



**CONSTRUCTION  
LAW  
INSTITUTE**

# VARIATIONS

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# TOPICS OF INTEREST

**01.**

Definition

**02.**

Causes of  
Variations

**03.**

Variation Procedure

**04.**

Value Engineering

**05.**

Quantum Meruit



# 01. Definition

A variation is **an alteration to the scope of work** originally specified in the contract through:

✓ *Addition, omission or substitution to the works*

✓ *Change to the manner in which the works are to be carried out*

# 02. CAUSES OF VARIATIONS

01

## Client requirements/ design

- Insufficient client involvement in design phase
- Lack of understanding of client requirements
- Change in mind or requirements
- Fast track projects (construction prior to design completion)

02

## Work scope

- Inadequate planning at project definition phase
- New circumstances that cause change in scope

# CAUSES OF VARIATIONS (Cont.)

03

## Financial circumstances

- Client's budget constraints or need for savings in project
- Improvement in Client's financial circumstances

04

## Conflicting contract docs

- Misinterpretation of project requirements where contract documents and details are not clear, sufficient or with room for misinterpretation

05

## Decision making process

- Decisions should be taken promptly to avoid delays and extra costs
- Delayed decisions result in variations and extra costs

# 0.3 VARIATION PROCEDURE

# 01

## CONTRACTOR REQUEST

- Prepares a variation order request form and submits to the Client.
- Request is reviewed and evaluated by the Client and approved if deemed necessary.
- Upon approval of request, the document is discussed between the client and the contractor including the time and cost effect of variation.
- Upon agreement, signed variation order including the scheduling and cost breakdown is submitted to the Client by the contractor.
- Client accepts and signs/formally approves the variation order and the work described in the variation order may start



# 02

## CLIENT ISSUED

- Client identifies the need for a variation and the variation order proposal is initiated.
- Initiator variation order is prepared and submitted to the contractor.
- Variation order is evaluated by the contractor.
- After contractor review, the document is discussed between the client & contractor including the time and cost effect of variation.
- Upon agreement, final version of the signed variation order including the scheduling and cost breakdown is submitted to the Client by the contractor.
- Client accepts and signs the variation order and the work described in the variation order may start



# FIDIC RED BOOK

Clause	Title
<b>GCC 13</b>	Variations and Adjustments
<b>13.1</b>	Right to vary
<b>13.2</b>	Value Engineering
<b>13.3</b>	Variation Procedure
<b>13.4</b>	Payment in Applicable Currencies
<b>13.5</b>	Provisional Sums
<b>13.6</b>	Daywork
<b>13.7</b>	Adjustments for Changes in Legislation
<b>13.8</b>	Adjustments for Changes in Cost

