

## ANNEX 4

### General View of the Project Sites and Location of Affected Households

Figure A.4-1 General View of Kanchpur Bridge Site

Figure A.4-2 General View of Meghna Bridge Site

Figure A.4-3 General View of Gumti Bridge Site

Figure A.4-4 Comparisons of Bridge Shape of Existing and 2nd Kanchpur Bridge

Figure A.4-5 Comparisons of Bridge Shape of Existing and 2nd Meghna Bridge

Figure A.4-6 Comparisons of Bridge Shape of Existing and 2nd Gumti Bridge

#### Kanchpur Bridge

Figure A.4-7 Location of Affected Households Overall Section (Sheet No. 1)

Figure A.4-8 Location of Affected Households West Section (Sheet No. 2)

Figure A.4-9 Location of Affected Households West Section (Sheet No. 3)

Figure A.4-10 Location of Affected Households East Section (Sheet No. 4)

Figure A.4-11 Location of Affected Households East Section (Sheet No. 5)

Figure A.4-12 Location of Affected Households East Section (Sheet No. 6)

#### Meghna Bridge

Figure A.4-13 Location of Affected Households Overall Section (Sheet No. 1)

Figure A.4-14 Location of Affected Households North Section (Sheet No. 2)

Figure A.4-15 Location of Affected Households North Section (Sheet No. 3)

Figure A.4-16 Location of Affected Households South Section (Sheet No. 4)

Figure A.4-17 Location of Affected Households South Section (Sheet No. 5)

Figure A.4-18 Location of Affected Households South Section (Sheet No. 6)

#### Gumti Bridge

Figure A.4-19 Location of Affected Households Overall Section (Sheet No. 1)

Figure A.4-20 Location of Affected Households West Section (Sheet No. 2)

Figure A.4-21 Location of Affected Households West Section (Sheet No. 3)

Figure A.4-22 Location of Affected Households West Section (Sheet No. 4)

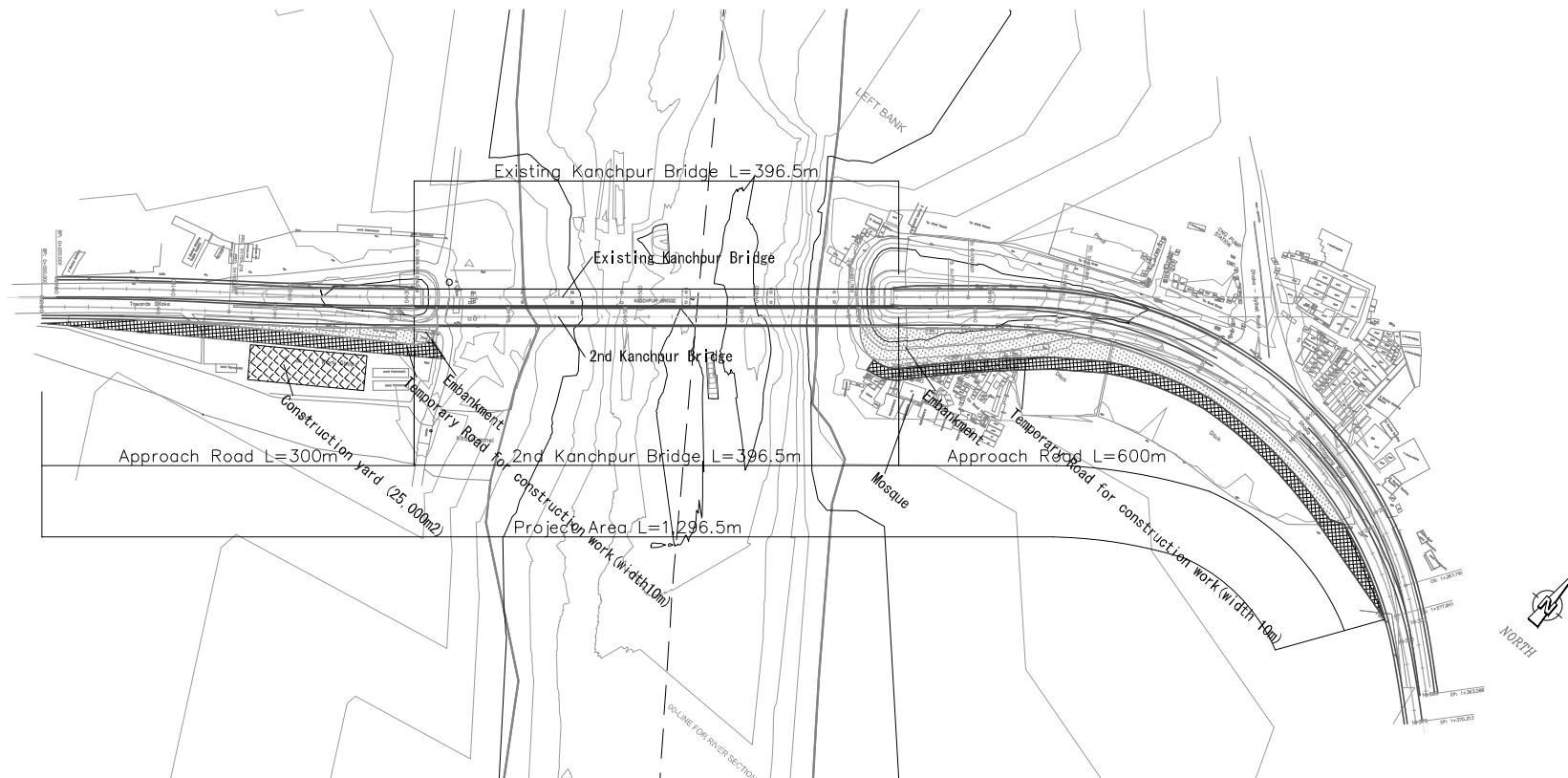
Figure A.4-23 Location of Affected Households East Section (Sheet No. 5)

Figure A.4-24 Location of Affected Households East Section (Sheet No. 6)

Figure A.4-25 Location of Affected Households East Section (Sheet No. 7)

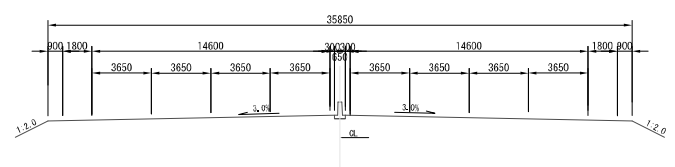


**KANCHPUR BRIDGE**  
**GENERAL VIEW OF THE SITE**  
**PLAN**

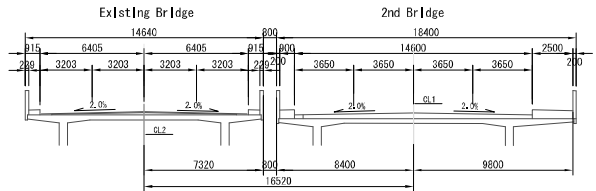


**TYPICAL CROSS SECTION**  
**S=1/150**

**Cross Section - Approach Road**



**Cross Section - Bridge**



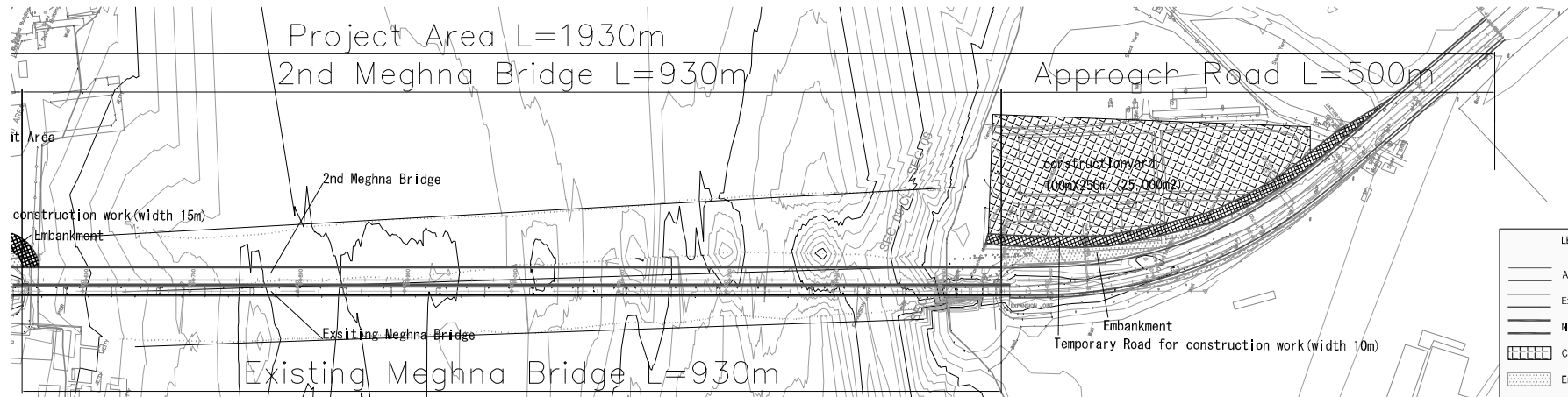
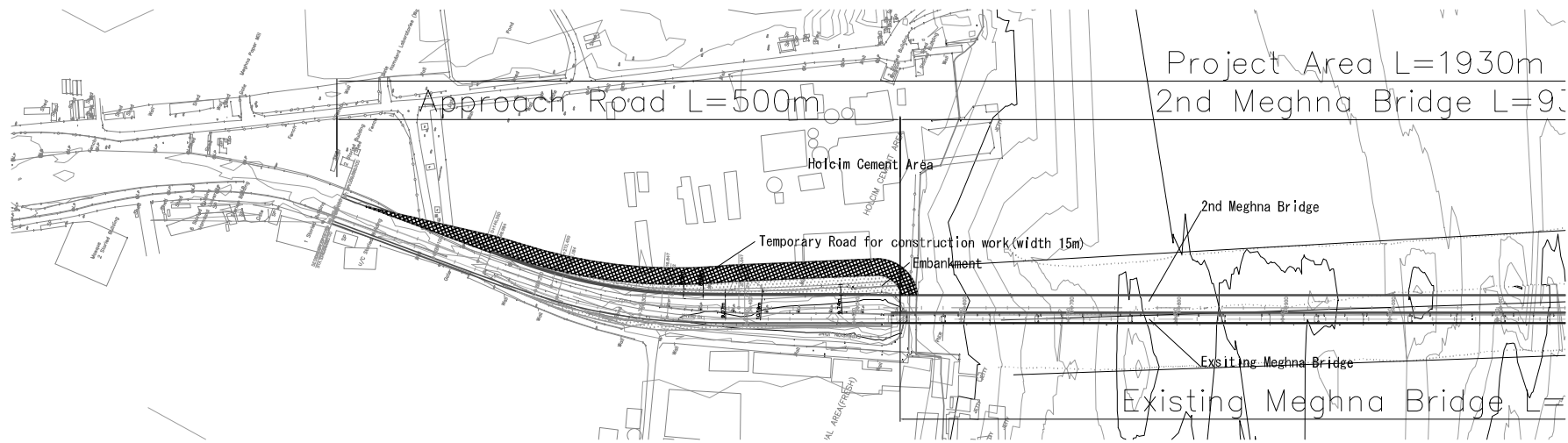
LEGEND	
	Approach Road
	Existing Bridge
	New Bridge
	Construction Yard
	Embankment
	Temporary Road for Construction Work
	Sandbank in the Middle of the River
	Working Place for Sand Loading and Unloading

