

Social Assessment Report

of

Mudanjiang Cold Weather Smart Public Transportation System Project

(Pre-appraisal version)

Hohai University

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CURRENCY EQUIVALENTS

(As of 31 Sep 2013)

Currency unit – Yuan (CNY)

CNY 1.00 = \$0.15797

\$1.00 = CNY6.3303

ABBREVIATION

AH	Affected Household
AP	Affected Person
CNY	Abbreviation for Yuan, PRC's currency
DI	Design Institute
EA	Executing agency
EAR	Environmental Assessment Report
FSR	Feasibility Study Report
HH	Household
LAB	Land Administration Bureau
LA&R	Land Acquisition and Resettlement
LAO	Land Acquisition Office
LPMO	Local Project Management Office
M&E	Monitoring and Evaluation
mu	Chinese land area unit of measure: 1 mu = 0.0667 ha
MMDRC	Mudanjiang Municipal Development and Reform Commission
MCWSPTSP	Mudanjiang Cold Weather Smart Public Transportation System Project
NGO	Non-Government Organization
PMO	Project Management Office
PRC	People's Republic of China
RMB	Renminbi—another word for the PRC Currency, the Yuan
RAP	Resettlement Action Plan

SA	Social Assessment
SES	Socioeconomic Survey
WB	World Bank

NOTES

- (i) The fiscal year of the Government of the People's Republic of China and its agencies ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

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1 Background

1.1 Project Description

1.1.1 Background and Object of the Project

In response to development of resources, environment and ecology, and the practical demand of people's livelihood and economic development of Mudanjiang City, as well as to improve the current urban public transport situation which is relatively backward, the government of Mudanjiang City intends to loan from the World Bank, carry out the Mudanjiang Cold Weather Smart Public Transportation System Project (hereinafter referred to as “the project”).

The project aims to build a green, safe city, environment protection and low carbon ecological homeland as the guiding ideology in extremely cold area, vigorously develop “smart and safe” public transport system, and promote the advanced concept of transportation active safety system, develop the transit-oriented mode of transport, build and improve the corresponding facilities, promote “safe and efficient” traffic management methods, build a “safe, smart, efficient and environmentally friendly” public transportation environment. Give full play to the important role of transportation system of Mudanjiang City in the construction of Northeast Asia economic and trade area. Accelerate the construction of international trade and transport channel, implement the strategy of sustainable development of urban traffic in Mudanjiang City.

Project objectives are: implement the scientific outlook on development, set the construction of green, environmental protection, low carbon, security city under extremely cold environment as the guiding ideology, develop “efficient, economic, convenient, reliable, reachable, safe, comfortable” public transport system vigorously, encourage low pollution and low-emission non-motorized transport, make full use of modern intelligent information system, and promote sustainable development of urban transport. Specific objectives are:

First, give priority to the development of city public traffic; improve the public transport capacity and punctuality rate; greatly enhance the attractiveness, the service ability and level of public transport; build “environmentally protection, energy-saving, low-carbon” green transport environment; ease traffic congestion and promote green low carbon travel;

Second, solve the prominent contradiction between the rapid growth of urban traffic flow and the resources of land and transportation; improve the effectiveness and efficiency of transport systems; and promote the linkage of road safety system in order to make full use of the resources and industrial advantages in Mudanjiang City; undertake international industrial transfer and factors of restructuring; accelerate the adjustment of economic structure to provide integrated transport support;

Third, in order to boost the tourism industry in Mudanjiang City, create a good traffic condition for “ice and snow tourism, green tourism, the Northeast Asian style tourism”, and enhance the image of city of Mudanjiang City and its soft power vigorously.

1.1.2 Contents of Project

According to the feasibility study report, the project is divided into four sub-projects: the integrated public transport corridor sub-project, the public transport infrastructure sub-project, the intelligent transportation systems, the institutional capacity building sub-project. The specific content of the project:

First, Design and construct integration on five selected bus corridors, including bus lanes, bus stops, and intersection widening and drainage of integrated transformation, bus priority traffic signal control system, the transformation of the corridor along the street entrances, pedestrian crossing system improvement, deceleration facilities, parking planning and management.

Second, the public transport infrastructure proposes to conduct the design and construction of public transportation station, public transportation hub and

repair factory, etc. This sub-project proposes to establish one public transportation hub, three first and last public transportation stations, three buses repair factories, one security education base, one bus drivers training center and purchase 120 buses.

Third, the smart public transportation is expanded and deep integrated on the basis of intelligent transportation system of Mudanjiang City, build "one data center, three large business platforms, and eleven business systems", which covers transportation comprehensive monitoring, signal control, illegal automatic recording, intelligent transportation scheduling, dispatching emergency transportation, public transportation information services and so on.

Fourth, institutional capacity building sub-project contains three aspects: 1) research how to establish a healthy, sustainable governmental agencies with powerful executive capacity, which can support the construction of Mudanjiang City sustainable transportation system; 2) carry out relative investigation and training, including investigation about domestic and abroad transportation, short-term training and in-service degree education, etc; 3) technological support project, mainly refers to urban transportation research, which includes ,urban transportation planning, optimization and adjustment of public transportation network, urban public transportation stations planning, public transportation corridors management strategy, the development of urban transportation model and database, urban public transportation intelligent research, parking planning and management and public transportation integration policy, etc.

Total investment of the Mudanjiang cold weather public transportation system project with the loan from World Bank is 1.24293 billion Yuan, of which the World Bank loans \$ 100 million and the remaining part of the money is solved by the Mudanjiang municipal government's matching funds.

Mudanjiang City Development and Reform Commission take the lead in this project. The construction period is 3 years, from January 2014 to December 2016, 36 months totally.

The project area for the project is in Mudanjiang City, Heilongjiang Province,

1.2 Tasks and Objectives of Social Assessment

The main purpose of the social assessment is to identify the various possible social impacts and social risks, make recommendations to eliminate or minimize the social negative effects produced by the implementation of the project and increase the positive social impact. During the project preparation stage, adopt the participatory approach, listen to the demands of different interest groups, achieve the project tasks and benefit more different stakeholders, promote the development in project areas inclusively;

The project preparation, design, construction and operational management meet the project area socio-economic development goals, local circumstances and specific development needs of the target population; provide people in the project area with wider development opportunities; improve the social, economic, environmental effect of project implementation and make the project to contribute to the regional social development goals; promote the coordinated development of population, society, economy and environment; meanwhile, but also for better implement the Safeguard Policies of World Bank and all the rights specified in the policy of the affected population in the project and carry out the scientific development of "five-in-one" policy in China.

1.3 Bases of Social Assessment

Social assessment of the project adheres to the people-oriented concept of development; adheres to objectivity, impartiality, fairness, legality, democracy and scientific principle, and strives to minimize project social risks and maximize project social benefit.

Social assessment of the project is based on the relevant laws, regulations, and policies of the Nation, Heilongjiang Province, and Mudanjiang City, regard the World Bank's "five focuses" as the key point of social analysis project, which include social diversity and gender, institutions, regulations and behavior, stakeholders, participation and social risks. As the focus of project social analysis,

social risks are implemented gradually through adopting the assessment method of overall process, participation and various angles. Specifically including:

(1) The World Bank social development and social safeguard policies, OP 4.12, etc.

(2) The World Bank's mission requirements for the project

(3) Each subproject design, project proposal, feasibility study report, the EIA report

(4) China International Engineering Consulting Corporation, *Social Assessment for Investment Projects in China*, 2007

(5) China International Engineering Consulting Corporation, *Social Assessment Manual for Investment Projects in China*, 2002

(6) Department of Housing and Urban-Rural Development, *Guidelines for social assessment on Public utility projects*, 2011

(7) Relevant laws, regulations, and policies of the Nation, Heilongjiang Province, and Mudanjiang City

1.4 Scope of Social Assessment and its Main Contents

The scope of social assessment of the project is the project's influence area and benefit area, namely main urban area (2,443km² with 962 thousand resident populations) in Mudanjiang City, including Dongan District, Xi'an District, Aimin District and Yangming District.

The social assessment of the project mainly includes: social analysis (Social Impact Analysis of the project, the stakeholder analysis, analysis of social adaptability, social risk analysis of the project, project sustainability analysis), assessment of the public functions of government in project construction, social management plan and implementation of monitoring and evaluation etc.

Favorable social impacts of this project mainly show as follow: Project outputs are important urban public infrastructures, they are the basic elements of urban production, urban economic and social development. Project construction can guarantee public traffic supply in Mudanjiang City; improve the public

transport situation of Mudanjiang City, improve people's living standard and life quality, promote economic and social development.

Adverse social impacts of this project mainly show as follows: different interest groups such as residents (especially vulnerable groups among them), enterprises and institutions may be adversely affected in the project area; With the gradual increase of municipal infrastructure construction level and product quality standard, it will bring about changes in social services or the price of public goods, which may increase the economical burden of the poor or vulnerable groups in the urban.

The key points of social assessment of the project are: Understand the feelings, attitudes and needs of Project beneficiaries on the project construction (Especially the public transport needs in the winter cold season), understand their willingness and ability to pay; the land expropriation and housing demolition and resettlement activities that may involved in the project should be concerned, analysis and evaluation of the negative impacts on the impaired groups of the project, propose a reasonable compensation measures and means; In the process of bus-product updates and files, analysis of the different groups of the willingness and ability to pay, balance the problems of the public transportation costs; seek the views and demands of the projects for specific groups(Old, weak, sick, disabled, women, migrants, etc.), consider and absorb their recommendations in the design of the project (the platform, road, signal, command and control system); should provide policy support to the poor or vulnerable groups, help them to alleviate the economic pressure, they can also benefit from the project.

1.5 Institutions of Social Assessment, Methods of Field Investigation and Process of Investigation

Public Administration school of Hohai University undertakes the SA work of the project that commissioned by Mudanjiang Municipal National Development and Reform Commission, and carries out the first field investigation from January

14th to January 30th, 2013. The purpose of the survey is to target stakeholder travel status, traffic safety awareness and education will, transportation infrastructure construction will and their views of the project. Determine the project's main stakeholders and their interaction with the project, including what kind of influence of the proposed project will affect them, and their influence may be applied to the project.

Collect the part of the official data and information; carry out the questionnaire of the SA of the project, interview and symposium, and survey all the proposed sites of the project during field investigation.

The literature and data collected, included: Statistical Yearbook of the past three years, the aging population, women and other special data in Mudanjiang City, the latest project proposal, project pre-feasibility study report and some special planning reports etc.

Perform random sample surveys which focus on residents, passengers, taxi drivers, bus drivers and traffic police etc. that in the scope of the proposed projects, five bus priority corridors, an amble system, first and last stop, transfer center and other related sub-project included. There are a total of 595 questionnaires were recovered (512 combination questionnaires, 27 questionnaires for bus driver, 56 questionnaires for foreign population inside) and all questionnaires are valid Use the SPSS statistical software for statistical analysis. According to the content of the project, questionnaires were designed in open, closed and semi-open semi-enclosed three forms in order to reflect the respondents' views accurately, objectively and comprehensively.

Research group organized a number of special meetings for public participation (the elderly, women, disabled, etc.), successively performed the discussion or the special interview with Development and Reform Commission, Land Resources Bureau, Construction Bureau, Traffic bureau, Finance Bureau, Ethnic and Religious Affairs Bureau, the Bureau of Civil Affairs, Senior Citizens' Work Committee, the Women's Federation, Federation of the Disabled, Education Bureau, bus companies, taxi companies, etc. during field investigation.

Use participant observation, interview with eight schools along the line and some potential sensitive points (residential quarters, religious places, hospitals, shopping malls and other) during field investigation.

Also survey all the projects' addresses and conducted a symposium with the project feasibility study and environmental assessment unit, Development and Reform Commission of Mudanjiang Municipal, and related sub-project owners units during field investigation.

on May 7, 2013, feedback all the stakeholders' proposals about the content of the project that collected in the SA report to the feasibility study unit and project owners, hope that they will consider and adopt in the design. Meanwhile, submit the first edition of the SA report.

On May 8, 2013, receive the first edition of the feasibility study report; update the report according to the latest feasibility study.

From May 18 to May 30, 2013, carry out the complementary investigation and update the report according to the World Bank preparation groups' views and the latest feasibility study of the project.

On June 9, 2013, feedback the updated SA report to the feasibility study unit and project owners once again.

In July, carry out the complementary investigation on adjusted stations based on latest feasibility study of the project.

On September 16, 2013, submit the SA report in both Chinese and English versions (the second edition).

On October 12, 2013, submit the SA report in both Chinese and English version (the third edition)

2 Socioeconomic Profile of the Project Area and the Project Introduction

2.1 Socioeconomic Profile of the Project Area

2.1.1 Introduction of the Project Area

Mudanjiang City, named as one of Songhua River's biggest tributaries of Mudanjiang across the urban area. Mudanjiang City is located in the southeastern of Heilongjiang Province, located in border hinterland of China, Russia and North Korea, and it is an important regional central city in the northeast and eastern area of China. Total area of Mudanjiang City is 40,600 km², including urban area of 2,456 km². Its geographical coordinates is located in east longitude 128°02'-131°18', north latitude 43°24'-45°59', Harbin bordering West and the East and the Russian Far East, bordering the south bordering Yanbian Autonomous Prefecture, Jilin Province, located in the beautiful scenery of the north of Changbai Mountain, Mudanjiang from south to north through. The center urban area of Mudanjiang City is Mudanjiang River basin, the whole area has mountains and rolling, and rivers cross also. It is known as "nine mountains and a field", The main terrain is mountainous, hilly, present four geologic formations including middle mountains, low mountains, hills and valley basin. The average altitude of the whole city is 230 meters, the top altitude located in White Mountain of ZhangGuangCaiLing of Mudanjiang area and its height is 1,686.9 meters above sea level. While the lowest altitude area located in the borders of Suifenhe City and Russia and its height is 86.5 meters above sea level.



Figure 2-1 Mudanjiang City's Location Map and Administrative Map

Mudanjiang City has jurisdiction Dongan, Xi'an, Aimin and Yangming four municipal districts, Linkou and East Nanjing two counties, and escrow Suifenhe, Ning'an, Hailin and Muling four county-level cities.

In 2011, the GDP of Mudanjiang City is 920 billion yuan, an increase of 15.3% over 2010; full-caliber financial income 11.7 billion yuan, completed investment in fixed assets 56.51 billion yuan, it grows by 36.5% compared to 2010; Social total retail sales of consumer goods reached 31.31 billion yuan, it increases most among all the cities in Heilongjiang Province; The total import and export volume is expected to achieve \$10.6 billion, keep the first in Heilongjiang province; Above-scale industrial added value reached 16.45 billion yuan, an increase of 29 percent, whose growth is second in Heilongjiang Province; Urban per capita disposable income is expected to hit 14,500 yuan, increased by more than 13%; Per capita net income of farmers reached 11,198 yuan, achieve "nine consecutive" in Heilongjiang Province; Mudanjiang City has a National 5A grade scenic spot Jingbo Lake, other famous tourist attractions such as China Snow Village, crater underground forest, Tang Dynasty ruins of Bohai State etc, and is

the "China Excellent Tourism City", "China top ten livable city" and "China top 100 city tourism competitiveness". In 2011 the annual number of tourist reception is 10.05 million passengers, the total income is 6.13 billion yuan, increased by 15.7% and 15.6% respectively, the reception of foreign tourists is 863,000 passengers.

According to the "Mudanjiang national economic and social development of the Twelfth Five Year Plan (2011-2015)", the GDP of Mudanjiang City will reach 1,570 billion yuan in 2015, with an average annual growth rate of more than 15% and double in five years.

2.1.2 Population

Until the end of 2011, a total population of Mudanjiang City is 278.6 million, of which the urban resident population is 96.2 million.

2.1.3 Women and Children

The changes of female household population during the period from 2009 to 2011 in Mudanjiang City are shown in Table 2-1.

Table 2-1 Female Population Situation from 2009 to 2011 in Mudanjiang City

County (city)	2009		2010		2011	
	Female household population	The proportion of female household population	Female household population	The proportion of female household population	Female household population	The proportion of female household population
The Whole City	1342782	49.63%	1337184	49.73%	1329408	49.75%
City Area	402504	50.37%	448483	50.42%	447028	50.46%
Dongan District	96567	49.50%	95087	50.99%	94642	50.77%
Yangming District	75770	50.11%	115230	49.65%	114656	49.71%

County (city)	2009		2010		2011	
	Female household population	The proportion of female household population	Female household population	The proportion of female household population	Female household population	The proportion of female household population
Aimin District	119137	50.94%	115666	50.40%	114621	50.60%
Xi'an District	111030	50.73%	122500	50.75%	123109	50.81%
Dongning District	105495	49.46%	104691	49.63%	104360	49.63%
Linkou County	212489	48.81%	186694	48.78%	183513	48.76%
Suifenhe City	31536	49.26%	32697	49.55%	33158	49.72%
Hailin City	212018	49.57%	201648	49.56%	200336	49.58%
Ning'an City	218809	49.65%	217057	49.68%	216746	49.67%
Muling City	159931	49.13%	145914	49.30%	144267	49.33%

According to the sixth census data, it can be found that the gradual increase in the proportion of the elderly population and the working-age population, but the proportion of children reduced. The total population of 0-14 year olds (also known as the dependent population) is 315,163 in Mudanjiang City, account for 11.26% of the population, decreased by 6.26% compared with 2000.

According to statistics, there are 1,170 schools, 388 thousand students in school and 31,912 staffs at all levels totally in Mudanjiang City. It has nine colleges including Mudanjiang Normal College, Mudanjiang Medical College, Mudanjiang University, Heilongjiang Forestry Vocation Technical College, Heilongjiang Preschool Education College, Heilongjiang Agricultural School of economics, Heilongjiang Institute of Commerce, Mudanjiang technician college, Mudanjiang health school, 57 thousand students in school and 4,851 staffs; 23 private colleges, 5,916 students in school and 557 staffs; 14 vocational high school, 8,926 students in school and 964 staffs; 149 ordinary schools, 128,881

students in school, 11,178 staffs; 385 ordinary primary schools, 138,075 students in school, 11,883 staffs; 429 kindergartens, 41,772 preschool children in the garden, 2,765 staffs; 6 special education schools, 404 students in school, 147 staffs. Among them, there are 248 different schools in urban areas, all kinds of schools at all levels of enrollment are 91,066, and the student's enrollment rate of both elementary school and junior high school reached 100%. Mudanjiang City's basic education of urban children is shown in Table 2-2.

Table 2-2 Mudanjiang City's Basic Situation of Urban Children Enrolled

Education	Unit	2009	2010	2011
Number of students in school	Person	336,333	331,521	330,011
Secondly school	Person	144,766	140,391	138,764
Primary school	Person	138,075	137,026	137,499

On the basis of *the Law on the Protection of Minors of the People's Republic of China*, *the Ordinance on the Protection of Minors of Heilongjiang Province* and other relevant laws and regulations, according to the general requirements of *Children Development Planning of Heilongjiang Province (2011-2015)* and *National Economic and Social Development Twelfth Five-Year Plan of Mudanjiang City*, combined with the actual situation of economic and social development and the development of children in Mudanjiang City, the government made the *Children Development Planning of Mudanjiang City(2011-2015)*. The plan clearly defined the objectives, measures of children's education, health and welfare etc. next few years in Mudanjiang City.

2.1.4 Floating Population

Floating population includes the inflow and outflow of population. Among them, the inflow of population mainly includes non-local household registration population about tourism, business and workers that from the field to Mudanjiang City. Mudanjiang City's 2009-2011 basic situations of population movements are

shown in Table 2-3. The proportion of floating population will increase year by year with the increase of the bus system coverage area, the continual development of tourist attractions and the rapid development of tourism economy in Mudanjiang City.

Table 2-3 Mudanjiang City's 2009-2011 Basic Situations of Population Movements

Unit: person

County (City)	2009	2010	2011
The Whole City	49,892	109,930	113,934
City Area	8,765	75,702	76,410
Dongan District	2,140	13,691	13,997
Yangming District	1,833	8,113	9,282
Aimin District	3,752	45,786	45,482
Xi'an District	1,040	8,112	7,649
Dongning County	2,070	-10,246	-10,007
Linkou County	1,001	-13,737	-11,112
Suifenhe City	35,497	66,324	66,476
Hailin City	1,076	-6,007	-6,089
Ning'an City	1,063	568	568
Muling City	420	-2,674	-2,312

It can be seen from the table above, in addition to the outflow of population¹ in individual cities and counties that under the jurisdiction of Mudanjiang City recent years, the overall inflow of population (population in the province mainly)

¹ According to the sixth demographic data, the Mudanjiang City's outflow of population mainly includes school, army and work. Which flows into the province accounted for 60% of the total number of outflow, the outflow to the province accounted for about 40% of the total (concentrated in Shandong, Beijing, Liaoning, Jilin, Guangdong and other provinces)

showed an increasing trend, which is inextricably linked with the rapid development of the local economy and society.

2.1.5 Poverty

Poverty can be divided into absolute poverty and relative poverty. If according to the National Bureau of Statistics, Ministry of Civil Affairs on urban poverty survey results (2011)², take the value of 8% and calculate, the relative poor population of the urban area of Mudanjiang City is about 77,000.

Another calculation method of urban poor population is based on urban poverty line statistics. Since the 1997, establishment of the urban minimum living security system in Mudanjiang City has been experienced eight times to raise the standards. In July 2012, Mudanjiang City has increased the urban minimum living security standard from 315 yuan per capita monthly family to 347 yuan per capita monthly family; has increased rural five securities centralized support standard from 2,400 yuan the annual per capita to 3,260 yuan the annual per capita; has increased rural five securities scattered support standard from 1,800 yuan the annual per capita to 2,370 yuan the annual per capita. Urban minimum living security and rural five securities support standards are higher than average to the standards set by Heilongjiang provincial government. The government of Mudanjiang City is on the basis of requirements of *Provincial Department of Civil Affairs, Ministry of Finance on Efforts to Improve Urban and Rural Minimum Living Security Standards and the Level of Financial Assistance Work Notice* in November, 2012, increased the level of urban minimum living security financial aid to 235 yuan per month; increased rural minimum living security standards to 1,718 yuan the annual per capita; increased the level of rural financial assistance to 1,236 yuan the annual per capita.

² Chinese urban poverty incidence was between 7.5%-8.7%.

If accounting to the line of the urban minimum living security, a total of 60,000 various types of low staff about in Mudanjiang City. Some of three non-officers³ and some of the old and sick people mainly include.

2.1.6 Ethnic Minorities

Mudanjiang City is a multi-ethnic fusion of the land; it has 37 ethnic minorities in existence; it is the birthplace of Manchu and it is also the country's second largest Korean settlements. Accounting to the sixth census results of Mudanjiang City in 2010, the total population of ethnic minorities is 182,300⁴, of which a maximum of Korean population is 103,500, accounted for 56.78% of the city's total population of ethnic minorities. Manchu followed with 68,900, accounted for the city's total population of 37.79% ethnic minorities. In urban area of Mudanjiang City, a total of 33 ethnic minorities and total population is 59,600 including 35,000 Korean, 19,000 Manchu. The minority population of Mudanjiang City tends to negative growth⁵ compared with the fifth census data.

According to the introduction, with the development of society and economy, each ethnic minority gradually deepen their production habits, values and other aspects of the deepening with that of Han Nationality, and it has been very difficult to distinguish the big difference in urban area. But there are still some minority areas in subordinate part of the county and township in Mudanjiang City, their customs, language, food, ancestor worship and other aspects still retain their own characteristics of each ethnic. Among the population of ethnic minorities in Mudanjiang City, only a part of the Korean population still use

³ Inhabitants with no source of income, no ability to work, nor legal guardian or dependents.

⁴ According to the results of the Ethnic and Religious Affairs statistics by the end of 2012, there are 37 ethnic minorities in Mudanjiang City and the population of the ethnic minorities is 240,000. Accounted for about 9% of the city's (four city plus five counties (city)) total population. Moreover, North Korea, Manchu, Hui, Mongolian and other ethnic minority populations were also increased to 120,363 people, 99,286 people, 7,571 and 3,888, respectively, accounted for 50% minority population, 41%, 3.2% and 1.6% respectively.

⁵ Based on Statistical Yearbook of Mudanjiang City, analysis and achieve.

Korean, Korean language, and retained their national customs at present. This part of the population is concentrated mainly in old urban area between Xi'santiao Road and Xi'shiyitiao Road. Other ethnic minorities in urban areas such as Manchu have been highly assimilated into the Han Nationality, no longer use Manchu language, no longer wearing Manchu style. They fully follow the customs of Han Nationality in daily life and no longer follow the Manchu own folk. The basic situations of ethnic minorities in Mudanjiang City's sixth census are reflected in Table 2-4.

Table 2-4 Basic Situations of Ethnic Minorities in Mudanjiang City's Sixth Census

Minority	The result of sixth census in 2010		The proportion of ethnic minorities
	The whole city	Urban area	
Mongolian	2,817	1,251	1.5450%
Hui	5,972	3,654	3.2753%
Uighur	64	34	0.0351%
Tibetan	58	37	0.0318%
Hmong	128	88	0.0702%
Yi	33	19	0.0181%
Zhuang	92	58	0.0505%
Buyi	9	5	0.0049%
Korean	103,524	34,629	56.7768%
Manchu	68,902	19,425	37.7887%
Dong	8	6	0.0044%
Yao	14	7	0.0077%
Bai	45	5	0.0247%
Tujia	70	43	0.0384%
Hani	9	4	0.0049%
Kazakh	2	0	0.0011%
Dai	6	1	0.0033%
Li	34	28	0.0186%

Minority	The result of sixth census in 2010		The proportion of ethnic minorities
	The whole city	Urban area	
Lisu	6	0	0.0033%
Shui	1	0	0.0005%
Naxi	1	1	0.0005%
Kirgiz	10	4	0.0055%
Monguor	11	5	0.0060%
Daur	166	120	0.0910%
Mulao	6	6	0.0033%
Qiang	4	4	0.0022%
Gelos	3	2	0.0016%
Sibo	228	127	0.1250%
Russians	2	2	0.0011%
Ewenki	26	13	0.0143%
Elunchunzu	26	25	0.0143%
Hoche	41	24	0.0225%
Shes	6	1	0.0033%
Gaoshan	3	3	0.0016%
Wa	3	0	0.0016%
Jingpo	4	2	0.0022%
Bonan	1	1	0.0005%
Total	182,335	59,634	100%

2.2 Project Area

2.2.1 Areas Directly Affected by Land Acquisition and House Demolition

Overall, the project involved land acquisition and house demolition was less affected. In the preparation stage of the project, the project unit optimized proposals in order to decrease the resettlement impact.

The project is the pursuit of a smaller quantity of inputs to achieve better results. Take the part of the Integrated Bus Corridor engineering of five bus corridors and the one slow corridor as an example; its construction is primarily aimed at the original traffic line for line broadening and facilities optimization. But the optimization at the same time does not change the original road grade and maintain the speed of the original road design. The newly increased area of the road mainly comes from the stripping of original isolation belt, the adjustment of bicycle lane breadth and a bit open space near streets, does not involve new land acquisition and house demolition; as for the stations, through optimization, the first and last stations of the project decrease from 17 to 3, which means land acquisition reduces 123,000 m²; cancel foot bridge, that decrease land acquisition 10,000 m².

The project will newly increased land acquisition 7.74ha (116.1 mu), of which proposed expropriation of rural collective land is 3.05ha (45.75 mu); the project will occupy new state-owned land 4.69ha (70.35 mu).

The project does not involve house demolition.

The project proposed land acquisition will influence 3 administrative villages belong to 2 districts and 2 towns of Mudanjiang City, which are Beian Village and Yinlong Village of Sandaoguan Town of Aimin District and Hualin Village of Hualin Town of Yangmin District;

There are 26 households, 102 persons are influenced by the acquisition of rural collective lands, of which there is one household belongs to vulnerable group (one person, old people).

The resettlement general information of the project refers to table 2-5. More details can be found in *Resettlement Action Plan & diligence Due Report*.

Table 2-5 Resettlement impact identification and resettlement documents preparation of

sub-projects

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
The integrated public transport corridor engineering	Mudanjiang City Construction Bureau	The integrated public corridor	Taipin Road slow system comprehensive reconstruction	Footpath reconstruction, set up isolation, across street feasibility, parking feasibility, etc	Reconstruction in the original place, not involves new land acquisition, no demolition, no temporary land occupation, no livelihood impact problem.	Compile <i>resettlement Action Plan</i> and policy framework for the possible resettlement impact
			The construction of Xinan Street integrated transport corridor	Road section adjustment, footpath reconstruction, transportation engineering construction, set up isolation, remake attachment lamp-posts, pipeline, greenery,		
			The construction of Pinan Road integrated transport corridor	Road section adjustment, footpath reconstruction, transportation engineering construction, set up isolation, remake attachment lamp-posts, pipeline, greenery,		
			The construction of Guanghua Street integrated transport corridor	Footpath and motor line reconstruction, roadbed, road surface reconstruction, transportation engineering construction, set up isolation, crossing		

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
				reconstruction, attached lamp, pipeline, greenery, build a new over bridge		
			The construction of Xi'santiao Road integrated transport corridor	Footpath and motor line reconstruction, roadbed, road surface reconstruction, transportation engineering construction, set up isolation, crossing reconstruction, attached lamp, pipeline, greenery,		
			The construction of Dong'sitiao Road integrated transport corridor	Footpath and motor line reconstruction, roadbed, road surface reconstruction, transportation engineering construction, set up isolation, crossing reconstruction, attached lamp, pipeline, greenery,		
Public transport infrastructure construction	Mudanjiang City Bus Company	Repair factory construction	Repair factory construction in the east Daqing Road	Administrative office, technological management, life service facilities (recreation and spot, canteen, toilet, bachelor dormitory, medical matters)	Propose to expropriate collective lands 1.11ha (16.65 mu) of Beian Village of Sandaogua	Compile <i>Resettlement Action Plan</i>

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
				etc,that kind of office building, repair workshop,maintain garage,material warehouse,oil gas and so on, that kind of ,maintain building, stopping pad,test road,factory road, parking facilities, greenery,lighting,drainage,fire control facilities.	n Town of Aimin District	
		Public transportation transit hub center construction	Jiangnan public transportation transit hub center construction	Transit hub management, routes scheduling, monitoring, drivers rest,catering、 hygiene, buses parking	Propose to occupy4.29ha (64.35 mu) in Mudanjiang economic development zone. This land belongs to Yehe Village of Dongan District Xinglong Town of	Free allocation of state-owned lands included in <i>Resettlement Action Plan</i> and compile <i>due Diligence Report of Jiangnan Public Transport Transit Hub Center</i> for the land acquisition
		The first and last stations of public transportation	The first and last stations of Hualin public transportation	routes scheduling, monitoring, drivers rest,catering、 hygiene, buses parking, lighting, greenery	Propose to expropriate rural collective land 1.51ha (22.65	Compile <i>Resettle Action Plan</i>

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
			on		mu)in Hualin Village of hualin Town of Yangmin District,no demolition and temporary land occupation	
			The first and last stations of Bada		Propose to expropriate rural collective land 0.43ha (6.45mu) in Yinlong Village of Sandaoguan Town of Aimin District, no demolition and temporary land occupation	
			The first and last station of Fujiang Road		Propose to expropriate 0.4ha (6 mu) Dongjiang Village of Xinxing Street of Yangmin	Compile <i>the first and last stations of Fujiang Road land acquisition diligence report</i>

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
					District	
	Mudanjiang traffic police detachment	Transport security education center	N/A	Education base proposes to build with the construction of Mudanjiang City Transport Security Control Center, build two-floor new building in the west of traffic police center attachment building, only use as the Mudanjiang City Transport Security Education Base. This building includes transportation security exhibition, tele-education center, education print facility, etc	Extend in the original place, not involve land acquisition or demolition, no temporary land occupation impact, no livelihood problem impact	N/A
	Mudanjiang traffic police detachment	Bus drivers training center	N/A	1. Resting service center: planning occupy 420m ² , three floors on the land. area of structure 1260m ² , including student rest hall, supermarket, canteen, coach resting room, office. 2. Site reconstruction: because the current bus training place is abandon road, which need to be repaired. The actual road area is	Use abandon road Not involve land acquisition, demolition, no temporary land	Include <i>resettlement Action Plan</i> and policy framework for the possible resettlement impact

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
				18900m ² > 3. Vehicles and analog equipment: propose to purchase them. 4.accessary equipment: include one gas station staff vanish	occupation, no livelihood influence problem	
Intellectual transport system	Mudanjiang traffic police detachment	Intellectual transport system		It will expend and deep integrate on the base of Mudanjiang City Intelligent Transportation System, build "one data center, three business platforms and 11 business system", covers transportation comprehensive monitoring, signal control, illegal automatic recording, intelligent transportation scheduling, dispatching emergency transportation, public transportation information services and so on.	Not involve land acquisition, demolition, no temporary land occupation, no livelihood influence problem	N/A
Institution capacity building subproject				1) establish Mudanjiang City governmental framework of sustainable transport system;2) objectives	Not involve land acquisition, demolition, no temporary	N/A

Name of subprojects	Construction Units	Main construction contents of subprojects	Single project name of subprojects	Construction contents of single project of subprojects	Impact identification	Resettlement documents preparation
				and promote mechanism of capacity building and project management;3) investigation in developed countries in terms of transportation system;5) related issue research and technological advisory service	land occupation, no livelihood influence problem	
General impact of the project	The project will have new land acquisition 7.74ha (116.1mu), of which occupy new state-owned land4.69ha (70.35mu), free allocation; land acquisition 3.05ha (45.75mu) on the rural collective land. There are 26 households, 102 people are influenced.					

