2020 10

2.2

1 -

2 - -

-

3

4

1 - 30km/h

2 - 40km/h

3 40km/h

4 40km/h

5

52310.81

2.3

2.3.1

2.3.1.1

2009 +

“ + ”

+

+

2.3.1.2

2010 2015 9

2014

5

46.0km

2014 2016 12

2017

5 33.0km

2017 12 2019 12

+

- +

- -

2.3.2 -

2.3.2.1

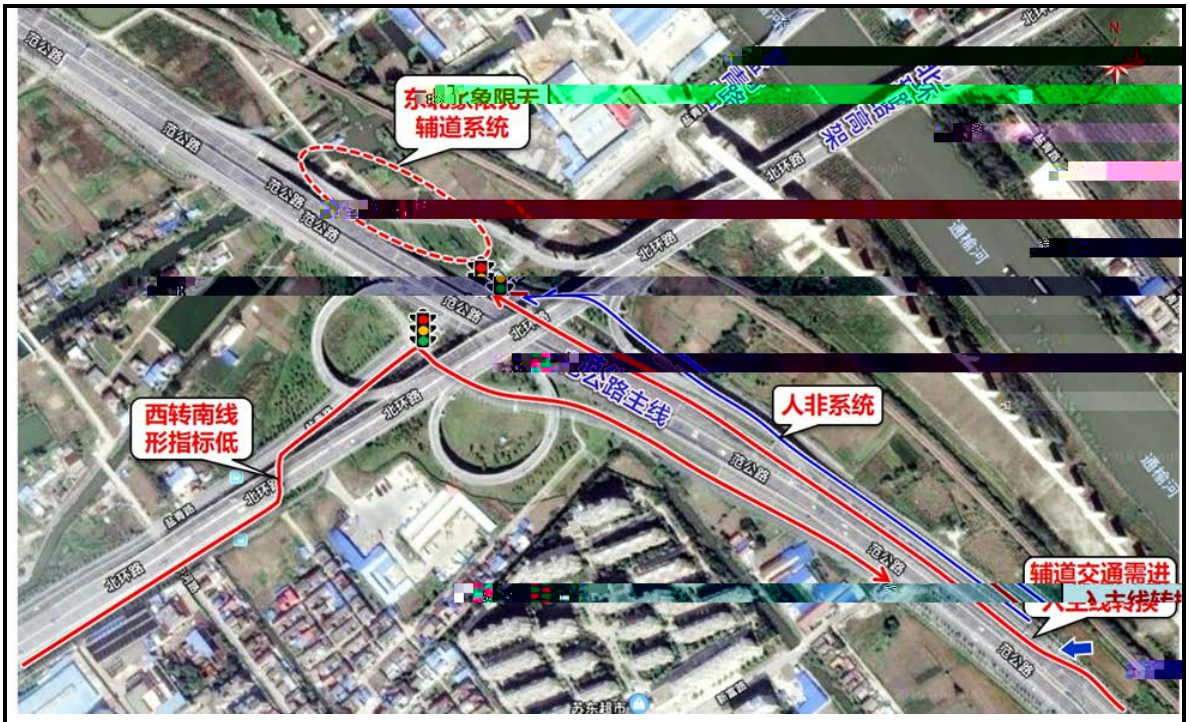
-

+

10~14m

8.5m

5.5m



2.3.2-1 -

2.3.2-2 -

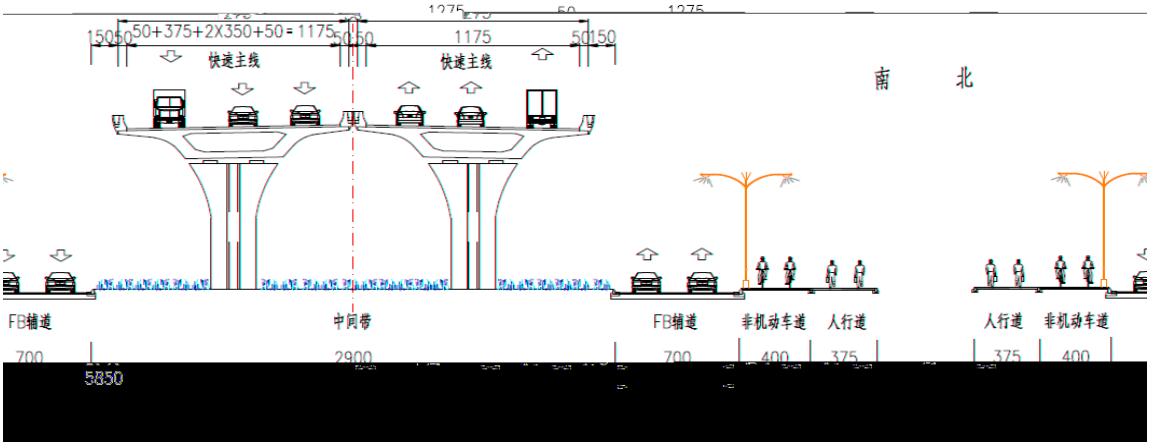
2.3.2.2

1

29m 0.5m +2×12.75m

+2×1.5m 58.5m 29m

+2 7m +2 4m +2 3.75m



2.3.2-2

2

0.525m + 0.5+0.25 m +3.75m +3.5m 2

+ 0.5+0.25 m +0.65m + 0.25+0.5 m

+3.5m 2 +3.75m + 0.5+0.25 m +0.525m

=26.2m

3m +4.5m +2.0m

+0.25m +3.5m 3 +0.25m +8m +0.25m

+ 3.5 3 +0.25m +2.0m +4.5m

+3m =49m

2.3.2-3

2.3.2.3

2.3.2.4

1

1

2m

2

2m

3

2

2.3.2.5

- 2

2.3.2-1

					× (m)	(m)			
1	-			K0+177.182	3 6	4.5	-		
2				K0+213.326	3 6	4.5	-		

1

2.3.2-2

		-(×)				
		(m)	(m)			
	K0+030.854	1-	9	-		

2.3.2.2

2.3.3

2.3.3.1

-

2.3.3-1

2.3.3.2

~ 25.0m 8.5m

+8m 2m +4m +2m +8.5m

2.3.3-2 ~

2.3.3.3

-

2.3.3.4

1

1

2m

2

2m

3

2

2.3.3.5

2.3.3.2

2.3.3.6

2.3.3-1

			m		
1			30	T	
2			50		

~

2.3.4-3

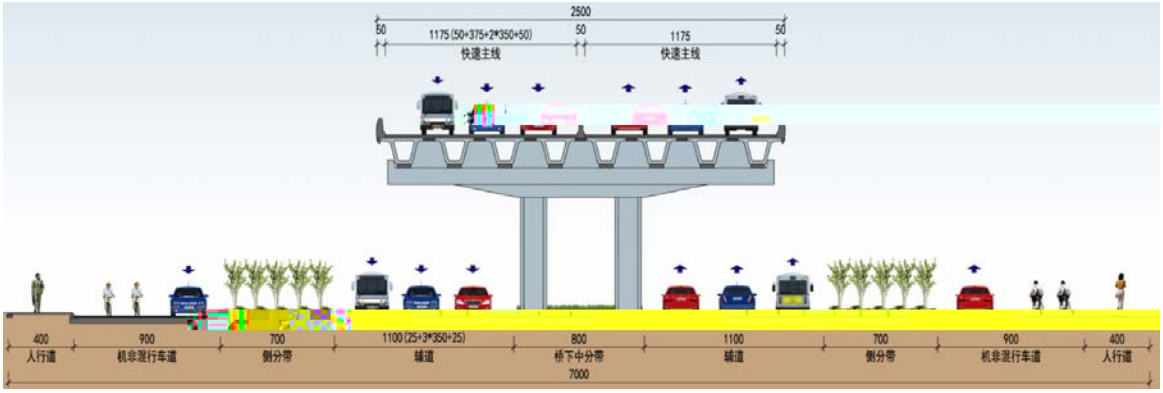
2.3.4.2

25m 0.5m

+2×11.75 +2×0.5m =25m

70m 8m +2×11m +2×7.0m

+2×9m +2×4m



2.3.4-4

6 6

Y

2.3.4-5

8m +2×11.75 +2×3m +2×7.5m

+2×2m +2×6.75m / + =70m

2.3.4-5

2.3.4.3

2.3.4.4

1

1

d400-d800

2 d600

d600 1000*600 d600

3

d400-d600

2

d800 w47H-1

2.3.4.4

2.3.4.2

2.3.4.5

4

2.3.4-1

			m		
1			25	T	
2			50		
3			11		
4			50	T	
5			32	T	

2.3.5

2.3.5.1

+

6 6

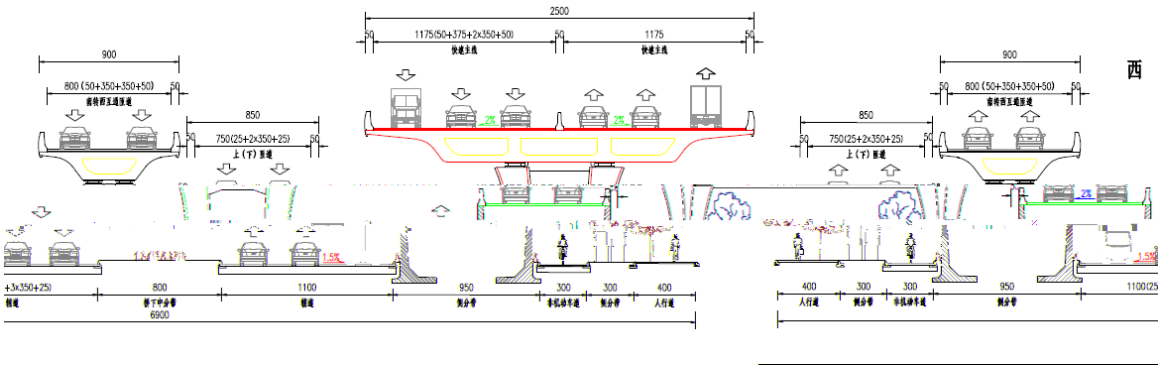
2.3.5-1

2.3.5.2

+

69m 8m +2×11.0

+2×9.5m +2×3m +2×3m +2×4m =69m



2.3.5-2

2.3.5-3

2.3.5.3

2.5.3.4

1

1 d600

2 d600

2

d800 3-8m

d400

2.3.5.5

1

2.3.5-1

					× (m)	(m)			
1				FG12+7 96.500	3 13	56.72	-A		

2.3.5.2

2.4

2.4-1

1		1 DN300 2 DN800 3 DN300
2		1 DN200 XFK8+880 XGK9+260 2 DN300 K330 3 - FD3
3		1 XFK9+260 2 3 XFK12+2630

		4 - FD3 FD1 K330 FD1
4		1 2 3

2.5

2.5.1

1 - -

FD1 FD2 FD3 FD4

2 - -

T 1.933km

3

4

1

2.5.2

-

-

4 7.83 37.89

3.567km 2.384km 4 2

7 5 2 178.2m 52310.81

2.5.2-1

2.5.2-1

		-	-		

1					
2		30 km/h	40 km/h	40 km/h	40 km/h
3					
4		3.53 hm^2	3.40hm^2	0.11hm^2	0.79hm^2
5		4.5m		2.5m	2.5m
1		FD2 FD3 FD4 FD1 1463.45m	1933m	4 1405.5m 1 485.364m	1 500.772m
2	m	50	70	90	90
3	%	7	6	8	8
1		3.5m	3.75m	3.5m	3.5m
2					
		3.73 m	10.3 m	0.17 m	0.28 m
		14.48 m			
		7.33 m	13.13 m	0.46 m	0.28m
		21.20 m			
3		98m^3	135m^3	128m^3	85m^3
		446m^3			
4		5650m	6300m	3400m	1452m
1		-A -			
2		2 1	3	4 1	1
1		-	3	5	-
1		-	11461m^2	63874m^2	6833m^2
		82168m^2			
1		52310.81			

