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Associate Director

- Countries with established RSA Procedures:

- Australia
- Denmark
- Iceland
- Malaysia
- New Zealand
- Norway
- Ireland
- Singapore
- Sweden
- USA

- Countries considering introducing RSA Procedures:

- France
- Finland
- Italy
- Canada
- Portugal

IFI Involvement

- Major donors (IBRD, ADB, EU) all require safety components to be included as part of national infrastructure projects
- Safety Audit key element?

Typical Staffing

Consultant	No.	Person Months
1. Deputy Chief Engineer	1	42
2. Tunnel Specialist	1	6
3. Bridge Specialist	1	6
4. Road Maintenance Specialist	1	1
5. Road Safety Specialist	1	1
Total	5	56

Safety Specialist Role

- The road safety specialist will be fielded for a period of one (1) person months, and the specialist will be a qualified road safety engineer with over ten (10) years in road safety design and road safety audit.
- The specialist will **conduct a road safety audit** and develop a risk management plan to cover areas of safety concern during construction, especially construction of bridges and tunnels, and develop a risk management plan to cover safety concern prior to opening of the expressway, and recommend additional traffic engineering, particularly for lighting, hazard barriers, signage, and marking.

Why is Road Safety Important?

- Current Safety Situation in China
 - 450,254 road traffic crashes in 2005
 - 98,738 deaths
 - 469,911 injuries
 - Population 1,330,044,605 as of mid-2008
 - 74 deaths/100,000 population
 - UK less than 6/100,000

Cost to China

- 1 - 3% of PRC's gross domestic product (GDP)
- Road injury patients take up 25% - 30% of hospital beds
- affects more than 20 million people, either as victims of crashes or as family members of those involved in the crashes.

Where do they happen?

- 40% of crash take place on Class III, IV and unclassified roads are the rural roads.
- 40% of traffic crashes in China take place on Class II
- 20% on Class 1 and Expressways

Which Roads are most risky?

- Class II : 246,000 km 0.73/km
- Class III : 344,000 km)
- Class IV : 920,000 km)0.28/km
- unclassified : 338,000 km)
- Class I : 38,000 km)
- Expressway: 41,000 km)1.14/km

Major Road Building Programme?

- Construction of 38,000 km of new roads, of which 25,000 km will be expressways, bringing the total length of expressways to 65,000 km; and
- Completion of the National Trunk Highway System (NTHS).