Figure 2-2 is a part of the sub-project planning and site selection and the proposed construction site situation.



Beian Street east, Diming Street, First and Last stop, located in the northeast corner of Mingxing Square



Yumin Road, First and Last stop, located in Jiangti Road, Qingmei Bridge



East of Daqing Road, Car insurance field



East of Bei Mountain, Musan Road, Hub station



Bus corridor: Xin'an Street and Dong'sitiao Road intersection

Bus corridor: Guanghua Street and Xi'shiyitiao Road intersection



Bus driver training base has been "expropriation" Lot 1

Bus driver training base has been "expropriation" Lot 2

Figure 2-2 A Part of the Sub-project Planning and Site Selection and the Proposed Construction Site Situation

2.2.2 Beneficial Areas

Mudanjiang Cold Weather Smart Public Transportation System Project mainly includes four parts: Integrated public transport corridor project; Intelligent Transport System Project; public transport infrastructure projects; capacity building and project management.

Integrated public transport corridor project mainly involves Xi'santiao Road, Dong'sitiao Road, Xin'an Street, Ping'an Street, Guanghua Street and Taiping

Road six lines in old urban area of Mudanjiang City. The direct beneficiaries of subprojects range in the table below 2-6.

Table 2-6 The Situation of Mudanjiang City Integrated Public Transport Corridor Project Benefits

Order	Project Name	Start location	Construction Content	Directly benefit range
1	Xi'santiao Road Bus Corridor	North from Xi'diming Street, south to Wusuli Road	Damaged pavement renovation, laying colored bus lanes, building 4 Pedestrian underpass or overpass, etc.	Length 6.9km, pedestrians, vehicles and all kinds of facilities along the Xi'santiao Road Will benefit due to line optimization and improvement of facilities.
2	Dong'sitiao Road Bus Corridor	North from Dong'diming Street, south to Bamiantong Street	Set bus lanes, building 3 Pedestrian underpass or overpass, etc.	Length 7.7km, shops, schools, other places and all of its service population along the Dong'sitiao Road
3	Guanghua Street Bus Corridor	West from Xi'santiao Road, east to Yumin Road	Set bus lanes, complete four intersection comprehensive transformation, etc.	Length 5.5km, Pedestrians, residential areas, hospitals, supermarkets, etc along the Guanghua Street
4	Ping'an Street Bus Corridor	West from Xi'shiyitiao Road, east to Zaozhi Road	Road widening, set the bus lanes, etc.	Length 5.8km, road users, maintainers and managers along the Ping'an Street will benefit due to the renovation and

Order	Project Name	Start location	Construction Content	Directly benefit range
				expansion of Bus Corridor
5	Xin'an Street Bus Corridor	West from Xi'shiyitiao Road, east to Dong'batiao Road	Road canalized, set bus lanes, etc.	Length 4.7km, various groups and facilities, etc along Xin'an Street Bus Corridor
6	Taiping Road NMTS Improvement	Starting point for the Taiping Road, Jiangbin Park and finish at East Jingpohu Road of south river	Footbridge across the river landscape construction projects and slow road infrastructure improvement projects	Length 1.2km, various groups, humanities and social environment along the Taiping Road will benefit

Public transport infrastructure construction subprojects are in charge of Mudanjiang City Bus Company, the main construction contents include bus hub, bus station and buses procurement, etc. Procurement of new buses will help improve bus carrying capacity, operating efficiency and quality of service of the bus company; The planning of bus stop insurance fields (also known as stop Paul Fields), first and last stops, hub stations and other supporting infrastructure projects will significantly improve the quality of the bus company's service and operating efficiency, while its beneficiary groups involving all these buses groups. The subproject beneficiary groups include not only the bus as the main way to travel to the resident population in urban area of Mudanjiang City, but also including the foreign population of workers, tourists and other people that come from the suburbs and the surrounding counties. It has a positive effect to enhance the image of Mudanjiang City, improve the city's ecological and human environment.

Intelligent Transportation System Project is in charge of Mudanjiang City traffic police detachment; it will expend and deep integrate on the base of Mudanjiang City Intelligent Transportation System, build "one data center, three

business platforms and 11 business system", covers transportation comprehensive monitoring, signal control, illegal automatic recording, intelligent transportation scheduling, dispatching emergency transportation, public transportation information services and so on. The direct beneficiaries of the scope of this sub-project is Mudanjiang City traffic police detachment, subproject construction has an important role of technical assistance to the improvement of its services and management capabilities; secondly, improving the level of traffic management and strengthening the people's awareness of traffic safety are both beneficial to reduce the accident rate and improve traffic efficiency, provide a useful reference of traffic improvement to the surrounding suburbs and counties while improve the urban traffic operating conditions; In addition, the project plan managed by Mudanjiang City traffic police detachment of the many bike rental points will provide Mudanjiang City residents and numerous foreign population with a convenient way to travel,⁶ provide new opportunities for the improvement of urban environment of Mudanjiang City and the development of the tourism industry. Figure 2-3 below is the shared bike rental points in Mudanjiang city bus corridors distribution.

⁶ As Mudanjiang is located in northern China, half of the year there is snow covered and lead to long winter freeze, unable to ride, but also accident-prone. Thus, the Shared Bike Project only implements in the summer.



Figure 2-3 Mudanjiang City Bike Rental Points Shared Planning Maps

As a fundamental part of Urban Public Infrastructure in fact, the scope of benefit area of MCWSPTS and its accurate number of the beneficiary population⁷ are often difficult to quantify, many positive effects are not dominant, but through "have or not contrast" to clearly understand great social effect of the livelihood projects.

Therefore, it can be seen that the main beneficiaries of the project area is the old urban area of Mudanjiang City. As Mudanjiang City will includes Hualin Town, Hewenchun Town, Hainan Township and other suburban towns into the scope of old urban area gradually, the beneficiaries of the project area will be extended to these areas for the regional disharmony problems caused by “individual contractors”, “divisions adjustment”, “the fare is higher than ordinary city bus

⁷ If calculate the traffic assessment rate carried by bus vehicles, the beneficiary population of the project is about 370,000.

fares” and other factors.

2.3 The Roles and Impacts of Urban Planning and Policies to the Project

The project design and implementation meet Mudanjiang city planning and related industry policies, make this project can be combined with the existing funding capabilities to optimize the allocation and can be advantageously facilitating the implementation of each subproject. In 2006 the State Council approved the “Master Plan of Mudanjiang City (2006-2020)”, pointed out that the Mudanjiang City's urban construction and development in accordance with the request of revitalization of northeast China and other old industrial bases strategy, adhere to the sustainable development strategy of economic, social, demographic, environmental and resource coordination. The plan clearly strengthens the planning and construction of infrastructure. Emphasis on urban road traffic infrastructure construction, prior develop the comprehensive transportation system organic combined by public transport based, multiple transportation modes. Specifically, it is necessary to improve the urban road traffic system, accelerate the construction of city static traffic facilities. Strengthen the city's rapid traffic contact between various groups, priority to the development of public transport, appropriate development of private cars, and strictly limit motorcycle and tricycle. Enhance traffic regulations publicity to enhance public awareness of compliance with traffic laws. This plan also laid MCWSPTS project and implement the urgency and priority. Figure 2-4 and 2-5 are master plan and road traffic plan maps of Mudanjiang City.

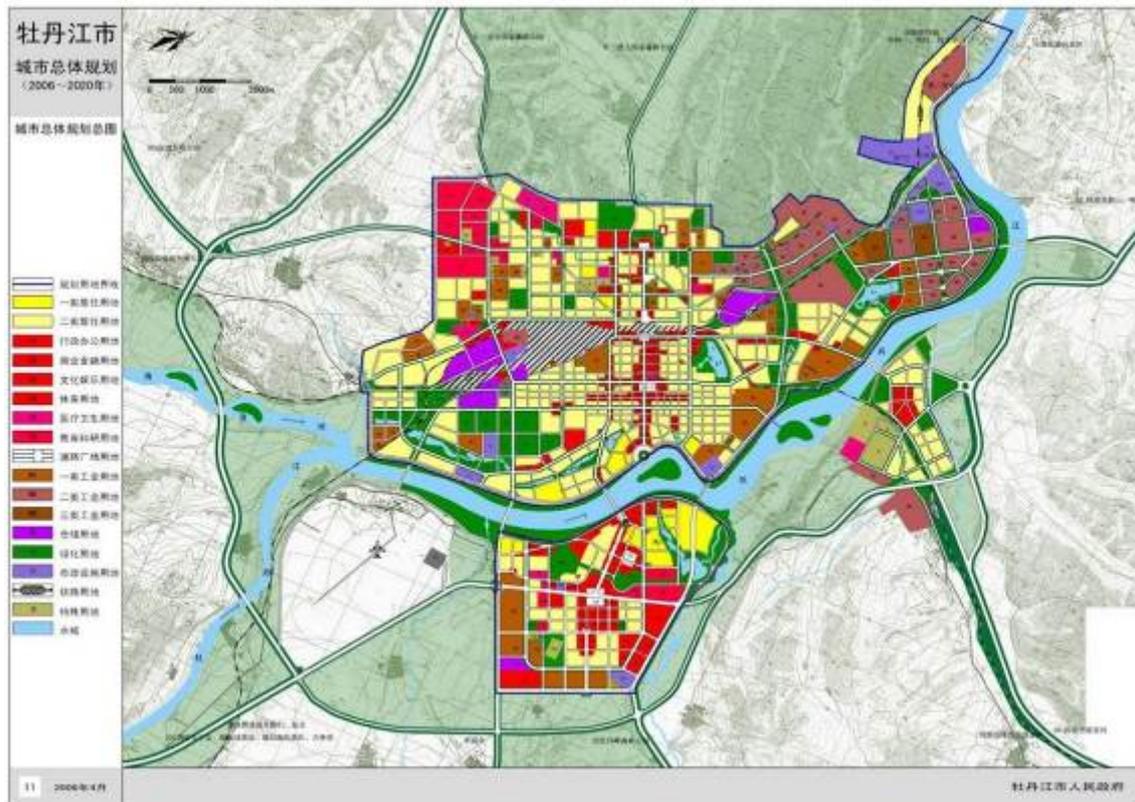


Figure 2-4 Master Plan Maps of Mudanjiang City

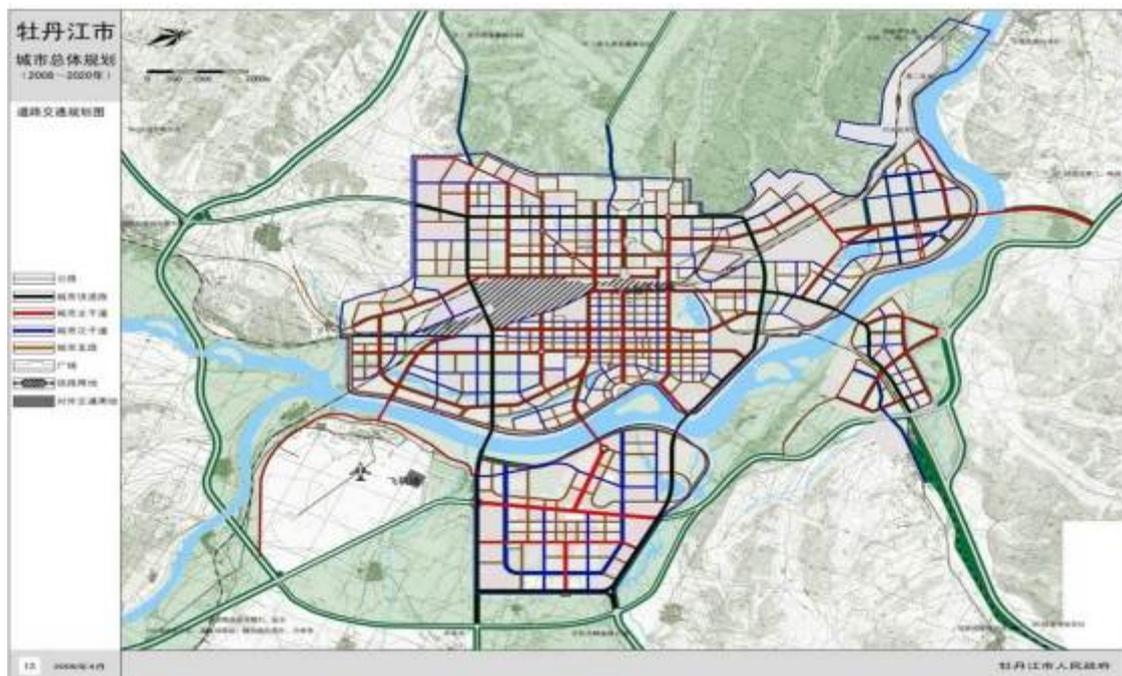


Figure 2-5 Road Traffic Plan Maps of Mudanjiang City

In 2012, Mudanjiang City Bus Company LLC initially completed the bus network plan and the bus station plan as the core content of the public transport

special plan; it lays the foundation for the determination of the MCWSPTS sub-project. Currently, the plan will improve in pace with the compilation of Comprehensive Transportation Plan of Mudanjiang City and the revising City's Medium and Long-term Plan, the project's social objectives and Mudanjiang City Plan's social development goal achieve better consistency. Meanwhile, Mudanjiang City Traffic Police Detachment compiled *Traffic relief plan for the central areas of Mudanjiang City* with Institute of Transportation of Harbin Institute of Technology in 2011, the goal is the spirit of "treating the symptoms" principle, comprehensive consider and propose solutions to ease urban area of Mudanjiang City's (Guanghua Street, Dong'sitiao Road, Xin'an Street, Xi'santiao Street area surrounded by and other individual congestion points) traffic congestion mainly from one-way street system, bus network adjustment, traffic signal optimization, traffic organization design and other aspects recently; Build perfect Mudanjiang City urban road traffic system and create a good urban road traffic travel environment from road network structural improvement, multiple business center construction, bus network optimization, traffic impact assessment, traffic demand management and many other aspects in the long-term. The program also provides a basic reference of the objectives, principles, contents, and security measures etc. for the construction of MCWSPTS municipal subprojects and traffic subprojects.

2.4 Analysis on the Role of Governments in the Project

Anyone of the projects is in a social environment, certain social conditions and in certain public range, in accordance with the public criteria framework. Comply with the rules of public is a precondition for the project construction to be carried out, and the government as a representative of the whole society, its basic function is to formulate the rules of public and supervise the implementation, therefore, have a major impact on the project. Government has a dual status and role in the project construction: to fulfill the functions of public administration, management, regulation and control of the whole social investment; assume

responsibility for public investment, provide public services and products for the whole society.

2.4.1 The Evaluation of Government Fulfilling Its Management Functions

Fulfill management functions of government has a positive impact on the achievement of project social objectives. Mudanjiang Government immediately composes the corresponding World Bank Loan Project Leading Group after applying for loans from the World Development Bank. In the process of the whole projects planning and implementation, when the distribution of interest become imbalance or unreasonable, Mudanjiang Government will appear as the identity of the social public interest representative. In compliance with the relevant laws and policies, regulate and distribute related social benefits based on the operation of relevant systems and mechanisms, in order to achieve an equitable distribution of the associated social benefits. Specific to MCWSPTS, Mudanjiang City set up the World Bank Loan Project Work Leading Group, its members and government positions are shown in table 2-8.

Table 2-7 MCWSPTSP Work Leading Group

Member		Position
Leader	Zhang Jingchuan	Municipal party committee secretary
	Lin Kuanhai	Mayor
Deputy Head	Li Dexi	Standing committee of the municipal party committee, Party members
	Cui Peiyuan	Vice Mayor
	Yan Zizhong	Vice Mayor
		Municipal Development and Reform

Member	Position
Members of the department	Commission
	Mudangjiang Municipal Finance Bureau
	Mudangjiang Municipal Construction Bureau
	Mudangjiang Municipal Department of Transportation
	Mudangjiang Municipal Planning Bureau
	Mudangjiang Municipal Land Resources Bureau
	Mudangjiang Municipal Environmental Protection Bureau
	Mudangjiang Municipal Accounting Office
	Mudangjiang Municipal Urban Management Bureau
	Mudangjiang Municipal traffic police detachment
Mudangjiang Municipal bus company	

As shown in the table above, leading group headed by Municipal party committee secretary Zhang Jingchuan, Mayor Lin Kuanhai of Mudanjiang City, deputy leaders of the group are Vice Mayor Li Dexi, Cui Peiyuan, Yan Zizhong and Director of Foreign Investment of PDRC Wang Xi. Municipal Development and Reform Commission, Mudanjiang Municipal Finance Bureau and other relevant departments are the members of the unit. Establish the Office under the Leading Group, located in Municipal Development and Reform Commission, the

Director of MDRC Fu Zhongyu hold a concurrent post as the Director of the Office, the Office is responsible for the organization and coordination work of the project. Among them, the MMDRC is responsible for the audit of pre-project master plan, each subproject proposals, feasibility study reports, preliminary design approval, foreign funds application reports submitted to the provincial and national DRP and other works; Mudanjiang Municipal Finance Bureau is responsible for project finance, debt management works; under the leadership of Project Leading Group and PMO, Mudanjiang City Longsheng Investment and Development Co., Ltd. is responsible for pre-project preparation, bidding procurement, project management and other specific works; City Environmental Protection Bureau is responsible for the project's EIA and other works.

2.4.2 The Evaluation of the Role of Governments as a Public Investor

City Bus System Project belongs to public goods provided by the government, and the government needs to be forward-looking in the provision of this project, the projects' objectives should also have high compatibility with various aspects of the targets in local society. The coverage of City Bus System Project is mainly for urban (city) residents, the approval and improvement of this project will help to improve and optimize the public welfare of city public facilities; meanwhile, the cost of such project services is primarily supported by government finance, reflecting the characteristics of public goods; finally, the government will ensure that the fair allocation of public goods. MCWSPTSP is directly led by leaders of Municipal Party Committee, MMDRC and so on. Implementation of the project is in strict accordance with World Bank's procedures and domestic procedures to promote the process, to make efforts to ensure public welfare and sociality of the project.

In addition, the government can rectify and standardize social injustices in the process of project implementation. Government can express responsibilities and rights of each stakeholder through the government open bar, related policies

opened in government website. When the existing policies are difficult to solve real-world conflicts, the government can adjust the policies according to the principles of social justice, so that the interests of the injured party can obtain reasonable compensation to eliminate social risks. When the projects are involved in land acquisition and house demolition, the corresponding social risks also will produce, then the government must appear as the identity of the social public interest representative, use the legal and policy means, regulate and distribute related social benefits based on the operation of relevant systems and mechanisms, in order to achieve an equitable distribution of the associated social benefits. Based on this knowledge, the government of Mudanjiang City make a meticulous plan on all aspects of projects management, government departments, enterprises and institutions involved can participate in the entire process, timely resolve the conflicts of interest, social risks and potential problems between each department, in the process of MCWWSPTSP implementation, eliminate the interruption of the project and other problems caused by unfair treatment.

In the aspect of the protection of the rights and interests of special groups, such as poor people, disabled people, women and children and so on, the government of Mudanjiang City constantly improves and provides the corresponding public service fee waiver policies, reflecting the suitability of project compensation that tilt to the vulnerable groups.

3. Social Impact Analysis

3.1 Project Impacts at Economic Dimensions

3.1.1 Regional Economy

The *Public Transport Special Planning* in Mudanjiang City is based on the idea of "big Mudanjiang". The worked out planning coheres with the compiling *Master Plan of Mudanjiang City* in terms of the spatial development strategy and the layout of land, both of them are trying to structure bus network model of "build new bus lines in new area, joint the lines in old area, combine urban area with rural area and form ring network. It provides premise condition in promoting the local spatial layout of industrial structure adjustment and economic growth mode optimization, as well as promoting healthy economic growth.

Macrocosmically speaking, implementation of the project makes for expanding the urban construction and development of the space, enhancing regional competitiveness, and laying a foundation for the sustainable development of urban conditions; helps to improve the comprehensive competitiveness of the city; promotes the overall urban image, and creates necessary conditions for the investment promotion and capital introduction and rapid development of the city. Micro speaking, the industrial base formatted in the history is the start point of the new industry layout. With the implementation of the project, liquidity of the road network and accessibility of the land could be improved, the inefficient path dependence has been broken, system innovation will be carried out, new efficient path dependence will be created, then we can form a new spatial pattern of industrial development. Moreover, the implementation of the project could improve the rate of population flow, promote consumption optimize economic growth pattern and translate the city traffic construction to a fast intelligent and economical development model, so

that the value of the land will increase.

3.1.2 Residents' Income and Distribution

The main construction area of the project is concentrated in the old city of Mudanjiang, whose retail trades, services and financial sector are all relatively developed. Families live in the area affected directly have stable income source and their income level is high to some extent. Some involved temporary area leaded by the extension of the Bus Corridors will produce certain effects to the operation of shops along the road, but during the project construction process, these affected residents will get some compensation fee for temporary area and loss of working time. After project operation, the more unrestricted traffic is beneficial to increase their business benefits. So, to short term, the construction of the project may have short-term effects on residents' income; but to long term, the implementation of the project will not affect the residents' income and its distribution their distribution within the scope, and it is more impossible to burden their life.

Meanwhile, public welfare and cheap tickets are two outstanding characteristics. Since 2001, the government of Mudanjiang City adheres to the principle of public welfare services, all the bus tickets set 1 yuan/people-once as standard, and cooperate with public welfare undertakings actively in Mudanjiang city, provide people older than 70 bus services, the blind and the disabled soldiers for free, the cost of free services as well as some part of supplement is paid by City Finance and District Finance. The ticket price will not be adjusted after the Mudanjiang Cold Weather Smart Public Transport System Project accomplished and will not lead to financial burden on households.

3.1.3 Employment

The project impacts on employment reflect in two aspects: project direct impacts on employment and project indirect impacts on employment. Among

them, the direct impacts can be divided into two stages: project construction and operation. During the bus projects and public utility projects construction, the technical staff and casual labors need to be employed. During the operation, the fixed workers need to be recruited who are engaged in daily operation and management of enterprises and maintenance work. Which means the project provides a lot of employment opportunities for local people, and it could be calculated during the project construction and operation, employment opportunities could be provided for about 14,200 people according to the coefficient of highway and transportation sector investment employment experience.

The project indirect impacts on employment reflect after the project construction. It improves the transportation condition of Mudanjiang City and its surrounding, promotes the development of relevant industries, and gives impetus to the improvement of local employment.

In addition, the benefits of the project also reflected in the aspect of social progress and environmental improvement. There is a progress for the project transmitting from the social and environmental benefits to economic benefits, and it reveals that the project impacts on local employment is long and subtle.

3.1.4 Infrastructure and Social Services

The complete of the project could increase the prevailing conditions of original bus transport to large degree, improve the bus operating speed, and bring huge time savings to passengers. At the same time, the improvement of bus service will attract more people choose public transport to travel, accordingly, travel by private car will be reduced effectively, the pressure of future road network in Mudanjiang City will be reduced, service levels for roads and junctions will be increased, the total vehicle kilometers and car hours on the road network will be reduced significantly, then vehicle transportation cost saving and time saving benefits, as well as benefit of the reduced bus

operating vehicles will be gained. Besides, the bus corridor integration project will improve transport condition greatly, then reduce the traffic accidents, bring convenience to the residents along for travelling and have certain social benefit. The table below shows the annual average passengers in Mudanjiang City from 2001 to 2012, and it reflects that new intelligent bus system operation will boost urban public transport infrastructure level and social service quality parameter values.

Table3-1 The Annual Average Passengers in Mudanjiang City from 2001 to 2012

UNIT: per person

No.	Year	The annual average passengers	Note
1	2001	94,629,973	/
2	2002	97,977,862.5	/
3	2003	100,930,566.5	/
4	2004	103,574,772.5	/
5	2005	105,967,274.5	/
6	2006	108,322,218	/
7	2007	110,675,701.5	/
8	2008	112,366,126	/
9	2009	115,094,902.5	/
10	2010	117,558,324	/
11	2011	126,254,704.5	/
12	2012	129,482,658.7	/
Total		1,322,835,084	/

On terms of social service, Mudanjiang city traffic police detachment is responsible for the implementation and management of road safety education and training center, which is the only road safety education and training and propaganda institution in Mudanjiang. The construction plan and operation

management of the Urban Intelligent Public Transport System Sub-project under extremely cold environment will be carried out as *Road Traffic Safety Law of the People's Republic of China*, adhere to the " eight road safety education principles" and provide a more convenient, efficient, scientific and intelligent technical and management support. Mudanjiang city traffic police detachment proceeds the education and training work on the road safety to city organs, army, enterprises, institutions, schools, related departments, and social scattered motor vehicle drivers, etc. with the help of the original road safety education training center of Mudanjiang. Set the operation vehicle enterprises running within the city scare as an example, Doc. Shan, the director of the safety training center trained driver for Mudanjiang concrete company, special operations vehicle drivers for road safety On March 24, 2012, November 20. There are about 600 motor vehicle drivers participating in. He also trained Mudanjiang City passenger transportation companies, Mudanjiang City public transportation groups, and Mudanjiang west-shiyi-road operating passenger cars for three days consecutively and in-depth On July 24, 2012, October, 20, November, 30 respectively. There are about 700 motor vehicle drivers participating in.

The effect of social service and satisfaction has achieved recognition and welcome to the city residents, and as the further perfect of the traffic safety training base as one of the sub-projects, the social service function will be further strengthened.

3.1.5 Urbanization

Several opinions about the implementation of the strategy of rejuvenating northeast China and other old industrial bases (In (2003) No. 11) published by CPC Central Committee and the State Council in 2003 shows that northeast China and other old industrial bases has risen as national strategy formally. It also published *The strategy opinion about further implement of rejuvenating*

the old industrial base by the State Council (In (2009) No.33), which symbols that the strategy of rejuvenating northeast China and other old industrial bases have entered a new stage. As the further implementation of rejuvenating northeast China and other old industrial bases, the industrial development space in Mudanjiang City will be further expanded, the regional economic development in Mudanjiang City will win a strong policy support, leapfrog economic and social development in Mudanjiang City will be brought great opportunities.

According to the "eight big economic zone" and "ten major projects" development strategy put forward clearly by Heilongjiang Province Committee, Mudanjiang City put forward to speed up the transformation of urban development and build the city group development pattern to form a regional urban system which is distinct, responsibilities clearly devised and rational layout. And it is made up by five function level contents regional central cities, borough central cities, center node town, Characteristic small towns, general towns. Then further construct and perfect the "bipolar drive, convection and radiation, response, linking" form of urban agglomeration. The development trend of Mudanjiang City traffic must put forward higher request to urban transport development.

Achieve the goal that drives the urban-rural integrative development through two city cores, Mudanjiang city (regional center city), Suifen River (borough central city). Mudanjiang city needs to strengthen the construction of infrastructure, especially construction of comprehensive transport network.

Construct the great network consists of the core cities connected groups, central towns, new rural communities and industrial concentration area, format three-dimensional integrated networks made up of modern railway, highway and aviation. Based on the rich tourism resources in Mudanjiang city, create unique green road system, connect the capacious space link among parks, natural protected area, resort, historical sites and other spacious space link

between densely areas, and then promote high level of economic development mode. Strengthen resource conservation and environmental protection, promote economic transmit from resource dependent to circular green, low carbon mode, enhance the capacity of urban sustainable development comprehensively by building green transportation environment and increasing the intensity of energy conservation and emissions reduction, then play an exemplary role for the other domestic cities to realize economic transformation.

Guided by the concept of "green safety", support the further implement strategy effectively of revitalization of the northeast of Mudanjiang city and "eight big economic zones, top ten projects" development strategy, promote the overall development of cities and improve urbanization level by establishing the safe, efficient, comfortable, low energy consumption, low pollution and comprehensive transportation system.

3.1.6 Vulnerable Groups

Vulnerable groups also called the social vulnerable groups. Vulnerable groups are defined according to one's social status, living conditions rather than the physical characteristics or physical state. It is general term for people who have difficulties in the society, incompetence or marginalized, scattered or exclude by social. Vulnerable groups involved in the project are mainly some "3 without" personnel and the old, weak, disease, remnants, women and young people in Mudanjiang city.

The project intends to develop construction with World Bank loan, so in the beginning of the project preparation and design, vulnerable groups problems involved in the project have been highly valued. The needs of elderly, women, all kinds of actual needs of the disabled people and children and other groups are given full consideration to, when purchasing of motor vehicles in the process, reconstructing the platform, reformatting roads, all of the junctions

have been reformatted comprehensively, the underground tunnels and overpasses or roads needed especially by vulnerable groups, such as road traffic facilities have been planned. The SA report of the project has conducted a number of vulnerable groups in certain area at the same time, collected their opinions and suggestions for the project. During the project preparation, SA group has fed back opinions and suggestions the project units and design units three times, and wishes them to consider in the design.

