

Infrastructure Management



Roads



Guangdong Road Network



Southern Guangdong

	1. Guangzhou City Northern Ring Road	2. Beijing – Zhuhai Expressway (Guangzhou – Zhuhai Section)	
NWSH's Attributable Interest	65.29%	25%	
Form of Investment	CJV	CJV	
Length	22km	Section I: 8.6km Section II: 53.8km	
Lanes	Dual 3-Lane	Section I: Dual 3-Lane Section II: Dual 3-Lane / Dual 2-Lane	
Location	Guangzhou City	Guangdong Province	
Operation Date	January 1994	Section I: May 1997 Section II: December 1999	
Expiry Date	2023	2030	
Current Toll Rates	Rmb2 – Rmb75	Section I: Rmb2.84 – Rmb17.62 Section II: Rmb5 – Rmb180	
Ave. Daily Traffic Flow	2003 2002 2001 117,217 120,556 130,747	2003 2002 2001 Section I: 31,513 27,731 24,912 Section II: 29,039 24,926 20,079	

Western Guangdong

	3. Roadway No. 321 (Fengkai Section)	4. Roadway No. 321 (Deqing Section)	5. Roadway No. 321 (Gaoyao Section)
NWSH's Attributable Interest	45%	45%	55%
Form of Investment	CJV	CJV	CJV
Length	42km	79km	23.8km
Lanes	Dual 2-Lane	Dual 2-Lane	Dual 2-Lane
Location	Fengkai County	Deqing County	Gaoyao City
Operation Date	December 1994	September 1995	August 1998
Expiry Date	2019	2020	2019
Current Toll Rates	Rmb2 – Rmb60	Rmb3 – Rmb70	Rmb2 – Rmb30
Ave. Daily Traffic Flow	2003 2002 2001 4,899 5,346 5,135	2003 2002 2001 5,907 6,342 6,023	2003 2002 2001 8,506 9,332 8,954
	6. Roadway No. 1962 (Gaoyao Section)	7. Roadway No. 1958 (Deqing Section)	8. Roadway No. 324 (Gaoyao Section)
NWSH's Attributable Interest	60%	65%	40%
Form of Investment	CJV	CJV	CJV
Length	32.4km	30km	24km
Lanes	Dual 1-Lane	Dual 1-Lane	Dual 2-Lane
Location	Gaoyao City	Deqing County	Gaoyao City
Operation Date	August 1998	May 1999	February 1994
Expiry Date	2026	2023	2015
Current Toll Rates	Rmb2 – Rmb25	Rmb2 – Rmb25	Rmb2 – Rmb30
Ave. Daily Traffic Flow	2003 2002 2001 2,258 2,398 2,387	2003 2002 2001 569 541 639	2003 2002 2001 9,644 9,079 8,779

→ Project Key Facts and Figures — Infrastructure Management

Western Guangdong

	9. Roadway No. 1969 (Gaoyao Section)	10. Roadway No. 1964 (Zhaojiang Section)	11. Shuangjin Roadway (Gaoyao Section)
NWSH's Attributable Interest	10% / 58%	70%	61%
Form of Investment	CJV	CJV	CJV
Length	27km	32km	34km
Lanes	Dual 1-Lane	Dual 2-Lane	Dual 1-Lane
Location	Gaoyao City	Gaoyao City	Gaoyao City
Operation Date	January 1998	December 1995	September 1997
Expiry Date	2024	2019	2024
Current Toll Rates	Rmb2 – Rmb25	Rmb2 – Rmb30	Rmb2 – Rmb20
	2003 2002 2001	2003 2002 2001	2003 2002 2001
Ave. Daily Traffic Flow	2,303 2,462 2,452	6,519 6,424 6,185	413 867 1,552



