

2019 Annual Report

108年 年報



交通部公路總局

DIRECTORATE GENERAL OF HIGHWAYS, MOTC

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攝影 / 呂尚昆
Photo by Lu Shang-kun

幸福公路，智築希望

從每一條建構好的路出發，於土地間交織成網，
投射在車來人往的脈動之間，守護著你我的行車安全，
不再侷限於平面藍圖之上，道路承載了無數美好的生活願景。

隨著近年環境變遷與科技大幅創新，交通發展正歷經轉型的改變。交通運輸不僅是道路設施的新建，抑或運輸監理的服務，擘劃的初心朝向以人為本的思維，藉由貼近民衆需求的交通政策，善用數位智能的專業科技，帶領人們通往美好的生活連結。

回首過去一年，是公路建設開花結果的一年；台9線蘇花公路山區路段改善計畫全線通車，提高蘇花路廊安全性與抗災能力；台9線南迴公路拓寬計畫全線通車，縮短用路人行車時間，提升運輸品質；台61線西濱快速公路芳苑至大城段完工通車，促進西部沿海鄉鎮發展，與鄰近高速公路整合成完善的交通路網。這些路段的通車，不僅提供民衆一條安全、便捷回家的道路，也強化地方道路的交通疏運，消除瓶頸路段及連結斷鏈，帶動地方繁榮與經濟發展。

為維持公路系統良好路況，提供用路人安全、順暢、舒適優美的用路環境，公路總局針對道路特性進行定期養護工作，持續落實「公路防救災預警機制」，配合重大工程相繼通車，辦理南迴及蘇花改之長隧道事

故演練，透過相關情境演練，強化長隧道相關安全防護與緊急應變的能量及作為，以維用路人行車安全。

公路的發展，除了提供人際往來交流的通道，也追求生態永續發展之路。公路總局關注生態保育，構築對生態友善的道路，如台3線卓蘭地段的石虎路殺預警系統、台26線墾丁香蕉灣到砂島路段的護蟹行動、台18線阿里山護螢棲地等。台9線花東縱谷公路整體景觀規劃以「安全、景觀、人



Happiness Highways - Build Roads and Lead the Life to Fulfillment

Starting from each constructed road, weaving into a network between the lands,
Projecting between the pulsations of the traffic coming
and going, guarding the driving safety for us all.

No longer confining to the flat blueprint, roads have carried countless beautiful visions of life.

With the recent changes in the environment and the significant innovations in science and technology, transportation development is undergoing transformational changes. Transportation does not only mean the construction of new road facilities or the motor vehicle services of transportation, but it is also an ideal based on people-oriented thinking. Through the implementation of transportation policies closely related to the needs of the people and the help of intelligent digital technology, we aim to lead people to the connection to a better life.

Looking back at the past year, it was a year of fruitful road construction. The Suhua Highway of the Provincial Highway No.9 Mountainous Section Improvement Project is now open to traffic. It has improved the safety and disaster resistance of the Suhua corridor. The South-Link Highway of Provincial Highway No.9 Widening Project has also opened to the public and shorten the transportation time for road users, increasing its overall quality. Furthermore, The Provincial Highway No.61 West Coast Expressway Fangyuan to Dacheng section is also complete and open to traffic, which has enhanced the development of coastal townships in the west by integrating nearby highways to form a comprehensive transportation network. The opening of these highways have not

only provided the public with a safe and convenient way to return home, but also strengthen local road traffic dredging, eliminated dense bottleneck sections, broken routes, and promoted regional prosperity and economic development.

In order to maintain excellent road conditions and to provide a safe, smooth, comfortable, and beautiful road environment for road users, the Directorate General of Highways conducted regular maintenance work and implemented the “Highway prevention and rescue disaster information system.” In this way, cooperation through the opening of significant projects to handle emergency drill in the Suhua Highway of Provincial Highway No.9 and South-Link Highway of Provincial Highway No.9. Thanks to these actions, we succeeded in maintaining the users’ safety.

The development of highways not only provided a channel for interpersonal communication, but also pursued the way to ecological sustainable development. The Directorate General of Highways has focused on environmental conservation and built ecologically friendly roads, such as the early warning detection system for Leopards Cats on the Zhuolan section of Provincial Highway No.3, the crab protection action on Provincial Highway No.26 from Banana Bay to the Sand Island in Kenting, and the protection



本、生態」為目標，保留在地意象的景觀綠廊，榮獲世界級景觀界國際景觀建築師協會 (IFLA) 大獎。此外，「西濱快速公路八棟寮至九塊厝工程碳管理及環境減輕政策」獲得國際道路協會 (IRF) 的「全球道路成就獎 (GRAA)」，更將臺灣推動永續公共工程落實環境保護措施，及全生命週期觀點的碳管理成就，推向國際舞臺。

以人為出發點，提供更溫暖的服務，是公路總局始終堅持的施政理念。108年除了持續強化偏鄉公共運輸，擴大提供最後一哩路的幸福巴士服務外，並延續公運計畫優化各地運輸服務，新闢路線完善路網，也配合蘇花改通車打造「北花線」最美的巴士，提供舒適的乘車環境。此外，身為第一線服務的監理機關，提供簡政便民的多元E化繳費管道、補助報考機車駕照者參加駕訓班訓練、加速推動大型車輛裝設行視野輔助系統，藉由各項監理業務的補助、訓練與宣導，提升道路交通安全；高雄區監理所榮獲第2屆政府服務獎即是優質服務備受民衆及行政院肯定。

在數位科技大躍進的同時，公路總局透過智慧化系統進行交通管理與控制，提升整體交通路網資訊之運作效能，如開發智慧化省道交控系統、幸福公路APP，提供最新即時省道路況訊息；同時針對省道易致災路段及易形成孤島區域，利用無人飛行載具系統 (UAS) 航拍技術，建置空域資料庫並進行前後變異分析，精進道路養護管理；話務中心研議導入AI智能文字客服，延伸服務時間及管道，讓公路監理服務更趨主動，提升服務品質與量能。

公路人是腳踏實地的築夢者，用專業的態度、敬業的精神，克服各項險阻與難題，為國人成就安全回家的路。透過一年又一年公路上的細緻演化，看見公路人共同守護的成果，期盼未來在「完善便捷公路網絡」、「永續安全公路環境」、「簡政便民監理服務」、「優質無縫公路運輸」的軸心政策下，繼續與全體用路人共同打造有溫度的幸福公路。

代理局長

of natural habitats of fireflies on Provincial Highway No.18 in Alishan, etc. Moreover, landscape planning of the East Rift Valley Highway of Provincial Highway No.9 designed based on the principles of "safety, landscape, humanism, and ecology". Because of this effort, it has been granted the Award of Excellence of the International Federation of Landscape Architects (IFLA) and is now among the world-class landscape industry examples. In addition, the " West Coast Expressway: Ba-Dong-Liao to Jiu-Kuai-Chou Project " has won the Global Road Achievement Award (GRAA) of International Road Federation (IRF), which has further promoted the implementation of sustainable environmental public projects and carbon management achievements from a life-cycle perspective to the international stage.

Being people-oriented and providing warmer services are an essential part of the policy-setting philosophy of the Directorate General of Highways. In 2019, in addition to continuing to strengthen local public transportation and expanding the provision of last-mile happiness bus services, we continued our public transport plan to optimize transportation services in various places, opened new routes, and improved the road network. Furthermore, we participated in the opening of the traffic of the Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project to establish the beautiful "TPE to HUN Shuttle Bus". In addition, as being a first-line service motor vehicle office, we provided a variety of e-payment options that simplify the service. We also subsidized applications for driver license applicants to undertake training courses and accelerate the installation of field-view assistance systems for large vehicles. Thanks to business subsidies, training, and advocacy, we have improved traffic safety. For example, the Kaohsiung Motor Vehicles Office, which won the 2nd Government Service Award, is now highly praised by the public and the Executive Yuan.

At the same time, as part of the great leap forward in digital technology, the Directorate General of Highways has implemented an intelligent system for traffic management and control to improve the efficiency of traffic network information. These systems were developed as part of the smart provincial highway traffic control system and Happiness Highways apps to provide the latest real-time road conditions. Also, for the disaster-prone sections of the secondary highway and isolated areas, the use of an Unmanned Aircraft System (UAS). These systems incorporate aerial photography technology that has been established to help in the analysis of the airspace database and their front-back variation and are very useful for road maintenance management. In addition, the usage of AI intelligent text customer service has also improved the service time and channels, making motor vehicle services more proactive, and enhancing the service quality and capacity.

Highway workers are down-to-earth dream builders. Thanks to an expert attitude and professionalism, we overcame various obstacles and problems to achieve a safe place for the people in this country. Through the meticulous evolution of highways year after year, we have seen the results of the joint protection of highway workers. We look forward to maintaining our principles of: "comprehensive and convenient highway network", "sustainable and safe highway environment", "simple-convenient motor vehicle services", "high-quality seamless highway transportation". We will continue to work with all passersby to create a highway with happiness and warmth.

Director-General 



規劃 · 願景 · 實踐

Portray Longitude and Latitude
Plan · Vision · Practice

Chapter 1



公路在土地上交織成網，承載著「送往迎來」的任務，並確保用路人的行車安全。這不但是我們在108年度擘劃的美好藍圖，也是一直以來，我們對人民信守的承諾，以及精益求精的期許。

Highways are intertwined on the land, carrying the task of "meet and send off" and ensuring the safety of drivers. This ideal is not only the beautiful blueprint we planned for the year 2019, but also our commitment to the people, and our expectation of excellence.

▲ 台9線蘇花改、南迴後續計畫及 ▲ 台61西濱快速公路陸續通車

The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project, South-Link Highway of Provincial Highway No.9 Widening Improvement, and The West Coast Expressway Open to Traffic Gradually

台9線蘇花公路山區路段 改善計畫全線通車

為提高台9線蘇花公路的安全性與抗災能力，公路總局辦理「台9線蘇花公路山區路段改善計畫」分為蘇澳至東澳（A段）、南澳至和平（B段）及和中之至大清水（C段）三路段，改善長度38.4公里。蘇澳至東澳段原路路線曲折，為車禍肇事率最高路

段，故為提高安全性，列為第一階段通車路段，公路總局已於107年2月5日完成通車任務，本路段自通車後，蘇花路廊改採橋梁及隧道替代，可避免邊坡落石，肇事率亦大幅降低，而原蘇花公路蘇澳至東澳段肇事率，經統計亦因蘇花改的分流及移轉重車車次而降低，可見蘇花改計畫對於蘇花路廊安全性確有提升。



白米景觀橋。
Baimi Scenic Bridge.

The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project is Now Open to Traffic

In order to improve the safety and disaster resilience of the Suhua Highway of Provincial Highway No.9, the Directorate General of Highways has launched the "The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project". This project is divided into Su'ao to Dong'ao (Section A) and Nanao to Heping (Section B) And three sections from Hezhong to Daqingshui (Section C), with an improved length of 38.4 kilometers. The route of the original road between Su'ao and Dong'ao was tortuous. It is the section with the highest accident rate. Therefore, to improve safety, it is listed as the first stage to open to traffic. The Directorate General of Highways managed to open it on February 5, 2018. The replacement of Suhua corridors with bridges and tunnels can avoid rockfall on the slopes, and the accident rate is significantly lower. The accident rate of the original Suhua Highway Su'ao to Dong'ao section has also decreased due to the diversion and transformation of the number of heavy vehicles in the Suhua reform. It is now clear that the Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project plan has indeed improved the safety of Suhua corridors.

The roads from Nan'ao to Heping and Hezhong to Daqingshui sections of the original roads were heavily eroded, part of the subgrade was narrow, and the geological conditions were severe. Blockage in traffic was common due to falling rocks and landslides. To improve disaster resistance, they were listed as second-stage traffic sections. From the construction team's experience in section A has foreseen that the early opening can indeed improve the safety of Suhua Road Corridor. Therefore, The Directorate General of Highways has started to discuss the implementation of the construction improvement plan for sections B



蘇澳隧道。
Suao Tunnel.

and C as early as back in 2016. The construction team held a review meeting every two weeks. About half a year before the opening, to effectively constraint the groups of contractors and to show the determination of the Directorate General of Highways to open the traffic, we added content to the interface. Now it is easier to coordinate, integrate, and shorten to a weekly review. During the construction period, we adopted a construction strategy of civil engineering, electromechanical, and traffic control. Because of the complicated interface of the construction strategy, the Directorate General of Highways took the lead at the country level. Then he initiated the pre-opening safety consultation meeting, invited experts and scholars to guide us. In this way, problems encountered in the construction process can come up with timely solutions. The length of the Guanyin and Gufeng Tunnels is 12.6 kilometers long. In doing so, two months before the opening of the tunnel, to enforce disaster prevention and relief of the long tunnel, the Directorate General of Highways conducted multiple on-site drills and invited joint defense units. Moreover, local government police, fire, and health units join the team to conduct scenario planning.

One month into the intensive phase, just before opening to traffic, the Directorate General of Highways conducted weekly reviews, improved daily reviews, and provided the contractors with the necessary resources from top to bottom. Furthermore, we provided a safe



南澳北溪脊背橋。
Nan-ao North River Extradoses Bridge.

南澳至和平段及和中至大清水段原路路線因邊坡侵蝕，部分路基狹窄、地質條件險峻，常因落石坍方阻斷交通，為了提高抗災能力，列為第二階段通車路段。透過A段通車經驗已讓施工團隊預見，及早通車確實能夠改善蘇花路廊的安全性，故公路總局早於107年即研議啓動B、C段施工精進計畫，施工團隊每雙週舉辦施工檢討會議，大約在通車前半年，為有效約束承包商群，體認公路總局通車的決心，將會議內容加入介面協調整合，並縮短為每週檢討，施工期間採土建、機電、交控併行的施工策略，因介面確實複雜，故公路總局率全國之先，首創通車前安全諮詢會議，邀請專家學者指導，讓施工過程中遭遇問題能及時提供解決對策。考量觀音及谷風隧道長達12.6公里，於通車前2個月為利長隧道消防救災，公路總局進行多場現場演練，邀集地方政府警察、消防及衛生等聯防單位加入團隊共同進行沙盤推演。

進入通車前1個月的緊鑼密鼓階段，公路總局更將每週檢討，精進為每日檢討，由上而下全力提供承包商所需資源，並由下而

上提供安全到位的橋隧路面、機電交控整合測試無誤的通車條件，由於各標工程進展順利，與通車相關的設備設施均可於109年1月5日前達通車標準，並完成交通部三階段履勘，預期全線通車後，必能讓當地民眾安全的返回家鄉，也同時縮短旅行時間、節省行車成本，增進當地觀光效益。蘇花改計畫全線在東部地區民眾的期盼下，於109年1月6日下午4時順利通車。

台9線南迴公路，拓寬計畫全線通車

台9線南迴公路是連結臺東與屏東主要幹道。台9線南迴公路拓寬計畫工程共分三路段同步執行，北起臺東縣太麻里鄉的香蘭金崙段已於108年7月1日通車，金崙大島段也於10月28日通車，而安朔草埔段則於12月23日通車。

香蘭金崙段主要為往海側拓寬，海側新建擋土牆填築路堤，山側路塹坡底設擋土牆，其中金崙大橋工程全長3,150公尺；多良段採北上南下分離車道，南下線為現有台9線道路，北上線則以多良大橋沿海側施築，全線以四車道方式拓寬。



香蘭至金崙段的金崙大橋。
Jinlun Bridge from Xianglan to Jinlun section.

bridge and tunnel pavement. We also made sure the electrical and mechanical control integration test is without errors before opening to traffic from bottom to top. As each standard project is progressing smoothly, all the equipment and facilities related to the traffic can reach the traffic standards before January 5, 2020. In doing so, the three-phase survey of the Ministry of Transportation and Communications will be completed on time. It will allow local people to return to their homes safely, while also reducing travel time, saving driving costs, and enhancing local tourism benefits. The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project's entire line aims to open to traffic successfully by 4:00 pm on January 6, 2020, under the expectations of the people in the eastern region.

South-Link Highway of Provincial Highway No.9 Widening Improvement Project is Now Open to Traffic

South-Link Highway of Provincial Highway No.9 is the main road connecting Taitung to Pingtung. The widening project of South-Link Highway of Provincial Highway No.9 widening improvement was carried out in three sections simultaneously. The Xianglan-Jinlun section from Taimali Township in Taitung County was open to traffic on July 1, 2019. The Jinlun Daniao section is also open to traffic on October 28, and the Anshuo- Caopu section opened to traffic on December 23.

The Xianglan-Jinlun section was extended to the seaside. A new retaining wall on the seaside is now operational to fill the embankment, with a retaining wall located at the bottom of the hillside slope. The Jinlun Bridge project is 3,150 meters in length. The Duoliang section is divided into the southward and northbound lanes. The Southward road is the existing Provincial Highway No.9. And the northbound carriageway is built along the seaside of the Duoliang Bridge, and the entire section is now four lanes wide.



安朔高架橋有如隱身山林中的南迴巨龍，藏橋於林之美。
The Anshuo Bridge is like a South-Link giant dragon in a hidden mountain forest, showed the beauty of the hidden bridge in the forest.

The widening method of the Duoliang to Daniao section used embankment and retaining walls. Wave blocks are installed outside to prevent the subgrade from scouring. The Daniao section sits on a high-slope part. As the seaside faces a steep slope, the two-lane follows the trestle method to widen. The length of the trestle section is about 500 meters.

The Anshuo Bridge on the Anshuo- Caopu section is 4.84 kilometers long. The planning follows environmentally friendly concepts of the "Hidden Bridge in the Forest." The pavement of the bridge section adopts a multi-porous water-permeable asphalt concrete cover. This feature can reduce driving noise, water, and improves driving safety, giving the driving experience a sense of traveling leisurely in the mountains and forests.

The tunnel connects the traffic between Shizi Township of Pingtung County and Daren Township of Taitung County. The total length is 4,706 meters. It is a double-tube parallel two-lane and two-way tunnel. The ventilation shaft in the middle of the tunnel is 112 meters high. The extraction, exhaust, and ventilation points system, with a mist fire prevention system, are top disaster prevention technologies. They can quickly remove smoke and reduce tunnel temperature. Also, the remaining mud and stone excavated will be used for artificial shore maintenance at nearby coasts to

多良至大鳥段拓寬方式採用路堤，外側設置擋土牆及消波塊防止路基淘刷；大鳥段位於高坡段，由於海側面臨陡坡，採雙車道棧橋方式拓寬，棧橋段長度約500公尺。

安朔草埔段的安朔高架橋長4.84公里，以「藏橋於林」友善環境為規劃設計理念，橋梁段路面採多孔隙透水瀝青混凝土鋪面，可降低行車噪音及減少揚水提高行車安全，行駛過程有悠遊山林居高臨下之感。隧道標銜接屏東縣獅子鄉與臺東縣達仁鄉兩地交通，全長4,706公尺，為雙孔分離雙向兩車道，隧道中段通風豎井高112公尺；隧道特別將最新的縱流+點排式抽風系統及水霧消防系統防災科技導入，可快速排除煙霧及降低隧道溫度。另將開挖的剩餘土石方用於附近海岸進行人工養灘，以達保護海灘及公路安全，將剩餘土石方有效利用之雙重功效。

台9線南迴公路通車後可縮短行車時間30分鐘，不僅提供一條安全、穩定回家的道路，亦可提升運輸品質、帶動觀光經濟及提升東部地區醫療救護水準，對屏東及臺東地區的經濟發展有莫大助益。

台61西濱快速公路 芳苑至大城段新建工程

本次通車路段位於彰化縣芳苑鄉及大城鄉，通車範圍為台61線里程197K+100~206K+400，分為WH51標及WH52標2標施工，自WH51標芳苑交流道跨越二林溪後沿海堤行進至李舵先師廟再往內陸偏移，於魚寮溪與台17線共構，全線採雙向四車道配置，跨越溪流、排水部分採用平衡懸臂預力箱型梁橋，橋寬為22.8公尺，其

餘一般高架路段則採逐跨支撐工法場鑄預力箱型梁橋，橋寬為22.8公尺，本次通車範圍全長約為9.3公里，工程金額約新臺幣66.2億元，完工通車效益如下：

一、本計畫連結彰化縣境內的彰濱工業區、彰濱溼地生態保育區、王功漁港休憩區、普天宮宗教民俗區及大城海埔新生地規劃區等，促進彰化縣西南沿海鄉鎮地方繁榮。

二、南接麥寮工業區，北與彰濱工業區及臺中港區銜接，可作為重車運輸的重要幹道，減少行經市區道路對居民的干擾，維持海岸景觀及提供民衆優質的海岸遊憩休閒空間。

三、可連接西部沿海重要工業區，有效分擔台17線交通量，將可大量紓解聯結車等重車及分散假日車流，以提升道路服務品質及地區民衆通行安全。

四、整體貫通西濱快速公路後，未來與東西向快速公路及高速公路整合成完善的高快速交通路網，充分發揮公路的高機動性，拉近城鄉距離，將可促進彰化縣沿海6鄉鎮地方繁榮與發展。



隧道避難聯絡通道。
Tunnel evacuation communication channel.



WH51標完工照片。
WH51 tender Completion Photos.



WH52標完工照片。
WH52 tender Completion Photos.

protect the beach and road safety, and the dual function of effectively utilizing the remaining mud and stone.

After the opening of the South-Link Highway of Provincial Highway No.9, the travel time is now down by 30 minutes. It has not only provided a safe and stable way home, but also improved the quality of transportation, driven the tourism economy, and also improved the level of medical care in the eastern region. It is a great help to the economic development in Pingtung and Taitung areas.

The West Coast Expressway of Provincial Highway No.61 Fangyuan to Dacheng Section New Construction Project

This traffic section is in Fangyuan Township and Dacheng Township of Changhua County. The opening range is road network 197K + 100 ~ 206K + 400 for the Provincial Highway No.61. There are two sections, WH51 and WH52, two construction tenders. From the WH51 tender Fangyuan Interchange crossing the Erlin Creek, the coastal embankment travels inland to the Li Ruo Shian-Shih Temple. It was co-constructed at Yuliao Greek and the Provincial Highway No.17. The entire line adopts a two-way four-lane configuration. A balanced cantilever prestressed box beam bridge crosses the stream and drainage. The bridge width is 22.8 meters. The rest of the general elevated sections adopt the prestressed box girder bridge that spans the supporting construction method. The bridge width is 22.8 meters. The total length of the opening is about 9.3 kilometers, and the project accounting number is

about NT \$ 6.62 billion. The benefits after opened to traffic are as follows:

1. The plan connected Changbin Industrial Zone, Changbin Wetland Ecological Conservation Zone, Wanggong Fishing Port Recreation Area, Putian Temple Religious Folklore Area, and Dacheng Wetlands Planning Area within Changhua County to promote the prosperous localities in the southwest coastal towns in Changhua County.

2. It connects the Mailiao Industrial Zone in the south and the Zhangben Industrial Zone and Taichung Port District in the north. It is an important trunk road for heavy trucks. And thus, it reduces the interference for the residents by lessening the urban roads passing through, maintaining coastal landscapes, and providing high-quality coastal recreation for the people. Relaxation area.

3. It is connected to critical industrial areas along the western coast and effectively shares the traffic volume of Provincial Highway No.17. It will greatly relieve the holiday traffic by heavy vehicles, to improve the quality of road services and the safety of local people.

4. After the West Coast Expressway is complete, it will be integrated with the East-West Expressway and Expressway into a complete high-speed traffic network in the future. It will give full play to the high mobility of the highway and reduce the distance between urban and rural areas. In this way, it will promote the local prosperity and development of the six coastal towns in Changhua County.

▲▲ 西快勇奪「全球道路成就獎」

The West Coast Expressway Wins the Global Road Achievement Awards

卓越的成果，發揮減碳最大效益

公路總局「西濱快速公路八棟寮至九塊厝工程碳管理及環境減輕策略」榮獲國際道路協會（International Road Federation，IRF）全球唯一的「全球道路成就獎」（Global Road Achievement Awards, GRAA）環境減輕類首獎，是公路總局、設計與執行團隊共同努力的成果，亦是莫大的榮耀與鼓勵，同時也將臺灣推動永續公共工程落實環境保護措施，及全生命周期觀點的碳管理成就，藉由西濱快速公路工程卓越的成果，除了讓臺灣工程建設得以躍登國際舞臺外，也讓世界看見臺灣、認識臺灣，相關得獎介紹短片，IRF將長期公布於官網 <https://www.irf.global/graa/>。

此工程是臺灣第一個獲得 ISO/TS 14067 碳足跡查證聲明的公路工程，此工程從規劃設計階段便導入環境減輕措施，如綠化植被、地下水入滲、既有紅樹林保護與

棲地補償等，並檢討工程施作與後續車流轉移所產生的排放量，更分析不同設計對碳排放的影響，如路線調整、替代材料、結構體減量等手段。

經透過實際盤查成果發現，工程材料碳排放量占比雖高達94%，機具與運輸各約占6%，但透過以飛灰、爐石粉取代水泥、加勁擋土牆取代一般擋土牆、機具運用最佳化、場電取代柴油發電機及多孔隙瀝青混凝土取代密級配瀝青混凝土等措施，並配合交通量的轉移、樹木與植被的種植，可減少約164座大安森林公園年吸附量，發揮減碳最大效益。

相關成果（本土化工程碳排放資訊）將回饋行政院環保署國家碳足跡系數資料庫及後續工程設計參考，使臺灣碳管理制度及碳排放參數資料更臻完備，進而可有效制定減碳策略、達成整體工程生命周期減碳及環境減輕目標。



七股溪橋。
Qiguxi Bridge.



鹽埕交流道。
Yancheng Interchange.



高架橋梁。
The viaduct.



臺灣代表團合影。
Group photo of the Taiwan delegation.

Outstanding Results, Maximize the Benefits of Carbon Emission Reduction

The “West Coast Expressway: Ba-Dong-Liao to Jiu-Kuai-Chou Project” launched by the Directorate General of Highways won the first prize in the environmental mitigation category of Global Road Achievement Awards, GRAA) held by the International Road Federation (IRF). It is the result of the joint efforts of the Directorate General of Highways and the design and implementation teams. At the same time, it will promote Taiwan's sustainable public works to implement environmental protection measures as well as the achievements in carbon management from the perspective of the life cycle. With the outstanding achievements of the West Coast Expressway Project, not only allowed Taiwan 's engineering construction to shine in the international arena, but also allowed the world to see and recognize Taiwan. Furthermore, IRF will Long-term put the related award-winning short films on the official website: <https://www.irf.global/graa/>

This project is the first expressway project in Taiwan to obtain the ISO / TS 14067 carbon footprint verification statement. This project introduced environmental mitigation measures from the planning and design stages, such as vegetation greening, groundwater infiltration, existing mangrove protection and habitat compensation, among others. Also, we reviewed the emissions generated by project construction and the subsequent traffic flow. We

analyzed the impact of different designs on carbon emissions, such as route adjustments, alternative materials, and structural scale reduction.

Through actual inspection results, we found that, although the carbon emissions of engineering materials accounted for 94%. Equipment and transportation accounted for about 6% each, but by replacing cement with fly ash and blast-furnace slag, and replacing ordinary retaining walls with reinforced retaining wall and optimizing the use of implements, replacing diesel generators with electricity from power plant, and replacing dense-graded asphalt concrete with porous asphalt concrete, and other measures. Cooperating with the transfer of traffic, and the planting of trees and vegetation, the total carbon emission reduction are about 164 times the annual absorption capacity of Daan Forest Park, maximize the benefits of carbon emission reduction.

Relevant achievements (local carbon emission factors information) were submitted to the National Carbon Footprint factors database of the Environmental Protection Administration, Executive Yuan and could serve as design reference for future. The lifecycle-integrated environment mitigation strategies not only preserved the environmental sensitive area with multiple environment strategies, but also completed the carbon management system for in roadways and bridges in Taiwan.

▲ 台14線育樂橋獲金安獎特優殊榮

Yule Bridge of Provincial Highway No.14
Received Excellent Honor in
Public Construction Golden Safety Award



育樂橋P4至P6橋基改建工程施工照片。

Photograph of the Reconstruction Project of 39K Yule Bridge P4~P6.