In addition, based on *Several Provisions of Preferential Policy for the Disabled in Mudanjiang City*, disabled people should get parking area at the station and other public venues for free, the blind could take the bus for free with certification, and bus companies should use electronic facilities to make it convenient to get on or off. According to *Rules about Discount for Elderly in Mudanjiang City*, bus companies in Mudanjiang City provide free bus card during the spring and autumn around the year for citizens who have the permanent residence and at least 70 years old or more.

The departments involved in the project planning, pay attention to according to the law particularly, through the provision of braille, sign language and voice prompt barrier-free services and facilities, have strengthened the consideration and support to the vulnerable groups in the city.

What's more, *Notice about the Opinions of Priority to the Development of Urban Public Traffic Forward by the Ministry Departments and so on* (SCS (2005), No.46) published by General Office of the State Council defined clearly that for cities carry out policy provide discount tickets or free of charge for the elderly, the disabled and disabled soldiers, and lead to public traffic enterprises policy loss, the Government should give subsidies. With the introduction of policies in Heilongjiang province and the nation, Mudanjiang city has also intensified efforts to give subsidies to local bus unit who loss because of the preferential treatment policy. Set the subsidies for the free bus subsidies for the elderly in Mudanjiang City as an example, according to the policy determined in the fourteenth session of the seventy-first mayor office

meeting on August 9, 2007, the cost of the free ride for the elderly over the 70 years old will be borne 30% by the city budget assumes, 30% by the Fucai Center, 5% by four district government respectively, a total of 20%, 20% by the city bus company. The policy that elderly vulnerable groups could take the bus for free has been properly implemented in Mudanjiang city, and the implementation of the follow-up support will be accompanied by the intelligent transportation system projects in Mudanjiang city to further increase.

It is obvious according to the analysis above that, the implementation of the road-traffic integration project could improve the safety of vehicles, bus passengers, pedestrians and non-motor vehicles, reduce the number of traffic accidents, dead, injured and direct economic loss brought by accidents. To vulnerable groups, they are relative weak in terms of income distribution, employment and the ability to enjoy public service, the Intelligent Public Transport System Project creates the conditions to improve their weak position and ensure they could enjoy the achievement of economic development in Mudanjiang City.

3.2 Project Impacts at Social Dimensions

3.2.1 Social Environment

Humanistic environment is the attitudes of a regional community, concepts, belief systems, cognitive environment, etc. For this project area, even more is a kind of the local culture and customs closely contacted with the natural environment. Specially:

(1) From the perspective of the function of project, after the project completed, it could improve the state of traffic management; reduce the incidence of traffic accidents effectively in the foreseeable period in Mudanjiang City. During the period from 2007 to 2011, a total of 1233 traffic accidents occurred (not including slight accidents), dead 574 people, injured 1389 people, the direct property loss 5,666,350 yuan in Mudanjiang City.

Table 3-2 below shows the distribution of traffic accidents every month from 2007 to 2011 in Mudanjiang City, and the table 3-1 represents the monthly average distribution of these accidents.

Table 1-2 the Distribution of Traffic Accidents Every Month from 2007 to 2011 in Mudanjiang City

UNIT: Per accident

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2007	161	159	113	166	174	221	223	151	211	196	205	165
2008	128	146	161	161	187	162	155	170	176	174	165	129
2009	89	96	101	105	104	151	131	130	146	129	135	106
2010	84	55	75	83	93	121	158	132	167	159	181	131
2011	77	60	84	87	110	132	123	150	155	159	100	/
Monthly average	107.8	103.2	106.8	120.4	133.6	157.4	158	146.6	171	163.4	157.2	106.2

Note: the number of accidents including the slight

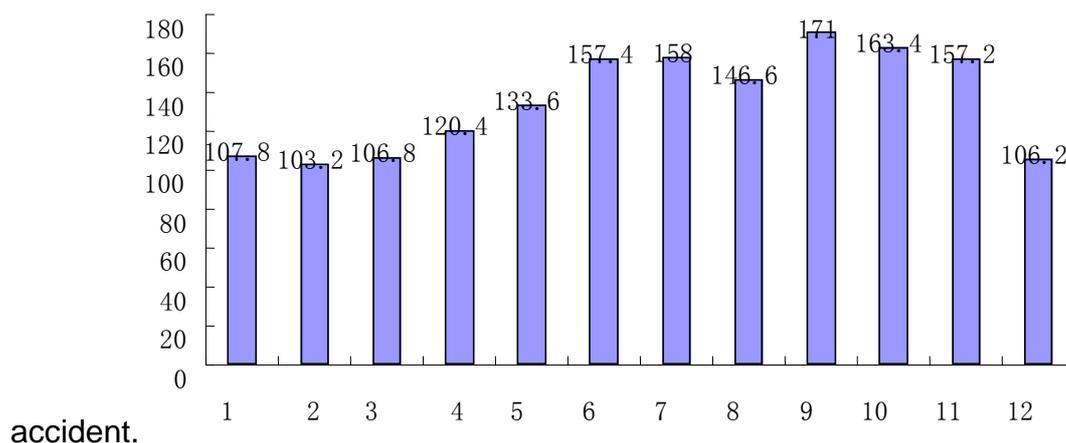


Figure 3-1 the Monthly Average Distribution of Traffic Accidents from 2007 to 2011 in Mudanjiang City

In Mudanjiang city, traffic accidents are concentrated around September every year, the traffic accident rate is relatively low in winter or around, the

operation of Mudanjiang Cold Weather Smart Public Transportation System Project has positive effects on reducing or eliminating inducing factors of traffic accidents such as not to give way in accordance with the regulations, speeding, drinking and driving, in violation of the traffic signs marking, in violation of the traffic signal, illegal lane change, illegal operation, illegal overtaking, illegal turn around, passing each other illegal, illegal parking and so on.

(2) From the perspective of project units and personnel, units in charge of project design, construction, management, supervision and etc. all have rich experience in project, are familiar with project operation process and technology, and most of their concrete construction personnel are local and can communication and coordination with the affected local people well.

(3) From the perspective of the bus corridor project construction effects, bus corridors in Mudanjiang City are all expanded and optimized based on public utility lines, have little effect on production and living of groups who use surrounding shops, residential areas, factories and roads, and will not conflict with the local social culture, customs or religion.

(4) From the perspective of transportation, energy and environment, municipal sub-project implementation will reform the main traffic network in the old city of Mudanjiang City and bring in more new energy vehicles. Its operation will improve the traffic planning and management greatly in Mudanjiang city. All these actions have positive and obvious effects on improving problems such as transport chaos existed for a long time in urban transport operation, high traffic energy costs and serious environmental pollution.

(5) From the perspective of sub-projects, implementation can improve their work environment and hardware facilities. Through capacity building projects, their professional quality can be perfected, their professional knowledge and management level can lay a foundation to the further

development of unit at the same time.

To conclude, the project has a good adaptability with the social environment of Mudanjiang City and surrounding counties. And through this chance, public transport options, road and traffic safety and consciousness of right maintenance are also improved in the project area.

3.2.2 Cultural Heritage

With the development of social and economy, the traditional culture has been impacted sharply, national culture is getting lose its direction in the tide of development. It is urgent to strengthen the protection of cultural heritage. Department of cultural heritage management in Mudanjiang city carries on the protection and search effectively through a variety of forms and carriers in cultural heritage protection work. There is many non-material cultural heritage but little natural and cultural heritage in the project area. In terms of citywide, three sections of sidewall Mudanjiang city were included as the part of the Great Wall of China resources investigation project in 2007. From then on, sidewalls in Mudanjiang city called “ the Great Wall built in Tang Dynasty” were incorporated into the Great Wall of China world cultural heritage list together with the Great wall, and became the first project included in the project in the world cultural heritage list in Mudanjiang city and Heilongjiang province. Moreover, there are 47 items included in the list of provincial intangible cultural heritage in 2012 in Mudanjiang city, accounts for about 25% of the province. Of course, all these material or non-material cultural is not in the project area, and all of sub-projects do not involve these intangible cultural heritage.

3.2.3 Religious Facilities and Worship Facilities

There are 5 kinds of religion in Mudanjiang city including Buddhism, Taoism, Islam, Catholicism and Christianity, 262 sites for religious activities registered lawfully, 105,321 religious believers, about 63,975 Buddhism believers, 28,534 Christianity believers, 7,588 Islam believers, 3,560 Taoism

believers, and other 1,664 Catholicism believers. In the project area, there are some religious facilities and worship facilities, but all of them will not be impacted by the project. Although project construction sites are all more than 200 meters distance away from these facilities, we should pay attention to reduce the short-term effects of these facilities. Among these religious facilities, several Provincial and significant religious facilities are within the project influence scope in Mudanjiang city, including religion the Yuantongjiang Temple passed by the 18th bus, the City Mudan Christian Church, the Tianxian Palace along State Road 20 and the Mosque located in Dong'an District Mudanjiang City and so on. Considering the engineering properties of municipal road as traffic improvement projects, the main impacts on the religious facilities are centralized on the temporary traffic or noise effects during the construction period. Although traffic impact is universal during the project period, while holding religious ceremony or religious activities, project owner should try their best to reduce construction and the impacts of noise. There are four location plans of extracted typical places of religious sites in Mudanjiang city below, it can be seen clearly from the figure that based on the nature of the project, generally, the span of the project effects on the space of the religious facilities and events is small.



Yuantongjiang Temple
(the 18th bus passes)



Tianxian Palace
(Along State Road 201)



Mosque (the 18th bus passes)

the City Mudan Christian Church

Figure 0-2 Religious Facilities within the Project Influence Scope

In China, traditional customs are thought highly of since the ancient time, and the grave relocation is not only from one place to another, it contains emotional, cultural factors. Within the scope of the project there is no grave relocation.

3.2.4 Analysis on Special Impacts

3.2.4.1 Social Gender Analysis

The differences of male and female are not only in physiology but also in the social roles, which cause different impacts on different gender induced by the project and different influence on the project resulting from different gender. Women (including children) are often regarded as the vulnerable groups, their environmental sensitiveness is high, and their rights are easy to be encroached on, so we must realize the information about women and children, identify the degree of the project impacts on women and children, thus the corresponding measures should be taken at the initial stage of the project to minimize or avoid the impacts on women and children.

There are 447,028 female in total in Mudanjiang City (shown in Table 2-1). Due to the improvement of traffic facilities, the increase of some auxiliary facilities, more clearly marking system, etc. there is no doubt that the project has universal and positive impact on women, especially older women and pregnant women. At the same time, the weak and the actual inequality status

of women's physiological, psychological, and social status on will be improved more obviously in the process of the project investment and operation. Among all the traffic accident victims in Mudanjiang City, a number of them are children and women, the improvement of urban public transport management and the service level has more obvious effects on this community than the strong social group. Meanwhile, the construction of the project can provide female population more convenient traffic environment, more employment opportunities and even some lifestyle changes in Mudanjiang City, such as the mode and frequency for shopping, leisure and travel, etc. And there is no denying that all of these have positive significance. Meanwhile, the project can provide convenient public transportation service, the intelligent scheduling can cut short the waiting time, electronic information system can provide convenient and clear directions, and the construction of infrastructure can ensure the temperature for waiting and taking buses. These provide the favorable guarantee for the physical and psychological health of women and children: 1) many women and children do not have a strong sense of direction, the reminder of electronic information system can support them to find the bus that they need; 2) The buses station and buses have high rate of sexual harassment. The project plans to install electronic eyes in the platforms and new purchase buses. That will be convenient for the administrative staff to know the latest condition and it is also beneficial to deal with the public security accidents. Moreover, the installation of electronic eyes can deter some criminals; 3) Female (especially, old women and pregnant women) and children is weak and sensitive to the temperature of surrounding environment, the construction of station and purchase of new type of buses can provide them warm environment for waiting and taking buses; 4) The main users of buses are women, and the development of municipal public transport is also beneficial to the life and work of female and then this will improve the Mudanjiang's economical development and citizen living quality.

Therefore, it will be beneficial to the women development of Mudanjiang and guarantee their needs of going out and public security.

3.2.4.2 Ethnic Minority Analysis

In the downtown area of Mudanjiang City, there are 33 ethnic minorities in total, and the population is about 59,634, including the about 35,000 Korean nationality and 19,000 Man nationality. With a long-time contact with the Han nationality, all nationalities includes Korean nationality participate in the social and economic lives of the Han people at all levels in different ways and means, with high fusion in the culture and the mainstay of the economy, and the intergradations of housing, clothing, food, working, and lifestyles, there is no obvious difference from the Han people expect that they remain their traditions of festivals, rites and customs which are different the Han's. In recent years, the "national tour" built by Mudanjiang City built of have achieved the initial results, but it still far away from the desired effect and function. The fact that merging folk tourism industry has yet to gain substantial breakthrough is relevant to the high assimilation of ethnic minorities.

The planning of intelligent transportation system project has considered and combined industrial structure adjustment with economic development planning in Mudanjiang City. So the implementation of the project will be conducive to the healthy development of the whole city economy, and promote the development of the ethnic minorities area, bring more opportunities to expand the national communication. In the meantime, the improvement of public transportation can promote the quality of the folk customs tour and depth, provide economic and social development conditions for the Mudanjiang minority areas as well.

Minority dominated by Korean nationality in Mudanjiang city and the population is about 35,000. They live in the area spanning from Xisantiao Road to Xishiyitiao Road. In the process of construction and operation of the

intelligent transportation system project, we should give full consideration to the Korean minority languages, travel habits. In the minority concentrated region, such as the area spanning from Xisantiao Road to Xishiyitiao Road, bus station, bus stop and the station name report settings should be given fully respect to the minority appeal. Even if lack of the will of corresponding expression, we should provide bilingual or multilingual service (bus stop and voice) as possible as we can, and promote national communication and national development through the implementation of the project.

3.2.4.3 Involuntary Resettlement Impacts

Involuntary resettlement should be avoided in the process of project construction as far as possible, but project construction needs to requisition certain land. So, involuntary resettlement is inevitable to some extent. Involuntary displaced people induced by project construction are divided into two types: Physical immigration (relocation) and economic migrants (loss of property). The reasons resulting in resettlement are different, the degrees of impacts also are different. For the displaced person of land acquisition, they lose the opportunities to earn income and the living standards of their families may be affected because of land loss. For the displaced person of house demolition, if the resettlement areas have some changes, social networks and social capital will be changed with the relocation, some social conflicts may be taken place during the resettlement, and the issues of social intergation and social adjustment will be involved in after relocation.

The land expropriation of the project will increase 7.74 ha (116.1 mu), among them, proposed rural collective land is 3.05ha (45.75mu); will occupy state-owned land 4.69 ha (70.35mu)

This project is not involved in household demolition.

The project proposed land acquisition will influence 3 administrative villages belong to 2 districts and 2 towns of Mudanjiang City, which are Beian Village and Yinlong Village of Sandaoguan Town of Aimin District and Hualin

Village of Hualin Town of Yangmin District;

There are 26 households, 102 persons influenced by the project, which induced by expropriation of rural collect land. Among them, there are one household belongs to vulnerable group (one person, older).

More details can be found in *Resettlement Action Plan & Due Diligence Report*.

3.3 Project Environmental Impacts

As the scale of urban construction is expanding constantly and the city traffic management is becoming more and more complex, due to the advancement of urbanization the requirements for the robust and intelligent city public transportation system are higher and higher due to the advancement of urbanization. From the point of view of project impact on the ecological environment, energy conservation and emission reduction is not only a long-term strategic task, but also a pressing task at present. Take comprehensive consideration and implement energy-saving and emission reduction measures in any project construction process, have very important significance to the construction of a resource-saving and environment-friendly society. MCWSPTSP sets “ safety, fast, economy, and advanced” as the goal, considers the traffic conditions and functional requirements, combines functional analysis, traffic demand with the actual conditions, pays full attention to the relationship between regional road network convergence and function coordination and deals well with it. The project realizes urban green transportation by developing public transport and it is a low carbon, environmental friendly, energy saving and green engineering and benefits every citizen.

Bus projects empty resource allocation to bus system while constructing the roads in the Mudanjiang City. The promotion of bus priority lanes is sped up; the efficiency of urban road traffic is improved by accelerating the

promotion of bus priority lanes and public transportation infrastructure. At the same time, through accelerating the application of urban intelligent transportation technology, reducing urban traffic congestion, improving the bus running environment, reducing the fuel consumption to reduce pollution gas such as carbon dioxide and sulfur dioxide emissions and improve the quality of urban environment. Meanwhile, the project plans and invests in new energy buses, sets the energy-saving emission reduction of buses as one of project components, uses economic strategy to encourage the implementation of energy-saving strategy, sets the concept of energy-saving and emission reduction run through the whole project. According to the calculation of Environmental Protection Administration in Mudanjiang City, a traveler travels by bus will produce 4.1 kg of hydrocarbon, 28.6 kg of carbon monoxide, 28.6 kg of carbon monoxide and 2.3 kg of nitrous oxide less than by car per year on average. Based on it, the environmental improvement effects of the project are obvious. The construction of the Intelligent Public Transport System Project will form an integrated intelligent system, improve road traffic conditions, ease traffic congestion, save the vehicle operating costs and reduce the motor vehicles emissions and the influence of traffic noise on the urban environment by transforming bus corridor, constructing the urban intelligent traffic management system, intelligent traffic system and the bus infrastructure and so on.

3.4 Other Impacts

The construction and implementation of this project will improve the changes of social consciousness, with the implementation of pre-feasibility studies for World Bank loans and the loaning work, its additionally scientific and normal project feasibility studies, project implementation, management modes and human-oriented thought will be carried out. Thus enhancing the management levels of the personnel in relevant functional departments of the people's governments at all levels, improving the academic levels and

technical levels of project consultant, technical staff and skilled worker involved in the project implementation. With the effective impacts of the management mode and management level of WB, all participants of this project and the construction will be affected imperceptibly, to improve their scientific and normal management consciousness and human-oriented ideology.

In addition, the implementation of the project enables participants to learn and be familiar with the improvement and optimization of bus corridor project, implementation and operation process and technology. It also makes the residents and the surrounding masses including the poor and vulnerable groups have a better understanding of the intelligent transportation system facilities, and it improves the technology and enhances the management level as well. The implementation of the project improves the road and traffic safety awareness of residents living in the affected area, improves the legal consciousness and awareness of policy of all levels of government management personnel, people participate in the project and people affected by the project, and makes benefits to social coordinated development, stability and unity.

4. Stakeholder Analysis

Stakeholders are each institutions and individual who have direct or indirect benefit-based relationships with the project, and they all have direct or indirect affect to project. In project preparation process, we can help project decision maker's response to different stakeholders affected by the project and make analysis and judgment through stakeholder analysis. So, in terms of content of analysis, not only contains the concerns of the stake in the stakeholders and project, their roles played in the project, their attitude and the influence degree on the success or failure of the project construction; but also contains influence to the stakeholders and the different levels and requirements of different stakeholders affected by the project. On this basis, put forward compensation measures and ways to the aggrieved group, set up participation mechanism to promote all kinds of stakeholders to cooperate with each other. Specifically the identification process is shown below:

First, identification of stakeholders: identify different stakeholders according to the influence level and the relationship with the project;

Second, the needs and influence of the stakeholders: analyze and assess the reaction and function of different stakeholders;

Third: impacts on stakeholders: analyze and assess the significance of different stakeholders according to the objections of the project;

Fourth: disclosure of information, public participation and project risk avoiding: publish the participation case for different stakeholders, put forward reasonable measures, and avoid risks.

4.1 Main Stakeholders Identification

4.1.1 Process of stakeholders identification

The identification of stakeholders mainly contains individual, groups or

communications affected by the project and the funding agencies, relative project management and enforcement agencies (including plan, design, consulting and management institutions, etc.) and other relative agencies. The identification of stakeholders includes judgment and analysis of the project stakeholders. According to the character of the project, identify and analyze stakeholders of the MCWSPTSP with the methods such as literature, interview and experience.

4.1.2 Category and analysis of the stakeholders

4.1.2.1 Category of stakeholders of MCWSPTSP

Due to the identification of stakeholders, the relative stakeholders includes government and agencies, PMO and Enforcement agencies, impacted groups because of the land requisition and removal; inhabitant in the project service area, floating population; vulnerable groups; and other stakeholders. According to the effects, stakeholders could be divided into beneficiary, impaired party, stakeholders benefit and impaired from the project, and vulnerable groups.

4.1.2.2 Analysis Matrix of Main Stakeholders of MCWSPTSP

Analysis matrix of stakeholders is a useful tool to conclude and compare the different stakeholders according their correlation with the project, characters, and effect. And it is used to analyze the stake of main stakeholders in the project (direct benefit, indirect benefit, direct affected, indirect affected), roles, attitudes, and degree of influence.

Table 4-1 the process of identification of stakeholders

Process	Contents	The Feasible Tools	Goals
First	Preliminary identification of stakeholders	Communicate with MMDRC and PMO about the early stage of SA; Analyze the character of Smart Public Transport System Project; The literature review; Previous experience of other urban transport project	Identify all the stakeholders who have direct or indirect benefit-based relationships with the project.
Second	Main stakeholders Identification	Have information discussions with government and agencies, PMO, Public utility transformation sub-projects office (Construction bureau), Public Transport transformation sub-projects office (The bus company), the transport management sub-projects office (Traffic police detachment), sensitive spots along(communities, hospitals, schools, religious sits), Scientific research and	Identify the stakeholders who have direct impact on the success or failure of the project construction and distinguish the stakeholders to different categories.

		design units, Environment assessment units; The field reconnaissance of the integrative transport corridor, the transport supporting infrastructures and intelligent transport system.	
Third	Analysis of the main stakeholders	Have symposium with relative agencies, the public and the vulnerable groups to understand relationship between stakeholders and the project, and requirements of different stakeholders from many aspects; Field reconnaissance; Questionnaire about travel of residents; Questionnaire about traffic police; Questionnaire about bus drivers; Questionnaire about vulnerable groups.	Analyze requirements of different stakeholders, the impact on stakeholders by the project and the impact on the construction of project by stakeholders.
Fourth	Reinforce and reduction	Communicate with PMO, sub-PMO, design unit of the project about preliminary results of the investigation, put forward feasible measures and	Improve the positive effects of the project, reduce or eliminate the negative effects at the same time.

		put them into the later design.	
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Table 4-2 Category of Stakeholders of MCWSPTS

Category	Stakeholders of MCWSPTS	Judgement
Beneficiary	Government and agencies, PMO, The bus company, Traffic police, Residents, Floating population, Project implementation agencies and so on.	Realize the public function of organization; Meet public service requirements; Acquire direct economic benefit.
Impaired Party	Groups and shops impacted by the rebuilt and expanded road line; Groups affected by the relocation of platform, car park, the first stage and the last stage, park and protect spot, hub stage and slow bridge.	Loss of tangible assets such as land and houses; Loss of intangible assets such as social relationship; Be forced to change livelihood and lifestyle.
Stakeholders benefit and impaired from the project	Communities, shops, schools, hospital, enterprise, etc. along the three-dimensional and integrative bus corridor affected temporarily by the construction of the project.	Inconvenience of travel for a short time; Meet the travel requirements with the improved traffic; Improve the traffic economic and increase the social benefit.
Other stakeholders	Land and Resources Bureau, civil affairs bureau, Social Security office, EPA, RTA, senior citizens' work committee, the Women's	Property of the project; Realize the functions of agencies.

Category	Stakeholders of MCWSPTS	Judgement
	Federation, Organization on Disability, etc. NGO, voluntary association, WB	
Vulnerable groups	Poor families, female-headed households, women, minorities, lonely elderly, children, disabled in project area and service area after the completion of the project.	Weak characteristics of groups; Voice and the ability of participation.

Table 4-3 Analysis Matrix of Main Stakeholders of MCWSPTS

Stakeholders	Stake	Roles	Attitude	Degree of influence
Government of Mudangjiang City	Indirect	Organize, coordinate	Support	High
PMO and other government agencies	Indirect	Organize, coordinate	Active	High
Public utility transformation sub-projects office	Direct	Implement	Active	High
Public Transport transformation sub-projects office	Direct	Implement	Active	High
Transport construction management sub-projects office	Direct	Implement	Active	High
Groups impacted by the land requisition and removal and	Direct	Affected	Support, worry	High

Stakeholders	Stake	Roles	Attitude	Degree of influence
organization agencies				
Groups impacted by the temporary land requisition and organization agencies	Direct	Affected	Support, worry	High
The construction process of reformation of the road line “Three vertical and two horizontal a slow” affects the daily life of surrounding groups and the operation of organizations.	Indirect	Affected	Support, worry	Middle
Groups affected by the construction process of the first stage and the last stage, park and protect spot and driving training center.	Indirect	Affected	Support, worry	Middle
Travelers in downtown of Mudanjiang City	Direct	Beneficiary	Support	Low
Special groups (Especially elderly, children and disabled)	Direct	Beneficiary	Support	Low

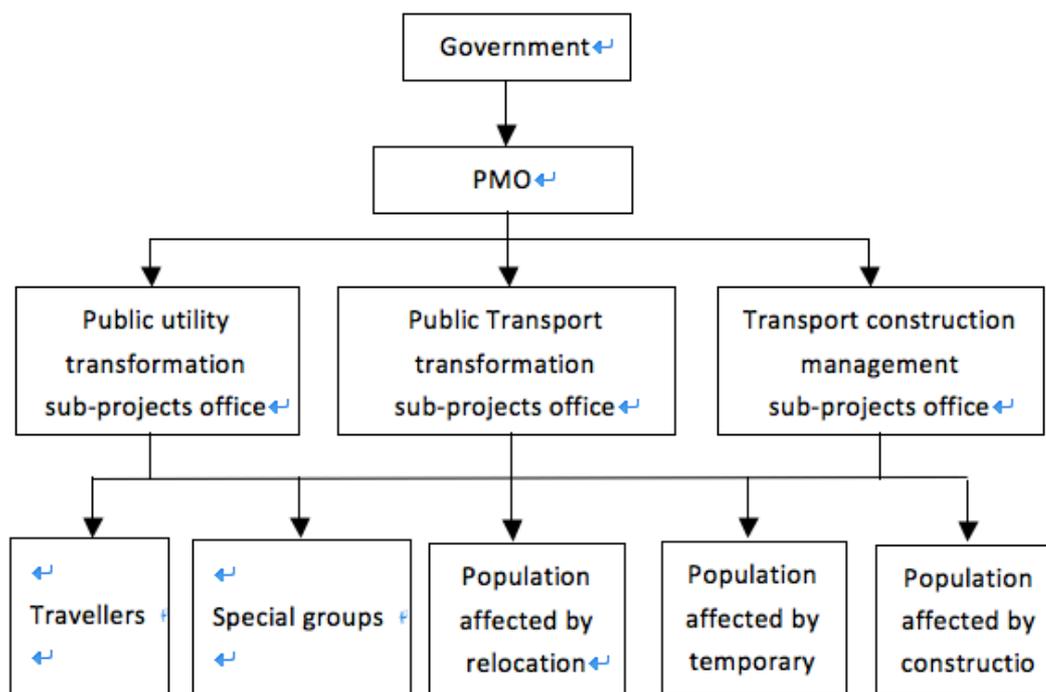


Figure 4-1 Stakeholder Relationships

4.2 Requirements of Main Stakeholders

4.2.1 Government of Mudanjiang City

The government has dual position and effect: the first is to fulfill the function of public management, to manage and regulate the social investment; the second is to bear the responsibility of public investment, and provide public service and production to public. The government plays a dual role in MCWSPTSP as “the promoters of urban development” and “servers to citizen” as well.

First, project implementation can introduce WB capital; reduce the pressure of government investment in infrastructure, speed up the transformation of urban development and the requirements of promoting the process of urbanization in Mudanjiang city;

Second, project implementation can give priorities to develop bus system, deal with extremely cold environment, meet the requirements of citizen’s daily

travel and the construction a city comfortable to live in and convenient to travel;

Third, project implementation can lead residents to drive green, improve problems such as traffic congestion and environment pollution and realize energy and greenhouse reductions; t

Fourth, project implementation can realize the intelligent traffic management, strengthen traffic safety, and realize the information and data sharing between traffic and travelers.

Table 4-4 Different Kinds of Requirements of Government Project Construction in Mudanjiang City

Types	Sources of requirements
City development	According to the explicit implementation of the revitalization of northeast strategy and “eight economic zones and ten projects” strategy raised by the Heilongjiang Province Provincial Party Committee, promote integral development of Mudanjiang City, promote urban integration development of Mudanning area; improve the level of urbanization.
Livelihood development	The specificity of extremely cold environment in Mudanjiang City limits the residents’ usage of bus in winter, makes daily travel difficult. As a Livable City with good ecological environment, an excellent environment for winter travel should be created to meet the travel requirements and propose residents to drive green.
Traffic safety	The character of winter climate leads to the traffic congestion, the increasing of traffic accidents, and affects the efficiency and safety of residents’ travel. The intelligent traffic information analysis, sharing and usage system has not been established in Mudanjiang City.
Energy and greenhouse reductions	National “12th five-year plan” for energy and greenhouse reductions proposes that “Plan the reasonable urban pattern, optimize traffic resource allocation, construct the development mode of urban traffic emphasizes on public transport, prioritize public transportation, construct rail transportation in an orderly manner, speed up the development of rapid transit, carry out eco-driving, and advocate drive green, pay attention to the

	construction of pedestrian and bicycling system, develop the intelligent traffic system, construct the Public Travel Information Service System, reinforce the eliminate of traffic congestion.” The project tries to consider and meet the requirements of energy and greenhouse reductions.
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4.2.2 PMO of Mudanjiang City

PMO of Mudanjiang City is set in MMDRC, and headed by the leading group of PMO. And there are several departments in charge of organization and coordination, such as Land and Resources Bureau, City Construction Bureau, RTA, PSB, bureau of finance, civil affairs bureau, Social Security office, Education Bureau, and planning department, design department , engineering department , consultancy service, etc. Therefore:

First, PMO are mainly in charge of organization and coordination, hope for more power to advance quickly and orderly progress of the project;

Second, PMO hope to organize all departments involved in the project to strengthen the communication and coordination with each other and to enhance the efficiency of the public service through the implementation of project;

Third, PMO hope for the success of the construction, which will be the performance of main leaders and staff in the agencies, and hope for reward to improve the working condition and environment as well;

Fourth, PMO hope the leaders pay attention to them and especially give capital support. At the same time, they hope the programs can be reduced to speed up the project process, reduce the costs, get loan as soon as possible and complete the tasks given by leaders.

Table 4-5 Leader group of the project

Name	Members	Main responsibilities
Leader group	Clerk, headman of the leader group, deputy leader acted by the leader of government who is in charge of project, deputy leader acted by relative leaders, and relative units.	Put forward development strategy and plan of intelligent bus system, make sure construction project and study plan, organize and coordinate implementation of important project, push for the support of strategy, fund, and project.

4.2.3 Other Agencies of Government

Agencies of government involved in including Land and Resources Bureau, bureau of finance, civil affairs bureau, EPA, City Construction Bureau, RTA, PSB, , Social Security office, planning agency, etc.

First, from the perspective of cost sharing, they cannot benefit from the project at all, but the content of construction is one of their main job. Without the project, they will suffer no loss, and with project, they have to whip out special staff to take charge of the work of the project and must affect other work. So the project may be a burden to them. They hope the government can take their coordinate work into consideration and give some office expense when necessary.