<b>KANCHPUR BRIDGE</b>	
OVERALL PLAN & TYPICAL CROSS SECTION	
SCALE: AS NOTED	DATE: 07/2012

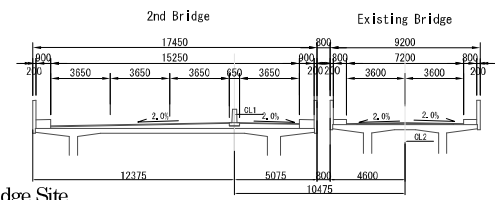
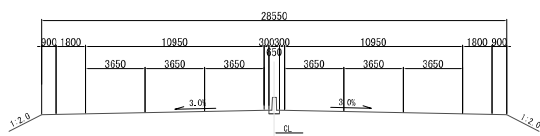
Figure A.4-1 General View of Kanchpur Bridge Site

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MEGHNA BRIDGE  
GENERAL VIEW OF THE SITE  
PLAN



TYPICAL CROSS SECTION  
S=1/150



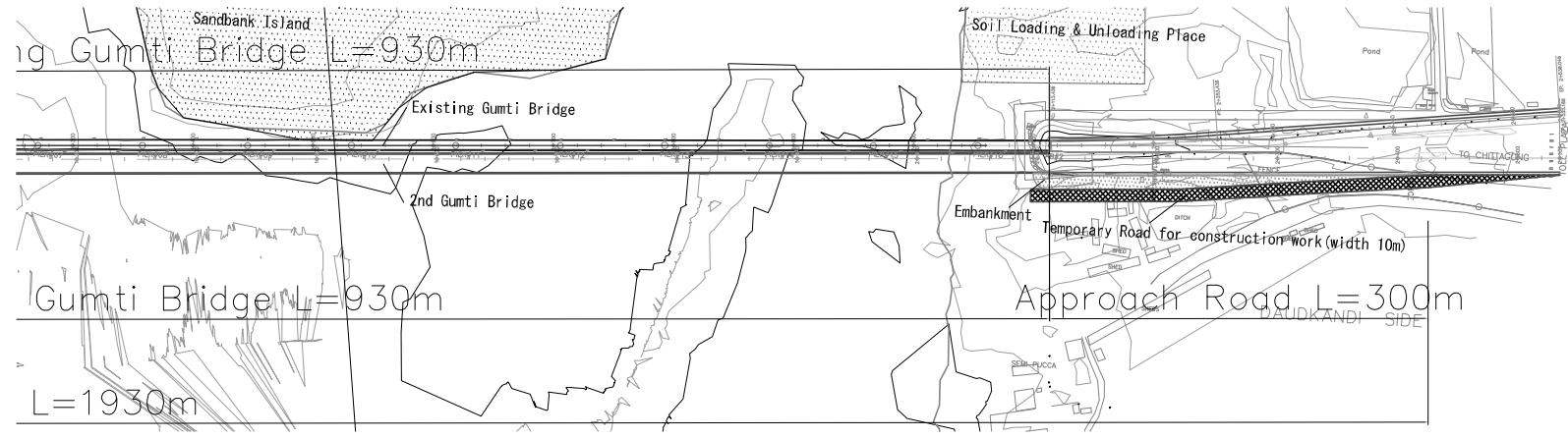
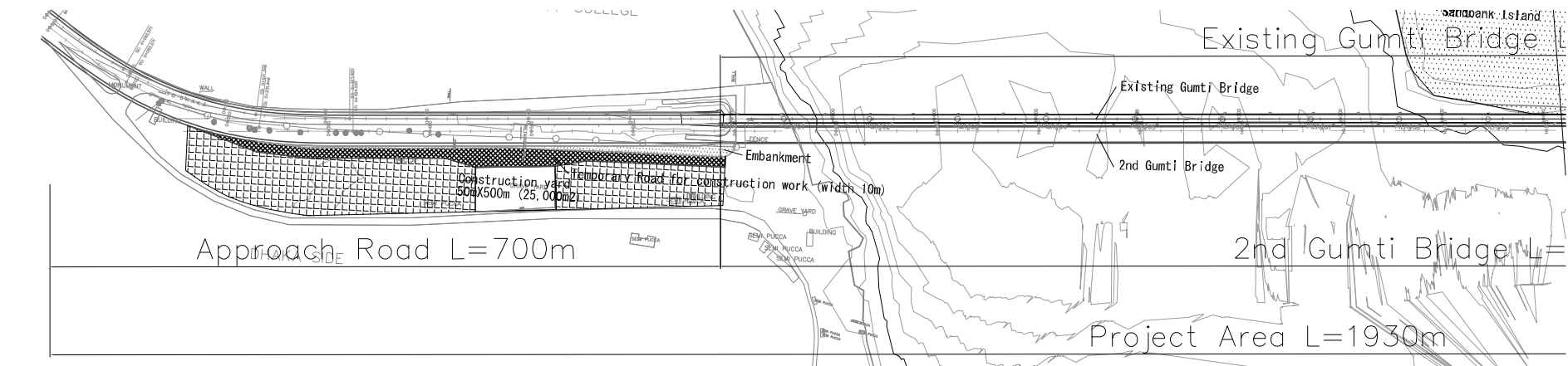
LEGEND	
	Approach Road
	Existing Bridge
	New Bridge
	Construction Yard
	Embankment
	Temporary Road for Construction Work
	Sandbank in the Middle of the River
	Working Place for Sand Loading and Unloading
	House/Building/Other Structure
	Affected Household

MEGHNA BRIDGE	
OVERALL PLAN & TYPICAL CROSS SECTION	
SCALE: AS NOTED	DATE: 07/2012

Figure A.4:2 General View of Meghna Bridge Site

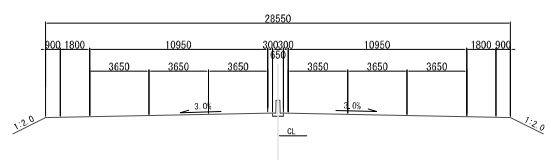
AP18-156

GUMTI BRIDGE  
GENERAL VIEW OF THE SITE  
PLAN

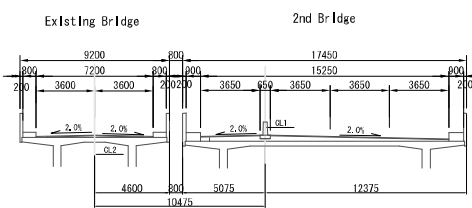


TYPICAL CROSS SECTION  
S=1/150

Cross Section - Approach Road



Cross Section - Bridge



LEGEND

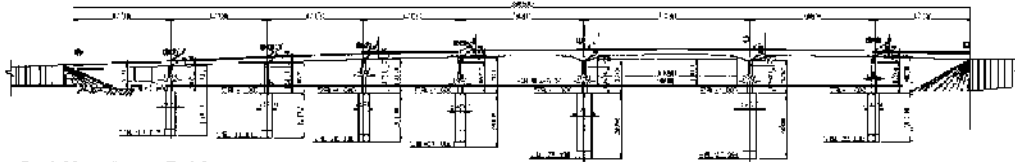
- Approach Road
- Existing Bridge
- New Bridge
- ▨ Construction Yard
- ▤ Embankment
- ▩ Temporary Road for Construction Work
- ▧ Sandbank in the Middle of the River
- ▦ Working Place for Sand Loading and Unloading

GUMTI BRIDGE	
OVERALL PLAN & TYPICAL CROSS SECTION	
SCALE: AS NOTED	DATE: 07/2012

Figure A.4-3 General View of Gumti Bridge Site

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Existing Kanchpur Bridge



2nd Kanchpur Bridge

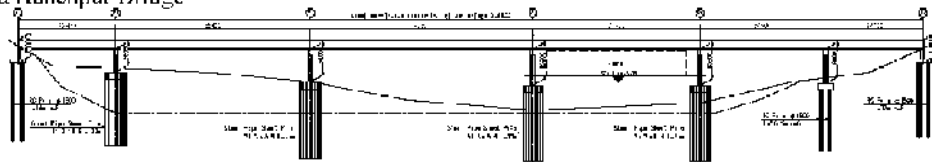


Figure A.4-4 Comparisons of Bridge Shape of Existing and 2<sup>nd</sup> Kanchpur Bridge

Existing Meghna Bridge



2nd Meghna Bridge

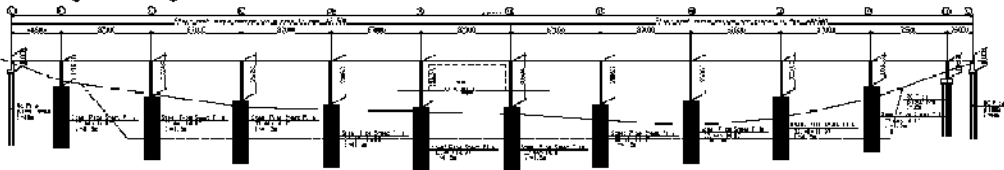


Figure A.4-5 Comparisons of Bridge Shape of Existing and 2<sup>nd</sup> Meghna Bridge

Existing Gumti Bridge



2nd Gumti Bridge

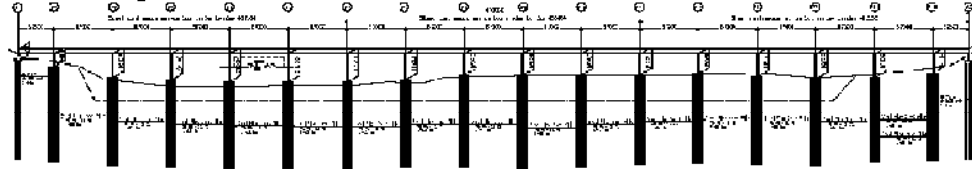


Figure A.4-6 Comparisons of Bridge Shape of Existing and 2<sup>nd</sup> Gumti Bridge

KANCHPUR BRIDGE  
GENERAL VIEW OF THE SITE  
PLAN



LEGEND

	Approach Road
	Existing Bridge
	New Bridge
	Construction Yard
	Embankment
	Temporary Road for Construction Work
	Sandbank in the Middle of the River
	Working Place for Sand Loading and Unloading
	House/Building/ Other Structure
	Affected Household

KANCHPUR BRIDGE	
LOCATION OF AFFECTED HOUSEHOLDS OVERALL SECTION	
SCALE: AS NOTED DATE: 07/2012	SHEET NO 1 of 6

Figure A.4-7 Location of Affected Households Overall Section (Sheet No. 1)

