DEPARTMENT OF BUILDING SURVEYING

FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING

UNIVERSITI TEKNOLOGI MARA

PERAK

TITLE

CONSTRUCTION MANAGEMENT
QLASSIC ASSESSMENT AT IDAMAN LAVENDER 2

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2009932485

DIPLOMA IN BUILDING SURVEYING

PRACTICAL TRAINING REPORT

JUNE 2013 – SEPTEMBER 2013

DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING

QLASSIC ASSESSMENT AT IDAMAN LAVENDER 2

JUN 2013 - SEPTEMBER 2013

This practical training report is fulfillment of the practical training course.

PREPARED BY : NUR KHAIRUNNISA BINTI KAMAL
SUPERVISING LECTURER : PN. INTAN BAYANI

DECLARATION :

I hereby admit that this report is the result of my own efforts, except for the certain parts that are attached from sources that specified in reference chapter.

Prepared By :

……

(NUR KHAIRUNNISA BINTI KAMAL) Date :

Approved By

…….

(Pn. INTAN BAYANI) Date :

DECLARATION BY EMPLOYER

“We hereby acknowledge that we have read this report and in my opinion this report is sufficient

in terms of scope and quality for the award of Diploma in Building Surveying”.

Checked By:

……..

(MR. HISHAM BIN HASHIM) Date:

Site Supervisor Of Idaman Lavender 2,

Sri Tunas Snd. Bhd..

Approved By:

……..

(MR. HASNOL HADI) Date:

Supervisor In-Charge (Site Engineer)

Sri Tunas Snd. Bhd.

ACKNOWLEDGEMENT

During my four month practical training period, i had been teach and supported by many person surround me. Therefore, I would like to thank all of them for giving me strength during this period. I would like to thank Allah S.W.T for giving me chances to live. I would like to thank Director of Koperasi Tunas Muda Sungai Ara Berhad and Director Of Sri Tunas Snd. Bhd. For their trust in me to do the practical training in their company. Thanks to En. Ismail Bin Hassan (The previous Site Supervisor) , En. Hisham Bin Hashim (The present Site Supervisor) and Cik. Asilatul Hanna (Assistant Site Supervisor) for giving me opportunity to do my learning process during my practical training under their supervises, for teaching me a lesson that I cannot get by the book. Thanks to En. Hasnol Hadi which is our Site Engineer for giving me opportunity to experience my own course situations while it came to real life. Also, to all sub-contarctor supervisor that help me by providing information and show me a way in construction projects. Not forgetting my parents that support me all way down from the beginning, they also help in my financial problems during my practical training. Finally, I would like to thank the lecturer of Building Surveying Department for the trust that they give me to accomplish my practical training and their help in complishing my practical training report.

ABSTACT

This practical report contains information about the selected case studies of the QLASSIC ASSESSMENT AT IDAMAN LAVENDER 2. This report was did while on practical training session. On this practical reports, there are few information about the company background, corporate information, organizational charts and also followed by a list of current and previous projects. Selected case studies in this practical report is the QLASSIC Assessment At Idaman Lavender 2. QLASSIC is important to one building in construction because it helps Malaysia Construction Standard to be better passing one by another construction for the future. Starting with what is QLASSIC it self, this report will show what are the purpose of the QLASSIC, How to apply QLASSIC, who are the person doing the QLASSIC, How QLASSIC ASSESSMENT process, What are the Weightage for QLASSIC on Assessment, What are the tools usually QLASSIC Assessor used, and finally how the QLASSIC Assessor count the scoring for QLASSIC and give certificate for the building. This practical training report also be the guidelines for contractors to made it as a benchmark in building quality. QLASSIC is one of Building Survey's role, where QLASSIC have to determine the quality of a building.

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CHAPTER 1

1.1 COMPANY BACKGROUND

1.1.1 INTRODUCTION OF THE COMPANY

Sri Tunas Sdn. Bhd. is a subsidiary company that is fully owned by Koperasi Tunas Muda Sungai Ara Berhad that is located in Taman Tunas Muda, Jalan Dato' Ismail Hashim, Sungai Ara, Bayan Lepas, Pulau Pinang. Koperasi Tunas Muda is a fast growing development company that has been producing a number of residential projects around the area such as from Sungai Ara, Sungai Tiram and Relau in Penang. They also have been starting a new residential project in Kedah as well.

Koperasi Tunas Muda Sungai Ara Berhad is incorporated in Malaysia under the Companies Act 1965 and a holding company of a few subsidiary companies such as Sri Tunas Sdn. Bhd. Which is a main contractor of Koperasi Tunas Muda, Tunas Harta Sdn. Bhd. Which responsible for estate managements of Koperasi Tunas Muda and Sri Tunas Edar Sdn. Bhd. which responsible in providing supplier for the needs in construction and development industry and Desa Kulim Sdn. Bhd.

Figure 1.1 : Logo of Koperasi Tunas Muda Berhad

Koperasi Tunas Muda own the lands around Sungai Ara and responsible to develop the lands basically for the bumiputra. The lands owned by Koperasi Tunas Muda are mostly developed as a residential area and also shop houses. The lands that have been developed also give benefits toward the members of Koperasi Tunas Muda that have been given much contribution towards the development of the lands of Koperasi Tunas Muda.

One of the contributions of Koperasi Tunas Muda is by developing a land as a commercial and residential industry and also in civil works in cooperation with Sunway Group. Sunway Group and Koperasi Tunas Muda Berhad has been a joint venture company forming a company called Sunway Tunas Sdn. Bhd. that is addressed in Bayan Lepas, Pulau Pinang.

Sri Tunas Sdn. Bhd. act as a main contractor of Koperasi Tunas Muda Berhad that has contributing skills as a specialist in the constructions of residential and commercial industry and civil works to help building and developing the lands as a residential area and also as commercial area.

1.1.2 INTRODUCTION OF STI TUNAS SND. BHD.

Sri Tunas Sdn. Bhd. is a class A construction company that is a subsidiary company owned by the Koperasi Tunas Muda Berhad. Sri Tunas Sdn. Bhd. Operate as the main contractor of the holding company and responsible to develop the land owned by Koperasi Tunas Muda Berhad. The core business of this company is in construction industry in civil and buildings and having an insight to be the leader in construction as a representative from the bumiputra.

With the capital of RM 1,000,000.00, the Sri Tunas Sdn. Bhd. Are incorporated in 10th April 1980 and located at the business address on No. 122, Second Floor, Jalan Dato' Ismail Hisham, Taman Tunas Muda, 11900, Sungai Ara, Bayan Lepas.

This company was acknowledged by the CIDB in 9th January 2012 and registered in the Construction Industry Development Board Act (Part IV) 1994. It is also registered by the Government Work Procurement Certificates that categorized this company in doing building constructions, civil constructions and also mechanical and electrical works. It is also recognized as a bumiputra status contractor by the Ministry of Public Works. This company also certified by the BM Trada Certification that the company's Quality Management System had satisfied the ISO 9001:2008 and registered with in the BM Trada certification scheme.

The board of directors of Sri Tunas Sdn. Bhd. Includes Dr . Rahmad bin Zakaria as the Chairman of the company and Puan Hayati binti Dato' Ismail, Encik Razak bin Maidin and Encik Rohaya @ Yahaya bin Darus as the directors and lastly Tuan Haji Rozali bin Baharudin as the General Manager of this company.

Through their hard works and commitments they successfully completed more than RM150 million worth of construction works in civil engineering, housing and commercial development.

Figure 1.2 : Logo of Sri Tunas Sdn. Bhd.

1.2 COMPANY INFORMATION

COMPANY REGISTRATION NO.	57142 – X
REGISTRATION ADDRESS	2-2-43A, SECOND FLOOR, TINGKAT MAHSURI 1, ONE SQUARE, BANDAR BAYAN BARU 11950 BAYAN LEPAS, PULAU PINANG
BUSINESS ADDRESS	NO.122, TINGKAT ATAS, JALAN DATO' ISMAIL HASHIM, TAMAN TUNAS MUDA, SUNGAI ARA, 11900 BAYAN LEPAS, PULAU PINANG.
TELEPHONE NO.	(04) 642 2239 / 642 6653
FACSIMILE NO.	(04) 642 2241
EMAIL ADDRESS	stsb@sritunas.com.my
DATE OF INCORPORATION	10 April 1980
AUTHORIZED CAPITAL	RM 1,000,000.00
PAID UP CAPITAL	RM 1,000,000.00

MAIN BUSINESS	CIVIL AND BUILDING CONTRACTOR
REGISTRATION	PKK : Status – Bumiputera Class – A CIDB : G7 , B , B04 , B12 G7 CE CE21 CE03 CE36 CE34 CE02 CE01 G7 ME M15
BANKERS	MAYBANK (Cawangan Gelugor) 345-H, Bangunan Kelab Gelugor, 11700 Penang. BANK ISLAM MALAYSIA BERHAD (Cawangan Bayan Baru) No.122, Jalan Mayang Pasir, Taman Sri Tunas, 11900 Bayan Baru, Pulau Pinang

	BANK MUAMALAT MALAYSIA BERHAD, (Cawangan Bayan Baru) No.24, 26, & 28, Tingkat 1, Taman Seri Tunas, Jalan Tengah, 11950 Bayan Baru, Pulau Pinang.

Table 1.1 : Company Information

1.3 VISION , MISSION AND QUALITY POLICY

VISION

To be a Leader in Construction Industry and recognized on our highest Quality standards of products and services.

MISSION

To be the best in Construction Industry and contribute to the Nation Building. We have professional, knowledgeable, skilled and dynamic construction team with latest technology and system to ensure our excellent service and highest quality standard for customers and share holders.

QUALITY POLICY

To achieve “Total Customers Satisfaction” through zero defects, fast track Completion and continuous improvement on our services.

