



E.M.D Civil & Structural

Engineering Consultancy

Unit 216 Bldg. 2, Residencias de Manila,

Jesus St., Paco, Manila, Philippines, 1007

M: +63 915 370 2077

E: mail@emdengineers.com

W: <https://www.emdengineers.com/>

Company Profile and Projects Summary

January 2021

OUR STORY

Established in 2014 as 7DOF Engineering, we began as a team of young engineers taking challenges to bring creative solutions to common civil and structural engineering problems. We started working with windbreak shelterbelts, billboards structures and residential development projects. The individual experiences of each member of the team enabled us to offer a range of services. Throughout the years, we successfully delivered and help build design projects from Commercial and Residential Developments, Hotels and Casinos, Warehouses and Industrial Structures, and a Museum. Furthermore, we also served as a structural engineering design contractor for a company in New Zealand.

Over the past decade, the Architecture, Engineering and Construction industries are already catching up with the advancements in technology for both hardware and software. This trend continues to serve us in navigating today's business environment which also prompted us to start to invest in the development of new skills such as software development, in the last 5 years. We started by writing code for our internal workflows and functions by tapping into APIs, enabling us to become more efficient with what we do.

With the start of 2021 and with the effects of the pandemic, we are realigned our goals to expand upon our offered services in order to meet the demands of the industry and its increasing complexity. Hence, the change in our company name – ***E.M.D Civil & Structural Engineering Consultancy***, to further bring us closer to the vision of our founder. We believe that the engineer of tomorrow will also be a capable software developer making his/her own tools to execute his/her traditionally expected functions. Therefore, we continually strive today to be at the forefront of this trend as we promise to deliver solutions outside of brick-and-mortar approaches in structural engineering.

Call us when it's difficult.

OUR DESIGN PHILOSOPHY

Anything should be built, should be built well.

We take the design process very seriously, especially during the concept stage. Structures with good form, from the beginning, have the greatest potential to meet efficiency and sustainability requirements. Adding more materials to a structure is not always the best way to address design problems. Hence, we clearly understand the significance of collaboration with different design professionals.

Our promise is to deliver outside of brick-and-mortar approaches in structural engineering while exhausting possibilities for economic, efficient and sustainable results as we offer the following services:

Structural Analysis and Design

Building Structures:

Residential and Commercial Developments

Institutional, Hospitality and Recreational Facilities

Warehouses and Industrial Complexes

Civil and Non-Building Structures:

Billboard and Signage Structures

Retaining Walls

Troughs, Tunnels and Bunkers

Seismic Engineering, Design and Retrofitting

Value Engineering and Design Reviews

Software Development for Civil and Structural Engineering

OUR PRINCIPAL

Engr. Enrico Miguel Dalistan, MIEAust, MASEP, MPICE

A member of the Institution of Engineers Australia(EA), the Association of Structural Engineers of the Philippines(ASEP) and the Philippine Institute of Civil Engineers, he successfully led, executed and helped implement design projects in reinforced concrete and structural steel, ranging from commercial, residential, institutional and industrial buildings within his decade in the structural engineering industry.

Obtained his Bachelor's Degree with honours and awarded a Certificate of Distinction by the Professional Regulations Commission (PRC), from being one of the top performers in Civil Engineering Licensure Exam during his time. Thereafter, he went into the practice of Structural Engineering, starting as junior engineer from a multinational company. He has professionally grown since by associating with various local engineering companies and subsequently founded 7DOF Engineering in 2014.

As a life-long learner, he invested in acquiring software development skills in the past 5 years which enabled him to take on projects in the domain of structural engineering software applications. Over the past 3 years, he is also professionally working with SkyCiv Cloud Engineering Software, developing a connection design software for structural steel.

Education

At present

Master of Science in Civil Engineering (*Structural*)

University of the Philippines – Diliman

2005 – 2009

Bachelor of Science in Civil Engineering (*Graduated with honours - Cum Laude*)

FEU – Institute of Technology

Publication(s)

Moving Beyond Serviceability and Safety, 18th Association of Structural Engineers of the Philippines (ASEP) International Convention (18thAIC), 2017

FEATURED PROJECTS

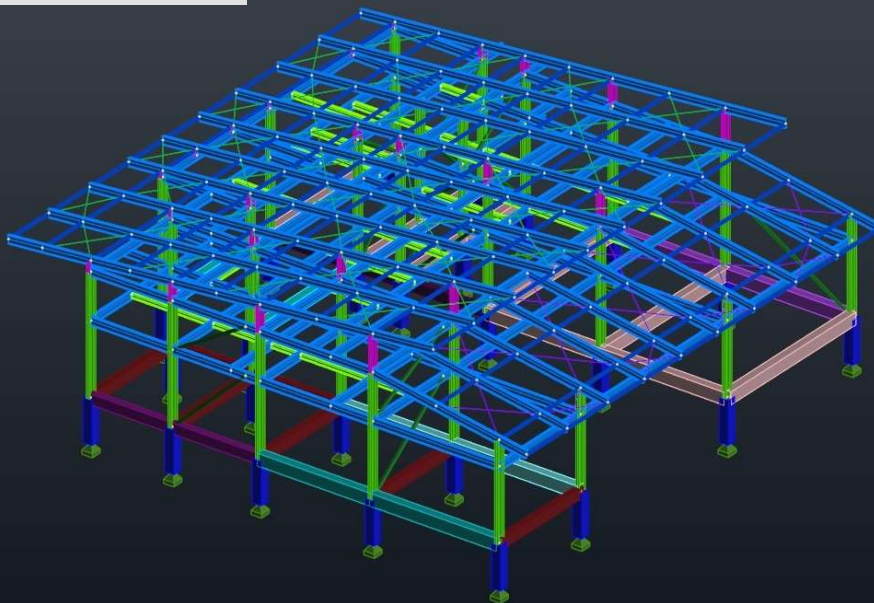
2 – Storey Residence and Sculpture

December 2020 – present (on-going)



Architects rendering: External Sunset View showing outdoor features

Structural Model



Project Overview

Architect

Fulgar Architects

Location

Quezon City,
Philippines

Responsibility

Engineer-of-Record
(Structural Design)

Design Features

Structural, seismic analysis and design (Linear Static and Dynamic), Seismic Isolation

