(1) பக்கங்களின் எண்ணிக்கை 28

(2) புதுக்கித் திருப்பிய நாள் 12.90

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

113

தமிழ்நாடு அரசு

PWD துறை

அரசாணை எண்.
மு. கோப்புத் தாள் எண். 2553-4

அச்சகம்
பலவகை

நாள் : 28-9-1991

198 .

State Archives No 4.
Sanctioned 13 mds.

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

14 Sheets

ஆவண. கா-1—18,000—15-6-87.

2593/1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following papers :—

From Major D. McNEIL CAMPBELL, R.E., Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department (through the Examiner, Public Works Accounts), dated Chepâk, 18th August 1891, No. 393 W.

I have the honour to forward an indent on the Director-General of Stores in England for rolled steel girders required by the Consulting Architect to Government for the proposed additions to the School of Arts, Madras.

ENCLOSURE.

REPORT to accompany indent for rolled steel girders for the proposed additions to the School of Arts, Madras.

The estimate for this work was sanctioned in G.O., No 1988 W., dated 24th July 1891. Girders of this description cannot be manufactured in India.

(Signed) W M. ELLIS, Captain, R E,
Offg. Consulting Architect to Government.

Office-note from the Examiner, Public Works Accounts, dated Madras, 19th September 1891, No. 5662.

The accompanying letter from the Superintending Engineer, V Circle, to the Chief Engineer, Public Works Department, No. 393 W., dated 18th August 1891, with an indent (No. 8 of 11th August 1891), for English stores, for transmission to the Secretary of State, is forwarded for necessary action.

2. I certify that funds to meet the estimated outlay in England in connection with this indent during the year 1891–92 will be provided by the Local Government to the extent of £67–2–0 in the estimate of the Public Works Department for that year.

ORDER—dated 28th September 1891, No. 2593 W., Public Works.

The indent will be forwarded to the Home Government for compliance.

(Here enter No. 2594 W., dated 28th September 1891.)

(True Extract.)

(Signed) J. PENNYQUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, V Circle.
„ Consulting Architect to Government.
„ Examiner, Public Works Accounts.

Exd. A. D. Xavier.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated September, 28th.

Recd. *Encl.*

G.O., 28th Sept. 1891, No. 2593 W.

SEPTEMBER.

School of Arts, Madras

Ordered that the indent for rolled steel
irders required for additions to the — be
rwarded to the Home Government for com-
liance.

28TH SEPTEMBER 1891, No. 2594 W., PUBLIC WORKS.

2553-4/2

PUBLIC WORKS DEPARTMENT.

General.
Account.

LETTER—from

COLONEL J. PENNYCUICK, R.E.,
Secretary to the Government of Madras,
Public Works Department,

To

THE DIRECTOR-GENERAL OF STORES,
INDIA OFFICE,
LONDON.

SIR,

I am directed to forward, for favour of compliance, an indent for rolled steel girders required for additions to the School of Arts, Madras.

2. The requisite certificate by the Examiner, Public Works Accounts, regarding provision of funds, is embodied in the Proceedings* of this Government forwarded herewith.

* No. 2593 W., dated 28th September 1891.

I have the honour to be,
Sir,
Your most obedient servant,

Colonel, R.E.,
Secretary to Govt., P.W.D.

OOTACAMUND,
28th September 1891.

Exd. A. D. Xavier.
Spare Copies

2573-4

3

GENERAL.
ACCOUNT.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated September, 28th.

Recd.

Encl.

28th Sept. 1891, No. 2594 W.

SEPTEMBER.

School of Arts, Madras

Forwarding indent for rolled steel girders required for additions to the —.

Special

Accompaniment to Public Works Department Circular No. XV of 188

No. ——.

INDENT FOR STORES required for the Public Works Department in the ~~Province of~~ —

Presidency for the service of the Indian Govern

I HEREBY certify that the Stores enumerated in this Indent are absolutely req of the Public Works Department ~~for a period of —— months, and I further certi personal inspection of Books and Stores, satisfied myself that they comprise the le necessary for the above period.~~

Dated this —— day of ——

at ——.

