(1) Number of pages 72

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(3) Initials of the Referencer bvs ✓

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PW DEPARTMEN

G.O. No. 74 (W) Press.
~~B.P. No.~~ ~~Mis.~~

Dated 9.1.1885 ~~198~~.

Not to be folded or roughly handled.

74

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

ad—the following paper :—

Proceedings of the Government of India, Public Works Department (General), dated Fort William, 13th December 1884, No. 1443 G.

Engineer Appointments guaranteed to Indian Civil Engineering Colleges.

ad again—

Despatch from the Secretary of State, No. 32, dated 4th August 1881.
„ to „ „ „ 38, „ 8th July 1882.
„ from „ „ „ 52, „ 28th Sept. „
Public Works Department Resolution, Nos. 1516—28 G., dated 11th November 1882.
„ „ „ 241—51 G., „ 14th February 1883.
Despatch to the Secretary of State, No. 36, dated 28th July 1883.
„ from „ „ „ 74, „ 20th December 1883.
„ to „ „ „ 14, „ 21st April 1884.
„ from „ „ „ 38, „ 24th July „
„ to „ „ „ 45, „ 29th Aug. „

ead also—

Despatch from the Secretary of State, No. 67, dated 30th October 1884.

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esolution—

The rules regulating the admission of students to the Indian Engineering
olleges, and the manner in which appointments in the Engineering Branch of the
ublic Works Department may be obtained by students of these colleges, are contained
the Resolutions of the Government of India, in the Public Works Department, of
1th November 1882 and 14th February 1883. These Resolutions modified the
reviously existing rules in several respects, and notably in giving to students of pure
ndian descent a preference over all other students for guaranteed appointments in the
ublic Works Department. As long ago as 1876 it had been remarked by the
ecretary of State that very few persons of pure Indian origin succeeded in obtaining
ppointments in the public service through the engineering class of the Thomason
ollege, and between that time and the year 1882 he had repeatedly urged on the
overnment of India the advisability of giving to pure natives a preferential claim to
ch appointments. The Government of India, while recognising the desirableness of
ttracting natives of India to the Engineer Department, hesitated to give an exclusive
reference to one class of natives of India as defined by statute, and the discussions on
his point ranged over a considerable period. Ultimately, the Governor-General in
ouncil acquiesced in the proposals of the Secretary of State, being influenced mainly
y the consideration that, owing to reductions in the Public Works Department, the
umber of appointments available for pupils of the Indian colleges had become so
mall that in no other way could the object in view be attained. The number of
ppointments guaranteed to the four Indian colleges was no more than six for the year
885 and seven for 1886, and, under these circumstances, almost the only way of
acilitating the candidature of pure natives seemed to be to give them a preference
ver other students. Shortly after the issue of the Resolutions in question, memorials
ere received from various Associations of domiciled Europeans and Eurasians in
ndia, remonstrating against the disadvantage at which persons of their class were
laced by the new rules. These memorials were forwarded to the Secretary of State

with the despatch from the Government of India of 28th July 1883, in which the Governor-General in Council remarked that although, looking to the small number of appointments involved, the memorialists appeared to exaggerate somewhat the practical effect of the rules upon their interests, he could not but think that "they had a certain solid foundation for their dissatisfaction, and that their representations deserved attention." The Governor-General in Council accordingly recommended that arrangements should be made in regard to the recruiting of the Public Works Department which would have the effect of increasing the number of appointments available for the Indian colleges to eleven, and that, with this extension of the field of employment, the area of competition might again be widened so as to include all persons coming under the statutory definition of natives of India. Considerable correspondence has since taken place upon various points of detail in this scheme, and the Secretary of State has now decided that the annual recruitment from the Indian colleges shall be fixed at nine. Although somewhat smaller than what they had recommended, the Government of India believe that this increase in the number of appointments, taken in connection with the changes made in other respects in the rules of admission to the college, renders it unnecessary to maintain a preference in favor of students of pure Indian descent, and that the object with which that preference was given may now be sufficiently attained without it. In future, therefore, all students coming under the statutory definition of natives of India will be eligible to compete on equal terms for the guaranteed appointments in the Public Works Department.

The appointments will, for the present, be allotted as follows :—

To Thomason College, Rurki	4 and 5 alternately.
" Seebpore "	2 and 1 "
" Madras Civil Engineering College	1
" Poona College of Science	2

Order—

Ordered that this Resolution be communicated to the Local Governments and Administrations noted in the margin; also that it be published in the *Gazette of India* and in all local official gazettes.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab, in the Public Works Department.
The Chief Commissioners of the Central Provinces, British Burma, Assam, and Coorg.
The Resident at Hyderabad.
The Agents to the Governor-General for Central India, Rajputana, and Beluchistan.
The Director-General of Railways.

(Signed) A. B. SAMPSON,
Under Secy. to the Govt. of India.

ORDER—dated 9th January 1885, No. 74 W., Public Works.

Ordered to be published in the *Fort St. George Gazette.*

2. The orders now received from the Government of India supersede the notification published at page 696, part I, of the *Fort St. George Gazette* of 28th October 1884, so far as the competition therein advertised is restricted to natives of pure Asiatic origin.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintendent, Government Press, for publication of proceedings in full.
" Educational Department.
Exd. E. Fernandez.
Spare Copies

74/2

2

GENERAL.
ESTABLISHMENT.

Govt. of (1885) Madras.
PUBLIC WORKS.

Dated January, 9th.

Encl.

Recd.

G.O., 9th Jan. 1885, No. 74 W.

JANUARY.

Engineer Appointments

Resolution of the Government of India on the subject of the — guaranteed to Indian Civil Engineering Colleges, ordered to be published in the *Fort St. George Gazette.*

~~Heads of Departments~~

74

No. 1442 G.
GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.
GENERAL.

Fort William, December 13, 1884.

Engineer appointments guaranteed to Indian Civil Engineering Colleges.