1.4 COMPANY SERVICES

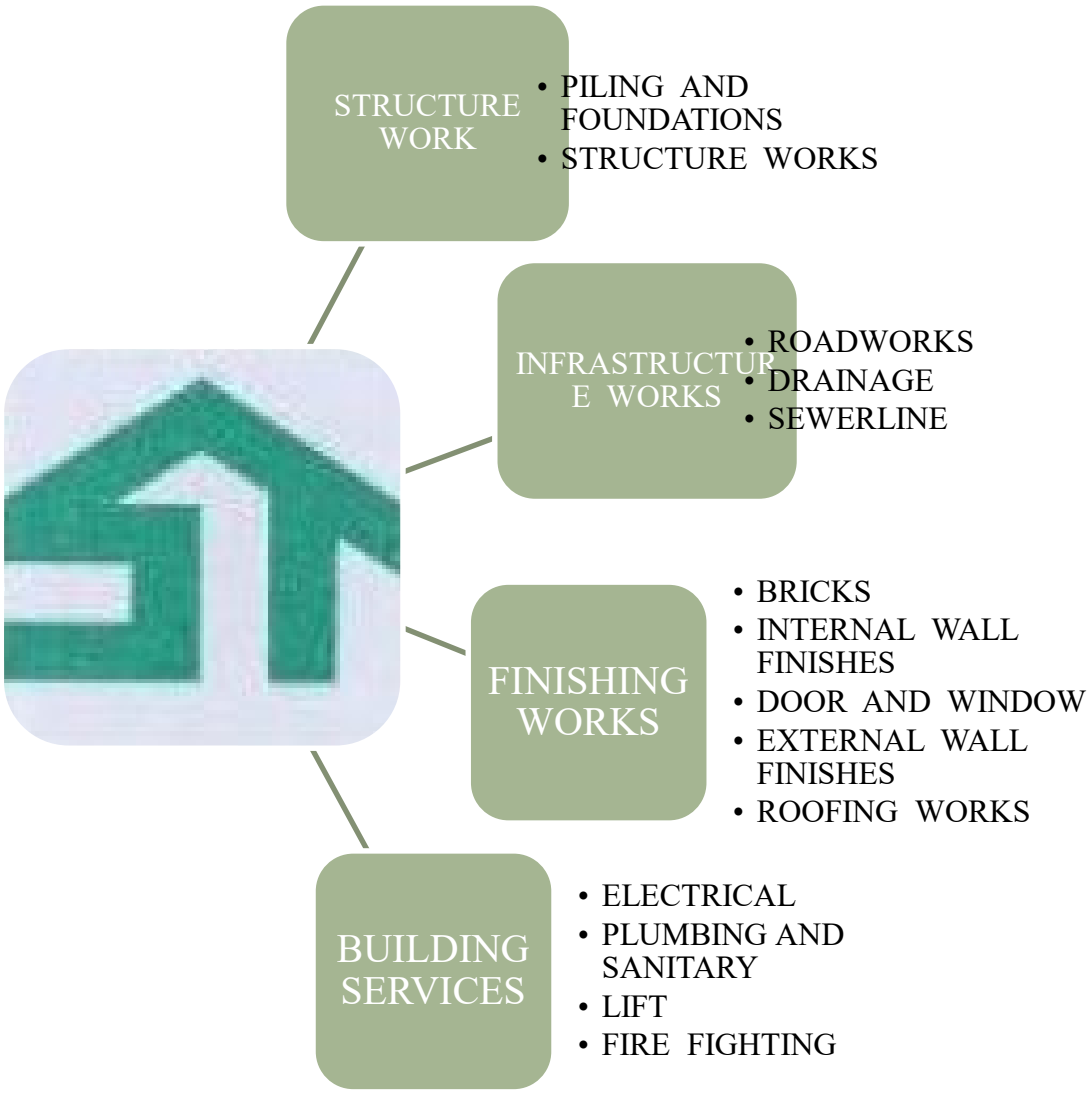


Figure 1.3 Company Services

1.5 ORGANIZATION CHART

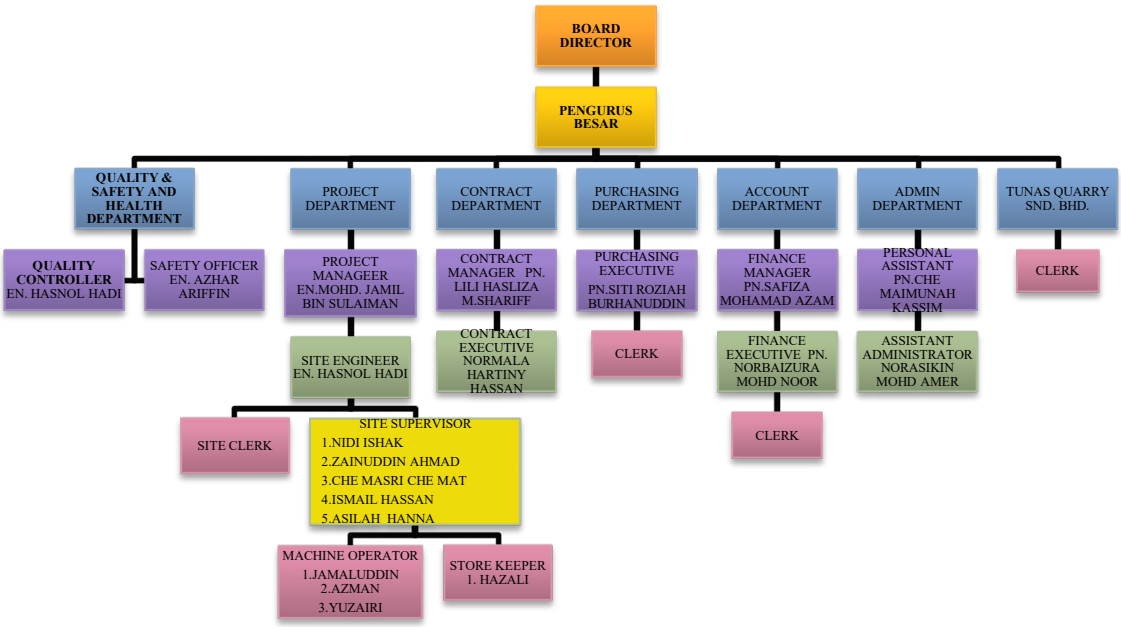


Figure 1.4 Organization Chart

1.6 COMPLETED PROJECTS

ITEM	PROJECT TITLE	CONTRACT VALUE (RM)	AC TUAL COMPLETED DATE
1.	Kerja-kerja Infrastruktur Cadangan 529 Unit Rumah Teres 2 Tingkat Dan 134 Unit Rumah Kedai 2 Tingkat Tempat Letak Kereta, Pencawang TNB Di Lot P.T. 3709 Mukim 2, Daerah Barat Daya Pulau Pinang Untuk Sunway Tunas Snd. Bhd	3,670,645.55	August 2002
2.	Cadangan Kerja Pembinaan Parit Konkrit dan Tambun Tanah bagi Cadangan 11 Unit Rumah Teres 2 Tingkat Dan 2 Unit Rumah Berkembar 2 Tingkat, Taman Melati, Daerah Barat Daya, Pulau Pinang.	337,645.40	May 2003
3.	Cadangan Perumahan 1 Blok 5 Tingkat 44 Unit Rumah Pangsa Kos Rendah Dan 1 Blok 5 Tingkat 84 Unit Rumah Pangsa Kos Rendah Di Lengkok Kampung Mesjid 1, Di Atas Lot-Lot 1131, 1132 & 1391, Daerah Barat Daya, Pulau Pinang	5,023,265.52	April 2005

4.	Cadangan Membina 8 Unit Rumah Berkembar Setingkat, 1 Unit Rumah Sesebuah 1 Tingkat, 22 Unit Rumah Sesebuah 2 Tingkat, 3 Unit Rumah Sesebuah 2 Tingkat, Berjumlah 34 Unit, Di Atas Lot-Lot 9374-9398, 9410-9418 Di Bawah Projek Kampung Tersusun Sungai Ara, Mukim 12, DBD, Pulau Pinang.	3,945,894.25	April 2005
5.	Cadangan Membina 31 Unit Rumah Kedai 4 Dan 2 Tingkat Di Atas Lot-Lot P.T 3244-3274 & 3578 (Lot Lama Sebahagian Lot 6034), Mukim 12 Jalan Dato' Ismail Hashim, Daerah Barat Daya, Pulau Pinang.	4,000,000.00	May 2004
6.	Cadangan Membina 11 Unit Rumah Teres 2 Tingkat Di Atas Lot-Lot 8662 (H.S(D)7680), 8663 (H.S(D)7681) Dan 9598 (H.S.(D)8718) [P.T3071] Mukim 12, Daerah Barat Daya, Jalan Sultan Azlan Shah, Pulau Pinang.	1,336,636.40	Jun 2003
7.	Cadangan Membina 11 Unit Rumah Teres 2 Tingkat & 2 Unit Rumah Berkembar Di Atas Lot 2885, 2886, PT 3084 (H.S(D) 8730, PT 3085, (H.S(D)8731)	2,220,000.00	Jun 2004

	Dan Satu Pencawang Elektrik Di Atas Lot 2882 Dan PT 3074, Jalan Tun Dr.Awang, Mukim 12, Daerah Barat Daya, Pulau Pinang.		
8.	Cadangan Kerja Tanah Untuk Mendirikan 56 Unit Rumah Teres 2 Tingkat Di Atas Lot-Lot 390, 391, 799 dan Lot 793, Mukim 12, Jalan Permatang Damar Laut, DBD, Pulau Pinang.	425,728.40	Jan 2004
9.	Cadangan Membina 1 Blok 5 Tingkat (84 Unit) Rumah Pangsa Kos Rendah (Blok C) Di Lengkok Kampung Mesjid 1 Di Atas Lot 1131 Dan Sebahagian Lot-Lot 1132 & 1391 , Mukim 9, Daerah Barat Daya, Pulau Pinang.	2,828,000.00	Oct 2005
10.	Kerja Instruktur Untuk cadangan Projek Penempatan Semula, Pagar Buloh Fasa 3, Di Atas Sebahagian Lot 609, Mukim 10, Daerah Barat Daya, Pulau Pinang.	699,029.30	May 2006
11.	Cadangan Mendirikan Rumah Teres 2 Tingkat 21 Unit (Hak Milik Strata), Rumah Teres 2 Tingkat 12 Unit (Hak Milik Individu) Dan Pejabat Pengurusan (1 Unit) Di Atas Lot P.T 3570 & P.T 3571, Mukim 12 Persiaran	4,080,000.00	April 2005

	Bayan, Daerah Barat Daya Pulau Pinang.		
12.	Cadangan Kerja Tanah Untuk 1 Blok Pangsapuri 10 Tingkat (90 Unit) Di Atas Lot P.T3564 [H.S(D)9086] Mukim 12, Daerah Barat Daya, Jalan Sultan Azlan Shah, Pulau Pinang.	640,000.00	Jan 2006
13.	Cadangan 2 Unit Rumah Contoh Rumah Teres 2 Tingkat Di Atas Sebahagian Lot 8012 (Lot Lama 2364), Mukim 12 Jalan Sultan Azlan Shah, Daerah Barat Daya, Pulau Pinang.	336,561.10	Oct 2005
14	Cadangan Kerja Tanah Untuk Cadangan Pembangunan Bercampur Di Atas Sebahagian Lot 8012 (Lot Lama 2364) Lot 8012 (Lot Lama 2364) Mukim 12, Jalan Sultan Azlan Shah, Daerah Barat Daya, Mukim 12, Jalan Sultan Azlan Shah, Pulau Pinang.	2,690,000.00	Jan 2007
15.	Kerjatanah Untuk Cadangan Projek Penempatan Semula, Pagar Buloh (Fasa 2), Di Atas Sebahagian Lot 609, Mukim 10, Daerah Barat Daya, Pulau Pinang	415,000.00	Oct 2005
16.	Cadangan Mendirikan 2 Blok		

	Pangsapuri Kos Sederhana 12 Tkt 340 Unit Di Atas Sebahagian Lot 8012 (Lot Lama 2364) Mukim 12, Jalan Sultan Azlan Shah, Daerah Barat Daya, Pulau Pinang.	23,597,453.58	March 2009
17.	Cadangan Membina Dan Menyiapkan Projek Kampung Tersusun Pagar Buloh, Fasa 2, Di Atas Sebahagian Lot 609, Mukim 10 Jalan Relau,Daerah Barat Daya, Pulau Pinang.	9,796,239.50	April 2007
18.	Cadangan Mendirikan 162 Unit, Dewan, Tapak Penjaja dan 2 Buah Pencawang TNB Di Atas Sebahagian Lot 8012 (Lot Lama 2364) Mukim 12, Jalan Sultan Azlan Shah, Daerah Barat Daya, Pulau Pinang.	22,400,000.00	March 2008
19.	Cadangan Mendirikan 2 Blok Rumah Pangsa Kos Rendah 5 Tingkat (156 Unit) Di Atas Sebahagian 8012 (Lot Lama 2364) Jalan Sultan Azlan Shah Mukim 12,DBD, Pulau Pinang.	7,133,600.00	March 2008
20.	Cadangan Pembinaan Rumah Kedai 2 Tingkat (16 Unit) Di Atas Kedai 2 Tingkat (16 Unit) Di Atas Sebahagian Lot 8012 (Lot Lama 2364) Jalan Sultan	4,394,612.38	April 2008

	Azlan Shah Mukim 12, Daerah Barat Daya, Pulau Pinang.		
21.	Cadangan Kerja Infrastruktur Untuk Pembangunan Bercampur Di Atas Sebahagian Lot 8012 (Lot Lama 2364) Mukim 12, Jalan Sultan Azlan Shah, Daerah Barat Daya, Pulau Pinang.	9,690,291.86	Sept 2008
22.	Cadangan Pembinaan 1 Blok Pangsapuri Kos Sederhana 10 Tingkat (90 Unit/750kp/unit) Di Atas P.T Lot 3564 [H.S(D)9086], Mukim 12, Jalan Medan Bayan, Daerah Barat Daya, Pulau Pinang.	8,300,000.00	March 2009
23.	Cadangan Membina 3 Unit Rumah Sesebuah 2 Tingkat Di Atas Lot-Lot 9369, 9404 dan 9409, 26 Unit Rumah Berkembar 2 Tingkat Di ATas Lot-Lot 9347-9356, 9359-9368, 9405-9408, Dan 9420-9421 Dan Sebuah Bangunan Pencawang TNB 1 Tingkat Di Atas Lot 9346 Di BAwah Projek Kampung Tersusun (Fasa 7), Jalan Tengah, Sungai Ara, Mukim 12, D.B.D, Pulau Pinang	4,792,585.00	Desember 2010
24.	Cadangan Pemajuab Secara Turnkey oleh Sri Tunas Snd. Bhd. Cdangan Pemajuan	33,783,744.08	Mac 2011

