

King Mongkut's University of Technology Thonburi



Midterm Examination  
Semester 1 Academic Year 2017

CVE 414 Construction Estimating and Specifications

4th Year International  
Program in Civil Engineering

Date : 28 September 2017

Time : 9.00 – 12.00 AM

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Instructions

1. Write your name on every page of this examination paper.  
20 points penalty if any sheet is missing.
  2. There are 4 questions with total score 100 points. Attempt all questions.
  3. Write your answer on provided space. If the provided space is not enough, continue writing on the back of sheets.
  4. Closed book; calculator is allowed; and work independently.
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Dr. Pitch Sutheerawatthana

02-470-9151

This examination paper has been approved by the Department of Civil Engineering

A handwritten signature in black ink, appearing to read "Sutat Leelataviwat", positioned above a horizontal dashed line.

for Associate Professor Dr. Sutat Leelataviwat

Head of the Civil Engineering Department

Student Name: \_\_\_\_\_

Midterm Examination

Student ID: \_\_\_\_\_ CVE414 Construction Estimating and Specifications

**Midterm Examination**  
**Construction Estimating and Specifications (CVE 414)**  
**KMUTT 2017**

180 minutes, Score: /100

**INSTRUCTIONS :**

1. Write your name on every page of this examination paper.  
20 points penalty if any sheet is missing.
2. There are 4 questions with total score 100 points. Attempt all questions.
3. Write your answer on provided space. If the provided space is not enough, continue writing on the back of sheets.
4. If a student thinks that a question is incomplete, please make necessary assumptions.
5. Closed book; any dictionary is NOT allowed; calculator is allowed; and work independently.

