

Contents, Volume I.1

List of Tables	iv
Preface	vii
Chapter 1: Introduction	1
1.1. Introduction	1
1.2. Terminology	3
1.3. Methodology	5
Chapter 2: The Historical Evidence	9
Chapter 3: A History of Shipshed and Slipway Research and Excavations	15
3.1. A History of Shipshed (and Slipway) Research and Excavations in the Piraeus	15
3.1.1. The Zea Shipsheds	15
3.1.2. The Mounichia Shipsheds	21
3.1.3. The Kantharos Shipsheds	23
3.2. General Research and Excavation History of Other Shipshed and Slipway Sites	24
Chapter 4: The Topography of the Piraean Shipsheds	31
4.1. The Topography of the Zea Shipsheds	32
4.1.1. Zea Shipshed Group 1 (Z-G1, East)	34
4.1.2. Zea Shipshed Group 2 (Z-G2, South-east)	35
4.1.3. Zea Shipshed Group 3 (Z-G3, West/South-west)	38
4.1.4. Zea Shipshed Group 4 (Z-G4, North-west)	39
4.1.5. Zea Shipshed Group 5 (Z-G5, North-east)	43
4.2. The Topography of the Mounichia Shipsheds	45
4.2.1. Mounichia Shipshed Group 1 (M-G1, North)	46
4.2.2. Mounichia Shipshed Group 2 (M-G2, North/North-west)	47
4.2.3. Mounichia Shipshed Group 3 (M-G3, West/North-west)	49
4.2.4. Mounichia Shipshed Group 4 (M-G4, West)	49
4.2.5. Mounichia Shipshed Group 5 (M-G5, South-west)	50
4.2.6. Mounichia Shipshed Group 6 (M-G6, South/South-west)	50
4.2.7. Mounichia Shipshed Group 7 (M-G7, South)	50
4.3. The Topography of the Kantharos Shipsheds	51

Chapter 5: The Phase 1 Slipways	53
5.1. Introduction	53
5.2. Analysis of Slipways 1–3 & 5–6	55
5.2.1. Slipway 1	56
5.2.2. Slipway 2	56
5.2.3. Slipway 3	59
5.2.4. Slipway 5	59
5.2.5. Slipway 6	61
5.3. Comparative Ramp Data from Other Slipway and Shipshed Sites	62
5.4. Discussion of the Phase 1 Slipways	67
5.4.1. Method of Construction	67
5.4.2. Design of Transverse Timber Sleeper Ramps	67
5.4.3. The Width of the Phase 1 Slipways	70
5.4.4. Phase 1 Ramp and Open-passage Gradients	72
Chapter 6: Shipshed Superstructures in Phases 2, 3 and 4	73
6.1. Introduction	73
6.2. Wilhelm Dörpfeld’s Legacy	75
6.3. Superstructures of Phases 3 and 4 in Area 1 at Zea	79
6.3.1. The Back-wall of Phases 3 and 4	80
6.3.2. Spur-walls of Phases 3 and 4	84
6.3.3. The Wall Dividing Shipshed 16 and Possible Shipshed 26	85
6.3.4. The Phase 3 Columns	88
6.3.5. The Phase 3 Column Bases, Foundation Blocks and Rock-cut Foundations	97
6.3.6. The Interaxial Spacing and Intercolumniation of the Phase 3 Colonnades	101
6.3.7. The Inclination of the Superstructure in Phase 3	104
6.3.8. The Possible Phase 4 Shipsheds	108
6.4. The Phase 2 Superstructure	109
6.4.1. Foundation Trenches and Blocks of the Phase 2 Colonnades	110
6.4.2. The Interaxial Spacing and Intercolumniation of the Phase 2 Colonnades	114
6.5. Relevant Comparative Superstructures from Other Shipshed Sites	119
6.5.1. Primary Comparative Superstructures	119
6.5.2. Secondary Comparative Superstructures	121
6.5.3. Tertiary Comparative Superstructures	123
6.6. A Summary of the Superstructure Arrangements in Area 1 of Zea Harbour	126
6.6.1. Phase 3	126
6.6.2. Phase 4	128
6.6.3. Phase 2	128

Chapter 7: Shipshed Ramps and Side-passages in Phase 2 and Phase 3	129
7.1. Introduction	129
7.2. The Ramps of Phase 3	130
7.3. Keel-supporting and Stern-supporting Ramp Structures	134
7.4. The Ramps of Phase 2	137
7.5. The Side-passages of Phase 2 and Phase 3	139
7.6. Comparative Side-passages from Other Shipshed Sites	141
7.7. Discussion	145
 Chapter 8: New Interpretations of Slipway and Shipshed Architecture and Piraeus Harbour Topography	 147
8.1. General Interpretations of Topography	147
8.1.1. Relative Sea Level Change and Linear Lengths of Shoreline	147
8.1.2. Accounting for Single-unit Slipways and Shipsheds and for Double-unit Shipsheds	150
8.1.3. Access to the Shipshed Complexes	156
8.1.4. Additional Space in the Naval Harbours	157
8.2. Architectural Interpretations of Zea, Area 1, Phases 1–3	158
8.2.1. Reconstructing the Length of the Phase 1 Slipways	158
8.2.2. Reconstructing the Length of the Phase 2 Superstructure	159
8.2.3. Reconstructing the Length of the Phase 3 Superstructure	159
8.2.4. Reconstructing the Height of the Superstructures in Phases 2 and 3	162
 Chapter 9: Conclusions	 167
9.1. Overview	167
9.2. Chronology and Phase Evolution	168
9.2.1. The Phase 1 Slipways	168
9.2.2. The Phase 2 Shipsheds	169
9.2.3. The Phase 3 Shipsheds	172
9.2.4. The Possible Phase 4 Shipsheds	173
9.3. Closing Remarks	173