



Hybrid

evos

Eco Voided Slabs

+

eTen

Post Tensioned Slabs



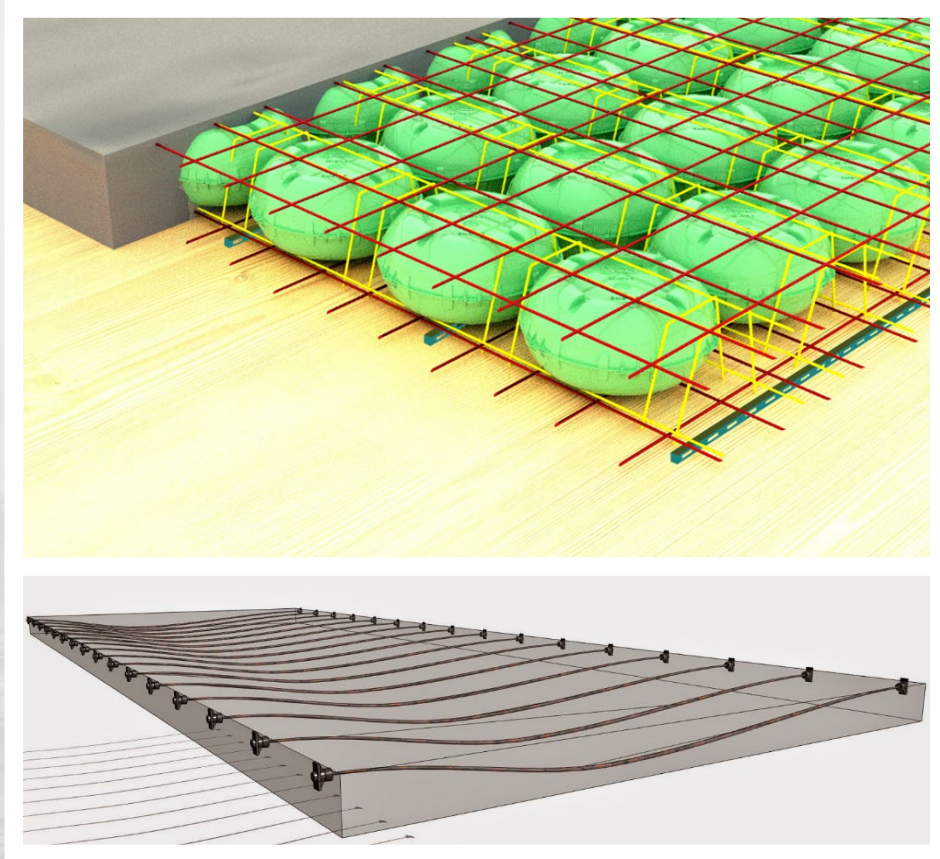
NEXT ERA
CME BUILDING CONTRACTING L.L.C

Introduction

eVos-eTen slabs are Voided-PT slabs, based on two featured construction techniques Voided Slabs and Post-Tensioned Slabs.

eVos is a superior bi-axial voided slab system, it creates voids within the concrete slabs in about 30-80% of the total slab area, replacing large quantities of concrete and dramatically reducing slabs self-weight.

The compressive force applied to post tension strengthens the concrete to create thinner plates while providing enhanced crack resistance and greater deflection control.





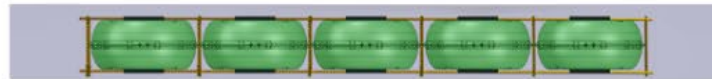
The Hybrid Solution

eVos with Post tension is developed to integrate the benefits of eVos and post-tensioning in one slab, hybrid slab. Hybrid slabs are longer, thinner, lighter and capable of spanning further than traditional reinforced concrete.

eVos -Post tensioned (hybrid) slabs are sustainable alternative to traditional reinforced concrete. Reduced quantities of concrete and reinforcement together with use of 100% recycled eVos void formers help to lower CO2 emissions and reduce the carbon footprint of the building.



Traditional Solutions VS CME Solutions



— **eVOS**
(Voided Slab)



— **eTen**
(Post Tension Slab)



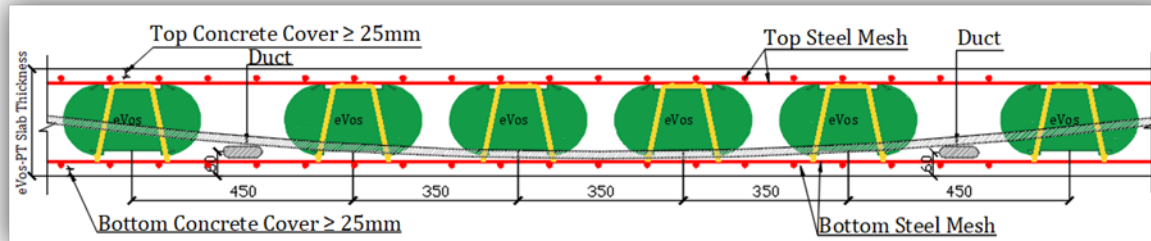
— **Hybrid**
(eVOS+ PT)



CME Hybrid Solutions:

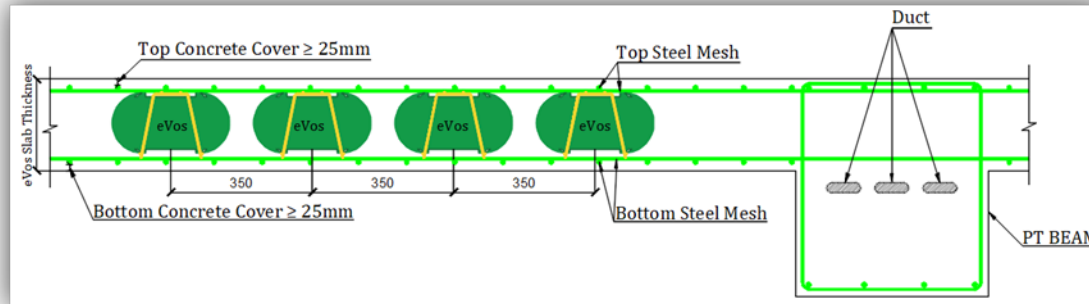
- CME features unique hybrid solutions, involving multiple systems, designed in-house, supplied as a complete CME single source package.
- Hybrid slab solutions integrate the benefits of several slab technologies in one slab solution, securing powerful engineering and construction activities optimization, mainly cost and time.