Second, from the perspective of organization benefit, due to the content of the requirements of public transport, realization of public functions of government, they hope the project can complete as quickly as possible as the beneficiary.

Third, from the perspective of participation, they participate passively in the administrative intervention. Because of passive participation, government is very important during the whole process. If the supervision of regulatory agency does not reach the designated position, the participation may be discounted.

Table 4-6 Symposium with Relative Government Agencies

When talking about requirements of the construction, each department give proper advances from their perspective.

Land and Resources Bureau: If the project involves rural land collection, we should do a good job of compensation and livelihood recovery security measures.

Price Bureau: If the project involves the change of bus ticket, we should take the hearing procedure, listen to the opinions and get the support of the community.

EPA: When choosing bus, we should choose new environmental protection and energy-saving vehicles to reduce air pollution and promote life quality of citizen in Mudanjiang City.

Civil Affairs Bureau: After the revolution of bus system, we should take endurance capacity of poverty group into full consideration, and should not increase their burden of life.

Senior Citizens' Work Committee: In Mudanjiang City, citizen older than 70 can take the bus for free, and whether we can learn from other big cities and lower the limit to 65.

Organization on disabled: We should take the design of assess facilities into consideration, such as set up blind tracks, set up barrier-free structures, install voice and text report facilities in buses.

Education Bureau: The lines should cover schools, and increase the number of buses when gonging to school and after school to solve the problem that students have difficulties to catch the bus.



Figure 4-2 Symposium with Relative Government Agencies and

4.2.4 Implementation Agencies

The content of the project includes: the integrated public transport corridor sub-project, the public transport infrastructure sub-project, the intelligent transportation systems and the institutional capacity building sub-project. The project establishes Public utility transformation sub-projects office (Construction bureau), Public Transport transformation sub-projects office (The bus company) and the transport management sub-projects office. It is shown below.

Table 4-7 Implementation Agencies

Name	Units	Main contents
Public utility transformation sub-projects office	Construction bureau	Bus corridor project (Xisantiao Road, Dongsitiao Road, Guanghua Street, Ping'an Street, Xin'an Street, Taiping Road).
Public Transport transformation sub-projects office	The bus company	Vehicle procurement, bus transfer junction stations, the first stage and the last stage, park and protect spot.
Transport management sub-projects office	Traffic police detachment	Information database of Construction of urban traffic integrated planning and management, urban integrated intelligent traffic management system, bus information management and dispatching system, road safety publicity and education base, training and examination center of drivers of transformed and expanded buses.

Commonplaces of them are:

First, content of implementation is one of their work, they hope to take this opportunity to improve from two aspects, institution construction and service ability;

Second, the implementation agencies hope to improve the working environment and reduce the daily job stress (especially traffic police and bus drivers) through the implementation of MCWSPTSP;

Third, the implementation brings many opportunities to agencies staff, such as promotion, transformation, showing talents, etc. So they hope their leaders can offer their full support, as well as the coordination of other agencies.

Specifically, the different requirements of three implementation units:

First, public utility transformation sub-projects office: transport management sub-projects office: the implementation agency of green and safe integrated public transport corridor sub-project is construction bureau, which takes the major charge of operation and management and so on. As government function agencies, one of its duties is to realize the serve function that provide citizens with comfortable and non-clog travel and living environment through the implementation of project. So, construction bureau hopes to carry out the content of implementation as soon as possible, push the smooth development of the project by coordinating with other sub-project offices, design department and consultation units.

Second, Public Transport transformation sub-projects office: the biggest problem of bus development is the lack of land, which leads to that, the number of bus station and the scale of bus area is small. Now there are 674 buses, and 545 of them have to park outside or on the roads. It brings a lot of

hidden danger to traffic safety and open roads, as well as brings many inconveniences to residents. In addition, there is no reserved area for public transport during the city implementation. The goal that design, construct, complete and deliver public transport sites together with new residential area, development zones and large public activity arenas has not been met, so it brings many difficulties to residents' travel.

Therefore, the bus company hopes to improve construction of public transport sites and logistics node. In terms of area for public transport facilities, it should be reserved in land use planning and given prioritization. As the minister of bus company mentioned during the symposium, public transport is a common weal, it needs the full support of government. Due to the land problem, the public transportation is restricted, and makes citizens' travel inconvenient. He said, construct the first stage and the last stage, park and protect spot and bus transfer junction stations with the help of the WB financed project to improve the level of serve of public transport in Mudanjiang city. Just set a simple example, environment of Mudanjiang city is extremely cold, the lack of bus sites may lead the first shuttle bus hard in starting in winter and affect bus punctuality rate. Thus, the content of public transport system construction is priority. The head of bus company said that, the design should give priority to the construction first and last stage, park and protect spot comes second; the third one is bus transfer junction stations.

Third, transport management sub-projects office: known from traffic police detachment, there are several problems of road and traffic in the old downtown of Mudanjiang city in the aspects below: first, hysteretic traffic infrastructure cannot meet the demand of shapely rising number of vehicles, such as network structure is not perfect, road facilities are not scientific and lack of design seriously and both of them affect the thoroughfare for vehicles; second, traffic management is relatively lag, traffic behavior cannot get effective

specification, such as ability of traffic police management needs to improve, the congestion caused by traffic accidents is increasing, lack of policemen, aging problem is serious, ability of traffic management cannot get strengthened; third, traffic participation's safety consciousness and the concept of the law of is weak and their self-discipline consciousness is poor.



Table 4-3 investigation and symposium about the content of transport management sub-projects

4.2.5 Groups Impacted by the Land Requisition

Based on investigation, this project only involves land acquisition but not house demolition. The project proposes to occupy rural collective lands 3.05ha (45.75), the affected area mainly concentrate in Beian Village and Yinlong Village of Sandaoguan town of Aimin District and Hualin Village of Hualin Town of Yangmin District. This project also will newly occupy state-owned land 4.69ha (70.35 mu), of which the state-owned land that occupied by Jiangnan public transportation transit hub center is the state-owned storage land in Mudanjiang economic development zone, *i.e.* National Circular Economy Pilots (hereinafter referred to development zone), which is 4.29ha (64.35mu) and state-owned land use way is free allocation; the state-owned land that occupied by the first and last bus stations of Fujiang Road is the

Dongsi across river bridge project expropriated in 2011, which is 0.4 ha (6 mu) and state-owned land use way is free allocation.

When expropriation and removal are involved, groups impacted by the land requisition as impaired party, whether we can take their reasonable requirements into full consideration, work out the proposal of the recovering of living, livelihood and development, let them participate in the project and share the benefit. All of these are related to the smooth construction of MCWSPTSP.

Thus, to groups impacted by the land requisition, reasonable compensation and resettlement are their first requirements. To households who loss their land, besides gain their compensation of land, they hope the government can carry out method to help them transform livelihood and improve economic status. To removal households, we should ensure their house righting, offer monetary compensation, and provide varied choices such as exchanging property right and let them choose voluntarily.

4.2.6 Public transport Travelers

4.2.6.1 Travel Situation in Mudanjiang City

First, Travel Mode

According to survey result, bus is the main mode of Mudanjiang City residents' travel. It is shown below.

Table 4-8 Statistics of the Top Three of Citizens Travel Mode

Top three choices	Not winter		Winter	
	Frequency	Percent (%)	Frequency	Percent (%)
By bus	477	31.1	481	31.3
By food	424	27.6	457	29.8
By cab	304	19.8	367	23.9

Total	1,205	78.5	1,305	85
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It can be seen from the table above, the main travel mode of resident are by bus, by food and by cab not in winter and in winter, the total shares 78.5% and 85% respectively. Among them, by bus is the preferred travel mode, and there is not big difference in seasonal distribution, about 0.2%.

Second, Travel Frequency

Table 4-9 Travel Frequency of citizens

Frequency	Not winter		Winter	
	Frequency	Percent (%)	Frequency	Percent (%)
More than once a day	189	36.9	208	40.6
Once two or three days	125	24.4	121	23.6
Once a week	78	15.2	78	15.2
Once two weeks	41	8	33	6.4
Once a month	35	6.8	33	6.4
Others	44	8.6	39	7.6
Total	512	100	512	100

The frequency of bus usage in Mudanjiang City is very high. According to the investigation result, not in winter, the percentage citizen travel by bus more than once a week is 76.5%; in winter it is 79.4%. In terms of season distribution, citizen will increase the frequency of travelling by bus.

4.2.6.2 Project Requirement of Citizens in Mudanjiang City

The requirement of project is according to requirement of daily travel. As a high frequency using vehicle, construction of public transport system means a

lot to citizens' life quality. According to questionnaire, it is found that requirements of project implementation are:

First, optimize traffic lines; connect enterprises, shopping center, hospitals, schools, etc. with each other, to be convenient for daily travel of work, study and life;

Second, improve bus infrastructure, especially heating equipment in winter to improve the comfort of bus;

Third, improve the punctuality, schedule grid frequency reasonably, to improve the serve level;

Fourth, renovate integrated bus corridor comprehensively to improve travel environment;

Fifth, ensure smooth and safe travel environment by the construction of intelligent information system.

4.2.7 Special Groups

Special groups involved in MCWPTSP contain minorities, elderly, children, disabled, etc.

Minorities in Mudanjiang City area mainly Korean and Man Nationalities, their language customs and life style are assimilated with the Han nationality highly because they live together with Han Nationalities for a long time. SA groups visited National religion bureau, the Korean Nationality School and Korean relative concentration of the Xisantiao Street to Xishiyitiao Street one after another in this investigation. But there is no sensitive spot need special concentration found.

Children are often accompanied by adults (mostly the elderly) when travelling, and are not paid exclusive attention. The SA conducted in-depth interviews with elderly and disabled, collected and arranged project requirements of these two groups.

Table 4-10 Project Requirements of Disabled

Type	Requirements	Priority	Situation
Blind	1. They have to wait for a long time because of unpunctuality sometime; 2. It is not safe for them to get on and off when snow covered platform in winter; 3. They are easy to skip the stop or get off at wrong stop because the inner voice station reporting is not perfect; 4. There is no voice bus stop, and braille stop sign is not standard; 5. It is inconvenient for them to punch in; 6. Construction of blind tracks is not perfect, and there are many obstacles on road; 7. No warming facilities in the carriage; 8. Little facilities in the carriage.	The priority of travel requirements of disabled according to symposium with disabled. First, voice bus stop, LED and voice station reporting in the carriage; Second, Snow removal facilities on platform; Third,	Dai Ying-fu, Cadre, Lame; Dun He-ming, Cadre, Lame; Liu Xian-lin, Massagist, Blind; Kuang Cheng-qiang, Massagist, Blind; Jiao Zhi-Yong, Teacher, Deaf; Tian Hu, Auto test division, Deaf; Wu
Lame	1. They have to wait for a long time because of unpunctuality sometime; 2. It is not safe for them to get on and off when snow covered platform in winter; 3. No warming facilities in the carriage, and windows are frozen;	improve the punctuality; Fourth, warming facilities in the carriage.	Chuan-gui, Professional committee member, Lame; Chang Shao-he,

	<p>4. Income of disabled is low, but they do not enjoy discount;</p> <p>5. Little facilities in the carriage.</p>		<p>Professional committee member,</p>
Deaf	<p>1. They have to wait for a long time because of unpunctuality sometime;</p> <p>2. It is not safe for them to get on and off when snow covered platform in winter;</p> <p>3. They are easy to skip the stop or get off at wrong stop because there is no LED light in the carriage;</p> <p>4. No warming facilities in the carriage, and windows are frozen;</p> <p>5. Income of disabled is low, but they do not enjoy discount;</p> <p>6. Little facilities in the carriage.</p>		<p>Lame.</p>

Table 4-11 Project Requirements of Elderly

From the perspective of their own, elderly carry out existing problems and improvement advices according to the symposium held in elderly activity center:

1. It is inconvenient for elderly to get on and off and easy to slip because heavy snow, ice and water around platform, and should be cleaned up in time;

2. No warming facilities in the carriage, and windows are frozen. They are easy to skip the stop or get off at wrong stop because they cannot identify whether reaching the station. Bus with heat preservation function should be updated;

3. Stools on the platform are not cleaned in time and not available;

4. The elderly take main responsible for taking children on and off school but bus run time is not long enough for them to take. Bus run time should be lengthened reasonably;

5. Improve the punctuality. Due to the cold winter, time waiting for bus should be controlled in 15min;

6. Bus sites and stops are not impressive, electronic bus stop should be constructed for convenience query;

7. Due to the unreasonable design, it is easy for many buses get to the stop at the same time and buses are relative far away from bus stop, so it is hard for the elderly with mobility to get on bus. So the platform should be transformed for getting on easier.



Figure 4-4 Symposium with special groups

4.3 Project Impact Analysis to Stakeholders

4.3.1 Government of Mudanjiang City

Public transport priority development strategy is the need of social and economic sustainable development. Due to the rapid development of economy and ceaselessly rising of city status, the growth of people's living standard, we need to have a green, environmental protection, safe way of transportation.

Mudanjiang City Municipal Party Committee recently put forward “five city construction”, the main content include “Modern industrial city”, “Develop the leading city synthetically”, “open up border areas of pilot city”, “eco-friendly and livable city”, “harmonious and happy city” and so on. All of these are agree with the urban green public transportation, intelligent, safe and harmonious development concept. The implementation of Mudanjiang clod weather smart public transportation system project fits with Mudanjiang City Government’s

urban development strategy. Improve the investment environment; bring vitality to economic development and brand-new appearance for city according to the urban infrastructure construction.

4.3.2 PMO of Mudanjiang City

The implementation of the project needs to arrange professional staff and expand organizing agency to manage and coordinate. It is the present key responsibility to pass the assessment of WB for PMO smoothly, and it is one of the most important indicators of performance from superior unit. Successes and Failures of the Project affect PMO a lot. If successful, it could be an important performance and could lay the foundation for application management in future similar projects. If it fails, PMO must lose the necessity of its existence, even facing the risk on the dissolution.

The implementation has brought the opportunity of ascension. WB not only brings financial support, but also brings and transforms the advance in the regulatory theory and emerging best practices for the construction, operation and management of transport projects domestic and international. PMO can strength agency construction and promote function of public service by learning advanced ideas and management models from WB.

4.3.3 Other Agencies of Government

Construction of project needs help and assistance from other government agencies. It cannot avoid increasing their workloads. On the one hand, it is the key city-level project, on the other hand, they do not responsible for the project and it has nothing to do with them although done well.

Meanwhile, PMO takes the participation of relative agencies seriously and hops to listen to their opinion. The process lets them know how the project operates loaned by WB, and absorbs advanced ideas and management

models from WB to their daily work.

Table 4-12 Symposium with Government Agencies

It is our first contact with WB project, through its approval process is fussier than that of domestic projects, it is conducive to the late stage, and reduces the opportunity of remaining aftereffects;

WB pays attention to the voice of different groups, especially the participation of vulnerable groups. It is the part we should strength in our future work. Now that existence of government is to provide assistance to citizens, we should let citizens participant in and pool their labor and talents, we can absorb good idea and advances as well.

WB pays attention to the construction of organization and agencies, including human resource and capacity building. The construction of organization and agencies is important guaranty for the project smooth development.

4.3.4 Implementation Agency

Positive effects brought by the implementation of project: the implementation increases the workloads of implementation agency, but its success will become a performance of its main leaders. And the implementation brings the agency budget which helps to improve staff's treatment.

Negative effects brought by the implementation of project: as implementation agency, it takes social risks to some extent. During the processes of construction and operation, if households affected by the land requisition or environment are not dealt with interests properly, it will suffer social risks.

Table 4-13 Implementation Agency about Development goals of the Construction of Urban public transport system

Bus company:

The bus company of Mudanjiang City plans to form public transport service system “integrated city, rapid public transport, quality first” to the end of “1025”, which means realize urban bus using all environment-friendly fuel, create a rapid bus lines to ensure citizens travel, short bus interval from 4-8min to 3-6min, quicken bus update and increase buses own by 10,000 from 7 to 8, increase the percentage of villages with bus from 74% to 90%, increase public transit trip contribution rate from 29% to 35%⁸. After the implementation, public transport situation will be improved greatly, operation will be more efficiency, attraction of public transport will be increased, the project will provide citizens safe, reliable, convenient, thoughtful, economic and comfortable public transport.

Traffic police detachment :

First, increase investment in the construction of urban road intelligent traffic management facilities, construct, upgrade and transform traffic lights and electronic police with the help of project loaned by WB, construct intelligent dispatch of public transport system and management system which cover the whole city, use intellectualized and informationalized method to guide and direct traffic reasonably, regulate the behavior of drivers, and reduce the source of traffic chaos.

Second, increase investment in the construction of urban road infrastructures, focus on 6 main infrastructures including road signs and road traffic marking, pedestrian crossings, isolation facilities in main roads, traffic safety facilities around schools, reasonable junctions, and efficiency traffic light. Solve the person- vehicle mixed traffic disturbance in the junction, traffic disturbance of random U-turn and low

⁸Source: The Special Overall Planning of Public Transport in Mudanjiang City Revised by Bus Company.

traffic efficiency by implementing the physical isolation, setting the drive area for left turn vehicles, deviating center line, expand stop line, channelization the junction.

Third, give priority to the development of public transport with the help of project loaned by WB. We should coordinate the development of public transport, plan and construct reasonable public transport system which can meet the demand of the mass, perfect bus lines, increase and improve operating buses, provide convenient travel condition to public and reduce the frequency of traveling by car, and realize the goal that reducing and eliminating participating units of road traffic and optimizing travel condition. At the same time, municipal department should try best to transform bus stops reasonably, ensure there is no road occupation when getting on or off. Moreover, when constructing bus stops, their import and export should be far away junctions to avoid slowness or congestion due to entering or driving out bus and waiting citizens gather at junctions.

4.3.5 Groups Impacted by the Land Requisition

4.3.6 Public transport Travelers

Public transport traveler are the biggest beneficial: in terms of urban integrated traffic corridor, transform and expand the main roads and after finished, the access rate of bus travel will be improved greatly; in terms of infrastructure, improve the citizens' comfort level travel by bus by designing platform and updating buses; in terms of construction of intelligent system, provide bus travelers seamless information travel service.

According to the questionnaire survey result, we listed the problems in order about bus platform, facilities in carriage and bus operation and came to the three aspects citizens concerned most. It can be found that, content design and arrangement of the project meet the forecasts and expectations. They are

shown below.

Table 4-14 Response of Project Design in Mudanjiang City to Citizens' Travel Problems

Name	Problems		Responses
Facilities of bus stop	First	No warming facilities in winter	Waiting room with warming facilities
	Second	Slippery and easy to fall down	Snow and ice removal vehicles
	Third	Near the fast line and dangerous	Bus-only lanes and Bus bay platform
Facilities in carriage	First	No air conditioning	New energy bus procurement
	Second	No enough seat	New energy bus procurement
	Third	Parking instability	Training and capacity building of bus drivers
Operation	First	Unreasonable configuration	Intelligent scheduling
	Second	Weak viewpoint of bus priority	Bus lanes
	Third	Unreasonable line	Integrated corridor

4.3.7 Special Groups

Due to problems such as language, culture, body and age, special groups have a lot of inconvenience in daily travelling, so we should take bus platform, station board, facilities for getting on and off bus into consideration. In addition, disabled in special groups are mainly low-income groups, and their main way of travel. The construction of project may raise the ticket price, and lead to the increase cost of living. It will weight down hard on them. The ticket price should

not be too high, or their life stress must be boosted.

4.4 Impacts of Stakeholders on the Project

4.4.1 Government of Mudanjiang City

Urge relative departments earnestly to implement the *Implementation Opinions about Giving Priority to the Development of Urban Public transport of Mudanjiang Government* (In (2009) No. 5), follow through actively on supporting all the preferential policies about the development of public transport and ensuring its healthy and continuous development.

Urge relative units and departments earnestly to pay high attention and take strong measures to urban intelligent public transport system project under extremely cold environment, and provide support and protection for promoting rapid development of urban public transport.

Table 4-15 Special Advices to the Construction of Public Transport System of Mudanjiang City Government⁹

Carry out *Public Transport System Plan of Mudanjiang City* as soon as possible, and dovetailed it into *Master Plan of Mudanjiang City*, speed up the development of modern urban public transport, play the leading and preceding role for building a smart city and speeding up the construction of the “bus urban”.

Speed up the construction of infrastructure, Construction Bureau intensifies transformation of urban roads according to priorities and dovetails construction of public transport bay into city construction plan. Communications Bureau and bus company should fully cooperate with it.

Resume the formal tax break, which means: set the tax money in 2009 as the base, 80% of excess tax money will be returned to the enterprise spanning from 2013 to 2015; at the same time, bus company will continue enjoy the policy that 500,000 for loss and allowance for free ride of elderly older than 70. On the premise of full investigation, Bureau of Finance gives suggestion for policy support of the development of outskirt public transport.

Planning Bureau, Land and Resources Bureau, Road Transport Bureau and Bus Company will combine *Public Transport System Plan of Mudanjiang City*, plan and fulfill the build-up land for public transport scientifically and reasonably, try to solve the build-up land for public transport in 3 to 5 years.

Synthesizes the situation of public transport of other cities of the province or in the country, combine the income situation of urban residents, the bus ticket price will not change.

⁹ Source: Special Meeting Minutes of Mudanjiang City Government.

4.4.2 PMO of Mudanjiang City

PMO is the direct administration and coordination agency, personal ability and work style of leader plays a key role in the project's success. Whether the information can be flowed upstream and downstream effectively in time, whether cooperation among all departments at city-level can be organized effectively are very important to the smooth implementation of the project.

4.4.3 Other Agencies of Government

Other agencies of government play roles in coordinating with implementation agency. Whether their attitude is active will impact the project, and the handling of relative producers need their help.

Table 4-1 Example: Support Policy about Public Transport of Bureau of Finance

The establishing of tax breaks and support policy of public transport of Mudanjiang city is led by the Bureau of Finance and coordinated by other relative departments, and the specific tax breaks and support policy and financial subsidies standards are come out.

According to *Notice about Subsidy Settlement Fund of Refined Oil Price by the Ministry of Finance* (In 2012, No. 161) and the requirements of *Transmitting the Notice about further Improving the Subsidy Mechanism to Farmers, Difficult Groups and Public Welfare after the Innovation of Refined Oil Price and Tax by Ministry of Finance, DRC, Ministry of Supervision, Ministry of Transport, Ministry of Agriculture, Auditing Administration and State Forest Bureau* (In 2009, No. 4) of 8 departments including Provincial Department of Finance. In accordance with bus conversion standard sets, actual operating days and subsidy for ferry fuel consumption in 2001 provided by provincial charging department, average subsidy for a bus a day is 205.05 yuan, subsidy for a bus operating a full year is 73818.5 yuan.

4.4.4 Implementation Agency

Implementation agency is the specific implementation unit, is in charge of the implementation of project and operation management in the future. During the preparation process, implementation agency bears most of the workloads and their attitudes impact the project construction greatly. Although they cannot impact the success directly, their working ability, working style and engagement level will determine the project effects.

4.4.5 Groups Impacted by the Land Requisition

The construction of project may involve expropriation and removal. According to experience of previous similar projects, if the relationship between project and local citizens or villagers has not been dealt well with during the construction and operation process, the advance of project will be tricky. Likewise, project cannot be operated normally when construction is finished. Current laws do not allow compulsory land levy and remove. To groups impacted by land requisition, we should acquire their agreement before land levy and remove, and confer with them on specific measures of compensation and relocation. Whether they allow land levy and remove or not determines the smooth launching of project.

4.4.6 Public transport Travelers

Service objects of MCWSPTSP are urban residents, and they are the biggest beneficial. Known from the investigation that most urban residents support the project, they can express their opinions and suggestion. But they do not impact the project a lot.

4.4.7 Special Groups

Special groups are also beneficial. Known from the investigation that most

special groups support the project, but their ability of participating in the project is weak and do not impact the project a lot. Therefore, we should carry out public participation mechanism for them and listen to their requirements fully.

In addition, government carried out preferential policy and Standard system for special groups. Set disabled as an example, when building, expanding and transforming urban roads, large public building and residential area, we should strictly enforce the barrier free design and construction requirement, no approve and no acceptance for construction projects do not meet the specifications.

Table 4-17 Several Provisions about Preferential Policy for disabled in Mudanjiang City

Article 27: Promote sign language gradually in service industry and all kinds of large-scale activities. Public should create information barrier-free platform actively, promote the application of culture transformation sound or conversion device transmitting voice character to provide disabled assessable service such as voice and character promoting, Braille and sign language.

Article 28: When building, expanding and transforming urban roads, large public building and residential area, all construction should be in compliance of barrier-free design standard, no acceptance for construction projects do not meet the specifications.

5. Mutual Adaptability Analysis of the Project and the Local Society

About the mutual adaptability analysis of the project and the local society, the contents are as follows: first, we should find out whether the social environment and cultural conditions of the project location can accept and support the existence and development of the project; Second, we should investigate the progress of the project which the local government and residents both support; Third, we should study the mutual adaptability between the project and the local society.

5.1 The Mutual Adaptabilities of Different Stakeholders and the Project

The mutual adaptabilities of different stakeholders and the project mean that we should find out the attitudes of the local government and other stakeholders toward the constructions and operating conditions of the project. Besides, their acceptability of the project, the things they may support, the extent of support they offer, are also important. Detailed information can be seen from Table 5-1.

Table 5-2 The Mutual Adaptabilities of Different Stakeholders and the Project

Stakeholders	Attitudes	Acceptabilities	Supports and cooperation
The government of Mudanjiang city	Positive attitude; Ask the PMO of the city to approve the project and go about the construction as	Good adaptation	According to the social economic development, consider the project components, fund raising, policy making and so on.

	soon as possible		
PMO of the city	Positive attitude; Ask the Project implementation agencies to finish the construction task as soon as possible	Good adaptation	Strengthen the communication between the government agencies and other related agencies, to coordinate the relationship between the agencies
Other government agencies	Positive attitude; Ask the Project implementation agencies to finish the construction task as soon as possible	Good adaptation	According to the function of different department, they should cooperate in the sides the project involves, participate in project design, provide comments and suggestions
Project implementation agencies	Positive attitude; ask for matching funds; go about the construction as soon as possible.	Good adaptation	From the perspective of institutional demand, they should put forward project content and construction project after the project has been approved.
The people	Positive	Relatively	After they have accepted

influenced by the Land acquisition and demolition	attitude; ask for the reasonable compensation	good adaptation	the compensation and resettlement fund, they should take the initiative to leave the occupied land.
The people travel by public transportation	Positive attitude; Ask the project implementation agencies to start the construction as soon as possible	Good adaptation	Through public participation channels, actively participate in the design of the project, to provide good advice
Special crowds	Positive attitude; ask the project implementation agencies to start the construction as soon as possible	Good adaptation	Through public participation channels, actively participate in the design of the project, to provide good advice

The above analysis can also be verified from our random sample of the public.

According to the survey, the first three trip modes of the citizens in Mudanjiang city in winter are “buses”(31.3%),“walking”(29.8%),“taxies” (23.9%)(Table 4-8). Among these, the number of the citizens whose first choice is “buses” is the most, accounted for 60.7%; the second is the number of the citizens whose first choice is “walking”, accounted for 20.7%; the last is

the number of the citizens whose first choice is “taxies”, accounted for 8.6%. The number of the citizens whose second choice is “walking ” is the most, accounted for 32.4%; the second is the number of the citizens whose second choice is “taxies”, accounted for 26.2%; the last is the number of the citizens whose second choice is “buses”, accounted for 24.8%. The number of the citizens whose third choice is “taxies ” is the most, accounted for 36.8%; the second is the number of the citizens whose third choice is “walking” , accounted for 36.1%.

According to the survey, the citizens’ main three non-winter travel mode are “buses”, “walking” and “taxies” (19.8%) . Among these, the number of the citizens whose first choice is “buses” is the most, accounted for 52.3%; the second is the number of the citizens whose first choice is “walking”, accounted for 20.7%; the last is the number of the citizens whose first choice is “bicycles”, accounted for 13.7%. The number of the citizens whose second choice is “walking ” is the most, accounted for 29.1%; the second is the number of the citizens whose second choice is “buses”, accounted for 27.9%; the last is the number of the citizens whose second choice is “taxies”, accounted for 21.3%. The number of the citizens whose third choice is “taxies ” is the most, accounted for 36.8%; the second is the number of the citizens whose third choice is “walking”, accounted for 36.1%.

In general, the main reasons for the citizens to take a bus are as follow: go shopping (30.9%), go to work (19.5%), buy some food and daily necessities (14%).

We also have carried on the questionnaire survey to special people, including 6 families of low-income residents, 2 households of the disabled, 86 families of the elderly. They all support this project, but their needs are not the same. Among them: low-income households are most concerned about the ticket prices; the disabled families are most concerned about the barrier-free facilities and fare subsidies; old people are most concerned about the slipping preventing and the elderly preferential issue.

The overall evaluation is well. Among these, the number of answering “good ” accounts for 42.9%, as well as the number of answering “fair ”.

We also investigated 56 outsiders. We find the outsiders come to Mudanjiang city mainly for tourism, accounted for 33.9%. This is concerned about the Jingbo Lake and other tourism industry.

The transportation that respondents from outside use when they are in Mudanjiang city. Taxi is the most common mode of transportation for respondents from outside, secondly is the bus. And this is just because they are unfamiliar with bus routes. On the other hand, the taxi fare is low.

The most important reason why respondents from outside choose the buses is that the expense is low, on the other hand the buses are often on time. When talking about the outside respondents’ reasons for choosing the taxis, it is mainly for convenience, fast speed comes second. According to respondents from outside, the most important problems the buses are facing in Mudanjiang city is that the traffic jams often happen in rush hour. The second, clean up the snow in winter is not in time. The last but not least, pedestrians, buses, cars rob road. The most important reasons why the outsiders change to choose the buses include that “the buses is faster”, “more buses is clean and well equipped”. “The bus station can provide more intelligent information” “There are heat preservation facilities in the bus station”.

Therefore, to conclude, public transport is a major way for the citizens in Mudanjiang city to travel, and their choose for a taxi is strongly influenced by season, because of the cold weather in winter, the temperature is low, which leads that people are more willing to take taxies in winter, and in summer, residents prefer to ride bikes. The frequency of the citizens taking the bus is higher, slightly higher than the non-winter.

To conclude, citizens, including special groups, all support this project. According to their different needs, the construction of this project is consistent with public travel habits and travel demand. This project especially can meet

the needs of their travel in winter, can improve their work efficiency and quality of life.

More detailed findings and analysis see Annex 6.

5.2 The Adaptability Between the Project and the Local Organizations, Social Structures

5.2.1 Local organizations

Through field visits and surveys, we find that there is no non-governmental organization or spontaneously formed folk organizations or groups of urban and rural residents in project service area, so they won't affect the project. In order to orderly promote the project, the government in Mudanjiang city strengthen capacity building, set up a agency for intelligent public transportation project, which is led by city leaders, composed of relevant committee and bureau leaders. Besides, the agency is responsible for organizing and coordinating transportation, public security, urban construction, technology, education and other departments as well as planning, design, engineering, research, education and other departments. On the other hand, it also develops clear strategic plans and research plan for intelligent public transportation project, organize and coordinate the implementation of major project, and strive to get government's support in policy, fund and project, etc. According to the leading groups' operation situation, various problems about the project can be solved, and the project can operate healthily.

