1. First off, from the partial hand-drawn schedule above, you can see that the relationship between the Underslab Utilities activity to the Slab on Grade activity is a finish to start relationship with no lag.

   To create this logical tie using the drag and drop feature, ***hover the cursor*** over the right edge of the Underslab Utilities bar until the cursor turns into this ⟺ double-sided arrow as shown to the right.
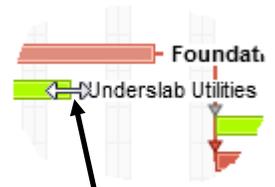
Important Note: Read through the next two bullets completely before proceeding with the next step.

2. When the cursor turns to this ⟺ double-sided arrow, ***left-click*** and ***drag down*** towards the Slab on Grade activity, but do not connect it, just hold it right there. Notice that the drag line becomes this •••••••••••

   red dashed line with this ⬏ arrow cursor and this ⬍ "started" relationship icon as shown below. If you happen to accidentally drop it, just hit the [Cancel] button and start over.
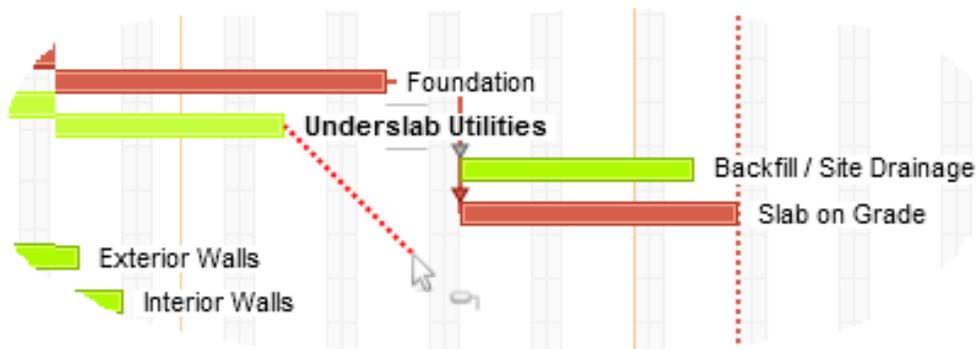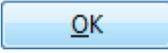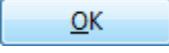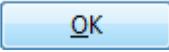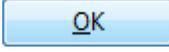
Formatting Bars

Take a look at the barchart area of the schedule. Always try to print your schedule in color but when you must print to black and white, or photocopy the schedule onto black and white, the following can be helpful.

When printed in black and white, it may be difficult to distinguish between the critical (red) bars and the non-critical (green) bars. Also, the Construction Period hammock which is an orange summary bar cannot be distinguished from the red critical bars.

Follow the instructions below to format the critical and hammock bars to so they can be more easily distinguishable when printed in black and white.

1. Go to **Format** then **Critical…** to open the Format window to the Critical tab. Next click in the Color [ ] field to change the color. Select the second red color down as shown to the right. This will allow for much more contrast from non-critical bars on black and white prints. Click [OK] to close the Color window, then click [OK] again in the Format window to accept this change.
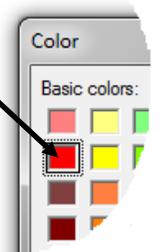
2. Next go to **Format** then **Bars…** to open the Format window to the Bar tab. Scroll down to the bottom and select **Hammock**. Next click on the middle orange bar as seen here [ ] to open the Configure Center Bar window. Then, click in the Color [ ] field to change the color. Select the blue color in the in the 5th column and the 4th row as shown to the right. Click [OK] to close the Color window. Next, in this same area, change the Height of this bar to **5**. Click [OK] to accept.
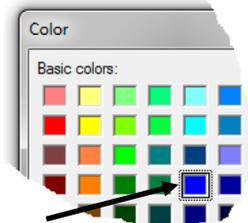
3. View the Neck Non-Working Days feature of Phoenix by going back to **Format** then **Bars…** . Select **Bar Activity** and click the middle [ ] to open the Configure Center Bar window and ***check*** ☑ Neck Non-Working Days , and hit [OK]. After viewing, go back in and ***un-check*** this feature.
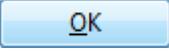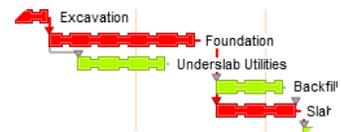
4. Save the project by going to **File**, then **Save**, or click the 🖫 button.

