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III. Widening and Expansion and New Projects

In 2008, 17 major projects in total were accomplished while 21 were under construction. The details are outlined below:



1) Yuanlin-Kaohsiung Section Widening Project (Freeway No.1).

The project beginning from Yuanlin interchange (station 211k+767) to Wujia system interchange (station 370k+200), with a total length of 158.43km. This section will be added with 1 lane on both sides except Dingjin system interchange to Kaohsiung interchange (Jiouru Rd.), which need to be added with 2 lanes on both sides due to the traffic introduced by National Freeway No.3. The whole section was completed and opened for 3-lane traffic before the Chinese New Year holiday of 2008. The total budget of this widening project is NT\$39.9625 billion, including 13 interchanges, 5 toll stations and 1 service area. The whole project is divided into 38 bids. By the end of December 2008, the accumulated actual progress of this project had reached 99.7%.



Project No. 521— 3 Lanes opened in June 15th 2008



Project No. 521— 3 Lanes opened in June 15th 2008



Project No. 521— 4 Lanes opened in June 15th 2008



2) Freeway No. 1 Wugu Interchange Improvement Works (Project No. 204)

This project consists of the area in the Wugu interchange on the section 32k+820 to 34k+240 of National Freeway No. 1, which including expansion to the access road (SinWu Rd.), additional elevated ramp between main line and access road, motorcycle lane change and improvement to the National Freeway No. 1 Wugu Interchange and elevated join work of East-West Expressway System Bali-Sindian Line (Project no. 2-3Z). The total budget of this project is NT\$0.978 billion and contracted to BES Engineering Corporation. The project began on April 13, 2006 and is expected to be completed by June 22nd, 2010. The Wugu interchange access roads A and B were expecting completion by March 2009; however, in order to accommodate the construction of connecting road to Taipei Harbor, its construction schedule has been reorganized for completion by the end of 2008. The completion of the access roads will allow traffic from Bali-Wugu direction to enter the freeway via the 2 ramps, relieving traffic congestion at the intersection of Sinwu road. The project will also connect to the East-West Expressway System Bali-Sindian Line, which can improve the overall efficiency of Taipei Harbor connecting road. By the end of December 2008, the accumulated actual progress of this project had reached 82.73%.



Project No. 204— Work on ramps A, B and C.



Contract No. 204— Ramp Bridge A roadwork



Project No. 204 — Work on Elevated Ramp C.



3) East-West Expressway (Wanli-Rueibin Line) Dahua System Interchange Project (Project No.156)

The project consists of areas around the East West Expressway Wanli-Ruibin Line (4k+800~6k+500) and National Freeway No.1 (4k+900~7k+300), which including additional Dahua system interchange, widening to the National Freeway No. 1's Wudu region, and accompanying Wudu interchange works.

The total budget of this project is 1.83860 billion NT dollars and contracted to TungChang Construction Unlimited Company. The project began on November 16th 2007 and expect to be completed by November 14th, 2010 with an expected construction period of 1,095 calendar days. On the completion of this project, it can become an additional alternate pathway for smooth traffic connection from the Freeway No.1 to west bank wharves of Keelung Harbor so as to provide the Keelung region with a more complete traffic network, reduce congestion from Keelung end on Freeway No.1, and the traffic loading on the Badu interchange and Provincial Highway No. 2D; and further, to improve overall highway service standards and reduce traveling time. By the end of December 2008, the accumulated actual progress of this project had reached 25.1%.



Dahua System Interchange Project
– EP8 tube foundation structure's steel bar binding works



Dahua System Interchange Project – EP14 pier foundation steel bar binding works.

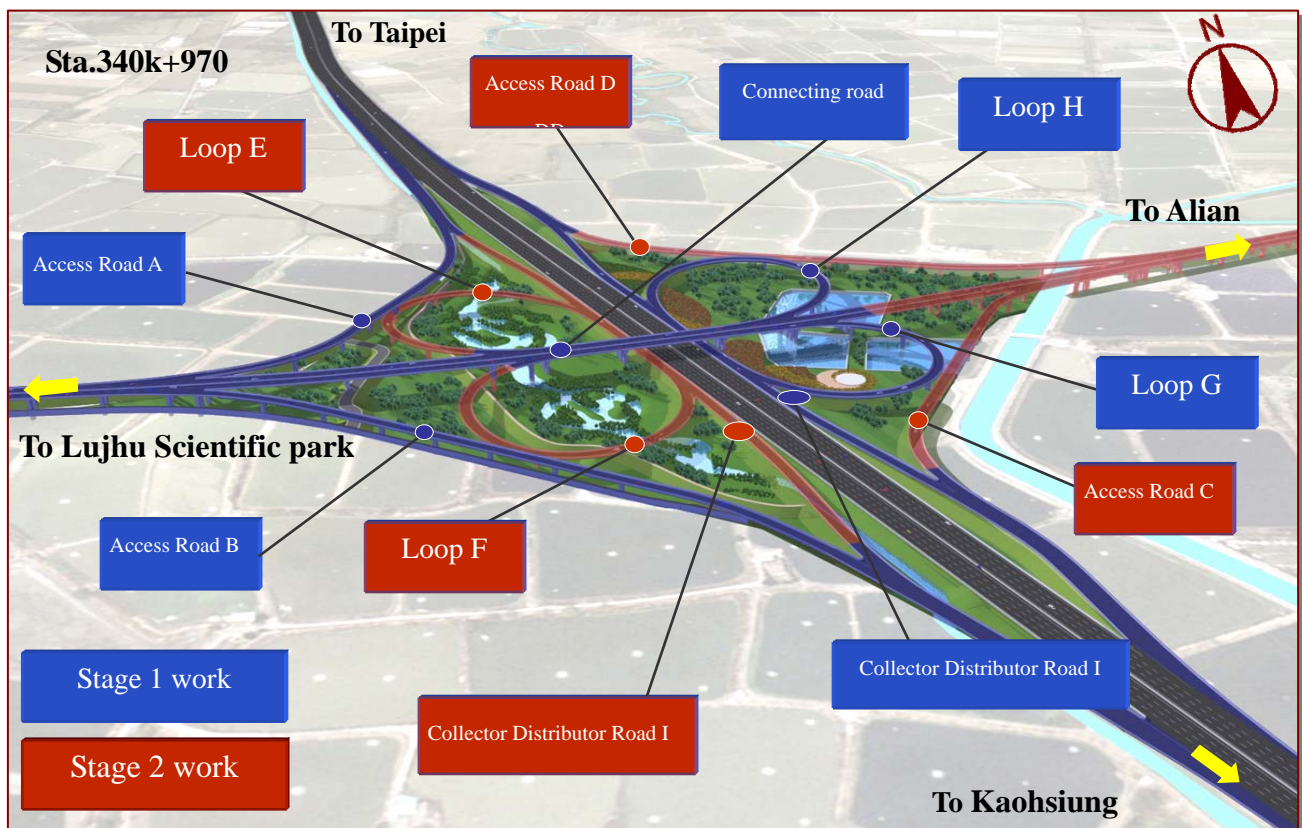


Dahua System Interchange Project – H2P6 beam construction.



