

## 2016 PEO CIVIL ENGINEERING EXAMINATIONS SUGGESTED TEXT BOOK REFERENCE LIST

**NOTE: Please feel free to use the most recent edition of textbooks referenced in this list**

### **16-Civ-A1 Elementary Structural Analysis**

*Primary Reference:*

Hibbeler, R. C. Structural Analysis, 8<sup>th</sup> edition. Prentice Hall, 2012. ISBN-10: 013257053X, ISBN-13: 9780132570534

*Secondary References:*

Leet, K. M. and Uang, C.-M. Fundamentals of Structural Analysis, 4<sup>th</sup> edition. McGraw-Hill, 2011. ISBN-13: 9780073401096

Kassimali, A. Structural Analysis, SI Edition, 4th Edition. Nelson, 2011. ISBN-10: 0495295671, ISBN-13: 978-0495295679

### **16-Civ-A2 Elementary Structural Design**

Grondin, G. Y. and Kulak, G. L. Limit States Design in Structural Steel 9<sup>th</sup> Edition. Canadian Institute of Steel Construction, 2010. ISBN-13: 978-088811-157-9

Brezev, S. and Pao, J. Reinforced Concrete Design: A Practice Approach, 2<sup>nd</sup> Edition. Prentice-Hall, 2013. ISBN-10: 1256873845, ISBN-13: 9781256873846

Handbook of Steel Construction. Current edition. Canadian Institute of Steel Construction. <http://www.cisc-icca.ca>

Concrete Design Handbook. Current edition. Canadian Portland Cement Association. [www.cement.ca](http://www.cement.ca)

Wood Design Manual. Current edition. Canadian Wood Council. [www.cwc.ca](http://www.cwc.ca)

### **16-Civ-A3 Municipal and Environmental Engineering**

Shammas, N.K. and Wang, L.K. (2011) Water Supply and Wastewater Removal. 3rd ed. Wiley, Hoboken, N.J. ISBN 978-0-470-41192-6  
Viessman and Hammar, Perez and Chadik Water Supply and Pollution Control, 8th Edition, Harper Collins College Publishers 1988, ISBN no. 0-13-233717-7

Brière, François G. (1999) Drinking-Water Distribution, Sewage, and Rainfall Collection, Presses internationale Polytechnique, École Polytechnique de Montréal. ISBN number: 2-55300-796-5

McGhee, T.J., Water Supply and Sewerage, 6<sup>th</sup> Edition, McGraw-Hill Publishing Co. ISBN # 0-07-060938-1, 1991

Metcalf & Eddy Inc., Wastewater Engineering: Collection and Pumping of Wastewater, McGraw-Hill Publishing Co. ISBN # 0-07-041680-X, 1981

### **16-Civ-A4 Geotechnical Materials and Analysis**

Budhu, M. Soil Mechanics and Foundations, 3<sup>rd</sup> edition. John Wiley and Sons, Inc., 2011. ISBN-13: 978-0-470-55684-9

Craig, R. F. Craig's Soil Mechanics, 8<sup>th</sup> Edition. CRC Press, 2012. ISBN-13: 9780415561266

Das, B.J. Principles of Geotechnical Engineering, 8<sup>th</sup> Edition. Nelson, 2014. ISBN-10: 1133108660, ISBN-13: 9781133108665

### **16-Civ-A5 Hydraulic Engineering**

Finnermore, E. J. and Franzini, J. B., Fluid Mechanics with Engineering Applications, 10<sup>th</sup> Edition. McGraw-Hill Science, 2001.

Houghtalen, Robert and Osman Akan, A. and Hwang, Ned H. C. Fundamentals of Hydraulic Engineering Systems. 4<sup>th</sup> Edition. Prentice Hall, 2009.

**16-Civ-A6 Highway Design, Construction, and Maintenance**

Mannering, F. L. and Washburn, S. S. and Kilareski, W. P. Principles of Highway Engineering and Traffic Analysis, 4<sup>th</sup> Edition, Wiley, 2008.

