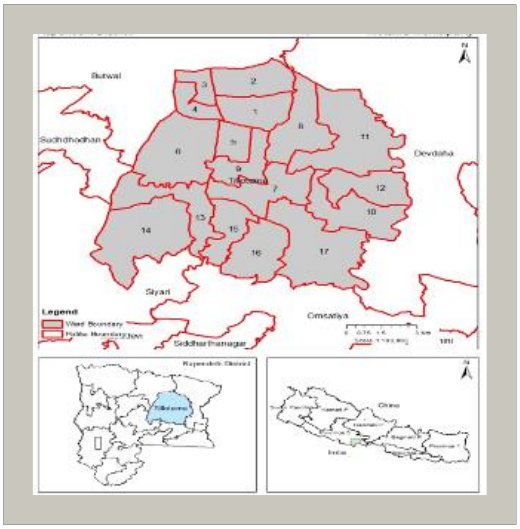
Environment and Social Impact Assessment

and

Environment and Social Management Plan

of

Upgradation of Mangalapur - Kanchibazar Road



TILOTTAMA MUNICIPALITY

January, 2022

ACRONYM

BoQ	: Bill of Quantity
CBOs	: Community Based Organizations
CBS	: Central Bureau of Statistics
CESMP	: Construction Environment and Social Management Plan
DIZ	: Direct Influence Zone
DPR	: Detailed Project Report
DSC	: Design and Supervision Consultant
DTMP	: District Transport Master Plan
DTO	: District Transport Office
DUDBC	: Department of Urban Development & Building Construction
EA	: Environmental Assessment
EHS	: Environment, Health and Safety
EPR	: Environmental Protection Rule
ESIA	: Environmental and Social Impact Assessment
ESMP	: Environmental and Social Management Plan
FGD	: Focus Group Discussion
FR	: Feasibility Report
HIV AIDS	: Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
HR	: Human Resources
IDA	: International Development Association
IIZ	: Indirect Influence Zone
ILO	: International Labor Organization
IP	: Indigenous People
ISR	: Implementation Status Review
KII	: Key Informant Interview
NGO	: Non-Governmental Organization
NUGIP	: Nepal Urban Governance and Infrastructure Project
OP	: Operational Policy
OP/BP	: Operational Policy/Bank Policy
PAP	: Project Affected Person
PCO	: Project Coordination Office
PCU	: Passenger Car Unit
PIM	: Project Implementation Manual
PIU	: Project Implementation Unit
PPE	: Personal Protective Equipment
RAP	: Resettlement Action Plan
RoW	: Right of Way
SEA/SH	: Sexual Exploitation and Abuse/Sexual Harassment
SHE	: Safety, Health and Environment
STD	: Sexually Transmitted Disease
TOR	: Terms of Reference
ULG	: Urban Local Governments

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Introduction

This environmental and social impact assessment covers the subproject connecting Mangalapur at Siddhartha Highway to Bewara Chowk so as to improve livelihood of the local people along the settlement. The subproject is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the municipality.

The overall length of the proposed road is 5.00 km of with the geographical location of that starting point is 27°36'44.2"N, 83°30'33.71"E (Siddhartha Highway) and end co-ordinate 27°35'30.5"N, 83°30'54.74"E (Bewara Chowk) through wards 7, 9, and 10 of Tilottama Municipality. The total road width varies from 6.25m to about 8.2m at some places. But the average road width is about 7.5m. This route has 3.5 km of settlement, 1.22 km of agricultural land & 0.28 km of barren land on either side of the road alignment. The average gradient of the road varies from 0.8 to 1.1 %. The upgradation project has proposed Carriageway width of 2 lanes (3.5 m each), barrier kerbs, covered RCC drains along the alignment, 47 road crossings, 178 ramps, shifting 206 electric poles and relocation of 3.7 km water supply pipelines and up gradation of the road furniture.

Baseline Information

The project area altitude varies from 25m to 60m from sea level. In the proposed road alignment and Right of Way (RoW) there is no landslide/flood area and other disaster-prone area. Mostly the project area consists of boulder and gravel. The main rivers of Tilottama are Tinau River, Rohani River & Sukhaura River and the project ends on the Rohini river bridge. The mean minimum temperature reaches up to 19.32^{o}C and means maximum temperature is nearly 30.92^{o}C. with an average precipitation of 1753mm. The catchment of the project road is 6 km^{2}. The peak ground acceleration of the project site is 0.29g. The proposed project alignment has 3.5 km of settlement & 1.22 km of agricultural land, 0.28 km of barren land on either side of the road length. The project alignment has 3.7 km water supply pipeline network, 206 electric poles. The average wind speed at the project site is 19 km/hr, water quality complied to Government of Nepal (GoN) standard and the PM_{10}, $PM_{2.5}$ and CO were lesser than 40µg/m^{3}, 30µg/m^{3} and 130µg/m^{3} respectively.

The nearby forest is Kariya Community Forest and Banbatika Community Forest at distance of 3.46 km and 4.58 km respectively from project direct impact area (within the RoW). The indirect project area (50 m from edge of the road) has built up area and agricultural land. There is no forest within project impact area and it is not a habitat for terrestrial fauna and avifauna. There are only 64 trees that need to be removed in 5 km road upgradation work.

The proposed project lies in Tilottama Municipality of Rupandehi District in Lumbini Province of Nepal. The total population of the district, according to the Census of Nepal, 2011 is 880,196 and the number of households is 163,916. The average family size of the district is 5.37, which is higher than that of the national average (4.88). The total population of Tilottama Municipality is 123836 and total household is 21957. The average household size of the municipality is 4.56 which are lower than that of district household size (5.37). The project area is inhabited by Brahmins, Chhetri, Tharu, Gurung, Magar, Thakali, Kewat, Muhsar, Yadav, Dhobi, Muslim, Chepang, Jogi, Thakuri, Kami, Damai, Chamar, Harijan, Ram and Hindus. Muslims, Christians, Sikhs, etc. are found living in religious communities. There are also Shiva Temple, Durga Temple, Radhakrishna Temple, Mokshyadham, Buddhist Gumba, Stupa, Mosque and Churches. The indigenous people in project area are Gurung, Chepang, Tamang, Tharu, Sherpa, Sunuwar, Rai. There is diversity in the cultural practices of the castes within the project area. Cultural festivals like Dashain, Tihar, Chhath, Ram Navami, Shivaratri, Maghi, Buddha Jayanti, Eid, Moharram, Christmas are celebrated in this region which is inhabited by different castes and religions.There are 5 schools along the alignment, 7 health posts, 1 Ayurvedic hospital, 1 private and 1 public hospital in the project municipality. The project area is the hub for people coming from Palpa, Baglung, Gulmi, Arghakhachi district. The main occupations of the residents living within the project area are agriculture, animal husbandry, trade, government jobs and foreign employment. In the ward 7 and 10, there are two female members each elected showing woman active participation at community level in 6 different women user group.

Legal and Regulatory Requirements

The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. The report has included the applicable GoN plan, policies, act, regulations, guidelines, and standards. Similarly, the report has also included the environmental and social standards of the World Bank.

Screening, Scoping, Impact identification, Prediction and Management

Direct Impact area of the project is considered as RoW (40 meter from Mangalapur Junction towards Kanchibazar: 7.7 meters; from 40 meter to 1660 meter: 11 meters; remaining up to 5 km is: 13 meters) of the subproject. Similarly, the indirect impact is fall within 50 meters from the edge of the RoW. Environmental and Social checklists were used for screening and summarizing the overall impacts. The site-specific impacts in construction and operation phases are included in the ESIA report. Some of the impacts include:

Physical Impacts

- *Land Use*
- *Quarrying material and operation*
- *Stockpiling and construction area*
- *Noise pollution*
- *Air pollution,*
- *Water pollution*
- *Solid waste generation*
- *Disaster risk*

Socio-economic and Cultural Impacts

- *Impact on physical resources like change in land use, temporary obstruction to structures*
- *Temporary impacts on Business*
- *Impacts to community infrastructures like school, water pipelines, health facilities and cultural sites – specifically, three boundaries wall requiring dismantling and relocation, of one school, one health post and one temple*
- *Occupational health and safety*
- *Social disturbances/risk of GBV/AIDS*
- *Community health risk*
- *Traffic management issues etc*

The mitigation measures corresponding to the impacts have been suggested in the report. Some of the mitigation measures are

Physical Impacts

- *Reuse of the top soil for backfilling*
- *Use of IEE approved quarry site and refilling*
- *Suitable selection of site for stockpiling*
- *Equipment meeting GoN emission standard to be used*
- *Regular maintenance of equipment*
- *Follow 3 R approach*
- *Waste segregation at source*
- *Compensatory plantation for felling trees*

- *Implementation and monitor of site specific Environmental and Social Management Plan (ESMP)*

Socio-economic and Cultural Impacts

- *Working condition and management of the worker relationship complying to national law and World Bank (WB) safeguard policies*
- *Provision of the safe, clean and hygienic workplace and use of Personal Protective Equipment (PPE) during work*
- *The project will restrict child labor (under age of 16)*
- *Public awareness raising against the community induced disease*
- *The project to make provision such that the workforce does not trespass other's property or nearby forest*
- *Gender based issues will be addressed from administrative work till construction work*
- *The diversion design during the construction phase should incorporate the needs of differently able people, school children, pedestrian, women and proper administrative and on-site provision will be made.*

Resettlement Action plan

The structures and additional land acquisition along the proposed up-gradation project will be avoided by adjusting the road alignment within the RoW of the road in related sections where such needs to be avoided. Hence, there are no structures or private or public land within RoW of road which requires acquisition. The Resettlement Action Plan (RAP) aims to provide policy and procedures of land acquisition, compensation and resettlement of affected persons if design changes. The PCO within the DUDBC will assume overall responsibility for the management procedures as mentioned in the RAP.

Sexual exploitation and Abuse and Sexual Harassment Prevention and Response Action Plan

Based on the Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate SEA/SH risks that the project activities might trigger. The Plan has also addressed "Table – 1: Recommended actions to address SEA/SH Risks in IPF Projects" as per the "Good Practice Note" published by the World Bank in September 2018.

Environment and Social Management Plan

Environmental and Social Management Plan (ESMP) has been proposed with present report including issues identified, possible effects and impacts, measures for their mitigation, monitoring methods. The mitigation cost for environmental and social impacts in construction and operation phases are included in ESIA report. In addition, agencies responsible for executing environmental mitigation measures and monitoring have been identified in the ESMP. Different monitoring indicators on the physical, biological, socio-economic and cultural environment have also been identified. The project along with the stakeholders will monitor during reconstruction and operation phase. The project also includes a grievance redress mechanism (GRM) for timely update and resolution of of stakeholders' queries and grievances.

Institutional arrangements

The Ministry of Urban Development (MoUD) has set up a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DuDBC) to implement NUGIP. The PCO is responsible for overall project compliance including compliance with environmental and social measures. The PCO will be supported by a Project Management Support Team (PMST). A Project Implementation Unit (PIU) will be established in each municipality for implementation of the subproject project at the local level and will be responsible for implementation of the ESMP and other environmental and social instruments. Technical Assistance will be provided through a Design and Supervision Consultancy (DSC) which includes safeguards specialists.

EXECUTIVE SUMMARY (NEPALI)

परिचयः

यस वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कनले यस बाटोको वरिपरिका बस्तीका स्थानीय व्यक्तिहरुको जीविकोपार्जनमा सुधार ल्याउने गरी सिद्धार्थ राजमार्ग स्थित मंगलापुर देखि बेवरा चोकसम्म जोड्ने सडक उपयोजनालाई समेट्छ। उपआयोजनाले नगरपालिका शहरी विकास योजना, पूर्वाधार विकास तथा संस्थागत विकास एवं नगरपालिकाको क्षमतामा अभिवृद्धिमा योगदान पुऱ्याउने उपेक्षा गरिएको छ।

भौगोलिक स्थिति २७ ° ३६' ४४.२" उत्तर , ८३ ° ३० ' ३०.७१" (सिद्धार्थ राजमार्ग) बाट सुरुभई तिलोत्तमा नगरपालिकाको वडा नं ७, ९ र १० हुदै २७ ° ३५' ३० °५" उत्तर , ८३ ° ३० "३४'७४ पूर्व (वेवारा चोक) सम्मको यस प्रस्तावित सडकको कुल लम्बाई पाँच किलो मिटर छ। यस बाटोको चौडाई ६.२५ मीटर देखि कहिकहि ८.२ मीटर जतिको फरकफरक छ। तर औसत चौडाइ करिब ७.५ मीटर जतिको छ। यस सडकको ३.५ किलोमीटर खण्डमा वस्ति रहेको छ भने १.२२ किलोमिटर खण्डमा कृषि जमित र ०.२५ किलोमिटर खण्डमा बाँझो जमिन पर्दछ। सडकको औसत भिरालो ०.८ देखि १.१ % प्रतिशत रहेको छ। यस सडक स्तरोन्नति उपआयोजनामा दुई लेनको सडक (३.५ मीटर प्रति लेन), केरियर कर्वहरु, किनारामा ढकन सहितको आर.सि.सि. को पानीढल, ४७ वटा दोबाटोहरु, १७८ च्यापमा , २०६ वटा विजुलीको खम्वा सार्ने, ३.७ कि.मी. खानेपानी पाइप सार्ने र सडक छेउको फर्निचरको स्तरोन्नति गर्ने प्रस्ताव गरिएको छ।

विद्यमान अवस्था ;

उपआयोजना क्षेत्रको उचाई समुद्री सतहबाट २५ मी. देखी ६० मी. माथि रहेको छ। प्रस्तावित सडक रहेको स्थान वा सडक क्षेत्राधिकार कुनै भूस्खलन, वाढी र अन्य प्रकोप क्षेत्र पर्दैन। आयोजना क्षेत्रमा प्राय ढुङ्गा गिट्टी पाईन्छ। तिनाउ, रोहिणी र सुखौरा तिलोत्तमाको मुख्य नदीहरु हुन् र उपयोजना रोहिणी नदिको पुलमा टुङ्गिन्छ। औसत वर्षा १७५३ मी.मी हुने तिलोत्तमा नगरपालिकाको औसत न्यूनतम तापक्रम १९.३२ ° सेल्सियस र औसत अधिकतम तापक्रम ३०.९२ ° सेल्सियस रहेको छ। प्रस्तावित सडकले ६ वर्ग कि.मी. क्षेत्रलाई सुविधा पुऱ्याउँछ। आयोजना स्थलको उच्चतम भूकम्पन ०.२९g रहेको छ। सडक किनारामा ३.७ कि.मी पानी-पाइप लाइन र २०६ विजु उच्चतम बस्ती बीचबाट जान्छ भने १.२२ कि.मी कृषि क्षेत्र बीचबाट जान्छ र ०.२८ कि.मी पर्ति जग्गामा पर्छ। सडक किनारामा ३.७ कि.मी खानेपानी-पाइप लाइन र २०६ विजुलीको खम्वाहरु छन्। आयोजना स्थलमा हावाको औसत गति १९ कि.मी. प्रति घण्टा छ, खानेपानीको गुणस्तर नेपाल सरकारको गुणस्तर मुताविकनै रहेको छ । त्यस्तै १० मा.मी. (µm) भन्दा कम (PM 10), २.५ मा.मी भन्दा कम (PM 2.5) र कार्वन डाइअक्साइड क्रमसः

४० मिलिग्राम प्रति घनमिटर ३० मि. ग्रा. प्रति घनमिटर र १३० मि.ग्रा. प्रति घनमिटर भन्दा कम छ ।

नजिकको करिया सामुदायिक वन र वनवाटिकाका सामुदायिक बन आयोजनाको प्रत्यक्ष प्रभावित क्षेत्र (सडकको अधिकार क्षेत्र) बाट क्रमश ३.४६ कि.मी र ४.५८ कि.मी. टाढा पर्दछ । आयोजना अप्रत्यक्ष प्रभावित क्षेत्र (सडकको किनार बाट ५० मीटर) मा बस्ती तथा कृषि क्षेत्र पर्दछ । आयोजना प्रभावित क्षेत्र

भित्र कुनै बन जंगल नरहेको र स्थलीय जीव वा चरा चुरुङ्गीको वासस्थान रहेको छैन । पाँच किमी सडक स्तरोन्नति कार्यमा ६४ वटा मात्र रुखहरु हटाउनु पर्दछ।

यस प्रस्तावित उपआयोजना नेपालको लुम्बिनी प्रदेश अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकामा पर्दछ । वि.सं २०६८ को जनागणना अनुसार यस जिल्लाको कूल जनसंख्या ८८०,१९६ र घर परिवार १६३,९१६ रहेको छ । औसत परिवार संख्या ५.३७ रहेको छ जुन राष्ट्रिय औसत (४.८८) भन्दा बढी हो । त्यसैगरि तिलोत्तमा नगरपालिकाको कूल जनसंख्या १२३,८३६ र घरधुरि २१,९५७ छ । औसत परिवार संख्या ४.५६ जना छ जुन जिल्लाको औसत (५.३७) भन्दा कम हो । आयोजना क्षेत्रमा ब्राम्हण, क्षेत्री, गुरुङ्, मगर, थकाली, केवट, मुसहर, यादव, धोवी, मुस्लिम, चेपाङ्ग, योगी, थकुरी, कामी, दमाई, चमार, हरिजन, राम आदिको बसोबास छ र हिन्दु, मुस्लिम, क्रिश्चियन, शिख आदि धार्मिक समुदायको बसोबास रहेको छ । यहाँ शिव मन्दिर, दुर्गा मन्दिर, राधाकृष्णा मन्दिर, मोक्षधाम, बोद्ध गुम्वा, मस्जिद तथा गिर्जाघर पनि छन् । आयोजना क्षेत्रको आदिवासीहरुमा गुरुङ्, चेपाङ्, तामाङ्, थारु, सेर्पा, सुनवार र राई पर्दछन् । यस आयोजना क्षेत्रमा विभिन्न जातजातिका संस्कृतिक अभ्यासहरु पाइन्छन् । विभिन्न जनजाति तथा धर्म रहेको यस क्षेत्रमा दशै, तिहार, छठ, रामनवमी, शिवरात्री, माघि, बुद्ध जयन्ति, इद, मोहर्राम, क्रिसमस जस्ता सांस्कृतिक चाडपर्वहरु मानाइन्छ । सडक किनारमा पाँच विद्यालय, सात हेल्थ पोष्ट, एक आयुर्वेदिक अस्पताल, एक निजी अस्पताल र एक सरकारी अस्पताल रहेको छ । यस आयोजना क्षेत्रमा पाल्पा, वाग्लुङ्ग, गुल्मी, अर्घाखाँची जिल्लाबाट आएका मानिसहरुको बसोबास रहेको छ । आयोजना क्षेत्रमा बसोबास गरी रहेका मानिसको प्रमुख व्यवसाय कृषि, पशुपालन, व्यापार, सरकारी जागिर र वैदेशिक रोजगार हुन् । वडा नं ७ र १० मा दुई निर्वाचित महिला सदस्यहरु र छ वटा विभिन्न महिला उपभोक्ता समूह रहेको छ जसले समुदाय स्तरमा महिलाको क्रियाशिल सहभागिता पुष्ठी गर्दछ ।

ऐन तथा नीति, नियमको आवश्यकता

नेपाल सरकारले विभिन्न समयमा जारी गरेका विषयगत तथा बहुविषयगत निर्देशिका तथा मापदण्डहरु आयोजना तयार गर्न तथा कार्यान्वयन चरणहरुमा वातावरणीय एवम् सामाजिक सुरक्षण आयामहरु मूल प्रवाहीकरण गर्न यथेष्ठ छन् । यस प्रतिवेदनले सम्बन्धित नेपाल सरकारका योजना, निति, ऐन, नियम, निर्देशिका एवम् मापदण्डहरु समेटेको छ । त्यसैगरी यस प्रतिवेदनले विश्व बैङ्कको वातावरणीय तथा सामाजिक मापदण्डहरु पनि समेटेको छ।

वर्गीकरण, क्षेत्र निर्धारण, प्रचाव पहिचान, अनुगमन र व्यवस्थापन

आयोजनाको प्रत्यक्ष प्रभावित क्षेत्र यस आयोजनाको सडकको क्षेत्राधिकार (१३ मीटर) मानिएको छ । त्यसै गरी अप्रत्यक्ष प्रभावित क्षेत्र सडकको क्षेत्राधिकारको किनारा देखि ५० मीटर सम्म पर्दछ । प्रभावहरुको वर्गीकरण तथा संक्षेपीकरण गर्न वातावरणीय तथा सामाजिक चेकलिष्ट प्रयोग गरिएको छ । स्थान विशेषको प्रभावहरु वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन मा समावेश गरिएका छन् । केही प्रभावहरु निम्नानुसार छन्।

भौतिक प्रभावहरुः

- भू-उपयोग
- निर्माण सामाग्री उत्खन्नन् तथा सञ्चालन
- निर्माण सामाग्री भण्डारण तथा निर्माण क्षेत्र

- ध्वनी प्रदुषण
- वायु प्रदुषण
- जल प्रदुषण
- फोहरमैला उत्सर्जन
- विपद्

भौतिक प्रभावहरु ;

- सतहको माटोको पुनः प्रयोग गर्ने
- नगरपालिकाको प्रारम्भिक वातावरणीय परीक्षणले अनुमोदन गरेका खानी प्रयोग गर्ने र पुर्ने।
- सामग्री भण्डार गर्ने स्थानको उचित छनौट गर्ने
- नेपाल सरकारले तोकेको मापदण्ड अनुकुल यन्त्रहरु प्रयोग गर्ने
- यन्त्रहरुको नियमित मर्मत संभार गर्ने
- फोहोर व्यवस्थापनमा तीन आर (3R) प्रकृया अवलम्बन गर्ने
- काटिने रुखहरुको क्षतिपूर्ती स्वरुप वृक्षारोषण गर्ने
- स्थान विशेषको वातावरणीय तथा सामाजिक व्यवस्थापन योजना (ESMP) कार्यान्वयन तथा अनुगमन गर्ने

अर्थ-सामाजिक तथा सांस्कृतिक प्रभावहरु ;

- राष्ट्रिय कानून एवम् विश्वबैङ्कको सुरक्षण नीति परिपालन हुने कार्यगर्ने वातावरण/अवस्था र कामगर्नेहरुको सम्बन्ध
- सुरक्षित, सफा तथा स्वास्थ्यका कार्यस्थलको व्यवस्था र कामको समय व्यक्तिगत सुरक्षण सामग्री को प्रयोग
- परियोजना वालमा १६ वर्षभन्दा कम उमेरका लागि निषेध गरिनेछ।
- समुदाय सृजित रोगहरुको रोकथाम सम्बन्धी सार्वजनिक चेतना अभिवृद्धि गर्ने
- कामगर्नेहरुले अरुको सम्पत्ति र नजिकको वनजंगल अनधिकृत प्रवेश नगर्ने व्यवस्था परियोजनाले गर्ने
- प्रशासनिक कार्य देखि निर्माण कार्यस्मम लैगिंक सवालहरुको सम्बोधन गर्ने
- निर्माण चरणका डाइभर्जनहरुको डिजाइजले फरक क्षमताका व्यक्तिहरुको आवश्यता समेटिनु पर्दछ र उपयुक्त व्यवस्थापकीय स्कुले वालवालिका, वटुवा तथा महिला र स्थलगत व्यवस्था गर्नु पर्दछ।

पुनःर्वास कार्ययोजना ;

प्रस्तावित स्तरोन्नति उपआयोजनाले वाटोको क्षेत्राधिकर भित्रको सडकको रेखाङ्कन मिलाउदै संरचनाहरु भत्काउने तथा थप जग्गा प्राप्त गर्नु पर्ने कार्यलाई रोक्ने छ । तसर्थ कुनै अतिरिक्त जग्गा प्राप्त गर्नु पर्ने सडकको क्षेत्राधिकारमा संरचना वा व्यक्तिगत वा सार्वजनिक जग्गा पर्दैन । डिजाइन परिवर्तन भई प्रभावित भए गरिने जग्गा प्राप्त, क्षतिपूर्ति तथा प्रभावित व्यक्तिहरुको पुनर्वासको निति तथा विधि उपलब्ध गराउने उद्धेश्यले यो पुनर्वास कार्य योजनाले राखिएको हो । शहरी विकास तथा भवन निर्माण विभागमा रहेको आयोजना समन्वय कार्यालयले पुनःर्वास कार्ययोजना उल्लिखित व्यवस्थापन विधिहरुको पुर्व सम्पुर्ण जिम्मा लिनेछ ।

यौन शोसण तथा दुर्वेसन एवम् दुर्व्यवहार रोकथाम तथा सम्बोधन कार्य योजना ;

विश्व बैङ्कले नेपाल शहरी शासकीय तथा पूर्वाधार उपआयोजनाको लागि गरिएको यौनिक शोषण, दुर्वेसन एवम् यौन दुर्व्यवहार जोखिम मूल्याङ्कनमा आधारमा यस आयोजनाको SEA/SH जोखिमको "न्यून" मूल्याङ्कन गरेको छ । यस मूल्याङ्कनमा आधारित भई आयोजनाको लागि SEA/SH निरोध तथा सम्बोधन कार्ययोजना आयोजनाको लागि SEA/SH रोकथाम तथा सम्बोधन कार्ययोजना बनाइएको छ । यसमा उपआयोजनाको कार्यक्रमले सिर्जना गर्न सक्ने SEA/SH जोखिमहरु निषेध एवम् रोकथाम तथा न्यूनीकरण गर्ने उद्धेश्यका निश्चित व्यवस्थाहरु समावेश गरिएका छन् । यस योजनाले तालिका-१; विश्व बैङ्कले सेप्टेम्बर २०१८ मा प्रकाशित "असल अभ्यास नोट" अनुसार IPF परियोजनाहरुमा SEA/SH जोखिमहरुलाई सम्बोधन गर्न सुझाएको कार्यहरु लाई पनि समावेश गरेको छ।

वातावरण तथा सामाजिक व्यवस्थापन योजना ;

पहिचान गरिएका सवालहरु, सम्भाव्य असर एवम् प्रभावहरु, तिनीहरुको न्यूनीकरण गर्ने विधिहरु र अनुगमन विधिहरु समावेश गरी यस प्रतिवेदनले वातावरणीय तथा सामाजिक व्यवस्थापन ~~योजना~~ रुपरेखा (ESMF) प्रस्ताव गरेको छ । निर्माण तथा सञ्चालन चरणमा हुने वातावरणीय तथा सामाजिक प्रभाव न्यूनीकरण गर्ने लागत खर्च वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदनमा संलग्न छ । अझ वातावरणीय प्रभाव न्यूनीकरण व्यवस्था तथा अनुगमन गर्ने जिम्मेवार निकायहरु वातावरणीय तथा सामाजिक व्यवस्थापन रुपरेखा तोकिएको छ । भौतिक जैविक, अर्थ सामाजिक तथा सांस्कृतिक वातावरण अनुगमन गर्ने विभिन्न सूचकांकहरु पनि तोकिएको छ। पुनःनिर्माण तथा सञ्चालनको चरणमा आयोजनाले सरोकारवालाहरुसंग मिलेर अनुगमन गर्नेछ । यस उपआयोजनामा सरोकारवालाहरुको जिज्ञासा एवम् गुनासोहरुको बारे अद्यावधिक सूची राख्न र उपयुक्त समयमै समाधान गर्न एवम् गुनासो सम्बोधन विधि समेत समेटिएको छ।

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संस्थागत व्यवस्था ;

आयोजना कार्यान्वयन गर्न शहरी विकास मन्त्रालयले शहरी विकास तथा भवन निर्माण विभाग अन्तर्गत एउटा आयोजना समन्वय कार्यालय स्थापना गरेको छ । वातावरणीय तथा सामाजिक विधिको साथै सम्पूर्ण विधिहरु पालना सम्बन्धी जिम्मेवारीको जवाफदेहिता आयोजना समन्वय कार्यालयमा रहने छ । आयोजना समन्वय कार्यालयलाई एउटा आयोजना व्यवस्थापन सहयोग टोलीले सहयोग गर्नेछ । उपआयोजनाहरुको वातावरणीय तथा सामाजिक व्यवस्थापन योजना कार्यान्वयन स्थानीय तहमा गर्न र तथा अन्य वातावरणीय एवम् सामाजिक संयन्त्रहरुको कार्यान्वयनका जिम्मेवार हुने गरी प्रत्येक नगरपालिकामा एकएक आयोजना कार्यान्वयन इकाइ स्थापना गरिनेछ । सुरक्षण विशेषज्ञ सहितको डिजाइन तथा सुपरिवेक्षक परामर्शदाता मार्फत प्राविधिक साहायाता पुऱ्याइनेछ।

INTRODUCTION

1.1. Project Background

Nepal has recently transitioned from a unitary to a federal government system, comprised of three tiers of government with seven provinces and 753 local governments for which new legislation, institutions, and administrative procedures are being formalized as constitutionally prescribed. To enable the federal implementation process and to support Urban Local Governments (ULGs) in the efficient provision of assigned service delivery responsibilities in the context of rapid urbanization, the proposed Nepal Urban Governance and Infrastructure Project (NUGIP), with support from the World Bank (WB), aims to address two main challenges under the new federal context: (i) limited institutional systems and capacities of ULGs; and (ii) critical gaps in core municipal services and infrastructure.

The Government of Nepal (GoN) is receiving financing from the International Development Association ("World Bank") towards the cost of the Nepal Urban Governance and Infrastructure Project (NUGIP). The Department of Urban Development and Building Construction (DUDBC) within the Ministry of Urban Development (MoUD) is the primary implementing agency for NUGIP, and bears the complete responsibility of project implementation, management, supervision and coordination. A Project Coordination Office (PCO) has been established under the MOUD, DUDBC for carrying out activities related to the project and is responsible for coordinating implementation on a day-to-day basis. The PCO is comprised of a Project Director (PD), Deputy Project Director (DPD), Project Engineers (PE), and other key project management and technical staff.

The Project Development Objective (PDO) of NUGIP is to strengthen institutional capacity in participating municipalities for strategic municipal infrastructure and service delivery. In particular, NUGIP will aim at: a) improving access to core municipal services (includes expansion of coverage, and construction and rehabilitation of basic infrastructure systems, e.g., urban roads & storm water drainage etc) in participating municipalities; b) strengthening planning, budgeting and implementation systems for municipal service delivery; and c) strengthening municipal finances and financial management systems.

NUGIP is comprised of five components:

- Component One will provide urban development grants (UDGs) to 17 municipalities for strategic municipal infrastructure and service delivery in two priority strategic urban clusters in eastern cluster (Provinces 1 and 2) and western cluster (Provinces 4 and 5). The 17 participating municipalities will be responsible for planning, preparation and implementation of the municipal infrastructure investments with direct support from proposed Design and Supervision Consultants (DSCs) and PCO.
- Component Two will support the 17 participating municipalities under Component One, plus 4 additional municipalities, on institutional strengthening through capacity building programs. The PCO and an Urban Development Support Team (UDST) will support the 21 participating municipalities in planning, preparation and implementation of institutional capacity development programs.
- Component Three will support COVID-19 response and recovery through Labour Intensive Public Works (LIPW) in 12 other municipalities. The 12 participating municipalities will take the overall responsibility of planning, administration, financial management, implementation and monitoring of LIPWs
- Component 4 supports a Contingent Emergency Response, and
- Component 5 supports Project Management and Coordination.

This environmental and social impact assessment covers the subproject connecting Mangalapur at Sidhartha Highway to Rohini Bridge so as to improve livelihood of the local people along the settlement. The subproject is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the municipality.

1.2. Subproject Objectives and Components

The objective of the project is to provide better and enhanced services to the road user along with better quality of road and improving the aesthetics of the street. As such, the proposed road subproject serves the purpose to provide basic service to the people and connect the settlements to the local and national strategic road network (SRN).

The subproject comprises of the following components:

a) Upgradation of existing single lane carriageway into two lanes Carriageway
b) Side Drain
c) Rehabilitation and Construction of Cross Drainage Structures
d) Footpath
e) Street light
f) Bus Laybys
g) Retaining Wall
h) Zebra Crossing.
i) Major and minor intersection improvements.
j) Signage and pavements marking.
k) Shifting of utilities.

The subproject was chosen based on its economic value addition and urban development requirements. The selection of the sub-projects is based on technical, environmental, social and financial sustainability.

1.3. Subproject Details

Tilottama Municipality lies in Lumbini Province, Rupandehi district at the Eastern rim of Lumbini, the birthplace of Buddha. Geographically, it is located between 83° 24' 0" to 83^0 33' 30" east longitude and 27° 33' 0" to 27^0 40' 30" north latitude. It is surrounded by Devdaha Municipality in the east, Suddhodhan Rural Municipality and Tinau river in the west, Butwal Sub-Metropolitan in the north and Omsatiya and Siyari rural municipalities in the south. It was formed on 25th Baisakh 2071 with the combination of seven existing VDCs, i.e. Shankarnagar, Aanandaban, Karahiya, Makrahar,

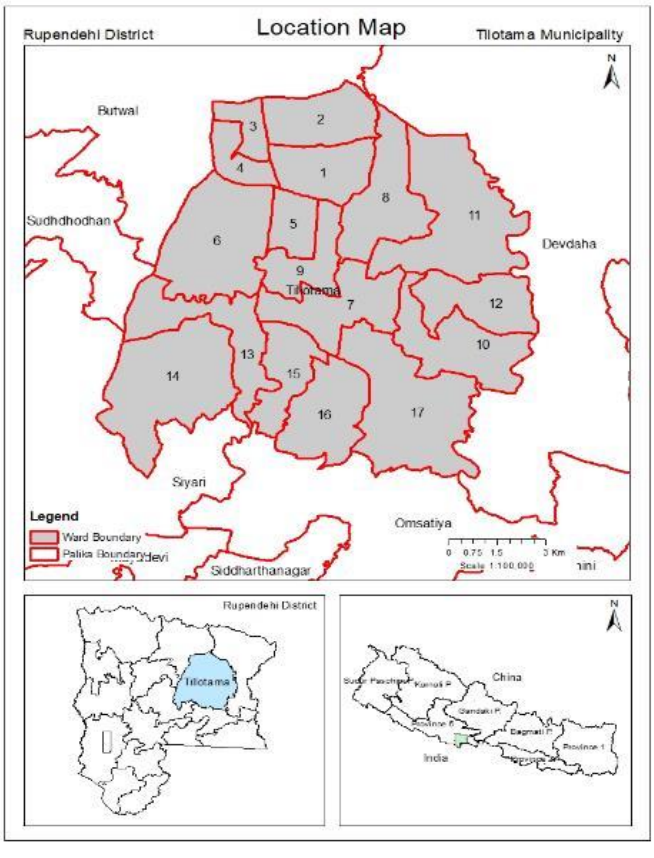

Figure 0.1: Location Map of the Tilottama Municipality

Madhwaliya, Tikuligadh and Gangolliya VDCs. The place was named for Tilotama River. Whereas, the Tilottama River was named after an Apsara named Tilottama described in the Hindu mythology. "Tila" in Sanskrit means a sesame seed and "uttama" means better. Tilottama therefore means smallest particle is the finest. It covers an area of 126.3 sq.km with total 17 wards.

The overall length of the proposed road is 5.00 km of with the geographical location of that starting point is 27°36'44.2"N, 83°30'33.71"E (Siddhartha Highway) and end co-ordinate 27°35'30.5"N, 83°30'54.74"E (Bewara Chowk). The location of the project can be depicted from **Figure 1.1**~~**Figure 1.1**~~.

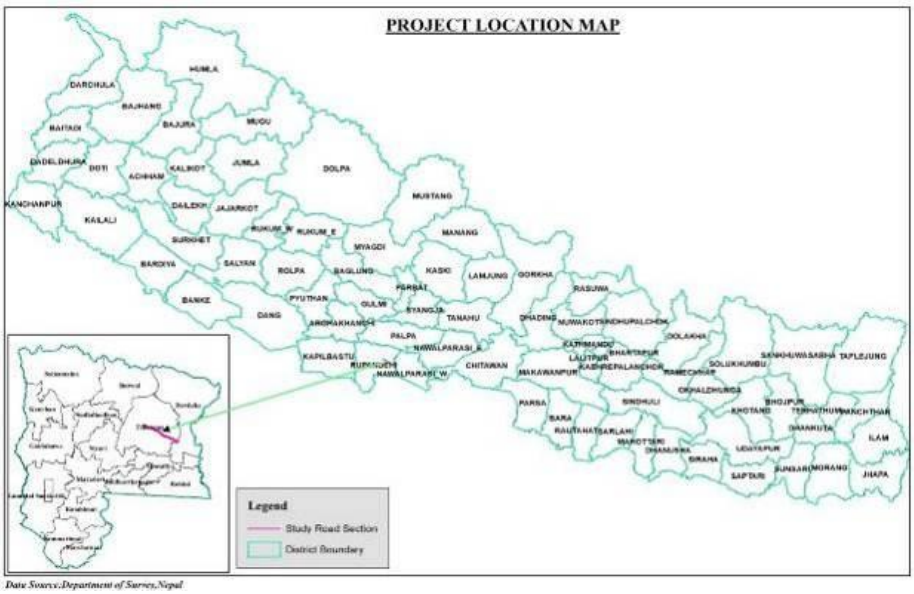

Figure 0.2: Project Location Map

The proposed subproject involves rehabilitation of the 5.0 kilometers section of the Mangalapur-KanchiBazar Road in Tilottama Municipality of Rupandehi district in Lumbini Province. The road under the subproject passes through wards 7, 9, and 10 of Tilottama Municipality. The road connects Siddhartha Highway with Devdaha Border. The road starts from Mangalapur in Siddhartha Highway and ends at Rohani River Bridge which is the border between Devdaha Municipality and Tilottama Municipality. The proposed subproject is located in plain land and passes through settlements, agricultural lands. The subproject road currently has a single lane operational paved carriageway and does not segregate slow-moving vehicles and pedestrians. The road section requires pavement reconstruction to maintain acceptable levels of service. There are no alternative routes to the project road that serve the same function as that of the stated road.

The declared Right of Way (RoW) of Mangalapur –Kanchibazar road is 13 meters. Different road width is fixed along this alignment to avoid the demolition of existing structures that fall within the RoW. The subproject is divided in to three different cross sections viz type –A, type B, and type C. Type A proposed road width is 7.7 meters (from Chainage CH 0+000 to 0+0380), total length of type A is 0.038 Km, ii) type B: proposed road width is 11 meters (at different chainage of settlement area), total length of type B is 0.942 Km. iii) Type C-proposed road width is 13 meters (at different chainage). The total length of type C is 4.02 Km.

The existing traffic circulation pattern shows that the project road experience heavy traffic during the peak hours i.e morning 9.00 AM to 11.00 A.M. and evening at 4.00 PM to 6.00 P.M. Most of the trips are home based trips and Manigram, Madhuwaliya, Tikuligadh, Shankarnagar, Kothihawa, Yogikuti are the major destinations.

Mangalapur is a collector road having ROW of 13 m. This road continues joining further to the Devdaha municipality through the proposed road alignment. This road is straight and shortest route to Bewara Chowk, one of the major destination points. There are numbers of other municipal roads coming and meeting as artilleries to this

main Mangalapur -Kanchibazar road. This alignment can be used as a bypass road in future to connect Siddartha highway and Bhumahi - Parasi Highway through Devdaha Municipality which reduces traffic congestion of Butwal and Bhairahawa.

The proposed scheme of Mangalapur Kanchibazar Road (upgradation up to Bewara Chowk) compared to the existing scenario is described in **Table 0.1~~Table 1.1~~.**

Table 0.1: Existing Condition and Proposed Scheme Comparison

S. No.	Description	Existing Scenario	Proposed Scheme
1	Length of Road	5.0 km	5.0 km (Mangalapur-Bewara Chowk)
2	Right of Way (RoW)-Declared by municipality	13m	13m
	Total Road Width	4 to 6 m	Type -A-7.7 m width (0+000.00 to0+038.00) – 38 m Type -B -11 m width (different chainage at settlement area) – 0.942 km Type -C – 13 m width (at different chainage) Length - 4.02 km
3	Traffic	i. 567 PCU (traffic count in 2018 at CH 0+250.00) ii. ii) 380 PCU (traffic count in 2018 at CH 6+500.00)	i. 8047 PCU in 2039 at CH 0+250.00 ii. ii) 5053 PCU in 2036 at CH 6+500.00
4	Carriageway	Average 3.75 m	7m for (0+000.00-0+038.00) & 7.5m including shyness for (0+038.00-5+000.00)
5	Pavement type	Single lane blacktopped (poor condition) road	Double lane upgradation with the 40mm of asphalt concrete, 50mm of DBM material, 150mm of base course and 175mm of sub base course with proper grade and camber
6	Median/Landscape or Green land areas	No median Provided and green land area	Median is not provided
7	Parking	Haphazard parking on shoulder and carriage way area obstructing traffic movement.	Due to space restriction, separate parking is not provided.
8	Cycle track	Nil	Nil
9	Side Drain	630m of Masonary Side Drain along the road. About 200 m. length of drain cover's slab as footpath.	Tick drain in both sides from chainage Type A1 0+000.00-0+014.96 (i.e. length = 29.92m)-tick drain (0.3*0.2) Type A2 0+014.96-0+038.00 (i.e. length = 46.08m)-tick drain (0.3*0.3) Type B (0.45m*0.4m) (L-2764.8 2m) Type C (0.6m*0.4m) (L-824.92m) Type D (0.75m*0.4m) (L-1723.02m) Type E (0.9m*0.4m) (L-4085.84m) Type F (0.9m* 0.5m)(L-844) note: drain length includes both sides drain length and Size given is internal dimension of drain
10	Cross drainage Structures	12pipe culverts 15 slab culverts	15 pipe culverts 12 box culverts - Rehabilitation of existing pipe culverts and slab culverts in order to make double lane
11	Protection Works	Nil	Retaining wall/slope protection measures as per requirement
12	Traffic signs/signage and road marking	Nil	Provided all along the road to ensure maximum safety to pedestrian and vehicular traffic.

S. No.	Description	Existing Scenario	Proposed Scheme
13	Road furniture (street lights, delineators, etc)	Nil	Provided
14	Utility	All wires and cable are hanging above ground and are in unmanaged condition	Unmanaged electric poles and wire are managed according to requirement
15	Trees and plants	Unmanaged plantation	Trees are provided on footpath
16	Total cost of road		NRs 781, 574, 621.29 (including VAT and contingency)
17	Per KM cost of road		NRs. 156,314,924.26

Source: DPR 2021

1.4. Existing Road conditions and inventory

The whole route of 5.0 km is black-top surface. The total road width varies from 6.25m to about 8.2m at some places. But the average road width is about 4.5m. This route has 3.5 km of settlement, 1.22 km of agricultural land & 0.28 km of barren land on either side of the road alignment. The average gradient of the road varies from 0.8 to 1.1 %. The list of some of the prominent features along the 5 KM road section for upgradation includes the following:

Schools: - There are five schools alongside the road alignment: Shree Gautam Buddha High School. (1+140.00, Right side), Janahit High School (2+350.00, Right Side), Shree Semra Secondary School (3+400.00, left Side), Namuna Boarding School (4+4350.00, Right Side) and Everest Boarding School.

Health Post/Hospital: - Semara Heath Post is found at chainage (3+850.00, Left Side) Administrative Buildings: - Nepal Telecom Office (0+100.00, Left Side), Ward Office-7 (1+270.00, Right Side), Ward Office-10 (4+500.00, Left Side)

Temple/ Gumba: - Siddharth Gumba (3+010.00, left Side), Shiva Temple (3+050.00, Left Side).

Waiting Station/ Chautara: - Waiting Station is found along chainage (3+050.00 Left Side) and (3+450.00 Left Side).

The DPR of the project has categorically provided the details along with chainage for Road inventory and conditions, inventory of existing culverts and side drains, minor intersections, existing footpath and, electrical poles, existing water supply pipelines and other details.

1.5. Components of proposed upgrading of road

Detail of the proposed upgradation of road components are provided below:

1.5.1 Cross-sectional Elements

Detail cross-sectional elements proposed in the Mangalapur-Kanchibazar Road (up gradation upto 5 km from Mangalapur to Bewara Chowk) are provided in ~~Figure 0.3~~Figure 1.3.

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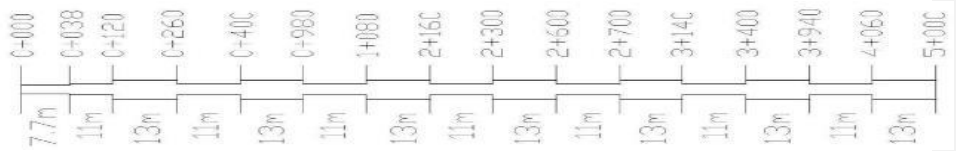


Figure 0.3: Proposed Road width and their chainage

Note:

Type A :7.7 m
Type – B:11 m
Type –C:13 m

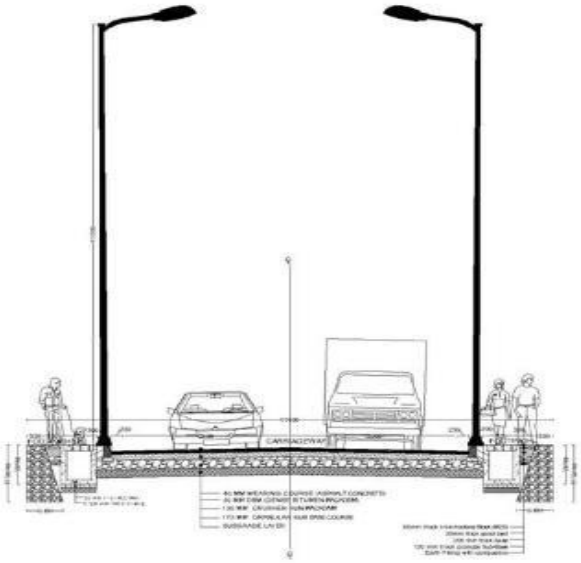


Figure 0.4: Typical Cross section for 11 m road (section Type B)

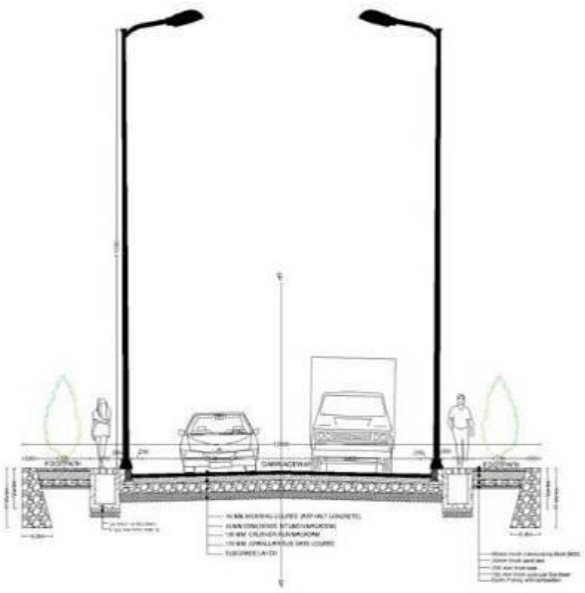


Figure 0.5: Typical Cross Section for 13m road (section Type C)

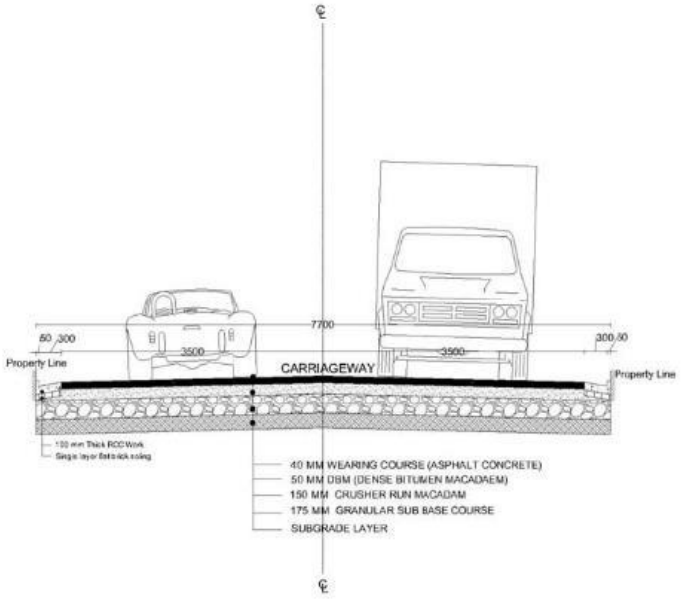


Figure 0.6: Typical Cross section for 7.7 m road (section Type A)

Note: Above figures is general typical cross section. Other typical cross sections in accordance to the surrounding are provided in DPR.

1.5.2 Carriageway

Carriageway width of 2 lanes (3.5 m each) has been proposed.

1.5.3 Kerbs

Barrier kerbs are designed to discourage vehicles leaving the pavement. In some places height of kerb stone has been lowered for house access for cars and motorcycle. In zebra crossing, mountable kerbs is provided for wheelchair passage.

1.5.4 Median

Median is not provided along the alignment.

1.5.5 Covered RCC drain

Tick drain is provided from chainage 0+000.00 to 0+038.00. RCC covered drain is provided from chainage 0+038.00 to the end of alignment in integration with footpath. Storm water collected are disposed through the nearest culvert sections.

1.5.6 Parking

Due to space restriction, separate provision of parking is not provided. However, Alternative parking locations are recommended for urban areas: Kanchibazar, Semara and Mangalapur for future development.

1.5.7 Intersections

Due to availability of less space and low traffic flow movements in junction, physical structures such as roundabouts and islands are not provided. However necessary safety measures such as traffic signs and signals, footpath etc. are proposed to be installed. The crossroad up to 15m is proposed to be upgraded.

1.5.8 Road crossings

Zebra crossings in combination with cycle crossing have been provided at locations with high pedestrian crossing

areas as well as settlement areas. 47 nos of such crossings have been provided along the alignment.

1.5.9 Ramps

There are 178nos. of Ramps proposed along the Road. The cost for construction of Ramp is stated in BOQ.

1.5.10 Shifting of Existing Electric Poles

206 nos. of electric poles located within the proposed road of width need to be demolished and to be replaced and to be shifted (to be relocated) near kerb stone (source: DPR, 2021).

1.5.11 Sewer Drainage

As per discussion with the municipal officials, future planning of any type of sewer drainage projects has not been done. Thus, in future if any plan is made for sewer network, it will be constructed below footpath area.

1.5.12 Manhole

Manholes at existing locations are required to be raised to FRLs of the road. Cost of same has to be provided in the cost estimate and BOQ. However, there are no any sewer line system and manhole present along the road.

1.5.13 Water Supply Pipeline

The existing pipeline is in both side of the road for distribution of pipelines. Existing Pipe line between the chainage of 0+000 to 3+700 has been proposed to be relocated below footpath.

1.5.14 Cross-Roads Development

Stretch of 15 m of each cross-road will be developed under this project. Minimum radius of 6.5 m has been provided for cross roads. This development of cross-roads will include the following aspects:

- Improvement of Carriageway of all major as well as minor intersections.
- Installation of Road markings at all major as well as minor intersections.

1.5.15 Road Signs and Markings

Road Markings has been provided as per Traffic Sign and Marking manual Volume I and II. Broken Line markings have been done separate lanes. There are 94 numbers of informative, regulatory and warning sings proposed at different chainage of 5 KM of road length.

1.5.16 Footpaths

Dedicated cycle lane is not provided along the road. On chainage 0+000.00 to 0+200.00 (left side),)+100.00-0+200.00 (right side) nearly 200 m of the drain cover's slab has been used as a footpath or walkway near to the location of Mangalapur Bazaar whereas another section of the road alignment is devoid of the footpath or walkway.

1.5.17 Street Lights and Bollard Lights

Street lights pole @ spacing 2X20m (alternatively) is proposed from chainage 0+000-5+000.

1.5.18 Bus laybys and Bus Shelters

Bus laybys are provided at various locations mentioned in the table below where public buses or micro buses pull out of the traffic to pick and drop off passengers.

Table 0.2: Location of Bus Laybys

SN	Chainage	Side	Length (m)
1.	0+110.00 to 0+161.00	left	51
2.	0+210.00 to 0+261.00	Right	51
3.	0+429.00 to 0+480.00	Left	51
4.	0+600.00 to 3+380	Right	51
5.	0+880.00 to 0+931.00	Left	51
6.	1+063.00 to 0+114.00	Right	51
7.	1+393.00 to 0+444.00	Left	51
8.	1+980.00to 2+031.00	Right	51
9.	2+103.00 to 2+154.00	Left	51
10.	2+384.00 to 2+435.00	Left	51

11.	2+436.00 to 2+487.00	Right	51
12.	2+935.00 to 2+986.00	Left	51
13.	3+030.00 to 3+081.00	Right	51
14.	3+214.00 to 3+256.00	Left	51
15.	3+342.00 to 3+393.00	Right	51
16.	3+ 537.00 to 3+588.00	Left	51
17.	3+586.00 to 3+ 637.00	Right	51
18.	3+911.00 to 3+ 962.00	Left	51
19.	4+ 131.00 to 4+ 182.00	Right	51
20.	4+ 209.00 to 4+ 260.00	Left	51
21.	4+ 671.00 to 4+722.00	Left	51
22.	4+ 843.00 to 4+ 894.00	Right	51

1.5.19 Hand railings

Hand railings are provided in 8 different locations along the alignment of 5 KM. The cost (Except Culvert) is NRs. 3343690.17 while the cost of Hand Railing for BOX Culvert is. NRs. 664,530.98.

1.5.20 Retaining/ Breast wall

Stone Masonry Retaining wall has been provided along the alignment where embankment is required. The locations and details of retaining walls are given in detail in DPR.

1.5.21 Interlock Concrete Block Pavement Design

The interlock concrete block pavement is proposed for footpath. The typical block pavement composition is given below:

- Concrete paver block-60 mm (Hexagon interlock block with compressive strength M 20)
- Sand Bed : 30 mm
- Base : 200 mm
- Granular sub base : 150 mm

1.6. ESIA Methodology

The study is undertaken following an overarching approach for Environmental and Social Impact Assessment (ESIA) and subsequently developing an Environmental and Social Management Plan (ESMP) following guidance provided by the Environmental and Social Management Framework (ESMF). A consultative and participatory process was adopted to conduct the ESIA and prepare the ESMP for the sub-project of Mangalapur –Kanchibazar road. The strategies to undertake the ESIA and preparing the ESMP required both qualitative and quantitative information gathering at both primary and secondary levels. The project team at Project Coordination Office (PCO) of Department of Urban Development and Building Construction (DUDBC), the World Bank, different national and local level stakeholders involved in NUGIP and the interaction with the community and related stakeholders on technical, environmental and social issues and consultants' observation of the intervention sites were undertaken. The ESIA/ESMP is in compliance with the GoN and the World Bank's policies and builds on the recent approaches and incorporates learning and previous experiences. The stepwise process in the preparation of ESIA/ESMP includes the following activities:

- Reviewed scope of works in the Terms of Reference (TOR) for the ESIA/ESMP, Project Implementation Manual (PIM), feasibility reports of the sub-project
- Reviewed applicable laws of the GoN and the WB policies.
- Consulted project team, PCO, stakeholders, WB and experts.
- Reviewed the DPR of the proposed project, consulted PCO and DPR consultants.
- Followed checklist for environmental and social data of DPR.
- Prepared safeguard (including resettlement) checklists prior to the field visit.
- Visited sub-project site and consulted municipality office, district level.
- Conducted consultations, Focus Group Discussions (FGDs), Key Informant Interviews (KII), with several stakeholders. Indigenous people from the outside of the project area are also considered during FGD (Refer Annex 1, Annex II)

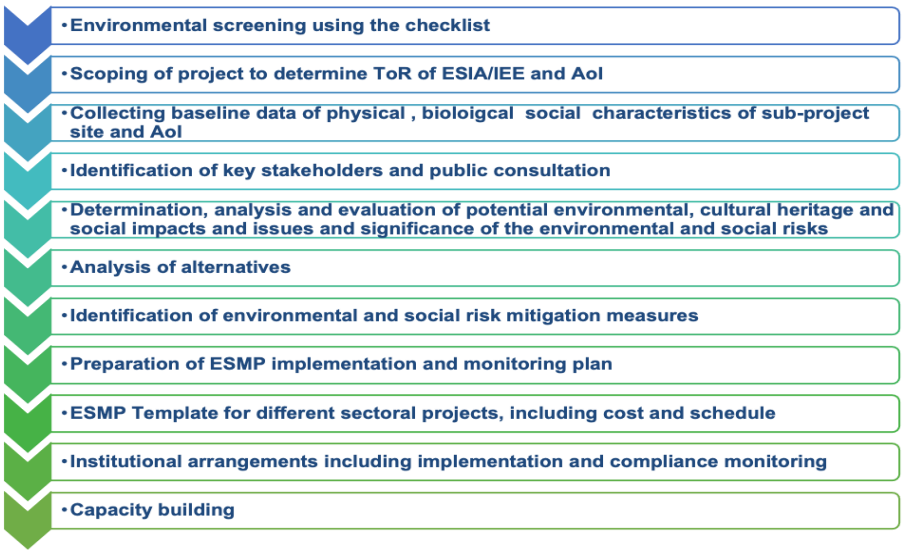


Figure 0.7: ESIA Process for all sub-projects

Collected primary data for physical, biological, and socio-economic baseline information. Instrumentation monitoring was performed for air, water, and noise. For biological assessment, vegetation survey was carried out. The representation of the methodologies for the ESIA of sub= project is shown in **Figure 0.5**~~**Figure 1.5**~~.

1.5.1. Baseline study

Baseline data was collected for both environmental (physical and biological) and social aspects in conducting the ESIA and was used in developing the ESMP, based on the ESMF.

1.5.2. Stakeholder Analysis

A stakeholder analysis was carried out during the ESIA stage. The following activities were carried out during the analysis:

- Identified stakeholders of the sub-project
- Consulted stakeholders
- Incorporated feedback from the stakeholders into project design
- Incorporated recommendations and mitigation measures during construction and operation
- Involved stakeholders in stages of project implementation for ownership.

1.5.3. Gender assessment and GBV status analysis

The following activities were undertaken for gender assessment.

- Review of the legal policy framework of GoN
- Review of the set-up, capacity, and constrains within relevant institutions
- Analyze the culture amongst women of different cultural groups
- Analyze potential positive and negative impacts on women
- Analyze barriers, challenges, and constrains for the participation of women
- Identify potential entry points and interventions to enhance gender sensitivity
- Recommend project planning and implementation teams in addressing gender context

1.5.4. Assessment of potential environmental and social impacts

- Likely Beneficial Impacts
- Likely Adverse Impacts

1.5.5. Environmental and social screening

Every sub-project under the NUGIP is subject to an environmental and social screening process. The screening process establishes the level of environmental and social assessment required. The screening process intends to identify relevant possible environmental and social concerns as well as suggest any further investigation and assessment as necessary. Primarily, the environmental and social screening exercise is undertaken to determine the key environmental and social issues/concerns and the nature and magnitude of the potential impacts that are likely to arise on account of the proposed sub-projects. The fundamental environmental and social issues to be identified were determined by the type, location, sensitivity and scale of the municipal investment and sub-grant intervention. The results were used to determine the need for detailed assessment and the extent and type of environmental and social assessment.

1.5.6. World Bank Safeguard Policies

The World Bank classifies projects into one of the four categories, depending upon the type of project or specific components which have inherent environmental risks, location proximity to environmentally, socially and culturally important areas, sensitivity, potential impacts which may be irreversible or environment sensitive to changes, the scale and extent of environmental and social issues of the project, and the nature and magnitude of its potential environmental impacts.

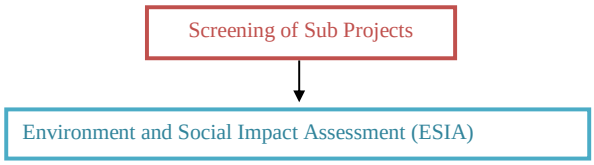


Figure 0.8: Flow of preparation of safeguard instruments for the project

1.5.7. Revision and modification of ESMP

The ESIA and ESMP is an 'up-to-date' document that will be publicly disclosed and disseminated. Unexpected situations in the sub-project or component design would therefore be assessed and appropriate management measures will be incorporated by updating the ESMP. Such revisions will also cover any modifications introduced in the design of sub-project at any stage of the project. Also, based on the experience of application and implementation of such a framework, provisions and procedures would be updated as applicable and when required with due process.

ENVIRONMENT AND SOCIO-ECONOMIC BASELINE

2.1. Physical environment

2.1.1 Physiography, Geomorphology and Geology

Physiographically, Nepal is divided into eight different zones. i.e. Terai, Siwalik, Dun Valley, Mahabharat Range and Midlands (hills), Fore Himalaya (Middle mountain), Higher Himalaya and Trans Himalaya (High Mountain). Each of the above zones has different altitude, topography, climate, soil type, geology and vegetation characteristics. Rupandehi district covers Chure hills and Duns 12.5%, Bhabar and Teari 87.5% (Source: Rastrapati Churia Conservation Program, 2015).

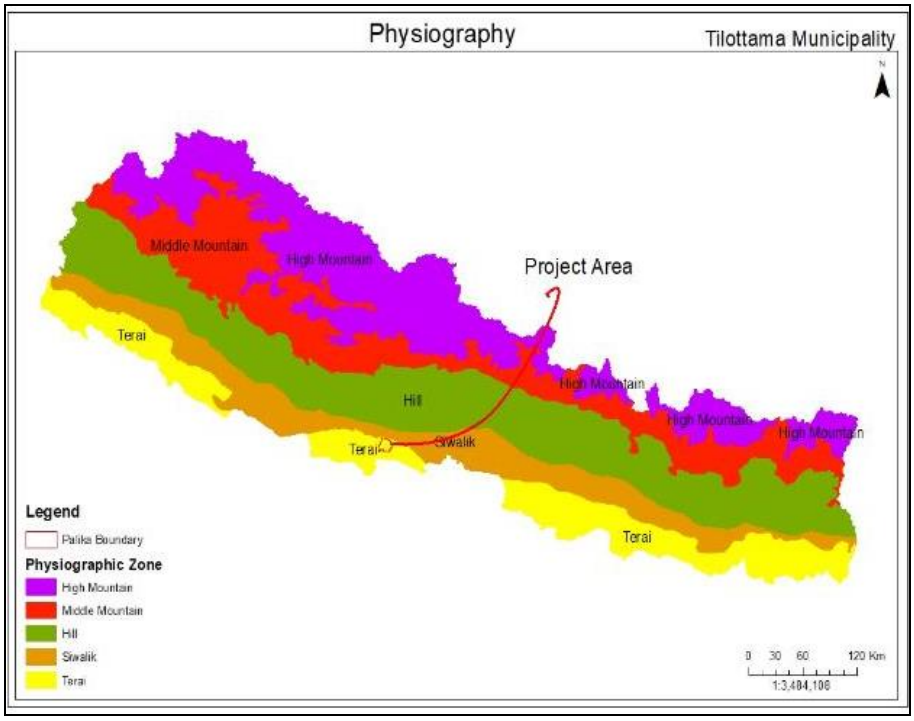


Figure 0.1: Physiographic Division of Nepal and project area

Tilottama Municipality falls on Terai zone. Topographically, Terai is generally flat with minor relief caused by river channel shifting and down warping of the basin. This Municipality is characterized by flat plain and lower in elevation. Also, small river valleys are filled up by the alluvial and fan deposit in the northern region. The major rock types are Alluvium (gravels in the north near the foot of the mountain, and gradually becomes finer southward. Boulder, cobble, pebble and sands and pebbly sands, silts, clay and silt in the plain Terai.

Geologically, Nepal is divided into 5 different regions. They are Terai, Siwaliks, Lesser Himalaya, Higher Himalaya and Tibetan Tethys Himalaya.

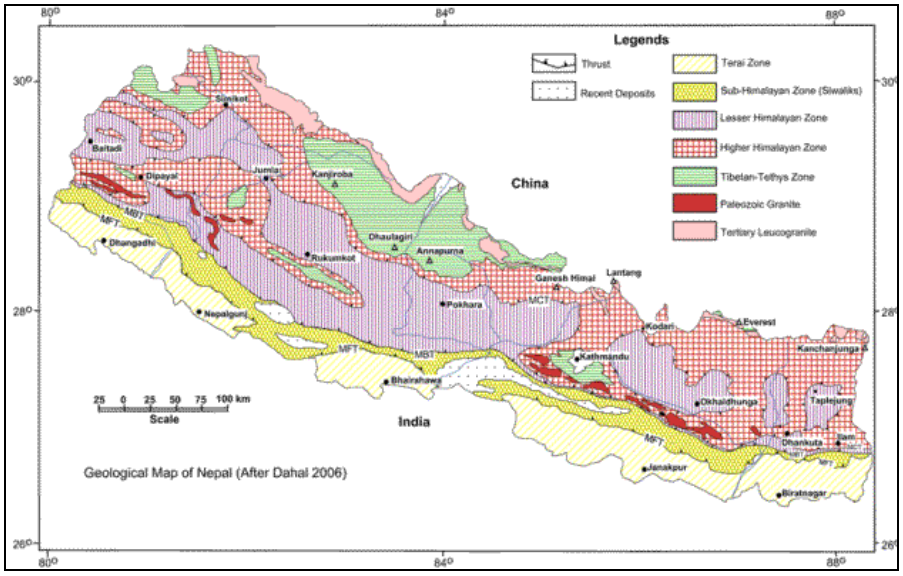


Figure 0.2: Geological map of Nepal

Geologically, Tilottama Municipality falls in the Terai zone. Northern part of the Terai zone is bounded by Main Frontal Thrust (MFT). Tilottama Municipality exhibits Recent Formation (Re), geological class. Recent Formation (Re) is characterized by alluvium, boulders, gravels, sands and clays. Churia hills have contributed to the restoration of soil fertility of this plain in the south.

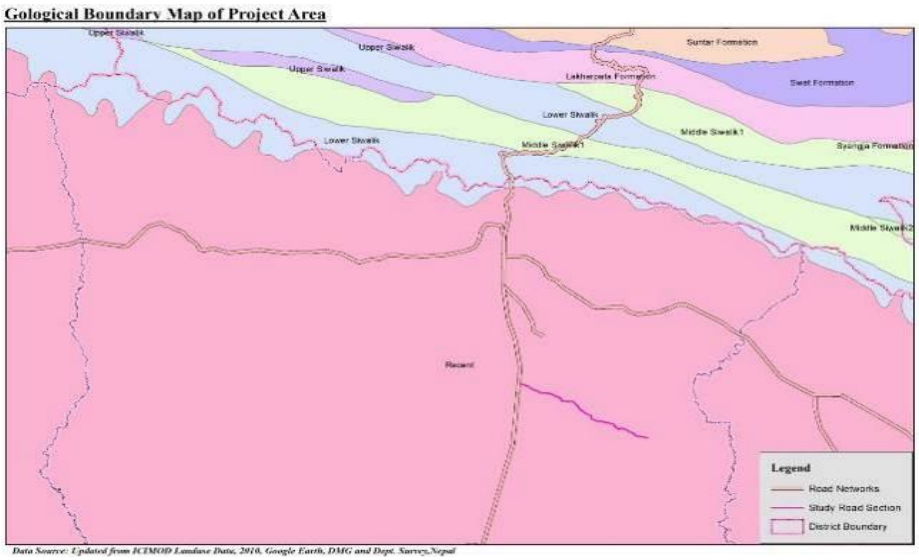


Figure 0.3: Geology of Project Site (Source: Updated from ICIMOD and Google Earth, 2021)

The municipality is located towards southwest from Kathmandu and the south from the provincial capital of Lumbini Province of Nepal. Physiographically, it lies between the latitudes 27° 36' 34.3" North and longitudes 83° 29' 4.3" East and the altitude varies from 25m to 60m from sea level. It covers an area of 126.2 square kilometers.