2.6

-

-

4

2.6.1 -

2.6.1.1

1 FD1

FD1K0+99.202~FD1K0+198.402 99.2m

2 FD2 FD2K0+000~FD2K0+355.344 355.344m

3 FD3 FD3K0+000~FD3K0+592.799

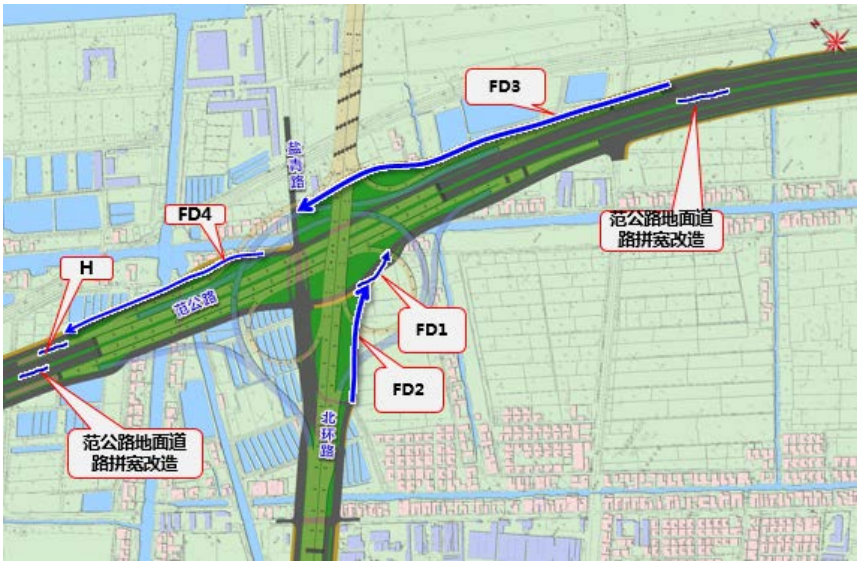
592.799m

4 FD4 FD4K0+000~FD4K0+416.110 416.110m

H HK0+952.823-HK0+992.281 39.458m

5 FGK6+049.283~FGK6+094.825

FGK7+141.938~FGK7+252.031 45.542m



2.6.1-1 -

2.6.1.2

1

1

30cm

10cm

/

2m

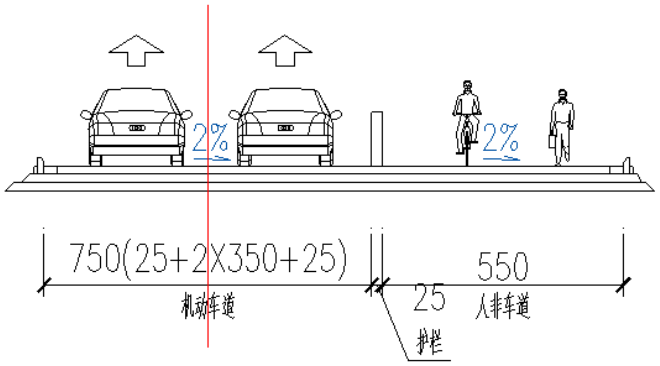
2m

2

1

FD1 **FD1K0+99.202~FD1K0+198.402**

FD2 FD1



2.6.1-2 FD1
FD1K0+99.202~FD1K0+198.402

FD3 FD3K0+000~FD3K0+

592.799

8.5m FD3 10.5m

0.5m +3.75m 2 +0.5m +2m

=10.5m 2.6.1-3

2.6.1-3
FD3 FD3K0+0000~FD3K0+592.799

2

FD2 FD2K0+000~FD2K0+355.344

FD4 FD4K0+000~FD4K0+416.110

FD2 FD4

13.25m 0.25m +3.5m 2 +0.25m

+5.5m =13.25m 2.6.1-3

2.6.1-2 FD2 FD4

FD2 FD2K0+000~FD2K0+355.344 FD4 FD4K0+000~FD4K0+416.110

2.6.1.3

1

-

1

2.6.1-1

	(cm)	
	4	SMA-13
Superpave	8	SUP-25
		PC-1
	36	4.5%
	20	3.0%

2

2.6.1-2

	(cm)	
Superpave	4	SUP-13
Superpave	6	SUP-20
		PC-1
	18	4.5%
	18	3.0%

3

2.6.1-3

	(cm)	
	6	
	3	M10
	20	C20
	15	

4

2.6.1-4

	(cm)	
	4	SMA-13
Superpave	6	SUP-20

5

C30

2

1m 30cm

2m

2m

2.6.1.4

- 2 1

2.6.1-5

				n×m	m	m	
1	-			1×20	26	14.25	
2				1×25	31	14.25	
3				/	/	14	

2.6.1.5

1

FD1 FD1K0+99.202~FD1K0+198.402

d600

FD2 FD2K0+000~FD2K0+355.344 1.5m d600

FD3 FD3K0+000~FD3K0+592.799

1.5m d600

FD4 FD4K0+000~FD4K0+416.110

1.5m d600

2

2.6.1.6

1

GB5768-2009

GB51038-2015

JTG D81 2017

A

A65

1 **-** **-**

42.0m 4.75m

2.6.2-3 FNK18+589.595~FNK18+761.816

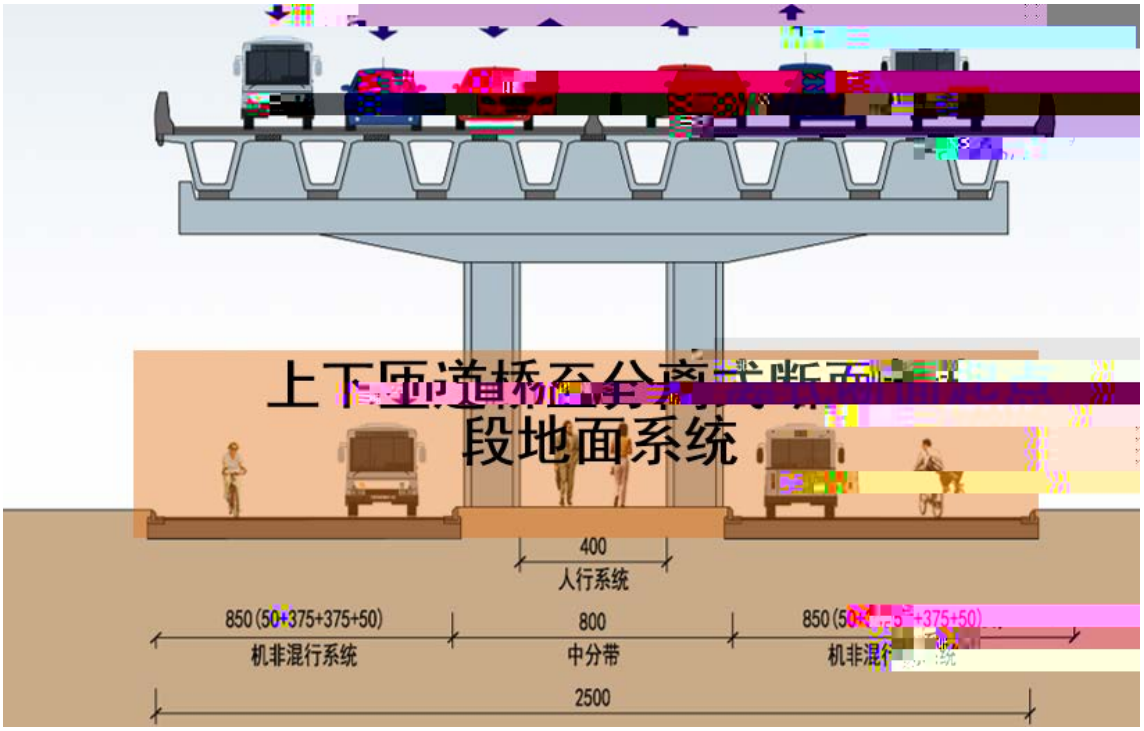
FNK18+761.816~

FNK19+503.206

25.0m 0.5m

+3.75m 2 +0.5m +8.0m 4m

+0.5m +3.75m 2 +0.5m =25.0m



2.6.2-4

FNK18+761.816~FNK19+503.206

FNK19+795.532~FNK19+993.262

T 33m 3.0m

+3.5m +1.5m +7.5m 25+2 350+25 +2m Åm350+350md

FNK18+980~FNK19+503

2

2.6.2.6

-

2.6.1.6

2.6.2.7

-

2.6.2.8

- -

2.6.1.8

2.6.2.9

- -

2.6.1.9

2.6.2.10

2.6.2-2

			m		
1			30	T	
2			50		
3			40	T	

2.6.3.2

1

-

2.6.1.2

2

1

25.0m 0.5m +0.5m

+ 3.75m +3.5m 2 +0.5m + 0.5m

+0.5m +3.5m 2 + 3.75m +0.5m

+0.5m =25.0m

9m 0.5m +0.5m +3.5m

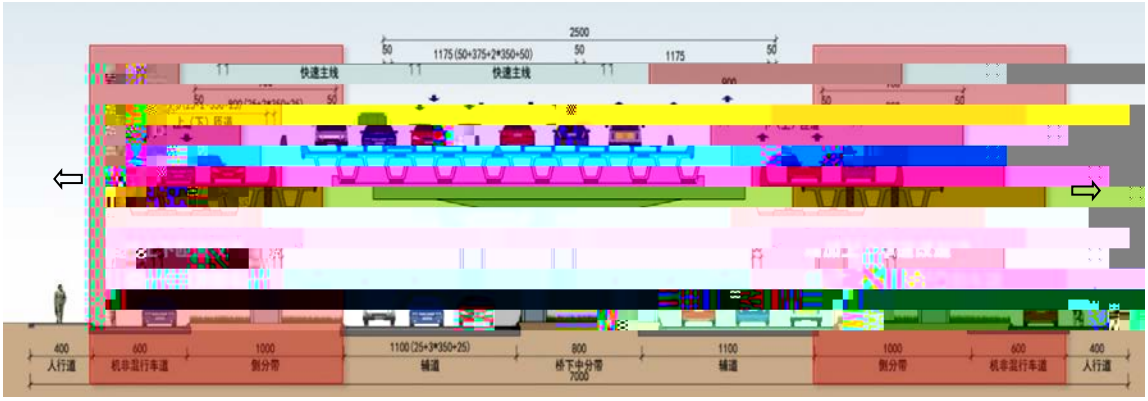
2 +0.5m +0.5m =9m

70.0m 4m +6m

+10m +0.25m +3.5m 3 +0.25m +8.0m

+0.25m +3.5m 3 +0.25m +10m

+6m +4m =70.0m



2.6.3-2

AK0+000~AK0+336.093 BK0+000~BK0+356.09

2

2.6.3-3

NWK0+73.636~NWK0+559 NEK0+232.752~NEK0+306.160

9.0m 0.5m +0.5m

+3.5m×2 +0.5m +0.5m =9.0m

70.0m -

3m +9.5m +6.75m +11.75m

+8.0m +11.75m +3m +7.5m +2m

+4.25m +2.5m =70.0m

- 3m +3.75m

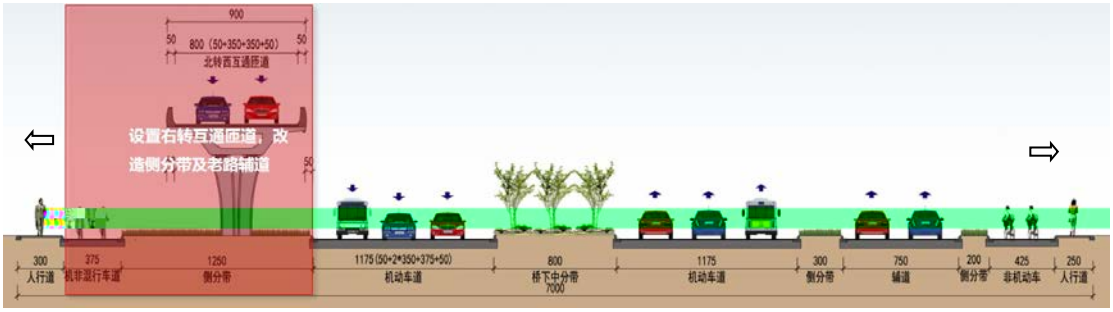
+12.5m +11.75m +8.0m +11.75m

+3m +7.5m +2m +4.25m +2.5m

=70.0m

⇦ ⇨

2.6.3-4 - NWK0+000-NWK0+300



2.6.3-5 - NWK0+300-NWK0+559

2.6.3.3

2.6.3-1

	4cmSMA-13	
	4cm	

2.6.3-2 EPS

	(cm)	
	4	SMA-13
Superpave	8	SUP-25
		PC-1
	36	4.5%
EPS		

2.6.3-3

	(cm)	
	4	SMA-13
Superpave	8	SUP-25
C30	40	
C30	20	
	20	

2.6.3.4

2 1

1

1 4 1405.5m

2 503.6m

3

1 485.4m

73.5m

2

0.5m(× 0.5m ´+8+(

1

2.6.3-7 1

2.6.3-4 1<29B4683an <</MCID 13 >>BDC /T21 1 Tf 0 T

		3	3×35	9	2		
		4	3×30	9	2 1.8		
	NE	1	3×24.5	9.495 9.882	1.8		

2.6.3.5

1

d400

d600-d800

d400

d400

d600

2

2.6.3.6

-

2.6.1.6

2.6.3.7

2.6.3.8

- 2.6.1.8

2.6.3.9

- 2.6.1.9

2.6.3.10

4

2.6.3-5

			m		
1			25	T	
2			50		
3			11		
4			50	T	
5			32	T	

2.6.4

2.6.4.1

1 SE SEK0+220.162~SEK0+720.935 500.773m

2 FGK12+756.424~FGK12+912.981

156.557m

3 P PK0+87.194~PK0+192.949 105.755m

4 YK6+231~YK6+305.400 74.4m

5 FGK12+657.208~FGK13+154.232

497.024m

2.6.4-1

2.6.4.2

1

:

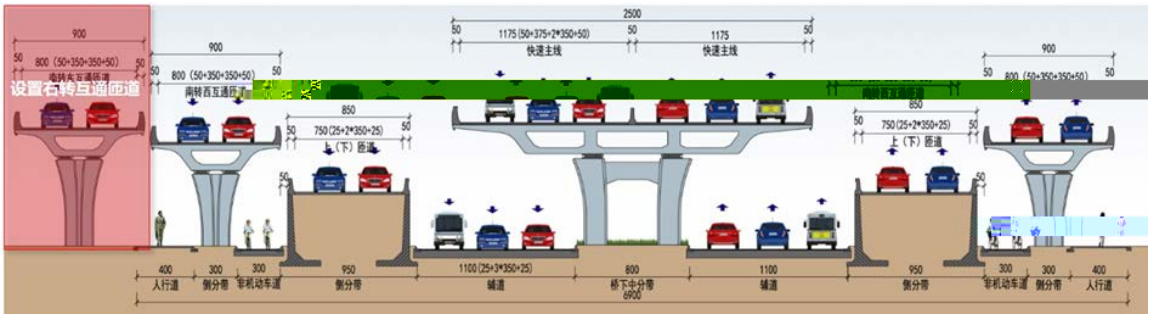
1.5m 100cm

60cm C30

2

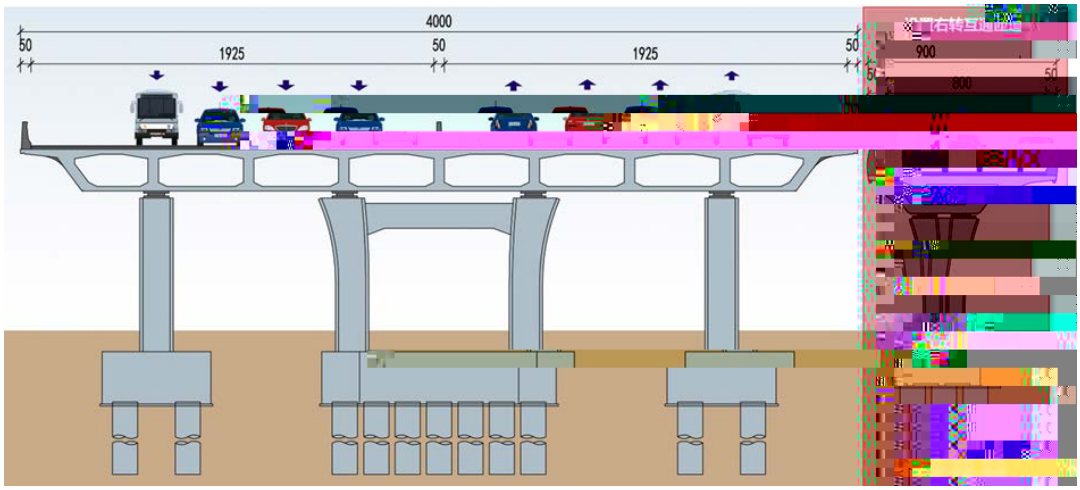
9.0m 0.5m +0.5m

+3.5m 2 +0.5m +0.5m =9.0m



2.6.3-2

(SEK0+220.16~SEK0+500)



