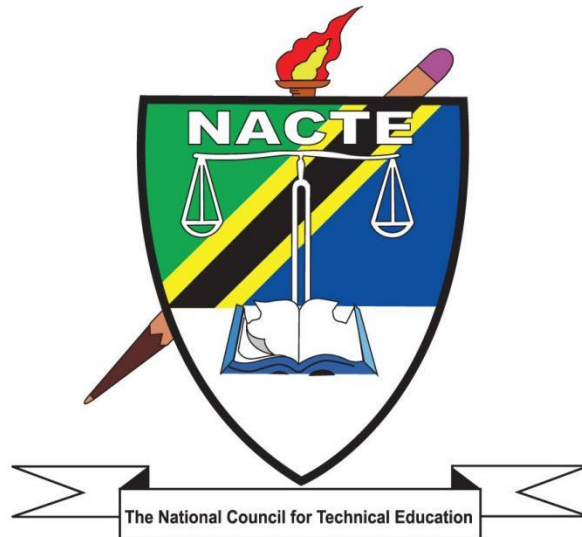


NATIONAL COUNCIL FOR TECHNICAL EDUCATION



NOVEMBER 2022

PROPOSED OCCUPATIONAL STANDARDS FOR ARCHITECT

OCCUPATION: ARCHITECT

LEVEL: NTA 7

TABLE OF CONTENTS

Contents

TABLE OF CONTENTS.....	i
FOREWORD	ii
ABBREVIATIONS	vii
GLOSSARY OF TERMS	viii
1.0. INTRODUCTION	10
2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS	11
3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATIONAL STANDARDS FOR ARCHITECTS	12
4.0. VALIDITY PERIOD.....	13
5.0. OCCUPATIONAL STANDARD	Error! Bookmark not defined.
APPENDIX 1.....OCCUPATIONAL STANDARDS FOR ARCHITECT – NTA 7	15

FOREWORD

The National Council for Technical Education (NACTE) is a corporate body established by the National Council for Technical Education Act, Cap.129. The Act provides a legal framework for the Council to coordinate the provision of technical education and training in Tanzania. The mandate of NACTE is three-fold, namely; Regulatory, Quality Assurance and Policy Advisory.

In discharging its mandate, the Council has been charged with the responsibilities, among others, to:

- (a) assist technical institutions in the transmission of knowledge, principles and training in the field of technical education and training for the benefit of the people of Tanzania;
- (b) assist technical institutions in the overall development of the quality of education they provide and to promote and to maintain approved academic standards;
- (c) establish and make awards in technical education which are consistent in standard and comparable to related awards in Tanzania and internationally; and
- (d) ensure that the quality of education required for the awards is met and maintained throughout the duration of the delivery of the course.

In the course of execution of these responsibilities, the Council has been instituting various measures aiming at advancing the quality of training provided in technical institutions in respect of the changing demands of the labour market, both local and international.

To achieve the above obligation, NACTE, under the Ministry of Education, Science and Technology implemented the East Africa Skills for Transformation and Regional Integration Project (EASTRIP), a project aiming at promoting regional integration through supporting the regional corridors and sector markets, developing common standards and qualifications, and promoting mobility of students, faculty, and graduates. The project supports the Government of Tanzania to address shortage of skills in five sectors namely:

- (a) Energy;
- (b) Construction;
- (c) Information and Communication Technology (ICT);
- (d) Transportation; and

(e) Agribusiness

To address the skills miss-match and shortage in the five (5) sectors in the country, the project funded, among others, a component of Development of Occupational Standards for Technical and Vocational Education and Training (TVET). In this regard, NACTE endeavoured to identify qualified and highly experienced experts in the five sectors from both the industry and training institutions to carry out the development of Occupational Standards. The exercise was carried out at Morogoro Teachers College – Morogoro from 16th July to 10th August, 2021. The output of the exercise is Occupational Standards for 12 occupations. Occupational standards for Architect Technicians are among the occupational standards for 12 occupations which have been developed.

Since Occupational Standards are statements of work performance reflecting the ability to successfully complete the functions required in an occupation, as well as the application of knowledge, skills, attitudes and understanding in an occupation, it is the Council's expectations that the developed standards will form a robust base for decision making and provide explicit guidance to policy makers, curriculum developers, educators, employers and other stakeholders in matters related to manpower planning as well as execution of Technical and Vocational Education and Training undertakings.

Prof. J. W. Kondoro
Chairman

Dar es Salaam
OCTOBER 2022

ACKNOWLEDGEMENT

The National Council for Technical Education (NACTE) is charged with the mandate to be the Quality Assurance organ of the Government in matters related to Technical and Vocational Education and Training (TVET) and production of qualified manpower for both local and international labour markets. In order to realize this obligation, NACTE endeavours to institute policies, guidelines and standards and to set the quality benchmarks for training institutions.

However, this is only possible if there is a strong base, linking the training institutions on one hand and the demands of the industry/labour market for relevant manpower on the other hand. Therefore, the Council undertook a step to develop Occupational Standards in sectors considered to be the engine to steer the country's desire to achieve an industrial economy. This exercise would not be a success without the input and support from our stakeholders. I am indebted to acknowledge some of them here.

I wish to acknowledge and appreciate the support from the Ministry of Education, Science and Technology through the East Africa Skills for Transformation and Regional Integration Project (EASTRIP) for the financial support which facilitated the preparation of this document. I wish also to appreciate Eng. Dr. Simon Baregu and Mrs Leah Lukindo for the tireless efforts and commitment in facilitating and guiding the standards development process, Ms. Eileen Tzamburakis and Ms. Chausiku Yakweli Ibrahim for compiling and type setting the final document; and the NACTE Secretariat for coordinating the whole activity.

