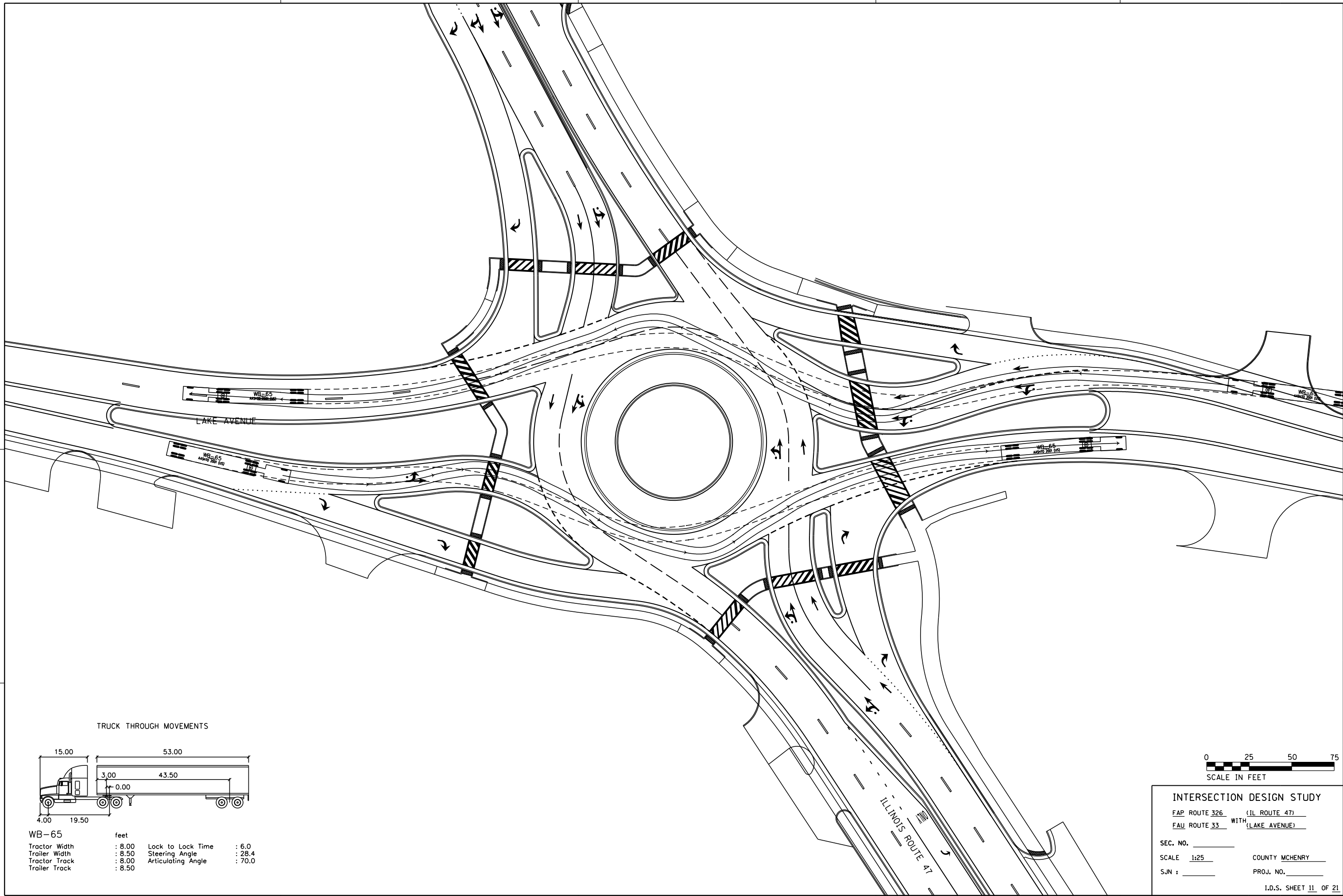


WB-65			
	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

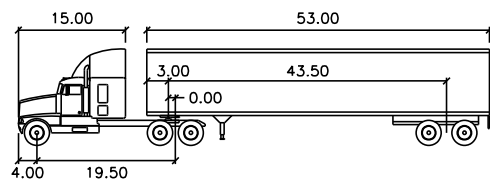


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 10 OF 21

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK THROUGH MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

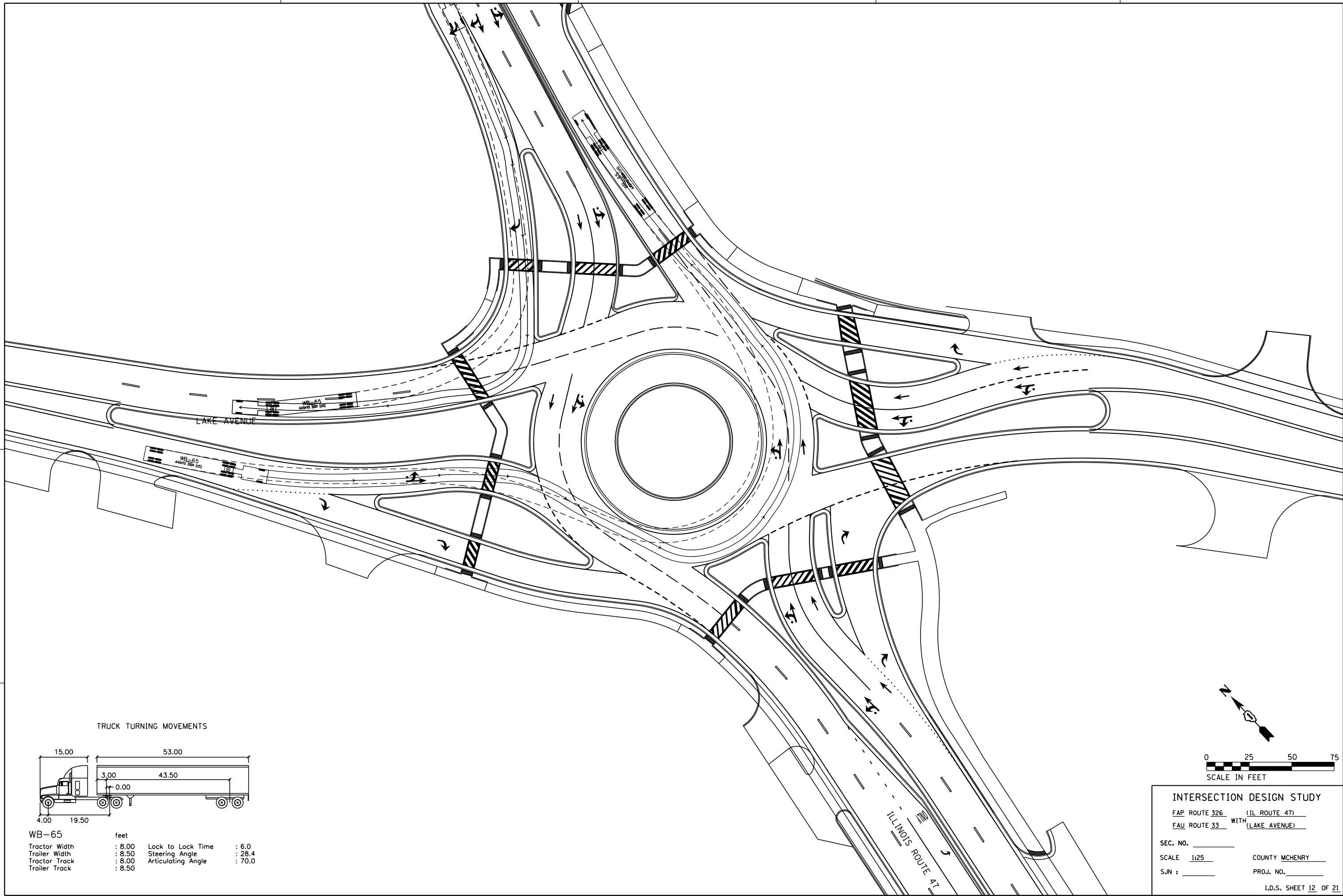


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

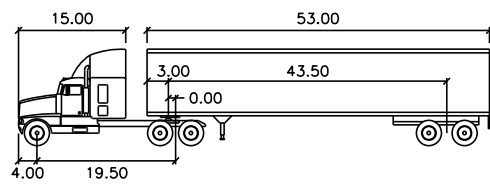
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 11 OF 21
 BDE-9908

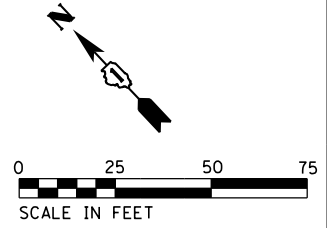
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

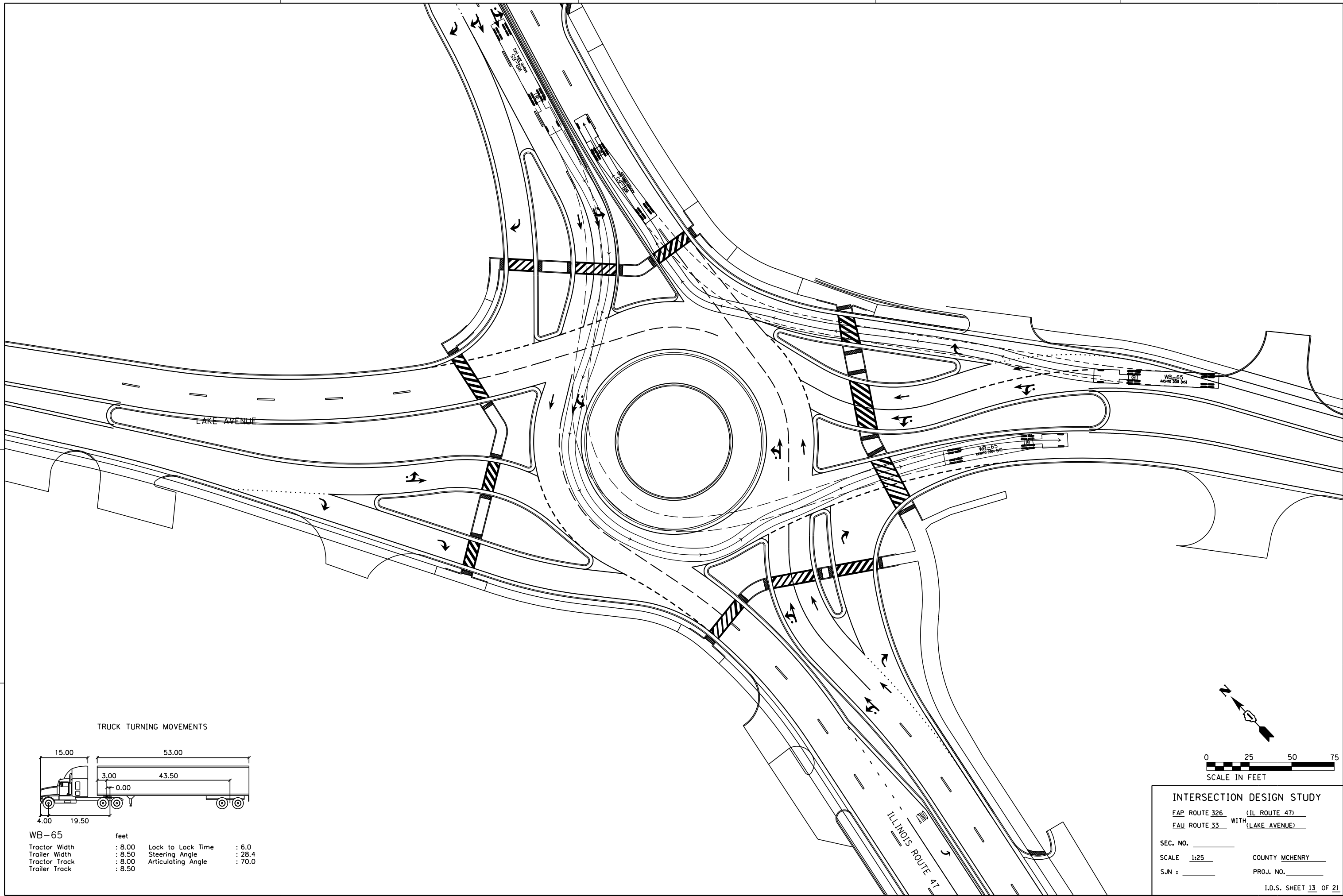


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

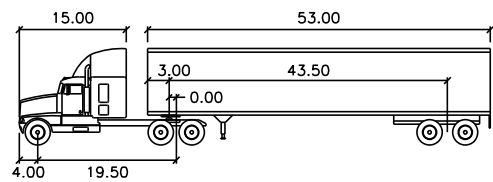
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 12 OF 21

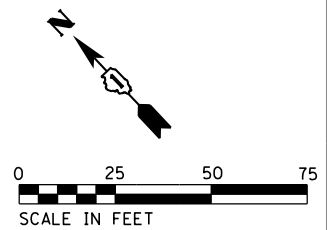
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

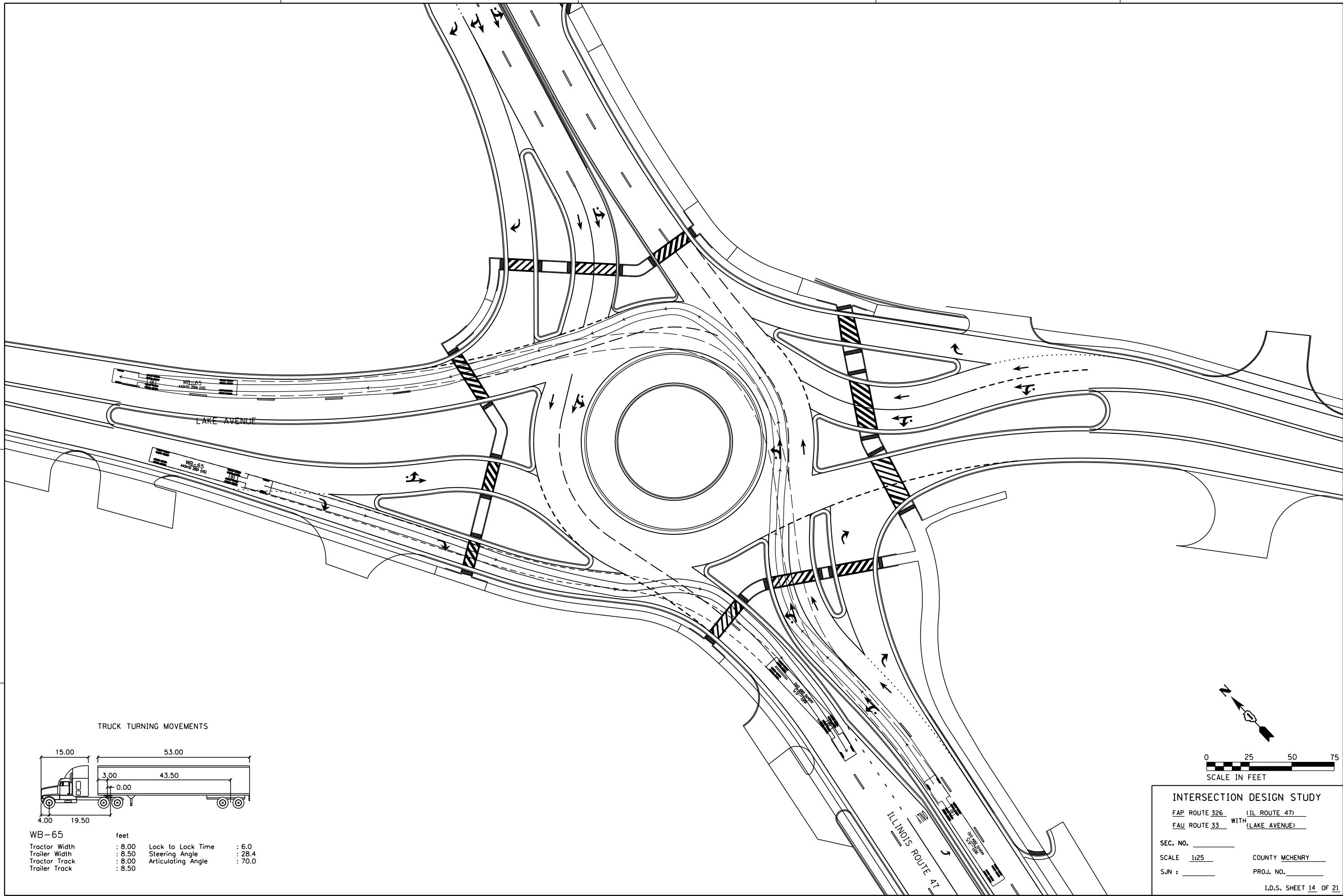


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

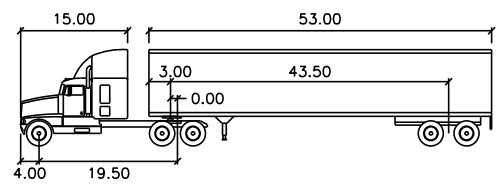
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 13 OF 21

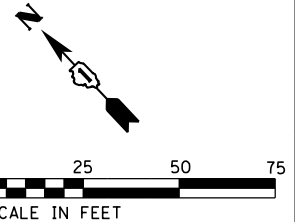
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

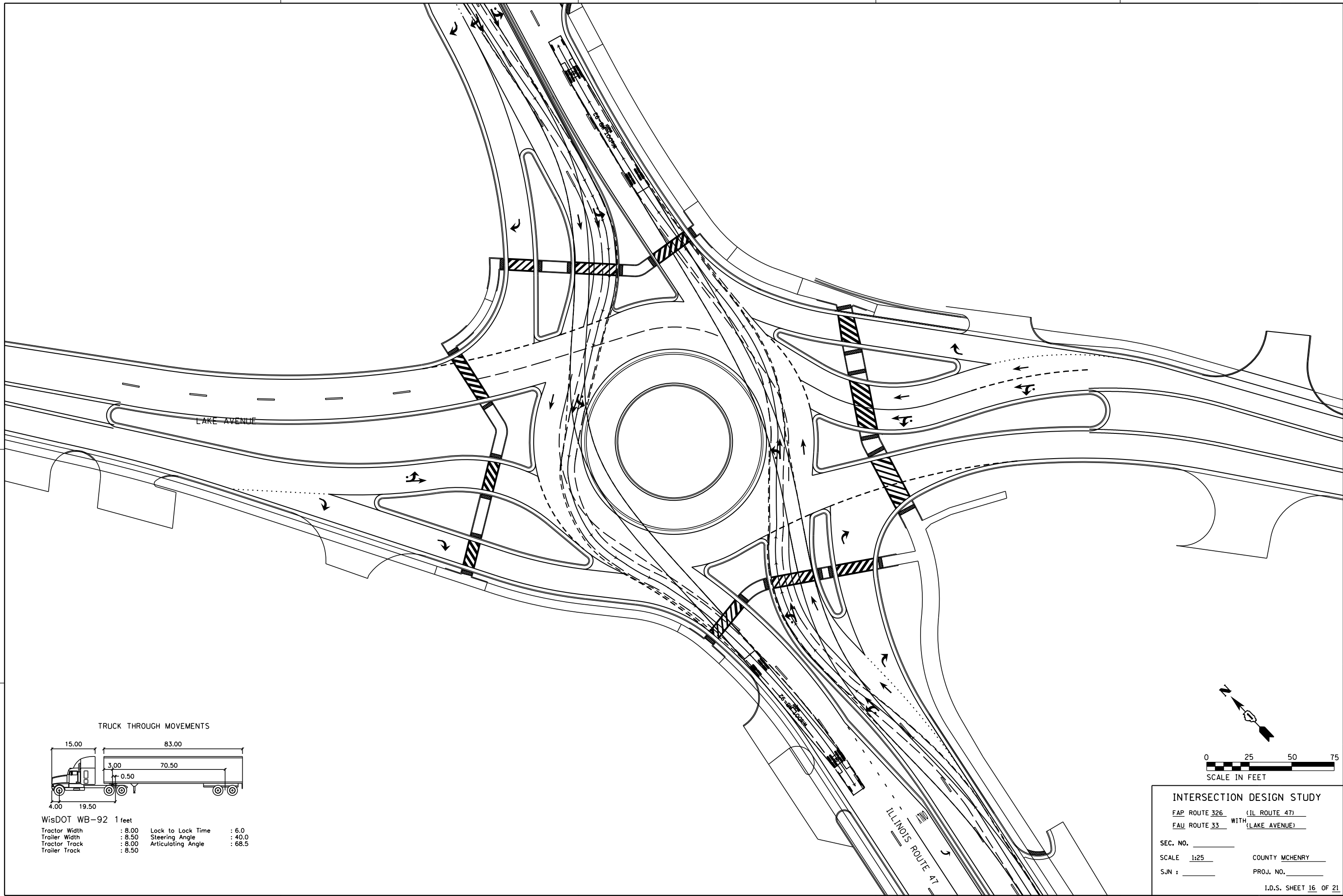


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

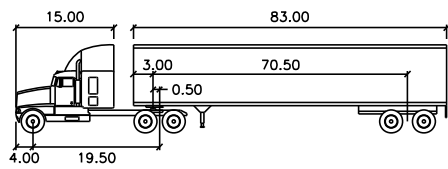
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 14 OF 21

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC

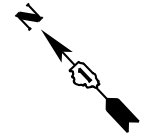


TRUCK THROUGH MOVEMENTS



WisDOT WB-92 1 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		

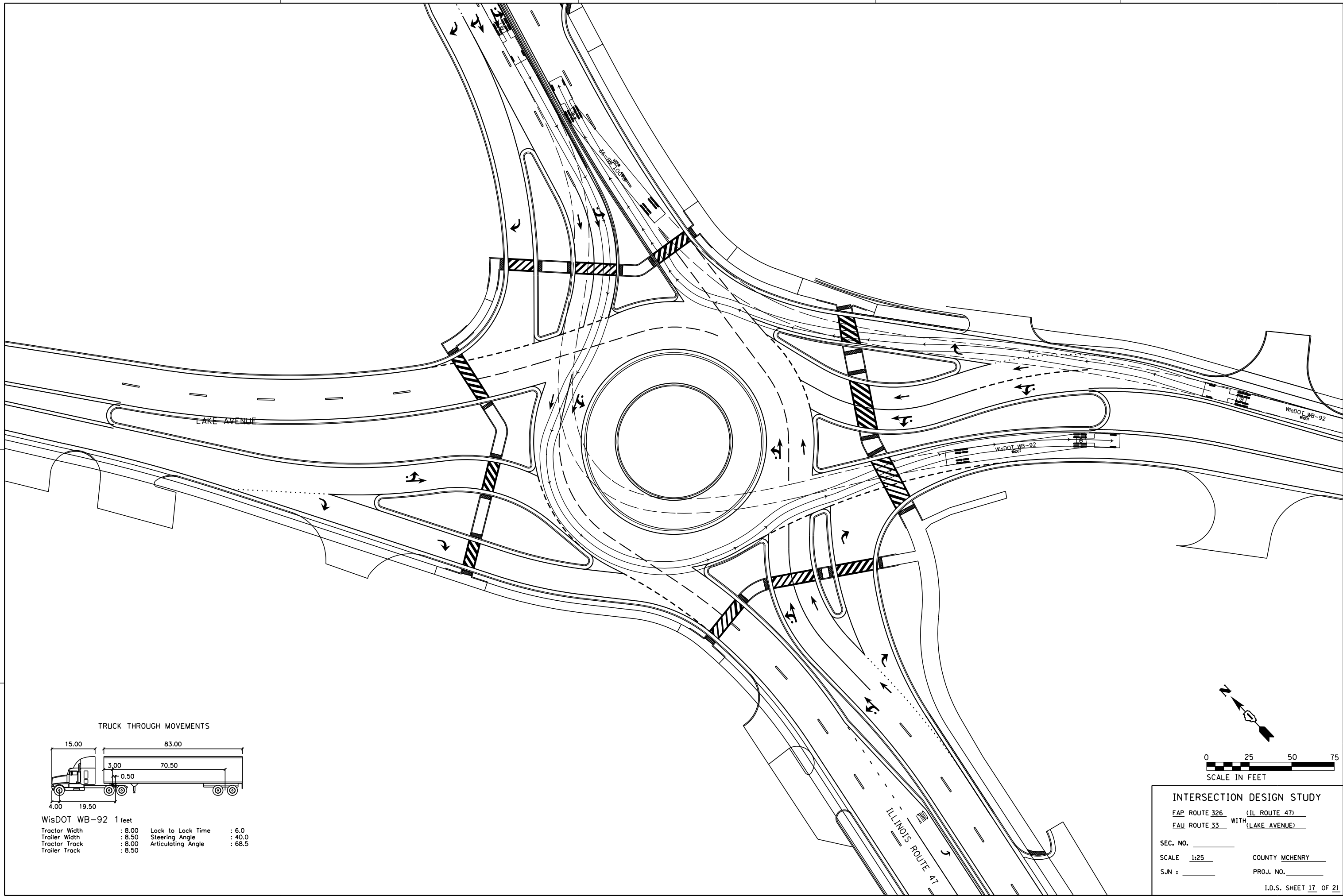


INTERSECTION DESIGN STUDY

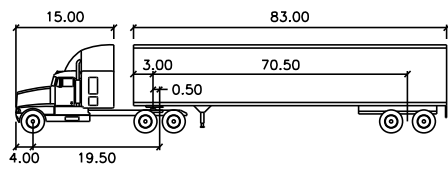
FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

PLOT DATE = 12/27/2018
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 USER NAME = MattC

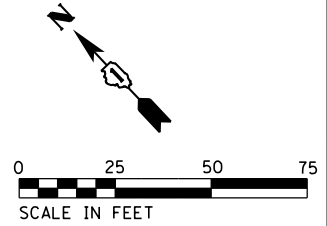


TRUCK THROUGH MOVEMENTS



WisDOT WB-92 1 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY

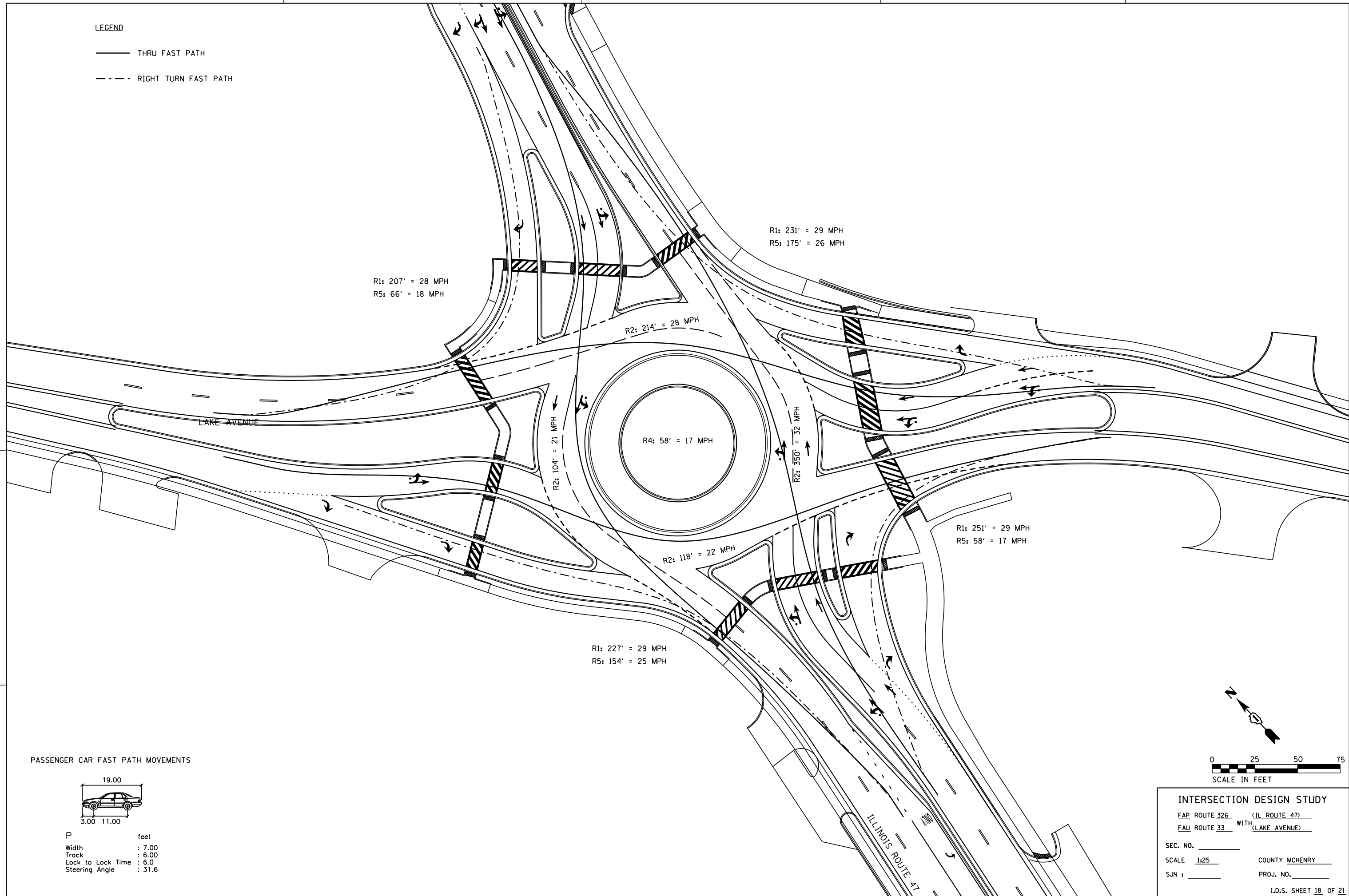
FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

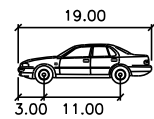
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 USER NAME = MattC

LEGEND

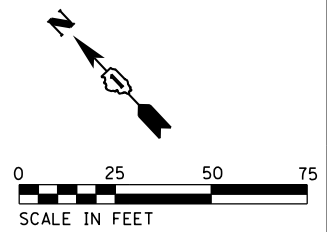
- THRU FAST PATH
- - - - RIGHT TURN FAST PATH



PASSENGER CAR FAST PATH MOVEMENTS



P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 18 OF 21

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01A\Micros\CADD Sheets\01B12345-ght-rds-Lake-Sight.dgn
 PLOT SCALE = 50.0000 / 1" =
 USER NAME = MattC





IL ROUTE 47
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

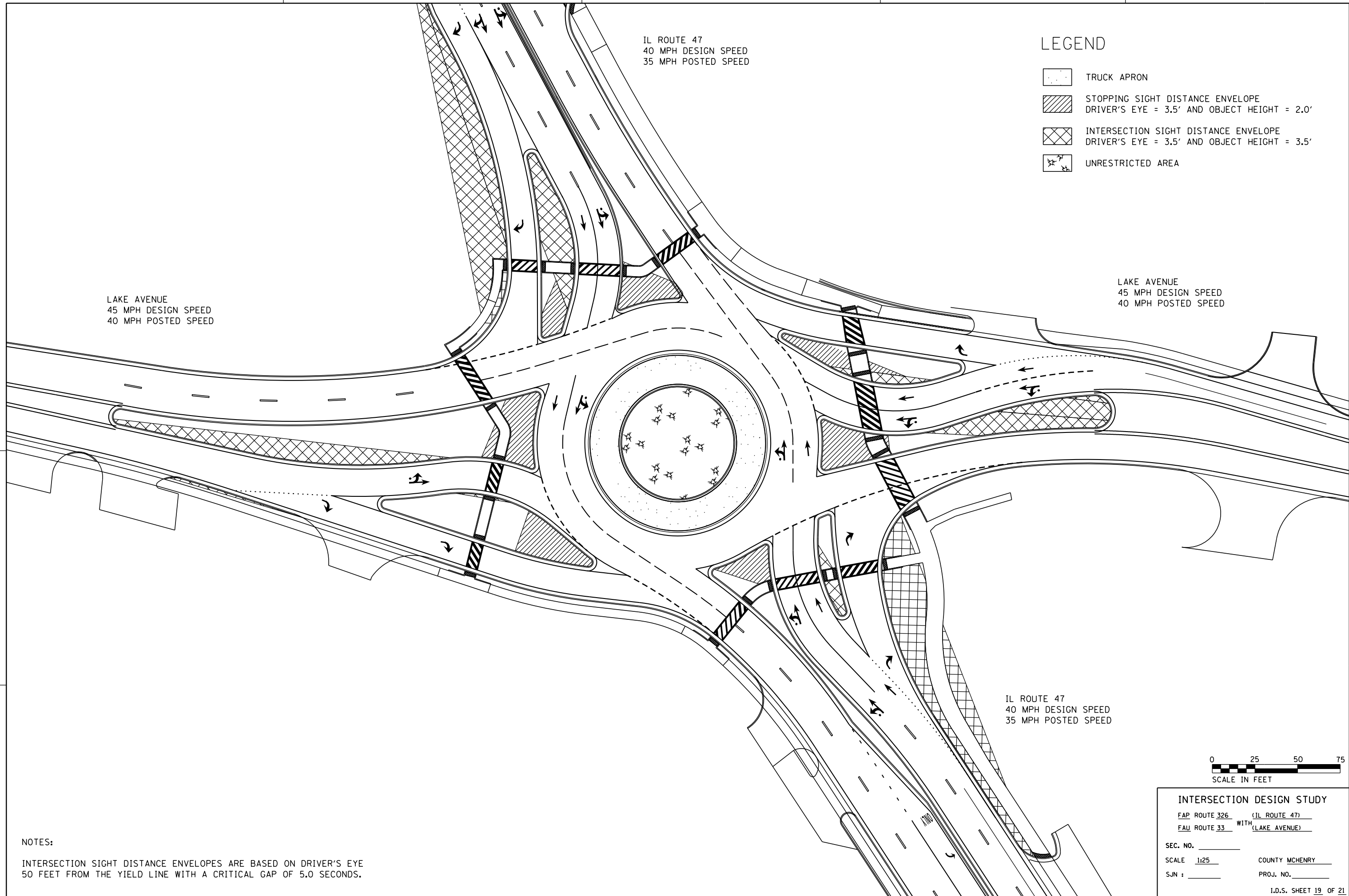
LAKE AVENUE
 45 MPH DESIGN SPEED
 40 MPH POSTED SPEED

LAKE AVENUE
 45 MPH DESIGN SPEED
 40 MPH POSTED SPEED

IL ROUTE 47
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

LEGEND

-  TRUCK APRON
-  STOPPING SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 2.0'
-  INTERSECTION SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 3.5'
-  UNRESTRICTED AREA



NOTES:
 INTERSECTION SIGHT DISTANCE ENVELOPES ARE BASED ON DRIVER'S EYE
 50 FEET FROM THE YIELD LINE WITH A CRITICAL GAP OF 5.0 SECONDS.

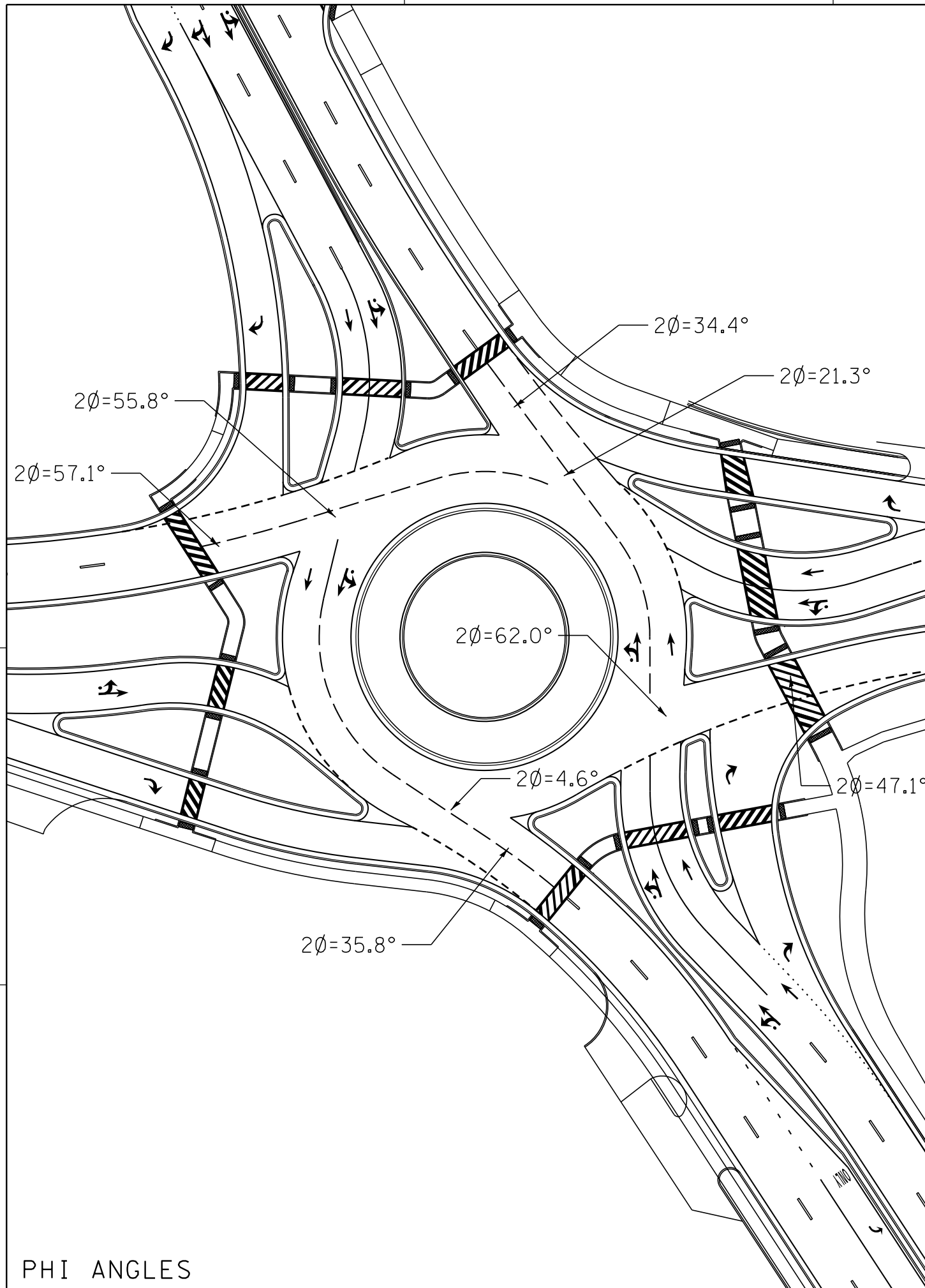


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

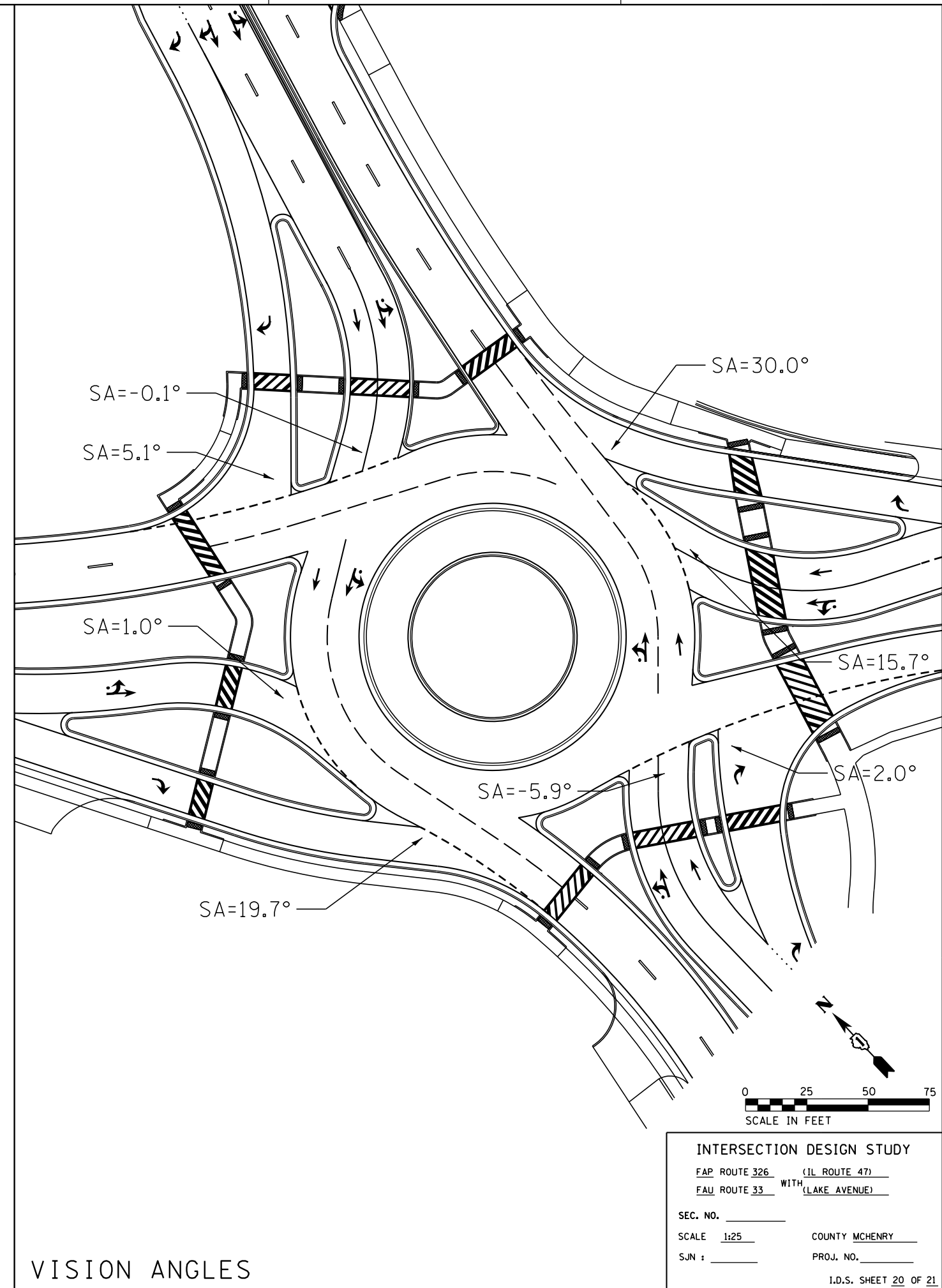
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 19 OF 21

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000' / in.
 USER NAME = MattC



PHI ANGLES



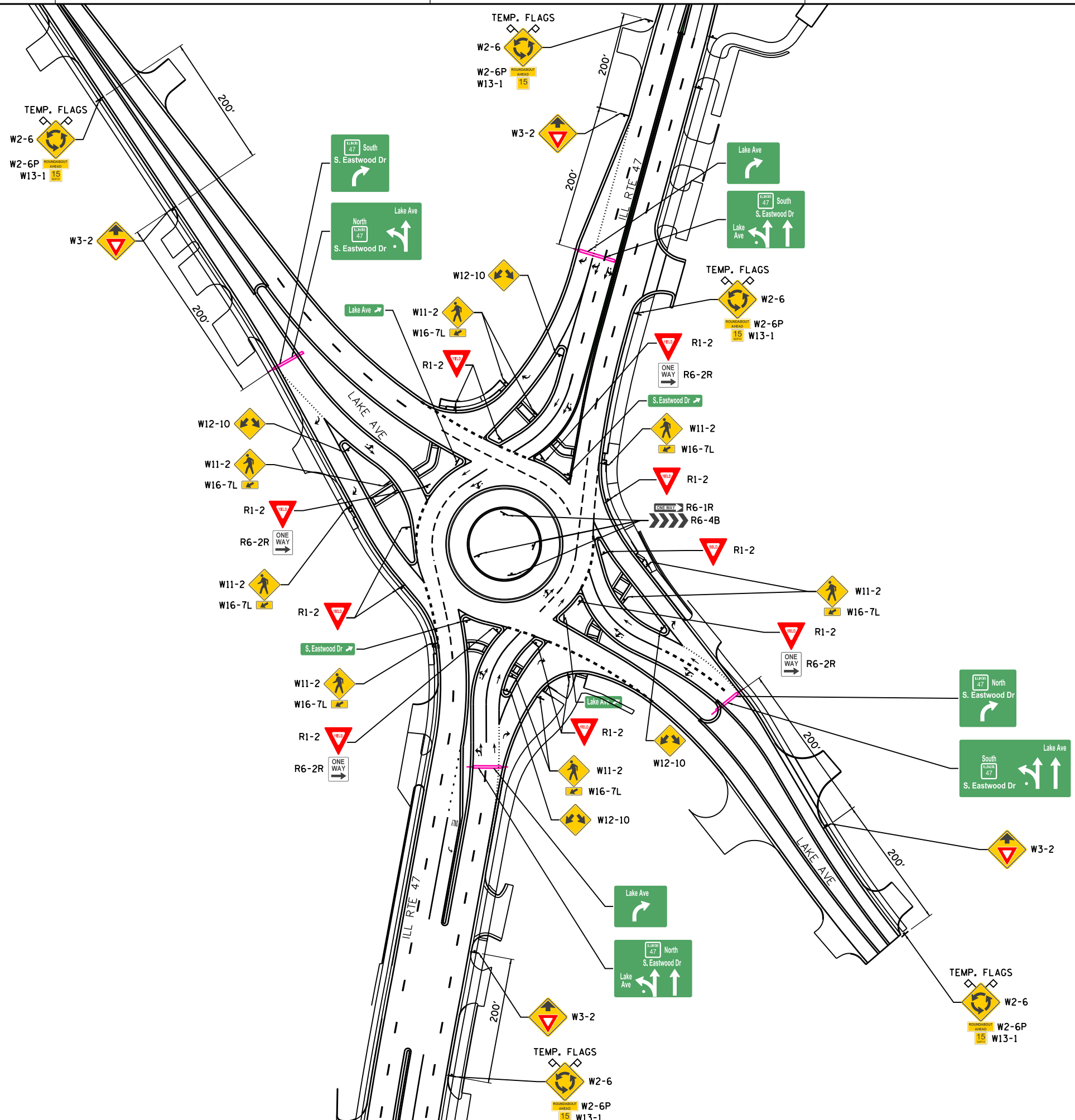
VISION ANGLES

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 33 WITH (LAKE AVENUE)

SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 20 OF 21
 BDE-9908

PLOT DATE = 8/23/2018
 FILE NAME = S:\JULY13\300--6399\GIS\46\01A\MicroStation\CAD\ Sheets\01A2345-ah+rd+Lake-Sign.dgn
 PLOT SCALE = 50.0000 / in.
 USER NAME = brianf



INTERSECTION DESIGN STUDY

2 ROUTE 326 (ILLINOIS RT. 47)
 9 ROUTE 33 WITH (LAKE AVENUE)

SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 SJN : _____ I.D.S. SHEET 21 OF 21

ROUNDABOUT CAPACITY DESIGN STUDY

PROGRAM USED SIDRA VERSION 7.0 AREA _____ PEAK HOUR FACTOR 0.92 (AM) 0.92 (PM)
 INTERSECTION CONTROL DELAY A.M. 6.3 SECONDS P.M. 7.6 SECONDS
 INTERSECTION LEVEL OF SERVICE A.M. A P.M. A

APPROACH		NB IL RTE 47		SB IL RTE 47		WB MCCONNELL ROAD	
LANE GROUP		TH	RT	LT	TH	LT	RT
2040 30TH MAX. HOUR TRAFFIC	A.M.	1015	230	100	945	285	90
	P.M.	1250	350	160	1120	335	120
ENTRY FLOW RATE	A.M.	995	225	98	926	276	87
v_l, pce (pc/h)	P.M.	1225	343	157	1098	325	116
PED/HOUR CROSSING THE APPROACH	A.M.	0		2		2	
	P.M.	1		0		1	
LANE MOVEMENTS		TH	RT	LT	TH	LT	RT
ENTRY FLOW RATE	A.M.	1103	250	109	1027	310	98
v_l (vph)	P.M.	1359	380	174	1217	364	130
LANE CAPACITY	A.M.	2375	538	225	2122	781	781
c_i (vph)	P.M.	2119	593	275	1926	614	614
x_l (v_l/c_i RATIO)	A.M.	0.47	0.47	0.48	0.48	0.40	0.13
	P.M.	0.64	0.64	0.63	0.63	0.59	0.21
STORAGE QUEUE LENGTH (FEET OR VEHICLES)	A.M.	104	104	97	103	53	14
	P.M.	179	179	170	175	103	27
LANE DELAY, d (SEC)	A.M.	4.6	4.5	12.0	5.7	13.8	6.6
	P.M.	5.3	5.2	14.0	7.3	17.0	7.6
LANE LEVEL OF SERVICE	A.M.	A	A	B	A	B	A
	P.M.	A	A	B	A	C	A
APPROACH CONTROL DELAY, d (SEC)	A.M.	4.6		6.3		12.3	
	P.M.	5.3		8.1		14.5	
APPROACH LEVEL OF SERVICE	A.M.	A		A		B	
	P.M.	A		A		B	

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:

F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: EASTWOOD DRIVE. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 3,475 VPD. DESIGN YEAR ADT: 4,500 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

SECONDARY ROUTE:

F.A. ROUTE NUMBER: 9-35. MARKED ROUTE NUMBER: MCCONNELL RD.
 STREET NAME: MCCONNELL RD. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR. OSOW DESIGN? N
 EXISTING ADT: 23,650 VPD. DESIGN YEAR ADT: 33,500 VPD.
 PROPOSED DESIGN SPEED: 35 MPH. PROPOSED POSTED SPEED: 30 MPH.

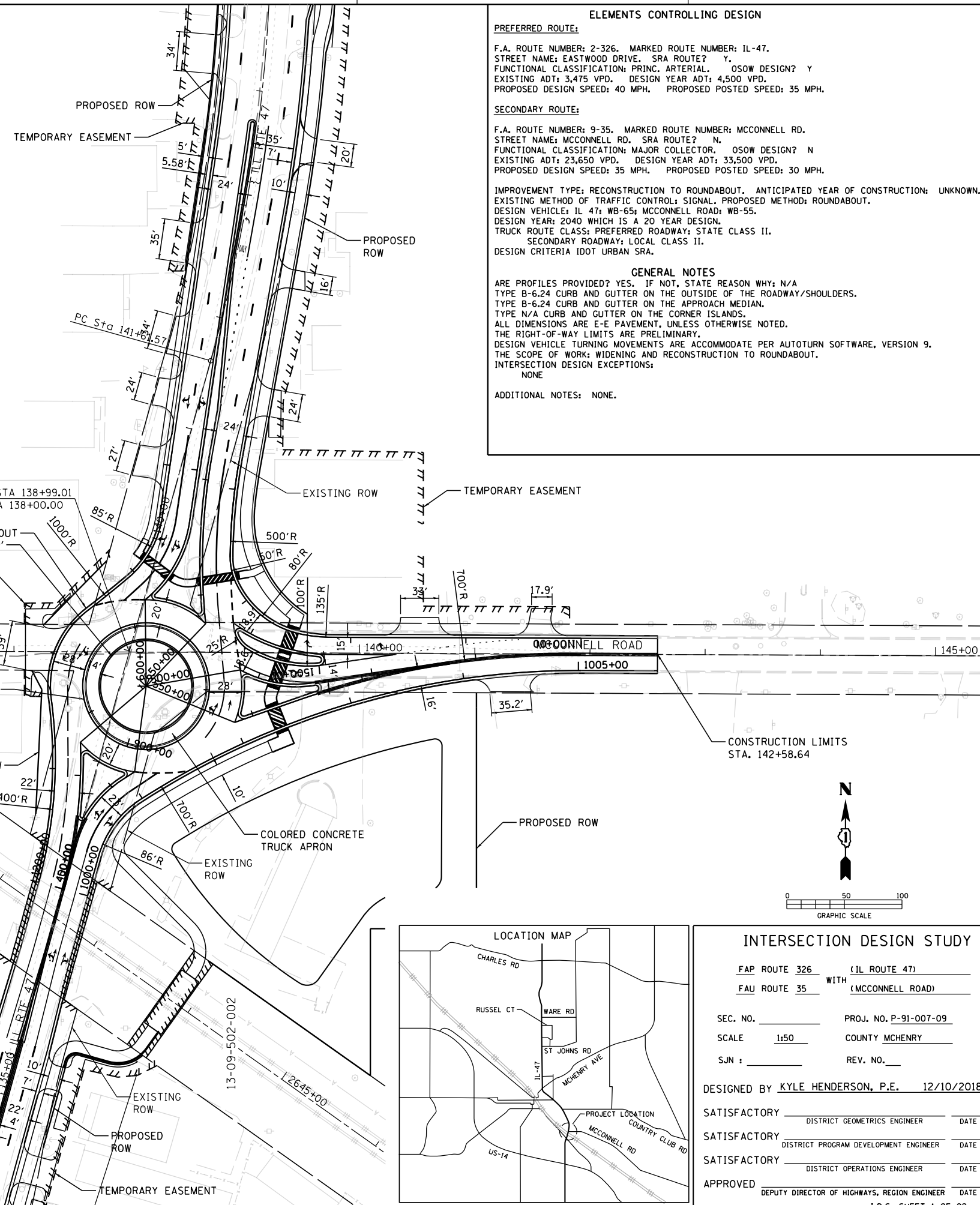
IMPROVEMENT TYPE: RECONSTRUCTION TO ROUNDABOUT. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: ROUNDABOUT.
 DESIGN VEHICLE: IL 47; WB-65; MCCONNELL ROAD: WB-55.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE CLASS: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: LOCAL CLASS II.
 DESIGN CRITERIA IDOT URBAN SRA.

GENERAL NOTES

ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.24 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE N/A CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED.
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: WIDENING AND RECONSTRUCTION TO ROUNDABOUT.
 INTERSECTION DESIGN EXCEPTIONS:
 NONE

ADDITIONAL NOTES: NONE.

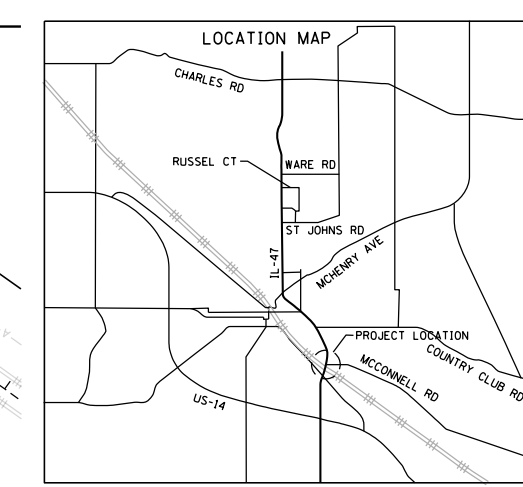
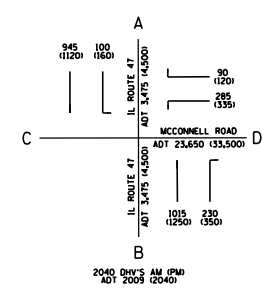
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 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC



TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2040 AM/PM	YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.
AD (L)	51	81	2.0	2.0	96/98	100	160
AB (T)	646	672	2.0	2.0	46/67	945	1120
AC (R)	2	13	2.0	2.0	-	-	-
BC (L)	0	17	1.5	1.5	-	-	-
BA (T)	728	839	1.5	1.5	39/49	1015	1250
BD (R)	149	242	1.5	1.5	54/45	230	350
CA (L)	3	16	0	0	-	-	-
CD (T)	2	1	0	0	-	-	-
CB (R)	5	10	0	0	-	-	-
DB (L)	188	203	3.3	3.3	52/65	285	335
DC (T)	4	12	3.3	3.3	-	-	-
DA (R)	73	87	3.3	3.3	23/38	90	120
TOTAL A	1503	1708	2.0	2.0	43/55	2150	2650
TOTAL B	1716	1983	1.5	1.5	44/54	2475	3055
TOTAL C	16	69	0	0	-	-	-
TOTAL D	467	626	3.3	3.3	51/54	705	965

T = THROUGH, L = LEFT, R = RIGHT



INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY KYLE HENDERSON, P.E. 12/10/2018

SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER _____ DATE _____

SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER _____ DATE _____

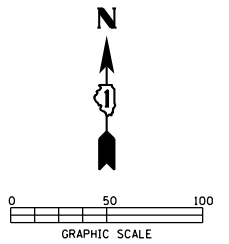
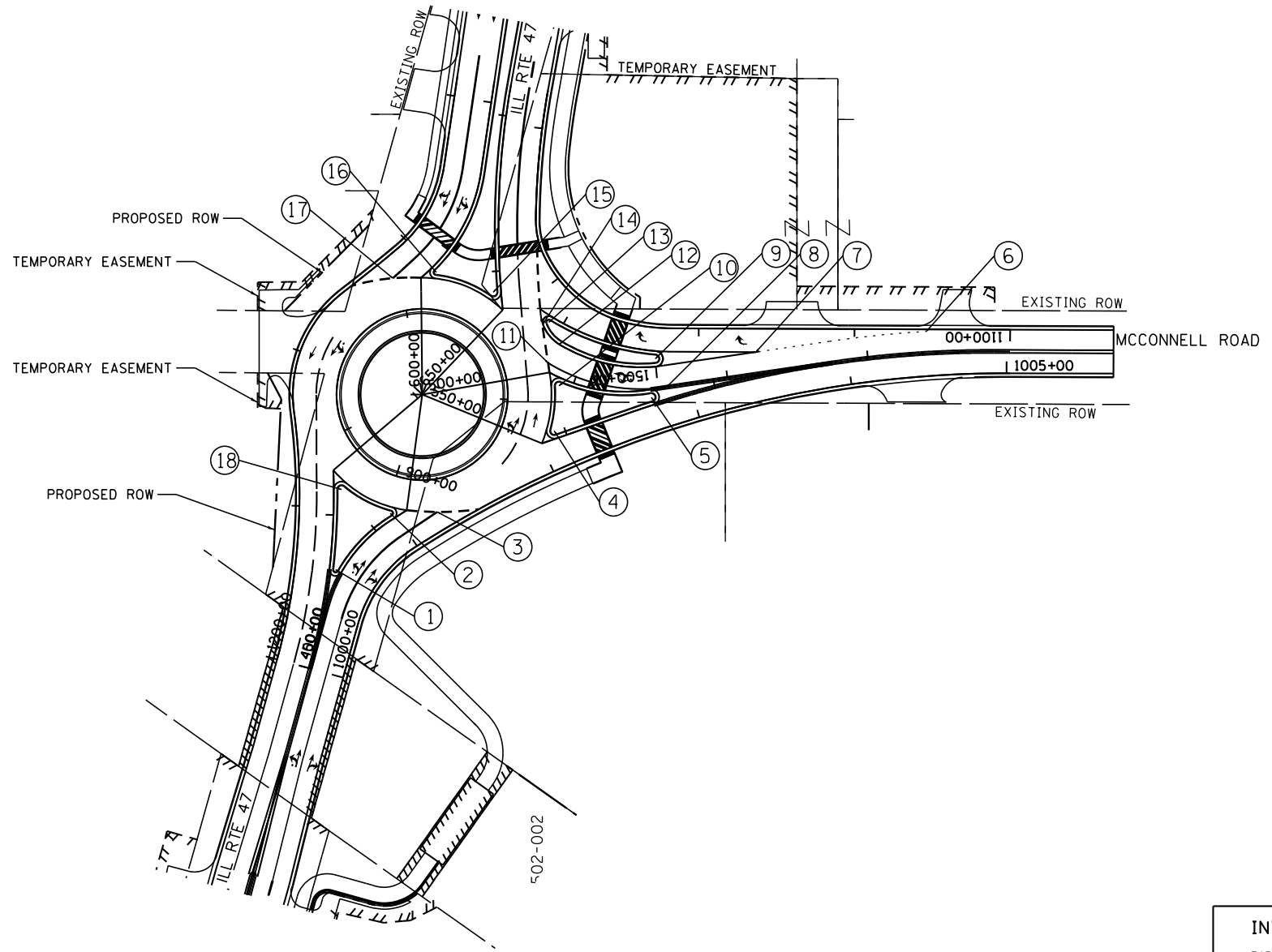
SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER _____ DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER _____ DATE _____

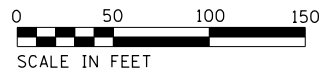
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 PLOT SCALE = 100,0000 / in.
 USER NAME = MattC

DATA TABLE					
NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
1	CC	400+64.8	4.0	LT	4'
2	CC	401+13.9	4.0	LT	4'
3		401+25.3	19.5	RT	--
4	CC	550+93.3	5.0	LT	5'
5	CC	551+59.1	5.0	LT	5'
6		553+38.5	14.0	LT	--
7		502+20.3	14.0	LT	--
8		501+60.3	0.0	LT	--
9	CC	501+55.8	19.1	LT	5'
10	CC	500+92.0	5.0	RT	5'
11		500+83.0	6.2	LT	--
12	PCC	500+83.0	19.2	LT	--
13	CC	500+83.0	32.3	LT	4'
14		500+83.0	31.4	LT	--
15	CC	650+86.8	5.0	LT	5'
16	CC	600+84.4	4.0	RT	4'
17		600+74.9	18.1	LT	--
18	CC	451+16.4	5.0	RT	5'



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 2 OF 22



PROP. CURVE RAB_MCC_CENT-1
PI STA. = 900+81.53
Δ = 111° 59' 28" (LT)
D = 104° 10' 27"
R = 55.00'
T = 81.53'
L = 107.50'
E = 43.34'
P.C. STA. = 900+00.00
P.T. STA. = 901+07.50

PROP. CURVE RAB_MCC_CENT-2
PI STA. = 902+17.27
Δ = 126° 46' 14" (LT)
D = 104° 10' 27"
R = 55.00'
T = 109.76'
L = 121.69'
E = 67.77'
P.C. STA. = 901+07.50
P.T. STA. = 902+29.19

PROP. CURVE RAB_MCC_CENT-3
PI STA. = 903+26.88
Δ = 121° 14' 18" (LT)
D = 104° 10' 27"
R = 55.00'
T = 97.69'
L = 116.38'
E = 57.10'
P.C. STA. = 902+29.19
P.T. STA. = 903+45.58

PROP. CURVE RAB_MCC_WB_RT-1
PI STA. = 1102+30.33
Δ = 12° 16' 16" (RT)
D = 42° 26' 29"
R = 135.00'
T = 14.51'
L = 28.91'
E = 0.78'
P.C. STA. = 1102+15.81
P.T. STA. = 1102+44.73

PROP. CURVE RAB_MCC_WB_RT-2
PI STA. = 1102+84.79
Δ = 53° 12' 09" (RT)
D = 71° 37' 11"
R = 80.00'
T = 40.06'
L = 74.28'
E = 9.47'
P.C. STA. = 1102+44.73
P.T. STA. = 1103+19.01

PROP. CURVE RAB_MCC_WB_RT-3
PI STA. = 1103+30.01
Δ = 24° 48' 25" (RT)
D = 114° 35' 30"
R = 50.00'
T = 11.00'
L = 21.65'
E = 1.19'
P.C. STA. = 1103+19.01
P.T. STA. = 1103+40.66

PROP. CURVE RAB_MCC_WB_RT-4
PI STA. = 1103+82.76
Δ = 9° 37' 31" (RT)
D = 11° 27' 33"
R = 500.00'
T = 42.10'
L = 84.00'
E = 1.77'
P.C. STA. = 1103+40.66
P.T. STA. = 1104+24.66

PROP. CURVE RAB_MCC_SB_EN-1
PI STA. = 600+77.11
Δ = 0° 27' 43" (LT)
D = 10° 56' 04"
R = 524.00'
T = 2.11'
L = 4.22'
E = 0.00'
P.C. STA. = 600+75.00
P.T. STA. = 600+79.22

PROP. CURVE RAB_MCC_SB_EN-2
PI STA. = 601+18.87
Δ = 39° 58' 19" (LT)
D = 52° 33' 54"
R = 109.00'
T = 39.64'
L = 76.04'
E = 6.99'
P.C. STA. = 600+79.22
P.T. STA. = 601+55.27

PROP. CURVE RAB_MCC_SB_RT-1
PI STA. = 1200+81.45
Δ = 23° 01' 06" (LT)
D = 14° 19' 26"
R = 400.00'
T = 81.45'
L = 160.70'
E = 8.21'
P.C. STA. = 1200+00.00
P.T. STA. = 1201+60.70

PROP. CURVE RAB_MCC_SB_RT-2
PI STA. = 1202+08.68
Δ = 60° 04' 04" (RT)
D = 69° 01' 52"
R = 83.00'
T = 47.99'
L = 87.02'
E = 12.87'
P.C. STA. = 1201+60.70
P.T. STA. = 1202+47.71

PROP. CURVE RAB_MCC_SB_RT-3
PI STA. = 1202+70.41
Δ = 2° 36' 00" (LT)
D = 5° 43' 46"
R = 1,000.00'
T = 22.69'
L = 45.38'
E = 0.26'
P.C. STA. = 1202+47.71
P.T. STA. = 1202+93.09

PROP. CURVE RAB_MCC_SB_RT-4
PI STA. = 1203+25.27
Δ = 41° 28' 19" (LT)
D = 67° 24' 24"
R = 85.00'
T = 32.18'
L = 61.52'
E = 5.89'
P.C. STA. = 1202+93.09
P.T. STA. = 1203+54.62

PROP. CURVE RAB_MCC_SB_EX-1
PI STA. = 450+64.87
Δ = 17° 28' 43" (LT)
D = 13° 34' 38"
R = 422.00'
T = 64.87'
L = 128.74'
E = 4.96'
P.C. STA. = 450+00.00
P.T. STA. = 451+28.74

PROP. CURVE RAB_MCC_NB_EN-1
PI STA. = 400+77.38
Δ = 41° 11' 30" (RT)
D = 60° 18' 41"
R = 95.00'
T = 35.70'
L = 68.30'
E = 6.49'
P.C. STA. = 400+41.68
P.T. STA. = 401+09.98

PROP. CURVE RAB_MCC_NB_EN-2
PI STA. = 401+16.89
Δ = 1° 05' 38" (RT)
D = 7° 54' 50"
R = 724.00'
T = 6.91'
L = 13.82'
E = 0.03'
P.C. STA. = 401+09.98
P.T. STA. = 401+23.80

PROP. CURVE RAB_MCC_WB_EN-1
PI STA. = 501+16.52
Δ = 37° 03' 54" (LT)
D = 57° 17' 45"
R = 100.00'
T = 33.52'
L = 64.69'
E = 5.47'
P.C. STA. = 500+83.00
P.T. STA. = 501+47.69

PROP. CURVE RAB_MCC_NB_RT-1
PI STA. = 1000+68.00
Δ = 41° 40' 55" (RT)
D = 66° 37' 23"
R = 86.00'
T = 32.74'
L = 62.56'
E = 6.02'
P.C. STA. = 1000+35.26
P.T. STA. = 1000+97.82

PROP. CURVE RAB_MCC_NB_RT-2
PI STA. = 1003+05.82
Δ = 33° 05' 50" (RT)
D = 8° 11' 06"
R = 700.00'
T = 208.00'
L = 404.36'
E = 30.25'
P.C. STA. = 1000+97.82
P.T. STA. = 1005+02.18

PROP. CURVE RAB_MCC_WB_IS-1
PI STA. = 1500+33.61
Δ = 37° 09' 27" (RT)
D = 57° 17' 45"
R = 100.00'
T = 33.61'
L = 64.85'
E = 5.50'
P.C. STA. = 1500+00.00
P.T. STA. = 1500+64.85

PROP. CURVE RAB_MCC_WB_IS-2
PI STA. = 1500+73.55
Δ = 38° 21' 52" (RT)
D = 229° 10' 59"
R = 25.00'
T = 8.70'
L = 16.74'
E = 1.47'
P.C. STA. = 1500+64.85
P.T. STA. = 1500+81.59

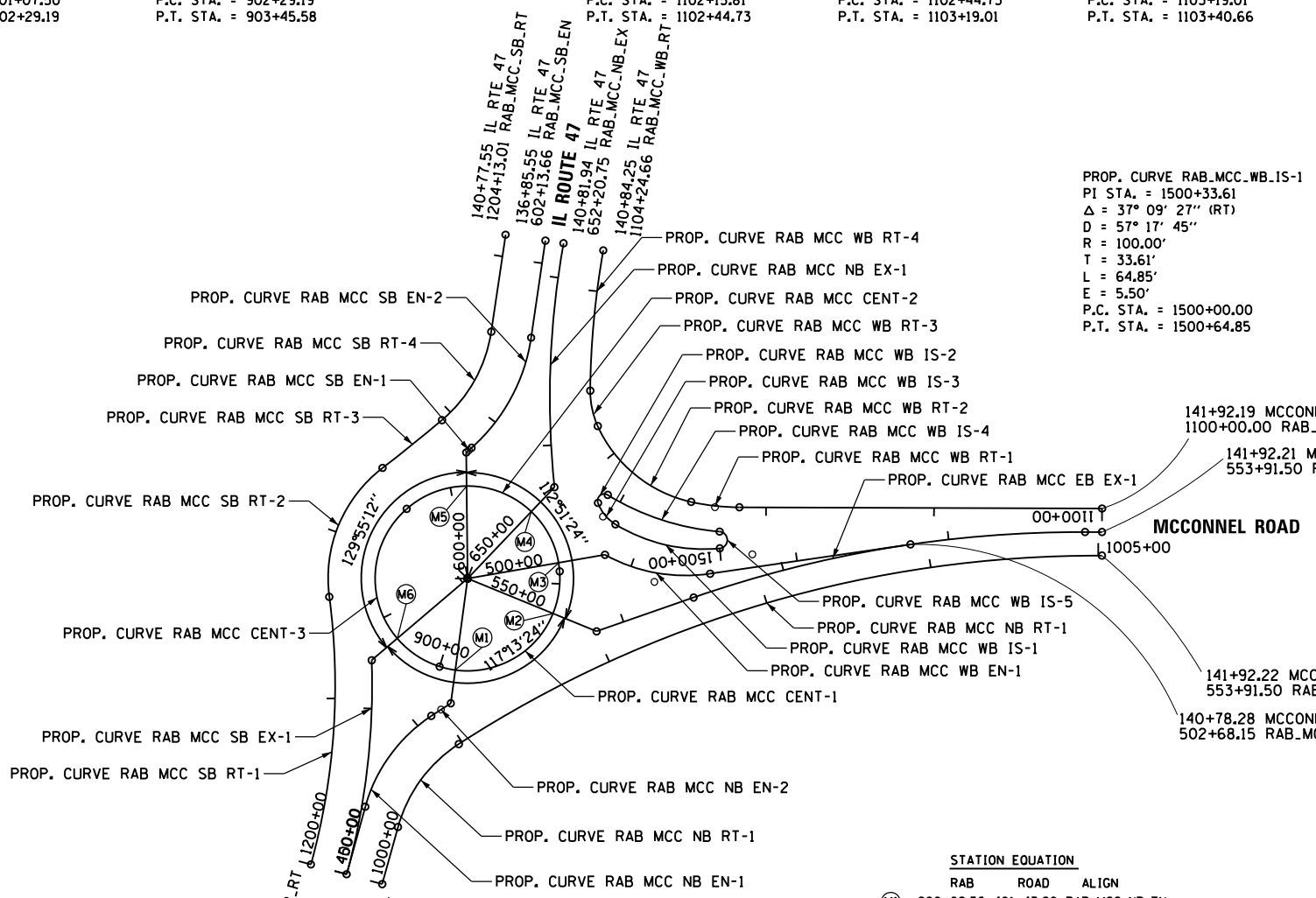
PROP. CURVE RAB_MCC_WB_IS-3
PI STA. = 1500+93.13
Δ = 141° 45' 21" (RT)
D = 1432° 23' 40"
R = 4.00'
T = 11.54'
L = 9.90'
E = 8.21'
P.C. STA. = 1500+81.59
P.T. STA. = 1500+91.49

PROP. CURVE RAB_MCC_WB_IS-4
PI STA. = 1501+27.51
Δ = 27° 00' 20" (LT)
D = 38° 11' 50"
R = 150.00'
T = 36.02'
L = 70.70'
E = 4.26'
P.C. STA. = 1500+91.49
P.T. STA. = 1501+62.19

PROP. CURVE RAB_MCC_WB_IS-5
PI STA. = 1502+17.81
Δ = 169° 43' 39" (RT)
D = 1145° 54' 56"
R = 5.00'
T = 55.63'
L = 14.81'
E = 50.85'
P.C. STA. = 1501+62.19
P.T. STA. = 1501+77.00

PROP. CURVE RAB_MCC_NB_EX-1
PI STA. = 651+48.35
Δ = 15° 56' 14" (RT)
D = 10° 56' 04"
R = 524.00'
T = 73.35'
L = 145.75'
E = 5.11'
P.C. STA. = 650+75.00
P.T. STA. = 652+20.75

PROP. CURVE RAB_MCC_EB_EX-1
PI STA. = 552+63.93
Δ = 19° 25' 25" (RT)
D = 8° 11' 06"
R = 700.00'
T = 119.80'
L = 237.31'
E = 10.18'
P.C. STA. = 551+44.13
P.T. STA. = 553+81.43



STATION EQUATION		
RAB	ROAD	ALIGN
(M1)	900+09.56	401+43.80 RAB_MCC_NB_EN
(M2)	900+81.89	550+55.00 RAB_MCC_EB_EX
(M3)	901+12.66	500+55.00 RAB_MCC_WB_EN
(M4)	901+47.84	650+55.00 RAB_MCC_NB_EX
(M5)	901+90.23	600+55.00 RAB_MCC_SB_EN
(M6)	903+14.94	451+48.74 RAB_MCC_SB_EX

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 USER NAME = pmagnelli

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH ROUTE _____ (MCCONNELL ROAD)

