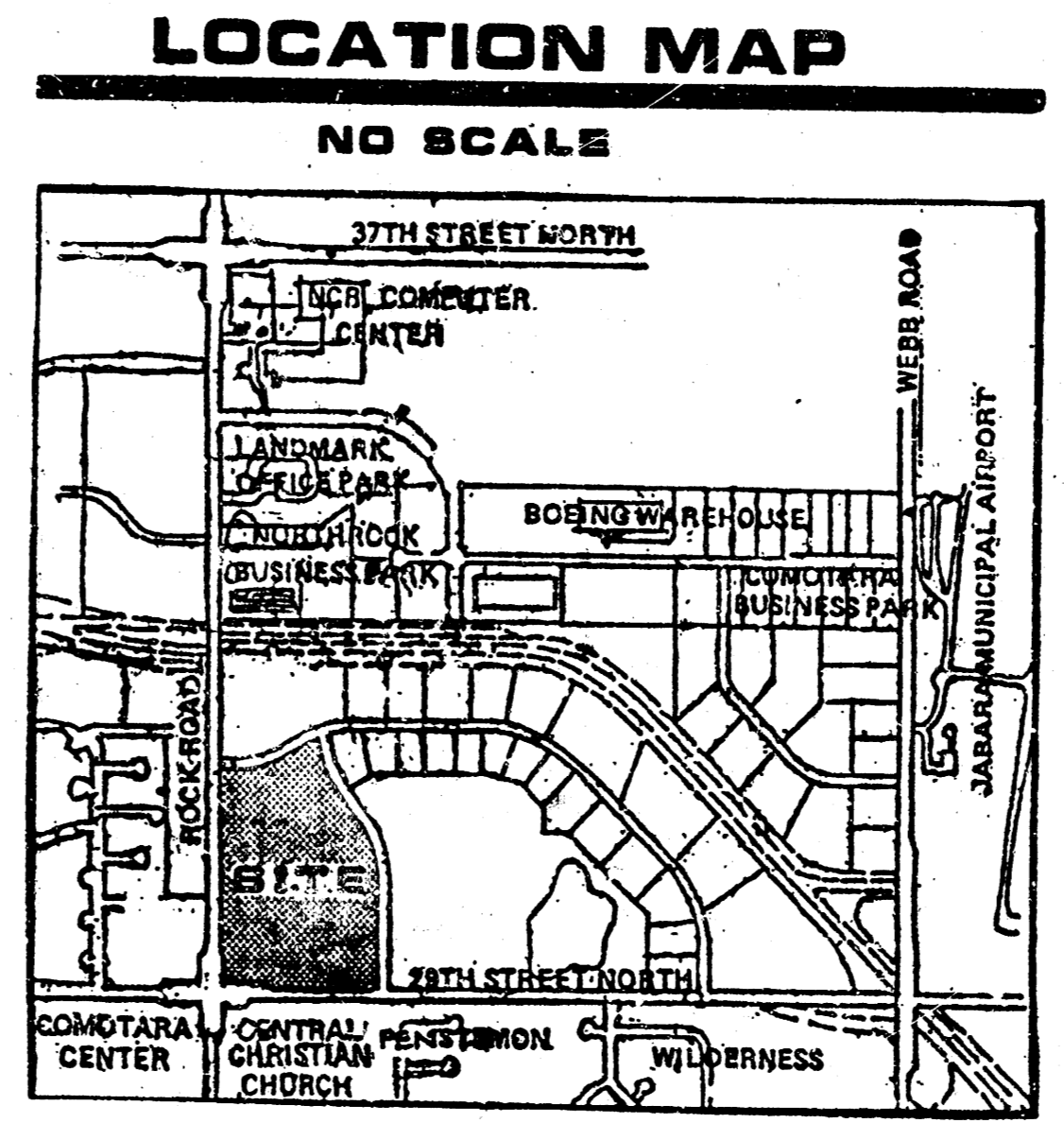


**NOTES**

DRAINAGE & UTILITY CONCEPT A REPLAT OF MEDITERRANEAN PLAZA COMMERCIAL ADD. UNDER C.U.P., D.P.-111  
**MEDITERRANEAN PLAZA COMM. SECOND ADDITION**

