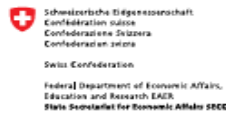


ورشة عمل  
تعديل مواصفات مواد البناء وإنشاء الطرق

# Modifying and Updating (7) Egyptian Road Construction Standards

**GIZ Project: Modifying and Updating Selected Egyptian Standards to encourage the use of Recycled Construction and Demolition (C&D) Wastes in Manufacturing Construction Products and Road Construction, Project No: 18.2158.6-001.00**

April 6, 2021



Implemented by



# Presentation Content for “Road Construction Standards”

Technical Committees

The Boom of Roads & Highways Construction in Egypt

Road Construction Materials

Updated Standards Related to Road Construction

How This Modification Could be Helpful for Road Construction ?

A Brief Description of Each Updated Egyptian Standard.

# Technical Committees

الجهة	أعضاء اللجنة	م	اللجنة الرئيسية الفنية رقم (2/27) الخاصة بالطرق والكباري
شركة المقاولون العرب	م. محمود محمد عدوى	1	
شركة النصر للمقاولات	م. احمد ابراهيم عبد المغنى	2	
مصلحة الرقابة الصناعية	م. لبنى محمد احمد	3	
الهيئة العامة للطرق والكباري	د. حسام بدر الدين ابراهيم	4	
الشركة القابضة للطرق والكباري	د. هانى ليون زكى	5	
الهيئة المصرية العامة للمواصفات والجودة	م. اكرام سعيد حسن عبد الغنى	6	

الجهة	أعضاء اللجنة	م	اللجنة الفرعية رقم (2/27/1) الخاصة بالطرق والكباري
المركز القومى لبحوث الاسكان والبناء	أ.د. زينب صلاح الدين حسين	1	
المركز القومى لبحوث الاسكان والبناء	أ.د دينا محمود صادق	2	
المركز القومى لبحوث الاسكان والبناء	أ.م.د. ايرينى عبد الرورف وطسن	3	
الهيئة المصرية العامة للمواصفات والجودة	م. اكرام سعيد حسن عبد الغنى	4	

# The Boom of Roads & Highways Construction in Egypt

NEWS PRODUCTS FEATURES CATEGORIES EVENTS MAGAZINE VIDEOS

HOME > FEATURES > ROAD STRUCTURES > BUILDING EGYPT'S WORLD CLASS DESERT HIGHWAY

## Building Egypt's world class Desert Highway

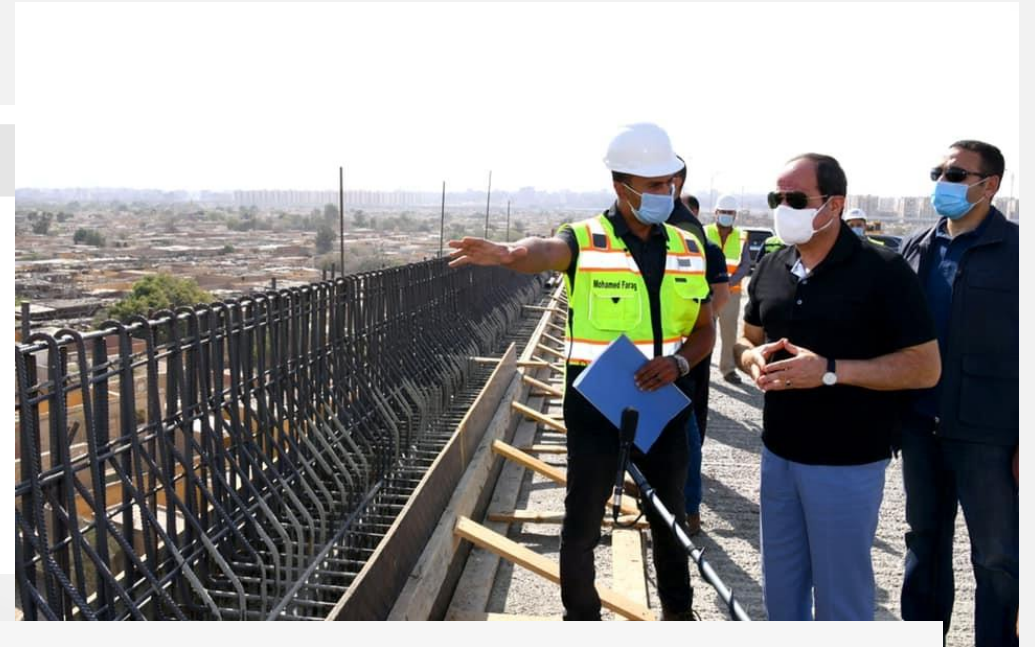
A huge highway upgrade project will transform the Cairo-Alexandria road link into a world-class connection as Mike Woof reports. The work to upgrade the Desert Highway connecting Egypt's sprawling capital Cairo with its major port Alexandria, is one of the country's largest infrastructure projects for many years. This 220km highway link is being widened and improved to cope with the hugely increased traffic volumes resulting partly from Egypt's fast growing vehicle population. The Egyptian economy is strong