第一標榮獲特優工程

金安獎自民國96年開辦13年以來，於108年首度頒出特優獎座予「台14線39K育樂橋P4至P6橋基改建工程」，這是金

安獎開辦以來第一個獲得特優的工程。該工程係由交通部公路總局第二區養護工程處主辦，南投工務段負責監造，黎明工程顧問公司設計、堃成營造工程團隊負責施工。

The First Construction Won the Excellent Award

The Golden Safety Award was awarded to the " Reconstruction Project of 39K Yule Bridge P4~P6 of Provincial Highway No.14 " in Public Construction in 2019. The first time in 13 years since its beginning in 1996. This project is under the authority of the Second Maintenance Office of the Directorate General of Highways of the Ministry of Transportation and Communications. The engineering of the Nantou section was responsible for supervision and construction, designed by Liming Engineering Consultants, and Kun Cheng construction engineering team was responsible for the construction.

The bridge site, in this case, is located on the Provincial Highway No.14 in Nantou County. It is an important highway for Taichung and Caotun to enter Puli, Sun Moon Lake, and Wushe. Due to the shallow foundation of the old bridge, completed in 1985, the flood resistance safety of the three piers P4, P5, and P6 was found insufficient according to the bridge flood resistance assessment. To maintain the driving safety of road users on the road, we handled the foundation reconstruction project. The bridge deck still kept regular traffic in both directions during the construction. The design of the well foundation of the bridge pier significantly increases erosion resistance. It also protects the bridge from the threat of flood damage. It ensures driving safety for road users, all while extending the service life of the bridge. We hope to reduce the possibility of future disasters in compliance with the standards set by the current regulations.

Source and Risk Management

This project adopted source control in the procurement strategy, applied the lowest standard for scoring and set the scoring items and various allocations in the bidding documents. Among them, the implementation capacity of the manufacturer's occupational safety accounts for 20% of the evaluation,

and it focuses on the manufacturer's ability to perform. The organization, project management, and construction and quality execution capabilities, among others. To complete the project, the contractor can further improve in terms of safety and project quality. In addition to judicious selection of good manufacturers, the General Administration of Highways also regularly held work safety supervision and guidance reports to implement walking management. Through statistical data to find weaknesses in work safety, the implementation of occupational safety work is the most important.

In the design stage, it has been considered that it is not very easy to work in the river bank. Therefore, precise calculations were included in the pre-design. It also targeted evacuation measures when the river floods into the work area in case of heavy rain. Due to an excellent early warning system and a lot of previous drills, safety measures were in place during the construction period. These measures made it impossible to withstand twice during the heavy rains on May 18 and June 11. At the time when the upstream river reached a warning level, the site had already initiated relevant measures and evacuated personnel and equipment. Therefore, no employees were injured, but the site also quickly resumed work after the rain stopped, effectively eliminating the possible significant occupational safety risks.

The Test From the Heavy Rain Sent From Above

Manufacturer general manager Qing-Wei Cai recalled the test at that time (May 18, 2019). Nantou County's Guoxing Township dropped heavy rain. The accumulated rainfall was the highest in Taiwan on that day. In less than 15 minutes after he left inspecting the construction area at around 7:00 in the morning. There was a report about flooding in the industrial area due to soaring streams. Fortunately, through countless drills in advance, more than 20 engineering personnel were evacuated in 2 to 3 minutes without any casualties.

本案橋址位於南投縣境省道台14線上，為臺中、草屯進入埔里、日月潭、霧社的重要公路。因舊橋採直接基礎型式，民國74年竣工，經橋梁耐洪安全評估得知P4、P5、P6三墩抗洪安全性不足，為維護用路人行車安全，辦理基礎換底改建工程，施工期間上方橋面仍維持雙向正常通行。橋墩設計採井式基礎可大幅增加耐沖刷能力，使橋梁免於洪害威脅，確保用路人行車安全並延長橋梁服務年限，期望在符合現今規範所訂定之標準下，降低未來發生災害的可能。

源頭及風險管理

本工程於採購策略即採源頭控管，以評分及格最低標辦理，於招標文件訂定評分項目及各項配分等，其中廠商在職安執行能力占評比20%，重視廠商履約能力，嚴謹的專案組織，工程管理與施工及品質執行能力等，以確保承攬廠商除有能力完成工程外，並在職安及工程品質上均能再精進提升。除了審慎選擇優良廠商之外，公路總局也定期召開工安督導會報，實施走動式管理，透過統計數據找出工安弱點，落實職安工作是最重要的。

在設計階段已考量到在河道內作業難度較高，因此事前設計時已納入精密計算，也特別針對若遇上豪大雨，河水一旦湧入工區，工程團隊該如何啟動撤離措施納入設計考量。由於設置優良預警系統，再加上事前多次演練，在施工期間擬定許多職安措施，這才禁得起5月18日及6月11日連續2次豪大雨的實際考驗。當時河道上游下雨達警戒值時，工地就已啟動相關措施，並緊急撤離人員及機具，因此不僅員工們毫髮無傷，在

雨停後工地也能迅速復工，有效排除可能的重大職安風險。

來自上天豪大雨的考驗

廠商蔡清為總經理回想起當時考驗（108年5月18日），南投縣國姓鄉降下豪大雨，當日累積雨量全臺最高，早上7點多才剛巡視完工區後離開，不到15分鐘，就傳來工區遭到暴漲溪水淹沒的消息，幸好透過事前無數次的演練，讓20多名工程人員在2至3分鐘內全數撤離，人員毫無傷亡。

由於金安獎比賽當月，前次豪大雨造成工區完全毀損狀況下，加緊趕工好不容易將工區復原，但是在6月11日於國姓鄉又再次降下豪大雨，造成趕工進度全部歸零；洪水淹沒工區，滿目瘡痍，距離勞動部金安獎評選僅12天，廠商秉持「眼淚止不住，土鏟拿著繼續拚」精神，受洪水實際考驗，依演練迅速撤退，災後快速復原，委員也看見我們的努力，評給本工程「特優」以茲鼓勵。

光榮的工程團隊

本工程在設計階段就考慮該工地最適合的安全工法，剩下的殘餘風險再量化編列相對應的安全設施、個人防護具，並將其傳遞給監造、廠商因應，廠商再就施工規劃階段進行風險評估，進行相對應的現地布設等。本施工團隊完整複製前揭理念，不但有效降低工地所受到的災害，也讓本工程團隊榮獲金安獎開辦13年以來第一座「特優」獎項之殊榮！



育樂橋主辦機關、設計、監造及施工團隊「金安獎」頒獎典禮合影。

Group photo of Yule Bridge host institution, design, supervision, and construction team in the "Golden Safety Award" award ceremony.

In the month of the Golden Safety Award competition, under the condition of complete damage to the work area caused by the previous heavy rain, it was difficult to restore the work area by stepping up the work. However, on June 11, the heavy rain again fell in the country's hometown, causing the progress of the work to return to zero. The flood submerged the work area and was devastated. It was only 12 days before the Golden Safety Award of the Ministry of Labor. The manufacturer adhered to the spirit of "can't stop tears, and continued to fight with soil shovel." Committee members also saw our efforts and praised the project as "excellent."

Glorious Construction Team

In the design stage of the project, we considered the best safety working method for the site. The

remaining residual risks are then quantified, and arrangements for the corresponding safety facilities and personal protective gear are transferred to the supervisor and the manufacturer for the response. The manufacturer then conducted the risk assessment on the construction planning stage and performed the corresponding on-site deployment and other arrangements.

This construction team fully replicated the previous concept, which not only effectively reduced the damage to the construction site but also earned this engineering team the honor of being the first "excellent" award since the 13 years of the Golden Safety Award!

▲ 前瞻計畫： ▲ 提升道路品質建設計畫（公路系統）

Forward Looking Project: Road Quality Improvement Construction Project (Highway System)

提升道路品質，改善路容景觀

公路系統為現代社會最重要基礎建設之一，舉凡民衆上下班通行、國內外觀光客旅遊或是民衆日常生活通行基本需求，都扮演重要角色。因此，為了讓公路系統之道路品質能夠整體提升，公路總局自106年9月起開始推動前瞻基礎建設：提升道路品質建設計畫（公路系統），編列中央補助款120億元，協助地方政府辦理公路系統都市計畫區

外道路品質改善工作，計畫主要工作項目為「既有道路養護整建」、「綠色生態路網建置」、「設立道路幸福設施」及「形塑城鄉人文地景道路」等。除了改善道路路面及路容景觀外，亦將道路人本需求及友善環境等納入補助範疇，例如：行人穿越線退縮、高老齡（幼童）行穿路口安全提升設施、人行道改善與設置及友善石虎保育措施等。



苗栗縣三灣鄉浪漫台3線103k道路路面及隙地景觀改善。

Improve road pavement and open space landscape of Taiwan Romantic Route 3 103k section in Sanwan Township of Miaoli County.



苗栗縣台13甲線道路改善工程——自行車道與候車亭設置。
Miaoli County Provincial Highway No.13A Road Improvement Project——Bike Lanes and Bus Shelters Setting.

Improve Road Quality and Road Landscape

The highway system is one of the most critical infrastructures in modern society. Everyone plays an essential role in commuting to and from work, domestic and foreign tourist travels, or the basic needs of daily life. In response to this, the Directorate General of Highways began infrastructure improvements in September 2017 by putting into action different projects. The Forward-Looking Project. The Road Quality Improvement Construction Project (Highway System). The central government delivered extraordinary financial aid of NT\$12 billion to assist local governments in work on road quality improvement outside the urban planning areas of the highway system.



宜蘭縣宜5線道路改善工程——人手孔蓋及管線下地與增加植栽綠帶。
Yilan County Highway No.5 Yilan Improvement Project——Let Manhole covers and pipelines go under grounded and increases planting green belts.



臺中市大甲、大肚、龍井區（中10、中60、中75-1線）道路改善工程——配合孔蓋下地與提升標線抗滑係數。
Taichung City Dajia, Datu, Longjing District (Taichung County Highways No.10, 60, and 75-1) Road Improvement Project— Maintenance of hole covers under grounded and raise the anti-slip coefficient of the marking lines.

截至108年底，已核定補助各單位道路改善工程312案，中央補助款為128.5億元。其中已完工212件，施工中47件及設計發包中53件，目前已累計完成路面改善688公里、孔蓋下地5,972個、綠化面積25,845平方公尺約為1/10座大安森林公園面積、自行車道通行空間改善80.2公里、人行道改善1,553公尺及行人穿越線退縮5處，執行成效已超越本計畫所訂績效指標。

人本友善的道路

未來公路系統運輸需求將面臨高齡化、友善環境、提升適應氣候變遷能力、節約能源與綠能應用、促進社會多樣性及區域均衡



宜蘭縣宜18-2線道路改善工程——調整配置增加綠帶與改善自行車道。
Yilan County Highway No.18-2 Road Improvement Project—adjusts the configuration to increase green belts and improve bicycle lanes.

發展等諸多課題，後續將納入本計畫持續推動時之考量面向，以期帶給用路人一條人本友善的優質道路。

The main work items of the project are "maintenance of existing roads," "Constructing green ecological road network," "Establishing road happiness facilities," and "shaping urban and rural humanities and landscapes" and so on. In addition to improving road pavement and road scrapes, human needs and environmental-friendly are included as well in the subsidy category, such as farther back of the crosswalk, senior citizens (young children) crossing safety improvement facilities, sidewalk improvement and installation, and the leopard cats-friendly protection measures.

By the end, we approved 2019, 312 cases of road improvement projects for various units, with a central subsidy of NT\$12.85 billion. Among them, 212 have been complete, 47 under construction, and 53 in the design contract. As a result, a total of 688 kilometers of pavement improvement, 5,972 manhole

covers under grounded, and a green area of 25,845 square meters are about 1/10 of Daan Forest Park have completed. Also, the space for bicycle lanes grew by 80.2 kilometers, the sidewalk extended by 1,553 meters, and five places have retracted the crosswalk. The performance has exceeded the performance indicators set out in this project.

Human-friendly Road

In the future, the transportation needs of the highway system will have to meet many standards. To list a few: aging, environmentally friendly, upgrade of ability to adapt to climate change, energy-saving and green energy applications, social diversity promotion, and regionally balanced development. In this way, we expect to give passers-by a friendly and high-quality road.



彰化縣縣道145線道路及綠美化改善工程—設置自行車道及改善路側植栽帶。

Changhua County Highway No.145, Road and Greening and Landscaping Improvement Project - Set up bicycle lanes and improve roadside planting belt.

生活圈道路交通系統 建設計畫推動成果

Implementation Outcome of Region-Based Road System Construction Project

承先啓後，補助項目多元化

道路交通建設關乎國家競爭力與社會民生福祉，道路交通建設的終極目標則是「提升生活品質」、「活絡產業發展」及「永續自然環境」，也是生活圈道路系統建設的努力方向。本期「生活圈道路交通系統建設計畫（公路系統）8年（104 - 111）計畫」，中央編列經費439億元，除延續過往協助地方辦理道路新闢拓寬事項，亦匡列資源協助偏鄉或急需改善之道路進行整建修復工作，消弭危險瓶頸路段，藉以協助地方建構完善路網、提升區域產業運輸效能。

逐步推動，道路建設更完善

「生活圈道路交通系統建設計畫（公路系統）」於108年度共完成32項工程建設，其中道路新闢拓寬計畫共17項，「協助縣市政府加速整建受損公路橋梁計畫」計14項，「山地原住民地區公路系統道路易致災路段改善工程」計1項，中央款約40.16億元，改善道路長度約35,205公尺，新建及整建地方公路橋梁計31座，有效強化區域交通便捷性並提升民衆行車安全。

另鑑於公路系統路網應有完整性及長遠之規劃，使資源投入效益最大化，本期計畫自108年起亦啓動協助地方辦理整體路網評估。

估，將未來施政主軸、運輸策略、交通需求、都市發展及重大區域建設等事項納入考量，並以達成路網完整串聯及斷鏈補缺為目標，做為未來道路建設的重要依據。

永續發展，連結路網脈動

強化地方特色與均衡國土發展，提供即時、便捷、舒適、安全之用路服務，是政府道路建設努力方向。在縣市政府財源有限的情形下，生活圈道路系統建設計畫持續挹注資源，強化及維護地方道路交通功能，未來仍將積極推動，串聯區域路網並促進產業繁榮。



啓動協助地方辦理整體路網評估。
Start to assist the local government to handle the overall road network assessment.

Linking the Past and the Future, Diversify Supplementary Account

Road traffic construction is related to national competitiveness and the well-being of society and people. The ultimate goal of road traffic construction is to “improve the quality of life,” “promote industrial development,” and “make the natural environment sustainable.” It is also the goal of the region-based road system construction. For the “Region-Based Road System Construction (Highway System) 8 Years (2015~2022) Project” this time, the central government has allocated NT\$43.9 billion. In addition to past projects, and to assist the localities in handling new road opening and widening issues, we also listed resources to assist in the reconstruction and reparation of remote or urgent roads. In this way, we aim to eliminate dangerous bottlenecks, thereby helping the local governments to improve the road network and enhance the efficiency of regional industrial transportation.

Promote Gradually, Make Road Construction Better

In 2010, a total of 32 projects for the Region-Based Road System Construction Project (Highway System) finished. Among them, 17 items were for the “Highway System Construction and Widening Project.” Fourteen items to “Assisting Local Governments in Accelerating Repairing of Damaged Road and Bridge Project.” One item to the “Mountain Aboriginal Areas Road System Vulnerable Section improvement,” which has cost the central government about NT\$4.016 billion in subsidies. Thanks to these, we improved road lengths for about 35,205 meters, as well as built or reconstructed 31 new and local highway bridges. Effectively strengthening the convenience of regional traffic and improving people's

driving safety.

In addition to this, to keep long-term planning in mind, the highway system network period of preparation has also assisted local governments in handling road network assessments since 2019. We aim to take a future-oriented governance focus and transportation strategies, transportation needs, urban development, and significant regional construction into consideration. In this way, we hope to achieve a complete road network and fill the gap of broken links, as an essential basis for future road construction.

Sustainable Development, Connecting the Road Network Pulsation

Strengthening local characteristics and balanced land development, and providing immediate, convenient, comfortable, and safe road services are the government's efforts in road construction. With the limited financial resources of the county and city governments, the Region-Based Road System Construction Project continues to inject resources, strengthen and maintain local road traffic functions, and will continue to actively connect regional road networks and promote industrial prosperity in the future.



新竹市北二高茄苳交流道聯絡道向東延伸新建工程，縮短往來新竹市香山區、新竹縣寶山地區間之時程，成為銜接北二高茄苳交流道之重要聯絡道路。
Hsinchu City's 2nd North Freeway Qiedong Interchange extension eastward to build construction projects. We are shortening the time between Xiangshan District of Hsinchu City and Baoshan District of Hsinchu County, an important communication road connecting the 2nd North Freeway Qiedong Interchange.

▲ 首創石虎路殺預警系統 ▲ 開啓智慧道路友善生物元年

The First-of-its-kind Invention of the Early Warning Detection System for Leopard Cats Kicks off the First Smart Road Friend Creature Year

關注生態保育 構築對生態友善之道路

公路總局與行政院農業委員會特有生物研究保育中心及國立中興大學合作，研發建構國內首創石虎路殺預警系統，選定於石虎出沒熱區台3線卓蘭地區做為示範路段，交通部林佳龍部長於108年5月17日示範路段視察辦理情形，並宣示路殺預警系統正式上路運行，開啓智慧道路友善生物元年，希望透過路殺預警系統達到生態保育及減少路殺事件與保障用路人安全之目的。路殺預警系統自5月開始運作，監測到鼬獾、白鼻心及石虎等野生動物，經由聲光波系統啓動趨避，順利防止路殺發生。

此外，公路總局除了著重石虎路殺保育議題外，亦關注其他動物生態保育以擴大生物防護範圍，降低公路對整體生態的衝擊，構築對生態友善之道路，例如台26線墾丁香蕉彎到砂島路段的護蟹行動，並拍攝微電影在美國國際短片競賽6月的影展場次獲得3項獎項。

營造螢火蟲棲地 為公路景觀帶來另類生趣

台18線阿里山公路每年4至6月、12月至隔年1月，是阿里山地區螢火蟲出沒高峰期，為了增加螢火蟲棲息的友善環境，公路總局透過微棲地營造概念與原則，於路肩隙地利用傾倒木、木屑及落葉等回填，營造螢火蟲棲地，近年阿里山公路螢火蟲數量已呈現穩定的成長，於夏、冬季節各展現其特色，為公路景觀帶來另類生趣。



交通部林佳龍部長視察預警系統與公路總局長官、特生中心林育秀助理研究員及中興大學蔣雅郁教授合影。

The Minister of the Ministry of Transportation and Communications Chia-lung Lin inspected on the early warning detection system with a group of officers from the Directorate General of Highways, Assistant Researcher Yu-Xiu Lin of the Endemic Species Research Institute, and Professor Ya-yu Jiang of National Chung Hsing University.



交通部長視察公路總局與墾管處「交管護蟹」保育作為。

The Minister of Transportation and Communications inspected the conservation of crabs conducted by the Directorate General of Highways and Kenting National Park Headquarters.

Pay Attention to Ecological Conservation and Build a Path of Ecological Friendliness

The Directorate General of Highways in cooperation with the Endemic Species Research Institute of the Council of Agriculture of the Executive Yuan and the National Chung Hsing University to develop and build the first domestic early warning detection system for leopard cats. It selected the Zhuolan area of Provincial Highway No. as a demonstration section where the leopard cats appeared frequently. Chia-lung Lin, the Minister of Transportation and Communications, inspected the situation on May 17, 2019. The minister then announced that an early warning detection system would be launched and inaugurated the first Year of Creature Friendly Smart Road. He hoped that the early warning detection system could achieve ecological conservation, reduce road killing incidents, and protect the safety of the passers-by. The rapid warning detection system has been in operation since May. Wild animals such as ferrets, gem-faced civets, and leopard cats are now monitored. The use of sound and light wave systems is now active to avoid the road kills.

There is more in addition to focusing on the conservation of leopard cats. The Directorate General

of Highways is also concerned about the preservation of other animals and hopes to expand the scope of protection. In doing so, we expect to reduce the impact of highways on the overall ecology and build ecologically friendly roads, such as the Provincial Highway No.26 Kenting Banana Bay to Shadao Road. The action of protecting crabs on the island and shooting short documentaries won three awards at the International Film Festival in the United States in June.

Creating Firefly Habitats, Bring Alternative Life to Highway Landscapes

On the Provincial Highway No.18 Alishan Highway, from April to June and December to January of the following year, is the peak of firefly infestation in the Alishan area. To increase the friendly environment in which fireflies inhabited, the Directorate General of Highways built concepts and principles through microhabitats in the road shoulder gap. The use of backfills, such as dump wood, sawdust, and fallen leaves to create firefly habitats. In recent years, the number of fireflies on the Alishan Highway has shown steady growth. Fireflies are now showing its different characteristics in the summer and winter seasons, bringing an alternative life to the highway landscape.



修建 · 養護 · 永續

Bridge to the Future

Construction · Maintenance · Eternity



Chapter 2



當我們說「休息，是為了走更長遠的路」之際，其實更忘了，若道路本身要遠、要長、要久、要能「讓我們走」，也得認真以愛呵護並定期修建。人車行於公路之上，公路則延展、永續於我們的行動之上。

When we say "rest is for walking a long way," we forget that if we hope the road itself is far, long, durable, and "able to walk by us," we must take care of it with love and repair regularly. Pedestrians and vehicles travel on highways, and highways extend and last on our actions.

▲ 公路翻轉： ▲ 台9線榮獲景觀界奧斯卡 IFLA 大獎

Highway Transformation:
Provincial Highway No.9 Recognized with
IFLA ASIA-PAC LA Awards 2019



2019年景觀大賞「分析及整體規劃類」卓越獎之殊榮。

Award of Excellence in "Analysis & Master Planning" category in 2019 IFLA-APR LA Awards.

讓國際認識臺灣景觀的專業實力

民國107年公路總局繼以台9線「公路翻轉」(台9線花東縱谷公路整體景觀規劃案)，於中華民國景觀學會辦理之2018年景觀大賞獲「環境規劃類－傑出獎」後，再度得到國際景觀建築師協會亞太分會(International Federation of Landscape

Architects, Asia Pacific Region. 簡稱IFLA APR) 2019年景觀大賞(LA Award)「分析及整體規劃類」卓越獎(Award of Excellence)之殊榮。

國際景觀建築師協會是國際景觀專業領域主要組織，亦是聯合國教科文組織(UNESCO)認定的專業夥伴團體，依

Let the International Understand the Professional Strength of Taiwan Landscape

In 2018, the Directorate General of Highways followed the Provincial Highway No.9 "Highway Transformation-Putting the Landscape First to Create a New Highway that Combines Safety, Humanism, and Ecology" plan. Also known as the Provincial Highway No.9 Huadong Highway Overall Landscape planning project. Thanks to this, they received the "Environmental Planning Category-Award of Excellence" at the 2018 Taiwan Landscape Awards held by the Taiwan Institute of Landscape Architect. They also won the Award of Excellence in the "Analysis & Master Planning" category of the 2019 LA Award, organized by the International Federation of Landscape Architects, Asia Pacific Region. (IFLA APR)

The International Federation of Landscape Architects is a major organization in the international landscape professional field. It is also a UNESCO-recognized professional partner group. There is a division into five chapters based on geographical relations, including the United States, Africa, Asia-Pacific, Europe, and the Middle East. It holds regular global and regional conferences every year. Taiwan is one of the 14 members of the Asia Pacific Region (IFLA APR). The annual LA Award is the Oscars of the landscape architecture industry.

The Asia-Pacific Regional Conference held the 2019 Asia-Pacific Regional Conference in Cebu City, Philippines, from November 7 to 9, 2019. It held an award ceremony on the evening of November 8. Under the competition of many excellent works from various countries, the Directorate General of Highways won the award of Excellence the first time joining in the competition. Participating in this international conference and receiving awards on the scene also brought the Directorate General of Highways in connection with the global landscape specialty, and

made the international community more aware of the professional strength of Taiwan's landscape.

Moving Forward Target: Safety, Landscape, Humanism, Ecology

Since 2017, the Hualien section of the Provincial Highway No.9 of the Directorate General of Highways has expanded the plan to break through the traditional practice and adopt a pattern different from the previous planning and design. In addition to first applying landscape planning (landscape first), it also includes "safety, landscape, people-oriented, and ecology" four main goals. Experts and scholars on the landscape, ecology, traffic management, and human safety fields work together to set up a "landscape consultant team." This team conducts an on-site survey and research conferences section by section and conducts "workshops" for residents' opinions exchange so that residents and experts can participate. To retain the landscape green corridor with local imagery, the concept of "Keep tree by road" was adopted. More than 3,000 trees needed to be preserved to achieve the win-win goals of road widening and road and tree preservation.

The awards, in this case, not only gave substantial encouragement to engineering staff but also established a deep consensus on the creation of environmental landscapes. This achievement is an important driving force for the improvement of rural highway landscapes, hoping that domestic high-quality landscape highways can attain international standards.

台9線
榮獲景觀界
奧斯卡 IFLA 大獎

Provincial Highway
No.9 Recognized with
IFLA ASIA-PAC LA
Awards 2019



台9線大農大富路段願景。

The vision of Danongdafu section of the Provincial Highway No.9.

地域關係分為五處分會，包括美、非、亞太、歐及中東分會，並於每年定期召開全球會議及區域會議，臺灣為亞太分會（IFLA APR）14個成員之一，每年舉辦的景觀大賞可謂之為景觀建築界的奧斯卡大獎。

亞太區分會於108年11月7日至9日，在菲律賓宿霧市召開2019亞太區年會，並於11月8日晚間舉行景觀大賞頒獎典禮，公路總局在各國眾多優秀作品的競爭下，首次參賽即獲卓越獎殊榮，實際參與此次國際會議並到場受獎，亦使公路總局與國際景觀專業接軌，更讓國際社會進一步認識臺灣景觀的專業實力。

目標邁進：安全、景觀、人本、生態

自106年起公路總局辦理之台9線花蓮路段拓寬計畫，突破傳統作為，採異於以往

規劃設計模式，除先行辦理景觀規劃（景觀先行）外，亦納入「安全、景觀、人本、生態」四大面向目標。邀集景觀、生態、交通管理及人本安全等專家學者，成立「景觀顧問團隊」，逐路段辦理現勘及研商會議，並辦理居民意見交流之「工作坊」，廣納居民及專家意見。為了保留具有在地意象的景觀綠廊，採「以路就樹」觀念，保留3千多株喬木，達到道路拓寬及路樹保留之雙贏目標。

本案獲獎不僅給予工程人員實質的鼓勵，更建立深切的環境景觀營造共識，此乃公路總局對省道景觀品質提升之重要動力，未來將更優化國內公路環境及用路品質，提供用路人優質的道路景觀，希冀國內優質景觀公路能與國際接軌。

▲ 精進效能：制定公路橋梁目視檢測手冊

Improve Efficiency by Establishing Roads and Bridge Visual Inspection and Evaluation Manual

檢測技術開發，維護用路人行安全

公路總局為使橋梁目視檢測作業更為周全，提升機關同仁的專業評估能力，依據交通部民國107年10月頒「公路橋梁檢測及補強規範」的1.3節：「……可由公路養護管理機關、公路養護單位依橋梁特性、現地狀況及養護條件參照本規範另訂檢測及養護規定」及解說C3.3：「公路養護管理機關得於其養護手冊或橋梁檢測手冊中提供參考圖說，供檢測人員評等使用」。另部頒技術規範為原則性、政策性或訓示性的技術規定，如屬實際操作面的詳細規定，應由各公路養護管理機關於其檢測手冊另行規定，公路總局於108年10月頒訂「公路橋梁目視檢測參考手冊」。

本手冊內容除依據相關規範及參考國內相關手冊訂定，亦融入公路總局既有制度，另考量執行面的順暢，故加入橋梁目視檢測實際經驗供所屬機關參考查詢，期望未來作為執行公路總局橋梁目視檢測的作業準則，並充實公路總局橋檢同仁的基本技能。

對比交通部高速公路局所編撰的「高速公路橋梁目

視檢測手冊」乃委託外部單位協助辦理，公路總局所編撰的「公路橋梁目視檢測參考手冊」由公路總局所屬同仁共同協助完成，除無需額外匡列經費辦理技術採購外，亦高度展現公路總局同仁在專業及實務上具有一定水平。參與同仁在繁忙業務中抽空討論、編輯，始得在有限時間內完成此任務，後續將視規範修訂更新、新型檢測技術的開發及國內外重要研究論文的發表適時適度滾動更新，俾利公路總局第一線執行同仁與國際資訊的同步接軌並提升工作效能，達到事半功倍的精進效益，並維護所有用路人之安全。



公路橋梁目視檢測參考手冊。
Roads and Bridge Visual Inspection and Evaluation Manual.