Read again—

Despatch from the Secretary of State, No. 12, dated 4th August 1881.
" to " " " 18, " 8th July 1882.
" from " " " 11, " 14th September 1882.
Public Works Department Resolution, Nos. 1513–75 G., dated 11th November 1882.
" " " 241–44 G., " 15th February 1883.
Despatch to the Secretary of State, No. 26, dated 18th July 1883.
" from " " " 74, " 20th December 1883.
" to " " " 14, " 21st April 1884.
" from " " " 18, " 24th July 1884.
" to " " " 46, " 12th August 1884.

Read also—

Despatch from the Secretary of State, No. 47, dated 30th October 1884.

RESOLUTION.—The rules regulating the admission of students to the Indian Engineering Colleges, and the manner in which appointments to the Engineering Branch of the Public Works Department may be conferred on students of these Colleges, are contained in the Resolutions of the Government of India in the Public Works Department of 11th November 1882 and 15th February 1883. These Resolutions modified the previously existing rules in several respects, and notably in giving to students of pure Indian descent a preference over all other students for guaranteed appointments in the Public Works Department. As long ago as 1870 it had been remarked by the Secretary of State that very few persons of pure Indian origin succeeded in obtaining appointments in the public service through the Engineering Class of the Thomason College, and between that time and the year 1882 he had repeatedly urged on the Government of India the advisability of giving to pure natives a preferential claim to such appointments. The Government of India, while recognising the desirableness of attracting natives of India to the Engineer Department, hesitated to give an exclusive preference to one class of natives of India as defined by Statute, and the discussions on this point ranged over a considerable period. Ultimately the Governor General in Council acquiesced in the proposals of the Secretary of State, being influenced mainly by the consideration that, owing to reductions in the Public Works Department, the number of appointments available for pupils of the Indian Colleges had become so small that in no other way could the object in view be attained. The number of appointments guaranteed to the four Indian Colleges was no more than six for the year 1885 and seven for 1886, and under these circumstances almost the only way of facilitating the candidature of pure natives seemed to be to give them a preference over other students. Shortly after the issue of the Resolutions in question, memorials were received from various Associations of domiciled Europeans and Eurasians in India, remonstrating against the disadvantage at which persons of their class were placed by the new rules. These memorials were forwarded to the Secretary of State with the Despatch from the Government of India of 28th July 1883, in which the Governor General in Council remarked that although, looking to the small number of appointments involved, the memorialists appeared to exaggerate somewhat the practical effect of the rules upon their interests, he could not but think that "they had a certain solid foundation for their dissatisfaction, and that their representations deserved attention." The Governor General in Council accordingly recommended that arrangements should be made in regard to the recruiting of the Public Works Department which would have the effect of increasing the number of appointments available for the Indian Colleges to eleven, and that with this extension of the field of employment the area of competition might again be widened so as to include all persons coming under the statutory definition of natives of India. Considerable correspondence has since taken place upon various points of detail in this scheme, and the Secretary of State has now decided that the annual recruitment from the Indian Colleges shall be fixed at nine. Although somewhat smaller than what they had recommended, the Government of India believe that this increase in the number of appointments, taken in connection with the changes made in other respects in the rules of admission to the College, renders it unnecessary to maintain a preference in favour of students of pure Indian descent, and that the object with which that preference was given may now be sufficiently attained without it. In future, therefore, all students coming under the statutory definition of natives of India will be eligible to compete for the guaranteed appointments in the Public Works Department.

The appointments will, for the present, be allotted as follows:—

To Thomason College, Rurki ...	... 4 and 5 alternately.
Seebpore ,, ...	... 2 and 1 ,,
Madras Civil Engineering College	... 1
Poona College of Science ...	... 2

ORDER.—Ordered, that this Resolution be communicated to the Local Governments and Administrations noted in the margin; also that it be published in the *Gazette of India* and in all local official Gazettes.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh and the Punjab, in the Public Works Department.
The Chief Commissioners of the Central Provinces, British Burma, Assam, and Coorg.
The Resident at Hyderabad.
The Agents to the Governor General for Central India, Rajputana, and Beluchistan.
The Director General of Railways.

Sampson

Under Secy. to the Govt. of India.

To The Secretary to the Govt. of Madras
P.W. Department

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

GENERAL.

To

74/4

No. 1443 G.

Dated December 13, 1884.

Received [illegible]

Engineer appointments guaranteed to Indian Civil Engineering Colleges.

No. 808, P. W. D. Press—19-12-84—468.

Circ: 6/1/85

5th August/84

To W. 74/4

Re-organisation of the Civil Engineering College, Madras.

In view to giving effect to G O No 1640 W, of 1st. July 188 I have roughed out for your consideration the accompanying draft of a Notification on the subject, which embodies, so far as I can ascertain, the modifications to be adopted.

The Notification in its final form is to be drawn up with the aid of the Principal of the College and in communication with the D. P. I. My rough draft so far as it goes, with your remarks thereon, might perhaps be forwarded to those officers, for additions & opinions as to the final shape it should assume.

I have stopped short at the 3rd. Class, as there will be no difficulty in framing the rules regarding Draftsmen, Surveyors & Maistries, when the rules regarding the Engineers have been finally agreed to.

There are a few points about which I am doubtful.

5

In your note of 10th. June, para 10, you state that the open competition should, in your opinion, "take place at the time of admission to the college, not at the close of technical training".

But according to para 5 of the first Report of the Committee & para 27 of Second Report the passing of the F.A. Examination was to be the test for admission. And according to para 18 of first Report, for the Subordinate class, "Matriculated candidates may be admitted to the class as at present".

In the rough draft I have taken the view expressed in the committees Reports as the basis of the rules.

The "Soldier students" offer a difficulty, & I am not sure of your intentions regarding them. In the draft I have included them under " Civil Engineer class", but in the committees Report they are dealt with as belonging to the " Subordinate Class".

74/p

If they are brought in to the latter, they will not be on the same footing as the other competitors for the overseer grades, as they cannot receive appointments lower than ~~one~~ an overseership 1st. grade. Besides, I take the general aim of the various opinions expressed, notably that given in para 15 of D. I. P's minute of 6th. September, 1883, which was endorsed by Government, to be the raising of the standard for the Non Commissioned Officers & Soldiers as for the others who are to monopolise the Sub-Engineer & Supervisor grades.