Northern Guangdong

	12. Roadway No. 1959 (Qingxin Section)	13. Roadway No. 1906 (Qingcheng Section)	14. Roadway No. 1960 (Guangning Section)
NWSH's Attributable Interest	75%	80%	55%
Form of Investment	CJV	CJV	CJV
Length	26.6km	26.8km	60km
Lanes	Dual 2-Lane	Dual 2-Lane	Dual 1-Lane
Location	Qingxin County, Qingyuan City	Qingcheng District, Qingyuan City	Guangning County
Operation Date	November 1998	September 2001	July 1996
Expiry Date	2027	2028	2020
Current Toll Rates	Rmb2 – Rmb25	Rmb2 – Rmb20	Rmb2 – Rmb60
	2003 2002 2001	2003 2002 2001	2003 2002 2001
Ave. Daily Traffic Flow	3,592 3,928 3,879	3,569 2,909 N/A	4,717 4,607 4,404




	15. Roadway No. 1960 (Sihui Section)	16. Roadway No. 1962 (Guangning Section)
NWSH's Attributable Interest	50%	55%
Form of Investment	CJV	CJV
Length	47km	19.5km (including a 301-metre bridge)
Lanes	Dual 2-Lane	Dual 1-Lane
Location	Sihui City	Guangning County
Operation Date	Wumagang Bridge Toll Station: January 1996 Shatou Toll Station: June 1996	April 1998
Expiry Date	2021	2023
Current Toll Rates	Rmb2 – Rmb60	Rmb2 – Rmb25
	2003 2002 2001	2003 2002 2001
Ave. Daily Traffic Flow	5,800 5,966 5,655	795 807 765

Eastern Guangdong

	17a. Shenzhen-Huizhou Expressway (Huizhou Section)	17b. Shenzhen-Huizhou Roadway (Huizhou Section)	18. Hui-Ao Roadway a. Hui-Dan Section b. Hui-Ao Section
NWSH's Attributable Interest	33.33%	50%	50%
Form of Investment	CJV	CJV	CJV
Length	34.7km	21.8km	Hui-Dan Section: 36km Hui-Ao Section: 50.5km
Lanes	Dual 2-Lane	Dual 2-Lane	Hui-Dan Section: Dual 1-Lane Hui-Ao Section: Dual 2-Lane
Location	Huizhou City	Huizhou City	Huizhou City
Operation Date	June 1993	December 1997	Hui-Dan Section: January 1996 Hui-Ao Section: October 2000
Expiry Date	2027	2023	2028
Current Toll Rates	Rmb15 – Rmb85	Rmb1 – Rmb25	Rmb2 – Rmb25
	2003 2002 2001	2003 2002 2001	2003 2002 2001
Ave. Daily Traffic Flow	11,375 7,314 6,312	11,529 11,979 11,383	7,462 5,930 4,062

