

# TAMIL NADU HIGHWAYS MANUAL

PRELIMINARY SPECIFICATIONS  
TO  
STANDARD SPECIFICATIONS TO ROADS AND  
BRIDGES

VOLUME - I PART - I

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## PREFACE

All the civil works in Tamil Nadu viz., Buildings, Dams, Tanks, Roads and Bridges were in the purview of one department viz., Public Works Department. The scope, the method of construction and the maintenance of Roads and Bridges altogether differed very much from other civil works. This gave birth to the formation of Highways and Rural Works Department, exclusively to look after the construction and maintenance of roads and bridges in April 1946.

By this time, not much standards were evolved to provide for an uniform procedure for which construction and maintenance of roads could be under taken on the other hand, there was tremendous growth of Intracity, intercity and interstate traffic all over the country and also in this part of the country, viz., Tamil Nadu demanding more and more roads and bridges. Not only the vehicle population but also the frequency of usage has increased and as a result there is enormous growth of traffic in the existing roads warranting better maintenance of existing roads and its structures. In the absense of evolved specifications in this direction the field Engineers have been adopting the practices prevailing in their region. A number of standing orders and circulars have been issued and circulated by the Chief Engineers whenever they come across good practices in the field and also through new technologies. With all these, the Department was striving hard to standardise the methods of maintenance and construction of roads and bridges, which is a must for better upkeep of the facilities.

For the first time the Highways Manual was brought out during the year 1954. The first Volume of Manual dealing with preliminary specifications of the contract and standard specifications for roads and bridges only was brought out.

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As it was felt also to standardise the investigation, planning, designing and execution procedure of works, a pictorial representation was found essential for this purpose. These details were brought out in Volume III of Highways Manual in the year 1956.

However, this Manual required further elaborations for the practising Engineers. To satisfy this need, Volume II of Highways Manual was brought out in two parts, first part in 1960 and second part in 1961.

With the advancement of time, the specifications and procedures covered in the above manuals have undergone wide revolutions. Amendments passed in the Parliament and State Legislatures have made existing terms of contract inoperative. New technologies have been evolved by the Scientists and Engineers and the old methods dealt in the Manual have become obsolete. A number of plants that have been exclusively for the construction of roads and bridges have given a complete face lift to the existing practices. In addition, the Country has switched over from F.P.S system to M.K.S system. All the above changes have made the existing system obsolete. Hence, it was found essential to revise and rewrite the existing manual adopting current laws, practices and procedures.

The preliminary specification to Standard Specification for Roads and Bridges deals with the general conditions of contract. Since introduction in 1954, only a few amendments have been issued.

In tune with the change of time and to meet the demand to make the conditions more equitable and rational the P.S. to S.S.R.B. has been revised taking into account the provisions of similar inter-national and documents followed in India, deci-

sions of courts in the various cases relating to enforcements of contract conditions and approved by Government.

For easy handling and reference the P.S. to S.S.R.B. is being brought out as a separate volume as Volume I Part I.

However, it is sincerely felt that this is just a beginning and the endeavour should be pursued by continuous monitoring and reviewing for updating these aspects. The manual will reflect the fast changing aspects of Rules and Regulations with the revisions and publication of the future editions.

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## TAMIL NADU HIGHWAYS MANUAL VOLUME - I PART - I

### PS : 101. DEFINITIONS

Whenever in these specifications, or in any estimates, documents or instruments where these specifications govern the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows.

#### 101-01 Government :-

The Government or the "Government of Tamil Nadu" shall mean the Governor of the said State his successors in office and assignees.

#### 101-02 Department :-

The Highways and Rural Works Department of the Government of Tamil Nadu.

#### 101-03 Engineer :-

The Divisional Engineer of the Tamil Nadu Highways and Rural Works Department in charge of the work; or his authorised representative limited by the particular duties entrusted to him.

#### 101-04 Tenderer or Bidder :-

Any person, firm or corporation submitting a tender for the work contemplated acting directly or through a duly authorised representative.

#### 101-05 Contractor :-

The Contractor shall mean the individual or firm or company whether incorporated or not, undertaking the execution of the work under the terms of the contract and shall include legal heirs representatives of such individual or persons composing of such firm or company or successors, administrative executors of such company and permitted assignees of such individual, firm or company.

#### 101-06 Register of Contractors :-

A register containing the names of persons, firms and corporations competent to bid for works in the Department.

**101-07 Plans:-**

The official approved drawings required for the performance of the contract or reproduction of drawings pertaining to the work provided for in the contract.

**101-08 Standard specification :-**

Standard specification for Road and Bridge construction issued by the Tamil Nadu Highways Department and Tamil Nadu Building practice issued by Tamil Nadu Public Works Department. Any Standard Specification shall be designated by Standard specification number followed by abbreviated citation 'SSRB (eg. Article 1003.02 of SSRB). The preliminary specification to the Standard Specification shall be designated by the Article number of preliminary specification followed by abbreviated citation "PS to SSRB eg. Article 106.01 of PS to SSRB.

**101-09 Special Specifications :-**

The body of directions, provisions and requirements contained in Standard specifications together with any special provisions or supplemental specifications and instructions pertaining to the method or manner of performing the work.

**101-10 Special Provisions :-**

The special body of directions, provisions and requirements prepared to cover proposed work not adequately provided for by standard specifications. Special provisions shall govern the work and shall take precedence over the standard specifications whenever they are in conflict.

**101-11 Tender Notice :-**

The official notice inviting tender proposals for the work contemplated.

**101-12 Tender documents (or tender forms) :-**

The official documents which are supplied to prospective bidders for preparing and submitting their tenders and consisting of the tender notice, tender form, schedule of approximate quantities, plans and specifications and descriptive specification sheets and supplementary clarifications issued.

**101-13 Tender proposal (Proposal or tender) :-**

The written proposals submitted by the bidder in the required manner to perform the work contemplated.

**101-14 Contract :-**

The written agreement covering the performance of the work.

The contract shall include the notice inviting the tender, clarifications of the tender and acceptance thereof and the agreement, executed together with the documents referred to therein and any special conditions, specifications, designs, drawings and post tender correspondence. All these documents taken together shall be deemed to form one contract and shall be complimentary to one another.

The Contract shall also include notice of handing over site, documents, authorising alterations and supplemental agreements.

**101-15 Work :-**

The "Work" shall mean the works to be executed in accordance with the contract and shall include all extra or additional altered or substituted works as required for the completion of the work under the contract.

**101-16 Earnest Money :-**

The security designated in the tender notice to be furnished by the bidder as a guarantee of good faith to enter into a contract for the work contemplated, if it be awarded to him.

**101-17 Security Deposit :-**

The approved form of security furnished by the Contractor as a guarantee of good faith and ability on the part of the contractor to execute the work in accordance with the terms of the contract.

**101-18 Excepted Risk :-**

"Excepted risk" are risks due to riots (otherwise than among Contractor's employees) and civil condition (in so far as both these are uninsurable) war (whether declared or not) invasion, act of foreign agencies, and hostilities, civil war, rebellion, revolution, insurrection, military or other works, over which the contractor has no control and accepted as such by the authority who has accepted the agreement.

**101-19 Site :-**

Site means the lands and or other places on, under or is or through which the works are to be executed or carried out and any other lands or places provided for the purposes of the contract.

**101-20 Right - of - Way :-**

The areas existing or acquired for highway purposes.

**101-21 Road Way :-**

That portion of the right of way included between the toes of embankment or the toes of cuts and appertaining structures.

**101-22 Road - bed :-**

That portion of the roadway extending between the outside shoulder lines.

**101-23 Sub grade :-**

That portion of the completed road - bed upon which the pavement and shoulders are to be placed.

**101-24 Carriage - way :-**

That part of a road formed for the use of vehicles.

**101-25 Shoulders :-**

That portion of the road bed between the edges of Pavements and top of fill slope or bottom of cut slope or inner edge of ditch.

**101-26 Bridge :-**

A structure for carrying the road traffic or other moving loads over a depression or obstruction such as channel, road or railway.

**101-27 Submersible bridge :-**

A bridge structure designed to allow normal floods to pass through its vents but which overtopped in high floods.

**101-28 Culverts :**

A bridge having a gross length of 5M or less between the faces of abutments or extreme vent way boundaries and measured at right angles thereto

**101-29 Causeways :-**

A Paved road crossing across a Stream or water logged or marshy ground at or about ground level.

**101-30 Foundation :-**

The portion of the work constructed to distribute or transmit the weight of the structure together with any superimposed load, to the earth, rock or the natural material existing below.

**101-31 Sub-structure :-**

All parts of a structure below the top of bed block or below the skew backs or arches and above the foundations as defined above

**101-32 Superstructure :-**

All parts of structure including bearing above the bridge seat not classified as substructure.

**101-33 Abbreviations :-**

The abbreviations used in these specifications are in lieu of and are to be construed the same as the respective expressions represented :-

A.A.S.H.T.O.	-	American Association of State Highway and Transportation officials.
A.S.T.M.	-	American Society for Testing Materials.
B.S.S.	-	British Standards Specification.
I.R.C.	-	Indian Roads Congress.
I.S.D.	-	Indian Stores Department.
I.S.I.	-	Indian Standards Institution.
N.B.C.	-	National Building Code.
T.N.B.P.	-	Tamil Nadu Building Practice.
T.N.H.M.	-	Tamil Nadu Highways Manual.

Note :- Singular and plural words importing the singular only also include the plural and vice versa when context requires.

**PS : 102 SCOPE****102.01 Scope of preliminary specifications :**

The preliminary specification lays down the general requirements in respect of the materials to be used, the method of execution of work, the Contractor's responsibilities and liabilities to the public, the Government and to his workmen and general conditions of contract which shall be accepted by every Contractor who is entrusted with any work in the Tamil Nadu Highways Department. The preliminary specification shall not be altered, amended or supplemented except with the prior approval of the Government.

The Preliminary specification shall form an inseparable condition of contract in all agreements entered into by the Contractors for executing the works for the Tamil Nadu Highways Department and it shall not be necessary to append a copy of the specification to the agreement.

If any of these conditions are not applicable to any particular contract or system of contracts, it will be clearly indicated in the tender notice.

**102.02 Applicability of standard specifications :-**

All work shall be performed in conformity with the standard specifications. The relevant portions shall be designated in the contract documents by the appropriate standard specification number. The text of such standard Specifications will not be recited in the tender documents. Every Contractor who tenders for or executes a work in the Department shall be deemed to have a thorough understanding of the Standard specification in so far as they govern that item of work.

The fact that the item of work is designated by the appropriate Standard Specification number shall mean that the Contractor is to execute the work according to such specification and modified as may be necessary by an addendum specification for that particular item of work incorporated in the tender.

In case there is no standard specification for any particular item of work, or the standard specification needs to be modified the necessary additional specification or modification shall be set forth in detail as special provisions in Schedule. C.

**102.03 Powers of officers to amend or supplement Standard Specifications :-**

The Chief Engineer may amend or supplement the Standard Specification whenever he considers such revision necessary, and issue correction slips, and incorporate such corrections in the subsequent editions of the Standard Specifications for Road and Bridge Construction.

Superintending Engineers and Divisional Engineers may alter the Standard Specification for any particular contract which is within their powers of sanction with the prior approval of the Chief Engineer of the Department. They may also furnish additional specifications for which there are no standard specifications as laid down in PS : 102.02.

All such amendments and additions shall have the force of Standard Specifications in so far as the work is concerned and shall form inseparable part of the contract.

**102.04 Delegation of Powers :-**

Any decision to be made or orders to be issued by the Engineer or any higher departmental authorities under the contract may be made by any person or persons authorised to act for the Engineer or higher authority for that purpose and may be made in such a manner and on such evidence or information as such person or persons shall think fit.

Provided always that the authority who has accepted the agreement for the work shall make no delegation of powers to his subordinates in respect of orders and decisions concerning the extension of time for completing the contract or the determination of the contract or any other matter in which his decision is to be final and conclusive, the orders of the Engineer in these matters shall be subject to his ratification.

**102.05 Notice Under The Contract :-**

Any communication notice to be given to the Contractor shall be in writing, type script or printed and shall be sent by ordinary / registered post to the last known place of abode or business of the Contractor. If sent by Registered Post it shall be deemed to have been served on the date when in the ordinary course of post it would have been delivered to him. The Contractor shall duly intimate any change in the address to which all communications are to be sent. \*Any failure to comply with this requirement resulting in non-receipt of communications will entitle the Department to take action for non Co-operation.

## PS : 103. TENDER REQUIREMENTS AND CONDITIONS.

### 103.01 Contents of Tender form and Contract Document:-

Intending bidders will be furnished with tender forms which will state the location and description of the work contemplated, the approximate quantities of work to be performed or materials to be furnished, the amount of earnest money and security deposit and the date, time and place of delivery opening of tenders. The tender forms will state any special provisions or requirements supplementing or altering the standard specifications. All documents bound with or attached to the tender forms shall be considered a part thereof and shall not be detached or altered.

The Engineer shall have the right to omit or suspend certain item of works to revise or to amend the tender documents prior to the date of receipt and opening of the tender. Such revisions or amendments or extensions, if any shall be communicated to all the concerned who have purchased tender schedule in the form of an addenda by registered post to be issued atleast 7 days before the due date for receipt of tenders.

### 103.02 Interpretation of Estimates :-

An estimate of quantities of work to be done or materials to be furnished under the specifications is given in the schedule A. These quantities are to be considered as approximate and are prepared for the comparison of bids only. The Department does not expressly nor by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimate of quantities or of the character, location or other conditions pertaining to the work. The unit prices to be tendered by the bidder are to be tendered expressly for the scheduled items of work. Payments to the contractor will be made for the actual quantities of the work performed or materials furnished only in accordance with the contract and it is understood that the schedule of quantities of work to be done or materials to be furnished may each be increased or decreased in accordance with PS : 105.05

### 103.03 Examination of Plans, Specifications, Special Provisions and site of Work :-

The bidder is required to examine carefully the site of the work, source of materials of the proposals, plans, specifications, special provision and

contract forms for the work contemplated; It will be construed that the bidder has investigated and is satisfied as to the conditions to be encountered for performing the work as scheduled or as at any time altered in conformity with PS : 105.05 and as to the Character, quality and quantities of work to be performed and materials to be furnished including increase and decrease and as to the requirements of contract. It is mutually agreed that submission of tender shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to all the conditions and contingencies.

