

Ethics – The Road All Engineers Must Follow

Presented By:

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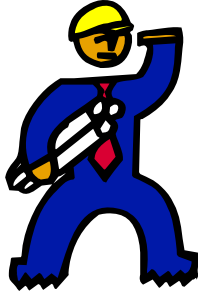
Michael R. Sanio M.ASCE, CAE



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Ethics – The Road Engineers Must Follow





- The US general public consistently ranks engineering second only to the medical professions with regard to honesty and ethics.

Gallup

3

Introduction



4

Topics

- ❖ Introduction
- ❖ Exactly what are (is?) “Ethics?”
- ❖ How did the ASCE Code of Ethics come about?
- ❖ What does the code say and can I possibly live by it?
- ❖ Where can I get help in making ethical decisions?
- ❖ How does ASCE enforce the Code?
- ❖ What does the ASCE General Counsel say?
- ❖ What is ASCE’s involvement in Global Ethics?
- ❖ Summary



5

Appendices

Appendix A: 1914 Code of Ethics

Appendix B: An Engineer’s Charter

Appendix C: References and Other Interesting Publications



6

Exactly what are (is?) “Ethics?”



Engineering Ethics – the study of moral issues and decisions confronting individuals and organizations involved in engineering.

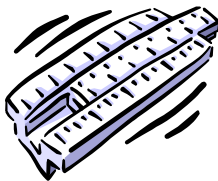
www.nspe.org

7

Exactly what are (is?) “Ethics?”

❖ **Code of ethics** – rules or standards that guide individuals or organizations to do the moral or right thing

(Adapted from Center for Army Leadership)



❖ **Moral** – making right decisions by distinguishing between right or wrong in accordance with the principles of right or wrong.

❖(Webster’s Dictionary)

8

Exactly what are (is?) "Ethics?"

Principles

Fundamental laws of the universe that pertain to human relationships and human organizations

(Covey, 1992)

Deep fundamental, classic truths. ... Generic common denominators

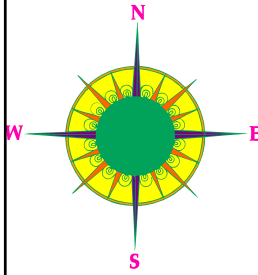
(Hackman and Johnson)

... Never a weather vane ... a compass forever fixed and forever true

Maxwell (2003)

A fundamental truth

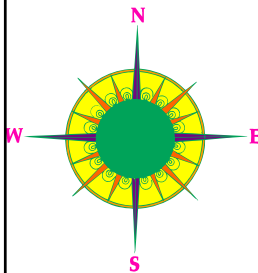
(Webster's Dictionary)



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Exactly what are (is?) "Ethics?"

ETHICS ARE PRINCIPLE BASED!!



10

Exactly what are (is?) "Ethics?"



PROFESSIONAL = PERSONAL

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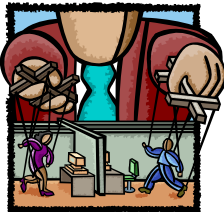
Exactly what are (is?) "Ethics?"

What is ethical behavior in one kind of organization or situation is ethical behavior in another.

Drucker

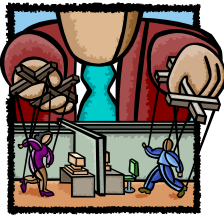
There is no such thing as business ethics – there's only ethics.

Maxwell (2003)



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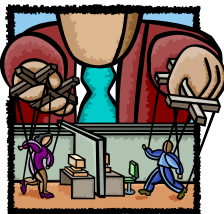
Exactly what are (is?) "Ethics?"



LAW VERSUS ETHICS

13

Exactly what are (is?) "Ethics?"



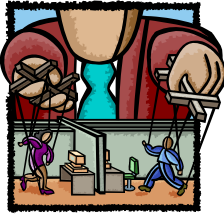
“I have lived my life in a society where there was no rule of law. And that is a terrible existence. But a society where the rule of law is the only standard of ethical behavior is equally bad.”

Solzhenitsyn in Maxwell

14

Exactly what are (is?) "Ethics?"

Code of Ethics

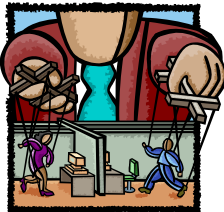


A code of conduct to which a person voluntarily adheres because it reflects his or her values and is believed to be beneficial to society. A guide that, with rare exceptions, does not provide specific instruction. **You ask – Is it the right thing to do?**

15

Exactly what are (is?) "Ethics?"