- All built to latest standards funded by ADB

Class II



Class III



Unclassified



Class I Road

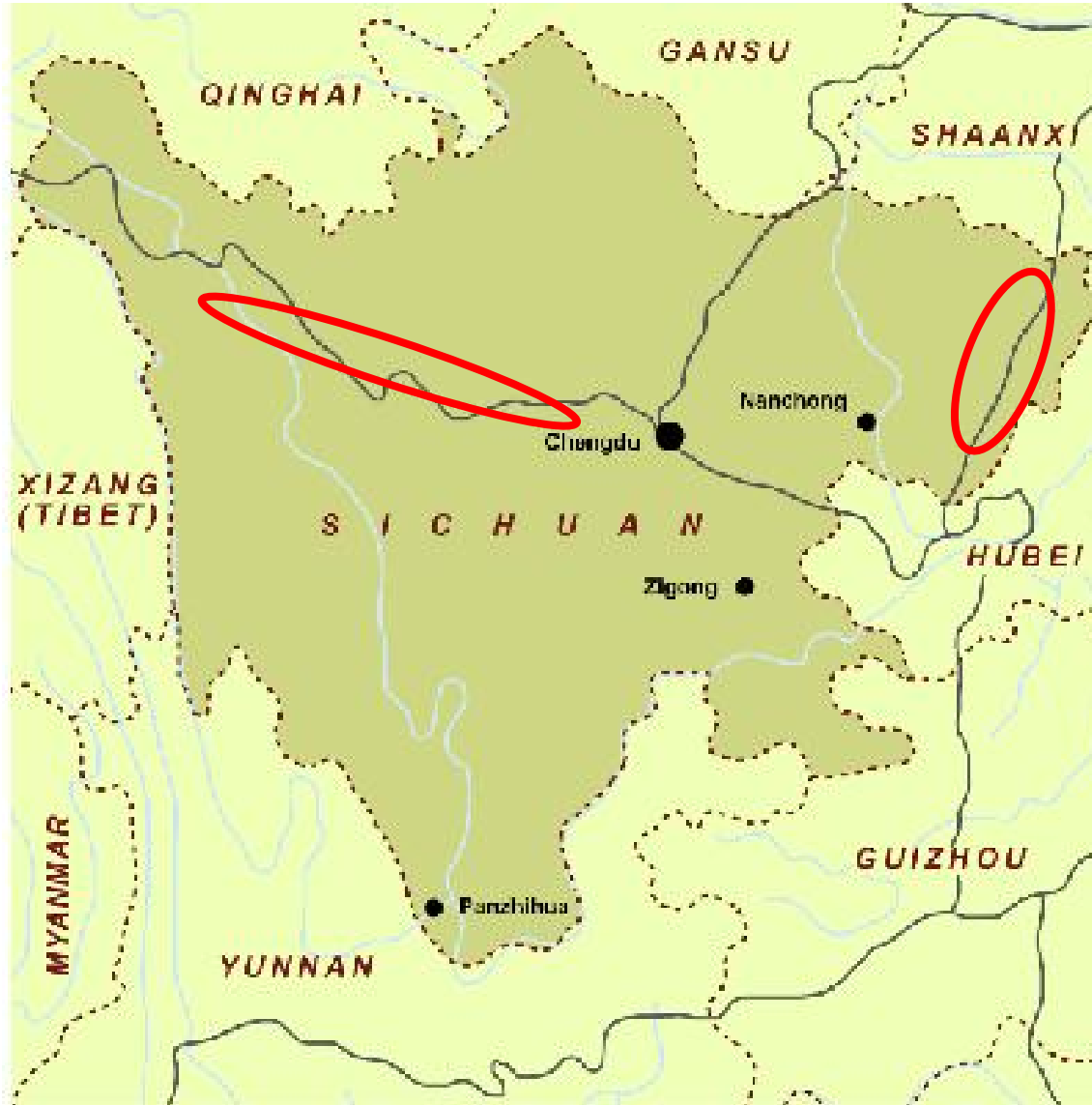


Expressway



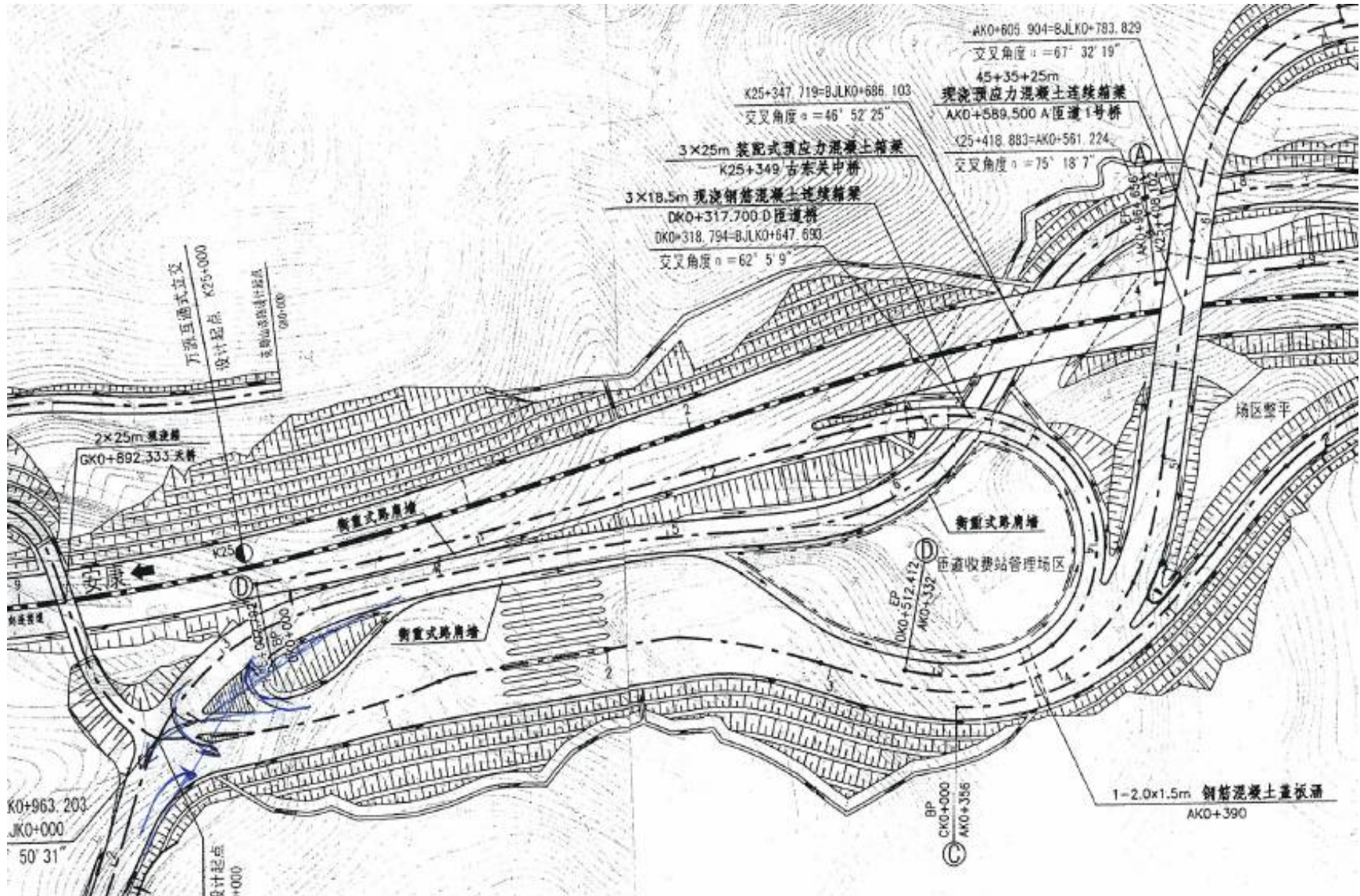






Information Provided

- Standard details of main features
- Alignment details - vertical and horizontal
- Signing and lining information 1:1250 scale
- Split by contract



