



REPLACEMENT OF DALI SYSTEM WITH ENERGY EFFICIENT LED LIGHTS AT APB CAMPUS BLOCK A TO J AND FADA BUILDING

The University of Johannesburg (UJ) invites suitable suppliers to provide a proposal for the replacement of old DALI lighting system and for the Supply, Installation, and Commissioning of the above-mentioned LED lights, at APB Campus Block A lecture venues, passages and also FADA Building lecture venues with DALI system.

Purpose

UJ wishes to appoint suitably qualified organizations for the following work at the University of Johannesburg APB Campus for the replacement of Dali System with Energy Efficient LED Lighting at the APB Campus, Block A to J and FADA Building.

Locality of the Work

- 1) APB Buildings Block A to J – This building consists of 3 levels (Ground Floor to 2nd Floor) where a number of lecture venues are distributed among each floor.
- 2) FADA Building – Lecture Venues with only Dali system

Regulation

The supply and installation of the equipment specified; and its commissioning shall be in compliance with the latest amendments of the following act and regulations.

- 1) Occupational Health and Safety act and regulation (85 of 1983).
- 2) SANS 10142 -1/2
- 3) SANS 10114 – 1:2005

Scope of Work

The purpose of this enquiry is to provide the University of Johannesburg with an upgrade to the existing lighting network at the lecture venues within the APB block buildings at the Bunting Road Campus.

A site inspection and assessment needs to be carried out and the outcome used to develop detailed specification, design and selection of the most suitable LED luminaires and bring the lecture venues up to the required luminosity levels as detailed in the SANS codes (refer to Appendix 1) and to select LED luminaires based on maximizing energy savings, potential for lower maintenance (have LED lights with a life span in excess of 30000 hours) and future component availability costs.

The scope of work is outlined and detailed in a Bill of Quantities and is not limited to the points mentioned below.

- 1) Strip and remove where necessary all redundant existing lights and fittings.
- 2) Replace all fittings, where necessary, and install new LED lights as per specification and compliant with SANS 10114 – 1:2005. All LED lights to be supplied must be SABS approved.
- 3) Rewire the fittings, where necessary, to the electrical network, test, commission and issue Certificate of Compliance (COC) and safety report according to SANS 10142/2 specifications.
- 4) Procure, supply and install all required material as per the Bill of Quantities.
- 5) Rewire complete unit, test, commission and issue Certificate of Compliance (COC) and safety report according to SANS 10142/2.

Technical Specification

The implementation of this project is based on assessment of the following criteria:

- Condition of existing lighting systems.
- Cost to retrofit existing system with energy efficient solutions.
- Maintenance requirements.
- Consistency of application (all areas of similar function are consistent).
- Overall impact on occupants and general acceptance of changes
- A number of photometric simulations examples, which are attached, will form the benchmark against which installations will be verified.
- All designs and supply to be compliant with **SANS 10114-1:2005**.

Bills of Quantities

NB! See BOQ's attached of the existing Dali lighting system, proposals to include energy savings calculations, lux levels expected of the new lighting, technology of light proposed in terms of brand, wattage, lifespan etc.

APPENDIX 1: Excerpt from SANS 10114-1:2005

General Building Areas	E_m	
Entrance Halls	100	
Lounges	200	
Corridors	100	
Stairs	150	
Rest Rooms	100	
Rooms for Physical Exercise	300	
Bathrooms and toilets	200	
Plant Rooms	200	
Stores	100	

Educational Buildings	E_m	
Playschool Room	300	
Nursery Class	300	
Classroom & Tutorial Rooms	300	Lighting should be controllable
Lecture Hall	500	Lighting should be controllable
Computer Practice Rooms	500	
Exams Halls	500	
Library Shelves	300	
Reading Tables	400	
Dormitories	100	

Libraries	E_m	
Shelves and Stacks	300	Vertical illuminance
Reading Rooms	500	
Binding	500	
Cataloguing & Sorting	300	
General Work Areas	300	

Offices	E_m	
Conference Rooms, General Offices	500	
Printing, Copying	300	
Reception Desk	300	
Archives / Stores	200	
CAD Workstation	500	

E_m indicates the Minimum Maintained Illuminance.