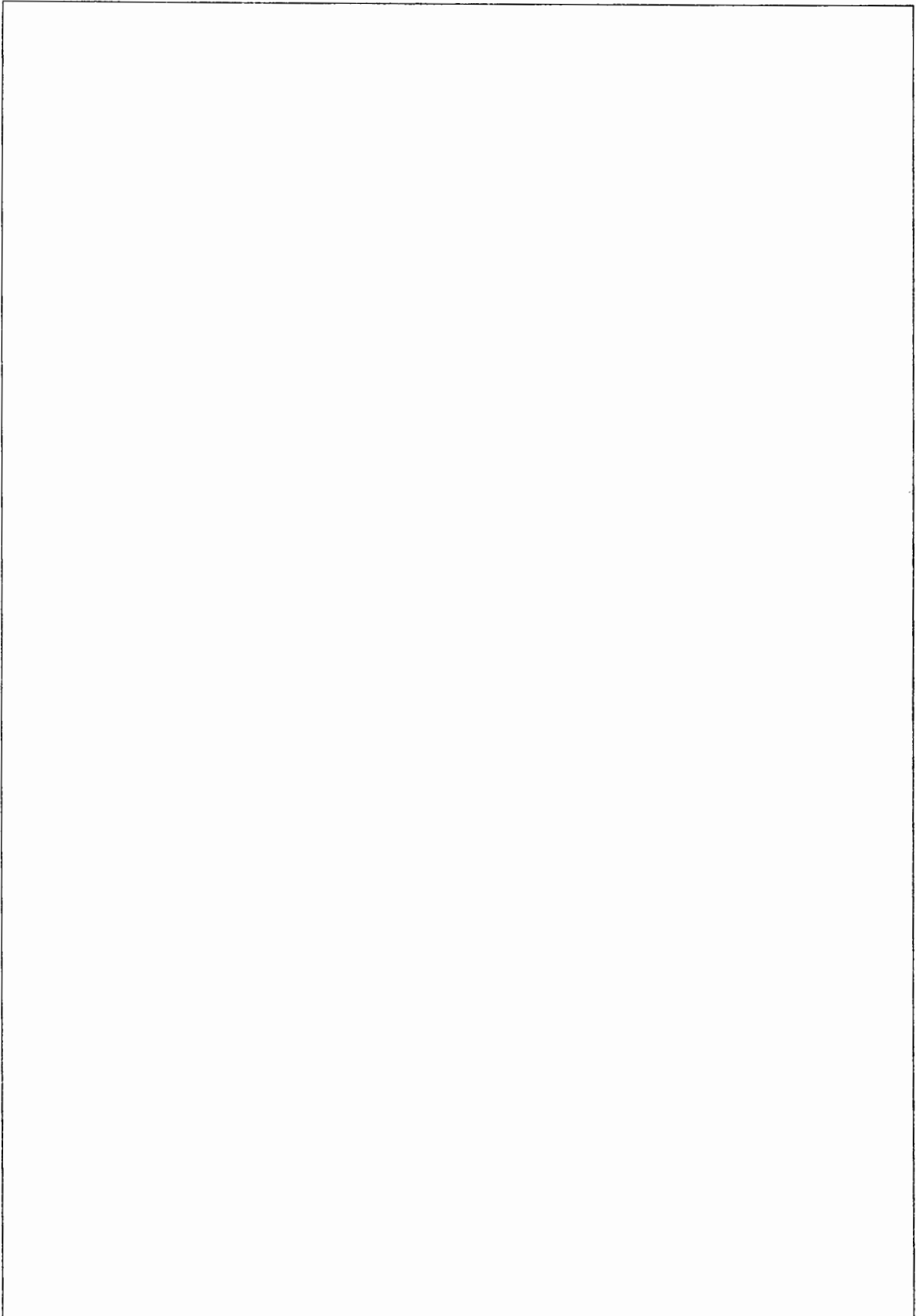
\* \* \* \* \*

1. [25 points] Suppose that your boss assigns you to prepare information of ready-mixed concrete for him so that he can use your information for cost estimation of cast-in-place slab concrete work (both materials and labor cost) of a new project. What information will you find for him? Where do you get these information from?