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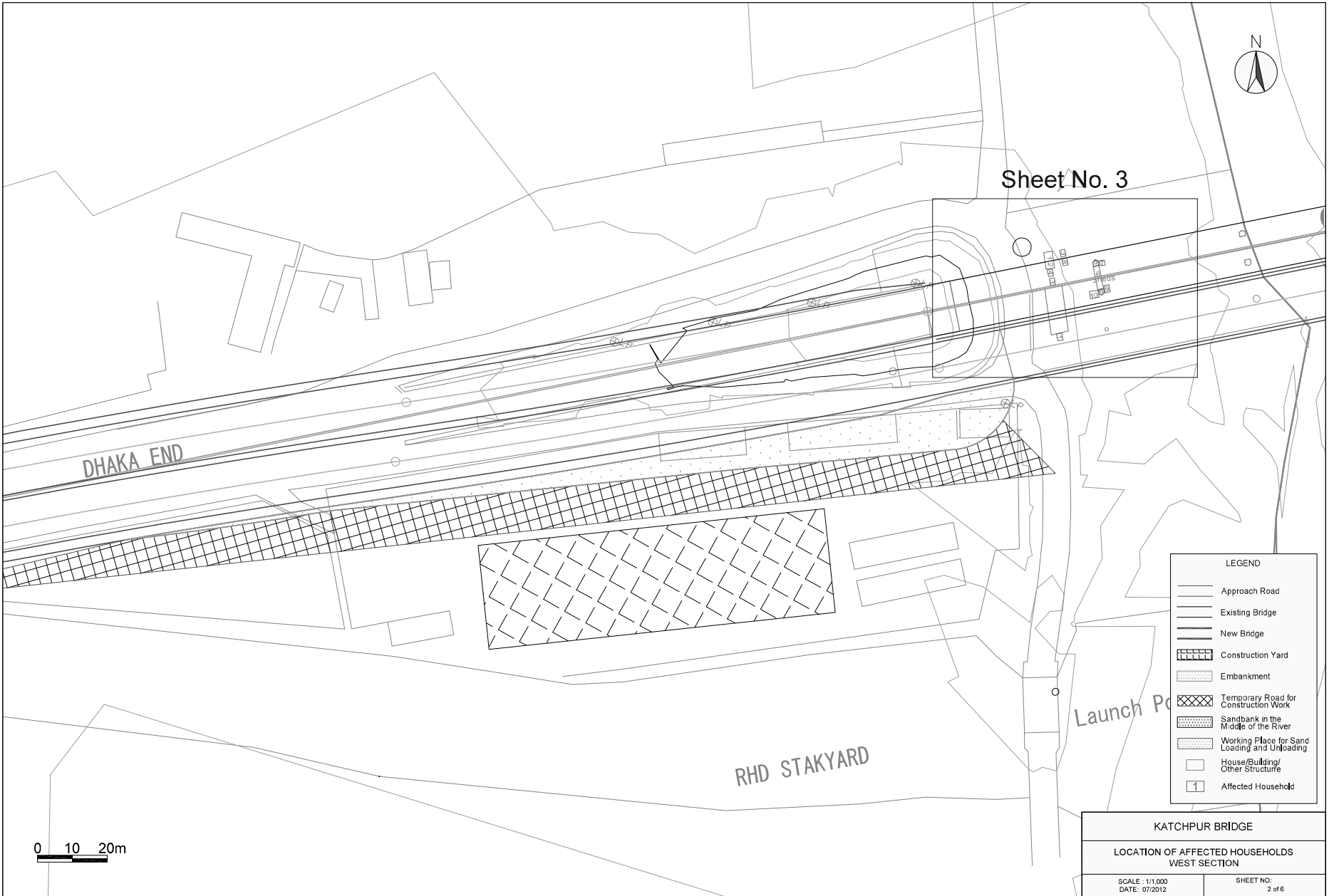


Figure A.4-8 Location of Affected Households West Section (Sheet No.2)



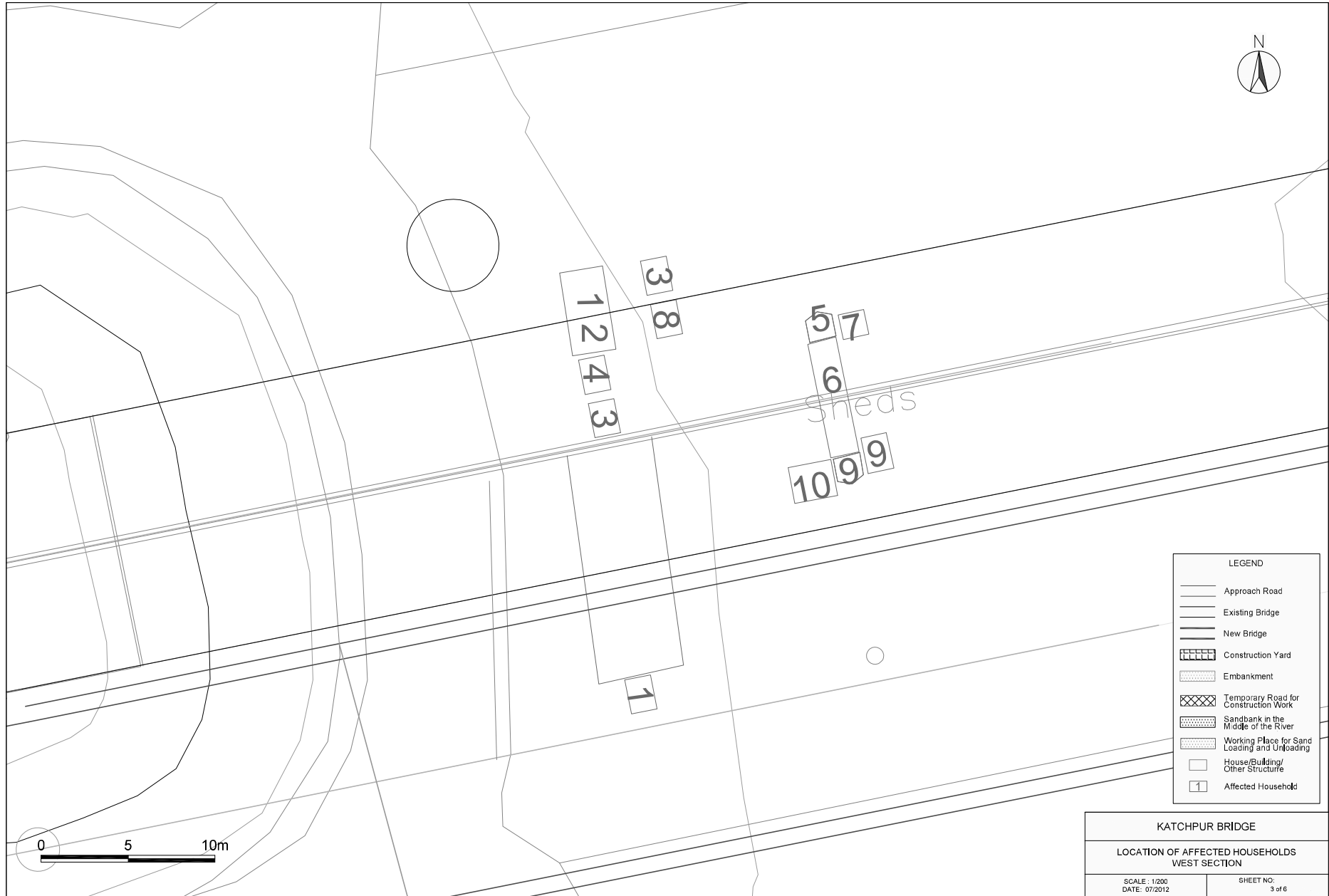


Figure A.4-9 Location of Affected Households West Section (Sheet No.3)

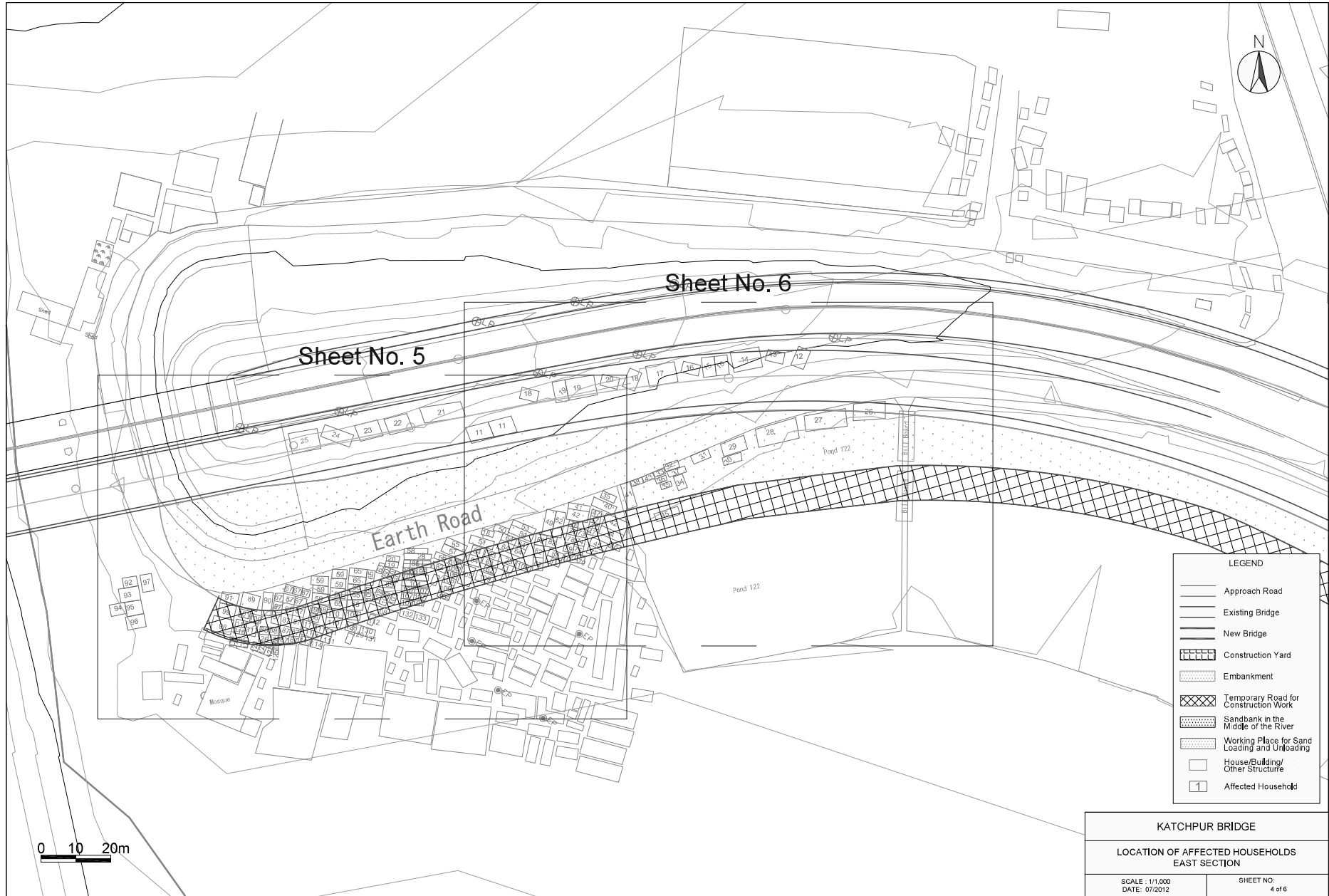


Figure A.4-10 Location of Affected Households East Section (Sheet No.4)