Materials

Reinforced Concrete and Structural Steel

Est. Construction Cost

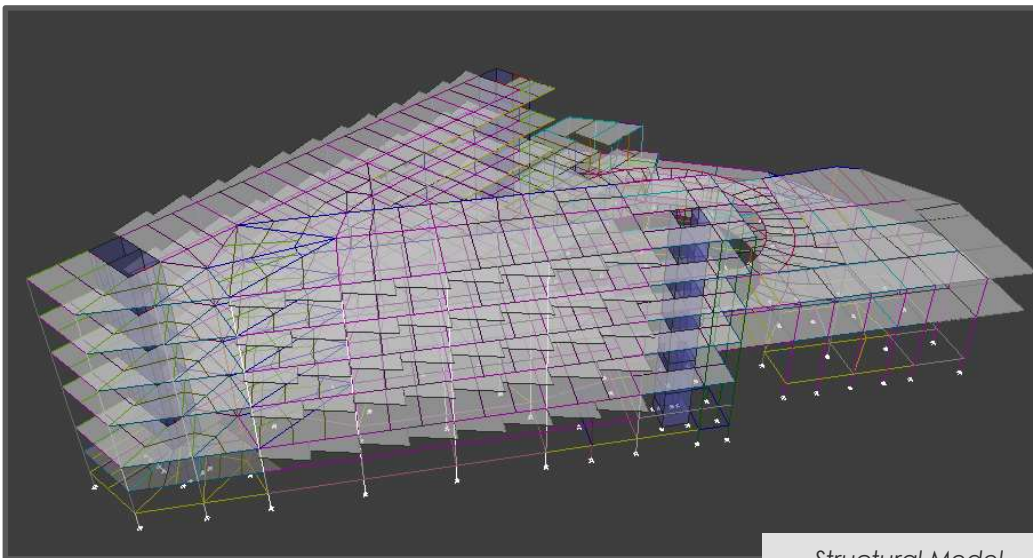
~ Php 40,000,000.00
(USD 800,000)

5 – Storey Hotel and Casino

September 2018 – January 2020



Architects rendering: External Daytime View showing outdoor pool and restaurant al fresco



Structural Model

Project Overview

Architect

Fulgar Architects

Location

Batangas, Philippines

Responsibility

Engineer-of-Record
(Structural Design)

Design Features

Structural, seismic analysis and design
(Linear Static and Dynamic)

Materials

Reinforced and Post-Tensioned Concrete

Est. Construction Cost

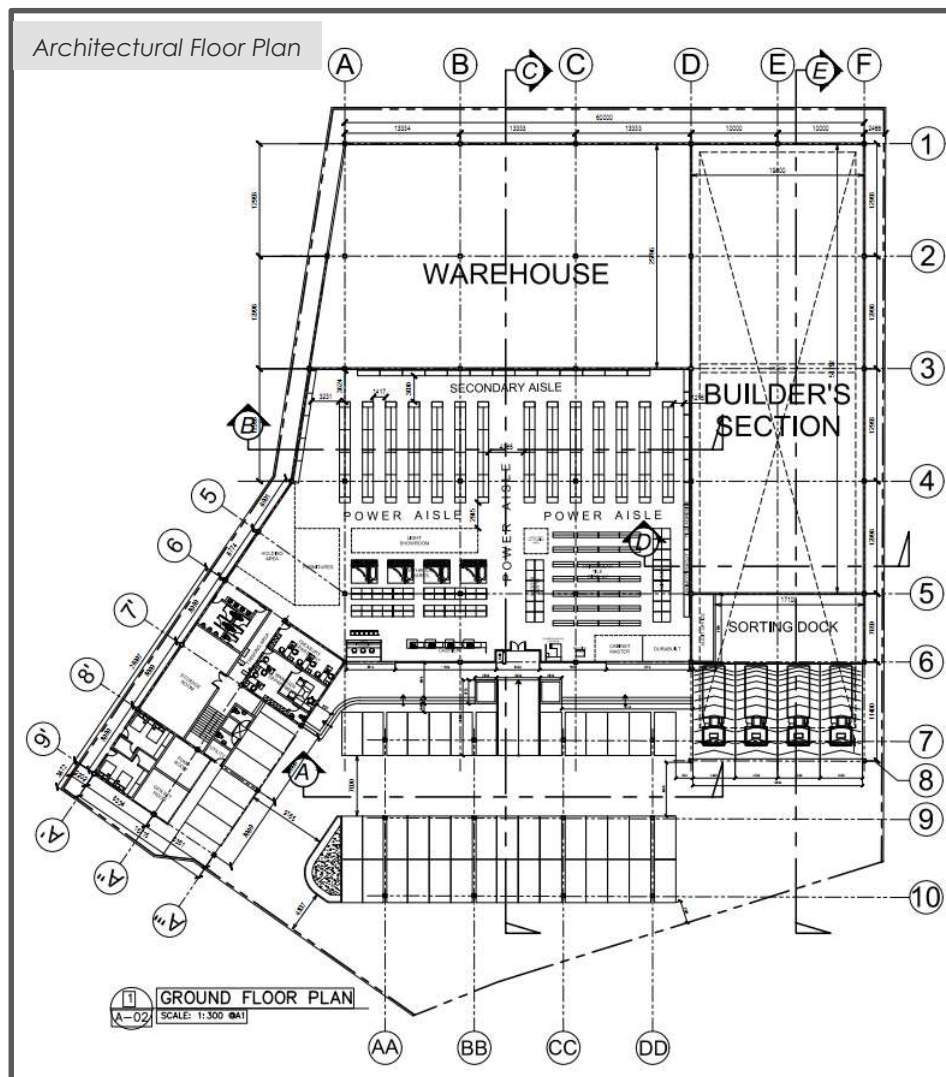
~ Php 150,000,000.00
(USD 3.0M)



The Architect's 3D Model

Budget Home Depot

December 2018 – February 2019



Project Overview

Architect

Archeds Design

Location

Palawan, Philippines

Responsibility

Engineer
Sub-Consultant for
Estanero and Associates

Design Features

Structural analysis and
design (Crane Analysis)

Materials

Structural Steel

Est. Construction Cost ~

Php 15,000,000.00
(USD 300,000.00)

Multi-Storey Warehouse

December 2018 – February 2019

Project Overview

Architect

Fulgar Architects

Location

Pasay City, Philippines

Responsibility

Engineer-of-Record
(Structural Design)

