Intersection Performance Summary

Movement	Approach Flow Rate	Approach Capacity	V/C Ratio	Average Total Delay	LOS
EB	201	407	0.49	6.5	B
WB	80	444	0.18	2.0	A
NB	224	838	0.27	2.8	A
SB	30	366	0.08	1.4	A

Intersection Delay = 3.99
Level of Service (Intersection) = A

Center For Microcomputers In Transportation

HCS: Unsignalized Intersection Release 2.1 Page 1

****

File Name ..... CARL_MR2.HCO
Streets: (N-S) Margaret St. (E-W) Caroline St.
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... CAP
Date of Analysis..... 1/17/96
Other Information..... Key West Bight -- 2000 Future Conditions

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1<	0	0>	1<	0	0>	1<	0	0>	1<	0
Stop/Yield			N			N						
Volumes	49	16	15	21	34	35	9	213	31	33	221	32
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0	0	0	0	0	0	0
SU/RV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
CV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
PCE's	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	24	52
Potential Capacity: (pcph)	1346	1303
Movement Capacity: (pcph)	1346	1303
Prob. of Queue-free State:	0.97	0.97
Step 2: LT from Major Street	**WB**	**EB**
Conflicting Flows: (vph)	31	69
Potential Capacity: (pcph)	1657	1589
Movement Capacity: (pcph)	1657	1589
Prob. of Queue-free State:	0.99	0.97
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-free State:	0.99	0.97
Step 3: TH from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	162	152
Potential Capacity: (pcph)	897	908
Capacity Adjustment Factor due to Impeding Movements	0.95	0.95
Movement Capacity: (pcph)	853	864
Prob. of Queue-free State:	0.73	0.72
Step 4: LT from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	272	267
Potential Capacity: (pcph)	737	742
Major LT, Minor TH Impedance Factor:	0.68	0.69
Adjusted Impedance Factor:	0.75	0.76
Capacity Adjustment Factor due to Impeding Movements	0.73	0.74
Movement Capacity: (pcph)	541	550

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB L	10	541				
NB T	234	853	874	6.0	B	6.0
NB R	34	1346				
SB L	36	550				
SB T	243	864	841	6.8	B	6.8
SB R	35	1303				
EB L	54	1589		2.3	A	1.4
WB L	23	1657		2.2	A	0.5

Intersection Delay = 5.1

File Name ..... CARL_WL2.HCO
Streets: (N-S) William St. (E-W) Caroline St.
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... CAP
Date of Analysis..... 1/17/96
Other Information..... Key West Bight -- 2000 Future Conditions

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1<	0	0>	1<	0	0>	1<	0	0>	1<	0
Stop/Yield			N			N						
Volumes	13	22	17	26	11	26	20	216	43	45	249	14
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0	0	0	0	0	0	0
SU/RV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
CV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
PCE's	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	30	24
Potential Capacity: (pcph)	1337	1346
Movement Capacity: (pcph)	1337	1346
Prob. of Queue-free State:	0.96	0.99
Step 2: LT from Major Street	**WB**	**EB**
Conflicting Flows: (vph)	39	37
Potential Capacity: (pcph)	1642	1646
Movement Capacity: (pcph)	1642	1646
Prob. of Queue-free State:	0.98	0.99
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-free State:	0.98	0.99
Step 3: TH from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	106	102
Potential Capacity: (pcph)	960	964
Capacity Adjustment Factor due to Impeding Movements	0.97	0.97
Movement Capacity: (pcph)	934	938
Prob. of Queue-free State:	0.75	0.71
Step 4: LT from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	225	223
Potential Capacity: (pcph)	784	786
Major LT, Minor TH Impedance Factor:	0.69	0.73
Adjusted Impedance Factor:	0.76	0.79
Capacity Adjustment Factor due to Impeding Movements	0.75	0.76
Movement Capacity: (pcph)	589	597

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB L	22	589				
NB T	238	934	938	5.7	B	5.7
NB R	47	1337				
SB L	50	597				
SB T	274	938	876	6.7	B	6.7
SB R	15	1346				
EB L	14	1646		2.2	A	0.6
WB L	29	1642		2.2	A	0.9

Intersection Delay = 5.3

File Name ..... JAMS_GR2.HCO
Streets: (N-S) Grinnell St. (E-W) James St.
Major Street Direction.... NS
Length of Time Analyzed... 60 (min)
Analyst..... CAP
Date of Analysis..... 1/17/96
Other Information..... Key West Bight -- 2000 Future Conditions

Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1<	0	0>	1<	0	0>	1<	0	0>	1<	0
Stop/Yield			N			N						
Volumes	7	128	9	32	261	12	0	1	3	35	28	91
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0	0	0	0	0	0	0
SU/RV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
CV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
PCE's	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	132	267
Potential Capacity: (pcph)	1187	1014
Movement Capacity: (pcph)	1187	1014
Prob. of Queue-free State:	0.92	1.00

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	137	273
Potential Capacity: (pcph)	1475	1271
Movement Capacity: (pcph)	1475	1271
Prob. of Queue-free State:	0.98	0.99
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-free State:	0.97	0.99

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	444	443
Potential Capacity: (pcph)	638	639
Capacity Adjustment Factor due to Impeding Movements	0.96	0.96
Movement Capacity: (pcph)	615	616
Prob. of Queue-free State:	0.95	1.00

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	440	498
Potential Capacity: (pcph)	589	545
Major LT, Minor TH Impedance Factor:	0.96	0.92
Adjusted Impedance Factor:	0.97	0.94
Capacity Adjustment Factor due to Impeding Movements	0.97	0.86
Movement Capacity: (pcph)	571	467

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
EB T	1	616				4.1
EB R	3	1014	873	4.1	A	
WB L	39	571				
WB T	31	615	838	5.4	B	5.4
WB R	100	1187				
NB L	8	1271		2.9	A	0.1
SB L	35	1475		2.5	A	0.3

Intersection Delay = 1.6

File Name ..... EATN_WL2.HCO
Streets: (N-S) William St. (E-W) Eaton St.
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... CAP
Date of Analysis..... 1/17/96
Other Information..... Key West Bight -- 2000 Future Conditions

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1<	0	0>	1<	0	0>	1<	0	0>	1<	0
Stop/Yield			N			N						
Volumes	41	462	4	31	164	29	10	6	12	23	13	42
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0	0	0	0	0	0	0
SU/RV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
CV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
PCE's	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	464	178
Potential Capacity: (pcph)	806	1125
Movement Capacity: (pcph)	806	1125
Prob. of Queue-free State:	0.98	0.96
Step 2: LT from Major Street	**WB**	**EB**
Conflicting Flows: (vph)	466	193
Potential Capacity: (pcph)	1028	1387
Movement Capacity: (pcph)	1028	1387
Prob. of Queue-free State:	0.97	0.97
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-free State:	0.96	0.95
Step 3: TH from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	729	716
Potential Capacity: (pcph)	452	459
Capacity Adjustment Factor due to Impeding Movements	0.92	0.92
Movement Capacity: (pcph)	415	421
Prob. of Queue-free State:	0.98	0.97
Step 4: LT from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	742	724
Potential Capacity: (pcph)	394	403
Major LT, Minor TH Impedance Factor:	0.89	0.90
Adjusted Impedance Factor:	0.91	0.93
Capacity Adjustment Factor due to Impeding Movements	0.88	0.91
Movement Capacity: (pcph)	345	367

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB L	11	345				
NB T	7	415	478	8.1	B	8.1
NB R	13	806				
SB L	25	367				
SB T	14	421	597	7.0	B	7.0
SB R	46	1125				
EB L	45	1387		2.7	A	0.2
WB L	34	1028		3.6	A	0.5

Intersection Delay = 1.2

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File Name ..... EATN_MR2.HCO
Streets: (N-S) Margaret St. (E-W) Eaton St.
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... CAP
Date of Analysis..... 1/17/96
Other Information..... Key West Bight -- 2000 Future Conditions

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0>	1<	0	0>	1<	0	0>	1<	0	0>	1<	0
Stop/Yield			N			N						
Volumes	237	482	10	21	460	66	9	24	12	56	17	28
PHF	1	1	1	1	1	1	1	1	1	1	1	1
Grade		0			0			0			0	
MC's (%)	0	0	0	0	0	0	0	0	0	0	0	0
SU/RV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
CV's (%)	0	0	0	0	0	0	0	0	0	0	0	0
PCE's	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)	487	493
Potential Capacity: (pcph)	784	779
Movement Capacity: (pcph)	784	779
Prob. of Queue-free State:	0.98	0.96
Step 2: LT from Major Street	**WB**	**EB**
Conflicting Flows: (vph)	492	526
Potential Capacity: (pcph)	999	963
Movement Capacity: (pcph)	999	963
Prob. of Queue-free State:	0.98	0.73
TH Saturation Flow Rate: (pcphpl)	1700	1700
RT Saturation Flow Rate: (pcphpl)	1700	1700
Major LT Shared Lane Prob. of Queue-free State:	0.97	0.60
Step 3: TH from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	1271	1243
Potential Capacity: (pcph)	235	243
Capacity Adjustment Factor due to Impeding Movements	0.58	0.58
Movement Capacity: (pcph)	137	141
Prob. of Queue-free State:	0.81	0.87
Step 4: LT from Minor Street	**NB**	**SB**
Conflicting Flows: (vph)	1260	1256
Potential Capacity: (pcph)	197	198
Major LT, Minor TH Impedance Factor:	0.50	0.47
Adjusted Impedance Factor:	0.61	0.58
Capacity Adjustment Factor due to Impeding Movements	0.58	0.57
Movement Capacity: (pcph)	115	113

Intersection Performance Summary

Movement		FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB	L	10	115				
NB	T	26	137	167	30.4	E	30.4
NB	R	13	784				
SB	L	62	113				
SB	T	19	141	155	77.8	F	77.8
SB	R	31	779				
EB	L	261	963		5.1	B	1.7
WB	L	23	999		3.7	A	0.1

Intersection Delay = 7.4

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-01-1996

Center For Microcomputers In Transportation

Streets: (E-W) Eaton St. (N-S) Margaret St.

Analyst: CAP File Name: EATN_MR5.HC9

Area Type: Other 1-17-96 PM Peak

Comment: Key West Bight -- 2000 Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<		> 1	<		> 1	<		> 1	<
Volumes	237	482	10	21	460	66	9	24	12	56	17	28
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane Width		12.0			12.0			12.0			12.0	
Grade		0			0			0			0	
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N)	N		(Y/N)	N		(Y/N)	N		(Y/N)	N	
Arr Type		3			3			3			3	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*	*			NB Left	*			
Thru	*	*			Thru	*			
Right	*	*			Right	*			
Peds					Peds				
WB Left		*			SB Left	*			
Thru		*			Thru	*			
Right		*			Right	*			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	11.0A	24.0P			Green	13.0A			
Yellow/AR	4.0	4.0			Yellow/AR	4.0			

Cycle Length: 60 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	944	1416	0.813	0.667	8.5	B	8.5	B
WB	LTR	589	1413	0.977	0.417	34.4	D	34.4	D
NB	LTR	354	1516	0.133	0.233	11.8	B	11.8	B
SB	LTR	329	1410	0.322	0.233	12.5	B	12.5	B

Intersection Delay = 18.9 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.685

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-01-1996

Center For Microcomputers In Transportation

Streets: (E-W) Eaton St. (N-S) Grinnell St.

Analyst: CAP File Name: EATO_GR2.HC9

Area Type: Other 1-17-96 PM Peak

Comment: Key West Bight -- 2000 Conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<		> 1	<		> 1	<		> 1	<
Volumes	8	514	14	72	467	91	270	61	7	4	68	34
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Lane Width		12.0			12.0			12.0			12.0	
Grade		0			0			0			0	
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
Parking	(Y/N) N			(Y/N) N			(Y/N) N			(Y/N) N		
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N) N			(Y/N) N			(Y/N) N			(Y/N) N		
Arr Type		3			3			3			3	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru	*				Thru	*			
Right	*				Right	*			
Peds					Peds				
WB Left	*				SB Left	*			
Thru	*				Thru	*			
Right	*				Right	*			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	31.0A				Green	21.0A			
Yellow/AR	4.0				Yellow/AR	4.0			

Cycle Length: 60 secs Phase combination order: #1 #5

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	858	1609	0.657	0.533	7.8	B	7.8	B
WB	LTR	652	1222	1.019	0.533	41.0	E	41.0	E
NB	LTR	437	1192	0.812	0.367	18.7	C	18.7	C
SB	LTR	573	1562	0.196	0.367	8.4	B	8.4	B

Intersection Delay = 23.1 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.935

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HCM: SIGNALIZED INTERSECTION SUMMARY   Version 2.4a        03-01-1996
            Center For Microcomputers In Transportation
================================================================================
Streets: (E-W) Eaton St.                (N-S) White St.
Analyst: CAP                            File Name: EATN_WH3.HC9
Area Type: Other                        1-17-96 PM Peak
Comment: Key West Bight -- 2000 Future Conditions - Modified Traffic
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	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<		> 1	<		> 1	<		1	<
Volumes	3	531	82	66	497	12	78	8	178		4	2
PHF or PK15	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Lane Width		12.0			12.0			12.0			12.0	
Grade		0			0			0			0	
% Heavy Veh	2	2	2	2	2	2	2	2	2		2	2
Parking	(Y/N) N			(Y/N) N			(Y/N) N			(Y/N) N		
Bus Stops			0			0			0			0
Con. Peds			0			0			0			0
Ped Button	(Y/N) N			(Y/N) N			(Y/N) N			(Y/N) N		
Arr Type		3			3			3			3	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		3.00	3.00
Prop. Share												
Prop. Prot.												

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru	*				Thru	*			
Right	*				Right	*			
Peds					Peds				
WB Left	*				SB Left				
Thru	*				Thru	*			
Right	*				Right	*			
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	40.0A				Green	16.0A			
Yellow/AR	4.0				Yellow/AR	4.0			

Cycle Length: 64 secs Phase combination order: #1 #5

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	1047	1634	0.619	0.641	5.2	B	5.2	B
WB	LTR	715	1116	0.846	0.641	12.3	B	12.3	B
NB	LTR	392	1477	0.706	0.266	17.6	C	17.6	C
SB	TR	423	1593	0.014	0.266	11.2	B	11.2	B

Intersection Delay = 10.3 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.805

ART-PLAN 2.0

Arterial Level of Service Estimating Software
Based on Chapter 11 of the 1994 Highway Capacity Manual Update

Florida Department of Transportation

August 1995

DESCRIPTION

Road Name: **Eaton Street**
From: **Simonton Street**
To: **White Street**
Peak Direction: **EB**
Off-peak Direction: **WB**
Study Time Period: **PM PEAK**
Analysis Date: **March 1, 1996**
User Notes: **Unadjusted Eaton volumes 2000 analysis**

TRAFFIC CHARACTERISTICS

AADT:	**see below**
K FACTOR:	**0.091**
D FACTOR:	**see below**
PHF:	**0.925**
ADJ. SATURATION FLOW RATE:	**1,850**
% TURNS FROM EXCLUSIVE LANES:	**0**

ROADWAY CHARACTERISTICS

THRU-LANES PEAK DIRECTION:	**1**	
THRU LANES OFF-PEAK DIRECTION:	**1**	
URBAN, TRANSITIONING, OR RURAL DEVELOPED (U/T/R):	**U**	
ARTERIAL CLASS:	**2**	(1, 2, or 3)
FREE FLOW SPEED (mph):	**30**	(40,35,30,25)

For Arterial Type and Class:	**Use Free flow speed of:**
Rural	55, 50, 45, 40 or 35
Transitioning, Class 1	55, 50, 45, 40 or 35
Urban, Class 1	45, 40 or 35
Urban or Transitioning, Class 2	40, 35, 30 or 25
Urban, Class 3	35, 30 or 25

SIGNALIZATION CHARACTERISTICS

ARRIVAL TYPE PEAK DIRECTION:	3	
ARRIVAL TYPE OFF-PEAK DIRECTION:	3	
TYPE SIGNAL SYSTEM:	**P**	P=PRETIMED S=SEMIACTUATED A=ACTUATED
SYSTEM CYCLE LENGTH:	**see below**	
WEIGHTED THRU MOVEMENT g/C:	**see below**	

EB	PEAK DIRECTION'S SPECIFIC INPUTS								
LINK	LINK AADT (1 if unavail.) (0 if unused)	PEAK HOUR VOLUME	% TURNS FROM EXCLUS. LANES	LANES	CYCLE LENGTH SIGNALS 2-20	EFFECTIVE g/C SIGNALS 2-20	DISTANCE BETWEEN SIGNALS (Enter in Miles or Feet)	LINK LENGTH (FT)	ARRIVAL TYPE
1-2	0	750	0	1	64	0.53	0.36	1,901	3
2-3	0	1,113	0	1	64	0.62	0.18	950	3
3-4	0	0	0			0.00	0.00		
4-5	0	0	0			0.00	0.00		
5-6	0	0	0			0.00	0.00		
6-7	0	0	0			0.00	0.00		
7-8	0	0							
8-9	0	0							
9-10	0	0							
10-11	0	0							
11-12	0	0							
12-13	0	0							
13-14	0	0							
14-15	0	0							
15-16	0	0							
16-17	0	0							
17-18	0	0							
18-19	0	0							
19-20	0	0							

EB	PEAK DIRECTION RESULTS						
LINK	NOTES or FROM/TO	THROUGH MOVEMENT FLOW RATE	v/c RATIO	STOPPED DELAY	INTERSECTION APPROACH LOS	SPEED (MPH)	ARTERIAL LINK LOS
1-2		811	0.83	13.7	B	20.9	C
2-3		1203	1.05	43.4	E	8.0	F
3-4		0					
4-5		0					
5-6		0					
6-7		0					
7-8		0					
8-9		0					
9-10		0					
10-11		0					
11-12		0					
12-13		0					
13-14		0					
14-15		0					
15-16		0					
16-17		0					
17-18		0					
18-19		0					
19-20		0					
EB		Arterial Speed =		13.6 mph			
		LOS =		E			

WB	OFF-PEAK DIRECTION'S SPECIFIC INPUTS						
LINK	PEAK HOUR VOLUME	% TURNS FROM EXCLUS. LANES	LANES	CYCLE LENGTH SIGNALS 19-1	EFFECTIVE g/C SIGNALS 19-1	LENGTH (FT)	ARRIVAL TYPE
20-19	0						
19-18	0						
18-17	0						
17-16	0						
16-15	0						
15-14	0						
14-13	0						
13-12	0						
12-11	0						
11-10	0						
10-9	0						
9-8	0						
8-7	0						
7-6	0						3
6-5	0						3
5-4	0						3
4-3	0						3
3-2	565	0	1	64	0.53	950	3
2-1	840	0	1	64	0.51	1,901	3

WB	OFF-PEAK DIRECTION RESULTS					
LINK	THROUGH MOVEMENT FLOW RATE	v/c RATIO	STOPPED DELAY	INTERSECTION APPROACH LOS	SPEED (MPH)	ARTERIAL LINK LOS
20-19	0					
19-18	0					
18-17	0					
17-16	0					
16-15	0					
15-14	0					
14-13	0					
13-12	0					
12-11	0					
11-10	0					
10-9	0					
9-8	0					
8-7	0					
7-6	0					
6-5	0					
5-4	0					
4-3	0					
3-2	611	0.62	8.9	B	17.9	D
2-1	908	0.96	26.8	D	16.4	D
WB	**Arterial Speed =**	**16.9 mph**				
	LOS =	**D**				

ART-PLAN 2.0

Arterial Level of Service Estimating Software
Based on Chapter 11 of the 1994 Highway Capacity Manual Update