Development of Detection Technology, Maintain the Safety of the Road Users

To make the visual inspection of bridges more comprehensive and to improve the professional assessment capabilities of the government is important. To do so, the Directorate General of Highways adheres to section 1.3 of the "Manual for Enhancement and Inspection of Highway Concrete Bridges" issued by the Ministry of Transportation and Communications in October 2018. Here we read that: "The road maintenance unit shall make separate inspection and maintenance requirements according to the characteristics of the bridge. As well as on-site conditions and maintenance conditions concerning this specification." In comment C3.3, we can read: " Road maintenance management agencies may provide reference diagrams for inspection of the personnel rating its use. Another ministry-issued technical specification is a principled, policy-based, or instructive technical regulation. If it is a detailed specification of the actual operation, it shall be separately stipulated by each road maintenance management institution regarding its testing manual. Therefore, the Directorate General of Highways issued "Establishing Roads and Bridge Visual Inspection and Evaluation Manual" in October 2019.

The content of this manual follows relevant specifications and references domestic manuals, and also incorporates the existing system of the Directorate General of Highways. Furthermore, it also considered a smooth implementation. Therefore, the experience of visual inspection of bridges is in it for reference and inquiry by the affiliated agencies. Guidelines for visual inspection and to enrich the necessary skills of bridge inspectors of the Directorate General of Highways.

In contrast to the "Highway Visual Inspection and Evaluation Manual," compiled by the Freeway Bureau of the Ministry of Transportation and Communications is entrusted to the external unit for assistance. The "Roads and Bridge Visual Inspection and Evaluation Manual," compiled by the Directorate General of Highways, were jointly completed by colleagues of the Directorate General of Highways. In addition to no additional budget required for technology purchases, it also highly demonstrates that colleagues of the Directorate General of Highways have a certain level of professionalism and practicality. The participating colleagues took time to discuss and edit between the busy businesses to complete this task within a limited time. A Follow-up will be updated in a timely and appropriate manner. This will depend on the revision and update of the specifications, the development of new detection technologies, and the publication of important research papers at home and abroad by colleagues. We aim to keep in sync with international information and improve work efficiency, as well as to achieve more effective results, and maintain the safety of all road users.



台18線芙谷峽橋。
The Provincial Highway No.18 Fu Guqiao Bridge.

▲ 同心應變：協助航港局南方澳斷橋事件歷程

The Process in Helping the Maritime Port Bureau in Dealing with the Collapse of Nanfang'ao Bridge Incident

災害事件概況

南方澳跨港大橋於民國 108 年 10 月 1 日 9 時 30 分斷裂崩塌，橋體掉落時撞擊周邊 3 艘漁船致沉沒於航道中，並造成行駛於橋上的油罐車墜落，共計 19 人傷亡，包括 15 名外籍漁工（其中 9 人獲救、6 人罹難）及 1 名油罐車司機，另有 2 名海巡署人員及 1 名救難協會人員於搶救過程中受傷。

公路總局應變措施

因應斷橋事件，公路總局隨即成立南方澳跨海大橋斷橋現場前進指揮所派員進駐，公路總局局長同時率總局及第四區養護工程處主管查明該橋梁相關資料，並同意縣府支援交維設備請求。另指示第四區養護工程處成立緊急應變小組支援作業，相關支援事

項包括標定臨時航道位置及座標、拱圈傾度監測、發布新聞稿、協助軍方填築便道、協助洽尋廠商辦理拱圈臨時支撐、最高及最低水位水深測量及提供拆橋作業相關技術協助等。

另依交通部指示，由公路總局辦理斷橋事件分析，公路總局局長指示由總工程司邀集專家學者並由總局及工程處相關人員配合成立，現場立即召開事件分析小組第 1 次會議，並進行勘查及召開專案會議，邀集運安會、宜蘭地檢署、港務公司、航港局召開拆除橋梁施工計畫書討論會議，就證物保存需求內容獲得結論；另委託中國土木水利工程學會進行證據蒐集及分析作業，並依現場勘查及比對結果，進行分析工作。

參與災情及救災人力機具彙整

Participation in Disaster Situation and Rescue Manpower Integration

人員、裝備及任務 Personnel, equipment, and tasks	公路總局（及第四區養護工程處） the Directorate General of Highways (and the Fourth Maintenance Office)
出動人員（次） Number of people dispatched (times)	75
各式車輛（次） Vehicles of all types (times)	41
各式機具（次） Machines and tools of all types (times)	5



南方澳跨港大橋鋼拱吊離。
Nanfang 'ao Cross-harbour Bridge steel arch lift off.



公路總局陳局長陪同交通部黃政務次長赴現場勘察。
The Director-General Chen of the Directorate General of Highways accompanied the Deputy Minister Huang of the Ministry of Transportation and Communications to the site for investigation.

Disaster Event Profile

The Nanfang' ao Cross-harbour Bridge collapsed at 9:30 on October 1, 2019. The bridge dropped and hit three fishing boats in the surrounding area, sank into the waterway, and caused the tanker truck to fall and led to a total of 19 deaths. The victims included 15 foreign fishermen (9 rescued and 6 deceased). Also, a tanker driver, 2 Ocean Affairs Council staff, and one rescue staff were injured during the rescue.

Contingency Measures of the Directorate General of Highways

In response to the broken bridge incident, the Directorate General of Highways immediately established the on-site command of Nanfang' ao Cross-sea Bridge and dispatched personnel to the station. The director of the Directorate General of Highways also led the officers of the General Administration and the Fourth Maintenance Office to find out the relevant information on the bridge. The appropriate support items included the calibration of the location and coordinates of the temporary waterway, the monitoring of the inclination of the arch ring, the release of press releases, assistance to the military to fill the sidewalk, assistance to the

manufacturer for a temporary arch ring, maximum and minimum water depth measurement, and technical support related to demolition operations.

Also, following the instructions of the Ministry of Transportation and Communications, and the Directorate General of Highways analysis of the broken bridges. The Director-General of the Directorate General of Highways instructed experts and scholars gathered by the Department of Engineering and Technologies and cooperated with the relevant personnel of the General Administration and the New Construction Office. The first meeting of the incident analysis team is held immediately on-site. It also conducted surveys and held project meetings, and invited the Taiwan Transportation Safety Board, Yilan District Prosecutors Office, Port Company, and Maritime Port Bureau to hold a discussion meeting on the demolition of the bridge construction plan and draw conclusions on the content of evidence preservation requirements. Besides, the Chinese Institute of Civil and Hydraulic Engineering was commissioned to conduct evidence collection and analysis, and perform analysis based on the site survey and comparison results.

▲ 108年公路養護整體成果

| 2019 Specific Achievements in Road Maintenance

以車為主規劃，以人為本通行

為使公路、橋梁、隧道及其附屬設施，能經常維持其原有良好行車及安全狀態，公路總局須不斷進行各種改善與維護，在養護工作進行前須評估其維護成本，如維護成本過高則納入省道改建計畫予以改建。復因省道公路易受颱風豪雨侵襲，公路總局養護單位於災害時立即通報並儘速予以搶修，以維持民衆用路權益。

省道改善計畫以彈性規劃為原則，考量無法以一般養護維護的各項改善計畫（路段）急迫性、安全性、維護管理責任等，以排定優先順序，維持省道公路系統最高效能。前瞻基礎建設即是現有「以車為主」的道路重新規劃設計，符合「以人為本」的通行需求，已投入120億元，改善路面688公里、孔蓋下地近6,000座、也增加25,000平方公尺綠化面積，成效顯著。



台20乙線0k+000~2k+680、3k+420~6k+800段改善工程。

The improvement project of the Provincial Highway No.20B 0k+000~2k+680, 3k+420~6k+800 sections.



台20線碧山橋改建工程。
Reconstruction of Bishan Bridge on Provincial Highway No.20.

Car-Oriented Planning, People-Oriented Traffic

For highways, bridges, tunnels, and their auxiliary facilities to maintain their original driving and safety good status, the Directorate General of Highways must carry out improvements and maintenance. It must evaluate its maintenance costs before the maintenance work can begin. If the maintenance costs are too high, it should incorporate into the provincial road reconstruction plan for reconstruction. Rural highways are susceptible to typhoons and heavy rains. The Maintenance Bureau of the Directorate General of Highways immediately is notified when disasters occur and repairs it as soon as possible to maintain the rights of the people to use roads.

We based the Highway Improvement Projects on the principle of flexible planning. Our priorities are the urgency, safety, and maintenance management responsibilities of various improvement plans (road sections). For those that cannot upkeep in general, they are given priority to maintaining the highest efficiency of the provincial road system. Forward-looking infrastructure is the re-planning of existing "car-oriented" roads, which meets "people-oriented" traffic needs. For putting this into practice, we have invested NT\$12 billion to improve pavement of 688 kilometers; nearly 6,000 manholes are now underground. There's also an increase of 25,000 square meters of green area, which has achieved remarkable results.



新設人手孔蓋抗滑檢測情形。
The situation of anti-slip detection of the newly set manhole cover.

第一區養護工程處獲得金路獎優勝

路平專案孔蓋下地率是民衆最關心的問題，因防災等特殊需求未下地的人手孔蓋，公路總局於民國108年9月1日實施新設未下地的人手孔蓋抗滑值需達50BPN以上，將與現行標線抗滑標準一致。

為期公路系統能確實維持良好路況，美化沿線景觀，以提供使用人安全、順暢、舒適優美之服務條件，交通部辦理「金路獎」評比競賽。公路總局配合道路特性進行特定養護，如山區道路逢雨易遇落石及土石流，須特別注意邊坡災防之重要性；濱海公路因位處沿海一帶，每逢颱風浪襲便有道路坍塌之虞；在市區道路部份，人車使用頻率高，路面平整與妥善維護，提升用路人滿意度。公路總局第一區養護工程處於今(108)年榮獲金路獎路況養護類優勝殊榮。

近年極端氣候影響，公路災害發生機率及規模提高，為了減少災害對社會的衝擊，公路總局於108年針對災前應變整備加強盤點作為，減少颱風災害事件對民衆通行的影響，108年影響臺灣的4個颱風，災情均於3日內搶修完成恢復通行，以維持民衆用路權益。



既設人手孔蓋抗滑檢測情形。
The anti-slip detection situation of the existing manhole cover.



台7線32K+500處上邊坡災害搶修作業。

Emergency repair work on the slope of 32K + 500 section of the Provincial Highway No.7.

First Maintenance Office Won the Golden Way Award

The manhole covers the underground rate of the Road-smoothing Project is the most concerned by the people. Due to special needs such as disaster prevention, some maintenance hole covers are not being moved underground. Therefore, since September 1, the Directorate General of Highways implemented a new policy. From 2019, the anti-sliding value of the newly established maintenance hole cover must be above 50 BPN, which will be consistent with the current standard anti-sliding standards.

To maintain good road conditions and beautify the landscape along the route, the Ministry of Transportation and Communications has launched the "Golden Way Award" competition. The Directorate General of Highways carried out specific maintenance according to the characteristics of roads. For example, mountain roads are liable to encounter falling rocks and earth and rock flows when it rains. So, we must pay

special attention to the importance of slope disaster prevention. Coastal highways along the coast. In urban areas, roads may collapse every time a typhoon wave strikes. In urban areas, people use vehicles frequently, and the pavement needs to be leveled and adequately maintained to improve the satisfaction of users. The First Maintenance Office of the Directorate General of Highways has won the Award of Excellence the Golden Way Award for road condition maintenance in this year (2019).

In recent years, the impact of extreme weather has increased the probability and scale of highway disasters. To reduce the impact of disasters on society, the Directorate General of Highways strengthened the inventory of pre-disaster emergency preparedness in 2019 to reduce the impact of typhoon disasters on people's traffic. The four typhoons' damage was repaired and restored within three days to maintain the rights of the people to use the road.

▲ 蘇花改及南迴公路隧道事故演練整備

Tunnel Emergency Drill of The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project and South-Link Highway of Provincial Highway No.9



南迴公路草埔隧道演練情形。

Practice of Caopu Tunnel on the South-Link Highway of Provincial Highway No.9.

整體應變計劃與SOP

鑑於國內外隧道事故所造成的重大傷亡，蘇花改BC段及南迴公路草埔隧道於撰擬整體防救災應變計畫前，即委由專業顧問公司辦理「緊急應變計畫專題研究」，其成果亦經邀集專家學者及相關橫向聯防單位辦理審查會議後確認定案，內容包括為縮短救援時間於隧道口附近成立警察及消防分隊、設置水霧系統及擬訂灑水時機、配置自衛消防編組等，全面提升防救災資源部署能量。

承上，整體防救災應變計畫係依據公路總局公路隧道事故處理標準作業程序擬定，並參照雪山隧道公路事故暨整體防救災應變計畫大綱章節，就隧道安全防護設施等章節編撰論述，經召開多次審查會議，並由專家學者及縱橫向單位多方審視制訂。

安全諮詢，防災演練

為確保行車安全，蘇花改及南迴公路草埔隧道依東澳隧道安全通車的經驗，於工程

Overall Contingency Plan and SOP

An "emergency plan study" was drafted before the emergency response plan. The cause was the severe casualties caused by tunnel accidents at home and abroad, BC section of the Suhua Highway of Provincial Highway No.9, and Caopu Tunnel of the South-Link Highway of Provincial Highway. So the plan was commissioned to a professional consultant company. Experts and scholars and relevant horizontal defense units were invited to conduct a review meeting to confirm the finalization. The contents include the establishment of a police and fire brigade near the tunnel entrance to shorten the rescue time—also, the installation of a water spray system and the planning of sprinkler timing. Additional measures include the deployment of self-defense fire formations, and comprehensively improved the implementation of disaster prevention resources. A follow up to the overall emergency response plan was prepared as the Standard Operation Procedures on Freeway Tunnel Incidents, launched by the Directorate General of Highways. Regarding the chapter of the Snow Mountain Tunnel Highway accident, and the overall emergency response plan, a discussion on tunnel safety protection facilities was made available for study. Several review conferences have been reviewed and formulated by experts, scholars, and vertical and horizontal units.

Security Consulting, Disaster Prevention Drills

The project of the mountainous section of Suhua Highway of Provincial Highway No.9, and well as the Caopu Tunnel on the South-Link Highway of Provincial Highway was based on previous experience at the Dongao Tunnel. Participants such as local traffic, police, fire, and sanitation units held a horizontal joint defense coordination meeting before the project opened to traffic. Since September 24, 2019, four disaster prevention and relief drills have taken place,

with a 5th drill on December 31 and December 27. The scenario simulation gradually upgraded the scale of the disaster to a severe and diverse scenario. The exercise indicators are based on monitoring, directed my response. Through various measures such as notification, tracking, inventory, and confirmation, the key to joint emergency response, disaster relief, and rescue for each unit are now ready.

Moreover, for the valuable opinions of experts and scholars in various fields, since May 2019, scholars from multiple areas such as civil engineering, traffic management, electromechanical traffic control, fire protection, and disaster prevention have also been invited to hold three safety consultation meetings each and surveyed before opening to traffic following regulations.

Independent Drills of the Operation Team's and the Inspection of the Management Unit

According to Standard Operation Procedures on Freeway Tunnel Incidents of the mountainous section of Suhua Highway of Provincial Highway No.9 and Caopu Tunnel on the South-Link Highway of Provincial Highway, regular notification drills, routine drills, and



南迴公路草埔隧道的隧道公路事故暨整體防救災演習。
Tunnel road accident and overall disaster prevention drill for Caopu Tunnel on the South-Link Highway of Provincial Highway.

通車前邀集當地交通、警政、消防與衛生等單位召開橫向聯防協調會。自民國108年9月24日起計各辦理4場次防救災演練，並分別於12月31日及12月27日加碼第5場演練，藉由小而大、由簡而繁、貼近實務的情境模擬，逐漸將災情規模升級為嚴峻且多元之情境推演。演練指標以監控為基礎，應變為導向，並藉由通報、追蹤、盤點、確認等各項處置，達成各單位聯防應變、救災救護要領。

另為廣納各領域專家學者寶貴意見，自108年5月迄今，也邀請土建、交管、機電交控、消防及防災等各領域學者，各召開3次安全諮詢會議，並依規定辦理通車前履勘。

營運團隊自主演練及管理單位稽查

依據蘇花改及南迴公路草埔隧道的隧道公路事故暨整體防救災應變計畫，通車後每

年需定期進行通報演練、例行演練及專案演練，管養單位可據此演練計畫內容，調整各事故點的發生位置以變化演練內容，讓各救災單位熟悉不同狀況之處理模式及相互通報的程序與內容，以提升未來通車後應對防救災的效能。

前開路段通車後，將以現有技術與操作程序為基礎，配合機電交控系統教育訓練課程養成對通車路段設備之熟悉，並配合考核制度加強人員對新轄區之熟悉度與操作效率。在考核制度方面，除了辦理定期考核外，亦辦理不定期演練考核，未達標準者列入輔導及淘汰名單。

針對通車前自主演練部分則安排各情境的演練，要求早、晚、夜3班按表操練，並視各班情況增加自主演練，公路總局亦於通車前每日進駐交控中心，抽測其防災演練成果。



蘇花改BC段隧道演練情形。

Tunnel prevention drills for the BC section of the Suhua Highway of the Provincial Highway No.9.



配合公路總局重大工程相繼通車辦理蘇花改之長隧道事故演練。

Cooperation with major highway projects of Directorate General of Highways to open to traffic one after another to conduct the Suhua Highway Improvement Project long tunnel accident drill.

project drills are required every year after opening to traffic. According to the content of this emergency drill plan, the maintenance unit can change the contents of the plan according to location. In this way, the disaster relief units will be familiarized with the different notifications during different situations, to improve the effectiveness of disaster prevention and relief after the future opening to traffic.

After the opening the section to traffic, it will follow operating procedures. It will continue training on the electromechanical traffic control system to develop familiarity with the equipment. Furthermore, it will cooperate with the assessment system to enhance

personnel familiarity and operating efficiency in the new jurisdiction. As for the assessment system, in addition to regular assessments, we will also conduct non-regular drill assessments. Those who fail to meet the criteria are included in the tutoring and elimination list. As for the autonomous drill before opening to traffic, we will arrange exercises for each scenario. They will require morning, evening, and night shifts to drill according to a timetable, as to increase independent exercises depending on the situation of each class. The Directorate General of Highways will be present at the traffic control center every day before it is open to test the results of its disaster prevention drills.

▲ 108年公路防災應變整體作為

2019 Overall Response of Highway Disaster Prevention

天候監控與指揮應變

公路總局持續落實「公路防救災預警機制」，於民國108年經歷4場致災性劇烈天候，丹娜絲颱風、利奇馬颱風、白鹿颱風及米塔颱風，公路預警性封閉36次，其中7次封閉後發生災情，因預警管制暨封路得宜，於劇烈天候下無發生用路人傷亡之情事。

各項演訓整備

公路總局於108年初，完成各區養護工程處辦理108年度天然災害兵棋推演共5場，兵棋推演著重緊急應變小組成員及指揮層級輪值主管的指揮決策，情境設想係藉由100至107年間實例演練以進行弱點強化，以提升各層級指揮官對防救災節奏要領及緊急應變處理能力。

另為順行防汛期間的應變處置機制運作，公路總局局轄管工程處（段）亦於年度汛期前完竣實際演練共40場，其中包含模擬颱風、地震、淹水及隧道等天然災害對轄管公路所造成之災情應變，使執行防災應變的第一線人員更加熟稔各項應變處置作為及通報機制。

配合公路總局局重大工程相繼通車，辦理南迴及蘇花改之長隧道事故演練，相關隧道事故及

通車前演練共辦理32場，透過相關情境演練，驗證現有隧道災防應變計畫與機制的妥適性，強化長隧道相關安全防護與緊急應變之能量及作為，以維用路人行車安全。

台9丁蘇澳至東澳路段4道防線

智慧防災第1期計畫為策進未達封路標準前的預警通告作為，應用歷史災害資料與降雨關係進行大數據分析建立，發展崩塌機率模型，並整合雨量資料、路側告警設施及資通訊設備，以風險管理輔以物聯網概念示警。以用路人的感受分類，順車行方向可依序產生4道守護防線如下所示：

防線1→風險預警推播系統

防線2→路側風險資訊顯示系統

防線3→落石告警系統

防線4→受困車輛偵測系統



智慧防災示意圖。
Smart disaster prevention diagram.

Weather Monitoring and Command Response

The Directorate General of Highways observed the “Highway Disaster Prevention Procedure.” During 2019, it experienced four catastrophic severe weather events, including Typhoon Danas, Typhoon Lekima, Typhoon Bailu, and Typhoon Mitag. The highway was early warning closed for 36 times. Disasters occurred after 7 of these closures. Due to early warning controls and appropriate road closures, no casualties occurred to passers-by in severe weather.

Various Training Preparations

At the beginning of 2019, the Directorate General of Highways completed a total of 5 natural disaster prevention drills conducted by the maintenance offices in each district in 2018. The disaster prevention drills focused on the emergency decision-making team members and the command-level rotating supervisors' command decisions. The scenario was based on 2011-2018 cases. The exercise strengthened the weaknesses to enhance the commander's ability to respond to disasters and emergencies.

Besides, to operate the emergency response mechanism during the flood control period, the construction department (section) of the Directorate General of Highways conducted 40 actual drills before the annual flood season. A total of 40 exercises, including simulated disasters caused by natural disasters such as typhoons, earthquakes, floods, and tunnels, to the governing highways. This was so that the front-line personnel who implemented the disaster prevention response were more familiar with various response measures and notification mechanisms.

In conjunction with the opening of major projects of the Directorate General of Highways, we have handled long tunnel emergency drills for the Suhua Highway of Provincial Highway No.9 Improvement Project and South-Link Highway of Provincial Highway No.9. A total of 32 related tunnel accidents and pre-



108年度天然災害封橋，其封路演練場景。

The scene of the road closure drill during the natural disaster closure in 2019.

opening drills were conducted. Through relevant scenario drills, the appropriateness of existing tunnel disaster prevention plans and mechanisms was verified. The energy and actions related to the safety protection and emergency response of long tunnels are now better. These measures help to maintain the driving safety of road users.

4 Defense Lines From Su'ao to Dong'ao section of Provincial Highway No.9D

The first phase of the smart disaster prevention project consists of using early warning notices before deciding the road closure. There is also the historical disaster data and rainfall, which is used to conduct big data analysis. Then we establish a collapse probability model and integrate rainfall data, roadside warning facilities, and information communications equipment. Conduct risk management complemented by IoT concepts to warn. Classified by the feelings of passersby, four defense lines can be generated in sequence along the direction of the car as follows:

- Defense Line 1 → Risk early warning push broadcast system
- Defense Line 2 → The risk information display system
- Defense Line 3 → Rock fall alarm system
- Defense Line 4 → Trapped vehicle detection system



雨情監控員

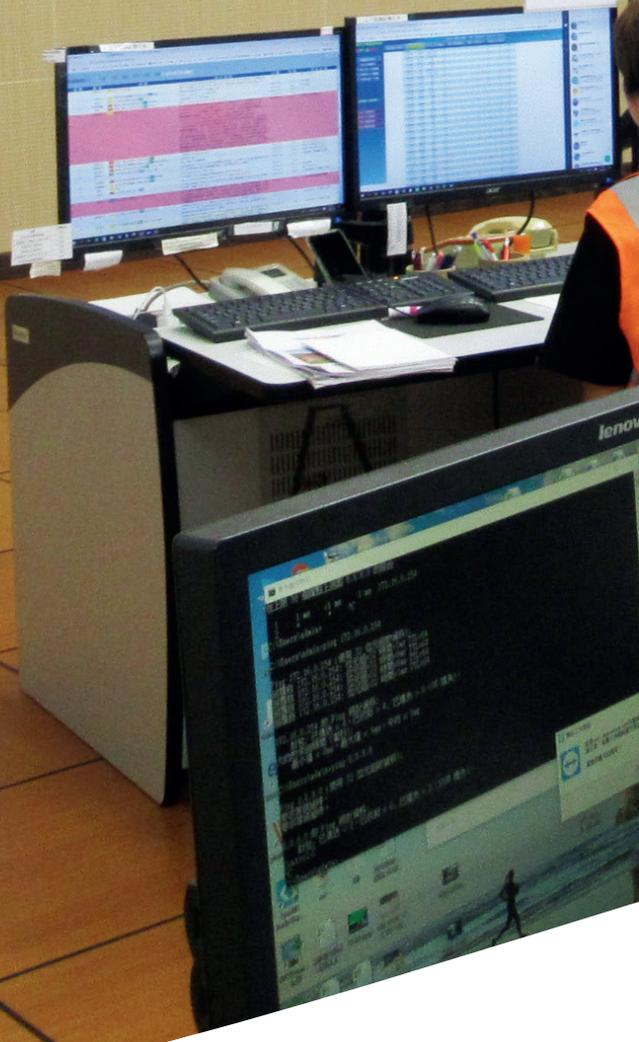


與民
同行

智慧 · 開創 · 深耕

Walk with People

Intelligent · Create · Cultivate



Chapter 3



為使行路順暢與安全，我們以人為出發點，善用數位科技的管理，持續強化公共運輸路網，擴大最後一哩路的幸福巴士服務，並透過智慧化系統進行交通管理與控制，讓每位用路人都能平安幸福。

To make the road smooth and safe, we put people first. Making good use of digital technology management to continue to strengthen the transportation network. We expanded the last-mile of the happiness bus service, and with the assist of the smart systems for traffic management to improve roads for everyone.

▲▲ 智慧交通管理打造幸福公路

Build Happiness Highways by Intelligent Traffic Management

緣起規劃

因應公路路網逐漸完整，公路總局自民國105年起辦理「省道交通資訊蒐集與管理系统規劃及建置」案，開發新一代智慧化省道交控系統，透過智慧化系統進行交通管理與控制策略，提升整體交通路網資訊之運作效能，並提供即時交通資訊與用路人做旅運參考，以期能快速舒緩道路壅塞現象。

內部管理系統

新一代智慧化省道交控系統具備資料蒐集、資料分析、溝通協調、策略管理四大主要功能平臺，以更智慧化的系統功能輔助管理人員進行交通管理及相關策略運作。

智慧化網頁服務

改版建置新一代智慧化網頁，以視覺化、圖層化友善介面環境設計方式，並採適應性網頁（RWD）技術增加行動管理便利性，提供省道路段績效資訊、省道重要路段提供旅行時間、施工資訊、災害道路通阻等資訊，讓用路人獲取更多省道交通資訊。

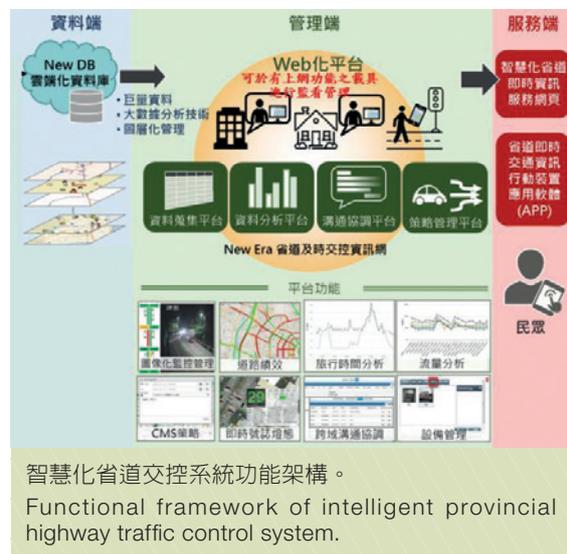
智慧化資訊應用軟體（APP）服務

107年公路總局重新思維以個人隨身化功能的APP為主軸，提供個人化功能、適地性資訊，使用者透過起迄點的設定，APP就會提供建議行車路線，且適時顯示

替代路徑及其旅行時間等圖形化資訊，並以紅、黃、綠三種顏色呈現路段順暢情形，讓使用者在單一頁面就能獲知視覺與聽覺的即時道路訊息，並加入一隻幸福公鹿，會與使用者互動，以貼心提醒駕駛人應注意事項與導引使用者熟悉系統的功能，故108年1月即隆重推出「幸福公路APP」，以提供最新即時省道路況訊息予使用者，協助用路人據以調整行車路線、變更行程，讓旅次規劃更有效率。

提升西濱快、蘇花改及南迴改用路安全交管策略

隨著道路里程數及車輛使用數日漸增加，資源相對分散，必須以最精簡的設備並



Origin Planning

During the construction of the highway network, the Directorate General of Highways Introduced the “Planning and Design of the Provincial Highway Real-Time Traffic Information Collection and Control System.” That, since 2016, has developed a new generation of smart provincial highway traffic control systems and implemented traffic management and control strategies through intelligent systems. These systems improve the operation efficiency of the overall traffic road network, and provide real-time traffic information for road users, helping to reduce road congestion.