4) National Freeway No. 1 Interchange linking to Lujhu Scientific Park (Project number 564A) and No. 564C joint sub-Contract project.

Project includes a new four-leafed clover type interchange between Lujhu and Gangshan interchange (342k+500). The first stage of the project begins with the construction of the access roads to Lujhu Scientific Park on the west side of the interchange, access ramps A, B, loop sections G, H and road section J. Second stage includes the construction of Eastern interchange access ways, dependent on local requirement as well as access ramps C, D, loop sections E, F and road section I. Total budget is 1,397,353,886 NT dollars and contracted to Kung Sing Engineering Corporation. The project began on December 26th 2006. By the end of December 2007, ramps A and B was completed and operated. The project is expected to be finished by January 12th 2009 with a construction period of 749 calendar days. With the Bureau's supervision, the project was completed before expected schedule in December 2008. The completion of project effectively reduces the traffic loads of Provincial Highway No.1 to Lujhu scientific park and provides a key future feature for the high speed network plans. It also improves transport between Tainan Scientific park, Lujhu Scientific park, Kaohsiung Multi-functional Economic and Trade Park and the Kaohsiung processing export area, forming a hi-tech corridor to Southern Taiwan. By the end of December 2008, there has been an accumulated progress of 98.37%.



Lujhu Scientific Park interchange locations diagram



Aerial photograph of ramps A and B and access ways.



Closing of the National Freeways at night for setting up the beams



5) Elevated Ramp Works of Freeway No.1 Dingjin System Interchange Additional Southbound Right Turn Lane Connecting to Freeway No.10 (Project No.571A)

Situated on Freeway No.1 Dingjin System Interchange (station 362k+227), the high rise road connect to National Freeway No. 10. With a project budget of 149,2881,192 NTD. The project is contracted to Liwang Construction Company. Beginning in September 28th, 2007, the project time of 549 calendar days. The project expects completion by March 29th, 2009. With the Bureaus supervision, the project was completed and open for traffic on December 2008. Allowing traveler to access National freeway no. 10 to wards Zouying without having to transfer from other routes. Reducing driving time and effectively relieving traffic congestion in Kaohsiung city Dazhong road and Veteran hospitals region.



Bridge pier works completed



Forecasted beam set-up operations.

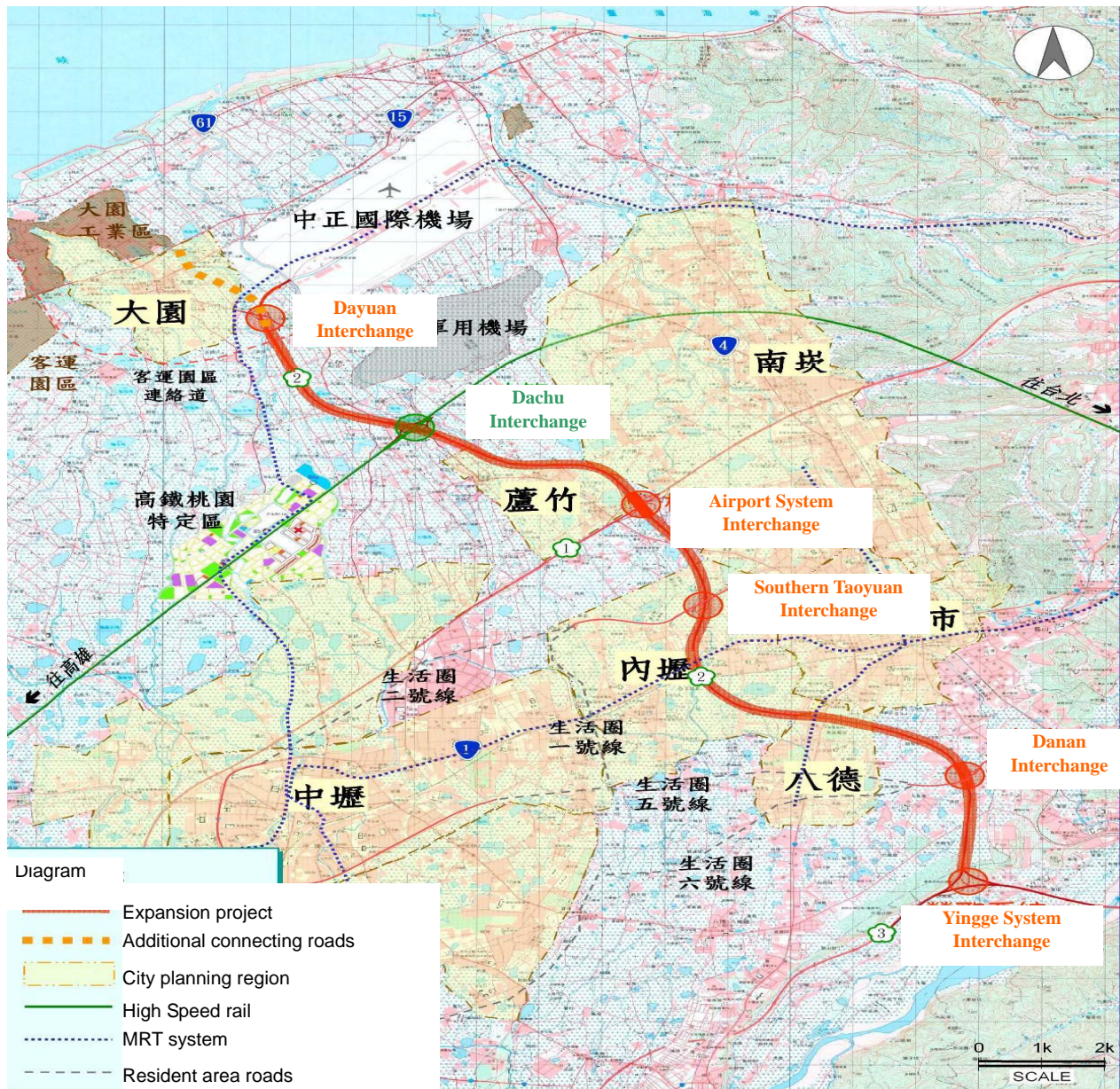


Ramp construction works



6) Widening Project on Freeway No.2

Starting West from Taoyuan International Airport to Eastern Yingge system interchange and connect to National Freeway No.3 and it lengths 20.4 km in total. The project plan was approved by the Council for Economic Planning and Development. This year, which contract bid began since December 28th 2008 with details being finalised by December 2008. The improvement plan aims to widen the airport system interchange section to Yingge interchange to 6 lanes, with other sections widened to 8 lanes. With the exception of Dachu section which was completed in 2006. the remaining sections are in progress and expects to complete by 2012. Improving overall traffic capacity and relief the transportation demands to the airport and Taoyuan region, improving overall service standards.