SEC. NO. _____

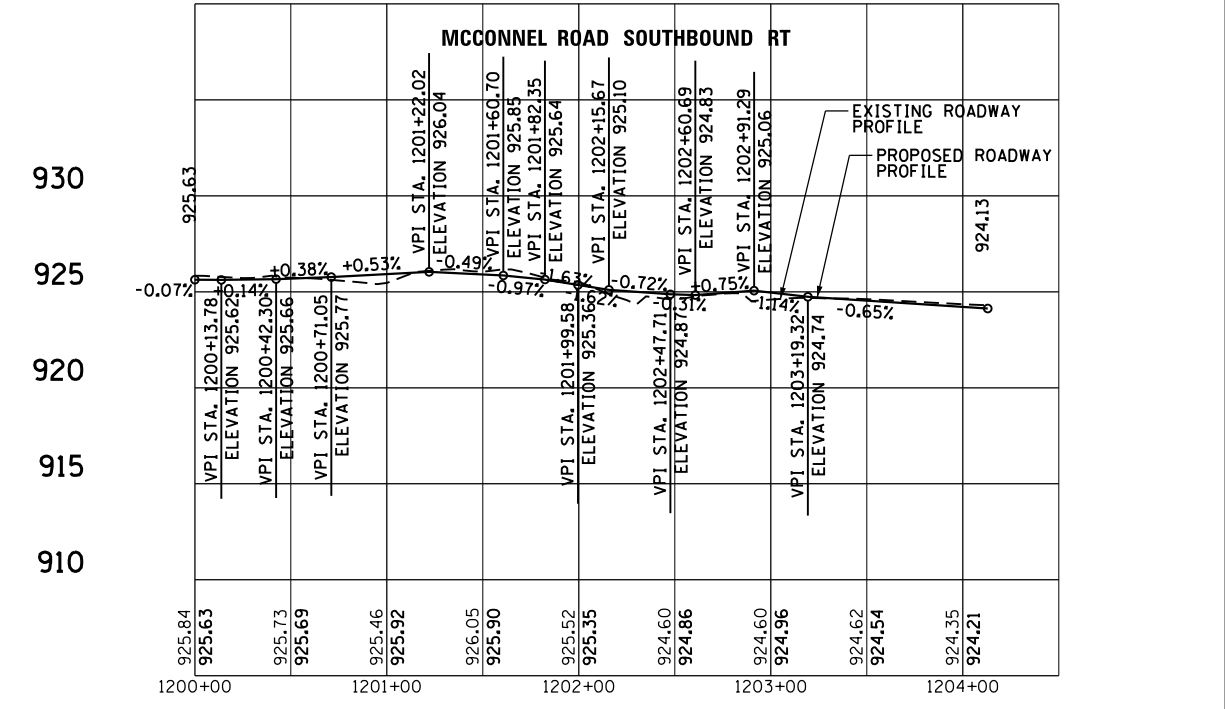
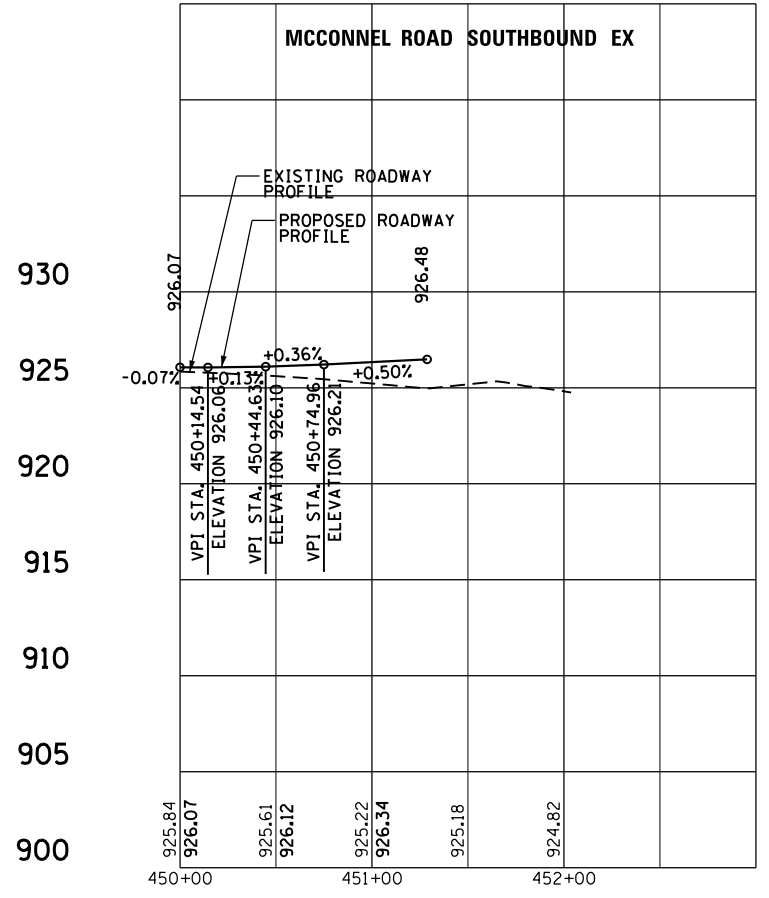
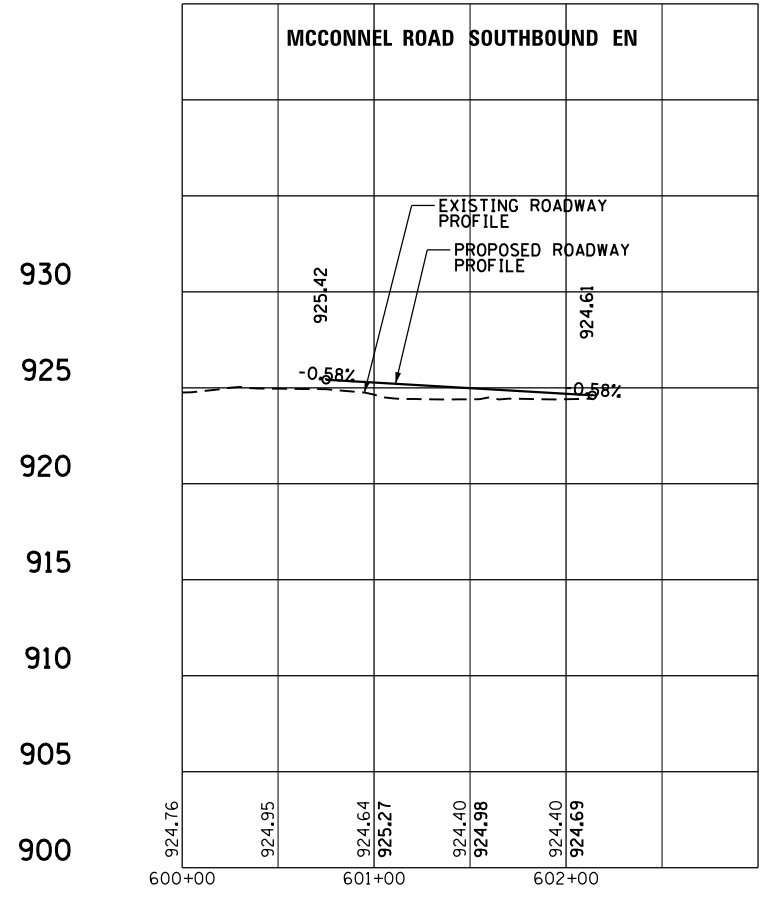
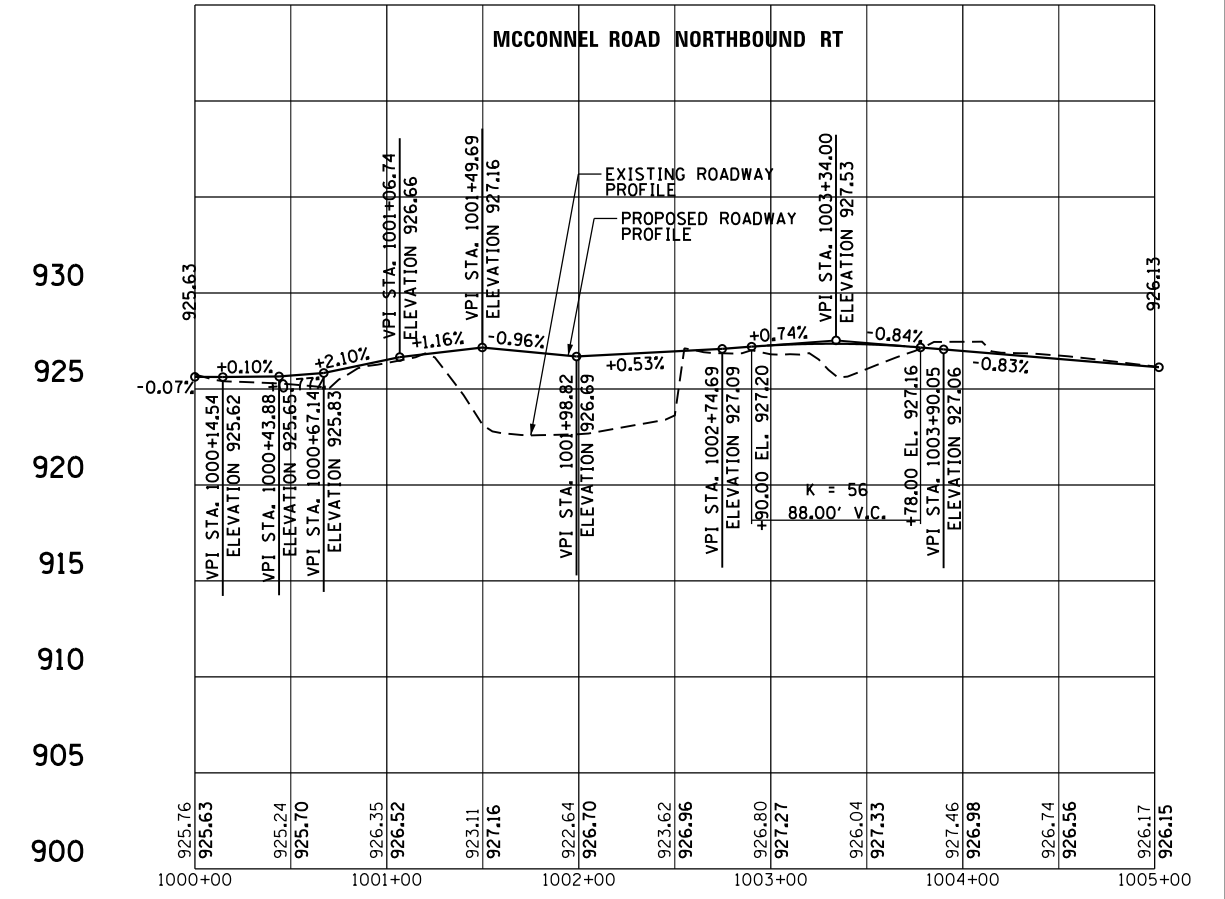
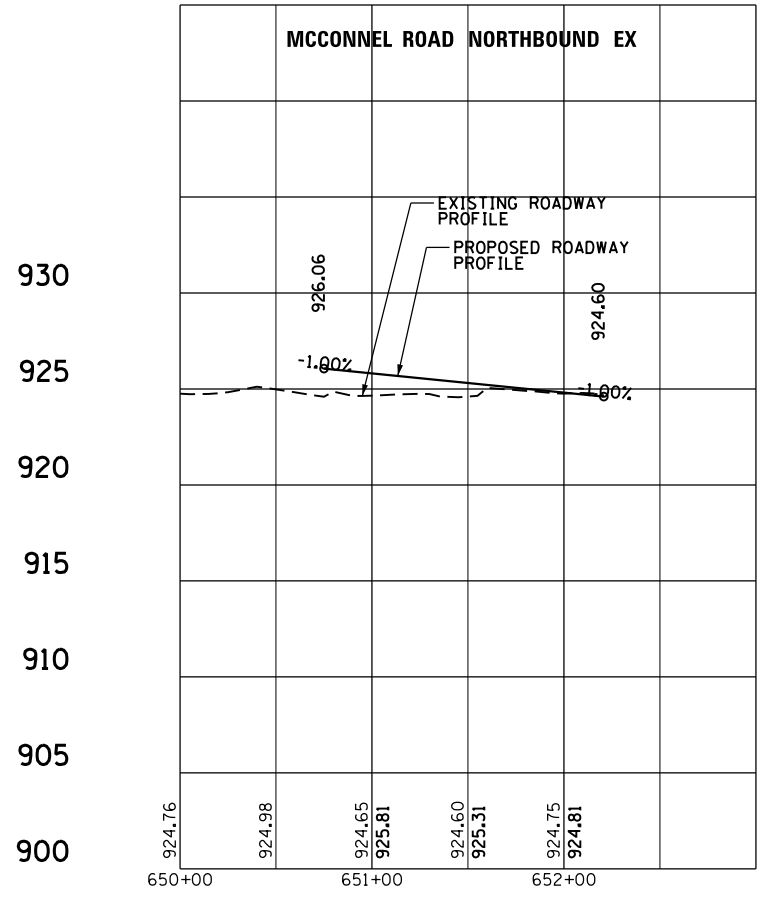
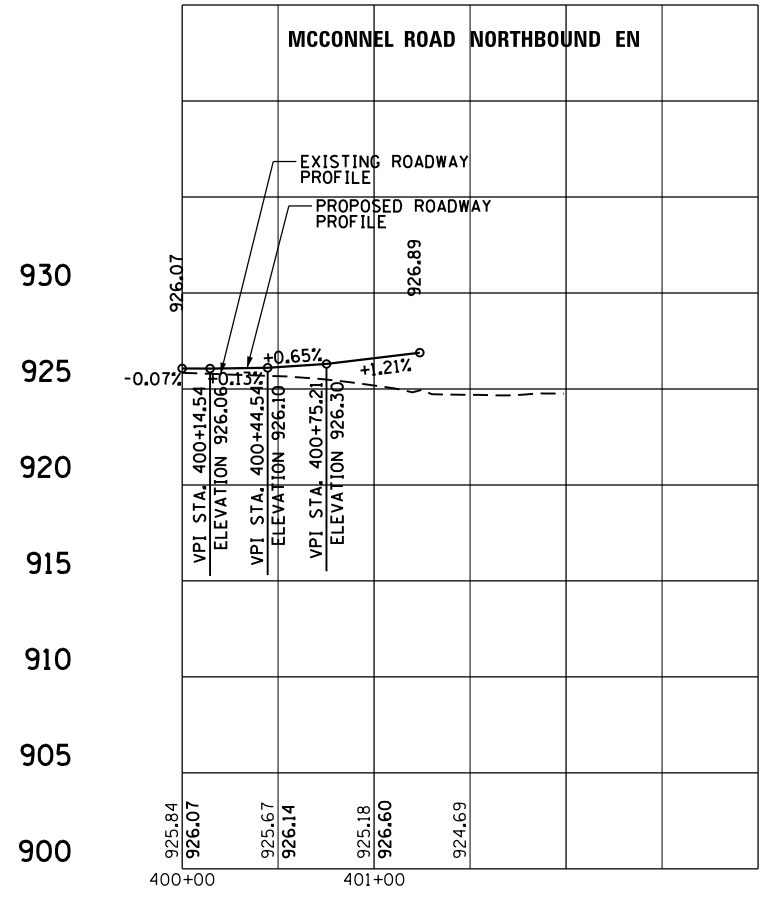
SCALE 1"=50' COUNTY MCHENRY

SJN : P-91-007-09 PROJ. NO. _____

I.D.S. SHEET 3 OF 22

**BASELINE
MCCONNELL ROAD**

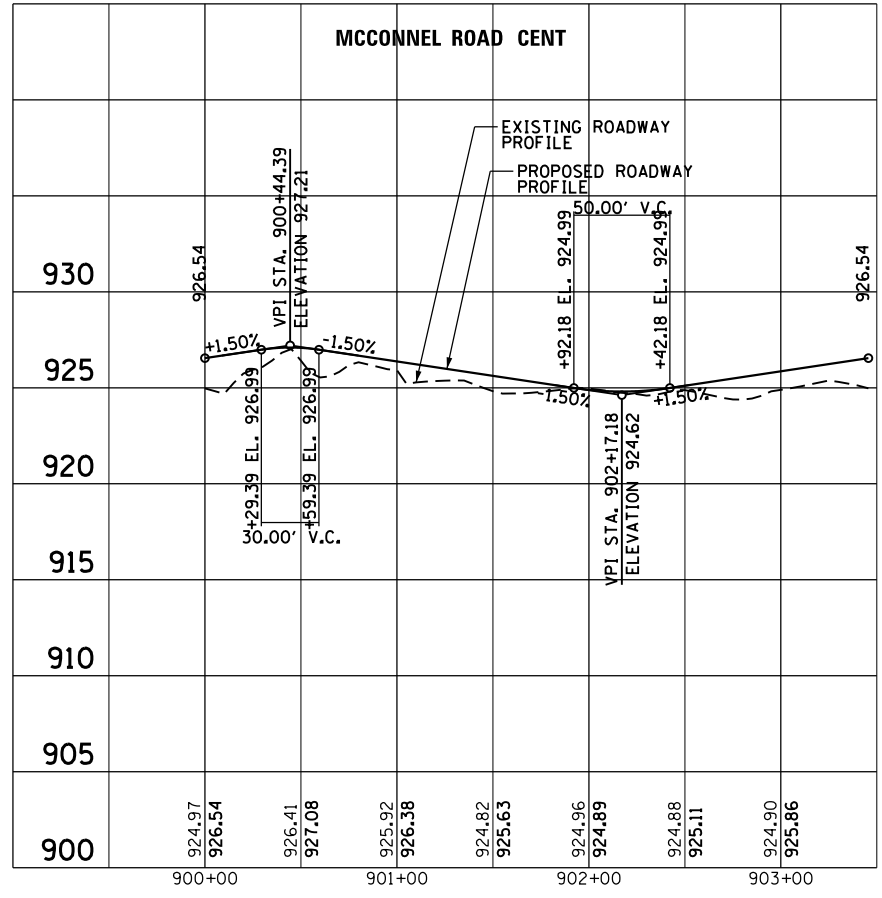
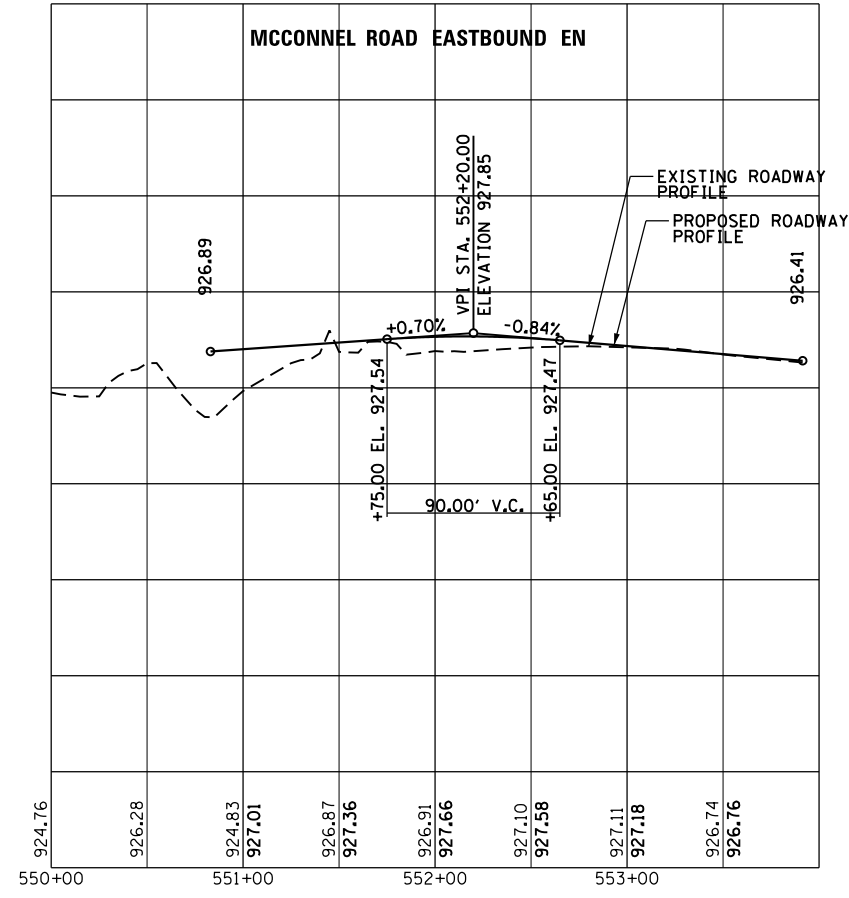
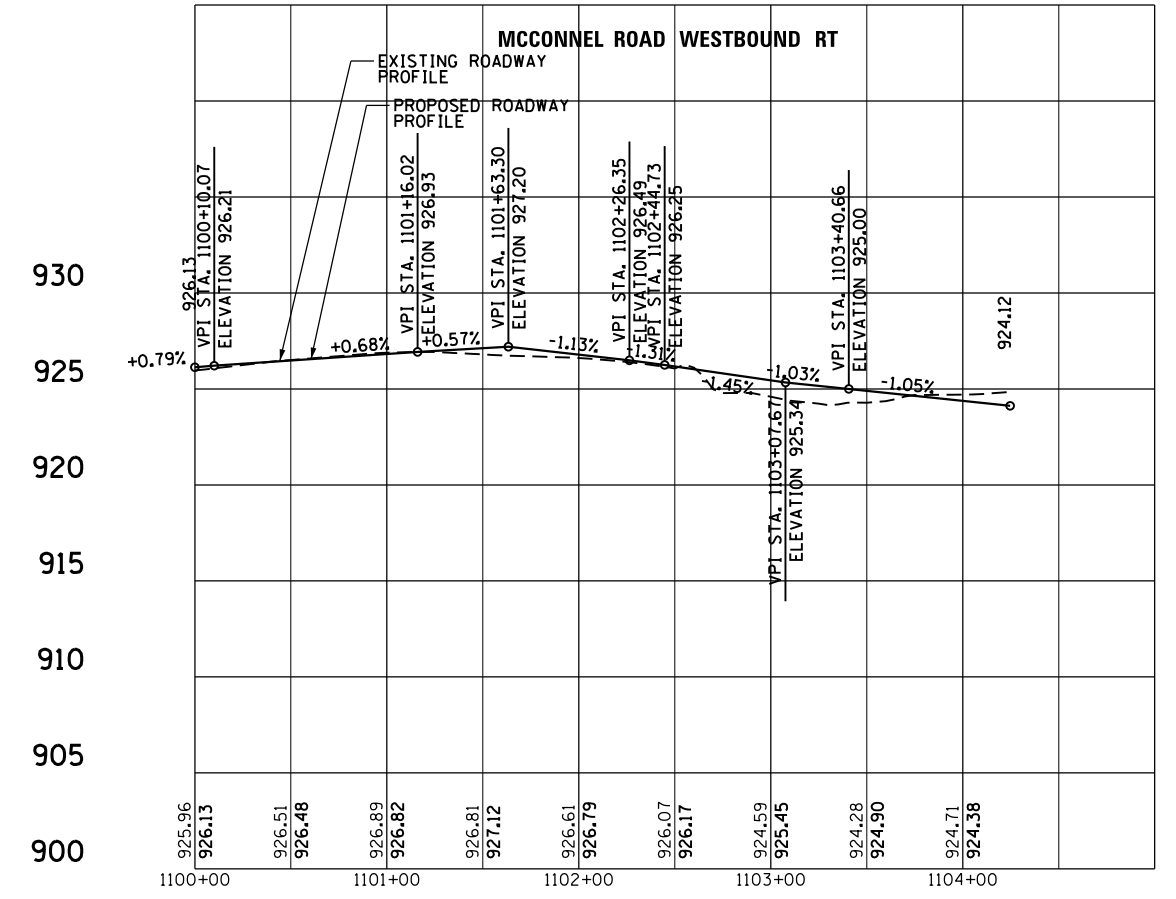
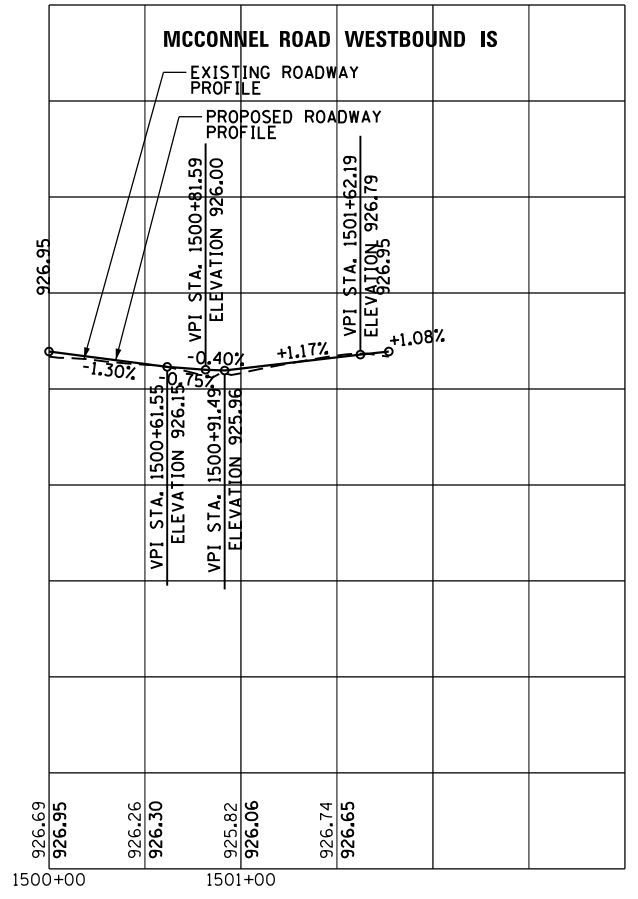
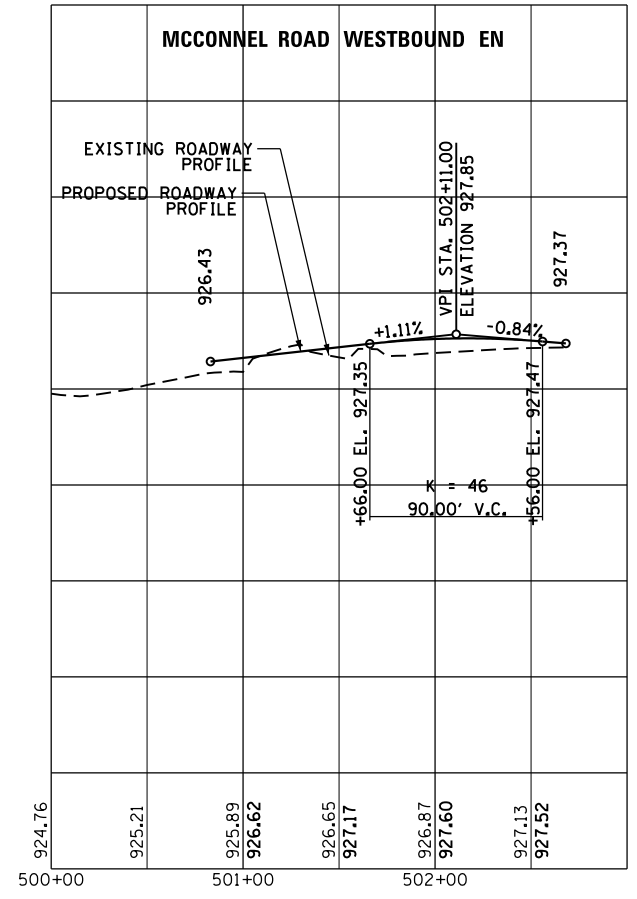
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 PLOT SCALE = 50.00' / 1" =
 USER NAME = pmagnelli



**PROFILES
 NORTHBOUND & SOUTHBOUND MCCONNEL ROAD**

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH MCCONNEL ROAD
 SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____
 I.D.S. SHEET 4 OF 22

PLOT DATE = 8/21/2018
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 USER NAME = pmagnelli



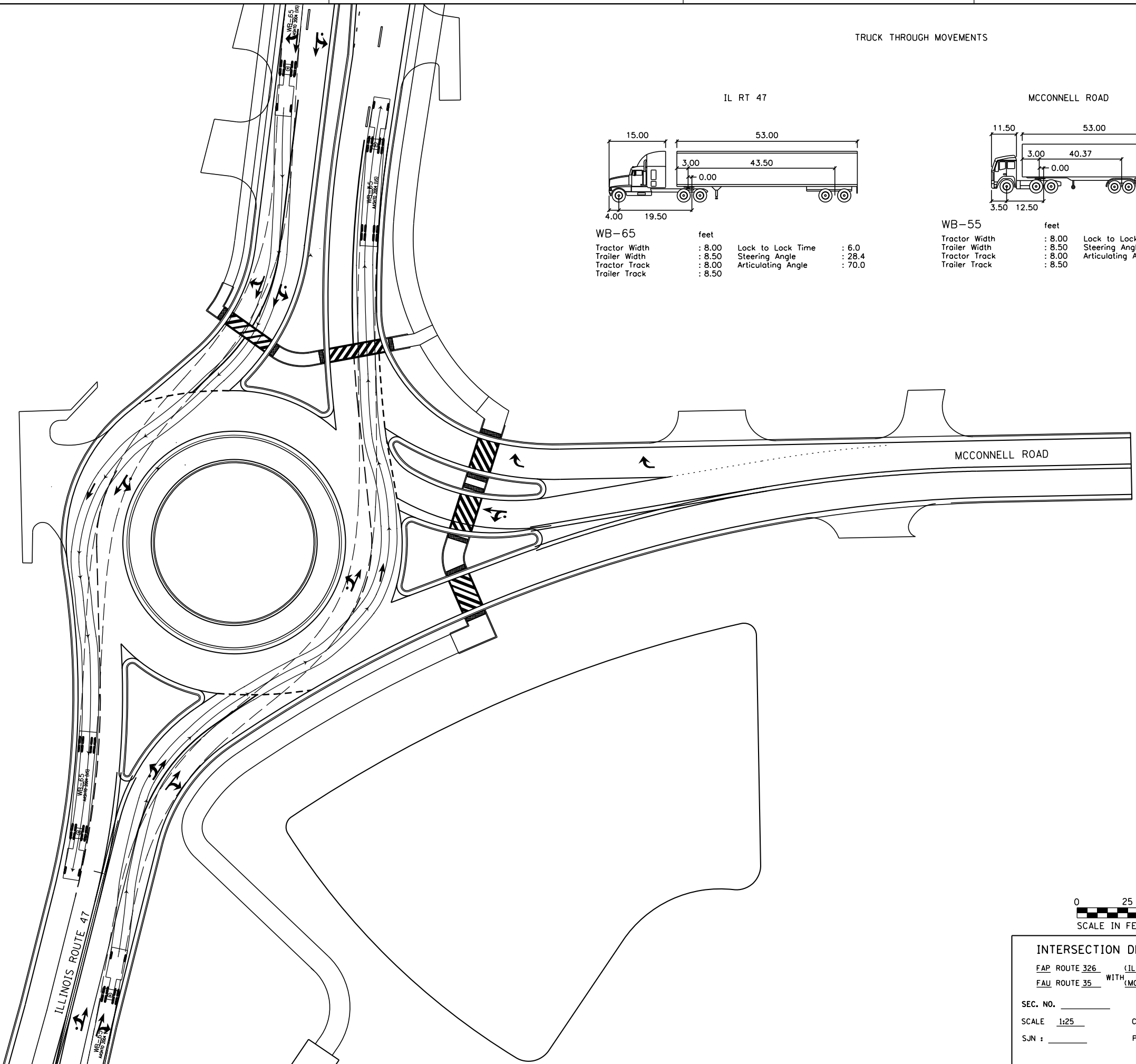
**PROFILES
 EASTBOUND & WESTBOUND MCCONNELL ROAD,
 MCCONNELL ROAD CENT**

INTERSECTION DESIGN STUDY

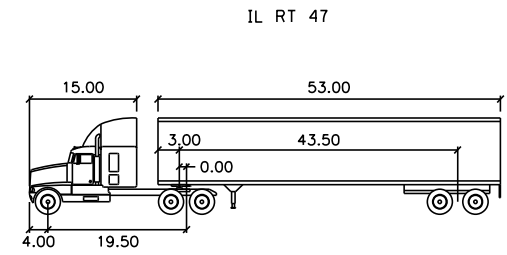
FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH (MCCONNELL ROAD)

SEC. NO. _____
 SCALE 1"=50'
 COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____
 I.D.S. SHEET 5 OF 22

PLOT DATE = 12/27/2018
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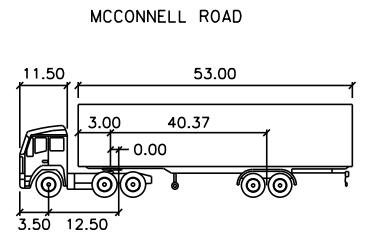


TRUCK THROUGH MOVEMENTS



WB-65 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WB-55 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)

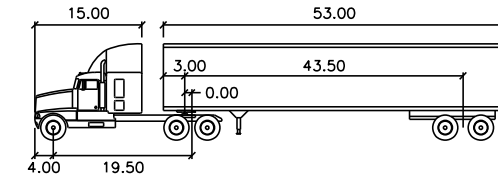
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 SCALE 1:25 COUNTY MCHENRY
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I.D.S. SHEET 6 OF 22

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 USER NAME = MattC

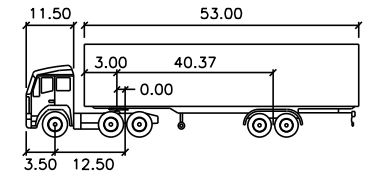
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF MCCONNELL ROAD

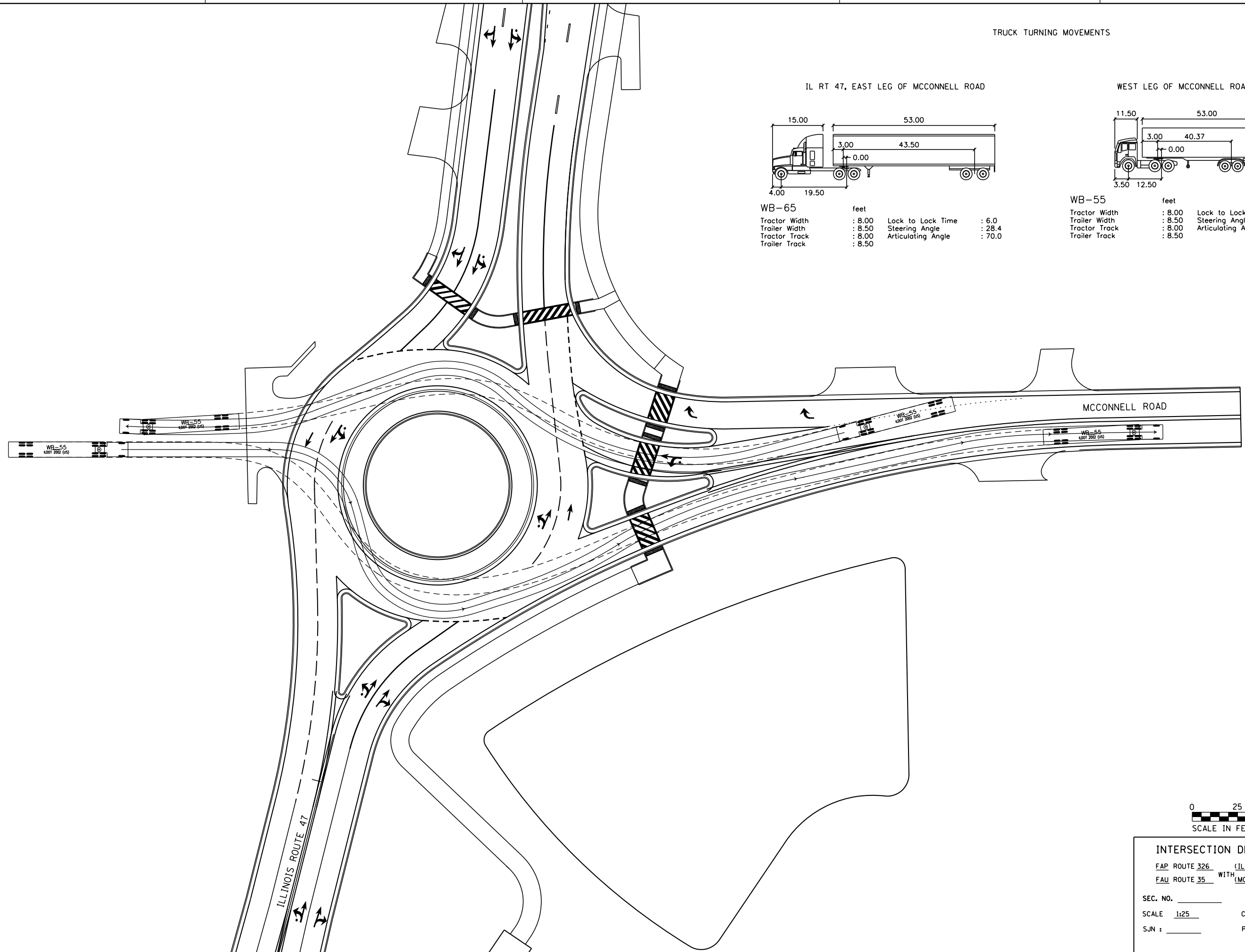


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF MCCONNELL ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

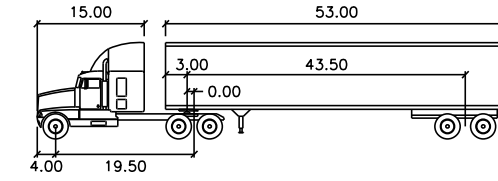


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 7 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01A\Micro\CA003 Sheets\01812345-sh1-rds-McConnell-Auto3.dgn
 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

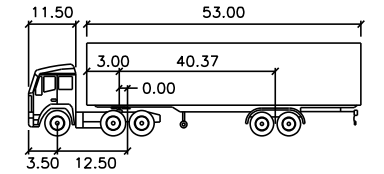
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF MCCONNELL ROAD

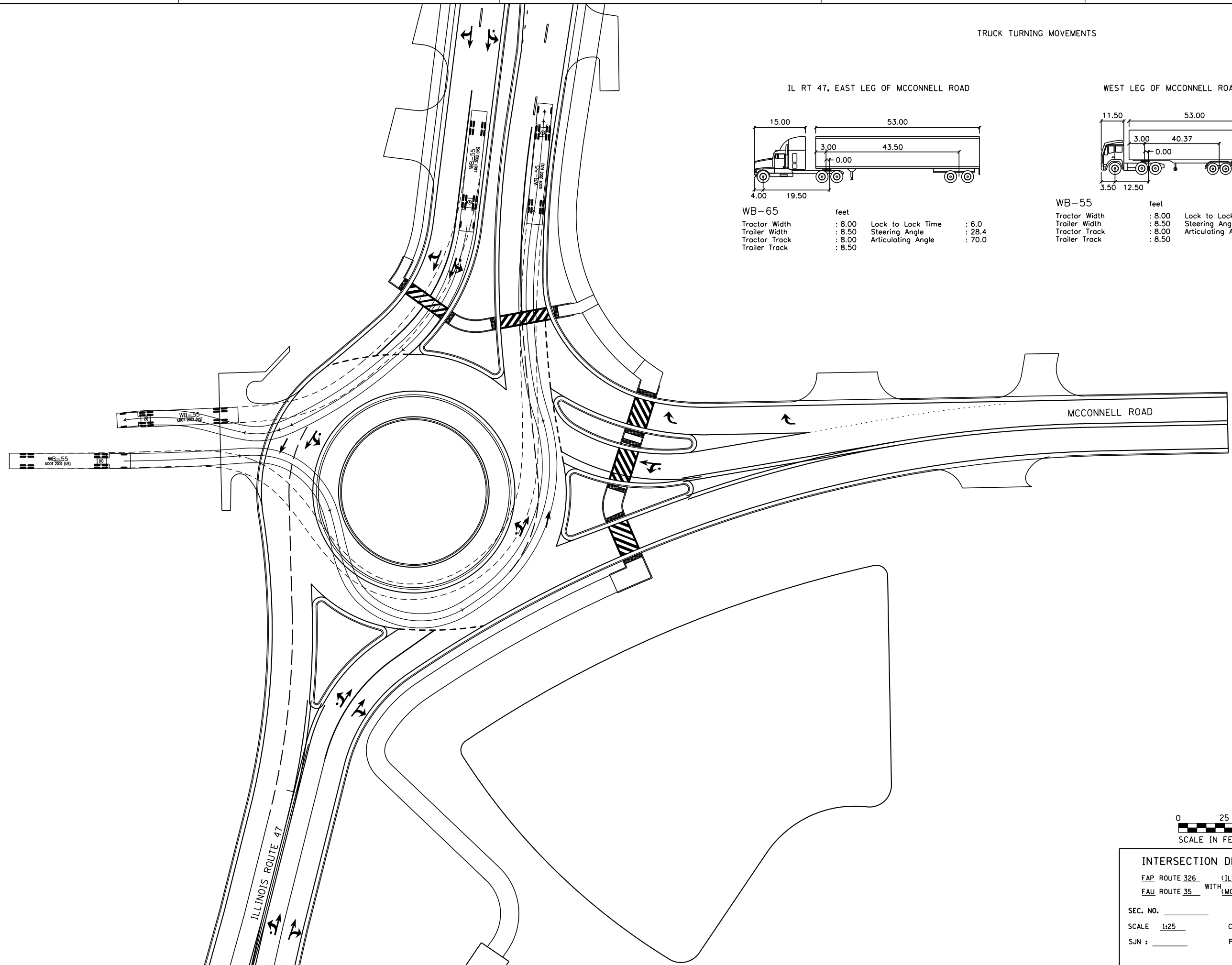


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF MCCONNELL ROAD

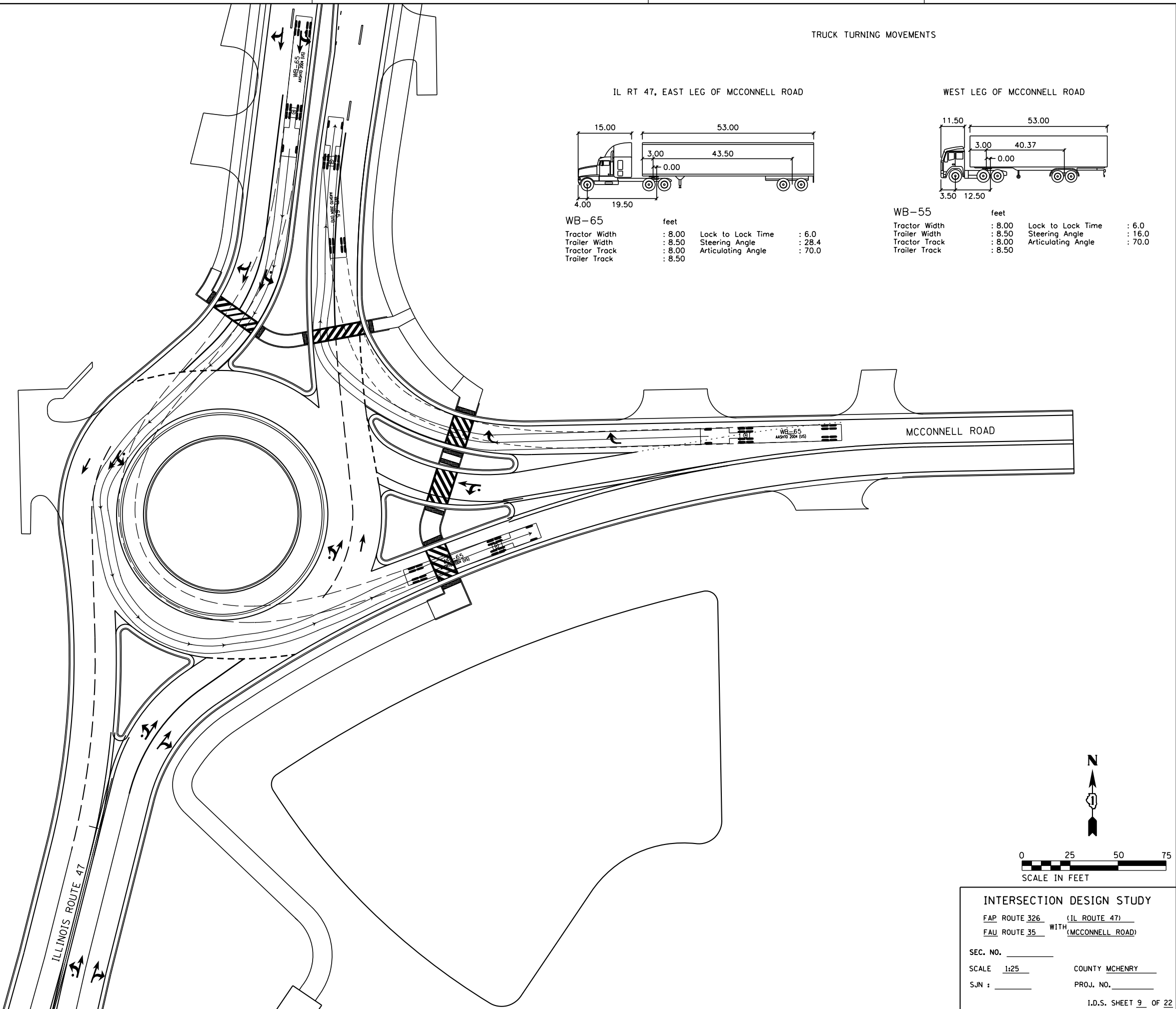


WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



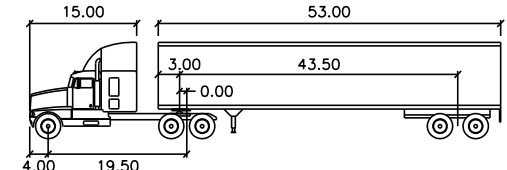
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 8 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\D\1\6390--6399\6346\01A\Micro\CA00D Sheets\01B12345-ah1-rds-McConnell-Auto.dgn
 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



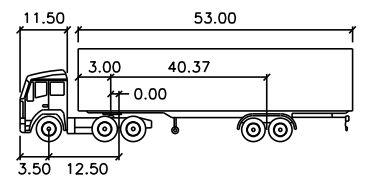
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF MCCONNELL ROAD



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF MCCONNELL ROAD



WB-55		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)

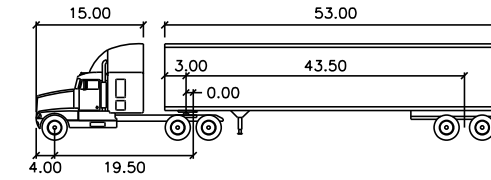
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 9 OF 22

PLOT DATE = 12/27/2018
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 USER NAME = MattC

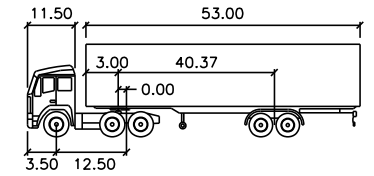
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF MCCONNELL ROAD

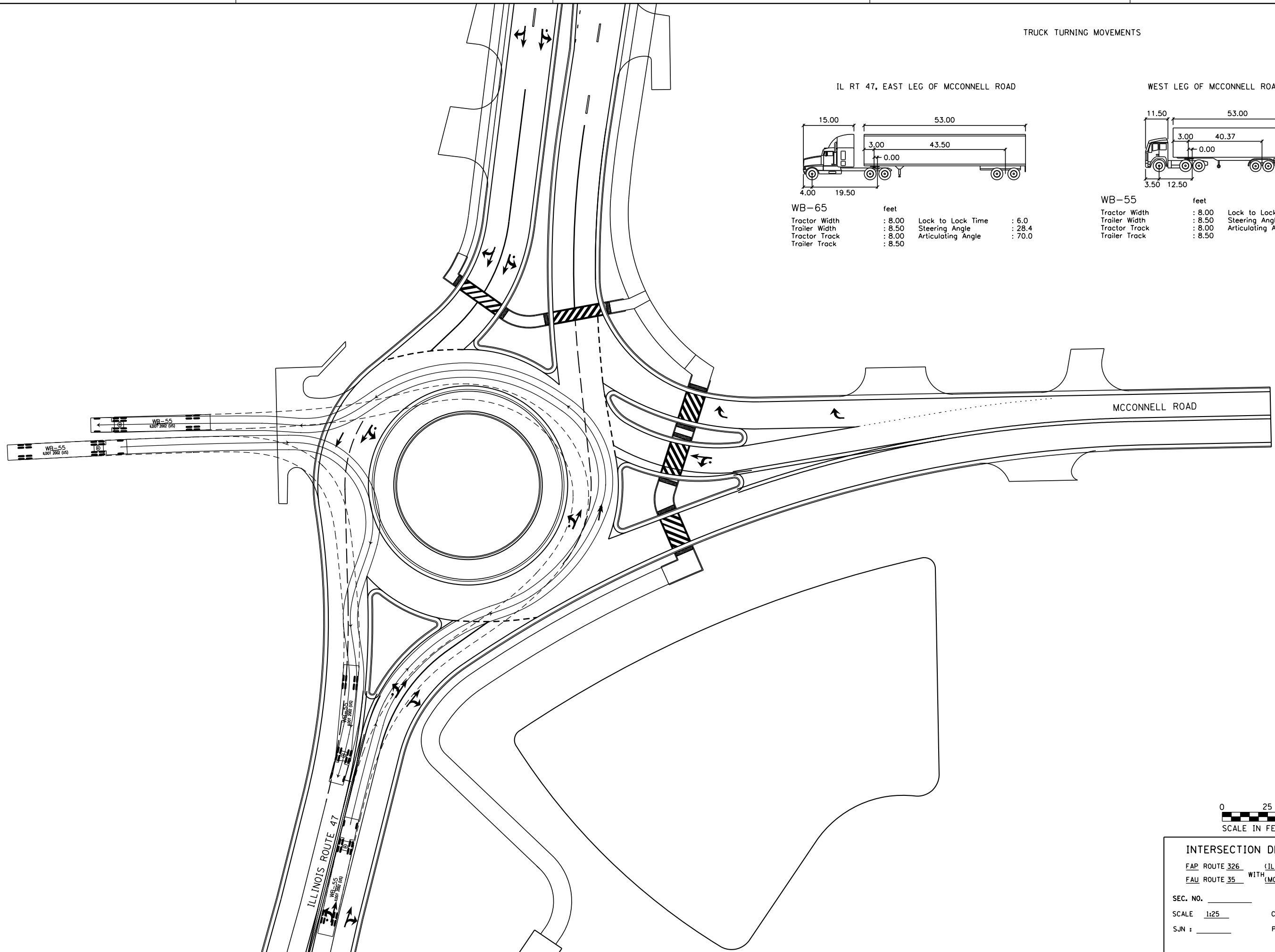


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF MCCONNELL ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

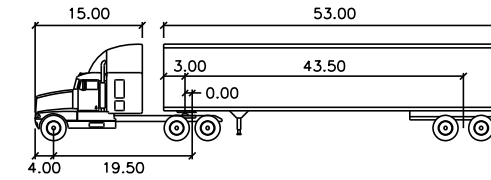


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 10 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390--6399\6346\01A\Micros\CADD Sheets\01B12345-1ht-rds-McConnell-Auto.dwg
 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC

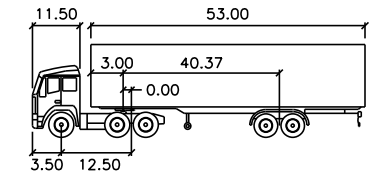
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF MCCONNELL ROAD

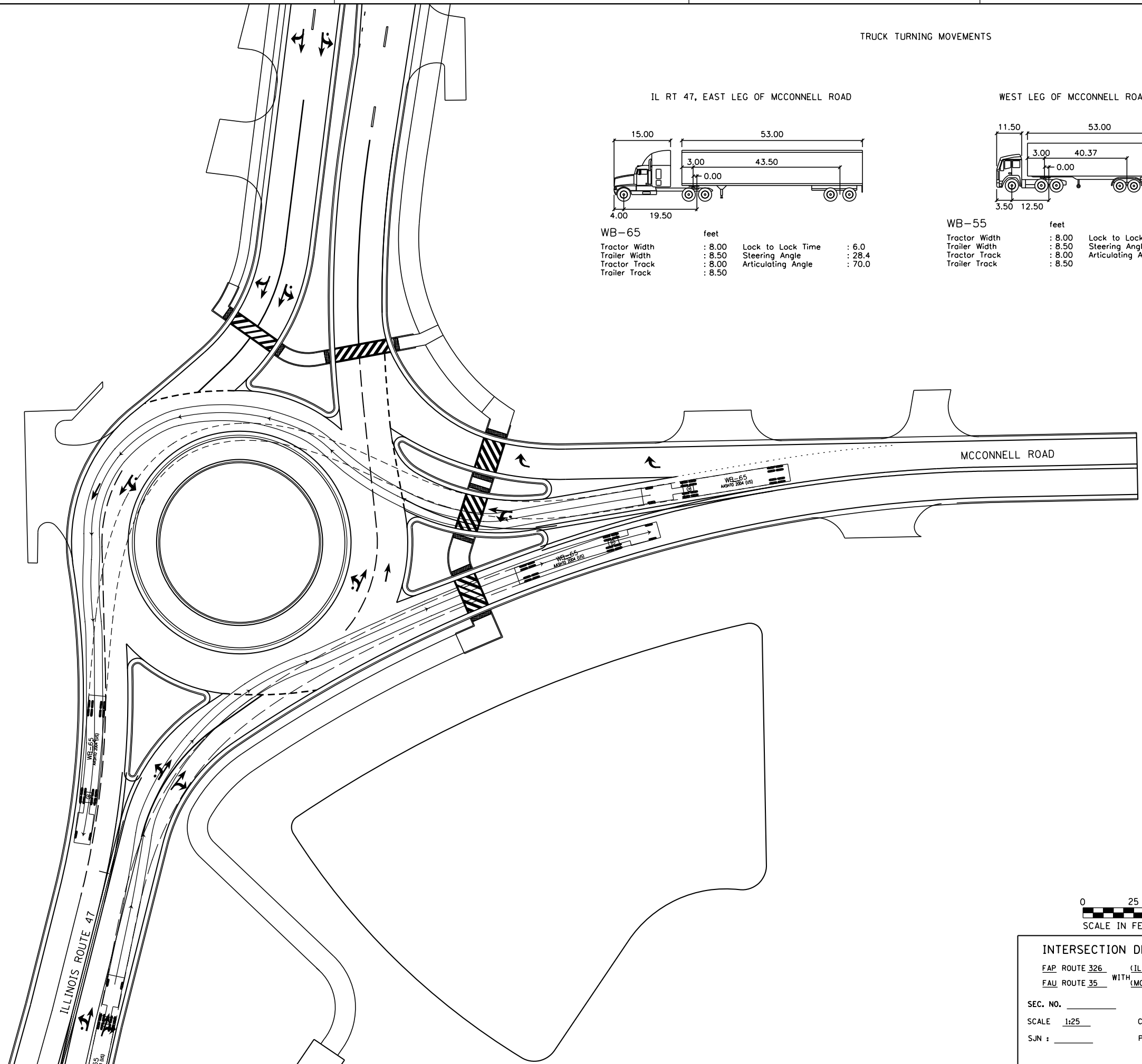


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF MCCONNELL ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

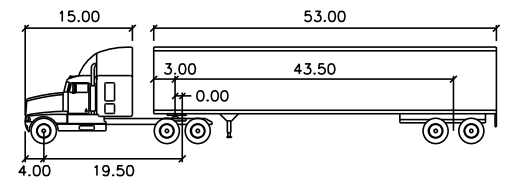


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 11 OF 22

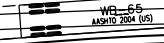
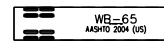
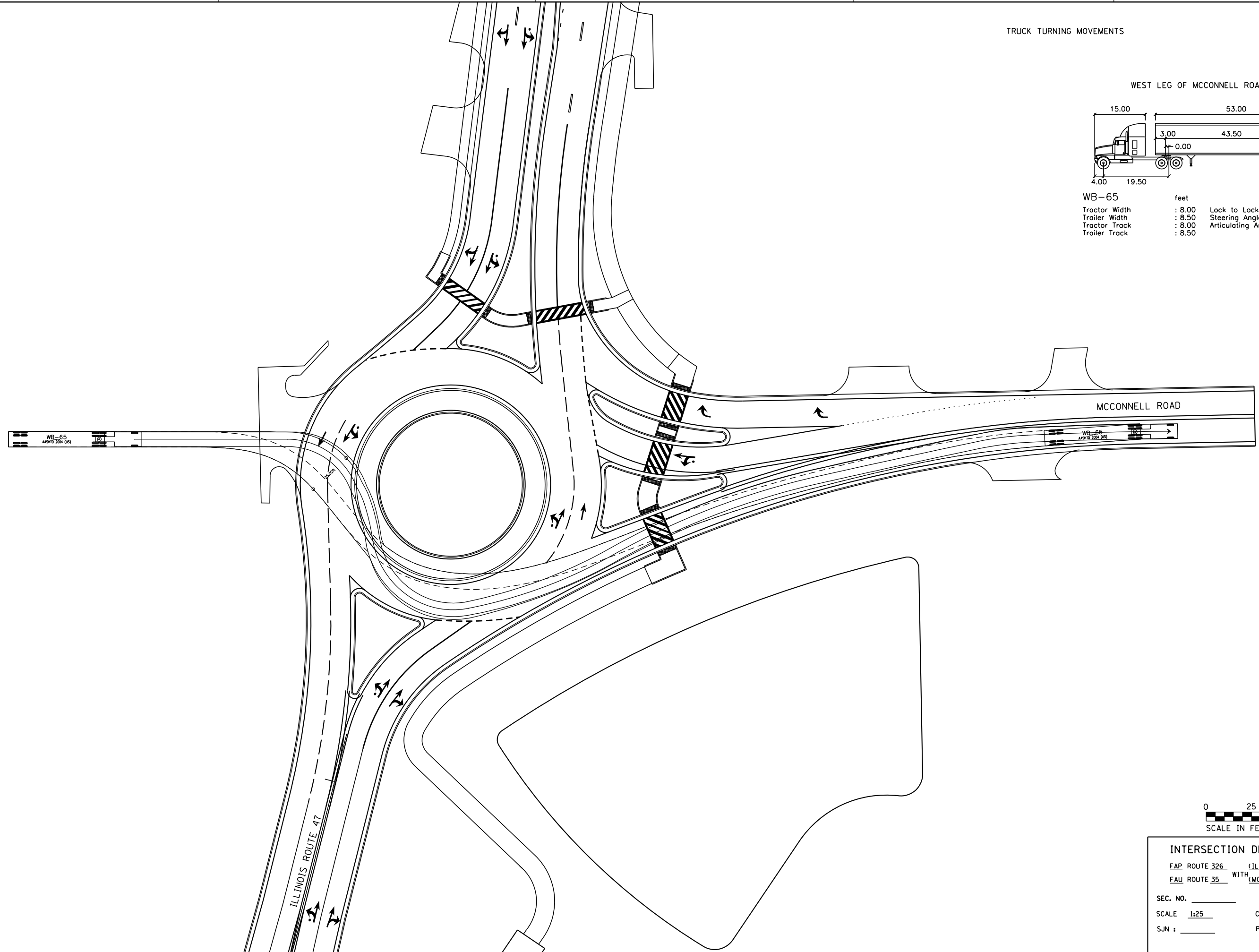
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

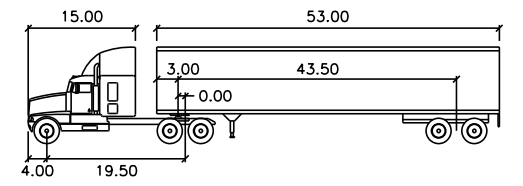


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 12 OF 22

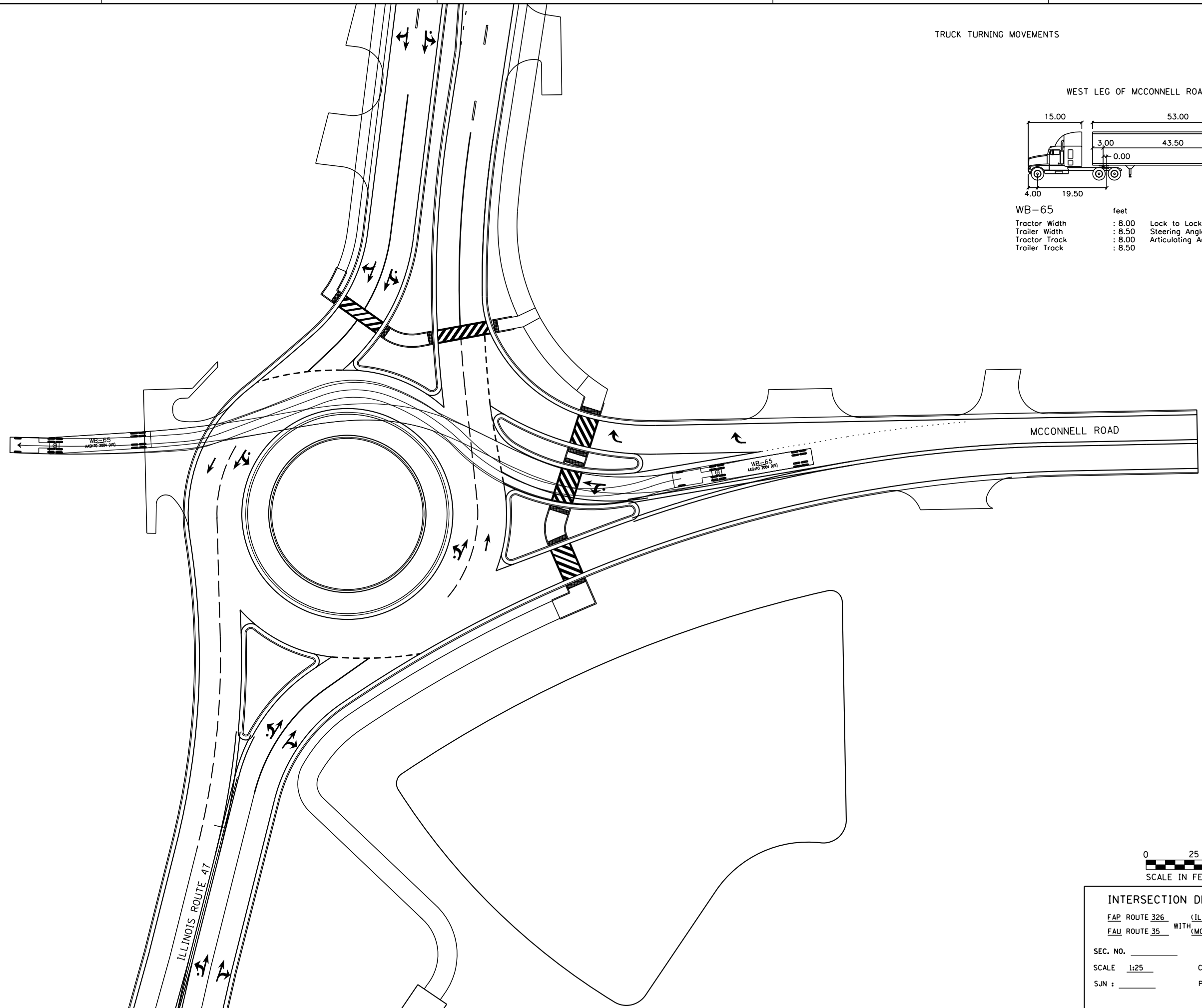
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

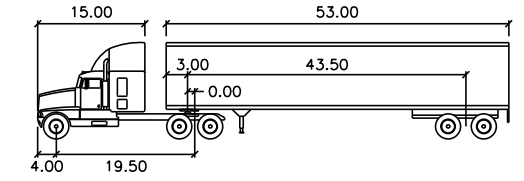


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 13 OF 22

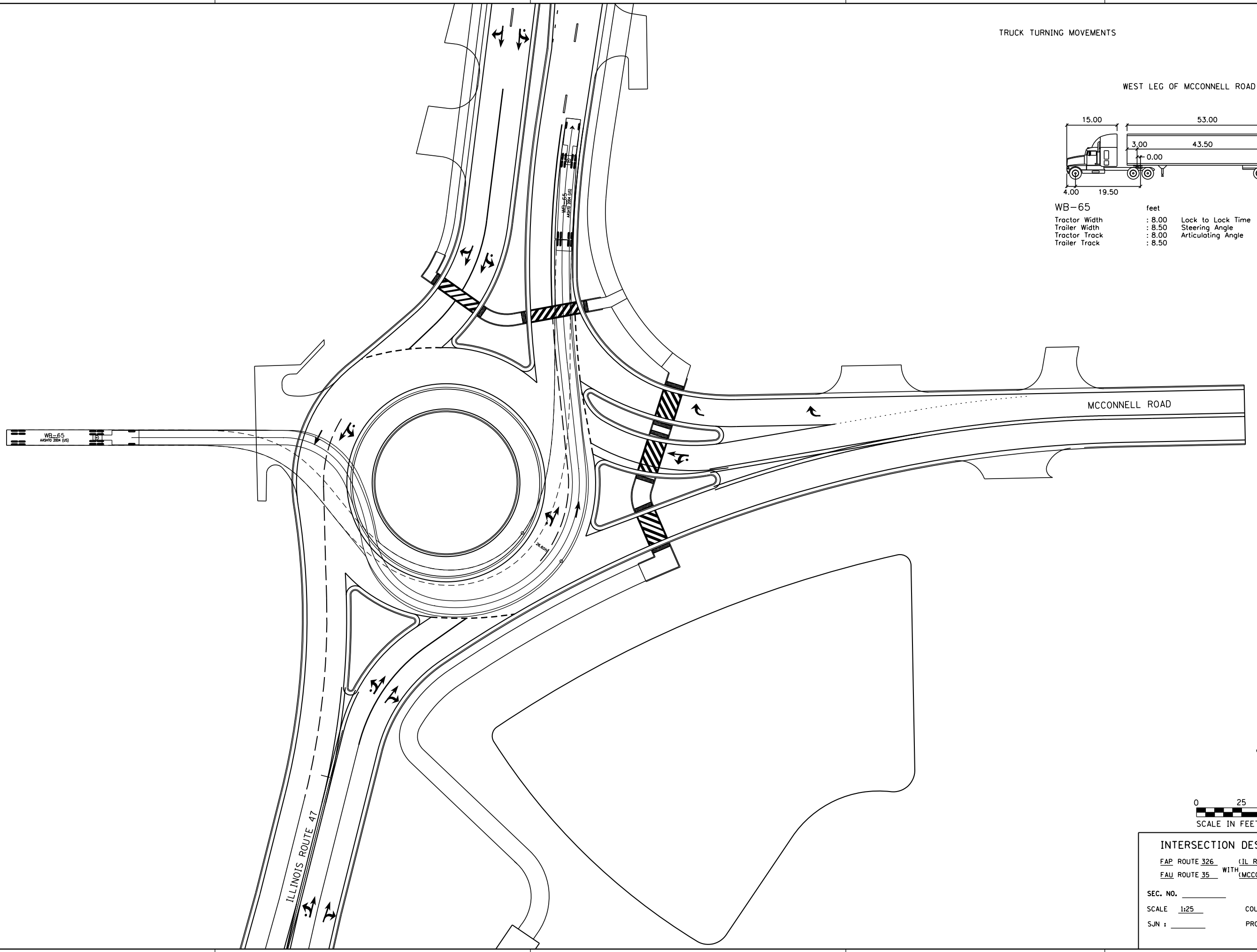
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

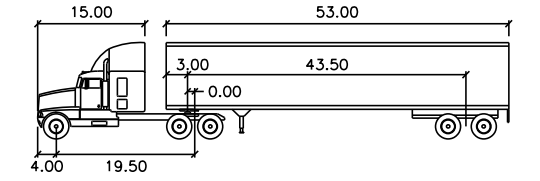


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 14 OF 22

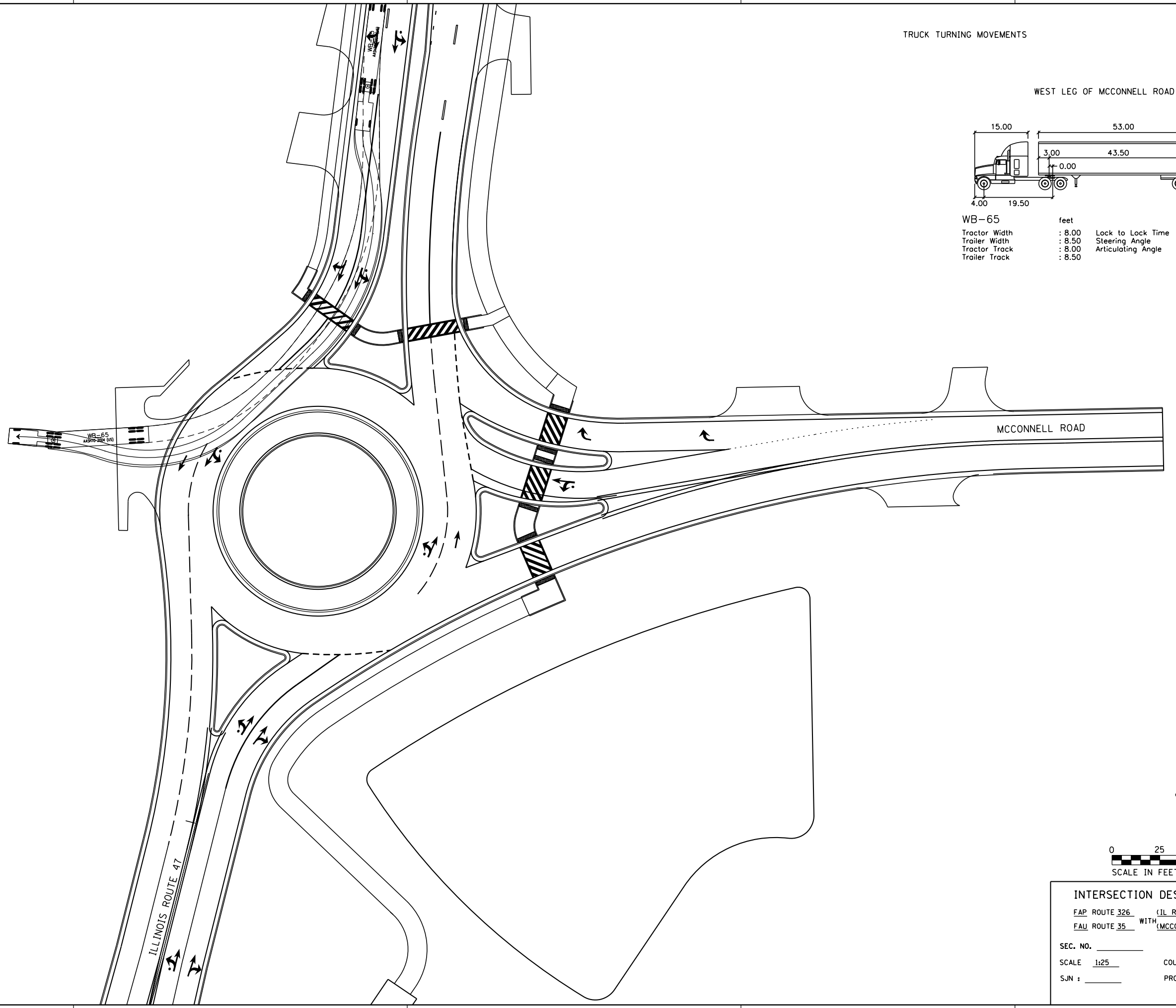
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

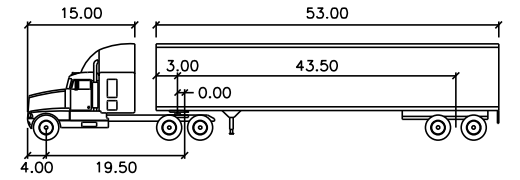


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 15 OF 22

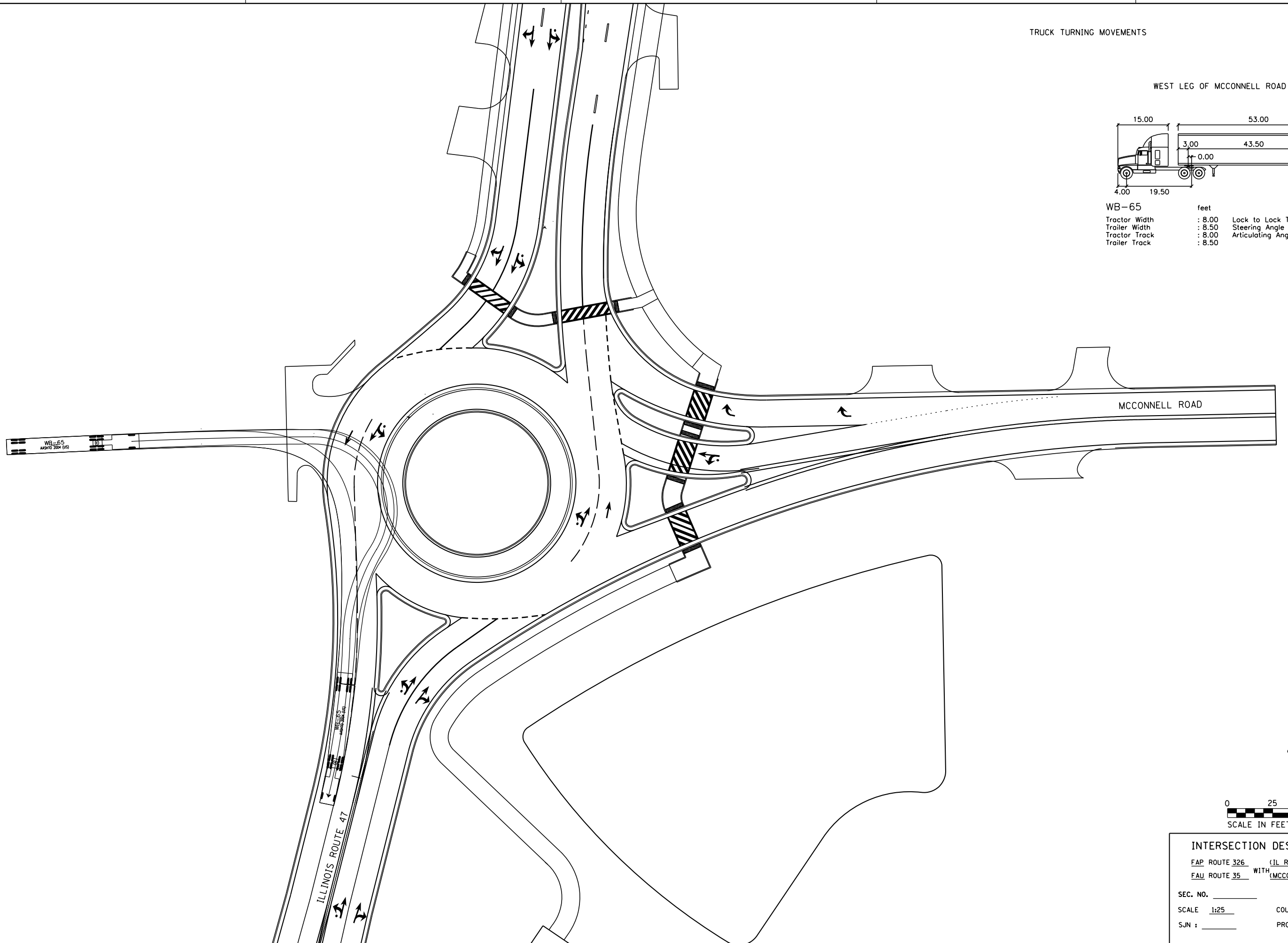
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