Florida Department of Transportation

August 1995

DESCRIPTION

Road Name:	**Eaton Street**
From:	**Simonton Street**
To:	**White Street**
Peak Direction:	**EB**
Off-peak Direction:	**WB**
Study Time Period:	**PM PEAK**
Analysis Date:	**March 1, 1996**
User Notes:	**Adj. Eaton vols. for detour; 2000 analysis**

TRAFFIC CHARACTERISTICS

AADT:	**see below**
K FACTOR:	**0.091**
D FACTOR:	**0.568**
PHF:	**0.925**
ADJ. SATURATION FLOW RATE:	**1,850**
% TURNS FROM EXCLUSIVE LANES:	**0**

ROADWAY CHARACTERISTICS

THRU-LANES PEAK DIRECTION:	**1**	
THRU LANES OFF-PEAK DIRECTION:	**1**	
URBAN, TRANSITIONING, OR RURAL DEVELOPED (U/T/R):	**U**	
ARTERIAL CLASS:	**2**	(1, 2, or 3)
FREE FLOW SPEED (mph):	**30**	(40,35,30,25)

For Arterial Type and Class:	**Use Free flow speed of:**
Rural	55, 50, 45, 40 or 35
Transitioning, Class 1	55, 50, 45, 40 or 35
Urban, Class 1	45, 40 or 35
Urban or Transitioning, Class 2	40, 35, 30 or 25
Urban, Class 3	35, 30 or 25

SIGNALIZATION CHARACTERISTICS

ARRIVAL TYPE PEAK DIRECTION:	**3**	
ARRIVAL TYPE OFF-PEAK DIRECTION:	**3**	
TYPE SIGNAL SYSTEM:	**P**	P=PRETIMED S=SEMIACTUATED A=ACTUATED
SYSTEM CYCLE LENGTH:	**see below**	
WEIGHTED THRU MOVEMENT g/C:	**see below**	

EB	PEAK DIRECTION'S SPECIFIC INPUTS								
LINK	LINK AADT (1 if unavail.) (0 if unused)	PEAK HOUR VOLUME	% TURNS FROM EXCLUS. LANES	LANES	CYCLE LENGTH SIGNALS 2-20	EFFECTIVE g/C SIGNALS 2-20	DISTANCE BETWEEN SIGNALS (Enter in Miles or Feet)	LINK LENGTH (FT)	ARRIVAL TYPE
1-2	0	571	0	1	64	0.53	0.36	1,901	3
2-3	0	845	0	1	64	0.62	0.18	950	3
3-4	0	0	0			0.00	0.00		
4-5	0	0	0			0.00	0.00		
5-6	0	0	0			0.00	0.00		
6-7	0	0	0			0.00	0.00		
7-8	0	0							
8-9	0	0							
9-10	0	0							
10-11	0	0							
11-12	0	0							
12-13	0	0							
13-14	0	0							
14-15	0	0							
15-16	0	0							
16-17	0	0							
17-18	0	0							
18-19	0	0							
19-20	0	0							

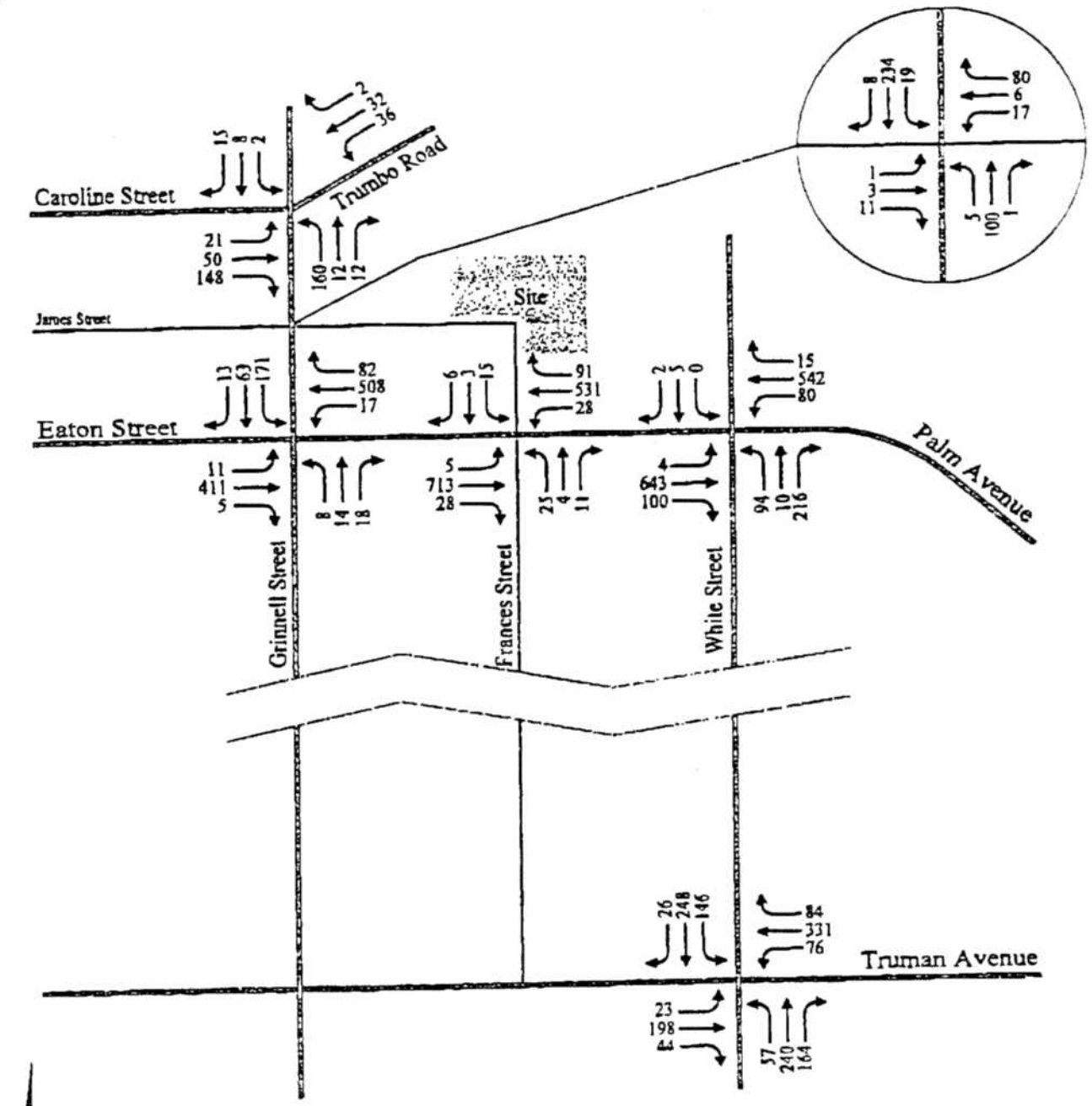
EB	PEAK DIRECTION RESULTS						
LINK	NOTES or FROM/TO	THROUGH MOVEMENT FLOW RATE	v/c RATIO	STOPPED DELAY	INTERSECTION APPROACH LOS	SPEED (MPH)	ARTERIAL LINK LOS
1-2		617	0.63	9.0	B	23.2	C
2-3		914	0.80	9.8	B	17.4	D
3-4		0					
4-5		0					
5-6		0					
6-7		0					
7-8		0					
8-9		0					
9-10		0					
10-11		0					
11-12		0					
12-13		0					
13-14		0					
14-15		0					
15-16		0					
16-17		0					
17-18		0					
18-19		0					
19-20		0					
EB		Arterial Speed =		20.9 mph			
		LOS =		C			

WB	OFF-PEAK DIRECTION'S SPECIFIC INPUTS						
LINK	PEAK HOUR VOLUME	% TURNS FROM EXCLUS. LANES	LANES	CYCLE LENGTH SIGNALS 19-1	EFFECTIVE g/C SIGNALS 19-1	LENGTH (FT)	ARRIVAL TYPE
20-19	0						
19-18	0						
18-17	0						
17-16	0						
16-15	0						
15-14	0						
14-13	0						
13-12	0						
12-11	0						
11-10	0						
10-9	0						
9-8	0						
8-7	0						
7-6	0						3
6-5	0						3
5-4	0						3
4-3	0						3
3-2	428	0	1	64	0.53	950	3
2-1	637	0	1	64	0.51	1,901	3

WB	OFF-PEAK DIRECTION RESULTS					
LINK	THROUGH MOVEMENT FLOW RATE	v/c RATIO	STOPPED DELAY	INTERSECTION APPROACH LOS	SPEED (MPH)	ARTERIAL LINK LOS
20-19	0					
19-18	0					
18-17	0					
17-16	0					
16-15	0					
15-14	0					
14-13	0					
13-12	0					
12-11	0					
11-10	0					
10-9	0					
9-8	0					
8-7	0					
7-6	0					
6-5	0					
5-4	0					
4-3	0					
3-2	463	0.47	7.4	B	18.9	C
2-1	688	0.73	11.3	B	22.0	C
WB	Arterial Speed =	20.9 mph				
	LOS =	C				

APPENDIX H

STRUNK LUMBER YARD TURNING MOVEMENT COUNTS



NOT TO SCALE

Miller Consulting, Inc.	Strunk Lumber Yard Key West, Florida	Figure 7 Existing Traffic Conditions PM Peak Hour (Peak Season)

SUPPLEMENTAL NARRATIVE
KEY WEST BIGHT - PHASE II
NOVEMBER 15, 1995

PROPOSED PROJECT

The City of Key West proposes to construct reconfigured docking space in Key West Bight to augment the already initiated revitalization project for said region. Key West Bight revitalization includes constructing reconfigured docks which will provide slips to service boats greater than 50 feet in length. One of the new docks will extend the existing fueling facility, and a pump-out facility, to a location readily accessible by most vessels. The fuel supply will be land-based with pipes conveying fuel to multiple pumps at the end of the dock.

A restroom, shower and laundry facility is proposed to be constructed behind the Waterside Marketplace building for marina patrons. Additionally, a restroom and second pump-out facility is proposed to be incorporated into a cruise terminal building at the eastern end of the project. Both pump-out facilities shall be complete by December 1995. These two land-based facilities will replace the existing restroom and laundry facilities which have been in severe need of repair.

Electric, lighting and water system will be included in dock construction as required by code for conducting the normal marina operation. The electric and water will be tied into systems already in place in the existing facility. Fire protection systems will be installed and approved by the City of Key West Fire Marshall.

PROJECT NEED AND PURPOSE

The City of Key West recently purchased a majority of the private property fronting Key West Bight. The goal of the City's Key West Bight Management Board is to renovate this nearly contiguous waterfront, adjacent business district, and marina facilities to create a waterfront activity center while retaining the *funky* atmosphere of this historical fishing, shrimping and turtling port.

When the city acquired the land adjacent to the Bight, they also acquired the docks, buildings, mooring piles, and associated marina facilities from multiple ownerships. Many of these structures were constructed decades ago and have been restored, removed or reconfigured since then. As a result, the City docks take on the appearance of a very disjunct system. The Phase I permitted project restored some of the docks in their original configuration. Other docks, particularly in the region of the "T" and "H" docks, were removed to allow the proposed dock reconfiguration which would better serve the demands of larger vessels.

Marine facilities within the Bight prior to renovation were inadequate for the needs of large sailing and motor vessels which require a twin-50 amp power supply, and longer and wider docking space. Previously, these vessels would be routed elsewhere due to lack of such facilities. The newly

reconfigured docks could accommodate vessels from greater than 80' to minor cruise liners. The previous Phase I improvements refurbished existing docks so as not to exclude the small to medium vessels that currently use the Bight.

EXISTING CONDITIONS

Is this correct 14,361

The City of Key West, under FDEP Permit No. 442679425 will refurbish 1436 SF of existing docks to their original configuration in addition to constructing 6236 SF of overwater harborwalk paralleling the bulkheaded shoreline in exchange for removing existing docks totaling 5107 SF. Renovations are on-going and assumed to be complete for the purposes of this narrative. During the previous permitting process, the conglomerate of Singleton Seafood submerged land leases was joined and expanded to encompass both the dock renovation/harborwalk Phase I construction and the currently proposed Phase II dock reconfiguration. The resultant submerged land lease would encompass 364,417.0 SF in Key West Bight and is awaiting review by the Governor and Cabinet which is anticipated to be concurrent with issuance of this Phase II permit.

Key West Bight has a long history of human impact through dredging and filling operations and commercial, municipal and recreational use. Key West Bight became known as a major shrimping port in 1949 when large shrimp populations were discovered in the Dry Tortugas. To accommodate the increased commercial traffic, a large portion of the Bight was dredged and connected to a nearby shipping channel. Since then, the commercial fishing activities have been largely replaced by recreational and charter interests.

In addition to the increased impact on the Bight due to past vessel oriented operations, land based operations such as an electrical power plant to the east of the project released effluent (cooling water) into the southeastern corner of the Bight from 1952 through 1991. The communities both above and below the water's surface reflect these impacts.

The existing project shoreline is completely bulkheaded excepting for the extreme eastern border of the project which is lined with rip-rap. These boundaries were verified and recorded by a special purpose survey in Fall 1995. The adjacent upland property is completely developed by commercial and municipal interests and includes roadways, buildings and parking areas.

A harborwalk parallels the entire bulkheaded shoreline and provides a pedestrian corridor accessing shops, restaurants and the marina facilities. The harborwalk is land-based except where existing buildings are located directly adjacent to the existing bulkhead forcing the harborwalk overwater.

PROPOSED IMPROVEMENTS

To accommodate the City of Key West's desire to commence renovation of both water and land based amenities, the project was split into two phases in the anticipation that Phase I could be processed more readily and would allow the City to begin a portion of the improvements at an earlier date. Phase I

included removal of several docks, repair of several docks, improvements to the upland stormwater management system and construction of the harborwalk. Phase I involved restoration of several docks (14361 SF), removal of several docks (5107 SF), and construction of an overwater harborwalk (5236 SF). This produced essentially no net change in the amount of overwater structure.

During permit negotiations for the first phase of improvements, FDEP requested to review the project in its entirety such that cumulative impacts, or improvements, could be anticipated during the first phase of permitting. As such, this section of the narrative represents a logical progression spanning the two phases of work as it relates to a net reduction in impacts to the aquatic system.

Water dependent activities prior to any renovations included 6543 SF of docks, 142 slips, one pumpout, one restroom/laundry and two fueling facilities. The vessel composition included live-aboard, commercial (fishing and dive charters), recreational and salvage/rescue vessels.

Phase II plans propose to reconfigure several docks in the vicinity of the docks removed in Phase I. The reconfigured docks (13634 SF) were designed to service the larger vessels that the docks previously could not accommodate. Thus, there is a proposed net increase in the amount of overwater structure totaling approximately 28,124 SF for the combined phases.

Water quality improvements resulting from the Bight renovation as a whole include: reduction in the number of slips from 142 to 133 (6% reduction), installation of 2.25 acres of upland stormwater management system where none existed, installation of two new pumpout facilities and a mobile pumpout system, renovation of both fueling facilities and reduction in the number of live-aboard vessels.

A new restroom/laundry facility is being constructed in a centralized location to replace the existing facility. The new facility will provide public restrooms (three stalls per sex) in addition to a restroom facility exclusively for the marina patrons. The marina restroom will include three showers and two stalls per sex. Thus, these facilities should provide unrestricted access to land based restroom amenities for marina patrons. This should decrease the loading on vessel holding tanks, decrease the need for vessels to pump-out and, hence, reduce the likelihood of illegal dumping of holds into open water.

The reduction in the number of slips from 142 to 133 is based on the number of slips paying dockage fees prior to Bight renovation versus the number of proposed slips upon completion of renovation. The realized reduction in the number of boats will actually be greater since the modified dock configuration will not allow the 10 to 15 vessels which have historically moored unassociated with the docks in the region of the proposed T1 and T2 docks. Those vessel were typically permanent or transient live-aboard which paid no dockage fees to the City and, as a result, they were not counted as part of the 142 slip count for the Bight.

MITIGATION/WATER QUALITY IMPROVEMENTS

The two new permanent pumpout stations and the single mobile pumpout unit will provide sewage disposal service where none existed previously at the City docks. This should provide an immediate improvement in water quality in the Key West Region. The mobile unit, on-call and operated by skilled personnel, will additionally provide the service to those vessel unable/or unwilling to visit the permanent stations.

Due to the disparity in magnitude of these numerous water quality improvements compared to the relatively minimal impacts of the Phase I construction of the overwater harborwalk, the majority of the water quality improvement should be credited toward Phase II dock reconfiguration. The Phase I FDEP permit (#442679425) acknowledges that water quality improvements are available for the future phase of work.

* As with Phase I, Phase II construction should not require water quality monitoring, per F.A.C. 18-21.0041(1)(b)5, since the project is not a new project and it will not produce a net increase of 10 or more slips.

Let Ken Sides know no monitoring req'd.

FLEET MIX AND USAGE AND CONSTRUCTION SEQUENCE

Prior to renovation, 142 slips were recognized at the Bight. This did not include 10 to 12 vessels that typically moored in the Bight and did not pay dockage fees. Since Phase I included removal of several docks, the slip count decreased to 102. Since it took an inordinate amount of time to obtain the Phase I permit, phasing of dock removal may be contingent upon the scheduling of construction of Phase II docks in the same vicinity of the dock to be removed. This will allow a shorter period of time for loss of docking fees as well as a shorter period when vessel may be without a slip. Thus, the number of slips at any one time will change up to the point where all improvements are complete. This Phase II permit constitutes the complete over-water improvements planned for the Bight.

One theme of the renovation is to provide services that will accommodate larger vessels than currently use the Bight. As a result, the final slip count upon completion of Phase II is 133 slips. This is a net decrease (6%) in the number of slips at the City docks (i.e. an anticipated decrease in the impact on the system). Fewer large vessels have a lesser impact than more small vessels

Prior to renovation, the fleet mix was approximately 27% commercial vessels, 17% liveaboards, and 56% recreational vessels. The City of Key West defines *liveaboards* as vessels paying dockage fees on a month to month basis (i.e. the vessel is their home). Transient vessels are not included here since these vessels are less likely to pollute the waters while in port.

Upon completion of Phase II, the fleet mix is anticipated to reduce the number of liveaboards from 24 to approximately 10. This will likely transfer this percentage (10%) to the recreational vessel category. Thus, the final fleet mix may include 27% commercial, 7% liveaboards and 66% recreational.

Obviously, the percentages and number of vessels will change through time depending upon the demand for slip space.

CONSTRUCTION METHODS

Construction activities for Phase II are limited to installation of timber pile supported docks. The piles will be driven from a shallow draft barge which can navigate the waters around the proposed docks. Siltation barriers will be employed, where necessary, to meet State water quality standards.

ENVIRONMENTAL ASSESSMENT

To assess the existing aquatic benthic community, the Bight was surveyed by WMBP biologists, Bruce Layman and Chris Pearce, on November 12 and 13, 1994. Meandering transects were snorkeled throughout the Bight, particularly in areas encompassed by the proposed submerged land lease currently being reviewed for modification. The transects were between 10 feet and 30 feet apart with a third person in a boat recording information relayed by the biologists in the water. Ponar grab samples were taken to identify epifauna and infauna throughout the Bight.

The bottom of Key West Bight is bounded on the west and south by a continuous bulkhead, on the east by a rip-rap shoreline, and on the north by a rock breakwater and concrete bulkhead. Directly adjacent to the northern concrete bulkhead, which services a U.S. Naval facility, is an artificially created 20 foot deep shipping channel which begins at the eastern Bight shoreline and extends west, out of the Bight, to deeper water. A spur of the channel extends from the mainstream of the channel to the southwest into the Bight. This allows maneuverability for Coast Guard, Navy and commercial vessels. This channel effectively forms the Northern boundary of the activities proposed for this project.