2.6.4-3

(SEK0+500~SEK0+720.935)

2.6.4.3

2.6.3.3

2.6.4.4

1 1 P

1 1 1

1

1 1 500.772m

2 165.9m

3 P 91.798m

4 80.4m

5 3×13m

2

0.5m( )+8m(

)+0.5m( )=9m

2.6.4-4

2.6.4-1

m m m ' H e# 8 • R1„(H

-

2.6.1.6

2.6.4.7

2.6.4.8

- 2.6.1.8

2.6.4.9

- 2.6.1.9

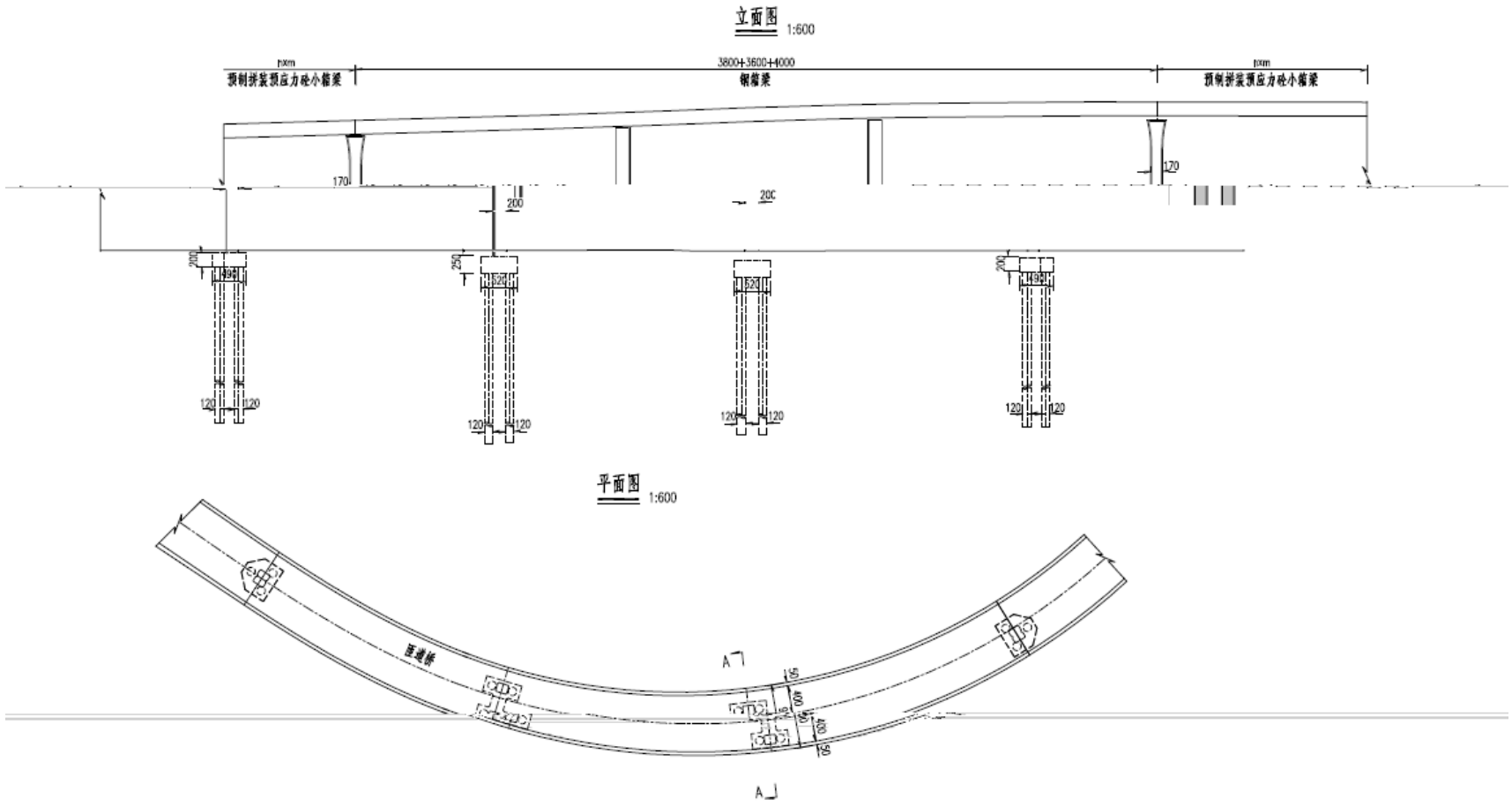
2.7

1

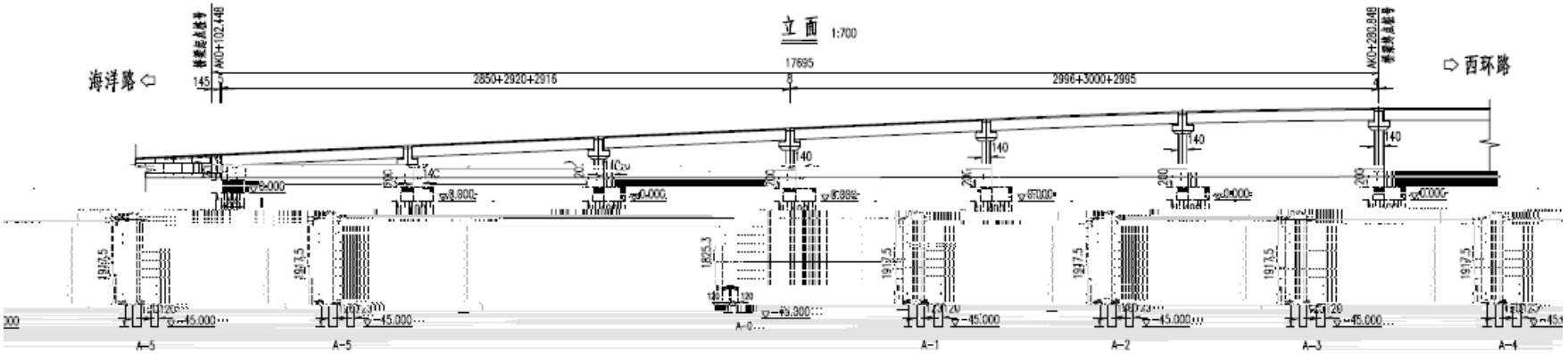
1:1.5 1:1.5 1:1

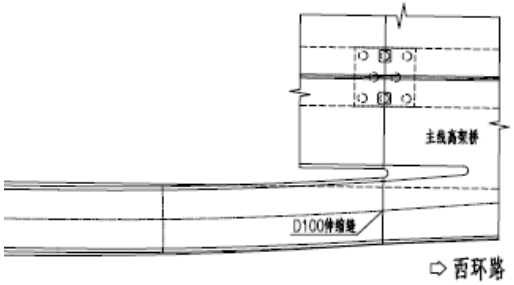
5.0m

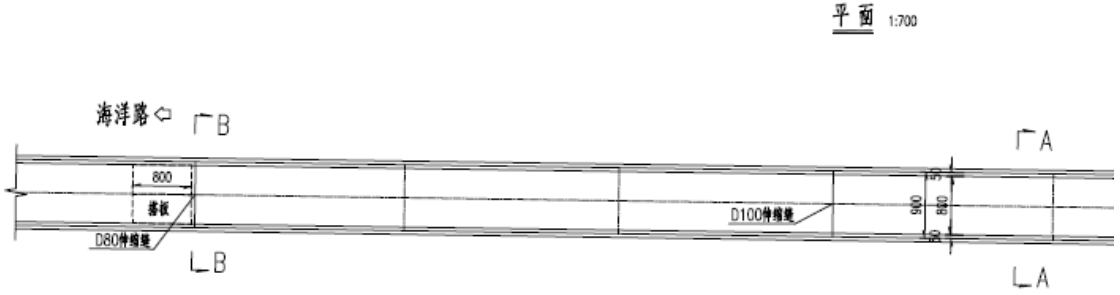
3

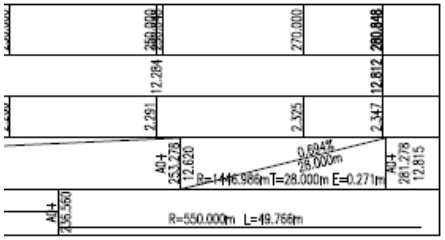


2-1









里程桩号 (m)	AK0+100.848	AK0+110.000	130.000	132.448	150.000	161.848	170.000	180.000	210.000	220.848	
设计标高 (m)	5.803		7.106		8.438		9.771		11.140		
地面标高 (m)		2.175	2.168	2.175	2.195	2.219	2.242				
竖曲线	4.564% 225.278m										
平曲线	R=∞ L=236.560m										

2-2

2.8

1

3 4 5

7.83 37.89 2.8-1

2.8-1

		hm²	hm²
-		3.53	21.0
-		3.4	5.27
		0.11	0.006
		-	5.17
		-	4.69
		0.79	1.75
		7.83	37.89

2

2.8-1

50

2

2.8-2

				200m
2	FNK19+400-FNK19+540		23	/
	NWK0+000-NWK0+200		27	/

2.9

21.20 m 14.48 m 14.48 m 6.72 m

2.9-1 m^3

-	7.33	3.73	3.73	3.6	-
-	13.13	10.3	10.3	2.83	-

2.11-1 2.11-2

pcu/d

		2022	2028	2036
		3400	4278	5448
		1567	1969	2505
		3053	3841	4891
	-	10427	13113	16695
	-	3107	3909	4978
		6067	7631	9716
		5167	6721	8792
		4493	5847	7652
		3833	4984	6518
		1573	2260	2853
		2527	3660	4593

-

	2.66%	6.49%	5.73%	8.55%	5.46%	100.0%
	3.40%	6.11%	5.11%	8.05%	5.14%	100.0%
	4.38%	5.61%	4.28%	7.38%	4.71%	100.0%

-

	5.66%	6.37%	6.25%	1.09%	0.67%	100.0%
	5.39%	6.00%	5.57%	1.03%	0.63%	100.0%
	5.03%	5.50%	4.67%	0.94%	0.58%	100.0%

3

	5.73%	8.42%	0.00%	0.00%	0.00%	100.0%
	5.45%	7.93%	0.00%	0.00%	0.00%	100.0%
	5.10%	7.27%	0.00%	0.00%	0.00%	100.0%

2028	86.62%	5.45%	7.93%	0.00%	0.00%	0.00%	100.0%
2036	87.63%	5.10%	7.27%	0.00%	0.00%	0.00%	100.0%

2.12

2.12.1 2013~2030

2013~2030

4.0 /

16.3%

1

- -

4-7

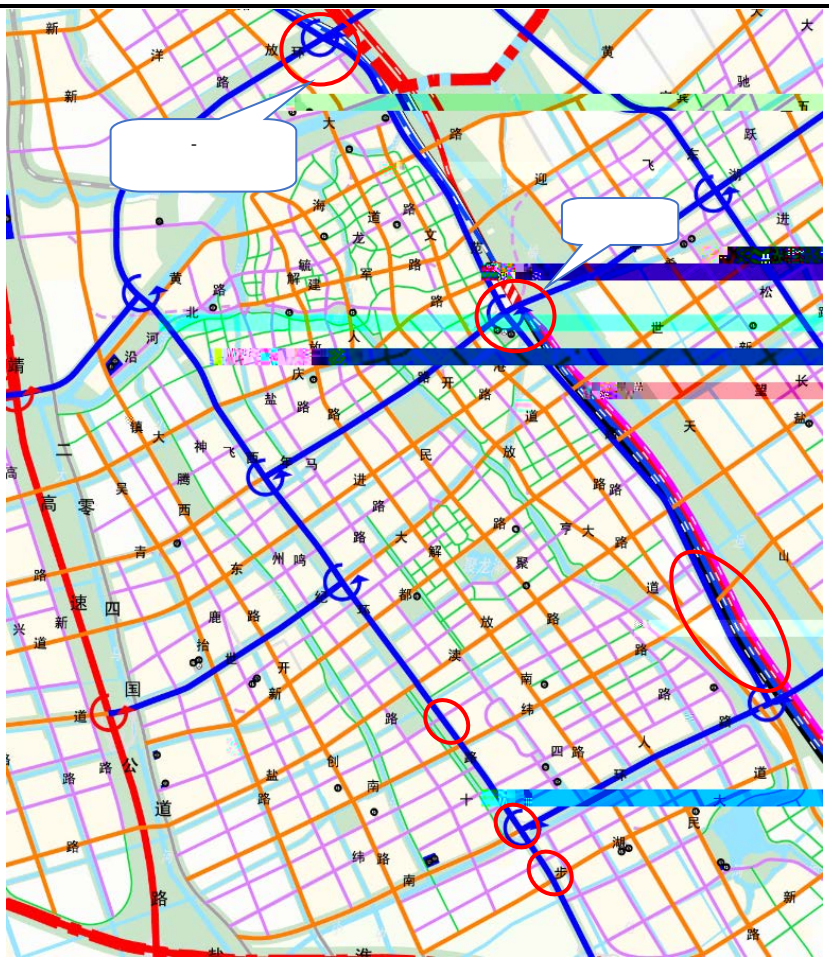
2

-

- -

-

-



2.12.1-1 2013-2030

2013-2030

2.12.2 2013-2030

2013-2030

2017

3.14km/km

144.36

226

2.12.2-1

			(km)	m		
1		-	6.18	70		
2		-	11.14	70		
3	-	-226	19.89	70		
4		-	17. 48	70		
			54.69			

