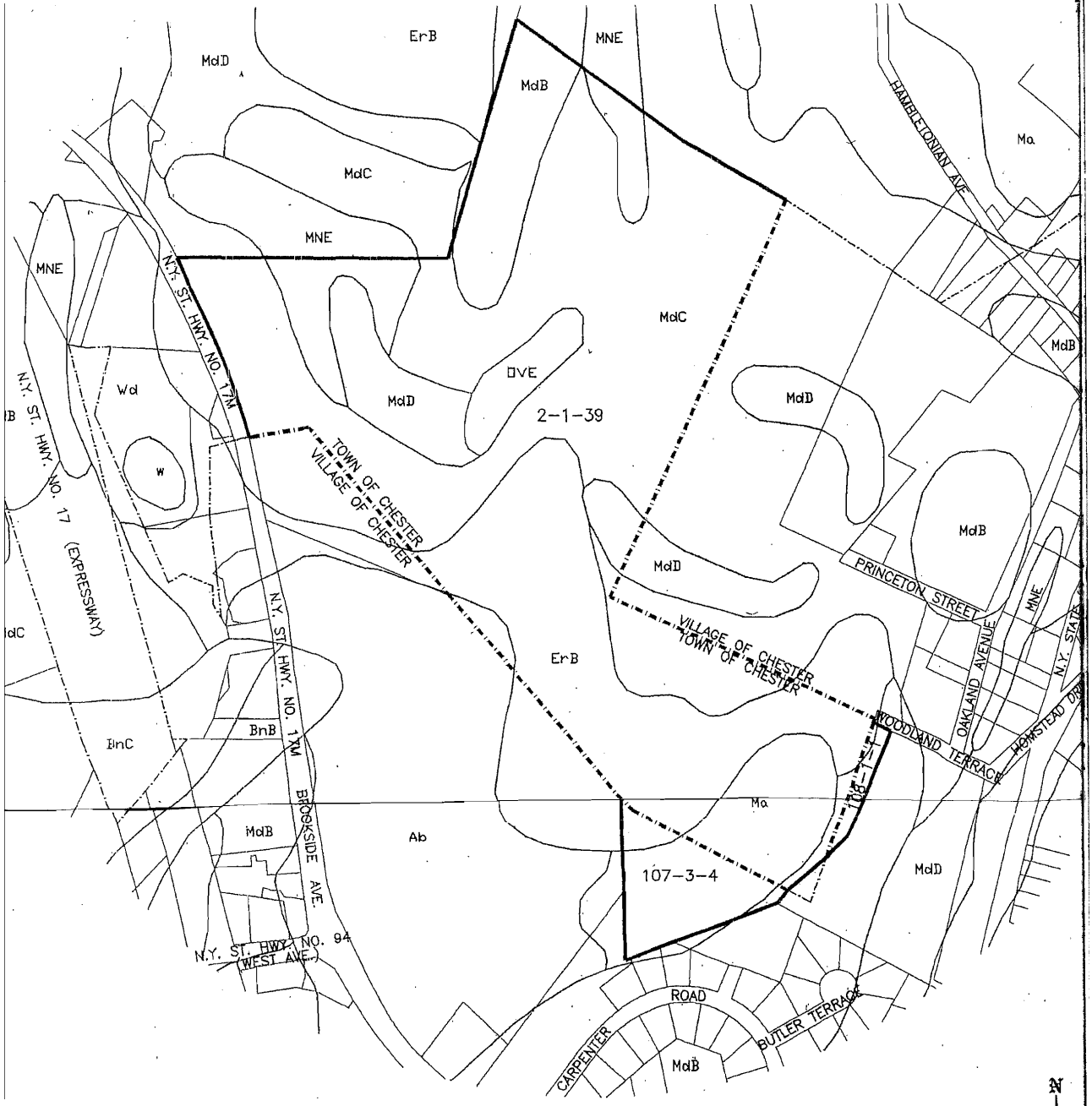
Photo 19: Large piles of asphalt and concrete were also identified in the area adjacent to property line. View south.

APPENDIX C

SOIL DESCRIPTIONS AND MAP (FIGURE 2)

Name	Soil Horizon Depth	Color	Texture/ Inclusions	Slope (Percent)	Drainage	Landform
Bath-Nassau shaly silt loams, 3 to 8% slopes (BnB)	**Bath**: A: 0-9" (0-22.86 cm) B: 9-17" (22.86-43.18 cm) C: 17-20" (43,18-50.8 cm) 20-44" (50.8-111.76 cm D: 44-53" (111.75-134.6 cm) **Nassau**: A: 0-10" (0-25.4 cm) B: 10-19" (25.4-134.62 cm)	 DkBrn YBrn Mottled OlBrn OlBrn DkGry DkGryBrn YBrn	 Shaly SiLo Shaly SiLo Shaly SiLo Shaly SiLo Bedrock Shaly SiLo Shaly SiLo	3-8%	Well drained & excessively drained	Glacial till deposits
Otisville and Hoosic soils, steep (OVE)	**Otisville**: A: 0-4" (0-10.16 cm) B: 4-16" (10.16-40.64 cm) 16-20" (40.64-50.8 cm) C: 20-60" (50.8-152.4 cm) **Hoosic**: A: 0-4" (0-10.16 cm) B: 4-18" (10.16-45.72 cm) C: 18-60" (45.72-152.4 cm)	 DkGryBrn YBrn YBrn GryBrn DkGryBrn YBrn Lt. OlBrn	 Gravelly SaLo Gravelly SaLo Vy gravelly Sa Vy Gravelly Sa Gravelly SaLo Gravelly SaLo Vy gravelly SaLo Vy gravelly Sa	25-45% (dominantly 25-35%)	Excessively drained & somewhat excessively drained	Glacial outwash deposits
Mardin gravelly silt loam, 3 to 8 percent slope (MdB)	A: 0-6" (0-15.24 cm) B: 6-11" (15.24-27.94cm) C: 11-15" (27.94-38.1 cm) D: 15-60" (38.1-152.4 cm)	Dk Brn YBrn Pale Brn, mottled Olive Brn	Gravelly SiLo Gravelly SiLo Gravelly SiLo Channery SiLo frangipan	3-8%	Moderately well drained	Glacial till deposits
Mardin gravelly silt loam, 8 to 15 percent slope (MdC)	A: 0-8" (0-20.32 cm) B: 8-15" (20.32-38.1 cm) C: 15-20" (38.1-50.8 cm) D: 20-60" (50.8-152.4 cm)	Dk Brn YBrn Pale Brn, mottled Olive Brn	Gravelly SiLo Gravelly SiLo gravelly SiLo (fragipan)	8-15%	Moderately well drained	Glacial till deposits

Name	Soil Horizon Depth	Color	Texture/ Inclusions	Slope (Percent)	Drainage	Landform
Mardin gravelly silt loam, 15 to 25 percent slope (MdD)	A: 0-6" (0-15.24 cm) B: 6-12" (15.24-30.48cm) C: 12-16" (30.48-40.64 cm) D: 16-60" (40..64-152.4 cm)	Dk Brn YBrn Pale Brn, mottled Olive Brn	Gravelly SiLo Gravelly SiLo Gravelly SiLo Channery SiLo (fragipan)	15-25%	Moderately well drained	Glacial till deposits
Erie gravelly silt loam, 3 to 8 percent slopes (ErB)	A: 0-9" (0-22.86 cm) B: 9-18" (22.86-45.72 cm) C: 18-45" (45.72-114.3 cm) D: 45-70" (114.3-137.16 cm)	DkBrn GryBrn, mottled OlBrn, mottled OlBrn, mottled	Gravelly SiLo Channery SiLo Channery SiLo Channery SiLo	3-8%	Poorly drained	Glacial till deposits
Alden silt loam (Ab)	A: 0-9" (0-22.86 cm) B: 9-19" (22.86-48.26 cm) C: 19-28" (48.26-71.12cm) 28-36” (71.12-91.44 cm) D: 36-60" (91.44-152.24 cm)	VyDkBrn Mottled DkGry Mottled GrnGry Mottled OlBrn	SiLo Heavy SiLo SiLo SaLo	0-3%	Very poorly drained	Glacial till deposits



LEGEND:

Ab: ALDEN SILT LOAM
BnB: BATH-NASSAU SHALY SILT LOAMS, 3 TO 8 PERCENT SLOPES
BnC: BATH-NASSAU SHALY SILT LOAMS, 8 TO 15 PERCENT SLOPES
ErB: ERIE GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES
HoB: HOOSIC GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES
Ma: MADALIN SILT LOAM
MdB: MARDIN GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES
MdC: MARDIN SILT LOAM, 8 TO 15 PERCENT SLOPES
MdD: MARDIN GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES
MNE: MARDIN SOILS, STEEP
OVE: OTISVILLE AND HOOSIC SOILS, STEEP
w: WATER

TAX MAP & DEED REFERENCE:

TOWN OF CHESTER
SECTION 2 BLOCK 1 LOT 39
VILLAGE OF CHESTER
SECTION 107 BLOCK 3 LOT 4
SECTION 108 BLOCK 1 LOT 1

NUSSBAUM PROPERTY

Town and Village of Chester

Fig. 2: Soil Survey

AFR Azzolina, Feury & Raimondi Engineering
PROFESSIONAL ENGINEERS AND LAND S
110 Stage Road, Monroe, NY 10950 – 845-782-8681 – 845-782-4
30 Madison Avenue, Paramus, NJ 07652 120 Woodland Avenue, Westwood, NJ 07675

SOIL SURVEY
FOR
BT PARTNERSHIP PROPERTIES

DATE: NOVEMBER 5, 2002	SCALE: 1" = 400'±	SHEET No. 1 OF 1

APPENDIX D

SHOVEL TEST RECORDS

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
1	1	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-14	23-35	10YR5/6	Y Brn Si Cl	NCM
	2	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-14	23-35	10YR5/6	Y Brn Si Cl	NCM
	3	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/6	Y Brn Si Cl	NCM
2	4	1	0-12	0-30	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	5	1	0-6	0-15	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	6	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/6	Y Brn Si Cl	NCM
	7	1	0-7	0-18	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	8	1	0-10	0-25	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	9	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	10	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-13	20-33	10YR5/6	Y Brn Si Cl	NCM
	11	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-11	25-28	10YR5/6	Y Brn Si Cl	NCM
	12	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	13	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-15	25-38	10YR5/6	Y Brn Si Cl	NCM
	14	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	15	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	16	1	0-12	0-30	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	17	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-10	18-25	10YR5/6	Y Brn Si Cl	NCM
	18	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	19	1	0-4	0-10	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	20	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-10	18-25	10YR5/6	Y Brn Si Cl	NCM
	21	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	22	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-10	20-25	10YR5/6	Y Brn Si Cl	NCM
	23	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
2	24	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/6	Y Brn Si Cl	NCM
	25	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-10	23-25	10YR5/6	Y Brn Si Cl	NCM
	26	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-10	20-25	10YR5/6	Y Brn Si Cl	NCM
	27	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-28	10YR5/6	Y Brn Si Cl	NCM
3	28	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	29	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	30	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	31	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	32	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	33	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	34	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	30-33	10YR5/6	Y Brn Si Cl	NCM
	35	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	36	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	37	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	38	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	39	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	40	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	41	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	42	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	43	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
3	44	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	45	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	46	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	47	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	48	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	49	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	50	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	51	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
4	52	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	53	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	54	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	55	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	56	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	57	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	58	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	59	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	60	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	2.	10YR5/6	Y Brn Si Cl	NCM
	61	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	62	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	63	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
4	64	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	65	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	66	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	67	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	68	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	69	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	70	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	71	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	72	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	73	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	74	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
5	75	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	76	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	77	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	78	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	79	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	80	1	0-16	0-40	10YR3/4	Dk Brn Si Lo	NCM
		2	16-20	40-50	10YR5/6	Y Brn Si Cl	NCM
	81	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-19	38-48	10YR5/6	Y Brn Si Cl	NCM
	82	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	83	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	84	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
5	85	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	86	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	87	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	88	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-38	10YR5/6	Y Brn Si Cl	NCM
	89	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-38	10YR5/6	Y Brn Si Cl	NCM
	90	1	0	0		Not excavated; Slope > 15%	
	91	1	0-5	0-8	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	92	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	93	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	94	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	95	1	0-22	0-55	10YR3/4	Dk Brn Si Lo	NCM
		2	22-26	55-65	10YR5/6	Y Brn Si Cl	NCM
	96	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	97	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-13	30-33	10YR5/6	Y Brn Si Cl	NCM
6	98	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	99	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	100	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	101	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	102	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	103	1	0-16	0-40	10YR3/4	Dk Brn Si Lo	NCM
		2	16-20	40-50	10YR5/6	Y Brn Si Cl	NCM
	104	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-19	38-48	10YR5/6	Y Brn Si Cl	NCM
	105	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	106	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	107	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
6	108	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
		1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
	109	2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	110	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	111	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-38	10YR5/6	Y Brn Si Cl	NCM
	112	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-38	10YR5/6	Y Brn Si Cl	NCM
	113	1	0	0		Not excavated; Slope > 15%	
	114	1	0-5	0-8	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	115	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	116	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	117	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	118	1	0-22	0-55	10YR3/4	Dk Brn Si Lo	NCM
		2	22-26	55-65	10YR5/6	Y Brn Si Cl	NCM
	119	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	120	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-13	30-33	10YR5/6	Y Brn Si Cl	NCM
7	121	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	122	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-17	30-48	10YR5/6	Y Brn Si Cl	NCM
	123	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	124	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	125	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	126	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	127	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	128	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
7	129	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	130	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	131	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM
	132	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	133	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	134	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	135	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	136	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	137	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	138	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	139	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	140	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	141	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	142	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
8	143	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	144	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	145	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	146	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	147	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	148	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	149	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
8	150	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	151	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	152	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	153	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	154	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	155	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	156	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	157	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	158	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	159	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	160	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	161	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	162	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	163	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	164	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
9	165	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	166	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/2	G Brn Si Cl	NCM
	167	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10		10YR5/2	G Brn Si Cl	NCM
	168	1	0-4	0-10	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	169	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-8	15-20	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
9	170	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	171	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	172	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/2	G Brn Si Cl	NCM
	173	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM
	174	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-10	23-25	10YR5/2	G Brn Si Cl	NCM
	175	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	176	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	177	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/2	G Brn Si Cl	NCM
	178	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/2	G Brn Si Cl	NCM
	179	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/2	G Brn Si Cl	NCM
	180	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/2	G Brn Si Cl	NCM
	181	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	182	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-13	30-33	10YR5/2	G Brn Si Cl	NCM
	183	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	184	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-10	20-25	10YR5/2	G Brn Si Cl	NCM
	185	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/2	G Brn Si Cl	NCM
	186	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-10	23-25	10YR5/2	G Brn Si Cl	NCM
10	187	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	188	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	189	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	190	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
10	191	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	192	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	193	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	194	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	195	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	196	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	197	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	198	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	199	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	200	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	201	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	202	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	203	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	204	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	205	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	206	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	207	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	208	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
11	209	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	210	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM
	211	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-8	18-20	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
11	212	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/2	G Brn Si Cl	NCM
	213	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-10	18-25	10YR5/2	G Brn Si Cl	NCM
	214	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM
	215	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/2	G Brn Si Cl	NCM
	216	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/2	G Brn Si Cl	NCM
	217	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/2	G Brn Si Cl	NCM
	218	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM
	219	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	220	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/2	G Brn Si Cl	NCM
	221	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	222	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/2	G Brn Si Cl	NCM
	223	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	224	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/2	G Brn Si Cl	NCM
	225	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	226	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	227	1	0-11	0-28	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	228	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	229	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/2	G Brn Si Cl	NCM
	230	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/2	G Brn Si Cl	NCM
12	231	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	232	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
12	233	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	234	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	235	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	236	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	237	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	238	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	239	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	240	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	241	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	242	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	243	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	244	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	245	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	246	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	247	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	248	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	249	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	250	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	251	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
13	252	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	253	1	0-6	0-15	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
13	254	1	0-11	0-28	10YR5/2	G Brn Si Cl	NCM
		2	11-15	28-35	10YR3/4	Dk Brn Si Lo	NCM
	255	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	256	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	257	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	258	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	259	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	260	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	261	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	262	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	263	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-17	30-48	10YR5/2	G Brn Si Cl	NCM
	264	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	265	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	266	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/2	G Brn Si Cl	NCM
	267	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	268	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	269	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	270	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	271	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	272	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
14	273	1	0-8	0-20	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	274	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
14	275	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	276	1	0-11	0-28	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	277	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	278	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/6	Y Brn Si Cl	NCM
	279	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	280	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	281	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	282	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-9	20-23	10YR5/6	Y Brn Si Cl	NCM
	283	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	284	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	285	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	286	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	287	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-11	25-28	10YR5/6	Y Brn Si Cl	NCM
	288	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	289	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	290	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	291	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM
	292	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	293	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
15	294	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	295	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	296	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	297	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	298	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	299	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
15	300	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	301	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	302	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	303	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	304	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	305	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	306	1	0-4	0-10	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	307	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	308	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-9	20-23	10YR5/6	Y Brn Si Cl	NCM
	309	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	310	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	311	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
16	312	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	313	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	314	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	315	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	316	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	317	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	318	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	319	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	320	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
16	321	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	322	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	323	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	324	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	325	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	326	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
17	327	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	328	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	329	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	330	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	331	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	332	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	333	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	334	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	335	1	0			Not excavated; Slope > 15%	
	336	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	337	1	0-1		10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	338	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	339	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	340	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	341	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	15-25	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
18	342	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	343	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/6	Y Brn Si Cl	NCM
	344	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	345	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
	346	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	347	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	348	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	349	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	350	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	351	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	352	1	0			Not excavated; Slope > 15%	
	353	1				Not excavated; Slope > 15%	
	354	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	355	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	356	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	357	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
19	358	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	359	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	360	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	361	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	362	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	363	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
19	364	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	365	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	366	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	367	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	368	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/6	Y Brn Si Cl	NCM
	369	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
	370	1	0			Not excavated; Slope > 15%	
	371	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	372	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	373	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	374	1	0-11	0-28	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
20	375	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	376			35-45	10YR5/6	vegetation	NCM
	377	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	378	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	379	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	380	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	381	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	382	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	383	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
21	384	1	0	0		Not excavated; Slope > 15%	
	385	1	0	0		Not excavated; Slope > 15%	
	386	1	0-25	0-60	10YR3/4	Dk Brn Si Lo, terminated at root	NCM
	387	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
21	388	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	389	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	390	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-16	38-40	10YR5/6	Y Brn Si Cl	NCM
	391	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	392	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	393	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	394	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/6	Y Brn Si Cl	NCM
	395	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-16	33-40	10YR5/6	Y Brn Si Cl	NCM
	396	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
22	397	1	0			Not excavated; Slope > 15%	
	398	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	399	1		30-40		Not excavated; Slope > 15%	
	400	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	401	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	402	1	0-10	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	403	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	404	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	405	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	406	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-16	33-40	10YR5/6	Y Brn Si Cl	NCM
	407	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	408	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	409	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at root	NCM
	410	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
23	411	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	412	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	413	1		20-30		Not excavated; Slope > 15%	
	414	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	415	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	416	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	417	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	418	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	419	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	420	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	421	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	422	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	423	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	424	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
24	425	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	426	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	427	1	0-6	0-15	10YR4/2	Dk G Brn Si Lo, terminated at root	NCM
	428	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	429	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	430	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	431	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	432	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
24	433	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	434	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	435	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	436	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	437	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	438	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
25	439	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	440	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	441	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	442	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM
	443	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	444	1	0-8	0-20	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
26	445	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	446	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	447	1	0-6	0-15	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
	448	1	0-12	0-30	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
27	449	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	450	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	451	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	452	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at groundwater	NCM
	453	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	454	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Dk Y Brn Si Cl	NCM
	455	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
27	456	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	457	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	458	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	459	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	460	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	461	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-13	20-33	10YR5/6	Y Brn Si Cl	NCM
	462	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-13	20-33	10YR5/6	Y Brn Si Cl	NCM
28	463	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	464	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-10	13-25	10YR5/6	Y Brn Si Cl	NCM
	465	1	0-12	0-30	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	466	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
	467	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	468	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	469	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	470	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	471	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	472	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	473	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
29	474	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-10	20-25	10YR5/6	Y Brn Si Cl	NCM
	475	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	476	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
29	477	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	478	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	479	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	480	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	481	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	482	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	483	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	484	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	485	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	28-38	10YR5/6	Y Brn Si Cl	NCM
30	486	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	30-40	10YR5/6	Y Brn Si Cl	NCM
	487	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	488	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	489	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	490	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	491	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	492	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	493	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-28	10YR5/6	Y Brn Si Cl	NCM
	494	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	485	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	496	1	0-4	0-10	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	497	1	0-3	0-8	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
31	498	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	499	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	500	1	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
		2	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
	501	1	0-5	0-13	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
31	502	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	503	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	504	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	505	1	0-2	0-5	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	506	1	0-7	0-18	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	507	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	508	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	509	1	0-4	0-10	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
32	510	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	511	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-7	15-18	10YR5/6	Y Brn Si Cl	NCM
	512	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	513	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	514	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	515	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	516	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	517	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	518	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	519	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	520	1	0-13	0-33	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	521	1	0-5	0-13	10YR5/6	Dk Y Brn Si Cl	NCM
		1	6-10	28-38	10YR5/6	Dk Y Brn Si Cl	NCM
	522	2	0-6	0-15	10YR4/2	Dk G Brn Si Lo	NCM
33	523	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM
	524	1	0-15	0-38	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
33	525	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-16	35-40	10YR5/2	G Brn Si Cl	NCM
	526	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	527	1	0-10	0-25	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
	528	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-10	23-25	10YR5/2	G Brn Si Cl	NCM
	529	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	15-25	10YR5/2	G Brn Si Cl	NCM
	530	1	0-8	0-20	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
	531	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	532	1	0-1		10YR3/4	Dk Brn Si Lo	NCM
		2	1-4	2.5-10	10YR5/2	G Brn Si Cl	NCM
	533	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	534	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	535	1	0-4	0-10	10YR3/4	Dk Brn Si Lo	NCM
		2	4-8	10-20	10YR5/2	G Brn Si Cl	NCM
34	536	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-15	33-38	10YR5/6	Y Brn Si Cl	NCM
	537	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-16	35-40	10YR5/6	Y Brn Si Cl	NCM
	538	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	539	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	540	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	541	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM
	542	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	543	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	544	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	545	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
34	546	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	547	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-9	15-23	10YR5/6	Y Brn Si Cl	NCM
	548	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/6	Y Brn Si Cl	NCM
35	549	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	550	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-30	10YR5/6	Y Brn Si Cl	NCM
	551	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-33	10YR5/6	Y Brn Si Cl	NCM
	552	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
	553	1	0-5	0-13	10YR3/4	Dk Brn Si Lo	NCM
		2	5-9	13-23	10YR5/6	Y Brn Si Cl	NCM
	554	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	555	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	556	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	557	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	558	1	0-2	0-5	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	559	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	560	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	561	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
36	562	1	0-4	0-10	10YR3/4	Dk Brn Si Lo	NCM
		2	4-8	10-20	10YR5/6	Y Brn Si Cl	NCM
	563	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	564	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	565	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	28-40	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
36	566	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	567	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	568	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/6	Y Brn Si Cl	NCM
	569	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	570	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	571	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	572	1	0			Not excavated; standing water	NCM
	573	1	0			Not excavated, standing water	NCM
	574	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
37	575	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	576	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM
	577	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	578	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-15	33-38	10YR5/6	Y Brn Si Cl	NCM
	579	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	580	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-8	15-20	10YR5/6	Y Brn Si Cl	NCM
	581	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/6	Y Brn Si Cl	NCM
	582	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-10	18-25	10YR5/6	Y Brn Si Cl	NCM
	583	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	584	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/6	Y Brn Si Cl	NCM
	585	1	0			Not excavated, standing water	
	586	1	0			Not excavated, standing water	
	587	1	0			Not excavated, standing water	