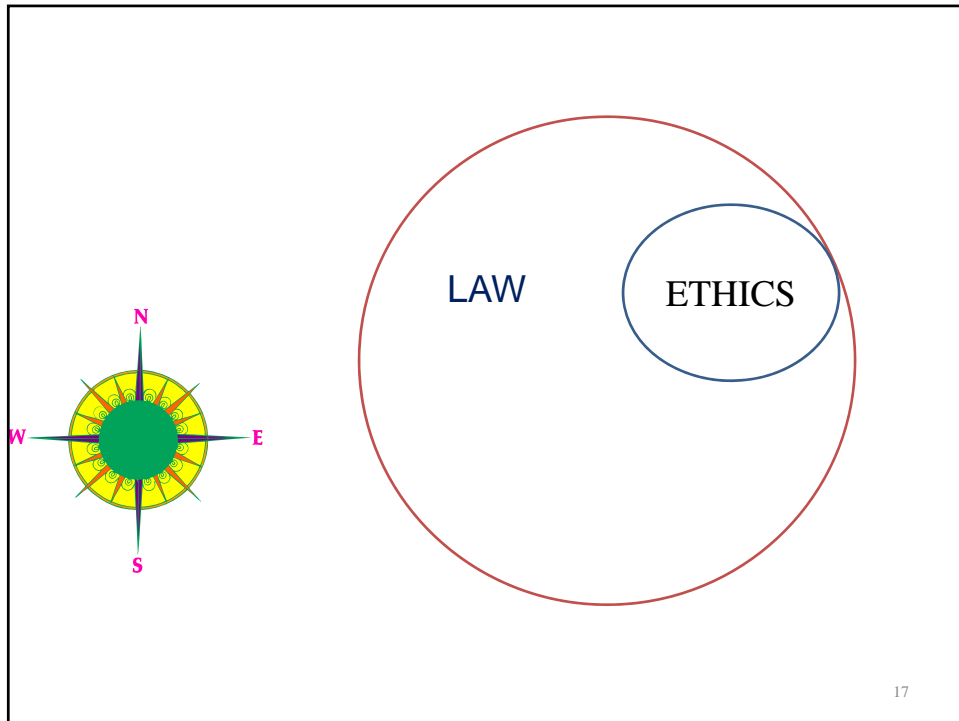
Law



Laws are intended to achieve specific behaviors without the application of either judgment or conscience. They provide specific instructions with specific punishments. **You may ask – What is the chance I will get caught?**

Adapted from Garrett

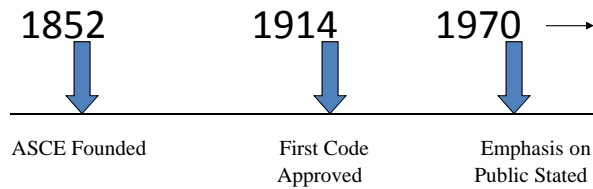
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How did the ASCE Code of
Ethics come about?

18

How did the ASCE Code of Ethics come about?



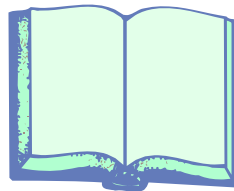
Pfatteicher

WHY??

