MEMORANDUM

Table 1

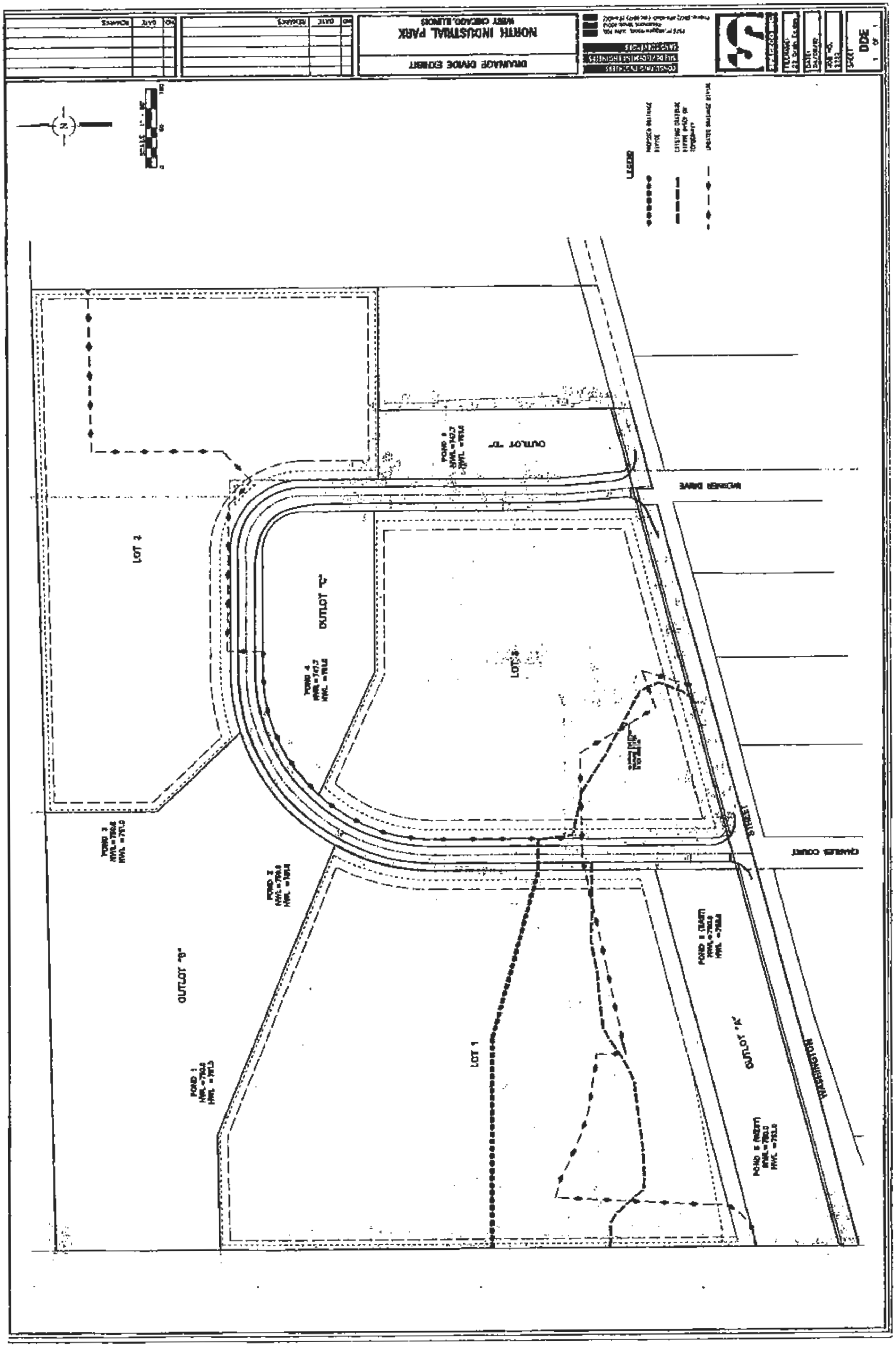
Comparison of Allowable Release Rate and Revised Drainage Divide Release Rates for the North Industrial Park

Outlet Number	Allowable 100-year recurrence interval Discharge (cfs)	Allowable High Water Elevation (Ft)	Actual Discharge (cfs)	Actual High Water Elevation (Ft)
1 (Ponds 1-3 and existing wetland storage)	3.84	751.0	3.76	751.0
2 (Ponds 4 and 6)	3.16	751.0	2.62	750.5
3 (Pond 5 east and west)	2.00	753.0	1.39	751.4
Total	9.00	N/A	7.77	N/A

As shown in Table 1, the existing drainage divides shown on the SPACECO plan labeled DDE do not need to be changed at this point. As the remainder of the industrial park develops, the ultimate drainage divides prepared by CBBEL as part of the Kramer stormwater management permit will need to be completed.

n:\westchicago\9948a\admin\m9948a_080610.doc

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W Higgins Road, Suite 600 Rosemont, Illinois 60018-4920 Tel (847) 823-0500 Fax (847) 823-0520



1

```
**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

   3 TR-20 FRACRUN                                        NOPLOTS
  .TLE     NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20
 TITLE     CBBEL PROJECT NO: 99-48A, MDC 5/25/2010 PHASE 2 DIVIDES
  5 RAINFL 6              .05                                      HUFF 1ST
  8          0.           .16          .33          .43          .52        QUARTILE
  8          .60          .66          .71          .75          .79        MEDIAN -
  8          .82          .84          .86          .88          .90        POINT
  8          .92          .94          .96          .97          .98        PAGE 14
  8          1.0          1.0          1.0          1.0          1.0        CIRC 173
  9 ENDTBL
  5 RAINFL 7              .05                                      HUFF 2ND
  8          0.           .03          .08          .12          .16        QUARTILE
  8          .22          .29          .39          .51          .62        MEDIAN -
  8          .70          .76          .81          .85          .88        POINT
  8          .91          .93          .95          .97          .98        PAGE 14
  8          1.0          1.0          1.0          1.0          1.0        CIRC 173
  9 ENDTBL
  5 RAINFL 8              .05                                      HUFF 3RD
  8          0.           .03          .06          .09          .12        QUARTILE
  8          .15          .19          .23          .27          .32        MEDIAN -
  8          .38          .45          .57          .70          .79        POINT
  8          .85          .89          .92          .95          .97        PAGE 14
  8          1.0          1.0          1.0          1.0          1.0        CIRC 173
  9 ENDTBL
  5 RAINFL 9              .05                                      HUFF 4TH
  8          0.           .02          .05          .08          .10        QUARTILE
  8          .13          .16          .19          .22          .25        MEDIAN -
  8          .28          .32          .35          .39          .45        POINT
  8          .51          .59          .72          .86          .92        PAGE 14
  8          1.0          1.0          1.0          1.0          1.0        CIRC 173
  9 ENDTBL
  3 STRUCT      30
  8                       748.370      0.000        0.000
  8                       749.360      0.001        0.100
  8                       749.500      1.130        1.090
  8                       750.000      2.310        3.560
  8                       750.500      3.090        7.140
  8                       751.000      3.730        10.72
  8                       751.050      3.790        11.07
  3 ENDTBL
  6 RUNOFF 1   1       1 0.04919      84.          0.50         1 1 1 0 1 1
  6 RESVOR 2    10 1   2 748.37                                 1 1 1 0 1 1
    ENDATA
  7 INCREM 6              0.50
  7 COMPUT 7   1      10 0.00         2.03         24.          8 2  24   1 6 MO
    ENDCMP 1


**********80-80 LIST OF INPUT DATA (CONTINUED)**********

  7 COMPUT 7   1      10 0.00         2.51         24.          8 2  24   2 1 YR
    ENDCMP 1
  7 COMPUT 7   1      10 0.00         3.04         24.          8 2  24   3 2 YR
    ENDCMP 1
  7 COMPUT 7   1      10 0.00         3.80         24.          8 2  24   4 5 YR
    ENDCMP 1
  7 COMPUT 7   1      10 0.00         4.47         24.          8 2  24   5 10YR
    ENDCMP 1
  7 COMPUT 7   1      10 0.00         7.58         24.          8 2  24  99 100YR
    ENDCMP 1
    ENDJOB 2
0**********END OF 80-80 LIST**********

 EXECUTIVE CONTROL OPERATION INCREM                                                    RECORD ID
+                                  MAIN TIME INCREMENT =   .50 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                                   RECORD ID 6 MO
+                                  FROM XSECTION   1
+                                                TO STRUCTURE 30
        STARTING TIME =   .00    RAIN DEPTH =  2.03    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
        ALTERNATE NO.=24         STORM NO.= 1    MAIN TIME INCREMENT =   .50 HOURS


 OPERATION RUNOFF   CROSS SECTION   1

 *** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
         COMPUTED PEAK(      1.23) AT            EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY   8 %.
+                                 XSECTION   1

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
             15.43                          3.83                        (RUNOFF)
             23.77                          1.23                        (RUNOFF)

 TIME(HRS)        FIRST HYDROGRAPH POINT =   .00 HOURS      TIME INCREMENT =  .50 HOURS      DRAINAGE AREA =    .05 SQ.MI.
    5.00    DISCHG          .00       .00       .00       .00       .00       .01       .07       .14       .21       .27
   10.00    DISCHG          .39       .50       .61       .80       .92      1.16      1.32      1.85      2.70      3.04
   15.00    DISCHG         3.53      3.82      3.30      2.95      2.84      2.14      2.09      1.59      1.44      1.31
   20.00    DISCHG         1.11      1.10      1.10      1.11       .90       .76       .81      1.10      1.14       .29
   25.00    DISCHG          .02       .00
```

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

PEAK TIME(HRS) 20.00 | PEAK DISCHARGE(CFS) 1.16 | PEAK ELEVATION(FEET) 749.51

* FIRST POINT OF FLAT PEAK

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS				DRAINAGE AREA =		.05 SQ.MI.
10.00	DISCHG	.00	.00	.00	.01	.05	.09	.15	.21	.31	.43
10.00	ELEV	748.37	748.37	748.37	749.30	749.31	749.32	749.33	749.34	749.35	749.38
15.00	DISCHG	.56	.70	.83	.94	1.03	1.10	1.14	1.15	1.16	1.16
15.00	ELEV	749.40	749.42	749.45	749.47	749.48	749.49	749.50	749.51	749.51	749.51
20.00	DISCHG	1.16	1.16	1.16	1.16	1.16	1.15	1.14	1.14	1.14	1.13
20.00	ELEV	749.51	749.51	749.51	749.51	749.51	749.51	749.51	749.50	749.50	749.50
25.00	DISCHG	1.08	1.03	.99	.94	.90	.86	.82	.78	.74	.71
25.00	ELEV	749.49	749.49	749.47	749.47	749.46	749.45	749.44	749.44	749.43	749.43
30.00	DISCHG	.68	.65	.62	.59	.56	.53	.51	.49	.46	.44
30.00	ELEV	749.42	749.41	749.41	749.40	749.40	749.39	749.39	749.39	749.38	749.38
35.00	DISCHG	.42	.40	.38	.37	.35	.33	.32	.30	.29	.28
35.00	ELEV	749.37	749.37	749.37	749.36	749.36	749.36	749.36	749.35	749.35	749.35
40.00	DISCHG	.26	.25	.24	.23	.22	.21	.20	.19	.18	.17
40.00	ELEV	749.35	749.34	749.34	749.34	749.34	749.34	749.34	749.33	749.33	749.33

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 1
REV PC 09/83(.2) CDBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 1