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
38	588	1	0-10	0-25	10YR5/6	Y Brn Si Cl	NCM
		2	10-13	25-33	10YR3/4	Dk Brn Si Lo	NCM
	589	1	0-9	0-23	10YR5/6	Y Brn Si Cl	NCM
		2	9-12	23-30	10YR4/4	Dk Y Brn Si Lo	``1``52TX5QX1
	590	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	591	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/6	Y Brn Si Cl	NCM
	592	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-10	18-25	10YR5/6	Y Brn Si Cl	NCM
	593	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	594	1	0-8	0-20	10YR3/4	Dk Brn Si Lo terminated at groundwater	NCM
	595	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	596	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-28	10YR5/6	Y Brn Si Cl	NCM
	597	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	0-28	10YR5/6	Y Brn Si Cl	NCM
	598	1	0-4	0-10	10YR3/4	Dk Brn Si Lo terminated at groundwater	NCM
39	599	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	600	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	601	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	602	1	0-7	0-18	10YR4/4	Dk Y Brn Si Lo	NCM
	603	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/6	Y Brn Si Cl	NCM
	604	1	0	0		Not excavated, standing water	
	605	1	0	0		Not excavated, standing water	
	606	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM
	607	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-9	18-23	10YR5/6	Y Brn Si Cl	NCM
	608	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM
	609	1	0-3	0-8	10YR3/4	Dk Brn Si Lo terminated at groundwater	NCM
	610	1	0			Not excavated, standing water	
	611	1	0			Not excavated, standing water	

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
40	612	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	613	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	614	1	0	0-20		Not excavated, standing water	NCM
41	615	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	616	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	617	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
42	618	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
42		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	619	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-15	33-38	10YR5/6	Y Brn Si Cl	NCM
	620	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-11	20-28	10YR5/6	Y Brn Si Cl	NCM
	621	1	0-6	0-15		Not excavated, standing water	
	622	1	0			Not excavated, standing water	
	623	1	0			Not excavated, standing water	
	624	1	0			Not excavated, standing water	
	625	1	0			Not excavated, standing water	
43	626	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
	627	1	0-3	0-8	10YR3/4	Dk Brn Si Lo	NCM
		2	3-6	8-15	10YR5/2	G Brn Si Cl	NCM
44	628	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	629	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-9	15-23	10YR5/6	Y Brn Si Cl	NCM
	630	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	631	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	632	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	633	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/6	Y Brn Si Cl	NCM
	634	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-17	38-48	10YR5/6	Y Brn Si Cl	NCM
	635	1	0			Not excavated, standing water	

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
44	636	1	0			Not excavated, standing water	
44	637	1	0			Not excavated, standing water	
	638	1	0			Not excavated, standing water	
45	639	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
	640	1	0			Not excavated, standing water	
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	641	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
	642	1	0			Not excavated, standing water	
45		2	13-15	33-38	10YR5/2	G Brn Si Cl	NCM
46	643	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	644	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	645	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	646	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	647	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	648	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	649	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	650	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
47	651	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
48	652	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	653	1	0-11	0-28	10YR4/2	Dk G Brn Si Lo terminated at rock obstruction	NCM
	654	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
49	655	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/2	G Brn Si Cl	NCM
	656	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	657	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	658	1	0-1	0-25	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
50	659	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
51	660	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-16	35-40	10YR5/2	G Brn Si Cl	NCM
	661	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	662	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	663	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	664	1	0-10	0-25	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	665	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	666	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	667	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	668	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-12	25-30	10YR5/2	G Brn Si Cl	NCM
	669	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	670	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	671	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	672	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
52	673	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	674	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	675	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	676	1	0-11	0-28	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	677	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	678	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	679	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
52	680	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	681	1	0-6	0-15	10YR3/4	Dk Brn Si Lo	NCM
		2	6-10	23-33	10YR5/2	G Brn Si Cl	NCM
	682	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	683	1	0-12	0-30	10YR4/4	Dk Y Brn Si Lo terminated at bedrock	NCM
	684	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/2	G Brn Si Cl	NCM
	685	1	0-6	0-15	10YR4/6	Dk Y Brn Si Lo terminated at bedrock	NCM
53	686	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/2	G Brn Si Cl	NCM
	687	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	688	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-13	20-33	10YR5/2	G Brn Si Cl	NCM
	689	1	0-4	0-10	10YR3/4	Dk Brn Si Lo	NCM
		2	4-7	10-18	10YR5/2	G Brn Si Cl	NCM
	690	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	691	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/2	G Brn Si Cl	NCM
	692	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	693	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	694	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-13	25-33	10YR5/2	G Brn Si Cl	NCM
	695	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/2	G Brn Si Cl	NCM
	696	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	697	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	698	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	699	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/2	G Brn Si Cl	NCM
	700	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
54	701	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
54	702	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	703	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	704	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	705	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	706	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	707	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	708	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	709	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	710	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-13	28-33	10YR5/6	Y Brn Si Cl	NCM
	711	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	712	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/6	Y Brn Si Cl	NCM
	713	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	714	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	715	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
55	716	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	717	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	718	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-14	33-35	10YR5/6	Y Brn Si Cl	NCM
	719	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	720	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	721	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
55	722	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	723	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
	724	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	725	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	726	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	727	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-14	33-35	10YR5/6	Y Brn Si Cl	NCM
	728	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	729	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	730	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
56	731	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	732	1	0-8	0-20	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	733	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	734	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM
	735	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-17	35-43	10YR5/6	Y Brn Si Cl	NCM
	736	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	737	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/6	Y Brn Si Cl	NCM
	738	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	739	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	740	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	741	1	0-7	0-18	10YR3/4	Dk Brn Si Lo	NCM
		2	7-11	18-28	10YR5/6	Y Brn Si Cl	NCM
	742	1	0-6	0-15	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	743	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-11	23-28	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
	744	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	745	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
	746	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-12	23-30	10YR5/6	Y Brn Si Cl	NCM
	747	1	0-17	0-43	10YR3/4	Dk Brn Si Lo	NCM
		2	17-21	38-23	10YR5/6	Y Brn Si Cl	NCM
57	748	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	749	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	750	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	751	1	0-12	0-30	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	752	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	753	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	754	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-15	25-38	10YR5/6	Y Brn Si Cl	NCM
	755	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	756	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/6	Y Brn Si Cl	NCM
	757	1	0-6	0-15	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	758	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-12	20-30	10YR5/6	Y Brn Si Cl	NCM
58	759	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	760	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	761	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	762	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	763	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	764	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-19	38-49	10YR5/6	Y Brn Si Cl	NCM
	765	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
59	766	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	767	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	768	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	769	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-19	38-49	10YR5/6	Y Brn Si Cl	NCM
	770	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	771	1	0-16	0-40	10YR3/4	Dk Brn Si Lo	NCM
		2	16-20	40-50	10YR5/6	Y Brn Si Cl	NCM
60	772	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	773	1	0-16	0-40	10YR3/4	Dk Brn Si Lo	NCM
		2	16-20	40-50	10YR5/6	Y Brn Si Cl	NCM
	774	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	775	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	776	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	777	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
61	778	1	0-9	0-23	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	779	1	0-12	0-30	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	780	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	781	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	782	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	783	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
62	784	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-16	25-40	10YR5/2	G Brn Si Cl	NCM
	785	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	786	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
62	787	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	788	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-16	35-40	10YR5/6	Y Brn Si Cl	NCM
	789	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	790	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
63	791	1	0-7	0-18	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	792	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	793	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	794	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
	795	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/6	Y Brn Si Cl	NCM
	796	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	797	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
64	798	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
	799	2	10-14	25-35	10YR5/6	Y Brn Si Cl	NCM
		2	0-6	0-15	10YR4/2	Dk G Brn Si Lo	NCM
	800	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
65	801	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	802	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
	803	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at bedrock	NCM
66	804	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	805	1	0	0		Not excavated: Surface Inspection	
	806	2	0	0		Not excavated: Surface Inspection	
67	807	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
67		2	12-14	30-35	10YR5/6	Y Brn Si Cl	NCM
	808	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
68	809	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
68	810	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	811	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	812	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	813	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	814	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	815	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	816	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	817	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	818	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
69	819	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	820	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	821	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	822	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	823	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	824	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	825	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	826	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	827	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	828	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	829	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
70	830	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	831	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	832	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	833	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
71	834	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	835	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	836	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	837	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	838	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	839	1	0-11	0-28	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	840	1	0-13	0-33	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
72	841	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-15	30-38	10YR5/2	G Brn Si Cl	NCM
	842	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	843	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	844	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-17	38-48	10YR5/2	G Brn Si Cl	NCM
	845	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	846	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-14	28-35	10YR5/2	G Brn Si Cl	NCM
73	847	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	848	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
74	849	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		1	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	850	1	0-9	0-23	10YR3/4	Dk Brn Si Lo, terminated at bedrock	NCM
	851	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
75	852	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	853	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	854	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	855	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
76	856	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	857	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-35	10YR5/2	G Brn Si Cl	NCM
	858	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
77	859	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	860	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	861	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	862	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
78	863	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-35	10YR5/2	G Brn Si Cl	NCM
	864	1	0-9	0-23	10YR3/4	Dk Brn Si Lo	NCM
		2	9-13	23-33	10YR5/2	G Brn Si Cl	NCM
	865	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	866	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/2	G Brn Si Cl	NCM
	867	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/2	G Brn Si Cl	NCM
	868	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	30-40	10YR5/2	G Brn Si Cl	NCM
	869	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/2	G Brn Si Cl	NCM
	870	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/2	G Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
C1	871	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	872	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	873	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-13	30-33	10YR5/6	Y Brn Si Cl	NCM
	874	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	875	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	876	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	877	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
C2	878	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	879	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	880	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	881	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	882	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	883	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	884	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
C3	885	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	886	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	887	1	0-15	0-38	10YR3/4	Dk Brn Si Lo	NCM
		2	15-19	38-48	10YR5/6	Y Brn Si Cl	NCM
	888	1	0-12	0-30	10YR3/4	Dk Brn Si Lo terminated at rock obstruction	NCM
	889	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	890	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	891	1	0-13	0-33	10YR3/4	Dk Brn Si Lo terminated at rock obstruction	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
C4	892	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	coal slag, not collected
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	893	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	894	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	plastic shot gun shell casing not
		2	14-16	35-40	10YR5/6	Y Brn Si Cl	NCM
	895	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	896	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	897	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	898	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
C5	899	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	900	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	901	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	902	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	903	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	904	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	905	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
C6	906	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-43	10YR5/6	Y Brn Si Cl	NCM
	907	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	908	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	909	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	910	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	911	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	NCM
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM

Transect	STP	Level	Depth(in)	Depth (cm)	Munsell	Soil Description	Cultural Material
	912	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
C7	913	1	0-14	0-35	10YR3/4	Dk Brn Si Lo	coal slag, not collected
		2	14-18	35-45	10YR5/6	Y Brn Si Cl	NCM
	914	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
	915	1	0-12	0-30	10YR3/4	Dk Brn Si Lo	NCM
		2	12-16	30-40	10YR5/6	Y Brn Si Cl	NCM
	916	1	0-11	0-28	10YR3/4	Dk Brn Si Lo	NCM
		2	11-15	28-38	10YR5/6	Y Brn Si Cl	NCM
	917	1	0-10	0-25	10YR3/4	Dk Brn Si Lo	NCM
		2	10-14	25-45	10YR5/6	Y Brn Si Cl	NCM
	918	1	0-8	0-20	10YR3/4	Dk Brn Si Lo	NCM
		2	8-9	20-23	10YR5/6	Y Brn Si Cl	NCM
	919	1	0-13	0-33	10YR3/4	Dk Brn Si Lo	NCM
		2	13-17	33-48	10YR5/6	Y Brn Si Cl	NCM
Dump # 2	920	1	0-6	0-15	10YR3/4	Dk Brn Si Lo terminated at rock obstruction	NCM

APPENDIX E

ARTIFACT CATALOG

Appendix E: Artifact Catalog
Nussbaum Property Route 17M (Chester Road) Town and Village of Chester, Orange County, New York

Location	Count	Item	Description	Features
Dump # 1	7	Window Glass	Clear	
Dump # 1	1	Bottle Glass	Machine Made clear	Registered/Lyon & Sons/Brewing Co./Newark, NJ/This Bottle/Not to be Sold
Dump # 1	3	Bottle Glass	Machine Made clear	
Dump # 1	7	Nail fragments;	cut or wrought	
Dump # 1	9	Metal	Unidentified	
Dump # 1	1	Architectural	Bolt	
Dump # 2	1	Bottle Glass	Machine Made Amber	Federal Law Prohibits Sale/or Re-use of this Bottle
Dump # 2	1	Bottle Glass	Machine Made clear	Linden/Gordons/Federal Law Prohibits Sale/or Re-use of this Bottle
Dump # 2	1	Container Glass	Milk Glass	
Dump # 3	1	Bottle Glass	Machine Made clear	Case Bottle, treaded rim
Dump # 3	2	Architectural	nails (~ 8")	
Surface Collection, Cornfield	1	Bottle Glass	Machine Made Amber	rim only
Surface Collection, Cornfield	1	Clothing	Flat metal insert	none
Surface Collection, Cornfield	1	Architectural	Ceramic Drain Pipe	
Surface Collection, Cornfield	1	Architectural	Brick	
Dump # 2 STP 920	2	Bottle Glass	Machine Made Green	
Dump # 2 STP 920	1	Bottle Glass	Machine Made Clear	
Dump # 2 STP 920	1	Architectural	barbed wire fragment	

APPENDIX H

Revised Water Report

WATER SUPPLY REPORT FOR THE CHESTER DEVELOPMENT PROJECT

Chester Development
Town of Chester Section 2, Block 1, Lot 39
Village of Chester Section 107, Block 3, Lot 4
Section 108, Block 1, Lot 1
Section 120, Block 1, Lot 1
Orange County
New York

Prepared For:

BT Holdings LLC- Chester Development
Town and Village of Chester
Orange County, New York

Prepared By:

Langan Engineering and Environmental Services, Inc.
River Drive Center 1
Elmwood Park, NJ 07407

Revised 20 January 2011
~~15 September 2009~~
9123501

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

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1.0 INTRODUCTION

This report presents a summary of the existing water supply system, proposed water usage and proposed infrastructure required for the proposed BT Holdings Chester Development project, a multi-family residential project in the Village of Chester, Orange County, N.Y. The Chester Development project site is several parcels totaling ±68.4 acres east of state Route17M, approximately one-half mile north of the intersection of Route 17M and state Route 94 (see Figure 1). Chester Mall is immediately south of the project site, Route 17M and a farm are to the west, residential properties and the Nexans industrial facility are to the north and Oakland Avenue and residential properties are to the east. Although the majority of the site, a 60.6-acre parcel, is presently located within the Town of Chester, the project proposes to annex this lot into the Village of Chester, which owns and operates a public water-supply system.