Design Features

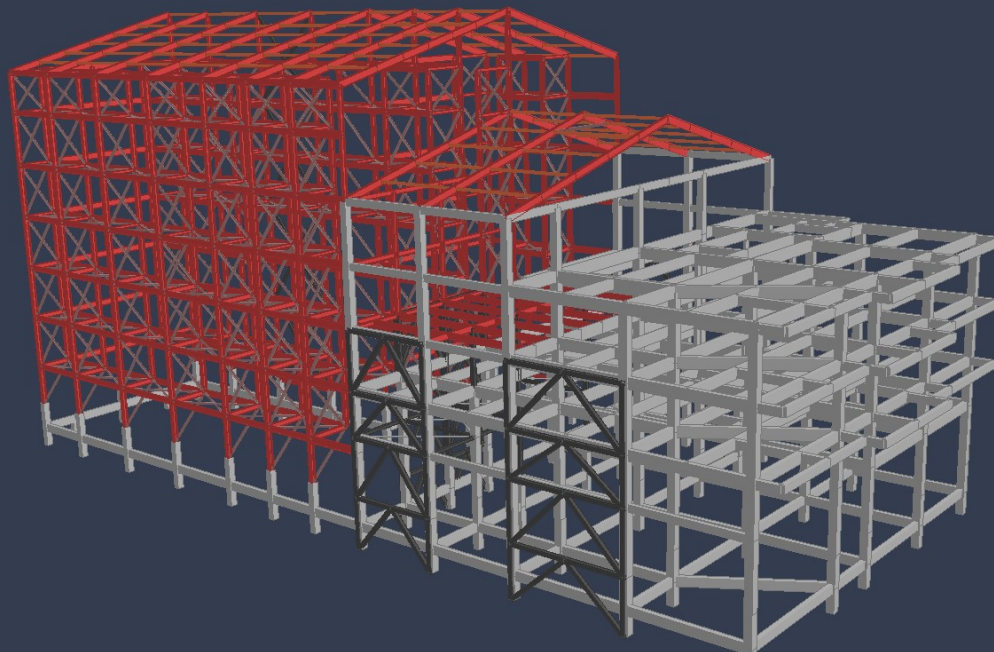
Structural, seismic analysis and design
(Linear Static and Dynamic)
Seismic Retrofitting

Materials

Reinforced Concrete
Structural Steel

Est. Construction Cost

~ Php 65,000,000.00
(USD 1.25M)



Structural Model:

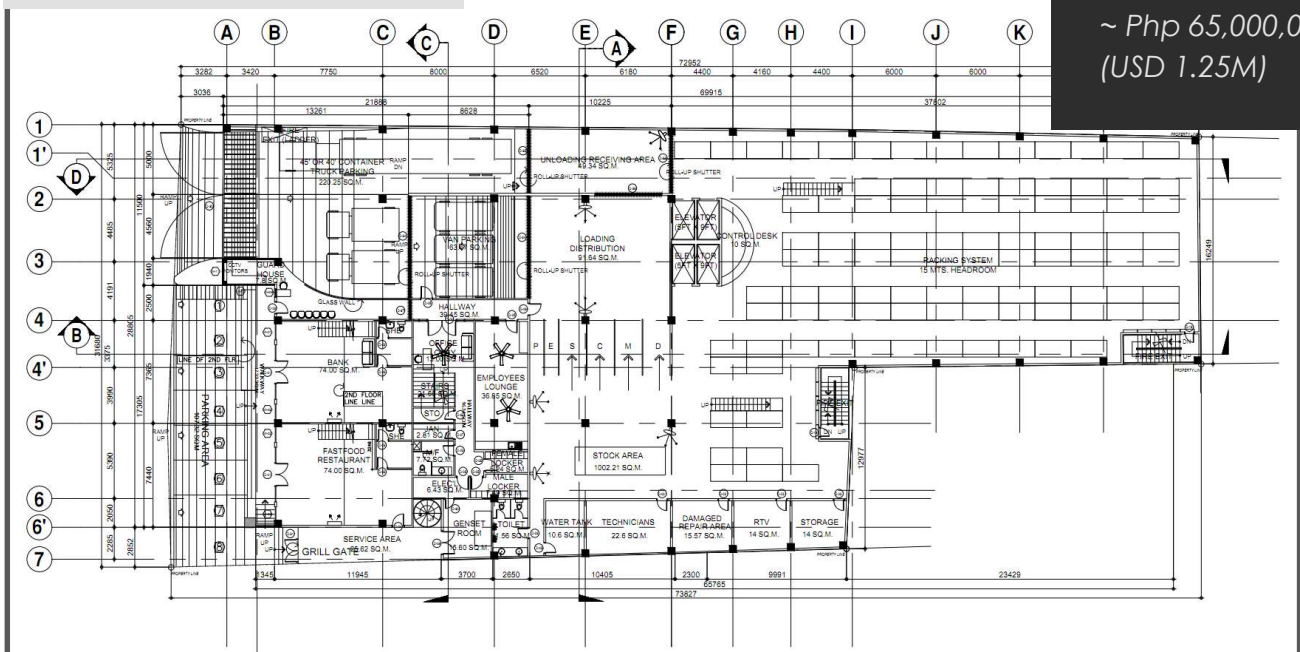
Structure retrofitted with structural steel chevron braces to handle earthquake loads.

Other concrete members were wrapped by layers of carbon fiber

Architectural Floor Plan

Split into two sections:

The left side houses the office area (girds A to F); the rest of the space is for warehouse storage

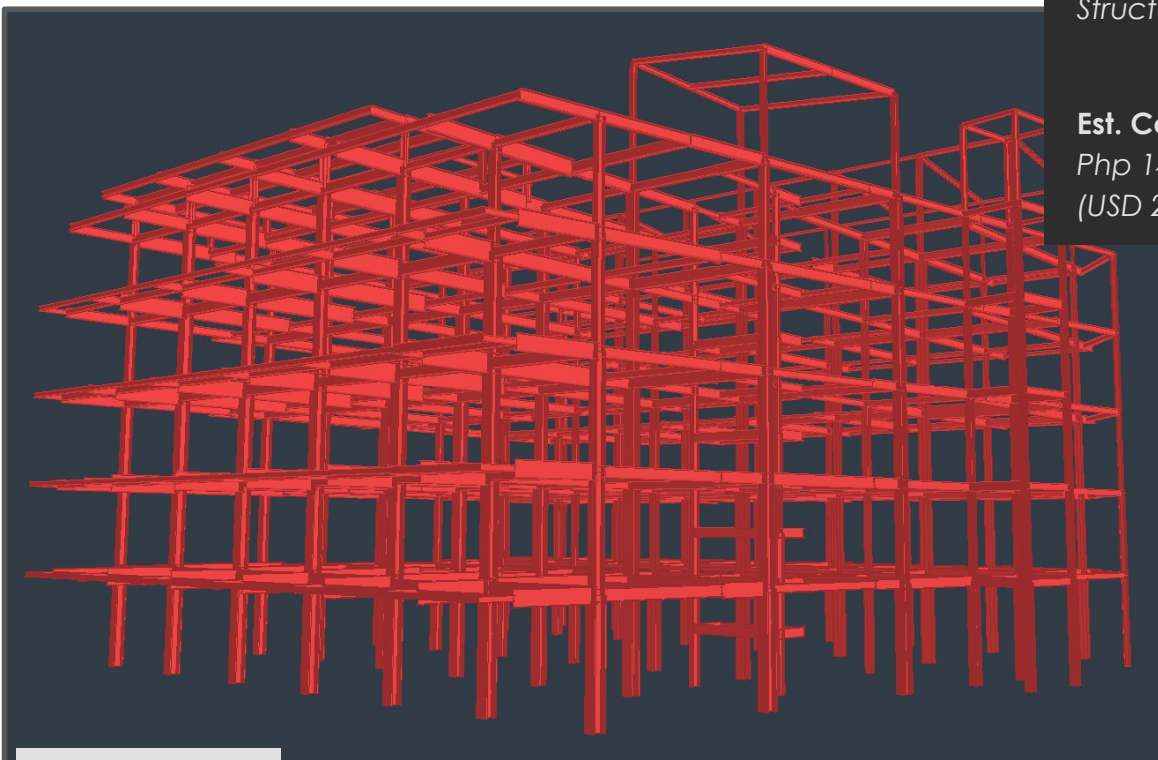


6 – Storey Hotel

August 2017 – October 2017



Architects rendering: External Daytime View



Structural Model

Project Overview

Architect

D'Unico Design Studio

Location

Palawan, Philippines

Responsibility

Engineer
Sub-Consultant for
Estanero and Associates
(Structural Design and
Value Engineering)

