

No. NH-11052/1/86-NHIII/DI

Dated the 3rd June, 1986

To,

Subject: Standardization of formats in respect of sanction letters and technical notes etc. for NH work

It has been observed that in the absence of standard formats many of the important issues are either not covered or left-out from the sanction letters/technical notes in respect of National Highway projects issued to the State Governments. Many a time, technical officers are also required to do more spade work in order to bring out the basic requirements to be included in the sanction letters/technical notes. In order to simplify the whole procedure and bring about more efficiency in the system, efforts have been made to standardize the sanction letter and technical notes to be attached thereto. This would reduce the typing work and ensure that nothing important is left out while according technical approval and financial sanction to NH works. A copy each of the standard forms-of the sanction letter, general instructions and technical notes in respect of Road/Bridge works is attached herewith. The format for technical note is illustrative and may be suitably amplified as per requirement. It is requested that these standard formats may be made use of in future.

2. In addition, information may be supplied to Planning and Monitoring Zones as per the annexures at A&B.

Enclosure to Circular No. NH-11052/1/86-NH III/D/dt. 3.6.86

No.

To

The Secretary to the Govt of

Subject:

(Job No.

Ref:

I am directed to convey the technical approval and financial sanction of the President to the estimate for the work mentioned in the subject heading as per the following details subject to the conditions stipulated in the annexure and the attached technical note:

- | | |
|--|----|
| 1. Amount as indicated in the estimate sent by the State | Rs |
| 2. Amount as modified by the Director General (Road Development) | Rs |
| 3. Amount of technical approval (inclusive of agency charges @ 9%) and | Rs |
| 4. Amount of financial sanction | Rs |

(Rupees only).

This sanction is further subject to the following conditions:

- (i) The work should be completed as targeted and indicated in the enclosed technical note.
- (ii) In accordance with the order contained in this Ministry's Circular letter No. PL-30(6)/80, dated the 19th January, 1980 addressed to the State Public Works Department, if due to the tender action it is necessitated that the revised estimate of the work will have to be sanctioned as the tender cost exceeds the permissible limits immediate action will be taken to get the revised estimate sanctioned;
- (iii) On completion of 50% work, if the appraisal of the project shows that it will necessitate revision of the estimate based upon the physical completion of the project vis-a-vis financial expenditure, immediate action should be taken to submit the revised estimate so as to ensure that the sanctioned revised estimate is available before necessity for incurring expenditure beyond permissible limits arises.

- (iv) The expenditure during the current financial year on this work as also on other sanctioned works should not exceed the allotment placed at the disposal of the State Government during the year.
3. The expenditure is debitable to sub-head AA-Capital Outlay on Roads and Bridge-AAI - National Highways AAI(I) - Major Works - AA.1(I) (I) - Works under Roads Wing subordinate to the Major Head "537" for which the corresponding Demand Number for the current financial year is "....."
4. A copy of the approved estimate is being sent separately to the Chief Engineer
5. This sanction issues with the concurrence of the Finance Division *vide* their U.O. No.....Dated

ANNEXURE

Accompaniment to letter No Dated

General instructions

1. No work beyond the scope of the sanctioned estimate leading either to increase in the scope of work or change in specifications should be undertaken without obtaining prior written approval of the Ministry. In this connection, this Ministry's letter No. RW/NHIII/Coord/32/84 dated 19.5.84 refers.
2. The work may be executed as per Ministry's book on "Specifications for road bridge works (1st revision)" and instructions issued by this Ministry from time to time. Deviation in specifications for any work should be got approved from the Ministry before adopting the same.
3. Provision for quality control at 1% has been allowed. The work is to be carried out in accordance with the "Hand Book of Quality Control for construction of Roads & Runways (1st revision) - IRC:SP:11-1977", observing strict quality control instructions contained in Ministry's letter No. NHIII/P/1/83 dated 19.4.84 and permanent records maintained thereof.
4. Neither the work, nor any item of work shall be split into small parts for awarding the work to a number of contractors. In case any splitting is essential due to the specific prevailing conditions, it should be done only after prior approval of this Ministry. In this regard instructions issued in this Ministry's letter No. NHIII/P/25/84 dated 4.8.84 refers.
5. Central Government machinery if available in the area shall be used in the work as spelt out in this Ministry's letter No. RMP-14(1)/83 dated the 29th October, 1983.
6. Guidelines in respect of pre-qualifications of tenderers for the execution of major road and bridge works on National Highways and under other Centrally-financed schemes laid down in this Ministry's letter No. NHIII/P/4/82 dated 11.7.84 and 5.3.85 shall be followed scrupulously.
7. "Guidelines" regarding adoption of alternative designs/departmental designs for bridge works laid down in this Ministry's circular letter No. RW/NHVI-50(3)/83 dated 15.7.85 shall be followed scrupulously.