2.0 PUBLIC WATER-SUPPLY SYSTEM

2.1 Existing Water Supply and Capacity

A public water system is operated by the Village of Chester Water Department. Water is supplied by gravity from Walton Lake and several wells in the Black Meadow well-field. The water taken from the lake is limited to a maximum of 800,000 gallons per day (gpd); however, there are restrictions on water taking as the water level in the lake decreases. The village's system is permitted for a total maximum daily water-taking from wells and the lake of 1.1 million gallons per day (mgd). According to Mr. Tom Becker, Superintendent of the Water Department, the current demand on the system based on an average usage during dry years is approximately 528,000 gpd. According to the reported current demand on the system, there is approximately 572,000 gpd in available excess capacity in the village's system.

2.2 Existing Water System

The village owns, operates and maintains an extensive water main distribution network throughout the village, including a 4-inch main in Route 17M and an 8-inch main in Oakland Terrace. According to Mr. Becker, the public water system presently includes three storage tanks: the Nancy Lane Tank (a 40-foot tall one-million gallon tank based at elevation 596±), the Whispering Hills Tank (a 64-foot tall 660,000 gallon tank based at elevation 550±), and the Princeton Street Tank (a 70-foot tall 399,000 gallon tank based at elevation 550±). The Princeton Street tank is on the Nexans parcel immediately north of the project site (see Figure 2). The gross storage capacity of the three storage tanks is approximately 2 million gallons.

Hydrant-testing records provided by the village water department indicate that the hydrants at Chester Mall, which are fed from a 10-inch main in Route 17M, have a static pressure of 78 pounds per square inch (psi), and a residual pressure of 66 psi flowing at 1,100 gallons per minute (gpm). No hydrant testing data was available for the main in Oakland Terrace; however, the hydrants on the 8-inch main in Hambletonian Avenue, which is connected to the 8-inch main in Oakland Terrance, were reportedly tested and found to have a static pressure of 80 psi and a residual pressure of 55 psi flowing at 950 gpm.

2.3 Pending or Approved Projects

According to available records, the following projects are pending or approved and may seek water service from the Village. For the purposes of this analysis, the estimated water usage is assumed to be the same as the wastewater generation rates from NYSDEC:

Project Name	Project Description	Estimated Water Usage
The Castle Entertainment Complex (Town of Chester)	10,000sf expansion	10,000sf x 0.10gpd/sf = *1,000gpd*
Frozen Ropes Sports Center (Town of Chester)	20,200 sf building	20,200sf x 0.10gpd/sf = *2,020gpd*
Lowe's Home Improvement Store (Village of Chester)	150,000 sf building	*2,500gpd**
C&S Wholesale Foods (Village of Chester)	356,022 sf warehouse expansion	*54,000 gpd***
Meadow Hill Development (Village of Chester)	142 residential units	*20,000gpd***
Korean Church	Unknown	*350gpd****
Joe Dipolis	Unknown	*350gpd****
Joe Mooze	Unknown	*350gpd****
	Total:	***80,570 gpd***

* Although the Lowe's is currently open and operating, it was still under construction when the current demand of the system was provided by Tom Becker, Village Water Superintendent

** As reported by Tom Becker, Village Water Superintendent

*** According to Tom Becker, Village Water Superintendent, these landowners are eligible to receive up to 30,000 gallons of water per quarter

2.4 Vacant Parcel Analysis

At the request of Superintendent Becker, an analysis of vacant parcels located within the Village that would be entitled to water usage has been prepared. It is unlikely that each and every parcel would be developed anytime soon, if ever. However, in order to be conservative, an assessment of potential water usage has been prepared (see Appendix A) which indicates that approximately 116,750 gpd could be reserved for the future use of vacant lands.

3.0 PROJECT WATER DEMAND AND INFRASTRUCTURE

3.1 Project Domestic Water Demand

The domestic water demand of the project is estimated to be approximately 10% higher than the estimated wastewater generation rate of the project. The 10% margin allows for incidental and ancillary uses of water associated with the project that do not end up in the wastewater stream, such as outdoor water use, routine testing, flushing and maintenance, and leakage. The estimated wastewater generation of the project is based on New York State Department of Environmental Conservation (NYSDEC) standards. The following table outlines the average daily domestic water demand for the project.

Type of Facility	Number of Units	NYSDEC Estimated Wastewater Generation Rate	Estimated Water Demand Rate	Water Demand (gpd)
1-bedroom dwelling unit	75	150 gpd per unit	165 gpd per unit	12,375
2-bedroom dwelling unit	153	300 gpd per unit	330 gpd per unit	50,490
3-bedroom dwelling unit	208	400 gpd per unit	440 gpd per unit	91,520
Clubhouse (sf)	6,000	0.1 gpd per sf	0.11 gpd per sf	660
Pool (swimmers)	150	10 gpd per swimmer	11 gpd per swimmer	1,650
			Subtotal:	*156,695*
			20% savings for use of water conservation devices	(31,339)
			Total:	***125,356 gpd***

The ±125,356 gpd average daily domestic water demand does not include water for irrigation purposes. The landscaping plan has been developed and drought-tolerant plant materials were chosen so that the lawn and landscape areas will be sustained via natural rainfall events only – public water sources will not be required for irrigation on this project.

3.2 Water System Capacity and Other Projects

The results of the above analyses indicate that the total demand on the Village's water system is as follows:

Current Usage (dry years)	528,000 gpd
Pending or Approved Projects	80,570 gpd
Vacant Parcel Potential Usage	116,750 gpd
BT Holdings Project Usage	125,356 gpd
Total	**850,676 gpd**

Ultimately, even including potential development of pending projects and all vacant land parcels, which represents absolutely full build-out of the Village, and utilizing a peak (dry) year's water usage as a base, less than 80% of the existing water supply is utilized, leaving more than a 20% margin of unutilized and unallocated water supply as a Village reserve.

In terms of fire protection flows, the addition of the proposed project's domestic demand (125,356 gpd) translates to approximately 87 gallons per minute (gpm). Given that the reported flow tests in the vicinity of the project site and in the higher areas of the village north and east of the site were all approximately 1,000 gpm, the resulting hydrant flows after the BT Holdings project could be roughly estimated to be approximately 915 gpm at the same locations, which is still a high flowrate for fire protection purposes. In summary, the project is not expected to have a significant effect on the capacity or efficiency of the existing village water distribution system.

3.3 Proposed Water System Infrastructure

The proposed project will require improvements to the village water system to provide adequate water supply to the site. The existing 4-inch main in Route 17M along the site frontage will be replaced with a new 10-inch main extended from the existing 10-inch main in Route 17M just south of the site that serves the Chester Mall. The replacement of the 4-inch main with the 10-inch main will require the village water department and Orange County Health Department review and approvals and would occur in the Route 17M right-of-way.

In addition to the new water main in Route 17M, a new public water main trunk line with hydrants every 400 feet will be constructed through the project site connecting the new 10-inch main Route 17M to the existing 8-inch main in Oakland Terrace. This new trunk line will allow for and provide redundant water supplies to the site for fire protection, domestic and irrigation purposes, in addition to providing a cross-connection of two branches of the village system. This trunk line will likely be a public main and will therefore require an easement dedicated to the village across the project site. As a public main, its design and installation will have to be reviewed and approved by the village water department and the Orange County Health Department.

In addition to the trunk line, a new water distribution network consisting of pipes, valves, hydrants, tees, elbows and other components will be provided on the site for fire protection, domestic, and irrigation needs of the new buildings and project components. With the exception of the aforementioned trunk main, the water- distribution system will be a privately owned, operated, and maintained system that will be designed and submitted for review to the village and county during the design phase of the project. The system will be designed in accordance with village, county, state, and National Fire Protection Association (NFPA) standards.

A private water-storage tank is not anticipated to be required for the project; however, a booster station will very likely be required to maintain adequate pressure in the system at the higher elevations of the site during fire-flow events. The booster station is typically housed within and below a small building structure, approximately 15 feet by 20 feet or smaller and 15 feet high or less, which is designed to look like a small garage on the site. More recent flow test data and hydraulic modeling of a conceptual water distribution network would be required to complete the booster station assessment. If such a booster station is required, it would be privately owned, operated and maintained by the homeowners' association or their designated agent.

The cost of the design, permitting and installation of all of the above on-site water supply system components, including the Route 17M water-main improvements, will be borne by the developer of the project.

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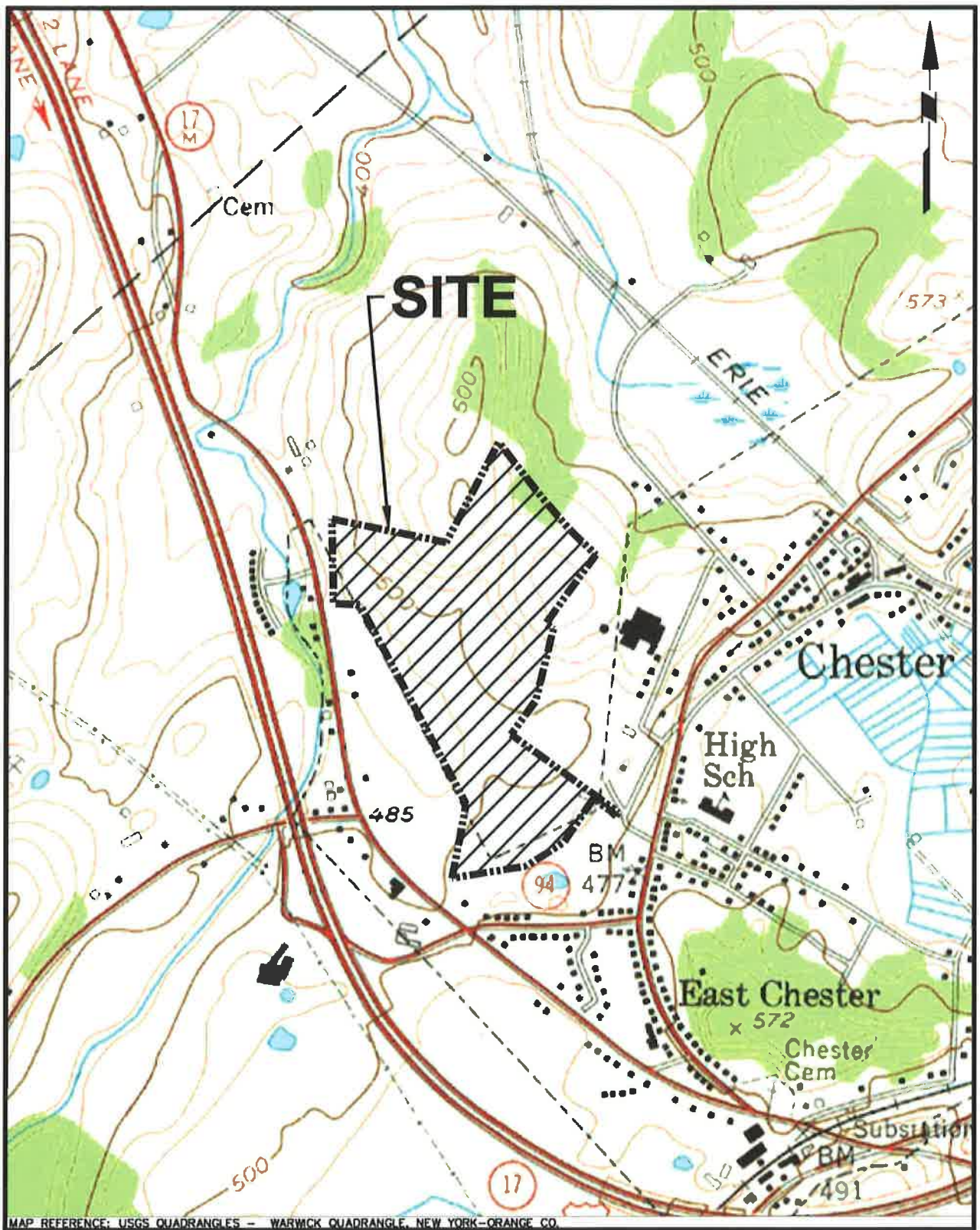
FIGURES



MAP REFERENCE: USGS QUADRANGLES – WARWICK QUADRANGLE, NEW YORK-ORANGE CO.

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NJ Certificate of Authorization No: 24GA27996400

Project **SITE LOCATION MAP**
CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	12-2-08	1"=1000'	FIGURE-1

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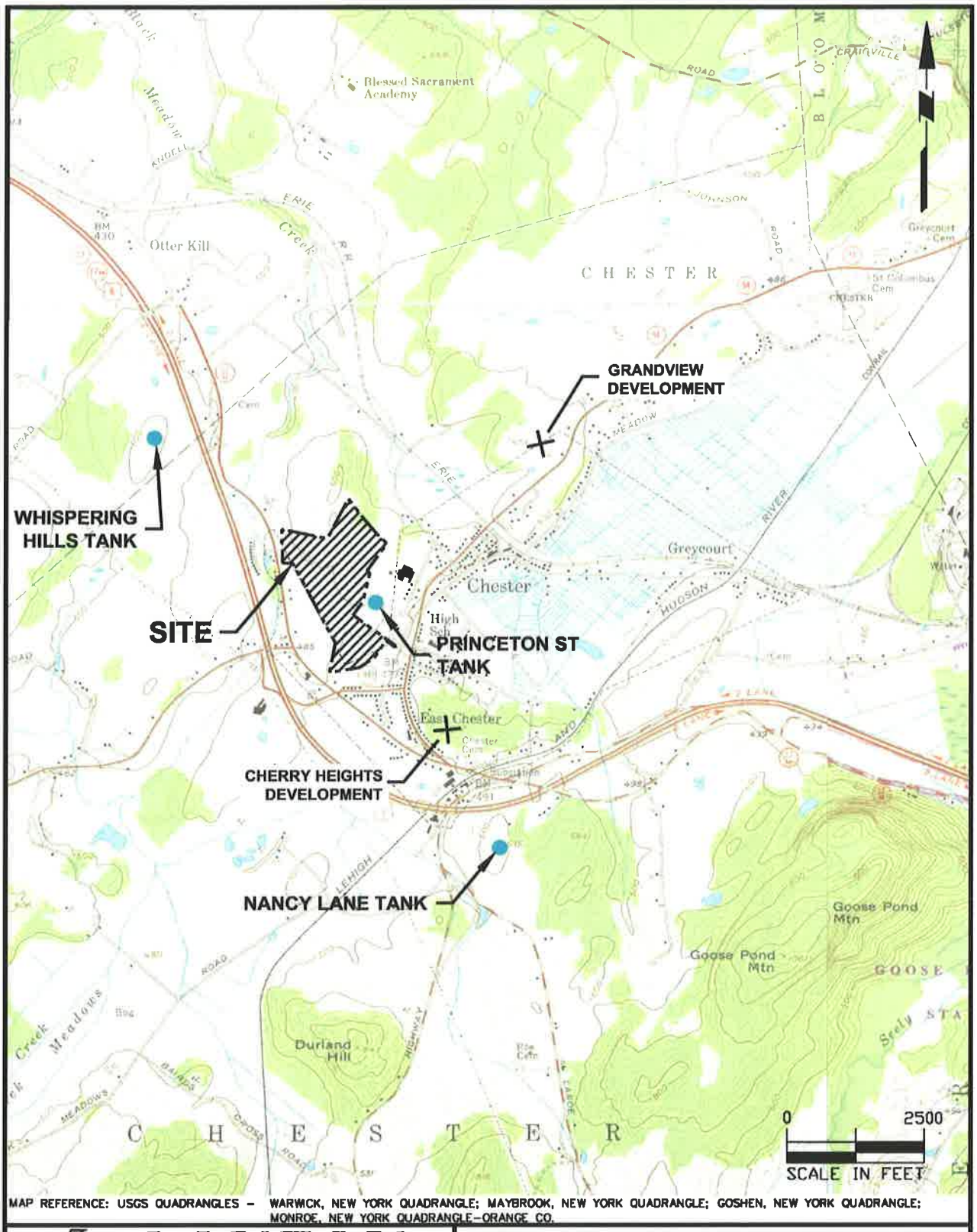

MAP REFERENCE: USGS QUADRANGLES – WARWICK, NEW YORK QUADRANGLE; MAYBROOK, NEW YORK QUADRANGLE; GOSHEN, NEW YORK QUADRANGLE; MONROE, NEW YORK QUADRANGLE–ORANGE CO.

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Project

PUBLIC WATER TANK LOCATION MAP CHESTER DEVELOPMENT

ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
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Filename: G:\Data5\9123501\Cadd Data – 9123501\Dwg\9123501 Water Tank Fig.dwg Date: 9/14/2009 Time: 16:04 User: bhunter Style Table: Langan.stb Layout: A Size Sheet (Bottom)

APPENDIX A

	Description	Section-Block-Lot	Acres	Zoning	GIS Land Use Code	Development Assumption	Potential Use	Projected Water Consumption
1	Lehigh Avenue (Becker)	106-2-34	21.74	B-2/RMH	105	65% buildable area	+/- 240,000 SF Retail Building	24,000
2	Sanford Avenue (Becker)	106-2-18	0.2	RMH	311	65% buildable area	Double width mobile home	400
3	Sanford Avenue (Johnson)	106-2-21.21	1.75	RMH	311	65% buildable area	9 Single width mobile homes	2,700
4	Grey Court Avenue Lot (BruDans)	106-2-11	0.32	RMH	311	65% buildable area	Double width mobile home	400
5	Grey Court Avenue Lot (BruDans)	106-2-12	0.21	RMH	710	65% buildable area	Double width mobile home	400
6	Grey Court Avenue Lot (BruDans)	106-2-13	0.2	RMH	340	65% buildable area	Double width mobile home	400
7	Grey Court Avenue Lot (BruDans)	106-2-14	0.15	RMH	340	65% buildable area	Single width mobile home	300
8	Grey Court Avenue Lot (BruDans)	106-2-47.2	0.29*	RMH		65% buildable area	Double width mobile home	400
9	Grey Court Avenue Lot (Smith)	106-2-10	0.33	RMH	441	65% buildable area	Double width mobile home	400
10	Kings Highway Lot (Amante)	114-4-4	2.11	M-2	340	60% Coverage based on Zoning Code	+/- 30,000 SF Warehouse	150
11	Oakland Avenue Lot (Kreher)	104-2-41	0.175*	RS		65% buildable area	Single Family House	475
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13	Main Street Lot (Kreiger)	108-1-2.1	2.13	RS	311	65% buildable area	4 Single Family Houses	1,900
14	Main Street Lot (Kreiger)	108-1-2.2	6.56	RS	281	65% buildable area	14 Single Family Houses	6,650
15	Route 94 Filled Property (DePaulis)	116-1-1.2	40.14	M-1	340	50% Coverage based on Zoning Code	+/- 350,000 SF Office	35,000
16	Industrial Park Open Lots (V Paulis Associates	117-1-2.1	4.11	M-1	340	50% Coverage based on Zoning Code	+/- 35,000 SF Office	3,500
17	Industrial Park Open Lots (V Paulis Associates	117-1-3	4.09	M-1	340	50% Coverage based on Zoning Code	+/- 35,000 SF Office	3,500
18	Industrial Park Open Lots (V Paulis Associates	117-1-1.1, 1.2	8.86	M-1	340	50% Coverage based on Zoning Code	+/- 75,000 SF Office	7,500
20	Brookside Avenue (Palmer Parcel)	107-3-1	3.04	B-2	330	65% buildable area	+/- 35,000 SF Retail	3,500
21	Brookside Avenue (across from Q Plaza)	111-9-15	1.01	B-2	330	65% buildable area	+/- 11,500 SF Retail Building	1,150
22	Garden Street lot (Antobelli)	101-4-22.21	0.64	RA	210	65% buildable area	+/- 6,000 SF Warehouse	50
23	Hudson Street Lot (Quinn)	112-1-56	1.71	RS		65% buildable area	3 Single Family Houses	1,425
24	Main Street Lot (Water Department)	104-6-25	0.31	B-1	651	65% buildable area	+/- 3,500 SF Retail Building	350
25	Land Behind the Village Offices (Parking Lot)	xxx-x-xx	Excluded from analysis					
26	Meadow Avenue Lot (Kratchie)	104-4-4	0.45	RS	210	65% buildable area	Single Family House	475
27	Main Street lot (next to car wash)	114-2-3	0.52*	M-2		60% Coverage based on Zoning Code	+/- 7,500 SF Warehouse	50
28	LeHigh Avenue (DOT property)	112-1-17	1.98	M-2	651	60% Coverage based on Zoning Code	+/- 30,000 SF Warehouse	150
29	LeHigh Avenue (DOT property)	112-1-36	1.43	M-2	340	60% Coverage based on Zoning Code	+/- 20,000 SF Warehouse	100
30	Kings Highway Lot (Young)	114-4-2	1.12	M-2	330	60% Coverage based on Zoning Code	+/- 15,000 SF Warehouse	75
31	Carpenter Avenue Lot (Sika)	xxx-x-xx	Excluded from analysis					
33	Church of Saint Culumba	102-1-62.1	5.87	RS	620	65% buildable area	13 Single Family Houses	6,175
34	Elm Street (Hipsman)	111-5-2	0.24	RS	210	65% buildable area	Single Family House	475
35	Main Street (Dunn)	111-2-7.1	2.39	B-1	330	65% buildable area	+/- 25,000 SF Retail Building	2,500
36	Leone Lane (V Paulis)	113-1-5	7.84	M-1	340	50% Coverage based on Zoning Code	+/- 65,000 SF Office	6,500
37	Lookout Terrace (Battiato)	115-2-21.2	5.22	RS	311	65% buildable area	11 Single Family Houses	5,225
* Acreage was approximated based upon a review of dimensions listed on Tax Maps.							**Total (GPD)=**	116,750

