Role Of The Estate & Works Department

Introduction

The preferred name for an Estate, Works Maintenance and Transport Department is the Department of Engineering Services. This name encompasses the various activities taking place in the department. Each activity can then be classified as a unit in the department.

Some of our older Universities like the University of Ibadan have broken up what used to be the Department of Works, Maintenance and Transport into three departments i.e. Department of Maintenance and Utilities, Department of Works and grounds, and the Motor Transport Department. One does not know what led to this decision, but it can be likened to the process of fragmentation which is so typical of Nigeria today such as the creation of new states. On the other hand, it could be following the example of some of our governments which have abolished the post of Controller of Works, and made the Chief Engineer of each section responsible to an Administrative Officer who hasn't the foggiest idea of what the engineers are expected to do.

In the developed countries, there are enough contracting establishments that could be depended upon to tackle most of the works aspect of the services, so that the Engineering Services will be mainly concerned with the maintenance and repairs of utilities of the University. The physical plant of a University in developed countries has been described as consisting of administration buildings, Libraries, Laboratories, Lecture Halls, some residential and recreational facilities, an auditorium, a gymnasium, an hospital, and a Institute for advanced study and research. This description also fits the Universities in developing countries, but to these must be added some other items like the provision of living accommodation for all academic staff and for all or most of the students, a good number of senior and junior administrative and other supporting staff, construction and maintenance roads, provision of water, electricity, refuse collection and disposal, pave, telephone and transport.
In effect, the University Campus in a developing country can be rightfully described as a small town of anything up to some 20,000 people. In this University, it is expected that the staff and students’ population by 1990/91 will be about 9,000. Consequently, the engineering services to be provided are like those of a small township; and in order that these services may be adequately and satisfactorily provided, a works, maintenance and transport department must be established.

**Staff Requirements**

To head such a department, a properly qualified professional engineer is required who will not only see to the efficient running of the department, but also will have to deal with other engineering consultants when capital works are concerned. The department also needs other engineers, architects, estate surveyors, technicians, artisans, skill and unskill labour. Each of these categories of staff must be properly trained for the part he is expected to play in the establishment. The Engineer (or architect or surveyor) is the high level manpower, the technician is the middle level manpower, and the artisans, skill and unskilled labour are the junior level manpower. FUTO to date, has in the Estate and Works Department (1) Engineer, (2) Architects, (6) technicians, (12) Artisans (32) skilled and unskilled labour (only ¼ directly under Estate and Works while the rest are permanently allocated to other units). These figures are grossly inadequate when one considers the extent of services being rendered.

**Structure of the Department**

Presently, the department has (4) Sections as given below:

1) **Architectural Section** - this section is currently headed by a Senior Architect, and the responsibilities include the architectural design of new buildings and modifications to existing ones. The Section has been and would continue to be involved in the design of some of the buildings on the permanent site.
2) Building/Civil Engineering Section - this section is currently headed by a Senior Technical Officer. The responsibilities include the maintenance of the roads, drains, grounds, plumbing, carpentry and masonry works, sign-writing and painting works.

3) Electrical Section - this section is presently headed by a Principal Technical Officer. The duties include the installation and maintenance of electrical appliances in buildings, operation and maintenance of generators.

4) Mechanical Section - this section is presently headed by a Technical Officer. The primary assignment is the servicing and repair of University Vehicles.

It is hoped that as the University grows to its expected size, arrangements will be made to employ Civil, Electrical and Mechanical/Automobile Engineers to head the Sections mentioned in 2, 3 & 4 respectively. This will enable the present sectional heads to be more involved in the actual maintenance works. Also, an Estate Surveyor normally trained for valuation of properties would be needed to take over some of the jobs being handled presently by the Central Administration.

Responsibilities.

Unlike other technological staff serving other establishments or communities, the staff serving the department does not serve a faceless populace as in a municipality where they deal with representatives of the people. The University Community is more compact, and everybody knows everybody else. Individual staff has direct access to the departmental staff. This makes the work more difficult as every complainant believes that his problems deserve priority attention above all other pending problems. In fact, one tends to see the department as a 'Public Complaints Commission'.

The most important aspect of the services rendered by the department is the maintenance of the University's physical plant. Past experience have shown that there has always been the tendency to go from one project to another whilst the previous ones are left to go rack and ruin due to lack of maintenance.
In tropical countries where paints and fabric deteriorate rapidly, a sum of 5% of the capital cost of construction of a building should be made available each year for its maintenance. On this temporary site alone, a total sum of about $29m has been spent to put up additional buildings and services. Going by the above percentage, a sum of about $450,000 should be provided annually for maintenance. Presently, the department receives about $70,000 per annum, out of which rented houses outside the temporary site are also maintained.