Internal Management System

The new generation of intelligent provincial highway traffic control systems has four major functional platforms: data collection, data analysis, communication and coordination, and strategic management. It uses intelligent system functions to assist managers in traffic management and related strategic operations.

Smart Web Services

We have built a new generation of intelligent

web pages that combine a visual and layered friendly interface environment design method. We adopted adaptive web page (RWD) technology to optimize mobile use, and to provide performance information. So now, users can get more provincial road traffic information such as travel time, construction information, a smooth or blocked situation of the disaster road traffic, and more.

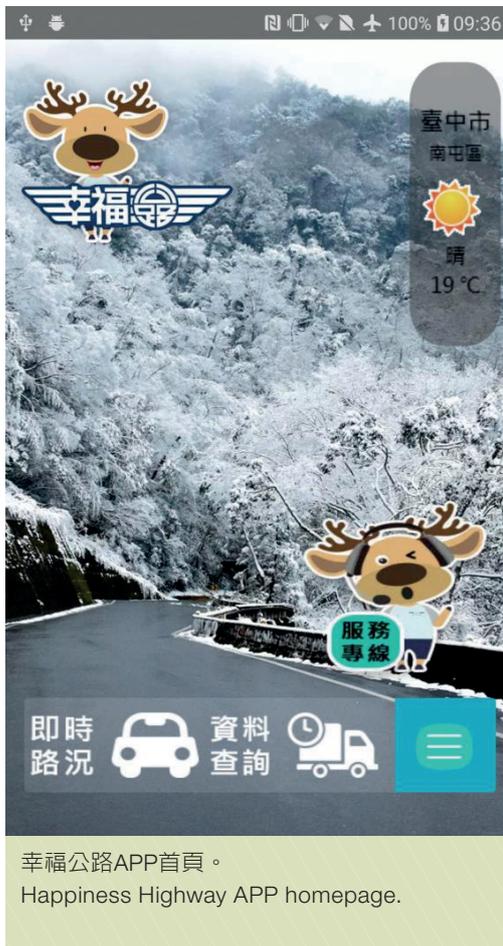
Intelligent Information Application Software (APP) Service

In 2018, the Directorate General of Highways re-thought about the personal portable function APP as the main focus to provide personalized functions and location information. It provided the suggested driving directions for users through the setting of starting and ending points by users. It displayed alternative routes and graphical travel information in three colors: red, yellow, and green. Users can now have real-time road information on a single page. The cartoon of a happy male deer can interact with users to remind drivers to pay attention to matters and guide users to familiarize them with the functions of the system. The “Happiness Highway APP” was launched in January 2019 to provide users with the latest real-time information on road conditions to help users adjust.

Improve the Safety Traffic Management Strategy of The West Coast Expressway of Provincial Highway No.61, Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project, South-Link Highway of Provincial Highway No.9 Widening Improvement

With the increase of road mileage and vehicle usage, and the relatively dispersed resources, we must use the most streamlined equipment and rely on effective management methods to create a better quality of transportation environment; In addition to





幸福公路APP首頁。
Happiness Highway APP homepage.



幸福公路APP替代道路導引。
Happiness Highway APP alternative routes guidance.

仰賴有效管理手段，打造更優質之交通環境品質；爰公路總局除管理手段（重車、速度、事件管理等）精進外，並透過服務品質提升（如重車管理、事故管理、資訊服務提供、雲端交控中心中央電腦軟體升級、通訊系統升級等），以達整體路網管理需求。最後透過智慧化資訊發布以及巨量數據的分析，整合各區域路網交通特性，結合中央及地方政府既有資源，提高省道公路的交通效率，提供用路人優質的用路環境及服務，期達路暢、車順、人安全之最終願景。

在環境與設施優化升級過程，將持續以人本、安全為永續追求之目標，未來將持續

配合辦理相關交通基礎設、交控路側設備（CCTV、CMS、VD、E-TAG等）增設與更新等。

鑑於公路路網重要性將大幅提升，為滿足整體運作效能，未來將持續精進公路路網整體交通管理與控制策略，並以「安全」、「效率」及「智慧」三面向規劃，以符整體路網管理需求。



improve the management methods (such as heavy vehicle, speed, event management, etc.) and improve service quality (such as heavy vehicle management, accident management, information service provision, cloud computer control center central computer software upgrade, communication system upgrade, etc.) to meet the overall road network management needs. Finally, through intelligent information release and analysis of huge amounts of data, the traffic characteristics of various regional road networks are integrated, and the existing resources of the central and local governments are combined to improve the traffic efficiency of provincial highways and provide high-quality road environment and services for road users to reach the ultimate vision of smooth roads, smooth traffic, and human safety.

In the process of environment and facility optimization and upgrading, we will continue to pursue human-oriented and safety as the goal of sustainable pursuit. In the future, we will continue to cooperate with the related traffic infrastructure and traffic control roadside equipment (CCTV, CMS, VD, E-TAG, etc.) to add and update.

In view of the significant increase in the importance of the highway network, in order to meet the overall operational efficiency. In the future, it will continue to improve the overall traffic management and control strategy of the highway network, and plan in three directions: “safety”, “efficiency” and “wisdom” to meet the overall road network management needs.

幸福公路 APP Happiness Highway APP

於最新版本中，依據使用者需求考量與使用角度，「幸福公路APP」提供八大功能為：即時路況、資料查詢、特殊路段、最新消息、我的最愛、我的設定、我有話說、服務專線。將給予使用者更即時快速的消息，並依自身習慣與常用路線等，設定成專屬風格的行動路線導航。

In the latest version, the “Happiness Highway APP” had eight functions: real-time traffic conditions, data query, special sections, latest news, my favorites, my settings, what I have to say, and direct service line. It will give users more timely and fast news and set up a unique style of navigation based on their habits and common routes.

即時路況
Real-time traffic conditions

資料查詢
Data query

特殊路段
Special sections

最新消息
Latest news



我的最愛
My favorites

我的設定
My settings

我有話說
What I have to say

服務專線
Direct service line

▲ 從城鄉建設改善停車問題

Improve Parking Problems by Urban and Rural Construction

納入亮點計畫 協助改善地區發展需求

行政院於民國106年2月18日聽取國家發展委員會報告「城鄉建設—地方前瞻基礎建設事宜」會議提示，請交通部研議提出公共運輸服務計畫，納入停車問題改善評估，若停車場管理具示範效果，可容許地方政府依其發展特色及需求提出專案亮點計畫納入，以協助地方政府改善地區發展需求。

另於106年3月21日「研商城鄉建設—改善停車問題」會議結論，基於停車場建設為具自償性的公共建設，為擴大政府投資乘數效果，帶動民間投資量能，應鼓勵民間投資參與，惟也不排除由地方政府自行興建。因此交通部依據行政院上述政策方向，提出「改善停車問題計畫」。

透過智慧化停車管理服務 及綠能友善設計原則

交通部為協助地方政府紓緩公共運輸場站轉乘停車需求，及因觀光遊憩旅次吸引、人車密集商業活絡等造成地區停車位不足之現象，由前瞻基礎建設計畫的城鄉建設下規劃「改善停車問題」補助計畫，

優先補助具上述特性需求的路外公共收費停車場，並透過智慧化停車管理服務及綠能友善設計原則，提升停車場使用效益與服務品質。

預計成果

截至108年止，已核定16縣市117座停車場，合計總工程經費為395.47億元，中央補助186.02億元（預計可提供大型車50席、汽車32,990席及機車12,879席）；108年完工停車場8處，可提供大型車46席、汽車2,213席及機車661席，改善各地交通及停車問題。



桃園市立圖書館總館。
Taoyuan Public Library.

Incorporate Highlight Plans, Help Improve Regional Development Needs

On February 18, 2017, the Executive Yuan heard the report from the National Development Council on the “Forward-Looking Infrastructure Project: Urban-rural Development” meeting reminder and requested the Ministry of Transportation and Communications to propose a public transport service plan to be included in the improvement assessment of parking issues. The demonstration effect can allow local governments to develop project highlight plans according to their developmental characteristics and needs to help local governments to improve regional development needs.

Also, the meeting on March 21, 2017, “Research on Urban-rural Development – Improving Parking Problems” concluded that parking lot construction is a self-liquidating public construction. To expand the effect of investment multiplier and drive private investment capacity. However, private investment participation does not exclude construction by local governments. Therefore, the Ministry of Transportation and Communications proposed the “Parking improvement project” following the above policy direction of the Executive Yuan.

Through Smart Parking Management Services and Eco-friendly Design Principles

To assist local governments in alleviating the need for interchange parking at public transport stations, and the lack of parking spaces in the area due to the attraction of tourism and recreational trips, and the intensive commercial activities of people and vehicles, the Ministry of Transport planned for the urban and rural construction of the Forward-Looking Infrastructure Project design the “Parking improvement project” subsidy plan gives priority to subsidizing off-street public toll parking lots with the above characteristics



三重商工地下停車場。

New Taipei San-Chung Commercial and Industrial Vocational High School underground parking lot.



中興河道創造水岸生活空間。

Chung-Hsing River Creating waterfront living space.

and needs and enhances parking lot use efficiency and service quality through intelligent parking management services and green energy-friendly design principles.

Expected Results

As of 2019, 117 parking lots in 16 counties, and cities have been approved, with a total project funding of NT\$ 39.547 billion and a central subsidy of NT\$18.602 billion. 50 parking spaces for large vehicles, 32,990 parking spaces for cars, and 12,879 for motorcycles will soon be available. 8 parking lots were ready in 2019, which can provide 46 parking spaces for large vehicles, 2,213 cars, and 661 motorcycles to improve transportation and parking problems in various places.

▲ 108年連續假期疏運成果

2019 Transport Management on Consecutive Holidays

落實假期間的巡檢工作

為因應3天以上連續假期或特定節日執行交通疏運計畫，專案成立公路總局疏運作業小組，針對壅塞或車多路段進行即時應變及處置，要求各區養護工程處主管及交控中心確實掌握轄內公路狀況，並執行適當之處置，同時亦須落實與橫向單位即時聯繫及合作。另轄區公路相關路側設備妥善率，除假期前盤點確認外，亦落實假期間的巡檢工作，以確保正常運作。

運用所蒐集疏運成果進行分析及檢討

各連續假期疏運依其節日特性、歷史資料、地方政府大型活動、重要觀光熱點及國道易壅塞路段等，預測省道易壅塞路段，研擬道路及公共運輸疏運措施。重點工作包含事前準備：針對該次假期特性、預估交通量、預估車流趨勢等研提整體疏運計畫；事中運作：因應局、處分別成立應變中心掌握及監控路況、指揮協調客運運輸、發布即時新聞及宣導等；另就事後檢討：運用假期間所蒐集的資料或疏運成果，進行當次連續假期成果之分析及檢討。

7次連續假期、2次花季 1次臺灣燈會疏運

民國108年共計完成7次連續假期疏運、2次花季疏運及1次臺灣燈會重大活動

疏運，針對109年春節前即將完工通車路段，公路總局未來將持續精進改善，並密切注意各路段的車流消長趨勢情形，以研擬連假交通疏運計畫以為因應，期許提供連假期間行車安全車流順暢之幸福公路。



各工程處交控中心掌握及監控路況。
The traffic control centers of various engineering offices master and monitor the road conditions.



替代道路疏運作為，期提供行車安全車流順暢之幸福公路。
The alternative road evacuation operation is expected to provide a happiness highway with safe and smooth traffic.

Perform Inspections on Holidays

To implement the traffic transport management plan. For more than three days of holidays, a special road transport operation team was set up to carry out immediate response and treatment for congestion or multiple road sections. The supervisors of each district maintenance offices and the traffic control center are required to grasp the status of highways within its jurisdiction and implement appropriate response, it must also implement immediate contact and cooperation with horizontal units. For the rate of roadside equipment related to highways in other jurisdictions, in addition to the inventory check before the holiday, they also implemented inspections during the holiday period to ensure normal operation.

Use the Collected Results to Analyze and Review

Each successive holiday transport management is based on its holiday characteristics, historical data, local government large-scale activities, important sightseeing hotspots, and the national highway easily clogged road sections. It predicted the provincial highways easily clogged road sections, and developed road and public transport management measures. Key tasks included preparations in advance: researched and developed overall dredging plans for the characteristics of the holiday, estimated traffic volume, estimated traffic flow trends, etc. For operation during the event: established a response center to control



and monitor road conditions, directed and coordinated passenger transportation, released real-time news and publicity, etc. And for the post-event review: used the information collected during the holiday period or the results of the transport management to analyze and review the results of the current consecutive holiday.

7 Consecutive Holidays, 2 Flower Seasons, 1 Taiwan Lantern Festival Transport Management

In the year 2019, 7 consecutive holiday transport managements, 2 flower season transport managements, and 1 Taiwan Lantern Festival major event transport management were set. For the roads to be completed and opened to traffic before the Chinese New Year of 2020, the Directorate General of Highways will supervise traffic flow. It will then develop a holidays' traffic plan to provide better service during the holidays.



▲ 偏鄉幸福服務幸福巴士開枝散葉

The Flourishing of Happiness Buses Link Together with the Happiness Services in Remote Towns



屏東縣來義鄉幸福巴士通車典禮。

Laiyi Township of Pingtung County Happiness Bus Opening Ceremony.

考量偏鄉地區運輸資源相對不足，公共運輸涵蓋率偏低，為持續強化偏鄉公共運輸，108年公路總局訂為幸福巴士元年，擴大推廣偏鄉幸福巴士（含幸福小黃），提供基本民行服務。

幸福巴士，偏鄉萌芽

在公路總局、縣市政府、鄉鎮區公所及各地區域運輸研究中心共同努力之下，108年度完成屏東縣來義鄉等26處幸福巴士（含幸福小黃），累計至108年底已有43處鄉

鎮區營運上路，補足偏鄉最後一哩之公共運輸缺口，滿足民衆就醫、就學及日常所需之交通需求。

幸福小黃，善用運能

為善用計程車運能，提供多元服務，針對部分偏鄉地區亦有推動幸福小黃，累計至108年底已經開通63條幸福小黃路線，尤其在高雄地區，今年共於12個區推動幸福小黃，讓民衆能更便利的使用公共運輸，並開創計程車營運市場。



嘉義縣阿里山鄉幸福巴士通車典禮。

Opening Ceremony of Happiness Bus in Alishan Township, Chiayi County.

Because of insufficient resources in rural areas, we keep trying to strengthen public transportation in rural areas. The Directorate General of Highways set 2019 as the first year of Happiness Bus. To expand Happiness Buses (including Happiness Taxi) as well as provide transportation service.

Happiness Bus, Sprout in Remote Towns

Thanks to the joint efforts of the Directorate General of Highways, county governments, township and district offices, and regional transportation research centers, 26 areas set up Happiness Buses (including Happiness Taxi) completely, including Laiyi Township, Pingtung County. At the end of 2019, there were 43 places providing Happiness Bus services. To

fill the last mile of the public transportation in remote area, furthermore satisfy daily requirements such as seeing a doctor, schooling and so on.

Happiness Taxi, Make Good Use of Transportation Capacity

To make good use of taxi transport capacity and provide diversified services, we also promoted Happy Taxi in rural areas. Till the end of 2019, there were 63 Happy Taxi routes operating. Especially in Kaohsiung, there 12 districts promoted Happy Taxi this year, which made more easier for people to use public transportation and created a market for taxi operations.



高雄市旗山區幸福小黃服務。

Happiness Taxi service in Cishan District, Kaohsiung City.



高雄市那瑪夏區幸福小黃通車典禮。

Opening Ceremony of Happiness Taxi in Namaxia District, Kaohsiung City.

▲ 最美麗的移動風景北花線公運美學

The Most Beautiful Moving Landscapes of TPE-HUN Public Transport Aesthetic Design

以人為出發點，服務更有溫度

為了提供乘客不一樣的客運服務與乘車感受，108年針對「北花線一回遊號」國道客運車輛導入美學設計，重新改造車輛外觀及內裝，成為國道最美麗的移動風景，並配合蘇花改工程完工啓用提供營運服務，打造公共運輸路線品牌及優質服務。

本次設計是由公路總局與經濟部工業局、臺灣創意設計中心跨域共同合作，採用簡約風格並融入在地元素的設計概念。在車輛外觀視覺以花蓮的「鵝卵石」呈現，8顆鵝卵石象徵蘇花改工程所貫通的8個隧道，將公共運輸與道路改善工程連結，象徵公路

通到哪裡，公共運輸就服務到哪裡的意涵；內裝部分，採用大理石色系呼應外觀主視覺設計，並運用減法美學、簡約設計及優化指標系統等方式，營造溫和舒適的乘車環境。

「北花線一回遊號」 被發現、回家與遊玩

北花線諧音「被發現」，回遊號表示「回家」及「遊玩」，未來往返臺北、花蓮的乘客，不論是返鄉回家或觀光旅遊，都能搭乘這部最「水」的巴士，感受發現東部山海之美。



北花線一回遊號美學設計成果發表會。

Aesthetic design presentation of TPE to HUN Shuttle Bus: Hui-yu.

Take People as the Starting Point, and Service will be Better

We try to provide passengers with different services and a better experience. In 2019, there is a new design for the “TPE to HUN Shuttle Bus: Hui-yu” national highway bus. The exterior and interior of the vehicles rebuild. Therefore the most beautiful moving scenery of the national highway appeared. In cooperation with The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project, we provide operational services and build a strong public transport brand and quality services.

This design is cross-domain cooperation between the Directorate General of Highways, the Industrial Development Bureau, Ministry of Economic Affairs, and the Taiwan Design Research Institute. The design concept is a simple style that incorporates local elements. The visual appearance of the vehicle is presented by the “pebbles” of Hualien. The eight pebbles symbolized the eight tunnels in Suhua Highway Improvement Project. They connected public transport with road improvement projects, and symbolized public transportation will provide service no matter where the road reach. The interior part adopts



北花線一回遊號外觀設計。
Exterior design of TPE to HUN Shuttle Bus: Hui-yu.

a marble color scheme to echo exterior, then uses methods such as subtraction aesthetics, minimalist design, and an optimized index system to create a moderate and comfortable riding environment.

“TPE to HUN Shuttle Bus: Hui-yu” for Being Discovered, Going home and Playing

The homophony of the Taipei-Hualien route is “discovered,” while “Hui-yu” symbolized “go home” and “travel.” Riding this blue lane bus between TPE and HAU, passengers will enjoy the mountain and sea scenery no matter for going home or sightseeing in the future.



北花線一回遊號內裝設計。
Interior design of TPE to HUN Shuttle Bus: Hui-yu.

▲ 公路公共運輸服務持續進步與優化

The Road Public Transport Services Continue to Improve and Optimize

公共運輸績效持續達標

108年公路公共運輸績效表現持續達標，主要績效指標包括公路公共運輸載客量（12.39億人次）、市區無障礙公車比例（64.7%）及電子票證使用率（非6都市區客運82.9%、公路客運83.9%），均達到108年設定目標。



臺中市新闢路線「662大甲高中—國立苑裡高中」。
Taichung City new route “662 Dajia High School-National to Yuanli Senior High School.”

新闢路線，完善路網

108年共補助5個縣市新闢23條市區公車路線，新購41輛大客車，協助各縣市政府完善市區公車路網，提供民眾便利的公共運輸服務。

受補助單位 Subsidized unit	路線數 Number of routes	低地板公車 Low floor bus	普通大客車 High floor bus	無障礙大客車 Accessible bus	電動大客車 Electric bus
臺中市政府 Taichung City Government	3			3	6
桃園市政府 Taoyuan City Government	1		8	2	
南投縣政府 Nantou County Government	7		3		
宜蘭縣政府 Yilan County Government	11	15	2	1	
花蓮縣政府 Hualien County Government	1			1	
總計 Total	23	15	13	7	6

108年新闢路線購車補助情形。
2019 Subsidies for car purchases on new routes.



桃園市新闢路線「717龍岡圓環—捷運永寧站」通車典禮。
Opening Ceremony of Taoyuan City's New Route "717 Longgang Circle to MRT Yongning Station."

Public Transport Performance Reach the Standards Continuously

The performance of highway public transport continued to meet reach the standards in 2019. The performance of highway intercity public transit continued improved consistently in 2019. KPIs including number of passengers served annually (1.239 billion), the proportion of barrier-free buses in urban areas (64.7%), and E-ticketing usage (82.9% for intra-city bus services, excluding the 6 special municipalities; 83.9% for highway intercity bus services) have all reached or exceeded the expected goals.

Create New Routes, Improve the Road Network

In 2019, 23 new urban bus routes subsidized in 5 counties and cities. 41 new buses were purchased to assist counties and cities to improve the urban bus network and provide convenient public transportation services for the public.

Construct Station, Optimize the Transfers

In 2019, the transit waiting environment was continuously improved. A total of 9 transfer stations



臺南市兵配廠轉運站完工啓用。
Tainan Bus Station completed and opened.



屏東縣潮州轉運站完工啓用。
Pingtung Chaozhou Transfer Station completed opened.



桃園市經國轉運站完工啓用。

Taoyuan Jingguo Transfer Station completed and opened.

構建場站，優化轉乘

108年持續完善轉乘候車環境，共補助建置9座轉運站及772座候車亭，另有包括桃園市經國轉運站、臺南市兵配廠轉運站及屏東縣潮州轉運站，均於今年完工啓用，提供民眾舒適、便利的轉乘空間。

智慧站牌，節能便利

108年共補助建置809座智慧型站牌，除附掛式智慧型LED站牌及獨立式智慧型站牌外，亦補助建置太陽能電子紙式節能智慧型站牌，使用上更加環保節能。

小黃關懷，提升品質

為提升計程車服務品質及加強駕駛照



新北市國泰街口電子紙站牌。

New Taipei City Guotai street e-display bus stop.

顧關懷，108年補助全國老舊計程車汰舊換新共4,080輛；另為加強駕駛關懷，共設置14處計程車駕駛關懷服務據點，提供法律諮詢扶助、金融理債諮詢及健康諮詢服務等相關服務。

and 772 bus stops were subsidized. Including Taoyuan Jingguo Transfer Station, the Tainan Bus Station, and the Pingtung Chaozhou Transfer Station were completed this year, they provided comfortable and convenient interchange space for the public.

Smart Bus Stop, Energy Saving and Convenient

In 2019, a total of 809 intelligent bus stops were subsidized. In addition to the intelligent LED panels. We also subsidized the construction of solar panels, energy-saving displays for the bus stop, which friendly and energy-saving for the environment.

Taxi Caring, Improve Quality

To improve the quality of taxi services and enhance caring care. We subsidized 4,080 old taxis to replace to new ones in 2019. Furthermore, strengthen driving safety a total of 14 taxi bases were set up to provide legal consulting assistance and financial debt consulting and health consulting services, etc.



桃園松柏園電子紙站牌。
Taoyuan Song Bo Yuan e-paper display bus stop.



計程車駕駛關懷服務據點。
Taxi driver caring service base.



蔡英文總統及林佳龍部長至計程車服務站視察關懷駕駛。
President Tsai Ing-wen and Minister Lin Jialong went to the taxi service station to inspect and showed caring for taxi drivers.

▲ 車輛動態資訊大數據分析 ▲ 應用於運輸營運安全管理

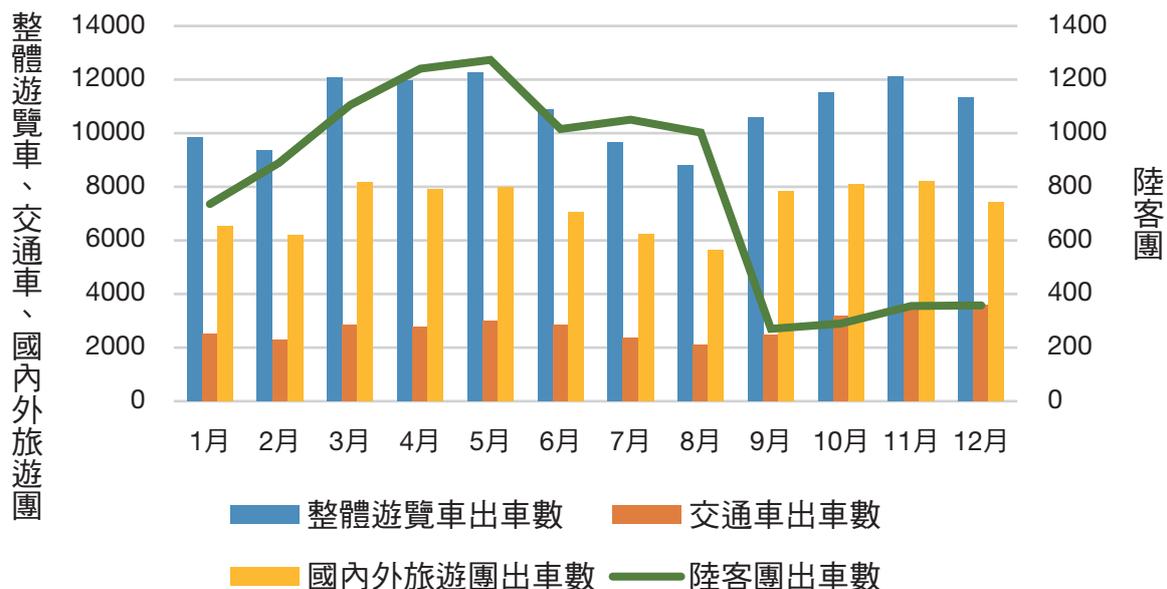
Big Data Analysis of Vehicle Dynamic Information Applied to Transportation Operation Safety Management

掌握遊覽車營運狀況設計預警機制

透過遊覽車動態資訊系統 (tBus) 中每輛車 GPS 回傳資訊，統計遊覽車營運狀況，顯示全年度整體遊覽車出車情形呈現雙高峰及雙低峰的態樣，主因為 1~2 月及 7~8 月適逢春節與寒暑假期間，包車旅遊與承攬學校交通車較少出車，使整體出車數

降低，3~6 月及 9~12 月為廟會、畢業旅行及國民旅遊旺季等活動使出車數有所提升。因應 108 年 9 月起陸客團來臺配額縮減情況，透過分析發現陸客團出車數下降的同時，交通車出車數逐月增加，國內外旅遊團出車數亦呈現增加，至年底整體遊覽車營運尚未受影響。

108年遊覽車出車情形



108年遊覽車出車情形。
2019 The situation of the bus dispatch.

Master the Operating Status of Tour Buses and Design Early Warning System

Through the GPS return information of each vehicle in the tour bus dynamic information system (tBus), the operation status of the tour bus is counted, showing that the overall tour bus exit situation throughout the year presents a double peak and double low peak, mainly because January to February and from July to August, during the Chinese New Year, winter and summer holidays, chartered tours and school transportation buses are less used, which reduced the overall number of cars. During March to June and September to December, peak season of activities such as temple fairs, graduation trips and domestic tours had increased the number of vehicles. In response to the reduction of quotas for tourist group from China coming to Taiwan since September 2019. Through analysis, it was found that while the number of tourist groups from China has dropped, the number of transportation vehicles has increased month by month, and the number of domestic and foreign tourist groups has also increased. The overall tour bus operation has not been affected.

Furthermore, we used the daily information about the tour bus dynamic information system to analyze the trend of the operation status of each tour bus company. We used the information such as the rate of departure and the number of vehicles to design an early warning threshold. If the tour company's operating conditions are below the warning threshold, an alert will be issued, and it will be provided to the Motor Vehicle Offices regularly from October 2019.



公路總局將車輛動態資訊大數據分析應用於運輸營運安全管理。

Big data analysis of vehicle dynamic information applied to transportation operation safety management.

Build the Function of Pre-Scheduled Schedule for Tour Bus Operators

The highway vehicle transport operator should upload the pre-arranged schedule to the highway tour bus dynamic motion information system (iBus) before the prescribed time limit to check whether the driver violated the driving time regulations. The establishment of the “pre-scheduled schedule” function was completed in July 2019 to provide operators with the ability to check drivers before scheduling. Whether the driving time of the day complied with the regulations. As of the end of November, the utilization rate of the schedules of all 50 companies reached over 99%. At the same time, the abnormal function check can be used to remind schedule violations and implement the driving time management system in advance.