1



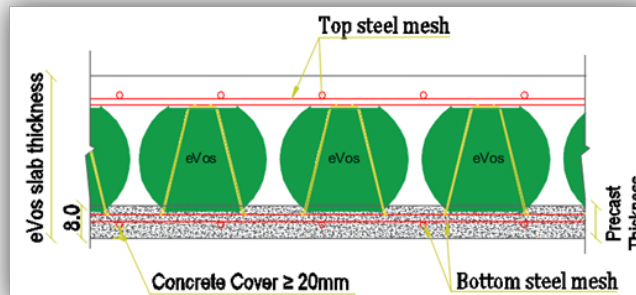
Voided-PT Slab

2



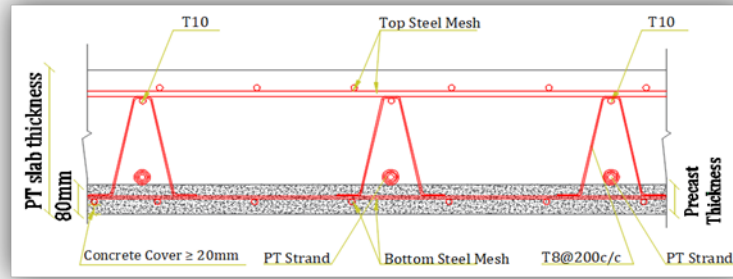
Voided Slab with PT Beams

3



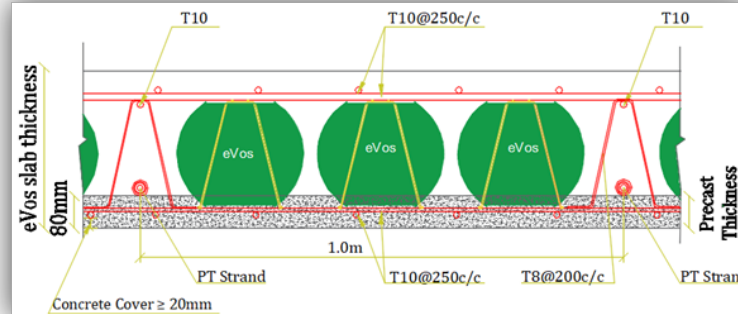
Voided Slab with Semi-Precast

4



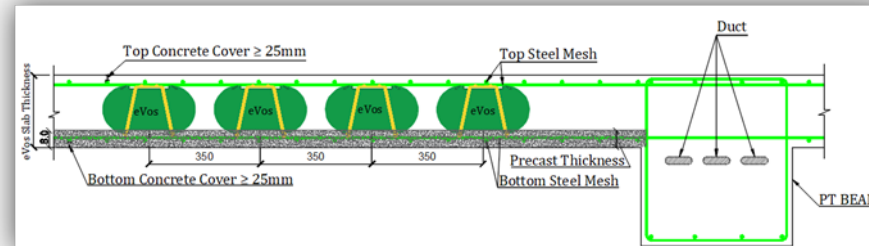
PT with Semi-Precast

5



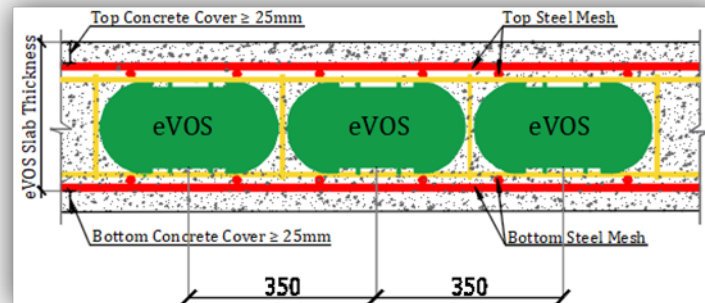
Voided-PT Slab with Semi-Precast

6



Voided Slab with PT Beams and Semi-Precast

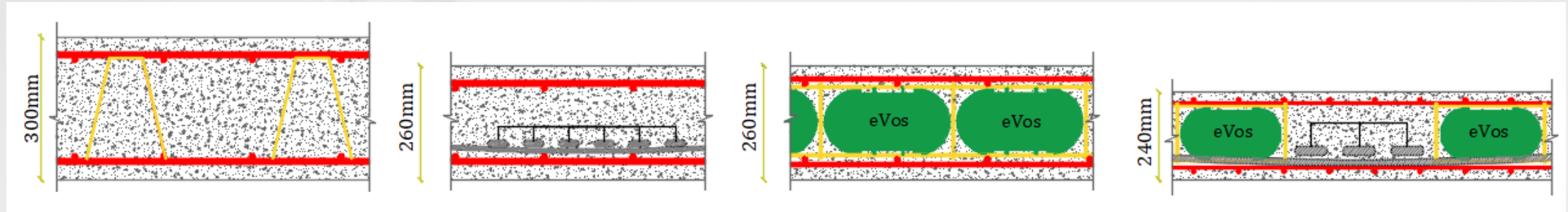
7



Voided Slab with Full-Precast



Approximate Comparison with RC Slab, 30cm thickness



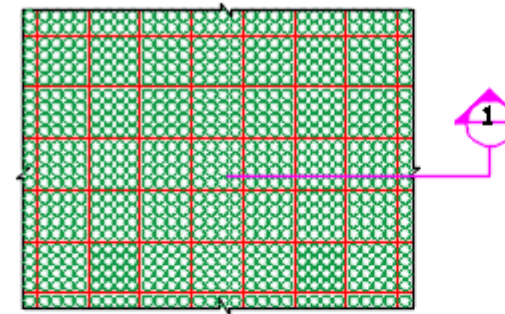
No.	Criteria	Solid Slab	eTen PT Slab	eVos Voided Slab	Voided-PT Slab
1	Slab Thickness	300mm	260mm	260mm	240mm
2	Concrete/ weight Reduction	Base of comparison	15%	30%	35%
3	Steel Reduction	Base of comparison	30%	15%	35%
4	Drop Beams/ Panels Removal	Base of comparison	70%	90%	95%



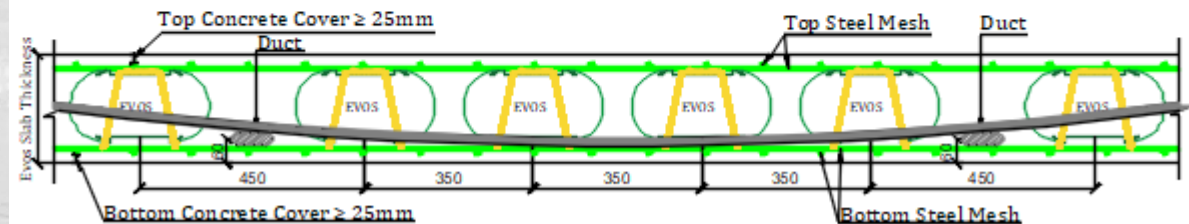
Highlighted on PT Hybrid, **Voided-PT Slab Options:**

1. Distributed- Distributed

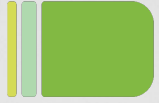
This layout involves evenly spaced tendons in both directions of the slab contributing in distributing the post tension balanced load and minimizing the stress concentration.