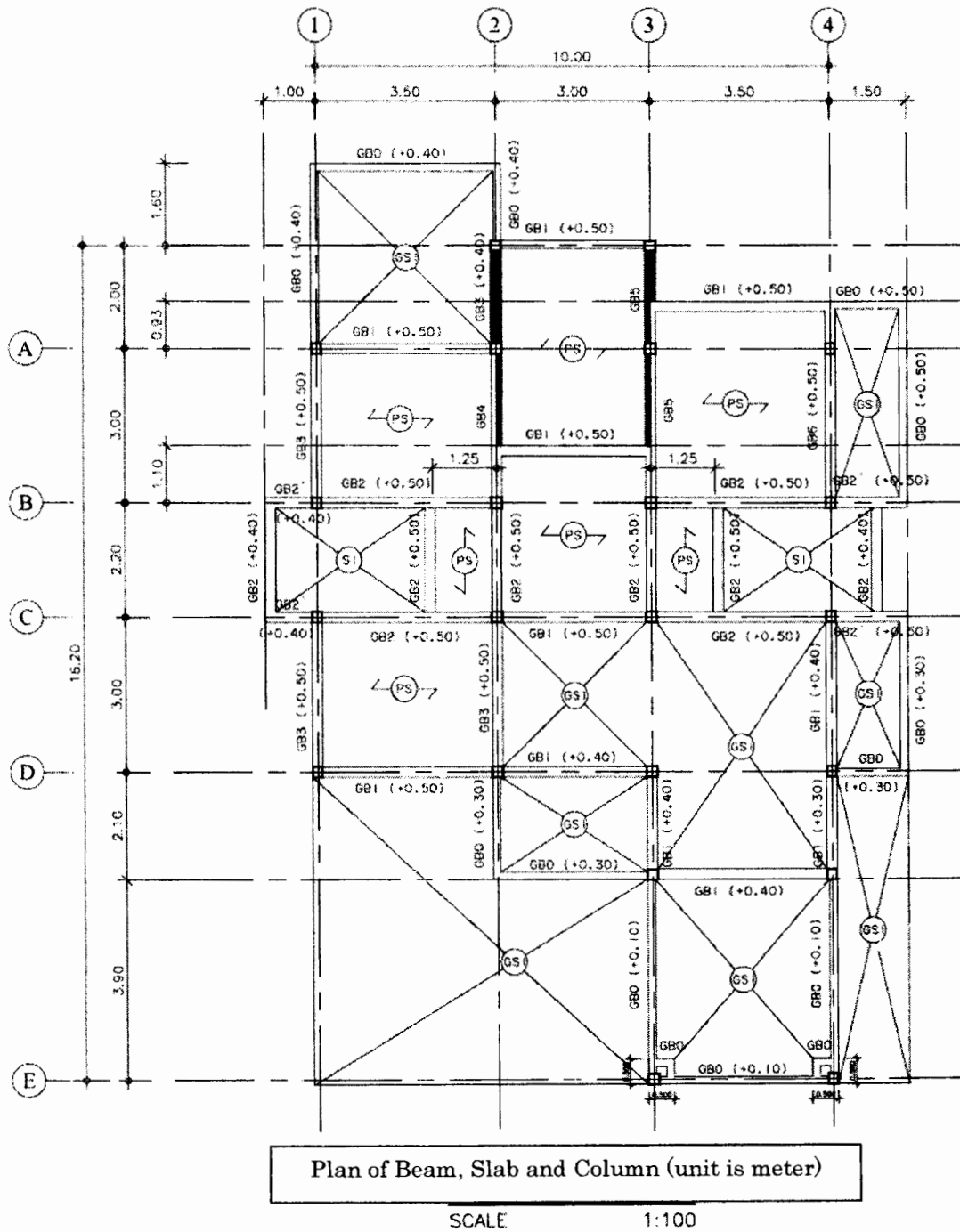
Student Name: \_\_\_\_\_

Midterm Examination

Student ID: \_\_\_\_\_ CVE414 Construction Estimating and Specifications

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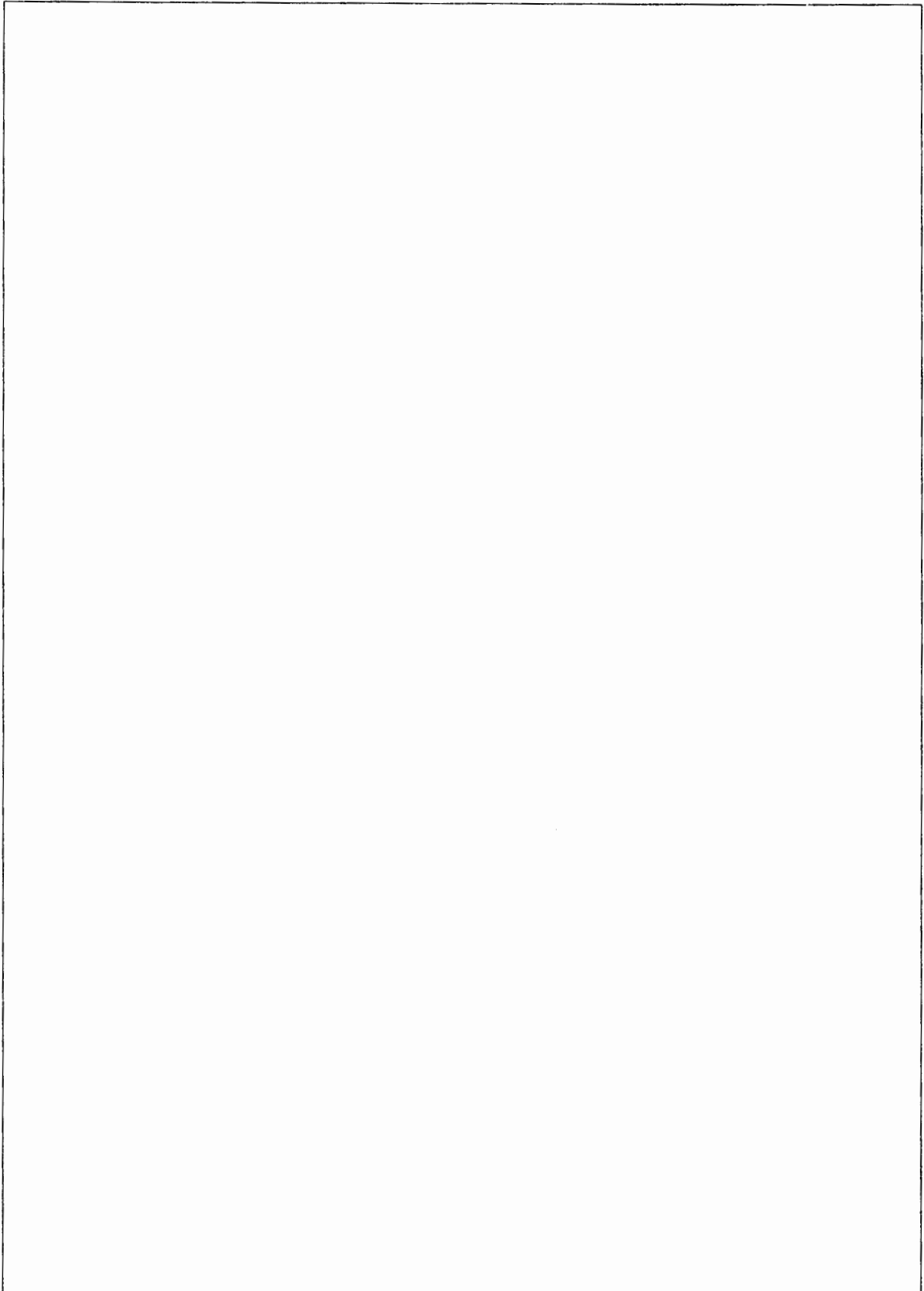
2. [25 Points] Given the drawing below, as an engineer, you are assigned to estimate the price of beam. The purpose of this estimation is to bid this project. Please explain **in very details** the process of how to estimate quantity and unit price of beam? It is **not necessary to do calculation**. In case that you think some necessary information is missing, you can make any assumption as appropriate. Width of Beam is 0.25 meter and depth of beam is 0.40 meter for all beams.



