

The Evolution of Technology in the Electrical Construction Industry

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Early Technology



Estimating By Hand

Page 1 100 Main Concourse EXTERIOR

Cam #	Length	From	To	CONDUIT EMT	CONDUIT RGS	WALL PENETRATION	CONDUIT SIZE	Comments NO HR	VIA
1	300	Comm	Cam	3/4 (250)	3/4 (150)	2	3/4	1, 2, 4, 5 + EXTRA	↓ BOX
2	350	Comm	C	1 3/8	1 1/2	2	1		↓ BOX
3	160	Comm	C						
4	350	Comm	Cam						
5	350	Comm	Cam						
6	160	Comm	C						
7	200	Cam	Tray						
8	> 300'	Cam's	TO tray						
9		VIA	NO CONDUIT						

Page 2 Service Level

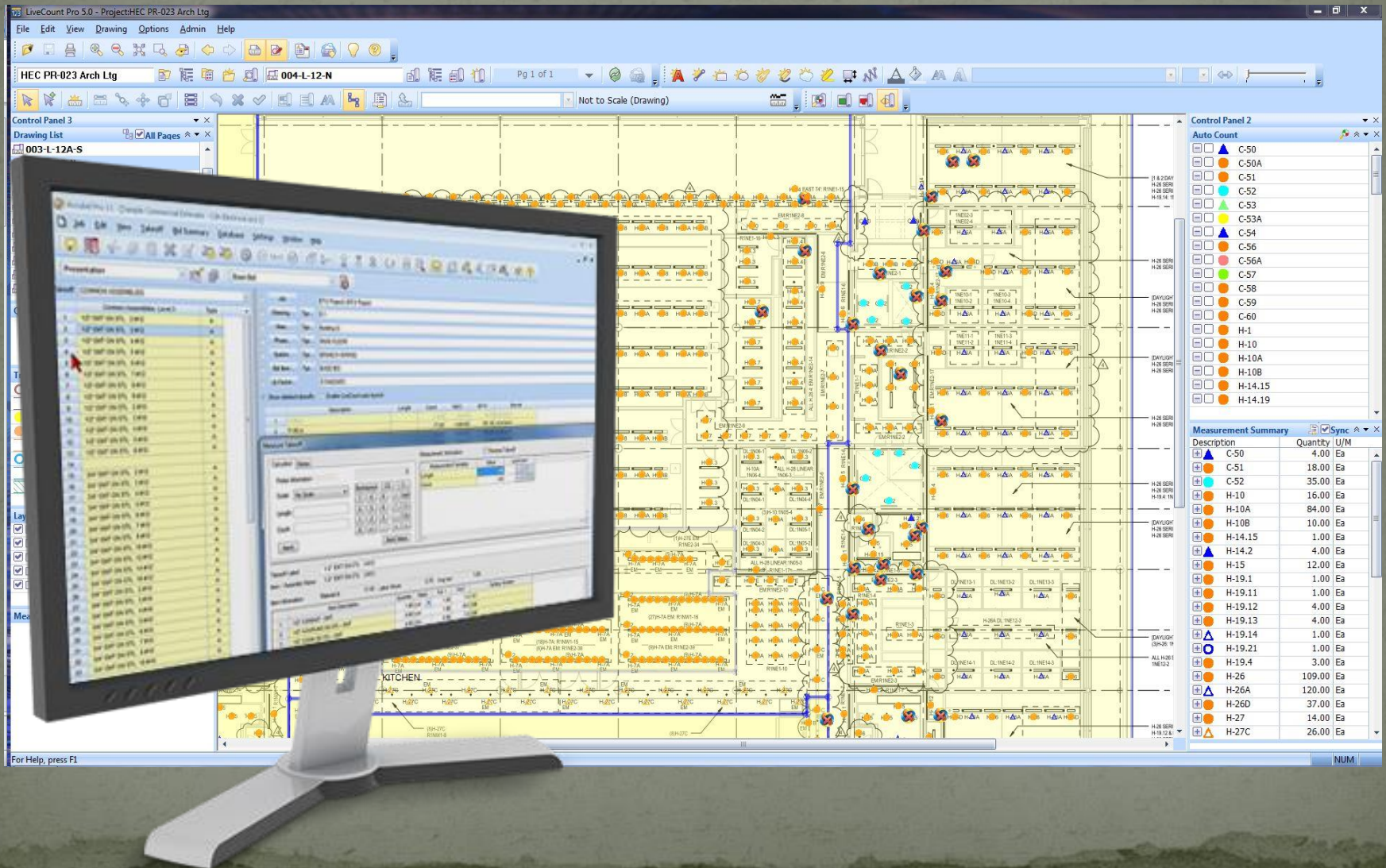
Cam #	Length	From	To	EMT	RGS	WALL PENETRATION	CONDUIT SIZE	MISC
1A	200	Cam	tray	250		0	3/4	
1B	NO CONDUIT	N/C						
2								
3	NCN							
4	50	Cam	tray	5				
5	10 / 50	Cam	↓ box	10				
6								
7	> 350'	Cam	Comm	250				
8	200	Cam	Comm	250				
9	NCN							
10	50'	Cam	Centrally	5				
11	NCN							
12	NCN							
13	NCN							
14	NCN							
15	NCN							
16	NCN							
17								
18	NCN							
19	100	Cam	Tray	100				
20	100	Comm	Tray	10				
21	NCN							
22	60	Cam	Comm	60				
23	> 220	Cam	Comm	> 2				
24		Cam	Rgs					