Under 6th. class, would it not be well to include Sub-overseers, as well as Maistries & artisans? The "Lower Subordinate" or Sub-overseer grades are now to be re-introduced into the Department.

CG

5. 8. 94

No. 1418 D.

GOVT. OF MADRAS. } 188 . { P. W. DEPT.

74/11

SECRETARY.

Chepak, 12th August 1884.

OFFICE NOTE.

From

The Under Secy. Govt. P.W.D.

To

The Principal C. E. College

In accordance with W's instructions I forward you herewith proposed notification regarding re-organisation of the College and papers connected therewith, and shall feel obliged by your remarks and suggestions thereon.

In addition to the points about which

was doubtful, as explained in my note of 5th to W, it has since occurred to me that the limit to the numbers to be admitted to the Civil Engineer class and upper Subordinate class may require reconsideration.

When the Committee fixed at 10 the number of applicants that could be admitted annually to the former class it had not in view the expansion that must be given to that class by the inducements now offered and the fact that it is now intended to afford engineering training not only to Sub. Engineers and Supervisors of the Public

Work

Works Department, but to meet the needs of the country outside the Government service.

74/12 ✓ CY.

Dy W.

12.8.84

C. E. College.

Office note.

74/13

To Dr. W.

Your office note No 1418 dated 12 August.

I. With regard to the four points on which you feel uncertainty:—

(a) Number in Engineer classes limited to 10 admissions annually. This limit was fixed owing to the cost of the practical course; but there would be no difficulty (when the new College is built) in putting a larger number through the theoretical course. Perhaps 5 additional students might be admitted annually on the understanding that they paid apprentice fees for their practical training. This is however mainly a question for the P.W.D. The College will effect the theoretical training of 15 Engineer students annually, if arrangements can be made for the practical training of that number.

(b) Open competition for admission to Engineer and Subordinate classes

This question of admission is a difficult one. It must be remembered that one of the objects of the Engr. Class is to train for the B.C.E deg. Examn. for which no candidate can present himself unless he has passed the F.A. Examn., and subsequently studied for two years in an affiliated Engineering Institution. If admission to the College is to be absolutely open, entrance examinations must be held. For the Engr. classes, the Examn. would have to extend over a wide range of subjects to ensure sufficient general education on the part of candidates. On the other hand, it is probable that *every* candidate would be a graduate or undergraduate of an Indian University, and the entrance Examn. would, except as embodying a principle, be practically useless. I think competition will be virtually open if we register all applicants who have passed the First Arts Examn. at least, and then select (1°) the graduates in order of merit, as proved by their University marks and (2°) under-graduates in a similar manner. It might be well however to ensure the representation of certain classes of the community, and to this end I suggest that the best candidate of each of the following classes, viz:

74/14

(1) Europeans
(2) Eurasians
(3) Mussalmans

be first selected from the qualified men; and that the other vacancies be then filled in order of merit from the remaining graduate and undergraduate candidates, irrespective of race.

As regards admission to the Subordinate class, the experience of the last two years shews that unless the workshops instruction [illegible] not to be very unpopular) the number of matriculate candidates will considerably exceed the limit of 30 proposed, and that some system of selection must therefore be adopted. An Entrance Examination for these men would not be quite such an undertaking as one for ~~the~~ Engr. Candidates; but, when it is considered how general University Education has become, I incline towards dispensing altogether with an Entrance Examn. for this class except in the case of Soldier Students.

(c) With reference to the Position of Soldier Students, it would be out of the question to put them into the Engineer Class. The theoretical course would pass entirely over their heads. Even if they could master the course, they could not appear for the B.C.E degree as suggested; and the University would be unlikely to relax its rules to enable them to do so.

(d) Subovrseers. If Subovrseers are to receive instruction in the vernacular, they may be included in the Mastry class. If otherwise, they should form a separate class.

II. To proceed to the Draft Notification.

Heading. The introduction of the new Rules will involve extensive alteration in the courses, and additions to the Staff;— changes which require time. It will be only fair moreover to give intending Candidates substantial notice of a change from a two to a five years' course. For these reasons, I think the Prospectus should not come into effect before 1st January 1886.

2nd para. - Classes. Since the Civil and Mechanical Engineers undergo ~~the~~ same theoretical course, they might advantageously be doubled up throughout the Notification. The classes named in this para. would then stand as follow:-

(1) Engineers, Civil & Mechanical.
(2) Engineer Subordinates
(3) Surveyors
(4) Draftsmen
(5) Lower Subordinates, Maistries
and Artizans.

3rd para. Engineer Class. This para might stand as follows:-

Engineer Class. This class will educate pupils up to the standard required for admission to the Engineer Establishment of the P. W. Dept., the course of instruction being at the same time regulated to meet the requirements of the Madras University for the degree of Bachelor of Civ. Engg. The course will be partly theoretical and partly practical, the theoretical portion extending over three years and the practical over two.

4th para - admission. The max.m limit of age fixed by the Committee was 19, this being the average age at which the F.A Exam.n is passed. The experience of the last two years shows that graduates in arts

may be induced to join the College in numbers. It is very desirable that they should be attracted; and I would therefore fix the limit of age at 21. The average age of B.A's in 1883-84 was 21.2 years, and in 1882-83, 22.3 years.

The following is suggested for insertion in the notification after the words "freedom from liability to small pox":-

The max.m limit of age for entrance will be 21. The number of admissions annually will be 10, but additional candidates who may be prepared to pay the cost of their practical training will be accepted to the number of 5. Selection of qualified candidates for admission will be guided by the grade and class of their University Exam.n checked if necessary by reference to the University authorities. One European, one Eurasian & one Mussalman, if such present themselves, will however be first selected from the list of qualified candidates, and the other vacancies will be filled by the remaining qualified Candidates in order of merit.

5th para. Conditions. The Committee's recommendations regarding fees were made at a time when Candidates did not readily come forward for the Senior Dept. of the College. It has since appeared that a fair prospect of employment is sufficient, under present rules, to insure the existence of a full class. I should therefore be disposed to fix the monthly fee at Rs 15. The words "with the exception of those who have passed the F. A. Exam. in the 1st class", may be struck out; as the inducement is not required, and as there may be students of higher attainments in the class. I would also strike out the last sentence of the para. "No guarantee &c", as a guarantee is given under the head "Rewards".

