**1.4 – Performance/Behavior Constraints**

1. Overview

This section describes the performance and behavior constraints imposed on the project by the customer's requirements, reasonable expectations of functionality and performance, and by the inherent nature of the project.

1. Constraints
   1. Customer Constraints
      1. Customer requirements will be determined during Phase 2, by completing Use Case Specifications and the Use Case Summary.
   2. Reasonable Functionality and Performance Constraints
      1. A query initiated online by the user should take no longer than 3 seconds to return a result and display it.
      2. Offline batch processing should take no more than 3 minutes to complete.
      3. If an unexpected error is encountered by the program:
         1. The error and pertinent information should be output to the program log file.
         2. An error message should be displayed to indicate to the user that an error occurred. The error should contain some description of the error, and an error code.
         3. All possible steps should be taken to recover from the error. If recovery is impossible, all transaction steps taken in the unit of work that contains the procedure and specific parameters which incurred the error should be rolled back.

An unexpected error is defined as an error that occurs in lieu of an expected action taking place successfully. Example: During the batch process, the file containing the incoming batch items is not formatted properly. The software would both log an error and display a message indicating that the file was unreadable, specifying which file it was, and providing a specific error code.

* + 1. If an expected error is encountered by the program:
       1. An error message should be displayed to indicate to the user that an error occurred. The error should contain some description of the error, and an error code.

An expected error is defined as an error that occurs because of normal program functionality. Example: A customer tries to place an order but there is no inventory remaining. The user (cashier) would receive an error message and be told that the store is out of stock and prompted to initiate a transfer or stock replenishment for the customer, and would be provided with an ETA for the item to be available for pickup.