Water Consumption Rates (Per NYSDEC Design Standards for Wastewater Treatment Works, 1988)

300 gallons per day per 2 bedroom dwelling
400 gallons per day per 3 bedroom dwelling
475 gallons per day per 4 bedrooms dwelling
25 gallons per day per employee for warehouses
0.1 gallons per day per square foot for Office and Retail

General Assumptions

RMH Zoning
2 bedroom for single width mobile dwelling for 5,000 SF lot
3 bedroom for double width mobile dwelling fot 8,000 SF lot
RS Zoning
4 Bedrooms per house
12,500 SF lot per house
M-2 and RA Zoning
1 employee per 5,000 sf of Warehouse
0.85 Ac of Parking and Drive Aisles/Loading to 1 Ac of Single Story Building
B-1, B-2,and M-1 Zoning
1.5 Ac of Parking to 1 Ac of Single Story Building

Zoning	
RS	Residental - Single-Family
RA	Residental and Agurcultural
RMH	Residental - Mobile Homes
B-1	Neighborhood Business
B-2	General Business
M-1	Light Manufacturing-Research
M-2	Manufacturing

APPENDIX I

Vacant Parcel Water Analysis

Vacant Parcel Water Analysis

BT Holdings Project

Village of Chester, Orange County, New York

Prepared for:

Labrador Properties, Inc.
1 Columbus Place - North Tower - Suite N38F
New York, NY 10019

Prepared by:

Tim Miller Associates, Inc.
10 North Street
Cold Spring, NY 10516

Submitted:

January 20, 2011

Vacant Parcel Water Analysis

The Village of Chester public water supply system is operated by the Village's Water Department. The water sources include a surface water supply at Walton Lake in Monroe and a second groundwater source at the Black Meadow well-field. The Village's total permitted maximum daily water-taking from these two sources is 1.1 million gallons per day (mgd). As reported in the DEIS, the average demand on this water supply system, according to the Water Commissioner, Mr. Thomas Becker, is approximately 0.45 mgd. Thus, available excess capacity of approximately 0.65 mgd would be available in the Village water supply system.

The DEIS also considered those projects pending before the Village of Chester which would utilize a portion of the available water capacity and estimated that those pending projects would require an additional 80,570 gallons per day (gpd).

The proposed plan contemplated in the DEIS included 458 units and was projected to require 137,676 gpd of domestic water usage. The revised Public Road Scenic Alternative plan consists of 436 total units and is projected to require 125,356 gpd of domestic water usage.

Furthermore, since the DEIS was prepared, a reanalysis of the project's irrigation needs indicates that these needs can be met in a sustainable way through utilization of water from the stormwater detention basins. Thus the total water usage requirement for the BT Holdings project at 436 units is a maximum of 125,356 gpd.

Also, since the DEIS was prepared, Tom Becker evaluated the water utilization during dry years, as opposed to average years, and determined that 528,000 gpd, or 0.53 mgd, was a more conservative estimate of peak water usage.

At the request of Superintendent Becker, an analysis of vacant parcels located within the Village that would be entitled to water usage has been prepared. The list of vacant parcels, as identified by the Village, has been mapped as shown on Figure 1. A spreadsheet has been prepared which shows the tax ID number, acreage, zoning and development potential of the vacant parcels. A generic development assumption of 65% development potential, unless further restricted by the zoning, was utilized. This assumption is based upon field experience to provide an order of magnitude for development and represents an estimate of maximum development potential. Additional development assumptions are listed on the spreadsheet.

It is unlikely that each and every parcel would be developed anytime soon, if ever. Some of these lands are significantly encumbered by wetlands and muck lands while others are not ideally located for development. However, in order to be conservative, an assessment of potential water usage has been prepared which indicates that approximately 116,750 gpd could be reserved for the future use of vacant lands.

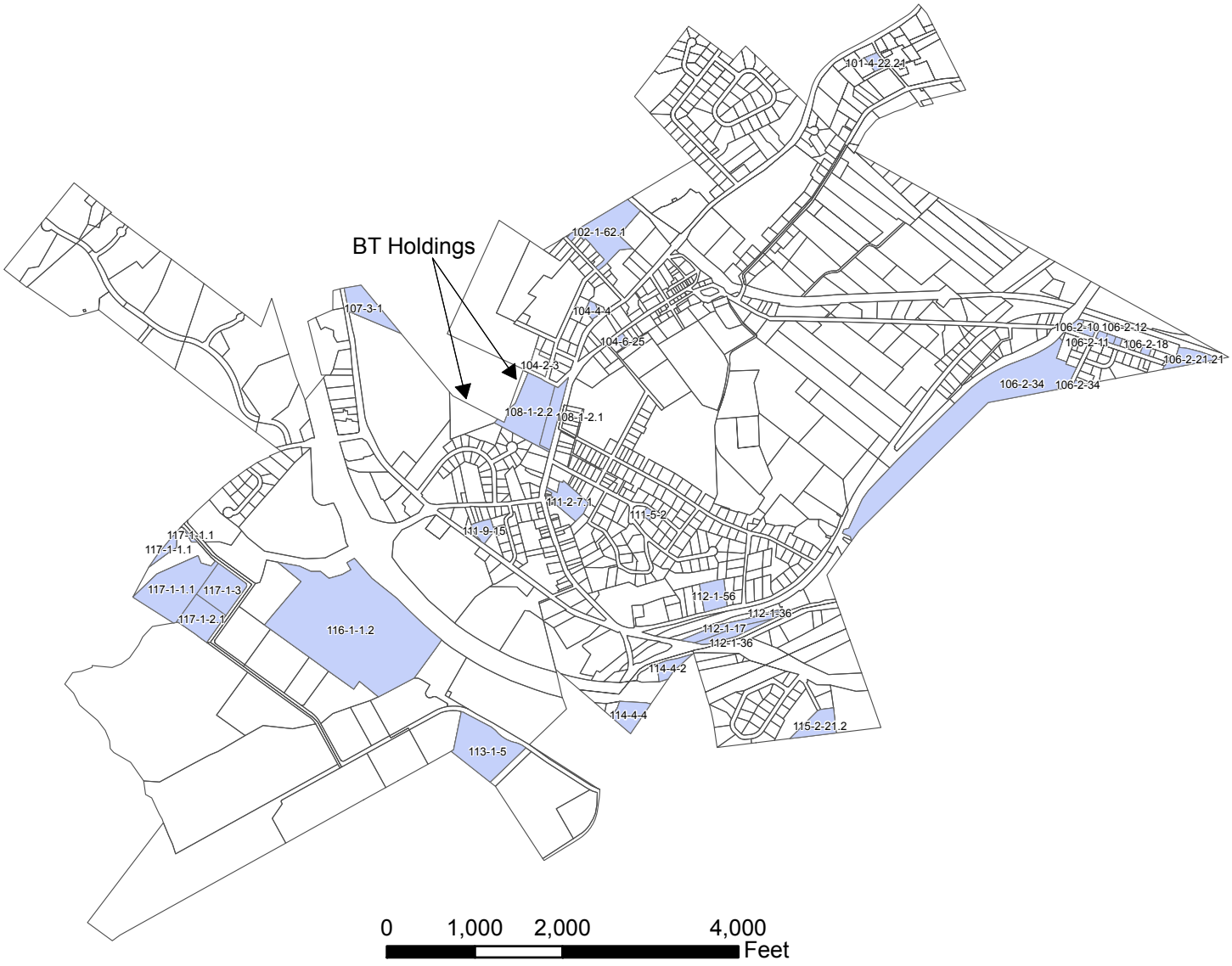
As a result of these analyses, the total demand on the Village's water system is as follows:

- 528,000 gpd - Current usage (dry years)
- 80,570 gpd - Pending projects
- 116,750 gpd - Vacant parcel potential usage
- 125,356 gpd - BT Holdings project usage

  850,676 gpd - TOTAL

Ultimately, even including potential development of pending projects and all vacant land parcels, which represents absolutely full build-out of the Village, and utilizing a peak (dry) year's water usage as a base, less than 80% of the existing water supply is utilized, leaving more than a 20% margin of unutilized and unallocated water supply as a Village reserve.

Village of Chester



Legend

Vacant Parcels

N

Figure 1: Village of Chester Vacant Parcels

Data Source: Orange County Geographic Information Systems, 2/27/09

Scale: As shown

Prepared by: Tim Miller Associates, Inc.
Date: 08/13/09

	Description	Section-Block-Lot	Acres	Zoning	GIS Land Use Code	Development Assumption	Potential Use	Projected Water Consumption
1	Lehigh Avenue (Becker)	106-2-34	21.74	B-2/RMH	105	65% buildable area	+/- 240,000 SF Retail Building	24,000
2	Sanford Avenue (Becker)	106-2-18	0.2	RMH	311	65% buildable area	Double width mobile home	400
3	Sanford Avenue (Johnson)	106-2-21.21	1.75	RMH	311	65% buildable area	9 Single width mobile homes	2,700
4	Grey Court Avenue Lot (BruDans)	106-2-11	0.32	RMH	311	65% buildable area	Double width mobile home	400
5	Grey Court Avenue Lot (BruDans)	106-2-12	0.21	RMH	710	65% buildable area	Double width mobile home	400
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4 Bedrooms per house	B-2	General Business
12,500 SF lot per house	M-1	Light Manufacturing-Research
M-2 and RA Zoning	M-2	Manufacturing
1 employee per 5,000 sf of Warehouse		
0.85 Ac of Parking and Drive Aisles/Loading to 1 Ac of Single Story Building		
B-1, B-2,and M-1 Zoning		
1.5 Ac of Parking to 1 Ac of Single Story Building		

APPENDIX J

Revised Wastewater Report

WASTEWATER REPORT FOR THE CHESTER DEVELOPMENT PROJECT

Chester Development
Town of Chester Section 2, Block 1, Lot 39
Village of Chester Section 107, Block 3, Lot 4
Section 108, Block 1, Lot 1
Section 120, Block 1, Lot 1
Orange County
New York

Prepared For:

BT Holdings LLC- Chester Development
Town and Village of Chester
Orange County, New York

Prepared By:

Langan Engineering and Environmental Services, Inc.
River Drive Center 1
Elmwood Park, NJ 07407

Revised 20 January 2011
~~22 October 2009~~
9123501

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

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1.0 INTRODUCTION

This report presents a summary of the existing municipal wastewater system, proposed wastewater generation rates and proposed wastewater infrastructure required for the proposed BT Holdings Chester Development project, a multi-family residential project in the Village of Chester, Orange County, N.Y. The Chester Development project site consists of several parcels totaling ±68.4 acres east of state Route 17M, approximately one-half mile north of the intersection of Route 17M and state Route 94 (see Figure 1). The Chester Mall is immediately south of the project site, Route 17M and a farm are to the west, residential properties and the Nexans industrial facility are to the north and Oakland Avenue and residential properties are to the east. Although the majority of the site, a 60.6-acre parcel, is presently located within the Town of Chester, the project proposes to annex this lot into the Village of Chester.

2.0 MUNICIPAL WASTEWATER COLLECTION SYSTEM

2.1 Existing Wastewater System and Capacity

The Harriman Sewage Treatment Plant is an Orange County facility that handles wastewater for a number of municipalities located within the county. The plant receives wastewater flow from the "Moodna Group" which consists of seven municipalities or parts thereof: The villages of Chester, Woodbury and South Blooming Grove and the towns of Chester, Monroe, Blooming Grove and Woodbury. The Moodna Basin Joint Operation and Maintenance Commission ("Moodna Basin Commission") operates as an intra-municipal agency that manages the public wastewater treatment for three of the Moodna Group municipalities or parts thereof: the Village of Chester, the Town of Chester and Town of Monroe. The commission operates and maintains a network of pipes and pump stations (owned by the municipalities in which they lie) within the service area of the Moodna Basin Commission. All of the wastewater within that service area is collected and eventually transported to the Harriman Sewage Treatment Plant for treatment before being discharged to the Ramapo River.

The project site lies entirely within the service area of the Moodna Basin Commission. The entire Village of Chester, where three of the project parcels are currently located, is within that service area. The site parcel presently located within the Town of Chester is within the Town's Consolidated Sewer District No. 1, which also lies entirely within that service area. All of the parcels have been assessed appropriate sewer fees for the duration of their existence within the service area.

In 2006, the Harriman Sewage Treatment Plant expanded its treatment capacity from approximately 4 million gallons per day (mgd) to 6 mgd. The Harriman Sewage Treatment Plant receives wastewater flow from the Moodna Group municipalities as well as Orange County

Sewer District No. 1, which consists of all or parts of the villages of Harriman, Monroe, and Kiryas Joel, and the Town of Monroe.

According to usage reports provided by the Moodna Basin Commission (see Appendix A), as of September 2008 the Harriman Sewage Treatment Plant was processing approximately 4.5 mgd, meaning the Treatment Plant has approximately 1.5 mgd of excess wastewater capacity.

The Moodna Group has a total allocation of 2.015 mgd to the Harriman Sewage Treatment Plant of which 347,000 gallons per day (gpd) and 410,000 gpd are allocated to the Village of Chester and Town of Chester, respectively. According to the usage report, the Moodna Group discharged approximately 1.775 mgd to the Harriman Plant with the Village of Chester discharging approximately 363,600 gpd of wastewater to the plant (16,600 gpd over the Village's allocated amount) and the Town of Chester discharging approximately 262,000 gpd (148,000 gpd under the Town's allocated amount). The net combined available and remaining allocation for the Village and Town of Chester is 131,400 gpd.

2.2 Existing Wastewater Infrastructure

The Moodna Basin Commission operates and maintains an extensive sewer network within the town and village, including 8-inch diameter gravity sewer in Route 17M along the site frontage. The 8-inch sewer runs northerly to a pump station (Moodna Pump Station No. 5) from where it is pumped back up to the intersection of Route 17M and West Avenue via a 4-inch force main into a gravity sewer that runs to the south.

2.3 Pending or Approved Projects

According to available records, the following projects are pending or approved and may be eligible for sewer service on a first-come, first-serve basis:

Project Name	**Project Description**	**Estimated Wastewater Generated**
The Castle Entertainment Complex (Town of Chester)	10,000sf expansion	10,000sf x 0.10gpd/sf= *1,000gpd*
Frozen Ropes Sports Center (Town of Chester)	20,200sf building	20,200sf x 0.10gpd/sf = *2,020gpd*
Coach USA (Town of Chester)	191,040sf bus garage & offices	60 emp x15gpd/emp = *900gpd*
Best Mexican Foods (Town of Chester)	20,000sf warehouse	10 emp x 15gpd/emp = *150gpd*

(table continued)

Project Name	Project Description	Estimated Wastewater Generated
Lowe's Home Improvement Store (Village of Chester)	150,000sf building	*2,500gpd**
C&S Wholesale Foods (Village of Chester)	356,022sf warehouse expansion	120 emp x 15gpd/emp = *1,800gpd***
Hills of Chester (Town of Chester)	20 single-family homes	20 x 400gpd/home = *8,000gpd*
Meadow Hill Development (Village of Chester)	142 residential units	20,000gpd***
Greens of Chester (Town of Chester)	431 residential units	See discussion below

Total: 36,370 gpd

* Although the Lowe's is currently open and operating, it was still under construction when the Sept 2008 usage report was published

** Not including wastewater generated from potential cooling towers (if any)

*** As reported by Tom Becker, Village Water Superintendent

The Greens of Chester had initially agreed to construct a new wastewater treatment plant as part of their project and therefore would not have been contributing any flow to the Moodna Basin Service Area. The recent settlement between the Town of Chester and the Greens of Chester however would allow the Greens of Chester to discharge up to approximately 135,000 gpd to the Moodna Basin Service Area. The Greens of Chester project has been in the approval and permitting process for over two decades, and the impact of the recent settlement agreement on the status, timing and/or phasing of the Greens project is unclear. The potential usage from the Greens has not been included in the pending or approved projects above.

3.0 PROJECT WASTEWATER GENERATION AND PROPOSED INFRASTRUCTURE

3.1 Project Wastewater Generation Rates

Based on New York State Department of Environmental Conservation (NYSDEC) criteria, the BT Holdings project will generate an estimated average daily wastewater flow of 113,960 gpd. The table below provides the calculations per NYSDEC standards.

Type of Facility	Number of Units	NYSDEC Estimated Wastewater Generation Rate	Wastewater Generated (gpd)
1-bedroom dwelling unit	75	150 gpd per unit	11,250
2-bedroom dwelling unit	153	300 gpd per unit	45,900
3-bedroom dwelling unit	208	400 gpd per unit	83,200
Clubhouse (sf)	6,000	0.1 gpd per sf	600
Pool (swimmers)	150	10 gpd per swimmer	1,500
		Subtotal:	*142,450*
		20% savings for use of water conservation devices	(28,490)
		Total:	***113,960 gpd***

3.2 Proposed Disposal of Wastewater

By virtue of the project site's location within the Town of Chester's sewer district and within the Village of Chester, the project will remain entitled to sewer service from both the Town and the Village. According to usage reports provided by the Moodna Basin Commission, the Village of Chester discharged approximately 363,600 gpd of wastewater to the plant which is 16,600 gpd over the Village's allocated amount. The Town of Chester discharged approximately 262,000 gpd which is 148,000 gpd under the Town's allocated amount. The net combined available and remaining allocation for the Village and Town of Chester is 131,400 gpd. The estimated 113,960 gpd of wastewater the proposed project is expected to generate is 34,040 gpd below the Town's available and remaining allocation and 17,440 gpd below the combined available and remaining allocation between the Town and Village. As such, there presently exists available capacity in the wastewater system to handle the proposed project.