The shipping channel facilitates tidal flushing between the Bight and the Gulf of Mexico. The mean tidal range is 1.3 feet and fluctuates between MHW (0.9 NGVD) and MLW (-0.4 NGVD). The Bight bottom south of the shipping channel is gradually sloping from 12 to 15 feet deep to depths of approximately 6 to 10 feet at the bulkhead (or rip-rap). The entire Bight is sufficiently deep such that only a narrow strip of intertidal bottom is exposed at low tide along the eastern rip-rapped shoreline. The bottom sediment ranges from silty mud to a coarse gravelly texture. The majority of the bottom is composed of unconsolidated mud and muddy sand.

Of 22 Ponar grab samples taken throughout the Bight, only 3 contained infauna visible with the naked eye. All 11 individuals were polychaetes less than one half inch in length. The benthic community observed can best be described as devoid of the quantity and diversity of life found in a remote or pristine location.

A majority of fishes observed (tarpon, gray snapper, crevalle jack) were concentrated either adjacent to the existing bulkhead, under existing dock structures near the bulkhead or adjacent to an existing waterfront restaurant (tarpon and jacks in particular). Aside from the existing docks, debris, and a rock ledge created by past dredging, there is little structure for fishes with which to be associated.

Juvenile spiny lobsters were observed on the ledge created by the channel dredging at the easternmost boundary of the Bight.

Seven juvenile and one adult queen conch were observed at three locations in the Bight. They were found equally frequently under existing docks and out on the open bottom. Key West Bight is a State of Florida Class III waterbody and, according to FDEP Marathon Office, is located within an unclassified shellfish harvesting area. Our understanding is that essentially all waters in the Florida Keys not classified as shellfish harvesting areas are considered unclassified shellfish harvesting areas and, as such, should not add any additional water quality definition beyond Class III.

Algae dominated the epibenthic community and varied from nearly monospecific stands of *Halimeda spp.* to a conglomerate of brown and green algae. Approximately 60% of the bottom surveyed contained algae. Generally, deeper regions of the Bight, and areas directly under existing docks, had a decreased abundance of algae. The largest species diversity was observed attached to the structure associated with existing dock piles and submerged debris.

Species observed during the biological survey did not appear to be negatively impacted by the existing overwater structure. In fact, fishes were observed more frequently around the existing docks versus the adjacent open mud and algae bottoms.

The lack of a coralline hard-bottom and general preponderance of green and brown algae would suggest an impacted system. Water depths under the proposed new docks range between approximately 10 and 18 feet, where direct shading from proposed structures is not anticipated to affect the system.

At first glance, the increase in overwater structure may appear to have a negative impact on the Bight flora and fauna. However, at stated in the following Environmental Assessment portion of this narrative, the majority of fishes observed were associated with the existing overwater structures in the Bight. Likewise, algae was found equally frequently under existing docks versus in the areas with no overwater structure. Overwater structures appear to be a normal part of the habitat with which the floral and faunal communities have become associated for food and cover. An increase in the overwater structures proposed in this phase of permitting would increase the potential usage for fishes in particular, with little, if any, impact on the algael community.

SUMMARY

The City of Key West has initiated a program to renovate and upgrade the Key West Bight waterfront and marina. Under separate permit, the City has removed several existing docks, refurbished several others and created a harborwalk paralleling the existing bulkhead.

Phase II (final phase) involves construction of slips which will upgrade the existing facility to accommodate larger vessels and a greater fleet mix. There is no dredging involved with the this project and fill is limited to piling installation. The new slips, none of which are anticipated to be liveaboards, will bring the total slip count to 133. This is a 6% reduction in the total number of slips from the number existing prior to the City's renovations. Additionally, two new pumpout facilities, 2.25 acres of stormwater treatment, a consolidated and upgraded fueling facility, and an anticipated reduction in the number of liveaboard vessels using the Bight should increase water quality in the Bight over conditions prior to renovations.

TABLE 4
DOCKING FACILITY SUMMARY

Type of Structure*	Type of Work**	# of Identical	Length (ft.)	Width (ft.)	Height (ft.)	Total sq. ft. over water	# of Slips
Docks T2	N	1	190	20	4.45	3800	4*
Docks T2	N	1	98	12	4.45	1251	5*
Docks T1	N	1	200	30	4.45	6000	4*
Docks T1	N	1	173	15	4.45	2595	6*

*Dock, Pier, Finger Pier, Other Structure (specify type)

**New, Replaced, Existing (unaltered), Removed, Altered/Modified

TOTALS:	Existing	Proposed
# of Slips		19*
Sq. Ft. Over		13646

Use of Structure Slip Space

Will the docking facility provide: Livaboard Slips? If yes, Number: No

Fueling Facilities: If yes, Number: No

Sewage Pump-out Facilities? If yes, Number: 1

Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle) ____ Yes X No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings greenheart timber

Decking pressure treated wood

Proposed Dock Plank Spacing (if applicable) Varies

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)

±30' vessels through cruise ship size.

TABLE 4
DOCKING FACILITY SUMMARY

Type of Structure*	Type of Work**	# of Identical	Length (ft.)	Width (ft.)	Height (ft.)	Total sq. ft. over water	# of Slips
Dock H1	N	1	140	8	4.6	1120	2*
Dock H2	N	1	100	8	4.6	800	2*
Dock H3	N	1	100	8	4.6	800	2*

*Dock, Pier, Finger Pier, Other Structure (specify type)

**New, Replaced, Existing (unaltered), Removed, Altered/Modified

TOTALS:	Existing	Proposed
# of Slips		6 *
Sq. Ft. Over		2720

Use of Structure Slip space, and fueling facility on pier H1

Will the docking facility provide: Livaboard Slips? If yes, Number: _____

Fueling Facilities: If yes, Number: 1

Sewage Pump-out Facilities? If yes, Number: _____

Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle) ____ Yes X No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings greenheart timber

Decking pressure treated wood

Proposed Dock Plank Spacing (if applicable) Varies

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)
±100' and 150' length vessels - similarly sized vessels currently use this region of the Bight.

* SEE ATTACHED SUPPLEMENTAL NARRATIVE and permit drawings for slip locations.

TABLE 4
DOCKING FACILITY SUMMARY

Type of Structure*	Type of Work**	# of Identical	Length (ft.)	Width (ft.)	Height (ft.)	Total sq. ft. over water	# of Slips
Dock C	N	1	150	15	3.3	2250	2 *
Walkway	A	1	15	8.5	3.3	127.5	0 *
Walkway	A	1	80	4.0	3.3	320	1 *
Walkway	A	1	70	7.0	3.3	24.5	0 *

*Dock, Pier, Finger Pier, Other Structure (specify type)

**New, Replaced, Existing (unaltered), Removed, Altered/Modified

TOTALS:	Existing	Proposed
# of Slips		3 *
Sq. Ft. Over		2722

Use of Structure Access around existing building to and from gas and pumpout dock, slip space.

Will the docking facility provide: Liveaboard Slips? If yes, Number: _____

Fueling Facilities: If yes, Number: 1

Sewage Pump-out Facilities? If yes, Number: 1

Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle) ____ Yes X No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings greenheart timber

Decking pressure treated wood

Proposed Dock Plank Spacing (if applicable) Varies

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)

The fueling and pumpout facilities provided are to service all (barring cruise ships) vessels desiring the service.

* SEE ATTACHED SUPPLEMENTAL NARRATIVE and permit drawings for slip locations.

TABLE 4
DOCKING FACILITY SUMMARY

Type of Structure*	Type of Work**	# of Identical	Length (ft.)	Width (ft.)	Height (ft.)	Total sq. ft. over water	# of Slips
Dock A	N	1	294	8	3.30	2352	4 *
Dock G	N	1	258	8	4.1	2064	3 *
Finger Pier	N	1	50	8	3.30	400	2 *
Finger Pier	N	7	50	5	3.30	1750	14*
Finger Pier	N	1	72	8	4.1	576	2 *
Finger Pier	N	3	70	5	4.1	1050	6 *

*Dock, Pier, Finger Pier, Other Structure (specify type)

**New, Replaced, Existing (unaltered), Removed, Altered/Modified

TOTALS:	Existing	Proposed
# of Slips		31 *
Sq. Ft. Over		8192

Use of Structure Slip space

Will the docking facility provide: Livaboard Slips? If yes, Number: ±10 **

Fueling Facilities: If yes, Number: _____

Sewage Pump-out Facilities? If yes, Number: _____

Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle) ____ Yes X No

Type of Materials for Decking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete)

Pilings greenheart timber

Decking pressure treated wood

Proposed Dock Plank Spacing (if applicable) Varies

Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility)

±80' vessels on Pier G, ±50' vessels on Pier A.

** Number of livaboard slips at any given time is dependent upon current demand.

* SEE ATTACHED SUPPLEMENTAL NARRATIVE and permit drawings for slip locations.

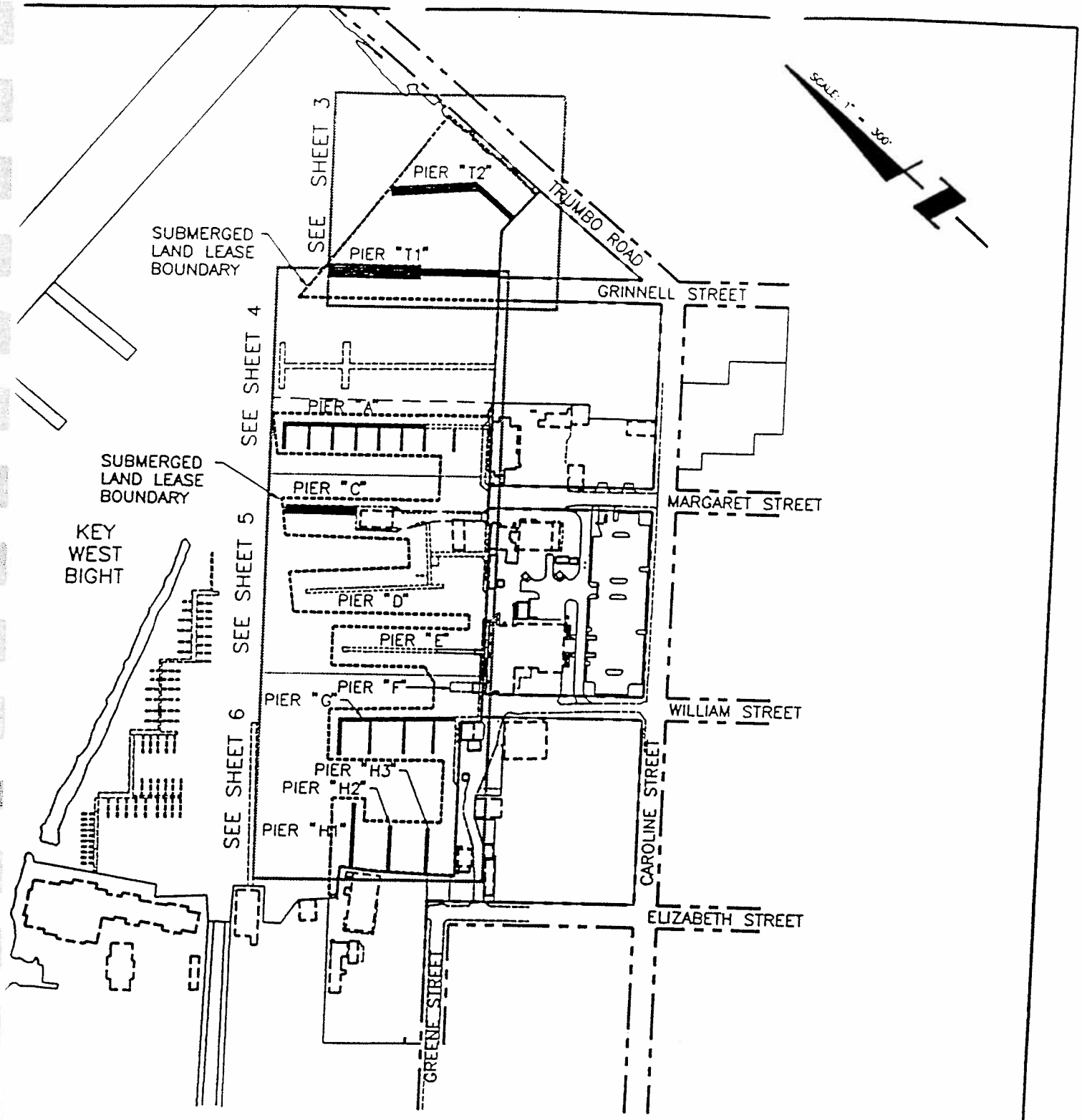
Table 5: SHORELINE STABILIZATION IF YOU ARE CONSTRUCTING A SHORELINE STABILIZATION PROJECT, PLEASE PROVIDE THE FOLLOWING:

N/A

Stabilization	Linear Ft. New	Linear Ft. Replaced	Linear Ft. Repaired	Linear Ft. Removed	Slope H: V:	Toe Width (Ft.)
Vertical Seawall						
Seawall + Rip Rap						
Rip Rap						
Rip Rap + Vegetation						
Other Shoreline Stabilization Type _____						

Size of Rip Rap _____

Type of Rip Rap _____



JECT: *KEY WEST BIGHT*

LICANT: *CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD*

LSON, MILLER, BARTON & PEEK, INC.

ENGINEERS • SURVEYORS • PLANNERS • ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS • CONSTRUCTION MANAGERS

Colonial Boulevard, Suite 200
Myers, Florida 33912 (813)939-1020 Fax (813) 939-7479

COUNTY: MONROE	DATE: 11/29/94
SEC. 31 TWP. 68S RGE. 25E	REV:
JOB: 33132 PROJ. 0273	FILE NO.: 02730302
DRAWN: JDK	SHEET 2 OF 8

COLLINS K. McKAY
FLA. REG. # 41571

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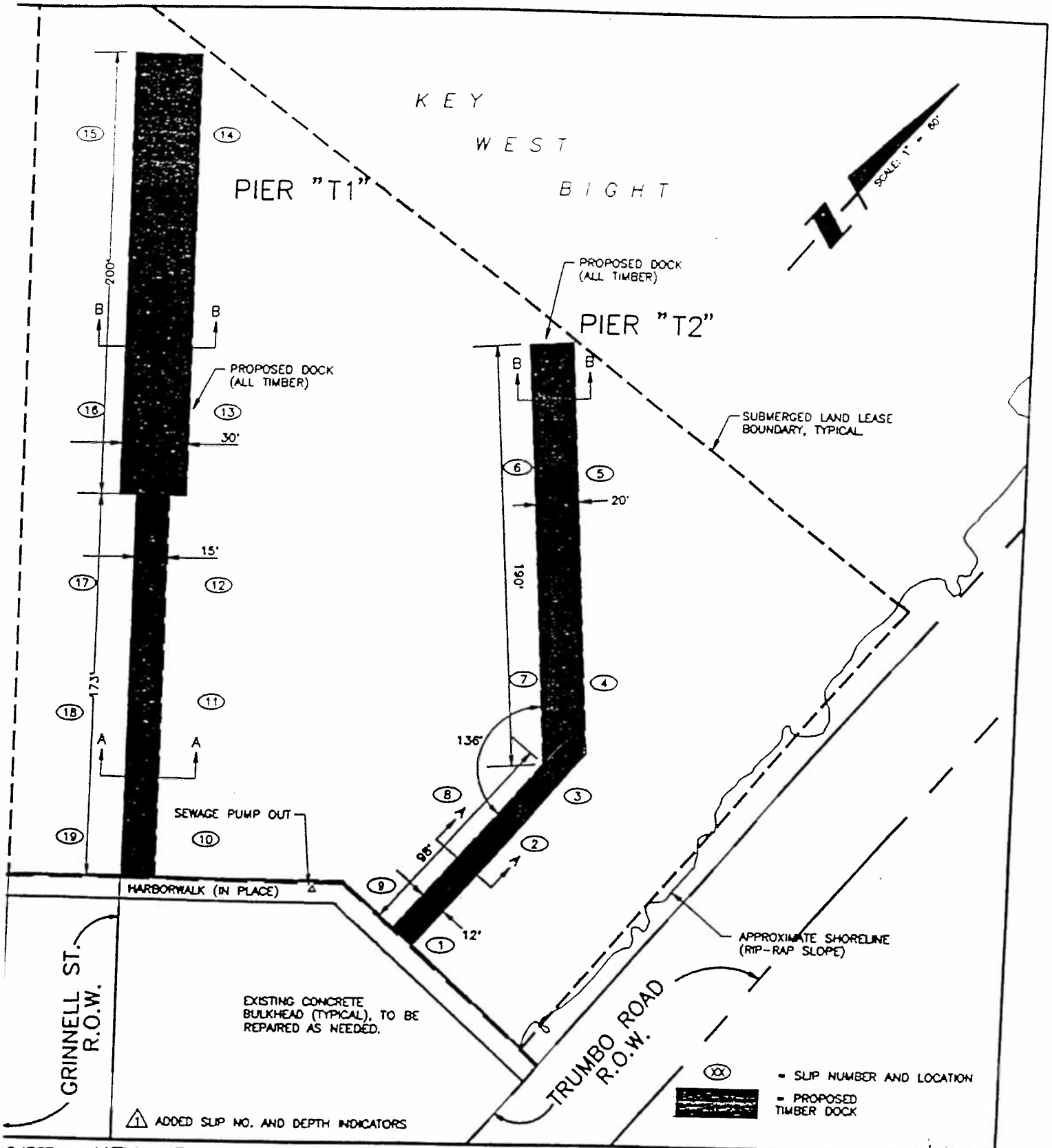

PROJECT: KEY WEST BIGHT

APPLICANT: CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD

WILSON, MILLER, BARTON & PEEK, INC.
ENGINEERS • SURVEYORS • PLANNERS • ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS • CONSTRUCTION MANAGERS
1 Colonial Boulevard, Suite 200
Myers, Florida 33912 (813)936-1020 Fax (813) 936-7479

COUNTY: MONROE	DATE: 11/29/94
SEC: 31 TWP: 68S RGE: 25E	REV: 10/27/95
BOOK: 33132 PAGE: 0273	FILE NO.: 02730303
DRAWN: JDK	SHEET 3 OF 8

Collins K. McKay
11-10-95
COLLINS K. McKAY
FLA. REG. # 41571

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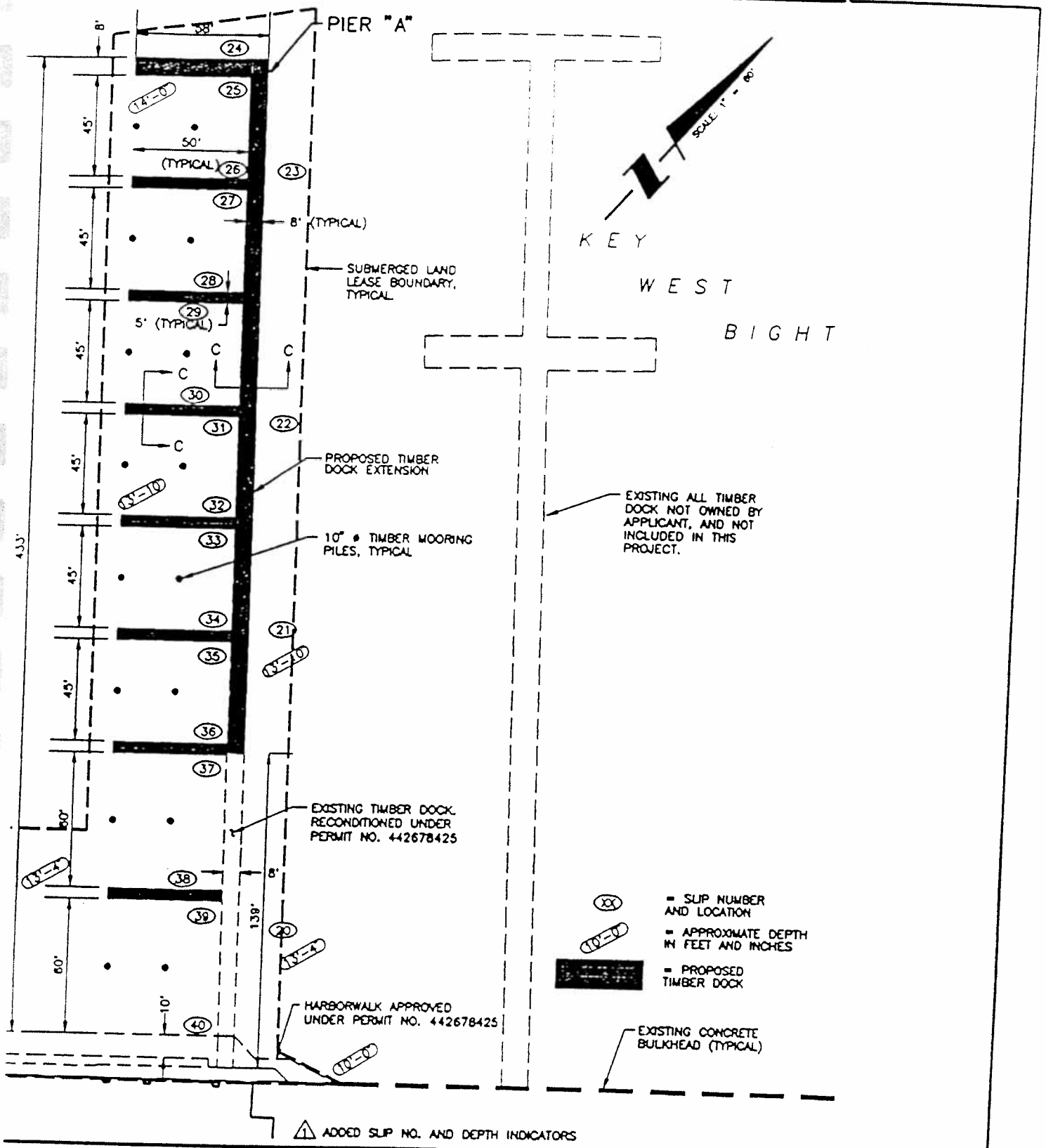

⚠1 ADDED SLIP NO. AND DEPTH INDICATORS

ECT: *KEY WEST BIGHT*

ICANT: *CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD*

SON, MILLER, BARTON & PEEK, INC.

