

MALTA TRANSPORT AUTHORITY



MANUAL OF CONTRACT DOCUMENTS FOR ROAD WORKS: VOLUME 4

**SECTION 1: METHOD OF MEASUREMENT FOR
ROAD WORKS**

Contents

<i>Series</i>	<i>Title</i>	<i>Section</i>
CHAPTER I	Definitions	1
CHAPTER II	General Principles	2
CHAPTER III	Preparation of Bill of Quantities Preambles to Bill of Quantities	3
CHAPTER IV	Units and Methods of Measurement	4
Series 100	Preliminaries Definitions Temporary Accommodation Vehicles for the Overseeing Organisation Communication System for the Overseeing Organisation Operatives for the Overseeing Organisation Information Board Traffic Safety and Management Temporary Diversion for Traffic Recovery Vehicles Progress Photographs Temporary Closed Circuit Television (CCTV) System for the Monitoring of Traffic Temporary Automatic Speed Camera System for the Enforcement of Mandatory Speed Limits at Roadworks	5
Series 200	Site Clearance Take Up or Down and Set Aside for Re-use or Remove to Store or Tip Off Site.	6
Series 300	Fencing Fencing, Gates and Stiles Remove from Store and Re-erect Fencing, Gates and Stiles Excavation in Hard Material	7
Series 400	Safety Fences, Safety Barriers, & Pedestrian Guard Rails Definitions Beam Safety Fences Remove from Store and Re-erect Beam Safety Fences Post Extension Units Raising Existing Sockets Wire Rope Safety Fence	8

	Concrete Safety Barriers	
	Pedestrian Guardrails and Handrails	
	Loading Tests on Post Foundations	
Series 500	Drainage and service Ducts	9
	Definitions	
	Drains and Service Ducts (excluding Filter Drains, Narrow Filter Drains and Fin Drains)	
	Filter Drains	
	Fin Drains and Narrow Filter Drains Connections	
	Chambers and Gullies	
	Headwalls and Outfall Works	
	Soft Spots and Other Voids	
	Supports Left in Excavation	
	Drainage and Service Ducts in	
	Structures (Including Reinforced Earth Structures and Anchored Earth Structures)	
	Filling to Pipe Bays and Verges on Bridges	
	Replacement, Raising or Lowering of Covers and Gratings on	
	Existing Chambers and Gullies	
	Remove from Store and Reinstall Chamber Covers and Frames, and Gully Gratings and	
	Frames	
	Grouting Up of Existing Drains and Service Ducts	
	Excavation in Hard Material Concrete Bagwork	
	Cleaning Existing Drainage Systems	
Series 600	Earthworks	10
	Definitions and Measurement General Excavation	
	Excavation in Hard Material	
	Processing of Unacceptable Material Class U1	
	Deposition of Fill	
	Disposal of Material	
	Imported Fill	
	Compaction of Fill	
	Soil Stabilisation Geotextiles	
	Soft Spots and Other Voids	
	Disused Sewers, Drains, Cables, Ducts, Pipelines and the Like Occurring	
	at Formation or Sub Formation Level; Disused Basements, Cellars and	
	the Like and Gullies	
	Supports Left in Excavation	
	Topsoiling and Storage of Topsoil	
	Completion of Formation and Sub-formation	
	Lining of Watercourses	
	Clearing of Existing Ditches	
	Ground Improvement - Establishment of Plant	
	Ground Improvement – Dynamic Compaction	
	Ground Improvement – Vibrated Stone Columns	
	Gabion Walling and Mattresses	
	Crib Walling	
	Filling and Caps to Mine Working, Well, Swallow Hole and the Like	
	Ground Anchorages - Ground	
	Anchorage Plant	
	Ground Anchorages	
	Ground Anchorages - Waterproofing	
	Anchorage Boreholes	
	Instrumentation and Monitoring - Boring Plant	

	Instrumentation and Monitoring - Boring Holes	
	Instrumentation and Monitoring - Instrumentation	
	Instrumentation and Monitoring - Instrument Hut or Cabinet	
	Instrumentation and Monitoring - Monitoring Equipment	
	Ground Water Lowering Trial Pits	
	Breaking Up and Perforation of Redundant Pavements	
	Perforation of Redundant Slabs, Basements and the Like.	
Series 700	Road Pavements – General	11
	Sub-base	
	Pavement	
	Regulating Course	
	Surface Treatment	
	Tack Coat	
	Cold Milling (Planing)	
	Insitu Recycling - The Remix and Repave Processes	
	Reinstatement of Paved Areas	
	Thin Bonded Repairs and Joint	
	Repairs to Existing Concrete Carriageway	
	Full Depth Repairs and Bay Replacement Repairs to Existing Concrete Carriageway	
	Saw Cutting, Cracking and Seating Existing Jointed Reinforced Concrete Pavements	
	Cracking and Seating Existing Jointed Unreinforced Concrete Pavements and CBM Bases	
	Overbanding and Inlaid Crack Sealing Repair Systems	
	Maintenance of Arrester Beds	
	Repairs and Patching	
Series 800	Not taken up	12
Series 900	Not taken up	13
Series 1000	Not taken up	14
Series 1100	Kerbs, Footways and Paved Areas	15
	Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems	
	Additional Concrete for Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems	
	Remove from Store and Relay Kerbs, Channels, Edgings, Combined Drainage and Kerb Blocks and Linear Drainage Channel Systems	
	Footways and Paved Areas	
	Remove from Store and Relay Paving Flags, Slabs and Blocks Steps.	
Series 1300	Road Lighting Columns & Brackets	17
	Road Lighting Columns, Brackets, Wall Mountings and CCTV Masts	
	Remove from Store and Re-erect	
	Road Lighting Columns, Brackets and Wall Mountings	
Series 1400	Electrical Work for Road Lighting and Traffic Signs (To be Included in the Next Version)	18
Series 1600	Piling and Diaphragm Walling (To be Included in the Next Version)	20

Series 1700	Structural Concrete	21
	In Situ Concrete	
	Precast Concrete	
	Surface Finish of Concrete - Formwork	
	Surface Finish of Concrete - Patterned Profile Formwork	
	Steel Reinforcement for Structures	
	Reinforcement for Reinforced and Anchored Earth Structures	
	In Situ Post-tensioned Prestressing for Structures	
Series 1800	Structural Steelwork	22
	(To be Included in the Next Version)	
Series 1900	Protection of Steelwork against Corrosion	23
	(To be Included in the Next Version)	
Series 2000	Waterproofing for Concrete Structures	24
	Waterproofing	
	Surface Impregnation of Concrete	
	Removal of Existing Waterproofing	
Series 2100	Bridge Bearings	25
	(To be Included in the Next Version)	
Series 2200	Parapets	26
	(To be Included in the Next Version)	
Series 2300	Bridge Expansion Joints and Sealing of Gaps	27
	(To be Included in the Next Version)	
Series 2400	Brickwork, Blockwork and Stonework	28
	Brickwork	
	Blockwork and Stonework	
	Remove from Store and Relay	
	Brickwork, Blockwork and Stonework	
Series 2500	Special Structures	29
	(To be Included in the Next Version)	
Series 2600	Not taken up	30
Series 2700	Accommodation Works, Works for Statutory Undertakers, Provisional Sums and Prime Cost Items	30
	(To be Included in the Next Version)	
Series 3000	Landscape and Ecology	31
	(To be Included in the Next Version)	