

Activity	Activity	Orig	Early	Early	Total		2007		2008 2009
ID	Description	Dur	-	Early Finish	Total Float	JI	F M A M J J A S	O N D	J F M A M J J A S O N D J F M A M J J A S O
	Description	Dui	Start	I IIIISII	i ioat	шшш	<u> </u>	<del></del>	
MEP						i			
	P/S MEPF Submittals	42	01/07/08	02/17/08	6				P/S MEPF Submittals
	R/A MEPF Submittals	42	01/28/08	03/09/08	6				R/A MEPF Submittals
	P/S Elevator Submittals	42	02/18/08	03/30/08	10				P/S Elevator Submittals
	R/A Elevator Submittals	42	03/10/08	04/20/08	132				R/A Elevator Submittals
Arch/MEP	P/Site								
						1			
01500	P/S Interiors Submittals	42	05/12/08	06/22/08	184	1			P/S Interiors Submittals
01510	R/A Interiors Submittals	42	06/02/08	07/13/08	233	į			R/A Interiors Submittals
01520	P/S Site Finishes Submittals	42	06/23/08	08/03/08	184	i			P/S Site Finishes Submittals
01530	R/A Site Finishes Submittals	42	07/14/08	08/24/08	184			1 1	R/A Site Finishes Submittals
Fabricati	ion					1			
						- 1			
Structural						į			
	51.0	1	10/1-1-	00/4=/=:		1			
	Fab Structural Components	70			275				Fab Structural Components
	Fab Skin Components	85	06/02/08	08/25/08	10	- 1			Fab Skin Components
MEP						1			
						i			
01600	Fab Mech/Plumbing Equipment	98	03/10/08	06/15/08	6				Fab Mech/Plumbing Equipment
	Fab Electrical Equipment	98	03/10/08	06/15/08	6				Fab Electrical Equipment
01610	Fab Elevators	150	04/21/08	09/17/08	132	- 1		1 1	Fab Elevators
Arch/MEP	P/Site					i			
						į			
01650	Fab Casework	56	07/14/08	09/07/08	233	1			Fab Casework
	derground Utilities								
	derground offittes					1			
Site						1			
						İ			
	Mobilize/Office Setup	15	02/19/07	03/05/07	216		Mobilize/Office Setup  Demo Existing Utilities		
	Demo Existing Utilities	7	03/06/07	03/12/07	216		Demo Existing Utilities		
	Install U/G Utilities	21	10/15/07	11/04/07	0			Install U/G	
	Shoring of Mass Excavation	14	11/05/07	11/18/07	0			T	of Mass Excavation
	Mass Excavation/Grading	14	11/19/07	12/02/07	0	i		Mass	Excavation/Grading
	Safe off utilities for Tunnel Tie-in	14	10/15/08	10/28/08	77	1			Safe off utilities for Tunnel Tie-in
	Utility Tunnel Work	35	10/29/08	12/02/08	77	- 1			Utility Tunhel Work
	Backfill Exterior Walls	7	12/03/08	12/09/08	77				Backfill Exterior Walls
Concrete	e & Superstructure					1			
Site						1			
South Pod						i			
	Excavate & FRP South Footings	28	12/03/07	12/30/07	0	-			xcavate & FRP South Footings
North Pod	Executate a Fri Count Founds	20	12/00/01	12,00,01		- 1			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Excavate & FRP North Footings	28	12/17/07	01/13/08	48	1			Excavate & FRP North Footings
_		20	12/11/01	01/10/00	-70	-			
1st Floor						i			
South Pod	Doctrill for COC Courts	-	40/04/07	04/00/00	_	į		1	Backfill for SOG South
	Backfill for SOG South	7	12/31/07		0	- 1			FRP SOG South Pour 1
	FRP SOG South Pour 2	14	01/07/08	01/20/08	0	4 .			