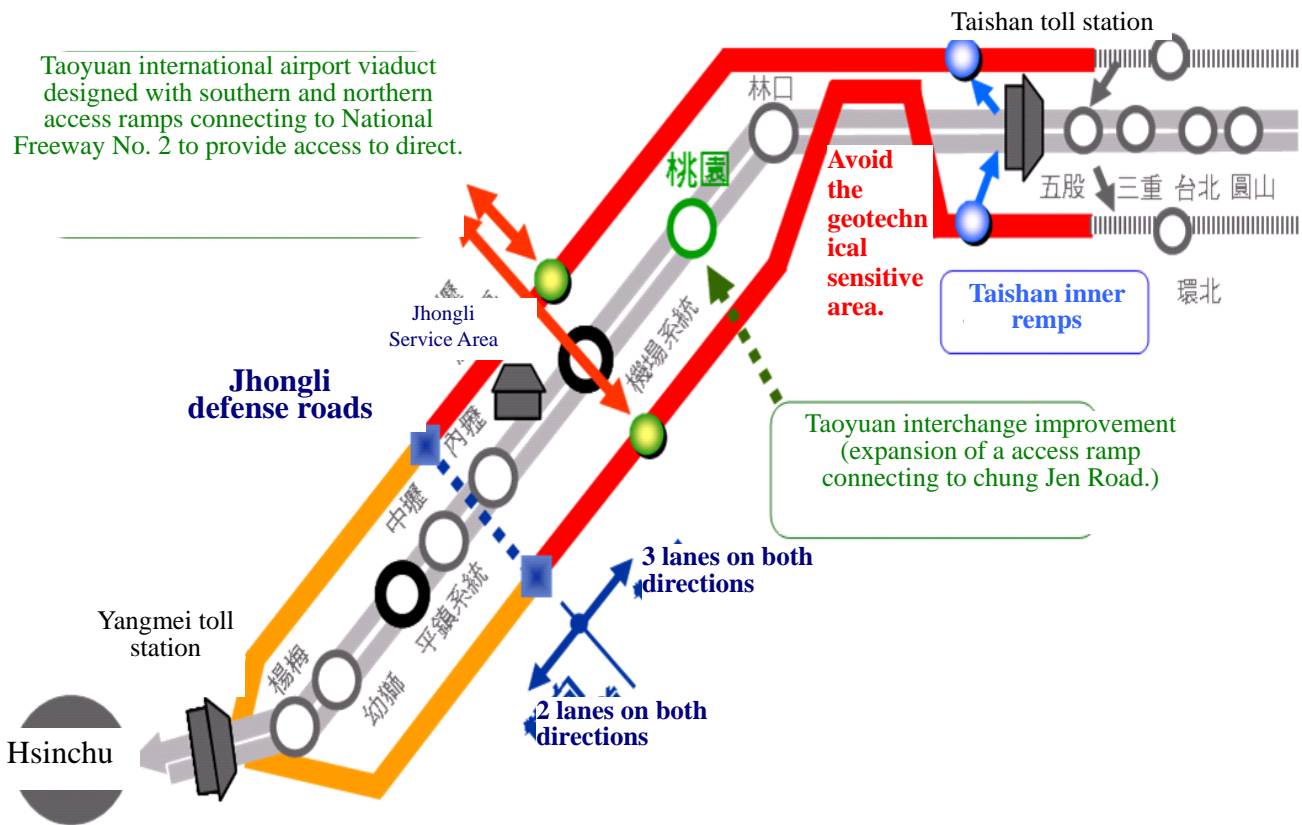
National Freeway Widening Project Plan diagram



7) National Freeway No. 1 Wugu-Yangmei Widening Project

Widening project is adopted by construct additional viaduct sections on both sides of existing freeway, from Sihjih-Wugu viaduct section (31k) in the North to Yangmei toll station (71k) in the south, totalling 40 km. The Jhongli defence roads toward North are be widened to 3 lanes on each side and 2 lanes each side towards the South. Widened section south of the Taishan Toll Station will have internal ramps to provide access to the Wugu-Yangmei viaduct section roads. In addition, access ramp to National Freeway No.2 will also be constructed to provide connection to Taoyuan International Airport. In addition it is recommended to replace Taoyuan interchange access ramp and extend the access road to Chungchen Road. The proposed plan is shown in the schematic diagram below.

The project feasibility studies was completed by August 2008 and was sent for approved by the Executive Yuan in November 2008. Executive Yuan approved the project by December 2007 and the Bureau has begun construction planning in December 2008. The project is expected to be completed by the end of 2012.