### 103.04 Scope of Contract Unit Prices :-

The contract unit prices entered in Schedule A shall be for finished work in situ or for articles or materials delivered at designated points and shall include all contingent expenses direct or indirect, construction expenses or those imposed by an act of legislature ( Central or State) and or any notification thereunder or on account of new levies or duties or an account of increase in such duties and levies affecting the price of the materials required for incorporation in the work. It shall also include all expenses imposed by an outside authority such as import duties, tolls, octroi, seigniorage, sales tax, royalties, entry tax etc.

The contractor shall be solely responsible for the payment of sales tax under the provisions of the Tamil Nadu General Sales Tax Act, 1939 Tamil Nadu Act IX of 1939) as in force for the time being in force and the rates for the various items of work shall remain unaffected by any change that may be made from time to time in the rate at which such tax is payable.

The contract unit prices shall always include the cost of conveyance and of all lifts, loading, unloading and stacking in the manner and at the place ordered by the Engineer unless covered by separate items in Schedule A.

The Contractor shall furnish, maintain and operate at his expense all equipment, tools and machinery which are necessary for the prosecution of the work on a scale satisfactory rate of progress as specified in the contract. His tendered prices shall be inclusive of all expenses in connection with furnishing, maintaining and operating all such construction plant and tools.

Plant and machinery used on the work shall be designed and constructed in accordance with general practice for such equipment and shall be of sufficient capacity and of such character to ensure the production of sufficient material to carry the work to completion.

Plant and machinery if available with the Department will be lent to the Contractor on request subject to the condition of hire charges prescribed in the tenders for each type of plant and such of these plants for which conditions of hire charges are not prescribed in the tender document, at rates of hire in force at the time of hiring the plant to the contractor. This shall not relieve the Contractor in any manner of his responsibility in the matter of furnishing and retaining and operating all necessary construction plant.

All requisite swaging, shuttering, shoring etc., shall be provided at the Contractor's expense in sufficient quantity and proper quality to ensure progress in conformity with the contract.

The Contractor shall not be entitled to any revision of contract unit rates during the currency of agreement on account of variation of prices of materials, labour and contingent items required for the proper completion of the work subject to the conditions in clause : 105.05.

If for any reason any material other than that envisaged in the contract is issued for the work at the request of the Contractor, the issue rates may be settled. The rates should be decided and agreed upon mutually.

#### **103.05. Government furnished materials :-**

The conditions for supply of materials furnished by the Government will be set forth in the tender documents. Tenderers shall accept the materials on these conditions and shall quote their unit prices for finished work accordingly.

**103.05 A.** Government do not undertake to take over from Contractors whether before or after the completion or determination of contracts, surplus materials, which were originally procured by the Contractors for themselves or were issued to them and charged to their accounts. Such materials are the property of the Contractors and can be taken over by Government if required for use on other works in progress only by special arrangements and at the prevailing market rates viz. the rates at which the article or articles of similar description can be procured at the given time at the stores godown from public market suitable to the division for obtaining a supply thereof. If the materials were originally supplied by Government, the price allowed to the Contractor on requisition the element of storage charged, if any, contractors are however not at liberty to remove from site of works, without the written permission of the Divisional officer, materials which have been issued to them for use on a work.

#### **103.06 Progress Schedule:-**

A progress schedule showing the proposed order of work and the time allowed for completion of the major items of work will be given in the tender documents. This schedule shall be used as the basis for establishing major construction operations and as a check on the progress of the work. The bidder shall take this into full consideration in quoting his unit rates.

#### **103.07 Preparation of the tender :-**

Tenders shall be drawn up properly on the form furnished by the Department and shall be submitted in sealed covers addressed to the officer inviting the tenders. All writing shall be with ink or typewriter except the signature of the bidder which shall be written with ink.

II. The bidder shall specify, in words and figures, a unit price for cash of the separate items in Schedule A. He shall show the products of the respective quantities and unit prices in the column provided for that purpose and the gross sum for which he will perform the work specified. special care shall be taken to write rates in figures as well as in words and the amounts in figures only in such a way that interpolation is not possible. The total amount shall be written both in figures and words.

III. The tender shall be accompanied by the following special requirements in the case of works costing more than Rs.25.00 lakhs.

1. Constitution, capital, registration, place of business etc. of the tenderer.
2. Financial resources with certificates.
3. Works completed during the last three years and works on hand with address of Departments under whom they were / are being executed and cost thereof.
4. Construction equipment available with the tenderer and qualified technical personal proposed to be employed on the work.
5. Particulars of registration with any Central or State Government Organisation or Public Sector Undertakings.
6. A list of all documents accompanying the tender.
7. A covering letter from the tenderer detailing the various consideration in his tender.

8. Duly executed power of attorney in original alongwith its two certified copies in the name of tenderer's authorised representative to act on behalf of the tenderer.

9. Documents for payment earnest money.

10. Sales - tax Verification and income - tax clearance certificates.

11. Detailed report on tenderer's proposal with a note on his programme of work.

12. If and when it is specifically called for, the tender must be accompanied by master net work by critical Path Method with details to sustain it.

IV. However in the case of maintenance works (including special repairs works in the nature of maintenance) bidders shall base their tenders on the departmental estimate rates offering a percentage deduction from or increase on the estimate rates. Bidders shall however note that tender percentage will not be operated on materials furnished by Government and that railway freight will be on actuals.

V. If a tender is made by a person, it shall be signed with his full name, and his postal address shall be given. If made by a firm, it shall be signed with the Co-partnership name, by a member of the firm who shall also sign his own name, and the name and postal address of each member of the firm shall be given. If made by a company or corporation, it shall be signed by a duly authorised officer who shall produce with his tender satisfactory evidence of his authorisation. Such corporation may be required to furnish evidence of its corporate existence.

VI. Joint tenders from two or more individuals shall not be permitted. If two or more individuals desire to bid jointly, they shall first constitute themselves as a firm, and proceed as set forth in the preceding paragraph.

VII. The Engineer shall be notified in writing of any change in postal address furnished by the bidder any notice to be given to the bidder shall be in writing, type script or printed and if sent by registered post to the last known place of abode or business of the bidder, shall be deemed to have been served on the date when in the ordinary course of post it would have been delivered to him.

### 103.08 Certificate of income-tax verification:-

Each tenderer shall also send a certificate of Income- tax clearance in the form prescribed in G.O.Ms.No.440, Finance, dated 15th March, 1953, from the Income-Tax Officer of the Circle, or district where the applicant is assessed or assessable to income-tax and in the case of the applicants in Madras City from the inspecting Assitant Commisioner, Central Range, Madras. The production of the certificate may, however, be waived by the Engineer when the value of the contract will not exceed Rs. 10,000.

In the case of proprietary or partnership firm it will be necessary to produce the certificate for the proprietors or proprietors and for each of the partners as the case may be.

The certificate will be valid for one year from the date of issue for all tenders made during this period of one year. If certificate had already been produced by the tenderers in respect of a previous tender submitted during this period of one year, it will be sufficient if particulars regarding the previous occasion on which the certificate was produced are given.

All tenders received without certificate of Income-Tax Clearance are liable to be rejected unless the production of it has been waived by the Engineer as hereince provided.

### 103.09 Earnest Money:-

Each bidder shall pay the specified amount of earnest money into the Government Treasury or sub-treasury or Reserve Bank of India within the jurisdiction of the Engineer to the credit of security deposit, on behalf of the Engineer to the credit and enclose the chalan with his tender. The E.M.D. may also be in the form of a demand draft, term deposit or National Savings Certificate duly pledged or deposit at call obtained from any scheduled bank.

The earnest money will also be accepted in any other approved form specified in the tender notice. The earnest money will not be received in cash or currency.

2. The tenderer exempted from payment of earnest money in individual cases shall attach with the tender an attested copy of the letter exempting him from payment of earnest money and shall produce the original for reference.

3. In the case of the successful tenderer, the earnest money paid will be transferred towards a part of the security deposit to be paid after the award of the work.

4. The department is not liable to pay any interest on the earnest money, further security and withheld amounts.

#### **103.10 Alternative tenders :-**

The Department may call for alternative design based on the data and conditions to be furnished in the notice. Such designs based on the requirements of the Department shall be accompanied by complete plans and detailed calculations in support of the design. The details of designs should be susceptible of ready check. After design is approved by the competent authority, tenders will be called for the accepted design.

#### **103.11 Multiple tenders :-**

If multiple tenders are to be received, the various sections or parts of the project making up the combinations for which such tenders will be received will be stipulated in the tender notice. Only multiple bids for such combinations as are stipulated in the notice of letting will be considered.

#### **103.12 Delivery of tenders :-**

Each tender shall be placed in a sealed envelope together with the earnest money as notified in the form specified in the tender notice, so superscribed as to indicate the name of work and the name and address of the tenderer. Tenders will be received at the place designated in the tender notice until the hour on the date set for the receipt thereof and must reach the hands of the tender inviting authority by that time. When sent by mail, preferably registered, the sealed tender marked as indicated above shall be enclosed in an additional envelope which shall also be sealed and addressed as indicated above. Tenders sent by mail must reach the tender inviting authority before the hour on the date set for receipt of tenders. Any tenders received after the time set forth will not be entertained and will be returned unopened.

#### **103.13. Withdrawal of tender :-**

A bidder may withdraw his tender before opening, provided the request in writing is in the hands of the tender inviting authority by the time sets for opening tenders. When such proposal is received, the tender will be returned to the bidder unopened. The bidder can withdraw his tender

in writing with valid reasons by a letter till the acceptance of his tender is communicated.

It shall be open to the departmental authorities to remove the name of such of these tenderer who withdrew their tender before acceptance by the department from the list of approved contractors maintained in the Department and not to entertain further tender from such tenderer and summarily reject them if reasonable and convincing explanation is not given for withdrawing the tenders.

#### **103.14. Competency of bidders :-**

Only a registered Contractor of the appropriate class is eligible to tender for the works. Contractors registered in any division may tender for works in the jurisdiction of the district in which the division is located. Contractors registered in the jurisdiction of the Circle in the category, II and above alone may a tender for works in any Circle of the state provided they are registered in any Circle in the appropriate category.

A Contractor registered in the Highways and Rural Works Department is eligible to tender for the works, one class above the category in which he / she has been registered.

Tenderer shall, if required, present satisfactory evidence to the tender inviting authority that they have been regularly engaged in executing such works as they propose to execute and that they are having sufficient capital, machinery, material etc. to begin the work promptly and to complete it as required by the SSRB and other specifications for the particular work tendered for in the event that tender being accepted.

The tender inviting authority shall have the right to insist on any Contractor to furnish a statement showing his financial condition as and when required by the Engineer. Such financial statement shall be prepared by a Chartered Accountant.

2. With each financial statement filed with the Department, as hereinabove outlined, the bidder shall also submit a questionnaire relating to his experience in performing construction work similar to that for which he is offering a proposal. The experience Questionnaire shall be approved by the Department as a prerequisite to the release of tender forms for works other than maintenance and special repairs and shall remain on file with the Department.

**103.15. Professional Qualification :-**

Other things being equal, preference will be given to a bidder who is himself professionally qualified or who undertakes to employ technically qualified men, with experience of similar works to supervise the work to the satisfaction of the Engineer. The bidder shall therefore furnish, while tendering, all the information that may be necessary for the Department to give proper consideration to this aspect.

**103.16. Disqualification of bidder :-**

Any one or more of the following causes may be considered as sufficient for rejection of the bid or bids and disqualification of the bidder from further bidding for such period of time as shall be determined by the Department.

Developments subsequent to establishment of bidder's competency and qualification which, in the opinion of the Department, or their authorised representatives entrusted to determine the competency of bidders, would affect the responsibility of the bidder.

Conviction for a violation of a State or Union Law or regulation, or rule or regulation of a Union Department, board or commission, or of a State Department, board or commission, involving moral turpitude.

More than one tender for the same work, from an individual, firm or company in which any one of them have interest in any capacity as individual firm or company.

Evidence of collusion among bidders : Participants in such collusion will receive no recognition as bidders for any future work of the Department.

Lack of competency for the Class of work contemplated or financial capacity as revealed by the Register of Contractors or by the financial statement and experience questionnaire required under PS : 103.14.

Lack of responsibility as shown by past work for the Department. Judged from the standpoint of workmanship and progress.

Unbalanced bids in which the unit prices on some items are disproportionately high or low.

**103.17. Public Opening of Proposals :-**

Proposals will be opened and read publicly at the time and place indicated in the tender notice and rates, amounts and the grand total amount

of the bid will be read. Bidders or their authorised agents are invited to be present.

Note : In the case of tenders for maintenance works and special repairs in the nature of maintenance, the percentage rebate or premium quoted by the bidder will be read.

**103.18. Rejection of Tenders :-**

Tenders not accompanied by the earnest money deposit to the notified amount in the forms specified in the tender notice accompanying the tender documents, as required under 103-09 of PS TO SSRB shall be rejected

Tenders containing omission, erasures, alterations or additions not called for, conditional or alternate tender unless called for, or that containing irregularities of any kind or tenders otherwise regular which are not accompanied by a certificate of income Tax Verification required under PS 103-08 may be rejected. Tenders may also be rejected for any of the clauses under article 103-16 of PS TO SSRB. The engineer or other accepting authority reserves the right to reject any or all tenders at any time without assigning any reasons therefor.

## PS : 104. AWARD AND EXECUTION OF CONTRACT.

### 104.01 Consideration of tenders :-

The tenders received will be compared on the basis of the summation of the products of the items of work listed and the contract unit prices offered. In case of discrepancy between the gross sum shown in the tender and that obtained by adding the products of the quantities of work and the unit prices, the unit prices shall govern and any errors found in the said products shall be corrected. In awarding contracts, the Department may, in addition to considering the amounts stated in the proposals, take into consideration the competency of the various bidders as entered in the Register of Contractors and adjusted for the net value of subsisting Contracts or as determined from a study of the data required under article 103.14 of PS to SSRB and from other investigations which it may elect to make.

