**K327 Exam 3 Part 2 – Asphalt Mix**

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&docid=FaNzXn8wTmVWqM&tbnid=kroF8Q93KbqwhM:&ved=0CAYQjRw&url=http://theartofilm.blogspot.com/&ei=Em4jU87zOMnCyAHZy4CoDg&bvm=bv.62922401,d.aWc&psig=AFQjCNHAvPWPfEjATPXfzd7LV25U26EC6w&ust=1394917252481086)  
I had taken your class back in 2006-2007 and enjoyed the advanced Excel things that we learned.  Now, at my job, I have been using a lot of excel formulas in several different ways that have helped us create some pretty useful tools.

The one I am currently working on has me completely stumped.  I'm wondering, if you had time, if you could provide some guidance on it.  I have attached the workbook I am working with.  The idea is that we will input the tons of each hot mix design (hot mix designs are in row 1 of "Asphalt Demand"...19522R, etc.) on each job that we have (jobs are listed on column A on "Asphalt Demand").   If you scroll down on "Asphalt Demand" you'll see a 2nd chart that tells us the material breakdown.  The items listed from A20 to A32 are quarry materials used in the asphalt mix.  
  
I am trying to get the spreadsheet to look at the table in C2:T15.  It would take each number there and then reference the "Mix Designs" sheet.  For example, let's take the 207 ton in C3 of "Asphalt Demand".  I am creating a formula that would produce the amount of CM-11 Irene that is needed in ALL of the 19512R mixes (so the formula would go in cell C20). It would go to the "Mix Designs" sheet, reference the Mix Design in column B (which would narrow it down to a single row).  Then it would search row 1 of "Mix Designs" for the referenced quarry material, in this case, CM-11 Irene.  Together those two things would pin down a single cell that would provide a percentage.  The percentage represents the percent of CM-11 Irene that goes into the original 207 ton of 19512R for job number 9130229.  
  
It would do that process for each number in column C of the Asphalt Demand sheet.  It would then sum all of those numbers together to give me the total demand for CM-11 Irene that is needed to make all of the mixes that are currently in demand. The manual calculation for the total is 12,416 tons. Ideally, we want the table in C21:T35 in Asphalt Demand to do all of these calculations for us, both Grand Total and by Asphalt Mix.

[](http://www.google.com/imgres?sa=X&biw=1680&bih=855&tbm=isch&tbnid=r_erExIPVj5B1M:&imgrefurl=http://theartofilm.blogspot.com/&docid=FaNzXn8wTmVWqM&imgurl=http://1.bp.blogspot.com/-ezfw9e6pZ9o/Ux5q1dPI_EI/AAAAAAAADvM/n29DrXb__0U/s1600/Title_3.jpg&w=853&h=480&ei=MW4jU52eHKKVygGv4IHYCg&zoom=1&ved=0CNgBEIQcMCk&iact=rc&dur=701&page=2&start=25&ndsp=32)

Create an analysis which will do the required calculations. Develop a plan after studying the data. **One formula in C21 is all that is necessary; this can be copied to the other cells in the table**. A couple of supporting tables may be necessary, but large formulas or extensive analysis on another worksheet is not.

**Note: this is an individual project and the Kelley Honor Code is in effect.** To upload: Place all folders in a new folder named K327\_Exam3\_yourusername. Select the folder and zip it: Right click=> Send to=> Compressed (Zipped) folder. Upload to Canvas. Note: Automatic 5 point deduction if name is not on the Plans.