45.00	DISCHG	.16	.16	.15	.14	.14	.13	.12	.12	.11	.11
45.00	ELEV	749.33	749.33	749.33	749.33	749.32	749.32	749.32	749.32	749.32	749.32
50.00	DISCHG	.10	.10	.09	.09	.09	.08	.08	.07	.07	.07
50.00	ELEV	749.32	749.32	749.32	749.32	749.31	749.31	749.31	749.31	749.31	749.31
55.00	DISCHG	.06	.06	.06	.06	.05	.05	.05	.05	.04	.04
55.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
60.00	DISCHG	.04	.04	.04	.03	.03	.03	.03	.03	.03	.03
60.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.30	749.30	749.30
65.00	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
65.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
70.00	DISCHG	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01
70.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
75.00	DISCHG	.01	.01								
75.00	ELEV	749.30	749.30								

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 1, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 1 YR

FROM XSECTION 1

TO STRUCTURE 10

STARTING TIME = .00 RAIN DEPTH = 2.51 RAIN DURATION= 24.00 RAIN TABLE NO.= 8 ANT. MOIST. COND= 2
ALTERNATE NO.=24 STORM NO.= 2 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(1.66) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 8 %.
XSECTION 1

PEAK TIME(HRS) 15.40 | PEAK DISCHARGE(CFS) 5.48 (RUNOFF) | PEAK ELEVATION(FEET) (RUNOFF)
23.77 | 1.66 (RUNOFF)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS				DRAINAGE AREA =		.05 SQ.MI.
5.00	DISCHG	.00	.00	.00	.03	.12	.23	.33	.42	.51	.59
10.00	DISCHG	.77	.94	1.09	1.30	1.53	1.87	2.08	2.85	4.06	4.48
15.00	DISCHG	5.11	5.45	4.66	4.13	3.95	2.96	2.88	2.18	1.97	1.78
20.00	DISCHG	1.51	1.50	1.50	1.51	1.22	1.03	1.10	1.49	1.54	.39
25.00	DISCHG	.03	.00								

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 2
REV PC 09/83(.2) CDBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 2

PEAK TIME(HRS) 23.82 | PEAK DISCHARGE(CFS) 1.44 | PEAK ELEVATION(FEET) 749.63
21.50 | 1.45 | 749.64

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .05 SQ.MI.

10.00	DISCHG	.01	.05	.09	.15	.21	.27	.35	.45	.59	.76
10.00	ELEV	749.30	749.31	749.32	749.33	749.34	749.35	749.36	749.38	749.40	749.43
15.00	DISCHG	.96	1.14	1.21	1.27	1.33	1.37	1.40	1.42	1.44	1.46
15.00	ELEV	749.47	749.50	749.53	749.56	749.58	749.60	749.61	749.62	749.63	749.63
20.00	DISCHG	1.45	1.45	1.45	1.45	1.45	1.44	1.44	1.43	1.43	1.43
20.00	ELEV	749.63	749.64	749.64	749.64	749.64	749.63	749.63	749.63	749.63	749.63
25.00	DISCHG	1.40	1.37	1.35	1.32	1.30	1.27	1.25	1.22	1.20	1.17
25.00	ELEV	749.62	749.60	749.59	749.58	749.57	749.56	749.55	749.54	748.53	749.52
30.00	DISCHG	1.15	1.13	1.07	1.02	.98	.93	.89	.85	.81	.77
30.00	ELEV	749.51	749.50	749.49	749.48	749.47	749.46	749.46	749.45	749.44	749.44
35.00	DISCHG	.74	.70	.67	.64	.61	.58	.56	.53	.51	.48
35.00	ELEV	749.43	749.42	749.42	749.41	749.41	749.40	749.40	749.39	749.39	749.39
40.00	DISCHG	.46	.44	.42	.40	.38	.36	.35	.33	.32	.30
40.00	ELEV	749.38	749.38	749.37	749.37	749.37	749.36	749.36	749.36	749.36	749.35
45.00	DISCHG	.29	.27	.26	.25	.24	.23	.22	.21	.20	.19
45.00	ELEV	749.35	749.35	749.35	749.34	749.34	749.34	749.34	749.34	749.33	749.33
50.00	DISCHG	.18	.17	.16	.16	.15	.14	.14	.13	.12	.12
50.00	ELEV	749.33	749.33	749.33	749.33	749.33	749.32	749.32	749.32	749.32	749.32
55.00	DISCHG	.11	.11	.10	.10	.09	.09	.08	.08	.08	.07
55.00	ELEV	749.32	749.32	749.32	749.32	749.32	749.32	749.31	749.31	749.31	749.31
60.00	DISCHG	.07	.07	.06	.06	.06	.06	.05	.05	.05	.05
60.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
65.00	DISCHG	.04	.04	.04	.04	.04	.03	.03	.03	.03	.03
65.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.30
70.00	DISCHG	.03	.03	.02	.02	.02	.02	.02	.02	.02	.02
70.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
75.00	DISCHG	.02	.02	.02	.01	.01	.01	.01	.01	.01	.01
75.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
80.00	DISCHG	.01	.01	.01	.01						
80.00	ELEV	749.30	749.30	749.30	749.30						

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 2, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 2 YR
FROM XSECTION 1
TO STRUCTURE 10
STARTING TIME = .00 RAIN DEPTH = 3.04 RAIN DURATION= 24.00 RAIN TABLE NO.= 8 ANT. MOIST. COND= 2
ALTERNATE NO.=24 STORM NO.= 3 MAIN TIME INCREMENT = .50 HOURS

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 3
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVINES PAGE 3

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(2.14) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 0 %.
XSECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.38	7.36	(RUNOFF)
23.77	2.14	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .05 SQ.MI.

5.00	DISCHG	.00	.03	.11	.26	.41	.55	.67	.79	.90	1.00
10.00	DISCHG	1.26	1.49	1.69	2.08	2.27	2.72	2.99	4.03	5.66	6.16
15.00	DISCHG	6.93	7.32	6.20	5.46	5.20	3.88	3.77	2.84	2.57	2.32
20.00	DISCHG	1.96	1.94	1.95	1.95	1.58	1.33	1.42	1.92	1.98	.50
25.00	DISCHG	.04	.00								

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 3, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
23.86	1.79	749.78
21.50	1.81	749.79

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .05 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.04	.08
5.00	ELEV	748.37	748.37	748.37	748.37	748.37	748.37	748.37	748.37	749.31	749.31
10.00	DISCHG	.13	.19	.25	.33	.41	.51	.62	.75	.94	1.15
10.00	ELEV	749.32	749.33	749.34	749.36	749.37	749.39	749.41	749.43	749.47	749.51
15.00	DISCHG	1.25	1.37	1.47	1.56	1.63	1.69	1.73	1.76	1.78	1.79
15.00	ELEV	749.55	749.60	749.64	749.68	749.71	749.74	749.75	749.77	749.77	749.78
20.00	DISCHG	1.80	1.80	1.80	1.81	1.81	1.80	1.79	1.79	1.79	1.78
20.00	ELEV	749.78	749.78	749.79	749.79	749.79	749.78	749.78	749.78	749.78	749.78
25.00	DISCHG	1.75	1.72	1.68	1.65	1.62	1.59	1.56	1.53	1.50	1.47
25.00	ELEV	749.76	749.75	749.73	749.72	749.71	749.69	749.68	749.67	749.66	749.64
30.00	DISCHG	1.44	1.41	1.38	1.36	1.33	1.30	1.28	1.25	1.23	1.20
30.00	ELEV	749.63	749.62	749.61	749.60	749.58	749.57	749.56	749.55	749.54	749.53
35.00	DISCHG	1.18	1.16	1.13	1.09	1.04	.99	.95	.90	.86	.82
35.00	ELEV	749.52	749.51	749.50	749.49	749.48	749.48	749.47	749.46	749.45	749.45
40.00	DISCHG	.78	.75	.71	.68	.65	.62	.59	.56	.54	.51
40.00	ELEV	749.44	749.43	749.43	749.42	749.41	749.41	749.40	749.40	749.39	749.39
45.00	DISCHG	.49	.47	.44	.42	.40	.39	.37	.35	.34	.32

45.00	ELEV	749.39	749.38	749.38	749.37	749.37	749.37	749.37	749.36	749.36	749.36
50.00	DISCHG	.30	.29	.28	.26	.25	.24	.23	.22	.21	.20
50.00	ELEV	749.35	749.35	749.35	749.35	749.34	749.34	749.34	749.34	749.34	749.34
55.00	DISCHG	.19	.18	.17	.17	.16	.15	.14	.14	.13	.12

1

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 3
REV PC 09/83(.2) CEBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 4

55.00	ELEV	749.33	749.33	749.33	749.33	749.33	749.33	749.33	749.32	749.32	749.32
60.00	DISCHG	.12	.11	.11	.10	.10	.09	.09	.09	.08	.08
60.00	ELEV	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.31	749.31	749.31
65.00	DISCHG	.07	.07	.07	.06	.06	.06	.06	.05	.05	.05
65.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
70.00	DISCHG	.05	.04	.04	.04	.04	.04	.03	.03	.03	.03
70.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
75.00	DISCHG	.03	.03	.03	.03	.02	.02	.02	.02	.02	.02
75.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
80.00	DISCHG	.02	.02	.02	.02	.01	.01	.01	.01	.01	.01
80.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
85.00	DISCHG	.01	.01	.01	.01	.01					
85.00	ELEV	749.30	749.30	749.30	749.30	749.30					

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 3, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 5 YR
+ FROM XSECTION 1
+ TO STRUCTURE 10
STARTING TIME = .00 RAIN DEPTH = 3.80 RAIN DURATION= 24.00 RAIN TABLE NO.= 8 ANT. MOIST. COND= 2
ALTERNATE NO.=24 STORM NO.= 4 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(2.63) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 8 %.
+ XSECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.36	10.14	(RUNOFF)
23.77	2.83	(RUNOFF)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS			DRAINAGE AREA =		.05 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.04
5.00	DISCHG	.17	.30	.43	.70	.92	1.09	1.25	1.40	1.53	1.66
10.00	DISCHG	2.05	2.37	2.62	3.18	3.41	4.03	4.37	5.81	8.06	8.65
15.00	DISCHG	9.62	10.05	8.45	7.39	7.00	5.22	5.04	3.80	3.43	3.09
20.00	DISCHG	2.61	2.58	2.58	2.59	2.09	1.77	1.88	2.53	2.62	.66
25.00	DISCHG	.05	.00								

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 4, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

1

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 4
REV PC 09/83(.2) CEBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
23.89	2.32	750.01
22.00	2.33	750.01

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS			DRAINAGE AREA =		.05 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.03	.09	.14	.20	.27
5.00	ELEV	748.37	748.37	748.37	748.37	748.91	749.31	749.33	749.34	749.35
10.00	DISCHG	.34	.43	.52	.63	.75	.89	1.04	1.17	1.28	1.42
10.00	ELEV	749.36	749.38	749.39	749.41	749.43	749.46	749.48	749.52	749.57	749.62
15.00	DISCHG	1.57	1.73	1.88	2.00	2.10	2.18	2.24	2.28	2.31	2.32
15.00	ELEV	749.69	749.76	749.82	749.87	749.91	749.94	749.97	749.99	750.00	750.00
20.00	DISCHG	2.32	2.32	2.33	2.33	2.33	2.33	2.32	2.32	2.32	2.32
20.00	ELEV	750.01	750.01	750.01	750.01	750.01	750.01	750.01	750.01	750.01	750.00
25.00	DISCHG	2.28	2.24	2.20	2.15	2.11	2.07	2.03	1.99	1.95	1.91
25.00	ELEV	749.99	749.97	749.95	749.93	749.92	749.90	749.88	749.86	749.85	749.83
30.00	DISCHG	1.88	1.84	1.80	1.77	1.73	1.70	1.67	1.63	1.60	1.57
30.00	ELEV	749.82	749.80	749.79	749.77	749.76	749.74	749.73	749.71	749.70	749.69
35.00	DISCHG	1.54	1.51	1.48	1.45	1.42	1.39	1.37	1.34	1.31	1.29
35.00	ELEV	749.67	749.66	749.65	749.64	749.62	749.61	749.60	749.59	749.58	749.57
40.00	DISCHG	1.26	1.24	1.21	1.19	1.17	1.15	1.11	1.06	1.01	.97
40.00	ELEV	749.56	749.55	749.54	749.53	749.52	749.51	749.50	749.49	749.48	749.47
45.00	DISCHG	.92	.88	.84	.80	.76	.73	.69	.66	.63	.60
45.00	ELEV	749.46	749.46	749.45	749.44	749.43	749.43	749.42	749.42	749.41	749.41
50.00	DISCHG	.58	.55	.52	.50	.48	.45	.43	.41	.39	.38
50.00	ELEV	749.40	749.40	749.39	749.39	749.38	749.38	749.38	749.37	749.37	749.37
55.00	DISCHG	.36	.34	.33	.31	.30	.28	.27	.26	.25	.23

