



Technical Services Information Bureau

PLASTER ASSEMBLIES MANUAL “ONLINE”



> LATH & PLASTER

> EIFS

> DEFINITIONS

> REFERENCE DOCUMENTS

TSIB: PLASTER ASSEMBLIES MANUAL

INTRODUCTION

page i1/i9

CHAPTER 1: HISTORY OF LATH & PLASTER

TABLE OF CONTENTS	PAGE 1-2
HISTORIC ACCOUNTS	PAGE 1-3
DEFINITION & TERMINOLOGY	PAGE 1-4
BENEFITS OF PLASTER/STUCCO	PAGE 1-4
LIME PLASTER	PAGE 1-5
GYPSUM PLASTER	PAGE 1-6
PORTLAND CEMENT PLASTER-STUCCO	PAGE 1-7
SKILL SETS	PAGE 1-10
MOISTURE MANAGEMENT	PAGE 1-10
MANAGEMENT SYSTEMS/ASSEMBLIES	PAGE 1-11
THE BARRIER CONCEPT	PAGE 1-11
CONCEALED BARRIER CONCEPT	PAGE 1-11
RAINSCREEN CONCEPT	PAGE 1-11
MOISTURE (RAIN) & DESIGN PRESSURE DATA	PAGE 1-12
WINDOW & DOORS – RELATED DESIGN PRESSURE	PAGE 1-12
WINDOW DESIGN & FLASHINGS	PAGE 1-13
STORE FRONT WINDOW	PAGE 1-13
NAIL FLANGE WINDOW	PAGE 1-14
FLASHING WINDOW & DOOR OPENINGS	PAGE 1-14
PERFORMANCE GRADE WINDOWS	PAGE 1-14
VAPOR & VAPOR DRIVE	PAGE 1-15
VAPOR CONTROL	PAGE 1-16
VAPOR RETARDER REQUIREMENTS	PAGE 1-16
VAPOR RETARDERS & THE CODE	PAGE 1-17
VAPOR PERMEABILITY	PAGE 1-17
MATERIAL PERM RATINGS	PAGE 1-18
WATER-RESISTIVE BARRIERS (WRB)	PAGE 1-19
AIR BARRIERS	PAGE 1-19
INNOVATIONS IN LATH & PLASTER	PAGE 1-21
EIFS	PAGE 1-21
ONE COAT STUCCO	PAGE 1-21
DIRECT-APPLIED FINISH SYSTEMS (DAFS)	PAGE 1-22
CEMENT BOARD SYSTEMS	PAGE 1-22
“CI” PLASTER/STUCCO ASSEMBLIES	PAGE 1-23
THE HISTORY OF “THE LEAKY BUILDING CRISIS”	PAGE 1-23
THE FUTURE	PAGE 1-25

CHAPTER 2: PLASTER (STUCCO) SUBSTRATES/LATH

TABLE OF CONTENTS	PAGE 2-2
GENERAL NOTES	PAGE 2-3
DEAD LOADS	PAGE 2-3
DEFLECTION	PAGE 2-3
METAL & WOOD FRAMING SUBSTRATES	PAGE 2-4
LATH COMPONENTS	PAGE 2-6
WATER RESISTIVE BARRIER (WRB)	PAGE 2-7
SELF-FURRED METAL BASES (LATH & WIRE)	PAGE 2-8

TSIB: PLASTER ASSEMBLIES MANUAL

LINE WIRE	PAGE 2-10
INSTALLATION	PAGE 2-10
PLASTER (STUCCO) ACCESSORIES	PAGE 2-11
CEILING/SOFFIT CONSIDERATIONS	PAGE 2-16
MASS WALLS (CMU & CONCRETE)	PAGE 2-18
PREPARATION	PAGE 2-18
APPLICATION	PAGE 2-19
LATH INSTALLATION OVER MASS WALLS	PAGE 2-20

CHAPTER 3: THREE-COAT PLASTER (STUCCO)

TABLE OF CONTENTS	PAGE 3-2
GENERAL PREPARATIONS	PAGE 3-3
MATERIALS	PAGE 3-3
FIELD & PROPRIETARY MIXES	PAGE 3-4
PLASTICIZERS	PAGE 3-4
SAND	PAGE 3-4
FIBERS	PAGE 3-4
ADMIXTURES	PAGE 3-5
WATER	PAGE 3-5
MIXING CONSIDERATIONS	PAGE 3-6
WATER PROPORTIONS	PAGE 3-6
SLUMP CONE TESTS	PAGE 3-6
USING CALIBRATION BOXES	PAGE 3-7
THE SCRATCH COAT	PAGE 3-7
CURE TIMES	
TRADITIONAL METHOD	PAGE 3-7
“DOUBLEBACK” METHOD	PAGE 3-8
THE BROWN COAT	PAGE 3-8
FINISHES (STUCCO & ACRYLIC FINISH)	PAGE 3-9
POST INSTALLATION CONSIDERATIONS	PAGE 3-11
JUDGING FINISHED PLASTER	PAGE 3-11
PLASTER CRACKING	PAGE 3-12
EFFLORESCENCE	PAGE 3-13
WATER TESTING THREE-COAT PLASTER	PAGE 3-15
FOG COAT AND PAINTING STUCCO/ACRYLICS	PAGE 3-16
PATCHING AND REPAIR	PAGE 3-17