Partial Plan



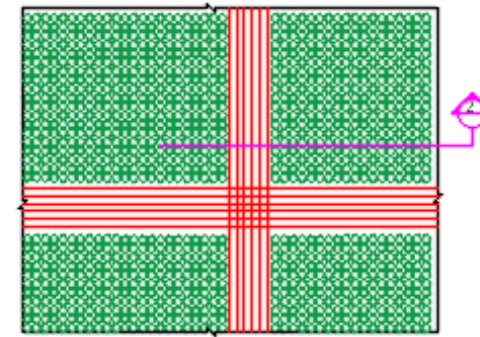
Section



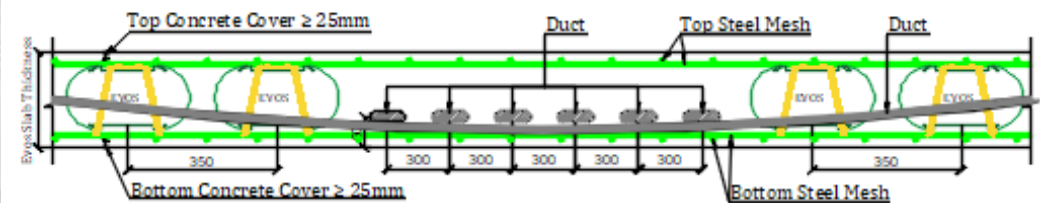
Highlighted on PT Hybrid, **Voided-PT Slab Options:**

2. Banded – Banded

Post tension tendons are concentrated at the support lines of the slabs offering larger voided area, easy construction and control of deflection.



Partial Plan



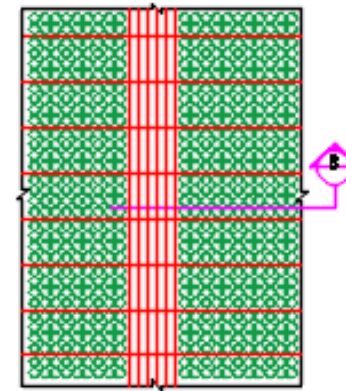
Section



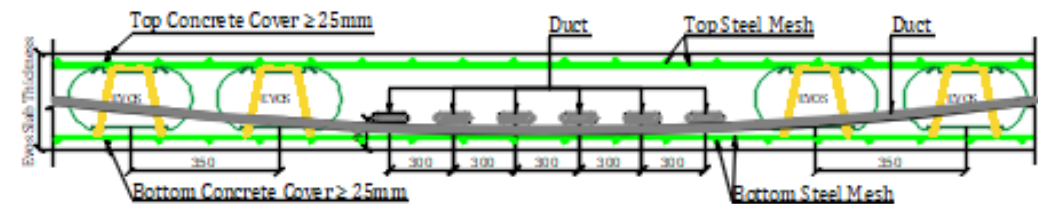
Highlighted on PT Hybrid, **Voided-PT Slab Options:**

3. Banded- Distributed

Using evenly spaced distributed tendons in one direction and concentrated banded tendons in the other provides control of deflection and minimizes the stresses in the direction of distributed tendons.



Partial Plan

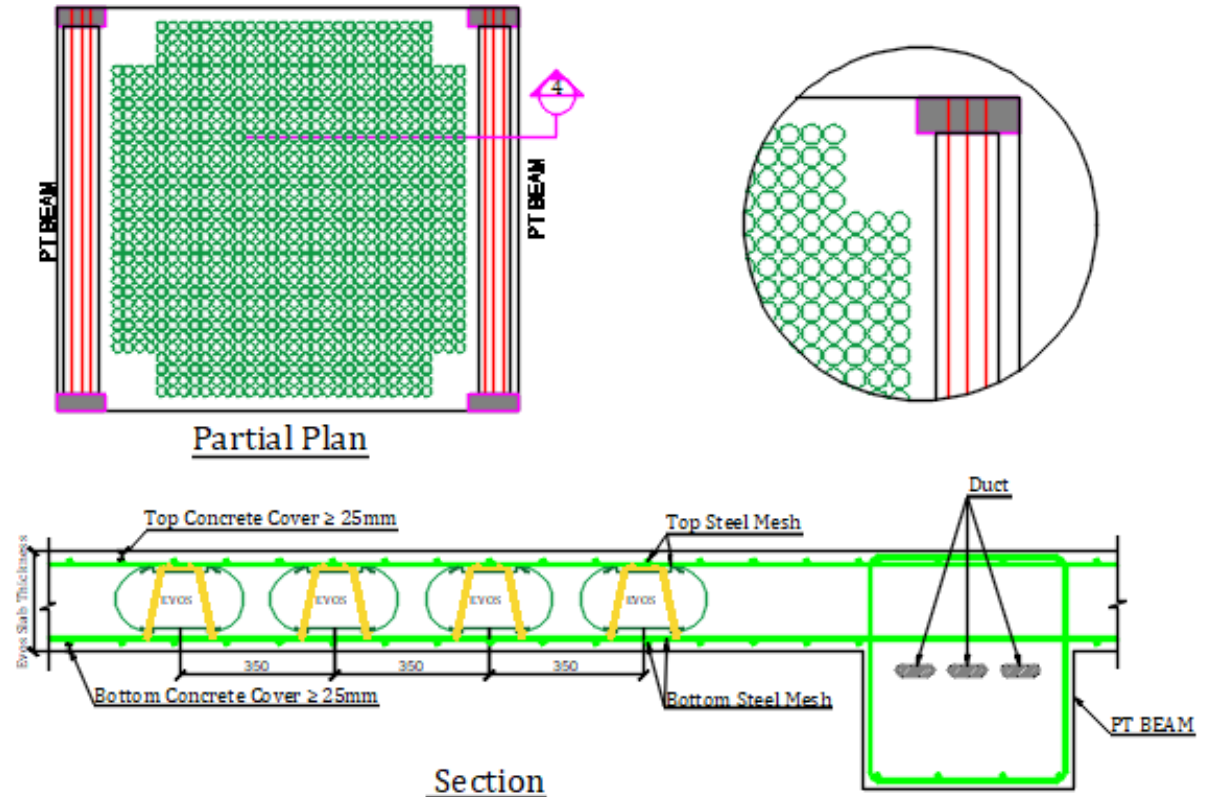


Section

Highlighted on PT Hybrid, **Voided-PT Slab Options:**

4. PT Band Beam with eVos

eVos voided slab can be executed also with post tension band beams achieving lighter slabs in long span structure.