EXISTING STORM SEWER SYSTEMS  
AUG. 1, 1988



**MID-KANSAS ENGINEERING CONSULTANTS, P.A.**  
 3500 N. Rock Road, #800  
 Wichita, KS 67226  
 (316) 636-5566

**LETTER OF TRANSMITTAL**

PROJECT: Mediterranean Plaza Lakes  
 Flood Detention Sites  
 DATE: 04/20/90  
 TO: Vicky Huang, P.E.  
 City of Wichita  
 Engineering Department  
 455 N. Main, 7th Floor  
 Wichita, KS 67202

We are sending the following items:

- Attached
- Under separate cover via
- Prints
- Specifications
- Legal Descriptions
- Tracings
- Petitions
- Correspondence
- Other

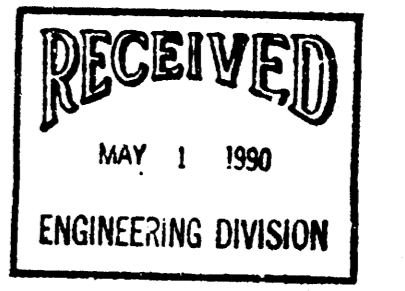
**COMMENTS:** Reference our meeting of April 18, 1990. Attached please find storage and excavation calculations for Mediterranean Plaza Lakes - K-96 Bypass Borrow. Runoff calculations were from drainage plan, Mediterranean Plaza. A set of plans were left with you on April 18.

For Your Approval:  Approved as Noted

As Requested:  For Your Files

For Review and Comment:

**REMARKS:** The sanitary sewer encasements, outlet pipes and weirs, etc. will need to be completed under flood detention petition.



Signed: *J. Neil Sedorewsky*  
 J. NEIL SEDOREWSKY, P.E.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 Lake Data Summary

Excavation	Normal Pool	100/Yr. 24/Hr. W.S.E.	Storage
LAKE I 26,400 C.Y.	208.0'	215.3'	11.89 AC-FT, 30" RCP Outlet + Weir
LAKE II 15,500 C.Y.	210.0'	217.4'	7.56 AC-FT, 30" RCP Outlet + Weir
LAKE III 20,700 C.Y.	212.0'	218.0'	11.34 AC-FT, 36" RCP Outlet
LAKE IV 105,800 C.Y.	213.0'	218.5'	25.71 AC-FT, 30" RCP Outlet + Weir
LAKE V 94,500 C.Y.	216.5'	224.3'	27.41 AC-FT, 30" RCP Outlet + Weir
LAKE VI 43,800 C.Y.	218.0'	224.2'	11.94 AC-FT, 15" RCP Outlet + Weir
<b>Totals</b> 306,700 C.Y.			<b>95.85 AC-FT</b>
<b>Total Runoff (100 Yr.): 6 Hour</b>			<b>94.60 AC-FT</b>
<b>24 Hour</b>			<b>126.00 AC-FT</b>

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 SOUTH LAKE #1 (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 200.0	Storage Above 208.0
200	0.31			0		
201	0.43	0.37	1	0.37	0.37	
202	0.52	0.475	1	0.475	0.84	
203	0.63	0.575	1	0.575	1.42	
204	0.73	0.68	1	0.68	2.10	
205	0.83	0.78	1	0.78	2.88	
206	0.93	0.88	1	0.88	3.76	
207	1.04	0.985	1	0.985	4.74	
208	1.14	1.09	1	1.09	5.84	0
209	1.27	1.205	1	1.205	7.04	1.20
210	1.40	1.335	1	1.335	8.38	2.54
211	1.53	1.465	1	1.465	9.84	4.00
212	1.67	1.60	1	1.60	11.44	5.60
213	1.80	1.735	1	1.735	13.18	7.34
214	1.95	1.875	1	1.875	15.05	9.22
215	2.08	2.015	1	2.015	17.06	11.23
216	2.30	2.19	1	2.19	19.26	13.42

