成雅高速金鸡关互通及服务区项目

（雅安东互通综合提升改造）

水土保持设施验收报告

责任页

（四川绿创环达生态环境建设有限责任公司）

批　准：　　郭　欢（高级工程师）

核　定：　　朱玉成（高级工程师）

审　查：　　刘晓东（工　程　师）

校　核：　　李德东（工　程　师）

项目负责人：　王　海（工　程　师）

编写人员：

姓　名	职　称	编写内容	签　名
王海	工程师	综合说明、项目概况、项目水土保持评价、水土保持措施、水土保持管理	
刘玉华	工程师	水土流失分析调查与预测、水土保持监测、水土保持投资概算及效益分析	

“ ”

“ ”

“ ”

60km/h

G318

0.6km

2.064km

4 1.915km A B C D

201.931m/2 103°03′3.07″~103°04′13.13″

30°02′22.40″~30°02′58.36″

G108

K0+000~K2+064.406 2.064km

24.5m 80km/h 4

4 1.915km A B C D 2 133m/1

68.931m/1 7 9.0/10.5m 40km/h

B D A D

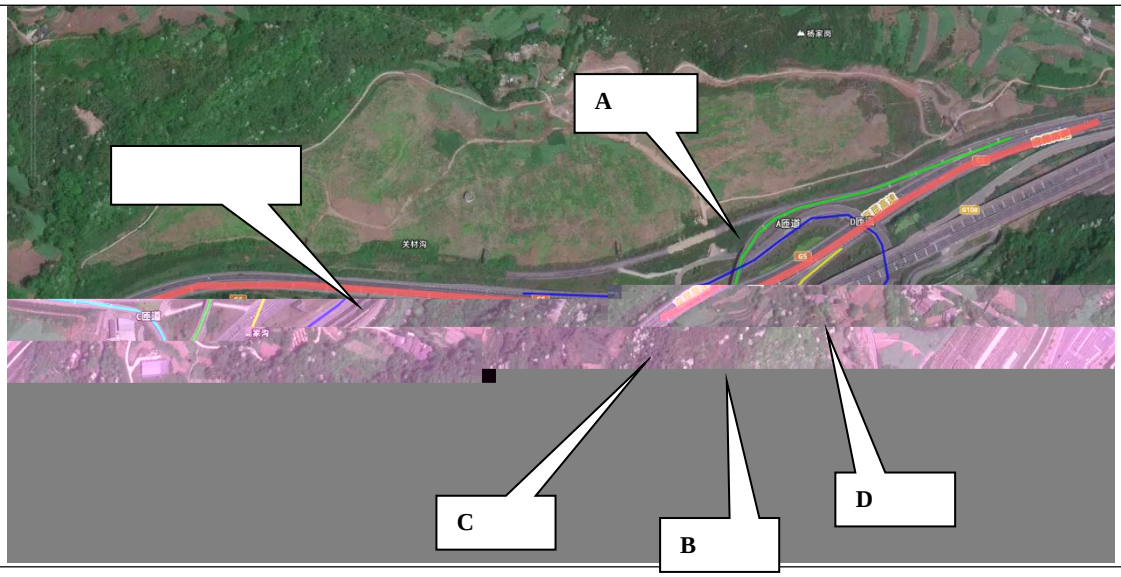
1 1

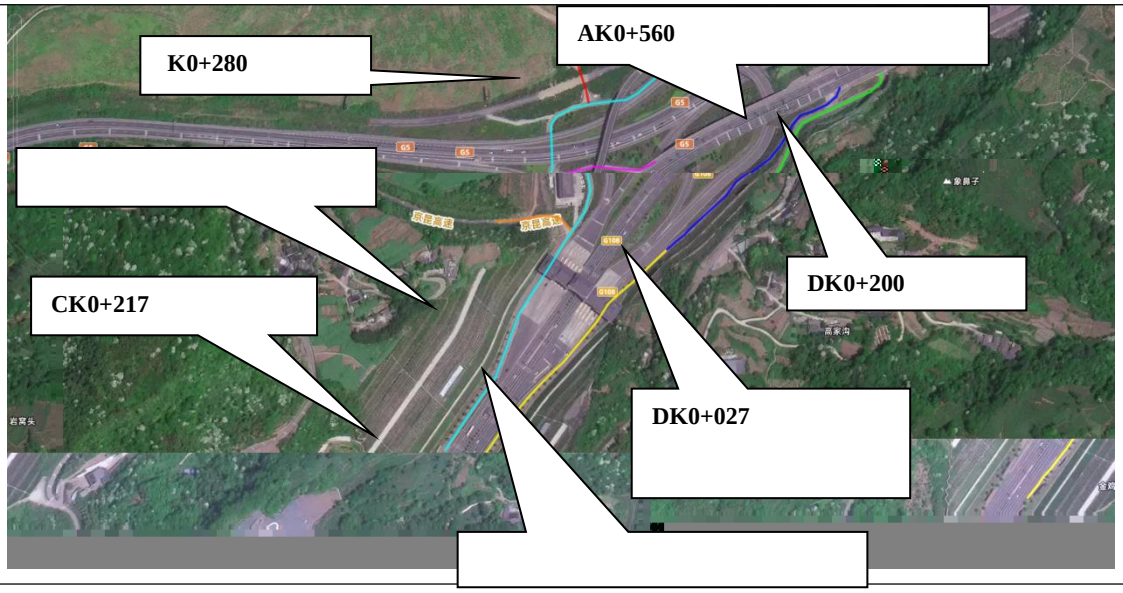
1352m 490m CK0+217

752m 110m 377m DK0+200 287m

K0+280 90m 650m AK0+560 150m

DK0+027 500m





2018 12

2019 2 14 2019 7

2019 3

2019 5

2019 10

2019 10 12 2019 627

K0+000~K2+064.406 2.064km 24.5m

80km/h 4

4 1.915km A B C D 2 133m/1

68.931m/1 7 9.0/10.5m 40km/h

B D A D

1 1

1352m 490m CK0+217

752m 110m 377m DK0+200 287m

K0+280 90m 650m AK0+560 150m

DK0+027 500m

2020 3 2021 2 12 18689.45

12784.97

2019 3

2019 9 11 2019 190

53

30% “

30%

2026 5

2026 7 3 2026 17

2021 2 2020 3

“ ”

2026 8

2018 133

53

“ ” 2019 160

2019 172

2026 7

GB/T 22490-2025 SL/T 336-2025

2026 7

100%

100%

2017 365

GB/T 22490-2025

SL/T 336-2025 2026 8

FLûQ FUH TW© ÈFP C × pN¯$ ´ Lû¿ R ÈFP52 > } oFVµ

