Team Project Assignment 1

All group presentations are on Wednesday, March 28 from 7 to 9 p.m. in ECEB 3015. Every student must attend.

Instructions

1. **We have partitioned the class** into 4 groups to undertake the preparation of either one of the attached case studies – groups will do either case study *A* (odd numbered) or case study *B* (even numbered). For added bonus points, each team's members may elect to create and prepare a case study of their own under the condition that the case study makes use of the material covered so far in class, possibly also including dynamic programming.

2. The expectations are that each group member **contributes to the work and its presentation**; each group must **elect** a team leader.

3. The default case is that the two odd-numbered groups will do case A and the other two even-numbered groups will do case B. Each group may replace its case study with a different case study of its own choice, including the development of a new case study.

4. Each group must develop a presentation, prepare a report documenting the work and also present its work to the class. The bullets that follow provide guidelines for the presentation and report preparation.

5. Use the default case study description as a starting point and feel free to make any assumptions that you can justify without a change in the physical constraints but you may add additional considerations and new degrees of freedom.

6. **Formulate** carefully the assumptions used in the analysis. For each assumption that is introduced, please provide a rationale for its reasonableness and its necessity.

7. **Plan** and **prepare** an effective oral presentation of your group's analysis and the set of your recommended actions. Please pay attention to the "robustness" of the recommendations and the need for sensitivity analysis. The sensitivity information is important to be able to respond to any type of *what if* questions.

8. **Document** your work and **prepare** a summary report with adequate details for the reader to perform the entire analysis that was done. The report serves as a comprehensive statement of the problem, the solution methodology developed and the recommendations

proposed. Each report needs to also address the sensitivity analysis issues. The report also includes a copy of the PPT slides. The report is to be filed both electronically and in paper form.

Notes

1. The grade on this and the second project make up part of the final grade on the course

2. The report has to provide adequate information to both assess the contributions of the team and to allow others to replicate what was done. It must be a stand-alone document.

3. You can make use any type of technology/medium to prepare and present your study.

4. All the students in the class **must be present** during each of the three other team presentations.

5. Students are encouraged to stay close to the notation used in the notes and to indicate what each subscript denotes. You may use any equation editor you wish but you must use the mathematical notation as you find in the notes.