Signature ——

Rank Secretary to G

NOTE.—1. In cases in which a personal inspection of Books and Stores cannot be made, the p relating thereto should be scored through.

2. The Indent should be paged, and the signature attached to the last line of the Inde

Superintending Engine

SUPERINTENDING ENGINEER'S OFFICE,
V Circle, Madras,
Chepák, 18 August 1891.

No 3930

From

Major D. Mac'l Campbell RE
SUPERINTENDING ENGINEER, V CIRCLE,

To

THE Chief Engineer
P. W. Department
Engineer. P.W. Accts.

I have the honor to forward the Director General of ...d for rolled Steel ...d by the Consulting ...rnment for the pro... ...ut to the School of ...

I have the honor to be
Sir,
Your most Obed't Servt

D. Mac'l Campbell Major RE
Superintending Engineer

Rec'd 25 Aug 91

Should not this indent be presented in accordance with G.O. Rs 25 July 91 - I dont think this actually required in this case because common Engs are specified & they keep a stock

25.8.91

EXAMINED
Accountant
20 AUG 91
ENGINEERS
P. W. ACCTS

P.W. Dept (Accts)
9457

Ord

Gov. no 2348 dtd 3.7.91 was issued only on 15th Inst. long after the indent was prepared. From orders shall S.S.E would be called on to submit a statement in the form prescribed. This will perhaps be unnecessary as the exact description of girders required is specified.

Cs
22-7-91

Can CO on
JOB
22-5-91

SUPERINTENDING ENGINEER'S OFFICE,
V Circle, Madras.

No 3937

Chepák, 18 August 1891.

From

Major D. McNeil Campbell RE
SUPERINTENDING ENGINEER, V CIRCLE,

To

THE Chief Engineer 2537
P. W. Department
Thro' the Examiner P.W. Accts

SIR,

I have the honor to forward an Indent on the Director General of Stores in England for Rolled Steel Girders required by the Consulting Architect to Government for the proposed additions to the School of Arts, Madras.

Enclosures.
1 Indent in triplicate
1 Report.

I have the honor to be
Sir,
Your most obedt Servt

D. Campbell Major RE
Superintending Engineer

From

THE SUPERINTENDING ENGINEER,

V CIRCLE,

EXAMINED
20 AUG'91
PUBLISHED
W. ACCOUR

To

THE Chief Engineer
P.W. Dept.
thro' Examiner
P.W.A.

Dated 18th August 1891
Recd

ENCLOSURES. 2

No. 3936

Rolled Steel Girders

Remarks on
Indent for
for the proposed
additions to the
School of Arts
Madras

Report to accompany Indent for
Rolled steel Girders for the proposed
additions to the School of Arts, Madras.

2533/1

The Estimate for this work was
sanctioned in G.O. No. 1905 W dated 24th July 1891.
Girders of this description cannot be
manufactured in India

Captain RE
Offg: Consulting Architect
to Government

(C No. 153.)

189/.

EXAMINER, P. W. ACCOUNTS.

Madras, 18 September 189/.

OFFICE NOTE No. 5862/153.

To E. W.

THE accompanying letter from the Superintending Engineer, 5th Circle, to the Chief Engineer, P. W. Department, No. 3931 W, dated 18th August 1891, with an indent (No. 8 of 11th August 189/) for English Stores for transmission to the Secretary of State, is forwarded for necessary action.

2 I certify that funds to meet the estimated outlay in England in connection with this Indent during the year 189/92, will be provided by the Local Government to the extent of £ 64-2-0 in the estimate of the P. W. Department for that year.

1 to 16

A B no 469 w dt 12.2.82
" A - 1788 w dt 24.7.91
" B - 2086-6 w dt 3.8.91 × Rejection 1/10/91
" A - 2348 w dt 3-9-91
" B - 2469 w dt 15.9.91

Rd 21-9-91
Issd 3 (+ Enc 2 — Inflexible)

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper:—

Circular from the Government of India, Public Works Department (Railway Stores), dated Simla, 31st July 1891, No. 11 (Railway).