Roess, R. P. and Prassas, E. S. and McShane, W. R. Traffic Engineering, 3<sup>rd</sup> Edition, Prentice Hall, 2004.

AASHTO Guide for Design of Pavement Structures. 4<sup>th</sup> Edition, American Association of State Highway and Transportation Officials (AASHTO), 1998.

The Asphalt Handbook. Manual Series # 4 (MS-4), Asphalt Institute, 2007. [www.asphaltinstitute.org](http://www.asphaltinstitute.org).

Geometric Design Standards for Canadian Roads. Roads and Transportation Association of Canada, Ottawa, 2011. [www.tac-act.ca](http://www.tac-act.ca)

Shahin, M.Y., Pavement Management for Airports, Roads and Parking Lots. 2<sup>nd</sup> Edition, Springer, 2006.

Handbook of Steel Drainage & Highway Construction Products. Corrugated Steel Pipe Institute, 2007.

[www.csipi.ca](http://www.csipi.ca)

**16-Civ-B1 Advanced Structural Analysis**

*Primary Reference:*

Hibbeler, R.C. Structural Analysis. 8<sup>th</sup> Edition. Prentice Hall, 2012. ISBN-10: 013257053X, ISBN-13: 9780132570534

*Secondary References:*

Leet, K.M. and Uang, C.M. Fundamentals of Structural Analysis. 4<sup>th</sup> Edition, McGraw-Hill, 2011

**16-Civ-B2 Advanced Structural Design**

Grondin, G. Y. and Kulak, G. L. Limit States Design in Structural Steel 9<sup>th</sup> Edition. Canadian Institute of Steel Construction, 2010. ISBN-13: 978-088811-157-9

Brezev, S. and Pao, J. Reinforced Concrete Design: A Practice Approach, 2<sup>nd</sup> Edition. Prentice-Hall, 2013.

ISBN-10: 1256873845, ISBN-13: 9781256873846

Handbook of Steel Construction. Current edition. Canadian Institute of Steel Construction. <http://www.cisc-icca.ca>

Concrete Design Handbook. Current edition. Canadian Portland Cement Association. [www.cement.ca](http://www.cement.ca)

CAN/CSA-S6-06 Code canadien sur le calcul des ponts routiers

Design Manual. Current edition. Canadian Precast/Prestressed Concrete Institute.

**16-Civ-B3 Geotechnical Design**

Budhu, M. Soil Mechanics and Foundations. 3<sup>rd</sup> Edition, John Wiley and Sons, Inc. 2010.

Craig, R. F. and Knappett, J. Craig' Soil Mechanics. 8<sup>th</sup> Edition, CRC Press, 2012.

**16-Civ-B4 Engineering Hydrology**

Fetter, C. W. Applied Hydrogeology, 4<sup>th</sup> Edition, Prentice Hall, 2000.

Domenico, P. A. and Schwartz, F. W. Physical And Chemical Hydrogeology, 2<sup>nd</sup> Edition, John Wiley & Sons, Inc. 1997.

**16-Civ-B5 Water Supply and Wastewater Treatment**

Shammas, N. K. and Wang, L. K. Fair, Geyer, and Okun's Water and Wastewater Engineering: Water Supply and Wastewater Removal, 3<sup>rd</sup> Edition, Wiley, October 2010.

American Water Work Association and American Society of Civil Engineers. Water Treatment Plant Design" 4<sup>th</sup> Edition, McGraw-Hill Professional, 2004.

Hammer, M. J. Sr. and Hammer, M. J. Jr. "Water and Wastewater Technology. 6<sup>th</sup> Edition, Prentice Hall, 2007.

**16-Civ-B6 Urban and Regional Planning**

Hodge, G. and Gordon, D. Planning Canadian Communities. 5<sup>th</sup> Edition, Nelson College Indigenous, 2007.