Design Features

Structural, seismic
analysis and design
(Linear Static)

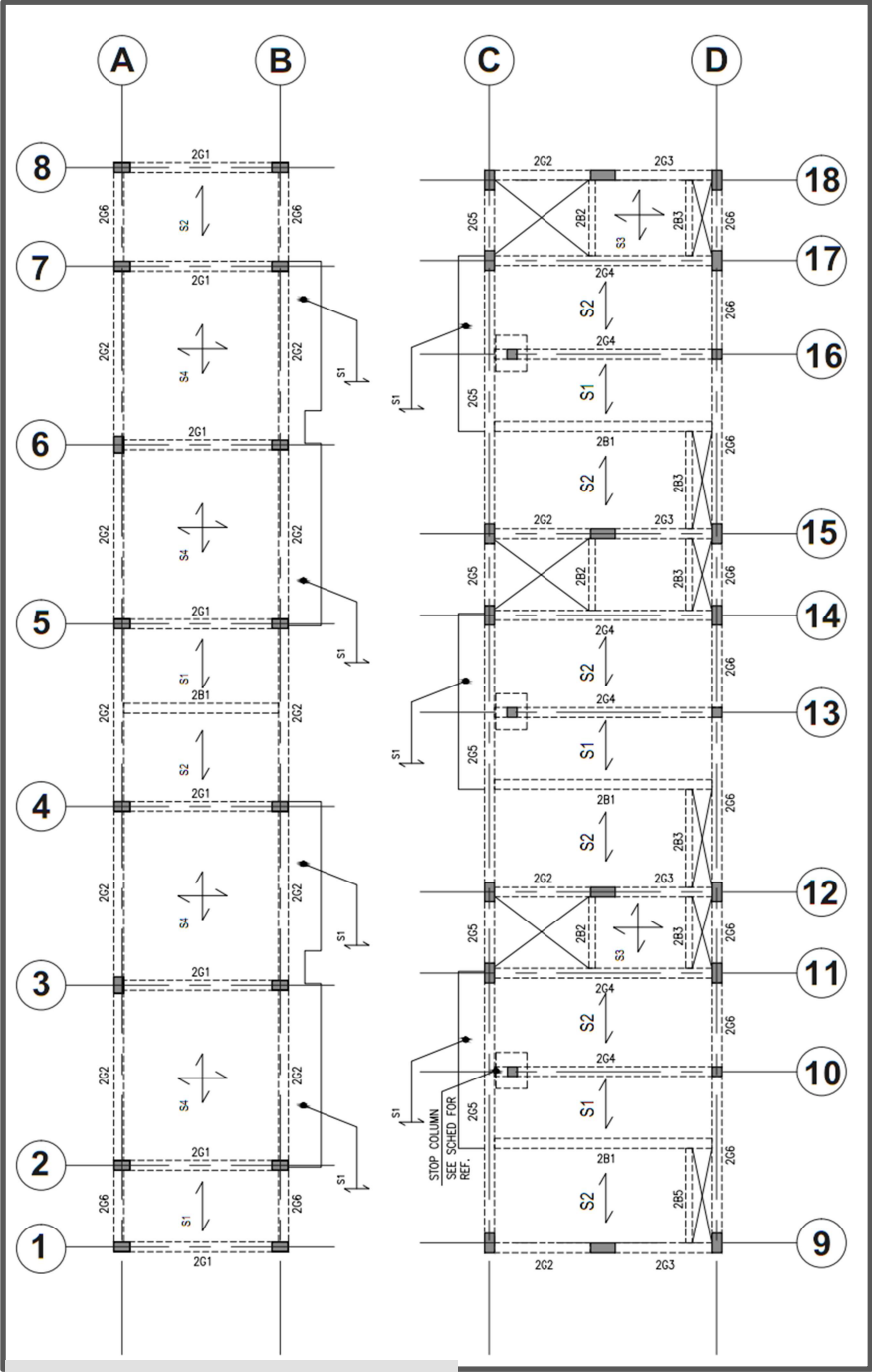
Materials

Structural Steel

Est. Construction Cost ~

Php 140,000,000.00
(USD 2.8M)

4-Storey Apartment Complex
July 2017 – July 2019



Structural Floor Plan of a sample

Project Overview

Architect
BAD Designs

Location
Mandaluyong City,
Philippines

Responsibility
Engineer-of-Record
(Structural Design)

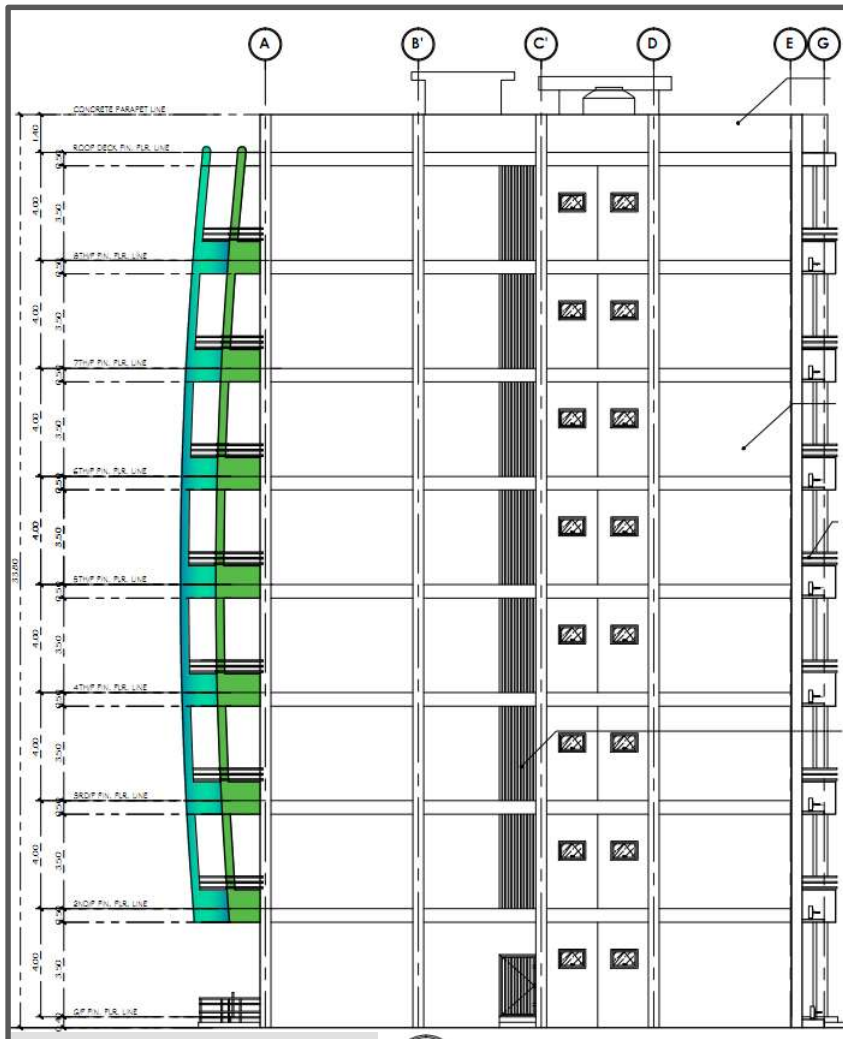
Design Features
Structural, seismic
analysis and design
(Linear Static and
Dynamic)