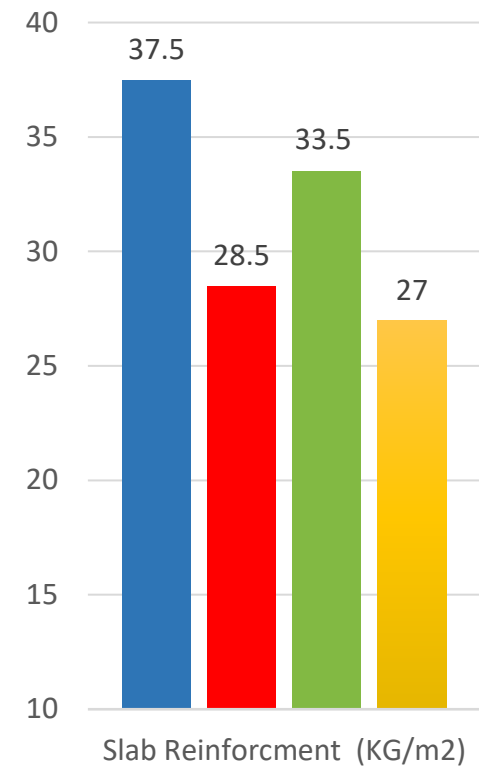
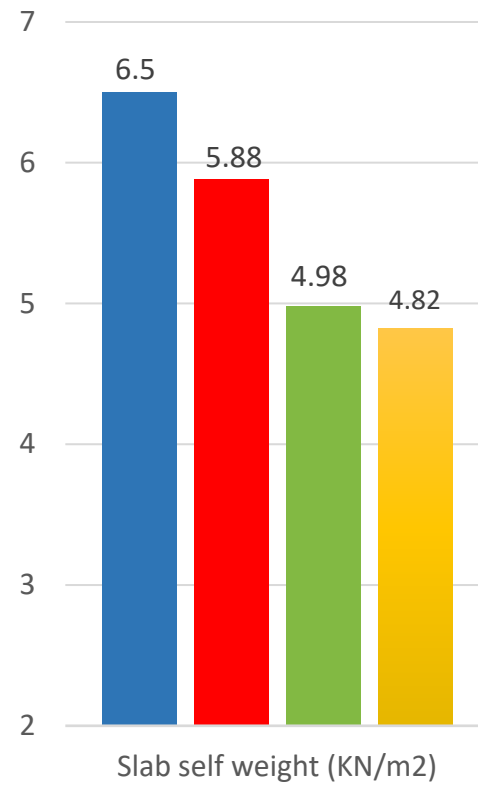
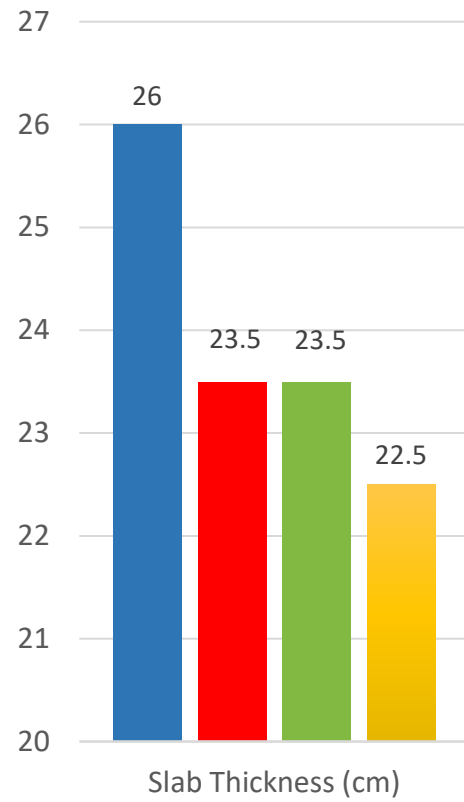
Hybrid, Voided Post Tension Slabs Benefits

- a. Ultra – long spans to give greater flexibility in layout design.
- b. Voided slabs to reduce the amount of concrete required.
- c. Thinner, lightweight slabs to optimize the structure and the foundations.
- d. Superior crack and deflection control.
- e. Enhanced sustainability.
- f. Significant reduction in total steel reinforcement
- g. Superior optimization in vertical elements & in foundations construction material
- h. Cost Saving.





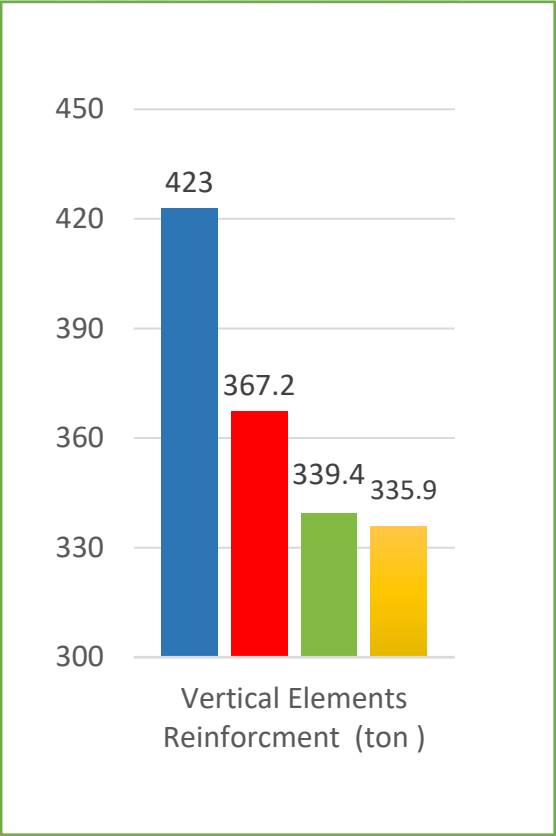
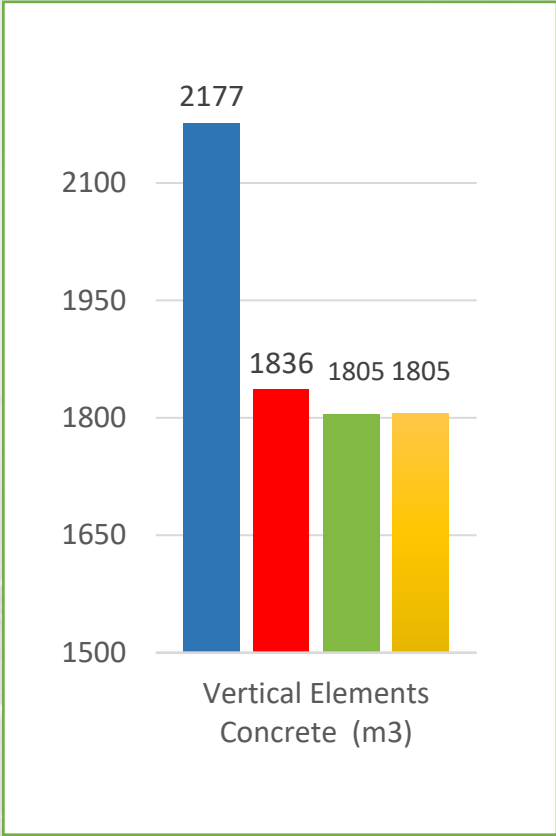
Slabs Results