ISBN-10: 0176252428 , ISBN-13: 978-0176252427

Wang, X. and Hofe, R. V. Research Methods in Urban and Regional Planning. 1<sup>st</sup> Edition, Springer, 2007.

Levy, J. M. Contemporary Urban Planning, 10<sup>th</sup> edition, Prentice Hall, 2013. ISBN-10: 0205951627 ISBN-13: 9780205951628

## 2016 PEO CIVIL ENGINEERING EXAMINATIONS SUGGESTED TEXT BOOK REFERENCE LIST

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Macionis, J. J. and Parrillo, V. N. Cities and Urban Life, 6<sup>th</sup> Edition, Pearson, 2012.

### **16-Civ-B7 Transportation Planning and Engineering**

Mannering, F. L. and Washburn, S. S. and Kilareski, W. P. Principles of Highway Engineering and Traffic Analysis, 4<sup>th</sup> Edition, Wiley, 2008.

Roess, R. P. and Prassas, E. S. and McShane, W. R. Traffic Engineering, 3<sup>rd</sup> Edition, Prentice Hall, 2004.

C.S. Papacostas, C. S. and Prevedouros, P. D. Transportation Engineering and Planning. 2<sup>nd</sup> Edition, Prentice-Hall, 2000.

Note: No available text, including the one recommended, adequately covers all topics in the Syllabus.

Candidates will have to seek more depth on: "Deterministic" queuing theory; rail, air, water, and pipeline systems; accidents.

Fricker, J. D. and Whitford, R. K. Fundamentals of Transportation Engineering, 1<sup>st</sup> Edition, Pearson / Prentice Hall, 2004.

### **16-Civ-B8 Management of Construction**

Knutson, K. and Schexnayder, C. and Fiori, C. and Mayo, R. Construction Management Fundamentals. 2<sup>nd</sup> Edition, McGraw-Hill, 2008.

Provincial Health and Safety Act, for the candidate's jurisdiction.

Hegazy, T. (2002) "Computer-Based Construction Project Management," Prentice Hall.

Nunnally, S.W. (2015) "Construction Methods and Management," Prentice Hall, 8th ed.

### **16-Civ-B9 The Finite Element Method**

*Primary Reference:*

Logan, D. L. A First Course in the Finite Element Method. 3<sup>rd</sup> Edition, Thomson Learning, 2011.

*Secondary References:*

Fish, J. and Belytschko, T. A First Course in the Finite Elements. Wiley, 2007.

Zienkiewicz, O. C. and Taylor, R. L. and Zhu, J. Z. The Finite Element Method: Its Basis and Fundamentals. 7<sup>th</sup> Edition, Butterworth-Heinemann, 2013.

### **16-Civ-B10 Traffic Engineering**

Roess, R. P. and Prassas, E. S. and McShane, W. R. Traffic Engineering. 4<sup>th</sup> Edition, Prentice Hall, 2011.

Garber, N. J. and Hoel, L. A. Traffic and Highway Engineering. 3<sup>rd</sup> Edition, Thomson Learning, 2001.

Mannering, F. L. and Washburn, S. S. and Kilareski, W. P. Principles of Highway Engineering and Traffic Analysis. 4<sup>th</sup> Edition, Wiley, 2008.

### **16-Civ-B11 Structural Materials**

Somayji, S. Civil Engineering Materials. Prentice Hall, 1995.

### **16-Civ-B12 Risk and Safety in Civil Engineering**

Ang, A. H. and Tang, W. H. Probability Concepts in Engineering. 2<sup>nd</sup> Edition, Wiley, 2006.

Benjamin, J. R. and Cornell, C. A. Probability, Statistics and Decisions for Civil Engineers. McGraw-Hill Inc., 1970.

Jordaan. Decisions Under Uncertainty: Probabilistic Analysis for Engineering Decisions. 1<sup>st</sup> Edition, Cambridge University Press, 2011.

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