In a very special way I wish further to extend my sincere gratitude to this team of wonderful experts who tirelessly dedicated their time and availed their invaluable intellect in the preparation of this document. I would like to recognise the colossal inputs of the following experts:

S/N	Name	Designation	Organization
1	Arch. Boniface Kazoba	Managing Director	Space Consult Architect (T) Ltd
2	Arch. Dora Joseph Njau	Director	N & D Associates Limited)
3	Arch. Muganguzi S. Mukiza	Director	Project Solutions Ltd
4	Arch. Boniphace Deus Dau	Architect	B.J. Amuli Architect

S/N	Name	Designation	Organization
5	Arch Thabit Khalid	Architect	ARQB
6	Arch Venjslous Mgeni	Architect	Cosmo Planarch Consult Ltd.

In addition, NACTE hopes to further enhance the internationalization of occupational standards and promote the modernization and internationalization of industries, facilitating Tanzania's integration into the international market and exploiting its development potential. Therefore, NACTE has invited China-Africa Vocational Education Alliance and China-Africa (Chongqing) Vocational Education Alliance to participate in the development, revision and review of occupational standards documents in collaboration with Chinese vocational institutions, so as to make use of their rich experience in vocational education efforts and rely on China's advanced and complete industrial chain and its position in the international market to contribute to the development of vocational education and related industries in Tanzania.

Therefore, I would like to express my sincere gratitude to this specialized team of Chinese institutions and experts. I thank them for their hard work and dedication, and for contributing their wisdom and experience to the preparation of this document. I would like to thank the following institutions and experts for their support:

S/N	Organization	Name	Title/Professional Field
1	Guangdong Construction Polytechnic	Zhang Yi	Lecturer/Architectural Design
2		Huang Li	Professor-level senior engineer/Architectural Design
3		Han Yuhong	Senior Engineer/Architectural Design
4		Liu Liqiong	Lecturer/Architectural Design

5		Li Shimao	Lecturer/Urban Design
6		Liu Ziding	Lecturer/Landscape Architecture
7		Li Xinlong	Lecturer/Interior Design
8		Wei Wenchao	Lecturer/Interior Design

Last, but not least, I would like to acknowledge the enormous inputs from all stakeholders who were consulted during the validation process to provide their expert views and opinions on the validity of the contents and preparation of this document for customers' consumption.

Dr. A. B. Rutayuga
Executive Secretary

Dar es Salaam
AUGUST 2022

ABBREVIATIONS

AQRB	Architects and Quantity Surveyors Registration Board
BOQ	Bills of Quantities
DLP	Defects Liability Period
ICT	Information and Communication Technology
NACTE	National Council for Technical education
NOS	National Occupational Standards
OS	Occupational Standards
OSHA	Occupation Safety, Health Administration
PPE	Physical Protective Equipment
RFP	Request for Proposal
TET	Technical Education and Training
TOR	Terms of Reference
TVET	Technical and Vocational Education and Training

GLOSSARY OF TERMS

CIRCUMSTANTIAL KNOWLEDGE:	Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues
Competence:	The ability to use knowledge, understanding, practical and thinking skills to perform effectively to the workplace standards required in employment.
Competency:	A description of the ability one possesses when able to perform a given occupational task effectively and efficiently.
Competency-Based Education:	An instructional program that derives its content from validated tasks and bases assessment on the learner's performance
Curriculum:	A description or composite of statements about “what is to be learned” by the trainee/student in a particular instructional programme; a product that states the “intended learning outcomes”.
Educational/Training Programme:	The complete curriculum and instruction (what and how) that is designed to prepare a person for employment in a job or other particular performance situation.
Occupation:	A specific position requiring the performance of specific tasks – essentially the same tasks are performed by all employees having the same title. (Example: baker)
Occupational Analysis:	A process used to identify the tasks that are important to employees in any given occupation
Occupational Area:	This is a broad grouping of related jobs. Example: food service
Occupational Competence:	The application of knowledge and skills to perform consistently to the standards required in the work context.
Occupational Standards:	Specific requirements of competences people are expected to demonstrate in a particular occupational area, including knowledge and relevant attitudes. They also act as performance tool of assessment of the pre – scribed

outcomes.

Performance Criteria:	Indicate the expected end results or outcome in form of evaluative statements.
Skills:	The ability to perform occupational tasks with a high degree of proficiency within a given occupation. Skill is conceived of as a composite of three completely interdependent components: cognitive, affective, and psychomotor.
Standards:	it is a set of statement, which if proved true under working conditions, means that an individual is meeting an expected level and type of performance
Task Analysis:	The process of analysing each task to determine the steps, related knowledge, attitudes, performance standards, tools and materials needed, and safety concerns required of employees performing it.
Tasks:	A work activity that has a definite beginning and ending, is observable or measurable, consists of two or more definite steps, and leads to a product, service, or decision.
Underpinning Knowledge:	This is crucial knowledge that an individual must acquire in order to demonstrate competences that are associated in performing a given task.
Verification Process:	The process of having experts review and conform the importance of the task (competency) statements identified through occupational analysis. Other questions, such as the degree of task learning difficulty are also frequently asked. This process is also sometimes referred to as validation.

1.0. INTRODUCTION

Technical Education and Training (TET) is one of the most important education sub-sectors in Tanzania, responsible for developing a skilled workforce to support the country's industrialization economic agenda. Tanzania's Development Vision 2025 intends to raise the country's economy to a middle-income status. This requires a skilled workforce that is aligned with the needs of the public and private sectors of the economy. The National Council for Technical Education has begun the job of drafting Occupational Standards that will eventually be adopted as National Occupational Standards for TET in order to ensure that it meets the needs of the labour market and the country's economic agenda.

National Occupational Standards (NOS) are performance criteria that are matched with labour market demands. Each National Occupation Standard describes functions, performance standards, and knowledge/understanding for one important function or task. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruiting, supervision, and appraisal, as well as TET standards. They're also helpful for benchmarking and harmonizing qualifications on a national and international level. Standards, in general, provide a solid framework for high-quality TET that is labour market-relevant, current and consistent in delivery across all public and private institutions.