2013-2030

-

-

2013-2030

2.12.3 2006-2020

2006-2020

2006-2020 2010

2020 476.20 7143.00 475.13 7127.00

421.53 6323.00

2006-2020 2020

848145.5 1272.22 763406.7 1145.11

2020 243452.7 365.18

23418.7 35.13

320900202000030

- 21.2443 3.5265

320900202000030 1137

2020

176505.2

9092.3

2006-2020 2006-2020

2.12.4

[2018]74

[2020]1

3

-

1414.353m

539.773m -

FNK18+060.445-FNK18+900

839.555m

2.12.4-1

						m	
		1000 5000 1000 5000 1000 100	-	FD1	FD1K0+99.202~FD1K0+198.402	99.2	-
				FD2	FD2K0+000~FD2K0+355.34	355.344	-
				FD3	FD3K0+000~FD3K0+592.79	592.799	-
				FD4	FD4K0+004.097~FD4K0+416.110	367.01	45
					SEK0+220.162~SEK0+720.935	500.773	39
			-		FNK18+060.445~FNK18+900	813.50	26

[2020]1

“

”

-

-

2.12.4-2

Ð w"² „2?•N w"ÝœD 2S •
Gü9 1 <19 4k?.819

2.12.4-3

						m
		-	FD1	FD1K0+99.202~FD1K0+198.402	99.2	-
			FD2	FD2K0+000~FD2K0+355.34	355.344	-
			FD3	FD3K0+000~FD3K0+592.79	592.799	-
			FD4	FD4K0+004.097~FD4K0+416.110	367.01	45
				SEK0+220.162~SEK0+720.935	500.773	39
			-	FNK18+060.445~FNK18+900	813.50	26
			-	FNK18+900-FNK19+822 FNK19+842-FNK19+993.262	1093.262	24

2.12.5 “ ”

1

[2020]1

- -

FNK18+060.445-FNK18+900

[2020]1

-

- FNK18+060.445-FNK18+900

2

3

4

2019

- -4

2012 2013

1

HJ2.2-2018 6.4.1.1

SO_2 NO_2 PM_{10} $PM_{2.5}$ CO O_3

2019

$PM_{2.5}$ O_3

2

1 -

N2 N5 N6

2

N10 N11

N12

N10 N11

N10 N11

3 -

4

N8

N8 N9

N8 N9

3.1

3.1.1

32

34 ~34 28 119 27 ~120 54

1.7 45.53

75% 582 56%

10

1

3.1.2

5 8 3

8.5

1

4000

0.7 7000

4 5 1 1.5

3.1-l

3.1.3

13.7 14.4 -17.3 40.8 1

0 1 7 26.7 27.5 40 55

900 1060mm

54 56%

2.9 3.9m/s

3.1.4

760 1400m Q1 Q4

3.1.5

3.6 1991 11 5

5.1 25km

GB18306-2015

0.10 0.15g

0.40 0.45s

4.1

4.1.1

2019 2019

4.03 2018 0.53 $PM_{2.5}$ 39 /

2018 4.88% 78.1% 2018

5.8 $PM_{2.5}$

2019 4 /

24 / PM_{10} 68 / 8

28-225 / 0.2-1.6 /

2019 90 195 69

10 1 $PM_{2.5}$ PM_{10}

2019 1-2 11 -12

$PM_{2.5}$ O_3

4.1.2

2019 2019

9 34 100%

88.9% 88.2% 11.1 8.8

44.4 17.6 10

8 20 30

52 82.7% 4.7

14 3

1

2019 9 8 88.9%

1 11.1%

44.4

2

2019 34 8 44.4

4.1-1

4.1-1

-	N2-1		2 1 20min	1	FD4K0+240	107	48m
	N2-2			1	FD4K0+240	162	
	N5			1	FD2K0+020	37	26m
	N6-1			- 1	FD3K0+360	135	40m
	N6-2			- 5			
	N6-3			- 10			
	N8-1			1	SEK0+550	14	13m
	N8-2			3			
	N8-3			5			
	N10-1			1	AK0+260	60	51m
	N10-2			3			
	N10-3			5			
	N11-1		2 1 20min	1	BK0+060	140	131m
	N11-3			3			
	N11-4			5			
	N12				NWK0+440	95	

				2	1			73m
		N13		1 20min	1	RD7K0+020	42	51m

2020 7 1 2020 7

2 GB3096-2008

4.1-2 dB(A)

							dB A	
				Leq(A)	dB(A)	dB A		
N2-1		1		51.8	51.7	60	-	-
				50.1	49.6	50	0.1	-
N2-2		1		50.4	50.5	60	-	-
				49.1	48.7	50	-	-
N5		1		66.2	64.8	70	-	-
				58.0	59.7	55	3.0	4.7
N6-1		- 1		52.9	52.6	70	-	-
				50.1	50.4	55	-	-
N6-2		- 5		58.5	58.2	70	-	-
				53.7	54.0	55	-	-
N6-3		- 10		59.6	59.0	70	-	-
				55.1	55.6	55	0.1	0.6
N8-1		1		63.9	63.7	70	-	-
				57.9	58.5	55	2.9	3.5
N8-2		3		65.1	65.1	70	-	-
				58.4	59.4	55	3.4	4.4

N8-3				65.4	65.5	70	-	-
		5		61.1	61.3	55	.1	.3
N10-1				52.9	51.3	6	-	-
		1		46.4	47.4			-
N10-2				56.5	56.2	0		-
		3		50.1	50.3	0	0.1	.3
N10-3				60.1	58.9	0	0.1	-
		5		53.5	53.9	0	3.5	.9
N11-1				50.5	50.7	0		-
		1		/	/			-
N11-2				51.5	52.3	60	-	-
		3		/	/	50	-	-

					15	12	85
			7.2		30	26	198
					18	6	73
	N5		7.1		83	22	193
					29	8	87
			7.2		73	29	207
					23	2	65
-	N8		7.1		85	26	342
					28	11	83
			7.2		81	33	324
					23	20	61
	N10		7.3		45	53	562
					34	21	162
			7.4				

1

2

4 4.1-4

4.1-4

3

1

2

4.1.4.1

1

-

2

4.2

1

4-2

1			
2			
3			3.5265
4			- 1448.5m
			- FNK18+060.445-FNK18+900 839.50m
			539.773m

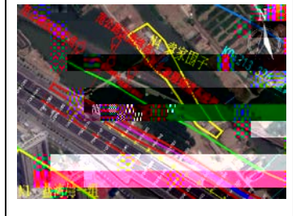
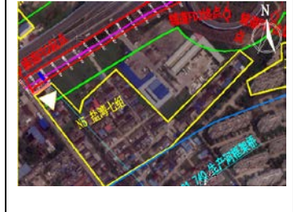
2

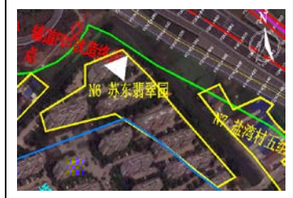
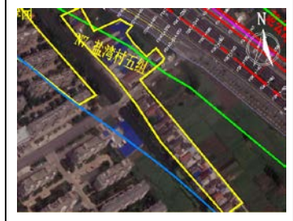
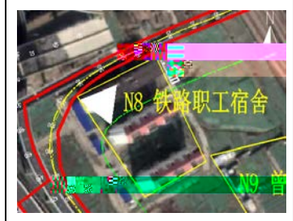
7 5 2 178.2m

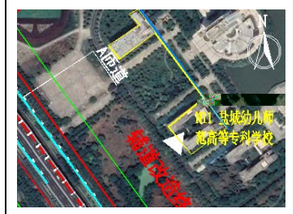
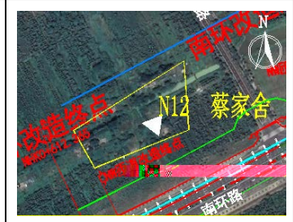
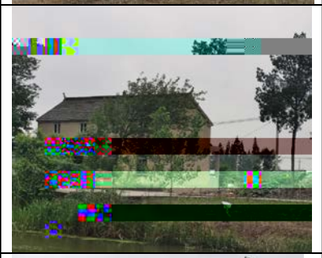
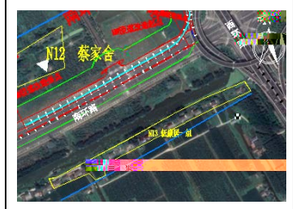
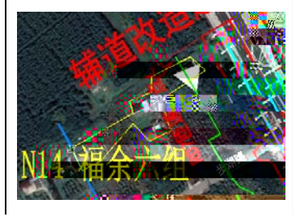
6 1 1

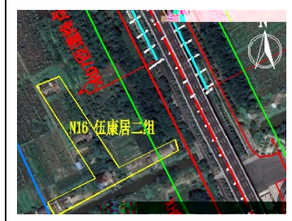
8

200

							/ m		/		/ m	/m	/					
N1	-		FGK6+049.283-FGK6+094.825		35		71/36	2	63/2520	0	71/36	0.19	63/2520	2	- 2 -	35	
			HK0+952.823-HK0+992.281								90/89	0.19						
			FD4K0+350-FD4K0+416.110								101/91	0.19						
N2			FD4K0+252-FD4K0+285		1-2		75/41	2	5/20	0	188/102	0.40	5/20	2	- 2 -	1-2	
N3			FD4K0+006-FD4K0+288		1-2		134/45	2	12/48	0	172/162	0.73	12/48	2	- 2 -	1-2	
			FD2K0+060-FD2K0+180				47/11	4a	1/4		73/63	0.40	1/4	4a				
							88/53	2	11/44		114/104		11/44	2	-			
N4			FD4K0+060-FD4K0+180		1-2		79/41	2	8/32	0	46/40	0.40	6/24	2	- 2 -	1-2	
N5			FD2K0+004-FD2K0+358		1-2		32/18	4a	4/16	2	24/18	0.37	2/8	4a	- -	1-2	
							75/48	2	56/224		50/44		56/224	2				

							/ m		/		/ m	/m	/					
N6			FD3K0+170-FD3K0+365	-	3 6 10		86/39	2	192/768	0	133/128	0.33	192/768	2	- -	3 6 10		
N7			FD3K0+000-FD3K0+250		1-2		45/5	4a	10/40	0	80/70	0.33	10/40	4a	- -	1-2		
							105/66	2	6/24		137/127		6/24	2				
N8			SEK0+400-SEK0+600		5 6 10		41/12	4a	10/10	0	10.7/5.9	15.28	10/10	4a		5 6 10		
							64/35	2	72/288		32.4/27.6		72/288	2				
N9			SEK0+280-SEK0+680		1-2		119/101	2	10/40	0	109/99	13.39	10/40	2		1-2		
N10			BK0+260-BK0+356		15		78/43	2	240/960	0	78/68	2.14	240/960	2	:	15		
			AK0+020-BK0+160								100/90	6.10						

							/ m		/		/ m	/m	/					
N11		( )	AK0+000-BK0+180		5		159/121	2	/	0	136/126	6.10	/	2	:	5	
			BK0+250-BK0+356								176/166	2.14						
N12			NWK0+360-NWK0+559		1-2		112/76	2	3/12	0	85/70	5.0	3/12	2	:	1-2	
N13			NWK0+000-NWK0+559		1-2		127/90	2	15/60	0	148/140	5.0	15/60	2	:	1-2	
N14			RD7K0+055-RD7K0+070		1-2		115/91	2	1/4	0	96/81	10.38	1/4	2	:	1-2	
			LU7K0+343-LU7K0+353								132/122	10.0						
N15			LU7K0+310-LU7K0+330		N15													

							/ m		/		/ m	/m	/					
N16			RD7K0+330 - RD7K0+359 LU7K0+000- LU7K0+080		1-2		142/106	2	2/8	0	122/106 149/139	0.6 1.4	2/8	2	:	1-2		

	CO	10	4	—	
	TSP	—	0.30	0.20	

3

8

( ) GB3838-2002

GB3838-2002

SL63-94

5.1-4 mg/L

	pH	DO					BOD_5	SS^*
	6-9	3	10	1.5	0.3	0.5	6	60
		5	6	1.0	0.2	0.05	4	30

*

1

GB12523

2011

5.1-5 dB A

70	55

2

GB16297-1996 2

5.1-6

		1.0	GB16297-1996 2
[a]		0.008ug/m^3	
(NMHC)		4.0	

3

GB/T18920-2020

5.1-7 mg/L

	pH			BOD_5		
	6-9		000	0	8	0.5

6.1

6.1.1

6.1.2

6.1.2.1

1

-

30cm 20cm

2

1

2

30cm

10cm

I /

/ 90% 20cm

6% 93% 80cm

95%

II

87%

90% 40cm

92%

/

90%

87%

1.5m 100cm

60cm C30

- -

30cm

1m 3

3

4

6.1.2.2

6.2

6.2.1

6.2.1.1

JTGB03-2006 (HJ2034-2013)

6.2-1

6.2-1 5m dB A

	92	92	86	83	74	75	74	85	90	87

6.2.1.2

THC TSP BaP

1

50m 8.90mg/m^3 100m 1.65mg/m^3 150m

0.3mg/m^3 TSP

50~200m

200m GB3095-2012

2

50m TSP

11.625mg/m^3 100m TSP 9.694mg/m^3 150m TSP

5.093mg/m^3

70%

3

120 140

100 120 70

150L

0.8 5 200

24m^3/d 3600m^3 JTGB03-2006

COD_{Cr} 500mg/L BOD_5 250mg/L

SS300mg/L NH_3-N 30mg/L 30mg/L 6.2-3

6.2-3

		COD_{cr}	BOD_5	SS	NH_3-N	
(mg/L)	—	500	250	300	30	30
(kg/d)	24000	12	6	7.2	0.72	0.72
(t)	3600	1.8	0.9	1.08	0.108	0.108