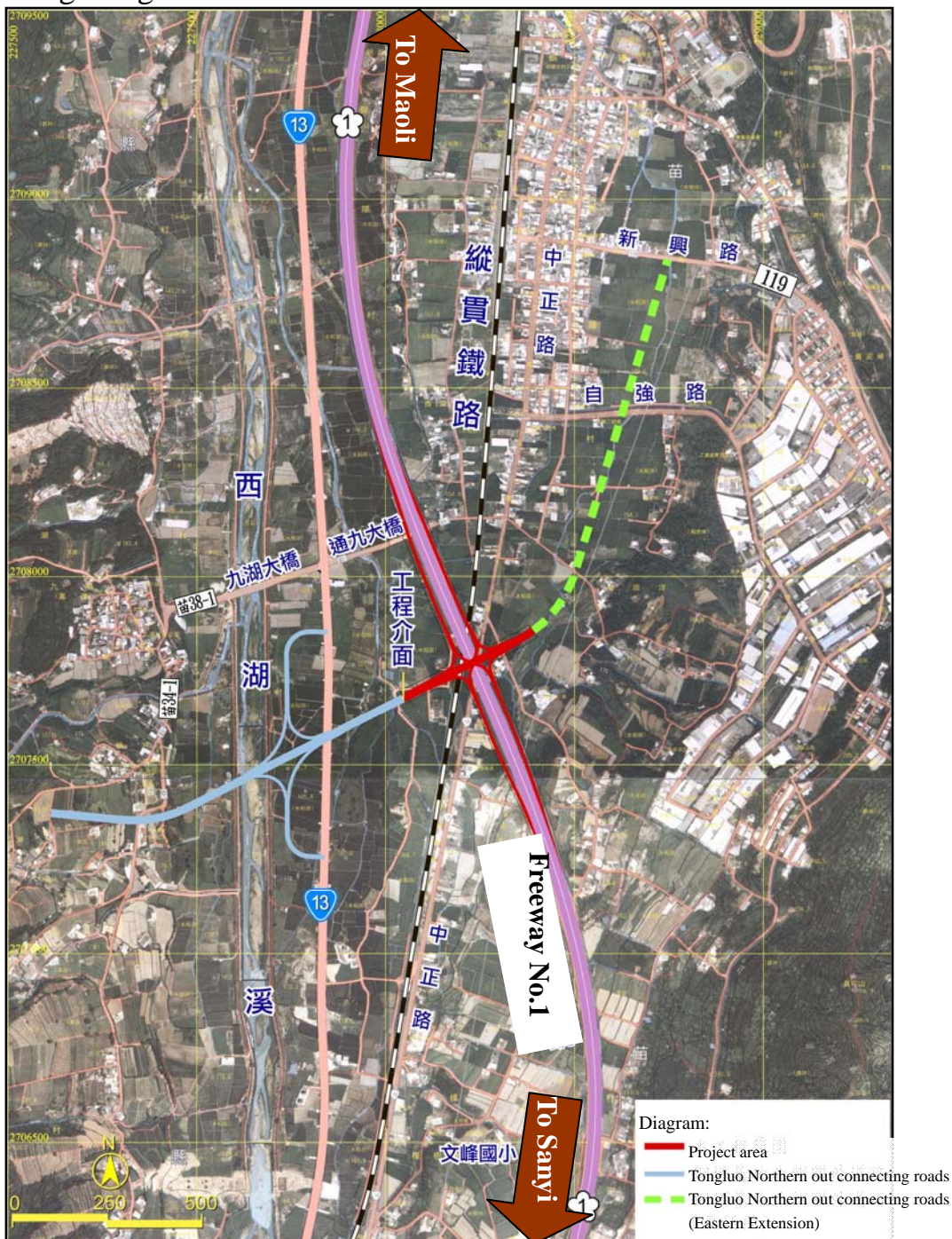


National Freeway No. 1 Wugu-Yangmei Widening Project Schematic Diagram.



8) Tongluo interchange on Freeway No. 1.

Located in National Freeway No. 1 at 140k, 8 km north of Miaoli interchange (132.8k) to 10 km south of the Sanyi interchange (150.2k). The project is expected to begin planning after February 1st, 2008. All related reports and plans (including an environmental impact assessment) are sent to the Ministry of Transportation and Communications by August 27th 2008, The Bureau will hold a roadworks planning meeting in Tongluo Miaoli County Townhall to outline proposed plans and begin land acquisition in October. The project is currently in the design stage.



National Freeway No.1 Tongluo interchange diagram.

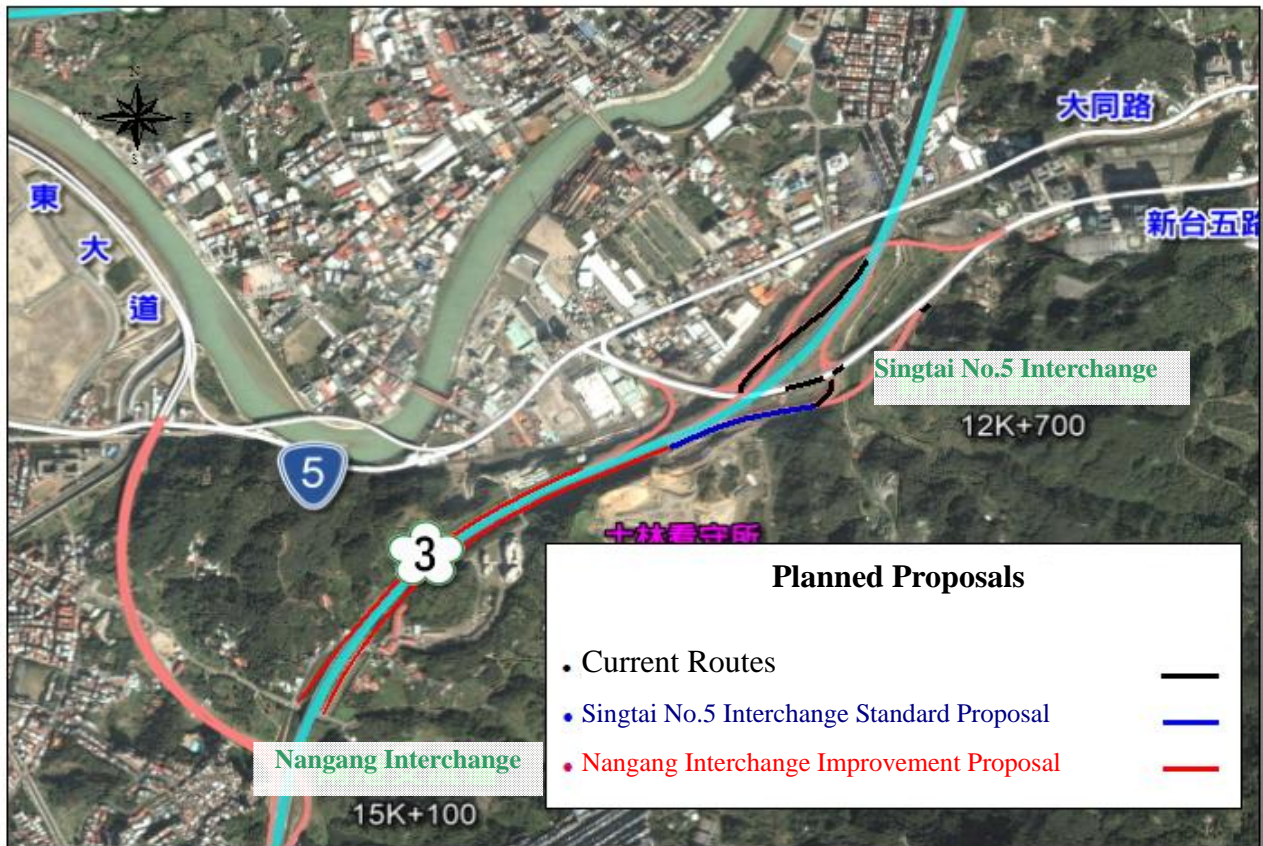


The interchange will cost approximately 1.35 billion NTD and should be completed in July 2011. The completion of this project will provide a northern access to National Freeway No.1 and establish a more efficient route for Tongluo region.