1. If it is not open, start by clicking to Info then 📅 Calendars... ,
   to open the Calendar Creator window.
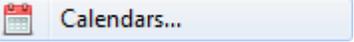
2. Select the **100% Weather Calendar**, then click the 📇 **Copy
   calendar**. Name the new calendar **50% Weather Calendar**, then,
   hit the ⏎ Enter, *key* on your keyboard. The new calendar is created.
   The next step is to add in the 50 % weather non-workdays.

3. Starting with **June 2015** and using the 50% column from Cincinnati
   Weather table a few pages back, create the non-workday months thru
   February of 2016 using the *exact dates* shown below and next page.
   Carefully double-check to ensure accuracy, then click OK .

June ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July ▼	2015 ⏶⏷

| Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December ▼	2015 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

January ▼	2016 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February ▼	2016 ⏶⏷

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

21. Re-select all of the activities and hover the cursor over the right edge to select and open the Start Node Date Options window. Insert the finish dates to the right of all the activities using the same instructions as above accept be sure to click the ⦿ Right button so the finish dates appear on the right side of the nodes (bars), rather than on the left. When complete, the Network Diagram should look like this partial view shown to the right.
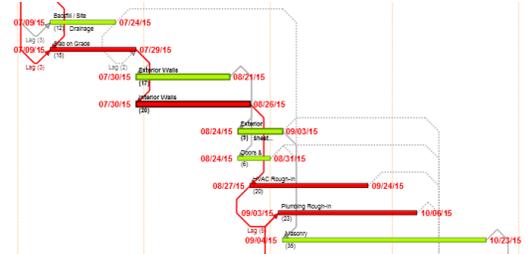
(F.Y.I.)

One of the most original features of the Network Diagram view in Phoenix is the ability to "collapse" selected activities into one line as shown to the right. To do this, you simply select the activities you want to collapse, then right-click on the screen, then select
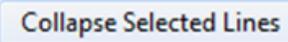
Collapse Selected Lines . If you try this on your sched-ule, click the Undo ⟲ button until your schedule re-turns back to its "un-collapsed" condition.

---
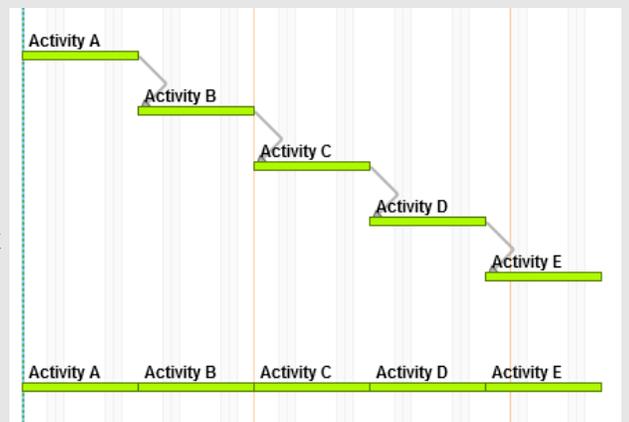
22. Next, click on the Font... button. In the Font style: field, select **Bold** and in the Effects area of this window, use the pull-down to *select the* [Red] *font*. Then click OK to close the Font window. When complete the Start Node Date Options window should look like that shown to the right. Click OK to accept the changes and see the start dates to the left of all the nodes (bars).
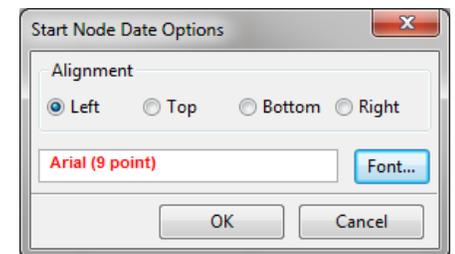
23. Next, click on the Font... button for the Contractor code. In the Effects area of this window, use the pull-down to *select the white font* as shown to the right. Click OK to close
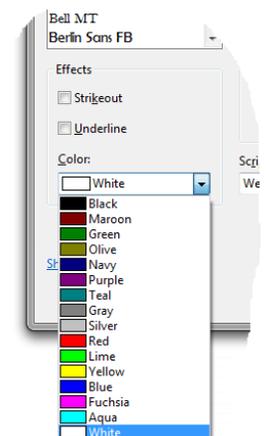
Possible Updating Scenarios