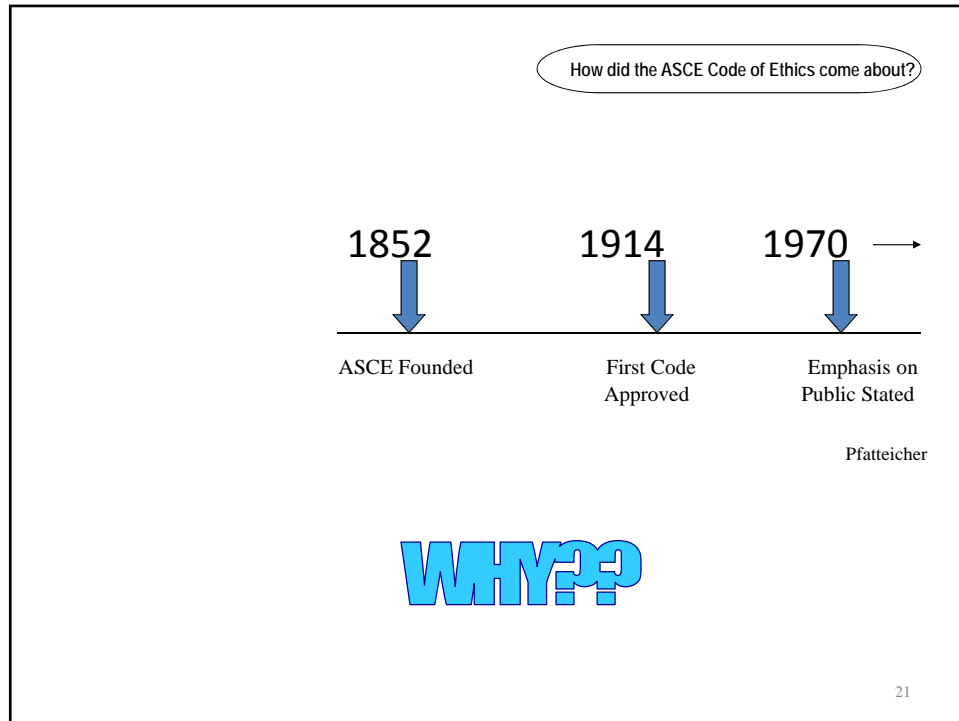
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How did the ASCE Code of Ethics come about?

REGISTRATION



20



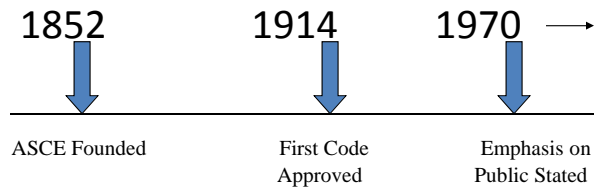
How did the ASCE Code of Ethics come about?

❖ 1914 Code

- ❖ Focused on relationships – engineer to engineer and engineer to client
- ❖ Responsibilities to public – not mentioned

22

How did the ASCE Code of Ethics come about?



Pfatteicher

WHY??

23

How did the ASCE Code of Ethics come about?

❖ 1970s +



- ❖ Major revisions to produce today's code
- ❖ Safety, health, and welfare of public is **PARAMOUNT**

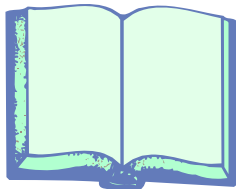
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What does the code say
and can I possibly live by
it?

25

What does the code say and can I possibly live by it?



- ❖ Fundamental principles
- ❖ Fundamental canons
- ❖ Guidelines to practice

26

What does the code say and can I possibly live by it?

Fundamental Canons

C
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S

1. Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties
2. Engineers shall perform services only in areas of their competence
3. Engineers shall issue public statements only in an objective and truthful manner

(Continued)

27

What does the code say and can I possibly live by it?

Fundamental Canons

C
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4. Engineers shall act in professional matters for each employer or client as faithful agents or trustees and shall avoid conflicts of interest
5. Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others

(Continued)

28

What does the code say and can I possibly live by it?)

Fundamental Canons (Concluded)

C
A
N
O
N
S

6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with zero tolerance, for bribery, fraud, and corruption.
7. Engineers shall continue their professional development throughout their careers, and shall provide opportunities for the professional development of those engineers under their supervision

29



Ethics is a highfalutin word, ... for the study of right and wrong ... twists and turns of sophisticated intellectual debate obscure a much much simpler truth.

Goldberg

30



Have we (engineers) ... made the concept of ethical behavior so complex and confusing that we fail to act in ways consistent with moral principles when faced with an ethical dilemma?

Veach

31

What does the Code say and can I possibly live by it?



❖ “5P’s” for Compromised Ethics

- ❖ Pressure
- ❖ Pleasure
- ❖ Power
- ❖ Pride
- ❖ Priority

Maxwell (2003)

32



Where can I get help in making ethical decisions?

33

Where can I get help in making ethical decisions?

D
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L
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M
M
A
S

Ethical dilemmas

34

Where can I get help in making ethical decisions?

❖ **HELP?**

- ❖ ASCE Guidelines for Professional Conduct
- ❖ Guidelines to practice
- ❖ Your organization's leadership
- ❖ State Registration Boards
- ❖ **ASCE Ethics Hotline – 703.295.6061;
800.548.ASCE, X6061**
- ❖ Other
 - ❖ National Society of Professional Engineers,
www.nspe.org
 - ❖ National Institute for Engineering Ethics:
www.niee.org



35

Where can I get help in making ethical decisions?