In the event the sum of the amount of the tender and the sum of the amounts of work under contract and incomplete, is in excess of the bidders established competency, the right is reserved to reject such tender.

In the event tenders for more than one project are issued to a bidder, which projects individually would be within the bidders competency, but a combination of more than one, considering also the work under contract and incomplete, would be in excess of his rating, the right is reserved to consider only such tender or tenders as in the opinion of the Department are within such competency and most advantageous to the Government.

The right is reserved to reject any or all tenders, to waive technicalities, and to advertise for new tenders, or to proceed to do the work otherwise if, in the judgement of the department, the best interests of the Government will be promoted thereby.

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the construction of the work, together with samples, which may be subjected to the tests provided for in the specifications to determine their quality and fitness for the work.

Before any contract is awarded, the bidder shall, if not requested by the Department, furnish a complete statement of the make, size, weight

(where weight is one of the specified requirements) condition and length of service of all equipment to be used in the proposed work.

### 104.02 Award of Contract :-

Except in cases where the Department exercises the right reserved under PS : 103.16 to reject any or all tenders, the contract will be awarded by the Department, within a period of 60 days after the date of opening of tenders to the bidder who has submitted the lowest tender, complying with all requirements necessary and who has satisfied the requirements of the specifications as to competency and professional qualification.

Note : 1 The period of 60 days may be varied and the modified period will be stipulated in the tender document.

Note : 2 The period notified in the tender notice for the issuance of orders may be extended by mutual concurrence.

The successful tenderer will be notified by a letter sent by registered post to the address shown on his tender that his tender has been accepted.

The tender and post tender correspondences together with the letter of acceptance thereof shall constitute a binding contract between the successful tenderer and the Department and shall form the foundation of the rights and the obligations of both the parties.

### 104.03 Return of Earnest Money :-

The earnest money will be refunded to the unsuccessful bidder on or before the expiration of the validity period specified in the tender or such extended period whichever is later. This refund will be authorised by the Engineer. The earnest Money of the successful bidder will be retained by the Department as part of the security deposit for the due fulfilment of the contract.

### 104.04 Execution of Contract :-

When a tender is to be accepted, the bidder whose tender is under consideration shall attend the office on the date fixed by written intimation to him.

The bidder shall forthwith upon intimation being given to him by the Engineer, furnish the security deposit, specified in the acceptance order and execute an agreement in the proper departmental form by signing all documents connected therewith within the period specified.

The security deposit aforementioned, together with the earnest money and the amount withheld as per article 110.10 of PS to SSRB shall be retained, as security for the due fulfilment of the contract. The security deposit and the earnest money deposit of the successful bidder shall be refunded on payment of the amounts withheld under article 110.10 of PS to SSRB.

The written agreement which shall be entered into between the contractor and the Government shall be the foundation of the rights of both parties and the contract shall not be deemed to be complete until the agreement has been first signed by the Contractor and then by proper Departmental authority.

The tender and post tender correspondence alongwith the letter of acceptance shall form part of the agreement.

#### **104.05. Failure to execute contract :-**

Failure on the part of the successful bidder to execute an agreement as provided herein, within the period specified in the order of acceptance of his tender will be considered as just cause of the annulment of the award and the forfeiture of his earnest money to the Government, not as a penalty but in payment of liquidated damages sustained as a result of such failure.

#### **104.06. Abrogation :-**

Should the Government fail to award the contract within the period stipulated under PS : 104.02, the contractor may abrogate his acceptance of the contract, by his filing due notice of such intent with the Department. Such notice shall be in writing and may be filed at any time after the expiration of such period and shall stipulate the maximum number of days, not less than 10, exclusive of Sundays or holidays, with which the contract shall be executed by the Government. Failure on the part of the Government to execute the contract within the time set forth in the said notice, shall be construed to be an acceptance on the part of the Government of the abrogation of the contract, and the Contractor will be relieved of all obligations to the Government that may have been incurred under such contract.

It is hereby agreed and understood, however, that such abrogation is a purely voluntary act of the Contractor, and that therefore, no liability or obligation towards the Contractor, or any other party, who may have an

interest, directly or indirectly in such contract, has been incurred by the Government.

Unless, and until the Contractor files such notice of abrogation, and until such notice becomes effective, if filed, the contract may be executed by the Government without prejudice to any of the terms and conditions thereof.

**PS : 105. SCOPE OF THE WORK.**

**105.01 Intent of the Plans and specifications :-**

1. The contract drawings, if any, together with the contract specification, are intended to show and explain the manner of executing the work and to indicate the type and class of material to be caused.

2. The work to be carried out under the Contract shall except as otherwise provided in these conditions include all labour, materials including wastage, tools, plant, equipment and transport, hoisting, setting, fitting and fixing in position which may be required at preparation of and for and in the full and entire execution and completion of the works in conformity with the specifications prescribed.

**105.02 Conformance :-**

The Contractor shall perform all work in an acceptable manner in accordance with the plans and specifications, and in accordance with such further explanatory drawings, details and instructions as may from time to time be given by the Engineer.

**105.03 Programme of Construction :-**

Time is the primary requirement in the contract and it shall be clearly understood that the tenderer has a definite programme to carry out the work within the specified time limit given in the tender documents.

He shall also provide a detailed programme of each of the major elements of the work for approval to the Engineer.

Immediately after the conclusion of the agreement and before the work is begun, the Contractor shall furnish in writing for approval to the Engineer, a programme of his proposed general and detailed arrangements for carrying out various items of works within the time schedule.

**105.04 Special Work :-**

Should any construction or requirements not covered by these specifications be anticipated on any proposed work, special provisions for the same will be prepared and referred to in the tender documents, which special provisions shall be considered as a part of these specifications the same as though contained fully herein.

**105.05 Increased or Decreased Quantities :-**

The right is reserved, at any time during which the contract is in force, to make any alterations in the work, that may in the opinion of the Engineer be necessary and for that purpose he shall have power to order that Contractor to do and the Contractor shall do any of the following :-

1. Increase or decrease in quantities of any item of work included in the contract.
2. To omit any portions of work.
3. Change the specification for any item of work.
4. Change the lines, levels, positions and dimensions of any part of the work.
5. Execute additional work necessary for the completion of the work and
6. Alterations in the plans.

Such alterations shall be ordered in writing before starting the work on such alterations. No signed drawing shall be taken as in itself as an order for variation, unless accompanied by a covering letter from the Engineer confirming that the drawing is an authority for variation. Alterations as referred to above shall not be considered as a waiver of any condition of contract nor invalidate any of the provisions thereof. The contractor shall execute the work at the same rates as in the agreement, for quantities upto 25% increase or decrease of the agreement quantity of the relevant item listed in Schedule A. But a supplemental agreement with the Contractor for the item or items involved will be necessary when the alterations involve an increase or decrease of more than 25% in the quantity of any item listed in the schedule A. Settlement of a new rate and supplemental agreement would arise if only the variation is more than 25% of the agreement quantity of the relevant item listed in schedule A, provided the value involved is not less than Rs.1000.00. In respect of substituted items and new items the rates shall be settled as per article 110.04 of PS to SSRB. The supplemental agreement would cover quantities varying beyond 25% of the quantities for the respective items listed in Schedule A. In the event of decrease in quantities beyond 25%, Payment would have to be assessed for the difference exceeding 25% of the quantity for the respective item listed in Schedule A. In such cases suitable rates would have to be mutually agreed upon, in accordance with

article 110.04 of PS to SSRB and the rates for compensation arrived at supplemental agreement drawn and payment made.

For the purpose of determining increased or decreased quantities of work as herein before set forth, such determination shall be made on the basis of original contract quantities for the respective items.

The Contractor shall not start work on any alteration requiring a supplemental agreement until the agreement setting forth an equitable adjustment of compensation shall have been executed. The contractor shall perform the alterations, deviations as herein before set forth under the supervision of the Engineer and his decision shall be final and binding. Claims for compensation for alterations or deviations performed which have not been authorised shall be rejected. The plan of works to be followed, the equipment to be used and the amount and character of labour to be employed shall be approved by the Engineer.

The unit price for alterations and or deviations which in the opinion of the Engineer shall constitute an extra work shall be deducted as per 110.04 of PS to SSRB.

#### 105.06 Detours :-

1. The Contractor shall construct detours and detour bridges for the use of traffic as provided for in the special provisions and as shown on the plans, and maintain a reasonably smooth and even surface satisfactory for the use of traffic. Full compensation for constructing and maintaining such detours shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed. In the absence of any specific provision will be allowed. In the absence of any specific provision the Contractor shall be relieved of all responsibility in connection with the marking, Construction and maintenance of all detours and detour bridges, but he shall be invariably responsible for the construction, maintenance and protection of adequate barriers, watchmen or lights at the ends of the portions of the road closed by construction on the project in accordance with departmental standards and as directed by the Engineer.

2. At locations where traffic is being routed through construction, roadway excavation and the construction of embankments and carriageways shall be conducted in such a manner as to provided a reasonably smooth and even surface satisfactory for the use of traffic at all times. Culvert installation or construction shall be conducted on but half the width of the travelled way at a time and that portion of the travelled way being used by

traffic shall be kept open and unobstructed until the opposite side of the travelled way is ready for use by traffic. All work required in connection with the routing of traffic through construction will not be considered as detour construction and maintenance. Full compensation thereof shall be considered as included in the price paid for the various contract items of work and no additional compensation will be allowed.

3. The failure or refusal of the Contractor to construct and maintain detours in a satisfactory condition at the proper time shall be sufficient cause for closing down the work until such detours are in satisfactory condition for the use of traffic.

#### 105.07 Removal and Disposal of Structures and Obstructions :-

1. The contractor shall remove only such of the culverts, bridges and other structures or parts of the structures included in the contract. Any structure, highway or part thereof not to be removed shall be left in place in the same conditions.

2. Structures beyond the limits of the highway shall remain in place unless otherwise specified on the plans or in the special provisions or unless removal appears as a specific bid item in the contract.

3. The highway shall be construed to be the highway right of way and shall include such portions of the right - of - way of existing highways lying adjacent and contiguous to the new highway right -of-way.

4. All structures and materials found on the work and not especially reserved in the plans or specifications shall be the property of the Government, to be disposed of as hereinafter specified. Unless otherwise provided, the material from any existing old structures may be used temporarily by the Contractor in the erection of the new work subject to the usual conditions of hire for such materials. They shall not be cut up or otherwise damaged, except with the approval of the Engineer.

#### 105.08 Final Cleaning Up :-

1. Upon completion of the work and before acceptance and final payment is made, the contractor shall clean the right - of - way and adjacent property and remove there from all surplus and discarded materials, rubbish and temporary structures, restore in an acceptable manner all property, both public and private, which has been damaged in the prosecution of the work and shall leave the right - of - way in a neat and presentable condition for the entire length of the highway under construction.

2. The Contractor shall clean out and restore to full effectiveness the waterways of all drainage installations and structures, located within the limits of those portions of the project or projects involved under the contract. This work shall be performed in all its entirety on completion of the work covered by the contract. Compensation for the work involved will be construed to be included in the contract unit price for other items of work and no extra or additional compensation will be allowed.

3. In the event the Contractor elects or is required to excavate and produce material from pits, quarries, or deposits within the right of way under the written orders of the Engineer he shall as a condition to such use and at his own cost and expense and in a manner approved by the Engineer, and prior to final acceptance of the work trim up such pit, quarry or deposit in a neat workmanlike manner, removing and levelling surplus material and debris, provide for necessary drainage and perform all other work necessary to prevent unsightly appearance.

4. The depth of the excavation throughout the area of any pit, quarry, or deposit shall be as uniform as practicable. The side slopes of such excavations shall be adapted to the topography of the contiguous terrain and shall be so merged, wrapped, or blended into it that when completed they will harmonize with the adjacent or surrounding natural ground surface. The intersections of the slopes with the ground surface and with the floor of the pit, quarry or deposit shall be rounded. The bottom or floor of the pits, quarries, or deposits shall be excavated in such a manner that the pits, quarries, or deposits will drain properly, and the excavated area shall be shaped with the blade graders or other equipment so as to present a neat appearance.

5. The Contractor shall so design his work platforms, temporary access bridges to the site or gang - way islands for foundations etc., in such a manner that they do not violate or alter the wave action and pattern of flow, similarly, dumping of excavations also should be so spaced that they do not produce any concentrated effect on the wave action or interfere with the normal operations of navigation, fishing and other routine operations prevailing at the site. In particular the contractor shall avoid dumping in the channel / river so as not to cause any obstruction to normal flow of navigational traffic, or flow in the channel.

#### 105.09 Test Under Load :-

a) If required by the Engineer, the Contractor shall have to carry out a load test on any one unit of the structure for the designed static and

dynamic loads or their equivalent and in a manner as may be decided by the Engineer. The reasons for the load test shall be established jointly before undertaking the test, and it shall be at the cost of the contractor.

b) The Engineer may also instruct that a load test shall be made on any part of the bridge structure if in his opinion such a test be deemed necessary for any one or more of the reasons specified below.

I) The work test on cubes, etc., failing to attain the specified requirements / strength.

II) Shuttering being prematurely removed.

III) any other circumstance attributable to the negligence on the part of the contractor which in the opinion of the Engineer, may give results in the structure or part thereof of being of less than the expected strength.

IV) any reason other than the foregoing

c) If the load test is to be made:

1) Solely or partly for the reasons given in (b) (I) and (II) above, the test shall be carried out by the Contractor and no extra cost will be borne by the Department.

2) For any reason, mentioned in (b) (III) above, the cost of the same shall be reimbursable to the Contractor as per actuals, provided the test results thereof are found to be satisfactory.

3) For any other reasons, mentioned in (b) (IV) above, the payment for test shall be made to the Contractor as per actuals irrespective of result of such test.