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 SOUTH LAKE #1 (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
200	0.31	0.37	1	0.37
201	0.43	0.475	1	0.475
202	0.52	0.575	1	0.575
203	0.63	0.68	1	0.68
204	0.73	0.78	1	0.78
205	0.83	0.88	1	0.88
206	0.93	0.985	1	0.985
207	1.04	1.09	1	1.09
208	1.14	1.18	1	1.18
209	1.27	1.26	1	1.26
210	1.30	1.34	1	1.34
211	1.38	1.375	1	1.375
212	1.37	1.28	1	1.28
213	1.19	1.12	1	1.12
214	1.05	0.94	1	0.94
215	0.83	0.735	1	0.735
216	0.64	0.555	1	0.555
217	0.47	0.345	1	0.345
218	0.22			

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 SOUTH MIDDLE LAKE #1 (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 202.0	Storage Above 210.0
202	0.30			0		
203	0.34	0.32	1	0.32	0.32	
204	0.39	0.365	1	0.365	0.68	
205	0.44	0.415	1	0.415	1.10	
206	0.49	0.465	1	0.465	1.56	
207	0.55	0.52	1	0.52	2.08	
208	0.60	0.575	1	0.575	2.66	
209	0.66	0.63	1	0.63	3.29	
210	0.72	0.69	1	0.69	3.98	0
211	0.79	0.755	1	0.755	4.74	0.76
212	0.88	0.835	1	0.835	5.57	1.59
213	0.96	0.92	1	0.92	6.49	2.51
214	1.04	1.00	1	1.00	7.49	3.51
215	1.13	1.085	1	1.085	8.58	4.60
216	1.21	1.17	1	1.17	9.75	5.76
217	1.30	1.255	1	1.255	11.00	7.02
218	1.39	1.345	1	1.345	12.34	8.36

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 SOUTH MIDDLE LAKE #1 (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
202	0.30	0.32	1	0.32
203	0.34	0.365	1	0.365
204	0.39	0.415	1	0.415
205	0.44	0.465	1	0.465
206	0.49	0.52	1	0.52
207	0.55	0.575	1	0.575
208	0.60	0.63	1	0.63
209	0.66	0.69	1	0.69
210	0.70	0.73	1	0.73
211	0.76	0.79	1	0.79
212	0.82	0.85	1	0.85
213	0.88	0.905	1	0.905
214	0.93	0.95	1	0.95
215	1.05	1.08	1	1.08
216	1.13	1.17	1	1.17
217	1.22	1.235	1	1.235
218	1.30	1.305	1	1.305

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS  
 SOUTH NORTH LAKE #1 (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 204.0	Storage Above 212.0
204	0.42			0		
205	0.51	0.465	1	0.465	0.46	
206	0.61	0.56	1	0.56	1.02	
207	0.73	0.67	1	0.67	1.70	
208	0.86	0.795	1	0.795	2.49	
209	0.98	0.92	1	0.92	3.41	
210	1.10	1.04	1	1.04	4.45	
211	1.27	1.185	1	1.185	5.64	
212	1.40	1.335	1	1.335	6.97	0
213	1.57	1.485	1	1.485	8.46	1.46
214	1.72	1.645	1	1.645	10.10	3.13
215	1.88	1.80	1	1.80	11.90	4.93
216	2.05	1.965	1	1.965	13.86	6.90
217	2.22	2.135	1	2.135	16.00	9.03
218	2.39	2.305	1	2.305	18.30	11.34

417,740 FT<sup>3</sup>  
 15,472 C.Y.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

SOUTH NORTH LAKE #III (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
204	0.42	0.465	1	0.465
205	0.51	0.56	1	0.56
206	0.61	0.67	1	0.67
207	0.73	0.795	1	0.795
208	0.86	0.92	1	0.92
209	0.98	1.03	1	1.03
210	1.08	1.08	1	0.98
211	0.88	0.905	1	0.905
212	0.93	0.97	1	0.97
213	1.01	1.045	1	1.045
214	1.08	1.11	1	1.11
215	1.14	1.16	1	1.16
216	1.18	1.145	1	1.145
217	1.11	0.73	1	0.73
218	0.35	0.205	1	0.205
219	0.06	0.065	1	0.065
220	0.07	0.06	1	0.06
221	0.05	0.025	1	0.025
222	0.00			

