

**CAREER
PATHS**

Construction II

Roads & Highways

Virginia Evans
Jenny Dooley
Mark Chavez



Express Publishing

Table of Contents

Book

1

Unit 1 – Types of Roads	4
Unit 2 – Parts of a Road	6
Unit 3 – Parts of a Highway	8
Unit 4 – Types of Intersections	10
Unit 5 – Materials	12
Unit 6 – Numbers	14
Unit 7 – Measurements	16
Unit 8 – Tools	18
Unit 9 – Safety Equipment	20
Unit 10 – Basic Actions	22
Unit 11 – Machines	24
Unit 12 – Communications	26
Unit 13 – Soil	28
Unit 14 – Describing Landscapes 1	30
Unit 15 – Describing Landscapes 2	32
Glossary	34

Book

2

Unit 1 – Surveying	4
Unit 2 – Surveying Equipment	6
Unit 3 – Plans	8
Unit 4 – Setting Out Lines	10
Unit 5 – Earthworks 1	12
Unit 6 – Earthworks 2	14
Unit 7 – Drainage	16
Unit 8 – Pipes	18
Unit 9 – Drains	20
Unit 10 – Flexible Pavement 1: Structure	22
Unit 11 – Flexible Pavement 2: Design	24
Unit 12 – Flexible Pavement 3: Surfacing	26
Unit 13 – Flexible Pavement 4: Defects	28
Unit 14 – Rigid Pavement 1: Slabs and Joints	30
Unit 15 – Rigid Pavement 2: Formwork	32
Glossary	34

Book

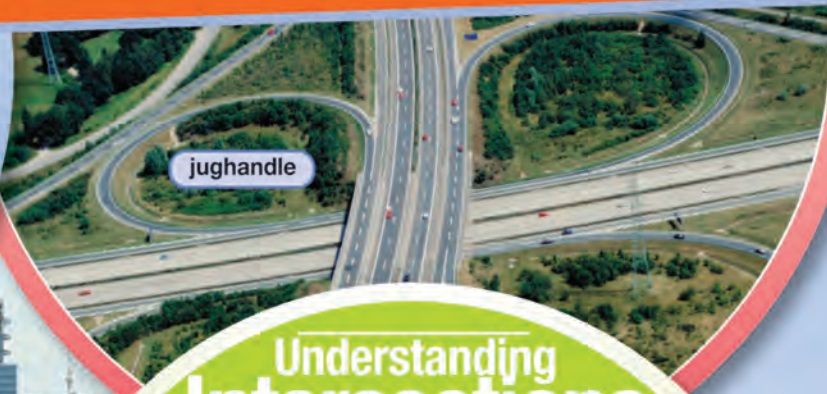
3

Unit 1 – Curb Types	4
Unit 2 – Installing Curbs	6
Unit 3 – Paving Sidewalks	8
Unit 4 – Bridges 1: Types	10
Unit 5 – Bridges 2: Parts	12
Unit 6 – Fencing	14
Unit 7 – Site Safety	16
Unit 8 – Traffic Control	18
Unit 9 – Signage	20
Unit 10 – Street Furniture	22
Unit 11 – Testing Materials 1	24
Unit 12 – Testing Materials 2	26
Unit 13 – Bridge Maintenance	28
Unit 14 – Road Maintenance 1	30
Unit 15 – Road Maintenance 2	32
Glossary	34

Get ready!

1 Before you read the passage, talk about these questions.

- 1 What are some common types of intersections?
- 2 What types of intersections do not require full stops?



Understanding Intersections

It's important to understand the different types of **intersections**. Intersections can be grouped into two main categories. The first category is intersections that require vehicles to come to a full stop. These include **4-ways**, **T-junctions**, and **box junctions**. The second type of intersection allows traffic to flow without stopping. This group includes **roundabouts**, **traffic circles**, **continuous flow intersections**, and **jughandles**. At any type of intersection, you should know the regulations that apply. For example, it's important to know which vehicle has the **right of way**. This changes by nation and region. Likewise, check how to enter a **turn lane** and whether or not **U-turns** are permitted.

*Driving Around the World
Chapter 10*



Reading

2 Read the chapter. Then, choose the correct answers.

- 1 What is the purpose of the passage?
 - A to describe the safety features of intersection types
 - B to give the pros and cons of full stop intersections
 - C to list different types of intersections
 - D to explain right of way in different intersections
- 2 Which intersection requires a driver to stop?

A roundabout	C traffic circle
B T-junction	D jughandle
- 3 Which of the following does NOT change by region or nation?
 - A how to enter turn lanes
 - B whether U-turns are allowed
 - C if box junctions require stops
 - D which vehicle has the right of way

Vocabulary

3 Match the words or phrases (1-7) with the definitions (A-G).

- | | |
|---------------------|-----------------------------------|
| 1 __ roundabout | 5 __ box junction |
| 2 __ traffic circle | 6 __ 4-way |
| 3 __ jughandle | 7 __ continuous flow intersection |
| 4 __ T-junction | |
- A an intersection where one road ends at a right angle
 - B an intersection where vehicles follow a gradual bend
 - C an indirect route over an intersection
 - D an intersection that contains yellow cross-hatching
 - E a road that eliminates left turns at intersections by leading drivers to another turn location
 - F an intersection where traffic coming from all four directions must stop
 - G a circular area at an intersection that allows for vehicles to pass between two roads

- 4 Fill in the blanks with the correct words or phrases from the word bank.

word BANK

intersection the right of way
U-turn turn lane

- At the next _____, take a left
- At a 4-way intersection, the vehicle on the right has _____.
- It's illegal to make a(n) _____ on this road.
- This street has a(n) _____ for both left turns as well as right turns.

- 5 Listen and read the chapter again. What are the two main types of intersections?

Listening

- 6 Listen to a conversation between a city planner and a construction manager. Mark the following statements as true (T) or false (F).

- ___ The design calls for a T-junction at 10th Street and Route 9.
- ___ A roundabout will not fit in the area.
- ___ The man suggests using a jughandle.

- 7 Listen again and complete the conversation.

Planner: Ms. Reed, I have an idea for the 1 _____ 10th Street and Route 9.

Manager: Sure, James. What is it?

Planner: Well, the plan 2 _____ a four-way stop.

Manager: Yes, that's correct.

Planner: I think that will 3 _____ traffic.

Manager: It will. But there's no room for a 4 _____ there.

Planner: I know. But I think we could fit a 5 _____.

Manager: You know, that's a good idea. Let's 6 _____ at the plans.

Speaking

- 8 With a partner, act out the roles below based on Task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

I have an idea for ...
I think that will ...
We could fit a ...

Student A: You are a city planner. Talk to Student B about:

- a planned intersection
- the current plan
- a change to the plan

Student B: You are a project manager. Talk to Student A about an intersection.

Writing

- 9 Use the conversation from Task 8 to complete the construction manager's email.

To: _____
From: _____
Subject: _____

Dear _____,

The Route 9 plan calls for a _____ intersection. I think this will _____. A _____ will not fit. Instead, I suggest we use _____. Let me know what you think.

Sincerely,