Materials
Reinforced Concrete

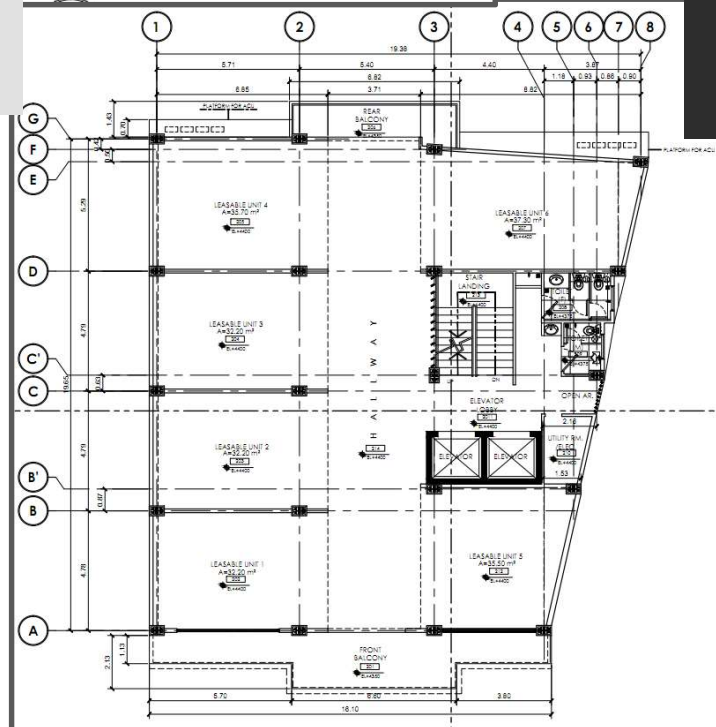
Est. Construction Cost ~
Php 120,000,000.00
(USD 2.3M)

8 – Storey Commercial Building

July 2017 – July 2019



ABOVE: Side Elevation
RIGHT: Architectural Floor Plan



Project Overview

Architect

Bev Sitjar

Location

Palawan, Philippines

Responsibility

Engineer
Sub-Consultant for
Estanero and Associates

Design Features

Structural, seismic
analysis and design
(Linear Static)

Materials

Structural Steel

Est. Construction Cost

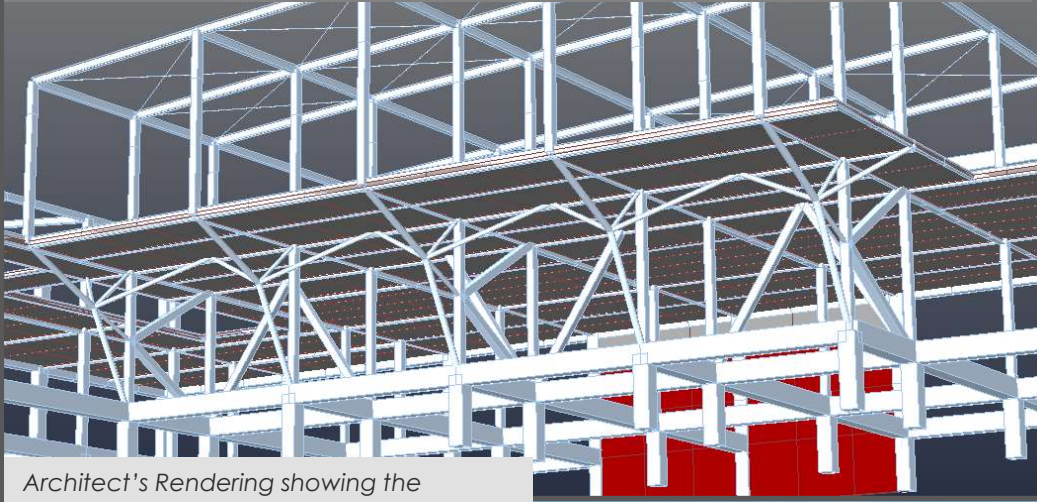
~ Php 80,000,000.00
(USD 1.6M)

2 – Storey Commercial Building

December 2016 – April 2017

Structural Model:

Featuring the tree-like struts made up of structural steel supporting the second floor



Architect's Rendering showing the building's longitudinal section along the driveway



Architect's Rendering showing the building from the road entrance



Project Overview

Architect

Fulgar Architects

Location

Marikina, Philippines

Responsibility

Engineer-of-Record
(Structural Design)

Design Feature

Structural, seismic analysis and design
(Linear Static and Dynamic)