**P. S. 106. CONTROL OF MATERIALS.**

**106.01 Quality of materials :-**

It is the intent of these specifications that materials conforming to standard specifications only shall be used throughout the work, and that they shall be incorporated in such manner as to produce completed construction which is workmanlike and acceptable to the Engineer in every detail. Only materials which conform to the requirements of these specifications shall be furnished or incorporated in the work. The Contractor shall, upon the request of the Engineer, furnish him with the vouchers to prove that the materials are such as specified.

**106.02 Source of materials :-**

1) All materials shall be obtained from the sources designated in the contract. The excavation of materials from sources designated in the contract shall be under the direction of the Engineer at all times in so far as selection of material or exact location of excavation is involved.

2) If sources previously approved are found to be unacceptable at any time and fail to produce materials satisfactory to the Engineer, the Contractor shall furnish materials from other approved sources. The Contractor will not be reimbursed for any expense in developing the new source, but allowance or deduction will be made as the case may be, for the increase or decrease in cost due to an increase or decrease in the length of haul.

3) If the Contractor decides to investigate new sources of supply, he shall furnish without charge such preliminary samples as the Engineer may require. Tests will be made on these preliminary samples and reports rendered, but it is understood that such tests are for informatory purposes only. Only materials actually delivered for use will be considered and their acceptance will be based solely upon the results of the tests made on these materials. The change to the new source initiated by the Contractor shall not be a ground for his demanding any compensation or extension of time.

**106.03 Government furnished materials :-**

(1) The Contractor shall furnish all materials required to complete the work except such materials as are designated to be furnished by the Department.

(2) Upon written request of the Contractor, such materials procured as per relevant specifications will be delivered to him within a reasonable time at the point designated in the contract. They shall be unloaded and hauled to the site of the work by the Contractor at his expense. The cost of handling and / placing all materials after they are delivered to the Contractor shall be considered as included in the Contract unit prices for the items in connection with which they are used.

(3) The Contractor shall be responsible for all materials delivered to him, and shall use them only for the purposes of the contract. Deductions will be made from any monies due to him to make good any damage, shortage or deficiency, from any cause whatsoever, which may occur after such delivery or for any demurrage charges due to delinquency in unloading.

(4) If materials are furnished by the Department the Government shall have a lien upon all surplus quantities of such materials, and the contractor shall deliver them as directed by the Engineer and at the Contractor's expense.

(5) The indents, shall, as far as possible, be kept commensurate with actual needs. If however, at any time, any of the items supplied by the department are found to become surplus owing to any change in design or other bonafide reason, the same shall be taken back by the Engineer, if they are in good condition, at the store of issue. The contractor shall be entitled to payment, therefor, if cost had already been recovered, at the rate at which they were issued to the Contractor excluding the element of storages charges. The return of all steel items shall be in lengths as supplied previously to the contractor through the Engineer, may, at his discretion, take over such cut lengths also as he may think fit.

(6) If on completion of works, the Contractor fails to return surplus materials out of those supplied by Department in good and acceptable conditions, then in addition to any other liability which the Contractor would incur, the Engineer may, by a written notice to the Contractor require him to pay within a month of receipt of the notice, for such unreturned surplus materials at double the issue rates with the element of storages changes or market rate whichever is higher.

(7) Contractors are however not at liberty to remove from site of works, without the written permission of the Engineer, materials which have been issued, to them for use on a work.

**106.04 Trade names and alternatives :-**

For convenience in designation in the plans and specifications, certain materials may be designated under trade names. The use of alternative materials of equivalent quality will be permitted subject to the approval of the Engineer. The burden of proof as to the comparative quality and suitability of the alternative material shall be upon the Contractor, and he shall furnish at his own expense, all information necessary or related thereto as required by the Engineer. The Engineer shall be the sole judge as to the comparative quality and suitability of the alternative material and his decision shall be final.

**106.05 Furnishing samples :-**

Samples of materials shall be furnished at the Contractor's expenses as required by the Engineer at the time and place stipulated.

Samples for testing local material shall be taken by or in the presence of the Engineer. Otherwise, they will not be considered.

Materials from local sources which have not been investigated and tested previously and proposed for use alternatively shall be investigated and tested and the cost of any such investigation and tests shall be born by the Contractor.

**106.06 Tests :-**

(1) The Contractor shall provide proper facilities at all times for the inspection and testing of materials and the Engineer shall have access at all times to the places of storage or source. The Contractor shall give sufficient advance notice of placing orders so as to permit tests to be completed before the materials are incorporated in the work, and he shall afford such facilities as the Engineer may require for collecting and forwarding samples and making inspection. The Contractor shall not make use of or incorporate in the work the materials represented by the samples, until tests have been made and the materials found to be in accordance with the requirements of the specifications.

(2) All tests of materials furnished by the Contractor shall be made in accordance with commonly recognised methods of Indian procedures and if such test procedure is not available in the approved Indian specifications procedures in international practice may be followed. Test charges should be borne by the Contractor.

(3) Field tests of materials and work will be made by the Engineer when deemed necessary and these tests shall be made in accordance with the standard practices of the Department. The cost of test charges involved in all such field tests will be borne by the Contractor.

(4) The Contractor shall, upon demand, forward for the Engineer's inspection, test certificates rendered by the suppliers for all materials furnished by the Contractor

(5) The cost of materials consumed in tests shall be borne by the Contractor in all cases.

(6) If any tests other than those specified in the Contract are required by the Engineer, the Contractor shall provide all facilities required for the purpose and the charges including cost of materials for such tests shall be borne by the Department.

(7) The Contractor may request the Engineer to test the materials supplied by the department with valid reasons and justifying the necessity. The tests shall be done before the materials are issued to the Contractor. The need for the test should be agreed upon by the Engineer and the Contractor before taking up the tests.

**106.07 (1) Storage of materials :-**

Storage and safe custody of materials issued to the Contractor shall be the responsibility of the Contractor.

(2) Materials required for the work, whether brought by the Contractor or supplied by the Department shall be stored by the Contractor at places acceptable to the Engineer. He shall submit for the approval of the Engineer, before starting a work, a detailed site survey clearly indicating the locations where materials shall be stored and sheds built. If storage is done outside the Government land provided if any, the additional space required shall be provided by the Contractor at his expense. Storage sites shall be vacated immediately upon completion of the portion of the Project for which the stores were required cleared of all surplus materials and debris and restored as nearly as possible to their original condition by the Contractor at his expense.

(3) Materials shall be so stored as to insure the preservation of their quality and fitness for the work. When considered necessary by the Engineer, they shall be placed on wooden platforms or other hard, clean surfaces are not on the ground. They shall be placed under cover when so directed and the Contractor shall erect and maintain at his own cost tem-

porary weather proof sheds for the purpose. Stored materials shall be so located as to facilitate prompt inspection.

#### 106.08 INSPECTION :-

All stored materials shall be inspected at the time of use in the work, eventhough they may have been inspected and approved before being placed in storage or during storage.

Materials may be inspected and tested at any time during the progress of the work and defective materials rejected.

#### 106.09 Defective Materials :-

1) All materials not conforming to the requirements of these specifications shall be considered as defective, and all such materials whether in place or not shall be rejected, save as provided in PS 107.15. They shall be removed immediately by the Contractor at his expense and replaced with acceptable material. No rejected material the defect of which have been subsequently corrected, shall be used on the work until approval in writing has been given by the Engineer. Upon failure on the part of Contractor to comply with any order of the Engineer made under the provisions of this article within the time stipulated by the Engineer, the Engineer shall have authority to remove and replace defective material and recover the cost of removal and replacement from the Contractor.

2) Further all such defective material lying at site not removed and replaced within 30 days after issue of notice by the Engineer, (if the Engineer so decides) shall become the property of the Government and the Engineer shall dispose of such material in any manner without any further written notice to the Contractor.

3) In the event of the Contractor refusing to comply, the Engineer shall have full powers to acquire other proper materials to be substituted for rejected materials and he may cause the same to be supplied by other means at the cost of the Contractor.

### PS : 107. CONTROL OF WORK.

#### 107.01 Plans and specification :-

Two copies of the plans and specification excluding the TNSSRB (Tamil Nadu Standard Specification for Road and Bridge Construction ) shall be furnished to Contractor free of cost at the commencement of the work. Such copies and copies of supplementary details furnished by the Engineer shall be kept on the worksite until completion, and the Engineer or his departmental representative authorised by him shall at all times, have access to them.

#### 107.02 Working drawing :-

The Contractor shall submit to the Engineer for approval such additional sheets or working drawings of structures as may be required, and prior to the approval of such plans, any work done or material ordered shall be at the Contractor's risk. The Contract rates shall include the cost of furnishing such drawings.

#### 107.03 Authority of Engineers :-

All work shall be done under the supervision of the Engineer and to his satisfaction. The Engineer shall decide all questions which arises as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, interpretation of the plans and specifications, and acceptable fulfilment of the contract. The Engineer shall determine the amount and quality of work performed and materials furnished and his decision and measurements shall be final. In all such matters and in any technical question which may arise in the contract, the Engineer's decision shall be final and binding on the Contractor.

The Engineer shall have power to enforce such decisions and orders if the Contractor fails to carry them out promptly. In case of failure on the part of the Contractor to comply with such orders of the Engineer the Engineer may give notice in writing to the Contractor stipulating a reasonable period, and at the expiration of the said period specified in the notice, proceed to execute such work as may be deemed necessary and the cost thereof shall be recovered from the Contractor.

**107.04 Conformity with Plans :-**

The finished work shall conform to the approved plans with the exception of such deviations as may be authorised by the Engineer in writing.

**107.05 Co - ordination of plans and specifications, tender documents and special provisions :-**

The plans and specifications, tender documents, special provisions, and all supplementary documents are intended to describe a complete work and are essential parts of the contract. A requirement occurring in any one of them is binding. In case of discrepancy, figured dimensions shall govern over scaled dimensions, plans over standard specifications and special provision over both plans and standard specifications. Quantities if any shown on the plans shall govern over those shown in the Schedule. A. Special specifications shall prevail always if there are varying or conflicting provisions made in any one document forming part of the contract. The Engineer shall be deciding authority to interpret the provisions and specifications.

The Contractor shall take no advantage of any apparant error or omission in the plans or specifications and the Engineer shall be permitted to make such corrections and interpretations as necessary for the fulfilment of the intent of the plans and specifications. Such error or omission shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the work or from any of his obligations under the contract.

The design and Construction of the Structural components of the bridges shall conform to the relevant departmental specifications and the criteria laid down in the latest Indian Roads Congress (IRC) codes as on the date of notice of tender.

In the event of any conflict between the provisions made in the departmental specifications and the Indian Roads Congress Codes, the departmental specification shall prevail.

In the absence of any definite provisions on any particular issue in the specifications, the design and construction shall be in conformity with sound Engineering practice, and in such cases, the decisions of the Engineer shall be final and binding on the Contractor.

**107.06 Co - operation by Contractor :-**

The Contractor shall give the work his constant attention to facilitate the progress thereof, and shall co - operate with the department in every way possible. He shall have on the work at all times during his absence a competent representative who can speak atleast the local language authorised to receive orders and act for him.

The Contractor shall provide all staff that is necessary for proper setting out, supervision, execution and measurement of the work in full compliance with the Contract. Persons employed to supervise the work shall have adequate qualification and experience of similar works and shall be able to supervise the work to the satisfaction of the Engineer.

The Engineer shall be at liberty to the object to and require the Contractor to remove from the works any person employed by the Contractor in or about the execution of the works who in the opinion of the Engineer misconducts himself or is incompetent or negligent in the proper performance of his duties. Such person shall not be re - employed in connection with the contract without the written permission of the Engineer.

**107.07 Co - operation between Contractors :-**

If separate Contracts for pavement, grading, structures, or for supplying materials are let within the limits of any one project, the Contractors working on the same project, shall co - operate with each other and in case of any dispute among them, the Engineer shall be the referee and his decision shall be final and binding on all. Each Contractor shall assume all liability, financial or otherwise in connection with his contract and he shall not be entitled to any consideration or compensation from the Department for any inconvenience, delay, or loss experienced by him because of the presence and acts or defaults of other contractors working within the limits of the same project.

The Contractor shall as far as possible arrange his work and shall place and dispose of the materials being used so as not interfere with the operations of the other contractors within the limits of the same project. He shall coordinate his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others, all as directed by the Engineer.

**107.08 Co - operation with utilities :-**

The Contractor shall co - operate with the authorities responsible for water mains, gas mains, sewers, electric lines and cables, telegraph and

telephone lines, service connection and all other utility appurtenances which are to be relocated or moved in accordance with the special provisions. The Contractor shall have considered in his bid all the permanent and temporary utilities in their present or re - located positions, and no additional compensation will be allowed for any delays, inconvenience, or damage sustained by him due to any interference from the said utility appurtenances or the operations of moving them.

#### 107.09 Departmental representative :-

The Engineer during his absence on the work shall be represented by one of his subordinates whose duties in relation to the Contractor shall be confined to ensuring that the work is performed in conformity with the plans and specifications in all respects. He shall communicate to the Contractor the instruction and directions of the Engineer on all questions relating to the work, and the Contractor shall comply with such instructions and directions. He shall request the Contractor in writing to suspend the performance of any part of the work, if, in his judgement, the Contractor is deviating from the plans and specifications in spite of his instructions and the Contractor shall comply.

The Departmental representative shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract nor except as expressly provided hereunder to order any work involving delay or any extra payment by the department nor to make any variation of or in the works.

The Engineer may from time to time in writing delegate to the Engineer's representative any of the powers and authorities vested in the Engineer and shall furnish to the Contractor a copy of all such written delegations of powers and authorities. Any written instruction or written approval given by the Engineers' representative to the Contractor within the terms of such delegation (but not otherwise) shall bind the Contractor and the Engineer as though it had been given by the Engineer, provided always as follows.