Two main rivers, the Tinau and the Rohini Khola run from its border to the west and east respectively. The geological map of the project area is shown in **Figure 0.3**~~**Figure 2.3**~~.

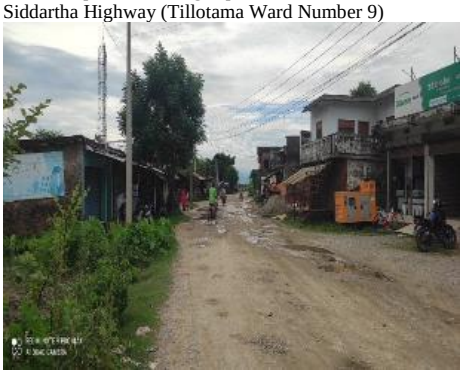
2.1.2 Topography

The municipality is located towards southwest from Kathmandu and the south from the provincial capital of Lumbini province of Nepal. This municipality lies in plain terrain of Terai region. Two main rivers, the Tinau, and the Rohini Khola run from its border to the west and east respectively. The length of the Tinau is 95 km starting from Palpa to Indo-Nepal Border at Marchawar. The catchment area of the river is about 1081 sq.km up to the border. The Rohini River rises in the Chure or Siwalik Hills in Kapilvastu and Rupandehi Districts of Nepal's Lumbini Zone and flows south into Uttar Pradesh state, India. At Gorakhpur it becomes a left bank tributary of West Rapti River, which in turn joins the Ghāghara above GauraBarhaj, then Ghaghara, in turn, joins the Ganges. The municipality was formed by merging existing seven Village Development Committees (VDCs) namely Shankarnagar, Aanandaban, Karahiya, Makrahar, Tikuligadh and Madhabaliya in May 2014, and Gangoliya VDC in September 2015. The municipality is surrounded by Devadaha municipality in the East, Omsatariya and Siyari rural municipalities in the south, Siyari and Suddhodhan rural municipalities in the west and Butwal sub-metropolitan city and Devdaha municipality in the North. In the proposed road alignment and in RoW there is no landslide/flood area and other disaster-prone area.

The physical conditions of the project area are shown in **Figure 0.1**~~**Figure 2.1**~~.

The start point of Mangalapur - Rohini road section at Siddartha Highway (Tillotama Ward Number 9)

Existing condition of the road



Tree within the RoW to be removed

Electric Poles within the RoW to be relocated

Condition of the road in Ward on 7

Public waiting place along the road alignment in Ward 7

Figure 0.4: Pictorial highlights of the Project Area

2.1.3 Climate and Hydrology

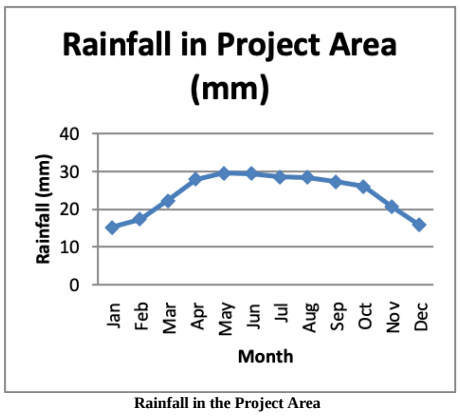
Tilottama Municipality falls on tropical climatic zone. This climate has three distinct seasons. Dry summer season begins in the month of March when the sun starts to move northward from the equator. It lasts till the middle of May. The mean minimum temperature reaches up to 19.32°C and mean maximum temperature is nearly 30.92°C. Rainy season starts from the month of May and ends in September. Winter season begins in the month of October and lasts till February as the sun moves southward from the equator. Higher temperature is observed in the month of April and it remains active till October. Extreme cold starts from November and last till February.

The average annual rainfall is 1753mm. November, December, and February are the driest month and most precipitation falls in July, with an average of 510 mm.

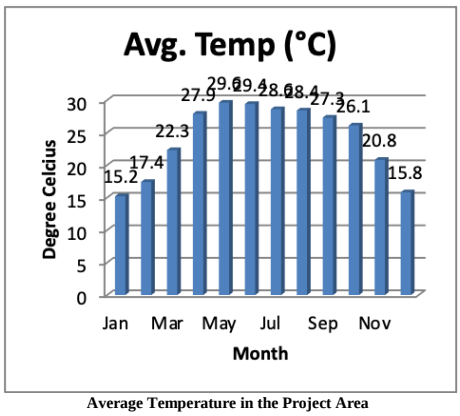
Table 0.1: Weather Data for Project Area

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Temp (°C)	15.2	17.4	22.3	27.9	29.6	29.4	28.6	28.4	27.3	26.1	20.8	15.8
Min. Temp (°C)	7.9	9.7	13.7	19.7	23	24.4	25	24.7	23.1	21.3	13.9	8.3
Max. Temp °C)	22.5	25.2	30.9	36.1	36.3	34.5	32.2	32.2	31.6	30.9	27.8	23.4
Rainfall (mm)	20	4	15	18	61	335	594	564	312	88	2	2

Source: DPR, 2021



Rainfall in the Project Area



Average Temperature in the Project Area

Figure 0.5: Weather Details for the Project Area

The main rivers of Tilottama are Tinau River, Rohani River & Sukhaura River. These rivers are the main river originating from Mahabharat Mountains and Middle Hills. Sukhaura (27°40″21.8‴N, 83°29″32.3‴E and major

stream are originating from the Chure hills and are tributaries of the main rivers of Tilottama Municipality. In the sub-project, Rohani River is the major River that is located at the end of the road and the principal drainage system of project site. Existing drainage system will be managed to reduce the problem of water logging. The relevant DHM established rainfall station for the estimation of the discharges in the natural drains crossing the road is Butwal –Station No. 0703. The latitude, longitude and elevations of the station are shown in **Table 0.2~~Table 2.2~~.**

Table 0.2: Hydrology Station of Tilottama Municipality

Stn. No.	Stn. Name	Latitude	Longitude	Elevation(m)
0703	Butwal	27°41'39.8"	83°27'58.7"	180

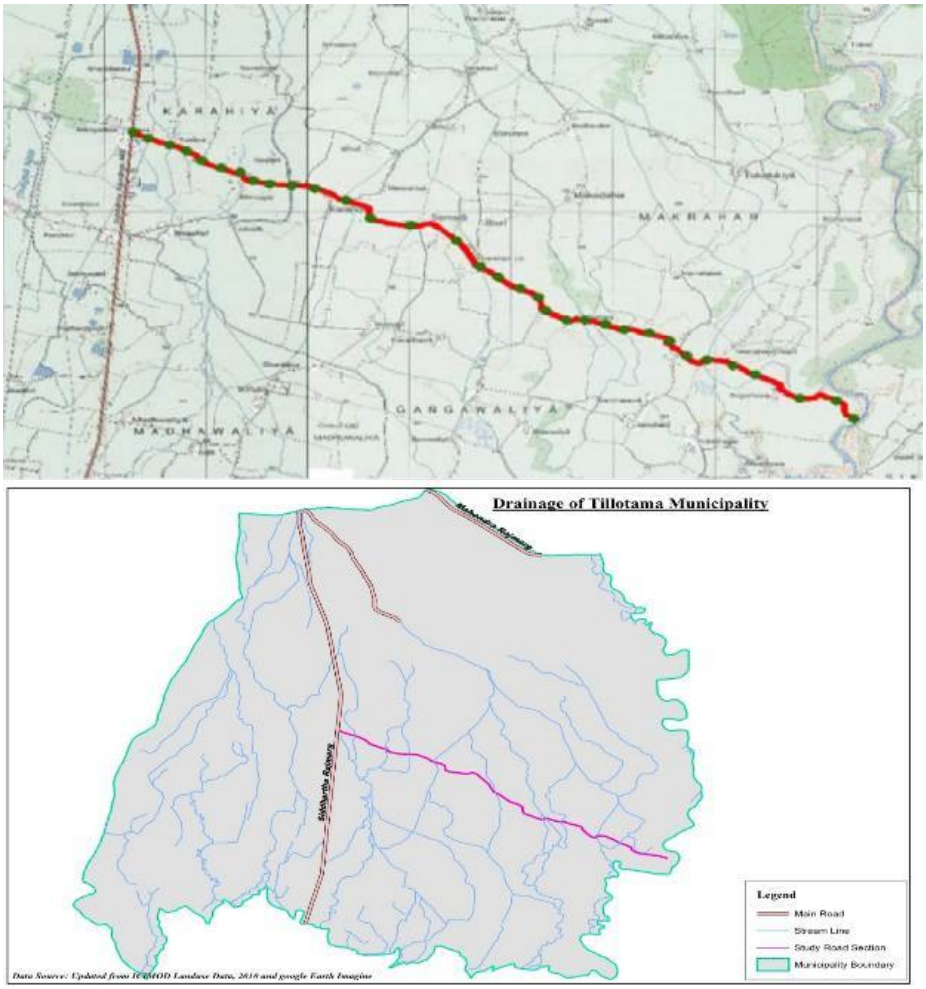


Figure 0.6: Zoning of the Catchment Area of the project (Source: DPR, 2021)

The hydrological catchment area of the project road covers about 6 sq.km including various rivers. The catchment zoning of the culvert points is provided in **Figure 0.6~~Figure 2.6~~**.

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2.1.4 Liquefaction Susceptibility

The Peak Ground Acceleration (PGA) for the Mangalapur-Kanchibazar site (up gradation up to 5 KM which is Bewara Chowk) has been taken as 0.29g referred from the Seismic Hazard Map of Nepal published by Nepal Seismological Centre. As per the literature reviews the strata with corrected N value greater than 30 are not susceptible to liquefaction. As the site falls under Zone V of seismic zone, the design for seismic forces should be done considering the project in Zone V. Earthquake hazard map of Nepal is shown in **Figure 0.7~~Figure 2.7~~**.

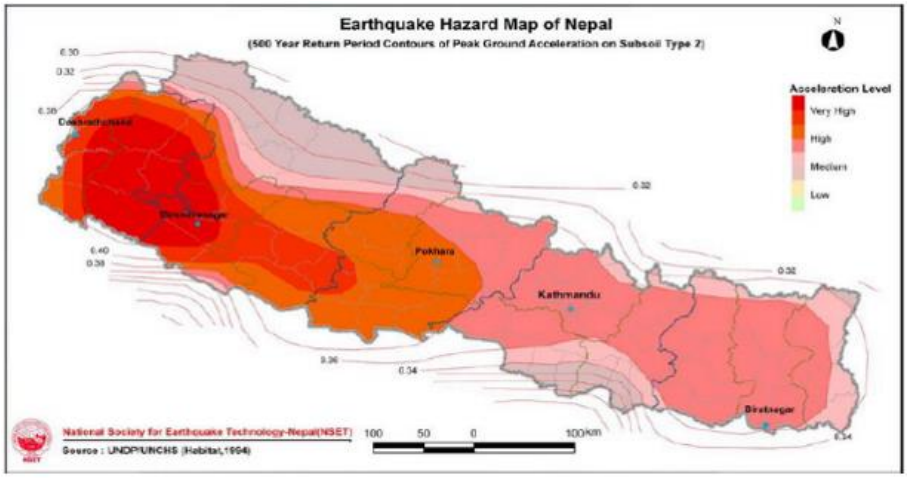


Figure 0.7: Earthquake Hazard Map of Nepal (Source: UNDP/UNCHS, 1994)

The sub-surface strata of the project area primarily consist of boulder and gravel. The liquefaction analysis indicates that the site is not susceptible to liquefaction. The materials to be used for backfilling purposes shall be of selected fill composed of sand and/or granular mixture free from organic matter or other deleterious substances. It shall be spread in layers not exceeding 25cm in un-compacted thickness, moisture conditioned to its optimum moisture content, and compacted to a dry density not less than 95% of the maximum dry density as obtained by modified proctor test (IS 2720 Part 8).

2.1.5 Land Use

The project area consists of different settlements like commercial, residential, agriculture and open / barren land. This route has 3.5 KM of settlement & 1.22 KM of agricultural land, 0.28 KM of barren land on either side of the road length. The proposed road includes marshes and barren land too along with its alignment and has the problem of water logging in some areas. The proposed road would directly serve about 473 households i.e. about 2365 population of the municipality considering buffer of 500 meter in either direction of proposed road alignment (Project DPR report, Sept 2021). Trees can be seen along the alignment at some places. The land use map of the project area is shown in **Figure 0.8~~Figure 2.8~~.**

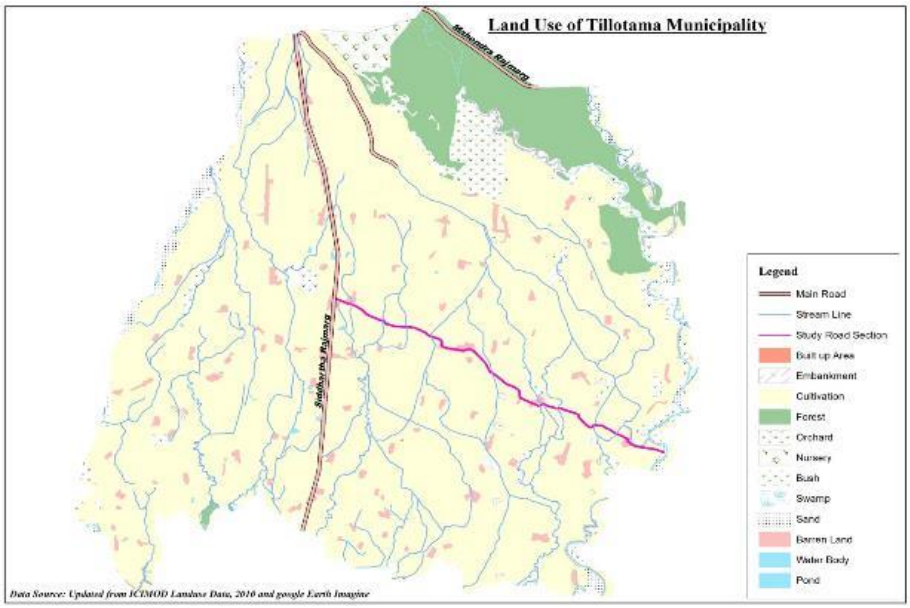


Figure 0.8: Land Use Map of the Project Area

2.1.6 Existing Infrastructures along the road alignment

2.1.6.1. Existing Waste Water/ Sewerage Network

The municipality lacks any kind of systematic sewerage system for urbanizing settlement and market areas. Majority of the households, mainly in urban settlements, have their own septic tanks for collection of sewage seepage which is disposed of via private service providers when filled.

2.1.6.2. Existing Water Supply Network

As per field observation, about 3.7 km (from chainage 0+000 to 3+700) of existing water supply pipe network is located in the proposed alignment. Kariya Makrar KhaniPani Tatha Sarsafai Abhiyan and Kariya Kahanepani Thatha Sarsaphai Abhiyan cater the water supply demand of Karahiya, Haraliya, Semara, Ramnagar, Keulani, and Tulshipur area of ward no 9 and 7 and some part of ward 10 area.

The water supply network map shows that distribution of diameter 90 mm HDPE pipelines from Mangalapur to Semara which passes parallel to the project road and is at center of existing carriage way. It has been proposed that the pipe line will be shifted to edge of road i.e under the footpath during the construction of road project. Currently there are no planed or potential sewage and water supply projects in the project area

2.1.6.3. Existing Electrical and Telecom Lines

206 nos. of electric poles lie within the proposed road width which are to be relocated to new place.

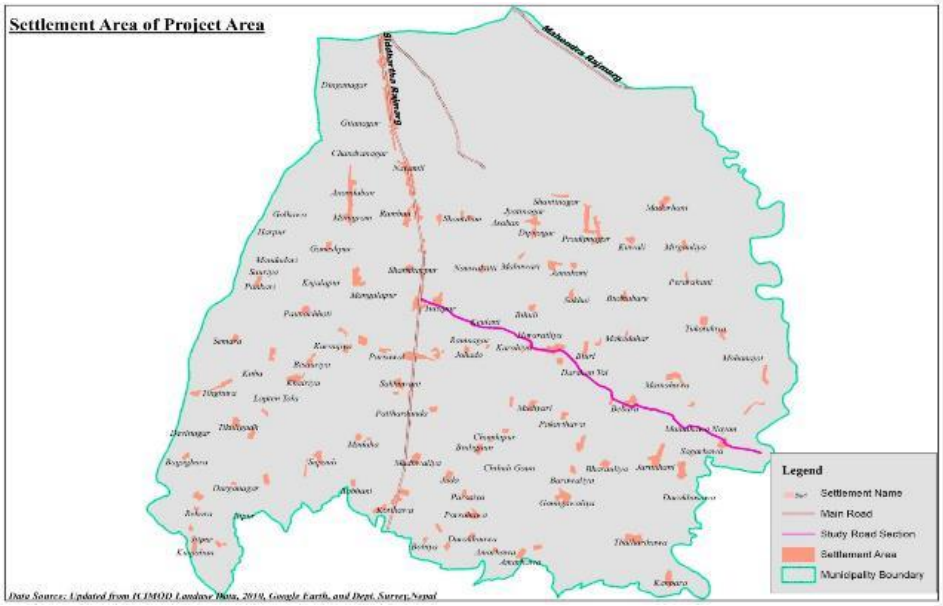


Figure 0.9: Settlement along the Project Area

2.1.6.4. Existing Road Networks

The Municipality has 5.199 km per square km of coverage of roads Municipality Transport Master Plan (MTMP-2017). The road density per 1000 populations is 5.59 km. Total Road network within Tilottama Municipality is 584.33 km of which Strategic Road Network is 16 km. The current status of road network including strategic, Feeder and some of the Municipal Road network are blacktopped. Although blacktopped, sections of these roads do not have storm water drainage. Out of total road length, 328.75km (56.02%) is graveled, 245.65 km (41.21 %) is black topped and 16.39 km (2.77%) is earthen roads (MTMP-2017). The main and intercity roads lack public facilities like bus stand, street light and intercity bus park. Among total blacktopped road within the municipality, about 30% of road surfaces have worn out. The roads in wards 17, 10, 11, 8 and 3 mostly have graveled road surfaces. Ward 12, 14 and 17 do not have sufficient road networks as compared to other wards. The list of roads is given in **Table 0.3~~Table 2.3~~**.

Table 0.3: Road Infrastructure in the Project Municipality

SN.	Road Name	Total Length (km)	Average Width (m)	Graveled Road (km)	Metalled Road (km)
1.	Harpur-(Ganeshpur-Manglapur) to Kanchibazar	12.68	9.69	1.45	11.23
2.	Manigram-Pradipnagar-Madrahani Road	7.53	8.55	2.35	5.19
3.	Rehara Tikuligadh Road	2.12	6.6	1.01	1.11
4.	Jabarjastpur-SiddharthaLokmarga-Gangoliya-Kanchibazar Road	7.89	8.55	0.48	7.41
5.	Ashaban-Bhalwari-Parsawal Road	4.89	7.11	2.86	2.03
6.	Purano Bato	5.89	7.5	2.93	2.97
7.	Pradipnagar-Jamuhani-Semara Baazar road	7.5	8.15	4.5	3.00
8.	Tilottama Ringroad	30.24	8.77	24.06	6.18
	Total	**78.74**	**-**	**39.64**	**39.12**

Source: MTMP, 2015

2.1.7 Air and, Water, Quality

During the physical environment survey (air and water) on project road alignment at recipient level measurement data were obtained. The water samples were collected from the project affected areas and tested in laboratory. The real time based 24 hours average PM_{10}, $PM_{2.5}$ and CO were lesser than 40µg/m^3, 30µg/m^3 and 130µg/m^3 respectively at the site. The observed values were significantly lower than NAAQS 2012 for the respective air quality parameters. The average wind was directed from South to North with maximum with speed of 19Km/hr **(Figure 0.13~~Figure 2.13~~).** The water quality report was found complied with National Drinking Water Quality Standards /GoN. The detail of water quality report is enclosed in **Annex V.**

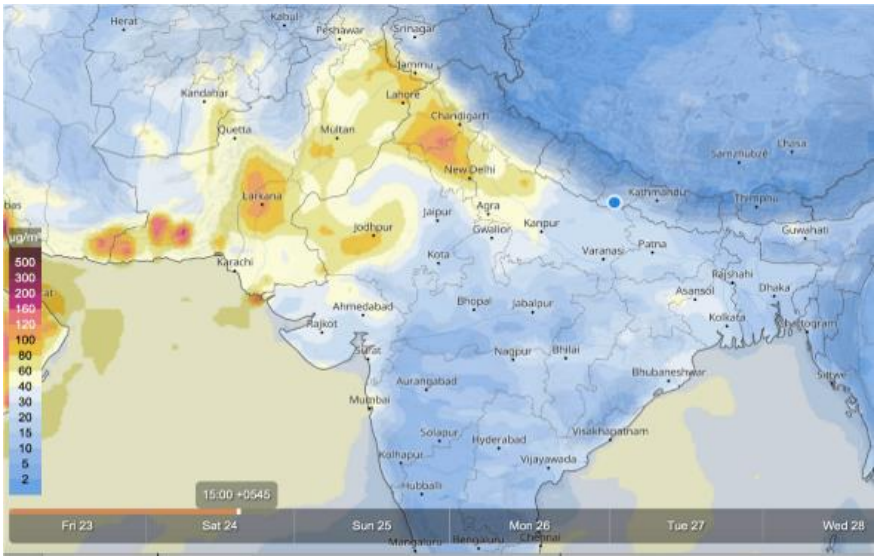


Figure 0.10: PM_{10}

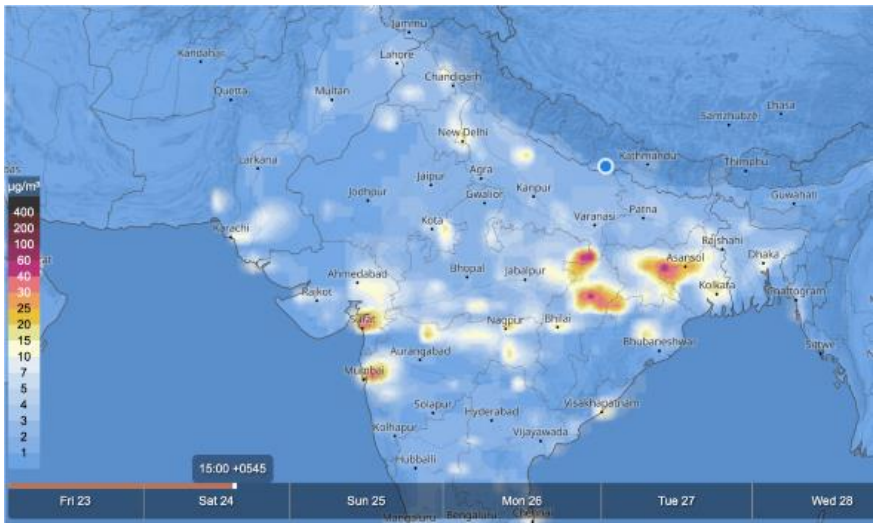


Figure 0.11: $PM_{2.5}$

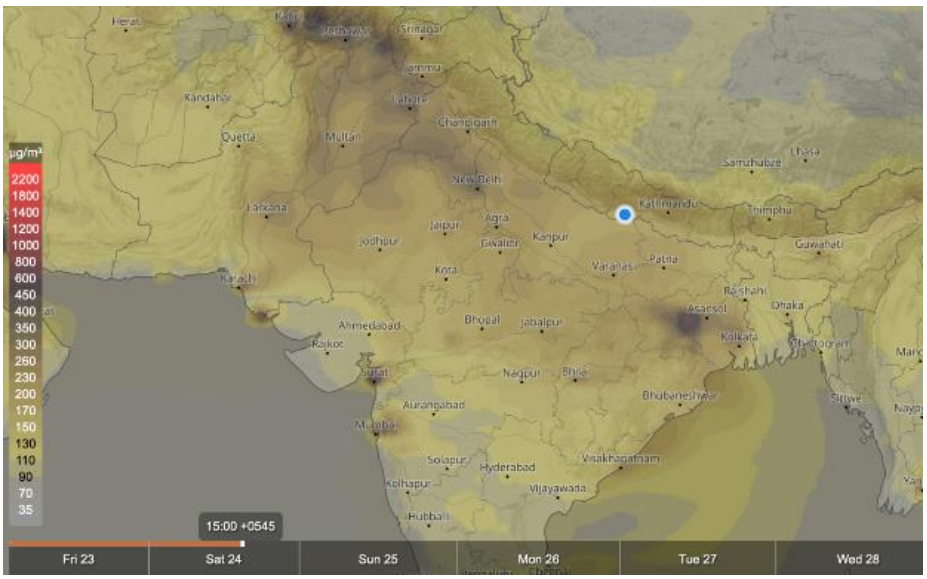


Figure 0.12: CO

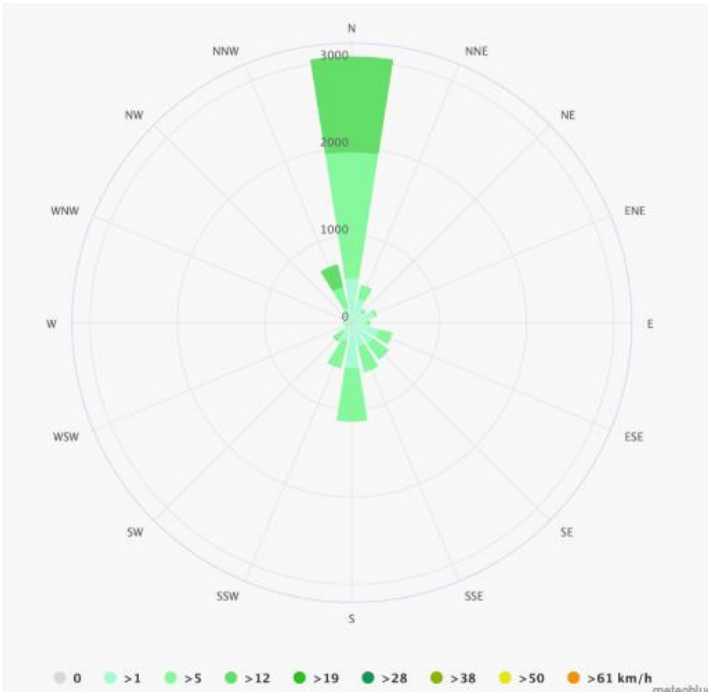


Figure 0.13: Windrose

2.1.7.1. Noise Quality

The daytime and nighttime observed sound pressure level at the monitoring site were 66dB(A) and 67dB(A) respectively. Similarly, the observed day and night sound pressure level was about 69dB(A). The observed daytime and nighttime average sound pressure levels complied the prescribed limits of GoN 2012{L_d: 75dB(A); L_n: 70dB(A)} for industrial area. The details of air, and noise are summarized in Annex V.

2.2. Biological Environment

The nearby forest is Kariya Community Forest and Banbatika Community Forest at distance of 3.46 km and 4.58 km respectively from project direct impact area (within RoW). The indirect project area (50 m from edge of the road) has built up area and agricultural land. There is no forest within project impact area and it is not a habitat for terrestrial fauna and avifauna. Major trees found in the RoW of the project are presented in **Error! Reference source not found.**~~Table 2.4~~.

Table 0.4: Major tree species found in the RoW of the project

SN	Scientific Name	Common Name	Use
1.	*Dalbergia Sissoo*	Sissoo	Timber
2.	*Magnifera indica*	Aanp	Fruit/Fuelwood
3.	*Azadirachta indica*	Nim	Traditional Medicine/Fodder
4.	*Melia azadirach*	Bakaino	Fuelwood/Fodder
5.	*Saraca asoca*	Ashoka	Ornamental
6.	*Psidium guajava*	Amba	Fruit/Fuelwood

Source: Field Survey, 2021

***Note**: Cutting of trees within the ROW will be compensated from the road side plantation. In addition to, Buffer zones, protected areas, wetlands, conservation areas and eco-sensitive areas are not affected by the proposed road.*

There are only 64 trees that need to be removed in 5 KM road up-gradation work. The details of trees to be removed are listed in annex VII of this report.

2.3. Socio-economic and Cultural Environment

2.3.1 Socio-economic overview

The road project Mangalpur-Kanchibazar is being implemented in Tilottama Municipality of Rupandehi district. The municipality was formed by merging existing seven Village Development Committees (VDCs) namely Shankarnagar VDC, Aanandaban VDC, Karahiya VDC, Makrahar VDC, Tikuligadh VDC and Madhabaliya VDC in May 2014 and Gangoliya VDC in September 2015. The project area of this proposed project is located in Tilottama Municipality of Rupandehi District, Province No 5 that connects Siddhartha Highway to the Rohini Bridge.

The municipality is surrounded by Devadaha municipality in the East, Omsatariya and Siyari rural municipalities in the south, Siyari and Suddhodhan rural municipalities in the west and Butwal sub-metropolitan city and Devadaha municipality in the north.

2.3.2 Details of settlements within the project area

In the settlements falling within the project area, Tilottama Municipality Ward no. 7 karahiya, Ward 9 and 10 Makrahar.

Table 0.5: Details of settlements within the project area and distance from the project site

Name of Local Level and Ward No.		Distance from the Project Site
Tilottama Municipality	Ward No. 7, Karahiya	The project passes through the ward
	Ward No.9	The project passes through the ward
	Ward No. 10	The project passes through the ward

Source: City profile of Tilottama Municipality, 2075 B.S

2.3.3 Details of households within the project area

The proposed project lies in Tilottama Municipality of Rupandehi District in Lumbini Province of Nepal. The total population of the district, according to the Census of Nepal, 2011 is 880,196 and the number of households is

163,916. The average family size of the district is 5.37, which is higher than that of the national average (4.88). The total population of Tilottama Municipality is 123836 and total household is 21957. The average household size of the municipality is 4.56 which is lower than that of district household size (5.37). The details of the demographic character of affected district and municipality are shown in **Table 0.6~~Table 2.6~~.**

There are different types of houses within the project area. Concrete House, Raw House and Hut Houses are found in this project area. The total numbers of households are 21,957 in Tilottama Municipality.

Table 0.6: Population and Literacy rate in Tilotama Municipality

Description	Population aged 5 years & above	Population			Literacy no stated	Literacy rate
		Can read and write	Can read only	Can't read & write		
Both Sex	92,946	75,055	1488	16282	121	81%
Male	43296	38149	668	4446	33	88%
Female	49650	36906	820	11836	88	74%

Source: Profile of Tilotama Municipality

Table 0.7: Details of total number of households and average number of households within the project area

Local Level	Name and Ward No.	Total Household	Average Households
Tilottama Municipality	Ward No. 7	2124	4.93
	Ward No. 9	1189	5.05
	Ward No. 10	846	6.15

Source: Central Statistics Department, Census B.Sc.2068

2.3.4 Details of the Ratio of Females to Males living within the project area

Table 0.8: Proportion of men and women living within the project area

Local Level	Ward No.	Female Population	Male Population	Average Population of Female and Male
Tilottama Municipality	Ward No. 7	5146	5345	0.96
	Ward No. 9	2969	3038	0.97
	Ward No. 10	2539	2666	0.95

Source: City profile of Tilottama Municipality, Census B.S.2075

2.3.5 Details of castes and religious communities residing within the project area

The project area is inhabited by Brahmins, Chhetri, Tharu, Gurung, Magar, Thakali, Kewat, Muhsar, Yadav, Dhobi, Muslim, Chepang, Jogi, Thakuri, Kami, Damai, Chamar, Harijan, Ram and Hindus. Muslims, Christians, Sikhs, etc. are found living in religious communities. There are also Shiva Temple, Durga Temple, Radhakrishna Temple, Mokshyadham, Buddhist Gumba, Stupa, Mosque and Churches. The indigenous people in project area are Gurung, Chepang, Tamang, Tharu, Sherpa, Sunuwar, Rai.

Table 0.9: Details of ethnic, religious communities and religious sites residing within the project area

Name of Local Level	Name and Ward No.	Caste	Religious denominations	Religious places
Tilottama Municipality	All Tilottama municipality	Ahir, Kumal, Brahmin, Kshetri, Gurung, Chepang, Jogi, Thakuri, Tamang, Thakali, Tharu, Pariyar, Dasnami, Magar, Muslim, Rai, Sherpa, Sunuwar	Hindu, Buddhist, Muslim, Christian	Kotahasmai Temple, Vishwashanti Gumba, Mayadevi Buddhist Gumba, Idgah Masjid etc.

Source: City profile of Tiltorama Municipality, 2075 B.S

2.3.6 Details of cultural practices of the castes living within the project area

There is diversity in the cultural practices of the castes within the project area. Cultural festivals like Dashain, Tihar, Chhath, Ram Navami, Shivaratri, Maghi, Buddha Jayanti, Eid, Moharram, Christmas are celebrated in this region which is inhabited by different castes and religions.

Table 0.10: Details of the cultural practices of the castes living within the project area

Name of Local Level	Name and Ward No.	Cultural Rituals
Tilottama Municipality	All Tilottama municipality	Dashain, Tihar, Teej, Maghi, Holi, Buddha Jayanti, Eid, Moharram, Christmas etc.

Source: City profile of Tilottama Municipality, 2075 B.S

2.3.7 Details of the educational level of the residents within the project area

In the total population (123836) of Tilottama Municipality, 13.84% of the population have obtained Secondary Education Examination level of education. Similarly, the number of male graduates was higher than that of the female graduates. Similarly, the educational level of the population living in the municipal area was higher than that of the population living in the rural Municipalities.

Table 0.11: The educational level of the residents living within the project area

Name of Local Level	Name and Ward No.	Educational Level	Total number of passes Population	Percentage of Educational Level
Tilottama Municipality	All Tilottama Municipality	S.E.E. or Equivalent	19630	15.85%
		+2 or Equivalent	17141	13.84%
		Bachelor's Degree	9915	8%
		Master's Degree	3809	3.07%

Source: Central Statistics Department, Census B.Sc.2068

2.3.8 Details of educational institutions falling within the project area

The number of basic schools is highest in the settlements within the project area while the number of higher secondary schools and colleges is low.

Table 0.12: Details of educational institutions within the project area

Name of Local Level	Types	Number of Schools
Tilottama Municipality	Community	42
	Religious	2
	Institutional/Private	42

Source: City profile of Tilottama Municipality, 2075 B.S

Table 0.13: Schools in and near the road alignment

S.N.	School Name	Location
1	Sree Semara Bazar Secondary School	Tilottama -7
2	Janahit High School	Tilottama -10
3	Namuna Boarding School	Tilottama -10
4	Sree Gautam Buddha High School	Tilottama -9
5	Everest Boarding School	Tilottama -9

Source: Field Survey, 2021

2.3.9 Condition of health, health institutions and sanitation within the project area

The condition of health facilities and sanitation within the affected area of this project has changed satisfactorily. At present there are health posts in all the municipalities and wards and well-equipped hospitals are operating in the Butwal sub-metropolitan area close to the project. There is also a private hospital in the municipality. Also, every household has built a toilet. Diseases like fever, cold, cough, asthma, hypertension and diabetes have been found in this area. The details of health institutions within the project area are as follows.

Table 0.14: Details of Health Institutions within the Project Area

Name of Local Level	Name and Ward No.	Health Post	Clinic/Pharmacy / Policlinic	Aayurvedic Hospital	Private hospital	Public Hospital
Tilottama Municipality	All Tilottama Municipality	7	5/12/210 (Estimated)	1	1	1

Source: City profile of Tilottama Municipality, 2075 B.S

2.3.10 Employment and income status

The main occupations of the residents living within the project area are agriculture, animal husbandry, trade, government jobs and foreign employment. Although some people have gone to the Gulf countries for employment, most of them have moved to different cities of India. Most of the people are found to be running small and medium enterprises at the local level and working for a daily wage while the income of urban dwellers is higher and those living in rural areas are lower.

2.3.11 Industry and its types

Table 0.15: Details of industries within the project area and its types

Name of Local Level	Name and Ward No.	Name of the Industries	Number of Industries	Type of Industries
Tilottama Municipality	All Tilottama Municipality	Agarbatti Industry, Candle Industry, Sawmill / Furniture Industry, Salt, Sewing-Knitting / Cutting, Dhaka and Tan Industry, Crusher Industry, Brick Making, Grill Industry, Poultry, Animal Farm etc.	Small Industries - 246, Medium Industries - 101, Large Industries - 16	Small and Medium Industries

Source: City profile of Tilottama Municipality, 2075 B.S

2.3.12 Condition of infrastructure

Most of the ward offices in the project affected area are in concrete buildings and some ward offices are under construction. It was found that there were paved roads, gravel roads and unpaved roads, paved bridges connecting one village to another and some bridges were under construction. There are local clubs in different wards. Similarly, access to electricity was extended to all households and poles and trees were used for power transmission lines. Most of the people used mobile phones for communication facilities.

2.3.13 Roads and its types

The project affected areas have paved, unpaved and gravel roads. In the rural areas, road construction and leveling work is being done and concrete bridges are being built on small and big rivers.

2.3.14 Value of land

While there are cheap lands in rural areas within the project affected areas, the price of land is also increasing due to increasing population density in urban areas.

2.3.15 Public facilities

Most of the ward offices in the project affected area are in concrete buildings and some ward offices are under construction. There were paved and unpaved roads, paved bridges connecting one village to another and some bridges were under construction. There are local clubs in different wards. Similarly, access to electricity has reached all the households, most of the people are using mobile phones towards communication facilities.

2.3.16 Migration Status

In order to get basic amenities in urban areas, to trade, to run small and medium scale industries, to find daily employment opportunities and to make a living by farming in the fertile lands of the Terai. There are many people come from Palpa, Baglung, Gulmi, Arghakhachi district.

2.3.17 Market and its position

Butwal and Bhairahawa are the main markets for most of the residents living in the project affected areas and goods are being procured at wholesale prices from the same market and transported from the local bazaars and grocery stores to the rural areas. Locally produced food, vegetables, pulses, oilseeds, goats, chickens, fish, etc. are sold in the local market on a daily and weekly basis.

2.3.18 Potential Development Centers

As various physical infrastructures are being developed around the municipality office and ward office of the municipality in the project affected area and on the right and left side of the road touched by the highway, these same areas are being developed as development centers.

Table 0.16: List of the Mother/Women Group/Co-operative in the project affected area

S.No.	Ward No	Name of Mother/Women group
1.	Ward no: 7	Pragati Sil Mahila Samuha Semara
2.	Ward No 9	Kalayan kari Ama Samuha
3.	Ward No 9	Ram Janaki Ama Samuha (religious group)
4.	Ward no:10	Sirjansil Ama Samuha, Bebari
5.	Ward no:10	Langghali Ama Samuha , Bebari
6.	Ward no:10	Swarga Rohini Ama Samuha , Sagrahawa

Source: Field Survey, 2021

Table 0.17: List of temples, resting areas and other community owned properties

S.No.	Ward No	Name	Type
1.	Ward No7	Durga Temple, Samera Bazar	Temple
2.	Ward No 7	Buddha Temple, Samera Bazar	Temple
3.	Ward No 7	Shiva Mandir , Samera bazar	Temple
4.	Ward No 7	Karahiya Rest area	Waiting Place
5.	Ward No 7	Samera bazar Rest area	Waiting place
6.	Ward No 10	Shiva Temple, Sagrahawa	Temple

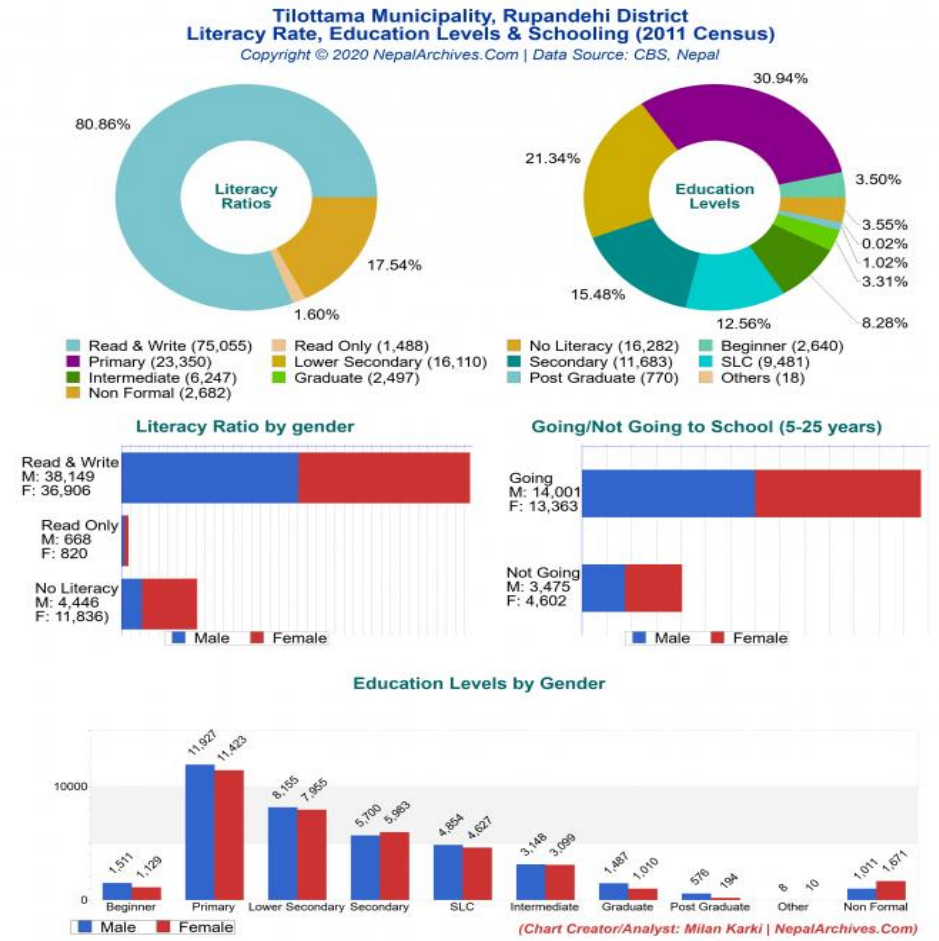
Source: Field Survey, 2021

2.3.19 Existing gender status

2.3.19.1. Sex Ratio

The average female to male ratio of the affected wards is 97:100 which is considerably higher than national average of 84.55: 100. In 2020, male to female ratio for Nepal was **84.55 males per 100 females**. Male to female ratio of Nepal fell gradually from 98.2 males per 100 females in 1950 to 84.55 males per 100 females in 2020.

There were only 75,055 people fully literate in Tilottama Municipality as of 2011 who were able to both read and write, while 1,488 people were able to read but not write. Gender wise, the literacy ratio of male to female was 50.82:49.18.



2.3.19.2. People with Special Need

In the society even though every citizen is equal. some of them should provide special attention and should provide accordingly. Social security is being considered as a right of the citizens. Social security is linked to enhancing social equity and justice. A universal flat pension of Rs. 100 to all the elderly people above 75 years was first announced in Nepal on December 26, 1994. From 1996-97, the Ministry of Local Development started administering the Old Age Pension (OAP), and the allowances were distributed by the ward offices in the urban areas and by the Village Development Committees in the rural areas. From 2008/2009, the government introduced allowances to single women, endangered races and marginalized communities for education allowances. Currently, the Social Security Allowance is now administered by Department of National Id and Civil Registration (DoNIDCR). The demography of beneficiaries of social security as single women, differently abled person, people from the affected wards 7, 9 and 10 are as follows:

Table 0.18: No. of person, people from marginalized group

Elderly citizens	Single woman Widowed	Schedule caste	Differently abled	Schedule caste child support	Marginalized family
896	436	17	121	21	48

Elderly people and differently abled people will have difficulties while construction period. For the easy movement and proper crossings for children and wheelchair, crutches and white cane users, the proper mechanism should be introduced.

Table 0.19: Violence Reported in Mangalapur Police Station

Gender Based Violence	Lost Women	Lost Men	Lost Girls	Lost Boys
67	31	22	13	6

As reported in Mangalapur police station in the year 2077/78 (one year period) the cases of violence against women are 67 and lost women and girls are 46. Whereas lost men and boy cases are 19. Trafficking is one of the issues where Indian Borders are near and easy to access.

2.3.19.3. Women participation at local committees (women leadership and participation)

The Local Level Election Act 2017 mandates that two among the four ward members elected for each ward must be women and one of the two women must be from marginalized community. Among 87 elected representatives of municipality, 36 are female. The elected female numbers are two in ward 7, three in ward 9 and two in ward 10 including Deputy Mayer of the municipality. Apart from this, woman is active in forming different user's group, religious group and actively participating. Women participation in community level committee looks good as there are more than half dozen active woman and user's groups.

LEGAL AND REGULATOTY REQUIREMENT

3.1 Key applicable national environmental and social laws and regulations

A summary of applicable rules and regulations is provided under the Chapter 2 of the NUGIP ESMF. The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. This ESIA has given due attention on the above guidelines and standards in the identification and prediction of the project's impact and in the design of the mitigation actions and monitoring protocols.

The Constitution of Nepal provides local governments the autonomy to enact new laws in areas listed as their sole authority (Schedule-8, Constitution of Nepal). The GoN's applicable laws, regulations, guidelines, standards shall be followed during the construction and operation phases of the project.

3.2 List of National Policies, Rules, Laws, Regulations, Relevant to the Project (if construction activities triggers then it applies)

1. Constitution of Nepal
2. Ancient Monument Protection Act 1956
3. Aquatic Animal Protection Act 1961
4. Environment Protection Act 2019
5. Explosive Act 1961 as Amended
6. Forest Act 2019
7. Labor Act 2017
8. Child Labor Act (CLA) 2001
9. Labor Act 2017
10. Tilottama Municipality's Environmental and Natural Resource Preservation Act 2077
11. Gender Equality Act, 2006
12. Land Acquisition Act, 1977 (and amendments 2010) and Land Acquisition Regulations, 1969
13. Local Government Operation Act 2017
14. Motor vehicle and Transport Management Act, 2049
15. National Foundation for the Development of Indigenous Nationalities Act 2002,
16. Plant Protection Act 2007
17. Public Road Act, 1974 and amendment 2010
18. Road Board Act 2059
19. Soil and Watershed Conservation Act, 1982 and Subsequent Amendment
20. Solid Waste Management Act 2011 and Solid Waste management Rules 2013
21. Water Resources Act 1992
22. Environment Protection Rule 2020
23. Forest Rules 1995
24. Water Resources Regulations 1993
25. 20 Year Road Plan, 2059 –2079BS (2002-2022AD)
26. 2002, National Dalit Commission 2002
27. Forest Policy 2015

28. Land Acquisition, Resettlement and Rehabilitation0 Policy for Infrastructure Development Project 2014
29. National Biodiversity Strategy and Action Plan (NBSAP) 2014-2020
30. National Environmental Standards Information Booklet 2018
31. National Human Rights Action Plan 2005, National Women Commission
32. Public Works Directive 2002
33. Work Procedure to Provide Forest Area for other Purposes, 2006
34. EIA guidelines for human settlement and Urban Development Sector 1996
35. EIA guidelines for Road Sector 1994
36. National EIA guidelines 1993
37. Operational Guideline for mainstreaming GESI in MoUD
38. GoN Policies supporting vulnerable communities
39. Brief Environmental Study and Preliminary Environmental Examining Procedure

3.3 Environmental Standards of GoN

1. Generic Tolerance Limits for Industrial Effluent Discharged into inland Surface water, 2001
2. Nepal Vehicle Mass Emission Standard, 2012
3. Nepal Ambient Air Quality Standard, 2012
4. Drinking Water Quality Standard, 2005
5. Nepal Noise Level Standard, 2012
6. National Indoor Air Quality Standards, 2009

3.4 Relevant sectoral policies and guidelines prepared by DoR

1. Environmental Assessment in the Road Sector of Nepal, January 2000
2. Environment Management Guidelines, GESU/DoR, July 1997
3. Reference Manual for Environmental and Social Aspects of Integrated Road Development, MPPW/DoR, 2003
4. The National Transport Policy, 2001.
5. Land Infrastructure Development Policy 2004
6. Public Infrastructure Built and Operate Policy, (2000)

3.5 International Obligations Conventions Relevant to the Project

1. Convention on Biological Diversity, 1992)
2. Convention on the International Trade in Endangered Wild Fauna and Flora (CITES), 1975
3. United Nations Framework Convention on Climate Change, 1992
4. Gender-Related International Conventions (including Convention on Elimination of All Forms of Discrimination Against Women, CEDAW)
5. ILO Convention on Indigenous and Tribal Peoples, 1989 (No.169)
6. ILO Convention on Worst Forms of Child Labor (C182)

3.6 The World Bank Safeguard Policies

Table 0.1:~~Table 3.1~~ represents the World Bank Safeguard policies that are triggered in the sub-project environmental and social assessment.

Table 0.1: World Bank Safeguard Policies relevant to Project

World Bank OP	Objective & Brief Description
Environmental Assessment (EA) OP/BP 4.01	An Environmental Assessment is conducted to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. Any World Bank project that is likely to have potential adverse environmental risks and impacts in its area of influence requires an EA indicating the potential risks, mitigation measures and environmental management framework or plan.
Natural Habitats OP/BP 4.04	The Natural Habitats Policy is triggered by any project (including any subproject under a sector investment or financial intermediary loan) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project). The policy has separate requirements for critical (either legally or proposed to be protected or high ecological value) and non-critical natural habitats. The Bank's interpretation of "significant conversion or degradation" is on a case-by-case basis for each project, based on the information obtained through the EA.
Forestry OP/BP 4.36	This policy is triggered by forest sector activities and other Bank sponsored interventions, which have the potential to impact significantly upon forested areas. The Bank does not finance commercial logging operations but aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development
Indigenous People OP/BP 4.10	This policy states that any development process under World Bank financing should fully respect the dignity, human rights, economies, and cultures of Indigenous Peoples (IPs). The project should engage in a process of free, prior, and informed consultation with IPs that should result in broad community support to the project by the affected Indigenous Peoples. There is no impact on the indigenous people (no impact due to project). However, it is responsibility of the project to communicate and disseminated the project related information to the indigenous people in the project areas. The project ensures that ensure that the IPs receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.
Physical Cultural Resources OP/BP 4.11	The Bank seeks to assist countries to manage their physical cultural resources and to avoid or mitigate adverse impact of development projects on these resources. This policy is triggered for any project that requires an EA.
Involuntary Resettlement OP/BP 4.12	Key objectives of the World Bank's policy on involuntary land acquisition are to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; assist displaced persons in improving their former living standards, income earning capacity, and production level, or at least in restoring them; encourage community participation in planning and implementing resettlement; and provide assistance to affected people regardless of the legality of land tenure. The policy covers not only physical relocation, but any loss of land or other assets resulting in relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood whether or not the affected people must move to another location. When the policy is triggered, a Resettlement Action Plan must be prepared. An abbreviated plan may be developed when less than 200 people are affected by the project. In situations, where all the precise impacts cannot be assessed during project preparation, provision is made for preparing a Resettlement Policy Framework. The Resettlement Action Plan / Resettlement Policy Framework must ensure that all the Bank's policy provisions detailed in OP 4.12 are addressed particularly the payment of compensation for affected assets at their replacement

World Bank OP	Objective & Brief Description
	cost
	NOTE: Upon consultation with the World Bank, it is advisable to use the latest standards of the World Bank to be used in ESMF and hence it will be referred and used in the ESIA and in conducting construction phase monitoring. **World Bank Environment and Social Standards** 1. ESS1 Assessment and Management of Environmental and Social Risks and Impacts 2. ESS2: Labor and Working Conditions 3. ESS3 Resource Efficiency and Pollution Prevention and Management 4. ESS4: Community Health and Safety 5. ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement 6. ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources 7. ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities 8. ESS8: Cultural Heritage 9. ESS9: Financial Intermediaries 10. ESS10: Stakeholder Engagement and Information

ENVIRONMENTAL AND SOCIAL SCREENING, SCOPING, IMPACT IDENTIFICATION, PREDICTION AND MANAGEMENT

4.1 Introduction

This chapter is on environmental and social impacts in terms of magnitude, extent and duration likely to occur during construction and operation phases. The issues are separated as beneficial and adverse environmental impacts, including direct, indirect, and induced impacts in the project influence area. The impacts will be related to activities to be carried out during construction of the project and the operation stage of the project. The operational phase impacts of the project will be associated with the activities carried out within the premises. In addition, closure and decommissioning phase impacts of the project are also highlighted. The impacts of the project during each of its life cycle stages (construction, operation and decommissioning) can be categorized into impacts on the biophysical environment, health and safety impacts and socio-economic impacts. The Environmental and Social Management Plan (ESMP) will have measures to avoid, minimize, mitigate, and compensate the adverse impacts and measures to enhance the beneficial impacts. Based on the Safeguard Policies OP/BP 4.01 and OP/BP 4.12 are triggered.

4.2 Zone of Influence of the Project

Direct Impact area of the project is considered as RoW (40 meter from Mangalapur Junction towards Kanchibazar: 7.7 meters; from 40 meter to 1660 meter: 11 meters; remaining up to 5 KM is: 13 meters) of the subproject. Similarly, the indirect impact is fall within 50 meters from the edge of the RoW.

4.3 Environmental and Social Screening Checklist

Table 0.1: Checklist for Environment Screening

SN	Particulars	Yes	No	Remarks
1	Is the site vulnerable to major natural or induced hazards such as landslides flooding storm surge, Severe wind damage, earthquakes, fire, explosion, others (specify)	Yes		Possibility of Earthquake Natural Disaster, flooding
2	Is the project area adjacent to or within any of the following environmentally sensitive areas? Cultural heritage site historical religious traditional or cultural significance Protected areas national parks wildlife reserves hunting reserve conservation areas buffer zone etc. Wetland/Ramsar site/Simsar Forest Special areas for protecting biodiversity Breeding/ nesting ground of wildlife occurrence of migratory species Migration route Wildlife Corridor Any site of national or International Importance		No	The project RoW is devoid of such archaeologically and culturally significant areas and national parks
3	Likely impacts on trees including Timber and fruit bearing and vegetable cover	Yes		During survey 64 trees were found to be removed. Though the trees need to be removed are not from forest land and fall in RoW of road. However, l as per forest norms 1:10 Compensatory plantation is recommended
4	Possibility of degradation of land and ecosystem of surroundings		No	Town Area
5	Is the project area densely populated?	Yes		ESMP measures applicable
6	Big Industries nearby and Type		No	Down town area
7	Alteration of surface water hydrology of waterways due to the protect resulting in increased sediment in streams affected by increase soil erosion at construction site?	Yes		ESMP measures applicable
8	Chance of deterioration of surface water due to silt runoff and sanitary waste from worker base camps and chemicals used	Yes		ESMP measures applicable

9	Does the sub project requires significant extraction of surface or groundwater		No	
10	Increased risk of water pollution from Oil grease fuel spills and other materials		No	
11	Impact on water quality due to release of sewage sludge		No	
12	Possibility of flooding due to sewage		No	
13	Possibility of increased air pollution during construction and operation phase	Yes		ESMP measures applicable
14	Other pollution concerns relating to the inconveniences in living conditions that may trigger cases of Upper respiratory problems?	Yes		ESMP measures applicable
15	Risk and Vulnerabilities related to occupational health and safety due to physical chemical biological hazards during project construction and operation	Yes		No Biological hazards
16	Noise and vibration due to Civil works	Yes		ESMP measures applicable
17	Possibility of poor sanitation and solid waste disposal	Yes		ESMP measures applicable
18	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents		No	
19	Accident risk associated with pre construction and operation phases	Yes		ESMP measures applicable.
20	Large population influx during project construction and operation that causes increased burden on social infrastructure and services such as water supply and sanitation systems		No	
21	Risks to community health and safety due to transport storage and use of construction materials such as gravel and sand and all other disposable Fuel and other chemicals during construction and operation	Yes		ESMP measures applicable.
22	Interference with other utilities and blocking of access to resource utility and households with entrances in the ROW	Yes		

Table 0.2: Checklist for Social Screening

SN	Particulars	Details
1	Proposed Site Location	
1.1	Land Requirement for the Project	It is an up-gradation of existing road so no additional land is required.
1.2	Land ownership of the project area by the government or private Land	RoW land is in jurisdiction of Municipality
1.3	Does the project require acquisition of government land structures?	No
1.4	Present use of government land that will be used for the project activities with persons households using	No
1.5	Does the project require acquisition of private land and structure?	No
1.6	Present use of government land that will be used for the project activities with persons households using for agriculture residential commercial and other purposes	The land will be used for the construction of the project only
1.7	Does the project require relocation of encroachers and squatters	No
1.8	Does the project require relocation of community facilities government establishment or any objects that are out of religious and cultural and historical significance	No
1.9	Proposed project located in an area where residents are a) All mainstream, b) Indigenous people, c) Majority mainstream are non-indigenous people, d) Majority indigenous people	The list of indigenous people living in area are mentioned above in subsection 2.3.5.
2	Potential social impacts of the project	
2.1	Involuntary resettlement of people? (Physical displacement and economic displacement)	No
2.2	Impacts on the poor, women and children, indigenous people or other for vulnerable groups	No such impact on poor women and children, indigenous people, and/or economic displacement.
2.3	Will Community facilities require relocation?	Yes, water supply pipes from the existing road section will be shifted to beneath the footpath of new road section
2.4	Will the sub project disturb any traditional activity on adjoining or nearby	No
2.5	Poor Sanitation and solid waste disposal in construction camps and work sites	Yes
2.6	Possible transmission of communicable diseases such as STI and HIV AIDS from workers to local population	
2.7	Population influx during project construction and operation that causes increased burden on social infrastructure and services such as water supply and sanitation systems	Yes
2.8	Social conflicts relating to inconveniences in the living condition while the construction interferes with pre-existing roads	Yes, change in road morphology and disruption in the infrastructure like drinking water, sewer system will cause inconvenience
2.9	Describe any other impacts that have not been covered in the screening	Gender-based violence; road stability and management; impact on Water Supply System and Electricity Poles; impact on existing infrastructures
2.10	Describe alternatives if any to avoid or minimize displacement from private and public lands	No such displacement from private and public lands
2.11	RAP /ARAP requirement	No, the design has avoided structures and land. It is the reason DPR has varied RoW in 5 KM stretch

4.4 Impact Summary

Table 0.3: Overall Impact Summary

Summary	Proposed Road
What are the main potential environment and social issues/ risks /impacts/ concerns and/or potential positive impacts	The major positive aspects of road improvement project include easier transportation facility, decreased travel time, decreased travel cost, increased employment opportunities, increased land value, and fostering the community-based tourism industry. The sub project component will most likely create the opportunities for local contractors and suppliers of the construction materials therefore stimulating income generation opportunities for local and employment for the low-skilled local workers. The subproject provides accessibility to schools, health post, ward offices, temples, connection to other villages through village roads, connection to Devdaha. The proposed road project shows limited adverse social impacts in comparison to the benefits. Mangalapur-Kanchibazar (upgradation up to 5 KM, Bewara Chowk only) road does not need deed transfer. Problems likely to be created during the construction stage can be marginalized with the proper precaution and implementing the measures recommended in ESMP Of the number of trees affected, none of them are related to have livelihood harvesting use. The environmental impacts like air, water, noise pollution, obstruction to drainage, issues of waste, issues related to health and safety (accidents), obstruction of natural drainage, issues related to management of traffic, labor camp, spoil disposal area (specific impacts are also spelled out in impact section of report). The site-specific project foot prints like spoil disposal area, camp sites, quarry sites, transportation route and number /type of vehicles, labor camps etc will be included during the preparation of Construction Environment and Social Management Plan (CESMP) by the contractor. The CESMP will be prepared by Contractor within 45 days of commencement of works and submit to the PIU for approval. The contractor will follow ESMP of ESIA and CESMP. Such site-specific details, likely impacts and mitigation measures could be used for compliance monitoring and reporting. The following aspects must be considered for selecting spoil disposal areas: a) away from water bodies, away from settlement, should be in stable area, good compaction and protection of slopes must be maintained. For camps and offices should be substantially away from settlement/school/public buildings, the labor camp must have basic accommodation, toilet and water supply facilities. The transportation routes for spoil disposal and material haulage must not interfere with through traffic (managed properly in off hours and alternative routes), the good and spoil transportation vehicles must cover the materials and maintain road safety standards.
Expected positive impacts/benefits to the local communities	The improved economic access to the areas will potentially make them more attractive for business and investments thus stimulating economic growth and employment opportunities. The proposed sub project will help to provide in easy road access, reduce travel time, provide travel and transportation cost saving, promote employment generation, provide easy access to social service facilities, promote market creation for local product, increase land values as beneficial impacts related with the road improvement project. Other positive impacts of this sub-project include socio-economic benefits, environmental benefits, disaster risk management, climate resilience.
Options Analysis	The road already exists and only upgrading work is required. The ROW is clear, minor issues can be mitigated and managed through proper mitigation measures outlined in ESMP. As there is no any option of this road, an option analysis was not carried out. However, an alternative route will be used by the road users during the construction phase.

4.4.1. Impacts as per the National EIA Guidelines Numerical Scale

Numerical Scale mentioned as depicted in Table 0.4~~Table 4.4~~ is used to analyze the impact of the proposed subproject. The combine score below 40 shall be termed as insignificant impact (IS). The scores ranging between 40 and 79 shall be termed as significant impact (S), scores ranging between 80 and 99 shall be termed as very significant (VS) and the scores above 100 shall be termed as highly significant impact (HS).

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Table 0.4: Impact Quantification

Magnitude		Extend		Duration	
High (H)	60	Regional (R)	60	Long term (LT)	20
Medium (M)	20	Local (L)	20	Medium Term (MT)	10
Low (L)	10	Site Specific (SS)	10	Short Term (ST)	5

Source: National EIA Guidelines, 1993

4.5 Adverse Impacts - Physical Environment (Pre-Construction and Construction Phases)

4.5.1 Land use

The land within RoW is already acquired at the time of Bhairahawa Lumbini Ground Water Irrigation Project (BLGWIP) was initially started in 1970's and was completed in June 1999 with an objective of raising agricultural production through an expansion of the irrigated area of 20,309 ha and thereby raising the living standard of the farmers. Majority of RoW of this road falls on already acquired land area by BLGWIP and some missing land parcels and areas were already under the jurisdiction of municipality. The acquired land is permanently converted within the width of the proposed road. A letter signed by the municipality Mayor confirming that all land within the ROW has been transferred to the jurisdiction of the municipality has been included at Appendix X. Hence, impact from construction will be direct in nature, low in magnitude, site-specific in extent and of long-term in duration. The indirect area of influence adjacent to RoW contains built structures and cultivated lands.

4.5.2 Quarrying material and operation

The upgrading of road will require boulders, sand and aggregates in activities like gravelling, construction of retaining walls and other structures. These construction materials will be brought from the established quarry sites at the Tinau river and Rohini river (which have already received the environment clearance) within the municipality (Figure 4.1).

Figure 4.1: Quarries Location

The Contractor may also obtain required construction materials from the legally operating crusher industries other than proposed quarry sites. So, the direct impact of quarries is not expected in this subproject. However, the quarry sites and amount of quarrying material will be included in Construction Environment and Social Management Plan (CESMP) within 45 days of commencement of works. PIU will check the site requirements and quality of quarrying material and approve it. DSC will also monitor whether the quarry sites has been legally operating or not.

4.5.3 Stockpiling area and construction material

For the upgradation of the road project; sand, stone and aggregates can be obtained from crusher industries. Likewise, reinforcement and cement can be obtained from Butwal at a distance of 2 Km whereas bricks and soil are locally available materials. The construction materials need to be stockpiled on the barren land near to the project site during the construction period. The site is selected after the consultation with local including land owners and their approval to use the land. Locals are informed about the construction works. The impact will be direct in nature, medium in magnitude, site-specific in extent and of short term in duration.

Land for the stockpiling of construction materials must be suitably selected such that it does not occupy private land, affect agricultural land and must obtain written permission from land owners and local bodies. The site should be cleaned promptly after completion. The specific conditions for stockpiling of construction materials are included in the construction contract.

4.5.4 Noise, air and water pollution

The main construction activities that cause air pollution are earthworks (excavation and dredging), asphalt plants operations etc. These activities generate dust, which directly affect the air quality. In addition, vehicles and machinery emit smoke and fine particles. These substances will increase the local air pollution significantly during the construction stage. Burning of fossil fuels will result air pollution due to emission of sulfur oxides (SO_x), nitrogen oxide (NO_x), carbon dioxide (CO_2) and particulates. The anticipated impacts on air will be direct in nature, low in magnitude, local in extent and of short-term in duration.

Water should be sprayed on the road surface as required during construction and protective equipment for the construction workers should be provided. The construction vehicles should be well maintained and should strictly comply with the GoN pollution regulation with compulsion in obtaining green sticker. Similarly, all construction plants should adhere to emission regulation. The vehicles carrying construction materials should ensure that it is well sealed and covered so as to avoid littering. The anticipated cost and specific conditions related to air pollution containment are included in the construction contract.

Noise impacts will be significant in the RoW and vicinity of the proposed subproject upgradation of 5 KM long road during construction periods due to increase of vehicular movements and operation of machinery equipment. The anticipated impacts of noise will be direct in nature, low in magnitude, local in extent and of short-term in duration.

Attempts should be made to operate heavy construction equipment in the day time only. Cracks in buildings caused by vibration need to be monitored closely. If such problems arise, alternative methods should be employed. For the safety of construction workers, earplugs must be provided while on duty. The anticipated cost and specific conditions related to noise and vibration containment are included in the construction contract.

The contaminated soil, oil or bitumen from construction activities if disposed near to river/stream affects aquatic fauna and flora. The construction debris, paints, oil and grease are likely to create water pollution both surface and subsurface. The dust and silt from the construction sites will also create water pollution of the receiving streams. If workers living in tents/camps do not have access to toilet facilities, open defecation may be practiced, which may contaminate water sources, causing health problems. The anticipated impacts on water pollution will be direct in nature, low in magnitude, local in extent and of short-term in duration.

Disposal of construction spoil in and near water bodies should be strictly prohibited. Such spoil should be disposed off at designated spoil sites mentioned in CESMP and approved by PIU and DSC and efforts should be made to minimize such waste as far as possible through reuse, reduction, and recycling concepts. Similarly, the contamination of water by the use of cement and bitumen should be avoided and strongly monitored by contractors, PIU and DSC. The Contractor needs to arrange for sufficient water supplies and proper sanitation facilities for its labour force. Separate arrangements are necessary for work camp and labour camps. The anticipated cost and specific conditions related to water pollution containment are included in the construction contract.

4.5.5 Solid waste generation

Some quantities of solid waste will be generated as a result of clearances, excavations and the final construction of the selected road. Such waste will consist of surplus materials, surplus soil and excavated materials among others. Solid waste will also be generated from the labour camp during construction. Such solid waste materials can cause negative impacts to the environment through blockage of drainage systems and negative impacts on human and animal health.

Construction debris should be disposed at designated spoil site only, far away from water resources and efforts should be made to minimize such waste as far as possible through reuse, reduction, and recycling concepts. The specific conditions for stockpiling of construction materials and debris management are included in the construction contract.