CHAPTER 4: THREE-COAT PLASTER GUIDE SPECIFICATION

GENERAL THREE-COAT SPEC	PAGE 4-3
SUSPENDED LATH & PLASTER CEILING SPEC	PAGE 4-11
THREE-COAT PLASTER W/ ACRYLIC “SMOOTH” FINISH	PAGE 4-12

TSIB: PLASTER ASSEMBLIES MANUAL

CHAPTER 5: PLASTER TEXTURES & ACRYLIC FINISHES

TABLE OF CONTENTS	PAGE 5-2
PORTLAND CEMENT STUCCO FINISHES	
FLOAT FINISH	PAGE 5-4
DASH FINISH	PAGE 5-5
HARD TROWEL(SMOOTH)	PAGE 5-7
LACE & OTHER TEXTURED FINISHES	PAGE 5-8
SPECIALTY FINISHES	PAGE 5-15
ACRYLIC FINISHES	
ABOUT ACRYLIC FINISH	PAGE 5-20
TYPES OF FINISH	PAGE 5-21

CHAPTER 6: PLASTER-STUCCO DETAILS

TABLE OF CONTENTS	PAGE 6-2
GENERAL NOTES	PAGE 6-3
ASSEMBLY DETAILS	PAGE 6-4
FOUNDATION/TERMINATION DETAILS	PAGE 6-8
CONTROL/EXPANSION JOINT DETAILS FROM EMLA	PAGE 6-15
SOFFIT TRANSITION DETAILS FROM EMLA	PAGE 6-18
WINDOW DETAILS FROM EMLA	PAGE 6-19
PARAPET DETAILS	PAGE 6-20
FLASHING AT ROOF DETAILS	PAGE 6-28

CHAPTER 7: PLASTER & THE ENERGY CODES

TABLE OF CONTENTS	PAGE 7-2
SYSTEMS & ASSEMBLIES	PAGE 7-3
EIFS	PAGE 7-3
ONE COAT STUCCO	PAGE 7-4
SAND	PAGE 7-4
GENERIC PLASTER/STUCCO	PAGE 7-4
DESIGN CONSIDERATIONS	PAGE 7-4
GENERIC PLASTER./STUCCO ASSEMBLIES	
PWA 104	PAGE 7-5
PWA 105	PAGE 7-11
PWA 106	PAGE 7-12
TABLE A (CLIMATE ZONE U FACTORS)	PAGE 7-14
TABLE B (WALL ASSEMBLY U FACTORS)	PAGE 7-15
TABLE C (EXTERIOR INSULATION R VALUES)	PAGE 7-16
CLIMATE ZONE MAPS	PAGE 7-17
GUIDE SPECIFICATION (PWA 104)	PAGE 7-18 – 7-26
SELECTED GUIDE DETAILS	PAGE 7-27

TSIB: PLASTER ASSEMBLIES MANUAL

CHAPTER 8: EIFS

TABLE OF CONTENTS	PAGE 8-2
INTRODUCTION	PAGE 8-3
TYPES OF COMMERCIAL EIFS	PAGE 8-3
SUBSTRATES	PAGE 8-5
MATERIALS	
Insulation Board	PAGE 8-5
Basecoats/Adhesives	PAGE 8-7
Fiberglass (Impact) Mesh	PAGE 8-7
Acrylic Primer	PAGE 8-7
Finish	PAGE 8-8
GENERAL NOTES	
“Below Grade” Applications	PAGE 8-8
Encapsulation of the System	PAGE 8-8
Expansion Joints & Perimeter Joints	PAGE 8-9
Fire Ratings	PAGE 8-9
Flashings & Moisture Management	PAGE 8-10
Sealants	PAGE 8-11
Maintenance	PAGE 8-11
Special Inspections & Warranties	PAGE 8-12
DEFINITIONS	PAGE D1- D20
WALL & CEILING REFERENCE STANDARDS	

01/15/2012

PLASTER SYSTEMS & ASSEMBLIES MANUAL