When updating activities from one period to the next, there are (6) possible update scenarios for any given activity. They are illustrated below along with the description *in blue font* of what you need to do to perform the update in Phoenix for each scenario.
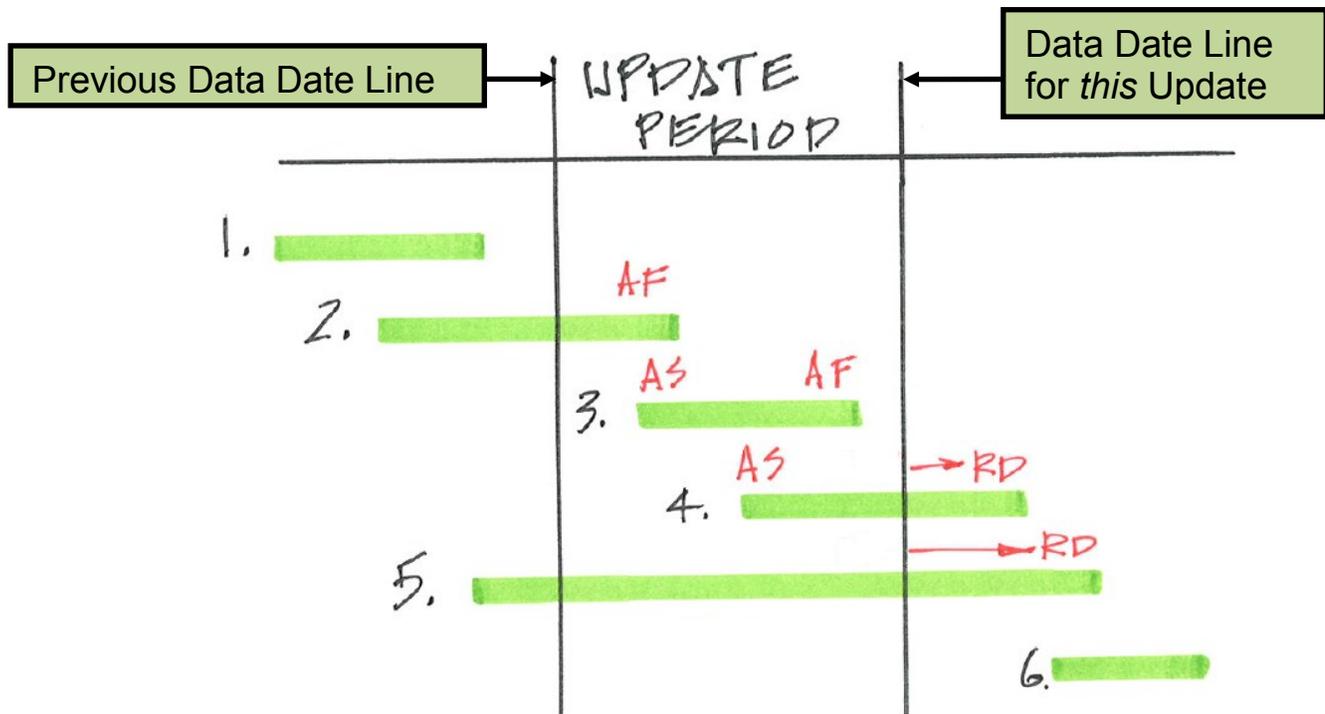
1. **Activity is already complete** ↔ Nothing should be entered for the activity.