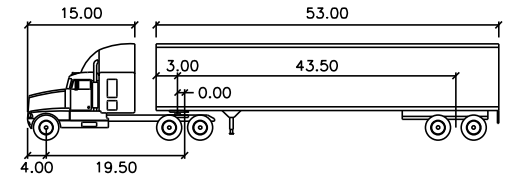


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 16 OF 22

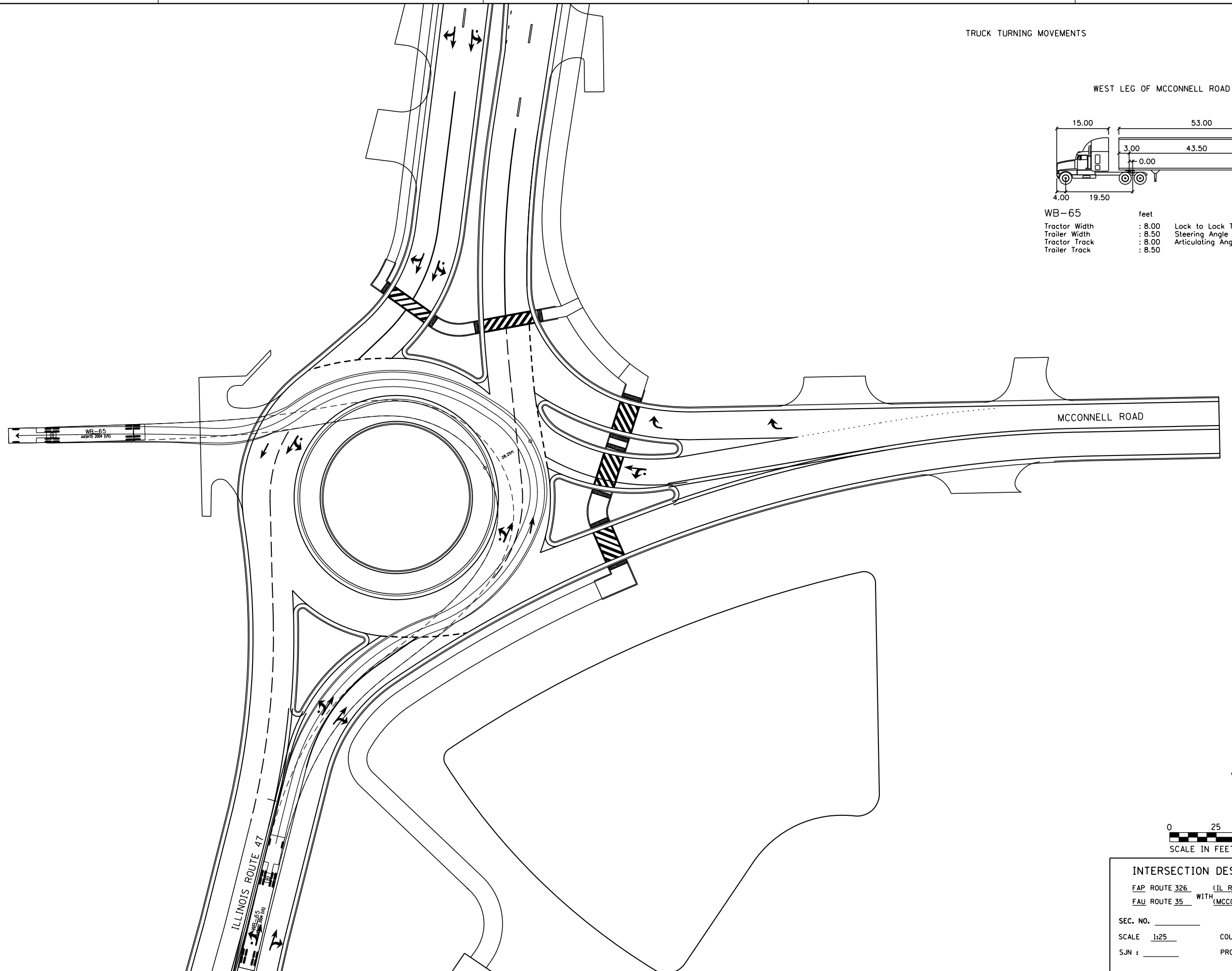
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

WEST LEG OF MCCONNELL ROAD

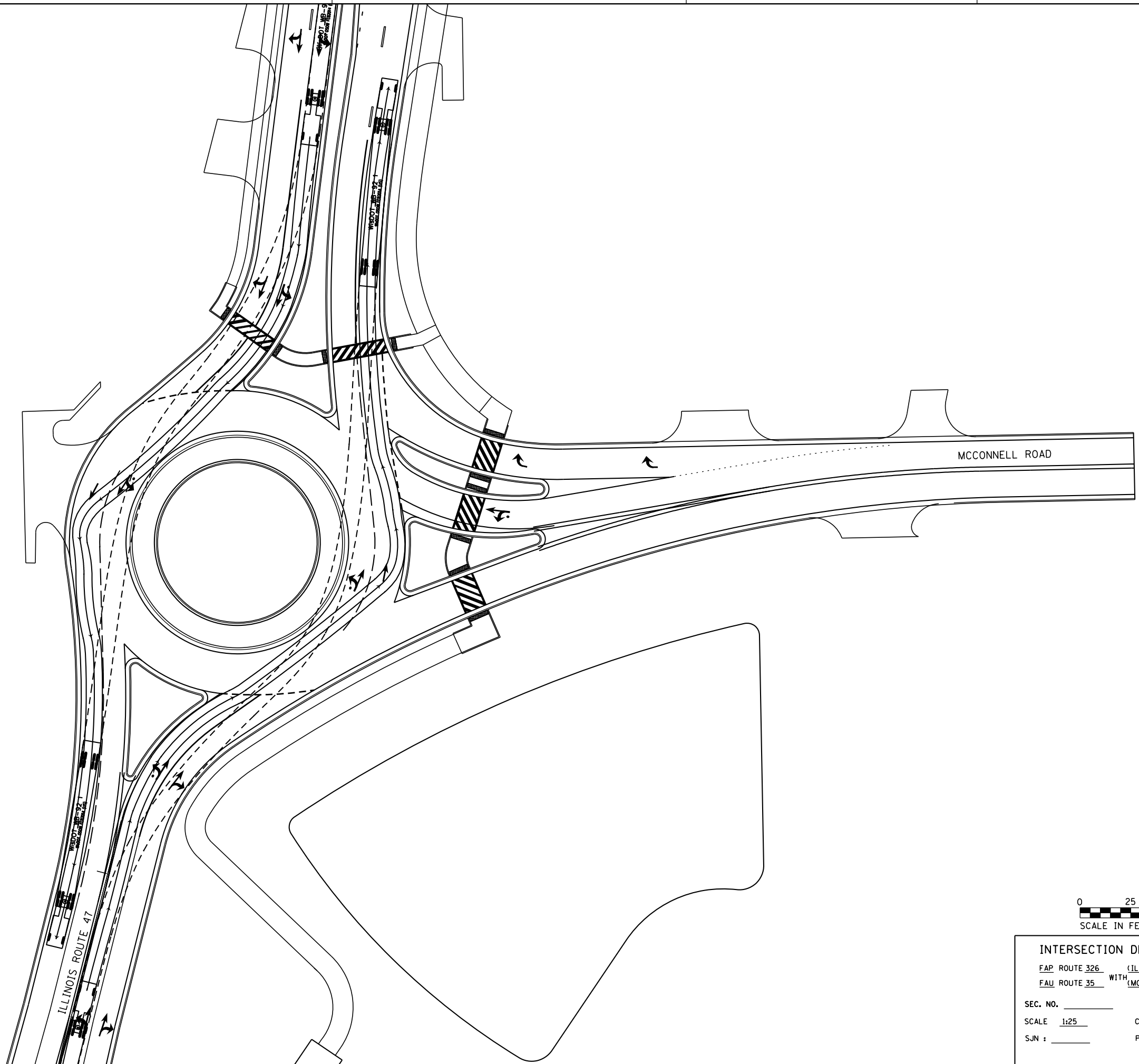


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

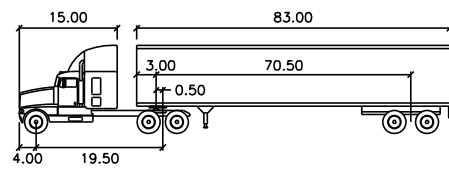


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 17 OF 22

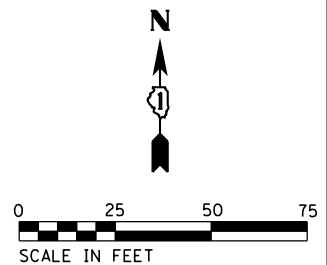
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 USER NAME = MattC



TRUCK THROUGH MOVEMENTS

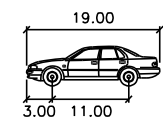


WisDOT WB-92 1 feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 18 OF 22

PASSENGER CAR FAST PATH MOVEMENTS



P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

LEGEND

- THRU FAST PATH
- - - RIGHT TURN FAST PATH

PLOT DATE = 12/27/2018
 FILE NAME = S:\JUL\6390--6399\6346\01A\Micros\CADD Sheets\01812345-ah-1-rds-McConnell-FastPath.dgn
 PLOT SCALE = 50.0000' / 1" =
 USER NAME = MattG

R1: 253' = 29 MPH
 R5: 133' = 23 MPH

R1: 182' = 26 MPH
 R5: 88' = 20 MPH

R2: 108' = 21 MPH

R2: 195' = 26 MPH

R4: 58' = 17 MPH

R2: 135' = 23 MPH

R1: 223' = 28 MPH
 R5: 246' = 29 MPH

ILLINOIS ROUTE 47

MCCONNELL ROAD



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)





SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 19 OF 22

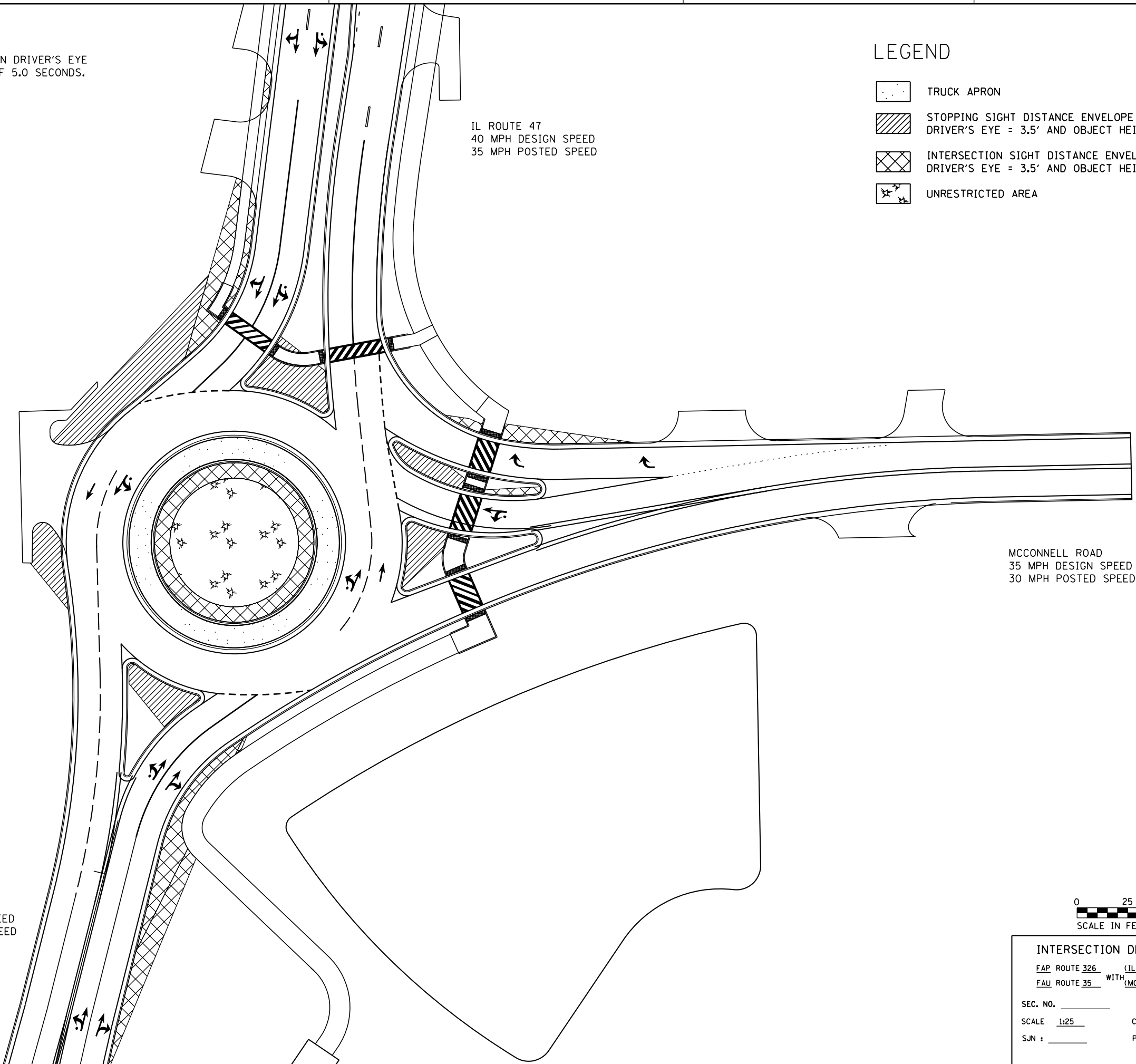
NOTES:

INTERSECTION SIGHT DISTANCE ENVELOPES ARE BASED ON DRIVER'S EYE 50 FEET FROM THE YIELD LINE WITH A CRITICAL GAP OF 5.0 SECONDS.

LEGEND

-  TRUCK APRON
-  STOPPING SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 2.0'
-  INTERSECTION SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 3.5'
-  UNRESTRICTED AREA

PLOT DATE = 12/27/2018
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PLOT SCALE = 50.0000' / in.
USER NAME = MattC



MCCONNELL ROAD
35 MPH DESIGN SPEED
30 MPH POSTED SPEED

MCCONNELL ROAD
35 MPH DESIGN SPEED
30 MPH POSTED SPEED

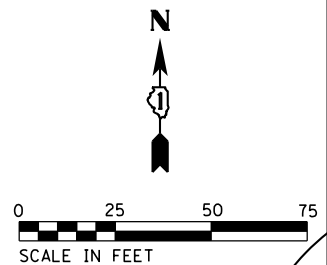
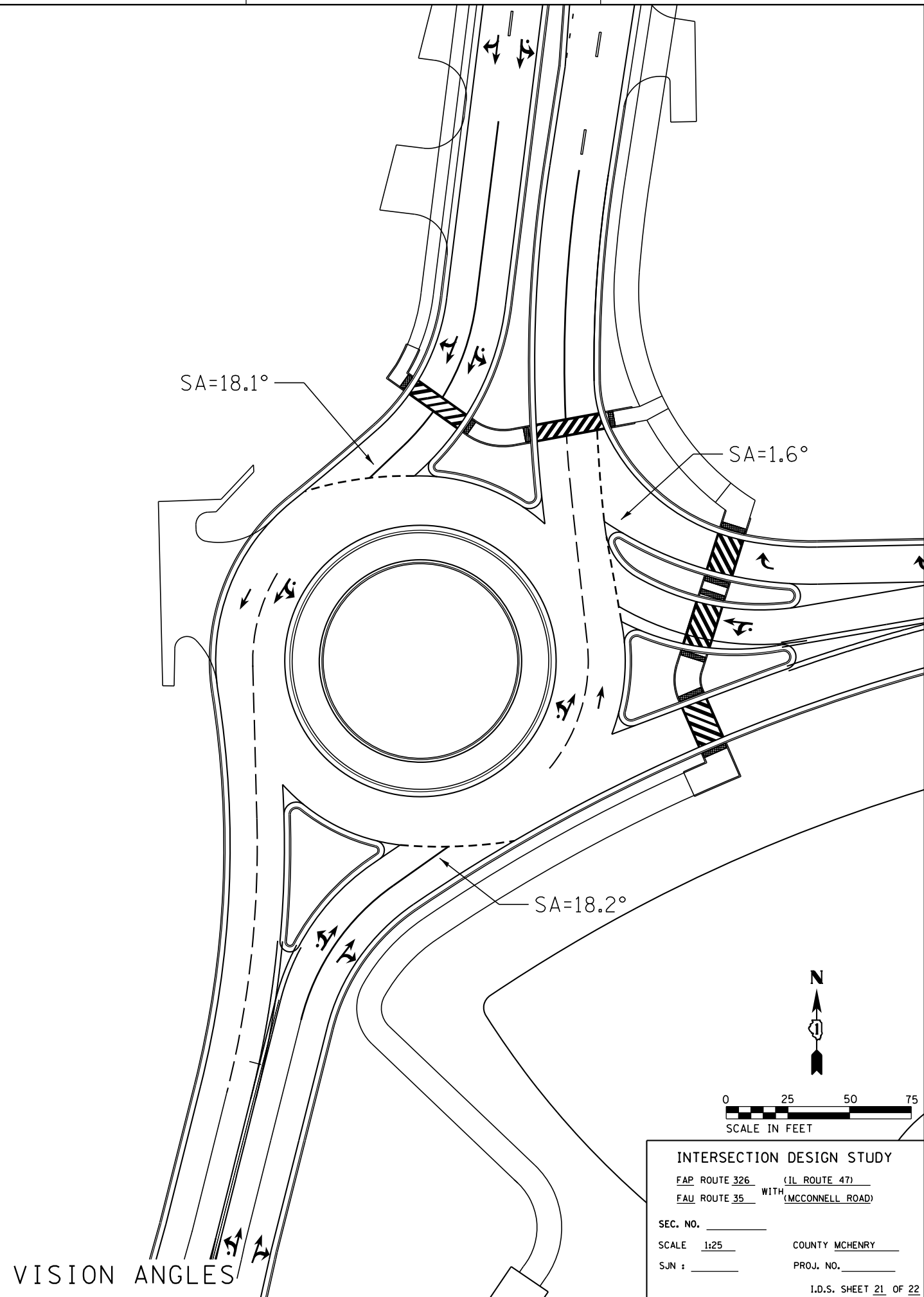
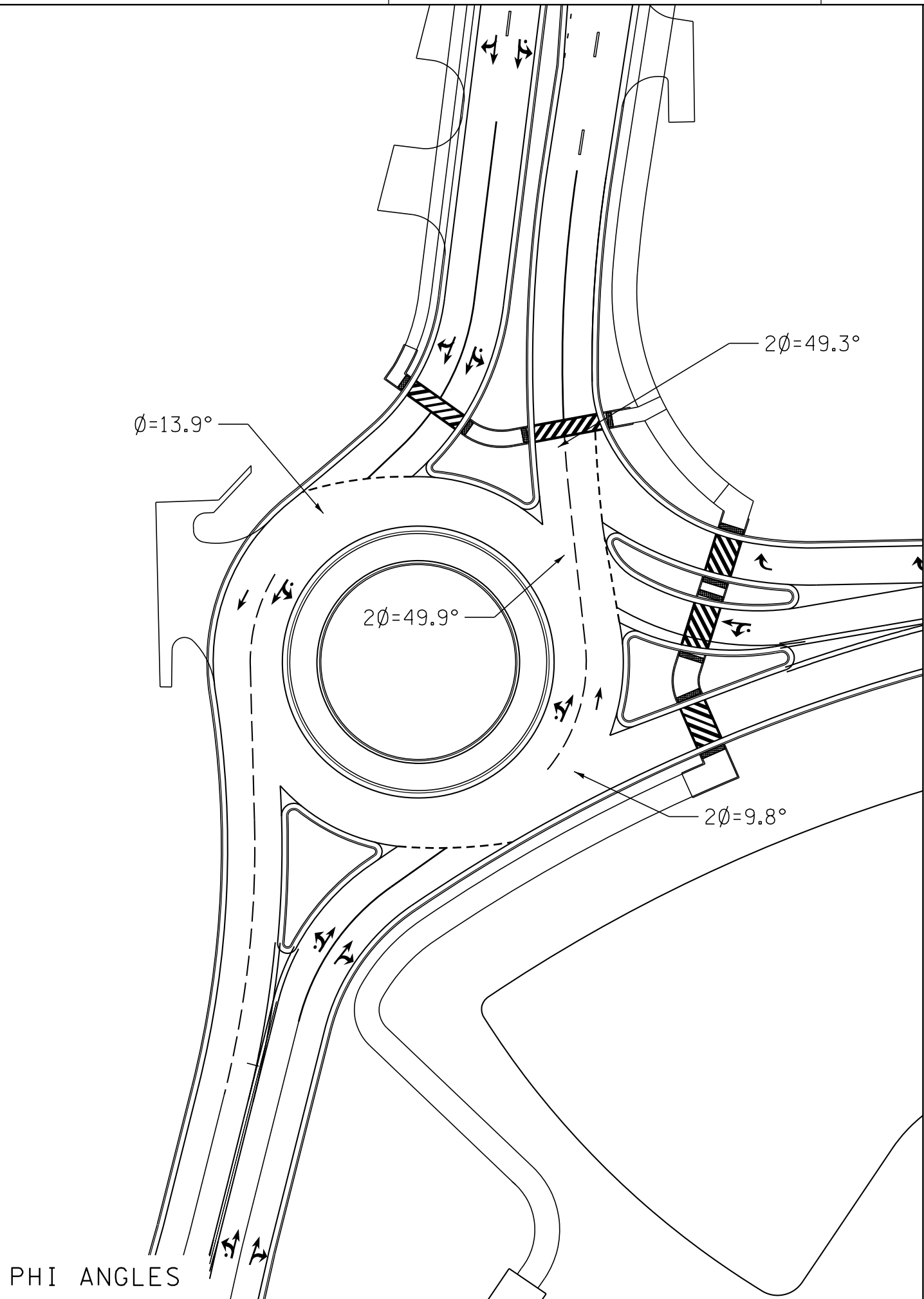
IL ROUTE 47
40 MPH DESIGN SPEED
35 MPH POSTED SPEED

IL ROUTE 47
40 MPH DESIGN SPEED
35 MPH POSTED SPEED



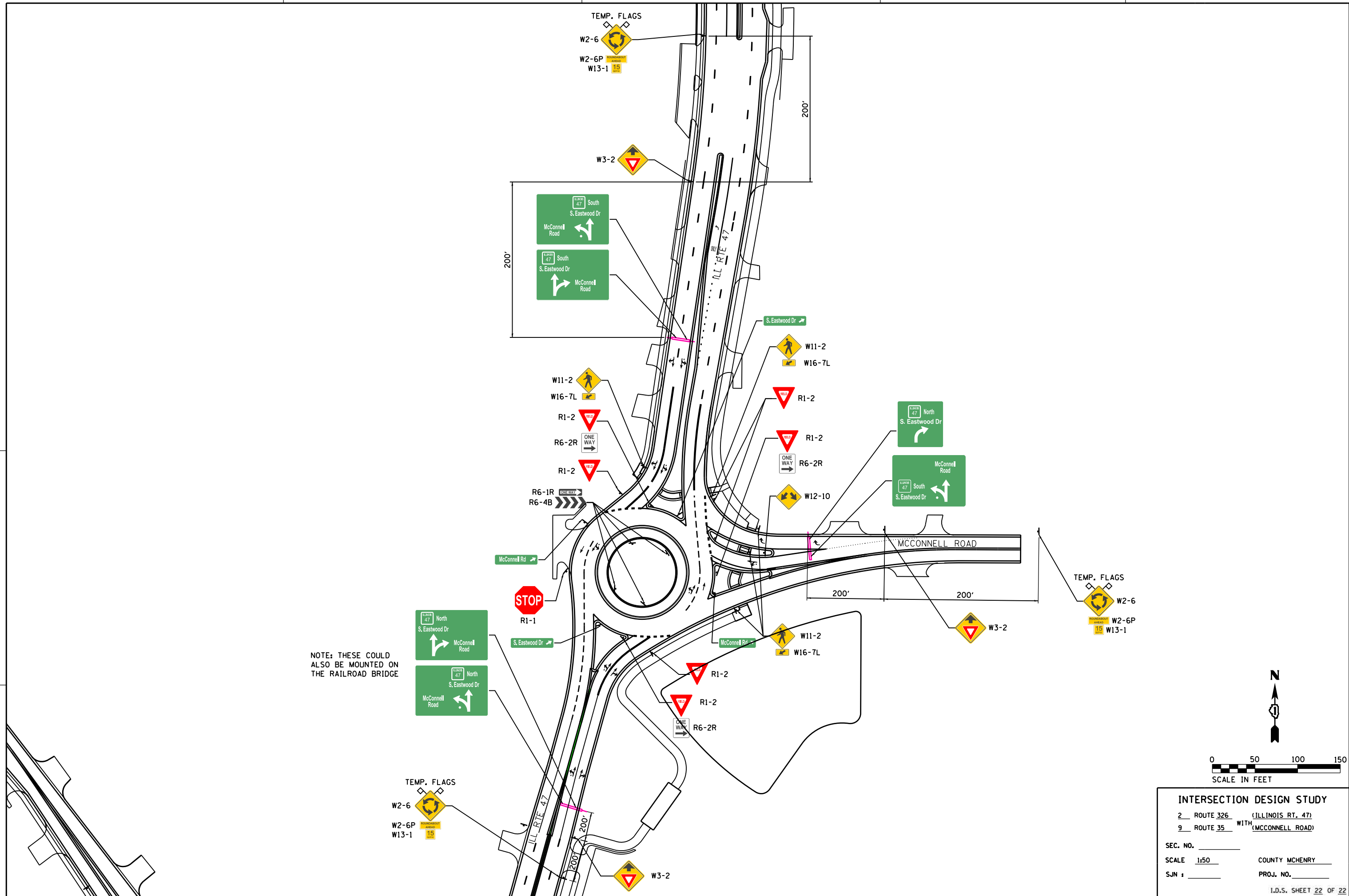
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 35 WITH (MCCONNELL ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 20 OF 22

PLOT DATE = 12/27/2018
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PLOT SCALE = 50.0000' / in.
USER NAME = MattG

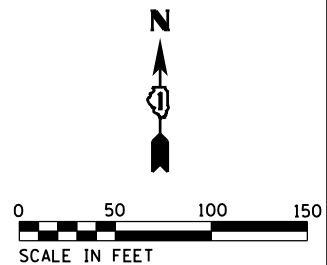


INTERSECTION DESIGN STUDY
FAP ROUTE 326 (IL ROUTE 47)
FAU ROUTE 35 WITH (MCCONNELL ROAD)
SEC. NO. _____
SCALE 1:25 COUNTY MCHENRY
SUN : _____ PROJ. NO. _____
I.D.S. SHEET 21 OF 22

PLOT DATE = 8/23/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = brianf



NOTE: THESE COULD ALSO BE MOUNTED ON THE RAILROAD BRIDGE

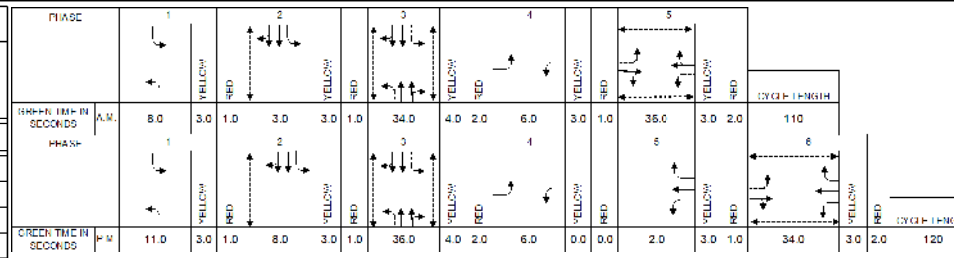


INTERSECTION DESIGN STUDY	
2 ROUTE 326 (ILLINOIS RT. 47)	
9 ROUTE 35 WITH (MCCONNELL ROAD)	
SEC. NO. _____	
SCALE 1:50	COUNTY MCHENRY
SJN # _____	PROJ. NO. _____
I.D.S. SHEET 22 OF 22	

SIGNALIZED CAPACITY DESIGN ANALYSIS

PROGRAM USED: SYNCHRO, VERSION: V8, SIGNAL TYPE: ACTUATED, AREA TYPE:
 NUMBER OF PHASES: (A.M.) 8 (P.M.) 8, CYCLE LENGTH: (A.M.) 110 SEC. (P.M.) 120 SEC., PEAK HOUR FACTOR: 0.98
 INTERSECTION DELAY/LEVEL-OF-SERVICE A.M. 23.3 SECONDS LOS C, P.M. 28.8 SECONDS LOS C

APPROACH	A		B		C		D		
LANE GROUP	L	TH/R	L	TH/R	L	TH/R	L	TH	R
NUMBER OF LANES	1	2	1	2	1	1	1	1	1
2040 30TH MAX. HOUR TRAFFIC (veh/h)	A.M. 275 P.M. 265	975 1150	125 1270	1030	60 100	95 155	140 185	85 140	335 455
BASE SATURATION FLOW RATE (veh/h)	1900	1950	1900	1950	1900	1900	1900	2000	1900
LANE WIDTH (FT)	11	12	11	12	12	12	12	12	12
VOLUME OF RIGHT TURN ON RED (veh/h)	A.M. 4 P.M. 0	P.M. 3 P.M. 0	A.M. 5 P.M. 2	P.M. 5	A.M. 15 P.M. 1	P.M. 14	A.M. 292 P.M. 0	P.M. 321 P.M. 0	
PEDESTRIANS/HOUR (ped/h)	A.M. 0	P.M. 0	A.M. 0	P.M. 0	A.M. 0	P.M. 0	A.M. 0	P.M. 0	
ARRIVAL TYPE	3		3		3		3		
LANE UTILIZATION ADJ. FACTOR	1.0	0.95	1.0	0.95	1.0	1.0	1.0	1.0	1.0
GREEN TIME (SECONDS)	A.M. 15.0 P.M. 23.0	41 48.0	8.0 11.0	34.0 36.0	6.0 6.0	36.0 34.0	6.0 8.0	36.0 36.0	36.0
GREEN RATIO (g/c)	A.M. 0.14 P.M. 0.19	0.37 0.40	0.08 0.09	0.31 0.30	0.05 0.05	0.33 0.28	0.05 0.07	0.33 0.30	0.33
CAPACITY (c)	A.M. 391 P.M. 348	1913 1696	271 256	1454 1461	243 309	205 314	295 336	283 417	229 336
v/c RATIO (X)	A.M. 0.78 P.M. 0.78	0.56 0.69	0.33 0.50	0.78 0.88	0.28 0.33	0.44 0.46	0.53 0.56	0.33 0.34	0.35 0.42
STORAGE QUEUE (FEET)	A.M. 381 P.M. 365	494 587	124 193	600 756	92 158	102 186	212 290	91 165	358 536
LANE GROUP DELAY (SECONDS)	A.M. 31.0 P.M. 34.6	13.6 21.0	13.6 17.5	24.0 32.7	31.6 31.0	37.1 36.3	30.0 28.6	33.9 32.4	34.2 33.3
LANE GROUP LEVEL-OF-SERVICE	A.M. C P.M. C	B C	B C	C C	C C	D D	C C	C C	C
APPROACH DELAY (SECONDS/VEHICLE)	A.M. 17.4 P.M. 23.5	17.4 23.5	23.3 31.4	23.3 31.4	35.0 34.2	35.0 34.2	33.1 32.0	33.1 32.0	33.1
APPROACH LEVEL-OF-SERVICE	A.M. B P.M. C	B C	C C	C C	C C	C C	C C	C C	C



ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:
 F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: EASTWOOD DR. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y.
 EXISTING ADT: 26,200 VPD. DESIGN YEAR ADT: 33,000 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

SECONDARY ROUTE:
 F.A. ROUTE NUMBER: 9-34. MARKED ROUTE NUMBER: COUNTRY CLUB RD.
 STREET NAME: COUNTRY CLUB RD. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR. OSOW DESIGN? N.
 EXISTING ADT: 11,000 VPD. DESIGN YEAR ADT: 11,000 VPD.
 PROPOSED DESIGN SPEED: 35 MPH. PROPOSED POSTED SPEED: 30 MPH.

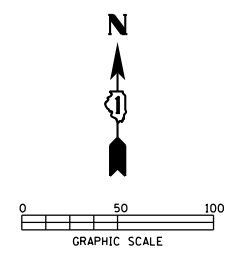
IMPROVEMENT TYPE: RECONSTRUCTION/WIDENING. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: SIGNAL.
 SIGNAL WARRANT: EX. SIGNAL.
 DESIGN VEHICLE: IL 47, WEST LEG COUNTRY CLUB RD: WB-65; EAST LEG COUNTRY CLUB RD: WB-55.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE DESIGNATION: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: NONE.
 DESIGN CRITERIA IDOT URBAN SRA.

GENERAL NOTES

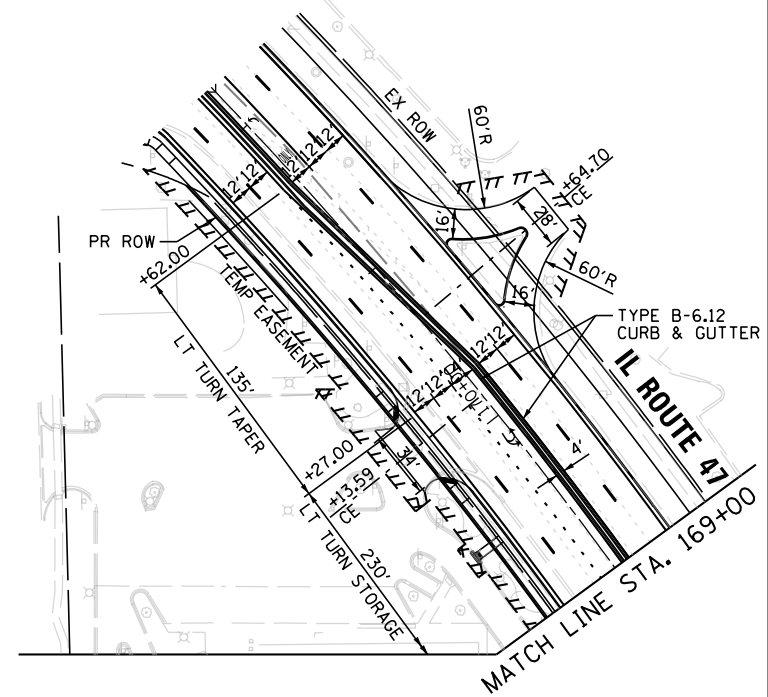
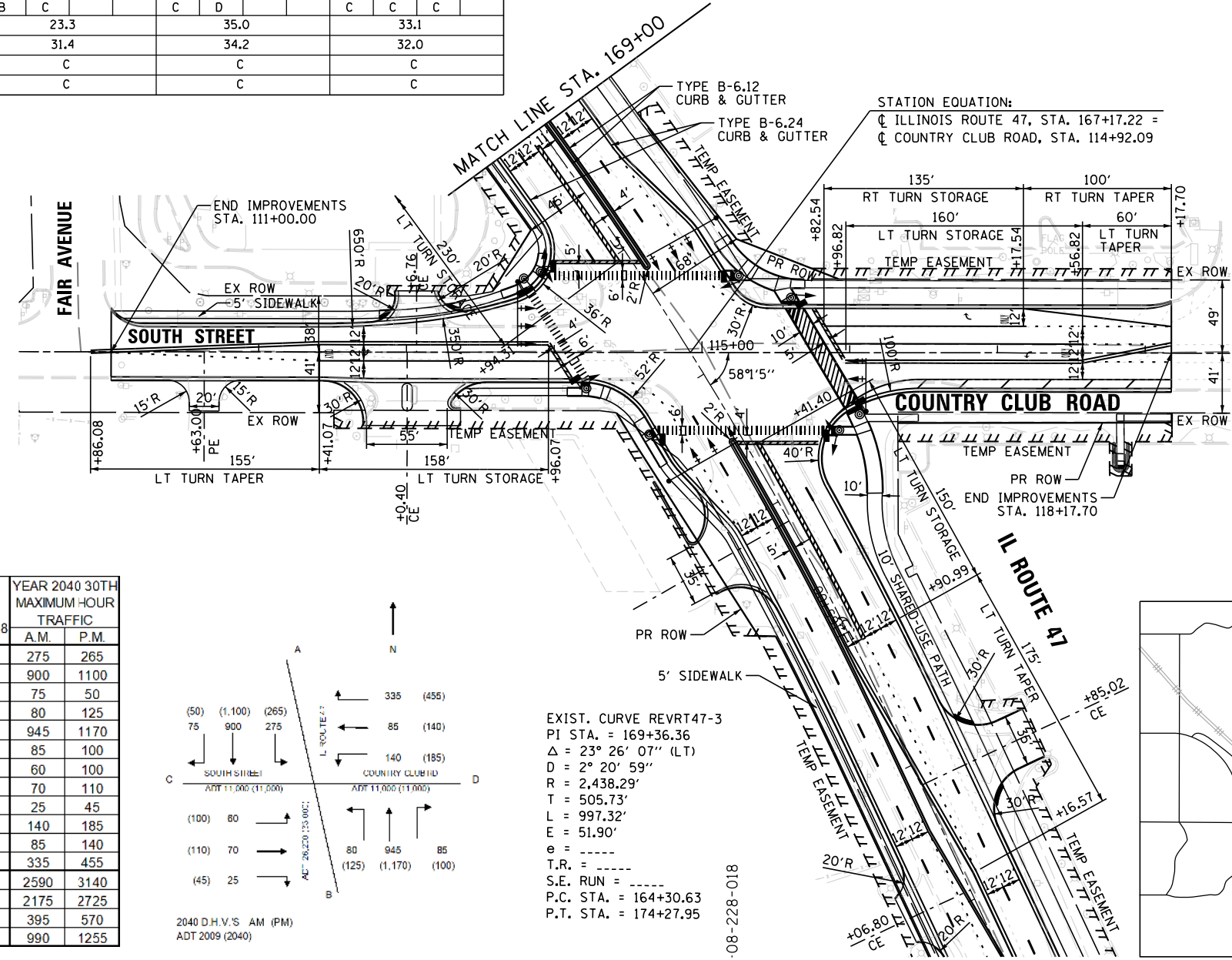
ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.12 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE M-6.24 CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: INTERSECTION RECONSTRUCTION AND WIDENING.
 INTERSECTION DESIGN EXCEPTIONS:
 SKEW OF INTERSECTION: 32 DEGREES; CRITERIA: 30 DEGREES.
 EB SOUTH STREET LEFT TURN LANE TAPER: UN-SHADOWED, CRITERIA: SHADOWED
 SB IL ROUTE 47 LEFT TURN STORAGE LENGTH: 230 FEET, CRITERIA: 381 FEET (AM)
 SB IL ROUTE 47 LEFT TURN TAPER LENGTH: 135 FEET, CRITERIA: 175 FEET
 NB IL ROUTE 47 LEFT TURN STORAGE LENGTH: 150 FEET, CRITERIA: 193 FEET (PM)
 WB COUNTRY CLUB ROAD LEFT TURN TAPER LENGTH: 60 FEET, CRITERIA: 155 FEET
 WB COUNTRY CLUB ROAD LEFT TURN STORAGE LENGTH: 160 FEET, CRITERIA: 290 FEET (PM)
 WB COUNTRY CLUB ROAD RIGHT TURN TAPER LENGTH: 100 FEET, CRITERIA: 155 FEET
 WB COUNTRY CLUB ROAD RIGHT TURN STORAGE LENGTH: 135 FEET, CRITERIA: 536 FEET (PM)

ADDITIONAL NOTES: NONE.

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 USER NAME = MattC



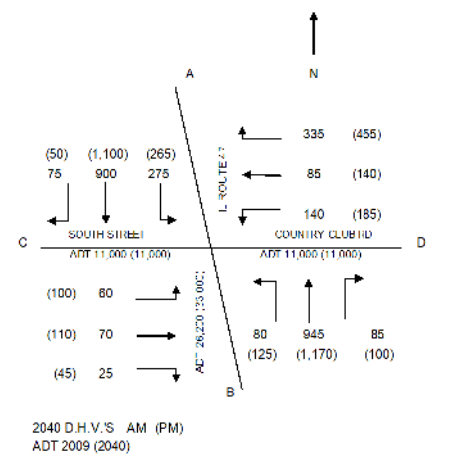
CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 PROJ. MGR. - MJM
 PROJ. ENG. - BC



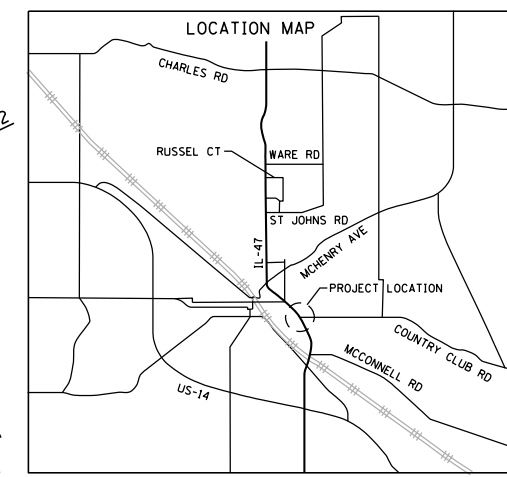
TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2018		YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
AD (L)	276	256	3%	2%	0%	4%	275	265
AB (T)	719	740	3%	2%	25%	49%	900	1100
AC (R)	59	11	3%	2%	27%	355%	75	50
BC (L)	35	33	8%	2%	129%	279%	80	125
BA (T)	653	743	8%	2%	45%	57%	945	1170
BD (R)	49	87	8%	2%	73%	15%	85	100
CA (L)	29	77	3%	0%	107%	30%	60	100
CD (T)	62	100	3%	0%	13%	10%	70	110
CB (R)	16	32	3%	0%	56%	41%	25	45
DB (L)	98	125	2%	1%	43%	48%	140	185
DC (T)	56	95	2%	1%	52%	47%	85	140
DA (R)	248	309	2%	1%	35%	47%	335	455
TOTAL A	1984	2136	5%	2%	31%	47%	2590	3140
TOTAL B	1570	1760	5%	2%	39%	55%	2175	2725
TOTAL C	257	348	3%	1%	54%	64%	395	570
TOTAL D	789	972	3%	1%	25%	29%	990	1255

T = THROUGH, L = LEFT, R = RIGHT



EXIST. CURVE REVRT47-3
 PI STA. = 169+36.36
 $\Delta = 23^\circ 26' 07''$ (LT)
 $D = 2^\circ 20' 59''$
 $R = 2,438.29'$
 $T = 505.73'$
 $L = 997.32'$
 $E = 51.90'$
 $e =$
 $T.R. =$
 $S.E. RUN =$
 $P.C. STA. = 164+30.63$
 $P.T. STA. = 174+27.95$



INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 FAU ROUTE 34 WITH (COUNTRY CLUB ROAD)
 FAU ROUTE 3897 WITH (SOUTH STREET)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN: _____ REV. NO. _____

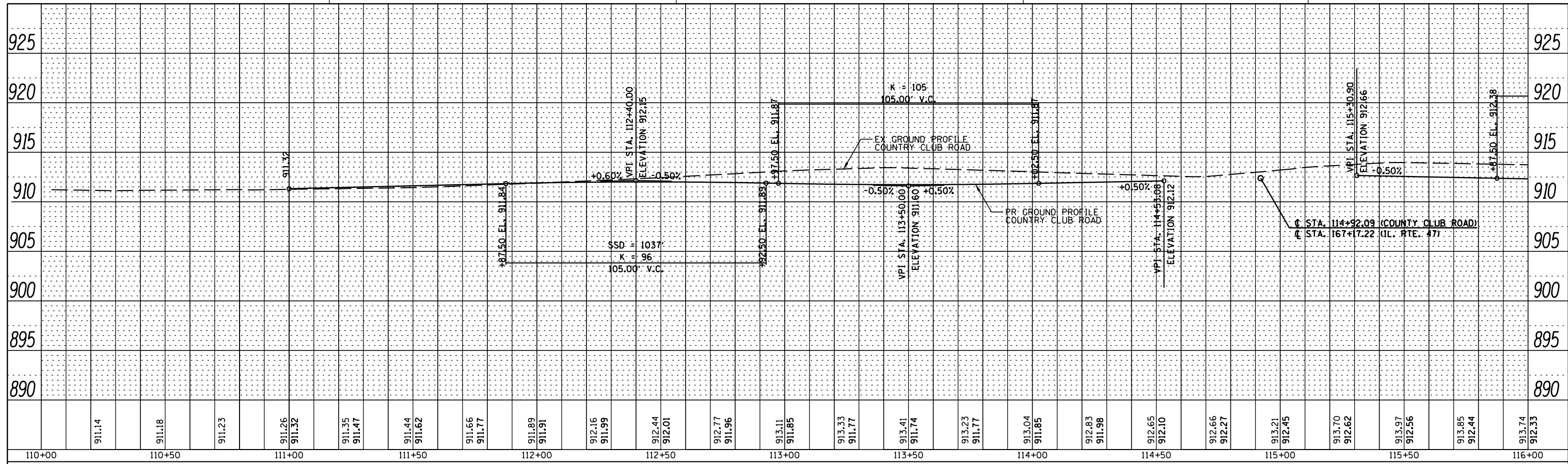
DESIGNED BY BOBBY GUNNELLS 12/10/2018

SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER DATE _____

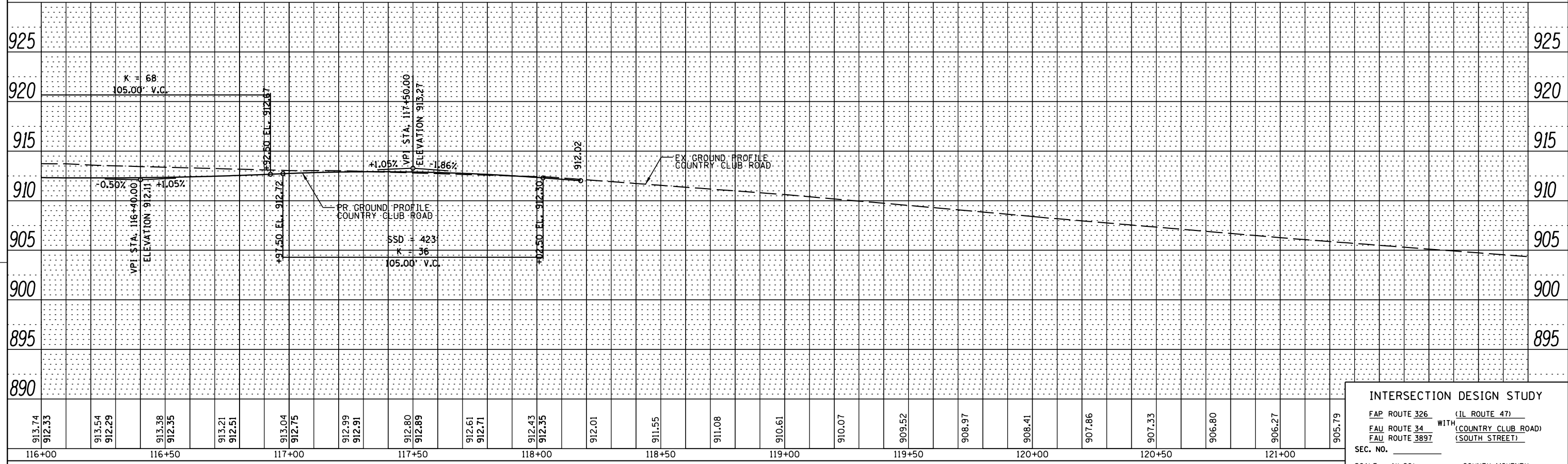
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CADD FILE NAME: () I.D.S. SHEET 1 OF 5

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 USER NAME = MattG



COUNTRY CLUB ROAD



COUNTRY CLUB ROAD

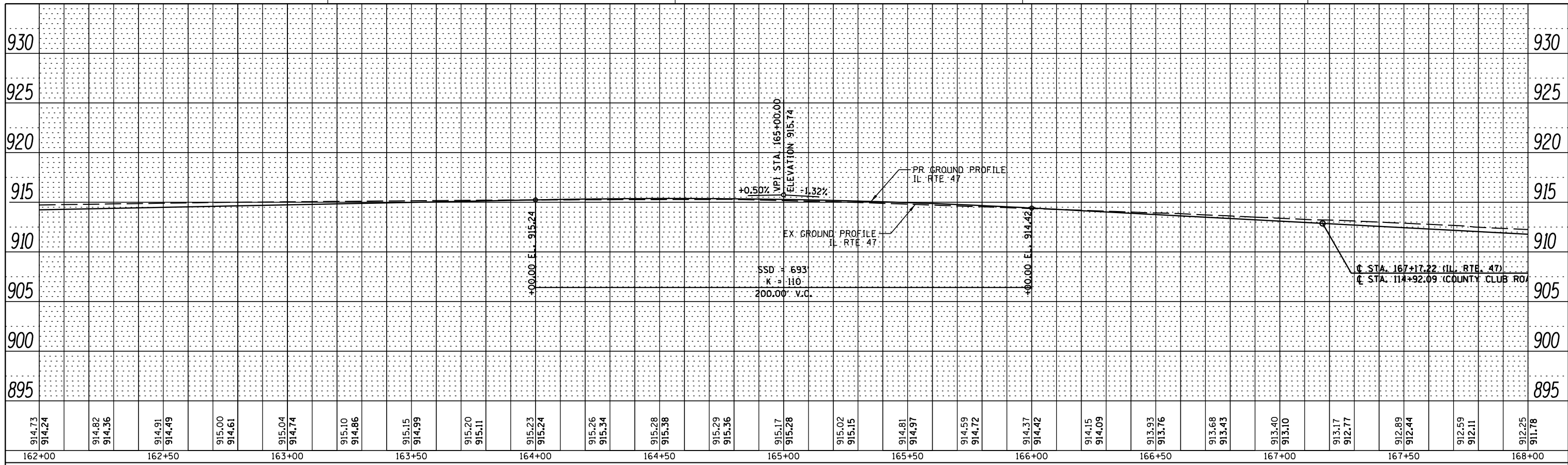
INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 34 WITH (COUNTRY CLUB ROAD)
 FAU ROUTE 3897 (SOUTH STREET)

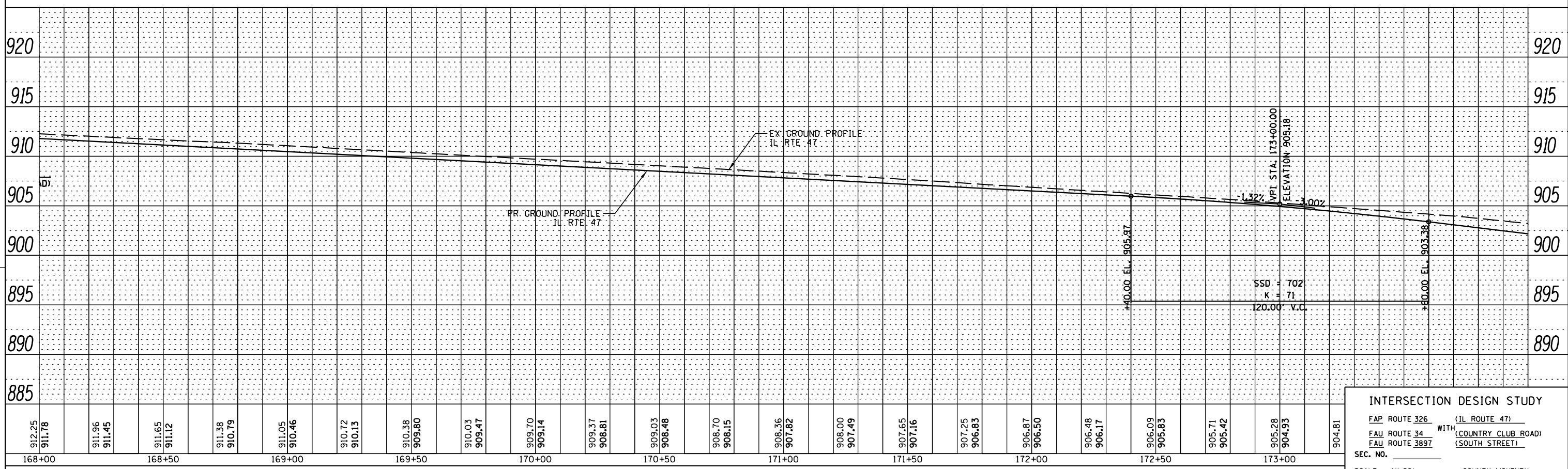
SEC. NO. _____
 SCALE 1"=20' COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 2 OF 5

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 PLOT SCALE = 40.0000 / in.
 USER NAME = MattG



ILLINOIS ROUTE 47



ILLINOIS ROUTE 47

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 34 WITH (COUNTRY CLUB ROAD)
 FAU ROUTE 3897 (SOUTH STREET)

SEC. NO. _____
 SCALE 1"=20' COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

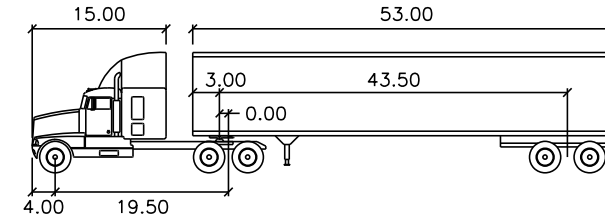
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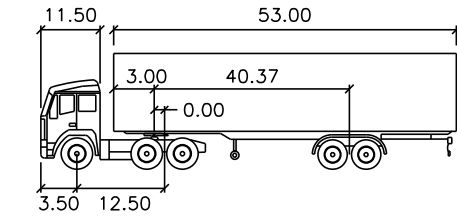
TRUCK TURNING MOVEMENTS

IL RT 47, WEST LEG OF COUNTRY CLUB ROAD

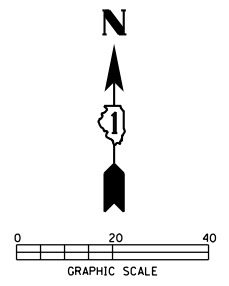
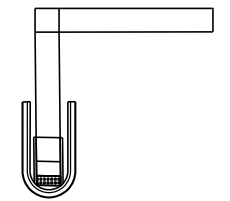
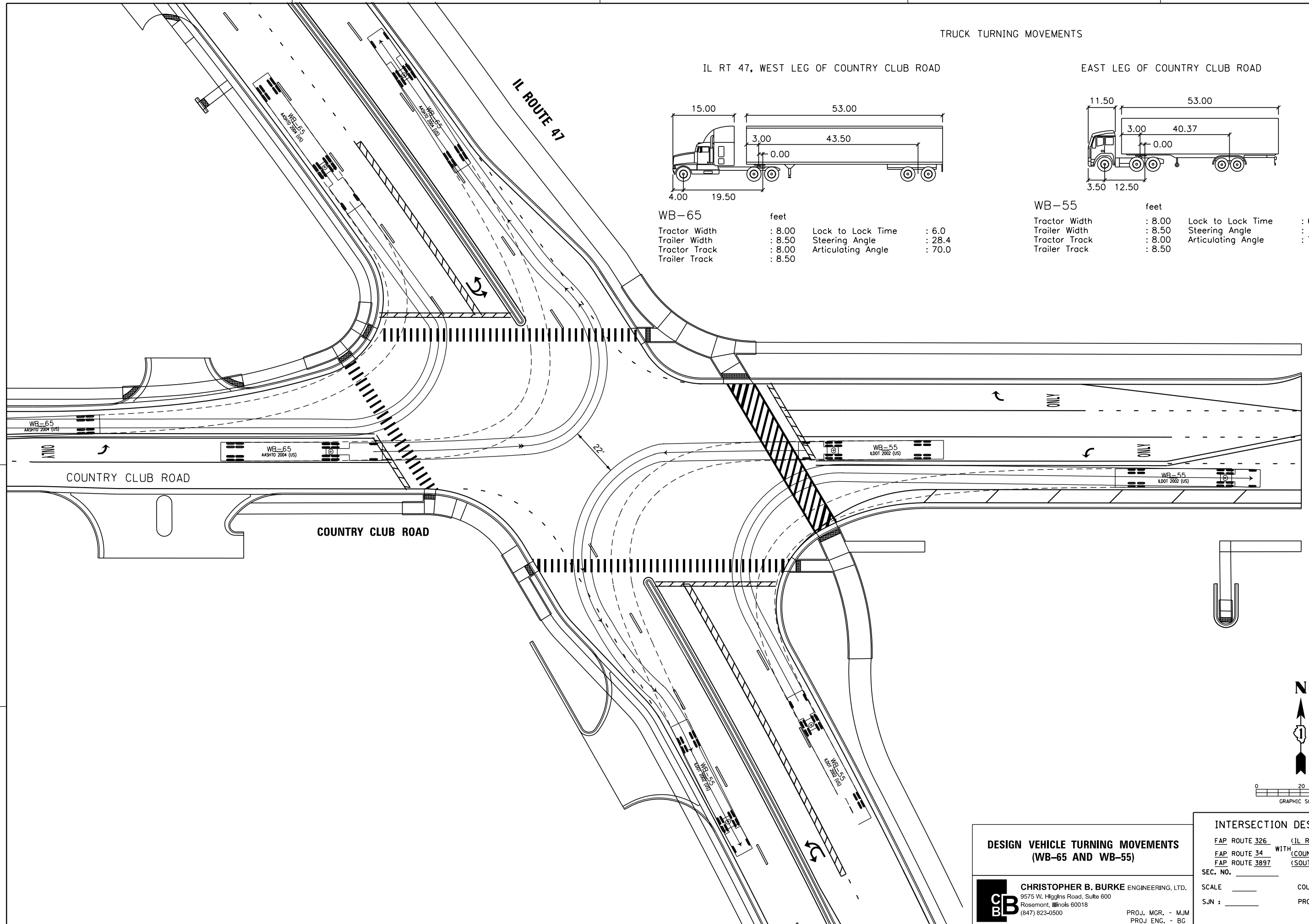
EAST LEG OF COUNTRY CLUB ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



**DESIGN VEHICLE TURNING MOVEMENTS
(WB-65 AND WB-55)**

CB CHRISTOPHER B. BURKE ENGINEERING, LTD.
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

PROJ. MGR. - MJM
 PROJ. ENG. - BG

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 34 WITH (COUNTRY CLUB ROAD)
 FAP ROUTE 3897 (SOUTH STREET)

SEC. NO. _____ COUNTY MCHENRY
 SCALE _____ PROJ. NO. _____
 SJN : _____ I.D.S. SHEET 5 OF 5

ROUNDABOUT CAPACITY DESIGN STUDY

PROGRAM USED SIDRA VERSION 7.0 AREA _____ PEAK HOUR FACTOR 0.92 (AM) 0.92 (PM)
 INTERSECTION CONTROL DELAY A.M. 7.4 SECONDS P.M. 8.8 SECONDS
 INTERSECTION LEVEL OF SERVICE A.M. A P.M. A

APPROACH	NWB RTE IL 47			SEB RTE IL 47			NEB JUDD STREET			SWB IRVING AVENUE		
LANE GROUP	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
2040 30TH HOUR TRAFFIC	A.M. 75	750	515	35	705	40	25	90	145	400	100	15
	P.M. 165	900	660	45	885	30	15	150	130	400	45	10
ENTRY FLOW RATE v_i (vph)	A.M. 34	691	39	34	691	39	25	90	145	396	99	15
	P.M. 162	882	647	44	867	29	15	150	130	396	45	10
PED/HOUR CROSSING THE APPROACH	A.M. 0			0			0			0		
	P.M. 0			1			6			0		
LANE MOVEMENTS	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
ENTRY FLOW RATE v_i (vph)	A.M. 82	815	560	38	766	43	27	98	158	435	109	16
	P.M. 179	978	717	49	962	33	16	163	141	435	49	11
LANE CAPACITY c_i (vph)	A.M. 157	1565	1075	80	1602	91	60	216	348	1167	292	44
	P.M. 252	1372	1006	81	1582	54	28	276	239	1008	113	25
x_i (v_i/c_i RATIO)	A.M. 0.52	0.52	0.52	0.48	0.48	0.48	0.45	0.45	0.45	0.37	0.37	0.37
	P.M. 0.71	0.71	0.71	0.61	0.61	0.61	0.59	0.59	0.59	0.43	0.43	0.43
95% QUEUE LENGTH (FEET)	A.M. 114	118	118	72	73	73	60	60	60	52	52	52
	P.M. 220	220	209	113	116	116	89	89	89	69	69	69
LANE DELAY, d (SEC)	A.M. 11.2	4.8	4.7	13.2	7.0	6.7	15.5	9.2	9.2	13.9	7.3	7.3
	P.M. 12.9	6.2	5.6	14.7	8.4	8.1	17.8	11.6	11.6	15.9	9.1	9.1
LANE LEVEL OF SERVICE	A.M. B	A	A	B	A	A	C	A	A	B	A	A
	P.M. B	A	A	B	A	A	C	B	B	C	A	A
APPROACH CONTROL DELAY, d (SEC)	A.M. 5.1			7.3			9.8			12.4		
	P.M. 6.6			8.7			11.9			15.1		
APPROACH LEVEL OF SERVICE	A.M. A			A			B			B		
	P.M. A			A			B			C		

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:
 F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: EASTWOOD DR. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 20,700 VPD. DESIGN YEAR ADT: 28,500 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

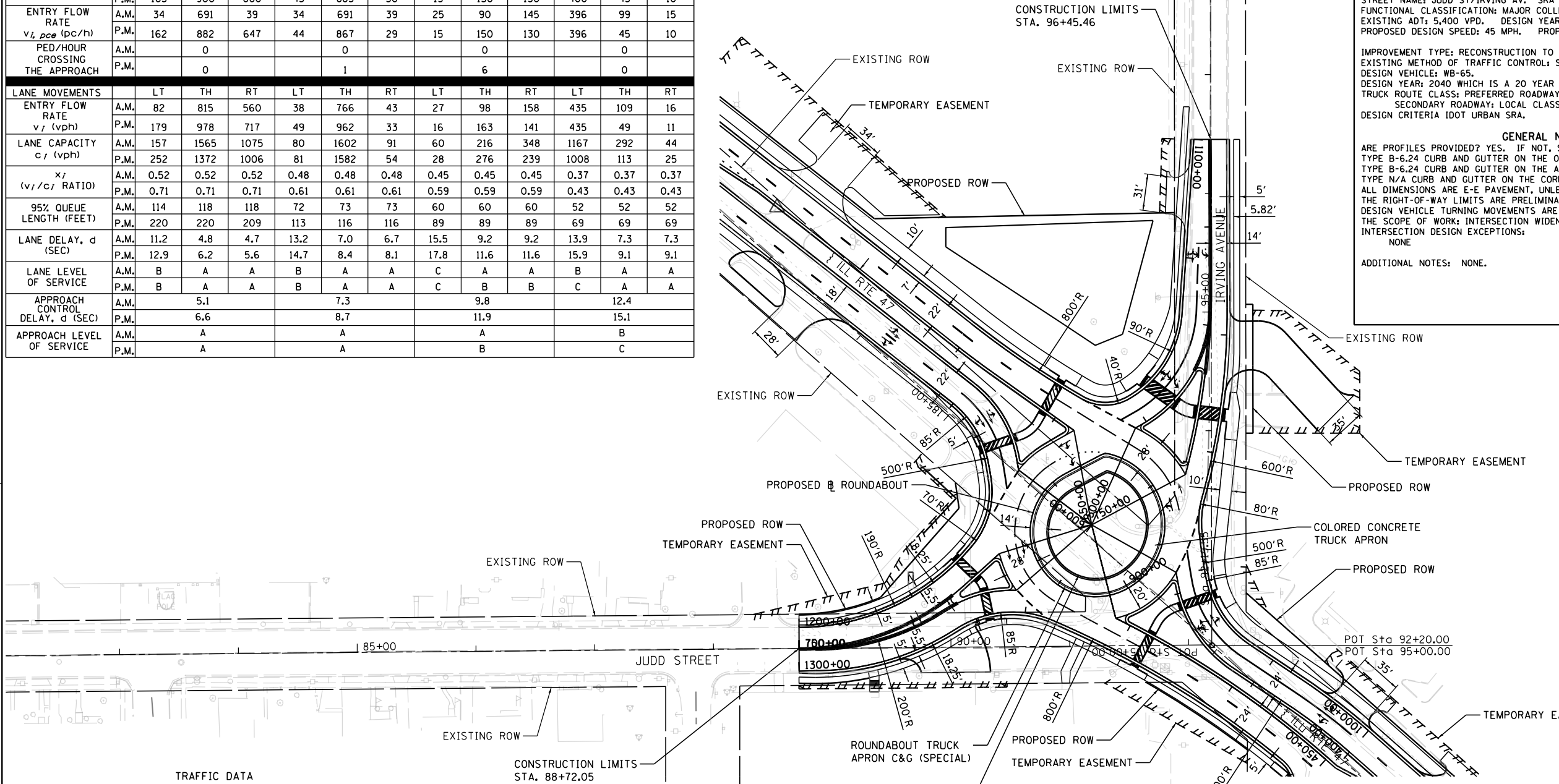
SECONDARY ROUTE:
 F.A. ROUTE NUMBER: 9-40. MARKED ROUTE NUMBER: JUDD ST/IRVING AV.
 STREET NAME: JUDD ST/IRVING AV. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR. OSOW DESIGN? N
 EXISTING ADT: 5,400 VPD. DESIGN YEAR ADT: 7,500 VPD.
 PROPOSED DESIGN SPEED: 45 MPH. PROPOSED POSTED SPEED: 40 MPH.

IMPROVEMENT TYPE: RECONSTRUCTION TO ROUNDABOUT. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: ROUNDABOUT.
 DESIGN VEHICLE: WB-65.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE CLASS: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: LOCAL CLASS II.
 DESIGN CRITERIA IDOT URBAN SRA.

GENERAL NOTES

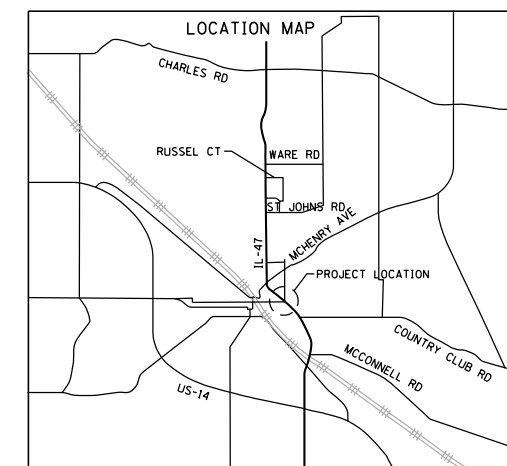
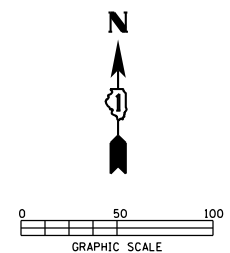
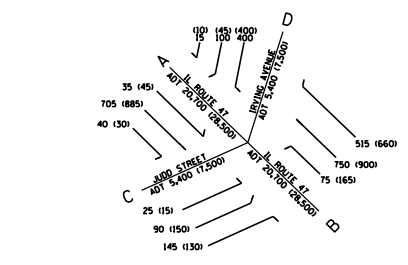
ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.24 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE N/A CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED.
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: INTERSECTION WIDENING AND RECONSTRUCTION TO ROUNDABOUT.
 INTERSECTION DESIGN EXCEPTIONS:
 NONE
 ADDITIONAL NOTES: NONE.