If the pending or approved projects should come on line prior to the BT Holdings project and additional capacity was needed, the Town and/or Village can request additional allocation from the Harriman Sewage Treatment Plant which, as mentioned above, has approximately 1.5 mgd of available capacity. As a district member, the property would be entitled to such service and the district would be obligated to provide it. At present, a Court ordered injunction prohibits the County from allocating any additional amounts to the Moodna Group municipalities. However, it is anticipated that the legal proceedings will be brought to conclusion prior to construction of the BT Holdings project and, depending upon the results of those legal proceedings, additional allocation may become available from the Harriman Treatment Plant source.

Should wastewater disposal via the proposed Black Meadow Wastewater Treatment Facility become available, that would also provide an additional potential source of wastewater capacity.

If the pending or approved projects came on line prior to the BT Holdings project and additional allocation to service the BT Holdings project was needed but unavailable from the alternate sources described above, construction of units beyond available capacity would be prohibited until such capacity became available.

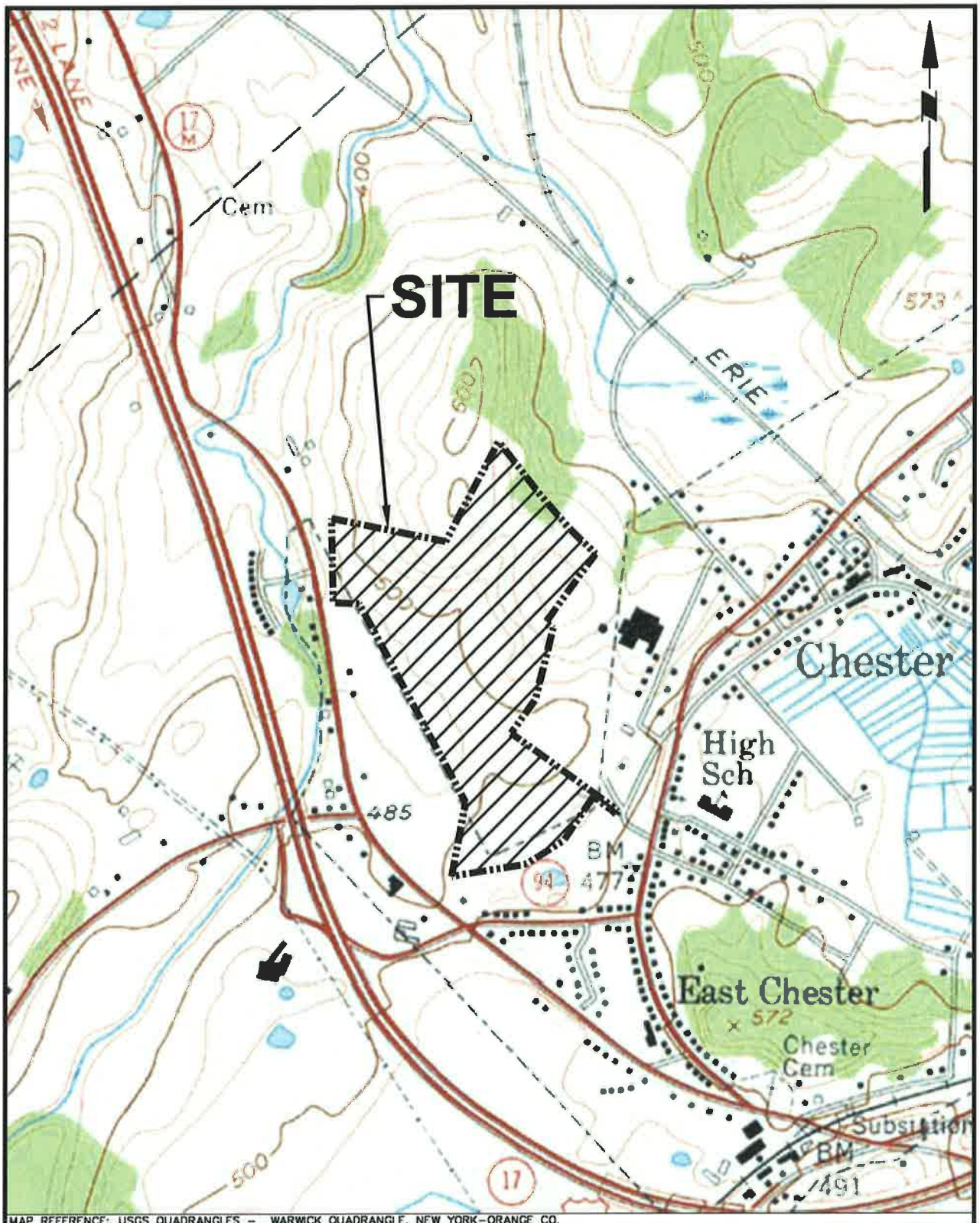
3.3 Proposed Wastewater System Infrastructure

The wastewater from the site will be collected from the site in a new gravity sewer system flowing to the existing 8-inch main in Route 17M. The new gravity sewer system will be designed in accordance with village, county and NYSDEC standards as applicable. Pump stations are not anticipated to be required within the project site.

Moodna Pump Station No. 5 will have to be assessed and evaluated for confirm its ability to handle the additional flow from the project site. Improvements to the pump station, if necessary, are anticipated to be designed, permitted, and constructed by the developer with review and approval by the Village, Moodna Basin Commission, Orange County Health Department, and NYSDEC as applicable.

The only anticipated infrastructure improvements outside the site boundary with regards to wastewater would be the assessment and upgrade, if necessary, of Moodna Pump Station No. 5 for the additional project flow. The remainder of the existing infrastructure in Route 17M would be utilized to convey wastewater flow to the south to its eventual discharge to the Harriman Sewage Treatment Plant.

FIGURES



MAP REFERENCE: USGS QUADRANGLES – WARWICK QUADRANGLE, NEW YORK–ORANGE CO.

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NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

Project

SITE LOCATION MAP
CHESTER DEVELOPMENT

VILLAGE OF CHESTER

ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	12-2-08	1"=1000'	FIGURE-1

Filename: G:\Data5\9123501\Cadd Data - 9123501\Dwg\9123501 Figure USGS.dwg Date: 2/11/2009 Time: 16:25 User: hhoq Style Table: Langan.stb Layout: A Size Sheet (Bottom)

APPENDIX A

ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS -
DIVISION OF ENVIRONMENTAL FACILITIES AND SERVICES
EXISTING FLOW INTO THE 6.0 MGD
HARRIMAN SEWAGE TREATMENT PLANT
REPORT DATE OF September 30, 2008

	2007 OCT	NOV	DEC	2008 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Total	12 MONTH AVG. ENDING 30-Sep-08	PRESENT LIMIT	REMAINING AVAILABLE BALANCE
RAIN IN INCHES	5.60	2.82	5.88	1.55	8.05	5.90	2.64	3.57	2.54	2.54	3.15	6.49	50.73			
VILLAGE OF CHESTER	284,393	279,066	357,072	325,774	401,775	412,909	266,279	430,557	380,057	378,332	422,406	424,432		363,588	347,000	(16,588)
TOWN OF CHESTER	266,880	275,297	292,743	262,738	272,333	299,549	265,697	278,676	233,131	222,800	218,254	257,734		262,153	410,000	147,847
TOWN OF MONROE	87,628	86,297	88,930	100,699	108,033	90,085	118,561	101,235	136,212	144,238	149,112	121,800		111,069	133,000	21,931
V. OF S. BLOOMING GROVE	219,061	260,817	359,913	321,232	363,966	387,421	294,403	286,484	223,607	216,674	206,935	231,437		280,996	490,000	209,004
VILLAGE OF WOODBURY	598,542	681,773	854,723	862,197	1,163,128	1,185,887	751,923	706,845	585,090	542,065	527,074	621,497		756,729	635,000	(121,729)
MOODNA TOTAL	1,456,504	1,583,250	1,953,381	1,872,640	2,309,235	2,375,851	1,696,863	1,803,797	1,558,097	1,504,109	1,523,781	1,656,900		1,774,534	2,015,000	240,466
OCSD#1	2,359,496	2,739,750	3,561,619	3,205,360	4,033,765	3,663,149	2,402,137	2,300,203	2,006,903	2,042,891	2,141,219	2,474,100		2,744,216	3,985,000	1,240,784
HSTP TOTAL	3,816,000	4,323,000	5,515,000	5,078,000	6,343,000	6,039,000	4,099,000	4,104,000	3,565,000	3,547,000	3,665,000	4,131,000		4,518,750	6,000,000	1,481,250

APPENDIX K

Preliminary Revised Stormwater Management Plan

PRELIMINARY STORMWATER MANAGEMENT PLAN

Chester Development
Town of Chester Section 2, Block 1, Lot 39
Village of Chester Section 107, Block 3, Lot 4
Section 108, Block 1, Lot 1
Section 120, Block 1, Lot 1
Orange County
New York

Prepared For:

BT Holdings LLC- Chester Development
Town and Village of Chester
Orange County, New York

Prepared By:

Langan Engineering and Environmental Services, Inc.
River Drive Center 1
Elmwood Park, NJ 07407

25 August 2009
Revised January 20 2011
9123501

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

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1.0 INTRODUCTION

In this report we present the conceptual stormwater management design and calculations for Chester Development project, a ±68.43 Ac. multi-family residential project located east of New York State Route 17M, approximately one-half mile north of the intersection of Route 17M and New York State Route 94, in the Village of Chester, Orange County, New York (see Figure 1). In this report we provide preliminary analyses of the existing and proposed watersheds and discuss the management of the stormwater runoff to show that adequate areas have been allocated to address water quality and quantity measures for the proposed development. Due to the conceptual nature of the project, a fully detailed design of the conveyance system and Stormwater Pollution Prevention Plan (SWPPP) which includes specific preventative measures for items such as litter control, and storage and disposal of construction materials and debris has not been prepared at this time. These documents will be provided for review and approval during the site plan approval process and conformance to state and local requirements for these items is expected.

The stormwater analyses contained herein have been prepared in accordance with the following state standards:

- New York Standards and Specifications for Erosion and Sediment Control, April 2005; and
- New York State Department of Environmental Conservation (NYSDEC) Stormwater Management Design Manual, August 2010.

2.0 DESIGN METHODOLOGY

2.1 Stormwater Management Design

Calculations for the site's runoff were prepared using the SCS Method as contained in the USDA Soil Conservation Service Publication TR-55 "Urban Hydrology for Small Watersheds." TR-55 outlines procedures for calculating peak rates of runoff resulting from precipitation events and procedures for developing runoff hydrographs. The TR-55 procedure simulates a watershed using the drainage area, curve number (CN), and time of concentration (Tc) for each watershed. Where appropriate, large watersheds with

varying runoff characteristics (i.e., Tc's CN's) were further delineated in sub-watersheds that all drain to the same location (discharge point).

The curve number is a land-sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. Based on the coverage of soil groups and land use in the area, an average CN was determined for each watershed for the existing and proposed conditions.

Using the NRCS Soil Survey for Orange County, New York (see Figure 2), the soils within the watershed was divided into hydrologic soil groups (A, B, C and D). The SCS classification system evaluates the runoff potential of a soil according to its infiltration and transmission rates. "A" soils have the lowest runoff potential and "D" soils have the greatest runoff potential.

The time of concentration is defined as the time for runoff to travel from the hydraulically most distant point of the watershed to a point of interest. Values of the time of concentration were determined for existing and proposed conditions based on land cover and slope of the flow path using methods described in TR-55.

The design storm used for the TR-55 study is the 24-hour SCS Type III cumulative rainfall distribution. For this site, the 1-, 2-, 10-, and 100-year storm events were considered in accordance with the NYSDEC Stormwater Management Design Manual. Please refer to Appendix A and Appendix B for pre- & post-development summary stormwater runoff hydrographs, respectively.

2.2 Water Quality & Quantity

The water quality volume, denoted as WQ_v, is the volume of runoff dictated by NYSDEC methodology to capture and treat 90% of the average annual stormwater runoff volume to improve the quality of the runoff leaving the site. The WQ_v is directly related to the amount of impervious coverage created at a project site. This volume is calculated

using the following equation as prescribed by NYSDEC Stormwater Management Manual:

$$WQ_v = \frac{P\ R_v\ A}{12}$$

Where:

P = 90% rainfall event number (Figure 4.1 NYSDEC Manual)

R_v = 0.05 + 0.009(I), where I is percent impervious coverage

A = Site area in acres

The WQ_v was calculated for each proposed sub-watershed for the proposed development. These calculations can be found within Appendix C. As described in the most recent NYSDEC Stormwater Management Design Manual, which was recently updated in August 2010, a new runoff reduction volume (RRv) requirement has been added which requires that the water quality volume is reduced by application of a combination of green infrastructure and standard stormwater management practices. The site was designed to comply with the new RRv requirement, which will be discussed in greater detail in section 4.4 of this report.

As described in NYSDEC Stormwater Management Design Manual, stormwater quantity measures include stream channel protection (CPv), overbank flood protection (Q_p), and extreme flood control (Q_f). Stream protection requires 24-hour extended detention of the 1-year storm event remaining after runoff reduction. Overbank flood control requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate to existing rate. The extreme flood control requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate to existing rate. The 10-year and 100-year storms were analyzed in accordance with the Manual. To provide treatment of the computed water quality volume, methods in accordance with the most current NYSDEC Stormwater Management Design Manual have been evaluated and selected accordingly for this project site. Analyses of storm events were prepared and are included in the appendices of this report.

3.0 EXISTING CONDITIONS

3.1 Existing Site Description

The subject property consists of four tax parcels, one presently within Town of Chester and the remaining three in Village of Chester. The lot in the Town of Chester (to be annexed in to Village as part of the proposed action) has a Section-Block-Lot number of 2-1-39 and is 60.6 acres. The three tax lots in the Village are 107-3-4, 108-1-1 and 120-1-1 totaling 7.7 acres. The site is bounded by New York State Highway Route 17M & Chester Mall (commercial uses) to the west, farmland to the north, another commercial facility to the southeast, and a mix residential and woodlands land to the northeast and south. The site also contains a ±3.67-Ac wetland area interior to the site (see Property Survey). The property is to be re-zoned RM (Residential Multi-Family) as part of the proposed action.

The topography of the site generally runs from two highpoints (Elev. 600 & Elev. 597) in the northeast portion of the site down towards the onsite wetland (Elev. 484), and towards the northwest of the property along Route 17M (Elev. 452). Approximately 50% of the site has slopes less than 10%, and about 20% of the site has slopes steeper than 15%. The majority of the steeper slopes are in the northwest section of the site.

Based on a preliminary soils investigation, the site is covered by surface layer of topsoil approximately 8 inches thick that overlies stiff/dense predominantly granular soils. The soils consist of varying proportions of silt, clay, sand, gravel and cobbles, which is typical of glacially deposited soils. Bedrock was not encountered during the investigation, nor was a uniform water table although locally perched water was observed in several test pits. The preliminary information gathered indicates that there should not be any significant impediments to cutting, filling, grading, or providing soil erosion measures at the site. Further geotechnical studies should be performed once the site design drawings and details have been further advanced prior to final approval and/or construction.

Under present-day condition stormwater discharges at four main locations (see Figure 3):

1. existing culvert within Route 17M at the northwest corner of the site,
2. existing basins to the west, and
3. towards adjacent northeast properties, and
4. towards adjacent properties at the northern corner of the site.

3.2 Existing Drainage

The SCS Method was used to determine existing runoff hydrographs for the 1-, 2-, 10- and 100-year, 24-hour storms. Overall watersheds, including associative off-site drainage where applicable, were analyzed to select downstream discharge locations. These analysis locations were chosen as a point in which comparison between the existing and proposed drainage can be reviewed for potential development impacts.

Based on survey information, aerial photographs, site visits and supplemental topographic information taken from record mapping sources, the site was divided into four watershed areas; A, B, C and D. Watershed D is the northwestern-most corner of the site. Because this de-minimis watershed (0.42 acres) is entirely pervious in nature, and the proposed project will reduce the size of this watershed further by channeling stormwater towards the stormwater management structures, we believe the proposed development will have no negative impact on this watershed. Therefore, this report does not discuss or evaluate this watershed in any further detail. Watersheds A, B and C were analyzed at their respective analysis points as shown in Figure 3. These analysis points consist of the following:

- 24"x18" pipe culverts located at westernmost property boundary for watershed A,
- A series of two existing ponds along the Chester Mall property for watershed B, and
- Overland sheet flow discharge to adjacent property for watershed C.

Watershed B is divided into two subwatersheds, B-1 and B-2. Subwatershed B-1 consists of about ±65% of this watershed and drains via the onsite wetland. Subwatershed B-2 drains via overland flow towards the adjacent properties' drainage system and eventually to analysis point B.

Based on survey information, aerial photographs, and site visits, the existing on-site cover conditions were considered to be mainly contoured row-crops in good condition with some areas of grass. Any off-site areas, included as part of a watershed were assessed based upon aerial photography and supplemental topographic information taken from record mapping sources.

The existing watershed data and calculations are summarized below. Summary watershed data and hydrographs are provided in Appendix A.

SUMMARY OF EXISTING PEAK DISCHARGES

Analysis Point	Area (Ac.)	Peak Runoff (cfs)			
		1 Year	2 Year	10 Year	100 Year
A	21.99	23.96	33.08	65.40	106.87
B	51.96	29.97	45.35	104.17	184.91
C	12.01	11.99	17.10	35.71	60.10

4.0 PROPOSED CONDITIONS

4.1 Proposed Development

The proposed development will consist of a total of approximately 436 residential units, including 100 senior apartments in two 3-story building and the other 336 units in townhomes scattered throughout the site. Along with the residential units, the development will include associative site improvements such as a clubhouse, internal roadways and parking areas, stormwater ponds, rain gardens, stormwater conveyance system, utilities to service the buildings (water, sanitary sewer, gas, electric, and telephone), lighting and landscaping. Access to the site will be provided via a new

access drive from Route 17M at the northwest corner of the site. An emergency access road is also proposed at the southeast corner of the site. The highest elevation of the site will remain at Elev. 600 along the undisturbed northwestern corner of the site, and the lowest elevation will remain Elev. 452 along Route 17M. The site earthwork is designed to be balanced with an estimated cut-to-fill volume of approximately 390,000 cubic yards based on the preliminary grading and drainage plan (Drawing 21.01). The maximum cut depth is approximately 33 feet and the maximum fill depth is approximately 20 feet.

4.2 Proposed Watershed Description

The existing topography was maintained to the extent possible when grading the site to minimize site disturbance and effects on the existing drainage patterns and discharge locations. Similar to the existing watersheds, the site was separated into 4 main watersheds (A, B, C & D) for the post-development analysis. As previously mentioned Watershed D is very small portion of the site and will not be adversely impacted by the proposed development. Analysis points A, B and C (one for each watershed) were selected to allow for an equal comparison of existing to proposed conditions (see Figure 4). Where applicable, off-site drainage is included in the proposed watershed calculations to account for flow passing through the project site.