Page 2 Cont. Service Level

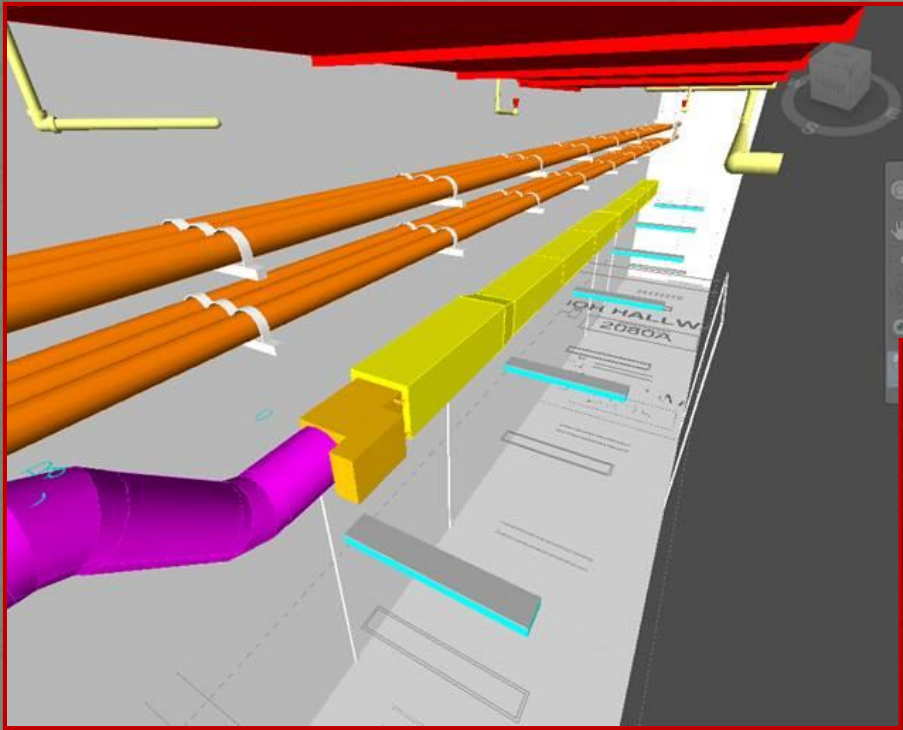
Cam #	Length	From	To	EMT	RGS	WALL PENETRATION	CONDUIT SIZE	MISC
25	120'	Cam	Comm	120		2	3/4	
26	60	Cam	Comm	60		2	3/4	
27	100	Cam	Comm	100		2	3/4	
28	230							
29	200							
30	250	Cam	Comm	250		2	1"	HR 28, 29, 30
31	230							31
32	160							
33	160	Cam	Comm	180		2	1"	HR 32, 33, 34
34	160							35
35	160							
36	260	Cam		180	20			HR 36, 37, 38
37	250		Comm	200	50'	> 3	> 1"	NEW LB
38	200			200				37 TO Family Tent
39	250	Cam	Comm	240	10	> 3	> 1"	
40	250			250	30			
41	50	Cam	tray	50		2	3/4	
42	10	Cam	tray	10		2	3/4	
43	20	Cam	tray	20		1	3/4	
44	50	Cam	tray	50		1	3/4	
45	20	"	"	20		1	3/4	
46	20	"	"	20		1	3/4	
47	50	"	"	50		1	3/4	
48	NCN							
49	50	"	"	50		2	3/4	
50	50	"	"	50		-	3/4	



