

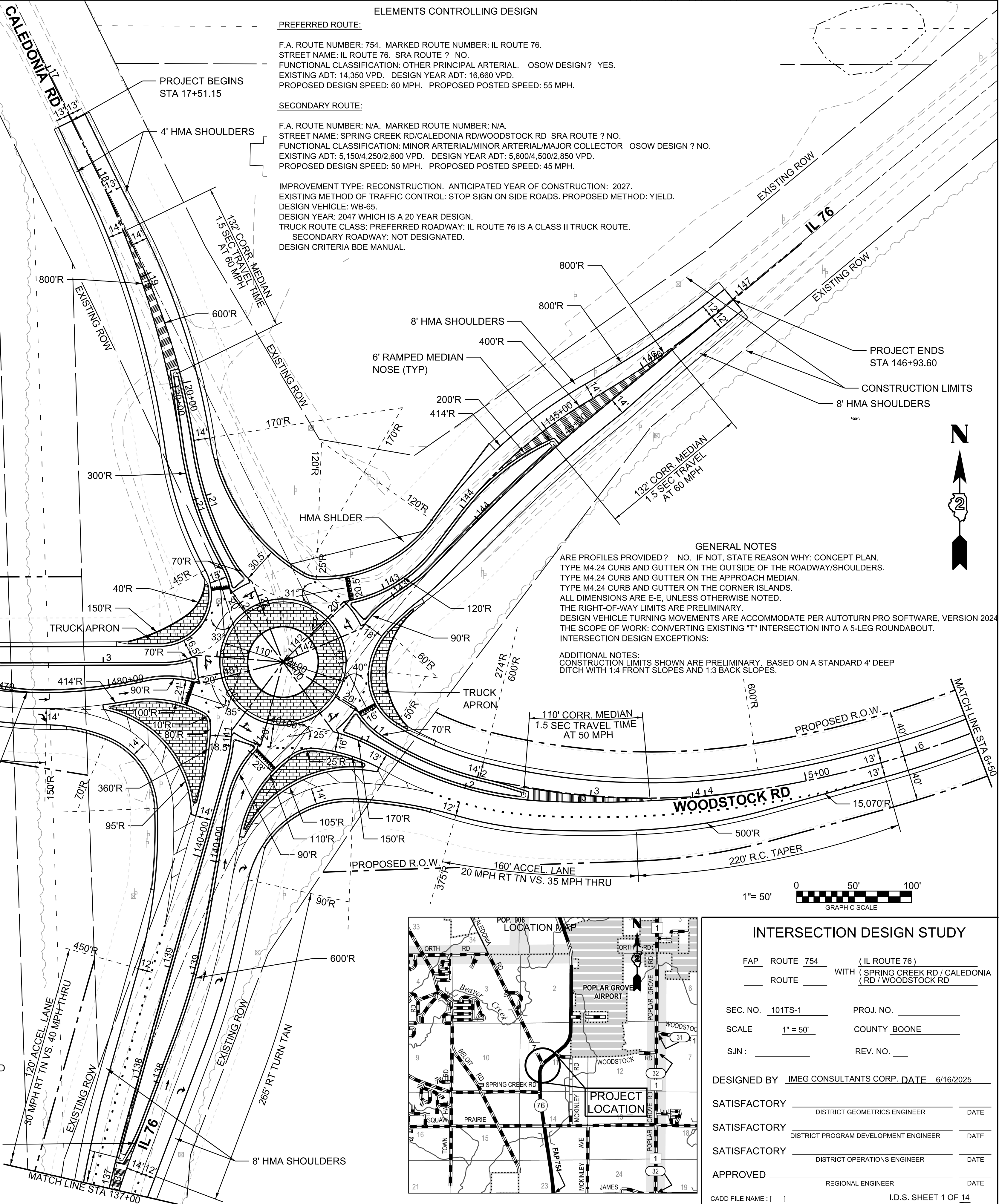
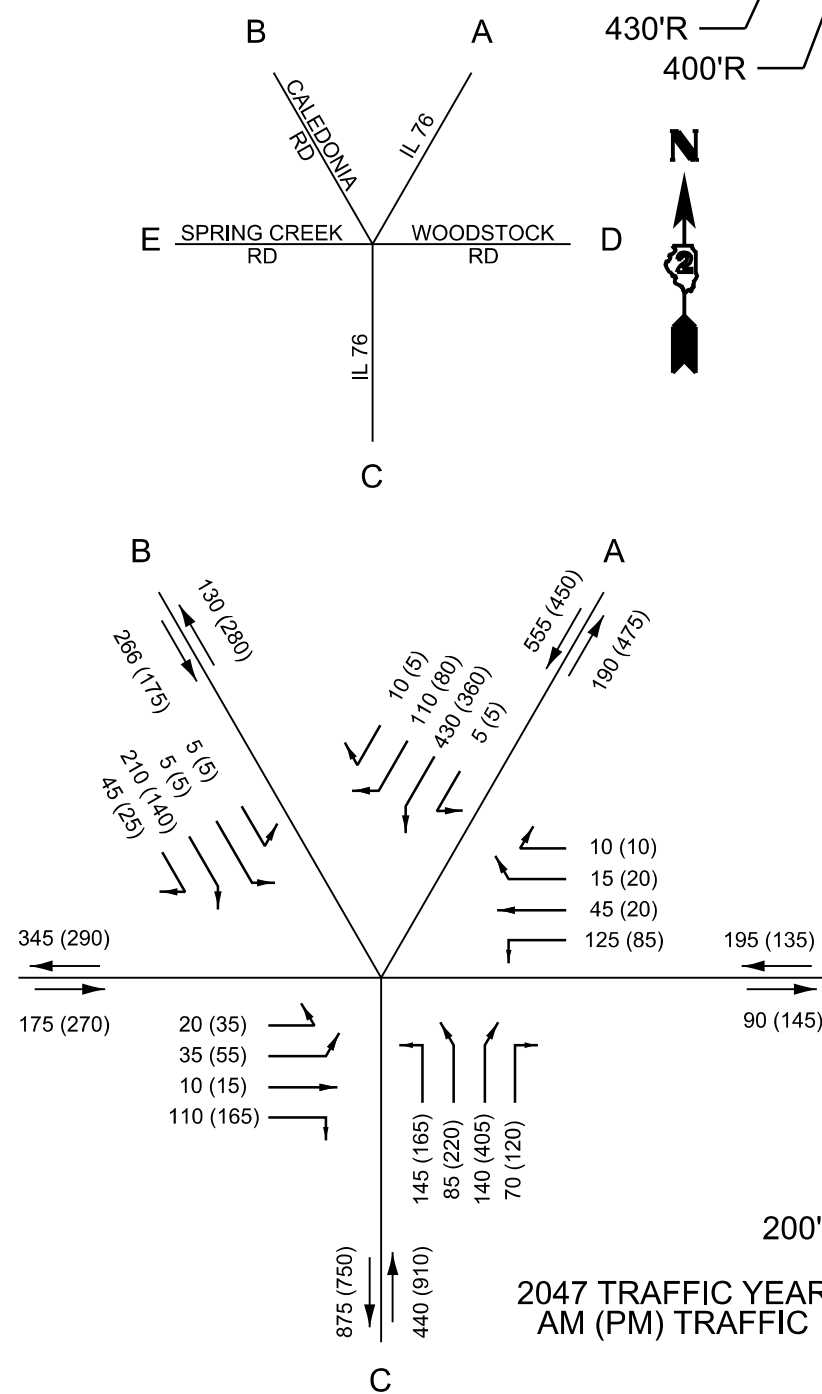
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PLOT SCALE = 50,000 / in.
USER NAME = Paul.Prauser

ROUNDBOUT CAPACITY DESIGN STUDY

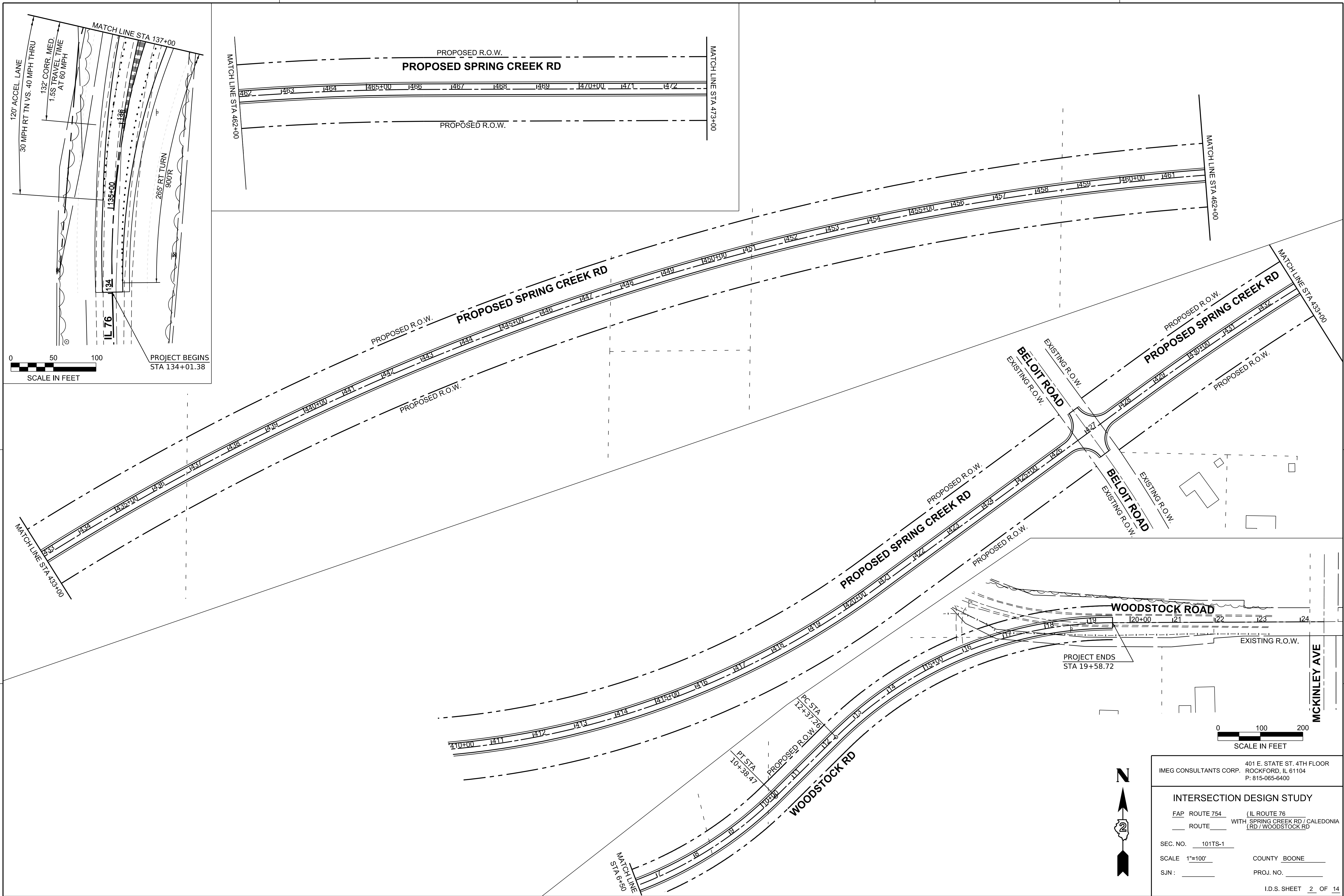
PROGRAM USED SIDRA INTERSECTION VERSION 9.1 AREA OTHER PEAK HOUR FACTOR 0.92
INTERSECTION CONTROL DELAY A.M. 11.5 SECONDS P.M. 11.2 SECONDS
INTERSECTION LEVEL OF SERVICE A.M. B P.M. B

