

STEM



Science • Technology • Engineering • Math

Paving the Road to Your Future

DGL Consulting Engineers

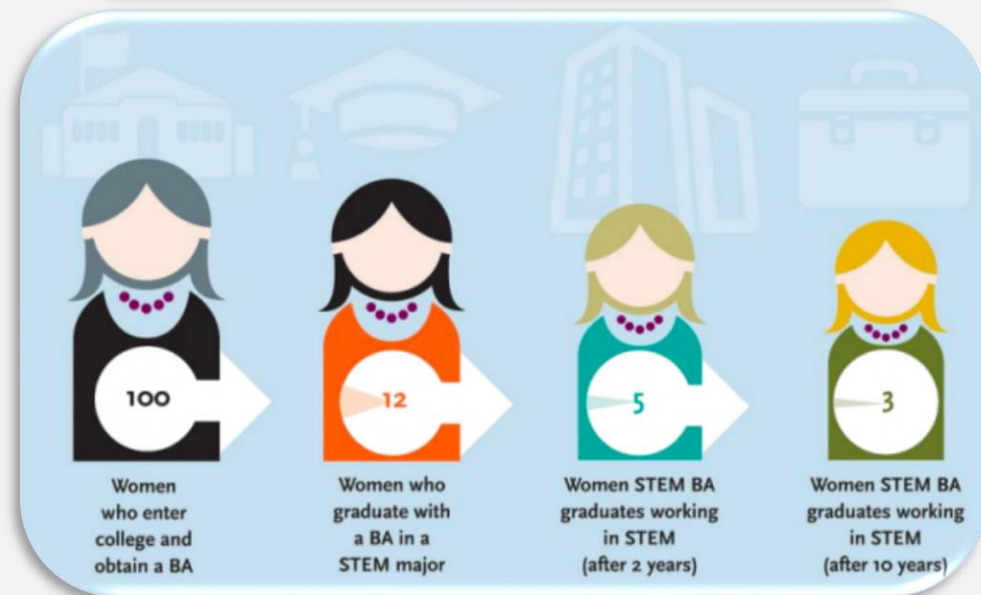
Christine Stookey, EI

Corrinne Lochtefeld, PE



Facts about Women in STEM

- **10%** of parents encourage their daughters to try engineering
- **66%** of 4th grade girls report they like science and math BUT...
- **18%** of engineering majors are female
- **80%** of jobs in the next decade will be technology based with STEM job growth outpacing the rest by **300%**!



Women in Engineering

- Our experience
 - 1 of 4 girls in college classes
 - 2003-2013, 17.2%-19.2% women in engineering
 - 2014 **39,690** Females graduated with Engineering Degrees, compared to **164,488** males
 - Singular woman at professional meetings
 - Use it as motivation, not a deterrent



Where Did We Begin?

- The University of Toledo
- The University of Cincinnati
- Mandatory Cooperative Education Program
- Civil Engineering



COLLEGE OF ENGINEERING

THE UNIVERSITY OF TOLEDO



What is Civil Engineering?

To design public Infrastructure which
increases Prosperity

Shelter

Transportation

Water

“Only the few can achieve
these heights”

What Do Civil Engineers Do?



Disciplines

- Transportation
- Structural
- Site Development
- Environmental/Water
- Construction

What Do We Do? Transportation Engineering

Roadway Design

- Highway Design
- Urban Streets
- Intersection Improvements
- Resurfacing
- Highway Interchanges
- Bridge approaches



Traffic Design

- Signal Design and Timing
- Sign Design
- Pavement Markings
- Traffic Impact Studies
- Safety Studies

Interchange Vs. Intersection

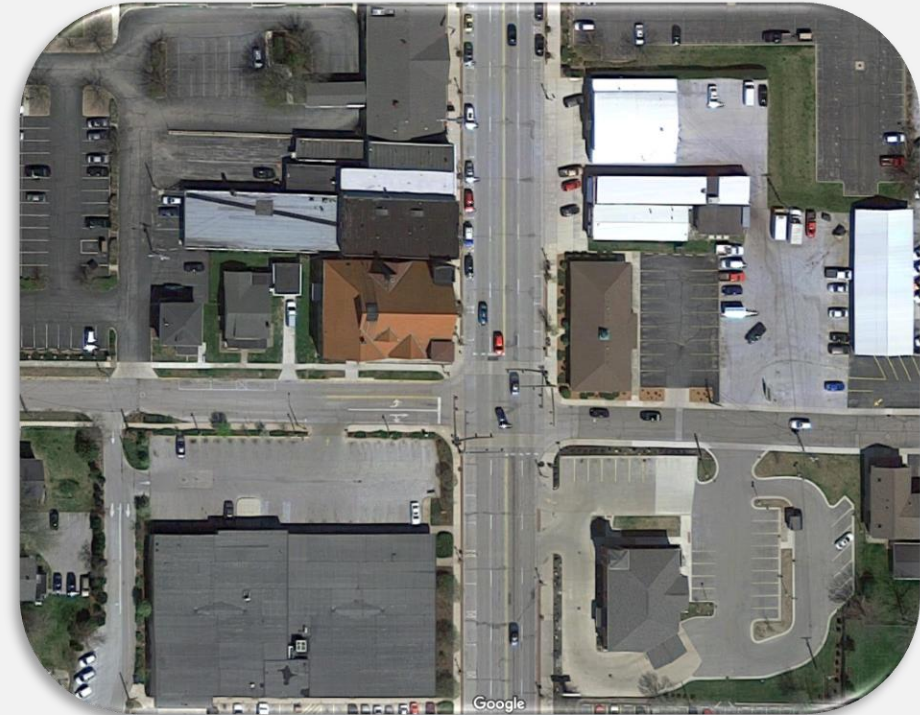
Interchanges

- Where a highway and a city street intersect



Intersection

- Where two or more streets intersect



Interchange Types - Diamond



Interchange Types – Single Point Urban Interchange



Interchange Types – Single Point Urban Interchange



Interchange Types – Roundabout



Interchange Types - Roundabout



Interchange Types – Diverging Diamond



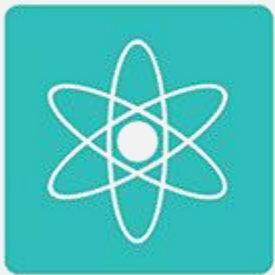
Interchange Types – Diverging Diamond



Activity Time



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