	FRP SOG South Pour 2	14	01/21/08	02/03/08	0				FRP SOG South Pour 2
	FRP L1 - Exterior Walls South	14	02/04/08	02/17/08	0				FRP L1 - Exterior Walls South
	FRP L1 - Internal Walls South	14	02/11/08	02/24/08	27				FRP L1 - Internal Walls South
03050	FRP L1 - Columns South	14	02/18/08	03/02/08	27				

Activity	Activity	Orig	-	Early	Total	J F	200 M A M J	)7 J A S O N D	2008 2009 J F M A M J J A S O N D J F M A M J J A S O
ID ID	Description	Dur	Start	Finish	Float	ш	<mark>-</mark>	<del>minnimminnim</del>	<del>anaminaminaminaminaminaminaminaminaminam</del>
North Pod	Doglefill for COC North	7	04/44/00	04/00/00	40	- 1			Backfill for \$OG North
03080 03100	Backfill for SOG North FRP SOG North	14	01/14/08	01/20/08	48 34	i			FRP SOG North
03100	FRP L1 - All Walls North	14	02/04/08	03/09/08	27	1			FRP L1 - All Walls North
03000	FRP L1 - Columns North	14	03/03/08	03/09/08		1			FRP L1 - Columns North
2nd Floo		14	03/03/00	03/10/00	21	-	+ + + +		
						i			
South Pod	Fabricate Deck Forms	111	00/40/00	02/02/00		į			Fabricate Deck Forms
03130	Shore + FRP Slab on Deck South	35	02/18/08	03/02/08	0	i			Shore + FRP Slab on Deck South
03140	FRP L2 - Exterior Walls South	8				1			FRP L2 - Exterior Walls South
03160 03170	FRP L2 - Exterior Walls South	8	03/31/08	04/07/08	13	1			FRP L2 - Internal Walls South
03170	FRP L2 - Columns South	8	04/05/08		13	1			FRP L2 - Columns South
North Pod	FRF L2 - Coldillis South	0	04/10/06	04/17/08	13	-			The second secon
03150	Shore + FRP Slab on Deck North	28	03/17/08	04/13/08	0	i			Shore + FRP Slab on Deck North
03150	FRP L2 - All Walls North	8	03/17/08		13	-			FRP L2 - All Walls North
03190	FRP L2 - All Walls North	8	04/15/08		13	1			FRP L2 - Columns North
	TIME LE - COMMINS MORE	0	04/20/00	04/21/00	13	-			
3rd Floor						į			
South Pod	OL EDDOLL D. C	165	00/01/05	05/01/05		i			Change FDD Clark or Dayle County
03220	Shore + FRP Slab on Deck South	35	03/31/08	05/04/08	0	i			Shore + FRP Slab on Deck South
03240	FRP L3 - Exterior Walls South	8	05/05/08	05/12/08	6	1			
03250	FRP L3 - Internal Walls South	8	05/10/08	05/17/08	6	1			FRP L3 - Internal Walls South
03260	FRP L3 - Columns South	8	05/15/08	05/22/08	6	i			FRP L3 - Columns South
North Pod	0. 500 0.1 0.1 1.1	00	0.4/4.4/00	05/44/00	4.4	į		_	Chara (FDDClatina Deal Marth
03230	Shore + FRP Slab on Deck North	28	04/14/08		14	i			Shore + FRP Slab on Deck North
03270	FRP L3 - All Walls North	8	05/20/08	05/27/08	6	1		<b>-</b>	FRP L3 - All Walls North
03280	FRP L3 - Columns North	8	05/25/08	06/01/08	6	1	1 1 1		
4th Floor						1			
South Pod			1			į			
03300	Shore + FRP Slab on Deck South	35	05/05/08		0	į			Shore + FRP Slab on Deck South
03320	FRP L4 - Exterior Walls South	8	06/09/08	06/16/08	14	i			FRP L4 - Exterior Walls South
03330	FRP L4 - Internal Walls South	8	06/14/08	06/21/08	14	1			FRP L4 - Internal Walls South
03340	FRP L4 - Columns South	8	06/19/08	06/26/08	14	1			FRP L4 - Columns South
North Pod	TO	100	05/10/00	00/45/00		1			
03310	Shore + FRP Slab on Deck North	28	05/19/08	06/15/08	22	į			Shore + FRP Slab on Deck North
03350	FRP L4 - All Walls North	8	06/24/08	07/01/08	14	i			FRP L4 - All Walls North