Table 0.5: Environmental Mitigation Plan for the use of construction equipment

Environmental feature	Project Activities	Material/equipment to be used	Impacts/Waste generated	Mitigation measures
LAND	Site clearance	Heavy Equipment Power Saws	Cut vegetation Rock debris Noise by power saw	Top soil to be reused for tree, flower plantation, remaining soil to be used for backfilling. Wood to be used for multiple uses by local people
AIR /LAND	Excavation/earthworks including removal of top soil	Excavation equipment including caterpillars and haulers	Noise Roots Soil Vibration	Top soil to be used for agricultural field, plantation. The photographic and video evidences of structures will be done by the contractors prior the construction is recommended to find the status of the structures prior the construction. Less noisy and less vibrating equipment selection are recommended.
	Transportation of materials and maintenance of equipment	Trucks	Used oil, lubricants, air fumes etc.	Reuse, regular and periodic maintenance
WATER	Building materials/construction materials	Cement, soil, timber ,glass, bitumen, oil paper, piles, water and other wastes	Stone, timber broken glass, waste water, plastic, greases spills	Follow 3 R approach
WASTE	Human consumables	Stationeries, medicines, reagents, waste food and water	Used paper, thrown-away clothing, computers, photo	Sell waste paper to dealers. All obsolete materials should be carefully sorted, stored and sold to dealers. Waste from toilets of camps should be managed properly (septic tank)

4.5.6 Disaster Risk of the subproject

It is envisaged to identify and estimate the risk of disasters in the Mangalapur-Kanchibazar Road alignment and address the associated risks using proactive design incorporations and additional risk management measures that warrant as per site conditions with due consideration to level of exposure of risk to the project. The likely environmental impact or disasters are identified and the exposure risks are classified as Low-Medium-High in magnitude. Climate Change and disaster resilience is studied under the adaptation and mitigations measures offered by the designed project against various possible disasters. Flooding, inundation and clogging of cross drainage and longitudinal drainage are the extreme disasters that usually happen in Terai Region of Nepal. The adverse environmental impacts or disasters (both natural and man-made) those may occur should be kept in mind and certain mitigation measures to avoid and minimize such disasters should be proposed. The risks of disaster in this proposed road project have been identified and addressed the associated risks using proactive design incorporations

and additional risk management measures to be adopted in the context of proposed project development during DPR preparation. Flooding, inundation and clogging of cross drainage and longitudinal drainage are the extreme disasters that are likely to happen in this area.

A site specific ESMP is prepared and will be implemented strictly, it is also necessary to monitor whether or not the ESMP applied properly or not during construction and maintenance operation phase of road project. The project is designed to respond to the disasters and it is clearly mentioned in mitigation section of the report.

4.6 Adverse Impacts - Physical environment (Operation Phases)

4.6.1 Road stability and management

During the operation phase, heavily-loaded vehicles may frequently pass through this route to haul raw materials, which may result in the destabilization of the road. On top of that, natural erosion, inadequate or inappropriate drainage work, faulty construction may also damage the road. The impact will be direct in nature, medium in magnitude, site specific in extent and of long term in duration.

4.6.2 Water pollution

The inappropriate driver practices connected with car/truck washing in streams and rivers which can cause local water pollution by leakage of fuel, lubricants and hydrocarbons can cause hazardous to people, animals and crops. The impact will be indirect in nature, low in magnitude, site specific in extent and of long term in duration.

4.7 Adverse Impacts - Biological environment (Pre-Construction and Construction Phases)

The project will have no impact on wild life, avian fauna, aquatic life and reptiles. The project alignment is neither habitat nor biological corridor of the wild animals. Nearest forest (CF) is about 4 KM away from the project alignment. The project will have impact on existing road side plantations and 64 trees (pole and tree size) of different species namely Sissoo (12), Aanp (8), Nim (11), Baikano (8), Amba (6), Ashoka (8) and other species (11) along the project RoW needs to be removed.

4.8 Adverse Impacts- Socio-economic and Cultural (Pre-Construction and Construction phases)

4.8.1 Impact on Physical Resources

a. Effect of Change in Land Use

The project includes widening and upgrading works of road and drainage structures along the existing RoW, therefore additional land will not be required. Site-specific major works such as intersection improvement, bank stabilization and drainage improvement also will not require additional land. The major component of the sub-project is the earth-filling necessary for road widening, and borrows pits for earth and gravel need to be identified. The extraction of earth from nearby areas will cause depression in the ground surface will result in water logging problems.

b. Obstruction to Structures

The road alignment within the RoW throughout the entire length of project (5 KM) is varied to avoid the structures along the alignment.

As noted below, there are only three structures which will need to be dismantled and relocated, namely three boundary walls. It has been agreed with the municipality mayor that any other structure currently within the ROW will not require dismantling for the purposes of this subproject.

c. Loss of Standing Agricultural Crops due to Construction

There is no encroachment of any standing agricultural crops in the RoW. Therefore, there is no loss of agricultural crops due to construction and no consequential income loss.

4.8.2 Impact on Personal Business/Enterprise, Trade Shop/Fishery

These are structures adjacent to the RoW but no business /enterprise will be affected.

a. Disruption of Water Resources Related Infrastructure

The field survey reveals that 3.7 KM of existing water supply pipelines will be impacted and needs to be replace. During the interaction, the stakeholders have requested to construct the water supply pipeline along the road in 5

Km of the overall road which will be renovated under this project. As per the meeting of utility groups including Drinking Water Utility Group, It has been decided (Decision number 3) that the design of the drinking water supply works will be conducted according to the DPR with the support and coordination of Drinking Water Utility Group. The meeting with the utility group is provided in Annex XI.

b. Education (School Buildings), Health Facilities and Cultural sites

The schools alongside the ROW are as follows: Shree Gautam Buddha High School. (1+140.00, Right side), Janahit High School (2+350.00, Right Side), Shree Semra Secondary School (3+400.00, left Side), Namuna Boarding School (4+350.00, Right Side), Everest Boarding School. These schools will be impacted through construction noise, and due to traffic-related and community risks associated with the construction. The only school which is physically impacted is a boundary wall of Janahit High School which will need to be dismantled and reconstructed at chainage 2+350.

Separately, the boundary wall of the Semara Health Post at chainage 3+850 and the boundary wall of a Shiva Temple at Chainage 3+290 will also need to be dismantled and reconstructed.

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c. Temporary Disturbances in House Owner's Mobility and Shop Consumer

There will be issue of access to some houses and businesses during the construction phase. This is very common in the road construction project in urban area. For a short period of time, the house owner may have difficulties for the access and there will be temporary structure provided by the contractor or the houseowner themselves make some arrangements. This is common practice for the road projects. Some temporary structures during the construction would be made and permanent ramp is provided for those houses.

d. Road Safety Concerns and Health and Sanitation in Community

During construction phase, increased number of construction vehicles will be plying the road therefore due to pressure and mismanagement accidents may likely occur. Hence, traffic management measures and information signboards need to be placed with the precautionary measures. The haphazard disposal of construction waste will adversely affect the sanitation environment in the area and this problem needs to be minimized through regulatory measures and public awareness. However, the road may pose some adverse impacts on the environment at the operational stage, such as increase in traffic accidents due to higher vehicles speed, which must be controlled by putting up speed limit signs and enforcing them. It is recommended that traffic signs are placed at appropriate locations for road safety purposes. The movement of trucks and other equipment in the project area during the works implementation will cause noise and dust if the works will be in dry weather. This noise and dust may also affect the businesses in the vicinity of the construction works.

e. Occupational Health and Safety

Because of the engineering and construction activities including minor excavations, concrete work, and sub-base stone lying among others, construction workers will be exposed to risks of accidents and injuries. Such injuries can result from the hand tools and construction equipment and risk of vehicular accidents to local residents.

f. Social Disturbance / Risk of SEA/SH and HIV AIDs

The project construction may disturb the local population with interactions of non-local workers with residential communities. Girls and women trafficking may arise during the construction phase. Further, it may lead to GBV at household level and afterwards because the frequency of visitors or tourists may increase. This project may lead to an influx of commercial sex workers into the township or lead to contractor workers and other personnel engage in risky sexual behavior that may lead to infections in HIV-AIDS or other sexually transmitted diseases.

g. Limited access to elderly and differently-able

During the construction phase mobility is going to be very limited for elderly and differently-able people. Their daily routine might get affected. Warning signage of the construction work, temporary access as per need will be provided as far as possible. The people will be aware of the construction work and the alternate route will be provided.

h. Woman and Girl Trafficking

As per the data received from Mangalapur police station, the number of missing women and girls is higher here and with the influx of labor this might spike and could cause some problems. Hiring local people as much as possible for the local work could be the one of the remedies for it but different awareness programs should be implemented for the cause and its prevention.

i. Risk in road crossing of school and hospital

During the construction phase the school going children, elderly and differently abled people might face problems in crossing the roads and walk in the side alignment of the road, especially in rainy season.

j. Risk of Spreading of Diseases

This project may lead to an influx of workers in the area. Influx of labors usually attracts commercial sex workers into the town and that can lead to contractor workers and other personnel engage in risky sexual behavior that may lead to infections in HIV-AIDS or other sexually transmitted diseases. Other than sexually transmitted diseases (STD), in today's time the risk of the spreading of "corona" and its other variants are also the major concern for the community and eventually for all.

k. Child and forced labor

In conformance with Nepali law project will not employ under-aged workers. The Child Labor (Prohibition and Regulation) Act of 2000 establishes the minimum age for work at 14 and the minimum age for hazardous work at 16. The employer/contractor must ensure the age through citizenship certificates. Contractor will be strictly instructed to keep the record of the workers.

l. Traffic Management Issues

The flow of traffic along or near the proposed area will be affected and diversions would require managing traffic. Safety barriers and warning signs need to be erected for safety. Half width working approach with signalized traffic control will be adopted to manage the traffic. Safety barriers and warnings signs will be erected where required ensuring safe movement of traffic. An alternative route will be identified to ease the flow of vehicles especially during the rush hour, peak travel periods to ease road congestion.

4.9 Adverse Impacts – Socio-economic and cultural (Operational Stage)

There are expected to be no adverse impacts on the local economy during the operational stage, and significant long-term benefits are expected to arise from the proposed sub-project. However, the market will be competitive and the urbanization and semi-urbanization effect may contribute to a higher cost of living. The scale and trend of plotting of agricultural land will increase and there are possibilities of converting the agriculture land into residential and commercial areas. Some industries that are located near the road may also have tendency to relocate to other places with the purpose of developing their properties as commercial areas.

4.10 Beneficial Impacts - Social-economic and cultural (Pre-Construction, Construction Phases)

4.10.1 Social beneficial impacts

The main Benefits of the proposed road will be access of highly equipped urban standard road which will be the milestone project leading to economic prosperity and increase in economic and social sector. With the highly facilitated transportation media, improvement in educational sectors (schools, colleges and universities), health sectors (health posts, clinics and hospitals), communication facilities etc would occur. More numbers of hotels, restaurants, groceries, shops, banks and other business-oriented activities will be increased ultimately aiding to the employment generation and economic prosperity of the people.

a. Social Implications

After implementation of this project, people will have access all weather transportation facilities and improve their socio-economic condition. The subproject will support the community to enhance their access on health facilities in low cost, increase attendance of students and teachers in the school and also increase in communication to other people, support to the poor, Dalit and other marginalized people because of employment generation during construction period, Initiation income generating activities like e.g. small business, groceries shop, and commercial agriculture production and off farm activities, increase in land price by using the improved transportation facilities.

It contributes for the minimization in transportation cost of all types of goods as well travel cost, time and assists to minimize living cost. It stimulates to farmers to increase agriculture production, livestock commodities etc as well as support for increased in accessibility of villagers to market centers and major cities of the province. The proposed road subproject shows limited adverse social impacts in comparison to the benefits that the people have been able to realize at large.

This is the route that joins Siddhartha Highway with Devdaha Municipality. Thus, the road can be used for connectivity of two municipalities. The most prosperity for the development of the two municipalities and adjoining areas depends on this road. At the same time, the proposed road will bring social justice for the balance development of the entire municipality.

b. Employment, Skill enhancement of workers and staff, Income Increment

As many local people seek interest in doing work in the road project, the contractors can hire them for unskilled laborers. For skilled laborers, they need to give some training which may help the project in the long run to protect and repair the road on a regular basis.

The sub-project will generate skilled and unskilled employment opportunities throughout the project life cycle. Priority will be given on sourcing labor requirements locally, specific ward, municipality, and district. . In cases that skilled workers are not locally unavailable, they will be recruited from other parts of country. Apart from income, locals will get gain experience and training and open door to opportunities everywhere, thereby increasing the quality of life. Undoubtedly, project impacts can be considered significant, positive, long term, and cumulative people lives changed for the better. The residual impact is the up-lift of the quality of life of the sub-project beneficiaries.

c. Easy Access to different facilities and Mobility

The road is giving proper access for the people planning to migrate in this area for the facilities like hospital, school /college and other required services. The land value itself will grow after the construction of the road. The properly designed sidewalks, enough lights and resting area will make it easy for the people with different needs.
The mobility will be comfortable for women, children and elderly. The school children, differently-able and elderly people will benefit from this road after completion.

d. Increase in Trade and Business

Business opportunities are created during the construction and operation of the road for products and services such as basic building materials, construction equipment, laundry, clothing, food services, cleaning services, excavation, construction material supply, etc. Indirect economic impacts will also occur from increased demand for products and services due to the increased workforce in the area. Business opportunities are a positive impact to host communities which has a multiplier effect. The improved road condition will welcome more tourists into the area, which can help women and persons with disabilities to start their own business.

e. Development of Social Services

Increased employment opportunities, trade and business and other income opportunities will direct considerable amounts of money into the local economy in the area. This will logically increase the income level of the individual household and the local body of the area. In the situation when the increased amount of resources, as well as local bodies, this can help to improve social services such as education/school and health care services.

4.10.2 Beneficial Impacts – Social and cultural (Operation stage)

The qualitative beneficial impacts that are likely to occur when the rehabilitated road is in operation are as follows:

a. Improved Transportation Facilities and Decrease Congestion

The rehabilitation and upgrading of the road will produce benefits through better access and mobility and effective transportation facility. The transportation of goods will make goods cheaper, particularly vegetables and livestock. Importantly, the journey will be more comfortable, the wear and tear of the vehicles will be less, and fuel and maintenance cost of the vehicles also will be less, which will lead to an increase in private savings.

b. Rise of Land Value

Road up gradation often leads to increased land values along the road corridor of Mangalapur–Kanchibazar road and its vicinity and subsequently enhances local peoples/farmers' capability for borrowing loans on collateral. High value lands are acceptable to banks and financial institutions to provide loans. This impact will be an indirect, high, significant, local and long-term in nature.

c. Improvement in Trade and Business

The improved road surface of Mangalapur-Kanchibazar road will ensure continued and smooth flow of products and commodities. It is envisaged that trade and business activities will be further promoted not only in the area but also expanded into others areas having links to this road.

d. Increase in Tourism Sector

Since the project district is connected to the border with India and the Indian tourist and the domestic tourist will pass through this road for getting to the different cities or parts of Nepal. Hence the road improved transportation will help to promote this area as more easily accessible tourism areas also benefit the local economy.

e. Enhancement of the Social Services

This sub-project will increase the availability of safe and quick access to social services, development of the economic center, and increase in economic levels, which will help to improve school education and promote higher education outside the sub-project area. Similarly, local people may spend more on health care, sanitary facilities, education facilities and other social services.

f. Enhancement of Mobility and Reduced workload

The improved mobility will improve comfort for women, children and the elderly. School children, differently-able and elderly people will therefore benefit from this road after completion The improved road condition can help people walking along the foot paths, and using cycles and wheelchairs along the cycle lane. This can reduce the rate of accidents along this route. The workload of women may decrease after the construction of the road given that women may not have to wash clothes every day because of the reduced dust impacts from the upgraded road. Because of such changes, women will benefit from time saved.

4.10.3 Social Mitigation measures

a. Working conditions and management of worker relationship

The project will provide reasonable working conditions and terms of employment and will conform to requirements for working conditions established by national laws and WB safeguard policies. Nepali law requires equal employment opportunity. The project will give preference to the recruitment of qualified skilled and unskilled local villagers. Migrant workers will likely be engaged by the contractors during construction. The road project will contractually require the contractor to engage migrant workers on substantially equivalent terms and conditions to local workers carrying out similar construction work. During construction, temporary accommodations will be constructed by the contractor and in compliance with national and international standards for quality, security, safety, and professional competency and no forced labor will be used.

b. Occupational Health and Safety (OHS)

The policy applies to employees and contractors, including subcontractors. The project will provide safety equipment with reference to the provisions of Nepali Law and the World Bank Group Occupational Safety Guidelines to ensure the safety of the workers. The project is obligated to report the occupational health and safety conditions to the municipality quarterly. To maintain a healthy environment for the labor force, the project management should put in place suitable measures to clean the environment associated with labor camps. This will include proper disposal of human waste. The contractor needs to put in place mechanisms for the collection of all wastes generated (solid wastes, organic wastes, food remains, garbage etc.), in the labor camps, segregate the various wastes and arrange for subsequent disposal through either efficient incineration or disposal in a sanitary landfill.

c. Child and forced labor

In conformance with Nepali law and the WB policies, the project will not employ children under the age of 16. However, children above the age of 14 can perform some types of labor e.g. non-hazardous/non-harmful.

d. Community health and safety and reduction of incidences of diseases

As a precaution to prevent the spread of HIV/AIDS in the project area, the project municipality and other stakeholders must organize and support education programs to create public awareness regarding HIV/AIDS and other sexually transmitted diseases (STDs). In order to protect the community member especially vulnerable groups such as women, children, infirmed and elderly from project workers, there will be a need for the project contractor to create awareness around STD prevention and contraception.

e. Management of labor force

The labor force engaged in the rehabilitation of the road and construction has the potential to degrade the environment of the project area as discussed in earlier sections of the ESIA. The project management should therefore put in place mechanisms to deter the work force from engaging in cutting of trees for fuel wood, charcoal burning, and building material and for any other purposes. The contractor should use pre-fabricated material (which can later be retrieved at the end of the project) in building the labor camps. This will deter the labor force from unnecessary cutting and trampling of vegetation and enhance the protection of the scanty natural vegetation of the project area.

f. Addressing Gender Issues in Construction, Operation and Monitoring

During project construction and operation, the ESMP should be implemented and activities monitored via the project management system and in accordance with monitoring indicators. In the case of procurement of goods and services, the PCO should ensure that gender-related issues are addressed through terms of contracts and contractor management monitoring. Stakeholder engagement should be continued throughout the project lifecycle, together with any activities related to capacity-building. Receiving feedback from relevant stakeholders is a valuable monitoring tool and any grievance should be dealt with in a timely manner and efficiently. Progress of implementation of the ESMP including results of monitoring should be described in the annual report to the PCO on environmental and social matters. The PCO should also consider reporting gender-related issues as part of any public reporting.

g. Limited access to elderly people and differently-able during construction

Diversions and proper crossings should be in place along the road for elderly and differently-able people during the construction phase. Elderly people should have access to socialize and meet people and their families to nurture their mental needs and health. The design should incorporate disabled-people's needs and incorporate periodic maintenance of disabled friendly designs. As the mobility of differently-able people will be impacted during construction, this should be addressed properly. After completion of the road improvement, training and using of such facilities should be arranged through the project municipality.

h. Safety to school children and pedestrians

During the construction phase, other roads should be used or diversions established, and should be child, elderly and differently able person-friendly. Crossings near school areas should be safe, and the school area should be highlighted properly. An attendant from the school and/or from the contractor will be present at the school crossing during starting and closing times, or in peak traffic hours. Appropriate signage during construction and implementation should be displayed to enhance the awareness of potential safety hazards. After the completion of the road improvement, awareness should be created amongst school children, members from mother and women groups, and other pedestrians (people using the road every day for work or business) of the road signs, and using the road safely through awareness-raising programs in schools, women groups, local media and FM radio.

RESETTLEMENT ACTION PLAN

5.1 Background and Objectives of the Resettlement Action Plan (RAP)

5.1.1. Aims of the RAP

This Resettlement Action Plan (RAP) aims to provide policy and procedures of land acquisition, compensation and resettlement of affected persons, if required. It has been prepared based on the findings of a resettlement impact assessment undertaken during detail project design and from updated information. The assessment aimed to identify the impacts on property and income sources of affected persons with documentation of loss of land, houses, trees etc. within the construction width of the proposed road. This RAP identifies safeguard measures including compensation, resettlement and rehabilitation assistances to the affected persons, consistent with the provisions of Resettlement Policy Framework (RPF) provided in the NUGIP Environmental and Social Management Framework (ESMF). This RAP particularly addresses the following considerations associated with road improvement and upgrading works. Social considerations have been incorporated into the road design:

- Private and community resources affected by the project (e.g. houses and infrastructures, which require the provision of appropriate entitlements (only, if applicable and triggers)
- Organizational and institutional requirements for the implementation of compensation, resettlement and rehabilitation activities
- Implementation schedules and monitoring mechanisms
- Compensation, resettlement and rehabilitation cost estimate

As of now, for this project only three boundary wall is required to be demolished (dismantling and construction of new boundary wall will take place at chainage 2+350 (government school wall), chainage 3+850 (Semara health post) and at Chainage 3+290 (boundary wall of shiva Temple). There are otherwise no resettlement impacts under this subproject. The RAP has been prepared with policies and principles are mentioned here in situation where there is any potential acquisition in the future that might trigger due to design change or any unavoidable circumstances.

5.1.2. Policy and Principles of the RAP

This RAP is prepared on the following policy and principles of the NUGIP ESMF and RPF, which are in harmony with GoN policies and the World Bank Policy on Involuntary Resettlement (OP 4.12). Both the WB policy and GoN legislation emphasize avoiding or minimizing involuntary resettlement. Where the acquisition of private property is unavoidable, involuntary resettlement should be an integral part of project design and preparation.

The acquisition of private assets and the displacement of people will be avoided or minimized to the extent possible, through the incorporation of social considerations into alignment selection and road design. Where asset acquisition and population displacement are unavoidable, the pre-project living standards of affected persons will be restored. Community consultation ensures people's views; concerns and suggestions are incorporated into implementation procedure. An institutional framework will be developed as an integral part of the sub-project to ensure that appropriate social impact management mechanisms are set up and maintained during implementation. These mechanisms and arrangements will ensure that compensation, resettlement and rehabilitation are carried out timely and effectively.

5.2 Operational framework and Methodology of the RAP

5.2.1. Operational Framework

As the project authority, the PCO within the DUDBC will assume overall responsibility for the management procedures as mentioned in the RAP. Key activities to be undertaken to ensure effective implementation of resettlement, compensation and rehabilitation activities are:

- Implementation of procedures to (i) minimize adverse social impacts including acquisition of land and assets throughout the planning, design and implementation phases and (ii) accurately record all project-affected persons, by means of census and asset verification and quantification exercises, and the issuing of identification;

- Establishment of systems and procedures for the co-ordination of resettlement and compensation activities;
- Establishment or strengthening of grievance redress mechanism at the Ward level or municipal level where it is appropriate and practicable to address the social issues associated with the project. The objectives of this will be to: (a) ensure ongoing dissemination of project information to affected households, (b) structure, regulate and strengthen communication between roadside communities, (c)involve affected communities and local government structures in social impact management, grievance resolution and monitoring;
- Distribution of copies of the approved Entitlement Policy, and follow-up community meetings to ensure full comprehension of its contents;
- Capacity-building initiatives to create a supportive environment for the implementation of RAP activities, including training on accepted resettlement and rehabilitation practices, training in the establishment of compensation plans for affected household;
- Coordination with relevant government line agencies (as required)
- Collaboration with non-governmental agencies to provide grassroots expertise and resources in areas such as project information campaigns and impact monitoring.

5.2.2. Definitions

The following definition will be applied in the RAP:

- **Compensation**: The payment in cash or kind for private property acquired by the NUGIP/ Metropolitan, based on replacement value as defined by the Compensation Determination Committee (CDC).
- **Compensation Determination Committee (CDC)**: The district-level committee established under Section 13 (2) of the Land Acquisition Act 2034 (1977) to determine replacement value and compensation rates for property acquired under the Act.
- **Cut-off Date for Eligibility to Entitlement**: The cut-off date for eligibility to compensation and assistance will be the date of the joint census of affected households and affected assets.
- **Entitled Person**: Any person who is entitled to compensation due to the loss of privately owned assets and other rehabilitation assistance.
- **Project Affected Person (PAP):** Any person directly affected by the project through the acquisition of assets belonging to him/her of his/her household or community. This includes any person whose rights, standard of living, subsistence and income-generating capacity are adversely affected through the acquisition of assets, whether full/partial, or permanent/temporary.
- **Project Affected Family (PAF):** The group of people residing in one house and operating as a single economic unit, who are adversely affected by the project. Major children over the age of 18 years will be entitled to rehabilitation measures as outlined in the Entitlement Matrix but not to compensation for properties held by other members of the household.
- **Rehabilitation**: The measures taken to mitigate identified social impacts, including compensation, resettlement and rehabilitation and transition allowances where required.
- Replacement Cost: With regard to land and structures, “replacement cost” is defined as follows: For agricultural land, it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes. For houses and other structures, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors’ fees, plus the cost of any registration and transfer taxes.
- **Titleholder:** The person in whose name the project-affected land and/or building is registered and the person who is authorized by law to receive the compensation granted for the acquisition of land.

- **Tenant**: A person occupying/using land of a titleholder according to the stipulations of the Land Act, 2021 (1964).
- **Vulnerable Groups**: Social categories whose livelihoods may be particularly vulnerable to disturbances created by the project. These groups may include tribal groups, Dalits and landless persons who rely on access to local agricultural work and other support systems built up around the agricultural resources base.

5.2.3. Methodology

The methodology includes review of the sub-project DPR report to understand the project foot prints, visit of project sites by team of experts, and verification of physically and economically displaced households and structures.

While reviewing the DPR report of the project it was noted that the structures and additional land acquisition along the proposed up-gradation project is avoided by adjusting RoW of the road in related sections where such needs to be avoided. Hence, there are no structures or private or public land within RoW of road which requires acquisition. This is verified with DPR consultant and PCO. Hence no RAP related issue triggers for the proposed up-gradation activities.

Though RAP related principles are elaborated in this document, it is for reference if it triggers by any means in future then project needs to abide with it and will be updated in line with any expected resettlement impacts.

5.3 Entitlement Matrix

An Entitlement Matrix, as outlined in the ESMF will be followed (if applicable).

SEXUAL EXPLOITATION AND ABUSE (SEA)/SEXUAL HARRASSMENT (SH) PREVENTION AND RESPONSE ACTION PLAN

6.1. SEA/SH - National Scenario

The current status of gender inequality and gender-based violence (GBV) in Nepal reveals the serious need to mainstream gender sensitivity and GBV risk mitigation measures, and more specifically, sexual exploitation and abuse, and sexual harassment (SEA/SH) risk mitigation measures at all organization levels and in all phases of project cycles. In Nepal, SEA/SH is prevalent due to unequal gender relations and discrimination towards women in both the public and private sphere. It has direct implications on the reproductive health status of women and on the physical, emotional, and mental health of their children.

Based on the SEA/SH Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate GBV, in particular SEA/SH risks that the project activities might trigger. The Plan has also addressed "Table – 1: Recommended actions to address SEA/SH Risks in IPF Projects" as per the "Good Practice Note" published by the World Bank in September 2018. The SEA/SH Risk Mitigation Action Plan is included under Chapter 7 of the ESMF for NUGIP. The plan applies to all sub-projects under NUGIP and provides recommended actions for addressing and mitigating SEA/SH risks. The project will refer to the main action plan and contextualize and adapt according to the nature of the project, capacity of the implementer, and the prevalence of GBV in the project areas

6.2. The Purpose of SEA/SH Risk Mitigation Action Plan

The Tilottama subproject draws upon NUGIP SEA/SH Risk Mitigation Action Plan to address and mitigate against any SEA/SH risk during subproject implementation, and will make any adjustments as required to meet subproject specific SEA/SH risks that were identified during ESIA preparation. The purpose of the action plan is to identify the issues, stakeholders, possible service providers, and map existing GBV services and service providers and assess their capacity and document the legal and institutional mechanisms that aid in accessing grievance redressal related to SEA/SH. The subproject will focus on sensitizing the communities and other stakeholders and strengthening institutional capacities. A survivor-centric approach is followed whereby all through the subproject, victim/survivors' care and providing access to different referral mechanisms are considered key aspects of this plan.

6.3. SEA/SH Risk Mitigation Action Plan Principal and Approach

The survivor-centric approach is a human-rights based approach which aims to create a supportive environment in which the survivor's rights are respected and in which he/she is treated with dignity and respect (UNICEF 2010). This approach helps to promote survivor's recovery and ability to identify and express needs and wishes, as well as to reinforce the survivor's capacity to make decisions about possible interventions (GPN – Addressing SEA/SH in civil works, World Bank 2020). The key principals of this approach are:

- To treat survivors with dignity and respect instead of being exposed to victim blaming attitude.
- Do not deal the issue through the feeling of powerlessness.
- To maintain privacy confidentiality and safety of the survivors.
- Do not discriminate survivor based on gender, age, race/ethnicity, ability, sexual orientation, HIV status or any other characteristics.
- Enable timely access to quality services as required by the survivor
- Ensure informed consent of the survivor since the survivor has the right to understand the options and decide whether to talk about the incidence or not

6.4. Additional SEA/SH Risks in relation to Labor Influx

Amongst all required human resource needed for the subproject, skilled labor requirements will be less and unskilled labor will be high. All labor requirements cannot be met through hiring from the local community, for various reasons including worker unavailability and lack of skilled labor, therefore the contractor will hire labor externally according to need. In many cases, labor influx is compounded by influx of other people who appear in the project area along with the development of the project for various reasons including to seeking opportunities to sell goods, and services. The social impacts resulting from labor influx are critical to address, as even a modest

labor influx may lead to negative impacts on the host community. However, SEA/SH risks can be equally triggered by local laborers. Below are potential risks in the subproject area which are associated with labor influx:

- Risk of social conflict due to conflicts like high consumption of alcohol, drug abuse and dispute/fights in the local area
- Increased risk of illicit behavior and crime that includes theft, physical assaults, substance abuse, prostitution and human trafficking.
- Influx of additional population followers like workers families, traders, suppliers, vendors and traders of different types
- Burden on and competition for public service provision due to increased population, increased density of traffic on roads, increased patients and accidents in the workplace
- Increased risk of communicable diseases and burden on local health services
- Child labor and school dropout due to increased job opportunity and forced labor due to poverty
- Increased pressure on accommodations and rents, traffic and inflation of price
- Other SEA/SH related risk

6.5. Mitigating against SEA/SH risks

Mitigation measures against the risk of SEA/SH in the subproject are outlined below:

- Reduce labor influx by using local manpower and prioritizing eccentrically throughout the local ward, municipality, district, province and federal state. Training can be conducted to train or upgrade the awareness on SEA/SH risk.
- Awareness programs related to community and workers, trafficking, sexually transmitted disease etc to be conducted to both workers and community to adjust the workers with the community
- School-Based Awareness Programs about development, environment, social cultures, probable impacts during construction and operation
- Implementation of Code of Conduct on SEA/SH behavior and the provision of punishment for breaching of the code of the conduct
- Communicable diseases like AIDS, COVID etc and to apply strict preventive measures for the same
- Mitigating risk of child labour through well-documented age verification process
- SEA/SH related to female workers by providing female labor-centric facilities such as separate female toilets, separate female camps, separate family camps and mother's rooms on the site.

6.6. SEA/SH Risk Mitigation Action Plan

As noted above, the subproject will draw on the SEA/SH Risk Mitigation Action Plan developed for NUGIP, which is included in the NUGIP ESMF and provided in **Table 0.1~~Table 6.1~~.**

Table 0.1: SEA/SH Risk Mitigation Action Plan

Objective	Indicator	Tilottama subproject measures	Timeline	Responsibility	Cost (NPR)
Include the assessment of SEA/SH risks (as low SEA/SH risk) as part of the social/gender assessment in project's Environmental and Social Impact Assessment (ESIA)	Low SEA/SH risks highlighted and preliminary mitigation measures identified Mapping completed of available, quality services in the project affected area	Consultations have been conducted and identified SEA/SH risks in project areas identified and include the main measure agreed to with the local administrative office Map out SEA/SH prevention and response services in project area of influence – reference to be made from the service mapping that already exists at the national level	Construction Phase (as part of ESIA)	Local Body /PIU	Included in ESIA cost
Reflect SEA/SH risks, and measures to address them, in ESMP and contractor ESMP including the costs	SEA/SH risk Mitigation Action Plan included in the ESMP Procurement for SEA/SH-related activities and costs outlined in the contract.	SEA/SH risk Mitigation Action Plan provided and SEA/SH related costs are included in the ESMP and contract documents to mitigate risks.	Year 1 (during preparation of ESMP)	Tilottama municipality (local body) /PIU	SEA/SH costing is included in ESMP
Incorporate SEA/SH related information and measures into plans for stakeholder engagement	Number of awareness and consultations held	The plans for stakeholder engagements during the subproject implementation include awareness raising activities (specialized service providers/contractors/NGOs identified and hired under contract) and awareness and consultations carried out. This plan will be implemented during the project construction.	During preparation of ESMP, beginning of construction, and during construction	Local Body /PIU	ESIA covers stakeholder consultation costs; construction phase stakeholder engagements costs should be inbuilt into overall budget
Formulate and adopt code of conduct (CoC) including sections on safety of women and girls	CoC developed, included in all contracts, and staff, consultants, contractors trained.	Developed CoC should be included in all contracts and also in the PIM. Training on the CoC should be provided to all.	Prior to contractor mobilization and during project period.	Local Body /PIU / Contractor	The awareness and orientation program cost to be inbuilt in PIU and at individual contractor level in BoQ
Assigning a focal point for SEA/SH related issues (this	Assignment of focal point for SEA/SH related issues	Social specialist/any designated focal person will be assigned to oversight this responsibility. Coordinate, report to and work closely with the	Year 1	Local Body /PIU	Included in Project Cost

Objective	Indicator	Tilottama subproject measures	Timeline	Responsibility	Cost (NPR)
may be the Social Specialist or social focal point for the project)	Measure effectiveness of the SEA/SH Action plan	NUGIP gender specialist on the implementation and monitoring of SEA/SH action plan			
Project Construction					
Codes of Conduct signed and understood	Number of people officially oriented and trained	Ensure CoCs are clearly understood, signed and behaviourally applied to the job site Disseminate CoCs (including visual illustrations) and discuss with employees and surrounding communities.	During subproject implementation	Contractor, PIU	Built into overall project cost
Awareness on SEA/SH	Number of participants and the awareness materials and the resources on project area	Awareness to the woman, children. school students Community based-awareness program School based awareness program The project should work with women's groups to support the awareness programs.	During subproject implementation	PIU, Contractor, , Ward office CBO/NGOs working in area	12 trainings covering all the schools , CBOs, women's group @Rs 50000.00 per training Total NRs 600000.00
Process in the Grievance redress Mechanism for referring SEA/SH related grievances	Availability of an effective SEA/SH mechanism within the project GRM to manage and refer complaints relating to SEA/SH (also called 'anti-harassment cell') Identifying the focal person under subproject to train about SEA/SH Number of GRM members trained. Inclusive GRM system in place. Number of SEA/SH issues which have been referred to GBV Services Providers	Awareness raising on the availability or provision of SEA/SH grievance process Training provided to assigned focal person of receiving and referring SEA/SH related grievances Undertake stakeholder engagements as outlined in the ESMP and conduct community awareness raising about SEA/SH risk mitigation measures, taking support from local women's groups, for example, CoC, GRM, how to report and provide multiple entry-points Maintain proper documentation for complaint registration and management	During subproject implementation	Social specialist/designated focal person to oversight gender related issues of the Project	Built into overall project cost and SEA/SH awareness raising outlined above
		Have separate, safe and easily accessible facilities for women and men working on the			

Objective	Indicator	Tilottama subproject measures	Timeline	Responsibility	Cost (NPR)
Implement appropriate subproject-level activities to reduce SEA/SH risks prior to civil works commencing	Documentation of measures taken to reduce SEA/SH risks.	site. Establish locker rooms/secured rooms and/or latrines for workers and project staff, well-lit areas and include the ability to lock them from inside. Visibly display signs around the project site (if applicable) that signal to workers and the community SEA/SH is prohibited. As appropriate, public spaces around the subproject grounds should be well-lit.	During subproject implementation	PIU, Gender Specialist of the project.	Include in Project Cost
Project Monitoring					
Report in the quarterly progress report and review during Implementation Status Review (ISR) missions	Successful implementation of agreed SEA/SH action Plan (Y/N)	Reports SEA/SH-related issues in the quarterly progress report review during ISR missions	Project period	PCO, PIU, Gender specialist	

Note: The requirements of the SEA/SH Risk Mitigation Action Plan must be included in contractor's management plan.

ENVIRONMENT AND SOCIAL MANAGEMENT PLAN

7.1 Background

This Environmental and Social Management Plan (ESMP) for the project identifies the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all construction and operational activities associated with the project development that is intended to ensure that commitments made to minimize project's related environmental and social impacts are upheld throughout all project phases. The management and monitoring program will involve the following: a) collection and analysis of appropriate environmental social and cultural data; b) preparation of periodic reports including an annual environmental and social performance report to DUDBC and the WB and liaison with other relevant bodies (e.g. ministries, departments and relevant agencies); c) identification of unexpected environmental and social impacts; and d) formulation of mitigation measures for the unexpected negative impacts.

7.2 Implementation of Environmental and Social Management Plans

The mitigation measures will be integrated into project design and the agreements/contract documents. The project bid documents will include the implementation and reporting of the ESMP and contractor must follow it. The impact of the construction on the environment will be kept to a minimum and appropriate measures as brought out to in the ESMP are taken to mitigate any adverse effects during the construction. The Environment, Health, and Safety requirements of the construction contractor will be clearly spelled out in the contract document and the necessary cost will be included in the BOQ. The contractor is required to submit the Construction Environment and Social Management Plan (CESMP) along with Contractor's Environment, Health, and Safety Management Plan within 45 days of the commencement of the work. The client/consultant will review the Contractors CESMP and EHS plans and provide approval along with necessary improvements. The regular monitoring will be followed by the PIU/Environmental and Social Monitoring team. It is in this context, the construction contractor is required to provide 1) a sound working environment to all employees involved in the design and construction of road as per national legislations, standards, and guidelines. 2) Must ensure HSE objectives are met during the entire construction, 3) Prepare and submit ESMP plan during construction period of the project. The EHSMP should include; policy statement, roles and responsibilities, site regulations, risk management and hazard identifications, HSE trainings, PPE, Inspection and auditing, site security, medical care and first aid, 4) The contractor must ensure Environmental Management and Mitigations addressing ESMP and mitigation management as shown in **Table 0.1**~~**Table 7.1**~~.

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As all the ESMP costs and activities are included in the BoQ, the budgetary activities lie within the contractor's responsibility. The DSC within the PIU, Project Management Support Team and Municipality are also responsible for the implementation of the mitigation activities and their monitoring. The public awareness campaign will be done through municipality and oversight by UDST.

Table 0.1: Adverse impacts mitigation measures

Stage	Impact	Mitigation Measure	Responsibility	Cost (Remarks if any)
	Physical-Construction			
	Dismantling of boundary wall and construction of new boundary wall at three separate locations: i. Chainage 2+350, Janahit High School's wall; ii. Chainage 3+850, Semara health post; iii. Chainage 3+290) boundary wall of Shiva Temple in RoW of road	▪ Obtain written permission from temple, school, health post prior to commencement of activities related to dismantling (also include in site specific ESMP before construction). ▪ Reconstruct of new boundary wall of Shiva temple, Government School and Health Post.	Contractor (budget) in coordination with Municipality	Include in BoQ No 12 of DPR
	Impact on property from vibrations due to the use of heavy machinery and other construction activities	▪ Establish photographic and video graphic evidences of structures and properties in and alongside RoW. ▪ Awareness raising, information and dissemination about GRM ▪ Cracks caused by vibration due to construction activities need to be monitored closely and alternative be sought where problem arises.	Contractor/ Municipality/DSC	Photography and Videography cost are included in BoQ. From 4% contingency budget allocated to municipality
	Obstruction due to electric and telephone poles in the ROW	▪ Obtain all necessary permits for dismantling and relocation of electric poles from NEA and provide a copy to the Contractor. ▪ Relocate the electric poles along the alignment in coordination with the Nepal Electricity Authority and Nepal Telecom. ▪ The process should be completed prior the beginning of the road construction	Municipality/DSC and Contractor in coordination with NEA and NTC	(Included in DPR BOQ No:13.01)
	Removal and re-construction of Water Supply Pipe lines of the water supply scheme	▪ Obtain permission for dismantling from Water Supply Management Committee. ▪ The project must work in close coordination with the Water Supply Management Committee regarding disruption of water supply system of 3.7 km at chainage of (0+000 – 3+700), ▪ Alternative means of supply during the disruption and reconstruct the system will be done.	Municipality/DSC and contractor in coordination with water supply management committee	(Included in DPR BOQ 13.02))

	Loss of Top Soil	▪ Save all available top soil from ROW sites and re-use it on completed road formation batters approved by Supervising Consultant. ▪ Strip and stockpile topsoil from all ancillary sites that are to be disturbed. ▪ Keep stockpiled topsoil separate from sub-soil material. ▪ Sow a cover crop on each top soiled batter soon after topsoiling.	Contractor	will be the part of Contractor's Responsibility under Contractor Cost
	Protection of water courses crossing the road and alongside the ROW	▪ Construct silt traps and ripraps to maintain the river channels. Dredge the river bottom to ensure free flow of the water	Contractor	This will be the part of Contractor's Responsibility under Contractor Cost
	Quarrying Material and Operation	▪ Prepare a CESMP and include the details of quarrying activities including required quantity, locations and required mitigation within 45 days of commencement of works and submit to the PIU for approval. ▪ The construction materials will be brought from the established quarry sites located within or outside the municipality. So, the direct impact of quarries is not expected in this Subproject. ▪ The municipality in support of DSC will monitor the quality of quarrying material and state of quarry sites. ▪ The materials will be brought only from licensed vendors having environmental clearance.	Municipality/DSC, Municipality instructs the quarry operators to reinstate the established quarry sites as per agreed norms during environment clearance	Covers by municipality/PIU DSC monitoring cost

	Road safety, Sewer, Drainage etc	▪ Provide bus laybys and Bus Shelters. Bus laybys are provided at various locations mentioned in Table 1.2 where public buses or micro buses pull out of the traffic to pick and drop off passengers. ▪ Provide ramps in strategic section of roads as detailed in section 1.4.9. ▪ Sewer Drainage: ▪ Manhole: Existing Manholes at existing locations require to be raised to FRLs of the road. ▪ Cross-Roads: Development Stretch of 15 m of each cross-road will be developed under this project. ▪ Installation of Road markings at all major as well as minor intersections. Road Signs and Markings Road Markings has been provided as per Traffic Sign and Marking manual as per DPR ▪ Hand railings: Hand railing to be provided at box culverts and other required section ▪ Retaining/ Breast wall: Stone Masonry Retaining wall has been provided along the alignment where embankment is required as stated in the Section 6.3.20 of the DPR and the related drawings and estimates ▪ Guard Rails and Safety Barriers: Guard Rails and safety barriers must be provided in places where serious damage to vehicle and people may occur when an out-of-control vehicle may leave the roadway or hit other objects.	Contractor	Already included in project BOQ
	Issues of stockpiling	▪ Locate, peg and seek approval from the supervising consultant for the use of stockpile sites. ▪ Stockpile should not be located on water courses; should not be within 50m of schools, hospitals or public standpipes; and should not affect locals and their properties. ▪ Obtain written permission from landowners and local bodies for stockpiling on their land. ▪ Only barren land will be used for stockpiling and proper insulator cover and proper drain will be managed to store the chemical to avoid the leakage of chemicals. ▪ Stock of sand will be set wet to prevent it from blowing with the wind; water sprinkler will be used for this purpose. ▪ The places used for the stockpiling of construction materials will be cleaned promptly after the completion of the project. ▪ The area could be leased or rented based on price not lower than the prevailing market price.	Contractor	This will be the part of Contractor's Responsibility under Contractor Cost. This will be included in CESMP

	Construction Safety	▪ Reinforced Cement Concrete covered drain must be provided throughout the alignment in integration with footpath. ▪ Storm water collected should be disposed through the nearest culvert sections. ▪ The contractor will assign a safety officer and the PIU's safeguard specialist will monitor the implementation of the OHS measures. ▪ Adequate lighting and safety signal devices be installed for work safety. ▪ Adequate warning signs, safety barriers, traffic calming measures and persons with flags to control traffic will be provided for work safety. ▪ Protective clothing including helmets, masks, boots, gloves, ear plugs and goggles should be provided for workers safety. ▪ At every work place, a readily available first aid unit including an adequate supply of dressing materials will be provided. ▪ Maintain health care system at construction camps including regular visits by trained medical staff for routine checkup of workers and avoidance of communicable disease. ▪ Temporary diversions will be provided wherever necessary, with proper drainage facilities. ▪ Electrical Equipment will be checked and certified regularly. ▪ Provide and install all road signs as per design. ▪ Impart road safety education to all community, schools, clubs and drivers of construction vehicles. ▪ Hazards will be identified, and workers will correctly wear PPE, will properly use safety equipment, and will follow work safety arrangements. Safety signs and information will be provided and the work space will be barricaded to prevent unauthorized entry. Workers and people at the construction site will be provided with proper training, and to help ensure that workers are trained on what to do in the event that an accident occurs on site.		
	Traffic Management	▪ Emergency traffic management plan should be included in CESMP by the contractor and approved by the PIU/DSC. This is required to cope up with the restriction on the vehicular movement due to closure of road for reasons including construction. The plan may include informing about the scheduled road closure and the alternative routes identified to divert the normal traffic flow, transport material during off-peak time, ▪ provide advance notice to stop vehicles by erecting indicator signs at a necessary distance in order to reduce congestion at the site of work, thus enabling making of proper security arrangements, or lane wise traffic management	PMST/DSC and Contractor	Included in BOQ

	Air/Dust Management	▪ Road construction area shall be maintained damp by periodical spray of water. ▪ Delivery vehicles will be covered. ▪ Mixing equipment will be well sealed and equipped as per existing standards. ▪ All construction vehicles should comply with Motor Vehicles and Transportation Management Act as amended – mandatory Green Sticker. ▪ Provide temporary hoardings where required to minimize dust impact on locations of temples, health posts and schools. ▪ Provision of speed control measures in settlement and working areas to limit traffic speed. ▪ Dust emission and air pollution due to construction activities and operation of heavy equipment and movement of transporting vehicles, to mitigate the impacts water will be sprinkled along the proposed road alignment and nearby dust prone area and repair and maintenance of equipment and vehicles regularly. ▪ Air pollutant parameters (TSPM, PM10, Sox, NOx, Cox) will be monitored regularly during construction. Conforming NAAQS of Nepal.	Contractor/PIU/DSC	The cost for the air pollution monitoring and water sprinkling will be borne by the DSC cost. It is included in the DSC ToR.
	Noise, vibration	▪ Ensure plant and equipment used for construction conforms to best practices. ▪ Vehicles and equipment used will be fitted with silencer and maintained to keep noise at minimum levels. ▪ Workers will be provided with appropriate ear muffs/plugs specially at crusher site ▪ Sensitive locations i.e., schools, hospitals, government offices etc. will avoided while placing the noise generating equipment. ▪ Cracks caused by vibration due to construction activities need to be monitored closely and alternative be sought where problem arises. ▪ Work will be restricted to day hours (not in night time) specifically at urban and sensitive locations. ▪ Select equipment and machinery with lower sound power levels for the use ▪ Restrict activities with significant noise impacts to outside school ▪ Activities involving heavy machinery with significant noise impacts should be restricted to outside school hours. ▪ Noise levels (1 hr Leq dB(A)) levels will be monitored regularly. Conforming WHO standards.	Contractor/DSC	The cost for Noise level monitoring will be borne by the DSC cost. It is included in the ToR of.DSC

	Water Pollution	▪ Hazardous materials shall not be stored near surface waters sources ▪ Used lubricants and oils shall be collected and recycled or disposed off site. ▪ Plastic sheeting shall be placed under hazardous material storage area to collect and retain leaks and spills. ▪ Contaminated runoff from storage areas shall be captured in ditches or ponds with an oil trap at the outlet. ▪ Contaminated and worn plastic sheeting shall be packed into drums and disposed off site. ▪ Water Quality (EC, PH, DO, TSS, Oil and Grease). Conforming WHO standards.		The cost for Water Quality Test monitoring will be borne by the DSC cost. It is included in the ToR of.DSC
	Loss of productive soil and agricultural land	▪ Top soil (0-25 cm) from the productive land will be collected and stored for reuse and final dressing of embankment turfing or given back to the farmers upon request	Contractor	Included in BOQ
	Siltation and contamination of rivers	▪ Protect disposal of excavated spoils and debris in to water bodies ▪ All chemicals and oil will be stored away from water and concreted platform with catchments pits for spills collection	Contractor	Included in BOQ
	Hydrology and drainage-risk of increasing sedimentation and siltation of waterways during construction phase	▪ Existing natural drainage system, including irrigation channels will not be disturbed. As per DPR, causeways and structures will be provided in each perennial and seasonal streams and rivulets. As suggested in DPR, adequate cross drainage structures will be provided to facilitate natural flow of water across road embankment.	Contractor	Included in BOQ
	Obstruction of access to structures	▪ Proper engineering measures to provide access to structures as per DPR, including the provision of constructing steps and 118 number of ramps	Contractor	Cost is included in BOQ

	Labour Camp Location and Management SEA/SH related risks	▪ Locate, peg and seek approval from DSC for labor camp sites. ▪ Camps shall not be located near settlements; near water supply intakes; or sites that affect the access by local people to drinking water. ▪ Install sanitary facilities for workers to avoid open defecation by construction of temporary toilet. ▪ Camp shall not be in the vicinity of landslide and flood plains. ▪ Provide and maintain proper drinking water, sewerage and waste disposal facilities at the camps. ▪ Ensure no wood is burnt by any worker on or off site. Camps shall be provided free of cost, with electricity and regulator & adequate fuel supplies of LPG or Kerosene. ▪ After use, sites shall be cleared and restored to near natural or stable conditions with vegetative cover. ▪ Have separate, safe and easily accessible facilities for women and men working on site ▪ Establish locker rooms/secured rooms/or latrines for workers, well-lit and include ability to lock from inside ▪ Display signs around workplace on prohibition of SEA/SH	Contractor	Included in Contractor's Cost
	Physical-Operation			
	Road Stability and Drainage Management	▪ Road side tree plantation, construction of gabion wall and drainage system to mitigate possible inundation in the settlements along the project alignment, Ensure proper compaction as per design	Contractor/Municipality	Included in DPR and subsequently budgeted in BOQ
	Air pollution	▪ There should be a consensus between municipality, District Transportation Office, Transportation Entrepreneur, and the local people regarding the operation of conditioned vehicles	DTO, transportation entrepreneur, local people	Municipality Regular program during Operation
	Water pollution	▪ The operation of proposed work doesn't pose serious threat on water bodies; however, washing vehicles on fresh water streams will be avoided.	Drivers, Ward, local people	Municipality will monitor

	Climate change and Disaster Risk	▪ Nepal lies in Seismic zone-V, hence all the design will be based on IS 1893 to withstand the earthquake. The road is provided with safety features, which likely reduce the chance of accidents in the road alignment. The road assets shall be designed to withstand seismic forces as per IS 1893. ▪ At Mangalapur-Kanchibazzar road (5 KM section from Mangalapur) there will be the problem of drainage system during operation & maintenance. Therefore, provision of prober road side drainage and cross drainage should be made to drain off the storm water from the road so as to mitigate possible inundation along the settlements that exist along the project alignment. ▪ As a mandatory rule, road side tree plantations have been proposed in the ratio of 1:10 to the number of trees that are to be cut down. The project has also proposed tree plantation in foot path areas. This helps in creating a comfortable microclimate, thereby reducing the temperature of the project area by some degrees. The cost of plantation has been included in the cost estimate. ▪ No alteration to the existing drainage channels (natural or artificial) will be done with the thought that they have been well adapted to the existing conditions over a long period of time. ▪ Entire process from project selection up to the project design and implementation prioritize wider settlements along with the social and health institutions like schools, hospitals, health posts and so on. These public institutions are very helpful during disaster to use as temporary shelters as well as centers for rescue and rehabilitation. The projects will incorporate various safety measures that also include signboards, information boards, caution sign, barricades to disaster prone areas and accident-prone areas within construction areas. This is also an attempt to incorporate disaster mitigation in the project.	PCO/PIU/Municipality	The cost is inbuilt to ESMP -BOQ and in project construction cost
	Flash floods	▪ Due to surface runoff and presence of natural streams which are fed by rain. A considerable risk (medium to high) is anticipated for floods. Due to heavy rain and surface run off due to improper drainage there will be problem of inundation/water logging and flooding	Design by DSC, construction phase by the contractor and operation phase by municipality	Provision of adequate drainage and cross drainage measures to prevent water logging Design of storm water drains capable of discharging large flows

	Road Safety	▪ Road safety components such as rumble strips, visibility improvement at intersections and branch roads, pedestrian crossings and installing proper signs, traffic signs and signals has been incorporated and recommended. Pedestrian crossings (zebra crossing) are proposed in intersections, major junctions, and branch roads and even in road alignment with major places such as schools and commercial establishments in order to cross the road safely across the flow of vehicular traffic. Signalized pedestrian crossings are proposed in order to separate when each type of traffic (pedestrians of road vehicles) can use the crossing. ▪ The objective of the Road Safety Interventions is to assess it for potential shortfalls in safety and recommend corrective strategies to eliminate/reduce risks of crashes. Various road safety interventions are proposed to make the road safer and reduce traffic accidents. ▪ Improvement of intersections, traffic signs installation and improving visibility ▪ Proper Traffic signs and signals and road markings throughout the alignment. ▪ Provision of guard rails, street lights, bollard lights, rumble strips, pedestrian crossings, covered drain throughout the alignment ▪ Provision of separate cycle lane and footpath ▪ Use of Reflective Pavement Marker (RPM) for lane marking and delineation for night-time visibility. Delineators and Object Markers ▪ Roadway delineators are intended to mark the edges of the roadway to guide drivers on the alignment ahead. Object markers are used to indicate hazards and obstructions within the vehicle flow path, for example, channelizing islands close to the intersections.	DSC and Contractor during construction phase, Operation phase monitoring and compliance by the municipality or concerned entity Oversight and advisory role of UDST will be there.	Costs are included in BoQ
	Biological-Construction			
	Vegetation clearing	▪ 64 trees/poles of different species need to be removed and compensatory plantation will be carried out @ 1:10 ration i.e., removal of 1 tree will require plantation of 10 seedlings. In addition to 640 seedlings for compensatory plantation, additional 260 trees will be planted by the project; thus, the total plantation will be of 1000 seedlings. The seedlings will be replanted outside RoW as far as practicable. ▪ Native tree species will be selected for the compensatory plantation as much as possible. In addition, project has proposed road side plantations.	The cost is included in Contractor Cost. PIU/Municipality initiation will be required to effective implementation.	The cost for 1000 seedling andtree guards is estimated @Rs 1500/tree. The total cost for plantation comes around Rs.1500000.00. The cost has been included in BOQ. CESMP will also include this.

	Biological-Operation Stage			
	Impact on Vegetation	▪ Encouraging local people for protection of roadside plantation carried out during construction.	Municipality	No additional cost
	Social- Construction Stage			
	Loss of Land or property (as of design for this road it is not applicable as of), If applicable and trigger then	▪ Compensation for loss of property as per the RAP (not applicable as of now: ref DPR report, field observation)	PCO	----------
	Pedestrian Safety	▪ Diversions should be child and elderly friendly as well as to other general pedestrians. Crossings near school area should be safe and the school area should be highlighted. Appropriate signage will be displayed use during construction and implementation of the project to enhance awareness around the potential safety hazards of the construction.	Contractor	
	Health and Sanitation	▪ Proper awareness of using latrines, construction of latrine for worker, Piyus (a chlorine solution) will be provided to workers to purify drinking water.	Contractor	Included in the project design cost
	Child labor and forced labor	▪ No child (below 16 years) and forced labor will be employed in project.	Contractor	No cost
	Occupational Health and Safety	▪ Provision of PPE that also includes the protection against COVID pandemic like use of mask, gloves, and distance maintaining wherever possible ▪ Provision of insurance to cover physical damage to workers. ▪ Induction and refresher training to the workers will also be provided with insurance to cover physical damage to workers. ▪ Basic First aid	Contractor	This will be included in ESMP and contractor's cost during contract Included in HIV-AIDS and COVID Management below.

	Traffic and Transport Management	▪ Mobilization of equipment of materials will occur at night (between 6 PM - 9 AM) ▪ A detailed Traffic and Transportation Plan is to be contained in the Contractor Document ▪ Traffic Safety such as street lights, traffic control devices and other features shall be covered through "*Traffic Signs Manuals Vol-I and Vol II*" and "*Road safety manual*" published by the DOR. ▪ Conducting the road safety audit during construction and prior to opening for public ▪ Bus bays are one of the most crucial factors to be considered in market areas as well as settlement areas. ▪ Provision of alternative routes to ease the congestion and built up of traffic	Contractor will submit the Traffic and Transportation Plan and approved by the PIU for effective monitoring	This will be the part of contractor cost.
	Community Health, Safety and Security	▪ Carry out site management practice such as the fencing around work area and road signage ▪ Increase public awareness of safety, health and environmental issues by providing information directly and indirectly through campaign ▪ Display appropriate signage for use during construction and implementation of the project to enhance awareness creation on the potential hazards of the project	Contractor/ Public awareness campaign by the municipality	Included in the BoQ
	Limited Access for elderly and Differently-able People	▪ Diversions and proper crossings will be available for elderly and differently-able people in the construction phase to ensure their mobility is not impacted during construction. Elderly people should have access to socialize and meeting people and family to nurture their mental need/health. ▪ The design should incorporate the disabled-friendly measures and will incorporate periodic maintenance.	Municipality/ DSC Contractor (engineer must ensure this in design)	will be the part of Contractor's Responsibility under Contractor Cost
	Working conditions and management of worker relationship	▪ The contractor shall provide reasonable working conditions and terms of employment, and in conformance to working conditions established by National law. During construction, temporary accommodations will be constructed by the contractor and will comply with national and international standards for quality, security, safety, and professional competency.	Contractor in support of NGOs	Included in BoQ
	HIV-AIDS and COVID Management	▪ Awareness creation and sensitization to workers and other persons post- project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases ▪ Distribute HIV & AIDS awareness materials in collaboration local health related agencies ▪ Ensure protective measures for COVID is followed, prepare and follow SOPs by all workers and staff for COVID (social distancing, immunization, hand washing, using sanitizer, masks etc) including the community health and safety awareness and management	DSC, Contractor in support of Municipality/NGOs	NRs. 900000.00

	Girls/Women Trafficking	▪ Awareness program will be developed and implemented ▪	DSC in close coordination with Women Development Office, municipality, NGO/Clubs	NRs. 500,000.00
	Impacts on Communities, disease, cultural drain on local resource, etc.	▪ Conduct local cultural awareness orientation training for workforce. ▪ Implement Public Health Awareness Raising Plan to address communicable diseases prevention, hygiene and sanitation, safe sex practices and other community Health issues ▪ Impact Monitoring of Local resources, address gap, and problem as needed	Contractor in support of Municipality	will be the part of Contractor's Responsibility under Contractor Cost
	Grievance Redressal	▪ Employ a grievance redress mechanism incorporating a negotiation and/or mediation team or party	DSC day to day compliance by the contractor	Transportation allowances for project period NRs 300,000.00
	SEA/SH risks	▪ SEA/SH awareness raising activities, trainings and stakeholder engagements such as: • Community based-awareness program • School based awareness program • Awareness program for women and against the gender-based violence ▪ Providing female labor-centric facilities such as separate female toilets, separate female camps, separate family camps and mother's rooms on the site. ▪ GRM will include mechanism for referring SEA/SH-related grievances ▪ Formulating and adopting Code of conduct including sections on the safety of women and girls (CoC should be included in all contracts and training on CoC should be provided to all workers) ▪ CoC are understood through orientations and signed by workers	Project Office DSC, Project Contractor, municipality, NGO/CBO/Local people, Women Development Office Contractor	Approx. Rs 1800000.00 NRs. 2,400,000 Contractor responsibility
Social Operation Stage				
	Encroachment of ROW	▪ The municipality will work with wards and local bazaar committees/groups to discourage encroachment into the RoW.	Municipality	Cost will be borne by municipality

	Traffic accidents and associated risks	▪ Raise awareness of traffic rules, pedestrian / cycle lanes and installation of speed bumps to control speed near pedestrian crossing areas ▪ Traffic management plan will be developed, especially along congested locations. ▪ Traffic control measures, including speed limits will be enforced strictly. ▪ Further encroachment and squatting within the ROW will be prevented. ▪ No school or hospital will be allowed to be established within 50 m of the road without permission from the planning authorities.	Municipality	Cost will be borne by municipality
	Limited access for elderly and differently-able people	▪ Provide training on the use of facilities; maintain signboards, lights, instructions in strategic locations.	Municipality	Cost will be borne by municipality
	Air and Noise Pollution	▪ Maintain signs and speed restrictions on the road section within settlements area to reduce vehicle speed, dust generation, and where horns will not be blown and traffic speed will be regulated. ▪ Strict enforcement of vehicle emission standards. ▪ Maintain road side tree plantation ▪ Air pollutant parameters (TSPM, PM10, SOx, NOx, COx, Pb). Conforming NAAQS of Nepal. ▪ Water quality (EC, PH, DO, TSS, Oil and Grease). Conforming WHO Standards. ▪ Noise levels (1 hr Leq dB(A). Conforming WHO standards.		Municipality will be responsible during operation stage.

7.3 Impact and Compliance Monitoring

Impact monitoring involves the monitoring of environmental and social changes and estimates inherent variation within the environment, identifies long term trends in the natural system, and derives conclusions by making comparison against a standard or target. Compliance monitoring is carried out to understand the implementation status of environmental and social requirements as documented in the ESMP and is shown below.

Municipalities will report on the implementation of the ESMP(s) and on the status of compliance with the instruments on a regular basis as part of the trimester progress report (to the DUDBC). Information shall include: 1) measures taken in furtherance of the safeguard instrument, ii) conditions, if any, which interfere or threaten to interfere with the smooth implementation of the safeguard instruments; iii) any feedback under the GRM of the ESMF, and iv) remedial measures taken or required to be taken to address such conditions.

Table 0.2: Selected monitoring indicators

Monitoring Sector	Parameters selected
Slope, stream protection	Effectiveness of slope protection, stream protection works
Socio-economic development in road alignment and ZoI	▪ Number of employment opportunities created ▪ Number of workers received training on enhancement of technical skills ▪ Change in transportation costs and time ▪ Number and type of enterprises, cottage industries established ▪ Change in status of basic services and utilities in the ZoI for e.g. education institutions, access to health infrastructures, water supply, energy status, trade and commerce ventures, shift in livelihood strategies among the populace from the ZoI ▪ Condition of affected infrastructures (if any) ▪ Occupational health and safety measures provided to workers ▪ Increase in number of people receiving social service facilities (school, health post) ▪ Increase in land value ▪ No. of accidents related to road ▪ State of settlement condition (no. of houses, shops, sanitation condition) ▪ Number and status of porter's livelihood

7.4 Monitoring activities and methods

Table 0.3: ~~**Table 7.3:**~~ identifies the specific compliance monitoring activities. Phase-wise/chronological details are provided for the methods, schedules, responsible implementing agency and the responsible monitoring agency. Compliance monitoring refers primarily to the pre-construction and construction stage of the project. The following government standards will be taken as reference for monitoring.

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Table 0.3: Impacts and monitoring of the project

Parameters	Verifiable Indicators	Verification methods	Monitoring locations	Schedule	Monitor agency	Cost
Change in Land Use	Changing Agricultural land, forest land, settlement area and barren land	Site observation, photos, discussion with communities	DIZ, IIZ and project affected wards	Continuous / construction (Yearly)	DSC	Included in DSC Contract
Quarrying of Construction Materials	Initiated erosion, changes in river regime, erosion by river systems, degradation of vegetation, water logging, waterborne diseases	Site observation, photos Records from local health centres	Quarry site areas	construction (Quarterly)	DSC	Included in DSC Contract
Noise and dust pollution	Total Suspended Solid, Particulates, noise level	Visual inspection, measurement, and comparing baseline data,	construction sites and at sensitive spots	construction / operation (Quarterly)	DSC	Included in DSC Contract
Use of bitumen storage, heating, spreading	Contamination of bitumen near water sources, land contamination	Visual inspection, measurement, comparison with baseline data,	construction sites	construction (Quarterly)	DSC	Included in DSC Contract
Road safety measures	Speed controls, traffic signboards, ROW encroachment, Pedestrian/cycle lane and speed bumps	Observation, photos and interaction with local peoples	ROW	Yearly throughout the project cycle	DSC	Included in DSC Contract
Road accidents	Type and number of accidents occurred Adequacy of occupational safety measures provided	Observations, photos, spot checks, interview with local peoples	Road alignment	Yearly throughout the project cycle	DSC	Included in DSC Contract
Cultural, religious and historical sites	Cultural and religious infrastructure, people perception, practices	Records, observations, interview with local people	Project area	operation (Yearly for 2 years)	DSC	Included in DSC Contract
Occupational and safety hazard	Safety equipment like helmets, globes, boots etc., insurance, potable water, basic first aid kit	Observation, records and interview with workers	camp and working area	construction (daily)	DSC	Included in DSC Contract
Possible township/ribbon development along the road	Congestions to road users Number of accidents, ROW encroachment	Records, observations	Project Area	operation (Yearly for 2 years)	DSC	Included in DSC Contract

The monitoring will be performed in active construction sites (road and other foot prints which details are provided in annex)

7.5 ESMP for Beneficial and Adverse Impact

The measures and actions proposed for augmenting the identified beneficial aspects the Mangalapur-Kanchibazar road upgrading project, as well as proposing a set of mitigation and precautionary measures to minimize or set off the potential adverse impacts is outlined in **Table 0.4**~~**Table 7.4:**~~**.**

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Table 0.4: Beneficial impacts of the project

Impact	Enhancement/Mitigation Measure	Enhancement/Mitigation Mechanism/Responsibility	Cost / Remarks
Construction Stage			
Employment opportunities for local people	Involve local people as per skills, qualifications (priority-based to the extent possible)	Contractor (DSC)	No additional cost
Employment to the women and disadvantaged groups	The contractor will coordinate with representative of disadvantaged and women group to employ those people, as many as possible	Contractor	No additional cost
Skills enhancement on construction, carpentry, masonry etc.	Organize skills enhancement training targeting the local youths, women, vulnerable, disadvantaged and skills enhancement of project workers	DSC	NRs 1400000.00 (for the people in the direct influence area)
Operation Stage			
Improved access and reduced travel time /transport cost	Fixing the minimum transportation cost in agreement with DTO, transport entrepreneurs and local people	Municipality, Transport entrepreneurs and local people	No additional cost
Environmentally friendly construction	The upgraded road will have a cycle track which helps to promote the use of non-motorized vehicles and reduces carbon emissions	Municipality	No additional cost
Maintaining open and green areas	A Green Utility Zone (Greenery) will be provided under the road upgrading, with various trees which will provide shelter from the heat, will create cool surroundings, and will improve the aesthetics of the road. A green area separating the footpath and cycle lane is proposed throughout the alignment. The green area will have tree plantations at certain intervals.	Municipality	Include in project cost
Change in livelihood through the promotion of business and industry	The municipality will facilitate measures to promote the establishment of new businesses and enterprises The PIU will create the suitable environment to promote business and industries based on local resources	Municipality PIU in coordination with local CBO/NGO/GoN offices	No additional cost
Gender and social empowerment	The subproject will serve to mainstream women, dalit, and other marginalized people by providing several income generating trainings and programs	Municipality in consultation with UDST in collaboration with local organizations	NRs. 1000,000

7.6 Costs of Executing the Environmental and Social Management Plan (ESMP)

All proposed mitigation measures will be integrated in the project design so that these measures may automatically form part of the construction and operational phases of the project. The cost of executing the suggested mitigation measures such as of slope stabilization, awareness, waste management measures, shall be included in contractor's environmental and social plans, whereas the and tree plantation, etc. comes under the BoQ. The other remaining total cost for the ESMP is outlined in **Table 7.5**.