The PLUS Test

P = Policies. Does the action serve the best interests of the public and the client? Is the action consistent with ASCE's Code of Ethics and your employer's policies, procedures, and guidelines?

L = Legal. Is the action compliant with the spirit and the letter of applicable laws and regulations?

U = Universal. Does it conform to the universal principles and values that the profession and your employer have adopted?

S = Self. Does it satisfy your own personal definition of right, good, and just?



36

Where can I get help in making ethical decisions

The SPLU\$ Test



P = Policies. Does the action serve the best interests of the public and the client? Is the action consistent with ASCE's Code of Ethics and your employer's policies, procedures, and guidelines?

L = Legal. Is the action compliant with the spirit and the letter of applicable laws and regulations?

U = Universal. Does it conform to the universal principles and values that the profession and your employer have adopted?

S = Self. Does it satisfy your own personal definition of right, good, and just?

37

How does ASCE Enforce the Code?



38

YOU!!!

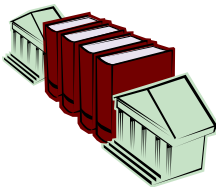


39

How does the ASCE enforce the code?

❖ Applicability – All Society members **must** subscribe ...

❖ Duty – A Society member **shall** report promptly to ASCE any observed violation of the Code



40

Complaints

Call the Ethics Hotline:

703.295.6151

800.548.ASCE (x6151)



41

What does the ASCE
General Counsel have to
say?



42

ASCE Ethics

- Edict
- Enforcement
- Education

43

Edict

Code of Ethics: Evolution from 1914
to the present

Antitrust investigations

Amendments

-Sustainable development
(1996)

-Anti-corruption (2006)

44

Enforcement

ASCE Committee on Professional Conduct

Disciplinary Action in 40 cases over 10-year span

- Plagiarism, improper campaign contributions, illegal gratuities, impugning integrity, breach of fiduciary duty to firm, overstatement of hours worked, incompetence/ misrepresentation, misappropriation of funds
- 2 expulsions, 19 resignations, 11 suspensions, 5 letters of admonition, 3 cease and desist letters
- Discretionary: publication in ASCE News, notification of State Licensing Boards

45

Education

- Publications
- Policies
- Videos
- Seminars
- Order of the Engineer
- Awards
- Ethics hotline
- Case studies



Case Study #1 (ASCE News Question of Ethics Column, 8/07)

- Facts: A Professional Engineer preparing construction design plans for a wastewater treatment facility dies suddenly as the plans are nearing completion.
- Question: May another Professional Engineer who has not prepared or supervised the preparation of the plans place her own seal on the plans following careful review of the work?



47

Case Study #1 (ASCE News Question of Ethics Column, 8/07)

ASCE Code of Ethics

Fundamental Canon 1, guideline a:

Engineers shall approve or seal only those design documents, reviewed or prepared by them, which are determined to be safe for public health and welfare in conformity with accepted engineering standards.

Fundamental Canon 2, guideline c:

Engineers shall not affix their signatures or seals to any engineering plan or document dealing with subject matter in which they lack competence by virtue of education or experience or to any such plan or document not reviewed or prepared under their supervisory control.

48

Case Study #1 (ASCE News Question of Ethics Column, 8/07)

NCEES Model Rules

- In circumstances where a licensee in responsible charge of the work is unavailable to complete the work... a successor licensee may take responsible charge by performing all professional services to include developing a complete design file with work or design criteria, calculations, code research, and any necessary and appropriate changes to the work. The non-professional services, such as drafting, need not be redone by the successor licensee but must clearly and accurately reflect the successor licensee's work. The burden is on the successor licensee to show such compliance. The successor licensee shall have control of and responsibility for the work product and the signed and sealed originals of all documents.

49

Case Study #1 (ASCE News Question of Ethics Column, 8/07)

Conclusion:

- ASCE's Code of Ethics permits an engineer to seal plans not prepared under her supervisory control after careful review of the work.
- However, engineers must look to state law to confirm that this practice is permitted in the applicable jurisdiction and to ensure compliance with any additional requirements that may be imposed.

50

Case Study #2 (ASCE News Question of Ethics Column, 6/08)

- **Facts:** A principal of a large engineering firm makes substantial contributions to candidates for state and local office, and causes his firm to reimburse employees for doing the same. Following a grand jury investigation, the member pleads no contest to violating state campaign contribution laws.
- **Question:** Did this member's actions violate the ASCE Code of Ethics?