55.00	ELEV	749.36	749.36	749.36	749.36	749.35	749.35	749.35	749.35	749.34	749.34
60.00	DISCHG	.22	.21	.20	.19	.19	.18	.17	.16	.15	.15
60.00	ELEV	749.34	749.34	749.34	749.33	749.33	749.33	749.33	749.33	749.33	749.33
65.00	DISCHG	.14	.13	.13	.12	.12	.11	.11	.10	.10	.09
65.00	ELEV	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32
70.00	DISCHG	.09	.08	.08	.08	.07	.07	.07	.06	.06	.06
70.00	ELEV	749.32	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
75.00	DISCHG	.05	.05	.05	.05	.05	.04	.04	.04	.04	.04
75.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
80.00	DISCHG	.03	.03	.03	.03	.03	.03	.03	.02	.02	.02
80.00	ELEV	749.31	749.31	749.31	749.31	749.30	749.30	749.30	749.30	749.30	749.30
85.00	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.01	.01
85.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
90.00	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01		
90.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30		

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 4, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 4

1

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS Abuilt2.t20 JOB 1 PASS 5
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, NDC 5/26/2010 PHASE 2 DIVIDES PAGE 6

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 10YR
+ FROM XSECTION 1
+ TO STRUCTURE 10
STARTING TIME = .00 RAIN DEPTH = 4.47 RAIN DURATION= 24.00 RAIN TABLE NO.= 6 ANT. MOIST. COND= 2
ALTERNATE NO.=24 STORM NO.= 5 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(3.44) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 0 %.
+ XSECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.34	12.60	(RUNOFF)
21.26	3.22	(RUNOFF)
23.77	3.44	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .05 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.09	.27
5.00	DISCHG	.45	.61	.76	1.15	1.43	1.64	1.83	2.00	2.15	2.30
10.00	DISCHG	2.80	3.20	3.50	4.21	4.46	5.24	5.63	7.43	10.22	10.88
15.00	DISCHG	12.01	12.48	10.44	9.11	8.60	6.39	6.17	4.64	4.18	3.77
20.00	DISCHG	3.18	3.14	3.14	3.15	2.54	2.15	2.28	3.08	3.17	.80
25.00	DISCHG	.06	.00								

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
23.99	2.58	750.17

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .50 HOURS DRAINAGE AREA = .05 SQ.MI.

5.00	DISCHG	.00	.00	.00	.02	.08	.14	.22	.29	.38	.46
5.00	ELEV	748.37	748.37	748.37	749.30	749.31	749.33	749.34	749.35	749.37	749.38
10.00	DISCHG	.56	.67	.79	.93	1.09	1.19	1.27	1.37	1.52	1.69
10.00	ELEV	749.40	749.42	749.44	749.47	749.49	749.52	749.56	749.60	749.66	749.74
15.00	DISCHG	1.89	2.09	2.27	2.36	2.42	2.46	2.50	2.52	2.54	2.55
15.00	ELEV	749.82	749.91	749.98	750.03	750.07	750.10	750.12	750.14	750.15	750.16
20.00	DISCHG	2.56	2.57	2.57	2.58	2.58	2.58	2.57	2.58	2.58	2.57
20.00	ELEV	750.16	750.16	750.17	750.17	750.17	750.17	750.17	750.17	750.17	750.17
25.00	DISCHG	2.56	2.53	2.51	2.49	2.47	2.44	2.42	2.40	2.38	2.36
25.00	ELEV	750.16	750.14	750.13	750.11	750.10	750.09	750.07	750.06	750.04	750.03
30.00	DISCHG	2.34	2.31	2.28	2.23	2.19	2.14	2.10	2.06	2.02	1.98
30.00	ELEV	750.02	750.00	749.99	749.97	749.95	749.93	749.91	749.89	749.88	749.86
35.00	DISCHG	1.94	1.90	1.87	1.83	1.80	1.76	1.73	1.69	1.66	1.63
35.00	ELEV	749.84	749.83	749.81	749.80	749.78	749.77	749.75	749.74	749.72	749.71
40.00	DISCHG	1.59	1.56	1.53	1.50	1.47	1.44	1.42	1.39	1.36	1.34

1

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS Abuilt2.t20 JOB 1 PASS 5
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, NDC 5/26/2010 PHASE 2 DIVIDES PAGE 7

40.00	ELEV	749.70	749.68	749.67	749.66	749.65	749.63	749.62	749.61	749.60	749.59
45.00	DISCHG	1.31	1.28	1.26	1.23	1.21	1.19	1.16	1.14	1.10	1.05
45.00	ELEV	749.58	749.57	749.55	749.54	749.53	749.52	749.51	749.50	749.49	749.49
50.00	DISCHG	1.00	.96	.91	.87	.83	.79	.76	.72	.69	.66
50.00	ELEV	749.48	749.47	749.46	749.45	749.45	749.44	749.43	749.43	749.42	749.42
55.00	DISCHG	.63	.60	.57	.54	.52	.49	.47	.45	.43	.41
55.00	ELEV	749.41	749.41	749.40	749.40	749.39	749.39	749.38	749.38	749.38	749.37
60.00	DISCHG	.39	.37	.36	.34	.32	.31	.29	.28	.27	.26

60.00	ELEV	749.37	749.37	749.36	749.36	749.36	749.35	749.35	749.35	749.35	749.35
65.00	DISCHG	.24	.23	.22	.21	.20	.19	.18	.18	.17	.16
65.00	ELEV	749.34	749.34	749.34	749.34	749.34	749.33	749.33	749.33	749.33	749.33
70.00	DISCHG	.15	.15	.14	.13	.13	.12	.11	.11	.10	.10
70.00	ELEV	749.33	749.33	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32
75.00	DISCHG	.09	.09	.09	.08	.08	.08	.07	.07	.07	.06
75.00	ELEV	749.32	749.32	749.32	749.31	749.31	749.31	749.31	749.31	749.31	749.31
80.00	DISCHG	.06	.06	.05	.05	.05	.05	.04	.04	.04	.04
80.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
85.00	DISCHG	.04	.04	.03	.03	.03	.03	.03	.03	.03	.02
85.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.30	749.30	749.30	749.30	749.30
90.00	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
90.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
95.00	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
95.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 5, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION RNDCM? RECORD I0
+ COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID 100YR
+ FROM XSECTION 1
+ TO STRUCTURE 10
STARTING TIME = .00 RAIN DEPTH = 7.58 RAIN DURATION= 24.00 RAIN TABLE NO.= 8 ANT. MOIST. COND= 2
ALTERNATE NO.=24 STORM NO.=99 MAIN TIME INCREMENT = .50 HOURS

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(6.20) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 8 %.
+ XSECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
15.31	24.06	(RUNOFF)
21.25	5.86	(RUNOFF)
23.77	6.20	(RUNOFF)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS			DRAINAGE AREA =		.05 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.00	.17	.65	1.11	1.53	1.89
1											

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS Abuilt2.t20 JOB 1 PASS 6
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 8

5.00	DISCHG	2.21	2.49	2.75	3.75	4.32	4.64	4.92	5.16	5.37	5.56
10.00	DISCHG	5.59	7.35	7.86	9.24	9.60	11.05	11.66	15.12	20.38	21.31
15.00	DISCHG	23.16	23.73	19.64	16.99	15.94	11.80	11.35	8.51	7.65	6.88
20.00	DISCHG	5.80	5.71	5.71	5.72	4.60	3.88	4.13	5.56	5.73	1.45
25.00	DISCHG	.12	.00								

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.21	3.76	751.02

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .50 HOURS			DRAINAGE AREA =		.05 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.09
.00	ELEV	748.37	748.37	748.37	748.37	748.37	748.37	748.37	749.30	749.32
5.00	DISCHG	.18	.28	.39	.52	.68	.86	1.04	1.17	1.25	1.33
5.00	ELEV	749.33	749.35	749.37	749.39	749.42	749.45	749.48	749.52	749.55	749.59
10.00	DISCHG	1.42	1.53	1.65	1.79	1.96	2.10	2.28	2.40	2.53	2.70
10.00	ELEV	749.62	749.67	749.72	749.78	749.84	749.91	749.99	750.06	750.14	750.25
15.00	DISCHG	2.87	3.06	3.20	3.31	3.41	3.49	3.54	3.59	3.62	3.65
15.00	ELEV	750.26	750.48	750.59	750.67	750.75	750.81	750.86	750.89	750.92	750.94
20.00	DISCHG	3.67	3.69	3.70	3.72	3.73	3.73	3.73	3.74	3.75	3.75
20.00	ELEV	750.95	750.97	750.98	750.99	751.00	751.00	751.00	751.01	751.02	751.02
25.00	DISCHG	3.73	3.70	3.68	3.65	3.62	3.60	3.57	3.54	3.52	3.49
25.00	ELEV	751.00	750.98	750.96	750.94	750.92	750.90	750.88	750.85	750.83	750.81
30.00	DISCHG	3.47	3.44	3.42	3.39	3.37	3.34	3.32	3.29	3.27	3.24
30.00	ELEV	750.79	750.77	750.75	750.73	750.72	750.70	750.68	750.66	750.64	750.62
35.00	DISCHG	3.22	3.20	3.17	3.15	3.13	3.10	3.08	3.05	3.02	3.00
35.00	ELEV	750.60	750.58	750.56	750.55	750.53	750.51	750.49	750.47	750.46	750.44
40.00	DISCHG	2.97	2.94	2.92	2.89	2.86	2.84	2.81	2.79	2.76	2.74
40.00	ELEV	750.42	750.41	750.39	750.37	750.36	750.34	750.32	750.31	750.29	750.27
45.00	DISCHG	2.71	2.69	2.67	2.64	2.62	2.59	2.57	2.55	2.52	2.50
45.00	ELEV	750.26	750.24	750.23	750.21	750.20	750.18	750.17	750.15	750.14	750.12
50.00	DISCHG	2.48	2.46	2.44	2.41	2.39	2.37	2.35	2.33	2.30	2.28
50.00	ELEV	750.11	750.09	750.08	750.07	750.05	750.04	750.03	750.01	750.00	749.98
55.00	DISCHG	2.22	2.17	2.13	2.09	2.05	2.01	1.97	1.93	1.89	1.85
55.00	ELEV	749.96	749.94	749.92	749.91	749.89	749.87	749.86	749.84	749.82	749.81
60.00	DISCHG	1.82	1.78	1.75	1.71	1.68	1.65	1.62	1.58	1.55	1.52
60.00	ELEV	749.79	749.78	749.76	749.75	749.73	749.72	749.71	749.69	749.68	749.67
65.00	DISCHG	1.49	1.46	1.43	1.41	1.38	1.35	1.33	1.30	1.27	1.25
65.00	ELEV	749.65	749.64	749.63	749.62	749.61	749.59	749.58	749.57	749.56	749.55
70.00	DISCHG	1.23	1.20	1.18	1.15	1.13	1.08	1.03	.99	.94	.90
70.00	ELEV	749.54	749.53	749.52	749.51	749.50	749.49	749.48	749.47	749.47	749.46
75.00	DISCHG	.86	.82	.78	.74	.71	.68	.64	.62	.59	.56