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 USER NAME = MattC



TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2040 AM/PM	YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.
AD (L)	4	14	5.6	5.6	775/221	35	45
AB (T)	477	560	5.6	5.6	48/58	705	885
AC (R)	7	13	5.6	5.6	471/131	40	30
BC (L)	57	92	6.1	6.1	32/79	75	165
BA (T)	529	680	6.1	6.1	42/32	750	900
BD (R)	261	296	6.1	6.1	97/123	515	660
CA (L)	9	10	1.5	1.5	178/50	25	15
CD (T)	39	68	1.5	1.5	131/121	90	150
CB (R)	85	103	1.5	1.5	71/26	145	130
DB (L)	292	259	4.1	4.1	37/54	400	400
DC (T)	69	30	4.1	4.1	44/50	100	45
DA (R)	3	6	4.1	4.1	400/67	15	10
TOTAL A	1077	1365	5.6	5.6	46/38	1570	1885
TOTAL B	1877	2183	6.1	6.1	38/44	2590	3140
TOTAL C	266	316	1.5	1.5	79/69	475	535
TOTAL D	668	673	4.1	4.1	73/95	1155	1310



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 WITH (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY KYLE HENDERSON, P.E. 12/10/2018

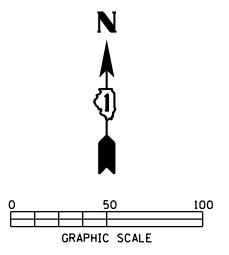
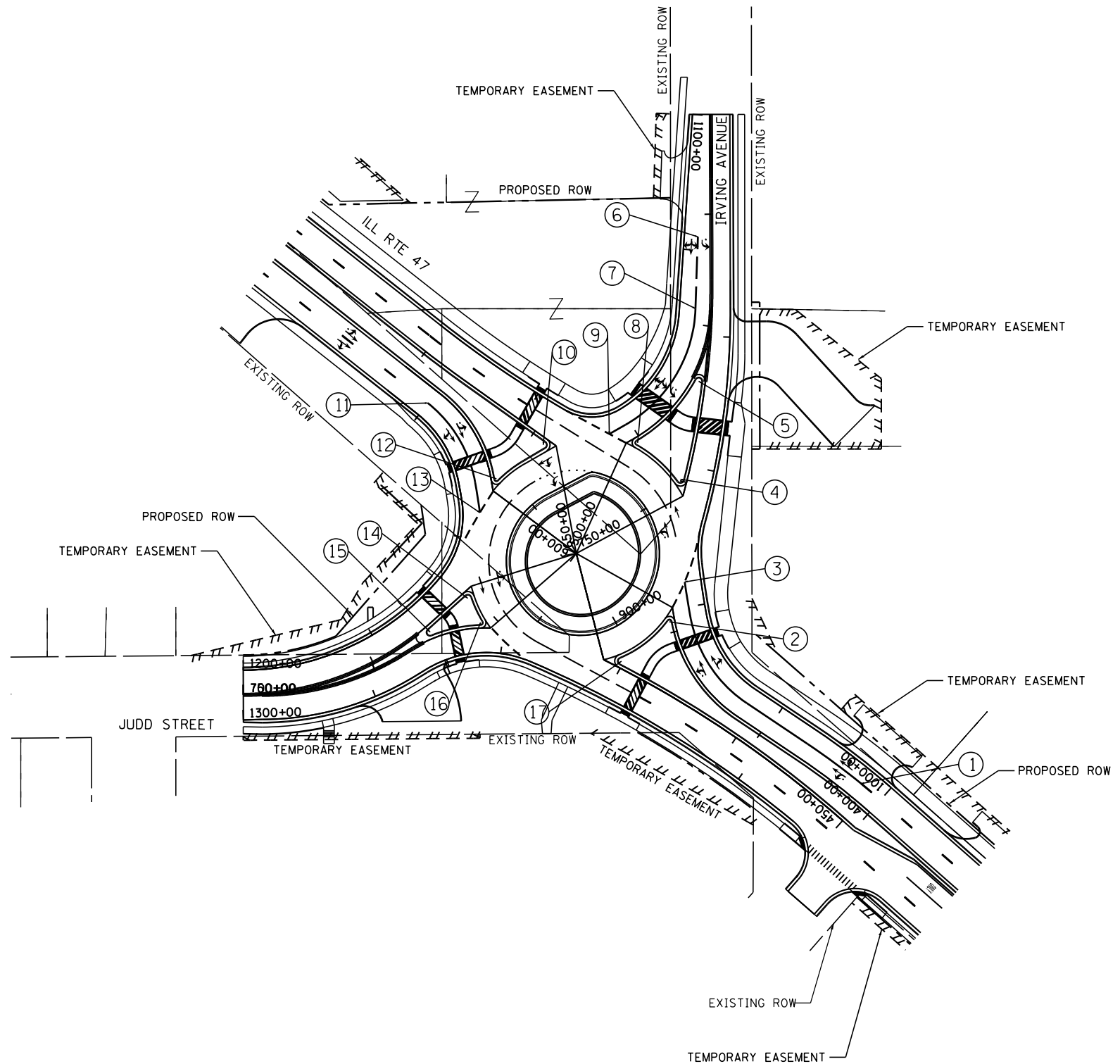
SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER _____ DATE _____
 SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER _____ DATE _____
 SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER _____ DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER _____ DATE _____

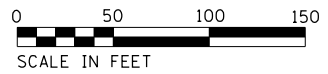
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 BDE-9908

PLOT DATE = 12/27/2018
 FILE NAME = S:\JLD\6390--6399\6346\01A\Microstation\CAD00 Sheets\01812345-ah+rd+Judd+Points.dgn
 PLOT SCALE = 100.0000 / in.
 USER NAME = MattC

DATA TABLE					
NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
1		400+18.3	12.0	RT	--
2	CC	402+07.8	4.0	LT	4'
3		402+19.1	21.0	RT	--
4	CC	751+01.2	5.0	LT	5'
5	CC	751+75.6	5.0	LT	5'
6		752+83.3	9.9	LT	--
7		752+29.8	11.5	LT	--
8	CC	500+96.9	4.0	RT	4'
9		500+89.5	14.1	LT	--
10	CC	650+89.1	5.0	LT	5'
11		601+64.0	11.0	LT	--
12	CC	600+85.3	4.0	LT	4'
13		600+75.2	18.7	LT	--
14	CC	751+84.4	5.0	RT	5'
15	CC	751+47.8	5.0	RT	5'
16	CC	701+85.3	4.0	RT	4'
17	CC	452+01.5	5.0	RT	5'



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 2 OF 16



PROP. CURVE RAB_JUD_WB_RT-1
PI STA. = 1101+94.87
Δ = 55° 55' 51" (RT)
D = 63° 39' 43"
R = 90.00'
T = 47.78'
L = 87.86'
E = 11.90'
P.C. STA. = 1101+47.09
P.T. STA. = 1102+34.94

PROP. CURVE RAB_JUD_WB_RT-2
PI STA. = 1102+58.26
Δ = 60° 28' 31" (RT)
D = 143° 14' 22"
R = 40.00'
T = 23.32'
L = 42.22'
E = 6.30'
P.C. STA. = 1102+34.94
P.T. STA. = 1102+77.16

PROP. CURVE RAB_JUD_WB_RT-3
PI STA. = 1103+33.38
Δ = 8° 02' 23" (RT)
D = 7° 09' 43"
R = 800.00'
T = 56.22'
L = 112.26'
E = 1.97'
P.C. STA. = 1102+77.16
P.T. STA. = 1103+89.42

PROP. CURVE RAB_JUD_NB_EX-1
PI STA. = 651+84.45
Δ = 2° 48' 13" (RT)
D = 6° 58' 13"
R = 822.00'
T = 20.12'
L = 40.22'
E = 0.25'
P.C. STA. = 651+64.33
P.T. STA. = 652+04.55

PROP. CURVE RAB_JUD_CENT-1
PI STA. = 901+53.56
Δ = 136° 20' 52" (LT)
D = 93° 09' 50"
R = 61.50'
T = 153.56'
L = 146.35'
E = 103.92'
P.C. STA. = 900+00.00
P.T. STA. = 901+46.35

PROP. CURVE RAB_JUD_CENT-2
PI STA. = 901+50.15
Δ = 41° 36' 45" (LT)
D = 572° 57' 28"
R = 10.00'
T = 3.80'
L = 7.26'
E = 0.70'
P.C. STA. = 901+46.35
P.T. STA. = 901+53.62

PROP. CURVE RAB_JUD_CENT-3
PI STA. = 902+43.57
Δ = 91° 01' 12" (LT)
D = 104° 10' 27"
R = 55.00'
T = 55.99'
L = 87.37'
E = 23.48'
P.C. STA. = 901+87.58
P.T. STA. = 902+74.96

PROP. CURVE RAB_JUD_CENT-4
PI STA. = 903+30.95
Δ = 91° 01' 12" (LT)
D = 104° 10' 27"
R = 55.00'
T = 55.99'
L = 87.37'
E = 23.48'
P.C. STA. = 902+74.96
P.T. STA. = 903+62.33

PROP. CURVE RAB_JUD_SB_RT-1
PI STA. = 1200+90.06
Δ = 50° 43' 26" (LT)
D = 30° 09' 20"
R = 190.00'
T = 90.06'
L = 168.21'
E = 20.27'
P.C. STA. = 1200+00.00
P.T. STA. = 1201+68.21

PROP. CURVE RAB_JUD_SB_RT-2
PI STA. = 1201+99.27
Δ = 47° 51' 30" (LT)
D = 81° 51' 04"
R = 70.00'
T = 31.06'
L = 58.47'
E = 6.58'
P.C. STA. = 1201+68.21
P.T. STA. = 1202+26.68

PROP. CURVE RAB_JUD_SB_RT-3
PI STA. = 1202+33.50
Δ = 1° 33' 49" (LT)
D = 11° 27' 34"
R = 499.99'
T = 6.82'
L = 13.64'
E = 0.05'
P.C. STA. = 1202+26.68
P.T. STA. = 1202+40.32

PROP. CURVE RAB_JUD_SB_RT-4
PI STA. = 1202+72.46
Δ = 41° 25' 32" (LT)
D = 67° 24' 23"
R = 85.00'
T = 32.14'
L = 61.46'
E = 5.87'
P.C. STA. = 1202+40.32
P.T. STA. = 1203+01.78

PROP. CURVE RAB_JUD_SB_EN-1
PI STA. = 600+82.33
Δ = 1° 09' 57" (LT)
D = 10° 56' 04"
R = 524.00'
T = 5.33'
L = 10.66'
E = 0.03'
P.C. STA. = 600+76.99
P.T. STA. = 600+87.66

PROP. CURVE RAB_JUD_SB_EN-2
PI STA. = 601+25.21
Δ = 41° 09' 51" (LT)
D = 57° 17' 45"
R = 100.00'
T = 37.55'
L = 71.84'
E = 6.82'
P.C. STA. = 600+87.66
P.T. STA. = 601+59.50

PROP. CURVE RAB_JUD_SB_EX-1
PI STA. = 451+07.44
Δ = 14° 51' 30" (LT)
D = 6° 57' 12"
R = 824.00'
T = 107.44'
L = 213.68'
E = 6.98'
P.C. STA. = 450+00.00
P.T. STA. = 452+13.68

PROP. CURVE PR_JUDD_EB_EN-1
PI STA. = 700+69.80
Δ = 31° 19' 20" (LT)
D = 28° 38' 52"
R = 200.00'
T = 56.07'
L = 109.34'
E = 7.71'
P.C. STA. = 700+13.73
P.T. STA. = 701+23.06

PROP. CURVE PR_JUDD_EB_EN-2
PI STA. = 701+37.03
Δ = 5° 06' 21" (RT)
D = 55° 29' 32"
R = 103.25'
T = 4.60'
L = 9.20'
E = 0.10'
P.C. STA. = 701+32.43
P.T. STA. = 701+41.63

PROP. CURVE PR_JUDD_EB_EN-3
PI STA. = 701+67.71
Δ = 28° 21' 08" (RT)
D = 55° 29' 32"
R = 103.25'
T = 26.08'
L = 51.09'
E = 3.24'
P.C. STA. = 701+41.63
P.T. STA. = 701+92.72

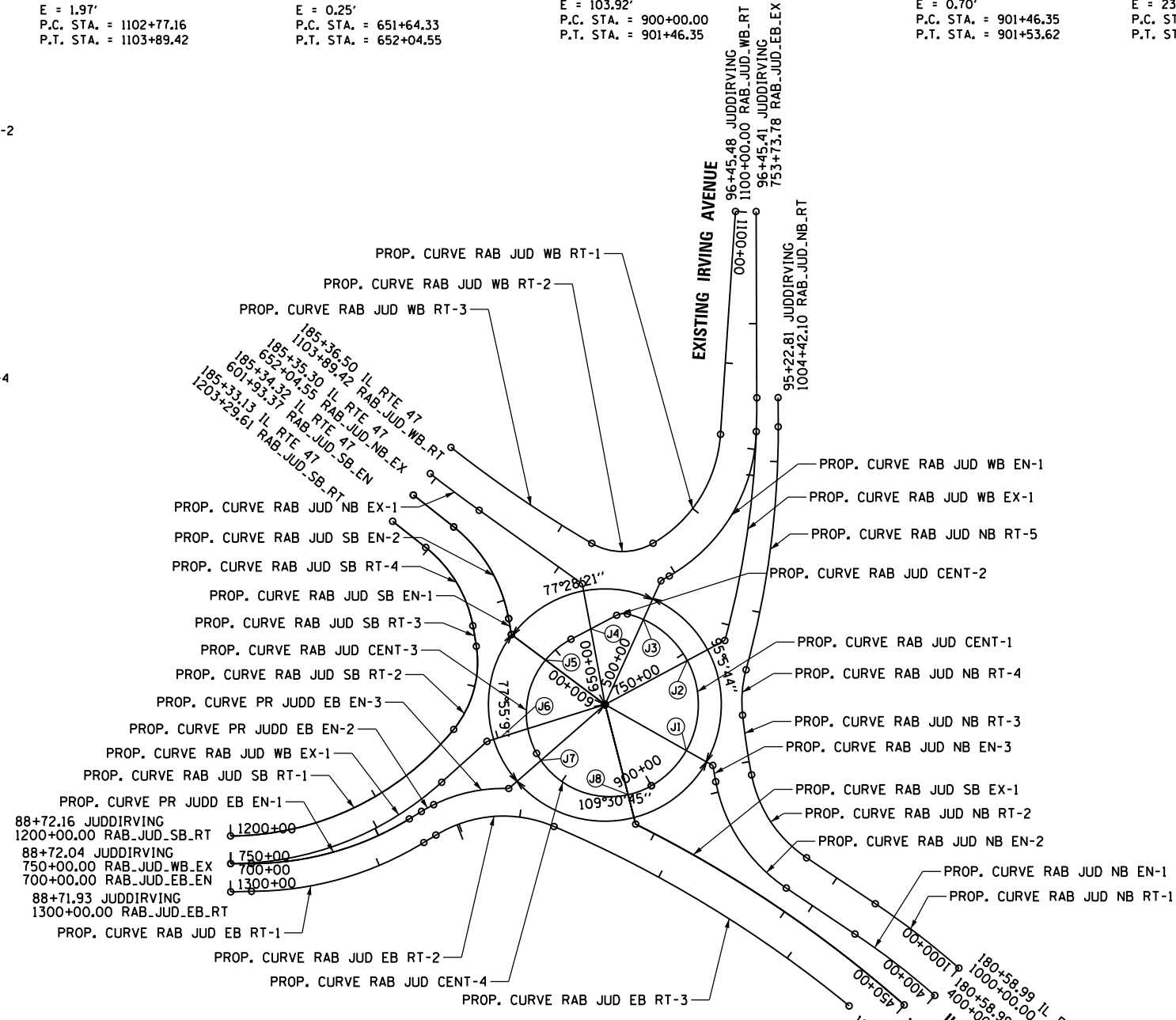
STATION EQUATION

	RAB	ROAD	ALIGN
(J1)	900+33.08	402+37.89	RAB_JUD_NB_EN
(J2)	900+94.89	750+61.50	RAB_JUD_EB_EX
(J3)	901+35.15	752+73.80	RAB_JUD_WB_EN
(J4)	901+72.90	650+50.75	RAB_JUD_NB_EX
(J5)	902+09.41	600+48.97	RAB_JUD_SB_EN
(J6)	902+57.60	752+20.58	RAB_JUD_WB_EX
(J7)	902+80.40	702+20.85	RAB_JUD_EB_EN
(J8)	903+45.88	452+33.69	RAB_JUD_SB_EX

PROP. CURVE RAB_JUD_EB_RT-1
PI STA. = 1300+74.92
Δ = 31° 19' 20" (LT)
D = 26° 15' 09"
R = 218.25'
T = 61.19'
L = 119.31'
E = 8.41'
P.C. STA. = 1300+13.73
P.T. STA. = 1301+33.04

PROP. CURVE RAB_JUD_EB_RT-2
PI STA. = 1301+86.29
Δ = 54° 36' 28" (RT)
D = 67° 24' 24"
R = 85.00'
T = 43.88'
L = 81.01'
E = 10.66'
P.C. STA. = 1301+42.41
P.T. STA. = 1302+23.42

PROP. CURVE RAB_JUD_EB_RT-3
PI STA. = 1303+38.25
Δ = 16° 20' 12" (RT)
D = 7° 09' 43"
R = 800.00'
T = 114.83'
L = 228.10'
E = 8.20'
P.C. STA. = 1302+23.42
P.T. STA. = 1304+51.52



PROP. CURVE RAB_JUD_NB_RT-3
PI STA. = 1002+11.07
Δ = 4° 33' 24" (RT)
D = 11° 27' 33"
R = 500.00'
T = 19.89'
L = 39.76'
E = 0.40'
P.C. STA. = 1001+91.18
P.T. STA. = 1002+30.94

PROP. CURVE RAB_JUD_NB_RT-1
PI STA. = 1000+34.80
Δ = 7° 35' 55" (LT)
D = 10° 56' 04"
R = 524.00'
T = 34.80'
L = 69.49'
E = 1.15'
P.C. STA. = 1000+00.00
P.T. STA. = 1000+69.49

PROP. CURVE RAB_JUD_NB_RT-2
PI STA. = 1001+59.43
Δ = 45° 20' 00" (RT)
D = 67° 24' 24"
R = 85.00'
T = 35.50'
L = 67.25'
E = 7.11'
P.C. STA. = 1001+23.93
P.T. STA. = 1001+91.18

PROP. CURVE RAB_JUD_NB_RT-4
PI STA. = 1002+46.18
Δ = 21° 34' 20" (RT)
D = 71° 37' 11"
R = 80.00'
T = 15.24'
L = 30.12'
E = 1.44'
P.C. STA. = 1002+30.94
P.T. STA. = 1002+61.06

PROP. CURVE RAB_JUD_NB_RT-5
PI STA. = 1003+42.50
Δ = 15° 27' 33" (LT)
D = 9° 32' 57"
R = 600.00'
T = 81.44'
L = 161.89'
E = 5.50'
P.C. STA. = 1002+61.06
P.T. STA. = 1004+22.95

PROP. CURVE RAB_JUD_WB_EX-1
PI STA. = 750+79.73
Δ = 41° 53' 55" (LT)
D = 27° 30' 47"
R = 208.25'
T = 79.73'
L = 152.29'
E = 14.74'
P.C. STA. = 750+00.00
P.T. STA. = 751+52.29

PROP. CURVE RAB_JUD_WB_EN-1
PI STA. = 501+59.39
Δ = 58° 18' 45" (LT)
D = 50° 15' 34"
R = 114.00'
T = 63.60'
L = 116.02'
E = 16.54'
P.C. STA. = 500+95.79
P.T. STA. = 502+11.81

PROP. CURVE RAB_JUD_NB_EN-1
PI STA. = 400+33.20
Δ = 7° 35' 55" (LT)
D = 11° 27' 33"
R = 500.00'
T = 45.52'
L = 66.31'
E = 1.10'
P.C. STA. = 400+00.00
P.T. STA. = 400+66.31

PROP. CURVE RAB_JUD_NB_EN-2
PI STA. = 401+66.27
Δ = 45° 20' 00" (RT)
D = 52° 33' 54"
R = 109.00'
T = 45.52'
L = 86.24'
E = 9.12'
P.C. STA. = 401+20.74
P.T. STA. = 402+06.99

PROP. CURVE RAB_JUD_NB_EN-3
PI STA. = 402+12.44
Δ = 1° 11' 33" (RT)
D = 10° 56' 04"
R = 524.00'
T = 5.45'
L = 10.91'
E = 0.03'
P.C. STA. = 402+06.99
P.T. STA. = 402+17.89

**BASELINE
JUDD STREET / EXISTING IRVING AVENUE**

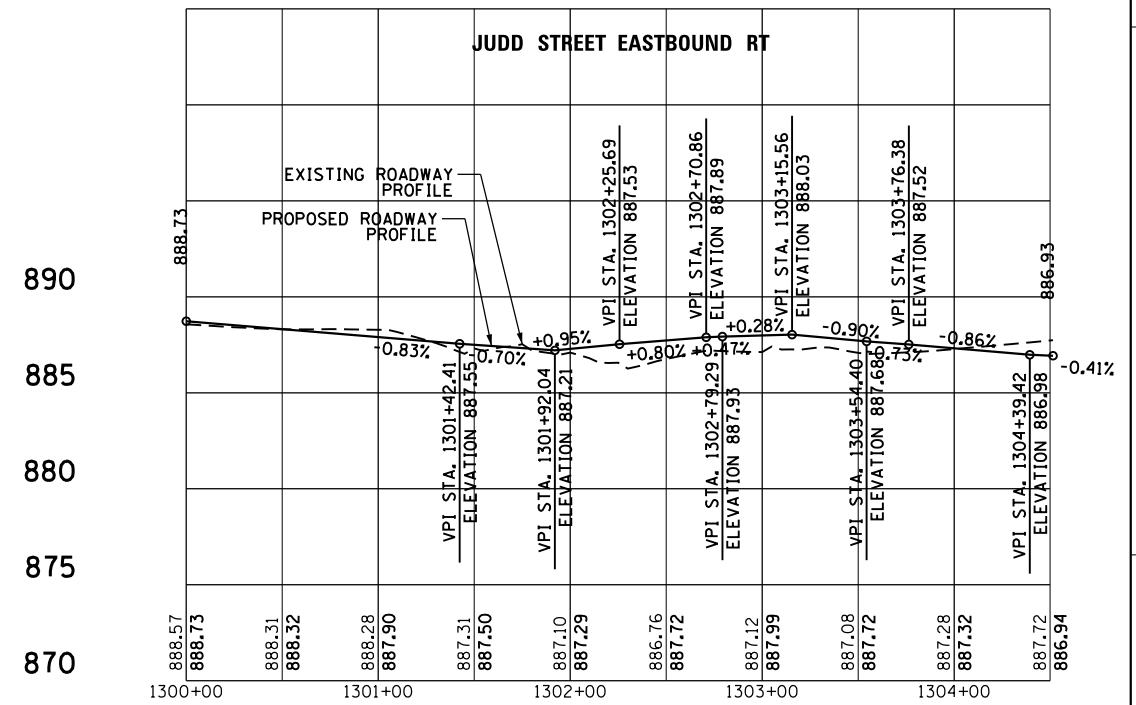
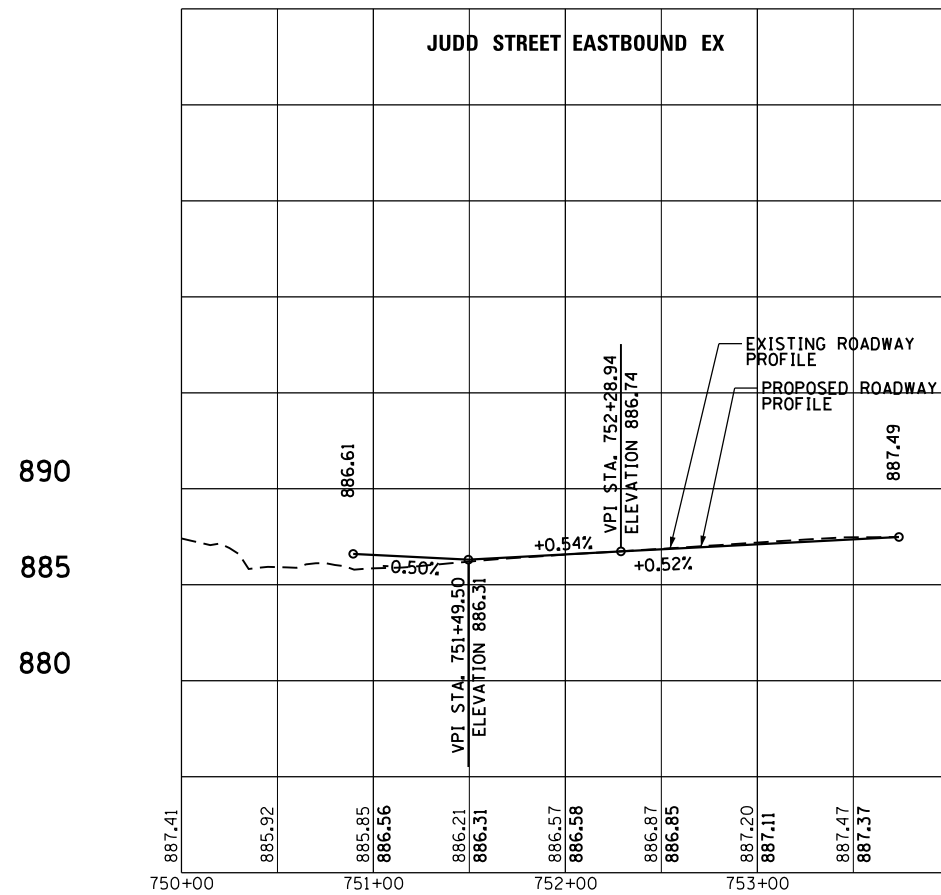
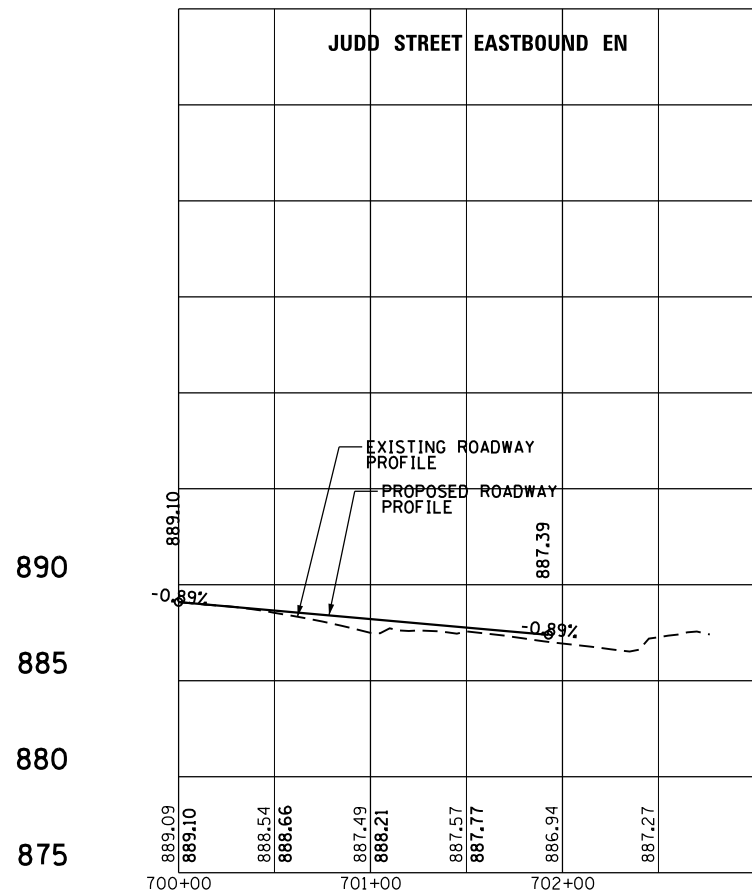
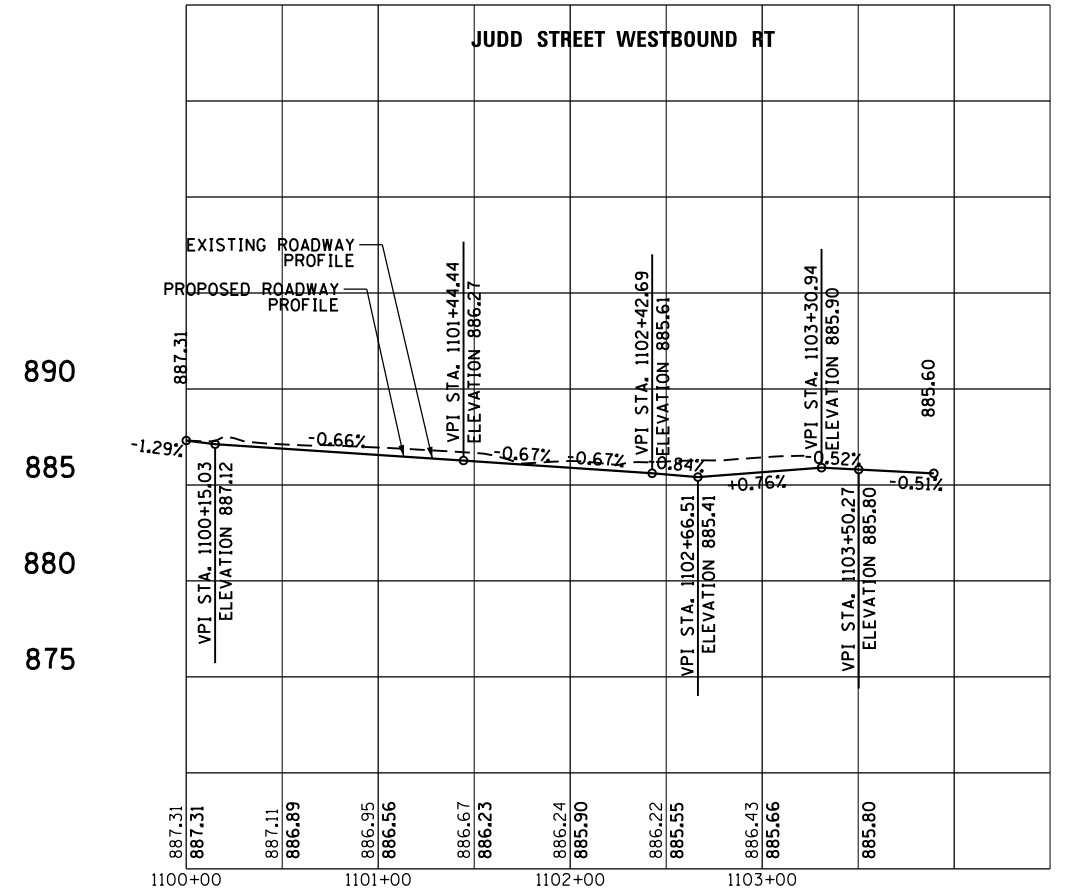
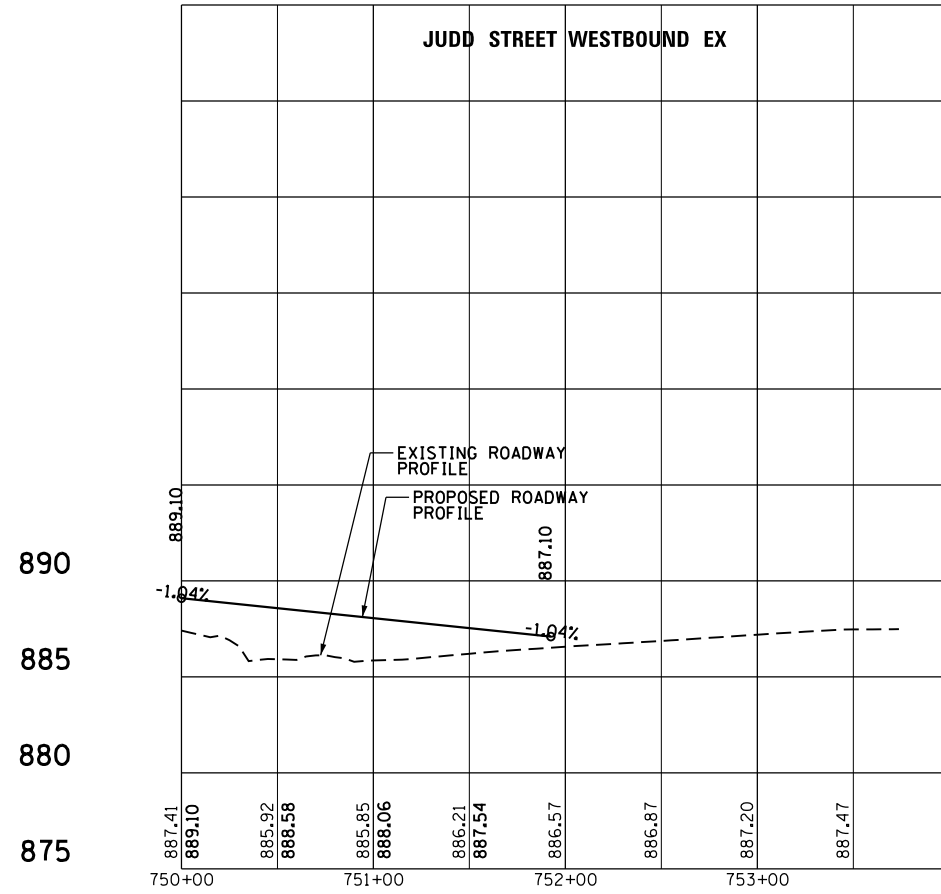
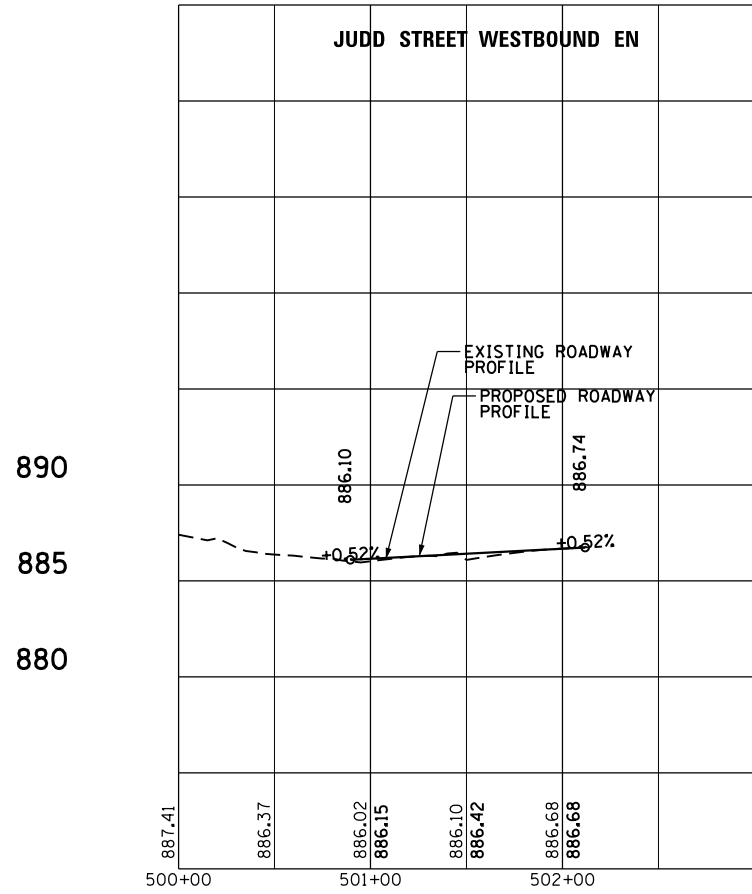
INTERSECTION DESIGN STUDY
FAP ROUTE 326 (ILLINOIS ROUTE 47)
ROUTE WITH JUDD STREET /
EXISTING IRVING AVENUE

SEC. NO. _____
SCALE 1"=50' COUNTY MCHENRY
SUN P-91-007-09 PROJ. NO. _____

PLOT DATE = 12/7/2018
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PLOT DATE = 8/21/2018
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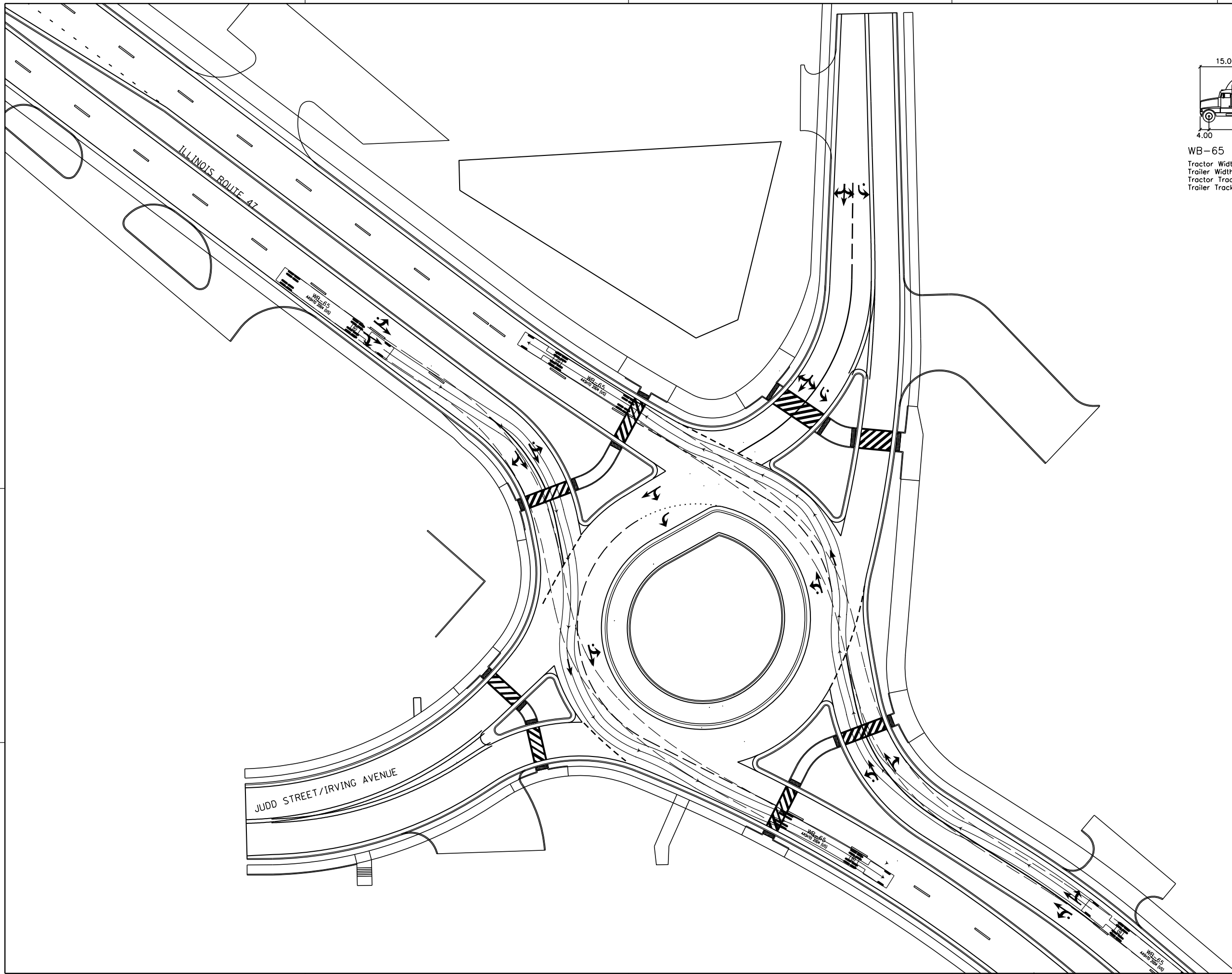
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 USER NAME = pmagnelli



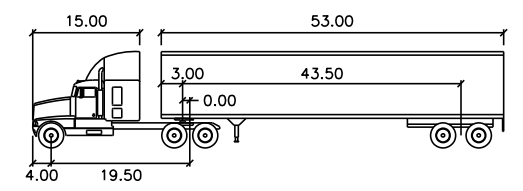
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH JUDD STREET / (EXISTING IRVING AVENUE)
 SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____
 I.D.S. SHEET 5 OF 16

**PROFILES
 WESTBOUND & EASTBOUND JUDD STREET**

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC



TRUCK THROUGH MOVEMENTS

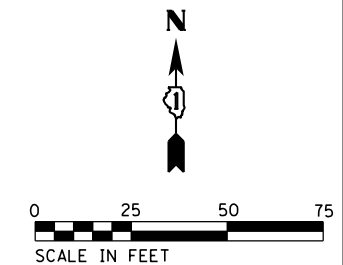
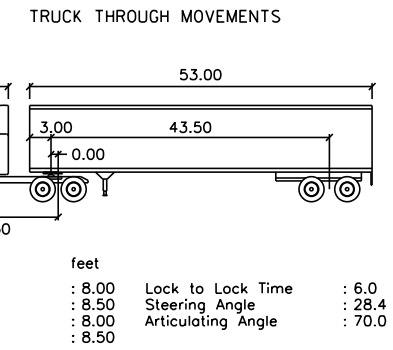
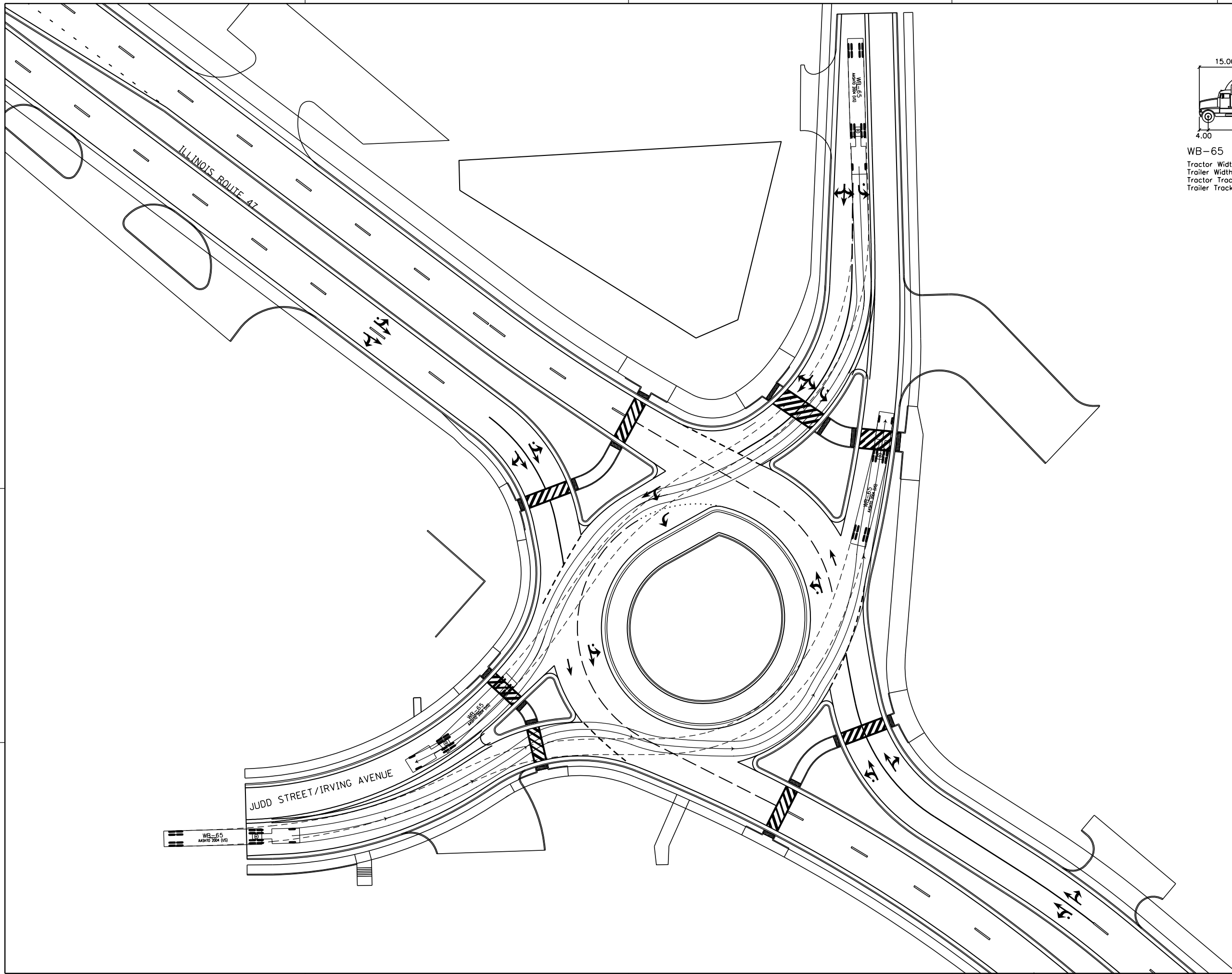


WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 6 OF 16

PLOT DATE = 12/27/2018
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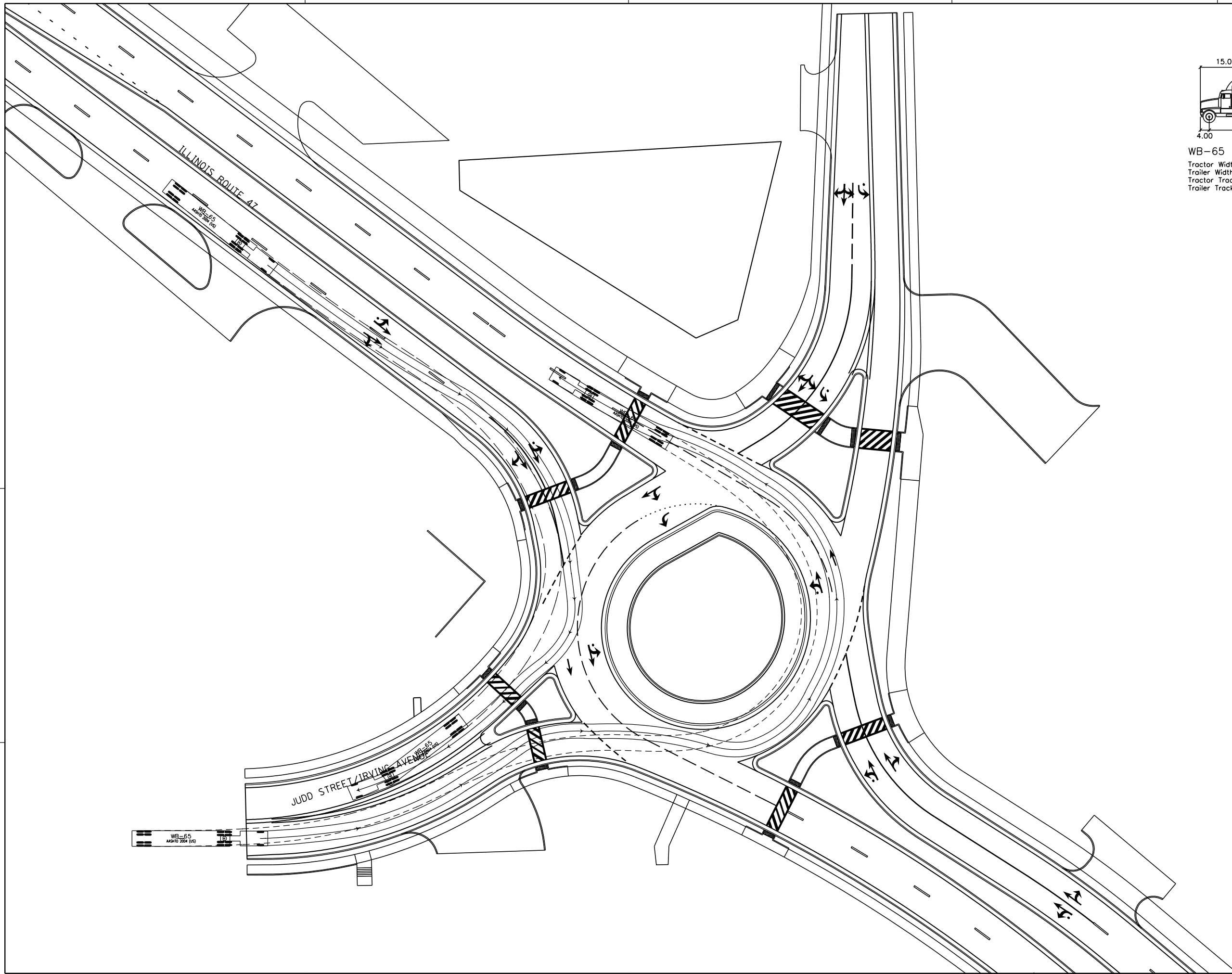


INTERSECTION DESIGN STUDY
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 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)

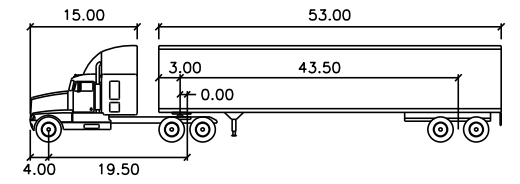
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 7 OF 16

PLOT DATE = 12/27/2018
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TRUCK TURNING MOVEMENTS

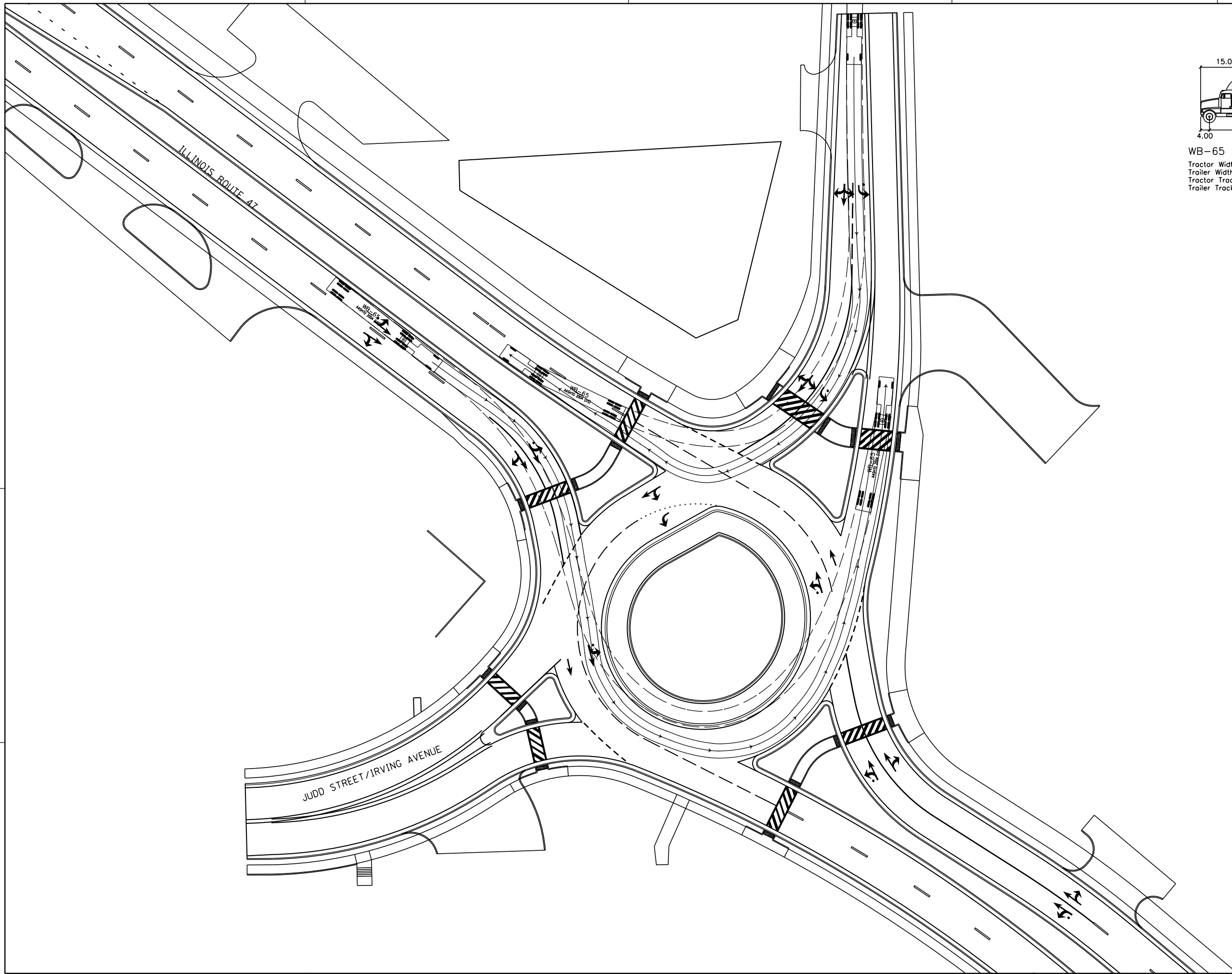


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

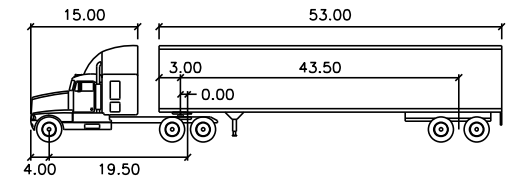


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 8 OF 16

PLOT DATE = 12/27/2018
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 USER NAME = MattC



TRUCK TURNING MOVEMENTS

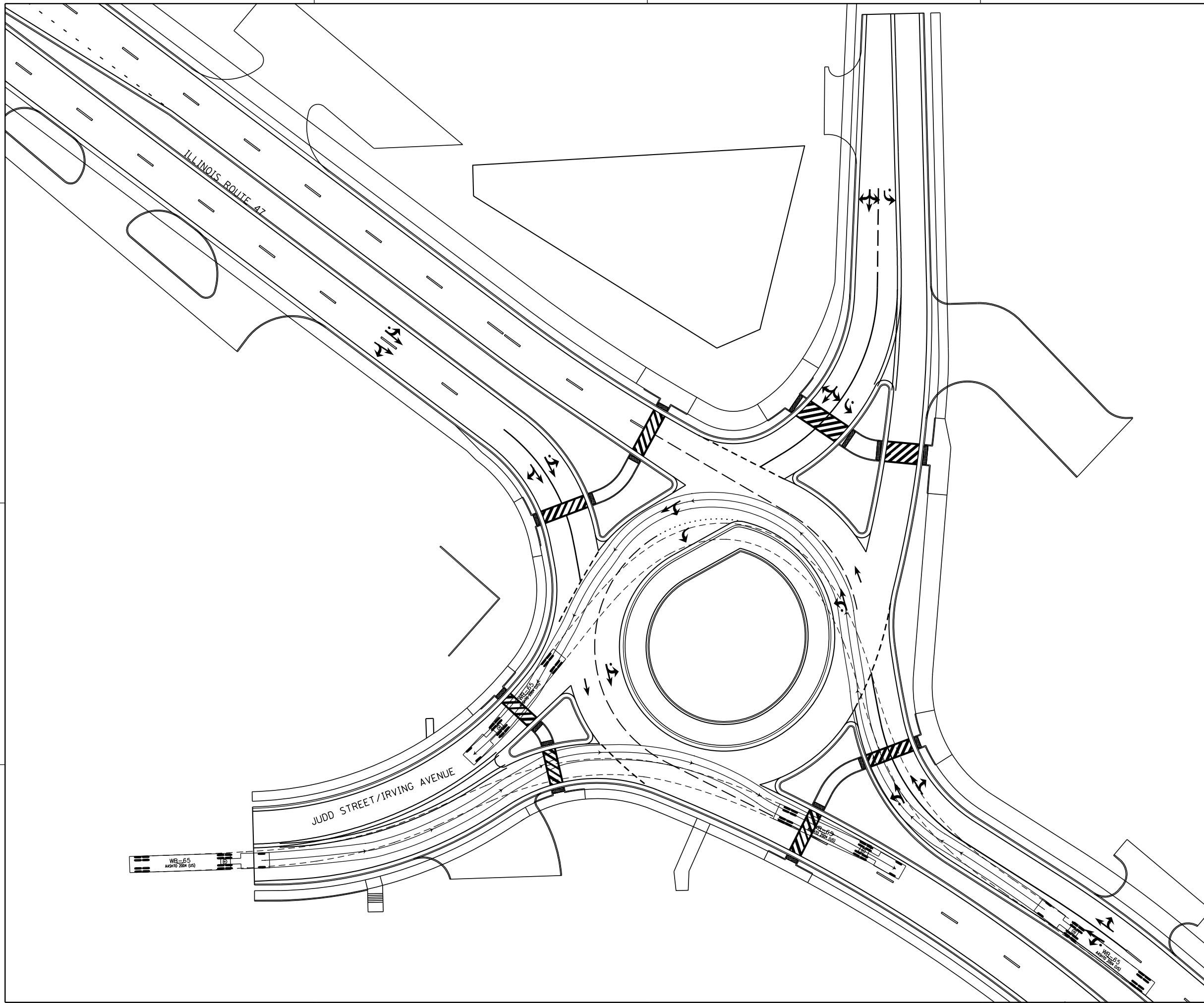


WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

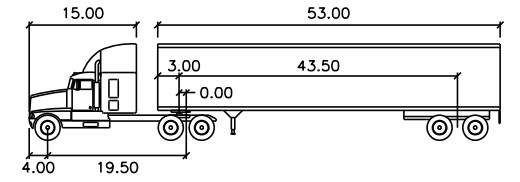


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 9 OF 16

PLOT DATE = 12/27/2018
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 USER NAME = MattC



TRUCK TURNING MOVEMENTS

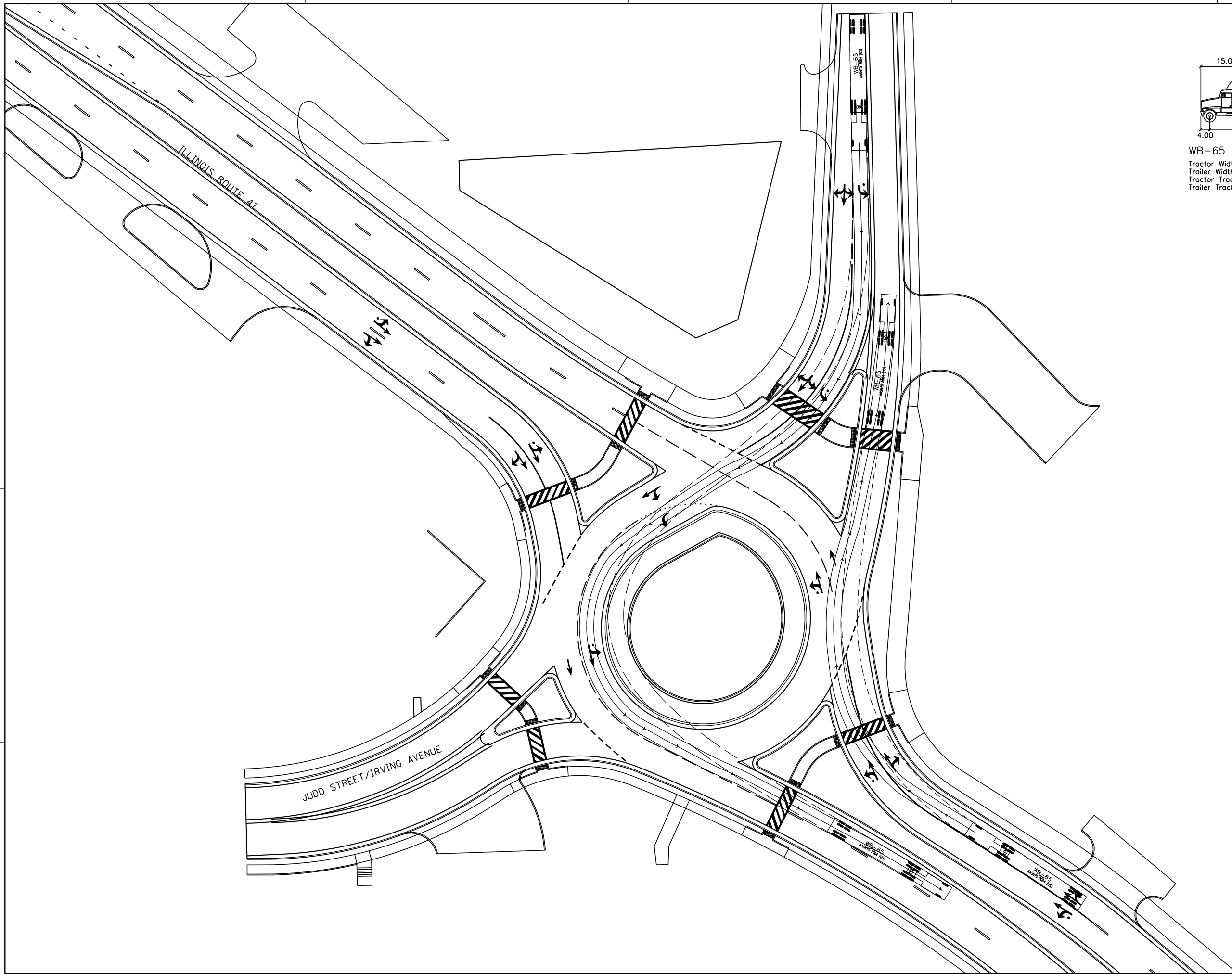


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

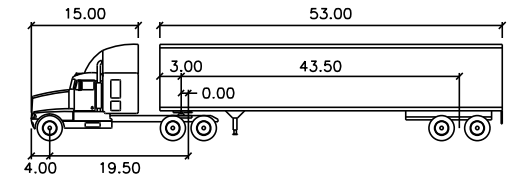


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 10 OF 16

PLOT DATE = 12/27/2018
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 USER NAME = MattC



TRUCK TURNING MOVEMENTS

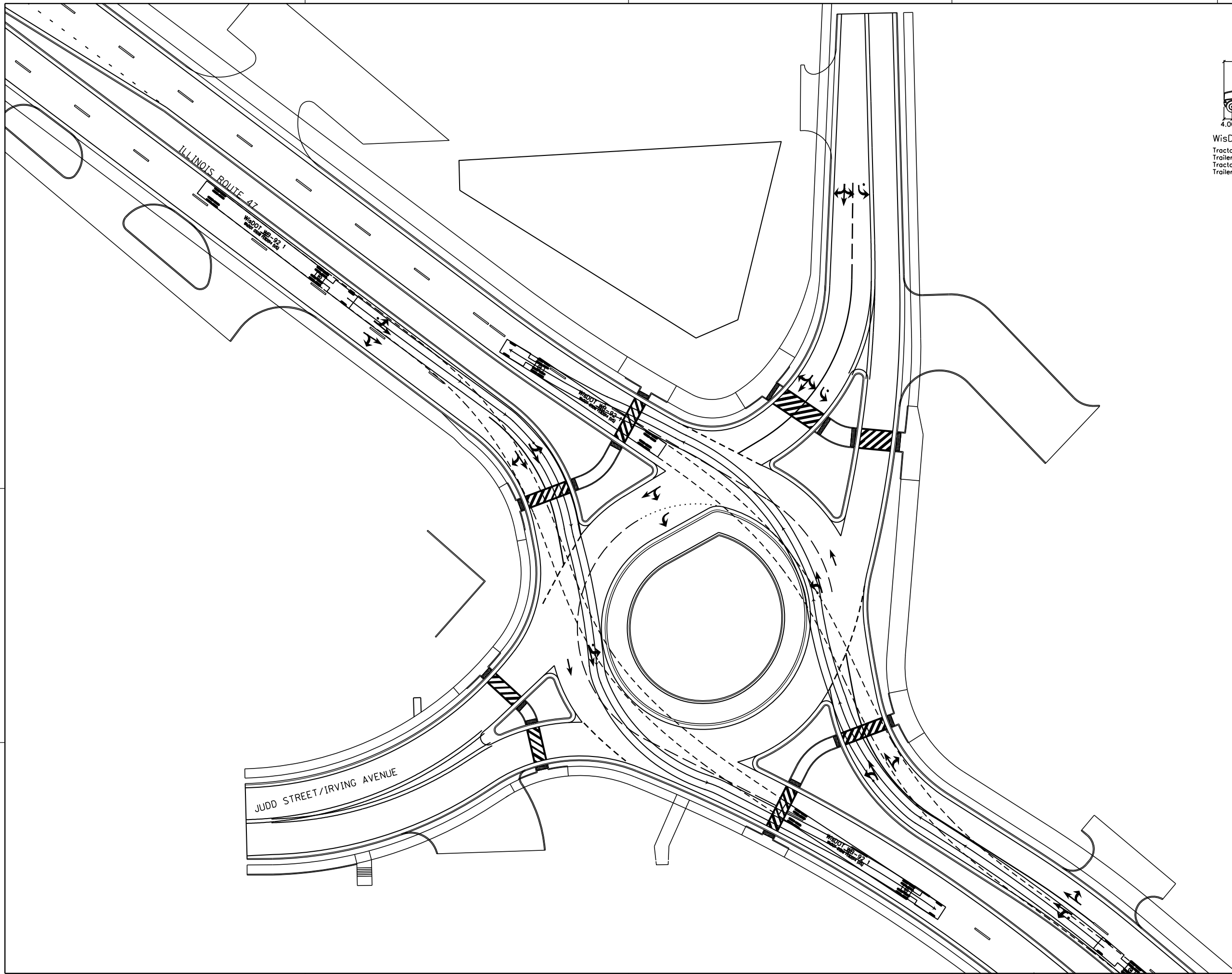


WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

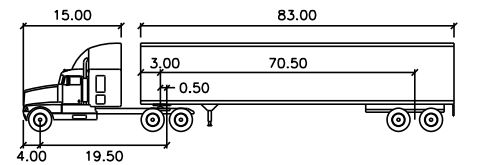


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 11 OF 16

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC



TRUCK THROUGH MOVEMENTS



WisDOT WB-92 1 feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		



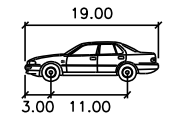
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 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 12 OF 16

PLOT DATE = 12/27/2018
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 USER NAME = MattC

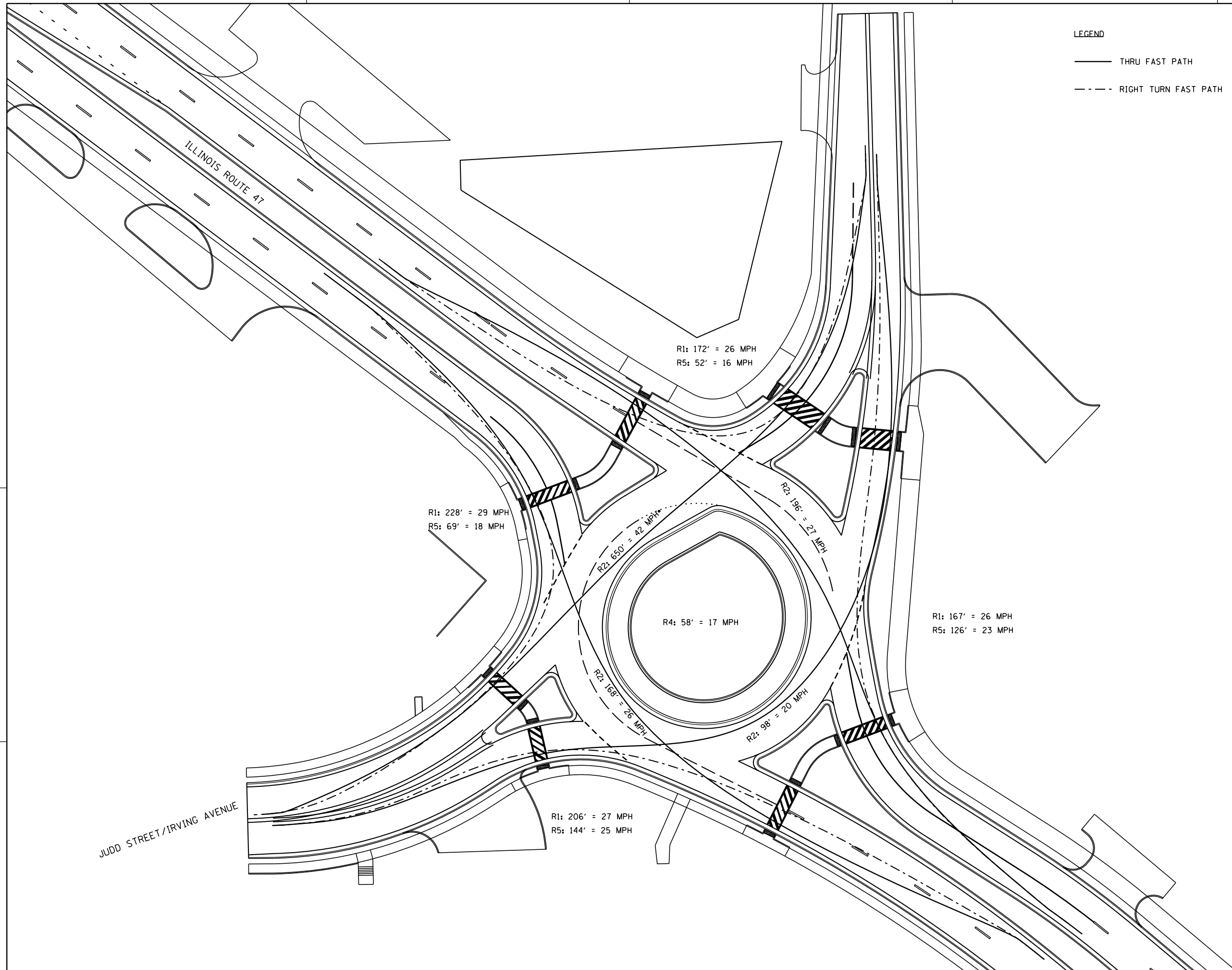
LEGEND

- THRU FAST PATH
- - - RIGHT TURN FAST PATH

PASSENGER CAR FAST PATH MOVEMENTS



P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



R1: 172' = 26 MPH
 R5: 52' = 16 MPH

R1: 228' = 29 MPH
 R5: 69' = 18 MPH

R4: 58' = 17 MPH

R1: 167' = 26 MPH
 R5: 126' = 23 MPH

R2: 650' = 42 MPH

R2: 196' = 21 MPH

R2: 168' = 26 MPH

R2: 98' = 20 MPH

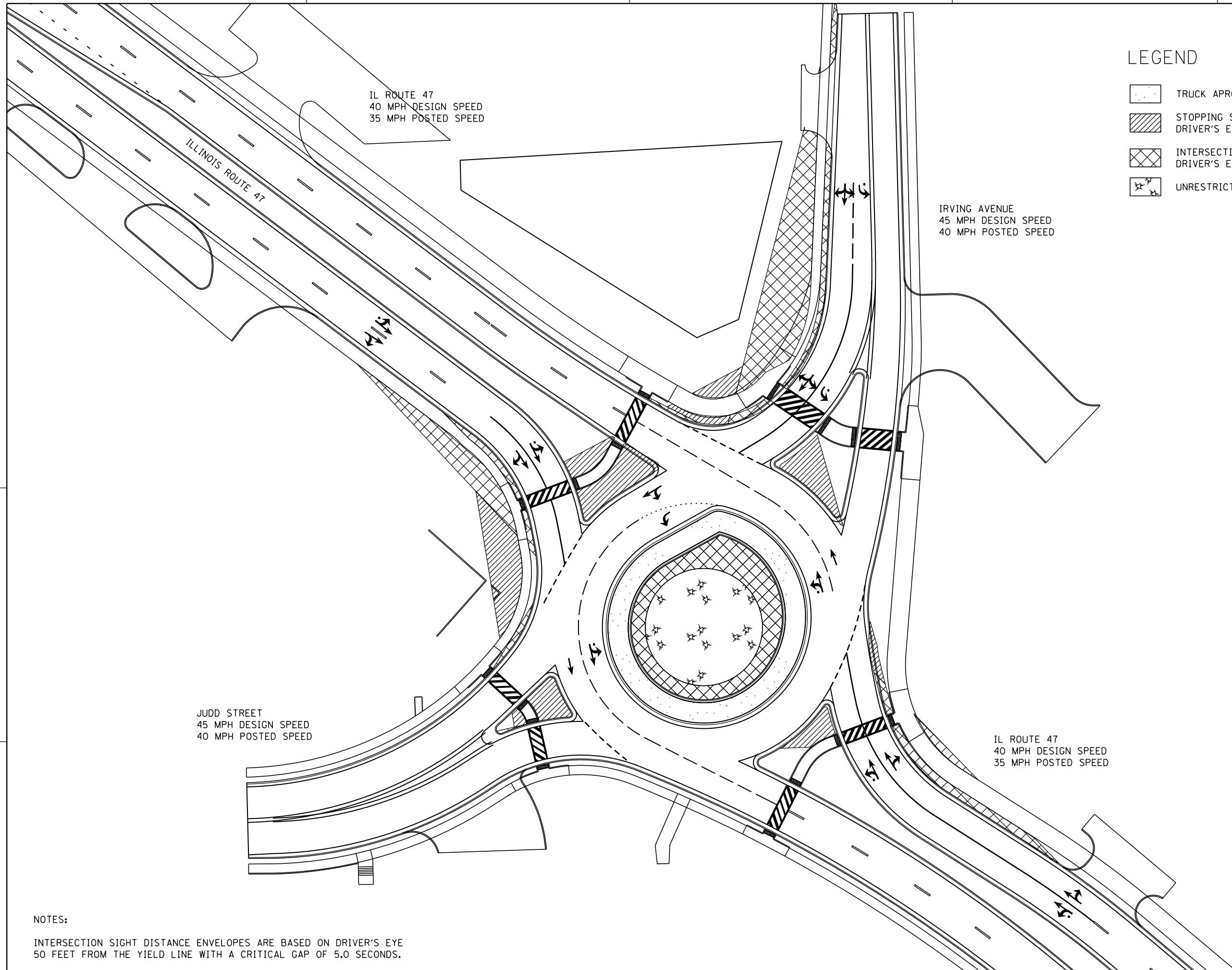
R1: 206' = 27 MPH
 R5: 144' = 25 MPH

• LIKELY NOT ACHIEVABLE WITH LOW ENTRY SPEED



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 13 OF 16

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000' / in.
 USER NAME = MattC







IL ROUTE 47
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

IRVING AVENUE
 45 MPH DESIGN SPEED
 40 MPH POSTED SPEED

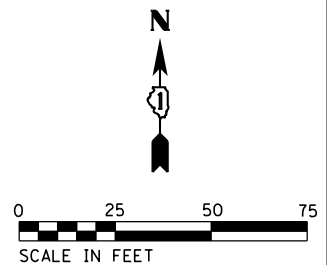
JUDD STREET
 45 MPH DESIGN SPEED
 40 MPH POSTED SPEED

IL ROUTE 47
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

LEGEND

-  TRUCK APRON
-  STOPPING SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 2.0'
-  INTERSECTION SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 3.5'
-  UNRESTRICTED AREA

NOTES:
 INTERSECTION SIGHT DISTANCE ENVELOPES ARE BASED ON DRIVER'S EYE
 50 FEET FROM THE YIELD LINE WITH A CRITICAL GAP OF 5.0 SECONDS.