APPROACH		A IL 76 SB				B CALEDONIA RD				C IL 76 NB				D WOODSTOCK RD				E SPRING CREEK RD			
LANE GROUP		L3	L1	R1	R2	L2	L1	R1	R3	L2	L1	R1	R2	L2	T1	R1	R3	L3	L1	T1	R2
2040 30TH MAX. HOUR TRAFFIC	A.M.	5	430	110	10	5	5	210	45	145	85	140	70	125	45	15	10	20	35	10	110
	P.M.	5	360	80	5	5	5	140	25	165	220	405	120	85	20	20	10	35	55	15	165
ENTRY FLOW RATE λ_{Vpc} (pc/h)	A.M.	5	467	120	11	5	5	228	49	158	92	152	76	136	49	16	11	22	38	11	120
	P.M.	5	391	87	5	5	5	152	27	179	239	440	130	92	22	22	11	38	60	16	179
PED/HOUR CROSSING THE APPROACH	A.M.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	P.M.	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LANE MOVEMENTS		RIGHT				RIGHT				LEFT RIGHT				RIGHT				LEFT RIGHT			
ENTRY FLOW RATE v_f (vph)	A.M.	603				288				402	76			212				71	120		
	P.M.	489				190				859	130			147				168	125		
LANE CAPACITY c_f (vph)	A.M.	808				486				1295	1626			822				629	1626		
	P.M.	713				578				1251	1626			490				752	1626		
x_i (v_f/c_f RATIO)	A.M.	0.747				0.592				0.311	0.047			0.258				0.112	0.074		
	P.M.	0.686				0.329				0.686	0.080			0.299				0.224	0.077		
STORAGE QUEUE LENGTH (VEHICLES)	A.M.	9.9				3.4				1.6	0.0			1.2				0.4	0.0		
	P.M.	6.6				1.4				6.6	0.0			1.2				0.9	0.0		
LANE DELAY, d (SEC)	A.M.	19.6				20.3				5.5	2.4			7.1				6.9	4.5		
	P.M.	18.4				10.8				11.8	2.6			11.9				7.3	4.1		
LANE LEVEL OF SERVICE	A.M.	C				C				A	A			A				A	A		
	P.M.	C				B				B	A			B				A	A		
APPROACH CONTROL DELAY, d (SEC)	A.M.		17.1				20.3				5.0				7.1				5.4		
	P.M.		17.0				10.8				10.6				11.9				5.9		
APPROACH LEVEL OF SERVICE	A.M.		C				C				A				A				A		
	P.M.		C				B				B				B				A		

MOVEMENT	YEAR 2027 30TH MAXIMUM HOUR TRAFFIC		PERCENT TRUCK TRAFFIC IN 30TH MAX. HOUR		ESTIMATED PERCENT INCREASE BY	YEAR 2037 30TH MAXIMUM HOUR TRAFFIC		ESTIMATED PERCENT INCREASE BY	YEAR 2047 30TH MAXIMUM HOUR TRAFFIC	
	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.		A.M.	P.M.
AD	5	5				5	5	GENERATION AND DEVELOPMENT	5	5
AC	390	330				410	345		430	360
AE	100	70				105	75		110	80
AB	10	5				10	5		10	5
BA	5	5				5	5		5	5
BD	5	5				5	5		5	5
BC	190	130				200	135		210	140
BE	40	25				40	25		45	25
CE	130	150	2.1			140	155		145	165
CB	75	200				80	210		85	220
CA	130	365				135	385		140	405
CD	60	110	2.7			65	115		70	120
DC	115	75	3.3			120	80		125	85
DE	40	20	0			40	20		45	20
DB	15	20				15	20		15	20
DA	10	10				10	10		10	10
EB	20	35				20	35	20	35	
EA	30	50				30	50	35	55	
ED	10	15	2.2			10	15	10	15	
EC	100	150	1.4			105	155	110	165	
TOTAL A	680	840				710	880		745	925
TOTAL B	360	425				375	440		395	455
TOTAL C	1195	1510				1255	1580		1315	1660
TOTAL D	260	260				270	270		285	280
TOTAL E	475	515				490	530		520	560



PLOT DATE	= 6/30/2025
FILE NAME	= W:\240033
PLOT SCALE	= 100.000 ' /
USER NAME	= Pat.J.Paus



PLOT DATE = 6/30/2025
FILE NAME = W:\2403397_00\BooneCo_TownHallRoad\CADD Data\Geometry\9209124-USDCity 3ar14.dgn
PLOT SCALE = 50.000' / in.
USER NAME = Paul J. Pfauter

S.B. BASELINE
CALEDONIA ROAD
PI STA = 19+24.77
 $\Delta = 18^{\circ}23'00''$ (RT)
D = 07°09'43"
R = 800.00'
T = 129.45'
L = 256.68
E = 10.41'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 17+95.31
PRC STA = 20+51.99

S.B. BASELINE
CALEDONIA ROAD
PI STA = 21+08.04
 $\Delta = 21^{\circ}09'54''$ (LT)
D = 19°05'55"
R = 300.00'
T = 56.05'
L = 110.82'
E = 5.19'
e = NC
TR = N/A
SE RUN = N/A
PRC STA = 20+51.99
PT STA = 21+62.81

S.B. BASELINE
CALEDONIA ROAD
PI STA = 21+75.73
 $\Delta = 20^{\circ}54'21''$ (RT)
D = 81°51'04"
R = 70.00'
T = 12.91'
L = 25.54
E = 1.18'
e = NC
TR = N/A
SE RUN = N/A
PRC STA = 21+62.81
PT STA = 21+88.35

CIRCULATORY ROADWAY
PI STA = 40+00.00
 $\Delta = 360^{\circ}00'00''$ (LT)
D = 104°10'27"
R = 55.00'
T = 0.00'
L = 345.58'
E = 0.00'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 40+00.00
PT STA = 40+00.00

S.B. IL 76 BASELINE
PI STA = 143+11.97
 $\Delta = 44^{\circ}14'29''$ (LT)
D = 47°44'47"
R = 120.00'
T = 48.78'
L = 92.66'
E = 9.53'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 142+63.19
PT STA = 143+55.85

S.B. IL 76 BASELINE
PI STA = 143+98.16
 $\Delta = 03^{\circ}06'24''$ (RT)
D = 14°19'26"
R = 400.00'
T = 10.85'
L = 21.69
E = 0.15'
e = NC
TR = N/A
SE RUN = N/A
PCC STA = 144+09.01
PT STA = 144+09.01

S.B. IL 76 BASELINE
PI STA = 144+79.62
 $\Delta = 20^{\circ}01'21''$ (RT)
D = 14°19'26"
R = 400.00'
T = 70.61'
L = 139.78
E = 6.18'
e = NC
TR = N/A
SE RUN = N/A
PCC STA = 144+09.01
PT STA = 145+48.79

S.B. IL 76 BASELINE
PI STA = 146+17.42
 $\Delta = 09^{\circ}48'24''$ (LT)
D = 07°09'43"
R = 800.00'
T = 68.63'
L = 136.93'
E = 2.94'
e = NC
TR = N/A
SE RUN = N/A
PRC STA = 145+48.79
PT STA = 146+85.72

N.B. IL 76 BASELINE
PI STA = 142+77.39
 $\Delta = 20^{\circ}53'15''$ (RT)
D = 63°39'43"
R = 90.00'
T = 16.59'
L = 32.81
E = 1.52'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 142+60.80
PT STA = 142+93.61

N.B. IL 76 BASELINE
PI STA = 143+29.92
 $\Delta = 10^{\circ}47'45''$ (LT)
D = 52°05'13"
R = 110.00'
T = 10.39'
L = 20.73'
E = 0.49'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 143+19.52
PT STA = 143+40.25

N.B. IL 76 BASELINE
PI STA = 144+59.83
 $\Delta = 06^{\circ}14'19''$ (RT)
D = 04°40'47"
R = 1,224.37'
T = 666.72'
L = 133.32'
E = 1.82'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 143+93.11
PT STA = 145+26.43

N.B. BASELINE
CALEDONIA ROAD
PI STA = 19+47.04
 $\Delta = 14^{\circ}18'36''$ (RT)
D = 09°32'57"
R = 600.00'
T = 75.32'
L = 149.85
E = 4.71'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 18+71.72
PCC STA = 20+21.58

N.B. BASELINE
CALEDONIA ROAD
PI STA = 20+38.89
 $\Delta = 03^{\circ}18'16''$ (RT)
D = 09°32'57"
R = 600.00'
T = 17.31'
L = 34.60
E = 0.25'
e = NC
TR = N/A
SE RUN = N/A
PCC STA = 20+21.58
PRC STA = 20+56.18

