The Development and Operation of Expressways in P. R. China

China Highway & Transportation Society (CHTS)
16 October, 2017
Contents

01 Brief introduction to China Highway & Transportation Society (CHTS)
02 Development and Operation of Expressways in P.R. China
Brief introduction to CHTS

1. History of CHTS

• CHTS, founded in May 1921, is the earliest national, academic and non-profit social organization of scientific and technological workers and units from China highway, transportation and other related fields. Reformed in 28 Aug. 1978, CHTS currently has 2,370 group members and 72,307 individual members.

• The current Board of CHTS was elected in the 8th CHTS Council held in January 2016. Mr. WENG Mengyong, former Vice Minister of the Ministry of Transport of China is President of the Board.
• CHTS currently has 14 technical sub-societies (including Road Engineering, Bridge & Structure Engineering, Urban Transportation, Maintenance & Operation, etc), two expert bodies (the Academic Advisory Committee and the Youth Expert Advisory Committee) and three specialized work groups, providing strong support for information exchange, engineering consultation and project evaluation. With presence in 31 provinces and autonomous regions in mainland China, nearly in each municipal city there is a local branch of CHTS.

• CHTS has hosted and published 7 journals including *China Highway* and *China Transport Informationization*, together with a largest website of the industry--[www.Chinahighway.com](http://www.Chinahighway.com).

• There are 15 departments /Centers under the Secretariat of CHTS, with over 150 full-time staff members.
2. What does CHTS do?

- Academic research & exchanges
- Project study & technical consulting
- Scientific & technical evaluation & talent recommendation
- Journals & website building
- International & regional cooperation & exchange
- Sci-Tech popularization and education & training
Two Major Tasks

1) World Transport Convention
   世界交通运输大会

2) International (The Belt & Road) Transport Alliance
   (ITA, under preparation)
2017 World Transport Convention (WTC) ceremoniously opened at China National Convention Center, Beijing on June 5, 2017. More than 4,000 participants attended the convention, including WTC special advisers, members of WTC organizing committee, political leaders of the central and relevant departments of the State Council of China, representatives of universities, scientific research institutions and enterprises from over 40 countries and regions, finalists of 2017 College Student Bridge Design Competition and winners of CHTS/CIN Science and Technology Award.
Nearly 1,300 presentations were made in 115 technical sessions, 6 poster sessions, 48 workshops and 20 committee meetings during 2017 World Transport Convention. Attendees and participants focused on hot issues and cutting-edge technologies in the field of transportation, such as transport interconnection among countries along the Belt and Road, high-speed rail technology, future transport, the development of long-span bridges, intelligent transportation, sharing economy and green mobility, etc.
More than 200 well-known enterprises at home and abroad, research institutes, colleges and universities exhibited state-of-the-art innovations in highway transport, urban and intelligent transport, transport and equipment, rail and port facilities during the 2-day exhibitions. About 300 eye-catching innovative technologies and projects like Hong Kong-Zhuhai-Macao Bridge, Medog highway, bike-sharing, intelligent transportation, Beidou Navigation were showcased.
**Theme:**
Better Transport, Better World

**Time:**
June 18-21, 2018
- June 18, Registration;
- June 19 09:00-12:30 Plenary sessions
- June 19-21 Technical sessions, workshops and related activities

**Venue:**
China National Convention Center

**Language:**
English & Chinese
The Belt and Road Roundtable Meeting for International Transport Cooperation, with the theme as “Initiating the Establishment of International (The Belt & Road) Transport Alliance (ITA)”, was convened on 4 June, 2017 in Beijing, China. More than 60 delegates from over 20 countries and regions along the Belt and Road, as well as international and regional organizations, attended this Meeting.

Consensus was reached on establishment of ITA, and the “Proposal for Initiating the Establishment of ITA” was adopted by applause. The Proposal was announced on the opening ceremony of “2017 World Transport Convention” on 5 June, 2017. ITA will serve as a platform for developing and enhancing all-round, multi-level and wide-ranging cooperation in the transport field among countries along the Belt and Road, achieving integrated, fast and sustainable development of the transport systems connecting these countries.
01 Brief introduction to China Highway & Transportation Society (CHTS)

02 Development and Operation of Expressways in P.R.China
1

Status and characteristics of expressway development in China
The expressway network of China is an integrated system of national and provincial-level expressways. By the end of 2016, the total length of China's expressway network reached 131,000 kilometers, the world's largest expressway system by length.