Specimen Technical Note to Accompany NH (original) Road Works sanction

TECHNICAL NOTE

•Explanatory note only, it is not to be included in the body of the technical note.

1. Name of work and Job No.

• (State briefly, reach/location, section, NH - but do not mention "*estimate*" as it is not the name of work)
Job No.

2. No. of NH

3. Name of State & District

4. Estimate cost

As, furnished by
the State PWD

As technically
approved by Roads
Wing

Where
applicable

- | | | | |
|----|---|--------------------------------------|------------------------------|
| 5. | Length of road (in km) | • | • |
| 6. | No. of culverts
(Proposed to be improved) | | |
| 7. | Rate/km (Rs. in lakhs) | • | • |
| 8. | Reference
(with which estimate has
been received from
State PWD) | State

CE(NH)

Letter No | (Name of State)

dated |

Up to two decimal
places only

COMMENTS

1. Scope of work
(Under this head brief-particulars of the work being approved shall figure).
2. Provisions in the estimate
(Under this head specific comments on provisions in the estimate, if any, shall be explicitly mentioned under sub-heads. 2.1,2.2..... and so on).
3. Cost of work
The estimate after modifications in light of comments in para 1 & 2 above, works out to Rs.....lakhs• including agency charges @ 9%.
4. Targets for the work
The physical and financial cumulative targets indicated below may be aimed at depending upon the availability of funds.
Financial year Physical progress (%) Financial (Rs in lakhs•)
1)
2)
3)
and so on.
5. **General** observations
 - 5.1 Collection of materials should be so planned that it is commensurate with the physical progress.
 - 5.2 ¹[~~Bitumen used for the work shall be heated in boilers only and not on open fire. Spraying of bitumen wherever necessary should be done only with the mechanical sprayers and premixing of bitumen and stone aggregate should be done only in proper mechanical mixers/bot mix plants~~] [Bitumen used for the work shall be heated in boilers only and not on open fire. Spraying of bitumen wherever necessary should be done only with the appropriate mechanical sprayers. Heating and mixing of stone aggregate with bitumen should be done only in appropriate hot mix plants as prescribed in the specifications].
 - 5.3 Fluent grade lines may be provided in the immediate approaches to the culverts as per Ministry's letter No. NHI-41(18)/70 dated 12.8.1970.
 - 5.4 Details about physical characteristics & other properties of the aggregate and grit proposed to be used in the work have not been furnished. It is presumed that the State PWD has satisfied that only the material conforming to the stipulated requirement of physical and other properties are proposed to be used in the work.
 - 5.5 During the course or execution, the traffic may be regulated in accordance with guidelines laid down *vide* Ministry's letter No. NHIII-33(126)/72 dated 20.3.1973.

This clause will figure in case of those estimate only where it is applicable.

This clause will figure in case of those estimates only where it is applicable.

This clause will figure only when such details are not available in the estimate

This clause will figure in case of those estimates only where it is applicable

This clause will be included only if the requisite information has not been furnished with the estimate

121.1/4

5.6 The time schedule for execution of project reckoned from the date of issue of sanction in the manner enumerated in Ministry's letter No. RW/NHIII/Coord/84 dated 11.10.1984 has not been furnished This may be done.

(Any other general observations, desired to be included, can be added under this head)

No

Dated the

TECHNICAL NOTE

(Sample of original estimates relating to bridges having well foundations).

1. Name of work: Construction/Reconstruction of a bridge across river _____ at km _____ on _____ Section of NH _____
2. State: _____
3. NH No. _____
4. Reference: Letter No. _____ dated _____ from the Chief Engineer, PWD to the Director General (Road Development)
5. Estimated Cost: As proposed by As modified in
(including 9% Agency Charges) the State PWD the Roads Wing
Rs _____ Rs _____

COMMENTS

1. Broad Features

The broad features of the proposed bridge as approved are given below:

Site _____

Span arrangement Design _____
discharge _____

H.F.L _____

Vertical clearance _____
scour depth _____

L.W.L _____

2. General Arrangement

The General Arrangement Drawing enclosed in the body of the estimate is acceptable subject to the following modifications:

- 2.1 For the abutment wells, the external diameter may be modified from _____ to _____ keeping the staining thickness as _____. The foundation level may be modified from RL _____ to RL _____. Sand filling inside the well may be provided up to RL _____
- 2.2 For the pier wells, the external diameter may be modified from _____ to _____ keeping the staining thickness as _____. The foundation level may be modified from RL _____ Sand filling inside the well may be provided up to RL _____
- 2.3 The length of return walls may be modified from _____ to _____

3. Depth of Well Foundations

The depth of well foundations as indicated in para 1 above has been fixed on the basis of the following soil parameters:

- (i) Value of ϕ =
- (ii) Value of C =
- (iii) S.B.C. of soil/rock at the founding level of RL=

However, if during the execution of the work of well foundations, it is found that the properties of the soil actually met with during sinking at or near the proposed founding level are widely varying from the properties given above the designs of well foundations would have to be reviewed. Bottom

plugging of the wells shall not be carried out until and unless the reviewed design has been got approved from the Roads Wing.

4. Design Calculations

Detailed design calculations in support of the sizes of various components of the bridge have not been furnished along with the estimate. The sizes proposed for various structural components of the bridge have been accepted for the purpose of estimate only. However, detailed working drawings based on detailed design calculations for various components of the structure (except the superstructure for which Ministry's standard drawing is proposed to be adopted) should be got approved from the Roads Wing before starting execution of the work.

5. Protective Works

The following modifications may be carried out in the details of the protective works :

6. Estimate

6.1 Provisions

(Here specific comments may be given on those provisions of the estimate which are being modified).

6.2 Rates

(Here specific comments may be given on those rates provided in the estimate which are being modified).

6.3 Miscellaneous

7. Sub-estimate for Approach Roads and Diversion Road

(Here give specific comments leading to modifications in the cos of approach roads and diversion road).

8. Modified Cost

The estimate has been modified in the light of the comments given in paras _____ above and it now amounts to Rs _____ including 9% agency charges.

9. Phasing

Realistic phased programme for the execution of the work may be drawn up after awarding the work to a contractor and a copy of the above mentioned programme may be furnished to the Director General (Road Development) for reference and record. It may, however, be ensured that the work is got completed in all respects by _____

No.

Dated the

TECHNICAL NOTE

(Sample for original estimates relating to bridges having foundations other than well-foundations).

- | | | |
|--|--|---|
| 1. Name of work: | Construction/Reconstruction of a bridge across river _____ at km _____ on _____ Section of NH _____ | |
| 2. State: | _____ | |
| 3. NH No.: | _____ | |
| 4. Reference: | Letter No. _____ dated _____ from the Chief Engineer, PWD _____ to •ho Director General (Road Development) | |
| 5. Estimated Cost:
(including 9% agency charges): | As proposed by
the State PWD
Rs _____ | As modified in
the Roads Wing.
Rs _____ |

COMMENTS

1. Broad Features

The broad features of the proposed bridge as approved are given below:

Site	_____
Span arrangement	_____
Design discharge	_____
H.F.L	_____
Vertical clearance	_____
L.W.L	_____

2. General Arrangements

The General Arrangement Drawing enclosed in the body of the estimate is acceptable subject to the following modifications:

- 2.1 The depth of u/s and d/s curtain walls may be modified from _____ and _____ to _____ and _____ respectively.
- 2.2 The width of pucca flooring on u/s and d/s sides may be modified from _____ and _____ to _____ and _____ respectively.
- 2.3 The width of flexible aprons beyond the curtain walls on the u/s and d/s sides may be modified from _____ and _____ to _____ and _____ respectively. The thickness of the flexible apron may be kept as _____. It may be ensured that the stone boulders used for the apron should not weight less than 40 kgs each.
- 2.4 The length of return wall splayed wing walls may be modified from _____ to _____

3. Safe Bearing Capacity of the Soil

- 3.1 The safe bearing capacity of the soil/rock at the proposed founding level has been taken as _____. However, if during the execution of the work, it is found that the properties of the Soil/rock actually met with at the proposed founding level are widely different from the one assumed earlier the design of foundations would have to be reviewed
- 3.2 The depth of foundations for the piers/abutments below the lowest bed level may be modified from _____ to _____ so as to provide for a minimum embedment of _____ m into the soil/rock strata

4. Design Calculations

Detailed design calculations in support of the proposed sections for the piers abutments wing. walls, superstructures and RCC boxes have not been furnished along with the estimate. The sizes proposed for various structural components of the bridge have been accepted for the purpose of estimate only. However, detailed working drawings based on detailed design calculations for various components of the structure (except the superstructure/RCC boxes for which Ministry's standard drawing is proposed to be adopted) should be got approved from the Roads Wing before starting execution of the work

5. Protective Works

The following modifications may be carried out in the details of the protective works:

6. Estimate

6.1 Provisions

(Here specific comments may be given in those provisions of the estimate which are being modified).