2. **Activity had already started before the update period and finished during the update period** ↔ Enter the **Actual Finish** date of the activity.

3. **Activity started and finished during the update period** ↔ Enter the **Actual Start** and **Actual Finish** date of the activity.

4. **Activity started during the update period and the activity is still in progress** ↔ Enter the **Actual Start** date of the activity and your estimate of the activity's **Remaining Duration**.

5. **Activity had already started before the update period and the activity is still in progress** ↔ Enter your estimate of the activity's **Remaining Duration**.

6. **Activity has not started yet** ↔ Nothing should be entered for the activity yet.

ID	Description	Orig Dur	Rem Dur	Dur At Comp	Start	Finish	Total Float	Storepoint
	Phoenix Training Project							
	\<your name\> Construction							
	Smith							
10	Notice to Proceed	0	0	0	06/01/15A			Update #1 - 2015-10-09
	Notice to Proceed	0	0	0	06/01/15		0	Baseline Schedule
20	Constr. Per.	185	185	185	06/01/15	02/19/16	N/A	Update #1 - 2015-10-09
	Construction Period	157	157	157	06/01/15	01/12/16	N/A	Baseline Schedule
30	Excavation	7	0	7	06/01/15A	06/09/15A		Update #1 - 2015-10-09
	Excavation	7	7	7	06/01/15	06/09/15	0	Baseline Schedule
60	Backfill / Site Drainage	12	0	7	07/14/15A	07/22/15A		Update #1 - 2015-10-09
	Backfill / Site Drainage	12	12	12	07/09/15	07/24/15	1	Baseline Schedule
70	Slab on Grade	15	0	17	07/27/15A	08/18/15A		Update #1 - 2015-10-09
	Slab on Grade	15	15	15	07/09/15	07/29/15	0	Baseline Schedule
120	HVAC Rough-In	20	12	25	09/22/15A	10/26/15	16	Update #1 - 2015-10-09
	HVAC Rough-In	20	20	20	08/27/15	09/24/15	0	Baseline Schedule
220	Proj. Comp.	0	0	0		02/19/16	0	Update #1 - 2015-10-09
	Project Complete	0	0	0		01/12/16	0	Baseline Schedule
	Jones							
40	Foundation	25	0	31	06/10/15A	07/10/15A		Update #1 - 2015-10-09
	Foundation	25	25	25	06/10/15	07/04/15	0	Baseline Schedule
80	Ext. Walls / Shtg.	17	0	15	07/31/15A	08/20/15A		Update #1 - 2015-10-09
	Exterior Walls	17	17	17	07/30/15	08/21/15	24	Baseline Schedule
100	Trusses & Roofing	9	0	7	08/17/15A	08/25/15A		Update #1 - 2015-10-09
	Exterior Sheathing	9	9	9	08/24/15	09/03/15	24	Baseline Schedule
90	Interior Walls	20	0	22	08/20/15A	09/21/15A		Update #1 - 2015-10-09
	Interior Walls	20	20	20	07/30/15	08/26/15	0	Baseline Schedule
110	Doors & Windows	6	0	6	08/24/15A	08/31/15A		Update #1 - 2015-10-09
	Doors & Windows	6	6	6	08/24/15	08/31/15	27	Baseline Schedule
190	Exterior Finishes	45	45	45	10/26/15	12/23/15	52	Update #1 - 2015-10-09
	Exterior Finishes	30	30	30	10/26/15	12/07/15	24	Baseline Schedule
180	Drywall	27	27	27	12/03/15	01/12/16	0	Update #1 - 2015-10-09
	Drywall	27	27	27	10/23/15	12/01/15	0	Baseline Schedule
200	Inter. Fin.	40	40	40	12/24/15	02/19/16	0	Update #1 - 2015-10-09
	Interior Finishes	40	40	40	11/13/15	01/12/16	0	Baseline Schedule