9) Feasibility Studies on Freeway No.3 Sijhih/ Nangang Four Interchanges Integration Works

To address National Freeway No.3 12k-16k 4km section which includes 4 intersections (Sijhih System Interchnage, Sintai 5th Road Interchange, Nagang Interchange and Nagang System Interchange). In order to improve the congested traffic for the access ramps and roads in Hengke and Sijhih region, The Bureau plans to conduct a “National Freeway No 3. (Sijhih to Nangang section) 4 interchange operations and improvements research”. The plan was approved by the Ministry of Transport in November 6th, 2008, with a planning schedule of 1.5 years and a construction time of 20 months.

The investigation will assist the Taipei County, city authority and the Construction and planning Agency in preparing and organising the problems faced with the traffic network. The project is currently in the planning stage and will be sent to the Ministry of Transportation and Communications by November 26th, 2008 for planning and design operations and other related fees needed.

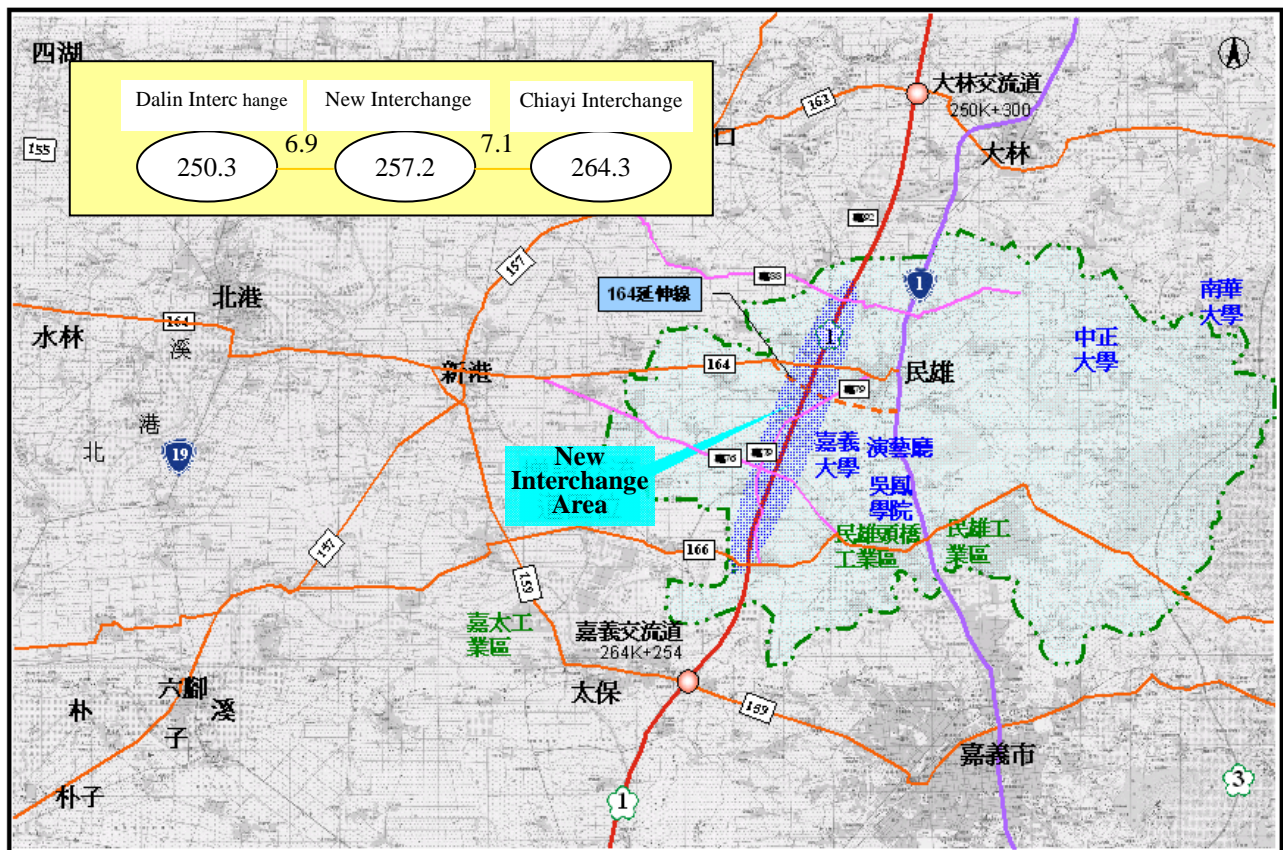


National Freeway No.3 (Sijhih to Nangang section) 4 interchange operations and improvements research diagram



10) National Freeway No.1 addition of Minshyong Interchange

Located on National Freeway Number 1. 257k+190 (Between Dalin and Chiayi Interchange). The completion of the interchange will relieve traffic in the Chiayi interchange (Provincial highway 159) and improve regional road service conditions. The interchange will also provide access to National Freeway No. 1 for Chiayi County citizens living in Minshyong, Singgang, Beigang and Shuilin townships and reduce travelling cost.