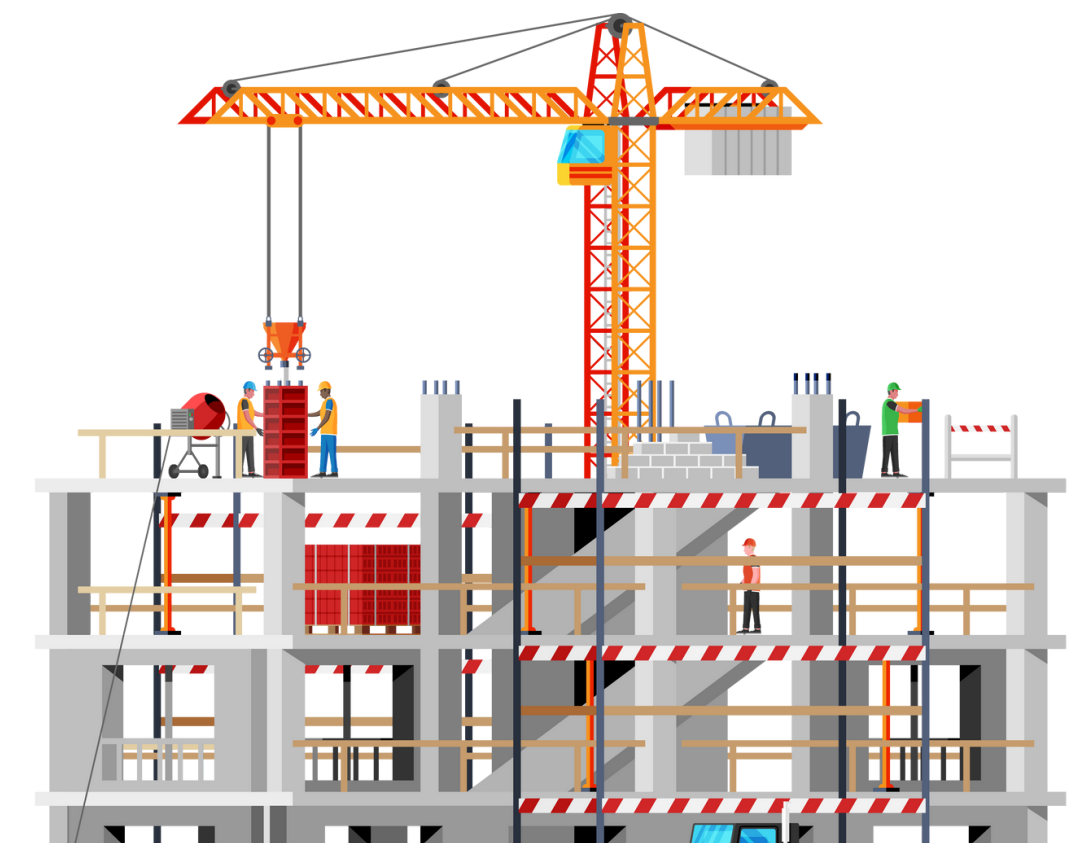


# PPDA CONTRACT

Clause	Title
GCC 41	Early Warning
GCC 46	Bill of Quantities or Activity Schedule
GCC 47	Changes in the Bill of Quantities or Activity Schedule
GCC 48	Variations
GCC 49	Payment for Variations
GCC 53	Compensation Events

# EAIA (BLUE BOOK) CONTRACT

Clause	Title
Clause 11	Variations, Provisional and Prime Cost Sums
Clause 12	Contract Bills
Clause 13	Contract Sum



# 0.4 VALUE ENGINEERING



## Definition:

- An organized effort directed at analyzing designed building features, systems, equipment, and material selections for the purpose of achieving essential functions at the lowest life cycle cost consistent with required performance, quality, reliability, and safety.
- During the Design Stage - Value engineering considers alternative design solutions to optimize the expected cost/worth ratio of projects at completion. Value engineering is aimed at maintaining or enhancing results while reducing life cycle costs.
- In the Construction Stage - Contractors are encouraged through shared savings to draw on their special 'know-how' to propose changes that cut costs while maintaining or enhancing quality, value, and functional performance

# PROCEDURE



## Information gathering

Collecting data and getting clear understanding of project



## Functional Analysis

Primary Functions  
Vital to the existence of the final product

Secondary Functions  
Notable but not critical to the core of the project



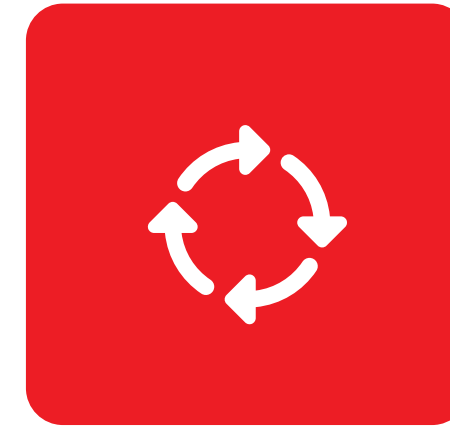
## Creative Speculation

Develop alternative solutions for delivering necessary building function



## Develop

Assess the alternative solutions



## Functional Analysis

- Allocate costs to alternative solutions
- How much will the solution cost today and over the facility's life cycle

# PROCEDURE



## **FINAL STEP** **Development**

Develop the alternatives with the highest likelihood of success

Timelines and Costs must be very clear

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## **FIDIC RED BOOK**

**GCC 13.2 – Value Engineering**

## **PPDA CONTRACT**

**Value Engineering is not specifically provided for**

## **EAIA (BLUE BOOK) CONTRACT**

**Value Engineering is not specifically provided for**

# QUANTUM MERUIT

Quantum meruit, which is a Latin term, means "as much as he had earned." In legal usage, quantum meruit states that "someone must not be forced to pay an amount that exceeds the total cost of services".

## Application:

- The expression quantum meruit means "the amount he deserves" or "what the job is worth".
- Generally a quantum meruit claim cannot be made if there is an existing contract between the parties that stipulates or allows for the calculation of the sum to be paid.

## Circumstances under which Quantum Meruit can be invoked

### In Contract with no price:

- Scope of Work is outline but there is no fixed price or method of calculating costs
- Think of “Dayworks”, “Cost”, “Cost plus profit”, etc

### Work outside of contract:

- Contract is for specific and well defined work.
- Contractor does work outside the Scope at the Client’s request

### Void unenforceable or terminated contract

- Contract is void or is rendered unenforceable by operation of statute
- Where a contract is repudiated by the Principal

## Circumstances under which Quantum Meruit can be invoked

### Heads of agreement buy contractor cannot claim payment

- Contractor may have signed a heads agreement which sets out key terms to negotiate before signing a final contract.
- The head of agreement may not be legally binding or subject to the final contract and also do not include a scope of work and a method of calculating the cost.
- During negotiations, Contractor may have done some initial works

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