The above stated 5% for maintenance can be drastically reduced if adequate precautionary measure are taken at the time of construction - hence the importance of the active involvement of the department at the construction stages. For example (i) if fittings, specials etc are standardized for all buildings, the cost of stocking the store will be reduced as there will be no undue proliferation of products. Whenever such needs arise, it will be easy to cannibalize from items beyond repair. (for economic reasons) to keep others going. (ii) Precautionary measures like anti-termite treatment to foundations, waterproofing etc at the construction stages give protection of up to 20 years. (iii) Proper location and marking/mapping out of utilities, especially the underground or concealed ones thus reduce maintenance problems. It is rather saddening to note that a city like Ibadan has no proper records of the location of its water services. Many times, efforts are made to locate the plumbers or other technical staff in the corporation at the time of construction in order to trace their lines and effect repairs in some areas.

The current trend in new Universities is to establish a Physical Planning/Development Unit in order to accelerate and monitor accurately the activities on the new sites. After this must have been reasonably accomplished, the Unit is gradually phased out, and its responsibilities transferred to Works Department. Physical Development is a continuing process, and that is why there is the need to have an architectural section in the department. This section is presently affiliated to Physical Development/Planning Unit, and it is expected that this section eventually takes over the transferred responsibilities of the ESD as it relates to architectural works.
Procedure for Maintenance Works

(a) It is preferred that requisition for maintenance jobs be made in writing to the department. This allows for proper documentation as against requisitions by telephone or orally while on the road.

(b) The requisition is received by a clerk; and after documentation is referred to the departmental head or any other designated Officer. The request is analyzed, and is passed on to the appropriate sectional head.

(c) The sectional head assigns a foreman or artisan to investigate the complaints and report back on the labour and materials requirement. The service requisition form is then filled, indicating the labour and materials requirement.

(d) The Sectional head then assigns an artisan to the job, indicating expected completion time.

(e) After completion, the complainant is expected to endorse the service requisition form to confirm that the job has been satisfactorily completed.

(f) Sectional heads have the duty of monitoring all on-going jobs to see to their successful completion. Where services of other artisans are required, it is the responsibility of that sectional head to liaise with his counterpart to obtain the required service.

(g) Where there is a backlog of uncompleted jobs caused by shortage of materials and/or labour, the sectional head reports to the departmental head periodically to intimate him with the problem(s), and obtain approval for release of funds for purchase of materials or employment of external hands (if there is need for it).

(h) Materials for job execution are normally collected from the store using the store requisition voucher. When the materials are not available in the store, one of the following steps are taken to obtain materials (i) for small amounts, purchases are made from the Imprést account (ii) for large amounts, a bulk order of the materials is made using the LPO (iii) for emergencies that the Imprést cannot cover, cash advances are made.
Constraints

There are three major constraints to rendering of efficient services.
(a) Funds - Because of funds limitations, occasions do arise where one has
to decide between spending $X to attend to Mr. A, and spending the same
amount to attend to Messrs X, Y, Z. Such a decision is left with the
departmental head - whatever decision is taken is bound to effect one
party adversely, and people don't usually take kindly to being asked to
hold on. Such decisions have sometimes been misconstrued as inefficiently.
(b) Personnel - the department is very short of skilled hands. Occasions do
arise when it becomes very compulsory to move a craftsmen from one job
(when it is not yet completed) to another more urgent job. This
usually is not looked on kindly, but it is a situation that cannot be
helped. Efforts are made to return such craftsmen to the previous jobs
as soon as is practicable. Perhaps it is pertinent to mention that
there is currently an embargo on the appointment of additional staff.
(c) Transport - the department is 'blessed' with one 504 saloon, one 504
station wagon, and one 504 pick-up that is presently off road. Movement
of equipments, tool, materials and personnel is terribly hindered by
this problem. This sometimes is responsible for late attention to
some complaints.