Road Structures / April 13, 2012

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## Egyptian President inspects Hassan Allam-built roads, bridges projects

As part of his visit, Al-Sisi also inspected the site of the bridge that links the Fustat Road and Autostrad Bridge in Cairo



HOME > NEWS > ROAD STRUCTURES > EGYPT PRIORITISING ROAD BUILDING

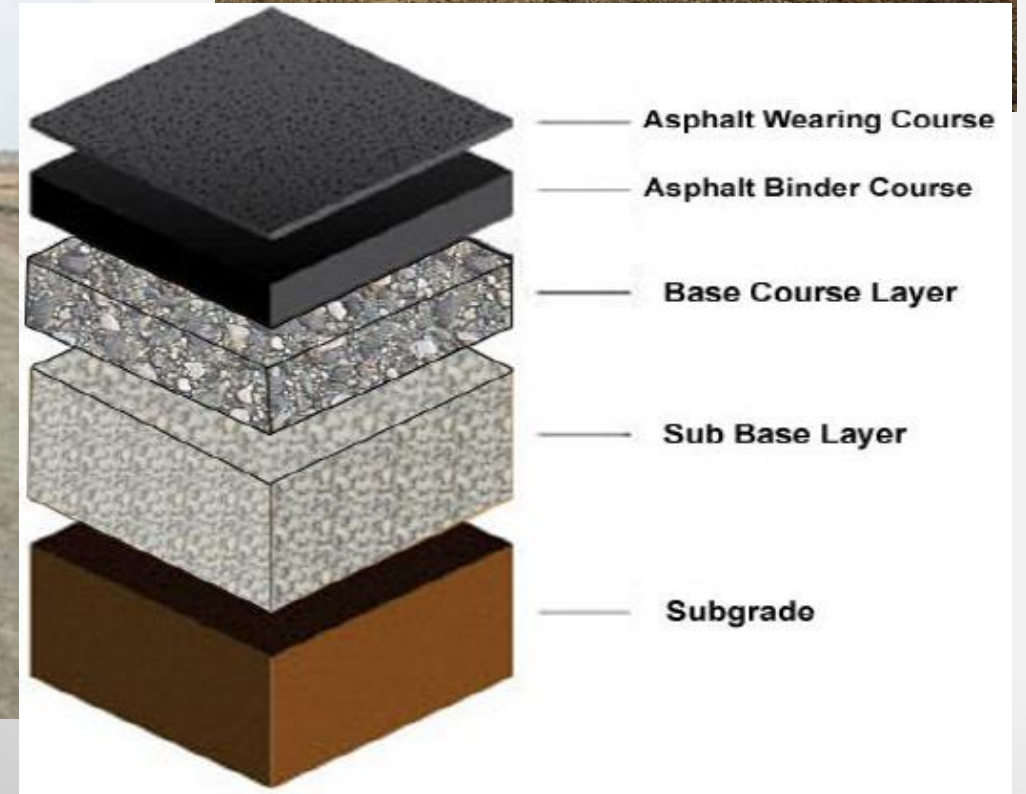
## Egypt prioritising road building

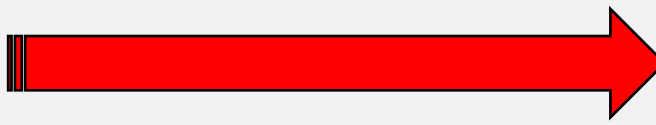
Egypt is prioritising road construction in a bid to boost the country's economic development. The country is shortly commencing the third phase of its national roadway project. This will cost US\$524.3 million and involves improvements to existing routes and building new roads, with a total distance of 1,154km. The 400km link from capital Cairo to Assiut will be a priority. Work on this project commenced some years ago. A new 37km link will also be built alongside the Cairo-Suez highway. Other projects being

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# Road Construction Materials