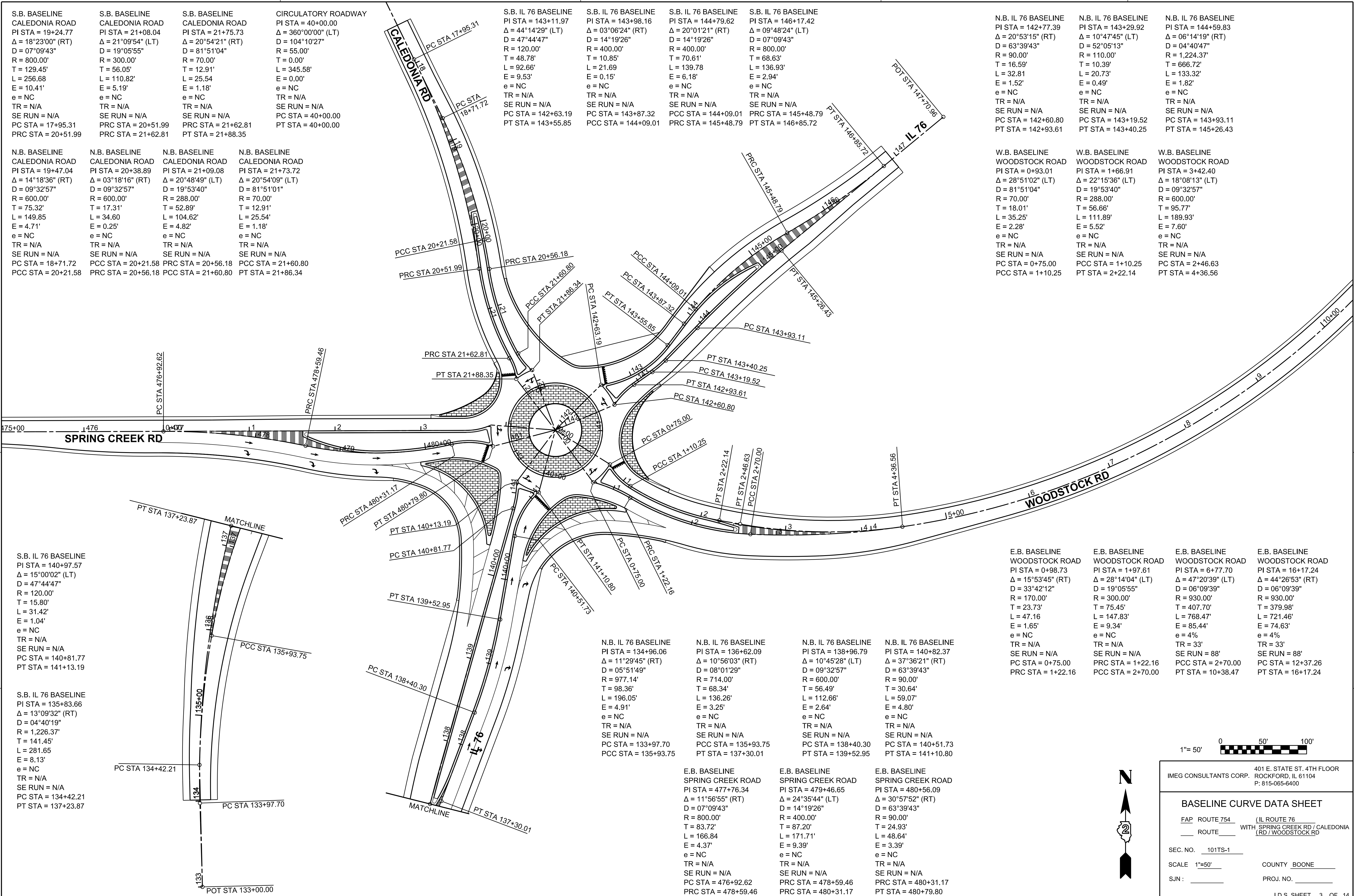
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CALEDONIA ROAD
PI STA = 21+09.08
 $\Delta = 20^{\circ}48'49''$ (LT)
D = 19°53'40"
R = 288.00'
T = 52.89'
L = 104.62'
E = 4.82'
e = NC
TR = N/A
SE RUN = N/A
PRC STA = 20+56.18
PCC STA = 21+60.80

N.B. BASELINE
CALEDONIA ROAD
PI STA = 21+73.72
 $\Delta = 20^{\circ}54'09''$ (LT)
D = 81°51'01"
R = 70.00'
T = 12.91'
L = 25.54'
E = 1.18'
e = NC
TR = N/A
SE RUN = N/A
PCC STA = 21+60.80
PT STA = 21+86.34

W.B. BASELINE
WOODSTOCK ROAD
PI STA = 0+93.01
 $\Delta = 28^{\circ}51'02''$ (LT)
D = 81°51'04"
R = 70.00'
T = 18.01'
L = 35.25'
E = 2.28'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 0+75.00
PCC STA = 1+10.25

W.B. BASELINE
WOODSTOCK ROAD
PI STA = 1+66.91
 $\Delta = 22^{\circ}15'36''$ (LT)
D = 19°53'40"
R = 288.00'
T = 56.66'
L = 111.89'
E = 5.52'
e = NC
TR = N/A
SE RUN = N/A
PCC STA = 1+10.25
PT STA = 2+22.14

W.B. BASELINE
WOODSTOCK ROAD
PI STA = 3+42.40
 $\Delta = 18^{\circ}08'13''$ (LT)
D = 09°32'57"
R = 600.00'
T = 95.77'
L = 189.93'
E = 7.60'
e = NC
TR = N/A
SE RUN = N/A
PC STA = 2+46.63
PT STA = 4+36.56



0 50' 100'
1"= 50'



401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
P: 815-065-6400

BASELINE CURVE DATA SHEET

FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD

SEC. NO. 101TS-1

SCALE 1"=50'

SJN : COUNTY BOONE

PROJ. NO.

I.D.S. SHEET 3 OF 14

MODEL: Pr_IL76NB_PGL-IL76 NB (Sheet)
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401 E. STATE ST. 4th Floor
ROCKFORD, IL 61104
PH: 815.985.6400
www.imegcorp.com

USER NAME = Pat.J.Pauser
PLOT DATE = 6/29/2025

DESIGNED -
DRAWN -
CHECKED -
DATE -

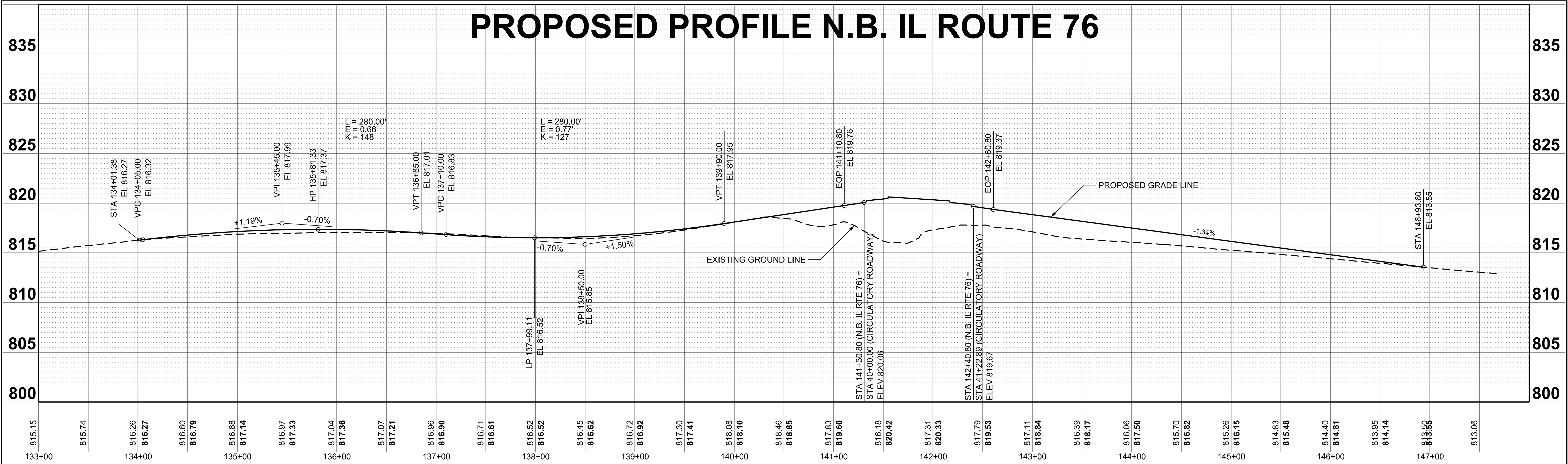
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

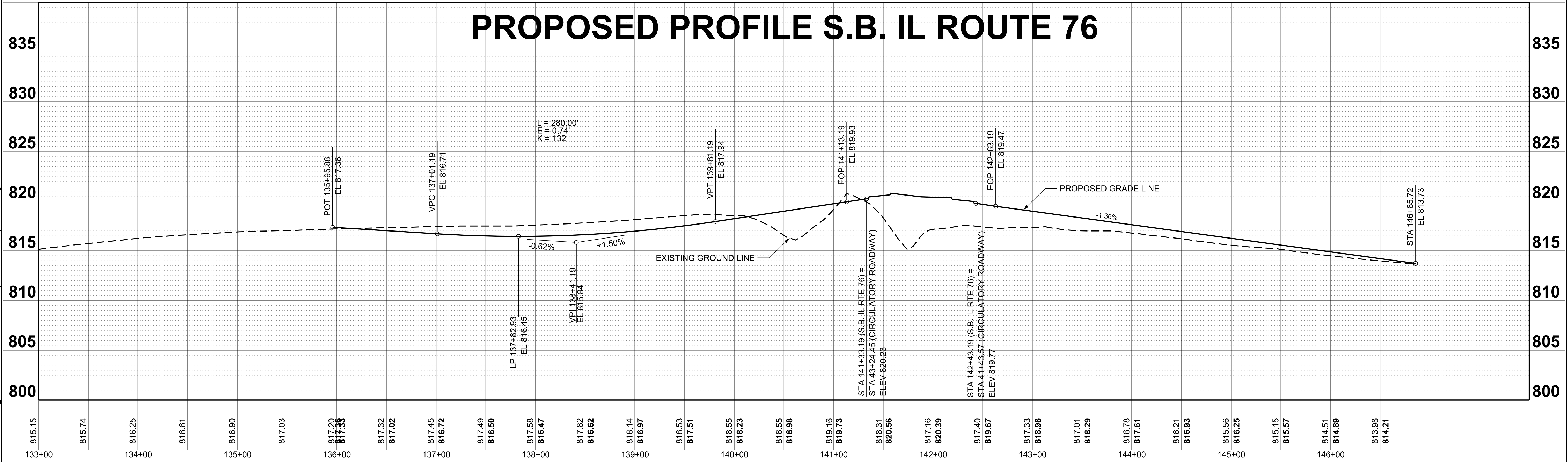
PROFILES
IL ROUTE 76 W/ SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD
SCALE: 1"=50'
SHEET 4 OF 14 SHEETS
STA. 133+00.00 TO STA. 148+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
754	101TS-1	BOONE		
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PROPOSED PROFILE N.B. IL ROUTE 76



PROPOSED PROFILE S.B. IL ROUTE 76



MODEL: WoodEBP\PC\4 - Profile 1 [Sheet]
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401 E. STATE ST. 4th Floor
ROCKFORD, IL 61104
PH: 815.985.6400
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USER NAME = Pat.J.Pauser
PLOT DATE = 6/27/2025

