1. Key development issues and rationale for Bank involvement

1. Xi’an is northwest China’s largest city¹ and the capital of Shaanxi Province. It is a world-renowned historical city (on a par with Athens and Rome) and one of the most popular tourist destinations in China. Xi’an is also an important educational, scientific, manufacturing and high-tech base. Historically the starting point of the famous “silk road”, Xi’an today is the largest trading centre in western China and a key inland air, highway and railway hub. The Government of China sees Xi’an as playing a key role in the development of the whole western China region. The vision of the city’s leaders is to have Xi’an play this role, while also developing Xi’an into a world class historic and cultural city.

2. In 2003, the urban population was 5.2 million, and urban residents made 1.95 trips/day, with mode shares of walk 22%, bicycle 33%, bus 23%, and car/taxi 22%. The annual average per capita income for urban residents was CNY7,184, slightly less than the national average of CNY7,703. By 2005, the income levels are forecast to increase to CNY8,864. Between 1990 and 2001, when real economic growth averaged 10.4% per annum, road traffic grew at 15.7% per annum. During the same period, vehicle ownership in Xi’an grew from 10.1 vehicles per 1,000 people to 23.1. These trends are expected to continue in the future as Xi’an faces the dual challenges common to all urban areas in China – increasing urbanization and rapid motorization. Urban population is forecast to reach at least 7 million by 2020, but no reliable estimates have been made of increased travel demand over the same period.

3. Key issues facing the sector are: (a) traffic congestion on the primary road network due to a lack of an effective network of secondary roads, which forces traffic on the main roads for even short distance trips. Inefficient use of the existing road space, with random illegal parking- average speed on trunk roads declined in 2002 to 19.27km/h, with the volume/capacity ratio at 0.95 during peak periods in the core area; (b) inadequate transport networks to service new development areas; (c) the public transport system has progressively shrunk since the mid 80’s, in terms of operating efficiency, service level,

¹ Xi’an municipality comprises the city (with eight districts) and five counties, with a total population of 7 million.
economic benefit and ridership. Bus operating speeds are now below 10km/h in the core area. This decline, together with low-fares, has resulted in unprofitable bus companies. No steps have been taken to implement the national strategy of “priority to public transport”; (d) Conflicts between motorized and non-motorized vehicles are frequent and severe, facilities for pedestrians and cyclists to cross main roads are inadequate and public awareness of the transport regulations is generally poor; (e) As pollution from other sources is reduced, increased motorization is becoming the key source of pollution threatening the urban environment - the levels of inhalable particulate matter (PM_{10}) for the past four years (2001-2004) at 151, 165, 135 and 142 ug/m^3 respectively, have exceeded the national standards of 100 ug/m^3; and (f) lack of institutional capacity to plan, design implement sustainable transport programs, so no robust analysis exists of current problems, and no objective based proposals to address key issues, with the notable exception of a strategy to develop Bus Rapid Transit.

4. The sub-regional plan envisages urban development in Xi’an city proper, and a number of designated satellite towns (including Huxian), with some development in smaller towns dotted about the sub-region. These changes will extend journey to work trip distances and dramatically increase travel demand, and the need for high capacity rapid transit services from Xi’an to the satellite towns. In Xi’an city proper, the basic policy for urbanization is to protect the heritage and at the same time provide new areas for economic development. In the NW quadrant of the city lies the Han Chang’an city site, an area of some 36.9 square kms, protected from development as a national heritage site, which the Government now wishes to restore and enhance. The centerpiece of the master plan is the protection of the Ming dynasty walled city, which today contains the CBD, yet few measures have been taken to ensure the sanctity of this area. Currently 21% of travel demand has an origin or destination in this area. Selective investments in junction capacity improvements on the first ring road (which circles the Ming city walls) could reduce traffic pressure in this area, and help to protect the area by facilitating restrictions on car traffic within the city walls. So too would investments in improving the capacity and quality of public transport services.

5. To bring into balance the conflict between preservation and growth, the city leader have recognized that Xi’an needs to undertake more systematic transport planning and capacity building of local institutions if it is to develop integrated and sustainable solutions, and so has proposed the implementation of Xi’an Urban Comprehensive Transport Improvement Project utilizing the World Bank loan. The city leaders have also said the specific priorities for the Project are:
   (i) Developing a transport planning capability in Xi’an municipality – starting immediately
   (ii) Strengthening public transport performance, and implementing Bus Rapid Transit (BRT)
   (iii) Protection of the Ming walled city
   (iv) Improving local air quality – with a target to meet national standards by 2008

6. The request for the loan is in alignment with both the Bank’s FY03-05 assistance strategy to China as well as the Government of China’s aim of improving the investment climate and addressing the needs of disadvantaged groups and underdeveloped western region.

The World Bank’s extensive experience in urban transport projects, and the satisfactory engagement in urban and cultural heritage projects in China and other East Asian countries, with an emphasis on urban management, comprehensive resolution of congestion and air quality issues and creation of integrated and sustainable transport systems, puts it in an unique position to engage in this project. The Bank is in a strong position to support the Government in formulating strategies to explore alternative solutions to complex traffic and transport management issues.