12.84 AC-FT  
559,310 FT<sup>3</sup>  
20,700 C.Y.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

MIDDLE LAKE #IV (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 205.0	Storage Above 213.0
205	2.11	2.175	1	2.175	0	
206	2.24	2.305	1	2.305	2.18	
207	2.37	2.435	1	2.435	4.48	
208	2.50	2.565	1	2.565	6.98	
209	2.63	2.695	1	2.695	9.48	
210	2.76	2.86	1	2.86	12.18	
211	2.96	3.045	1	3.045	15.04	
212	3.13	3.22	1	3.22	18.08	
213	3.31	3.43	1	3.43	21.30	0
214	3.55	3.655	1	3.655	24.73	3.43
215	3.78	3.885	1	3.885	28.40	7.10
216	3.99	4.105	1	4.105	32.28	10.98
217	4.22	4.33	1	4.33	36.38	15.08
218	4.44	4.555	1	4.555	40.72	19.42
219	4.67				45.27	23.97

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

ADD. MIDDLE LAKE #IV (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 205.0	Storage Above 213.0	Totals (Both Pages)
205	0.41	0.425	1	0.425	0		
206	0.44	0.45	1	0.45	0.42		
207	0.46	0.475	1	0.475	0.88		
208	0.49	0.505	1	0.505	1.35		
209	0.52	0.535	1	0.535	1.96		
210	0.55	0.56	1	0.56	2.39		
211	0.57	0.585	1	0.585	2.95		
212	0.60	0.615	1	0.615	3.54		
213	0.63	0.65	1	0.65	4.15	0	0
214	0.67	0.685	1	0.685	4.80	0.65	4.08
215	0.70	0.72	1	0.72	5.48	1.34	8.44
216	0.74	0.755	1	0.755	6.20	2.08	13.04
217	0.77	0.79	1	0.79	6.96	2.81	17.89
218	0.81	0.83	1	0.83	7.75	3.60	23.02
219	0.85				8.58	4.43	28.40

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

MIDDLE LAKE #IV (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
205	2.11	2.175	1	2.175
206	2.24	2.305	1	2.305
207	2.37	2.435	1	2.435
208	2.50	2.565	1	2.565
209	2.63	2.695	1	2.695
210	2.76	2.86	1	2.86
211	2.96	3.045	1	3.045
212	3.13	3.195	1	3.195
213	3.26	3.26	1	3.26
214	3.42	3.48	1	3.48
215	3.54	3.60	1	3.60
216	3.66	3.73	1	3.73
217	3.80	3.855	1	3.855
218	3.91	3.98	1	3.98
219	4.05	3.985	1	3.985
220	3.92	3.415	1	3.415
221	2.91	2.30	1	2.30
222	1.69	1.245	1	1.245
223	0.80	0.465	1	0.465
224	0.13			

54.67 AC-FT  
2,381,425 FT<sup>3</sup>  
88,200 C.Y.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

ADD. MIDDLE LAKE #IV (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
205	0.41	0.425	1	0.425
206	0.44	0.45	1	0.45
207	0.46	0.475	1	0.475
208	0.49	0.505	1	0.505
209	0.52	0.535	1	0.535
210	0.55	0.56	1	0.56
211	0.57	0.585	1	0.585
212	0.60	0.615	1	0.615
213	0.63	0.65	1	0.65
214	0.67	0.685	1	0.685
215	0.70	0.72	1	0.72
216	0.74	0.755	1	0.755
217	0.77	0.79	1	0.79
218	0.81	0.83	1	0.83
219	0.85	0.865	1	0.865
220	0.88	0.805	1	0.805
221	0.73	0.505	1	0.505
222	0.28	0.17	1	0.17
223	0.06			

10.92 AC-FT  
475,893 FT<sup>3</sup>  
17,600 C.Y.  
Total Both Pages 105,800 C.Y.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

NORTH LAKE #V (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 205.0	Storage Above 215.5	Storage Above 222.0
208	1.67	1.73	1	1.73	0		
209	1.79	1.855	1	1.855	1.73		
210	1.92	1.99	1	1.99	3.58		
211	2.06	2.125	1	2.125	5.58		
212	2.19	2.255	1	2.255	7.70		
213	2.32	2.39	1	2.39	9.96		
214	2.46	2.535	1	2.535	12.34		
215	2.61	2.69	1	2.69	14.88		
216	2.77	2.825	0.5	1.4125	17.57		
216.5	2.88	2.915	0.5	1.4575	18.98	0	
217	2.95	3.025	1	3.025	20.44	1.46	
218	3.10	3.18	1	3.18	23.46	4.48	
219	3.26	3.345	1	3.345	26.64	7.66	
220	3.43	3.52	1	3.52	29.99	11.01	
221	3.61	3.685	1	3.685	33.51	14.53	
222	3.76	3.855	1	3.855	37.20	18.21	0
223	3.95	4.055	1	4.055	41.05	22.07	3.86
224	4.16	4.345	1	4.345	45.10	26.12	7.91
225	4.53	4.945	1	4.945	49.45	30.47	12.36
226	4.90	4.715	1	4.715	54.16	35.18	16.97