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olonial Boulevard, Suite 200
ers, Florida 33912 (813)939-1020 Fax (813) 939-7479

COUNTY: MONROE	DATE: 11/29/94
SEC. 31 TWP. 68S RGE. 25E	REV: 10/27/95
MAP 33132 PROJ 0273	FILE NO.: 02730304
DRAWN: JDK	SHEET 4 OF 8

COLLINS K. McKAY
FLA. REG. # 41571

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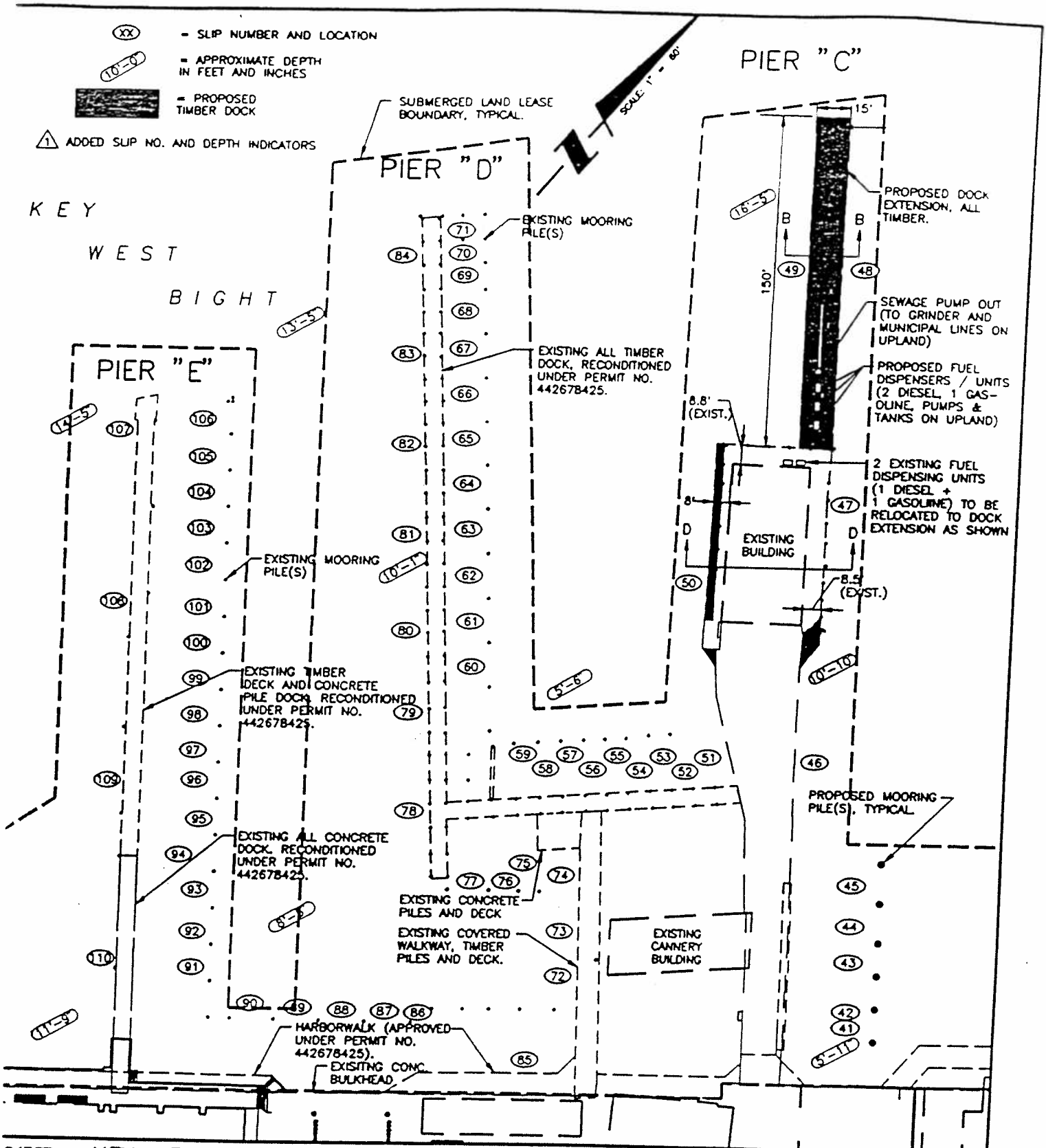

OJECT: *KEY WEST BIGHT*

PLICANT: *CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD*

ILSON, MILLER, BARTON & PEEK, INC.

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LANDSCAPE ARCHITECTS • CONSTRUCTION MANAGERS

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Myers, Florida 33912 (813)939-1020 Fax (813) 939-7479

COUNTY: *MONROE*	DATE: *11/29/94*
SEC. *31* TWP. *68S* RGE. *25E*	REV: *10/27/95*
W.O.# *33132* PROJ. *0273*	FILE NO.: *02730305*
DRAWN: *JDK*	SHEET *5* OF *8*

Collins K. McKay 11-10-95

COLLINS K. McKAY
FLA. REG. # 41571

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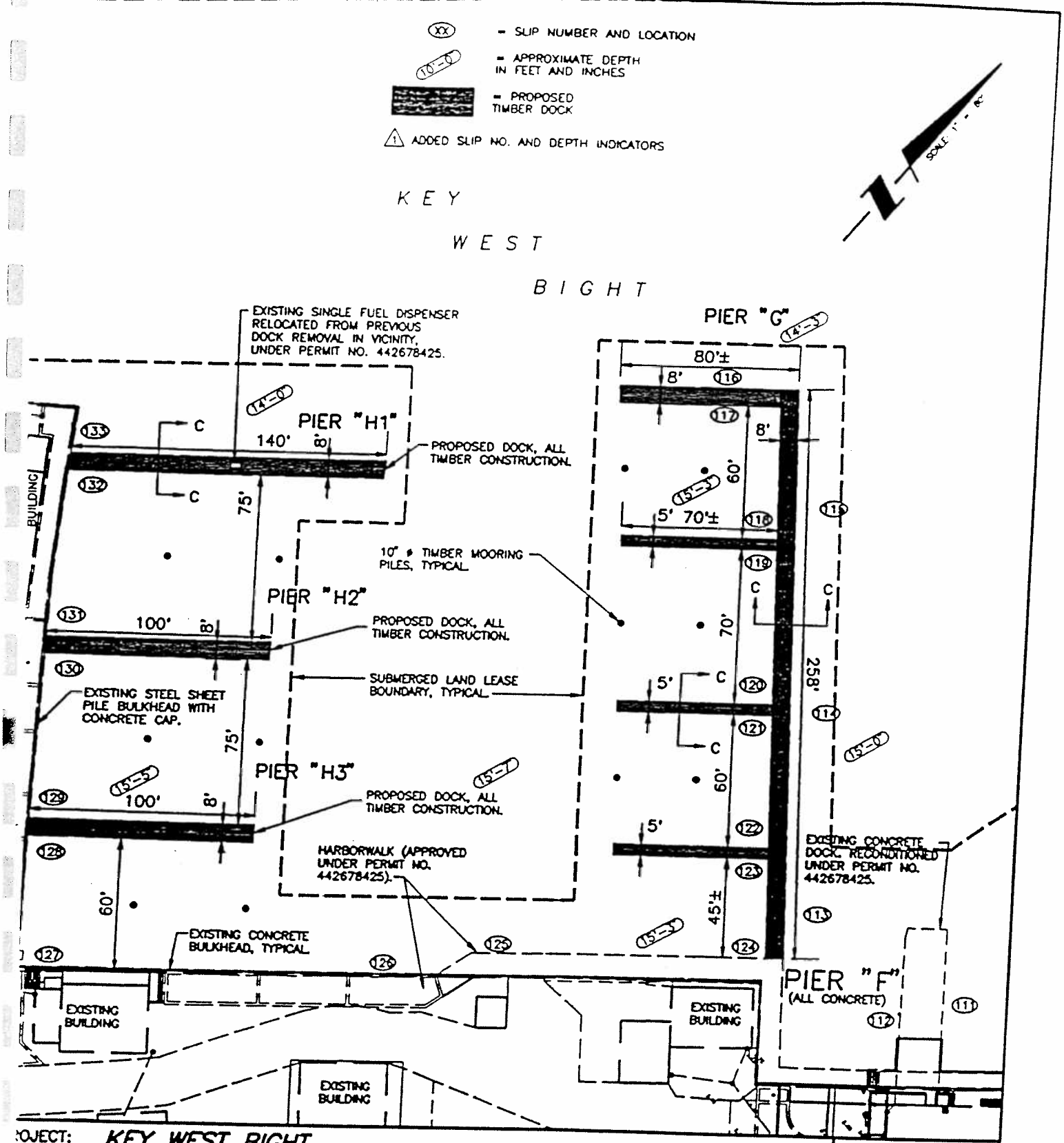

PROJECT: KEY WEST BIGHT

APPLICANT: CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD

WILSON, MILLER, BARTON & PEEK, INC.

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COUNTY: MONROE	DATE: 11/29/94
SEC. 31 TWP. 68S RGE. 25E	REV: 10/27/95
BOOK 33132 PAGE 0273	FILE NO.: 02730306
DRAWN: JDK	SHEET 6 OF 8

COLLINS K. McKAY
FLA. REG. # 41571

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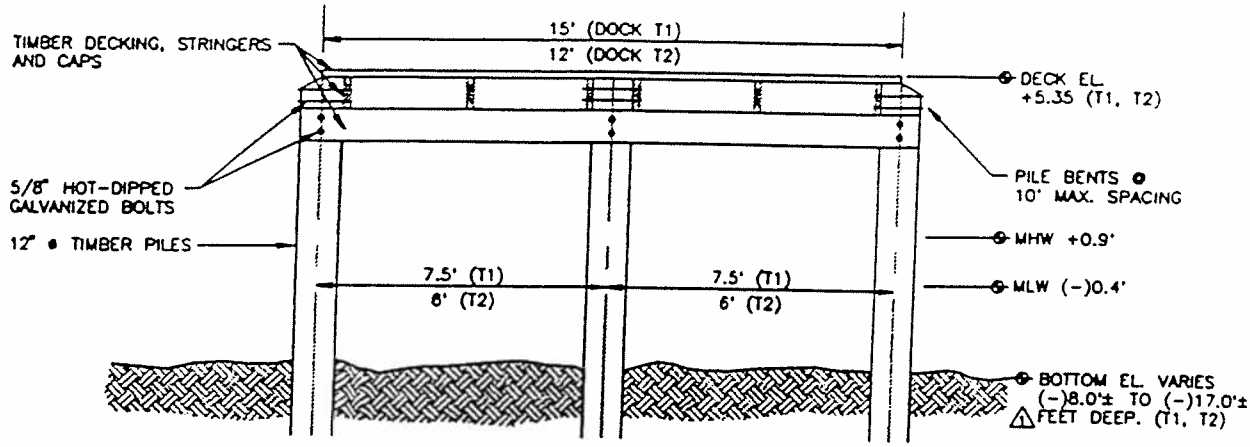
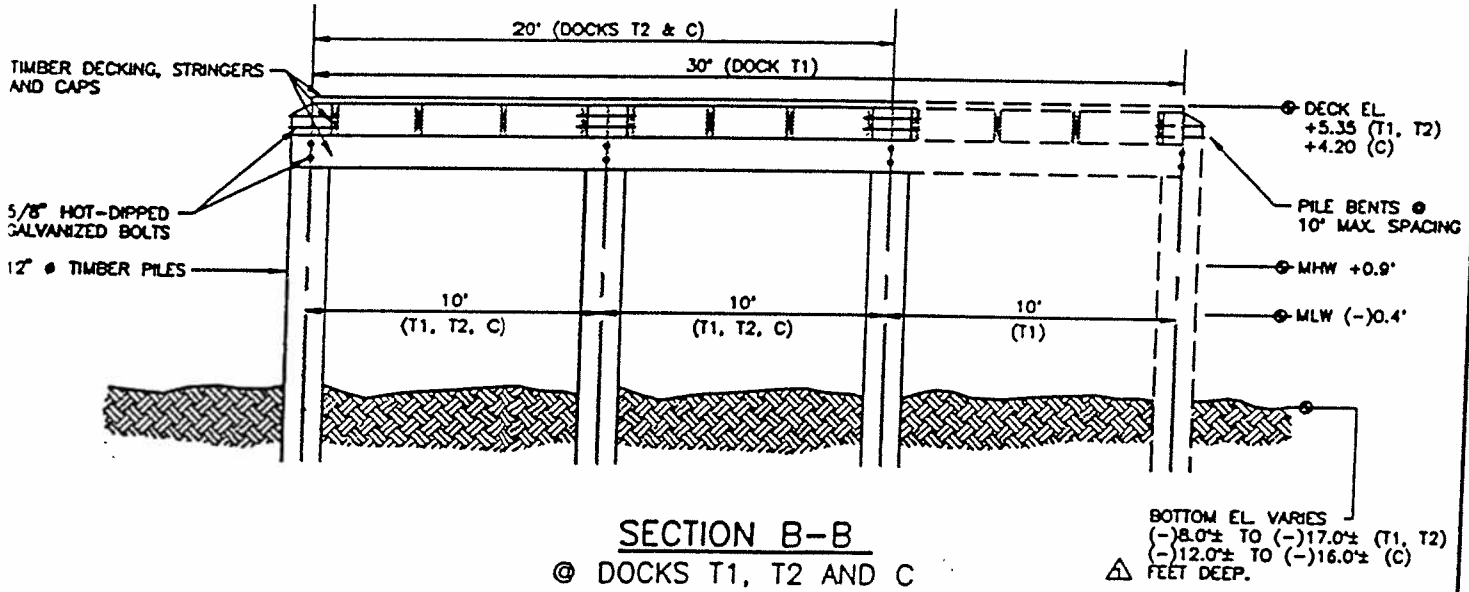
⚠ REVISED TEXT.



SECTION A-A
@ DOCKS T1 & T2

NTS



SECTION B-B
@ DOCKS T1, T2 AND C

NTS

TYPICAL DOCK SECTIONS/DETAILS

NOTE: ALL ELEVATIONS ARE REFERENCED TO N.G.V.D. MHW AND MLW ELEVATIONS WERE OBTAINED FROM FDEP BUREAU OF SURVEYING AND MAPPING.

ROJECT: KEY WEST BIGHT

PLICANT: CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD

ILSON, MILLER, BARTON & PEEK, INC.