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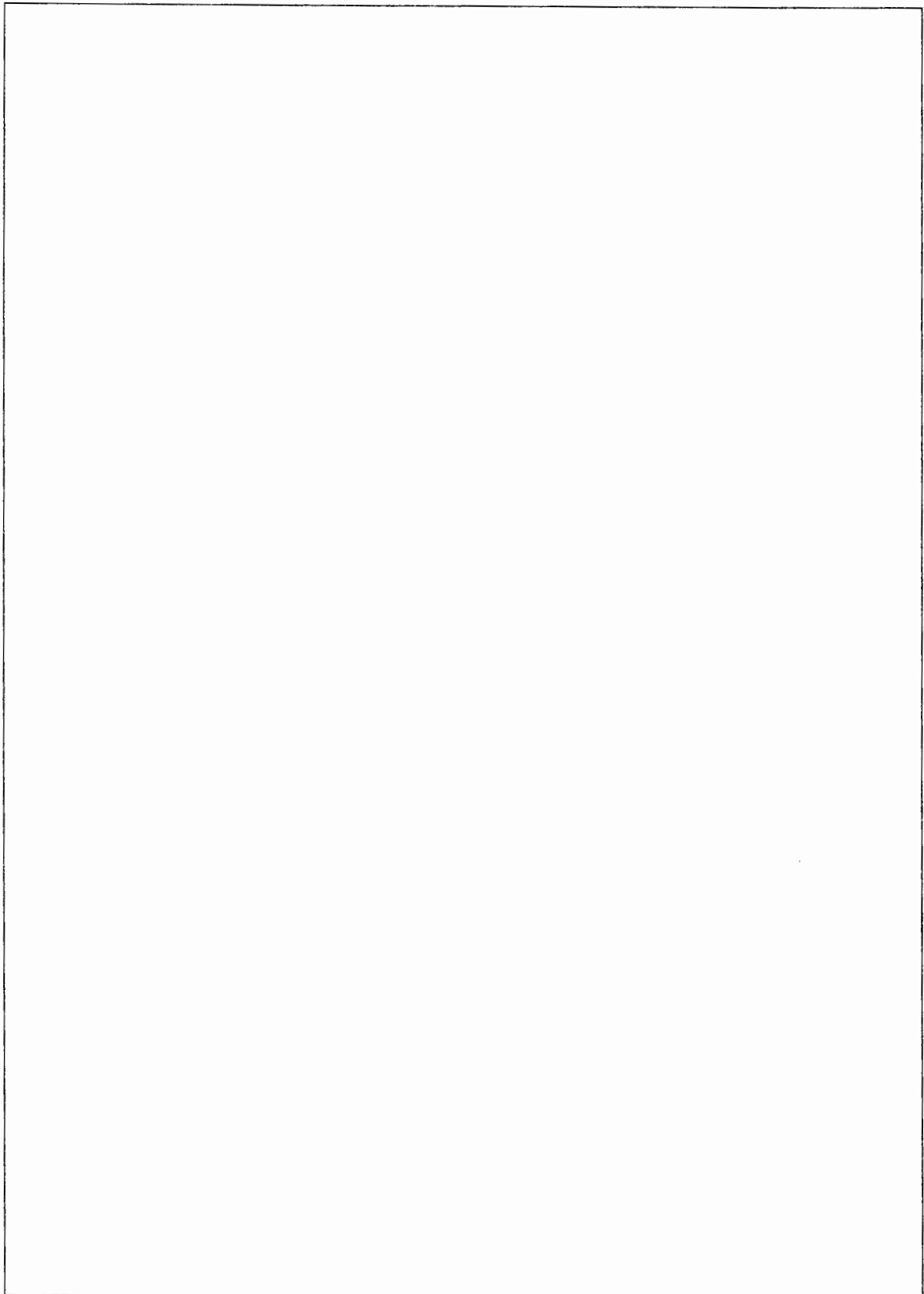
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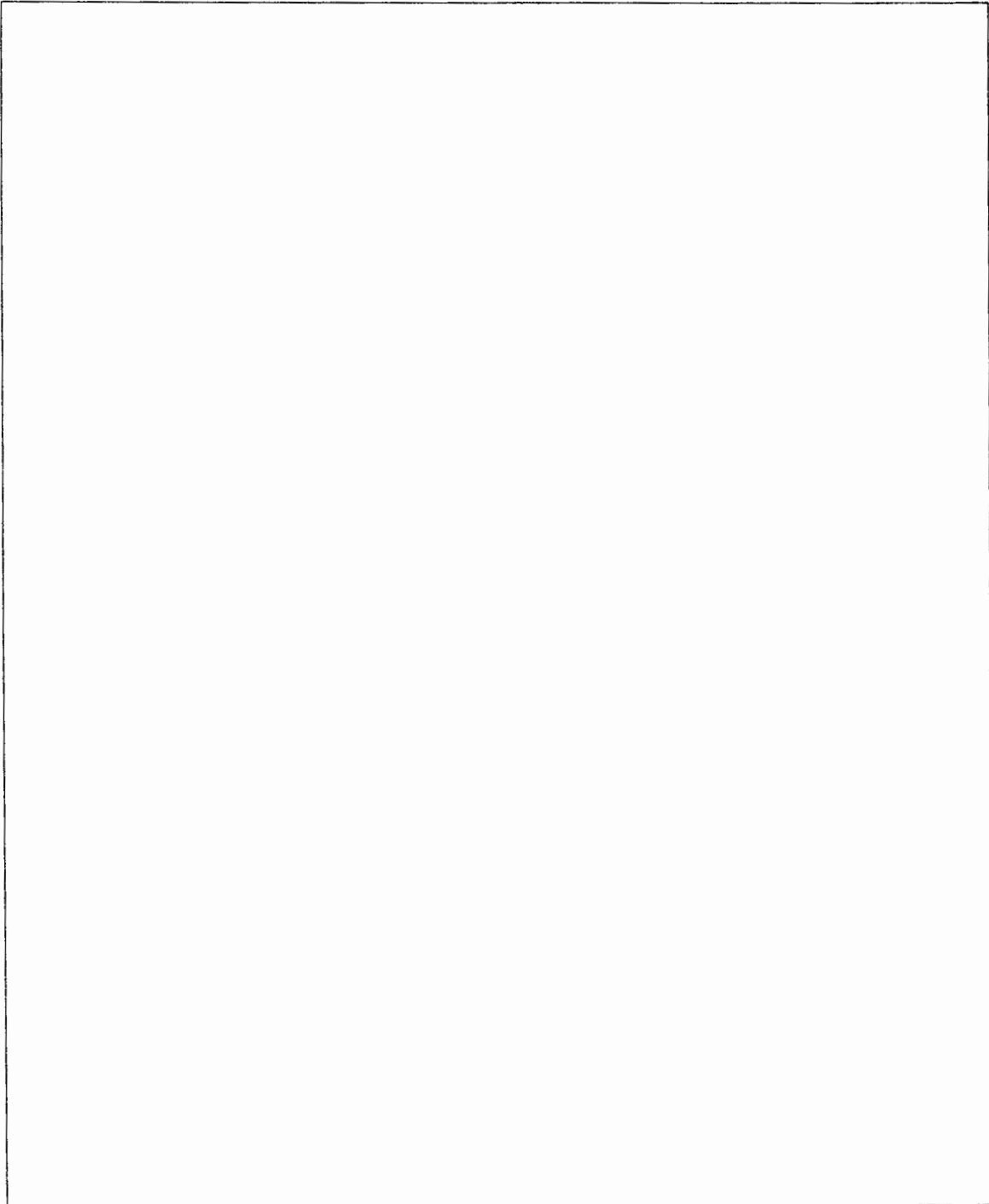
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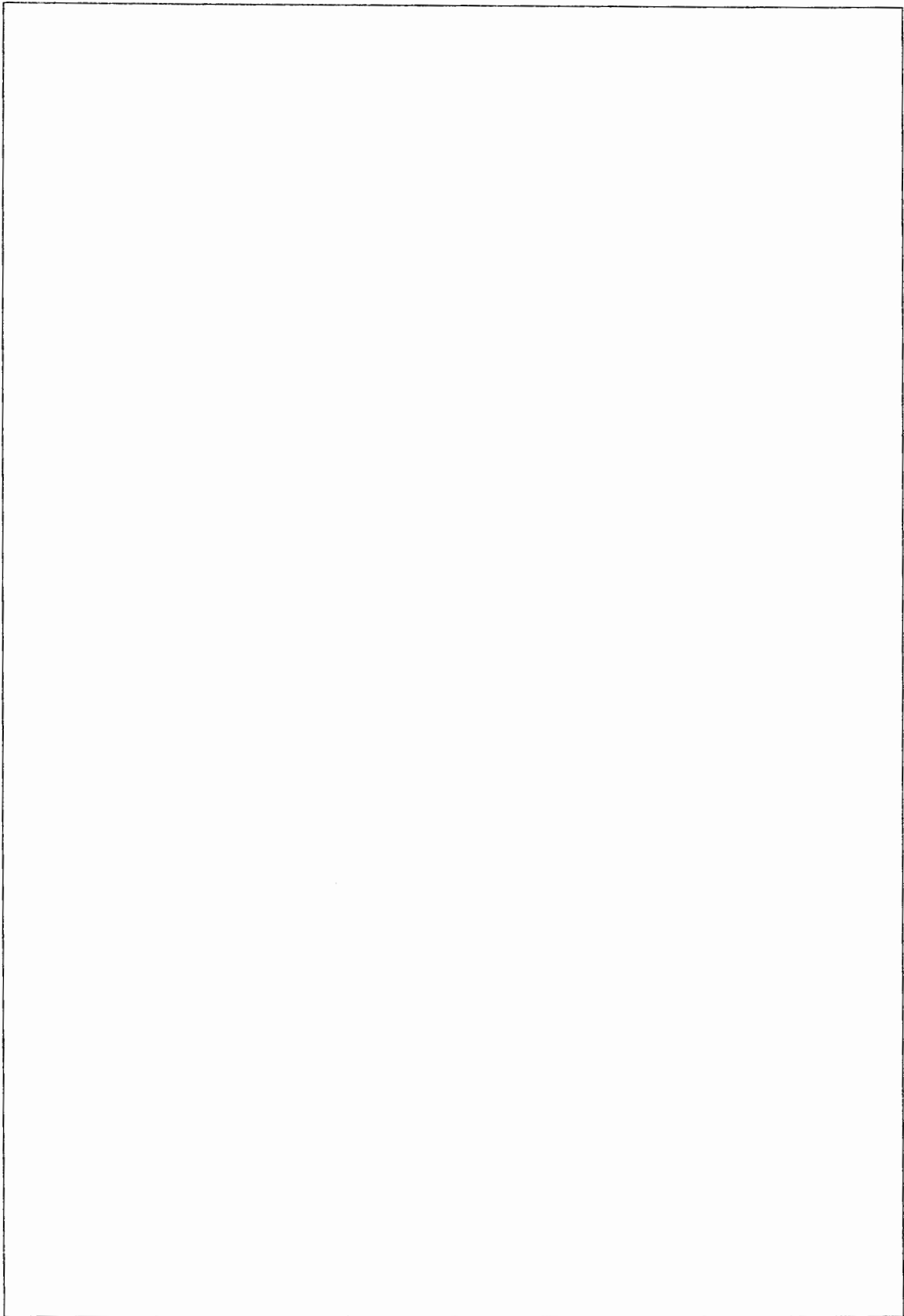
3. [25 points] Suppose that you are working as a site engineer and your boss assigns you to supervise 2 piling-subcontractors in a housing construction project. This housing project consists of 200 houses. What information will you collect for knowing the actual cost of piling work of subcontractors so that you can send a feedback to the estimation and contracting team of this company? How will you collect these information?



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4. [25 points] For a construction of a high-rise building project (50 floors). Its location is in Downtown of Bangkok. Suppose that you work for a contractor who wants to bid this project, and you are assigned to estimate the indirect cost of this project. What are the items of indirect costs of the contractor in this project?