"j U 7AôóPÂl (¯] >ž

	+		K0+000~K2+064.406 2.064km 24.5m 80km/h 4 4 1.915km A B C D 2 133m/1 68.931m/1 7 9.0/10.5m 40km/h B D A D 1 1 1352m 490m CK0+217 752m 110m 377m DK0+200 287m K0+280 90m 650m AK0+560 150m DK0+027 500m

	2026 17 2026 7 3			
		2020 3 -2021 2		
		2020 3 -2021 2		
hm²		20.06		
		20.06		
		15.62		
	%	97	99.05	
		1.0	1.06	
	%	94	98.06	
	%	92	96.68	
	%	97	99.60	
	%	25	37.49	
		2900m 40m 1 415m 1740m 0.50 m³	/	4555m²

3336m²

25794m²

2639m²

4636m² 0.40 2966m²

1961m²

m³ 0.35 m³

3523m²

672m²

2915.1m

195m 9

/ 300m²

396m 135m

0.39 m³

0.56 m³

2.21hm² /

0.88 m³

0.07 m³ / 450m²

0.12 m³ 0.30hm² /

0.96hm² 0.96hm² 9600m²

0.70 m³ 8113m²

1210m

1.27 m³ 3.18hm² 7014m²

1056.96

1056.96

€ « d ¤.! Ñ€Ps à

1

1.1

1.1.1

0.6km

2.064km

4

1.915km A B C D 201.931m/2

103°03′3.07″~103°04′13.13″

30°02′22.40″~30°02′58.36″

G108

1.1-1

1.1.2

+

BK0+171.080 BK0+512.073	652.63 662.63	654.00 670.00	
CK0+135.397 CK0+313.931	650.00 664.00	652.00 666.00	
DK0+058.03 DK0+806.093	646.00 660.90	648.00 664.00	
	632.44~665.27	638.24~670.33	

1.1.4.3

2.064km 1352m 490m

CK0+217 752m 110m 377m DK0+200

287m K0+280 90m 650m AK0+560

150m DK0+027 500m

1

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80km/h 24.5m

1.1-3

Ŷ

2 1 1 AK0+511.5A

DK0+433.305D ( )