5.2.2 Social Structure

According to the latest data from statistical bureau of Mudanjiang city, the population birth rate is 6.63‰ in 2011, population mortality rate is 7.91 ‰, and natural growth rate is -1.28‰; male to female ratio was 50.3:49.7; there are 2.4 people per household and the average household employment population is 1.14.

According to the latest data from statistical bureau of Mudanjiang city, in 2011, per capita disposable income of urban residents of Mudanjiang city is 14515 yuan, and the rural per capita net income is 11198 yuan. On the consumption structure of urban residents, food accounted for 36.4%; clothing accounted for 11.7%; supplies and other accounted for 4.7%, housing accounted for 5.3%.

According to the latest data from statistical bureau of Mudanjiang city, in 2011, first industry accounts for 53.3%, secondary industry accounts for 11.5%, the third industry accounts for 35.2%; about the structure of the economy, the state-owned units account for 11.5%, collective units account for 0.4%, others account for 5.8%, private enterprises account for 11%, individual businesses account for 13%, farming, forestry, animal husbandry, side-line production and fishery accounted for 51.4%, flexible employments account for 6.9%.

What we can see from the above data is that Mudanjiang city is in the social and economic transition period, the industrial structure adjustment brings a series of changes: on the one hand, residents' incomes have increased; on the other hand, their consumption level will also increase as well as the demand for urban infrastructure. Besides, the construction of Mudanjiang Cold Weather Smart Public Transportation System Project will accelerate the changes of social structure.

5.3 The Adaptability Between the Project and the Local Technology, Culture Conditions

5.3.1 The Local Technology Conditions

The intelligent transportation construction in Mudanjiang city has been going on for nearly 10 years. By cooperating with scientific research institutions and consulting companies, carrying out a number of infrastructure researches and technology innovations and a series of key technical problems have been solved, which will guarantee the implementation of the project

effectively. Meanwhile, after 10 years' construction, a large number of talents who have theories, techniques and engineering experience have been cultivated, as well as the development and reform commission (NDRC) system.

5.3.2 The Local Culture Conditions

1. Educational Level

According to the latest data from statistical bureau of Mudanjiang city, in 2011, net school-age children enrollment rate of Mudanjiang city is 100%, the gross enrollment rate in junior school is 99.8%, and high school enrollment rate is 84.4%. It can be concluded that the citizens' educational level is low in general and this situation is suitable to carry out project.

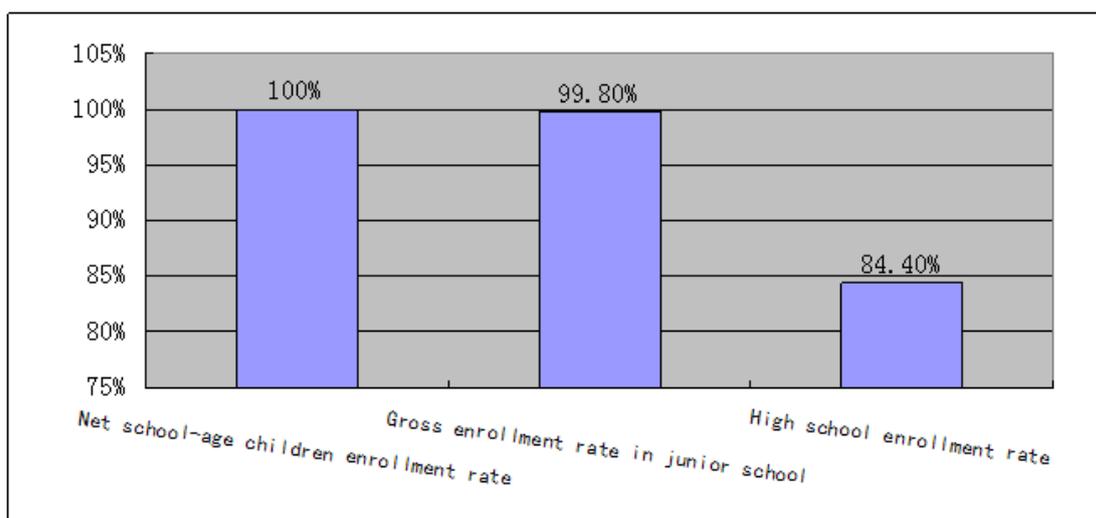


Figure5-1: Educational Level of Mudanjiang City

2. The Minority Cultures

Mudanjiang city is a multi-ethnic place with 37 ethnic minorities. It is not only the birthplace of the Manchu, but also the country's second largest Korean settlements. According to the result of Mudanjiang city 'sixth census in 2010, the number of the minority population is 182335. Among these, Korean population is the largest, the number is 103524, account for 56.7768%. That of Manchus comes second, the number is 68902, account for 37.7887%. There are 30 minorities in the main urban area of Mudanjiang city, and the total

population is 59634. Among these, the number of the Koreans is 35000, while that of the Manchus is 19000. Mudanjiang city is one of the most popular cities of Korean. The Korean nationality not only has its own language, writing, but also has its' own customs on the basic necessities of life and weddings and funerals. In Mudanjiang city, some Koreans who are mainly concentrated between Xi'santiao Road and Xi'shiyitiao Road are still retaining their national customs by speaking Korean. While the Manchus have been fully assimilated.

The implementation of this project has no conflict with minority' languages, customs and traditions, besides, the construction of the project is conducive to promoting the synchronous development of minority communities and Mudanjiang city.

3. The Religions

In Mudanjiang city, the existing five kinds of religions include Buddhism, Taoism, Islam, Catholicism and Christianity. The number of legal venues for religious activities is 262(including eight Buddhist temples, a Taoist temples, six mosques,14 Catholic venues for activities, 233 Christian venues for activities), besides, the number of religious believers is 105321 (including 63975 Buddhists,3560 Taoist believers,7588 islamists,28534 Christians , 1664 Catholics) ,the number of the re-identified religious clergies is 523 .At last, there are 15 religious groups in the city and county levels.

According to the contents of the project, the implementation of the project is not directly involved in religious sites and facilities in Mudanjiang city. On the other hand, this project belongs to public infrastructure project, which makes that it has no conflicts with all religious teachings. More importantly, the project can provide convenience for Christians to participate in religious activities.

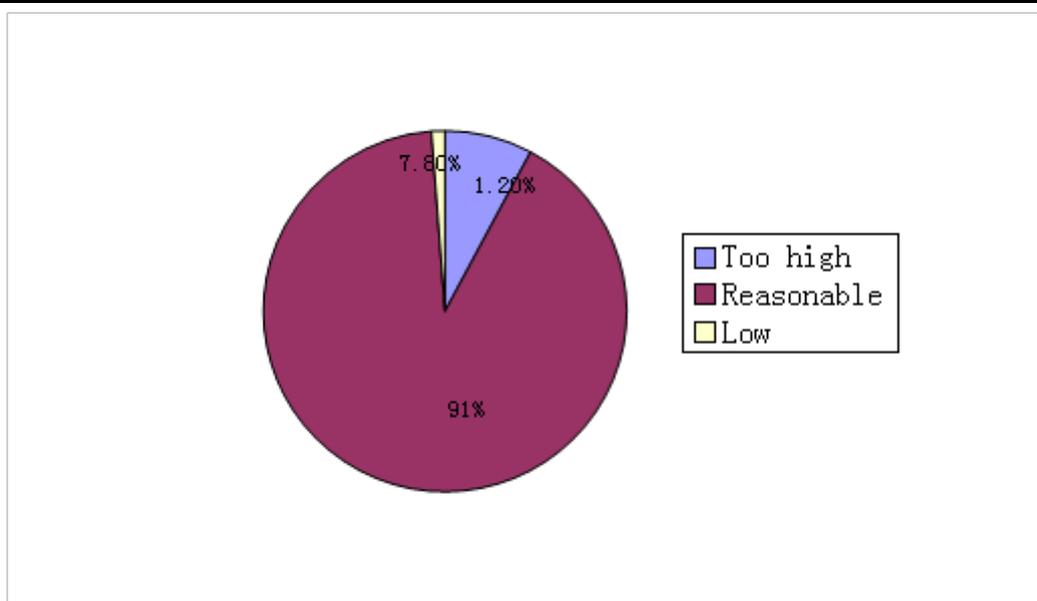
5.4 Benefit Groups' Willingness to Pay and Ability to Pay

5.4.1 Ordinary Travelers' Ability to Pay and Willingness to Pay

According to the survey, 7.8% of citizens think the fares are too high, 91% of citizens think the fares are reasonable, the last 1.2% of citizens think the fares are low. So we can conclude that the existing bus fare is in citizens' acceptable range.

Table 5-3 The Evaluation of the Current Bus Fares

Bus fares	Frequency	Percent (%)
Too high	40	7.8%
Reasonable	466	91.0%
Low	6	1.2%
The total	512	100.0%



After completion of the project, 93.8% of the citizens want to remain the same bus fares, 6.3% of citizens think the bus fares can be appropriately increased. The reasons why the citizens want to remain the same bus fares are as follow:

First, the citizens who often take the bus belong to the working class, and

high prices will increase their burden;

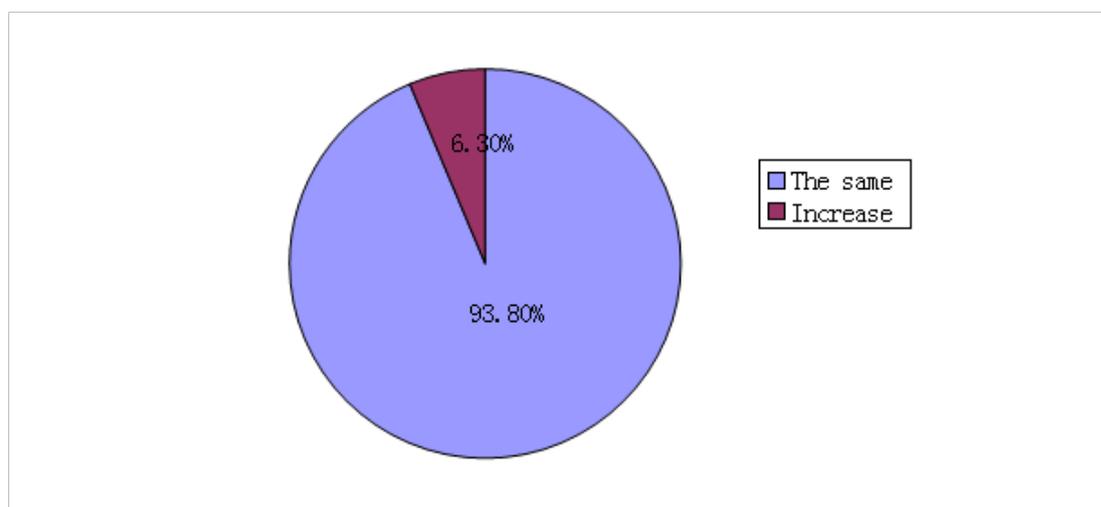
Second, Buses belonging to urban public welfare facilities, so they should be beneficial for the people;

Third, Because of the limited urban areas, and the short distance between sites, (Generally, it is only 300 meters between two sites), people can choose to travel on foot if the ticket prices rise;

Fourth, In Mudanjiang city, the starting taxi fare is low (5 yuan), so if the ticket prices rise, people can choose to share the taxi fare with others or take a taxi directly;

Table5-4 After the Completion of Bus Priority Corridors, Citizens' Attitudes towards the Bus Fares

Bus fares	Frequency	Percent (%)
The same	480	93.8%
Increase	32	6.3%
The total	512	100%



5.4.2 Special Groups' Ability to Pay and Willingness to Pay

Due to the low income or no income, the special groups (including the citizens who are enjoying the minimum living guarantee, the disabled, the

retired old people) want to remain the same bus fares. For example, in Mudanjiang city, the minimum standard of living is 347 yuan / month, the subsidy standard is 235 yuan / month, so the life of the people who are enjoying the minimum living guarantee is poor. Now, if one of them takes the bus twice everyday (1yuan/every time, 2 yuan /every day), the bus fares will account for 10.3% of his total income. How big a spending! Therefore, we suggest that relief policy should be made for them.

Of course, the government of Mudanjiang city has made some relief policies for these special groups. Now, we can conclude the policies:

The Notice Made by the Ministry of Construction and Other Departments and Forwarded by the General Office of the State Council about the Opinions of Priority to Develop Urban Public Transport (Office of the State Council released [2005] No. 46) Clearly provides that: the government of the city should give subsidies to public transportation enterprises for their lose in practicing the relief policies.

The elderly: Since 2006, the people above 70 years old can enjoy the free ride policy. Every year in May and October, The elderly affairs agency in charge of this matter, cooperating with the bus company and the insurance company in Mudanjiang city, handle the bus cards and check the free card issued for free for the people who are over the age of 70 and having the urban hukou. The fares of the old people shall be borne by the budget by 30%, welfare lottery center takes 30%, each of the four urban governments takes 5%, the city public transport corporation takes 20%. In 2012, the car allowance for the aged is 6.517 million yuan, the government assumes (80%) 5.2136 million yuan and the enterprises assume (20%) 1.3034 million yuan.

Disabled soldiers: According to *Opinions about the Free Tickets for the Disabled Soldiers and the Bus Compensation Problems* (Mudanjiang city's budget proposal [2006] No. 8), disabled soldiers are national heros, so they

should enjoy the social allowances and the free ride policy. The compensation of the bus company will come from the public welfare of lottery tickets and the disabled employment security fund equally.

The blind: According to the Article 26 of the *The Notice Issued by the Municipal People's Government Office and Related to Some Provisions of Preferential Policies for the Disabled in Mudanjiang City*, the blind can travel free on buses (tram) in Mudanjiang city. Besides, the bus company should use electronic bus-stop device for people's on and off.

6. Social Risk Analysis

The implementation of the project often has negative impacts on the project surrounding residents; these impacts may become a source of intensifying social conflicts. The focuses to analysis and discuss in SA reports are how to identify in advance the negative impacts of a project that may lead to social risks, and propose measures and recommendations to avoid or mitigate social risks.

6.1 Identification of Social Risk

6.1.1 Social Risks in the Early Phase of Projects

Based on analysis of the contents of project construction and make interviews one by one to DRC of Mudanjiang Municipal, Municipal Construction Committee, the bus company, the traffic police detachment and other departments, the social risks faced during the preparation phase of MCWSPTS mainly include the following aspects:

First, the project still has some extent resettlement risk, social risk and policy risk

After identification, SA team found that the project will newly occupy land 7.74ha (116.1mu), of which state-owned land is 4.69ha (70.35 mu), which is free allocation; rural collective land is 3.05ha (45.75mu), there are 26 households and 102 persons are impacted. Therefore, the project has some extent resettlement risk, which require to make arrangements regarding livelihood rehabilitation for affected people and compile resettlement action plan.

By analyzing construction contents and implementation programs of Mudanjiang City Intelligent Bus System subprojects, which may involve subprojects of house demolition social risks and subprojects mainly involving road widening, construction of roadside safety island, bay bus station and

intelligent equipment needed for original equipment control room rebuilt items. These projects will involve some formal construction, temporary construction or demolition of illegal items, these potential social risks caused by house demolition first interfere residents' living and production around the demolition of buildings, then there could lead traffic pressure surge near the road, the third social risks include groups' or sectors' economic loss compensation risks from demolishing these buildings or structures, financial pressure risk caused by early underestimate and other risks. In view of the domestic and World Bank in a temporary building demolition has different understanding and different policies, the PMO in this regard need to familiarize themselves with the World Bank's policies, ahead of the relevant plan and the capital budget.

Second, World Bank Project inexperience

From pre-project preparation process can be seen, the PMO has strong project preparation and management capabilities, but overall the project other relevant agencies, grasping and understanding of the policies of World Bank project are not comprehensive nor fully. Performance in the lack of understanding of some concepts, some ideas in the project, and is still not in project preparation, such as the design of the project is still not fully consider the factors of these policies of the world bank, the World Bank has emphasized inclusive development issues.

Third, implementing agencies and other inter-agency co-ordination problems

From the project content point of view, there is a strong correlation between several subprojects, which these several subprojects are divided into three sub-office (Bus Corporation, Construction Bureau, the traffic police detachment), were also need to cooperate with several other institutions, coordination of the workload and complicated, if not handled properly, will cause the repeated work even cause the project conflict.

6.1.2 Social Risks during Construction Phase

Generally speaking, social risks of the project construction period on the one hand perform to create noise, dust and other environment risks caused by project construction after each sub-entity commencing; on the other hand, these social risks also include personal injury, risk of work missing, temporary land use and other risks.

6.1.2.1 Environment Risks Caused by Noise, Dust etc. during Project Construction Phase

Public transport improvement, non-motorized transport improvement, traffic management and security, road reconstruction and enhancement parking capacity subprojects of Integrated Public Transport Corridor projects, as well as public transport infrastructure projects in the planning and construction of two park and ride hubs, fifteen first and last stops and three stop insurance fields. These projects will inevitably produce the common noise, air, solid waste and other environmental risks of municipal engineering project construction process in the construction process, the increase in the frequency block traffic, traffic accidents and other traffic management increased risk also appears. In the sub-construction environmental risks that may arise, for example, in the process of bus priority corridors construction, daytime construction noise interfere with residents' work and production along the roadsides, nighttime construction noise interfere with residents' rest and living along the roadsides. During project construction, road surface excavation, construction dregs and construction materials will inevitably pile up along the way, rain construction dregs, building materials after rain washed and vehicle rolling, then the roads become muddy, these will affect the excavation of the road near the landscape and tidy. Construction of road excavation, bare ground surface in case of rainfall, may have a certain amount of soil erosion, while the excavation of surface vegetation brings destruction. Laying new pavement and the transformation is complete; must recover the corresponding

sections of green, reduce soil erosion and restore most of the vegetation.

6.1.2.2 Risks of Temporary Land Use

Meanwhile, the construction process will produce a certain amount of temporary land occupation. In this project the possible risk of temporary land use analysis as an example. For affected residents of project temporary land use, temporary land compensation fees must be in place, otherwise there will be residents impede project construction and lead to social risk of the project construction period delay, conflict risks of affecting social stability and harmony may also exist. After the completion of the supporting infrastructure projects, ensure that residents of temporary land use can timely use the land after the reconstruction, does not affect the residents' normal production and work. Construction period of temporary land use should fully protect the affected residents in the economic and social benefits.

6.1.2.3 The Risks of Intelligent System Aspects

Construction contents of Intelligent System project mainly include subproject of Mudanjiang city comprehensive traffic plan and management platform, the city's comprehensive intelligent traffic management system, public transportation information management and scheduling system. Ancillary and compatibility of the hardware and software between three systems exists some obstacles, if coordination is poor, three system conflicts will not be easy to achieve the best results. In addition, because the northern region less used these intelligent systems, procurement of equipment and installation of protective methods are required to adapt to the cold northern weather. In addition, social risk of construction period mainly manifest that these intelligent systems may fail at any time during the commissioning period of the equipment or test run period, causing traffic chaos in a short period, therefore, must make relevant plan in advance.

6.1.2.4 Others

Some other social risks also include the personal injury and risk of work missing in construction period; bus lanes construction will be diverted part of the non-motor vehicle lanes; construction period may also cause short-term water, electricity or communication failure, etc.; some bus lines and site surveys, etc.

As can be seen from the analysis above, Mudanjiang cold weather smart public transportation system project may bring a certain degree of negative effects in project construction period, but these effects are small scale, short, social risk it brings in a sense can be characterized as the necessary project cost. However, for temporary land occupation, etc., if the construction workers and local residents do not have good communication, some minor contradictions without timely mitigation, it may also produce more violent social conflicts.

6.1.3 Social Risks during Operation Phase

After MCWSPTSP put into operation, social risks that may exist manifest in the following areas:

6.1.3.1 Ticket Price Increase Problem

The survey found that Mudanjiang people are more sensitive to prices after the implementation of the project. The survey found that after the implementation of the project Mudanjiang public issue of fares sensitive. The evaluation teams conducted in the community sample of 500 questionnaires, 91% of residents believe that the current price ticket (1 yuan / person. times) is reasonable, 93.75% of the people want to be able to maintain the project after the completion of the current fare.

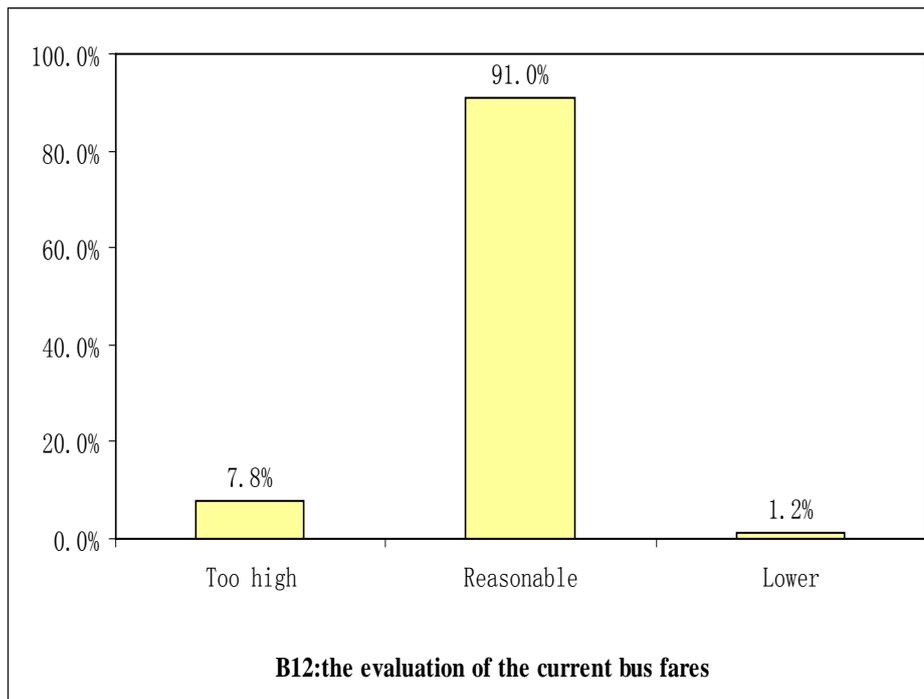


Figure 6-1 public evaluation of the existing fare

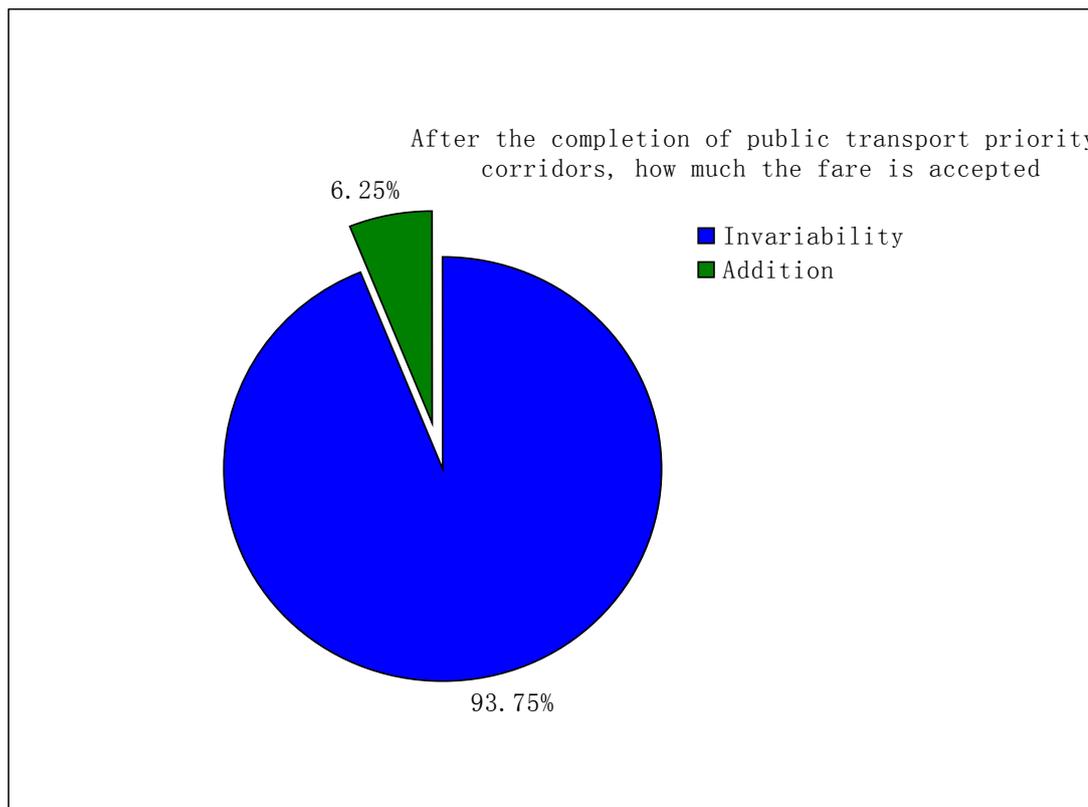


Figure 6-2 public fares hope of the project after the completion

All kinds of interview process to carry out in the social group also can be seen, older age groups and parts of disabilities not enjoy preferential policies

are especially sensitive to fares. Some respondent people even said that if the project is completed and fares increase, then they will change the way to travel, no longer take the bus. Because their original income is not high, according to the current fare, they are now spending 60 yuan fare of about a month, which for the lower income groups (the elderly, disabled people, their retirement income or monthly income of the majority is only 1000-1500 yuan), is already a large expense, if the ticket price increase after the completion of the project, that would reduce their quality of life.

6.1.3.2 Operational Management Aspects Issues

Implementation of this project can greatly improve the Mudanjiang city bus system hardware facilities; provide the basis conditions for the development of Mudanjiang city bus. However, it should be noted that the bus operation quality is not entirely hardware problem, but also to the bus system software problem, which is the bus system operational management issues. Based on our sample of 500 people, there are still many management issues that lead urban residents refused to travel by bus in Mudanjiang bus system.

Based on the residents' questionnaire survey along the bus priority corridor in Mudanjiang City, 18.6% of people think the main reason that prompt residents to change to bus is "bus station can provide more intelligent information", 14.4% of people considered "bus clean, well-maintained", 12.8% of people considered to be "add new bus lines in home and travel destination", 12.0% of people considered to be "a warm site facility", 11.6% of people considered to be "public transportation safer" (see Table 6-1). 32.4% of people think the main reason that don't take bus is "working hours too crowded", 25.0% of people considered "bus did not run" (see Table 6-2).

Table 6-1 the reasons prompting change to take bus

	Cumulative selection (times)	Percentage (%)

Bus station can provide more intelligent information	196	18.6
More clean, well-maintained buses	152	14.4
Bus faster		
(If the bus professional channel)	94	8.9
Add new bus lines in home and travel destination	135	12.8
Reduced fares	95	9.0
Transfer to other modes of transportation more efficient	54	5.1
Warm site facilities	126	12.0
Public transport safer	122	11.6
There are old, weak, sick and disabled dedicated bus seat	29	2.8
Bus transfer deals	49	4.7
Total	1052	100.0

Table 6-2 the reasons prompting not to take bus

	Cumulative selection (times)	Percentage (%)
Parking easier	77	8.0
Subway station opened	104	10.8
The bus is not on time	242	25.0
Bus is too crowded in work time	313	32.4

Easier and safer to cross the road	51	5.3
Cheaper fuel costs	17	1.8
Have the ability to buy a car	67	6.9
Public bus station Rent a bike	20	2.1
Have the ability to buy electric vehicles	23	2.4
There are not old, weak, sick and disabled dedicated bus seat	45	4.7
Other	22	2.3
Not changed	12	1.2
Total	967	100.0

From the bus running time, 51.9% of people think that the crowded time period is 7:00-9:00, 30.1% of people considered to be at 16:00-18:00 (see Table 6-3); 58.2% people think the average waiting time for buses should be 5-10 minutes (see Table 6-4); waiting for the bus's time, 61.5% of people think that "a little longer" in winter than in non-winter (see Table 6-5); About the time of the first and last car, 67.8% of people think that "basically reasonable" (see Table 6-6); while on the current bus service frequency, 76.4% of people think that the "basic right" (see Table 6-7).

Table 6-3 Most Crowded Periods for Buses

	Cumulative selection (times)	Percentage (%)
7:00—9:00	397	51.9

9:00—12:00	30	3.9
12:00—14:00	11	1.4
14:00—16:00	9	1.2
16:00—18:00	230	30.1
18:00—20:00	60	7.8
After 20:00	21	2.7
Total	765	100.0

Table 6-4 Average Waiting Time for Buses

	Frequency	Percentage (%)
Within 5 minutes	53	10.4
5—10 minutes	298	58.2
10—20 minutes	121	23.6
20—30 minutes	26	5.1
More than 30 minutes	14	2.7
Total	512	100.0

Table 6-5 Winter Waiting Time for Buses Compared with that in Non-winter

	Frequency	Percentage (%)
Much longer	71	13.9
A little longer	315	61.5
Almost	107	20.9
Shorter	10	2.0
Did not feel there is a change	9	1.8
Total	512	100.0

Table 6-6 Currently Bus Frequency

	Frequency	Percentage (%)
More	18	3.5
Fundamental right	391	76.4
Less	103	20.1
Total	512	100.0

Table 6-7 Is Time of the First and Last Bus reasonable or not

	Frequency	Percentage (%)
Reasonable	31	6.1
Basically rational	347	67.8
First bus too late	51	10.0
Last bus too early	83	16.2
Total	512	100.0

On bus lines design. 78.1% of people think the bus Line Condition "fundamental right" (see Table 6-8); 69.7% of people think that by bus transfer times "slightly, but still capable of acceptance" (see Table 6-9).

Table 6-8 Bus Transfer Times in City

	Frequency	Percentage (%)
Too much, very inconvenient	40	7.8
Slightly, still capable of receiving	357	69.7
Small, very satisfied	105	20.5
Other	10	2.0
Total	512	100.0

Table 6-9 Currently Bus Line Conditions

	Frequency	Percentage (%)
More	31	6.1
Fundamental right	400	78.1
Less	81	15.8
Total	512	100.0

Evaluation on the bus station and bus compartment set: evaluation on bus station setting 41.4% of people think that "more reasonable", 41.8% of people think that "fortunately" (see Table 6-10); Insufficient setting of bus station 33.4% of people think it is mainly reflected in the "winter waiting no insulation facility" and 29.6% of people think that "winter site very slippery, easy to fall" (see Table 6-11); Current evaluation inside the bus setting 58.6% of people think that the bus inside setting is "General" (see Table 6-12); 28.0% of people believe that the current main shortcoming inside the bus setting is "no air conditioning", 20.7% of people think is "Seat not enough", 17.8% of people considered to be "parking instability" (see Table 6-13).