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t Myers, Florida 33912 (813)939-1020 Fax (813) 939-7479

COUNTY: MONROE	DATE: 11/29/94
SEC. 31 TWP. 68S RGE. 25E	REV: 10/27/95
MAP 33132 PAGE 0273	FILE NO.: 02730307
DRAWN: JDK	SHEET 7 OF 8

Collins K. McKay 11-10-95

COLLINS K. McKAY
FLA. REG. # 41571

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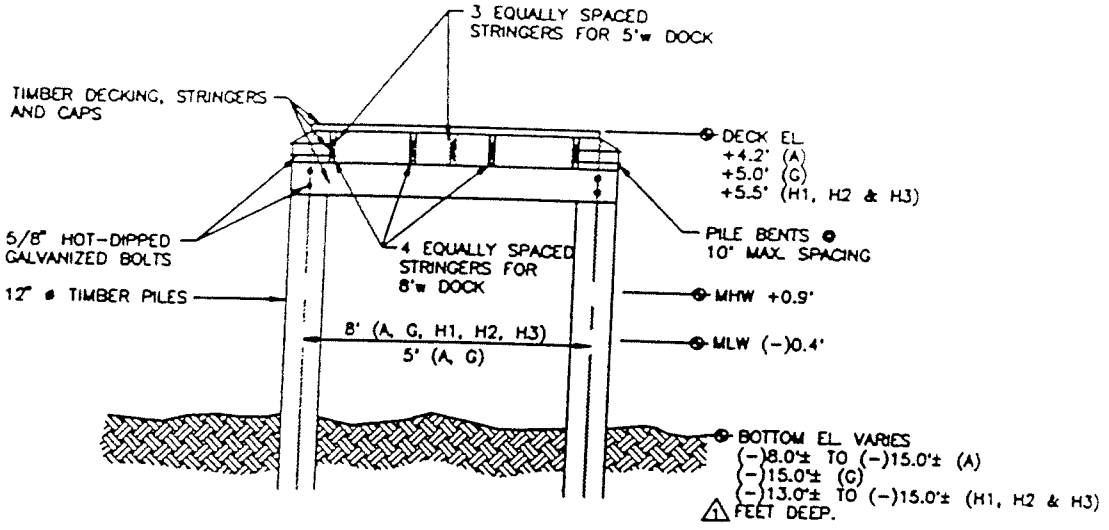
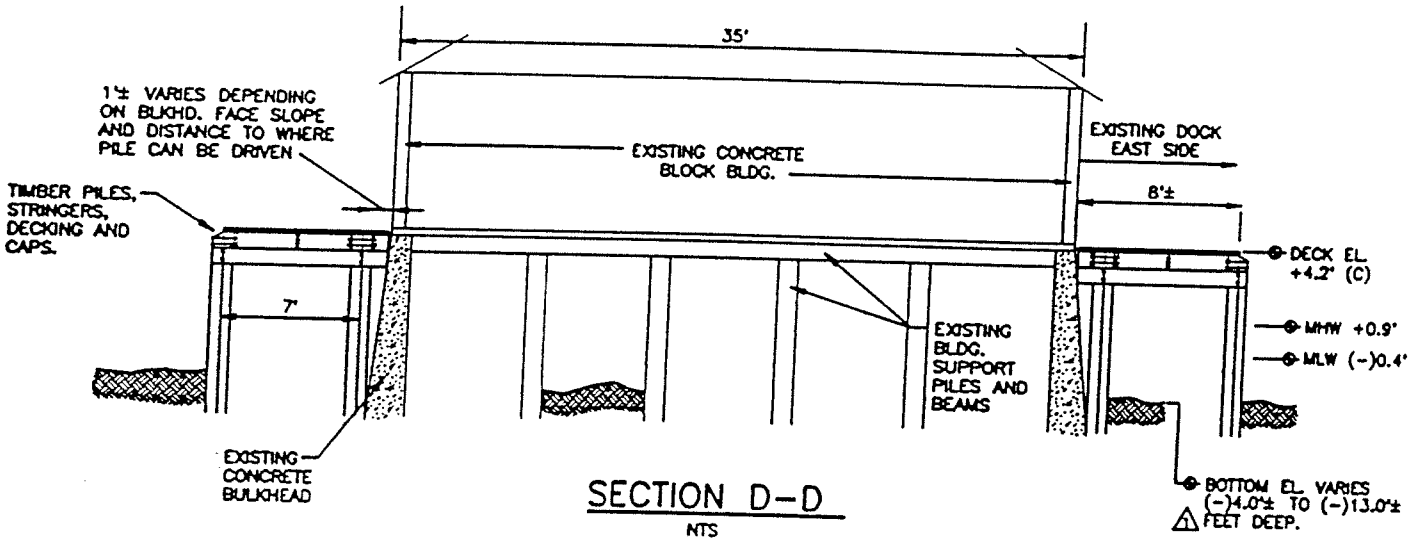


SECTION C-C
@ DOCKS A, G, H1, H2, H3
NTS



SECTION D-D
NTS

NOTE:
1. EXISTING 4' WIDE DOCK WEST SIDE TO BE REPLACED W/ 8' WIDE TIMBER DOCK.
2. NEW DOCK STANDS ALONE AND ABUTS BUILDING.

TYPICAL DOCK SECTIONS/DETAILS

NOTE: ALL ELEVATIONS ARE REFERENCED TO N.G.V.D. MHW AND MLW ELEVATIONS WERE OBTAINED FROM FDEP BUREAU OF SURVEYING AND MAPPING.

OJECT: KEY WEST BIGHT

PLICANT: CITY OF KEY WEST C/O BIGHT MANAGEMENT BOARD

LSON, MILLER, BARTON & PEEK, INC.
ENGINEERS • SURVEYORS • PLANNERS • ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS • CONSTRUCTION MANAGERS
Colonial Boulevard, Suite 200
Myers, Florida 33912 (813)939-1020 Fax (813) 939-7479

COUNTY: MONROE	DATE: 11/29/94
BOOK 31 PAGE 68S RGE 25E	REV: 10/27/95
JOB NO. 33132 PROJ. 0273	FILE NO.: 02730308
DRAWN: JDK	SHEET 8 OF 8

Collins K. McKay 11-10-95
COLLINS K. McKAY
FLA. REG. # 41571

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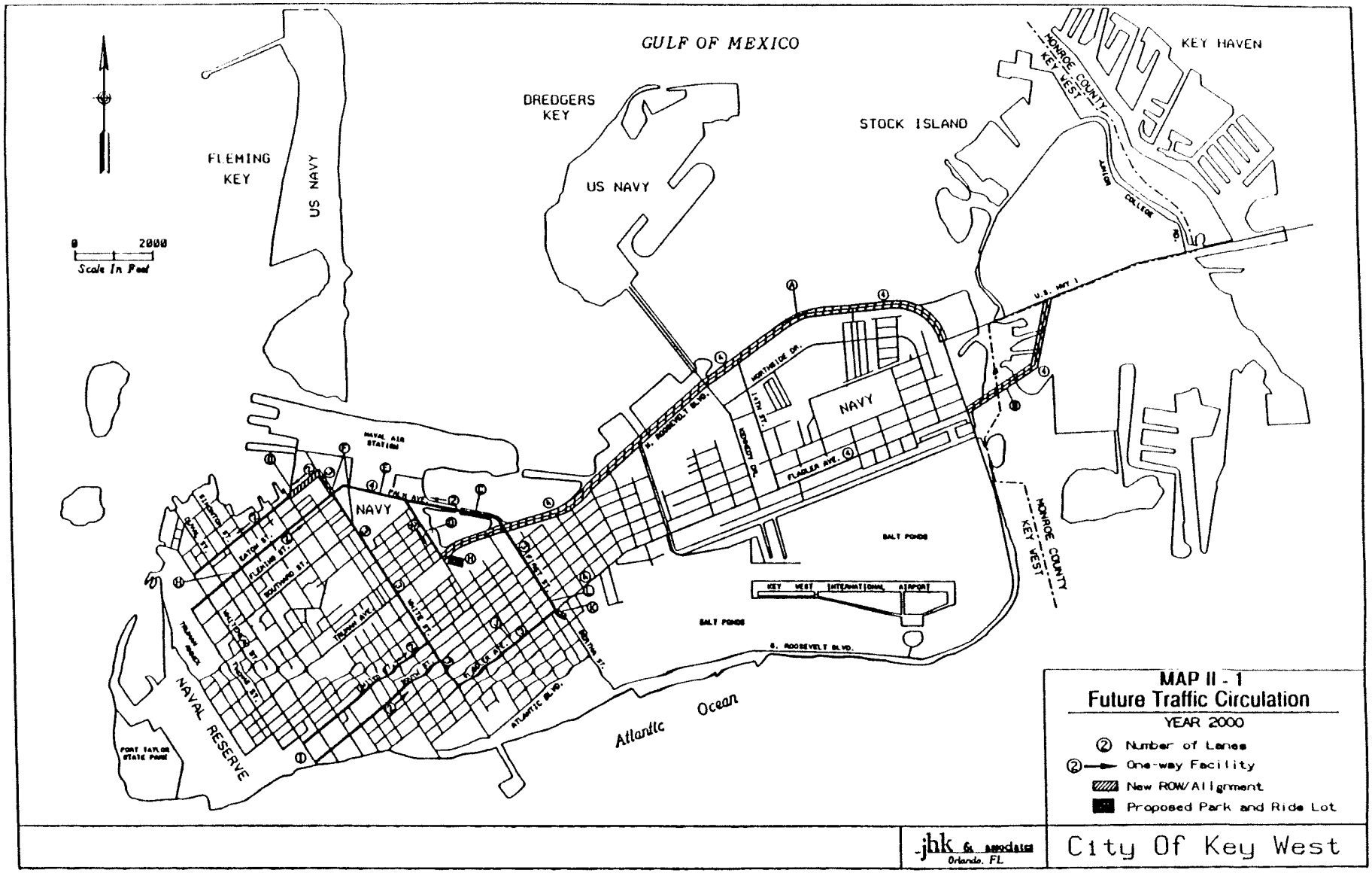

GULF OF MEXICO
KEY HAVEN
DREDGERS KEY
STOCK ISLAND
FLEMING KEY
US NAVY
US NAVY
0 2000
Scale In Feet
NAVY
NAVY
SALT PONDS
SALT PONDS
KEY WEST INTERNATIONAL AIRPORT
NAVAL RESERVE
Atlantic Ocean
MONROE COUNTY KEY WEST
MONROE COUNTY KEY WEST
U.S. HWY 1
S. ROOSEVELT BLVD.
FLAGLER AVE.
TRUMAN AVE.
SOUTHARD ST.
FLEMING ST.
DUVAL ST.
WHITE ST.
ATLANTIC BLVD.
NAVAL AIR STATION
FORT TAYLOR STATE PARK
MAP II - 1
Future Traffic Circulation
YEAR 2000
② Number of Lanes
② One-way Facility
New ROW/Alignment
Proposed Park and Ride Lot
jhk & Associates
Orlando, FL
City Of Key West

ii. All lights on balconies will be shielded from the beach.

iii. Floodlights on buildings or adjacent to the beach shall be positioned so that the source of light is not visible from the beach or, if required for safety, positioned in such a manner as to minimize impacts on turtles.

iv. Where lights are used, low-profile and low-intensity shielded lights will be used on dune walkovers.

c. Any planned beach renourishment project shall protect sea turtle nesting areas by ceasing development activity during the nesting season (May 1st through October 31st), or by collecting eggs from the nests, incubating them, and relocating the hatchlings.

d. Coral reefs shall not be destroyed by development activities. The City shall assist Reef Relief in distributing educational material concerning the coral reef, including information on boating practices which are harmful to the coral reef. Wastewater system improvements identified in Policy 4-2.1a.1-2 shall also be carried out to reduce potential adverse impacts on the coral reef.

2. **Water-Related Uses in Coastal Building Zone.** All water-related uses shall be built on uplands landward of the high velocity hurricane storm surge zone (V-zone) and the coastal construction control zone established by the Florida Department of Natural Resources and enacted as the Florida Keys Coastal Management Act of 1974, excepting structures approved by the State DNR. Within the coastal building zone all construction activities shall be predicated on plans compliant with applicable State and local building codes. Dredging and filling of wetlands or open water in order to accommodate water-related uses shall not be permitted unless federal, State, and regional agencies having jurisdiction approve such development. Upon plan adoption the City shall adopt a wetland protection ordinance, a stormwater management ordinance, and a comprehensive site plan review criteria to facilitate review of environmental impacts of development and redevelopment. Wetland protection regulations shall be consistent with applicable State and federal regulatory program definitions.

3. **Shoreline Structures/Water-Dependent Uses.** Along the coastal or nearshore/estuarine shoreline seaward of the high velocity storm surge zone, no development other than water dependent structures, native shoreline vegetation, elevated accessways, and other uses approved by the State or federal agencies having jurisdiction shall be permitted. Hardening of the shoreline shall not be permitted unless the upland property is critically imperiled and the use of vegetation has failed to stabilize the shoreline. The design specifications of any shoreline hardening structure shall:

a. Comply with best management principles and practices consistent with existing State and federal standards and be accomplished by use of the least environmentally damaging methods and designs possible;

b. Avoid a vertical slope which generates erosive tendencies, especially to adjacent unprotected shoreline properties. Use natural rock boulders, pervious interlocking tile systems with filter fabric on the landward side, or similar stabilization methods all of which must be approved by public agencies having jurisdiction;

c. Not be located waterward of the mean high water line except when it is shown to be in the overriding public interest;

d. First be approved by other public agencies having jurisdiction; and

e. Incorporate a program of shoreline vegetation or revegetation in order to build, enhance, and stabilize a restored shoreline.

4. **Land Use Restrictions in Submerged Lands and Wetlands.** No nonwater dependent uses shall be permitted on submerged lands or wetlands. Development on uplands adjacent to wetlands shall preserve a buffer measured from the nearest upland/wetland boundary. The buffer area shall be consistent with South Florida Water Management District permitting guidelines. Within the buffer area all exotic vegetation shall be removed and native plants shall be planted. The purpose of the buffer area is to preserve water quality and to prevent pollutants from surface water runoff within coastal waters. Similarly, no structures which constrict water circulation shall be permitted.

5. **Marine and Dock Facilities.** Upon plan adoption docks or marina improvements shall not be approved by the City until the applicant demonstrates compliance with all applicable federal and State laws and administrative rules as well as applicable policies of regional agencies. The City shall require site plans with an environmental impact component for all docks and marinas which adequately address marina siting criteria cited herein. These plans must demonstrate to the City's satisfaction that the facilities shall not adversely impact living marine resources, including, but not limited to, seagrasses, near shore waters, manatees and other living marine organisms. The plans shall comply with the following criteria:

   a. The Plan shall indicate location of site relative to all potentially impacted natural marine resources, including specific location and characteristics. New marinas shall not be allowed in or immediately adjacent to the following sensitive areas:

      i. Aquatic Preserves;
      ii. Class II Waters approved by the Department of Natural Resources (DNR) for shellfish harvesting;
      iii. Outstanding Florida Waters;
      iv. Marina Sanctuaries;
      v. Estuarine Sanctuaries; and
      vi. Areas of essential manatee habitat, as determined by DNR.

   b. Marinas must have sufficient upland area for all non-water-dependent uses. Dredging and filling of wetlands or open water in order to accommodate uses which are not water-dependent shall not be allowed. Exceptions may be granted in cases shown to be overwhelmingly in the public interest, such as the presence of sensitive upland systems.

   c. Cumulative effects of several marinas and/or boat ramps in one area shall be considered in the review of proposed marina projects.

   d. All new and expanded marinas shall provide a demonstration of compliance with State Water Quality Standards by maintaining a water quality monitoring program approved by the Florida Department of Environmental Regulation (DER).

   e. Grassbeds and other submerged habitat deemed valuable by DER and DNR will be subject to protection regardless of their size.

   f. In reviewing applications for new or expanded docking facilities, ways to improve, mitigate, or restore adverse environmental impacts caused by previous activities shall be explored. This may include shallowing dredged areas, restoring wetland or submerged vegetation, or marking navigational channels. Such mitigation or restoration may be a condition of approval of new, renewed, or expanded facilities.

   g. Immediate access (ingress and egress) points shall be delineated by channel markers, indicating speed limits, manatee area warnings, and any other applicable regulations.

   h. All new or expanded marinas must provide treatment of stormwater run-off from upland areas to the extent necessary to ensure that state water quality standards are met at the point of

discharge to waters of the state. In addition, all requirements of the water management district and DER shall be met.

i. Boat maintenance activities in new or expanded marina facilities shall be located as far as possible from open water bodies in order to reduce contamination of water bodies by toxic substances common to boat maintenance. Run-off from boat maintenance must be collected and treated prior to discharge.

j. Open wet slips will be preferred to covered wet slips in marina design to reduce shading of water bodies which result in lowered biological productivity.

k. Marina design shall incorporate natural wetland vegetative buffers whenever possible near docking area and in access areas for erosion and sedimentation control, run-off purification and habitat purposes.

l. The West Indian manatee shall be afforded protection from boating activities which may have an adverse impact upon the species. The following criteria apply in the implementation of this policy:

   i. Marina operators shall undertake the following manatee protection measures in areas where manatees are known to occur:

      (a) Implement and maintain a manatee public awareness program which will include posting signs to advise boat users that manatees are an endangered specie which frequents the waters of the region's estuaries and lagoon;
      (b) Declare the waters in and around marinas as "idle speed" zones; and
      (c) Post phone number(s) to report an injured manatee.

   ii. Local manatee protection plans shall be included as part of the Coastal Management and Conservation elements of the comprehensive plan. The plan should:

      (a) assess the occurrence of manatee activity within the jurisdiction;
      (b) document the number of manatee accidents and deaths;
      (c) identify manatee habitats;
      (d) determine the potential for adverse impacts to the manatee population from various activities and identify the level of protection necessary to ensure least possible interference; and
      (e) recommend local mitigative actions to be undertaken in support of the regional policy.

m. A comprehensive study of the need for additional public and private marinas should be conducted by the City.

n. The City should develop a program as soon as possible for commercial/residential and commercial/industrial marinas to be inspected annually by the City. The results of these inspections should be coordinated with other agencies. Items to be inspected and reviewed shall include the following:

   i. pump-out facilities/marine sanitation devices;
   ii. compliance with power/sailboat mix;
   iii. spill prevention, control, containment, and clean-up plans;
   iv. waste collection and disposal methods;
   v. required fire fighting equipment; and
   vi. inspection of Marine Sanitation Devices (MSD) in marinas with live-aboards to ensure compliance with Federal standards.

The City shall undertake necessary actions to ensure that existing marinas within the City's jurisdiction which do not have service pump-out facilities are retrofitted with pump out facilities for wastewater effluent. The pump out facilities shall be located in a manner that provides access to all boats that may be accommodated at the marina, including those with deepest keel depth.

The City shall promote boater education programs that address the value of coastal and estuarine vegetation by assisting Reef Relief, the Nature Conservancy, and other public or semi-public entities in distributing educational materials.

6. **Ocean, Gulf, and Estuarine Water Quality.** In order to protect the water quality of the Atlantic Ocean and the Gulf of Mexico, no new point source pollution shall be permitted to discharge into these waters or into ditches or canals flowing into these waters. In addition, in order to reduce non-point source pollutants the City shall require the following:

   a. Surface water management systems shall be consistent with the City's adopted drainage level of service (Reference Policy 4-1.1.1) and applicable federal, state, and regional standards.

   b. A vegetated pond with sloping wetland buffers shall be established and maintained as part of the surface water management requirements. Prior to construction of the surface water management system for any phase of a project, the developer shall prepare a design and management plan for the wetland/littoral zone that will be developed as part of these systems. The plan should:

      i. Include typical cross sections of the surface water management system showing the average groundwater elevation and the -3 foot contour (i.e., below average elevation);

      ii. Specify how vegetation is to be established within this zone, including the extent, method, type and timing of any planting to be provided;

      iii. Include the removal of all exotic vegetation; and

      iv. Provide a description of any management procedures to be followed in order to ensure the continued viability and health of the stormwater management system. The wetlands as established should consist entirely of native aquatic vegetation and should be maintained permanently as part of the water management system. As a minimum, 10 square feet of vegetated littoral zone per linear foot of wetland shoreline should be established as part of the water management plan.

   c. The City shall coordinate with the South Florida Water Management District in developing and adopting an ordinance regulating installation of underground storage tanks for petroleum products.

   d. The City shall coordinate with the South Florida Water Management District in reviewing issues and appropriate enforcement activities surrounding water withdrawals from the freshwater lens. The intent should be to prevent the use of these water resources for domestic purposes.

   e. By 1992 the City shall investigate alternatives for improving the White Street pier. The pier has caused erosion and accumulation of seaweed and other particulate matter. The investigation shall set forth an improvement strategy, identify capital costs, and establish a source(s) for funding the project. The project shall include some renourishment at Rest/Higgs Beach and revegetating the shoreline with native dune plants consistent with the management plan approved by FDNR. The pier would be redesigned to allow the circulation of water to occur, including natural functions associated with improved flushing.

7. **Shoreline Access.** Upon plan adoption shoreline access to the Atlantic Ocean and Gulf of Mexico shall be required in order to maintain accessways at approximately one-half mile intervals along the

shoreline of the natural and renourished beach in order to enforce the 1985 Coastal Zone Protection Act for beach and shoreline access. State assistance shall be enlisted to achieve land required to appropriately store vehicles, provide rest room facilities, and accessways designed in a manner compatible with the shoreline ecosystem.

The City shall enforce applicable public access requirements of the Coastal Protection Act of 1985 and shall analyze alternative means for increasing parking facilities for waterfront activities along the shoreline as part of the City's traffic circulation management activities.