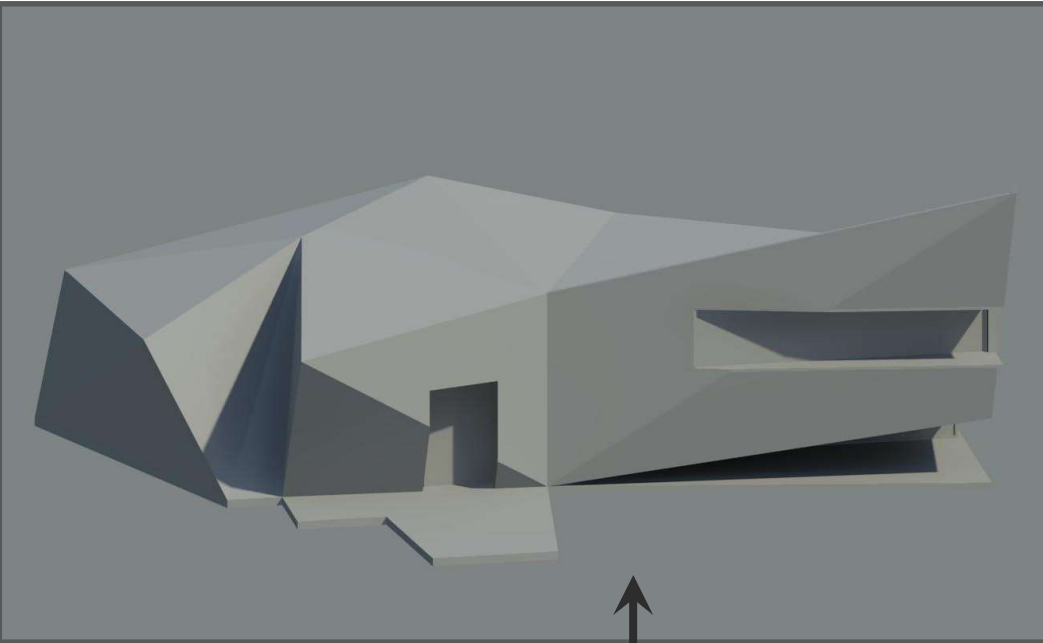
Materials

Structural Steel

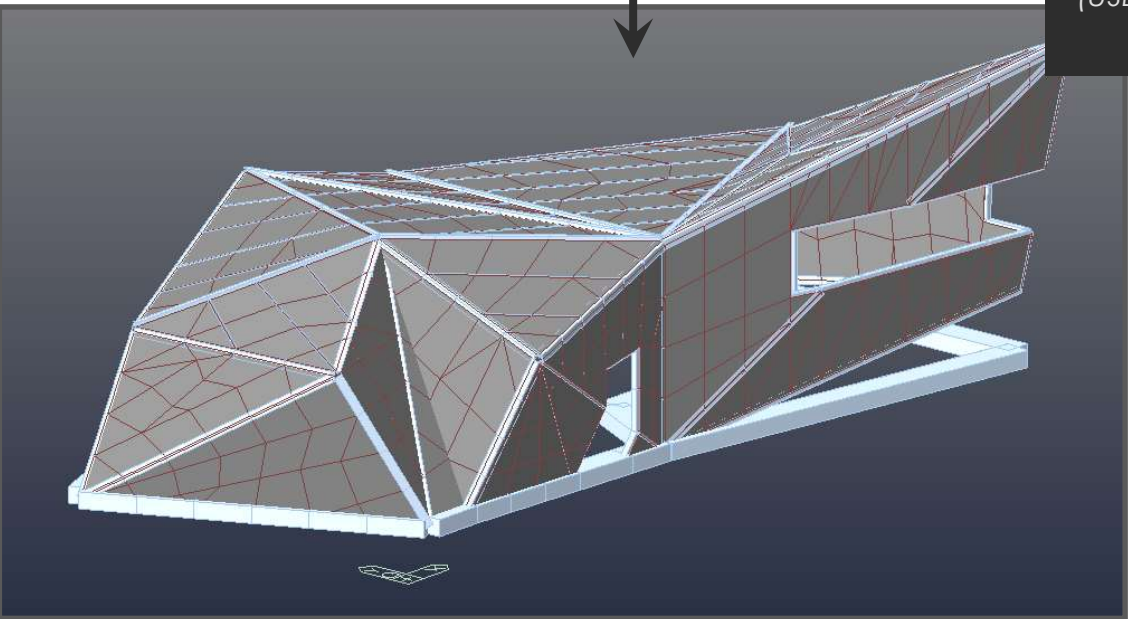
Est. Construction Cost

~ Php 40,000,000.00
(USD 800,000.00)

Museum Complex: Free-Form Geometries
February 2016 – September 2016



Architect's Mass Model then translated into a structural analytical (FEM) model for the implementation of Static and Dynamic Analyses



Project Overview

Architect
Fulgar Architects

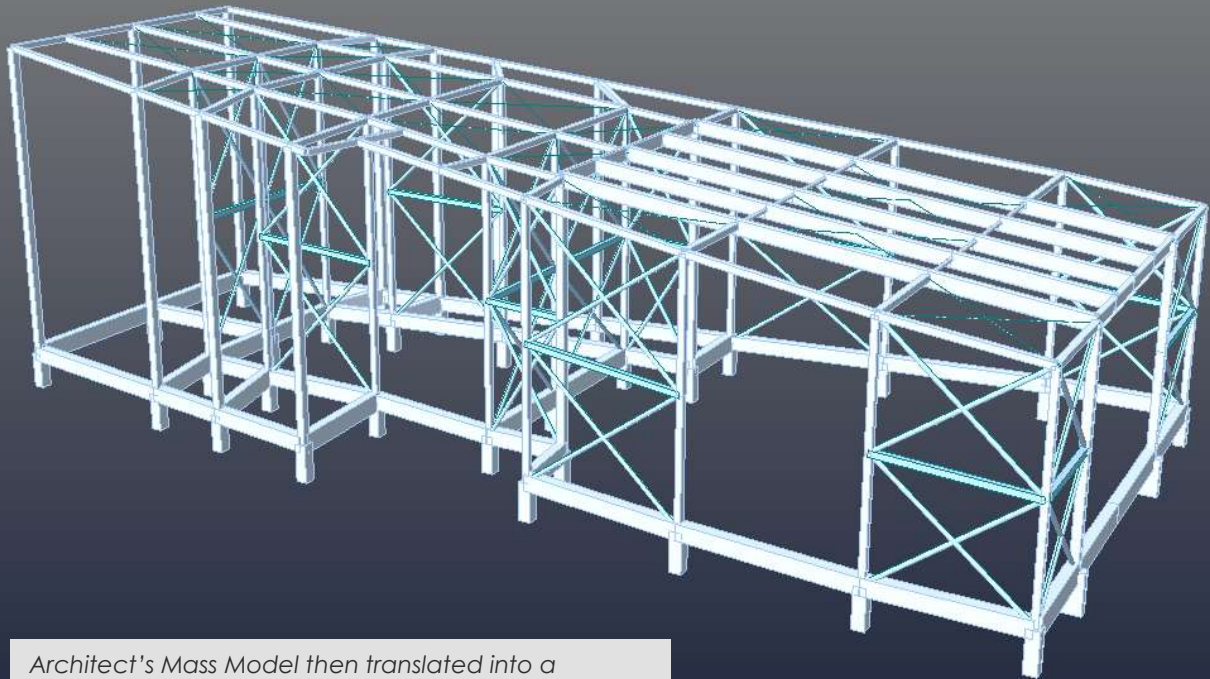
Location
Tagaytay, Philippines

Responsibility
Engineer-of-Record
(Structural Design)

