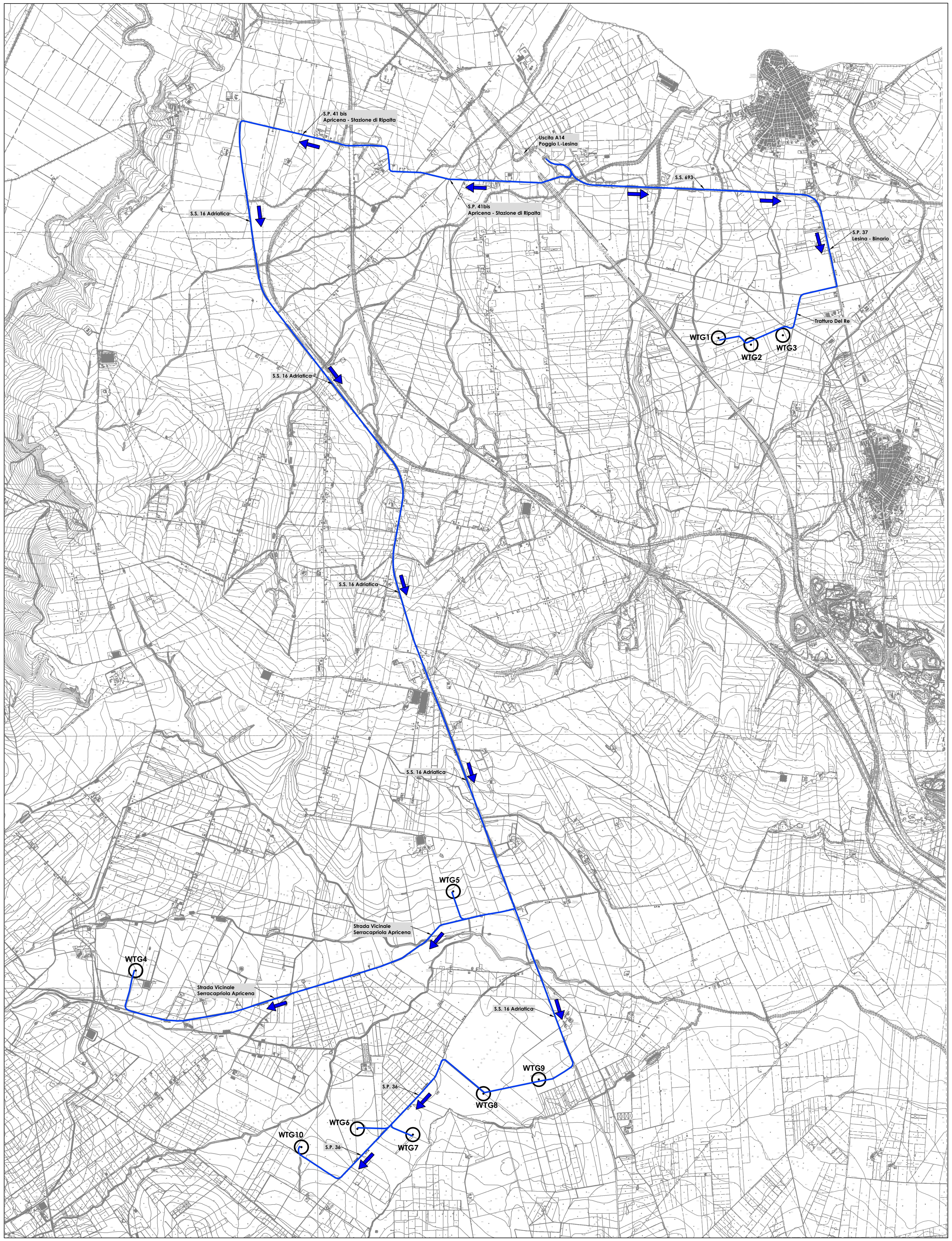
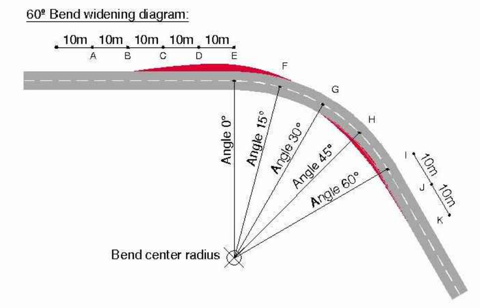