8 4 4

25 25

AK0+511.50A

D 5×25m

DK0+433.305D

2×25m

1.1.4.5

2.21hm^2

2.21hm^2 0.36hm^2

1.85hm^2

1

3.0m

1.8

2

1.1.4.6

1 0.27hm^2 1 0.50hm^2

G108 1

4 6 1 2

ETC 1 ETC MTC ETC MTC

654.50m 2

8m

1.1.4.7

1

2

10kV

B×H=1.0 ×1.0 12

Φ150 6 Φ110 DN219

2.5m

1.1.5

1.1.5.1

1.1-6

1.1.5.2

1

G108 G318

G351

2

3

1.1.5.3

1

K0+800 100m 1

0.30hm^2

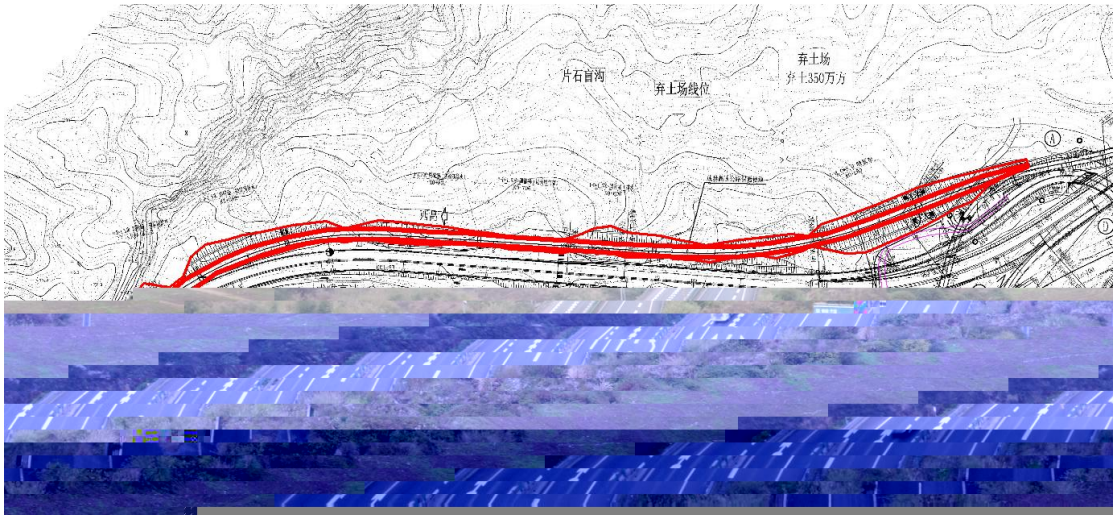
1.1-7

1	X=332150.240	Y=486932.120
2	X=332620.140	Y=4868-20

A AK+300

1.39km 12m

3.18hm^2



1.1-10

1.1-11

2

3

1.1.5.6

2020 3 -2021 2 12

1.1.6

67.26 m^3

2.62 m^3 49.68 m^3 2.62 m^3

1.59 m^3 15.99 m^3

21.27 m^3

2021 2026

67.26

m^3 2.62 m^3 49.68 m^3

2.62 m^3 1.59 m^3 15.99 m^3

21.27 m^3

1.1-10

1.1-9 **m³**

		K0+260-K1+000	0.16	0.22	0.89	1.27		1.41	5.01	6.42	5.31		0.16				0.00	
		K1+000 K2+000	0.20	3.82	9.37	13.39		0.34	0.16	0.50			0.20				12.69	16.88
			0.04	0.38	1.35	1.77		0.72	3.71	4.43	2.70		0.04				0.00	
			0.08	1.61		1.69		0.43	2.85	3.28	1.67		0.08				0.00	
			0.02	0.05	0.28	0.35		0.12	3.88	4.00	3.67		0.02				0.00	
			0.50	6.08	11.89	18.47		3.02	15.61	18.63	13.35		0.50				12.69	16.88
			0.40	4.00	22.74	27.14	0.35		0.62	0.97			24.07		1.59	/	0.51	0.68
		AK0+114.438 AK0+900	0.15	0.45		0.60		1.48	3.33	4.81	4.36	B D	0.15				0.00	
		BK0+171.080 BK0+512.073	0.08	0.52	2.40	3.00		0.16	0.49	0.65			2.35	A			0.00	
		CK0+135.397 CK0+313.931	0.04	0.01	0.41	0.46		0.03	0.53	0.56	0.14	D	0.04				0.00	
		DK0+058.03 DK0+806.093	0.12	1.28	5.84	7.24		0.41	3.11	3.52			2.35	A C			1.37	1.82

			0.39	2.26	8.65	11.30		2.08	7.46	9.54	4.50		4.89				1.37	1.82
			0.56	0.27	1.33	2.16	0.88	0.27	1.61	2.76	0.60						0.00	
			0.07	0.63	2.33	3.03		0.04	1.22	1.26			0.35				1.42	1.89
			1.92	13.24	46.94	62.10	1.23	5.41	26.52	33.16	18.45		29.81		1.59		15.99	21.27
				0.02		0.02	0.12	0.02		0.14	0.12						0.00	
			0.70	0.84	3.60	5.14	1.27	1.62	13.49	16.38	11.24						0.00	
			0.70	0.86	3.60	5.16	1.39	1.64	13.49	16.52	11.36		0.00				0.00	
			2.62	14.10	50.54	67.26	2.62	7.05	40.01	49.68	29.81		29.81		1.59		15.99	21.27