8. **Signage Along the Atlantic Ocean and Gulf of Mexico.** At the time land development regulations are amended in order to comply with the adopted comprehensive plan, the City shall consider restricting commercial signage along the seaward side of shoreline properties; including marinas, activities providing services to the boating public, and those signs deemed essential for water dependent facilities. The City shall coordinate with jurisdictional agencies to develop uniform signage and criteria to further this policy.

OBJECTIVE 5-1.3: LAND USE CONTROLS AND CONSTRUCTION STANDARDS FOR PROTECTING THE NATURAL SHORELINE AND THE VERY LIMITED BEACH/DUNE SYSTEM. The City shall not allow any construction of man-made structures on the City's beach, excepting beach access structures compliant with construction standards of the State Division of Beaches and Shores. In addition, water dependent structures such as life guard stands or beach renourishment approved by the Division may be constructed if such structures meet the construction standards of federal and state agencies having jurisdiction. Any such construction activity must include measures to restore the beach and vegetation pursuant to a plan approved by the federal and/or state agencies having appropriate jurisdiction. No vegetation shall be removed unless the revegetation shall occur at a ration 3 to 10 times the affected vegetated areas. The federal and/or state agencies having jurisdiction shall approve the revegetation ratio plan including the threshold for revegetation. The City shall adopt amended land development regulations which include performance standards designed to protect the limited beach and establish construction standards mandating that no development shall be located seaward of the Coastal Construction Control Line (CCCL), excepting structures approved by the State DNR. The City has dune system. The City's natural beach is in public ownership and shall be available for public access.

Policy 5-1.3.1: Enforce Development Restrictions Seaward of the CCCL. The City shall coordinate the development review process by forwarding all applications for construction seaward of the Coastal Construction Control Line (CCCL) to the State Department of Natural Resources for jurisdictional action. Following such action, any construction permitted by the State shall comply with best management principles and practices for respective activities and shall receive permits from all other public agencies having jurisdiction. In addition, such activities shall comply with applicable provisions of Policy 5-1.2.1, 5-1.3.2 and 5-1.3.4 herein cited.

Policy 5-1.3.2: Natural Shoreline and Beach/Dune Stabilization. To protect natural rock outcrops which form most of the City's shoreline as well as the limited beach , shoreline development and access shall continue to be restricted in order to preserve the shoreline and the limited beach . Rigid shore protection structures are not permitted, except when used as part of a comprehensive plan for beach restoration and when non-structural alternatives are not acceptable. When beach renourishment projects are needed, the dune system should be restored, as necessary, utilizing natural, indigenous vegetation. The City supports renourishment of the 3,000' long Smathers Beach and revegetation of dune community at Rest Beach.

Policy 5-1.3.3: Restrictions on Operation of Vehicles on Beaches. The City shall continue to enforce restrictions which prohibit any motorized vehicle upon or over the City's incorporated portion of the beach adjacent to the Atlantic Ocean, excepting mechanical beach cleaning equipment, public safety and emergency vehicles, and vehicles permitted by the DNR.

Beach cleaners shall be required to obtain a Coastal Construction Control Line (CCCL) permit for operations beyond the control line. The method of operations and equipment shall be approved by the Florida

TABLE V - 3
METHODOLOGY FOR DETERMINING FLORIDA KEYS MUNICIPALITIES PERMIT ALLOCATION

City	1990 Population	% of Total Population	Total Units: % Population x Total Units
Key West	24,832	95.5	1,093
Key Colony Beach	977	3.8	44
Layton	183	0.7	8
Total	25,992	100.0	1,145

These measures of carrying capacity do not reflect additional development potentials at plan adoption. Rather, they reflect the increase in population and development from April 1, 1990, the date of the 1990 Census, data for which formed the starting point for estimating the population to be evacuated. Thus, in order to determine the amount of development which the plan may allocate from the point of adoption, it is necessary to estimate the number of permits issued from April 1, 1990.

As part of the 5-year Comprehensive Plan Evaluation and Appraisal Report process, the City of Key West shall, in coordination with Monroe County, the South Florida Regional Planning Council and the municipalities of Layton and Key Colony Beach, re-run updated transportation models of the Southeast Florida Hurricane Evacuation Study in order to re-evaluate and adjust such factors as participation rates, visitor population levels, total growth allocations, allocations to sub-areas and municipal jurisdictions and estimates of the effectiveness of programs and policies to reduce the number of evacuating vehicles.

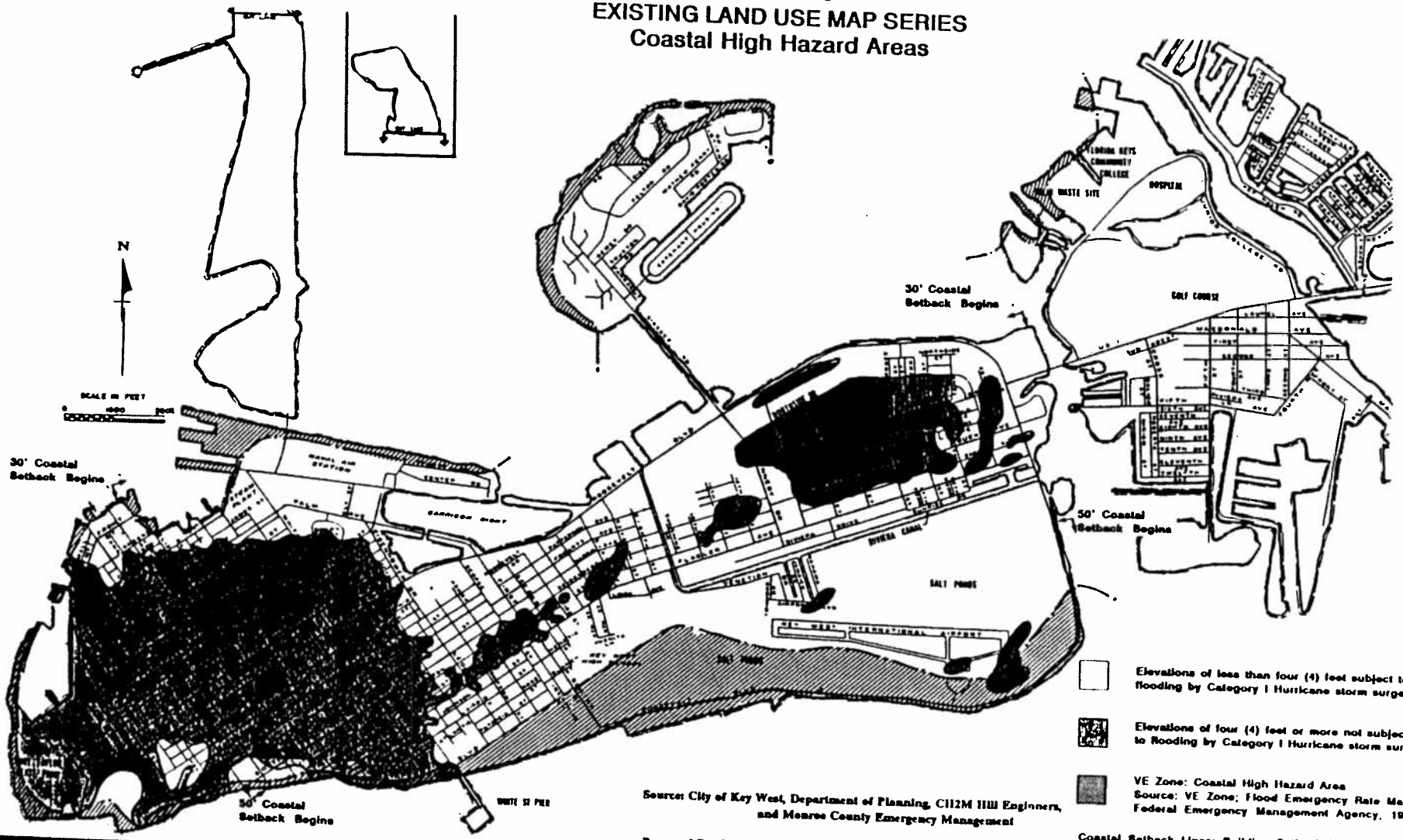
OBJECTIVE 5-1.7: **HAZARD MITIGATION AND COASTAL HIGH-HAZARD AREAS.** Upon plan adoption, the City shall adopt amended land development regulations which shall include performance standards regulating development activities in a manner which minimizes the danger to life and property occasioned by hurricane events.

Policy 5-1.7.1: **Coastal High-Hazard Area Defined.** As defined in Rule 9J-5.003(13),FAC, the coastal high-hazard area shall encompass areas which have historically experienced destruction or severe damage, or are scientifically predicted to experience destruction or severe damage, from storm surge, waves, erosion, or other manifestations of rapidly moving or storm driven water. These areas shall include all areas in the City of Key West where public facilities have been damaged or undermined by coastal storms, Federal Emergency Management Agency designated V zones, areas seaward of the coastal construction control line established by the Florida Department of Natural Resources pursuant to Chapter 161, Florida Statutes, and inlets which are not structurally controlled. The high hazard area shall include the Category I hurricane evacuation zone as delineated on Map V - 1.

The coastal high hazard area for the City of Key West is designated on Map V-1. This area includes all coastal high hazard areas as identified in the definition above which exist in the City of Key West. This City Planner has coordinated the delineation of coastal high hazard areas with the State Department of Natural Resources (DNR). Based on information obtained from DNR, the City's Map V-1 includes all known coastal high hazard areas pursuant to the above stated definition.

Policy 5-1.7.2: **Management Techniques for Hazard Mitigation and Coordinating Update of the Hazard Mitigation Plan.** Upon plan adoption the City shall participate in the County's technical coordinating committee in preparing the hazard mitigation component of the Local Peacetime Emergency Plan . Updates

MAP I - 6
EXISTING LAND USE MAP SERIES
Coastal High Hazard Areas



Source: City of Key West, Department of Planning, CH2M Hill Engineers, and Monroe County Emergency Management

Prepared By: Solin and Associates, 1993.

INTRODUCTION

In 1990, when the heirs of Henry C. "Booty" Singleton decided to put 8.8 acres of the island's historic waterfront on the market, the City of Key West began a series of negotiations with the family and the Trust for Public Land (TPL). TPL agreed to an option to purchase the property and allowing the City two years to raise the funds to buy and preserve the harbor area that had made Key West a famous seafood producing island.

Backed by support from many diverse groups who wanted this last large parcel of privately owned waterfront preserved for the public and posterity, the City proposed a bond issue. The citizens of Key West overwhelmingly approved the $18.5 million revenue bond issue on November 3, 1992.

This property includes the last remnants of the green turtle industry -- the kraals or water holding pens, soup cannery and fish house. The waterfront area was also the heart of the island's major maritime industries -- sponging, crawfishing, shrimping and Key West's original charterboat area.

In late July 1993, City commissioners appointed a seven member Key West Bight District Management Board to oversee the property. The Board selected Wilson, Miller, Barton and Peek, Inc., in September, 1993, to develop the plans which would preserve the historic maritime character of Key West Bight while making sure the property produce sufficient income to pay off the bonded indebtedness.

The Wilson Miller team began research and analysis of Key West Bight in September. Meetings and discussions were held with the Key West Bight Board and City staff to review their goals and objectives for the project. Pertinent information such as surveys, maps, previous reports, current inventories and Comprehensive Plan and development standards was obtained and assembled. A site reconnaissance was then conducted to observe existing conditions of site and structures, views, historic features, land and water use and circulation. This information was compiled to develop base mapping for preparation of the planning charrette.

The design team which included Wilson Miller, Gonzales Architects and International Marina Resources conducted a four-day planning charrette on-site. The process included development of alternative design concepts for each parcel and the marina while meeting with the Key West Bight Board, commercial tenants, and interested public to discuss goals, opportunities and constraints. Refinement and presentation of conceptual plans followed at a public workshop.

Through further review and discussion with the Board and City staff the design team developed a Preliminary Master Plan. The Preliminary Plan incorporated layouts of structures and open space, marina design and utilization, a traffic circulation system on both land and water, and added potential revenue generating opportunities.

The Wilson Miller team wishes to acknowledge the great importance of continuous communication with, and participation by, the people of Key West, including the Key West Bight Board, City staff and tenants, that involvement helped to create a Final Master Plan which reflects their ideas and suggestions. Thus, these people who live in and experience the spirit of Key West are an integral part of the plan.

DESIGN NARRATIVE

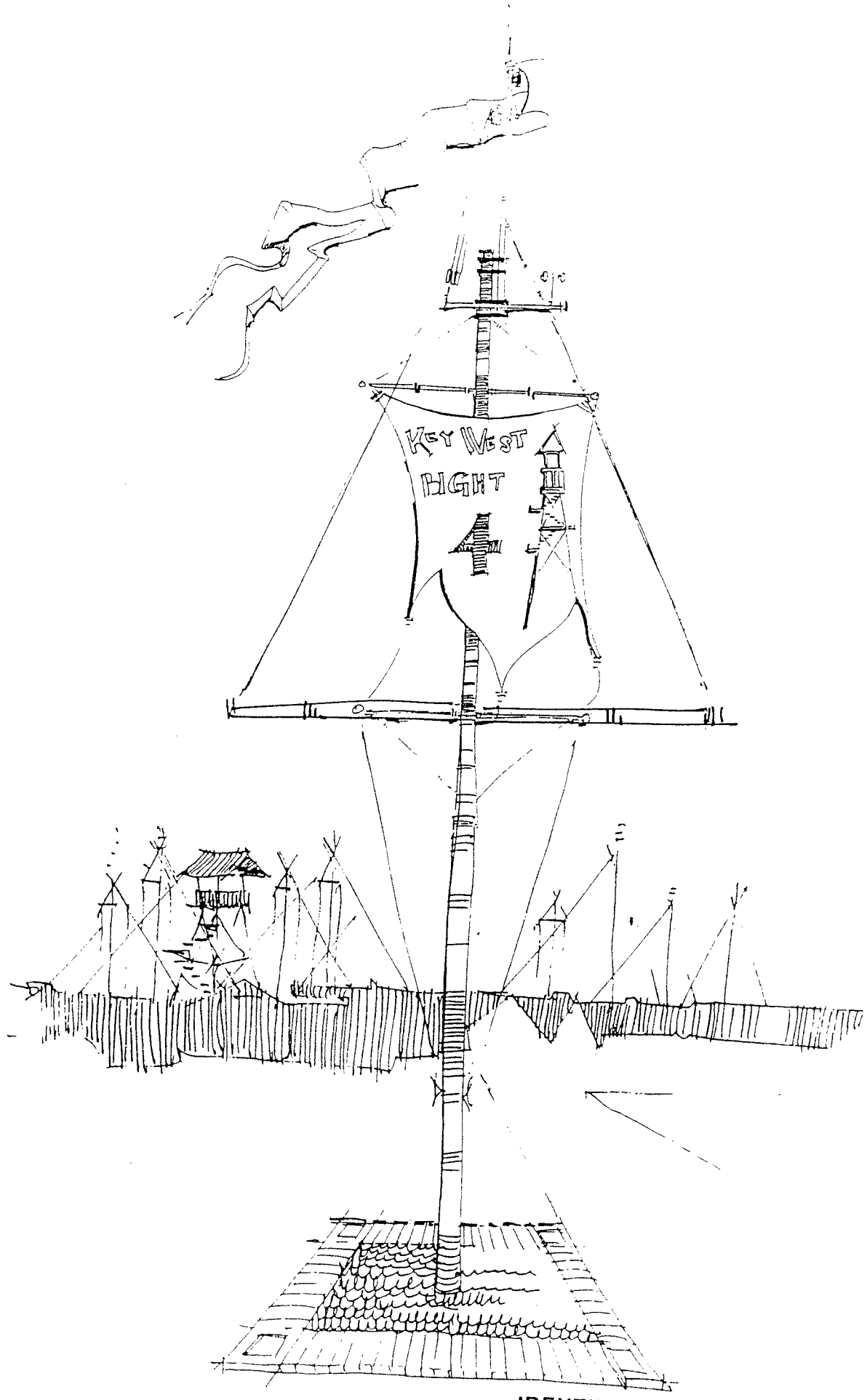
Key West Bight is comprised of a unique mix of land uses which have evolved over many years. The character and ambiance established in this working waterfront are difficult to recreate and should be protected and retained in the project design.

The people of Key West and the Wilson Miller team desire to maintain that "funky" character and enhance the historic quality of the Key West Bight through design of the Bight Master Plan. However, the plan reflects realistic funding potentials for public and private improvements which will generate revenues to support debt service and operations.

Shrimp, sponge and green turtle were once abundant and major maritime industries in Key West. The old Turtle Kraals, Cannery and Fish House still remain and the city has obtained a grant to design construction documents for the restoration of these historical structures. The Master Plan suggests that the cannery be restored as a small museum for display of information regarding the green turtle industry. Old working shrimp and sponge boats may be docked adjacent to the cannery as additional historical attractions. These historic elements should create a strong public attraction to The Bight area.

HARBORWALK

A major component in the overall plan for the Bight is the continuous connection of the waterfront along the **Harborwalk.** The Harborwalk connects adjacent properties to other significant points of interest and activity centers such as Front Street. The Harborwalk is to be a key element in successfully attracting pedestrians, increasing exposure and access to the waterfront and reinforcing the ambiance of the waterfront. The Harborwalk will be constructed both landside and waterside with assorted materials to create character and economic viability. Also the Harborwalk will generally be landside along parcels A and B (Seaport and Lazy Way) except at the Schooner Wharf Bar and William Street Plaza. It will be partially landside at the Market, cantilevered to achieve design width. It will be landside from the market through Turtle Kraals to Margaret Street plaza. The walks will shift to waterside past the Half Shell Raw Bar to the Chevron site. From that point on, it will be landside.