 <p>Guangxi Road Network</p> <p>Roads</p> <ul style="list-style-type: none"> Grade 1 Highway Grade 2 Highway 	<p>19. Beiliu City Roadways</p> <p>NWSH's Attributable Interest Form of Investment Length</p> <p>Lanes</p> <p>Location</p> <p>Operation Date</p> <p>Expiry Date</p> <p>Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>60% CJV</p> <p>Phase I: 18.2km Phase II: 21.6km</p> <p>Dual 1 to 2-Lane</p> <p>Beiliu City</p> <p>Phase I: August 1997 Phase II: May 1998</p> <p>2022</p> <p>Rmb1 – Rmb25</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>4,501</td> <td>4,590</td> <td>5,552</td> </tr> </table>	2003	2002	2001	4,501	4,590	5,552													
2003	2002	2001																			
4,501	4,590	5,552																			
<p>NWSH's Attributable Interest Form of Investment Length</p> <p>Lanes</p> <p>Location</p> <p>Operation Date</p> <p>Expiry Date</p> <p>Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>20. Rongxian Roadways</p> <p>70% CJV</p> <p>Phase I: 9.2km Phase II: 16.8km</p> <p>Dual 1 to 2-Lane</p> <p>Rongxian</p> <p>Phase I: October 1997 Phase II: May 1998</p> <p>2022</p> <p>Rmb1 – Rmb25</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>4,521</td> <td>4,289</td> <td>4,430</td> </tr> </table>	2003	2002	2001	4,521	4,289	4,430	<p>21. Yulin – Shinan Roadway</p> <p>60% CJV</p> <p>27.8km</p> <p>Dual 2-Lane</p> <p>Yulin City</p> <p>May 1998</p> <p>2022</p> <p>Rmb1 – Rmb25</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>5,753</td> <td>4,937</td> <td>4,638</td> </tr> </table>	2003	2002	2001	5,753	4,937	4,638	<p>22. Yulin Shinan – Dajiangkou Roadway</p> <p>60% CJV</p> <p>Phase I: 8.7km Phase II: 30km</p> <p>Dual 1 to 2-Lane</p> <p>Yulin City</p> <p>Phase I: August 1997 Phase II: January 1999</p> <p>2022</p> <p>Rmb1 – Rmb25</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>2,941</td> <td>2,721</td> <td>2,415</td> </tr> </table>	2003	2002	2001	2,941	2,721	2,415
2003	2002	2001																			
4,521	4,289	4,430																			
2003	2002	2001																			
5,753	4,937	4,638																			
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2,941	2,721	2,415																			
<p>NWSH's Attributable Interest Form of Investment Length</p> <p>Lanes</p> <p>Location</p> <p>Operation Date</p> <p>Expiry Date</p> <p>Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>23. Yulin Shinan – Guigang Roadway</p> <p>60% CJV</p> <p>20km</p> <p>Dual 2-Lane</p> <p>Yulin City</p> <p>N/A</p> <p>2022</p> <p>N/A</p> <p>N/A</p>	<p>24. Roadway No. 321 (Wuzhou Section)</p> <p>45% CJV</p> <p>Phase I: 8.7km Phase II: 4.3km</p> <p>Dual 2-Lane</p> <p>Wuzhou City</p> <p>Phase I: March 1997 Phase II: December 1998</p> <p>2022</p> <p>Rmb2 – Rmb30</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>4,994</td> <td>5,558</td> <td>5,377</td> </tr> </table>	2003	2002	2001	4,994	5,558	5,377	<p>25. Cangwu County Roadway</p> <p>70% CJV</p> <p>10.1km</p> <p>Dual 2 to 3-Lane</p> <p>Cangwu County</p> <p>January 1999</p> <p>2022</p> <p>Rmb1 – Rmb22</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>4,503</td> <td>5,055</td> <td>4,990</td> </tr> </table>	2003	2002	2001	4,503	5,055	4,990						
2003	2002	2001																			
4,994	5,558	5,377																			
2003	2002	2001																			
4,503	5,055	4,990																			
 <p>Shanxi Road Network</p> <p>Roads</p> <ul style="list-style-type: none"> Grade 1 Highway Grade 2 Highway 	<p>26. Shanxi Taiyuan – Gujiao Roadway (Taiyuan Section)</p> <p>NWSH's Attributable Interest Form of Investment Length</p> <p>Lanes</p> <p>Location</p> <p>Operation Date</p> <p>Expiry Date</p> <p>Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>60% / 90% CJV</p> <p>23.18km</p> <p>Dual 1-Lane</p> <p>Taiyuan City</p> <p>July 2000</p> <p>2025</p> <p>Rmb10 – Rmb60 (effective from 5 August 2002)</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>430</td> <td>630</td> <td>670</td> </tr> </table>	2003	2002	2001	430	630	670													
2003	2002	2001																			
430	630	670																			

