

ACI 318-14 Chinese Translation by Taiwan Chapter, CICHE, and TCI in Taiwan

Reporter: Hung-Jen (Harry) Lee

On behalf of



YUNTECH

Wen-Chen Jau

and

Shyh-Jiann Hwang



國立交通大學
National Chiao Tung University

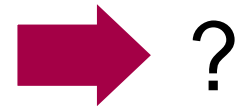


National Taiwan University

Code Background in Taiwan

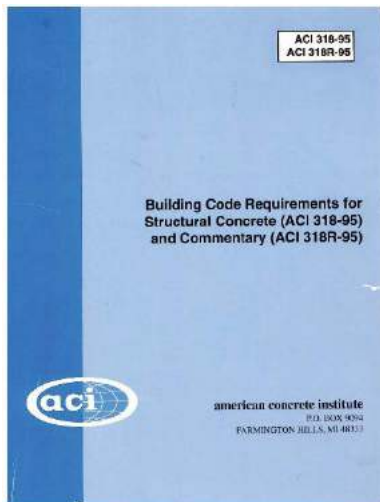
Codes by CICHE		Chief Source	Evolution
Edition	Year		
1. 土木 401-56	1967	318-63	Working Stress Design
2. 土木 401-59	1970	318-63	USD in appendix
3. 土木 401-68	1979	318-77	USD in codes
4. 土木 401-80	1991	318-89	Adding seismic special provisions
5. 土木 401-84	1995	318-89	Adding commentary
6. 土木 401-86	1997	318-95	“Structural Concrete”
7. 土木 401-86a	2000	318-95	Adopted by building officials(2002)
8. 土木 401-93	2004	318-02	Unified LRFD factors
9. 土木 401-96	2007	318-05	Unified notations
10. 土木 401-100	2011	318-05	Adopted by building officials(2011)

Code Background in Taiwan



Refer to

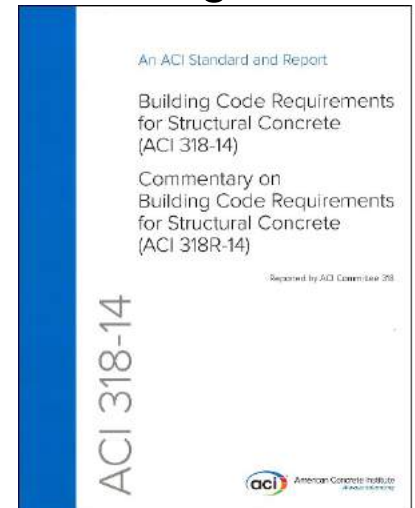
ACI 318-95



ACI 318-05

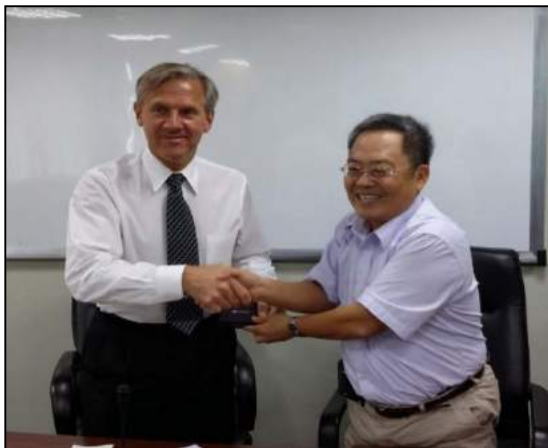


Reorganized



Initiation of translation agreement

- TCI invited ACI Ex-President *James Wight* and Executive Vice President *Ron Burg* to visit Taiwan and initiated this cooperation in 2012.
- ACI Taiwan Chapter, CICHE and TCI signed an MOU with ACI for the Chinese Translation of ACI 318-14 in 2013.
- IAC Secretary *Bernard A. Pekor* visited Taiwan Chapter during 2014 Sept. 25-26.