	Pangsapuri Kos Sederhana Idaman Irish (750k.p) Mengandungi 352 Unit, Di Atas Sebahagian Lot PT 2568, Mukim 10, Daerah Barat Daya, Jalan Dato' Ismail Hashim/Jalan Paya Terubong, Pulau Pinang		
25.	Cadangan Membina Satu Blok Rumah Pangsa Kos Rendah Jenis D1-650kp (280 Unit) Dan Sebuah Surau Di Atas Sebahagian Lot 719 (Lot Lama P.TP. 2568) Mukim 10 Daerah Barat Daya, Jalan Dato' Ismail Hashim/Jalan Paya Terubong, Pulau Pinang.	14,300,000.00	May 2011
26.	Cadangan Kerja Tanah Bagi Cadangan Pembangunan Rumah Teres 1 Tingkat Jenis B (82 Unit) Dan Sebuah Pencawang TNB Di Atas Sebahagian Lot 8009, (Lot Lama 2368) Mukim 12, Lot 8009, (Lot Lama 2368) Mukim 12 Daerah Barat Daya, Jalan Dato' Ismail Hashim/Jalan Tun Dr.Awang Bayan Lepas, Pulau Pinang	2,657,838.75	Mac 2011
27.	Cadangan Mendirikan 20 Unit Rumah Sesebuah 1 Tingkat (Plot32 - Plot 51) Dan 50 Unit	13,547,129.85	Aug 2012

	Rumah Sesebuah 2 Tingkat (Plot 52 - Plot 101) Serta 1 Unit Pencawang TNB (Double Chamber) Dan 1 Unit Rumah Pam Di Atas Sebahagian Lot 8009 (Lot Lama 2368), Jalan Dato' Ismail Hashim, Mukim 12 Daerah Barat Daya, Bayan Lepas, Pulau Pinang.		
28.	Cadangan Membina 1 Blok Rumah Pangsa Kos Sederhana 1 Hingga 20 Tingkat (448 Unit) Termasuk 1 Tingkat Kemudahan Masyarakat Dan 4 Tingkat Tempat Letak Kenderaan Di Atas Sebahagian Lot 719 (Lot Lama P.T 2568) Mukim 10, Daerah Barat Daya, Jalan Dato' Ismail Hashim/Jalan Paya Terubong, Pulau Pinang.	48,530,822.60	
	TOTAL CONTRACT VALUE	235,572,723.52	

Table 1.2 : Completed Projects

1.7 CURRENT PROJECTS

ITEM	PROJECT TITLE	CONTRACT VALUE (RM)	SITE POSSESSION	TO BE COMPLETE
1.	Cadangan Mendirikan 1 Blok 19 Tingkat Pangsapuri Kos Sederhana (100 Unit) Di Atas Lot P.T 3563, Mukim 12, Daerah Barat Daya, Medan Bayan, Bayan Lepas, Pulau Pinang.	12,492,792.85	01 July 2012	December 2012
2.	Cadangan Pemajuan Oleh Sri Tunas Snd. Bhd. Untuk Cadangan Pembinaan Satu Blok Pangsapuri Kos Sederhana Rendah, 12 Tingkat 176 Unit (750KP/69.7) Di Atas Lot P.T 246 Mukim 10 Daerah Barat Daya, Jalan Dato' Ismail Hashim, Sungai Ara, Pualau Pinang.	15,000,000.00	01 Jun 2011	December 2012 (Waiting For O.C)

3.	Cadangan Pembangunan Untuk Kerja-kerja Bangunan & Infrastruktur Bagi Cadangan Pemajuan Pangsapuri Kos Sederhana Idaman Selasih (750KP) Mengandungi 608 unit Dan 2 Blok Rumah Pangsa Kos Rendah (650KP) berjumlah 480 unit Di Atas Lot 1079 & 1078, Taman Tunas Idaman, Mukim 12, Daerah Barat Daya, Jalan Dato' Ismail Hashim/Jalan Paya Terubong, Pulau Pinang	73,000,000.00	01 April 2011	30 Sept 13
4.	Cadangan Membina Dan Menyiapkan Sebuah Kompleks Medan Selera Yang Mengandungi 29 unit	1,950,846.70	Feb 2012	Aug 2012 (Waiting For O.C)

	Gerai, Pejabat Pengurusan, Surau Dan Tandas Di Atas Lot P.T. 267, Mukim 10, Daerah Barat Daya, Jalan Dato Ismail Hashim/Jalan Paya Terubong, Sungai Ara, Pulau Pinang.			
5.	Cadangan Membina 6 Unit Rumah Teres 2 Tingkat Di Atas Lot 2775 (H.S(D)3191), Lot 2776 (H.S(D)3192), Lot 2777 (H.S(D)3193), Lot 2807 (H.S(D)3223), Lot 2808 (H.S(D)3224), Lot 2809 (H.S(D)3225), Lebuh Mahsuri, Mukim 12, Daerah Barat Daya, Pulau Pinang.	1,317,233.60.	Jan 2012	Dec 2012 (Over Date-Due)
TOTAL CONTRACT VALUE			103,760,873.15	

Table 1.3 : Current Projects

CHAPTER 2 :

LITERATURE REVIEW

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION TO QLASSIC

QLASSIC is short name for Quality Assessment System In Construction. QLASSIC is a way or method to scale the quality of one building or project base on its workmanship on the relevant approved standard. With QLASSIC, the quality of workmanship can be compared with scoring systems.

QLASSIC was developed by CIDB to be the nation's Construction Industry Standard (CIS). Almost 400 projects have been assessed using QLASSIC and average scoring of 65 per cent. Those percentage are observation of five years and prove that Malaysia construction projects has not achieved the acceptable level of satisfactions.

Stand by "ASSESS QUALITY OF WORKMANSHIP USING QLASSIC" Mission, the QLASSIC looking forward to quality workmanship for Malaysia Constructions.

2.1.1 OBJECTIVE OF QLASSIC

- To benchmark the quality of workmanship of construction industry
- To establish a standard quality assessment system on quality of workmanship of construction work
- To assess the quality of workmanship of a construction project based on the relevant approved standard.
- To be use as a criterion to evaluate the performance of contractors based on quality of workmanship
- To compile data for statistical analysis

2.1.2 SCOPE OF QLASSIC

QLASSIC sets the standard 'Quality Of Workmanship" for many elements for construction and infrastructure works. All of construction elements are made according to standard. Total marks are used in QLASSIC scoring for one project or construction.

QLASSIC evaluations are made by site investigations and follow the "first time assessment" principles. Any construction works that are made after or as a correction to the last assessment are uncounted and will not be inspect again. The objectives of this rules are to encourage the contractors to "Do Things Right The First Time And Every Time"

2.1.3 QLASSIC ASSESSORS

QLASSIC assessment on a construction project shall be carry out by assessors that has no relationship or any interest with that project.

All assessors should fulfill requirements and undergo training sets by CIDB. Only assessors that pass the training will be registered with CIDB as qualified QLASSIC assessors.

2.1.4 QLASSIC APPLICANT

The QLASSIC applicant can be only authorized person for one project. The authorized person will fill up the QLASSIC form and can only be applied when the building get the Certificate Of Practical Completion (CPC) or Architect's Work Finished Letter for the project and not yet been given to the client.

The Legal Applicant that can apply for QLASSIC are :

i. Developer
ii. Project Manager
iii. Contractor

2.1.5 ASSESSMENT APPROACH AND SAMPLING PROCESS

A sampling and statistical approach of construction elements that need to be assessed should be gather prior to carrying out the assessment. These samples shall be distributed evenly throughout the project or various construction stages. Assessment samples are selected from drawings and plans of the relevant construction project. All locations in the construction project shall be made available for the assessment. This is to ensure that the selected samples are adequately represent the whole construction project.

2.1.6 PROCESS OF APPLIYING QLASSIC ASSESSMENT

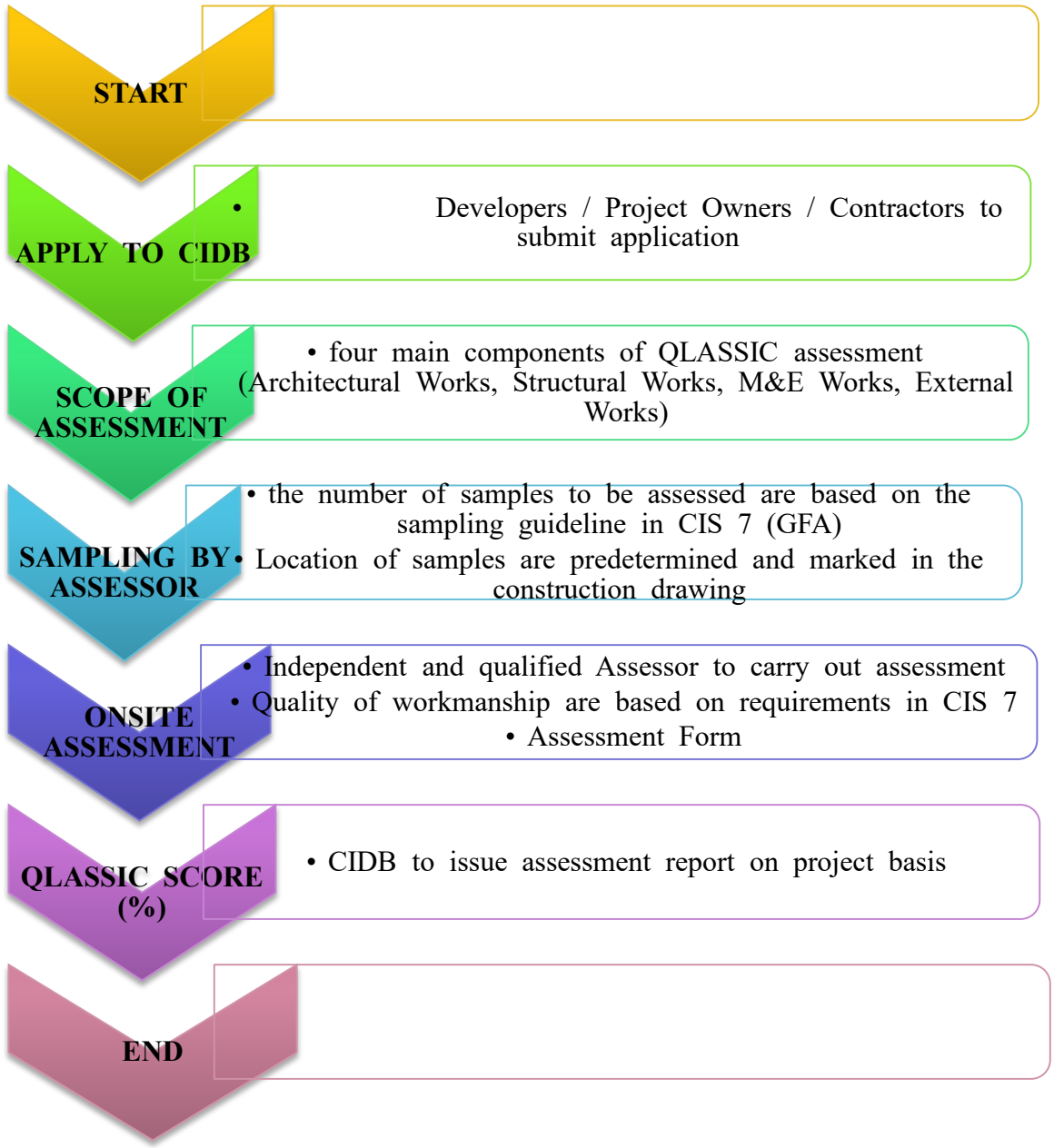


Figure 2.1 : Process Of Applying QLASSIC Assessment

2.1.7 WHY APPLY FOR QLASSIC ASSESSMENT ?

- Enables the Project Owner / Developer / Contractor to benchmark the quality of workmanship of your construction project.

- Provides Project Owner / Developer / Contractor a standard quality assessment system on quality of workmanship of construction works.

- Enhances quality control in construction works.

- Specified as a quality criterion for contractors performance scorecard.

2.2 MAIN COMPONENTS OF QLASSIC ASSESSMENTS

There are four main components of QLASSIC assessment that been highlight in CIS 7:2006, which is :

2.2.1 : Structural Works

The assessment are held when one project are still in construction period. The number of samples are determine by *Gross Floor Area* (GFA) for one building. The maximum and minimum for number of samples are also determine by GFA.