DESIGNED -
DRAWN -
CHECKED -
DATE -

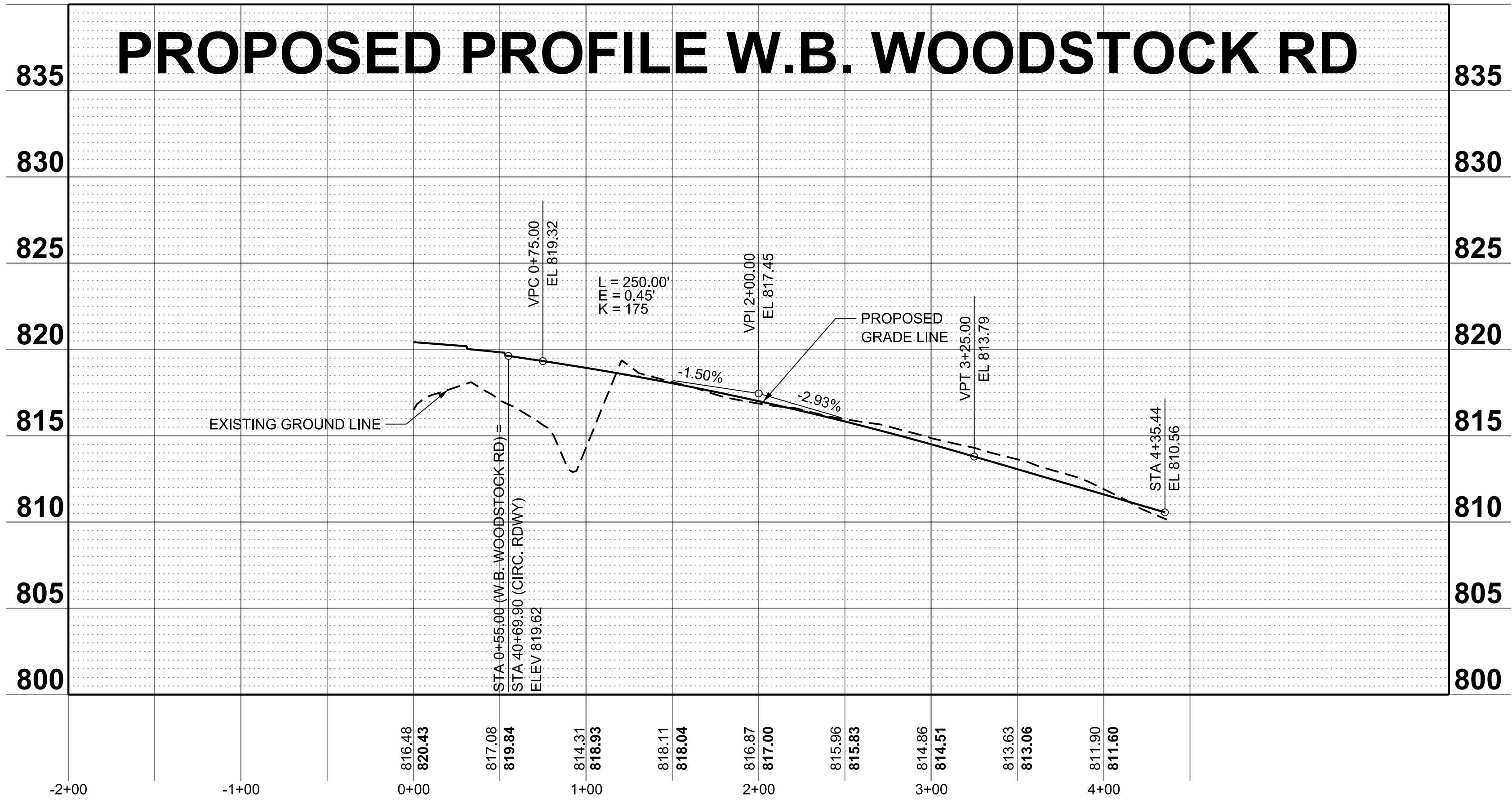
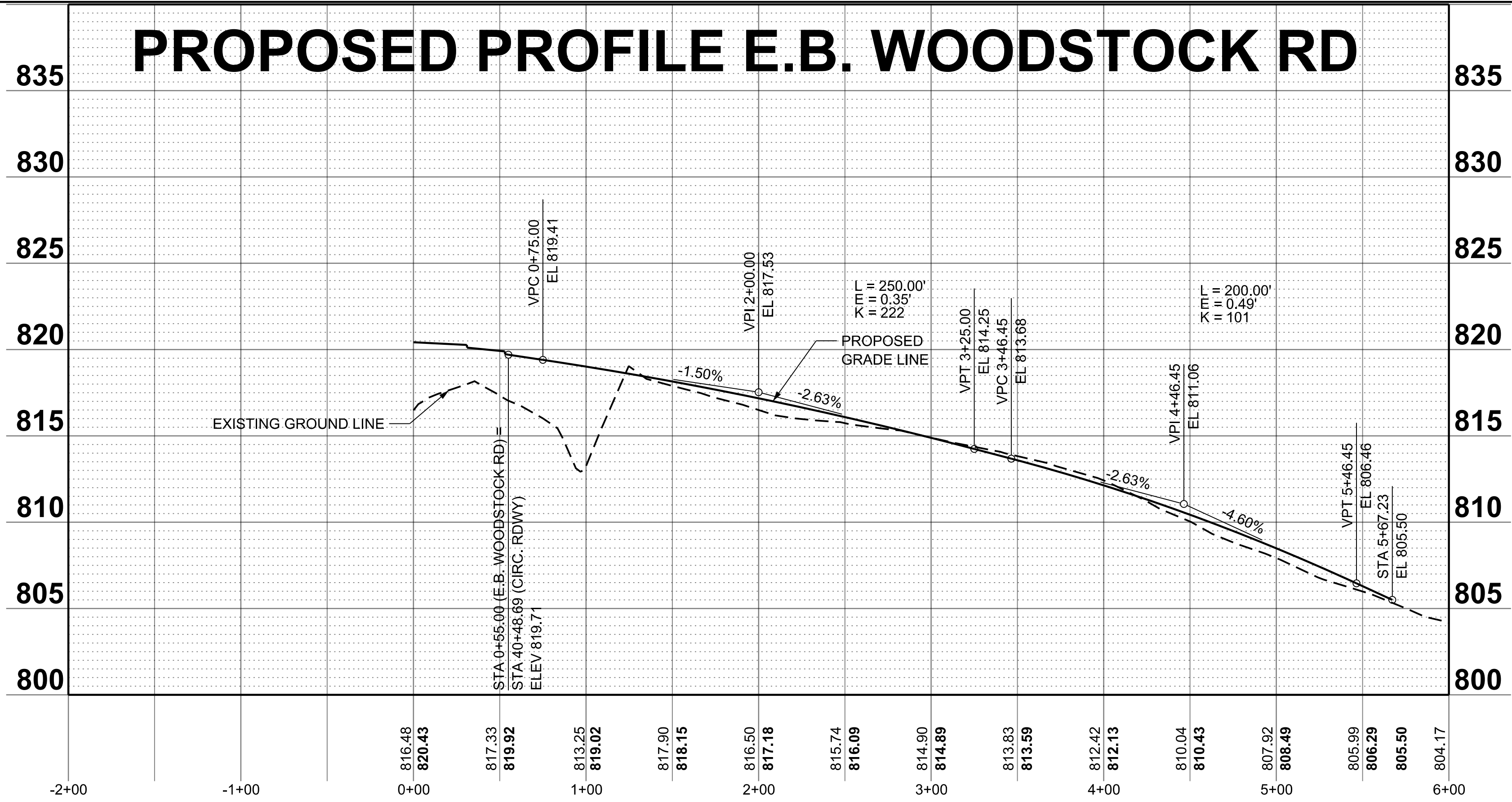
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REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILES
IL ROUTE 76 W/ SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD

SCALE: 1"=50' SHEET 5 OF 14 SHEETS STA. -2+00.00 TO STA. 6+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
754	101TS-1	BOONE		Profile 1
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PROPOSED PROFILE E.B. CALEDONIA RD

PROPOSED PROFILE
CIRCULATORY ROADWAY

PROPOSED PROFILE W.B. CALEDONIA RD

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401 E. STATE ST. 4th Floor
ROCKFORD, IL 61104
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USER NAME = Pat.J.Pauser

DESIGNED -

REVISED -

DRAWN -

REVISED -

CHECKED -

REVISED -

PLOT DATE = 6/29/2025

DATE -

REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILES
IL ROUTE 76 W/ SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD

SCALE: 1"=50'

SHEET 6

OF 14

SHEETS

STA. 16+00.00

TO STA. 24+00.00

F.A.P.

RTE.

SECTION

754

101TS-1

COUNTY

BOONE

TOTAL

SHEETS

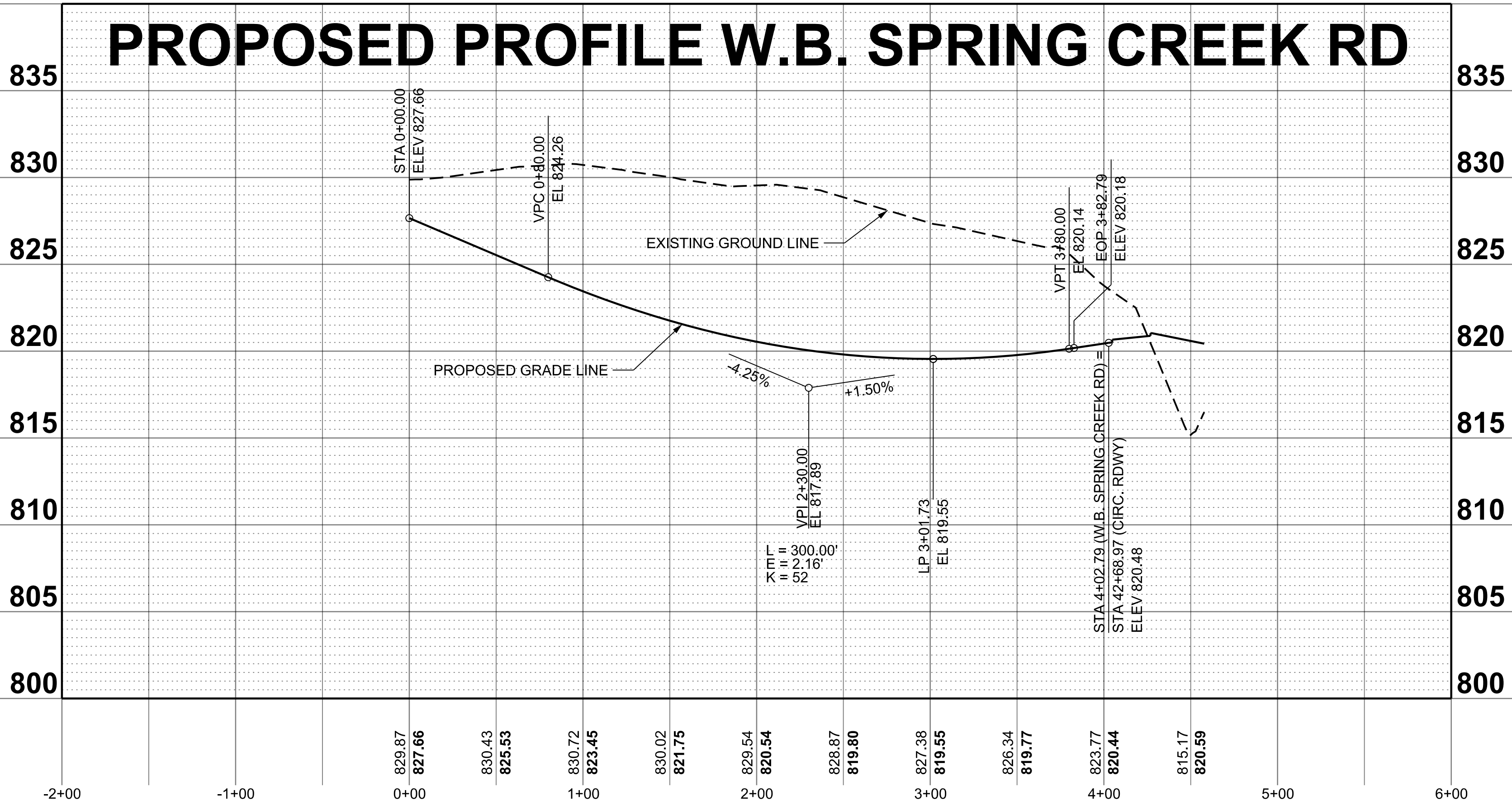
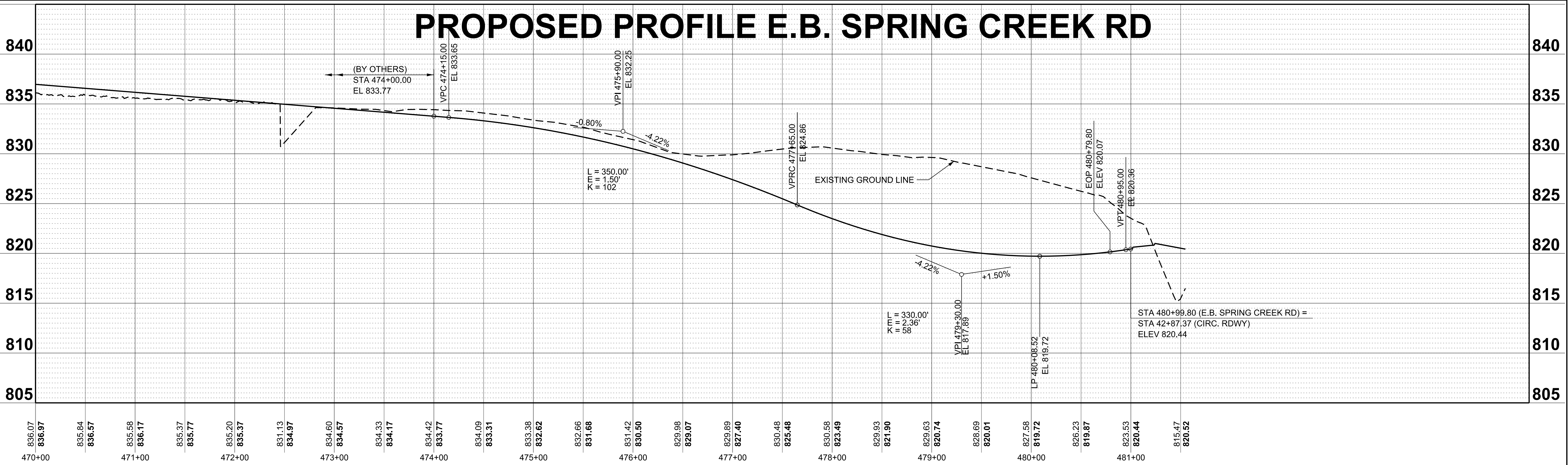
SHEET