The post-development watersheds were broken up into subwatersheds, as necessary, to simulate the runoff generated by the uncontrolled runoff from offsite areas as well as the runoff from the site controlled by proposed stormwater management features. In the post-development condition approximately 23 acres of new impervious coverage will be created. Runoff associated with this new impervious coverage will be primarily collected and conveyed via above ground swales and conventional drainage inlets and piping to rain gardens, water quality ponds, and stormwater management basins for water quality and water quantity treatment.

The cumulative curve numbers and times of concentrations for the proposed development were determined based upon the proposed ground cover and the grading

of the site (see Figure 4). Furthermore, to accurately depict the timing of the overall watersheds, a "reach-route" extending from the confluence of each subwatershed to the downstream analysis point of the overall watershed was used to translate the hydrographs from the end of the time of concentration path to common analysis points.

4.3 Proposed Stormwater Management

The SCS method was used to determine proposed peak discharges for the 1-, 2-, 10- and 100-year storms. The following table summarizes the proposed peak runoff rates, and peak discharges to and from each of the proposed stormwater management basins. The location of the proposed basins and discharge points are shown on the Proposed Watershed Map (see Figure 4) and the Grading and Drainage Plan (Drawing 21.01).

SUMMARY OF INFLOW & OUTFLOW PEAK DISCHARGE OF PROPOSED BASINS

Proposed Basins	Watershed Area	Area (Ac.)	Peak Runoff (cfs)							
			1 Year		2 Year		10 Year		100 Year	
			Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow
A	A-1	24.57	26.8	1.9	37.0	3.8	73.0	19.6	119.4	49.8
B	B-1	19.06	24.1	0.7	32.0	2.1	59.2	8.1	93.3	40.0
C	C	9.05	12.5	0.5	17.1	0.6	33.2	14.3	53.6	48.5

SUMMARY OF PROPOSED RUNOFF

Analysis Point	Area (Ac.)	Peak Runoff (cfs)			
		1 Year	2 Year	10 Year	100 Year
A	33.67	10.0	14.0	33.7	74.2
B	43.31	15.8	23.6	54.2	118.9
C	9.05	0.5	0.6	14.3	48.5

Under standard NYSDEC criteria for attenuating the increase in discharge associated with new development, a stormwater basin (Infiltration Basins - NYSDEC Classification I-2) were conceptually designed in each watershed where impervious areas are proposed (watershed A-1, B-1 and C). Channel protection has been provided within each basin by providing a low-flow orifice to detain runoff from the 1-year storm event. Sufficient capacity has been provided to meet the 24 hour extended detention design requirement when a fully detailed design is completed.

To provide stormwater quantity measures in accordance with NYSDEC, the proposed basins have also been conceptually designed to attenuate the 10-year and 100-year storm events to keep the discharge rate equal or less than existing peak at each of the analysis points.

Discharge from proposed Basin A will be piped to the existing culvert at 17M, and discharge from proposed Basins B & C will be conveyed via onsite overland flow to downstream waters/areas. To accurately depict the timing of the flows from the overall watersheds, a "reach-route" extending from the confluence of each subwatershed to the downstream analysis point of the overall was used to translate the hydrographs from the end of the time of concentration path to the discharge point. The on-site stormwater management basins have been conceptually designed to provide for the quantity treatment as outlined in the NYSDEC Stormwater Management Design Manual for infiltration basins (NYSDEC Classification I-2). A typical cross section of the proposed detention ponds can be found in figure section of this report (see Figure 5). Summary hydrographs of the proposed analysis are also provided in Appendix B.

4.4 Proposed Water Quality

The NYSDEC Stormwater Management Design Manual requires that water quality treatment of 90% of the average annual stormwater runoff volume be provided. The water quality volume (WQ_v) is directly associated to the quantity of impervious area within a project site. The Manual requires that the water quality volume be treated as close to the source of runoff as possible and the Manual has recently been updated to include a requirement to reduce the total WQv through application of specific green infrastructure techniques.

Treatment of the required water quality volumes will be provided throughout the site utilizing various green infrastructure techniques in accordance with the latest NYSDEC Stormwater Management Design Manual requirements. The conceptual design includes application of several of the techniques identified in the Manual, including: rain gardens,

tree plantings and vegetated swales, disconnected roof runoff, and conservation of natural areas. The majority of the site runoff is intended to flow through one or several of those measures prior to entering the proposed detention basins. The detention basins are designed to include conventional forebays for additional water quality treatment and to provide treatment for the small amount of water that cannot be treated prior to entering the basins. A map of the proposed water quality features is provided (See Figure 6) and water quality calculations are provided in Appendix C.

4.5 Stormwater Conveyance

A combination of grass swales and traditional curb gutters, inlet catch basins, and an underground pipe system are envisioned to collect & convey stormwater safely from the project site. The conveyance system will be designed during later stages of the permitting process after the site plan has been designed in further detail. In accordance with Best Management Practices, local and state stormwater management regulations, the stormwater conveyance pipes will be sized to convey stormwater runoff from the site for the 10-year storm using the rational method.

At the proposed roadway crossing of the wetland, three open-bottom culvers are proposed. The culverts will not only convey stormwater from the wetlands on the north side of the crossing to the south side of the crossing, but will also allow for flora and habitat crossings. The size, location and orientation of these culverts will be determined as part of the ACOE permitting process that is required for the roadway wetland crossing.

4.6 Erosion and Sediment Control Measures

Temporary and permanent soil erosion and sediment control measures have been conceptually designed and located to minimize the amount of sediment carried by stormwater runoff and discharge to adjacent surface waters or to on-site drainage structures. The preliminary soil erosion and sediment control design was completed in accordance with the "New York State Standards and Specifications for Erosion and

Sediment Control," August 2005. The following summarizes the planned erosion and sediment control practices for the project.

Silt Fence

A 30-inch high silt fence shall be placed along the down gradient edge of the site in conjunction with securely anchored hay bales placed in front of the fencing, as shown on the plans. The purpose of the silt fencing is to reduce the runoff velocity and encourage deposition of any sediment before it leaves the site. The filter cloth shall be embedded securely in the ground as per the standard detail. Silt fencing shall be inspected regularly for fabric integrity, embedded depth and sediment accumulation. A silt fence shall also encircle temporary stockpile areas if one is not in placed surrounding the work area.

Sediment Basins

Sediment basins minimize the amount of sediment carried by storm water runoff and discharge to nearby surface waters. Temporary sediment basins have been conceptually designed to intercept sediment laden runoff and to trap and retain the sediment in runoff in order to reduce the total suspended solids leaving the project site. After adequate settling time, through a basin dewatering device consisting of filter-fabric wrapped perforated piping, flow will be slowly discharged out of the sediment basins through a temporary outlet structure.

Inlet Protection

All new catch basins and area drains within the limit of disturbance or in the vicinity of construction activities shall have fabric inlet protection installed to prevent sediment-laden runoff from entering the storm drain system. The fabric will be securely fastened on a frame and staked and embedded into the ground. The filter fabric inlet protection shall be inspected regularly for fabric integrity, embedded depth and sediment accumulation.

Vegetative Measures

Any disturbed area where the earthwork is completed and not subject to construction traffic, should not be left exposed more than 14 days and shall immediately receive a temporary seeding in accordance with the "New York State Standards and Specifications for Erosion and Sediment Control", August 2005. Disturbed areas that are within wetlands or area adjacent to the wetland areas should use the seeding mix specified for wetland areas. Mulch may be used if the season prevents the establishment of a temporary cover. Permanent stabilization shall be performed as soon as possible after completion of grading.

Construction Entrance

A stabilized pad of aggregate underlain with filter fabric will be located at the site entrance to reduce or eliminate the tracking of sediment onto public streets. The pad thickness shall be constantly maintained to the specified dimensions by adding rock. At the end of each construction day, all sediment deposited on public streets will be removed and returned to the site.

Temporary Stockpile

The maximum slope for the temporary stockpile shall be three horizontal to one vertical. The stockpile shall be within the work area, encircled with a silt fence to prevent the spread of sediment from the stockpile to the rest of the site outside of the work area. To the extent practicable, stockpiles shall be located at least 50 feet from the site property line boundaries. Any temporary stockpile inactive for more than 14 days shall be stabilized or covered.

Dust Control

Generation of dust shall be minimized by limiting the extent of exposed soils and re-establishing vegetative cover in these areas as soon as possible. Additional temporary methods to minimize dust may include wetting, mulching, spray adhesives, stone covering, and wind barriers. The Contractor shall maintain all stockpiles; haul roads, access roads, and equipment storage areas as necessary to keep the work area free

from visible dust which would cause a hazard or nuisance, at all times including after working hours, on weekends and holidays.

Details associated with the implementation of the proposed stormwater facilities and erosion control measures during construction are conceptually shown on the design plans (see drawing 23.01 & 23.02). This also includes a rough construction sequence to guide the contractor in the installation of the erosion control measures as well as the site plan features. Due to the size of the project and the significant amount of cut-to-fill that will be required for the project, we anticipate a waiver from the 5-acre maximum disturbance limit will be sought from NYSDEC simultaneously within the filing of the SPDES application. When greater than 5 acres are disturbed additional controls are necessary including more stringent vegetative measures and inspection frequency. The more stringent controls will be followed in accordance with NYSDEC requirements.

4.7 Stormwater Management Facility Maintenance

Stormwater management facilities for the project site have been conceptually designed for long-term water quality and water quantity performance. Below is a description of the methods to be implemented by the project sponsor during and after construction. Sample checklists have been provided as part of Appendix D:

- Stormwater collection and conveyance systems (i.e., catchbasins and pipes) will be inspected at least once annually and cleaned as necessary to maintain a free-flowing conveyance to downstream treatment ponds. This includes a visual inspection and the clearing of any blockages within proposed swales and rain gardens and subsurface drainage pipe to respective networks.

- Stormwater basins will be visually inspected after every major storm event and at least semi-annually for the following items:
    - Clogging of orifice or overflow weirs;
    - Erosion of pond embankments and inlet/outlet pipes;

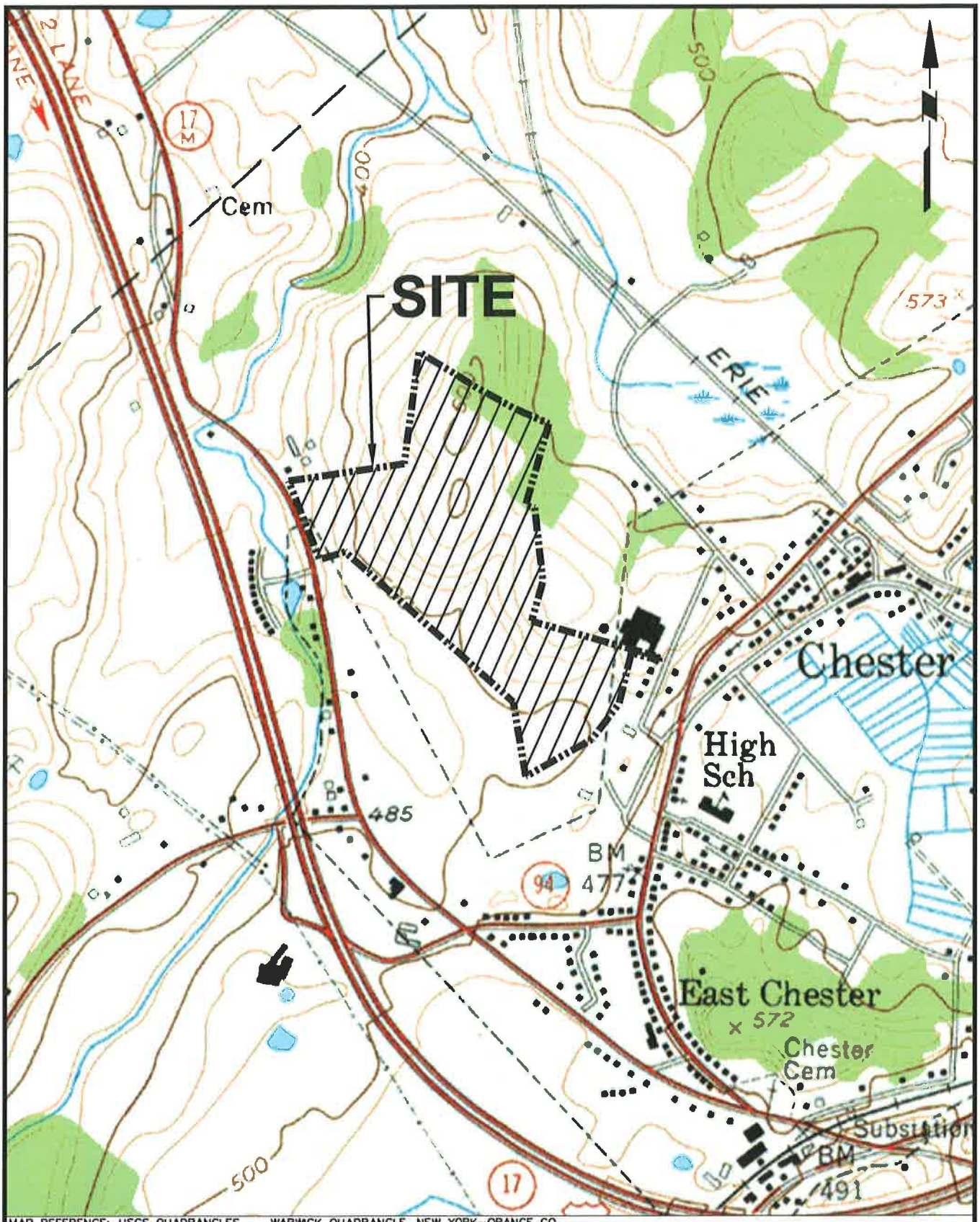
- Substantial vegetative growth that may inhibit the pond volume or outflow;
- Accumulation of sediment within the basin bottom and/or around the proposed outlet structure; and
- Other miscellaneous items identified on the checklist in Appendix D.

5.0 CONCLUSION

The proposed management systems have been conceptually designed to attenuate peak discharges from the site to be equal to or below the existing peak discharge routes for the 1-, 2-, 10-, and 100-year storms in accordance with NYSDEC quality control requirements. Water quality measures have been provided in accordance with NYSDEC Stormwater Management Design Manual for the water quality volume (WQ_v) runoff and for the runoff reduction volume (RRv). Channel protection has been provided within each basin by providing a low-flow orifice to detain runoff from the 1-year storm event. The proposed conveyance system will include traditional curb gutters, inlet catch basins and an underground pipe system to collect and convey stormwater runoff to the appropriate above-ground detention ponds as well as grassed dry swales to convey runoff to rain gardens.

Temporary and permanent soil erosion and sediment control measures have been conceptually designed and located to minimize the amount of sediment carried by stormwater runoff and discharging to adjacent surface waters or to on-site drainage structures. The preliminary soil erosion and sediment control design was completed in accordance with the "New York State Standards and Specifications for Erosion and Sediment Control", August 2005.

FIGURES



MAP REFERENCE: USGS QUADRANGLES – WARWICK QUADRANGLE, NEW YORK–ORANGE CO.

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NJ Certificate of Authorization No: 24GA27996400

Project **USGS SITE LOCATION MAP**
CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	12-2-08	1"=1000'	FIGURE-1

Filename: G:\Data5\9123501\Cadd Data – 9123501\Dwg\9123501 Figure USGS.dwg Date: 12/2/2008 Time: 14:09 User: hhoq Style Table: Langan.stb Layout: A Size Sheet (Bottom)

LEGEND		
SYMBOL		SOIL TYPE
	Ab	ALDEN SILT LOAM 0 TO 3 % SLOPES
	ErB	ERIE GRAVELLY SILT LOAM, 3 TO 8 % SLOPES
	Ma	MADALIN SILT LOAM 0 TO 3 % SLOPES
	MdB	MARDIN GRAVELLY SILT LOAM, 3 TO 8 % SLOPES
	MdC	MARDIN GRAVELLY SILT LOAM, 8 TO 15 % SLOPES
	MdD	MARDIN GRAVELLY SILT LOAM, 15 TO 25 % SLOPES
	MNE	MARDIN SOILS, 25 TO 35 % SLOPES
	OVE	OTISVILLE AND HOOSIC SOILS, 25 TO 45 % SLOPES

300 0 150 300

SCALE IN FEET

NOTE: SOIL INFORMATION BASED ORANGE COUNTY SOIL SURVEY GIS MAPPING.

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Project

SOILS MAP
CHESTER DEVELOPMENT
VILLAGE OF CHESTER

ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	12-2-08	1"=300'	FIGURE-2

LEGEND

WATERSHED LIMITS

TIME OF CONCENTRATION FLOWPATH

WATERSHED 'A' | WATERSHED 'B' | WATERSHED 'C' | WATERSHED 'D'

ANALYSIS POINT-C

WATERSHED 'D'
AREA = ±0.42 AC
TC = 13 MIN
CN = 82

WATERSHED 'C'
AREA= ±12.01 AC
TC = 14 MIN
CN = 79

Tc PATH (TYP.)

COMMERCIAL DEVELOPMENT

WATERSHED 'B-2'
AREA= ±18.47 AC
TC = 29 MIN
CN = 79

WATERSHED 'B-1'
AREA= ±33.49 AC
TC = 25 MIN
CN = 72

EXISTING WETLAND (± 3.677-AC)

WATERSHED 'A'
AREA= ±21.99 AC
TC = 18 MIN
CN = 82

ANALYSIS POINT-A

ANALYSIS POINT-B

NYS ROUTE 17M

0 125 250
SCALE IN FEET

ANALYSIS POINT	EXISTING DISCHARGE RATE		
	1-YEAR	10-YEAR	100-YEAR
A	23.96 CFS	65.40 CFS	106.87 CFS
B	29.97 CFS	104.17 CFS	184.91 CFS
C	11.99 CFS	35.71 CFS	60.10 CFS

NOTES:
1. EXISTING TOPOGRAPHIC INFORMATION BASED ON A DIGITAL SURVEY PREPARED BY LANC & TULLY, DATED JUNE 7, 2005 AND LAST REVISED MAY 17, 2006. SUPPLEMENTAL OFFSITE CONTOURS TAKEN FROM GOOGLE TERRAIN.