51

Case Study #2 (ASCE News Question of Ethics Column, 6/08)

ASCE Code of Ethics

Fundamental Canon 5, guideline a:

Engineers shall not give, solicit or receive either directly or indirectly, any political contribution, gratuity, or unlawful consideration in order to secure work, exclusive of securing salaried positions through employment agencies.

Fundamental Canon 6:

Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with zero tolerance for bribery, fraud, and corruption.

52

Case Study #2 (ASCE News Question of Ethics Column, 6/08)

Conclusion:

- ASCE's Committee on Professional Conduct (CPC) finds that the member's actions violated Canons 5 and 6 of the Code of Ethics and recommends expulsion.
- Before a hearing of the Board of Direction can convene, the member tenders his resignation from the Society. The Board accepts the resignation with prejudice toward readmission, and notice of the action is published in a Society publication.
- In addition, a state court sentenced the member to community service and payment of a substantial fine.

53

Case Study #3 (ASCE News Question of Ethics Column, 4/09)



Facts: Departing employee contacts his firm's clients to solicit work from them for his new practice, tells clients that he has "grave concerns" about firm's ability to meet client needs after his departure.

Question: Is it ethical for a member to criticize employer and solicit work from employer's clients while still employed by the firm?

54

Case Study #3 (ASCE News Question of Ethics Column, 4/05)

ASCE Code of Ethics

Fundamental Canon 4:

Engineers shall act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.

Fundamental Canon 5, guideline (g)

Engineers shall not maliciously or falsely, directly or indirectly, injure the professional reputation, prospects, practice or employment of another engineer or indiscriminately criticize another's work.

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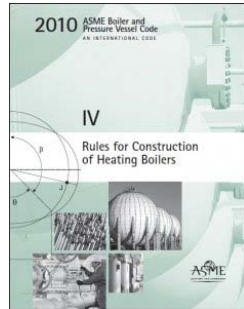
Case Study #3 (ASCE News Question of Ethics Column, 4/05)

Conclusion:

- The member is found to have violated Canons 4 and 5 of the ASCE Code of Ethics, and the Committee on Professional Conduct recommends expulsion.
- At hearing before the Board, member denies trying to solicit work, claims that any concerns about his employers were raised by clients, not him, and that he only responded with honest assessment and without improper motive.
- While not fully persuaded by his arguments, Board votes in favor of suspension rather than expulsion.

56

Case Study # 4 (ASCE News Question of Ethics Column, 2/11)



Facts: Two standards committee members with a personal interest in a product manufacturer issue an opinion in the committee's name which incorrectly claims that a competing product produced by a company called Hydrolevel fails to meet the standard's safety requirements.



Question: What are the ethical implications of the engineers' conduct?

57

Case Study #4 (ASCE News Question of Ethics Column, 2/11)

ASCE Code of Ethics

Fundamental Canon 4, guideline a:

Engineers shall avoid all known or potential conflicts of interest with their employers or clients and shall promptly inform their employers or clients of any business association, interests, or circumstances which could influence their judgment or the quality of their services.

Fundamental Canon 5:

Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others.

58

Case Study #4 (ASCE News Question of Ethics Column, 2/11)

Conclusion:

- Hydrolevel sues all parties involved for violation of federal Sherman Antitrust Act.
- Employers of the two committee members settle antitrust claims out of court; pay Hydrolevel approximately \$800,000.
- The standards organization denies responsibility for its committee members' conduct. Case goes to the U.S. Supreme Court, which holds the organization liable for damages in the amount of \$4.5M

(Case: ASME v. Hydrolevel, U.S. Supreme Court, 1982)

59

Case Study #5 (ASCE News Question of Ethics Column, 9/12)

Facts: A company website lists an employee's design of an innovative industrial structure without stating that the work was done while employed with another company and under the supervision of others.

Question: Is it ethical to describe an employee's accomplishments without adding that the work was done under supervision and in a prior place of employment?



60

Case Study #5 (ASCE News Question of Ethics Column, 9/12)

ASCE Code of Ethics

Fundamental Canon 5, guideline e:

Engineers shall give proper credit for engineering work to those to whom credit is due, and shall recognize the proprietary interests of others. Whenever possible, they shall name the person or persons who may be responsible for designs, inventions, writings or other accomplishments.