NO.

CONTRACT NO.

ILLINOIS FED. AID PROJECT

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USER NAME = Pat.J.Pauser	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 6/29/2025	DATE -	REVISED -

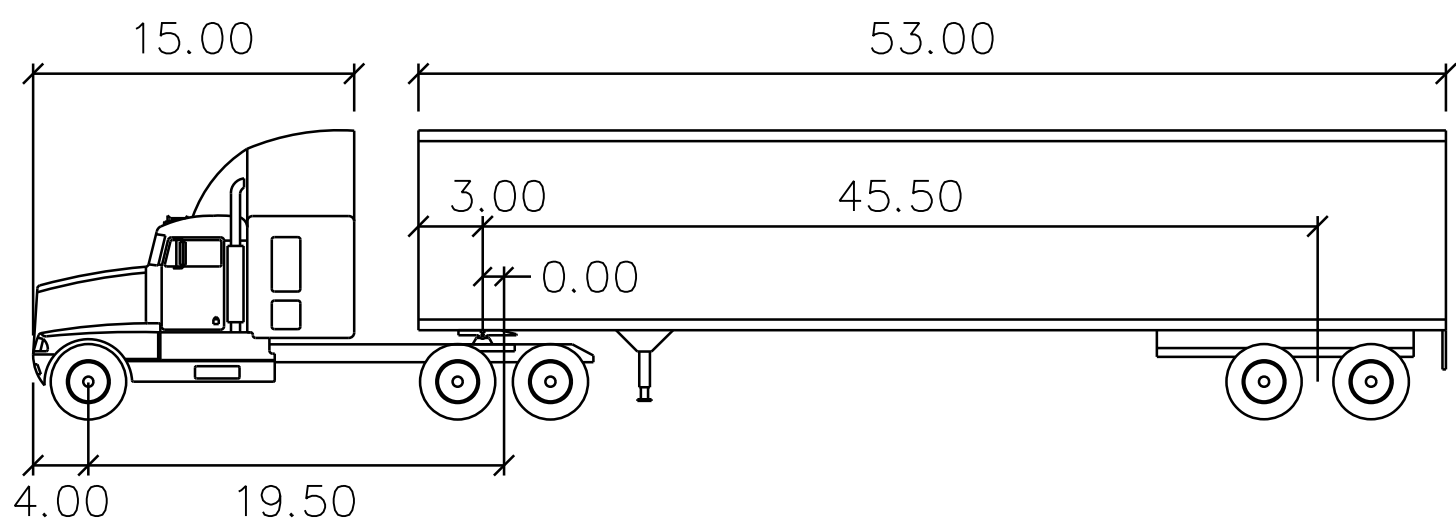
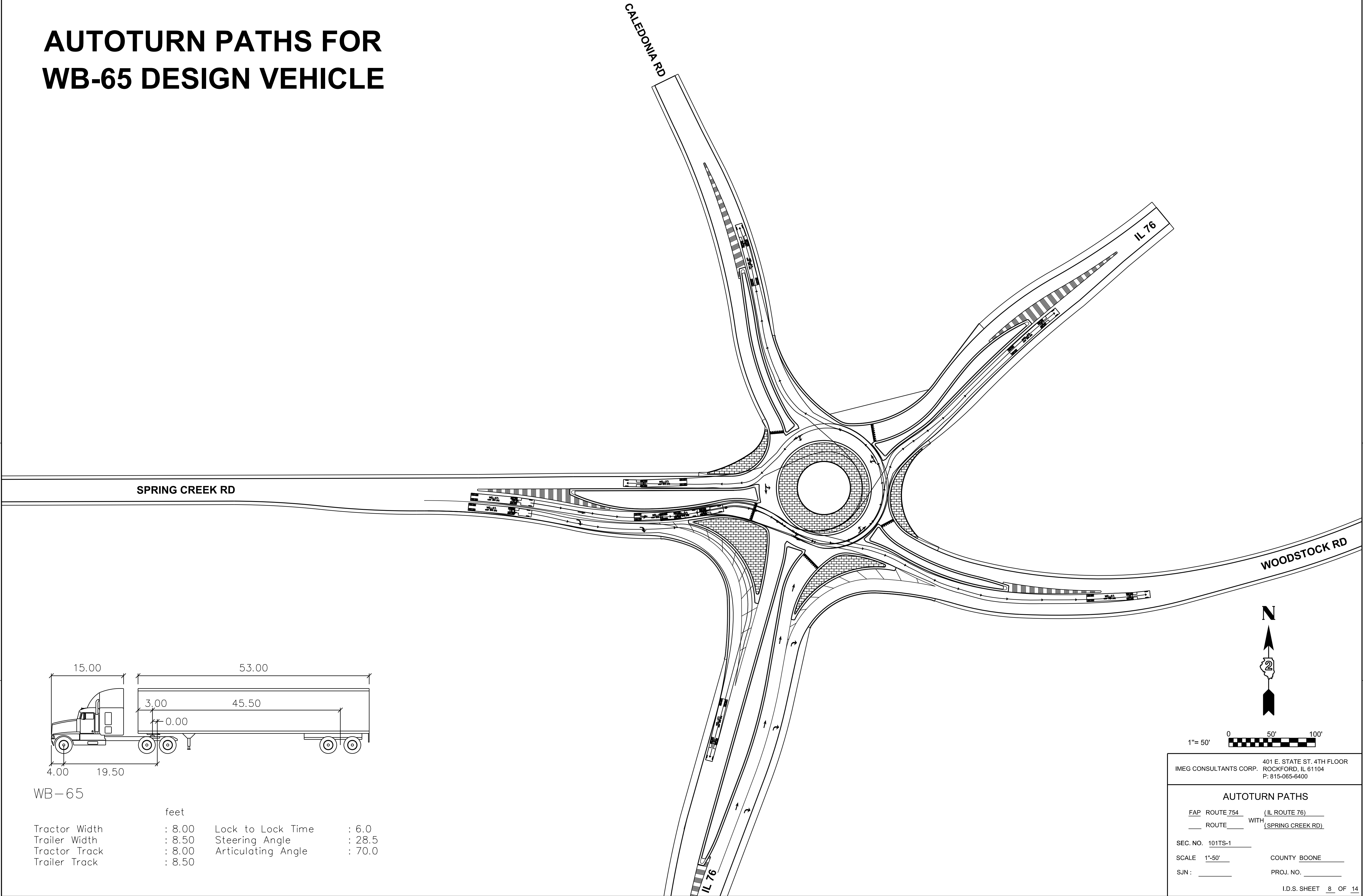
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILES			
IL ROUTE 76 W/ SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD			
SCALE: 1"=50'	SHEET 7	OF 14 SHEETS	STA. 470+00.00 TO STA. 485+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
754	101TS-1	BOONE		
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

AUTOTURN PATHS FOR WB-65 DESIGN VEHICLE

PLOT DATE = 8/20/2025
FILE NAME = W:\24\03397\00\BooneCo_TownHallRoad\CADD Data\Geometry\9209124\DSOPk 8-12r14.dgn
PLOT SCALE = 50.000 / ft.
USER NAME = Pat.J.Prauser



WB-65

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.5
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



1"= 50' 0 50' 100'

401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
P: 815-065-6400

AUTOTURN PATHS
FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH (SPRING CREEK RD)

SEC. NO. 101TS-1

SCALE 1"-50' COUNTY BOONE

SJN : PROJ. NO.