03360	FRP L4 - Columns North	8	06/29/08	07/06/08	14	-			FRP L4 -i Columns North
5th Floor						1			
South Pod						1			
03380	Shore + FRP Slab on Deck South	35	06/09/08		0	İ			Shore + FRP Slab on Deck South
03400	FRP L5 - Exterior Walls South	8	07/14/08		7	ij			FRP L5 - Exterior Walls South
03410	FRP L5 - Internal Walls South	8	07/19/08		7	- 1			FRP L5 - Internal Walls South
03420	FRP L5 - Columns South	8	07/24/08	07/31/08	7				FRP L5 - Columns South
North Pod	555 011 5 111 11	1.55	00/07/25	07/65/5		1			
03390	Shore + FRP Slab on Deck North	_	06/23/08			1			Shore + FRP Slab on Deck North
03430	FRP L5 - All Walls North	8	07/29/08			i			FRP L5 - All Walls North
03440	FRP L5 - Columns North	8	08/03/08	08/10/08	7				FRP L5 - Columns North
6th Floor						-			
South Pod						1			
03450	Shore + FRP Slab on Deck South		07/14/08			1			Shore + FRP Slab on Deck South
03470	FRP L6 - Exterior Walls South	8	08/18/08			i			FRP L6 - Exterior Walls South
03480	FRP L6 - Internal Walls South	8	08/23/08			į			FRP L6 - Internal Walls South
03490	FRP L6 - Columns South	8	08/28/08	09/04/08	0	i			FRP L6 - Columns South

Activity	Activity	Orig	Early	Early	Total		20	07	2	008 2009
ID	Description	Dur	Start		Float	JI	F M A M J	JASONI	D J F M A M J	JASONDJFMAMJJASC
North Pod	-						!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!		!!!!!!!!	
03460	Shore + FRP Slab on Deck North	28	07/28/08	08/24/08	86					Shore + FRP Slab on Deck North
						ı				
03500	Structural Steel Erection, Weld & Decking	28	09/10/08	10/07/08	70					Structural Steel Erection, Weld & Decking
Penthous	se/Roof					ı				
	FRP Roof/PH Decks	21	09/24/08	10/14/08	70					FRP Roof/PH Decks
	Structure Complete	0		10/14/08	77					Structure Complete
Exterior	Skin					1				
Exterior S	Skin					 				
						l I				
08010	Infill framing at windows	70	06/02/08	08/10/08	6	I I				Infill framing at windows
08030	Masonry/Precast Veneer	$\rightarrow$		10/19/08	53					Masonry/Precast Veneer
	Steel Trellis	42	06/30/08	08/10/08	53	1				Steel Trellis
	Roof Eyebrow Paneling	28	08/11/08	09/07/08	107					Roof Eyebrow Paneling
	Curtain wall/Glazing Systems	124	09/05/08	01/06/09	0	I				Curtain wall/Glazing Systems
Roofing						I I				
Exterior S	Skin					1				
						I I				
08060	Roof penthouses, curbs	28	10/15/08	11/11/08	70	i				Roof penthouses, curbs
	Flashings & Roofing	21	01/07/09	01/27/09	0					Flashings & Roofing
08080	Building Dry-In	0		01/27/09	0	i	i i i			◆Building Dry-In
Interior I	MEP & Framing Rough-Ins					į				
1st Floor						i				
South Pod						i				
	Start Roughins	0	06/16/08		6	i				Start Roughins
09020	OH Rough-ins 1st South	21	06/16/08	07/06/08	6	i			8	OH Rough-ins 1st South
	Wall Rough-ins 1st South	21	07/07/08	07/27/08	6	į	i i i	i i i i		Wall Rough-ins 1st South
North Pod					I -	i				
	OH Rough-ins 1st North	21	07/07/08	07/27/08	6					OH Rough-ins 1st North Wall Rough-ins 1st North
	Wall Rough-ins 1st North	21	07/28/08	08/17/08	6	i				vvali Rough-ins 1st Notifi
Lecture Hall 09060	Lecture Hall Rough-ins	21	08/18/08	09/07/08	6	İ				Lecture Hall Rough-ins