- a) Failure of the Engineers' representative to disapprove any work or material shall not prejudice the power of the Engineer thereafter to disapprove such work or material and to order the pulling down and removal or dismantling thereof.
- b) If the Contractor shall be dissatisfied by reason of any decision of the Engineer's representatives he shall be entitled to refer the matter to the Engineer who shall thereupon, conform reverse or vary such decision

#### 107.10 Construction stakes :-

Construction stakes will be set to mark the general location, alignment, elevation and grade of the work. The Contractor shall assume full responsibility for dimensions and elevations measured from such stakes. He shall exercise proper care in the preservation of stakes set for his use or the use of the Engineer, and if he displaces, loses or removes them during his operations, they shall be reset at his expense.

The Contractor shall furnish at his expense stakes of required size, quality and quantity, necessary for setting the stakes. If he fails to furnish any of these at the time and place specified, the Engineer may purchase necessary stakes and employ departmental labour to set the stakes, and the cost of the stakes shall be debited to the Contractor's account. The Contractor shall at the request of the Engineer furnish the necessary labour to set the stakes and make the necessary measurements. He shall be reimbursed for the actual cost of such labour, actual cost to include the time actually engaged on such work, but not include profit, over head charges, or rental charges for tools or other equipment.

#### 107.11 Detailed setting out :-

The Contractor shall be responsible for the timing of the execution of the work proper setting out of the works and for the correctness of the position, levels, dimensions and alignments of all parts of the works and for the provisions of all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of the works any error shall appear or arise in the position, levels, dimensions or alignment of any part of the works the Contractor on being required to do so by the Engineer shall at his own expense rectify such error to the satisfaction of the Engineer unless such errors are based on incorrect data supplied in writing by the Engineer in which case the expense of rectifying the same shall be borne by the Department. The checking of any setting out by the Engineer shall not in any way relieve the Contractor of his responsibility for the correctness thereof.

The Contractor shall be responsible for the proper maintenance of all reference pillars, bench marks stakes and other evidences existing in the field required in connection with the setting out of works at his own cost till physical completion of all items of the works or prior to that if agreed to by the Engineer. The stakes etc., shall be removed at Contractor's cost when no longer required.

The work of establishing all Bench marks shall be carried out only by the experienced staff of the Contractor with the help of precision instruments suitable for the work. The instruments used shall be checked for their accuracy and for permanent adjustments before the commencement of the work and also at frequent intervals during the progress of the work.

For the lay - out, work and establishing the centre line of the bridge or structure, only steel tape shall be utilised throughout the work and where work is done by traversing, the traverse shall be closed. In case of minor errors these should be corrected by interpolation and the layout and the Centre line pillars got approved by the Engineer.

#### **107.12 Unauthorized Excavation :-**

The Contractor shall make excavation for obtaining any material at locations designated in the plans and specifications or as directed by the Engineer.

#### **107.13 Inspection :**

All materials and each part or detail of the work shall be subject at all times to inspection by the Engineer, and the Contractor will be held strictly to the true intent of the specifications in regard to quality of materials, workmanship, and the diligent execution of the contract. The Engineer shall be allowed access at all times to all parts of the work and to places of storage or manufacture, and shall be furnished with such information and assistance by the Contractor as required to make a complete and detailed inspection.

All works shall be subject to examination and approval by the Engineer. The Contractor shall give due notice to the Engineers or his authorised representatives when each stage of work is ready and the Engineer or his authorised representatives shall, without delay attend for the purpose of examining and approving such works.

#### **107.14 Uncovering for inspection :-**

The Contractor shall, if the Engineer requests, remove or uncover such portions of the finished work as the Engineer may direct before the final acceptance of the same. After such special examination, the Contractor shall restore them to the standard required by the specification. If no instructions of the Engineer were contravened in covering up the work, and if the work on being exposed and examined proves acceptable, the

cost of uncovering and of restoration shall be paid for as extra work but if the work proves unacceptable, the cost shall be borne by the Contractor.

No additional compensation shall be made for removing, uncovering replacing any portion of the work in connection with inspection.

If the Contractor fails to uncover or having uncovered fails to restore within the time stipulated by the Engineer, he may employ other workmen for these operations, and debit the Contractor with the cost of uncovering and restoration if the work proves unacceptable.

If the Engineer, having been notified by the Contractor of the fact of uncovering for inspection, fails to inspect within a reasonable time, and the Contractor fears that continued exposure may be detrimental to the work, the Contractor may cover it up again, and any further uncovering for inspection shall be done at the cost of the Department.

#### **107.15 Removal of defective and unauthorised work :-**

The Engineer may reject at any stage before final acceptance any work that he considers to be not in conformity with the plans and specifications, or any extra work done without authority and such work will not be measured and paid for.

All work which has been rejected shall be remedied or removed and replaced promptly in an acceptable manner by the Contractor at his own expense. Upon failure on the part of the Contractor to comply with any order of the Engineer under the provisions of this article a written notice shall be issued by the Engineer to the Contractor demanding compliance with a stipulated time. If the Contractor continues to default till the expiry of the period of notice, the Engineer shall have the authority to cause defective work to be remedied, or removed and replaced or to cause unauthorised work to be removed, through other agencies and to recover the cost thereof from the Contractor.

In lieu of rejecting work done or materials furnished not in conformity with the Contract, the Engineer may allow such work or materials to remain, provided the Engineer is satisfied with the quality of the materials, or the strength and structural safety of the work, and in that case shall make such deduction for the difference in value, as in his opinion may be reasonable on the written certificate of the Engineer.

#### **107.15 Final inspection :-**

The Engineer shall make final inspection of all work included in the Contract, or any portion thereof, or any completed structure forming part

of a project, as soon as practicable after notification by the Contractor that the work is completed and ready for acceptance. If the work is not acceptable to the Engineer at the time of such inspection, he shall inform the Contractor in writing as to the particular defects to be remedied before final acceptance can be made.

**107.17 Maintenance during observation period :-**

Work entrusted on lump sum contract system and works entrusted on piece work agreements or maintenance works shall be under observation for a period of 6 and 3 months respectively the period of observation commencing from the date of last check measurement. The Contractor shall maintain the work in a satisfactory condition during the period of observation at his own cost. On expiry of the said observation period or on remedying defects that appear during the observation period whichever happens last, the amount deposited by the Contractor as 'Security deposit' together with the amount withheld from the final bill will be repaid to the Contractor in conformity with schedule under article 110, 10 of PS to SSRB.

**107.18 Defects appearing after acceptance :-**

Any defects which may appear within the observation period and arising, in the opinion of the Engineer, from lack of conformance with plans and specification, shall, if so required by the Engineer in writing be remedied by the Contractor at his own cost within the time stipulated by the Engineer. If the Contractor fails to comply, the Engineer may employ other agencies to remedy the defects, and recover the cost thereof from the dues of the Contractor.

The Contractor shall search for the cause of any defect, imperfection or fault if required by the Engineer in writing. When the defect, imperfection or fault for which the Contractor is not liable under the Contract the cost of the work carried out by the Contractor in searching as aforesaid shall be borne by the Department. But if such defect, imperfection or default shall be one for which the Contractor is liable as aforesaid, the cost of the work carried out in searching as aforesaid shall be borne by the contractor and he shall in such case repair, rectify and make good such defect, imperfection or default at his own expense. Where the fault is due to reason other than that of the contractor the rectification shall be done at the cost of the department.

**PS : 108 RESPONSIBILITIES AND LIABILITIES OF THE CONTRACTOR**

**108.01 Explanation :-**

This article sets forth the responsibilities which the Contractor shall assume, in addition to those mentioned in other sections of this preliminary specification, under every contract which he enters into for executing works for the Department and he shall therefore calculate his unit prices for schedule items of work accordingly.

**108.02 Laws to be observed :-**

The Contractor shall at all times observe and comply with all Union and State laws, local laws, ordinances and regulations which in any manner affect the conduct of the works and all such orders as exist at the present and which may be enacted in the future by legislative bodies or tribunals having legal jurisdiction or authority over the work, and no place of misunderstanding or ignorance thereof will be considered. He shall indemnify and save harmless the Government and all its officers, agents, employees and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree whether by himself or by his employees.

He shall also ensure that no attachments are made against materials or work forming part of or for the use of the contract.

All scaffolding, runways, hoists and other temporary construction shall comply with all pertinent requirements of Union and State laws, local laws, ordinances and regulations.

**108.03 Interference with traffic and adjoining property :-**

This article defines the Contractor's responsibility with regard to providing for the passage of traffic during construction.

The Contractor shall notify the Engineer at the earliest possible date, of the starting of any construction work which might in any way inconvenience or endanger traffic. Under no circumstances shall any road be closed to traffic without the previous written permission of the Engineer. The Contractor shall give the Engineer sufficient notice in writing of the need to close any road so that he may take action under Tamil Nadu

Traffic Rules, where the road is to be partially closed, temporary detours or diversion shall be made and maintained for traffic in conformity with article 105.06 of PS to SSRB. All such diversions shall be provided with necessary road signs and all such signs shall be clearly visible at a distance of 150 metres from the diversion. All such signs shall be erected in conformity with departmental standards and as directed by the Engineer. All diversions shall be clearly marked by white washed stones or other such means.

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to traffic and he shall have under construction no greater length or amount of work than he can prosecute properly with due regard to the rights of the public to the use of the highways. Where existing roads are not available for use as detours, unless otherwise provided in the special provisions, all traffic shall be permitted to pass through the work with as little inconvenience and delay as possible.

Convenience of abutting owners along the road shall be provided for as far as practicable. Convenient access to driveways, houses, and buildings along the time of the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition.

At locations where traffic is being routed through construction during grading operations, roadway excavation and the construction of embankment shall be conducted in such a manner as to provide a reasonably smooth and even surface satisfactory for the use of public traffic at all times; and if ordered by the Engineer, roadway cuts should be excavated in lifts and embankments constructed part at a time, construction being alternated from one side to the other and traffic routed over the side opposite the one under construction. Culverts installation or construction shall be conducted on but one half the width of the travelled way at a time and that portion of the travelled way being used by traffic shall be kept open and unobstructed until the opposite side of the travelled way is ready for use by traffic. The road bed shall be sprinkled with water if necessary, to prevent dust nuisance. Upon completion of the rough grading, the surface of the road bed shall be brought to a smooth even condition free from humps and depressions and made satisfactory for the use of traffic. While sub grade and proving operations are underway, traffic shall be permitted to use the shoulder and if half with having methods are used, the side of the road opposite the one under construction.

When all traffic is to be maintained over any part of the carriageway or shoulders during construction, the Contractor shall furnish and place barricades, signs, lights and other adequate warning devices to protect the work properly and to provide for the safety and convenience of the travelling public in accordance with the departmental type designs and as directed by the Engineer. The Contractor shall maintain constantly such barricades, signs and lights from the date of the closing of the road until such time as, in the judgement of the Engineer, they are no longer necessary.

The Contractor will be held responsible for all damages to the work due to failure of barricades, signs, lights and watchmen to protect it, and whenever evidence of such damage is found prior to acceptance, the Engineer may order the damaged portion immediately removed and replaced by the Contractor without cost to the Government if in his opinion, such action is justified. The Contractor's responsibility for the maintenance of barricades, signs, and lights shall not cease until the project shall have been accepted, after completion.

The suspension of operations, by order of the Engineer, or otherwise, shall in no way relieve the contractor of the obligation of providing and maintaining barricades, signs and lights as set forth above.

In order that all unnecessary delay to the travelling public may be avoided, where ordered by the Engineer, the Contractor shall provide and station competent flagmen whose sole duties shall consist of directing the movement of traffic either through or around the work.

Flagmen and guards, while on duty and assigned to traffic control, shall be in khaki uniform and equipped with red flags, and shall perform their duties all in accordance with the requirements of any manual issued or to be issued by the Department.

At locations where traffic is being routed through construction under one way controls and when ordered by the Engineer, the movement of the Contractor's equipment from one portion of the work to another shall be governed in accordance with such one way controls. When a section of surfacing or pavement or a structure has been completed, it shall be opened to use by public traffic at the request of the Engineer, and no additional compensation will be allowed to the contractor due to any inconvenience caused by the use of the surfacing or pavement by traffic during the finishing of shoulders or performing any other necessary work outside of the carriageway.

Full compensation for all work involved in providing for the convenience of traffic as set forth in this article shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made therefor save as laid down in PS : 105 - 06.

#### **108.04 Public safety :-**

This article defines the contractor's responsibility with regard to providing for the safety of the public during construction.

The Contractor shall furnish, erect, and maintain such fences, barriers, lights, and signs as are necessary to give adequate warning to the public at all times that the highway is under construction and of any dangerous conditions to be encountered as a result thereof in accordance with any departmental type designs or as directed by the Engineer. At any and all points along the work where the nature of construction operations in progress and the contractor's equipment and machinery in use is of such character as to endanger passing traffic, the contractor shall provide such lights and signs and station such guards as may appear necessary to prevent accident and avoid damage or injury to passing traffic.

No material or equipment shall be stored where it will interfere with the free and safe passage of traffic. At the end of each days work and at other times when construction operations are suspended for any reason, the contractor shall remove all equipments and other obstruction from that portion of the road open for use by traffic. Full compensation for the work involved in carrying out the precautionary and safety measures above specified shall be considered as included in the prices paid for the various contract items of work and no additional allowances will be made therefor.

#### **108.05 (a) Accidents :-**

The Department shall not be liable for or in respect of any damages or compensation payable at law in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the Contractor or any sub - contractor, save and except an accident or injury resulting from any act or default of the Department, and the contractor shall indemnify and keep indemnified the Department against all such damages and compensation (save and except as aforesaid) and against all claims, demands, proceedings, costs charges and expenses whatsoever in respect thereof or in relation thereto. Where the provisions of the

workman's compensation act apply, the contractor would provide proper coverage of insurance against any claims thereunder.

It shall be the Contractor's sole responsibility to protect the public and his employees against accident from any cause and he shall save, harmless and indemnify the department against all claims for damages to the public or private property and for injuries to persons during the progress and to the completion of the work in case of accident.

Within 24 hours of the occurrence of an accident which results in the death or which is so serious as in all probability to result in the death of any workman employed by the contractor, he shall intimate in writing to the officer in immediate charge of the work and to the Engineer, the fact of such accident. The Contractor shall indemnify the Government against all loss or damage sustained by it resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the Government as a consequence of its failure to give notice under the workmen's compensation act or otherwise conform to the provisions of the said act in regard to such accident.

