MARINE WORKS

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MINA RASHID MARINA-DESIGN & BUILD

Initial Stage – Dredging

Client: DP World
Consultant: MAPES Engineering Co. Ltd
Date of Start: 04-02-2015
Location: Port Rashid - Dubai, UAE
Built Up Area: 114,500
Duration: 22 Months
Total Quantity of Ramps: 2
East Boat Ramp (L) 70.6m x 20m (w)
West Boat Ramp (L) 70.6m x 20m (w)

- Excavation & trimming of the existing soil at the end block area
- Installation of geotextile, secondary rock (10 to 20 kg) at the bottom side of the end block
- Excavation, trimming & installation of geotextile at ramp area
- Crushed aggregate (20mm) over the geotextile & installation of precast concrete over the aggregates
- Installation of side support end precast concrete block at both sides of precast slab
- Installation of armor rock at the sides of side support precast blocks
- Cast-in-situ final end block construction
TUBULAR PILE

Total Number of Piles 324 Nos.
Phase I - 219 Piles
Phase II - 105 Piles

Tubular Pile Driving Works

- Tubular Pile & Pile driving equipment’s (Floating barge, Tug Boat, Pile driving equipment’s) mobilization at site
- Lifting and installation of the pile at pile driving equipment
- Setting out of the floating barge at exact position with the help of surveyor from the land and GPS
- Starting the Pile driving with the help of hydro hammer, this will be operated by crane operator
- Pile head cutting
PONTOON FABRICATION & CASTING

- Total Number of Pontoons: 222
- Primary, Secondary & Landing Pontoon: 20 M X 2.5 M
- Finger Pontoon: 15m x 1.5m & 20m x 1.5m
- Dock Pontoon: 10m x 5.0m

Pontoon Casting
- Pontoon Fabrication material delivery
- EPS (Expandable Polystyrene Styrofoam) block protective coating works
- Epoxy coated wire mesh & rebar fabrication
- Installation of EPS block, wire mesh & rebar
- Installation of pontoon embedded items
- Pontoon shutter installation & alignment of embedded material
- Pontoon concrete pouring works and curing works
LAUNCHING THE PONTOONS

- Concrete pontoon shifting from casting yard to launching yard
- Arrangement of all lifting tools
- Launching of concrete pontoon
- Dragging of concrete pontoon to desired location installation
INSTALLING PONTOON ACCESSORIES

- Installation of rubber fender
- Installation of pile guide
- Cleat and checkered plate
- Installation of dock identification number
- Installation of MEP utility and SOS pedestal
- Pile Cap
Total Length of Revetment Works 1.444 Km
Primary One Layer 70 – 180 kg
Secondary Two Layers 10 – 20 kg

Rock Revetment Construction
- Excavation, trimming of the excavated soil at slope area & Toe area
- Installation of geotextile in toe & revetment slope area
- Installation of secondary rock (10 to 20 kg) at toe & slope area around 30 cm depth as per the survey alignment
- Installation of the primary rock (70 to 180 kg) at slope area (under & above the water)
- Installation of precast end concrete block (capping beam)
ACCESS TO PONTOON

- Access platform concrete works
- Handrail & glass door installation
- Aluminum gangway Erection Works
- Finishing works
MARINA ROAD

- Site survey, road line, utilities service marking and leveling etc.
- Bottom soil trimming, grading and compaction.
- Laying of underground service duct pipes with necessary manhole construction, street light foundation.
- Installation of road drainage system.
- Installation of kerb stone & capping beam.
- Spreading of road base material in layer wise with proper compaction.
- Fixing of inter lock, paving block including sand bedding for walkway and drive way.
- Proper compact the interlock with sand.
- Palm tree and street light installation.
- Finally, road marking and fixing of road signage for smooth usage.
FINAL STAGE OF PHASE I & II
QUAY WALL REFURBISHMENT WORKS

Client: DP WORLD
Consultant: ITD Consultant
Date of Start: June 2013
Location: Port Rashid - Dubai, UAE
Builtup Area: 1,100 m
Duration: 7 months

- Initial stage: existing quay wall concrete breaking
- Rebar installation
- Installation of steel shutter Reinforcement
- Form works installation
- Concrete pouring
- Curing of concrete
- Installation of rubber fender, ladder & mooring ring
COASTER BERTH MOORING DOLPHIN

Client: DP WORLD
Date of Start: 2018
Location: Port Rashid – Dubai, UAE
Builtup Area: To Berth 162m Mega Yatch
Duration: 4 months

- Tubular pile driving works
- Tubular pile dynamic load test
- Tubular pile head cutting
- Bottom support steel channel & form works installation
- Steel reinforcement installation
- Embedded material installation for the fenders
- Concrete pouring
- Concrete curing
- Pneumatic fender & strip fender installation
- Tubular pile cathode protection works
- Safety handrail installation
PRESIDENTIAL JETTY

Client: Ministry of Construction
Date of Start: 10th Jan 2007
Location: Aden Yemen
Equipment used: Batching Plant & 130ton Crane
Builtup Area: 7,000m²
Duration: 10 months

Design & construction:
- 190m accropodes breakwater against the open water on up to 5m of water and with a 30 + 54m berthing facility on the protected side with 2 respectively 3 meters water depth, (block quay wall).
- Retaining wall was designed for overtopping and the elements were placed on a 0.1m bed of crushed material which in turn were protected against washing out.
- Block wall quay was designed for a Water level of + 2.0 CD, with the fill behind the wall having a friction angle of 35 deg.
- The bed consisted of 0 – 100 or 0 – 75 mm crushed material, placed on a heavy duty geo-textile.
- Blocks during placing were given a slight back fall against the bund and each column given a slight back fall towards the previous.