3

SS

SS 80-160mg/L 100m

SS 50mg/L

1.20-1.46 32%-50% pH 6-7

4

2

SS

6.2.1.4

1

200 0.5kg/d

100kg/d 5

15t

2

3926m^2

0.1m^3

392.6m^3

3

6.65 m^3

4

4 2 5

226m^3 220m^3

446m^3

6.2.2

6.2.2.1

1

/d

$$N_{d,j}=\frac{n_d}{\sum(\alpha_j\beta_j)}\cdot\beta_j$$

$N_{d,j}$—— j /d j=

n_d—— pcu/d

$_j$—— j JTG B01-2014 1 1.5 1 1.5 2.5 4

$_j$—— j %

/h

$N_{h,j(d)} = N_{d,j} \cdot \gamma_d / 16$ $N_{h,j(n)} = N_{d,j} \cdot (1-\gamma_d) / 8$

$N_{h,j(d)}$—— j /h

$N_{h,j(n)}$—— j /h

$_d$—— 16 0.8

6.2-4 /h

			2022		2028		2036	
-			134	67	172	86	224	112
			10	5	11	5	12	6
			12	6	14	7	17	8
			62	31	79	39	103	51
			4	2	5	3	5	3
			5	3	6	3	8	4
			120	60	154	77	201	101
			9	4	10	5	11	5
			10	5	12	6	15	7
-			303	152	390	195	511	255
	-		22	11	25	13	28	14
			65	33	83	41	106	53
			90	45	116	58	152	76
	-		7	3	8	4	8	4
			19	10	25	12	32	16

			176	88	229	115	302	151
			0	0	0	0	0	0
			11	5	13	7	16	8
			72	36	104	52	132	66
			0	0	0	0	0	0
			4	2	6	3	7	4
			116	58	168	84	213	106
			0	0	0	0	0	0
			7	4	10	5	11	6

2

6.2-5

80% -

30km/h -

40km/h 40km/h 40km/h

6.2-5 km/h

			2022		2028		2036	
-			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
			30.0	24.0	30.0	24.0	30.0	24.0
-			40.0	32.0	40.0	32.0	40.0	32.0
	-		40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
	-		40.0	32.0	40.0	32.0	40.0	32.0

			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0
			40.0	32.0	40.0	32.0	40.0	32.0

3

(JTG B03-2006)P86 48-140m/h

20-80m/h

L_0 $E_1=25+27\lg V_1$

L_0 $E_2=38+25\lg V_2$

L_0 $E_3=45+24\lg V_3$

L0 Ei--- km/h

Vi km/h

6.2-6

	S	M	L
		3.5t-12t	

6.2-7 dB(A)

			2022		2028		2036	
			64.9	62.3	64.9	62.3	64.9	62.3
			74.9	72.5	74.9	72.5	74.9	72.5
			80.5	78.1	80.5	78.1	80.5	78.1
			64.9	62.3	64.9	62.3	64.9	62.3
-			74.9	72.5	74.9	72.5	74.9	72.5
			80.5	78.1	80.5	78.1	80.5	78.1
			64.9	62.3	64.9	62.3	64.9	62.3
			74.9	72.5	74.9	72.5	74.9	72.5
			80.5	78.1	80.5	78.1	80.5	78.1
			6 0	65.6	6 0	65.6	6 0	65.6
	-							
			83.4	81.1	83.4	81.1	83.4	81.1
-			6 03	65.6	6 03	65.6	6 03	65.6
	-		78.1	75.6	78.1	75.6	78.1	75.6
			83.4	81.1	83.4	81.1	83.4	81.1
			68.3	65.6	68.3	65.6	68.3	65.6
			78.1	75.6	78.1	75.6	78.1	75.6
			83.4	81.1	83.4	81.1	83.4	81.1
			83.4	81.1	83.4	81.1	83.4	81.1
			6 03	65.6	6 03	65.6	6 03	65.6
			78.1	75.6	78.1	75.6	78.1	75.6
			83.4	81.1	83.4	81.1	83.4	81.1

			68.3	65.6	68.3	65.6	68.3	65.6
			78.1	75.6	78.1	75.6	78.1	75.6
			83.4	81.1	83.4	81.1	83.4	81.1
			68.3	65.6	68.3	65.6	68.3	65.6
			78.1	75.6	78.1	75.6	78.1	75.6
			83.4	81.1				

	NO_2	**1.56**	1.56	1.56	1.66	2.19	2.34	2.74

6.2-9

6.2-9

(mg/m·s)	2022		2028		2036	
	CO	NO_2	CO	NO_2	CO	NO_2
-	0.14	0.01	0.18	0.00	0.20	0.01
-	0.17	0.01	0.21	0.01	0.26	0.02
	0.40	0.01	0.47	0.02	0.58	0.02
	0.05	0.00	0.07	0.00	0.09	0.00

6.2.2.3

30

40~60

6.2-10

6.2-10 mg/L

	( )						
	0 15	15 30	30 60	60 120	120		
COD	170	130	110	97	72	170	115.08
BOD_5	28	26	23	20	12	28	21.8
	23	17.5	6	1.5	1	23	9.8
SS	360	280	200	140	120	360	220

6.2-10 (GB8978-1996) 4

1 (GB8978-1996)

4

6.2.2.4

mg/m³	**t/a**	**mg/m³**

	1 1 2 3 4

GB/T

18920-2020

SS

2

SS

50m

5mg/L 250m

3

SS pH 8 10

GB/T18920-2020

8.1.1.2

1

SS

GB/T18920-2020

2

8.1.2

1

8.1.2-1 dB(A)

	5m	10m	20m	40m	60m	80m	100m	150m	200m	300m
	90	84.0	78.0	71.9	68.4	65.9	64.0	60.5	58.0	54.4
	86	80.0	74.0	67.9	64.4	61.9	60.0	56.5	54.0	50.4
	84	78.0	72.0	65.9	62.4	59.9	58.0	54.5	52.0	48.4
	86	80.0	74.0	67.9	64.4	61.9	60.0	56.5	54.0	50.4
	90	84.0	78.0	71.9	68.4	65.9	64.0	60.5	58.0	54.4
	87	81.0	75.0	68.9	65.4	62.9	61.0	57.5	55.0	51.4

8.1.2-1 20m

200m

35m 300m

2

8.1-1

8.1-2

1

4.5dB(A)

4a

1.4dB(A) 16.4dB(A) 2

0.9dB(A) 10.9dB(A)

100 10.6dB(A)

8.1.2-2 3dB(A)

22:00-6:00

8.1.2-2 dB(A)

	m							
	30	71.4	69.4	70.0	70	55	1.4	16.4
	60	60.9	58.9	59.5	60	50	0.9	10.9
	80	62.7	60.7	61.3	60	50	2.7	12.7
	100	60.6	58.6	59.2	60	50	0.6	10.6
	150	57.0	55.0	55.5	60	50		7.0
	200	54.3	52.4	52.9	60	50		4.3

1

2

3

4

8.1.3

1

60%

$$Q = 0.123\left(\frac{V}{5}\right)\left(\frac{W}{6.8}\right)^{0.85}\left(\frac{P}{0.5}\right)^{0.75}$$

Q— kg/km.

V— km/hr

W— t

P— kg/m^2

4 5

70% 8.1.3-1 4 5

TSP 20 50m

8.1.3-1

		5	20	50	100
TSP mg/m^3		10.14	2.89	1.15	0.86
		2.01	1.40	0.67	0.60

3

60m [a] 0.00001mg/m^3

0.01 g/m^3 0.01mg/m^3 0.01mg/m^3 THC

0.16mg/m^3 0.16mg/m^3

4

CO NO

NO2 THC

5

5

60m

P

1

2

3

3

4

5

8

8.1.4

1

20.62 m 13.96 m 13.96 m 6.65 m 226m^3

2

200

0.5kg/ d 100kg/d

8.1.5

8.1.5.1

1

7.83 37.89

3.53

82168m^2

8.1.5.2

1

1

-

1414.353m

539.773m -

FNK18+060.445-FNK18+900

839.555m 3

8.1.5-1

1000

5000

				FD4	FD4K0+004.097~ FD4K0+416.110	367.01	45
					SEK0+220.162~ SEK0+720.935	500.773	39
			-		FNK18+060.445~ FNK18+900	813.50	26

2

2.12.4

- -

8.1.5-1

100m

GB/T18920-2020

GB/T18920-2020

3

1

2

8.1.5.3

1

43 20 23

8.1.5-2

8.1.5-2

1

3.5m 7m 20

8.2

8.2.1

1

30

40~60

2

8.2.2

1

1 i

$$L_{eq}(h)_i = (\overline{L_{OE}})_i + 10\lg(\frac{N_i}{V_i T}) + 10\lg(\frac{7.5}{r}) + 10\lg(\frac{\psi_1 + \psi_2}{\pi}) + \Delta L - 16$$

$L_{eq}(h)_i$—— i dB(A)

$(L_{OE})_i$—— i V_i km/h 7.5m A dB(A)

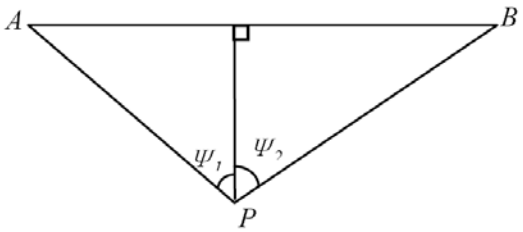
N_i—— i /h

r—— m r 7.5m

V_i—— i km/h

T—— T=1h

1 2—— 8.2-1



8.2.2-1 A-B P

L—— dB(A)

$$\Delta L = \Delta L_1 - \Delta L_2 + \Delta L_3$$

$$\Delta L_1 = \Delta L \quad + \Delta L$$

$$\Delta L_2 = A_{atm} + A_{gr} + A_{bar} + A_{misc}$$

L_1—— dB(A)

L —— dB(A)

L —— dB(A)

$(\overline{L_{OE}})$i

3 2

a) A_{bar}

A_{bar}

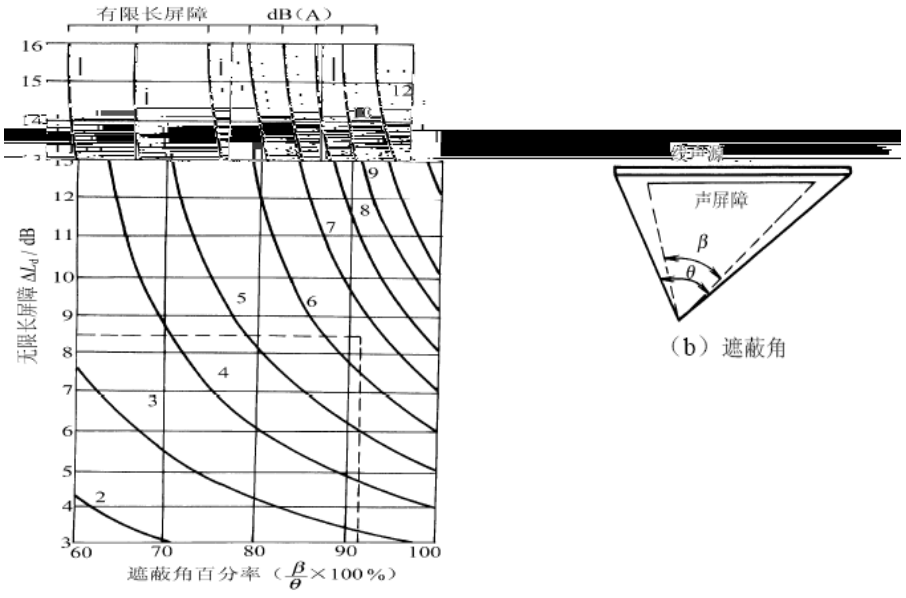
$$A_{bar}=\begin{cases}10\lg[\dfrac{3\pi\sqrt{1-t^2}}{4arctg\sqrt{\dfrac{1-t}{1+t}}}] & t=\dfrac{40f\delta}{3c}\le 1 \quad dB\\ 10\lg[\dfrac{3\pi\sqrt{t^2-1}}{2\ln(t+\sqrt{t^2-1})}] & t=\dfrac{40f\delta}{3c}>1 \quad dB\end{cases}$$