The Contractor shall at his own expense arrange for the safety provision as required by the Labour Acts and rules in respect of all labour directly or indirectly employed for performance of the works and shall provide all facilities in connection therewith. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid, the Engineer shall be entitled to do so and recover the costs thereof from the Contractor.

#### **108.05 (b) First aid and medical facilities :-**

At every workplace, the Contractor shall maintain in a readily accessible place first aid appliances (including an adequate supply of sterilized dressings and sterilized cotton wool as prescribed in the factory rules of the state). The appliances shall be kept in a clean and orderly condition and should cover any foreseeable accidents connected with the type of work being performed. They shall be placed in charge of a trained employee who shall be readily available during working hours and capable of administering the first aid.

At large workplaces, where hospital facilities are not available within easy reach, first aid posts shall be established and be run by a trained compounder.

Where large work places are remotely situated and faraway from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees.

#### 108.06 Responsibility for claims towards damages :-

The contractor shall indemnify and save harmless the Government, its officers and employees, from all suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person or persons, or property account of the operations of the Contractor, or on account of or in consequence of any neglect in safeguarding the work, or through use of unacceptable materials in constructing the work or because of any act or omission, neglect or misconduct of the said contractor or because of any claims or proceedings for or on account of or amounts recovered for any infringement of patent, rights, design, trademark, copy right, name or other protected rights in respect of any constructional plant, machine, work or material used for or in connection with the works or temporary works or any of them and from and against all claims, demands proceedings damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto or from any claims or amounts arising or recovered under the workmen's compensation act, or any other law, ordinance order or decree and so much of the money due to the contractor under and by virtue of his contract as shall be considered necessary by the Engineer for such purposes may be retained for the use of the Government.

The Government shall not be liable to the contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.

The Contractor guarantees, the payment of all just claims for labour and materials furnished to him or his sub - contractors in connection with the contract and his liability will not be released by final acceptance and payment by the Engineer unless all such claims are paid or released.

The Contractor shall at all times indemnify the Department against all claims, damages, or compensation under the provisions of payment of wages act, 1936, Minimum wages act 1948, Employees Liability Act 1938, Industrial Dispute Act 1947, The maternity benefit act 1961, the Contractor Labour regulation and abolition act 1970, or any modifications thereof or any other law relating thereto and rules made there under from time to time.

#### 108.07 Use of Explosives :-

In the event explosives are used in the prosecution of the work, the contractor shall observe the utmost care and shall limit the number and size of the charges so as not to endanger life and property. All explosives shall be stored in a secure manner and all such storage places shall be marked clearly "Dangerous Explosives" and shall be in care of competent watchmen at all times. The methods of use, storing and handling of explosives and highly inflammable materials shall conform with all of the Government and local laws, and regulations.

#### 108.08 Protection and restoration of property :-

If corporate or private property interferes with the work, the contractor shall notify in writing the owners of such property, advising them of the nature of the interferences and shall arrange with them for the disposition of such property. The Contractor shall furnish the Engineer with copies of such notifications and final agreements.

The contractor shall take every precaution to prevent the damage or destruction of corporate or private property including buildings, poles, trees, shrubbery, crops, other public utilities and fences adjacent to the work; also all overhead structures such as wires, cables etc., and all underground structures such as water pipes, gas pipes, meters and accessories, conduits etc., within or adjoining the right of way. He shall protect and carefully preserve all official survey monuments, bench marks, boundary stones etc., until the owner or an authorised agent has witnessed or otherwise referenced their location or relocation. The contractor shall notify the Engineer of the presence of any such survey or property monuments as soon as they are discovered.

The contractor shall be responsible for the damage or destruction of property of any character resulting from any of his acts or defaults or from defective work or materials and such responsibility shall not be released until the work is completed and accepted.

Whenever public or private property is damaged or destroyed, the contractor shall at his own expense restore such property to a condition similar to or equal to that existing before such damage or injury was done, or he shall otherwise make good such damage or injury in the acceptable manner. If he fails to do so, the Engineer may, after the expiration of a

period of 48 hours after giving notice to him in writing, proceed to repair, rebuild or otherwise restore such property as may be deemed necessary, and the cost thereof shall be recovered from the contractor.

**108.09 Archaeological finds :-**

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest found in excavating or pulling down shall be the property of the Government and shall be handed over to the Engineer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and carryout at the expense of the department, the Engineer's direction as to the disposal of the same.

**108.10 Contractor's responsibility for work :-**

From commencement to completion and upto the expiry of observation period, the work shall be under the charge and care of the contractor and the contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage and shall be liable for any damage or loss that may happen to the works or any part including the departmental tools and plant thereof from any cause whatsoever and shall at his own cost repair and make good the same so that at completion and expiry of observation period, the work shall be in good condition and in conformity in every respect with the requirements of the contract and instructions of Engineer.

Provided however that the Contractor shall not be liable for all or any loss of damage occasioned by or arising out of hostile acts, warlike operations, or invasion by foreign enemies rebellion or civil war. The Contractor shall arrange to insure the work against any loss or damage due to natural calamities like unprecedented rains, floods, cyclone, fires, lighting, earthquake, volcanic eruption or other convulsions of nature.

**108.11 Camps for workers :-**

The Contractor shall provide at his expense temporary camps for housing workers as directed by the Engineer.

**108.12 Water and lighting :-**

The contractor shall provide at his expense water and lighting as required from municipal mains or other sources for use of the works and

workmen, unless otherwise agreed upon in writing, with the Engineer. The water for the works shall be, so far as practicable, free from earthy, vegetable, or organic matter, and from salts or other substances likely to prove harmful to the work.

**108.13 Health and Sanitation :-**

The Contractor shall erect, prior to the commencement of work, sufficient latrines for the use of workers, male and female, and shall keep the same disinfected and clean at all times during the progress of the works, and shall remove the same, disinfect the ground, and make good all damage, on the completion of the works. The Contractor shall also provide such other amenities for workers in accordance with schedule D.

**108.14 Night and holiday work :-**

Subject to any provisions to the contrary contained in the contract, no work shall be carried out during nights or on Sundays or on authorised holidays without the permission in writing of the Engineer except when the work is unavoidable or absolutely necessary for the safety of life, property or works, in which case the Contractor shall immediately advise the Engineer accordingly, provided always that the provisions in this clause shall not be applicable in the case of any work in which it is customary to carryout in shifts. If the Engineer grants such permission, the Contractor shall not be entitled to any additional payment.

**108.15 Illegal practices :-**

The Contractor shall not offer or give or agree to give to any person in Government service any gift or consideration of any kind as an inducement or reward for doing or for bearing to do or for having done or for borne to do any act in relation to the obtaining or execution of this or any other contract for the Government or for showing or for bearing to show favour or disfavour to any person in relation to this or any other contract for the Government.

Any breach of this condition by the Contractor or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Contractor) in relation to this or any other contract for the Government shall entitle the Department to determine the contract.

Any dispute or difference of opinion arising in respect of either the interpretation, effect of application of this condition shall be decided by the Chief Engineer of the department, whose decision shall be final and conclusive.

**108.16 Admission to the site :-**

The Contractor shall take all reasonable steps to ensure that no alien or person of dual nationality shall be admitted to the site of the work, unless the prior permission in writing of the Engineer has been obtained.

The Engineer shall have the power to exclude from the site any person whose admission thereto may in his opinion be undesirable for any reason whatsoever.

The Decision of the Engineer upon any matter arising under the provisions of the Article shall be final and conclusive.

**108.17 Photographs:-**

No photographs of the site or of the work or any part thereof shall be taken except with the permission in writing of the Engineer and no such photographs shall be published or otherwise circulated without the like permission.

**108.18 Training of Apprentices :-**

The Contractor shall during the currency of the contract when called upon by the Engineer engage and also ensure engagement by Sub - Contractors in connection with the works, such categories and such number of apprentices and for such period as may be required by the Engineer.

The Contractor shall train them as required under the apprentices act 1961 and shall be responsible for all obligations of the department under the act including the liability to make payment to apprentices, as required under the Act.

Category of apprentices and number to be employed shall be as per the following table.

Value of contract	Category	No. to be appointed.
Rs.1.00 lakh and upto Rs.3.00 lakhs.	1. Building Constructor	1
	2. Brick layer	1
Rs.3.00 lakhs and upto Rs.10.00 lakhs	1. Building Constructor	1

Value of contract	Category	No. to be appointed.
	2. Brick layer	1
	3. Diploma Holder in Civil Engineering	1
Above Rs.10.00 lakhs.	1. Building Constructor	1
	2. Brick Layer	1
	3. B.E. (Civil) or equivalent Degree holder.	1

This however may be subjected to modification from time to time and may be incorporated as special condition to be attached to Tender form / Agreement.

**108.19 Changes in constitution of contracting agencies.**

Where the contractor is a partnership firm, the prior approval in writing of the accepting authority shall be obtained before any change is made in the constitution of the firm.

Where the Contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the Contractor enters into any partnership agreement whereunder the partnership firm would have the right to carryout the work here by undertaken by the Contractor.

If the prior approval as aforesaid is not obtained, the contract shall be liable for termination.

**108.20 Subletting of the contract :-**

If the contractor sublets the whole or any part of the work to be done under this contract, he shall not under any circumstances be relieved of his liabilities and obligations. All transactions of the Engineer shall be with the contractor ; It is obligatory on the part of the sub contractors to carryout the orders of the Engineer or his representative treating the work as carried out by the main agency itself.

Sub contractors shall be recognised only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competence.

The contractor shall not assign, transfer, convey, sell, or otherwise dispose of the whole or any part of his contract his right, title, or interest therein, or his power to execute such contract, to any person, firm, partnership or corporation without written consent of the Engineer.

## PS : 109 PROSECUTION AND PROGRESS

### 109.01 Commencement of work.

Within 10 Calenders days from the date on which notice, " that the site is thereby handed over to him", is served on the contractor he shall commence the work. The contract time shall start on the date on which the contractor shall start construction operations, or preparatory work and in any event, not later than the 10th day from the date on which the above notice is served on the contractor.

The contractor shall under no circumstances be entitled to claim any damages from the Government if he incurse any expense or liabilities under the contract before the date of commencement defined above. He shall have the right to withdraw from the contract and obtain only re-fund of his earnest money and security deposit if intimation of handing over the site is delayed more than a period of 60 days from the date of acceptance of the agreement by competent authority.

The contractor shall not be permitted to enter on (other than for inspection purposes) or take possession of the site until it is handed over. The portion of the site to be occupied by the Contractor shall be defined and or marked on the site plan, failing which these shall be indicated by the Engineer and the Contractor shall on no account be allowed to extend his operations beyond these areas. In respect of land allotted for the purpose of accommodation of labour, erection of temporary workshops, stores, etc., storage of materials and like, the Contractor shall pay the rent for use and occupation in respect of such and every separate area of land allotted to him as indicated in tender documents. The temporary structures put up shall be removed and site cleared at the expense of the Contractor within 30 days of the completion of the work.

The contractor shall provide, if necessary or if required, on the site all temporary access there to and shall alter, adopt and maintain the same as required from time to time and shall clear them away and make good all damages done to the site within 30 days of the completion of the part of the work.

### 109.02 Suspension of work :- \*

The Engineer shall have authority to suspend the work, wholly or in part, for such period of time as he may deem necessary due to unsuitable

weather or such other conditions as are considered unfavourable for the satisfactory prosecution of the work; or for such time as is necessary by reason of failure on the part of the contractor to carry out orders given, or to perform any or all provisions of the contract, and no additional compensation, shall be paid to the Contractor because of such suspension. In the event of such suspension of work, the contractor shall store all materials in such manner that they will not obstruct or impede the travelling public unnecessarily or become damaged in anyway, and he shall take every precaution to prevent damage or deterioration of the work performed, provide suitable drainage of the roadway, and erect temporary structures where necessary. The Contractor shall not suspend work without written authority.

In the event of unsuitable weather or such other conditions as are considered unfavourable for the satisfactory execution of the work, the contractor shall bring it to the special notice of the Engineer for specific orders.

If the suspension is ordered taking into consideration unsuitable weather or such other conditions as are unfavourable for the satisfactory execution of the work, the Contractor shall be entitled to reasonable extension of time only.

#### 109.03 Extension of contract time for completion :-

The time for completion of the work contemplated will be specified in the proposal and contract and it is understood that the completion of the work within the time specified is an essential part of this contract. If any delay in the completion of the works is likely to be caused by reason of any of the following circumstances, viz.

- a) the execution of any modified or additional work.
- b) delay caused by any written instructions issued by the Engineer.
- c) any act or default of the Engineer including failure to issue necessary instructions upon written request from the Contractor.
- d) any expected risks under P. S. 108.10
- e) any circumstances which are wholly beyond the control of the contractor and unavoidable.

The Contractor shall immediately upon the occurrence of the alleged cause of delay give notice thereof in writing to the Engineer and he shall be allowed a reasonable extension of time for completion in respect of any

delay caused by any above mentioned circumstances. In assessing any extension of time, account shall be taken of the effect of the omission of any work. Any extension of further extension of time under the provisions hereinbefore contained may be allowed notwithstanding that the Contractor has failed to give notice of the cause thereof or that the date for completion may have passed, or that the work may have been completed.

In case where the Engineer under the terms of the contract with the Contractor is liable to supply any materials, articles, or things to the Contractor for the performance by him, of his part of the contract, the Engineer may at his absolute discretion extend the time within which such materials, or articles or things may be supplied by the Engineer and the Engineer may supply to the Contractor such materials, articles or things within the time so extended without any liability on Engineer's part to compensate the contractor by reason of the extension of time for the supply of the materials, articles or things.