Vehicle Dynamic Information Reporting and Automatic Analysis

To maintain the safety of people's riding, the Directorate General of Highways has grasped the dynamic information of each highway passenger and tourist bus. The Motor Vehicle Office and the

運用遊覽車動態資訊系統每日出車數分析各家遊覽車業者營運狀況趨勢，並以出車率及車輛數等資訊設計營運狀況預警閾值，如有遊覽車業者營運狀況低於預警閾值，即發出警訊，自108年10月起定期提供監理單位運用。

建置客運業者預排班表功能

公路汽車客運業者應於規定時限前上傳預排班表至公路汽車客運動態資訊統(iBus)，檢核駕駛員有無違反駕車時間之規定。108年7月完成建置「預排班表」功能，提供業者排班調度前檢核駕駛員當日駕車時間是否符合規定，截至11月底，全部50家業者預排班表使用率均達99%以上，

同時可透過異常檢核的功能，提示排班違反規則態樣，落實駕車時間事前管理機制。

車輛動態資訊通報與分析自動化

為了維護民衆乘車安全，公路總局掌握每一部公路客運及遊覽車客運車輛動態資訊，透過業者、監理所及公路總局分級管理模式，如發現異常狀態即時通報各區監理所督促業者改善。108年10月完成建置「智慧通報平臺」，系統依資訊類別自動推播相對應監理人員，自動彙整統計資訊，監理人員可隨時掌握最新彙整資訊。同時也完成建置「數據分析平臺」，對於異常事件常使用分析，製作成視覺化報表並定期產製，將大幅減少人工作業流程及重複工作。



車輛動態系統建置「數據分析平台」。
Build "data analysis platform" for dynamic vehicle system.



車輛動態系統建置「智慧通報平臺」。
Build a "Smart Reporting Platform" dynamic systems.

Directorate General of Highways can easily tell if any abnormal conditions are found. Thanks to this improvement, it will immediately notify the district Motor Vehicle Office to urge the companies to fix it. In October 2019, the establishment of the "smart reporting platform" was completed. The system automatically promoted and broadcasted the corresponding motor vehicle service personnel

according to the type of information, and automatically aggregated statistical information. At the same time, it has also completed the construction of a "data analysis platform" which is frequently used for the analysis of abnormal events, production of visual reports, and regular production. It will greatly reduce manual work processes and repetitive work.

營運管理	統計報表	系統管理	監理稽核	營運績效	操作手冊	登出
排班調度 >>	車輛預排班表					
油耗管理 >>	預排班表班次數統計					
健康管理 >>	預排班表檢核異常紀錄	客運業者	全部	調度站	全部	
遊覽車管理 >>	預排班表檢核結果					
訊息設定 >>	駕駛員預排班表					

日期 2019/12/12 至 2019/12/12

查詢 直接下載Excel

- 線上查看：僅提供單一業者查詢，查詢期間不得超過31天
- 直接下載Excel檔：全部監理單位不能超過7天；監理單位下全部業者不得超過15天；單一業者查詢期間不得超過31天
- 檢核一：每日最多駕車不得超過10小時
- 檢核二：連續駕車4小時未達6小時，休息需一次休滿45分
- 檢核三：連續駕車不得超過6小時
- 檢核四：連續兩個工作日之間，應有連續10小時以上休息時間。但因排班需要，得調整為連續8小時以上，一週以2次為限，並不得連續為之

公路汽車客運預排班表功能。
Pre-scheduled function of highway tour bus.



追求
卓越

監督 · 品質 · 管理

Pursuit of Excellence

Supervision · Quality · Management

Chapter 4



我們持續強化公路監理業務的管理品質，精進各項駕駛訓練及車輛檢驗業務，以達到「人安、車安、路安」的目標。

We continue to strengthen the management quality of highway motor vehicle service and improve various driving training and vehicle inspection businesses to achieve the goals of “people safety, car safety, road safety.”

▲ 榮獲政府服務獎： ▲ 為了你高雄所一直走在最前面

Won the Government Service Award:

Kaohsiung Motor Vehicles Office is Always at the Forefront for You

高雄所服務亮眼卓著 屢獲民衆高度評價

當梁郭國所長從行政院蘇貞昌院長手中接過第2屆政府服務獎獎座，那份榮耀與喜悅無法以筆墨形容，無數汗水加上破百點的努力以赴，終獲國家級肯定。高雄區監理所是全國最南端的監理所，轄管區域橫跨離島偏鄉，雖然幅員遼闊，但我們展現出創新活力，服務績效一直都非常亮眼卓著，也屢獲民衆的高度評價。

開發千里號牌追蹤系統

註銷號牌影響用路人行車安全甚鉅，為維護用路人安全，高雄所團隊開發第一代、第二代舉發註銷號牌系統，目前該系統已由民間公司接續發展銷售，現行已推廣至桃園市政府警察局查緝贓車使用。

友善服務區 貼心關懷弱勢族群

我們在1樓服務大廳設置友善服務區，提供聽障朋友現場查知監理業務洽辦須知，並與財團法人平安社會福利慈善事業基金會所屬身心障礙關懷中心合作，提供聽障朋友視訊手語服務。此外，友善服務區還有臨櫃辦理號碼查詢系統QRcode、I櫃檯，方便民衆即時洽辦監理業務。

產官學合作 首創汽車場內路試VR體驗區

民國107年開發初期由路老師、道安促進會及駕訓班教練等100餘人實際體驗，提供相關改進意見，並藉以修正方向盤延遲、油門及剎車操作甚至螢幕畫面的排列。採網路預約開放給民衆來體驗，目前為止有國泰不意外騎士團隊、大發駕訓班學員、樹德家商等團體前來體驗。

高雄所全體同仁凝聚團隊力量，展現貼心、關懷、科技創新，在有限的人力及經費下，提供更優質的服務，一路過關斬將直到獲得政府服務獎，545天的努力，再度擦亮公路總局為民服務招牌。高雄區監理所 YES! WE CAN!



聽障朋友監理業務視訊服務熊大心。

Deaf friends Motor Vehicle Driver video service is very caring.

Services of Kaohsiung Motor Vehicles Office is Outstanding, Highly Praised by the Public

When Liang Guo-Guo, the Director of Kaohsiung Motor Vehicles Office, took over the 2nd Government Service Award from the Premier of Executive Yuan Su Tseng-chang, the glory and joy cannot be described in words. Through countless sweats and tremendous effort, we finally won national affirmation. The Kaohsiung Motor Vehicle Office is the southernmost Motor Vehicle Office in the country. Its jurisdiction spans outlying islands and rural areas. Although it is a vast area, we have shown innovative activity, and our service performance has always been very eye-catching. The public has highly praised it.



高雄所我驕傲的團隊夥伴與蘇貞昌院長歡喜大合照。

Group photo of my proud teammates in Kaohsiung with the Premier Su Tseng-chang.

Develop Long Distance License Tracking System

The cancellation of the license has a huge impact on the safety of road users. To maintain the safety of the road users, the Kaohsiung Motor Vehicles Office team developed the first and second generation of license cancellation system. At present, the system has been continuously developed and sold by private companies. It has recently been promoted to the Taoyuan City Government Police Station for investigating stolen cars.

Friendly Service Area, Care for Vulnerable Groups

We set up a friendly service area at the lobby on the first floor, where we provided instructions for hearing-impaired visitors. We work together with the physical and mental disability care center of the Peace Foundation to provide hearing-impaired friends with sign language services. Moreover, the friendly service area also provided QRcode, and I counter to search for numbers on-the-counter, which is convenient for

the people to contact the motor vehicle driver service immediately.

Industry-Academia-Government Collaboration, Pioneer VR Test Area on Road Test in Car

At the beginning of the development of the early period of 2018, more than 100 people, including Teacher Lu, Society for Traffic Safety, and driving training coaches, provided practical suggestions to improve steering delays, throttle and brake operations, and even the arrangement of screens. We adopted Internet reservations to open to the public to experience. So far, groups such as Cathay Pacific No Accident Rider Team, Dafa driving training students Shu-Te Home-economics & Commercial High School, and other groups to come and experience.

All my colleagues in the Kaohsiung Motor Vehicles Office gathered team strength, demonstrated intimate, caring, technological innovation, and provided better services with limited manpower and funding. Therefore, we passed the barrier by winning the w96. Through 545 days of hard work, he once again polished the sign of Directorate General of Highways to serve the people. Kaohsiung Motor Vehicles Office YES! WE CAN!

▲ e化多元繳費管道服務效率高

High Efficiency and Easy Payment Through Multiple Channels and E-service

e化繳費管道，省紙減碳又方便

汽車燃料使用費（以下簡稱汽燃費）自民國49年7月1日起開始徵收，其徵收目的係用於公路之養護、修建及安全管理所需經費。為鼓勵民衆按時繳納，公路總局每年開徵前，積極辦理宣導活動。108年為達省紙減碳政策、提高徵收率之目的，鼓勵車主於開徵前繳納，統計108年5月20日前，提前繳納者超過25萬件（繳納金額逾5億元），郵資及印製費節省逾184萬元。

此外，為了讓民衆繳費更簡單方便，除金融機構、農漁會、郵局、超商、代檢廠等臨櫃、電話語音轉帳或約定扣款外，並積極開發多項e化繳費管道，如監理服務網、監理服務APP、臨櫃信用卡繳費、電子繳款單、台灣Pay掃描QRcode支付等，108年度更加入Apple Pay功能。其中「電子繳款單」並結合線上繳費，可環保省紙，亦能減少車主收不到的困擾，提升通知單送達率。統計108年度開徵期前寄發72,414件電子繳款單，車輛數17萬3,998輛次，另至12月底已逾30萬5千多輛申請。

為因應行動支付潮流，與時俱進的電子化運用，達到簡政便民與智慧化之效益，並研議增加line pay、街口支付等多元化繳費管道，以提升繳費便利性，期使民衆按時繳納，減少後續欠費催繳或裁罰案件。

先繳先贏
繳納汽機車燃料費
百萬禮券獎不停

抽獎日期
108年8月30日 (五)

抽獎資格
自用汽車及機車所有人於108年5月20日前，非因申請牌照或辦理車輛其他異動，即先行繳納108年度汽燃費者。

抽獎活動獎項

特獎	郵政禮券3萬元	10名
頭獎	郵政禮券1萬元	50名
普獎	郵政禮券2千元	100名

得獎名單於活動網站公布並發送通知，相關活動辦法詳本局網站公告。

汽燃費先繳先贏宣導海報。
The vehicle fuel fee pays first wins the first poster.

實現國家債權 充裕公路養護所需經費

統計102至105年汽燃費徵收率平均維持在96%，106年首度突破97%，108年已達97.38%。近年徵收總額屢創新高，歲入決算金額由102年428.8億元，逐年攀升至108年531.3億元。公路總局積極行使公權力，實現國家債權，充裕公路養護所需經費。

E-payment Channel, Save Paper and Carbon

The vehicle fuel fee has been levied since July 1, 1960. The collection purpose is the funds required for highway maintenance, construction, and safety management. In order to encourage people to pay on time, the Directorate General of Highways actively conducts propaganda activities before the annual levy. In 2019, in order to achieve the province's paper carbon reduction policy and increase the collection rate, car owners were encouraged to pay before the levy. According to statistics, before May 20, 2019, more than 250,000 people had paid in advance (the payment amount exceeded NT\$ 500 million) The production cost has been saved over NT\$ 1.84 million.

In addition, in order to make it simpler and more convenient for the people to pay, other than the on-the-counter, telephone voice transfers or auto pay service of financial institutions, agricultural and fishery associations, post offices, supermarkets, inspection agencies, we also actively developed a number of e-payment channels such as Motor Vehicle Driver Information Service, Motor Vehicle Driver Service APP, counter-based credit card payment, electronic payment, Taiwan Pay scan QRcode payment, etc. Apple Pay was added in 2019. Among them, the “electronic payment forms” combined with online payment can save the environment and save paper. It

can also reduce the trouble that the car owner cannot receive and improve the delivery rate of notices. According to the statistics, 72,414 electronic payment forms were sent before the start of the year 2019 levy period. The number of vehicles was 173,998, and by the end of December, more than 305,000 applications had been submitted.

In response to the trend of mobile payment, the electronic application that keeps pace with the times, achieves the benefits of simplification of administration and the wisdom of the people, and has proposed to increase LINE Pay, KKO Pay and other diversified payment channels, in order to improve the convenience of payment and make the people pay on time to reduce subsequent calls for arrears or penalties.

The Vehicle Fuel Fee Pays First Wins the First Poster.

According to statistics, the average rate of levying gasoline and fuel charges from 2013 to 2016 remained at 96%, and it exceeded 97% for the first time in 2017, reaching 97.38% in 2019. In recent years, the total amount of levies has reached record highs, and the annual final account amount has gradually increased from NT\$42.88 billion in 2013 to NT\$53.13 billion. The Directorate General of Highways actively used its public powers, realized the national claims, and made sufficient funds for highway maintenance.



監理服務APP新增Apple Pay繳費功能。
Apple Pay was added to the supervision service APP.

▲▲ 安裝視野輔助系統保障行車安全

Driving Safety is More Guaranteed with the Installation of Driving Vision Assistance System

大型車輛應設置 行車視野輔助系統

由於大型車輛轉彎視野死角較多且內輪差情形明顯，屢有發生機車、自行車騎士因進入大型車輛視野死角，遭絆倒而捲入大型車輛輪下之事故發生，所以交通部修正道路交通安全規則，明訂自民國107年1月1日起，新出廠大型車輛均應設置行車視野輔助系統，另自109年1月1日起，將該設備列為大型車輛定期檢驗項目。

為提升大型車輛行車安全及為鼓勵使用中大型車輛，提前於109年1月1日新修訂定期檢驗法規實施前，均能完成裝設行車視野輔助系統。交通部先後於106年、107年分別爭取2期補助計畫，核定補助經費1.9億元，計有1萬965輛大型車輛受惠裝設行車視野輔助系統。



提升大型車輛道路交通安全

另外108年6月28日行政院核定交通部「加速推動大型車輛裝設行車視野輔助系統計畫」，核定計畫經費2.59億元（行政院第二預備金2.5億元、公路公共運輸多元推升計畫900萬元）補助大型車輛裝設行車視野輔助系統，為108年底前完成裝設該等設備車主均予以補助，所以行政院再加碼核定第二預備金3.34億元支應，共計新臺幣5.93億元，實施日期自108年7月1日起至108年12月31日止。預計至12月31日前，使用中大型車可全數申領補助安裝該等系統，以減輕車主負擔。

經統計至108年12月31日底止，所有使用中大型車裝設登記率計達99.3%，以提升大型車輛道路交通安全。



Large Vehicles Should Be Equipped with Driving Vision Assistance System

Because there are many deadly angles in large vehicles, it's easy for scooter and bicycle riders to get caught in this deadly angle. Therefore, the Ministry of Transportation and Communications revised the road traffic safety regulation. The rules stipulated that starting from January 1, 2018; new large vehicles should be equipped with driving vision assistance systems. From January 1, 2020, this equipment is listed as a large vehicle periodic inspection project.

To improve the driving safety of large vehicles and to encourage the use of medium and large vehicles, a new amendment was made in advance on January 1, 2020. Before the implementation of the regular inspection regulations, the driving field assistance system can be installed. The Ministry of Transportation and Communications successively sought two subsidy programs in 2017 and 2018 and approved the subsidy fund of NT\$190 million. A total of 1,965 large vehicles benefited from installing a driving vision assistance system.

Improve Road Safety for Large Vehicles

Moreover, on June 28, 2019, the Executive Yuan approved the Ministry of Transportation and Communications plan to "Accelerate the Installation of Vision Assistance System for Large Vehicles Project. The plan's funding of NT\$259 million (the second reserve of the Executive Yuan is NT\$250 million, and the Highway Public Transport Multiple Enhancement Project NT\$9 million) to subsidize the installation of driving vision assistance systems for large vehicles. The owners of who have completed the installation of this equipment before the end of 2019 will be subsidized. Therefore, the Executive Yuan will further increase the approval of the second reserve of NT\$334 million. It was NT\$591 million, and the implementation date was from July 1, 2019, to December 31, 2019. It

is expected that by December 31st, all medium and large vehicles will be able to apply for subsidies to install these systems to reduce the burden on vehicle owners.

According to statistics, as of the end of December 31, 2019, the registration rate of all used medium and large vehicles was 99.3%, to improve the road traffic safety of large vehicles.

▲▲ 機車駕訓：培養安全正確駕駛觀念

Motorcycle Rider Training: Cultivating Safe and Correct Driving Concepts

機車事故傷亡人數居高不下

鑑於近年機車事故傷亡人數居高不下，民國96年起機車使用者死亡人數已占交通事故死亡總人數超過60%、受傷人數占交通事故受傷總人數超過80%。另經初步統計，107年資料自行考取機車駕照者，1年內違規率為10.08%，而經駕訓班訓練並考照者，違規率降低至2.99%，顯示經過機車駕訓確能有效降低違規率。

增加駕訓班講師和教練的專案訓練

爰為增加民眾參與機車駕訓的意願，108年由交通部道安會專案補助全國普通重型機車受訓學員，補助自108年4月16日至108年11月22日前參加訓練並取得駕照，每名學員新臺幣1,000元（現行收費2,800

至3,700元），名額共計6,000名，同時可增加駕訓班增設普通重型機車班別之意願。除補助措施外，針對駕訓班的講師、教練辦理專案訓練，並由專業團隊編撰統一學科教材，教學亦融入現實道路混合車流的應變及防禦駕駛能力，藉以提升教學的成效，培養機車駕駛人遵守交通規則及正確駕駛習慣，養成防禦駕駛及責任駕駛之觀念。

108年度辦理情形良好，共計6,165人參加補助計畫，根據公路總局問卷調查，參加機車駕訓的民眾，有96.4%對課程的內容感到滿意，98.3%的民眾認為對增進交通安全認知及騎乘技巧有幫助，亦顯示參加的民眾絕大多數均認為經過駕訓班學習騎乘機車確有其成效，109年預計將持續辦理本補助計畫。





駕訓班辦理機車訓練實況。

Rider training during a motorcycle training class.



High Number of Casualties in A1 Accidents

Because of the high number of casualties in motorcycle accidents in recent years, the number of motorcycle user deaths since 2017 has accounted for more than 60% of total traffic accident deaths. The number of injuries has accounted for more than 80% of total traffic accident injuries. According to preliminary statistics, those who obtained a motorcycle license on their own during 2018 show a violation rate of 10.08% within the first year. On the other hand, those who have both licenses and certifications have reduced the violation rate to 2.99%. This result shows that motorcycle rider training can effectively reduce the violation rate.

Increased Project Training for Instructors and Coaches in Driving Classes

To increase the public's willingness to participate in motorcycle rider training, the Society for Traffic Safety of the Ministry of Transportation and Communications subsidized ordinary heavy motorcycle trainees in 2019. NT \$ 1,000 (currently NT \$ 2,800 to NT \$ 3,700), with a total of 6,000 places. At the same time, it is possible

to increase the number of riding classes and normal heavy motorcycle classes. In addition to financial subsidy, special training is provided for lecturers and coaches in driving training classes, and a professional team compiles a unified subject textbook. Teaching is also integrated into the realistic mix of road traffic and defensive riding ability to improve the effectiveness of teaching and train motorcycle riders. Train the motorcycle riders to obey traffic rules and correct driving habits as well as develop the concepts of defensive riding and responsible driving.

The situation was good in 2019. A total of 6,165 people participated in the subsidy program. According to a questionnaire survey by the Directorate General of Highways, 96.4% of the people who participated in the motorcycle rider training were satisfied with the content of the course. Another 98.3% of the people thought that it was helpful and improved their understanding of traffic safety, as well as their skills. The results also showed that the majority of the people who participated in the program believed that learning to ride a motorcycle after rider training is indeed effective. It is expected that this subsidy program will continue to be held in 2020.



典藏 · 持續 · 升級

Good Quality Administration
Treasure · Continue · Upgrade



Chapter 5



案管理
金質獎

頒獎典禮
AWARDS CEREMONY

關檔案管理
檔將金質獎



我們透過人文藝術的形式來推廣理念，不但舉辦美學展覽及活動，另也拍攝電影短片，向大眾訴說有溫度的故事。智慧科技時代，我們更導入智能服務，拉近與民眾的距離，並透過資料的分析與應用，提升監理服務量能。與此同時，我們也不遺餘力推廣法制教育，並秉持廉潔精神完成每件工程，以取得大眾對我們的信任。

We promoted the concept through the form of humanities and arts. We held not only aesthetic exhibitions and events but also shot short films to tell the public stories with warmth. In the era of smart technology, we have introduced smart services to shorten the distance with the people. Through the analysis and application of data, we have increased the capacity of supervision services. At the same time, we spare no effort to promote legal education and complete each project with integrity to gain the trust of the public.

▲▲ 智慧 AI 導入藝術美學

Embrace Intelligent AI and Introduce Artistic Aesthetics

科技與美學的匯集

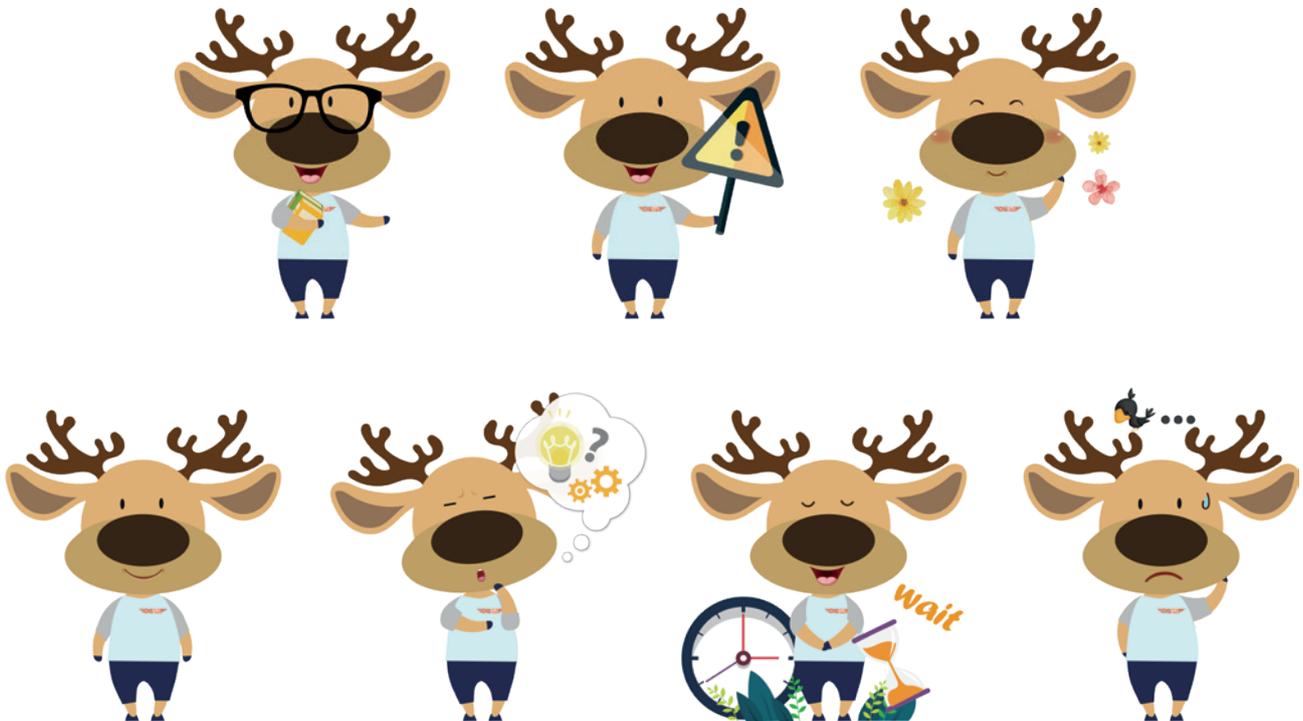
公路總局 0800231035 免付費電話 24 小時不間斷提供民眾洽詢公路、運輸、監理各類問題；並考量民眾通訊習慣的改變，為迎接智慧科技的世代並以趨前服務做準備，用路人服務中心引進 AI 科技——文字智能客服來提升服務品質與量能。

此外，用路人服務中心自 108 年起針對幸福公路館的經營，著重導入美學藝術概

念，結合多元方式舉辦各類特展，使得幸福公路館成為迎賓亮點及社區鄰里休憩好去處。

客服生力軍，超萌小鹿貼心登場

公路總局話務中心每天平均要處理約 600 通的民眾洽詢電話，其中重複性的問題占大宗，隨著 AI 技術的興起，公路總局除保留現有真人電話客服外，導入 AI 智能



客服生力軍，超萌小鹿貼心登場。
Customer service force, super cute little deer debut.



公路總局話務中心。
The call center of the Directorate General of Highways.

Gathering of Technology and Aesthetics

The Directorate General of Highways toll-free telephone 0800231035 24 hours non-stop to provide people with inquiries on highways, transportation, supervision, and other issues. Considering the changes in people's communication habits, we have also prepared for forward-looking services in the generation of smart science and technology. AI technology-text intelligent customer service to improve service quality and capacity.

Also, the Road User Service Center has stressed the concept of aesthetics and art since the beginning of 108. It has organized various special exhibitions in a variety of ways, making Taiwan Highway Museum a welcome highlight and a place to relax in the neighborhood.

Customer Service Force, Super Cute Little Deer Debut

The call center of the Directorate General of Highways handled an average of about 600 people's inquiries each day. Of these, repetitive problems

account for a large proportion. Now there is the rise of AI technology and the existing telephone customer service line. Also, the Directorate General of Highways introduced AI smart text customer service with a "Human-machine collaboration" method. The machine can now help customer service specialists to share information, giving people the ability to respond to more complex issues. In the short term, service time and service channels can be extended. In the long term, because of the large number of customer service records, it can analyze the needs of the people and make the highway supervision services more proactive.



文字客服，以「人機協作」方式，透過機器協助客服專員分擔話務量，讓人有餘力回覆更複雜的問題。短期可以延伸服務時間與服務管道，長期則因為獲得大量客服紀錄，可以分析民衆的需求並讓公路監理服務更趨前主動。

在智能客服的設計上，以公路總局吉祥物「幸福小鹿」為基礎，設計Q版人偶表情，並提供高鐵、台鐵時刻問答服務、36小時天氣預報，以及幽默生活問候用語等，讓超萌的小鹿來拉近與民衆互動的距離。

美感再升級 善用博館展示政策成果

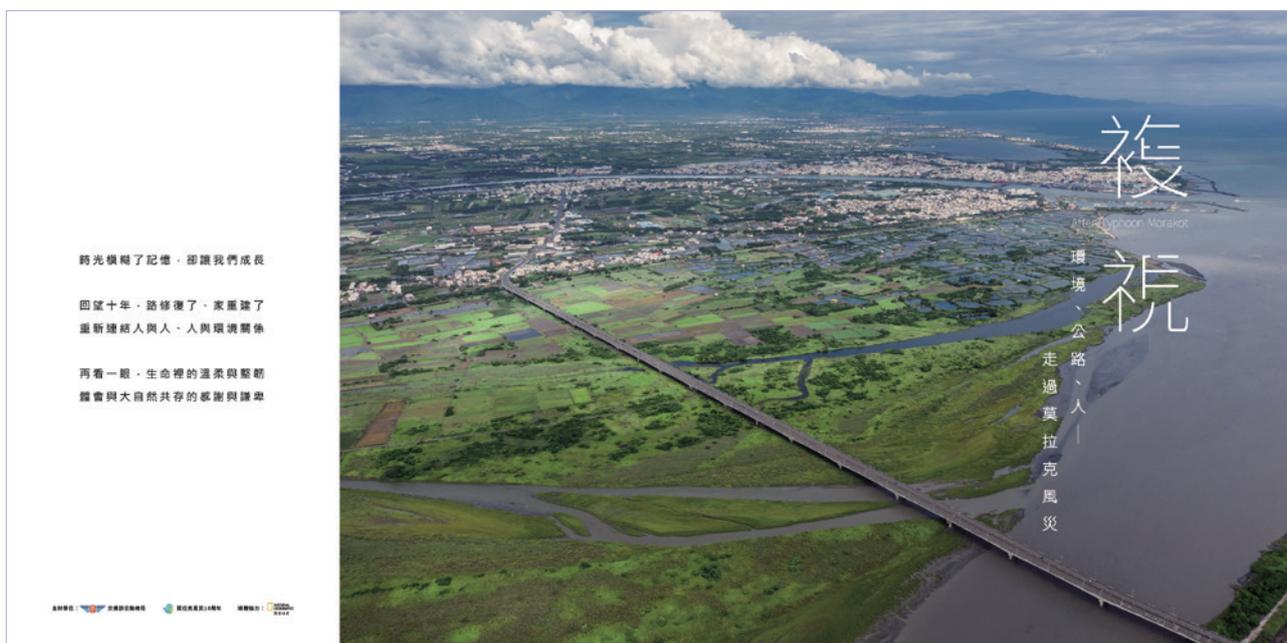
為使幸福公路館在傳承、交流、創新的功能持續發揮，自108年起，除了加入中華民國博物館學會增加汲取專業機會，導入美

學藝術的概念，結合大愛電視台島嶼路談話性節目，以布幔呈現攝影作品的「鏡頭下島嶼路」微型攝影展；透過《埡口之巔——南橫青山在》新書發表會，舉辦「南橫公路特展」，是以大幅畫作風格將書本內頁精華展出。在莫拉克風災10年紀念之際，則結合國家地理雜誌以精彩動人影像說故事的敘事方式，推出「複視：環境、公路、人——走過莫拉克風災」特展。

在各類特展期間，更積極與民間團體或專業講師合作，舉辦兒童志願服務營隊、親子插畫活動、手撕拼貼課程等具美學素養的實體活動；同時也善用臉書粉絲專頁，推出各樣行銷活動引導更多民衆駐足參訪幸福公路館，讓幸福公路館成為公路總局政策亮點的最佳平臺。



兒童志願服務營隊活動。
Children's Volunteer Service Camps.