75.00	ELEV	749.45	749.44	749.44	749.43	749.43	749.42	749.41	749.41	749.40	749.40
80.00	DISCHG	.53	.51	.49	.46	.44	.42	.40	.38	.37	.35
80.00	ELEV	749.39	749.39	749.39	749.38	749.38	749.37	749.37	749.37	749.36	749.36

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 PASS 6
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 9

85.00	DISCHG	.33	.32	.30	.29	.28	.26	.25	.24	.23	.22
85.00	ELEV	749.36	749.36	749.35	749.35	749.35	749.35	749.34	749.34	749.34	749.34
90.00	DISCHG	.21	.20	.19	.18	.17	.16	.16	.15	.14	.14
90.00	ELEV	749.34	749.33	749.33	749.33	749.33	749.33	749.33	749.33	749.33	749.32
95.00	DISCHG	.13	.12	.12	.11	.11	.10	.10	.09	.09	.08
95.00	ELEV	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.32	749.31
100.00	DISCHG	.08	.08	.07	.07	.07	.06	.06	.06	.06	.05
100.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
105.00	DISCHG	.05	.05	.05	.04	.04	.04	.04	.04	.03	.03
105.00	ELEV	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31	749.31
110.00	DISCHG	.03	.03	.03	.03	.03	.02	.02	.02	.02	.02
110.00	ELEV	749.31	749.31	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
115.00	DISCHG	.02	.02	.02	.02	.02	.02	.01	.01	.01	.01
115.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30	749.30
120.00	DISCHG	.01	.01	.01	.01	.01	.01	.01			
120.00	ELEV	749.30	749.30	749.30	749.30	749.30	749.30	749.30			

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID

COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 SUMMARY
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 10

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 24 STORM 1													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	2.03	24.00	.76	---	15.43	3.83	77.9
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	2.03	24.00	.72	749.51	20.00*	1.16*	23.6
ALTERNATE 24 STORM 2													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	2.51	24.00	1.12	---	15.40	5.48	111.3
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	2.51	24.00	1.08	749.64	21.50	1.45	29.5
ALTERNATE 24 STORM 3													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	3.04	24.00	1.54	---	15.38	7.36	149.7
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	3.04	24.00	1.50	749.79	21.50	1.81	36.7
ALTERNATE 24 STORM 4													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	3.80	24.00	2.18	---	15.36	10.14	206.0
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	3.80	24.00	2.15	750.01	22.00	2.33	47.3
ALTERNATE 24 STORM 5													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	4.47	24.00	2.78	---	15.34	12.60	256.2
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	4.47	24.00	2.74	750.17	23.99	2.58	52.4
ALTERNATE 24 STORM 99													
XSECTION 1	RUNOFF	.05	8	2	.50	.0	7.58	24.00	5.67	---	15.31	24.06	489.1
STRUCTURE 10	RESVOR	.05	8	2	.50	.0	7.58	24.00	5.64	751.02	24.21	3.76	76.3

TR20 XEQ 06-16-10 17:56 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS abuilt2.t20 JOB 1 SUMMARY
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 PHASE 2 DIVIDES PAGE 11

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

SECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....

ID	(SQ MI)	1	2	3	4	5	99
0 STRUCTURE 10	.05						
+							
ALTERNATE 24		1.16	1.45	1.81	2.33	2.58	3.76
(SECTION 1	.05						
ALTERNATE 24		3.83	5.48	7.36	10.14	12.60	24.06

1END OF 1 JOBS IN THIS RUN

```
1


 ********************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

  XB TR-20 FRACRUN                                    NOPLOTS
 /TITLE    NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20
 TITLE     CABEL PROJECT NO: 99-46A, MDC 5/26/2010 KRAMER PHASE 2 DIVIDES
  5 RAINFL 6              .05                                    HUFF 1ST
  8          0.          .16          .33          .43          .52          QUARTILE
  8          .60         .66          .71          .75          .79          MEDIAN -
  8          .82         .84          .86          .88          .90          POINT
  8          .92         .94          .96          .97          .98          PAGE 14
  8          1.0         1.0          1.0          1.0          1.0          CIRC 173
  9 ENDTBL
  5 RAINFL 7              .05                                    HUFF 2ND
  8          0.          .03          .08          .12          .16          QUARTILE
  8          .22         .29          .39          .51          .62          MEDIAN -
  8          .70         .76          .81          .85          .88          POINT
  8          .91         .93          .95          .97          .98          PAGE 14
  8          1.0         1.0          1.0          1.0          1.0          CIRC 173
  9 ENDTBL
  5 RAINFL 8              .05                                    HUFF 3RD
  8          0.          .03          .06          .09          .12          QUARTILE
  8          .15         .19          .23          .27          .32          MEDIAN -
  8          .38         .45          .57          .70          .79          POINT
  8          .85         .89          .92          .95          .97          PAGE 14
  8          1.0         1.0          1.0          1.0          1.0          CIRC 173
  9 ENDTBL
  5 RAINFL 9              .05                                    HUFF 4TH
  8          0.          .02          .05          .08          .10          QUARTILE
  8          .13         .16          .19          .22          .25          MEDIAN -
  8          .28         .32          .35          .39          .45          POINT
  8          .51         .59          .72          .84          .92          PAGE 14
  8          1.0         1.0          1.0          1.0          1.0          CIRC 173
  9 ENDTBL
  3 STRUCT      10
  8                      747.410      0.000        0.000
  8                      748.000      1.21         0.50
  8                      749.000      1.91         2.45
  8                      750.000      2.42         5.21
  8                      751.000      2.83         8.61
  9 ENDTBL
  3 STRUCT      20
  8                      749.88       0.50         0.00
  8                      750.000      0.67         0.10
  8                      751.000      1.24         1.59
  8                      752.000      1.62         3.37
  8                      753.000      1.92         5.40
  9 ENDTBL
  6 RUNOFF 1   1       1 0.03094      88.          0.50         1 1 1 0 1 1


 ********************80-80 LIST OF INPUT DATA (CONTINUED)*********************

  6 RESVOR 2    10 1    2 747.61                               1 1 1 0 1 1
  6 RUNOFF 1    2       1 0.01363      82.          0.50         1 1 1 0 1 1
  6 RESVOR 2    20 1    2 749.88                               1 1 1 0 1 1
    ENDATA
  7 INCREM 6              0.25
  7 COMPUT 7   1      20 0.00         7.58         24.          8 2  24  99 100YR
    ENDCMP 1
    ENDJOB 2
0*************************END OF 80-80 LIST*********************************


 EXECUTIVE CONTROL OPERATION INCREM                                          RECORD ID
+                              MAIN TIME INCREMENT =   .25 HOURS


 EXECUTIVE CONTROL OPERATION COMPUT                                          RECORD ID 100YR
+                              FROM XSECTION   1
+                                           TO STRUCTURE 20
        STARTING TIME =    .00    RAIN DEPTH =  7.58    RAIN DURATION= 24.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 2
        ALTERNATE NO.=24          STORM NO.=99    MAIN TIME INCREMENT =   .25 HOURS


 OPERATION RUNOFF   CROSS SECTION   1

           PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              15.43                        15.53                        (RUNOFF)
              21.38                         3.69                        (RUNOFF)
              23.88                         3.79                        (RUNOFF)

 TIME(HRS)        FIRST HYDROGRAPH POINT =   .00 HOURS     TIME INCREMENT =   .25 HOURS     DRAINAGE AREA =    .03 SQ.MI.
    .00    DISCHG          .00          .00          .00          .00          .00          .00          .00          .04          .20          .40
   2.50    DISCHG          .61          .80          .97         1.13         1.28         1.42         1.54         1.66         1.76         1.86
   5.00    DISCHG         1.95         2.04         2.12         2.19         2.26         2.54         3.00         3.24         3.37         3.46
   7.50    DISCHG         3.55         3.62         3.69         3.75         3.81         3.86         3.91         3.96         4.01         4.14
  10.00    DISCHG         4.70         5.05         5.19         5.26         5.49         6.09         6.39         6.52         6.59         6.94
  12.50    DISCHG         7.53         7.78         7.88         8.01        10.15        12.69        13.58        13.90        14.10        14.72
  15.00    DISCHG        15.22        15.42        15.52        15.17        12.79        11.42        11.03        10.93        10.33         8.46
  17.50    DISCHG         7.63         7.39         7.33         6.67         5.49         5.06         4.93         4.88         4.43         3.91
  20.00    DISCHG         3.74         3.69         3.68         3.67         3.67         3.67         3.68         3.57         2.96         2.60
  22.50    DISCHG         2.50         2.47         2.65         3.29         3.57         3.65         3.68         2.71          .93          .27
  25.00    DISCHG          .08          .02          .00
```

--- HYDROGRAPH FOR XSECTION 1, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE IO

PEAK TIME(HRS) 24.23 | PEAK DISCHARGE(CFS) 2.62 | PEAK ELEVATION(FEET) 750.89

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .25 HOURS			DRAINAGE AREA = .03 SQ.MI.		
.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02
.00	ELEV	747.41	747.41	747.41	747.41	747.41	747.41	747.41	747.41	747.41	747.42
2.50	DISCHG	.04	.08	.12	.16	.21	.27	.33	.39	.45	.52
2.50	ELEV	747.43	747.45	747.47	747.49	747.51	747.54	747.57	747.60	747.63	747.66
5.00	DISCHG	.59	.66	.73	.80	.87	.94	1.03	1.13	1.21	1.23
5.00	ELEV	747.70	747.73	747.76	747.80	747.83	747.87	747.91	747.96	748.01	748.03
7.50	DISCHG	1.25	1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.39	1.41
7.50	ELEV	748.05	748.08	748.10	748.13	748.15	748.18	748.21	748.24	748.26	748.29
10.00	DISCHG	1.44	1.46	1.49	1.52	1.56	1.58	1.61	1.65	1.68	1.72
10.00	ELEV	748.32	748.36	748.40	748.44	748.48	748.52	748.57	748.62	748.68	748.73

1

TR20 XEQ 05-27-10 09:32 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20 JOB 1 PASS 1
REV PC 09/03(.2) CEBEL PROJECT NO: 99-48A, MDC 5/26/2010 KRAMER PHASE 2 DIVIDES PAGE 1

