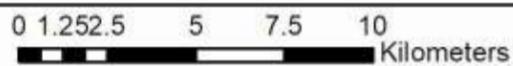
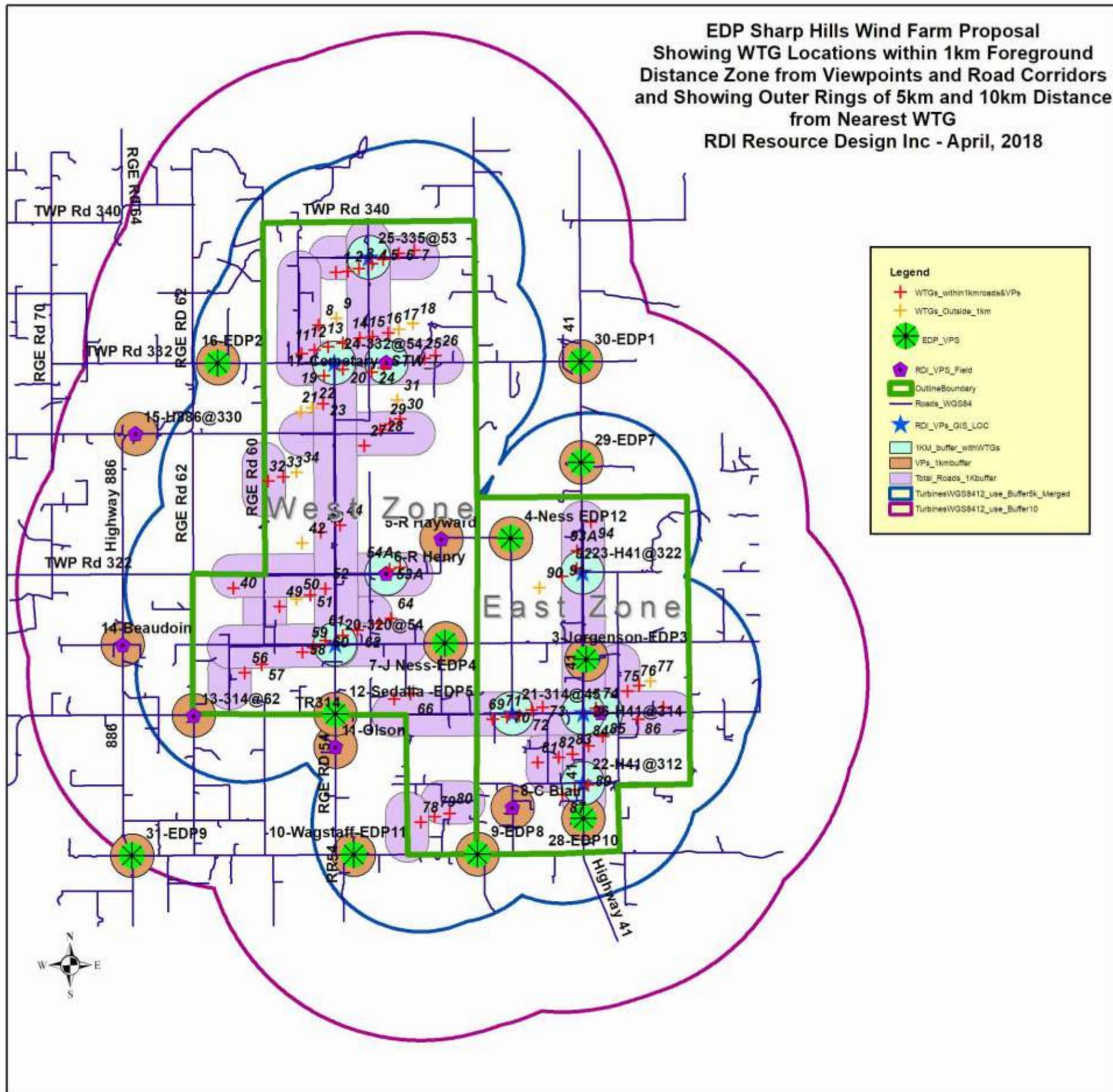


**EDP Sharp Hills Wind Farm Proposal  
Showing WTG Locations within 1km Foreground  
Distance Zone from Viewpoints and Road Corridors  
and Showing Outer Rings of 5km and 10km Distance  
from Nearest WTG  
RDI Resource Design Inc - April, 2018**



**EDP Renewables  
Sharp Hills Wind Farm Proposal  
Visual Effects Assessment  
Photography and Visual Simulations  
Report A  
RDI Resource Design Inc, April 2018**

A field observation and photography exercise was conducted by Ken Fairhurst and Brydon Coby of RDI on November 14, 2017. The tour was guided by Sheldon and Kelly Kroker. The Krokers located 7 of the EDP viewpoints for RDI, and RDI located the remaining 4 EDP viewpoints on the map during the mapping exercise. The EDP viewpoints are termed Visual Representation Locations by EDP. All are shown as large green icons on the map. The Krokers also located an additional 9 viewpoints that they considered to be representative of the viewing opportunities towards the proposed wind turbine generators (WTG's). These have purple icons on the map. Upon analysis using ArcGIS 10.1, RDI added a further 7 viewpoints. These are depicted as blue stars on the map.

The map indicates 1km circular buffers around each viewpoint which depicts the Foreground Distance Zone - the zone considered to have the greatest visual vulnerability in many visual landscape guidelines. The buffer of the viewpoints with one or more WTG's within the buffer are shown as light blue on the map.

RDI also identified 1km Foreground Distance Zones along community roads containing one or more WTG's along the local travel routes. These are road buffers are identified in purple on the map. The viewpoints and road proximities to the WTG's are summarized in the table on Page 2 of this report, and are summarized and discussed in the overview report. The photography and simulations reports are provided separately as Part A and Part B. The viewpoints covered in each report are shown in the table on Page 2.

The photos taken were overlapping individual 35mm to 42 mm shots using a Nikon D5300 camera with a Nikon 18mm to 105mm lens, set primarily between 38mm and 42mm. The Nikon digital camera frame equates to a standard 35mm camera with a correction factor of 1.5 to become 52mm to 63mm with field of view of 38 to 42 degrees. The individual frames were stitched into full 360 degree panoramas, and then split along the principal roadway in each panorama to provide orientation with cardinal directions (i.e., North / South or East / West). RDI utilized Visual Nature Studio 3-dimensional software to produce 40 degree single images stitched automatically by the VNS software into 360 degree simulations from each of the viewpoints. RDI then split the full panoramas into 180 degree half-panoramas along the same roads as the photography for ease of comparison and validation.

The simulations placed a 3-dimensional model of the Vestas V136 to scale at each EDP WTG point. The Vestas model was shown as having a vertical blade reaching 200m in height, correctly located for distance and terrain. The absence of vegetation cover information was overcome somewhat by the addition of 15m height tree patches to compare with the scale of the WTG's. Camera direction is provided across the bottom of each simulation. Measurement bars indicate 0 to 180 degrees, and also a 40 degree bar and framing box (standard 35mm camera frame width).

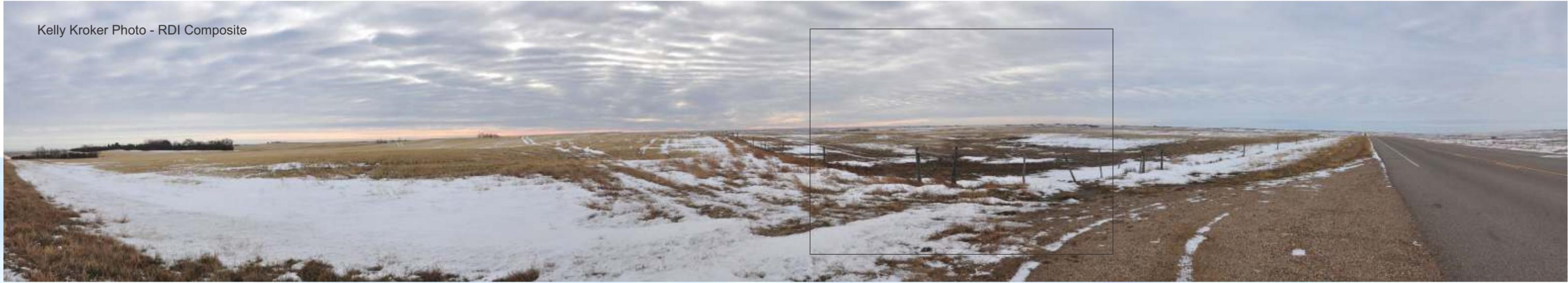
The wide panoramas tend to diminish the scale of the WTG's. Zooming in to a 40 degree width of view emulates normal viewing. Each single frame located on the panoramas was presented on the following full page in the images reports. Viewing distance from a single frame printed image should be 1.5 times the diagonal length of the image (e.g. 11"x8.5" print = 21 inch viewing distance).

RDI also prepared day and night photo-montages using windPRO 3.1 from Viewpoint 3 - EDP3 - Jorgenson's Bins. These are provided as inserts on Page 8. The night view shows the aviation lights. The same software was also used to produce day and night animations with revolving rotors. The animations require a separate viewer and could not be included in this document.

**Visual Effects Assessment - EDP Renewables' Sharp Hills Wind Farm Proposal - Viewpoints as presented in Documents A and B**

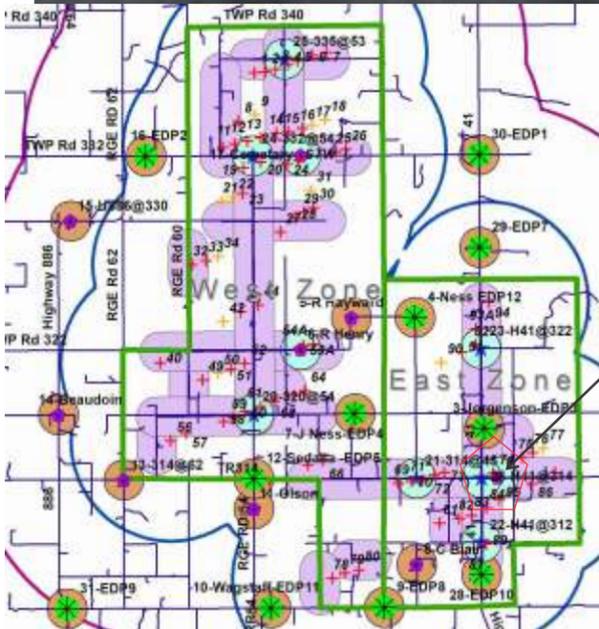
Report Page #	RDI Viewpoint Number	Viewpoint Name	Viewpoint Location	Viewpoint Photo Record	Distance to Closest WTG (m)	Closest WTG #	Foreground WTG's in 1.0 KM Buffer	Foreground WTG's within 1.5KM Buffer	
<b>Part A - Separate Document</b>									
3 to 6	2	2-GPS829	GPS829-TR314-Eastof Hwy41	South / North split - Kelly Kroker Photos	315	74	1	3	
7 to 10	3	3-GPS830-Jorgenson's Bins-EDP3	Hwy 41 near TR 320	N-0831-0824 (11 images); S-0803-0813 (11 images)	2500	75	0	0	
11 to 14	4	4-GPS831-Ness EDP12	EDP12-TR323@RR45	W 0835-0842 (8 images); E-0825-0835-(11 images)	2660	90	0	0	
15 to 18	5	5-GPS832-Randy Hayward	TR323@RR51	5E-843-847; 5W-849-859 OK	2330	54A	0	0	
19 to 22	6	6-GPS833-Ralph Henry	TR322, 1227m East of RR53	6S-860-871, 6N-871-879 OK	230	53A	2	2	
23 to 26	7	7-GPS834-Jim Ness-EDP4	TR320 east of RR50	7N-images 881-891; 7S- images 892-899	2750	64	0	0	
27 to 30	8	8-GPS835-Cory Blair	RR45	8W-900-912; 8E-images 911-921	2360	81, 87	0	0	
31 to 33	9	9-GPS836-EDP8	TR310@RR50; EDP8	9N-images 932-940; 9S-images 922-932	2270	80	0	0	
34 to 36	10	10-GPS837-Wagstaff-EDP11	TR310 @ 736m East of RR54; EDP11	10N - 947-954; 10S - 941-947	3440	78	0	0	
37 to 40	11	11-GPS838-Gene Olson	RR54 @ 2400m South of TR314	11W - 955-963; 11E 963-972	3580	78	0	0	
<b>Part B - Separate Document</b>									
3 to 6	12	12-GPS839-Sedalia Townsite-EDP5	TR 314 @ RR 54	12S-973-984 - 12 images; 12N-983-994-12 images		65	0	0	
7 to 8	13	13-GPS 840	GPS 840-314@62	13N-0995-0006 (11 images); no south view photos		56	0	0	
9 to 10	14	14-GPS841-Kent&Dawne Beaudoin	TWP RD320-4/RGE HWY 886	14E - 0007-0015 (9 images); no west view photos		40, 56	0	0	
11 to 14	15	15-GPS845	Hwy 886 @ TR 330	N-0025-0035 (11 images); S-0016-0024 (9 images)		32	0	0	
15 to 18	16	16-GPS844-EDP2	EDP2-TR332 east of RR62	N-0045-0053 (9 images); S-0036-0045 (10 images)		10	0	0	
19 to 20	17	17-GPS846-Cemetery	TR332 East of RR53	North 0054-0063 (10 images); no South photos		STW_1	2	4	
21 to 22	20	20-320@54	320@54	No RDI photos		60	3	5	
23 to 24	21	21-314@45	314@45	No RDI photos		70	4	5	
25 to 26	22	22-H41@312	H41@312	No RDI photos		89	2	3	
27	23	23-H41@322	H41@322	No RDI photos		92	2	3	
28 to 29	24	24-332@54	332@54	No RDI photos		20	4	6	
30 to 31	25	25-335@53	335@53	No RDI photos		4	3	5	
32 to 33	26	26-H41@314	H41@314	No RDI photos		74	1	3	
34 to 35	28	28-EDP10-H41	EDP10-H41	No RDI photos		88	0	3	
36 to 37	29	29-EDP7 -HWY41	EDP7 -HWY41	No RDI photos		94	0	0	
38 to 39	30	30-EDP1-Hwy41-TR332	EDP1-H41@332-no px	No RDI photos		26	0	0	
40 to 41	31	31-EDP9-HWY886-310	EDP9-HWY886@310	No RDI photos		56	0	0	
	27 total	Green background indicates field viewpoints with RDI photography; Beige background indicate viewpoints with no RDI photography.					WTG's*	24	42
							*VPs 2 and 26 - same WTG's		
		<b>EDP Viewpoints, by RDI # (11 total)</b>	3, 4, 7, 9, 10, 12, 16, 28, 29, 30, 31	<b>Average Distance (m)</b>	<b>2724</b>				
				Range: Low (m) - 28-EDP10	0				
				Range: High (m) - 31-EDP9	0				
		Number of EDP Viewpoints with Foreground WTGs	0						
		<b>Additional Kroker Fieldtrip Viewpoints, by RDI # (9 total)</b>	2, 5, 6, 8, 11, 13, 14, 15, 17	<b>Average Distance</b>	<b>1763</b>				
				Range: Low (m) - 6-Ralph Henry	230				
				Range: High (m) - 15-H886@TR330	6470				
		Number of Kroker Viewpoints with Foreground WTGs	3						
		<b>Additional RDI Selected Viewpoints, by RDI # (7 total)</b>	20, 21, 22, 23, 24, 25, 26,	<b>Average Distance</b>	<b>410</b>				
				Range: Low (m) - 22-H41@312	275				
				Range: High (m) - 26-H41@314	640				
		Number of RDI Viewpoints with Foreground WTGs	7						
		<b>Of the total of 27 viewpoints, 8 are less than 500m from the nearest WTG (no EDP VP's), 2 more are between 500m and 1 km, (no EDP VP's), 13 more are between 1 km and 5 km (7 EDP VP's) , and 4 viewpoints are between 5 km and 10 km from the nearest WTG (2 EDP VP's). EDP 9 is furthest at just under 10 km.</b>							

