



# Institute of Transportation Engineers

## Work Force Development

The Board of Direction for ITE has undertaken the task of identifying the important areas that ITE should be involved in to support workforce development. Following is a summary or roadmap of future activities and direction.

There are four defined groups requiring work force development. They are;

- 1) Grades K-12,
- 2) Universities,
- 3) technical development, and
- 4) professional development

ITE can serve one or several roles in each of these areas. The roles include;

- 1) Provider of the training,
- 2) Advocate\Champion
- 3) Partner with other organizations or
- 4) Convener\Leader

A description of each group, ITE's role and direction follows

### **Grades K-12 - Advocate**

Activities in this area might include introducing the transportation profession to students in grades K-12, presentations to students (show and tell), introducing transportation examples and problems into text books, and working with teachers to provide work materials for class use that include transportation problems and solutions. The amount of effort and resources to make significant inroads is substantial. ITE's role can best be served as an advocate. ITE should continuously inform its members of the importance of contact with K-12 students and encourage the members to make presentations at schools when possible. ITE should make available to its members materials developed by others that would assist the members in making presentations to classes and working with teachers in schools to introduce transportation problems. ITE should continue to work with other partners to advocate the need for contact with K-12 students to improve supply of the workforce. A staff member should be assigned responsibilities in this area. It is anticipated the responsibilities would take a small part of the staff member's time.

### **Universities – Provider, Advocate, Partner**

Universities provide the basic skill sets and education necessary to begin a transportation career. There are several components at the University level. The components include;

- 1) Undergraduate students
- 2) Graduate students
- 3) Student Chapters
- 4) Student Chapter Advisors
- 5) Faculty

ITE already has many activities underway as a provider. Universities have a built in hierarchy with competing interests. ITE cannot make significant changes in a quick manner. Changes will only occur over time with ITE as an advocate and convener. The student chapter system functions well and should be strengthened. ITE should be cognizant of the competition on campus of other organizations and should support the student chapters in a manner that will assist them in the competitive environment. The student chapter advisors are important to the success of the student chapters. Efforts should continue to be made to support and encourage the student chapter advisors. Introduction of undergraduate students to the transportation profession has traditionally occurred through the undergraduate traffic engineering course. The introductory course is no longer required to be taught by universities. ITE should work through ABET to reinstitute the teaching of the course. ITE members should be encouraged to serve on board of advisors to the universities as advocates of the transportation field. ITE should advocate additional research dollars for transportation research to help support the faculty. ITE should serve as a clearinghouse for classroom materials, photos, problems and examples, and courses to further support the faculty. ITE should partner with other organizations to continue to promote engineering and specifically transportation engineering at the university level.

#### **Technical Development – Provider, Partner, Convener**

Technical training includes all training to improve the technical job skills of members. Methods include reference documents, text books, training courses, short courses, and distance learning. Most training in this area will result in professional development units which count towards professional license renewals and the PTOE renewal. ITE as a provider, has an extensive effort underway in this area both at the board level and through the Coordinating Council. The professional development fund is dedicated solely to technical training. The e-learning program is another example. There is a continuous stream of publications, technical reports, informational reports, recommended practices and courses underway. These efforts should continue. ITE partners with FHWA, Robert Wood Johnson, Easter Seals and others to provide materials and courses. These efforts should continue and be expanded. ITE should partner with Universities to provide actual training through the development and teaching of courses. The universities are an excellent resource for developing distance learning opportunities.

There is a gap in the workforce due to demographics between members that have 5 years experience and 15 years experience. Forty percent of the workforce will be eligible for retirement in the next 10 years. ITE should concentrate technical training targeted for the group of members with 5-15 years of experience. There is a significant need for certification of technical skills. ITE should continue to expand certification program to include all disciplines and skill levels.

#### **Professional Development – Convener, Advocate**

Professional development includes the job skills that allow members to advance and succeed in management roles, and political systems. There is a heavy emphasis on communication skills, project management skills, personnel management, working with the public, and working within political administrations. Undergraduate and graduate

programs do not as a rule teach these skills. ITE ability to serve as a provider in this area is limited by the amount of resources necessary. There are also many organizations which have expertise in these areas. ITE should serve as an advocate to promote the need for training to its members. ITE should serve as a clearinghouse to provide course listings and opportunities for training. Where courses are not available, ITE should serve as a convener to create partnerships with funding sources and providers to develop the necessary training. ITE should advocate and be the convener to make courses available to its members in the areas of project management, dealing with public officials, dealing with the media, personnel management, and public involvement.