IDENTITY FEATURE

VILLAGES

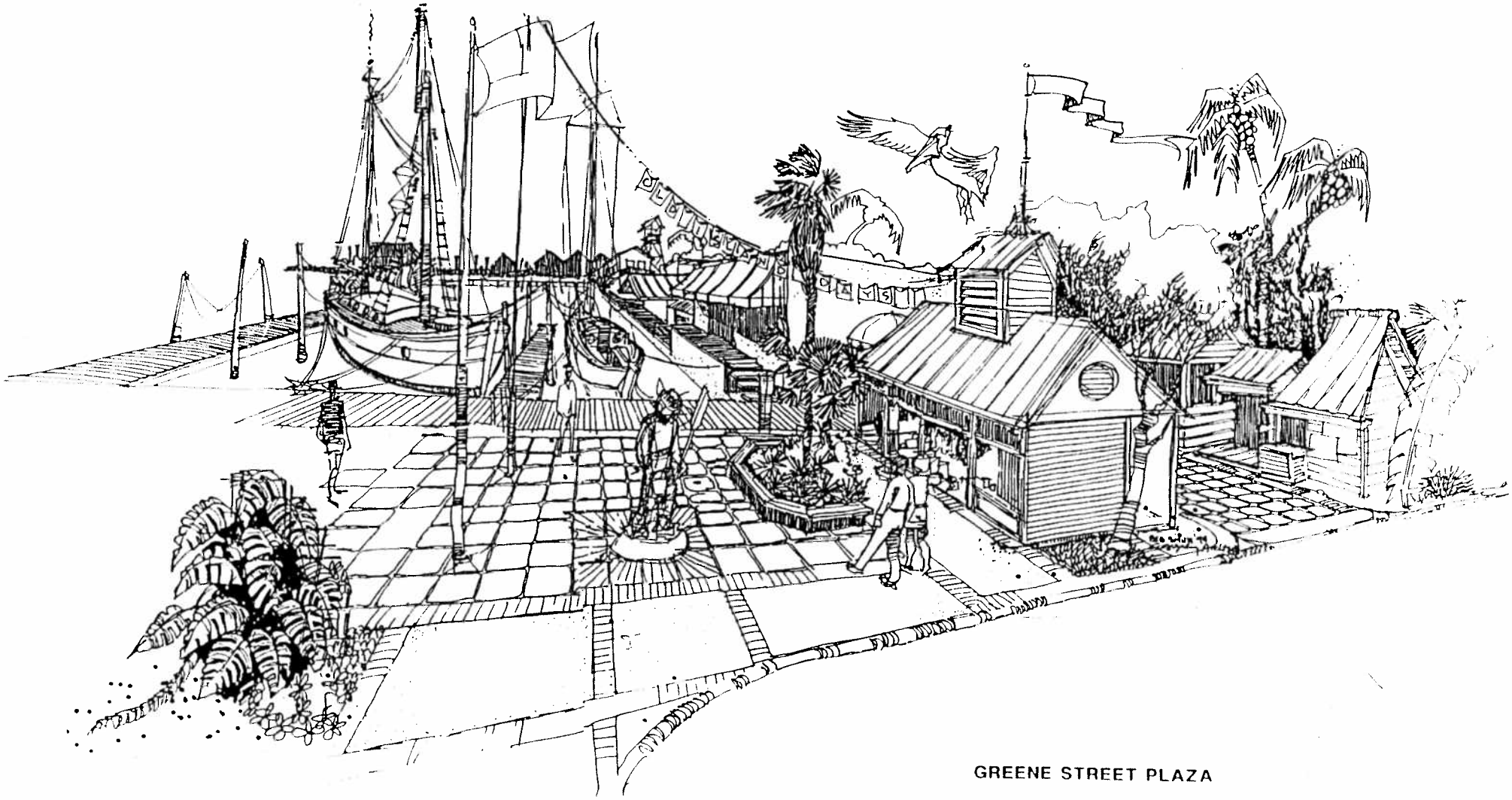
The property as it exists is divided into separate nodes or "villages" with limited continuity along the waterfront or streetside. One goal of the plan is to maintain these areas and enhance them through identification as focal points oriented to the water. The Harborwalk will provide the connection between the villages to create continuity. Plazas at Greene, William, Margaret and Grinnell Streets are designated as prominent public spaces with great views of the harbor, shops, restaurants, and historic structures and monuments. The plazas will contain enticements, such as monuments, kiosks describing the history of The Bight and merchants displaying their wares, to draw people to the waterfront to explore The Bight's past and present.

DISTRICT ENTRIES

Each street leading into Key West Bight is proposed to have a common entry feature emphasizing the arrival into the Key West Bight project. Greene Street and Margaret Street will be the principal entries with more significant entry statements.

Greene Street is an important pedestrian link to Duval Street; therefore, the Bight property along Greene Street and the plaza should be designed to attract pedestrians down to the waterfront from Duval Street. The use of specialty pavers, lighting, landscaping and signage or banners will provide an enhanced pedestrian attraction. This streetscape treatment should be continued from Duval Street all the way down to the Bight, creating a second major pedestrian axis. Businesses and homeowners along Greene Street should be encourage to upgrade their building facades and parking areas. The use of banners with the Bight nautical theme (see sketch) can help the streetscape scene and provide identify and a sense of entry for the Bight.

Margaret Street is the primary entrance into the historic district which contains the Turtle Kraals, Cannery and Fish House. The identifying feature and sense of entry will occur at the intersection of Caroline and Margaret Streets. A monument to "Booty" Singleton will be the focus of the Margaret Street plaza. The monument will be placed in the plaza at the junction of the Harborwalk and Margaret Street centerline to assure visibility as people enter the plaza from all directions.



GREENE STREET PLAZA

PLAN DESCRIPTION - LANDSIDE

The general direction of the waterfront runs south and north; therefore, the following review of the Master Plan begins at the southern most Parcel A (Key West Seaport), and progresses through The Bight to the northern most Parcel F (the "Triangle").

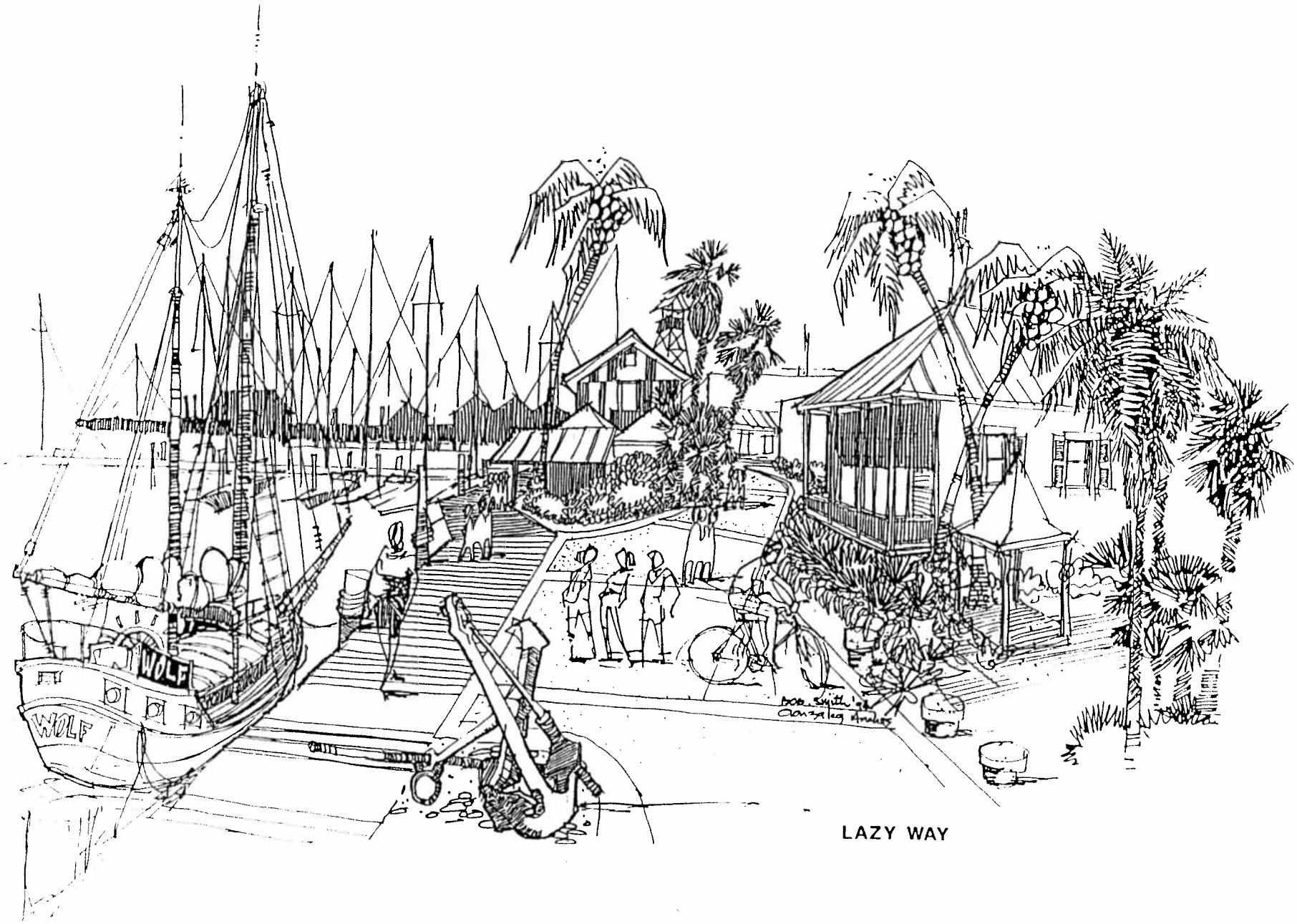
Parcel A

Parcel A (Seaport) may be divided into several land leases with public parking and the option to either retain the existing Seaport and Ice Plant buildings or replace them with new structures. The Seaport Building located directly on the waterfront has renovation potential. Design guidelines should be created to control access to and through the parcels, setbacks from waterfront and Greene Street, building character, planting and lighting. It is elemental that structures and landscape treatments front Greene Street to reflect the other side of the street and frame the view looking down to the plaza and waterfront from Duval Street. Retail activity on the street will help draw traffic.

Greene Street Plaza will provide the focus to draw people from Duval Street to the waterfront. Tall masted vessels, such as old schooners, will be docked at the plaza. The appeal of the high masts and flags flying, especially lit up at night, with open views to the water will stimulate interest and lure people toward the waterfront from Duval Street. The plaza will be paved with a decorative surface and include benches, decorative lighting, and limited planting on the edges. This plaza is the setting for two land lease sites.

Parcel B

Parcel B (Lazy Way) consists of several small retail shacks, a studio, bar and staging areas for the boats docked along Lazy Way. The plan includes an additional 1,000 square foot land lease located adjacent to Greene Street Plaza to form an edge to the plaza and create a needed revenue opportunity. Lazy Way remains an important link through the Bight for pedestrians, bicycles, trolleys and limited service vehicles. Garden areas incorporating seating for pedestrians and boat patrons will be tucked into open areas along the travelway. Special paving treatment defined by bollards and landscape will indicate where the limited vehicular traffic is allowed. The trolleys and limited service vehicles can circulate as one way traffic from William Street to



LAZY WAY

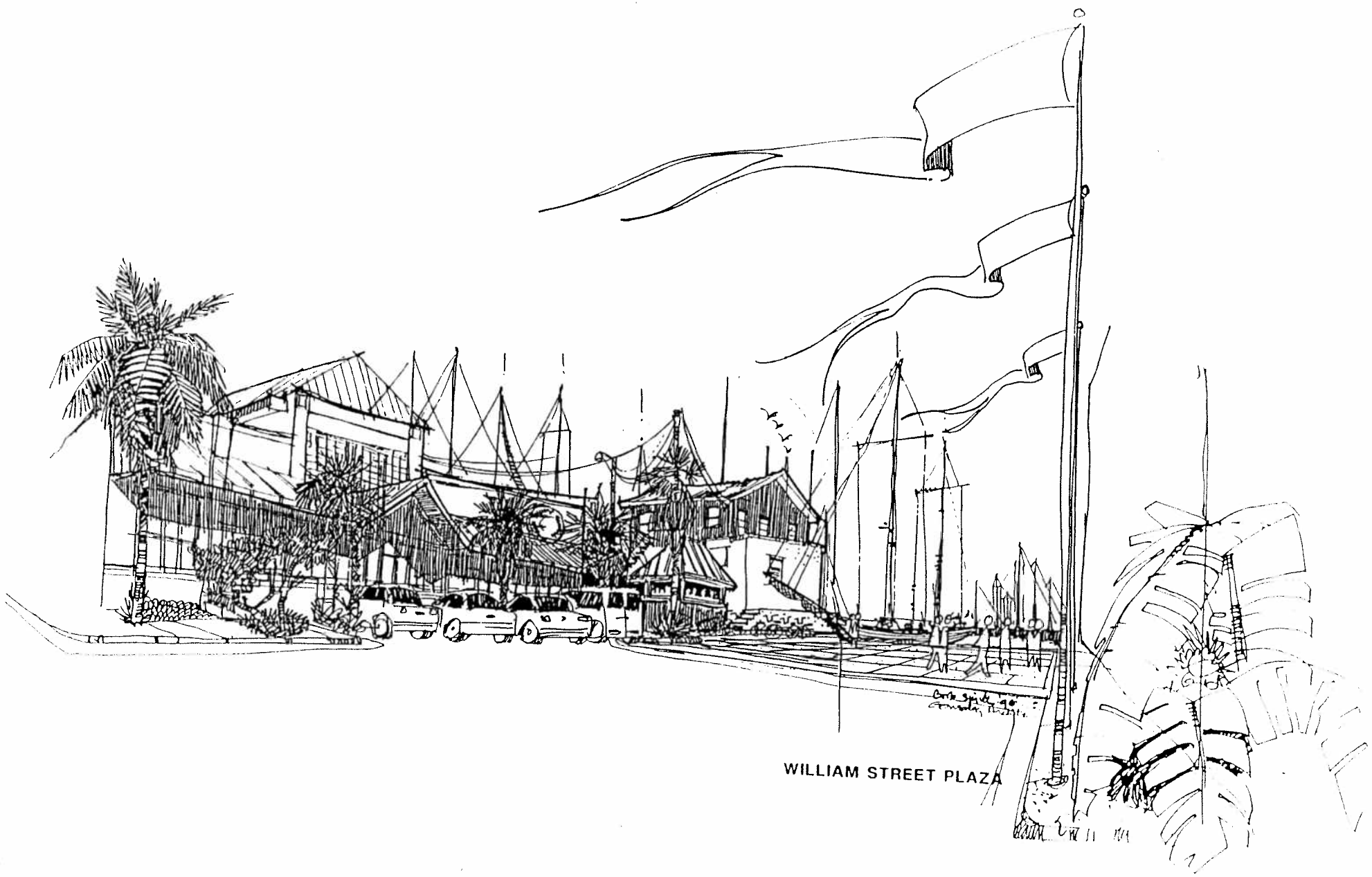
Elizabeth Street to minimize congestion with traffic using William Street to access the main parking lot. Alignment of the asphalt pavement will lead traffic into the paring area. Mountable curbs, change from asphalt to decorative paving, signage, landscape and structural elements will deter general traffic from entering the William Street plaza and Lazy Way. Only authorized service vehicles and the trolley should be allowed.

William Street Plaza is an active docking area with views to the open water. A widened section of Harborwalk, constructed waterside, will accommodate more people and activity. An attraction such as a schooner should be moored here, along with dinghy docking and water taxi service areas. This active docking area is conveniently located adjacent to the waterfront market for tourists and boat owners and enhances the interaction between landside and waterside activities.

Parcel C

Parcel C, the Waterfront Market building generates much activity in the Key West Bight. This building contains several businesses, including a popular and busy market. In order to maximize the use of the building space, the plan proposes to relocate the market toward the east end of the building with a new entrance facing Caroline Street. This provides convenient access from the parking area to the market. The waterfront portion will be reconfigured to accommodate several small retail spaces for more specialized water dependent and water related businesses. The market may retain access to the Harborwalk by maintaining the store deli/bakery which may be able to support the higher waterfront rent. This reconfiguration will increase utilization and revenue. There is second floor space available for renovation into offices for businesses, non-profit organizations, storage or possibly a cafe with views of the harbor. The existing shower facilities for marina tenants on the second floor can eventually be relocated to a new marina facility to be built on the north side of the Market building, freeing up more leasable space.

A central service area for truck deliveries, trash and recycle pick up will be relocated to the north side of the building where it will serve several businesses including the Turtle Kraals Restaurant. The goal is to eliminate the multiple service areas which are currently exposed and



WILLIAM STREET PLAZA

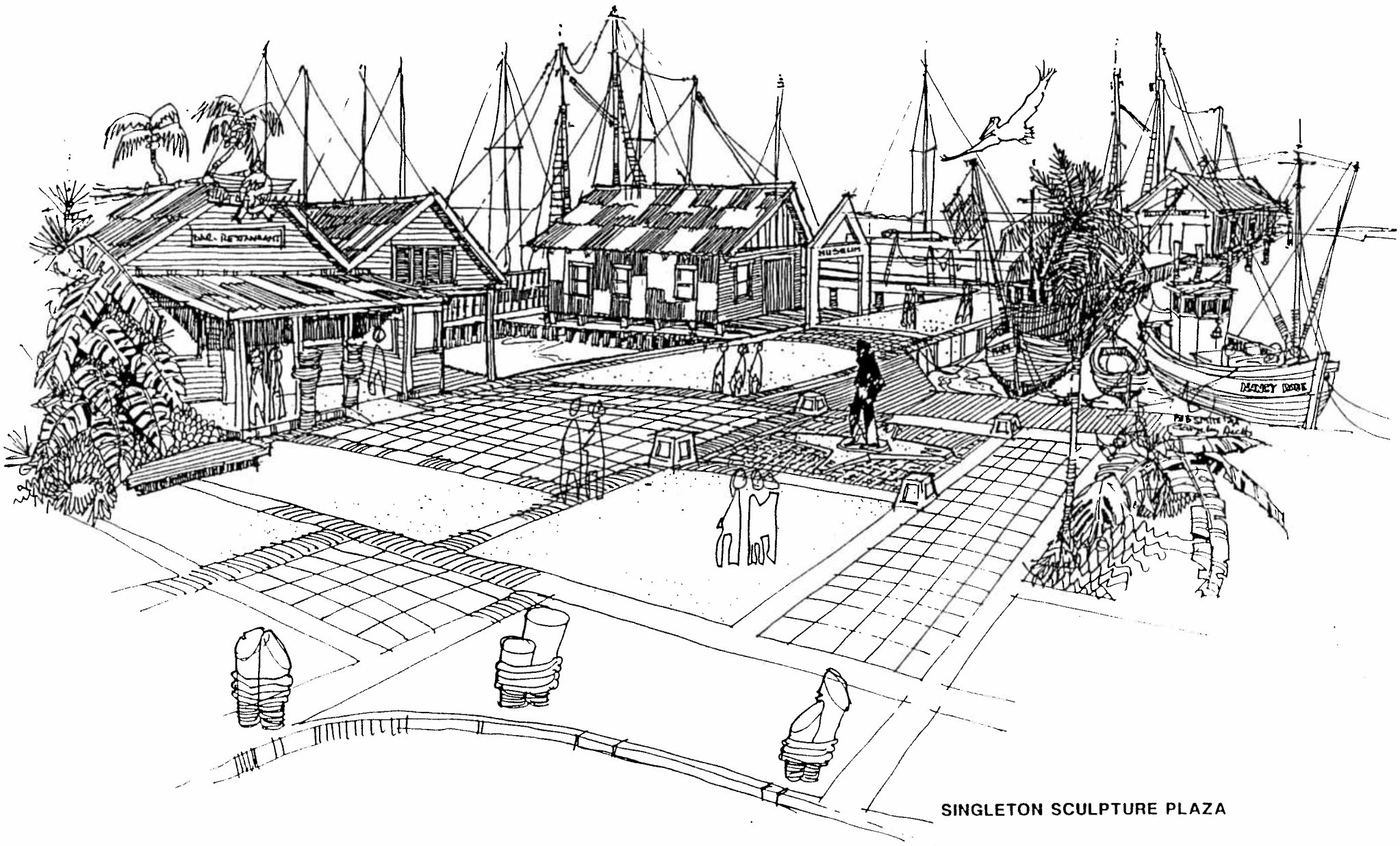
detract from the higher traffic areas. The new central service area is buffered from the waterfront by the proposed marina facility and from the parking lot and Caroline Street by wall and landscape elements.

The proposed **marina facility** will house showers, restrooms and a laundromat for the boaters. The dock master and/or property manager may be located in this building also for convenience to the boaters. The city may also provide a public restroom at this location. Alternate use of this building site as retail space is possible if shower and laundromat facilities remain in the Market building.

Two **park areas** are planned in Parcel C as relief from the hardscape and gathering places. A large mural of the undersea world was painted by Wyland on the southern wall of the Waterfront Market building. The Wyland Wall is a special element and adds to the Bight character; therefore, a small park will be placed in front of it with seating to offer rest and visual enjoyment of "the Wall." The other park is planned adjacent to the Harborwalk between the market building and The Kraals Restaurant. This location is ideal as it already contains some trees. It offers an inviting rest area and welcome green space along the waterfront.

The plans for the **Turtle Kraals Restaurant** expansion include not only additional seating capacity and kitchen facilities, but a marinelife aquarium attraction at the intersection of the Harborwalk where it extends out to the cannery. This display will contribute to the interest already produced by the existing kraals and fascinating sealife that abounds in the pens. The Harborwalk will pass through the seaward most portion of the Kraals building and chickee, retaining the cantilevered balcony which currently provides restaurant seating.