[*Preparation in India of Indents for Rolled Joists.*]

The Governments of Madras, Bombay, Bengal, North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam and Coorg.
The Resident at Hyderabad.
The Resident in Mysore.
The Agents to the Governor-General for Central India, Rajputana and Baluchistan.
The Accountant-General, Public Works Department.
The Director-General of Railways.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.
The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director-General of Telegraphs.

The following is forwarded to the Local Governments and Administrations and officers noted on the margin for information and guidance.

2. These instructions are applicable to all branches of the Public Works Department.

(By Order.)

(Signed) F. B. HEBBERT,
Offg. Under-Secretary.

ENCLOSURE.

From the Right Honorable Her Majesty's Secretary of State for India, to the Government of India, dated 23rd April 1891, No. 1.

Difficulty having been sometimes experienced for various reasons in complying with demands for rolled joists, it appears desirable that copies of the accompanying "suggestions as to the preparation of indents for rolled joists" should be distributed to indenting officers in the departments noted in the margin and that they be instructed to submit with the indents a detail on the form referred to in the "suggestions" of each item demanded. A similar number of the specifications of iron and steel joists used by the Stores Department of this office, which, it is thought, may be of service to the indenting officers, is also being forwarded with the "suggestions."

* 75 copies for the Public Works Department.
75 copies for the Military Works Department.
Per parcel post.

SUGGESTIONS as to the preparation of indents for rolled joists.

Difficulty is sometimes experienced in meeting demands for rolled joists in consequence of—

(*a*) Contractors not being able to obtain the exact sections demanded.
(*b*) The load being specified in addition to the section without details as to the "condition" of the girder or the limit of stress intended to be allowed.

2. It is, therefore, suggested that demands for rolled joists should be accompanied by a detail of each item on the form annexed, which will, it is thought, give all the information required to enable the Store Department to supply suitable joists.

3. The central test loads inserted in India Store depôt specifications of *iron* joists have hitherto been calculated on the basis that they should not produce a stress exceeding 5 tons per square inch of the area of either flange (the calculations are made for joists *supported* at both ends, distance from centre to centre of bearings about 1 foot less than the length of the joists). As nearly all the iron joists supplied to India are of foreign (Belgian) manufacture, it is recommended that this limit of stress should not be exceeded. The difficulty of getting rolled iron joists of English manufacture is shown by the fact that, in answer to an *advertised* tender for them, the War office received only two offers, and the price was upwards of £9 per ton, whereas the same sections of foreign manufacture were offered at £6–5–0 per ton.

4. Rolled steel joists can generally be obtained at from £9 to £10 a ton, and in these the limit of stress may be taken at 7½ tons per square inch, which in some cases would allow of lighter sections being used as compared with iron; the amount of deflection of the steel joists with this stress would, however, be greater than that of the iron joists with a limit of 5 tons.

It may be mentioned that, although steel joists cost more per ton, they will bear a greater strain, weight for weight, than iron joists, as is instanced by the particulars entered on the specifications. This will doubtless be borne in mind in deciding whether steel or iron joists should be demanded.

25837/10

Detail of Rolled Joists demanded on Indent

Item of Indent.	Section required. Depth.	Width.	Iron or mild steel.	Weight per foot run.	Maximum and minimum limits of dimensions of section which may be allowed in case the exact section cannot be procured. Depth. Max.	Depth. Min.	Width. Max.	Width. Min.	Length. Ft.	Length. In.	Clear span. Ft.	Clear span. In.	Number required. Dead length, i.e., both ends planed.	With one end planed.	With neither end planed.	Dead load including weight of joist. Tons.	Distribution of load.*	Condition of girder.†	Stress in tons per square inch not to exceed —. Tons.	Remarks.—State whether built up plate girders may be substituted for joists, and, if so, whether they must be of uniform *section* throughout or may be of uniform *strength*.
	In.	In.		lbs.	In.	In.	In.	In.	Ft.	In.	Ft.	In.				Tons.			Tons.	

* i.e., Distributed, Central, &c.

† i.e., Fixed both ends. Supported, ditto, &c.

Specification of rolled iron joists.