Table 0.5: Cost of ESMP

S.N.	Activities/Measure	Total Cost (NPR)		Remarks
1.	Environment Mitigation (Pre construction phase)			
1.1	Electric /telephone Pole removal and reinstatement (as per BOQ)		30962335.29	Both sides along the road @ 20 m interval
	Dismantling of boundary walls and reconstruction of new boundary wall (Chainage 2+350, Janhit High School wall), Chainage 3+850, Semara health post, Chainage 3+290) boundary wall of Shiva Temple in RoW of road		-	Included in BoQ
1.2	Relocation cost of existing water supply (as per BOQ) LS		4878418.54	
2.	Construction phase and operation mitigation (specific activities not related to construction related mitigation) including GBV, girl trafficking, COVID, HIV/AIDs awareness, skill training etc Skill enhancement trainings (construction phase): Operation phase gender and social empowerment Awareness program in girl trafficking: GBV awareness activities: NRs. HIV/AIDS, COVID Awareness and Management: Waste management Tree plantation (1000 no)- Beneficial Impacts (refer table 7.4)	1500000.00		Included in contract BOQ
3.	Waste Management (Construction Waste and Waste from Labour Camp), Top Soil Management, Road Safety, Sewer and Drainage Stockpiling Management Traffic Management Labour camp Management Dust Management by water spraying		-	Construction waste management by Contractor's package and will be prepared during CESMP. Waste from camp is considered during camp site management.
4.	Environment Monitoring and Management Unit		-	The cost is already built in to DSC contract
5.	Protection of Water Course Crossing			Included in Design (BoQ)
6.	Roadside Plantation		-	Included in BoQ
7.	Capacity Building Trainings to Municipality		-	The project has allocated this activity under component II UDST contracted
8.	Construction of Retaining Wall		Included in BoQ	
9.	Road safety measures		Included in BoQ	
10.	Quarry Sites monitoring and Material Quality Check Up Air Sampling/ Noise measurement and management			Municipality contingency cost, PIU/DSC
11.	Stakeholder consultations, maintaining GRM at project level		900000.00	
	Total		36740753.83	Excluding Vat

7.7 Monitoring Cost

There will be no cost for establishment of Environment and Social Monitoring Unit as the monitoring unit lies within PIU as a DSC. The social, gender and environment expert within the DSC will monitor environment and social components and cost will be provisioned under DSC contract. The DSC will also consider cost requiring items such as air, water and noise monitoring.

7.8 Institutional arrangements

The institutional setup plays a vital role in successful implementation of Environmental and Social Safeguards measures. The Ministry of Urban Development (MoUD), Nepal has setup a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DUDBC) for NUGIP in Kathmandu. A Project Management and Support Team (PMST) will support the PCO in project implementation including ensuring compliance with environmental and social safeguards. A Project Implementation Unit (PIU) in each municipality is established for the implementation in the field. To ensure that the investment sub-projects are efficiently implemented, delivered on time, and completed in accordance with environmental and social safeguards requirements, technical assistance will be delivered through a Design and Supervision Consultancy (DSC). DSC will deploy engineering, procurement, E&S safeguards and other technical specialists to work closely with municipal engineers and other technical staff to design and supervise the implementation of the sub-projects in two clusters. The role of PIU/DSC includes implementation of ESMP, RAP, VCDP, etc. The PCO with support from PMST will review implementation support of environmental and social safeguard studies/ management plan prepared by PIUs/DSCs.

At subproject level, the contractor will be required to comply with the ESMP. Each municipality will need Environmental and Social Development (ESD) expert to review ESIA-ESMP, RAP-ARAP, etc. The E & S safeguard specialists of DSCs will regularly visit the subprojects to ensure project implementation in accordance to World Bank's safeguard standards and ESMP. The ESD will be a part of PIU. The role of DSC will also include ensuring compliance of pertaining laws, policies, regulation for all subprojects, coordination and liaising with government stakeholders as well as the World Bank with respect to various E&S issues. The PCO will have overall responsibility to ensure compliance with pertaining laws, policies, regulation for all sub projects, and development of sub-projects in sustainable way and allocation of fund for institutional capacity development. The reporting of the PMST on the monitoring and evaluation on the project's safeguard performance to WB is done internally by the PCO and externally by the WB experts.

Table 7.6: Roles and Responsibilities of the Stakeholders in ESMP Implementation

SN	Stakeholder	Roles and Responsibilities	Time Schedule
1	World Bank	• Review and final approval of ESIA and ESMP • Review project design and contract documents, against approved ESMP measures and give comments for corrective actions • Review of periodic monitoring reports of project construction and operation and taking of necessary actions in case of non-compliance	Recommendations and implementation
2	PCO/PMST	• Review and approval of ESIA and ESMP • Give permission for Project Implementation as per ESMP • Review project design and contract documents, against approved ESMP measures and give comments for corrective actions • Ensure that contractor commitments under the ESMP are reflected in bidding documents • Monitoring subproject to ensure the implementation of ESMP • Review of periodic monitoring reports of project construction and operation and taking of necessary actions in case of non-compliance • Environment and social monitoring Report preparation and	ESMP approval Before contract bidding As and when required construction and operation phases

SN	Stakeholder	Roles and Responsibilities	Time Schedule
		submission to the WB	
3	PIU/Municipality	• Incorporate ESMP mitigation measures are incorporated in the final project design and tender documents of project construction and operation • Acquire necessary permits and approval for project construction and operation • Monitoring and record keeping regarding environmental measures and impacts. • Compilation of environmental monitoring and performance report and dispatch for review through proponent to stakeholders	Before construction During construction, and operation phase Monitoring every month during construction
4	DSC	• Elaborate ESMP, if necessary and assist field engineers on the site inspection before approval of CESMP • Supervision of baseline, compliance and impact monitoring of construction contractor's activities as per responsibilities in the contract document and advise the PIU for needed actions at the site in regular environmental management meetings. • Preparation of monitoring report as mentioned in ESMP with a list of compliance and non-compliance works with recommendations • Monitoring of contractor's performance on meeting the provisions of tender documents and ESMP • Monitoring of the effectiveness of enhancement measures and mitigation measures	Pre-construction phase Regularly during construction phase (daily, weekly, monthly)
5	UDST	• Design Training, prepare training manual to include measures identified in ESMP • Provide training to DSC, PIU or Contractors to implement the training part included in the ESMP • Prepare report	During Construction Stage As per required
6	Construction Contractor	• Prepare a detail CESMP for minimization of construction related impact and seek a prior approval • Provision of Environment Cum Safety Officer • Ensure all preparatory works are carried out as per the tender document • Implement mitigation measures as specified in ESIA, ESMP or as instructed by supervising engineer • First hand monitoring and record keeping of environmental mitigation measures implemented and their performance • Carry out all corrective actions or other instruction given by supervising engineers/DSC/PCO	Pre-construction phase Daily during construction phase Regularly during construction phase.
7	Affected Stakeholders	• Ensure that the local level complaints are adequately address • Assist and provide suggestions to the PIU in the matters related to community	As and when required

STAKEHOLDER ENGAGEMENT AND CONSULTATATIONS

8.1 Stakeholder engagement overview

Regular stakeholder engagement and consultations are necessary to ensure widespread and meaningful participation of key stakeholders with focus on the project affected people. Successful implementation of the subproject requires coordinated efforts of various stakeholders at different levels. Hence, communication and consultations at different levels were used as a tool to inform and educate stakeholders about the proposed project intervention.

There are two key objectives of effective stakeholder engagement and consultations. First, it is to keep all stakeholders informed of the project activities, and any potential beneficial and adverse impacts. Second, it is to ensure that stakeholders actively participate at all levels of the project cycle, to enable sharing of valuable local knowledge involvement in the development of mitigation plans to minimize the potential negative impacts of the project, and so are well equipped to take over the responsibilities of operation and management once the project phases out. These will ultimately contribute towards narrowing down the gaps between the project officials and beneficiaries, and to help create a conducive environment to mitigate against the adverse social and environmental issues through optimal cooperation from the project beneficiaries themselves.

Community participation can be effective if local people are empowered. The method of community participation needs to be planned to reflect the community profile and nature of the project. Different communication methods are integrated together communicates the community as focus group discussions, meetings, and workshop. The plan ensures the following:

- Ensure local ownership
- Include different types of stakeholder's group in participation process
- Generate and respond to feedback

Public consultation and community participation helps to remove such uncertainty and at the same time help the project implementation with its methodology as well as work plan. It is assisted in the identification of the problems associated with the project, as well as the needs of the population likely to be impacted. This participatory process helps in reducing the public resistance to change and enabling the participation of the local people in the decision-making process. The involvement of the various stakeholders ensures that the affected population and other stakeholders are informed consulted and are allowed to participate at various stages of project preparation. Different strategies have been adopted for communication/ consultation during implementation stages. Stakeholder engagement strategy outlines engagement through the project development phases and recommends a set of stakeholders' engagement activities to be carried out throughout the project development phases. This chapter also outlines the disclosure to be made and other communications to be made during the project cycle.

Various stakeholder consultations were held during the design of the subproject to understand project questions and concerns, and to incorporate any concerns and feedback into project design. A table of the stakeholder consultations held to date has been included at Annex 1. Stakeholder consultations including with vulnerable groups such as women's groups, and indigenous groups, and information dissemination will continue through project implementation as detailed further below.

8.2 Stakeholder Engagement Procedures and process

The subproject will draw on existing mechanisms and procedures established at the local level to carry out stakeholder engagements. The municipality forums will be the primary mechanism for engaging with stakeholders and community participation, to ensure that projects identified reflect local needs and priorities. Other mechanisms for community engagement and consultations include community-based user committees in construction supervision and operations and maintenance, as a social accountability and safeguard mechanism. The stakeholder consultations will draw on mechanisms already established at the local level. Where mechanisms for stakeholder engagement do not already exist, a mechanism elaborated below will be followed:

8.2.1. Stakeholder Mapping

The primary objective of stakeholder analysis is to map the stakeholders, their role, operational network, representation requirements and impact on type of activity in the project to strategically prioritize consultations with them. The stakeholder interactions will be through:

- Focused group discussions (FGD)
- Public consultations
- Key informant interview (KII)
- Indigenous and women groups discussion
- Consultation with institutional stakeholders

The stakeholder mapping is undertaken through formal and informal consultations and their interests concerned with the project activities should be identified throughout the project cycle. The stakeholders identified for the subproject are presented in **Table 0.1~~Table 8.1~~**.

Table 0.1: Stakeholder roles and responsibilities

Level	Stakeholder	Roles and Responsibilities	
Federal	MoUD DUDBC (PIU)	Facilitate the implementation of the subproject, coordinate with agencies, undertake monitoring and reporting to WB	
	DoR, MoFE, (PIU)	Support coordination, and sectoral policy implementation	
Local	Municipality, Ward Offices Tole Development Committees	Support the process of subproject selection, identify beneficiary and their needs, support coordination, support grievance and dispute resolution	
	NEA, DFO, LRO, DoI DCC, Traffic Police , Water Users Committee	Provide specialized inputs on local conditions, permissions, technical input limitations and needs of the public, provide compensation estimation, provide required assistance during project implementation, and support monitoring	
Subproject Level	Ward representative Associations) and All types of local user groups	Engage and participate in consultations, support in project implementation	
	Extended users of the project		
PCO		Overall Monitoring and Coordination	Executing agency
PMST		To support PCO in monitoring and control ,will work as a helping hand to PCO, coordinate with the municipalities and DSCs of municipalities	Executing Agency
DSC (Design and Supervision Consultant)		Design and overall management of UDG contract in municipality Will help PIU of municipalities in overall design, contract management, supervision will coordinate with PMST	Consultant

8.3 Mechanism for Consultation

The consultation process envisages involvement of all the stakeholders' at each stage of subproject planning and implementation. Involvement of the community is not limited to interactions with the community but also disclosing relevant information pertaining to the project tasks. Community participation is and will be ensured at all stages. Dissemination of project information to the community and relevant stakeholders will be carried out by the PIU. The community will be made aware of the project alternatives and necessary feedback will be obtained; other stakeholders will be involved in the decision making to the extent possible.

The outcome of consultations is incorporated as appropriate into the design and ESMP. As part of such consultations, the draft ESMP will be presented and explained to the people on the content and process of the implementation of the plans. Consultations with project affected persons and their profiling are conducted as per the requirements of ESIA, and preparation of the RAP.

8.3.1. Public/Community Consultation Plan

All consultations on social and environmental issues will be carried out during implementation of the project will be done in an inclusive manner, including vulnerable social groups (such poor household, caste, persons with disabilities, among others) and women. Details of the Project Consultation Plan are presented in Error! Reference source not found.~~**Table 8.2**~~.

Table 0.2: Project Consultation Plan

Objective and Target Goal	Method	Responsibility
I. Build Local Ownership		
Introduce Project DPR Report and its components	Group Meeting/Workshops	DPR Consultant/ PCO/Municipality
Maintain efforts for two-way communication with relevant stakeholders through the project	Face to face meeting with concerned stakeholders	PCO, Design Supervision Consultant, Ward Level Authority
II. Start Consultation Process with Potentially Affected Communities by construction and operation of road		
Identify communities to be potential affected by project	Electronic and face to face communication with relevant stakeholders and implementing agencies	PCO, DPR Consultant Municipality Ward Authority
Consult with community representatives and ensure that their concerns with the proposed project are addressed	Face to face meeting with community representative (includes social officer of Municipality, women's representative etc.) Meeting will take place following protocol for meeting (social distancing , wearing of masks by all the participants, use of hand sanitizers, conducting meeting in a open and ventilated places)	PCO, DPR Consultant Municipality Ward Authority
Ensure that the views and needs of vulnerable segment (if required) of communities, including but not limited to poor, women, elderly, and are addressed by the subproject	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO, Design and Supervision Consultant Municipality Ward Authority
III. Implementation Phase		
Maintain effective communication with PIU	Electronic and face to face communication with representative of relevant agency /organization	PCO, Design and Supervision Consultant Municipality Ward Authority
Raise awareness of project activities among potential beneficiaries	Media advertisements and targeted campaign	PCO, Consultant/ Municipality
Maintain consultation process with a potential affected communities and beneficiaries	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO, Design and Supervision Consultant Municipality Ward Authority
Monitoring and evaluation community involvement	Face to face meeting with affected communities' representative	PCO, Design and Supervision Consultant Municipality Ward Authority
Reports outlining progress of activities related to engagement and communication	Collation of progress report, self-evaluation by PCO	PCO
Agreement on operation and maintenance system	Electronic or face to face communication with relevant stakeholder Face to face meeting with local authority	PCO, Design and Supervision Consultant Municipality Ward Authority
Implementation of ESIA	The contractor will prepare the various stand alone plans to comply with ESIA requirements By including all the stand alone plans, the contractor will prepare Contractor's Environmental and Social	The requirements stipulated in ESIA shall be included in bid document of the contractor. The contractor will prepare the

Objective and Target Goal	Method	Responsibility
	Management Plan (ESMP) and submit it to PIU. This requirements will be included in the contract BOQ	stand alone plans and submit it to the PIU before the construction begins and obtain approval. The standalone plan includes ; environment, health and safety management plan, traffic management plan, grievance redress plan, spoil management plan, emergency preparedness plan, camp management plan, labor management plan, air/water/noise management plan to name a few.

8.4 Information Disclosure

For the success of the project, all information about the proposed activities and their expected results will be publicly shared with the affected people and interested stakeholder. In collaboration with the relevant local authorities, NGOs and other community groups, the project will disclose all the relevant information in the various stages of project cycle. Agencies working for environmental and social aspects will also be informed about the ongoing and planed activities, to identify jointly appropriate protective or corrective measures. The following approaches will be adopted to make information accessible to all the concerned stakeholders throughout the project cycle.

- Mass Media: Use local media like newspaper, radio and TV.
- Meeting/Workshops
- Distribution of project documents: Certain project documents will be disclosed in Nepali (or other relevant local language). Project-related information materials will be distributed prior to each construction work to local officials, local people, stakeholders and other concerned offices like municipality, Ward, Tole Committee etc.

An Information Centre will be established at the municipality office during implementation to disseminate all the documents related to the project activities. Based on the public information disclosure policy, PCO and the municipality will unveil the information through its website. The information dissemination plan for Mangalapur-Kanchibazar Road project is presented in **Table 0.3~~Table 8.3~~.**

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Table 0.3: Information dissemination plan

Means of Communication	Timeline & Frequency	Responsibility	Resources
Municipality Website (project details, grievance mechanism)	At the start of the project which will be maintained throughout the project	PIU/ Information Officer	Information Officer
Newspaper and local Radio (project salient features, dates, grievance mechanism etc.)	Project implementation phase Weekly basis	PIU, municipality Information Officer	Radio-program/Talk show, FM Radio Clip
Project leaflets and Fact Sheet	Project details, Implementing agencies, project period - 2 times	PIU, Information Officer	Doubled sided color A4 500 copies
Face to face engagements - meetings, focus group discussion with relevant stakeholders including vulnerable groups such as women's groups and indigenous groups.	Project Main Activities, Financial Assistance, Implementing agencies, project period etc. 2 time in year	PIU, Information Officer	

8.5 Grievance redress

As part of the implementation stage the PIU, the project municipality, project engineers and Environment and Social staffs will directly interact and consult with the project affected persons. These would comprise of consultations towards relocation of the PAPs, relocation of cultural properties, and towards addressing the impacts on common property resources such as places of religious importance, community buildings, trees, etc. Since such type of resettlement and rehabilitation are not envisaged in this project, there is no need to include such aspects in this project. The information provided here are for understanding purpose and if applicable in future (if it triggers)
The stakeholders may raise any grievances related to the impacts on them or any other grievances. Such types of grievances need to be addressed through grievance redress mechanism (GRM) for timely response on stakeholders' query and concerns.

A grievance redress mechanism is established to allow stakeholders including PAPs to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). Stakeholders will be made fully aware of their rights and the procedures.

8.5.1 Grievance Redress Processes – existing mechanisms at the local level

At the municipality level, community disputes including environmental and social disputes and property disputes are directly submitted to the municipality's Judicial Committee. The Judicial Committee is a three-member body chaired by the Deputy-mayor of the LG. By design, it is meant to mediate and/or resolve disputes between community members of the municipality. Grievances can also be submitted to District Administrative Officer (DAO) at District level or to Ward Chairman at Ward Level. Besides the Judicial Committee, the municipality also has a separate desk to register gender-based grievances/cases. These mechanisms and procedures are not fully operational so need to be strengthened further to perform its role more effectively. The Tilottama municipality has approved a Public Accountability Procedure 2077 which has the provision for a grievance management committee headed by the Deputy Mayor.

8.5.2 Grievance Redress Mechanism under the subproject

Existing mechanisms for grievance redress at the local level will be drawn upon under the project to enable grievants to lodge issues, complaints and requests for information, where feasible, to help support and build the capacity of local governments. Component 2 of NUGIP on institutional strengthening will support the strengthening of existing grievances mechanisms at the municipality level. For this subproject, a project-based mechanism will be established in the interim to facilitate the uptake and resolution of grievances related to the subproject.

8.5.3 Structure of the GRM

The grievant should first raise any project-related grievances with the project site office, which will decide whether the grievance can be resolved at project level or other mechanism. A dedicated person will be placed as a grievance officer to look after grievances, who may include the project manager or other assigned person. The person will either resolve on site or refer the case to the grievance redress committee (GRC) according to the nature of grievances. Records shall be kept properly. The grievant may also raise their complaint with the ward chairperson. The GRC in the municipality will include each Ward Chair from the project affected area and include an engineer from the sub project and the focal point from the PIU. Grievances that can't be resolved by the GRC will be escalated to the PCO level, comprising members from the PCO. Those engaged as the monitoring unit for ESMP, RAP related issues (as of no issues and implications that RAP will trigger for this project but if triggers due to some circumstances, it could be part of the committee. Special project grievance mechanisms such as on-site provision of complain hearings allows project affected persons to get fair treatment on time. The subproject will also handle issues regarding the compensation damages done during construction.

8.5.4 Processes of the GRM

Grievances shall be submitted through various mediums, including in person, in written form to a noted address, through a toll-free phone line or through direct calls to concerned officials, and emails. The PCO will appoint a person (Operator) at PCO- Kathmandu to receive such calls and online messages. The person (Operator) based on nature of complaint, will forward the same to the information office or ward committee. A ticket or a unique number will be generated for all such call, messages and letters. The complainant will follow up based that unique

number with Operator at PCO-Kathmandu. All complaints will be responded within two weeks at any level. In case response is not received from 1stlevel within 15 days, the complaint will be escalated to next level. If complaint remains unaddressed at 1st and 2nd within maximum 30 days after registering the compliant, it will be elevated to 3rd level at PCO level. The PCO within 7 days of time should instruct the concerned person at PMC level to arrange for a hearing within maximum 5 days of time. Effort will be given by all levels of GRCs to conduct hearing and resolve the concern at their level up to the satisfaction of complainant within the stipulated timeframe. In case 1st and 2nd level GRCs are unable to resolve the concern up to the satisfaction of complainant, these GRCs' or Complainant may approach to 3rd level of GRC at PCO Level. After conducting hearing at any level of GRC, the decision will be communicated to complainant within maximum 30 Days of time.

All local contact information and options for complaint submission will be available on site, on Toles, Wards, municipality office, PCO on information boards and the project municipality websites. A half yearly report on Grievance Redress by the subproject project will be prepared and will be sent to the project municipality's GRCs by Wards' GRCs and ultimately to GRC of PCO. The PCO will forward the same to the World Bank.

8.5.5 Further details of the GRM

The functions of grievance mechanism include redressing grievances of community / beneficiaries /project affected persons in all project respects, providing rehabilitation and resettlement assistance and related activities, and hearing grievances from workers involved in the project at any level or phase. The system should be established to report back to the concerned community or persons regarding the decision on the complaint. The grievances related to women should be dealt by women officer. As required, the social mobilizers will be recruited. GRC will deal/hear the issues related to Environment, R&R and individual grievances and will give its decision/verdict within 30 days after hearing the aggrieved person. The final verdict of the GRC will be given by the Head of GRC in consultation with other members of the GRCs and will be binding to all other members. Potential grievances which may need to be addressed are listed below:

- Rehabilitation & Resettlement and Compensation issue
- Loss of livelihood
- Access to resource /utility/facility
- Ambient air and noise Quality
- Impact on water quality/resource
- Grievance from vulnerable community
- Gender related issues
- Grievances from workers
- Safety and risk repeated to project development

8.5.6 Other Mechanisms for Grievance Redress

All complainants have the option to approach court/judiciary or the World Bank's Grievance Redress Service in case he or she is not satisfied with the verdict provided.

ANNEXES

ANNEX I: CONSULTATION WITH THE MEMBERS RESIDING IN DIFFERENT LOCATION OF TILLOTAMA MUNICIPALITY

Stakeholder Consultations held during subproject preparation

Date	Consultation type	Composition of participants	Issues raised	Response from project
Aug 4 to Aug 6, 2021	Individual consultations with women	Consultations with 15 women members residing in different location of Tillotama Municipality ward # 7,9 & 10 along the road side	• Quite positive and enthusiastic to support the Govt. /Pjt to construct the road. • We are in trouble due to the delay for road construction. • Increasing the number of accidents. 2/3 accidents per day. • No single person is against the road project. • The trees need to be planted by the project • Road is our priority. Facing the troubles due to the poor condition of road for last 4 years, hence they are excited that road will be finally built • There is no serious conflict, all are in favor of road construction • Expect that road construction will begin soon	The project will carefully design the road considering the mitigation measures. The process of preparing the safeguard documents will be expedited.
July 23, 2021	Key Informant Interview	Byas man Tharu Ward 10, Ward Chairman	• All ready to clear ROW in Ward 10 in writing and some have demolished • One Tharu family and one Kurmi family will be totally displaced due to ROW extension, and resettlement may be needed • Health post compound wall of Semara, 1 house, with female headed is affected up to 10 houses have partial loss to property of house • 1 temple in Sagraha needs relocation, and have promised to relocate to local site • Municipality Ward 10 is positive and looking forward to making project successful request to go to tender soon	There will be no impact on structures except 3 boundary walls belonging to school, health post and Shiva Temple. Tharu and Kurmi family will not be displaced.
July 23, 2021	Key Informant Interview	Durga Prasad Pandya Ward 7, Ward chairman	• Road section is best for Buddha circuit and has good agriculture land • Public are positive for construction, and reconstruction of road needs to tender fast • Public is okay to make ROW clear and some are already demolished • It is likely that 2 temples and 1 gumba need relocation, public are okay and will look for appropriate place to relocate • Municipality will be liable for all rehabilitation issues • Samara Mavi, Gatam Buddha compound wall affected	Dismantling of boundary wall and construction of new boundary wall (Chainage 2+350, Government school wall), Chainage 3+850, semara health post, Chainage 3+290) boundary wall of Shiva which falls Temple in RoW of road. Besides these no other structures will be impacted

Date	Consultation type	Composition of participants	Issues raised	Response from project
July 23, 2021	Key Informant Interview	Mr. Basu Dev Ghimire Mayor, Tilottama Municipality	• The mayor was briefed about the project details and environmental and social issues and proposed mitigation measures by ESIA team • The mayor informed the team that there are no such issues in RoW and all the RoW land belongs to municipality. He has committed to provide a written letter mentioning that RoW land is in jurisdiction of Tilotamma Municipality • The mayor requested the project team for starting the project at the earliest. .He further mentioned that municipality will extend the required support and cooperation to the project.	Preparation of the safeguard documents will be expedited hoping to get approved.
July 23, 2021	Key Informant Interview	Mr. Narayan Neupane Ward No 9, Ward chairman	• Mr Neupane mentioned that all the public utilities like water supply, electric poles, telephone poles needs to be shifted away from the RoW of the road prior the construction phase. • He has emphasized that job opportunities should be provided to the local people	The project assured that all the public infrastructures will be shifted prior the construction of road. The project informed that based on the skills and qualifications the workers/staff will be recruited. The local will get priority in hiring based on skills and qualifications
July 23, 2021	Key Informant Interview	Mr. Madhav Pokharel Section Officer, Tilottama Municipality	• The awareness on road safety to pedestrians, drivers should be provided. • Adequate safety, warning and informative signs needs to be kept in strategic places along the road alignment	ESIA has captured these requirements and shall be implemented
July 23, 2021	Key Informant Interview	Mr.Om Prakash Yadav Bebara,ward No: 10 Tilottama Municipality Mobile: 9847015186	• During the construction phase the control of dust, vehicle speed must be maintained. • He has advise to maintain the quality control of the construction.	These issues of construction phase dust control and speed control are addressed in ESIA
July 23, 2021	Key Informant Interview	Mr. Khilawan Yadav Student, Bebara , Ward No 10	• The project should display the board providing all the details of the construction activities, start date, name of the contractor, consultant including their phone number, total budget etc like in other project	This will be prepared and displayed upon the finalization of contractor by the project.
July 23, 2021	Key Informant Interview	Mr. Salin Chaudhari Labor, Bebara, Ward No: 10	•	
July 23,	Key Informant	Mr. Indra Prasad Basel	• He is curious to know the start and ending date of the road	

Date	Consultation type	Composition of participants	Issues raised	Response from project
2021	Interview	Rikshaw Driver, Ward N0: 7	construction. • He has shown the quality of the construction work	
July 23, 2021	Key Informant Interview	Ms. Chandra kala Neupane, Manyata Hotel, house Owner	• She is more concerned about the construction and operation phase impact like road safety. The strict implementation of speed and responsible driving is essential as structures are built close to RoW	This will be addressed in ESIA
July 23, 2021	Key Informant Interview	Mr. Min Raj Bhusal, Owner of the house of Pradip Kirana store	• The Bhirahawa Lumbini Ground water project has already acquired 13 meter of RoW long time ago in this proposed road section. However due to encroachment the RoW is varied along the proposed road alignment. He is in opinion that Tilotamma municipality must clear land and structures with the 13 meter RoW already acquired by the government.	The municipality has already acquired the required RoW.
July 23, 2021	Key Informant Interview	Mr, Babu Ram rana House owner, (A.B. Tailor) Mangalapur	• The project has demarcated 13 meter RoW with red mark which has created confusion to local household	In order to avoid impacts on land and structures, the project has maintained different RoW (i.e The project is divided in to three different cross sections viz type –A, type B, and type C. Type A proposed road width is 7.7 meter (from Chainage CH 0+000 to 0+0380), total length of type A is 0.038 Km, ii) type B: proposed road width is 11 meter (at different chainage of settlement area), total length of type B is 0.942 Km. iii) Type C-proposed road width is 13 meter (at different chainage). The total length of type C is 4.02 Km.
July 23, 2021	Group discussion	Ward no 7 (5 participants of which 4 Indigenous people, 2 women)	• Road should equally measure from centre point in both side • Irrigation canal of bhailabhuja should manage before the construction of road • The road has to be made.	The measures will be taken during design. The cost will be included in DPR if needed.

Date	Consultation type	Composition of participants	Issues raised	Response from project
			• Reasonable compensation should be provided • If the Bhailbhuja (Bhairahawa Lumbini Ground Water Project's') canal affects the house after the relocation, then the project should provide compensation to the affected families too.	
July 23, 2021	FGD – Ward 10	Ward no 10 Sagrahuwa (8 participants, Indigenous)	• It's been a long time we heard this road will be widen, it should be done fast. • The compensation should be paid to affected people • Proper compensation should provide for tree cutting and demolished structures.	The trees will be planted on either side of the road.
July 23, 2021	FGD – Ward 10	Ward no 10 Sagrahawa (11 participants, Indigenous)	• Any physical displacement or economical loss should be informed prior by the project • We are ready to clear ROW • The project should accomplish as soon as possible.	The infrastructures if needed to dismantle, the meeting will be conducted and included in the project cost if relevant.

Mangalapur -Kanchhibazar Road Section, Date: 2021/08/04 till 2021/08/06

KII with Women

Tillotama Municipality ward # 7, 9 &10
Rupandehi

Consultation with the women members residing in different location of Tillotama Municipality ward # 7,9 &10 along the road side

S.N.	Name of the Participant	Address/Location	Contact #	Remarks
01	Sarasoti Pandey	Tillotama -7, Semara	9804439835	Quite positive and enthusiastic to support the Govt. /Pjt to construct the road.
02	Yamkala Pandey	Tillotama -7, Dada Bazar, Semara	9867145337	We are in trouble due to the delay for road construction.
03	Rima Karki	Tillotama -7, Semara	9847066254	Increasing the number of accidents. 2/3 accidents per day.
04	Sita Bhandari	Tillotama -7, Pragati Tole, Semara	9847023569	No single person is against the road project.
05	Parbati Pandey	Tillotama -7, Semara	9847016613	
06	Mishu Sashi	Tillotama –9, Mangalapur	9815465405	
07	Sakuntala Thapa	Tillotama –9, Tulsipur	9847131806	The trees needs to be planted by the project
08	Bhagawati Kanel	Tillotama –9, Tulsipur	9847023161	
09	Puspa Subedi	Tillotama –9, Tulsipur	9806909346	Road is our priority. Facing the troubles due to the poor condition of road for last 4 years , hence they are excited that road will be finally built
10	Rama Rana	Tillotama –9, Keuleni	9804467511	There is no serious conflict, all are in favor of road construction
11	Sabitra Tharu	Tillotama –10, Sagrahawa	9806955091	
12	Om Kumari Kunwar	Tillotama –10, Sagrahawa	9825484557	
13	Ratrani Tharu	Tillotama –10, Sagrahawa	9821930006	
14	Tapewari Tharu	Tillotama –10, Sagrahawa	9819400219	Expect that road construction will begin soon
15	Shanti Tharu	Tillotama –10, Sagrahawa	9827590677	

ANNEX II: KEY INFORMANT INTERVIEW (KII)

Key Informant Interview (KII)

1. Mr Basu Dev Ghimire- Mayor, Tilotamma Municipality
2. Mr. Narayan Neupane, Ward Chairman, ward no 7
3. Mr. Madhav Pokharel, Section Officer, Tilotamma municipality
4. Mr Om Prakash Yadav- Bebara, Tilotamma 10, 9847015186
5. Mr. Khilawan Yadav, - Student, Bebara, Tilotamma 10
6. Mr. Shalin Chaudhary-Labor, Bebara, Tilotamma 10
7. Mr Indra Prasad Basel, Rikshaw Driver
8. Ms. Chandra Kala Neupane, Manyata Hotel house owner
9. Mr Min Raj Bhusal, Owner of house of Pradip Kirana Pasal
10. Ms Prem Kala Neupane, Mangalapur
11. Mr. Babu Ram Rana, House owner (AB tailor), Mangalapur

Stakeholders Consultation
Nepal Urban Governance and Infrastructure Project (NUGIP)
ESIA and ESMP of Mangalapur-Kanchibazar Road of Tilottama Municipality, Rupandehi
Attendance Sheet

Date. 2021/07/23 ...... Venue: Tilottama-10, Ward Office

Name: Byas Mun Thapa

Occupation/Organization: Ward Chairman, Tilottama-10

Comments/Suggestions

1) It is main road and set to make exemplary road to make ROW 43 feet & is connecting road to Parasi with many bridges made.
2) All ready to clear ROW in Ward-10 in writing & some have demolished too
3) One Tharu and one Kurmi family will be totally displaced due to ROW extention & resettlement may be needed & land for land is expected by those families.
4) Health post compound wall of Semara, 1 house with female house head ~~heads~~ is affected & upto 10 house have partial loss to property & house.
5) 1 temple in Sagraha need relocation & have provision to relocated to local cl[illegible]
6) Municipality Ward-10, is positive & looking forward to working to make the project success & request to make & go to tender soon
7)

Signature:

12.

KII

Stakeholders Consultation
Nepal Urban Governance and Infrastructure Project (NUGIP)
ESIA and ESMP of Mangalapur-Kanchibazar Road of Tilottama Municipality, Rupandehi
Attendance Sheet

Date..2021/07/23.....**Venue:** ..Tilottama Municipality, Ward-07 office.....

Name: ..Durga Prasad Pandaya.....

Occupation/Organization: .Ward-07, Tilottama Municipality, (Director).....

Comments/Suggestions

1) This road section is best for Buddha Circuit & has good agriculture land.
2) The public are positive for construction & reconstruction of road & needs to be fast
3) Public are ok to make ROW clear & some are already demolished
4) 2 temples & 1 gumba needs relocation & public ok for it & will look appropriate place if needed to relocate
5) Municipality will be liable for all rehabilitation issues on the project
6) Semara Mavi, Gautam Buddha Mavi compound wall effected
7) Semara Health post effected.

Signature: 08/04/2018

Annex III: Focus Group Discussions (FGD) Ward No. 10

FGD

Stakeholders Consultation
Nepal Urban Governance and Infrastructure Project (NUGIP)
ESIA and ESMP of Mangalapur-Kanchibazar Road of Tilottama Municipality, Rupandehi
Attendance Sheet

Date. 2081/07/23 ....Venue: Sagrahawa, Tilottama-10 ....

Attendees

S.N.	Name	Organization/Title	Contact No.	Signature
1)	दुधनाथ कुर्मी			दुधनाथ
2)	पशुपति थारु	Sagrahawa, 10 ward	9806447924	[signature]
3)	कमलेश्वरी चौधरी	"	9803023440	[signature]
4)	भगवानदास थारु	"	9825455205	भगवान दास
5)	हुकुम थारु	"	9843133444	[signature]
6)	ध्रुव नारायण थारु	"	9804447924	[signature]
7)	मधुमाया चौधरी	"	9826425988	मधुमाया
8)	मनोज थारु	"	9806905591	मनोज
9)	मनिषा कुर्मी	"	9821931291	manisha
10)	प्रदीप थारु	"	9800703674	प्रदीप
11)	परशुराम थारु	"	–	परशुराम

Suggestions

→ दुधनाथ कुर्मी: ६ धुर जग्गामा कोको घर भत्काउँदा पूरै विस्थापित हुने हुँदा जग्गाको राम्रो जग्गा दिए मनासिब।

→ ROW clear गर्नुपर्ने अहिले हाम्रो तयार (छैनौं)।

→ चौडा बाटो बनाउनुपर्ने।

FGD

Stakeholders Consultation
Nepal Urban Governance and Infrastructure Project (NUGIP)
ESIA and ESMP of Mangalapur-Kanchibazar Road of Tilottama Municipality, Rupandehi
Attendance Sheet

Date. 2081/07/23 ....Venue: Sagrahua (सग्रहुवा), Tilottama-10, ...

Attendees

S.N.	Name	Organization/Title	Contact No.	Signature
१)	हरिराम थारु	Sagrahua, Tilottama-10	9800921840	हरिराम
२)	बुद्धिराम थारु	"	"	बुद्धिराम
३)	फिरु थारु	"	9825404586	[illegible]
४)	मनोज थारु	"	9806974642	manoj
५)	शालिक [illegible]	"	—	
६)	अनिरुद्ध थारु	"	—	अनिरुद्ध
७)	लक्ष्मी थारु	"	—	लक्ष्मी थारु
८)	मीन कुमारी थारु	"	—	मीनकुमारी

Suggestions

1) बाटो बढाउन भनेर धेरै भयो भनेको तर बढेन, चाँडै बढाउन पर्‍यो।
2) बाटो बढाउँदा मुआब्जा दिनु पर्ने
3) पर्ने रुख र संरचनालाई मनासिब क्षतिपूर्ति दिनु पर्ने।

K11

Stakeholders Consultation
Nepal Urban Governance and Infrastructure Project (NUGIP)
ESIA and ESMP of Mangalapur-Kanchibazar Road of Tilottama Municipality, Rupandehi
Attendance Sheet

Date: 2021/07/23 Venue: Tilottama-7, Semarabazar

Attendees

S.N.	Name	Organization/Title	Contact No.	Signature
1)	सरिता पाण्डे	Tilottama-7	9817042613	[signature]
2)	बुद्धबहादुर गुरुङ	”	9867217157	Buju
3)	तेज नारायण श्रेष्ठ	”	9807-510142	[signature]
4)	रुपा गुरुङ	”	9847030263	Rupa
5)	रिना गुरुङ	”	9804377808	Rina

Suggestions

→ बाटो बनाउँदा centerline बाट बराबर हिसाब गरेर विस्तार गर्नुपर्ने।
→ शैलमुजाको नहरलाई व्यवस्थित गर्नु पर्ने पर्ने। सडक मात्र एक विस्तार गर्ने।
→ बाटो जसरी भएपनि बन्न पर्‍यो।
→ क्षतिपूर्ति मनासिब दिन पर्‍यो।
→ शैलमुजाको नहर सडक यदि घर दिन परेमा वा आंशिक रूपमा क्षति भएमा पनि न्यायोचित क्षतिपूर्ति दिनु पर्ने।

ANNEX IV: LABORATORY REPORTS

NS Accreditation No. Pra. 01/053-54

Date of Monitoring : 25 – 07 – 2021
Sample : Ambient Noise
Client : NUGIP Monitored By : NESS
Location : Ward 10, Tilotama

Community Sound Pressure Level, Tilotama

Sampling Point : Road Side Community, Kanchibazar road ward 10, Tilotama
Monitoring Date : 25-07-2021
Geographical Coordinates : 27°35' 00''N; 83°32'1.18'E
Height from the Floor : 1.5m
Starting Time : 18:00
Ending Time : 15:00
Distance from Road : 45 (appr.)

dB(A)

Noise Descriptors	Monitoring Hours				
	07:00 ~ 10:00	**10:00 ~ 13:00**	**13:00 ~ 15:00**	**17:00 ~ 19:00**	**19:00 ~ 22:00**
L_{min}	53	50	44	40	39
L_{95}	55	51	47	46	42
L_{90}	56	52	48	46	43
L_{50}	63	57	54	49	47
L_{10}	66	64	60	58	54
L_5	68	66	61	62	56
L_{max}	78	99	68	73	59
L_{eq}	**65**	**77**	**57**	**57**	**53**

Notes: L_{min}: Minimum Sound Pressure Level; L_{95}: Ninety-five Percentile Sound Pressure level; L_{90}: Ninety Percentile Sound Pressure Level; L_{50}: Fifty Percentile Sound Pressure Level; L_{10}: Ten Percentile Sound Pressure Level; L_5: Five Percentile Sound Pressure Level; L_{max}: Maximum Sound Pressure Level; L_{eq}: Equivalent Sound Pressure level; L_d: Daytime average Sound Pressure Level; L_n: Nighttime Average Sound Pressure level; dB(A): Decibel A-Weighted; GoN: Government of Nepal;

Remarks: The daytime and nighttime observed sound pressure level at the monitoring site were 66dB(A) and 67dB(A) respectively. Similarly, the observed day and night sound pressure level was about 69dB(A). The observed daytime and nighttime average sound pressure levels complied the prescribed limits of GoN 2012{L_d: 75dB(A); L_n: 70dB(A)} for industrial area.

Nepal Environmental & Scientific Services (P.) Ltd.
G.P.O. Box 7301, Thapathali, Kathmandu, Nepal
Phone: +977-1-4244988, 4241001, Fax No.: +977-1-4226028,
Email: ness@mos.com.np, Website: www.nesspltd.com

NESS/Lab, M-03/QSR2.3

QSM Test Report / Certificate

NS Accreditation No. Pra. 01/053-54

Entry No. : NCL - 24(W) (1) - 07 - 2021
Sample : Boring Water
Client : Mangalapur- Kanchibazar Road Project
Sampled By : Dwarika Adhikari (NESS)
Coordinates : 27°35'00"N; 85°32'18"E
Altitude : 120m

Date Received : 25 - 07 - 2021
Date Completed : 13 - 08 - 2021
Sampling Date : 24 - 07 - 2021
Location : Tilottama-10, Sagrahawa

S. N.	Parameters	Test Methods	Observed Values	NDWQS, Nepal
1.	pH at 22 °C	Electromeric, 4500 - H^+ B.; APHA	7.6	6.5 - 8.5
2.	Electrical Conductivity, (µS/cm)	Conductivity Meter, 2510 B, APHA	386	1500
3.	Turbidity, (NTU)	Nephelometric, 2130 B, APHA	4	5
4.	Total Hardness as $CaCO_3$, (mg/L)	EDTA Titrimetric, 2340 C, APHA	200	500
5.	Total Alkalinity as $CaCO_3$, (mg/L)	Titrimetric, 2320 B, APHA	237	-
6.	Chloride, (mg/L)	Argentometric Titration, 4500 - Cl^- B, APHA	1.93	250
7.	Ammonia, (mg/L)	Direct Nesslerization, 4500 - NH_3 C APHA	<0.05	1.5
8.	Nitrate, (mg/L)	UV Spectrophotometric Screening, 4500 - NO_3^- B, APHA	1.99	50
9.	Nitrite, (mg/L)	NEDA, Colorimetric, 4500 - NO_2^- B, APHA	N.D.(<0.02)	-
10.	Calcium, (mg/L)	EDTA Titrimetric, 3500 - Ca B & 3500 - Mg B APHA	47.3	200
11.	Magnesium, (mg/L)		19.9	-
12.	Iron, (mg/L)	Direct Air - Acetylene AAS, 3111 B, APHA	0.23	0.3
13.	Manganese, (mg/L)		<0.02	0.2
14.	Arsenic, (µg/L)	SDDC, 3500 – As, C. APHA	N.D. (<0.01)	0.05

N.D.: Not Detected

Note:
NDWQS: National Drinking Water Quality Standard - 2063; AAS: Atomic Absorption Spectrophotometer; UV: Ultraviolet; EDTA: Ethyelenediaminetetraacetic acid; NTU: Nephelometric turbidity unit; NEDA: N-1-Naphthyleethylenediamine dihydrochloride; APHA: American Public Health Association.

Remarks: All observed values complied the prescribed NDWQS.

(Analyzed By) (Checked By) (Authorized Signature)

Note:
1. This report/certificate is in reference to Laboratory Quality System Manual, QSM (2021).
2. The result listed refer only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
3. Liability of our institute is limited to the invoiced test parameters & amount only.
4. Samples will be destroyed after one month from the date of issue of test certificate unless otherwise specified.
5. This report should not be reproduced wholly / partially for any advertising media without our permission.
6. The clients are requested to take back their hazardous samples along with the report/certificate.

ANNEX V: PICTORIAL HIGHLIGHTS OF FIELD SURVEY WORK

List of Home owners whose house falls adjacent to RoW

Rohini bridge

Shiva Temple at Tilottama-10

School gate and fence adjacent to RoW of road

Physical condition of the road

Hand pump near road RoW

FGD with project affected families at Tilottama-7

FGD with project affected families at Tilottama-10

Gate and fence of siddharta gumba adjacent road RoW in Semara

Waiting station near RoW at Semara

Shiva Temple adjacent to RoW of road

Gate and wall near RoW of road in Semara Bazzar School

Pole at RoW

Public consultation at Tilottama-10

FGD at Tilottama-10

Structure at RoW on Tilottama-10

Bridge near Tilottama-7 ward office

Gate at RoW

Gate at RoW

Semara Bazar Health post

Condition of existing road

Consultation with women's group

Condition of existing road

Bridge Structure at RoW

Tree under RoW

Condition of existing road

Consultation with local stakeholders

ANNEX VI: CADASTRAL MAPS OF ALIGNMENT

ANNEX VII: LIST OF TREES TO BE REMOVED

List of Affected Trees to be removed

SN	Local Name	Common Name	Botanical Name	No of Trees to be Removed	Remarks
1.	Sissoo	Sissoo	*Dalbergia Sissoo*	12	
2.	Aap	Mango	*Mangifera Indica*	8	
3.	Nim	Neem	*Azadirachta indica*	11	
4.	Bakaino	chinaberry tree	*Melia azedarach*	8	
5.	Amba	Guava	*Psidium gaujava*	6	
6.	Ashoka	Ashok	*Saraca asoca*	8	
7.	Katahar	Jackfruit	*Artocarpus heterophyllus*	3	
8.	Kadam	Bur-flower tree	*Neolamarckia cadamba*	4	
9.	Litchi	Lychee	*Litchi chinensis*	2	
10.	Parijat	Night Jasmine	*Nyctanthes arbor-tristis*	2	
	Total			**64**	

ANNEX VIII: CULVERTS

Government of Nepal Ministry of Urban Development
Department of Urban Development and Building Construction
Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Quantity Estimate of Pipe Culvert (90 cm dia) with earth cushion
SUMMARY OF COST OF ROAD WORK INCLUDING CULVERTS
Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

S. No.	Description of Works	Unit	Nos.	Length (m)	Width (m)	Height (m)	Quantity	Rate	Amount	Remarks
1	Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials all complete as per drawing, specification and instruction in ordinary soil depth upto 3m									
	Head wall	cum	2	3.35	1.75	3.02	35.43			
	Pipe portion	cum	1.00	10.05	1.20	2.22	26.76			
	Appron	cum	2	1.50	4.03	0.30	3.62			
	Appron cut	cum	2	4.70	0.60	0.30	1.69			
	Total =						**67.50**			**cum**
	Total quantity for	**3**	**nos =**				**202.49**	**140.58**	**28,466.76**	
2	Providing and laying Random Rubble Stone Masonry work in cement mortar MM7.5 all complete as per drawing, specification and instruction									
	Head wall	cum	2	3.13	1.13	2.92	20.54			
	Deduction for pipe	cum	-2.00	1.13	0.95		-2.14			
	Appron	cum	2	1.50	4.03	0.30	3.62			
	Appron cut	cum	2	4.70	0.45	0.30	1.27			
	Wing Wall	cum	4	1.73	0.13	1.55	1.34			
	Total =						**24.63**			**cum**
	Total quantity for	**3**	**nos =**				**73.88**	**9979.92**	**737,349.83**	
3	Providing and laying of hand pack Stone soling with 150 to 200mm thick stones and packing with smaller stone on prepared surface all complete as per drawing, specification and instruction									
	Below head wall	cum	2	3.35	1.75	0.15	1.76			
	Below hume pipe	cum	0.00	12.50	1.20	0.15	0.00			
	Total =						**1.76**			**cum**
	Total quantity for	**3**	**nos =**				**5.28**	**5609.70**	**29,621.86**	
4	Providing and laying of Plain Cement Concrete Grade M 15 all complete as per drawing, specification and instruction.									
	Below head wall	cum	2	3.35	1.75	0.10	1.17			
	Below hume pipe	cum	1.00	12.50	1.20	0.36	5.40			
	Deduction for pipe portion		-1.00	12.50	Area	0.09	-1.07			
	Total =						**5.50**			**cum**
	Total quantity for	**3**	**nos =**				**16.51**	**10299.37**	**170,084.51**	
5	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications: (Section 20.7)									
	Head Wall	**m**	6	1.13			**6.75**			**m**
	Wing Wall	**m**	8	0.38			**3.00**			
	Total =						**9.75**			
	Total quantity for	**3**	**nos =**				**29.26**	**902.85**	**26,419.84**	
6	Providing and Laying Reinforced Cement Concrete NP3 Flush jointed pipe for culverts including fixing with cement mortar 1:2 all complete as per drawing, specification and instruction (SS 701) - 900 mm Internal Diameter.									
		m	1.00	12.50			**12.50**			**m**
	Total =						**12.50**			
	Total quantity for	**3**	**nos =**				**37.50**	**16378.09**	**614,178.23**	
7	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per drawing, specification and instruction Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m									

		cum	4	2.92	1.73	0.50	10.11			
	Total =						**10.11**			**cum**
	Total quantity for	**3**	**nos =**				**30.34**	**5845.83**	**177,334.06**	
8	Providing and laying of Filter media with granular Material/stone crushed aggregates to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition all complete as per drawing, specification and instruction									
	Head wall	cum	2	3.13	0.20	2.92	3.65			
	Wing Wall	cum	4	1.73	0.20	1.16	1.61			
	Deduction for pipe	cum	-2	Area	1.90	0.20	-0.76			
	Total =						**4.50**			
	Total quantity for	**3**	**nos =**				**13.49**	**3547.13**	**47,835.09**	
9	Providing and laying of a geotextile filter in weephole as per complete as per drawing, specification and instruction.									
	Weep hole	sqm	14		0.20	0.20	0.56			
	Total =						**0.56**			
	Total quantity for	**3**	**nos =**				**1.68**	**141.58**	**237.86**	
10	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.3-B)									
	Hush Bar	cum	0	12.50	1.7	0.25	0.00			
	Total =				0.3		**0.00**			
	Total quantity for	**3**	**nos =**				**0.00**	**14515.08**	**0.00**	
11	Providing and laying Reinforcement including cutting, bending, binding, fixing in position and lead etc. all complete as per drawing, specification and instruction									
	For side drain and cover of drain	MT	1% of total concrete volume				0.00			
			3	**Total Quantity**			**0.00**	117048.40	**0.00**	
	Grand Total								**1,331,523.04**	

Government of Nepal Ministry of Urban Development
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Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Quantity Estimate of Pipe Culvert (90 cm dia) without earth cushion
SUMMARY OF COST OF ROAD WORK INCLUDING CULVERTS
Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

S. No.	Description of Works	Unit	Nos.	Length (m)	Width (m)	Height (m)	Quantity	Rate	Amount	Remarks
1	Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials all complete as per drawing, specification and instruction in ordinary soil depth upto 3m									
	Head wall	cum	2	3.35	1.23	2.15	17.72			
	Pipe portion	cum	1.00	10.78	1.90	1.55	31.74			
	Appron	cum	2	1.50	4.03	0.30	3.62			
	Appron cut	cum	2	4.70	0.60	0.30	1.69			
	Total =						**54.77**			**cum**
	Total quantity for	**4**	**nos =**				**219.10**	**140.58**	**30,801.28**	
2	Providing and laying Random Rubble Stone Masonry work in cement mortar MM7.5 all complete as per drawing, specification and instruction									
	Head wall	cum	2	3.13	0.87	2.05	11.08			
	Deduction for pipe	cum	-2.00	0.87	0.95		-1.64			
	Appron	cum	2	1.50	4.03	0.30	3.62			
	Appron cut	cum	2	4.70	0.45	0.30	1.27			
	Wing Wall	cum	4	1.73	0.13	1.10	0.95			
	Total =						**15.28**			**cum**
	Total quantity for	**4**	**nos =**				**61.13**	**9979.92**	**610,086.96**	
3	Providing and laying of hand pack Stone soling with 150 to 200mm thick stones and packing with smaller stone on prepared surface all complete as per drawing, specification and instruction									
	Below head wall	cum	2	3.35	1.23	0.15	1.24			
	Below hume pipe	cum	0.00	12.50	1.90	0.38	0.00			
	Total =						**1.24**			**cum**
	Total quantity for	**4**	**nos =**				**4.94**	**5609.70**	**27,737.72**	
4	Providing and laying of Plain Cement Concrete Grade M 15 all complete as per drawing, specification and instruction									
	Below head wall	cum	2	3.35	1.23	0.10	0.82			
	Below hume pipe	cum	1.00	12.50	1.90	0.36	8.55			
			1.00	12.50	1.70	0.55	11.69			
	Deduction for pipe portion		-1.00	12.50	Area	0.56	-7.01			
	Total =						**14.05**			**cum**
	Total quantity for	**4**	**nos =**				**56.21**	**10299.37**	**578,942.19**	
5	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)									
	Head Wall	m	6	0.87			**5.19**			**m**
	Wing Wall	m	4	0.38			**1.50**			
	Total =						**6.69**			
	Total quantity for	**4**	**nos =**				**26.76**	**902.35**	**24,160.36**	
6	Providing and Laying Reinforced Cement Concrete NP3 Flush jointed pipe for culverts including fixing with cement mortar 1:2 all complet as per drawing, specification and instruction (SS 701) - 900 mm Internal Diameter.									
		m	1.00	12.50			**12.50**			**m**
	Total =						**12.50**			
	Total quantity for	**4**	**nos =**				**50.00**	**16378.09**	**818,904.31**	
7	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per drawing, specification and instruction Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1037 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m									

		cum	4	2.05	1.73	0.50	7.10			
	Total =						**7.10**			**cum**
	Total quantity for	**4**	**nos =**				**28.41**	**5845.83**	**166,054.50**	
8	Providing and laying of Filter media with granular Material/stone crushed aggregates to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition all complete as per drawing, specification and instruction									
	Head wall	cum	2	3.13	0.20	2.05	2.56			
	Wing Wall	cum	4	1.73	0.20	0.83	1.14			
	Deduction for pipe	cum	-2	Area	1.90	0.20	-0.76			
	Total =						**2.95**			
	Total quantity for	**4**	**nos =**				**11.78**	**3547.19**	**41,791.23**	
9	Providing and laying of a geotextile filter in weephole as per complete as per drawing, specification and instruction.									
	Weep hole	sqm	10		0.20	0.20	0.40			
	Total =						**0.40**			
	Total quantity for	**4**	**nos =**				**1.60**	**141.58**	**226.53**	
10	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)									
	Hoch Bar	cum	1	12.50	1.7	0.25	5.31			
	Total =				0.3		**5.31**			
	Total quantity for	**4**	**nos =**				**21.25**	**14518.08**	**308,509.20**	
11	Providing and laying Reinforcement including cutting, bending, binding, fixing in position and lead etc. all complete as per drawing, specification and instruction									
	For side drain and cover of drain	MT	1% of total concrete volume				1.67			
					Total Quantity		**1.67**	117088.40	**195,318.09**	
	Grand Total								**2,807,532.45**	

Government of Nepal Ministry of Urban Development
Department of Urban Development and Building Construction
Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Quantity Estimate of Pipe Culvert (120 cm dia) without earth cushion
SUMMARY OF COST OF ROAD WORK INCLUDING CULVERTS
Project Name: Upgradation of Mangalapur – Kanchibazar Road, Thulotama Municipality

S. No.	Description of Works	Unit	Nos.	Length (m)	Width (m)	Height (m)	Quantity	Rate	Amount	Remarks
1	Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials all complete as per drawing, specification and instruction in ordinary soil depth upto 3m									
	Head wall	cum	2	4.28	1.53	3.28	42.96			
	Pipe portion	cum	1.00	10.36	2.23	1.85	42.73			
	Apporn	cum	2	1.50	4.96	0.30	4.46			
	Apporn cut	cum	2	5.63	0.80	0.30	2.03			
	Total =						**92.18**			**cum**
	Total quantity for	**8**	**nos =**				**737.41**	**140.58**	**103,667.35**	
2	Providing and laying Random Rubble Stone Masonry work in cement mortar MM7.5 all complete as per drawing, specification and instruction									
	Head wall	cum	2	4.06	1.02	3.18	26.18			
	Deduction for pipe	cum	-2.00	1.02		1.61	-3.26			
	Apporn	cum	2	1.50	4.96	0.30	4.46			
	Apporn cut	cum	2	5.63	0.45	0.30	1.52			
	Wing Wall	cum	4	1.73	0.13	1.30	1.13			
	Total =						**30.02**			**cum**
	Total quantity for	**8**	**nos =**				**240.17**	**9970.92**	**2,396,918.73**	
3	Providing and laying of hand pack Stone soling with 150 to 200mm thick stones and packing with smaller stone on prepared surface all complete as per drawing, specification and instruction									
	Below head wall	cum	2	4.28	1.53	0.15	1.96			
	Below frame pipe	cum	0.00	12.50	2.23	0.45	0.00			
	Total =						**1.96**			**cum**
	Total quantity for	**8**	**nos =**				**15.72**	**5609.70**	**88,162.94**	
4	Providing and laying of Plain Cement Concrete Grade M 15 all complete as per drawing, specification and instruction.									
	Below head wall	cum	2	4.28	1.53	0.10	1.31			
	Below frame pipe	cum	1.00	12.50	2.23	0.36	10.04			
			1.00	12.50	2.03	0.72	18.14			
	Deduction for pipe portion		-1.00	12.50	Area	0.90	-11.27			
	Total =						**18.22**			**cum**
	Total quantity for	**8**	**nos =**				**145.75**	**10299.37**	**1,501,158.78**	
5	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete shutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)									
	Head Wall	m	8	1.02			**8.12**			**m**
	Wing Wall	m	4	0.38			**1.50**			
	Total =						**9.62**			
	Total quantity for	**8**	**nos =**				**76.96**	**902.85**	**69,483.59**	
6	Providing and Laying Reinforced Cement Concrete NP3 Flush jointed pipe for culverts including fixing with cement mortar 1:2 all complete as per drawing, specification and instruction (SS 701) - 1200 mm Internal Diameter.									
		m	1.00	12.50			**12.50**			**m**
	Total =						**12.50**			
	Total quantity for	**8**	**nos =**				**100.00**	**21357.50**	**2,135,750.02**	
7	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per drawing, specification and instruction Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1037 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 12 mm, Box size 2 X 1 X 1 m									

		cum	4	3.18	1.73	0.50	11.02			
	Total =						**11.02**			**cum**
	Total quantity for	**8**	**nos =**				**88.13**	**5845.83**	**515,173.97**	
8	Providing and laying of Filter media with granular Material/stone crushed aggregates to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition till complete as per drawing, specification and instruction									
	Head wall	cum	2	4.06	0.20	3.18	5.16			
	Wing Wall	cum	4	1.73	0.20	0.98	1.35			
	Deduction for pipe	cum	-2	Area	3.21	0.20	-1.21			
	Total =						5.22			
	Total quantity for	**8**	**nos =**				**41.79**	**3547.18**	**148,246.69**	
9	Providing and laying of a geotextile filter in weephole as per complete as per drawing, specification and instruction.									
	Weep hole	sqm	12		0.20	0.20	0.48			
	Total =						**0.48**			
	Total quantity for	**8**	**nos =**				**3.84**	**141.58**	**543.68**	
10	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)									
	Hatch Bar	cum	1	12.50	2.0	0.25	6.30			
	Total =				0.3		**6.34**			
	Total quantity for	**8**	**nos =**				**50.75**	**14513.08**	**736,792.74**	
11	Providing and laying Reinforcement including cutting, bending, binding, fixing in position and lead etc. all complete as per drawing, specification and instruction									
	For side drain and cover of drain	MT	1% of total concrete volume				3.98			
					Total Quantity		**3.98**	117088.40	**466,465.55**	
	Grand Total								**5,162,364.05**	

Government of Nepal Ministry of Urban Development
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Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (1.5M X 1M)

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	**Deck slab**								
1	**Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m**								
	Base	cum	1	10	2.75	0.90	24.75		
	Cutoff wall	cum	2	2.6	0.60	1.35	4.21		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	1.70	1.50	18.43		
	curtain wall type 1	cum	1	4.40	1.85	2.50	20.35		
	curtain wall type 2	cum	1	4.40	1.50	2.00	13.20		
	For	**2**	**nos**			**Total**	**172.73**	**140.58**	**24,283.47**
2	**Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)**								
	culvert	cum	1	10	2.75	0.5	13.75		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	1.70	1.81	0.5	6.14		
	Floor apron		2.00	1.20	3.20	0.5	3.84		
	Flexible apron								
	Up stream		1	3	4.40	0.5	6.60		
	down stream		1	6	4.40	0.5	13.20		
	For	**2**	**nos**			**Total**	**90.68**	**132.91**	**12,052.56**
3	**Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))**								
	Base	cum	1	10	2.75	0.15	4.13		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	1.6968	2.01	0.15	2.05		
	Floor apron	cum	2.00	1.20	3.20	0.15	1.15		
	Type 1 curtain wall	cum	1	4.40	1.85	0.15	1.22		
	Type 2 curtain wall	cum	1	4.40	1.5	0.15	0.99		
	For	**2**	**nos**			**Total**	**20.27**	**10299.37**	**208,807.83**
4	**Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20**								
	Wing wall								
	Tappererd portion	cum	4	1.70	Area=	1.89	12.85		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	4.40	AREA=	1.97	8.68		
	Type 2 curtain wall	cum	1	4.40	AREA=	1.47	6.46		
	For	2	nos			Total	62.86	13361.16	839,943.05
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	2.6	0.25	6.50		
	Wall	cum	2	10	0.25	1	5.00		
	Top Slab	cum	1	10	2	0.25	5.00		
	Fillet	cum	4	10	Area =	0.02	0.80		
	cutoff wall	cum	2	2.6	1.10	0.3	1.72		
			4	1.10	1.10	0.3	0.73		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	2	nos			Total	81.48	14518.08	1,182,991.53
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			40.74	6.40		
	For	2	nos			Total	12.79	117088.40	1,497,910.50
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	1.20	3.19982	0.45	3.46		
	For	2	nos			Total	6.91	8871.35	61,306.05
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	4.40	0.75	9.90		
	down stream		1	6	4.40	0.75	19.80		
	For	2	cum			Total	59.40	3373.36	200,361.19
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	2	nos			Total	32.00	5845.83	187,066.56
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	18				18.00		
	For	2	nos			Total	36.00	2488.88	89,599.68

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	2	nos			Total	60.00	902.85	54,171.20
Grand Total									4,358,493.61

Government of Nepal Ministry of Urban Development
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Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (2MX1M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m								
	Base	cum	1	10	3.35	0.96	32.16		
	Cutoff wall	cum	2	3.2	0.60	1.20	4.61		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	1.84	1.50	19.96		
	curtain wall type 1	cum	1	5.20	1.85	2.50	24.05		
	curtain wall type 2	cum	1	5.20	1.50	2.00	15.60		
	For	1	nos			Total	101.81	140.58	14,312.54
2	Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)								
	culvert	cum	1	10	3.35	0.5	16.75		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	1.84	1.81	0.5	6.65		
	Floor apron		2.00	1.30	3.90	0.5	5.07		
	Flexible apron								
	Up stream		1	3	5.20	0.5	7.80		
	down stream		1	6	5.20	0.5	15.60		
	For	1	nos			Total	53.68	132.91	7,134.98
3	Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))								
	Base	cum	1	10	3.35	0.15	5.03		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	1.8382	2.01	0.15	2.22		
	Floor apron	cum	2.00	1.30	3.90	0.15	1.52		
	Type 1 curtain wall	cum	1	5.20	1.85	0.15	1.44		
	Type 2 curtain wall	cum	1	5.20	1.5	0.15	1.17		
	For	1	nos			Total	11.98	10299.37	123,369.66
4	Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20								
	Wing wall								
	Tappererd portion	cum	4	1.84	Area=	1.91	14.03		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	5.20	AREA=	1.97	10.26		
	Type 2 curtain wall	cum	1	5.20	AREA=	1.47	7.63		
	For	**1**	**nos**			**Total**	**35.36**	**13361.16**	**472,464.98**
5	**Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)**								
	Deck slab								
	Base Slab	cum	1	10	3.2	0.3	9.60		
	Wall	cum	2	10	0.3	1	6.00		
	Top Slab	cum	1	10	2.6	0.3	7.80		
	Fillet	cum	4	10	Area =	0.02	0.80		
	cutoff wall	cum	2	3.2	0.90	0.3	1.73		
			4	0.90	0.90	0.3	0.49		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	**1**	**nos**			**Total**	**47.41**	**14518.08**	**688,360.42**
6	**Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications**								
	Reinforcement	MT	2% of total concrete volume			47.41	7.44		
	For	**1**	**nos**			**Total**	**7.44**	**117088.40**	**871,605.82**
7	**Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.**								
	Floor apron	cum	2.00	1.30	3.8998037	0.45	4.56		
	For	**1**	**nos**			**Total**	**4.56**	**8871.35**	**40,471.83**
8	**Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification**								
	Flexible apron								
	Up stream		**1**	**3**	**5.20**	**0.75**	11.70		
	down stream		**1**	**6**	**5.20**	**0.75**	23.40		
	For	**1**	**cum**			**Total**	**35.10**	**3373.36**	**118,396.06**
9	**Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m**								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	**1**	**nos**			**Total**	**16.00**	**5845.83**	**93,533.28**
10	**Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)**								
		m	19				19.00		
	For	**1**	**nos**			**Total**	**19.00**	**2488.88**	**47,288.72**

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									2,504,023.88

Government of Nepal Ministry of Urban Development
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Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (2.5MX1M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	**Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m**								
	Base	cum	1	10	3.85	0.96	36.96		
	Cutoff wall	cum	2	3.7	0.60	1.48	6.55		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	1.84	1.50	19.96		
	curtain wall type 1	cum	1	5.70	1.85	2.50	26.36		
	curtain wall type 2	cum	1	5.70	1.50	2.00	17.10		
	For	**2**	**nos**			**Total**	**224.72**	**140.58**	**31,592.38**
2	**Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)**								
	culvert	cum	1	10	3.85	0.5	19.25		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	1.84	1.81	0.5	6.65		
	Floor apron		2.00	1.30	4.40	0.5	5.72		
	Flexible apron								
	Up stream		1	3	5.70	0.5	8.55		
	down stream		1	6	5.70	0.5	17.10		
	For	**2**	**nos**			**Total**	**118.16**	**132.91**	**15,705.39**
3	**Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))**								
	Base	cum	1	10	3.85	0.15	5.78		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	1.8382	2.01	0.15	2.22		
	Floor apron	cum	2.00	1.30	4.40	0.15	1.72		
	Type 1 curtain wall	cum	1	5.70	1.85	0.15	1.58		
	Type 2 curtain wall	cum	1	5.70	1.5	0.15	1.28		
	For	**2**	**nos**			**Total**	**26.35**	**10299.37**	**271,379.96**
4	**Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20**								
	Wing wall								
	Tappererd portion	cum	4	1.84	Area=	1.91	14.03		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	5.70	AREA=	1.97	11.24		
	Type 2 curtain wall	cum	1	5.70	AREA=	1.47	8.36		
	For	2	nos			Total	74.16	13361.16	990,892.35
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	3.7	0.3	11.10		
	Wall	cum	2	10	0.3	1	6.00		
	Top Slab	cum	1	10	3.1	0.3	9.30		
	Fillet	cum	4	10	Area =	0.02	0.80		
	cutoff wall	cum	2	3.7	1.18	0.3	2.61		
			4	1.18	1.18	0.3	0.83		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	2	nos			Total	103.27	14518.08	1,499,336.94
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			51.64	8.11		
	For	2	nos			Total	16.21	117088.40	1,898,468.83
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	1.30	4.3998037	0.45	5.15		
	For	2	nos			Total	10.29	8871.35	91,321.57
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	5.70	0.75	12.82		
	down stream		1	6	5.70	0.75	25.65		
	For	2	cum			Total	76.94	3373.36	259,562.32
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	2	nos			Total	32.00	5845.83	187,066.56
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	20				20.00		
	For	2	nos			Total	40.00	2488.88	99,555.20