2nd Floor		Z 1	33, 10,00	33,31700	J	1				
South Pod						İ				
	OH Rough-ins 2nd South	21	07/28/08	08/17/08	6	İ				OH Rough-ins 2nd South
	Wall Rough-ins 2nd South	21	08/18/08	09/07/08	6	4 .				Wall Rough-ins 2nd South
North Pod						İ				
	OH Rough-ins 2nd North	21	08/18/08		6	i				OH Rough-ins 2nd North
09100	Wall Rough-ins 2nd North	21	09/08/08	09/28/08	6	i				Wall Rough-ins 2nd North
3rd Floor						i				
South Pod						i				
	OH Rough-ins 3rd South				6					OH Rough-ins 3rd South
	Wall Rough-ins 3rd South	21	09/29/08	10/19/08	6	i	i			Wall Rough-ins 3rd South
North Pod	OU Develoring and Newth	0.1	00/00/00	40/40/00		i				OH Polymbing 2rd North
	OH Rough-ins 3rd North Wall Rough-ins 3rd North	21	09/29/08	10/19/08 11/09/08	6 6					OH Rough-ins 3rd North
	wali Noughillo Siu Notti	21	10/20/08	11/09/08	0	-				avaii Nougir-in 3 du Nouti
4th Floor										
South Pod 09160	OH Rough-ins 4th South	24	10/20/08	11/00/00	6					OH Rough-ins 4th South
09160	On Nough-ins 4iii 30uiii	21	10/20/08	11/09/08	ס			1 1 1 1		Of Froughting 40 Double

Activity	Activity	Orig	Early	Early	Total		200	)7	2008	2009   A   S   O   N   D   J   F   M   A   M   J   J   A   S   C
ID	Description	Dur	Start	Finish	Float	шш				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
09170	Wall Rough-ins 4th South	21	11/10/08	11/30/08	6	-	1 1 1			Wall Rough-ins 4th South
North Pod	OUD I : WEN II	0.4	44/40/00	4.4 (0.0 (0.0		1				
09180 09190	OH Rough-ins 4th North Wall Rough-ins 4th North	21	11/10/08 12/01/08	11/30/08 12/21/08		1	1 1 1			OH Rough-ins 4th North  Wall Rough-ins 4th North
	Wall Rough-ins 4th North	21	12/01/06	12/21/06	O		1 1 1	1 1 1 1		waii Rougi iii sau ii ya
5th Floor						1				
South Pod 09200	OH Rough-ins 5th South	21	12/01/08	12/21/08	6	1				OH Rough-ins 5th South
09200	Wall Rough-ins 5th South	21	12/01/08	01/11/09		1				Wall Rough-ins 5th South
North Pod	TVall Rough in Sun Godin	- 1	12/22/00	01/11/03						
09220	OH Rough-ins 5th North	21	12/22/08	01/11/09	6	į				OH Rough-ins 5th North
09230	Wall Rough-ins 5th North	21				i				Wall Rough-ins 5th North
6th Floor						i				
South Pod										
09240	OH Rough-ins 6th South	21	01/12/09	02/01/09	6					OH Rough-ins 6th South
09250	Wall Rough-ins 6th South	21	02/02/09	02/22/09	6					Wall Rough-ins 6th South
North Pod										
09260	OH Rough-ins 6th North	21	02/02/09	02/22/09						OH Rough-ins 6th North
09270	Wall Rough-ins 6th North	21	02/23/09	03/15/09	6					Wall Rough-ins 6th North
Penthous	se/Roof									
										; ;   ; ;   ; <u>;  </u>   ; ;   ; ;   <b> </b>
09280	Penthouse Roughins	21	02/23/09	03/15/09	6					Penthouse Roughins
Interior	Finishes					- 1		1 1 1 1		
1st Floor						- 1				
South Pod						1				
09690	Start Finishes	0	01/28/09		0	1				9 Start Finishes
09290	Board/Tape/Paint/Ceiling Grid -South	13	01/29/09	02/10/09	0	1				Board/Tape/Paint/Ceiling Grid -South
09300	Casework/Fixtures -South	7	02/11/09	02/17/09	77	1				Casework/Fixtures -South
09310	Carpet/Misc Specialties -South	7	02/18/09	02/24/09	77		1 1	1 1 1		Carpet/Misc Specialties -South
North Pod						1				:
09320	Board/Tape/Paint/Ceiling Grid -North	14	02/04/09	02/17/09		1				Board/Tape/Paint/Ceiling Grid -North