6th para. Course of Study Strike out, as it is proposed for inclusion under the 3rd para.

7th para. Theoretical Course

Under II. Elide "Practical Mechs" and under VI. Elide "Theory of Strains, and Applications to Construction", and insert in their place under VI. "Applied Mechanics". Under IV. Elide "Mechanical Drawing", and insert Machine Drawing after "Architectural Drawing". Under VI, Elide "Strength of materials" and insert Building Materials in its place

8th para. Practical Course

This para. might be altered as follows, so as to embrace both the Civil & Mechl Engineers

Practical Course. After completing the theoretical course, those pupils who desire to qualify for the Civil branch of the profession will spend one year in the P. W. workshops, going through the Carpenter's shop, smithy, foundry, and fitting shops. They will then be placed for one year under the P. W. D. and will be stationed at places where large works are in progress. They will be regularly instructed in the practical

-making, bricklaying, quarrying, blasting, masonry, building of all kinds, the management of labour, accounts &c.

Those pupils who wish to qualify as Mechanical Engineers, and to fit themselves for employment in the P.W. Shops, the Railway Shops, or on works for which technical mechanical training and knowledge are indispensable will, after completing the theoretical course, be stationed for two years at the largest workshops available. Special arrangements will be made each year for these apprenticeships.

11th para. Rewards. If the fee is increased to Rs 15 per mensem, the scholarships in the theoretical course should be raised to Rs 25 and Rs 15 respectively. Those of the workshops course may remain at Rs 10.

After the words "During the final year of practical training" elide the words "on works"

so that the para. may suit the Mechanical Engineers. At the end of the para. insert the words "or shops", for the same reason.

12th para. Soldier Students. Cut out this para. A portion may be inserted later under "Engineer Subordinates".

13th para. Mechanical Engineer Class. Cut out this para.:— already disposed of.

14th para. Course of Studies. Cut out this para.;— already disposed of. This answers in the negative W's question in pencil on margin of draft.

16th para. Admission. See my suggestions under I(b). The para. might stand somewhat as follows:—

The qualification for the admission of Civilians to this class will be the matriculation Exam.ⁿ of the Madras or other Indian University. The max.ᵐ limit of age will be 18. The physical tests required will be similar to those laid down for candidates for the Engi-

Class. The number annually admitted will be limited to 25, selection being made from the total number of qualified candidates by the order of merit indicated by the University records.

A qualification similar to that proposed under 4th para. might be inserted to secure the representation of different races.

17th para Conditions. Will the P.W.D. be able to afford workshop instruction to so many students? The Workshop Superintendent, I believe, thinks not. Perhaps the first half of each batch could join the shops for six months, & then proceed to the works, the second half going to the shops for a similar period after six months of idleness. If this suggestion were to be adopted, the total course of instruction would last $2\frac{1}{2} + 1\frac{1}{2} = 4$ years.

At the end of this para. the words "No guarantee of appointments is given" might be removed, as this matter is dealt with under "Rewards".

Between 17th and 18th paras

It is suggested to insert a para somewhat as follows:-

Non Commissioned officers and soldiers of H.M.'s British Force, desirous of qualifying for employment in the P.W. Dept., will to the number of five annually, be admitted to the College on passing an Entrance Exam.n in Arithmetic and English. After one year's study of Arithmetic Algebra and Vernacular Language, they will, provided they pass a satisfactory Exam.n in these subjects, ~~be admitted~~ join the Subordinate Class for the ordinary theoretical and practical courses. Each student will draw a stipend of Rs 10 per mensem for $3\frac{1}{2}$ years commencing from the date of joining the Subordinate Class. His pay rations and clothing will be drawn from his regiment throughout the whole course of study. A fixed proportion between the number of soldiers and civilians to be appointed to the P.W.D. will be established.

The cost of the training, especially the practical training of these students will be considerable. Perhaps it would be well to decide at the end of the theoretical course how many of the soldiers will be required for the Works Dept; and let the remaining military students stop short at this point of the course. Arrangements might perhaps be made for the latter to be placed at the disposal of the Revenue Survey Dept., which would I understand, be glad to obtain men of this type. By leaving their training incomplete, we do not turn incompetent men loose on the country as we should in the case of civilians similarly treated.

An alternative suggestion is the following:— Considering the previous training & habits

of the European soldier, & the facts that the majority of them come from artizan families, & that many have been themselves workmen or apprentices, there is not the same urgency for a workshop training in their case as in that of natives. The adoption of this suggestion would make the total length of the course for soldiers more reasonable viz 1 + 2½ + 1 = 4½ years

19th para. Practical course

See remarks under 17th para.

21st para. Rewards.

At the end of the first sentence some qualification seems necessary regarding the military students' "fixed proportion". If the Rev. Survey could furnish employment for these men as suggested above, the fixed proportion might be left out altogether; and the soldiers like the civilians might be accepted or refused, solely on the results of the final examination.

Draftsmen & Surveyors are not dealt with in the Notification. The question of the training of Draftsmen was (subsequently to the issue of G.O. No 61 Educ. dated 9 Feby 83) referred to the College Committee for report. I wrote a note on the subject, which was circulated to and generally approved by the Committee. No report was however sent in. I put up herewith that note and its file, as it may be of assistance to you in completing the notification.

Princ. C.E.C.
21. 8. 84

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23 – 8 – 84

To

W

74/23

The Principal Civil Engineering College now submits his views on the proposed Notification of the reorganisation of the College, &ca.

I shall proceed to discussion of Capt. Love's remarks seriatim.

1. (a) Number in Engineer classes limited to 10 admissions annually. I see no objection to the admission of 5 additional students, but I do not see why these 5 should pay apprentice fees for their practical training. I think all who have passed [illegible] e- [illegible] all [illegible]

[illegible] tion.

[illegible] o doubt Capt [illegible] to postpone the [illegible] spectus taking ef- [illegible] ore 1st. January 1886.

[illegible] ara – Classes. – There

I would adhere to the limit of ten for the present.