However, it must be noted that, Occupational Standards and Training standards/qualifications standards are different. Occupational standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical wiring circuits, performs trouble shooting in electrical wiring, etc.) and they are usually defined by employers following procedures agreed upon by all stakeholders. Education and training standards are developed from the activities defined in occupational standards, and they include learning objectives to ensure that the necessary skills and knowledge are developed for a person to enable him or her to function at an agreed level in an occupation. Education and Training standards are used to define curricula in training institutions. It is, however, critical that there must be a direct link between the occupational standards and the training standards to respond to demands of the labour market.

In TET delivery, Tanzania adopted the Competence Based Education and Training (CBET) approach. The CBET approach focuses on providing learners with the skills and knowledge required to meet the occupational standards. Occupational standards are thus the starting point for developing CBET programs. TET institutions will be required to benchmark their curricula with relevant occupational standards.

Occupational Standards are developed based on a given occupation's current and future demands. As a result, they serve as a means of bridging the gap between the worlds of employment and technical education and training (TET).

The Architect's Occupation has its own set of occupational standards. The document explains how the occupational standards were developed, as well as the scope, the occupational profile in the form of DACUM charts, and the Occupational Standards.

2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS

The Occupational standards development process began with an examination of major documents that guide Tanzanian skill development. The 10-year National Skills Development Strategy (2016-2026) was one of the documents reviewed, and it outlined six (6) economic sectors that should be prioritized when developing skills development programmes. These sectors include: Transport and logistics, Tourism and Hospitality, Agribusiness, Construction, Energy and ICT. NACTE labour market reports were also used in the literature review to determine the skills demand in the Tanzanian labour market as a whole.

After the literature review, a workshop comprised of expert workers and educators with substantial knowledge and experience in the occupation conducted an occupational analysis utilizing the DACUM approach to produce the occupational profile. The analysis resulted in DACUM Charts, which are attached as **Appendix 1** to this document.

The workshop thereafter continued with the development of occupational standards. Experts in Occupational Analysis and development of Occupational Standards facilitated the workshop. Interviews, online surveys, and a stakeholder forum were used to validate the occupational standards. Architects, and experienced draughts personnel were key informants in the survey to establish occupational trends. This information was used to gain insight from

the workplaces regarding trends and changes in the profession, including how well graduates are equipped to be able to perform in the occupation. A total of online surveys were completed by experts from the labour market across the country. Apart from the survey aiding in defining the scope for the occupational analysis, they served to engage a wide cross-section of experts in the occupation. The stakeholders' forum was attended by participants from different parts of the country representing various companies.

3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATIONAL STANDARDS FOR ARCHITECTS

These standards cover a broad range of duties and tasks that can be performed by Architects. However, the occupational standards are not meant to replace individual job descriptions, they are to be used for guidance in defining skill levels and knowledge for the architect in specific settings or positions. Architects may take on a range of different duties depending on the company or organization they work for. Typical duties and responsibilities of Architects include:

- Preparing and presenting design proposals, reports, applications and contracts
- Competing for work by submitting tender documents and delivering presentations
- Meeting with clients to discuss project goals, needs and budget
- Liaising with construction professionals about the practicability of potential plans, etc.

Architect create designs for new buildings, works on the alterations and redevelopments of existing structures and advise on the restoration and conservation of old properties. They use their specialist construction knowledge and high-level drawing skills to design buildings that are functional, safe, sustainable and aesthetically appealing.

Apart from designing buildings and structures, they also prepare feasibility reports, determine environmental impacts and create project proposals. They estimate costs, determine timelines and oversee the construction process. Architects stay proactive throughout the building process, adapting their plans according to budget constraints, environmental factors and client needs. The standard covers the main duties of Architects as follows:

- a) Prepare client requirements for construction projects
- b) Design the proposals of the building for construction projects
- c) Design the construction drawings for construction projects

- d) Develop Terms of Reference (TOR) for building construction projects
- e) Obtain the construction project business through competition
- f) Prepare bid documents for construction projects
- g) Prepare the construction for construction projects
- h) Manage the construction projects
- i) Manage the completion of construction projects

The Occupational standards have been clustered into NTA qualification levels i.e. NTA level 7 and 8.

4.0. VALIDITY PERIOD

The occupational standards will be valid for 3-5 years due to the fast-changing nature of technology. The review will proceed in the same manner as the previous one, with new occupational standards being developed based on current labour market information.

5.0. OCCUPATIONAL STANDARD

5.1 OCCUPATIONAL STANDARDS FOR ARCHITECT – NTA

OCCUPATIONAL STANDARDS FOR ARCHITECTS – NTA 7

OCCUPATION	ARCHITECT	OCCUPATIO N CODE	
DUTY TITLE	PREPARE CLIENT REQUIREMENT(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	701
TASK TITLE	SITE SURVEY OF CONSTRUCTION PROJECT(S)	TASK NO.	7011
PERFORMANCE CRITERIA	The person performing this task must be able to collect the original data, complete the site survey and sort the data.		
RANGE STATEMENT	The task will be performed on site and at the office, under the supervision of a Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, GPS, camera, personal protective equipment (PPE).		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Collect the information of natural conditions in and around construction projects, including climate, topography, hydrology, geology, sunshine, landscape, etc; 2. Collect the information of urban planning, including location, site scope, building red line, building height and density control index, building setback requirements, original buildings and structures, outdoor activity facilities, etc; 3. Collect the information of the municipal environment, including traffic, water supply, power supply, drainage, gas supply, communication and other conditions and situations; 4. Research the local historical and cultural features, humanistic background and development of construction projects; 5. Collect the relative codes; 6. Draw the current status map; 7. Complete to sort the data.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Photograph, measure, find, record and learn the information of natural conditions in and around construction projects from clients and relative departments; 1.2. Photograph, measure, find, record and learn the information of urban planning from clients and relative departments; 1.3. Photograph, measure, find, record and learn the information of municipal environment from clients and relative departments; 1.4. Photograph, interview, find, record and learn the local historical and cultural features and humanistic background and development of construction projects from clients and relative departments. 2.0. Principles The person must be able to explain the principles of: 2.1. Determining the comprehensiveness and accuracy of current research; 2.2. Determining the elements of the current status map. 3.0. Theories The person must be able to explain: 3.1. Relationship between construction projects and the	