Kelly Kroker Photo - RDI Composite



2- TR 314 East of Highway 41 - South View

Closest WTG is 315m (#74) - North View



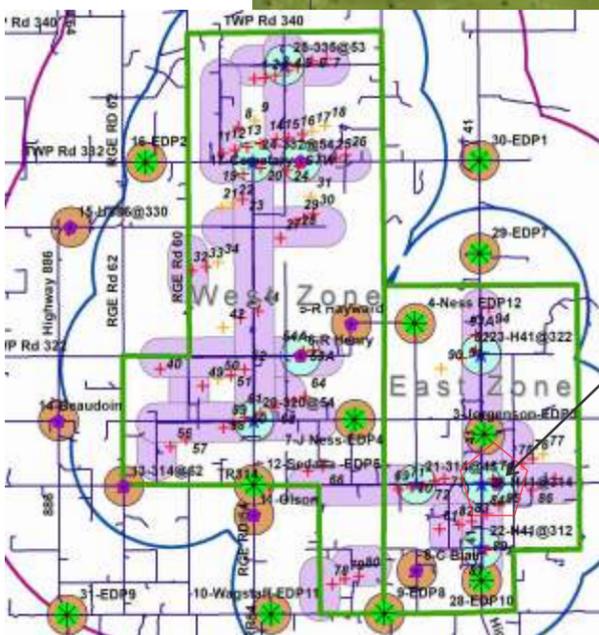
90° Single Frame 50mm lens = 40 deg. FOV  
180° Width of View

2- TR 314 East of Highway 41 - South View

Viewpoint

Closest WTG is 315m (#74) - North View

6 WTG's in View in Single Frame



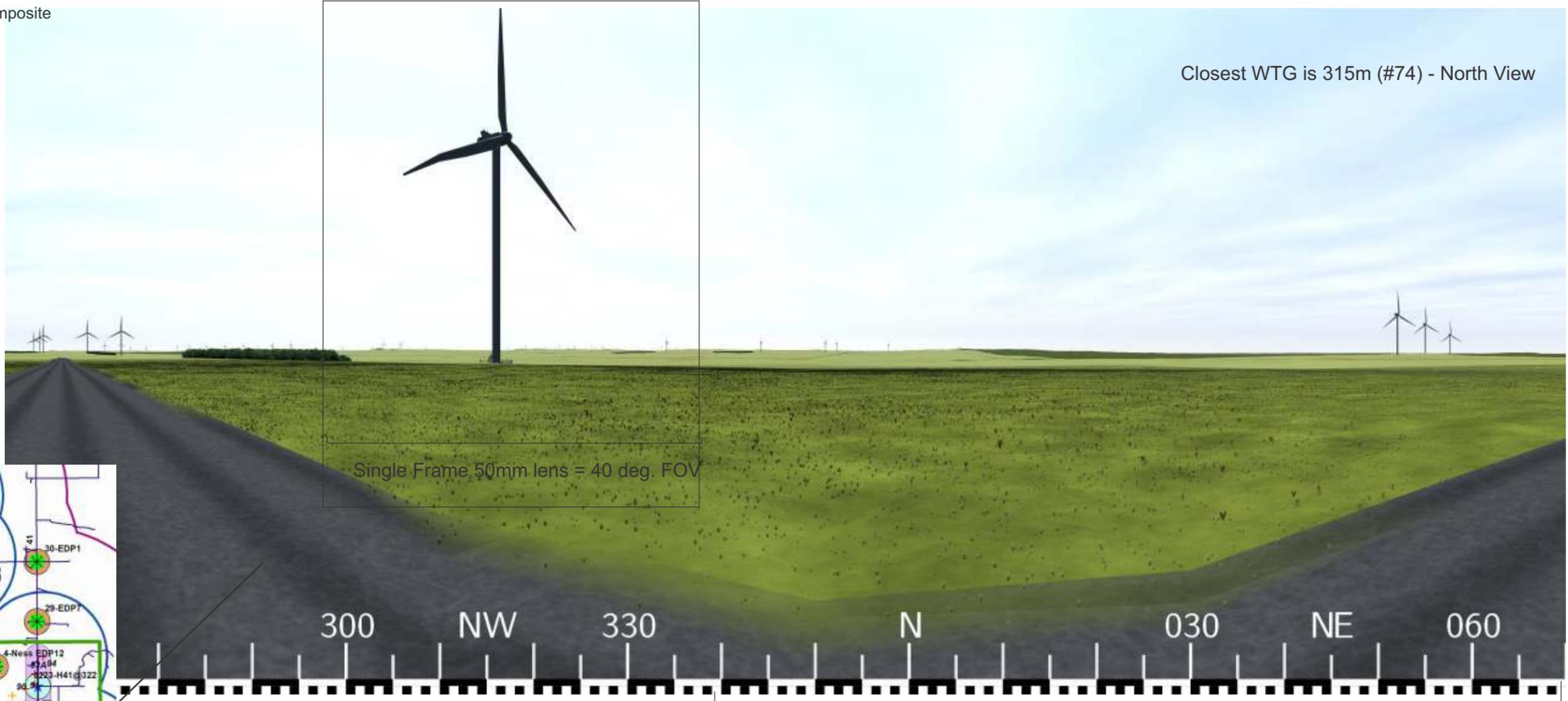
Single Frame 50mm lens = 40 deg. FOV

2- TR 314 East of Highway 41 - South-Southwest Single Frame View

Viewpoint



Kelly Kroker Photo - RDI Composite

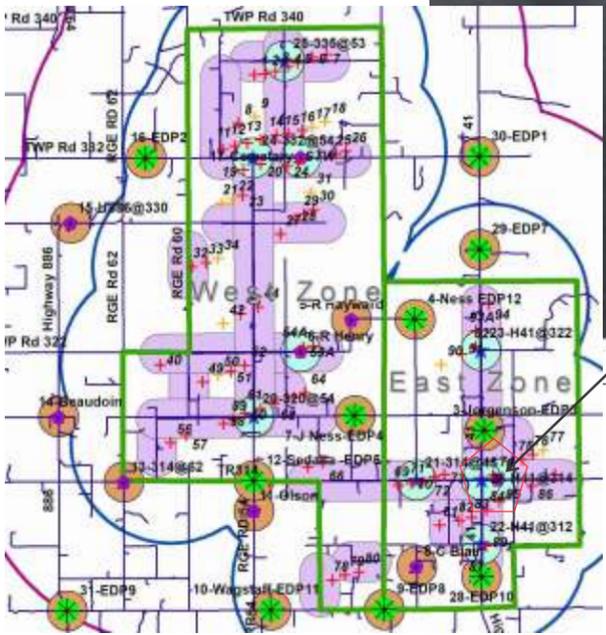


Closest WTG is 315m (#74) - North View

Single Frame 50mm lens = 40 deg. FOV

300 NW 330 N 030 NE 060

90°  
180° Width of View

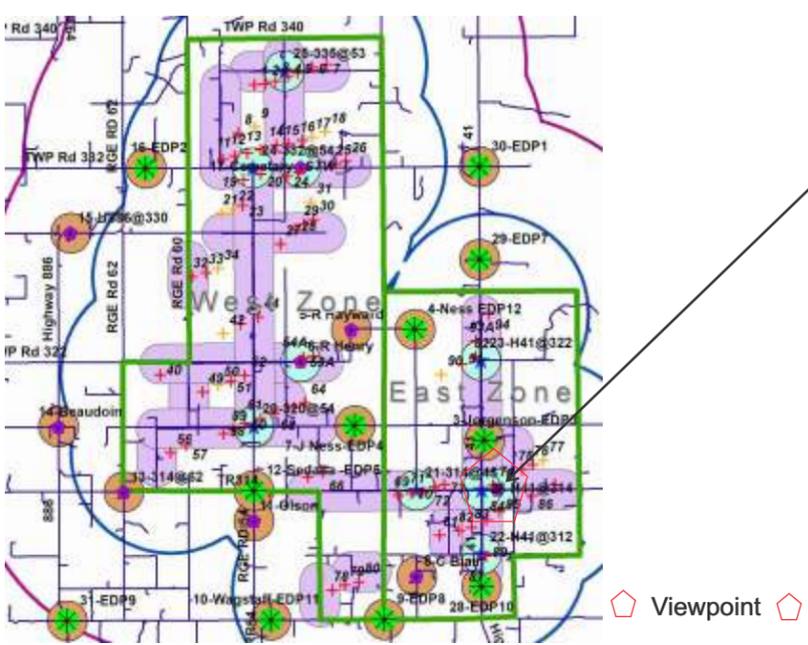


Viewpoint

2- TR 314 East of Highway 41 - North View

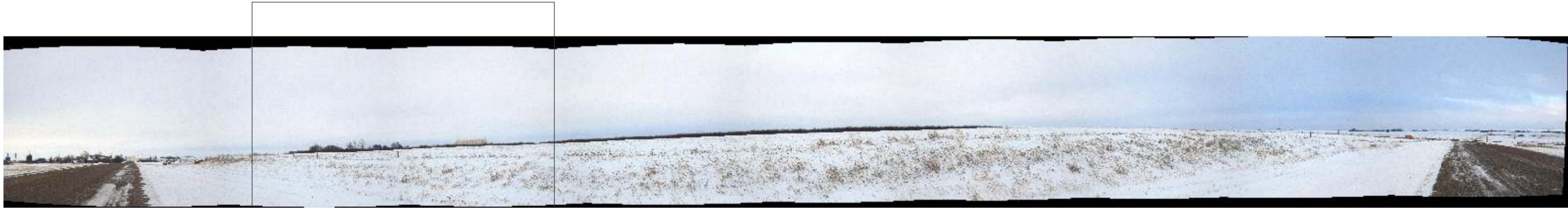
Closest WTG is 315m (#74) - North View

34+ WTG's in View in Single Frame



Single Frame 50mm lens = 40 deg. FOV

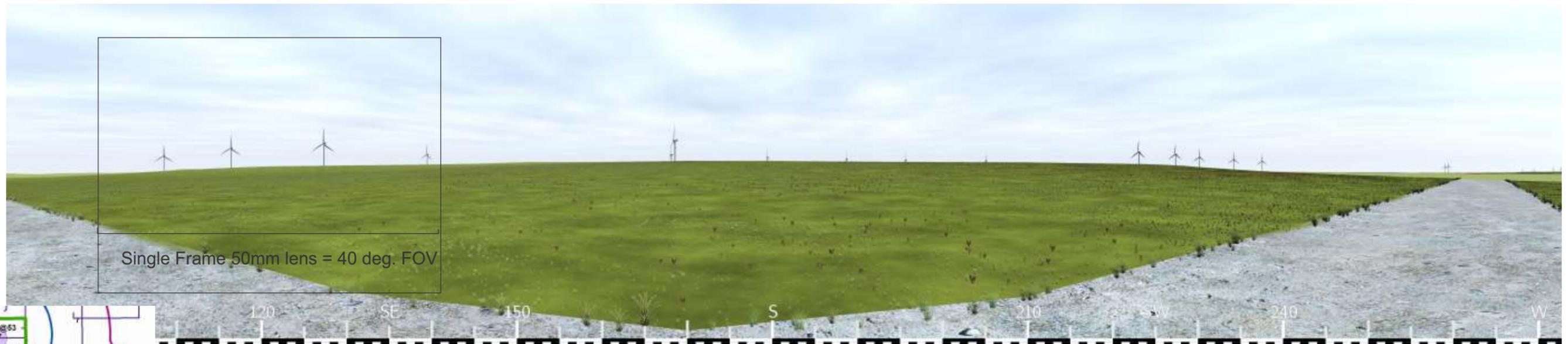
2- TR 314 East of Highway 41 - Northwest Single Frame View



RDI Photo Composite

3- Jorgenson's Bins - South View - images 0803-0813 (11 images)

Closest WTG is 2500m (#75)

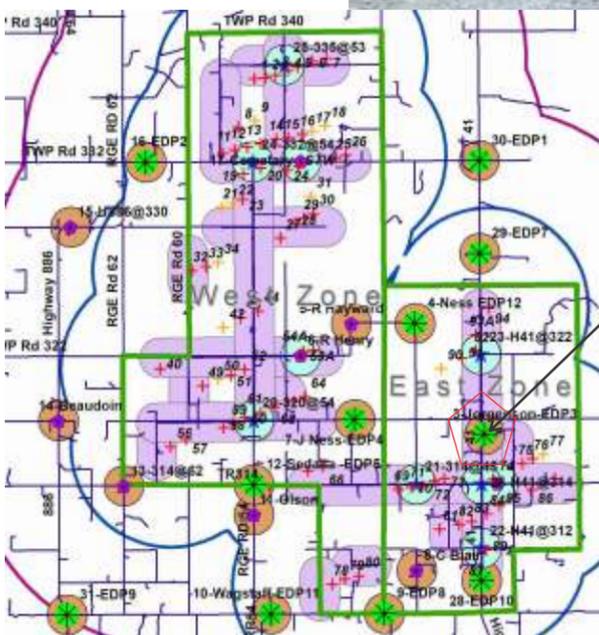


Single Frame 50mm lens = 40 deg. FOV

180° Width of View  
3- Jorgenson's Bins - South View

Also see the WindPro Day and Night Photomontages and Animations

3- Jorgenson's Bins - EDP3 - Highway 41



Viewpoint

Closest WTG is 2500m (#75)