National Freeway No.1 Minshyong Interchange diagram

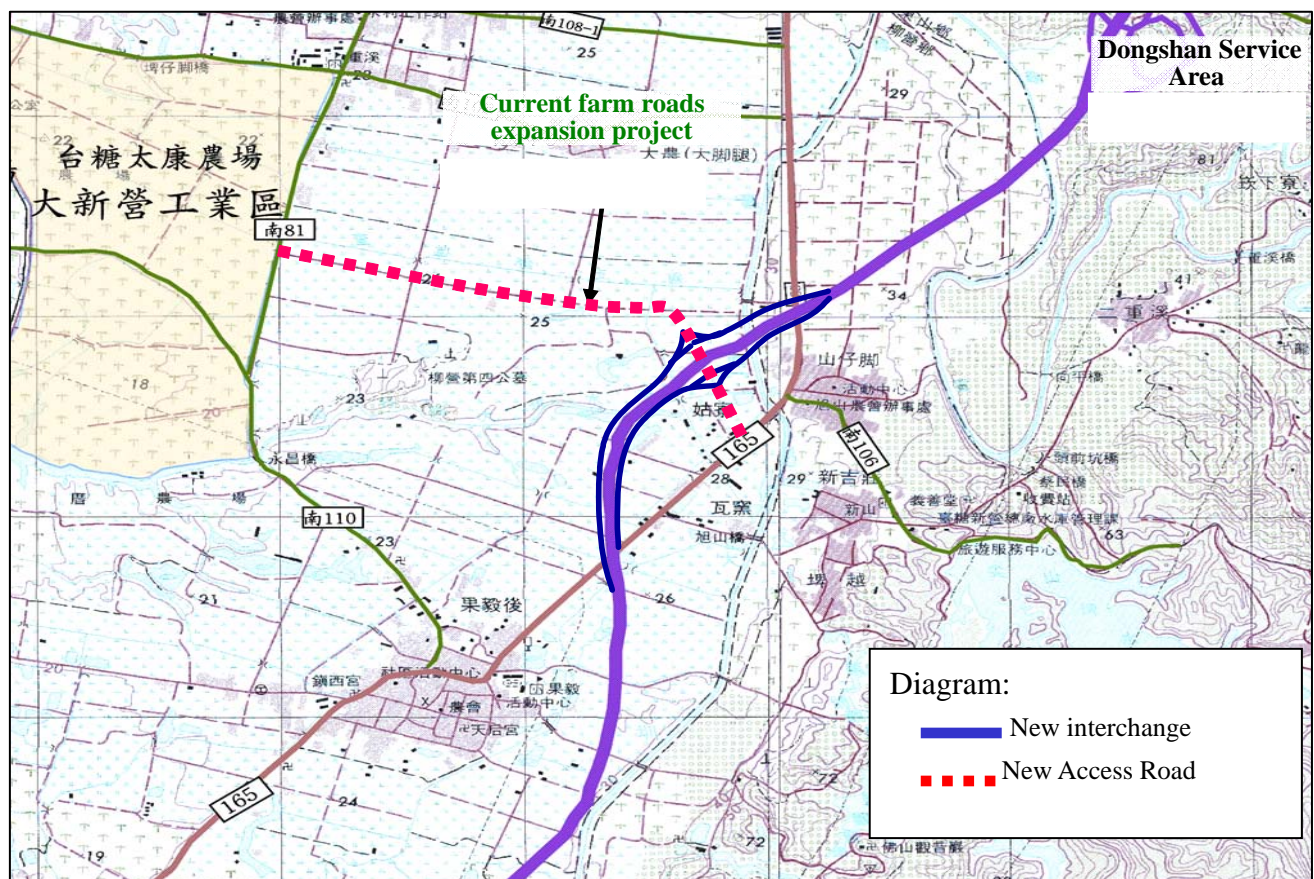
The feasibility study of this case was approved by the Ministry of Transportation and Communication in January 9th, 2008 and began planning and notification since June 13th. The planning report and environmental impact studies are completed and sent to the Ministry and environmental protection agency for approval in October 16th. The engineering plans, environmental impact assessment and land acquisitions of this project are currently finished. The project is expected completion by 2011.



11) Liouying interchange on Freeway No. 3.

Located in Tainan Liouying region (National Freeway No. 3 321k-324k) and the Provincial highway 165. The connection will allow access by the Western Sinying Industrial park and a more complete traffic network.

The project intersection type was decided in May 19th 2008 in the scheduled mid-term review meeting and a final term review meeting in July 31st. The plan was then sent for approval by the Ministry of Transportation and Communication in September 11th and an open meeting in the Liouying town hall was held in September 19th. The project is currently in the planning review stage.



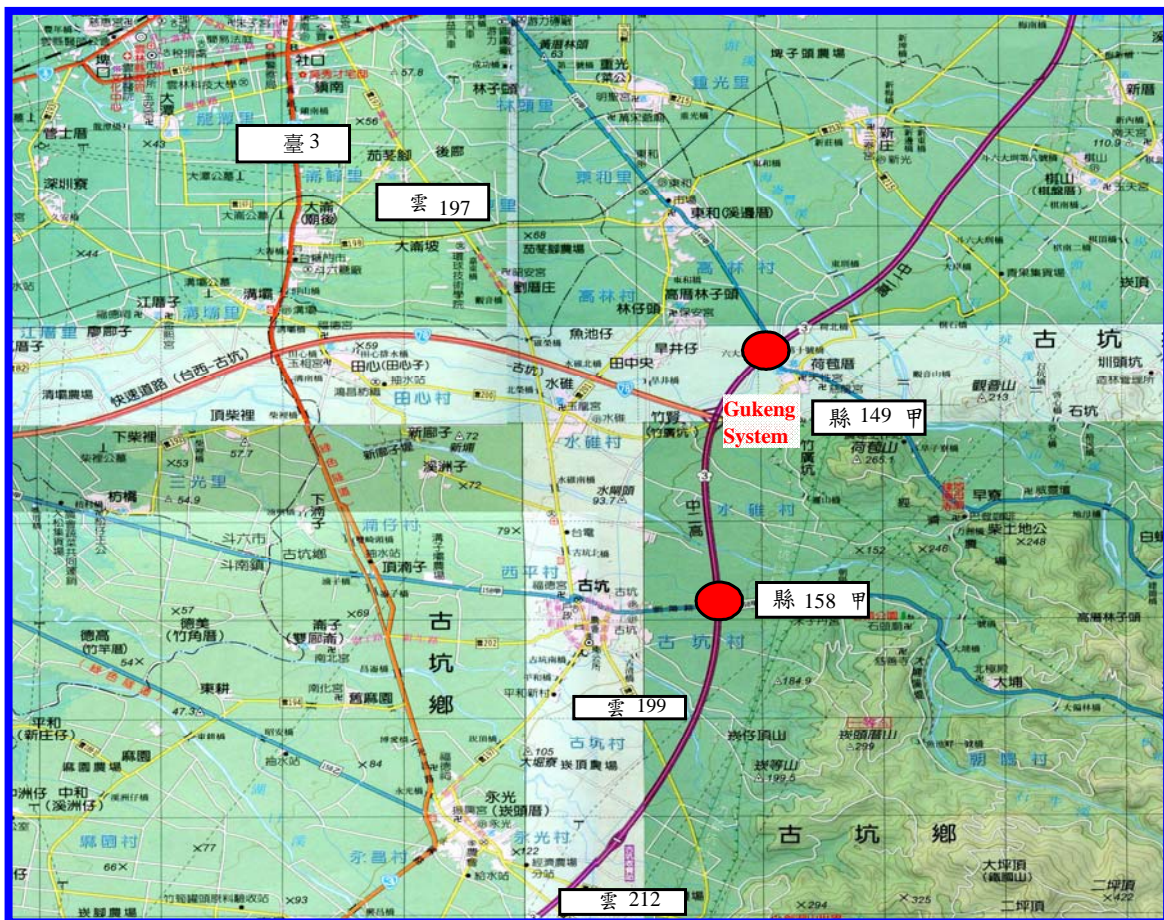
National Freeway No. 3 Liouying interchange project diagram



12) Gukeng interchange on Freeway No. 3.