Memorandum of translation agreement

American Concrete Institute
38800 Country Club Drive
Farmington Hills, MI 48331
USA

MEMORANDUM OF TRANSLATION AGREEMENT

Made and entered into this 3rd day of January, 2013 between the American Concrete Institute and jointly the Chinese Institute of Civil and Hydraulic Engineering (CICHE), the Taiwan Concrete Institute (TCI), and the ACI Taiwan Chapter concerning the translation into Mandarin Chinese of the following works entitled:

Building Code Requirements for Structural Concrete (ACI 318-14)

1. The American Concrete Institute guarantees that it is, for the purpose of this agreement, the sole proprietor of the right to translate and publish in print form the works named above and has the right to the consideration hereinafter named.
2. The American Concrete Institute grants to CICHE, TCI, and ACI Taiwan Chapter nonexclusive license and authority to have a licensed translation made into Mandarin Chinese of the works named above, and to print, publish, and sell such translations in hard copy print form only subject to the following terms and conditions:
 - 2a. Sale by CICHE, TCI, and ACI Taiwan Chapter of the translations is to be confined to the geographic area of Taiwan and Mainland China.
 - 2b. ACI will not grant a similar right to reprint and/or sell said document to any other organization in Taiwan.
 - 2c. ACI may grant a similar right to reprint and/or sell said document to other organizations in Mainland China without prior approval or authorization by CICHE, TCI, and ACI Taiwan Chapter.
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 - 2e. CICHE, TCI, and ACI Taiwan Chapter are authorized to sell the said document to the general public in the locations delineated in 2a.
 - 2f. This license will expire one year after the publication of a revised version of the English language edition of the work named above.
 - 2g. The licensee can further use the translated version for developing codes, education, promotion, and technical purposes.
3. CICHE, TCI, and ACI Taiwan Chapter agree to publish the translations named above within one year of the final version of the subject document becoming available to the public. If CICHE, TCI, and ACI Taiwan Chapter fail to publish said translations within said timeframe, the rights offered in this Memorandum of Agreement shall become null and void and all translation rights of the works shall immediately revert to the American Concrete Institute.
4. The title of the named works in English, the name of the American Concrete Institute as original publisher in English, and the date of their original publication in English, as well as the name(s) of the author(s) or ACI Committee which developed the works, shall appear beneath the Mandarin Chinese title on the title pages, or on the back of the title pages with the international copyright indicia in every copy issued of the Mandarin Chinese translations.
5. On signing of agreement, CICHE, TCI, and ACI Taiwan Chapter shall pay the American Concrete Institute the sum of \$1(one) dollar, U.S. currency, as total payment of the royalties of the translations published by CICHE, TCI, and ACI Taiwan Chapter. Failure to pay ACI within 30 days from the date of signature by ACI shall render this agreement null and void.
6. Five (5) free copies of the translated works shall be provided to the American Concrete Institute before being offered for sale by CICHE, TCI, and ACI Taiwan Chapter.
7. CICHE, TCI, and ACI Taiwan Chapter agree to sell copies of the translated work at 10% above the printing cost to the American Concrete Institute for possible resale by the American Concrete Institute.

8. The license herein granted is assigned to the CICHE, TCI, and ACI Taiwan Chapter solely and shall not be transferred without written consent of the American Concrete Institute.
9. The translations shall carry the following statement: "The document was originally published in English. Consequently, whenever there is doubt about the exact meaning, it is the English version which must be taken as authentic."
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By

AMERICAN CONCRETE INSTITUTE



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January 3, 2013
Date

Ronald G. Burg, P.E.
Executive Vice President

By

CHINESE INSTITUTE OF CIVIL AND HYDRAULIC ENGINEERING



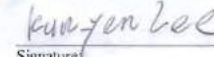
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Jan. 9, 2013
Date

Shi-Shuenn Chen, Prof.
President

By

TAIWAN CONCRETE INSTITUTE



Signature

2013.1.17
Date

K. Y. Lee
President

By

ACI TAIWAN CHAPTER



Signature

Jan. 17, 2013
Date

Wen-Chen Jau, Prof., FACI
President

CICHE

TCI

ACI
Taiwan
Chapter

The Licensee can further use the translated version for developing codes, education, promotion, and technical purposes.