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	2	nos			Total	60.00	902.85	54,171.20
Grand Total									5,399,052.70

Government of Nepal Ministry of Urban Development
Department of Urban Development and Building Construction
Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (2.5M X 1.6M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	**Earthwork in excavation in foundation of structures including construction of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m**								
	Base	cum	1	10	3.85	1.32	50.82		
	Cutoff wall	cum	2	3.7	0.60	1.20	5.33		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	3.54	1.50	38.39		
	curtain wall type 1	cum	1	8.10	1.85	2.50	37.46		
	curtain wall type 2	cum	1	8.10	1.50	2.00	24.30		
	For	2	nos			Total	323.45	140.58	45,471.80
2	**Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)**								
	culvert	cum	1	10	3.85	0.5	19.25		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	3.54	1.81	0.5	12.80		
	Floor apron		2.00	2.50	5.60	0.5	14.00		
	Flexible apron								
	Up stream		1	3	8.10	0.5	12.15		
	down stream		1	6	8.10	0.5	24.30		
	For	2	nos			Total	168.60	132.91	22,409.22
3	**Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))**								
	Base	cum	1	10	3.85	0.15	5.78		
	Wing wall								
	Tappered portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular	cum	4	3.535	2.01	0.15	4.26		
	Floor apron	cum	2.00	2.50	5.60	0.15	4.20		
	Type 1 curtain wall	cum	1	8.10	1.85	0.15	2.25		
	Type 2 curtain wall	cum	1	8.10	1.5	0.15	1.82		
	For	2	nos			Total	37.82	10299.37	389,525.66
4	**Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20**								
	Wing wall								
	Tappered portion	cum	4	3.54	Area=	2.08	29.42		
	Rectangular	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	8.10	AREA=	1.97	15.98		
	Type 2 curtain wall	cum	1	8.10	AREA=	1.47	11.89		
	For	2	nos			Total	121.45	13361.16	1,622,770.53
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	3.7	0.3	11.10		
	Wall	cum	2	10	0.3	1.6	9.60		
	Top Slab	cum	1	10	3.1	0.3	9.30		
	Fillet	cum	4	10	Area=	0.02	0.80		
	cutoff wall	cum	2	3.7	0.90	0.3	2.00		
			4	0.90	0.90	0.3	0.49		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	2	nos			Total	108.57	14518.08	1,576,199.30
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			54.28	8.52		
	For	2	nos			Total	17.05	117088.40	1,995,792.39
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	2.50	5.599622	0.45	12.60		
	For	2	nos			Total	25.19	8871.35	223,509.23
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	8.10	0.75	18.22		
	down stream		1	6	8.10	0.75	36.45		
	For	2	cum			Total	109.34	3373.36	368,842.74
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting, weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	2	nos			Total	32.00	5845.83	187,066.56
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	20				20.00		
	For	2	nos			Total	40.00	2488.88	99,555.20

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	2	nos			Total	60.00	902.85	54,171.20
Grand Total									6,585,313.83

Government of Nepal Ministry of Urban Development
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Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (SINGLE CELL 3.5M X 1M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m								
	Base	cum	1	10	5.29	1.09	57.77		
	Cutoff wall	cum	2	5.14	0.60	2.70	16.65		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	2.12	1.50	23.03		
	curtain wall type 1	cum	1	7.30	1.85	2.50	33.76		
	curtain wall type 2	cum	1	7.30	1.50	2.00	21.90		
	For	1	nos			Total	158.54	140.58	22,288.66
2	Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)								
	culvert	cum	1	10	5.29	0.5	26.45		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	2.12	1.81	0.5	7.68		
	Floor apron		2.00	1.50	5.80	0.5	8.70		
	Flexible apron								
	Up stream		1	3	7.30	0.5	10.95		
	down stream		1	6	7.30	0.5	21.90		
	For	1	nos			Total	77.48	132.91	10,298.68
3	Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))								
	Base	cum	1	10	5.29	0.15	7.94		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	2.121	2.01	0.15	2.56		
	Floor apron	cum	2.00	1.50	5.80	0.15	2.61		
	Type 1 curtain wall	cum	1	7.30	1.85	0.15	2.03		
	Type 2 curtain wall	cum	1	7.30	1.5	0.15	1.64		
	For	1	nos			Total	17.37	10299.37	178,935.67
4	Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20								
	Wing wall								
	Tappererd portion	cum	4	2.12	Area=	1.94	16.43		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	7.30	AREA=	1.97	14.40		
	Type 2 curtain wall	cum	1	7.30	AREA=	1.47	10.71		
	For	1	nos			Total	44.99	13361.16	601,084.89
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	5.14	0.42	21.59		
	Wall	cum	2	10	0.4	1	8.00		
	Top Slab	cum	1	10	4.3	0.4	17.20		
	Fillet	cum	4	10	Area =	0.02	0.80		
	cutoff wall	cum	2	5.14	2.28	0.3	7.03		
			4	2.28	2.28	0.3	3.12		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	1	nos			Total	78.74	14518.08	1,143,133.00
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			78.74	12.36		
	For	1	nos			Total	12.36	117088.40	1,447,441.41
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	1.50	5.799773	0.45	7.83		
	For	1	nos			Total	7.83	8871.35	69,449.48
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighing not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	7.30	0.75	16.42		
	down stream		1	6	7.30	0.75	32.85		
	For	1	cum			Total	49.27	3373.36	166,212.09
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	1	nos			Total	16.00	5845.83	93,533.28
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	23				23.00		
	For	1	nos			Total	23.00	2488.88	57,244.24

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									3,816,707.00

Government of Nepal Ministry of Urban Development
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Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (DOUBLE CELL 2.25M X 1.6M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	Earthwork in excavation in foundation of structures including construction of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m								
	Base	cum	1	10	6.5	1.38	89.70		
	Cutoff wall	cum	2	6.35	0.60	1.30	9.91		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	3.68	1.50	39.93		
	curtain wall type 1	cum	1	10.75	1.85	2.50	49.72		
	curtain wall type 2	cum	1	10.75	1.50	2.00	32.25		
	For	1	nos			Total	226.92	140.58	31,901.91
2	Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)								
	culvert	cum	1	10	6.5	0.5	32.50		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum height		4.00	3.68	1.81	0.5	13.31		
	Floor apron		2.00	2.60	8.15	0.5	21.19		
	Flexible apron								
	Up stream		1	3	10.75	0.5	16.12		
	down stream		1	6	10.75	0.5	32.25		
	For	1	nos			Total	117.18	132.91	15,574.20
3	Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))								
	Base	cum	1	10	6.5	0.15	9.75		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	3.6764	2.01	0.15	4.43		
	Floor apron	cum	2.00	2.60	8.15	0.15	6.36		
	Type 1 curtain wall	cum	1	10.75	1.85	0.15	2.98		
	Type 2 curtain wall	cum	1	10.75	1.5	0.15	2.42		
	For	1	nos			Total	26.54	10299.37	273,386.08
4	Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20								
	Wing wall								
	Tappererd portion	cum	4	3.68	Area=	2.10	30.81		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	10.75	AREA=	1.97	21.20		
	Type 2 curtain wall	cum	1	10.75	AREA=	1.47	15.77		
	For	1	nos			Total	71.23	13361.16	951,733.59
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	6.35	0.35	22.23		
	Wall	cum	3	10	0.35	1.6	16.80		
	Top Slab	cum	1	10	5.55	0.35	19.43		
	Fillet	cum	8	10	Area =	0.02	1.60		
	cutoff wall	cum	2	6.35	0.95	0.3	3.62		
			4	0.95	0.95	0.3	0.54		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	1	nos			Total	85.21	14518.08	1,237,100.42
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			85.21	13.38		
	For	1	nos			Total	13.38	117088.40	1,566,423.49
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	2.60	8.149607	0.45	19.07		
	For	1	nos			Total	19.07	8871.35	169,151.84
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	10.75	0.75	24.19		
	down stream		1	6	10.75	0.75	48.37		
	For	1	cum			Total	72.56	3373.36	244,761.69
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	1	nos			Total	16.00	5845.83	93,533.28
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	25				25.00		
	For	1	nos			Total	25.00	2488.88	62,222.00

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									4,672,874.11

Government of Nepal Ministry of Urban Development
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Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (DOUBLE CELL 2M X 1.8M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	Earthwork in excavation in foundation of structures including construtions of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m								
	Base	cum	1	10	6	1.50	90.00		
	Cutoff wall	cum	2	5.85	0.60	1.20	8.42		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	4.24	1.50	46.07		
	curtain wall type 1	cum	1	11.05	1.85	2.50	51.10		
	curtain wall type 2	cum	1	11.05	1.50	2.00	33.15		
	For	1	nos			Total	234.17	140.58	32,920.72
2	Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)								
	culvert	cum	1	10	6	0.5	30.00		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum height		4.00	4.24	1.81	0.5	15.36		
	Floor apron		2.00	3.00	8.05	0.5	24.14		
	Flexible apron								
	Up stream		1	3	11.05	0.5	16.57		
	down stream		1	6	11.05	0.5	33.15		
	For	1	nos			Total	121.03	132.91	16,086.74
3	Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))								
	Base	cum	1	10	6	0.15	9.00		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	4.242	2.01	0.15	5.12		
	Floor apron	cum	2.00	3.00	8.05	0.15	7.24		
	Type 1 curtain wall	cum	1	11.05	1.85	0.15	3.07		
	Type 2 curtain wall	cum	1	11.05	1.5	0.15	2.49		
	For	1	nos			Total	27.51	10299.37	283,382.31
4	Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20								
	Wing wall								
	Tappererd portion	cum	4	4.24	Area=	2.15	36.53		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	11.05	AREA=	1.97	21.79		
	Type 2 curtain wall	cum	1	11.05	AREA=	1.47	16.21		
	For	1	nos			Total	77.98	13361.16	1,041,887.00
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	5.85	0.35	20.48		
	Wall	cum	3	10	0.35	1.8	18.90		
	Top Slab	cum	1	10	5.05	0.35	17.68		
	Fillet	cum	8	10	Area =	0.02	1.60		
	cutoff wall	cum	2	5.85	0.85	0.3	2.98		
			4	0.85	0.85	0.3	0.43		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	1	nos			Total	83.07	14518.08	1,205,973.65
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			83.07	13.04		
	For	1	nos			Total	13.04	117088.40	1,527,010.59
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	3.00	8.049547	0.45	21.73		
	For	1	nos			Total	21.73	8871.35	192,778.86
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	11.05	0.75	24.86		
	down stream		1	6	11.05	0.75	49.72		
	For	1	cum			Total	74.58	3373.36	251,590.00
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	1	nos			Total	16.00	5845.83	93,533.28
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	24				24.00		
	For	1	nos			Total	24.00	2488.88	59,733.12

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									4,731,981.87

Government of Nepal Ministry of Urban Development
Department of Urban Development and Building Construction
Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (DOUBLE CELL 3.75M X 2.3M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	**Deck slab**								
1	**Earthwork in excavation in foundation of structures including construction of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m**								
	Base	cum	1	10	9.81	1.90	186.59		
	Cutoff wall	cum	2	9.66	0.60	2.45	28.40		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	5.85	1.50	63.57		
	curtain wall type 1	cum	1	17.04	1.85	2.50	78.80		
	curtain wall type 2	cum	1	17.04	1.50	2.00	51.12		
	For	**1**	**nos**			**Total**	**413.91**	**140.58**	**58,189.21**
2	**Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)**								
	culvert	cum	1	10	9.81	0.5	49.05		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum height		4.00	5.85	1.81	0.5	21.19		
	Floor apron		2.00	4.14	12.90	0.5	53.40		
	Flexible apron								
	Up stream		1	3	17.04	0.5	25.56		
	down stream		1	6	17.04	0.5	51.12		
	For	**1**	**nos**			**Total**	**202.12**	**132.91**	**26,864.54**
3	**Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M15 (Section 20.2 (A))**								
	Base	cum	1	10	9.81	0.15	14.72		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular portion	cum	4	5.85396	2.01	0.15	7.06		
	Floor apron	cum	2.00	4.14	12.90	0.15	16.02		
	Type 1 curtain wall	cum	1	17.04	1.85	0.15	4.73		
	Type 2 curtain wall	cum	1	17.04	1.5	0.15	3.83		
	For	**1**	**nos**			**Total**	**46.96**	**10299.37**	**483,642.62**
4	**Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20**								
	Wing wall								
	Tappererd portion	cum	4	5.85	Area=	2.32	54.24		
	Rectangular portion	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	17.04	AREA=	1.97	33.61		
	Type 2 curtain wall	cum	1	17.04	AREA=	1.47	25.00		
	For	1	nos			Total	116.30	13361.16	1,553,912.63
5	**Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)**								
	Deck slab								
	Base Slab	cum	1	10	9.66	0.45	43.47		
	Wall	cum	3	10	0.42	2.3	28.98		
	Top Slab	cum	1	10	8.76	0.42	36.79		
	Fillet	cum	8	10	Area =	0.02	1.60		
	cutoff wall	cum	2	9.66	2.00	0.3	11.59		
			4	2.00	2.00	0.3	2.40		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	1	nos			Total	145.83	14518.08	2,117,230.21
6	**Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications**								
	Reinforcement	MT	2% of total concrete volume			145.83	22.90		
	For	1	nos			Total	22.90	117088.40	2,680,848.75
7	**Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.**								
	Floor apron	cum	2.00	4.14	12.89937	0.45	48.06		
	For	1	nos			Total	48.06	8871.35	426,320.00
8	**Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification**								
	Flexible apron								
	Up stream		1	3	17.04	0.75	38.34		
	down stream		1	6	17.04	0.75	76.67		
	For	1	cum			Total	115.01	3373.36	387,975.62
9	**Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m**								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	1	nos			Total	16.00	5845.83	93,533.28
10	**Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)**								
		m	32				32.00		
	For	1	nos			Total	32.00	2488.88	79,644.16

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									7,935,246.62

Government of Nepal Ministry of Urban Development
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Babar Mahal, Kathmandu
Project Coordinate Office

Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

DETAILED QUANTITY ESTIMATE OF BOX CULVERT (DOUBLE CELL 3M X 1.3M)

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
A	Deck slab								
1	**Earthwork in excavation in foundation of structures including constrution of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m**								
	Base	cum	1	10	8	1.20	96.00		
	Cutoff wall	cum	2	7.85	0.60	1.90	17.90		
	wing wall	cum	4	1.81	0.50	1.50	5.43		
		cum	4	1.81	2.83	1.50	30.71		
	curtain wall type 1	cum	1	11.05	1.85	2.50	51.10		
	curtain wall type 2	cum	1	11.05	1.50	2.00	33.15		
	For	**1**	**nos**			**Total**	**234.29**	**140.58**	**32,937.63**
2	**Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications. (Section 10.4)**								
	culvert	cum	1	10	8	0.5	40.00		
	Wing Wall								
	At Min Height		4.00	0.50	1.81	0.5	1.81		
	At Maximum		4.00	2.83	1.81	0.5	10.24		
	Floor apron		2.00	2.00	9.05	0.5	18.10		
	Flexible apron								
	Up stream		1	3	11.05	0.5	16.57		
	down stream		1	6	11.05	0.5	33.15		
	For	**1**	**nos**			**Total**	**119.87**	**132.91**	**15,931.81**
3	**Providing and laying of Plain/Reinforced Cement Concrete complete including formwork as per Drawing and Technical Specifications. PCC Grade M 15 (Section 20.2 (A))**								
	Base	cum	1	10	8	0.15	12.00		
	Wing wall								
	Tappererd portion	cum	4	0.5	2.01	0.15	0.60		
	Rectangular	cum	4	2.828	2.01	0.15	3.41		
	Floor apron	cum	2.00	2.00	9.05	0.15	5.43		
	Type 1 curtain wall	cum	1	11.05	1.85	0.15	3.07		
	Type 2 curtain wall	cum	1	11.05	1.5	0.15	2.49		
	For	**1**	**nos**			**Total**	**26.99**	**10299.37**	**278,030.43**
4	**Providing and laying of Plain Cement Concrete all complete as per Drawing and Technical Specifications. M20**								
	Wing wall								
	Tappererd portion	cum	4	2.83	Area=	2.01	22.73		
	Rectangular	cum	4	0.5	Area=	1.72	3.44		
	Curtain wall								

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
	Type 1 curtain wall	cum	1	11.05	AREA=	1.97	21.79		
	Type 2 curtain wall	cum	1	11.05	AREA=	1.47	16.21		
	For	1	nos			Total	64.18	13361.16	857,493.24
5	Providing and laying of Reinforced/Pre-stressed cement concrete in sub structure RCC Grade M25/20 with Formwork and all complete as per Drawing and Technical Specification (Section 20.8-B)								
	Deck slab								
	Base Slab	cum	1	10	7.85	0.35	27.48		
	Wall	cum	3	10	0.35	1.3	13.65		
	Top Slab	cum	1	10	7.05	0.35	24.68		
	Fillet	cum	8	10	Area =	0.02	1.60		
	cutoff wall	cum	2	7.85	1.55	0.3	7.30		
			4	1.55	1.55	0.3	1.44		
	Approach slab								
		cum	2	3.5	10	0.3	21.00		
	For	1	nos			Total	97.14	14518.08	1,410,315.68
6	Providing and laying , fitting and placing HYSD bar reinforcement as per drawing and technical specifications								
	Reinforcement	MT	2% of total concrete volume			97.14	15.25		
	For	1	nos			Total	15.25	117088.40	1,785,749.61
7	Providing and laying of plumConcrete (boulder mixed concrete) complete as per Drawing and Technical Specifications. 60% M15 and 40% boulder /stones as per drawing and technical specification.								
	Floor apron	cum	2.00	2.00	9.049698	0.45	16.29		
	For	1	nos			Total	16.29	8871.35	144,487.67
8	Providing and laying stone boulder apron on river bed for protection against scour with boulders/stone weighring not less than 40 kg each complete as per drawing and tehnical specification								
	Flexible apron								
	Up stream		1	3	11.05	0.75	24.86		
	down stream		1	6	11.05	0.75	49.72		
	For	1	cum			Total	74.58	3373.36	251,596.88
9	Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,. Box size 2 X 1 X 1 m								
	Flexible apron								
	Up stream	cum	4	2	1.00	1	8.00		
	down stream	cum	4	2	1.00	1	8.00		
	For	1	nos			Total	16.00	5845.83	93,533.28
10	Tubular Steel Railing on Preast RCC posts 1.2m High above ground Level: Providing, fencing and erecting 50mm dia painted steel pipe in railing in 3 rows on precast M20 grade RCC vertical posts 1.8m high (1.2m above GL) with 3 holes 50mm dia for pipe , fixed 2 meter center to , complete as per Drawing and Technical Specifications. (Section 31.7)								
		m	28				28.00		
	For	1	nos			Total	28.00	2488.88	69,688.64

S. No.	Description	Unit	No.	Length (m)	Breadth (m)	Height (m)	Quantity	Rate	Amount
11	Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.: (Section 20.7)								
		m	2	15.00			30.00		
	For	1	nos			Total	30.00	902.85	27,085.60
Grand Total									4,966,850.47

ANNEX IX: RAMPS

Government of Nepal Ministry of Urban Development
Department of Urban Development and Building Construction
Urban Governance and Infrastructure Improvement Project (UGIIP-II)
Babar Mahal, Kathmandu
Project Coordinate Office

RAMP
CHAINAGE 0+000 - 5+000
Project Name: Upgradation of Mangalapur – Kanchibazar Road, Tilottama Municipality

S.No	Description	Unit	Nos	Length	Breadth	Height	Quantity	Rate	Amount
1	Earthwork in excavation for structural works, including construction of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Materials as per Drawing and Technical specifications in ordinary soil depth upto 3m all complete as per drawing, specification and instruction								
	3 m width ramp	Cum							
	1 m width ramp		79	1.50	1.00	0.28	32.59		
			39	1.50	1.00	0.28	16.09		
				Total Quantity			**48.68**	**140.58**	**6,842.92**
2	Providing and laying of hand pack Stone soling with 150 to 200mm thick stones and packing with smaller stone on prepared surface all complete as per drawing, specification and instruction								
	3 m width ramp	Sqm	79	1.50	1.00	0.2	23.70		
	1 m width ramp	Sqm	39	1.50	1.00	0.2	11.70		
				Total Quantity			**35.40**	**5609.70**	**198,583.38**
3	Providing and laying of Plain Cement Concrete M 10 all complete as per Drawing, technical specifications and instructions.								
	3 m width ramp	Cum	79	1.50	1.00	0.08	8.89		
	1 m width ramp		39	1.50	1.00	0.08	4.39		
				Total Quantity			**14.60**	**9633.81**	**140,677.67**
4	Providing and laying of Plain/Reinforced Cement Concrete complete as per Drawing and Technical Specifications. PCC M20 (Section 20.2-B)								
	3 m width ramp	cum	79	3.00	1.62	0.10	38.29		
	1 m width ramp		39	1.00	1.62	0.10	6.30		
				Total Quantity			**44.59**	**13361.16**	**595,762.86**
5	Providing and laying of Stone Masonry Work in Cement Mortar MM5 complete for structural works as per Drawing and Technical Specifications and directed by the Engineer								
		cum							
	3 m width ramp		79	1.50	1	0.6	35.55		
	1 m width ramp		39	1.50	1	0.6	17.55		
				Total Quantity			**35.55**	**9058.83**	**322,041.43**
Grand Total									**1,263,908.25**

ANNEX X: LETTER

तिलोत्तमा नगरपालिका

नगर कार्यपालिकाको कार्यालय

मणिग्राम, रुपन्देहि, लुम्बिनि प्रदेश, नेपाल

प.सं.: ०७८/०७९
च.नं.: 2265

मिति २०७८।९।११

श्री नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना,
आयोजना समन्वय कार्यालय,
बबरमहल, काठमाण्डौ ।

श्री प्रशासन
दर्ता
078/03/11

विषयः जानकारी सम्बन्धमा ।

उपरोक्त सम्बन्धमा यस नगरपालिका र ताहां शहरी विकास तथा भवन निर्माण विभागबीच भएको Participation Agreement अनुसारको आयोजना अन्तर्गत यस नगरपालिकाको मंगलापुर कान्छिबजार सडक अन्तरगत पर्ने मंगलापुर देखि बेवरा चोक जोड्ने सडक खण्ड निर्माण सम्बन्धि योजनामा पर्ने सडकको मापदण्ड भित्र परेको (Right of Way) को जग्गा पूर्णत खालि गरिसकिएको र उक्त सडकको क्षेत्राधिकार भित्र कुनै विवाद नरहेको र मापदण्ड भित्र पर्ने सम्पुर्ण जमिन नगरपालिका मातहत आइसकेको व्यहोरा जानकारी गराउदछौ । यदि काम गर्ने शिलशिलामा कही कतै विवाद सिर्जना भएमा त्यसलाई नगरपालिकाले सहजिकरण वा समन्वय गरी समाधान गरीने व्यहोरा जनकारी गराइन्छ ।

नगर प्रमुख
वासुदेव घिमिरे
नगर प्रमुख

NUGIP
दर्ता: ३५०
मिति: २०७८।८।१५

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय

मणिग्राम, रुपन्देहि, लुम्बिनी प्रदेश, नेपाल

प.सं.: ०७८/०७९
च.नं.: १८४४

मिति २०७८।८।१५

श्री नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना,
आयोजना समन्वय कार्यालय,
बबरमहल, काठमाण्डौ ।

विषयः Urban Development Grat अन्तरगत सडक निर्माण गर्ने सम्बन्धमा ।

उपरोक्त सम्बन्धमा यस नगरपालिका र सहरी विकास तथा भवन निर्माण विभागबीच सन 05/03/2021 मा भएको Participation Agreement अनुसारको आयोजना अन्तर्गत यस नगरपालिकामा को मंगलापुर कान्छिबजार सडक अन्तरगत पर्ने मंगलापुर देखि बेवरा चोक जोड्ने सडक खण्ड निर्माण सम्बन्धि योजना Urban Development Grat मार्फत निर्माण गर्ने गरी नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना मार्फत तयार गरेको डि पी आर अनुसार टेण्डर प्रकिया अगाडि बढाइदिनुहुन यस नगर कार्यपालिकाको मिति २०७८।७।३० को निर्णय अनुसार अनुरोध छ ।

प्रमुख प्रशासकीय अधिकृत

प्रदिप पौडेल
प्रमुख प्रशासकीय अधिकृत

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय
कार्यपालिका बैठक संख्या ४/०७८/०७९ (११४) मिति २०७८/०७/३० गते

प्रस्तावहरु:

१. कार्यपालिका बैठक समीक्षा सम्बन्धमा ।
२. देहायका कार्यविधि स्वीकृत सम्बन्धमा ।
   क) तिलोत्तमा नगरपालिकाको मेयर जनता आवास कार्यविधि, २०७८,
   ख) तिलोत्तमा नगरपालिकाको एकीकृत पार्क व्यवस्थापन तथा संचालन कार्यविधि, २०७८ ।
३. वडास्तरको योजना सम्झौता गर्न बडा कार्यलयको समय तालिका निर्धारण गर्ने सम्बन्धमा ।
४. जग्गा आवास योजना (Land Poling) कार्य अगाडि बढाउने सम्बन्धमा ।
५. जेष्ठ नागरिक घरदैलो स्वास्थ्य सेवा अभियान सम्बन्धमा ।
६. बालमैत्री स्थानीय शासन (CFLG) वडास्तरको प्रगती तथा आगामी कार्ययोजना तथा सूचक लेखाजोखाको जानकारी सम्बन्धमा ।
७. नदिजन्य पदार्थको कार्यसूची (TOR) स्वीकृत सम्बन्धमा ।
८. सम्मान तथा पुरस्कार वितरण गर्ने सम्बन्धमा ।
९. योजनाहरु संशोधन सम्बन्धमा ।
१०. विविध ।
   क) ज्ञापन पत्र सम्बन्धमा ।
   ख) "घ" वर्गको इजाजतपत्र प्रदान गर्न स्वीकृती सम्बन्धमा ।
   ग) जग्गा सिफारिस सम्बन्धमा ।
      अ) गौतमबुद्ध मा.वि., वडा नं.-९,
      आ) मोही जग्गा, वडा नं.-७ ।
   घ) मंगलापुर कान्छी बजार सडकको योजना कार्यान्वयन सम्बन्धमा ।
   ङ) बारुण यन्त्र खरिद सम्बन्धमा ।
   च) म्याद थप सम्बन्धमा ।
   छ) नदीजन्य पदार्थको जफत प्रकिया अगाडी बढाउने सम्बन्धका ।
   ज) धान बालीको क्षतिको विवरण उपलब्ध गराउने सम्बन्धमा ।
   झ) फोहरमैला व्यवस्थापन गर्ने सम्बन्धमा ।

प्रमुख प्रशासकीय अधिकृत

नगर प्रमुख

निर्णय नं.-१० विविध (ग)

अ) तिलोत्तमा नगरपालिका, वडा नं.-९ केवलानी स्थित कि.नं.२८६, १-८-६ क्षेत्रफलको सार्वजनिक जग्गा वि.स. २०१८ साल देखि श्री गौतम बुद्ध माध्यमिक विद्यालयको नाममा रही भोगचलन गर्दै आएको र उक्त जग्गाको जग्गा धनी प्रमाणपुर्जा नभएकोले सोही विद्यालयको स्वामित्वमा ल्याउन जिल्ला प्रशासन कार्यालय, रुपन्देही र नेपाल सरकारको "सार्वजनिक प्रकृतीको जग्गा प्रयोग गर्न उपलब्ध गराउने सम्बन्धी मापदण्ड, २०७७" लगायत प्रचलित कानून बमोजिम नेपाल सरकार मन्त्रिपरिषदबाट निर्णय गराउन सम्बन्धित निकायमा सिफारिस गर्ने निर्णय गरियो ।

आ) ज.ध. जीव कुमारी पाण्डेको नाउँमा दर्ता कायम रहेको जि. रुपन्देही तिलोत्तमा नगरपालिका वडा नं. ७ (साबिक करहिया गा.वि.स. वडा नं. ४का) कि.नं. ७५ ज.वि. ३-१-३ को कित्ता जग्गा र उक्त जग्गामा सोही ठाउँ बस्ने भगवान दत्त दुबेले मोहियानी हक दावी गरेको र मोही भगवानदत्त दुबे भई श्रेस्ता पुर्जा कायम भएकोमा मालपोत कार्यालय भैरहवाको मिति २०७६/०१/२९ को निर्णय बाट उक्त कि.नं. ७५ ज.वि. ३-१-३ मध्ये उत्तर तर्फबाट ज.वि. १-५-१९ मोही भगवानदत्त दुबेको नाउँमा कायम हुने र दक्षिणतर्फ ज.वि. १-५-१९ को कित्ता जग्गा नेपाल सरकारको नाउँमा कायम हुने गरी निर्णय भएकोमा मालपोत कार्यालय, भैरहवा को मि.न. ४३ मिति २०७७/७/२८ को निर्णयबाट हाल नेपाल सरकारको नाउँमा कायम रहेको दक्षिणतर्फको जग्गा ज.वि. १-५-१९ को जग्गा मोही भगवान दत्त दुबेलाई कमाउन खान दिइएको भनि निर्णय भई सो को जानकारी नगरपालिका कार्यालयलाई मालपोत कार्यालय भैरहवाको मिति २०७७/८/२२ को पत्रबाट प्राप्त भएकोले ज.वि. १-५-१९ को जग्गा नेपाल सरकारको नाउँमा लालपुर्जा ल्याउने प्रक्रियाको लागि प्रचलित नियमअनुसार सम्बन्धित निकायमा सिफारिस गर्ने निर्णय गरियो ।

निर्णय नं.-१० विविध (घ)

- नगरपालिकाको मंगलापुर कान्छी बजार सडक अन्तर्गत पर्ने मंगलापुर देखि बेवरा चोक सम्म जोड्ने सडक खण्ड निर्माण सम्बन्धी आयोजना Urban Development Grant मार्फत निर्माण गर्ने गरी नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना मार्फत डि पी आर बमोजिम आवश्यक कार्यान्वयन प्रक्रिया अगाडि बढाउने शहरी विकास तथा भवन निर्माण विभागलाई अनुरोध गर्ने निर्णय गरियो ।

ANNEX XI: MEETING WITH UTILITY GROU

आज मिति २०७८/८/१९ को दिन World Bank को सहयोगमा निर्माण प्रस्तावगरिएको तिलोत्तमा नगरपालिकाको मंगलापुर देखि वेवरा सडक स्तर उन्नती सम्बन्धी योजनाको नेपाल विद्युत प्राधिकरण, नेपाल टेलिकम, खानेपानी उपभोक्ता संस्था लगायत सम्बन्धीत सरोकारवाला संस्थाहरु, तिलोत्तमा नगरपालिका, शहरी शासकीय तथा पुर्वाधार योजना कार्यालय तथा World Bank का प्रतिनिधी समेतको Virtual Meeting बसी देहाय बमोजिमको निर्णय गरियो ।

उपस्थितीः-

श्री बासुदेव घिमिरे	नगर प्रमुख, तिलोत्तमा नगरपालिका
श्री प्रदिप पौड्याल	प्रमुख प्रशासकीय अधिकृत तिलोत्तमा नगरपालिका
श्री दुर्गा प्रसाद पाण्डे	वडा अध्यक्ष, वडा नं.-०७
श्री नारायण न्यौपाने	वडा अध्यक्ष, वडा नं.-०९
श्री यज्ञ गैरे	अध्यक्ष, मकहर करहिया खानेपानी उपभोक्ता संस्था
श्री प्रदिप वन	इन्जिनियर, तिलोत्तमा नगरपालिका

प्रश्तावहरुः-

प्रश्ताव नं.१ योजना सञ्चालन तथा कार्यान्वयनमा समन्वय तथा सहजिकरण सम्बन्धमा ।

प्रश्ताव नं.२ विद्युत पोलको लम्बाई सम्बन्धमा ।

प्रश्ताव नं.३ खानेपानी सम्बन्धी कार्यक्रम सञ्चालन सम्बन्धमा ।

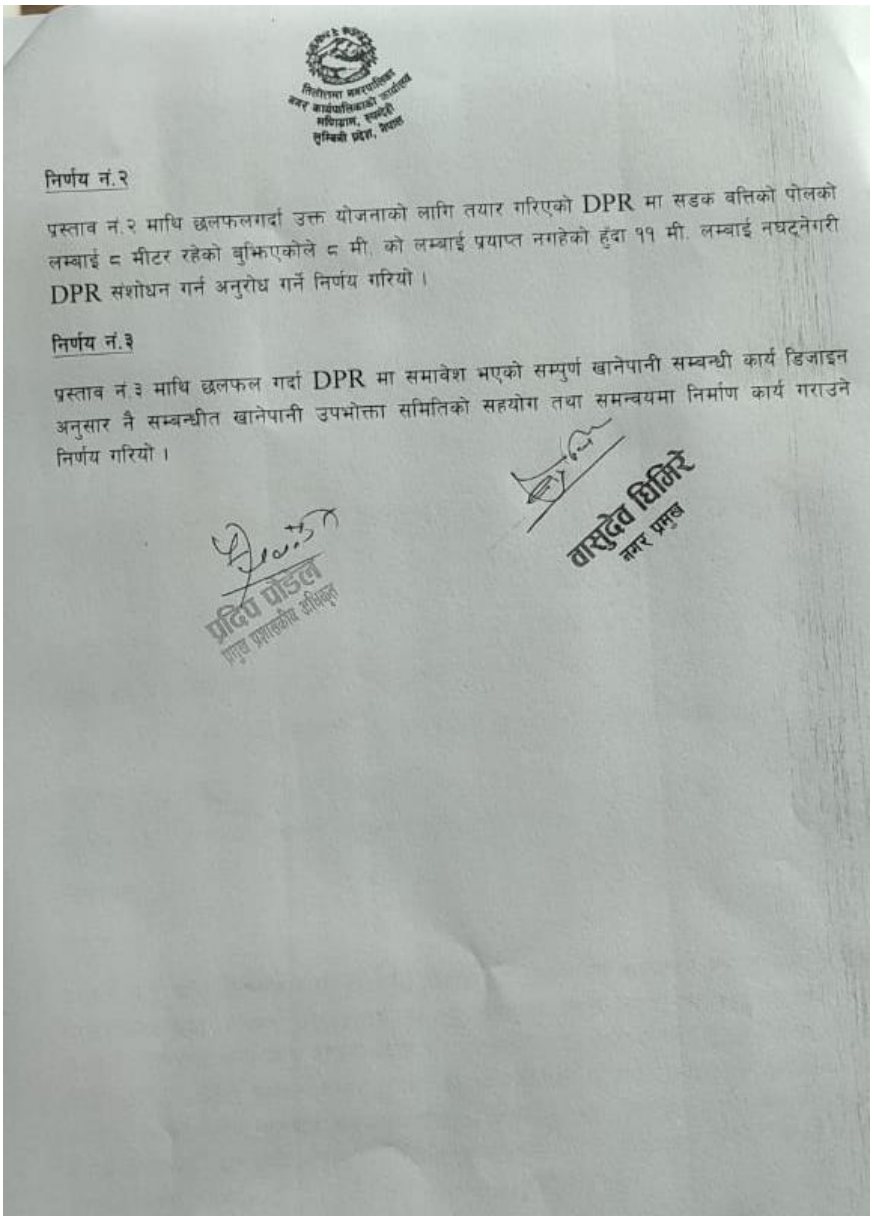
निर्णयहरुः-

निर्णय नं.१

प्रस्ताव न.१ माथि छलफल गर्दा World Bank को सहयोगमा सञ्चालन हुन लागेको तिलोत्तमा नगरपालिका वडा नं.-०७, ०९, र १० मा पर्ने मंगलापुर वेवरा सडक निर्माण तथा स्तर उन्नती सम्बन्धी योजनाको यथा शिघ्र टेण्डर प्रकृया अगाडी बढाउन को लागि सहरी विकास विभाग अन्तरगत NUGIP Project सम्बन्य एकाई समक्ष अनुरोध गर्ने साथै योजना सञ्चालनको क्रममा आवश्यक सहयोग, समन्वय तथा सहकार्य यस नगरपालिका, सम्बन्धीत वडा कार्यालय, नेपाल विद्युत प्राधिकरण, नेपाल टेलीकम, खानेपानी उपभोक्ता समिति लगायतबाट गर्ने प्रतिवद्यता समेत रहेको जानकारी गराउने निर्णय गरियो ।

प्रदिप पौडेल
प्रमुख प्रशासकीय अधिकृत

बासुदेव घिमिरे
नगर प्रमुख



निर्णय नं.२

प्रस्ताव नं.२ माथि छलफलगर्दा उक्त योजनाको लागि तयार गरिएको DPR मा सडक बत्तिको पोलको लम्बाई ८ मीटर रहेको बुझिएकोले ८ मी. को लम्बाई प्रयाप्त नहुँदा ११ मी. लम्बाई नघट्नेगरी DPR संशोधन गर्न अनुरोध गर्ने निर्णय गरियो ।

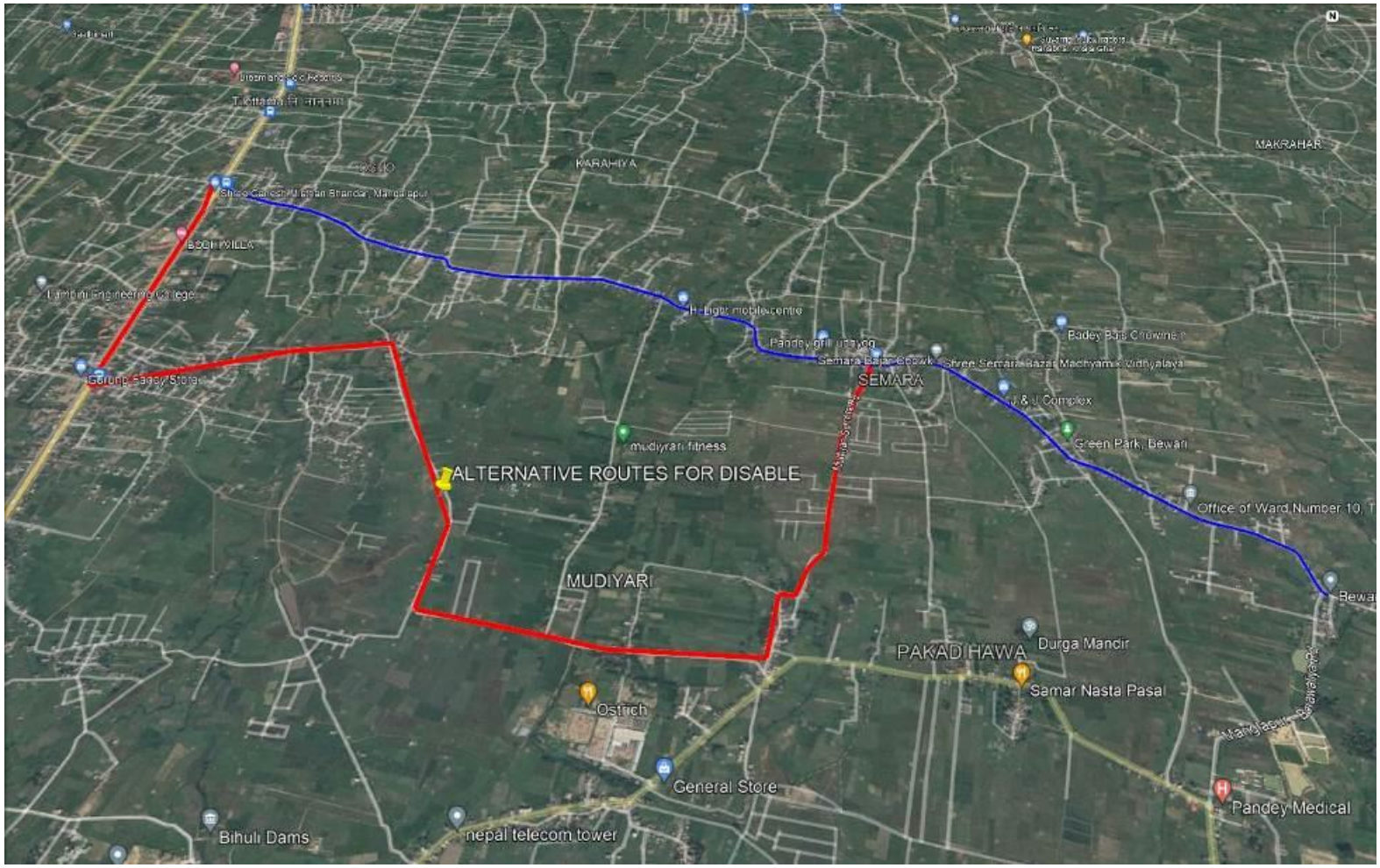
निर्णय नं.३

प्रस्ताव नं.३ माथि छलफल गर्दा DPR मा समावेश भएको सम्पुर्ण खानेपानी सम्बन्धी कार्य डिजाइन अनुसार नै सम्बन्धीत खानेपानी उपभोक्ता समितिको सहयोग तथा समन्वयमा निर्माण कार्य गराउने निर्णय गरियो ।

प्रदिप पोडेल
प्रमुख प्रशासकीय अधिकृत

वासुदेव घिमिरे
नगर प्रमुख

ANNEX XII: ALTERNATIVE ROUTE FOR DIFFERENTLY ABLE PERSON DURING CONSTRUCTION


ALTERNATIVE ROUTES FOR DISABLE
SEMARA
MUDIYARI
PAKAD HAWA
KARAHIYA
MAKRAHAR
BOOTWALA
mudiyari fitness
Durga Mandir
Samar Nasta Pasal
Ostrich
General Store
Pandey Medical
Bihuli Dams
nepal telecom tower
Green Park, Bewari
Office of Ward Number 10
Bewa

Environmental and Social Management Plan
(Updated ESMP)

Credit No. IDA-6778-NP

Nepal Urban Governance and Infrastructure Project (NUGIP)

Upgradation of Mangalapur – Kanchhi Bazar (Bewara Chowk – Kanchhi Bazar Section) Road

Tilottama Municipality
Rupandehi District, Lumbini Province

April, 2024

Acronym

BoQ	: Bill of Quantity
CBS	: Central Bureau of Statistics
CESMP	: Contractor's Environment and Social Management Plan
CoC	: Code of Conduct
DPR	: Detailed Project Report
DSC	: Design and Supervision Consultant
DUDBC	: Department of Urban Development & Building Construction
EA	: Environmental Assessment
EHS	: Environment, Health and Safety
EPR	: Environmental Protection Rule
ESMP	: Environmental and Social Management Plan
FGD	: Focus Group Discussion
GBV	: Gender Based Violence
GRC	: Grievance Redress Committee
GRM	: Grievance Redress Mechanism
ILO	: International Labor Organization
NPHC	: National Population and Housing Census
NSO	: National Statistics Office
NUGIP	: Nepal Urban Governance and Infrastructure Project
OHS	: Occupational Health & Safety
OP/BP	: Operational Policy/Bank Policy
PCO	: Project Coordination Office
PIM	: Project Implementation Manual
PIU	: Project Implementation Unit
PPE	: Personal Protective Equipment
RoW	: Right of Way
SEA/SH	: Sexual Exploitation and Abuse/Sexual Harassment
SMC	: School Management Committee
STD	: Sexually Transmitted Disease
TMO	: Transport Management Office
WASH	: Water, Sanitation and Hygiene
WB	: World Bank

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Executive Summary

Introduction

This updated Environmental and Social Management Plan (ESMP) document covers the road upgradation project connecting Bewara Chowk to Kanchhi Bazar section under Mangalapur Kanchhi Bazar Road of Tilottama Municipality, Rupandehi district. It is an extension of the existing and ongoing road upgradation project from Mangalapur to Bewara. The road passes through ward number 10 of Tilottama Municipality. The project is intended to improve quality of life and livelihood of the local people along the settlements along and near the road alignment. The total length of Bewara Chowk - Kanchhi Bazar section is 1.840 km. The geographical location of the starting point is 27°35'31.03"N, 83°30'53.16"E and the end point coordinates is 27°35'10.74"N, 83°31'52.02"E.

RoW of the proposed road is declared as 13 m. Available width ranging from at least 11.74 m to 13 m is available for road upgradation works, and is currently in public use. Since all the design components are within the existing available road width, the proposed road width is itself the Corridor of Impact or the actual footprint required for construction. Hence, there is no additional land required. There are no outstanding issues within the proposed road width.

Baseline Information

Within the proposed road alignment there are 54 electric poles and 7 private hand pumps, 1 Public Rest Place (Pratikshalaya) at Kanchhi Bazar Chowk of WN 10, and 16 trees (no private trees). Shree Janaheet Secondary School lie along the right side of the road alignment at Kanchhi bazar. The design has provided 13 culverts (6 box culvert & 7 pipe culverts). Since the project area is relatively less urbanized, air quality is less polluted. The primary source of ambient air pollution is due to dust from vehicles plying on earthen roads. The range of average noise levels in the project area was observed to be between 64.3 dBA to 66 dBA. Water quality of underground drinking water sources is found to be potable.

The total population of project ward - ward no. 10 is 5,136 and the total number of households is 1,156. The average household size of the project ward is 4.44. Total male population of the project ward is 2,462 and the total female population of the project ward is 2,674. The sex ratio of the project ward 92.07. (*Source: NPHC, NSO - 2021)*. Based on the field study and public consultation meetings, there are around 114 households along the road alignment with total population 506 having 243 male populations and 263 female populations. (*Source: Field study, March, 2024*).

The project area has people of Brahman, Chhetri, Newar, Gurung, Magar, Tharu, Yadav and Chaudhary and dalit communities. There are 103 households of jananati families. This includes a total population of 455 with 218 male and female 237 of janajati families. The indigenous people are living in a mixed community. Separate consultation was carried out with the indigenous people (ie. Tharu, Newar, Gurung, Magar, etc.) of the project area. (Source: Field study, March, 2024).

Legal and Regulatory Requirements

The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. The report has included the applicable GoN plan, policies, act, regulations, guidelines, and standards. Similarly, the report has also included the environmental and social safeguards standards of the World Bank.

Screening, Scoping, Impact identification, Prediction and Management

The direct Impact area of the project is considered as Road Width of 11.74 m to 13 m of the road alignment. Similarly, the project's influence area falls within 500 meters from both edges of the road. Environmental and Social Screening checklists were used for screening and summarizing the overall impacts. The site-specific impacts in construction and operation phases are included in the ESIA report. Some of the impacts include;

Physical Impacts

- *Land use change*
- *Use of Quarry materials*
- *Stockpiling and construction campsite*
- *Ambient air pollution, Noise nuisance*
- *Solid waste & spoil generation*
- *Road stability & management*

Biological Impacts

- *Vegetation loss*
- *Risk of degradation of water resources*

Socio-economic and Cultural Impacts

- *Change in land use*
- *Damage to public and private utilities*
  This includes 54 electric poles, 7 private hand pumps along road alignment, and 1 Public Rest Place (Pratikshalaya) at Kanchhi bazaar chowk
- *Difficulty in access & mobility to private properties and premises*
- *Community Health & Safety*
- *Occupational Health and Safety*
- *Social disturbances/risk of GBV- SEA/SH, and Human trafficking,*
- *Risk of communicable diseases like HIV AIDS and CoVID*
- *Child labour, forced labour and wage discrimination*
- *Traffic management issues, etc*

The mitigation measures corresponding to the impacts have been suggested in the report. Some of the mitigation measures are;

Measures for Physical Impacts

- *Use of construction materials only from the legally operating crusher industries*
- *Suitable selection of site for stockpiling*
- *Vehicles and equipment meeting GoN emission standard to be used*
- *Regular maintenance of vehicles and equipment*
- *Follow 3R approach of waste management*
- *Waste segregation at source, prohibition of waste burning*
- *Prohibition of spoil disposal into rivers, water bodies and public places*
- *Awareness activities* to reduce the incidences of disposal of waste into road-side drains

Measures for Biological Impacts

- *Prohibition in use of fuel wood from local community by the workers,*
- *Prohibition of disposal of any waste or waste water into water bodies*

Measures for Socio-economic & Cultural Impacts

- *Tilottama Municipality office will accomplish the process of transfer of deeds of the land parcels that are within road width of the road alignment*
- *Electrical poles and private hand pumps will be reinstated without delay*
- *Metal/wooden planks, and earthen ramps will provisioned to ease access to shops, courtyards and public passages; Traffic Management Plan will be prepared*
- *Sign boards/messages in local languages, safety barricades will be provided*
- *Provision of PPEs and first aid kits*
- *Provision of safe, clean and hygienic workplace and adequate WASH facilities at campsite*
- *The project will restrict child labor*
- *Public awareness raising events (safety, environmental conservation)*
- *Employment opportunity & priority for the locals*
- *Code of Conduct to be implied for the workforce*
- *Construction works to consider elderly, women, child & differently able people (EWCD) requirements*
- *Awareness on GBV, SEA/SH, communicable diseases/CoVID, and human trafficking*

Resettlement Action Plan

The impact on private structures along the proposed road up-gradation project have been avoided to the possible extent. Since the RoW of the road was already declared on 2076/01/30 BS (April, 2019), and the required Road Width is already in public use, there are no issues of land acquisition. The Resettlement Action Plan (RAP) aims to provide policy and procedures of land acquisition, compensation and resettlement of affected persons if design changes. However, RAP is not required for this project.

Sexual Exploitation & Abuse, and Sexual Harassment Prevention and Response Action Plan

Based on the Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate SEA/SH risks that the project activities might trigger. The Plan has also addressed "Table - 1: Recommended actions to address SEA/SH Risks in IPF Projects" as per the "Good Practice Note" published by the World Bank in September 2018.

Environmental and Social Management Plan

Environmental and Social Management Plan (ESMP) has been proposed including potential impacts and required mitigation measures. A total cost of NPR 3,740,000 has been allocated for mitigation and management of the environmental and social impacts of the project activities. In addition, agencies responsible for executing environmental mitigation measures and monitoring have been identified in the ESMP. The project also includes a Grievance Redress Mechanism (GRM) for timely update and resolution of stakeholders' concerns and grievances.

Grievance Redress Committee (GRC)

1st Level and 2nd Level Grievance Redress Committees have been established in the project area to allow stakeholders to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). The committees can be provided with grievances through any of the mediums like written, verbal, telephone, letter, etc. and the committee will process it following the procedures of the ESMF document of the project, and if not solvable, it will be forwarded to the higher level of GRM.

Institutional arrangements

The Ministry of Urban Development (MoUD) has set up a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DUDBC) to implement NUGIP. The PCO is responsible for overall project compliance including compliance with environmental and social measures. The PCO will be supported by a Project Management Support Team (PMST). A Project Implementation Unit (PIU) has been established in Tilottama Municipality for implementation of the subproject project at the local level and will be responsible for implementation of the ESMP and other environmental and social instruments. Technical Assistance will be provided through a Design and Supervision Consultancy (DSC) which includes environmental and social safeguards specialists.

कार्यकारी शाराम्श

यस वातावरणीय तथा सामाजिक व्यवस्थापन योजना प्रतिवेदनले रुपन्देही जिल्ला, तिलोत्तमा नगरपालिकाको बेवरा चोक देखि कान्छि बजार सम्म जोड्ने सडक खण्ड जुन हाल संचालनमा रहेको मंगलापुरदेखि बेवरा चोक जोड्ने सडक खण्डको कार्य विस्तार गरी स्तरोन्नतीको कामलाई समेट्ने छ । यो सडक खण्ड वडा नं. १० भएर जान्छ । यस आयोजनाको उद्देश्य बाटोको वरिपरिका बस्तीका स्थानीयहरुको जीवनस्तर र जीविकोपार्जनमा सुधार ल्याउने रहेको छ । यस सडक खण्डको लम्बाई १.८४० कि.मि. रहेको छ । यस उपआयोजनाको भौगोलिक स्थितिमा शुरुवात विन्दु २७°३५'३१.०३'' उत्तर, ८३°३०'५३.१६'' पूर्व र अन्तिम विन्दु २७°३५'१०.७४'' उत्तर, ८३°३१'५२.०२'' हुन् ।

प्रस्तावितको सडकको क्षेत्राधिकार (Right of Way) १३ मिटर रहेको छ । हाल सडक स्तरोन्नतीका लागि न्यूनतम ११.७४ मि. बाटो खुल्ला रहेको छ जुन अहिले सार्वजनिक प्रयोगमा रहेको छ । सडकका सम्पूर्ण संरचनाहरु यही उपलब्ध चौडाइभित्रै डिजाइन गरिएको कारण यहीनै सडक स्तरोन्नती आयोजनाका लागि करिडोर अफ इम्प्याक्ट (Corridor of Impact) हुनेछ, र थप जग्गाको आवश्यकता पर्नेछैन । प्रस्तावित सडक खण्डमा कसैको गुनासो आदी जस्ता कुनै किसिमका समस्या छैन ।

विद्यमान अवस्थाः

प्रस्तावित सडक किनारामा ५४ वटा विद्युतका पोलहरु, ७ वटा नीजि ह्याण्ड पम्प, वडा नं. १० को कान्छि बजार चोकमा एउटा सार्वजनिक प्रतिक्षालय र १६ वटा रुखहरु रहेका छन् । सडकको दाँया किनारको कान्छि बजारमा श्री जनहित माध्यमिक विद्यालय रहेको छ । डिजाइनले प्रस्तावित सडक खण्डमा १३ वटा कल्भर्टहरु (६ वटा बक्स कल्भर्ट र ७ वटा पाइप कल्भर्ट) रहेको देखाएको छ । प्रस्तावित आयोजना क्षेत्र तुलनात्मक रुपमा कम शहरीकरण भएकोले प्रदुषण पनि कमै रहेको छ । त्यसै गरी औसत ध्वनीको स्तर ६४.३ देखि ६६ dBA रहेको छ । जमिन मुनिको खानेपानीको गुणस्तर पिउन योग्य रहेको छ ।

प्रस्तावित आयोजना रहेको वडा नं. १० को कुल जनसंख्या ५,१३६ रहेको र कुल परिवार संख्या १,१५६ रहेको छ । आयोजनाको वडाको औसत परिवारको आकार ४.४४ रहेको छ । त्यस्तै आयोजनाको वडाको महिला संख्या २,६७४ र र पुरुष संख्या २,४६२ रहेको र लैङ्गिक अनुपात ९२.०७ रहेको छ (श्रोतः *NPHC, NSO - 2021)* । स्थलगत अध्ययन र सार्वजनिक परामर्श बैठकको आधारमा सडक क्षेत्रमा करिब ११४ घरपरिवार रहेका छन् भने जम्मा जनसंख्या ५०६ रहेको छ । जसमा २४३ जना पुरुष र २६३ जना महिलाको संख्या रहेको छ (स्रोतः *Field study, March, 2024*)।

यस उपआयोजना क्षेत्रमा ब्राम्हण/क्षेत्री, नेवार, गुरुङ्ग, मगर, थारु, यादव, चौधरी र दलित समुदायको बसोबास रहेको छ । जहाँ १०३ घरपरिवार जनजाति समुदायको रहेको छ, जसको जम्मा जनसंख्या ४५५ रहेको छ भने पुरुषको संख्या २१८ र महिलाको संख्या २३७ रहेको छ । आदिवासी/जनजति बहुसंख्यक राहेको यस आयोजनाका क्षेत्रमा मिश्रित समुदायको बसोबास रहेको छ । आयोजना क्षेत्रमा रहेको आदिवासीहरुसंग छुट्टै छलफल गरिएको थियो (स्रोतः *Field study, March, 2024*)।

ऐन तथा नीति, नियमको आवश्यकताः

नेपाल सरकारले विभिन्न समयमा जारी गरेका विषयगत तथा बहुविषयगत निर्देशिका तथा मापदण्डहरु आयोजना तयार गर्न तथा कार्यान्वयन चरणहरुमा वातावरणीय एवं सामाजिक सुरक्षण आयामहरु मूल

प्रवाहीकरण गर्न यथेष्ठ छन् । यस प्रतिवेदनले सम्बन्धित नेपाल सरकारका योजना, निति, ऐन, नियम, निर्देशिका एवम् मापदण्डहरु समेटेको छ। त्यसैगरी यस प्रतिवेदनले विश्व बैङ्कको वातावरणीय तथा सामाजिक मापदण्डहरु पनि समेटेको छ ।

स्क्रीनिङ्ग, क्षेत्र निर्धारण, प्रभाव पहिचान, पुर्वानुमान तथा व्यवस्थापनः

आयोजनाको प्रत्यक्ष प्रभावित क्षेत्र यस उपआयोजनाको सडकको चौडाइ ११.७४ मिटर देखि १३ मिटरसम्म रहेको छ । त्यसैगरि आयोजनाको प्रभाव क्षेत्र सडकको किनारको दुबै तर्फ ५०० मिटरसम्मको क्षेत्रलाई लिइएको छ । प्रभावहरुको वर्गीकरण तथा संक्षेपीकरण गर्न वातावरणीय तथा सामाजिक चेकलिष्ट प्रयोग गरिएको छ । स्थान विशेषको प्रभावहरु वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कनमा समावेश गरिएका छन् । केही प्रभावहरु निम्नानुसार छन् ।

भौतिक प्रभावहरुः

- भूमि उपयोगमा परिवर्तन
- उत्खनन् सामाग्रीको प्रयोग
- भण्डारण र निर्माण शिविर स्थल
- ध्वनी, वायु र जल प्रदुषण
- फोहरमैला तथा ढुङ्गा-माटो व्यवस्थापन
- सडकको स्थाइत्व र व्यवस्थापन

जैविक प्रभावहरुः

- बोटबिरुवामा हानी ।
- जलश्रोत प्रदुषणको जोखिम ।

सामाजिक-आर्थिक तथा सांस्कृतिक प्रभावहरुः

- भूमि उपयोगमा परिवर्तन
- सार्वजनिक तथा नीजि संरचनाहरुमा क्षती (*जम्मा ५४ वटा बिजुलीको खम्वा, ७ वटा नीजि ह्याण्ड पम्प, एक सार्वजनिक प्रतिक्षालय)*
- घर-आँगन, पसल तथा नीजि सम्पतिमा पहुँच र गतिशिलतामा कठिनाइ
- सामुदायिक स्वास्थ्य र सुरक्षा
- व्यवसायजन्य स्वास्थ्य र सुरक्षा
- सामाजिक सद्भावमा अवरोध, गुनासो व्यवस्थापन
- यौन जन्य हिंसा तथा मानव बेचविखन जस्ता विषय सँग सम्बन्धित जोखिम
- HIV AIDS तथा CoVID) जस्ता सरुवा रोग सँग सम्बन्धित जोखिम
- बाल श्रम, जबरजस्ती काममा लगाउने तथा ज्यालामा असमानता जस्ता समस्या
- ट्राफिक व्यवस्थापन

यी असरहरु न्यूनीकरणका लागि विभिन्न उपायहरु यस प्रतिवेदनको वातावरण तथा सामाजिक व्यवस्थापन योजना (ESMP) मा उल्लेख गरिएका छन् । ती मध्ये केही प्रमुख उपायहरु निम्नानुसार रहेका छन् :

भौतिक प्रभावहरु न्यूनीकरण गर्ने केही उपायहरुः

- स्वीकृत गिट्टी वालुवा प्लान्टबाट मात्रै गिट्टी वालुवा प्रयोग गर्ने
- निर्माण सामग्री भण्डारण स्थल व्यवस्थापन
- नेपाल सरकारले तोकेको मापदण्ड अनुकुल सवारी साधन तथा यन्त्रहरु प्रयोग गर्ने
- सवारी साधन तथा यन्त्रहरु को नियमित मर्मत संभार गर्ने
- फोहोर व्यवस्थापनमा 3R अवधारण अवलम्बन गर्ने
- श्रोतमा नै कुहिने र नकुहिने फोहोर वर्गीकरण, तथा प्लाष्टिक जन्य फोहोर जलाउनमा प्रतिवन्ध
- सार्वजनिक स्थल तथा खोलामा निर्माणजन्य फोहोर फाल्न प्रतिवन्ध

जैविक वातवारणमा पर्ने प्रभावहरु न्यूनीकरण गर्ने केही उपायहरुः

- कामदारहले वन जङ्गलबाट काठ दाउरा लिन ल्याउनमा प्रतिवन्ध
- कामदारहले खोलामा माछा मार्न प्रतिवन्ध तथा खोलामा निर्माणजन्य फोहोर फाल्न प्रतिवन्ध

सामाजिक-आर्थिक तथा सांस्कृतिक प्रभावहरु न्यूनीकरणका उपायहरु :

- सडकको क्षेत्राधिकारमा भित्र रहेका जग्गाहरुको कित्ताकाट र स्वमित्व हस्तान्तरणको प्रकिया तिलोत्तमा नगरपालिकाले पुरा गर्नेछ ।
- खानेपानी पाईप लाईन तथा विजुलीका पोलहरु पुनःर्स्थापना तथा व्यवस्थापन गर्ने
- घर-आँगन, पसल तथा नीजि क्षेत्रमा आवागमनमा सहजताका लागि आवश्यक स्थानहरुमा काठको वा फलामको फड्के वा earthen ramp को व्यवस्था गरिदिने, साथै ट्राफिक व्यवस्थापन योजना तयार गरिनेछ
- नेपाली भाषामा *Sign board* तथा सूचनाहरु राख्ने, तथा सुरक्षाका लागि *barricade* राखिनेछ
- कामदारहरुलाई सुरक्षाका उपकरणहरु तथा प्राथमिक उपचार सामाग्री उपलब्ध गराइनेछ
- कामदारहरुलाई सुरक्षित तथा सफा आवासगृहको व्यवस्था, तथा उपयुक्त WASH सुविधाहरु उपलब्ध गराइनेछ
- परियोजनामा वालवालिकालाई काम लगाउन निषेध गरिनेछ
- स्थानीयलाई रोजगारीको अवसर तथा प्राथमिकता
- कामदारहरुलाई आचार संहिता (CoC) लागू गरिनेछ
- निर्माण चरणका डाइभर्जनहरुको डिजाइनले बृद्ध-बृद्धा, महिला, वालवालिका तथा फरक क्षमताका भएका व्यक्तिहरुका लागि उपयुक्त उपायहरुको व्यवस्था गर्नु पर्दछ ।
- वातावरणीय संरक्षण र सामाजिक सुरक्षण सम्बन्धी जनचेतनामूलक कार्यक्रम संचालन गरिने ।
- यौन जन्य हिंसा (यौन दुराचार), मानव बेचविखन, HIV AIDS and CoVID सम्बन्धी जनचेतनामूलक कार्यक्रमहरु संचालन गरिनेछ ।

पुनःर्वास कार्ययोजनाः

प्रस्तावित सडक स्तरोन्नति उपआयोजनाको सडकको क्षेत्राधिकार भित्रको नीजि संरचनामा पर्ने असरलाई सकेसम्म जोगाइएको छ । नगरपालिकाले उपलब्ध गराएको निर्णय प्रतिलिपिमा उल्लेख भए बमोजिम बि.सं. २०७६ साल बैशाख ३० गते स्थानिय राजपत्रमा प्रकाशित सुचनाले बाटोको क्षेत्राधिकार स्पष्ट छ र जग्गा अधिग्रहणको आवश्यकता छैन । पुनर्वास कार्य योजनाले डिजाइन परिवर्तन भएमा प्रभावित व्यक्तिहरुको जग्गा अधिग्रहण, क्षतिपूर्ति र पुनर्वासको नीति र प्रकृयाहरु प्रदान गर्ने लक्ष्य राखेको छ । तर यस परियोजनको लागि पुनर्वास कार्य योजना आवश्यक छैन ।

यौन शोषण तथा दुर्वेसन एवं दुर्वव्यवहार रोकथाम तथा सम्बोधन कार्य योजनाः

विश्व बैङ्कले नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना (NUGIP) को लागि गरिएको यौनिक शोषण, दुर्वेसन एवम् यौन दुर्व्यवहार जोखिम मूल्याङ्कनका आधारमा यस आयोजनाको SEA/SH जोखिमको "न्यून" मूल्याङ्कन गरिएको छ । यस मूल्याङ्कनमा आधारित भई आयोजनाको लागि SEA/SH निरोध तथा सम्बोधन कार्ययोजना आयोजनाको लागि SEA/SH रोकथाम तथा सम्बोधन कार्ययोजना बनाइएको छ । यसमा उपआयोजनाको कार्यक्रमले सिर्जना गर्न सक्ने SEA/SH जोखिमहरु निषेध एवं रोकथाम तथा न्यूनीकरण गर्ने उद्धेश्यका निश्चित व्यवस्थाहरु समावेश गरिएका छन् । यस योजनाले तालिका- १. विश्व बैङ्कले सेप्टेम्बर २०१८ मा प्रकाशित "असल अभ्यास नोट" अनुसार IPF परियोजनाहरुमा SEA/SH जोखिमहरुलाई सम्बोधन गर्न सुझाएका कार्यहरुलाई पनि समावेश गरेको छ ।

सामान्यतया नेपाली समाजमा लैङ्गिक हिंसासम्बन्धी घटनाहरु घटिरहन्छन् । समुदाय स्तरका महिलाहरुसँग भएका छलफल अनुसार, आयोजना क्षेत्रमा केही साना-तीना घरेलु हिंसाका घटनाहरु घटे तापनि सामाजिक प्रतिस्थाका कारण आपसी मेलमिलाप गर्नेगरेको छ ।

वातावरण तथा सामाजिक व्यवस्थापन योजना :

पहिचान गरिएका सवालहरु, सम्भाव्य असर एवं प्रभावहरु, तिनीहरुको न्यूनीकरण गर्ने विधिहरु र अनुगमन विधिहरु समावेश गरी यस प्रतिवेदनले वातावरणीय तथा सामाजिक व्यवस्थापन रुपरेखा (ESMF) मा उल्लेख भए बमोजिम प्रस्ताव गरेको छ । निर्माण तथा सञ्चालन चरणमा हुने वातावरणीय तथा सामाजिक प्रभाव न्यूनीकरण गर्ने लागत खर्च वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन प्रतिवेदनमा संलग्न छ । अझ वातावरणीय प्रभाव न्यूनीकरण व्यवस्था तथा अनुगमन गर्ने जिम्मेवार निकायहरु वातावरणीय तथा सामाजिक व्यवस्थापन रुपरेखा तोकिएको छ । वातावरण तथा सामाजिक व्यवस्थापन योजना कार्यान्वयनका लागि कूल रु. ३,७४०,००० को बजेट प्रस्ताव गरिएको छ । यस उपआयोजनामा सरोकारवालाहरुको जिज्ञासा एवं गुनासोहरुको बारे अद्यावधिक सूची राख्न र उपयुक्त समयमै समाधान गर्न एवं गुनासो सम्बोधन विधि (GRM) समेत समेटिएको छ ।

गुनासो व्यवस्थापन समिति (GRC) को व्यवस्थाः

उपआयोजना निर्वाध रुपमा कार्यान्वन गर्न र समयमा नै उपआयोजना सम्पन्न गर्नका लागि निर्माण चरणमा आउने गुनासाहरुको सुनुवाई गर्ने र त्यस्ता गुनासाहरुलाई तत्कालै स्थानिय स्तरमा नै समानधन गर्ने उद्देश्यले आयोजना स्तरमा र नगरपालिका स्तरमा एक/एक गुनासो व्यवस्थापन समितिको गठन गाएिकोछ । उक्त गुनासो समितिलाई कुनै पनि प्रकारका संचारका माध्यम, चिट्ठिपत्र वा भौतिक रुपमा उपस्थित भएर टिपाउने गुनासाहरुको सुनुवाई ESMF मा उल्लेख भए बमोजिमको नियम र परिधिमा रहि समाधन गर्ने र आफुले समाधान गर्न नसकिने गुनासाहरुलाई उपल्लो निकायमा पठाउन एक गुनासो व्यवस्थान समितिको गठन गरिनेछ ।

संस्थागत व्यवस्था :

आयोजना कार्यान्वयन गर्न शहरी विकास मन्त्रालयले शहरी विकास तथा भवन निर्माण विभाग अन्तर्गत नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना (NUGIP) को कार्यालय स्थापना गरेको छ । वातावरणीय तथा सामाजिक विधिको साथै सम्पूर्ण विधिहरु पालना सम्बन्धी जिम्मेवारीको जवाफदेहिता आयोजना समन्वय कार्यालय (PCO) मा रहने छ । आयोजना समन्वय कार्यालयलाई एउटा आयोजना व्यवस्थापन सहयोग टोलीले (PMST) सहयोग गर्नेछ । उपआयोजनाहरुको वातावरणीय तथा सामाजिक व्यवस्थापन योजना कार्यान्वयन स्थानीय तहमा गर्न र अन्य वातावरणीय एवं सामाजिक संयन्त्रहरुको कार्यान्वयनमा जिम्मेवार हुने गरी नगरपालिकामा एक आयोजना कार्यान्वयन इकाइ (PIU) स्थापना गरिएकोछ । सुरक्षण विशेषज्ञ सहितको डिजाइन तथा सुपरिवेक्षक परामर्शदाता (DSC) मार्फत प्राविधिक साहायाता पुऱ्याइनेछ ।

1. PROJECT INTRODUCTION

Department of Urban Development and Building Construction (DUDBC) under Ministry of Urban Development (MoUD) of Government of Nepal has been executing 'Nepal Urban Governance and Infrastructure Project (NUGIP) within the strategic framework for urban development as envisaged in National Urban Development Strategy since the fiscal year 2077/78 B.S.