12.50	DISCHG	1.76	1.80	1.85	1.89	1.93	1.97	2.01	2.05	2.10	2.15
12.50	ELEV	748.79	748.85	748.91	748.98	749.04	749.11	749.19	749.28	749.37	749.46
15.00	DISCHG	2.19	2.24	2.29	2.34	2.39	2.42	2.45	2.47	2.49	2.50
15.00	ELEV	749.56	749.65	749.75	749.85	749.94	750.01	750.06	750.11	750.16	750.21
17.50	DISCHG	2.52	2.53	2.54	2.55	2.56	2.57	2.58	2.58	2.59	2.59
17.50	ELEV	750.24	750.27	750.30	750.33	750.35	750.36	750.38	750.39	750.41	750.41
20.00	DISCHG	2.59	2.60	2.60	2.60	2.60	2.61	2.61	2.61	2.61	2.61
20.00	ELEV	750.42	750.43	750.44	750.44	750.45	750.46	750.46	750.47	750.47	750.47
22.50	DISCHG	2.61	2.61	2.61	2.61	2.62	2.62	2.62	2.62	2.62	2.62
22.50	ELEV	750.47	750.47	750.47	750.47	750.48	750.48	750.49	750.49	750.49	750.48
25.00	DISCHG	2.61	2.60	2.60	2.59	2.58	2.58	2.57	2.56	2.56	2.55
25.00	ELEV	750.46	750.45	750.43	750.41	750.40	750.38	750.37	750.35	750.34	750.32
27.50	DISCHG	2.55	2.54	2.53	2.53	2.52	2.51	2.51	2.50	2.50	2.49
27.50	ELEV	750.31	750.29	750.27	750.26	750.24	750.23	750.21	750.20	750.18	750.17
30.00	DISCHG	2.48	2.48	2.47	2.46	2.46	2.45	2.45	2.44	2.43	2.43
30.00	ELEV	750.15	750.14	750.12	750.11	750.09	750.08	750.06	750.05	750.03	750.02
32.50	DISCHG	2.42	2.41	2.40	2.39	2.39	2.38	2.37	2.36	2.35	2.34
32.50	ELEV	750.00	749.99	749.97	749.95	749.93	749.92	749.90	749.88	749.86	749.84
35.00	DISCHG	2.33	2.32	2.31	2.31	2.30	2.29	2.28	2.27	2.26	2.25
35.00	ELEV	749.83	749.81	749.79	749.77	749.76	749.74	749.72	749.71	749.69	749.67
37.50	DISCHG	2.24	2.24	2.23	2.22	2.21	2.20	2.19	2.19	2.18	2.17
37.50	ELEV	749.66	749.64	749.62	749.61	749.59	749.57	749.56	749.54	749.52	749.51
40.00	DISCHG	2.16	2.15	2.14	2.14	2.13	2.12	2.11	2.10	2.10	2.09
40.00	ELEV	749.49	749.47	749.46	749.44	749.43	749.41	749.39	749.38	749.36	749.35
42.50	DISCHG	2.08	2.07	2.06	2.06	2.05	2.04	2.03	2.02	2.02	2.01
42.50	ELEV	749.33	749.32	749.30	749.29	749.27	749.26	749.24	749.22	749.21	749.19
45.00	DISCHG	2.00	1.99	1.99	1.98	1.97	1.96	1.96	1.95	1.94	1.93
45.00	ELEV	749.18	749.16	749.15	749.13	749.12	749.10	749.09	749.08	749.06	749.05
47.50	DISCHG	1.93	1.92	1.91	1.90	1.89	1.87	1.86	1.84	1.83	1.82
47.50	ELEV	749.03	749.02	749.00	748.99	748.97	748.95	748.93	748.91	748.89	748.87
50.00	DISCHG	1.80	1.79	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.69
50.00	ELEV	748.85	748.83	748.81	748.79	748.77	748.75	748.74	748.72	748.70	748.68
52.50	DISCHG	1.67	1.66	1.65	1.64	1.63	1.61	1.60	1.59	1.58	1.57
52.50	ELEV	748.66	748.65	748.63	748.61	748.59	748.58	748.56	748.54	748.53	748.51
55.00	DISCHG	1.55	1.54	1.53	1.52	1.51	1.50	1.49	1.48	1.47	1.45
55.00	ELEV	748.49	748.48	748.46	748.44	748.43	748.41	748.40	748.38	748.36	748.35
57.50	DISCHG	1.44	1.43	1.42	1.41	1.40	1.39	1.38	1.37	1.36	1.35
57.50	ELEV	748.33	748.32	748.30	748.29	748.27	748.26	748.24	748.23	748.22	748.20
60.00	DISCHG	1.34	1.33	1.32	1.31	1.30	1.29	1.28	1.27	1.26	1.25
60.00	ELEV	748.19	748.17	748.16	748.14	748.13	748.12	748.10	748.09	748.08	748.06
62.50	DISCHG	1.24	1.24	1.23	1.22	1.20	1.14	1.08	1.03	.98	.93
62.50	ELEV	748.05	748.04	748.02	748.01	747.99	747.97	747.94	747.91	747.89	747.87
65.00	DISCHG	.89	.84	.80	.76	.73	.69	.66	.63	.60	.57
65.00	ELEV	747.84	747.82	747.80	747.78	747.76	747.75	747.73	747.72	747.70	747.69
67.50	DISCHG	.54	.51	.49	.46	.44	.42	.40	.38	.36	.34
67.50	ELEV	747.67	747.66	747.65	747.64	747.62	747.61	747.60	747.60	747.59	747.58
70.00	DISCHG	.33	.31	.30	.28	.27	.25	.24	.23	.22	.21
70.00	ELEV	747.57	747.56	747.55	747.55	747.54	747.53	747.53	747.52	747.52	747.51
72.50	DISCHG	.20	.19	.18	.17	.16	.15	.15	.14	.13	.13

1

TR20 XEQ 05-27-10 09:32 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20 JOB 1 PASS 1
REV PC 09/03(.2) CEBEL PROJECT NO: 99-48A, MDC 5/26/2010 KRAMER PHASE 2 DIVIDES PAGE 2

72.50	ELEV	747.51	747.50	747.50	747.49	747.49	747.49	747.48	747.48	747.47	747.47

--- HYDROGRAPH FOR STRUCTURE 10, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS) 15.46 | PEAK DISCHARGE(CFS) 6.43 | PEAK ELEVATION(FEET) (RUNOFF)
23.98 | 1.62 | (RUNOFF)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .25 HOURS			DRAINAGE AREA = .01 SQ.MI.		
2.50	DISCHG	.00	.03	.08	.14	.20	.26	.32	.37	.41	.46
5.00	DISCHG	.50	.54	.58	.62	.65	.75	.91	1.00	1.06	1.11

7.50	DISCHG	1.16	1.20	1.24	1.27	1.31	1.34	1.37	1.40	1.43	1.49
10.00	DISCHG	1.70	1.84	1.91	1.95	2.05	2.29	2.42	2.49	2.53	2.68
12.50	DISCHG	2.92	3.04	3.10	3.16	4.03	5.07	5.46	5.62	5.73	6.02
15.00	DISCHG	6.29	6.36	6.42	6.30	5.33	4.77	4.62	4.59	4.34	3.56
17.50	DISCHG	3.21	3.12	3.09	2.82	2.32	2.14	2.09	2.07	1.88	1.66
20.00	DISCHG	1.59	1.57	1.56	1.56	1.56	1.56	1.56	1.52	1.26	1.11
22.50	DISCHG	1.06	1.05	1.13	1.40	1.52	1.56	1.57	1.16	.40	.11
25.00	DISCHG	.03	.01	.00							

--- HYDROGRAPH FOR XSECTION 2, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

OPERATION RESVOR STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
24.00	1.39	751.40	
21.75	1.39	751.41	* FIRST POINT OF FLAT PEAK

FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .25 HOURS DRAINAGE AREA = .01 SQ.MI.

TIME(HRS)										
2.50	DISCHG	.00	.00	.01	.02	.04	.07	.10	.13	.16	.20
2.50	ELEV	749.88	749.88	749.88	749.88	749.89	749.89	749.90	749.90	749.91	749.92
5.00	DISCHG	.23	.27	.31	.35	.38	.43	.48	.54	.60	.67
5.00	ELEV	749.92	749.93	749.94	749.94	749.95	749.96	749.97	749.98	749.99	750.00
7.50	DISCHG	.67	.68	.68	.69	.69	.70	.70	.71	.71	.72
7.50	ELEV	750.01	750.01	750.02	750.03	750.04	750.05	750.05	750.06	750.07	750.08
10.00	DISCHG	.72	.73	.74	.75	.76	.77	.78	.80	.81	.83
10.00	ELEV	750.10	750.11	750.13	750.14	750.16	750.18	750.20	750.22	750.25	750.27
12.50	DISCHG	.84	.86	.88	.89	.91	.94	.98	1.01	1.05	1.09
12.50	ELEV	750.30	750.33	750.36	750.39	750.43	750.48	750.54	750.60	750.67	750.73
15.00	DISCHG	1.13	1.17	1.21	1.25	1.27	1.28	1.30	1.31	1.33	1.34
15.00	ELEV	750.80	750.87	750.95	751.01	751.07	751.11	751.15	751.19	751.23	751.26
17.50	DISCHG	1.35	1.35	1.36	1.37	1.37	1.38	1.38	1.38	1.39	1.39
17.50	ELEV	751.28	751.30	751.32	751.34	751.35	751.36	751.37	751.38	751.39	751.39
20.00	DISCHG	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
20.00	ELEV	751.39	751.40	751.40	751.40	751.40	751.40	751.41	751.41	751.41	751.41

1

TR20 XEQ 05-27-10 09:32 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20 JOB 1 PASS 1
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 KRAMER PHASE 2 DIVIDES PAGE 3

22.50	DISCHG	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.38
22.50	ELEV	751.40	751.40	751.39	751.39	751.39	751.40	751.40	751.40	751.39	751.38
25.00	DISCHG	1.38	1.37	1.37	1.36	1.35	1.35	1.34	1.34	1.33	1.32
25.00	ELEV	751.36	751.35	751.33	751.31	751.30	751.28	751.27	751.25	751.24	751.22
27.50	DISCHG	1.32	1.31	1.31	1.30	1.29	1.29	1.28	1.28	1.27	1.27
27.50	ELEV	751.21	751.19	751.17	751.16	751.14	751.13	751.11	751.10	751.09	751.07
30.00	DISCHG	1.26	1.26	1.25	1.24	1.24	1.23	1.22	1.21	1.20	1.19
30.00	ELEV	751.06	751.04	751.03	751.01	751.00	750.98	750.96	750.95	750.93	750.91
32.50	DISCHG	1.18	1.17	1.16	1.15	1.14	1.14	1.13	1.12	1.11	1.10
32.50	ELEV	750.90	750.88	750.86	750.85	750.83	750.82	750.80	750.79	750.77	750.75
35.00	DISCHG	1.09	1.08	1.07	1.07	1.06	1.05	1.04	1.03	1.02	1.02
35.00	ELEV	750.74	750.72	750.71	750.69	750.68	750.66	750.65	750.64	750.62	750.61
37.50	DISCHG	1.01	1.00	.99	.98	.98	.97	.96	.95	.95	.94
37.50	ELEV	750.59	750.58	750.57	750.55	750.54	750.53	750.51	750.50	750.49	750.47
40.00	DISCHG	.93	.92	.92	.91	.90	.90	.89	.88	.87	.87
40.00	ELEV	750.46	750.45	750.43	750.42	750.41	750.40	750.38	750.37	750.36	750.35
42.50	DISCHG	.86	.85	.85	.84	.83	.83	.82	.81	.81	.80
42.50	ELEV	750.33	750.32	750.31	750.30	750.29	750.28	750.27	750.25	750.24	750.23
45.00	DISCHG	.80	.79	.78	.78	.77	.76	.76	.75	.75	.74
45.00	ELEV	750.22	750.21	750.20	750.19	750.18	750.17	750.16	750.15	750.13	750.12
47.50	DISCHG	.74	.73	.72	.72	.71	.71	.70	.70	.69	.68
47.50	ELEV	750.11	750.10	750.09	750.08	750.07	750.06	750.05	750.04	750.04	750.03
50.00	DISCHG	.68	.67	.65	.56	.49	.43	.37	.32	.28	.24
50.00	ELEV	750.02	750.01	750.00	749.98	749.97	749.96	749.95	749.94	749.93	749.92
52.50	DISCHG	.21	.19	.16	.14	.12	.11	.09	.08	.07	.06
52.50	ELEV	749.92	749.91	749.91	749.91	749.90	749.90	749.90	749.89	749.89	749.89
55.00	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
55.00	ELEV	749.89	749.89	749.89	749.89	749.89	749.88	749.88	749.88	749.88	749.88
57.50	DISCHG	.01	.01	.01	.01	.01					
57.50	ELEV	749.88	749.88	749.88	749.88	749.88					

