

TABLE 3.1-1 GENERAL PROJECT DEVELOPMENT DATA

(PART 1)

GENERAL PROJECT DEVELOPMENT DATA		PROJECT CODE												
		1	2	3	5	6	7	8	9	10	11	13	15	16
I. Project Size														
Delivered Source Lines		50911	4100	55237	111868	2886	75420		75393	41000	5200	6300	1200	
New Source Lines		45345	4100	43955	84729	2000	20075		49316	41000	3200	6300	1200	
Modified Source Lines		4673	0	3506	20041	486	6727		4252	0	0	0	0	
NASA Estimate of Delivered Object Code		106913	11890	115998	234923	8081	158382		158325	86100	15080	18270	3480	
NASA Estimate of New Object Code		95227	11890	92305	177931	5600	42161		103560	86100	9280	18270	3480	
NASA Estimate of Modified Object Code		9813	0	7363	42086	1361	14127		8929	0	0	0	0	
Total Modules		201	42	283	510	24	374		535	200	60	69	12	
New Modules		172	32	200	346	19	92		337	200	31	69	7	
Modified Modules		19	32	21	122	2	0		0	0	0	0	0	
Number of Components		292	42	355	587	24	423		638	200	60	69	12	
Minimum Components Size		1		2	4		2		1					
Maximum Component Size		2016		1332	1329		1186		1477					
Average Component Size		195		88	216		201		140					
II. Project Development Summary														
Months of Development Time			14.5	4.0	15.3	19.3	8.5	10.3		14.8	19.3	5.0	7.0	4.0
Programmer Hours	3211.1	8911.5	525.7	12929.9	12852.2	345.7	4170.6		10956.5		150.0	704.1	187.2	
Management Hours	914.0	3676.5	132.0	2331.8	2907.8	38.3	1620.9		3551.0		70.0	197.0	49.0	
Other Hours	648.0	1109.0	28.0	1378.0	4316.0	58.0	1079.0		1231.0		0.0	77.0	0.0	
Manmonths of Development Effort	28.0	80.0	4.0	100.2	125.0	42.0	40.0		92.0		1.0	6.0	1.0	
III. Project Development by Phase														
Design:														
Start Date		2/13/77	6/13/77	10/11/76	6/1/76	10/18/77	8/15/77		4/1/77	4/1/76	10/1/77	6/1/77	10/7/77	
End Date		6/4/77	7/30/77	2/26/77	10/9/76	12/3/77	12/3/77		7/30/77	7/26/76	11/5/77	7/16/77	10/29/77	
Calendar Days in Phase		108	48	149	129	47	121		121	117	30	46	22	
Percent of Total Schedule		25%		32%	21%	18%	37%		27%	20%			18%	
Design Create, Read, Review Manhours	270.0	1690.6	86.2	2000.8	735.0		1260.0	315.0	1615.5		46.5	145.0	50.5	
Code and Test:														
Start Date		6/4/77		2/26/77	10/9/76	12/3/77	12/3/77		7/30/77	7/26/76	11/5/77	7/16/77	10/29/77	
End Date		12/3/77		7/23/77	5/21/77	1/21/78	3/11/78		1/14/78	3/19/77	1/14/78	9/24/77	12/3/77	
Calendar Days in Phase		182		147	254	49	98		168	232	70	70	35	
Percent of Total Schedule		42%		32%	41%	19%	30%		37%	40%			30%	
Code Develop, Read, Review, and Module Test Manhours	522.2	3130.3	141.8	2513.1	2187.2		1601.2	533.5	2346.5		92.9	117.2	203.2	
System Test														
Start Date		12/3/77		7/23/77	5/21/77	1/21/78	3/11/78		1/14/78	3/19/77	1/14/78	9/24/77	12/3/77	
End Date		2/4/78		8/20/77	7/23/77	3/18/78	4/8/78		2/18/78	4/9/77	2/4/78	12/17/77	1/28/78	
Calendar Days in Phase		63		28	63	56	28		35	21	21	84	54	
Percent of Total Schedule		15%		6%	10%	22%	9%		8%	4%			46%	
System Test and Review Manhours	512.5	1718.5	37.5	1232.5	928.0		281.8	74.0	833.0		44.6	80.5	30.0	
Acceptance Test														
Start Date		2/4/78		8/20/77	7/23/77	3/18/78	4/8/78		2/18/78	4/9/77	2/4/78	12/17/77	1/28/78	
End Date		3/18/78		9/17/77	9/24/77	3/25/78	5/6/78		4/15/78	5/21/77		12/24/77	2/4/78	
Calendar Days in Phase		42		28	63	7	28		56	42		7	7	
Percent of Total Schedule		9%		6%	10%	3%	9%		12%	7%			6%	
Cleanup														
Start Date		3/18/78		9/17/77	9/24/77	3/25/78	5/6/78		4/15/78	5/21/77		12/24/77		
End Date		4/29/78		1/7/78	1/6/78	6/30/78	6/24/78		6/24/78	11/5/77				
Calendar Days in Phase		42		112	106	97	48		70	168				
Percent of Total Schedule		9%		24%	18%	38%	15%		16%	29%				
Other Manhours not Recorded by Phase	54.0	1479.0	109.5	518.0	726.0		1570.5	42.5	995.9		8.5	91.5	78.0	
IV. Computer Resource Expenditures														
System 360-95 Hours		223.0		164.0	311.0	52.5	93.0		209.0	98.0				
System 360-75 Hours		160.0		156.8	154.0	0.6	76.3		193.0	50.0				
DEC PDP 11-70 Hours		0.0		0.0	0.0	50.0	0.3		0.0	0.0				
Number of Computer Runs		4604		6871		168	8033		7500	9987				