Assessments due to structural works are covered few construction or building elements such as ;

- Reinforced concrete structure (formwork, pre-cast specific requirements, finished concrete, structure quality and NTD),
- Structural steel work,
- Pre-stressed concrete

2.2.2 : Architectural Works

The assessment are held when one project is fully accomplished, which the project is already achieved the *Certificate Of Practical Completion* (CPC) and not yet be handed to the Project Owner. The number of samples are determine by *Gross Floor Area* (GFA) for one building.

The maximum and minimum for number of samples are also determine by GFA.

Assessments due to architectural works are covered few construction or building elements such as ;

- Ceiling
- Floor
- Internal Wall
- External Wall
- Roof
- Apron and Perimeter Drain
- Door and Window
- Internal and External Fixtures

(Source : CIDB, (2006) *CIDB QLASSIC* Retrieved December 04, 2010, from www.cidb.gov.my/)

2.2.3 Mechanical & Electrical (M&E) Works

The assessment are held when one project are still in construction period. The number of samples are determine by *Gross Floor Area* (GFA) for one building. The maximum and minimum for number of samples are also determine by GFA.

Assessments due to structural works are covered few construction or building elements such as ;

- Electrical Works
- Air-conditioning And Mechanical Ventilation Work (ACMV)
- Fire Fighting Works
- Piping Works And Cleanliness
- Basic M&E equipments

2.2.4 External Works

The assessment are held when one project is fully accomplished, which the project is already achieved the *Certificate Of Practical Completion* (CPC) and not yet be handed to the Project Owner. The number of samples are determine by 10m *length section or per location* for one building. The maximum and minimum for number of samples are also determine by GFA.

Assessments due to external works are covered few construction or building elements such as ;

- External Drain
- Road Work And Parking
- Link-Way or Shelter
- Footpath and turfing
- Playground
- Court
- Fence And Gate
- Swimming Pool

- Electrical Substation

(Source : CIDB, (2006) *CIDB QLASSIC* Retrieved December 04, 2010, from www.cidb.gov.my/)

2.3 QLASSIC ASSESSMENT DETAILS (ARCHITECTURAL WORKS)

2.3.1 FLOOR (TILED FLOOR)

- No cracks, scratches, chips, stains and hollowness of tiles
- Joints are aligned between tiles and consistent in size
- Gap between two tiles are not more than 1 mm
- Consistent colour tone
- Gradient of floor tile
- Top of tile skirting to be level, neat and consistent

2.3.2 FLOOR (TIMBER FLOOR)

- No visible gaps between floor and wall slaps
- Edges of floor are properly sealed
- Neat jointing on top of sliding track (for sliding door)
- Variance in lengths of tread and riser for staircase not exceeding 5mm from dimensions specified in the approved drawings
- No warping
- Resting firmly and no delaminating

- No visible gaps
- Edges of floor are properly sealed
- Floor to be consistent in colour tone and free from visible stain
- Free from dents, scratches and damages

2.3.3 WALL (INTERNAL WALL - PLASTER FINISHING)

- Wall meet at the right angle must less than 4 mm over 300 mm
- No strain marks
- Edge to be straight and aligned
- Vertically and evenness of wall must less than 3 mm per 1.2 mm
- Surfaces are evenly painted
- No patchiness resulted from touch-up work
- No hollowness and no sign of delaminating
- Surface should be free from peeling, blisters and chalkiness (no discoloration)
- No visible gaps / damages / defects / cracks

2.3.4 WALL (EXTERNAL WALL)

- Surfaces are evenly painted
- No patchiness resulted from touch-up work
- No sign of delaminating
- Surfaces should be free from peeling, blisters and chalkiness (No discoloration)
- No visible gaps / damages / defects / cracks

- For Facing Brickwork, 10mm joint with marking, weep holes are provided as specified and no efflorescence
- Painting - Good opacity, no discoloration and fading, free from peeling, blister and chalkiness

2.3.5 EXTERNAL WALL (GLAZING)

- Consistent and neat marking
- Joints to be even
- Glazing should be properly aligned

2.3.6 CEILING

- Finishing must have no stain marks
- Surface should be smooth, even and not wavy
- Straight at corners
- No visible damage; e.g., cracks, leaks, breaks, etc
- No rough surfaces
- Jointing should be consistent, aligned and neat
- Paintwork with good opacity with no brush marks
- No gaps between wall and ceiling
- For Plaster/ Skim Coat/ Boarded Ceiling - no pin holes and no trowel marks, formwork joints are grounded smooth, no sign of corrosion
- For False Ceiling/ Grid System - Alignment of ralls should be visually straight, chipped/cracked surfaces or corner should not be detected,panels should not warp and laid neatly into grids

2.3.7 DOOR

- Door leaf must be free from damage and warping with no stain mark
- Consistent gap between door leaf and frame
- Consistent gap between door leaf and finished floor
- Neat joints
- Double leaf doors to flush with each other
- Door and frame corners are maintained at right angles
- No visible damage; e.g., cracks, leaks, breaks, etc.
- Door joints and nail holes are filled up, sanded down with good paintwork
- Clean glazing and evenly sealed with gasket
- Alignment and evenness must be parallel, and to be plumb and square
- Easy opening and closing
- No squeaky sound
- Lockset should be functional
- Good paintwork (including top and bottom of door leaf)
- Finishing must have no stain marks
- Surface should be smooth, even and not wavy
- Straight at corners
- No rough surfaces
- Jointing should be consistent, aligned and neat
- Paintwork with good opacity with no brush marks
- Wrapping of door to avoid scratches
- Frames must be free from corrosion, dents and discolorations
- Neat joints
- Good paintwork

2.3.8 ROOF

- No stains marks
- Surface to be level
- No cracks, chips or damages
- Joints are properly filled up, neat and aligned
- No ponding and gradient to specification
- Proper dressing for any protrusion
- Consistent colour tone
- Good paint works
- Evenly Falls
- For Flat Roof, ponding must less than 3 mm, opening to be sealed to prevent pest invasion
- For Pitched Roof, roof tiles must be in alignment
- Waterproofing for exposed area must be evenly installed, no sharp protrusion, complete adhesion to base and good laps at joints and proper abutment details
- For Gutter And Rain Water Down Pipes (RWDP), RWDP Inlet should be lower than the surrounding gutter Invert Level
- Gutter and RWDP Inlet to be covered to prevent chockage where practical

2.3.9 WINDOW

- Lockset, gasket lining and hinges fit well with no stains and free from damage
- No sign of corrosion nor discoloration in ironmongery and frame
- No missing accessories

- Neat joints for accessories
- Screws must be fastened properly
- Alignment and evenness must be parallel, and to be plumb and square
- Easy opening and closing
- No squeaky sound
- Lockset should be functional
- Louvered window with glass panels of correct length

2.4 QLASSIC ASSESSMENT DETAILS (MECHANICAL & ELECTRICAL WORKS)

2.4.1 INTERNAL FIXTURES (PLUMBING AND SANITARY FITTINGS)

- Joints are watertight
- Pipes properly support,bent without distortion and kink
- Width of joints are consistent and neat
- No visible gaps
- Pipes end properly capped
- No cold water pipes below sewerage pipes
- Service pipe duct are accessible
- Level and aligned
- No stain marks
- No damages / defects
- Consistent color tone
- No drippings
- Functional, secured and safe

2.4.2 M&E FITTING

- Fitting must be aligned
- No stains
- Neat patch-up for marking / penetration
- Heights of switches and marks to be consistent
- Switches function properly
- No gaps at joints
- No visible gaps between switches, marks and wall
- No damages and choked
- For Floor Trap - Must be securely fixed, trap's top lower than the surrounding floor level
- For pipes, no leakage at joints, plumb <10mm/ storey height, brackets firmly secured
- For fittings, must be accessible for maintenance, no sediments/particles found in water collected at terminal water fittings (remove aerator & showerhead), and all sensors covers properly sealed against water seepage

2.4.3 FIRE PROTECTION WORKS

a) Wet/ Dry Riser

- Landing valve must be accessible, strapped, padlocked, labeling for riser door, painted red for wet riser and yellow for dry riser. Automatic air release valve provided at highest mark of rising main.

- Pipe & Pipe Support must be label & paint for riser pipe, bonding to earth provided for rising main
- Wall/ floor Penetration
- No visible Damages

b) Sprinkler

- Installation - Double layer sprinkler for false ceiling > 800mm in depth, no obstruction and painting to sprinkler heads, correct sprinkler heads used in correct locations
- Pipe Support
- Proper wall/ Floor penetration
- No visible damage

a) Fire Alarm

- Installation - Fire Alarm wiring in conduit (G1 type)
- Panel and conduit properly painted
- Fire Alarm zoning diagram provided near panel/sub-panel
- No visible damage

b) Hose reel

- Hose reel cabinet properly labeled, hose reel pipe properly fixed with hanger & bracket, hose reel operation instruction fixed on hose reel drum or door
- Correct paint and good finished
- No visible damage

2.5 QLASSIC ASSESSMENT DETAILS (EXTERNAL WORKS)

2.5.1 EXTERNAL WORKS - DRAINS

- Finishes must be even, level, aligned and consistent
- Free flowing and no water ponding
- Properly painted
- Gaps between drain covers are 5-10 mm wide
- Gaps between sides of drains are 5-10 mm wide
- No visible cracks
- Fixtures installed must be safe, secure and functional

2.5.2 EXTERNAL WORKS - ROAD WORKS AND CARPARK

c) ROAD SURFACE

- No water ponding
- Road painted according to drawings
- Gaps between aeration slabs are properly filled up with sand
- Aeration slabs are stable and no broken kerbs
- Width of joints are consistent and neat
- No stain marks, visible damages or defects
- Finishing must be evenly aligned and consistent
- Good paintwork

d) KERBS

- Width of joints are consistent and neat

- No stain marks, visible damages or defects
- Finishing must be even aligned and consistent
- Good paintwork

2.5.3 LINKWAY / SHELTER

- Visual assessment to ensure no stains, cracks, damages, gradient to specification and not in a wavy form
- Ceiling to be neat, consistent, free from leaks, all fittings, fixtures and fixing are neatly installed, where applicable
- All plaster works to be aligned, level and not in a wavy form

2.5.4 FOOTPATH & TURFING

- Floor to be consistent in colour tone and free from visible stains
- Visual assessment to ensure no stains, cracks, damages, gradient to specification and not in a wavy form
- Turfing according to drawings and specification-spot / close turfing
- No depression or bald patches
- Turfing to be even, no dead grass or weeds.

2.5.5 PLAYGROUND

- Visual assessment to ensure no stains, cracks, damages, gradient to specification and not in a wavy form
- All fittings, fixtures and fixings are neatly installed, where applicable

2.5.6 COURT

- Visual assessment to ensure no stains, cracks, damages, gradient to specification and not in a wavy form
- All fittings, fixtures and fixings are neatly installed, where applicable
- All accessories and fittings are to be properly fixed and no missing items or damages

2.5.7 FENCE & GATE

- Vertical tolerance do not exceed 5 mm per 1.2 m, to be perpendicular and straight
- Fencing to be plumb, not exceeding 5 mm per 1.2 m and straight
- Good paintwork
- No dent and rust, and welding is grounded and flushed
- Alignment of fence must be leveled
- Ensure all fittings and fixings are secured and functional

2.5.8 SWIMMING POOL

- All overflow drain do not in a wavy form and gradient to specification
- Visual assessment to ensure no stains, cracks, damages and not in a wavy form
- All fittings, fixtures and fixings are neatly installed, where applicable

- All accessories and fittings are to be properly fixed with no missing items or damages

2.5.9 ELECTRICAL SUBSTATION

a) EXTERNAL WALL
   - External wall to be aligned, leveled, free from rough and not in a wavy form of surface
   - Good paintwork

b) DOOR AND WINDOW
   - To be aligned, neat, vertically flushed, free from damages and dents
   - Good paintwork

2.6 QLASSIC ASSESSMENT DETAILS (STRUCTURE WORKS)

2.6.1 FORMWORK

a) For formwork dimensions and openings for services
   - Tolerance for cross-sectional dimensions of cast in-situ & precast elements (+10mm/-5mm)
   - Tolerance for penetration/opening for services (+10mm for size ± 25mm for location)
   - Tolerance for length of precast members (major dimension of unit)

Dimension of unit	Tolerance
Up to 3m	± 6mm
3m to 4.5m	± 9mm
4.5m to 6m	± 12mm

Additional deviation for every subsequent 6m	± 6mm

b) For Alignment, plumb and level

- Tolerance for departure of any mark from its position (±10mm)
- Tolerance for plumb (=3mm per 1m, maximum 20mm)
- Maximum deviation of mean level of staircase tread to temporary bench mark (±5mm)
- For cast in-situ elements, the deviation of level of any mark from the intended level (±10mm)

c) For condition of formwork, props and bracing

- Formwork must be free from defects
- Before concreting, the interior must be free from debris
- All formwork joints must not have gaps to prevent leakage
- There must be adequate support, bracing and tie-back for the formwork to prevent bulging or displacement of structural elements

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.6.2 REINFORCEMENT (CAST IN-SITU & PRECAST)

a) For main and secondary rebars

- According to structural drawings (number/sizes)
- Spacing of bars not more than that specified (±10mm)

b) For anchorages and lap lengths

- Required lap length not less than that specified

c) For cover provision

- According to specification (+5mm)

d) For links, stirrups and trimming bars

- According to structural drawings (number/sizes)
- Spacing of bars not more than specified (±10mm)

e) For rebar condition

- Rebars must securely and properly tied in place
- Rebars must be free from concrete dropping, corrosion etc.