DPR of *Upgradation Works of Mangalapur - Kanchhi bazar (Bewara chowk - Kanchhi bazar Section) Road* of Tilottama Municipality has been prepared as per the Contract between Municipal Executive, Tilottama and Nepal Urban Governance and Infrastructure Project (NUGIP) (Client). The project is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the municipality together with the improvement of livelihood of the local people along the settlement.

This study for updating of Environmental and Social Management Plan of *Upgradation Works of Mangalapur - Kanchhi bazar (Bewara chowk - Kanchhi bazar Section) Road* in Tilottama Municipality has been conducted during March - April 2024. The study is based on the Environmental and Social Management Framework (ESMF) for Nepal Urban Governance and Infrastructure Project (NUGIP) in Nepal.

Estimated Cost:	NPR. 277,961,049.09 (including VAT and contingency)
Start/Completion Date:	April 2024 - April 2025

2. DESCRIPTION OF THE PROJECT SITE

Tilottama Municipality lies in the Rupandehi District of Lumbini Province. Geographically, it is located between 83°24'0" to 83°33'30" east longitude and 27°33'0" to 27°40'30" north latitude. It covers an area of 126.3 sq.km with a total of 17 wards. Tilottama has an estimated population of 149,479 living in 35,991 households as per NPHC, 2021 NSO.

2.1 Location of the project

The project is located in ward number 10 of Tilottama Municipality. The project covers Bewara - Kanchhi bazar section which is an extension of the existing and ongoing road upgradation project from Mangalapur to Bewara. Its starting point coordinates are 27°35'31.03"N, 83°30'53.16"E and end point coordinates are 27°35'10.74"N, 83°31'52.02"E.

2.2 Land Use

The project area is primarily an agricultural area with scattered settlement areas. The project area consists of different settlements like commercial, residential, agriculture and open / barren land. Although there are some forest areas in Tilottama Municipality, there are not any forest areas along or in proximity of the proposed road alignment.

2.3 Topography and Hydrology

Main settlements in the municipality lie in the plain area. The road alignment lies in the plain terrain with elevation ranging from 126.72 m to 127.97 m from sea level (amsl). Two main rivers, the Tinau and the Rohini Khola run from its border to the west and east respectively. However, these are not along the proposed road alignment. Major streams originate from the Chure hills and are tributaries of the main rivers of Tilottama Municipality.

2.4 Climate and Vegetation

Tilottama Municipality falls in a tropical climatic zone. This climate has three distinct seasons. Dry summer season begins in the month of March when the sun starts to move northward from the equator. It lasts till the middle of May. The mean minimum temperature reaches up to 19.3°C and mean maximum temperature is nearly 30.9°C. Rainy season starts from the month of May and ends in September. Winter season begins in the month of October and lasts till February as the sun moves southward from the equator. Higher temperature is observed in the month of April and it remains active till October. Extreme cold starts from November and lasts till February. The average annual rainfall is 1753mm. November, December, and February are the driest months and most precipitation falls in July, with an average of 510 mm.

The road alignment has tropical to subtropical vegetation types. The project area is highly influenced by human settlement which reveals low - natural vegetation diversity. Common vegetation found in the project municipality are Sal (*Shorea robusta),* Asna *(Terminalia tomentosa),* Khayer (*Acacia catechu),* Sissoo (*Dalbergia Sissoo),* Teak (*Tectona grandis),* Simal (*Bombax ceiba),* Aanp (*Magnifera indica),* Bakaino (*Melia persica),* Harro *(Terminalia chebula),* Jamun (*Syzugium operculata),* Kadam (*Anthocephalus chinensis),* Neem *(Melia azadirach) and* Aamala *(Phyllanthus emblica).* There are no forests along the proposed road alignment for upgradation. There are 14 trees within the construction width, and all these are under ownership of Tilottama Municipality. The details are provided in Annex 6.

2.5 Air Quality, Water Quality, and Noise level

The ambient air quality of the project area doesn't show critical state. The air quality index of the Butwal station is taken for reference, and this shows that the $PM_{2.5}$ level is 49.6 µg/m^3 and the AQI is 135 (*Source: https://www.iqair.com/nepal/western-region/butwal, 26th April 2024*). However, the project area is relatively less urbanized, hence air quality is better. The primary source of ambient air pollution is due to dust from vehicles plying on earthen roads. Noise levels were measured using an android application, and a continuous measurement was conducted along the road alignment. The average noise levels ranged from 64.3 dBA to 66 dBA.

The drinking water source of the project area is primarily deep tubewell. Reference report of drinking water quality of ward number 10 has been referred to (Annex 5). The report shows that the water quality is satisfactory and the parameters are within the threshold limits of NDWQS 2022 (Annex 3). The report shows that although turbidity is slightly high, there is no foul taste and odour. Some of the sample values were Electrical conductivity - 386µS/cm, Arsenic < 0.01 µg/L, Iron - 0.23 mg/L, and Total Hardness of 200 mg/L.

2.6 Existing Status, Structures and Utilities along Road Alignment

The field study shows that the following public structures or utilities at present near the proposed road alignment;

Table 2-1: Existing Public structures and utilities alongside road alignment

SN	Structures	Description	Remarks
1	Chautari /Public rest place / waiting station	1 Chautari at Ch. 5+520 km 1 Public Rest Place (*Pratikshyalaya*) at Ch. 6+490 km	These structures will not be affected
		1 Public Rest Place (*Pratikshyalaya*) at Ch. 6+463 km	This falls within road width, and will be reinstated
2	Electric poles	54 including 1 transformer	Will be relocated; included in BoQ Abstract of Cost - A1

Source: DPR - Upgradation of Mangalapur - Kanchhi Bazar (Bewara chwok - Kanchhi bazar Section) Road

It has been discussed with the stakeholders that there will be a need of shifting and installation of new electric poles. Likewise, consultation was carried out also with the School Management Committee (SMC) of Shree Janaheet Secondary School regarding information about EMSF/ESMP documents and some of its provisions including GRC, & greenery promotion, etc. (Annex 2).

2.7 Demography of the project area

The total population of Tilottama Municipality is 149,479 and total household is 35,991. The population density is 1,185 per sq.km. and the average household size of the municipality is 4.15 which is lesser than that of district household size of 4.71. Male population is 71,526, and female population is 77,953 giving the sex ratio of 0.917.

The total population of project ward - ward 10, is 5,136 and the total number of households is 1,156. The average household size of the project ward is 4.44. Total male population of the project ward is 2,462 and the total female population of the project ward is 2,674. The sex ratio of the project is 0.92. (*Source: NPHC - NSO, 2021).* The total household along the road alignment is 114 with total

population 506 having 243 male populations and 263 female populations. (*Source: Field study, March, 2024*)

2.8 Settlements

The major settlements existed along the alignment are Bewara, Mainahawa, and Kanchhi bazar.

2.9 Land availability

The land required for road construction is already available and is in public use. The RoW was declared on 2076/01/30 BS (May, 2019), however, ownership of private land strips are yet to be transferred to Tilottama Municipality. The municipality office will conduct the process of transfer of deeds of these land parcels. The proposed road width is within the existing road width and there are no outstanding issues or grievances related to the land that is in public use at the moment. Letter of Tilottama Municipality regarding RoW and availability of land for road upgradation has been provided in Annex 2.

2.10 Ethnicity

The project area has people of Brahman, Chhetri, Newar, Gurung, Magar, Tharu, Yadav, Chaudhary and Dalit communities. There are 103 households of indigenous families. This includes a total population of 455 with 218 male and female 237 of indigenous families. The indigenous people are living in a mixed community *(Source: Field study, March, 2024).* Separate consultation was carried out with the indigenous people (ie. Tharu, Newar, Gurung, Magar, etc.) of the project area.

2.11 GBV, SEA / SH

Community consultations carried out for the ESMP preparation showed there are some instances of family disputes. During the consultation, it was discussed that some minor cases of family disputes, like disputes between husband-wife, take place in the project area - reflecting gender violence. As per the consultation carried out with the local women, there are no significant cases related to GBV, and if any such cases happen, then those cases are settled under facilitation of the local elite and social figures. In case, if such cases are not resolved even under facilitation of the local elite and social figures, then they are reported to the ward office. Since such cases are related to social prestige, the locals are found reluctant to take such cases to police stations or to other legal entities. Most of the local women were also not aware about the provisions of complaint registering through toll free number 1145 dedicated by National Women Commission.

Discussions were also carried out to sensitize the local women on possible cases of GBV after the workforce & laborers start working during the construction phase. They were also informed about provisions of the GRC and anti-harassment cell under this project. Hence awareness activities are required regarding GBV. As a part of the project compliance, an Anti-Harassment Cell has been formed in Tilottama Municipality with Ms Samjhana Bhandari, Chief of Women, Children and Social Welfare Section of the Tilottama Municipality as the focal person The letter regarding deputation of the focal person has been attached in Annex 2. The purpose of anti-harassment cell is to facilitate women to raise complaintes against any sexual harassment and to work as a link between the victim and relevant authority so as to prevent and address any cases of sexual harassment in relation to the project.

3. DESCRIPTION OF THE PROJECT AND ITS ACTIVITIES

The proposed road extension project is a section of Mangalapur - Kanchhi Bazar road. It serves the agriculture as well as tourism area of the Tilottama Municipality of Rupandehi district in Lumbini Province. The road connects Siddhartha Highway with Devdaha Border. The road passes through flat lands with almost plain slopes and passes through settlements, agricultural lands. The project road currently has a single lane operational paved carriageway and does not segregate slow-moving vehicles and pedestrians. The road section requires pavement reconstruction to maintain acceptable levels of service. There are no alternative routes to the project road that serve the same function as that of the stated road.

3.1 Salient Features of the Project

The proposed upgradation road project has following features;

Table 3-1: Details of Proposed Road Upgradation Project

SN	Description	Description	
1	Road Type	Urban/ Collector Road	
2	Proposed extended road length	1.84 km	
3	Number of Lane	Double Lane	
4	Right of Way	13 m	
5	Road Attributes	Existing	Proposed
	(i) Road Width	11.74 m to 13 m (in public use)	11.74 m to 13 m
	(ii) Carriageway Width	5.0 m in average	7 m throughout
	(iii) Pavement Surfacing	Asphalt concrete (Flexible pavement)	
	(iv) Culverts	13 culverts (6 box culvert & 7 pipe culverts)	
6	Terrain Type	Plain terrain (hill region) with gentle slope only at the end section	
7	Wards & Major settlements	Ward number 10; Bewara, Mainahawa, Kanchhi bazar	
8	**Design Parameters**		
9	Design speed of Road	30 km/hr	
10	Maximum gradient	8%	
11	Minimum Gradient	0.3%	
12	Total cost of EMP	NPR. 3,740,000.00	
13	Total Project cost	NPR. 277,961,049.09 (including VAT and contingency)	
14	Cost per km	NPR. 151,065,787.55 (including VAT and contingency)	

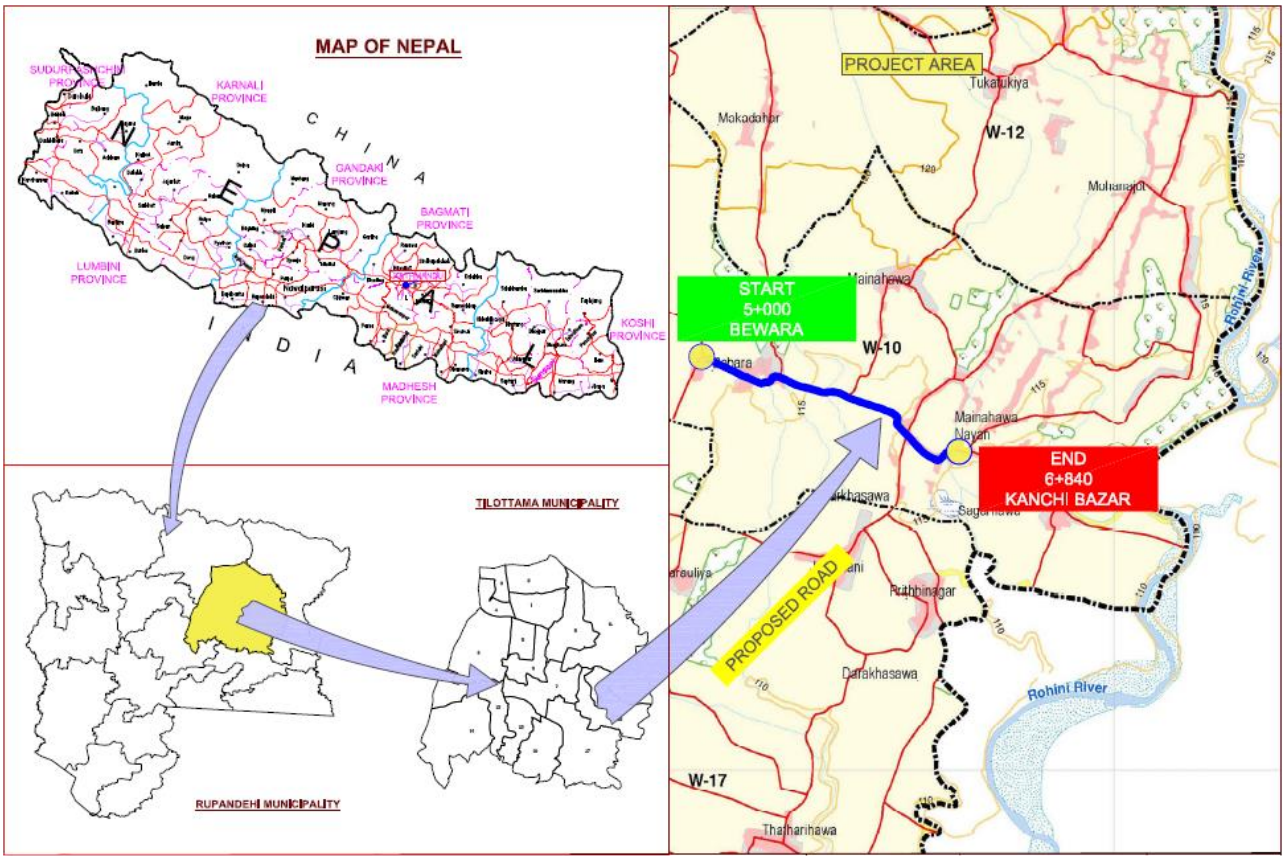


Figure 3.1: Index Map

3.2 Proposed Campsite and Stockpile Area

The field study showed an open space at the right side of chainage 6+050 to 6+120 km with an area of around 0.16 ha. at WN 10, can be used for Contractor's campsite and for stockpiling of the construction materials. There is a single-story block with at least 5 rooms which can be used as office and room. The land is private land, and the land is currently barren land. The contractor will lease the land through a contractual process. The details will be included in C-ESMP of the project.

Figure 3.2: Proposed Campsite and stockpiling area at Ch. 6+050 to 6+120 (WN 10)

3.3 Solid Waste and Spoil Management

Assuming the per capita waste generation to be 0.17 kg/person/day, and an average of 75 workers including staff, supervisors and workers live in the campsite, it is estimated that around 382.5 kgs of solid waste will be generated per month from the campsites. Although this is not a large volume, if not well managed - this will degrade the environment of the project aera. Solid waste generated from the camps will be disposed within the proposed camp site only (as recommended in the C-ESMP), away from local water bodies and efforts will be made to minimize such waste through reuse, reduction, and recycling concepts. Regarding the waste generated during decommissioning of the temporary campsite, the reusable like cardboards, plastics, bins, etc. will be sold, the metal scrap will be sent or sold to scrap dealers, and any residue will be disposed in coordination with the local ward/municipal authority through the solid waste management (collection & disposal) system of the municipality. The land will be cleared and restored to the satisfaction of the landholder or the local authority. Soak pits or septic tanks will be established for the sanitation units/latrines.

It is estimated that around 750 m^3 of spoil will be generated. Some portion of this will be reused in the backfilling works. An open space which is an unused uneven land of an area of around 0.12 ha. area within ownership of Shree Janaheet Secondary School at WN 10 has been proposed as a spoil disposal site. Construction debris will be disposed of at designated spoil sites only (as recommended in the C-ESMP) and efforts will be made to minimize such waste through reuse, reduction, and recycling concepts. While hauling and storing spoil temporarily, spoil will be covered with plastic/tarpaulin cover.

Figure 3.3: Proposed spoil disposal site (WN 10)

3.4 Use of Quarry materials

The quarry materials will be brought from authorized and licensed crusher plants. The contractor will not operate its own quarry site. All the quarry materials and borrow pit materials will be brought from the crusher plants. Those places, if not restored properly, might lead to other environmental problems, such as river bank cutting leading to erosion of agricultural areas. The other potential adverse impacts of quarrying are accelerated erosion, disturbance in natural drainage patterns, water logging and water pollution. The contractor will not operate its own quarry site. The project will require around 4,400 m^3 granular sub-base materials and 2,280 m^3 crusher-run base materials. All the quarry materials will be brought from the crusher plants.

For the up-gradation of the road project; sand, stone and aggregates can be obtained from two sites: Rohini River and Tinau River at a distance of 3 KM and 8 Km respectively. Likewise, reinforcement and cement can be obtained from Butwal at a distance of 2 Km whereas bricks and soil are locally available materials.

Figure 3.4: Proposed Quarry sites

3.5 GBV, SEA/SH aspects

Based on the SEA/SH Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". The project construction may disturb the local population with interactions of non-local workers. The outside workers may breach local social/cultural norms and values. If the code of conduct is not well implemented for the workers, then there can be cases of SEA/SH, GBV and HIV AIDS. Concerns of sexual misconduct and STDs remains a pertinent social risk. Communicable diseases may spread from the workforce to the community. As per the data of *Nepal Human Rights Year Book 2024* - INSEC, there were 8 cases of Human trafficking, 53 cases of rape, 17 cases of sexual harassment including 1 male case, and 576 cases of domestic violence in Rupandehi district in the year 2023. Hence, awareness on this regard will be relevant.

4. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

4.1 Social and Environmental Screening:

This sub-project is an upgradation of an existing road. The social and environmental screening of the sub-project has been done to assess any potential risk associated with the road upgradation in the required format. The screening checklists are provided in Annex 1. The screening shows that the project area doesn't have major social or environmental risks. The land required for road construction is already available and is in public use. The RoW was declared on 2076/01/30 BS (May, 2019), however, ownership of private land strips are yet to be transferred to Tilottama Municipality. Tilottama Municipality will conduct the process of transfer of deeds of these land parcels. The proposed road width is within the existing road width and there are no outstanding issues or grievances related to the land that is in public use at the moment. Letter of Tilottama Municipality regarding RoW and availability of land for road upgradation has been provided in Annex 2. As per section B & C of Appendix C of Environmental and Social Management Framework (ESMF, August 2020) of NUGIP, it can be concluded that the proposed road upgradation project falls under 'Low to Medium impact project' under Category B. Hence an abbreviated ESMP is sufficient for the proposed project. This ESMP document has been prepared as per Appendix C - C of the ESMF.

4.2 Implementation of Environmental and Social Management Plans

The sub-project ESMP implementation arrangements can be summarized as follows;

SN	Stakeholder	Role & Responsibilities for ESMP implementation
1	Tilottama Municipality/PIU	✓ The overall project environmental management is the responsibility of PIU ✓ The regular monitoring will be carried out by the PIU
2	Contractor	✓ The contractor is required to submit C-ESMP within 45 days of contract signing. ✓ Implement the mitigation measures and provisions as per ESMP of the project's DPR/ESIA
3	DSC	✓ Preparation of ESIA during DPR phase ✓ Supervision support to the Contractor to implement the ESMP ✓ Monitoring of implementation of ESMP and its compliance ✓ The E&S safeguards specialists of DSC will work closely with its technical staff to ensure project implementation in accordance to World Bank's safeguard standards.
4	PCO & PMST	✓ The PCO will have overall responsibility to ensure compliance with pertaining laws, policies, regulation for all sub projects ✓ The PCO with support from PMST will review implementation support of environmental and social safeguard studies/ management plan prepared by PIU/DSC

Figure 4.1: Institutional Arrangement for ESMP Implementation

4.3 Objectives of ESMP:

The overall objective is to ensure that the environment and its surrounding areas are protected and developed to meet the needs of the local stakeholders and safeguard the requirements of the local people. It also aims to establish the roles & responsibilities of all parties involved in the project's environmental and social management; and the to ensure budget required for the same.

4.4 ESMP Matrix:

Following project interventions and related mitigation measures have been planned in relation to the existing status and potentials improvements for the proposed road alignments;

Table 4-1: Environmental and Social Management Plan (ESMP) Matrix

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
	Physical Environment (Construction Phase)			
1.	Land use concerns - temporary and permanent changes in landuse	▪ Leaseholder or rental contract will be maintained for temporary use of land required for campsite and stockpile site for the project. ▪ Fertile topsoil will be conserved and reapplied as and when possible. ▪ All the temporarily acquired land will be rehabilitated into its previous state or better than the earlier state maintaining natural drainage and acceptable to the land owner/DSC.	Contractor	Included in BOQ for the establishment of camp
		▪ Prior notification (2months' before award of construction contract) for crop plantation will be given.	Tilottama Municipality	
2.	Use of quarry and borrow materials	▪ Contractor will obtain required construction materials from the legally operating crusher industries only. Quarry materials will be purchased from legally operating crusher plants at Rohini River and Tinau River. The maps of the proposed quarry site are provided in Fig. 3.4 ▪ In case of borrow pits, the borrow pit sites will be well demarcated, regularly monitored and topsoil will be collected. Later, the topsoil will be put back on the surfaces and the areas revegetated, if required.	Identifying approved quarry site is municipality responsibility but carrying material for construction from the defined site is responsibility of Contractor	This is provisioned under BoQ item D-4 to D-8
		▪ PIU & DSC will check the site requirements and quality of quarrying material and approve it.	DSC/PIU	
3.	Issues related to Campsite and stockpiling - risks of accidents;	▪ Campsite is proposed at an open space of around 0.16 ha. near Kanchhi bazar at chainage 6+050 to 6+120 km in WN 10 ▪ The site will be provisioned with proper drinking water facilities, WASH provisions, and lighting system. Environmental sanitation will be maintained along with proper stock-keeping. Ensuring use of cleaner fuel like LPG and electricity for cooking and heating purposes.	Contractor	As per Item B-2 of General Works in BoQ

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
	pollution to local environment	▪ Separate rooms, & toilets will be provisioned for male & female workers. ▪ Proper insulator cover and proper drain will be managed to store the chemical to avoid the leakage of chemicals. ▪ Stock of sand will be set wet to prevent it from blowing with the wind; water sprinkler will be used for this purpose. ▪ The places used for the stockpiling of construction materials will be cleaned promptly after the completion of the project. ▪ The site will be well fenced, and provided with a 24-hour guard. ▪ The contractor will rehabilitate the camp and stockpiling area after the demolition of the sites.		
4.	Air pollution in the construction locality - dust nuisance to the locals, and ambient air pollution of the project area	▪ Water sprinkling (at least 3 times a day) at dry exposed surfaces and stockpiles of aggregates as necessary during dry seasons. Settlements like Bewara, Mainahawa, & Kanchhibazar are more prone to this issue. ▪ Require trucks delivering aggregates and cement to have tarpaulin cover. ▪ All diesel generators, haul trucks, pavers, graders, and rollers, required to comply with regulations ▪ No firewood for cooking and heating bitumen and incineration of wastes will be allowed by the contractor. ▪ Burning of waste (from campsites) will be strictly prohibited. ▪ Maintenance of vehicles on regular basis. ▪ Ensure use of equipment and fuel complying with applicable emission standards.	Contractor (Supervision support of Design & Supervision Consultant)	Included within BoQ, Abstract of Cost A-4
		▪ Air quality monitoring (6 times during construction phase).	Contractor	NPR 150,000
5.	Noise nuisance	▪ Involve the local authority and the community in planning the work program so that any particularly noisy or otherwise invasive activities can be scheduled to avoid sensitive times. Settlements like Bewara, Mainahawa and Kanchhi bazar chowk are more susceptible to noise nuisance. ▪ Operation of heavy equipment/vehicles, and noisy construction works will be stopped during the night time between 10:00 pm to 6:00 am. ▪ Drop heights for loading and unloading coarse aggregates will be minimized ▪ Soft horns to be used, and use silent type generators (if required)	Contractor (Supervision support of Design & Supervision Consultant)	Cost of Noise level monitoring 30,000/-

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor will post warning signs in the noise hazard areas. ▪ Contractor will monitor noise level along the construction site monthly. ▪ Complete work in settlement areas as quickly as possible		
6.	Impact on water bodies (local streams) - disposal of waste and spoil; disposal of wastewater on to water bodies	▪ Earthworks generating a higher amount of spoil will be conducted during the dry season to avoid the difficult working conditions that prevail during the monsoon season such as problems from runoff. ▪ Location for stock yards for construction materials are identified at least 100 m away from water courses like Danda stream. Place for storage of fuels and lubricants will be at least 300 m away from any drainage leading to water bodies. ▪ Washing of project vehicles at stream banks will be restricted. ▪ Proper storage of chemicals and lubricants, use of a spillage kit to avoid spillage. Take all precautions to prevent entering of wastewater into streams, watercourses, or irrigation systems. Install temporary silt traps or sediment basins ▪ While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, are disposed in a manner that may block the flow of water of any water course ▪ Any disposal on surface water flows (streams and irrigation canals) will be strictly prohibited; fishing by the workforce will be strictly prohibited; Washing of project vehicles along the banks of streams will also be prohibited;	Contractor	As per Item B-2 of General Works in BoQ (Table 4-2 no 1. 90,000)
		▪ Environmental Awareness activities will be carried out for the workforce (during 1st & 3rd Quarters - Yr. 1; at least 30 participants/event)	Contractor (Coordination support of DSC for awareness and training)	NPR 50,000
7.	Solid waste and spoil generation	▪ Waste minimization and waste segregation will be prioritized; the 3R approach will be promoted. ▪ Composting of organic waste generated (around 60% of 900kg/month) from the camps will be disposed of within the proposed camps.	Contractor (Coordination support of DSC for	NPR 120,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
	- waste littering; burning of waste; degradation of local aesthetic values	▪ Containment of hazardous waste will be carried out. ▪ Awareness raising event will be carried out. ▪ Decommissioning waste will be re-used, sold to local scrap dealers. ▪ Coordination with the local municipality team for final disposal into the municipality's waste collection & disposal system. ▪ It has been planned those basic facilities like composting, waste segregation, etc will be started from first month/quarter of contractor's mobilization; other practices under 3R approach (e.g. waste minimization) will be carried out through out; and awareness events will be carried out every quarter (detailed plan will be provided in C-ESMP) ▪ Disposal of spoil into water bodies will be strictly prohibited. ▪ Generated spoil will be disposed of only at designated spoil disposal sites. Details of disposal sites will be confirmed during construction by the contractor and will be presented in the C-ESMP.	awareness and training)	
8.	Spoil Disposal	▪ Disposal of spoil into water bodies will be strictly prohibited. ▪ Generated spoil will be disposed of only at designated spoil disposal sites. Details of disposal sites will be confirmed during construction by the contractor and will be presented in the C-ESMP. ▪ The contractor will avoid haphazard disposal of spoil materials, ▪ The contractor will maintain landscape of the disposal site after disposal ▪ The contractor will avoid steep slopes along the disposal site. ▪ The contractor will provide a toe wall at the bottom of the disposal to prevent slide. ▪ The contractor will provide drainage along the disposal to maintain natural flow of surface runoff. ▪ The contractor will rehabilitate the disposal area covering vegetation and planting trees.	Contractor Supervision of DSC and PIU	This is provisioned under BoQ item D-4 to D-8, and G-1
9.	Others	▪ As one of the Climate Resilience actions, during hydrological calculations, additional 16% weightage has been included for hydraulic design of drainages and cross-drainages ▪ The Contractor will develop and maintain an emergency response system in order to address any accidents or other emergency situations or disasters at site such as fall of workers from height, collapse of pier, flood, earthquake, accident, etc.		

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ The Contractor will dispose of all the chemical wastes generated during the time of construction safely without interrupting the existing nearby settlements, water bodies, forests and wildlife.		
	Physical Environment (Operation & Maintenance Phase)			
10.	Road Stability and Drainage Management - risks of accidents; degradation of road utilities	▪ Regular/periodic maintenance of the road ▪ Construction of drainage system to mitigate possible inundation in the settlements along the project alignment ▪ Ensure proper compaction as per design	Tilottama Municipality	Included in BoQ, General works 6
		▪ Awareness activities to be carried out in community level to reduce the incidences of disposal of waste into road-side drains	Contractor; Support of DSC	BoQ, Abstract of Cost A-6
11.	Air pollution and Noise nuisance	▪ There should be a consensus between Tilottama Municipality, Transportation Management Office, Transportation Entrepreneur, and the local people regarding the operation of conditioned vehicles ▪ Campaigns like 'No Horn' and use of soft-horns can be initiated by the local authority	TMO, transportation entrepreneur, local people	No extra cost will be required.
12.	Water pollution	▪ Disposal of any septic or industrial wastewater into the roadside drains will be strictly prohibited ▪ Washing of public and private vehicles at banks of local streams, like Danda stream, will be restricted	Tilottama Municipality	No extra cost will be required.
	Biological (Construction Phase)			
13.	Vegetation loss	▪ Compensatory plantation @ 1:10 for each tree cut; totaling to plantation of 160 trees for 16 trees to be cut. No private trees need to be cut. All these are under public status, and hence coordination with the municipality will be carried out. *(The detailed list of trees to be cut is provided in Annex 6)*	Contractor;	NPR 250,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ Greenery promotion works will be carried out along the settlement belts within RoW (100 plants of to be planted covering road side plantation for around cumulative length of 1 km of road stretch) ▪ Plants like Neem, Bakaino, Sissau etc. and fruit plants will be planted. Care-taking cost of 1 year is included in this cost, and for later period, Tilottama Municipality will need to bear the care-taking cost.	Tilottama Municipality for care-taking works	(NPR 485,000 for greenery promotion)
		▪ Public land under ownership of Shree Janaheet Secondary School will be used for greenery promotion and park works. It is an unfenced land along the right side of the road alignment (Chainage 6+390 km to 6+730 km) and is currently in public use.	Contractor; Shree Janaheet Sec. School for care-taking works	NPR 350,000
	Socio-economic and Cultural (Construction Phase)			
14.	Impact on public infrastructure -Damage to a public rest place (Pratikshyala)	▪ The public rest place (*Pratikshyala*) at Ch. 6+463 km will be damaged and hence will be reinstated	Contractor	NPR 1,425,000 (Abstract of cost, A5)
15.	Disturbance to electric poles in the proposed road width	▪ Relocate and Install 54 electric poles along the alignment in coordination with the local electricity office and telecommunication authority. ▪ Should be completed prior the beginning of the road construction	Contractor under coordination of Tilottama Municipality	Included in BoQ (Abstract of cost, A1)
16.	Reinstatement of hand pumps	▪ There will be need of reinstatement of 7 private hand pumps that are in use now. The contractor will work in close coordination with the locals and Tilottama Municipality for reinstatement of these hand pumps.	Contractor in support with Tilottama Municipality	NPR 175,000; Included in BoQ; Abstract of cost, A5

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
17.	Difficulties in access & mobility to private properties and premises - obstruction to reach the local merkets; challenges specially for the elderly and the children	▪ Diversions and proper crossings will be available for elderly and differently-able people in the construction phase to ensure their mobility is not impacted during construction. ▪ Metal planks and wooden planks will be placed to ease the access to private houses and shops. Ramps have been proposed at 25 sites.	Contractor (Supervision support by DSC)	Included in BoQ (Abstract of cost, K)

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
18.	Road safety, and Community health & safety - risk of accidents; traffic disturbances	▪ 'Drive slow' messages will be placed along the active sites. ▪ Barricades will be placed to avoid any accidental falls. Hard barricades will be provided at temporary deep excavations and trenches for foundation works. ▪ Sign boards with safety messages and warnings will be placed in local languages all along the alignment at the construction sites and at the trench excavation area. ▪ Construction works to consider elderly, women, child & differently able people (EWCD) requirements ▪ Trenches will be backfilled with immediate effect. ▪ Carry out site management practice such as the fencing around work areas and road signage. ▪ Increase public awareness of safety, health and environmental issues by providing information directly and indirectly through campaigns. ▪ Display appropriate signage, in Nepali language, for use during construction and implementation of the project to enhance awareness creation on the potential hazards of the project ▪ To minimize any negative impacts from operation of the labour camp, the contractor will manage the labour camp as per measures provided in SN 3 above ▪ The contractor will assign a safety supervisor and will monitor daily construction works in terms of health and safety. ▪ The Contractor will comply with the requirements of the Environmental, Health, and Safety (EHS) General Guidelines of the World Bank, April, 2007 and the statutory norms of safety during construction	Contractor	Included in BoQ (Abstract of cost, H)
		▪ Emergency response mechanism will be established, and provisions will be arranged under emergent circumstances in concurrence from DSC	Contractor	NPR 150,000
		▪ Awareness activities will be conducted to inform & aware locals regarding potentials risks and proposed safety measures related to the project activities	Contractor; Support of DSC and PIU	NPR 50,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
19.	Occupational Health & Safety - risk of injuries; higher exposure to water borne diseases and pulmonary diseases; conflict with the locals	▪ Personal Protective Equipment (PPEs) will be provided to the workers, and its use will be monitored closely. ▪ Replacement of PPEs after 'wear & tear' - at least every quarter ▪ First aid boxes will be provided at campsites as well as active working sites (the kits to be refilled and updated every month). ▪ CoC will be implemented for all the parties involved in the project including engineers, supervisors, operators, drivers and labourers ▪ Proper WASH provisions will be provided in the labour camps ▪ Drinking water quality monitoring (at start, and after that once every 2-3 months; total of at least 6 times) ▪ Provision of potable water for the workforce will be ensured ▪ Toilets will be provided at the ratio of at least 1 unit for 15 workers. ▪ Provision of insurance to cover physical damage to workers. ▪ Drivers with authorized license holders will only be allowed for the operation of construction vehicles. ▪ Workers and staff at the construction site will be provided with proper training to ensure that workers are trained on what to do in the event that an accident occurs on site. ▪ The contractor's supervisors will be instructed to conduct 'pre-work instructions' to the workers everyday – explaining to them about the nature of works, condition of the site, and associated risks as well as safety measures. ▪ Agreement with nearby health institutions will be in place by the contractor. ▪ Contractor will be responsible to maintain the records of each and every accident and incidence and will make it available to DSC/PCO/PMST as and when required. ▪ Contractor's team, staff and laborers can also make use of the GRM to raise complaints / grievances if any	Contractor (Supervision support by DSC team)	To be included within contractor's overhead (GCC) NPR 90,000 for drinking water quality monitoring

20.	Social Disturbance / Risk of SEA/SH, Human trafficking, GBV, HIV AIDS and CoVID	(i) Regarding SEA/SH, GBV ▪ Locals will be given due priority for any employment opportunity ▪ CoC will be implemented for the operators, drivers and labourers ▪ Separate toilets will be provided for male and female workers ▪ SEA/SH, GBV awareness raising activities, trainings and stakeholder engagements such as - community based-awareness program, school based awareness program. The focal person of Anti-Harassment Cell will be part of trainings, awareness programs regarding SEA/SH. ▪ SEA/SH grievances received by Levels 1 and 2 GRM will be referred to the Anti-Harassment Cell with utmost confidentiality. Individuals can also take their grievances to the focal person of the Anti-Harassment cell. Adequate information about the anti-harassment cell will be provided to the community alongside project GRM ▪ Awareness program for women and against the gender based violence will be conducted for the workers as well as the local community regarding these concerns ▪ 2 orientations/trainings with at least 20 participants in each training; 1 event to be conducted by the end of 1st Quarter & and 1 by the end of 4th Quarter of Year 1 (ii) HIV AIDS & other Communicable diseases ▪ Awareness creation and sensitization to workers and other persons post- project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases ▪ Distribute HIV & AIDS awareness materials in collaboration local health related agencies ▪ Ensure protective measures for Communicable diseases is followed, prepare and follow SOPs by all workers and staff for communicable diseases (hand washing, using sanitizer, masks etc.) including the community health and safety awareness and management ▪ Health screening of the workers will be carried out before joining them into workforce ▪ Emergency Response Plan will be implemented during any critical circumstances (e.g. CoVID spread) ▪ 1 orientation/training with at least 20 participants; during 2nd Quarter-Year 1, another to be scheduled as per requirement (iii) Human trafficking - focused on women & girl trafficking ▪ Awareness program will be developed and implemented	PIU/ Municipality office (Social Development Section)	NRs. 100,000 NRs. 50,000

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ 1 orientation/training with at least 15 participants; during 3rd Quarter-Year 1		NRs. 50,000
21.	Child labour, forced labour and wage discrimination	▪ Child labour & forced labour will be strictly prohibited ▪ Copies of citizenship card or other valid personal ID card will be kept in record of the workers ▪ Awareness among the workers and the local community will be conducted ▪ Equal wage for male and female workers will be ensured	Contractor (Supervised by local authority and DSC)	
22.	Traffic Management	▪ Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points. ▪ Emergency traffic management plan should be prepared by the contractor and approved by the Project. The plan may include informing about the scheduled road closure and the alternative routes identified to divert the normal traffic flow, transport material during off-peak time. ▪ Provide advance notice to stop vehicles by erecting indicator signs at a necessary distance in order to reduce congestion at the site of work, thus enabling making of proper security arrangements, or lane wise traffic management. ▪ The contractor will be supervised to prepare a Traffic Management Plan.	Contractor	Included in BoQ (Abstract of cost, H)
23.	Others	▪ Information dissemination regarding project details, Grievance Mechanism, and environmental & social safeguards aspects will be disseminated to the local through leaflets, and local media	Contractor (Coordinated by local authority and DSC)	NPR 100,000
		▪ GRC meetings, monitoring and logistic costs@ 1 meeting every month	Contractor (Supervision & coordination support of DSC)	NPR 90,000
	Socio-economic and Cultural (Operation & Maintenance Phase)			
24.	Traffic accidents and associated risks	▪ Raise awareness of traffic rules, and installation of speed humps to control speed near pedestrian crossing areas ▪ Awareness will be raised regarding traffic safety ▪ Speed limits will be defined ▪ Traffic sign boards and messages, in local languages, will be placed at main chowks, junctions and start-end points	Tilottama Municipality	Cost will be borne by municipality

S. N.	Project Phase & Impacts	Mitigation Measures	Responsibility	Cost, NPR
		▪ Zebra crossings are provided at 37 sites focusing on settlement areas and road traffic (*details provided in Annex 7*)		
25.	Community Health and Safety - risk of accidents; conflict with the workers; risk of communicable diseases	▪ In total 25 ramps have been provisioned in interlinking points, and crossing points of roads ▪ Installation of road markings at all major as well as minor intersections. Road Signs and Road Markings have been provided as per Traffic Sign Manual - DoR ▪ Reinforced Cement Concrete covered drain will be provided throughout the alignment in integration with the footpath.	Tilottama Municipality	Included in BoQ (Abstract of cost, K) Included in BoQ (Abstract of cost H)
26.	Impacts due poor maintenance of road-drains	▪ Awareness activities will be carried to stop disposal of waste into the road-side drains ▪ Drainages will be regularly cleared under periodic maintenance ▪ Road side plantation at settlement belts (plantation to be carried out within RoW)	Tilottama Municipality	Cost will be borne by municipality

The total cost of ESMP implementation is NPR. 3,740,000 (*In words: Thirty seven lakhs and forty thousand only*), and the items will be included in BoQ of the contract document. The contractor will take prior approval from Tilottama Municipality and the DSC team for expenses under the provisional sum of the contract document.

4.5 Summary of Costs of ESMP Activities

The summary of costs for the ESMP activities is outlined in Table 4-2 below;

Table 4-2: Summary of Cost of ESMP Implementation

SN	Items & Headings	Unit	Qty	Rate	Total, NPR	Reference
	Provisional Sum amount					
1	Water quality test (at start, and every 2-3 months)	Samples	6	15,000	90,000	
2	Air quality and Noise level monitoring (3 samples, 2 times)	Samples			180,000	
(i)	Air quality monitoring	Samples	6	25,000		
(ii)	Noise level monitoring	Samples	6	5,000		
3	SWM works	LS			120,000	
4	Reinstatement of *Pratikshyala*	LS	1		1,425,000	
5	Reinstatement of handpumps	Set	7	25,000	175,000	
6	Greenery promotion				735,000	
(i)	Plantation works			250,000		
(ii)	Greenery promotion support works like gardening in public land	LS		85,000		
7	Public safety (metal planks, fencing of school compound, etc)	LS			375,000	
8	Emergency response support	LS			150,000	
9	Awareness on Health & safety, child labour, environmental conservation		4		100,000	
(i)	Environmental Awareness (during 1st & 3rd Quarters - Yr. 1; at least 30 participants/event)	Events	2	25,000		
(ii)	Road safety & Community HS	Events	2	25,000		
10	Awareness on Communicable Diseases, CovID, Girls/Women Trafficking, SEA/SH risks, GBV (*Events will be conducted for workers as well as community*)	Events	4		200,000	
(i)	SEA/SH, GBV (at least 20 participants in each orientation/training, during first 1st & 4th Quarter - Year 1)	Events	2	50,000		
(ii)	HIV AIDS & CoVID (at least 20 participants in orientation/training; 1 event during 2nd Quarter-Year 1)	Events	1	50,000		
(iii)	Women/Girl Trafficking (at least 15 participants in orientation/training; during 3rd Quarter-Year 1)	Events	1	50,000		
11	Social safeguards (grievance meetings, site monitoring, etc)	Meetings /Events	12	7,500	90,000	
12	Information dissemination					
(i)	Leaflets				25,000	
(ii)	PSA (local media)		3	25,000	75,000	
	Total				**3,740,000**	

4.6 Environmental & Social Monitoring

Environmental and social monitoring is an essential tool to ensure the implementation of mitigation measures and to know the effectiveness of those measures. ESMP monitoring is necessary for the following purposes;

- to track the impacts,
- to evaluate the effectiveness of proposed mitigation measures, and
- to suggest improvements, if any new circumstances arise.

The following table summarizes the plan for environmental and social monitoring for the proposed project;

Table 4-3: Environmental & Social Monitoring Plan

SN	Monitoring Aspects	Location	Parameters	Methodology	Frequency	Responsibility
A	**Construction Phase**					
1	Air quality monitoring	Settlement areas near road alignment	At least TSP; PM10/PM2.5	Air Sampler / Detector	Every Six Months	Contractor
2	Noise Levels	Settlement areas near road alignment	Average noise levels (Leq)	Noise Meter / Android Application	Every Month	Contractor
3	Water Quality	Surface streams; and Campsite	Parameters as per standards only for drinking water (Annex 4)	Laboratory Analysis	Every three Months	Contractor
4	Debris clearance and disposal	Along road alignment	Spoil tip sites; road sections where	Site verification	Every week	DSC, PIU/PCO
5	Road Traffic safety	Along road alignment	Status of road for use; road accidents	Use of Logs; Records of complaints	Every Month	DSC, PIU/PCO
6	Campsite monitoring	Construction Campsite	Space for workers; Potable water; Sanitation facilities; waste management	Site verification; records of provisions of WASH materials;	Every Month	DSC, PIU/PCO
7	Occupational Health & Safety	Active construction sites; campsite	Provision/Use of PPEs; First Aid/treatment; Awareness/orientations conducted for workers	Site verification; records of supply of PPEs; records of events	Every Month	DSC, PIU/PCO
8	Loss of vegetation; greenery promotion	Active construction sites; road sections passing through vegetated area	Site clearance at vegetated areas; plantation works	Site verification; records of trees cut; records of newly planted trees	Every Month	DSC, PIU/PCO
9	GBV aspects	Work sites; settlement areas near campsite	Laborers' records; Cases of GBV in relation to project	Community consultation; GRM records	Every Month	DSC, PIU/PCO

SN	Monitoring Aspects	Location	Parameters	Methodology	Frequency	Responsibility
			works; any unrecorded cases			
B	**Operation & Maintenance Phase**					
1	Road stability	Road alignment	Status of slopes along road alignment; status of road components	Site verification; ward records; traffic police office records	Every 3 months - 1st year; Bi-annually after that	DSC, PIU/PCO
2	Vegetation/tree survival rate	Plantation sites	Number of surviving trees; status of planted trees	Site verification; interaction with road-side communities	Every 6 Months	DSC, PIU/PCO
3	Road safety	Road alignment and adjacent settlements	Road accidents; status of road components	Site verification; interaction with road users	Every Month	DSC, PIU/PCO

Monitoring activities during O&M Phase will need to be scheduled based also on the site requirements and need of the communities using the road services. Contractor will be responsible for monitoring during the Defect Liability Period (DLP). After the DLP period, Tilottama Municipality will be totally responsible for the O&M phase.

5. STAKEHOLDER ENGAGEMENT AND INFORMATION DISSEMINATION

5.1 Stakeholder Engagement

5.1.1 Consultations during DPR phase

The local community, ward office, Tilottama Municipality Office, schools, local businessmen, labourers and farmers were well consulted during the process. Consultations were carried out also with the women and Janajatis living along the proposed road alignment. The details of the consultation are provided in SN 3 of Table 5-2.

Focused group discussions (FGDs), formal consultation meetings, and Key informant interview (KII) were used to engage as many locals as possible during the public consultation process. The details of design aspects of the road, social & environmental safeguards, and GBV aspects were discussed during the public consultations. The list of people and institutions consulted are provided in Annex 2. Followings are the details of the public consultations carried out during the field study;

Table 5-1: List of Public Consultations and their Summary

SN	Meeting	Date	Total Participants	Outcomes
1	Consultation meeting held with Public/Stakeholders of Mangalapur - Kanchhi Bazar (Bewara Chowk - Kanchhi Bazar section) at Mainahawa, ward no. 10, Tilottama Municipality.	March 22, 2024	Total- 33 (M- 26; F- 7)	Detailed Discussion on ESMF and updated design aspects; discussion on avoiding vegetation loss; employment opportunities for locals, mitigation measures for social and environmental aspects including GBV, SEA/SH was carried out. Sharing and discussion on socio-economic condition, safeguards aspects, RoW road width, and GRM/GRC was carried out.
2	Consultation meeting held with Janajatis for Mangalapur - Kanchhi Bazar (Bewara Chowk - Kanchhi Bazar section) at Mainahawa, ward no. 10, Tilottama Municipality.	March 22, 2024	Total- 22 (M- 16; F- 6)	Detailed Discussion on ESMF and updated design aspects; priority for employment opportunities for locals & the poor; and provisions of GRM/GRC were discussed in presence of Deputy Mayor of Tilottama Municipality.
3	Consultation meeting held with Women at Consultation meeting with Mangalapur – Kanchhi Bazar (Bewara Chowk – Kanchhi Bazar section) at Mainahawa, ward no. 10, Tilottama Municipality.	March 22, 2024	Total- 11 (M- 1, F- 10)	Detailed Discussion on ESMF and updated design aspects; employment opportunities for locals & women; mitigation measures for GBV, SEA/SH; provisions of anti-harassment cell in the project; and provisions of GRM/GRC were discussed in presence of the Deputy Mayor of Tilottama Municipality.

4	Consultation meeting held with Public/Stakeholder Mangalapur – Kanchhi Bazar (Bewara Chowk – Kanchhi Bazar section) at Kanchhi Bazar, Ward No. 10, Tilottama Municipality.	April 17, 2024	Total- 42 (M- 25, F- 17)	Detailed Discussion on ESMF and updated design aspects; discussion on avoiding vegetation loss; employment opportunities for locals, mitigation measures for social and environmental aspect including GBV, SEA/SH was carried out. Sharing and discussion on socio-economic condition, safeguards aspects, RoW road width, and GRM/GRC was carried out.
5	Consultation meeting held with Janajati at Consultation meeting with Mangalapur – Kanchhi Bazar (Bewara Chowk – Kanchhi Bazar section) at Kanchhi Bazar, Ward No. 10, Tilottama Municipality	April 17, 2024	Total- 24 (M- 14, F- 10)	Detailed Discussion on ESMF and updated design aspects; priority for employment opportunities for locals & the poor; and provisions of GRM/GRC were discussed in presence of Mayor of Tilottama Municipality.
6	Consultation meeting held with Women at Consultation meeting with Mangalapur – Kanchhi Bazar (Bewara Chowk – Kanchhi Bazar section) at Kanchhi Bazar, Ward No. 10, Tilottama Municipality	April 17, 2024	Total- 25 (M- 1, F- 24)	Detailed Discussion on ESMF and updated design aspects; employment opportunities for locals & women; mitigation measures for GBV, SEA/SH; provisions of anti-harassment cell in the project; and provisions of GRM/GRC were discussed in presence of the Mayor of Tilottama Municipality.
7	A Consultation meeting held with the Janhit Secondary School Management Committee at Mangalpur-Kanchibazar (Bewarachok-Kanchibazar section) Kanchibazar, Ward No. 10, Tilottama.	April 16, 2024	Total- 11 (M- 8, F- 3)	Detailed Discussion on ESMF and updated design aspects; use of public land for road upgradation; reinstatement of public rest place at Kanchhi bazar; Greenery promotion works; and public awareness aspects along with other mitigation measures for social and environmental aspect including GBV, SEA/SH. Provisions of GRM/GRC were also discussed with the SMC.

The major concerns discussed during the public consultations were as followings;

- Reinstatement of private and public utilities including hand pumps, electricity poles, etc. were discussed. Protection/conservation of a *public rest places* (*Pratikshyalaya*) was discussed.
- It was discussed that open land at Kanchhi Bazar (WN 10) can be used for campsite & stockpile site. It was also discussed that unused land parcels within the compound of Shree Janahit Secondary School can be used for spoil disposal and greenery promotion works.
- Awareness of workers and locals regarding environmental sensitivities, and also regarding social aspects, as well as social harmony between workers and locals were discussed
- Potential concerns of dust nuisance, and disturbances due to noise during construction phase was raised as a concern as there are settlements and a school along the road alignment

- Minimization of tree loss, compensatory plantation at the rate of 1:10 per tree cut, and greenery promotion works were discussed

The minutes of the meetings are provided in Annex 2. Public engagement has been considered as one of the key tools to ensure the safeguards aspects of the project. Hence, public consultation will be taken as a regular process during the construction phase as well.

5.1.2 Stakeholder Consultations Plan for Implementation Phase

Consultations during the implementation phase will include direct interactions with the Project Affected Persons. PIU, DSC and contractor will conduct regular consultations with PAPs as well as local users' committees, local unit of electricity office, and other stakeholders. All consultations on social and environmental issues carried out during implementation of subprojects will be held in an inclusive manner, including vulnerable social groups and women. Public consultation will be taken as a continuous process during the construction phase as well.

5.2 Grievance Redress Mechanism (GRM)

As part of the implementation stage the PIU, project engineers and Environment and Social staffs will directly interact and consult with the project affected persons. These would consist of consultations towards addressing the impacts on private properties, public properties, trees, etc.

5.2.1 Grievance Redress Mechanism

A Grievance Redress Mechanism has been set up (see 7.8.2) to allow stakeholders including PAPs to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). Information about GRM will be published on the municipality's website, will be put up at public space in the sub-project area, in the notice boards of municipality and ward offices. Locals will be encouraged to make use of the GRM established for the sub-project to raise any complaints/ grievances induced due to this sub-project. Stakeholders will be made fully aware of their rights and the procedures. GRM has been active since the implementation of the project Upgradation of Mangalapur-Kanchhi bazar (upto Bewara chowk) has been in operation since September 2022. The 1st Level GRC has been formed at the project's ward level. At the Ward level, the staffing of the Grievance Redress Committee (GRC) includes ward representatives, DSC representatives under coordination of Chairperson of WN 10 Mr. Gopal Prasad Ghimire. The first level of GRC is composed of the following team:

Table 5-2: Details of 1st Level GRC

SN	Members	Designation	Remarks
1	Gopal Prasad Ghimire	Coordinator	Chairperson - Ward 10
2	Dhruba Neupane	Member	Chairperson - Ward 9
3	Devi Prasad Pangeni	Member	Chairperson - Ward 9
4	Madhab Prasad Pokharel	Member	Section Officer - Tilottama Municipality
5	Yubraj Panthi	Member	Engineer, Environment Sector - Tilottama Municipality
6	Binod Gyanwali	Member	Section Chief, Social Development

SN	Members	Designation	Remarks
7	Shakuntala Thapa	Member	Female Representative, Planning section- Tilottama Municipality
8	Shailesh Bhandari	Member	Contractor's Engnieer

Likewise, 2nd Level GRC has already been established under coordination of the Deputy Mayor of Tilottama Municipality office, Ms. Jageshwori Devi Chaudhary (*The details are provided in Annex 2*). It is composed of the following team:

Table 5-3: Details of 2nd Level GRC

SN	Members	Designation	Remarks
1	Jageshwori Devi Chaudhary	Coordinator	Deputy Mayor - Tilottama Municipality
2	Ganga Ram Adhikari	Member	Grievance Officer - Tilottama Municipality
3	Madhab Prasad Pokharel	Member	Section Officer - Tilottama Municipality
4	Pradeep Ban	Member	Focal Person - PIU/NUGIP
5	Binod Gyanwali	Member	Section Chief, Social Development
6	Narendra Kumar Deo	Member Secretary	DSC - TL

The notice regarding formation of 1st Level GRC and 2nd Level GRC has been published and shared to the stakeholders.

The third level GRC will be at the PCO level, comprising members from the PCO. The PCO will forward the same to WB. Those engaged as the monitoring unit for ESMP, RAP related issues (as of no issues and implications that RAP will trigger for this project) but if The notice regarding formation of 1st Level GRC and 2nd Level GRC has been published and shared to the stakeholders.

The third level GRC will be at the PCO level, comprising members from the PCO. The PCO will forward the same to WB. Those engaged as the monitoring unit for ESMP, RAP related issues (as of no issues and implications that RAP will trigger for this project) but if triggered due to some circumstances, it could be part of the committee. Special project grievance mechanisms such as on site provision of complaint hearings allows project affected persons to get fair treatment on time. The subproject will also handle issues regarding the compensation damages done during construction.

The details of the proposed GRC structure and GRM process were discussed during public consultations with stakeholders in all levels.

All local contact information and options for complaint submission will be available on site, at Toles, Wards, municipality office, PCO on information boards and the project municipality websites. A half yearly report on Grievance Redress by the subproject project will be prepared and will be sent to the project municipality's GRCs by Wards' GRCs and ultimately to GRC of PCO. The PCO will forward the same to the World Bank.

due to some circumstances, it could be part of the committee. Special project grievance mechanisms such as on site provision of complaint hearings allows project affected persons to get fair treatment on time. The subproject will also handle issues regarding the compensation damages done during construction.

The details of the proposed GRC structure and GRM process were discussed during public consultations with stakeholders in all levels.

All local contact information and options for complaint submission will be available on site, at Toles, Wards, municipality office, PCO on information boards and the project municipality websites. A half yearly report on Grievance Redress by the subproject project will be prepared and will be sent to the project municipality's GRCs by Wards' GRCs and ultimately to GRC of PCO. The PCO will forward the same to the World Bank.

5.2.2 Further details of the GRM

The functions of grievance mechanisms include redressing grievances of community / beneficiaries /project affected persons in all project respects, providing rehabilitation and resettlement assistance and related activities, and hearing grievances from workers involved in the project at any level or phase. All complainants have the option to approach court/judiciary or the World Bank's Grievance Redress Service in case he or she is not satisfied with the verdict provided. The grievances related to women will be dealt by the focal person of Anti-Harassment Cell, Ms. Samjhana Bhandari, Chief of Women, Children and Social Welfare Section of the Tilottama Municipality.

5.3 Information Dissemination

For the success of the project, all information about the proposed activities and their expected results will be publicly shared with the affected people and interested stakeholders. In collaboration with the relevant local authorities, NGOs and other community groups, the project will disclose all the relevant information in the various stages of the project cycle. Agencies working for environmental and social aspects will also be informed about the ongoing and planned activities, to identify jointly appropriate protective or corrective measures. The following approaches will be adopted to make information accessible to all the concerned stakeholders throughout the project cycle;

- Mass Media: Use local media like newspapers, radio and TV.
- Meeting/Workshops
- Distribution of project documents: Certain project documents will be disclosed in Nepali (or other relevant local language). Project-related information materials will be distributed prior to each construction work to local officials, local people, stakeholders and other concerned offices like municipality, Ward, users committees, etc.

Point of information will be defined at the municipality office level during implementation to disseminate all the documents related to the project activities. Based on the public information disclosure policy, PCO and the municipality will unveil the information through its website. The information dissemination plan for the project is presented in Table 5-3 below;

Table 5-4: Information Dissemination Plan

Means of Communication	Timeline & Frequency	Responsibility	Resources
Municipality Website (project details, GRM)	At the start of the project, & maintained throughout	PIU/ Information Officer	Information Officer
Newspaper and local Radio (project salient features, dates, GRM etc.)	Project implementation phase Weekly basis	PIU, municipality Information Officer	Radio-program, FM Radio Clip
Project leaflets and Fact Sheet	Project details, Implementing agencies, project period - 2 times	PIU, Information Officer	Double-sided colour A4 (500 copies)
Face to face engagements - meetings, focus group discussion with relevant stakeholders	Project Main Activities, Financial Assistance, Implementing agencies, project period etc. 2 time in year	PIU, Information Officer	

List of References

- *Environment Protection Act, Government of Nepal, 2019*
- *Environment Protection Regulations, Government of Nepal, 2020 (and amendments)*
- *Environmental and Social Management Framework, Nepal Urban Governance and Infrastructure Project, August 2020, the World Bank*
- *Final Project Document of Upgradation of Mangalapur - Kanchhi bazar (Bewara - Kanchhi bazar Section) Road, 2024*
- *Nepal Human Rights Year Book 2024, Informal Sector Service Center (INSEC), Kathmandu.*
- *Project Implementation Manual, Nepal Urban Governance and Infrastructure Project, December 2022, the World Bank*
- *https://censusnepal.cbs.gov.np (then CBS, now Office of NSO)*

List of Annex

Annex 1: Environmental and Social Screening Checklists

Checklist for Environmental Screening

SN	Particulars	Yes	No	Can't Say	Remarks
1.	Is the site vulnerable to major natural or induced hazards such as: Landslides, Flooding, Storm surge, Severe wind damage, Earthquakes, Fire, Explosion, Other (specify)	Yes			The project area is susceptible to urban rainwater flooding
2.	Is the project area adjacent to or within any of the following environmentally sensitive areas? • Cultural heritage site (historical, religious, traditional, or cultural significance) • Protected Area (National Parks, Wildlife Reserve, Hunting Reserve, Conservation Areas, and Buffer Zones etc.) • Wetland/Ramsar Site/Simsar • Forest • Special area for protecting biodiversity/interest • Breeding/nesting ground of wildlife/occurrence of migratory species • Migration route/Wildlife corridor • Any site of national or international importance	Yes			The project area is not within any environmentally sensitive area The road section crosses Danda stream and some minor surface water flows and irrigation crossings.
3.	Likely impact on trees (including Timber & fruit bearing) and vegetation cover	Yes			The project will require felling of trees 16 trees. These trees are within the ownership of the municipality. The details are provided in Annex 6.
4.	Possibility of degradation of land and ecosystems of surrounding?		No		
5.	Is the project area densely populated?		No		
6.	Heavy with development activities/big industries nearby & type?		No		
7.	Alteration of surface water hydrology of waterways due to the project resulting in increased sediment in streams affected by increased soil erosion at construction site?		No		
8.	Chance of deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction	Yes			The road section crosses Danda stream and some minor surface

SN	Particulars	Yes	No	Can't Say	Remarks
					water flows and irrigation crossings.
9.	Does the sub project require significant extraction of surface or ground water?		No		
10.	Increased risk of water pollution from oil, grease, fuel spills and other materials	Yes			This is probable if campsite is not managed properly
11.	Impact on water quality due to release of sewage/sludge?		No		
12.	Possibility of flooding due to sewage		No		
13.	Possibility of increased air pollution during Pre-construction/construction/operation phase?	Yes			During construction phase
14.	Other pollution concerns relating to inconveniences in living conditions that may trigger cases of upper respiratory problems?		No		
15.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological hazards during project construction and operation	Yes			Physical hazards like accidents and illness are likely
16.	Noise and vibration due to blasting and/or other civil works?	Yes			However, blasting is not required
17.	Possibility of poor sanitation and solid waste disposal	Yes			Campsite management aspect
18.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		No		
19.	Accident risks associated with pre construction, construction & operation phases of project	Yes			Injuries during construction phase, and traffic accidents during operation phase are potential risks
20.	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)		No		The population influx will be in small scale, possibly with some of them from neighbouring cities and districts (estimated to be around 50 - 75 workers/day during normal period, 75 - 90 workers/day during peak construction period)
21.	Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives,		No		Fuel and lubricants pose potential risks, but explosives are not used in the project

SN	Particulars	Yes	No	Can't Say	Remarks
	fuel and other chemicals during construction and operation?				
22.	Interference with other utilities and blocking of access to resource/utility	Yes			54 numbers of electric poles will need to be shifted and reinstalled. 7 private handpumps will need to be reinstated.
23.	Generation of solid waste and/or hazardous waste during construction/operation of project?		No		

Checklist for Social Screening

SN	Particulars		Details
1	Proposed Site Location-		Tilottama Municipality, Ward No. 10
	1.1	Land requirement for the project	It is an up-gradation of an existing road of Bewara Chowk - Kanchhi Bazar section under the Mangalapur-Kanchhi Bazar road. Existing road width is 11.74 m. to 13 m. There will be no additional land requirement.
	1.2	Land ownership of the project area: Govt. / Private lands	Land within the proposed road width is already in use by the public. However, the ownership of private land strips is yet to be transferred. There are no oustanding issues like any grievances or compensation regarding this.
	1.3	Does the project requires acquisition of Govt. land/structures?	No
	1.4	Present use of Govt. Land that will be used for the project activities with Persons/Households using for agriculture, residential, commercial and other purposes	No
	1.5	Does the project require acquisition of private land/structures?	No. The existing road width in use is 11.74 m to 13 m, and is already in public use.
	1.6	Present use of Govt. Land that will be used for the project activities with Persons/Households using for; ✓Agricultural purposes ✓ Residential purposes ✓ Commercial purposes ✓ Other purposes (Indicate)	Public use
	1.7	Does the project require relocation of encroachers/squatters	No
	1.8	Does the project require relocation of community facilities/Govt. establishment or any objects that are of religious, cultural and historical significance	No It was observed that there is public structure like Public Rest Place (Pati). A significant portion of the *Pratikshyalaya* at Kanchhi Bazar Chowk lies within the road alignment and will be damaged during road upgradation.

SN	Particulars		Details
	1.9	Proposed project located in an area where residents are- • All Mainstream • All Indigenous peoples • Majority Mainstream or Non-indigenous peoples • Majority Indigenous peoples	Majority indigenous people
2	Potential Social Impacts- Will the Project cause		
	2.1	Involuntary resettlement of people? (physical displacement and/or economic displacement)	No, resettlement is not required in this project
	2.2	Impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	No such impact on poor women and children, indigenous people, and/or economic displacement.
	2.3	Will community facilities require relocation?	In total 54 electric poles will need to be shifted and new poles installed. And 7 private hand pump will be shifted.
	2.4	Will the sub-project disturb any traditional activity on adjoining or nearby?	No
	2.5	Poor sanitation and solid waste disposal in construction camps and work sites	Yes there will be concern of sanitation and solid waste disposal in construction camp and work sites.
	2.6	Possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?	Local peoples have knowledge on such communicable diseases but labourers' understanding may be low about possible transmission of communicable diseases
	2.7	Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	No, the up-gradation of road project is a small scale intervention, and there will be only around 50 to 75 workers at a particular time, possibly with some of them from neighbouring cities and districts.
	2.8	Social conflicts relating to inconveniences in living conditions where construction interferes with preexisting roads	No. But there will be temporary disturbances to locals during construction works. Traffic management plan will be prepared by the contractor and will be included in Contractor's Site specific ESMP.