18

by the University marks. And I see no objection to the suggestion for providing for the representation of certain classes, but I would go further and select 2 of each of the classes named. I think too that an Entrance Examination to the Subordinate class may very well be dispensed with. For entrance to this class, as to the Engineer class, I would reserve a certain number of vacancies for Europeans, Eurasians, and Mussulmans.

(c) Position of Soldier Students. This difficulty is not got over, the Principal considering that they could not master the theoretical course of the Engineer class. This does not apparently coincide with the Director of Public Instruction's views as expressed in para 15 of his Memorandum of 16th. September 1883, No. 6159. There need be no necessity for these men attaining the B.C.E. degree, if the University will not allow them to go up for it.

approved -

approved -

I am inclined to agree in the Principal's opinion that Soldier Students cannot be put into the Engineer class.

I do not clearly underst the Principal's remarks o this point.

If they are to be relegated to the subordinate class, from sheer inability to go through the course laid down for the Engineer class, many practical difficulties will arise. As a solution I can only think of a special class and special training for these men, altogether apart from the civilian element. It must not be forgotten that these military Subordinates have hitherto formed the backbone of our Sub-engineer and Supervisor Establishments. Can we afford to throw them over in the future? And must not a certain number at least always be necessary for military works proper?

(d) Suboverseers. Might be included I think in the maistry class - if you consider it necessary to include them at all in the scheme.

I do not think this suggestion need be entertained at present. I entirely concur in what you say as to the importance of maintaining the military element in the Sub Engineer & Supervisor grades, — and I look to the proviso in 11th para of draft, that a certain number of vacancies in ~~the grades~~ the Supervisor grade must be reserved for the best qualified among the Overseer grade, for the maintenance of that element. If the practical working of these arrangements proves unsatisfactory, the modification proposed by you can be considered.

approved

II. Draft Notification.

Heading. - I have no doubt Capt Love is right to postpone the date of Prospectus taking effect before 1st. January 1886.

2nd. para - Classes. - There

is this to be said in favor of Captn. Love's proposed doubling up of the civil and mechanical Engineer classes, that it is very unlikely any candidate for the mechanical class will come forward, at least for many years. If there were a number of applicants, I would myself prefer to keep them in a distinct class. True, the rough draft notification states, para 14, that the theoretical course for mechanical Engineers will be similar to that for civil Engineers, but this hardly implies exact similarity as to the subjects, time devoted to each subject, extent of treatment of each, &ca., and I am inclined to think that in their case considerable departure should be made from the exact lines of the theoretical course shown in para. 7. The fact too that the establishment of a distinct class is sanctioned and treated separately from the Civil Engineer class, will emphasise the desire of Govt. to afford training in the Mechanical Branch of the profession, and direct the attention of the public thereto.

I think the two classes should be kept separate as proposed in the draft Notification

3rd. para. The modification proposed here is to substitute the words "For admission to the Engineer Establishment of the P. W. Department" for the words of the draft "For the admission to the Sub-Engineer and Supervisor grades of the Upper Subordinate Establishment". I have no objection to the alteration, though I am not sure as to the propriety of it, when it is considered that this class is to be the sole recruiting-ground for the upper grades of the Subordinate Establishment, and but one Engineer, the best man, is to be taken from it annually. Is not the standard then, the standard for the Sub-Engineer and Supervisor grades?

I would accept the Principal's proposed alteration

4th. para. An important modification is proposed here, viz: the raising of the maximum limit of age from 19 to 21. I entirely disagree with the Principal in this point. The

ould keep the
t at 19.

course is to be 5 years, and men would thus commence their career in the Department at 26. Surely this is too late.

5th. para. The fees may of course be altered as you think proper, the Educational Department consenting. I would stick to the "no guarantee" - the words being "no guarantee is given of appointments in the public service to passed students". Rewards to the best men are not in my mind a guarantee to passed students.

I do not object to the Principal's proposals in the matter of fees.

Yes.

7th. para. I have not myself looked into this List which I think I took from one of the Committee's Reports, but I may observe that I see no earthly use in teaching our would-be supervisors and engineers and the solitary annual A. E. Machine Drawing.

I would accept the Principal's proposed modifications

8th. para. No objection to the change, if it be finally decided to double up the Civil and Mechanical Engineer students.

See remark above on 2nd para.

11th. para. No objection.

approved

12th. para. This matter is dealt with by me in my remarks regarding the position of Soldier Students, the most difficult part of the whole question from a P.W. point of view.

As stated above, I concur with the Principal's remarks [illegible] this point

13th & 14th paras of draft will stand.
I would accept the Principal's proposals under para 15th

13th., 14th., 16th. paras. I have no objections to offer.

17th. para. The point here alluded to by the Principal is one for future settlement. It seems unnecessary to discuss it until the time comes, 4 years hence, for providing the Workshops training.

Yes.

Between 17th. and 18th. paras. I need say no more on the suggestion made here by Captn Love. In my first note to you (of 5th.) I pointed out what appeared to me the objection to including the Military Students in the Subordinate Class. And this objection is not the only one. Captn. Love's proposed new para seems to me useless, but this is only my own opinion, and may be disregarded inasmuch as the Committee's Report dealt with the Military Students as belonging to the Subordinate class. The further remarks

What I have said above shows that I approve the insertion of some such paragraph as suggested by the Principal.

of the Principal regarding the Soldier Students, their employment in the Revenue Survey Department, dispensing with workshop training for them, &ca., are matters for the future rather than the present. Whatever the final shape and form of the Notification, the above points need hardly be alluded to therein.

Draftsmen & Surveyors. I purposely left out these classes which I thought could easily be dealt with after disposal of the more important parts of the Notification. It devolved on this office I thought to take the initiative on the last orders of Govt. and bring about a final settlement of a vexed question, and it was mainly with this object the rough rules were drafted.

Cl.

D.W.

23 — 3 — 84

I entirely concur.

Yes. I think the procedure in the matter of these classes may be dealt with hereafter.

Meanwhile I think the proper course is to have the draft Notification modified in the sense of the foregoing remarks, and to send it for the consideration & remarks of the D.P.I. with advertence to G.O. of 1-7-84, No. 1840 Edl.