f—— Hz f=500Hz

—— m

c—— m/s

A_{bar} 8.2.2-3 A_{bar}

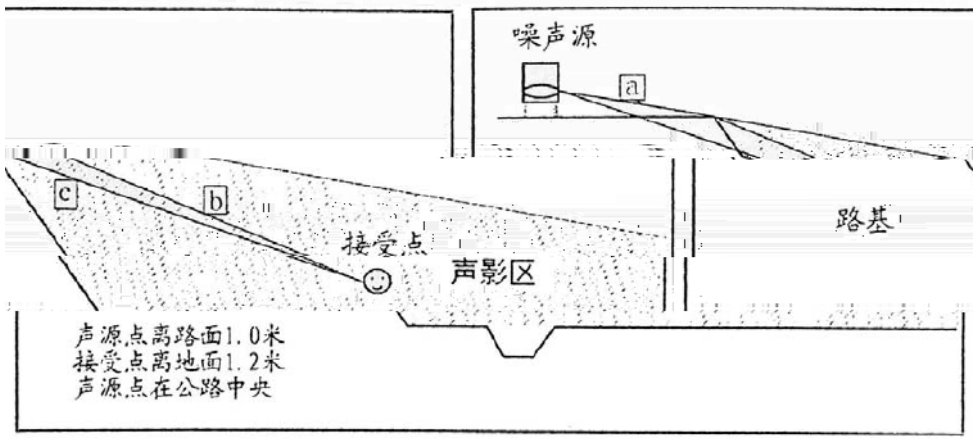


8.2.2-3

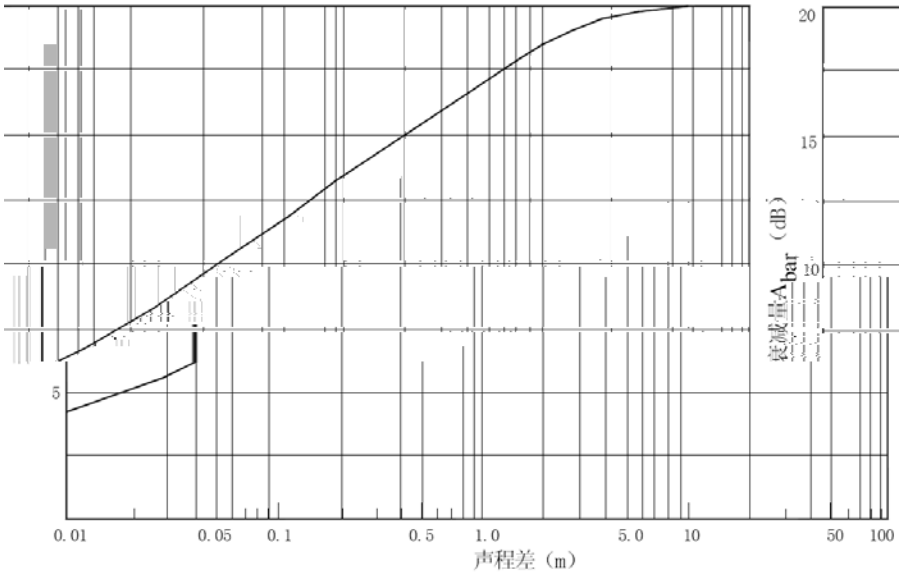
A_{bar}

A_{bar} =0 A_{bar}

8.2.2-4 -c 8-4 A_{bar}



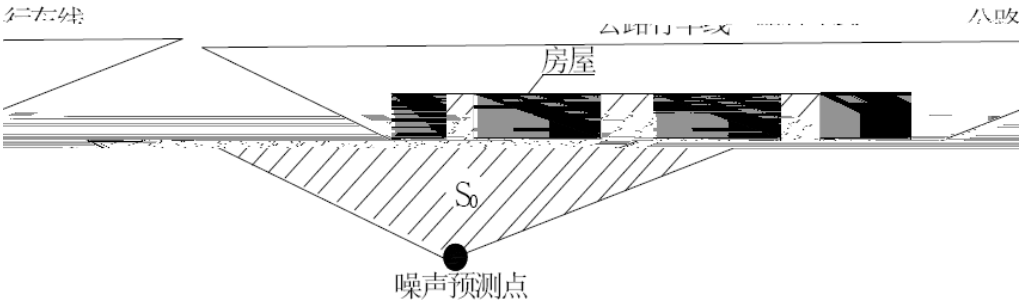
8.2.2-4



8.2.2-5 Abar f=500Hz

8.2.2-6

8.2.2-7



8.2.2-6

8.2.2-3

S/S_0	A_{bar}
40%　60%	3 dB(A)
70%　90%	5 dB(A)
	1.5 dB(A)

b)　　A_{atm}

$$A_{atm} = \frac{a(r - r_0)}{1000}$$

a

8.2.2-4　　500Hz

15　　79%　　a=2.4

8.2.2-4　　a

		a　dB/km							
		Hz							
	%	63	125	250	500	10　0	2000	4000	8000
10	70	0.1	0.4	1.0	1.9	3.7	9.7	32.8	117.0
20	70	0.1	0.3	1.1	2.8	5.0	9.0	22.9	76.6
30	70	0.1	0.3	1.0	3.1	7.4	12.7	23.1	59.3
15	20	0.3	0.6	1.2	2.7	8.2	8.2	28.8	202.0
15	20	0.1	0.5	1.2	2.2	4.2	10.8	36.2	129.0
15	80	0.1	0.3	1.1	2.4	4.1	8.3	23.7	82.8

c)　　A_{gr}

A

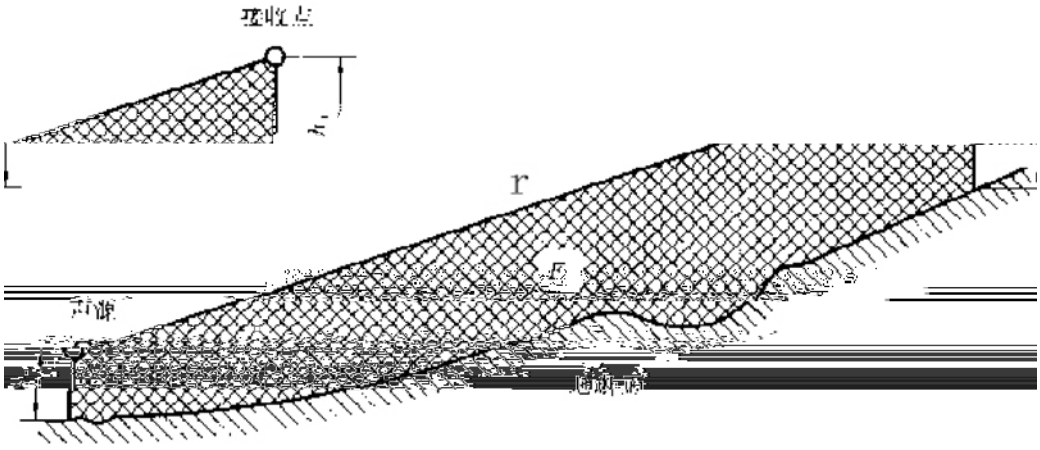
$$A_{gr} = 4.8 - (\frac{2h_m}{r})[17 + (\frac{300}{r})]$$

r—— m

h_m—— m 8-6 h_m= F/r F

m^2 r m

A_{gr} A_{gr} “0”



8.2.2-7 hm

d) A_{misc}

500Hz

8.2.2-5

	df	Hz							
	m	63	125	250	500	1000	2000	4000	8000

dB		0	0	1	1	1	1	2	3
dB/m		0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.12

4 L_1

a)

8.2.2-6

m	dB
	3
40	2
70	1
100	0

b)

30%

$$\Delta L = \frac{4H_b}{w} \leq 3.2dB$$

$$\Delta L = \frac{2H_b}{w} \leq 1.6dB$$

$$\Delta L \approx 0$$

w—— m

H_b—— m

5

1

1 1.2m 6

1 3 5 15

1 5 10

6

4a 2

L_{eq}

8.2-6 a

8.2-6 b

8.2-6 a dB(A)

	LAeq dB(A)			
N2-1	51.8	49.9	N2-1 N4-1 N7-1	4a
N2-2	50.5	48.9	N1 N2-2 N7-2 N4-2 N9	2
N5	65.5	58.9	N3-1 N3-2 N5-1 N5-2	
N6-1	52.8	50.3	N6-1 N6-4	-
N6-2	58.4	53.9	N6-2 N6-5	
N6-3	59.3	55.4	N6-3 N6-6	
N8-1	63.8	58.2	N8-1 N8-4	
N8-2	65.1	58.9	N8-2 N8-5	
N8-3	65.5	61.2	N8-3 N8-6	
N10-1	52.1	46.9	N10-1	
N10-2	56.4	50.2	N10-2	
N10-3	59.5	53.7	N10-3	
N11-1	50.6	/	N11-1	
N11-2	51.9	/	N11-2	
N11-3	54.3	/	N11-3	
N12	46.6	45.4	N12 N13	
N14	53.1	47.5	N14 N15 N16	

-1
-2 N9
N5-2
6

dB(A)	
4.3	0.2
2.0	0.2
0.0	0.3
4.3	0.2
2.0	0.2
0.0	0.3
4.3	0.2

		FD4K0+288								
		FD2K0+060-	73/63	0.40	1	4a	0.0	0.0	4.0	0.2
		FD2K0+180	114/104	0.40	1	2	0.0	3.0	4.4	0.3
N4		FD4K0+060- FD4K0+180	46/40	0.40	1	2	0.0	0.0	4.2	0.2
N5		FD2K0+004-	24/18	0.37	1	4a	0.0	0.0	0.0	0.0
		FD2K0+358	50/44	0.37	1	2	0.0	3.0	3.3	0.1
N6		FD3K0+170- FD3K0+365	86/39	0.33	1	2	0.0	3.0	4.5	0.4
					5		0.0	3.0	3.0	0.4
					10		0.0	3.0	1.3	0.4
N7		FD3K0+000-	80/70	0.33	1	4a	0.0	0.0	4.1	0.2
		FD3K0+250	137/127		1	2	0.0	0.0	4.4	0.3
N8		SEK0+400- SEK0+600	10.7/5.9	15.28	1	4a	13.0	0.0	0.0	0.0
					3		10.0	0.0	0.0	0.0
					5		6.0	0.0	0.0	0.0
			32.4/27.6		1	2	10.0	3.0	0.0	0.1
					3		8.0	3.0	0.0	0.1
					5		5.0	3.0	0.0	0.1
N9		SEK0+280- SEK0+680	109/99	13.39	1	2	5.0	0.0	2.0	0.3
N10		BK0+260- BK0+356	78/68	2.14	1	2	0.0	4.0	3.6	0.2
					5		0.0	0.0	0.5	0.2
					10		0.0	0.0	0.0	0.2
		AK0+020- BK0+160	100/90	6.10	1	2	0.0	4.0	3.1	0.2
					5		0.0	0.0	0.8	0.2
					10		0.0	0.0	0.0	0.2
N11	( )	AK0+000- BK0+180	136/126	6.10	1	2	0.0	4.0	4.2	0.3
					3		0.0	0.0	3.3	0.3
					5		0.0	0.0	2.5	0.3
		BK0+250- BK0+356	176/166	2.14	1		0.0	4.0	3.9	0.4
					3		0.0	0.0	3.2	0.4
					5		0.0	0.0	2.6	0.4
N12		NWK0+360- NWK0+559	85/70	5.0	1	2	0.0	3.0	3.1	0.2
N13		NWK0+000- NWK0+559	148/140	5.0	1	2	0.0	4.0	3.9	0.4
N14		RD7K0+055- RD7K0+070	96/81	10.38	1	2	9.0	0.0	2.2	0.2
		RD7K0+055- RD7K0+070	132/122	10.0	1	2	9.0	0.0	3.0	0.3
N15		LU7K0+310-	164/144	10.1	1	2	9.0	0.0	3.4	0.4

		LU7K0+330								
N16		RD7K0+330-RD7K0+359	122/106	0.6	1	2	0.0	0.0	4.4	0.3
		LU7K0+000-LU7K0+080	149/139	1.4	1	2	0.0	0.0	4.3	0.4

3

1

- -

0m 1m 1.2m

10m 1.2m

8.2-8

8.2-9

8.2-8 dB(A)

				m										
				30	40	50	60	80	100	120	140	160	180	200
-		2022		50.3	48.4	47.1	46.1	44.5	43.4	42.4	41.7	41.0	40.4	61.5
				45.9	44.0	42.6	41.6	40.1	38.9	38.0	37.2	36.6	36.0	57.1
		2028		51.1	49.2	47.9	46.9	45.3	44.2	43.3	42.5	41.8	41.2	62.3
				46.7	44.8	43.4	42.4	40.9	39.7	38.8	38.1	37.4	36.8	57.9
		2036		51.9	50.0	48.7	47.7	46.1	45.0	44.1	43.3	42.6	42.0	63.1
				47.5	45.6	44.2	43.2	41.7	40.5	39.6	38.8	38.2	37.6	58.7
		2022		46.9	45.0	43.7	42.7	41.2	40.0	39.1	38.3	37.6	37.0	36.5
				42.5	40.6	39.3	38.2	36.7	35.6	34.6	33.9	33.2	32.6	32.1
		2028		47.8	45.9	44.5	43.5	42.0	40.8	39.9	39.1	38.5	37.9	37.3

				43.3	41.4	40.1	39.1	37.5	36.4	35.5	34.7	34.0	33.4	32.9
		2036		48.5	46.6	45.3	44.3	42.8	41.6	40.7	39.9	39.2	38.7	38.1
				44.1	42.2	40.9	39.8	38.3	37.2	36.2	35.5	34.8	34.2	33.7
		2022		49.8	47.9	46.6	45.6	44.0	42.9	42.0	41.2	40.5	39.9	39.4
				45.4	43.5	42.2	41.1	39.6	38.5	37.5	36.8	36.1	35.5	35.0
		2028		50.7	48.8	47.4	46.4	44.9	43.7	42.8	42.0	41.4	40.8	40.2
				46.2	44.3	43.0	42.0	40.4	39.3	38.4	37.6	36.9	36.3	35.8
		2036		51.5	49.5	48.2	47.2	45.7	44.5	43.6	42.8	42.2	41.6	41.0
				47.0	45.1	43.8	42.8	41.2	40.1	39.1	38.4	37.7	37.1	36.6
	-	2022		61.2	58.5	56.7	55.4	53.6	52.2	51.2	50.4	49.6	49.0	48.4
				56.8	54.1	52.3	51.0	49.2	47.8	46.8	46.0	45.2	44.6	44.0
		2028		62.2	59.5	57.7	56.4	54.6	53.2	52.2	51.4	50.6	50.0	49.4
				57.8	55.1	53.3	52.0	50.2	48.8	47.8	47.0	46.2	45.6	45.0
		2036		63.3	60.5	58.8	57.5	55.6	54.3	53.3	52.4	51.7	51.1	50.5
				58.8	56.1	54.4	53.1	51.2	49.9	48.9	48.0	47.3	46.7	46.1
-	-	2022		55.9	53.2	51.5	50.2	48.3	47.0	46.0	45.1	44.4	43.7	43.2
				51.5	48.8	47.0	45.8	43.9	42.6	41.6	40.7	40.0	39.3	38.8
		2028		56.9	54.2	52.5	51.2	49.3	48.0	47.0	46.1	45.4	44.7	44.2
				52.5	49.8	48.1	46.8	44.9	43.6	42.6	41.7	41.0	40.3	39.8
		2036		58.0	55.3	53.5	52.2	50.4	49.0	48.0	47.2	46.4	45.8	45.2
				53.6	50.9	49.1	47.8	46.0	44.6	43.6	42.8	42.0	41.4	40.8
		2022		53.5	51.6	50.3	49.3	47.8	46.6	45.7	44.9	44.2	43.7	43.1
				49.1	47.2	45.9	44.8	43.3	42.2	41.2	40.5	39.8	39.2	38.7
		2028		54.4	52.5	51.2	50.2	48.6	47.5	46.6	45.8	45.1	44.5	44.0
				49.9	48.0	46.7	45.7	44.2	43.0	42.1	41.3	40.6	40.1	39.5
		2036		55.3	53.4	52.1	51.0	49.5	48.3	47.4	46.7	46.0	45.4	44.9
				50.8	48.9	47.6	46.6	45.0	43.9	43.0	42.2	41.5	40.9	40.4