09330 09340	Casework/Fixtures -North	7	02/18/09 02/25/09	02/24/09 03/03/09		1				Casework/Fixtures -North
	Carpet/Misc Specialties -North	1	02/25/09	03/03/09	11	-				Carpetivisc Specialites -North
Lecture Hall 09350	Board/Tape/Paint/Ceiling Grid -Lecture	7	02/11/09	02/17/09	0				Boar	d/Tape/Paint/Ceiling Grid -Lecture
09360	Woodwork/Carpet/Fixtures -Lecture	7	02/11/03	02/17/03		i				Woodwork/Carpet/Fixtures -Lecture
09370	Seating/Misc Specialties -Lecture	7	02/25/09	03/03/09		i				Seating/Misc Specialties -Lecture
2nd Floo						İ				
South Pod						į				
	Board/Tape/Paint/Ceiling Grid -South	14	02/18/09	03/03/09	0	i			Bo	ard/Tape/Paint/Ceiling Grid -South
09390	Casework/Fixtures -South	7	03/04/09							Casework/Fixtures -South
09400	Carpet/Misc Specialties -South	7	03/11/09	03/17/09	70					Carpet/Misc Specialties -South
North Pod										
09410	Board/Tape/Paint/Ceiling Grid -North	14	02/25/09							Board/Tape/Paint/Ceiling Grid -North
09420	Casework/Fixtures -North	7	03/11/09							Carpet/Misc Specialties -North
09430	Carpet/Misc Specialties -North	7	03/18/09	03/24/09	70					Garpet/misc Specialities -North
3rd Floor										
South Pod	Doord/Tone/Deigh/Ceiling Cold Courts	4.4	02/04/00	00/47/00						Board/Tape/Paint/Ceiling Grid -South
09440 09450	Board/Tape/Paint/Ceiling Grid -South Casework/Fixtures -South	7	03/04/09 03/18/09							Casework/Fixtures -South
09450	Casework/Fixtures -South  Carpet/Misc Specialties -South	7	03/18/09							Carpet/Misc Specialties -South
North Pod	- Outpos villo Openialites - Outil		00120103	00/01/09		-	1 1 1			
	Board/Tape/Paint/Ceiling Grid -North	14	03/11/09	03/24/09	0					Board/Tape/Paint/Ceiling Grid +North
30 17 0		1	33, 1700	00,2 1,00						

	Activity	Activity	Orig	Early	Early	Total		20	2007 2008 2009
	ID	Description	Dur	Start	Finish	Float	J F	=   M   A   M   J	JASONDJEMAMJJASONDJEMAMJJASO
	09480	Casework/Fixtures -North	7	03/25/09	03/31/09	56	11,11	111111111111111111111111111111111111111	Casework/Fixtures -North
	09490	Carpet/Misc Specialties -North	7	04/01/09	04/07/09	56	1	1 1 1	Carpet/Misc Specialties -North
Δt	h Floor						-		
	outh Pod						i		
	09500	Board/Tape/Paint/Ceiling Grid -South	14	03/18/09	03/31/09	0	į		Board/Tape/Paint/Ceiling Grid -South
	09510	Casework/Fixtures -South	7	04/01/09	04/07/09	42	1		Casework/Fixtures -South
	09520	Carpet/Misc Specialties -South	7	04/08/09	04/14/09	42	-		Carpet/Misc Specialties -South
N	orth Pod	and the second second					-		
		Board/Tape/Paint/Ceiling Grid -North	14	03/25/09	04/07/09	0	1	1 1 1	Board/Tape/Paint/Ceiling Grid -North
	09540	Casework/Fixtures -North	7	04/08/09	04/14/09	42	1		Casework/Fixtures -North
	09550	Carpet/Misc Specialties -North	7	04/15/09	04/21/09	42	1	1 1 1	Carpet/Misc Specialties -North
5t	h Floor						1	1 1 1	
S	outh Pod						į		
		Board/Tape/Paint/Ceiling Grid -South	14	04/01/09	04/14/09	0			Board/Tape/Paint/Ceiling Grid -South
	09570	Casework/Fixtures -South	7	04/15/09	04/21/09	28	1		Casework/Fixtures -South
	09580	Carpet/Misc Specialties -South	7	04/22/09	04/28/09	28	1		Carpet/Misc Specialties -South