2.6.3 FINISHED CONCRETE (CAST IN-SITU & PRECAST)

a) For dimension for elements/opening for services

- Tolerance for cross-sectional dimensions of cast in-situ & precast elements (+10mm/-5mm)
- Tolerance for penetration/opening for services (+10mm for size ± 25mm for location)
- Tolerance for length of precast members (major dimension of unit)

Dimension of unit	**Tolerance**
Up to 3m	± 6mm
3m to 4.5m	± 9mm
4.5m to 6m	± 12mm
Additional deviation for every subsequent 6m	± 6mm

- Straightness or bow (deviation from intended line) of precast member :

Dimension of unit	Tolerance
Up to 3m	± 6mm
3m to 4.5m	± 9mm
4.5m to 6m	± 12mm
Additional deviation for every subsequent 6m	± 6mm

- Squareness of precast member- Difference between the greatest and shortest dimensions should not exceed the following :

Length of the shorter sides	Tolerance
Up to and including 1.2m	± 6mm
Over 1.2m but less than 1.8m	± 9mm
1.8m and over	± 12mm

- Twist of precast member - Any corner should not be more than the deviation stated from the plane containing the other 3 corners :

Length And Wide Of Corners	Tolerance
Up to 600 mm wide and 6 m in length	± 6mm
Over 600 mm wide and for any length	± 12mm

- Flatness
-

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

b) For Alignment, Plumb And Level.

- Tolerance for departure of any mark from its position (± 10mm)
- Tolerance for plumb : maximum 20mm for floor to floor height and 40mm for the entire building height (3 mm/1 m)
- Maximum deviation of mean level (± 10mm)
- For cast in-situ elements, the maximum deviation of levels within elements (± 10mm)
- Chamber at mind-span : according to specifications

c) For Expose Surface

- Should not have visual exposure of groups of coarse aggregates resulting
- Cold joint & formwork joint must be smooth
- No bulging of structural element
- All formwork, nails, zinc strips, etc must be removed
- No cracks or damages
- No exposed rebar

2.6.4 PRECAST SPECIFIC REQUIREMENT

a) For Lifting marks / inserts

- Tolerance for position (± 20mm from centre line location in drawing)
- Lifting devices and inserts free from damages

b) For Sleeve System / Connections

- Tolerance for position (± 6mm from centre line location in drawings)
- Bar protrusion length according to requirements. No bending, cranking or damages to bars.
- Bars free from concrete droppings or corrosion
- Sleeves, grout holes, grout tubes not congested with debris

c) For Interface / Joint requirement

- Joint taper :

Joint Taper	Tolerance
Over 3m length	± 6mm
Maximum for entire length	± 9mm

- Alignment of horizontal and vertical joint (± 6mm)
- Jog in alignment of matching edges (± 6mm)
- Sitting of element
- Installation of sealant and waterproofing

d) For Cast-in steel items / welded & bolted connection

- Tolerance for position of cast-in steel items (± 6mm from centre line location in drawings)
- Tolerance for position of openings for bolt connections (± 3mm from centre line location in drawings)

2.6.5 STRUCTURE QUALITY

a) For Concrete Cube Test

- According to specifications; for every pour of concrete, test cubes results at 28 days must satisfy the passing criteria in relevant approved standard

b) For Reinforcement (Rebar)

- To pass the tensile strength test for all the reinforcement bars used as according to 'Approved Standard for Grade 500 ribbed bars' and 'Approved Standard for Grade 460 ribbed bars'
- All the welded steel fabric used to comply with approved standard in their respective specified characteristic strength of not less than 250 N per mm^2, 460 N per mm^2 and 485 N per mm^2.
- No non-conforming reinforcement detected through test records has been installed in the structure.

2.6.6 NON-DESTRUCTIVE TESTING

a) For Ultra Pulse Velocity (UPV) test for Concrete Uniformity

- To conduct NDT using ultrasonic pulse velocity (UPV) to check the degree of uniformity of hardened concrete
- 5 columns / walls per set and 2 readings per column / wall
- Assessment is based on the difference between 2 UPV readings within a column / wall not exceeding 0.05 km/s
- Method as per approved standard
-

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

➢

b) For Electro-Convermeter test for concrete cover

- ➢ To check hardened concrete cover for reinforcement bars after casting
- ➢ 5 structural members per set including : 3 for slab soffit @ 4 reading each , 1 for column @ 2 readings each on both axis of the column , 1 for beam @ 2 readings each on the soffit and one side of the beam
- ➢ For each reading, full mark for ± 5mm and half mark for > ± 5mm to ± 8mm. For each location, no mark will be awarded if any of the 4 readings exceeds ± 12mm
- ➢ Method as per proved standard

2.6.7 MAIN MEMBER / PARTIAL ASSEMBLED COMPONENT

a) For Physical Dimensions

- ➢ Cross sectional tolerance should meet approved structural steel specification or approved plan
- ➢ Tolerance for length of structural steel member (± 3mm)
- ➢ Tolerance for bolt hole size :

Bolt Hole Size	**Tolerance**
Diameter < 24mm	= 2mm
Diameter = 24mm	= 3mm

- ➢ Tolerance bolt hole positions

b) For Type And Condition

- ➢ According to the structural steel specifications

- Surface preparation shall meet the surface roughness specifications
- Material used must be traceable to its original mill certificates

c) For Welding

- Welding size, length and profile shall meet the structural steel specification and drawings
- Visual inspection shall meet the structural steel specifications
- All welding must be done by qualified welders

d) For Bolting

- Bolts and washers, type, size and number shall be according to the structural steel specifications
- Drilled holes shall be free from burrs
- The condition of bolted parts adjacent to the bolt heads, nuts, flat washers, connection gussets and splice plates shall be free from oil, paint, and loose mill scales or otherwise specified by the structural steel specifications
- Gap between adjacent parts (<2 mm using Caliper)
- Threaded bolts protruding at least one thread length with washers

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.6.8 METAL DECKING

a) For Type and Conditions

- Correct type and thickness of metal decking used

- All decking joints must not have gaps
- All metal decking must be properly secured in place
- Metal decking must be free from defects and visible damages
- Before concreting, the decking must be free from grease, oil, paint and all other foreign materials
- All accessories such as pour stop, and end closures and cover plates must be in place before concreting

b) For Shear Studs

- Correct numbers and type of shear studs used
- Spacing and position according to approved plan
- Strength of shear stud welds not less than specified
- All welds should show a full 360-degree weld fillet. All welds free from visible damages

c) For Lapping and Deck Openings

- According to structural steel specifications or approved plan

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.6.9 ERECTION TOLERANCE

a) For Column Verticality

- Tolerance for verticality :± H / 600mm or 5mm, maximum ± 25 mm; where H is the floor to floor height in mm

b) For Column Positions

- The position in plan of steel column at the base shall not deviate from the specified position by more than 10mm along either of the principal setting out axes

c) For Beam Level

- Maximum deviation of level at each end of the same beam (± 5 mm)
- The level of the top of the steelwork at any storey shall be within ± 10mm of the specified level

d) For Beam Position

- Beams shall not deviate from their specified positions relative to the column to which they are connected by more than 5mm

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.6.10 CORROSION AND FIRE PROTECTION

a) For Thickness Of Coating

- Average thickness of the coating or the protective layer must not be less than specified

b) For Condition

- No visible damages
- No spalling of coating or protective layer from structural steel members

c) For Welding Test Report

- Reports for all critical welding joints from the specified contract requirements must be submitted
- Test reports must comply with the acceptable criteria and to be endorsed by client's representative

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.6.11 PRE-STRESSED CONCRETE

a) For Condition Of Tendons & Anchorages
   - All pre-stressing strands and wires should comply with the specified standards and requirements and be free from loose rust, oil, tar, paint and any foreign objects
   - All tendon anchorage are to comply with the specified standards and protected from corrosion. Thread parts to be greased wrapped and tapped holes protected until use

b) For Installation Of Sheathing
   - Sheathing properly secured and protected and free from damage or puncture
   - Sheathing profile according to drawings throughout the length with position tolerance (± 5mm)
   - Splice to sheathing shall be mortar tight
   - Air vents grout tubes provided according to the drawing

c) For Stressing & Grouting Process
   - Tendon ducts clean and free from foreign objects and tendon free moving in the duct

- All grouting operations of the tendons must be smooth and achieved without need to flush out in the first grouting

d) For Debonding

- Open ends of debond tubes over the debond length of strands sealed
- Debond lengths according to the drawings
- Debonding materials not punctured or damaged

-

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.7 WEIGHTAGE

The weightage for Structural Works, Architectural Works, M&E Works and External Works are allocated in accordance to four categories of buildings.

COMPONENTS	Category A (Landed Housing)	Category B (Stratified Housing)	Category C (Public Building)	Category D (Special Public Building)
Structural Works	25%	30%	30%	30%
Architectural Works	60%	50%	45%	35%
M&E Works	5%	10%	15%	25%
External Works	10%	10%	10%	10%
TOTAL SCORE	100%	100%	100%	100%

Table 2.1 : Weightage

The weightage system, which is aimed at making the score quantitative in representing the quality of workmanship of a building project. It has taken into consideration the distribution between the cost proportions of the four components in the various buildings and their aesthetic considerations.

The total quality score of a building project is the sum of marks given to the four components in each category of a building.

Each category of a building comprise as follow :

a. Category A (Landed Housing) – Detached, Semi-Detached, Terrace and Cluster House.
b. Category B (Stratified Housing) – Flat, Apartment, Condominium, Service Apartment and Town House.
c. Category C (Public Building) – Office Building, Schools and other related facilities / buildings built intended for public use.
d. Category D (Special Public Building) – Hospitals and Airports only

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.7.1 SAMPLING

As it is impractical to assess all elements in a building project, the assessment is carried out through a sampling approach. The sampling, which is based on the gross floor area (GFA) of the building and 10 m length section or per location for external work is to ensure that the assessment adequately represents the entire building project.

2.7.2 ARCHITECTURAL WORKS ASSESSMENT

Assessment of architectural works is carried out upon completion of the building project and before handing over of the project.

The weightage for architectural elements are allocated as per Table

ARCHITECTURAL ELEMENTS		WEIGHTAGE %	
		Total	**Breakdown**
Internal Finishes		56	
	Floor		16
	Ceiling Wall		16
	Ceiling		6
	Door		6
	Window		6
	Fixtures (Internal)		6
Roof		10	
External Wall		10	
Apron And Perimeter Drain		4	
Material And Functional Tests		20	
	Skim Coat or Pre-packed Plaster		3
	Field Window Water Tightness Test (WTT)		6
	Wet Area Water Tightness Test		6
	Pull-Off Test for internal Wall tiles		5
Total		**100**	

Note :
A weightage of 3% is automatically awarded to projects where skim coat or pre-packed plaster is used. This is to encourage the use of these products in the industry.

Table 2.2 : Weightage For Architectural Element

The Assessment is based on the sampling guidelines.