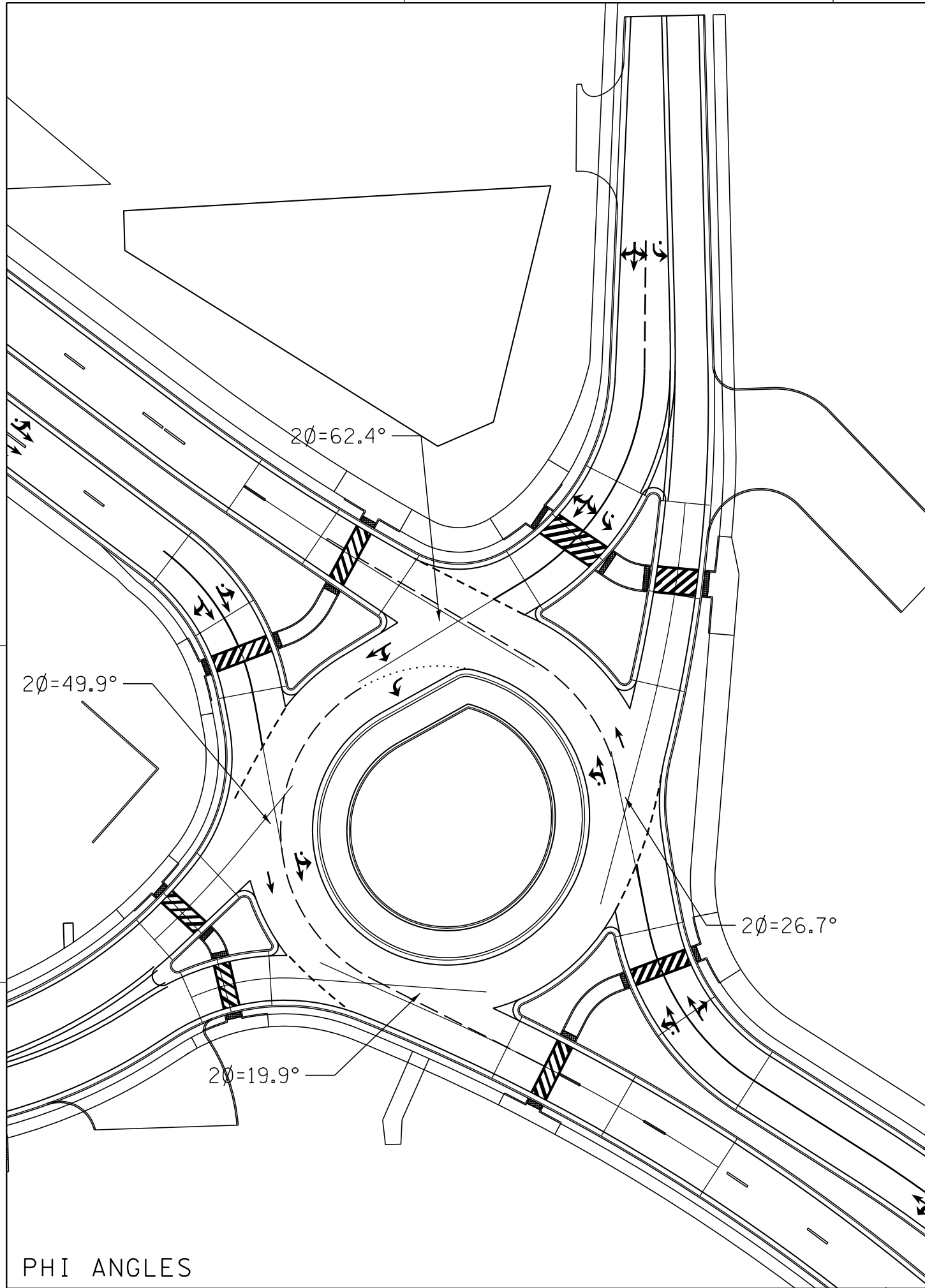


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)

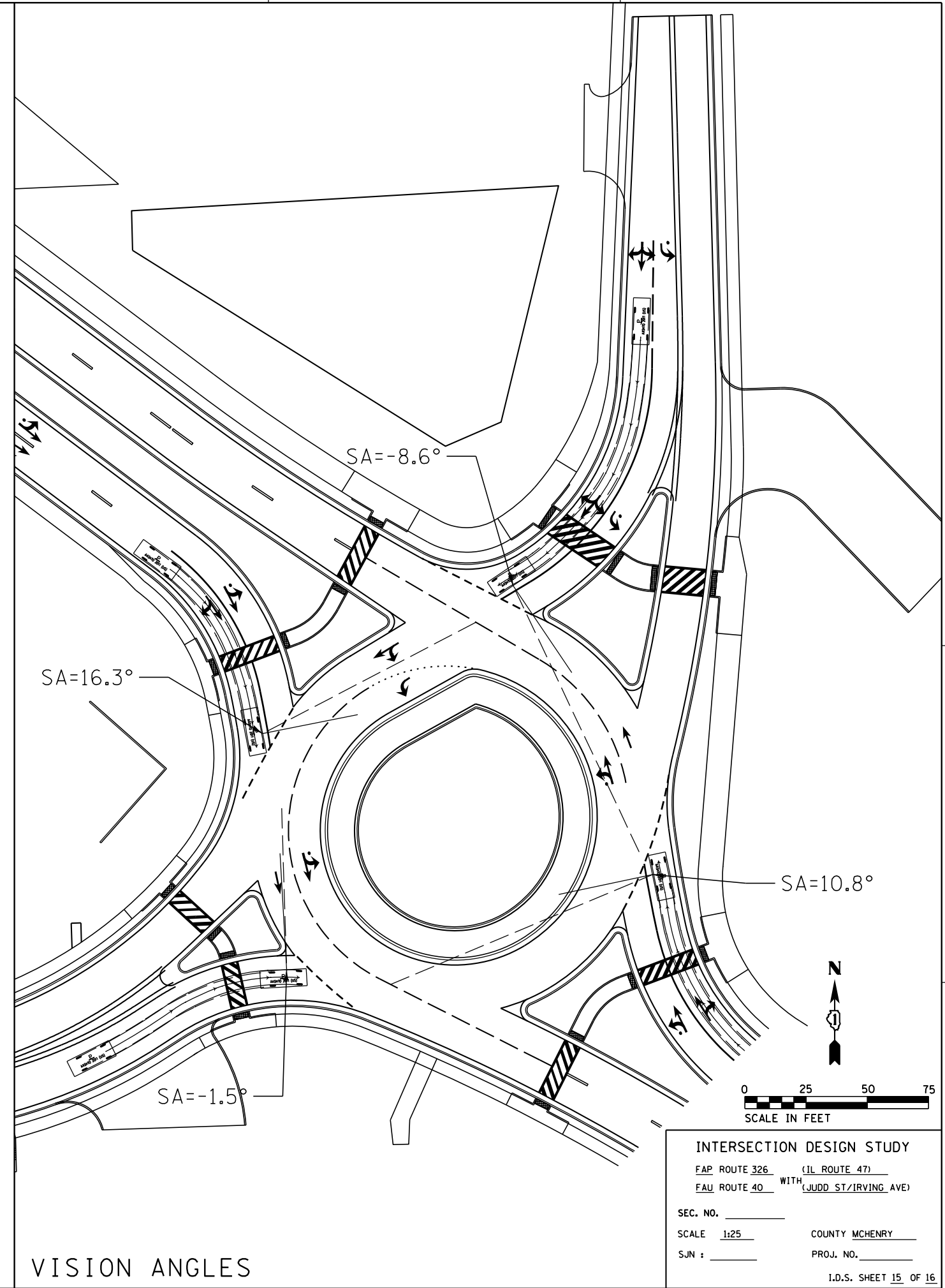
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 14 OF 16
 BDE-9908

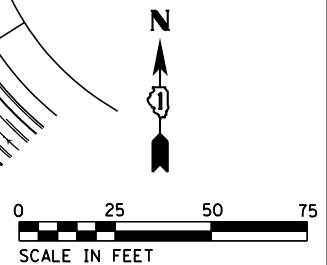
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 USER NAME = MattC



PHI ANGLES

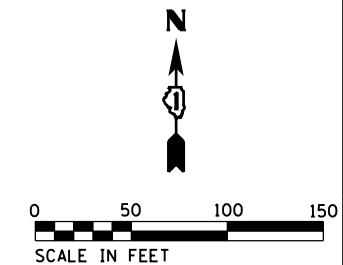
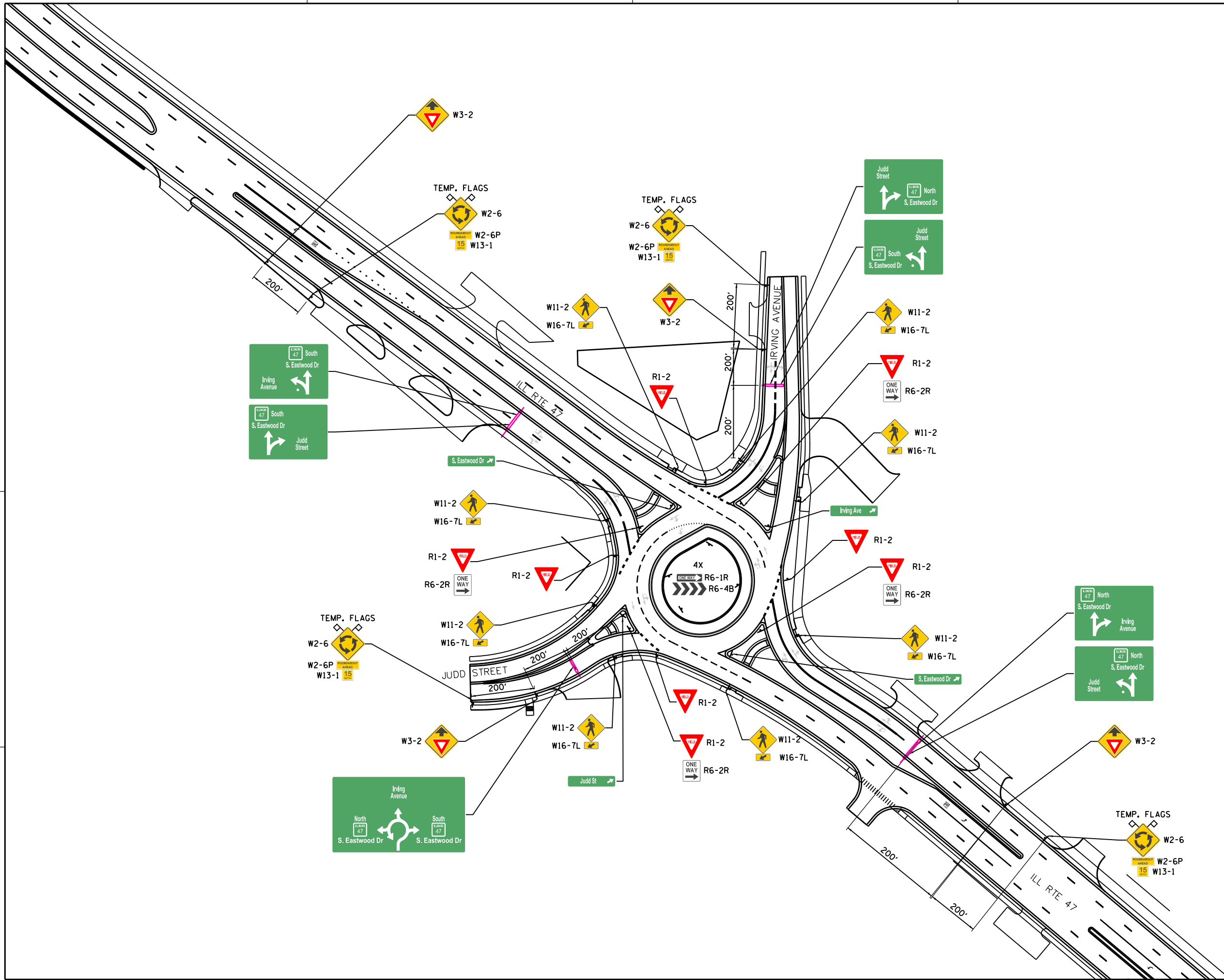


VISION ANGLES



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 40 WITH (JUDD ST/IRVING AVE)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 15 OF 16
 BDE-9908

PLOT DATE = 8/23/2018
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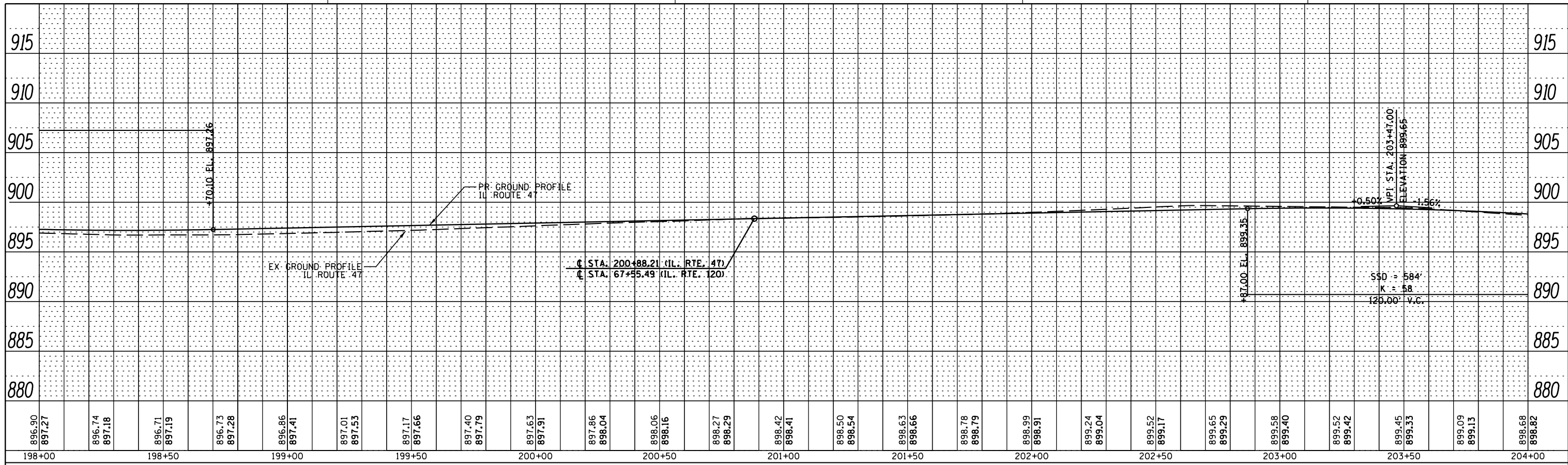


INTERSECTION DESIGN STUDY
 2 ROUTE 326 (ILLINOIS RT. 47)
 9 ROUTE 40 WITH (JUDD ST/IRVING AVE)

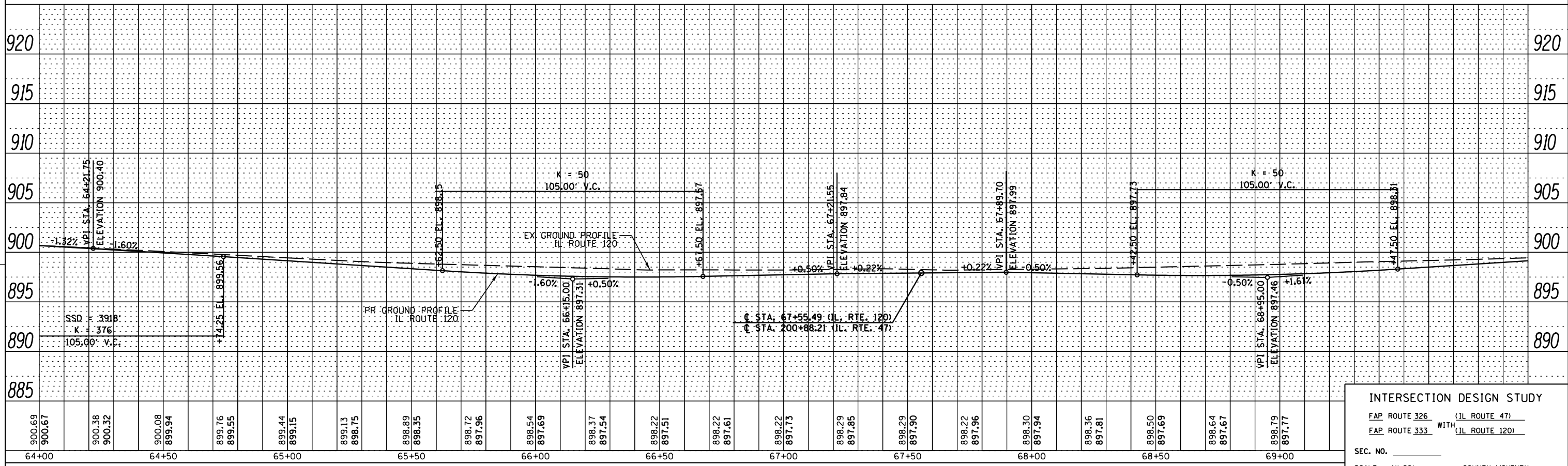
SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN # _____ PROJ. NO. _____

I.D.S. SHEET 16 OF 16
 BDE-9908

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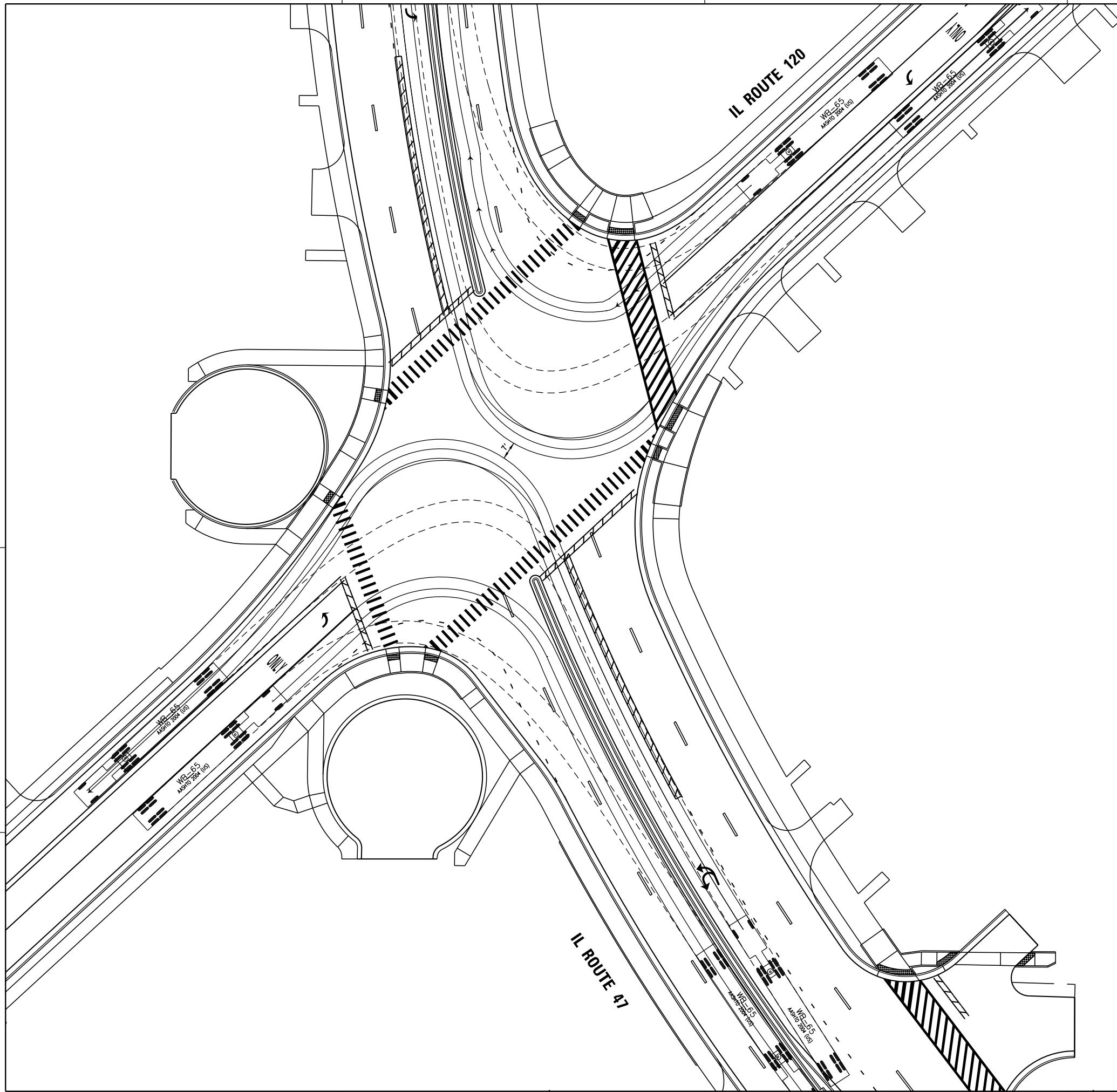
ILLINOIS ROUTE 47



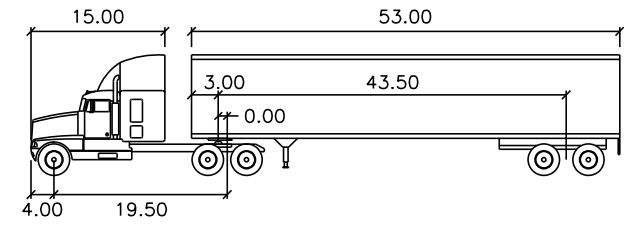
ILLINOIS ROUTE 120

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (IL ROUTE 120)
 SEC. NO. _____
 SCALE 1"=20' COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 2 OF 4

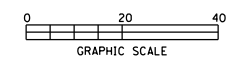
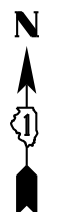
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 PLOT SCALE = 40.0000' / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

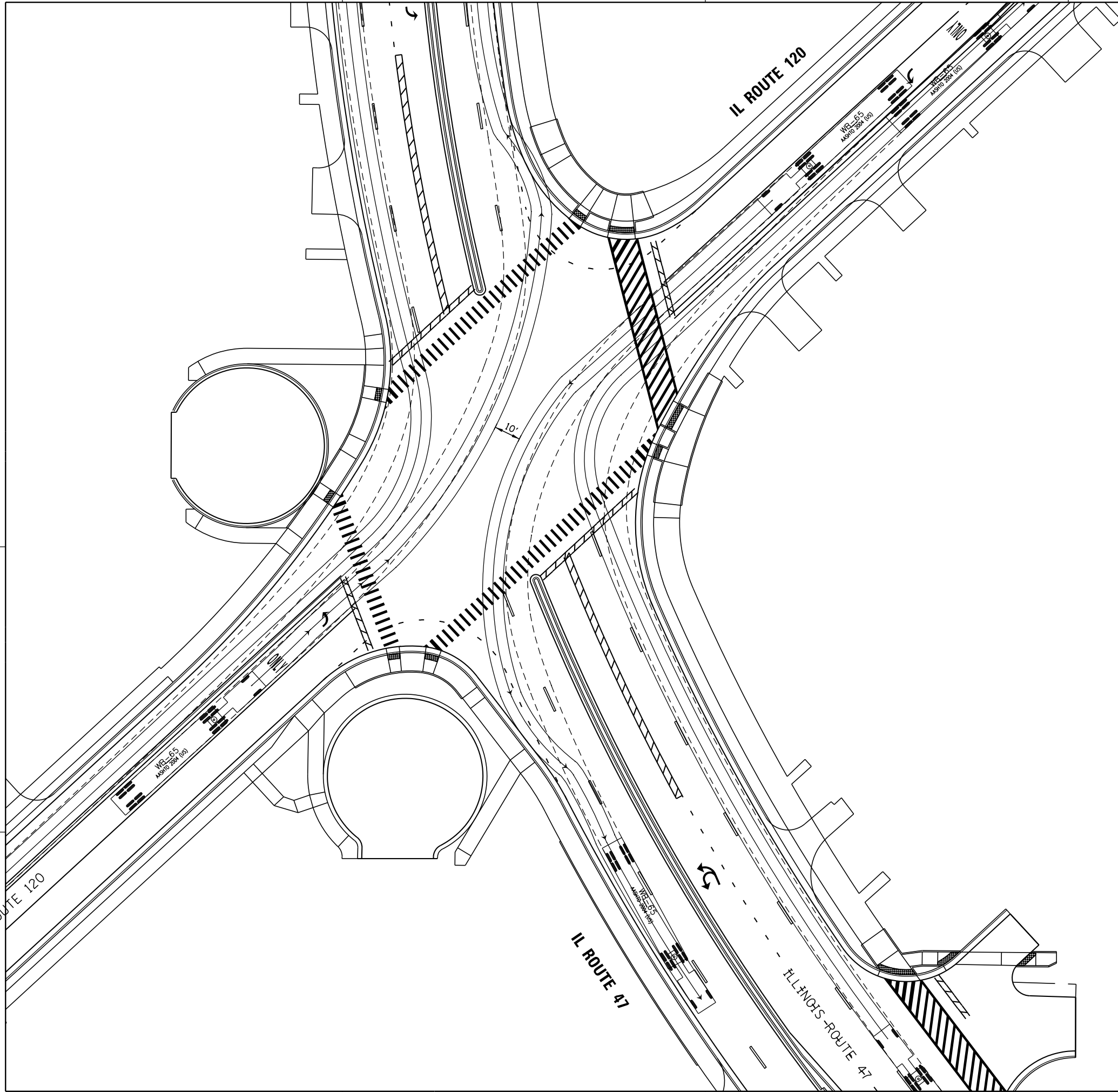


DESIGN VEHICLE TURNING MOVEMENTS
(WB-65)

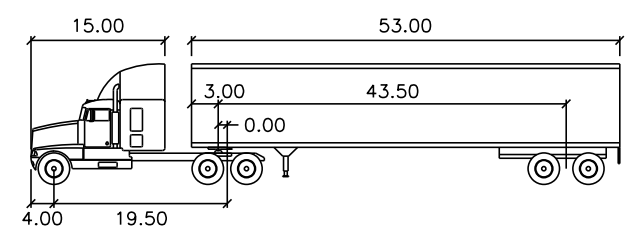
CB **CHRISTOPHER B. BURKE ENGINEERING, LTD.**
 9575 W. Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500
 PROJ. MGR. - MJM
 PROJ. ENG. - BG

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (IL ROUTE 120)
 SEC. NO. _____
 SCALE _____ COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 3 OF 4

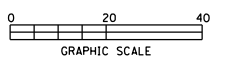
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 PLOT SCALE = 40.0000' / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

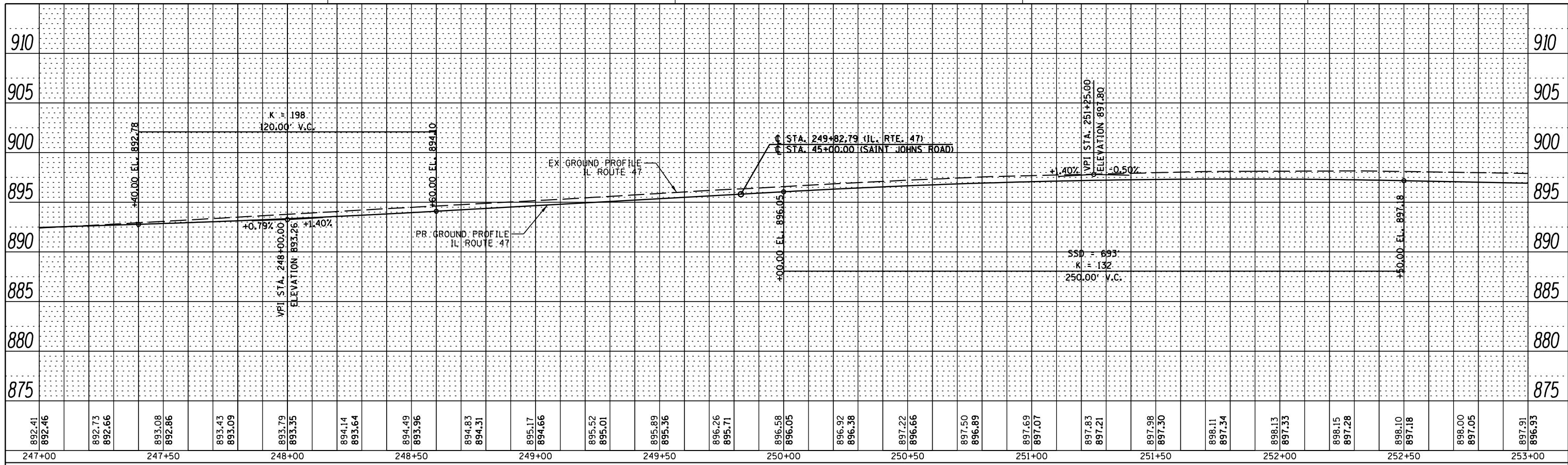


DESIGN VEHICLE TURNING MOVEMENTS (WB-65)

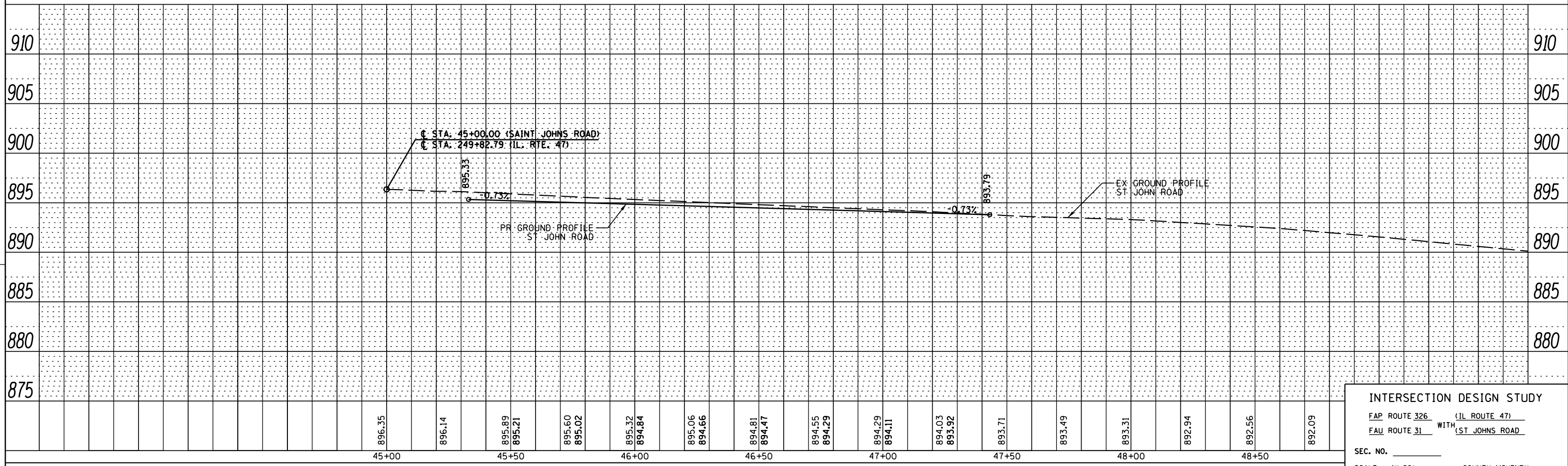
CB CHRISTOPHER B. BURKE ENGINEERING, LTD.
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 PROJ. ENG. - BG

INTERSECTION DESIGN STUDY	
FAP ROUTE 326 (IL ROUTE 47)	
FAP ROUTE 333 WITH (IL ROUTE 120)	
SEC. NO. _____	COUNTY MCHENRY
SCALE _____	PROJ. NO. _____
SUN _____	I.D.S. SHEET 4 OF 4

PLOT DATE = 1/22/2019
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 PLOT SCALE = 40.0000 / 1"
 USER NAME = MattG



ILLINOIS ROUTE 47



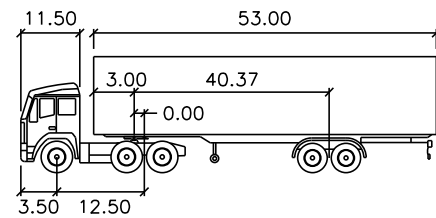
ST. JOHNS ROAD

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 31 WITH (ST JOHNS ROAD)
 SEC. NO. _____
 SCALE 1"=20' COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 2 OF 3

PLOT DATE = 1/22/2019
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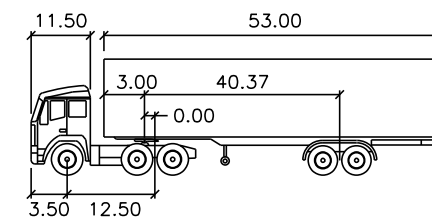
IL RT 47 LEFT TURN MOVEMENTS
 ST. JOHNS RD RIGHT TURN MOVEMENTS
 DESIGN VEHICLE: WB-55

TRUCK TURNING MOVEMENTS

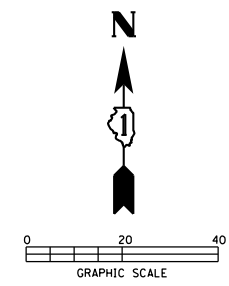
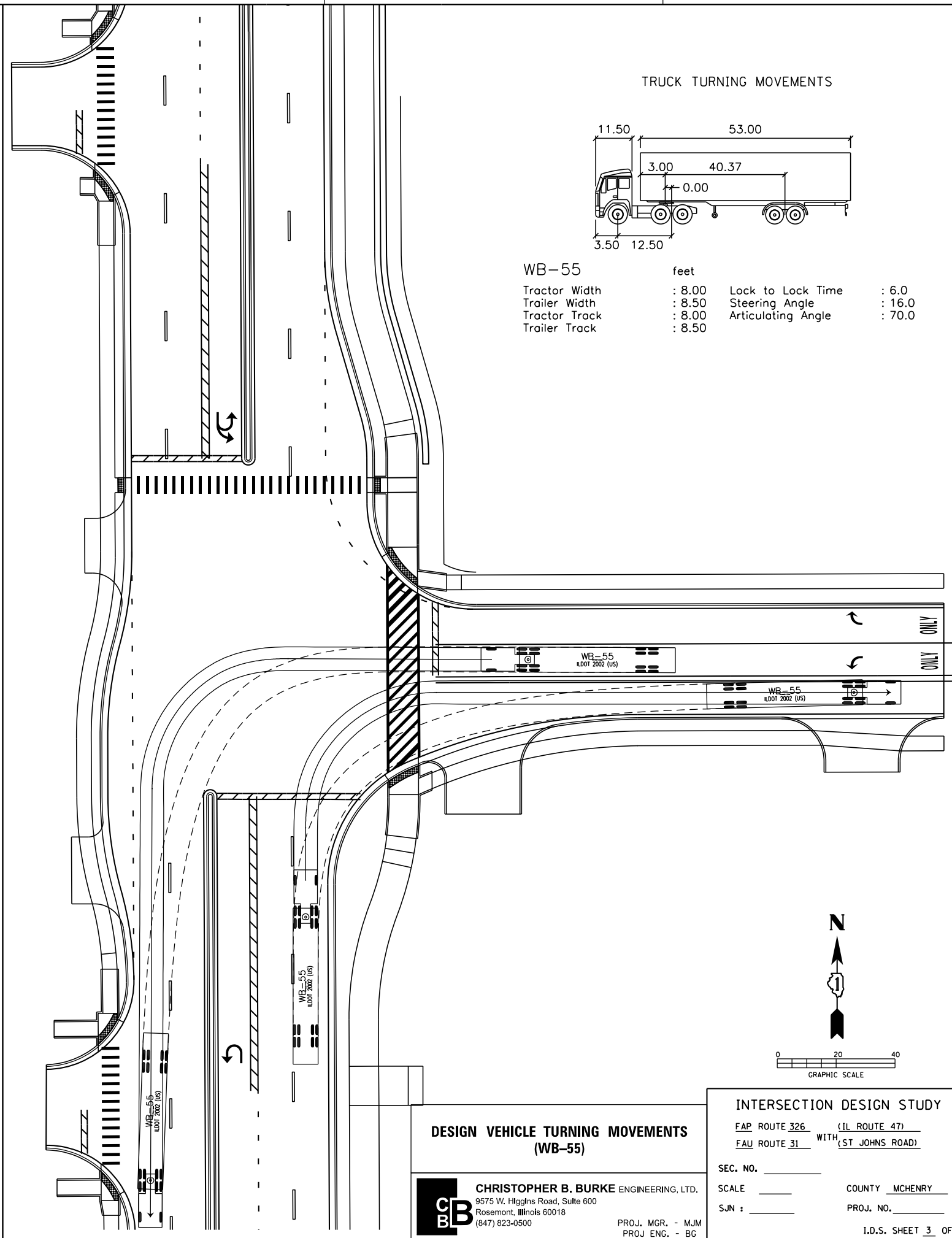
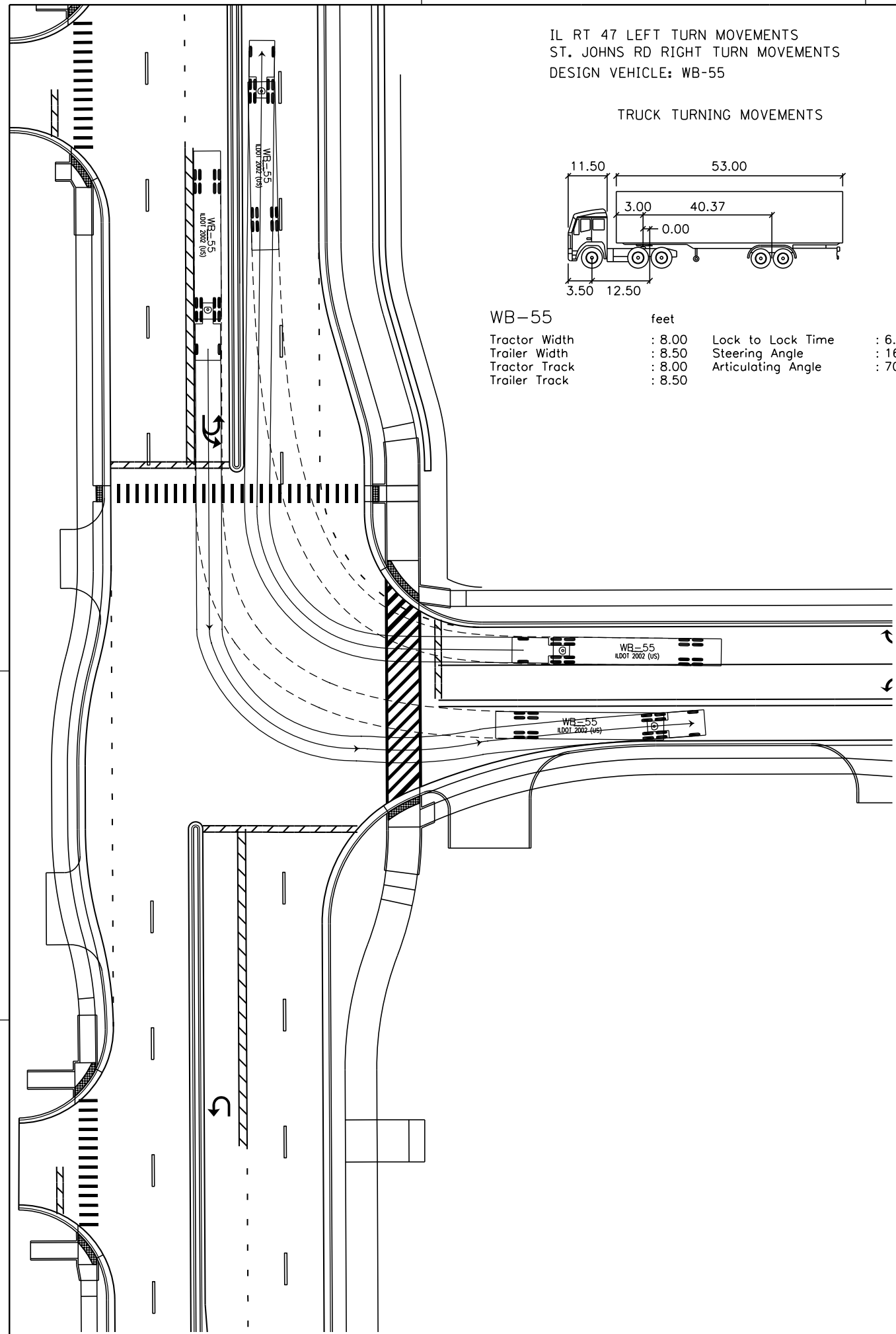


WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

TRUCK TURNING MOVEMENTS



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



DESIGN VEHICLE TURNING MOVEMENTS
(WB-55)

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INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 31 WITH (ST. JOHNS ROAD)
 SEC. NO. _____
 SCALE _____ COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 3 OF 3

SIGNALIZED CAPACITY DESIGN ANALYSIS												
PROGRAM USED: SYNCHRO, VERSION: V8, SIGNAL TYPE: ACTUATED, AREA TYPE:												
NUMBER OF PHASES: (A.M.) 6 (P.M.) 6, CYCLE LENGTH: (A.M.) 80 SEC. (P.M.) 80 SEC., PEAK HOUR FACTOR: 0.92												
INTERSECTION DELAY/LEVEL-OF-SERVICE: A.M. 15.8 SECONDS LOS B, P.M. 21.0 SECONDS LOS C												
APPROACH	A			B			C			D		
LANE GROUP	L	TH/R		L	TH	R	L	TH/R		L	TH/R	
NUMBER OF LANES	1	2		1	2	1	1	1		1	1	
2040 30TH MAX. HOUR TRAFFIC (veh/h)	A.M. 140	640		79	1041	435	120	156		145	80	
	P.M. 110	956		56	989	75	79	80		5	136	
BASE SATURATION FLOW RATE (veh/h)	1900	1950		1900	2000	1900	1900	1900		1900	1900	
LANE WIDTH (FT)	11	12		11	12	12	12	12		12	12	
VOLUME OF RIGHT TURN ON RED (veh/h)	A.M. 5	P.M.		A.M. 244	P.M.		A.M. 118	P.M.		A.M. 61	P.M.	
PEDESTRIANS/HOUR (ped/h)	A.M. 10	P.M.		A.M. 1	P.M.		A.M. 27	P.M.		A.M. 0	P.M.	
ARRIVAL TYPE	3			3			3			3		
LANE UTILIZATION ADJ. FACTOR	1	0.95		1	0.95	1	1	1		1	1	
GREEN TIME (SECONDS)	A.M. 6	31		6	31	31	28	28		28	28	
	P.M. 6	31		6	31	31	28	28		28	28	
GREEN RATIO (g/C)	A.M. 0.13	0.46		0.13	0.46	0.46	0.41	0.41		0.41	0.41	
	P.M. 0.13	0.46		0.13	0.46	0.46	0.41	0.41		0.41	0.41	
CAPACITY (c)	A.M. 266	1597		412	1619	673	335	399		304	415	
	P.M. 205	1389		207	1445	596	439	513		421	544	
v/c RATIO (X)	A.M. 0.57	0.43		0.21	0.70	0.36	0.39	0.13		0.52	0.06	
	P.M. 0.61	0.79		0.31	0.79	0.06	0.21	0.07		0.63	0.07	
STORAGE QUEUE (FEET)	A.M. 142	202		78	319	266	79	103		95	52	
	P.M. 112	301		56	309	47	52	52		3	89	
LANE GROUP DELAY (SECONDS)	A.M. 12.9	12.7		9.2	17.0	13.3	21.8	19.8		23.4	19.3	
	P.M. 18.9	22.0		13.5	21.8	13.4	17.2	16.2		22.9	16.2	
LANE GROUP LEVEL-OF-SERVICE	A.M. B	B		A	B	B	C	B		C	B	
	P.M. B	C		B	C	B	B	B		C	B	
APPROACH DELAY (SECONDS/VEHICLE)	A.M.	12.7		15.6			20.6			21.9		
	P.M.	21.7		20.8			16.7			21.1		
APPROACH LEVEL-OF-SERVICE	A.M.	B		B			C			C		
	P.M.	C		C			B			C		

PHASE	1	2	3								
GREEN TIME IN SECONDS	A.M. 6.0	3.0	1.0	31.0	4.0	2.0	28.0	3.0	2.0	80	
	P.M. 6.0	3.0	1.0	31.0	4.0	2.0	28.0	3.0	2.0	80	

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:
 F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: SEMINARY AVE. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y.
 EXISTING ADT: 15,600 VPD. DESIGN YEAR ADT: 29,000 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

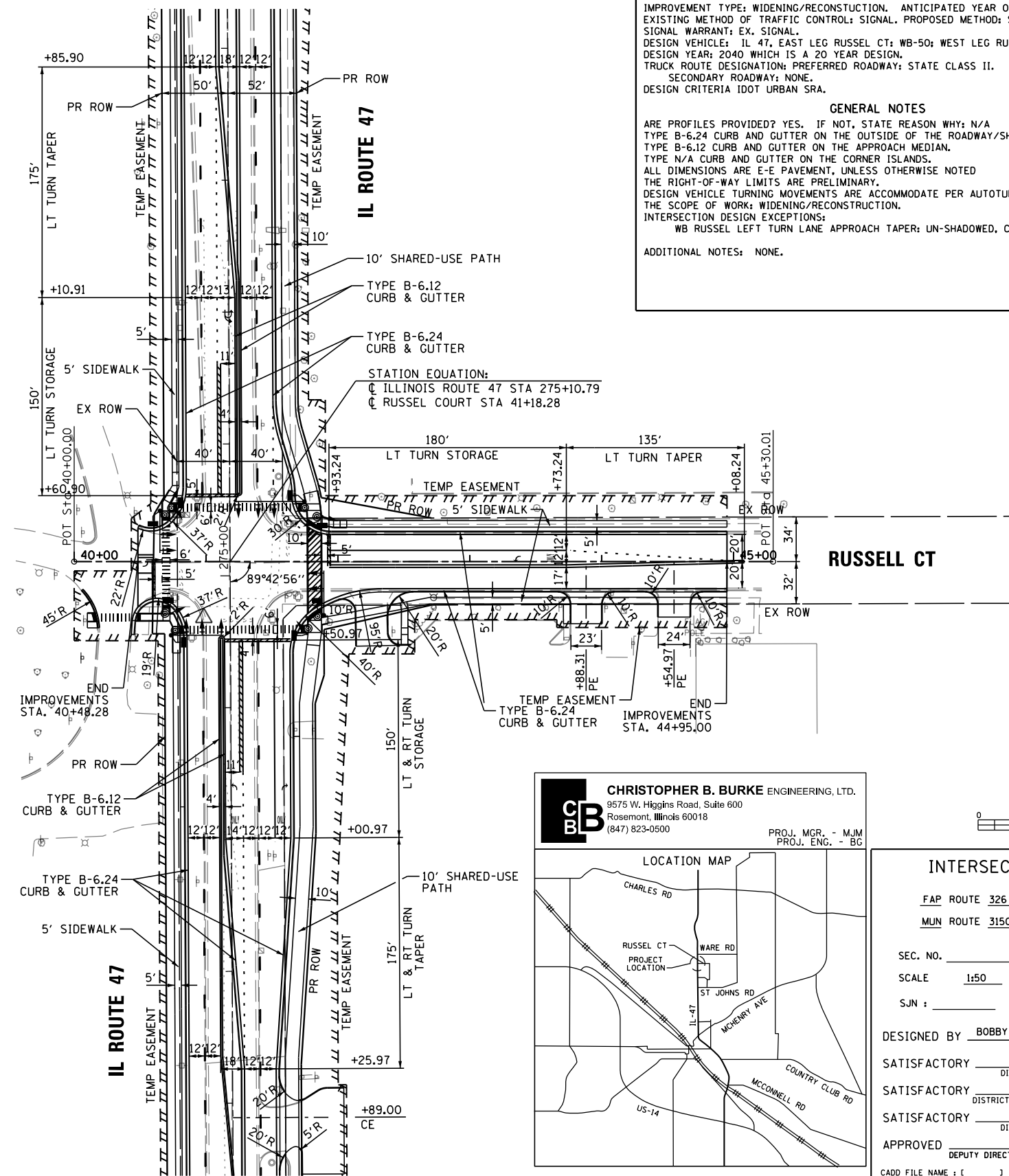
SECONDARY ROUTE:
 F.A. ROUTE NUMBER: 0-3150. MARKED ROUTE NUMBER: RUSSEL COURT.
 STREET NAME: RUSSEL COURT. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: LOCAL ROAD. OSOW DESIGN? N.
 EXISTING ADT: 4,100 VPD. DESIGN YEAR ADT: 5,000 VPD.
 PROPOSED DESIGN SPEED: 30 MPH. PROPOSED POSTED SPEED: 25 MPH.

IMPROVEMENT TYPE: WIDENING/RECONSTRUCTION. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
EXISTING METHOD OF TRAFFIC CONTROL: SIGNAL. PROPOSED METHOD: SIGNAL.
SIGNAL WARRANT: EX. SIGNAL.
DESIGN VEHICLE: IL 47, EAST LEG RUSSEL CT; WB-50; WEST LEG RUSSEL CT; SU.
DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
TRUCK ROUTE DESIGNATION: PREFERRED ROADWAY: STATE CLASS II.
SECONDARY ROADWAY: NONE.
DESIGN CRITERIA: IDOT URBAN SRA.

GENERAL NOTES

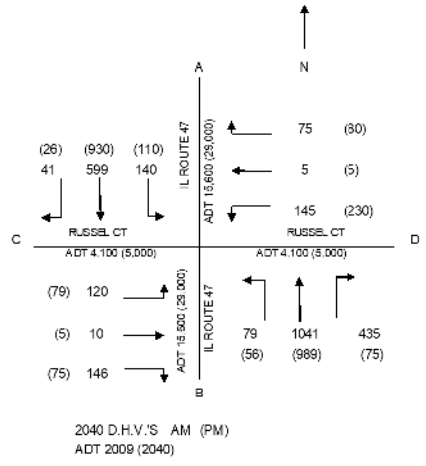
ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.12 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE N/A CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: WIDENING/RECONSTRUCTION.
INTERSECTION DESIGN EXCEPTIONS:
 WB RUSSEL LEFT TURN LANE APPROACH TAPER: UN-SHADOWED, CRITERIA: SHADOWED

ADDITIONAL NOTES: NONE.



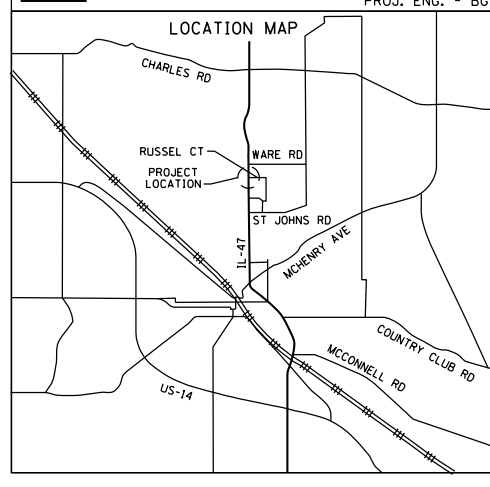
TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2018		YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.			A.M.	P.M.
AD (L)	62	17	5%	5%	126%	547%	140	110
AB (T)	290	419	5%	5%	107%	122%	599	930
AC (R)	27	12	5%	5%	52%	117%	41	26
BC (L)	82	58	2%	4%	-4%	-3%	79	56
BA (T)	405	400	2%	4%	157%	147%	1041	989
BD (R)	354	77	2%	4%	23%	-3%	435	75
CA (L)	60	39	1%	0%	100%	103%	120	79
CD (T)	8	4	1%	0%	25%	25%	10	5
CB (R)	118	57	1%	0%	24%	32%	146	75
DB (L)	77	127	0%	0%	88%	81%	145	230
DC (T)	3	1	0%	0%	67%	400%	5	5
DA (R)	25	29	0%	0%	200%	176%	75	80
TOTAL A	869	916	3%	4%	132%	142%	2016	2214
TOTAL B	1326	1138	2%	4%	84%	107%	2445	2355
TOTAL C	298	171	2%	2%	35%	44%	401	246
TOTAL D	529	255	2%	2%	53%	98%	810	505



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PROJ. MGR. - MJM
 PROJ. ENG. - BG



INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 MUN ROUTE 3150 WITH (RUSSELL COURT)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY BOBBY GUNNELLS 12/10/2018

SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER DATE _____
 SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER DATE _____

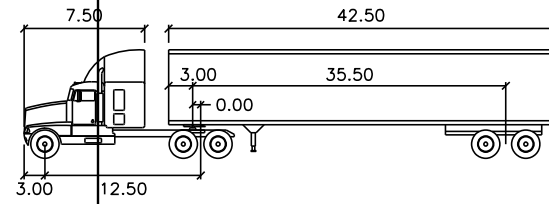
CADD FILE NAME : () I.D.S. SHEET 1 OF 3

PLOT DATE = ROUTE
 FILE NAME = FILES
 PLOT SCALE = SCALES
 USER NAME = USER

T = THROUGH, L = LEFT, R = RIGHT

PLOT DATE = #DATE*
 FILE NAME = #FILE*
 PLOT SCALE = #SCALE*
 USER NAME = #USER*

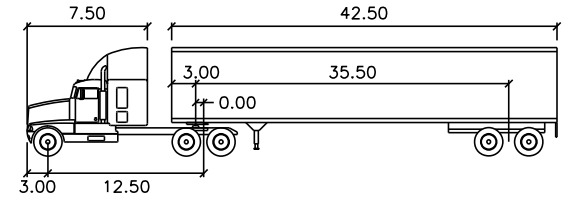
TRUCK TURNING MOVEMENTS



WB-50	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

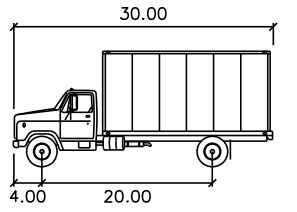
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF RUSSEL COURT

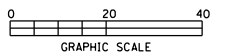
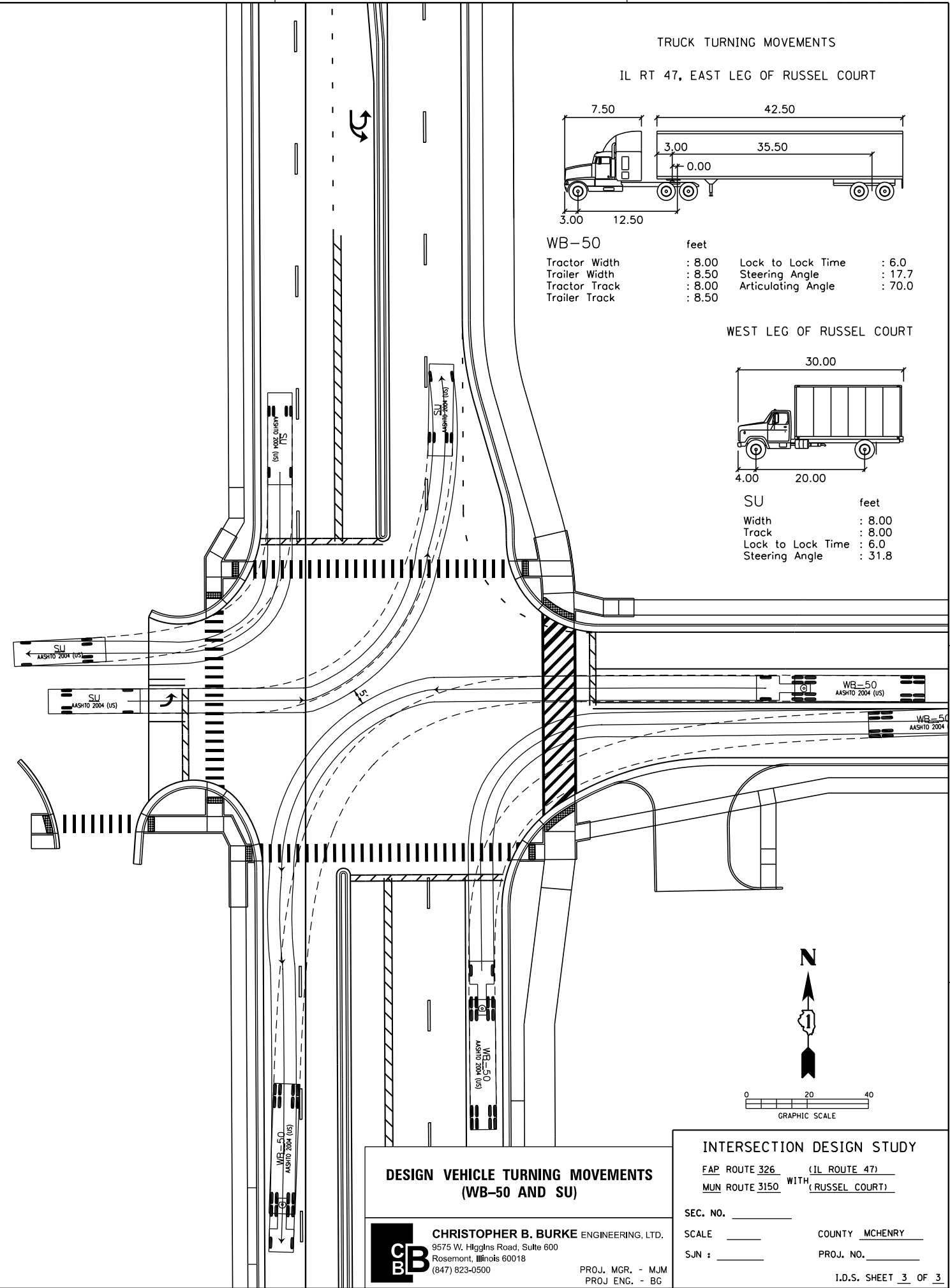
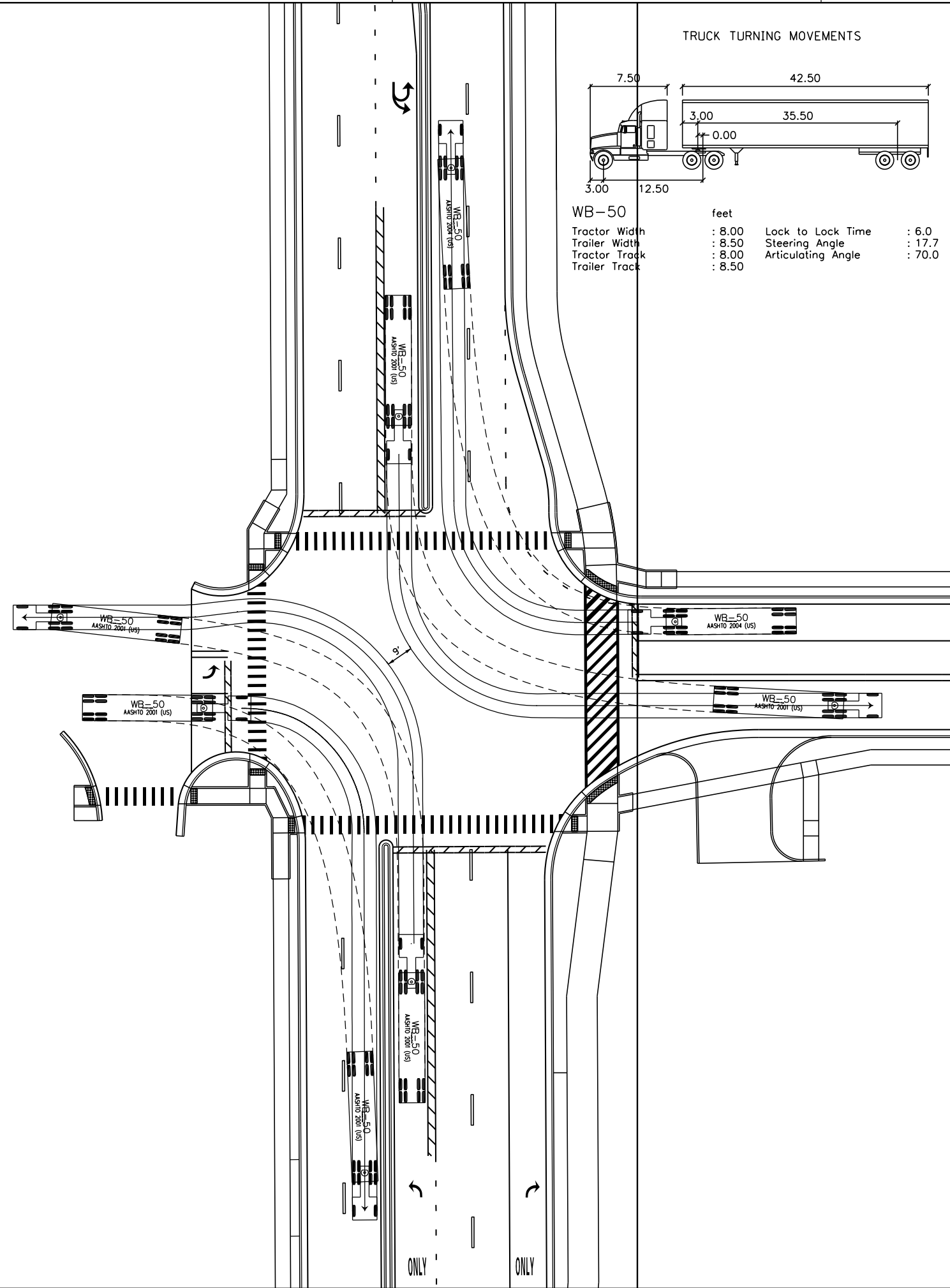


WB-50	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WEST LEG OF RUSSEL COURT



SU	feet		
Width	: 8.00		
Track	: 8.00		
Lock to Lock Time	: 6.0		
Steering Angle	: 31.8		



DESIGN VEHICLE TURNING MOVEMENTS
(WB-50 AND SU)

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 Rosemont, Illinois 60018
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PROJ. MGR. - MJM
 PROJ. ENG. - BG

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 MUN ROUTE 3150 WITH (RUSSEL COURT)

SEC. NO. _____
 SCALE _____ COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

ROUNDABOUT CAPACITY DESIGN STUDY

PROGRAM USED SIDRA VERSION 7.0 AREA _____ PEAK HOUR FACTOR 0.92 (AM) 0.92 (PM)
 INTERSECTION CONTROL DELAY A.M. 10.0 SECONDS P.M. 7.8 SECONDS
 INTERSECTION LEVEL OF SERVICE A.M. A P.M. A

APPROACH		NB IL RTE 47		SB IL RTE 47		WB WARE ROAD	
LANE GROUP		TH	RT	LT	TH	LT	RT
20 30TH MAX. HOUR TRAFFIC	A.M.	550	700	380	480	265	40
	P.M.	805	350	100	740	310	60
ENTRY FLOW RATE	A.M.	473	679	376	451	239	33
<i>v_L</i> <i>pce</i> (pc/h)	P.M.	692	340	99	696	279	50
PED/HOUR CROSSING THE APPROACH	A.M.	0		0		1	
	P.M.	0		1		3	
LANE MOVEMENTS		TH	RT	LT	TH	LT	RT
ENTRY FLOW RATE	A.M.	598	761	413	522	288	43
<i>v_L</i> (vph)	P.M.	875	380	109	804	377	65
LANE CAPACITY	A.M.	868	1104	994	1255	530	80
<i>c_i</i> (vph)	P.M.	1819	791	255	1887	477	92
<i>x_i</i> (<i>v_L</i> / <i>c_i</i>) RATIO	A.M.	0.69	0.69	0.42	0.42	0.54	0.54
	P.M.	0.48	0.48	0.43	0.43	0.71	0.71
95% QUEUE LENGTH (FEET)	A.M.	216	216	80	85	104	104
	P.M.	114	114	84	90	142	142
LANE DELAY, <i>d</i> (SEC)	A.M.	11.2	8.7	11.8	5.7	16.2	10.8
	P.M.	5.0	4.7	12.1	6.3	19.9	14.6
LANE LEVEL OF SERVICE	A.M.	B	A	B	A	C	B
	P.M.	A	A	B	A	C	B
APPROACH CONTROL DELAY, <i>d</i> (SEC)	A.M.	9.8		8.4		15.5	
	P.M.	4.9		7.0		19.1	
APPROACH LEVEL OF SERVICE	A.M.	A		A		C	
	P.M.	A		A		C	

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:

F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: SEMINARY AVE. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 9,450 VPD. DESIGN YEAR ADT: 16,000 VPD.
 PROPOSED DESIGN SPEED: 40 MPH. PROPOSED POSTED SPEED: 35 MPH.

SECONDARY ROUTE:

F.A. ROUTE NUMBER: 9-3851. MARKED ROUTE NUMBER: WARE ROAD.
 STREET NAME: WARE ROAD. SRA ROUTE? N.
 FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR. OSOW DESIGN? N
 EXISTING ADT: 3,500 VPD. DESIGN YEAR ADT: 6,000 VPD.
 PROPOSED DESIGN SPEED: 45 MPH. PROPOSED POSTED SPEED: 40 MPH.

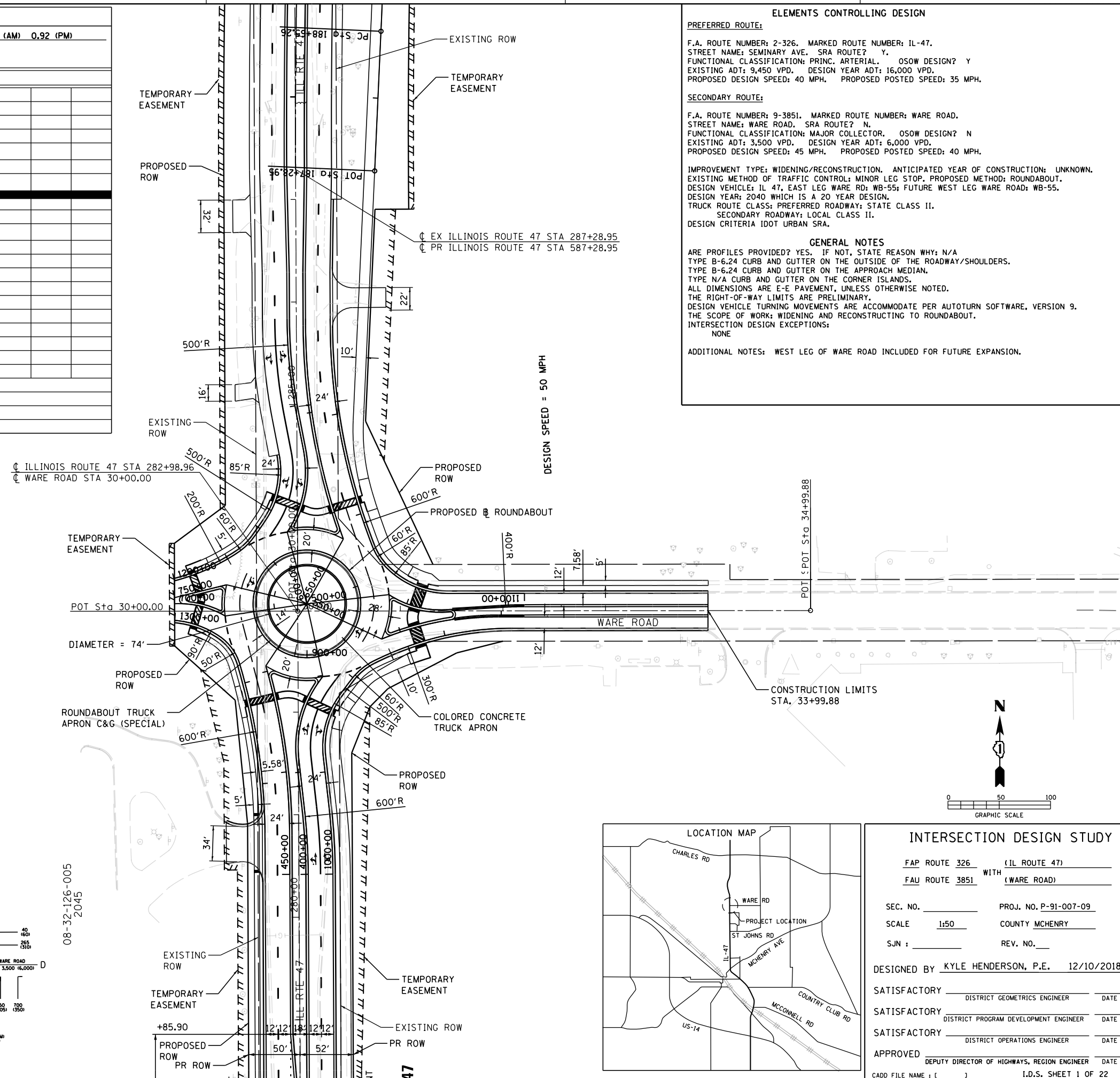
IMPROVEMENT TYPE: WIDENING/RECONSTRUCTION. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: MINOR LEG STOP. PROPOSED METHOD: ROUNDABOUT.
 DESIGN VEHICLE: IL 47, EAST LEG WARE RD; WB-55; FUTURE WEST LEG WARE ROAD; WB-55.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE CLASS: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: LOCAL CLASS II.
 DESIGN CRITERIA IDOT URBAN SRA.

GENERAL NOTES

ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.24 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE N/A CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED.
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: WIDENING AND RECONSTRUCTING TO ROUNDABOUT.
 INTERSECTION DESIGN EXCEPTIONS:
 NONE

ADDITIONAL NOTES: WEST LEG OF WARE ROAD INCLUDED FOR FUTURE EXPANSION.

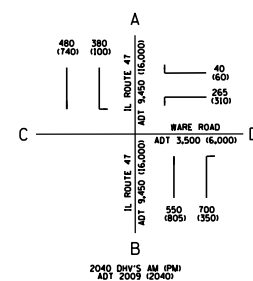
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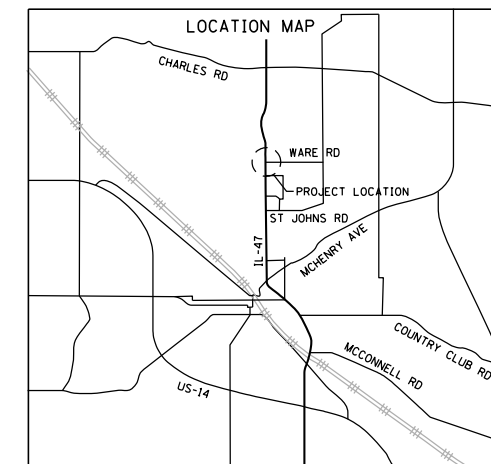
TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY 2040 AM/PM	YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.
AD (L)	101	26	4.7	4.7	276/285	380	100
AB (T)	344	294	4.7	4.7	40/152	480	740
AC (R)	-	-	-	-	-	-	-
BC (L)	-	-	-	-	-	-	-
BA (T)	212	367	9.2	9.2	159/119	550	805
BD (R)	181	103	9.2	9.2	287/240	700	350
CA (L)	-	-	-	-	-	-	-
CD (T)	-	-	-	-	-	-	-
CB (R)	-	-	-	-	-	-	-
DB (L)	126	123	11.2	11.2	110/152	265	310
DC (T)	-	-	-	-	-	-	-
DA (R)	17	28	11.2	11.2	135/114	40	60
TOTAL A	674	715	4.7	4.7	115/138	1450	1705
TOTAL B	863	887	9.2	9.2	131/149	1995	2205
TOTAL C	-	-	-	-	-	-	-
TOTAL D	425	280	11.2	11.2	226/193	1385	820

T = THROUGH, L = LEFT, R = RIGHT



08-32-126-005
2045



INTERSECTION DESIGN STUDY

FAP ROUTE 326 WITH (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY KYLE HENDERSON, P.E. 12/10/2018

SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER DATE _____

SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER DATE _____

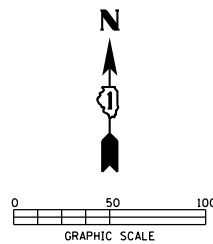
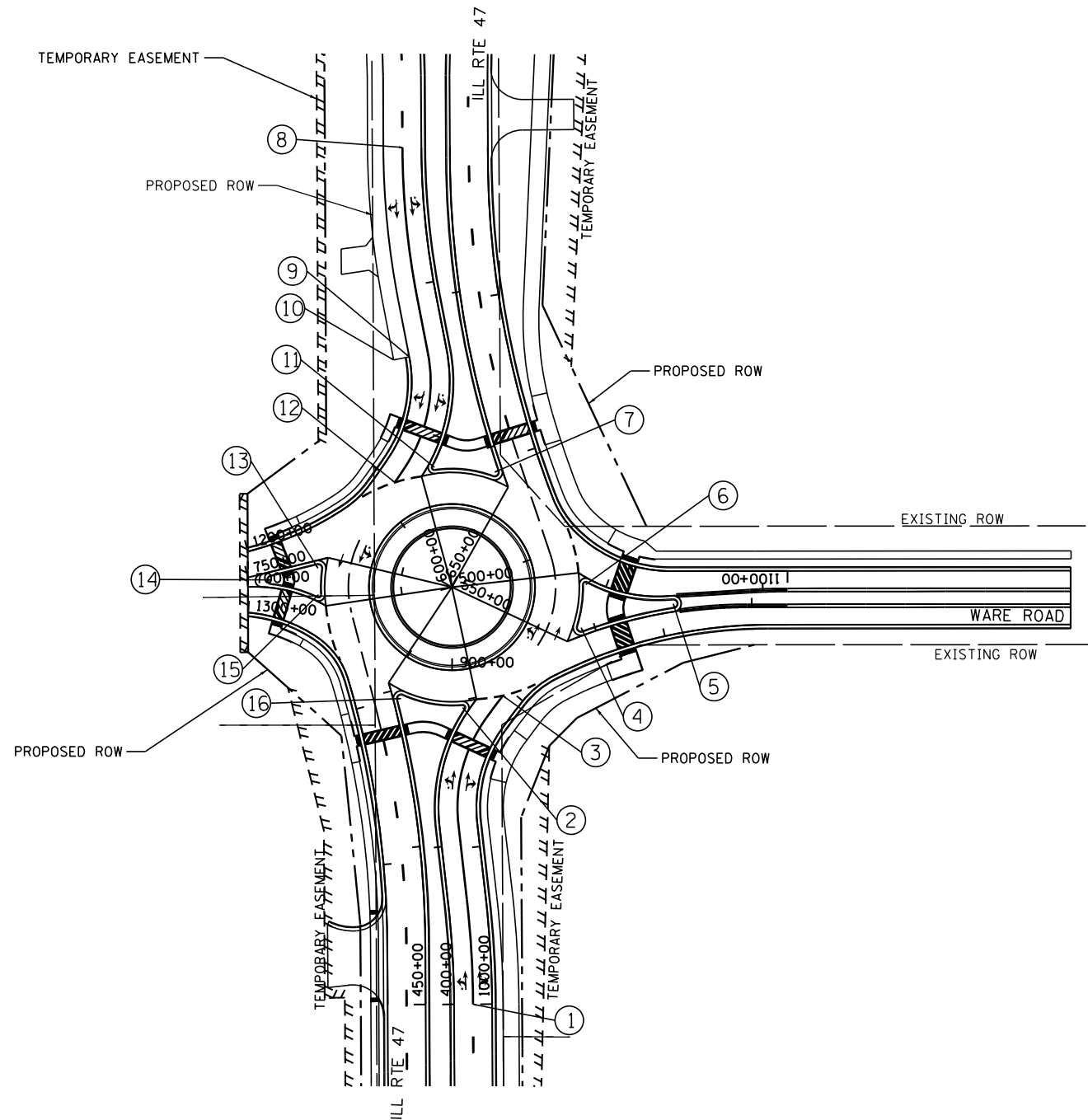
SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER DATE _____

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PLOT DATE = 12/27/2018
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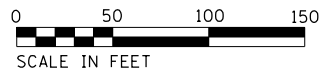
DATA TABLE					
NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
1		400+00.0	12.0	RT	--
2	CC	401+89.5	4.0	LT	4'
3		401+98.9	16.8	RT	--
4	CC	550+91.8	5.0	LT	5'
5	CC	551+51.1	5.0	LT	5'
6	CC	500+88.0	4.0	RT	4'
7	CC	650+84.2	5.0	LT	5'
8		602+85.3	12.0	LT	--
9		601+56.2	24.0	LT	--
10		601+56.2	34.0	LT	--
11	CC	600+81.4	4.0	LT	4'
12		600+72.5	17.5	LT	--
13	CC	750+44.4	5.0	RT	5'
14	CC	750+14.2	5.0	RT	5'
15	CC	700+44.2	4.0	LT	4'
16	CC	451+93.7	5.0	RT	5'



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____



PROP. CURVE RAB_WAR_EB_EN-1
 PI STA. = 700+26.45
 $\Delta = 32^\circ 45' 16''$ (RT)
 D = 63' 39' 43"
 R = 90.00'
 T = 26.45'
 L = 51.45'
 E = 3.81'
 P.C. STA. = 700+00.00
 P.T. STA. = 700+51.45

PROP. CURVE RAB_WAR_CENT-1
 PI STA. = 900+52.50
 $\Delta = 90^\circ 00' 00''$ (LT)
 D = 109' 08' 05"
 R = 52.50'
 T = 52.50'
 L = 82.47'
 E = 21.75'
 P.C. STA. = 900+00.00
 P.T. STA. = 900+82.47

PROP. CURVE RAB_WAR_CENT-2
 PI STA. = 902+09.21
 $\Delta = 135^\circ 00' 00''$ (LT)
 D = 109' 08' 05"
 R = 52.50'
 T = 126.75'
 L = 123.70'
 E = 84.69'
 P.C. STA. = 900+82.47
 P.T. STA. = 902+06.17

PROP. CURVE RAB_WAR_CENT-3
 PI STA. = 903+32.91
 $\Delta = 135^\circ 00' 00''$ (LT)
 D = 109' 08' 05"
 R = 52.50'
 T = 126.75'
 L = 123.70'
 E = 84.69'
 P.C. STA. = 902+06.17
 P.T. STA. = 903+29.87

PROP. CURVE RAB_WAR_NB_EX-1
 PI STA. = 651+79.79
 $\Delta = 19^\circ 30' 46''$ (RT)
 D = 9' 10' 55"
 R = 624.00'
 T = 107.29'
 L = 212.51'
 E = 9.16'
 P.C. STA. = 650+72.50
 P.T. STA. = 652+85.01

PROP. CURVE RAB_WAR_SB_RT-1
 PI STA. = 1200+34.64
 $\Delta = 19^\circ 39' 07''$ (LT)
 D = 28' 38' 52"
 R = 200.00'
 T = 34.64'
 L = 68.60'
 E = 2.98'
 P.C. STA. = 1200+00.00
 P.T. STA. = 1200+68.60

PROP. CURVE RAB_WAR_SB_RT-2
 PI STA. = 1200+79.18
 $\Delta = 20^\circ 00' 36''$ (LT)
 D = 95' 29' 35"
 R = 60.00'
 T = 10.58'
 L = 20.95'
 E = 0.93'
 P.C. STA. = 1200+68.60
 P.T. STA. = 1200+89.55

285+83.59 IL RTE 47
 652+91.57 RAB_WAR_NB_EX

285+83.59 IL RTE 47
 602+85.29 RAB_WAR_SB_EN

285+83.59 IL RTE 47
 1103+93.51 RAB_WAR_WB_RT

PROP. CURVE RAB_WAR_WB_RT-1
 PI STA. = 1101+10.65
 $\Delta = 46^\circ 32' 58''$ (RT)
 D = 67' 24' 24"
 R = 85.00'
 T = 36.56'
 L = 69.06'
 E = 7.53'
 P.C. STA. = 1100+74.09
 P.T. STA. = 1101+43.14

PROP. CURVE RAB_WAR_WB_RT-2
 PI STA. = 1101+54.88
 $\Delta = 22^\circ 08' 33''$ (RT)
 D = 95' 29' 35"
 R = 60.00'
 T = 11.74'
 L = 23.19'
 E = 1.14'
 P.C. STA. = 1101+43.14
 P.T. STA. = 1101+66.33

PROP. CURVE RAB_WAR_WB_RT-3
 PI STA. = 1102+77.90
 $\Delta = 21^\circ 04' 03''$ (RT)
 D = 9' 32' 57"
 R = 600.00'
 T = 111.57'
 L = 220.62'
 E = 10.28'
 P.C. STA. = 1101+66.33
 P.T. STA. = 1103+86.95

PROP. CURVE RAB_WAR_SB_RT-3
 PI STA. = 1201+00.25
 $\Delta = 2^\circ 27' 05''$ (LT)
 D = 11' 27' 33"
 R = 500.00'
 T = 10.70'
 L = 21.39'
 E = 0.11'
 P.C. STA. = 1200+89.55
 P.T. STA. = 1201+10.94

PROP. CURVE RAB_WAR_SB_RT-4
 PI STA. = 1201+45.66
 $\Delta = 44^\circ 26' 14''$ (LT)
 D = 67' 24' 24"
 R = 85.00'
 T = 34.72'
 L = 65.92'
 E = 6.82'
 P.C. STA. = 1201+10.94
 P.T. STA. = 1201+76.87

284+51.26 IL RTE 47
 1201+76.87 RAB_WAR_SB_RT

PROP. CURVE RAB WAR WB RT-3

PROP. CURVE RAB_WAR_NB_EN-1
 PI STA. = 400+32.57
 $\Delta = 6^\circ 12' 49''$ (LT)
 D = 9' 32' 57"
 R = 600.00'
 T = 32.57'
 L = 65.07'
 E = 0.88'
 P.C. STA. = 400+00.00
 P.T. STA. = 400+65.07

PROP. CURVE RAB_WAR_NB_EN-2
 PI STA. = 401+54.67
 $\Delta = 42^\circ 17' 54''$ (RT)
 D = 52' 33' 54"
 R = 109.00'
 L = 80.47'
 E = 7.87'
 P.C. STA. = 401+12.50
 P.T. STA. = 401+92.97