Table 6-10 Evaluation for Bus Station Setting

	Frequency	Percentage (%)
Very reasonable	13	2.5
More reasonable	212	41.4
Not bad	214	41.8

Not reasonable	70	13.7
Very unreasonable	3	0.6
Total	512	100.0

Table 6-11 Shortcomings of Bus Station Setting

	Cumulative selection (times)	Percentage (%)
Spacing is too far	17	1.8
Spacing is too close	52	5.7
Areas of need not set station	59	6.4
No heat preservation facilities in winter waiting	307	33.4
Station logo unclear	32	3.5
The station is too small	31	3.4
Adjacent to the fast lane, dangerous	150	16.3
Winter station very slippery, easy to fall	272	29.6
Total	920	100.0

Table 6-12 Evaluation for Facilities inside Bus Currently

	Frequency	Percentage (%)	Cumulative percentage (%)
Very good	9	1.8	1.8
Better	122	23.8	25.6

General	300	58.6	84.2
Relatively bad	73	14.3	98.4
Very bad	8	1.6	100.0
Total	512	100.0	

Table 6-13 Shortcomings of inside Bus Setting Currently

	Cumulative selection (times)	Percentage (%)
Old, weak, sick, disabled and pregnant dedicated bus seats are too few	77	8.8
Seats are not enough	182	20.7
Station inaudible, unclear	79	9.0
No air conditioning	246	28.0
Handles, handrails unsafe	55	6.3
Convenient on and off	34	3.9
Card is inconvenient	16	1.8
Parking instability	157	17.8
Other	34	3.9
Total	880	100.0

After the operation of the project, if the various factors that promoting public to change to take bus cannot function, or the factors that promoting public not to change to take bus cannot improve, then the effect of the project itself without regulations, will become social risk in first operation period that Mudanjiang City Intelligent Transport System project faced. In addition, because the management and use risks caused by the equipments' poor quality, high difficulty of maintenance and network virus attacks in project operational phase is also inevitable.

6.1.3.3 The Risks of Safety Aspects after Operation

The project's green and safe urban Transportation Integrated Corridor Construction subproject also shared bicycles in order to solve the problem of public travel last one km. But in the actual course of the investigation, we found that some people disagree on this content, they think: 1) Mudanjiang is not a very big city, due to the city size is limited, the distance between the site and the site now is generally about 300 meters. The distance between the site and the area is limited, and bus lines coverage is high, so there is no requirement for the bicycle transit. 2) Mudanjiang is located in the North, a half of year is in snow, road icy situation is very serious, so there are very few people ride on the road in winter because of insecurity.

Meanwhile, use a large number of natural gas or liquefied petroleum gas and other cleaner fuels used by environmentally friendly vehicles, these vehicles exhaust pipe easy to dripping water in the winter, the landing ground are easy to freeze, cause unsafe hidden danger, especially in the intersection area, therefore it is easy to occur traffic accident.

Therefore, if the project requires construction of these aspects, we must strengthen safety management, otherwise the resulting endless trouble.

6.1.3.4 The Risks of Environment Aspects after Operation

After completion of the project, because the procurement of the bus

capacity increases, and more for the low-carbon environmental protection, reduce a lot of harm to the surrounding social environment especially to the surrounding noise, air and other ecological factors compared before completion of the project. However, during the project operation, increasing number of vehicles and other factors brought by the improvement of bus lines will lead the increase of motor vehicle exhaust emissions, vehicle leakage oil and other harmful substances scattered on the road year by year, once these pollutants with rainfall runoff into water bodies, the water quality will have an impact; On the other hand, even if the new purchase bus can use natural gas or liquefied petroleum gas of low pollution fuel, but as a means of transport is still inevitably produce carbon monoxide, nitrogen dioxide, car exhaust smoke, hydrocarbons, etc.; In the application process of these devices, the city public traffic participants of these intelligent transportation equipment approval and acceptance of risk is the need for testing by the practice project operation after tested by the practice.

6.2 Mitigating Measures

6.2.1 Measures for Risk Mitigating at Early Stage of Project

(a) Risk Mitigating of Land Acquisition, House Demolition and Resettlement

Any construction of the project are required to use some of the land, land occupation, buildings, structures compensation and relocation cannot be completely separated from project construction. For risk of land acquisition and house demolition, it is usually required by optimizing the project design to reduce the impact of land acquisition, house demolition and resettlement, to develop a detailed plan of land acquisition, house demolition and resettlement or prepare policy framework for potential resettlement risk constraints, in order to mitigate risk.

In the project planning, design stage, land departments should be involved

as early as possible to make sure land ownership, prepare the relevant plans in advance, and timely adjustment of the master plan of land use, and strive to make project land reasonable, legalization. Match with Mudanjiang's master development plan, try to save the city construction land, in residential areas, schools, hospitals, shopping malls, stations and other sensitive areas should be the reasonable location, to reduce the number of house demolition. PMO should follow the requirements of World Bank involuntary resettlement policy, prepare the "Resettlement action plan" of the project, while the need for relocation of ground attachments, including the house, should be a really good job relocation compensation work, strictly in accordance with national, Heilongjiang Province's and Mudanjiang City's relevant policies and compensation standards, timely payment of all compensation costs. Maintain the public participation rights and legitimate interests; guarantee the standard of living and production status of theirs.

(b) Avoid Social Risk and Policy Risk Caused by Dismantling the Building or Illegal Demolition

PMO should try to organize, coordinate Land and Resource Bureau, Department of Transportation, Traffic Management Bureau, project design units as soon as possible, to jointly survey the scene, early identification of project scope, started investigation in a timely manner, to ascertain the exact amount of influence. At the same time, familiar with World Bank's policies as soon as possible, ready ahead of compensation funds according to the requirement of World Bank social protection policies.

(c) Dissolve the Risk of Inadequate Information Disclosure and Public Participation

Through a variety of media in various forms introduce and promote the project to the public, public participation in this project, encourage different community stakeholders to participate in the project effectively and actively, optimize project design and management.

(d) Resolving Organizational Risk

Clarify institutional responsibilities and responsibilities with the project of each agency, coordinated by the leadership team, project management meetings should be held regularly and they should communicate and solve the problems the projects encounter.

(e) Resolving the Management Agencies and Executive Agencies' Inexperience to World Bank Project

Enhance training and study for project management and executing agency, introducing World Bank policies comprehensive and detailed, promoting the project can benefit more people, achieving scientific management, promoting inclusive development in project area.

6.2.2 Risk Aversion Measures During Construction

6.2.2.1 Ecological Environment Risk Avoidance Measures

(a) Avoidance Measures of Noise Pollution

After the construction phase of supporting infrastructure, including the construction of canalized inter section, hub station and first and last stop along the integrated urban transport corridors and public transport corridor, the approach of various types of construction equipment and personnel are often the first to bring noise pollution. According to the universal experience of municipal construction projects in the construction phase, generally taking Changed construction methods to alleviate the problem that noise sometimes up to 85dB (such as piling operations) at the construction site, such as the job which have powerful noise source can be placed on the daytime (06:00 ~ 22:00) or making appropriate adjustments of various construction machinery operation time. To reduce the sound source of transport of materials percussion, people's shouting and other construction activities during construction, contractors need to construct civilly and strengthen the effective management measures to mitigate the problem. For the construction site within 150 meters away from the residential areas, construction machineries

have large noise at night (22:00 to 06:00) should stop. Work sites which must be continuous constructed, the construction unit should promptly get in touch with the local environmental protection department depending on the specific circumstances, apply for night construction permit and announced to utmost strive for people's understanding, cooperation and support. Sampling and monitoring the sensitive points close to the construction site, such as Huaxing primary and Corning homes near the railway street, take noise canceling measures such as mobile type or build temporary noise barriers depending on the monitoring results. Finally emphasized that construction unit should instruct construction unit to post notice at the construction site and public complaints telephone of the project period. After receiving the report, the construction unit should promptly get in touch with the local environmental protection department to timely process a variety of environmental disputes

(b) Avoidance Measures of Water Pollution

Construction materials of intelligent transportation construction projects in Mudanjiang used in building the transport, stacking process will cause dust, have a definite impact on nearby water bodies. In addition, if the storage of asphalt, oil and chemicals is improper care, it will be washed into the water easily, and pollute the water environment. In this regard, it is recommended engineering contracting contract shall express the terms for the transport process of road building materials (such as asphalt, oilseeds, chemicals, etc.) to prevent the sprinkle leak, and other problem. Also, various materials disposal site shall not be located in the vicinity of rivers or irrigation canals to avoid them flowing into the water bodies with the rain and causing surface water pollution. In addition, concrete mixing station and precast field need to be set during construction in the project. In which, the process of aggregate cleaning and concrete curing will produce a certain wastewater, suspended solids are principal pollutants by cleaning aggregate, concrete curing water is in high pH, the part of the waste water shall be recycled to the grit chamber to recycle supernatant water after precipitation, after mud and debris and other

are settled down they will backfill embankment. Again, while along the bus corridor, particularly within 100 m of the shore of the river, there cannot be stacked or dumping of any materials containing hazardous substances or wastes, close the river, forbidding earth borrowing and temporary spoil, disposal site of construction materials such as asphalt, oil, chemicals and other harmful substances should be located barrier measures and Gabon cloth covered to reduce pollution caused by rain wash, prohibit spilling water, construction waste shall not be discharged directly into the river. Finally, the project construction departments should make sure soil and water along the highway are conserved to reduce soil erosion, making reasonable arrangements for construction period to avoid and reduce roadbed excavation in the rainy season, and trying to achieve dig and fill balance, reduce the amount of earthwork stacking, constructing in strict accordance with the design of water conservation measures.

(c) Avoidance Measures of Atmospheric Pollution

Compared to mining and other projects, the air pollution of public transportation projects is much lower, the atmospheric pollution of intelligent transportation projects of Mudanjiang mainly adjust pollution (PM2.5, etc.). Therefore, hardening measures or watering for the construction and transportation road surface is required to be adopted during materials transport, road excavation and material processing in outdoor project; they should strengthen watering or increase watering times in arid windy weather. Strengthen management for stacking easy lost materials is needed, setting wind-break walls around it, and arranging stacking position reasonably, If necessary, blending additives or spray lubricant on stacking surface to stabilize the material to minimize the amount of dust of all types equipment.

(d) Avoidance Measures of Solid Waste Pollution

Bus priority public transport corridors and public transport infrastructure projects, mostly are engineering and construction facilities, the solid waste generated during construction mainly includes construction debris and

construction workers' garbage. For the use of these pollutants, on the one hand the construction garbage of these projects can be partially used for site leveling of construction camp and temporary area, and the rest of the construction waste and construction personnel garbage will need to be collected and sent to the nearest municipal solid waste landfill.

(e) Precautionary Measures for Impacts on Vegetation

The risk avoidance of MUdanjiang smart bus project regarding ecological environment mainly focus on the protection of urban various green vegetation.. Before the construction of the project, the construction unit should develop a reasonable construction schedule, try to avoid the rainy season, and prepare slope protection and drainage facilities well before the rainy season. Also, construction area should be pre-planned, and construction operations should be strict controlled within a specified area to avoid disturbing more land and destroying more vegetation. During the construction phase, the construction unit shall purchase in legal stockyard, and the procurement contract signed with stockyard shall explicitly assume the responsibility for soil erosion.

6.2.2.2 Scheduling Intelligent Management and System Management

Carry out adequate preliminary research, feasibility studies and system simulation, preparing plan for various risks well in advance.

6.2.2.3 Others

Strengthen project management, selecting construction enterprises according to quality priority or mass and price balance, while strengthening publicity and supervision, reduce the potential risk of personal injury and loss of working time, reduce the situation that bus lane was diverted and the construction period without water, power or communication failure during construction.

6.2.3 Risk Aversion Measures During the Operation

6.2.3.1 Issue of Fares

In the pre-project coordination meeting, the Development and Reform Commission of Mudanjiang has committed to not raising their prices after the completion of the project. Accordingly, there are no social risk results from fares increase.

6.2.3.2 Operational Management Issues

For the social risk aversion caused by operating intelligent transportation projects in Mudanjiang, first demonstrated that various types of facilities for intelligent transportation in the new alpine city improve deficiencies and flaws in current bus operators, strengthen existing bus service to which given a higher rating by residents, really improve human project management and the quality of public transport services, facilitate the city's public travel needs of various groups as far as possible. Meanwhile, in view of the new procurement traffic safety and management equipment, road maintenance and maintenance equipment has a relatively high technological content, therefore, be sure to establish a complete set of equipment and vehicle operation, management, repair and maintenance system, and to establish the appropriate mechanisms response to the special alpine climate to ensure that these support facilities are benign operation in later period.

6.2.3.3 The Security Management after Operation

Change the green way to travel, free bikes are used only in summer.

For energy saving automobile exhaust dripping issues, start from the intersection of the surface material, and strive to take geothermal facility or use non-slip material on larger lots intersection to prevent safety problems caused by efficient cars' dripping ice in the intersection,

6.2.3.4 Environmental Aspects after Operations

Strengthen the risk aversion of noise, exhaust gas, sewage and solid waste and other aspects after the operation of the project. To implement "local non-separation", dedicated lanes shall be designed for the slow system, and focus on the roadside greening and slow environmental optimization. This not only helps reduce bodily harm to pedestrians caused by vehicle exhaust, irregular whistle, etc., but also facilitate urban sanitation sector to set up a targeted set of noise isolation facilities, automobile exhaust purification device and garbage bins in the motor vehicle lanes and slow track.

For the exceeded sensitive point in the prediction of environmental noise during the operation, there is need to take engineering and ecological noise reduction measures. Specifically, strengthen the acoustic environment quality environmental monitoring along the proposed transit corridor, establish regular monitoring system of environmental noise for sensitive point areas that may be more polluting, and promptly take appropriate mitigation measures according to the sound level of environmental pollution caused by the amount of increase in traffic. Meanwhile, the road needs regular maintenance to ensure that there is a good transportation where the transit corridor is proposed. The following Table 6-14 is the main control measures analysis for common noise pollution.

Table 6-14 common noise prevention measures analysis table

Measures and programs	Applicable Situation	Noise reduction effect	Advantage	Shortcoming	The adaptability of the project
Housing Relocation / Housing to do it with another	Relocate the excessive household to where unaffected by noise	Well	Noise reduction completely, completely eliminate the noise impact, but only applies to sporadic excessive household	Higher costs, a greater impact on the living	Not suitable for this measure

Measures and programs	Applicable Situation	Noise reduction effect	Advantage	Shortcoming	The adaptability of the project
Sound Barrier	Seriously exceeded , Centralized sensitive points close to the road	5~10dB	Better, directly on the highway shoulder, easy to implement and benefit a large population	Higher investment, some form of sound barrier have impact on the landscape, and inconvenience to the residents access	Not suitable for this measure.
Ventilated soundproof windows	Highly affected villages which houses scattered distribution	10 ~ 25dB	Better, moderate cost, applicability, little impact on the living	Requirements housing structure is good.	Ventilated soundproof windows are suitable for sensitive points housing structure in the project
Strengthen monitoring	For the long-term existing seriously exceeded, and tracking and monitoring after taking noise reduction measures.	----	----	----	----

During the operation, sources of pollution of surface water of the mainly are road runoff, so the degree of pollution increases with rainfall and atmospheric pollution load, the sewage speed is reduced with the extension of rainfall duration, having a strong randomness, chance and other characteristics. In addition, if the road runoff pollutants directly into rivers, channels and other water bodies will also increase water COD, SS and other pollutants. Therefore, during the operation of the project, the person in charge

of each subproject should timely manner road runoff pollution risk aversion and resolve with Supply and Drainage Group of Mudanjiang, sewage treatment departments.

According to the main components and sources of pollutants, the air pollution risk aversion, during the operation after completion of the project, on the one hand to strengthen road management and road maintenance, keep the roads good operating condition, reduce vehicle exhaust emissions; on the other hand, strictly implement national emissions standards to strengthen law enforcement efforts of vehicle administration to reduce exhaust emissions. Transport vehicles easy to produce dust also need to cover tarp to prevent contamination flying spilled during the transportation.

Finally, risk aversion measures of solid waste during the operation mainly relying on the existing road transport sector, the urban management department and sanitation department of Mudanjiang City, solid waste generated by maintenance personnel and travelers is primarily domestic waste, these wastes can conveniently sent to municipal waste landfill sites.

7. The Sustainability Analysis of the Project

The sustainability analysis of the project is concerned about the overall analysis of the project's lifecycle. The content is as follow: Whether the effects of the project can continue to play, what conditions this project need, whether the beneficiaries of the project are able to continue to bear the cost of the project and whether there are potential beneficiaries to prevent the construction and operation of the project.

7.1 The Sustainability Analysis of the Social Benefit

The social benefit of the project should be based on the existence of the project. The social benefit of the project plays a necessary condition for the sustainable social effects: the beneficiaries have an incentive to ensure the operation of the project and the losers of the project will not block the implementation of the project. Urban public transport as an important urban infrastructure and public service is the window of the city. Its development degree represents a city's political, cultural, economic and civilization level and marks the level of comprehensive strength of a city.

In 2005, The Notice Made by the Ministry of Construction and Other Departments and Forwarded by the General Office of the State Council about the Opinions of Priority to Develop Urban Public Transport establishes the priority development of the urban buses. The municipal party committee and the municipal government of Mudanjiang city, according to the principle of "bus priority", promote the sustainable development of the city's urban public transport, which makes the basic livelihood project has played its due contribution.

Social effect is the value of the project. From the life improvements of the affected groups, the establishment of the MCWSPTSP is helpful to ease the traffic congestion, improve the level of traffic safety and reduce energy

consumption and environmental pollution, which can also improve the accessibility, efficiency, convenience, comfort, satisfaction and security of people's travel.

According to the 12th five-year plan of the public transport company in Mudanjiang city, to strive to build "city integration, rapid transit, and high-quality service" bus service system in the last three years, to make sure that all buses are running with the environmentally friendly fuels, to build rapid bus lines for making the headway by 4 to 8 minutes reduced to 3 to 6 minutes, to accelerate the vehicle update in order to make the number of the buses occupied by 10000 people increases from 7 to 8, to try to make the rural bus pass rate increase from 74% to 90% and to relieve 29% to 35% of people' travel burden. At the same time, the quality of people's lives has been improved continuously. From the aspect of the project's influence on the national quality, scientific and technological level of the project determines whether the project can help to improve the national quality. The MCWSPTS is undoubtedly a high-tech project, which will not only increase the educational level of the employees, but also helps to improve the national quality. About the large scaled introduction of unmanned systems, IC card electronic toll collection system, GPS intelligent scheduling systems, train staff operating the vehicle electronic systems and other electronic information technology facilities in the project, Citizens' acceptance of them shows the increasing national quality.

7.2 The Sustainability Analysis of the finance

According to the current economic situation, combining the reality of Mudanjiang city and deducting non-comparable factors, to predict that by 2015, the fiscal revenue of Mudanjiang city is 55.8 billion yuan, year-on-year growth of about 27.6%. Besides, the Mudanjiang city has attached great importance to urban construction for many years. In recent years, the investments for urban

traffic and other infrastructure are increasing year by year. In 2009, the investment is 2.569 billion, accounting for 19.9% of the fiscal revenues; In 2010, the investment is 4.429 billion, accounting for 26.8 of fiscal revenue. In general, urban transportation infrastructure is still lagging behind the development of the city and the spending on public transportation cannot meet the main mode of urban transport development ----"Walk + Bike + Ride".

Now, in Mudanjiang city, the amount of the total loans from World Bank and foreign government is RMB 130 million, mainly used for public health, agriculture, environmental protection, etc. By the end of 2010, the actual debt balance is 130 million yuan, accounting for 0.78% of the total fiscal revenue and 0.16% of the GDP (the GNP is 78.1 billion yuan in 2010); it also accounts for 0.96% of the general budget revenue (the local fiscal budget revenue is RMB 13.499 billion in 2010). By the end of 2010, the Mudanjiang city has no principal and interest that should be returned to the superior. In recent 10 years, Mudanjiang city has established the loan reserve fund of 20.72 million yuan (debt service reserve rate of 15.9%) and the monitoring indicators are green areas. From the above situation, the foreign debt scale of Mudanjiang city is small and the government of the city has the ability to take on new debt, moreover, principal and interest in arrears will not happen. About the World Bank loan by the provincial government on-lending to municipalities for this project, it should be repaid by the municipal government. Besides, Longsheng Investment and Development Co. Ltd should be responsible for the specific implementation of the project. In order to accelerate the progress of loans, the government of Mudanjiang city should bring the principal and interest into the current fiscal budget. With the implementation of account management, if they cannot pay in full repayment, the Ministry of Finance agrees to withhold financial accounts through new debt owed.

In short, the economic development momentum of Mudanjiang city is very strong. More importantly, the city government has attached great importance

to the traffic. With the strong financial support, the financial sustainability of the project is improved.

7.3 The Sustainability Analysis of the Technologies and Organizations

The intelligent transportation construction in Mudanjiang city has been going on for nearly 10 years. By cooperating with scientific research institutions and consulting companies, carrying out a number of infrastructure researches and technology innovations and a series of key technical problems have been solved, which will guarantee the implementation of the project effectively. Meanwhile, after 10 years' construction, a large number of talents who have theories, techniques and engineering experience have been cultivated, as well as the development and reform commission (NDRC) system.

In order to strengthen cooperation with the World Bank and effectively manage the bank's loan project, the government in Mudanjiang city strengthens capacity building, set up a organization for intelligent public transportation project, which is led by city leaders, composed of relevant committee and bureau leaders. Besides, the organization is responsible for organizing and coordinating transportation, public security, urban construction, technology, education and other departments as well as planning, design, engineering, research, education and other departments. On the other hand, it also develops clear strategic plans and research plan for intelligent public transportation project, organize and coordinate the implementation of major project, and strive to get government's support in policy, fund and project, etc. As the emphases on management and innovation, the management system and operating mechanism corresponding to MCWSPTS have been set up. So the sustainability of the MCWSPTS organizations can be guaranteed as well. The organizations and their responsibilities are as follows: Figure 7-1

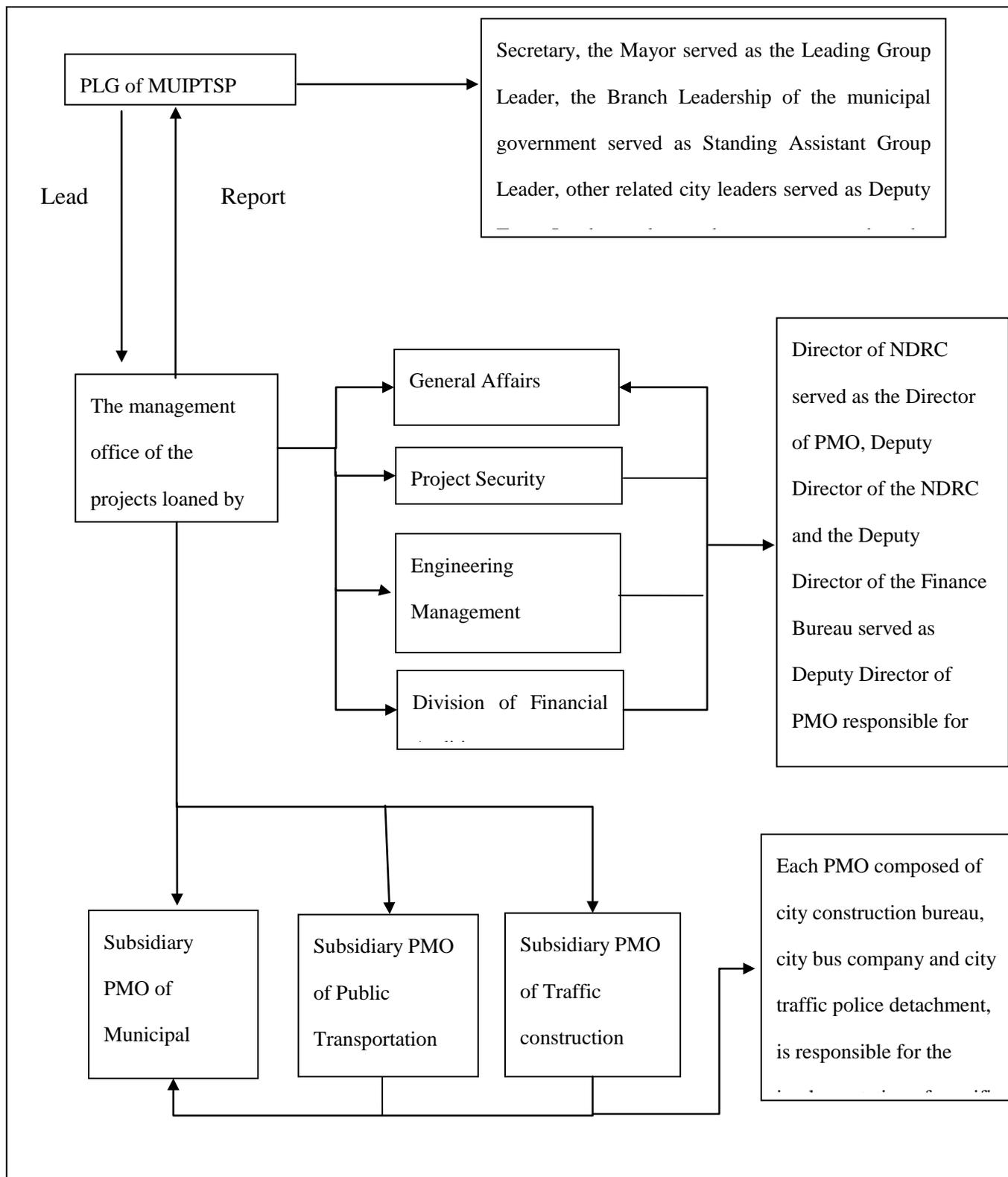
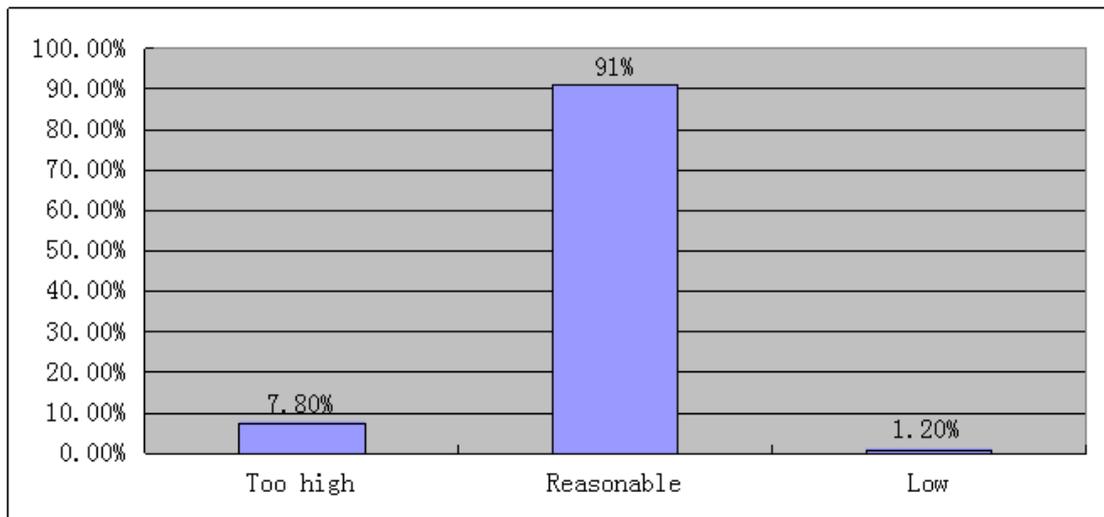


Figure 7-2 The Evaluation of the Current Bus Fares

7.4 The Sustainability Analysis of the Economy

Beneficiaries' ability to pay and willingness to pay are two important factors for the sustainability of the project. Although the residents' willingness to pay is change according to the quality of the service, but the economic ability of a region is also an important factor which can measure the affordability of the residents.



B12 The Evaluation of the Current Bus Fares

According to the statistical results of 512 valid questionnaires and B12, 7.8% of citizens think the fares (1 yuan/person, every time) are too high, 91% of citizens think the fares are reasonable, the last 1.2% of citizens think the fares are low. Based on the present economic development situation and the residents' income level in Mudanjiang city, to conclude that after completion of the project, the higher prices will be passed on to more local fiscal transfer payments. Moreover, in order to keep the project's economic sustainability, the municipal government should increase the support for the project on the basis of scientific measurement. All kinds of the public transportation subsidies in 2010-2012 are as follow:

Table 7-1 All Kinds of the Public Transportation Subsidies in 2010-2012

Units: ten thousand yuan

Items	The total	In 2010	In 2011	In 2012	Notes
The total	27,251.4 6	3,630.3 9	11,354.9 7	12,266. 1	/
One: fiscal subsidies	563	147	239	177	Tax policy
Two: oil subsidies for the buses	13,165	1,228	5,898	6,039	Special project
Three: oil subsidies for the taxis	9,880	1,325	3,915	4,640	Special project
Four: Traffic facilities maintenance	1,842	430	707	705	Urban construction planning
Five: Free bus subsidies for the elderly	1,640.86	446.59	542.57	651.7	/
(1) The government bears eighty percent	1,312.69	357.27	434.06	521.36	/
(2) Enterprises bear twenty percent	328.17	89.32	108.51	130.34	/
Six: Subsidies to cover the losses	150	50	50	50	/
Seven: Free bus subsidies for the	10.6	3.8	3.4	3.4	/

Items	The total	In 2010	In 2011	In 2012	Notes
disabled soldiers					

As can be seen from the table: every year, the fiscal transfer payments for urban public transport (including buses and taxis) of Mudanjiang city have been increasing. After the MCWSPTS has been put into operation, the government of Mudanjiang city needs to increase subsidies for the public transport which is a people's livelihood.

8. Planning and Implementation of Social Management

8.1 Social Management Plan of the Project

The design should minimize the scale of the land acquisition that the project involved in, environmental pollution problems caused by construction and traffic safety issues; reduce the negative impact of the project through public participation and listening to public opinion, so it is necessary to formulate a social management plan for the project.

8.1.1 Develop Land Acquisition and Resettlement Action Plan

First and last field bus, stopping Paul Field, transit hub and bus training venues of the project, all need a certain amount of land for construction. According to the project's feasibility study, the acreage of project-related field station construction is totaling 237000m², about 355.5 acres of land (see feasibility P169), but the land of Mudanjiang stock is limited, for this situation, it is possible to optimize and reduce unnecessary the land acquisition and resettlement. For the unavoidable land acquisition and demolition of this project, it is necessary to develop a detailed action plan for resettlement. Resettlement Action Plan, in accordance with the requirements of relevant policy, should protect the standard of immigration living at least not be reduced by construction projects. During the process of resettlement implementation, strictly implementing in accordance with the Resettlement Action Plan,

enforcement agencies shall timely implement resettlement costs, and employ another expert on external resettlement monitoring and evaluation. In the Resettlement Action Plan, it is necessary to pay special attention to the poor how to use the resettlement compensation for revenue recovery.