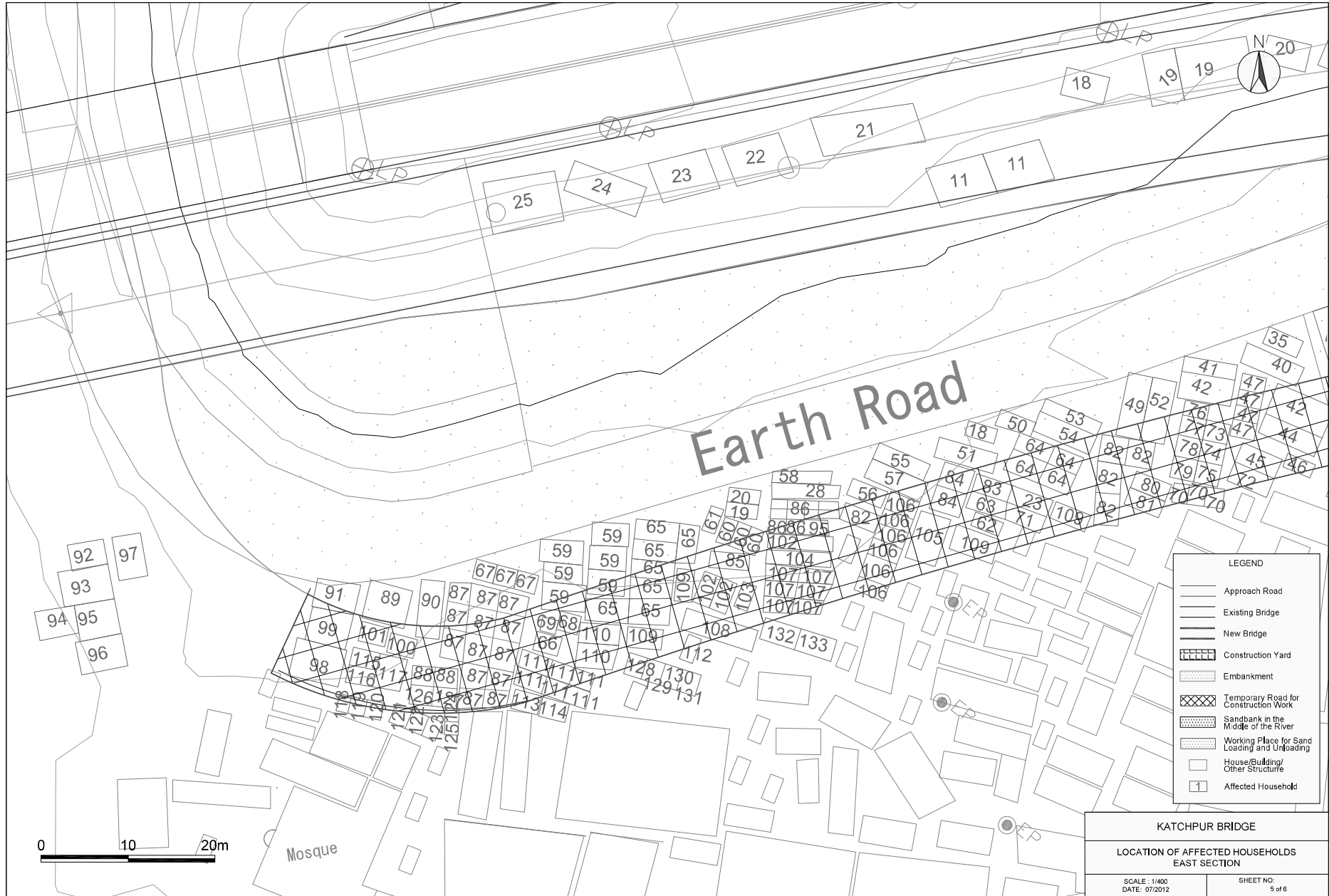


Figure A.4-11 Location of Affected Households East Section (Sheet No.5)



Figure A.4-12 Location of Affected Households East Section (Sheet No.6)

MEGHNA BRIDGE  
GENERAL VIEW OF THE SITE  
PLAN

Sheet No. 2

Project Area L=1930m  
2nd Meghna Bridge L=930m

Approach Road L=500m

Sheet No. 3

Holcim Cement Area

New Meghna Bridge

Temporary Road for construction width 15m

Existing Meghna Bridge

Existing Meghna Bridge L=

Sheet No. 4

Project Area L=1930m  
2nd Meghna Bridge L=930m

Sheet No. 5

Sheet No. 6

Approach Road L=500m

New Meghna Bridge

Existing Meghna Bridge

Existing Meghna Bridge L=930m

Embankment  
Road for construction width 10m

LEGEND	
	Approach Road
	Existing Bridge
	New Bridge
	Construction Yard
	Embankment
	Temporary Road for Construction Work
	Sandbank in the Middle of the River
	Working Place for Sand Loading and Unloading
	House/Building/Other Structure
	Affected Household

MEGHNA BRIDGE	
LOCATION OF AFFECTED HOUSEHOLDS OVERALL SECTION	
SCALE: AS NOTED DATE: 07/2012	SHEET NO: 1 of 6

Figure A.4-13 Location of Affected Households Overall Section (Sheet No. 1)

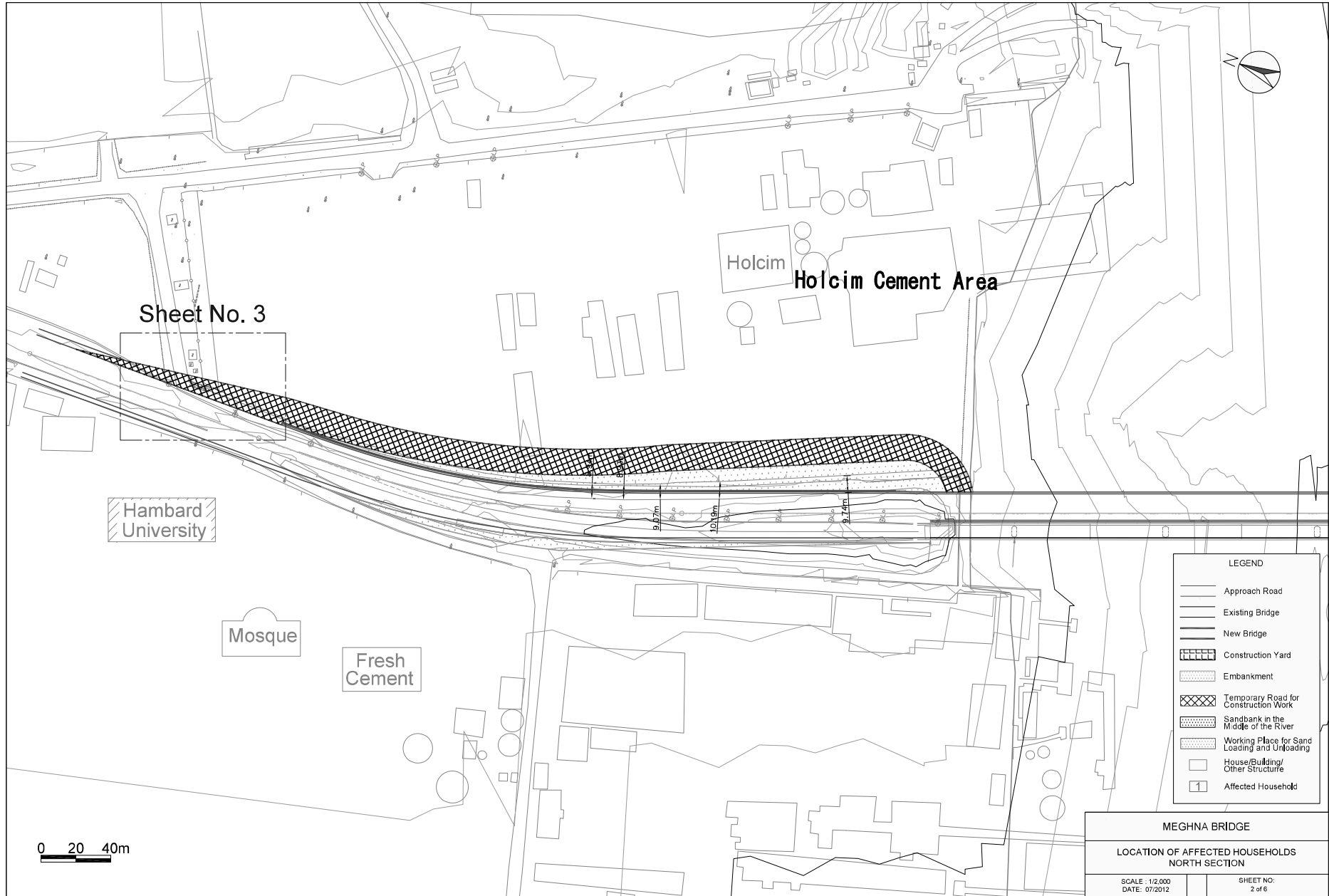


Figure A.4-14 Location of Affected Households North Section (Sheet No.2)

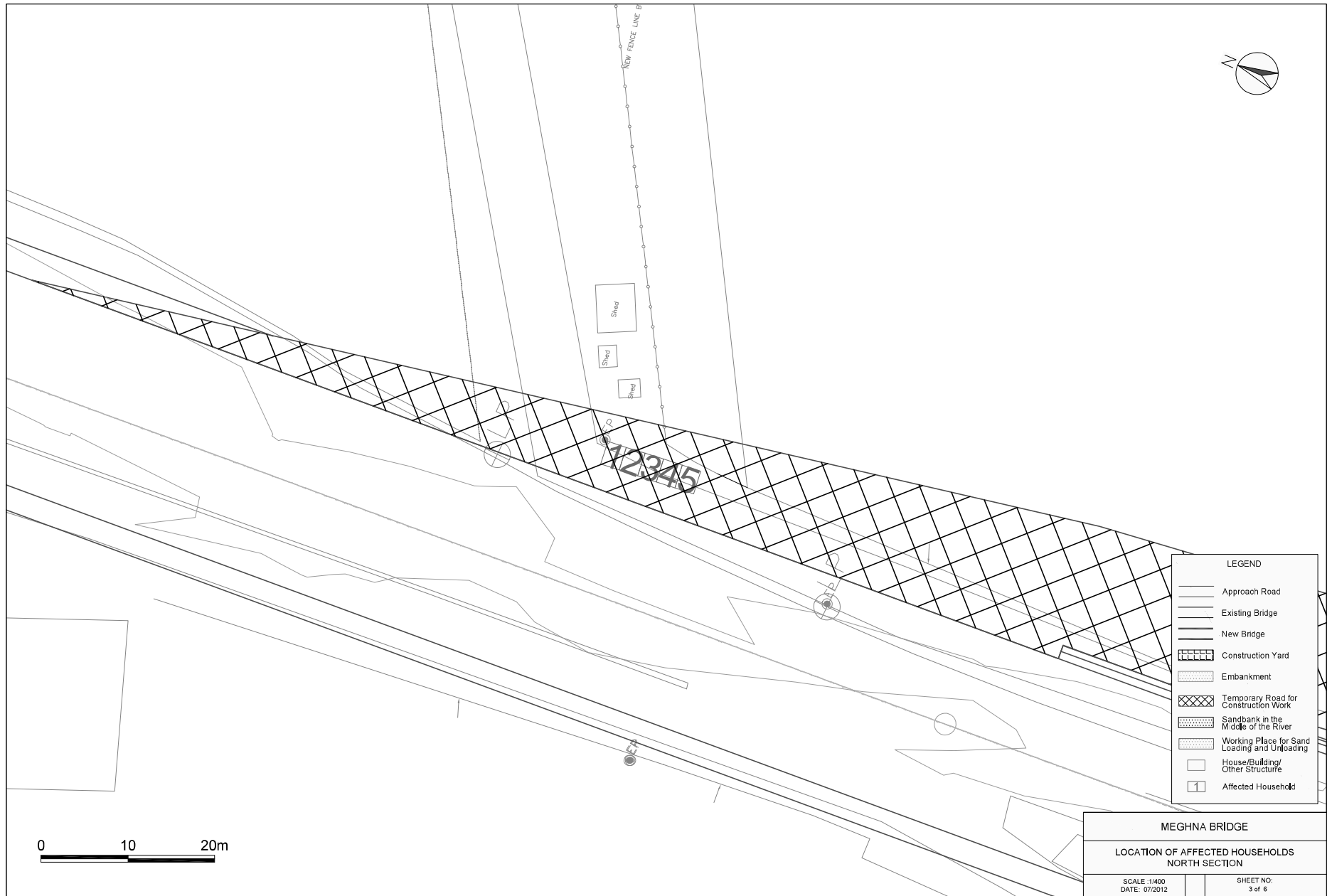


Figure A.4-15 Location of Affected Households North Section (Sheet No.3)