26-4-84

Notification.

In modification of the rules hitherto in force for the admission of candidates to the Civil Engineering College at Madras, and their subsequent training and employment, the following Prospectus which will take effect from the Ist. January 1886, is now published for general information.

Prospectus of the Civil Engineering College, Madras.

Ist. The College purposes to give theoretical and practical training in Civil Engineering to Europeans, Eurasians, and Natives, in view to fitting them for employment in the Public Works Department, or on works undertaken by Local Fund Boards and Municipalities, or in connection with the private Engineering enterprises of the Country. Students will also be prepared for the Degree of B.C.E. in the University of Madras.

2nd. The following classes will be formed at the College:-

(1) Civil Engineers

(2) Mechanical Engineers

(3) Engineer Subordinates

(4) Surveyors

(5) Draftsmen

Subordinates

(6) Maistries and Artizans

3rd. Civil Engineer Class. This class will educate pupils up to the standard required for admission to the Sub-Engineer and Supervisor grades of the Upper Subordinate Engineer Establishment of the Public Works Department; the course of instruction being at the same time regulated to meet the requirements of the Madras University for the Degree of B.C.E. The course will be partly theo partly practical retical portion over three years, practical over

4th. Rules for Admission. Candidates for admission to this class must produce a certificate of having passed the "First in Arts Examination" of the Madras or any other Indian University. They must also produce satisfactory testimony of good character,

Selection of qualified Candidates for admission will be guided by the grade and class of their University examination, checked if necessary by reference to the University authorities. Two Europeans or two Eurasians & two Muhammadans, if such present themselves will however be first selected from the list of qualified candidates, and the other vacancies will be filled by the remaining qualified Candidates in order of merit.

age, health, and freedom from liability to Small-pox. The maximum limit of age for entrance will be nineteen. The number to be admitted annually is limited to 10.

5th. Conditions. All students in the Civil Engineer Class will be required, during the period of their theoretical course, to pay a monthly fee of Rs. 10 15, with the exception of those who have passed the F.A. Examination in the first class, from whom no fees will be taken during the first year of study. They will provide themselves with the Text Books in use, and with a case of Drawing Instruments and a box of colors. They will be non-resident. Strict observance of the Standing Orders of the institution as regards attendance, discipline, &ca, will be expected from all. No guarantee is given of appointments in the public service to passed students.

6th. Course of study. The course for Civil Engineer Students will extend over five years, and will be partly theoretical and partly practical.

6 7th. Theoretical Course. The theoretical course will last three years, and will comprise the following studies:-

I. Pure Mathematics.

Arithmetic and Algebra

Plane Geometry, and Mensuration.

Trigonometry and Algebraic Geometry.

Differential and Integral Calculus.

II. Applied Mathematics.

Statics and Dynamics.

Hydrostatics, Hydrodynamics, and Pneumatics.

Practical Mechanics.

III. Physics.

Experimental Physics.

Inorganic Chemistry, theoretical (including Metallurgy), and practical (including Elementary knowledge of qualitative analysis).

Elementary Geology.

IV. Drawing.

Practical or Descriptive Geometry

Orthographic and Isometric Projections.

Mechanical Drawing.

Architectural Drawing.

Machine Drawing

Free-hand and Perspective Drawing.

V. Language.

Tamil or

Telugu

(Note.- Tamil to be obligatory for Natives of Telugu Districts, and vice versa. The choice of one of these two languages to be open to all other students.)

VI. Engineering.

Building Materials

Strength of Materials.

Building Construction, and Architecture.

Applied Mechanics

Theory of Strains and applications to Construction.

Earthwork, Roads and Railways.

Hydraulics, including Bridges and Irrigation Works.

Principles of Mechanism

Prime-movers, Steam-
engines, and
Hydraulic
Machinery.

Designs, Specifications, and
Estimates.

VII. Surveying.
Instruments.
Surveying and Levelling
in the field.
Calculations and Topographical
Drawing.

8th. Practical Course. After completing the theoretical course, the pupils of the Civil Engineering Class will spend one year in the Public Works Workshops, going through the carpenter's shop, the smithy, the foundry, and the fitting shop. They will then be placed for one year under the Public Works Department, and will be stationed at places where large works are in progress. They will be regularly instructed in the practical details of brickmaking, bricklaying, quarrying, blasting, masonry, building of all sorts, the management of labor, ~~and~~ accounts, &ca.

8
9th. Examinations. At the close of each year of the theoretical course, Term Examinations will be held by independent Examiners. At these examinations, portions of certain subjects will be finally disposed of; and the marks gained at each examination will count towards the final total. The final examination will take place at the close of the theoretical course, and certificates to the effect that they have satisfactorily completed the same will then be issued by the Principal of the College to the passed candidates.

9
10th. University Degree. After passing the final theoretical college examination, the students may go up for the Univer

sity Degree of B.C.E.; but, with the consent of the Senate of the University, this degree will be withheld until the receipt of a report from the Principal of the Civil Engineering College that the candidate has satisfactorily gone through the full practical course.

10 11th. **Rewards.** One appointment annually as Assistant Engineer, 3rd. grade, in the P.W.D., will for the present be conferred on the student highest on the list at the final examination, ~~and~~ who has also obtained the Degree of B.C.E.

(or) until further

To those next on the list appointments as Supervisors 2nd. grade will be offered, in order of merit. The number of appointments to be so awarded will be in proportion to the requirements of the service, and will be fixed by the Chief Engineer. The number so determined on will be announced annually, at least 6 months before the final college examination. It is to be understood, however, that all vacancies in the Supervisor grade will not be filled by selection from the most distinguished of the passed students of this class, as a portion of such vacancies must ~~necessarily~~ be reserved for the ~~[illegible]~~ duly qualified subordinates of the Overseer grade.

Two scholarships of Rs. 20 25 per mensem, and one of Rs. 10 15, tenable for two years, will be awarded annually, on the results of the first year's examination.