#### 109.04 Rescinding the contract by the Engineer.

In case where the Engineer under the terms of the contract is liable to supply any materials, or articles, or things to the contractor for the performance by him of his part of the contract and the Engineer for any reasons is unable to supply such materials, articles or things either within the time specified or within the extended time as per article 109.03, of PS to SSRB, the Engineer may by himself or at the request of the Contractor rescind the whole or any part of the contract which cannot be performed by reason of the failure to supply such materials, articles or things and the contractor shall not be entitled to claim any damages or compensation in respect of such rescinding. The Contractor shall however be paid the value of the work already done by him and the cost of the materials, articles or things if any collected by him upto the date of such rescinding and left unused on the work spot. (Which shall be taken over by the Engineer) either at the contract rates or at values deduced from through rates included in the contract, when the contract is rescinded at the discretion of the Engineer, he shall give notice in writing to the contractor and the decision of the Engineer to rescind to the contract shall be final and binding on the contractor.

Explanation (i) : The expression 'through rates' mean the rates for finished items of work or the all-in rates that is to say the rates for finished items of work inclusive of the cost of materials and labour.

- (ii) Things include land acquisition also.

**109.05 Determination of contract due to default or failure of the Contractor.**

The Engineer may without prejudice to his rights against the Contractor in respect of any delay or inferior workmanship or otherwise, or to any claims for damage in respect of any breaches of the contract and whether the date for completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases.

(a) If the contractor, having been given by the Engineer a notice in writing to rectify, reconstruct or replace any defective work or a notice in writing that the work is being performed in an inefficient or otherwise improper manner or that the commencement of the work is being delayed or that the execution of the work is being delayed has been suspended so that, in the judgement of the Engineer, the Contractor will be unable to secure the completion of the work by the date for completion or he has already failed to complete the work by that date, shall omit to comply with the requirements of such notice for a period of seven days thereafter, such notice shall not be unreasonable or vexatiously given, and must signify that it purports to be a notice under the provisions of this Article, and must specify the act or default on the part of the Contractor upon which it is based. If the Contractor fails to comply with the provisions of the Apprenticeship Act the competent authority may at his discretion determine the Contract.

- b) i) If the contractor being an individual, or where the Contractor is a firm or any partner in that firm, shall at any time become bankrupt, or shall have a receiving order made against him or shall make any composition or arrangement with or for the benefit of his creditors, or shall make any conveyance or assignment for the benefit of his creditors or shall purport to do so or
- ii) If the Contractor, being a company, shall pass a resolution, or the court shall make an order that the company be wound up, or if a receiver or manager on behalf of a creditor shall be appointed, or if circumstances shall arise which entitle the court or a creditor, to appoint a receiver or manager or which entitle the court to make a winding up order.
- c) If the Contractor's name be removed from the Register of Contractors whether temporarily or permanently.

- d) If the Contractor shall have failed to comply with PS: 108.16, and if the Engineer shall decide that such failure is prejudicial to the interest of the Government.
- e) If the Contractor shall have committed any breach of the provisions of PS: 108.15.

Provided always that such determination shall not prejudice or affect any right of action or remedy which shall have accrued or shall accrue thereafter to the Engineer.

- f) If the Contractor dies, becomes insane or is imprisoned.

Provided further that after the notice under condition (a) herein shall have been served on the Contractor, he shall not be at liberty to remove from the site of the work or from adjoining ground any plant materials, and equipment belonging to his and placed thereon for the purpose of the work, and the Engineer shall have a lien upon all such items and all infrastructure facilities subsisting from the date of such notice until the notice shall have been complied with. The Engineer shall have power to post watchman at the site of the work and on the ground contiguous thereto to prevent the removal of any plant materials and equipment upon which the Engineer shall have a lien.

**109.06 Forfeiture and partial determination:-**

Notwithstanding the failure of the contractor to comply with the notice served on him under PS 109.05 (a) herein, the Engineer may in his discretion permit the contractor to proceed with the work in conformity with the contract. Such permission shall carry with it the forfeiture of a sum of money not exceeding 5 percent of the total contract amounts provided however that this forfeiture may be modified or revoked by a superior authority. Such permission with levy forfeiture, will not amount to rendering any delay on the part of the contractor nor invalidate any of the provisions of the contract.

It shall be a right of the Engineer under this paragraph to determine any part of the contract and to proceed with the execution of the relative portion of the work through any other agency in order to maintain the rate of progress stipulated in the contract. Such omission shall not be waiver of any condition of the contractor nor invalidate any of the provisions thereof. The Contractor shall diligently proceed with the portions of work left to him and payment of money due or may become due shall only be made after deducting therefrom the extracost as ascertained by the Engi-358/2-5.

neer that may be involved in executing parts of the work through other agency. The decision of the Engineer in this respect will be final and conclusive.

**109.07 Provisions in case of absolute determination of contract**

If the Engineer shall in the exercise of the power contained in PS: 109.05 and for any of the reasons set forth in paragraphs (a) to (f) therein determine the contract, then the following provisions shall take effect.

a) The earnest money taken as security and additional security deposit at the time of execution of the agreement shall stand forfeited to the Government.

b) The total amount with hold under PS : 110 -10 and the value of such work as may have been executed but not paid for and all other sums of money that may then be due or becoming due from the department to the Contractor shall cease to be due or become due.

c) The Engineer shall enter upon and take possession of the site, all the infrastructure facilities provided by the Contractor for purpose of execution of the work and of all materials, tools, plant and equipment there on. The Engineer may take all appropriate steps and do all other acts requisite for the completion of the work and or may employ other Contractors to complete the same, and the Contractor shall have no claim whatsoever in respect of such action by the Engineer.

d) The Contractor shall, if required by the Engineer assign to him without further payment, the benefit of any sub - contract or sub - contracts he may have made in connection with the contract and the Engineer shall pay to any such person or persons the price (or the balance thereof remaining unpaid) which the Contractor may have agreed to pay there under.

**109.08 (e) Upon completion of the work the Engineer shall certify the cost of completion, which shall include :-**

i) The cost of any materials purchased and labour provided to secure completion of the work, including the making good of any defects and faulty work, together with the addition of such percentage to cover supervision and establishment charges as may be decided by the Engineer.

ii) the cost of work executed by other Contractors to secure completion of the work, including the making good of any defects and faulty work of

the portion of the work executed by the Contractor whose contract has been determined.

iii) the cost of maintenance of the portion of the work completed by the Contractor whose contract has been determined.

**109.09 Rights and Liabilities :-**

After termination of the contract in full, the Engineer shall determine what amount, if any, is recoverable from the contractor on completion of the works or in case the work or part of the work is not to be completed, the loss or damage suffered by the Department. In determining this amount, credit shall be given to the Contractor for the value of the work executed by him upto the time of cancellation, the value of Contractor's materials taken over and incorporated in the work, and use of machinery belonging to the contractor.

Any excess expenditure incurred or to be incurred by the Department in completing the works or part of the works or the excess loss or damage suffered or may be suffered by the Department as aforesaid after allowing such credit shall be recovered from any moneys due to the contractor on any account, and if such moneys are not sufficient, the contractor shall be called upon in writing to pay the same within 30 days of the notice given to that effect by the Engineer.

If the contractor fails to pay the sum within the aforesaid period of 30 days, the Engineer shall have the right to sell any or all of the Contractor's unused materials, constructional plants implements, temporary buildings etc., and apply the proceeds of sale there of towards the satisfaction of any sums due from the Contractor under the contract and in accordance with the provisions.

Any sums in excess of the amounts due to the Department and unsold materials, constructional plant, etc., shall be returned to the Contractor.

For the cases covered under para 109.05 (f) and in the event the Contractor is declared to have become insolvent, payments shall be made and any unsold plant, materials and equipment shall be returned to the person or persons on titled to receive then and give a valid discharge.

The contractor shall be liable for recovery of salary at market rate for the apprentices to be trained for any pecuniary liability arising on account of any violation by him of the provisions of the Apprentice Act.

**109.10 Special powers of determination :-**

These powers shall be exercised in the event of complete stoppage or abandonment of whole or portion of work under the orders of Government.

a) The Engineer shall in addition to any other power enabling him to determine the contract, have power to determine the contract, at any time, by notice in writing to the Contractor, and upon receipt by the Contractor of the notice, the contract shall be determined but without prejudice to the rights of the parties accrued to the date of determination and to the operation of the following provisions of this article.

b) The Engineer shall as soon as practicable, and in any case not later than the expiration of three months from the date of such notice or of the period upto the date for completion, whichever is the shorter, give directions (with which the Contractor shall comply with all reasonable dispatch) as to all or any of the following matters, that is to say :-

i) the performances of further work in accordance with the provisions of the contract;

ii) the protection of the work executed under the contract in compliance with directions given under sub paragraph.

iii) the removal of all plant, temporary buildings and equipments and infrastructure facilities from the site.

iv) the removal of materials placed on the site,

v) the clearing of the site.

vi) any other matter arising out of the contract with regard to which the Engineer decides that directions are necessary or expedient.

c) The Engineer may at any time within the period referred to in paragraph (b) herein by notice in writing to the Contractor vary any direction so given or give fresh directions as to all for any of the matters specified in the fore going paragraph.

d) In the event of the determination of the contract under this Clause there shall be paid to Contractor, the net amount due ascertained in accordance with all the applicable provisions of P.S. 110 here of the including valuations in the same manner as increased or decreased quantities, extra work and omitted items.

The Contractor shall have no claim to any compensation or other payments whatsoever on account of any profit or advantage the might have derived from the execution of the work in full but which he did not derive in consequence of such termination of the works. He shall be paid at the contract rates for the work executed by him, including additional works such as clearing of site etc. that may be rendered necessary by such termination. He shall also be allowed reasonable payment as decided by the authority next higher in rank to the authority which accepted the tender for any expenses incurred by him on account of labour and materials, article or things collected but which could not be utilised on the works as verified by the Engineer. Such decision shall be final and binding on both parties.

There shall be deduction from any sum payable to the Contractor under this sub - clause the amount of all payments previously made to the Contractor in respect of the contract, and the Engineer shall have the right to retain any reserve accumulated in his possession at the date of determination until the final settlement of all claims made by the Contractor.

c) Any dispute or difference which may arise between the parties as to the carrying out of this clause as a consequence of stoppage or abandonment shall be referred to arbitration and the provisions with regard to arbitration in PS : 111 thereof shall apply.

## PS : 110. MEASUREMENT AND PAYMENT

### 110.01 Measurement of quantities :-

All work to be paid for at contract price shall be measured by the Engineer in accordance with the methods set forth in the relevant specifications.

For the purpose of calculating quantities the length of a cut, fill, subgrade, base course, or surface course, shall be measured along the centre line of the road; and the length of kerbs, shoulders, slopes, ditches and drains shall be measured along their centre lines.

Road materials which are specified for payment by volume in stacks shall be delivered and stacked in accordance with the plans and specifications or as directed by the Engineer and the contents of the stacks shall be taken as equal to the product of average length, breadth and height of the stacks.

Materials which are specified for payment by weight shall be weighed on a scale approved by the Engineer furnished by and at the expense of the contractor.

Quantities of material wasted or disposed of in a manner not called for under the contract, or rejected material whether placed or not or material placed outside of the lines indicated on the plans or given by the Engineer, or material remaining on hand after completion of the work will not be measured or paid for. No compensation will be allowed for hauling back rejected material.

The Contractor shall be present at the worksite so that the work executed may be measured or check measured by the Engineer's representative. Any such measurements or check measurements when performed and any differences arising thereon shall be duly recorded in the manner required by the Engineer's representative and the Engineer's decision shall be final and conclusive. The Contractor shall without extra charge provide assistance with every appliance other tools and labour necessary for measuring the work. If the Contractor fails to attend, the Engineer's representative shall have power to proceed to take such measurements or check measurements and in that case any decision of the Engineer shall

be final and conclusive and the cost of any labour engaged for the purpose shall be recoverable from the Contractor.

### 110.02 (a) Scope of payment :-

The Contractor shall accept compensation as herein provided, for furnishing all materials, labour, tools and equipment necessary for performing all work contemplated and covered under the contract; also for loss or damage arising from the nature of the work, or from the action of the element, or from any unforeseen difficulties which may be encountered during the execution of the work until the final acceptance by the Engineer and for all insurance, compensation and risks of every description connected with the execution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified, and for any infringement of patent trade mark, or copy right and for completing the work according to the plans and specifications.

All interim payments made to the Contractor shall be treated as advances in respect of LS contracts.

Payment on account for amount admissible shall be made by the Engineer for the sum to which the Contractor is considered entitled by way of interim payment for the following.

All work executed, after deducting therefrom the amounts already paid, the security deposit retention money and such other amounts as may be deductible or recoverable in terms of the contract.

The amount admissible shall normally be paid within ten days of the presentation of the bill.

### 110.02 (b) Unfixed materials :-

No payment or advance will be made for unfixed materials when the rates are for finished work in situ, unless expressly permitted by the Chief Engineer of the Department and the Contractor shall be entitled to be paid during the progress of the work 80 percent of the value of any materials which are in the opinion of the Engineer in accordance with the contract and which have been reasonably brought on to the site in connection therewith and are adequately stored and protected against damage by weather or other causes, but which have not at the time of the advance been incorporated in the work. When materials on account of which an advance has been made under this article are incorporated in the work, the amount of such advance shall be deducted from the succeeding payments to the extent incorporated in the work.

Any payment prior to final acceptance of the work by the Engineer shall in no way constitute an acknowledgement of the acceptance of the work, nor in any way prejudice or affect the obligation of the Contractor, at his expense, to repair, correct, renew or replace any defects of imperfections in the construction or in the strength or quality of the materials used in or about the construction of the work under contract and its appurtenances, not any damages due or attributable to such defects, which defects, imperfections or damage shall have been discovered on or before the final inspection and acceptance of the work. The Engineer shall be the sole judge of such defects, imperfections or damage and the Contractor shall be liable to the Government for failure to correct the same as provided herein.

No sums of money payable under the contract or any part thereof shall become due and payable if the Engineer so elects until the Contractor shall satisfy the Engineer that he has fully settled or paid for all materials used in or upon the work and labour done in connection therewith, and the Engineer, if he so elects, may pay any or all such bills, wholly, or in part, and deduct the amount or amounts so paid from any sums of money due to the Contractor.

