

G:\Project\lak\13486\bridge\lak002_0395C\sheets\002_0395CE0001.dgn 8/4/2008 2:10:24 PM djpozity

PARTICIPATION		ESTIMATED QUANTITIES					CALC. BY: ABS DATE: 10/07 CHK'D BY: BMG DATE: 10/07	AS PER PLAN
I REHAB	II TRAC	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	STRUCTURE SHEET NO.	
1		202	20010	1	EACH	HEADWALL REMOVED		
315		202	35200	315	FT	PIPE REMOVED, OVER 24"		
150		202	38000	150	FT	GUARDRAIL REMOVED		
10		202	75000	10	FT	FENCE REMOVED		
1		202	75250	1	EACH	GATE REMOVED		
21	62	203	10000	83	CU. YD.	EXCAVATION		
1138	3415	203	20000	4553	CU. YD.	EMBANKMENT		
19	56	301	46001	75	CU. YD.	ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN		
20	62	304	20000	82	CU. YD.	AGGREGATE BASE		
5	16	448	46050	21	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22		
4	11	448	47020	15	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22		
160	480	601	32004	640	CU. YD.	ROCK CHANNEL PROTECTION, TYPE A WITH FABRIC FILTER		
4.4	13.1	602	20000	17.5	CU. YD.	CONCRETE MASONRY		
79	236	603	26200	315	FT	72" CONDUIT, TYPE B		
	1	604	31500	1	EACH	MANHOLE, NO. 3		
1	2	604	98000	3	EACH	DRAINAGE STRUCTURE MISC.: 12" PIPE CONNECTION		
	1	604	98000	1	EACH	DRAINAGE STRUCTURE MISC.: 24" PIPE CONNECTION		
	1	604	98000	1	EACH	DRAINAGE STRUCTURE MISC.: 27" PIPE CONNECTION		
1	2	604	98000	3	EACH	DRAINAGE STRUCTURE MISC.: 30" PIPE CONNECTION		
	1	604	98000	1	EACH	DRAINAGE STRUCTURE MISC.: 66" PIPE CONNECTION		
112.5		606	13000	112.5	FT	GUARDRAIL TYPE 5		
1		606	22010	1	EACH	ANCHOR ASSEMBLY, TYPE E-98		
1		606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T		
20		607	20000	20	FT	FENCE, TYPE CL		
1		607	50901	1	EACH	GATE, TYPE CL, AS PER PLAN	9/11 & 10/11	
37	110	836	10020	147	SO. YD.	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2		
65	196	837	10001	261	FT	LINER PIPE, AS PER PLAN	3/11	
250	749	837	10001	999	FT	LINER PIPE, AS PER PLAN	3/11	
650	1950	837	20001	2,600	CU. YD.	BACKFILL FOR LINER PIPE, AS PER PLAN	3/11	

SOIL PARAMETERS FOR USE IN LINER PIPE DESIGN								
ESTIMATED ELEVATION RANGE (FT)	SOIL TYPE(S)	SOIL DESCRIPTION	ESTIMATED AVERAGE MOIST DENSITY (PCF)	ESTIMATED AVERAGE DRY DENSITY (PCF)	ESTIMATED ANGLE OF INTERNAL FRICTION (DEGREES)	ESTIMATED MODULUS OF SUBGRADE REACTION (PSI)	RANKINE ACTIVE EARTH PRESSURE COEFFICIENT	RANKINE PASSIVE EARTH PRESSURE COEFFICIENT
650-628	A-6a	VERY-STIFF SILT & CLAY (FILL)	138	120	28	6000	0.36	2.77
628-621	A-7-6, A-6a & A-6b	MEDIUM-STIFF TO STIFF CLAY	120	102	21	4800	0.47	2.12
621-616	A-6a & A-6b	VERY-STIFF TO HARD SILT & CLAY	146	130	25	7200	0.41	2.46
BELOW ELEV. 616	A-4a	HARD SANDY SILT	146	130	30	8400	0.33	3.00

USE A MARSTON ARCHING FACTOR OF 0% FOR THE DESIGN OF THE LINER PILE DUE TO THE UNCERTAINTIES RELATED TO INSTALLATION AND BACKFILLING OF THE EXISTING 180-INCH CMP.

GROUNDWATER: IN GENERAL, AT THE TIME OF DRILLING BORINGS B-251, B-252, RT401A, RT402A, B-201, B-202, AND B-203 ENCOUNTERED NO GROUNDWATER ABOVE THE EXISTING 180-INCH CMP INVERT. INFERENCES SHOULD NOT BE MADE TO THE WATER SURFACE ELEVATIONS BETWEEN OR AWAY FROM THE BORING LOCATIONS OR AT TIMES OTHER THAN THE DATE(S) OF DRILLING WITHOUT FIELD VERIFICATION. IF FIELD VERIFICATION IS DEEMED NECESSARY BY THE PIPE MANUFACTURE'S ENGINEER, VERIFICATION COULD INCLUDE EXCAVATION TO TEST PITS BY THE CONTRACTOR ADJACENT TO THE EXISTING 180-INCH CMP TO VERIFY/DETERMINE GROUNDWATER LEVELS. NOTE THAT BORINGS B-252 AND B-201 ENCOUNTERED GROUNDWATER BELOW ELEVATION 602.

ESTIMATED QUANTITIES
BRIDGE NO. LAK-2-0395
STATE ROUTE 2 OVER TRIBUTARY OF CHAGRIN RIVER

LAK-2-3.32
PID No. 13486

4 / 11

1319
1679

DESIGN AGENCY
PARSONS BRINCKERHOFF
QUADE & DOUGLAS, INC.
614 W. SUPERIOR AVE., SUITE 400
CLEVELAND, OHIO 44113

DATE: 7/7/??
RJO: 4300548
STRUCTURE FILE NUMBER: 4300548

DESIGNED: PMP
CHECKED: BMG

DRAWN: NAL
REVISED:

NOTE:
FOR ABBREVIATION LIST, SEE SHEET 2/11.