Four scholarships of Rs. 10 per mensem, tenable for one year, during the Workshop course, will be awarded on the results of the final examination. During the final year of practical training on works, subsistence allowances of Rs. 50 per mensem for Europeans and Eurasians, and Rs. 25 per mensem for natives, will be granted. Such allowances will, however, be contingent on the good conduct and satisfactory progress of the student under instruction; and on proof of misconduct or idleness the allowances may be cut down or withdrawn altogether by the officers in charge of the works.

12th. Soldier Students. Military students desirous of qualifying for employment in the P.W.D. will be admitted to the Civil Engineer Class on their passing an entrance examination at the College. This test will be ~~executed~~ exacted in lieu of their furnishing the certificate of having passed the F.A. Examination as required from Civilians. The rules hitherto in force regarding the residence, subsistence, apprenticeship, &ca., of Soldier pupils will continue to apply. A fixed proportion between the number of soldiers and civilians to be appointed to the P.W.D. will be established. These soldiers will also be allowed to go up for the B.C.E. degree; but they will not be eligible for the annual appointment to the Assistant Engineer grade given to the highest passed candidate of the C.E. Class.

4/ [illegible] be subject to some [illegible] number

~~13TH~~ 11. Mechanical Engineer Class. Will comprise pupils desirous of qualifying themselves for employment in the Public Works Workshops, in the Railway Workshops, or on works for which technical mechanical training and knowledge are indispensable.

14th. Course of study. The theoretical course for mechanical engineers will be similar to that for Civil Engineers; after completing which, the mechanical pupils will be stationed for two years at the largest Workshops available. Special arrangements will be made each year for this apprenticeship.

The rules for Civil Engineers as regards fees, scholarships, subsistence allowances, &ca, will apply to this class also.

Does this mean that the same number of scholarships will be awarded in the two classes?
The number of awards must bear some ratio to the number in class

~~15th~~ 13th. Engineering Subordinates. This class will afford theoretical and practical instruction to young men seeking to qualify themselves for the Overseer grades of the P.W.D. and analagous positions.

16th. Admission. Matriculated Candidates will be admitted to this class without examination; all others must pass an entrance examination in English, Arithmetic, Elementary Algebra, and two books of Euclid. The maximum limit of age will be eighteen. The number admitted annually will be limited to 30. The physical test for admission will be similar to that exacted from candidates for the C.E. Class.

15
17th. Conditions. The conditions will be similar to those laid down for the C.E. Class, but the fee from Subordinate students will be Rs. 3 per mensem. As ~~for~~ in the case of the Civil Engineer pupils, no fee will be exacted during the workshop year; and, during the year of practical study on works, stipends will be granted of Rs. 30 per mensem for Europeans & Eurasians, and Rs. 20 per mensem for natives, subject to the conditions of good-conduct, regular attendance, &ca. No guarantee of appointments is given.

15th [illegible] [illegible] for the admission of Candidates to this class will be the Matriculation Examination of the Madras or other Indian University. The maximum limit of age will be eighteen. The physical tests required will be similar to those laid down for candidates for the Engineer Class. The number annually admitted will be limited to 25, selection being made from the total number of qualified candidates. Two Europeans, two Eurasians and two Muhammadans, if such present themselves, will be first selected from the list of qualified candidates, and the other vacancies will be filled by the [illegible] qualified candidates in order of merit.

16th Non Commissioned Officers and soldiers of H.M.'s British Service, desirous of qualifying for employment in the P.W. Dept, will, to the number of five annually, be admitted to the College on passing an entrance examination in Arithmetic and English. After one year's study of Arithmetic, Algebra and Vernacular Language, they will, provided they pass a satisfactory examination in these subjects, join the subordinate class for the ordinary theoretical and practical courses. Each student will draw a stipend of Rs 10 per mensem for 3 1/2 years commencing from the date of joining the subordinate class. His pay, rations and clothing will be drawn from his regiment throughout the whole course of study. A fixed proportion between the number of soldiers and civilians to be appointed to the P.W. Dept. will be established.

17
18th. Theoretical Course. This course will occupy two years and a half, and will embrace the following subjects

74/31

1 Mathematics.

Arithmetic and Algebra.
Geometry and Mensuration.
Trignometry.
Elementry Statics.

11 Drawing -
Geometrical Drawing.
Orthographic Projection
Mechanical Drawing (Buildings, Irrigation Works, Models, and Machines)
Freehand Drawing

111 Language -

Tamil or Telugu.

1V Surveying -
Chain and Compass.
Box Sextant and Plane Table.
Theodolite.
Levelling.
Topographical Drawing.

V Engineering -
Building Materials and Construction
Hydraulics, Bridges and Irrigation Works.
Earthwork and Roads.
Strength of Materials.
Elements of Mechanism and the Steam Engine.
Designing and Estimating

(Civil and Mechanical)

18
~~19th~~. Practical Course. This Course will comprise one year of practical study at the Chief Workshops of the Presidency, and one year on large Engineering Works on which instruction will be afforded Similar

in character to that given to the Civil Engineer pupils.

19

20th. Examinations. During the theorftical course, term Examinations will be held by independent Examiners, the results counting towards the final total; but certificates of qualification as Engineering Subordinates will be held back until the satisfactory completion of the practical course, as attested by the officers of the Workshops and Works on which the pupils have been entertained.

2[illegible]

21st. Rewards. Vacancies in the Overseer grades of the Public Works Establishment will be filled by passed men, in the order of merit. Prior to each entrance examination, notice will be given of the number of such appointments likely to become available for competition by the then entering batch of candidates.

Six scholarships at Rs. 8 per mensem, extending over three years, are sanctioned. These will be awarded, in the first instance only for one year, on the results of an examination held six months subsequent to entrance, and will be redistributed annually after each term examination.

One scholarship at Rs. 20 per mensem, tenable for three and a-half years, by a European or Eurasian pupil of the Lawrence Asylum, will be awarded to each batch by open competition among the pupils.

Lists of qualified men, with remarks as to their attainments, marks obtained, conduct, &ca., will be circulated annually to Local Fund Boards and Municipalities, with recommendations that they be employed in suitable posts when opportunities offer.

Ed C No 1/85

Mch 10094

C.a.W.

Have the papers connected with this subject been returned by the D.P.I.?

C.J.
4.12.84

To D.W.