Margaret Street is one of the significant arrival points into the Bight and waterfront area. The **Margaret Street plaza** will contain a memorial to Booty Singleton in honor of his development of the shrimping industry in Key West. This plaza anchors the historical waterfront dock area, comprised of the cannery, kraals, fish house and historical boat display. The plaza will be physically extended to incorporate a multi-use central parking area designed to accommodate a trolley drop off-pick up station, limited and handicap parking, and special events such as



SINGLETON SCULPTURE PLAZA

farmer's markets and entertainment as added attractions. The entire area will be distinguished by special paving, seating, lighting and accent planting at the edges. The main plaza will be constructed to accept large tent covering for special events.

The **Half Shell Raw Bar** has plans to expand its facility. The restaurant expansion includes additional indoor and outdoor dining area and modifications to the service area located at the north end of the building. Removal of the Discovery structure will allow better access for delivery trucks. The plan incorporates a common service area accessed from Caroline Street, along the north side of the Piano Shop, to the Half Shell Restaurant. The preferred service alley is located on a portion of the Chevron property which will be ultimately shared with Chevron property uses; however, a drive along the south side of the piano shop will provide equal access to Key West Bight property.

Parcel D

Two land lease parcels are designated within **Parcel D**. The larger land lease will encompass 2,500-3,000 square feet of building area along Caroline and Margaret Streets surrounded by parking. Another potential land lease of 3,600 square feet is designated where the Lost Reef Adventures Dive Shop currently exists. This parcel provides the option to either retain The Dive Shop or demolish it and construct a larger building with frontage directed toward the plaza and the waterfront. Design guidelines should be created to control the development of the parcels. An integral part of the design may include re-creation of the Old Fisherman's Cafe or other historical style structures at the corner of Margaret Street and Caroline Street.

Parcel E

Parcel E will retain The Crab Shack Restaurant. A large portion of the parcel will be dedicated to the proposed parking garage. Convenient access from the garage to the Bight is important; therefore, the plan provides for pedestrian access through the parcel on the south side of The Crab Shack. Trolley stops located on Caroline Street will transport people from the garage through the Bight and to other downtown locations.

Parcel F

The "Triangle" is designated for use by live-aboards. The plan shows proposed facilities to service them such as marine repairs, laundry and showers, convenience store, and parking. The proposed large parallel docks are designed to initially accommodate the live-aboards with an option for potential future use of a naval ship attraction and a ferry dock. Parking is a concern if those uses are implemented since they typically generate a large demand for parking. The triangle property will not accommodate enough parking support. Therefore, additional parking would be required elsewhere. The C.E.S. property may provide space for parking in the future.

PLAN DESCRIPTION - WATERSIDE

The design team prepared several alternate plans addressing the major marina issues. Those issues include:

- appropriate zoning and location of commercial and transient boats
- effective locations of attractions such as schooners and historical boats
- dinghy location
- number of fuel docks
- the need for larger slips to accommodate larger vessels
- location of dock master's facility
- the condition of existing utilities and services to slips
- how and where to generate more revenues.

After much review, the Final Master Plan integrates preferred features of each alternative.

The existing piers extending out from the Triangle parcel will be replaced with two large 20 foot wide parallel piers. The initial design will include installation of pilings to provide mediterranean moorings for live-aboard boat docking. In the future, the piers could support ferry boats and/or an historic naval vessel as an attraction. The piers are specifically designed to accommodate either option depending on which use becomes most appropriate and beneficial to the Key West Bight.

The Chevron parcel pier is under separate ownership and is currently operating with docking and fuel sales.

Pier A (behind Half Shell Raw Bar) will be redesigned and extended as a new long pier for larger boats, 40 feet or greater in size.

Pier B will be eliminated to allow for the maneuvering of boats into the finger docks of Pier A and along the north side of Pier C.

Pier C will be renovated to service the historical structures and increase dock width around the Fish House. A ±150 foot extension will provide fuel facilities. Tanks will remain located behind the Local Color Shops, with new fuel lines extended out onto the new extension. The extended pier will allow separation of fueling operations from the public access and will accommodate up to 200 foot vessels. A central office will be located in the Fish House.

Pier D remains as it is with repairs to the structure and new utilities installed to the slips. This dock primarily services a variety of transient boats.

Pier E also remains as it is with repairs to the structure and new utilities. Large vessels will be moored along the south side of the pier while smaller boats will be docked mediterranean style on the north side.

Existing **Pier F** is constructed of concrete and harbors large commercial vessels including an historic schooner. An additional pier **(F2)** is planned with fingers open to the south side. This pier will service larger commercial and transient vessels.

The southernmost area of the waterfront has been designed with several new piers **(G1, G2, and G3)** to accommodate larger boats. Commercial boats can dock along the Harborwalk with transient boats out on Pier G1 for privacy. Schooners and tall masted ships surround Greene Street Plaza while catamarans dock along Lazy Way.

The proposed marina configuration is based upon existing conditions, projected market conditions (see marina analysis section) and input from the people of Key West. While the

physical design accommodates the recommendations made above, the location of specific vesse
type and use areas will be dictated by the market and by The Bight management.

[redacted]

01.19.96

The Creative Edge

The Craig Company

Comprehensive Planning
Resort/Tourism Planning
Land Use Regulation
Development Feasibility
Site Design
Expert Witness

Southernmost Waste to Energy Corporation
PO Box 5708
Key West, Florida 33041-5708

Subject: Key West Bight Master Plan - Community Impact Assessment Statement.

PO Box 372
718 Caroline Street
Key West • Florida • 33041 - 0372
305 • 294 • 1515
305 • 292 • 1525 FAX

Dear Sir/Madam:

Attached to this letter is a copy of the Key West Bight Master Plan, site plan which illustrates the location and intensity of uses to be developed on the City owned land through the year 2000. Also attached is a list of existing and proposed leased space within the master plan area and a phasing schedule for all improvements anticipated and planned to date.

Please review the master site plan, schedule of uses and phasing plan and provide me with a written response, containing your comments as to the plans expected effects on the resources your agency manages permitting of individual projects will commence on the completion of the CIAS process, so your early consideration of the master plan is important.

Your comments will be incorporated into the Community Impact Statement.

Should you have questions about the Master Plan. or the CIAS process, prior to completing your comments, please call me at the above listed telephone number. Thank you for your participation in the process.

Very Truly Yours

Donald Leland Craig, AICP

cc: Mark Summers, Key West Bight Manager
Ted Strader, AIA, City Planner

File

Florida Keys Field Office
2796 Overseas Hwy., Suite 213
Marathon, Florida 33050
(305) 289-2365 FAX 289-2366

Memorandum

To: Don Craig. The Creative Edge

From: Philip A. Frank

Date: February 2. 1996

Subject: Key West Bight Master Plan

Thank you for submitting plans for the "Key West Bight Master Plan". We have reviewed the proposal and have no objections to the project as proposed. Indeed. there are no wildlife or fresh water fish resources in the vicinity that our office is aware of.

Please consider this as our letter of coordination. Should you have the need for any fur[illegible]r coordination, please feel free to contact our office any time.

P.S. You could save your clients money by NOT sending our office plans by Federal Express. The office is staffed by a single person. and review generally takes between one to two weeks.

South Florida Water Management District
3301 Gun Club Road, West Palm Beach, Florida 33406 • (407) 686-8800 • FL WATS 1-800-432-2045

CON 24-06

Regulation Department
February 13, 1996

Mr. Donald Leland Craig, AICP
The Craig Company
P.O. Box 372
Key West, FL 33041-0372

Dear Mr. Craig:

Subject: Key West Bight Master Plan, City of Key West, Monroe County

District staff has reviewed the information submitted on January 22, 1996, regarding the above referenced project. Based on the information submitted, staff is unable to determine whether an Environmetal Resource Permit will be required for the proposed project. Additional information including total project acreage (total, impervious, building and pervious area), paving, grading and drainage plans showing how water quality treatment will be provided and a recent aerial delineating the project boundaries will be required before staff can decide if an Environmental Resource Permit will be required. In addition, an Environmental Resource Permit may be required for any proposed works such as new docks or modifications to existing docks. Staff is available if you wish to schedule a pre-application meeting to discuss the project and any permitting requirements.

Should you have any questions, please call.

Sincerely,

Carlos de Rojas, P.E.
Supervising Professional
Surface Water Management Division

CDR

c: DEP
City of Key West Engineer
Monroe County Engineer

RECEIVED

FAXED
3/18/96 - 14:02

FIRE MARSHAL'S OFFICE
David Fraga, Fire Marshal
Alex Vega, Capt./Fire Inspector
Craig Marston, Fire Inspector

THE CITY OF KEY WEST
P. O. BOX 1409
KEY WEST, FLORIDA 33041-1409

3127 Flagler Avenue
Key West, Florida 33040
(305) 292-8179
Fax (305) 293-8399

March 18, 1996

The Craig Company
718 Caroline St.
Key West, Fl. 33040

RE: Key West Bight Master Plan (LAS)

Dear Mr. Craig,

The submitted site plan and phase schedule was reviewed with the following comments:

I. Site Access:

A. throughout the development process it is imperative that adequate access for fire department apparatus and emergency forces personnel be provided to:

1. dock / pier entrance(s) and exit(s).

2. water supplies.

3. fire department connections, to dock / pier fire protection systems.

II. Water Supply:

A. adequate water supply, volume and pressure, be available, inspected and approved by this office, prior to continuation of each project phase.

III. New Commercial Buildings:

A. it is recommended that the owner clearly define the areas which are to be the tenants or the owner's responsibility:

1. fire rated / code compliance
a. emergency lights
b. illuminated exit lights / signs
c. manual pull alarm stations as required by code

2. fire code compliance
a. fixed fire protection
1. automatic fire sprinklers
2. hose cabinets
3. fire wells
4. portable fire extinguishers.

Please contact this office if there are any comments or questions at the telephone numbers listed above.

Sincerely

Craig E. Marston
Fire Inspector

c. Richard Wardlow, Fire Chief
Mark Summers, Key West Bight Manager
Ted Strader, City Planner

February 6, 1996

Mr. Donald Leland Craig, AICP
718 Caroline Street
P.O. Box 372
Key West, Florida 33041-0372

Subject: Key West Bight Master Plan - CIAS

In review of the Key West Bight plan - have found the project to be a definite major project that will impact the Key West Police Departments calls for services and require patrol. Furthermore, I found there will be a substantial increase in the square footage of commercial structures to be built and there will be a boardwalk the full length of the Bight property on the ocean side presenting a patrol problem. Also, there will be an increase in the dockage area allowing live aboards. As this area grows and develops it will need some type of security on a 24 hour basis.

Listed below you will find recommended needs of the Police Department and some recommendations for PATA.

- The department will need additional sworn personnel to patrol and answer calls for service on a 24 hour basis. No numbers on personnel has been determined at this time.

- The additional cost for these officers would be salaries, benefits and required equipment. No cost has been estimated at this time.

- Both of the above will be quite costly.

- All parking attends should be certified parking enforcement officers.

- City should hire security personnel on a 24 hr. basis like they have at Garrison Bight. Cost would be much less than certified officers.

- All parking areas should be manned by parking attendants or metered to make enforcement less of an impact on the Police Dept. (No designated 2 hour parking spaces outside of town.

If I can be of any further assistance or if there are any questions please don't hesitate to contact me at [illegible].

David V. Lang
Deputy Chief
Key West Police Department

CC: Mark Summers, Key West Light Manager
Ted Stradder, AIA, City Planner

THE CITY OF KEY WEST
Post Office Box 1409
Key West, Fl. 33041-1409

APPLICATION FOR SITE PLAN AND CIAS REVIEW
(Revised 3/94)

(Planning staff accepted complete application on: _____)

PLEASE PRINT SITE PLAN _____ CIAS X

1. SITE ADDRESS Key West Bight between Greene, and Grinnell Streets
(Street)

2. NAME OF APPLICANT Key West Bight Management Board

3. APPLICANT IS (check one): OWNER _____ AUTHORIZED REPRESENTATIVE X

4. ADDRESS OF APPLICANT: 201 William Street
Key West Florida 33040
(State) (Zip)

5. PHONE NUMBER OF APPLICANT: 305-293-8309

6. IF APPLICANT IS NOT OWNER, NAME OF OWNER City of Key West

7. ADDRESS OF OWNER: 525 Angela Street
Key West Florida 33040
(City) (State) (Zip)

8. DIMENSIONS AND AREA OF SITE: Varies; 8.8 Acres: See CIAS

9. ZONING DISTRICT: HP-2 and M-1 RE#: Multiple - See CIAS

10. DESCRIPTION OF PROPOSED DEVELOPMENT: Master Plan for the redevelopment of the City owned Bight to include 36380 sq.ft. of new space in multiple buildings for Restaurants, Professional Office, Speciality Retail, Grocery, Bar, Marine Services and Marina Piers.

11. HARC REVIEW (Check applicable response)

_____ Not yet submitted to HARC
_____ Not required for this project
_ _ Conceptual approval granted by HARC _____ (date)
_X_ Final approval granted by HARC _____ (date).
_____ Disapproved by HARC on _____ (date).
COMMENTS: (Include HARC No. if approved by HARC)
Phase 1 construction plans have received final approval _____
Each phase of construction plans will undergo HARC Review _____

12. REQUIRED ATTACHMENTS : (Please check if attached)

_____ Deed(s) showing ownership and legal description (must cover entire property).
__X__ Site Plan in accordance with the Land Development Code.
__X__ Fee - $100.00 for Site Plan Review ONLY, $500.00 for CIAS and Site Plan Review, payable to the City of Key West.
_X_ Notarized statement by applicant or owner verifying application.
__X__ Applicant's notarized statement authorizing applicant to represent owner.

13. PLANS (TO BE SUBMITTED WITH APPLICATION!!)

__X__ Site Plan with project description
_X_ Area map and surrounding land uses, show setbacks of surrounding uses, if relevant.
_X_ Surface Water Management Plan
_X__ Landscaping Plan
__X__ Elevation drawings showing front, side and rear of structure(s).
_X__ Site survey provided by a certified land surveyor showing existing conditions.

CITY PLANNER COMMENTS

FORM A

SITE PLAN REVIEW CHECKLIST

This Checklist is taken from Section 34.12, Key West City Code; the requirements set forth in this section apply to ALL site plan review applications. PLEASE COMPLETE THE CHECKLIST BELOW AND SUBMIT IT WITH THE REQUISITE PLANS AND A COMPLETED SITE PLAN REVIEW APPLICATION TO THE PLANNING OFFICE.

GENERAL INFORMATION

Description of the project

Please include the following dimensions on the site plan sheet.

__X__ Total lot area
__X__ Total building area
__X__ Building square footage by type
__X__ Site coverage
__X__ Area of paved and open areas
_N/A_ Number of dwelling units, if applicable.
__X__ Number and location of parking spaces

Drawings

__X__ **Surrounding Land Uses** - Map illustrating existing land uses within 100 feet of site.

__X__ **Site Plan (Include the following)**

__X__ Site boundaries including existing and proposed easements, ROWs (may be a SURVEY);
__X__ Location and use of all buildings and structures on the site;
__X__ Indicate existing and proposed uses and structures;
__X__ Location and character of paved, parking and walkway areas;
__X__ Outside facilities for waste disposal, storage or display & screening;
__X__ Open space and landscaping;
__X__ Height of all perimeter walls, fences, hedges & other screening devices;
__X__ Location of curb cuts.

_N/A_ **Generalized Floor Plan:** indicating dimensions and square footage of each use of all building, building addition, or structure; Indicate existing and proposed.

N/A **Elevation Drawings** showing the side, front, rear of the proposed building and/or building addition including exterior construction material and color; height between floors, height of first floor and height of structure (roof).

__X__ **Signage and Lighting** - Location, character and orientation of signs and outdoor lighting.

__X__ **Stormwater Management Plan** - Systems for controlling stormwater run-off.

__X__ **Landscape Plan** - Show plant location and size at time of planting, include a key to clearly identify the plants.

N/A **Other** - Additional drawings such as perspective, transverse section, etc., may be submitted to more accurately depict a project.

SUPPLEMENTAL REQUIREMENTS

SHORELINE PROJECTS - For projects located on or along a shoreline, the following shall be included:

__X__ Any easements or ROWs providing public access to the shoreline.
__X__ The location and type of existing or proposed bulkheads.

OTHER - Additional information may be required as follows:

__X__ Protection of vegetation
__X__ Shoreline protection
__X__ Flood protection and elevations.
__X__ Consistency with Key West Comprehensive Plan.

TO APPLICANTS: Please read the following section for your information.

==========

This section is to be completed by the Planning Department.

CONSIDERATION IN REVIEWING SITE PLANS

The following will be considered, depending on the nature of the project, by the Planning Board, for Site Plan approval and by those departments, agencies and persons reviewing and evaluating Site Plans.

_____ Compliance with all city policies, standards and zoning regulations.
_____ The provision of adequate, safe vehicular and pedestrian circulation.
_____ The provision of adequate open space and landscaping.
_____ The provision of surface run-off and site drainage.
_____ Consistency with the Key West Comprehensive Plan.

The Planning Board will consider each application for Site Plan review and will APPROVE, APPROVE WITH CONDITIONS, OR DENY the project.

Staff Comments (Additional sheet may be attached)

_____

_____

_____

_____

_____

I Paul J Cates, authorize Mark C. Summers, to represent my
(Property Owner's Name) (Applicant's Name)

property for this variance and\or special exception application.

Subscribed and sworn to (or affirmed) before me on 5/2/96 (date)

by Paul J Cates (name of affiant, deponent or other signer). He/she is personally

known to me or has presented N/A (type of identification) as

identification.

Walker
(Notary's Signature and Seal)

CAROLYN A. WALKER (Name of Acknowledger typed, printed or stamped)

(Title or Rank)

(Commission Number, if any)

CAROLYN A. WALKER
MY COMMISSION # CC429234 EXPIRES
March 12, 1999
BONDED THRU TROY FAIN INSURANCE, INC.

STATE OF FLORIDA
COUNTY OF MONROE

I, Mark C. Summers (please print clearly), being duly sworn, depose and say that: I am the (check one) owner _____ legal representative X of the property which is the subject matter of this application. All of the answers to the above questions, sketches, and attached data which make up this application are true and correct to the best of my knowledge and belief.

Mark C. Summers
(Applicant's Signature)

Subscribed and sworn to (or affirmed) before me on MAY 21, 1996 (date) by MARK C. SUMMERS (name of affiant, deponent or other signer). He/~~She~~ is personally known to me or has presented _____ (type of identification) as identification.

_____
(Notary's Signature and Seal)

BARBARA K. ARTHUR
MY COMMISSION EXPIRES
JUNE 12, 1998
#CC 470943
Bonded thru
Troy Fain-Insurance
NOTARY PUBLIC, STATE OF FLORIDA

_____ (Name of Acknowledger typed, printed or stamped)

_____ (Title or Rank)

_____ (Commission Number, if any)

KEY WEST BIGHT

201 William St., Key West FL 33040, (305) 293-8309

May 22, 1996

Tyson Smith
Planning Department
P.O. Box 1409
Key West, Fl. 33040

Dear Mr. Smith:

Please accept this letter as authorization for Mr. Donald Craig of The Craig Co. to represent the City of Key West, Key West Bight Project for the purpose of presenting the CIAS study and associated site plan review before the Planning Board, City Commission, and any other agencies which it may need review by.

Sincerely,

Mark C. Summers

Mark C. Summers
Key West Bight Director