4 WTG's in View in Single Frame

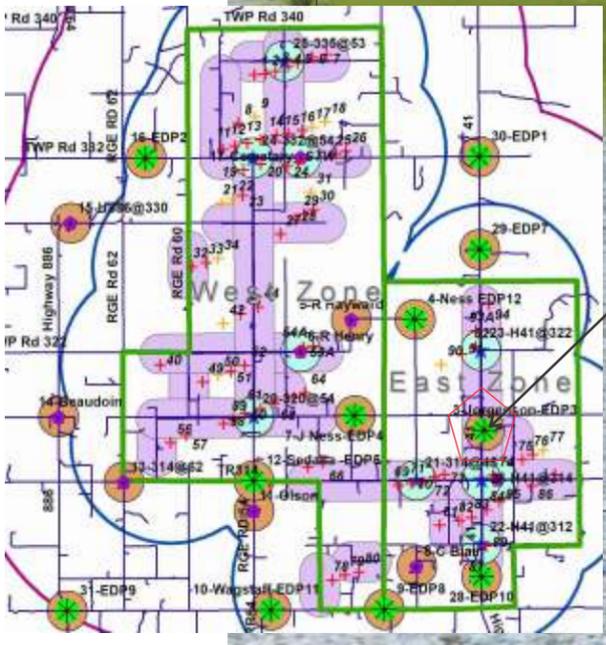
Single Frame 50mm lens = 40 deg. FOV



windPRO Photo-montage Day View



windPRO Photo-montage Night View with Aviation Lights on Turbines



3- Jorgenson's Bins - EDP3 - Highway 41 - Southeast Single Frame View

Viewpoint

120

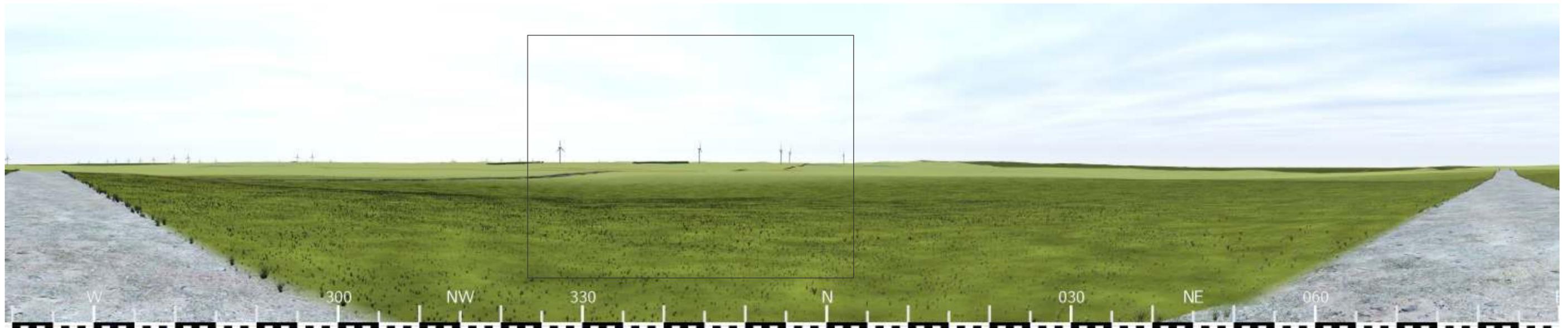
SE



RDI Photo Composite

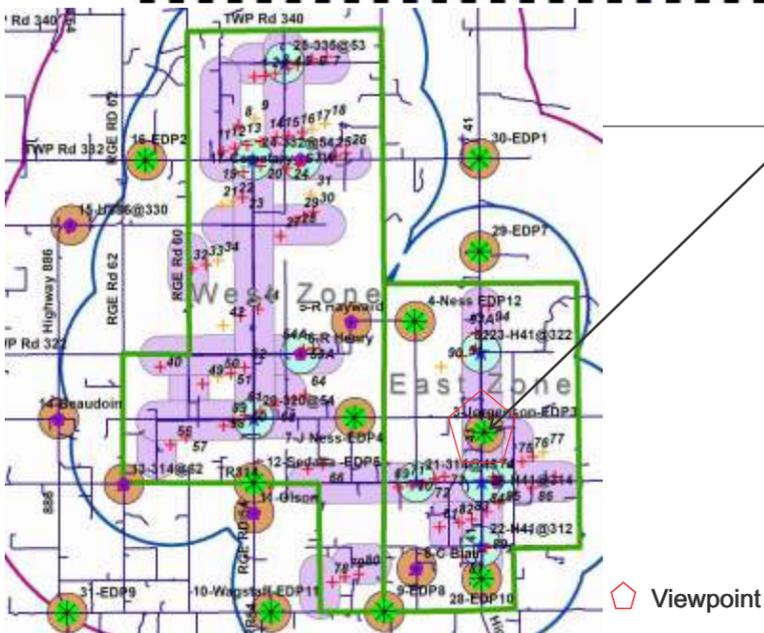
3- Jorgenson's Bins - North View - images 0831-0824 (11 images)

Closest WTG is 2500m (#75)



Single Frame 50mm lens = 40 deg. FOV

90°  
180° Width of View



3- Jorgenson's Bins - EDP3 - Highway 41

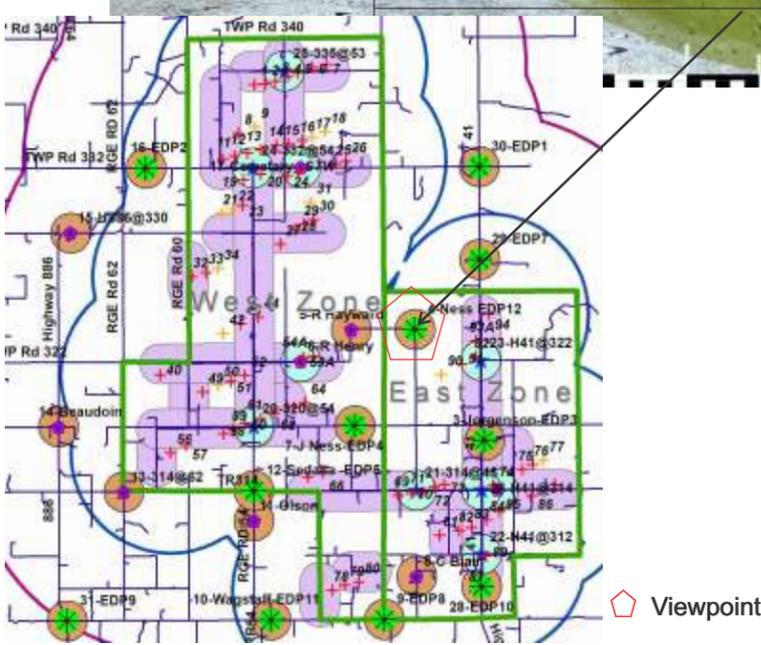
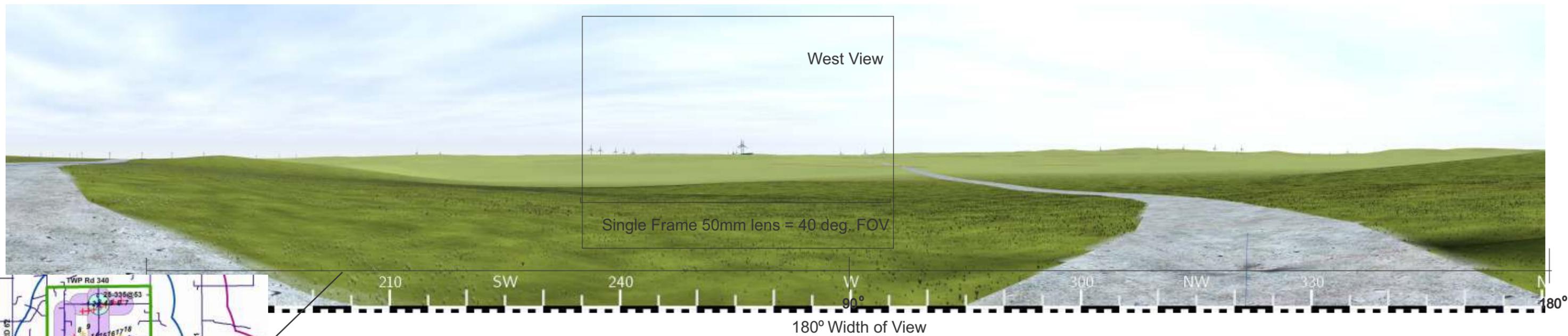




RDI Photo Composite

4- Larry Ness - West View - images 0835-0842 (8 images)

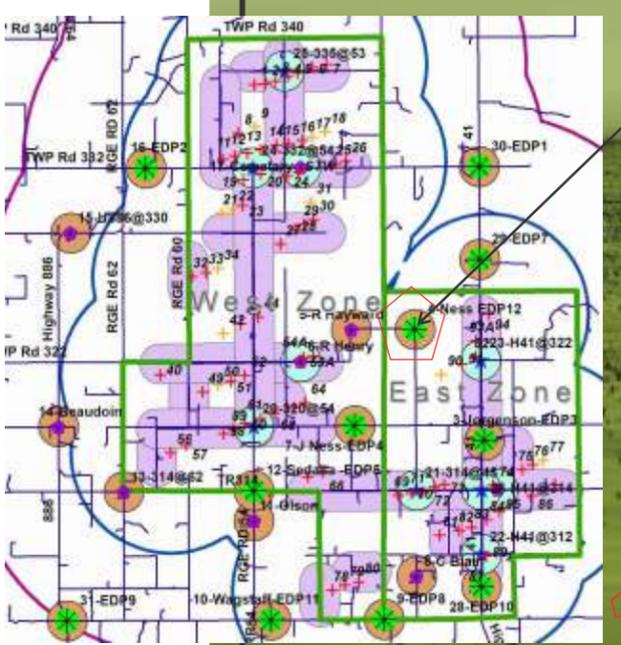
Closest WTG is 2660m (#90)



4 - Larry Ness - EDP 12 TR323@RR45

16+ WTG's in View in Single Frame

Closest WTG is 2660m (#90)



Single Frame 50mm lens = 40 deg. FOV

4 - Larry Ness - EDP 12 TR323@RR45 - Southwest-West Single Frame View

Viewpoint



RDI Photo Composite

4- Larry Ness - East View - images 0825-0835 (11 images)

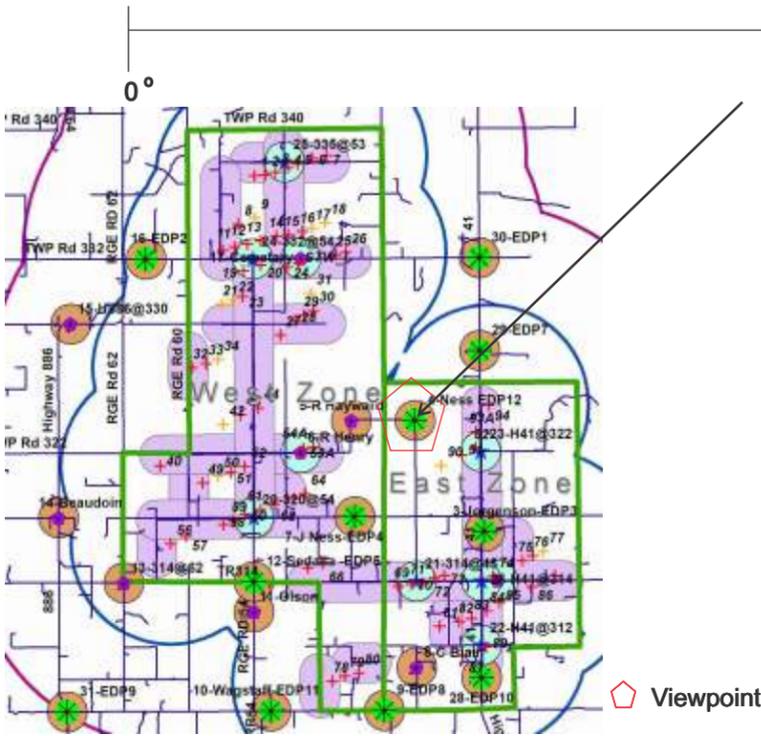


East View

Closest WTG is 2660m (#90)

Single Frame 50mm lens = 40 deg. FOV

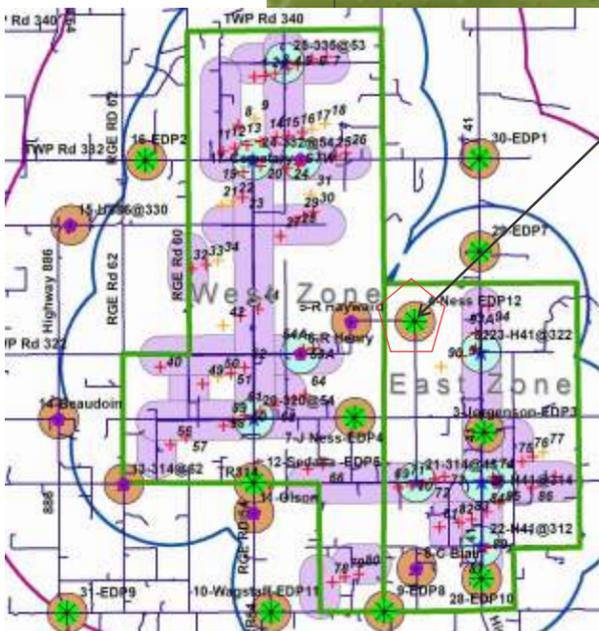
90°  
180° Width of View



4 - Larry Ness - EDP 12 TR323@RR45

3 WTG's in View in Single Frame

Closest WTG is 2660m (#90)