Please see the attached slip which shows that the papers are not in the office. They have not been passing through the books in the regular course

4.12.84

The return of the papers sent to D.P.I. must be awaited. I can take no further action till then.

C.J.
4-12-84

P.O. reminded
5.12.84

To D^r. W. Dec No 7459/1/85

In your note dated 23.8.84 on my Remarks on Draft Notification regarding Senior College Classes, you say under II, 4^th^ para.

"An important modification is proposed here, viz the raising of the maximum limit of age from 19 to 21. I entirely disagree with the Principal on this point. The course is to be 5 years, and men would thus commence their career in the Depart^t. at 26. Surely this is too late."

I solicit a reconsideration of this point on the following grounds:—

(1) We want to get as many men as possible to enter who will not have to be instructed in subjects taught in Arts Colleges. Thus F.A's have no knowledge of Mixed Mathematics; B.A's have: but an age limit of 19 will exclude B.A's

(2) The man who secures the

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guarantee of an Assist. Engineership becomes a gentleman by position, whatever his previous status may have been; and he should therefore have received a liberal Education. I do not think the F.A. standard can fairly claim this title.

Up to this para

(3) When the new courses come into operation, we want to extend and raise the B.C.E. standard. At present men are admitted up to 22, and have a two years' theoretical training. If men are to be admitted up to 19, and are then to have a three years' theoretical training, it will not be possible to raise this standard materially.

(4) The age limit being at present 22, and the course 2 years, the superior limit for the public service is 24 years:— without practical training. If the age limit for the College were fixed at 21, a 3 years' course would give 24 years also, without practical training.

Up to this point, we should have, under the new scheme, more technical training for a given age. Both under present system, and in future, practical knowledge has to be acquired somehow; but the mere circumstance that it is proposed to impart it systematically instead of hap-hazard does not seem sufficient reason for reducing the age of admission to the College by 3 years.

(5) Because 26 years is the superior limit at which men can join the permanent staff of the P.W.D., it does not follow that it will be the average age.

I admit that I agreed to the Committee's proposal to make the age limit of admission to the College 19: but I now know more of the relative capabilities of B.A's & F.A's than I did then.

H D Love
Prinl. C.E. Coll

to D.W

I approve generally of the draft notification; but I should like you to take the opinion of the Principal, both on the points which you have mentioned as doubtful, and generally on the scheme

It seems to me better that he should be consulted as to the practical working of the system in the first place.

With the Principal's opinions before us, the notification (draft) can be revised, and then referred to the D.P.I. for his remarks.

G.

74/5

F INDIA.

EPARTMENT.

L.

m, 27th December 1884.

r the word "compete" in the
paragraph 1 of Public Works
lution No 1443 G dated 13th
insert "on Equal terms".

AW Sampson

Under Secy to the Govt. of India.

Govt. of Madras,
ublic Works Department.

10094

D. W.

[illegible]

We have no record of the return of the papers by the D. of P. Instruction. They seem to have been sent by d/o to W. by the D.P.I. but from the P.S. to No 1975 D of 5-11-84 you will see they were sent back again by W. & from this date we have no trace of them.

S.O.W. says they were returned lately by the D.I.P. to D.T.W. who sent them by office Note to the Principal C.E. College - of this office Note we have no trace - Perhaps it was a d/o - D.S.

6/12/84

74/5

G.

OF INDIA.

DEPARTMENT.

L.

m, 27th December 1884.

er the word "compete" in the

paragraph 1 of Public Works

lution No 1443 G dated 13th

insert "on equal terms".

W. Sampson

Under Secy to the Govt. of India.

Govt. of Madras,

ublic Works Department.

No. 1500 G.

74/5

GOVERNMENT OF INDIA.
PUBLIC WORKS DEPARTMENT.
GENERAL.

Fort William, 27th December 1884.

r the word "compete" in the
paragraph 1 of Public Works
lution No 1443 G dated 13th
isert "on equal terms."

CWSampson
Under Secy to the Govt. of India.

Govt. of Madras,
ublic Works Department.

C.a.w.

74

The Hon. Mr. Sullivan
is expected at Madras
on Wednesday morning
the 7th Inst.

Ca
5.1.85.

A.C

Circ tomorrow

AS
5 1-85

No. 1500 G.

All communications
should be addressed
to the Secretary.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

GENERAL.

Fort William, 27th December 1884.

Ch 13609
Sent to W on
7/1/85

__Addendum.__ After the word "__compete__" in the last sentence of paragraph 1 of Public Works Department Resolution No 1443 G dated 13th December 1884 insert "__on equal terms__".

A W Sampson

Under Secy to the Govt. of India.

To

The Secy to the Govt. of Madras,
Public Works Department.

No. 972 W d/12. 4. 84
" 1223 W d/16. 5. 84
" 1450 W d/11. 6. 84
" 1641 W d/1. 7. 84
" 2647 W d/28. 10. 84
" 2139 D d/29. 11. 84
" 1493 C d/8. 9. 84
" 1975 D d/5. 11. 84

Circ: 6/1/85

No. 74 W — PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 9th January/85

28/35

READ the following

aw.

The Govt. of India - (P.W. No: 1443 G d/13th Dec/84)

Ordered to be published in the Fort St. George Gazette

2. The ~~present~~ orders now received from the Govt. of India will supersede the Notification published at page 696, Part I, of the Fort St. George Gazette of 28th October 1884 so far as the

Ⓓ

Competition there advertised is restricted to natives of pure Asiatic origin

9 JAN 85

C.B.
27.12.84

5.1.85

9/1/85

Supdt: Gazette Press for publication of Proceedings in full
Edn Department

20/1/85

Circ: 6/1/85

7.2.11 ✓

21.2.11 ✓

[illegible] 12 ✓

27-2-23 ✓

22/3/24 BIII ✓

10699

Gobt. of (1884) Madras.

PUBLIC WORKS.

Dated

Recd.

Encl.

12-1-83

G.O., 17 Jany 1884, No. 74

Engineer Appointments

Resolution of the Govt. of India on the subject of the [illegible] guaranteed to Indian Civil Engineering Colleges ordered to be published in the Fort St. George Gazette

Rd 10/1 E 10/1