Fundamental Canon 5, guideline f:

Engineers may advertise professional services in a way that does not contain misleading language or is in any other manner derogatory to the dignity of the profession.

61

Case Study #5 (ASCE News Question of Ethics Column, 9/12)

Conclusion:

- ASCE's Committee on Professional Conduct concludes that the description on the company website created a false impression as to the responsible party for the project, and therefore represented a violation of Canon 5 of the ASCE Code of Ethics.
- The Committee recommends that the members either revise or remove the project description from the company website, and the members agree to remove the page.

62

What is ASCE's Involvement in Global Ethics?

63

What is ASCE's involvement in global ethics?

The Problem

❖ World construction ~ \$5.0T

ENR

❖ ~10% - as much as \$500B -
lost to bribery, fraud and
corruption

World Bank



64

Developing Countries



- ❖ 80% of infrastructure \$ - next 10 years
- ❖ 2/3 of major cities – 15 years
- ❖ Relatively high corruption rating

65

U. S. Organizations



- ❖ “... we’ll see the global practice of CE grow at unprecedented rates.”
- ❖ “... level the playing field.”

Bill Henry

Zero Tolerance



- ❖ Consulting engineering firms
- ❖ Major construction contractors
- ❖ Professional societies - SILENT

67



“ ... an ethical foundation cannot be built by the organization as a whole. ... built beginning with each individual and done ... in the face of continuous pressure to perform at the expense of doing the right thing

Maxwell

68

CPP - Committee on Global Principles for Professional Conduct



- ASCE Policy
- Revision to the Canon 6 - ASCE Code of Ethics
- Engineer's Charter
- Global - Anti Corruption Education and Training Program – www.Ethicana.org

69

ASCE Policy

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The ASCE supports a zero tolerance policy toward bribery, fraud, and corruption in design and construction. ASCE further actively supports the global effort to stem corruption in the procurement and execution of design services and construction projects. ASCE openly seeks cooperation with others in a domestic and international effort to empower individual engineers in the fight against corruption through education, awareness and the adoption and enforcement of Principles and Guidelines for Professional Conduct.

70

Canon 6

What is ASCE's involvement in global ethics?

Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession

...pre July 2006

71

Canon 6

What is ASCE's involvement in global ethics?

and shall act with zero tolerance for bribery, fraud, and corruption.

...added July 2006

72

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Engineers:

- a. Shall not knowingly engage in business or professional practices of a fraudulent, dishonest or unethical nature.
- b. Shall be scrupulously honest in their control and spending of monies, and promote effective use of resources through open, honest and impartial service with fidelity to the public, employers, associates and clients.

73

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- c. Shall act with zero tolerance for bribery, fraud, and corruption in all engineering or construction activities in which they are engaged.
- d. Should be especially vigilant to maintain appropriate ethical behavior where payments of gratuities or bribes are institutionalized practices.

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- e. Should strive for transparency in the procurement and execution of projects. Transparency includes disclosure of names, addresses, purposes, and fees or commissions paid for all agents facilitating projects.
- f. Should encourage the use of certifications specifying zero tolerance for bribery, fraud, and corruption in all contracts.

75



76

Summary



77

YOUR ROLE

YOU must:

- Establish the organization's ethical climate.
- Define core values – the ethical compass.
- Communicate, live by, and exhibit the compass.
- Demand your people abide by the compass.
- Establish and enforce penalties.



78

In other words:

You must preach, preach,
preach ethics and sometimes
you even have to speak.



79

Summary

“Each of us has a conscience ... We know when we have done the right thing.”

Hinckley

“Integrity ... behavior is the only score that is kept.”

DePree

“... guard your integrity as if it's your most precious leadership possession – because it is.”

Cottrell

“I consider him Mr. Integrity – as high a compliment you can pay anyone.”

Welch

“In respect to ethics, the rules are the same for everybody, and the test is a simple one – ‘the mirror test’.”

Drucker



80

Before you make a
decision ask



81

“IS IT RIGHT”

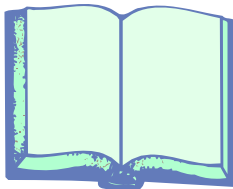


82



- ❖ Comments?
- ❖ Questions?
- ❖ Observations?

