

## 7.0 Appendix

### Survey Questionnaire

Aim: This study aim to assess Lean Principle in Malaysia Construction Industry in improving operational performance in term of Quality, Time and Cost.

#### Part 1: Please circle the appropriate item

1) How much do you know about Lean Construction?

None		Knowledgeable		
1	2	3	4	5

2) If the company is going to implement Lean to improve operational performance, do you think this will success ?

Do not Agree			Agree	
1	2	3	4	5

3) How much do you understand about the Systems & Tools listed:

		None	Knowledgeable			
3.1)	Master Schedule	1	2	3	4	5
3.2)	Reverse Phase Scheduling	1	2	3	4	5
3.3)	Six-Week Look-ahead	1	2	3	4	5
3.4)	Weekly Work Plan	1	2	3	4	5
3.5)	Percent Plan Complete	1	2	3	4	5
3.6)	Increased Visualization	1	2	3	4	5
3.7)	Tool-box Meeting	1	2	3	4	5
3.8)	First Run Studies (Trade Demo)	1	2	3	4	5
3.9)	The 5s Process (Housekeeping)	1	2	3	4	5
3.10)	Fail Safe for Quality and Safety (Non-conformity)	1	2	3	4	5
3.11)	Design for Buildability	1	2	3	4	5
3.12)	Just-In-Time Procurement & Logistic	1	2	3	4	5
3.13)	Enterprise Resource Planning System	1	2	3	4	5

**Part 2: Please circle the appropriate item**

4.1) Do you agree Master Program, 6 Week Look-ahead & Weekly Work Plan set clear objective and goal, for the construction team to achieve better work effectiveness?

No	Yes			
1	2	3	4	5

4.2) Do you agree Progress Review in Percentage measurement allow quantification and verification of production rate keep up to Master Program?

No	Yes			
1	2	3	4	5

4.3) Do you agree in the event of delays, Reverse Scheduling helps determine the needed resources to ensure work completion within a shortened time frame?

No	Yes			
1	2	3	4	5

4.4) Do you agree Increased Visualization towards Safety Sign, frequently remind workers of safety risk hence reduce accident on site?

No	Yes			
1	2	3	4	5

4.5) Do you agree Daily Coordination Meeting improves 2-ways communication between management and worker to achieve smoother work flow on site?

No	Yes			
1	2	3	4	5

4.6) Do you agree verification and checking of First Run Studies (Trade Demo) ensure works are done correctly prior mass production to avoid undesirable rectification?

No	Yes			
1	2	3	4	5

4.7) Do you agree proper 5s (Housekeeping) improves access and traceability of tools and equipments on site?

No	Yes			
1	2	3	4	5

4.8) Do you agree Quality Control (Non-conformity Report) ensure quality product delivery to customer?

No	Yes			
1	2	3	4	5

4.9) Do you agree Build-ability Design reduce needed resources for construction in term of time, material and labor?

No	Yes			
1	2	3	4	5

4.10) Do you agree Just-In-Time Delivery reduce on-hand inventory and double handling of material on site?

No	Yes			
1	2	3	4	5

4.11) Do you agree Enterprise Resource Planning Information Technology helps integrate information across multiple department thus shortening routine processing time?

No	Yes			
1	2	3	4	5

**Part 3: Please circle the appropriate item**

- 5) Age (years):
- 20 ~ 29
  - 30 ~ 39
  - 40 ~ 49
  - 50 & above
- 6) Gender:
- Male
  - Female
- 7) Education Level (highest level attained):
- Diploma
  - Graduate
  - Post-graduate
- 8) Experience (years):
- Less than 5 years
  - Less than 10 years
  - 10 years & above
- 9) Job Position:
- Supervisor
  - Engineer
  - Manager
  - Other (please specify): \_\_\_\_\_
- 10) Department:
- Design & Engineering
  - Procurement
  - Construction
  - Quality
- 11) Company Size
- Less than 25 employee
  - Less than 50 employee
  - 50 & above employee
- 12) Company Trade:
- General Construction
  - Electrical
  - Plumbing
  - Other (please specify): \_\_\_\_\_