Translation of ACI 318-14 Chinese Version

- Team of Chinese translation
 - Chinese Institute of Civil and Hydraulic Engineering
 - Taiwan Concrete Institute
 - ACI Taiwan Chapter
- Divide in 3 task groups, totally 70+ meetings, 900+ person-times involved in this work for one years.



ACI 標準及報告

結構混凝土建築規範

(ACI 318-14 Traditional Chinese)

結構混凝土建築規範解說

(ACI 318R-14 Traditional Chinese)

ACI 318 委員會編訂

ACI 318-14



中國土木水利工程學會

Chinese Institute of Civil and Hydraulic Engineering



社團法人台灣混凝土學會

Taiwan Concrete Institute



美國混凝土學會台灣分會

American Concrete Institute Taiwan Chapter

Building Code Requirements for Structural Concrete (ACI 318-14)

An ACI Standard

Commentary on Building Code Requirements for Structural Concrete (ACI 318R-14)

An ACI Report

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ACI 318-14 supersedes ACI 318-11, was adopted August 29, 2014, and published September 2014.
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*Deceased.

Members of the translating task group

結構混凝土建築規範 (ACI 318-14) — ACI標準

結構混凝土建築規範解說 (ACI 318R-14) — ACI報告

中文翻譯工作

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社團法人台灣混凝土學會

美國混凝土學會台灣分會

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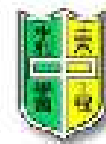
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31 members from engineers, researchers, and professors

- Professional engineers association
- Consultant company
- NCREE (researchers)
- Academic society (professors)



中國土木水利工程學會

Chinese Institute of Civil and Hydraulic Engineering



社團法人臺灣混凝土學會

Taiwan Concrete Institute



美國混凝土學會台灣分會

American Concrete Institute Taiwan Chapter

ACI 318-14 Traditional Chinese Version

CODE

CHAPTER 1—GENERAL

1.1—Scope of ACI 318

1.1.1 This chapter addresses (a) through (h):

- (a) General requirements of this Code
- (b) Purpose of this Code
- (c) Applicability of this Code
- (d) Interpretation of this Code
- (e) Definition and role of the building official and the licensed design professional
- (f) Construction documents
- (g) Testing and inspection
- (h) Approval of special systems of design, construction, or alternative construction materials

1.2—General

1.2.1 ACI 318, "Building Code Requirements for Structural Concrete," is hereafter referred to as "this Code."

1.2.2 In this Code, the general building code refers to the building code adopted in a jurisdiction. When adopted, this Code forms part of the general building code.

1.2.3 The official version of this Code is the English language version, using inch-pound units, published by the American Concrete Institute.

1.2.4 In case of conflict between the official version of this Code and other versions of this Code, the official version governs.

1.2.5 This Code provides minimum requirements for the materials, design, construction, and strength evaluation of structural concrete members and systems in any structure designed and constructed under the requirements of the general building code.

1.2.6 Modifications to this Code that are adopted by a particular jurisdiction are part of the laws of that jurisdiction, but are not a part of this Code.

1.2.7 If no general building code is adopted, this Code provides minimum requirements for the materials, design, construction, and strength evaluation of members and systems in any structure within the scope of this Code.

COMMENTARY

R1—GENERAL

R1.1—Scope of ACI 318

R1.1.1 This Code includes provisions for the design of concrete used for structural purposes, including plain concrete; concrete containing nonprestressed reinforcement, prestressed reinforcement, or both; composite columns with structural steel shapes, pipes, or tubing; and anchoring to concrete.

This Code is substantially reorganized from the previous version, ACI 318-11. This chapter includes a number of provisions that explain where this Code applies and how it is to be interpreted.

R1.2—General

R1.2.2 The American Concrete Institute recommends that this Code be adopted in its entirety.

R1.2.3 Committee 318 develops the Code in English, using inch-pound units. Based on that version, Committee 318 approved three other versions:

- (a) In English using SI units (ACI 318M)
- (b) In Spanish using SI units (ACI 318S)
- (c) In Spanish using inch-pound units (ACI 318SUS).

Jurisdictions may adopt ACI 318, ACI 318M, ACI 318S, or ACI 318SUS.