Single Frame 50mm lens = 40 deg. FOV

4 - Larry Ness - EDP 12 TR323@RR45 - Southeast Single Frame View

Viewpoint

120

SE

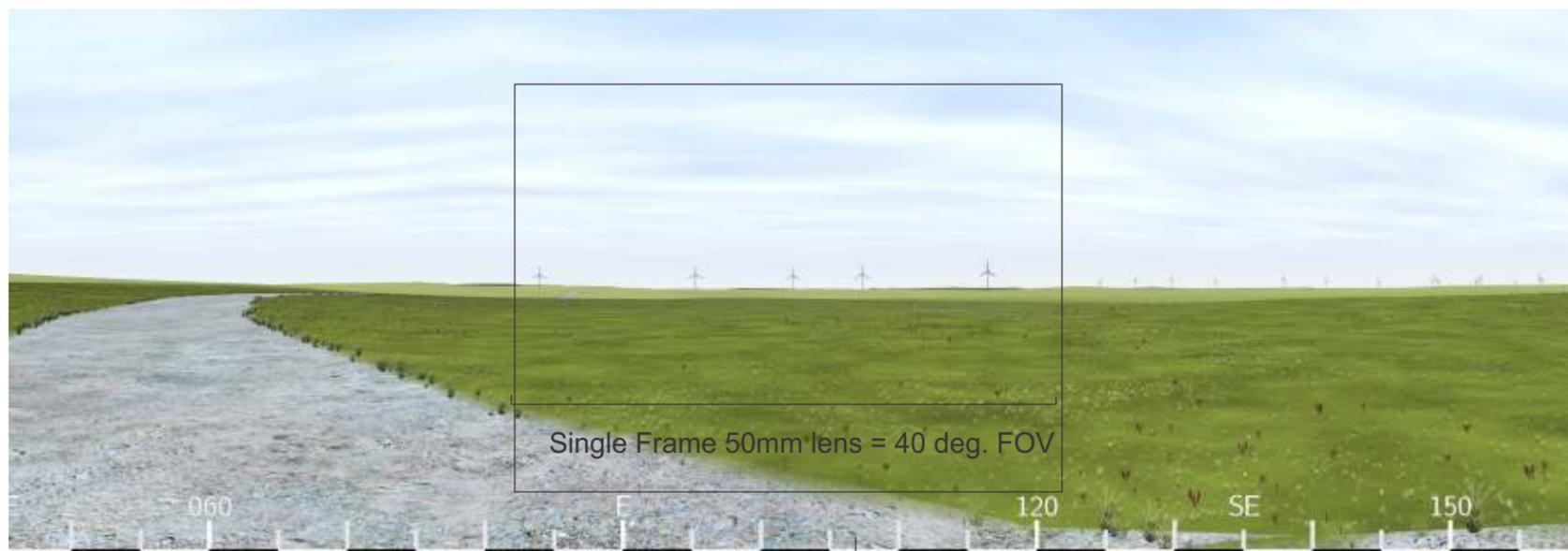
150



RDI Photo Composite

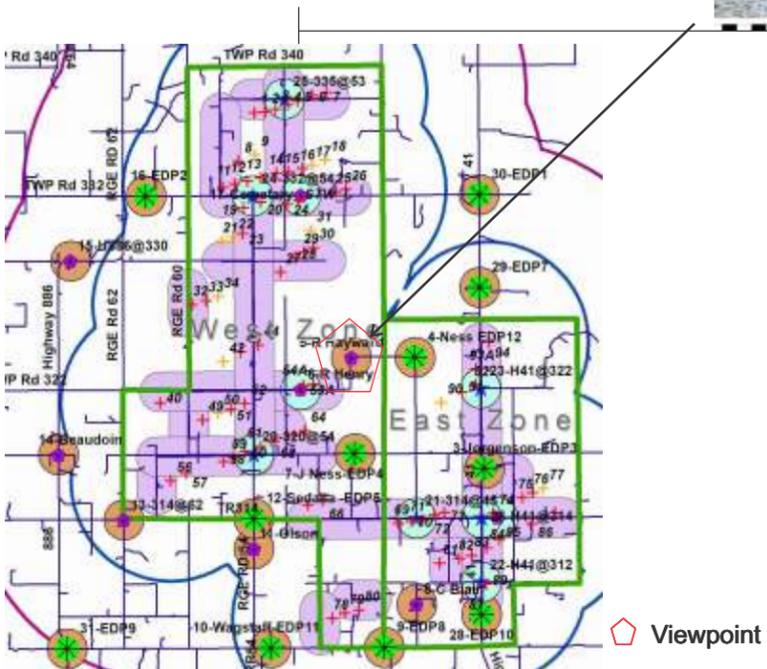
5 - Randy Hayward East - images 843-847

Closest WTG is 2330m (#34A) - West View



90°  
180° Width of View

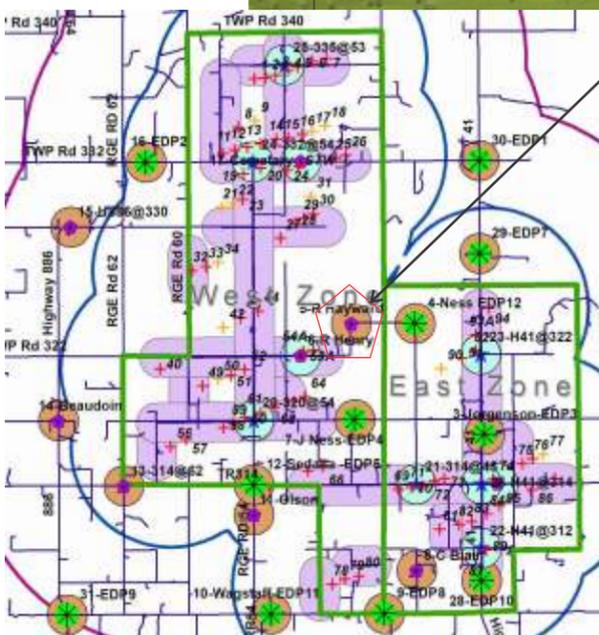
180°



5 - Randy Hayward - TR 323@RR51

5 WTG's in View in Single Frame

Closest WTG is 2330m (#34A) - West View



Single Frame 50mm lens = 40 deg. FOV

5 - Randy Hayward - TR 323@RR51 - East View Single Frame

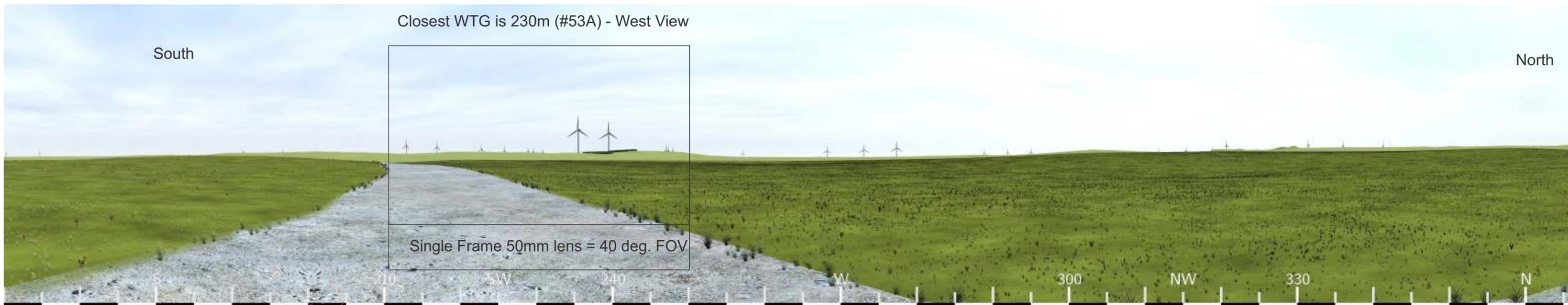
120



RDI Photo Composite

5 - Randy Hayward West images 849-859

Closest WTG is 2330m (#34A) - West View



Closest WTG is 230m (#53A) - West View

South

North

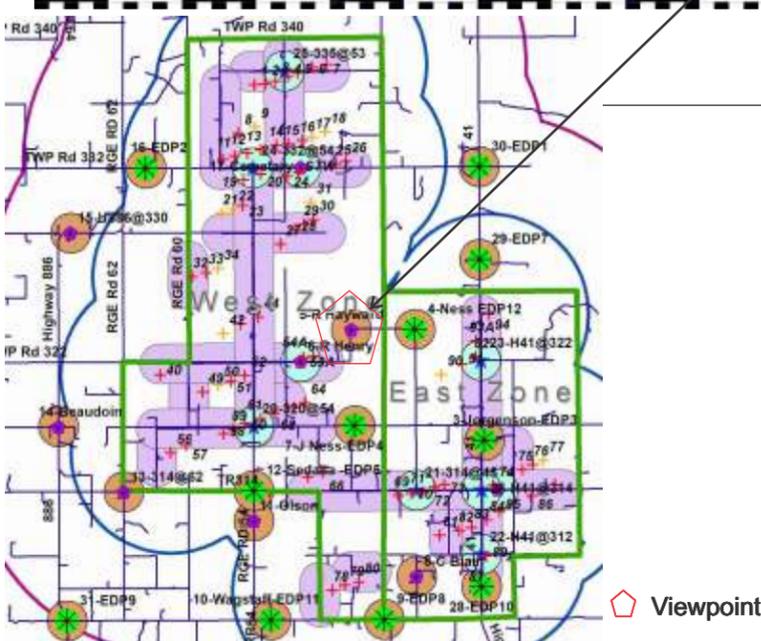
Single Frame 50mm lens = 40 deg. FOV

Westside

90°

180° Width of View

180°

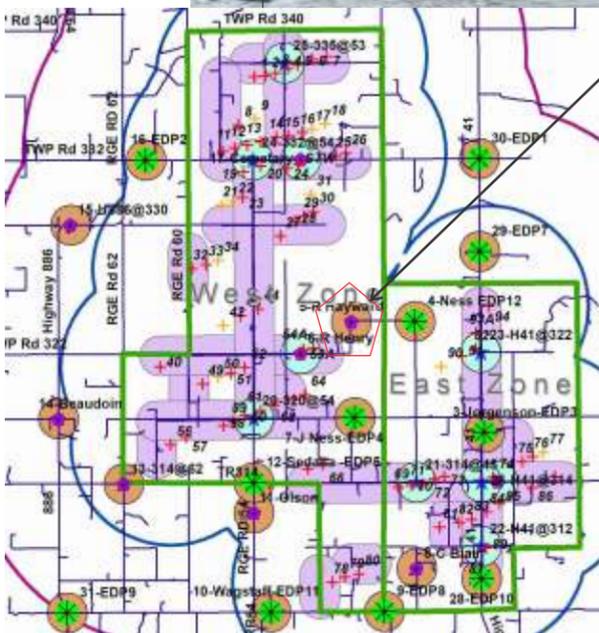
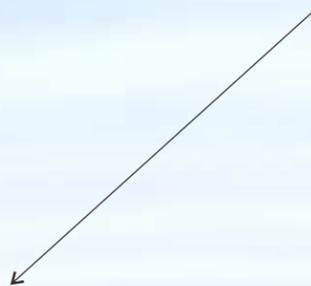


Viewpoint

5 - Randy Hayward - TR 323@RR51

13+ WTG's in View in Single Frame

Closest WTG is 2330m (#34A) - West View



Single Frame 50mm lens = 40 deg. FOV

5 - Randy Hayward - TR 323@RR51 - Southwest View Single Frame

SW

240

Viewpoint



RDI Photo Composite

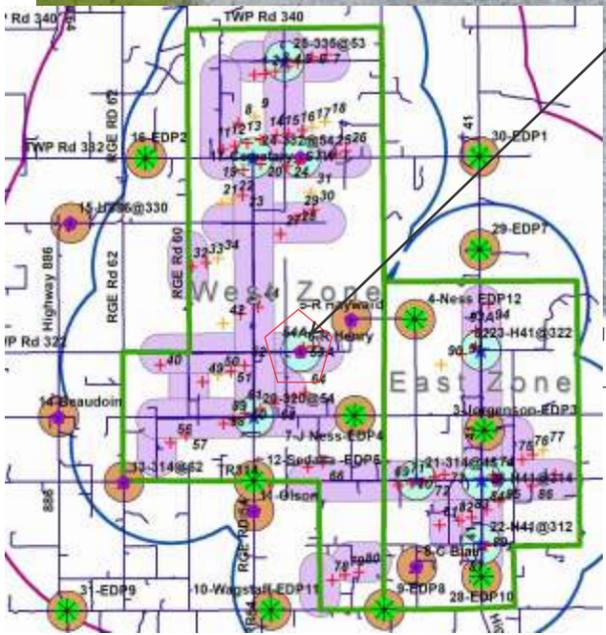
6 - Ralph Henry North images 871-879

Closest WTG is 230m (#53A) - in North View



North View

Single Frame 50mm lens = 40 deg. FOV



Viewpoint



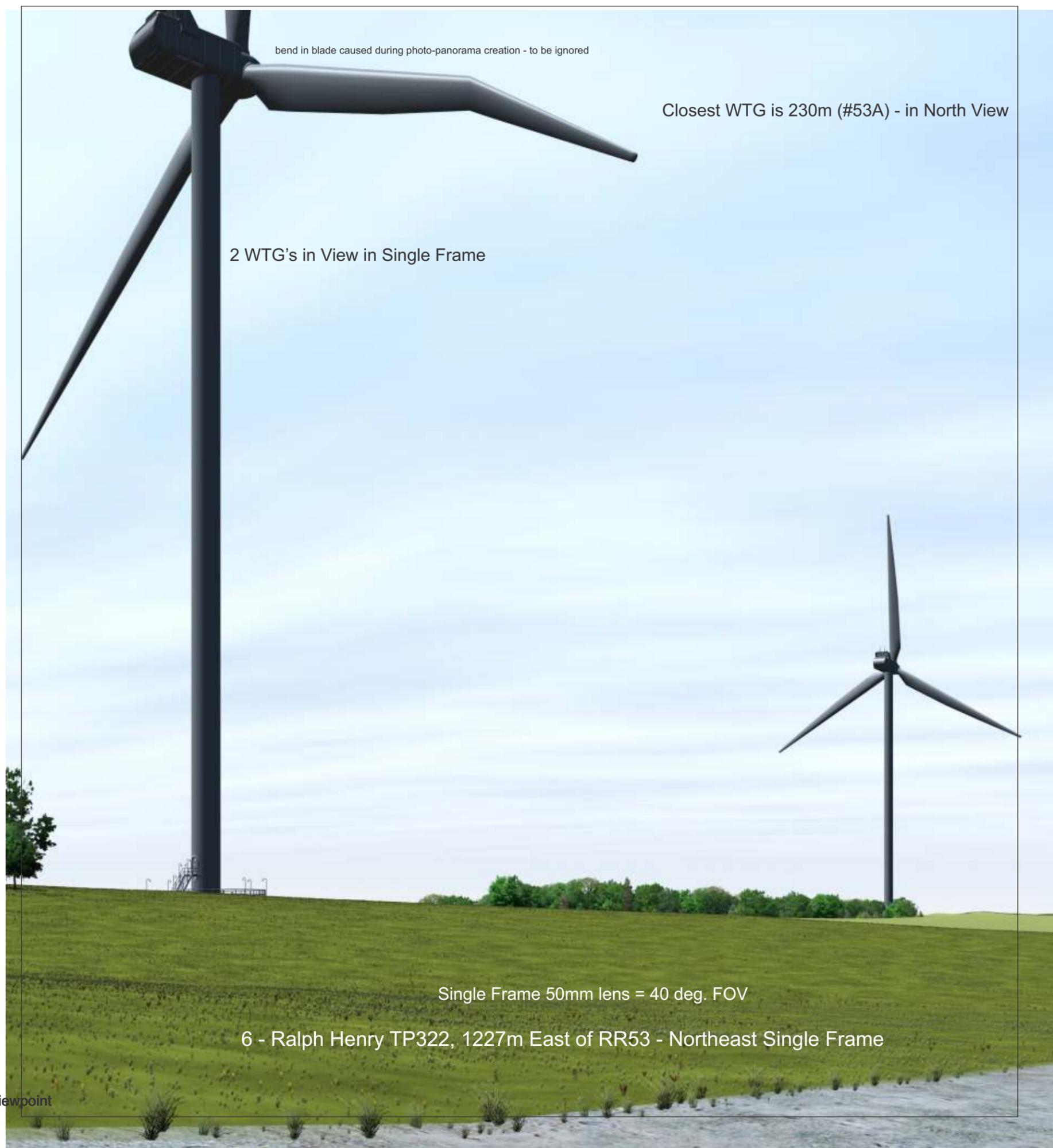
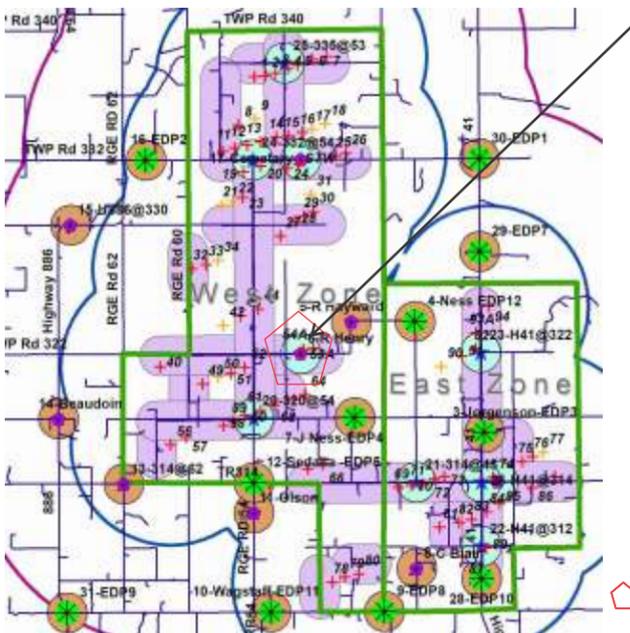
180° Width of View