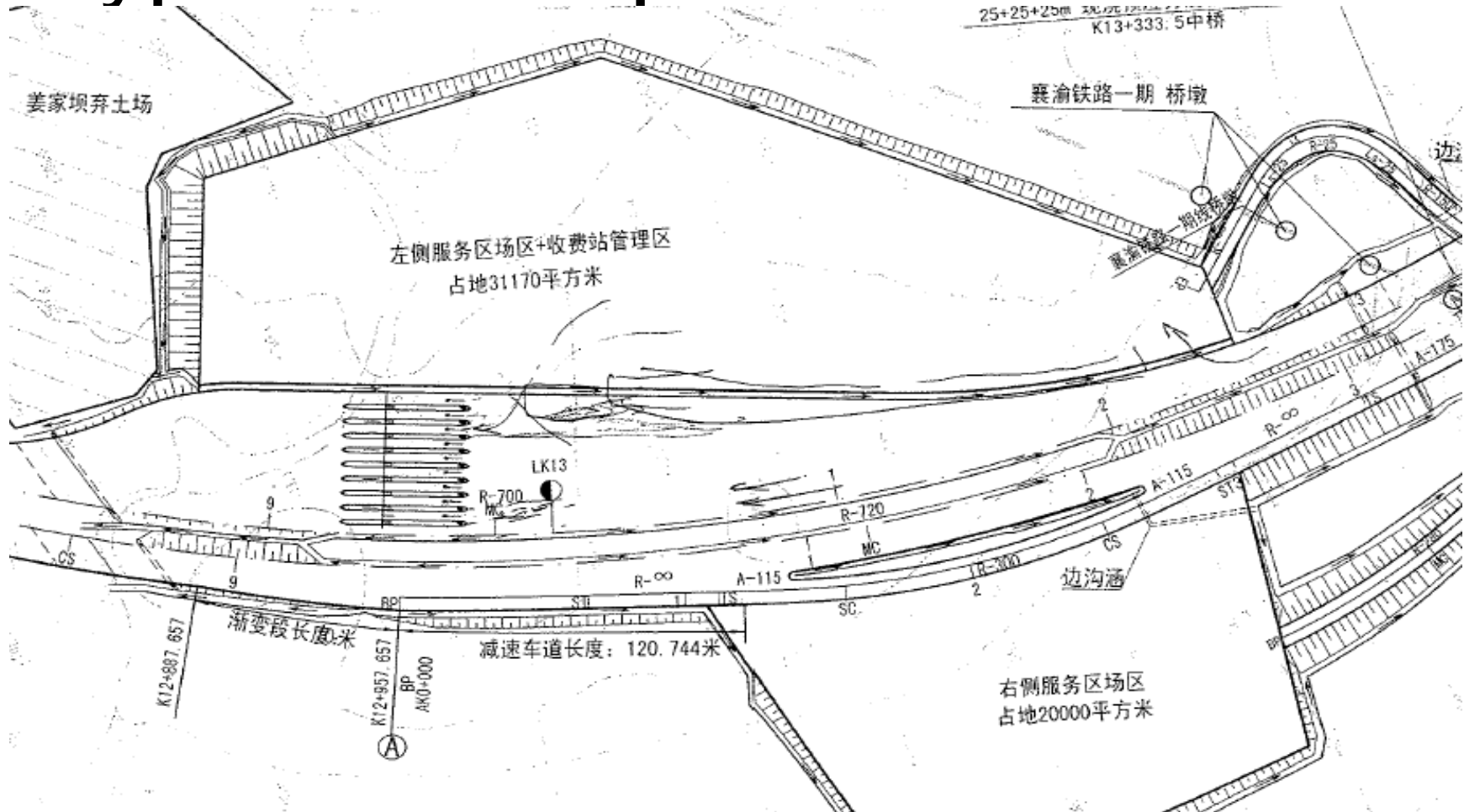
Typical Example - Junction







Typical Example – Service Area





Main Issues

- Translation
- Road Safety v Health and Safety
- Tunnel Management
- Signing
- Junction transitions
- Restraint systems
- Non-motorised users
- Construction

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Vehicle Mix

- Modern roads
- Different vehicles
- Extended vehicle mix and performance
- Common on all roads







Any Questions