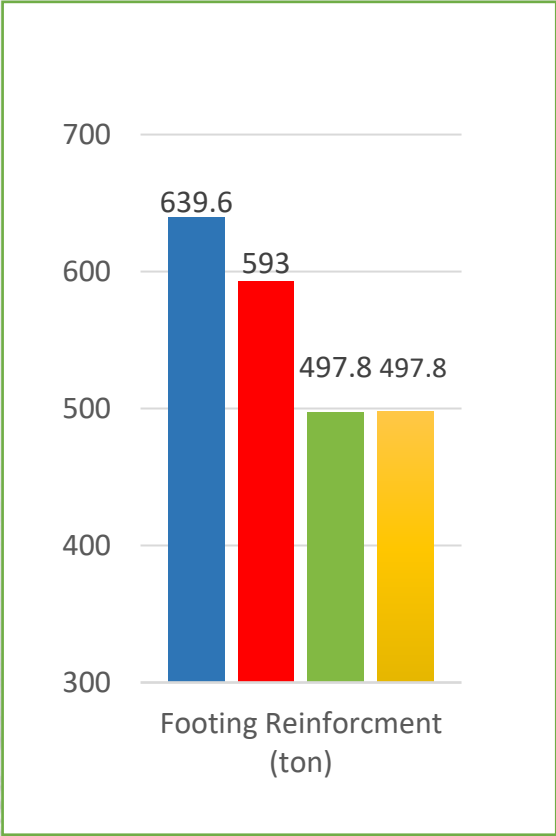
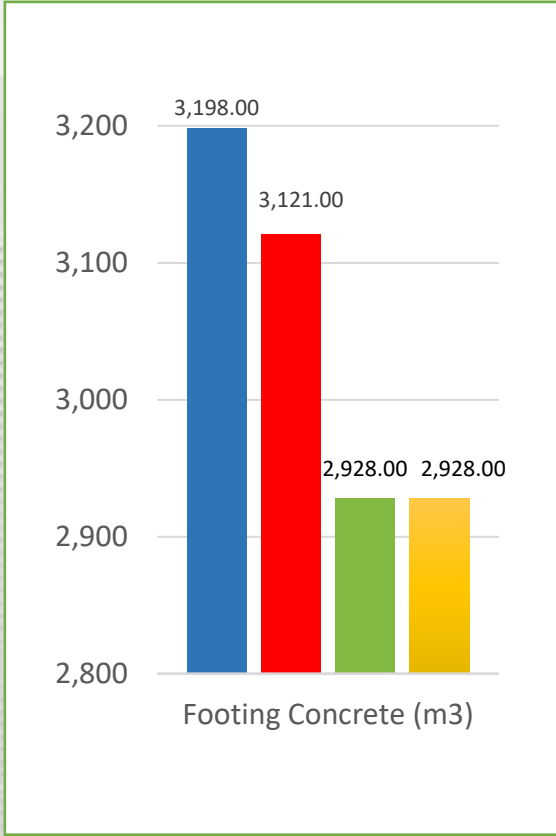
■ Solid/ Flat ■ PT ■ eVOS ■ eVOS-PT



Vertical Elements Results



Vertical Elements Results



Environmental Benefits

Less Plastic Pollution

eVos VF is made from recycled plastic materials collected from city landfills.

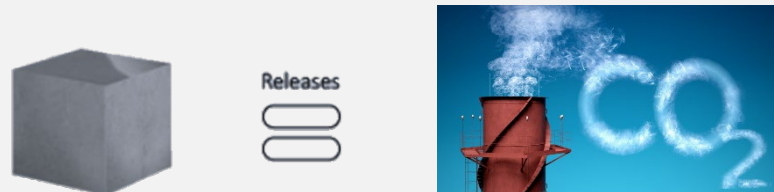


Less Traffic

Delivery of one 40ft container replaces in average delivery of 30 concrete mixers.



Less CO2



Production of 1 m³ of concrete releases 210 kg of CO₂ into the air



1 - Design Professional Indemnity (PI)

2 - Public & Product Liability

	MOMENTUM INSURANCE AGENTS LLC مومنتيوم أولئك التامين لن ديم	 دبي التأمين DUBAI INSURANCE CARD & COMPENSATION SCHEME
QUOTATION		Date: 10 th February 2023
Ref. No.		
Policy Type	Public & Product Liability	
Policy Form	PCA 94 Classmate Form Wrangling	
Policy Trigger	Occurrence basis	
Name of the Insured	MR. Cushman Middle East DMCC member Next Era CME Building Contracting LLC	
Address of the Insured	TBA	
Insurer's Activities	> Building & Construction Materials Trading > Building Contracting	
Estimated Annual Turnover	AED 33,000,000/-	
Period of Insurance	12 months from the date to be agreed	
Limits of indemnity	AED 8,000,000 any one occurrence and in the aggregate including legal costs and expenses	
Territorial Limits	Worldwide excluding USA & Canada	
Applicable Law & Jurisdiction	Worldwide excluding USA & Canada	
Insurance Condition	As per PCA 94 form, subject to the following:	
	▪ 30 days' notice of cancellation (on short rate basis) by either side subject to all claims only ▪ Cost inclusive Claims ▪ Change in the Risk Class ▪ Work safety rules ▪ Premium Payment Clause = 30 days ▪ Including Contractual Liability ▪ Cover for sudden and accidental pollution ▪ Personal and Advertising Liability ▪ Food and Drink Liability = up to AED 250,000/- anyone occurrence and in the aggregate ▪ Liability arising from Fire, Explosion and Water Damage ▪ Torts Liability ▪ Professional Liability	

Page 1 of 3

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3060 Saturn Street, Suite 100
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www.iccsafe.org

Azzam Khaled
Chief Executive Officer
COBIAX MIDDLE EAST DMCC (CME)
Office 2006, JBC1, Cluster G, JLT
Dubai, United Arab Emirates
Phone: +971 (4) 4431150

Dear Mr. Khaled:

Some background information and the review process are described below.

