

ICPI Concrete Paver Installer Student Manual, 8th Edition TABLE OF CONTENTS

Lists of Figures	vii
Lists of Tables	vii
Lists of Forms	ix
Acknowledgements.....	ix
Antitrust Guidelines for Association Meetings	xi
Who is ICPI?.....	xiii
SECTION 1: Introduction	1
A: The Course: Objectives, Prerequisites, and Benefits	3
B: Registration and Course Procedures	5
C: Concrete Segmental Paving: A Brief History	7
D: Overview: Components of an Interlocking Concrete Pavement System/Comparison to Other Pavement Systems	9
SECTION 2: Job Planning and Documentation	13
A: What's in it for me?	13
B: Job Jacket Contents.....	13
SECTION 3: Estimating Quantities, Job Layout and Flow	27
A: Job Layout For Excavation.....	27
B: Excavation of Soil, Hauling and Disposal	29
C: Estimating Base, Sand, and Paver Materials	31
D: Estimating Cut Pavers and Edge Restraints.....	33
E: Flow of Materials.....	35
SECTION 4: Soil Characteristics and Compaction.....	39
A: Gradation Fundamentals, Sieve Analysis and Standards	39
B: Soil Classification, Soil Properties and Quick Field Identification.....	41
C: Soil Compaction and Moisture-Density Relationships.....	47
D: Measuring Soil Compaction.....	49
E: Soil Compaction Methods and Equipment	55
F: Geotextiles: Purpose and Uses	63
SECTION 5: Base Materials	65
A: Gradation	65

B: Factors in Determining Base Thickness	67
C: Base Compaction Testing and Guidelines	69
D: Base Installation	71
SECTION 6: Edge restraints	73
A: Types and Applications	73
SECTION 7: Bedding and Joint Sands	79
A: Shape, Gradation, Moisture, and Hardness	79
B: Installation and Equipment	83
SECTION 8: Selection and Installation of Concrete Pavers	87
A: Selecting Pavers for Various Applications	87
B: Aspect Ratio and Its Effect on Applications	89
C: Paver Installation	93
D: Paving Around Obstructions, Non-aligned Edges and Openings	99
E: Cutting Equipment and Techniques	101
F: Compaction Equipment and Compacting Pavers	105
SECTION 9: Maintenance and Management	107
A: Introduction	107
B: Problem Areas	107
C: Cleaning, Sealing and Joint Stabilization	109
D: Remedial Measures	111
SECTION 10: Specialty Applications and Construction Tips	113
A: Overlays	113
B: Pool Decks	115
C: Raised Patios	119
D: Step Construction	123
E: Construction Tips	125
SECTION 11: Safety	129
A: Introduction – The Four-point System	129
B. Implementing a Company Safety Program	131
C. Conducting a Hazard Analysis	133
D. Typical Hazards on a Hardscape Installation Project	135
E. Personal Protection Equipment	137
SECTION 12: Estimating & Job Costing	141
A: Overhead	143
B: Profit	145
C: Foreman and Crew Incentives	146
D: Actual vs. Estimated Costs	146

SECTION 13: Contract Basics.....	153
Change Orders.....	154
Payment.....	154
Warranties	155
Section 14: Review and Exam.....	159
Appendix	161
Glossary of Terms.....	161
List of Tools for Paver Installation Contractors	171
Tech Spec 2–Construction of Interlocking Concrete Pavements.....	172
Tech Spec 5 – Cleaning, Sealing and Joint Sand Stabilization of Interlocking Concrete Pavement.....	178
Tech Spec 6 – Reinstatement of Interlocking Concrete Pavements	186
Tech Spec 10– Application Guide for Interlocking Concrete Pavements	192
TenCate Mirafi Geotextile Technical Data	198
References.....	202