PROP. CURVE RAB_WAR_NB_EN-3
 PI STA. = 401+95.91
 $\Delta = 0^\circ 38' 40''$ (RT)
 D = 10' 56' 04"
 R = 524.00'
 T = 2.95'
 L = 5.89'
 E = 0.01'
 P.C. STA. = 401+92.97
 P.T. STA. = 401+98.86

PROP. CURVE RAB_WAR_SB_EN-1
 PI STA. = 601+16.55
 $\Delta = 44^\circ 00' 28''$ (LT)
 D = 52' 33' 54"
 R = 109.00'
 T = 44.05'
 L = 83.72'
 E = 8.56'
 P.C. STA. = 600+72.50
 P.T. STA. = 601+56.22

PROP. CURVE RAB_WAR_SB_EN-2
 PI STA. = 602+10.41
 $\Delta = 4^\circ 04' 43''$ (RT)
 D = 11' 27' 33"
 R = 500.00'
 T = 17.80'
 L = 35.59'
 E = 0.32'
 P.C. STA. = 601+92.61
 P.T. STA. = 602+28.20

30+00.00 WARE
 1201+76.87 RAB_WAR_SB_RT

30+00.00 WARE
 750+00.00 RAB_WAR_WB_EX

30+00.00 WARE
 700+00.00 RAB_WAR_EB_EN

30+00.00 WARE
 1302+88.62 RAB_WAR_EB_RT

PROP. CURVE RAB WAR EB RT1

PROP. CURVE RAB WAR CENT-3

PROP. CURVE RAB WAR EB RT2

PROP. CURVE RAB WAR EB RT3

PROP. CURVE RAB WAR SB EX-1

280+41.86 IL RTE 47
 1302+88.62 RAB_WAR_EB_RT

280+41.86 IL RTE 47
 450+00.00 RAB_WAR_SB_EX

280+41.86 IL RTE 47
 1000+00.00 RAB_WAR_NB_RT

280+41.86 IL RTE 47
 400+00.00 RAB_WAR_NB_EN

32+20.98 WARE
 1100+00.00 RAB_WAR_WB_RT

32+20.98 WARE
 502+15.58 RAB_WAR_WB_EN

32+20.97 WARE
 552+22.65 RAB_WAR_EB_EX

32+20.97 WARE
 1003+78.09 RAB_WAR_NB_RT

PROP. CURVE RAB WAR EB EX-1

PROP. CURVE RAB WAR NB R-5

PROP. CURVE RAB WAR EB EX-1

PROP. CURVE RAB WAR CENT-1

PROP. CURVE RAB WAR NB R-4

PROP. CURVE RAB WAR NB R-3

PROP. CURVE RAB WAR NB EN-2

PROP. CURVE RAB WAR NB R-1

PROP. CURVE RAB WAR NB EN-1

WARE ROAD

PROP. CURVE RAB_WAR_WB_EN-1
 PI STA. = 501+10.53
 $\Delta = 36^\circ 54' 23''$ (LT)
 D = 3' 24' 18"
 R = 400.00'
 T = 30.03'
 L = 57.97'
 E = 4.88'
 P.C. STA. = 500+80.50
 P.T. STA. = 501+38.47

PROP. CURVE RAB_WAR_WB_EN-2
 PI STA. = 502+03.70
 $\Delta = 3^\circ 24' 18''$ (RT)
 D = 14' 19' 26"
 R = 400.00'
 T = 11.89'
 L = 23.77'
 E = 0.18'
 P.C. STA. = 501+91.81
 P.T. STA. = 502+15.58

STATION EQUATION

	RAB	ROAD	ALIGN
①	900+11.25	402+18.86	RAB_WAR_NB_EN
②	900+59.29	550+52.50	RAB_WAR_EB_EX
③	900+88.30	500+52.50	RAB_WAR_WB_EN
④	901+37.99	650+52.50	RAB_WAR_NB_EX
⑤	901+78.94	600+52.50	RAB_WAR_SB_EN
⑥	902+35.12	750+80.22	RAB_WAR_WB_EX
⑦	902+55.08	700+79.45	RAB_WAR_EB_EN
⑧	902+99.13	452+25.48	RAB_WAR_SB_EX

PROP. CURVE RAB_WAR_EB_EX-1
 PI STA. = 551+15.95
 $\Delta = 13^\circ 28' 42''$ (RT)
 D = 19' 05' 55"
 R = 300.00'
 T = 35.45'
 L = 70.57'
 E = 2.09'
 P.C. STA. = 550+80.50
 P.T. STA. = 551+51.07

PROP. CURVE RAB_WAR_EB_EX-2
 PI STA. = 551+74.16
 $\Delta = 8^\circ 13' 17''$ (RT)
 D = 17' 49' 55"
 R = 321.31'
 T = 23.09'
 L = 46.10'
 E = 0.83'
 P.C. STA. = 551+51.07
 P.T. STA. = 551+97.18

PROP. CURVE RAB_WAR_EB_RT1
 PI STA. = 1300+24.20
 $\Delta = 30^\circ 05' 54''$ (RT)
 D = 63' 39' 43"
 R = 90.00'
 T = 24.20'
 L = 47.28'
 E = 3.20'
 P.C. STA. = 1300+00.00
 P.T. STA. = 1300+47.28

PROP. CURVE RAB_WAR_EB_RT2
 PI STA. = 1300+64.87
 $\Delta = 38^\circ 45' 53''$ (RT)
 D = 114' 35' 30"
 R = 600.00'
 T = 17.59'
 L = 33.83'
 E = 3.00'
 P.C. STA. = 1300+47.28
 P.T. STA. = 1300+81.11

PROP. CURVE RAB_WAR_EB_RT3
 PI STA. = 1301+66.42
 $\Delta = 16^\circ 11' 05''$ (RT)
 D = 9' 32' 57"
 R = 50.00'
 T = 85.31'
 L = 169.49'
 E = 6.03'
 P.C. STA. = 1300+81.11
 P.T. STA. = 1302+50.59

PROP. CURVE RAB_WAR_NB_R-1
 PI STA. = 1000+33.87
 $\Delta = 6^\circ 12' 49''$ (LT)
 D = 9' 10' 55"
 R = 624.00'
 T = 33.87'
 L = 67.67'
 E = 0.92'
 P.C. STA. = 1000+00.00
 P.T. STA. = 1000+67.67

PROP. CURVE RAB_WAR_NB_R-2
 PI STA. = 1001+47.98
 $\Delta = 42^\circ 17' 54''$ (RT)
 D = 67' 24' 24"
 R = 85.00'
 T = 32.88'
 L = 62.75'
 E = 6.14'
 P.C. STA. = 1001+15.10
 P.T. STA. = 1001+77.85

PROP. CURVE RAB_WAR_NB_R-3
 PI STA. = 1001+88.59
 $\Delta = 2^\circ 27' 41''$ (RT)
 D = 11' 27' 33"
 R = 500.00'
 T = 10.74'
 L = 21.48'
 E = 0.12'
 P.C. STA. = 1001+77.85
 P.T. STA. = 1001+99.33

PROP. CURVE RAB_WAR_NB_RT-4
 PI STA. = 1002+12.59
 $\Delta = 24^\circ 55' 22''$ (RT)
 D = 95' 29' 35"
 R = 60.00'
 T = 13.26'
 L = 26.10'
 E = 1.45'
 P.C. STA. = 1001+99.33
 P.T. STA. = 1002+25.43

PROP. CURVE RAB_WAR_NB_RT-5
 PI STA. = 1002+96.82
 $\Delta = 26^\circ 46' 18''$ (RT)
 D = 19' 05' 55"
 R = 300.00'
 T = 71.39'
 L = 140.18'
 E = 8.38'
 P.C. STA. = 1002+25.43
 P.T. STA. = 1003+65.61

**BASELINE
WARE ROAD**

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 WITH ROUTE WARE ROAD

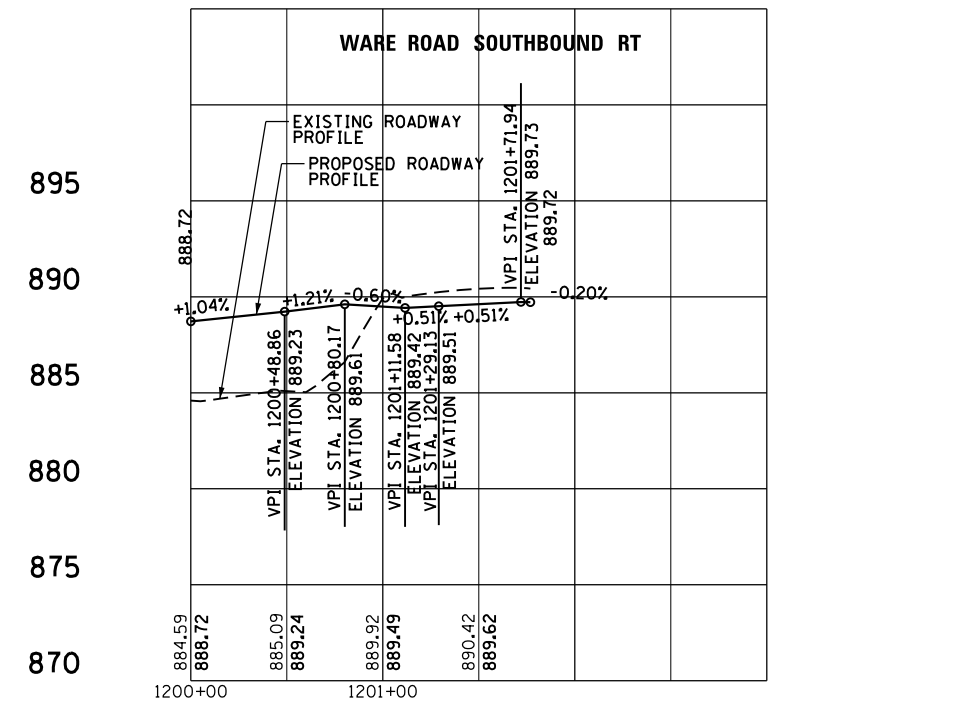
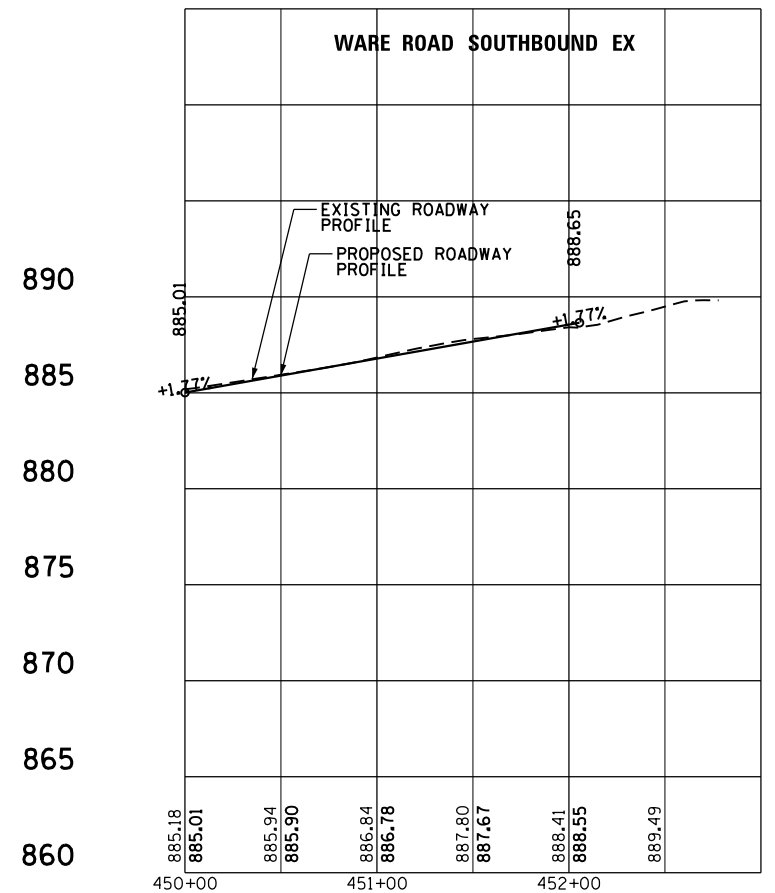
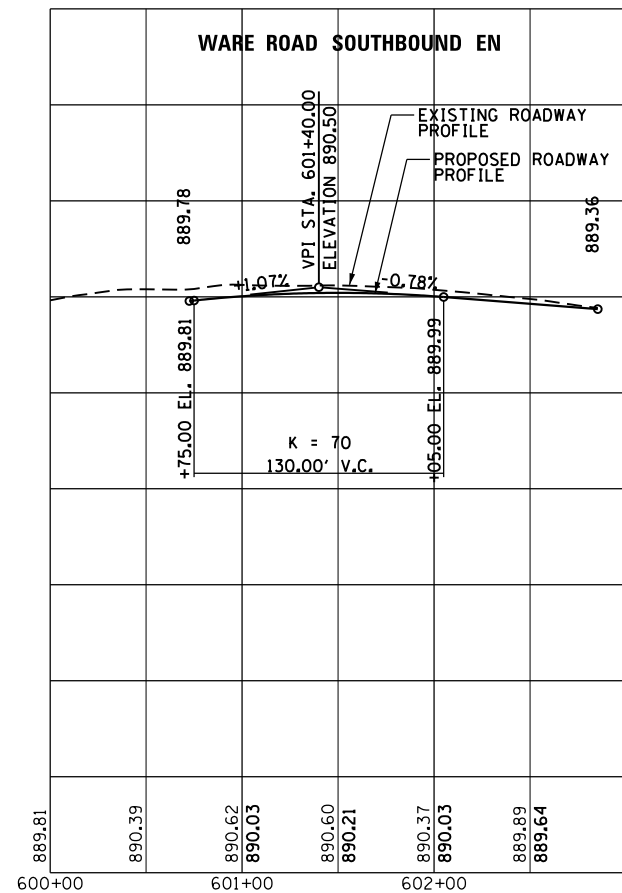
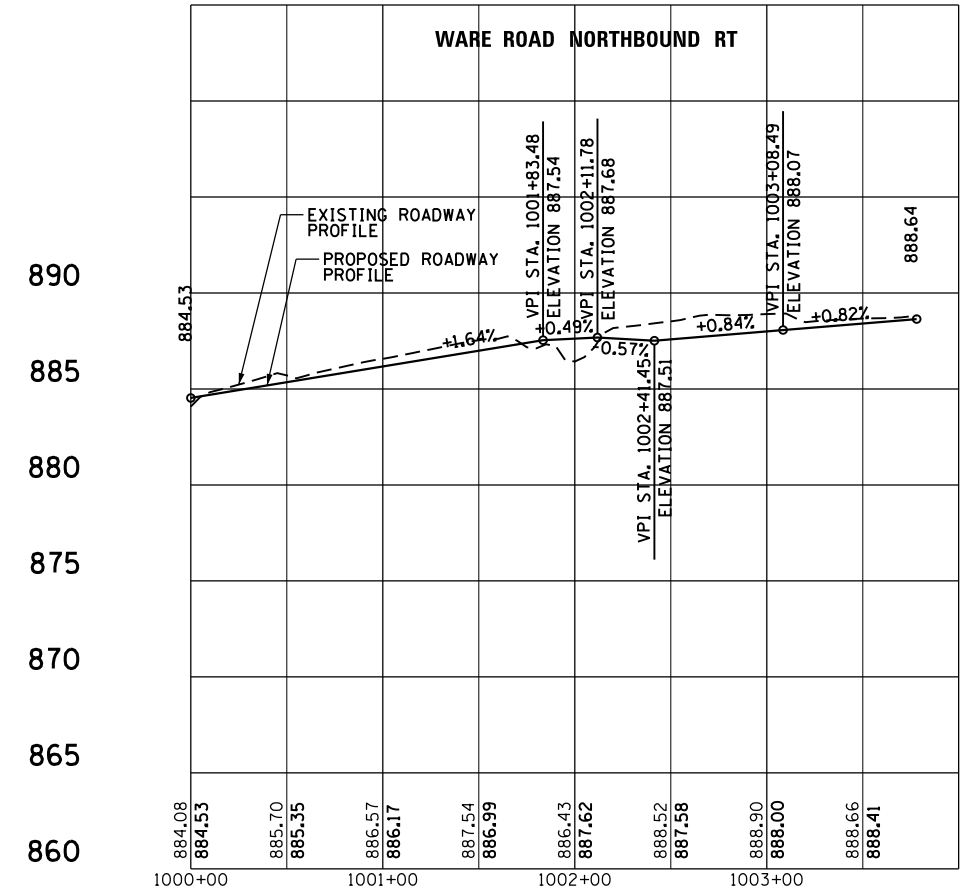
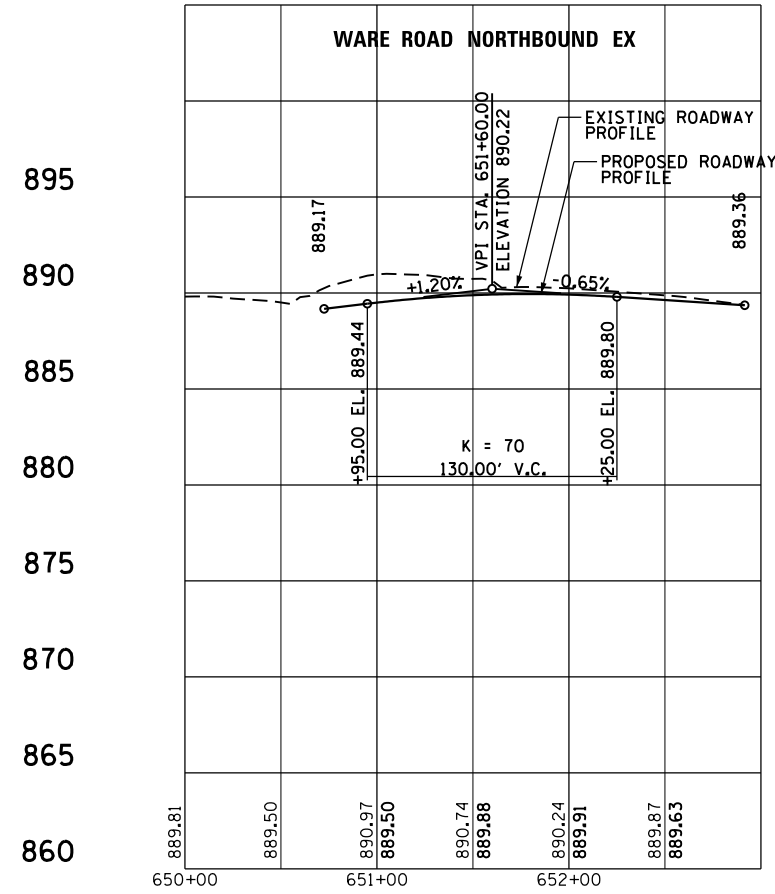
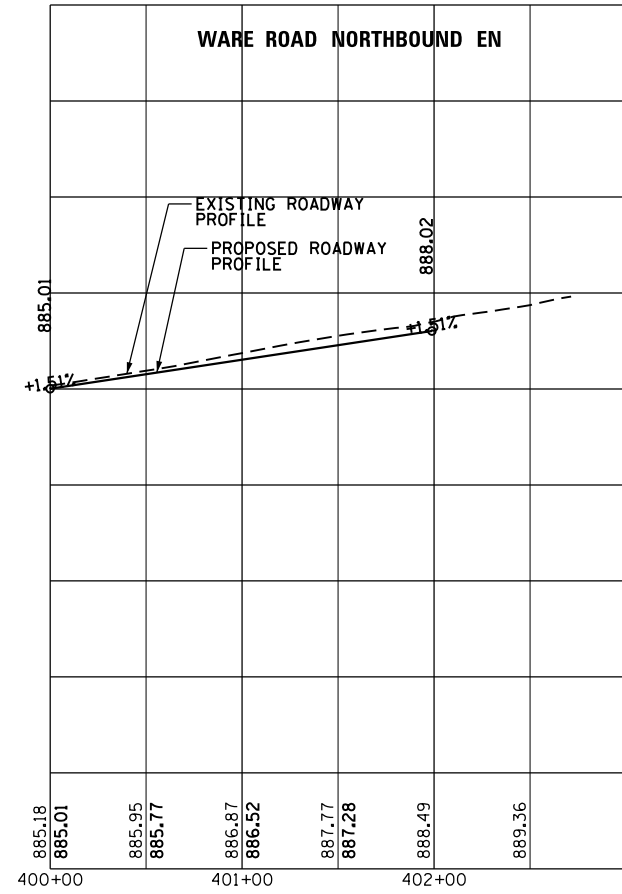
SEC. NO. _____

SCALE 1"=50' COUNTY MCHENRY

SJN : P-91-007-09 PROJ. NO. _____

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PLOT DATE = 8/21/2018
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 PLOT SCALE = 50.00' / 1" =
 USER NAME = pmagnelli



**PROFILES
 NORTHBOUND & SOUTHBOUND WARE ROAD**

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
 _____ ROUTE _____ WITH _____ (WARE ROAD)

SEC. NO. _____

SCALE 1"=50' COUNTY MCHENRY

SJN : P-91-007-09 PROJ. NO. _____

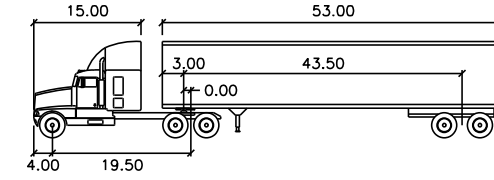
I.D.S. SHEET 4 OF 22

PLOT DATE = 8/21/2018
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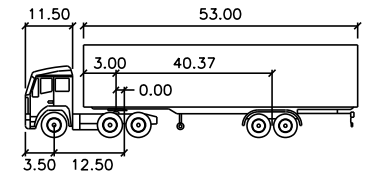
TRUCK THROUGH MOVEMENTS

IL RT 47

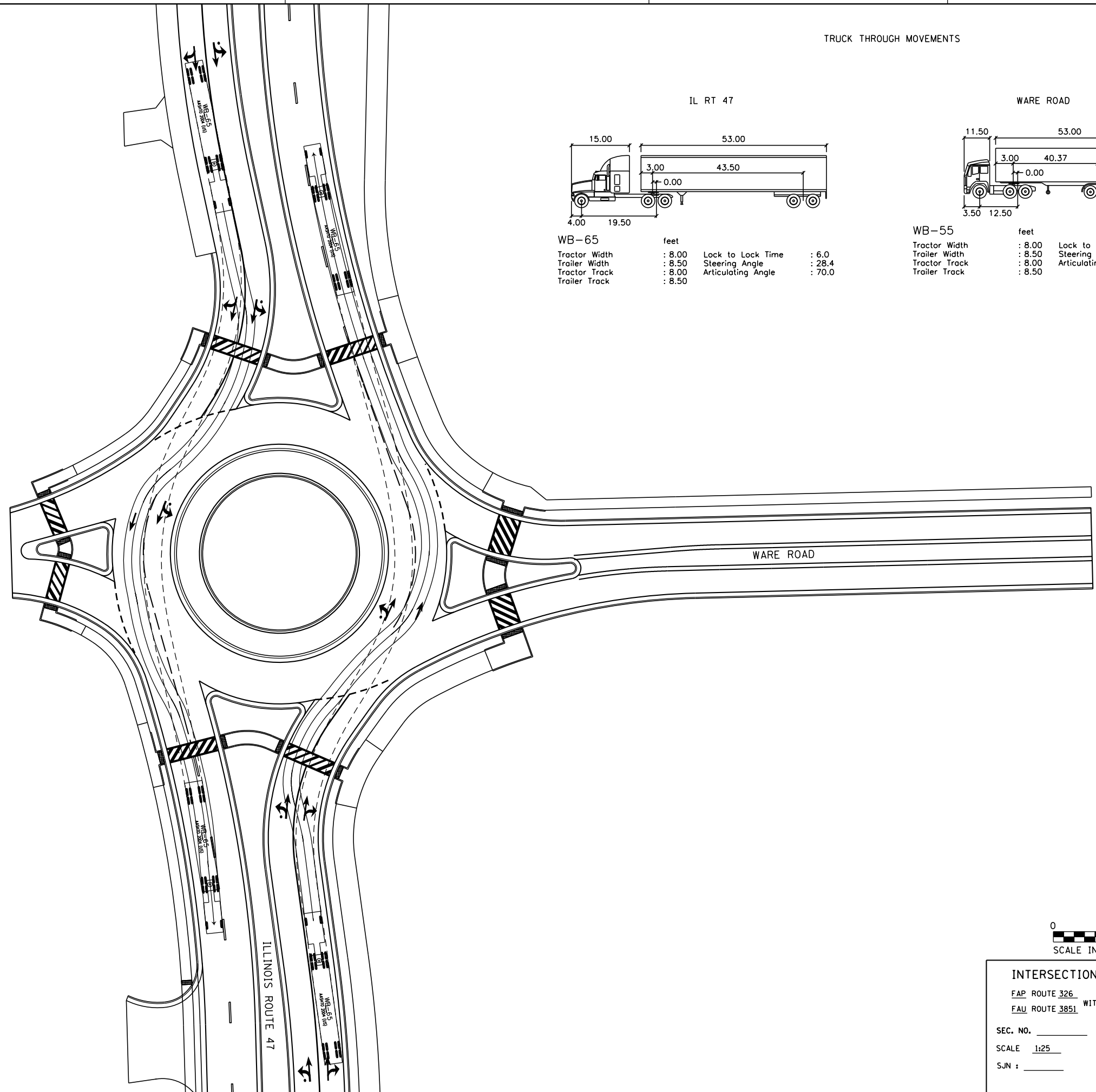


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

WARE ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

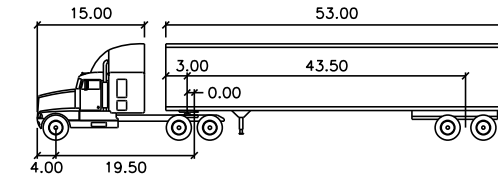


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 6 OF 22

PLOT DATE = 12/27/2018
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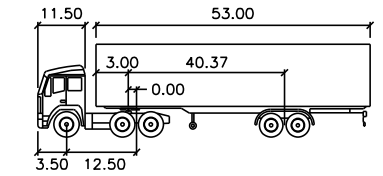
TRUCK THROUGH MOVEMENTS

IL RT 47, EAST LEG OF WARE ROAD

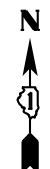
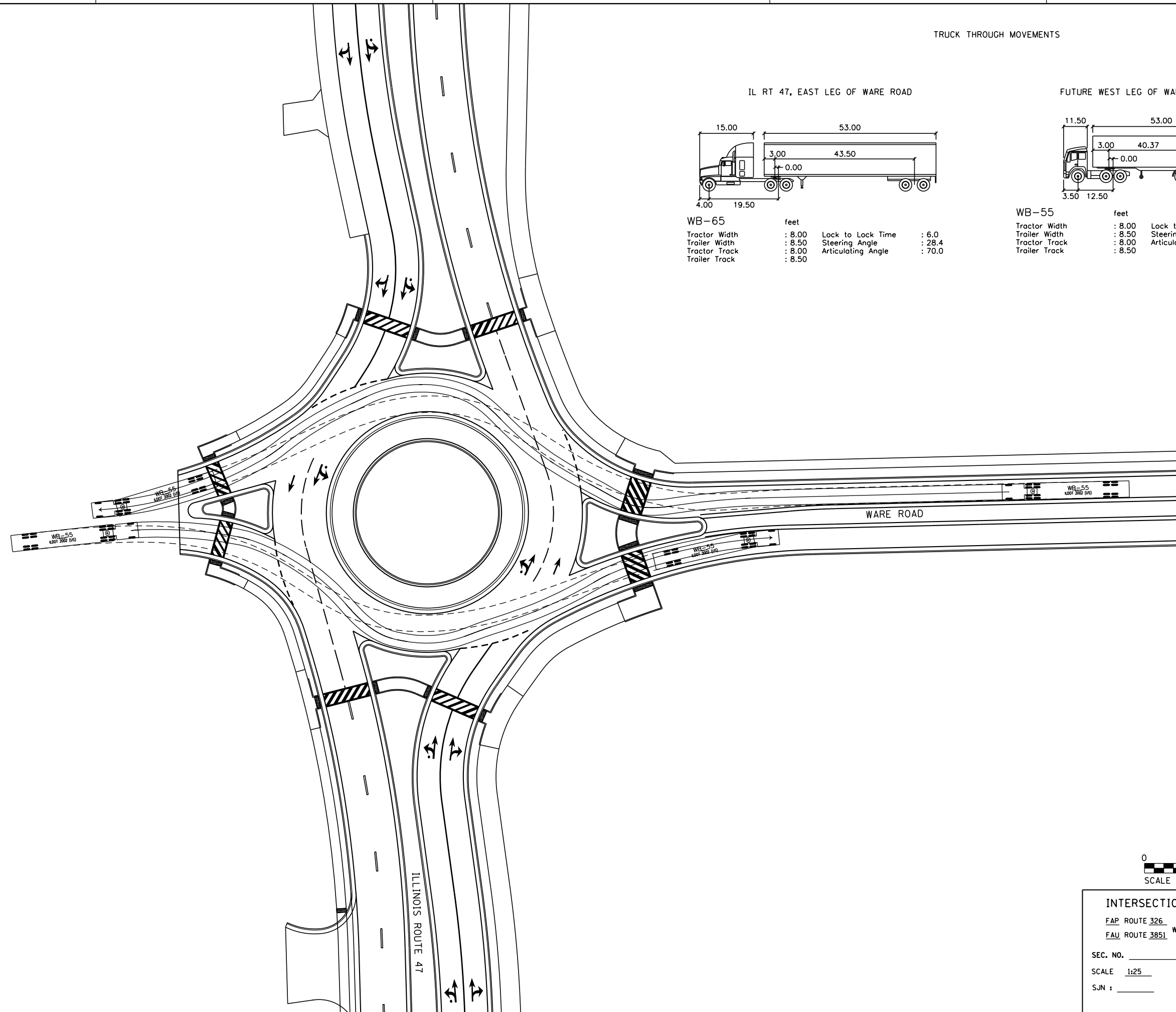


WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

FUTURE WEST LEG OF WARE ROAD

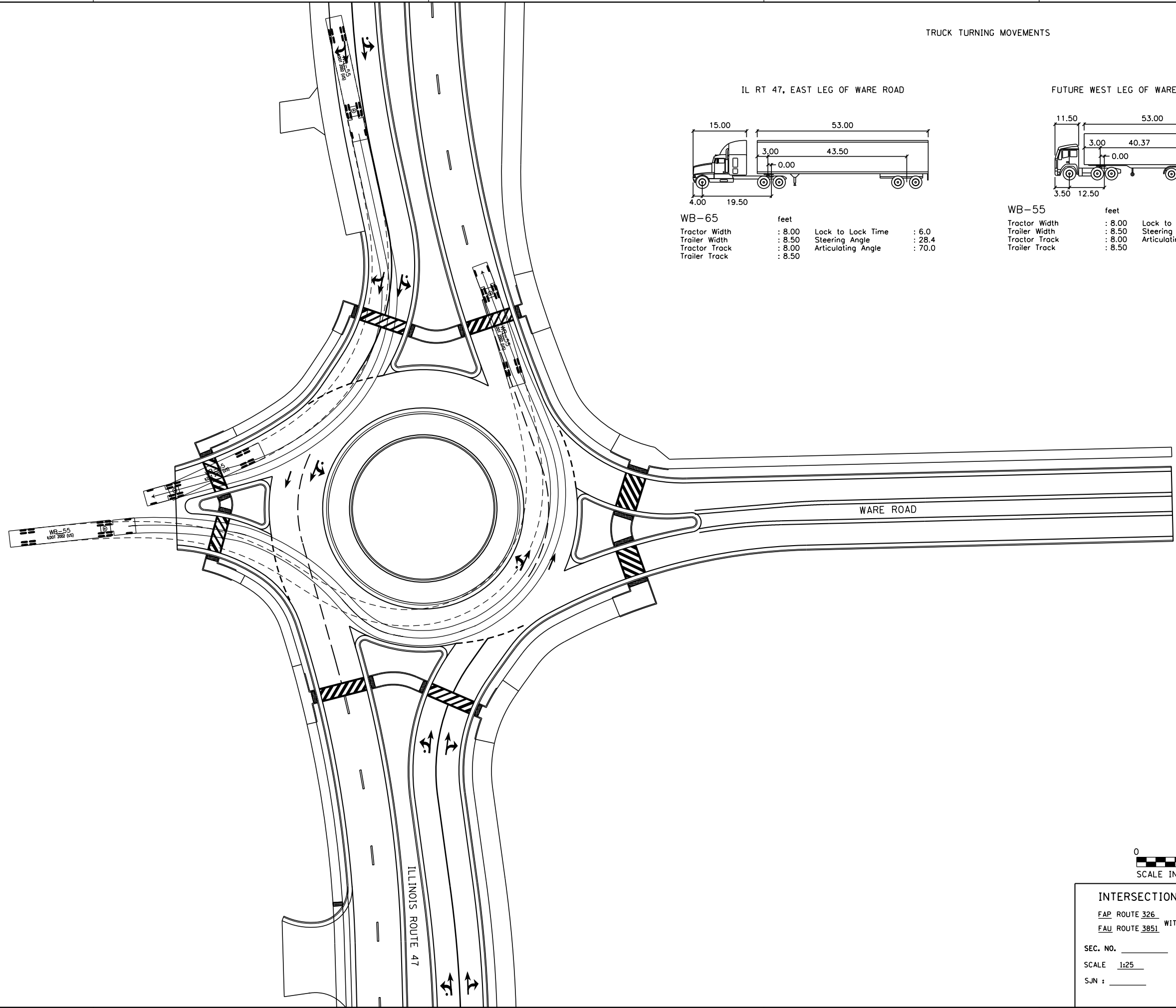


WB-55		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



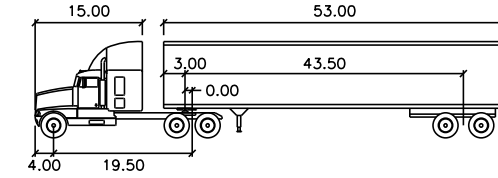
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 7 OF 22

PLOT DATE = 12/27/2018
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 USER NAME = MattG



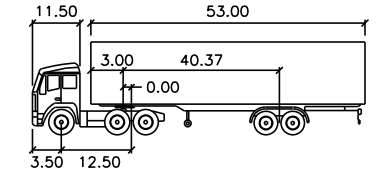
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF WARE ROAD

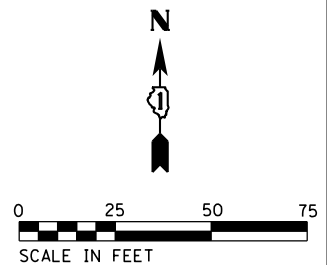


WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

FUTURE WEST LEG OF WARE ROAD

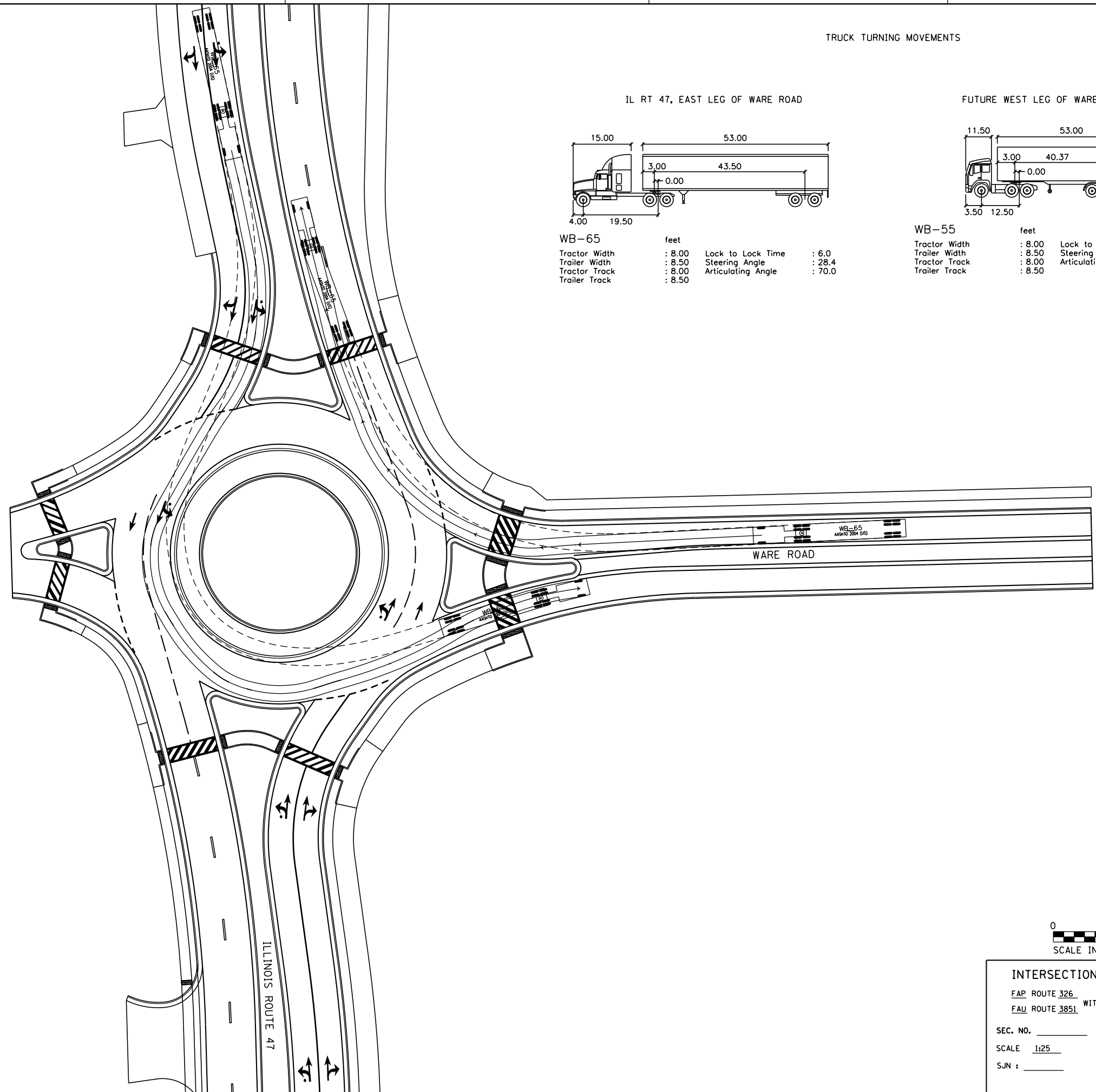


WB-55		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



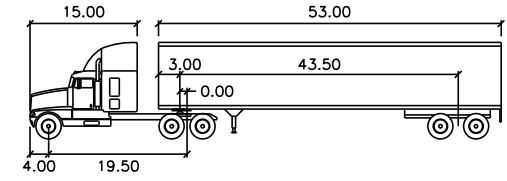
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 8 OF 22

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattG



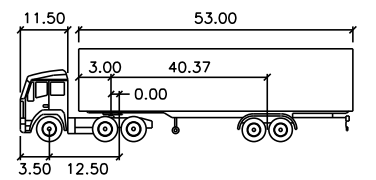
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF WARE ROAD



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

FUTURE WEST LEG OF WARE ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

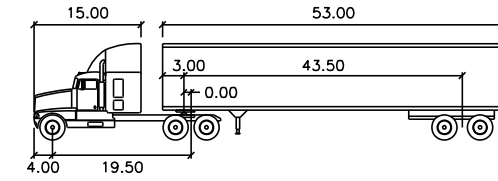


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 9 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\JULY\3300--6399\346\01A\Micro\CA003 Sheets\01B\2345-sht-rds-ware-Auto5.dgn
 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC

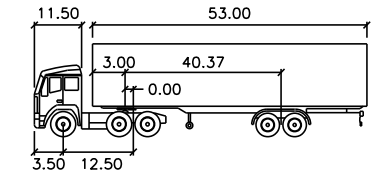
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF WARE ROAD

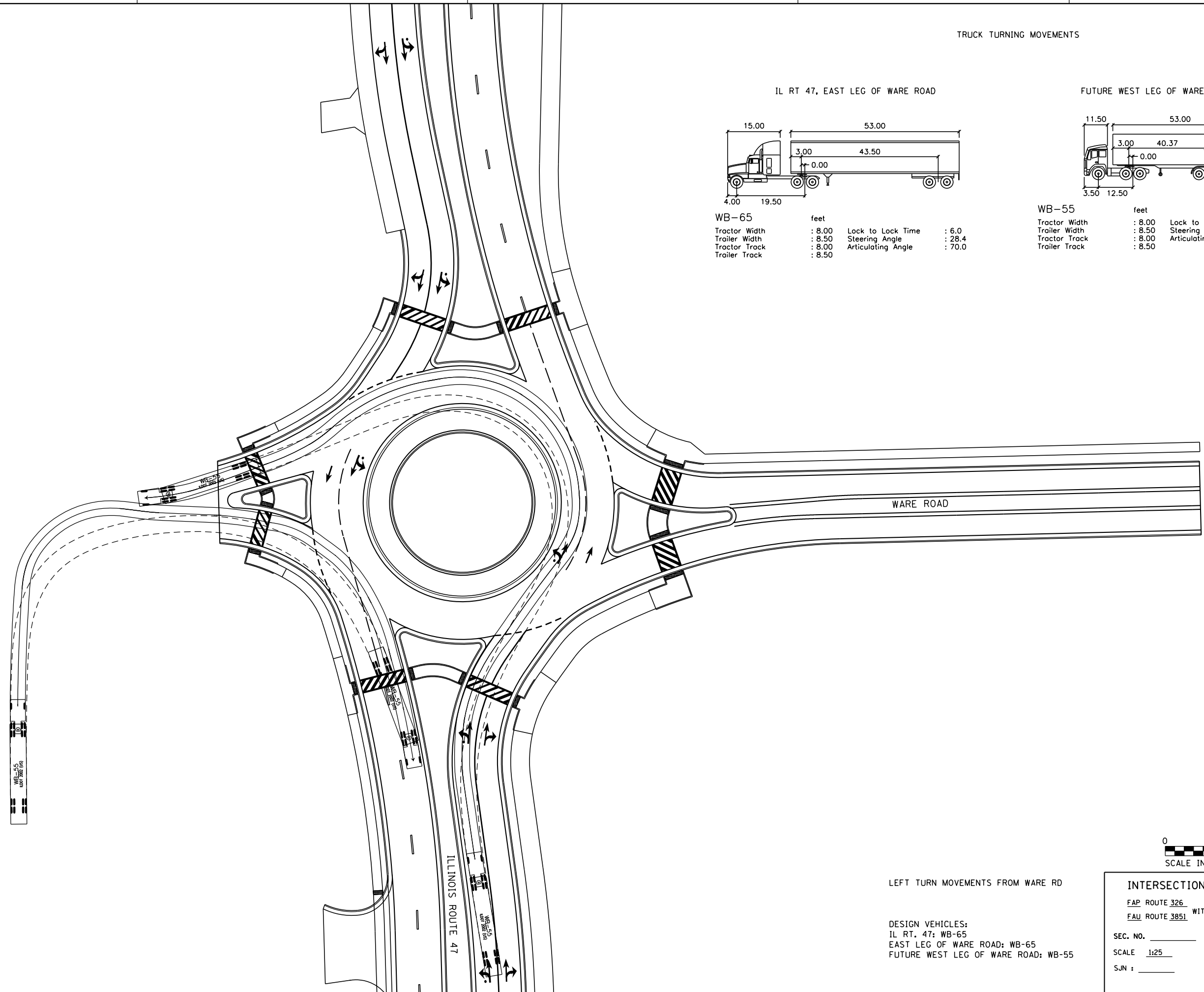


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

FUTURE WEST LEG OF WARE ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WARE ROAD

ILLINOIS ROUTE 47



LEFT TURN MOVEMENTS FROM WARE RD

DESIGN VEHICLES:
 IL RT. 47: WB-65
 EAST LEG OF WARE ROAD: WB-65
 FUTURE WEST LEG OF WARE ROAD: WB-55

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

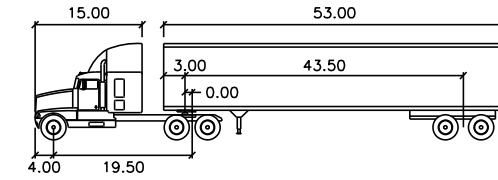
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 10 OF 22

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattG

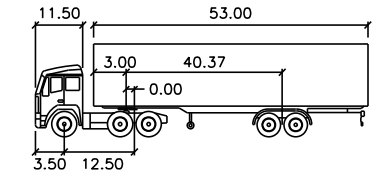
TRUCK TURNING MOVEMENTS

IL RT 47, EAST LEG OF WARE ROAD

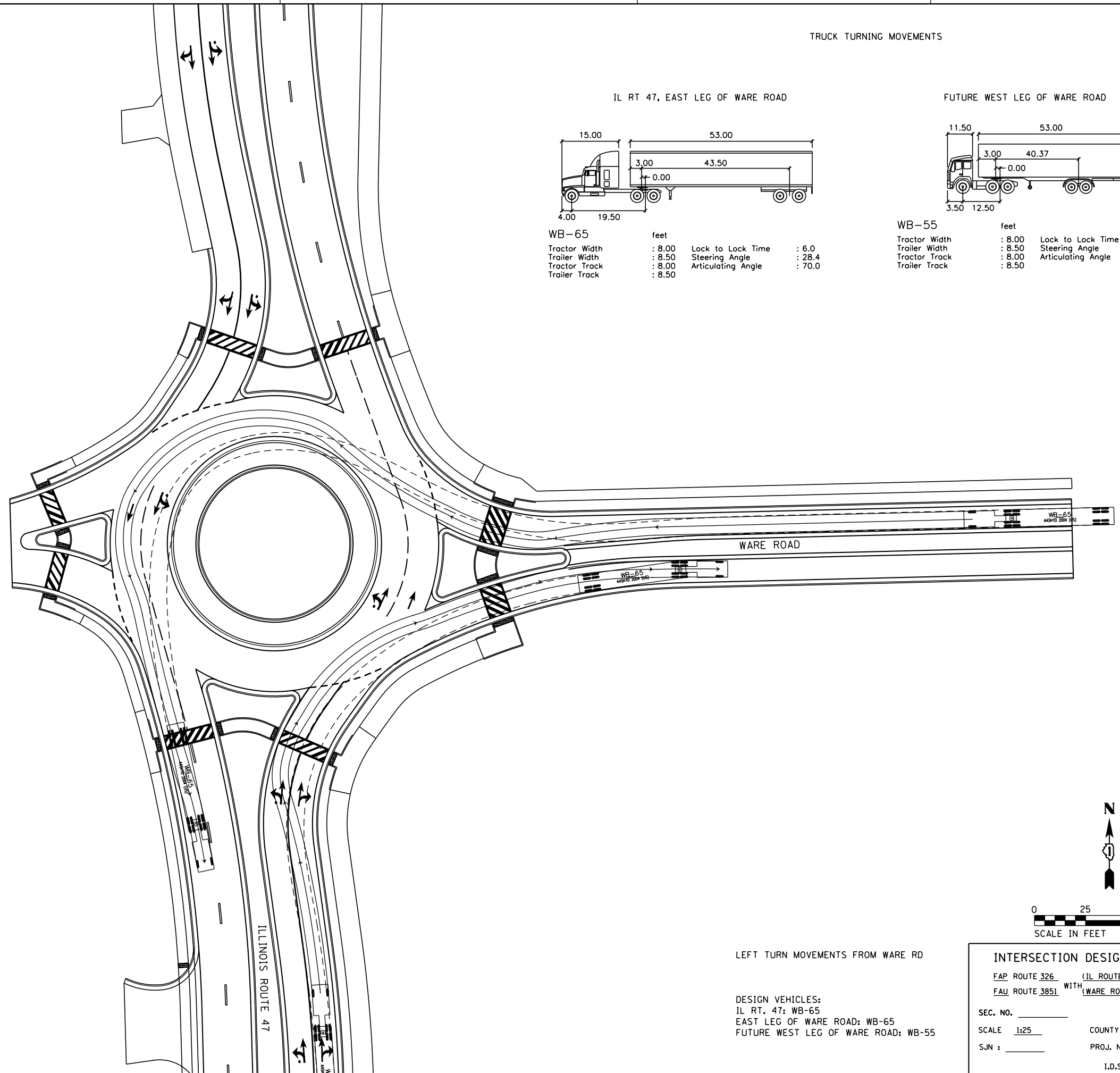


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

FUTURE WEST LEG OF WARE ROAD



WB-55	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 16.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WARE ROAD

ILLINOIS ROUTE 47



LEFT TURN MOVEMENTS FROM WARE RD

DESIGN VEHICLES:
 IL RT. 47: WB-65
 EAST LEG OF WARE ROAD: WB-65
 FUTURE WEST LEG OF WARE ROAD: WB-55

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

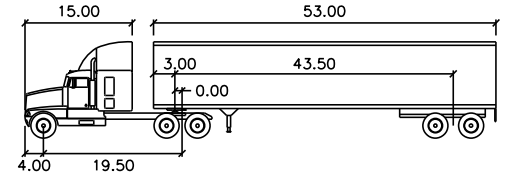
SEC. NO. _____ COUNTY MCHENRY _____
 SCALE 1:25 PROJ. NO. _____
 SJN : _____

I.D.S. SHEET 11 OF 22

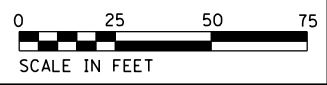
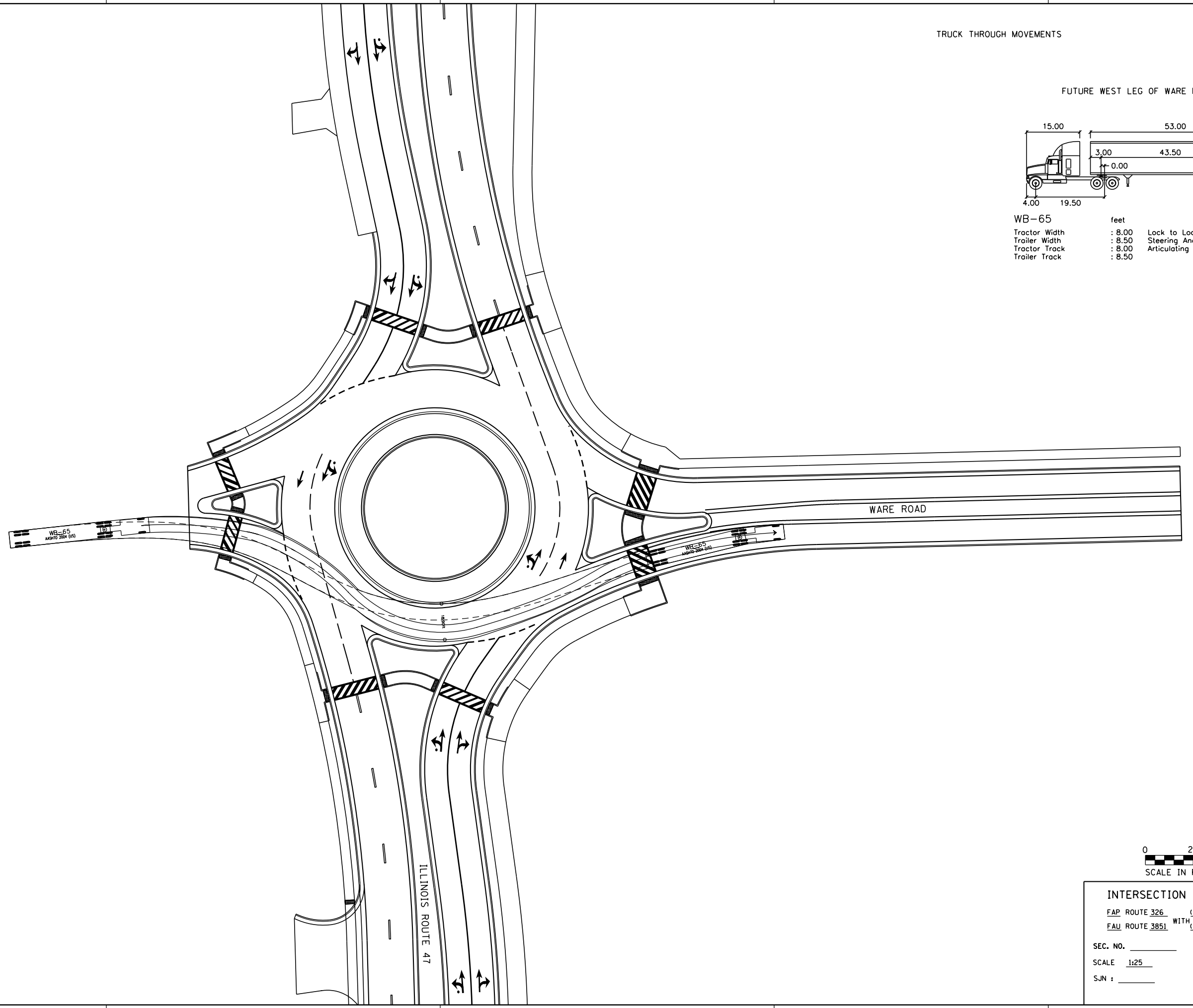
PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01A\Micro\CA00D Sheets\0812345-ght-rds-ware-Auto7.dgn
 PLOT SCALE = 50.00000 / 1"
 USER NAME = MattG

TRUCK THROUGH MOVEMENTS

FUTURE WEST LEG OF WARE ROAD



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

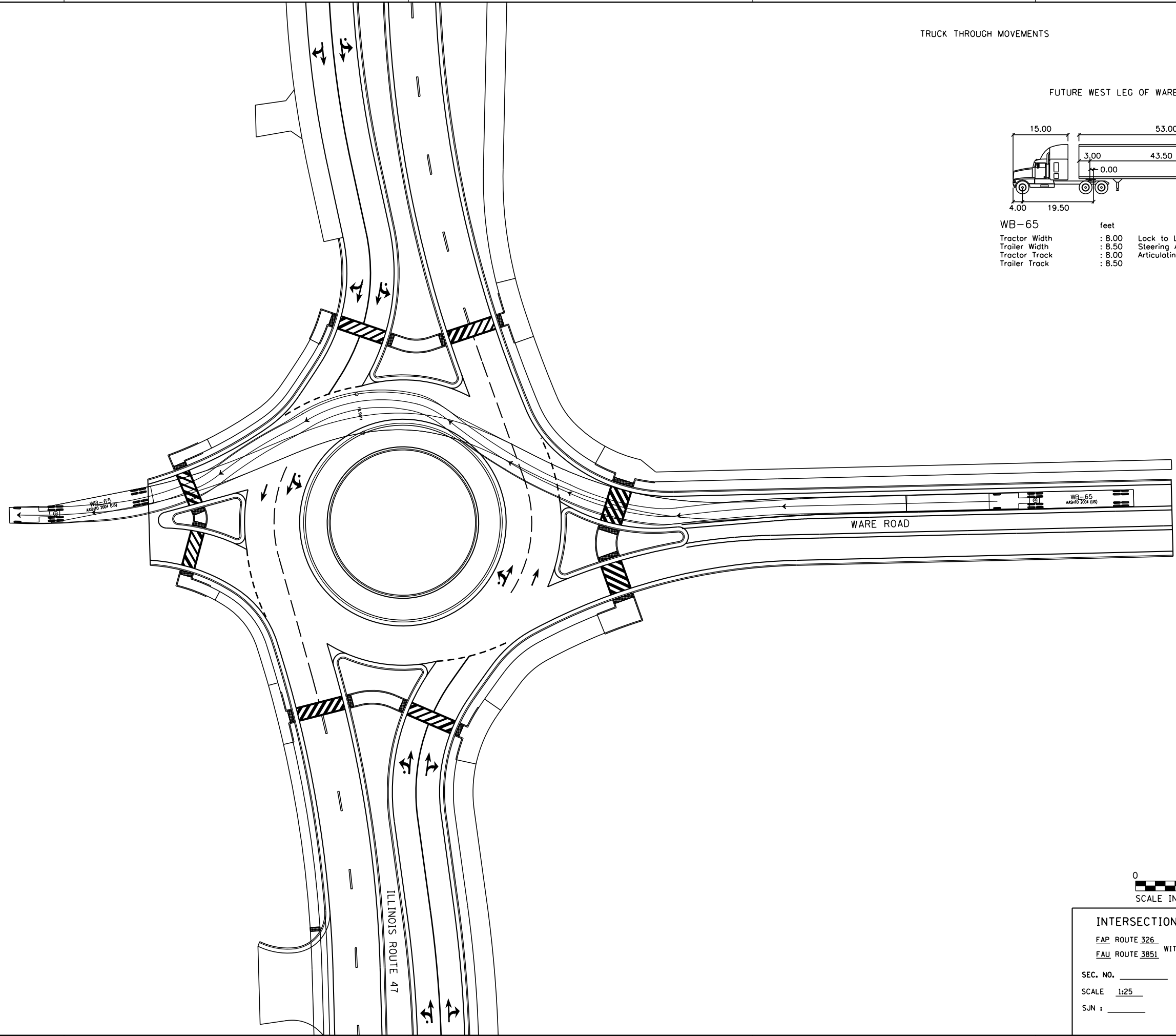
SEC. NO. _____

SCALE 1:25 COUNTY MCHENRY

SJN : _____ PROJ. NO. _____

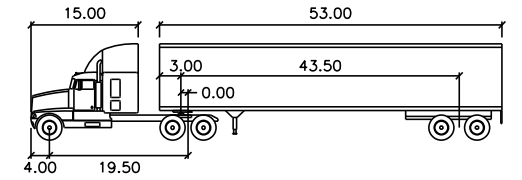
I.D.S. SHEET 12 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01A\Micro\CA00D Sheets\0812345-ght-rds-ware-AutoB.dgn
 PLOT SCALE = 50.00000 ' / in.
 USER NAME = MattG



TRUCK THROUGH MOVEMENTS

FUTURE WEST LEG OF WARE ROAD

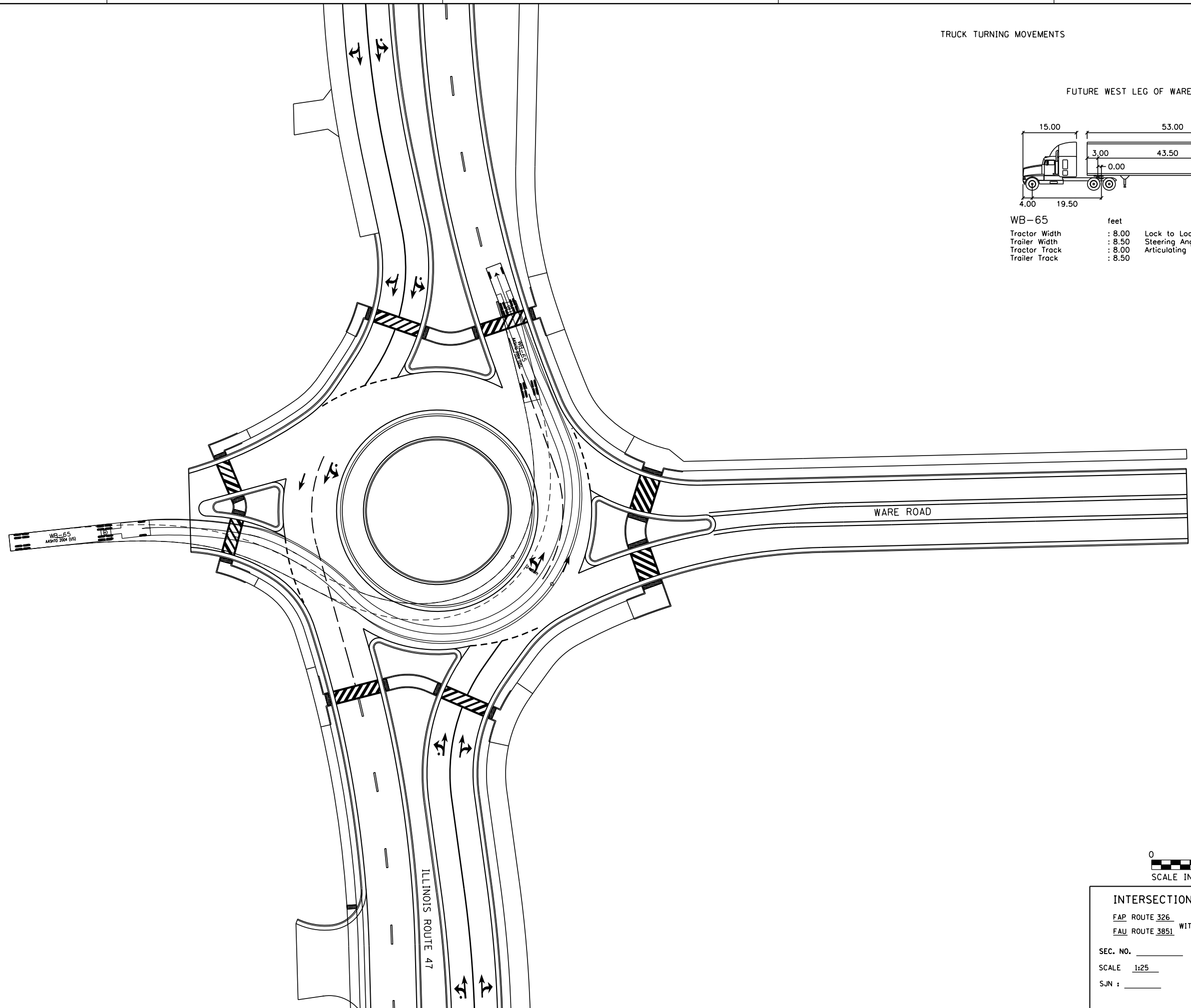


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



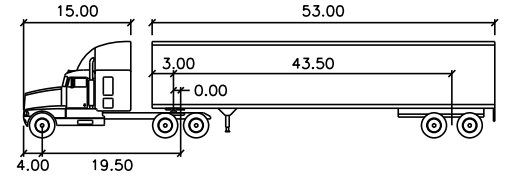
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 13 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01\Micro\CA00D Sheets\01\2345-ght-rds-ware-AutoR.dgn
 PLOT SCALE = 50.00000 / 1"
 USER NAME = MattC



TRUCK TURNING MOVEMENTS

FUTURE WEST LEG OF WARE ROAD



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

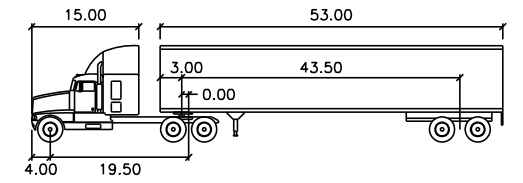
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 14 OF 22

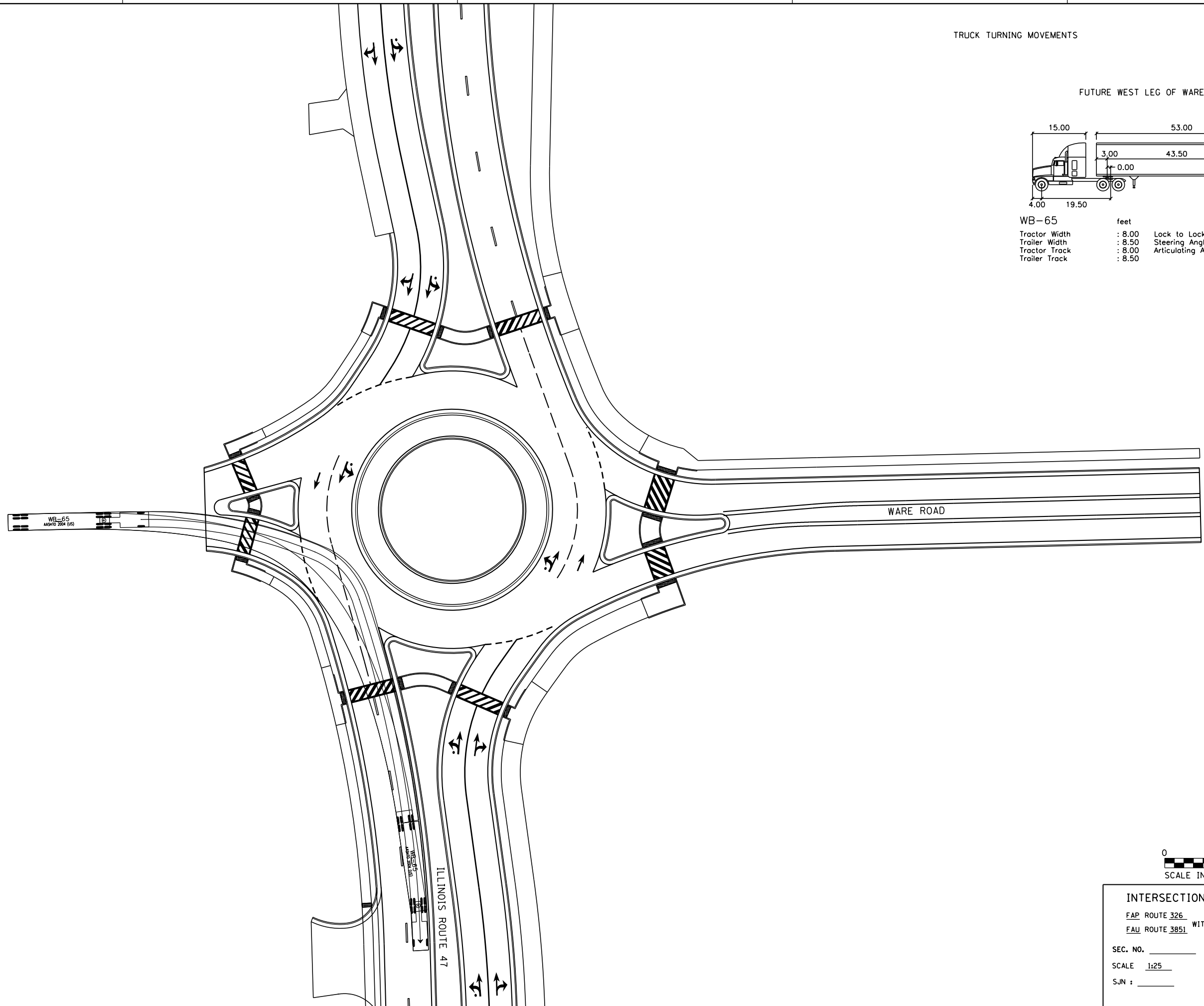
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 PLOT SCALE = 50.00000 / 1"
 USER NAME = MattC

TRUCK TURNING MOVEMENTS

FUTURE WEST LEG OF WARE ROAD



WB-65		feet	
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

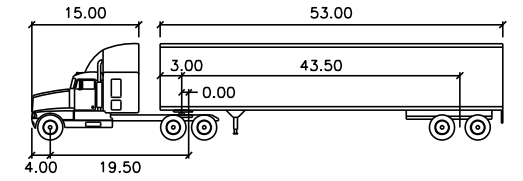


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 16 OF 22

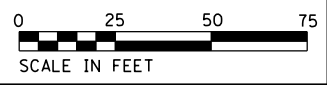
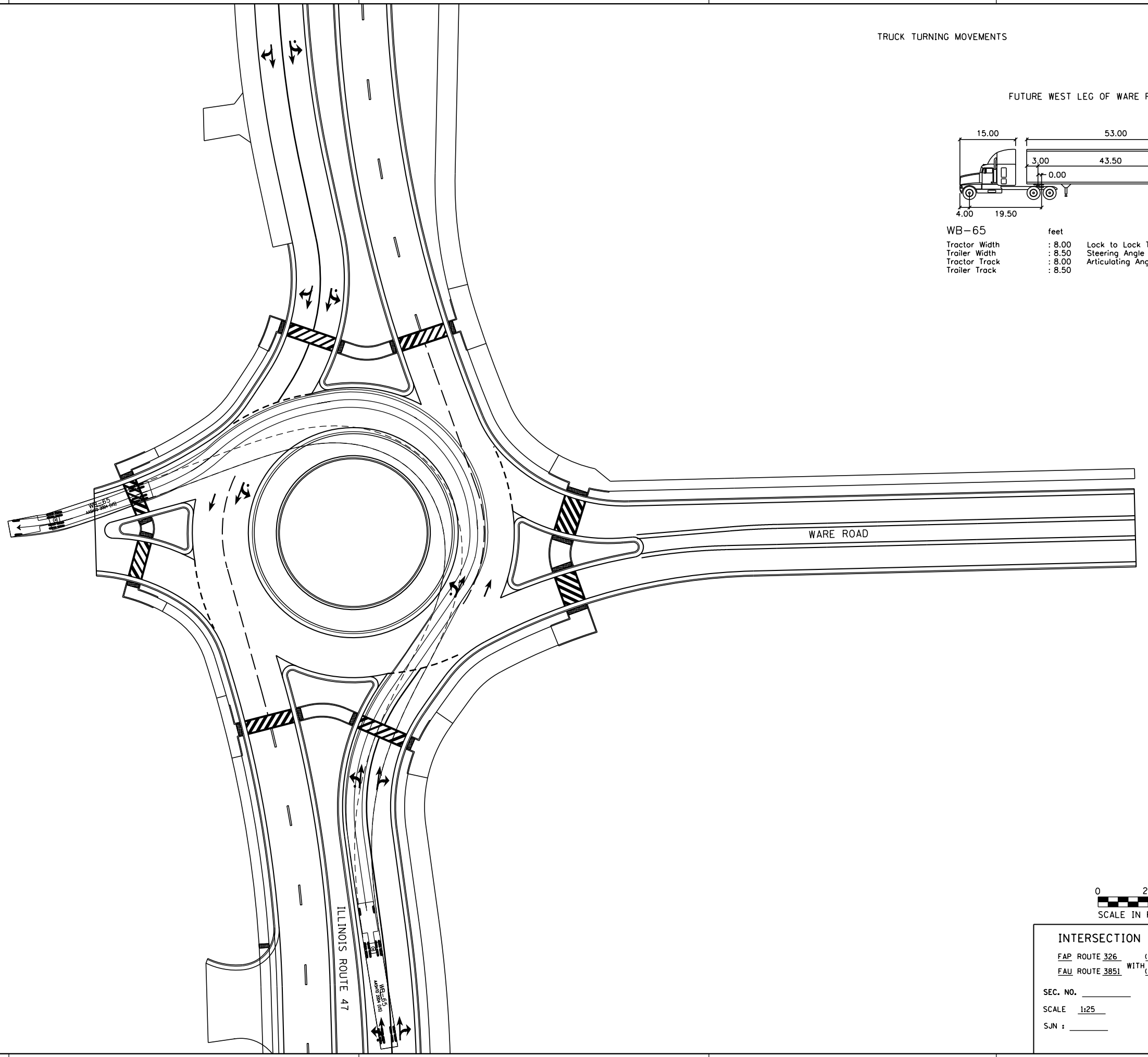
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 USER NAME = MattC

TRUCK TURNING MOVEMENTS

FUTURE WEST LEG OF WARE ROAD

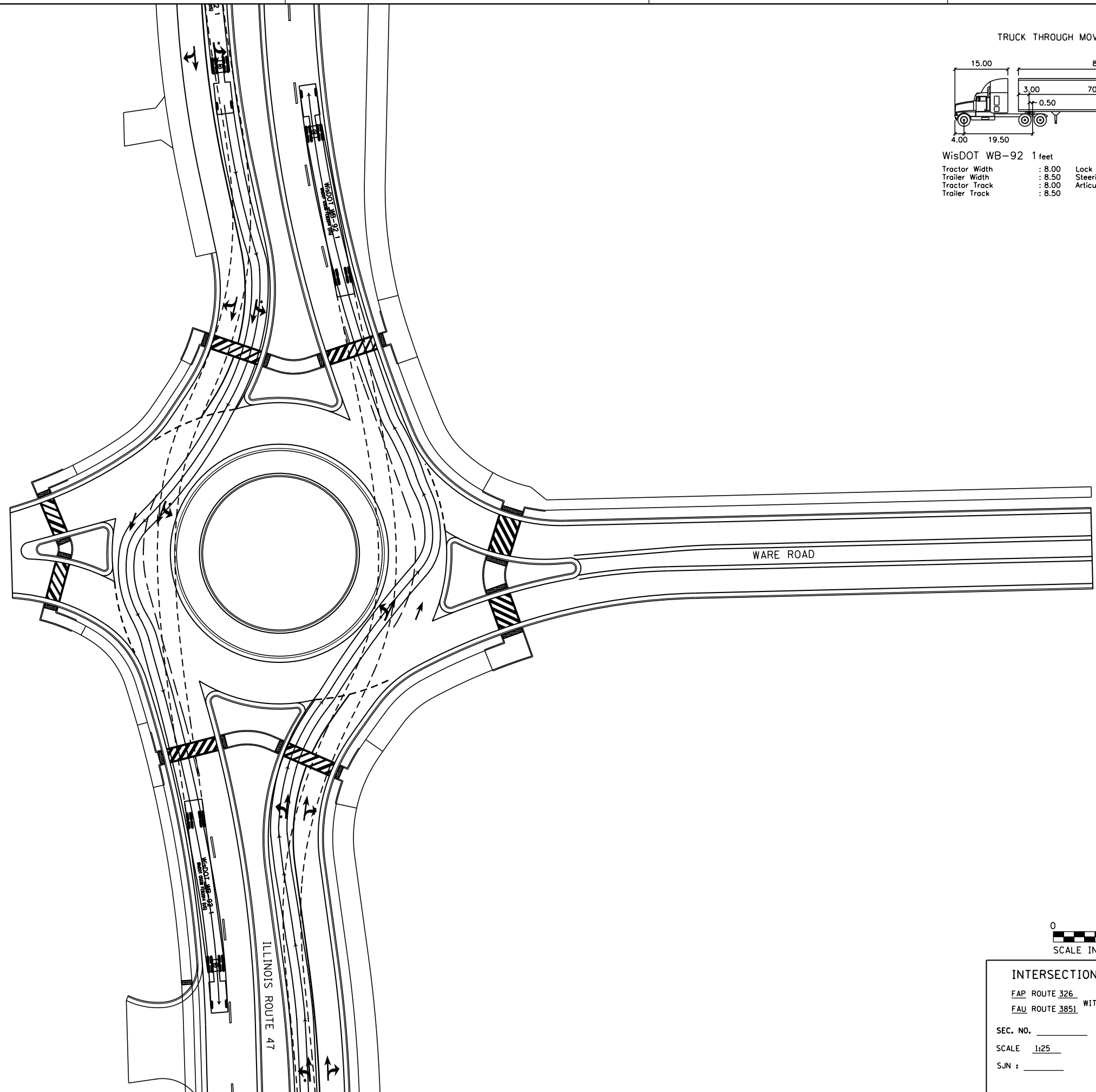


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

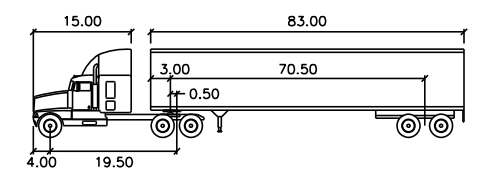


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 17 OF 22

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390--6399\6346\01A\Micro\CA00 Sheets\0812345-ah-1ds-Ware-05DW1.dgn
 PLOT SCALE = 50.0000 / 1"
 USER NAME = MattC



TRUCK THROUGH MOVEMENTS

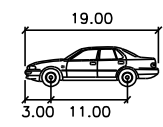


WisDOT WB-92 1 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		



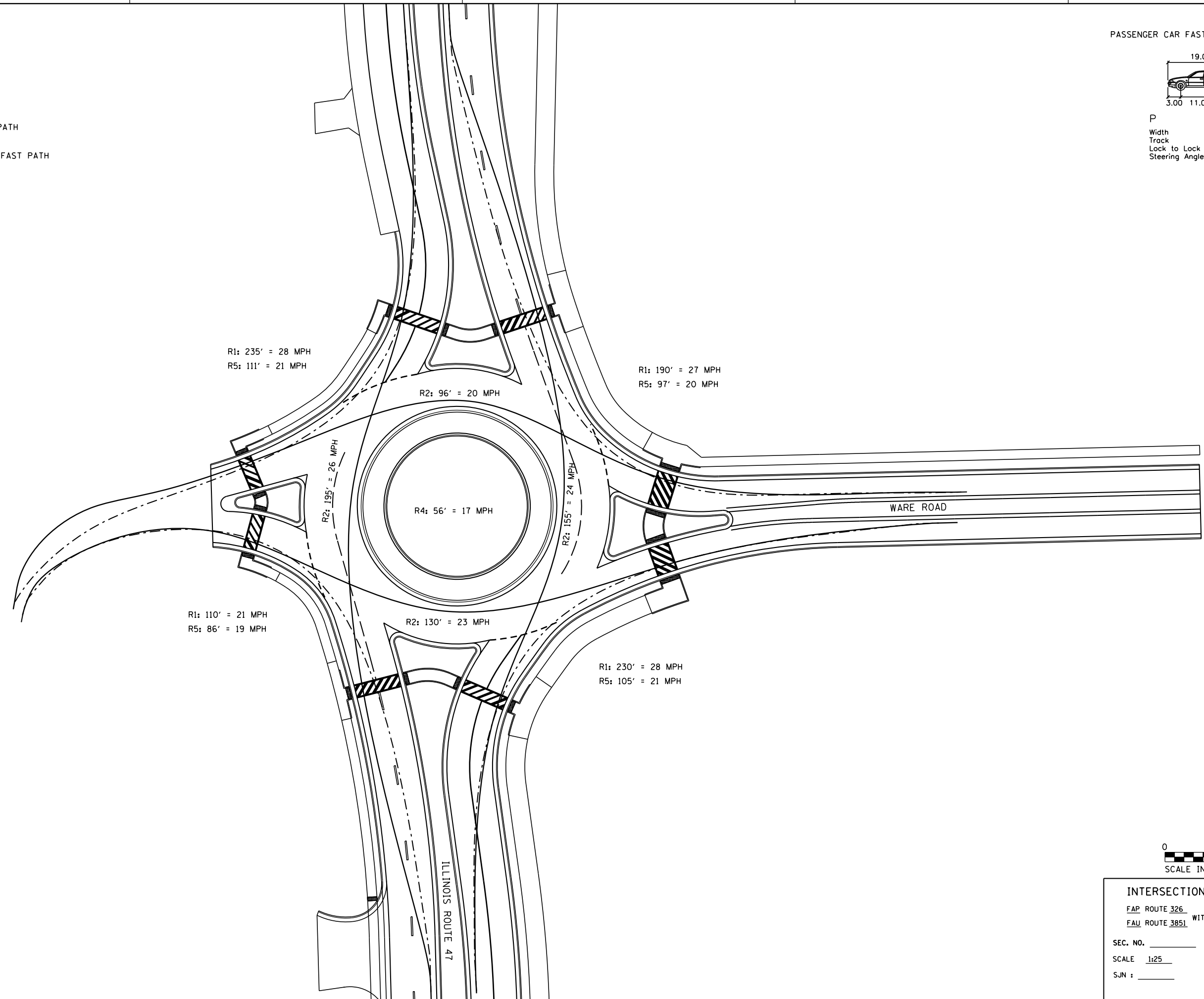
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 18 OF 22



P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6

LEGEND

- THRU FAST PATH
- - - RIGHT TURN FAST PATH



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
FAU ROUTE 3851 WITH (WARE ROAD)

SEC. NO. _____

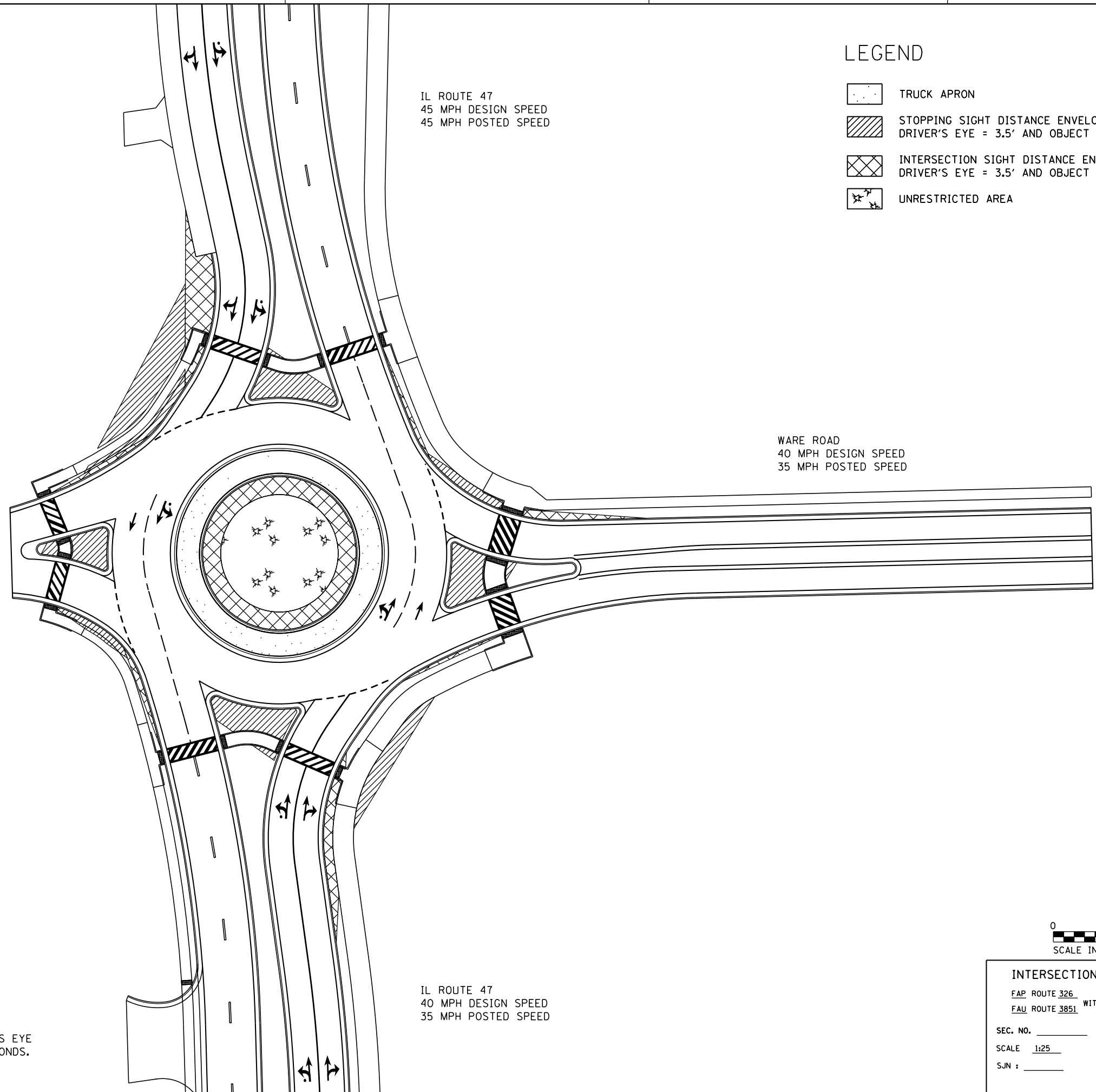
SCALE 1:25 COUNTY MCHENRY

SJN : _____ PROJ. NO. _____

I.D.S. SHEET 19 OF 22

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattG

PLOT DATE = 12/27/2018
 FILE NAME = S:\LD\6390-6399\6346\01A\MicroStation\CAD\ Sheets\01A\2345-ght-rds-ware-sight.dgn
 PLOT SCALE = 50.0000 / in.
 USER NAME = MattG







IL ROUTE 47
 45 MPH DESIGN SPEED
 45 MPH POSTED SPEED

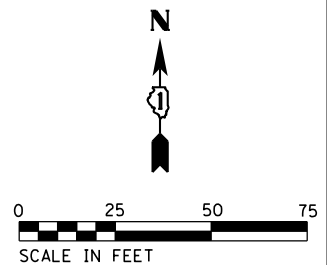
WARE ROAD
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

IL ROUTE 47
 40 MPH DESIGN SPEED
 35 MPH POSTED SPEED

LEGEND

-  TRUCK APRON
-  STOPPING SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 2.0'
-  INTERSECTION SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 3.5'
-  UNRESTRICTED AREA

NOTES:
 INTERSECTION SIGHT DISTANCE ENVELOPES ARE BASED ON DRIVER'S EYE
 50 FEET FROM THE YIELD LINE WITH A CRITICAL GAP OF 5.0 SECONDS.