Background Information

It must be noted that the behavior and design of a voided slab system are not fundamentally different from those of a regular solid slab system. Voids created in a slab by using void formers reduces the weight of the slab, which, in turn, reduces the gravity loads imposed on the structural members.

August 06, 2020

EXECUTIVE SUMMARY

Elliptically shaped recycled plastic void formers are available in different sizes as will be discussed later. The main purpose of the voids is to eliminate concrete in areas where it is not needed, thereby reducing the overall weight of the floor system, and all supporting members.

The EVOS floor systems are designed to meet the requirements of ACI 318-19 and IBC 2018. The design of EVOS slabs follows the same process as with a conventional concrete slab floor system. The following factors must be accounted for in the design:

- Reduced Dead load, up to 35%.
- Reduced slab stiffness, varying between 0.81-0.93 (See Appendix A).
- Reduced shear capacity in voided section varies between 0.50-0.63 (See Appendix B).

^aConsultant, Member of ACI 318 (23), Member of ASCE 7 (22)

Page | 1

Michael Ross



البلديات
Ministry of Municipalities
and Urban Planning

**شهادة اعتماد
لنظام بناء جديد**

بلدية دبي
Dubai Municipality



رقم الاعتماد:	تاريخ الإصدار:	تاريخ الطماعة:
470761	26-Dec-2025	30-Dec-2025

اسم مقدم الطلب : كست ابراهيم ام اي معلومات ابناءه ش-حم

اسم الشركة / المكتب / الصنع : كويباس استيل مدرجس

اسم الشركة الأم : اعتماد نظام بناء جديد

نوع الاعتماد : مشتكات الفوارق للمنظومات الجرانسية EVOS

اسم النظام : اعتماد نظام مشتكات الفوارق لمنظومات الجرانسية EVOS

وصف النظام : شروط خاصة

80mm to 100mm solid strip to be added at the edges.

الاشتراطات لاجزء الترسيم الموصحة في ECR – EC الانشاس 71920- 2020/ 11/16 بالمرح والشروط الانشاسية المذكورة في هذا الاعتماد Minimum of 25mm concrete cover to reinforcement shall be provided for the external sides of the slab

التراسم الشارطة خاصة بالنظام الانشاسي على عملية التركيب والتنفيذ في الموقع وعلى آلية الانشاس في الصناعات ومطابقتها للمواصفات المعتمدة التأكيد من ح-حم صانع على شهادات مطابقة الجودة من جهات مستقلة

نوع مشتكات الفوارق : EVOS module SCE S100 to S300 (المصدر – الفارات وكرويات)

اي يتم صب الخرسانة على طبقتين لثبات جيب مشتكات الفوارق وان تكون الخرسانة متماصة بمقدار هوب (Slump) من الفتحة F3 و F4

التراسم يمتثل لمتطلبات حذمين الاعتماد في التراسم واشتراطات حذم المراتل للحريق وسلامة الازواج وادارة الدفعا المعني بدبي

Minimum 20 or 1mm solid slab to be provided around the columns. Columns to be connected by min 40cm thickness beams both ways

Minimum concrete thickness of 50 mm shall be provided for each of the top and bottom solid layers above the voids

الان ح-حم مسؤول المهندس الاستشاري في اشروع يستخدم فيه النظام التأكيد من مطابقة لشروط الاعتماد ومواصفات المشروع من حيث التصميم والة التنفيذ.

شروط عامة :

1 هذه الشهادة لا تجوز تسيار افعال اإ بعد الحصول على الترخيس بناء لكل مشروع يستخدم هذا النظام عن طريق ح-حم

2 استخدا ح-حم معتمدة من حذمين في المركزي

3 تطبيق المواصفات المعتمدة كالمناحج والمصنوع لبلدية دبي

4 في حال التماس اي تعديل على النظام يجب الحصول على موافقة نظام ذلك واي يعتبر النظام في حكم الفالون

5 يعتبر النظام في حالة ظهور مشاكل في تخالف المعايير والمواصفات المعتمدة

6 اذا الاعتماد اساس المعنول لمدة سنة واحدة من تاريخ صدور حذمين خاضع لتعديل



البلديات
Dubai Municipality

حذمين الفاروق (22123232)

رؤة اارة الماني : مانييا حذم العام

حذمين الفاروق (22123232)

رؤة اارة الماني : مانييا حذم العام



امارات العربية المتحدة - حكومة الشارقة
 بلدية مدينة الشارقة
 United Arab Emirates - Sharjah Government
 SHARJAH CITY MUNICIPALITY

التاريخ: 2021/02/21
المرجع: 169/932/2021

الحقوق

المادة/ شركة كوباكس الشرق الأوسط
تحيةة طيبة وبعد،

شهادة اعتماد نظام الأسقف المخرقة (Evo-Coblox-System)
والمقدم من شركة تكست ابرا التجارة مواد البناء ذ.م.م

بالإشارة إلى الموضوع أعلاه وتنادي على الرخصة التجارية المقدمة من قبل المائدة شركة تكست إيرا لتجارة مواد البناء. فقدمت عرض شركتكم الموفرة في إدارة الشارقة تخيد بلدية مدينة الشارقة بأنه لا مانع من اعتماد النظام المذكور أعلاه، وذلك طبقاً للشروط التالية:

- [illegible]

