

PORT ENGINEERING

CAPE TOWN CONTAINER TERMINAL RECONFIGURATION PROJECT SOUTH AFRICA

In order to cater for the worldwide growth in container movements, Cape Town's Container Terminal, originally built in the mid 1970's, is undergoing a phased expansion programme at an estimated total cost of R4billion. The reconfiguration and expansion project's first phase will increase the terminal's annual handling capacity (number of TEU's or 6m container movements) from 700 000 TEU's per annum to 1.4 million and then to 2.0 million TEU's per annum. To achieve this, additional space, a bridge crossing Marine Drive, new container handling equipment and a different configuration in the way which containers are stacked is required. In addition, the staging area for container trucks had to be increased and reconfigured along with the rail lines and marshalling yards serving the terminal. HHO Africa were appointed to plan and design the civil infrastructure of this Transnet project which is being completed within extremely tight time frames with the terminal fully operational at all times.

A multidisciplinary team of engineers, architects and a quantity surveyor was established to deliver on HHO's responsibilities which were to design the road network serving the Container Terminal and the civil works and buildings design for the stack area within the terminal and prepare a rehabilitation plan for the existing stack area pavement. This included:

- ◆ *Conducting initial & subsequent Traffic Impact Assessments for linking Cape Town Harbour & Container Terminal to an adjacent portion of land (the Port Industrial Park site)*
- ◆ *Preparing Conceptual Layouts of various options for the entrance to, truck staging areas & the exit from the Container Terminal*
- ◆ *Extensive services location & rerouting*
- ◆ *Designing the pavement layers capable of supporting the new container stack configurations for both General Purpose & Refrigerated (Reefer) Containers & preparing a pavement rehabilitation/strengthening plan for the existing stack areas*
- ◆ *Detailed design of the external road system serving the Container Terminal including a new road bridge & rail culvert, & truck staging area*
- ◆ *Developing detailed construction phasing & accommodation of traffic plans for the works external to the Container Terminal & the Stack Area itself*
- ◆ *Designing new & modifying existing substations & other smaller buildings*
- ◆ *Preparing contract specifications & schedules of quantities*
- ◆ *Preparation of an interim plan to accommodate Rubber Tired Gantry Operations as a temporary operation*
- ◆ *Detailed design of reefer stack area layout to accommodate electrical supply & gantry systems supporting refrigerated containers*
- ◆ *Ongoing design & construction support*

Client : Transnet Capital Projects /
National Ports Authority