--- HYDROGRAPH FOR STRUCTURE 20, ALTERNATE 24, STORM 99, ADDED TO OUTPUT HYDROGRAPH FILE ---

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID

1

TR20 XEQ 05-27-10 09:32 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20 JOB 1 SUMMARY
REV PC 09/83(.2) CBBEL PROJECT NO: 99-48A, MDC 5/26/2010 KRAMER PHASE 2 DIVIDES PAGE 4

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/	STANDARD	RAIN	ANTEC	MAIN	PRECIPITATION	PEAK DISCHARGE

STRUCTURE ID	CONTROL OPERATION	DRAINAGE AREA (SQ MI)	TABLE #	MOIST COND	TIME INCREM (HR)	BEGIN (HR)	AMOUNT (IN)	DURATION (HR)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 24 STORM 99													
XSECTION 1	RUNOFF	.03	8	2	.25	.0	7.58	24.00	6.16	---	15.43	15.53	502.1
STRUCTURE 10	RESVOR	.03	8	2	.25	.0	7.58	24.00	6.12	750.49	24.23	2.62	84.8
XSECTION 2	RUNOFF	.01	8	2	.25	.0	7.58	24.00	5.46	---	15.46	6.43	471.5
STRUCTURE 20	RESVOR	.01	8	2	.25	.0	7.58	24.00	5.46	751.41	21.75	1.39	102.3

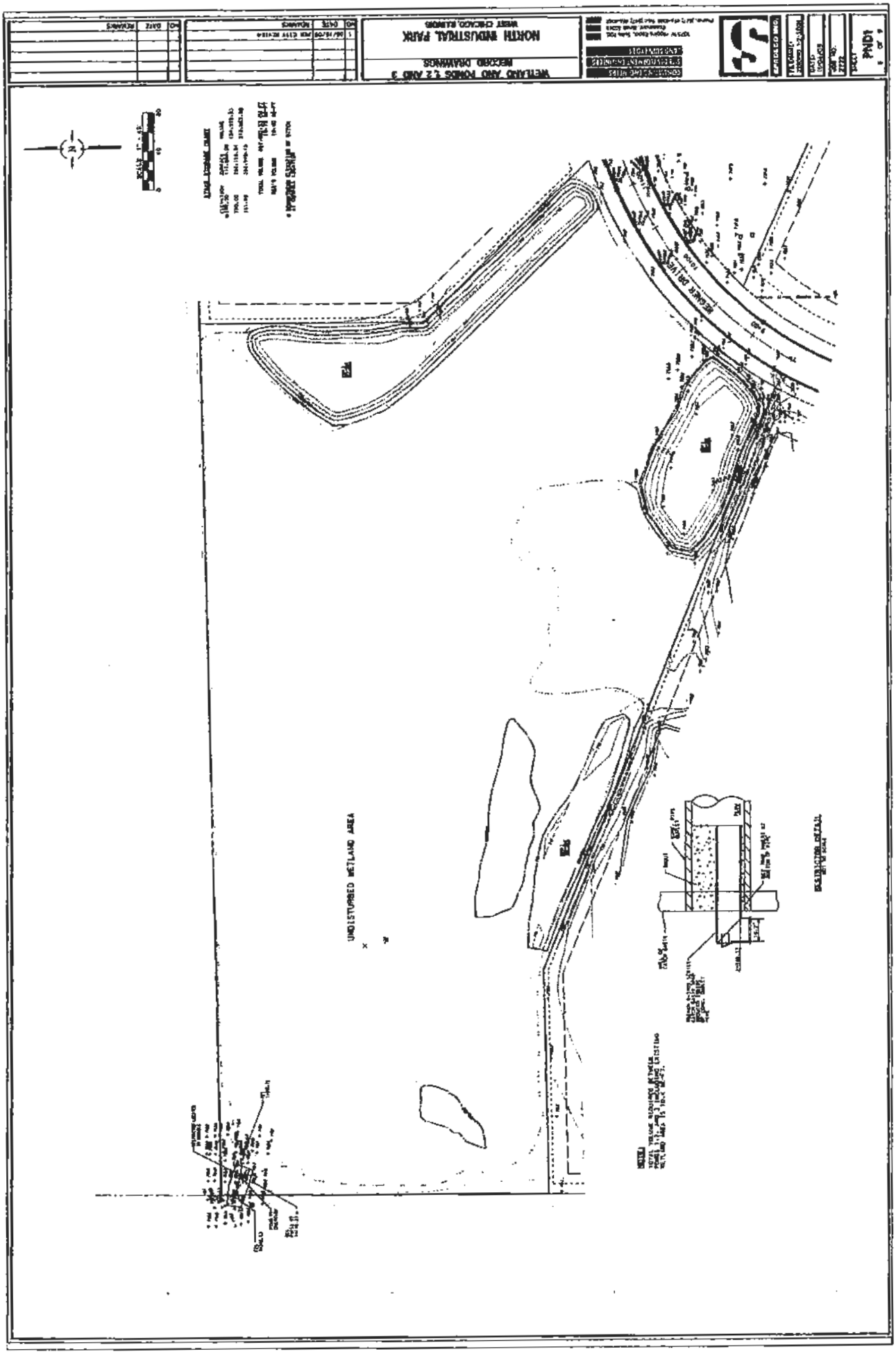
1

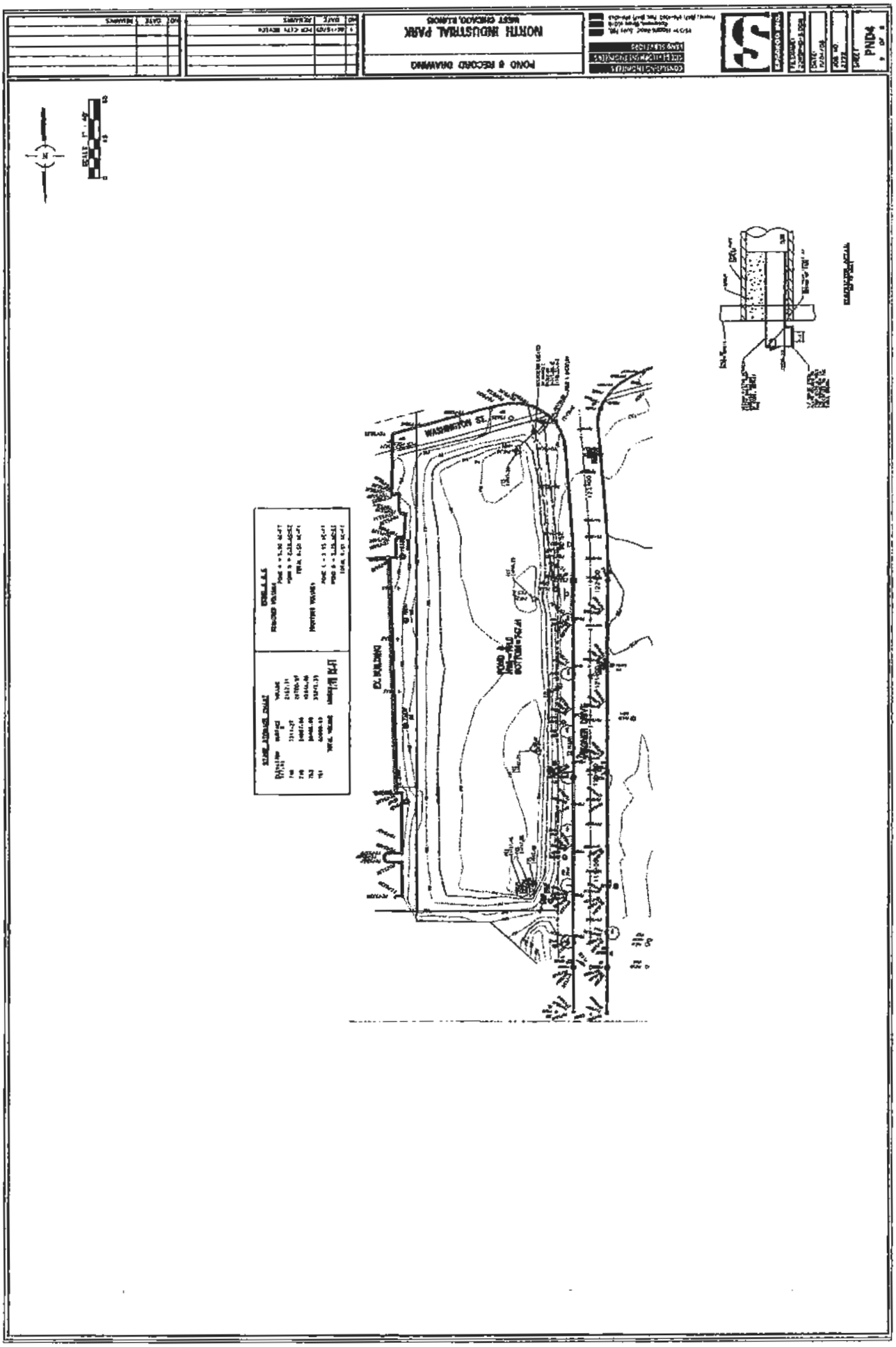
TR20 XEQ 05-27-10 09:32 NORTH INDUSTRIAL PARK, WEST CHICAGO, ILLINOIS ACCEPTED abuilt22.t20 JOB 1 SUMMARY
REV PC 09/89(.2) CORE1 PROJECT NO: 99-40A, MDC 5/26/2010 KRAHER PHASE 2 DIVIDES PAGE 5

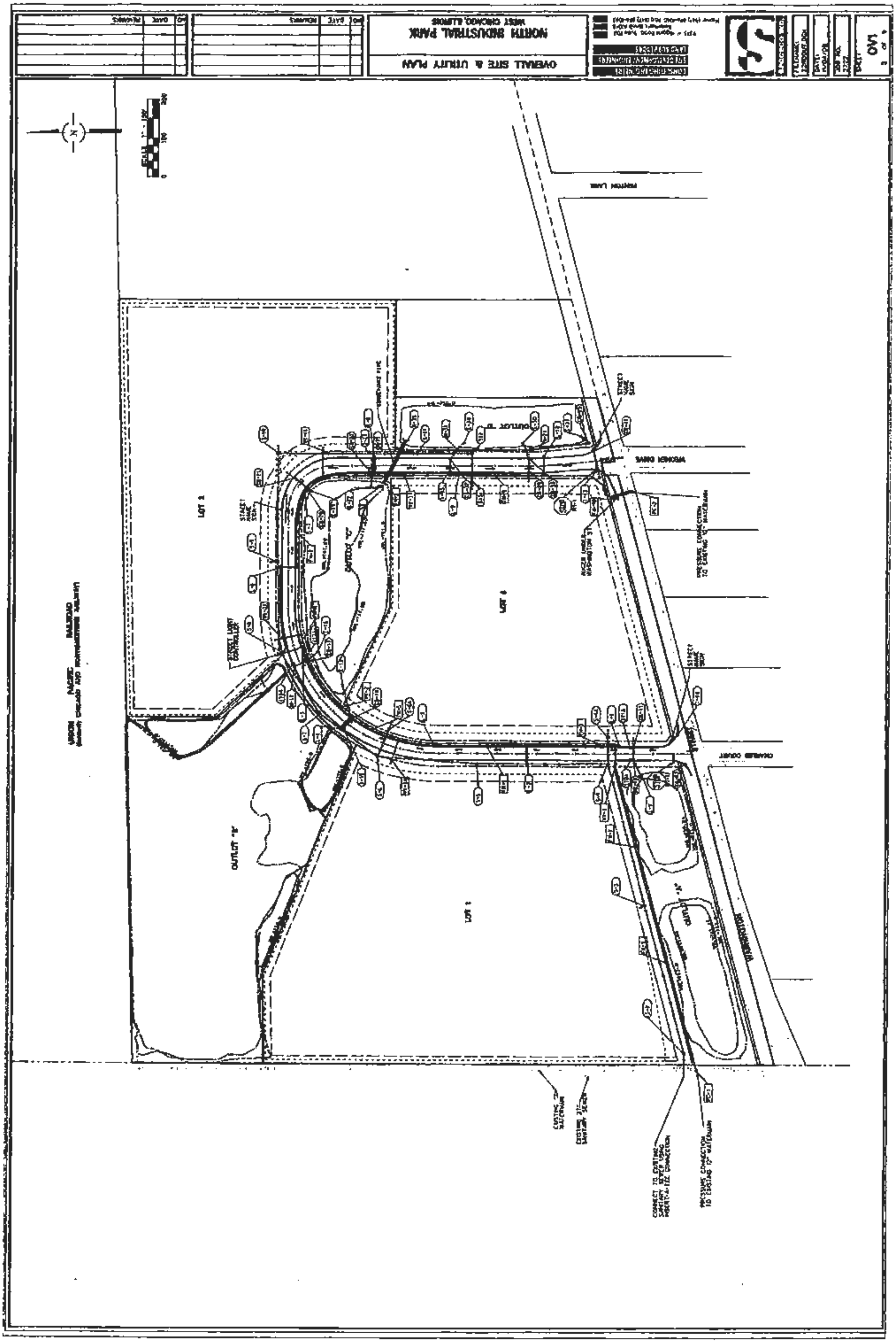
SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