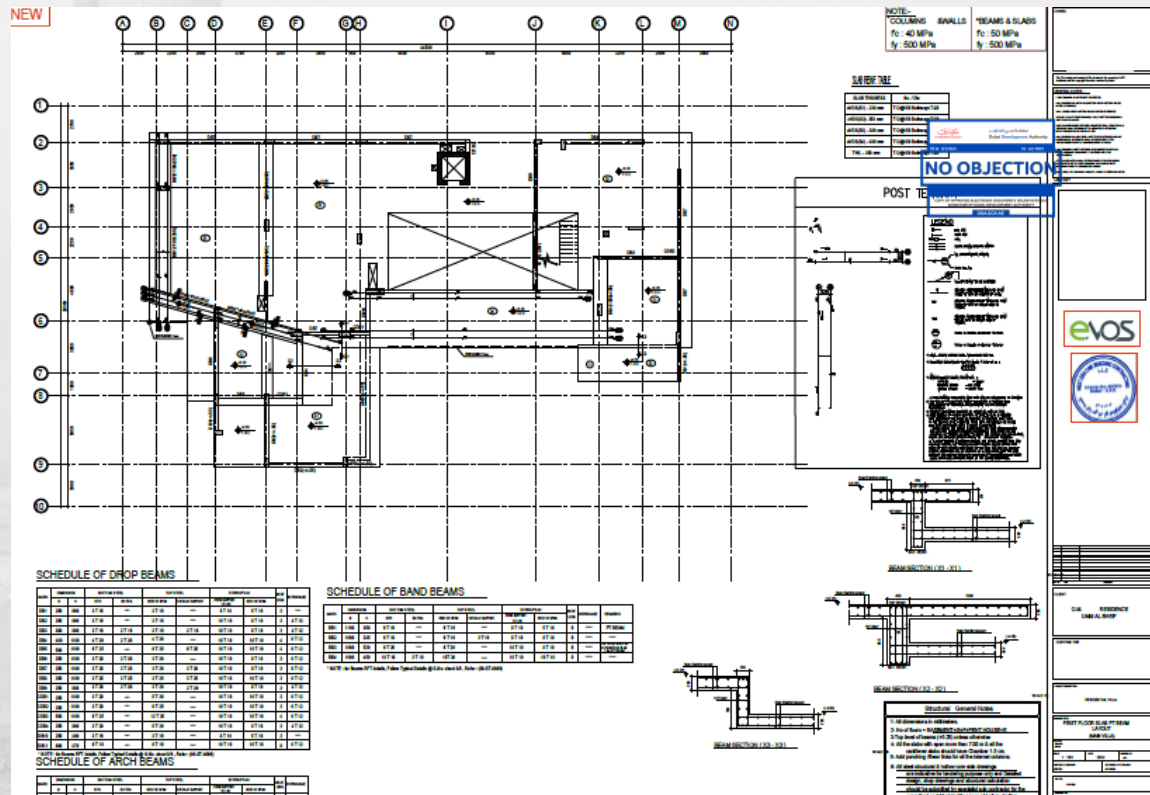
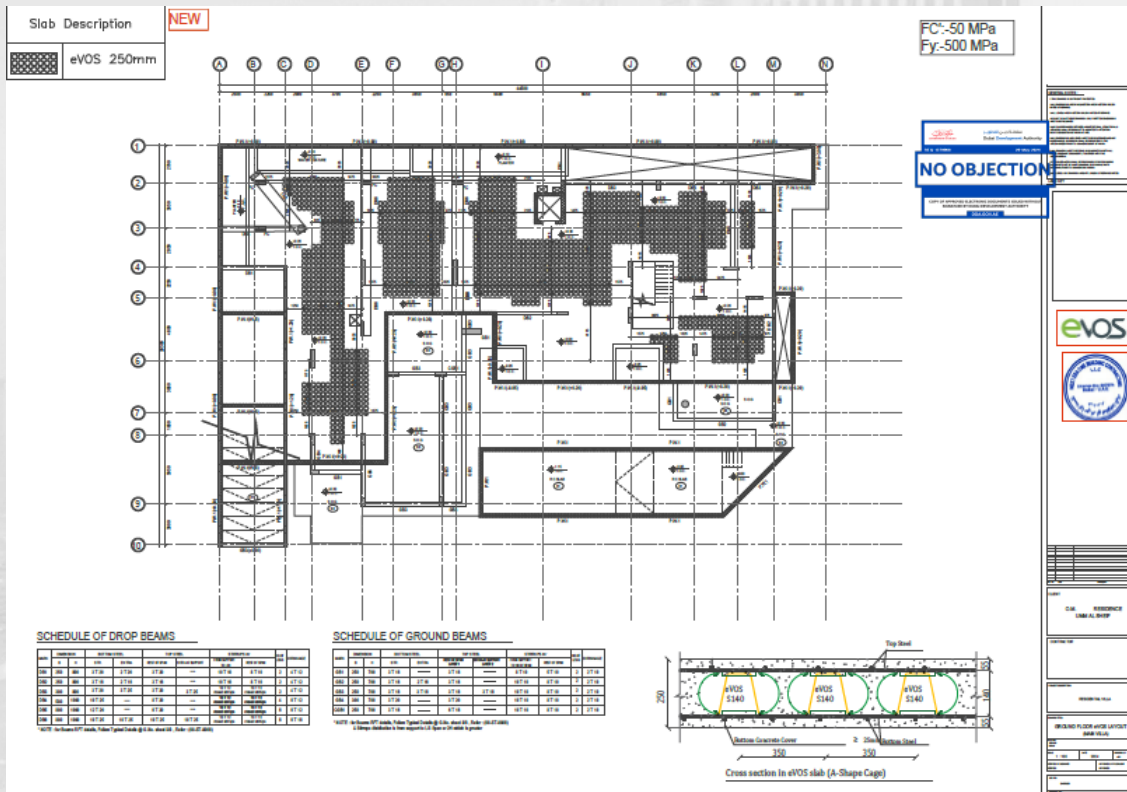
٤ / مدير عام بلدية الشارقة



