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Economic Commission for Europe

Inland Transport Committee

Working Party on Transport Trends and Economics

Group of Experts on Benchmarking Transport Infrastructure Construction Costs

Fifth session

Geneva, 1 and 2 May 2018

Item 3 of the provisional agenda

Transport Infrastructure Construction costs: Presentations of terminologies used

Construction cost of waterways

Submitted by the Government of Turkey

CONSTRUCTION COST OF WATERWAYS		
MAIN COST/INVESTMENT ITEMS	Breakdown Items	Unit
1) LAND EXPROPRIATION		
	1 Expropriation	\$/m2
2) MOBILISATION		
	1 Construction of access roads	\$/m2
	2 Establishment of Camp Areas	\$/lump sum
	3 Renting /Purchasing the construction equipment & machinery	\$/lump sum
2) ENGINEERING WORKS		
	1 Engineering Works For Detailed Design	\$/lump sum
	2 Site surveys, investigations, model works	\$/lump sum

CONSTRUCTION COST OF WATERWAYS		
MAIN COST/INVESTMENT ITEMS	Breakdown Items	Unit
3) CANAL EXCAVATION & DREDGING (INCLUDING TRANSPORTATION AND DISPOSAL)		
	1 Excavation on land	\$/m3
	2 Dredging for sea	\$/m3
4) CONSTRUCTION OF OUTER PROTECTION BOUNDARY OF SEA FILLING AREAS		
	1 Construction of protection structure along the outer boundary of sea filling areas	\$/Km
5) CANAL BANK & BOTTOM PROTECTION		
	1 Protection Type A	\$/m2
	2 Protection Type B	\$/m2
6) IMPERVIOUSNESS OF CANAL		
	1 Imperviousness Type A	\$/m2
	2 Imperviousness Type A	\$/m2
7) AUXILARY STRUCTURES AT ENTRANCES OF THE CANAL		
	1 Construction of Quays	\$/m2
	2 Construction of Breakwaters	\$/m
	3 Construction Dolphins	\$/m2
8) EMERGENCY AND WAITING MOORING BASINS		
	1 Construction of Quays	\$/m2
	2 Construction of Breakwaters	\$/m
	3 Construction Dolphins	\$/m2
9) STREAMS CONNECTIONS		
	1 Stream Connection Type A	\$/Unit
	2 Stream Connection Type B	\$/Unit
	3 Stream Connection Type C	\$/Unit
	4 Stream Connection Type D	\$/Unit
	5 Stream Connection Type E	\$/Unit
8) ROAD ALONG BOTH SIDES OF CANAL		
	1 Road along both sides of canal	\$/Km

CONSTRUCTION COST OF WATERWAYS		
MAIN COST/INVESTMENT ITEMS	Breakdown Items	Unit
10) CANAL OPERATION AND MAINTENANCE STRUCTURES		
	1 Construction of pilots building	\$/m2
	2 Construction of operation towers including radar, VHF, etc	\$/Unit
	3 Construction of tag-boat connection areas	\$/Unit
	4 Establishment of lighting, marking, etc, along canal	\$/Lump sum
11) CONSTRUCTION OF YATCH HARBOR(S)		
	1 Construction of Quays	\$/m2
	2 Construction of Breakwaters	\$/m
	3 Construction of Floating Piers	\$/m2
	4 Construction of Backyard	\$/m2
12) CONSTRUCTION OF LOGISTIC HARBOR(S)		
	1 Construction of Quays	\$/m2
	2 Construction of Breakwaters	\$/m
	3 Construction Dolphins	\$/m2
	4 Construction of Backyard	\$/m2
13) CONSTRUCTION OF LOGISTICS CENTER		
	1) Construction of Logistics Center Buildings	\$/m2
	2) Construction of Logistics Center Infrastructure	\$/Lump sum
14) RELOCATION OF INFRASTRUCTURE CROSSING BY CANAL		
	1 Relocation of water supply infrastructure	\$/crossing
	2 Relocation of astewater infrastructure	\$/crossing
	3 Relocation of power infrastructure	\$/crossing
	4 Relocation of telecommunication infrastructure	\$/crossing
	5 Relocation of oil and natural gas infrastructure	\$/crossing
	6 Relocation of Railways (Canal Crossing only - bridge, tunnel)	\$/crossing
	7 Relocation of Highways (Canal Crossing only - bridges)	\$/crossing