→ Project Key Facts and Figures — Infrastructure Management

	27. Shanxi Taiyuan – Gujiao Roadway (Gujiao Section)	28. Roadway No. 309 (Changzhi Section)	29. Taiyuan – Changzhi Roadway (Changzhi Section)
NWSH's Attributable Interest	60% / 90%	60% / 90%	60% / 90%
Form of Investment	CJV	CJV	CJV
Length	36.02km	22.2km	18.3km
Lanes	Dual 1-Lane	Dual 1-Lane (16.75km) Dual 2-Lane (5.45km)	Dual 1-Lane (4.05km) Dual 2-Lane (14.25km)
Location	Gujiao City	Changzhi City	Changzhi City
Operation Date	April 1999	July 2000	August 2000
Expiry Date	2025	2023	2023
Current Toll Rates	Rmb10 – Rmb60 (effective from 5 August 2002)	Rmb10 – Rmb60 (effective from 5 August 2002)	Rmb10 – Rmb70 (effective from 5 August 2002)
Ave. Daily Traffic Flow	2003 1,019 2002 955 2001 973	2003 1,161 2002 1,087 2001 1,305	2003 2,749 2002 3,682 2001 2,280
	Wuhan City Road Project		30. Wuhan Airport Expressway
		NWSH's Attributable Interest	40%
		Form of Investment	CJV
		Length	18km
		Lanes	Dual 2-Lane
		Location	Wuhan City
		Operation Date	April 1995
		Expiry Date	2025
		Current Toll Rates	Rmb5 – Rmb50
		Ave. Daily Traffic Flow	2003 6,974 2002 6,647 2001 5,700
	Tianjin Municipality Road Project		31. Tangjin Expressway (Tianjin North Section)
		NWSH's Attributable Interest	90% distributable cash for the first 15 years; 60% of distributable cash for the last 15 years
		Form of Investment	CJV
		Length	Section I: 43.4km Section II: 17km
		Lanes	Dual 2 to 3-Lane
		Location	Tianjin Municipality
		Operation Date	Section I: January 1999 Section II: January 2001
		Expiry Date	Section I: 2028 Section II: 2030
		Current Toll Rates	Rmb5 – Rmb110
		Ave. Daily Traffic Flow	2003 13,313 2002 10,615 2001 9,235
	Hong Kong Road Project		32. Tate's Cairn Tunnel
		NWSH's Attributable Interest	29.5%
		Form of Investment	Equity
		Length	4km
		Lanes	Dual 2-Lane
		Location	Hong Kong
		Operation Date	June 1991
		Expiry Date	2018
		Current Toll Rates	HK\$10 – HK\$20
		Ave. Daily Traffic Flow	2003 61,456 2002 63,519 2001 63,992

Bridges

	<h2>Guangdong Bridge Projects</h2> <ul style="list-style-type: none"> Bridges Grade 1 Highway Grade 2 Highway 	<p>1. Gaoming Bridge</p> <p>NWSH's Attributable Interest Form of Investment Length Lanes Location Operation Date Expiry Date Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>30% / 80% CJV 1.1km Dual 1-Lane Gaoming District, Foshan City November 1996 2021 N/A</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>16,227</td> <td>15,816</td> <td>14,977</td> </tr> </table>	2003	2002	2001	16,227	15,816	14,977
2003	2002	2001							
16,227	15,816	14,977							
<p>NWSH's Attributable Interest Form of Investment Length Lanes Location Operation Date Expiry Date Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<h2>2. Zhaoqing Deqing Xijiang Bridge</h2> <p>60% CJV 1.4km Dual 1-Lane Deqing County May 1999 2022 Rmb2 – Rmb25</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>1,864</td> <td>1,928</td> <td>1,652</td> </tr> </table>	2003	2002	2001	1,864	1,928	1,652		
2003	2002	2001							
1,864	1,928	1,652							
	<h2>Wuhan City Bridge Project</h2> <ul style="list-style-type: none"> Bridges Expressway 	<p>3. Wuhan Bridge Development</p> <p>NWSH's Attributable Interest Form of Investment Length Lanes Location Operation Date</p> <p>Expiry Date Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>48.86% JSC 4km Dual 2 to 3-Lane Wuhan City Yangtze River Bridge No. 2: June 1995 Han River Bridge No. 1: January 1956 Han River Bridge No. 2: April 1978 N/A N/A All three bridges have ceased collecting toll</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>58,800</td> <td>45,476</td> <td>40,682</td> </tr> </table>	2003	2002	2001	58,800	45,476	40,682
2003	2002	2001							
58,800	45,476	40,682							
	<h2>Tianjin Municipality Bridge Project</h2> <ul style="list-style-type: none"> Bridges Expressway 	<p>4. Tianjin Yonghe Bridge</p> <p>NWSH's Attributable Interest Form of Investment Length Lanes Location Operation Date Expiry Date Current Toll Rates</p> <p>Ave. Daily Traffic Flow</p>	<p>90% CJV 0.5km Dual 1-Lane Tianjin Municipality December 1998 2023 N/A (ceased collecting toll from 1 June 2003)</p> <table border="1"> <tr> <td>2003</td> <td>2002</td> <td>2001</td> </tr> <tr> <td>4,920</td> <td>4,811</td> <td>5,575</td> </tr> </table>	2003	2002	2001	4,920	4,811	5,575
2003	2002	2001							
4,920	4,811	5,575							