	environment; 3.2. Relationship between construction projects and the city; 3.3. Urban planning and code of architectural design; 3.4. Code of architectural drafting. 4.0. Essential skills 4.1. Analytical mind; 4.2. Architectural drafting skills; 4.3. Computer (CAD) skills;; 4.4. Report writing skills; 4.5. Team work skills; 4.6. Communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Complete the site survey and sort the data.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Basic theoretical knowledge of site design; 2. Laws and regulations related to the construction; 3. Recognizing and drafting of architectural drawings; 4. Occupational safety and health.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	PREPARE CLIENT REQUIREMENT(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	701
TASK TITLE	CONDUCT PRELIMINARY ANALYSIS OF CONSTRUCTION CONDITIONS	TASK NO.	7012
PERFORMANCE CRITERIA	The person performing this task must be able to do a preliminary analysis and draw the site analysis diagram based on the data sorted during the site survey process.		
RANGE STATEMENT	The task will be performed at the office, under the supervision of a Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, seal and binding machine.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Analyze the natural conditions in and around construction projects, including climate, topography, hydrology, geology, sunshine, landscape analysis, etc.;; 2. Analyze the planning scope of construction projects, including analysis of location, analysis of the buildable area of the building, and analysis of the current building on the site;; 3. Analyze the municipal environment of construction projects, including traffic analysis, building safety distance analysis, water supply, power supply, drainage, gas supply, communication analysis, etc.;; 4. Analyze the local historical and cultural features and humanistic background and development of construction projects; 5. Draw an analysis diagram; 6. Submit the text of analysis diagram.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Analyze the natural conditions in and around construction projects, and provide the basis for designing the functional layout and vertical design later;; 1.2. Analyze the planning scope of construction projects, and provide the basis for the design of site planning conditions later;; 1.3. Analyze the municipal environment of construction projects, and provide the basis for the road parking design and integrated pipeline design later;; 1.4. Analyze the local historical and cultural features and humanistic background and development of construction projects, and provide the basis for general layout and architectural design later. 1.5. 2.0. Principles The person must be able to explain the principles of: 2.1. Comprehensiveness and accuracy of preliminary analysis;; 2.2. Elements of an analysis diagram. 3.0. Theories The person must be able to explain: 3.1. Drafting and recognizing of architectural drawings;	

	3.2. Basis of architectural design; 3.3. Computer aided design. 4.0. Essential skills 4.1. Analytical mind; 4.2. Architectural recognizing skills; 4.3. Architectural drafting skills; 4.4. Computer (CAD, Photoshop) skills; 4.5. Type setting skills; 4.6. Team work skills; 4.7. Communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	The complete site analysis diagram text of construction projects includes analysis of natural conditions, analysis of planning scope, analysis of the municipal environment, historical humanistic analysis, analysis of development, etc.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Analytical method of original data; 2. Code of technical index; 3. Drafting and expression of an analysis diagram.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	PREPARE CLIENT REQUIREMENT(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	701
TASK TITLE	CONFIRM CLIENT REQUIREMENT(S) FOR CONSTRUCTION PROJECT(S)	TASK NO.	7013
PERFORMANCE CRITERIA	The person performing this task must be able to provide suggestions to the clients base on the preliminary analysis and design code, confirm the construction project requirements with clients, and formulate the design assignment.		
RANGE STATEMENT	The task will be performed at the site and office, under the supervision of a Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer and paper		
EVIDENCE REQUIREMENTS			

PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE
The person performing this task must be able to do the following: 1. Determine the location of construction projects; 2. Determine the scale and elements of construction projects, including the essential projects and optional projects as needed; 3. Determine the general design requirements of construction projects; 4. Determine the technical and economical indicator requirements of construction projects; 5. Determine the general architectural function and area indicator of construction projects; 6. Write the design assignment of construction projects; 7. Confirm the assignment with the clients.	Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Determine the land condition with clients combined with the original data and preliminary analysis; 1.2. Determine the scale and elements based on client requirements, design code, etc. Learn the design aims and ideas of clients, and determine the project location; 1.3. Determine the technical and economical indicators based on the relative departments' requirements, design code, client requirements, etc; 1.4. Determine the architectural function and area indicator based on the client requirements, design code, etc. 2.0. Principles The person must be able to explain the principles of: 2. 1. Following the requirements of general plan; 2. 2. Meeting the requirements of architectural function; 2. 3. Meeting the requirements of proper techniques; 2. 4. Equipping with good economical

	effects; 2. 5. Considering the artistic requirements of buildings. 3.0. Theories: The person must be able to explain: 3.1. Basic contents of the design assignment of construction projects 3.2. The framework of the design assignment of construction projects 4.0. Essential skills 4.1. Analytical mind 4.2. Computer program skills 4.3. Report writing skills 4.4. Team work skills 4.5. Communication skills
DESCRIPTION OF THE END PRODUCTS / SERVICE	Confirm the complete design assignment of construction projects with clients, including the location, scale and elements, general design requirements, technical and economical indicator requirements, general architectural function and area indicator, etc.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Basic knowledge of architectural design 2. Urban planning and code of architectural design 3. Relative regulations and contents of design assignment