6 - Ralph Henry TP322, 1227m East of RR53

bend in blade caused during photo-panorama creation - to be ignored

Closest WTG is 230m (#53A) - in North View

2 WTG's in View in Single Frame



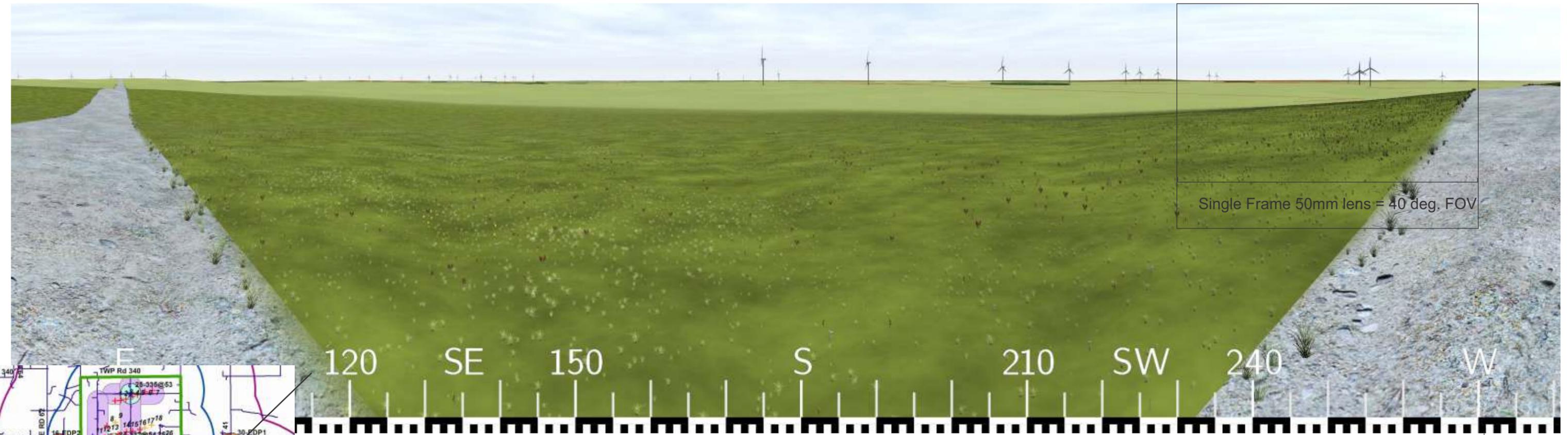
Single Frame 50mm lens = 40 deg. FOV

6 - Ralph Henry TP322, 1227m East of RR53 - Northeast Single Frame



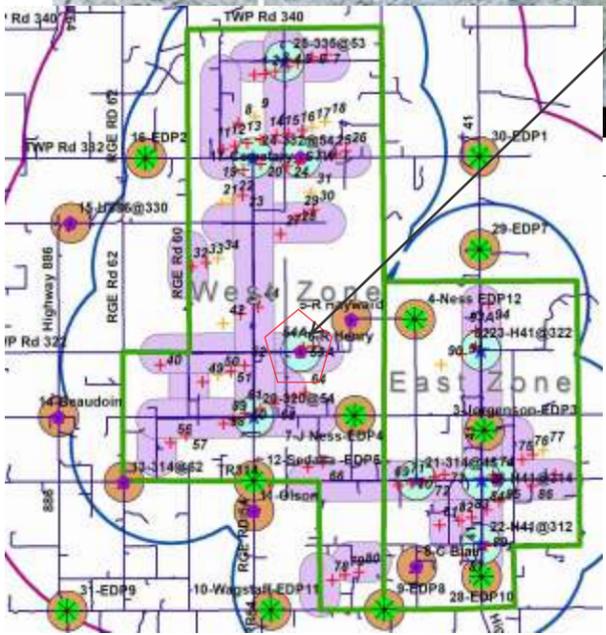
RDI Photo Composite

6 - Ralph Henry South images 860-871



Single Frame 50mm lens = 40 deg. FOV

120 SE 150 S 210 SW 240 W



Viewpoint

90°  
180° Width of View

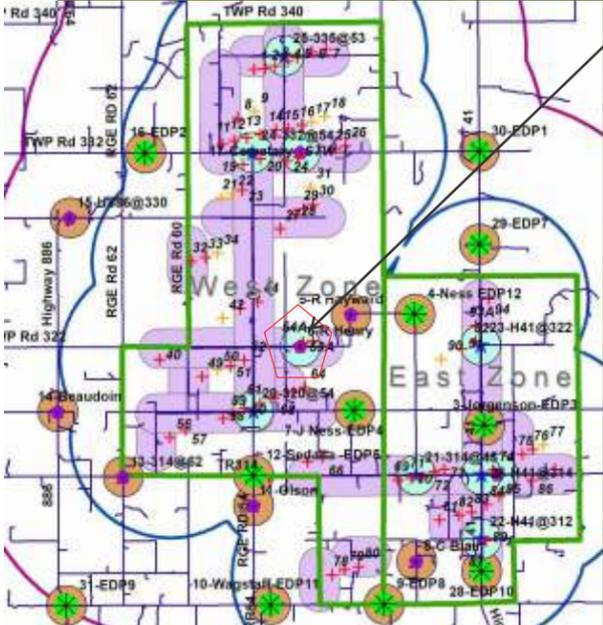
Closest WTG is 230m (#53A) - in North View

180°

6 - Ralph Henry TP322, 1227m East of RR53

Closest WTG is 230m (#53A) - in North View

7 WTG's in View in Single Frame



Single Frame 50mm lens = 40 deg. FOV

6 - Ralph Henry TP322, 1227m East of RR53 - Sw-West Single Frame

Viewpoint



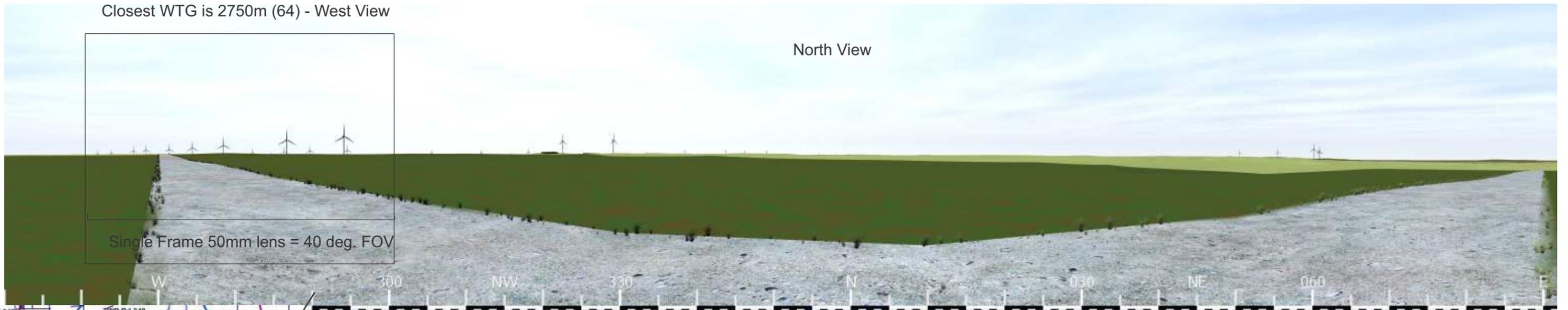
RDI Photo Composite

Stop 7-North-Jim Ness-DSC\_0881\_DSC\_0891-11 images

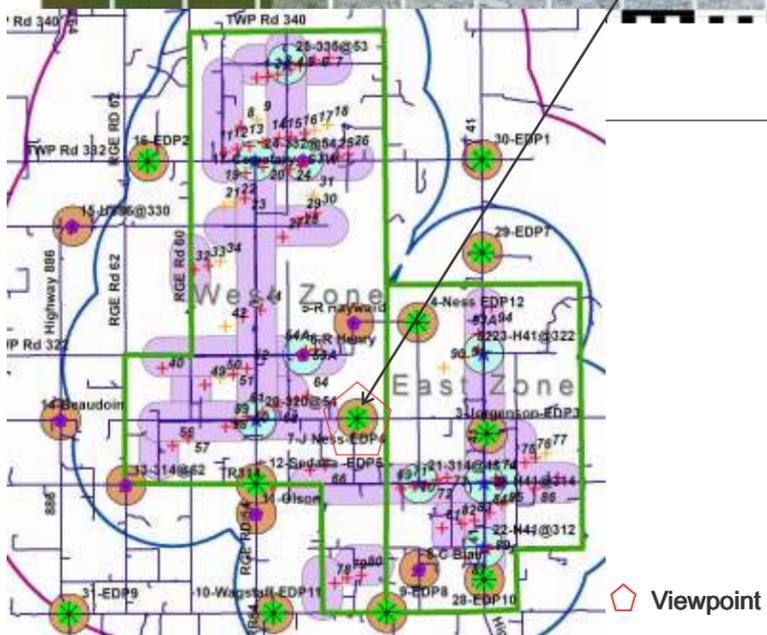
Closest WTG is 2750m (64) - West View

North View

Single Frame 50mm lens = 40 deg. FOV



90°  
180° Width of View



7 - Jim Ness EDP4 - TR320 West of RR50 - North View

14 WTG's in View in Single Frame

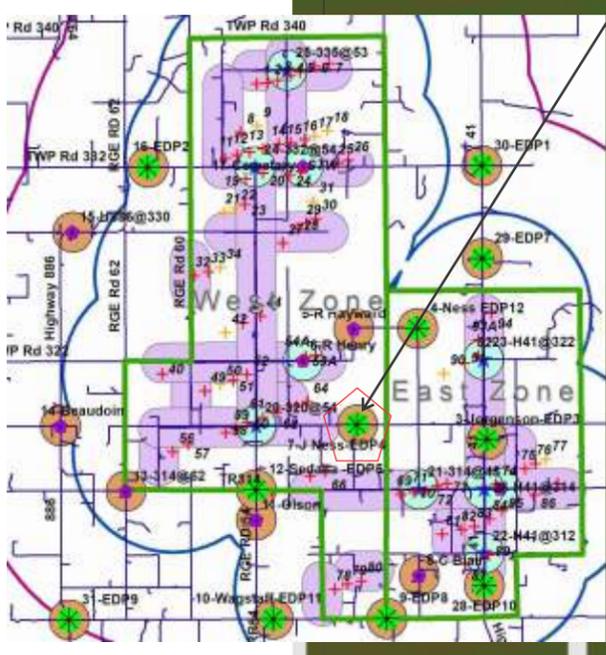
Closest WTG is 2750m (64) - West View



Single Frame 50mm lens = 40 deg. FOV

7 - Jim Ness EDP4 - TR320 West of RR50 - West Single Frame View

300



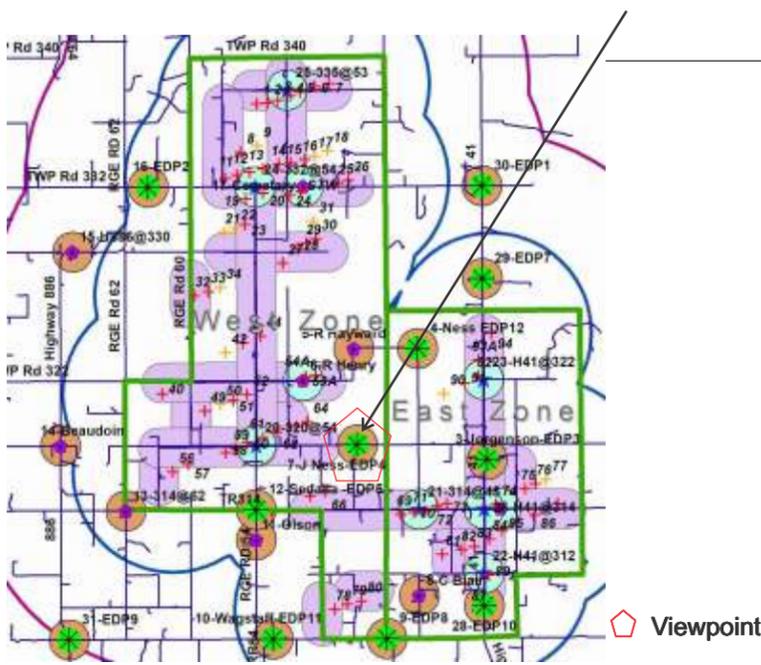
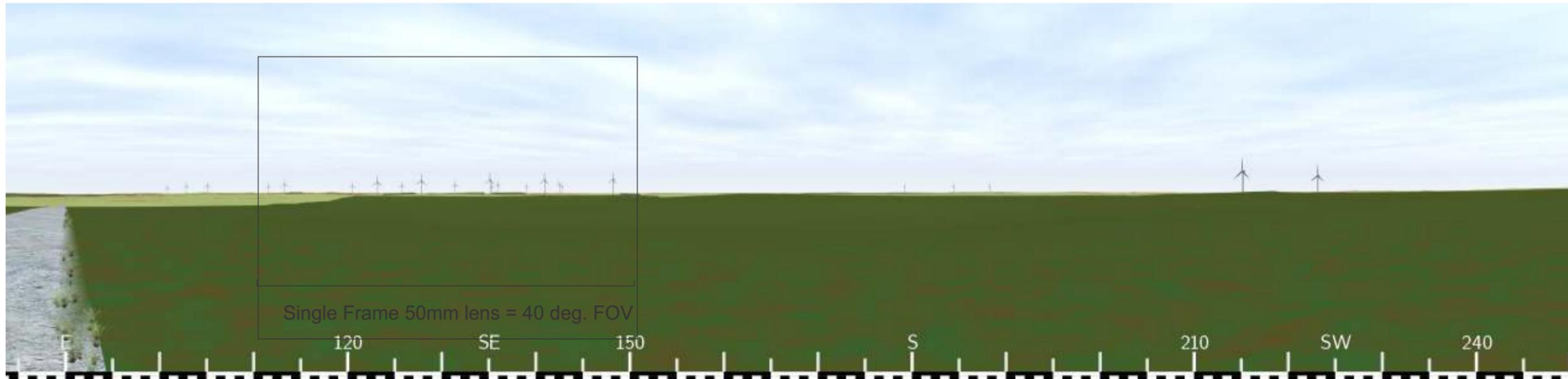
Viewpoint



