



प्रदेश सरकार
भौतिक पूर्वाधार विकास मन्त्रालय

बागमती प्रदेश



हेटौंडा, मकवानपुर, नेपाल

प.सं.: २०७८/७९

च.नं.: ६७४.....

मिति: २०७८/०७/२९

विषय: सडक तथा सडकपुलको संक्षिप्त वातावरणीय अध्ययन (BES) को परामर्शसेवा खरिदको नर्मस् स्वीकृति सम्बन्धमा।

श्री यातायात पूर्वाधार निर्देशनालय,
हेटौंडा, मकवानपुर।

श्री पूर्वाधार विकास कार्यालय,
सवै, बागमती प्रदेश।

श्री प्रादेशिक डिभिजन सडक कार्यालय,
सिन्धुली र धादिङ्ग।

प्रस्तुत विषयमा बागमती प्रदेश वातावरण संरक्षण ऐन, २०७७ को अधिनमा रहि नागरिकको स्वच्छ र स्वस्थ वातावरणमा बाँच्न पाउने अधिकारको संरक्षण गर्न, वातावरण र विकासबीच समुचित सन्तुलन कायम गरी दीगो विकास गर्न, वातावरण र जैविक विविधतामा पर्ने प्रतिकूल वातावरणीय प्रभाव न्यूनिकरण गर्न र प्राकृतिक स्रोतको समुचित उपयोग र व्यवस्थापन गर्न सोही ऐनको अनुसूची-१ मा उल्लेख भएका आयोजनाहरूको कार्यान्वयन पूर्व संक्षिप्त वातावरणीय अध्ययन गर्नु पर्ने व्यवस्था रहे बमोजिम यस मन्त्रालयको मिति. २०७८/०७/२९ को निर्णयानुसार (सचिव स्तरीय) सडक तथा सडकपुलको संक्षिप्त वातावरणीय अध्ययन कार्यको परामर्शसेवा खरिदको नर्मस् स्वीकृत गरिएको व्यहोरा निर्णयानुसार अनुरोध छ।

पुण्यराम सुलु


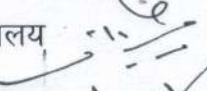
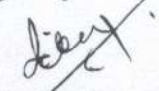


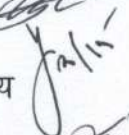
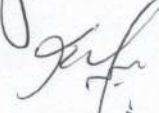
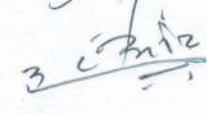
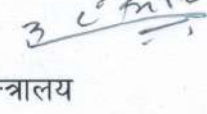
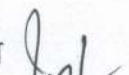
इञ्जिनियर

इ. पुण्यराम सुलु

ने.इ.प.द.नं.-५०९९ सिभिल "क"

आज मिति २०७८।०७।२९ गते सोमबारको दिन भौतिक पूर्वाधार विकास मन्त्रालय, बागमती प्रदेश, हेटौडा, मकवानपुरका श्रीमान् सचिव श्री अशोक कुमार साह ज्यूको अध्यक्षतामा संक्षिप्त वातावरणीय अध्ययनको नर्मस् तयारी सम्बन्धमा निम्न व्यक्तिहरुको उपस्थितिमा देहाय बमोजिमको निर्णय गरियो।

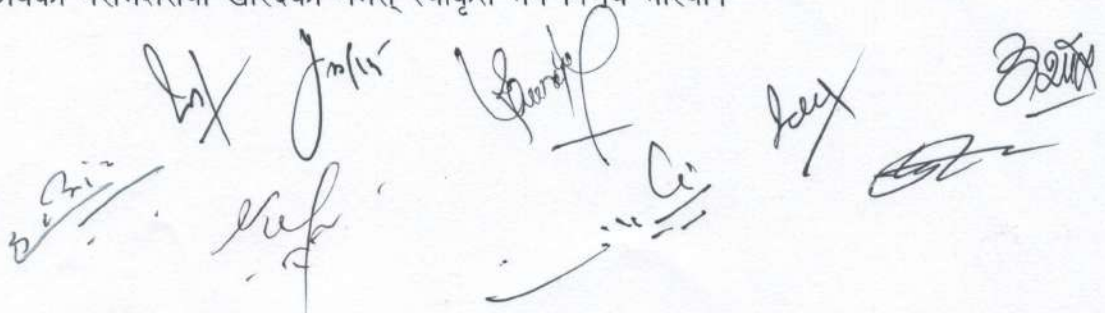
उपस्थिति:

श्री अशोक कुमार साह	सचिव, भौतिक पूर्वाधार विकास मन्त्रालय	
श्री नवीन कुमार सिंह	महाशाखा प्रमुख, भौतिक पूर्वाधार विकास मन्त्रालय	
डा. सहदेव बहादुर भण्डारी	नि.निर्देशक, यातायात पूर्वाधार निर्देशनालय	
श्री सोमराज तिमल्सेना	आयोजना प्रमुख, प्रदेश राजधानी पूर्वाधार विकास विशेष आयोजना	
श्री पुष्कर प्रसाद पोखरेल	सि.डि.ई., यातायात पूर्वाधार निर्देशनालय	
श्री पुण्यराम सुलु	इञ्जिनियर, भौतिक पूर्वाधार विकास मन्त्रालय	
श्री ज्यानेन्द्र प्रसाद पुन	इञ्जिनियर, भौतिक पूर्वाधार विकास मन्त्रालय	
श्री हरि प्रसाद ओझा	इञ्जिनियर, यातायात पूर्वाधार निर्देशनालय	
श्री ध्रुव प्रसाद सापकोटा	लेखा अधिकृत, भौतिक पूर्वाधार विकास मन्त्रालय	
श्री राजन पोखरेल	अधिकृत, भौतिक पूर्वाधार विकास मन्त्रालय	

निर्णय:

निर्णय नं. १

बागमती प्रदेश वातावरण संरक्षण ऐन, २०७७ को अधिनमा रहि नागरिकको स्वच्छ र स्वस्थ वातावरणमा वाँचन पाउने अधिकारको संरक्षण गर्न, वातावरण र विकासबीच समुचित सन्तुलन कायम गरी दीगो विकास गर्न, वातावरण र जैविक विविधतामा पर्ने प्रतिकूल वातावरणीय प्रभाव न्यूनिकरण गर्न र प्राकृतिक स्रोतको समुचित उपयोग र व्यवस्थापन गर्न सोही ऐनको अनुसूची १ मा उल्लेख भएका आयोजनाहरुको कार्यान्वयन पूर्व संक्षिप्त वातावरणीय अध्ययन गर्नु पर्ने व्यवस्था रहे बमोजिम सोही प्रकृतिको अन्य अध्ययन कार्यहरुलाई समेत आधार लिई तपशील बमोजिमको संक्षिप्त वातावरणीय अध्ययन कार्यको परामर्शसेवा खरिदको नर्मस् स्वीकृत गर्ने निर्णय गरियो।





Provincial Government
Ministry of Physical Infrastructure Development
Bagmati Province
Hetauda, Makwanpur, Nepal

**Norms for Rate Analysis of Brief Environmental
Study (BES) of Roads and Bridges**



Kartik, 2078

Brief Environmental Study (BES) of Bridge

1 Manpower

Unit = Nos (for 1 (one) bridge)

	Professional/Supporting Staff	Unit	Desk Study	Travel*	Field Work	Report Preparation	Total
A	Key Staff						
1	Team Leader (Environmentalist/ Forestry Specialist/ Ecologist)	day	1	1	2	4	8
2	Highway/ Transportation Engineer/Bridge Engineer	day	1	1	2	2	6
3	Geologist / Eng. Geologist/ Geo-Technical Engineer	day	1	1	2	2	6
4	Hydrologist	day	1	1	2	2	6
5	Socio-Economist	day	1	1	2	2	6
6	Legal Expert	day				2	2
B	Support Staff						
1	Technical Assistance (Physio-Chemical)	day		1	2	2	5
2	Technical Assistance (Biological)	day		1	2	2	5
3	Technical Assistance (Socio-Economic)	day		1	2	2	5
4	Account Admin Staff	day	1			2	3
5	Computer Operator	day	1			2	3
6	Surveyor	day			2	2	4
7	Support Staff/ Helper	day	1	1	2	4	8

*Adjust travel time in above table as per location of work site as: 1 day for Kathmandu Valley, 2 day with in remaining area of Bagamati Province.

2	Transportation of personal	LS	10 % of cost of manpower required
3	Tools and equipment for data collection	LS	5 % of cost of manpower required
4	Stationary and logistic support	LS	5 % of cost of manpower required

Note:

- Man days for one bridge used same mandays
For more than one bridge in a package : Calculate cost of a bridge and add additional cost after
- applying bridge factors as 60 % of cost within 10 Km distance and 70 % of cost for outside of 10 Km distance for each additional bridge.