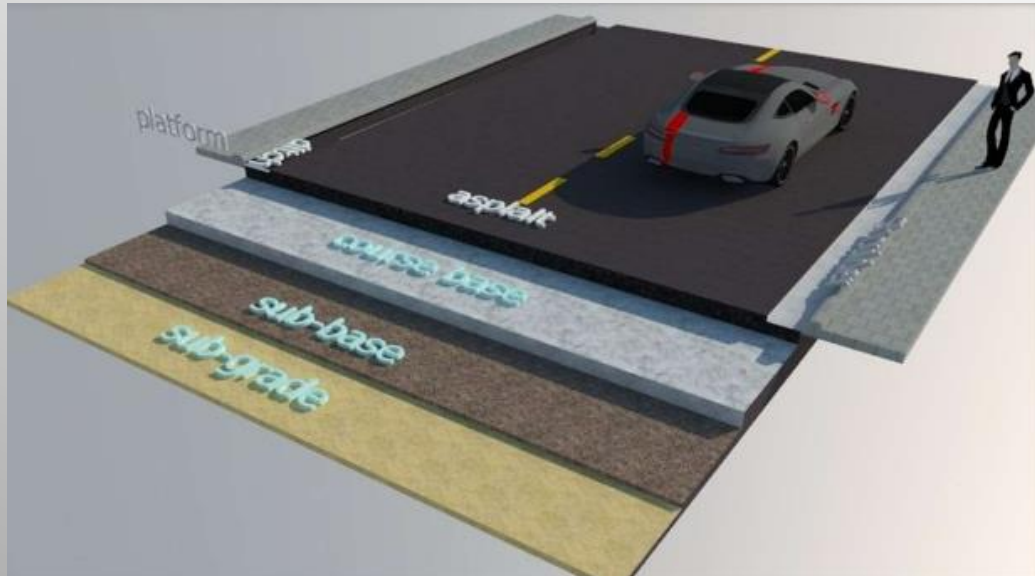




**Sub-base Course**



**Base Course**



# Updated Standards Related to Road Construction

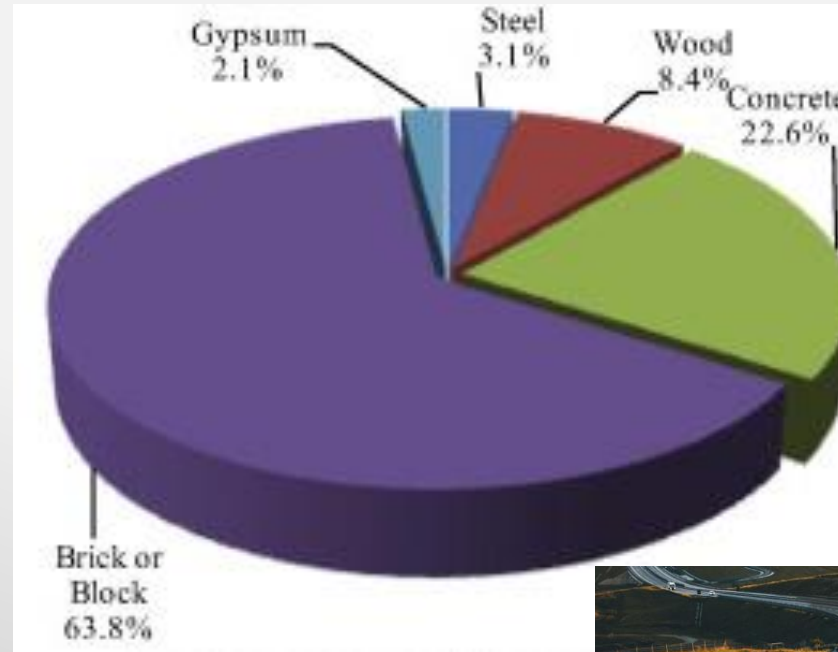
No.	ES No.	Arabic Title	English Title	EU/American Standard Reference
1	7613	الركام المستخدم في الخلطات البيتومينية ومعالجات السطح للطرق وممرات المطارات ومناطق السير الأخرى	Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas	European Standard EN 13043 /2013
2	7848	الركام للمواد غير المربوطة أو المربوطة هيدروليكيًا للاستخدام في أعمال الهندسة المدنية وإنشاء الطريق	Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction.	European Standard EN 13242/2002+A1/2007
3	4382	وحدات الرصف الخرساني - الإشتراطات وطرق الإختبار	Concrete paving blocks. Requirements and test methods	European Standard EN 1338/2003