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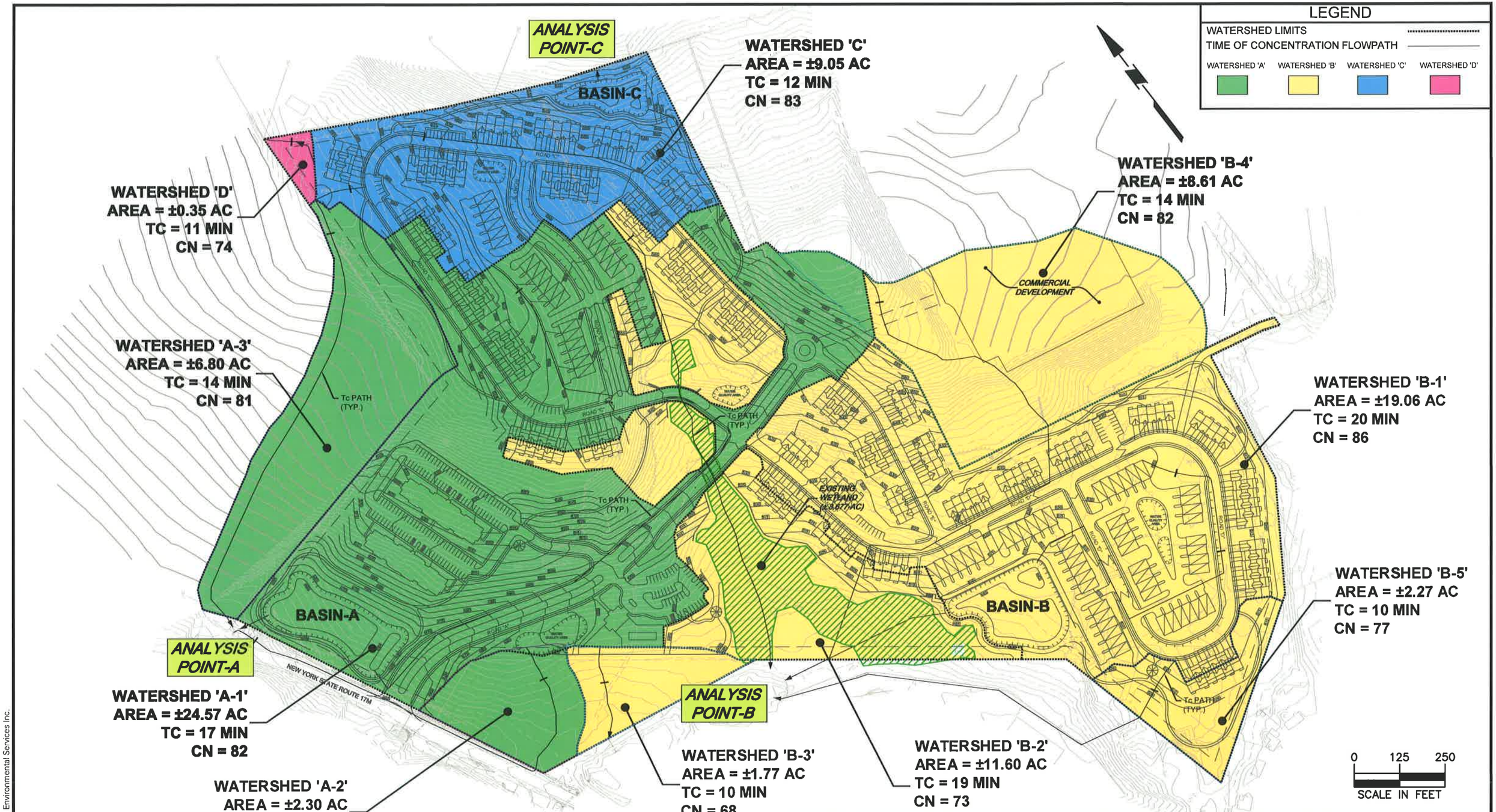
Project
EXISTING WATERSHED MAP
CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	12-2-08	1" = 250'	FIGURE-3



ANALYSIS POINT	PROPOSED DISCHARGE RATE		
	1-YEAR	10-YEAR	100-YEAR
A	9.98 CFS	33.72 CFS	74.18 CFS
B	15.75 CFS	23.55 CFS	118.86 CFS
C	0.47 CFS	14.34 CFS	48.46 CFS

NOTES:
1. EXISTING TOPOGRAPHIC INFORMATION BASED ON A DIGITAL SURVEY PREPARED BY LANC & TULLY, DATED JUNE 7, 2005 AND LAST REVISED MAY 17, 2006. SUPPLEMENTAL OFFSITE CONTOURS TAKEN FROM GOOGLE TERRAIN.
2. PROPOSED LAYOUT BASED A GRADING PLAN PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES INC. DATED 11-24-08.

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
River Drive Center 1 Elmwood Park, NJ 07407
P: 201.794.6900 F: 201.794.0366
www.langan.com
NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA
NJ Certificate of Authorization No: 24GA27996400

Project
PROPOSED WATERSHED MAP
CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

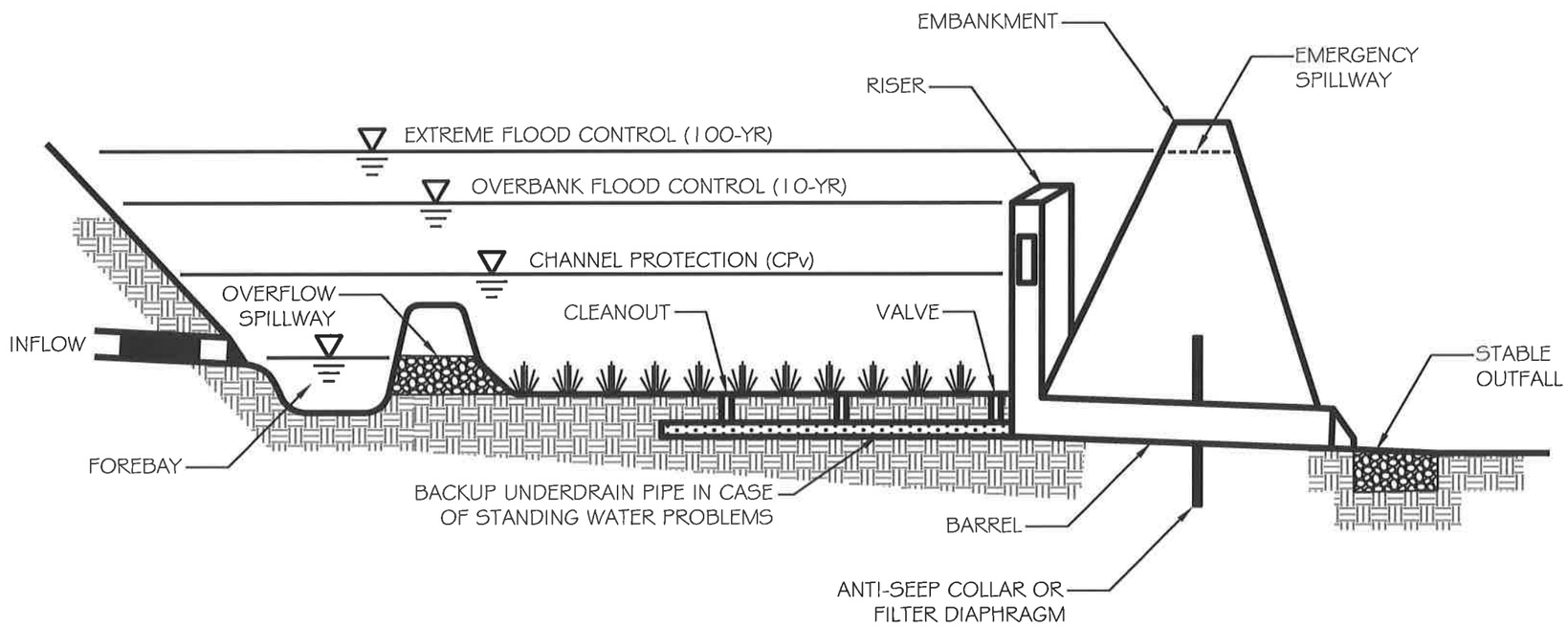
Project No.	Date	Scale	Dwg. No.
9123501	1-20-11	1"=250'	FIGURE-4

Filename: G:\data5\9123501\Cadd Data - 9123501\Dwg\9123501 Watershed Map - Proposed.dwg Date: 1/19/2011 Time: 17:11 User: jaldenburger Style Table: Langan.stb Layout: 11x17 Prop Watershed Map

TYPICAL STORMWATER MANAGEMENT BASIN

STORMWATER BASIN DISCHARGE & VOLUME SUMMARY								
WATERSHED	WQv (ac-ft)		CPv (ac-ft)		10-YR FLOW (CFS)		100-YR DISCHARGE (CFS)	
	Required	Provided	Required	Provided	Inflow	Outflow	Inflow	Outflow
WATERSHED A-1	0.94	TBD	1.67	1.67	73.07	19.58	119.41	49.82
WATERSHED B-1	0.92	TBD	1.57	1.99	59.22	8.08	93.34	39.96
WATERSHED C	0.36	TBD	0.66	0.71	33.17	14.34	53.58	48.46

* WQv to be determined based on final design to meet or exceed requirements by NYS Stormwater Management Design



NOTES:
1. THIS TYPICAL DETAIL IS FOR SCHEMATIC PURPOSE ONLY AND NOT FOR CONSTRUCTION. SITE SPECIFIC DESIGN AND SPECIFICATION PENDING FURTHER COORDINATION WITH GEOTECH & OTHER STUDIES.
2. WATER QUALITY AND CHANNEL PROTECTION VOLUMES SHOWN ABOVE ARE BASED ON PROPOSED GRADING AND DRAINAGE PLAN PREPARED BY LANGAN ENGINEERING, DATED PRELIMINARY 10-28-10, AND MAY CHANGE UPON ANY REVISIONS MADE TO THE PROPOSED PLAN.

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Project
CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	1-20-11	N.T.S.	FIGURE-5

Filename: G:\data5\9123501\Cadd Data - 9123501\Dwg\9123501 23.02.dwg Date: 1/19/2011 Time: 17:02 User: jaldenburger Style Table: Langan.stb Layout: Detention Basin Figure

LEGEND

- RAIN GARDENS
- TREE PLANTINGS/ VEGETATED SWALE
- STORMWATER DETENTION
- DISCONNECTED ROOF RUNOFF
- CONSERVATION OF NATURAL AREAS

0 125 250

SCALE IN FEET

NOTES:
1. EXISTING BOUNDARY, PLANIMETRIC AND TOPOGRAPHIC INFORMATION OBTAINED FROM A SURVEY ENTITLED "SURVEY PREPARED FOR BT PARTNERSHIP", DRAWING NUMBER A – 05 – 0038 – 01, PREPARED BY LANC & TULLY ENGINEERING AND SURVEYING, P.C., LAST REVISED MAY 17, 2006.
2. PROPOSED LAYOUT BASED ON A GRADING PLAN PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES INC. ENTITLED GRADING AND DRAINAGE PLAN (THRU ROAD LAYOUT) PRELIMINARY DATE OF 10-28-10.

LANGAN
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Project
PROPOSED WATER QUALITY FEATURES CHESTER DEVELOPMENT
VILLAGE OF CHESTER
ORANGE COUNTY NEW YORK

Project No.	Date	Scale	Dwg. No.
9123501	1-20-11	1"=250'	FIGURE-6

Filename: G:\data5\9123501\Cadd Data - 9123501\Dwg\9123501 Water Quality.dwg Date: 1/19/2011 Time: 17:17 User: jaldenburger Style Table: Langan.stb Layout: 11x17 Prop Watershed Map

APPENDIX A

PRE-DEVELOPMENT WATERSHED HYDROGRAPHS

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	23.96	1	733	102,651	----	------	------	Analysis Pt. A (Watershed A)
3	SCS Runoff	16.88	1	740	91,085	----	------	------	Existing Watershed B-1
4	SCS Runoff	13.91	1	742	74,816	----	------	------	Existing Watershed B-2
5	Reach	13.87	1	744	74,814	4	------	------	B2 to Roadway
6	Reach	13.69	1	748	74,813	5	------	------	B2 to Analysis B
7	Combine	29.97	1	744	165,898	3, 6	------	------	Analysis Pt. B
9	SCS Runoff	11.99	1	731	48,649	----	------	------	Analysis Pt. C (Watershed C)
12	SCS Runoff	0.51	1	729	1,952	----	------	------	Existing Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	33.08	1	733	140,678	---	-----	-----	Analysis Pt. A (Watershed A)
3	SCS Runoff	26.59	1	739	136,268	---	-----	-----	Existing Watershed B-1
4	SCS Runoff	19.86	1	741	104,993	---	-----	-----	Existing Watershed B-2
5	Reach	19.81	1	743	104,992	4	-----	-----	B2 to Roadway
6	Reach	19.68	1	746	104,991	5	-----	-----	B2 to Analysis B
7	Combine	45.35	1	743	241,259	3, 6	-----	-----	Analysis Pt. B
9	SCS Runoff	17.10	1	731	68,271	---	-----	-----	Analysis Pt. C (Watershed C)
12	SCS Runoff	0.71	1	729	2,675	---	-----	-----	Existing Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	65.40	1	732	278,570	----	------	------	Analysis Pt. A (Watershed A)
3	SCS Runoff	64.72	1	738	314,815	----	------	------	Existing Watershed B-1
4	SCS Runoff	41.52	1	740	217,005	----	------	------	Existing Watershed B-2
5	Reach	41.46	1	742	217,004	4	------	------	B2 to Roadway
6	Reach	41.40	1	743	217,003	5	------	------	B2 to Analysis B
7	Combine	104.17	1	740	531,819	3, 6	------	------	Analysis Pt. B
9	SCS Runoff	35.71	1	730	141,106	----	------	------	Analysis Pt. C (Watershed C)
12	SCS Runoff	1.40	1	729	5,298	----	------	------	Existing Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	106.87	1	732	462,432	---	------	------	Analysis Pt. A (Watershed A)
3	SCS Runoff	118.20	1	737	570,697	---	------	------	Existing Watershed B-1
4	SCS Runoff	70.06	1	740	369,284	---	------	------	Existing Watershed B-2
5	Reach	69.95	1	741	369,283	4	------	------	B2 to Roadway
6	Reach	69.95	1	742	369,283	5	------	------	B2 to Analysis B
7	Combine	184.91	1	739	939,982	3, 6	------	------	Analysis Pt. B
9	SCS Runoff	60.10	1	730	240,124	---	------	------	Analysis Pt. C (Watershed C)
12	SCS Runoff	2.29	1	729	8,794	---	------	------	Existing Watershed D

Project Chester Development By BDH Date 7/18/2008

Location Village of Chester, NY Checked _____ Date _____

Circle one: Present Developed Existing Watershed A

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	Row Crops (C - good)	82			21.35	1750.70
C	Woods (fair)	73			0.64	46.72
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	21.99	1797.42

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{1797.42}{21.99} =$ 81.74 Use CN = **82**

Project: **Chester Development** By: **BDH** Date: **7/18/2008**

Location: **Village of Chester, NY** Checked: _____ Date: _____

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing Watershed A**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)		Segment ID					
1. Surface description (table 3-1)			Cultivated Soil (>20%)				
2. Manning's roughness coeff., n (table 3-1)			0.170				
3. Flow Length, L (total L ≤ 100 ft)		ft	100				
4. Two-yr 24-hr rainfall, P_2		in	3.4				
5. Land slope, s		ft/ft	0.010				
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.231	+		=	0.231
Shallow concentrated flow		Segment ID					
7. Surface description (paved or unpaved)			Unpaved				
8. Flow length, L		ft	1316				
9. Watercourse slope, s		ft/ft	0.1121				
10. Average velocity, V (figure 3-1)		ft/s	5.4				
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.068	+		=	0.068
Channel flow		Segment ID					
12. Cross sectional flow area, a		ft^2					
13. Wetted perimeter, p_w		ft					
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft					
15. Channel slope, s		ft/ft					
16. Manning's roughness coeff., n							
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s					
18. Flow length, L		ft					
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		=	0.000
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)							hr 0.299
							min 18

Project Chester Development By BDH Date 7/18/2008

Location Village of Chester, NY Checked _____ Date _____

Circle one: Present Developed Existing Watershed B-1

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
A	Row Crops (C - good)	65			1.34	87.10
C	Row Crops (C - good)	82			7.45	610.90
D	Row Crops (C - good)	86			0.51	43.86
A	Woods (fair)	36			0.35	12.60
C	Woods (fair)	73			10.32	753.36
C	Brush (good)	65			12.44	808.60
D	Brush (good)	73			1.08	78.84
						0.00
						0.00
				Totals =	33.49	2395.26

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{2395.26}{33.49} = 71.52 \quad \text{Use CN} = \boxed{72}$$

Project	Chester Development	By	BDH	Date	7/18/2008
Location	Village of Chester, NY	Checked		Date	

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing Watershed B-1**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)		Segment ID						
1. Surface description (table 3-1)			Woods (Lt. Underbrush)					
2. Manning's roughness coeff., n (table 3-1)			0.400					
3. Flow Length, L (total L ≤ 100 ft)		ft	100					
4. Two-yr 24-hr rainfall, P_2		in	3.4					
5. Land slope, s		ft/ft	0.023					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.328	+		=	0.328	
Shallow concentrated flow		Segment ID						
7. Surface description (paved or unpaved)			Unpaved					
8. Flow length, L		ft	1309					
9. Watercourse slope, s		ft/ft	0.0872					
10. Average velocity, V (figure 3-1)		ft/s	4.8					
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.076	+		=	0.076	
Channel flow		Segment ID						
12. Cross sectional flow area, a		ft^2						
13. Wetted perimeter, p_w		ft						
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft						
15. Channel slope, s		ft/ft						
16. Manning's roughness coeff., n								
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s						
18. Flow length, L		ft						
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		=	0.000	
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)							hr	0.404
							min	25

Project Chester Development By BDH Date 7/18/2008

Location Village of Chester, NY Checked _____ Date _____

Circle one: Present Developed Existing Watershed B-2

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	Brush (fair)	70			0.58	40.60
D	Brush (fair)	77			2.40	184.80
C	Woods (fair)	73			7.67	559.91
D	Woods (fair)	79			4.58	361.82
						0.00
	Impervious	98			3.24	317.52
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	18.47	1464.65

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{1464.65}{18.47} =$ 79.30 Use CN = **79**

Project: **Chester Development** By: **BDH** Date: **7/18/2008**

Location: **Village of Chester, NY** Checked: _____ Date: _____

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing Watershed B-2**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

		Segment ID		
1. Surface description (table 3-1)		Woods (Lt. Underbrush)		
2. Manning's roughness coeff., n (table 3-1)		0.400		
3. Flow Length, L (total L ≤ 100 ft)	ft	100		
4. Two-yr 24-hr rainfall, P_2	in	3.4		
5. Land slope, s	ft/ft	0.060		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t hr	0.224	+	= 0.224

Shallow concentrated flow

		Segment ID		
7. Surface description (paved or unpaved)		Unpaved		
8. Flow length, L	ft	1012		
9. Watercourse slope, s	ft/ft	0.0049		
10. Average velocity, V (figure 3-1)	ft/s	1.1		
11. $T_t = \frac{L}{3600\ V}$	Compute T_t hr	0.256	+	= 0.256

Channel flow

		Segment ID		
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V ft/s			
18. Flow length, L	ft			
19. $T_t = \frac{L}{3600\ V}$	Compute T_t hr		+	= 0.000

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) hr 0.479

min 29

Project Chester Development By BDH Date 7/18/2008

Location Village of Chester, NY Checked _____ Date _____

Circle one: Present Developed Existing Watershed C

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	Row Crops (C - good)	82			7.87	645.34
C	Woods (fair)	73			4.14	302.22
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	12.01	947.56

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{947.56}{12.01} =$ 78.90 Use CN = **79**

Project	Chester Development	By	BDH	Date	7/18/2008
Location	Village of Chester, NY	Checked		Date	

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing Watershed C**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)		Segment ID						
1. Surface description (table 3-1)			Cultivated Soil (>20%)					
2. Manning's roughness coeff., n (table 3-1)			0.170					
3. Flow Length, L (total L ≤ 100 ft)		ft	100					
4. Two-yr 24-hr rainfall, P_2		in	3.4					
5. Land slope, s		ft/ft	0.021					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.172	+		=	0.172	
Shallow concentrated flow		Segment ID						
7. Surface description (paved or unpaved)			Unpaved					
8. Flow length, L		ft	853					
9. Watercourse slope, s		ft/ft	0.0894					
10. Average velocity, V (figure 3-1)		ft/s	4.85					
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.049	+		=	0.049	
Channel flow		Segment ID						
12. Cross sectional flow area, a		ft^2						
13. Wetted perimeter, p_w		ft						
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft						
15. Channel slope, s		ft/ft						
16. Manning's roughness coeff., n								
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s						
18. Flow length, L		ft						
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		=	0.000	
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)							hr	0.221
							min	14