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Secretary



Scope of Work Include:

1. Preparation of Site/ Project specific Terms of Reference as per EPA 2076, EPR 2077 and Bagamati Province Environment Protection Act, 2077.
2. Carryout topographical map study, alignment assessment, geological assessment, necessary laboratory testing of proposed bridge site to prepare ToR and BES report, which shall incorporate all the priority issues of work by categorizing them into physical, biological, socio-economic, and cultural aspects of both Beneficial and Adverse types, for both construction, operational and maintenance stages, as per EPA 2076, EPR 2077 and Bagamati Province Environment Protection Act, 2077.
3. Data collection and examination related to:
 - Physical parameters - walkthrough survey, inventory, literature review (including feasibility study and previous works), map study, national and provincial level databases.
 - Biological parameters - identification of species including protected species along the alignment, sampling and estimation on influence area.
 - Socio-economic parameters - Semi-structured interview with key informants, asset survey (Project Affected Families), questionnaire, map interpretation and walkthrough survey.
 - Cultural and Religious parameters - interview, walkthrough survey.
4. Impact identification, Impact prediction, Determination of significant impacts.
5. Preparation of Environmental Management Action Plan.
6. Information on the land ownership within the Right of Way
7. Preparation of Brief Environmental Study (BES) report as per approved Terms of Reference

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Secretary



Brief Environmental Study (BES) of Road

1 Manpower

Unit = Km (for upto 10 Km of Road)

Professional/Supporting		Unit	Desk Study	Travel*	Field Work	Report Preparation	Total
A Key Staff							
1	Team Leader (Environmentalist/ Forestry Specialist/ Ecologist)	day	2	1	2	5	10
2	Highway/ Transportation Engineer/Bridge Engineer	day	1	1	2	2	6
3	Geologist / Eng. Geologist/ Geo-Technical Engineer	day	1	1	2	2	6
4	Hydrologist	day	1	1	2	2	6
5	Socio-Economist	day	1	1	2	2	6
6	Legal Expert	day				2	2
B Support Staff							
1	Technical Assistance (Physio- Chemical)	day		1	2	2	5
2	Technical Assistance (Biological)	day		1	2	2	5
3	Technical Assistance (Socio- Economic)	day		1	2	2	5
4	Account Admin Staff	day	1			2	3
5	Computer Operator	day	1			2	3
6	Surveyor	day			2	2	4
7	Support Staff/ Helper	day	2	1	2	5	10

*Adjust travel time in above table as per location of work site as: 1 day for Kathmandu Valley, 2 day with in remaining area of Bagamati Province.

- 2 Transportation of personal LS 10 % of cost of manpower required
- 3 Tools and equipment for data collection LS 5 % of cost of manpower required
- 4 Stationary and logistic support LS 5 % of cost of manpower required

Secretary

Note:

- a) In case of Inner Terai road determine manpower requirement of field work component as 80 % of above mention value
- b) For other than 10 Km length (L), determine per Km manpower requirement and modify as
- I) If $L < 10$ Km, determine per Km manpower requirement and deduct @ 80 % of md per Km except travel and calculate total cost accordingly after adjustment in (a) above. [for example in case of 6 Km road preparation = 6 with total 14md, for field work $3/10$ md per Km it will be $14 - 4 * 3/10 * 0.8 = 13.04$ md in kathmandu valley]
- II) If $L > 10$ Km, determine per Km manpower requirement and add @ 80 % of md per Km on and calculate total cost accordingly after adjustment in (a) above. [for example in case of 12 Km road , for team leader in above, find manpower for 10 Km desk study = 4, field work = 3, report preparation = 6, total 13 md, $13/10 = 1.3$ md per Km excluding travel for 12 Km it will be $13 + 2 * 13/10 * 0.8 = 15.08$ and travel time 1 day i.e. total in kathmandu will be 16.08 md.]
- for more than one road, in package : consider longest road first and add cost after applying road
- c) factors as 70 % of cost within 10Km distance and 80 % of cost for outside of 10 Km distance for each additional road.

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Secretary

Scope of Work Include:

1. Preparation of Site/ Project specific Terms of Reference as per EPA 2076, EPR 2077 and Bagamati Province Environment Protection Act, 2077.
2. Carryout topographical map study, alignment assessment, geological assessment, necessary laboratory testing of proposed road to prepare ToR and BES report, which shall incorporate all the priority issues of work by categorizing them into physical, biological, socio-economic, and cultural aspects of both Beneficial and Adverse types, for both construction, operational and maintenance stages, as per EPA 2076, EPR 2077 and Bagamati Province Environment Protection Act, 2077.
3. Data collection and examination related to:
 - Physical parameters - walkthrough survey, inventory, literature review (including feasibility study and previous works), map study, national and provincial level databases.
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 - Cultural and Religious parameters - interview, walkthrough survey.
4. Impact identification, Impact prediction, Determination of significant impacts.
5. Preparation of Environmental Management Action Plan.
6. Information on the land ownership within the Right of Way
7. Preparation of Brief Environmental Study (BES) report as per approved Terms of Reference (ToR).

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Secretary