SN	Particulars		Details
	2.9	Describe any other impacts that have not been covered in this screening form	Gender-based violence and GESI aspects; These aspects will be incorporated in ESMP
	2.10	Describe alternatives, if any, to avoid or minimize displacement from private and public lands	No such concerns
	2.11	RAP/ARAP Requirement	No

Annex 2: Minutes, Public Notice and Letters

RoW Declaration Letter

तिलोत्तमा नगरपालिका

स्थानीय राजपत्र

खण्ड ३। तिलोत्तमा, वैशाख महिना ३० गते २०७६ साल ।संख्या १

भाग : २

तिलोत्तमा नगरपालिका

तिलोत्तमा नगर कार्यपालिकाले बनाएको तल लेखिए बमोजिमको मापदण्ड सर्वसाधारणको जानकारीको लागि प्रकाशन गरिएको छ ।

सम्वत् २०७६ सालको मापदण्ड नं. १

मापदण्डको नाम : तिलोत्तमा नगरपालिकाको भु-उपयोग मापदण्ड-२०७६

प्रस्तावना : तिलोत्तमा नगरपालिका भित्र खाद्य सम्प्रभुताको हकलाई सुनिश्चित गर्दै, कृषियोग्य जमिनको गैह्रकृषि क्षेत्रमा रुपान्तरणको वर्तमान परिस्थितिमा खेतीयोग्य जमिनको संरक्षण गरी व्यवस्थित रुपमा बस्ती बसाउन, आवास क्षेत्रमा आधारभूत शहरी सेवा सहज रुपमा व्यवस्थापन गर्न, उत्पादनको स्रोतको रुपमा रहेको भूमिको अव्यवस्थित खण्डीकरणलाई रोक्न, जग्गा विकास, कित्ताकाट तथा प्लटिङको कामलाई व्यवस्थित गर्न र जग्गाको प्लटिङ्ग गरी जग्गा कारोवार गर्न चाहने व्यक्ति, फर्म, कम्पनी तथा संस्थाका क्रियाकलापको नियमन गर्न, तिलोत्तमा नगर कार्यपालिकाको मिति २०७६-०१-२६ गतेको बैठकबाट यो मापदण्ड पारित गरी लागू गरिएको छ ।

१. **संक्षिप्त नाम र प्रारम्भ :**
   (क) यस मापदण्डको नाम "तिलोत्तमा नगरपालिकाको भु-उपयोग मापदण्ड"-२०७६ रहेको छ ।
   (ख) यो मापदण्ड तुरुन्त प्रारम्भ हुनेछ ।
२. **परिभाषा** : विषय वा प्रसङ्गले अर्को अर्थ नलागेमा यस मापदण्डमा,
   (क) "नगरपालिका" भन्नाले तिलोत्तमा नगरपालिका सम्झनुपर्छ ।
   (ख) "मापदण्ड" भन्नाले तिलोत्तमा नगरपालिकाबाट स्वीकृत मापदण्डलाई जनाउने छ ।

(ग) "प्लटिङ्ग" भन्नाले जग्गालाई आवासीय, व्यापारिक वा अन्य निर्माण कार्यमा प्रयोग ल्याउने प्रक्रिया र त्यससंग सम्बन्धित सबै कार्यलाई जनाउने छ ।

(घ) "जग्गा" भन्नाले घर, बाग-बगैचा, रुख, कारखाना, ताल, पोखरी इत्यादि भएको समेत सबै किसिमको जमिनलाई सम्झनु पर्दछ ।

(ङ) "जग्गावाला" भन्नाले प्रचलित कानून बमोजिम जग्गामा जग्गाधनी हक हुने व्यक्ति तथा निकायलाई सम्झनु पर्दछ ।

(च) "कार्यपालिका" भन्नाले तिलोत्तमा नगर कार्यपालिका सम्झनु पर्दछ ।

(छ) "सदस्य" भन्नाले नगर कार्यपालिकाको सदस्यलाई सम्झनु पर्दछ ।

(ज) "अनुगमन समिति" भन्नाले यसै मापदण्ड अनुसार गठन गरिएको अनुगमन समितिलाई जनाउनेछ ।

(झ) "विषयगत शाखा" भन्नाले यस मापदण्डअनुसार तोकिएको विषयगत शाखालाई जनाउनेछ ।

(ञ) "संयोजक" भन्नाले यस मापदण्ड बमोजिक गठित समितिको संयोजक सम्झनु पर्दछ ।

(ट) "कित्ताकाट" भन्नाले जग्गा बिक्री प्रयोजनको लागि मालपोत कार्यालयबाट आधिकारिक रुपमा दिइएको कागजातलाई सम्झनु पर्दछ ।

(ठ) "सिफारिस" भन्नाले नगरपालिकाबाट प्रचलित कानूनको आधिनमा रही लिखित रुपमा दिइएको जग्गा विकास र कित्ताकाट सम्बन्धित कागजात सम्झनु पर्दछ ।

(ड) "जग्गा विकास" भन्नाले साविकको जग्गाको स्वरुप परिवर्तन गरी आवासीय, व्यापारिक वा अन्य निर्माण कार्यमा प्रयोगमा ल्याउने प्रक्रियालाई सम्झनु पर्दछ ।

(ढ) "खेतीयोग्य जग्गा" फिल्डबुकमा कृषि क्षेत्र किसिम कायम भएका कित्ता जग्गाहरु वा फिल्डबुकमा अब्वल, दोयम, सिम, चहार भनी परिभाषित गरिएता पनि तिलोत्तमा नगरपालिकले जग्गाको मौजुदा अवस्था र निर्धारित अन्य मापदण्डको आधारमा खेतीयोग्य जग्गाभनी निर्धारण गरेको कित्ता जग्गाहरुलाई सम्झनुपर्छ ।

(ण) "जग्गा उपयोगिता विश्लेषण प्राविधिक समिति" भन्नाले नगरपालिकाद्वारा गठित जग्गा उपयोगिता विश्लेषण प्राविधिक समितिलाई सम्झनुपर्नेछ ।

३. <u>जग्गा प्लालिङ गर्दा ध्यान दिनु पर्ने आधारभुत विषयहरु</u> :

३.१ प्लानिङ परमिट (Planning Permit) दिंदा कूल जमिनको कम्तीमा बाटो बाहेकको नगरपालिकाले तोकेको निश्चित प्रतिशतको जमिन प्लटिङ्गको जग्गाभित्र पर्नेगरी उपयुक्त स्थानमा खुल्ला क्षेत्र तथा पार्कको लागि सार्वजनिक स्वामित्वमा राख्नुपर्ने छ ।

३.२ प्लटिङ्ग गरेको क्षेत्रमा विद्युत्को खम्वा तथा 3face तार, पक्की सडक र ढलका साथै खानेपानीको लाईन विस्तार गर्ने कार्य प्लटिङ्गकर्ताले गर्नेगरी प्लटिङ्गको Planning Permit स्वीकृत गरिनेछ । साथै प्लटिङ्ग गरिएको हरेक घडेरीले तोकिएको भवन मापदण्ड समेत पूरा गर्नुपर्नेछ । उपरोक्त

मापदण्डहरु पुरा गरेर मात्र Planning Permit प्रदान गर्न सकिने छ । यस प्रावधान विपरीत प्लटिङ्ग गरेमा उक्त प्लटिङ्ग क्षेत्रमा सार्वजनिक उपयोगिताहरु जस्तैः धारा, बिजुलीबत्ती आदि जडान हुने छैनन् । साथै उक्त जग्गा रोक्का राख्न लगाउन सकिनेछ ।

३.३ नगरपालिकामा निकट भविष्यमा सुरु गरिने भू-उपयोग योजनाको भावना विपरीत हुनेगरी कुनै पनि प्लानिङ्ग स्वीकृती दिइने छैन ।

४. **नगरपालिकाको जग्गा प्लाटिङ्ग तथा कित्ताकाट सम्बन्धि मापदण्ड देहाय बमोजिम हुनेछ :**

४.१ अंशवण्डाको हकमा सिफारिस गर्दा नेपालको प्रचलित कानुन वा यो मापदण्डअनुसार सिफारिस दिनुपर्नेछ भने जग्गा विकास, प्लटिङ्ग, हाउजिङ आदिको सिफारिस दिँदा अनुसूची-१ अनुसारको मापदण्ड पुरागरी तथा प्रचलित नेपाल कानून अनुसारको मापदण्ड पुरा गरेको व्यक्ति, फर्म, कम्पनी वा संस्थालाई मात्र सिफारिस दिइनेछ ।

४.२ जग्गाको प्लटिङ्ग गरी वा नगरी कुनैपनि प्रक्रियाबाट जग्गाको खण्डीकरण (कित्ताकाट) गरी हक हस्तान्तरण गर्ने फर्म, संस्था वा कम्पनीले खेतीयोग्य जग्गा कुनै पनि प्रकारले खण्डीकरण गरी घडेरीको रुपमा बिक्री वितरण गर्न वा हक हस्तान्तरण गर्नेगरी लिखत पास गरिने छैन ।

४.३ बसोबास वा व्यवसायिक क्षेत्र, जग्गाको किसिम जनिएका वा फिल्डबुक वा स्रेस्तामा अन्य कुनै किसिम जनिएता पनि खेतीयोग्य जग्गा होइन भनी जग्गा उपयोगिता विश्लेषण प्राविधिक समितिले सिफारिस गरेको अवस्थामा मात्र खण्डीकरण (कित्ताकाट) को सिफारिस दिइने छ ।

४.४ नेपाल सरकारको आधिकारिक निकायले जग्गाविकास योजना सचालन गरेकोमा सो निकायले यथासम्भव कृषियोग्य जग्गाको संरक्षण हुने गरी मापदण्ड निर्धारण गरेकोमा कित्ताकाटको सिफारिस दिइने छ ।

४.५ जग्गा उपयोगिता विश्लेषण प्राविधिक समितिले प्रचलित कानूनको अधिनमा रही सिफारिस गरेमा मात्र कित्ताकाटको सिफारिस दिइने छ ।

४.५ कृषियोग्य जमिनको खण्डिकरण हुनेगरि मिलापत्र भएको भएता पनि कित्ताकाट गरिनेछैन तर कित्ताकाट हुन नसकेको व्यहोरा सम्बन्धित अदालतलाई जानकारी गराउनु पर्नेछ ।

५. **यस मापदण्डको अन्यत्र जुनसुकै लेखिएको भएता पनि खेतीयोग्य जमिनको हकमा देहाय बमोजिम गर्नुपर्ने छ :**

५.१. प्रचलित कानुन बमोजिम अंशवण्डा हुँदा कित्ताकाट हुनुपर्ने रहेछ भने कानून बमोजिमका अंशियाराहरुको संख्या बराबरको कित्ता तथा नेपाल सरकारको नाममा समेत लगत कत्ता भई आउने बाटो समेत रहेछ भने एक कित्ता बाटो समेत कायम हुने गरी कित्ताकाटको सिफारिस दिन सकिने छ । तर जग्गाको महत्व र प्रकृतिको आधारमा तोकिएको कित्ताकाटमा थपघट गर्न सकिने छ ।

५.२ अंश भरपाई गरी लिने दिने जग्गाको कित्ताकाट गर्दा एकमात्र कित्ता र नेपाल सरकारको नाममा लगत कायम भई आउने बाटो रहेछ भने दुई कित्ता सम्मम सिफारिस दिन सकिने छ ।

५.३ प्रचलित कानून बमोजिम कायम रहने अंशियारहरुका बीच एकभन्दा बढी पटक अंशवण्डा वा अंशभरपाई गरि कित्ताकाट गर्न पाइने छैन ।

५.४ कुनै पनि आर्थिक वर्षको सुरुमा कायम रहेको खेतीयोग्य कित्ता जग्गा सम्बन्धित जग्गा धनीले कित्ताकाट गरी बिक्री वितरण वा हक हस्तारन्तरण गर्न चाहेमा प्रत्येक आर्थिक वर्षमा तोकिएको मापदण्ड बमोजिमका बढीमा दुई कित्ता मात्र कायम हुने गरी कित्ताकाट गरि हक हस्तान्तरण गर्न सक्नेछ ।

तर कुनै जग्गा धनीले आफ्नो कित्ताको बीचभागको जग्गाबाट कित्ताकाट गरि एक कित्ता जग्गाको हक हस्तान्तरण गर्न चाहेमा बाँकी कित्ता जग्गा साबिक जग्गा धनीकै कायम हुने गरी बढीमा तीन कित्ता कायम हुने गरी कित्ताकाट गर्न सकिनेछ ।

५.५ दुई वा दुई भन्दा बढी जग्गा धनीहरुको संयुक्त रुपमा दर्ता रहेको कित्ता जग्गा दर्ताफारी कित्ताकाट गर्नु परेमा समेत ५.४ बुँदाको प्रकृया अवलम्बन गर्नुपर्ने छ ।

६. <u>प्लटिङ्ग अनुमति दिँदा नगरपालिकाले देहाय बमोजिमका कुरामा ध्यान पुराउनु पर्नेछ</u> :

६.१. प्लटिङ्ग गरिएको क्षेत्र नगरपालिकाको भू-उपयोग योजना नक्साअनुरुप विकास योग्य क्षेत्रमा परेको हुनु पर्नेछ ।

६.२. भू-उपयोग योजनामा संरक्षित कृषि क्षेत्र, संस्थागत क्षेत्र, वन क्षेत्र, खोला तथा नदीकिनार क्षेत्र भनी उल्लेखित क्षेत्रमा प्लटिङ्ग गर्न स्वीकृति दिइने छैन ।

६.३. माथि उल्लेखित भू-उपयोग क्षेत्रहरुमा प्लटिङ्ग नगरी नहुने अवस्था आएमा सोको आधार, पुष्ट्याई तथा जोखिम न्यूनीकरणका लागि अवलम्वन गरिने गरिएका उपाय तथा प्रावधानहरुको विस्तृत अध्ययन प्रतिवेदन जग्गा विकास गर्न स्वीकृतिका लागि निवेदन पेश गरेको हुनुपर्ने छ । साथै सो किसिमको प्लटिङ्ग स्वीकृत गर्ने आधार तथा पुष्ट्याई नगरपालिकाको सम्बन्धित शाखा प्रमुखले लिखित रुपमा गर्नुपर्ने छ ।

६.४. प्लटिङ्ग गर्दा जग्गा विकास गर्ने जग्गाधनीले सडक, ढल, खानेपानी, विद्युतलाइन जस्ता आधारभूत पूर्वाधार विकास गरेको हुनुपर्नेछ । जग्गाधनी/जग्गाविकासकर्ताले आफैले आधारभूत पूर्वाधार विकास नगरी सो कार्य नगरपालिकामार्फत् गराउन चाहेमा सो पूर्वाधार विकास गर्दा लाग्ने सम्पूर्ण खर्चको लागत इष्टिमेटमा आगामी आर्थिक वर्षमा हुन सक्ने मूल्य वृद्धिको रकम बाहेक कम्तीमा १० प्रतिशत अतिरिक्त रकम थप गरी नगरपालिका कार्यालयमा एकमुष्ठ दाखिला गरेको हुनु पर्नेछ ।

६.५. नगरपालिका कार्यालयमा प्लटिङ्गका लागि पूर्वाधार विकासका लागि रकम जम्मा हुन आएको खण्डमा यथासम्भव सोही आर्थिक वर्षमा र सोही आर्थिक

वर्षमा सम्भव नभएमा आगामी आर्थिक वर्षभित्रमा पूर्वाधार विकासको कार्य सम्पन्न गरिदिने दायित्व नगरपालिकाको हुनेछ ।

६.६ जग्गा विकास गर्दा पानीको बहाव समेत ध्यानदिई धरातलीय विशेष अर्थात् उत्तर दक्षिण गरी जग्गा विकास गर्न प्राथमिकता दिनु पर्नेछ । उत्तर दक्षिण गरी जग्गा विकास गर्न उपयुक्त नहुने भएमा पूर्व पश्चिम गरी जग्गाविकास गर्न स्वीकृत दिइनेछ ।

६.७ जग्गाविकास गर्दा आफ्नो स्वामित्वभन्दा बाहिरको, तर कसैको पनि दावी नरहेको सरकारी तथा सार्वजनिक जग्गाहरु प्लटिङ्गरा क्षेत्रको सीमाभित्र पर्न गएको खण्डमा ती सरकारी वा सार्वजनिक जग्गाहरुलाई प्रचलित कानुनविपरीत नहुने गरी सम्भव भएमा उक्त क्षेत्रका घडेरीहरुको सुविधाजनक स्थानमा एकीकृत गरी प्लटिङ्गको खुल्ला क्षेत्रमा थप कायम हुनेगरी मात्र प्लटिङ्गको स्वीकृत दिइनेछ । सरकारी वा सार्वजनिक जग्गाहरुमा जग्गा विकाससंग सम्बन्धित कुनै किसिमका संरचना निर्माण वा तिनलाई घडेरीमा विभाजन गरी प्लटिङ्ग गर्न पाइने छैन ।

६.८ दुई सडकको rossing मा रहेका कित्ताहरुले दुवै तर्फका सडकको सडक अधिकार क्षेत्रबाट नगरपालिका कार्यालयले तोकेको सेटव्याक दुरी छोडेर मात्र निर्माण कार्य गर्न पाइने छ । झ्याल ढोका राखी भवन निर्माण गर्नुपर्दा प्लटको अगाडि, पछाडी किनारा एवं दुवै छेउ जतापट्टि झ्याल ढोका राख्ने हो, त्यतापट्टि कम्तिमा ५ फिट छाड्नु पर्नेछ । सडक तथा सार्वजनिक जग्गातर्फ कम्तीमा १.५ मि. सेटव्याकको जग्गा सहित Planning नक्सा तयार पार्नुपर्नेछ ।

६.९ विद्युतका हाइटेन्सन लाइनको मुनि जग्गाविकास गर्न पाइने छैन । जग्गा विकास क्षेत्रको हाइटेन्सन लाइन गएको खण्डमा उक्त हाइटेन्सनलाईनको दुवै तर्फ (विद्युत प्राधिकरणले तोकेअनुसार) सेटव्याक छोडेर मात्र निर्माण कार्य गर्न दिइनेछ । उक्त हाइ टेन्सनलाइनको मुनि सडकको डिभाइडर बाहेकका अन्य प्रयोजनको लागि उपयोग गर्न पाइने छैन ।

६.१० जग्गा विकास क्षेत्रभित्र कुलो, खोल्सी आदि परेको खण्डमा कुलो, खोल्सीको किनारबाट दुवैतर्फ यसै मापदण्डले व्यवस्था गरे अनुरुप सेटव्याक छोडेर मात्र कित्ताकाट गर्न पाइने छ । कुलो खोल्सी आदिको सेटव्याक मिचेर कित्ताकाट तथा भवन निर्माण गर्न स्वीकृत दिइने छैन । कुलो, खोल्सी आदिको सेटव्याकमा सर्भिस लेन तथा ग्रीनबेल्ट बाहेक अन्य प्रयोजनका निर्माण गर्न पाइने छैन ।

६.११ नगरपालिकाले यस मापदण्डमा व्यवस्था गरे बमोजिमको कार्यविधिअनुसार प्रकृया अगाडि बढाई प्लटिङ्गको स्वीकृत लिनुपर्नेछ ।

६.१२ प्लाटिङ्ग कार्य सम्पन्न भएपश्चात जमिन बाँझो राख्न नपाइने हुँदा जग्गा बाँझो राखेमा नगरपालिकाले जरिवाना लगाउन सक्नेछ ।

६.१३ प्लाटिङ्ग कार्य स्वीकृति लिएको मितिबाट ६ महिना भित्रमा सम्पन्न हुनुपर्ने छ । मनासिब कारण देखाई उक्त समयमा सम्पन्न हुन नसकी आवेदन दिएमा स्वीकृति दिने अधिकारीले अर्को ६ महिनाको लागि म्याद थप गर्न सक्ने छ ।

६.१४ उल्लेखित प्रावधानहरु बाहेक घर निर्माणका लागि अन्य मापदण्ड तिलोत्तमा नगरपालिका भवन निर्माण मापदण्ड-२०७४ अनुसार रहनेछ ।

६.१५ २०७४ साल साउन २६ गते अगावै खोलिएका सडकको हकमा न्यूनतम मापदण्ड पूरा गरेमा नेपाल सरकारको नाममा लगतकट्टाका लागि सिफारिस गरिनेछ । तर यस कार्यका लागि जग्गा उपयोगिता विश्लेषण प्राविधिक समितिको राय मने लिनुपर्ने छ ।

६.१६ सरकारी निकायबाट वा सरकारी लगानीबाट संचालित विकास आयोजनाका हकमा लगत कट्टा गर्ने प्रयोजनको लागि यो मापदण्डले बाधा पार्नेछैन ।

६.१७ पुनःनापी सम्पन्न भई हाल साबिक दर्ताको क्रममा कित्ताकाट गर्नुपर्ने भए प्रचलित व्यवस्था बमोजिम कित्ताकाट गर्न बाधा पर्नेछैन । तर साबिकको एक कित्ताको हाल साबिक गर्दा हाल कायम बाटो, कुलो, आदिले छुट्टाएको कारणले बाहेक एक कित्ता भन्दाबढी कायम गर्न पाइने छैन ।

६.१८ प्रचलित कानूनी व्यवस्था बमोजिम विभिन्न कित्ताहरु एकीकरण भई कायम भएको कित्ता र कित्ताकाट भई हुने प्लट मिलानको सम्बन्धमा बुंदा नं. ५.४ मा व्यवस्था भए बमोजिम हुनेछ ।

६.१९ भुकम्प पीडितहरुको स्थान्तरण एवं एकीकृत बस्ती विकासको लागि कित्ताकाट गर्न आवश्यक भएको भनि राष्ट्रिय पुनः निर्माण प्राधिकरण र सो अन्तर्गतको कार्यालयबाट लेखि आएमा सोही बमोजिम कित्ताकाट गरिदिनु पर्नेछ ।

७. नगरपालिकाको जग्गा प्लटिङ्ग मापदण्ड देहाय बमोजिम हुनेछ :

७.१ अंशबण्डाको हकमा एकाघर परिवारमा अंशबण्डा गर्नुपर्ने भएमा खरिद गरी लिएको ३ वर्ष पूरा भएको वा सोभन्दा अगाडिको जग्गाको हकमा दुई विगाहासम्म क्षेत्रफल सम्मलाई २२ फुट बाटो नाली समेतको हुनुपर्नेछ । दुई विगाहादेखि माथि भएको खण्डमा २४ फुट बाटो नालीसमेत हुनुपर्नेछ ।

७.२ जग्गा प्लटिङ्ग गर्दाको अवस्थामा दुई विगाहासम्म क्षेत्रफल भएको जग्गामा २४ फुट बाटो नाली समेत हुनुपर्नेछ । दुई विगाहादेखि माथि भएको अवस्थामा नालीसहित ३० फुटको बाटो हुनुपर्नेछ ।

७.३ नयाँ जग्गा विकासका लागि घडेरीको क्षेत्रफल कम्तिमा पाँच धुर हुनुपर्नेछ ।

७.४ प्लटिङ्ग क्षेत्रमा सडक बाहेकको खुल्ला क्षेत्र दश कट्टासम्म ४ प्रतिशत, दशभन्दा माथि तीस कट्टासम्म ३ प्रतिशत, तीसदेखि साठी कट्टासम्म २.५ प्रतिशत र सो भन्दा माथिको लागि २ प्रतिशत हुनुपर्नेछ ।

७.५ जग्गा विकास गर्नेले क्रमशः पूर्वाधार आफैले विकास गरी नगरपालिकाद्वारा निरीक्षण गरी उल्लेखित मापदण्ड पूरा भएको अवस्थामा मात्र प्लटिङ्ग स्वीकृत गर्ने निर्णय गरिनेछ ।

८. जग्गा प्लटिङ्ग गर्दा देहायका कागजात पेश गर्नुपर्नेछ :

८.१ नेपाली नागरिकताको प्रमाणित प्रतिलिपि ।

८.२ कम्पनी वा फर्मको हकमा, दर्ताको प्रमाणित प्रतिलिपि ।

८.३ जग्गाधनी प्रमाण पुर्जाको प्रतिलिपि ।

८.४ ब्लुप्रिन्ट वा फाइल नक्साको प्रतिलिपि ।

८.५ प्लटिङ्ग गर्ने जग्गाको प्लालिङ्ग नक्सा ।

९. जग्गा प्लालिङ्ग गर्दा देहायको रकम नगरपालिकामा धरौटी राख्नु पर्नेछ :

९.१ दश कठ्ठासम्मको लागि एकमुष्ठ रुपमा दुई लाख ।

९.२ दश कठ्ठादेखि डेढ विघाहाको लागि पाँचलाख ।

९.३ डेढ विघाहादेखि पाँच विघाहा सम्मको लागि आठ लाख ।

९.४ पाँच विघाहादेखि माथिको लागि दश लाख ।

१०. अनुगमन समिति सम्वन्धी व्यवस्था :

कार्यपालिकावाट जग्गा प्लानिङ्ग अनुगमनको लागि १ जना संयोजक र १ जना प्राविधिक, सदस्य १ जना रहेको ३ सदस्यीय एक अनुगमन समिति गठन गरिने छ ।

११. खारेजी र बचाउः

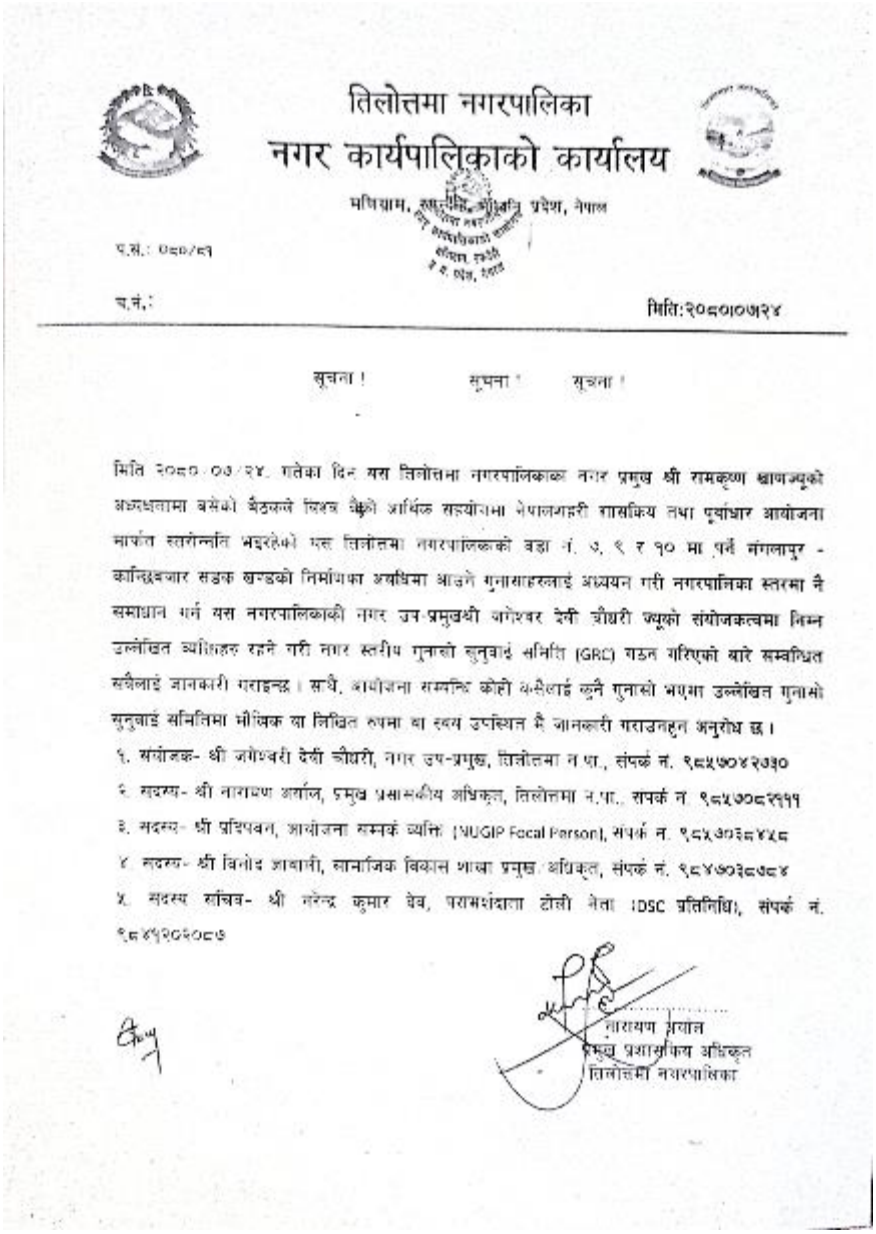
११.१ यो मापदण्ड लागू हुनुपूर्व गरिएका प्लानिङ्ग यसै मापदण्डअनुसार गरिएको मानिने छ र यसमा नसमेटिएका मापदण्डको हकमा प्रचलित नेपाल कानून लागु हुने छ ।

११.२ यसपूर्व लागु गरिएको तिलोत्तमा नगरपालिकाको जग्गा विकास तथा प्लटिङ्ग सम्वन्धी मापदण्ड-२०७४ खारेज गरिएको छ ।

अनुसूची १
दफा ४.१ सँग सम्बन्धित

सि. नं.	बाटोको नाम	वडा नं.	चौडाई (फिट)	आवासका लागि कायम भएको क्षेत्र
१	सिद्धार्थ राजमार्ग	१,२,३,४,५,६,७,९,१३,१५	१०५	दायां बायां १२ सय मिटर
२	योगिकुटी कमर सडक हुँदै वडा नं. ४ सम्म	३	८२	दायां बायां १ कि मि
३	७ नम्बर वडा कार्यालयदेखि दर्शनटोल	७	६०	दायां बायां ८ सय मिटर
४	पत्थरडाडा तिनाउ सडक	१३, १४, १५	५२	दायां बायां ८ सय मिटर
५	मंगलापुर-कान्छीबजार सडक	७, ९, १०	४३	दायां बायां ८ सय मिटर
६	डाइभरटोल-शिवपुर सडक	१,८,११	४३	दायां बायां ८ सय मिटर
७	गणेशनगर- शिवपुर-खैमरा मुडियारी सडक	८, ११, १२, ७, , १७	४३	दायां बायां ८ सय मिटर
८	भलवारी-तिनाउ सडक	७, १३, ६	४३	दायां बायां ८ सय मिटर
९	शंकरनगर-वनवाटिका सडक	१,२	४३	दायां बायां ८ सय मिटर
१०	कोटिहवा-कानपारा सडक	१५, १६, १७	४३	दायां बायां ८ सय मिटर
११	पुरानो सडक (डाइभरटोल कोटिहवा)	४, ५ ६, ७, १३, १५	४३	दायां बायां ८ सय मिटर
१२	रोहिणीपुलबाट भूपूर्वसैनिक हुँ कान्छिबजार जमुहानी ठटहारिया सडक	११, १०, १७	४३	दायां बायां ८ सय मिटर
१३	शंकरपुरबाट नगरपालिक भवन निर्माणस्थल जोड् सडक	५, ९, ६	४३	दायां बायां ८ सय मिटर
१४	मधवलिया-कान्छीबजार-भुनाह सडक	१५, १६, १७, १०	४३	दायां बायां ८ सय मिटर
१५	भरौलिया-ठटरिया-कानपारा सडक	१७	४३	दायां बायां ८ सय मिटर
१६	कोटिहवा-टिकुलिगढ-तिनाउ सडक	१५, १३, १४	४३	दायां बायां ८ सय मिटर
१७	सिताराइसमिल-डिंगरनगर सडक	३, ४	४३	दायां बायां ८ सय मिटर
१८	योगीकुटी-शारदा स्कूल भवानीपुर जोड्ने सडक	२, १	४३	दायां बायां ८ सय मिटर
१९	टिकुलिगढ-पश्चिमपहुनी-गोरकट्टा जोडेनी डिंगरनगर योगीकुटी सडक	१३, १४, ६, ४, ३	४३	दायां बायां ८ सय मिटर
२०	नयामिल-तिनाउ सडक	४,५,६	४३	दायां बायां ८ सय मिटर
२१	न्यूलाइट-प्रेमनगर सडक	१,२	४३	दायां बायां ८ सय मिटर
२२	योगिकुटी-शिवचौक-प्रेमनगर-टिकाभवन-मंगलापुर सडक	२, १, ९	४३	दायां बायां ८ सय मिटर
२३	शिवपुर-बुधबारे-मकहर-ब्यूरा सडक	११,१०, १२	४३	दायां बायां ८ सय मिटर
२४	सखुहानी-बिहुली-गगोलिया सडक	१५, १६, १७	४३	दायां बायां ८ सय मिटर

Municipality Notice of Formation of GRM (2nd Level)



तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय
मधियाम, [illegible] प्रदेश, नेपाल

च.नं.: ७८०/८१

च.नं.: मिति:२०८०।०७।२४

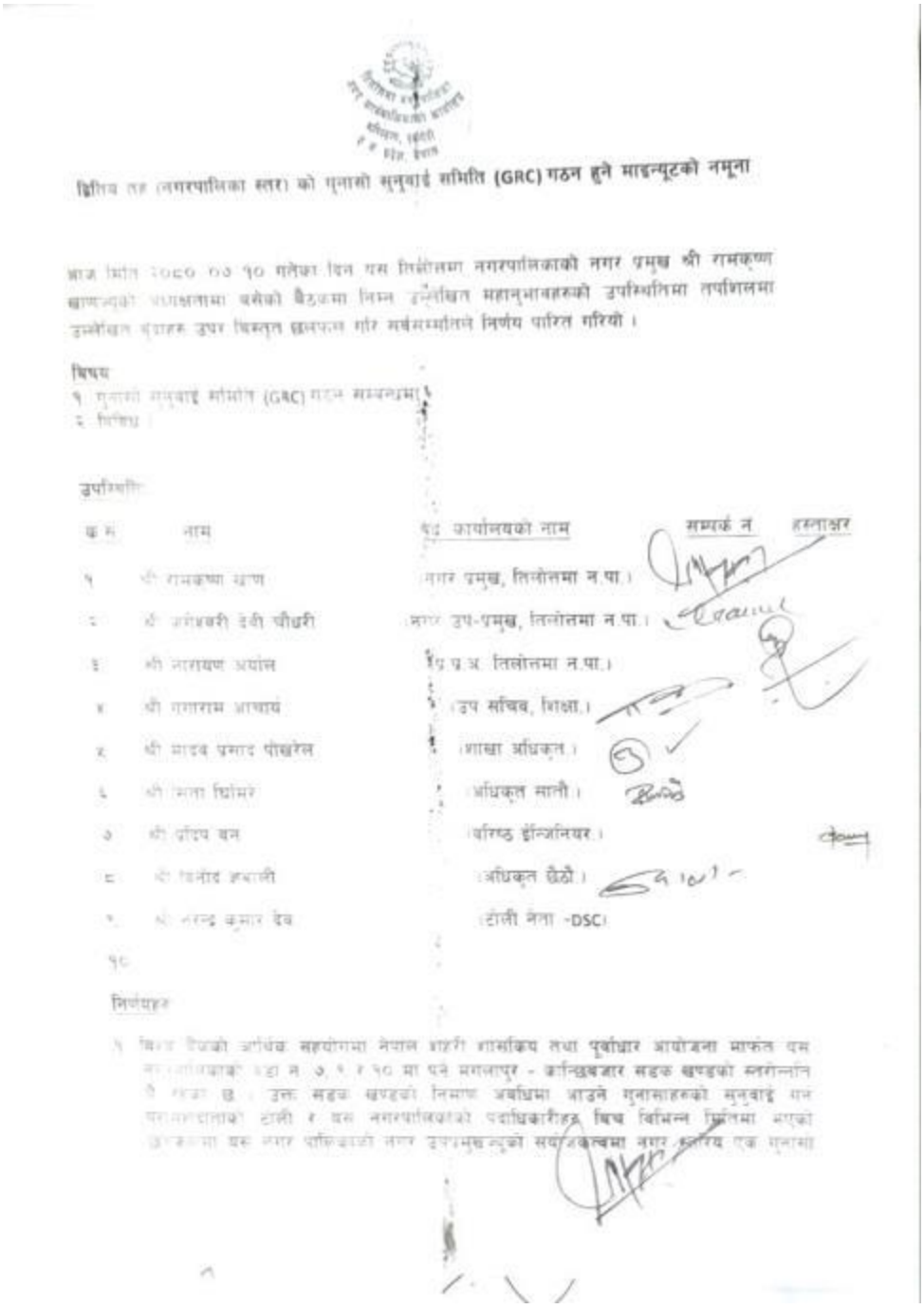
सूचना ! सूचना ! सूचना !

मिति २०८०/०७/२४ गतेका दिन यस तिलोत्तमा नगरपालिकाका नगर प्रमुख श्री रामकृष्ण खाणज्यूको अध्यक्षतामा बसेको बैठकले विश्व बैंकको आर्थिक सहयोगमा नेपालगन्ज सासकिय तथा पूर्वाधार आयोजना मार्फत स्तरोन्नति भइरहेको यस तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने मंगलापुर - कान्छिबजार सडक खण्डको निर्माणका क्रममा आउने गुनासाहरुलाई अध्ययन गरी नगरपालिका स्तरमा नै समाधान गर्न यस नगरपालिकाकी नगर उप-प्रमुखश्री जगेश्वर देवी चौधरी ज्यूको संयोजकत्वमा निम्न उल्लेखित व्यक्तिहरु रहने गरी नगर स्तरीय गुनासो सुनुवाई समिति (GRC) गठन गरिएको बारे सम्बन्धित सबैलाई जानकारी गराइन्छ । साथै, आयोजना सम्बन्धि कोही कसैलाई कुनै गुनासो भएमा उल्लेखित गुनासो सुनुवाई समितिमा मौखिक वा लिखित रुपमा वा स्वयं उपस्थित भै जानकारी गराउनहुन अनुरोध छ ।

१. संयोजक- श्री जगेश्वरी देवी चौधरी, नगर उप-प्रमुख, तिलोत्तमा न.पा., संपर्क नं. ९८५७०४२७३०
२. सदस्य- श्री नारायण अर्याल, प्रमुख प्रशासकीय अधिकृत, तिलोत्तमा न.पा., सपर्क नं. ९८५७०८२६११
३. सदस्य- श्री प्रदिपवन, आयोजना सम्पर्क व्यक्ति (MUGIP Focal Person), संपर्क नं. ९८५७०३८४४८
४. सदस्य- श्री विनोद जावासी, सामाजिक विकास शाखा प्रमुख अधिकृत, संपर्क नं. ९८४७०३८७८४
५. सदस्य सचिव- श्री नरेन्द्र कुमार देव, परामर्शदाता टोली नेता (DSC प्रतिनिधि), संपर्क नं. ९८४९२०२०८७

नारायण अर्याल
प्रमुख प्रशासकीय अधिकृत
तिलोत्तमा नगरपालिका

Minutes of Formation of GRC (2nd Level)



द्वितिय तह (नगरपालिका स्तर) को गुनासो सुनुवाई समिति (GRC) गठन हुने माइन्यूटको नमूना

आज मिति २०८० ०३ १० गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर प्रमुख श्री रामकृष्ण खनालज्यूको अध्यक्षतामा बसेको बैठकमा निम्न उल्लेखित महानुभावहरुको उपस्थितिमा तपशिलमा उल्लेखित मुद्दाहरु उपर विस्तृत छलफल गरि सर्वसम्मतीले निर्णय पारित गरियो ।

विषय

१ गुनासो सुनुवाई समिति (GRC) गठन सम्बन्धमा ।

२ विविध ।

उपस्थिति

क.स.	नाम	पद कार्यालयको नाम	सम्पर्क नं	हस्ताक्षर
१	श्री रामकृष्ण खनाल	नगर प्रमुख, तिलोत्तमा न.पा.		
२	श्री अनोखरी देवी चौधरी	नगर उप-प्रमुख, तिलोत्तमा न.पा.		
३	श्री नारायण अर्याल	वडा अ. तिलोत्तमा न.पा.		
४	श्री नगराज आचार्य	उप सचिव, शिक्षा।		
५	श्री माधव प्रसाद पोखरेल	शाखा अधिकृत ।		
६	श्री मिना घिमिरे	अधिकृत सानी ।		
७	श्री दीपेन्द्र बम	वरिष्ठ इन्जिनियर ।		
८	श्री विनोद अन्सारी	अधिकृत छैठौ ।		
९	श्री नरेन्द्र कुमार देव	टोली नेता -DSC।		

१०

निर्णयहरु

१ जिल्ला विकास समितिको आर्थिक सहयोगमा नेपाल सरकार स्थानीय तथा पूर्वाधार विकास मार्फत यस नगरपालिकाको वडा नं ७, ९ र १० मा पर्ने मंगलापुर - कान्छिबजार सडक खण्डको स्तरोन्नति गर्ने कार्य हुँदै । उक्त सडक खण्डको निर्माण अवधिमा आउने गुनासाहरुको सुनुवाई यस नगरपालिकाको टोली र यस नगरपालिकाको पदाधिकारीहरु बिच विभिन्न छिमेकमा भएको छलफलमा यस नगर पालिकाको नगर उपप्रमुखज्यूको सयोजकत्वमा नगर स्तरिय एक गुनासो

सुनुवाई संयन्त्र हुनु पर्ने विषयमा पनि छलफल भएको थियो । साथै बातावरणीय एवं सामाजिक व्यवस्थापन कार्यनीति (ESMF) मा उल्लेख भए बमोजिम पनि आयोजना स्तरमा रहेको गुनासो सुनुवाई समितिले समाधान गर्न नसकेको गुनासोहरुलाई नगरपालिकामा रहेको गुनासो सुनुवाई समितिले समाधान गर्नु पर्ने र उक्त समितिले पनि समाधान गर्न नसकेको गुनासाहरुलाई नेपाल शहरी शासकिय तथा पूर्वाधार आयोजनामा पठाउनु पर्ने उल्लेख भए बमोजिम सोही प्रयोजनका लागि यस नगरपालिकाको नगर उपप्रमुख श्री जगेश्वर देवी चौधरीज्यूको संयोजकत्वमा निम्न उल्लेखित व्यक्तिहरु रहने गरी नगर स्तरिय एक गुनासो सुनुवाई समिति (GRC) गठन गर्ने निर्णय सर्वसम्मतिले परित गरियो । नगरपालिका स्तरिय गुनासो सुनुवाई समितिका पदाधिकारीहरुको नामावली यस प्रकार रहेको छ ।

१. संयोजक- श्री जगेश्वरी देवी चौधरी (नगर उप-प्रमुख, तिलोत्तमा न.पा.) ।
२. सदस्य- श्री गंगाराम आचार्य (नगरपालिकाको गुनासो सुन्ने अधिकारी) ।
३. सदस्य- श्री माधव प्रसाद पोखरेल (शाखा अधिकृत, तिलोत्तमा न.पा.) ।
४. सदस्य- श्री प्रदिप बन (आयोजना सम्पर्क व्यक्ति (NUGIP Focal Person) ।
५. सदस्य- श्री विनोद जवाली (सामाजिक विकास शाखा प्रमुख / अधिकृत)
६. सदस्य सचिव- श्री नरेन्द्र कुमार देव (परामर्शदाता टोली नेता -DSC प्रतिनिधि) ।

२. यस गुनासो सुनुवाई समितिमा आयोजना स्तरमा रहेको गुनासो सुनुवाई समितिबाट समाधान हुन नसकि आएका गुनासाहरु एवं अन्य माध्यमबाट सिधै यस समितिमा आएका गुनासाहरुलाई छलफल गरी समाधान गर्न बातावरणीय एवं सामाजिक व्यवस्थापन कार्यनीति (ESMF) मा उल्लेख गरिएको समयावधि भित्र समाधान गरिने र समाधान गर्न नसकिने गुनासाहरुलाई नेपाल शहरी शासकिय तथा पूर्वाधार आयोजनामा पठाउने प्रयोजनको लागि यस गुनासो सुनुवाई समितिको नियमित बैठक प्रत्यक महिनाको पहिलो शुक्रवार बस्ने र आवश्यक भएमा जुनसुकै समयमा पनि बस्न सकिने निर्णय सर्वसम्मतिले परित गरियो ।

Minutes of Formation of GRM (1st Level)

आज मिति २०७९/१०/१६ गतेका दिन तिलोत्तमा नगरपालिकाका उप प्रमुख श्री जगेश्वर देवी चौधरी ज्यूको अध्यक्षतामा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिकाका अधिकारीहरु निर्माण व्यवसायी र अन्य सम्बद्ध सरोकारवालाहरुको उपस्थितिमा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत निर्माण भैरहेका रुपन्देही जिल्ला, तिलोत्तमा नगरपालिका वडा नं ७, ९ र १० स्थित मंगलपुर - कान्छिबजार सडक खण्ड स्तरोन्नति गर्ने कार्यको सिलसिलामा आउने गुनासाहरुलाई समाधान गर्न यस आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन कार्यनिति (ESMF) मा उल्लेख भए बमोजिम स्थानिय स्तरमा गुनासो व्यवस्थापन समिति (Grievance Redress Committee) गठन गर्नु पर्ने भएकोले सोही विषयमा विस्तृत रुपमा छलफल गरियो।

उपस्थिति:

क.सं.	नाम	हस्ताक्षर	पद/कार्यालयको नाम	सम्पर्क नं.
१.	जगेश्वर देवी चौधरी		उप-प्रमुख ति.न.पा.	[illegible]
२.	नारायण अर्याल		प्र.प्र.अ. "	[illegible]
३.	कृष्ण प्रसाद पौडेल		वडाध्यक्ष (९)	[illegible]
४.	देवी प्रसाद पंजेनी		" (७)	[illegible]
५.	गौथान प्रसाद घिमिरे		" १०	
६.	सीता घिमिरे		सा.उ.	
७.	प्रदिप [illegible]		ईन्जिनियर	
८.	बालकृष्ण [illegible]		वडा सचिव (१०)	[illegible]
९.	शैलेश भण्डारी		ईन्जिनियर-[illegible]	[illegible]
१०.	भिम बहादुर थापा		वातावरण विद (निर्माण व्यवसायी)	[illegible]
११.	रघु नाथ [illegible]		Sociologist/DSC/B.N. Consultancy	
१२.	योगेश [illegible]		Environmental Specialist	
१३.	[illegible] प्रसाद [illegible]		DSC	
१४.	[illegible]		DSC/Engineer	

मिति २०७८।१०।१८ गतेका दिन तिलोत्तमा नगरपालिकाका उप-प्रमुख श्री जोगेश्वर देवी चौधरीज्युको अध्यक्षतामा विश्व बैंकको सहयोगमा निर्माणाधीन मंगलापुर कान्छीबजार सडक खण्ड सम्बन्धमा तपसिलको उपस्थितिमा बैठक बसी तपसिलका निर्णयहरु गरियो।

उपस्थिति:

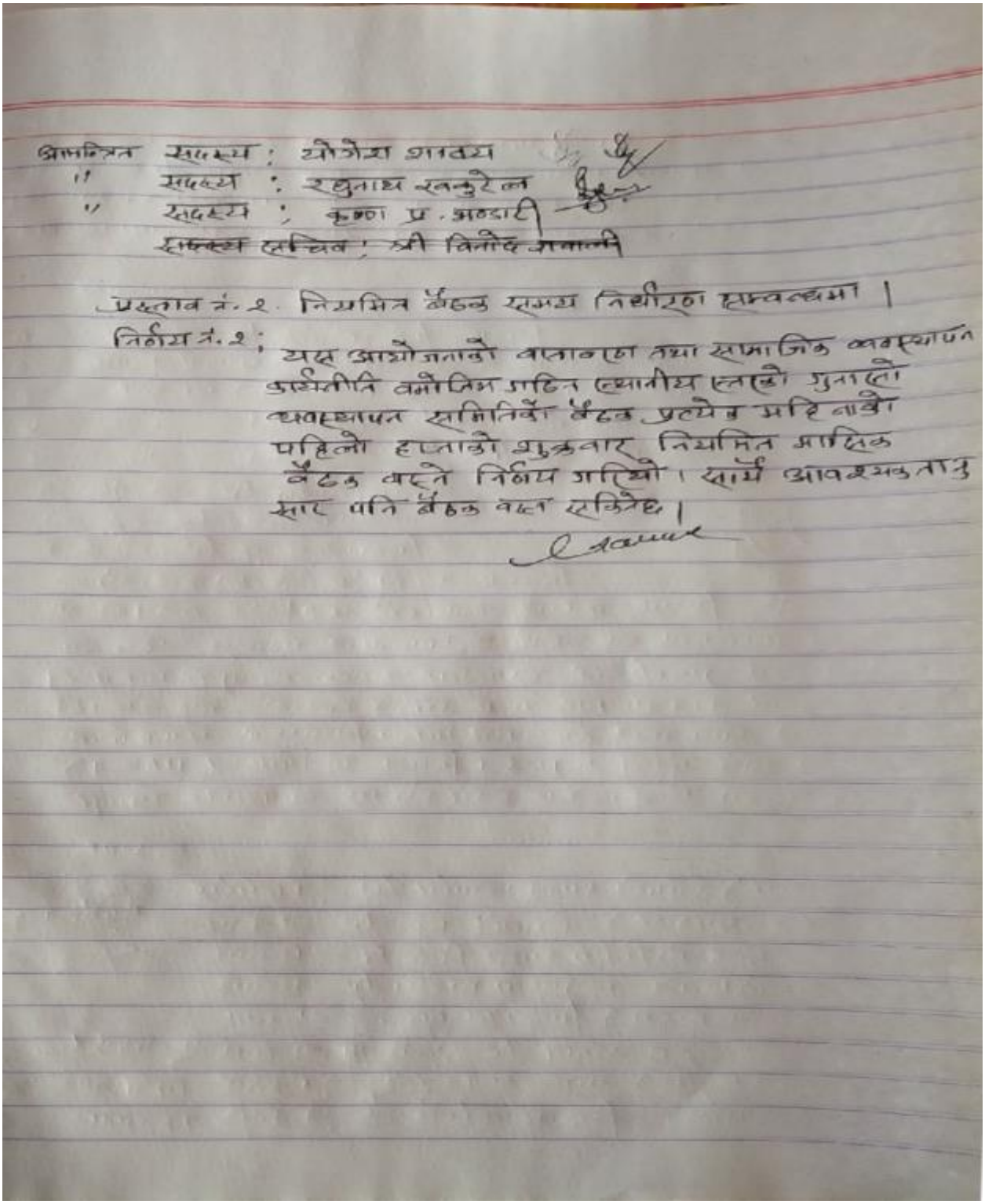
१. उप प्रमुख श्री जोगेश्वर देवी चौधरी
२. प्रमुख प्रशासकीय अधिकृत श्री नारायण अर्याल
३. वडाध्यक्ष (वडा नं १०) श्री गोपाल प्रसाद घिमिरे
४. " (वडा नं. ३) श्री ध्रुव न्यौपाने
५. " (वडा ६) श्री देवी प्रसाद पंगेनी
६. सि.अ. श्री सीता घिमिरे
७. ई. श्री प्रदिप कन
८. ई. श्री युवराज पन्थी
९. सा.वि.प्र (अ.ई.) श्री विनोद ज्ञवाली
१०. Engineer DSC / B.N. Consulted [illegible] प्र. भण्डारी

प्रस्ताव: गुनासो व्यवस्थापन समिति गठन सम्बन्धमा।

तिलोत्तमा नगरपालिकामा मंगलापुर कान्छीबजार सडक निर्माणको सिलसिलामा आइपर्ने विवाद तथा समस्याहरुको समाधानका लागि आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन कार्यनीति (ESMF) बमोजिम स्थानीय स्तरमा निम्न सदस्यहरु रहेको गुनासो व्यवस्थापन समिति गठन गर्ने निर्णय गरियो।

तपसिल:

संयोजक: श्री गोपाल प्रसाद घिमिरे (वडाध्यक्ष-१० ...)
सदस्य: श्री ध्रुव न्यौपाने (वडाध्यक्ष-३)
सदस्य: श्री देवी प्रसाद पंगेनी (वडाध्यक्ष-६)
सदस्य: श्री माधव पोखरेल पी.अ.(सो.स.प्र.)
सदस्य: ई. युवराज पन्थी (वातावरणीय क्षेत्र)
सहजकर्ता सदस्य: अ.ई. श्री विनोद ज्ञवाली (सामाजिक क्षेत्र)
आमन्त्रित सदस्य: शकुन्तला थापा (योजना क्षेत्र-महिला प्रतिनिधि)
आमन्त्रित सदस्य: ई. शैलेश भण्डारी (निर्माण व्यवसायी)



आमन्त्रित सदस्य : योगेश शाक्य
" सदस्य : रघुनाथ खनुरेल
" सदस्य : कृष्ण प्र. भण्डारी
~~सदस्य सचिव : श्री विनोद शर्मा~~

प्रस्ताव नं. २ नियमित बैठक समय निर्धारण सम्बन्धमा ।

निर्णय नं. २ ; यस आयोजनाको वातावरण तथा सामाजिक व्यवस्थापन कार्यनीति बमोजिम प्रदित स्थानीय स्तरको गुनासो व्यवस्थापन समितिको बैठक प्रत्येक महिनाको पहिलो हप्ताको शुक्रवार नियमित मासिक बैठक बस्ने निर्णय गरियो । सार्थ आवश्यकतानु सार पनि बैठक बस्न सकिनेछ ।

Public Notice of Formation of Municipality and Project Level GRC

Notice Regarding Formation of Project Level GRC

Municipality No Outstanding Issues Letter

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय

मणिग्राम, रुपन्देही, लुम्बिनि प्रदेश, नेपाल

प.सं.: ०८०/८१

च.नं.: ३४६४

मिति: २०८१।१।१०

श्री आयोजना प्रमुख ज्यू,
आयोजना समन्वय कार्यालय, NUGIP,
शहरीविकास तथा भवन निर्माण विभाग (DUDBC),
ववरमहल, काठमाण्डौ ।

विषय:निर्माणाधिन मंगलापुर - कान्छीवजार सडक अर्न्तगत पर्ने वेवरा चोक - कान्छी वजार सडक खण्डमा कुनै मुद्दाहरु (Outstanding Issues) नरहेको सम्वन्धमा ।

उपरोक्त विषयमा यस नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणाधिन मंगलापुर - कान्छीवजार सडक अर्न्तगत पर्ने वेवरा चोक - कान्छी वजार सडक खण्डको शहरी विकास तथा भवननिर्माण विभाग (DUDBC), नेपाल सहरी शासकीय पूर्वाधार आयोजना (NUGIP) मार्फत विश्व वैंकको आर्थिक सहयोगमा स्तरोन्नति हुनलागेको शन्दर्भमा उक्त सडक खण्डको क्षेत्राधिकार मिति २०७६/०१/३०गते यस नगरपालिकाले स्थानीय राजपत्रमा सुचना प्रकाशित गरि उक्त सडक खण्डको क्षेत्राधिकार १३ कायम गरेको छ । निर्माणाधिन मंगलापुर - कान्छीवजार सडक अर्न्तगत पर्ने वेवरा चोक - कान्छी वजार सडक खण्डको प्रस्तावित सडक चौडाई ११.७४ देखि १३ मिटर भित्रकोसाइट (Site) अहिले खुल्ला रहि सार्वजनिक प्रयोगमा रहेको छ । उक्त सडक खण्डको स्तरोन्नतिका लागि प्रस्तावित सडक चौडाई ११.७४ देखि १३ मिटर भित्र कुनै किसमका मुद्दाहरु (Outstanding Issues) जस्तै: क्षतिपूर्तिका मुद्दा, झैझगडा वा अदालति मुद्दा आदि नरहेको व्यहोरा जानकारीको लागि अनुरोध गर्दछु । साथै, वातावरणीय एवं सामाजिक व्यवस्थापन योजना(ESMP) तयारीका क्रममा प्राविधिक, वातावरणीय र सामाजिक, एवं आर्थिक वस्तु स्थिति र लैङ्गिक हिंसा सम्वन्धि विषयमा विस्तृत छलफल भएको र सर्वसाधारणको जनकारीको लागि वातावरणीय एवं सामाजिक प्रभाव मूल्याङ्नको अन्तिम प्रतिवेदनलाई यस नगरपालिकाको वेव साइट र सम्वन्धित वडा कार्यालयमा राखी आयोजना सम्वन्धि पारदर्शीता अपनाउन यस नगरपालिका प्रतिवद्ध रहेको व्यहोरा समेत जानकारी लागि अनुरोध गर्दछु ।

नगर प्रमुख
रामकृष्ण खाण
नगर प्रमुख

Meeting Minutes with Municipal Authority, Ward Chairperson

आजमिति २०८१/१/४ गतेकादिन यस तिलोत्तमा नगरपालिकाको नगर प्रमुख श्री रामकृष्ण खाणज्यूको अध्यक्षतामा नगर प्रमुखज्यूको कार्य कक्षमा भएको बैठकमा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना मार्फत विश्व बैंकको आर्थिक सहयोगमा यस तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने मंगलापुर - कान्छी बजार सडक खण्डअन्तर्गत मंगलापुर देखि बेवरा चोक सम्मको सडक खण्डको स्तरोन्नति गर्ने कार्य भैरहेको छ । यसै शन्दर्भमा मंगलापुर - कान्छी बजारसडक खण्ड अन्तर्गत बेवरा चोक देखि कान्छी बजार सम्मको सडकलाइ पनि स्तरोन्नति गर्ने कार्यको लागि वातावरणीय एवं सामाजिक व्यवस्थापन योजना(ESMP)तयारीगर्ने कार्य भैरहेको छ । तसर्थ उक्त योजना तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुकासाथै नेपाल शहरी शासकिय तथा पूर्वाधार आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF)मा उल्लेखित प्रावधानका बारेमा समेत B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिकाका पदाधिकारीहरु, वडा अध्यक्ष र अन्य सरोकारवालाहरु का बिच बिस्तृत छलफल गरी निर्णयहरु पारित गरियो ।

उपस्थिति:

१. श्री रामकृष्ण खाण, नगर प्रमुख, ति.न.पा.,
२. श्री जगेश्वरी देवीचौधरी, नगर उप-प्रमुख, ति.न.पा.,
३. श्री नारायण अर्याल, प्रमुख प्रसासकीयअधिकृत, ति.न.पा.,
४. श्री गोपाल प्रसाद घिमिरे, वडा अध्यक्ष, ति.न.पा.१०,
४. श्री देवि प्रसाद पंगेनी, वडा अध्यक्ष, ति.न.पा.७,
५. श्री ध्रुव न्योपाने, वडा अध्यक्ष, ति.न.पा.९,
६. श्री प्रदिपवन, आयोजना सम्पर्क व्यक्ति(NUGIP Focal Person)ति.न.पा.,
७. श्री विनोद ज्ञवाली, सामाजिकविकास शाखाप्रमुख/अधिकृत ति.न.पा.,
८. श्री रबु खकुरेल, Social Expert, B.N Engineering
९. श्री योगेश साक्य, Environmental Expert, " "
१०. श्री सम्झना भण्डारी, महिला बालबालिका शाखा प्रमुख

निर्णयहरु:

१. यस नगरपालिका द्वारा मंगलापुर - कान्छी बजार सडक खण्ड अन्तर्गत बेवरा चोक देखि कान्छी बजार सम्मको सडकको क्षेत्राधिकार १३ मिटर कायम गरिएको भएतापनि सडक चौडाइ १३ मिटर नपुग्ने ठाउँहरुमा सडकको चौडाइ जति उपलब्ध छ त्यति नै चौडाइको सडक बनाउने सम्बन्धमा छलफल गरी निर्णय गरियो । साथै प्रस्तावित सडक निर्माण गर्दा सडक किनारमा रहेका आफ्ना

संरचनाहरु स्वइच्छाले आफुखुसि हटाउन चाहेमा वा स्तरोन्नति/स्थानान्तरणगर्न चाहेमा नगरपालिकाले आवश्यक समन्वयतथा सहजिकरण गर्ने सम्बन्धमा छलफल गरी निर्णय गरियो ।

२. मंगलापुर - कान्छी बजार सडक खण्ड अन्तर्गत बेवरा चोक देखि कान्छी बजारसम्मको सडकको उपलब्ध सडक चौडाइ मिटर भित्रकुनै मुद्दाहरु (Outstanding Issues) जस्तै: क्षतिपूर्तिका मुद्दा, झैझगडा वाअदालति मुद्दा आदि नरहेको सम्बन्धमा छलफल गरी निर्यणय गरियो ।

३. मंगलापुर - कान्छी बजार सडक खण्ड अन्तर्गत बेवरा चोक देखि कान्छी बजारसम्मको सडकको वातावरणीय एवं सामाजिक व्यवस्थापन योजना(ESMP) तयारी कममा नगरपालिका स्तर, वडा स्तर र आयोजना स्तरमा नेपालशहरी शासकिय तथा पूर्वाधार आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF)माउल्लेखित प्रावधान लगायत आयोजना क्षेत्रमा हुन सक्ने घरेलु हिंसा तथा लैङ्गिकविभेद (GBV, SEA/SH) सम्बन्धि घटना र तत् सम्बन्धमाAnti-Harassment Cellका Focal Personले खेल्नु पर्ने भूमिकाकाबारेमा समेत बिस्तृत छलफल भएको सम्बन्धमा निर्णय गरियो ।

४. प्रस्तावित सडक आयोना क्षेत्रमानगरपालिकको तार्फबाट महिला, दलित र आदिवासी/जनजाति हरुलाई लक्षित बिविध कार्यक्रमहरु संचालन भैरहेको र भविश्यमा पनि यस्ता कार्यक्रम हरुलाई निरन्तरता दिइने सम्बन्धमा छलफल गरी निर्णय गरियो ।

Anti- Harassment Cell Focal Person Appointment Letter

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय
मणिग्राम, रुपन्देही, लुम्बिनि प्रदेश, नेपाल

प.सं.: ०७९/८०
च.नं.: ४१२८

मिति २०८०।३।१९

श्री शहरी विकास तथा भवन निर्माण विभाग
नेपाल शहरी शासकीय तथा पुर्वाधार आयोजना
बबरमहल, काठमाडौं ।

विषय :- Anti-Harassment cell को जिम्मेवारी तोकिएको बारे ।

नेपाल शहरी शासकीय तथा पुर्वाधार आयोजनाबाट मिति २०८०/०३/१० को प.सं. ०७९/८० को चलानी नं. ३५१ को प्राप्तपत्र अनुसार मंगलापुर कान्छिबजार सडक स्तरोन्नती आयोजनासंग सम्बन्धित लैङ्गिक हिंसा तथा यौन दुर्व्यवहार सम्बन्धी गुनासोहरुलाई अभिलेखिकरण तथा सहजीकरण गर्नका लागि यस नगरपालिकाको महिला बालबालिका तथा सामाजिक कल्याण शाखा की प्रमुख श्री सम्झना भण्डारी लाई Anti-Harassment cell को गुनासो समेत हेर्ने गरि जिम्मेवारी तोकिएको व्यहोरा अनुरोध छ ।

नारायण अर्या
प्रमुख प्रशासकीय अधि

OCMC Letter

लुम्बिनी प्रदेश सरकार
स्वास्थ्य मन्त्रालय
स्वास्थ्य निर्देशनालय
लुम्बिनी प्रादेशिक अस्पताल
बुटवल, नेपाल

Email :- lzhospital@gmail.com

प.सं. : २०८०/०८१
चलानी नं. २४६१

मिति : २०८१/०१/१०

श्री तिलोत्तमा नगरपालिका,
नगरकार्यपालिकाको कार्यालय ।

विषय : लैङ्गिक हिंसा सम्बन्धी जानकारी सम्बन्धमा ।

प्रस्तुत विषयमा ताहाँको च.न.३४०६ मिति २०८१/०१/७ को लैङ्गिक हिंसा सम्बन्धी प्राप्त पत्रानुसार तिलोत्तमा न. पा. वडा न. १० बाट यस अस्पतालको OCMC शाखामा आजका मितिसम्म सडक खण्डको प्रभाव क्षेत्रबाट लैङ्गिक हिंसा सम्बन्धी कुनै पनि घटना दर्ता हुन नआएको व्यहोरा जानकारीका लागि अनुरोध छ ।

.....
डा.विप्लप मानन्धर
OCMC प्रमुख

Notice for Public Consultatoin

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय

मणिग्राम, रुपन्देहि, लुम्बिनि प्रदेश, नेपाल

प.सं.: ०८०/८१

च.नं.:

मिति:२०८०।११।२७

विषय: सुचना सुचना सुचना

विश्व वैकको आर्थिक सहयोगमा शहरी विकास तथा भवन निर्माण विभाग (DUDBC), नेपाल सहरी शासकिय पूर्वाधार आयोजना (NUGIP) ले यस तिलोत्तमा नगरपालिका, वडा नं. ७, ९ र १० मा पर्ने मंगलापुर - कान्छी बजारसडक अर्न्तगत बेवरा चोक देखि कान्छी बजार सम्मको सडक खण्डको स्तरोन्नति गर्ने भएको छ । यसै सिलसिलामा उक्त सडक खण्डको वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका क्रममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय सरोकारवालाहरुका बिच विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य हुने भएकोले मंगलापुर - कान्छीबजारसडक खण्डमा पर्ने बेवरा चोक देखि कान्छी बजार सम्मका सडक आयोजनाबाट प्रभावितहुने बासिन्दा/जग्गाधनीहरुसंग निम्न उल्लेखित स्थान र मितिमा हुने विस्तृत छलफल तथा अन्तरक्रिया कार्यक्रममा उपस्थित हुनकालागि सम्बन्धित सबै सरोकारवाला हरुलाई सुचित गरिन्छ । साथै छलफलमा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव, सम्भाव्य उपाय र गुनासो व्यवस्थापन प्रणलीका सम्बन्धमा विस्तृत छलफल हुने समेत जनकारी गराइन्छ ।

अन्तरक्रिया हुने मिति र स्थान:

मिति: २०८०/१२/०९गते शुक्रवार ।

स्थन: मैनहवा, वडा नं. १०, तिलोत्तमान गरपालिका ।

समय: विहान ८:०० बजे

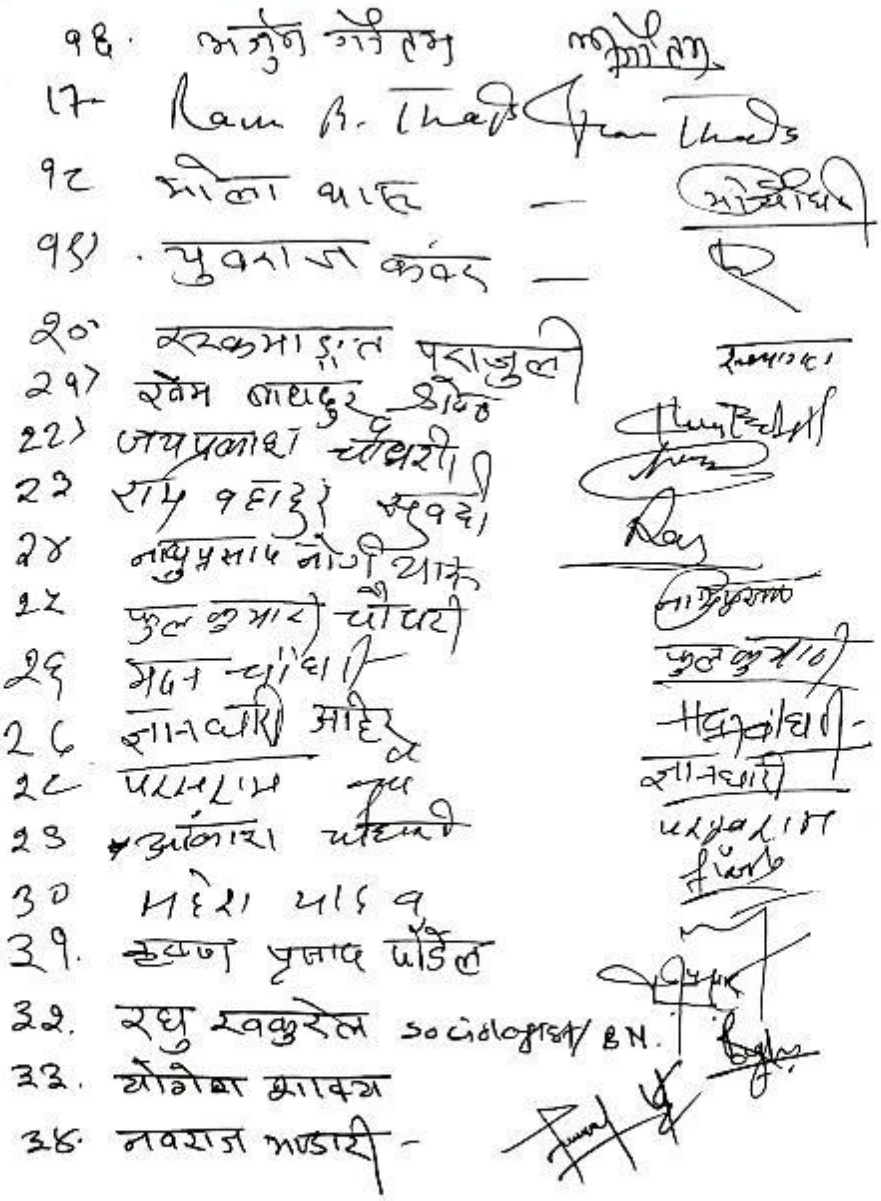
२०८०।१२।२६ .