Currently residents of the Gukeng region have to travel through County Road No. 149A or 158A and then access Provincial Highway No.78 via interchange at Provincial Highway No.3, then access Freeway No. 3 via the Gukeng interchange. The Yuanlin County government has proposed an interchange on the 149A or 158A County Road where it intersects Freeway No.3.

The Project had been reviewing by Mid-term review committee on May 9th 2008. The committee agreed upon the diamond shape interchange to be added in Provincial highway 158A as outlined in Proposal 1 Gukeng township office and local public representatives are in favour of the split diamond-shape interchange in Proposal 2 which is to be built at Provincial Highway 149A. However, due to the position of interchange in Proposal 2 is too close to the next interchange (within 2km), the project uses Proposal 1 as the final resolution which was confirmed by Yunlin County Government. And according to the official letter from the Ministry of Transportation and Communications on Sep 23, 2008 and currently begins further proceeding.



National Freeway No. 3 Gukeng interchange project diagram



13) National Freeway No.1 Huwei Interchange Project

New interchange will be situated on National Freeway No.1 (234k+300-236k+900), where the new Douliu high-speed rail station access road will intersect with it. Due to local demands, the access road will not be raised above National Freeway No.1 but will now join with it. The Bureau began design and construction preparations after announcement of the interchange on behalf of the Ministry of transport in 23rd January, 2008. A review meeting was held on 29th September in 2008 to report on the current plans and the land use maps were sent to the Yunlin County government for organising land acquisition.

The project was part of the Yunlin high speed rail designated region proposal. The completion of this project will reorganise the transportation of Yunlin region, attracting industry investors and encourage vitality into the region.



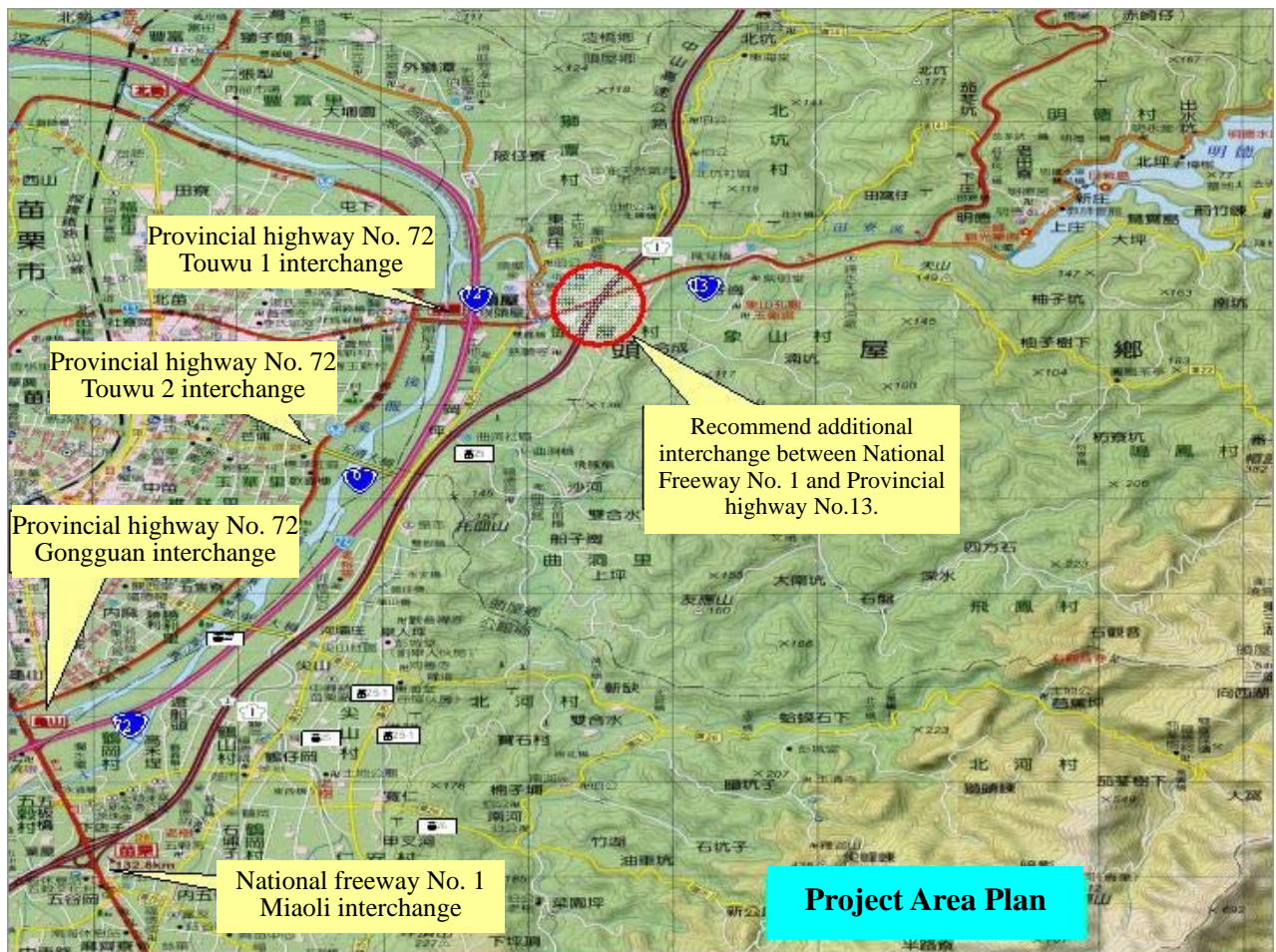
National Freeway No.1 Huwei Interchange Project diagram



14) National Freeway No.1 Touwu Interchange Project

Located at National freeway No. 1 Touwu area (128k+500) and Provincial highway No.13. The project was the result of “Discussion on the feasibility of East-West Expressway Provincial Highway 66, 68 and 72 and their connection to the No. 1 and 3 National Freeway” meeting held by the Directorate General of Highways. The meeting recommends a northern on and off access ramp to the National Freeway No.1 with Provincial Highway No.13 to provide access of the freeway from Provincial Highway No.72. The interchange will not only benefit the regional locals in the area but also a connection with Provincial Highways 72 Touwu interchange, Gongguan interchange and Freeway No.1 Miaoli interchange. Giving a more complete expressway connecting system for both the locals as well as transportation.

