

The Wilson T. Ballard Company
Consulting Engineers

Student Co-op Plan

Guide for experience offered civil engineering Co-op students temporarily employed while attending an accredited school.

Purpose

The purpose of our program is to make available meaningful temporary employment to civil engineering Co-op students which will enable them to evaluate, based on actual experience, the private practice of civil engineering. We also intend to accomplish work assignments using students in connection with their school work and future employment.

Program

The following plan, to be used as a guide, may be modified to suit special skills and interests of students employed and as required by our varying work load. However, each student employed will be assured of a general program covering the areas described.

Our program is based on three work periods of at least three months duration each (this scheduling is flexible to suit school requirements), arranged as indicated:

Period 1 - For those who have completed Freshman year.

Period 2 - For those who have completed Sophomore year.

Period 3 - For those who have completed Junior year.

The work assignments for each period will be selected from the following, it being our intention to provide a variety of experience during the Program (It is possible that not all items would be covered due to the student's work schedule and the current projected work assignments).

All Periods - General Information

Orientation, description of scope of practice and current work load, and introduction to officers and personnel. This will also include, when possible, an off-time visit to one or more completed projects and an invitation to attend on A.S.C.E Maryland Chapter meeting.

Period 1:

Office

Reduction and computer input of survey field notes, drafting, determination of earthwork and other quantities, operation of office machines (personal computer, copier, blueprint, Merlin Express, Planix).

Field Inspection (when available)

Moisture-density testing of fills, field measurement of quantities, asphalt plant inspection, field log record keeping, assisting with estimates for monthly payments to contractor, assisting engineer in the condition inspection and evaluation of existing bridges and culverts.

Surveys

Service as rodman, axeman or chainman on survey party, introduction to methods of horizontal and vertical measurement including instruments (transit, self-leveling level and total station).

Period 2:

Office

Highway geometric computations including use of Cogo computer program. Students will be shown how to prepare the computer input forms and have an opportunity to operate the computer using the highway design programs.

Air quality and noise analyses including use of Stamina/Optima computer programs. Students will be shown how to gather and prepare the computer input and will have an opportunity to conduct an analysis.

Elementary drainage design (ditch analysis, closed-drainage systems, etc., using the rational or Soil Conservation Service methods).

Field Inspection

Same as for Period 1, but involving more responsibility and less direct supervision (provided previous experience was obtained during Period 1).

Surveys

Same as for Period 1 if available and if it was not performed during Period 1.

Period 3:

Office

Introduction to highway design, signing and lighting layouts, intersection layouts, traffic analysis, vertical and horizontal alignment studies and more advanced drainage design.

Preparation of engineering data to assist designers in the design and preparation of structural plans for bridges, culverts, sound barriers, etc. Work may include geometric calculations, plotting of topography, developing existing and proposed grading plans and estimating quantities.

If the student has adequate academic background in structural analysis, and the work schedule permits, instruction on the use of computers for structural design will be given to include STRESS, continuous beam, retaining wall, concrete box culvert, columns and rigid frames. To be worthwhile, this work requires some outside study by the student.

Introduction to report writing. Each student will be given one copy of a report previously completed by our firm for reference.

Field Inspection

No field work is included in this period unless it has been missed in the previous periods.

A site visit to a project on which the student has worked on in the past will be made if possible and/or the condition inspection of existing bridges.

For a student who has successfully worked during Periods 1 through 3, the business aspects of private practice including company policy, legal responsibility, licensing, etc. will be presented during Period 3.

It is our desire to complement the student's formal education with practical experience so that, if Periods 1 through 3 are completed, the student will be uniquely suited to enter his/her professional career with a full understanding of the responsibilities involved and the satisfaction and benefits to be expected.

Condition of Employment

Co-op students will be temporary employees and as such will not be covered by our fringe-benefit program which includes profit sharing, vacation, sick leave and insurance. They will be paid for all time worked and will be guaranteed the opportunity to work forty hours per week. Holidays falling within the working period will be paid. Leave of absence without pay will be approved as necessary. Student will report to either our Owings Mills, Maryland or Shrewsbury, Pennsylvania office and assigned locations may be changed during a given co-op period.

Application For Employment

THE WILSON T. BALLARD COMPANY

Date: _____ Interviewed By: Web Site Application

Name: _____

Address: _____
Street Address, P.O. Box Number City State Zip Code

Telephone Number: _____ Social Security Number: _____

EDUCATION	NAME OF SCHOOL	YEARS ATTENDED	YEAR GRADUATED	SUBJECTS
High School:				
College:				
Other:				

EXPERIENCE: (List below employers, starting with last one first)

From:	To:	Name of Employer	Position Held	Reason for Leaving

Do you have a Valid Drivers License? _____ If yes, what state? _____

Are you available for travel? _____ Yes _____ No

Are you a U.S. Citizen? _____ Yes _____ No If no, what is Visa Status? _____

Do you have the ability to perform the duties of the job for which you are applying? _____ Yes _____ No

If no, please explain _____

Position Desired: _____ Salary Desired: _____

Date Available: _____ Signed: _____ Date: _____

Office use:

Date Hired: _____ First Day of Work: _____ Salary: _____

Comments by Interviewer: _____