The iron is to be soft and fibrous, thoroughly well made, uniform in texture, and free from lamination and all defects of manufacture.

2. The samples mentioned in clause 6 will be tested by such person as the Superintendent of the India Store depôt may appoint and must bear a tensile strain of 21 tons per square inch, with a reduction of area at the point of fracture of not less than 15 per cent. They will also be subjected to the forge tests in use at the India Store depôt, Belvedere Road, Lambeth, S.E., where patterns of them (No. 2874) may be seen. If the samples fail to pass the above tests the joists will be rejected.

3. No charge is to be made for these samples nor for the testing carried out at the contractor's works.

4. The joists are not to exceed the specified lengths by more than 1 inch and are in no case to be less than the said lengths. When ordered in dead lengths the ends are to be cut truly square and the lengths are to be exact. The weights per foot run are not to be less than those specified.

5. The schedule weights include an allowance of 2 per cent. above the tabulated weights per foot run and show the maximum weight of any particular size for which payment will be made. Payment will not, however, be made for more than the actual weights.

6. One joist of each of the sections marked * in the table is to be rolled of sufficient length to allow of a piece, 16 inches long, being cut from one end for testing. No allowance is made for the weight of these extra pieces, which are to be forwarded to the India Store depot free of charge.

7. Each joist will be tested by hydraulic pressure at the contractor's premises in Great Britain in the presence of an Officer of the India Store depôt, with the central loads specified in the table below. On the removal of the pressure the joists are to show no permanent set.

8. Notice in writing is to be given to the Superintendent of the India Store depôt when the joists are ready at the contractor's premises in Great Britain for examination and testing.

9 The joists are to be thoroughly cleansed from rust and dirt before examination, and, after approval, are to be painted with one coat of good oil paint, and each is to have stencilled on it in white metallic paint at one end the address, shipping marks, &c., and at the other end the dimensions The stencil plates must be provided by the contractor.

10. Any inattention to these instructions will cause the joists to be rejected.

11. The joists are to be addressed as under:—

Table showing Central Loads.

Section.	Weight per foot run.	Distance from centre to centre of bearings.	Load at centre.	Remarks.
	lb.	feet.	cwt.	
*10″ × 4½″	32	23	38	* Calculated from the formula— $\frac{1}{4} W \times 12 L = 100 \times a \times d$. W = load at centre in cwts. L = distance from centre to centre of bearings in feet. A = area of one flange in square inches. D = depth of joist in inches.

Samples sent to the India Store depôt, Belvedere Road, Lambeth, S.E., are to be marked "*Iron branch*" and are to be advised by a delivery note (form 140) similarly marked.

Specification of rolled steel joists.

The steel is to be thoroughly well made, uniform in texture, and free from lamination and all defects of manufacture.

2. The pieces mentioned in clause 6 will be tested by such person as the Superintendent of the India Store depôt may appoint and must bear a tensile strain of 27 to 32 tons per square inch, with a minimum elongation of 20 per cent. in a length of 8 inches. Pieces heated uniformly to a low cherry red and cooled in water of about 80° Fahrenheit must also stand

2573/11

bending in a press to a curve of which the inner radius is one and a half times the thickness of the sample. If the samples fail to pass the above tests the joists will be rejected.

3. No charge is to be made for these samples nor for the testing carried out at the contractor's works.

4. The joists are not to exceed the specified lengths by more than one inch and are in no case to be less than the said lengths. When ordered in dead lengths the ends are to be cut truly square and the lengths are to be exact. The weights per foot run are not to be less than those specified.

5. The schedule weights include an allowance of 2 per cent. above the tabulated weights per foot run and show the maximum weight of any particular size for which payment will be made. Payment will not, however, be made for more than the actual weights.

6. One joist of each of the sections marked * in the table is to be rolled of sufficient length to allow of a piece, 16 inches long, being cut from one end for testing. No allowance is made for the weight of these extra pieces, which are to be forwarded to the India Store depôt free of charge.

7. be tested by hydraulic pressure at the contractor's premises in Great Britain in the presence of an Officer of the India Store depôt with the central loads specified in the table below. On the removal of the pressure the joists are to show no permanent set.