1.1-10 **m³**

		K0+260-K1+000	0.16	0.22	0.89	1.27		1.41	5.01	6.42	5.31		0.16				0.00	
		K1+000 K2+000	0.20	3.82	9.37	13.39		0.34	0.16	0.50			0.20				12.69	16.88
			0.04	0.38	1.35	1.77		0.72	3.71	4.43	2.70		0.04				0.00	
			0.08	1.61		1.69		0.43	2.85	3.28	1.67		0.08				0.00	
			0.02	0.05	0.28	0.35		0.12	3.88	4.00	3.67		0.02				0.00	

			0.50	6.08	11.89	18.47		3.02	15.61	18.63	13.35		0.50				12.69	16.88	
			0.40	4.00	22.74	27.14	0.35		0.62	0.97			24.07		1.59	/	0.51	0.68	
		AK0+114.438 AK0+900	0.15	0.45		0.60		1.48	3.33	4.81	4.36	B D	0.15				0.00		
		BK0+171.080 BK0+512.073	0.08	0.52	2.40	3.00		0.16	0.49	0.65			2.35	A			0.00		
		CK0+135.397 CK0+313.931	0.04	0.01	0.41	0.46		0.03	0.53	0.56	0.14	D	0.04				0.00		
		DK0+058.03 DK0+806.093	0.12	1.28	5.84	7.24		0.41	3.11	3.52			2.35	A C			1.37	1.82	
			0.39	2.26	8.65	11.30		2.08	7.46	9.54	4.50		4.89				1.37	1.82	
			0.56	0.27	1.33	2.16	0.88	0.27	1.61	2.76	0.60						0.00		
			0.07	0.63	2.33	3.03		0.04	1.22	1.26			0.35				1.42	1.89	
			1.92	13.24	46.94	62.10	1.23	5.41	26.52	33.16	18.45		29.81		1.59		15.99	21.27	
				0.02		0.02	0.12	0.02		0.14	0.12						0.00		
			0.70	0.84	3.60	5.14	1.27	1.62	13.49	16.38	11.24						0.00		
			0.70	0.86	3.60	5.16	1.39	1.64	13.49	16.52	11.36		0.00				0.00		
			2.62	14.10	50.54	67.26	2.62	7.05	40.01	49.68	29.81		29.81		1.59		15.99	21.27	

1.1-11

		mį				mį				mį				%			
		0.50	6.08	11.89	18.47	0.50	6.08	11.89	18.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	3.02	15.61	18.63	-	3.02	15.61	18.63	-	0.00	0.00	0.00	-	0.00	0.00	0.00
		-	-		-	-	-	-	-	-	-		-	-	-	-	-
		-	-		-	-	-	-	-	-	-		-	-	-	-	-
		0.40	4.00	22.74	27.14	0.40	4.00	22.74	27.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.35	--	0.62	0.97	0.35	-	0.62	0.97	0.00	-	0.00	0.00	0.00	-	0.00	0.00
		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
		0.39	2.26	8.65	11.30	0.39	2.26	8.65	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	2.08	7.46	9.54	-	2.08	7.46	9.54	-	0.00	0.00	0.00	-	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
		0.56	0.27	1.33	2.16	0.88	0.27	1.61	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.56	0.27	1.33	2.16	0.88	0.27	1.61	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
		0.07	0.63	2.33	3.03	-	0.04	1.22	1.26	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
		0.07	0.63	2.33	3.03	-	0.04	1.22	1.26	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00
		-	-		-	-	-	-	-	-		-	-	-	-	-	-
		-	-		-	-	-	-	-	-		-	-	-	-	-	-
		-	0.02	-	0.02	-	0.02	-	0.02		0.00		0.00		0.00		0.00
		0.12	0.02		0.14	0.12	0.02		0.14	0.00	0.00		0.00	0.00	0.00		0.00
		-	-		-	-	-	-	-	-		-	-	-	-	-	-

		-	-		-	-	-	-	-	-		-	-	-	-	-	-
		0.70	0.84	3.60	5.14	0.70	0.84	3.60	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1.27	1.62	13.49	16.38	1.27	1.62	13.49	16.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-		-	-	-	-	-	-	-		-	-	-	-	-
		-	-		-	-	-	-	-	-	-		-	-	-	-	-
		2.62	14.10	50.54	67.26	2.62	14.10	50.54	67.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2.62	7.05	40.01	49.68	2.62	7.05	40.01	49.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-	-		-	-	-	-	-	-	-		-	-	-	-	-
		-	-		-	-	-	-	-	-	-		-	-	-	-	-