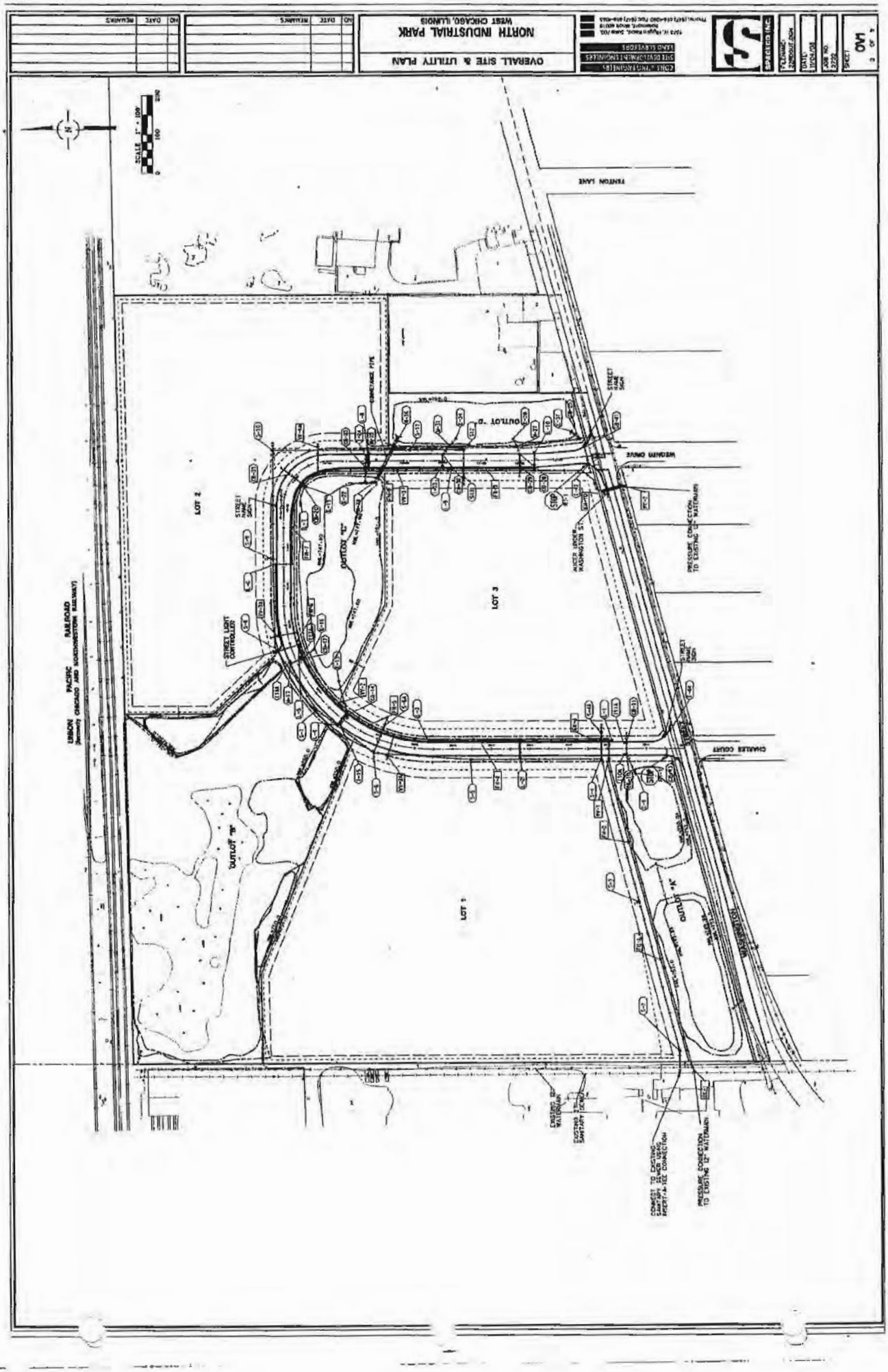
XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 99
0 STRUCTURE 20	.01	
+ ALTERNATE 24		1.39
0 STRUCTURE 10	.03	
+ ALTERNATE 24		2.62
0 XSECTION 1	.03	
+ ALTERNATE 24		15.53
0 XSECTION 2	.01	
+ ALTERNATE 24		6.43