I.D.S. SHEET 8 OF 14

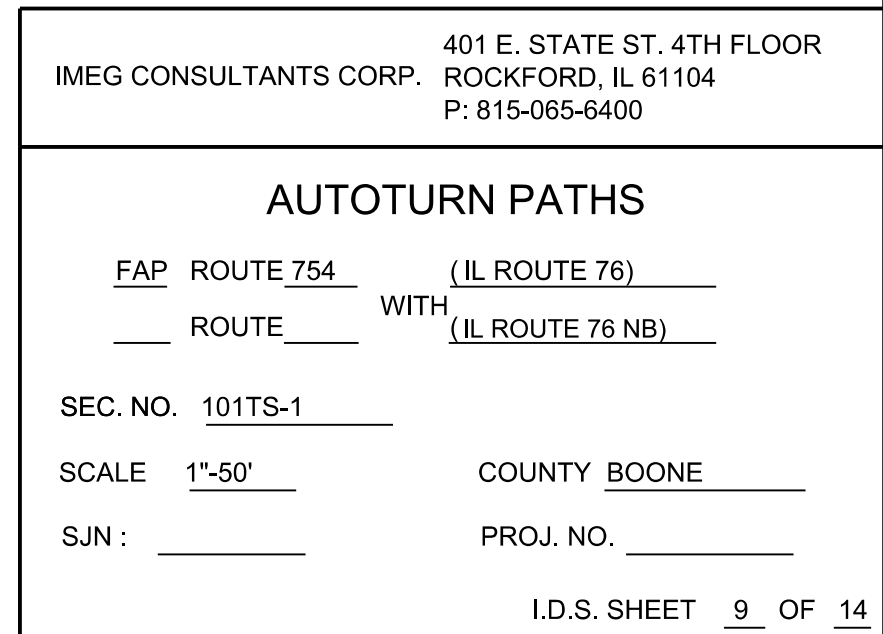
Long Section Number
Multiple County Names

BDE-9908

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PLOT SCALE     = 50,000' / in.
USER NAME      = Pat. J. Prauser

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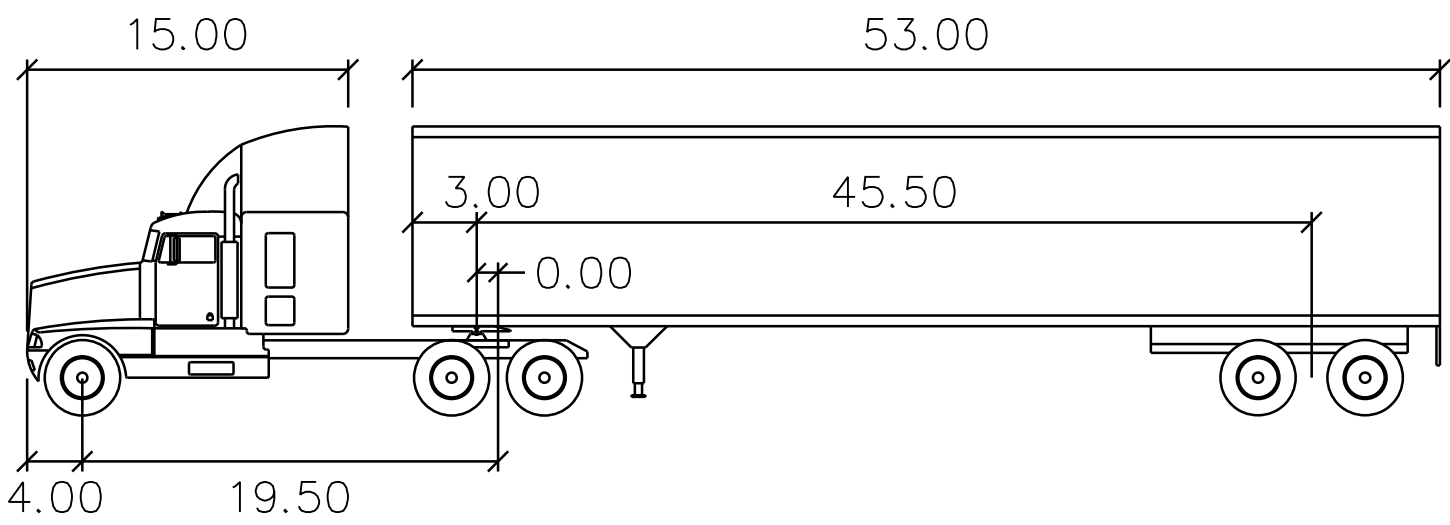
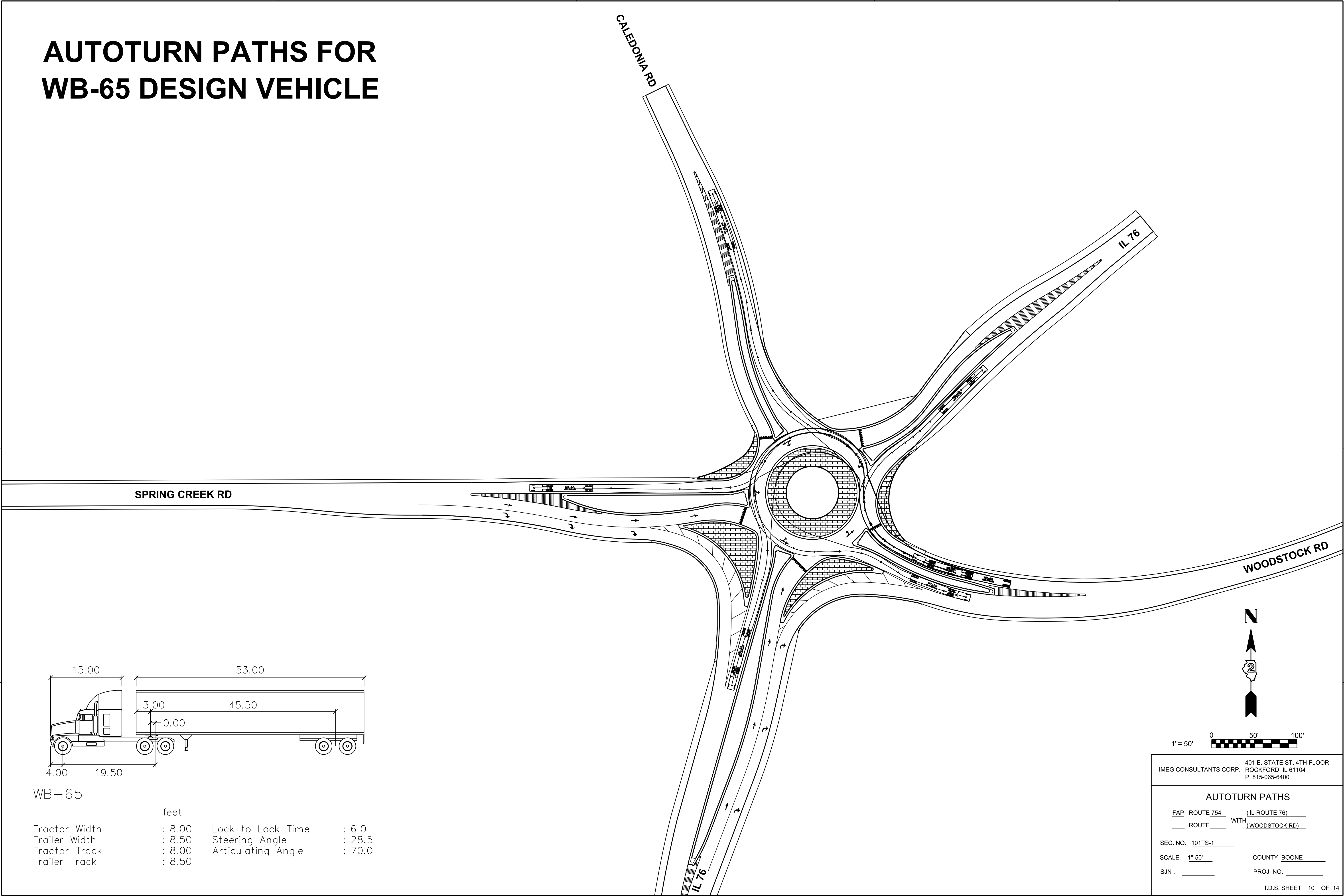


WB-65

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.5
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

AUTOTURN PATHS FOR WB-65 DESIGN VEHICLE

PLOT DATE = 8/20/2025
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PLOT SCALE = 50,000 / in.
USER NAME = Pat.J.Prauser



WB-65

feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.5
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
P: 815-065-6400

AUTOTURN PATHS

FAP ROUTE 754 (IL ROUTE 76)

ROUTE WITH (WOODSTOCK RD)

SEC. NO. 101TS-1

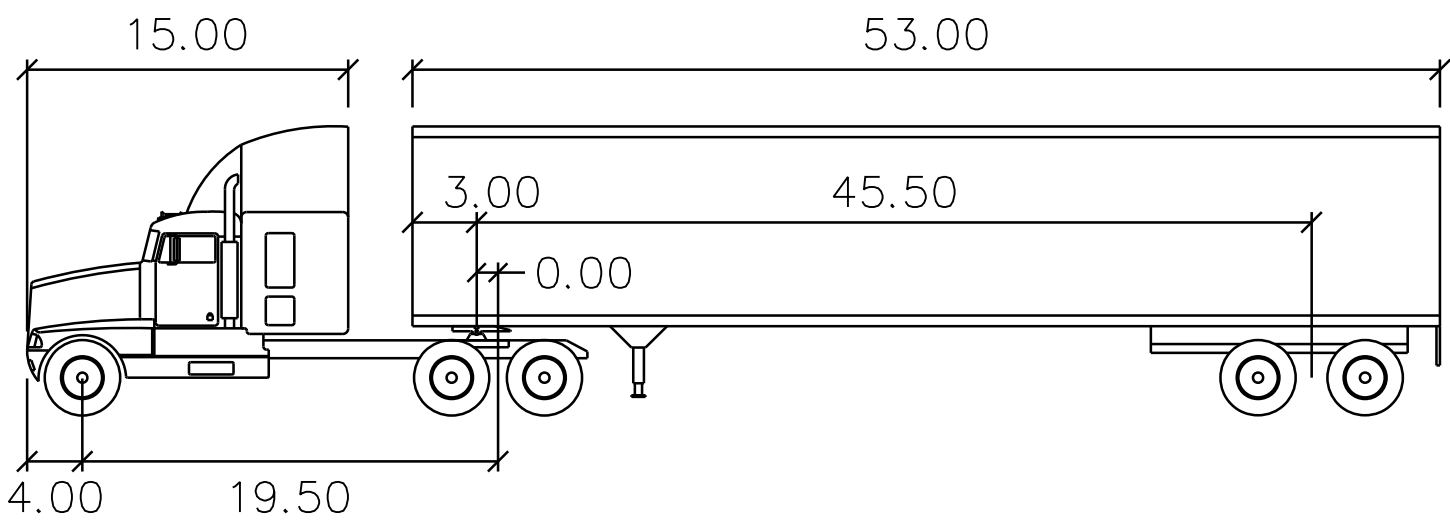
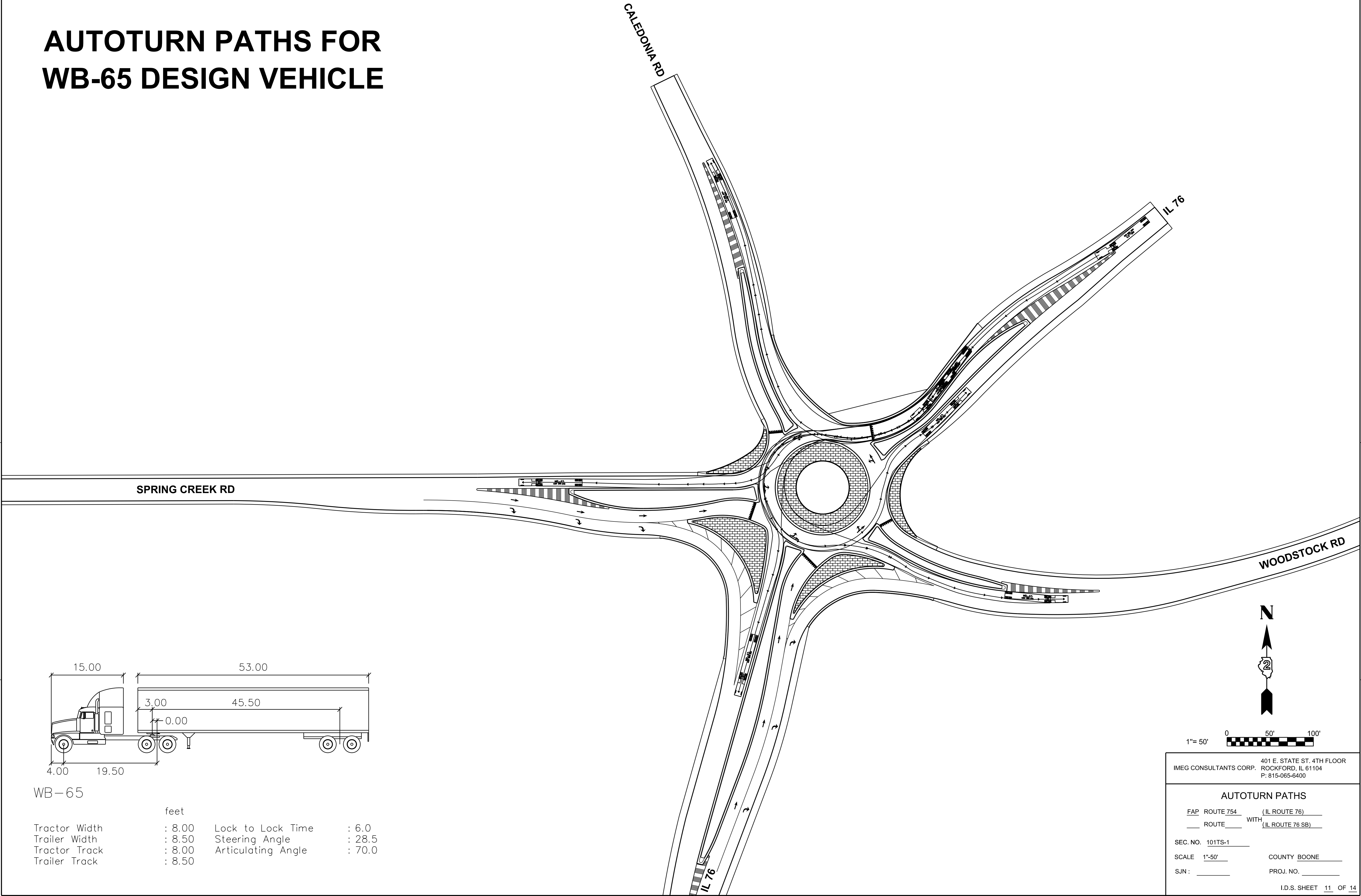
SCALE 1"-50' COUNTY BOONE