8. Notice in writing is to be given to the Superintendent of the India Store depôt when the joists are ready at the contractor's premises in Great Britain for examination and testing.

9. The joists are to be thoroughly cleansed from rust and dirt before examination. *After approval*, they are to be painted with one coat of good oil paint and each is to have stencilled on it in white paint at one end the address, shipping marks, &c., and at the other end the dimensions. The stencil plates must be provided by the contractor.

10. Any inattention to these instructions will cause the joists to be rejected.

11. The joists are to be addressed as under:—

Table showing Central Loads.

Section.	Weight per foot run.	Distance from centre to centre of bearings.	Load at centre.
	lb.	feet.	cwt.
9″ × 3¾″	24	23	35
10″ × 4½″	32	23	64

Samples sent to the India Store depôt, Belvedere Road, Lambeth, S.E., are to be marked "*Iron branch*" and are to be advised by a delivery note (form 140) similarly marked.

Order—dated 3rd September 1891, No. 2348 W., Public Works.

Communicated to officers of the Public Works Department for information and guidance.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation.
" Consulting Engineer for Railways.
To Superintending Engineers.
To the Consulting Architect to Government.
" Superintendent of Works, Periyár Project.
" Secretary, Public Works Code Committee.

Exd. A. D. Xavier.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated September, 3rd.

Encl.
Read.

G O., 3rd Sept. 1891, No. 2348 W.

SEPTEMBER.

Rolled Joists

Circular from the Government of India, Public Works Department, forwarding instructions for the preparation in India of indents for —, communicated to officers of the Public Works Department for information and guidance.

24TH JULY 1891, No. 1988 W., PUBLIC WORKS.

2593 4/12

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

G.O., dated 6th July 1891, No. 512, Educational.

Read—the following papers : —

From the Director of Public Instruction, dated 30th April 1891, No. 4846.

In submitting, for sanction, plans and estimate for Rs. 12,260, duly countersigned, for the construction of additional class rooms in the School of Arts, I have the honour to state that the present accommodation is quite inadequate for the work the school is now doing.

From the same officer, dated 20th June 1891, No. O/39.

ABSTRACT.—Submitting a site plan of the proposed new class rooms in the School of Arts.

Order—dated 6th July 1891, No. 512, Educational.

The plans are approved and will be transferred to the Public Works Department.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

ORDER—dated 24th July 1891, No. 1988 W., Public Works.

The estimate, amounting to Rs. 12,260, for providing additional accommodation to the School of Arts, Madras, is sanctioned.

2. This sanction has been registered as Provincial No. 42 W. of 1891-92 and classified as Civil Buildings, Original Works.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Consulting Architect to Government, with five enclosures.
" Examiner, Public Works Accounts.
" Educational Department.

Exd. A. D. Xavier.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated July, 24th.

Read. *Encl.*

G.O., 24th July 1891, No. 1988 W.

JULY.

School of Arts, Madras

The estimate, amounting to Rs. 12,260, for providing additional accommodation to the —, sanctioned.

No 2593 W. dt 28th Sept 1891 Encl Text

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

2593/7/13

READ the following

From the Supdg. Engineer Circle No. 393 W. dt 18th August 1891.

Endorsement by the Examiner P.W. Accts No. 5662 dt 19th September 1891

The sketch will be forwarded to the Home Government for completion

To
The Supdg. Engr. Circle
Copy sketch to Supdt
Examiner P.W. Accounts

No. 2593 dt 28th Sept 1891.

To
The Director General of Stores
India Office
London

2. The requisite certificate by the Examiner P.W. Accounts regarding provision of funds is embodied in the Proceedings of this Government forwarded herewith

No 2593 W dt 28 Sept 1871.

2593-4
14

10016

1890.

Public Works Department.

No.

Dated

Despatched

Received

14

28th Sept 1891 to 2893/45.

SUBJECT.

School of Art, Madras.

Ordered that the indent for roller & slab printers &c for additions & alterations to the Home for the Blind for examination.

Do do do.

Forg indent for roller & slab printers &c for additions & alterations to the —.

80/2

30/2.

recollection &c