2021-02-18

- تم دفع الرسوم بإجمالي بمبلغ (5000 درهم) برقم (9030720849) وتاريخ: 2021-02-18

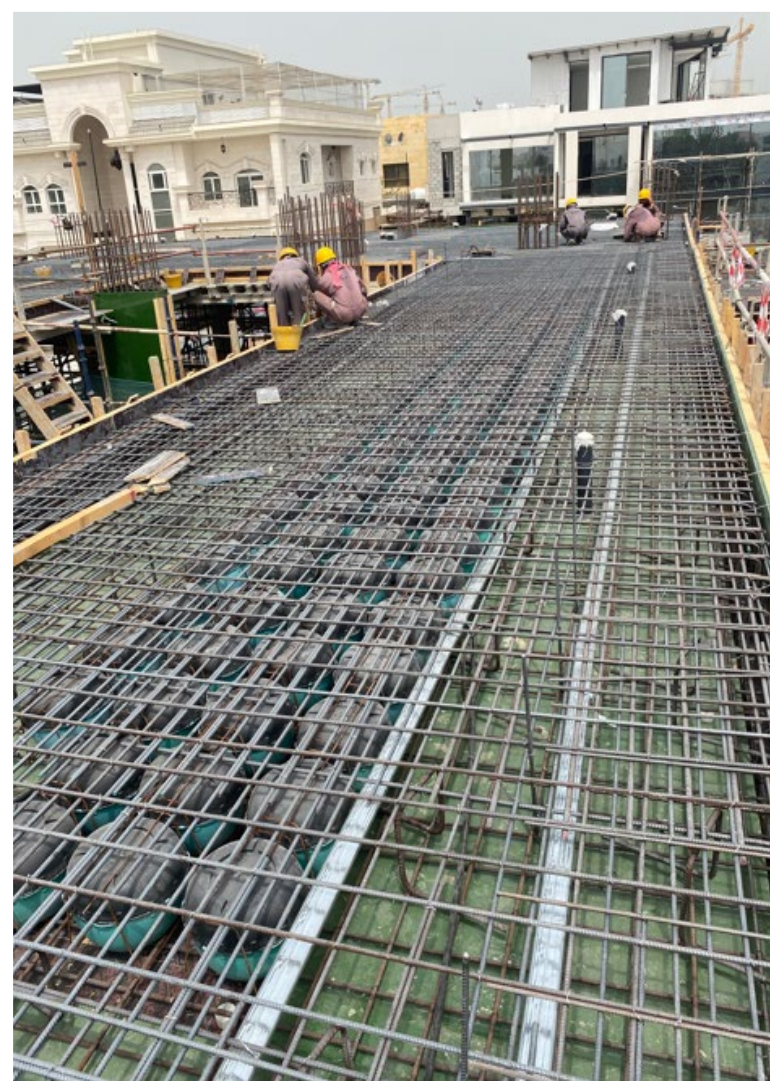
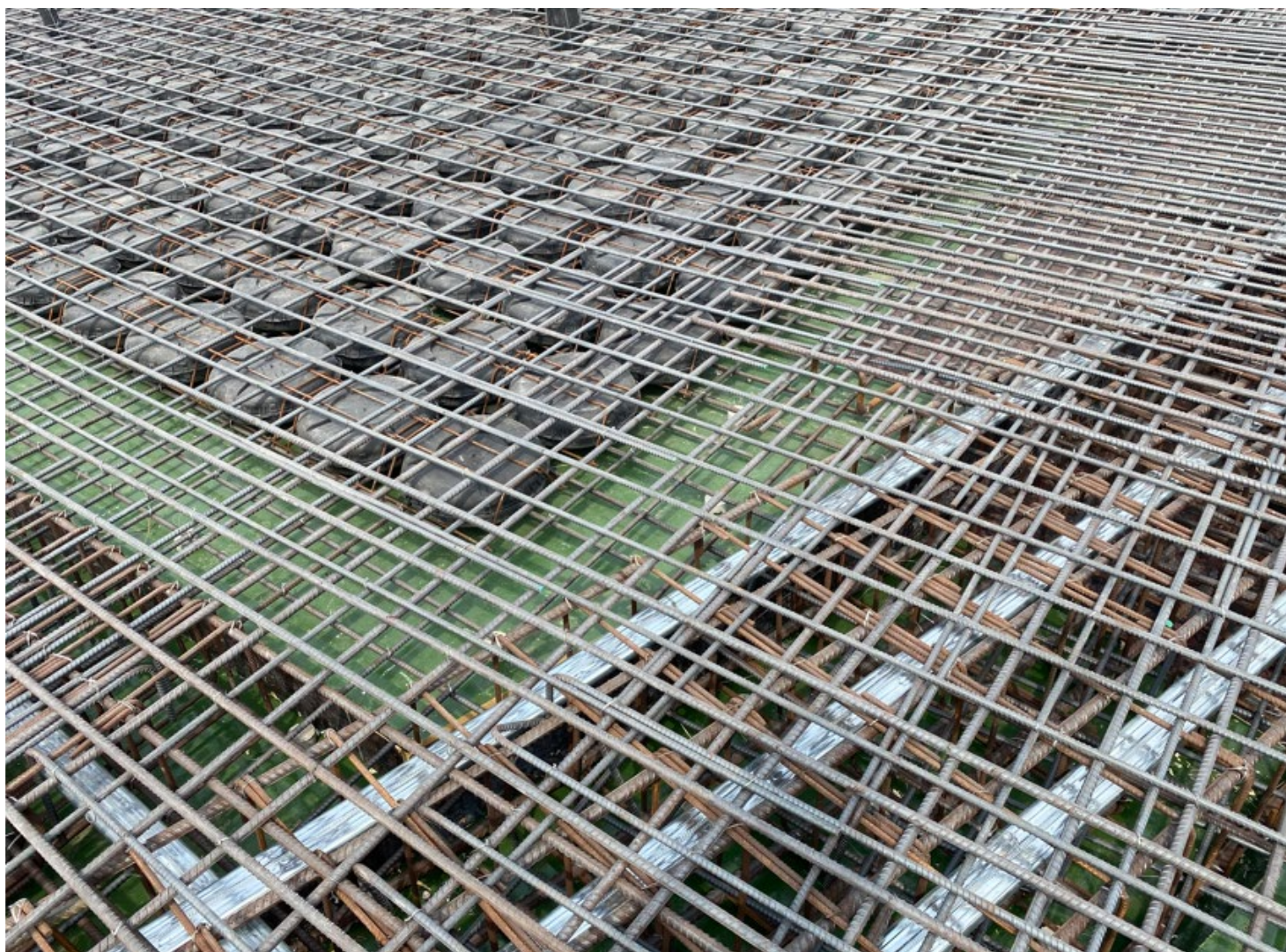
Tel: +971 4 362 3333 Fax: +971 4 362 4111 F11 Box 22 Sharjah U.A.E. e-mail: info@sharjah.gov.ae www.sharjah.gov.ae





Hybrid Slabs on Site













Applications

- Commercial & Residential Buildings
- Villas
- Schools
- Hospitals
- Shopping Malls
- Stadiums
- Towers
- Car Parks





NEXT ERA
CME BUILDING CONTRACTING L.L.C



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Tower 01, Tecom,
Dubai, UAE



THANK YOU