N	orth Pod								
	09590	Board/Tape/Paint/Ceiling Grid -North	14	04/08/09	04/21/09	0	1		Board/Tape/Paint/Ceiling Grid North
	09600	Casework/Fixtures -North	7	04/22/09	04/28/09	28	1		Casework/Fixtures -North
L	09610	Carpet/Misc Specialties -North	7	04/29/09	05/05/09	28	i	i i i	Carpet/Misc Specialties -North
6t	h Floor						į		
S	outh Pod						- 1		
	09620	Board/Tape/Paint/Ceiling Grid -South	14	04/15/09	04/28/09	0	i	1 1 1	Board/Tape/Paint/Ceiling Grid South ■
	09630	Casework/Fixtures -South	7	04/29/09	05/05/09	0	1	1 1 1	Casework/Fixtures -South
	09640	Carpet/Misc Specialties -South	7	05/06/09	05/12/09	0	-		Carpet/Misc Specialties -South
N	orth Pod						1	1 1 1	
		Board/Tape/Paint/Ceiling Grid -North	14	04/22/09	05/05/09	0	İ		Board/Tape/Paint/Ceiling Grid -North
	09660	Casework/Fixtures -North	7	05/06/09	05/12/09	0	į		Casework/Fixtures -North
_		Carpet/Misc Specialties -North	7	05/13/09	05/19/09	0	i		Carpet/Misc Specialties -North
P	enthous	se/Roof					į		
				-	1				
_	09680	Flooring/Paint/Fixtures -Penthouse	14	05/20/09	06/02/09	0			Flooring/Paint/Fixtures -Penthouse
E	evator	'S					i	1 1 1	
V	ertical S	Systems					1		
							1		
	14010	Elevator Rails/Equipment	70	10/15/08	12/23/08	105	1		10 Elevator Rails/Equipment
		Cab Assembly/Finishes/Fronts	56			105	1		Cab Assembly/Finishes/Fronts
117		pe, Site Finishes & Landscaping					1		
C	4.0	ipe, one i inishes a Lanuscaping					1		
SI	te						i		
	00500	Davide Oradia a		04/00/00	00/40/00	00	i		
	02500	Rough Grading	14	01/28/09 02/11/09	02/10/09	28 28			Rough Grading
		Planter Wall Footings Planter Walls	14	02/11/09 02/25/09	02/24/09 03/10/09	28	1		11 Planter Walls
		Site Lighting & Irrigation	14	02/25/09	03/10/09	28	1		Planter viails
		Concrete Pavings/Site Finishes	14	03/11/09	03/24/09	28	1		Concrete Pavings/Site Finishes
		Landscape Fine Grading	14	04/08/09	04/07/09	28	+		Landscape Fine Grading
		Plantings	14	04/22/09	05/05/09	28	-		Plantings
				3 ., <u></u> , 00	33,30,00		İ		
C	JIIIIIIIS	ssioning					i		
							1		
							-		
	17020	Electrical Energize & Test	14	03/16/09	03/29/09	6			Electrical Energize & Test

Sheet 6 of 7

Δ	ctivity	Activity	Orig	Early	Early	Total			20	07			2	008			2009 J F M A M J J A S C
^	ID	Description	Dur		Finish							DJFM	AMJ	J	A S	OND	J F M A M J J A S C
	17010	Mech/Plumbing Test and Balance	84		06/21/09	6	шш	1	<del>                                      </del>	<del>                                      </del>	<del>                                      </del>	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	<del>                                      </del>	ш	<u>IIIIIII</u> ⊢M∈	ech/Plumbing Te	est and Balance
	17030	Fire Alarm Programming, Testing and Signoff	35			0	- 1	1					1 1				nming, Testing and Signoff
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	17050	Owner/Arch/GC Prepare Punchlist		06/03/09		0	-	1	1 1				1 1	1	1	Owner//	Arch/GC Prepare Punchlist Complete Punchlist Items
		Complete Punchlist Items	21	07/01/09	07/21/09	0	-  -	1		1 1					1	1 1	Complete Punchlist Items
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	17070	O&M Manuals	21	06/22/09	07/12/09	6		į							į		O&M Manuals