6.2 Rates

(Here specific comments may be given on those rates provided in the estimate which are being modified).

6.3 Miscellaneous

7. Sub-estimate for Approach Roads and Diversion Road

(Here give specific comments leading to modifications in the cost of approach roads and diversion road).

8. Modified Cost

The estimate has been modified in the light of the comments given in Paras _____ above and it now amounts to Rs. _____ including 9% Agency Charges

9. Phasing

Realistic phased programme for the execution of the work may be drawn up after awarding the work to a contractor and a copy of the above-mentioned programme may be furnished to the Director General (Road Development) for reference and record. It may, however, be ensured that the work is got completed in all respects by _____

ANNEXURE A

ADDITIONAL INFORMATION FURNISHED BY THE PROJECT ZONE ALONG WITH THE TECHNICAL NOTE ACCOMPANYING THE SANCTION LETTER FOR THE USE OF PLANNING ZONE

The proposed standard format of the technical note to accompany National Highway (Original) road work's sanction though provides a column for rate per km and also makes it obligatory to clearly spell out the Scope of work, is considered short of vital statistical information which could be used with advantage in Planning Zone besides it being a useful guide to the Project Zone **itself**. For this purpose, it is suggested that at the sanction stage this additional information should be prepared and furnished to the Planning Zone during the endorsement of the sanctioning letter and Technical Note. A comprehensive coverage of the additional information is difficult but illustrative examples are given below to serve as guide for formulating additional information depending on the nature of each individual work which is being sanctioned.

Illustrative Examples:

I. Rate per km for the strengthening course:

- (a) WBM grade _____ thickness _____ in _____ pavement width.
- (b). BSG _____ thickness in _____ pavement width.
- (c) BM _____ thickness in _____ pavement width.

2. Rate per km for the Wearing Course:

- (a) Surface dressing
 - (i) Single Coat in _____ pavement width.
 - (ii) Two Coat in _____ pavement width
- (b) Open graded premix carpet
 - 20 mm thick in _____ pavement width
- (c) Semi dense carpet
 - (i) 20mm thick in _____ pavement width
 - (ii) 25mm thick in _____ pavement width
- (d) Mix seal surfacing
 - (i) Type A in _____ pavement width
 - (ii) Type B in _____ pavement width
- (e) Seal coat
 - (i) Type A in _____ pavement width
 - (ii) Type B in _____ pavement width
- (J) Asphaltic concrete
 - (i) 25mm thick _____ pavement width
 - (ii) 40mm thick in _____ pavement width
 - (iii) 50mm thick in _____ pavement width

3. Rate per km for earthwork in shoulders:
 _____ mm average thickness in _____ wide shoulder
4. Rate per km for widening the pavement
 Widening or pavement in _____ m with average thickness of _____ mm of crust.
5. Rate per km for earthwork in forming road embankment
 - (a) 12m wide formation with average embankment height of _____ m with side slope _____ with borrowed earth from adjacent fields with an average lead of _____ m.
 - (b) 12m wide formation with average embankment height of _____ m with side slope _____ with borrowed earth from adjacent fields with an average lead of _____ m but carted earth from _____ kms distance.
6. And so on.

ANNEXURE B

ADDITIONAL INFORMATION TO BE FURNISHED BY THE PROJECT ZONE ALONG WITH THE TECHNICAL NOTE ACCOMPANYING THE SANCTION LETTER FOR THE USE OF MONITORING ZONE.

As per the existing instructions, Forms I & II of Master Proforma for Fresh Projects are to be filled up by the Project Zone after sanction of the job and furnished to the Monitoring Zone.

Presently this is not being done simultaneously with the sanctioning of the project resulting ultimately in delay or the supply of information as well as double handling of the project file in the Project Zone.

As such it is suggested that the Master Proforma for Fresh Project (Forms I & II) should be filled up simultaneously on sanction of the project by the Project Zone and enclosed with the sanctioning letter and technical note and endorsed to the Monitoring Zone. *(This shall be obligatory on the part of Project Zone).*