複視：環境、公路、人——走過莫拉克風災。

Review: Environment, Highway, People-Walking Through the Typhoon Morakot.

In the design of smart customer service, based on the mascot “Happiness Little Deer” of the Directorate General of Highways. A cute version of the mascot’s facial expression was designed. The mascot provides information, such as train timetables, Q & A, 36-hour weather forecast, and other more user-friendly features to better interact with the people.

Aesthetics Upgrade Again, Make Good Use of the Museum to Display Policy Results

To carry on the work of the Taiwan Highway Museum in inheritance, communication, and innovation; in 2019, with the Chinese Association of Museum work to provide professional opportunities. We introduced the concept of aesthetics and art in cooperation with the Da Ai TV Island Road talk show to present a photographic exhibition: The “Island Road Under the Lens.” Based on a new book, “Top of the

Yakou - Mountain of Southern Cross-island Highway,” the “Southern Cross-island Highway Special Exhibition” displayed large-scale paintings. On the occasion of the 10th anniversary of the Morakot disaster, combined with National Geographic's narrative method of storytelling with exciting moving images, a special exhibition of “Review: Environment, Highway, People-Walking Through the Typhoon Morakot” was launched.

During special exhibitions, we cooperated with civil groups and professional lecturers to organize different activities—things like children's volunteer service camps, parent-child activities, and college courses. Also, we used Facebook fan pages, and marketing campaigns to bring more people to visit the Taiwan Highway Museum. The Taiwan Highway Museum is now the best platform for the policy highlights of the Directorate General of Highways.

▲ 公路監理資訊系統量能提升 ▲ 暨擴大資訊運用

Improve and Expand the Usage of The Motor Vehicle and Driver Information System and Continuously Improve the Quality of the Services

監理資訊系統面臨的挑戰

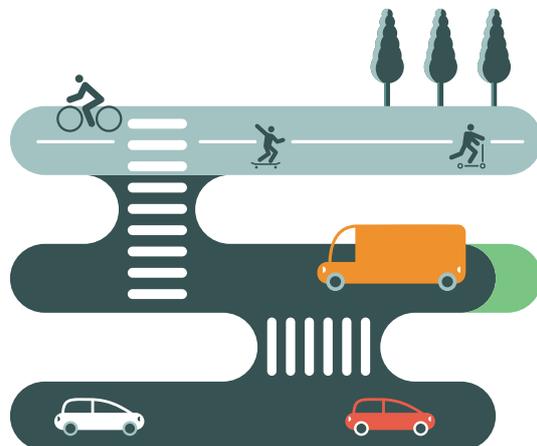
第3代公路監理資訊系統自民國99年6月由交通部委託規劃，直至民國101年9月由公路總局啟動建置，103年12月完成建置，並於104年5月正式啓用。近年來隨著公路監理新政策頒布，以及因應簡政便民創新服務、機關互助外部連結介接，致使系統交易量持續爆量成長，已逾原本規劃設計的負荷量，爰亟須提升公路監理系統服務量能。

服務量能提升計畫

第3代公路監理資訊系統原先的設計架構中，包含臺北全國中心以及臺中異地備援中心，前者提供公路總局及各外部連結機關各項監理服務，而後者平時則處於待命狀態，僅作為前者無法提供服務時的備援機制。因應提高系統服務量能需要，公路總局於108年9月完成服務量能提升計畫，將異地備援中心設備及網路進行升級，提高為與主中心相同之高可用度架構，並透過服務分流的设计，將超過30%外部機關查詢服務分流至異地備援中心，彈性運用異地備援中心系統資源，改善全國中心的效能瓶頸。

擴大公路監理資訊運用

異地備援中心系統資源活化後，充裕的效能更能幫助擴大監理資訊的運用，進而精進公路總局的公路監理業務。公路總局於108年打造了資料科學專案辦公室，設置監視攝影、螢幕側錄、帳號控管及隨身設備控管等多項防護措施，在資訊安全與個資保護控管的前提下，提供同仁或經公路總局核可之外部合作團隊進行研究分析的環境。108年的分析重點項目包含租賃業代雇駕駛、危險物品運送車輛、車輛檢驗時間與里程數與遊覽車行駛軌跡等，亦陸續參考分析成果規劃相關精進措施，持續提升監理服務之品質。



Challenges for Motor Vehicle and Driver Information System

The Ministry of Transportation and Communications planned the Third-Generation Motor Vehicle and Driver Information System Establishment Project in June 2010. The Directorate General of Highways commissioned it in September of 2012. The construction was completed in December of 2014 and officially launched in May of 2015. In recent years, with the promulgation of new policies for motor vehicle, and innovative services for simplifying the administration and convenience of the people, and external connection for mutual assistance of agencies, the system's transaction volume has continued to grow and has exceeded the originally planned load. Therefore, it is urgent to upgrade the service capacity of the motor vehicle and driver information system.

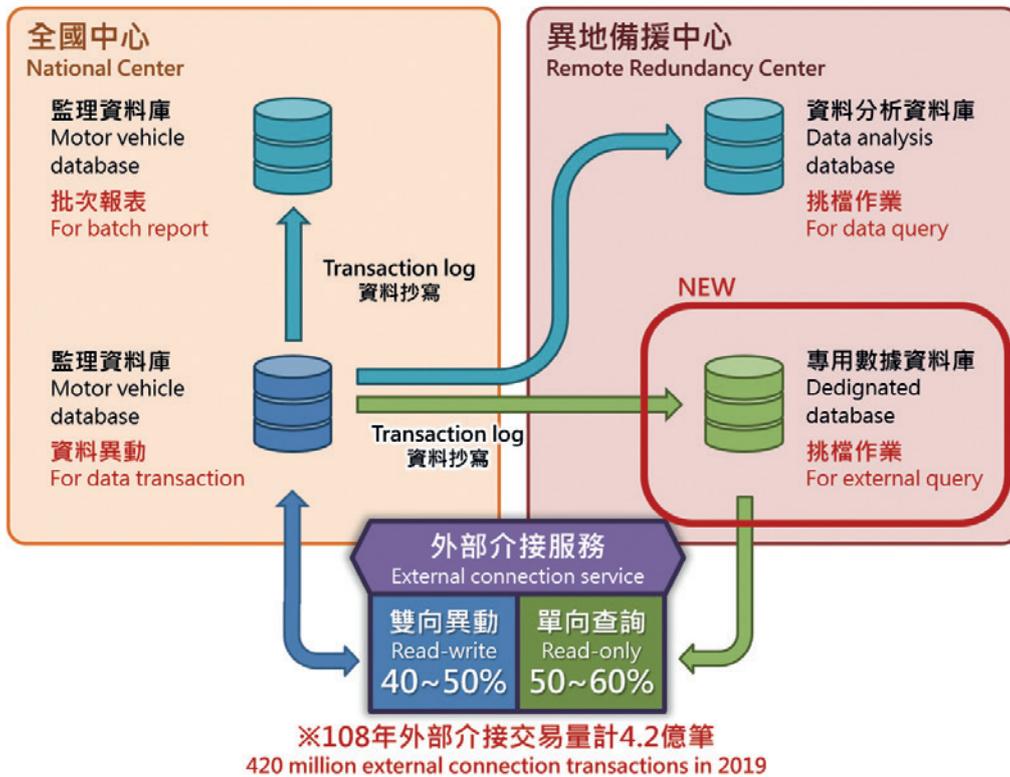
Service Capacity Improvement Project

The original design system architecture of The Third-Generation Motor Vehicle and Driver Information System Establishment Project included the Taipei National Center and the Taichung remote redundancy Center. The former provided various motor vehicle services for the Directorate General of Highways and external connection agencies. The latter usually remain on standby as a redundancy mechanism used only when the former cannot provide service. To tackle the requirement of increasing the system's service capacity, the Directorate General of Highways completed the project in September 2019. We upgraded the equipment and network of remote redundancy centers to the same high availability architecture as the main center. We also designed a service diversion for more than 30% of external

	105年	106年	107年	108年
 臨櫃服務 Counter service	0.95億 95 million	0.99億 99 million	1.16億 116 million	1.27億 127 million
 監理服務網 Website	1.40億 140 million	1.66億 166 million	2.40億 240 million	2.50億 250 million
 監理服務APP Mobile Application	1,782萬 17.8 million	2,822萬 28.2 million	5,017萬 50.2 million	7,590萬 75.9 million
 監理查外機關 Data import	1,679萬 16.8 million	1,507萬 15.1 million	1,579萬 15.8 million	1,401萬 14 million
 外機關查監理 Data export	3.89億 389 million	4.96億 496 million	3.35億 335 million	4.20億 420 million
 資料有償利用 Value-added service	-	457萬 4.6 million	4,657萬 46.6 million	4,865萬 48.7 million

公路監理資訊系統交易量持續成長。

The transaction volume of motor vehicle and driver information systems continued to grow.



優化效能·分流外部介接30%~40%查詢量至異地備援中心
Optimize performance, divert 30% ~ 40% of the external query to the remote redundancy center



將M3異地備援中心伺服器升級成具備高可用性資料庫伺服器
Upgrade servers of remote redundancy center to database servers with high availability



優化外部介接服務異地備援能力·確保外部服務不中斷
Optimize the remote redundancy capability of external connection services to ensure they will not interrupted



即時監控各項連結服務之網路流量及交易數量
Real-time monitoring of network traffic and transaction volume of various external connection services

服務量能提升計畫可以達到優化效能提高可用性的目標。
The service capacity improvement project can achieve the goal of optimizing performance and improving availability.

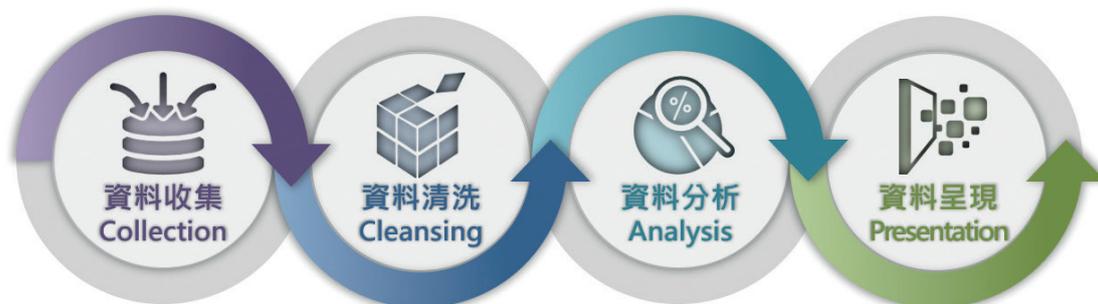
agencies' query services so they can be redirected to remote redundancy center. In doing so, the system resources of remote redundancy center were used creatively to improve the efficiency of the bottleneck of national center.

Expand the Use of Motor Vehicle Information

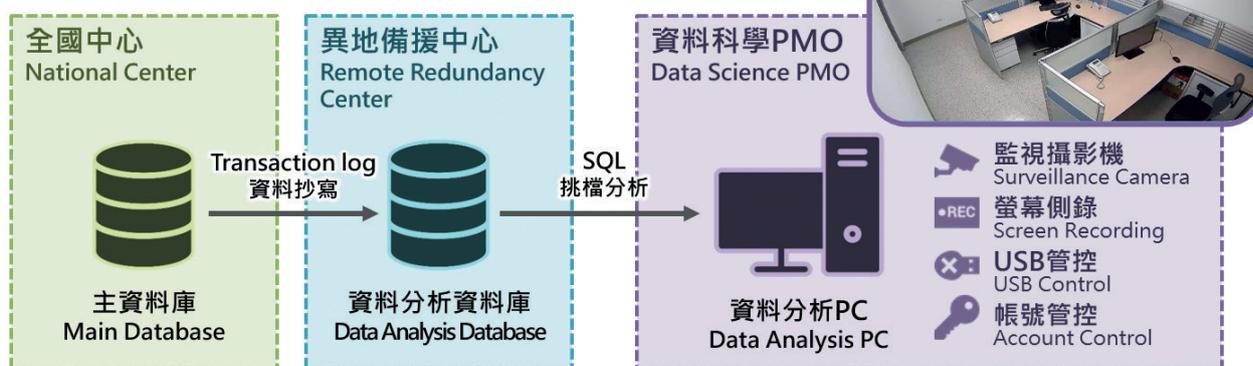
After the system resources of the remote redundancy center were activated, the full performance can help expanding the use of motor vehicle information and further improving the motor vehicle service of the Directorate General of Highways. The Directorate General of Highways created the data science project management office in 2019. It has set up several

protective measures such as surveillance camera, screen recording, user account control, and portable device control. Under the affiliation of information security and personal information protection control, it provides an environment for research and analysis by colleagues or external cooperation teams approved by the Directorate General of Highways. The key analysis items of the year 2019 included driver hiring in the rental industry, dangerous materials transport vehicles, vehicle inspection time and mileage, and tour bus driving tracks, etc., and successively referenced the analysis results to plan related advanced measures to continuously improve the quality of motor vehicle service.

作業流程 Workflow



作業環境 Working environment



擴大監理資訊運用作業流程及環境。
The workflow and environment for expanding the use of motor vehicle information.

▲ 開路先鋒——典藏三工

Pioneer of the Way Maker — Recall Honor of the Third Maintenance Office

三工處同仁展現無比旺盛企圖心

公路總局第三區養護工程處檔案管理業務經過同仁多年的戮力齊心，終於在今年開花結果。首先在國家發展委員會檔案管理局舉辦的第17屆金檔獎選拔，三工處表現優異，在評獎類別4項得到特優，2項得到優等，並獲中央機關組第1名，在頒獎典禮上主辦機關特請林清洲處長代表獲獎機關致詞。

林處長表示，三工處在準備參獎過程中，全體同仁展現無比旺盛企圖心，加上交通部及公路總局深具信心的強力輔導，上下一心將硬梆梆的工程檔案，活化為柔性有溫度的檔案奇珍，獲得評獎委員高度肯定，拿下第1名殊榮。

林處長感動的說，參獎期間個人曾因家庭因素申請提早退休，當看著不眠不休、日

以繼夜為金檔獎打拚的同仁時，捫心自問：怎麼可以當一個金檔落跑的公路老兵呢？很慶幸，當下選擇留下來與同仁一起努力，今天才有這個機會站在舞臺上與大家一起分享這份榮耀。

記錄施工過程的微電影 《護蟹任務》

三工處「開路先鋒——典藏三工」團隊在工作崗位的戮力從公與任勞任怨，也獲得民國108年公務人員傑出貢獻獎團體獎第1名的肯定，更加顯示三工處的表現，為全國機關及公務人員的佼佼者，其得獎傑出事蹟為完成台26線護蟹廊道，記錄施工過程的微電影《護蟹任務》，並獲得美國短片競賽最佳紀錄短片、自然環境保育類別最佳短片等獎項。

設置檔案資料庫並建立歷史迴廊，透過口述歷史、檔案清查與徵集、文書管理資訊化、檔案庫房改建等，妥善保存並還原南橫公路的歷史，同時透過網站及社群網站臉書粉絲專頁宣導檔案應用服務及措施，108年出版南橫開拓史專書、完成退休員工訪談紀錄影片、公路新村紀錄片備忘錄並上傳YouTube平臺，深化宣傳效益。三工處團隊成員均具備高專業素質與團隊合作精神，在自己工作崗位上奉獻心力成就團隊效能，足為機關楷模。



林清洲處長代表獲獎機關致詞。
Director Lin, Qing-zhou delivered a speech on behalf of the winning organization.



交通部與公路總局輔導委員及三工處金檔獎團隊大合照。
A group photo of the Ministry of the Transportation and Communications, the Counseling Committee of the Directorate General of Highways, and the Archives Management Quality Awards Team of the Third Maintenance Office.

Colleagues From the Third Maintenance Office Show Extremely Strong Intentions

After years of hard work, the archives management business of the Third Maintenance Office of the Directorate General of Highways has finally come to fruition this year. First, at the 17th Records Management Quality Awards held by National Archives Administration of the National Development Council, the Third Maintenance Office did well. It received four of the highest distinction awards in one category and two excellence awards. It also won first place in the central government group. The organizer invited Director Lin, Qing-Zhou, to speak on behalf of the award-winning organization.

Director Lin said that during the preparation of the awards, all colleagues showed great ambitions. Together with strong and confident counseling provided by the Ministry of Transportation and Communications and the Directorate General of Highways, no effort was spared to keep project archives. Now they can be found as archive treasures showing our temperance and resourcefulness, which was highly recognized by the jury members when awarding the first prize.

Director Lin said that he had personally applied for early retirement due to family factors during the award

period. After a great effort, the Archives Management Quality Awards, the question was posed: “How can I be a highway veteran and not assist the Archives Management Quality Awards? Fortunately, I chose to stay and work with my colleagues at the moment. Today I have the opportunity to stand on the stage and share this glory with everyone.”

Short Documentary Recording the Construction Process

The Third Maintenance Office’s “Pioneer of the Road—Recall the Third Maintenance Office” team has worked hard without complaining at work, and also won first place in the 20192019 Civil Service Outstanding Contribution Award. It also showed the performance of the Third Maintenance Office and is an outstanding example for government agencies and public servants nationwide. Its award-winning project was the completion of the crab protection corridor on Provincial Highway No. 26. A short documentary, “Mission-Land Crab Redemption,” following the construction process, has won an Award of Excellence as a short documentary in the Nature, Environment and Wildlife category, and other awards.

In addition, we set up an archive database and establish a history gallery. This gallery preserves the history of the Southern Cross-island Highway through oral history records, archive review, and expansion, document informatization, archive warehouse reconstruction, etc. At the same time, through the website and social network Face book fan page to promote archival application services and measures and published a book on the history of Southern Cross-island Highway development in 2019, completed a documentary of interviews with retired employees, a memorandum of the Gonglu New Village documentaries, and uploaded to the YouTube platform to deepen the effectiveness of publicity. The members of the Third Maintenance Office all had a high professional quality and teamwork spirit. They dedicated their efforts to achieve team effectiveness, which is a role model for institutions.

▲ 優化法制作業績效卓著

Outstanding Performance in Optimizing Legal Operations

法制作業，表現卓越

交通部為配合法務部全國法規資料庫工作小組辦理107年度的法規通報績效查核作業，由法規會許宏達專門委員於108年1月15日率隊到局，並由法制室進行專案簡報，介紹公路總局法規網站的建置維護情形、法制作業及刊登行政院公報各項精進與改善缺失的作為。嗣後交通部108年2月9日函復公路總局：「貴局同仁配合本部辦理107年度法規通報績效查核，辛勞得力，績效卓著」、「貴局辦理法制作業與法規網站資料建置及維護等事項之人員不遺餘力，表現卓越」。

推廣法律教育，不遺餘力

法制室108年度除例行開辦工程契約法律概念、行政院公報與法制作業、國賠實務、行政救濟及工程契約實務等5項講習班之外，奉交通部祁文中次長108年5月16日指示，法制室專案開辦行政處分遭撤銷之實務講習班；上述到訓同仁累計達381人次，平均滿意度達91.6分，成效良好。另為加強基層人員的基本法律概念，法制室主動積極創新對提出需求之局屬機關量身打造的「法制亮點教育訓練」，分別至臺中所、四工處、高雄市所、臺北所、二工處及五工處等機關，共計6場次，著有實績。

期盼扮演「推進器」與「煞車器」之雙重角色

有鑑於政府機關行政作為皆應依法行政，而法制室為公路總局輔助業務的單位，除正式公文之法制會簽外，亦以電詢及面談提供適法性的法律諮詢。法制室於108年度提供諮詢共計達698件、服務時間共計達23,075分鐘，每工作日平均提供諮詢時間約為95分鐘，未來法制室仍秉自我期許扮演「推進器」與「煞車器」之雙重角色，俾協助業務單位依法行政下推展各項業務及達成上級長官交辦任務。



法制室蔡境列主任於高雄市所的「法制亮點教育訓練」致詞。

Director of the Legal Affairs Office Cai, Jing-lie, addressed the "Legal Highlight Education and Training" in Kaohsiung City Motor Vehicles Office.



公路總局黃運貴副局長蒞臨交通部查核法規通報績效會場致詞。

Huang Yun-gui, deputy director of the Directorate General of Highways, delivered a speech at the meeting venue where Ministry of the Transportation and Communications checked the performance of regulatory reports.

Promote Legal Education, Spare No Effort

In addition to five workshops including the legal concept of engineering contract law, Executive Yuan Gazette Online, and legal operation, national compensation practice, administrative relief, and engineering contract practice, held by the Legal Affairs Office in 2019, on May 16, 2019, Qi Wen-Zhong, the Deputy Minister of Ministry of the Transportation and Communications, instructed that the Legal Affairs Office open a practical workshop for the cancellation of administrative sanctions. The trainees, as mentioned earlier, have accumulated a total of 381 people, with an average satisfaction of 91.6 points and good results. Also, to legal

grassroots initiatives, the Legal Affairs Office upgraded the “Legal Highlight Education and Training,” and is now tailored to local agencies. This effort was made in response to a rise in demand, including the Taichung Office, the Fourth Maintenance Office, the Kaohsiung City Motor Vehicles Office, the Taipei Office, and the Second and Fifth Maintenance Office, a total of 6 training.

Legal work, Excellent Performance

A special committee member of the Legal Affairs Committee Xu Hong-da led a team on January 15, 2019. This team was composed of the National Laws and Regulations Database team of the Ministry of Justice. Its mission was to handle the performance of the regulatory notification performance review in 2018. The legal department conducted a briefing on the establishment and maintenance of the laws and regulations website of the Directorate General of Highways, the operation of the legal system, and the publication of various improvements on the Executive Yuan Gazette Online. Later, the Ministry of Transportation and Communications sent a letter to the Directorate General of Highways on February 9, 2019. It read: “My colleagues in the bureau cooperated and conducted a performance review of the 2018 year regulations and notifications. It was a great effort and an outstanding performance. The staff of your bureau handling the establishment and maintenance of the legal system, as well as the website of the laws and regulations, has spared no effort in showing excellent performance.”

Looking Forward to Playing the Dual role of “Thruster” and “Brake”

Since the administrative actions of government agencies should be administered following the law, the Legal Affairs Office of the Directorate General of Highways, also provided legal advice by telephone and interview. The legal office provided a total of 698 consultations in 2019, and the total service time reached 23,075 minutes. The average consultation time per working day was about 95 minutes. In the future, the legal office will still play the dual role of “thruster” and “brake” to assist business units in carrying out various businesses under the administration of the law and achieve tasks assigned by superiors.

▲ 深化廉潔提升人民對政府的信賴

Deepen the Awareness of Integrity to Win People's Trust in the Government



舉辦淡江大橋「廉政同行 行政透明」交流座談會。
Held the seminar on “Danjian Bridge Anti-Corruption Activity.”

凝聚反貪共識，降低違法風險

機關清廉攸關國家競爭力，更是人民對政府信任的磐石，公路總局政風室除對機關同仁外，並將相關業者、廠商納入廉政宣導對象，透過交流平臺、預警作為等預防機制，形塑透明廉潔的機關形象。

公路總局以「幸福公路，廉潔工程」、「翻轉監理，廉能升級」及「圖利與便民之分際」三大主題辦理宣導講習，期能使同仁熟諳相關法規，凝聚反貪共識，降低違法風險。

善用平臺，建立溝通橋梁

為使淡江大橋成為國內公共工程施工典範，公路總局責成西濱北工程處舉辦淡江大橋「廉政同行 行政透明」交流座談會，並就工程行政透明及加強監造作為等議題進行意見交流，同時建置淡江大橋「行政透明」

網頁，以凝聚各方參與共識，確保工程品質無虞。

機先預防，消弭潛在風險

公路總局辦理「綠美化及路容維護再防貪」等系列預防作為，並辦理車輛檢驗業務代辦業者專案稽核，藉由臺北市區監理所試辦「工業內視鏡」拍照設備輔助車輛檢驗，準確放大鈹件影像，增進人民對政府的信賴，有效消弭潛在廉政風險。

辦理廉政會報，展望未來

透過舉辦公路總局108年廉政會報，除就工程施工品質進行報告，並將公路總局利益衝突迴避法配合辦理情形提出討論，獲得台灣透明組織等與會外聘委員具體意見，未來將強化推動「企業誠信與社會責任」，以共築廉潔政府、誠信社會之施政目標。

Consolidate Anti-Corruption Consensus and Reduce the Risk of Illegality

The integrity of government agencies is related to national competitiveness, and it is also a base of people's trust in the government. In addition to the colleagues of the government, the government office of the Directorate General of Highways has included relevant industry players. We use communication platforms and prevention systems to shape an image of a transparent and incorruptible institution.

The Directorate General of Highways conducted training seminars focused on three themes: "Happiness Highways, Clean Project," "Flip Supervision, Upgrade Integrity," and "Division of Profitability and Convenience." These seminars aim to familiarize colleagues with relevant laws and regulations, build consensus on anti-corruption measures, and reduce the risk of corruption.

Make Good Use of the Platform and Build Communication Bridges

To make Danjiang Bridge a model of domestic public engineering construction, the Directorate General of Highways instructed the West Coast Expressway Engineering Office to organize a seminar on "Clean Government and Transparent Administration." In this seminar, we exchanged views on issues such as project administrative transparency and strengthening supervision and construction. At the same time, we established the "Administration Transparency" webpage of the Danjiang Bridge to gather consensus from all parties to ensure the quality of the project.

Early Prevention, Reduce Potential Risks

The Directorate General of Highways handled a series of preventive actions such as "greening, road maintenance, and anti-corruption," and carried out a special project audit of the vehicle inspection business agencies. The "Industrial Endoscope" photographic equipment piloted by the Motor Vehicles Office assisted vehicle inspection, accurately enlarged the sheet metal

image, increased people's trust in the government, and effectively eliminated potential risks of clean government.

Conduct Integrity Report and Looking Forward to the Future

By holding the 2019 integrity report of the Directorate General of Highways, in addition to reporting on the quality of the construction of the project, and discussing the situation of the Act on Recusal of Public Servants Due to Conflicts of Interest of the Directorate General of Highways in cooperation with the handling of the situation, it obtained specific opinions from external members such as the TICT-Transparency International Chinese Taipei. In the future, we will strengthen the promotion of "corporate Integrity and social responsibility" to build a clean government and an honest society.



陳彥伯局長主持 108 年廉政會報。
Director-General Chen, Yen-Po presides over the 2019 Annual Report of the integrity report.



法官講授圖利便民相關課程。
Judges taught courses on greed and convenience.