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	PREPARE CLIENT REQUIREMENT(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	701
TASK TITLE	ASSIST IN MANAGING CONTRACT(S) FOR CONSTRUCTION PROJECT(S)	TASK NO.	701 4
PERFORMANCE CRITERIA	The person performing this task must be able to assist in managing contracts for construction projects based on the requirements of construction projects.		
RANGE STATEMENT	The task will be performed at office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, seal and binding machine.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Learn the relative laws and regulations of engineering survey and design; 2. Master the requirements of technical code and standards; 3. Master the principles, foundation, procedure, quality and specific requirements of preparing design documents; 4. Remind clients of providing documents of design basis and basic data. Check the completeness, correctness and time-bound character of the basic data and documents submitted by clients; 5. Guarantee the design quality, and complete tasks of each design process on time; 6. Assist architects in clearing the duties of both contracting parties; 7. Assist architects in establishing the dispute settlement mechanism; 8. Assist architects in establishing the procedure of contract termination; 9. Assist architects in preparing the contract for sign.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain: 1.1. Basic documents of signing the contract; 1.2. Design basis; 1.3. Composition and priority orders of contract documents; 1.4. Range and contents of delegated design tasks; 1.5. Relative data, documents and time that should be provided by clients; 1.6. Relative data, documents and time that should be provided by designers; 1.7. Duties of both parties; 1.8. Duties of violation. 2.0. Principle The person must be able to explain the principles of: 2.1. Design contract contents of construction projects; 2.2. Management of design contract fulfillment. 3.0. Theories The person must be able to explain: 3.1. Basic work of architects; 3.2. Codes and specific requirements of design documents; 3.3. Contents of the design contract; 3.4. Laws and regulations of contract management. 4.0. Essential skills	

	4.1. Analytical mind; 4.2. Mathematic skills; 4.3. Computer program skills; 4.4. Contract writing skills; 4.5. Team work skills; 4.6. Communication skills; 4.7. Time management skill.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Assist in managing contracts for construction projects.
CIRCUMSTANTIAL KNOWLEDGE	1. Detailed knowledge about: 1. Design business management; 2. Design proposals of the building; 3. Design of architectural construction drawings.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN PROPOSAL FOR CONSTRUCTION PROJECT(S)	DUTY NO.	702
TASK TITLE	DESIGN SITE PLANNING OF CONSTRUCTION PROJECT(S)	TASK NO.	7021
PERFORMANCE CRITERIA	The person performing this task must be able to make the site planning design of the construction project based on the signed contract		
RANGE STATEMENT	The task will be performed at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, legal documents and binding machine.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Prepare the data of site survey and preliminary analysis for reference; 2. Make vertical design based on the code of site design; 3. Make the buildable area design based on site planning conditions; 4. Make road parking design based on the code and requirements of road parking design; 5. Make site landscape designs based on the different requirements for selections of plants and trees on the land; 6. Consider the above contents comprehensively, and make general layout design of site.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Learn the concept, content and procedure of site design; 1.2. Master and apply the relative theoretical knowledge of site design and relative technical indicator code; 1.3. Master the content and design method of site design. 2.0. Principle The person must be able to explain the principles of: 2.1. Vertical design; 2.2. Sunshine spacing ; 2.3. Design and code of site planning conditions; 2.4. Road parking design; 2.5. Layout of greens. 3.0. Theories The person must be able to explain: 3.1. Concept, content and procedure of site design; 3.2. Relative theoretical knowledge of site design and relative technical indicator code; 3.3. Content and design method of site design. 4.0. Essential skills 4.1. Skills to complete the general plan design of the building; 4.2. Skills to assess contents of various site planning designs; 4.3. Basic skills to observe, analyze and solve	

	problems; 4.4. Self-presentation skills; 4.5. Self-learning skills; 4.6. Team work skills; 4.7. Innovation and sustainable development skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Make the site planning design of the construction project based on signed contract.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Basic theory of site planning design; 2. Technical indicator code.

OCCUPATION	ARCHITECT	OCCUPATIO N CODE	
DUTY TITLE	DESIGN PROPOSAL FOR NEW CONSTRUCTION PROJECT(S)	DUTY NO.	702
TASK TITLE	MAKE ARCHITECTURAL CONCEPTUAL PROPOSAL DESIGN	TASK NO.	7022
PERFORMANCE CRITERIA	The person performing this task must be able to produce conceptual design of construction project according to pre-phase analysis and TOR.		
RANGE STATEMENT	The task will be performed at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Conceive the design according to the preliminary analysis and the requirements of the design assignment, and determine the concept of the architectural conceptual proposal design; 2. Use codes properly. The design should comply with the current national and local engineering and construction code and regulations related to this architectural design, especially the fire protection code. Codes and regulations should be complete, correct, and valid version; 3. Design reasonable space architecture. Complete the general plan design, plan design, section design and building shape and elevation design of the building. Conduct multiple proposal comparisons to determine the optimal solution; 4. Complete the drafting and expression of the architectural conceptual proposal design.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Thinking process and entry points of design; 1.2. Search for architectural conceptual proposal design codes; 1.3. Fundamentals of architectural conceptual proposal design, including residential buildings and public buildings; 1.4. Architectural conceptual proposal evaluation; 1.5. Master expression of architectural conceptual proposal design. 2.0. Principle The person must be able to explain the principles of: 2.1. Determine the design elements of the architectural conceptual proposal; 2.2. Determine the drafting process of the architectural conceptual proposal. 3.0. Theories The person must be able to explain: 3.1. The content of the architectural conceptual proposal design; 3.2. Order of architectural conceptual proposal design; 3.3. General provisions for the architectural conceptual proposal design.	