प्रमुख प्रशासकिय अधिकृत

Meeting Minutes of Public Consultation with Stakeholders

आज मिति २०८०।१२।०९ गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर उप-प्रमुखज्यूको उपस्थितिमा तिलोत्तमा नगरपालिकाको वडा नं १० स्थित मैनहवा चोकमा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी आयोजना तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ६, ९ र १० मा पर्ने निर्माणाधिन मंगलापुर-कान्छि बजार सडक खण्ड अन्तर्गत वडा नं. १० मा पर्ने बेवरा चोक देखि कान्छि बजारसम्मको सडक स्तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका क्रममा प्राविधिक, वातावरणीय सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन प्रभाव र सम्भाव्य उपायहरुका बारेमा B.H. Consultancy Pvt. Ltd. का DSC Team र नगरपालिका र स्थानिय सरोकारवालाहरुका बिच विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य सम्पन्न भयो। साथै, छलफलको क्रममा यस आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपसिलमा उल्लेखित बुँदाहरुमाथि उठेका प्रश्नहरुको समाधानका बारेमा विस्तृत जानकारी दिएको सम्बन्धमा छलफल भएको निर्णय गरियो।

१. राम कृष्ण खनाल - नगर प्रमुख
१. जानकुमार देवी चौधरी - नगर उप-प्रमुख
२. गोपाल प्रसाद घिमिरे वडा अध्यक्ष
३. देवकी थापा कार्य. पा. सदस्य
४. बालकृष्ण अर्याल वडा सदस्य
५. रिता कुमारी चौधरी " "
६. चन्द्रिका नेपाली " "
७. बेवरी आदर्शटोल कृष्ण बराल अध्यक्ष
८. राजेश यादव गौरिया टोल - अध्यक्ष
९. मैनहवा चोक टोल अध्यक्ष - अशोक चौधरी
१०. प्रकाश खड्का दुर्गा मन्दिर टोल - अध्यक्ष
११. चन्दन चौधरी जरहवा टोल - अध्यक्ष
१२. विष्णु डंगोल
१३ ओम प्रसाद न्यौपाने मैनहवा
१४. कृष्ण बहादुर थापा शाखा प्रमुख
१५ सीता न्यौपाने कार्यालय सहायक
१६ भोजनाथ कुँवर - रोहिणी टोल अध्यक्ष



छलफलका मुद्दा एवं निर्णयहरु:

१. यस तिलोत्तमा नगरपालिकाको वडा नं. १० मा पर्ने निर्माणाधिन मंगलापुर-कान्छि बजार सडक खण्डको क्षेत्राधिकार १३ मिटर कायम रहेको सम्बन्धमा तिलोत्तमा नगरपालिकाले मिति २०६८ साल बैशाख ३० गतेको स्थानीय राजपत्रमा सूचना प्रकाशित गरी उक्त सडक खण्डको क्षेत्राधिकार १३ मिटर कायम गरेको थियो। हाल उक्त सडकको बेवरा चोक देखि कान्छि बजार सम्मको सडक चौडाई सार्वजनिक प्रयोजनमा रहेको र सडक चौडाई (Road Width) अहिले खुल्ला रहेको सम्बन्धमा विस्तृत छलफल गरियो। साथै उक्त सडक खण्ड स्तरिय एवं शिघ्र निर्माण हुनुपर्नेमा विस्तृत छलफल गरि सडक निर्माण गर्दा अपनाइने विधि र प्रकृयाका बारेमा समेत जानकारी दिने कार्य गरेको सम्बन्धमा विस्तृत छलफल भएको निर्णय सर्वसम्मतिले निर्णय गरियो।

२. गुनासो निवारण संयन्त्र (GRM) र गुनासो निवारण समिति (GRC) को गठन प्रक्रिया, उक्त गुनासो सुनुवाई समितिमा गुनासाहरु राख्ने तरिका आदि बारेमा विस्तृत छलफल गरि निर्णय गरियो।

३. सडक निर्माण गर्दा पहिलो रोजगारीको अवसर स्थानियले पाउनु पर्नेमा छलफल गरियो।

४. बाटोमा पर्ने पानीका पाइप, बिजुलीका पोल, कल्भर्ट आदि बाटो निर्माण चरण पहिले नै स्थानान्तरण गर्नु पर्ने र खानेपानी अवरुद्ध भएमा वैकल्पिक रुपमा ट्याङ्कबाट शुद्ध खानेपानी दिनु पर्ने विषयमा छलफल गरियो।

५. प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा GBV, SH/SEA सम्बन्धि खासै समस्या नदेखिए पनि सडक निर्माणका क्रममा बाहिरी कामदार र स्थानिय बिच हुन सक्ने अवान्छित गतिविधी र तिनको रोकथाम आदिका बारेमा छलफल गरियो। साथै GBV, SEA/SH सम्बन्धी कुनै घटना घटेमा उक्त घटनाहरुको अभिलेखिकरण र सम्बोधन गर्न यस आयोजनासँग सम्बन्धित व्यक्ति / Anti-Harassment cell को सम्पर्क व्यक्ति [illegible] सँग सम्पर्क गरि उहाँ मार्फत सम्बन्धित निकायको सहयोग लिन सकिने सम्बन्धमा विस्तृत छलफल गरि निर्णय गरियो।

६. सडक निर्माणका क्रममा हुन सक्ने ध्वनी प्रदुषण, वायु प्रदुषण आदिका बारेमा छलफल गरियो।

७. यस सडक निर्माणका क्रममा धार्मिक सांस्कृतिक महत्वका मठ मन्दिर पाटी पौवा, रुख चौतारी आदिको संरक्षण गर्नु पर्ने विषयमा छलफल भयो।

८. प्रस्तावित सडक खण्डमा सकेसम्म कम बोटबिरुवाहरु काट्ने गरि डिजाइन गर्ने र काटिएका रुखहरुका हकमा प्रति रुख बराबर १० नयाँ बिरुवा लगाउने विषयमा छलफल भयो।

९. निर्माण व्यवसायीको क्याम्प र कामदारको शिविर वडा नं १० को मैनस्थल नजिकको खाली स्थानमा राख्न उपयुक्त हुने र बाटो खन्दा उत्पन्न हुने माटो ढुङ्गा आदि फाल्न वडा नं १० को कान्छीबजार जनमा.वि. नजिकको खाली स्थान उपयुक्त हुने सम्बन्धमा छलफल भयो।

१०. यस निर्माणाधिन मंगलापुर-कान्छीबजार सडक खण्डको बेवरा चोक देखि कान्छीबजारसम्मको सडकको दाया बाँया करिब ११४ घरधुरी रहेको र महिला संख्या २६३ र पुरुषको संख्या २४३ रहेको सम्बन्धमा छलफल गरि तथ्याङ्क संकलन गरियो।

११. वातावरणीय तथा सामाजिक व्यवस्थापन योजना बारे नगरपालिकाको कार्यालय नगरपालिकाको वेबसाइट, वा वडा कार्यालयमा सम्पर्क गरि जानकारी लिन सकिने र ESMF मा उल्लेखित प्रावधानका सम्बन्धमा र सडक निर्माणका क्रममा आइपर्ने विविध वातावरणीय तथा सामाजिक समस्या तिनका समाधानका उपायहरु माथि छलफल गरियो।

[signature]

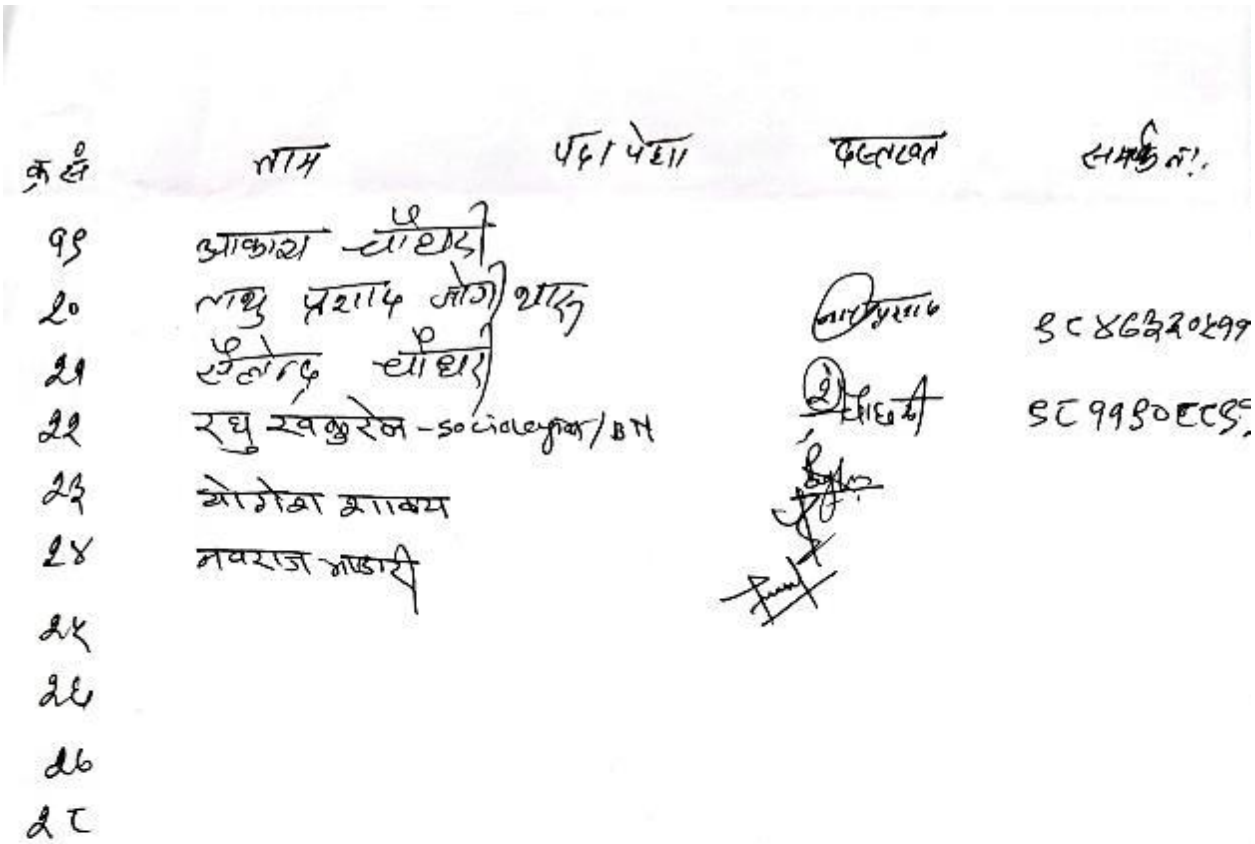
Meeting Minutes of Consultation with Indigenous/Janajati

आदिवासी/जनजातिहरुसंग भएको छलफल

आज मिति २०८०/१२/..९ गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर उप-प्रमुखज्यूको अध्यक्षतामा तिलोत्तमा नगरपालिकाको वडा नं. १० स्थित मैनहवा चोक.....मा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्ड अर्न्तगत वडा नं. १० मा पर्ने बेवरा चोक देखि कान्चि बजारसम्मको सडक तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय आदिवासी जनजातिहरुका बिच विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका कममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका प्रश्नहरुको समाधानका बारेमा विस्तृत जनकारी दिएको सम्बन्धमा छलफल भएको निर्णय गरियो ।

१. रामनरेश खाण नगर प्रमुख [signature]

क.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१	जागेश्वर देवी चौधरी	नगर उपप्रमुख	[signature]	९८४६०८२६३०
२	कृष्ण बहादुर बराल मगर		[signature]	९८४०९६९८९०
३	चन्द्रा चौधरी		[signature]	९८६६३०२२४४
४	ओमप्रकाश थापा		ओमप्रकाश थापा	९८१९४३६८१२
५	कृष्ण बहादुर श्रेष्ठ		[signature]	९८६६०६६२२६
६	रिता कुमारी चौधरी	वडा सदस्य	[signature]	9817484525
७	फुलकुमारी चौधरी		फुल कुमारी	९८०६९४९३०६
८	सुइदी चौधरी		सुइदी	[illegible]
९	देवकी थापा	वडा सदस्य	[signature]	–
१०	शंकर प्रसाद कंवर		[signature]	9800742919
११	मदन चौधरी		[signature]	९८१२४०८६९४
१२	जय प्रकाश चौधरी		[signature]	९८०६९९३१२५
१३	चन्द्रिका नेपाली		[signature]	9811987200
१४	प्रकाश श्रेष्ठ		चन्द्रिका	9817495496
१५	रमेश बहादुर श्रेष्ठ		[signature]	९८६६२९३३२८
१६	युवराज कंवर		[signature]	९८०८६३९६२६
१७	अशोक कुमार चौधरी		[signature]	९८९९४९८९६०
१८	मोला थापा		[signature]	९८४६०१९९६४
			मोलीसा	९८४६०३८८०९



क्र.सं	नाम	पद/पेशा	हस्ताक्षर	सम्पर्क नं.
१९	आकाश चौधरी			
२०	मधु प्रसाद जोगी थारु			९८४६३२०४९१
२१	सैलेन्द्र चौधरी			
२२	रघु खबुरेल - Sociologist/BH			९८१९९०६८९९
२३	योगेश श्रावय			
२४	नवराज भण्डारी			
२५				
२६				
२७				
२८				

छलफल एवं निर्णयका मुद्दाहरु:

1. यस बेवरा चोक देखि कान्छिबजार सडक खण्डको सडक चौडाई र ROW का सम्बन्धमा यस बाटो नजिकका जनजातिहरु जानकार रहेको सम्बन्धमा छलफल गरियो। कसैले आफ्नो नीजि घरहरुहरु आफ्नो स्वइच्छाले हटाउन चाहेमा हटाउन सकिने सम्बन्धमा छलफल गरि निर्णय गरियो।
२. यस आयोजनाका लागि गठन गरिएको गुनासो सुनुवाइ संयन्त्र (GRC- 1st Level र 2nd Level) का सम्बन्धमा जानकारी लिने र GRC ले गर्ने कार्यहरुका बारेमा जानकारी दिने काम भएको साथै लैङ्गिक हिंसा (GBV, SEA/SH) का सम्बन्धमा विविध छलफल गरियो।
३. सडक निर्माण गर्दा पहिलो प्राथमिकता जनजाति समुदायलाई दिनु पर्ने सम्बन्धमा छलफल गरियो।
४. यस निर्माणाधिन सडकको दायाँ बायाँ आदिवासी/जनजातिको घरधुरी संख्या लगभग १०३ रहेको र महिला संख्या २३६ र पुरुष संख्या २१८ रहेको सम्बन्धमा छलफल गरि तथ्याङ्क संकलन गरियो।
५. यस आयोजनाको वडाहरुमा नगरपालिकाको तर्फबाट दलित, महिला, आदिवासी/जनजातिहरुलाई लक्षित गरि विविध कार्यक्रमहरु संचालन भैरहेको र निरन्तर भने आयोजनाका तर्फबाट पनि थप कार्यक्रमहरु संचालन गरि दिन अनुरोध गर्ने सम्बन्धमा छलफल गरियो।
६. नेपाल शहरी शासकीय प्रबर्धन आयोजनाको वातावरणीय एवं सामाजिक व्यवस्थापन ढाँचा (ESMF) मा उल्लेखित विविध विषयहरुका र प्रावधानहरुका बारेमा जानकारी दिने र लिने काम गरियो। साथै ESMF ले प्रत्याभूत गरेका कुराहरु लागु हुनु पर्ने विषयमा विस्तृत छलफल गरियो।

[signature]

Meeting Minutes of Consultation with Women

महिलाहरुसंग भएको छलफल

आज मिति २०८०/१२/.९. गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर उप-प्रमुखज्यूको अध्यक्षतामा तिलोत्तमा नगरपालिकाको वडा नं. १० स्थित [illegible]...मा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्ड अर्न्तगत वडा नं. १० मा पर्ने बेवरा चोक देखि कान्चि बजारसम्मको सडक तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय महिलाहरुका बिच विस्तृत छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका कममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका प्रशनहरुको समाधानका बारेमा विस्तृत जनकारी दिएको सम्बन्धमा छलफल भएको निर्णय गरियो ।

१. रामकृष्ण खाण — नगर प्रमुख — [signature]
२. [illegible] देवी चौधरी — उप प्रमुख — [signature]

क्र.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१.	रिताकुमारी चौ.	वडा सदस्य	रिता	9817484225
२.	चन्द्रिका नेपाली		[signature]	9817495446
३.	रिता च्यौपने		[signature]	9867323716
४.	देवकी थारु	वडा सदस्य	[signature]	9800742919
५.	सुइटी चौधरी		सुइटी	
६.	धनमाया ढकाल		Dhanmaya	9808622014
७.	उमा थारु	उमा 9800703844		
८.	सितादेवी सुवेदी		सीता	9807591401
९.	फूलकुमारी थारु		फूलकुमारी	9806949306
१०.	रघु खकुरेल	Sociologist/BN	[signature]	
११.	योगेश प्राक्य		[signature]	
१२.	नवराज भण्डारी		[signature]	
१३.				
१४.				
१५.				
१६.				

दुलफल एवं निर्णयका बुदाहरु :

१. बेवरा चोक देखि काछि बजारसम्मको सडक चौडाई अहिले रुक्ना राहि सार्वजनिक प्रयोगमा रहेको सम्बन्धमा सबै महिला विद्यार्थीलाई जानकार रहेको सम्बन्धमा छलफल गरियो। बाहो निर्माण गर्दा स्थानिय महिलाहरुलाई पहिलो प्राथमिकतामा राखेर काम दिनु पर्ने र बाटो गुणस्तरिय हुनको लागि पर्ने सम्बन्धमा छलफल गरीयो।

२. लैङ्गिक हिंसा तथा लैङ्गिक विभेद सम्बन्धमा छलफल गरियो। नगरपालिकामा रहेको Anti Harassement cell को प्रतिनिधि आयोजना स्तरमा भएका पिडितलाई गुनासो गर्न सजिलो र दिइने सम्बन्धमा छलफल गरि निर्णय गरियो।

३. महिला सचेतनका कार्यक्रमहरु संचालन गरि कामदार (बाहय) र स्थानिय महिलाहरु बिच हुन सक्ने घटनाहरुको रोकथाम र उपायहरुबारे जानकारी दिनु पर्ने सम्बन्धमा छलफल गरि निर्णय गरियो।

४. सार्वजनिक प्रतिष्ठालयको संरक्षण गरिनु पर्ने सम्बन्धमा छलफलगरी निर्णय गरियो।

५. कुनै पनि सम्पत्ति निर्माण कार्य गर्दाको समयमा हुने झैझगडा गुनासाहरु GRC (1st Level & 2nd Level) मा गएर पनि गरि गुनासो निवारण गर्ने सकिने सम्बन्धमा छलफल गरियो।

६. यस बेवरा चोक देखि काछि बजारसम्मको क्षेत्रमा (सडक प्रभाव क्षेत्र) रहेका छल महिला हिंसा, यौन शोषण, सामाजिक विभेद जस्ता छला घटनाहरु नघटेको सम्बन्धमा छलफल गरियो।

६. वातावरणीय एवं सामाजिक व्यवस्थापन खाँचा (ESMF) मा उल्लेखित विषय र प्रावधानका बारेमा छलफल गरि जानकारी लिने र दिने कार्य गरियो।

Public Notice for ESMP Preparation of Tilottama Municipality

तिलोत्तमा नगरपालिका
नगर कार्यपालिकाको कार्यालय

मणिग्राम, रुपन्देहि, लुम्बिनि प्रदेश, नेपाल

च.नं.: ०८७/८१

च.नं.:

मिति:२०८०/१२/२७

विषय: सुचना सुचना सुचना

विश्व बैंकको आर्थिक सहयोगमा शहरी विकास तथा भवन निर्माण विभाग (DUDBC), नेपाल सहरी सार्वजनिक पूर्वाधार आयोजना (NUSIP) ले यस तिलोत्तमा नगरपालिका, वडा नं. ७, ९ र १० मा पर्ने मंगलापुर - कान्छी बजारसडक अन्तर्गत बेवरा चोक देखि कान्छी बजार सम्मको सडक खण्डको स्तरोन्नति गर्ने भएको छ । यसै सिलसिलामा उक्त सडक खण्डको वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका क्रममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति मापिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय सरोकारवालाहरुका बिच विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य हुने भएकोले मंगलापुर - कान्छीबजारसडक खण्डमा पर्ने बेवरा चोक देखि कान्छी बजार सम्मका सडक आयोजनाबाट प्रभावितहुने बासिन्दा/जग्गाधनीहरुका निम्न उल्लेखित स्थान र मितिमा हुने विस्तृत छलफल तथा अन्तरक्रिया कार्यक्रममा उपस्थित हुनकालागि सम्बन्धित सबै सरोकारवाला हरुलाई सुचित गरिन्छ । साथै छलफलमा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति मापिको मूल्याङ्कन, प्रभाव, सम्भाव्य उपाय र गुनासो व्यवस्थापन प्रणालीका सम्बन्धमा विस्तृत छलफल हुने समेत जनकारी गराइन्छ ।

अन्तरक्रियाहुने मितिर स्थान:
मिति: २०८१/०१/०३ गते मिलिबार। शुक्रबार ।
स्थान: कान्छि बजार, वडा नं. १०, तिलोत्तमा नगरपालिका ।
समय: बिहान ७:३० बजे

२०८०/१२/२६

सार्वजनिक छलफल तथा अन्तरकिया

आज मिति २०८१/०१/०५ गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर प्रमुखज्यूको अध्यक्षतामा तिलोत्तमा नगरपालिकाको वडा नं. १० स्थित कान्छी वजार चोकमा भएको छलफल तथा अन्तरकिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणधिन मंगलापुर - कान्छी बजार सडक खण्ड अर्न्तगत वडा नं. १० मा पर्ने वेवरा चोक देखि कान्चि वजारसम्मको सडक तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय सरोकारवालाहरुका बिच विस्तृत छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्न भयो। साथै छलफलका कममा यस आयोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुंदाहरु माथि उठेका प्रश्नहरुको समाधानका बारेमा विस्तृत जनकारी दिएको सम्वन्धमा छलफल भएको निर्णय गरियो।

क.सं.	नाम	पद/पेशा	हस्ताक्षर	संपर्क नं.
१.	रामकृष्ण खाण	नगर प्रमुख, ति.न.पा.	[signature]	9857030111
२.	प्रदिप वन	इन्जिनियर, ति.न.पा.	[signature]	9857038458
३.	सम्झना भण्डारी	Anti Harassment cell, ति.न.पा.	[signature]	
४.	विनोद न्यौपाने	सामाजिक विकास शाखा, प्रमुख, ति.न.पा.	[signature]	
५.	युवराज पन्थी	वातावरण शाखा, प्रमुख ति.न.पा.	[signature]	9857072727
६.	लालकृष्ण लम्साल	वडा नं. १०, सदस्य, ति.न.पा.		
७.	सुमित्रा श्रेष्ठ		[signature]	9823805011
८.	दुर्गा गुरुङ			
९.	उषा पन्थी सुनार	कृषक	उषा	9811564206
१०.	सिता थापा	कृषक	सिता	9846067123
११.	दिल कुमारी गुरुङ	गृहिणी	[signature]	9817436377
१२.	लिला माया खपुर			9864411196
१३.	सुन माया गुरुङ		सुन माया	
१४.	स्री माया खत्री		सोमाया	
१५.	सिता न्यौपाने	व्यापार	[signature]	9569323716
१६.	ल्याल सिरी गुरुङ	"	[signature]	9846182176
१७	निर्मला श्रेष्ठ	"	[signature]	9815959[illegible]
१८	सुर्य श्रेष्ठ		[signature]	9702334482

19) देवबहादुर [illegible] कान्छीबजार [signature] 9702434489
20) नरबहादुर गोदार ,, ~~9703859~~ ~~9903889~~
21) हेम बहादुर गुरुङ — ,, — 5687685C318
22) केशव बहादुर थापा बेवरा - [illegible] 9806945574 [illegible]
23) कृष्ण बहादुर श्रेष्ठ कान्छिबजार [signature] 9806033988 9806066288
24) सुजित ज्ञवाली ,, [signature] 9806339803
25) किरन अधिकारी ,, [signature] 9813455817
26) पुष्प उप्रेती ,, [signature] 9816434128
26) पुर्णराज केवट ,, [signature] 9819414870
28) राम बं. [illegible] ,, [signature] 9847677365
29) हिरा बा. [illegible] ,, [signature] 9011404954
30) निरज गुरुङ [signature] 9817457818
31) BISHAL GURUNG [signature]
32) भिम ब. थापा [signature] 9807564178
33) अजय थापा [signature] बेवरा 9807516686
34) [illegible] [signature] ,, 9814468305
35 चम्पादेवी थकाली
36 विष्णु गोतेल [signature] 9857059551
37 लक्ष्मी पोखरेल [signature]
38 रिमा पुरी [signature] रिमा
39 बालकुमारी राना [signature] 9807511073
40/ प्रमिला कुमारी चौधरी
41/ चितक थापा [signature] 9825403469
42. रघु खकुरेल Sociologist/BH. – [signature] [illegible]
43. योगेश्वर ज्ञावली - Environmental Expert [signature]

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु:

१. यस तिलोत्तमा नगरपालिकाको वड नं. १० मा पर्ने निर्माणधिन मंगलापुर - कान्चि बजार सडक खण्डको क्षेत्राधिकार १३ मिटर कायम गर्ने भनि तिलोत्तमा नगरपालिकाले मिति २०७६ साल बैशाख ३० गतेको स्थानीय राजपत्रमा सुचना प्रकाशित गरि उक्त सडक खण्डको क्षेत्राधिकार १३ कायम गरेको थियो । हाल उक्त सडक खण्डको बेवरा चोक देखि कान्छि बजारसम्मको सडक चौडाइ (Road with) अहिले खुल्ला भै सार्वजनिक प्रयोगमा रहेको सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो । साथै प्रस्तावित सडक निर्माण गर्दा सकेसम्म १३ मिटर चौडाइको सडक निर्माण हुनु पर्ने र सडक किनारमा रहेका आफ्ना संरचनाहरु स्वइच्छाले आफुखुसि हटाउन चाहेमा वा स्तरोन्नति गर्न चाहेमा कुनै बाधा नपर्ने सम्बन्धमा पनि छलफल गरी निर्णय गरियो ।

२. गुनासो निवारण संयन्त्र (GRM) र गुनासो निवारण समिति (GRC) को गठन प्रकृया, उक्त संयन्त्रमा गुनासो गर्ने तौरतरिका लगायत हाल निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्डको गुनासो सुनुवाई गर्न गठन गरिएको आयोजना स्तरीय (प्रथम तह) र नगरपालिका स्तरीय (द्वितिय तह) को गुनासो निवारण समिति (GRC) का सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो ।

३. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय बासिन्दाहरुलाई दिनु पर्ने सम्बन्धमा विस्तृत छफल गरियो ।

४. बाटो निर्माण गर्दा बाटोमा पर्ने बिजुलीका पोल र कल्भर्ट, सार्वजनिक प्रतिक्षालय आदि निर्माण कार्य शुरु गर्नु पहिले नै उचित स्थानान्तरण गरिनु पर्ने विषयमा जानकारी दिई छलफल गरियो । साथै निर्माण चरणमा खानेपानी सेवा अबरुद्ध हुन गएमा वैकल्पिक रुपमा ट्याङ्करबाट शुद्ध पिउने पानी उपलब्ध गराउनु पर्ने सम्बन्धमा विस्तृत छलफल गरियो ।

५. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि खासै समस्या नदेखिए पनि बाहिरी कामदार र स्थानीय समुदाय बिच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्बन्धमा पालना गर्नु पर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो । साथै यस आयोजना क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि घटना घटेमा यस आयोजनासंग सम्बन्धित लैङ्गिक हिंसा तथा यौन दुर्व्यवहार सम्बन्धि गुनासोहरुलाई अभिलेखिकरण तथा सहजिकरण गर्नका लागि तोकिएको व्यक्ति/Anti-Harassment Cell Focal Person तथा तिलोत्तमा नगरपालिकाको महिला बालबालिका तथा समाजिक कल्याण शाखाकी प्रमुख श्री सम्झना भण्डारीसंग लैङ्गिक हिंसा तथा यौन दुर्व्यवहार पीडितले नगरपालिकासम्म जानु भन्दा आयोजना स्तरीय गुनासो सुनुवाई समितिमा नै Anti-Harassment Cell Focal Person भए झनै सहज हुने सम्बन्धमा बिस्तृत छलफल गरी निर्णय गरियो ।

६. सडक निर्माणका कममा हुन सक्ने ध्वनी, वायु प्रदुषण जस्ता समस्याका र त्यसको निराकण सम्बन्धमा विस्तृत छलफल गरियो ।

७. सडक निर्माणका कममा प्रस्तावित सडक खण्डका किनारमा रहेको सार्वजनिजक प्रतिक्षालय मन्दिर एवं धार्मिक सम्पदाको संरक्षण गर्ने । यदि यसस्ता धार्मिक संरचनाहरुका कारण सडक निर्माणमा बाधा पुग्ने भएमा अन्यत्र स्थानान्तरण गरी सडक निर्माण गर्न समुदाय सबै मन्जुर रहेको बिषयमा छलपफल गरियो ।

८. प्रस्तावित सडक खण्डमा नीजि रुखहरु नरहेको र सार्वजनिक रुखहरु पनि सकेसम्म कम मात्र काट्ने र काटिएका रुखहरुका हकमा प्रति एक रुख बराबर १० नयाँ बिरुवाहरु लगाउने, तथा हरियाली प्रबर्धनका कियाकलापहरु गरिने विषयमा छलफल गरियो ।

९. निर्माण व्यवसायीको क्याम्प र कामदारका लागि शिविर वडा नं. १० को नैनहवा नजिकको खाली स्थान उपयुक्त हुने र बाटो खन्दा उत्पन्न हुने माटो ढुङ्गा आदि फाल्न वडा नं.१० कान्छि बजार जानहित मा.वि. नजिकको खाली स्थान उपयुक्त हुने सम्बन्धमा छलफल गरियो ।

१०. यस निर्माणाधिन मंगलापुर - कान्छि बजार सडक खण्डको बेवरा चोक देखि कान्चि बजारसम्मको सडकको दाँया बाँया झण्डै १९४ घरधुरी रहेको र महिला संख्या लगभग २६३ र पुरुषको संख्या २४३ रहेको सम्बन्धमा छलफल गरि तथ्याङ्क संकलन गरियो ।

११. वातावरणीय तथा सामाजिक व्यवस्थापन योजना बारे यस नगरपालिकाको कार्यालय, नगरपालिकाको वेव साइट वा वडा कार्यलयमा सम्पर्क गरि जानकारी लिन सकिने र ESMF मा उल्लेखित प्रावधन लगायत सडक निर्माणका कममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

Meeting Minutes of Consultation with Indigenous/Janajati Peoples

आदिवासी/जनजातिहरुसंग भएको छलफल

आज मिति २०८१/०१/०५ गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर प्रमुखज्यूको अध्यक्षतामा तिलोत्तमा नगरपालिकाको वडा नं. १० स्थित कान्छी बजार चोकमा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा, नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्ड अर्न्तगत वडा नं. १० मा पर्ने बेवरा चोक देखि कान्चि बजारसम्मको सडक तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका क्रममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्न, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय आदिवासी जनजातिहरुका विच विस्तृत छलफल तथा अन्तरक्रिया गर्ने कार्य सम्पन्न भयो। साथै छलफलका क्रममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका प्रश्नहरुको समाधानका बारेमा विस्तृत जनकारी दिएको सम्बन्धमा छलफल भएको निर्णय गरियो।

क.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१.	रामकृष्ण खाण	नगर प्रमुख, ति.न.पा.		9857030111
२.	प्रदिप वन	Focal Person, NUGIP.		9857038458
३.	समझना भण्डारी	Anti Harassement cell,		
४.	देवकी थारु	कान्छी बजार		9800742919
५.	कलम बहादुर थापा	तिनपा-१०, बेवरा		9847036139
६.	कृष्ण बहादुर श्रेष्ठ	" कान्छिबजार		9847077256
७.	महेश [illegible]	तिलोत्तमा-१० बेवरा		9864442695
८.	दिनेश कुँवर	तिलोत्तमा १०		9815825992
९.	अशोक चौधरी	ति.न.पा. १० [illegible]		[illegible]
१०.	गोपाल गुरुङ	ति.न.पा. १०		
११.	[illegible] गुरुङ	ति.न.पा.-१०		9867522604
१२.	भीम बहादुर [illegible]	" " १०		9820576792
१३.	[illegible]	ति " १०		[illegible]
१४.	राम नारायण चौधरी	ति.न.पा. १६		[illegible]
१५.	दुर्गा गुरुङ	" "		[illegible] [illegible]
१६.	प्रकाश केसी	ति.न.पा. १०		[illegible]
१७	[illegible]	ति.न.पा.		[illegible]

१८ माया गुरुङ दुर्गा मन्दिर कान्छी बजार माया 9800702168
१९ अस्मीता नेपाली .. .. दस्तखत [illegible] 9828777289
२० अरुक कुमारी [illegible] [illegible] 981[illegible]55[illegible]4
२१ सविता गुरुङ . . .. [illegible] 9817485151
२२ गंगा गुरुङ . . . [illegible] 9826650119
२३ पुनम गुरुङ पुनम 9814066474
२४ बाल कुमारी राना . . [illegible] 9807511073
२५. रघु खकुरेल Sociologist/BM — [illegible]
२६. योगेश आचार्य वातावरण विद, BW [illegible]

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु:

१. यस तिलोत्तमा नगरपालिकाको वड नं. १० मा पर्ने निर्माणधिन मंगलापुर - कान्चि बजार सडक खण्डको क्षेत्राधिकार १३ मिटर कायम गर्ने भनि तिलोत्तमा नगरपालिकाले मिति २०७६ साल बैशाख ३० गतेको स्थानीय राजपत्रमा सुचना प्रकाशित गरि उक्त सडक खण्डको क्षेत्राधिकार १३ कायम गरेको थियो । हाल उक्त सडक खण्डको बेवरा चोक देखि कान्छि बजारसम्मको सडक चौडाइ (Road with) अहिले खुल्ला भै सार्वजनिक प्रयोगमा रहेको सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो । साथै प्रस्तावित सडक निर्माण गर्दा सडक किनारमा रहेको आफ्ना संरचनाहरु स्वइच्छाले आफुखुसि हटाउन चाहेमा वा स्तरोन्नति गर्न चाहेमा कुनै बाधा नपर्ने सम्बन्धमा पनि छलफल गरी निर्णय गरियो ।

२. गुनासो निवाण संयन्त्र (GRM) र गुनासो निवारण समिति (GRC) को गठन प्रकृया, उक्त संयन्त्रमा गुनासो गर्ने तौरतरिका लगायत हाल निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्डको गुनासो सुनुवाई गर्न गठन गरिएको आयोजना स्तरीय (प्रथम तह) र नगरपालिका स्तरीय (द्वितिय तह) को गुनासो निवारण समिति (GRC) का सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो ।

३. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय आदिवासी/जनजातिहरुलाई दिनु पर्ने सम्बन्धमा विस्तृत छफल गरियो ।

४. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि खासै समस्या नदेखिए पनि बाहिरी कामदार र स्थानीय समुदाय बिच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्बन्धमा पालना गर्नु पर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो । साथै यस आयोजना क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि घटना घटेमा यस आयोजनासंग सम्बन्धित लैङ्गिक हिंसा तथा यौन दुर्व्यवहार सम्बन्धि गुनासोहरुलाई अभिलेखिकरण तथा सहजिकरण गर्नका लागि तोकिएको व्यक्ति/Anti-Harassment Cell Focal Person तथा तिलोत्तमा नगरपालिकाको महिला बालबालिका तथा समाजिक कल्याण शाखाकी प्रमुख श्री सम्झना भण्डारीसंग लैङ्गिक हिंसा तथा यौन दुर्व्यवहार पीडितले नगरपालिकासम्म जानु भन्दा आयोजना स्तरीय गुनासो सुनुवाई समितिमा नै Anti-Harassment Cell Focal Person भए भनै सहज हुने सम्बन्धमा विस्तृत छलफल गरी निर्णय गरियो ।

५. सडक निर्माणका कममा प्रस्तावित सडक खण्डका किनारमा रहेको सार्वजनिजक प्रतिक्षालय मन्दिर एवं धार्मिक सम्पदाको संरक्षण गर्ने । यदि यसस्ता धार्मिक संरचनाहरुका कारण सडक निर्माणमा बाधा पुग्ने भएमा अन्यत्र स्थानान्तरण गरी सडक निर्माण गर्न समुदाय सबै मन्जुर रहेको विषयमा छलपफल गरियो ।

६. यस निर्माणाधिन मंगलापुर - कान्छि बजार सडक खण्डको बेवरा चोक देखि कान्चि बजारसम्मको सडकको दाँया बाँया आदिवासी/जनजातिको घरधुरी संख्या लगभग ५०३ रहेको र महिला संख्या लगभग २३८ र पुरुषको संख्या २९८ रहेको सम्बन्धमा छलफल गरि तथ्याङ्क संकलन गरियो ।

७. वातावरणीय तथा सामाजिक व्यवस्थापन योजना बारे यस नगरपालिकाको कार्यालय, नगरपालिकाको वेव साइट वा वडा कार्यलयमा सम्पर्क गरि जानकारी लिन सकिने र ESMF मा उल्लेखित प्रावधन लगायत सडक निर्माणका कममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

Meeting Minutes of Consultation with Women

महिलाहरुसंग भएको छलफल

आज मिति २०८१/०१/०५ गतेका दिन यस तिलोत्तमा नगरपालिकाको नगर प्रमुखज्यूको अध्यक्षतामा तिलोत्तमा नगरपालिकाको वडा नं. १० स्थित कान्छी बजारमा भएको छलफल तथा अन्तरक्रिया कार्यक्रममा नेपाल शहरी शासकिय तथा पूर्वाधार आयोजना अन्तर्गत रुपन्देही जिल्लाको तिलोत्तमा नगरपालिकाको वडा नं. ७, ९ र १० मा पर्ने निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्ड अर्न्तगत वडा नं. १० मा पर्ने बेवरा चोक देखि कान्छि बजारसम्मको सडक तरोन्नति गर्ने कार्यको विस्तृत परियोजना प्रतिवेदन र वातावरणीय एवं सामाजिक व्यवस्थापन योजना (ESMP) तयारीका कममा प्राविधिक, वातावरणीय र सामाजिक एवं आर्थिक वस्तु स्थिति माथिको मूल्याङ्कन, प्रभाव र सम्भाव्य उपायहरुका बारेमा B.N. Consultancy Pvt. Ltd. का DSC Team, नगरपालिका र स्थानिय महिलाहरुका बिच विस्तृत छलफल तथा अन्तरकिया गर्ने कार्य सम्पन्न भयो । साथै छलफलका कममा वातावरणीय तथा सामाजिक व्यवस्थापन ढाँचा (ESMF) को परिधि भित्र रहि तपशिलमा उल्लेखित बुँदाहरु माथि उठेका प्रश्नहरुको समाधानका बारेमा विस्तृत जनकारी दिएको सम्वन्धमा छलफल भएको निर्णय गरियो ।

क्र.सं.	नाम	पद/पेशा	दस्तखत	संपर्क नं.
१.	रामकृष्ण खाणा	नगर प्रमुख, ति.न.पा.	[illegible]	
२.	दिल कुमारी गुरुङ	दुर्गा झाँकी कान्छी बजार	[illegible]	9817436377
३.	उषा पन्थी (सुनार)	" "	उषा	9811564206
४.	सुस्मिता राना	" "	सुस्मिता	9817528882
५.	माया गुरुङ	" "	माया	9800702168
६.	सिता थापा	" "	सिता	9846067123
७.	सुनिता खत्री	" "	सुनिता	९८४४८७१९६
८.	दिलमाया खवास	" "	दिल	
९.	लाल सिरी गुरुङ	" "	[illegible]	9846182176
१०.	चन्द्रिका नेपाली	" "	चन्द्रिका	9817495446
११.	देवकी चाद	" "	[illegible]	9867383716
१२.	सिता न्यौपाने	" "	[illegible]	9800742919
१३.	बिमला राठौ	" "	[illegible]	9817595754
१४.	अस्मीता नेपाली	" "	[illegible]	9828777295
१५.	इन्द्र कुमारी राठौ	" "	[illegible]	9815595564
१६.	लुदा देवी थापा	" "	[illegible]	9809849260
१७.	साबित्रा गुरुङ	" "	[illegible]	9817485151
१८.	गंगा गुरुङ	" "	[illegible]	9826659116
१९.	पुनम गुरुङ	" "	पुनम	9814066474

		दस्तखत	फोन नं.
	दुर्गा मन्दिर कान्छिबजार		
२० बाल कुमारी राना	〃 〃		9807511073
२१ लक्ष्मी पोखरेल	〃 〃		
२२ बविता भट्टराई	〃 〃		9847504394
२३ रिमा पुरी	〃 〃		
२४ पवित्रा कुमारी चौधरी	〃 〃		9825403469

२५. सुषमा भण्डारी - Anti Harassement cell.

२६. रघु खकुरेल - Sociologist/BN.

26. योगेश शाक्य वातावरण विद् /BW Consultancy

आज माथि उल्लेखित महानुभावहरुको उपस्थितिमा भएको छलफलका बुँदा एवं निर्णयहरु:

१. यस तिलोत्तमा नगरपालिकाको वड नं. १० मा पर्ने निर्माणधिन मंगलापुर - कान्चि बजार सडक खण्डको क्षेत्राधिकार १३ मिटर कायम गर्ने भनि तिलोत्तमा नगरपालिकाले मिति २०७६ साल बैशाख ३० गतेको स्थानीय राजपत्रमा सुचना प्रकाशित गरि उक्त सडक खण्डको क्षेत्राधिकार १३ कायम गरेको थियो । हाल उक्त सडक खण्डको बेवरा चोक देखि कान्छि बजारसम्मको सडक चौडाइ (Road with) अहिले खुल्ला भै सार्वजनिक प्रयोगमा रहेको सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो ।

२. गुनासो निवाण संयन्त्र (GRM) र गुनासो निवारण समिति (GRC) को गठन प्रकृया, उक्त संयन्त्रमा गुनासो गर्ने तौरतरिका लगायत हाल निर्माणधिन मंगलापुर - कान्छि बजार सडक खण्डको गुनासो सुनुवाई गर्न गठन गरिएको आयोजना स्तरीय (प्रथम तह) र नगरपालिका स्तरीय (द्वितिय तह) को गुनासो निवारण समिति (GRC) का सम्बन्धमा बिस्तृत छलफल गरि निर्णय गरियो ।

३. सडक निर्माण गर्दा रोजगारीको पहिलो प्राथमिकता स्थानिय महिलाहरुलाई दिनु पर्ने सम्बन्धमा विस्तृत छफल गरियो ।

४. यस प्रस्तावित सडक खण्ड क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि खासै समस्या नदेखिए पनि बाहिरी कामदार र स्थानीय समुदाय बिच हुन सक्ने झैझगडा वा अवान्छित गतिविधिका सम्बन्धमा पालना गर्नु पर्ने आचार संहिताको बारेमा जानकारी दिई विस्तृत छलफल गरियो । साथै यस आयोजना क्षेत्रमा घरेलु हिंसा तथा लैङ्गिक विभेद (GBV, SEA/SH) सम्बन्धि घटना घटेमा यस आयोजनासंग सम्बन्धित लैङ्गिक हिंसा तथा यौन दुर्व्यवहार सम्बन्धि गुनासोहरुलाई अभिलेखिकरण तथा सहजिकरण गर्नका लागि तोकिएको व्यक्ति/Anti-Harassment Cell Focal Person तथा तिलोत्तमा नगरपालिकाको महिला बालबालिका तथा समाजिक कल्याण शाखाकी प्रमुख श्री सम्झना भण्डारीसंग लैङ्गिक हिंसा तथा यौन दुर्व्यवहार पीडितले नगरपालिकासम्म जानु भन्दा आयोजना स्तरीय गुनासो सुनुवाई समितिमा नै Anti-Harassment Cell Focal Person भए झनै सहज हुने सम्बन्धमा बिस्तृत छलफल गरी निर्णय गरियो ।

५. सडक निर्माणका क्रममा प्रस्तावित सडक खण्डका किनारमा रहेको सार्वजनिजक प्रतिक्षालय मन्दिर एवं धार्मिक सम्पदाको संरक्षण गर्ने । साथै सडक निर्माण गदा कसैको घर पर्खाल आदि संरचनाहरु परेमा उचित क्षतिपूर्ति दिनुपर्ने सम्बन्धमा छलपफल गरियो ।

६. वातावरणीय तथा सामाजिक व्यवस्थापन योजना बारे यस नगरपालिकाको कार्यालय, नगरपालिकाको वेव साइट वा वडा कार्यलयमा सम्पर्क गरि जानकारी लिन सकिने र ESMF मा उल्लेखित प्रावधन लगायत सडक निर्माणका क्रममा आइपर्ने विविध वातावरणीय एवं सामाजिक समस्या र तिनका समाधानका उपायहरु माथि विस्तृत छलफल गरियो ।

Meeting minute with School Management Committee

आज मिति २०८१ वैशाख ४ गतेका दिन यस जनहित मा.वि. का अध्यक्ष श्री मुनेश्वर पोखरेलज्यूको अध्यक्षतामा निम्न उल्लेखित व्यक्तिहरूको उपस्थितिमा भएको बैठक तपशिलमा उल्लेखित बुँदाहरू उपर छलफल गरि सर्वसम्मतिले निर्णय पारित गरियो।

विषय:

१. बाटोका लागि जग्गा उपलब्ध गराउने सम्बन्धमा ।
२. विविध ।

उपस्थिति:

१. श्री मुनेश्वर पोखरेल - वि.व्य.स. अध्यक्ष - [signature]
२. श्री राम नारायण चौधरी - प्र.अ. - [signature]
३. श्री गोपाल प्रसाद घिमिरे - वडा नं. १०, अध्यक्ष - [signature]
४. श्री हिम बहादुर डे.सी. सहायक प्र.अ. [signature]
५. श्री पवित्रा पोखरेल (घिमिरे) वि.व्य.स. सदस्य [signature]
६. उषा पन्थी सुनार वि.व्या.स. सदस्या उषा
७. कमलकुमारी अभिभावक [illegible] [signature]
८. चन्द्रकला नेपाली वडा सदस्य चन्द्रकला
९. रघु खकुरेल Sociologist/BN [signature]
१०. योगेश शाक्य, Environment Expert/BN [signature]
११. नारायण आचार्य Manager, Manglapur [signature]

निर्णयहरू:

१. ~~निर्णय नं.~~ प्रस्ताव नं. १ उपर छलफल गर्दा वडा नं. १० मा मंगलापुर कान्छि बजार सडक खण्ड अन्तर्गत पर्ने बेवरा चोक देखि कान्छि बजारसम्मको सडक खण्डमा यस जनहित मा.वि. को जग्गा बाटोमा पर्ने भएकोले उक्त सडक निर्माणमा आवश्यक पर्ने जग्गा उपलब्ध गराउने यस जनहित व्यवस्थापन समिति सहमत रहेको सम्बन्धमा छलफल गरि निर्णय गरियो।

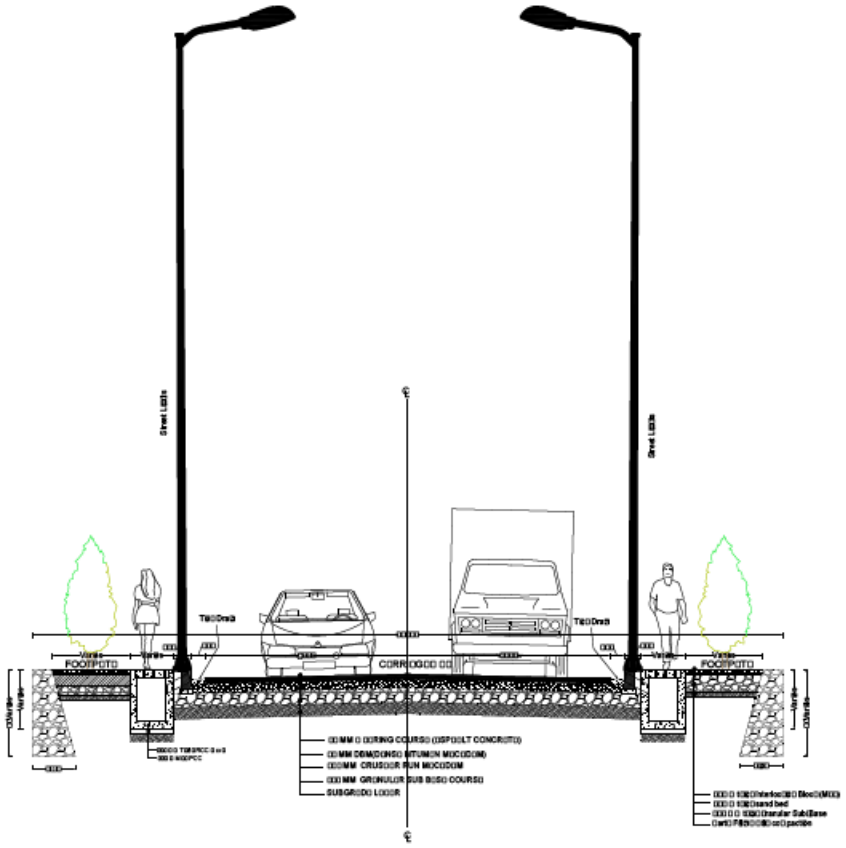
२. प्रस्ताव नं. २ उपर छलफल गर्दा विद्यालय व्यवस्थापन समिति बाटो निर्माण गर्ने कार्यमा आवश्यक सहजिकरण गर्न सहमत रहेको सम्बन्धमा छलफल गरि निर्णय गरियो। [signature] [signature]

प्रस्ताव नं. २ उपर छलफल गर्दा विद्यालय परिसरमा बाटोको किनारमा रहेको विद्यालयको रुखहरु विद्यालय आफैंले हटाउने सम्बन्धमा छलफल गरि निर्णय गरियो। साथै प्रमुख [illegible] विद्यालय व्यवस्थापन समिति छिटो बाटो निर्माण हुन भनी रहेकोले आफ्नो जग्गामा रहेका रुखहरु निजहरु आफैंले हटाउने विषय विषयमा छलफल गरी निर्णय गरियो

प्रस्ताव नं. २ उपर छलफल गर्दा विद्यालय परिसरबाट रुख काटिएको भएको बाटो विद्यालय परिसरमा सफाई/शहर र हरियाली प्रवर्द्धन गर्ने कार्यमा पनि गर्न सकिन्छ भनी विषयमा छलफल गरियो। विद्यालय परिसरलाई सफा र हरियाली बनाउने सम्बन्धमा छलफल गरी निर्णय गरियो।

प्रस्ताव नं. २ उपर छलफल गर्दा DSC Team ले विद्यालय व्यवस्थापन समितिलाई ESMF मा रहेका प्रावधान र GRC का बारेमा जानकारि दिएको विषयमा छलफल गरि निर्णय गरियो।

Annex 3: Proposed Typical Cross Sections



Typical Cross section

Annex 4: GoN Permissible Environmental limits/standards

(A) Standards for Inland Surface waters from combined wastewater treatment

S. N.	**Characteristics**	**Tolerance Limits**
1.	Total Suspended solids, mg/l, *max*	50
2.	pH	5.5 to 9.0
3.	Biochemical oxygen demand (BOD) for 5 days at 20 degree C, mg/l, *max*	50
4.	Oils and grease, mg/l, *max*	10
5.	Phenolic compounds, mg/l, *max*	1
6.	Mercury (as Hg), mg/l, *max*	0.01
7.	Zinc (as Zn), mg/l, *max*	5
8.	Ammonical nitrogen, mg/l, *max*	50
9.	Chemical Oxygen Demand, mg/l, *max*	250

(B) National Drinking Water Quality Standard, 2079 BS

B-1: Mandatory Parameters to be tested

SN	Parameters	Unit	Limits	Remarks
	Physical			
1	Turbidity	NTU	5	
2	pH		6.5 - 8.5	
3	Colour	TCU	5	
4	Taste & odour		Unobjectionable	
5	Electrical Conductivity	µS/cm	1500	
	Chemical			
6	Iron	mg/L	0.3 (3)	
7	Manganese	mg/L	0.20	
8	Arsenic	mg/L	0.05	
9	Fluoride	mg/L	0.50 - 1.50 (Min. - Max.)	
10	Ammonia	mg/L	1.50	
11	Chloride	mg/L	250	
12	Sulphate	mg/L	250	
13	Nitrate	mg/L	50	
14	Copper	mg/L	1	
15	Zinc	mg/L	3	

16	Aluminum	mg/L	0.20	
17	Total Hardness	mg/L	500	
18	Residual Chlorine	mg/L	0.10 - 0.50 (Min. - Max.)	
	Microbiological			
19	E-Coli	(CFU/10 ml)	0	

B-2: Additional Parameters to be tested based on Risk and Requirement

SN	Parameters	Unit	Limits	Remarks
	Physical			
1	Total Dissolved Solids	mg/L	1000	
	Chemical			
2	Calcium	mg/L	200	
3	Lead	mg/L	0.01	
4	Cadmium	mg/L	0.003	
5	Chromium	mg/L	0.05	
6	Cyanide	mg/L	0.07	
7	Mercury	mg/L	0.001	
8	Nitrites	mg/L	3	
	Microbiological			
1	Total Coliform	(CFU/10 ml)	0 (In 95% samples)	

(C) National Ambient Air Quality Standard, 2069 BS

Parameters	Units	Averaging Time	Concentration in Ambient Air, Maximum
TSP	$\mu g/m^3$	24 - hours	230
PM_{10}	$\mu g/m^3$	24 - hours	120
$PM_{2.5}$	$\mu g/m^3$	24 - hours	40
Sulfur Dioxide	$\mu g/m^3$	Annual	50
		24-hours	70
Nitrogen Dioxide	$\mu g/m^3$	Annual	40
		24-hours	80
Carbon Monoxide	$\mu g/m^3$	8hours	10000
Lead	$\mu g/m^3$	Annual	0.5
Benzene	$\mu g/m^3$	Annual	5
Ozone	$\mu g/m^3$	8-hours	157

Ref.: Section 62, Number 19, Nepal Gazette, Part 5, 2069/04/29, Notice 2

(D) National Sound Pressure Level, 2069

Microenvironment	Sound Pressure Level, L_{eq}dB(A)	
	Daytime	Nighttime
Industrial Area	75	70
Commercial Area	65	55
Rural Settlement Area	45	40
Urban Settlement Area	55	50
Mixed Settlement Area	63	55
Pristine Area	50	40

Ref.: Section 62, Number 30, Nepal Gazette Part 5, 2069/7/13

(E) Diesel Powered Generator Emission Limits (g/kWh), 2069

Category, (kW)	CO	HC	NOx	PM
kW< 8	8	1.3	9.2	1
8 = kW < 19	6.6	1.3	9.2	0.85
19 = kW < 37	6.5	1.3	9.2	0.85
37 = kW < 75	6.5	1.3	9.2	0.85
75 = kW < 130	5	1.3	9.2	0.7
130 = kW < 560	5	1.3	9.2	0.54

Ref.: Section 62, Number 30, Nepal Gazette Part 5, 2069/7/13

The minimum height of the chimney should be maintained not less than 11m for the industrial boiler utilizing solid or liquid fuel.

Annex 5: Water Quality Report

Drinking Water Quality Test Report (WN 10)

Nepal Environmental & Scientific Services (P.) Ltd.
G.P.O. Box 7301, Thapathali, Kathmandu, Nepal
Phone: +977-1-4244980, 4241001, Fax No.: +977-1-4226028,
Email: ness@mos.com.np, Website: www.nesspltd.com

NESS/Lab, M-03/QSR2.3

QSM Test Report / Certificate

NS Accreditation No. Pra. 01/053-54

Entry No. : NCL - 24(W) (1) - 07 - 2021
Date Received : 25 - 07 - 2021
Sample : Boring Water
Date Completed : 13 - 08 - 2021
Client : Mangalapur- Kanchibazar Road Project
Sampling Date : 24 - 07 - 2021
Sampled By : Dwarika Adhikari (NESS)
Location : Tilottama-10, Sagrahawa
Coordinates : 27°35'00"N; 85°32'18"E
Altitude : 120m

S. N.	Parameters	Test Methods	Observed Values	NDWQS, Nepal
1.	pH at 22 °C	Electromeric, 4500 - H^+ B.; APHA	7.6	6.5 - 8.5
2.	Electrical Conductivity, (µS/cm)	Conductivity Meter, 2510 B, APHA	386	1500
3.	Turbidity, (NTU)	Nephelometric, 2130 B, APHA	4	5
4.	Total Hardness as $CaCO_3$, (mg/L)	EDTA Titrimetric, 2340 C, APHA	200	500
5.	Total Alkalinity as $CaCO_3$, (mg/L)	Titrimetric, 2320 B, APHA	237	-
6.	Chloride, (mg/L)	Argentometric Titration, 4500 - Cl^- B, APHA	1.93	250
7.	Ammonia, (mg/L)	Direct Nesslerization, 4500 - NH_3 C APHA	<0.05	1.5
8.	Nitrate, (mg/L)	UV Spectrophotometric Screening, 4500 - NO_3^- B, APHA	1.99	50
9.	Nitrite, (mg/L)	NEDA, Colorimetric, 4500 - NO_2^- B, APHA	N.D.(<0.02)	-
10	Calcium, (mg/L)	EDTA Titrimetric, 3500 - Ca B & 3500 - Mg B APHA	47.3	200
11	Magnesium, (mg/L)		19.9	-
12	Iron, (mg/L)	Direct Air - Acetylene AAS, 3111 B, APHA	0.23	0.3
13	Manganese, (mg/L)		<0.02	0.2
14	Arsenic, (µg/L)	SDDC, 3500 – As, C APHA	N.D. (<0.01)	0.05

N.D.: Not Detected

Note:
NDWQS: National Drinking Water Quality Standard - 2063; AAS: Atomic Absorption Spectrophotometer; UV: Ultraviolet; EDTA: Ethyelenediaminetetraacetic acid; NTU: Nephelometric turbidity unit; NEDA: N-1-Naphthyleethylenediamine dihydrochloride; APHA: American Public Health Association.

Remarks: All observed values complied the prescribed NDWQS.

(Analyzed By) (Checked By) (Authorized Signature)

Note:
1. This report/certificate is in reference to Laboratory Quality System Manual, QSM (2021).
2. The result listed refer only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
3. Liability of our institute is limited to the invoiced test parameters & amount only.
4. Samples will be destroyed after one month from the date of issue of test certificate unless otherwise specified.
5. This report should not be reproduced wholly / partially for any advertising media without our permission.
6. The clients are requested to take back their hazardous samples along with the report/certificate.

Annex 6: List of Trees to be cut and Compensatory Plantation Plan

Trees to be cut

SN	Trees	Number	Chainage (km)	Remarks
1	Neem *(Melia azadirach)*	1	5+260	Left side
2	Kaner *(Nerium oleander)*	1	5+380	Left side
3	*Amala (Phyllanthus emblica)*	1	5+480	Right side
4	Bakaino (*Melia persica)*	3	5+470 to 5+480	Left side
5	Kadam (*Anthocephalus chinensis)*	1	6+435	Left side
6	Bakaino (*Melia persica)*	1	6+445	Right side
7	Neem *(Melia azadirach)*	1	6+530	Left side
8	Bakaino (*Melia persica)*	1	6+650	Right side
9	Bakaino (*Melia persica)*	1	6+660	Left side
10	Kalki (*Callistemon citrinus*)	1	6+775	Right side
11	Bakaino (*Melia persica)*	1	6+798	Right side
12	Bakaino (*Melia persica)*	1	6+815	Left side
13	Sissau (*Dalbergia sissoo*)	1	6+820	Left side
14	Neem *(Melia azadirach)*	1	6+835	Left side
	Total	**16**		

Compensatory Plantation Plan

SN	Activities and items	Description	Remarks
1	Number of trees to be planted under compensatory plantation	160 trees to be planted; Proposed trees like Bakaino, Sissau and Neem trees	@10 trees per tree cut
2	Greenery promotion works	100 trees to be planted as greenery promotion works	Greenery promotion
3	Time of plantation	During June - July - August time period	Year 1 and Year 2
4	Area for plantation	Open space / public land at public land within Shree Janaheet Secondary School and Mainahawa areas, and along available greenery belt along the road alignment	184 trees can be planted along road sides, and remaining 76 trees can be planted at public open spaces
5	Cost of plantation works	NPR 385,000	@around Rs 1500 per tree including seedling, bed-preparation, transportation and care taking of 12 months

Annex 7: List of Zebra Crossings and Ramps

List of Proposed Zebra Crossings Locations

SN	Proposed Chainage (km)	SN	Proposed Chainage (km)
1	0+085	22	3+300
2	0+180	23	3+405
3	0+270	24	3+485
4	0+340	25	3+660
5	0+420	26	3+870
6	0+740	27	3+955
7	0+825	28	4+120
8	1+010	29	4+310
9	1+065	30	4+415
10	1+560	31	4+515
11	1+700	32	5+000
12	1+855	33	5+245
13	2+070	34	5+370
14	2+150	35	5+565
15	2+290	36	6+455
16	2+355	37	6+720
17	2+610		
18	2+900		
19	2+955		
20	3+110		
21	3+195		

Annex 8: Code of Conduct (CoC) on GBV

Reference Code of Conduct (CoC) on GBV for the Project

नेपाल शहरी शासकीय तथा पुर्वाधार आयोजना

कार्य स्थलमा हुने यौनजन्य तथा महिला हिंसा सम्बन्धी आचार सहिता

व्याक्तिगत आचार सहिता

म, ...यो आचार सहिता पालना गर्नु मेरो दाहित्व हो भनी स्वीकार गर्दछु ।म कुनै पनि यौनजन्य तथा महिला हिसा जस्ता कार्यमा सँलग्न हुने छैन । परियोजना को काम को शिलसिलामा यो आचार सहिता पालना गर्न सहमत छु ।

१. म जातजाति धर्म, भाषा, लिङ्ग, उमेर, राजनितीक वा सामाजिक हैसियत, भौगोलिकता, पहुच, वैवाहिक स्थीती वा अन्य कुनै पनि आधारमा भेदभाव नगरी सवैलाई सम्मानजनक र समान रुपमा व्यवहार गर्नेछु ।

२. सामाजिक सन्जालको प्रयोग गरी अश्लील शब्द, दृष्य सामाग्री वा कार्यलय समय अघिपछी वार्तालाप मार्फत सहकर्मि/कामदार लाई यौन दुर्व्याहार गर्ने छैन ।

३. कार्यस्थलमा सिट्टी बजाउने, चुम्बन गर्ने ,व्यार्त्तिगत उपहार दिने आदि जस्ता कार्य गरी कर्मचारी, सहकर्मि/कामदार लाई यौन दुर्व्याहार गर्ने छैन ।

४. कुनै पनि प्रलोभन/ धम्की देखाई (जस्तै पदोन्नती लोभ देखाएर,जागीर नदिने धम्की दिएर शोषण गरेर आदि) यौन दुर्व्याहार पक्षमा सलग्न हुने छैन

५. कार्य समयावधि भित्र कुनैपनि मादिराजन्य तथा लागुपदार्थको सेवन गर्ने छैन ।

६. परियोजका सरोकारवाला वा वरपरका समुदायका सदस्यहरुलाई कुनैपनि म लैङ्गिक हिसा तथा यौनजन्य दुर्व्याहार गर्ने छैन ।

७. कुनै पनि कर्मचारी/श्रमिक विरुद्व हिँसा गरिएको दोषी ठहरिएमा प्रचलित सघिय, प्रादेशिक, स्थानीय सरकार वर्ल्ड बैक को कानुन , निती नियम अनुसार सजाय/ दण्डित जरिवाना तिर्न तयार हुनेछु ।

८. कार्य गर्ने शिलशिलामा सम्मानजनक निर्देशनहरुको पालना गर्दछु (वातावरणीय + सामाजिक)

९. मेरो जिम्मेवारी कुशलता र लगनशीलता पुर्वक पुरा गर्नेछु ।

१०. सम्र्बाधित कार्यलय /कम्पनीले सन्चालन गरेको विभीन्न प्रशिक्षण कार्यक्रममा सक्रिय रुपमा भाग लिनेछु ।

११. परियोजनाका प्रत्यक्ष लाभदायक सदस्य/समुदायमा यौन दुर्व्याहार/शोषण गर्ने छैन ।

१२. विश्वासनीयता नैतिक उल्लघनको रिपोर्ट गरेमा कुनै कामदार विरुद्व बदला लिने छैन ।

१३. कार्य स्थलमा लैङ्गिक सम्वेदनशिल भाषाको प्रयोग गर्दछु

१४. कार्यस्थलमा महिला हिसा तथा यौनजन्य क्रियाकलाप लाई प्रोत्साहन गर्ने खालका गतिविधी गर्न दिने छैन ।

१५. कार्यस्थलमा महिला तथा यौन हिसा गतिविधीहरुलाई प्रोत्साहन गर्ने छैन ।

१६. १८ वर्षभन्दा मुनिका बालिकाहरुमा कुनै डिजीटल मिडीया मार्फत वा कुनै माध्यमबाट /स्वीकृती लिई वा नलिई यौनजन्य क्रियाकलापमा सहभागी हुनेछैन, यदि नाबालिका स्वीकृती लिई यौनजन्य क्रियाकलापमा गरेमा क्षमा हुदैन ।

१७. परियोजना कार्यन्वयन को बेलामा यौनजन्य दुर्व्याहार /यौन शोषण भएमा वा आचार सहिता उल्लघन गरेमा वडा/ नगरपालिका स्तरमा रहेको गुनासो सुनवाई सयन्त्रमा तुरुन्त निवेदन/जानकारी दिनेछु ।

१८. कार्यस्थलमा कसैले यौनजन्य दुर्व्याहार सम्बन्धी शख्कापद व्याबहार गरेमा वा शख्कापद कार्य गरेमा तुरुन्त टोली प्रमुख /प्रबन्धकलाई जानकारी/निवेदन दिनेछु ।

माथि उल्लेखित आचार सहिता राम्ररी पढे र बुझेको छु र कार्यस्थलमा कडाईका साथ पालना गर्दछु भनी हस्ताक्षर गर्दछु ।

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व्यवस्थापक/टोली प्रमुख कर्मचारी/कामदार

Annex 9: Photographs

Photo 1: Mayor addressing locals in public consultation held on March 2024

Photo 2: Deputy Mayor addressing locals in public consultation held on March 2024

Photo 3: A local participating in public consultation held on March 2024

Photo 4: A local participating in public consultation held on March 2024

Photo 5: Separate consultation with Indigenous/Jananati in the presence of Mayor and Deputy Mayor held on March 2024

Photo 6: A Indigenous/Janajati people participating consultation meeting held on March 2024

Photo 7: Separate consultation meeting with women in presence of Mayor and Deputy Mayor held on March 2024

Photo 8: A women participating in consultation meeting held on March 2024

Photo 9: Consultation with locals at Kanchhi Bazar, March 2024

Photo 10: Consultation with locals at Mainahawa, March 2024

Photo 11: A local participating in public consultation held during April 2024

Photo 12: Public consultation in presence of Ward Chairpersons and the Mayor, April 2024

Photo 13: Mayor of Tilottama Municipality addressing the Public Consultation held during April 2024

Photo 14: Meeting with Janajatis of the project area, and interaction by a local during the meeing in presence of Mayour, April 2024

Photo 15: Meeting with women of the project area in presence of Mayor
April 2024

Photo 16: Interaction with SMC of Shree Janaheet S School

Photo 17: Ttree to be cut along road alignment, WN 10

Photo 18: Proposed Campsite (Kanchhi bazar, WN 10)

Photo 19: Proposed Campsite (Unused land within Shree Janahit S. School, WN 10)