Project Chester Development By BDH Date 7/18/2008

Location Village of Chester, NY Checked _____ Date _____

Circle one: Present Developed Existing Watershed D

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	**Row Crops (C - good)**	**82**			**0.42**	**34.44**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.42**	**34.44**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{34.44}{0.42} =$ 82.00 Use CN = **82**

Project	Chester Development	By	BDH	Date	7/18/2008
Location	Village of Chester, NY	Checked		Date	

Circle One: Present Developed

Circle One: T_c T_t through subarea **Existing Watershed D**

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)		Segment ID						
1. Surface description (table 3-1)			Cultivated Soil (>20%)					
2. Manning's roughness coeff., n (table 3-1)			0.170					
3. Flow Length, L (total L ≤ 100 ft)		ft	100					
4. Two-yr 24-hr rainfall, P_2		in	3.4					
5. Land slope, s		ft/ft	0.014					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.202	+		=	0.202	
Shallow concentrated flow		Segment ID						
7. Surface description (paved or unpaved)			Unpaved					
8. Flow length, L		ft	164					
9. Watercourse slope, s		ft/ft	0.0793					
10. Average velocity, V (figure 3-1)		ft/s	4.5					
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.010	+		=	0.010	
Channel flow		Segment ID						
12. Cross sectional flow area, a		ft^2						
13. Wetted perimeter, p_w		ft						
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft						
15. Channel slope, s		ft/ft						
16. Manning's roughness coeff., n								
17. $V = \frac{1.49\ r^{2/3} s^{1/2}}{n}$	Compute V	ft/s						
18. Flow length, L		ft						
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		=	0.000	
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)							hr	0.212
							min	13

APPENDIX B

POST-DEVELOPMENT WATERSHED HYDROGRAPHS

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	26.77	1	733	114,694	----	------	------	Proposed Watershed A-1
2	SCS Runoff	2.37	1	731	9,600	----	------	------	Proposed Watershed A-2
3	SCS Runoff	7.62	1	731	30,537	----	------	------	Proposed Watershed A-3
4	Reservoir	1.85	1	924	71,197	1	460.69	72,812	A-1 to Pond A
5	Combine	9.98	1	731	111,334	2, 3, 4	------	------	Analysis Point A
8	SCS Runoff	24.09	1	735	110,168	----	------	------	Proposed Watershed B-1
9	SCS Runoff	6.91	1	736	33,540	----	------	------	Proposed Watershed B-2
10	SCS Runoff	0.87	1	728	3,699	----	------	------	Proposed Watershed B-3
11	SCS Runoff	10.18	1	731	40,654	----	------	------	Proposed Watershed B-4
12	SCS Runoff	2.28	1	727	8,150	----	------	------	Proposed Watershed B-5
13	Reservoir	0.71	1	1130	59,044	8	496.20	86,695	B-1 to Pond B
14	Reach	0.71	1	1144	58,828	13	------	------	Pond B to Dis Pt B
15	Reach	9.76	1	734	40,652	11	------	------	B-4 to Discharge B (pipe)
16	Reach	8.50	1	741	40,648	15	------	------	B4 to Dis Pt B
17	Reach	0.71	1	1133	58,986	13	------	------	B-5 to Roadway
18	Reach	0.71	1	1205	58,138	17	------	------	B-5 Roadway to Dis Pt B
19	Combine	15.75	1	739	194,854	9, 10, 14, 16, 18	------	------	Analysis Point B
22	SCS Runoff	12.51	1	728	45,693	----	------	------	Proposed Watershed C
23	Reservoir	0.47	1	1007	36,892	22	522.45	30,831	Analysis C (Pond C)
26	SCS Runoff	0.28	1	729	1,093	----	------	------	Proposed Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	36.96	1	733	157,183	----	------	------	Proposed Watershed A-1
2	SCS Runoff	3.37	1	731	13,472	----	------	------	Proposed Watershed A-2
3	SCS Runoff	10.63	1	730	42,174	----	------	------	Proposed Watershed A-3
4	Reservoir	3.84	1	829	113,500	1	461.16	88,190	A-1 to Pond A
5	Combine	14.01	1	731	169,146	2, 3, 4	------	------	Analysis Point A
8	SCS Runoff	32.03	1	735	146,576	----	------	------	Proposed Watershed B-1
9	SCS Runoff	10.72	1	735	49,672	----	------	------	Proposed Watershed B-2
10	SCS Runoff	1.51	1	728	5,791	----	------	------	Proposed Watershed B-3
11	SCS Runoff	14.07	1	730	55,714	----	------	------	Proposed Watershed B-4
12	SCS Runoff	3.34	1	727	11,632	----	------	------	Proposed Watershed B-5
13	Reservoir	2.11	1	922	94,085	8	496.60	100,364	B-1 to Pond B
14	Reach	2.11	1	932	93,919	13	------	------	Pond B to Dis Pt B
15	Reach	13.74	1	733	55,713	11	------	------	B-4 to Discharge B (pipe)
16	Reach	12.09	1	739	55,709	15	------	------	B4 to Dis Pt B
17	Reach	2.11	1	925	94,038	13	------	------	B-5 to Roadway
18	Reach	2.10	1	944	93,737	17	------	------	B-5 Roadway to Dis Pt B
19	Combine	23.55	1	737	298,829	9, 10, 14, 16, 18	------	------	Analysis Point B
22	SCS Runoff	17.11	1	728	62,147	----	------	------	Proposed Watershed C
23	Reservoir	0.56	1	1027	52,312	22	523.39	43,586	Analysis C (Pond C)
26	SCS Runoff	0.42	1	729	1,603	----	------	------	Proposed Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	73.07	1	732	311,253	----	------	------	Proposed Watershed A-1
2	SCS Runoff	7.05	1	730	27,845	----	------	------	Proposed Watershed A-2
3	SCS Runoff	21.39	1	730	84,693	----	------	------	Proposed Watershed A-3
4	Reservoir	19.58	1	760	267,238	1	462.83	152,356	A-1 to Pond A
5	Combine	33.72	1	733	379,776	2, 3, 4	------	------	Analysis Point A
8	SCS Runoff	59.22	1	734	274,949	----	------	------	Proposed Watershed B-1
9	SCS Runoff	25.47	1	734	112,801	----	------	------	Proposed Watershed B-2
10	SCS Runoff	4.14	1	727	14,413	----	------	------	Proposed Watershed B-3
11	SCS Runoff	27.81	1	730	110,325	----	------	------	Proposed Watershed B-4
12	SCS Runoff	7.24	1	727	24,771	----	------	------	Proposed Watershed B-5
13	Reservoir	8.08	1	789	220,950	8	498.15	159,057	B-1 to Pond B
14	Reach	8.07	1	798	220,831	13	------	------	Pond B to Dis Pt B
15	Reach	27.62	1	732	110,325	11	------	------	B-4 to Discharge B (pipe)
16	Reach	24.91	1	737	110,322	15	------	------	B4 to Dis Pt B
17	Reach	8.08	1	791	220,913	13	------	------	B-5 to Roadway
18	Reach	8.07	1	797	220,824	17	------	------	B-5 Roadway to Dis Pt B
19	Combine	54.20	1	736	679,192	9, 10, 14, 16, 18	------	------	Analysis Point B
22	SCS Runoff	33.17	1	728	121,375	----	------	------	Proposed Watershed C
23	Reservoir	14.34	1	744	110,221	22	524.13	55,383	Analysis C (Pond C)
26	SCS Runoff	0.98	1	728	3,581	----	------	------	Proposed Watershed D

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	119.41	1	732	516,688	----	------	------	Proposed Watershed A-1
2	SCS Runoff	11.86	1	730	47,385	----	------	------	Proposed Watershed A-2
3	SCS Runoff	35.26	1	730	141,743	----	------	------	Proposed Watershed A-3
4	Reservoir	49.82	1	752	472,449	1	464.41	225,199	A-1 to Pond A
5	Combine	74.18	1	737	661,577	2, 3, 4	------	------	Analysis Point A
8	SCS Runoff	93.34	1	734	442,268	----	------	------	Proposed Watershed B-1
9	SCS Runoff	45.85	1	733	202,537	----	------	------	Proposed Watershed B-2
10	SCS Runoff	7.95	1	727	27,212	----	------	------	Proposed Watershed B-3
11	SCS Runoff	45.40	1	730	183,143	----	------	------	Proposed Watershed B-4
12	SCS Runoff	12.41	1	727	42,887	----	------	------	Proposed Watershed B-5
13	Reservoir	39.96	1	755	387,274	8	499.55	221,368	B-1 to Pond B
14	Reach	39.33	1	762	387,195	13	------	------	Pond B to Dis Pt B
15	Reach	45.36	1	731	183,142	11	------	------	B-4 to Discharge B (pipe)
16	Reach	41.55	1	736	183,139	15	------	------	B4 to Dis Pt B
17	Reach	39.94	1	757	387,247	13	------	------	B-5 to Roadway
18	Reach	39.93	1	758	387,220	17	------	------	B-5 Roadway to Dis Pt B
19	Combine	118.86	1	752	1,187,307	9, 10, 14, 16, 18	------	------	Analysis Point B
22	SCS Runoff	53.58	1	728	199,874	----	------	------	Proposed Watershed C
23	Reservoir	48.46	1	731	188,390	22	524.53	62,788	Analysis C (Pond C)
26	SCS Runoff	1.75	1	728	6,370	----	------	------	Proposed Watershed D

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed A-1**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
	Impervious	**98**			**9.04**	**885.92**
A	**Open Space (good)**	**39**			**0.60**	**23.40**
C	**Open Space (good)**	**74**			**12.21**	**903.54**
A	**Pasture/grassland (good)**	**39**			**0.13**	**5.07**
C	**Pasture/grassland (good)**	**74**			**1.69**	**125.06**
A	**Woods (fair)**	**73**			**0.14**	**10.22**
C	**Woods (fair)**	**79**			**0.76**	**60.04**
				Totals =	**24.57**	**2013.25**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{2013.25}{24.57} =$ 81.94 Use CN = **82**

TR55 Tc Worksheet

Hydraflow Hydrographs by Intelisolve

Hyd. No. 1

Proposed Watershed A-1

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.40	0.00	0.00	
Land slope (%)	= 2.00	0.00	0.00	
Travel Time (min)	**= 13.84**	**+ 0.00**	**+ 0.00**	**= 13.84**
Shallow Concentrated Flow				
Flow length (ft)	= 433.00	21.00	0.00	
Watercourse slope (%)	= 4.50	4.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	= 3.42	4.07	0.00	
Travel Time (min)	**= 2.11**	**+ 0.09**	**+ 0.00**	**= 2.19**
Channel Flow				
X sectional flow area (sqft)	= 3.14	7.07	9.62	
Wetted perimeter (ft)	= 6.28	9.42	11.00	
Channel slope (%)	= 3.80	5.50	7.00	
Manning's n-value	= 0.010	0.010	0.015	
Velocity (ft/s)	= 18.26	28.83	24.02	
Flow length (ft)	= 390.0	525.0	738.0	
Travel Time (min)	**= 0.36**	**+ 0.30**	**+ 0.51**	**= 1.17**

Total Travel Time, Tc ..... 17.21 min

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed A-2**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	**Pasture/grassland (fair)**	**79**			**2.37**	**187.23**
				Totals =	**2.37**	**187.23**

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{187.23}{2.37} = 79.00$$ Use CN = **79**

TR55 Tc Worksheet

Hyd. No. 2

Proposed Watershed A-2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.170		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.40		0.00		0.00		
Land slope (%)	= 9.00		0.00		0.00		
Travel Time (min)	**= 5.76**	**+**	**0.00**	**+**	**0.00**	**=**	**5.76**
Shallow Concentrated Flow							
Flow length (ft)	= 1127.00		0.00		0.00		
Watercourse slope (%)	= 2.57		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	= 2.59		0.00		0.00		
Travel Time (min)	**= 7.26**	**+**	**0.00**	**+**	**0.00**	**=**	**7.26**
Channel Flow							
X sectional flow area (sqft)	= 1.23		2.63		0.00		
Wetted perimeter (ft)	= 3.93		4.50		0.00		
Channel slope (%)	= 5.00		10.70		0.00		
Manning's n-value	= 0.013		0.400		0.015		
Velocity (ft/s)	= 11.77		0.85		0.00		
Flow length (ft)	= 40.0		28.0		0.0		
Travel Time (min)	**= 0.06**	**+**	**0.55**	**+**	**0.00**	**=**	**0.61**

Total Travel Time, Tc ..... **13.62 min**

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed A-3**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	**Open Space (good)**	**74**			**0.12**	**8.88**
C	**Pasture/grassland (good)**	**74**			**1.07**	**79.18**
C	**Row Crops (C - good)**	**82**			**5.40**	**442.80**
C	**Woods (fair)**	**79**			**0.21**	**16.59**

1 Use only one CN source per line

Totals = **6.80** **547.45**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{547.45}{6.80} =$ 80.51 Use CN = **81**

TR55 Tc Worksheet

Hyd. No. 3

Proposed Watershed A-3

Description	A	B	C	Totals
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.40	0.00	0.00	
Land slope (%)	= 4.40	0.00	0.00	
Travel Time (min)	**= 10.10**	**+ 0.00**	**+ 0.00**	**= 10.10**
Shallow Concentrated Flow				
Flow length (ft)	= 1163.00	0.00	0.00	
Watercourse slope (%)	= 12.38	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	= 5.68	0.00	0.00	
Travel Time (min)	**= 3.41**	**+ 0.00**	**+ 0.00**	**= 3.41**
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	**= 0.00**	**+ 0.00**	**+ 0.00**	**= 0.00**

Total Travel Time, Tc ..... **13.51 min**

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed B-1**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
	Impervious	**98**			**9.20**	**901.60**
C	**Open Space (good)**	**74**			**7.03**	**520.22**
D	**Open Space (good)**	**80**			**1.77**	**141.60**
C	**Woods (fair)**	**73**			**0.84**	**61.32**
C	**Pasture/grassland (good)**	**74**			**0.22**	**16.28**
				Totals =	**19.06**	**1641.02**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{1641.02}{19.06} =$ 86.10 Use CN = **86**

TR55 Tc Worksheet

Hyd. No. 8

Proposed Watershed B-1

Description		A		B		C		Totals
Sheet Flow								
Manning's n-value	=	0.400		0.011		0.011		
Flow length (ft)	=	100.0		0.0		0.0		
Two-year 24-hr precip. (in)	=	3.40		0.00		0.00		
Land slope (%)	=	3.50		0.00		0.00		
Travel Time (min)	**=**	**16.65**	**+**	**0.00**	**+**	**0.00**	**=**	**16.65**
Shallow Concentrated Flow								
Flow length (ft)	=	85.00		214.00		0.00		
Watercourse slope (%)	=	1.76		0.80		0.00		
Surface description	=	Unpaved		Paved		Paved		
Average velocity (ft/s)	=	2.14		1.82		0.00		
Travel Time (min)	**=**	**0.66**	**+**	**1.96**	**+**	**0.00**	**=**	**2.62**
Channel Flow								
X sectional flow area (sqft)	=	3.14		7.07		0.00		
Wetted perimeter (ft)	=	6.28		9.42		0.00		
Channel slope (%)	=	1.00		1.58		0.00		
Manning's n-value	=	0.010		0.010		0.015		
Velocity (ft/s)	=	9.36		15.45		0.00		
Flow length (ft)	=	448.0		349.0		0.0		
Travel Time (min)	**=**	**0.80**	**+**	**0.38**	**+**	**0.00**	**=**	**1.17**

Total Travel Time, Tc ..... **20.45 min**

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed B-2**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
	Impervious	**98**			**1.46**	**143.08**
A	**Open Space (good)**	**39**			**0.15**	**5.85**
C	**Open Space (good)**	**74**			**4.13**	**305.62**
C	**Woods (fair)**	**73**			**0.95**	**69.35**
C	**Brush (good)**	**65**			**4.91**	**319.15**
1 Use only one CN source per line				Totals =	**11.60**	**843.05**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{843.05}{11.60} =$ 72.68 Use CN = **73**

TR55 Tc Worksheet

Hyd. No. 9

Proposed Watershed B-2

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.240		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.40		0.00		0.00		
Land slope (%)	= 2.00		0.00		0.00		
Travel Time (min)	**= 13.84**	**+**	**0.00**	**+**	**0.00**	**=**	**13.84**
Shallow Concentrated Flow							
Flow length (ft)	= 1263.00		0.00		0.00		
Watercourse slope (%)	= 6.80		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	= 4.21		0.00		0.00		
Travel Time (min)	**= 5.00**	**+**	**0.00**	**+**	**0.00**	**=**	**5.00**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	= 0.00		0.00		0.00		
Flow length (ft)	= 0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... 18.85 min

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed B-3**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
C	**Pasture/grassland (good)**	**74**			**0.67**	**49.58**
C	**Brush (good)**	**65**			**1.10**	**71.50**
1 Use only one CN source per line				Totals =	**1.77**	**121.08**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{121.08}{1.77} =$ 68.41 Use CN = **68**

TR55 Tc Worksheet

Hydraflow Hydrographs by Intelisolve

Hyd. No. 10

Proposed Watershed B-3

Description	A		B		C		Totals
Sheet Flow							
Manning's n-value	= 0.170		0.011		0.011		
Flow length (ft)	= 100.0		0.0		0.0		
Two-year 24-hr precip. (in)	= 3.40		0.00		0.00		
Land slope (%)	= 7.00		0.00		0.00		
Travel Time (min)	**= 6.37**	**+**	**0.00**	**+**	**0.00**	**=**	**6.37**
Shallow Concentrated Flow							
Flow length (ft)	= 158.00		0.00		0.00		
Watercourse slope (%)	= 3.16		0.00		0.00		
Surface description	= Unpaved		Paved		Paved		
Average velocity (ft/s)	= 2.87		0.00		0.00		
Travel Time (min)	**= 0.92**	**+**	**0.00**	**+**	**0.00**	**=**	**0.92**
Channel Flow							
X sectional flow area (sqft)	= 0.00		0.00		0.00		
Wetted perimeter (ft)	= 0.00		0.00		0.00		
Channel slope (%)	= 0.00		0.00		0.00		
Manning's n-value	= 0.015		0.015		0.015		
Velocity (ft/s)	= 0.00		0.00		0.00		
Flow length (ft)	= 0.0		0.0		0.0		
Travel Time (min)	**= 0.00**	**+**	**0.00**	**+**	**0.00**	**=**	**0.00**

Total Travel Time, Tc ..... **7.28 min**

→ USE 10.00 min

Project **Chester Development** By **BDH** Date **12/2/2010**

Location **Village of Chester, NY** Checked _____ Date _____

Circle one: Present Developed **Proposed Watershed B-4**

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
	Impervious	**98**			**3.24**	**317.52**
C	**Woods (fair)**	**73**			**3.54**	**258.42**
C	**Brush (fair)**	**70**			**1.83**	**128.10**

1 Use only one CN source per line

Totals = **8.61** **704.04**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{704.04}{8.61} =$ 81.77 Use CN = **82**