		2022		51.0	49.1	47.7	46.7	45.2	44.0	43.1	42.3	41.7	41.1	40.6
				46.5	44.6	43.3	42.3	40.7	39.6	38.7	37.9			

			46.8	44.8	43.5	42.5	41.0	39.8	38.9	38.1	37.5	36.9	36.3
	2036		52.0	50.1	48.8	47.8	46.2	45.1	44.2	43.4	42.7	42.1	41.6
			47.6	45.7	44.3	43.3	41.8	40.6	39.7	38.9	38.3	37.7	37.1

8.2-9 m

				4a	m	2	m
		2022		0.6		6.4	
				7.1		19	9
		2028		0.8		7.5	
				8.5		20	10
		2036		0.9		9.0	
				11	1	22	12
		2022		0.3		2.9	
-				3.3		10.5	4
		2028		0.3		3.5	
				4		13	6.5
		2036		0.4		4.3	
				4.7		15	8.5
		2022		0.6		5.8	
				6.4		18	9
		2028		0.7		7	
				7.7		19	10
		2036		0.8		8.2	
				9.3		21	12
		2022		2.8		34	21.5
	-			36	23.5	70	57.5
		2028		4.4		38	25.5
				38	25.5	82	69.5
		2036		6		43	30.5
				46	33.5	99	86.5
		2022		-		12	
-				14		35	18.5
	-	2028		-		16	
				16		39	22.5
		2036		-		20	3.5
				18	1.5	43	26.5
		2022		1.3		13	8.5
				15	10.5	27	22.5
		2028		1.6		16	11.5
				17	12.5	30	25.5

		2036		1.9		19	14.5
				19	14.5	34	19.5
		2022		0.7		7.5	3
				8.5	4	20	15.5
		2028		0.9		9.3	4.8
				11	6.5	22	17.5
		2036		1.2		11.5	7
				13	8.5	25	20.5
		2022		1		10	5.5
				11	6.5	22.5	18
		2028		1.3		13	8.5
				14	9.5	25.5	21
		2036		1.6		15.5	11
				17	12.5	29	24.5
		2022		0.5		5.5	1
				6.5	2	18	13.5
		2028		0.7		7	2.5
				7.5	3	20	15.5
		2036		1		8.5	4
				10	5.5	22	17.5

8.2-10 a dB(A)

					dB A						dB A		dB A		dB A				- dB A					
					2022		2028		2036						2022		2028		2036		2022		2028		2036	
			m																						
N1		2	101	1	40.4	35.9	41.2	36.7	42.0	37.5	50.5	48.9	50.5	48.9	50.9	49.1	51.0	49.2	51.1	49.2	0.4	0.2	0.5	0.3	0.6	0.3
				5	42.7	38.2	43.5	39.0	44.3	39.8	50.5	48.9	50.5	48.9	51.2	49.3	51.3	49.3	51.4	49.4	0.7	0.4	0.8	0.4	0.9	0.5
				10	44.5	40.1	45.3	40.9	46.1	41.7	50.5	48.9	50.5	48.9	51.5	49.4	51.6	49.5	51.8	49.7	1.0	0.5	1.1	0.6	1.3	0.8
N2		2	188	1	40.2	35.8	41.1	36.6	41.9	37.4	51.8	49.9	51.8	49.9	52.1	50.1	52.2	50.1	52.2	50.1	0.3	0.2	0.4	0.2	0.4	0.2

8.2-10 b dB(A)

			m		dB A						dB A		dB A					
					2022		2028		2036				2022		2028		2036	
N1		2	101	1	50.9	49.1	51.0	49.2	51.1	49.2	60	50	-	-	-	-	-	-
				5	51.2	49.3	51.3	49.3	51.4	49.4	60	50	-	-	-	-	-	-
				10	51.5	49.4	51.6	49.5	51.8	49.7	60	50	-	-	-	-	-	-
N2		2	188	1	52.1	50.1	52.2	50.1	52.2	50.1	60	50	-	0.1	-	0.1	-	0.1
N3		4a	75	1	65.5	58.9	65.5	58.9	65.5	58.9	70	55	-	3.9	-	3.9	-	3.9
		2	110	1	51.9	50.0	51.9	50.0	52.0	50.0	60	50	-	-	-	-	-	0.0
N4		2	46	1	52.5	50.3	52.6	50.4	52.8	51.1	60	50	-	0.3	-	0.4	-	0.5
N5		4a	16	1	65.7	59.2	65.8	59.3	65.8	59.4	70	55	-	4.2	-	4.3	-	4.4
		2	51	1	65.5	58.9	65.5	58.9	65.5	58.9	60	50	5.5	8.9	5.5	8.9	5.5	8.9
N6		2	86	1	53.1	50.5	53.1	50.5	53.2	50.5	60	50	-	0.5	-	0.5	-	0.5
		2	86	5	58.5	54.0	58.6	54.1	58.6	54.1	60	50	-	4.0	-	4.1	-	4.1
		2	86	10	59.5	55.5	59.5	55.6	59.5	55.6	60	50	-	5.5	-	5.6	-	5.6
N7		4a	80.0	1	52.5	50.3	52.6	50.4	52.8	50.5	70	55	-	-	-	-	-	-
		2	137.0	1	51.0	49.2	51.1	49.2	51.2	49.3	60	50	-	-	-	-	-	-
N8		4a	10.5	1	63.8	58.2	63.8	58.2	63.8	58.3	70	55	-	3.2	-	3.2	-	3.3
		4a	10.5	3	65.2	59.0	65.2	59.0	65.2	59.0	70	55	-	4.0	-	4.0	-	4.0
		4a	10.5	5	65.6	61.3	65.6	61.3	65.7	61.4	70	55	-	6.3	-	6.3	-	6.4
		2	32.4	1	63.8	58.2	63.8	58.2	63.8	58.2	60	50	3.8	8.2	3.8	8.2	3.8	8.2
		2	32.4	3	65.1	58.9	65.1	58.9	65.1	58.9	60	50	5.1	8.9	5.1	8.9	5.1	8.9
		2	32.4	5	65.5	61.2	65.5	61.2	65.6	61.3	60	50	5.5	11.2	5.5	11.2	5.6	11.3
N9		2	109.0	1	50.8	49.1	51.0	49.2	51.1	49.2	60	50	-	-	-	-	-	-
N10		2	100.0	1	52.7	47.6	52.8	47.7	53.0	47.9	60	50	-	-	-	-	-	-
		2	100.0	3	56.8	50.8	56.9	50.9	57.0	51.0	60	50	-	0.8	-	0.9	-	1.0
		2	100.0	5	59.7	54.0	59.8	54.1	59.8	54.2	60	50	-	4.0	-	4.1	-	4.2
N11		2	176.0	1	51.0	/	51.1	/	51.2	/	60	50	-	/	-	/	-	/

( )

2 17

2

16 4a 4 2

16

8.2-11

4a

6.3dB(A) 2 5.5dB(A)

11.2dB(A)

8.2-11

						dB(A)		
4a	8		0	0	0	/	/	/
			4	4	4	6.3	6.3	6.4
2	16		2	2	2	5.5	5.5	5.6
			6	6	6	11.2	11.2	11.3

8.2.3

8.2.3.1

1m

0.15-0.17 dB(A)/m 0.15 dB(A)/m

0.18dB(A)/m 0.12-0.17 dB(A)/m

0.25-0.35 dB(A)/m 0.07-0.10 dB(A)/m

30m

1200~3000 /m

HJ/T17-1996

25dB(A)

1000 /m^2

3000 /m-4000 /m

3m 6-9dB(A)

“ ” “ ”

3-5dB(A)

SMA

3

8.2-12

8.2-12

				dB(A)
1			3000-4000 /m	6-9
2			100 /	
3			1000 /m^2	>30
4			0.5 /100m^2	1-3
5				3-5

8.2.3.2

1

15

50m

30dB A

2

1

-

N10 N11

-

N8 N9

2

N2 N3 N4 N5

N6 N8 N10

8-10 a 0.8dB

N11 N12 N14

3.5dB(A) 3.9dB(A)

8.2-17

8.2-14

8.2-14

	3.5m 400m	4000 /	N8	120		
	328	2 /		596		
	/	/	N2 N3 N4 N5 N6 N8 N10	20		

	/	/	N2 N3 N4 N5 N6 N8 N10	346		
	-	-	-	1082		

							2022		2028		2036				
N2			FD4K0+252-FD4K0+285	**2**	**1**		-	0.1	-	0.1	-	0.1		-	10
						-	0.3	0.2	0.4	0.2	0.4	0.2			
N3			FD2K0+060-FD2K0+180	4a	1		-	3.9	-	3.9	-	3.9		- 134m 73m	48
						-	0.0	0.0	0.0	0.0	0.1	0.0			
			FD4K0+006-FD4K0+288	2	1		-	-	-	-	-	-			
						-	0.1	0.1	0.1	0.1	0.2	0.1			
N4	-		FD4K0+060-FD4K0+180	2	1		-	0.3	-	0.4	-	0.5		-	12
						-	0.7	0.4	0.8	0.5	1.0	0.6			
N5			FD2K0+004-FD2K0+358	4a	1		-	4.2	-	4.3	-	4.4		- 18m	116
						-	0.2	0.3	0.3	0.4	0.3	0.5			
				2	1		5.5	8.9	5.5	8.9	5.5	8.9			
						-	0.0	0.0	0.0	0.0	0.0	0.0			
N6			FD3K0+170-FD3K0+365	2	1		-	0.5	-	0.5	-	0.5		- 133m	150
						-	0.3	0.2	0.3	0.2	0.4	0.2			
					5		-	4.0	-	4.1	-	4.1			
						-	0.1	0.1	0.2	0.2	0.2	0.2			

							2022		**2028**		**2036**				
					10		-	5.5	-	5.6	-	5.6			
						-	0.2	0.1	0.2	0.2	0.2	0.2			
N8			SEK0+400-SEK0+600	4a	1		-	3.2	-	3.2	-	3.3	4a	298	3.5m
							3.0	3.0	3.0	3.0	3.0	3.0			
								1.7		1.7		1.7			
						-	0.0	0.0	0.0	0.0	0.0	0.1			
					3		-	4.0	-	4.0	-	4.0			
							4.0	4.0	4.0	4.0	4.0	4.0			
								1.6		1.6		1.6			
						-	0.1	0.1	0.1	0.1	0.1	0.1			
					5		-	6.3	-	6.3	-	6.4			
							7.0	7.0	7.0	7.0	7.0	7.0			
								1.2		1.2		1.2			
						-	0.1	0.1	0.1	0.1	0.2	0.2			
				2	1			3.8	8.2	3.8	8.2	3.8	8.2		
							5.0	5.0	5.0	5.0	5.0	5.0			
							1.3	5.7	1.3	5.7	1.3	5.7			
						-	0.0	0.0	0.0	0.0	0.0	0.0			
					3			5.1	8.9	5.1	8.9	5.1	8.9		
							6.5	6.5	6.5	6.5	6.5	6.5			
							1.	5.4	1.6	5.4	1.6	5.4			

5.9m

SEK0+300-SEK0+700

1.2-1.7dB 2 1.3-1.6dB 5.7-6.5dB

\+

GB50118-2010 45dB(A) 37dB(A)

400m

328

3000 /

120

2 /

596

8.2.3

CO NO2 THC

8.3

8.3.1

Q 1

HJ169-2018

8.3.2

8.3.3

8.3.4

8.3.4.1

8.3.4.2

$$P \quad Q_1 \cdot Q_2 \cdot Q_3 \cdot Q_4 \cdot Q_5 / 10000$$

P——

/

Q_1—— /(

·km) 5a 0.22 /(

·km)

Q_2 /a

Q_3 %

Q_4 % 5%

Q_5 km

8.3-1

8.3-1

0.0000947 /

8.3-1 /

				P		
				2022	2028	2036
1				0.0000098	0.0000107	0.0000118
2				0.0000098	0.0000107	0.0000118
3				0.0000785	0.0000856	0.0000947
4				0.0000638	0.0000696	0.0000770
5				0.0000054	0.0000058	0.0000063
6				0.0000086	0.0000093	0.0000101
7				0.0000620	0.0000570	0.0000504
8				0.0000167	0.0000227	0.0000261

10%

8.3.5

8.3.5.1

-

-

-

-

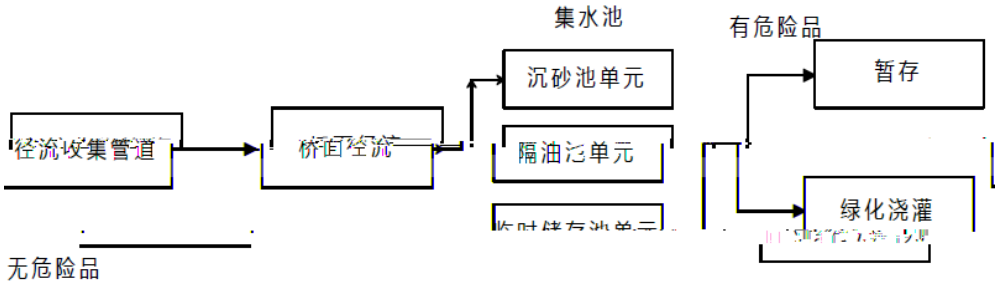
$120m^3$

8.3-2

			m	m³	
1			13	120	

1

8.3-1



8.3-1

2

60m³

60m³

1 1 60m³

120m³

8.3.5.2

1

2

/

8.3-3

1		20	0.5	-
2		20	0.5	-
3		2	3	
4			6.0	-
5			10	-
6		1000m	20	-
			40.0	-

3

HJ589-2010

8.3.5.2

1

2

3

4

				GB16927-1996 2
		NO_2 CO THC		GB3095-2012
		COD SS		
		SS		
		COD BOD_5 SS		
		SS		
		22:00-6:00		200m

9.1

9.1.1

1

2 2

22:00-6:00 300

3

4

9.1.2

1

2

3

4

5

6

7

2016 69

9.1.3

1

2

GB/T18920-2002

3

4

5

6

9.1.4

1

2

3

6.65 m^3

4

9.1.5

1

1

2

3

4

2

1

2

3

4

3

1

2

3

4

9.2

9.2.1

1

N8 3.5m 400m

298 N2 N3 N4 N5 N6 N8 N10

2

9.2.2

1

2

9.2.3

COD SS

50mm ( )