60º BEND WIDENING - 5 METERS WIDE ROAD											
Radius	External						Internal				
	A	B	C	D	E	F	G	H	I	J	K
70m	-	0.2	1.2	1.6	1.2	0.1	-	1.3	1.1	0.4	0.2
75m	-	-	0.8	1.4	0.8	-	-	1.0	0.8	0.3	-
80m	-	-	0.8	1.1	0.7	-	-	1.0	0.7	0.3	-

60º BEND WIDENING - 6 METERS WIDE ROAD											
Radius	External						Internal				
	A	B	C	D	E	F	G	H	I	J	K
70m	-	-	0.4	0.8	0.4	-	-	0.2	0.2	-	-
75m	-	-	0.2	0.6	0.2	-	-	0.2	-	-	-
80m	-	-	-	0.2	-	-	-	0.2	-	-	-

60º BEND WIDENING - 6.5 METERS WIDE ROAD											
Radius	External						Internal				
	A	B	C	D	E	F	G	H	I	J	K
70m	-	-	-	0.4	-	-	-	-	-	-	-
75m	-	-	-	0.2	-	-	-	-	-	-	-
80m	-	-	-	-	-	-	-	-	-	-	-

60º Bend widening diagram:

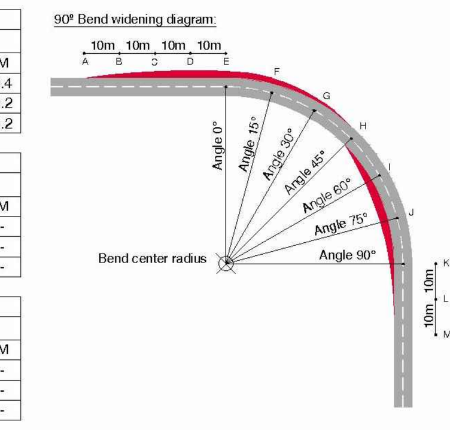


90º BEND WIDENING - 5 METERS WIDE ROAD													
Radius	External								Internal				
	A	B	C	D	E	F	G	H	I	J	K	L	M
70m	-	0.7	1.5	1.7	1.3	0.2	-	-	-	1.2	1.7	1.1	0.4
75m	-	0.5	1.2	1.4	1.0	-	-	-	-	1.0	1.4	0.8	0.2
80m	-	0.2	1.0	1.3	0.9	-	-	-	-	0.6	0.9	0.6	0.2

90º BEND WIDENING - 6 METERS WIDE ROAD													
Radius	External								Internal				
	A	B	C	D	E	F	G	H	I	J	K	L	M
70m	-	-	0.5	0.6	0.2	-	-	-	-	0.6	0.1	-	-
75m	-	-	0.4	0.6	-	-	-	-	-	0.4	-	-	-
80m	-	-	0.3	0.6	-	-	-	-	-	-	-	-	-

90º BEND WIDENING - 6.5 METERS WIDE ROAD													
Radius	External								Internal				
	A	B	C	D	E	F	G	H	I	J	K	L	M
70m	-	-	0.2	0.4	-	-	-	-	-	-	-	-	-
75m	-	-	-	0.4	-	-	-	-	-	-	-	-	-
80m	-	-	-	-	-	-	-	-	-	-	-	-	-

90º Bend widening diagram:

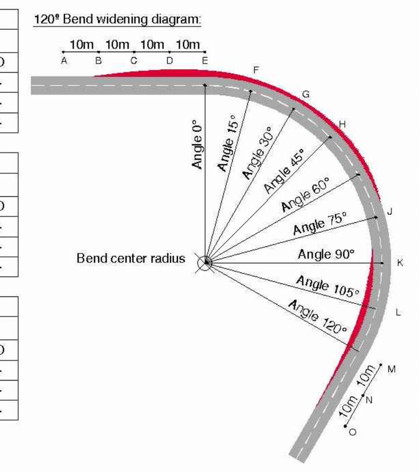


120º BEND WIDENING - 5 METERS WIDE ROAD															
Radius	External									Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
70m	-	0.9	1.8	2.0	1.2	0.1	-	-	-	-	0.7	1.6	0.9	0.2	-
75m	-	0.6	1.5	1.6	1.0	-	-	-	-	-	0.5	1.2	0.8	0.2	-
80m	-	0.3	1.1	1.4	1.0	-	-	-	-	-	-	0.9	0.7	0.2	-

120º BEND WIDENING - 6 METERS WIDE ROAD															
Radius	External									Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
70m	-	-	0.6	0.8	0.2	-	-	-	-	-	-	0.5	0.3	-	-
75m	-	-	0.4	0.5	-	-	-	-	-	-	-	0.4	0.2	-	-
80m	-	-	0.2	0.3	-	-	-	-	-	-	-	-	-	-	-