	4.0. Essential skills 4.1. Self-presentation skills; 4.2. Self-learning skills; 4.3. Team work skills; 4.4. Innovation and sustainable development skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Complete architectural conceptual proposal design drawings of the construction projects, including design descriptions, general plans, floor plans, elevations, architectural detail drawings, architectural renderings, aerial views and other relevant drawings.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Codes for the architectural conceptual proposal design; 2. Architectural recognition and drafting; 3. Regulations and contents of the architectural conceptual proposal design.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN PROPOSAL FOR CONSTRUCTION PROJECT(S)	DUTY NO.	702
TASK TITLE	CONFIRMATION OF DESIGN MEETING CLIENT REQUIREMENTS AND DESIGN CODE	TASK NO.	7023
PERFORMANCE CRITERIA	The person performing this task must be able to submit site planning design and documents of architectural conceptual proposal design of construction projects to the client and complete revisions to confirm compliance with their needs and current design codes.		
RANGE STATEMENT	The task will be performed at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, internet, etc.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Verify that the site planning design and the documents of the architectural conceptual proposal design are in line with the requirements of the construction project assignment and design contract; 2. Verify whether the overall design requirements of the construction project meet the needs. The behavioral needs of users should be studied from the user’s point of view, and whether the use is convenient and comfortable should be considered; 3. Verify whether the technical and economic indicators of the construction project meet the planning requirements. The building project design should be in line with the planning approval of the construction site location, and the building area and height should be in line with the planning permission; 4. Verify the main building		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Understand basic capital construction procedures and design procedures; 1.2. Be familiar with the requirements and depth of design documents for each stage of preparation; 1.3. Make suggestions to clients on design proposal; 1.4. Explain the requirements of relevant departments and design codes. 2.0. Principle The person must be able to explain the principles of: 2.1. Comply with general plan requirements; 2.2. Meet the functional requirements of building; 2.3. Meet reasonable technical requirements; 2.4. Good economic effect; 2.5. Consider the aesthetic requirements of the building. 3.0. Theories The person must be able to explain: 3.1. Basic construction procedures and design procedures; 3.2. Prepare requirements and depth of design documents for each stage; 3.3. Relevant departmental requirements and design	

functions and area index of the construction project. The flow of people, vehicles and goods should be organized according to the use requirements, and reasonable functional zoning should be carried out; 5. Confirm that the design meets the design code requirements; 6. Confirm the revisions with the client and complete the revisions.	codes. 4.0. Essential skills 4.1. Sense of responsibility, enterprise, and overall view; 4.2. Self-learning and the ability to update knowledge, analyze problems and solve them; 4.3. Honesty, trustworthiness, willingness and dedication; 4.4. Presentation and communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Improve the revisions according to the approved opinions of site planning design and architectural conceptual proposal design of construction projects and design code setting-out contracts. Finally confirm with clients, approval departments, etc., that this design proposal meets the needs of function, investment, proposal approval, etc.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Basic knowledge of architectural design; 2. Basic theory of site planning design; 3. Design assignment, construction projects contract provisions and contents.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN THE CONSTRUCTION DRAWING(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	703
TASK TITLE	DRAFT ARCHITECTURAL CONSTRUCTION DRAWINGS	TASK NO.	7031
PERFORMANCE CRITERIA	Design architectural construction drawings of construction projects, including drawing catalogs, design descriptions, general plan drawings, floor plans, elevations, sections, node details, etc.		
RANGE STATEMENT	The task will be performed at the office under the supervision of a Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Be familiar with and understand the design intentions of the architectural proposal; 2. Be familiar with and master design guideline documents, codes and standards, etc., of relevant programs; 3. Draft architectural construction drawings of construction projects, including drawing catalogs, design descriptions, general plans, floor plans, elevations, sections, etc.; 4. Draft construction design and practices of common node details of buildings; 5. Be familiar with the performance and applicable conditions of construction materials and master the specific methods of the process.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Master the design cycle of construction projects; 1.2. Be familiar with the proposal intent of the construction projects; 1.3. Understand the requirements of construction-related investment and approval departments; 1.4. Understand the funding arrangements for construction projects. 2.0. Principles The person must be able to explain the principles of: 2.1. Deepen and adjust the design proposals of the building; 2.2. Determine the design points of architectural construction drawings; 2.3. Master the drafting standards of architectural construction drawings. 3.0. Theories The person must be able to explain: 3.1. Design content of architectural construction drawings; 3.2. Drawing standards of architectural construction drawings;	

	3.3. General provisions of architectural construction drawings. 4.0. Essential skills 4.1. Analytical mind; 4.2. Computer (CAD, BIM) skills; 4.3. Report writing skills; 4.4. Team work skills; 4.5. Communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Complete architectural construction drawings of construction projects, including drawing catalogs, design descriptions, general plans, floor plans, elevations, sections and node details and other related drawings.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. General rules and points of architectural design; 2. Drafting standards for architectural construction drawings; 3. Recognizing and drafting of architectural construction; 4. Relevant regulations and contents of architectural construction drawing preparation.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN THE CONSTRUCTION DRAWING(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	703
TASK TITLE	COLLABORATIVE DESIGN WITH OTHER RELEVANT PROGRAM(S) ON THE REQUIREMENTS OF ARCHITECTURAL CONSTRUCTION DRAWING(S)	TASK NO.	7032
PERFORMANCE CRITERIA	The architecture, in cooperation with other relevant programs, will summarize the design, and the relevant programs will put forward their integration opinions according to the design requirements, and determine the contents that need to be supplemented and optimized.		
RANGE STATEMENT	The task will be performed at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, pencil/pen, computer, printer, telephone, internet, etc.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE	UNDERPINNING KNOWLEDGE		
The person performing this task must be able to do the following: 1. The architecture provides basic drawing information to other relevant programs for optimized design and detailed design; 2. Coordinate space and practice requirements between various relevant programs, and collect drawings of relevant programs.	Detailed knowledge about:		
	1.0. Methods		
	The person performing this task must be able to explain how to:		
	1.1. Design requirements of architecture and relevant programs; 1.2. Methods and processes of collaborative design with relevant programs; 1.3. Collect and determine the final construction drawings for all relevant programs.		
	2.0. Principle		
	The person must be able to explain the principles of:		
	2.1. Basic design points of relevant programs; 2.2. Coordinate the design requirements of relevant programs; 2.3. Collect the design drawings of relevant programs.		
	3.0. Theories		
	The person must be able to explain:		
	3.1. Collaborate the requirements of design space and practice among relevant programs; 3.2. Collect the design drawings of relevant programs; 3.3. Sort architectural construction drawings.		
	4.0. Essential skills		