A system of national-level expressways, officially known as the National Trunk Highway System (NTHS), with 7 radial expressways from the capital Beijing, 11 north-south expressways and 18 east-west expressways, forms the backbone of the expressway network in the country. This backbone is known as the 7-11-18 network. In addition, the provincial-level divisions of China each have their own expressway systems.
From 2010 to 2020, the annual investment planned in expressway construction is to be around 100 billion RMB (12 billion US dollars).

The construction fund in general comes from vehicle purchase tax, fees and taxes collected by local governments, state bonds, domestic investment and foreign investment. Unlike other freeway systems, almost all of the roads on the NTHS/"71118 Network" are toll roads that are largely financed by private companies under contract from provincial governments.
Digital Monitoring & Display

More and more expressways including all the trunk expressways and all the newly built expressways in China now have digital monitoring and displays. These displays may advise against speeding, indicate upcoming road construction, warn of traffic jams, or alert drivers to rain and recommended detours.
2 Trends of expressway development in China

With support of standards, policy, laws and regulations, public awareness, etc

To build national expressway networks for economic growth and social welfare:
- advanced infrastructure
- efficient transport organization
- reasonable operation & management
- regulated market competition
- Environmental friendliness
China's State Council issued a plan to expand the country's transport network during the 13th Five-year Plan period (2016-2020) on Tuesday. Let's take a look at its vision to turn the future more connected.

By 2020

**150,000 km railway lines**
- High-speed rail network will reach 80% of big cities with a population of over 1 million

**5 million km roads**
- Construction of 36 high-speed rail lines will be accelerated

**260 airports**
- 32+ will be located in cities that are not served by any airline

**15 trillion yuan in total ($2.17 trillion)**
- 3.5 trillion for Railways
- 7.8 trillion for Roads
- 4.2 trillion for Air transport
- 500 billion for Water transport

China's 13th Five-Year (2016-2020) Plan
Road network, highways to increase

According to the plan, China will have a total road network of 4.58 million km, an increase of 572,000 km from current length. The construction of 36 expressways will be accelerated and the length of expressways will be increased by 22,000 km.

The government plans to increase the use of electronic toll collection (ETC) on highways, with 50 percent of expressway coaches added to the system, a 20 percentage point increase compared with 2015. Drivers with an ETC card can enjoy a discount of five percent.
3 Obstacles in the development and operation of EXPRESSWAYS in China

- Policies, regulations, planning and construction standards need to be further improved and consolidated.

- More intermodal transport facilities are in need of construction, and the cargo collecting and distributing systems with sound functions are to be refined.

- Information technology, including data exchange and sharing in the development and operation of expressways should be more widely applied, in order to further improve efficiency.
4

Strategies & Measures

of promoting expressway development in the next stage
1) with deepened research, further refine the

**Overall layout planning**

---

**What factors should be taken into account...**

- Administrative divisions
- Economy
- Geography
- Traffic condition

---

**What results should be avoided...**

- Unbalanced development
- Repeated construction
- Disordered competition
- Waste of resources
2) explore and accumulate Experience in the development and operation of expressways

- Adopt various cooperation modes
- Innovate operation & management methods
- Optimize financing modes

Keep self-survival and sustainable development when servicing for market
3) Improve related policies, regulations and standard systems

sound standards related to...

favorable policies related to...

Then realize...

- Perfect interface among infrastructure, transport equipment, information systems and management services
- Higher operation efficiency and capability of integrated services
- Better information system integration between different management departments of transport, customs and e-commerce
4) strengthen International cooperation

Strengthen international cooperation with neighboring countries & related international organizations and further expand China’s opening

- Capital investment
- Personnel training
- Technology development
- Infrastructure construction
- Consulting
- Operation & management
- Process optimization
- Logistics information
Thank You!

yanglj@chinahighway.com