



The energy-efficient glass façades at the new Department of Health buildings have resulted in them surpassing the target to reduce overall energy consumption by 24% on the air-conditioning scale of consumption

Health Department goes "green" at new headquarters

Contractor Grinaker-LTA has announced that it is close to completing a R580 million construction contract for the Department of Health's new headquarters in Pretoria's CBD. This project is being undertaken in a joint venture with BEE firm, Keren Kula Construction.

The contractors' work has entailed a complete refurbishment of the 30-storey Civitas building – which was originally built in 1971 and has housed the Department of Internal Affairs – as well as the construction of a new nine-storey office tower alongside it.

Both the refurbished Civitas building and the new office tower feature striking glass façades, the R40 million sub-contract for which was undertaken by Grinaker-LTA Façades, a division of the Building Business Unit. In addition to giving the old structure a modern, new look, these glass "curtain walls" are also designed to make the buildings more energy efficient. "The glass curtain walls comprise sealed, insulated glass units consisting of specialised inner and outer glass panels with an airspace

in between them. These units are designed to improve natural lighting in the office areas while simultaneously reducing solar heat build-up within the buildings, resulting in decreased lighting and air-conditioning energy requirements. With South Africa's building regulations under review with the aim of reducing energy demand from industry by 15% in 2015, the new Civitas buildings' energy-efficient features are particularly noteworthy. The average office building has a heat load of 120 Watts (W) per m³, depending on the details of the building. With their energy-saving curtain walls, the Civitas buildings run at approximately 90 W/m³. These energy-efficient glass façades have resulted in the buildings surpassing the target to reduce overall energy consumption by 24% on the air-conditioning side. This represents significant cost savings for the client, the Department of Public Works, and the tenant, the Department of Health," elaborates Graeme Jones, contracts director at Grinaker-LTA Building Inland. During the installation of the glass façades, the contractors employed innovative safety systems to minimise the potential safety risks associated with lifting 510 000 kg of glass up a 30-storey skyscraper.

An interior view of the refurbished Civitas building in Pretoria's CBD

"Project specific lifting rigs were developed. "In addition, more than 1 200 m of lifelines were installed to protect the panel installation workers."

In addition to the Expanded Public Works training initiatives, the contract provided 498 workers with in-house training in subjects ranging from first aid to plant operation.

A further 205 staff members were trained on site in basic construction skills. Four candidates from the Civitas site were also entered into a two-year trainee foreman learnership.

As part of the Expanded Public Works Programme, this contract has contributed to training artisans for the skills-strapped construction industry. Skills training was provided in various trades, including bricklaying, carpentry, tiling, plastering and plumbing.

Following a six-month training period, each student received a certificate of compliance. A total of 169 students were trained.

This contract has netted a number of safety awards since it commenced, including twice attaining second place in its category in the Gauteng Regional MBA (Master Builders' Association) safety competition, and receiving a 5-Star MBSA safety rating. The site has currently achieved 1,75 million lost time injury free hours.

Jones says one of the contractor's greatest challenges on this contract was the vertical movement of staff and materials within the old Civitas skyscraper – with demolitions going down and material for installation needing to go up, all while two staircases were being demolished and rebuilt. "We also faced the challenge of limited storage space," he notes. ■



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