120º BEND WIDENING - 6.5 METERS WIDE ROAD															
Radius	External									Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
70m	-	-	0.2	0.4	-	-	-	-	-	-	-	-	-	-	-
75m	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
80m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

120º Bend widening diagram:

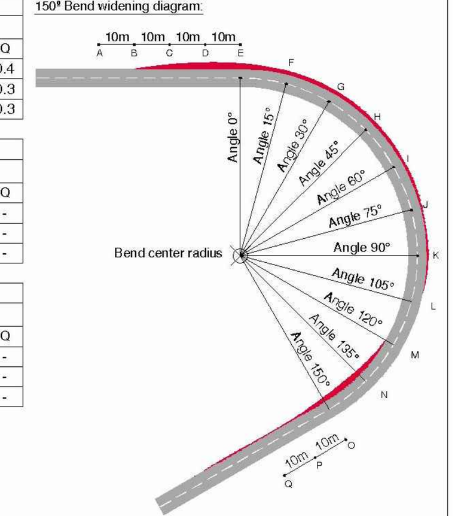


150º BEND WIDENING - 5 METERS WIDE ROAD																	
Radius	External											Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
70m	-	0.7	1.7	2.0	1.4	-	-	-	-	-	-	-	0.3	1.3	1.1	0.8	0.4
75m	-	0.5	1.4	1.6	1.2	-	-	-	-	-	-	-	0.2	1.0	0.8	0.6	0.3
80m	-	0.2	1.1	1.3	0.9	-	-	-	-	-	-	-	-	0.6	0.7	0.5	0.3

150º BEND WIDENING - 6 METERS WIDE ROAD																	
Radius	External											Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
70m	-	-	0.8	1.0	0.4	-	-	-	-	-	-	-	-	0.4	-	-	-
75m	-	-	0.4	0.7	0.2	-	-	-	-	-	-	-	-	0.2	-	-	-
80m	-	-	0.2	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-

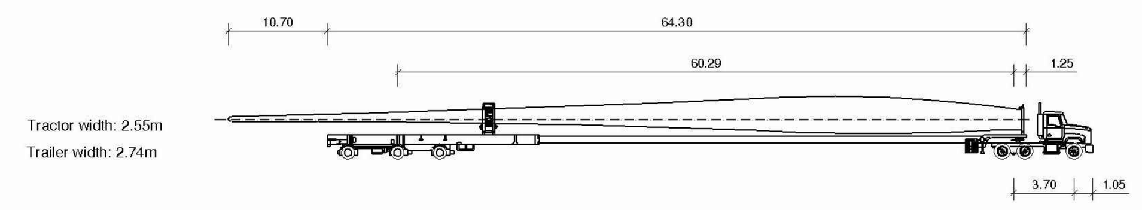
150º BEND WIDENING - 6.5 METERS WIDE ROAD																	
Radius	External											Internal					
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
70m	-	-	0.4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
75m	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
80m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

150º Bend widening diagram:



Design has been defined considering the following truck dimensions:

-Different truck dimensions will lead to substantially different results
-Trailer based on the largest configuration of "Nooteboom Super Wing Carrier OVB-67-03V".



DESIGN REQUIREMENTS	
Minimum vertical curve paramether	Kv.= L / | i_1 - i_2 |= 500
Maximum slope on gravel road	9%
Maximum slope on concrete road	14%
Minimum radius	70m
Min. straight length before/after the bend *	160m
* Additional bend wides provided in this drawing, will not be valid if this minimum straigth length are not respected.	

PROJECT:	AUTHOR:	SCALE:	DATE:	DRAWING:	DRAW UP: / DATE:	EDITION:	DRAWING Nº:
TECHNICAL SPECIFICATIONS	Vestas	WITHOUT SCALE	12 JUNE 2016	V150 BEND WIDENING	CHECK BY: / DATE:	V2	1.2
					APPROVAL: / DATE:		PAGE 1 OF 1

2.4 LATERAL CROSS-FALL

In case that the designer decides to have a lateral cross-fall for rain water evacuation shall not exceed 2% from the centre of the road.