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

NORTH LAKE #V (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
208	1.67	1.73	1	1.73
209	1.79	1.855	1	1.855
210	1.92	1.99	1	1.99
211	2.06	2.125	1	2.125
212	2.19	2.255	1	2.255
213	2.32	2.39	1	2.39
214	2.46	2.535	1	2.535
215	2.61	2.69	1	2.69
216	2.77	2.825	0.5	1.413
216.5	2.88	2.915	0.5	1.458
217	2.95	3.025	1	3.025
218	3.10	3.18	1	3.18
219	3.26	3.345	1	3.345
220	3.43	3.52	1	3.52
221	3.61	3.685	1	3.685
222	3.76	3.855	1	3.855
223	3.95	4.055	1	4.055
224	4.16	4.345	1	4.345
225	4.53	4.945	1	4.945
226	4.90	4.715	1	4.715

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

NORTH LAKE #V (EXCAVATION CONT'D)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
228	1.39	1.245	1	1.245
229	1.10	0.98	1	0.98
230	0.86	0.77	1	0.77
231	0.68	0.605	1	0.605
232	0.53	0.465	1	0.465
233	0.40	0.335	1	0.335
234	0.27	0.165	1	0.165
235	0.06	0.045	1	0.045
236	0.03			
237	0.01			

58.561 AC-FT  
2,550,917 FT<sup>3</sup>  
94,478 C.Y.

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

NORTHEAST LAKE #VI (STORAGE)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)	Storage Above 210.0	Storage Above 218.0
210	0.94	0.98	1	0.98	0	
211	1.02	1.055	1	1.055	0.98	
212	1.09	1.13	1	1.13	2.04	
213	1.17	1.21	1	1.21	3.16	
214	1.25	1.285	1	1.285	4.38	
215	1.32	1.36	1	1.36	5.66	
216	1.40	1.44	1	1.44	7.02	
217	1.48	1.52	1	1.52	8.46	
218	1.56	1.62	1	1.62	9.98	0
219	1.68	1.735	1	1.735	11.60	1.62
220	1.79	1.85	1	1.85	13.34	3.36
221	1.91	1.975	1	1.975	15.18	5.20
222	2.04	2.10	1	2.10	17.16	7.18
223	2.16	2.21	1	2.21	19.26	9.28
224	2.26				21.47	11.49

MEDITERRANEAN PLAZA LAKES - K-96 BYPASS BORROW PITS

NORTHEAST LAKE #VI (EXCAVATION)

Elevation	Surface Area (AC)	Ave. Area	Depth (FT)	Incremental Volume (AC-FT)
210	0.94	0.98	1	0.98
211	1.02	1.055	1	1.055
212	1.09	1.13	1	1.13
213	1.17	1.21	1	1.21
214	1.25	1.285	1	1.285
215	1.32	1.36	1	1.36
216	1.40	1.44	1	1.44
217	1.48	1.52	1	1.52
218	1.56	1.62	1	1.62
219	1.68	1.735	1	1.735
220	1.79	1.85	1	1.85
221	1.91	1.975	1	1.975
222	2.04	2.10	1	2.10
223	2.16	2.21	1	2.21
224	2.26			
225	1.90	1.635	1	1.635
226	1.37	1.02	1	1.02
227	0.67	0.46	1	0.46
228	0.25	0.20	1	0.20
229	0.15	0.13	1	0.13
230	0.11	0.09	1	0.09
231	0.07	0.055	1	0.055
232	0.04	0.025	1	0.025
233	0.01			

27.16 AC-FT  
1,183,307 FT<sup>3</sup>  
43,800 C.Y.