Work Priority System

From the point of view of importance/urgency of jobs, it has become
necessary to categorize the jobs in order of priority. Three main categories
are in use:
(i) Priority One (P.1) jobs - These are jobs that require emergency maintenance
work, and those which have to be performed for successful operation of
the institution. Examples are burst water mains, leaking water/gas
pipe, main door lock repairs, blocked septic tanks etc.
(ii) Priority Two (2) jobs - these are jobs that should be done as soon as
possible, and they take precedence over all others except those in (P.1).
Examples are replacement of light bulbs, repair of air conditioners,

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installation of air conditioners and new electrical appliances, indoor carpentry works etc.

(iii) Priority Three (P,3) jobs - these are jobs that are desirable, but which may be completed when convenient. They are jobs used to take up the slack in manpower usage. Examples are major modification to quarters, floor tiling, replacement of wardrobes, keys etc.

As has been said before, there is always the tendency to move personnel from one uncompleted job to another of higher priority. The reasons usually are based on expertise and manpower shortage.

**Routine Maintenance**

There is worldwide recognition for routine maintenance of service and utilities in order to prolong the life of such services. Such services/utilities include generators, air-conditioners, estate grounds, roads maintenance (including drains), water mains, plumbing and electrical installations in buildings. A maintenance schedule is drawn up on weekly, monthly, quarterly etc. basis, depending on the type of service being considered. Efforts are made to adhere strictly to this schedule. Unfortunately, FUTO Estate and Works Department is so short of manpower that it has not been possible to effect any routine maintenance. Efforts were made in the past to contract out the routine maintenance of air-conditioners, but experience has shown that this was abused by the contractor - hence the agreement was not renewed. At present the maintenance programme is ad-hoc, and it will remain so for as long as an embargo on fresh appointments lasts.

**Transport/Vehicle Maintenance**

At present, the Transport Section of FUTO is not under this department. Ours is about the only institution I can think of immediately where this is the case. I do not know the rational behind the decision to sever the Transport Section from the Estate and Works Department but I do hope that this stance will be reviewed as time goes on to normalize the situation.
The mechanical workshop in this department is under-equipped for major vehicle repairs. It is capable of undertaking general servicing and minor repairs. Routine maintenance of vehicles in this institution has been very difficult to effect. This is because of the general shortage of vehicles which makes it impossible to provide alternative vehicles for use while some are being serviced. The tendency is to continue to 'manage' the vehicle until it eventually refuses to move again. It is only then that requests come for repairs and they are tagged very urgent. There is no Imprint account for the Mechanical Section. So, all requisition for spares have to go through the stores which is usually not adequately stocked, or await cash advances. We all know how fast it is to get money out of the Bursary. In effect, vehicles have to be unnecessarily delayed in the workshop before repairs can be effected.

For repair works beyond the capability of the workshop, either in form of shortage of manpower or the inavailability of the right tools and equipment, the vehicles are sent to nominated workshops in town. The on-going procedure is to obtain an estimate from the external workshop for the prescribed job, assess the estimate, and negotiate accordingly. The revised estimate is then communicated to the user unit for approval before authorization of the repair work. After the repair work, the user unit has to confirm that the job has been satisfactorily carried out before recommendation for payment can be made.

Complaints have been received in the past on high estimates/bills from the mechanical workshop. Some people have even insinuated that Officials of the department do collude with others to inflate bills and include items not purchased. Whilst one appreciated that people have freedom of expression (for as long as it is not libelous nor against Decree 4), it must be emphasized that the general outlook of individuals (especially drivers) to the use of Official vehicles is that of indifference - for as long as the cost of repairs does not come from their pockets. Most drivers do not observe the daily routine checks of electrolyte level of the battery, engine oil level, clutch and brake fluid level. There is no regard for bumps and pot holes.
This makes it possible to lower shock absorbers every 2-3 months which is not likely with personal vehicles. So, Officers with official vehicles should please see the vehicles as their personal properties and treat them as such. This will reduce the maintenance costs.

Conclusion

I will like to conclude this presentation by highlighting areas where additional staff/equipment are needed to enhance efficiency in the department.

(a) A minimum of 50 technicians, artisans, and labour of various grades and disciplines will be needed to cope with the volume of work in the department.

(b) Additional tools will be needed to enable the department undertake the maintenance of the air conditioners, refrigerators, and cookers in-house.

(c) The mechanical workshop will have to be equipped for jobs like engine overhaul, panel beating, spray painting before the department can claim to be reasonably self-sufficient.

The embargo on physical development employment on the Lake Nsaebele Campus will no doubt stand in the way of the recommended improvements in the department. But it is hoped that the suggestions will be well noted against the time that the University moves to the permanent site.

Thank you for your patience.

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