Figure 5: Longitudinal slope

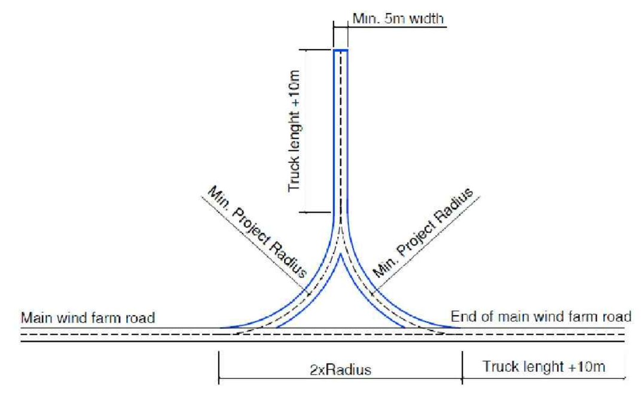


Figure 10: Turning Area Minimum Dimensions

4.2 COMPACTION AND SOIL BEARING CAPACITY

As mention in paragraph 2.6., static plate-bearing test is recommended to assure the well compaction of the roads and its bearing capacity.

Static plate bearing test shall be done in a staggered pattern where the truck wheel is expected to be in contact with road surface. In case transversal section has cutting and embankment, the plate bearing test shall be done in the embankment part as shown in the following figure:

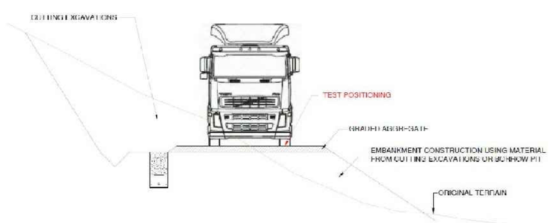


Figure 11: Plate Bearing Test Positioning

2.2 MAXIMUM LONGITUDINAL SLOPE

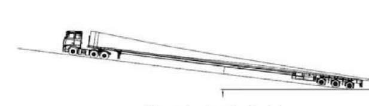


Figure 1: Longitudinal slope

2.3 VERTICAL ALIGNMENT OF ROADS

The vertical alignment of roads, in relation to (parabolic) vertical curves, must be in accordance with the following criteria:

The minimum required values of the vertical alignment parameters (as described in Figure 2:) are established in Table 1 for each wind turbine model.

WTG	Kv min.
V80, V90	300
V100, V105	350
V110, V112, V117	400
V126	450
V136	500

Table 1. Minimum Kv

Vertical radius parameter (Kv) calculation:

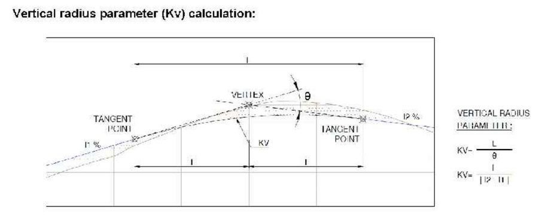


Figure 2: Representation of parameters for Vertical alignment

Convex radius example:

The following image shows an example of Kv calculation for a convex alignment:

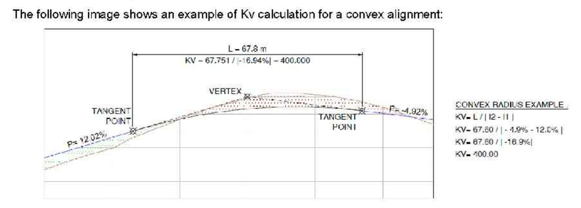


Figure 3: Representation of Convex Radius Example

Concave Radius Example:

The following image shows an example of Kv calculation for a concave alignment:

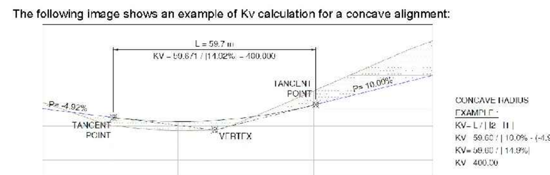


Figure 4: Representation of Concave Radius Example

AEROGENERATORI (WTG) DI PROGETTO

PERCORSI MEZZI

NOTE :
BASE CARTOGRAFICA CTR PUGLIA

Regione Puglia

Provincia di Foggia

Comuni di San Paolo di Civitate e Poggio Imperiale

OGGETTO :

PROGETTO PER LA REALIZZAZIONE DI UN IMPIANTO DI PRODUZIONE DI ENERGIA ELETTRICA DA FONTE EOLICA DI POTENZA PARI A 42 MW

COMMITTENTE :	TITOLO TAVOLA :	
IVPC power6	PERCORSO MEZZI DI TRASPORTO AEROGENERATORI	
	SCALA : 1:25.000	Nº TAVOLA : 08
REVISIONE : 00	DATA : Luglio 2018	

PROGETTISTI:

IVPC eolica

PAOLO PISANI
ARCHITETTO