R1.2.5 This Code provides minimum requirements and exceeding these minimum requirements is not a violation of the Code.

The licensed design professional may specify project requirements that exceed the minimum requirements of this Code.

規範

解說

第一章 總則

R1 總則

1.1 ACI 318 之範圍

1.1.1 本章敘述以下(a)至(h)之主題:

- (a) 本規範的一般要求
- (b) 本規範的目的
- (c) 本規範的適用性
- (d) 本規範的解釋
- (e) 建管官員與證照設計專業人員的定義與角色
- (f) 施工文件
- (g) 試驗與檢驗
- (h) 特別設計系統、施工或替代施工材料的核可

1.2 通則

1.2.1 此後稱 ACI 318「結構混凝土建築規範」為「本規範」。

1.2.2 本規範中，一般建築規範係指法定建築規範，當本規範被採用時，則為一般建築規範之一部分。

1.2.3 本規範的正式版本為英文版，使用英吋—磅單位，由美國混凝土學會出版。

1.2.4 若本規範的正式版本與其他版本的内容衝突時，以正式版本為準。

1.2.5 凡依一般建築規範要求所設計與施工之任何結構，本規範提供了材料、設計、施工、與結構混凝土構材與系統強度評估的最低要求。

1.2.6 有特定管轄權機關對本規範修訂為其法規，屬於其管轄權限，但該修訂內容非屬本規範之一部分。

1.2.7 如無一般建築規範適用時，本規範提供涵蓋範圍內各結構之材料、設計、施工，及構材與系統強度評估的最低要求。

R1.1 ACI 318 之範圍

R1.1.1 本規範包含條款以設計結構目的使用之混凝土，種類包括純混凝土；混凝土含非預力鋼筋、預力鋼筋或兩者兼具；合成柱含結構型鋼、鋼管或鋼筒；混凝土中的錨定。

本規範實質上由前一版本 ACI 318-11 重新整理而得。本章包含很多條款以說明本規範之適用處及解釋方式。

R1.2 通則

R1.2.2 美國混凝土學會建議完整採用本規範。

R1.2.3 318 委員會使用英文及英吋—磅單位來開發此規範。基於該版本，318 委員會認可其他三個版本：

- (a) 使用 SI 單位的英文版 (ACI 318M)
 - (b) 使用 SI 單位的西班牙文版 (ACI 318S)
 - (c) 使用英吋—磅單位的西班牙文版 (ACI 318SUS)
- 司法上可採用 ACI 318, ACI 318M, ACI 318S, 或 ACI 318SUS。

R1.2.5 本規範提供最低要求，而超過這些最低要求時並非違反本規範。

證照設計專業人員可指定超出本規範最低要求的計畫需求。

Chinese Characters: Traditional vs. Simplified

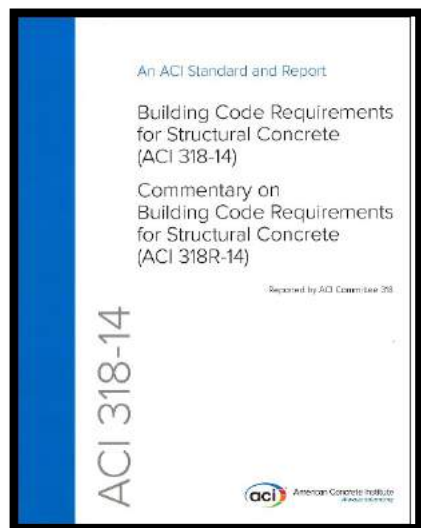
Characters	Traditional (Taiwan)	Simplified (China)
Structure	結構	结构
Concrete	混凝土	混凝土
Building	建築	建筑
Codes	規範	规范