2

9.2.4

9.3

-

-

-

-

120m^3

9.4

9.4.1

9.4-1

9.4-2

9.4-3

9.4.2

1

			1			
	N3 N5 N6 N8 N10	L_{Aeq}	2 / 1	 10:00-11:00 22:00-6:00		

9.4-5

		TSP	2 /	12 3	100m		

9.4-6

100m

		120		
		20		
		596	⩾25dB	
		50		
		10		
		20		
		100		
		50		
		28		
		15		
		1760		

10.1

- -

-

30km/h

- 40km/h

40km/h 40km/h

52310.81

10.2

1

HJ2.2-2018 6.4.1.1

SO_2 NO_2 PM_{10} $PM_{2.5}$ CO O_3

2019

$PM_{2.5}$ O_3

2

2019 9

34 100%

3

N2 N11

N12 N14

3.5dB(A)

3.9dB(A)

4

-

1414.353m

539.773m -

FNK18+060.445-FNK18+900

839.555m

10.3

10.3.1

10.3.1.1

10.3.1.2

N2 N3 N4 N5

N6 N8 N10

4a

6.2dB(A) 2

5.5dB(A) 11.2dB(A)

10.3.2

10.3.2.1

10.3.2.2

10.3.3

10.3.3.1

GB/T18920-2002

10.3.3.2

-

1414.353m

539.773m -

FNK18+060.445-FNK18+900

839.555m

-

-

120m^3

10.3.4

10.3.4.1

10.3.4.2

10.3.5

1

2

3

10.3.6

1

2 FGK12+780- FGK12+820 1

120m^3

3

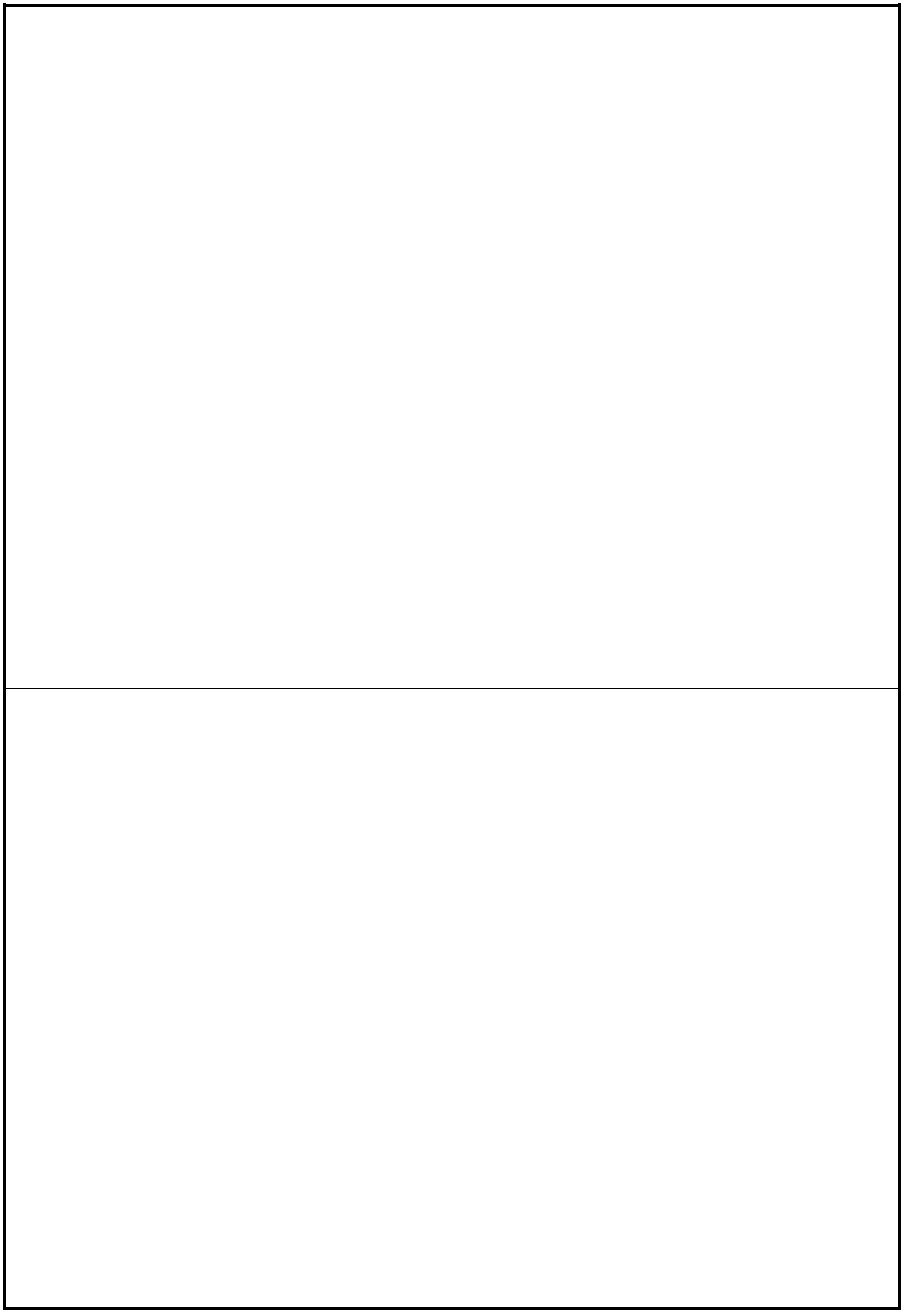
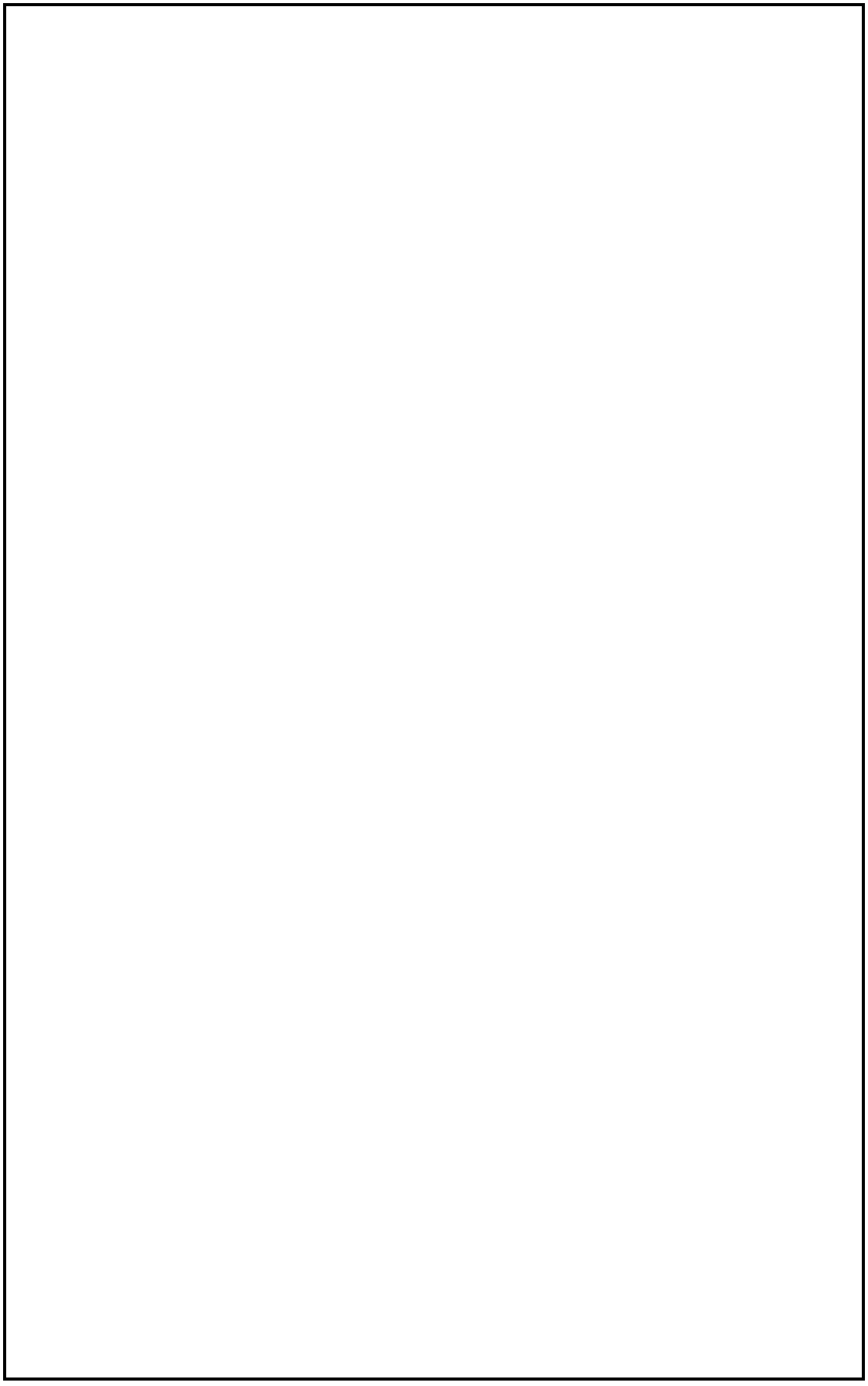
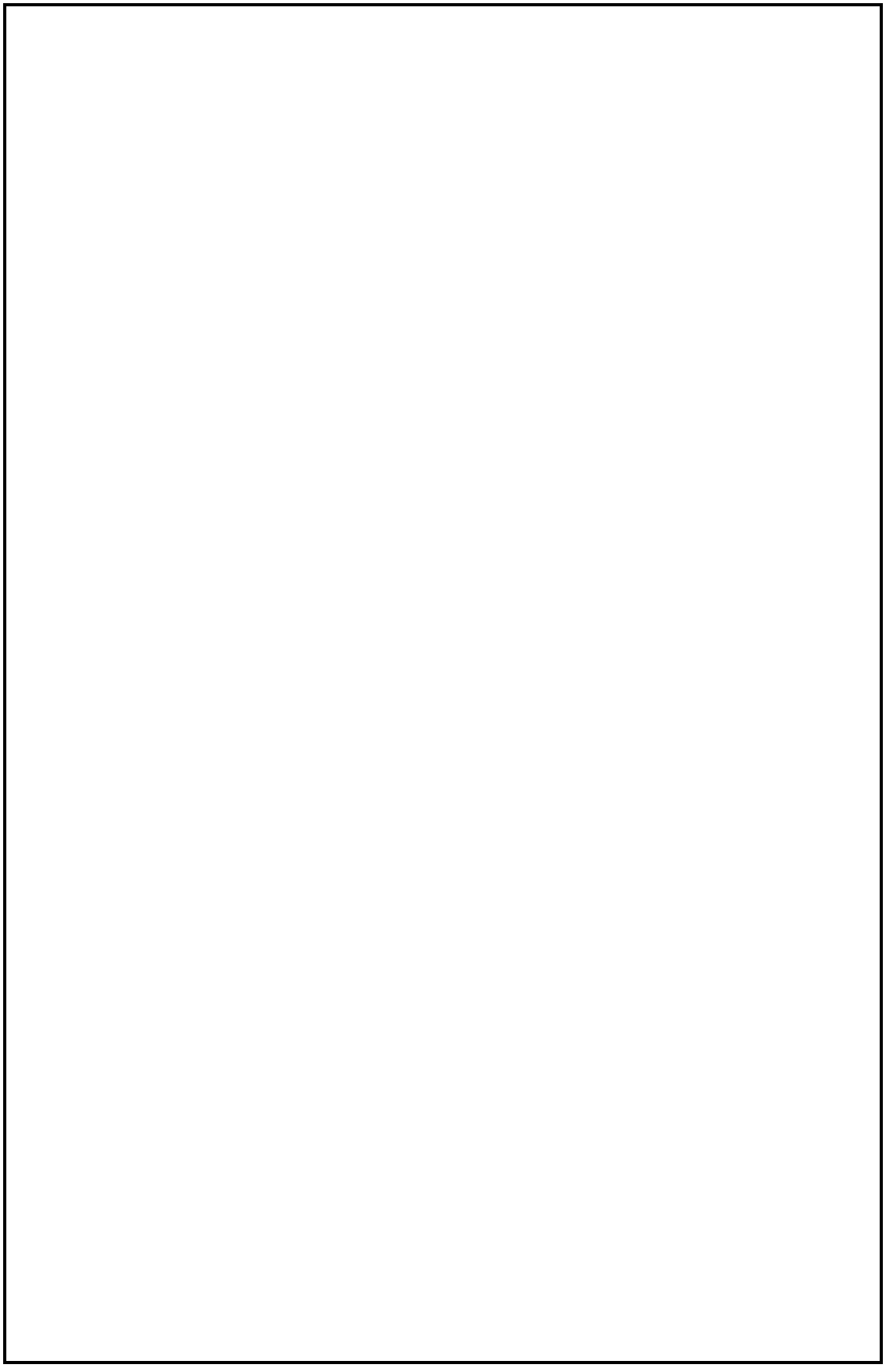
[2002]226

4

10.4

10.5

1

2

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