No.	Items	GFA per Sample	Min Sample	Max Sample	Remarks
1a	Internal Finishes	70 m²	30	700	For landed housing
1b	Internal Finishes	70 m²	30	600	For stratified housing
1c	Internal Finishes	500 m²	30	150	For public building
1d	Internal Finishes	500 m²	30	100	For special public building
2	External Wall	-	50%	-	50% of the blocks/units
3	Skim Coat And Pre-packed plaster	-	-	-	Declarations by qualified person
4	Roof	-	50%	-	50% of the blocks/units
5	Apron And Perimeter Drain	-	2	-	10m length section per sample
6a	Field window water-tightness test (WTT)	1 000 m²	20	100	Independent testing
6b	Field window water-tightness test (WTT)	-	25%	-	Self-testing with declaration by qualified person
7a	Wet area water-tightness	-	20	100	- 10% of all bathrooms and/or

	test				toilets (by location) -all will be tested if <20 nos.
7b	Wet area water-tightness test	-	100%	-	Self Testing with declarations by qualified person
8	Pull-Off test for Internal Wall Tiles	10 000 m²	1 set	5 sets	5 tiles per set (by locations)
Note : GFA means Gross Floor Area					

Table 2.3 : Sampling Guidelines for architectural works

A location for Internal Finishes assessment is a functional space of a building such as a room, hall, toilet, kitchen, corridor or lobby. Locations are further categorized into three types :

- Principal locations are major functional places such as halls and rooms.
- Circulation locations include lift lobbies, corridors and staircases.
- Service locations are utility areas such as toilets, kitchens, balconies and yards.
-

The total number of locations will be distributed according to Principal, Circulation and Service based on the percentage set out in the four categories of buildings in Table 2.4.

Scoring of internal finishes is based on the defects groups shown in QLASSIC EXPECTATIONS. In general, any item which is not available in

a project will not be considered for scoring. For such case, the architectural score will be pro-rated accordingly.

Locations	Category A (Landed Housing)	Category B (Stratified Housing)	Category C (Public Building)	Category D (Special Public Building)
Principal	40%	40%	60%	60%
Service	40%	40%	15%	15%
Circulation	20%	20%	25%	25%
Note : For other types of building the distribution of percentage shall be in accordance to Category C.				

Table 2.4 : Weightage for location of architectural work according to building category

An item under assessment will be considered failed if it does not meet the standards. In addition, any item found to be defective functionally such as evidence of water seepage in the window, slab, ceiling or roof, is considered to have failed the assessment. Likewise for a particular defect that is found excessive in an item (say excessive cracks on a wall).

For the assessment of external wall, a minimum 50% of the total number of building will be assessed. For a building, the external wall will be divided into 4 walls for assessment.

Under the material & functional tests, self testing items like field window water-tightness test for 25% of windows and the use of skim coat or pre-packed plaster for all plastering works are based on declaration by the project Qualified Person (QP). In general, declaration on passing for self-testing is based on first-time-right basis.

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.7.3 EXTERNAL WORKS ASSESSMENT

Assessment of external works is carried out upon completion of the building and before handing over of the project.

The assessment consists of the following locations :

a) Link-way/Shelter - 10m length section per sample and minimum 2 samples
b) External Drain - 10m length section per sample and minimum 2 samples
c) Roadwork And Car Park - 10m length section per sample and minimum 1 sample
d) Footpaths And Turfing - 10m length section per sample and minimum 2 samples
e) Playground - 1 location
f) Court - 1 location
g) Fence And Gate - 10m length section per sample and minimum 1 sample
h) Swimming Pool - 10m length section per sample and minimum 1 sample
i) Electrical substation - 1 location
j) Guard House - 1 location
k) Rubbish Chamber - 1 location

Each item in the external works will be assessed separately and all the locations listed above must be assessed where applicable. The total

QLASSIC score for external works shall be the marks achieved divided by the total achievable marks.

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.7.4 MECHANICAL AND ELECTRICAL (M&E) WORKS ASSESSMENT

2.7.4 a) Completed Projects

Assessment of M&E works is carried out upon completion of the building project and before handing over of the project. The assessment covers basic M&E fittings and performance testing.

2.7.4 b) Projects In-progress

Assessment of M&E works is done throughout the construction stages. The assessment covers the following area, with their weightages allocated in accordance with the four categories of projects. See Table 2.5.

M&E elements	**Category A (Landed Housing)**	**Category B (Stratified Housing)**	**Category C (Public Building)**	**Category D (Special Public Building)**
M&E Works Assessment (%)				
Electrical Works	10	15	20	20
ACMV Works	10	10	25	20
Fire Protections Works	-	10	10	10
Plumbing & Sanitary Work	20	20	20	25

Basic M&E Fittings	60	45	25	25
Sub-total	100	100	100	100
Weightage	50	50	30	30
M&E Works Performance Test Assessment (%)				
Performance Testing	100	100	100	100
Weightage	50	50	70	70
Total	**100**	**100**	**100**	**100**

Table 2.5 : Weightage For M&E Element According To Building Category

NOTES :

1. "-" means that no assessment on that M&E element is required.
2. Refer to QLASSIC EXPECTATIONS for details of the marks allocated under each element of the M&E works assessed.
3. Performance testing will be done for electric power supply, water supply and sanitary flushing system.
4. Basic M&E Fittings – 500m² per sample with min 30 and max 150 samples.

Like the architectural works, sampling for M&E works in-progress will be determined based on the four categories of building as per the guidelines in Table 2.6 :

	Category A Landed Housing 3 500 m² per sample	Category B Stratified Housing 3 500 m² per sample	Category C Public Building 1 000 m² per sample	Category D Special Building 1 000 m² per sample
Electrical				
1.Main Cables			**1**	**1**
2.Surface Conduits	**1+**	**1+**	**1+**	**1+**
3.Cable tray, ladder and trunking	**1**	**1+**	**1+**	**1+**
4.Distribution Board	**1**		**2+**	**2+**
ACMV				
1.Split unit/Window air conditioner	**3+**	**3+**	**2+**	**2+**
2.Air-con comfort	**2+**	**2+**	**1+**	**1+**
3. Ductwork			**3+**	**3+**
4.Fire-rated Duct			**1**	**1**
5.Dampers			**1+**	**1+**
6.Fire Dampers			**1**	**1**
Fire Protections				
1.Wet/Dry Riser		**1+**	**1+**	**1+**
Sprinkler			**1+**	**1+**
3.Fire Alarm			**1**	**1**
4.Hose Reel		**1+**	**1+**	**1+**
Plumbing And Sanitary				
1.Conceal Pipes		**1**	**1**	**1+**
2.Exposed Pipes		**4+**	**4+**	**4+**

3.Water Tank	**1**	**1**	**1**	**1**
4.Pump And Motor		**1**	**1**	**1**
Minimum Samples	**9**	**16**	**25**	**24**
Maximum Samples	**15**	**29**	**43**	**44**
Notes : **1.Basic M&E fittings - 500m² per sample with min 30 samples and max 150 samples** **2.Remarks : means to be repeated for additional samples required**				

Table 2.6 : Sampling Guidelines for M&E Works

Reinforced Concrete Structure Elements	**Weightage Cast In-Situ (%)**	**Weightage Pre-Cast (%)**
Formwork	20	0
Rebar	15	5
Finished Concrete	25	35
Concrete Quality	5	0
Steel Reinforcement Quality	5	0
Precast Specific Requirement	0	20
NDT-UPV test for concrete uniformity	15	20
NDT- Electro-covermeter test for concrete cover	15	20
Total	**100**	**100**
NOTE : If total pre-cast concrete volume exceeds 20% of total structural concrete volume, assessment will be carried out for pre-cast concrete construction. The marks will be distributed proportionately between formwork/ rebar assessment and pre-cast concrete assessment based on the respective concrete volume percentage.		

Table 2.7 Weightage For Reinforced Concrete Structure Element

For a typical reinforced concrete structure, selection of samples for assessment is based on Table 2.8

	Items	GFA per sample	Min. Sample	Max. Sample	Remarks
1	**Structural Elements**	500 m²	30	150	For Non-Housing Projects
1a	**Structural Elements**	1 500 m²	30	**50**	For Housing Projects
2	**Concrete Compressive Strength**	-	100%	**-**	Declarations By Qualified Person
3	**Steel reinforcement tensile strength**	-	100%	**-**	Declarations By Qualified Person
4	**NDT-UPV test for concrete uniformity**	5 000 m²	2 sets	20 sets	5 structure members per set
5	**NDT-Electro-Covermeter test for**	5 000 m²	2 sets	20 sets	5 structure members per set

	concrete cover				
Notes : The computed number of elements to be checked must be evenly distributed throughout the entire blocks and cover at least 50% of floors in a blocks. It should also as far as possible cover the different types of structural elements.					

Table 2.8 : Sampling Guidelines For Reinforced Concrete Structure Work

The resulting scores for the formwork/ rebar/pre-cast and finished concrete will be the sum of the number of checks that meet the standards.

There is no assessment of pre-cast components at the pre-cast yard. The assessment is applicable for all types of pre-cast components at site.

The assessment of the non-destructive tests, i.e . on concrete uniformity and cover for steel reinforcement, is to minimize the risk of carbonation and steel corrosion which affect the durability of the concrete structures.

If the structural works consist of structural steelworks which constitutes more than 20% of the structural cost, assessment will be required for the latter and the marks will be distributed proportionately. This applies to pre-stressing works as well. In any case the distribution should follow the cost composition for these three types of structural works in the projects.

The weightage for structural steel work and pre-stressed concrete are allocated as per Table 2.9.

Structural Steel Work	**Weightage %**
Main member/Partially assemble components	40
Metal decking	20
Erection Tolerance	10
Corrosion And Fire Protection	10
Welding Test Report	20
Total	**100**
Note : Assessment for structural steel roof truss is compulsory irregardless of the 20% costing criteria	

Pre-stressed Concrete Work	**Weightage %**
Tendon And Anchorage	25%
Sheathing	25%
Stressing And Grouting	25%
Debonding	25%
Total	**100%**

Table 2.9 : Weightage For Structural Steel Element And Pre-Stressed Concrete Element

The selection of sample for structural steel works assessment is based the following guidelines :

Items	Steel tonnage per sample	Min sample
Structural Elements		
➢ **Main member/ partial assembled components**	250	5
➢ **Metal decking**	250	5
➢ **Erection Tolerances**	500	5
➢ **Corrosion And Fire Protection**	500	5
Material And Functional Test		
➢ **Welding Test Report**	All critical welding joints	All critical welding joints
Note : Samples will be taken before and after installation.		

Table 2.10 : Sampling Guidelines For Structural Steel Work

(Source : CIDB, (2006) *Construction Industry Standard; CIS 7: 2006,* MY)

2.8 TERM AND CONDITION TO APPLY QLASSIC

2.8.1 To apply QLASSIC, applicants must submit to the Unit Standard @ Quality, Building Technology Development Division, Headquarters CIDB Malaysia the following documents :

a) QLASSIC's application form (QLASSIC/05/F1) complete with ;

- For contractors, a copy of the Registration Certificate from CIDB
- For developers, a copy of the Housing Developer License from the Kem. Perumahan & Kejaraan Tempatan (KPKT) that claims as 'true copy' by KPKT or commissioner of oaths.
- For individuals, a copy of grant of the lot certified as 'true copy' by the corporation that issuing the grant or the commissioner of oaths.
- Projects Letter Of Award
- Acknowledgement For Quality Assessment System In Construction (QLASSIC) Application
- Site Location Plan
- Construction Programmed
- Structural Layout Plan
- Architectural Layout Plan

b) Term And Condition Documents for Quality Assessment System In Construction (QLASSIC) Application dates February 22nd 2006 are read and signature by applicant at every page.
(Source : CIDB, (2006) *CIDB QLASSIC* Retrieved December 04, 2010, from www.cidb.gov.my/)

2.8.2 Assessment works should be done by CIDB officer that state in Letter Of Declarations (Surat Pemakluman) for QLASSIC Assessor that issued by Pegawai Kanan, Building Technology Development Division, CIDB Malaysia to applicant. Applicant should arrange works on site to give way to CIDB to do the assessment work at the time, date and place that arranged. If the applicant are failed to arranged the work on site at the time, date and place that arranged, CIDB will not continue the assessment process. CIDB will issuing again the Letter Declaration (Surat Pemakluman) for a new QLASSIC Assessment date and time to a new assessment process.