In any case where the contractor shall claim that extra compensation, or an adjustment in unit prices, is due to him for work or material not clearly covered in the contract, or for which an adjustment is not provided in the specifications, the Contractor shall notify the Engineer in writing of his intention to make such claim, before he begins the work on which he bases the claim. If such notice is not given and the Engineer is not afforded facilities for keeping strict account of actual cost of construction, then the Contractor hereby agrees to waive the claim for extra compensation, or adjustment in the unit prices, for such work. Such notice from the Contractor, or the fact that the Engineer has kept account of the cost as aforesaid, shall not construed as proving the validity of the claim.

Whether or not errors are found in or alterations or authorised from the original estimate of quantities, final payment shall be based on the actual quantities of work performed or materials furnished at the contract unit prices specified. No allowance will be made from any change in anticipated profits due to an increase or decrease in the original estimate of quantities. Unless it is provided in the special provisions and such special provisions shall be in conformity with PS 105.05.

### 110.03 Final payment :-

The final bill shall be submitted by the Contractor within three months of the completion of work. If however the Contractor does not submit the final bill within 3 months, the Engineer is at liberty to prepare the final bill with reference to the records available with him and make payment within 3 months after giving due notice to the Contractor. It shall be accepted as a condition of the contract that the payment of the final bill to the Contractor deducting the with held amounts and his acceptance thereof shall constitute a full and absolute release of the Government from all further claims by the Contractor under the contract. If any over payment is discovered at any time in respect of any work done by the Contractor under the contract, it shall be recovered by the Engineer from the Contractor, or if any under payment is discovered at any time, the amount shall be duly paid to the Contractor by the Engineer.

Unless the Contractor has been exempted from engagement of apprentices by the Director of Employment and Training / State Apprenticeship Adviser a certificate to the effect that the contractor has discharged his obligations under the said Act satisfactorily should be obtained from the Director of Employment and Training / State Apprenticeship Adviser and it should be produced by the Contractor for final payment in the settlement of the contract.

### 110.04 Payment for increased or decreased quantities and extra work:-

Increased or decreased quantities shall be paid for at the contract unit prices listed in schedule A, if no supplemental agreement are required and at the unit prices in the supplemental agreement if such an agreement is required in conformity with PS : 104.05.

Extra work shall be paid for in accordance with the Supplemental Agreement covering the extra work required in conformity with PS : 105.05.

The unit price for extra work shall be deduced from the unit price for similar items listed in schedule. A.

If the rate for additional, altered or substituted item of work is specified in the contract, the Contractor shall carry out the additional altered or substituted item at the rate stipulated for such additional altered or substituted items.

In case the rates can not be derived from the original agreement, in the case of works for which supplemental Agreement is to be entered into

during the period when the schedule of rates has not changed from the date of execution of the original agreement, then the rates for supplemental agreement may be prevailing schedule of rates plus or minus tender premium in case the rate cannot be derived. In other cases, where the schedule of rates has changed in either directions upward or downward in the intervening period the rate prevailing as per schedule of rates at the time of execution of supplemental items will be adopted with no tender percentage plus or minus over this rate.

If the extra work is not susceptible of measurement, extra work may be paid for on the basis of an agreed lumpsum.

If the Engineer and the Contractor fail to agree on a lumpsum payment for extra work, payment will be made on the basis of the actual cost of labour, of materials including conveyance, and of local supervision solely engaged on the extra work, together with 10 percent of the total of these items as certified by the Engineer. To enable the Engineer to evaluate the extra work the Contractor shall furnish the Engineer with all connected books of account, vouchers and other documents in support of the claim within seven days after such extra work is completed. Reasonable compensation shall also be allowed for the use of Contractors tools and plants on the extra work and for such materials as are used for staging, formwork, curing etc.. If the Engineer considers that payment for such work on the basis of the vouchers presented is unduly high, he shall make payment in accordance with such valuation as he considers fair and reasonable and his decision in the matter shall be final, if the amount involved in the extra payment is Rs. 1,000 or less for each occasion on which such extra works are authorized. If the amount exceeds Rs. 1,000 the Contractor shall have the right to submit the matter to arbitration under the provisions of PS 111 herein.

If in the opinion of the Engineer a unit price or lumpsum compensation for the extra work cannot be arrived at prior to execution of the work, the payment thereof shall be dealt with as provides for in the preceding paragraph.

#### **110.05 Omitted items :-**

The Department shall have the right to cancel the portions of the contract relating to the construction of any item therein by the payment to the Contractor of a fair and equitable amount to be agreed upon by Supplemental Agreement covering all items of cost incurred prior to the date of completion of the work by order of the Engineer.

Payment will be made at the actual cost to the Contractor for all acceptable materials ordered by the Contractor or delivered on the work prior to the date of cancellation of the work by order of the Engineer and shall thereupon become the property of the Government.

He shall be reimbursed for any money expended in preparation for work on any omitted item when such preparation has no value to the remaining items of the contract or for a proportionate amount based on the total contract price over which such preparation would ordinarily be distributed when other items are included in such preparation.

The Contractor shall for the purpose of the Article keep such books of account, vouchers and other documents as are necessary to ascertain the sums payable hereunder he shall at the request of the Engineer furnished to him (Verified in such manner as he may require) any documents so kept and such other information as he may reasonably require in connection with matters arising out of this condition.

#### **110.06 Unauthorized extras :-**

It shall be clearly understood that no payment whatever will be made to the contractor for extra work unless it has been authorized in writing by the Engineer.

#### **110.07 Accounts, receipts and Vouchers :-**

The Contractor shall at any time, upon the request of the Engineer, furnish him with all invoices, accounts, receipts and other vouchers that he may require in connection with the contract.

#### **110.08 Fraud, wilful neglect or default :-**

No final or other certificate of payment or of completion, acceptance, or settlement of account shall, in any circumstances, relieve the Contractor of his liability for any fraud or wilful neglect or default in the execution of the contract or any wilful or unauthorized deviation from the plans, specifications, instructions, and directions for the time being binding upon him.

#### **110.09 Payments and certificate :-**

Payments will be made to the Contractor under the certificates which will be issued at reasonably frequent intervals by the Engineer or by the Assistant Divisional Engineer. The details of such payments which will

be made with in fourteen days of the date of each certificate are set forth in the schedule under this Article.

The deductions from bills shown therein are the normal deductions to be made and do not include any recoveries or forfeiture under penal clauses. The Contractor when applying for a certification shall prepare a sufficiently detailed bill, based on the figures of quantities and rates in the contract schedule A to enable the Engineer or the Assistant Divisional Engineer to check the claim and issue the Certificate.

The omission by the Engineer or the Assistant Divisional Engineer to pay the amount due upon certificates shall vitiate or annul the contract.

#### 110.10 Interest on dues :-

The Contractor shall not be entitled to interest upon any guarantees bond, or payments in arrear, nor upon any balance which may, on the final settlement of his accounts, be found to be due to him.

Whenever the withhold amount reaches, Rs.1,000/- or a multiple thereof, the Contractor may, at his option deposit with the Engineer and equal amount in sums of Rs. 1,000/- or a multiple thereof, in any of the forms of interest bearing securities recognised for the purpose and the equivalent withhold amount shall be paid to him forthwith. The Contractor will be permitted to exercise the option in this clause, subject only to the condition that the rate of progress stipulated in the contract is properly maintained.

#### 110.11 Acceptance of final measurements :-

The Contractor agrees, that before payment of the final bill shall be made on the contract, he will sign and deliver to the Engineer either in the measurement book or otherwise as demanded, a valid release and discharge from any and all claims and demands whatsoever for all matters arising out of, or connected with the contract, provided that nothing in this clause shall discharge or release the contractor from his liabilities under the contract. It is further expressly agreed that the Engineer, in supplying the final measurement certificate, need not be bound by the proceeding measurements and payments. The final measurements, if any, of the Engineer shall be final, conclusive and binding on the Contractor.

#### 110.12 Recoveries from Contractor :-

In every case in which provision is made for recovery of money from the Contractor, the Government shall be entitled to retain or deduct the amount thereof, from any moneys that may be due or may become due to the Contractor under this or under any other contract or contracts or on any other account what so ever, and or under the Revenue Act after serving a notice to the effect.

#### SCHEDULE UNDER ARTICLES 110-10.

#### DETAILS OF PAYMENTS AND DEDUCTIONS FROM BILLS.

Nature of contract	Class of Bill	Amount of Payment	Nature of Deduction	Refund of Deduction
1.	2.	3.	4.	5.
		(Piece work contracts)		
Piece work contract	Intermediate bills.	Case (i) Total Value of work done if it is less than 20 times earnest money.	NIL	NIL
		ii) a) Total value of work done less deduction shown in column (4) if the value of work done is more than 20 times earnest money.	a) 5 Percent of value of work in excess of 20 times earnest money to be held as security. To be credited to deposits only if the withheld amount exceeds Rs.500/-	To be refunded after payment of final bill if credited to deposits as stated in column (4) Otherwise, to be refunded in the final bill itself.
-do-	Final bills	b) Total value of work done less deduction shown in column (4) If the value of	2 1/2 percent of value of work in excess of 40 times earnest money to be held as security	To be refunded on expiry of the observation period of three months or on

Nature of contract	Class of Bill	Amount of Payment	Nature of Deduction	Refund of Deduction
1	2	3	4	5
		(Piece work contracts)		
		work done is more than 40 times earnest money for schedule caste schedule tribe	for schedule caste scheduled tribe. To be credited to deposite only if the withheld amount exceeds Rs.500 -	remedying any defects that appear during the observation period which ever happens last.
		Total value of work done less amount if any withheld for proper maintenance.	A suitable amount at the discretion of the Engineer for proper maintenance	
L.S. or schedule contract supply of materials and or constructions.	Intermediate bills	95 percent of value of work done.	a) 5 percent of value towards securities b) 2 percent of value towards security in case where special heavy sum deposit of Rs. One lakh is taken. c) 2.5 percent of value towards security in case of Contractor entered with unemployed Engineers. d) 2.5 percent of value towards security in case of contracts with	2.5 percent to be refunded in final bills and the balance to be dealt with as indicated against final bills below.

Nature of contract	Class of Bill	Amount of Payment	Nature of Deduction	Refund of Deduction
1.	2.	3.	4.	5.
		(Piece work contracts)		
			schedule caste and schedule tribe.	
			e) 10 percent of value towards security should be with held and retained in respect of labour co-operative contract societies.	
L.S. or Schedule contract supply of materials and or constructions.	Final bills.	97.5% of the value of work done less amount if any with - held for proper maintenance	i) 2.5 percent of value towards security. To be credited to deposits.	Major plan workssuch as improve - ment to roads. formation of road including metalling and black topping.  To be retained till the expiry of the period of one year reckoned from the date of comple - tion of work in order to enable the Departmen - tal Officers to watch the effect of the

Nature of contract	Class of Bill	Amount of Payment	Nature of Deduction	Refund of Deduction
1.	2.	3.	4.	5.
(Piece work contracts)				
				work on all provided the contractor shall execute an indemnity bond for a further period of two years against any loss or expenditure incurred to rectify any effect noticed due to the faulty workmanship by the Contractor or sub-standard materials used by the Contractor during the total period of three years
			ii) A suitable amount in addition to (i) above at the discretion of the Engineer for proper maintenance	<u>Maintenance work such as WBM</u> <u>renewal and B.T. renewal.</u>
				To be retained till the expiry of observation

Nature of contract	Class of Bill	Amount of Payment	Nature of Deduction	Refund of Deduction
1.	2.	3.	4.	5.
(Piece work contracts)				
				period of six months reckoned from the date of completion Indemnity bond need not be obtained from the contractor for maintenance.
				To be refunded on expiry of the observation period of the three months or on remedying any defects that appear during the observation period whichever happens last

### PS : 111 DISPUTES AND ARBITRATION

In case of any dispute or difference between the parties to the contract either during the progress or after the completion of the works or after the determination, abandonment, or breach of the contract, as to the interpretation of the contract, or as to any matter arising thereunder except as to the matters left to the sole discretion of the Engineer under Articles 106-01, 106-02, 106-04, 106-09, 107-03, 107-05, 107-06, 107-07, 107-15, 107-16, 107-17, 108-16, 110-01 and 110-02 (a) & (b) of the preliminary specification or as to the withholding by the Engineer of payment of any bill to which the Contractor may claim to be entitled, then either party shall forthwith give to the other, notice of such dispute or difference, and such dispute or difference shall be referred to the Arbitrator mentioned in the contract and the award of such Arbitrator shall be final and binding on the parties. The claims shall be preferred within one year from the date of final payment.

Any claim preferred after this limitation period shall be time barred. Provided however that in cases, where the Engineer has entered into the contract on behalf of the Governor, the dispute or difference shall in the first instance, be referred by or through the Engineer to the Superintending Engineer of the circle in which the work lies, and his decision thereon obtained before referring such dispute or difference to arbitration under this clause. Progress of the work shall not be suspended or delayed on account of the reference of any dispute or difference to the Superintending Engineer of the circle in which the work lies, or to arbitration under this clause. The decision of the Engineer or the Superintending Engineer on such dispute or difference shall be conclusive until reversed by the Superintending Engineer or the Arbitrator as the case may be. Either party may within a period which shall be fixed by the Arbitrator, file before the Arbitrator a statement of the case and also all the documents, relating to or having a bearing on the case. The arbitrator shall not be bound to observe the ordinary rules of procedure applicable to trials before judicial tribunals nor to hear or receive formal evidence but may pass an award based on the documents and statements of the case filed by the parties or on personal inspection or on both. The Arbitrator shall have power to

view the subject matter of the dispute with or without the parties or their agents, to open up review and revise any certificate opinion, decision, requisition, or notice, save in regard to the matters expressly excepted, and to determine all matters in dispute which shall be submitted to him and of which notice has been given as aforesaid, in the same manner as if no such certificate, opinion, decision requisition or notice had been given. The award thus given shall be a speaking award. The Arbitrator shall give detailed remarks in the award for his findings and conclusions for all the disputes referred to him. The Government shall not be liable to any claim in respect of any such dispute or difference until the liability and the amount thereof are referred to and decided by the Arbitrator and decreed by the competent court.