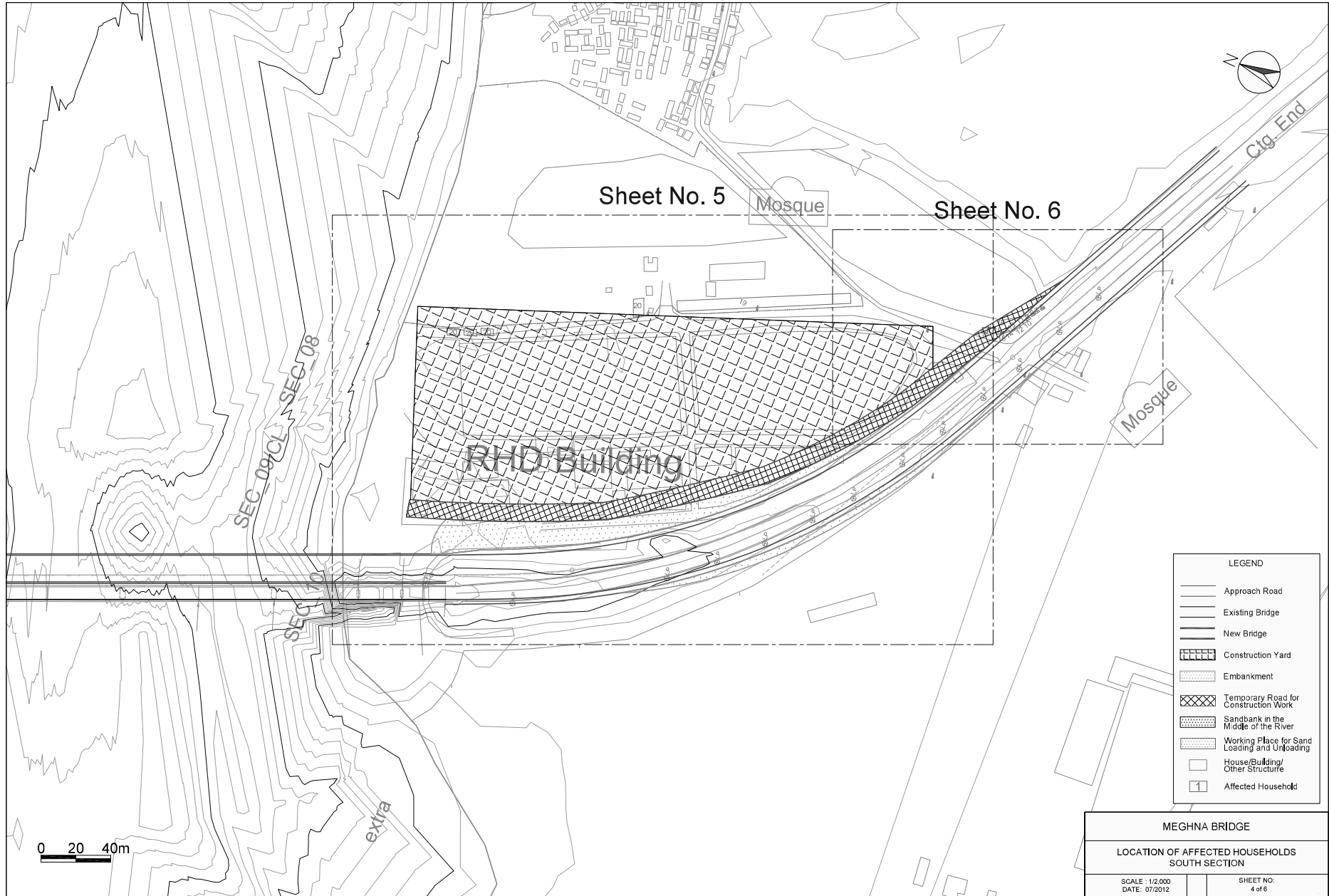


Figure A.4-16 Location of Affected Households South Section (Sheet No.4)



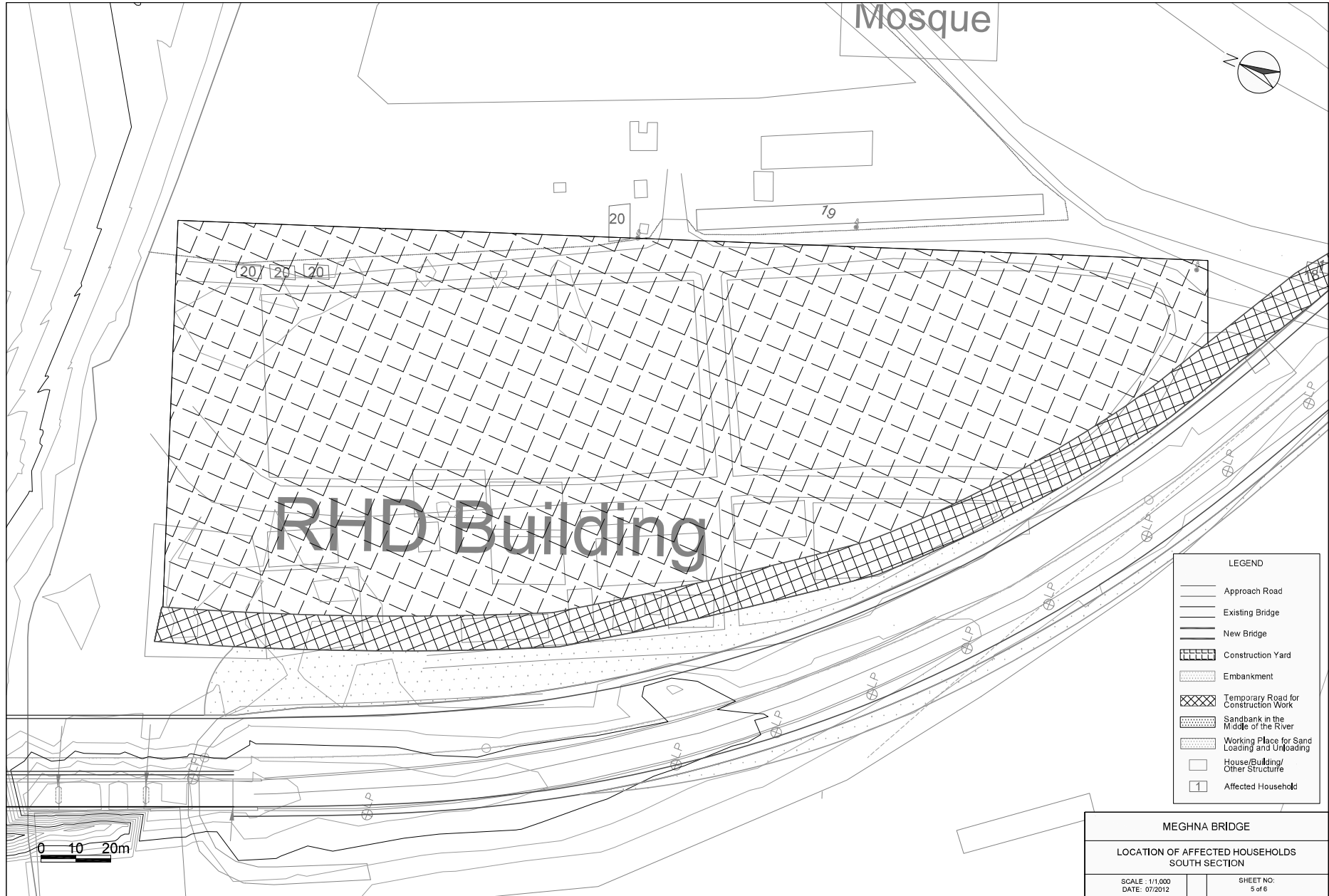


Figure A.4-17 Location of Affected Households South Section (Sheet No.5)



Figure A.4-18 Location of Affected Households South Section (Sheet No.6)

**GUMTI BRIDGE**  
GENERAL VIEW OF THE SITE  
PLAN

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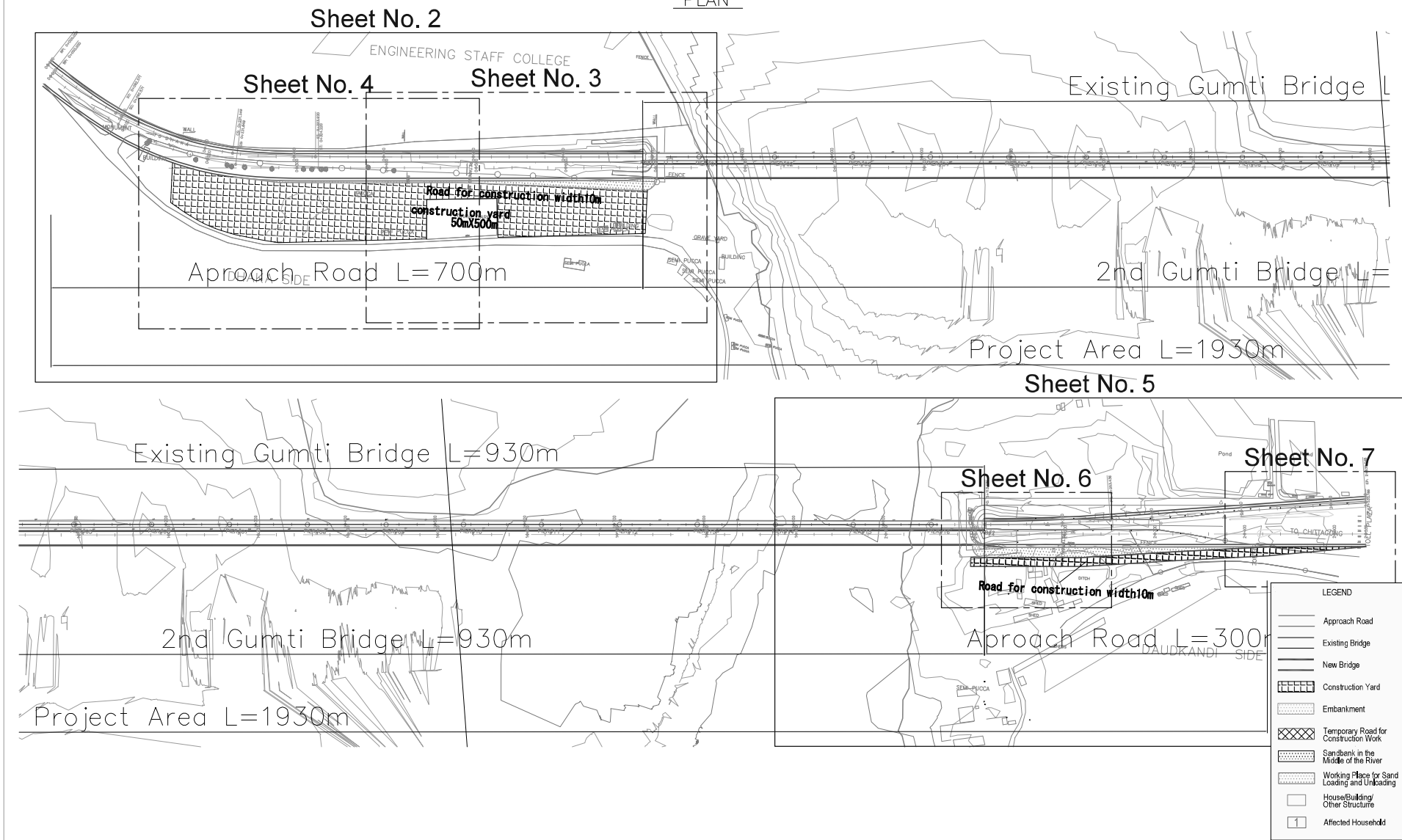


Figure A.4-19 Location of Affected Households Overall Section (Sheet No.1)