1.1.7

20.06hm^2 15.62hm^2 4.44hm^2

1.1-12

		0.10	0.92	1.32		3.70		6.04	6.04	
		0.05		3.35		0.31		3.71	3.71	
		0.10	0.29	1.37	0.23	0.90		2.89	2.89	
		0.45		1.76				2.21	2.21	
				0.50		0.27		0.77	0.77	
		0.70	1.21	8.30	0.23	5.18		15.62	15.62	
							0.30	0.30		0.30
							0.96	0.96		0.96
		1.66		1.52				3.18		3.18
		1.66	0.00	1.52	0.00	0.00	1.26	4.44		4.44
		2.36	**1.21**	**9.82**	**0.23**	**5.18**	**1.26**	**20.06**	**15.62**	**4.44**

2021 2026

20.06hm^2

15.62hm^2 4.44hm^2

1.1-13

		0.10	0.92	1.32		3.70		6.04	6.04	
		0.05		3.35		0.31		3.71	3.71	
		0.10	0.29	1.37	0.23	0.90		2.89	2.89	
		0.45		1.76				2.21	2.21	
				0.50		0.27		0.77	0.77	
		0.70	1.21	8.30	0.23	5.18		15.62	15.62	
							0.30	0.30		0.30
							0.96	0.96		0.96
		1.66		1.52				3.18		3.18
		1.66	0.00	1.52	0.00	0.00	1.26	4.44		4.44
		2.36	**1.21**	**9.82**	**0.23**	**5.18**	**1.26**	**20.06**	**15.62**	**4.44**

17° 30°

A

60 100° á10

24° 270 315° á8 25°

100° á5° 310° á5°

J1 191° á84° 5 8

/m 1 1.5m J2 244° á80°

1 3 /m 1 2m 2

2.

Q_4^{ml} Q_4^{dl+pl}

Q_4^{al+pl} K_2g

1 Q_4^{ml}

G318

1 10m

Φ 200mm 10 200~20mm 60

20 2mm 10

2 Q_4^{dl+pl}

~ 20~200mm 500mm

3 Q_4^{al+pl} l

~ ~

20~200mm 300mm

60% 65%

4 K_2g

423 1040m

0.1% 0.8% 65~102kPa

3.

0.10g 0.45s

VII

4.

5.

D

8~20° 15°

+ +

1.2.1.2

5 8°

30 40m

-

632.00m~675.20mm

634.00m~680.00m

1.2.1.3

16.1℃

≥10℃ 5539℃ 1732mm 5 9

839mm 284 82% 1.7m/s

NE

1.2.1.4

279km 1.59 km^2 34.3km 1067km^2

5km

34.3km 390m³/s

80.5m³/s

0.2~0.45m

5~20L/s 12 ~ 3 3~7L/s

6~9 100L/s 2021~2025

1.2.1.5

9 13 29 88 162

0.1m~0.3m

1.2.1.6

47726.7hm²

85 350 23

1100

54.8%

51%

1.2.2

2013 188 -7"j _ »

2017 482

> 2017 160

SL190-2007

500t/ km²·a

2025

216.33km² 173.19km² 9.79km²

8.48km² 15.22km² 9.65km²

SL 190-2007 “

” “ ”

GB 50434-2008

900t/ km²·a

		2.89		2.89
		2.21		2.21
		0.77		0.77
		15.62		15.62
			0.30	0.30
			0.96	0.96
			3.18	3.18
			4.44	4.44
		15.62	**4.44**	**20.06**

3.1.3

3.1-3

			hm²	**hm²**		
1			6.04	6.04	0.00	
2			3.71	3.71	0.00	
3			2.89	2.89	0.00	
4			2.21	2.21	0.00	
5			0.77	0.77	0.00	
6			15.62	15.62	0.00	
7			0.30	0.30	0.00	
8			0.96	0.96	0.00	
9			3.18	3.18	0.00	
10			4.44	4.44	0.00	
			20.06	**20.06**	**0.00**	

3.1.4

15.62hm^2

3.1-4

			hmį
1			6.04
2			3.71
3			2.89
4			2.21

49.68 m^3 2.62 m^3 1.59 m^3 15.99 m^3 21.27 m^3

3.4

3.5

3.5.1

3.5-1

		È ã 9• 2³
		? p 0 † í ã C9•

3.5.2

3.5-2

3.5-2

		» È ã Š&,9•2³55 L
		È ã 9•2³
		? p 0 † í ã C9•

3.5.3

2021 2026

3-5-3

			√	√		
			√	√		
			√	√		
			√	√		
			√	√		
			√	√		
			√	√		
			√	√		
			√	√		
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3.6.1

2900m 40m 1 415m 1740m 0.50 m^3

2639m^2 4636m^2 0.40 m^3 0.35 m^3

2915.1m 195m 9 396m 135m 0.39 m^3 0.56 m^3 0.88 m^3 0.07 m^3 0.12 m^3 0.96hm^2 0.70 m^3 1.27 m^3 3.18hm^2