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2 Shaanxi Province has a per capita GDP at around 70% of the national average, ranking in the bottom fifth among the 31 provinces and regions in China.
2. Proposed objective(s)

The project development objective is to improve accessibility and mobility in Xi’an while protecting its cultural heritage and reducing the environmental impact of urban transport system, with a focus on the Ming walled city.

Key performance indicators being considered are:
1. Improvements in travel speeds cross town, for key user groups (cyclists, pedestrians and public transport users).
2. Increased throughput on primary roads for key user groups.
3. Reductions in car traffic to/from and across the Ming walled city and the Han Chang’an site.
4. Increases in bus operating efficiency – on street speeds, reliability, passenger flows/bus
5. Reduction in levels of key pollutants to national standards or better.

Urban infrastructure development was identified as a priority area for investment, by the central government. The proposed project will support this strategy by improving the urban transport system in Xi’an. This intervention would enhance Xi’an’s competitiveness, fostering the development of lagging Western regions. It would also help Xi’an develop and implement more sustainable transport options which would enhance protection of its cultural identity and urban environment, and thus improve the quality of life. The project would also be a pilot for the implementation of the recommendations of the Bank’s policy note, “Building Institutions for Sustainable Urban Transport” recently completed in collaboration with the China Academy of Urban Planning and Design and the Institute of Comprehensive Transport of the National Development and Reform Commission reform Commission.

3. Preliminary description

The following components are required to achieve the project objectives. As the focus of the project is the preservation of the Ming City, the subcomponents will be selected to support the achievement of this objective. Studies and consultation with stakeholders will be used to refine the project scope and design, and to get a clear understanding of the transportation challenges. Consultation should include the tourist industry (domestic and international).

Urban road network - This component consists of a package of investments so as to ensure the most effective and efficient operation of the network within the third ring road, and which complement the investments in new major roads being made by ADB and XMG. The main objective of investments in the component will be on solving the current congestion and access problems, especially those related to the Ming walled city and to the Han Chang’an site. The component will also include improvements to the road maintenance system, and roads in the satellite town of Huxian, to provide areas for development to relieve development and traffic pressures inside the Ming walled city.

Public Transport. This component consists of a package of measures to strengthen public transport performance, as well as investment to support a pilot BRT route. The focus of the component will be on increasing accessibility to the city center by improving the efficiency of the overall public transport system. The first step is to identify (and suggest solutions) to the public transport problems in Xian, particularly in the city center, rather than attempting to champion BRT which is only part of the solution.

Traffic Management and Road Safety - The objectives of this component are to upgrade pedestrian, bicycle and traffic facilities, so as to make full and safe use of the existing urban road network, and to establish the foundation of ITS (Intelligent Transport Systems) to facilitate mobility management to
protect the Ming walled city and other cultural heritage sites. The component also complements investments in the ADB project.

Air Quality Management (AQM) - Xi’an Environmental Protection Bureau (XEPB) has comprehensive and ambitious plans to improve air quality and to reduce vehicular emissions. For this project, they have proposed five activities which will allow them to expand AQM, with a focus on vehicular emissions.

Cultural Heritage. This component is designed to provide transport infrastructure to support proposals to protect and enhance two of the major historic sites in Xi’an. Three subcomponents are proposed:

- **Han Chang’an Site** - Pedestrian and Bicycle Paths for the Weiyang Palace Site. To provide better access for people to visit the site by marking and utilizing the ancient roads.
- **Bicycle Ring inside the Ming City Wall and the 15 Scenic Spots Bicycle Route.** 50% of tourists who come to Xi’an visit the Ming City Walls. The objectives of the subcomponent extend beyond providing bicycle routes and aim to be a catalyst for more fundamental changes in the approach to traffic management in the Ming City.
- **Ming City Management Plan.** The purpose of this plan is to provide the overall framework for the protecting and enhancing the Ming City. The proposed scope is envisaged to cover not only traffic management, but also urban design, cultural heritage, and upgrading of utilities.

Capacity Building. This component is designed to respond to the request from Xi’an for Bank assistance to develop a capacity in the city for transport planning and policy making. To date, seven topics have been suggested for possible TA support in the project. Given the urgent need for an UT Strategy and Short Term Improvement Program, this item is being considered for possible retroactive financing. It could be started as part of project preparation, but continued as part of project implementation.

4. **Safeguard policies that might apply**
The project includes a component related to cultural heritage, and will involve involuntary resettlement, with other environmental impacts including changes in vehicle emissions and traffic noise levels. The Bank policies on Environmental Assessment (OP/BP 4.01), Cultural Property (OPN 11.03), and Involuntary Resettlement (OP/BP 4.12) are likely to apply to the project. The Environmental Category is considered as A – Full Assessment.

5. **Tentative financing**

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<td>INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT</td>
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<td><strong>Total</strong></td>
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6. **Contact point**
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