GUMTI BRIDGE	
LOCATION OF AFFECTED HOUSEHOLDS OVERALL SECTION	
SCALE: AS NOTED DATE: 07/2012	SHEET NO. 1 of 7

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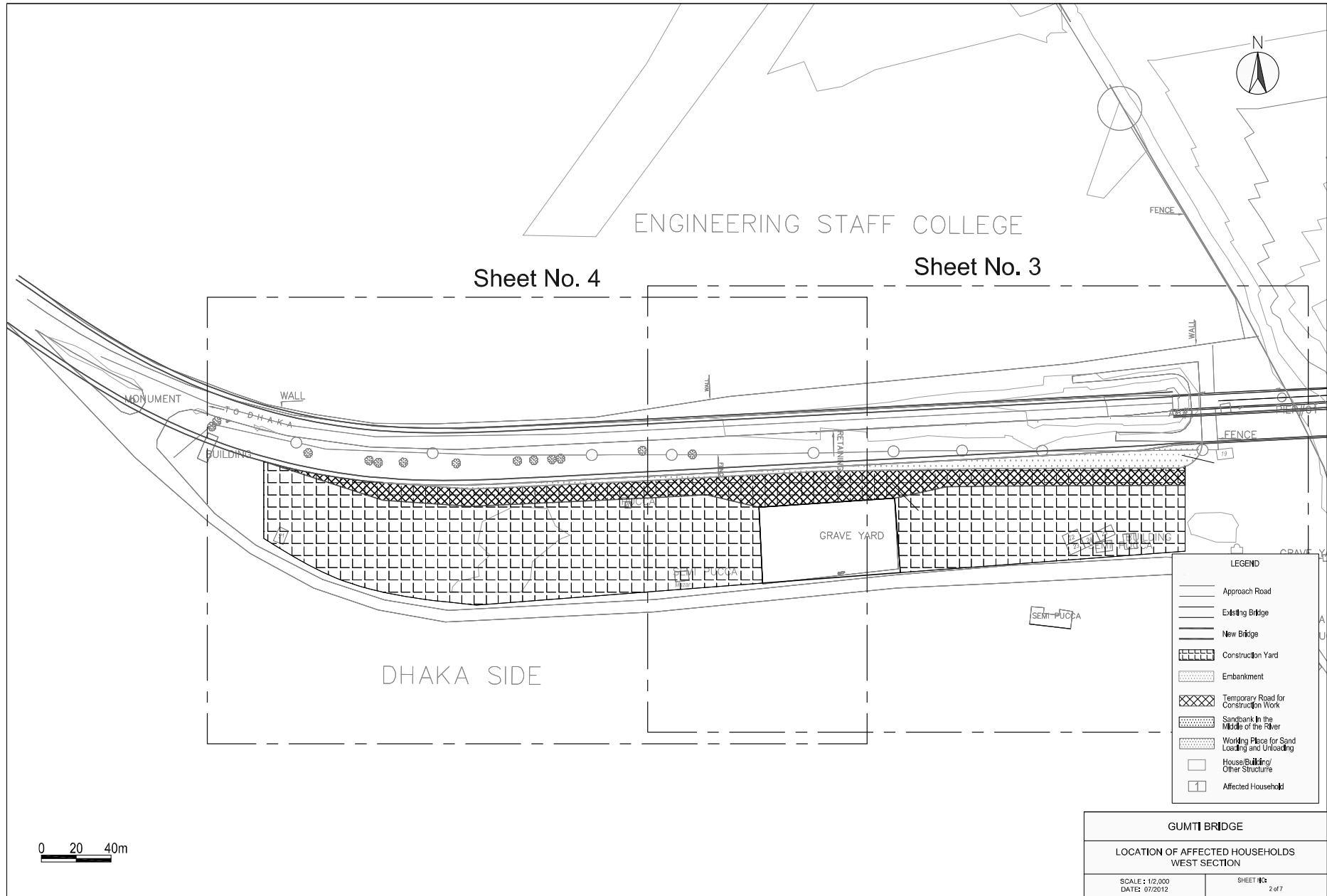


Figure A.4-20 Location of Affected Households West Section (Sheet No.2)

AP18-173

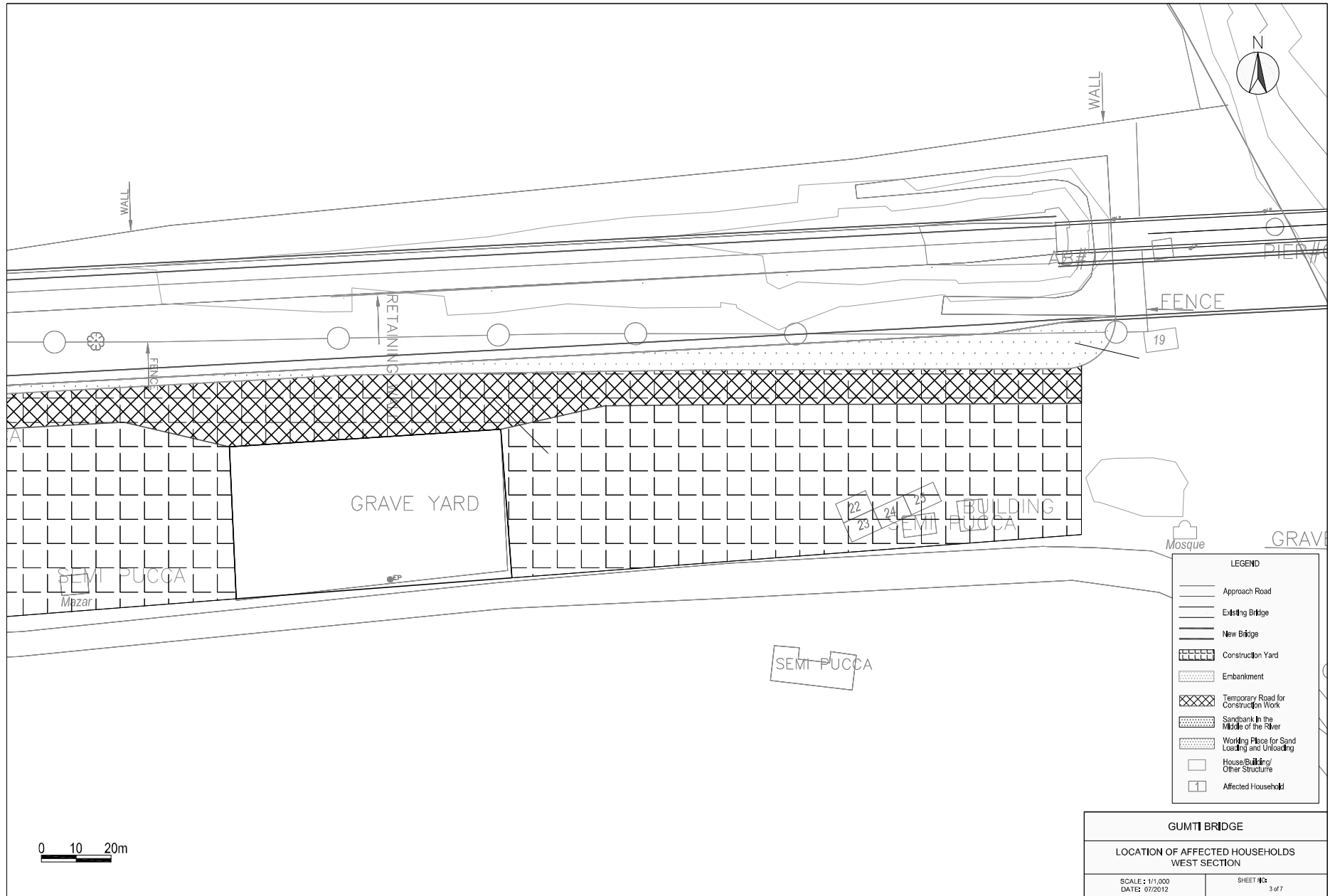


Figure A.4-21 Location of Affected Households West Section (Sheet No.3)

AP18-174

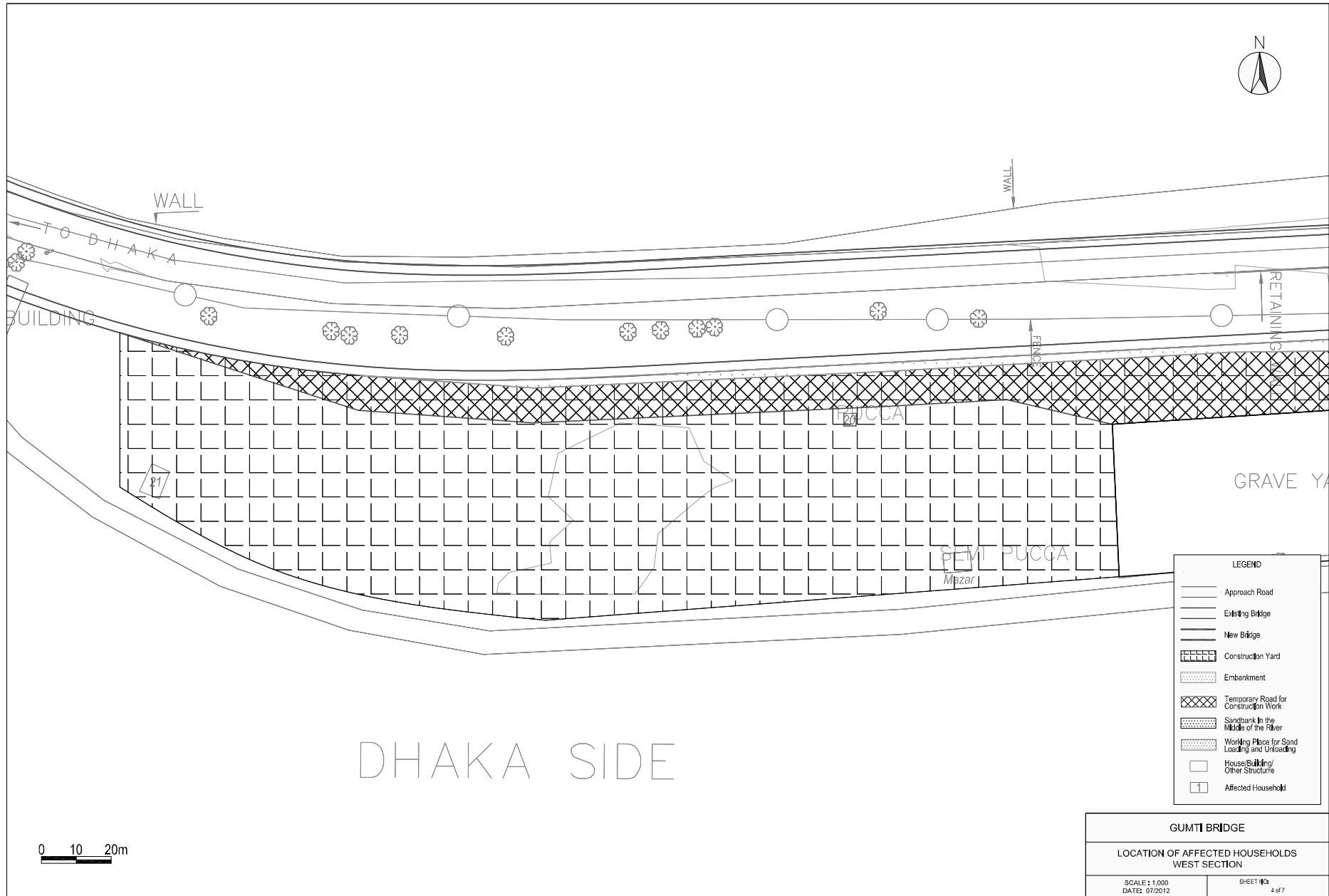


Figure A.4-22 Location of Affected Households West Section (Sheet No. 4)