SJN : PROJ. NO.

I.D.S. SHEET 10 OF 14

AUTOTURN PATHS FOR WB-65 DESIGN VEHICLE

PLOT DATE = 8/20/2025
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PLOT SCALE = 50.000 / ft.
USER NAME = Pat.J.Prauser



WB-65

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.5
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
P: 815-065-6400

AUTOTURN PATHS

FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH (IL ROUTE 76 SB)

SEC. NO. 101TS-1

SCALE 1"-50' COUNTY BOONE

SJN : PROJ. NO.

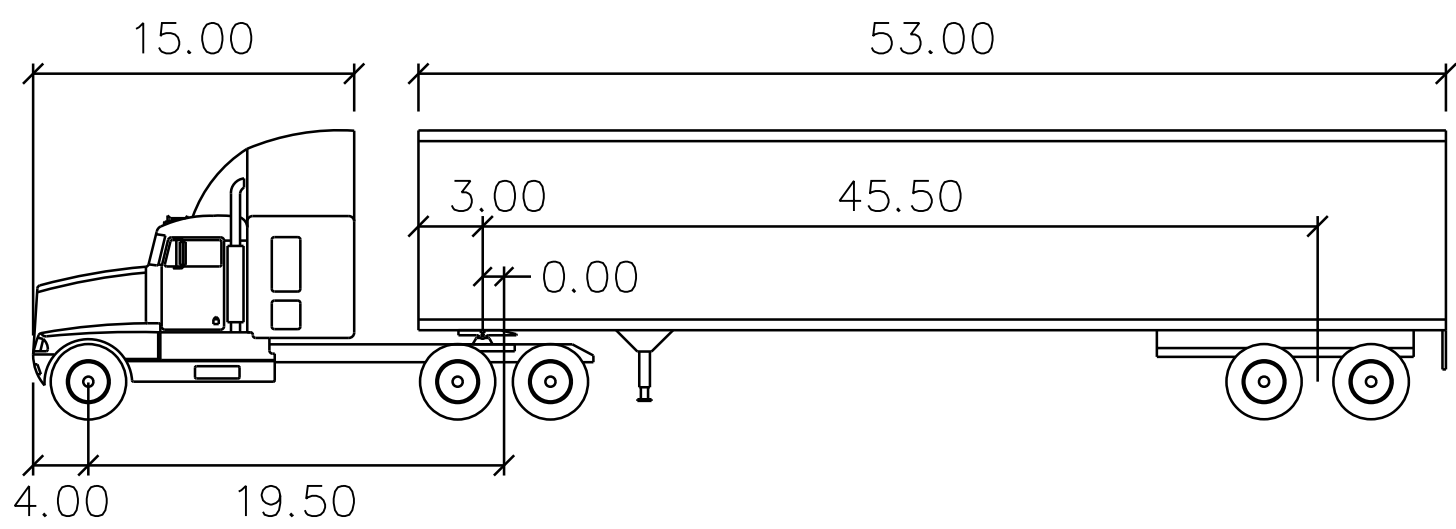
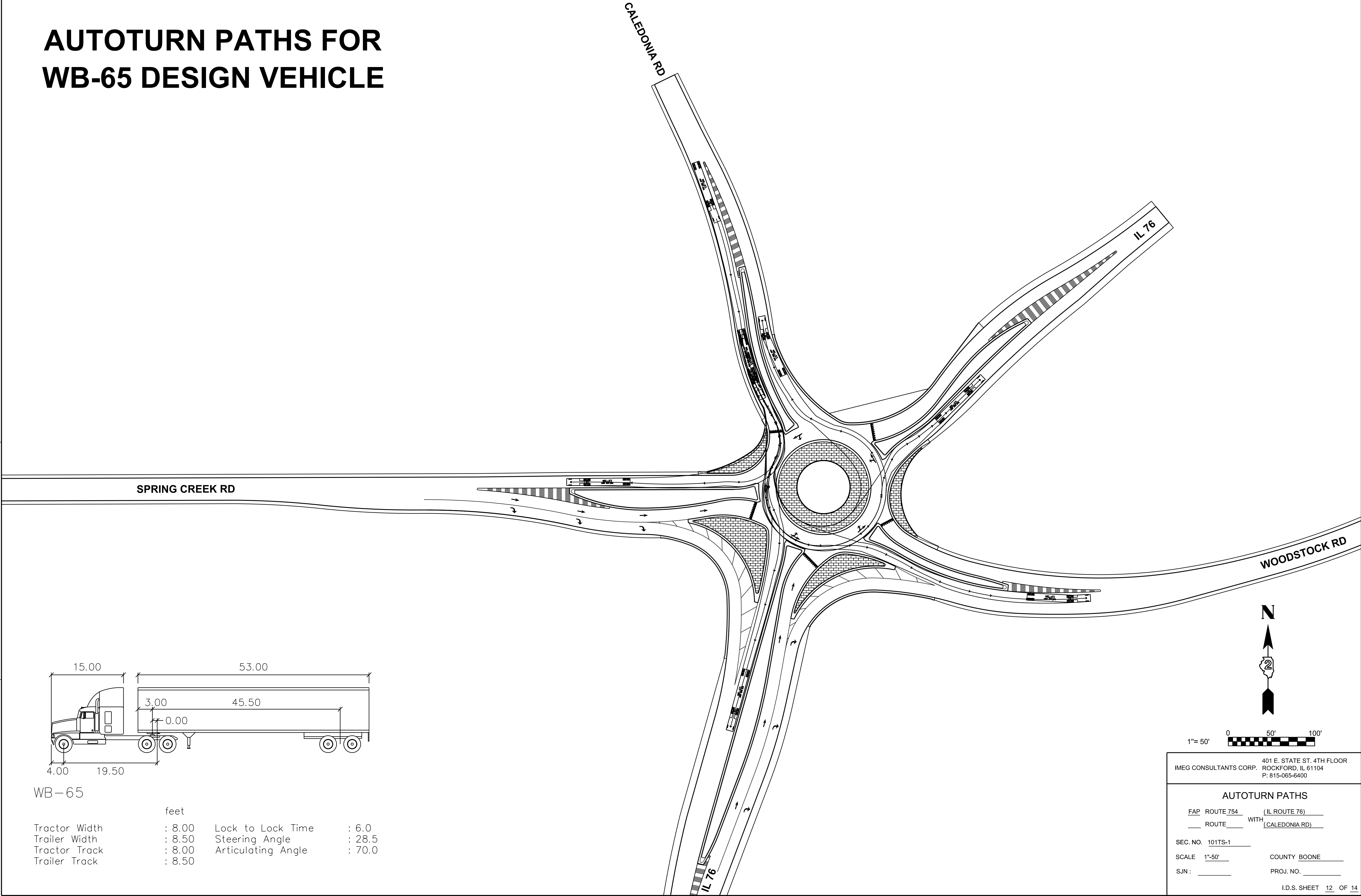
I.D.S. SHEET 11 OF 14

Long Section Number
Multiple County Names

BDE-9908

AUTOTURN PATHS FOR WB-65 DESIGN VEHICLE

PLOT DATE = 8/20/2025
FILE NAME = W:\2403397_00\BooneCo_TownHallRoad\CADD Data\Geometry\9209124-UDS\014 8-12\14.dgn
PLOT SCALE = 50.000 / ft.
USER NAME = Paul.Prauser



WB-65

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.5
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

1"= 50'

401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
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AUTOTURN PATHS

FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH (CALEDONIA RD)

SEC. NO. 101TS-1

SCALE 1"-50' COUNTY BOONE

SJN : PROJ. NO.