3.6-1

			m	2900	2020 8 ~10
			m	40	2020 8 ~10
				1	2020 8 ~10
			m	415	2020 8 ~10
			m	1740	2020 8 ~10
			m^3	0.5	2020 4
			m^2	2639	2020 8 ~10
			m^2	4636	2020 8 ~10
			m^3	0.4	2020 4
			m^3	0.35	2020 9 ~11
			m	2915.1	2020 8 ~10
			m	195	2020 8 ~10
			m	135	2020 8 ~10
				9	2020 8 ~10
			m	396	2020 8 ~10
			m^3	0.39	2020 4
			m^3	0.56	2020 4
			m^3	0.88	2020 9 ~11
			m^3	0.07	2020 4

			m^3	0.12	2020 12
			hm^2	0.96	2020 12
			m^3	0.7	2020 4
			m^3	1.27	2020 7 ~10
			hm^2	3.18	2020 8 ~12

3.6.2

3336m^2 25794m^2

1961m^2

3523m^2 672m^2

2.21hm^2

0.30hm^2

0.96hm^2

8113m^2 7014m^2

3.6-2

			m^2	3336	2020 9 ~11
			m^2	25794	2020 9 ~11
			m^2	1961	2020 9 ~11
			m^2	3523	2020 9 ~11
			m^2	672	2020 9 ~11
			hm^2	2.21	2020 9 ~11
			hm^2	0.30	2020 12
			hm^2	0.96	2020 12
			m^2	8113	2020 8 ~10
			m^2	7014	2020 8 ~10

3.6.3

4555m^2

2966m^2

300m^2

540m^2

540m^2

9600m^2

1210m

3.6-3

3.6-3

			m^2	4555	2020 ª 6 >~8 >
			m^2	2966	2020 ª 6 >~8 >
			m^2	300	2020 ª 6 >~8 >
			m^2	540	2020 ª 12 >
			m^2	540	2020 ª 12 >
			m^2	9600	2020 ª 8 >~10 >
			m	1210	2020 ª 4 >

3.6.4

2021 2026

3-6.4

			m	2900	2900		
			m	40	40		
				1	1		
			m	415	415		
			m	1740	1740		
			m^3	0.5	0.5		
			m^2	4555	4555		
			m^2	2639	2639		
			m^2	4636	4636		
			m^3	0.4	0.4		
			m^3	0.35	0.35		
			m^2	3336	3336		
			m^2	25794	25794		
			m^2	1961	1961		
			m^2	3523	3523		
			m^2	672	672		
			m^2	2966	2966		
			m	2915.1	2915.1		
			m	195	195		
			m	135	135		
				9	9		
			m	396	396		
			m^3	0.39	0.39		
			m^2	300	300		
			m^3	0.56	0.56		
			m^3	0.88	0.88		
			hm^2	2.21	2.21		
			m^2	600	600		
			m^3	0.07	0.07		

			m^2	540	540		
	0Aà ó		m^3	0.12	0.12		
			hm^2	0.3	0.3		
			hm^2	0.96	0.96		
			hm^2	0.96	0.96		
			m^2	9600	9600		
			m^3	0.7	0.7		
			m^3	1.27	1.27		
			hm^2	3.18	3.18		
			m^2	8113	8113		
			m^2	7014	7014		
			m	1210	1210		

3					12.50	12.50		12.50
4								
5								
6								
I		87.72	2.00	0.00	19.00	112.50	918.38	1030.88
II						0.00		0.00
III						112.50	918.38	1030.88
IV						26.078		26.078
×						**138.58**	**918.38**	**1056.96**

3.7.2

1056.96

918.38 138.58

64.27 3.78 14.00 11.45

19.00 0 26.078 260780

3.7-2

3.7-2

		64.27				64.27	672.67	736.94
1		8.71				8.71	276.39	285.10
2		12.89				12.89	126.99	139.88
3		6.80				6.80	225.32	232.12
4		30.40				30.40		30.40
5		1.22				1.22		1.22
6		2.81				2.81		2.81
7		1.44				1.44		1.44
8							43.97	43.97
						3.78	212.13	215.91
1								0.00
2							121.45	121.45
3								0.00
4							50.85	50.85
5								0.00
6				0.90		0.90		0.90
7				2.88		2.88		2.88
8							39.83	39.83
		12.00	2.00			14.00		14.00
1		4.00	2.00			6.00		6.00
2		8.00				8.00		8.00
		11.45				11.45	33.58	45.03
		7.67				7.67	33.58	41.25
1		2.87				2.87		2.87

2		1.87				1.87		1.87
3		0.19				0.19		0.19
4						0.00		0.00
5		0.34				0.34		0.34
6						0.00		0.00
7		2.40						0.00
8						0.00	33.58	33.58
		1.68				1.68		1.68
		2.10				2.10		2.10
					19.00	19.00		19.00
1					6.50	6.50		6.50
2					0.00	0.00		0.00
3					12.50	12.50		12.50
4								
5								
6								
I		87.72	2.00	0.00	19.00	112.50	918.38	1030.88
II						0.00		0.00
III						112.50	918.38	1030.88
IV						26.078		26.078
×						**138.58**	**918.38**	**1056.96**