AP18-175

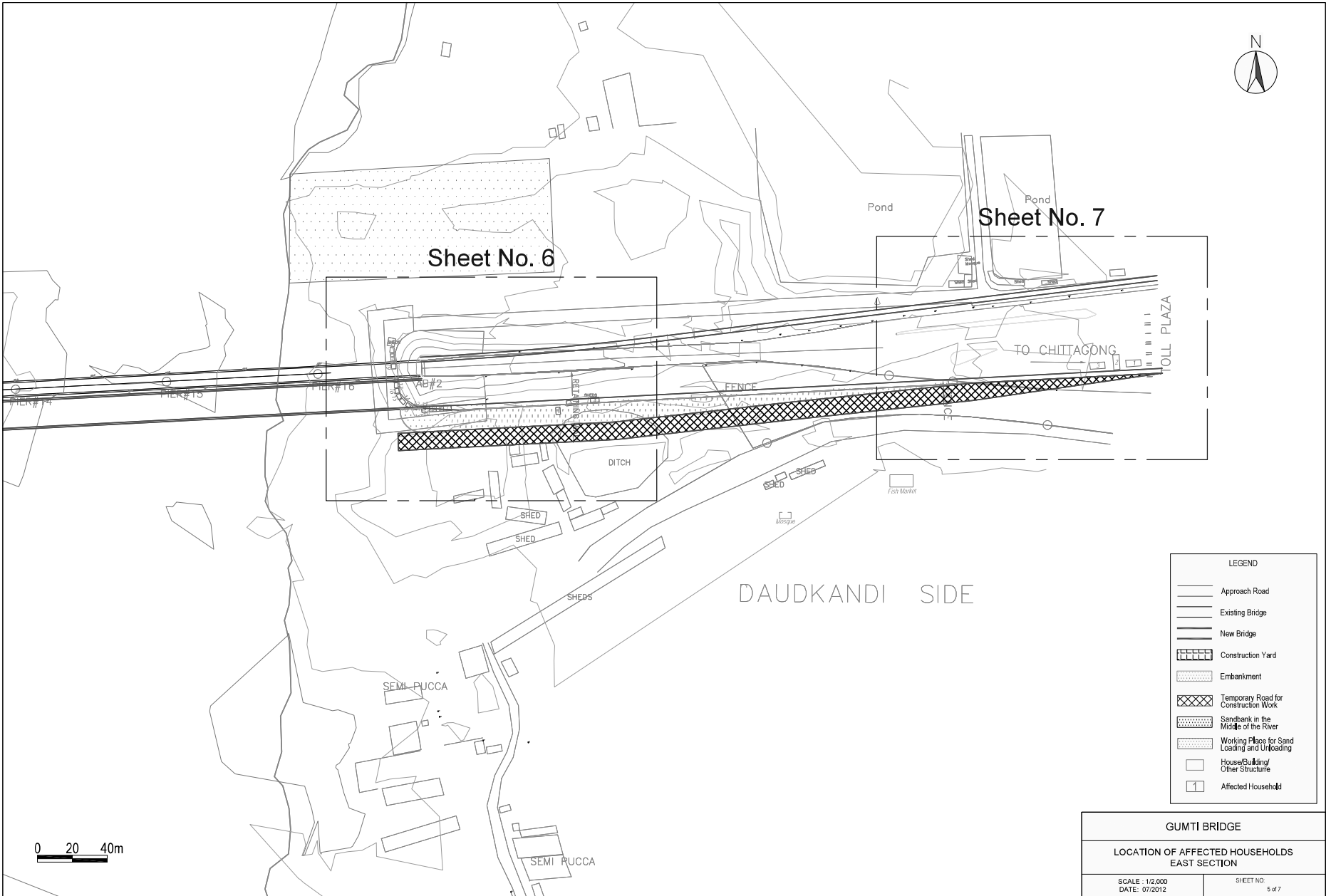


Figure A.4-23 Location of Affected Households East Section (Sheet No.5)

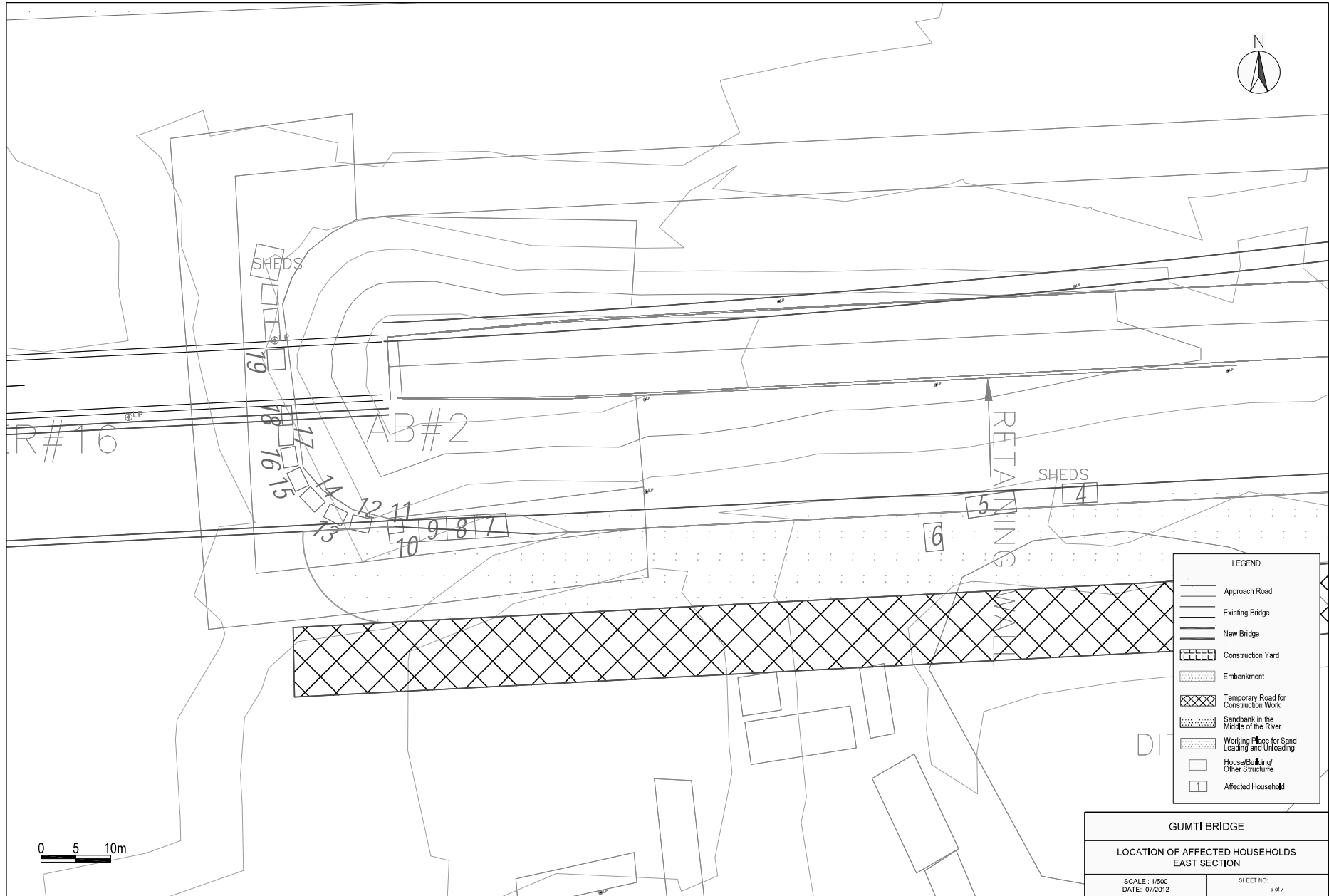


Figure A.4-24 Location of Affected Households East Section (Sheet No.6)



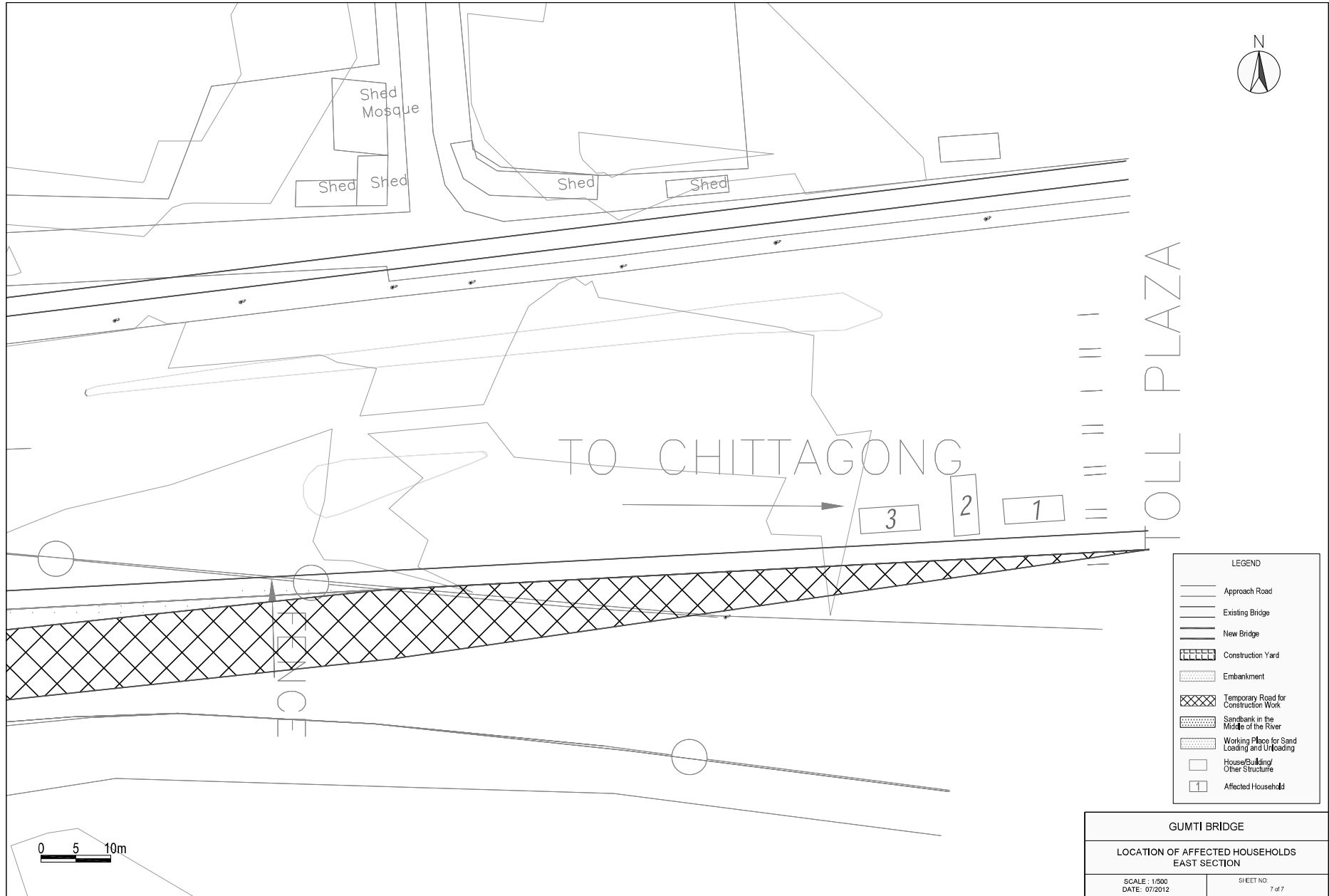


Figure A.4-25 Location of Affected Households East Section (Sheet No. 7)



Roads and Highways Department (RHD)

Preparatory Survey for Dhaka-Chaittagong Highway (N-1) Bridge Construction and  
Rehabilitation Project  
Kanchpur Bridge and Meghna-Gomti Bridge

Consultation meeting with potential affected people and other stakeholders

Date: 15 .3.2012 at 10.30 am  
Venue : Shenpara, Kanchpur,  
Sonargao, Narayanganj

A meeting was held on the 15<sup>th</sup> March 2012 at 10.30 a m at the Kanchpur Bri dge location (Shenpara),Sonargaon, Narayanganj on T erms of Reference for Social and Environmental Impact Assessment. The Meeting was presided over by the Kanchpur Union Parishad Chairman Md. Alhaj Fazlul Haque. Among others Mr. Md . Ashrafu l Alam Superintending Engineer, RHD, Mr. Tushar Kanti Shaha Executive Engineer, RHD, Shi m rail, Narayanganj, Md. Rejaul Karim Executive Engineer, Bridge Design Division, RHD, Dhaka, Ms. Rehana Haque Executive Engineer, RHD, Dhaka, Ms. Johora Sultana S DE, RHD, Dhaka, Abdur Rahma n Kawser SDE, RHD, Narayanganj, Takeo SHOJI Japanese Environmental Specialist of the JICA Study Team, Md. Nahid Muniruddin, Natural En vironmental Engineer (Local) and Kh. Khairul Matin Social Environmental Engineer (Local) JICA Study Team and more than 30 local people were present in the meeting (list of the participants attached in Appendix-A). In the consultation meeting the local pe ople were informed about the goals and o bjectives of the. The Superintending Engineer welcomed all participants in the discussion session and described the project including it's different components. It was disclosed that the Japan Bank for International Cooperation (JICA) will finance th e project Mr. Takeo SHOJI described importance of the consultation meeting and emphasizes on the social and en vironmental issues to be addressed during project preparation, implementation and operation & maintenance stage.