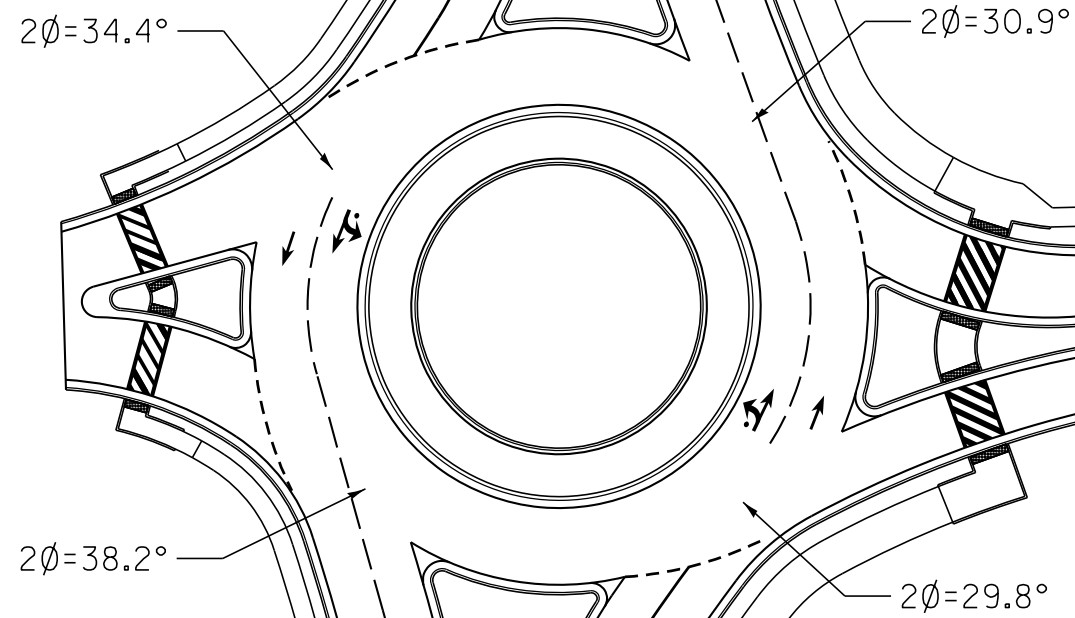


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)

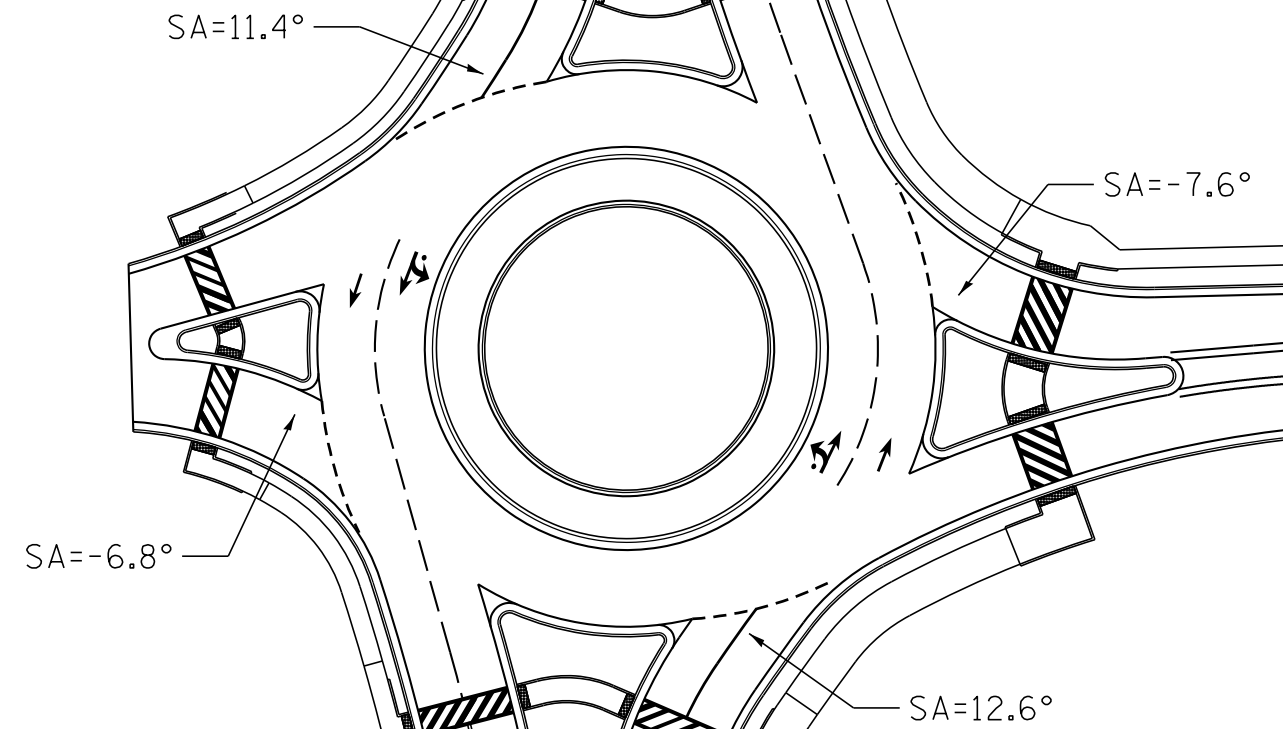
SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 20 OF 22

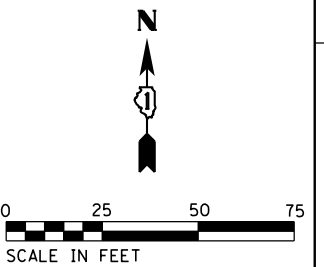
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 PLOT SCALE = 50.0000' / in.
 USER NAME = MattG



PHI ANGLES

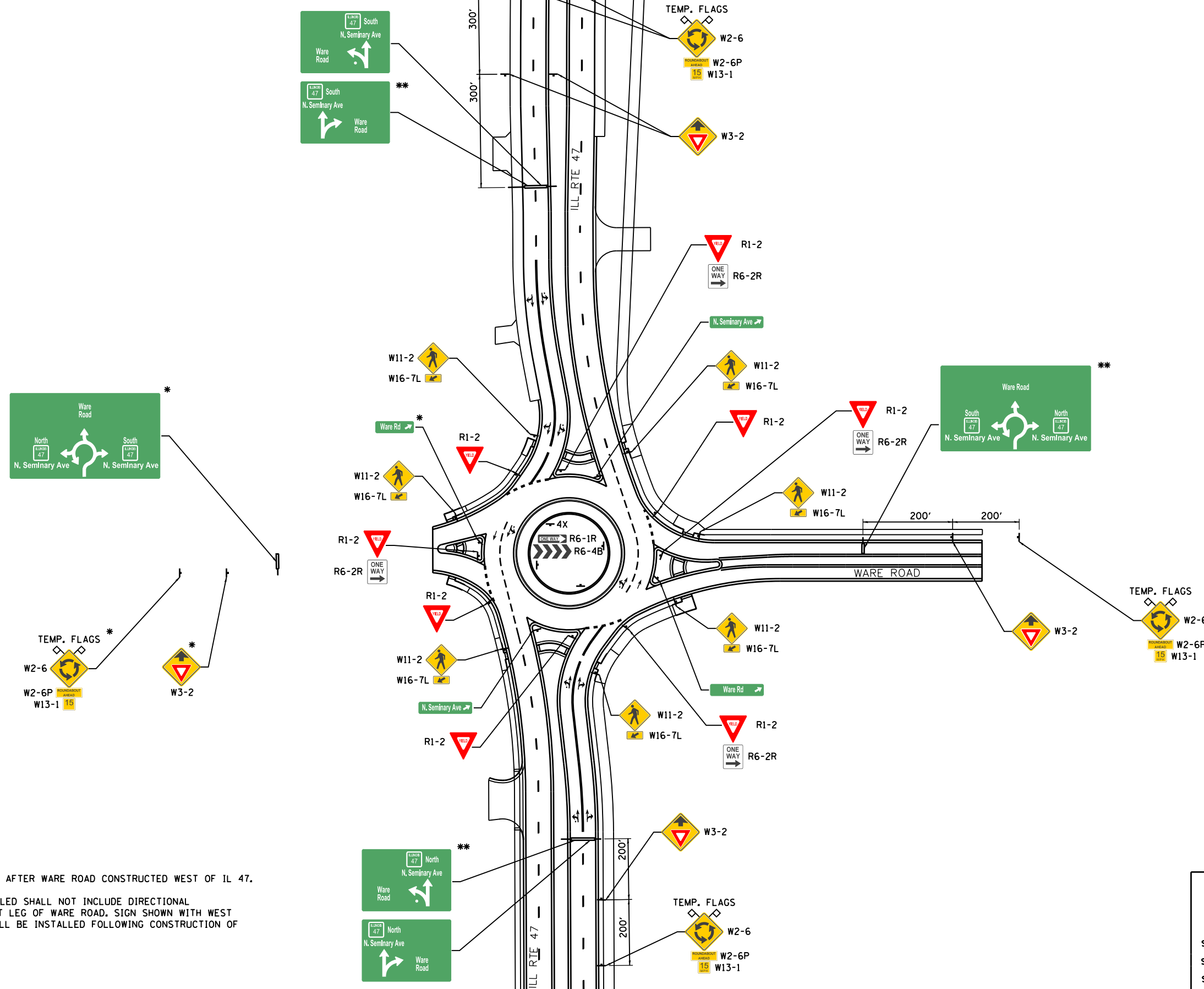


VISION ANGLES

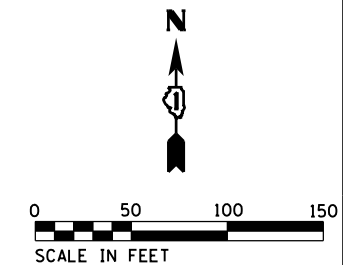


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAU ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 21 OF 22

PLOT DATE = 8/23/2018
 FILE NAME = S:\JULY\2018\6399\6346\01A\MicroStation\CAD Sheets\01A2345-ght-rds-ware-sign.dgn
 PLOT SCALE = 50.0000 / 1" = 100'
 USER NAME = brianf



NOTES
 * INDICATES SIGN TO BE INSTALLED AFTER WARE ROAD CONSTRUCTED WEST OF IL 47.
 ** INDICATES SIGN INITIALLY INSTALLED SHALL NOT INCLUDE DIRECTIONAL INFORMATION REGARDING THE WEST LEG OF WARE ROAD. SIGN SHOWN WITH WEST LEG OF WARE ROAD INCLUDED SHALL BE INSTALLED FOLLOWING CONSTRUCTION OF THE LEG.



INTERSECTION DESIGN STUDY
 2 ROUTE 326 (ILLINOIS RT. 47)
 9 ROUTE 3851 WITH (WARE ROAD)
 SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN # _____ PROJ. NO. _____
 I.D.S. SHEET 22 OF 22

ROUNDABOUT CAPACITY DESIGN STUDY

PROGRAM USED SIDRA VERSION 7.0 AREA _____ PEAK HOUR FACTOR 0.92 (AM) 0.92 (PM)
 INTERSECTION CONTROL DELAY A.M. 8.3 SECONDS P.M. 10.0 SECONDS
 INTERSECTION LEVEL OF SERVICE A.M. A P.M. B

APPROACH	NB IL RTE 47			SB IL RTE 47			EB CHARLES ROAD			WB CHARLES ROAD		
LANE GROUP	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
2040 30TH MAX. HOUR TRAFFIC	A.M. 105	375	110	65	350	5	10	480	320	190	215	30
	P.M. 220	500	145	40	545	10	20	340	130	165	350	55
ENTRY FLOW RATE	A.M. 100	356	105	63	340	5	10	466	310	182	206	29
v_i pcu/h	P.M. 209	475	138	39	529	10	19	330	126	158	336	53
PED/HOUR CROSSING THE APPROACH	A.M. 0			0			0			0		
	P.M. 0			0			0			0		
LANE MOVEMENTS	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
ENTRY FLOW RATE	A.M. 114	408	120	71	380	5	11	522	348	207	234	33
v_i (vph)	P.M. 239	543	158	43	592	11	22	370	141	179	380	60
LANE CAPACITY	A.M. 293	1045	306	278	1494	31	19	889	950	432	489	991
c_i (vph)	P.M. 497	1129	327	89	1218	23	44	744	814	251	532	906
x_i (v_i/c_i) RATIO	A.M. 0.39	0.39	0.39	0.26	0.26	0.26	0.59	0.59	0.37	0.48	0.48	0.03
	P.M. 0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.17	0.72	0.72	0.07
95% QUEUE LENGTH (FEET)	A.M. 73	81	81	43	47	47	111	111	49	78	78	4
	P.M. 100	105	105	106	117	117	83	83	22	160	160	8
LANE DELAY, d (SEC)	A.M. 14.6	8.0	7.6	13.7	7.2	7.0	14.2	8.2	6.0	12.7	6.7	5.0
	P.M. 13.6	7.0	6.7	19.2	11.8	11.0	13.8	7.8	6.1	16.6	10.6	5.5
LANE LEVEL OF SERVICE	A.M. B	A	A	B	A	A	B	A	A	B	A	A
	P.M. B	A	A	C	B	B	B	A	A	C	B	A
APPROACH CONTROL DELAY, d (SEC)	A.M. 9.1			8.2			7.4			9.2		
	P.M. 8.6			12.2			7.6			11.8		
APPROACH LEVEL OF SERVICE	A.M. A			A			A			A		
	P.M. A			B			A			B		

ELEMENTS CONTROLLING DESIGN

PREFERRED ROUTE:

F.A. ROUTE NUMBER: 2-326. MARKED ROUTE NUMBER: IL-47.
 STREET NAME: SEMINARY AVENUE. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? Y
 EXISTING ADT: 6,300 VPD. DESIGN YEAR ADT: 8,500 VPD.
 PROPOSED DESIGN SPEED: 50 MPH. PROPOSED POSTED SPEED: 50 MPH.

SECONDARY ROUTE:

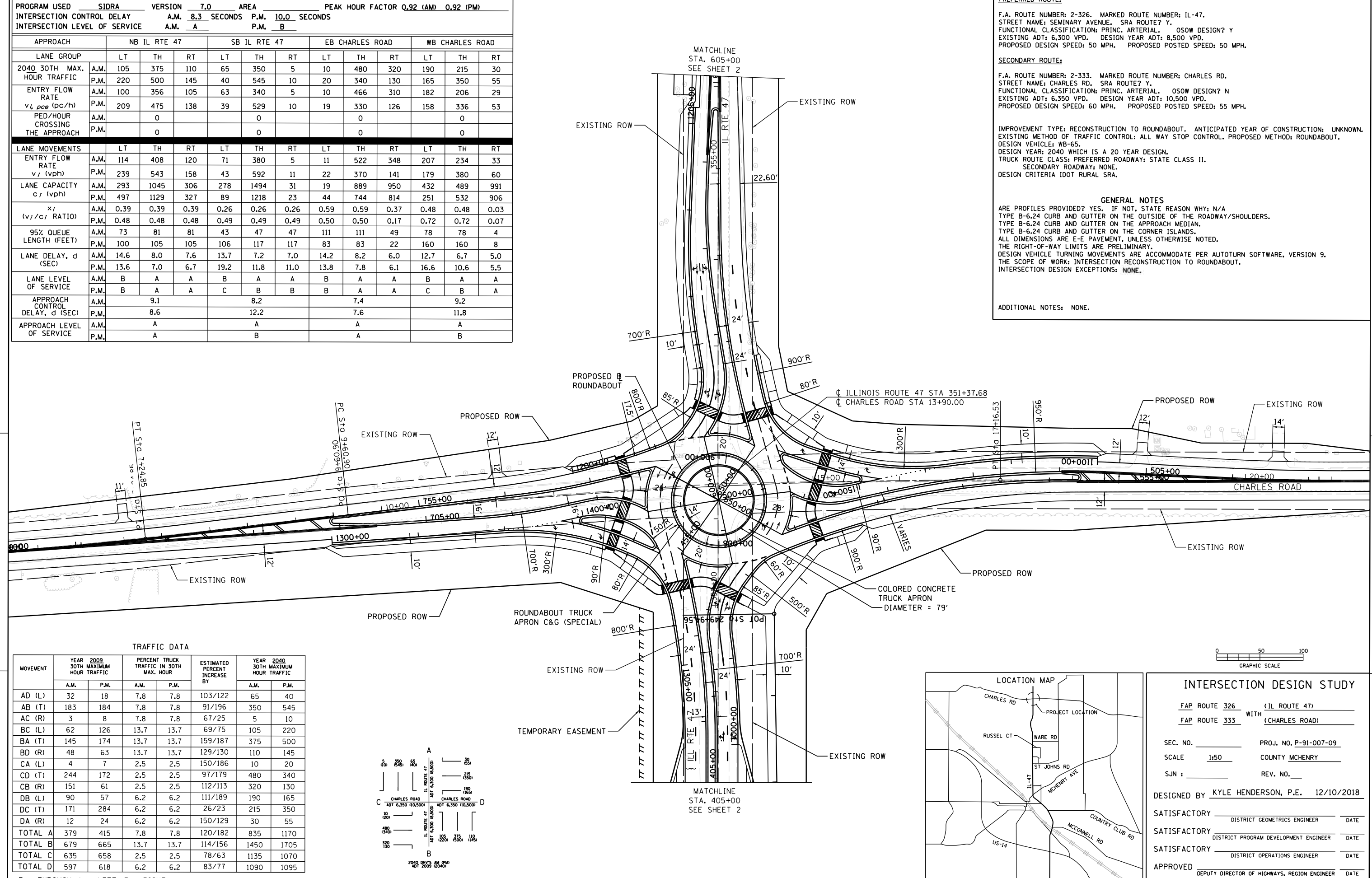
F.A. ROUTE NUMBER: 2-333. MARKED ROUTE NUMBER: CHARLES RD.
 STREET NAME: CHARLES RD. SRA ROUTE? Y.
 FUNCTIONAL CLASSIFICATION: PRINC. ARTERIAL. OSOW DESIGN? N
 EXISTING ADT: 6,350 VPD. DESIGN YEAR ADT: 10,500 VPD.
 PROPOSED DESIGN SPEED: 60 MPH. PROPOSED POSTED SPEED: 55 MPH.

IMPROVEMENT TYPE: RECONSTRUCTION TO ROUNDABOUT. ANTICIPATED YEAR OF CONSTRUCTION: UNKNOWN.
 EXISTING METHOD OF TRAFFIC CONTROL: ALL WAY STOP CONTROL. PROPOSED METHOD: ROUNDABOUT.
 DESIGN VEHICLE: WB-65.
 DESIGN YEAR: 2040 WHICH IS A 20 YEAR DESIGN.
 TRUCK ROUTE CLASS: PREFERRED ROADWAY: STATE CLASS II.
 SECONDARY ROADWAY: NONE.
 DESIGN CRITERIA IDOT RURAL SRA.

GENERAL NOTES

ARE PROFILES PROVIDED? YES. IF NOT, STATE REASON WHY: N/A
 TYPE B-6.24 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
 TYPE B-6.24 CURB AND GUTTER ON THE APPROACH MEDIAN.
 TYPE B-6.24 CURB AND GUTTER ON THE CORNER ISLANDS.
 ALL DIMENSIONS ARE E-E PAVEMENT, UNLESS OTHERWISE NOTED.
 THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
 DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 9.
 THE SCOPE OF WORK: INTERSECTION RECONSTRUCTION TO ROUNDABOUT.
 INTERSECTION DESIGN EXCEPTIONS: NONE.

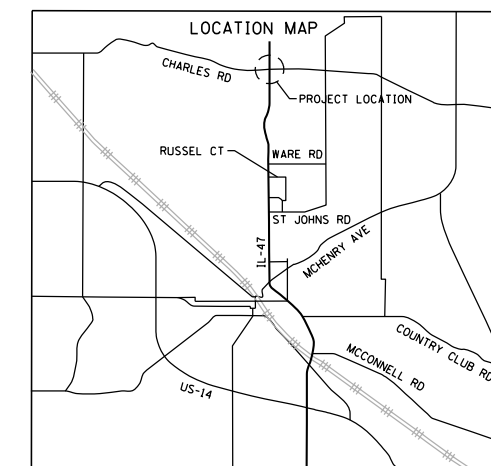
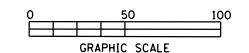
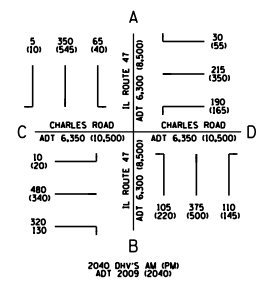
ADDITIONAL NOTES: NONE.



TRAFFIC DATA

MOVEMENT	YEAR 2009 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY	YEAR 2040 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.
AD (L)	32	18	7.8	7.8	103/122	65	40
AB (T)	183	184	7.8	7.8	91/196	350	545
AC (R)	3	8	7.8	7.8	67/25	5	10
BC (L)	62	126	13.7	13.7	69/75	105	220
BA (T)	145	174	13.7	13.7	159/187	375	500
BD (R)	48	63	13.7	13.7	129/130	110	145
CA (L)	4	7	2.5	2.5	150/186	10	20
CD (T)	244	172	2.5	2.5	97/179	480	340
CB (R)	151	61	2.5	2.5	112/113	320	130
DB (L)	90	57	6.2	6.2	111/189	190	165
DC (T)	171	284	6.2	6.2	26/23	215	350
DA (R)	12	24	6.2	6.2	150/129	30	55
TOTAL A	379	415	7.8	7.8	120/182	835	1170
TOTAL B	679	665	13.7	13.7	114/156	1450	1705
TOTAL C	635	658	2.5	2.5	78/63	1135	1070
TOTAL D	597	618	6.2	6.2	83/77	1090	1095

T = THROUGH, L = LEFT, R = RIGHT



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 WITH FAP ROUTE 333 (CHARLES ROAD)

SEC. NO. _____ PROJ. NO. P-91-007-09
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ REV. NO. _____

DESIGNED BY KYLE HENDERSON, P.E. 12/10/2018

SATISFACTORY _____ DISTRICT GEOMETRICS ENGINEER _____ DATE _____

SATISFACTORY _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER _____ DATE _____

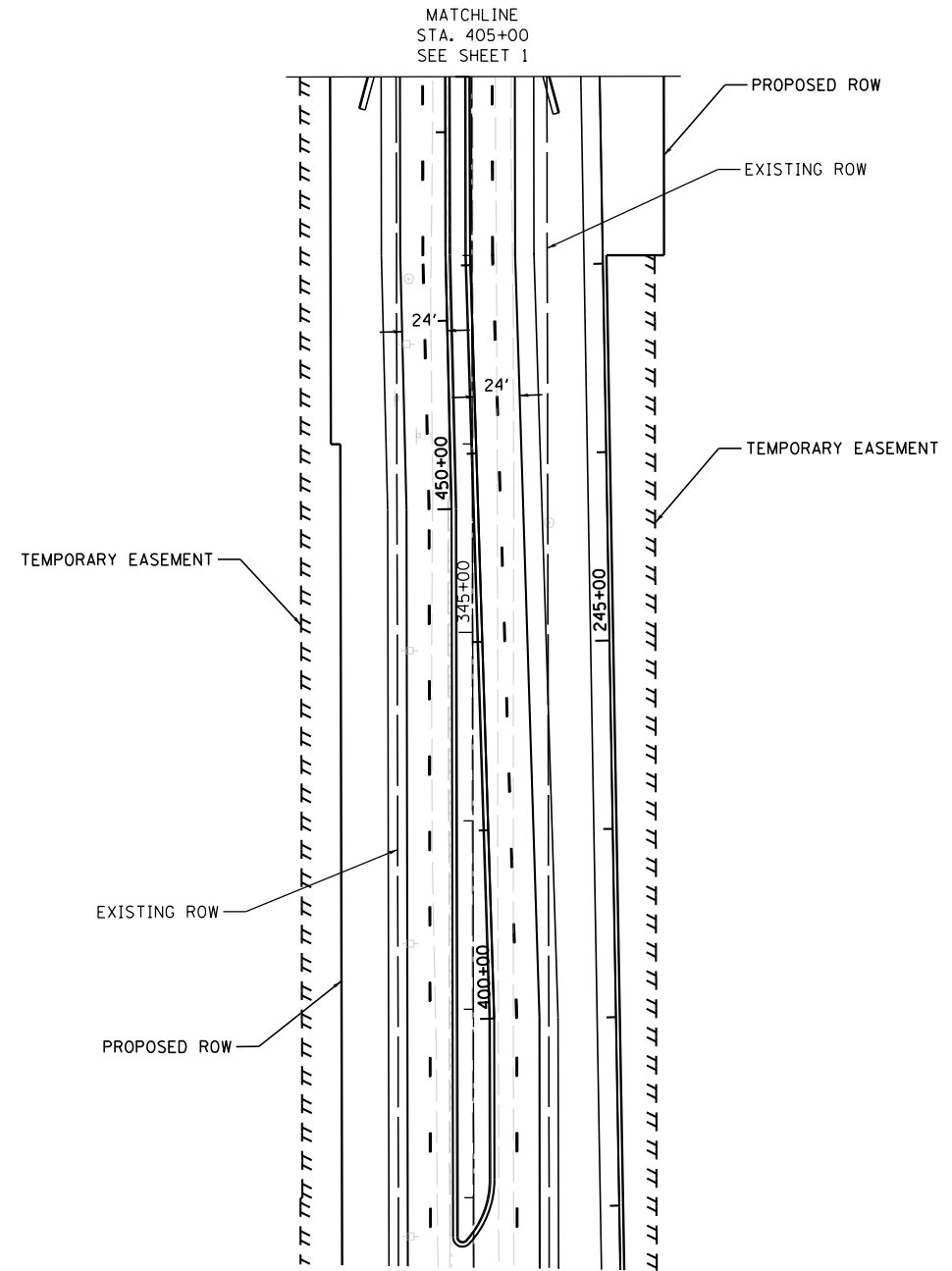
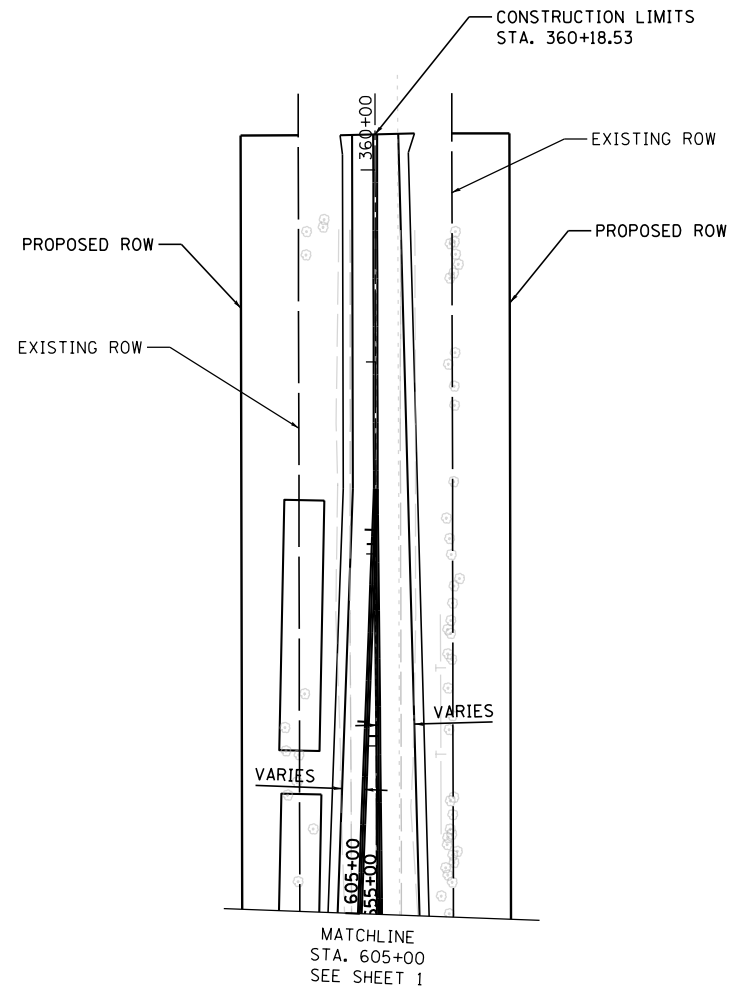
SATISFACTORY _____ DISTRICT OPERATIONS ENGINEER _____ DATE _____

APPROVED _____ DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER _____ DATE _____

CADD FILE NAME : [] I.D.S. SHEET 1 OF 19

PLOT DATE = 12/27/2018
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 USER NAME = Mett

PLOT DATE = 12/27/2018
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 PLOT SCALE = 100,0000 / in.
 USER NAME = MattC



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

SEC. NO. _____

SCALE 1:50 COUNTY MCHENRY

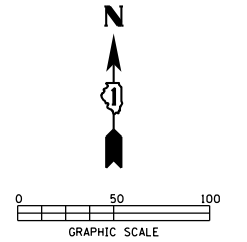
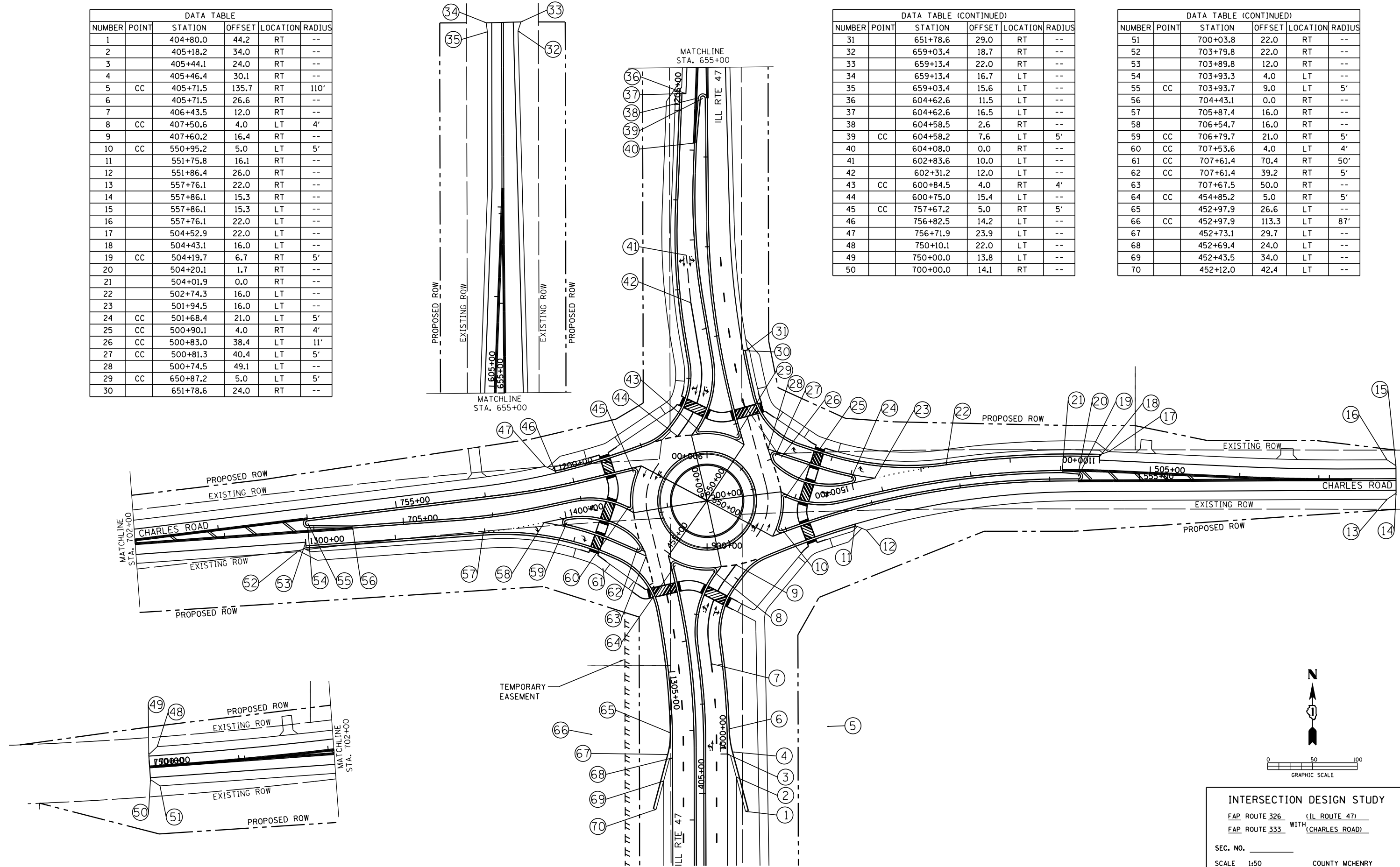
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 USER NAME = MattC

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1		404+80.0	44.2	RT	--
2		405+18.2	34.0	RT	--
3		405+44.1	24.0	RT	--
4		405+46.4	30.1	RT	--
5	CC	405+71.5	135.7	RT	110'
6		405+71.5	26.6	RT	--
7		406+43.5	12.0	RT	--
8	CC	407+50.6	4.0	LT	4'
9		407+60.2	16.4	RT	--
10	CC	550+95.2	5.0	LT	5'
11		551+75.8	16.1	RT	--
12		551+86.4	26.0	RT	--
13		557+76.1	22.0	RT	--
14		557+86.1	15.3	RT	--
15		557+86.1	15.3	LT	--
16		557+76.1	22.0	LT	--
17		504+52.9	22.0	LT	--
18		504+43.1	16.0	LT	--
19	CC	504+19.7	6.7	RT	5'
20		504+20.1	1.7	RT	--
21		504+01.9	0.0	RT	--
22		502+74.3	16.0	LT	--
23		501+94.5	16.0	LT	--
24	CC	501+68.4	21.0	LT	5'
25	CC	500+90.1	4.0	RT	4'
26	CC	500+83.0	38.4	LT	11'
27	CC	500+81.3	40.4	LT	5'
28		500+74.5	49.1	LT	--
29	CC	650+87.2	5.0	LT	5'
30		651+78.6	24.0	RT	--

NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
31		651+78.6	29.0	RT	--
32		659+03.4	18.7	RT	--
33		659+13.4	22.0	RT	--
34		659+13.4	16.7	LT	--
35		659+03.4	15.6	LT	--
36		604+62.6	11.5	LT	--
37		604+62.6	16.5	LT	--
38		604+58.5	2.6	RT	--
39	CC	604+58.2	7.6	LT	5'
40		604+08.0	0.0	RT	--
41		602+83.6	10.0	LT	--
42		602+31.2	12.0	LT	--
43	CC	600+84.5	4.0	RT	4'
44		600+75.0	15.4	LT	--
45	CC	757+67.2	5.0	RT	5'
46		756+82.5	14.2	LT	--
47		756+71.9	23.9	LT	--
48		750+10.1	22.0	LT	--
49		750+00.0	13.8	LT	--
50		700+00.0	14.1	RT	--

NUMBER	POINT	STATION	OFFSET	LOCATION	RADIUS
51		700+03.8	22.0	RT	--
52		703+79.8	22.0	RT	--
53		703+89.8	12.0	RT	--
54		703+93.3	4.0	LT	--
55	CC	703+93.7	9.0	LT	5'
56		704+43.1	0.0	RT	--
57		705+87.4	16.0	RT	--
58		706+54.7	16.0	RT	--
59	CC	706+79.7	21.0	RT	5'
60	CC	707+53.6	4.0	LT	4'
61	CC	707+61.4	70.4	RT	50'
62	CC	707+61.4	39.2	RT	5'
63		707+67.5	50.0	RT	--
64	CC	454+85.2	5.0	RT	5'
65		452+97.9	26.6	LT	--
66	CC	452+97.9	113.3	LT	87'
67		452+73.1	29.7	LT	--
68		452+69.4	24.0	LT	--
69		452+43.5	34.0	LT	--
70		452+12.0	42.4	LT	--

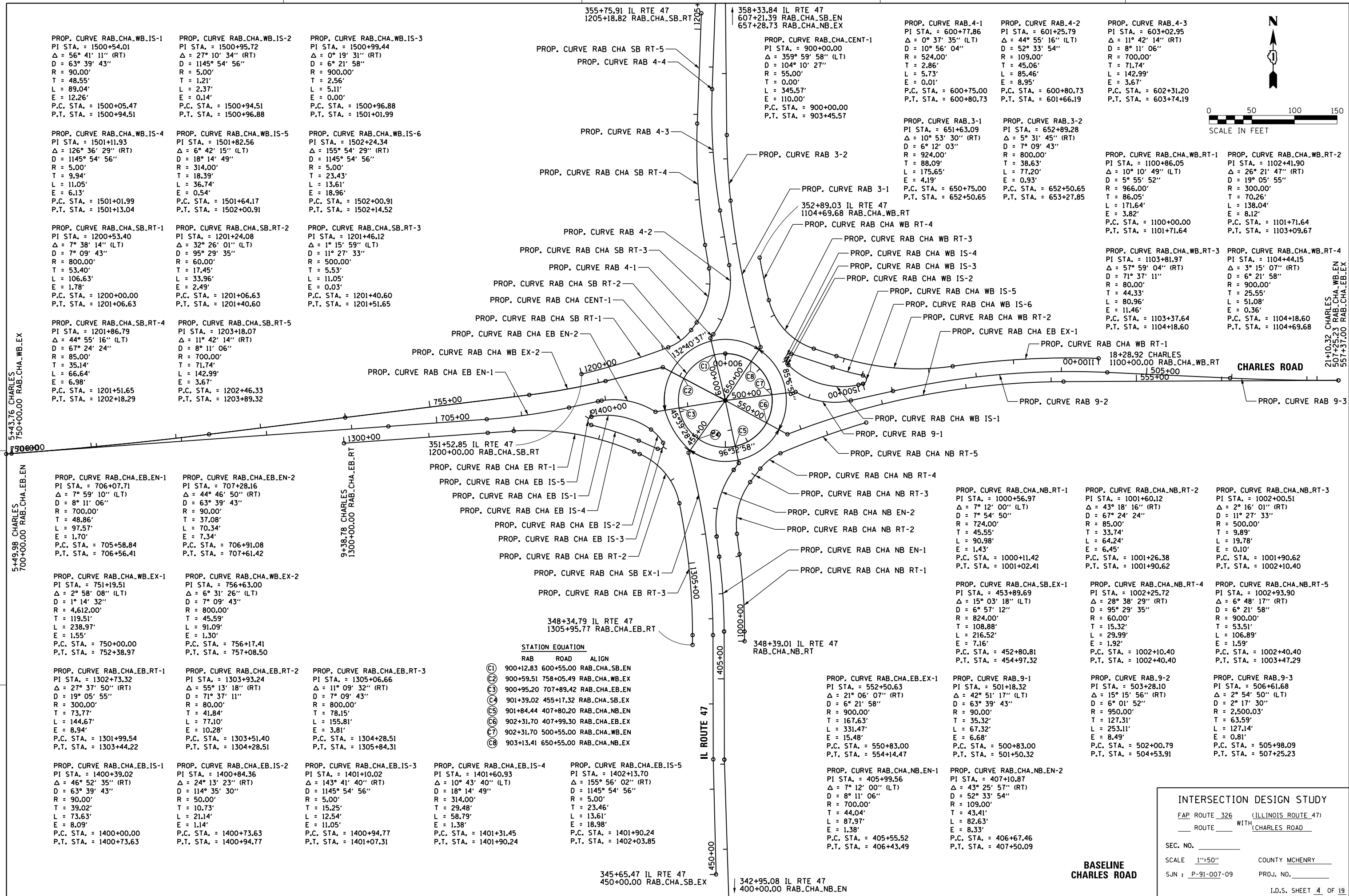
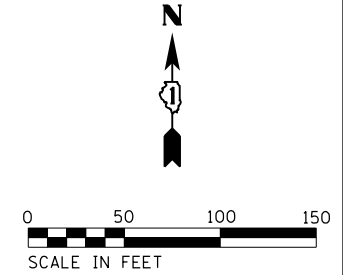


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 3 OF 19

PLOT DATE = 12/7/2018
FILE NAME = N:\STRAIGHT\044_IL47\0400_Sheets\0412345-ht-Charles-Baseline.dgn
PLOT SCALE = 100.00' / in.
USER NAME = pmagnelli



STATION EQUATION		
RAB	ROAD	ALIGN
C1	900+12.83	600+55.00 RAB_CHA_SB.EN
C2	900+59.51	758+05.49 RAB_CHA_WB.EX
C3	900+95.20	707+89.42 RAB_CHA_EB.EN
C4	901+39.02	455+17.32 RAB_CHA_SB.EX
C5	901+84.44	407+80.20 RAB_CHA_NB.EN
C6	902+31.70	407+99.30 RAB_CHA_EB.EX
C7	902+31.70	500+55.00 RAB_CHA_WB.EN
C8	903+13.41	650+55.00 RAB_CHA_NB.EX

INTERSECTION DESIGN STUDY

FAP ROUTE 326 (ILLINOIS ROUTE 47)
ROUTE WITH (CHARLES ROAD)

SEC. NO. _____

SCALE 1"=50' COUNTY MCHENRY

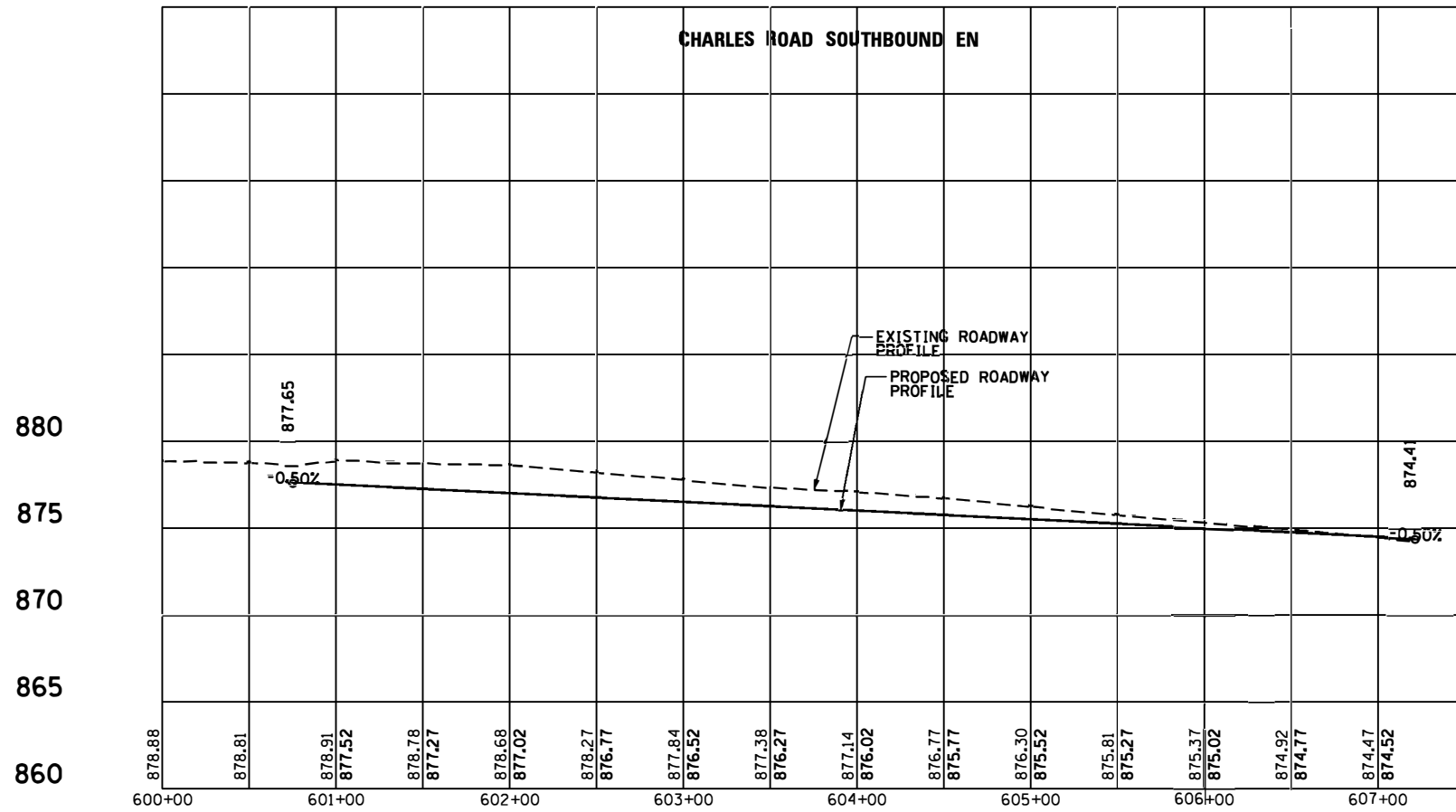
SJN : P-91-007-09 PROJ. NO. _____

I.D.S. SHEET 4 OF 19

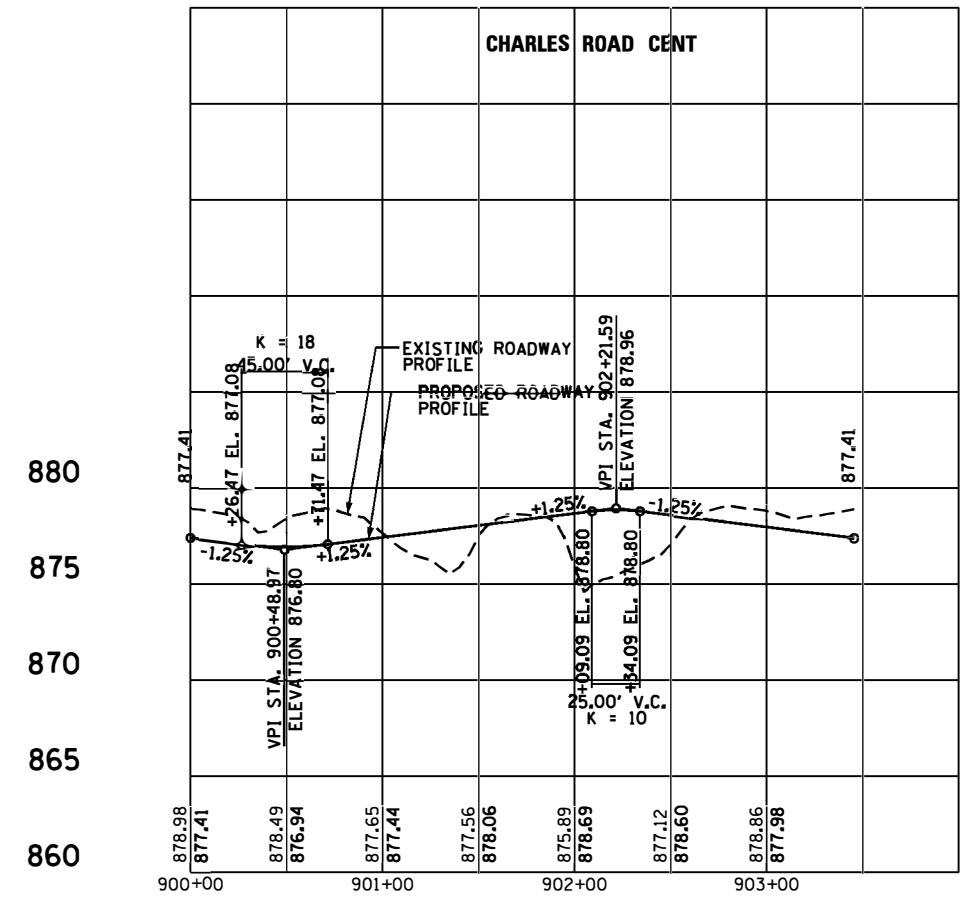
**BASELINE
CHARLES ROAD**

PLOT DATE = 8/21/2018
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 USER NAME = pmagnelli

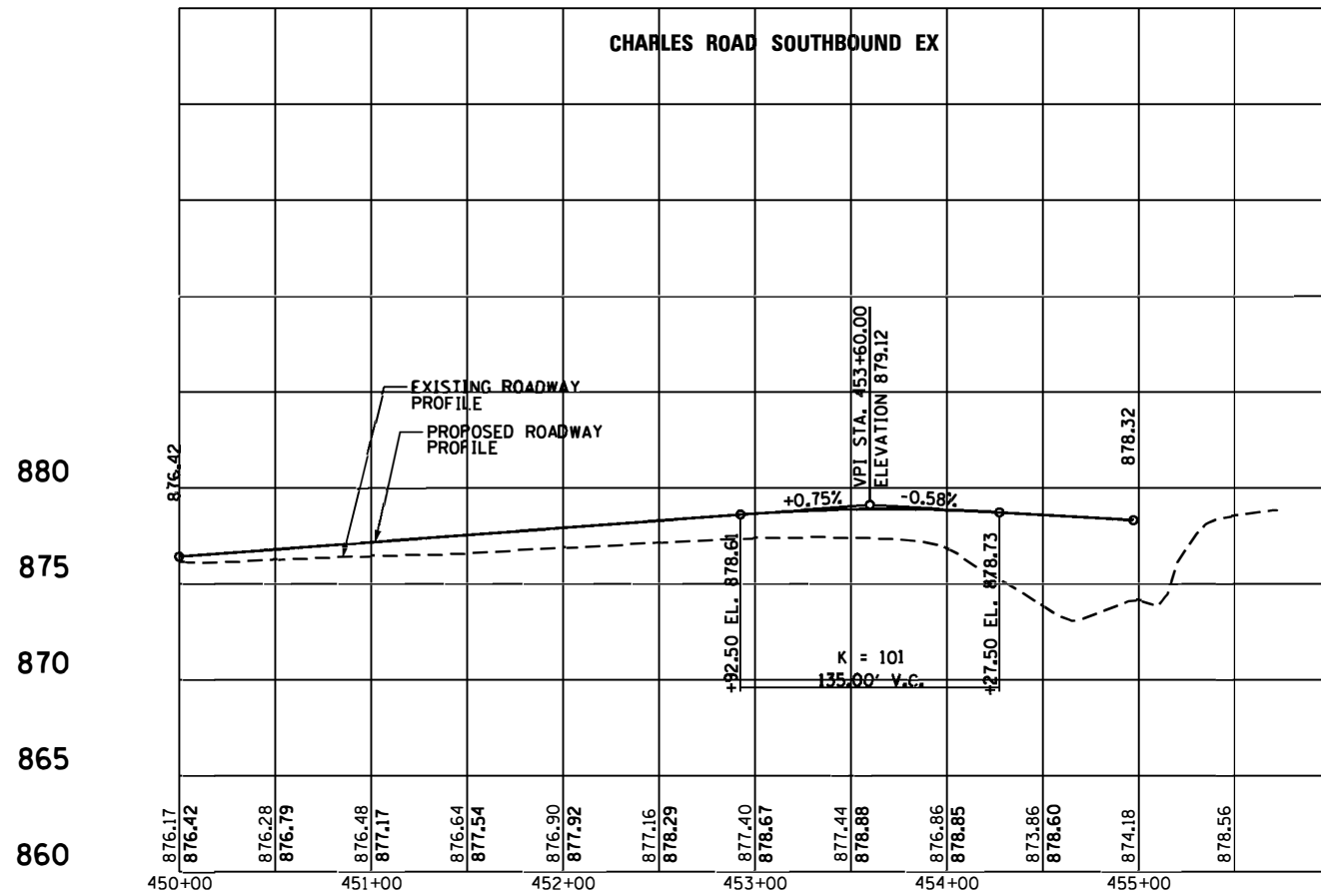
CHARLES ROAD SOUTHBOUND EN



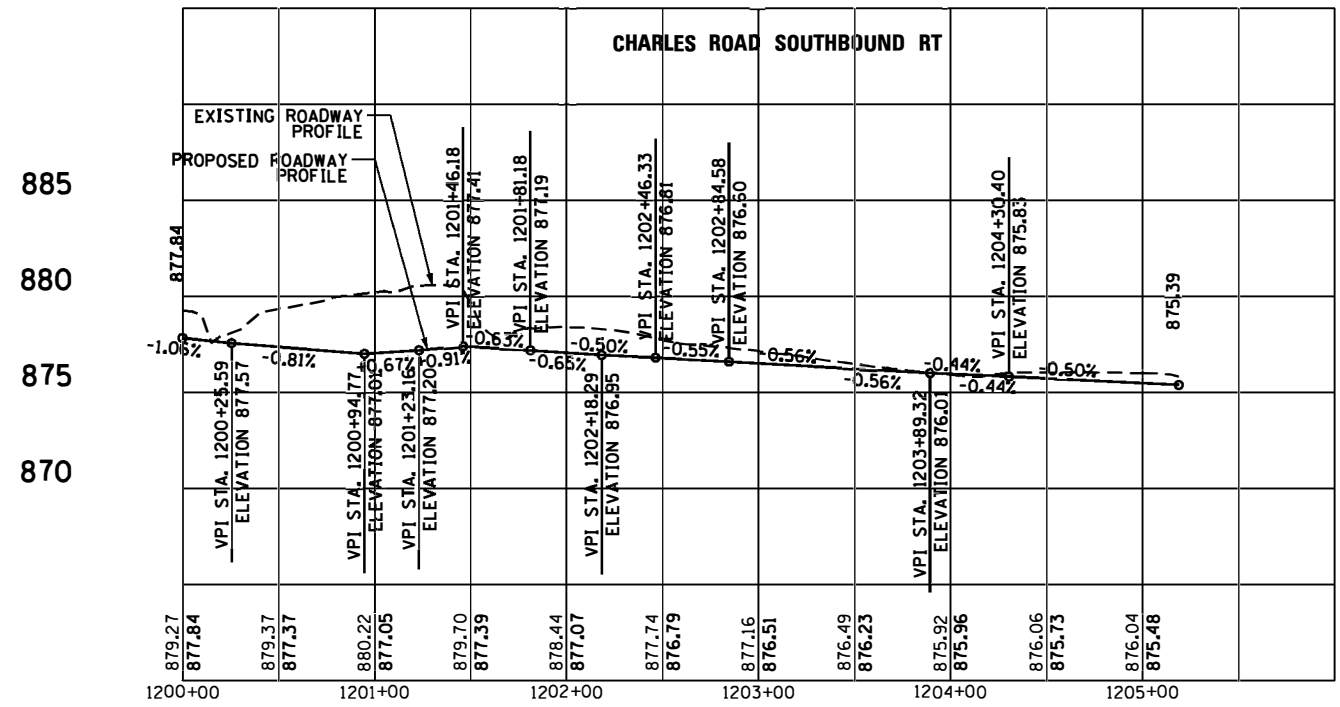
CHARLES ROAD CENT



CHARLES ROAD SOUTHBOUND EX



CHARLES ROAD SOUTHBOUND RT

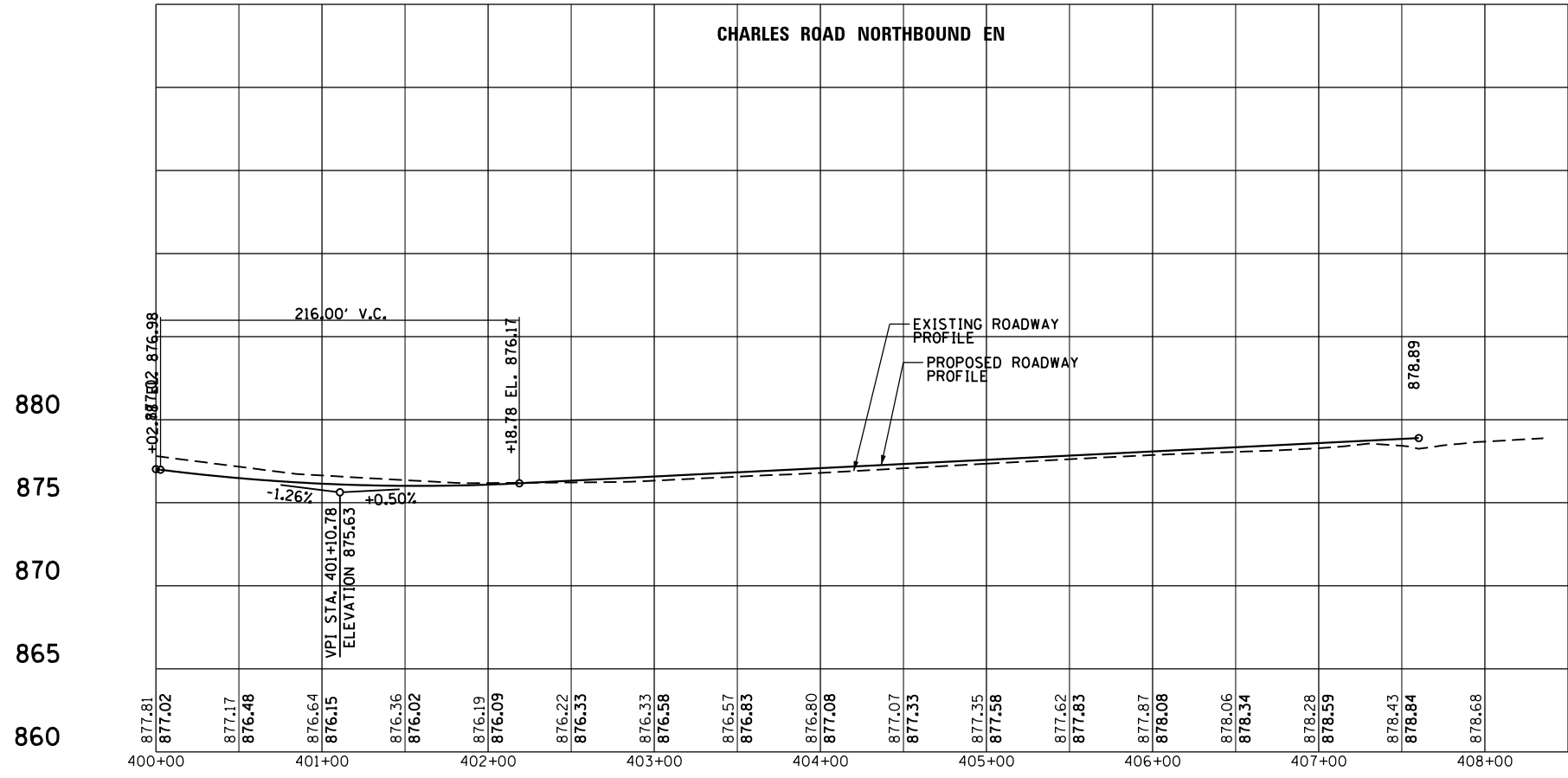


**PROFILES
 SOUTHBOUND CHARLES ROAD,
 CHARLES ROAD CENT**

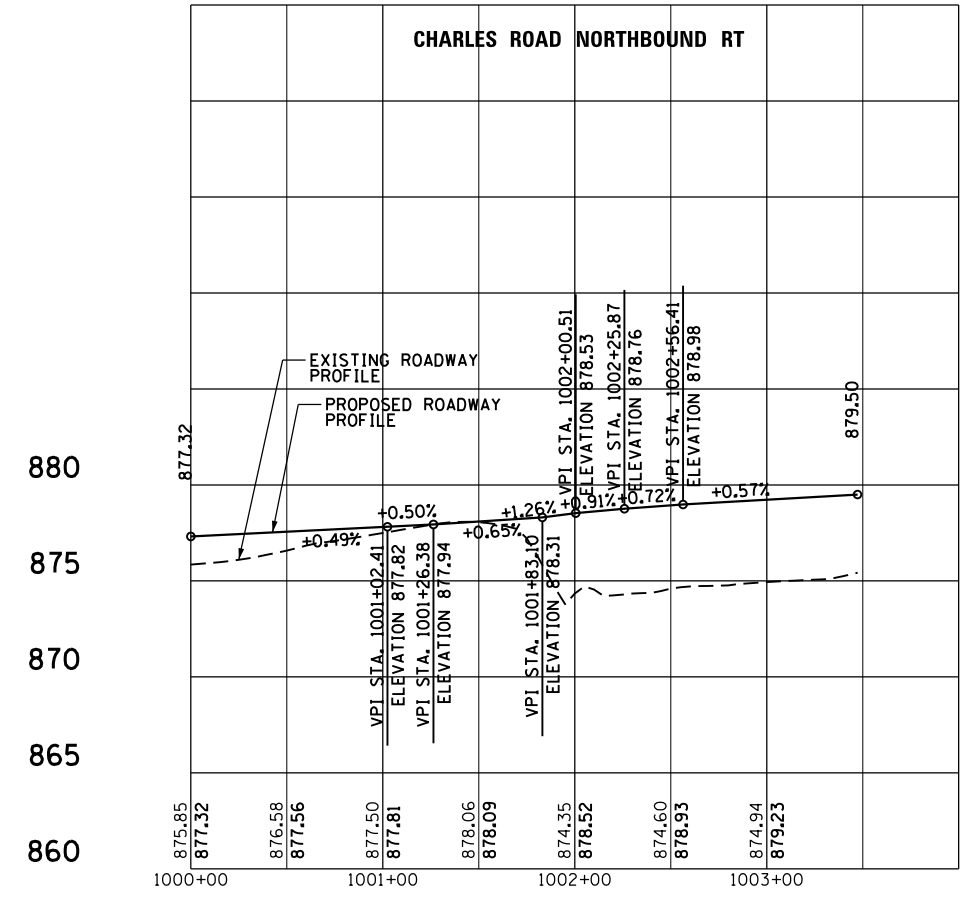
INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH CHARLES ROAD
 SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____
 I.D.S. SHEET 5 OF 19

PLOT DATE = 8/21/2018
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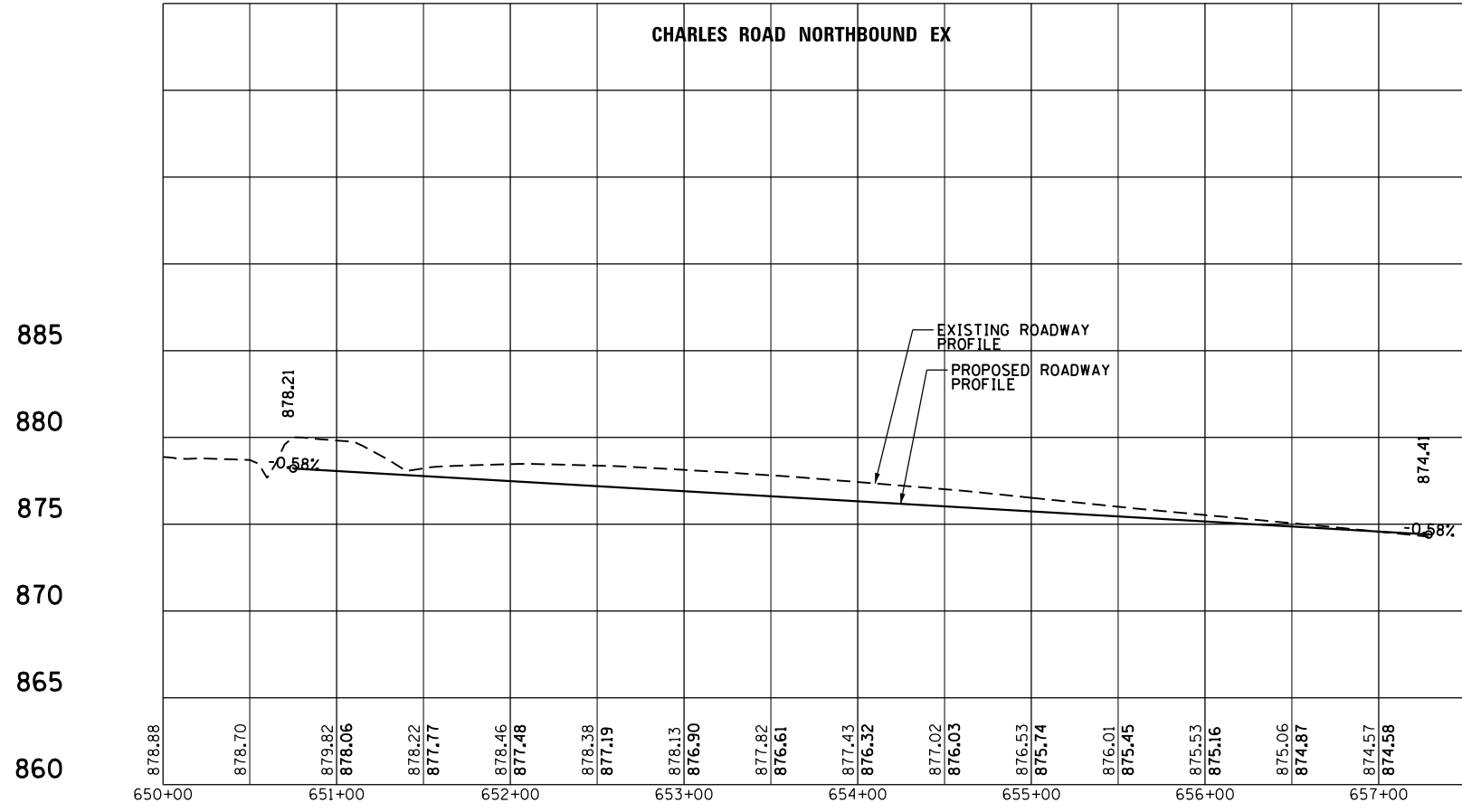
CHARLES ROAD NORTHBOUND EN