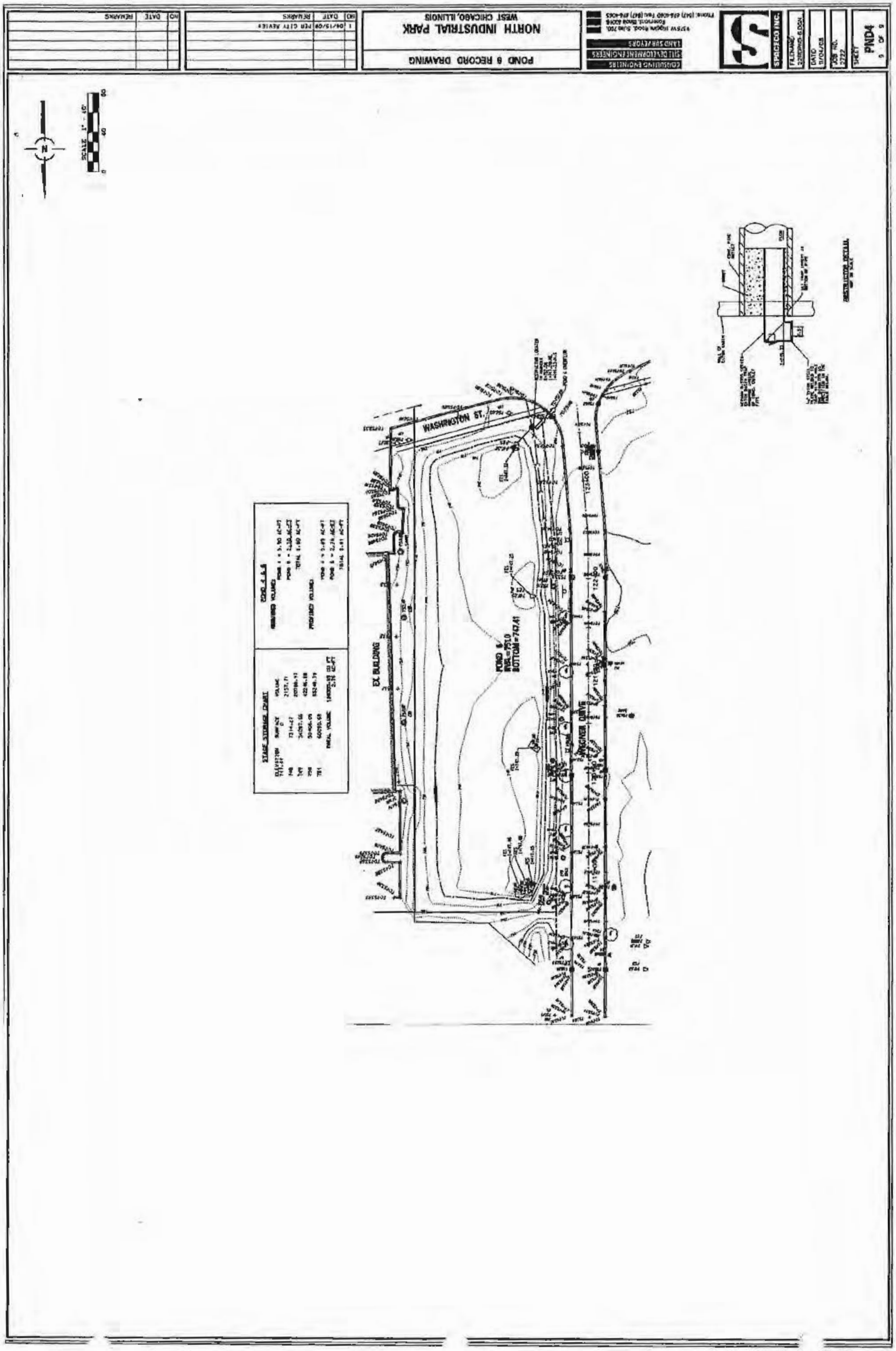
1END OF 1 JOBS IN THIS RUN

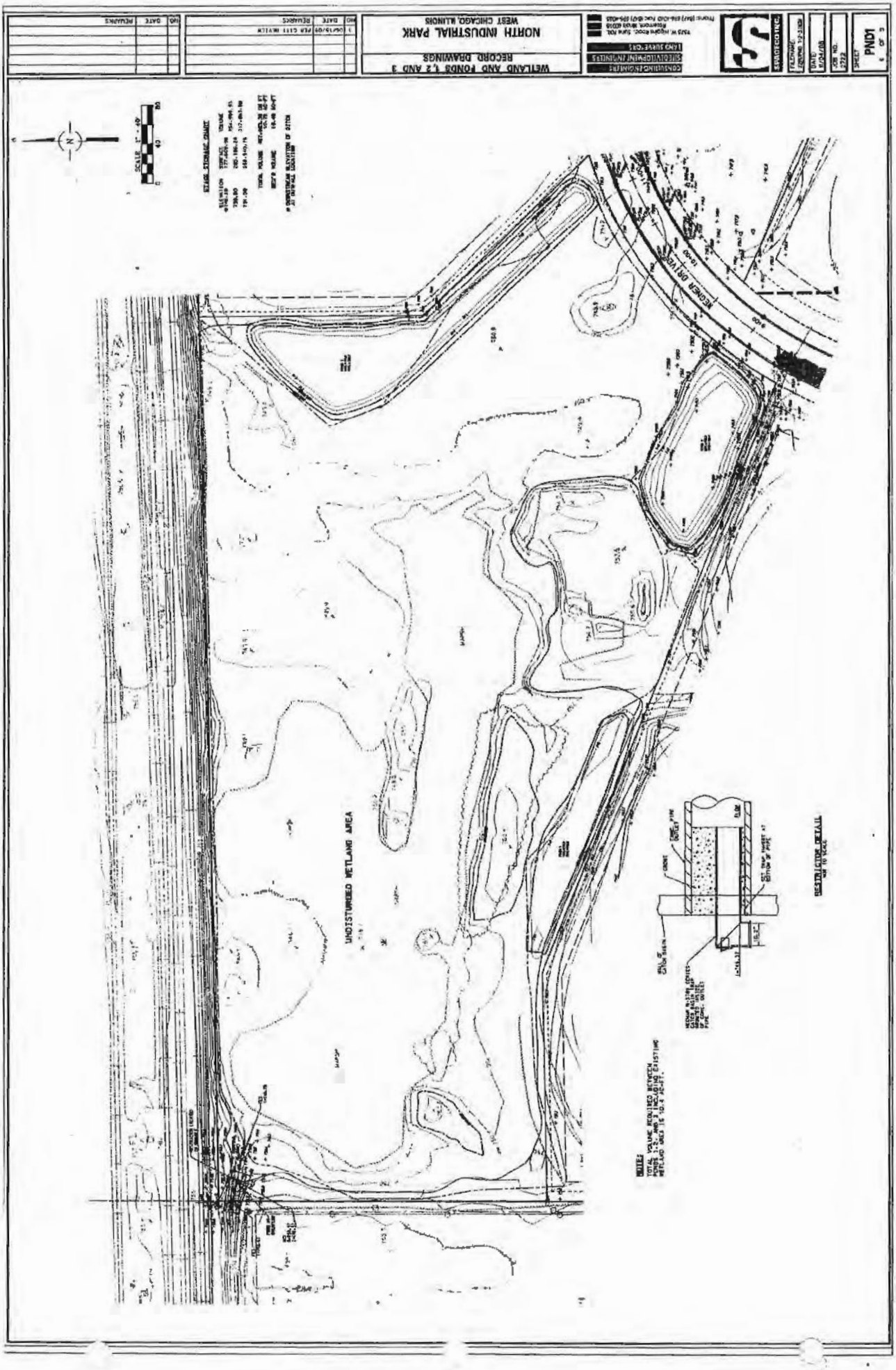

NORTH INDUSTRIAL PARK
WEST CHICAGO, ILLINOIS
WETLAND AND POND C-2 AND 3
RECORD DRAWINGS
UNDISTURBED WETLAND AREA


POND & RECORD DRAWING
NORTH INDUSTRIAL PARK
WEST CHICAGO, ILLINOIS
PND4
WASHINGTON ST.
EX. BUILDING




OVERALL SITE & UTILITY PLAN
NORTH INDUSTRIAL PARK
WEST CHICAGO, ILLINOIS
LOT 1
LOT 2
LOT 3
OUTLOT "A"
OUTLOT "B"
OUTLOT "C"
OUTLOT "K"
FENTON LANE
WASHINGTON ST
CHARLES COURT
STREET LIGHT CONTROLLER
STREET NAME SIGN
STOP
PRESSURE CONNECTION TO EXISTING 12" WATERMAIN
CONNECT TO EXISTING SANITARY SEWER MANHOLE-A-SEE CONNECTION
EXISTING 12" WATERMAIN
EXISTING SANITARY SEWER
UNION PACIFIC RAILROAD
(formerly CHICAGO AND NORTHWESTERN RAILWAY)


POND 6 RECORD DRAWING
NORTH INDUSTRIAL PARK
WEST CHICAGO, ILLINOIS
WASHINGTON ST.
EX BUILDING
PND4


WETLAND AND PONDS 1, 2 AND 3
RECORD DRAWINGS
NORTH INDUSTRIAL PARK
WEST CHICAGO, ILLINOIS
SCALE 1" = 40'
UNDISTURBED WETLAND AREA
RECKER DRIVE
NOTES:

9

ATTACHMENT 9: SITE SAFETY CONTINGENCY PLAN

CONTINGENCY PLAN (831.07)

This purpose of this contingency plan is to summarize and compile procedures to be employed in the event of a fire or unplanned release of non-hazardous material that could be a threat to human health and the environment.

The plan also includes steps taken during a medical emergency and responses to miscellaneous circumstances that create nuisance conditions at the site requiring a remedy.

Health and Safety

In order to maintain the health and safety of employees, the following measures are planned:

a. Provide areas where employees can wash their hands and use hand sanitizers during the work day.
b. Make available as needed the use of safety equipment such as gloves, hearing protection, safety glasses, masks, hard hats and safety vests.
c. Implement the in the Mulch Yard as outlined in **Appendix A** to the Contingency Plan

Medical Emergencies:

a. Medical first aid equipment will be kept at the equipment maintenance building.
b. In the event of an injury the injured person shall not be moved unless there is an immediate danger.
c. Call for emergency medical help if necessary.
d. In case of chemical or dust exposure, rinse the effected skin or eyes with running water for at least 10 minutes.
e. Keep the victim calm until emergency medical help arrives.

Miscellaneous Conditions:

a. This contingency plan has been established to addresses the contingencies set forth in Section 830.202(c):

1. Equipment Breakdowns:

Kramer Tree Specialists, Inc. maintains a fully operational tree care and mulch production business on property where the leaf mulch production facility is planned. Some equipment used for the leaf mulch production facility is also used in the tree care business and associated wood mulch production. Qualified repair

technicians are available from the manufacturer to deal with breakdown of equipment. Records are maintained on each piece of equipment to ensure it stays in service. In the event of equipment failure that impairs the ability of the site to function, additional equipment will be supplied through a rental.

2. Odors

When a complaint is logged, the cause of the odor will be determined and remedied by implementing procedures outlined in Section 4: Operating Standards (g). Odor is typically the result of anaerobic conditions, which rarely occurs during storage and excavation of the processed leaf piles. Use thermometers and correlate data with odor events to identify odor producing conditions before they cause a problem. Correcting the situation involves several options. These include; maintaining pile density on the outer slope surface, excavating the pile to increase air flow; and placing a blanket of high-carbon mulch material over the pile to absorb odors. Avoid excavating piles during still, humid weather conditions and have odor neutralizing agents available that can be sprayed on the piles. Also, maintain proper drainage on the mulch production pad by keeping drain inlets clear and remove loose organic material between piles.

3. Unacceptable Waste Delivered to the Facility

Unacceptable waste will be rejected, prior to unloading, if visibly noticeable, by the Site Yard Manager. If municipal solid waste or other non-mulching waste is dumped at the facility, it will be promptly removed and placed in a refuse container. The closest disposal facility is the DuKane Transfer Station on Powis Road operated by the Groot Industries

Often, small non-mulching materials are inadvertently accepted as "incidental" to the load (rocks, plastic bags, etc.). These materials will be removed during the unloading and stacking of leaves, and disposed of properly.

4. Groundwater Contamination

A continuous reinforced concrete mulch storage pad surface will be maintained at all times between it and the water table. Groundwater contamination from the leaf mulch production facility located on this pad is highly unlikely. Maintaining the concrete pad to allow drainage between the piles is the best method to prevent overflow on to bare ground and create the possibility of infiltration to the ground water table.

5. Accidental Release of Special Waste

Should stored materials become contaminated by antifreeze, diesel fuel or hydraulic oil from trucks and heavy equipment, the suspect material will undergo Special Waste Testing and Approval protocols as necessary by an IEPA approved sanitary landfill capable of accepting Special Waste. Once the waste is approved, it will be transported by a licensed special waste hauler and disposed of properly. The nearest facility is the DeKalb Landfill.

For small spills of 10 gallons or less, facility staff will clean the spill using absorbent materials that will be disposed of properly. During the clean up, fire extinguishers will be close by to prevent material ignition. For larger spills the Site Yard Manager will assess the threat to human health and the environment, and call for assistance from outside local contractors to contain the release.

Based on the characteristics of the released material, the Site Yard Manager will designate proper personal protective equipment to be worn. This includes gloves, hard hat and eye protection. The equipment will be cleaned after the incident.

6. Fires, Dust, Noise, Vectors, Power Outages and Unusual Traffic Conditions

<u>Fires</u>

Fires can occur within piles when temperatures rise above the combustion temperature of the materials. This is unlikely in properly maintained piles where temperatures average is less than 60° C. Maintain all leaf storage piles to the proper maximum height to prevent overheating. Maintain adequate pile spacing for equipment mobilization

and access to burning material. Some procedures to be implemented in case of a fire or other emergency include:

A. Depending on the magnitude of the fire incident and the amount and characteristics of the material, the following procedures are recommended:

1. The easiest means of controlling fires is to keep them from occurring. This includes constant evaluation of temperature measurements to identify abnormal high temperatures; making careful observations to identify excess steam, smoke and isolating smoldering conditions. Kramer Tree Specialists has a SOP for fire prevention and these are included in **Appendix B.**

   In the event of a small contained fire that can be controlled by facility personnel, it will be extinguished using on-site fire extinguishers (located at the maintenance building and on each facility vehicle), with clean dirt to smother the fire, or with water following the Standard Operating Procedures for fire suppression located in **Appendix C**. Other methods include isolating and spreading the burning material to create a fire break in the affected pile..

2. If site personnel are unable to extinguish the fire, they will notify all personnel to leave the area and contact the West Chicago Fire Department. The Department phone number will be posted at the maintenance building.

3. The route of egress from the site is from the yard access road to Charles Court.

Water is available from a hydrant located at the concrete pad in the mulch yard and located on the property controlled by the operator.

Dust

Dust problems will be remedied by watering access roads as needed. When grinding and blending, adequate moisture to the feedstock will be maintained to prevent excess dust.

Noise

Noise is controlled through the use of mufflers on all vehicles. Maintenance of vehicles insures that excessive noise is kept to a minimum. The location of the site is in a predominately industrial area, where plant equipment is operated, such that the noise created by the mulch yard machinery should not be bothersome.

Power Outage

In the event of a power outage, the Site Yard Manager will keep the hand tickets until he is able to register the receipt of loads. The receiving hours for the site are such that daylight will be adequate for this task.

Workers on the site receive and send communications by cell phone and/or two way radios. A power outage should not affect communications.

Vectors

Rodent problems will be remedied by contracting with an extermination contractor who will visit the site and provide traps for rodents as needed. Insect populations will be controlled using good housekeeping measures and selective use of pesticides. Mosquitoes will be kept to a minimum by preventing standing water to accumulate.

Traffic

Traffic on Charles Court is very light near the facility, and if adverse weather conditions or accidents occur, the facility will close temporarily until the episode is over. Alternatively, in the case of adverse weather,

steps will be taken to slow traffic into and out of the facility to avoid accidents. Such steps might include the removal of snow, directing traffic manually in the appropriate safety clothing, and temporary repairs to roads. In the case of an accident, traffic will be re-routed or slowed to allow emergency personnel to gain access to the situation.

Traffic in the mulch yard is controlled using an SOP for driving within the yard. This SOP is included in **Appendix D** to the Operating Plan.

b. The facility contingency plan will be available on-site and implemented as necessary. In addition, Kramer Tree Specialists holds an annual mulch production orientation meeting during the Spring of each year to review operating procedures and safety in the mulch yard. This SOP is included in **Appendix E** to the Operating Plan

Emergency Contacts:

Site Yard Manager (Primary Emergency Coordinator):

Tim Peters, 630-440-3912 cell; 640-231-1512 home

Operations Director (Secondary Emergency Coordinator):

Rick Thomas, 630-229-9142 cell; 630-466-1483 home

West Chicago Fire Protection District: 506 Lyman Street, West Chicago, Illinois
(630) 520-0124

West Chicago Police Department: Emergencies call 911 or for non-emergencies call (630) 293-222

Central DuPage Hospital: 25 North Winfield Road, Winfield, Illinois
(630)933-2600

Illinois State Emergency Services and Disaster Agency: (217) 782-2860

Illinois EPA Response Center: (217)782-3637

National Emergency Response Center: (800) 424-8802