RDI Photo Composite

Stop 7-South-Jim Ness-DSC\_0892\_DSC\_0899-8 images.jpg

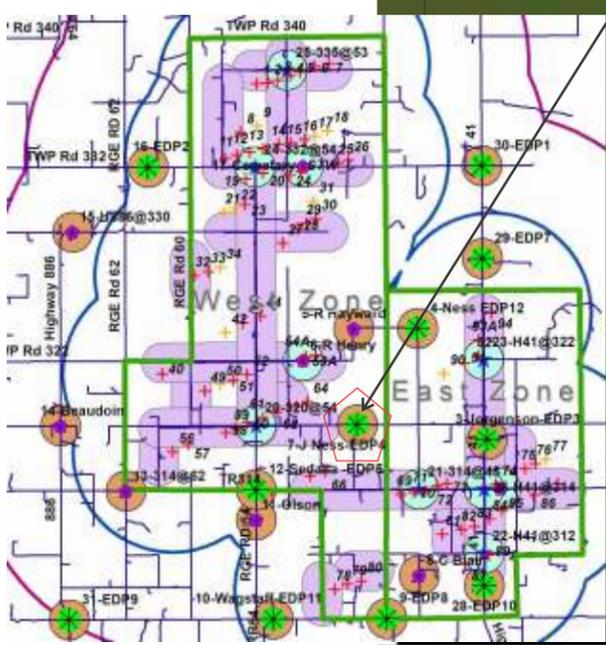
Closest WTG is 2750m (64) - West View



7 - Jim Ness EDP4 - TR320 317m East of RR50

15 WTG's in View in Single Frame

Closest WTG is 2750m (#64) - West View



Single Frame 50mm lens = 40 deg. FOV

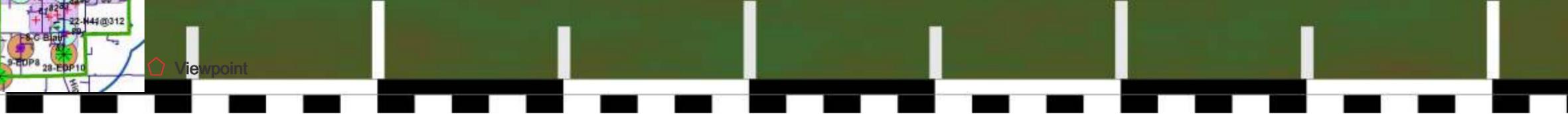
7 - Jim Ness EDP4 - TR320 317m East of RR50 - Southeast single Frame view

120

SE

150

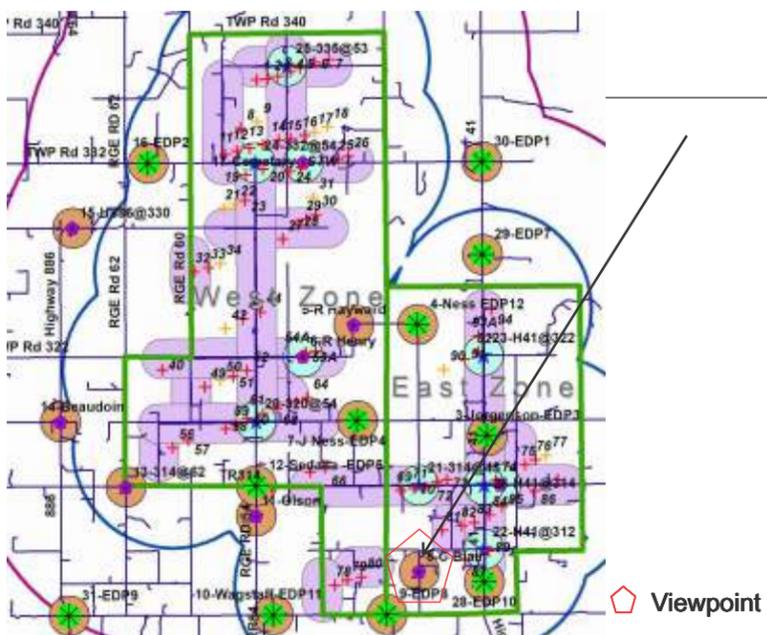
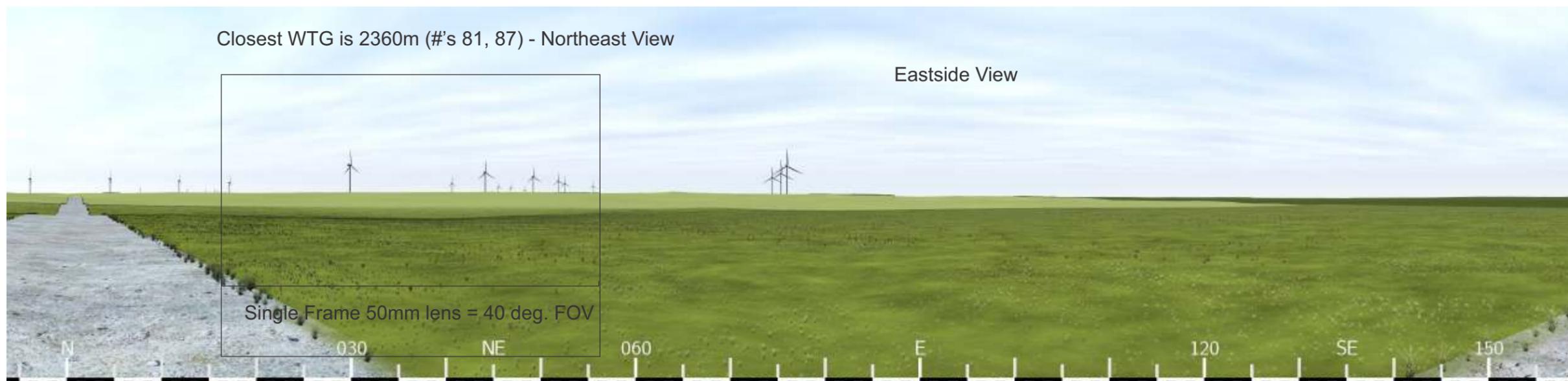
Viewpoint





RDI Photo Composite

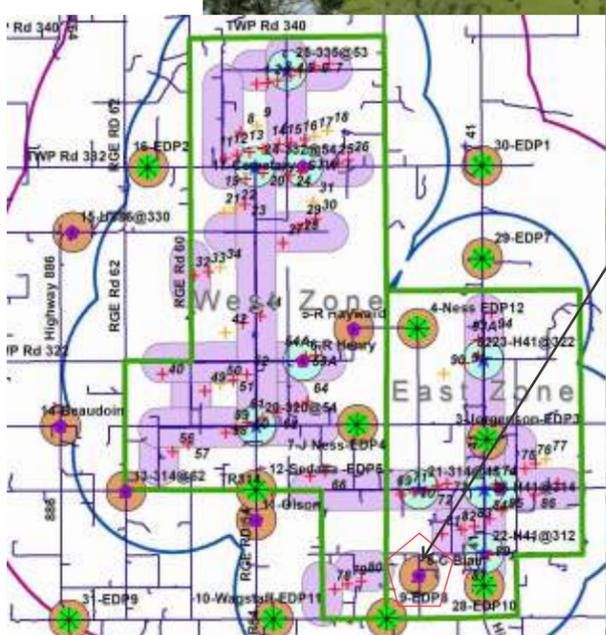
Stop 8-East-Cory Blair-DSC\_0911\_DSC\_0921-11 images.jpg



8 - Cory Blair - RR45

11 WTG's in View in Single Frame

Closest WTG is 2360m (#'s 81, 87) - Northeast View



Single Frame 50mm lens = 40 deg. FOV

8 - Cory Blair - RR45 - Northeast Single Frame View

030

NE

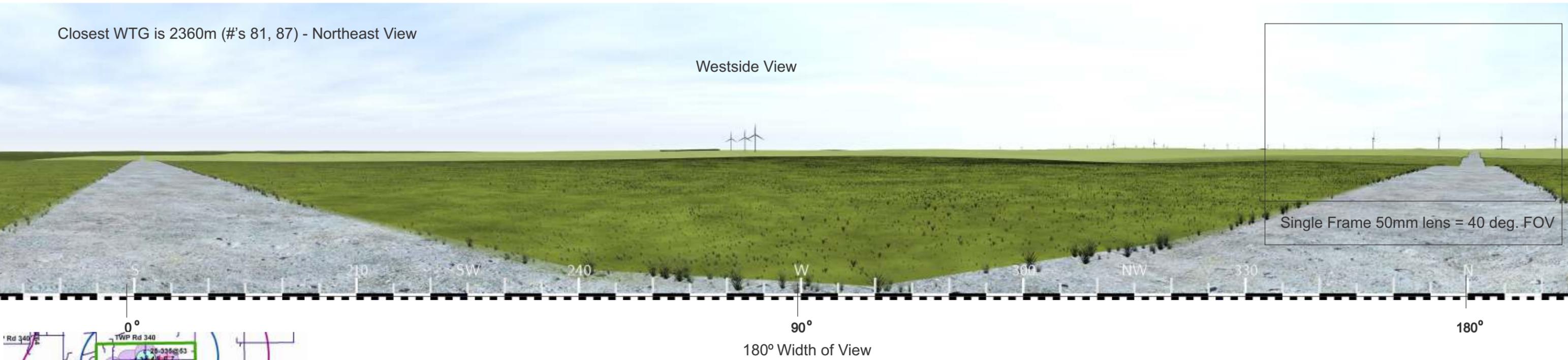
Viewpoint



RDI Photo Composite

Stop 8-West-Cory Blair-DSC\_0900\_DSC\_0911-12 images.jpg

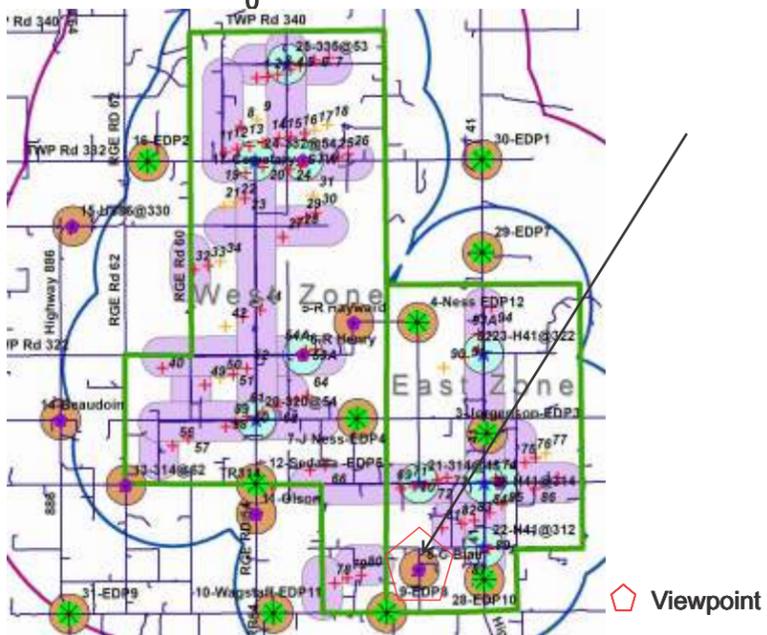
Closest WTG is 2360m (#'s 81, 87) - Northeast View