	17080	Certs and Warrantees Submitted	14		07/12/09	6	i i	i							l I	C	erts and Warrantees Submitted
	17090	Facilities Management Training	10	07/06/09	07/15/09	6	- 1	1		1 1		1 1 1			I.		Facilities Management Training
	17100	Inclement Weather Allowance	27	07/22/09	08/17/09	0	-	1							1	14	Inclement Weather Allowance
	17110	Final Completion	0		08/17/09	0	-	1							1		Final Completion

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#### 6. CPM SCHEDULE ANSWER STATEMENT COMMENTS

- 1. Design: The design phase was given about 11 months. This allows for some buffer time if a design package falls behind. The Civil Package was chosen to proceed first, as it is naturally the first of the construction activities to take place. I show the structural and architectural packages following shortly after. This is a typical design sequence for this type of building. I afforded 1 Backcheck period and frequently 2 are required. However, with a proactive team, the design phase can be a collaborative effort through a series of client and design team meetings. This increases the flow of communication and limits the need for multiple backchecks. Also, the building is a relatively simple structure to design.
- 2. **Subcontracting**: The Subcontracting sequence is driven primarily by material lead times and sequencing of work in the field. The sequencing I drafted here is typical of most jobs.
- 3. Submittals: The material procurement process can sometimes be a challenging one to schedule. More often than not, the submittal process can begin before the design is complete. But for scheduling purposes this should not be assumed. Schedule submittals to follow design and precede material fabrication. This the safe approach. Also, know your material lead times to best schedule the procurement activities.
- 4. **Fabrications**: As mentioned above, knowing the lead times of all your specified equipment and materials is critical to the success of your schedule. This information should be gathered from your subcontractors and they should be in written agreement as to the fabrication durations you will publish in your schedule.
- 5. **Mobilization**: You can typically mobilize whenever you intend to start work, but occasionally the client will specify when mobilization can begin. No such requirement was specified or in your problem statement, so it was scheduled immediately after NTP. However, for the sake of your General Conditions budget, the mobilization should be timed wisely.
- 6. Structure: The critical path almost always passes through the structural work. In this schedule, the placement of the south slab drives the schedule on each floor. It has been given a conservative duration and by minimizing the amount of structural activities on the critical path, there is less opportunity for the schedule to slip. This also provides a consistent attainable goal at each level your concrete operation jumps. The columns and walls are kept off the critical path as to allow for some catch-up time on each floor if required.