Md. Abu Nahid Munirudding and Kh. Khairul Matin pres ented the environmental and social issues using flip charts. It was discussed that th e construction of the project may be started by early 2014. The project will include main bridge, approach road, service area, stake yard, etc.

Kh. Khairul Matin informed the participants that;

- New land acquisition is not required for construction of the proposed bridges and for this overall impact on the community will be minimized.
- These bridges will be constructed in RHD land acquired for the existing bridges
- Some residential households, commercial enterprises and common properties are found within the proposed area those are required relocation before starting civil construction
- A detailed socioeconomic survey and inventory of assets through structured questionnaires are being conducted among the households within and surrounded the project area.

- The cut-off date for conducting this survey is
  - March 8, 2012 for Kanchpur Bridge
  - March 15, 2012 for Meghna Bridge &
  - March 15, 2012 for Meghna-Gomti Bridge
- The residential households are to be relocated in new location due to the project
- Commercial enterprises would be relocated for continuing business
- They have to search alternative livelihood for the time being
- Wage labourers may lose their job for some days/weeks
- The vulnerable house holds/ women headed households may experience adverse impacts due to the project
- The commercial enterprises may be closed for some days/weeks
- Besides, some other adverse impacts/ challenges may be encountered during construction of the bridge

Md. Abu Nahid Muniruddin informed the participants that the proposed bridge construction project may impact or effect on the following important environmental components (IECs) during various phases of the project:

- Topography and Geology may be changed due to the project
- Soil Erosion and scouring in the river bed may take place
- Inland Water Transportation may disturbed during construction of the bridge
  - River hydrology may be changed
  - Impacts on Biota and ecosystems
  - Effects on Global Warming
- Air Pollution
- Water Contamination
- Soil Pollution
- Waste
- Noise and Vibration
- Ground Subsidence
- Odor
- Bottom Sediment
- Landscape

A large percentage of participants were concerned that the existing water quality of the Shitalakhya river is very poor due to the effluent discharges from all the industries situated on the upstream and downstream which include , fertilizers, textiles, jute mills, soap factory, pulp

and paper mill etc. These Industrial pollution often creates very severe localized environmental problems, which affect human health, aesthetic and local ecosystems. Due to the industrial effluents, there is no fish in the river Shitalkaha. Most of them also opined that noise, vibration, and dust will be the major issues during construction.

The Environmental Specialist pointed out that impact on the project upon ambient air, noise quality, soil quality, water quality is being assessed through collection of primary baseline data. EMP will provide instructions limiting environmental qualities to comply with the standards and penalties for violation.

Almost everybody said that they will support the project and advised the JICA Team to take precautions in the environmental mitigation to avoid the various impacts anticipated during the preconstruction, construction and operation stages of the project and to ensure protection of the sensitive locations like mosque, mazar, graveyard etc. of the areas.

The Environmental Specialist informed that the design and layout of the main bridge and approach roads etc. when finalized will consider the anticipated adverse impacts. EMP will cover specific measures to follow during the construction process in protecting religious and other sensitive locations.

The participants expressed their views in favor of the project. They are well known about the contribution of the JICA in this project. The affected people told that they have been living in the present location for more than two decades and most of them have no alternative land for relocation. Most of them are wage laborers and rickshaw/van puller. Some of the women are living there who have no husband or adult son to shoulder the household responsibility. According to their statement, most of them are vulnerable in terms of income. About 14 RHD employees are living within the proposed site in their own structure but they have constructed some temporary sheds and rented out to others. About 120 residential and commercial enterprises are found in the proposed site (both ends of the Kanchpur bridge). After threadbare discussion on the issues the floor was open for all to express opinion about the mitigation measures of the probable social and environmental impacts as discussed earlier.

It was found that the people are mainly concern about their relocation and assistance to be provided by the project for relocation in new site.

Confidential

Confidential

The Chairman of the Kanchpur Union Parishad thanked to all especially the Japan Government for extending support in this project and urged again relocation of the affected poor households in a cluster manner if there is any provision in the project.

The Superintending Engineer informed the participants that their opinion have been noted down and would be discussed with the project authority. The principle is to assist the affected persons in their relocation as per Donor's guideline and they should be relocated by their own before starting civil construction. The affected persons were insisted to search alternative location from now as they have about 2 years time in hand to relocate.

The meeting was closed with a vote of thanks from the chair.

## **Appendix-A: Attendance Sheet**

Preparatory Survey for Dhaka-Chittagong National Highway (N-1) Bridge Construction  
and Rehabilitation Project Kanchpur, Meghna and Meghna-Gomti Bridge

Consultation meeting with affected people and other stakeholders  
(Attendance Sheet)

Date: March 15. 2012, Time 10.30 am  
Venue: Kanchpur Bridge (Shenpara), Ctg.  
end  
Union: Kanchpur, Upazila: Sonargaon,  
District: Narayanganj

Confidential

Confidential



## Roads and Highways Department (RHD)

### Preparatory Survey for Dhaka-Chaittagong Highway (N-1) Bridge Construction and Rehabilitation Project Kanchpur Bridge and Meghna-Gomti Bridge

Consultation meeting with potential affected people and other stakeholders

Date: 15 .3.2012 at 02.30 pm  
Venue : Tetuitala Bazar, Meghna Ghat,  
Baliakandi, Gazaria, Munshiganj

A meeting was held on the 15<sup>th</sup> March 2012 at 2.30 pm the Kanchpur Bridge location (Shenpara), Sonargaon, Narayanganj on Terms of Reference for Social and Environmental Impact Assessment. The Meeting was presided over by the Hazi Abdul Aziz Dewan (affected person), Tetuitala, Baliakandi, Gazaria, Munshiganj. Mr. Md. Ashraf Alam Superintending Engineer, RHD, Mr. Tushar Kanti Shaha Executive Engineer, RHD, Shimrail, Narayanganj, Md. Rejaul Karim Executive Engineer, Bridge Design Division, RHD, Dhaka, Ms. Rehana Haque Executive Engineer, RHD, Dhaka, Ms. Johura Sultana SDE, RHD, Dhaka, Abdur Rahman Kawser SDE, RHD, Narayanganj, Takeo SHOJI Japanese Environmental Specialist of the JICA Study Team, Md. Nahid Muniruddin, Natural Environmental Engineer (Local) and Kh. Khairul Matin Social Environmental Engineer (Local) JICA Study Team and more than 50 local people were present in the meeting (list of the participants attached in Appendix-A). In the consultation meeting the local people were informed about the goals and objectives of the. The Superintending Engineer welcomed all participants in the discussion session and described the project including its different components. It was disclosed that the Japan Bank for International Cooperation (JICA) will finance the project. Mr. Takeo SHOJI described importance of the consultation meeting and emphasizes on the social and environmental issues to be addressed during project preparation, implementation and operation & maintenance stage.

Md. Abu Nahid Muniruddin and Kh. Khairul Matin presented the environmental and social issues using flip charts. It was discussed that the construction of the project may be started by early 2014. The project will include main bridge, approach road, service area, stake yard, etc.

Kh. Khairul Matin informed the participants that;

- New land acquisition is not required for construction of the proposed bridges and for this overall impact on the community will be minimized.
- These bridges will be constructed in RHD land acquired for the existing bridges
- Some residential households, commercial enterprises and common properties are found within the proposed area those are required relocation before starting civil construction
- A detailed socioeconomic survey and inventory of assets through structured questionnaires are being conducted among the households within and surrounded the project area.

- The cut-off date for conducting this survey is
  - March 8, 2012 for Kanchpur Bridge
  - March 15, 2012 for Meghna Bridge &
  - March 15, 2012 for Meghna-Gomti Bridge
- The residential households are to be relocated in new location due to the project
- Commercial enterprises would be relocated for continuing business
- They have to search alternative livelihood for the time being
- Wage labourers may lose their job for some days/weeks
- The vulnerable house holds/ women headed households may experience adverse impacts due to the project
- The commercial enterprises may be closed for some days/weeks
- Besides, some other adverse impacts/ challenges may be encountered during construction of the bridge

Md. Abu Nahid Muniruddin informed the participants that the proposed bridge construction project may impact or effect on the following important environmental components (IECs) during various phases of the project:

- Topography and Geology may be changed due to the project
- Soil Erosion and scouring in the river bed may take place
- Inland Water Transportation may disturbed during construction of the bridge
- River hydrology may be changed
- Impacts on Biota and ecosystems
- Effects on Global Warming
- Air Pollution
- Water Contamination
- Soil Pollution
- Waste
- Noise and Vibration
- Ground Subsidence
- Odor
- Bottom Sediment
- Landscape

The participants opined that the existing water quality of the Meghna river is not good due to untreated effluent discharges from two chemical industries. They requested that a sound environmental mitigation plan be prepared to address the various impacts anticipated during the

pre-construction, construction and implementation stages and to ensure the protection of natural water bodies (river, canals etc.).

The Environmental Specialist pointed out that impact on the project upon ambient air, noise quality, soil quality, water quality is being assessed through collection of primary baseline data. EMP will provide instructions limiting environmental qualities to comply with the standards and penalties for violation.

Almost everybody said that they will support the project and advised the JICA Team to take precautions in the environmental mitigation to avoid the various impacts anticipated during the preconstruction, construction and operation stages of the project and to ensure protection of the sensitive locations like mosque, mazar, graveyard etc. of the areas.

The Environmental Specialist informed that the design and layout of the main bridge and approach roads etc. when finalized will consider the anticipated adverse impacts. EMP will cover specific measures to follow during the construction process in protecting religious and other sensitive locations.

The participants expressed their views in favor of the project. They are well known about the contribution of the JICA in this project. They are also known that the existing Meghna and Meghna-Gomti Bridge were constructed with financial assistance from Japan. The affected people told that they have been living/ dealing in the present location for more than three decades and most of them have no alternative land for relocation. The existing bazaar is established long ago and now it is being auctioned in every year by Upazila Administration. This is the only market in this area. Some poor people are living beside the market in a slum on RHD land. They are willing to offer their possession for constructing the bridge but required relocation in anywhere nearer to the present location. About 300 shops and more than 100 residential households are there. Most of the people living in the project area are vulnerable and they earn their livelihood by wage laboring, brick & stone chipping, fishing etc. Some of the women are living there who have no husband or adult son to shoulder the household responsibility. According to their statement, most of them are vulnerable in terms of income. After threadbare discussion on the issues the floor was open for all to express opinion about the mitigation measures of the probable social and environmental impacts as discussed earlier.

It was found that the people are mainly concern about their relocation and assistance to be provided by the project for relocation in new site.

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The Superintending Engineer informed the participants that the project will look in to the matter to avoid unnecessary displacement. He told that opinion of the people have been noted down and would be discussed with the project authority. The principle of the project is to assist the affected persons in their relocation as per Donor's guideline and they should be relocated by their own before starting civil construction. The affected

persons were insisted to search alternative location from now as they have about 2 years time in hand to relocate.

The meeting was closed with a vote of thanks from the chair.

**Appendix-A: Attendance Sheet**

**Preparatory Survey for Dhaka-Chittagong National Highway (N-1) Bridge  
Construction and Rehabilitation Project Kanchpur, Meghna and Meghna-Gomti  
Bridge  
Consultation Meeting with affected persons and other stakeholders  
Attendance Sheet**

Date:15/03/2012 Time:12.30 pm  
Venue: Tetuitala Bazar Union:Baliakandi  
Upazila : Gazaria, District: Munshiganj

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