2.8.3 During the assessment work carry out, pictures will be taken as prove if there any discussion involving disagreement about assessment work that carried out by the assessor. If there are delayed due to the applicant, it have to be sign by applicant in 2 (two) hours from the delayed time happens. If the agreement are failed to be signed by the applicant, CIDB will not carry on the assessment work. CIDB will issuing again the Letter Of Declaration (Surat Pemakluman) for a new QLASSIC Assessment date and time to a new assessment process.

2.8.4 The Site Representative which state in the QLASSIC application form should be exist to accompany the assessment work made by CIDB. If there any way that the site representative cannot attend the assessment process, a replacement person should be named.
(Source : CIDB, (2006) *CIDB QLASSIC* Retrieved December 04, 2010, from www.cidb.gov.my/)

2.8.5 The scope of the assessment will be made by CIDB depend to chosen Package by applicant in Applicant Certificate Quality Assessment System In Construction (QLASSIC).

2.8.6 The Site Representative must sign the assessment form (QA1, QA2, and QA3) every time after CIDB done do the assessment work at the construction site.

2.8.7 For the completed construction project that has finished assessment, the assessor will provide the assessment report for the construction project. The assessment project will be presented to Assessor Committee for review and recommendations, A Letter of Declaration about QLASSIC Score will be issuing to applicant by Chief Executive of CIDB Malaysia within 2 (two) weeks before The QLASSIC Certificate are issuing by CIDB. In case that the applicant are not satisfied with QLLASSIC score that be recommended by QLASSIC Assessor Committee, applicant could made a request to Chief Executive of CIDB Malaysia in 2 (two) weeks from the Letter Of Declaration (Surat Pemakluman) about the QLASSIC score. The result that been taken by Chief Executive Of CIDB Malaysia is a final decisions.

2.8.8 CIDB has rights on using or publish the details in QLASSIC Certificate that issued by CIDB to the applicant for any motive to raising the construction industry of Malaysia.

2.8.9 If the applicant cancelled the assessment work that are invariable or CIDB cannot continue the assessment work by the subject in 2.8.2 or been late by subject in 2.8.3, the applicant should pay to CIDB the following cost ;

a) Travelling Cost
b) Accommodation
c) Parking Lot Cost / Toll Cost

Re-assessment costing didn't need to be pay by the applicant again.

2.8.10 The applicant must ensure that the construction site that assessment will be held are in the safe environment.

2.8.11 The applicant must take a precaution steps that needs in terms of equipment, or other equipment connected to ensure safety for CIDB and health officials during the assessment carried out.

CIDB reserves the rights to make amendments to the terms and conditions. This are from time to time (if required). Applicant shall comply with the amendments made by CIDB. If the applicant unable to comply with amendments, the assessment will not carried out by QLASSIC.
(Source : CIDB, (2006) *CIDB QLASSIC* Retrieved December 04, 2010, from www.cidb.gov.my/)

2.9 TOOLS AND EQUIPMENT THAT USE FOR ASSESSMENT

 Figure 2.2 : Steel Measuring Tape (8m)	1) Steel Measuring Tape (8m)
 Figure 2.3 : L-Square (24”X12’’)	2) L-Square (24”X12’’)
 Figure 2.4 : Tapping Rod	3)Tapping Rod

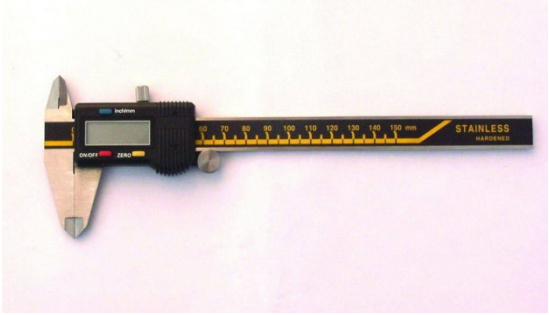
 Figure 2.5 : Spirit Level (1.2m length)	4) Spirit Level (1.2m length)
 Figure 2.6 : Digital Caliper	5) Digital Caliper
 Figure 2.7 : Retractable Plum-bob	6) Retractable Plum-Bob

 Figure 2.8 : Long Measuring Tape (30m)	7) Long Measuring Tape (30m)
 Figure 2.9 : Steel Wedge	8) Steel Wedge

CHAPTER 3 :

CASE STUDY
(Idaman Lavender 2)

CHAPTER 3

CASE STUDY

INTRODUCTION OF BUILDING (IDAMAN LAVANDER 2)

Figure 3.1 : IDAMAN LAVANDER 2

CADANGAN MEMBINA SATU BLOCK PANGSAPURI KOS SEDERHANA 11 TINGKAT 750KP/69.7MP (176 UNIT) DI ATAS LOT PT 246 (LOT 1076) MUKIM 10 DAERAH BARAT DAYA , JALAN DATO' ISMAIL HASHIM / JALAN PAYA TERUBONG, SUNGAI ARA PULAU PINANG

.

Tel No. : (04) 645 6436

Fax No. : (04) 645 6430

Email Address : stsb@sritunas.com.my

3.1 INTRODUCTION OF THE BUILDING

This building is One Block 176 units Medium Cost Apartment that build at Lot 1076 Mukim 10 Daerah Barat Daya, Jalan Dato' Ismail Hashim / Jalan Paya Terubong, Sungai Ara, Pulau Pinang . Build with many public facilities at ground floor as Kindergarten, Multipurpose Hall, Store , Public Toilet, Management Office, Mail Room, and Prayer Hall. This building also provide 194 parking lots for cars, 176 parking lots for motorcycles and one parking lot for disabled

All 176 units apartment are equipped with master bedroom, room two (9.91mp), room three (7.32mp), balcony, two bathrooms/toilets, dinner hall, kitchen and a laundry area. This building's site are given to the Developer, Koperasi Tunas Muda Sungai Ara Berhad at July 1st 2011, and started the construction work on that date. The construction period for this building are eighteen month which is end on December 31st 2012.

The main contractor for this project is Sri Tunas Snd. Bhd., and fifth teen subsidiary contractor are assigned in this project did about seven teen treat for the building such as Glazing Work, Piler, Structure Work, Brickwork And Plaster, Plumber, Electrical, Lift, Fire Fighting, Tiler, Painting, Roof Works, Sewer, External Work, Guard House, Fence, Garbage House and Mild Steel.

3.2 BUILDING DESCRIPTION

PROJECT / BUILDING NAME	**PELAN BANGUNAN MPPP/OCS/PB (2981)/10 (LB) CADANGAN MEMBINA SATU BLOCK PANGSAPURI KOS SEDERHANA 11 TINGKAT 750KP/69.7MP (176 UNIT) DI ATAS LOT PT 246 (LOT 1076) MUKIM 10 DAERAH BARAT DAYA , JALAN DATO' ISMAIL HASHIM / JALAN PAYA TERUBONG, SUNGAI ARA PULAU PINANG UNTUK TETUAN KOPERASI TUNAS MUDA SUNGAI ARA BERHAD.**
ADDRESS	**LOT 1076, MUKIM 10, JALAN DATO ISMAIL HASHIM / JALAN PAYA TERUBONG, SUNGAI ARA, PULAU PINANG**
OWNER	**KOPERASI TUNAS MUDA SUNGAI ARA BHD** **126, TAMAN TUNAS MUDA,** **JALAN DATO ISMAIL HASHIM,** **11900 BAYAN LEPAS, PULAU PINANG**
YEAR START	**2011**

CONSTRUCTION	
YEAR COMPLETION	**2012**
BUILDING FUNCTION	**RECIDENCIES**
NO. OF STOREY	**11**
ARCHITECT	**AMIR ZULKIFLIE ARCHITECT, 57-1 PERSIARAN BAYAN INDAH, 11900 BAYAN BAY, QUEENSBAY, PULAU PINANG**
MAIN CONTRACTOR	**SRI TUNAS SDN BHD, 122 TAMAN TUNAS MUDA, JALAN DATO ISMAIL HASHIM , 11900 BAYAN LEPAS, PULAU PINANG.**
ENGINEER IN-CHARGE	**PERUNDING BHR, NO.114, TINGKAT 1, JALAN DAGANGAN 2, PUSAT BANDAR BERTAM PERDANA 1, 13200 KEPALA BATAS, PULAU PINANG.**

Table 3.1 : Building Description

3.3 VIEW OF THE BUILDING

Figure 3.2 : Front View Of Idaman Lavender 2

Figure 3.3 : Rear View Of Idaman Lavender 2

Figure 3.4 : Left View Of Idaman Lavender 2

Figure 3.5 : Right View Of Idaman Lavender 2

3.4 LOCATION PLAN

Idaman Lavender 2 is located at (Lot 1076) Mukim 10 Daerah Barat Daya , Jalan Dato' Ismail Hashim / Jalan Paya Terubong, Sungai Ara Pulau Pinang. This place are near to Bayan Lepas, Bayan Baru and Relau.It is located in residencies area at Sungai Ara.

This building is five minutes away from Pekan Sungai Ara, five minutes away to P.I.S.A, 20minutes from Penang Bridge, ten minutes from Terminal Sungai Nibong and ten minutes from International Airport Penang.

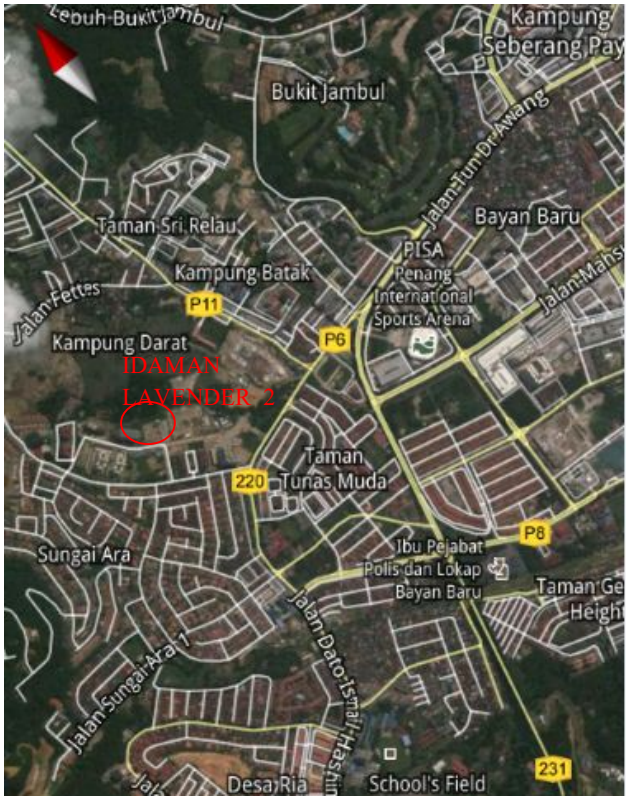


Figure 3.6 : Location Plan

3.5 INTRODUCTION OF CASE STUDY

Koperasi Tunas Muda Sungai Ara Berhad are known developer for Sri Tunas Snd. Bhd., twenty-five (28) projects are done developed by Koperasi Tunas Muda Sungai Ara Berhad, but there are only three projects are using QLASSIC Scoring for the projects. They are Idaman Iris (Project 448 Units), Idaman Lavender 1 and Idaman Lavender 2 (Project 176 Units). It is because the knowledge of QLASSIC are limited in those time.

The reasons that Koperasi Tunas Muda Sungai Ara Berhad apply for QLASSIC Assessment are to benchmark the quality of workmanship of your construction projects and as a quality control in construction works besides the usual checking by the person authorize for the tasks.

For the previous QLASSIC Assessment at Idaman Iris , the projects get an average scoring of 63%, which 58% for Idaman Iris and 68% for Idaman Lavender 2. However, Sri Tunas Snd. Bhd. As the main contractor are getting better from one project to another. The average of all projects that has been used QLASSIC ASSESSMENT are 71%. These have been a guidelines for Sri Tunas Snd. Bhd. to control the quality of workmanship at their currents and future projects.

3.6 INTRODUCTION OF EVENT

PLACE OF EVENT :	Idaman Lavender 2 (Lot 1076, Mukim 10, Jalan Dato Ismail Hashim / Jalan Paya Terubong, Sungai Ara, Pulau Pinang)
DATE OF EVENT :	Jun 11st 2013
TIME OF EVENTS :	09:30 a.m - 13:00 p.m
QLASSIC ASSESSOR :	1.EN. MUHAMMAD SAIFUL IZLY AB LAMIN 2.EN. RASTAM HAMZAH
APPLICANT :	Project Manager : EN. MOHD. JAMIL BIN SULAIMAN
ASSESSMENT SCOPE :	1. ARCHITECTURAL WORKS 2. EXTERNAL WORKS 3. BASIC M&E FITTINGS
APPLICANT FORM SERIAL NO. :	PP 13 B0001 (P)
GROSS FLOOR AREA (GFA) :	17,084.10 m²

WEATHER :	GOOD

DESCRIPTION OF ASSESSMENT :

(According to QLASSIC Assessment Report for Idaman Lavender 2) 224 samples are assessed. Only Architectural Works, External Works and Basic M&E Fittings are assessed. Structural Works and M&E Works are not to be assessed in this assessment.