結構 混凝土 建築 規範

Building Code Requirements for Structural
Concrete

Developing building codes in Taiwan

Reorganized



Translation

Traditional Chinese



Change Characters

Simplified Chinese



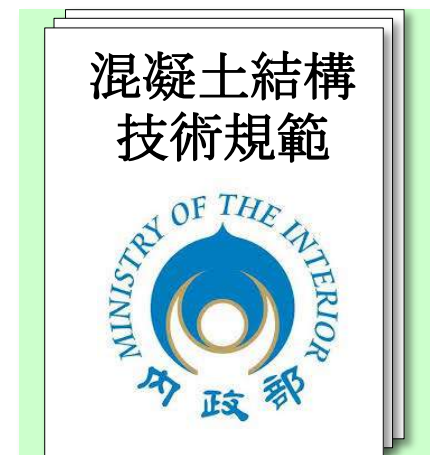
(2016 Spring)

(2016 Summer)

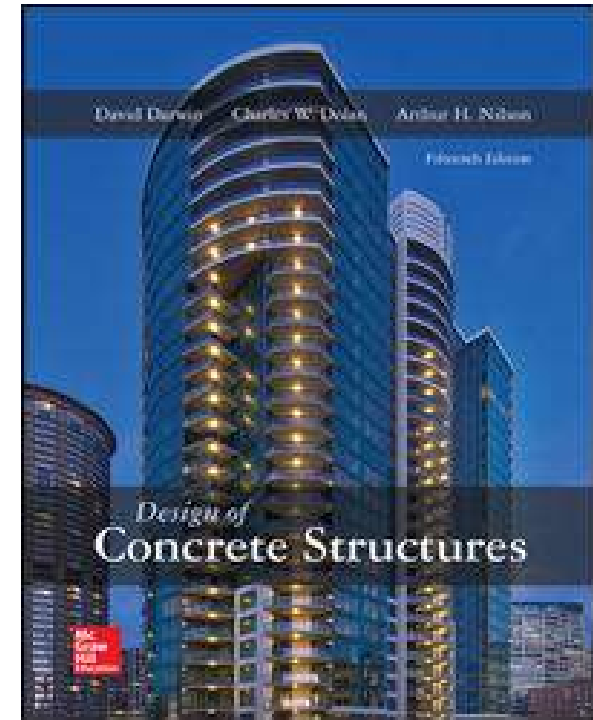
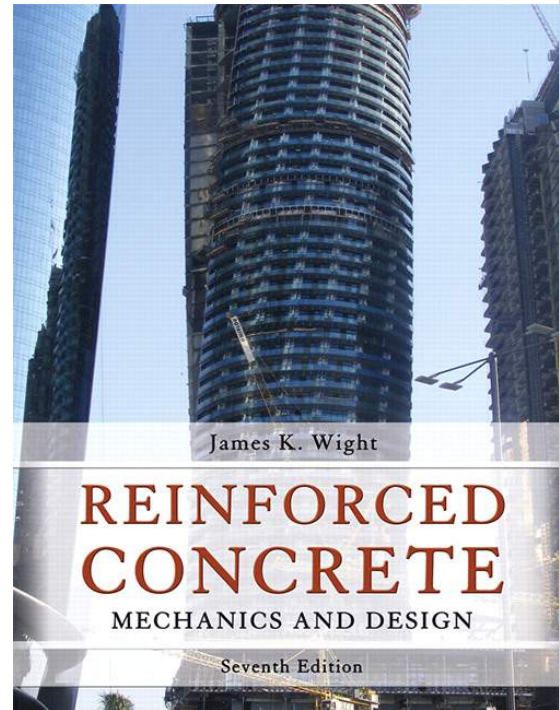
Taiwanese building codes



Ongoing one-year project in 2016, by Ministry of the Interior



Education and promotion



- Higher education
- Examination for professional engineers
- Building and concrete industry



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March 7, 2016

Dr. Wen-Chen Jau
Professor, Dept. of Civil Engineering, National Chiao-Tung University
ACI Taiwan Chapter
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Hsin-Chu 30010 Taiwan - ROC

Subject: **Permission to Publish**

Dear Professor Jau,

Permission to publish ACI 318-14 in Traditional Chinese for sale confined to the geographic area of Taiwan and mainland China is hereby granted.

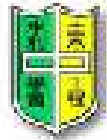
As originally agreed, please provide a complete set of PDF files and related editable digital files for replication of the translated works to the American Concrete Institute. Additionally, please provide (2) hard copies of the translated works to the American Concrete Institute when they become available.