CHARLES ROAD NORTHBOUND RT



CHARLES ROAD NORTHBOUND EX

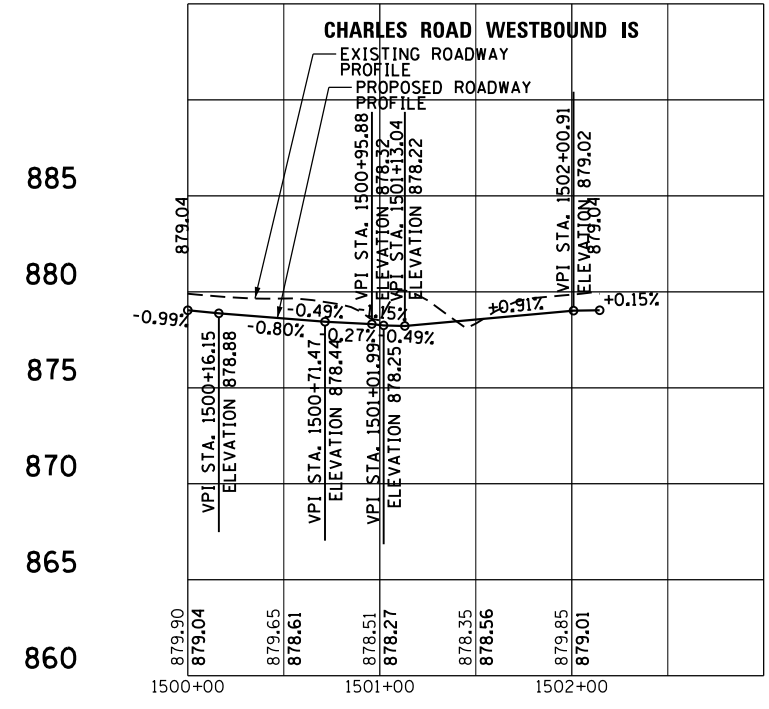
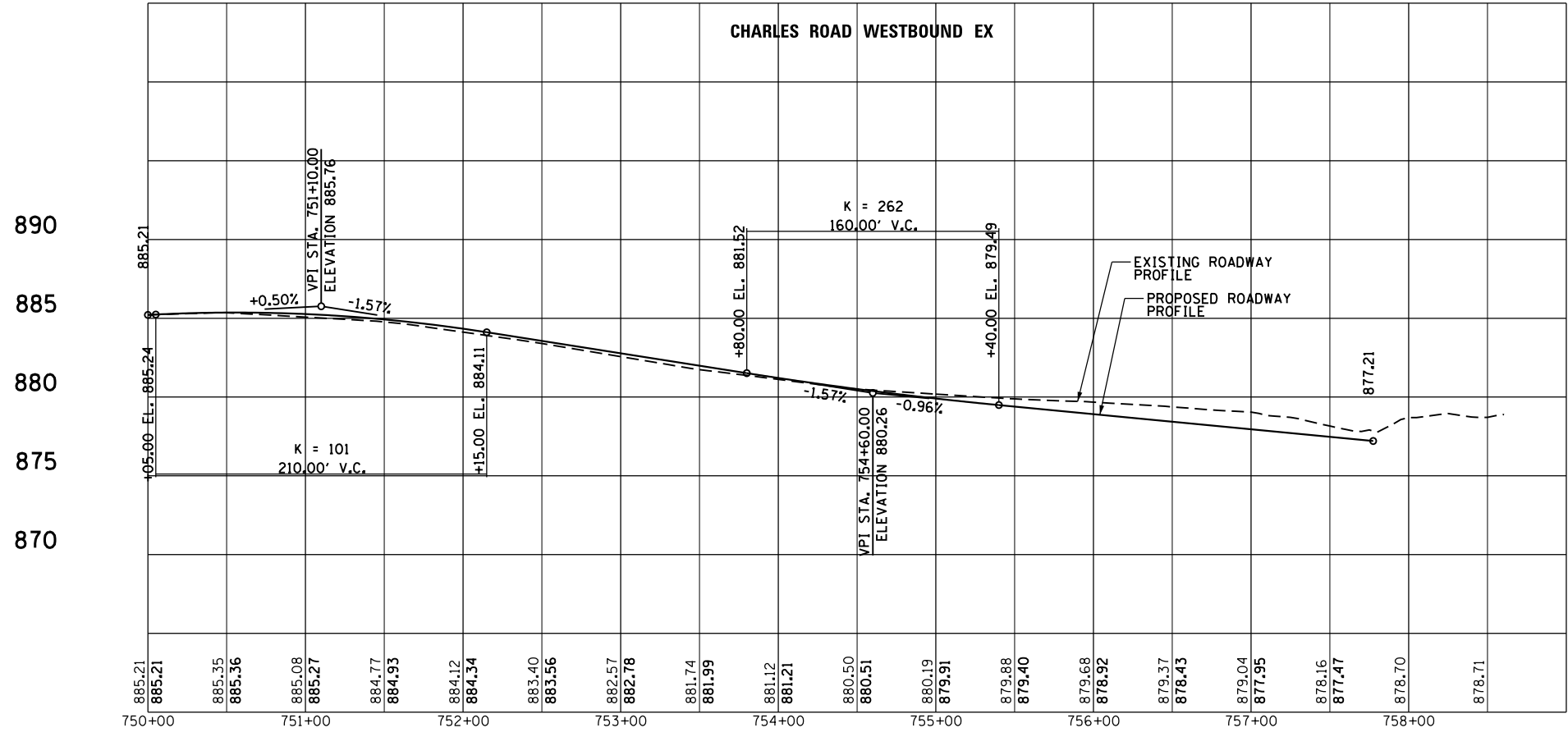
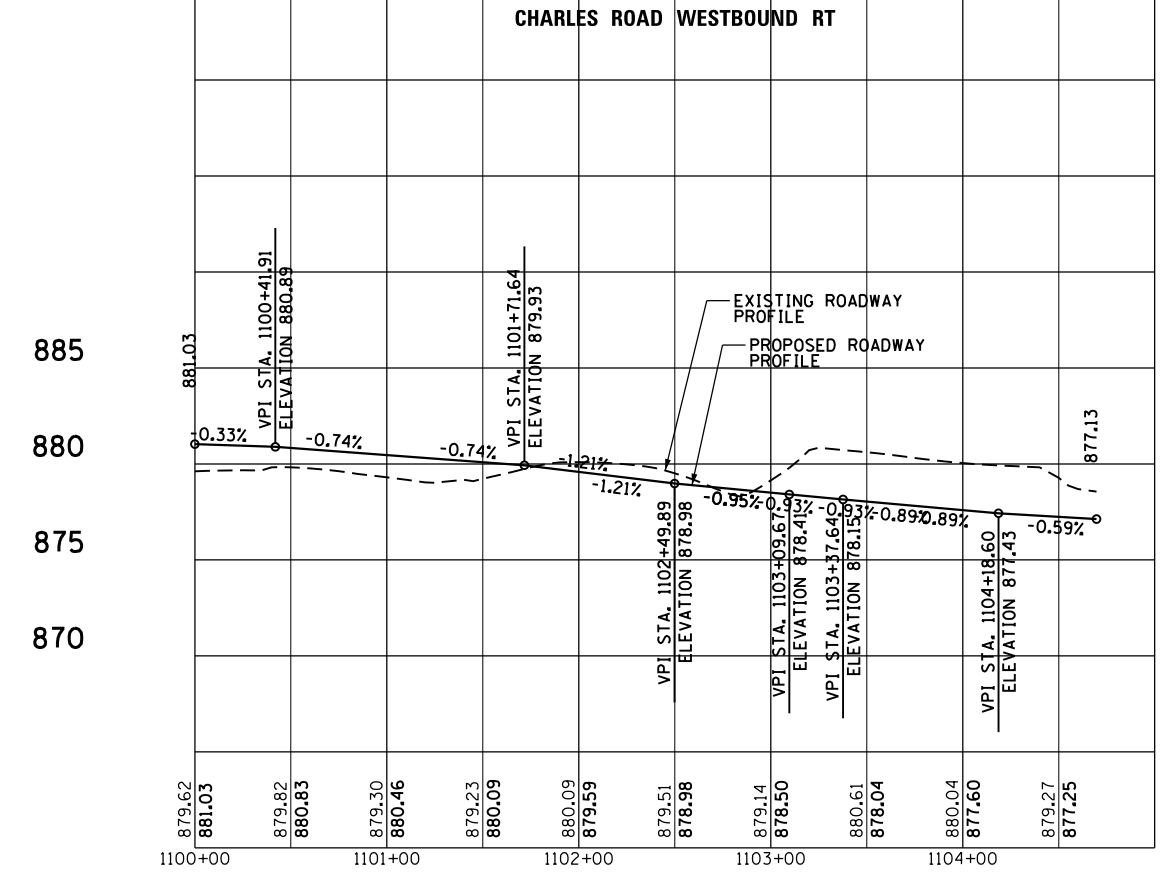
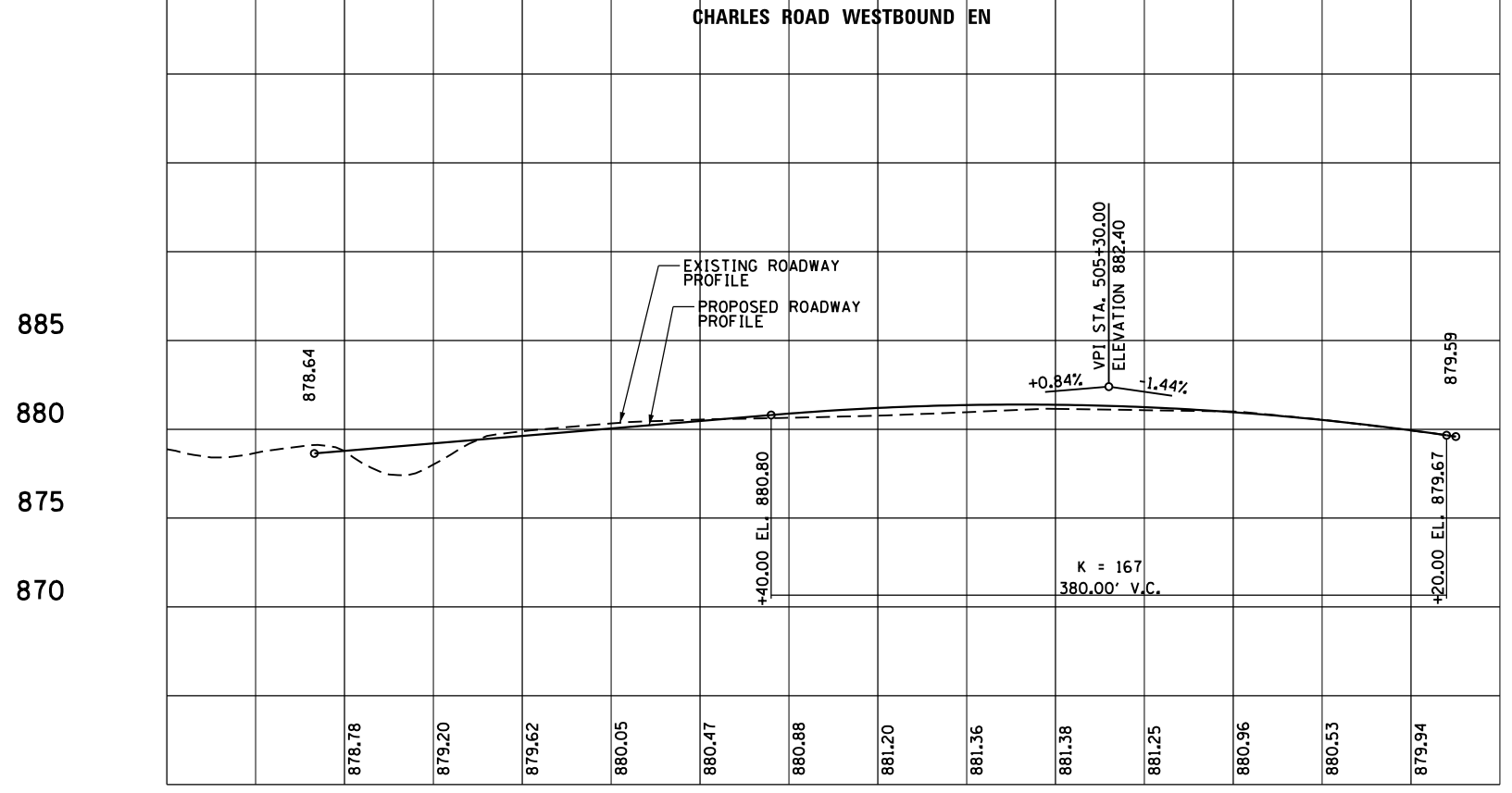


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH CHARLES ROAD

SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____

**PROFILES
 NORTHBOUND CHARLES ROAD**

PLOT DATE = 8/21/2018
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 PLOT SCALE = 50.00' / 1" =
 USER NAME = pmagnelli



**PROFILES
 WESTBOUND CHARLES ROAD**

INTERSECTION DESIGN STUDY

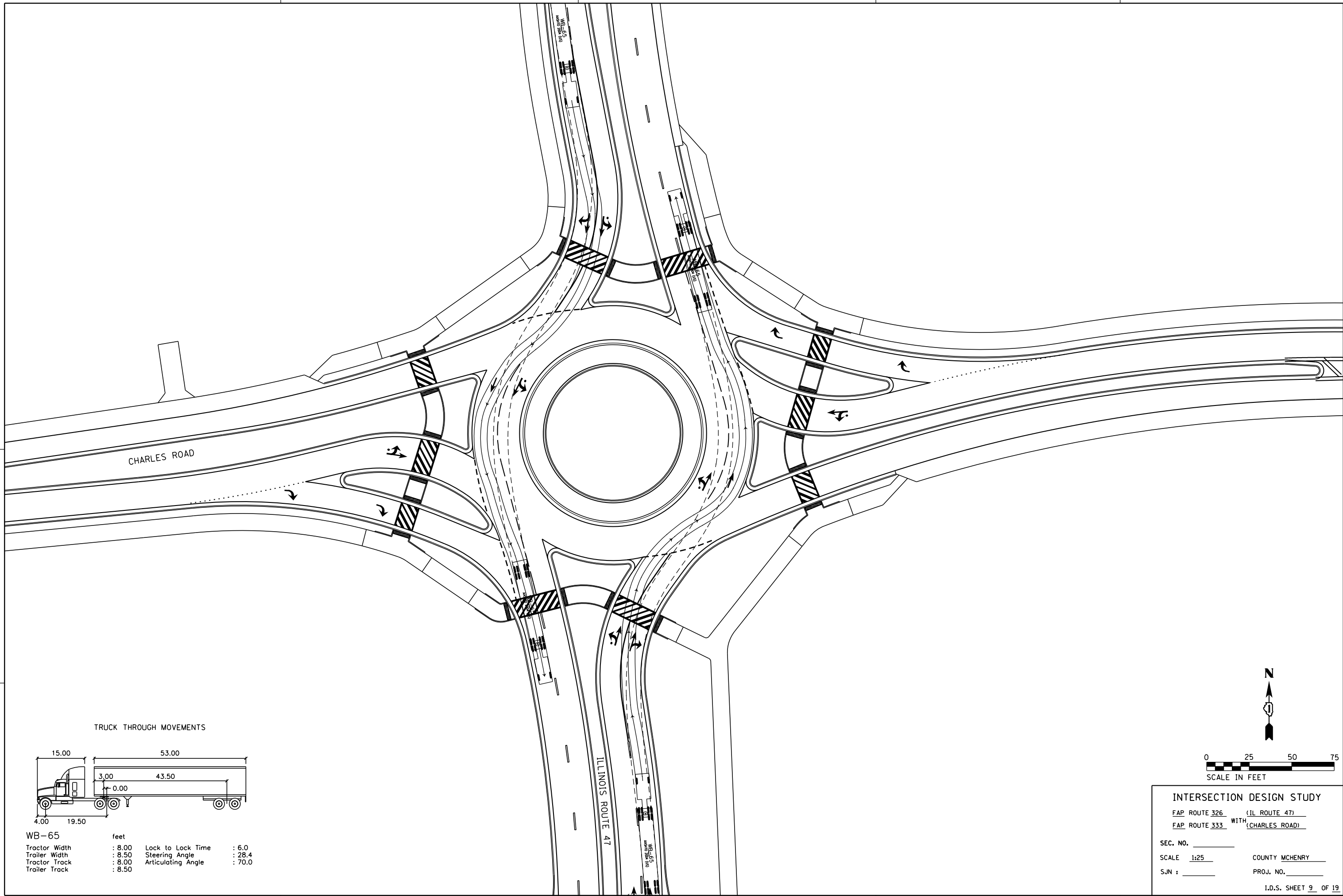
FAP ROUTE 326 (ILLINOIS ROUTE 47)
 ROUTE WITH CHARLES ROAD

SEC. NO. _____
 SCALE 1"=50' COUNTY MCHENRY
 SJN : P-91-007-09 PROJ. NO. _____

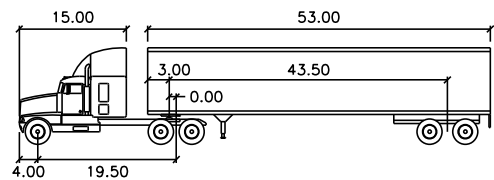
I.D.S. SHEET 7 OF 19

PLOT DATE = 8/21/2018
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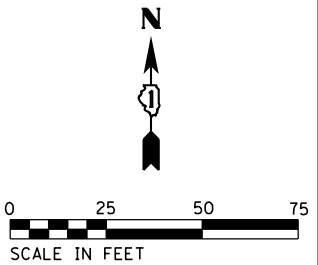
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK THROUGH MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

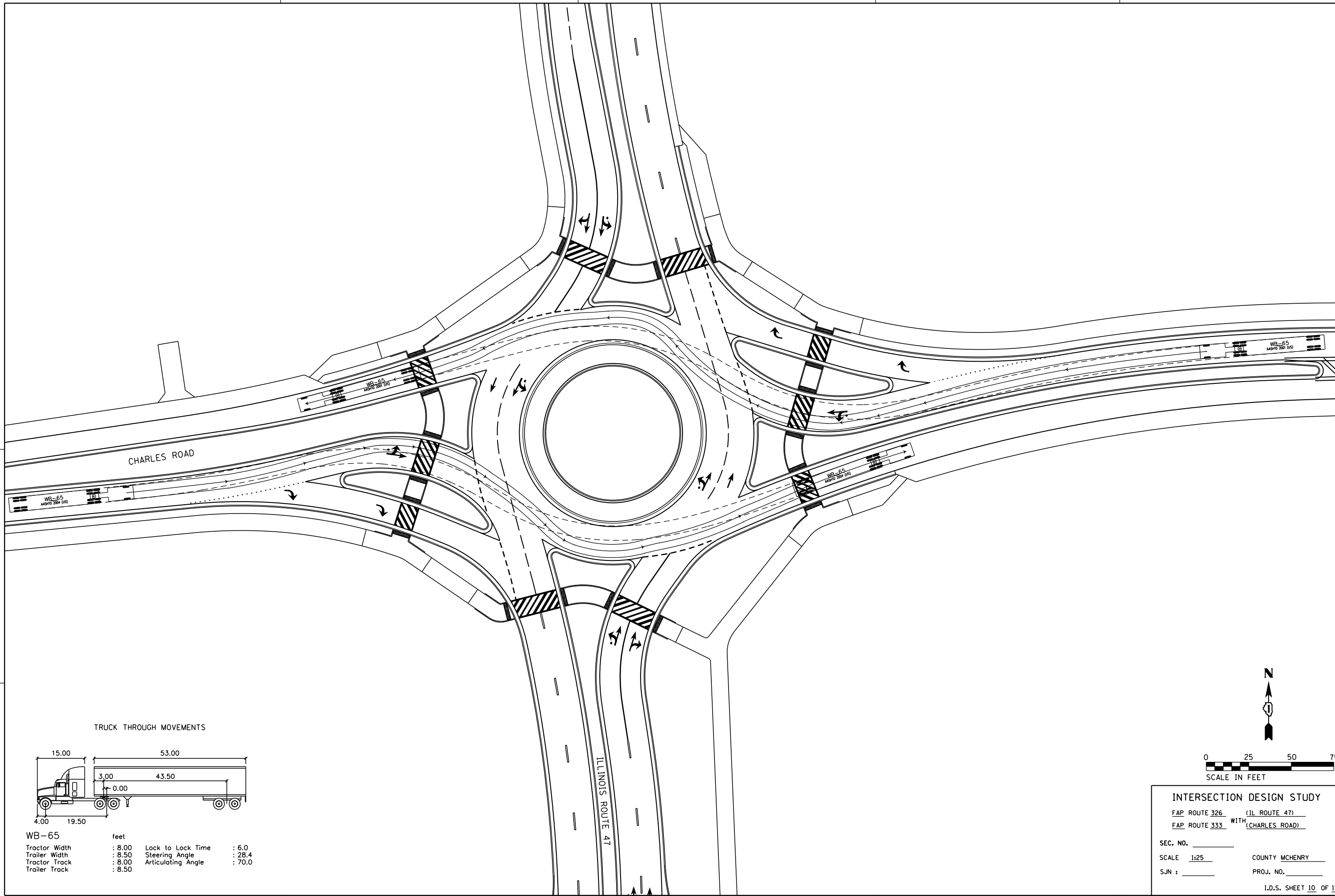
SEC. NO. _____

SCALE 1:25 COUNTY MCHENRY

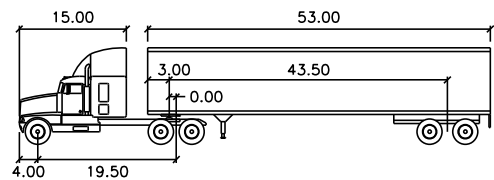
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I.D.S. SHEET 9 OF 19

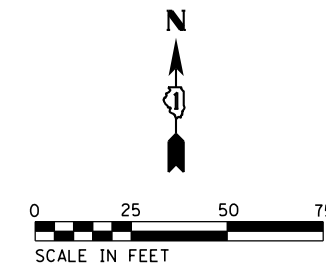
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 USER NAME = MattC



TRUCK THROUGH MOVEMENTS

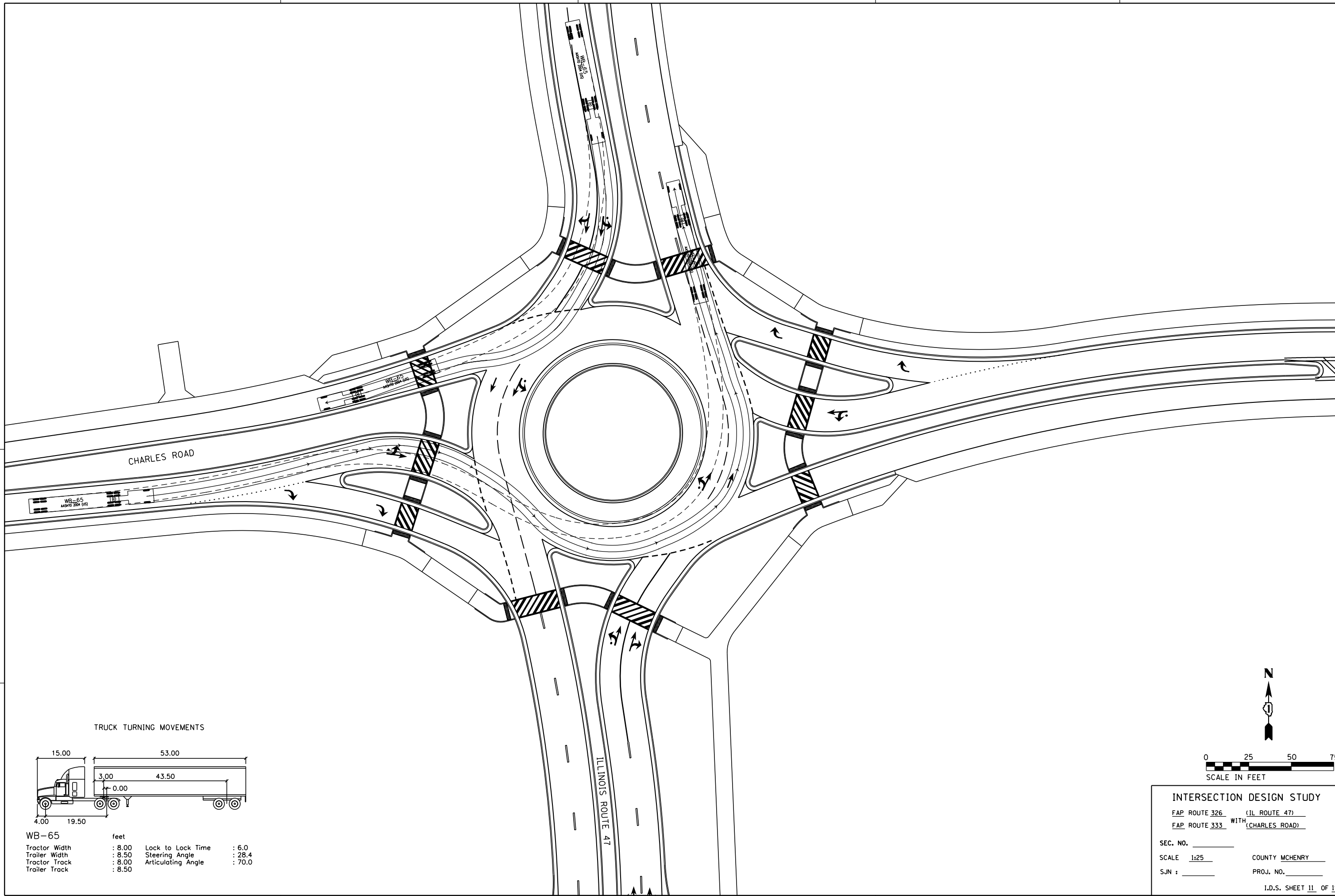


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

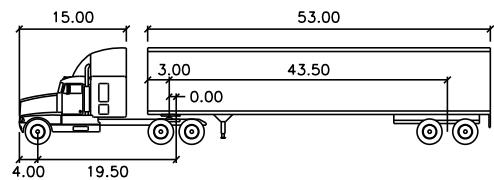


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 10 OF 19

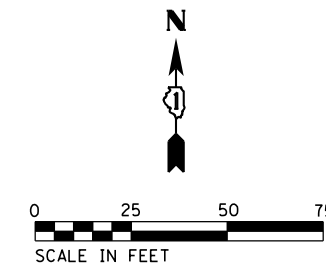
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

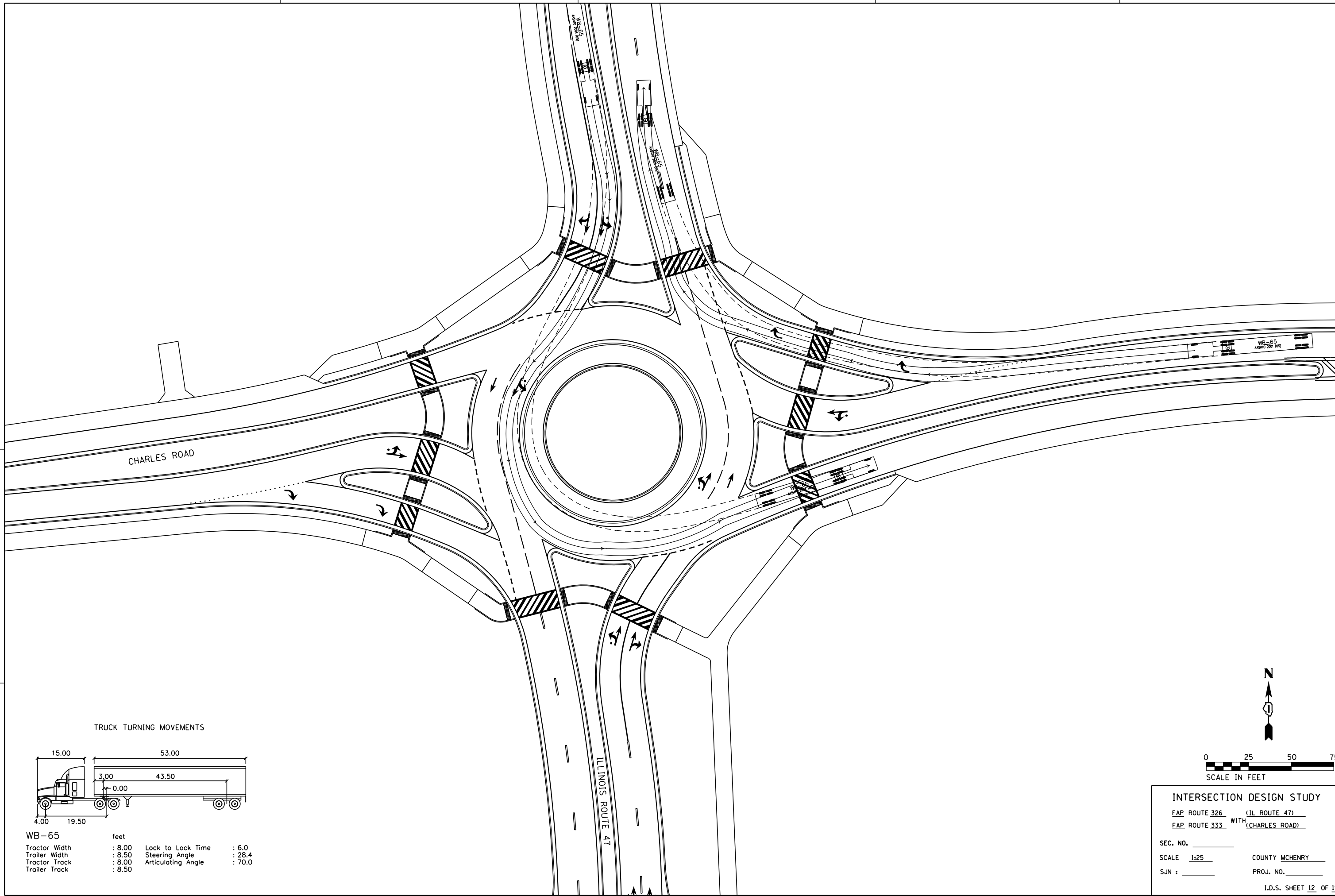


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

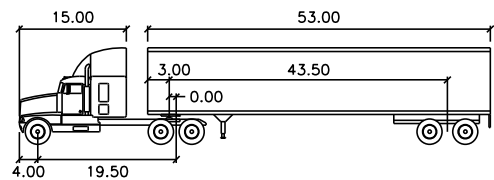
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I.D.S. SHEET 11 OF 19

PLOT DATE = 12/27/2018
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 USER NAME = MattC



TRUCK TURNING MOVEMENTS



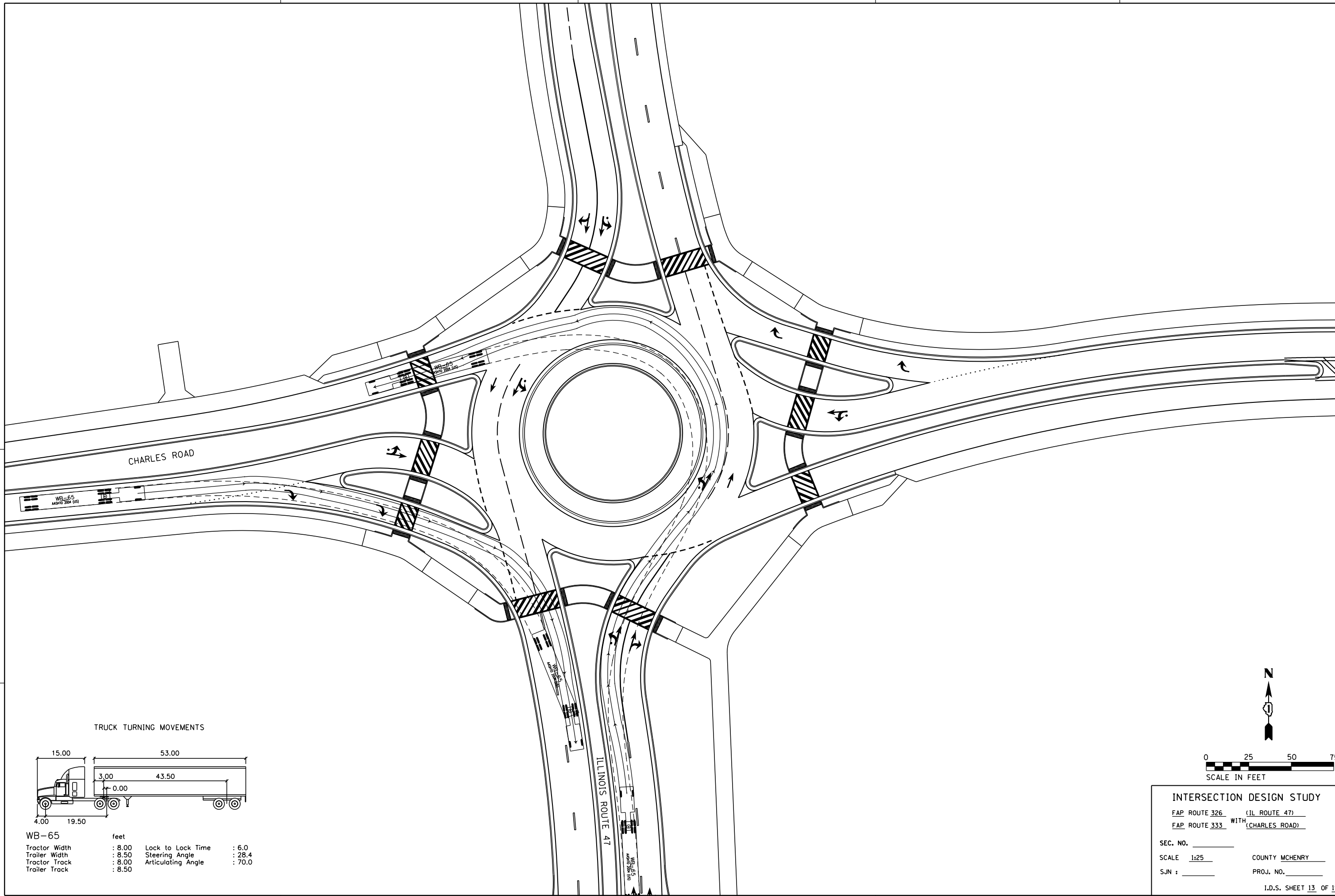
WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

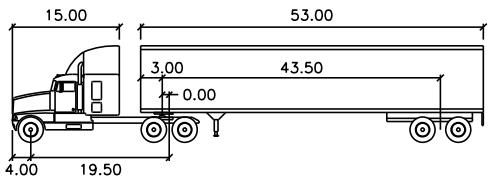
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I.D.S. SHEET 12 OF 19

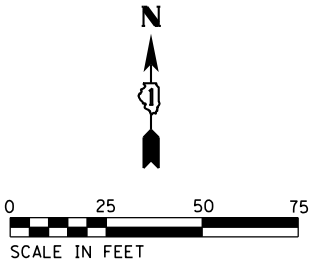
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 USER NAME = MattC



TRUCK TURNING MOVEMENTS

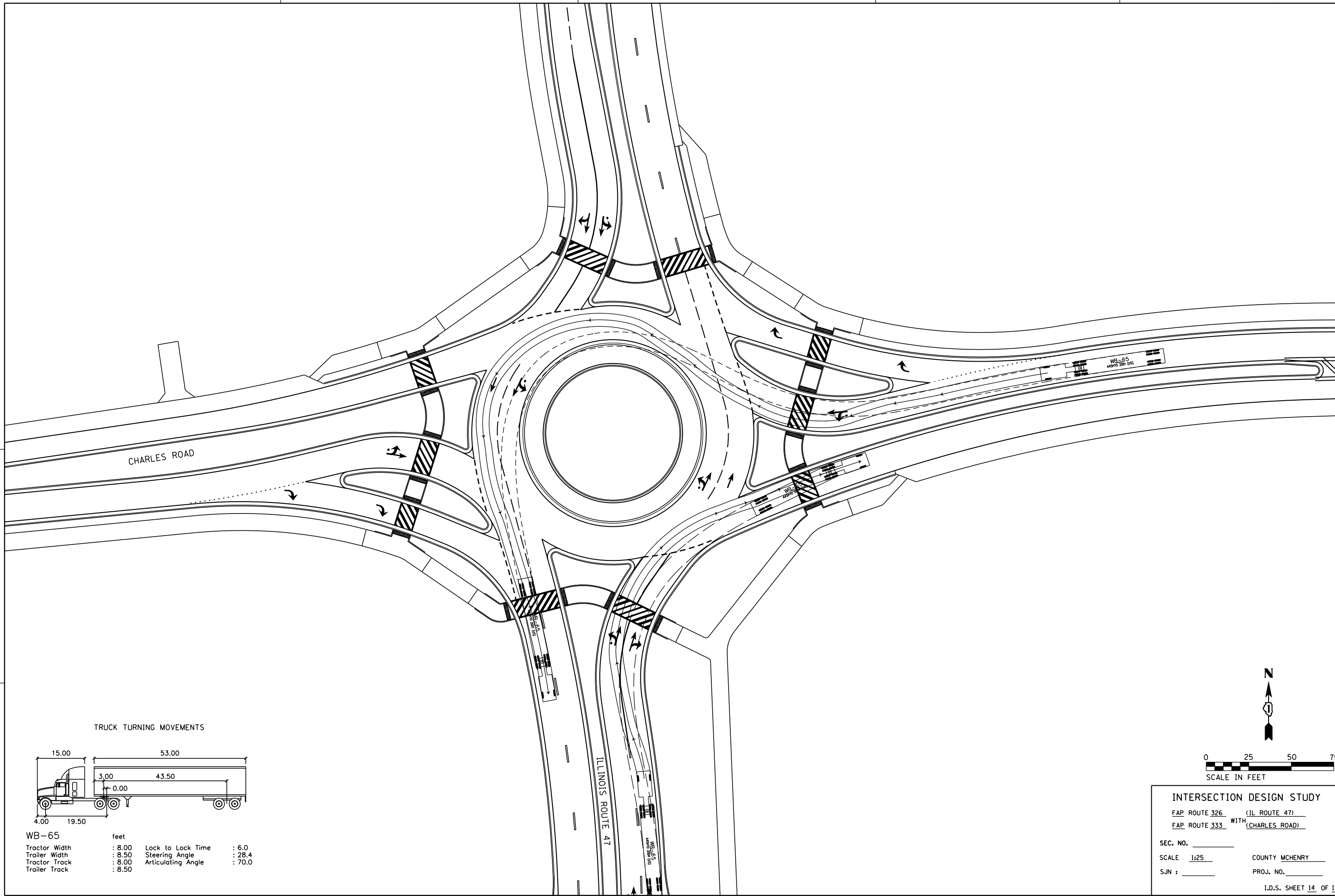


WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

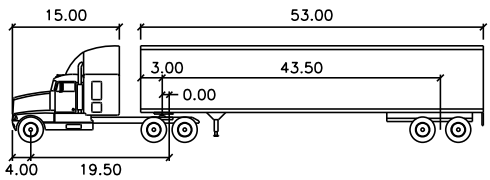


INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 13 OF 19

PLOT DATE = 12/27/2018
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 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC



TRUCK TURNING MOVEMENTS



WB-65	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

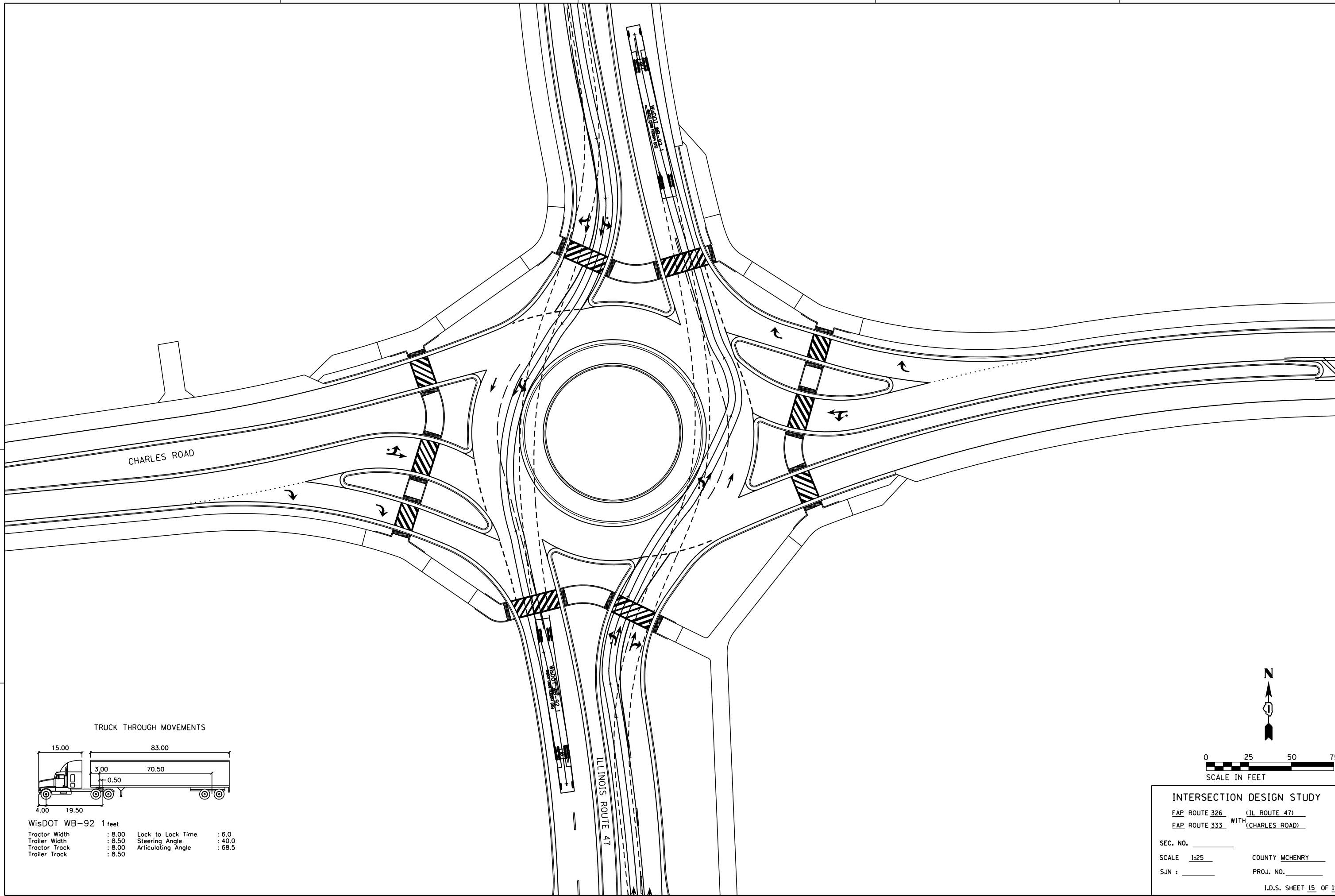


INTERSECTION DESIGN STUDY
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 FAP ROUTE 333 WITH (CHARLES ROAD)

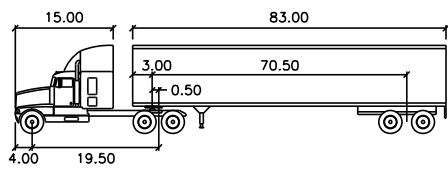
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I.D.S. SHEET 14 OF 19

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 USER NAME = MattC



TRUCK THROUGH MOVEMENTS



WisDOT WB-92 1 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 68.5
Trailer Track	: 8.50		



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

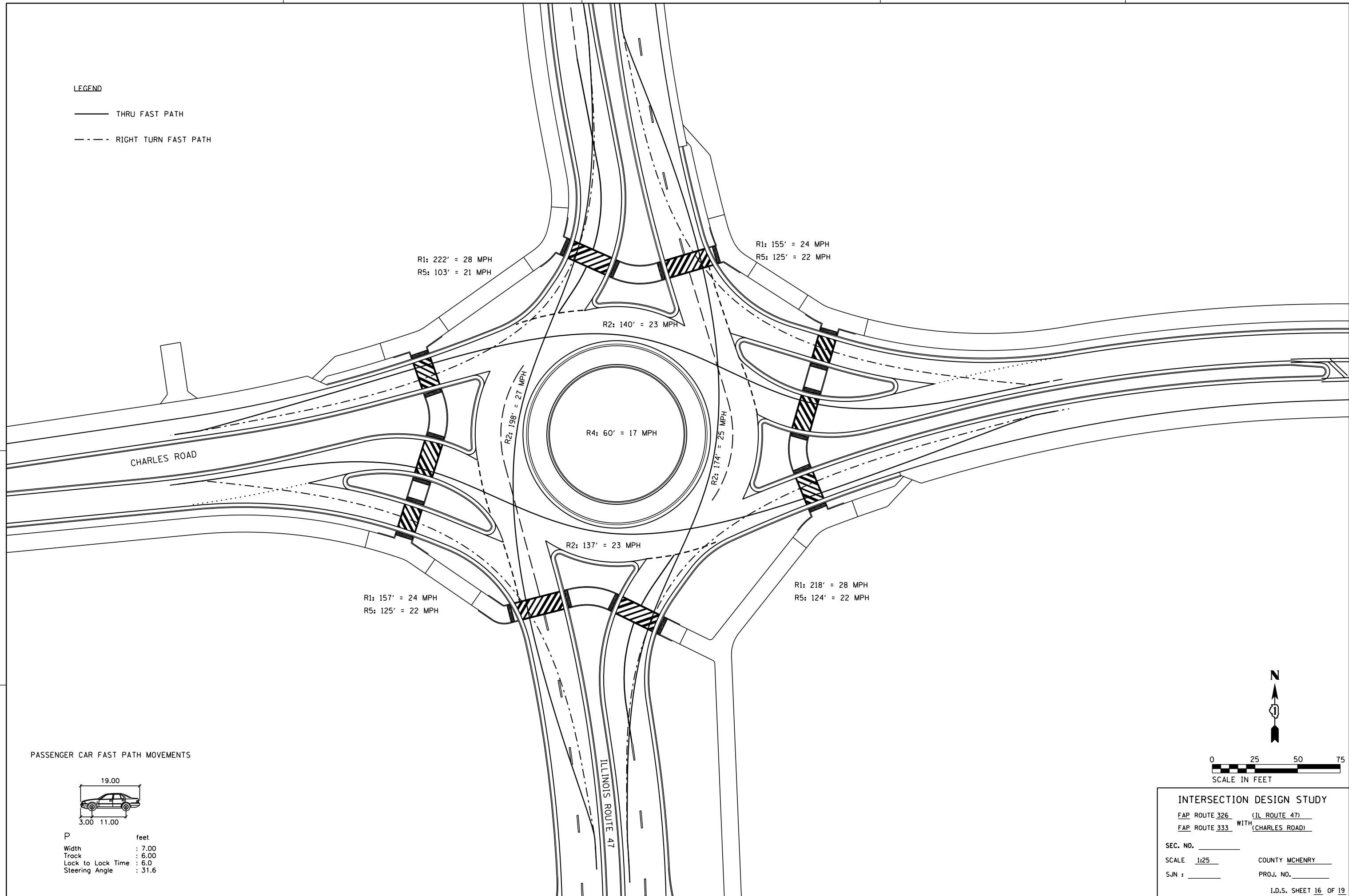
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I.D.S. SHEET 15 OF 19

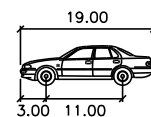
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 USER NAME = MattC

LEGEND

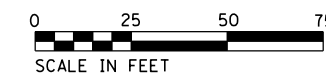
- THRU FAST PATH
- - - RIGHT TURN FAST PATH



PASSENGER CAR FAST PATH MOVEMENTS



P	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6







INTERSECTION DESIGN STUDY

FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)

SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____

I.D.S. SHEET 16 OF 19

LEGEND

-  TRUCK APRON
-  STOPPING SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 2.0'
-  INTERSECTION SIGHT DISTANCE ENVELOPE
DRIVER'S EYE = 3.5' AND OBJECT HEIGHT = 3.5'
-  UNRESTRICTED AREA

IL ROUTE 47
50 MPH DESIGN SPEED
45 MPH POSTED SPEED

CHARLES ROAD
60 MPH DESIGN SPEED
55 MPH POSTED SPEED

CHARLES ROAD
60 MPH DESIGN SPEED
55 MPH POSTED SPEED

IL ROUTE 47
50 MPH DESIGN SPEED
45 MPH POSTED SPEED

PLOT DATE = 12/27/2018
 FILE NAME = S:\D\16380-6399\6346\01A\MicroStation\01A\Road Sheets\01A12345-ght-rds-Charles-Sight.dgn
 PLOT SCALE = 50.0000 / in.
 USER NAME = MattC

NOTES:

INTERSECTION SIGHT DISTANCE ENVELOPES ARE BASED ON DRIVER'S EYE
50 FEET FROM THE YIELD LINE WITH A CRITICAL GAP OF 5.0 SECONDS.



INTERSECTION DESIGN STUDY

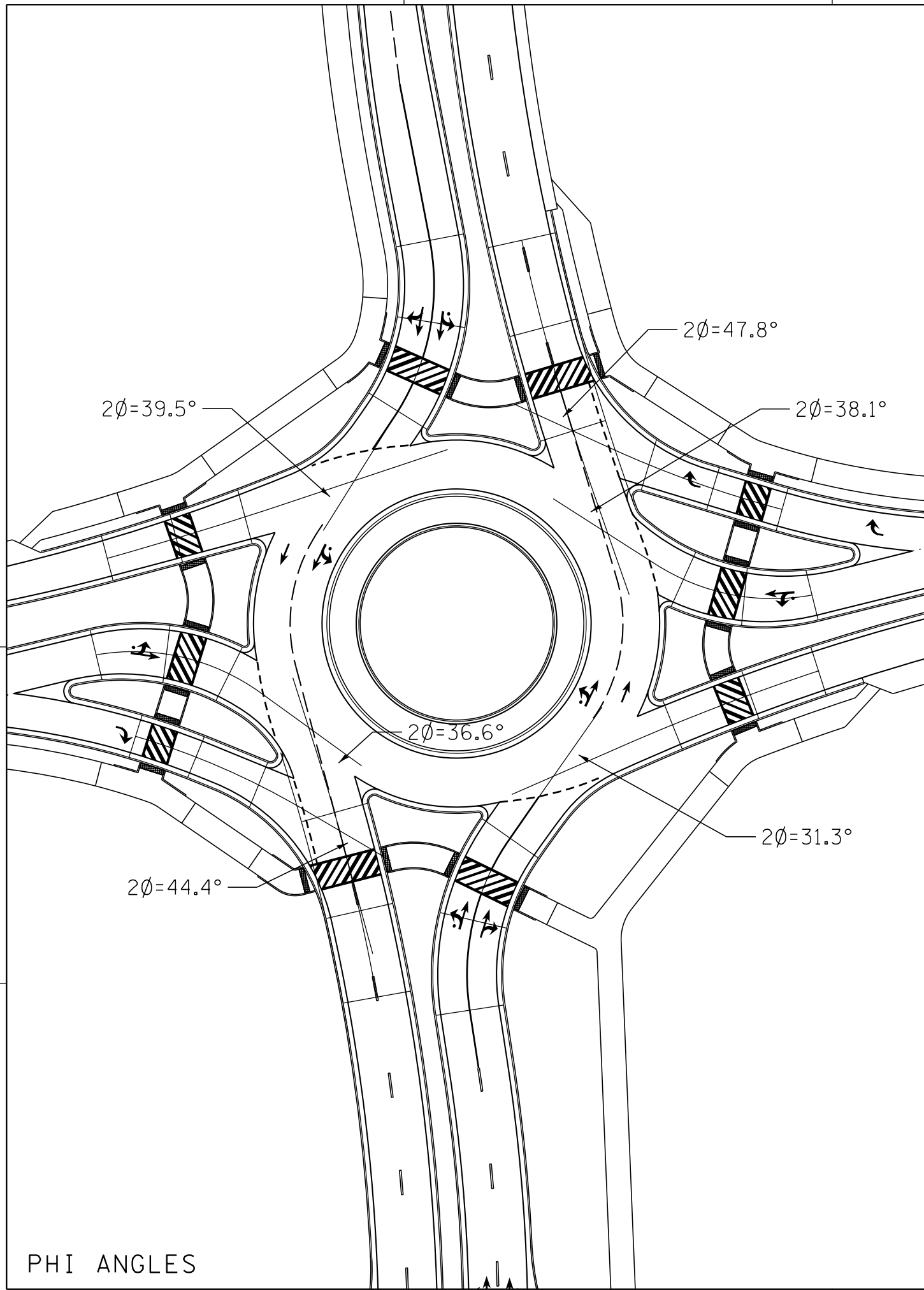
FAP ROUTE 326 (IL ROUTE 47)
FAP ROUTE 333 WITH (CHARLES ROAD)

SEC. NO. _____

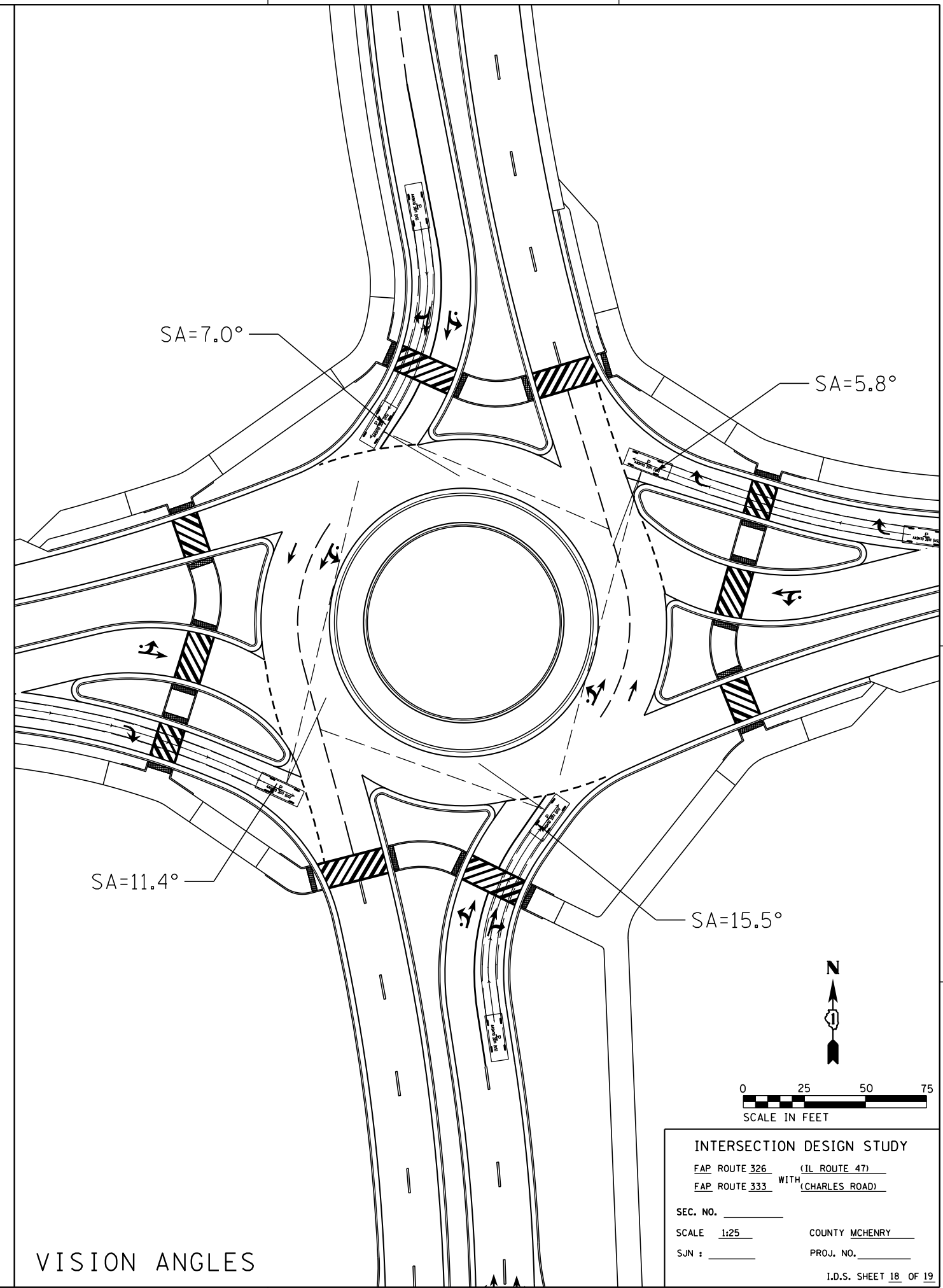
SCALE 1:25 COUNTY MCHENRY

SJN : _____ PROJ. NO. _____

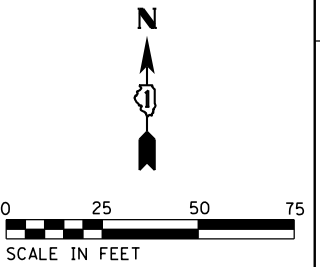
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 USER NAME = MattC



PHI ANGLES

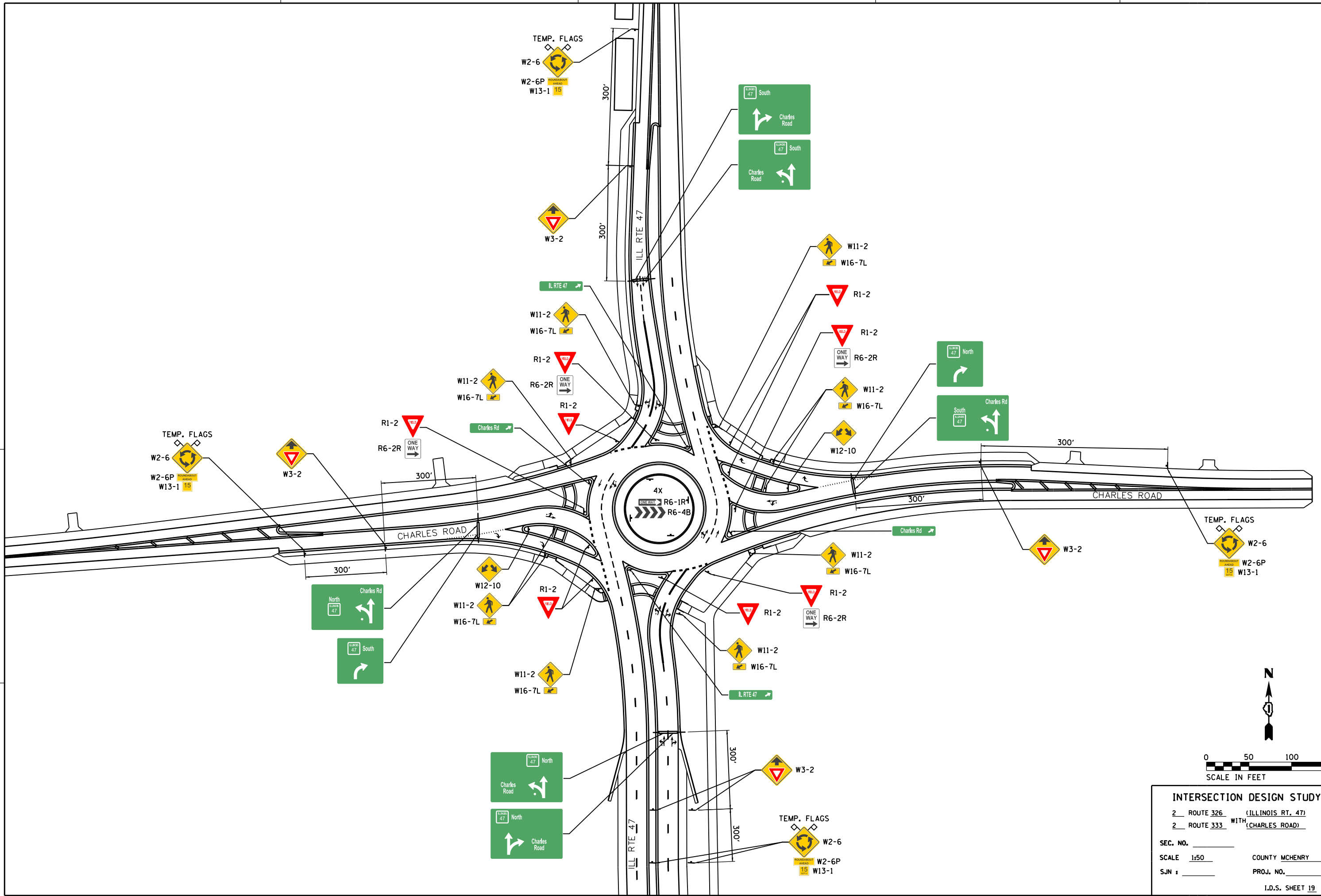


VISION ANGLES



INTERSECTION DESIGN STUDY
 FAP ROUTE 326 (IL ROUTE 47)
 FAP ROUTE 333 WITH (CHARLES ROAD)
 SEC. NO. _____
 SCALE 1:25 COUNTY MCHENRY
 SJN : _____ PROJ. NO. _____
 I.D.S. SHEET 18 OF 19

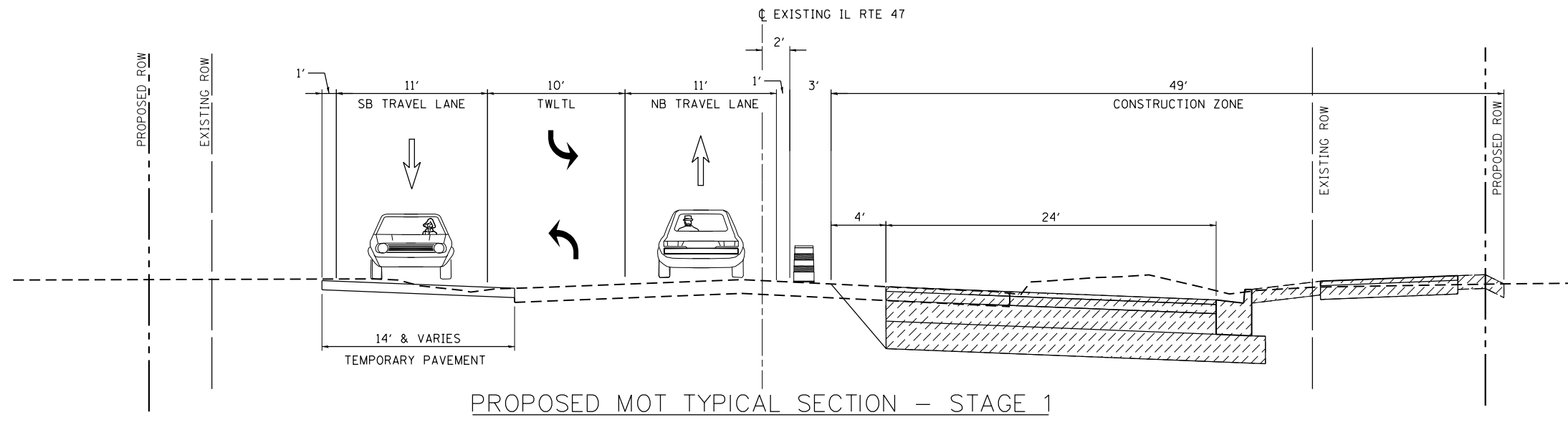
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 PLOT SCALE = 50.0000 / 1 in.
 USER NAME = brianf



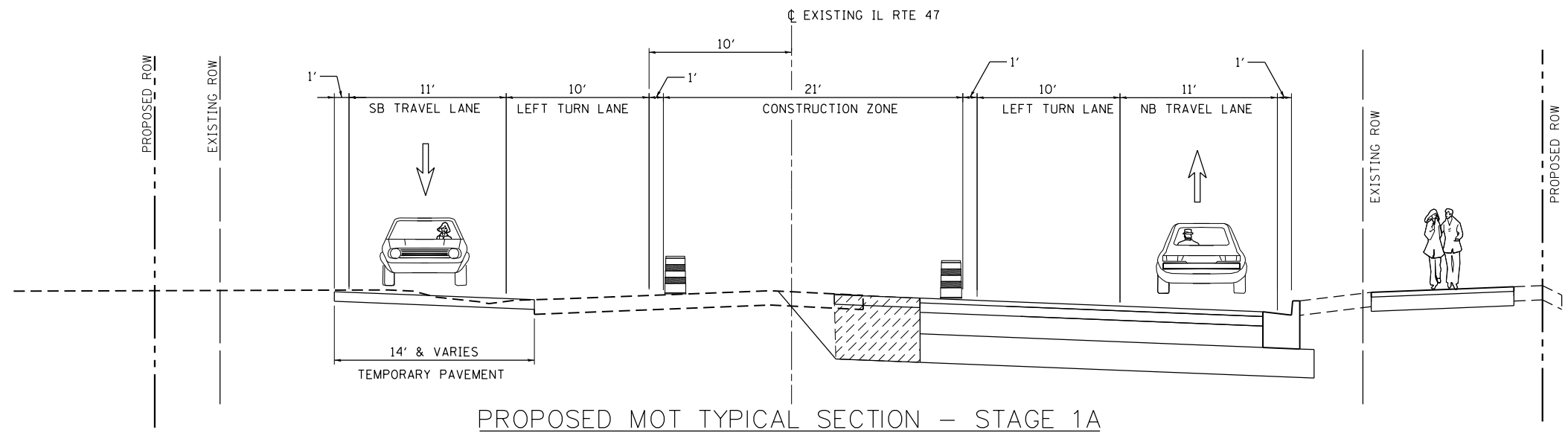
INTERSECTION DESIGN STUDY
 2 ROUTE 326 (ILLINOIS RT. 47)
 2 ROUTE 333 WITH (CHARLES ROAD)
 SEC. NO. _____
 SCALE 1:50 COUNTY MCHENRY
 SJN # _____ PROJ. NO. _____
 I.D.S. SHEET 19 OF 19

EXHIBIT 3.22-1
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAD\DD Drawings\IL47-MOT Typical_Revision 2018.11.01.dgn



PROPOSED MOT TYPICAL SECTION - STAGE 1



PROPOSED MOT TYPICAL SECTION - STAGE 1A

- LEGEND**
- EXISTING GROUND
 - PREVIOUSLY CONSTRUCTED GROUND
 - ▨ CONSTRUCTION ZONE



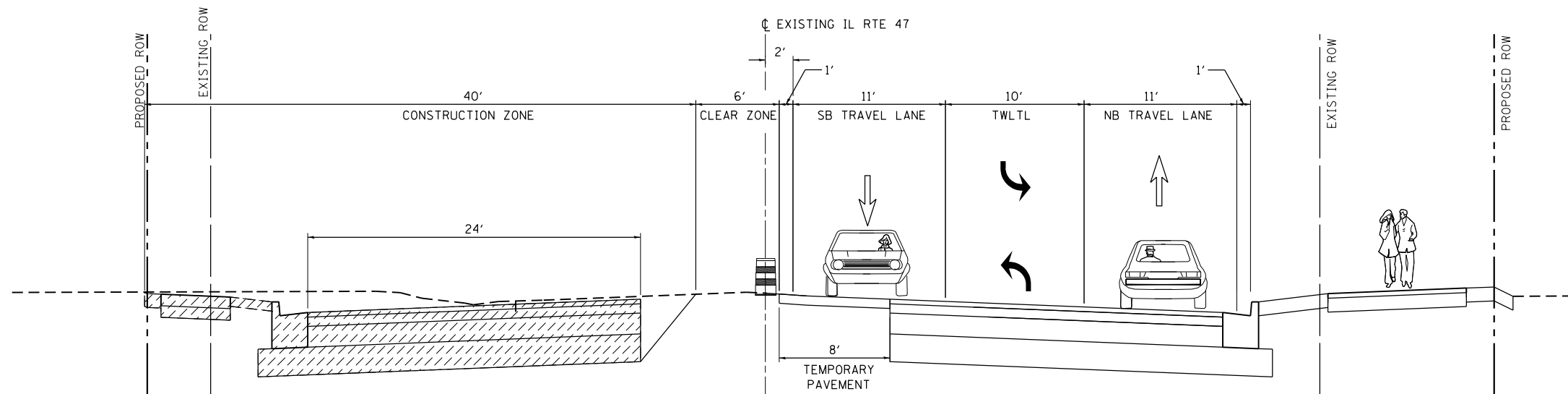
USER NAME = MattG	DESIGNED -	REVISED -
PLOT SCALE = 10.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 3/1/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

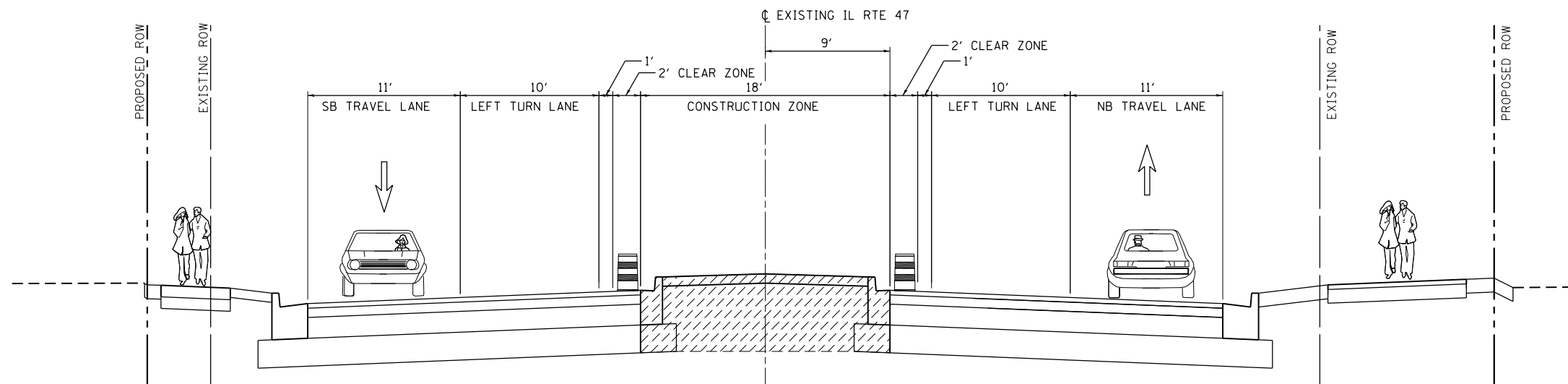
IL 47 - US 14 TO WARE ROAD MOT

SCALE: N-T-S SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY		
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				






PROPOSED MOT TYPICAL SECTION - STAGE 2



PROPOSED MOT TYPICAL SECTION - STAGE 3

LEGEND

	EXISTING GROUND
	PREVIOUSLY CONSTRUCTED GROUND
	CONSTRUCTION ZONE

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAD\Drawings\IL47-MOT_Typical_Revise.dgn

SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

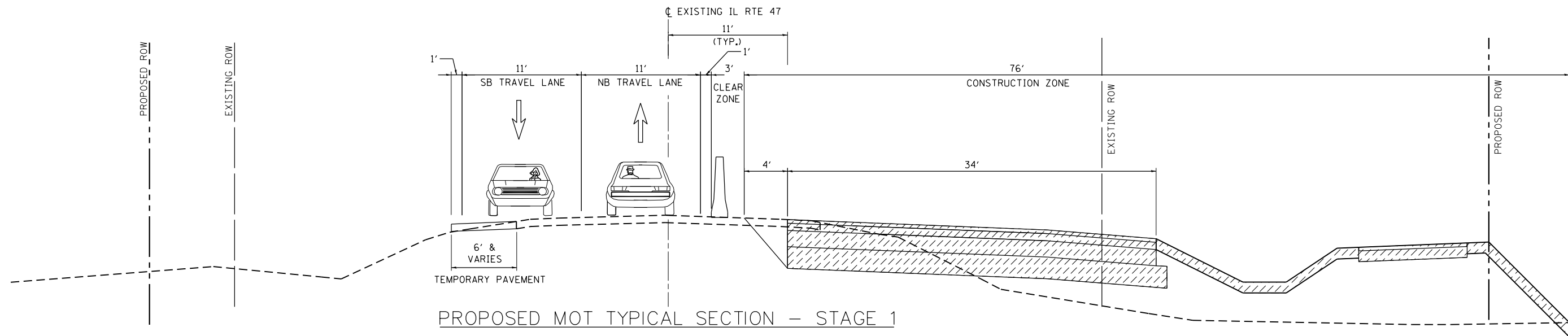
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PLOT DATE = 3/1/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

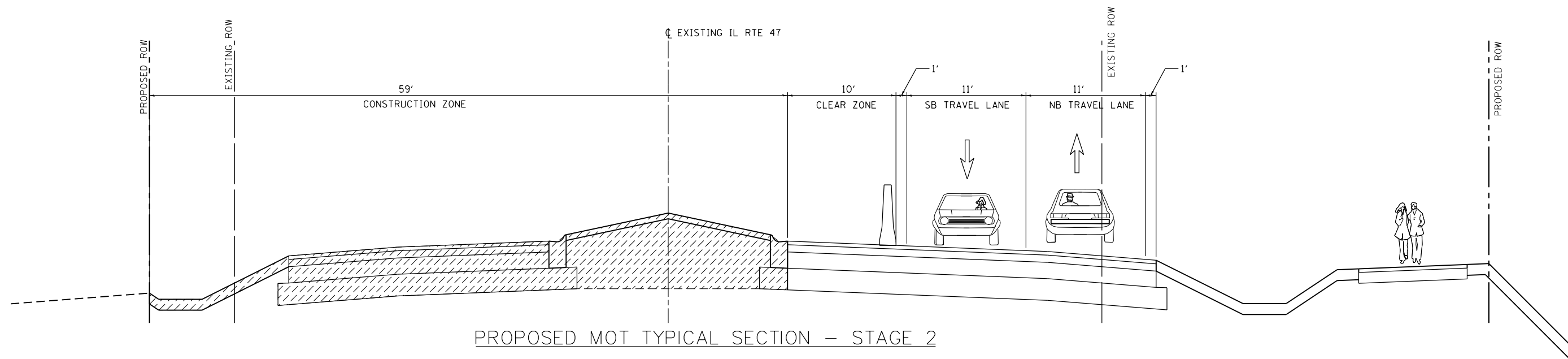
IL 47 - US 14 TO WARE ROAD MOT			
SCALE: N-T-S	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326		MCHENRY		
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FILE NAME = SA\JOL\63800-6399\6346\014\Micro\CAD\Drawings\IL47-MOT_Typical_Revise.dwg



PROPOSED MOT TYPICAL SECTION - STAGE 1



PROPOSED MOT TYPICAL SECTION - STAGE 2

LEGEND

- EXISTING GROUND
- PREVIOUSLY CONSTRUCTED GROUND
- /// CONSTRUCTION ZONE