Table 8-1 Project resettlement modes

Usage	Collection Location	Acreage (M ²)	Scope (Around the critical point)	Nature of the land	Resettlement or compensation
Transit hub (15)	Farm turntable Road	8,000			
	North Street, East Street names, star plaza in the northeast corner	4,000			
	First Middle School, Bamiantong South Street to the north, the first high school east opposite side drains	10,000			
	The eastern end appropriate location of Daqing Road	10,000			
	New love plot, appropriate location of international logistics center	22,000			
	West twelve road, Zhu Tuncun mouth	6,000			
	Teachers College's west of South Gate	8,000			
	Ome Dyke Road Bridge	20000			

Usage	Collection Location	Acreage (M ²)	Scope (Around the critical point)	Nature of the land	Resettlement or compensation
	Auxiliary bridge of West eleven south bridge	12,000			
	Birch rural workers, appropriate location of oil shale industrial park	20,000			
	Eight road of New Street East, near Dyke Road,	6,000			
	Yangming Park South nearby	8,000			
	NE angle between Xing Zhong Street and Di Ming Street	8,000			
	Near NanBei Road and JiuTiao Road	4,000			
	Convention Center	6,000			
Transit hub (2)	Jiangnan District, south Bamiantong Street, Xuanwu Lake	43,000			
	Kitayama east, near the Vitex three road	15,000			
Stop Paul Field (3)	Surf Road West, near eleven Bridge (lower)	10,000			
	Jiangnan District, near south street bamiantong	10,000			
	Near the east Daqing Road	10,000			
In total		237,000			

8.1.2 Social Impact Mitigation Plan of the Project during Construction

8.1.2.1 Traffic Congestion Caused by Construction of Bus Station and Other Projects

- a) Segmented construction, to avoid spread across the board, which may result in a large area of blockage;
- b) Blocked construction should set aside the opening in a certain distance, especially in heavy traffic junctions; the opening should be larger;
- c) The barrier of construction team should try to occupy as little space, and reserve a certain space for transportation;
- d) Once a section of the construction is completed, the site should be cleaned up immediately, the barrier and restore traffic should be removed;
- e) Strengthen information dissemination, release Traffic Guide timely.

8.1.2.2 Inconvenience of Enterprises and Shops' Production and Operations Caused by the Barrier of Construction

- a) Reasonably arrange each road construction, try to control the construction period;
- b) Under the premise of ensuring safety, do not use barriers if possible, once construction is completed, remove the barriers immediately;
- c) In the traffic junctions where there is enterprise outlet for the cargo, reserve appropriate space vehicle to facilitate business travel;
- d) Allows companies indicate information of businesses and shops on the wall of barriers.

8.1.2.3 Construction of Water, Electricity, Gas, Pipeline Sabotage Network

- a) Construction team shall master arrangement of various pipelines before

construction to avoid blind construction;

b) Construction team shall enhance the safety of staff education, overcoming brutal construction behavior;

c) For unavoidable circumstances for pipeline relocation and resettlement, issued early advance notice to admit the public take all the preparatory.

d) Construction team shall arrange special personnel responsible for liaison with the host community committees, release information, listen to community residents' report, run immediate crisis management once there is a sign of the pipeline damage, avoid magnification of crisis.

8.1.2.4 Noise Pollution on Surrounding Environment Generated by the Construction,

a) Blocks construction section as possible, repair retaining wall around timely after damage;

b) Strengthen the management of construction site, place construction materials neatly, clean up garbage promptly;

c) Cover the bare dirt or timely liquidation;

d) During the construction process, try to take processes and technologies which can control the generation of high-decibel noise;

e) Prohibiting noisy construction work (before 8:00 A.M. and after 9:00 P.M.);

f) Constructing temporary noise walls and taking other measures to mitigate the impact on the surrounding residents

g) Adequate compensation of surrounding residents who are suffering serious noise disturbance;

h) Monitoring harmful gases generated in the construction and operation, strictly use environmentally friendly building materials and construction techniques.

8.1.2.5 The Destruction of Transportation Security Risks Caused by Construction Facilities

- a) Retaining wall should be solid and reliable, timely repair once damaged;
- b) If the construction hinders the roadway or danger to sidewalk, should arrange specialized personnel on-site command and management;
- c) Timely establish warning signs in the event of road damage or other hidden dangers places.

8.1.3 Social Impact Mitigation Plan during Operation of the Project

- a) The safety of residents nearby the bus terminals may have been affected by the operation of buses, shall pay attention to the distance between bus lane and sidewalk.
- b) The rest of residents nearby the bus terminals may have been affected by the noise of the operation of buses, shall pay attention to the morning departure time and night time admission.
- c) Security issues of bus passengers getting off the platform, especially the security issues during the operation in the winter.
- d) Bus station and walkways should be non-slip surface designed.
- e) Paul Field bus stop shall control various leaking oil pollution.

8.1.4 Developing Traffic Safety Management Plan

- a) During the whole process of the project, increase education efforts for improving public awareness of road safety
- b) During construction, the city traffic police team shall strengthen cooperation with public transport Limited, to detect the impact of traffic safety and congestion that may happen due to the project.
- c) Set clear signs traffic alerts and tips in construction process, carry out traffic control for large-scale construction.

d) Increase penalties of urban public traffic violation

8.1.5 Vulnerable Groups (Old and Sick Pregnant, etc.) Care Plans

8.1.5.1 Vulnerable Groups Fare Reduction Plan

After completion of the project, fare will affect some disadvantaged groups' travel and increase their travel costs. Although the level of the increase is not too large, the majority of urban residents can afford, it will bring some of the burden to vulnerable groups in the project area. To alleviate the burden of their lives, enabling them to enjoy the project's social benefits fairly, relevant government departments shall support policies and formulate preferential scheme as soon as possible according to the actual situation of vulnerable groups.

8.1.5.2 Facility Care for Vulnerable Groups

a) All Bus stops should have access facilities for the elderly, children and disabled access;

b) Establishment seats for old and sick pregnant in public transportation vehicle;

c) During the driving process of buses, regular prompt passengers to give seat old and sick pregnant;

d) To meet the special needs of passengers, handrails inside should be set with high and low;

e) Design the stations and bus, consider the up and down convenience of elderly, infants, people with disabilities carts;

f) In the process of bus motion, strengthen the voice prompts, not only to report about the name of reaching station, but also the direction of travel destinations, transfer information, etc., also should timely remind the convenience of passengers, especially a timely reminder for vulnerable groups

to get off and transfer.

8.1.6 Stakeholder participation plan

8.1.6.1 Principles and Framework for Participation

World Bank in its participation manual defines participation as "this is a process, project stakeholders through its influence, joint control involves the development of their involvement, the development of decision-making and related resources." This definition avoids the major stakeholders in the development process who are simply treated as passive recipients of aid, interview subjects or labor, and to clear that the implemented projects of World Bank should be a process that stimulating major interest groups, influencing and controlling the development of actions. The implementation of this process requires the entire country's economy and its relevant departments to consider a wider range of stakeholders; ensure that all stakeholder groups and their relationships can be identified, and in all phases of the project to be considered, let the poor be more accessible to resources, especially financial resources; and strengthen key stakeholders and their organizations' ability to manage. Table 8-2 summarizes the main principles and framework for involved stakeholders.

Table 8-2 framework and principles of community participating in the project

Number	Steps	The role of key stakeholder groups	The role of government	The role of expert	Effects
1	Analysis of the problem and	Analysis of the family, society, resources and other issues, the	Administrative, political and financial	help key stakeholder groups analyze problems and	Can accurately find the real

Number	Steps	The role of key stakeholder groups	The role of government	The role of expert	Effects
	establishment of theme	causes of problems	support	guide them to find out the cause of the problem	problem
2	content and framework of the project	Put forward their own needs, compared the relationship between the cause of problems and their own needs, in order to establish a framework to solve the problem	Study on whether government can support proposal put forward by major stakeholders	Based on the analysis of the problem proposed to the government and key stakeholders the views on the technical feasibility of	The content of project is linked to the actual needs of key stakeholder groups
3	Project Plan	According to family labor, gender division of labor, and other socio-economic characteristics of the season, establish project activity intends and determine the	Examination of the relationship between key stakeholder groups and government funding programs	Together with key stakeholders to develop plans, early warning plan	Program activities should be consistent with the main production season

Number	Steps	The role of key stakeholder groups	The role of government	The role of expert	Effects
		responsible persons			stakeholder groups, labor allocation and capital position
4	Implementation of the project	Establishing implementing organizational system to elect the person in charge of the activities and implementation of project activities	Providing conditions for implementation	Technical Support	Beneficiary groups responsible for their own
5	Monitoring and evaluation	Project implementation monitoring their activities and organizing regular assessment of progress	Involved in monitoring and evaluation	Analysis of monitoring and evaluation results and report to the government and major stakeholder groups	Beneficiary groups keeps abreast of the progress of their activities

Number	Steps	The role of key stakeholder groups	The role of government	The role of expert	Effects
6	Final project evaluation	Evaluate their own input and the ultimate effectiveness of external support	Involved in the assessment process, review the effectiveness of government investment	Involved in assessing the effectiveness of the review of technical inputs	Evaluate by the beneficiary whether they are benefited
Role		Decision performer	Guarantor	Supporter	Roles Unified

8.1.6.2 Necessity for Participation

During the period of the project design, implementation and monitoring of management, in order to ensure various types of project beneficiaries timely get project-related information, and have equal opportunity put forward their own proposals and comments for the corresponding questions, but also to facilitate the project implementation units and supervise management agencies to grasp the dynamic implementation of the project and to make a scientific decision-making based on the actual situation. Therefore need to:

a. Keep the openness of project information, the project needs to carry out propaganda work throughout the project cycle. Establish regular project information disclosure system, on a regular basis post the information which closely related to major stakeholder groups and the information they are particularly concerned about project in the public spaces of affected communities. In addition, it can also inform key stakeholders the preparation

and implementation status of the project through group meetings, congress, posters, television, radio and other means.

b. Help primary stakeholders build the project consciousness. Training can be carried into the following categories: a) carry out participatory training for primary stakeholders of the project and guide them to take the initiative to carry out thinking about the social and public transport development; b) carry out the relevant knowledge training, and guide primary stakeholders think about the impact of public transport to itself, to support public transportation construction; c) carry out technical training of the project, eliminating primary stakeholders' concerns about the project.

c. Encourage key stakeholder to participate in project construction, give priority to hire them for the project paid labor and allow them to provide logistical services for project construction

d. Concern about the role of community leaders and the strength of community in the project implementation process. Project needs the involvement of community leaders in advocacy, training, mobilization, reflecting the needs of the public and found problems in project implementation, coordination conflicts, follow-up management and other aspects.

8.1.6.3 Participation Goals

Around the public participation activities launched in project of City Public Transport in Mudanjiang, goals that expected to achieves are:

a. During the stages of preparation and design in the project, in flexible and diverse ways, publish information about projects to various stakeholders groups involved in the project, to solicit Mudanjiang public of different sexes, different ages, different classes, different travel modes advice and suggestions on alignments, site settings, bus terminals design, traffic organization, construction management, compensation and rehabilitation of affected residents and enterprises.

b. Analyze and summarize the collected relevant information, provided to the project owner and design department and other relevant departments to optimize project design and project implementation and management, and open to the public the various optimization measures through continuous public participation and information communication to achieve optimization of project preparation and design.

c. In the construction process of the project, through participatory public participation, dynamic collecting various stakeholder groups' complaining, comments and suggestions, identify potential problems during the implementation stage, to seek a reasonable solution to the problem, ensure the smooth implementation of the project construction to achieve the maximization of the project's social value.

8.1.6.4 Ways and Means of Participating Organizations

a. Using Various Media to Release the Information of Public Participation

Publishing information related to public transport projects and soliciting public opinions on "Mudanjiang Daily", Mudanjiang Harbor, Mudanjiang television, radio and other traditional and modern media, which has larger circulation and a broader coverage.

b. Issued Open Letters and Other Promotional Materials

Distributing promotional materials within the scope of the impact and public transport services and convey information of bulletin content through illustrations way. Issued leaflets mainly in the area where has high pedestrian flow or key community and units.

c. Interviews of Focus Group

According to the preliminary design of public transportation programs in Mudanjiang, plans for residents and staff in the area of involving bus stations, bus terminals, stop insurance field and the bus driver training venues, organizing focus group interviews covering the entire community. Interviewees

include general community residents, also the enterprises and institutions are covered, and elderly, women, persons with disabilities and other special populations shall have an appropriate proportion in the interview object.

d. Structured Questionnaire

For the characteristics of preparation and design phase in the project, design the structural questionnaire, have a comprehensive understanding of the known situation for public transport projects in project area, seek the views and recommendations on project trends, site location, bus fares, safety facilities and other related content. 500 copies of the survey sample, selected in six evenly along the line.

e. Seminars and Individual Interviews

According to the content of public participation activities, organize various forms of seminars and individual interviews for individuals to gather information.

8.1.6.5 Public Participation and Information Disclosure
Implementation Plan

During 2013 January-February, public participation activities of Public Transport project in Mudanjiang launched, and used various ways and means of facilitating adequate information disclosure to encourage public participation. Accordance with the arrangements of "public participation in the implementation of activities outline", activities were orderly conducted. The main public participation activities include:

A. Pre-project Participation of Various Stakeholders

For public participation, the most important thing is to obtain information. SA group plays the role of information providers in the social assessment process, during the process of each social assessment task, group members and the project masses are on an equal footing, public project information, and negotiated project with masses equally. The most important project

stakeholders are the masses of ordinary project area, and for these ordinary people, empowerment, openness and equally dialogue with them, is the premise to ensure their ability to learn the project information and actively participate in the project. To ensure that the recommendations and actions of various stakeholders can be integrated into the project, the research group for different stakeholders took a different way of informing and collecting information aim at different stakeholders.

a) Early involvement of relevant government departments

The stakeholder groups, compared with other groups, have the expertise related to transportation projects and long-term management experience. This perspective of professional departments from the government is very important for the project. So for projects, listening to the recommendations of these departments is often able to achieve a multiplier effect. These sectors' involvement in the program mainly through seminars and literature collecting.

During the agency interviews, SA group members explained overview and the role of the project to relevant person in charge of the municipal government departments and consulting project proposals likely to give from the perspective of work way and their participation in the project will be one of the key discussions.

Local government departments' relevant responsible persons, who start from their duties, introduce a great deal of local knowledge that is adapted to work in the local. Task force members get the recommendations of the project from various government departments at the project area, can integrate a good life with the local people and maximize project benefits. These recommendations providing a great help to social assessment work on the project, and were integrated into the relevant sections of this report. Organized by the Mudanjiang City Development and Reform Commission, the SA team has held two seminars.

Table 8-3 Analysis of Symposium

The seminar organized by PUC in Mudanjiang

Time: January 15, 2013

Location: Municipal Development Conference Room in Mudanjiang

Participating units: Development and Reform Commission, the Land Bureau, Construction Bureau, Planning Bureau, the bus company, the Financial Bureau, Traffic Police Detachment, Hohai University

Meeting contents:

Units	Current situation	Potential problems	Suggestions
Land Bureau	<p>1. The existing bus field and stations are mainly based on the old city land use planning, which has low utilization of land for construction;</p> <p>2. Proposed project Building Land Index of area is fewer and land becomes scarce</p>	<p>1. The proposed bus stop insurance field, the setting of bus stops exist risks of beyond the scope of urban construction land use planning and occupy basic farmland or other land, including agricultural land;</p> <p>2. Projects exist risks that land compensation is not timely, the standard is low and production resettlement landless workers are not in place.</p>	<p>1. The project selection process of bus company in Mudanjiang should take full account of the ownership and nature of land to be occupied, screening combined with long-term planning of urban land use;</p> <p>2. Projects involving land acquisition should be strictly in accordance with national and the city's compensation measures and resettlement approach of landless person to compensation and resettle</p>
Construction Bureau	<p>Responsible for subprojects' construction work of municipal</p>	<p>The content of the project which the department is responsible for, have been identified, the</p>	<p>Hoping to strengthen communication with the Planning Bureau, bus companies to ensure that</p>

	<p>construction project that present traffic lines will cause buses congestion easily, while the slow system of central area is imperfect and missing which is a major predisposing factor of accidents</p>	<p>project implementation process exist the risk to adjust the project site, design drawings and implement changes to modify the contents</p>	<p>the "three vertical and two horizontal an amble" and other projects conducted in accordance with urban planning and design requirements</p>
<p>Planning Bureau</p>	<p>Transit network of Old Town in Mudanjiang has been formed, so the proposed project requires no new bus routes open; focused commercial and financial sector caused congestion of Taiping Road and other roads, winter season exacerbated the problem</p>	<p>The proposed project exist the risk of conflicting the overall urban planning and urban transport planning 2011-2015; the implementation of intelligent transportation system project exist the risk of reducing the scale of old commercial gathering area</p>	<p>Recommends obtain project funding as soon as possible, improve industrial layout in Mudanjiang through the construction of intelligent transportation systems, and promote optimal adjustment of economic development planning; hope revising the proposed project and the overall urban planning is able to effectively converge; planning of the proposed project will be promote the sound development of the</p>

			economy, which as the prerequisite
Bus company	As a project office of World Bank Loan bus subprojects, the company currently has more than 700 buses that are too aging and interior heating system is missing; only four stops insurance field stopped and protection function is almost loss during up to four months of winter; bus station spacing, specifications and service facilities are behind the passenger demand	Bus subproject implementation may be difficult to play its proper function because of insufficient of publicity and the deficit of public traffic safety awareness and knowledge; investment in hardware devices of intelligent transportation may cause the increased costs and losses of the bus company which has completed the restructuring	Recommended to start the project as soon as possible, through the delivery of high intelligent vehicle, perfect intelligent car insurance market, improve "punctuality" and other measures to improve bus service quality, improve enterprise management; recommends bus stops should be designed according to local conditions, the person should, in improving human services capacity, reduce operating costs; advised people to provide a reasonable demand for bus travel, to avoid unrealistic
Finance Bureau	Based on national policy and the bus company's operations nature to determine they can	The implementation of the proposed project may increase pressure on the government financial subsidies; the operation	Suggest bus company reasonable estimates new urban public transport system' size of subsidies and transparent the use of

	get some oil supplement and special subsidies for passenger car	of intelligent transportation system may let the existing urban public transport subsidies and standards be outdated and obsolete	its funds to subsidize; give necessary government financial support under the new requirements of the project and based on the market-driven.
Traffic Police Detachment	Old town transit lines in Mudanjiang exist road network irrational due to the old design; including buses, the speed of various types of vehicles are too slow, there's a long time for bus passengers to wait for and ride the bus; during winter season, four indicators of traffic accident have increased year by year in the old town	The implementation of the proposed project may result in an increase in the number of private cars, not conducive to improving the proportion of transit operations	At the same time of improving the urban traffic control system, it is recommended to increase the training of residents' traffic safety awareness strengthening the various drivers driving habits and traffic literacy training including bus drivers, improve urban traffic in essence; considering the uniqueness of winter season, it is recommended to work harder on improving lights in the traffic congestion lots, snowmelt equipment sound and other aspects

Table 8-4 The Seminar Organized by Urban Council in Mudanjiang (Two)

The seminar organized by Urban Council in Mudanjiang (two)

Time: January 15, 2013

Location: Municipal Development Conference Room in Mudanjiang

Participating units: Development and Reform Commission, Public complaints bureau, Civil Affairs Bureau, statistics, CDPF, Office on Aging, Price Bureau, Hohai University

Meeting contents:

Units	Current situation	Potential problems	Suggestions
Public complaints bureau	Currently there are 37 ethnic compositions and the population of the ethnic minority in Mudanjiang is 240,000, account for 9% of the total population. Minorities are Korean, Manchu, Hui, Mongolian and so on. Among them, the largest number of Korean population, there are 120,363 people. There are North Korean elementary and secondary schools near the bus lines in Mudanjiang. Educational level of	There is the Korean settlement surrounding the Korean school, There exists barriers of Chinese language for the older age groups of the Korean population;	In minority areas, the implementation of bus bilingual (Chinese and Korean) at stations, bus schedule is also bilingual prompts;

	ethnic minority groups is roughly the same to the Han.		
Office on Aging	In Mudanjiang, the elderly population (60 years old) is nearly 430,000, accounting for 14% of the total population of Mudanjiang. Since 2006, the travel free policy for the elderly over 70 years old was implemented in Mudanjiang. On Cost-sharing, the municipal budget commitment 30%, City Welfare Center commitments30%, four city governments assume 5%, the city bus company bears 20%.	Birch town, and warm spring town, Hainan Township bus lines, due to personal contract zoning adjustment, the fare is higher than the ordinary urban bus fares and other factors, has not been included in the scope of free transit; There is the narrow scope of bus relief benefit, Beijing and other cities implement free bus for over 65 years old; It is difficult for the elderly with poor physical condition travel;	Refit the Charging apparatus of the buses which passing the Hualin Town、Hewenchun Town and Hainan Village , and being free for the70 years old or older; Being free for the 65 years old or older, if economic conditions permit; Make the Barrier-free buses, which has no steps in the front half of the compartment and can tilt to side of the door by the air control. The bus has a ramp for the wheelchair in the back door and two safely wheelchair seats, the disabled person can use the wheelchair to get on or get off the bus, the old people will be convenient, too.
CDPF	Under the current	Some disabled persons	Advice: Repair the

	<p>policy, now there are 300 blind people who can make their free IC-Card which are paid by the government. The card was made 2 times a year, which was mainly for the blind in Mudanjiang; The blind in this city can also have 2 free employment trainings a year, all the young blind between 20-30 years old can gain the good Re-employment opportunities beside blind massage; But the blind stop sign made in 2008 in this city had different degrees of damage, which affects the travel of blind</p>	<p>refuse to handle disabled card, which caused the difficulty on statistics, so the number of registered disabled is far more less than the fact; Some disabled persons avoid travelling because the varying degrees of physical disability, and disability aids like scooter are improved further, they are not helpful for the disabled persons to fit into society, and will also cause the disabled people mental and psychological problems.</p>	<p>damaged "blind stop sign", while further increasing accessibility transport facilities for different disabilities such as reducing bus car plate height and interior handrail height; encourage and improve the proportion of disabled groups bus travel and to strengthen communication with disabilities on travel in areas, to promote social harmony</p>
<p>Civil Affairs Bureau</p>	<p>The existing types of guaranteeing population in</p>	<p>Worried intelligent bus fares are too high, combined with vulnerable</p>	<p>Suggested the city bus company and other departments to effectively</p>

	<p>Mudanjiang is more than 60,000 and its current average monthly trip costs are about \$ 12 to \$ 20, in addition to 70 years old and blind and other disabled individuals enjoy the financial subsidy, the majority of low population enjoy no transportation subsidies; suburban guaranteeing community commitments higher bus fares</p>	<p>groups, including students fare without subsidies, will increase the burden on their lives</p>	<p>control the operating costs of intelligent transportation system and inhibit fare hikes; while expanding coverage of bus lines for the outskirts of the city travel group</p>
<p>Price Bureau</p>	<p>The unified fare (1 yuan / person • times) has been accepted by the public, but the operating status of city bus system make the "upgrade file" of urban public transport system</p>	<p>Lower level of urban economic development and a higher scale of the project will result in fare increases, thereby causing changes in the way people travel, it will be difficult for bus system to achieve the purpose of taking on more urban transport weight</p>	<p>The running of urban intelligent transportation system, on the one hand should increase financial subsidies, reduce the bus travel burden for corporate and passenger, on the other ensure that fare is reasonably adjusted, avoid the negative impact of the</p>

	has become a necessity		fare increase on the traffic
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Figure 8-1 Land Bureau, Finance Bureau, Construction Bureau, Planning Bureau and Other Departments to Participate in the Forum

b). Early Involvement of Traffic Police Department

The traffic police team in Mudanjiang is not only a government department, but also a project component units; the importance of the involvement of transport sector in the project is that, the stakeholders' proposals can dramatically improve benefit of the project for ordinary urban residents, such as traffic safety etc. The involvement of traffic police department includes department heads, especially participation in the project of transportation projects Branch and line traffic police.

Management's participation in the project is in the form of individual interviews suitable. Different from management's perspective, the management of the traffic police force for urban public transport presents three-dimensional situation. For example, the reasonable setting of bus lines, situation and restraining factors of bus bottleneck operation and public transportation security and resolution programs. After informed the purposes of the pre-participation discussion conducted for World Bank projects, the responsible officers of traffic division soon focused the discussion on the departments responsible for their own, and provided the feasibility

recommendations to the SA group members.

Figure 8-2 Early Involvement of Traffic Police Department

Problems	Views and recommendations of traffic police team's responsible people
For the bus driver's training conducted by traffic police team, What are the requirements of the assessment? What are the special requirements for inspection of buses?	The bus driver's training conducted by traffic police team, apart from practicing the bus driving skills, but also expanded around the typical traffic accidents, including road safety knowledge. Bus drivers' internal evaluation is usually implemented by public transport enterprises; the traffic police detachment in Mudanjiang does not assume this function. The transit vehicle inspection work in Mudanjiang shall be in charged by the traffic management department, which means Department of Transportation is responsible for that, the traffic police force mainly provide management and services for road violations within the city buses and it's settlement.
What is the view of traffic police team for the construction of transit integrated corridor? Views or recommendations of items such as bus lanes, across the street underpasses or overpasses, bus stations, comprehensive renovation of intersection, parking	To the construction of Bus integration corridors subproject, the traffic police team is in affirmative and supportive attitude. The "three vertical and two horizontal a slow" of bus integration corridor project has a direct effect on improving the urban passenger sharing rate of transport systems and environmental protection. Under current conditions of road infrastructure in Mudanjiang, the actual use value and efficiency of planning bus dedicated lanes is difficult to predict, given the current level of the development of bus, the establishment of bus dedicated channel may lead to wasted resources, more traffic congestion and other risks; The design of bus station is best not to take up motor vehicle lanes, conditions permitting, it should be possible to widen the road, the site selection shall on the basis of avoid the road opening to facilitate the management of traffic police department; Construction Bureau is mainly responsible for the

<p>spaces, road traffic languages, signal control systems, electronic police and electronic stop sign</p>	<p>comprehensive transformation of intersection ,the implementation of this project has an important role in improving the urban transport; Overpasses, underpasses and other construction projects requires appropriate geological conditions, in Mudanjiang, in many commercial downtown area which need to improve traffic conditions does not have the conditions of building underpass or overpass. In short, "bus priority" of urban transport development strategy in Mudanjiang is not simply a hardware improvement process, but also include city bus company's internal management and service improvement, urban transport services community awareness of road safety and other soft-improvement; therefore, the implementation of "signal control system", "electronic police" and other facilities project are in the process of continues promoting, still need the improvement of comprehensive facilities.</p>
<p>The design of city's comprehensive intelligent traffic management system platform is divided into three subsystems, data centers, operation and maintenance systems, platforms' application subsystems, whether there is a preliminary idea in capacity building, planning, organizational</p>	<p>In Mudanjiang, the current design of urban bus lines has become increasingly unsuited to the needs of development. To shunt bus lines and vehicles in Taiping road, more than one line in the center of Mudanjiang changed from two-way street to one-way street, and set up a special bus lanes in some sections to, but these measures are often brings retrograde of motor vehicle, "in name only" of bus lanes and other issues due to low literacy of citizenship and driver. Therefore, after the new transit corridor planning and implementation is finished, along with road widening and gradually solving the above problems, the city's comprehensive platform for intelligent traffic management system will function effectively. In addition, by the smaller urban space and economic development and other factors, in Mudanjiang, they did not choose the existing measures such as odd and even numbers to ease traffic pressure.</p>

<p>realignment, etc.? And how to deal with it?</p>	
<p>Whether there is the ability to set aside a special warning for the traffic management in front of Schools (primary and secondary)?</p>	<p>In Mudanjiang, because of the earlier road design and narrow width, the zebra crossing seated in school district roads of the bus corridor will result in decline rate of vehicle traffic and traffic congestion, planning overpass or underpass near the school in individual area where the condition has. In Mudanjiang, now there can pulling up special cordon to maintain traffic order in front of busier traffic school gate at the peak of to and from school, such as Lixin primary schools, Yangming primary schools.</p>
<p>Problems and recommendations of existing signaling systems, command system; The elderly, persons with disabilities (such as color blindness, physical disabilities, etc.) over brideways Problems and suggestions (signal interval, the auxiliary signal system, pedestrian Green Island, etc.)</p>	<p>The current signal system in Mudanjiang must be replaced in accordance with national standards for traffic signal system. In Mudanjiang, there are more than 390 intersections at present, but only 52 intersections have crossing signal system, and mostly signal systems were set in the 1980s. Considering requirements of urban development on traffic control system, in subsequent urban transportation construction work, should gradually establish a "regional signal linkage" system. For the blind and other disabled persons, proposed that blind road laying should integrate with popular crosswalk, through the design of uneven pavement, laying a certain width blind road on the sidewalk to improve sidewalk utilization.</p>
<p>What is the biggest constraint in bus operations</p>	<p>The largest constraints of bus operator management system focus on the acquisition of the land used for its first and last stop bus facility construction, different types of ownership of the land, its reporting,</p>

<p>management system? How to improve?</p>	<p>approval, the content and procedures of expropriation and compensation are both different; Secondly, the bus sub-projects will purchase a large number of new equipment, such as the new bus and car insurance parking facilities, there are some uncertain factors in bus company's ability to make good use of these facilities in order to improve service quality; In addition, the privately owned bus company itself, there is much higher cost effectiveness than corporate social responsibility considerations, the implement of World Bank loan alpine urban intelligent transportation project need the management of bus operators to assume more social responsibility and urban development obligations.</p>
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c). Early Participation in the Transport Sector

The importance of transport sector participate in the projects is that the proposals of stakeholders can dramatically improve the project's benefits for ordinary urban residents. Participation of the transport sector includes two parts, project involvement of bus companies and taxi companies' management and participation in the project of bus drivers and taxi drivers.

Management's participation in the project is suitable for the form of individual interviews. Various functional departments of the company's management, in charge of different aspects of the city public transport, from different management's perspective, make the bus company presents three-dimensional situation to the urban public transport. Such as line operating divisions are more concerned about reasonable setting of bus lines, public transportation efficiency and so on.

After informed the purposes of the pre-participation discussion conducted for World Bank projects, the management staff soon focused the discussion on the departments responsible for their own, and provided the feasibility recommendations to the SA group members.

Following figure shows the situation of SA group members interviewed

responsible person of bus company in Mudanjiang:



Figure 8-3 Interviews of Bus Company in Mudanjiang City

In comparison, the driver's perspective is more bottom, to some extent make up for the lack of management recommendations. The bus and taxi drivers can use combined participation of questionnaires and interviews. The depth interviews can get more detail of the project needs of this group, help SA group members find the problem, and as fully as possible to listen to their opinions and suggestions.

Following figure shows SA group members interviewing bus driver in-depth interviews:



Figure 8-4 Interviews with Bus Drivers

d). Early Involvement of Ordinary Urban Residents

Urban residents are the most important one involved in the project stakeholders. All project participants can promote urban social evaluation methods and can be used for this group. To fully provided information and ideas relevant to World Bank projects to urban residents, during the process of outside industry, SA group members use the combination form of participant observation, interviews, seminars and questionnaires.

The SA group members use the combination form of in-depth interviews, seminars and questionnaires, information conveyed to the part of the residents interviewed, rapidly spread within the community, will be able to mobilize more residents in the project area to participate into the project.

Group members carried out a field survey in the transformation sections, through participatory observation understand the situation of projects area, understand the needs of residents for public transport. Mainly inspected public transportation needs along some of the facilities, such as hospitals, schools, nursing homes and other.