3.7-3

				+/-
		736.94	736.94	0.00
1		285.10	285.10	0.00
2		139.88	139.88	0.00
3		232.12	232.12	0.00
4		30.40	30.40	0.00
5		1.22	1.22	0.00
6		2.81	2.81	0.00
7		1.44	1.44	0.00
8		43.97	43.97	0.00
		215.91	215.91	0.00
1		0.00	0.00	0.00
2		121.45	121.45	0.00
3		0.00	0.00	0.00
4		50.85	50.85	0.00
5		0.00	0.00	0.00
6		0.90	0.90	0.00
7		2.88	2.88	0.00
8		39.83	39.83	0.00
		14.00	14.00	0.00
1		6.00	6.00	0.00
2		8.00	8.00	0.00
		45.03	45.03	0.00
		41.25	41.25	0.00
1		2.87	2.87	0.00
2		1.87	1.87	0.00
3		0.19	0.19	0.00
4		0.00	0.00	0.00

5		0.34	0.34	0.00
6		0.00	0.00	0.00
7		0.00	0.00	0.00
8		33.58	33.58	0.00
		1.68	1.68	0.00
		2.10	2.10	0.00
		19.00	19.00	0.00
1		6.50	6.50	0.00
2		0.00	0.00	0.00
3		12.50	12.50	0.00
4		-	-	-
5		-	-	-
6		-	-	-
I		1030.88	1030.88	0.00
II		0.00	0.00	0.00
III		1030.88	1030.88	0.00
IV		26.078	26.078	0.00
×		**1056.96**	**1056.96**	0.00

3.7.3

2021 2026

1

2

3

4.1.2

1

2

3

4

5

6

7

4.1.3

“

”

1

2

“ ”

3

4

5

6

7

4.1.4

1

2

“ ”

3

4

5

4.1.5

1

2

3

4

5

6 SL/Y

50% 30%

4.2.2.5

1

2

1

SL/T 336-2025

GB/T 22490-2025

1

2

3

4

5

2

8

2 8 136

50%

30%

4.2-2

		1		1	57		50%
				1	13		50%
				1	49		50%
				1	6		50%
				1	1		50%
		1		1	1		50%
				1	1		50%
				1	8		50%
		2		**3**	**136**		

3

2 8

1 8 100%

100%

4.2-3

						%
			1	1	1	100
			1	1	1	100
			1	1	1	100
			1	1	1	100
			1	1	1	100
			1	1	1	100
			1	1	1	100
			1	1	1	100
			8	**8**	**8**	**100**

4.2.2.5

1

2

1

2

2 5 102

50%

30%

4.2-4

		1		1	87		100%
				1	3		
				1	1		
				1	1		
				1	10		
		1		**5**	**102**		

3

≥ 85%

85% 41%~85%

2 8 238

100.00%

5.3-1

					/	
	hm²	**hm²**	**hm²**	**hm²**	**hm²**	**%**
	6.04	0.11		0.11	5.83	98.34
	3.71	0.18	3.52	3.70		99.73
	2.89	0.10		0.10	2.77	99.31
	2.21		2.20	2.20		99.55
	0.77			0.00	0.76	98.70
	0.30		0.30	0.30		100.00
	0.96	0.95		0.95		98.96
	3.18	1.65	1.50	3.15		99.06
	20.06	2.99	7.52	10.51	9.36	99.05

5.3.2

500t/km²·a 473/km²·a

1.06 1.0

5.3-2

	t/km².a	**t/km².a**	
	500	450	1.11
	500	495	1.01
	500	455	1.10
	500	480	1.04
	500	470	1.06
	500	488	1.02
	500	492	1.02
	500	498	1.00
	500	473	1.06

5.3.3

% =

+ / + ×100%

15.99 m³

15.68m³ 98.06% 94%

5.3-3

	mį	**mį**	**%**
	15.99	15.68	98.06

5.3.4

% = / ×100%

2.71 m^3 2.62

m^3 96.68% 92%

5.3-4

m^3		**%**
2.71	2.62	96.68

5.3.5

7.55hm^2 7.52hm^2 99.60%

97% 5.3-5

5.3-5

	(hm^2)	**(hm^2)**	
	7.55	7.52	99.60%
	7.55	**7.52**	**99.60%**

5.3.6

% = / ×100%

7.52hm^2 37.49% 25%

5.3-6

5.3-6

	(hm^2)	**(hm^2)**	**(hm^2)**	
	20.06	7.55	7.52	37.49%

	5		10		2		1	
		%		%		%		%
	16	88.89	2	11.11	0	0	0	0
	17	94.44	2	5.56	0	0	0	0
	15	83.33	3	16.67	0	0	0	0
	17	94.44	1	5.56	0	0	0	0