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- 7. Exterior: The critical path passes from the structure to the exterior systems. Achieving building dry-in is extremely important to allow finishes to begin. While it is feasible to manage a drywall & taping operation before dry-in, it should not be assumed so on a CPM. A bad weather season could spell disaster for a schedule which relies on finishes beginning before dry-in. If you can manage boarding & taping before dry-in it should be viewed as a bonus opportunity.
- 8. **Rough-ins**: With the lower level structure completed, you want building wall framing and MEP rough-ins to kick-off as soon as possible. Typically, in a concrete structure, the deck being placed must be fully shored on the 3 levels below. Therefore, rough-in kickoff is tied to the completion of the fourth floor deck. Once the shoring is removed from the first floor, roughins may begin.
- 9. **Finishes**: As noted above, the finishes are scheduled to begin upon completion of building dry-in. This is the safest play. Depending on the time of year (especially in Southern California), finishes may begin before permanent dry-in. It's all a matter of risk management. Note that since boarding and taping kicks off a multitude of finish activities, the boarding, taping & ceiling activities are on the critical path.
- 10. Elevators: Elevator procurement is typically a long lead time. But, the elevator installation is a fairly independent activity that relies on structure being in place, an early machine room rough-in and either temp or permanent power. Therefore, the elevator system has been scheduled to begin in the early building rough-in phase. Note that permanent power and fire alarm are required for elevator commissioning.
- 11. Final sitework: Final sitework is one of those activities that when underway, makes everyone feel like the project is nearing completion. Obviously, one can only begin final sitework when substantial equipment and materials have been moved into the building. Also, structural and exterior systems must be substantially complete such that boom lifts and scaffolds are removed for clear site access. This can be a great motivation tool for exterior system trades to wrap up their work. Completing exterior system work before sitework also minimizes the risk of site furnishing damage.
- 12. **Commissioning**: This is another activity that can be a long drawn out process and thus difficult to schedule. However, it does have the benefit of being able to commence as MEP systems are installed and signed-off by inspectors. Proactive MEP trades and good General Contractors will test, secure owner sign-offs and protect systems throughout construction thus smoothing the commissioning process.

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- 13. Punchlist: This is yet another intangible process that historically takes longer than anticipated. This is where a quality installation, inspection and protection plan can reap huge benefits. By maintaining a high level of quality throughout the construction process, a punchlist operation can be very manageable. Also note that a punchlist operation can begin as soon as an area's finishes are complete, thus saving time at the end of the job. However, this can be a slippery slope, because if you begin punchlist too early you risk possible damage in areas that cannot be cordoned off. A balance of correct timing and efficient punchlist execution usually make the scheduled punchlist time realistic.
- 14. Inclement Weather: This is always a tricky issue to tackle in a schedule. There are numerous ways to handle it. For example, the days can be dispersed to the historically wettest months and can be expended as needed or carried forward if unused. Next, they can be spread evenly throughout the schedule and expended or carried forward. I feel the best way to handle the 27 days of inclement weather is to schedule them as a single activity at the end of the job. Then, whenever a rain day is used, you reduce the duration of the inclement weather activity by one day. This locks in the completion date, and provides some buffer time at the end of the job if any inclement weather days are remaining.

#### FINAL NOTES:

As you've probably realized in this exercise, there is a lot of flexibility when designing a project schedule. It is likely that the very different schedules from completely different teams can all feasibly work in the field. This is a difficult exercise for a project team with limited time and resources to assist you in developing the CPM. In real life, we as GC's can call and discuss this with whomever we want. With that in mind, the key to a CPM's success is to make everyone involved buy into the plan. The only way to make everyone buy into the plan is to get them involved. Even if you're sure of when or how long an activity should take place, you should always discuss it with the experts that are going to build it. When they share their knowledge with you, they are staking ownership in your schedule. When *EVERYONE* shares in that ownership, the CPM becomes a great tool to steer a project to success.