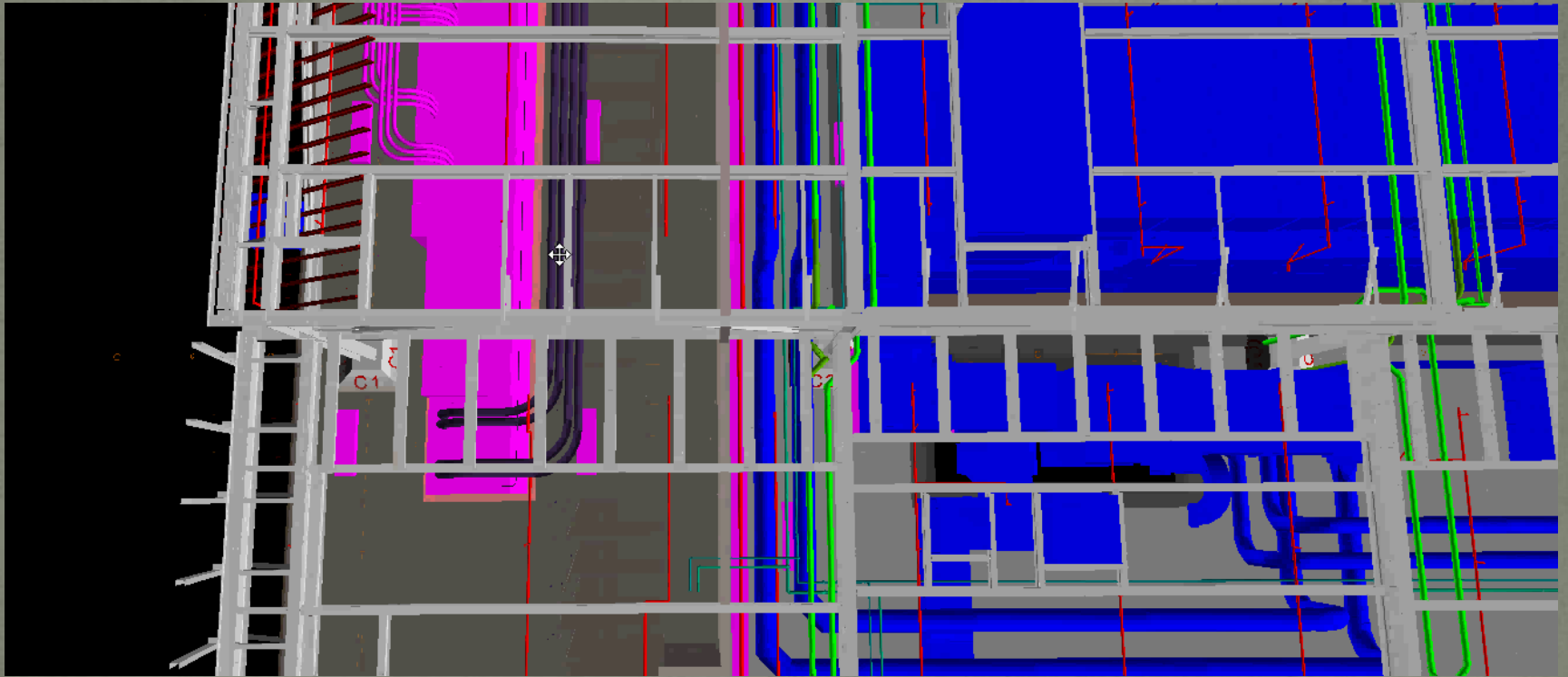
Digital Estimating



3D BIM Modeling



3D BIM Modeling



Prefabrication



Battery Operated Tooling



Field Layout