Figure 8-5 Accesses of Sensitive Points along the Line

Depth interviews are generally carried out in communities in the project area. Use the idle time of community residents, explain the contents, objectives, ideas of World Bank projects to community residents, ask community residents the local traffic conditions and problems, ask community residents the needs and attitudes to World Bank project, and ask reasons and recommendations from their own point by depth interviews.



Figure 8-6 Interviews with District Staff on Duty

Questionnaire can be in the form of text, accurate inform respondents content related to World Bank project, and let the respondents perceive variety of social problems involved in the project.

In the process of respondents are being asked, trained investigators explain the overall structure of the questionnaire and the design intent of related questions, asked respondents to, so that respondents understand the attention of World Bank project to traffic management, traffic safety and traffic facilities.

Table 8-5 Comprehensive Survey Sample Size Distribution (Plan)

Category	Number	Name of bus corridors	Road length km	Line ratio	Number of samples (copies)
Road system: three vertical and one horizontal two postponed	1	Three blocks west	7	20.17%	101
	2	East four Street	8	23.05%	115
	3	Xinan Street	4.7	13.54%	68
	4	Pingan Street	8.3	23.92%	120
	5	Guanghua Street	4.5	12.97%	65
	6	Amble system in Taiping Road	2.2	6.34%	32
		Total	34.7	100%	500

e). Early Participation of Vulnerable Groups

Urban residents Forum is mainly designed for involvement in the project of vulnerable groups, requires members participated in the symposium covering the elderly, women, disadvantaged groups and the disabled. Aimed at understanding the special needs and the views of urban traffic problems of vulnerable groups in the project, based on asking the reason, encourage these groups to voice their suggestions on the implementation of the project. Because the forum is organized and held combine the local Committee on Aging and the CDPF, the person in charge of his department were also involved, brought into government departments and grassroots organizations perspective.



Figure 8-7 Talking with Disabilities and the Elderly

In addition to the discussion, group members also conducted a questionnaire survey and interviews for vulnerable groups.



Figure 8-8 Questionnaire Survey and Interviews on Vulnerable Groups

After SA group members equal footing with the stakeholders in the project area, the fundamentals of their public participation for the project are good, most of the people expressed their support for the project and willing to

participate in the project. Participatory Social Assessment Project Task Force members also collected the relevant information required for editorials.

B. Public Participation during Project Implementation Plan

a) Release the project's implementation and the demolition announcement. Before the implementation of the land acquisition and resettlement, publish to all affected person the levy system and the demolition notice. Its purpose is to enable the affected people to understand and relocation levy system related issues, the scope of land acquisition and resettlement, compensation and resettlement policy and other relevant regulations. In addition, publish notice of the fence, to inform the time, place and the possible impact, providing traffic control programs to facilitate public travel.

b) Publish public transportation running safety booklet. Public Transportation Running Safety Booklet is distributed by the local government public transport authorities such as traffic police team and the Department of Transportation, to all the affected streets, communities and their residents in the implementation of the project. Public Transport Operational Safety Information manual includes public transport project profiles, the possible impact of project implementation to congestion and safety, precautions, benefits of related participants during post-implementation and other content.

c). Holding A Immigration Mass Meeting is A Major Form of Information dissemination. The role of such meetings is to allow participants to first understand the implementation of land acquisition, compensation policies and standards, housing reconstruction and resettlement measures, while collecting feedback from the participants. Each affected zone has a mass meeting, through the General Assembly elected a qualified rating agency to assess the compensation price in this area.

8.1.7 Complaints and Appeals

a. The Way of Collecting Dissatisfaction and Complaining

a). Collecting and understanding the problems including the masses complain, progress and work measures, through the report of local public transport and street construction leading group office of resettling.

b). Coordination problems found in inspecting the construction site found by the owners construction unit.

c). Information reflected by external monitoring agency.

d). Letters and visits of affected people.

e). Reflection of owners' construction unit agency.

b. Procedures of Appeals and Complaints

In planning the process of project's design and implementation, the participation of resettlement is always encouraged. However, in practice there will be problems more or less, to resolved the problems arise promptly and effectively and to safeguard the smooth progress of construction, in addition to the existing levels of local government petition complaint channels, the project established a transparent and effective grievance redress and developed complaints and complaints procedures of the resettlement demolition for the affected residents.

c. Principles for Handling Complaints and Grievances

Complain about the problem raised by the masses must be field research, fully solicit the opinions of the masses, patiently repeated consultations, put forward opinions objectively and impartially in accordance with national regulations and the principles and of criteria resettlement action plan provides must promptly reflect to the higher authorities about incapable of handling complaints issues, and to help to improve the investigation.

If the organization in the previous stage did not respond to questions on the appeal in the date specified, the complainant the right to appeal.

d. The Content and Manner of Complaint Reply

a) Reply Contents

- Descriptions of complainers' dissatisfaction
- Fact-finding results

- Relevant state regulations, principles and standards of resettlement action plan

- Treatment advice and the specific basis

b) The way of Answering Complaints

- The way of directly sent to those who complain complaints in written materials for individual phenomena question.

- Inform residents in the village or community in the form of village (residents) meeting or issue a document for the complaining problem reflecting by more people.

- No matter which kind of Answer mode, all information must be delivered to the communities or units that the complainant belongs to.

e. Appeals and Complaints Records and Tracking Feedback

During the period that the project's designing plan is executing, monitoring team should do a good job of registration of information and complaint and information processing results management in collaboration with various departments, regular Inscribed to resettlement office in written form. Project resettlement office will regular inspect the process of complain registration.

To have a complete record of the handling situation of related issues and complaint of affected population, project management office developed a registration form of the affected population's complaints and grievances.

Table 8-6 Complaints and Appeals Registration Form of World Bank Loan Project

Receiving unit		Time		Location	
Name of complainant	The complaint	Required solution		Proposed solutions	Actual handling situation
Complainant (Signed)				Recorder (Signed)	
<p>Note: a. Records should accurately record the claimant's allegations content and requirements;</p> <p>b. There should not be any interference and obstacles in the appeals process;</p> <p>c. The proposed solution should reply complainant within the stipulated time.</p>					

8.2 Implementation of Social Management Plan

8.2.1 Institutional Arrangements and Capacity Building

The main responsibility of implementing social management plan is project owners. According to the social management plan implementation requires and combine the functions division of project-related institutions, project owners can own or entrust relevant agencies all or partly responsible for implementing the project of social management plan.

A. Institutional Arrangements

Social management agencies involved in the bus line project of Mudanjiang include:

1. leadership team of Mudanjiang cold weather smart public transportation system project
- 2 management office of Mudanjiang cold weather smart public

transportation system project

3.Public Transport Company Limited in Mudanjiang

4.the relevant government agencies in Mudanjiang, (such as the NDRC, the traffic police team, the Land Bureau, Construction Bureau, etc.)

5.district government and streets along Mudanjiang

6.Project Monitoring and Evaluation Unit

B. Institutional Responsibilities

leadership team of Mudanjiang cold weather smart public transportation system project: responsible for the entire project leadership and coordination of social management.

management office of Mudanjiang cold weather smart public transportation system project: implementing social management capacity building training accordance with the requirements of the World Bank and the.

Public Transport Company Limited in Mudanjiang: responsible for reviewing project documentation, monitoring project implementation.

The relevant government agencies in Mudanjiang, (such as the NDRC, the traffic police team, the Land Bureau, Construction Bureau, etc.): responsible for project specific social management plan implementation and monitoring of the Bank's policies and conduct training.

District government and streets along Mudanjiang: carry out social management with the project, and conduct training for the relevant policies of World Bank.

Project Monitoring and Evaluation Unit: investigation and assessment of the social management plan implementation of the project, proposing issues and recommendations to the Provincial Project Office and the World Bank to submit monitoring and evaluation reports.

C. Institutional Arrangements and Capacity Building

According to the survey, institutional capacity, working conditions and equipment configuration of the project is more complete, professional staff's quality level is high, they have preparation for similar project, construction and

operation of the national experience. Give the project belongs to the World Bank loan project, the relevant personnel need to be familiarity with the mode of operation for World Bank projects, especially in relation to social and security requirements and adequately compare with domestic experience, so they need further study and training for relevant business policy requirements.

Table 8-7 Training Program.

Table 8-7 Social Management Implementation Plan of the Project

Number	Contents	Implementation time	Primary responsibility institutional
1	Optimize the project design	2013 ~2016	Management office of the project, design units, each subproject office
2	Social Development and Resettlement Implementation Plan	2013 ~2016	Management Office of the project, Office of the subproject, Land Bureau, the land acquisition and resettlement office, the relevant streets and communities
3	Implementation of Environmental Management Plan	2013 ~2016	Management office of the project, each subproject Office, the Municipal Environmental Protection Bureau
4	Fee waiver program implementation associated with vulnerable groups	After completion of the project	Municipal Development and Reform Commission and the Finance Bureau, the District Finance Bureau, the Municipal Civil Affairs Bureau, Municipal Committee on Ageing, City CDPF, Welfare Centre, the city bus company
5	Information disclosure	The entire process	Management office of the project,

Number	Contents	Implementation time	Primary responsibility institutional
	and public participation		each subproject office / the news media
6	Monitoring and Evaluation of Social Management Plan	Once a year in the project implementation period	Management Office of the project, Office of the subproject, monitoring bodies

8.2.2 Implementation Plan

According to the social management plan of the project, the project develops a detailed implementation plan and arrangements, see Table 8-8

Table 8-8 Social Management Implementation Plan of the Project

Number	Contents	Implementation time	Primary responsibility institutional
1	Optimize the project design	2013 ~2016	Alpine city intelligent transportation system construction project management office of Mudanjiang, design units, each subproject office
2	Implementation of action plan for land acquisition and resettlement	2013 ~2016	Alpine city intelligent transportation system construction project management office of Mudanjiang, each sub-project office, bureau, land acquisition and resettlement office, the relevant streets and

Number	Contents	Implementation time	Primary responsibility institutional
			communities
3	Implementation of Environmental Management Plan	2013 ~2016	Alpine city intelligent transportation system construction project management office of Mudanjiang, each subproject Office, the Municipal Environmental Protection Bureau
4	Fee waiver program implementation associated with vulnerable groups	After completion of the project	Municipal Development and Reform Commission and the Finance Bureau, the District Finance Bureau, the Municipal Civil Affairs Bureau, Municipal Committee on Ageing, City CDPF, Welfare Centre, the city bus company
5	Information disclosure and public participation	The entire process	Alpine city intelligent transportation system construction project management office of Mudanjiang, each subproject office / the news media
6	Monitoring and Evaluation of Social Management Plan	once a year in the project implementation period	alpine city intelligent transportation system construction project management office of

Number	Contents	Implementation time	Primary responsibility institutional
			Mudanjiang, each subproject office, monitoring bodies

8.2.3 Emergency Plans

Emergency plans has been established under the "Environmental Protection Law", "Production Safety Law", "national general public emergency contingency plans" and "national contingency plans for sudden environmental accidents" and relevant laws, and administrative regulations.

The Emergency Plan is divided into three categories:

a. Construction emergencies. Traffic congestion caused by the barrier of construction will bring inconvenience to production and operation of business enterprises and shops along the construction; sabotage of water, electricity, gas, pipeline network, construction generated environment and noise pollution on the surrounding, security risks caused by the destruction of transportation facilities, construction is also possible to generate labor safety and other issues. These events are likely to evolve into emergencies, should be considered to reduce the economic losses caused by the barrier of construction, try to develop traffic diverting programs by traffic police departments, and in conjunction with the municipal departments to understand all kinds of pipelines well, and construct strictly following norms. Also, public information, informed the public in advance.

b. Emergencies caused by the uncooperative of interest groups during the construction period. The projects involves some land acquisition and resettlement, some residents, shops, enterprises and institutions are affected, some residents require relocation and become involuntary resettlement, which not only seriously affect their working lives, destruct their social support networks and social networks, but also some even severely affect their children to school, medical care and work trips. For their resettlement

compensation, relocation standards often differ with immigration requirements, which are likely to become emergencies, uncooperative to the construction of the project, and boycott the project. In addition, there are also local governments delay payment of compensation payments in various ways, and even reduce the compensation standards, which can easily lead to unexpected events. For such an event, resettlement implementation unit should strictly develop specific policies and implement procedures in accordance with the "Design Report" and "Resettlement Action Plan" requirements to prevent such incidents.

c. The operational emergency. The operation of the end of the first field bus and hub station may affect the rest of the nearby residents, the construction of bay docking station may encroach the sidewalk and other potential safety accidents and so on. These are likely to cause emergencies, should carried out a variety of plans from a technical and management aspects to guard against possible risks.

9. Monitoring and Evaluation Implementation of Social Management Plan

In order to measure the success of the implementation of this project, that needs to access to relevant implementation information of social management plan sufficiently and timely. Develop publicly verifiable monitoring and evaluation procedures, develop monitoring and evaluation indicators to measure the social impact of the actual project; assessment projects to meet the needs of the target group; ensure the establishment of monitoring and evaluation procedures of various negative impact mitigation options. Timely develop adjustment programs to remove barriers to the achievement of the project's social objective.

9.1 Monitoring Agencies

Monitoring and evaluation of Social Management Plan shall be implemented by the third party (organization or person) commitment entrusted by the project units which have the social evaluation appropriate qualifications, experience and ability independent to the project construction, design, approval, construction, management and other institutional stakeholders.

In Mudanjiang, Leading Group of World Bank Project will engage an independent monitoring agency to carry out an external monitor for the implement of social management plans. Independent monitoring and evaluation unit periodically carry out tracking monitoring and evaluation activities for the implementation of social management plan, advice and submit monitoring and evaluation reports to the leading group of municipal public transport and the World Bank.

Monitoring agency of social management in the project is a highly qualified organization, the group composed of staff of WB, ADB senior expert in social monitoring.

9.2 Monitoring Steps and Content

9.2.1 Monitoring Steps

The monitoring unit analyses and assess the social impact of the actual project and the extent to meet the needs of target groups based on the findings of tracking and monitoring; focusing on tracking various implementation that mitigating or have negatively affect on the program, timely submission measures to remove barriers to achieve social objectives of the project, if necessary, proposed adjustment programs; identify and analyze the existing social problems and social risks during the implementation process in the project, and propose corrective measures and improvement suggestions. Main work steps are as follows:

- A. Establish work plan for monitoring and evaluation;
- B. Establish survey outline, survey forms, questionnaires and interviews

Commitments

- C. Sampling program, program design for interviewing stakeholders;
- D. Baseline survey to determine the base value of the core indicators for monitoring
- E. Establish a monitoring and evaluation information system, which will involve social management plans for different types of data classification to establish a database for analysing and follow-up monitoring to provide computer-aided;
- F. Monitoring and evaluation surveys;
- G. Writing monitoring and assessment report

9.2.2 Monitoring contents

- a. According to the social management plan to determine the social monitoring and evaluation indicators, tracking and monitoring and evaluation the social management plan for the implementation;
- b. Based on the survey results of tracking and monitoring, analyse and

evaluate social impact that the projects actually produce assess the level of the project meets the needs of the target group;

c. Focus on tracking various implementation of the program which have negatively affect on the project, timely propose measures to remove barriers to achieve social objectives of the project, if necessary, propose adjustment programs;

d. Identify and analyse existing social problems and social risk during the implementation process of the project, and propose corrective measures and improvement suggestions.

9.3 Indicator System

Monitoring indicator system is built mainly around social diversity and gender, systems, rules and behavior, public participation, stakeholder analysis, social risk, and several other aspects.

Table 9-1 Monitoring Indicators Constitute Little Table

Indicator System	Monitoring contents
Social diversity and gender 1、 Women and children 2、 national minority 3、 Poor population	Different groups (including men and women) have different status, role and development in social development of the project's; Analysis the changes that may occur of these groups' social status affected by the project, their interaction with other groups, as well as these groups' effect and opportunities for development.
System, rules and behavior 1. Formal system 2. Informal system 3. Customs and behavior	Analysis project-related organization system, rules and members, including forms of social organization and social relations, formal and informal institutions, formal and informal rules convention, customs and behavior between different groups, as well as rules and behavior

	<p>of those institutions that may have an impact on the achievement of project objectives.</p>
<p>Public Participation</p> <ol style="list-style-type: none"> 1.Participation program 2.Participatory approach 3.Participation procedures 4.Participation in the feedback 5.Participation of special groups 	<p>From the looks of public participation, analysis the degree of stakeholders involved in the project affected by the project, including the results generated by participating in project preparation, decision-making, construction, operation management, and sharing the project and the opportunities created by the project, and should give particular attention to the extent and possibility of vulnerable groups' participation. Then study existing participatory approach, establish framework for participation including information-sharing mechanisms, consultative mechanisms and participation mechanisms to develop participation plans to improve the effectiveness of stakeholder participation.</p>
<p>Stakeholders</p> <ol style="list-style-type: none"> 1.Beneficiaries 2.Damaged stakeholders 3.Both benefit and losers 4.Other stakeholders 5.Vulnerable groups 	<p>Analysis individuals or groups affected by the project or affecting the project. Not only to analyze the extent of the actual impact of different individuals or groups in the project, but also analyze their influence on the project, assess their role in achieving the project development objectives. On this basis, proposed the recommendations of establish the mechanisms that promoting various stakeholders to mutual cooperating and</p>

	involved in the project and the establish monitoring indicators of the various stakeholders.
<p>Social risk</p> <p>1.Compensation for expropriation risk</p> <p>2.Risk of ethnic and religious affairs</p> <p>3.Other risks of the project highlights</p>	<p>Identify all possible risks, to develop management measures to cope with risks. On risk analysis, usually pay attention to five risks, including vulnerability risk, country risk, political and economic risks, institutional and external risks. Risk analysis should considered the above-mentioned aspects together.</p>

9.4 Monitoring and Evaluation Report

In the project implementation period (2014 to 2016), annually submit a part of social management plan implementation monitoring and evaluation report.

10. Conclusions and Suggestions

10.1 Conclusions

10.1.1 The construction of project will improve the public transport condition and promote sustainable development of local social economy.

Due to the rapid development of social economy and continuous promotion of urbanization process, the congestion of public transport is increasingly prominent, not only affects residents' life and livelihood, but also exerts negative influence on attract investment. The construction of project not only can improve residents' living environment and life quality, reduce rate of traffic accidents, save people's life and property, but also can relieve traffic congestion, contribute environmental, energy-efficiency, low-carbon green traffic environment, improve investment environment greatly, and thus playing an active role in promoting sustainable development of local social economy.

10.1.2 The project design accords with residents' travel requirements and most residents support and are willing to participate in the construction.

According to sampling questionnaire and interviews, it indicates that the project design accords with residents' travel situation and requirements, and most residents support the project strongly. The main reason is that residents recognize the project is urban basic livelihood project, and its implementation can benefit all citizens. Therefore, most of them have high expectation for the project and their participations are very enthusiasm.

10.1.3 Early in the project, we have tried best to optimize design to reduce impact on resettlement, but there are still risks in the resettlement.

During the early preparation process, PMO has known about the WB policy of involuntary resettlement. Thus, PMO has optimized the proposed project site greatly together with units like Road Transport Bureau. The result of optimization is that resettlement influence decreases sharply.

In spite of it, the project still remains small amount of resettlement influence, especially influence of temporary land occupancy. The specific contents can be found in the *Resettlement Action Plan & Due Diligence Report of Mudanjiang City..*

10.1.4 Implementation of project will be beneficial to the development of vulnerable groups.

The problem can be analyzed in two ways. On one hand, the project dose not impact vulnerable groups directly, and the DRC has indicated that ticket price will not be raised after the project finished. Therefore, the project will not increase vulnerable groups' living costs. On the other hand, in the early process of argument, we have taken the requirement of vulnerable groups and special groups into full consideration and absorbed their reasonable suggestions. Accordingly, the construction of project will have positive impact on the development of vulnerable groups.

10.1.5 The project can promote the development of minorities.

Core content of the project is the improvement of roads and traffic facilities. It will not affect minorities directly. Conversely, because there are relatively concentrated areas where Korean Nationality live in, and project intends to set up the bilingual signs in these areas as well as bilingual hints. All of these will create conditions for the development of minorities and ethnic tourism.

10.1.6 Public participation policy has been preliminary established.

During the early preparation process, the public participation mechanism has been preliminary established and residents show their enthusiasm in participating, especially special groups, such as elderly, disabled, low-income population and women, have shown high participation level. Certainly, due to some details have not been fully implemented, this kind of participation is not sufficient. Accordingly, in the next process, we should strengthen publicizing and mobilizing, to encourage more citizens to take active and effective part in the project.

10.2 Suggestions

10.2.1 It is unfavorable to raise ticket prices after the completion of the project

During the process of public investigations and interviews, we found that the ticket price is a very sensitive problem. According to the result of investigation, 88% of residents think present ticket price reasonable and 87.8% object adjustment of ticket price. Consider the situation of Mudanjiang City (factors such as city scale is not huge, distance between stations is short, taxi fares are cheap, etc.) we advise the government of Mudanjiang City not to raise ticket price after the completion of the project.

10.2.2 Further strengthen public participation

Public participation activities of the early preparation of the project have gained some good effects. In the following process, it is better to make more detailed public participation schedule, open information in time and strive for the most widespread public support.

10.2.3 Increase the Transparency of Project Information

Open information through internet, television, newspaper and shop showcase. Introduce the progress of the project, promote the meaning of project and increase residents' sense of belonging.

10.2.4 Promote the Measures and Suggestions of Anti-poverty

The present low-income standard in Mudanjiang City is average 347 yuan per month and per person, subsidy standard is 235 yuan per month and per person. The life for the people who are low-income is very tough. Suppose that, a low-income person takes bus twice a day, the expense (1 yuan once, 2 yuan a day) will occupy 10.3% of his (her) monthly income. Thus, we advise government of Mudanjiang City to implement fare reduction policy to this group of people.

10.2.5 Suggestions to the support policy of other vulnerable population

During the design and construction of project, it is necessary to care more about the demands of disabled, elderly and women (especially pregnant women and older women). Create condition to for vulnerable groups to share project results by adding the blind stop and LED electronic bus stop, and special equipment such as barrier-free, increase the platform maintainers. The details are shown below in table 10-1.

At the same time, comprehensively, whether can provide free bus pass in advance for elderly older than 65-year-old and expand the scope of free ride for disabled gradually.

10.2.6 Mitigation measures and suggestions for environment impact during the construction

Mitigation measures for traffic impact. Take this factor into full consideration when making project implementation and require the particularly busy roads to avoid the rush hour (such as night transport to ensure there is no traffic congestion during day time).

Reduce dust. We advice that when constructing under the continuous good weather and wind conditions, spraying some water to the heap soil to prevent dust, and constructors should carry out cleaning policy for the construction sites.

Control noise pollution. To reduce construction impact on nearby residents, project should not allow construction from 11pm to 6 am the next day within the area where is not far more than 200 meters away from residential. And construction equipment and methods should be taken into consideration and instrument which low noise is needed should be preferred. To the project must be constructed at night which will affect surrounding residents, noise reduction measures should be carried out. And at the same time, temporary facilities can be set up around construction sites or residential to ensure the quality of living environment.

Restore greenery on municipal roads. After completion of construction, damaged roads and landscaping should be recovered as soon as possible so that avoids affecting urban function.

To sum up, the social assessment group comes up with 32 suggestions regarding project design and management and feedbacks from feasibility study units and owners units. The specific contents refer to table 10-1. In the process of pre-appraisal, after the confirmation of feasibility study and PM units, there are 15 suggestions have been accepted by management authority, 8 suggestions have been included in feasibility study report by the feasibility study and design units and 9 suggestions cannot be adopted as the objective reasons including technology, economy and limited platform space, etc.

Content	No.	Existing problems	Suggestions	Adoptation of Suggestions
Stations	1	There is no canopy or stool, and it is inconvenient for passages to wait for bus, especially elderly, weak, patient and disabled; Though there are stools at several stations, but they are lack of maintenance and cannot be used.	Install canopies and stools at station, best set up special seats for elderly, weak patient and disabled. And strengthen maintenance, such as recruiting suitable volunteers to maintain order, guide passages, help elderly, weak patient and disabled wait for bus and guide them get on bus exactly in time.	Adopted and can be found in feasibility study report (volume 2):6.9
	2	Surface of some platforms is not smooth, especially in winter. Roads around platform frozen seriously, which may lead to accidents regularly and difficulties for elderly, weak patient and disabled to get on bus.	Improve the roads in time, roads near the station should be better paved by skid proof and insulation material and be able to heat partially to prevent frozen in winter.	Unadopted, but the management unit will increase staff to reinforce maintenance.
	3	There is no heat preservation, and it is cold to wait for a bus in winter.	Building three sides semi-closed waiting room, warm house should be established at big stations.	Adopted and refer to feasibility study report (volume 2):6.9
	4	The height of steps of bus body and the roads of station do not correspond with each other, and the distances are large, which makes it difficult for the elderly and disabled to get on bus.	1.The height of steps of bus body and the roads of station should remain the same. 2. Set up barrier-free way	Unadopted as unfeasibility of technology and finance.
	5	Buses for different routes may arrive simultaneously sometime and do not stop at the same place, which may lead to unordered groups and that elderly may easy to fall down, pregnant and leg deformed person cannot get on bus in	Recruit volunteers, strength guidance of station, especially big stations, set different park area for different routes in big stations to make it convenient for elderly, pregnant and disabled to get on bus.	Unadopted as platform space is limited

Content	No.	Existing problems	Suggestions	Adoptation of Suggestions
		time, blind cannot find and get on bus in time.		
	6	No voice prompts at station, blind cannot know where to wait and which bus is coming.	Establish voice prompts to make it convenient for blind to take bus.	Unadopted, but adopt other measures to mitigate this problem.
	7	No guardrails and guide bar in line at station, and it is chaotic.	Establish guardrails, and let passengers get on the bus in order, establish special channel for elderly, weak, patient and disabled.	Unadopted as platform space is limited
	8	The sign of station is not clear; the name of station is not normative, place names, company names park names, etc. are mixed up, local people may even make sure where it is; there is no electronic maps or bus route query system, it is difficult for population from outside to take bus.	Standardize the name of bus station. Unify the usage of road name.	Adopted by management authority
	9	Minorities agglomeration	Install Korean station board between Xisantiao Street and Xishiyitiao Street, offer bilingual reminder on buses.	Adopted by feasibility study unit.
	10	There is no electronic maps or bus route query system, it is difficult for population from outside to take bus.	Establish electronic maps and bus route query system at big stations.	Adopted and refer to feasibility study report (general volume):8.5.4
	11	Some platforms are not safe as there are many thieves near them,	Install surveillance cameras on the platforms and intensify platforms supervise	Management department plan to install
Buses	1	Steps are too high getting on and off bus. It is difficult for elderly and disabled to	Standardize the model and standard of buses, purchase buses with moderate step height.	Adopted by management authority.

Content	No.	Existing problems	Suggestions	Adoptation of Suggestions
		get on bus.		
	2	Buses have no air conditioning, and they are very windy, frozen, cold and slippery in winter.	Install skid proof . Purchase air-conditioned buses.	Adopted by management authority.
	3	Bus handrails are not suitable for disabled; several rods are too high for general people.	Set up or add handrails for disabled in the special sections of bus. Consider various demands, add lower rods.	Unadopted as the whole country requires the same standard.
	4	Too many posters and all different kinds of advertisements in the carriage, it is not pretty.	Exercise unified management. Unsightly advertisements and enterprise publicity should not be posted in the carriage.	Adopted and included in the feasibility report.
	5	Sometimes, buses break down while driving.	Strengthen the maintenance and repair of buses and check bus condition before driving.	Adopted and included in the feasibility report.
	6	Women take the risks of sexual harassment. Elderly and children are easy to be attacked. There are thieves.	Install monitoring cameras in buses, which can improve deterrence and decrease similar cases; also, purchase buses with three doors and set up special door and seats for elders, women and children	Adopted and refer to feasibility study report (general volume): 8.4
Preferential card	1	Part of routes to outskirts do not provide discount card to elderly.	All buses in urban area should practice the same policy, and benefit outskirts and rural area gradually.	Unadopted, that need municipal government support.
	2	Elderly can enjoy discount after 70-year-old, and it is too late.	It will be better to change the age from 70 to 60 or 65.	Unadopted, that need municipal government support.
	3	Only disabled (first level) cannot enjoy discount now.	Provide disabled relative discount policy according to the disabled level and type.	Unadopted, that need municipal government support.
Scheduling	1	The time bus arrive is not stable, many buses sometime, no bus sometime. Many empty buses are not on road in the final station.	Strengthen the supervisory control of station. Schedule reasonably in time according to passenger flow.	Management authority plans to adopt.

Content	No.	Existing problems	Suggestions	Adaptation of Suggestions
	2	It is chaotic in all stations during rush hours.	Dispatch field command and maintain order during rush hours.	Adopted by management authority.
Identity system and promoting	1	Route maps are only existed in front or behind in the bus. The number is too little and the picture is not clear.	Set more route maps in the car, and pictures should be more clear.	Adopted by management authority.
	2	It is very cold in winter, and windows are frosted seriously. The number of bus (which route) on the outside of the bus and the stop name on station are not clear, it makes passengers, especially elderly, deaf and near-sightedness, inconvenient to take bus, and often miss the certain stop.	Enlarge the font size, add LED screen on the outside of windows to show route name. Install LED screen on relatively high place in front and behind the bus to make passengers, especially elderly, deaf and near-sightedness, convenient to take bus.	Adopted by management authority.
	3	Route maps on station and in bus are not updated in time.	Relative department should update route maps in time to make passengers convenient to take bus.	Adopted by management authority.
Bus company and drivers management	1	It is too fast for elderly and disabled to adapt when starting or stopping the bus.	Strength training for bus drivers to slow down the acceleration when starting or stopping the bus.	Adopted by management authority.
Destinat	1	No public toilet in the final station.	Construct public toilet to provide convenience for drivers and passengers.	Adopted and refer to feasibility study report (volume 3): 4.13

Content	No.	Existing problems	Suggestions	Adaptation of Suggestions
ion constru ction	2	Too few garages, drivers have to warm the buses especially in winter. They have to get up at 3 o'clock in the morning, and their workloads raised imperceptibly.	Increase the number of garages, strengthen the maintenance of buses, reduce the workloads of bus drivers and make convenient to bus warming.	Adopted and refer to feasibility study report (volume 3): 4.13
Signalin g system	1	Traffic light in some junctions is too short for the disabled to cross the road. Some of the junctions have no voice prompting, and blind have no idea of crossing the roads, some blind only have to crossing the road with cane.	Take demand of disabled into consideration, set reasonable length of traffic light, and establish voice prompt system for crossing signal.	Adopted by management authority.
Overpa sses or underpa sses	1	Steps of overpasses are too steep, and not all steps are made by non-slip material, and it is inconvenient for elderly and disabled to use.	Set step height reasonably, cover the steps by non-slip material, add handrail in the middle of wide overpasses, to make it convenient for elderly and disabled to pass.	Adopted by management authority.
	2	No windscreen, and it is very cold in winter.	Add windscreen to big overpasses to make it convenient. In addition, take weather factor into consideration, and the number of underpasses should be increased.	Adopted by management authority.
Sidewal ks or bike lanes	1	Too many motors in sidewalk, and it is very difficult for elderly and disabled.	Relative department should carry out policy and measures to strengthen management.	Adopted by management authority.