	4.1. Coordination skills; 4.2. Analytical mind; 4.3. Computer (CAD) skills ; 4.4. Report writing skills; 4.5. Team work skills; 4.6. Communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Collaborate with relevant programs to complete the summary of design requirements, and complete and sort architectural construction drawings.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Basic knowledge of building structure selection; 2. Recognizing and application of construction equipment; 3. Recognizing and application of HVAC, and water supply and drainage.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN THE CONSTRUCTION DRAWINGS FOR CONSTRUCTION PROJECT(S)	DUTY NO.	703
TASK TITLE	DRAFT FIRE PROTECTION, ENERGY CONSERVATION AND OTHER SPECIAL DESIGN OF CONSTRUCTION DRAWING DESIGN	TASK NO.	7033
PERFORMANCE CRITERIA	Complete the drawings of relevant special designs, such as fire protection design, energy conservation design, daylighting design, etc., based on the completed drawings of relevant programs		
RANGE STATEMENT	The task will be performed at the site of existing building(s) and at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: note book, clip board, pencil/pen, camera, computer, printer P.P.E etc.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Prepare the description document of special design of construction drawings; 2.Draft the special design of construction drawings; 3.Complete calculations and drawing collection for the special design of construction drawings.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Determine the content of special design according to the project characteristics and approval requirements; 1.2. Prepare special design process of construction drawings. 2.0. Principle The person must be able to explain the principles of: 2.1. Understand and be familiar with the construction drawings of each program; 2.2. Master the preparation content of special design of construction drawings; 2.3. Master the preparation points of special design of construction drawings. 3.0. Theories The person must be able to explain: 3.1. Master the preparation standard of special design of construction drawings; 3.2. Master the calculation method of relevant special design. 4.0. Essential skills 4.1. Special design of construction drawings skills; 4.2. Computer aided drafting skills;	

	4.3. Self-directed learning and research skills; 4.4. Team work skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Complete the preparation of special design documents that meet the characteristics of the project and the approval requirements of relevant departments.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Codes and design methods of fire protection of building; 2. Codes and design methods of energy conservation of building; 3. Codes and design methods for daylighting design; 4. Other special design codes and design methods that may be involved.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN THE CONSTRUCTION DRAWING(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	703
TASK TITLE	COMPLETE CONSTRUCTION DRAWING DOCUMENT(S) THAT MEET THE PROJECT CONSTRUCTION AND APPROVAL REQUIREMENT(S)	TASK NO.	7034
PERFORMANCE CRITERIA	Collect all construction drawings of relevant programs to form a completed project construction drawing brochure, and cooperate with the client to complete the technical review, administrative approval and other related processes.		
RANGE STATEMENT	The task will be performed at the site of existing building(s) and in the office under the supervision of a Registered Architect. The following equipment, tools and materials will be needed in performing the task: Measuring tape, note book, clip board, pencil/pen, camera, computer, printer P.P.E etc.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Master building codes, architectural design requirements, and feasibility of the construction drawings of the subproject; 2. Collect the construction drawings of subproject, classify and sort the subprojects in a logical order, and organize them into a complete construction drawing brochure; 3. Review the construction feasibility of construction drawing brochure based on the building codes and architectural design requirements, propose amendments and then feedback to the designer; 4. Review the construction drawings for the second time after the completion of the revision; 5. Submit the brochure in accordance with the building code, architectural design requirements and construction		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. Collection cycle; 1.2. The sequence of construction drawings of subproject; 1.3. Review cycle; 1.4. Review content; 1.5. Review steps; 1.6. The sequence of construction drawings of subproject; 1.7. Submission cycle; 1.8. Submission content; 1.9. Submission steps. 2.0. Principles The person must be able to explain the principles of: 2. 1. Determine building scale; 2. 2. Clarify the submission deadline of the construction drawing brochure and the time allocation of the collection, review and submission of the construction drawing brochure; 2. 3. Master the collection order of the construction drawing brochure; 2. 4. Master the review order of construction drawing brochure; 2. 5. Master the submission content of construction	

feasibility to Party A, government departments, and third-party construction departments, and revise it again based on feedback. If there is no need to revise, the construction drawing brochure will be the final architectural design drawings, submit it to the third-party departments for building construction.	drawing brochure; 2.6. Master the submission order of construction drawing brochure. 3.0. Theories The person must be able to explain: 3.1. Master the collection contents of the construction drawing brochure; 3.2. Master the key points of the review of construction drawing brochure; 3.3. Master the key points of the review of Party A, government departments and third-party technical departments on construction drawing brochure. 4.0. Essential skills 4.1. Planning skills and multiple tasks management; 4.2. A keen eye to detail; 4.3. Analytical mind; 4.4. Computer skills; 4.5. Team work skills; 4.6. Communication skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Collect the construction drawings of each subproject and organize them into a construction drawing brochure. Review the brochure in accordance with building code, architectural design requirements and construction feasibility, and submit the completed construction drawing brochure to Party A, government departments and third-party technical departments, and after their review, conduct construction projects based on the drawing.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Study of building code, architectural design requirements and construction feasibility; 2. Laws and regulations of construction projects; 3. Key points of collection and review of construction drawing brochure.