Samplings and assessment are based on the Construction Industry Standard (CIS) 7:2006 Quality Assessment System For Building Construction Work that issued by CIDB.

THE TOOLS USED FOR THE ASSESSMENT ARE :

a) Spirit Level (1.2m length)
b) Steel Measuring Tape (8m)
c) Digital Calliper
d) L-Square (24”X12’’)
e) Tapping Rod
f) Retractable Plum-bob
g) Long Measuring Tape (30m)
h) Steel Wedge

BREAKDOWN OF THE MARKS :

(According to QLASSIC Assessment Report for Idaman Lavender 2) The breakdown of the assessment marks are for the Architectural Works, External Works and Basic M&E Fittings for this project are state in the table below.

Table 3.2 : Introduction Of Event

ITEM	ELEMENT	TOTAL WEIGHTAGE	BREAKDOWN WEIGHTAGE	SCORE (%)
A	**ARCHITECTURAL WORKS**	**76.92**		**49.91**
1	**Internal Finishes**	65.12		
1.1	Floor		18.61	8.32
1.2	Internal Wall		18.61	10.87
1.3	Ceiling		6.98	4.23
1.4	Door		6.98	4.46
1.5	Window		6.98	4.51
1.6	Fixtures (Internal)		6.98	4.35
2	**Roof**	11.63		8.72
3	**External Wall**	11.63		8.72
4	**Apron & Perimeter Drain**	4.65		3.72
5	**Material & Functional Test**	6.98		6.98
B	**EXTERNAL WORKS**	**15.38**		**13.37**
C	**BASIC M&E FITTINGS**	**7.69**		**4.38**
QLASSIC SCORE (%)				**67.66**

Table 3.3 : QLASSIC SCORING

3.7 PROCESS OF QLASSIC AT IDAMAN LAVENDER 2

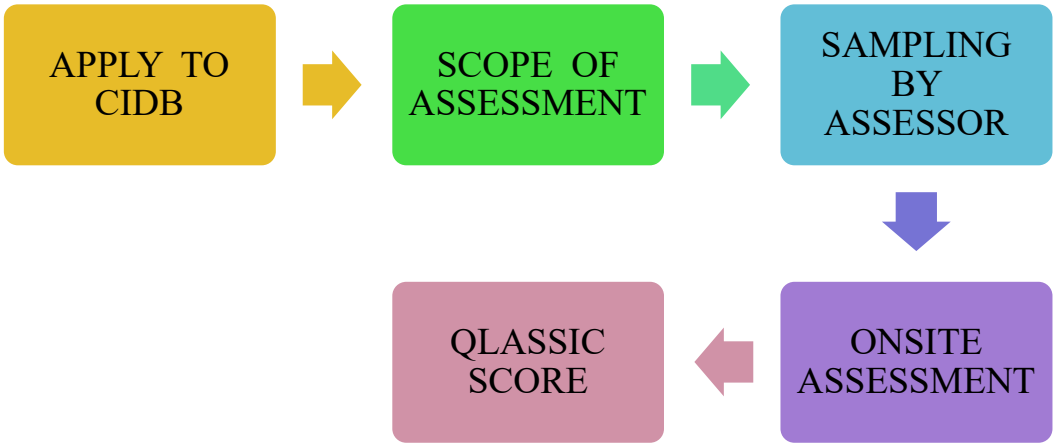


Figure 3.7 : Process Of QLASSIC

3.7.1 APPLIYING TO CIDB

QLASSIC Assessment are applied by Sri Tunas Snd. Bhd. Throughout their Projects Manager, En Mohd. Jamil Bin Sulaiman . En. Jamil paid RM500 as appliying fee to CIDB. Few attachments are submitted along with the application form such as :

a) Projects Layout
b) Staircase Detailed Drawing
c) Floor Plan
d) Site Location Map
e) External Works Layout Plan
f) Project Letter Of Award

According to En Jamil Bin Sulaiman, the Project Manager, the purpose of Sri Tunas Snd. Bhd. applying for QLASSIC Assessment are to benchmark the quality of workmanship of the company's construction projects. Using the QLASSIC Assessment, the company can detects their mistakes for strategies and management flow for a new level of quality of constructions.

3.7.2 SCOPE OF ASSESSMENT

The scope of assessment are predetermine by four quidelines which is structural work, architectural works, mechanical and electrical works and external works. However for this assessment the scope that be assessed are Architectural Works, External Works and Basic M&E Fittings.

The assessment are basically based on the Construction Industry Standard (CIS) 7:2006 Quality Assessment System For Building Construction Works.

3.7.3 SAMPLING BY ASSESSOR

The number of sample to be assessed are determined before the assessor do the onsite assessment based on the Construction Industry Standard (CIS) 7:2006 Quality Assessment System For Building Construction Works.

In this stage, the Assessors will marks on the plans given by applicant to determine the elements at the site such as :

a) Tiled Floor
b) Screed Finishes
c) Plaster Finishes
d) Tiled Finishes
e) Painting
f) Skim coated Ceiling
g) Door
h) Window
i) Fixtures (Internal)
j) Roof
k) Gutter & RWDP – Rain Water Down Pipes
l) Plaster Finishes for External Wall
m) Painting for External Wall
n) Fixture (External)
o) Perimeter Drains & Apron
p) External Drains
q) Link-way / Shelter
r) Roadwork & Car Park
s) Footpath & Turfing
t) Playground
u) Court
v) Fence & Gate
w) Electrical Substations

3.7.4 ONSITE ASSESSMENT

On the Onsite Assessment stage, Assessor will do the site visit to the building that apply for QLASSIC Assessment. Onsite, the Assessor will do the visual checking on some items such as :

a) Roof
b) Gutter & RWDP – Rain Water Down Pipes
c) Plaster Finishes for External Wall
d) Painting for External Wall
e) Fixture (External)
f) Perimeter Drains & Apron
g) External Drains
h) Link-way / Shelter
i) Roadwork & Car Park
j) Footpath & Turfing
k) Playground
l) Court
m) Fence & Gate
n) Electrical Substations

While some of items are checked by tools such as Spirit Level (1.2m length), Steel Measuring Tape (8m), Digital Caliper, L-Square (24”X12’’), Tapping Rod, Retractable Plum-bob, Long Measuring Tape (30m) and Steel Wedge. The items are :

a) Tiled Floor
b) Screed Finishes
c) Plaster Finishes
d) Tiled Finishes

e) Painting

f) Skim coated Ceiling

g) Door

h) Window

i) Fixtures (Internal)

	Figure 3.8 : Assessment Using Tapping Rod
	Figure 3.9 : Assessment Using Tapping Rod (2)

	Figure 3.10 : Assessment Progress For External Works
	Figure 3.11 : Assessment Using Tapping Rod (3)
	Figure 3.12 : Assessment Using L-Square

	Figure 3.13 : Assessment at the roof
	Figure 3.14 : QLASSIC ASSESSOR doing their assessment
	Figure 3.15 : Assessment For External Works (2)

3.7.5 QLASSIC SCORE

STEP 1 : CALCULATION FOR TOTAL WEIGHTAGE (%) OF ARCHITECTURAL WORKS

TOTAL WEIGHTAGE = A / B × 100%
= 50% / 65% × 100%
= 76.92 %

A = weightage of AW
B = weightage of AW + weightage of EW + weightage of B M&E F (refer to table 2.5)

Note : refer to Table 2.1

STEP 2 : CALCULATION FOR TOTAL WEIGHTAGE (%) OF INTERNAL FINISHES

TOTAL WEIGHTAGE = A / B × 100%
= 56% / 86% × 100%
= 65.12 %

A = weightage of internal finishes
B = weightage of internal finishes + weightage of roof + weightage of external wall + weightage of apron & perimeter drain + weightage of material & functional test

STEP 3 : CALCULATION FOR BREAKDOWN WEIGHTAGE (%)

BREAKDOWN WEIGHTAGE = A / B × 65.12%

A = weightage of floor
B = weightage of internal finishes

Note : refer to Table 2.2

STEP 4 : CALCULATION FOR SCORE (%) - EVERY ITEMS

SCORE = A / B × C

A = total number of compliance for floor
B = total number of checks for floor
C = breakdown weightage for every items

559 / 1250 × 18.61 = 8.32%

STEP 5 : CALCULATION FOR TOTAL ARCHITECTURAL WORKS SCORE (%)

SCORE (%) = A / 100% × B
= 57.90% / 100% × 76.92%
= 49.91 %

A = score for floor + score for internal wall + score for ceiling + score for door + score for window + score for internal fixtures + score for roof + score for external wall + score for apron & perimeter drain + score for material & functional

B = Total Weightage of AW

Usually this scoring and result are issued by CIDB in three (3) days works. The company, Sri Tunas Snd. Bhd. received LASSIC Certificate that state the QLASSIC SCORE and QLASSIC ASSESSMENT REPORT.

CHAPTER 4 :

PROBLEM AND RECOMMENDATION

CHAPTER 4

PROBLEMS AND RECOMMENDATIONS

Problems for QLASSIC ASSESSMENT AT IDAMAN LAVENDER are usually general problems. There is no problems usually on site while the assessment progress. The problems with Idaman Lavender projects are this projects does not have it's own benchmark. There are many checking that done in this buildings but quality are not the priority that actually need to be concern in one buildings or projects. It is important to see whether the building are reach enough the Malaysia's Quality Standard in Construction.

QLASSIC Department are located at the headquarters of CIDB at PWTC, Kuala Lumpur. Every time when one applicant request for QLASSIC Assessment, CIDB will ask their Assessor to travel to the construction building that need to be assessed. This become a burden to the assessor and the others applicant. Some applicant have to wait until the Assessor come back from the another assessment progress. Sometimes the assessor has to many projects to assess and unfortunate miss out some important defect or mistake in one project. So do the Site Supervisor, this company usually placed one site supervisor to supervise one projects that over 100 units, mistake can be done in the supervise period which the site supervisor mistook or having problems ion checking all the units and the utilities areas.

CIDB having problems with lack of the Assessor. Usually, CIDB made the assessor to took the QLASSIC Assessor Examination before

become a QLASSIC. Few of the examination's applicants did make it to be an assessor. CIDB should give some opportunity to the fresh graduate that graduate with first level of degree to be an assessor instead of taking those who have the experiences as a part timer assessor. Many courses in Malaysia nowadays that have quality control as a learning subject such as building survey.

CHAPTER 5 : CONCLUSION

CHAPTER 5

CONCLUSION AND REFERENCES

5.1 CONCLUSION

As the conclusion, QLASSIC do helps Sri Tunas Snd. Bhd to improve in aspects quality of workmanship, provides a standard quality assessment system on quality of workmanship of construction works, enchances quality control in construction works and specified as a quality criterion for contractors performance scorecard.

CIDB must think of a way to solve the general problems of QLASSIC which is QLASSIC are unknown basically for most publics and developers. CIDB must take this problems seriously in order to increasing the standard of construction industry in Malaysia compared to world. Most institution that has course major in construction should take QLASSIC ASSESSMENT as a chapter on Building Quality subjects in order to develops new ideas on how to make construction industry in Malaysia in a new level. In this exposes to students about QLASSIC ASSESSMENT. This may helps CIDB to make/take more potentials QLASSIC Assessors in Malaysia and solve the lack of QLASSIC Assessors problems itself.

Construction Industry in Malaysia should consider on making QLASSIC ASSESSMENT as a compulsory in order to get the building CCC or CF. QLASSIC helps showing the mistake / miscarry on one

construction that Quality Control Inspectors for the constructions did not noticed. With QLASSIC ASSESSMENT, it helps the construction industry to highlight the workmanship problems in this industry in Malaysia. Many contractors will not take the construction's workmanship lightly anymore if QLASSIC ASSESSMENT is a compulsory in order to get the CCC or CF.

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5.2 REFERENCES

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