6.2

1

2

“

”

3

4

5

“ ”

6.3

6.3.1

2019

2019 3

2020

2026 5

2026 7

6.3.2

1

“ ”

2

3

4

2026 7

2026 8

6.3.3

1

2026 7

2

6.3.4

2017 365

53

6.4

6.4.1

6.4.2

2021 2 2020 3

“ ”

2026 8

6.4.3

6.4.3.1

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GB/T21010

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6.4.3.2

6.4.4

6.4.5

99.05%

1.06 98.06% 96.68% 99.60%

37.49%

6.4.6

6.5

6.6

6.7

2017 347

1.3 /m² 16.48hm² 164800m²

21.424 214240 2019 9 16

20.06hm² 200600m²

26.078 260780 3.58hm² 35800m²

4.654 46540 2026 6 17

6.8

6.8.1

1

2

3

4

6.8.2

7

7.1

1 +

K0+000~K2+064.406 2.064km

24.5m 80km/h 4

4 1.915km A B C D 2 133m/1

68.931m/1 7 9.0/10.5m 40km/h

B D A D

1 1

1352m 490m CK0+217

752m 110m 377m DK0+200 287m

K0+280 90m 650m AK0+560 150m

DK0+027 500m

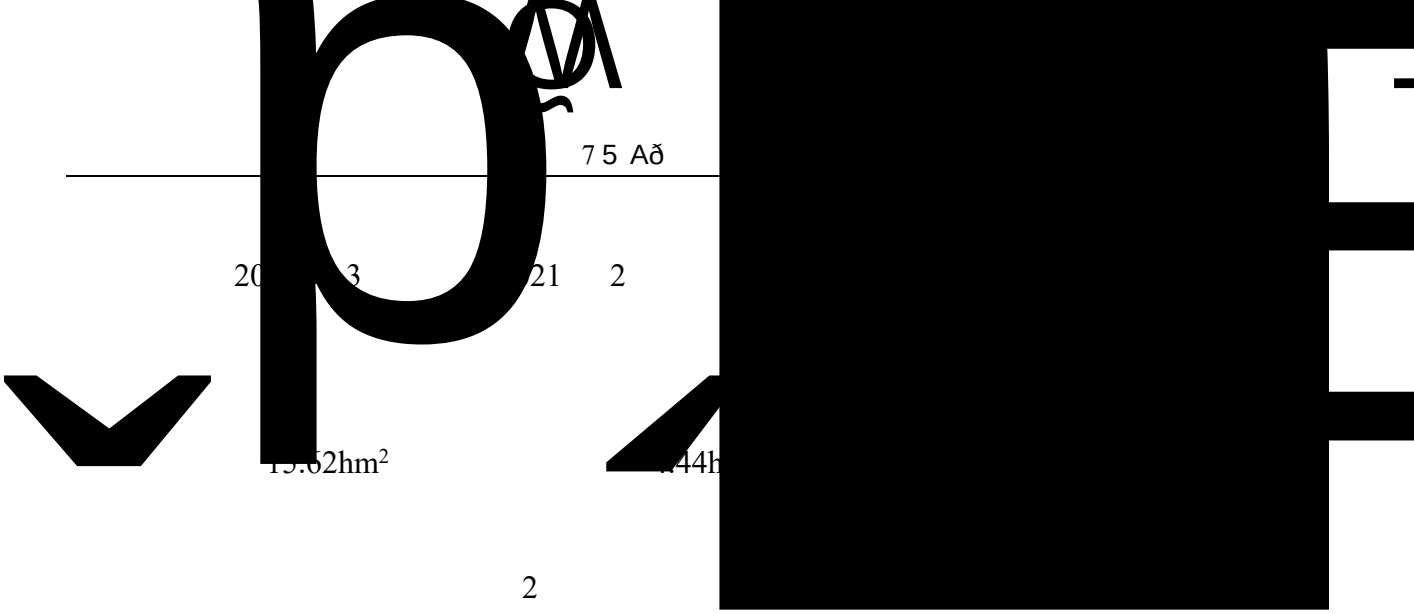
67.26

m^3 2.62 m^3 49.68 m^3

2.62 m^3 1.59 m^3 15.99 m^3

21.27 m^3

18689.45 12784.97



75 Að

20 3 21 2

15.62hm² 44h

2

8

2

3

4 99.0%

1.06 6% 96 %

99.60% 49%

5

1056.96 918.38

138.58 64.27

3.78 14.00 11.45 19.00

1

2

3

7.2

8

8.1

1

2

3

4

5

6

8.2

1

2

3

4

5

6

7

8.3

1

2

3