The project was approved by a National Highway interchange addition committee on 16th June, 2008 and the feasibility studies were sent to the Ministry of Transportation and Communication on 29th July. With the Ministry’s recommendations, The Miaoli County government sent the final reports to the Bureau on 25th December and are then sent via the Ministry to the Executive Yuan for Approval. Once approved we can proceed with planning operations and works.



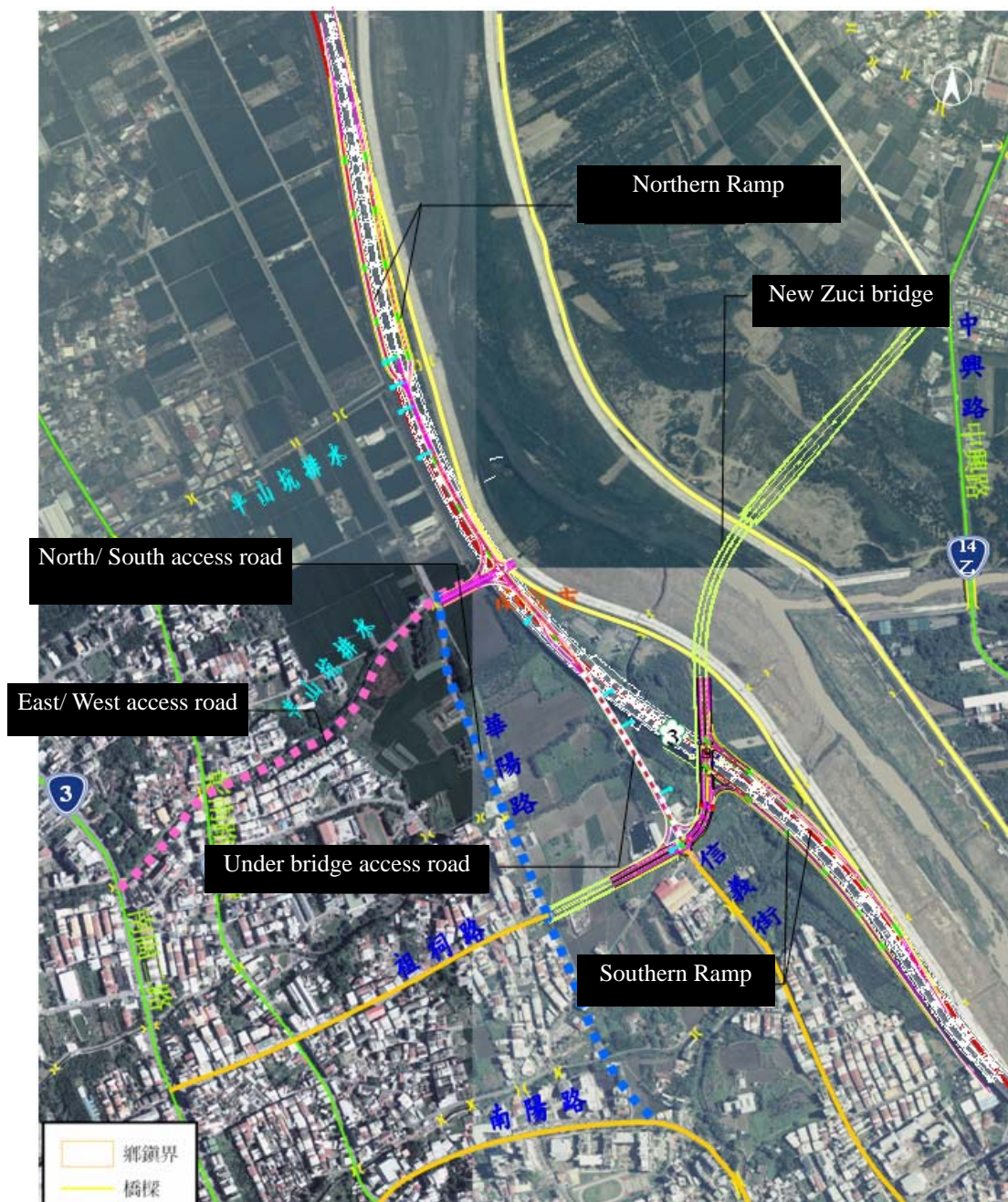
National Freeway No.1 Touwu Interchange Project diagram



15) Additional Interchange to National Freeway No.3 at Nantou City area.

A Separated Diamond Shape Interchange will be added at National Freeway No. 3 from 227k-228k. A northern on-ramp and southern off-ramp will be placed near Ping Shan Kun Drainage and a northern on-ramp and southern off-ramp will be placed near Zuci Bridge. The completion of the interchange will be expected to improve the local traffic network and provide a direct transportation access and enhance the development of the region.

The Bureau has began a National Highway interchange addition committee on 12th August 2008 and is currently awaiting feasibility studies report to be approved by the Ministry of Transport.



Additional Interchange to National Freeway No.3 in the Nantou City area diagram



16) Project of Freeway No. 1 Yuanlin-Kaohsiung Section Traffic Control System

The Yuanlin- Kaohsiung widening project was completed at the end of 2007. New traffic control system works needs to be done in order to include the section into the overall control network. The control will be part of the National Traffic Control Information Centre which will coordinate and direct data in the entire southern highway traffic control system.

Beginning on the May 9th, 2006 the project was divided into 2 sections. The first is the construction, which is expecting completion by May 2009. The second part is the incorporation into the traffic control system network which will begin at the end of the first section. The working period scheduled is 1 year. By the end of December 2008, the accumulated progress of the project is 85.29%.

17) Freeway Central Region Traffic Control System

Central region traffic control system works will accompany extensions to National Freeway No. 3 and widening projects in National Freeway No. 1. In addition the project will include the establishment of the traffic control system in these areas as well as the replacement of emergency telephone system on the National Freeway No. 1, including the transportation and surveillance systems. These additions will be incorporated into the current control system to aid traffic monitoring and control.

The project began on April 3rd, 2002 and finished on August 15th 2006, with a half year trial from September 15th and initial inspection by April 14th, 2007. Finalisation of the inspection was completed by October 15th, 2008 and completion of the inspection by February 28th, 2009.

18) Integrated Freeway & Expressway Traffic Network Management System Project

- (1) The construction budget approved by the Executive Yuan on September 2nd, 2008 was at 4,923,473,757 NTD.
- (2) Currently there are 5 ongoing sub contracts at work. The Northern region central traffic control and command coordination system began in February 27th, 2007, and the Central region traffic control system began work on July 20th, 2007. The Southern region traffic control system began work on December 20th, 2007. Both the Northern and Southern traffic control systems began in December 10th and 12th, 2008. The expected completion time is set at the end of 2010.