OCCUPATION	ARCHITECT	OCCUPATION CODE	
DUTY TITLE	DESIGN THE CONSTRUCTION DRAWING(S) FOR CONSTRUCTION PROJECT(S)	DUTY NO.	703
TASK TITLE	PREPARE CONSTRUCTION DISCLOSURE	TASK NO.	7035
PERFORMANCE CRITERIA	The person performing this task must finalize the project content of the construction drawing disclosure based on the general layout of the construction drawings.		
RANGE STATEMENT	The task will be performed at the site of existing building(s) and at the office under the supervision of the Registered Architect. The following equipment, tools and materials will be needed in performing the task: Measuring tape, note book, clip board, pencil/pen, camera, computer, printer P.P.E etc.		
EVIDENCE REQUIREMENTS			
PRACTICAL PERFORMANCE		UNDERPINNING KNOWLEDGE	
The person performing this task must be able to do the following: 1. Master the content of disclosure of construction drawings; 2. Master the content of architectural design disclosure of construction drawings; 3. Master the content of structural design disclosure of construction drawings; 4. Master the content of engineering installation disclosure of construction drawings.		Detailed knowledge about: 1.0. Methods The person performing this task must be able to explain how to: 1.1. The design intent and disclosure content of the construction drawings; 1.2. The key links of the project; 1.3. Technical requirements and construction techniques of new materials. 2.0. Principles The person must be able to explain the principles of: 2.1. Content and requirements of architectural design disclosure of construction drawings; 2.2. Content and requirements of structural design disclosure of construction drawings; 2.3. Content and requirements of engineering installation disclosure of construction drawings; 2.4. Construction drawings are easy to understand and implementable. 3.0. Theories The person must be able to explain: 3.1. The content of construction drawing disclosure; 3.2. Design code and standard drawings for construction drawings. 4.0. Essential skills 4.1. Understand the theory of construction drawing disclosure; 4.2 Computer aided drafting skills ;	

	4.3 Self-directed learning and research skills; 4.4 Self-directed learning and research skills; 4.5 Teamwork skills.
DESCRIPTION OF THE END PRODUCTS / SERVICE	Complete a complete and accurate construction drawings that can be disclosed.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. The content of the design of the construction drawings; 2. The process and content of construction drawing disclosure.

APPENDIX 1: DACUM CHARTS FOR ARCHITECTS

TABLE 1: DACUM CHARTS FOR ARCHITECTS LEVEL - 7

DUTIES	TASKS	ENABLERS
1.0. Prepare client requirements for construction project(s)	1.1. Site survey of the construction project(s) 1.2. Conduct preliminary analysis of construction conditions 1.3. Confirm client requirement(s) for construction project(s) 1.4. Assist in managing contract(s) for construction project(s)	General Skills and Knowledge • Knowledge of other related fields (e.g. Structural engineer, urban planners, quantities surveyor and services engineer) • Understanding of the construction industry • Free hand drawing ability • An eye for detail and building design • Awareness of how buildings and spaces are used • Ability to work well under time and budget pressure • Ability to communicate • Writing skills • Analytical skills • OSHA, Environment and fire fighting • Models preparation Tools and Equipment • Computer software • Standards and design guidelines • Tape measure • Camera • Office furniture. • Internet • Printer • Photocopy Machine • Transport • Seal • Binding Machine • Clip Board • GPS • Personal Protective Equipment (PPE) Materials • Stationery materials

DUTIES	TASKS	ENABLERS
		Work Behaviour • Team spirit • Trustworthy • Time management • Commitment • Work ethic • Adaptability • Respect and predictability Others Resources • Human Resource (Supporting Staffs) • Financial Resource
2.0. Design proposal for construction project(s)	2.1. Design site planning of construction project(s) 2.2. Make architectural conceptual proposal design 2.3. Confirmation of Design Meeting Client Requirements and Design Code	General Skills and Knowledge • Knowledge of other related fields (e.g. Structural engineer, urban planners, quantities surveyor and services engineer) • Understanding of the construction industry • Free hand drawing ability • An eye for detail and building design • Awareness of how buildings and spaces are used • Ability to work well under time and budget pressure • Ability to communicate • Writing skills • Analytical skills • OSHA, Environment and fire fighting • Models preparation Tools and Equipment • Computer • Standards and design guidelines • Tape measure • Camera • Office furniture • Internet • Printer • Photocopy Machine • Transport

DUTIES	TASKS	ENABLERS
		• Binding Machine • Clip Board • Legal document Materials • Stationery materials Work Behaviour • Team spirit • Trustworthy • Time management • Commitment • Work ethic • Adaptability • Respect and predictability Others Resources • Human Resource (Supporting Staffs) • Technicians and Technologist • Financial Resource
3.0. Design the construction drawing(s) for construction project(s)	3.1. Draft architectural construction drawings 3.2. Collaborative design with other relevant program(s) on the requirements of architectural construction drawing(s) 3.3. Draft fire protection, energy conservation and other special design of construction drawing design 3.4. Complete construction drawing document(s) that meet the project construction and approval requirement(s) 3.5. Prepare construction disclosure	General Skills and Knowledge • Knowledge of other related fields (eg. Structural engineer, urban planners, quantities surveyor and services engineer) • Understanding of the construction industry • Free hand drawing ability • An eye for detail and building design • Awareness of how buildings and spaces are used • Ability to work well under time and budget pressure • Ability to communicate • Writing skills • Analytical skills • OSHA • Environment and fire fighting • Models preparation Tools and Equipment • Computer • Standards and design

DUTIES	TASKS	ENABLERS
		guidelines • Tape measure • Camera • Office furniture. • Internet • Printer • photocopy Machine Transport Binding Machine • Clip Board Materials • Stationery materials Work Behaviour • Team spirit • Trustworthy • Time management • Commitment • Work ethic • Adaptability • Respect and predictability Other Resources • Human Resource (Supporting Staffs) • Technicians and Technologist • Financial Resource