Westside View

Single Frame 50mm lens = 40 deg. FOV

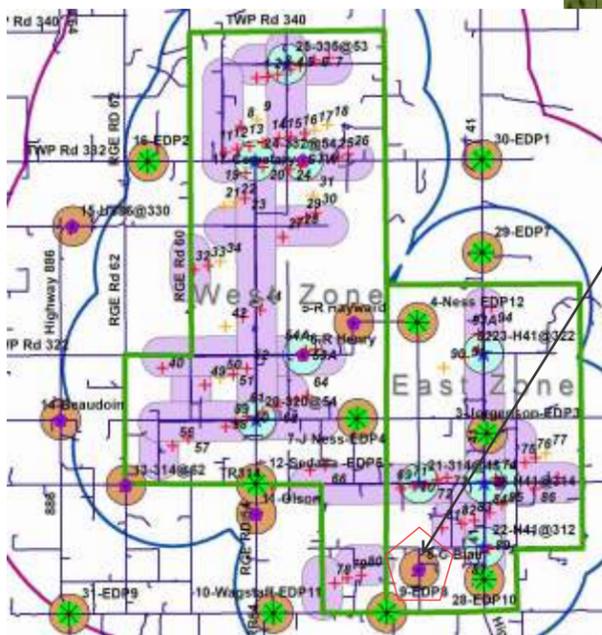
180° Width of View



8 - Cory Blair - RR45

23+ WTG's in View in Single Frame

Closest WTG is 2360m (#'s 81, 87) - Northeast View



Single Frame 50mm lens = 40 deg. FOV

8 - Cory Blair - RR45 - North-Single Frame View

N

South View

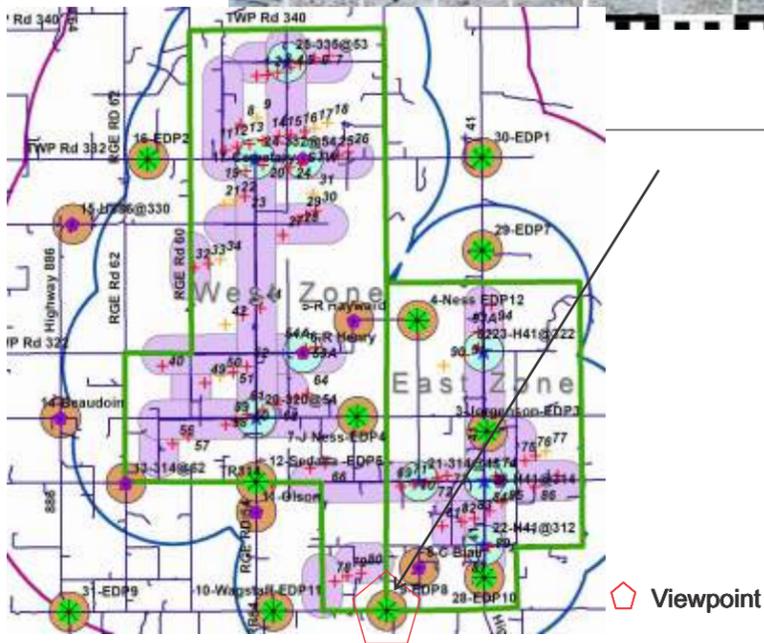
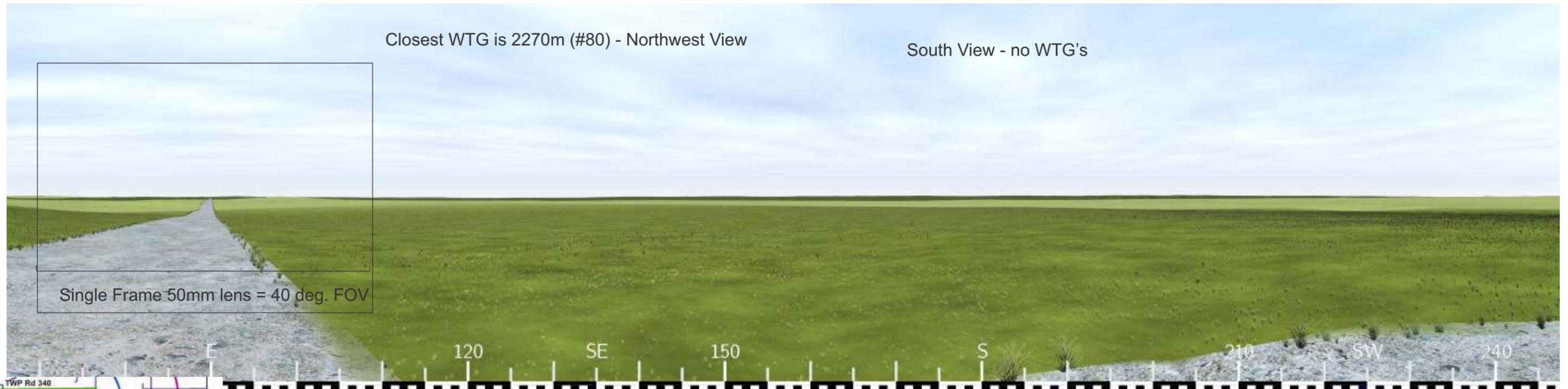


RDI Photo Composite

Stop 9-EDP8-South -TR 310 @ Rg Rd 50-DSC\_0922\_DSC\_0932-11 images.jpg

Closest WTG is 2270m (#80) - Northwest View

South View - no WTG's



90°  
180° Width of View

180°

9 - EDP8 - TR 310 @ Rg Rd 50

North View



RDI Photo Composite

Stop 9-North -EDP8-TR 310 @ Rg Rd 50-DSC\_0932\_DSC\_0940-9 images.jpg

Closest WTG is 2270m (#80) - Northwest View

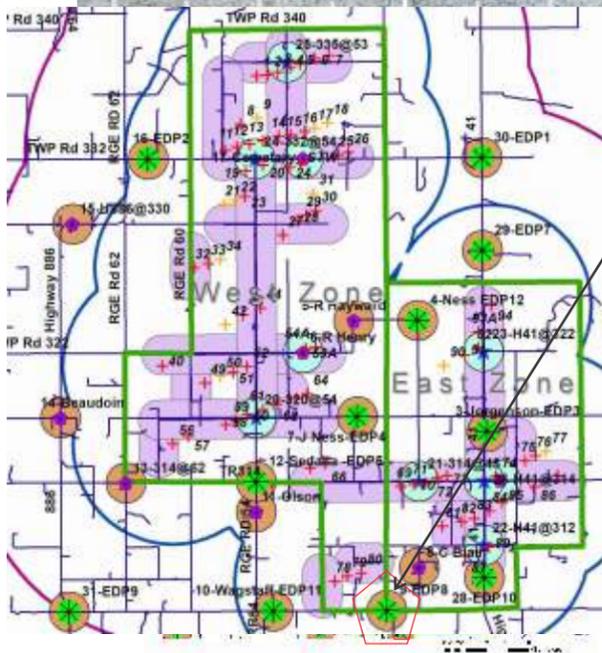
North View



Single Frame 50mm lens = 40 deg. FOV

90°  
180° Width of View

180°

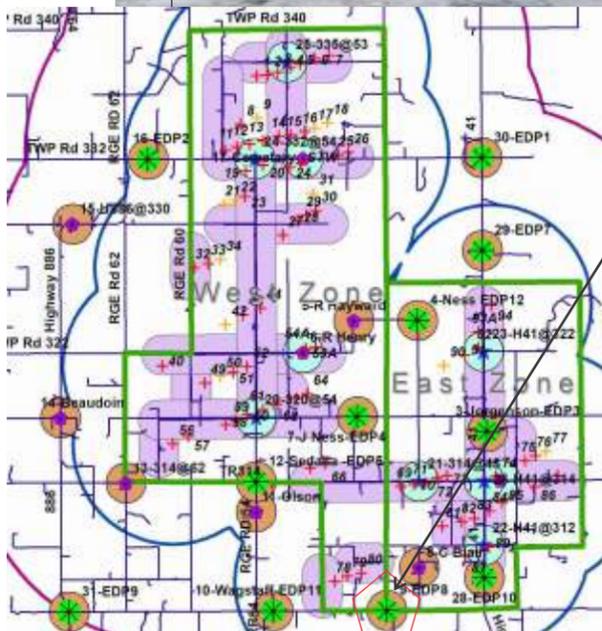
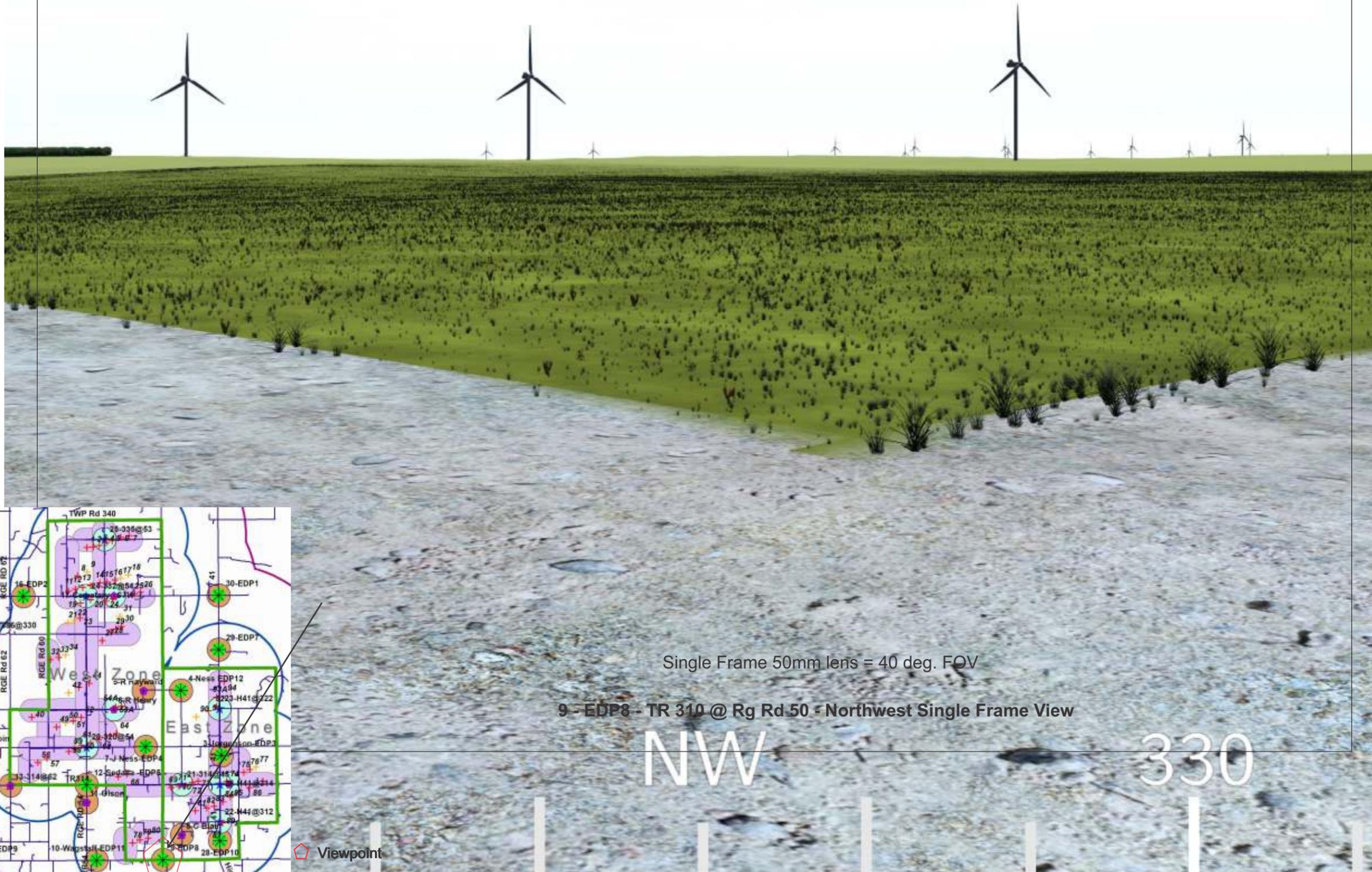