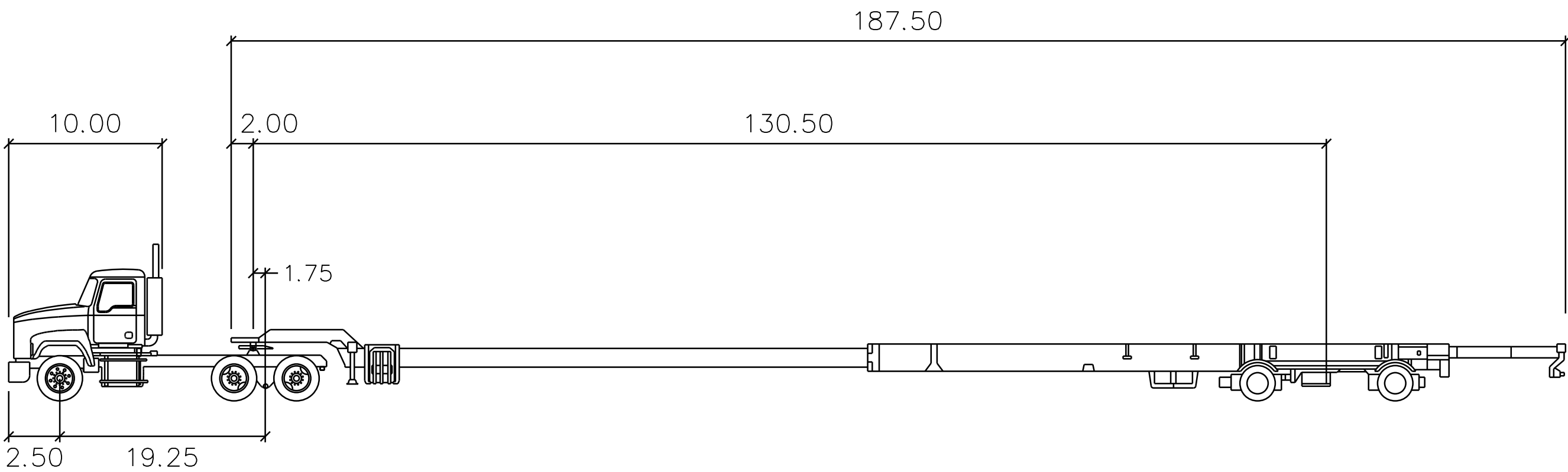
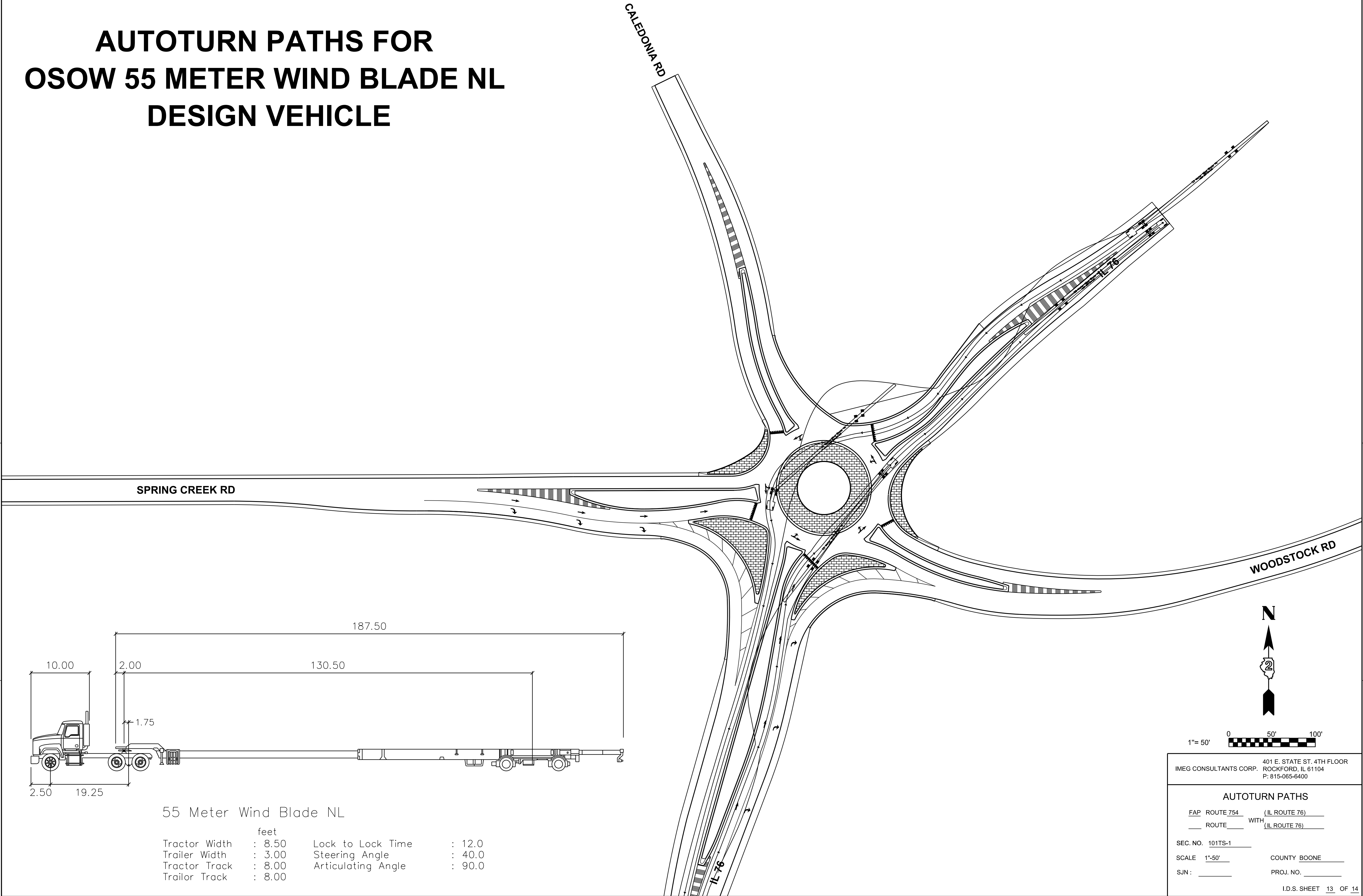
I.D.S. SHEET 12 OF 14

Long Section Number
Multiple County Names

BDE-9908

AUTOTURN PATHS FOR
OSOW 55 METER WIND BLADE NL
DESIGN VEHICLE

PLOT DATE = 6/20/2025
FILE NAME = W:\2403397\00\BooneCo_TownHallRoad\CAOD Data\Geometry\9209124\DSOp4 13of14.dgn
PLOT SCALE = 50.000 / ft.
USER NAME = Pat.J.Prauser



55 Meter Wind Blade NL

Tractor Width	: 8.50	Lock to Lock Time	: 12.0
Trailer Width	: 3.00	Steering Angle	: 40.0
Tractor Track	: 8.00	Articulating Angle	: 90.0
Trailer Track	: 8.00		

1"= 50'

0 50' 100'

401 E. STATE ST. 4TH FLOOR
ROCKFORD, IL 61104
P: 815-065-6400

AUTOTURN PATHS

FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH (IL ROUTE 76)

SEC. NO. 101TS-1

SCALE 1"-50' COUNTY BOONE

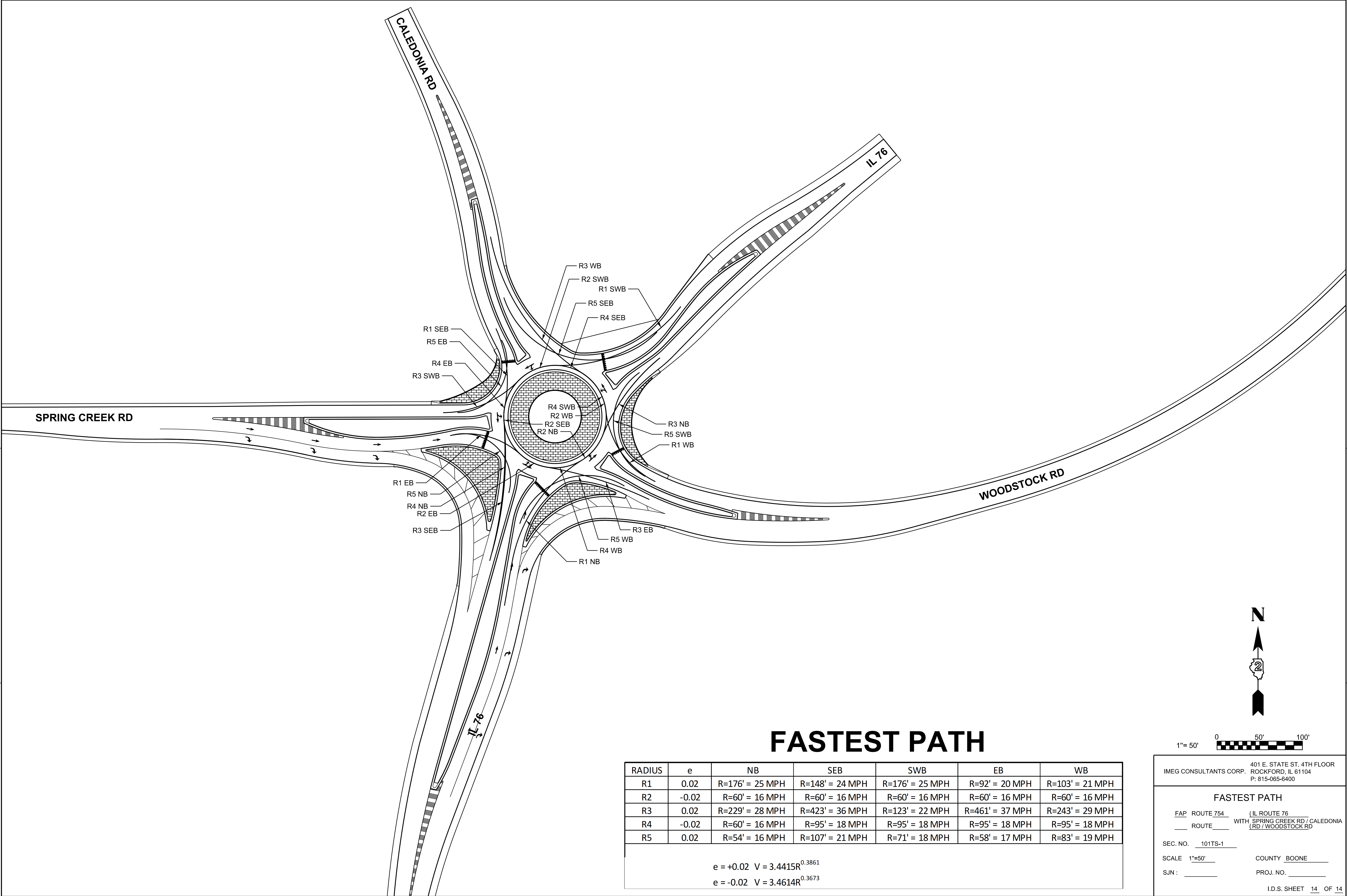
SJN : PROJ. NO.

I.D.S. SHEET 13 OF 14

Long Section Number
Multiple County Names

BDE-9908

PLOT DATE = 6/20/2025
FILE NAME = W:\24\03397\00\BooneCo_TownHallRoad\CAOD Data\Geometry\9209124\USOpk4 14r14.dgn
PLOT SCALE = 50,000 / in.
USER NAME = Pat.J.Prauser



1"= 50' 0 50' 100'

401 E. STATE ST. 4TH FLOOR
IMEG CONSULTANTS CORP. ROCKFORD, IL 61104
P: 815-065-6400

FASTEST PATH
FAP ROUTE 754 (IL ROUTE 76)
ROUTE WITH SPRING CREEK RD / CALEDONIA RD / WOODSTOCK RD

SEC. NO. 101TS-1

SCALE 1"=50' COUNTY BOONE

SJN : PROJ. NO.

I.D.S. SHEET 14 OF 14