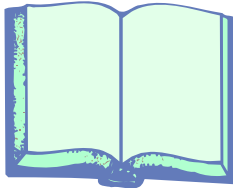
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APPENDIX A: 1914 CODE OF ETHICS

84

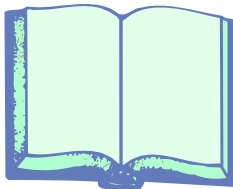
It shall be considered unprofessional and inconsistent with honorable and dignified bearing for any member of the American Society of Civil Engineers



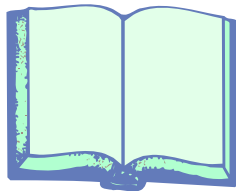
1. To act for his clients in professional matters otherwise than as a faithful agent or trustee, or to accept remuneration other than his stated charges for services rendered his clients

(Continued)

2. To attempt to injure falsely or maliciously, directly or indirectly, the professional reputation, prospects, or business of another engineer
3. To attempt to supplant another engineer after definite steps have been taken toward his employment



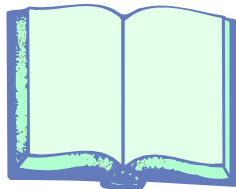
(Continued)



4. To compete with another engineer for employment on the basis of professional charges, by reducing his usual charges and in this manner attempting to underbid after being informed of the charges named by another
5. To review the work of another engineer for the same client, except with the knowledge or consent of such engineer, or unless the connection of such engineer with the work has been terminated

(Continued)

87



6. To advertise in self-laudatory language, or in any other manner derogatory to the dignity of the profession

88

Appendix B: An Engineer's Charter



89

Appendix B: An Engineer's Charter

An Engineer's Charter

We, the undersigned, as leaders in the global engineering community, recognize that corruption of all forms diverts resources from projects intended to raise living standards, threatens sustainable development, impoverishes communities, and tarnishes the reputation of the profession.

We hereby join in the battle against bribery, fraud, and corruption in engineering and construction worldwide.

We acknowledge as fundamental principles of professional conduct that engineers as individuals must:

(Continued)



90



- ❖ Ensure that they are not personally involved in any activity that will permit the abuse of power for private gain
- ❖ Recognize that corruption occurs within the public and private sectors, in the procurement and execution of projects, and among employers and employees
- ❖ Refuse to condone or ignore corruption, bribery, or extortion, or payments for favors
- ❖ Urge professional engineering societies and institutions to adopt and publish transparent, enforceable guidelines for ethical professional conduct
- ❖ Enforce anti-corruption guidelines by reporting infractions by any participant in the engineering and construction process

(Continued)
91



Further, we pledge to support the formal adoption of these principles by our professional organizations; build professional and public support for zero tolerance for bribery, fraud and corruption; seek transparency in all dealings with public officials and private owners; and coordinate our efforts with the work of Transparency International, the Partnership Against Corruption Initiative of the World Economic Forum, the World Bank and other local or global organizations seeking the same goal

Signatories

Name

Organization

Date

92

Appendix C

References and Other Interesting Publications

93

Appendix C: References

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94

Appendix C: References

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100

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101

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Tue., Aug. 18 – Soil Mechanics	Thur., Aug. 20 – Foundation Engineering
Tue., Aug. 25 – Hydraulics	Thur., Aug. 27 – Hydrology
Tue., Sept. 1 – Geometrics	Thur., Sept. 3 – Construction Engineering
Tue., Sept. 8 – Engineering Cost Analysis	Thur., Sept. 10 – Project Scheduling and Estimating



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Tue., Aug. 11 – Design and Construction	Thur., Aug. 13 – Construction Materials
Tue., Aug. 18 – Soil Mechanics	Thur., Aug. 20 – Foundation Engineering
Tue., Aug. 25 – Hydraulics	Thur., Aug. 27 - Hydrology
Tue., Sept. 1 – Geometrics	Thur., Sept. 3 – Construction Engineering
Tue., Sept. 8 – Engineering Cost Analysis	Thur., Sept. 10 – Project Scheduling and Estimating
Mon., Sept. 14 – Transportation Depth I	Tue., Sept. 15 – Structural Depth I
Wed., Sept. 16– Geotechnical Depth I	Thur., Sept. 17– Waste Resource & Env. I
Fri., Sept. 18 – Construction Depth I	Mon., Sept. 21 – Transportation Depth II
Tue., Sept. 22– Structural Depth II	Wed., Sept. 23- Geotechnical Depth II
Thur., Sept. 24– Waste Resource & Env. II	Fri., Sept. 25 – Construction Depth II



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