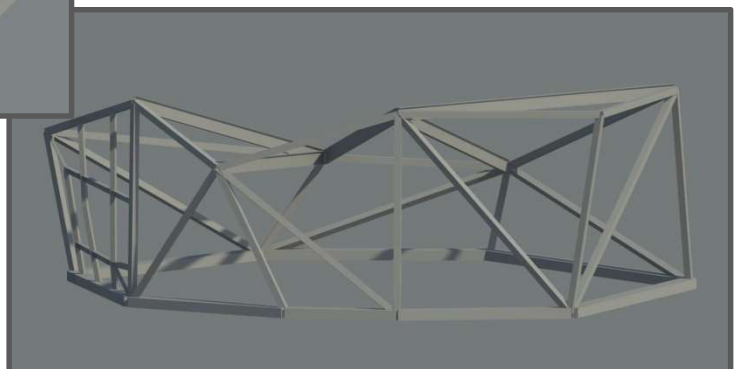
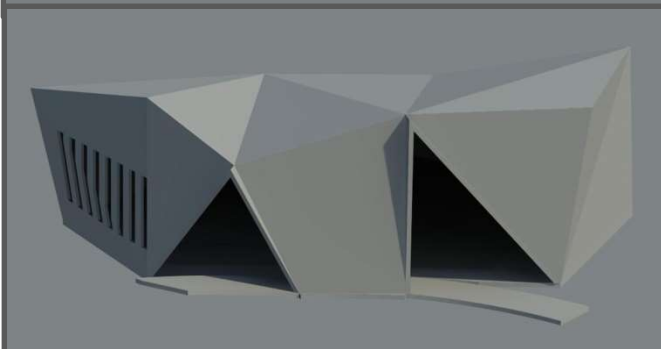
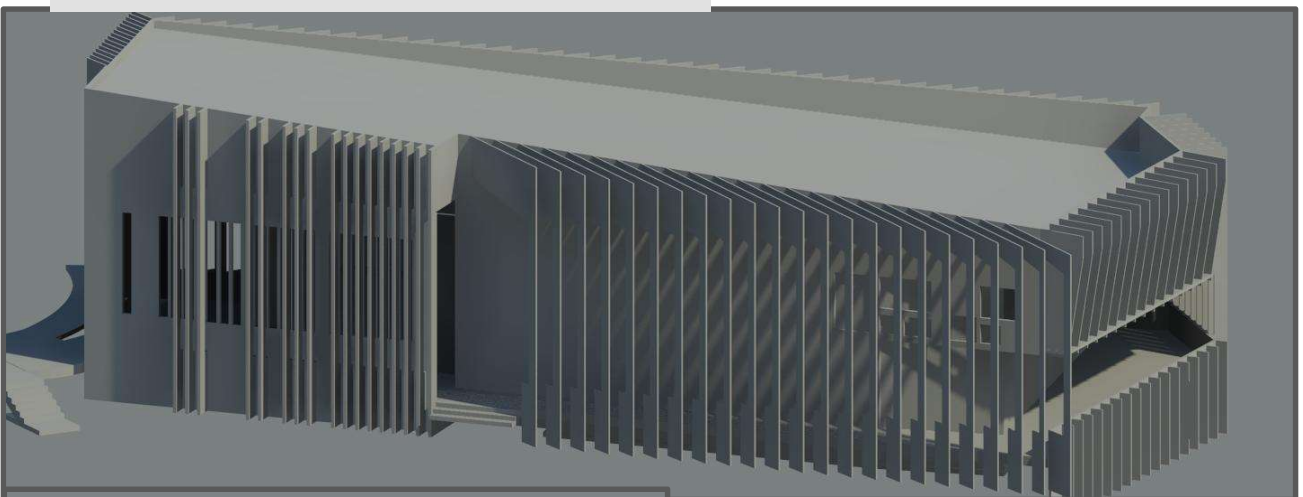
Design Feature
Structural, seismic
analysis and design
(Linear Static and
Dynamic)

Materials
Reinforced Concrete
Structural Steel

Est. Construction Cost
~ Php 40,000,000.00
(USD 800,000.00)



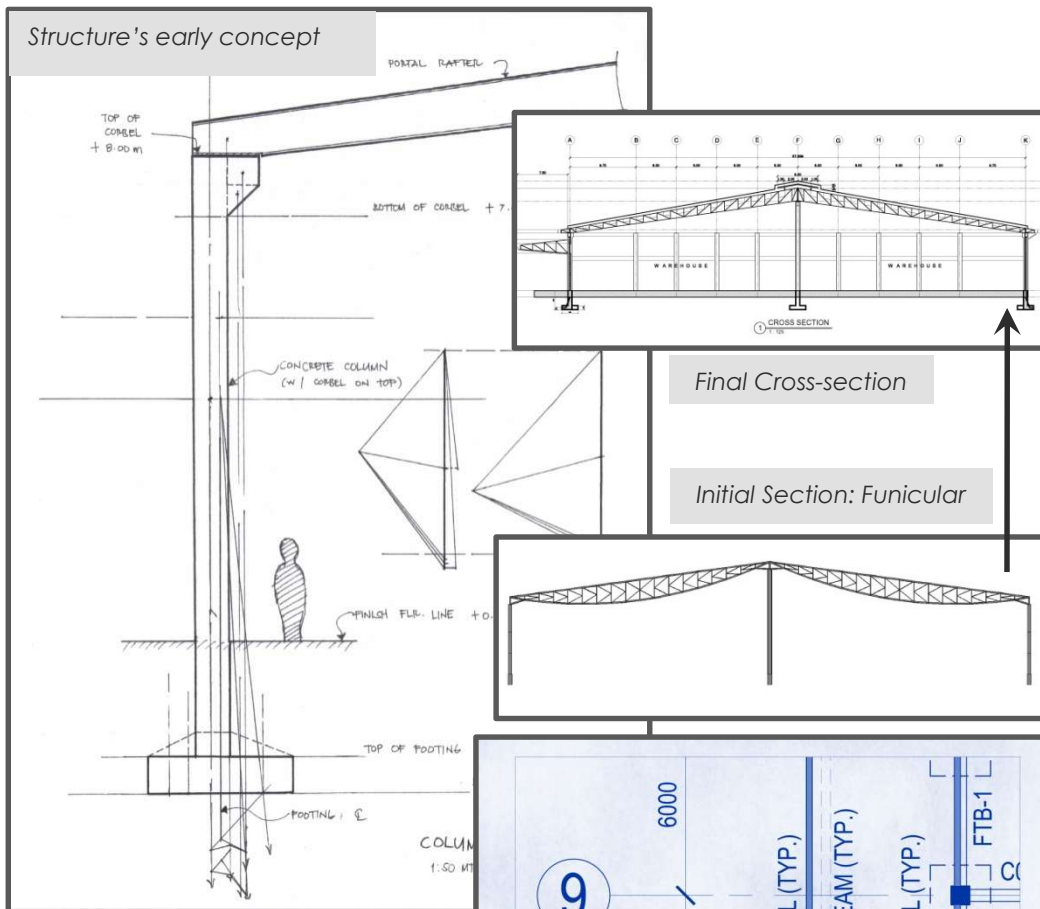
Architect's Mass Model then translated into a structural analytical model for the implementation of Static and Dynamic Analyses