TABLE 3.1-1 GENERAL PROJECT DEVELOPMENT DATA (PART 11)

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	4000 1500 500 11600 4350 1400	85369 76803 5652 179275 161455 11869						89513 61950 14297 189977 130095				5500 4300 200 15400 12040 560	14500 14000 0 40600 33200 0	5639 5540 0 15784 15512 3704	9126 5354 1123 25553 14991 3704							10172 9627 527 28482 26956 1476	
200 200	39 14	519 418				13 10 13	604 404 84 851 19 375 125				11 0 0 11	84 70 3 84	200 194 0 200	41 39 0 42 5 352 121	74 44 0 101 3 206 27				10 2600 159	10 2600 175	5 280 155	55 45 8 74	5 253 152
4037.2 1550.3 408.7 35.0	3.3	17.5 11658.6 2711.9 2744.4 100.0		29.0		26.0	14.5 12314.3 2807.8 1926.5 106.0	19.0				25.5 2436.3 619.0 331.1 21.0	8.8	8.5 1018.0 76.6 3.4 7.0	8.5 1920.5 600.2 527.6 14.7		8.3	14.8	15.5	1667.5 498.6 543.6 110.0	16.3		
	1/13/78 3/25/78 72	5/1/78 10/14/78 167 28%		3/1/75 7/5/75 127		4/6/74 2/1/75 131 44%	6/1/78 10/14/78 136 25% 2196.7	1/1/74 8/31/74 243 41%				1/8/79 4/1/79 73 29% 16.0	2/3/79 6/21/79 141 43% 224.0	2/3/79 5/26/79 108 34% 488.9	10/1/79 5/17/80 229	10/1/79 5/17/80 229	10/1/79 5/17/80 229		10/1/79 5/17/80 229	10/1/79 5/17/80 229	5/1/78 2/3/78 279 49% 445.7	555.2	
	3/25/78 4/22/78 28	10/14/78 3/31/79 168 28%		1/5/75 1/1/77 546		2/1/75 8/1/75 122 17%	10/14/78 3/31/79 168 30% 3638.3	8/31/74 1/4/75 126 21%				4/1/79 7/20/79 110 43% 82.0	6/21/79 8/18/79 58 18% 745.5	5/26/79 8/4/79 71 22% 569.0	5/17/80 11/29/80 196	5/17/80 11/29/80 196	5/17/79 11/29/80 196		5/17/80 11/29/80 196	5/17/79 11/29/80 196	2/3/79 5/19/79 105 18% 329.3	276.7	
	3/31/79 6/2/79 63 11%			1/1/77 5/18/77 137		8/1/75 8/30/75 29 4%	3/31/79 6/2/79 11% 1942.6	1/4/75 2/1/75 28 5%				7/20/79 8/3/79 14 5% 57.0	8/18/79 9/1/79 14 4% 0.0	8/4/79 9/1/79 28 9% 170.1	11/29/80 1/31/81 196.2	11/29/80 1/31/81 196	11/29/80 1/31/81 196		11/29/80 1/31/81 196	11/29/80 1/31/81 196	5/19/79 7/14/79 56 10% 34.1	106.3	
	6/2/79 10/13/79 133 23%			5/28/77 7/30/77 63		8/30/75 11/29/75 93 13%	6/2/79 8/11/79 70 13%	2/1/75 4/12/75 70 12%				8/3/79 8/31/79 28 11%	9/1/79 10/13/79 42 13%	9/1/79 10/13/79 42 13%	1/31/81 2/28/81 196.2	1/31/81 2/28/81 196	1/31/81 2/28/81 196		1/31/81 2/28/81 196	1/31/81 2/28/81 196	7/14/79 8/18/79 35 6%		
	10/13/79 12/22/79 60 10%			7/30/77		11/29/75 6/5/76 158 22%	8/11/79 12/8/79 119 21%	4/12/75 8/1/75 121 21%				8/31/79 9/30/79 30 12% 95.0	10/13/79 12/22/79 70 22% 45.0	10/13/79 12/22/79 70 22% 865.7	2/28/81 4/4/81 1694.6	2/28/81 4/4/81 1694.6	2/28/81 4/4/81 1694.6		2/28/81 4/4/81 1694.6	2/28/81 4/4/81 1694.6	8/18/79 12/22/79 96 17%	594.7	
				258.0 155.0 0.0 9970		50.0 96.0 0.0 5117	127.0 183.0 0.0 7379	88.1 176.0 105.1 10890			103.7 217.2 0.0 10549	1.5 0.0 0.0 1000.0	0.0 0.0 0.0 6000.0										