# Updated Standards Related to Road Construction

No.	ES No.	Arabic Title	English Title	EU/American Standard Reference
4	8016	الحواجز الخرسانية سابقة الصب	Standard Specification for Precast Concrete Barriers	American standard ASTM C 825/2011
5	8293-1	الرصيف الخرساني – الجزء الأول - المواد	Concrete pavements - Part 1: Materials	European Standard EN 13877-1
6	8293-2	الرصيف الخرساني – الجزء الثاني – المتطلبات الوظيفية للرصيف الخرساني	Concrete pavements - Part 2: Functional requirements for concrete pavements	European Standard EN 13877-2
7	8293-3	الرصيف الخرساني – الجزء الثالث – متطلبات أشاير الربط المستخدمة في الرصيف الخرساني	Concrete pavements - Part 3: Specifications for dowels to be used in concrete pavements	European Standard EN 13877-3

# How this modification could be helpful for road construction ?



# ES 7613/2021

## Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas



- ❑ This standard specifies the **properties of aggregates and filler aggregates** obtained by processing natural, manufactured or **recycled materials** and mixtures of these aggregates for use in bituminous mixtures and surface treatments for roads, airfields and other trafficked areas.
- ❑ This standard does not cover the use of reclaimed bituminous mixtures.



# ES 7848/2021

## Aggregates for unbound and hydraulically bound materials for use in civil engineering work and road construction

- This standard specifies the **properties of aggregates** obtained by processing natural, manufactured or **recycled materials** for hydraulically bound and unbound materials for civil engineering work and road construction.



# ES 8016/2021

## Precast Concrete Barriers

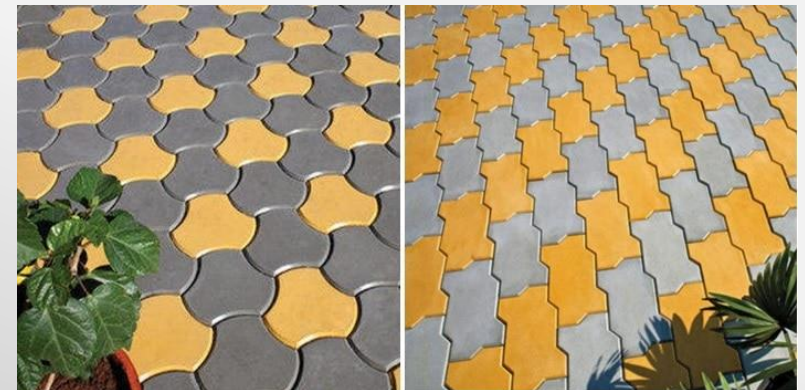
- ❑ This standard covers precast concrete barriers, intended to be used adjacent to a roadway or as a median, to redirect vehicles leaving the roadway.



# ES 4382/2021

## Concrete paving blocks - Requirements and test methods

- ❑ This standard specifies **materials**, properties, requirements and test methods for unreinforced cement bound concrete paving blocks and complementary fittings. It is applicable to precast concrete paving blocks and complementary fittings for pedestrian use, vehicular use and roof coverings.
- ❑ This standard does not deal with the visibility of blocks or with permeable blocks.
- ❑ This standard provides for the product marking and the evaluation of conformity of the product to this standard.



# ES 8293-1/2021

## Concrete pavements - Part 1: Materials

- ❑ This standard specifies requirements for:
  - **Concrete ingredients and other materials used in concrete pavements;**
  - The properties of fresh and hardened concrete.
- ❑ This standard is applicable to cast in situ concrete pavements. Concrete compacted by rollers is not covered by this standard.
- ❑ This standard covers concrete pavements for roads, motorways and airports, pedestrian footpaths, cycle tracks, storage areas, and in general all traffic-bearing structures.

# ES 8293-2/2021

## Concrete pavements - Part 2: Functional requirements for concrete pavements

- This standard specifies requirements for concrete pavements cast in situ and compacted by vibration.
- This standard also covers concrete sub-bases as well as concrete wearing courses on bridges.
- This standard covers concrete pavements in motorways, airfields, pedestrian streets, cycle tracks, storage areas and, in general, all traffic-bearing structures.



**ES 8293-3/2021**

## **Concrete pavements - Part 3: Specifications for dowels to be used in concrete pavements**

- ❑ This standard specifies the requirements for dowels to be used in cast “in situ” concrete pavements for roads, airfields and other trafficked areas.

- In case of using natural aggregates or recycled aggregates, Egyptian standards for aggregates shall be followed.
- **End product** shall fulfill the requirements in the relevant standards.
- **In case of using recycled aggregate from C&D wastes**, the “Egyptian Code for Recycling Solid Wastes – Part I : Recycling of Construction and Demolition Wastes” shall be followed with respect to the properties of the recycled aggregate and the requirements that shall be checked.

**THANK YOU**