見證
幸福

回顧 · 脈絡 · 傳承

Witnessing Happiness

Review · Context · Heritage

Chapter 6



回顧一年來的精彩成果，我們落實推動並精進各項業務，並獲得諸多獎項肯定。我們將在過往的成果之上，持續進行研究計畫，並且妥善規劃預算，創造更優質的建設與服務。

Looking back on the wonderful achievements of the past year, we have implemented and promoted various businesses, and have won many awards. We will continue to carry out research projects based on past achievements and properly plan the budget to create better construction and services.



組織系統 | Organizational Structure

- 總局內部單位計有6組、6室、4個任務編組單位。
- 17個所屬機關（構）：
 - 5個養護工程處（所轄36個工務段及50個監工站）
 - 3個新建工程處（所轄18個工務段）
 - 7個監理所（所轄26個監理站、4個監理分站及7個鑑定會）
 - 公路人員訓練所（2個訓練中心）
 - 材料試驗所
- The internal units of the Directorate General of Highways include 6 divisions, 6 offices, and 4 temporary task force units.
- 17 subordinated units:
 - 5 maintenance offices (36 branches and 50 stations)
 - 3 engineering offices (18 branches)
 - 7 motor vehicles offices (26 stations, 4 substations, and 7 investigation committees)
 - Training Institute (2 institutes)
 - Materials Testing Laboratory





施政計畫 | Administrative Project

計畫名稱 Project name	年度預算(千元) Annual budget (NTD 1,000)	計畫期程(年) Timeframe (year)	列管級別 Supervisory Level
台9線蘇花公路山區路段改善計畫 The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project	7,205,578	2010-2020	政院管制 Executive Yuan
台9線南迴公路拓寬改善後續計畫 Follow Up to the South Link Highway of Provincial Highway No.9 Widening Project	3,342,137	2011-2020	部會管制 Ministry
西濱快速公路後續建設計畫 Follow Up to the West Coast Expressway Continuous Construction Project	6,679,922	2009-2019	部會管制 Ministry
淡江大橋及其連絡道路建設計畫 Danjiang Bridge and Connecting Roads Construction Project	2,482,746	2014-2024	部會管制 Ministry
改善停車問題計畫 Parking Improvement Project	2,161,945	2017-2021	部會管制 Ministry
公路公共運輸多元推升計畫 Highway Public Transport Multiple Enhancement Project	4,247,772	2017-2020	部會管制 Ministry
生活圈道路交通系統建設計畫(公路系統)8年(104-111)計畫 Region-Based Road System Construction Project (Highway System) 8-year (2015-2022) plan	4,394,935	2015-2022	部會管制 Ministry
提升道路品質建設計畫 Road Quality Improvement Construction Project	4,157,997	2017-2021	部會管制 Ministry
科學城低碳智慧環境基礎建置——公共建設部分 Science City Low-carbon Intellectual Environment Foundation - Partial Plan for Constructing Infrastructure	597,423	2017-2024	部會管制 Ministry
台9線花東縱谷公路安全景觀大道計畫 A Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9	167,728	2017-2024	自行管制 Autonomous Management
東西向快速公路台76線(原漢寶草屯線) 台19線以西路段改線工程 East-West Expressway No.76 (former Hanbao-Caotun Expressway) West Section by Provincial Highway No.19 Construction Project	62,306	2018-2025	自行管制 Autonomous Management
省道配合區域排水整治及環境營造計畫需辦理橋梁工程 Construction of Provincial Highway Bridges Needed for Regional Drainage & Regulation and Environment Construction Plan for Major Rivers	176,941	2015-2020	自行管制 Autonomous Management
省道改善計畫(108-113年) Highway Improvement Project (2019-2024)	5,760,277	2019-2024	自行管制 Autonomous Management
公路養護計畫 Highway Maintenance Project	7,764,016	2019-2019	自行管制 Autonomous Management

參賽成果 | Competition Results

序號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
1	交通部所屬各一級行政機關108年績效考評 2019 performance evaluation of the chief administration departments of Ministry of Transportation and Communications	公路總局 Directorate General of Highways	第1名 First Place
2	108年交通部公文檢核 2019 document review by the Ministry of Transportation and Communications	公路總局 Directorate General of Highways	第1名 First Place
3	107年度公路監理機關徵收汽車燃料使用費績效評比 2018 Annual evaluation of motor vehicle agencies collecting vehicle fuel fees	各區監理所 All Motor Vehicles Office	特優 Superior
4	108年度交通部金路獎—路況養護類—工程處 2019 MOTC Golden Way Award—road condition maintenance category—Maintenance Office	第一區養護工程處 First Maintenance Office	優勝 Excellent
5	108年度交通部金路獎—路況養護類—工務段 2019 MOTC Golden Way Award—road condition maintenance category—Maintenance Office Branch	第一區養護工程處 復興工務段 First Maintenance Office	第1名 First Place
6	108年勞動部推動職業安全衛生優良公共工程—台14線39K育樂橋P4~P6橋基改建工程 2019 Ministry of Labor promoted labor safety and health outstanding public construction—Provincial Highway No.14 39K Yule Bridge P4~P6 Reconstruction Project	第二區養護工程處 Second Maintenance Office	特優 Superior
7	108年度交通部金路獎—用路人資訊類 2019 MOTC Golden Way Award—road users	第二區養護工程處 Second Maintenance Office	第1名 First Place
8	第18屆公共工程金質獎—台63線烏溪橋P41~P47橋梁改善工程 2018 Public Construction Commission Golden Quality Award—Provincial Highway No.63 Wuxi Bridge P41 ~ P47 Bridge Improvement Project	第二區養護工程處 Second Maintenance Office	優等 Excellent
9	108年度交通部金路獎—優良景觀類 2019 MOTC Golden Way Award—outstanding landscape category	第三區養護工程處 Third Maintenance Office	第1名 First Place
10	2018第六屆台灣景觀大賞—尋秘境26·琅嶠卑南道台26線72k+300~79k+400路段 2018 the 6 th Taiwan Landscape Awards—Finding mystery 26 - Provincial Highway No.26 Langya-Beinan Trail 72k + 300 ~ 79k + 400 Section Construction Project	第三區養護工程處 Third Maintenance Office	年度大獎 Annual Grand Prize



序號 Number	考評(核)或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
11	台26線「護蟹任務微電影」於2019年6月獲美國國際短片競賽 (Best Short Competition) 3項獎項 Provincial Highway No.26 "Mission-Land Crab Redemption" won 3 awards from the Best Short Competition in the United States in June 2019	第三區養護工程處 Third Maintenance Office	最佳紀錄短片、最佳短片、剪輯優選獎 Best Short Documentary, Best Short Film, Award of Merit for editing.
12	台26線「護蟹任務微電影」於2019年8月獲全球電影競賽 (The Accolade Global Film Competition) 4項獎項 Provincial Highway No.26 "Mission-Land Crab Redemption" won 4 awards from the Accolade Global Film Competition in the United States in August 2019	第三區養護工程處 Third Maintenance Office	「自然環境野生動物類」卓越獎、「紀錄短片類」卓越獎、「剪輯類」優選獎、「公眾服務節目類」優選獎 Award of Excellence in Environment and Wildlife category, Award of Excellence in A Short Documentary category and an Award of Merit in Editing category.
13	第17屆機關檔案管理金檔獎 The 17 th Archives Management Quality Awards	第三區養護工程處 Third Maintenance Office	金檔獎 Archives Management Quality Awards
14	108年勞動部推動職業安全衛生優良公共工程—台9線285K+250~287K+000(三軒至大禹段)道路拓寬工程 2019 Ministry of Labor promoted labor safety and health outstanding public construction—Provincial Highway No.9 285K + 250 ~ 287K + 000 (Sanxuan to Dayu Section) Road Widening Project	第四區養護工程處 Fourth Maintenance Office	優等 Excellent
15	107年度橋梁維護管理作業督導考核 2018 bridge maintenance and management Assessment	第五區養護工程處 Fifth Maintenance Office	第1名 First Place
16	第18屆公共工程金質獎—台17甲線鹽水溪橋改建工程 The 18 th Public Construction Commission Golden Quality Award – Provincial Highway No.17A Yanshui Creek Bridge Reconstruction Project	西濱南區工程處 West Coast Expressway Southern Region Temporary Engineering Office	優等 Excellent
17	108年勞動部推動職業安全衛生優良公共工程—台17線本淵橋改建工程 2019 Ministry of Labor promoted labor safety and health outstanding public construction—Provincial Highway No.17 Reconstruction of Benyuan Bridge	西濱南區工程處 West Coast Expressway Southern Region Temporary Engineering Office	優等 Excellent
18	第18屆公共工程金質獎—台9線南迴公路安朔至草埔C2隧道標改建工程 The 18 th Public Construction Commission Golden Quality Award –Provincial Highway No.9 South-Link Highway Anshuo to Caopu Section C2 Tunnel Tender Reconstruction Project	西濱南區工程處 West Coast Expressway Southern Region Temporary Engineering Office	特優 Superior
19	推動職業安全衛生優良公共工程 Labor safety and health outstanding public construction	蘇花改工程處 Suhua Improvement Engineering Office	優等 Excellent

序號 Number	考評（核）或競賽名稱 Evaluation or the name of the Competition	得獎單位 Awarded Unit	成績 Result
20	第11屆道安創新貢獻獎—公路監理組 The 11 th Road Safety Innovative Contribution Award—highway supervision category	臺北區監理所 Taipei Motor Vehicles Office	第1名 First Place
21	107年度機關綠色採購績效評核 2018 Principal of Green Procurement Performance Evaluation	新竹區監理所 Hsinchu Motor Vehicles Office	優等 Excellent
22	108年軍民聯合防空（萬安42號）演習 2019 Joint Military and Civil Air Defense Exercise (Wanan 42)	臺中區監理所 Taichung Motor Vehicles Office	優等 Excellent
23	交通部頒成果考評團體總成績（卓越獎） The MOTC awarded the total score of the results evaluation group (Excellence Award)	臺中區監理所 Taichung Motor Vehicles Office	第3組第1名 First Place, Group 3
24	車輛號牌智慧收繳裝置業務研究專利 Research patent on vehicle license smart collection device business	嘉義區監理所 Chiayi Motor Vehicles Office	取得專利 Get patent
25	第2屆政府服務獎—整體服務類 The 2 th Government Service Award—overall service category	高雄區監理所 Kaohsiung Motor Vehicles Office	政府服務獎 Government Service Award
28	108年第17屆金展獎 2019 17 th Golden Wingspan Award	高雄區監理所 Kaohsiung Motor Vehicles Office	優等獎 Excellent
29	107年內政部「暑期保護青少年—青春專案」—臺北市 2018 Ministry of the Interior “Summer Protection—Youth Project”—Taipei City	臺北市區監理所 Taipei City Motor Vehicles Office	優等 Excellent
30	107年內政部「暑期保護青少年—青春專案」—基隆市 2018 Ministry of the Interior “Summer Protection—Youth Project”—Keelung City	臺北市區監理所 Taipei City Motor Vehicles Office	特優 Superior
31	「台灣好行」獲交通部觀光局服務管理及服務品質優化獎—推動單位組：金門縣。 “Taiwan Trip” won the Service Management and Service Quality Optimization Award of the Tourism Bureau of the Ministry of the Transportation and Communications—Promotion Unit Group: Kinmen County.	臺北市區監理所 Taipei City Motor Vehicles Office	第1名 First Place
32	行政院動員會報107年對直轄市、縣（市）政府動員業務訪評 2018 Executive Yuan mobilization annual inspection on the 2018 evaluation of mobilization business of municipalities and counties (cities)	臺北市區監理所 Taipei City Motor Vehicles Office	優等（丁組第1名） Excellent (First Place, Group D)
33	行政院環境保護署107年度直轄市及縣（市）政府環境教育績效考核 2018 The Environmental Protection Administration of the Executive Yuan annual inspection of the environmental education performance of municipalities and counties (cities)	臺北市區監理所 Taipei City Motor Vehicles Office	優等 Excellent
34	第11屆道安創新貢獻獎—教育宣導組 The 11 th Road Safety Innovative Contribution Award—education romotipon group	高雄市區監理所 Kaohsiung City Motor Vehicles Office	第1名 First Place
35	107年交通部汽車貨運調查 2018 MOTC Annual Evaluation of Auto Cargo	高雄市區監理所 Kaohsiung City Motor Vehicles Office	第1名 First Place



研究發展 | Research and Development

編號 Number	研究計畫名稱 Name of Research Project	研究單位 Research Unit
1	多元管道收集手機號碼計畫 Multi-channel mobile phone number collection project	臺北區監理所 Taipei Motor Vehicles Office
2	動態源頭稽查「精、減」路檢聯稽勤務研究 Research on "fine, reduced" road inspection joint audit service of dynamic source inspection	臺北區監理所 Taipei Motor Vehicles Office
3	成立酒癮諮詢轉介櫃檯之成效——以板橋監理站為例 Effectiveness of establishing a consultation counter for alcohol addiction—taking the Banqiao Motor Vehicles Station as an example	臺北區監理所板橋監理站 Banqiao Motor Vehicles Station, Taipei Motor Vehicles Office
4	主動推播服務——以運輸業交通事故訊息為例 Proactive broadcast service—taking traffic accident information in the transportation industry as an example	新竹區監理所 Hsinchu Motor Vehicles Office
5	機關財產管理新尖兵推動計畫 New property management promotion plan	新竹區監理所新竹監理站 Hsinchu Motor Vehicles Station, Hsinchu Motor Vehicles Office
6	M3系統執行命令之流程改善（以影像機器人建檔） Improved M3 system execution order process (filed by image robot)	臺中區監理所 Taichung Motor Vehicles Office
7	M3大數據運用——汽燃費退費智慧比對 M3 big data application—smart comparison of gas and fuel rebates	高雄區監理所臺東監理站 Taitung Motor Vehicles Station, Kaohsiung City Motor Vehicles Office
8	臨海混凝土構造物抵抗氯離子侵害之研究 Study on the durability of reinforced concrete to salt damage in Taiwan coastal environment	材料試驗所 Materials Testing Laboratory
9	Bailey 級配調整法提高瀝青混凝土力學性質之研究 Study on Bailey Method to improve mechanical properties of asphalt concrete	材料試驗所 Materials Testing Laboratory



大事紀要 | Major Events

1月 Jan.	1月1日 January 1 st	自108年1月1日起受理民衆申請2年內購買主要通勤代步使用125CC以下配備防鎖死煞車系統（ABS）或連動式煞車系統（CBS）機車，每輛4,000元或1,000元之定額補助，以兼顧交通安全及民衆負擔。 Since January 1, 2019, applications have been accepted from the public for the purchase of major commutes within two years. Use of anti-lock braking system (ABS) or interlocking braking system (CBS) locomotives with a minimum of 125CC, a fixed subsidy of NT \$4,000, or NT \$1,000 to take into account both traffic safety and public burden.
	1月17日 January 17 th	交通部公路總局第四區養護工程處不斷檢討精進及多次模擬事故演練下，台9線蘇花改蘇澳至東澳路段，於108年1月17日上午9時正式開放12.2公尺以下非管制大貨車通行。 The Fourth Maintenance Engineering Office of the Directorate General of Highways of the Ministry of Transportation and Communications continued to review the refinement and many simulated accident drills. The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project Suao-Dong' ao section and officially opened below 12.2 meters at 9 am on January 17, 2019
	1月31日 January 31 st	公路總局辦理「台20乙線3K+420~4K+420（西埔里至中坑里段）拓寬改善工程」主線已施工完成，於108年1月31日下午5時開放通車。 The Directorate General of Highways has completed the construction of the "Provincial Highway No.20 B 3K + 420 ~ 4K + 420 (Xipuli to Zhongkengli) Widening and Improvement Project". The mainline has been completed and will be opened to traffic at 5 pm on January 31, 108.
2月 Feb.	2月28日 February 28 th	交通部長視察台9線蘇花公路山區路段改善工程計畫。 The Ministry of Transportation and Communications inspected the improvement project of Suhua Highway of Provincial Highway No.9.
	3月 Mar.	3月12日 March 12 th
3月14日 March 14 th		淡江大橋（第3標）工程動土典禮，蔡英文總統、新北市侯友宜市長、交通部黃玉霖次長、內政部營建署吳宏碩副署長等蒞臨觀禮。 The groundbreaking ceremony for the Danjiang Bridge (No. 3 tender) was attended by President Tsai, Ing-wen, Mayor Hou, You-Yi of New Taipei City, Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications, Wu, Hong-Shuo, Deputy Director of the Construction and Planning Agency of the Ministry of Interior.
3月26日 March 26 th		連江縣南北竿跨海大橋綜合規劃於連江縣政府簽訂代辦契約。 The comprehensive planning for the Nangan-Beigan sea-crossing bridge of Lianjiang County signed an agency contract with the Lianjiang County Government.
4月 Apr.	4月15日 April 15 th	為提升機車騎士行車安全，培養事先察覺潛在風險感知能力，自108年4月15日機車危險感知教育平臺上線，並列為機車駕照發照前講習課程。 To improve the safety of motorcycle riders and to improve their ability to perceive potential risks in advance, a motorcycle risk and awareness education platform was launched on April 15, 2019. It is now part of a pre-license training course for locomotive drivers.
	4月16日 April 16 th	自108年4月16日開始，為增加機車用路人上路前之交通安全知識及安全騎乘技能，補助至駕訓班參加機車駕訓並考取駕照之學員每人1,000元，藉以鼓勵民衆參訓。 From April 16, 2019, subsidies are provided to the driver training class to participate in motorcycle rider training. We hope to increase traffic safety and safe riding skills of motorcycle road users before they go on the road. To obtain a driving license, we pay NT \$1,000 per person to encourage people to participate in training.

4月
Apr.

4月16日 April 16 th	交通部黃玉霖政務次長暨公路總局陳彥伯局長視察台9線蘇花公路改善工程計畫。 Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications and Chen, Yen-Po, the Director of the Directorate General of Highways, inspected the Suhua Highway Improvement Project of Provincial Highway No.20.
4月18日 April 18 th	公路總局為因應0418花蓮地震事件，於4月18日13時10分應變小組一級開設，第一時間清查災情、執行應變，並配合中央應變中心於當日18時15分降為二級開設，執行完成地震期間之應變作為。 In response to the 0418 Hualien earthquake, the Directorate General of Highways activated the first level alert at 13:10 on April 18. It was the first time we used the disaster situation and implementation of the emergency response. It also cooperated with the Central Emergency Operation Center to be lowered to the second level at 18:15 on the same day and completed the response during the earthquake.
4月19日 April 19 th	行政院蘇貞昌院長及交通部黃玉霖政務次長視察「東西向快速公路台76線（原漢寶草屯線）台19線以西路段改善工程」。 Dean Su Zhenchang of the Executive Yuan and Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications inspected the "East-West Expressway of Provincial Highway No.76 (original Hanbao-Tsaotun line) West to Provincial Highway No.19 Section Diversion" Construction Project."
4月19日 April 19 th	交通部林佳龍部長視察阿里山地區業務，並進行在地交流。 Lin Jia-long, Ministry of Transportation and Communications, inspected Alishan business, and conducted local exchanges.
4月25日 April 25 th	交通部林佳龍部長及蕭美琴立委視察台9線舞鶴台地段（274.5K~280.6K）及三軒至大禹路段（285.25K~287K）。 Lin Jia-long, Ministry of Minister of Transportation and Communications and Xiao, Mei-qin legislators inspected the Satokoay section of Provincial Highway No.9(274.5K ~ 280.6K) and Sanxuan to Dayu section (285.25K ~ 287K).

5月
May

5月4日 May 4 th	交通部黃玉霖政務次長視察淡江大橋計畫。 Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications, inspected the Danjiang Bridge Project.
5月8日 May 8 th	交通部公路總局「安全臺灣SafeTaiwan平臺」於5月8日至10日受邀至Secutech 2019第22屆臺北國際安全科技應用博覽會參展。 The "SafeTaiwan Platform" of the Directorate General of Highways of the Minister of Transportation and Communications was invited to participate in the 22 nd Secutech Expo from May 8 to 10, 2019.
5月17日 May 17 th	行政院核定「台9線蘇花公路山區路段改善計畫」第2次修正計畫。 The Executive Yuan approved the second amendment plan of the "The Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project."
5月17日 May 17 th	交通部林佳龍部長視察台8臨37線（中橫便道）路況，聽取公路總局報告整體崩場地自民國88年921地震後之變化，以及運用科技安定分析，與智慧防災工作之後，部長宣示正式啟動谷關至德基間青山上、下線復建工程可行性研究。 Lin, Jia-long Minister of the Ministry of Transportation and Communications inspected the road conditions of the Provincial Highway No.8 near 37 section (Central Cross-island Highway), listened to the report of the Directorate General of Highways on the overall collapse of the site since the 921 earthquakes in 1988, and the use of scientific and technological stability analysis and smart disaster prevention work. After that, the Minister announced the formal launch of the feasibility study on the reconstruction of the Guguan- Deji Qingshan upper and lower line.
5月17日 May 17 th	交通部林佳龍部長視察台3線卓蘭地區示範路段，聽取公路總局報告「中部地區友善道路改善計畫」辦理情形，並宣示路殺預警系統正式上路運行。 Lin, Jia-long the Minister of Ministry of Transportation and Communications, inspected a demonstration section of the Zhuolan area on Line 3 of the station. It has listened to the report of the General Administration of Highways about the handling of the "Friendly Road Improvement Plan for the Central Region." This marks the official opening.
5月17日 May 17 th	108年5月17日修正公布「未經核准經營汽車運輸業及計程車客運服務業裁量基準」，本次修正係為符合行政罰法第18條第1項裁量應審酌因素之規定。 Amended and announced on May 17, 2019, the "Unauthorized Operation of Motor Transport Industry and Taxi Passenger Service Industry Discretionary Benchmark." This amendment is to comply with the provisions of Article 18, paragraph 1, of the Administrative Penalty Law, which shall be subject to discretion.

5月
May

5月20日 : 為鼓勵車主於汽燃費開徵前繳納，以達省紙減碳政策、提高徵收率之目的，公路總局於本（108）年度首度規劃提前繳納汽燃費抽獎活動，統計108年5月20日前，提前繳納者超過25萬件（繳納金額逾5億元），郵資及印製費估計節省逾175萬元。

May 20th : We want to encourage car owners to pay before gas refilling to save on paper and to enforce carbon reduction policies, as well as to increase the collection rate. The Directorate General of Highways planned the first payment of the gas and fuel fee drawn in advance in 2019. More than 250,000 payers paid in advance (the payment amount is more than NT\$500 million), postage and printing costs are estimated to be more than NT\$1.75 million.

6月
Jun.

6月6日 : 108年6月6日修正公布汽車運輸業管理規則第103條之1，本次修正目的係為落實分業管理。

June 6th : On June 6, 2019, the amendment published Article 103-1 of the Automobile Transportation Management Regulations. The purpose of this amendment is to implement separate management.

6月17日 : 交通部金質獎實地考評「台9線蘇花公路仁水隧道新建工程」。

June 17th : The Public Construction Commission Golden Quality Award of the Ministry of Transportation and Communications conducted field evaluation on the "Renshui Tunnel of Suhua Highway of Provincial Highway No.9 New Construction Project".

6月20日 : 交通部金路獎實地考評「西濱快速公路白沙屯至南通灣段新建工程」。

June 20th : The Golden Way Award of the Ministry of Transportation and Communications on-site evaluation of the "West Coast Expressway Baishatun to Nantong Bay Section New Construction Project."

6月29日 : 公路總局於108年6月29日辦理首場大客車駕駛擴大徵才就業安新方案招募活動。

June 29th : On June 29, 2019, the Directorate General of Highways conducted the first recruitment campaign for the expansion of the recruitment and employment security program for large vehicle drivers.

7月
Jul.

7月2日 : 公路總局7月2日於「幸福公路館」舉行「垵口之巔——南橫青山在」新書發表會，出席人員包括交通部林佳龍部長、公路總局陳彥伯局長、中央社劉克襄董事長、中山大學黃義佑副校長、南橫紀錄片作者洪春景等。

July 2nd : The Directorate General of Highways held a new book presentation "Top of the Yakou - Mountain of Southern Cross-island Highway" at the "Taiwan Highway Museum" on July 2. The attendees included Minister Lin, Jia-long of the Ministry of Transportation and Communications, Chen, Yen-Po, Director of the Directorate General of Highways, Liu Ke-Xiang, Chairman of the Central News Agency, and Huang, Yi-you, Vice President of Sun Yat-Sen University, Hong, Chun-jing, author of Nanheng documentary.

7月6日 : 公路總局陳彥伯局長及許鈺漳副局長陪同行政院蘇貞昌院長視察「台9線南迴公路拓寬改善後續計畫」。

July 6th : Director-General Chen Yen-po and Deputy Director Xu, Zheng-zhang Director of the Directorate General, next to Su, Tseng-chang Director of the Executive Yuan, to inspect the "Suhua Highway of Provincial Highway No.9 Mountainous Section Improvement Project."

7月9日 : 交通部林佳龍部長及公路總局陳彥伯局長至臺中市政府視察該市通用計程車及小黃公車推動情形。

July 9th : Lin, Jia-long, Minister of Communications and Chen, Yen-po Director General of Highways, visited Taichung City Government to inspect the city's general taxi and small taxi bus promotion.

7月9日 : 公路總局高雄區監理所榮獲第2屆「政府服務獎——整體服務類機關」獎項，國發會於108年7月9日假臺大醫院國際會議中心舉行頒獎典禮，公開表揚得獎機關。

July 9th : The Kaohsiung Motor Vehicles Office of the Directorate General of Highways won the 2nd "Government Service Award-Overall Service category." The National Development Council held an award ceremony on July 9, 2019, at the International Conference Center of National Taiwan University Hospital to publicly praise the winning organization.

7月11日 : 台9線南迴公路拓寬改善後續計畫第2次修正計畫行政院108年7月11日核定。

July 11th : The Executive Yuan approved the second revision of South-Link Highway of Provincial Highway No.9 Widening Improvement on July 11, 2019.

7月11日 : 「前瞻基礎建設——綠能建設」內「科學城低碳智慧環境基礎建置——公共建設部分」修正計畫行政院108年7月11日核定。

July 11th : The "Forward-Looking Infrastructure Project for a Green Construction Plan" reviewed the "Science City Low-carbon Intellectual Environment Foundation-Public Construction Section Amendment Program,"; and the Executive Yuan approved it on July 11, 2019.

