BUILDABLE SOLUTIONS FOR High-Rise Residential Development

BCA Buildability Series



ISBN: 981-05-2000-X

Copyright @ 2004 Building and Construction Authority, Singapore. All right reserved. This document or any part thereof may not be reproduced for any reason whatsoever in any form or means whatsoever and howsoever without the prior written consent and approval of the Building and Construction Authority.

Whilst every effort has been made to ensure the accuracy of the information presented in this document, the Building and Construction Authority, its employees or agents or industry partners involved in the project shall not be responsible for any mistake or inaccuracies that may be contained herein and all such liability and responsibility are expressly disclaimed by these said parties.

	ACI	KNOWLEDGEMENT	i
	INT	RODUCTION	ii
1	Building Framework Floor Slab with Precast Façade System		
	1.1	Design Concept	4
	1.2	Stability of Building	5
	1.3	Floor System	6
	1.4	Wall System	13
	1.5	Other Precast Concrete Components	23
2	Joints and Connections Between Building Components		
			24
	2.1	Connections at Vertical Joints between Precast Façades/ Wall Panels	34
	2.2	Connections between Precast Façades/ Wall Panels and Floor Slab	37
	2.3	Connections between Precast Floor Elements and Supporting Structures	41
3	Interfacing Mechanical & Electrical Services Works		
	3.1	Approach in Co-ordinating M & E Services Works	51
	3.2	Electrical Services	54
	3.3	Plumbing and Sanitary Services	57
	3.4	ACMV Services	58
4	Managing Precast		
	Concrete Components		
	4.1	Plan for Temporary Site Facilities	63
	4.2	Plan for Precast Production	66
	4.3	Precast Panel Installation	71
5	Current Trends Towards Buildability		
	5.1	Trends in High-Rise Residential Development	81
	5.2	Examples of Recent Projects	82
6	Case Studies		
	6.1	Park Green Executive Condominium	91
	6.2	The Jade	99
	6.3	Newton.GEMS Condominium	107

REFERENCES AND FURTHER READING