Thank you for your continued interest in ACI publications, and for furthering this content throughout Taiwan and China.

Sincerely,

A handwritten signature in black ink, appearing to read "Aimee M. Gurski".

Aimee M. Gurski
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Chinese Institute of Civil and Hydraulic Engineering



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Taiwan Concrete Institute

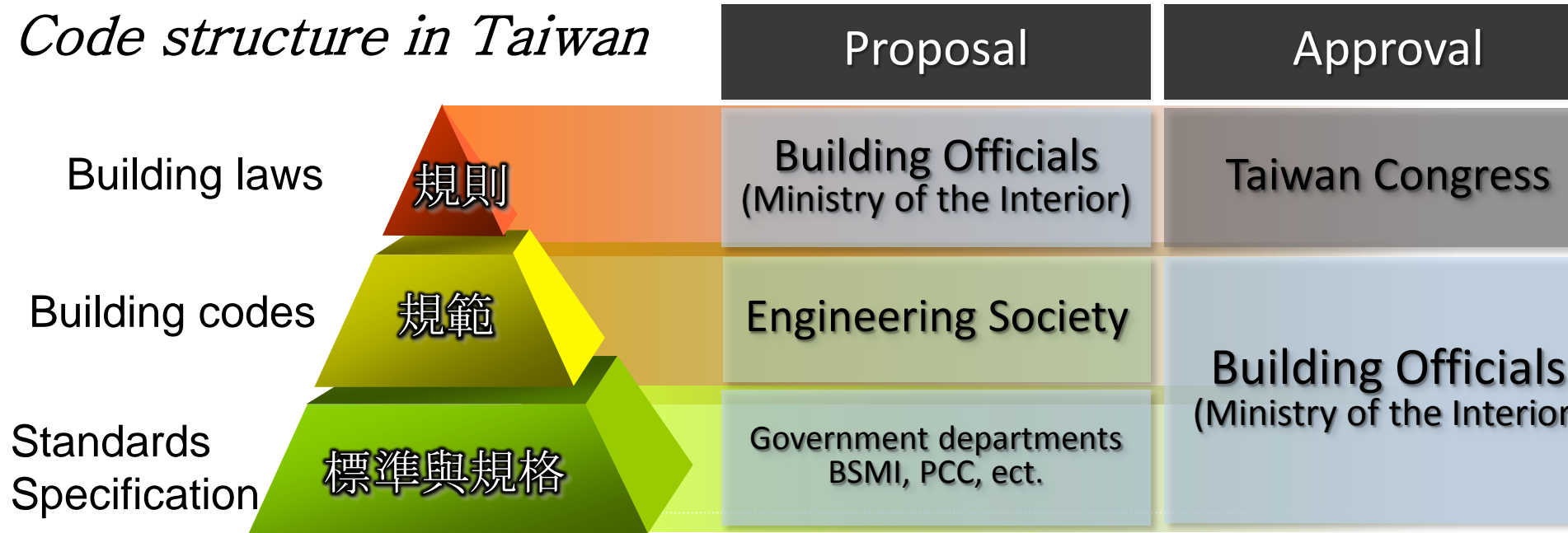
American Concrete Institute
Always advancing



Thank you
謝謝
谢谢

Difference base of standards

Code structure in Taiwan



U.S. customary

Taiwan customary

3.2.4 *ASTM International*

A706/A706M-14—Standard Specification
for Deformed and Plain Low-Alloy Steel
Bars for Concrete Reinforcement

.....

C150/C150M-12—Standard Specification
for Portland Cement

CNS

CNS 560-Steel deformed and plain
bars for concrete reinforcement

....

...

CNS 61 - Portland cement

Chinese characters for numbers

Number	Chinese characters
1	一
2	二
3	三
4	四
5	五
6	六
7	七
8	八
9	九
10	十

Number	Chinese characters
11	十一
12	十二
13	十三
14	十四
15	十五
16	十六
17	十七
18	十八
19	十九
20	二十

Number	Chinese characters
21	二十一
32	三十二
33	三十三
34	三十四
15	二十五
16	二十六
17	二十七
18	二十八
19	二十九
20	三十