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7月17日 July 17 th	<p>公路總局為因應丹娜絲颱風事件，於7月17日8時00分應變小組二級開設，13時一級開設，林佳龍部長並於當日16時視察公路總局防災中心，對各級防災人員之辛勞表示慰勉，後續公路總局應變小組配合中央應變中心於20日15時解除應變小組，應變時數共計79小時。</p> <p>In response to the Typhoon Danas incident, the Directorate General of Highways opened the second level of the emergency response team at 8:00 on July 17 and the first level at 13:00. Minister Lin Jia-long inspected the Highway Disaster Prevention Center of the Directorate General of Highways at 16:00 on the same day. After expressing condolences, the follow-up contingency team of the Directorate General of Highways and the Central Emergency Operation Center deployed a contingency team at 15:00 on the 20th. The total number of contingency hours was 79 hours.</p>
7月19日 July 19 th	<p>交通部辦理金路獎評比，公路總局「西濱快速公路白沙屯至南通灣段新建工程」榮獲工程類第三名。</p> <p>The Ministry of Transportation and Communications held the Golden Way Awards. The Directorate General of Highways won third place in the engineering category for the "West Coast Expressway Baishatun to Nantong Bay Section New Construction Project."</p>
7月23日 July 23 rd	<p>行政院蘇貞昌院長關心大型車行車安全，於7月23日前往公路總局臺北市區監理所士林監理站，實地視察「加速推動大型車輛裝設行車視野輔助系統推廣活動」，並指示於108年12月31日前，使用中大型車輛完成裝設合於規定之行車視野輔助系統均有補助，預估補助數量約為14萬8千餘輛。</p> <p>Su, Tseng-chang, Director of the Executive Yuan, was concerned about the safety of large vehicles. On July 23, he went to the Shilin Motor Vehicle Station of the Taipei City Motor Vehicle Office of the Directorate General of Highways to conduct a field inspection of "Accelerate the Installation of Driving Vision Assistance System for Large Vehicles Project." Before December 31, 2019, the use of medium and large vehicles to complete the installation of the driving vision assistance system following the regulations will be subsidized, and the estimated amount of subsidies is about 148,000.</p>
7月29日 July 29 th	<p>為響應省紙減碳，減少印製自用汽機車燃料費繳納通知書對環境之影響，公路總局今年首度推出「鼓勵自願提前繳納汽燃費」抽獎活動，7月29日在律師見證下舉行抽獎儀式。</p> <p>For the purposes of green and eco-friendly initiative, the Directorate General of Highways launched "Raffle for Early-bird who pay the Vehicle Fuel fee" for the first time. And the draw for the raffle held on July 29, witnessed by a lawyer.</p>
7月30日 July 30 th	<p>行政院蘇貞昌院長及交通部林佳龍部長出席新北市政府「三重商工地下停車場」啟用典禮。該停車場為新北市政府申請「前瞻基礎建設——城鄉建設——改善停車問題計畫」第一座完工啟用停車場，工程經費5.83億元、中央補助1.94億元，可提供停車格位汽車500席、機車50席。</p> <p>Su, Tseng-chang, Director of the Executive Yuan and Lin, Jia-long, Minister of the Ministry of Transportation and Communications, attended the opening ceremony of the "New Taipei San-Chung Commercial and Industrial Vocational High School underground parking lot" of the New Taipei City Government. This parking lot is the first to be completed and opened for the New Taipei City Government as part of the "Forward-Looking Infrastructure Project- -Urban-Rural Construction- Parking Problem Improvement Project." The project cost is NT\$ 583 million, the central government subsidy is NT\$ 194 million, and it can provide 500 parking spaces for cars and 50 for motorcycles.</p>

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8月6日 August 6 th	<p>生活圈道路交通系統建設計畫（公路系統）8年（104 - 111）計畫第13次分項計畫書修正案於108年8月6日奉交通部核定，計納入182項分項計畫，中央款需求數402.03億元。</p> <p>The construction plan of the Region-Based Road System Construction (Highway System) 8 Years (2015~2022) Project, the 13th sub-item plan amendment, was approved by the Ministry of Transportation and Communications on August 6, 2019. It was included in the 182 sub-items, and the demand for central funds is NT\$ 40.203 billion.</p>
8月6日 August 6 th	<p>台9線260K + 150~268K + 500（富源至瑞北段）道路拓寬工程竣工。</p> <p>Provincial Highway No. 9 260K + 150 ~ 268K + 500 (Fuyuan to Ruibei Section) road widening project was completed.</p>
8月6日 August 6 th	<p>行政院蘇貞昌院長視察台9線蘇花公路改善計畫。</p> <p>Su, Tseng-chang, Director of the Executive Yuan, inspected the Suhua Highway Improvement Project of Provincial Highway No. 9.</p>
8月7日 August 7 th	<p>交通部林佳龍部長視察「台9線南迴公路拓寬改善後續計畫」。</p> <p>Lin Jia-long, Minister of the Ministry of Transportation and Communications inspected "Follow Up to the South Link Highway of Provincial Highway No.9 Widening Project".</p>

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8月15日 August 15 th	交通部林佳龍部長視察「台26線39.5K~41.5K（香蕉灣~砂島）護蟹工作」，呼籲用路人於陸蟹產卵期間行經此路段能減速慢行、禮讓陸蟹先行，一起創造友善道路環境。 Lin, Jia-long, Minister of the Ministry of Transportation and Communications inspected "Provincial Highway No. 26 39.5K ~ 41.5K (Banana Bay- Sand Island) Crab Protection Work". He called on road users to pass through this section during the spawning of the land crab to slow down and let the land crab go first to create a friendly road environment.
8月26日 August 26 th	蔡英文總統應立法委員楊曜及澎湖縣政府賴峰偉縣長邀請，率交通部林佳龍部長、公路總局陳彥伯局長等人，親赴澎湖視察203縣道跨海大橋、中正橋及永安橋改建計畫。 President Tsai Ing-wen, at the invitation of Legislator Yang, Yao, and Lai Fengwei. County Head of the Penghu County Government, led Lin, Jia-long, Minister of Transportation and Chen, Yen-po Director-General of the Directorate General of Highways on a visit to Penghu to inspect the 203 County Road Cross-sea Bridge, Zhongzheng Bridge, and Yongan Bridge reconstruction projects.
8月30日 August 30 th	交通部林佳龍部長參加公路總局「複視：環境、公路、人——走過莫拉克風災」特展開幕活動。 Lin, Jia-long, Minister of the Ministry of Transportation and Communications, participated in the Directorate General of Highways opening event of the "Review: Environment, Highway, People-Walking through the Typhoon Morakot" special exhibition.

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9月4日 September 4 th	交通部黃玉霖政務次長召集相關單位檢討西濱快速公路WH10C標工程執行情形。 Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications, convened relevant units to review the implementation of the West Coast Expressway WH10C tender.
9月8日 September 8 th	交通部黃玉霖政務次長於9月8、9兩天，率領公路總局及不同專業顧問公司團隊，視察台8中橫便道，進行現場踏勘。 Huang, Yu-Lin, Political Deputy Minister of the Ministry of Transportation and Communications, led the Directorate General of Highways and teams of different professional consulting companies on September 8 and 9 to inspect Provincial Highway No.8 Central Cross-island Highway and conduct site surveys.
9月11日 September 11 th	「台9線285K+250~287K+000（三軒至大禹段）道路拓寬工程」榮獲勞動部職業安全衛生署108年度金安獎工程類優等。 "Provincial Highway No.9 285K + 250 ~ 287K + 000 (Sanxuan to Dayu Section) Road Widening Project" won the 108th Golden Safety Award of the Occupational Safety and Health Administration, Ministry of Labor for Excellence in Engineering category.
9月11日 September 11 th	公路總局第三區養護工程榮獲國家發展委員會檔案管理局「第17屆機關檔案管理金檔獎」最高榮譽，並受邀出席頒獎典禮，以肯定機關積極落實檔案管理工作之成效。 The maintenance project of the Third Maintenance Office of the Directorate General of Highways won the highest honor of the "17 th Records Management Quality Awards" held by National Archives Administration of the National Development Council. It was invited to attend the award ceremony to affirm the effectiveness of the organ's active implementation of archive management.
9月19日 September 19 th	交通部108年環評追蹤考核評定公路總局「西濱快速公路後續設計畫白沙屯至南通灣段新建工程計畫」榮獲第2名。 The Ministry of Transportation and Communications' 108th EIA Tracking Assessment of the State Highway Administration's "West Coast Expressway Follow-up Construction Design Project Baishatun to Nantong Bay Section New Construction Project" won second place.
9月24日 September 24 th	因應台9線南迴公路草埔隧道即將通車，公路總局針對草埔隧道防救災作為於9月24日執行第1場事故車輛情境演練，希藉由狀況之模擬，讓管理單位對於緊急應變作業程序達到一定熟悉程度，以符合自助能力。 In response to the opening of the Caopu Tunnel on the South-Link Highway of Provincial Highway No.9, the Directorate General of Highways carried out the first accident vehicle scenario drill on September 24 for the disaster prevention and relief of Caopu Tunnel. It is hoped that through the simulation of the situation, the management unit will be able to respond to emergency operations. The program has reached a certain level of familiarity to meet the self-help ability.
10月1日 October 1 st	「台9線246k+574至247k+750馬太鞍溪橋改建工程」竣工。 The "Provincial Highway No.9 246k + 574 to 247k + 750 Mataianxi Bridge Reconstruction Project" was completed.

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10月5日 October 5 th	<p>連接臺南市安南區及北區之「台17甲線鹽水溪橋改建工程」，並經現勘確認相關交通標誌標線及號誌設施完備，於108年10月5日開放全面通車。</p> <p>The "Provincial Highway No.17A Yanshui Creek Bridge Reconstruction Project" that connects Annan District and North District of Tainan City is now complete and will be fully open to traffic on October 5, 2019.</p>
10月23日 October 23 rd	<p>交通部林佳龍部長出席「海路漫行——台61中部路段影片發表記者會」。鑑於台61線即將於今年底起陸續完工通車，公路總局特別與「台灣人工智慧實驗室」(Taiwan AI Labs)及「財團法人看見·齊柏林基金會」合作，拍攝並剪輯西濱公路中部路段的特色工程、生態美景及人文景觀，製作「海路漫行」影片，讓民衆可以從不同的視野角度看見西濱公路。</p> <p>Lin Jia-long, Minister of the Ministry of Transportation and Communications attended the "Seawalk- on the Road to Provincial Highway No.61 middle section Press Conference". Because the Provincial Highway No.61 will be open to traffic at the end of this year, the Directorate General of Highways collaborated with "Taiwan AI Labs" and "Chi Po-lin Foundation." The objective was to shoot and edit the central section of the West Coast Expressway featuring projects, ecological beauty, and cultural landscapes. The result was the production of the video "A Coastal Journey" so that people can see the West Coast Expressway from different perspectives.</p>
10月26日 October 26 th	<p>公路總局於花蓮舉行台9線花東縱谷公路安全景觀大道研討會，以安全、景觀、人本、生態四大面相出發，藉此與民衆溝通以宣達台9線拓寬理念。</p> <p>The Directorate General of Highways held the Provincial Highway No.9 A Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9 Seminar in Hualien. Setting the four aspects of safety, landscape, humanism, and ecology, to communicate with the public to widen the concept of Provincial Highway No.9.</p>
10月28日 October 28 th	<p>「台9線南迴公路金崙至大鳥段拓寬改善工程」里程429K+000~432K+832(加津林至大鳥段)，道路長度3.8公里，已完成全線4車道改善拓寬，並經現勘確認道路標線標誌相關設施完備，於108年10月28日下午3時前開放全線4車道通行。本路段通車後，香蘭至大鳥路段長約20公里均已完成拓寬改善3~4車道，有效促進區域經濟及產業發展，提升台9線區域運輸系統服務品質，提供安全迅速高容量運輸功能。</p> <p>"Provincial Highway No.9. South-Link Highway Jinlun to Daniao Section Widening Improvement Project", for section 429K + 000 ~ 432K + 832 (Gajinlin to Daniao section), where the length of the road is 3.8 km. The improvement and widening of 4 lanes on the entire line have been completed. The road marking is confirmed by the current survey; all lanes of 4 lanes will be opened before 3 pm on October 28, 2019. After a section of the road was opened to traffic, the section of about 20 kilometers long from the Xianglan to Daniao section is now complete. It is now wider and improved from 3 to 4 lanes, effectively promoted regional economic and industrial development, improved the service quality of the Provincial Highway regional transportation system, and provided safe and rapid high-capacity transportation.</p>
10月31日 October 31 st	<p>公路總局於行政院第3674次院會中提報「西濱快速公路周邊效益行銷申聯」案。</p> <p>The Directorate General of Highways reported to the 3674th meeting of the Executive Yuan the case of "Beneficial Marketing of Benefits Around West Coast Expressway.</p>
10月31日 October 31 st	<p>公路總局第二區養護工程處副工程司兼谷關工務段段長呂正安及第三區養護工程處分別獲選為108年公務人員傑出貢獻獎個人獎及團體獎</p> <p>Lu, Zheng-an, Associate Engineer of the Second Maintenance Office Engineering Department of the Directorate General of Highways and the head of the Guguan Branch, and the Third Maintenance Office were selected as the individual awards and group awards of the 2019 Civil Service Outstanding Contribution Award.</p>
11月1日 November 1 st	<p>總統視察台9線蘇花公路計畫C2標仁水隧道工程。</p> <p>The President inspected The Suhua Highway of Provincial Highway No.9 C2 tender Renshui Tunnel Construction Project.</p>
11月4日 November 4 th	<p>交通部林佳龍部長偕同「第33屆中日工程技術研討會日本代表團」晉見陳建仁副總統，期許未來臺日雙方可就工程建設、自動化技術、材料、能源及環保等領域，積極發揮經濟合作，並促進產業界更多交流。</p> <p>Lin, Jia-long, Minister of Ministry of Transportation and Communications, met with Vice President Chen Chien-Jen at the "33rd Sino-Japanese Modern Engineering and Technology Symposium". They hope that in the future, Taiwan and Japan can have active economic cooperation. More particularly in engineering construction, automation technology, materials, energy, and environmental protection, as well as to promote more exchanges in the industry.</p>

11月
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11月8日 November 8 th	11月8日行政院蘇貞昌院長率吳澤成政務委員、李孟諺秘書長、發言人Kolas Yotaka，以及交通部黃玉霖政務次長、公路總局陳彥伯局長等人陪同下，視察嘉義縣特殊風險橋梁——縣道157線東石鄉臥龍橋，嘉義縣翁章梁縣長全程隨同。 On November 8, Su, Tseng-chang Director of the Executive Yuan led Wu, Ze-cheng as an administrative member, Secretary-General Li, Meng-yen, spokesman Kolas Yotaka, and Huang, Yu-lin, Political Deputy Minister of the Ministry of Transportation and Communications, and Chen, Yen-po, Director of the Directorate General of Highways, accompanied by inspecting the special risk bridge of Chiayi County-County Road 157 Wolong Bridge, Dongshi Township, Weng, Chang-Liang, Mayor of Chiayi County, accompanied him throughout the journey.
11月11日 November 11 th	公路總局與特生中心攜手合作石虎保育，救傷石虎康復野放及追蹤活動路徑。 The Directorate General of Highways and the Endemic Species Research Institute worked together to protect leopard cats, save the wounded leopard cat, and rehabilitate and track the path of activities.
11月18日 November 18 th	「台9線蘇花公路安全提升計畫」東澳－南澳段及和平－崇德段可行性研究，國發會審查通過。 The feasibility study on the "Suhua Highway of Provincial Highway No.9 Improvement Project" Dongao- Chongde Section and Heping-Chongde Section was reviewed and approved by the National Development Council.
11月20日 November 20 th	「西濱快速公路八棟寮至九塊厝工程碳管理及環境減輕策略」獲國際道路協會（IRF）頒發全球道路成就獎（GRAA）環境減輕類首獎，公路總局陳彥伯局長於108年11月20日至美國拉斯維加斯受獎。 The "Carbon Management and Environmental Mitigation Strategies of West Coast Expressway: Ba-Dong-Liao to Jiu-Kuai-Chou Project" won the first award of the Global Road Achievement Award (GRAA). In the environmental mitigation category from the International Road Federation (IRF), Director Chen, Yen-po Director General of Directorate General of Highways, received the award in Las Vegas, USA, on November 20, 2019.
11月20日 November 20 th	「台9線南迴公路安朔至草埔段C2隧道標（6K+300~11K+006）新建工程」通車前第一、二階段履勘。 The first and second phases of the "C2 Tunnel tender(6K + 300 ~ 11K + 006) of the Anshuo-Caopu Section of the South-Link Highway of Provincial Highway No.9 New Construction Project" will be carried out in the first and second phases before the commissioning.
11月21日 November 21 st	台9線花東縱谷公路安全景觀大道計畫（臺東段）建設計畫，國發會審查通過。 The design drawing for the construction of the 9th A Safe Landscape Boulevard on East Rift Valley Highway of Provincial Highway No.9 (Taitung Section) Construction Project was reviewed and approved by the National Development Council.

12月
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12月5日 December 5 th	西濱快速公路曾文溪橋段新建工程建設計畫交通部報院。 The Ministry of Transportation and Communications inspects the new project of the Zengwenxi bridge section of the West Coast Expressway.
12月9日 December 9 th	交通部林佳龍部長應立法院交通委員會之邀考察臺南市交通建設，由公路總局陳彥伯局長、臺南市黃偉哲市長以及林俊憲立法委員隨同下，視察位於臺南市中西區台17線的臨安橋。 At the invitation of the Transportation Committee of the Legislative Yuan, Minister Lin, Jia-long inspected the transportation construction in Tainan City. Director-General Chen, Yen-po of the Directorate General of Highways, Mayor Huang, Wei-zhe of Tainan City, and Legislator Lin, Jun-xian accompanied the inspection of Lin'an Bridge on Provincial Highway No.17 of Tainan Central and Western District.
12月10日 December 10 th	環保署同意備查「蘇花公路山區路段改善計畫（蘇澳～東澳、南澳～和平、和中～大清水）環境影響說明書（調整南澳～和平段臨時便道拆除時間）申請備查內容」案。 Executive Yuan, Environmental Protection Administration, agreed to record the contents of the "Application for Reference for the Environmental Impact Statement (Adjusting the Time for the demolition of temporary access roads in, Nan'ao ~ Heping Section) of the Suhua Highway Mountain Section Improvement Project (Su'ao ~ Dong' ao, Nan'ao ~ Heping, and Hezhong ~ Daqingshui)."
12月13日 December 13 th	台13甲線豐湖國小至北勢大橋道路完成拓寬，公路總局於108年12月13日辦理竣工祈福儀式。 The roads from Fenghu Elementary School to Beishi Bridge on Provincial Highway No.13A were widened, and the Directorate General of Highways completed the completion and blessing ceremony on December 13, 2019.
12月16日 December 16 th	公路總局「協助縣市政府加速整建受損橋梁計畫3年（109 - 111）計畫」由交通部轉陳行政院審查。 The Directorate General of Highways draft "Assisting Local Governments in Accelerating Repairing of Damaged Road and Bridge Project 3 Years (2020-2022)" was sent to the Executive Yuan for review by the Ministry of Transportation and Communications.

12月
Dec.

12月17日 December 17 th	交通部林佳龍部長參加「蘇花改生態永續之路——當幸福工程遇上生物多樣性」論壇。 Lin, Jia-long Minister of the Ministry of Communications, participated in the forum on "Suhua's Road to Ecological Sustainability-When the Happiness Project Meets Biodiversity."
12月20日 December 20 th	行政院核定「台9線蘇花公路安全提升計畫」東澳－南澳段及和平－崇德段可行性研究。 The Executive Yuan approved the feasibility study on the "Provincial Highway No.9 Suhua Highway Safety Improvement Project" for the Dong' ao - Nan'ao section and the Heping-Chongde section.
12月23日 December 23 rd	行政院蘇貞昌院長率同李孟諺秘書長、吳澤成政委、交通部林佳龍部長及Kolas·Yotaka發言人等貴賓出席台9線南迴公路拓寬改善工程通車典禮。台9線南迴公路安朔至草埔路段以新闢高架橋梁及長隧道截彎取直方式連接屏東、臺東兩縣，並於當日下午5時正式開放通車。 Su, Tseng-chang, Director of the Executive Yuan led Secretary-General Li, Meng-y3n, Political Commissar Wu, Ze-cheng, Minister Lin, Jia-long of the Minister of Ministry of Transportation and Communications, and spokespersons Kolas · Yotaka and other distinguished guests at the opening ceremony of the widening and improvement project of the South-Link Highway of Provincial Highway No.9. The section from Anshuo to Caopu on the South-Link Highway of Provincial Highway No.9 connected the two counties of Pingtung and Taitung with newly built viaducts and long tunnels. It was officially opened to traffic at 5 pm that day.
12月24日 December 24 th	西濱快速公路204K+530~209K+087 (WH52標) 新街至大城路段新建工程榮獲公共工程金質優等。 The new construction of the Xinjie to Dacheng Road section of the 204K + 530 ~ 209K + 087 (WH52 tender) West Coast Expressway won the excellent Public Construction Commission Golden Quality Award.
12月25日 December 25 th	西快鳳鼻隧道至香山路段可行性評估報院。 Feasibility assessment report from Fengbi Tunnel to Xiangshan section of West Coast Expressway.
12月26日 December 26 th	交通部林佳龍部長出席北花線車輛美學設計成果記者會，北花線車輛首度將美學設計導入客運車輛，邀請美學設計團隊進行整體設計改造，打造客運路線品牌與提升公共運輸服務品質。 Lin, Jia-long Minister of the Minister of Transportation and Communications, attended the press conference on the aesthetic design achievements of TPE to HUN Shuttle Bus. The TPE to HUN Shuttle Bus introduced an aesthetic design to please passengers in vehicles. This project was the first time that invited an aesthetic design team to carry out overall design transformation to create a brand.
12月27日 December 27 th	台61線西濱快速公路彰化芳苑交流道至大城交流道通車典禮。 The opening ceremony of the Changhua Fangyuan Interchange to Dacheng Interchange on the West Coast Expressway of Provincial Highway No.61.
12月31日 December 31 st	交通部林佳龍部長視察「台18線公路保育（螢火蟲）作為」，呼籲用路人於4~6月（夏螢）12~1月（冬螢）時節慢活旅行，停留路側隙地觀賞螢火蟲閃爍飛舞，共同創造友善道路環境。 Lin Jia-long, Ministry of Transportation and Communications inspected the "Provincial Highway No.18 Highway Conservation (Firefly) Act". He called on road users to travel slowly from April to June (for summer firefly), and from December to January (for winter firefly). By staying on the side of the road to watch the fireflies flickering, work together to create a friendly road environment.
12月31日 December 31 st	台9線蘇花改「南澳至和平段（B段）、和中至大清水（C段）」預計109年1月完工通車，為能在通車前做好最完善之防災應變整備，公路總局已辦理通車前五場防救災演練，藉由多元情境推演，以監控為基礎，應變為導向，並藉由通報、追蹤、盤點、確認等各項處置，達成各單位聯防應變、救災救護之要領。 The Suhua Highway Provincial Highway No.9 Improvement Project "Nan'ao to Heping section (section B), and Hezhong to Daqingshui (section C)" is expected to be completed and opened to traffic in January 2020, to be able to do complete disaster prevention and preparedness before opening to traffic. The first five disaster prevention and relief drills held by the Directorate General of Highways have been completed. Through multi-scenario deduction, monitoring-based, and strain-oriented, and various measures such as notification, tracking, inventory, and confirmation, all units have achieved the key point of joint defense, disaster relief, and rescue.

預算執行與保留 | Budget Execution and Reservation

一、公務預算 Administrative Budget

(一) 歲入部分 Revenues

108年度 2019	<p>本年度預算數80億6,883萬8千元，實收數91億5,897萬6千元，應收款3億6,050萬8千元（占預算數4.47%），合計95億1,948萬4千元，執行率117.98%。</p> <p>The DGH had budgeted revenue of NT\$8,068,838,000 in 2019, with receipts of NT\$9,158,976,000 and accounts receivable of NT\$360,508,000 (4.47 percent of budgeted revenue) for a total of NT\$9,519,484,000. Execution rate was 117.98 percent.</p>
以前年度 Previous year	<p>以前年度歲入應收款5億4,766萬7千元，實收數5億3,588萬9千元（占應收款97.85%），餘1,177萬8千元，轉入下年度繼續執行（占預算數2.15%）。</p> <p>The DGH had annual receivables of NT\$547,667,000, with receipts of NT\$535,889,000 (97.85 percent of annual receivables). The surplus of NT\$11,778,000 (2.15 percent of annual receivables) was carried forward to the following year.</p>

歲入預算執行表 Revenues Execution Chart							單位：新臺幣千元 Unit: NT thousand dollars
108年度 2019	預算數 Budget (1)	實收數 Actual Receipts (2)		應收款 Accounts Receivable		執行數 Execution Amount	
				金額 Amount (3)	占預算數 Share of Budget % (3)/(1)	金額 Amount (4) = (2) + (3) % (4) / (1)	
	8,068,838	9,158,976		360,508	4.47	9,519,484 117.98	
以前年度 Previous year	歲入應收款 Annual Receivables (1)	實收數 Actual Receipts		轉入下年度繼續執行數 Transferred to the Next Year's Budget for Execution			
		金額 Amount (2)	占應收款 Share of Annual Receivables % (2)/(1)	金額 Amount (3) = (1) - (2)		占應收款 Share of Annual Receivables % (3) / (1)	
	547,667	535,889	97.85	11,778		2.15	

(二) 歲出部分 Expenditures

1. 歲出預算執行 Expenditures Execution

108年度 2019	<p>本年度預算數478億5,126萬7千元，實支數465億5,906萬9千元，贖餘數825萬1千元（占預算數0.02%），預付款5億1,772萬5千元，執行率（含預付款）98.40%。</p> <p>The DGH had budgeted expenditures of NT\$47,851,267,000 in 2019, with payments of NT\$46,559,069,000, treasury payments of NT\$8,251,000 (0.02 percent of budgeted expenditures) and suspense payments of NT\$517,225,000. Execution rate including suspense payments was 98.40 percent.</p>
以前年度 Previous year	<p>保留轉入數18億8,929萬9千元，實支數14億2,552萬5千元，註銷減免數6,663萬1千元（占保留數3.53%），預付款1億9,279萬7千元，執行率（含預付款）89.18%。</p> <p>Encumbrances totaled NT\$1,889,299,000, with payments of NT\$1,425,525,000, write-offs and deductions of NT\$66,631,000 (3.53 percent of encumbrances), and suspense payments of NT\$192,797,000. Execution rate including suspense payments was 89.18 percent.</p>



歲出預算執行表 Expenditures Execution Chart							單位：新臺幣千元 Unit: NT thousand dollars	
108年度 2019	預算數 Budget (1)	實支數 Actual Payments (2)	賸餘數 Treasury Payments		預付款 Suspense Payments (4)	執行數 Execution Amountt		
			金額 Amount (3)	占預算數 Share of Budget % (3) / (1)		金額 Amount (5) = (2) + (3) + (4)	% (5) / (1)	
	47,851,267	46,559,069	8,251	0.02	517,725	47,085,045	98.40	
以前年度 Previous year	保留轉入數 Encumbrances (1)	實支數 Actual Payments (2)	註銷減免數 Write-offs and Deductions		預付款 Suspense Payments (4)	執行數 Execution Amount		
			金額 Amount (3)	占保留轉入數 Share of Encumbrances % (3) / (1)		金額 Amount (5) = (2) + (3) + (4)	% (5) / (1)	
	1,889,299	1,425,525	66,631	3.53	192,797	1,684,953	89.18	

2. 歲出預算保留 Expenditures Reservation

108年度 預算保留申請數12億8,394萬7千元（占預算數2.68%）。
2019 Budgeted encumbrances totaled NT\$1,283,947,000（2.68 percent of the budgeted amount）.

以前年度 預算保留申請數3億9,714萬3千元（占保留轉入數21.02%）。
Previous year Budgeted encumbrances totaled NT\$397,143,000（21.02 percent of encumbrances）.

歲出預算保留表 Expenditures Reservation Chart			單位：新臺幣千元 Unit: NT thousand dollars	
	保留申請數 Budgeted Encumbrances	申請數占預算（保留轉入）數 Share of Budget / Encumbrances %		
108年度 2019	1,283,947	2.68		
以前年度 Previous year	397,143	21.02		
合計 Total	1,681,090	3.38		

二、特別預算 Special Budget

(一) 第二期前瞻基礎建設計畫 Second Phase of Forward-Looking Infrastructure Plan

1. 歲入部分 Revenues

108年度
2019

本年度預算數0元，實收數1億1,899萬8千元，應收數0千元，合計1億1,899萬8千元。
The second phase of the plan had total revenue 118,998,000 in 2019, with receipts of NT\$118,998,000.

歲入預算執行表 Revenues Execution Chart				單位：新臺幣千元 Unit: NT thousand dollars
108年度 2019	預算數 Budget (1)	實收數 Actual Receipts (2)	應收數 Accounts Receivable (3)	執行數 Execution Amount (4) = (2) + (3)
	0	118,998	0	118,998

2. 歲出部分 Expenditures

108年度
2019

本年度預算數61億7,000萬元，實支數47億5,014萬2千元，預付款14億1,905萬1千元，執行率（含預付款）99.99%。
The second phase of the plan had budgeted expenditures of NT\$6,170,000,000 in 2019, with payments of NT\$4,750,142,000 and suspense payments of NT\$1,419,051,000. Execution rate including suspense payments was 99.99 percent.

歲出預算執行表 Expenditures Execution Chart				單位：新臺幣千元 Unit: NT thousand dollars	
108年度 2019	預算數 Budget (1)	實支數 Actual Payments (2)	預付款 Suspense Payments (3)	執行數 Execution Amount	
				金額 Amount (4) = (2) + (3)	% (4) / (1)
	6,170,000	4,750,142	1,419,051	6,169,193	99.99

(二) 第一期前瞻基礎建設計畫 First Phase of Forward-Looking Infrastructure Plan

歲出部分 Expenditures

以前年度
Previous year

保留轉入數6億2,336萬5千元，實支數6億2,336萬5千元，執行率100%。
Encumbrances totaled NT\$623,365,000, with payments of NT\$623,365,000. Execution rate was 100 percent.

歲出預算執行表 Expenditures Execution Chart			單位：新臺幣千元 Unit: NT thousand dollars
以前年度 Previous year	保留轉入數 Encumbrances (1)	實支數 Actual Payments (2)	執行率 Execution Rate % (2) / (1)
	623,365	623,365	100

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