Viewpoint

9 - EDP8 - TR 310 @ Rg Rd 50

32+ WTG's in View in Single Frame

Closest WTG is 2270m (#80) - Northwest View



Single Frame 50mm lens = 40 deg. FOV

9 - EDP8 - TR 310 @ Rg Rd 50 - Northwest Single Frame View

NW

330

Viewpoint



RDI Photo Composite

10 - Wagstaff - EDP11 North - images 947-954 - 8 images

Closest WTG is 3440m (#78) - Northeast View



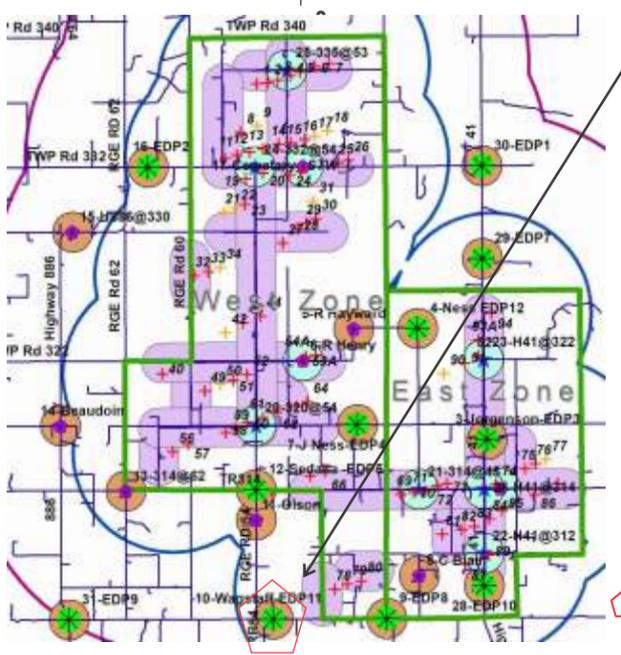
West

North View

East

Single Frame 50mm lens = 40 deg. FOV

90°  
180° Width of View

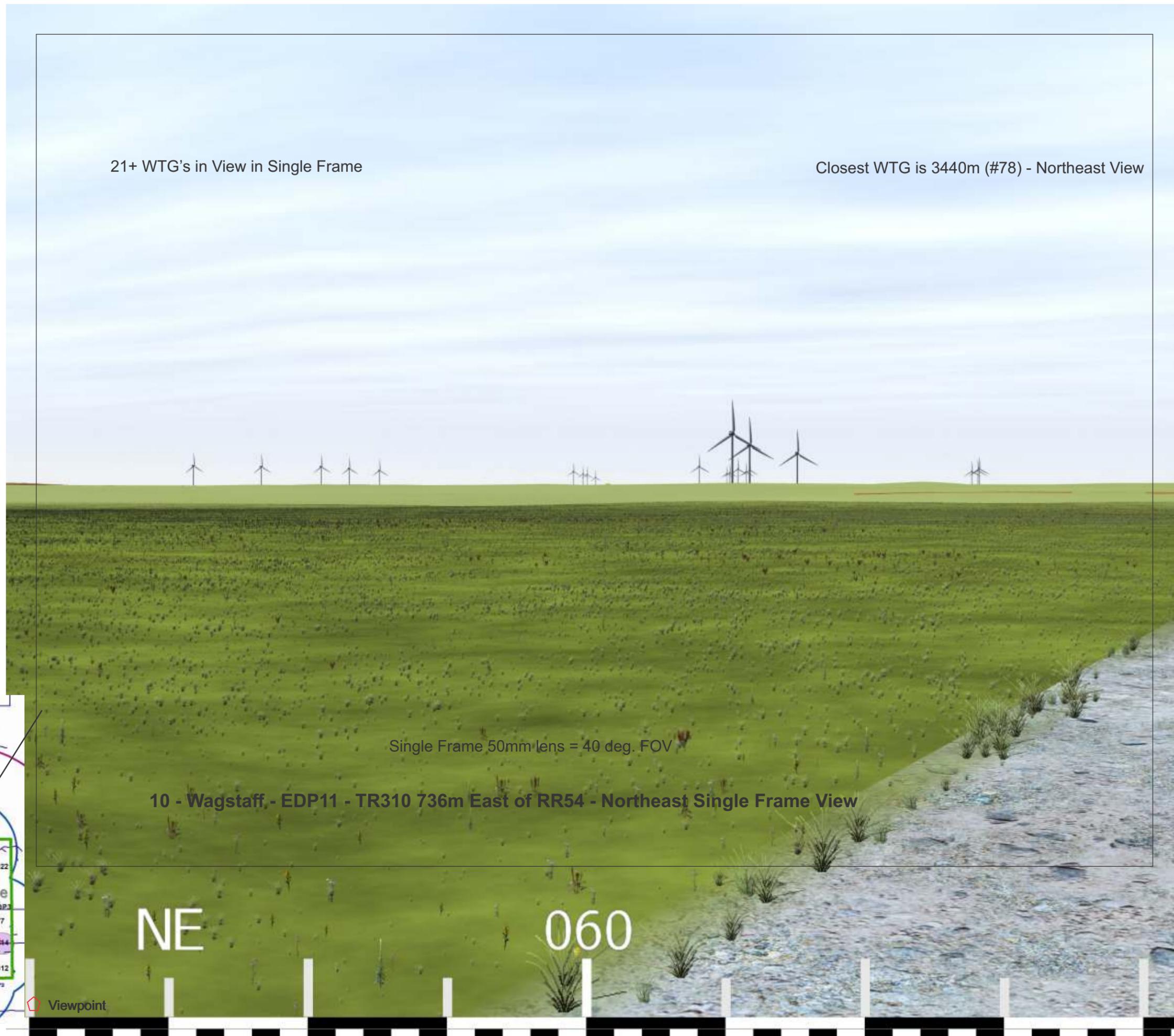


Viewpoint

10 - Wagstaff - EDP11 - TR310 736m East of RR54

21+ WTG's in View in Single Frame

Closest WTG is 3440m (#78) - Northeast View



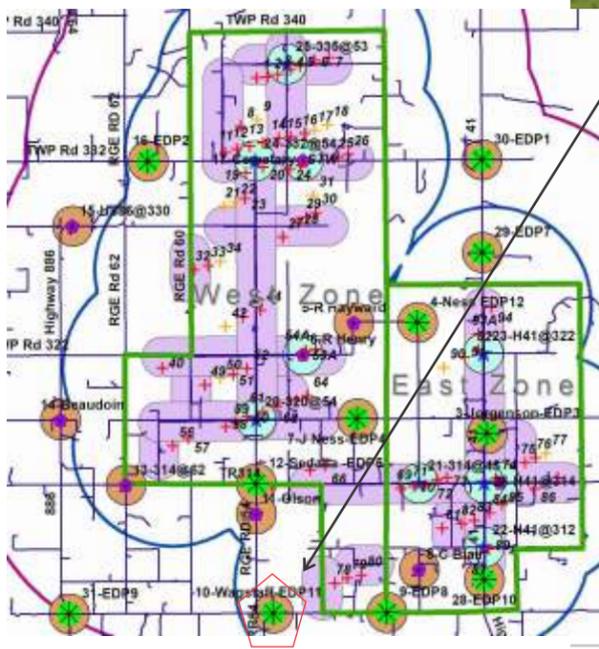
Single Frame 50mm lens = 40 deg. FOV

10 - Wagstaff - EDP11 - TR310 736m East of RR54 - Northeast Single Frame View

NE

060

Viewpoint





Transmission Line Crossing



RDI Photo Composite

10 - Wagstaff - EDP11 South - images 941-947 - 7 images



Closest WTG is 3440m (#78) - Northeast View

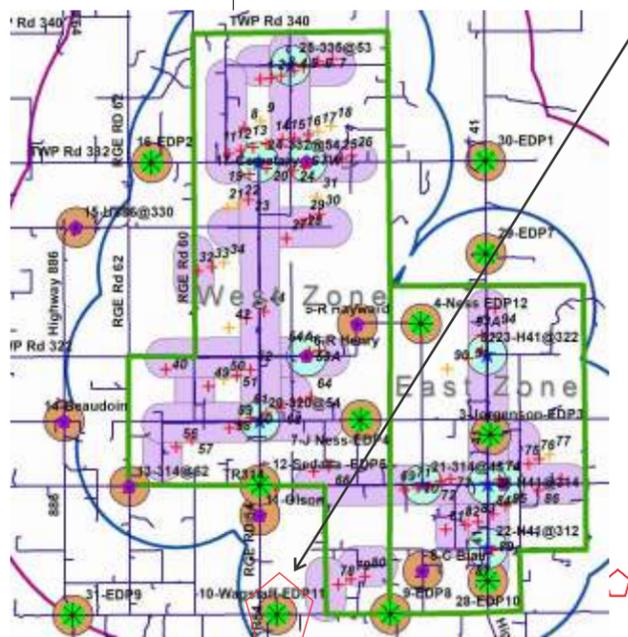
South View - no WTG's

East

Single Frame 50mm lens = 40 deg. FOV

West

90°  
180° Width of View



Viewpoint

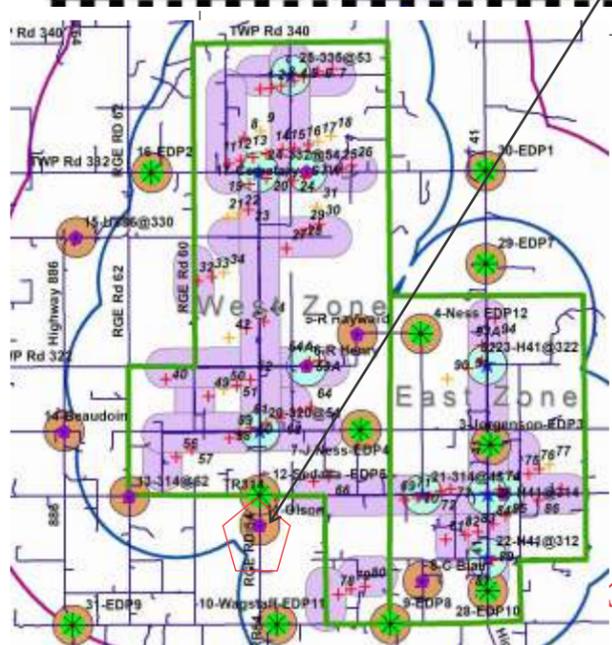
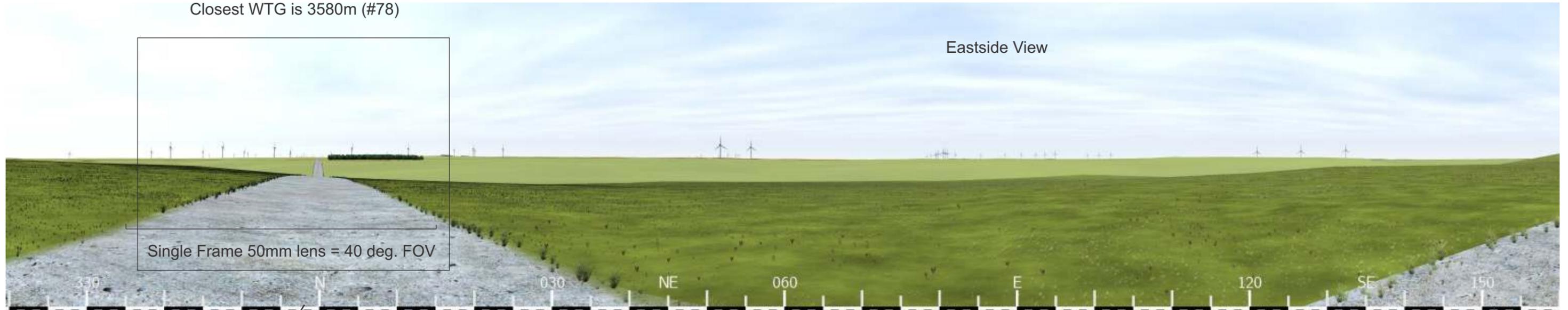
10 - Wagstaff - EDP11 - TR310 736m East of RR54



RDI Photo Composite

11 - Gene Olson East - 963-972 - 10 images

Closest WTG is 3580m (#78)



Viewpoint

90°  
180° Width of View

11 - Gene Olson - RR54 @ 2400m South of TR314

South

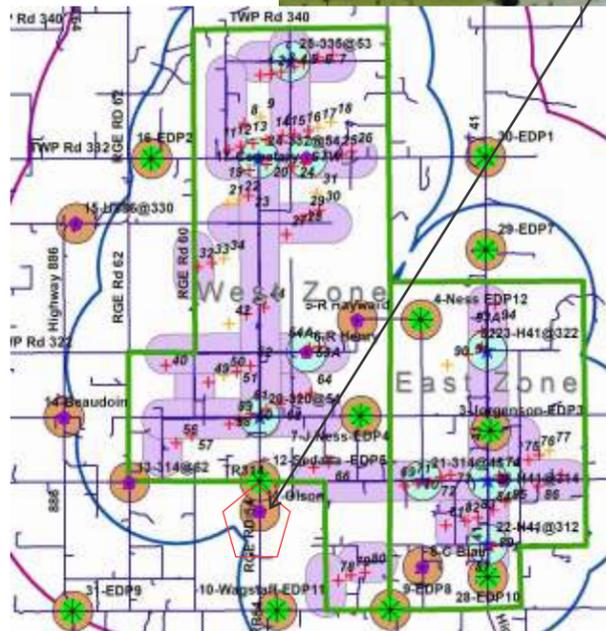
Eastside View

Single Frame 50mm lens = 40 deg. FOV

180°

32+ WTG's in View in Single Frame

Closest WTG is 3580m (#78)



Viewpoint

Single Frame 50mm lens = 40 deg. FOV

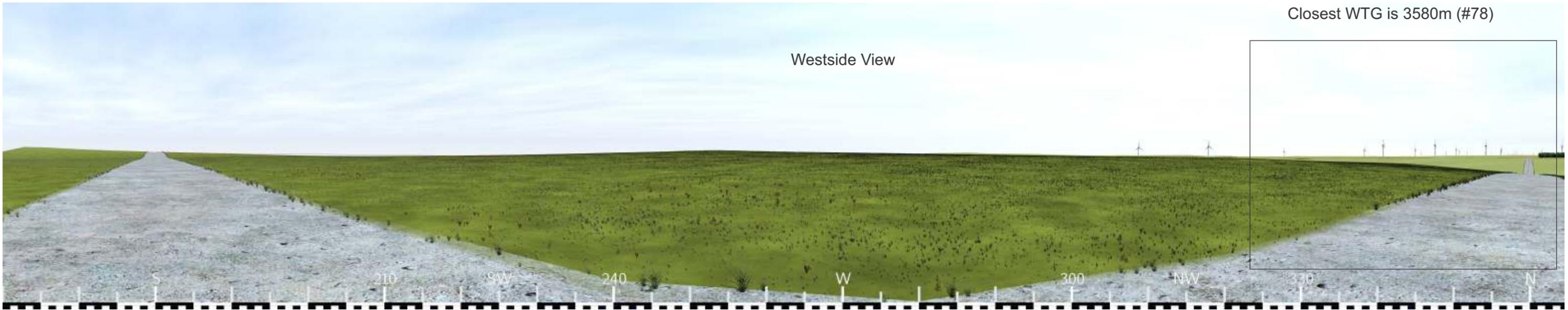
11 - Gene Olson - RR54 @ 2400m South of TR314 - North Single Frame View

N



RDI Photo Composite

11 - Gene Olson West - 955-963 - 9 images



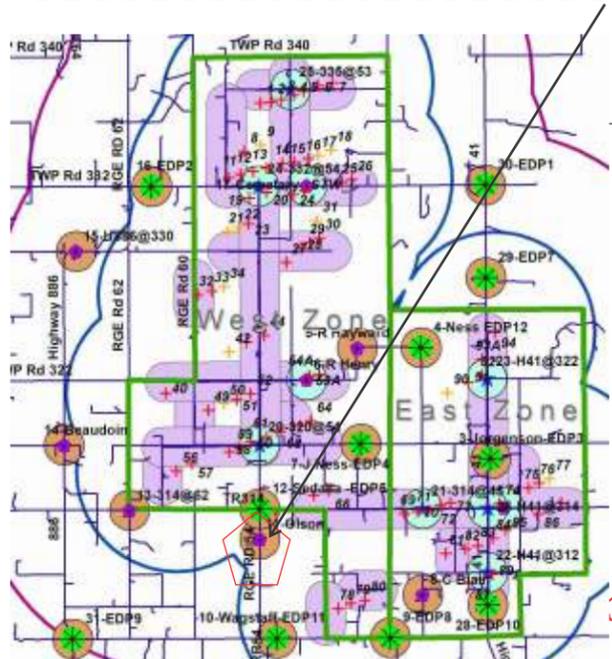
Closest WTG is 3580m (#78)

Westside View

Single Frame 50mm lens = 40 deg. FOV

90°  
180° Width of View

180°

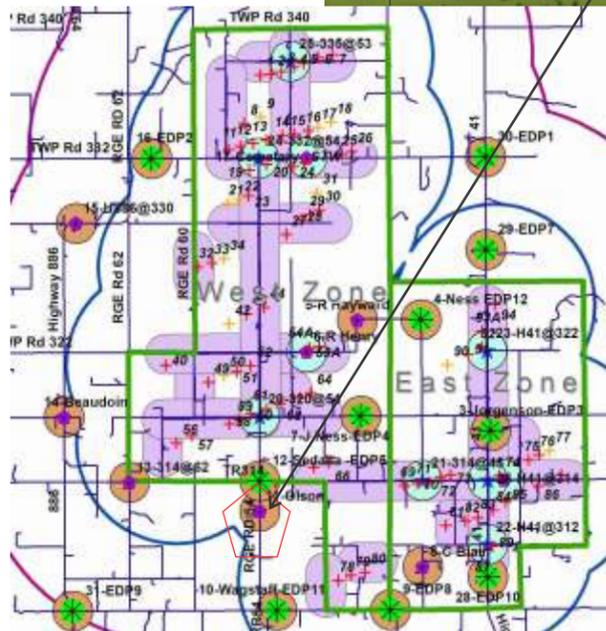


Viewpoint

11 - Gene Olson - RR54 @ 2400m South of TR314

25+ WTG's in View in Single Frame

Closest WTG is 3580m (#78)



Single Frame 50mm lens = 40 deg. FOV

11 - Gene Olson - RR54 @ 2400m South of TR314 - North Single Frame View

330

Viewpoint

N