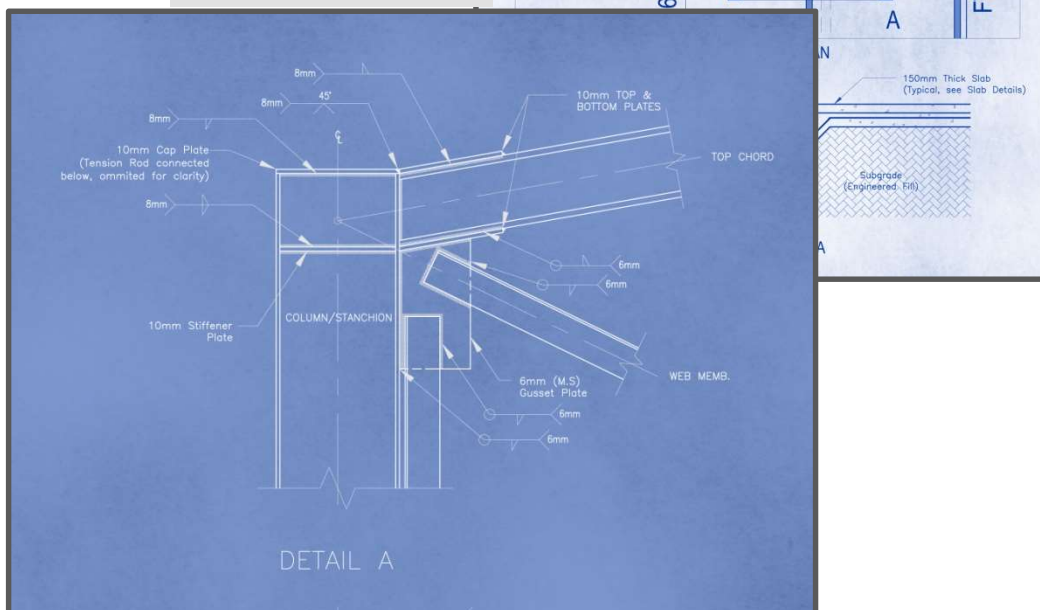
67.5m-Span Commercial Warehouse

November 2015 – February 2016

Structure's early concept



Snapshots of some construction details



Project Overview

Architect

Fulgar Architects

Location

Pasig City, Philippines

Responsibility

Engineer-of-Record
(Structural Design)

Design Feature

Structural, seismic
analysis and design
(Linear Static)

Materials

Reinforced Concrete
Structural Steel

Est. Construction Cost

~ Php 55,000,000.00
(USD 1.2M)

Spanbild New Zealand Ltd.

Across New Zealand

2014 – 2016



Sample Barnhouse (above)
and Portal Garage (below) by
Spanbild – Totalspan



Project Overview

Location

across New Zealand

Responsibility

Independent Contractor
supporting design (R&D)
team

Design Feature

Modified and Specific
Designs based on
company Standard
Designs

Materials

Cold-Formed Steel

TYPICAL SECTION END WALL FRAME

GIRTS AS SIDE WALL IN BUILDING TABLES

CROSS-BRACING
FOR END GABLE WALL
(without Openings)

Note:
All braces are 27x0.6mm strip brace
connected at each end by
4-#10G Tek Screws

END WALL POST (ON EDGE)
CENTER AS PER BUILDING
TABLE

END WALL POST (ON EDGE)
INTERMEDIATE OR SAME AS
CENTER, AS PER BUILDING
TABLE

END WALL PORTAL FRAME
AS PER BUILDING TABLE

TYPICAL SECTION MID WALL FRAME

APEX TIE

PROFILED SHEET
CLADDING

GIRT

GL

APEX TIE

PURLIN

COLD FORMED STEEL CRIMPED
LIPPED CHANNEL PORTAL FRAME
REFER TO BUILDING TABLE FOR
SECTION DETAILS

Sample Gable Frame
Drawings

OTHER PROJECTS (prior to 7DOF)

Windbreak and Dust Suppression Wall

December 2013 – January 2014



Actual photo prior to extension (left) and the new design rendered view (below)

Project Overview

Location

Bataan, Philippines

Responsibility

Engineer / Consultant

Design Features

Wind Load Analysis and Steel Design

Materials

Structural Steel

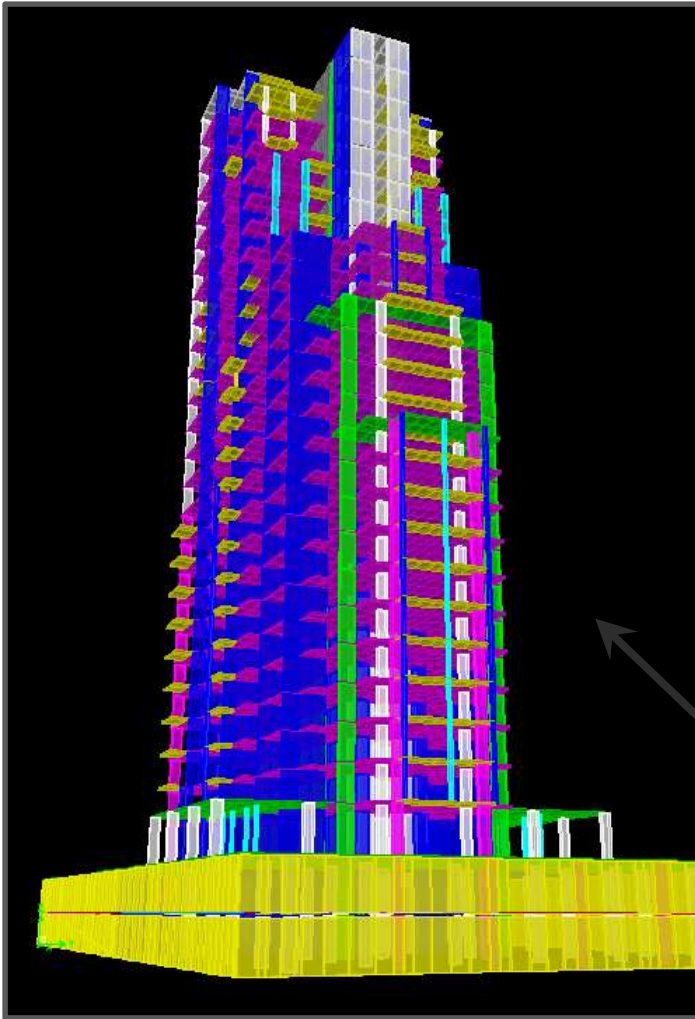
Est. Construction Cost

~ Php 120,000,000.00
(USD 2.4M)



25-Storey Building with Two-Level Basement

2013



Project Overview

Location

Dubai, UAE

Responsibility

Design Engineer for
Tandem Engineering

Design Features

Structural, seismic
analysis and design
(Linear Static and
Dynamic)

Materials

Reinforced Concrete