Start Date: 06/01/15
Finish Date: 02/19/16
Data Date: 10/09/15
Run Date: 08/06/15

Phoenix Lab #5b (Comparison Schedule to Update #1) Construction Schedule
Phoenix Project Manager Systems

Phoenix Lab #5b (Comparison Schedule to Update #1).pp Page 1A

Comparison of the Baseline Schedule to the First Update (Page One)

Phoenix Project Manager: *Real World* Scheduling

Schedule Analysis – Lab #2

Name _____

After completing Lab #2, answer the following questions from the schedule printouts and the on-screen schedules. Turn the Schedule Analysis – Lab #2 in to your instructor stapled on top of your first schedule printout followed by the second schedule printout.

1. Is the data in any of the columns centered inside the column ? **Yes** or **No** (circle one)

    If yes, list which column(s) _____

2. If a Column Title does not fit inside the width of the column, will the title automatically stack vertically like shown here for the Total Float title `Total Float` ? **Yes** or **No** (circle one)

3. Hammock activities in Phoenix – by default – are what color ? _____

4. When activity bars are "necked down" as shown here ▬▬▬▬▬▬, the necked portion of the bar is to signify what ? _____

5. Relationship lines in Phoenix are turned on by default ?   **Yes**   or   **No** (circle one)

6. The Timescale allows the schedule to be displayed in *hours* ?   **Yes**   or   **No** (circle one)

7. Where do you go to extend the print range so activity descriptions at the end of the schedule do not get truncated ? _____

    _____

8. Is the schedule sorted by the Start date ?   **Yes**   or   **No** (circle one)

    If yes, list the activity ID(s) that are out of numerical order ? _____

9. Which of the following logo format file types *is not* supported by Phoenix: **BMP files, JPEG files, PCX files, TIFF files,** or **none of the above** ? (circle one)

10. When the footer was changed to the right, were the Construction Period and Project Complete activity descriptions truncated again ?   **Yes**   or   **No** (circle one)

11. Did the footer information change when switched to the right ? **Yes** or **No** (circle one)

    If yes, what changed ? _____

12. Did the schedule end date change when holidays were added to the calendar ? **Yes   No**

    If yes, what is the new end date ? _____ If no, why didn't change ? _____

    _____

13. Did the critical path change ? **Yes   No**   If yes, what new activities are now critical that

    were not previously ? (*list by task IDs*) _____

14. When the weather calendars were assigned to the (8) activities, only the assignment to

    activities 30, 50, and 70 effected the project end date. Explain why ? _____

    _____

Your contract for this project with the owner has Incentive Clauses that stipulate that the owner will pay you a ***bonus*** of $5000 per day for every day the project is finished prior to its scheduled January 21st, 2016 end date - *and* – that you will have to pay the owner a $5000 per day ***penalty*** for every day the project goes beyond this same scheduled end date. Based on that information, answer these questions using the **Weather Calendars** schedule.

15. Your boss was told by your Interior Finishes subcontractor that they could accelerate

    the completion of the interior finishes activity by 8 workdays if your company would

    agree to pay their crew time-and-a-half (1.5 x normal rate) for overtime for the last **12**

    days of that work. The normal rate for their crew is $2700/day.   He has asked you to

    determine if this would gain or lose money for your company, and by how much ?

    Gain   Lose (circle one)   By how much ? **$**_____ .

16. That same contractor said that if they rent a specialized piece of equipment for one

    week (which must be rented for a (5) day minimum rental at $1900/day) they could

    accelerate the completion of their work an additional (3) days. If your company would

    pay for the rental, determine if your company would gain or lose money? **Gain   Lose**

    If a gain, how much would your company gain ? **$**_____ . If a loss, how much

    would your company lose ? **$**_____ . (***Note:*** Calculate using <u>new end date</u>)