→ Project Key Facts and Figures — Infrastructure Management

Energy						
	1. Zhujiang Power Station – Phase I	2. Zhujiang Power Station – Phase II	3. Shunde De Sheng Power Plant			
NWSH's Attributable Interest	50%	25%	60%			
Form of Investment	EJV	EJV	CJV			
Installed Capacity	600MW	600MW	273.5MW			
Location	Nansha Economic Development Zone, Guangzhou City	Nansha Economic Development Zone, Guangzhou City	Shunde District, Foshan City, Guangdong Province			
Type of Power	Coal-Fired Thermal	Coal-Fired Thermal	Oil-Fired Thermal			
Operation Date	January 1994	April 1996	October 1995			
Expiry Date	2017	2020	2017			
	2003	2002	2001	2003	2002	2001
Power Generation (GWh)	3,373	3,537	3,148	3,902	3,183	3,335
				1,329	1,349	1,298
	4. Sichuan Qianwei Dali Power Plant	5. Macau Power				
NWSH's Attributable Interest	60%	19%				
Form of Investment	CJV	Equity				
Installed Capacity	54MW	488MW				
Location	Qianwei County, Leshan City, Sichuan Province	One in Macau and Two in Coloane				
Type of Power	Coal-Fired Thermal	Oil-Fired Thermal				
Operation Date	November 1997	November 1985				
Expiry Date	2022	2010				
	2003	2002	2001	2003	2002	2001
Power Generation (GWh)	300	230	199	1,876	1,831	1,735

Water Treatment & Waste Management

	1. Macao Water Supply Co. Ltd.	2. Lianjiang Water Plant	3. Zhongshan Tanzhou Water Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	42.5% Equity 255,000m ³ / day Macao 1985 2010	30% Equity 100,000m ³ / day Lianjiang, Guangdong Province N/A 2027	29% Equity 60,000m ³ / day Zhongshan, Guangdong Province January 1994 2027
	4. Zhongshan Dafeng Water Plant	5. Zhongshan Quanlu Water Plant	6. Dongguan Microfiltraton Equipment Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	33.06% Equity 200,000m ³ / day Zhongshan, Guangdong Province April 1998 2020	33.06% Equity 500,000m ³ / day Zhongshan, Guangdong Province April 1998 2020	25% Equity N/A Dongguan, Guangdong Province September 1995 2014
	7. Nanchang Water Plant	8. Baoding Water Plant	9. Siping Water Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	25% Equity 50,000m ³ / day Nanchang, Jiangxi Province January 1996 2023	45% Equity 260,000m ³ / day Baoding, Hebei Province June 2000 2020	25% Equity 118,000m ³ / day Siping, Jilin Province September 2000 2030
	10. Zhengzhou Water Plant	11. Xinchang Water Plant	12. Changtu Water Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	25% Equity 360,000m ³ / day Zhengzhou, Henan Province August 2001 2031	25% Equity 100,000m ³ / day Xinchang, Zhejiang Province March 2002 2032	35% Equity 50,000m ³ / day Tieling, Liaoning Province December 2000 2029
	13. Panjin Water Plant	14. Shanghai Spark Water Plant	15. Shanghai SCIP Waste Water Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	30% Equity 110,000m ³ / day Panjin, Liaoning Province April 2002 2032	25% Equity 100,000m ³ / day Shanghai January 2002 2031	25% Equity Wastewater: 50,000m ³ / day Industrial water: 200,000m ³ / day Shanghai December 2003 (Estimate) 2052
	16. Qingdao Water Plant	17. Chongqing Water Plant	18. Shanghai SCIP Waste Incineration Plant
NWSH's Attributable Interest Form of Investment Capacity Location Operation Date Expiry Date	25% Equity 543,000m ³ / day Qingdao, Shandong Province August 2002 2027	30% Equity 275,000m ³ / day Chongqing November 2002 2052	10% Equity 50,000-60,000 tons / year (Estimate) Shanghai May 2006 (Estimate) 2053