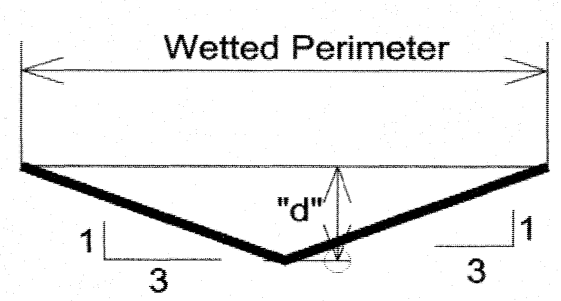
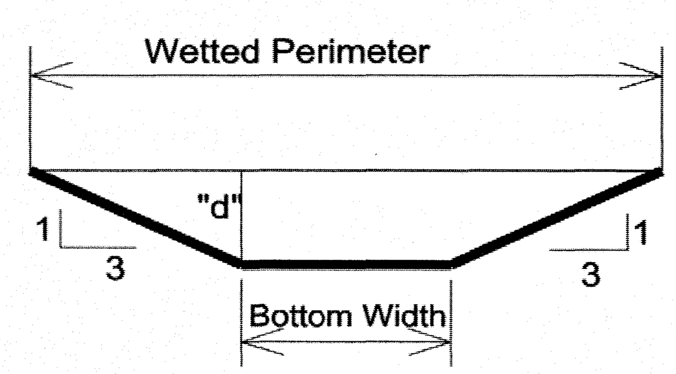


Ditch Section (For Bottom Width = 0)
(Not To Scale)



Trapezoidal Ditch / Swale Section
(Not To Scale)

TRAPEZOIDAL SWALE DRAINAGE CHART-PHASE THREE

Ditch I.D.	D.A., Ac.	C	i_{10}, in/hr	Q_{10}, cfs	Left Side Slope, Z Z:1	Right Side Slope, Z Z:1	Avg. Ditch Slope, %	Bottom Width	Ditch Lining	Manning, n *	Q_{10} Flow Depth, ft	Flow Velocity V10, fps	Calc.Shear Stress, psf
DS 7A	0.20	0.45	7.22	0.65	3.00	3.00	1.2	0.00	**Reinforced Mesh(Grass)**	0.022	0.32	**2.08**	0.24
DS 7B	0.51	0.48	7.22	1.77	3.00	3.00	12.0	0.00	**RipRap**	0.037	0.37	**4.29**	2.77
DS 7C	0.78	0.46	7.22	2.59	3.00	3.00	4.0	0.00	**RipRap**	0.037	0.52	**3.12**	1.30
DS 7D	2.05	0.41	7.22	6.07	3.00	3.00	1.2	2.00	**RipRap**	0.037	0.55	**3.04**	0.41
DS 9A	1.60	0.35	7.22	4.04	3.00	3.00	2.0	1.00	**Reinforced Mesh(Grass)**	0.022	0.44	**3.95**	0.55
DS 9B	2.39	0.34	7.22	5.87	3.00	3.00	1.7	1.00	**Reinforced Mesh(Grass)**	0.022	0.54	**4.10**	0.58
DS 9C	0.68	0.35	7.22	1.72	3.00	3.00	1.0	0.00	**Reinforced Mesh(Grass)**	0.022	0.48	**2.49**	0.30
DS 9D	0.15	0.34	7.22	0.37	3.00	3.00	2.3	0.00	**Reinforced Mesh(Grass)**	0.022	0.23	**2.28**	0.33
DS 9E	0.78	0.32	7.22	1.80	3.00	3.00	1.5	0.00	**Reinforced Mesh(Grass)**	0.022	0.45	**2.93**	0.42
DS 9F	0.54	0.34	7.22	1.33	3.00	3.00	1.0	0.00	**Reinforced Mesh(Grass)**	0.022	0.44	**2.33**	0.27
DS 9G	1.16	0.34	7.22	2.85	3.00	3.00	12.0	0.00	**RipRap**	0.037	0.44	**4.85**	3.31
DS 9H	4.33	0.34	7.22	10.63	3.00	3.00	1.3	2.00	**RipRap**	0.037	0.82	**2.93**	0.68
DS 9I	0.26	0.34	7.22	0.64	3.00	3.00	6.6	0.00	**Reinforced Mesh(Grass)**	0.022	0.23	**3.92**	0.96
DS 9J	0.50	0.34	7.22	1.23	3.00	3.00	2.0	0.00	**Reinforced Mesh(Grass)**	0.022	0.37	**2.96**	0.46
DS 9K	0.83	0.34	7.22	2.04	3.00	3.00	8.4	0.00	**RipRap**	0.037	0.42	**3.90**	2.19
DS 9L	0.81	0.34	7.22	1.99	3.00	3.00	8.3	0.00	**RipRap**	0.037	0.42	**3.86**	2.15
DS 9M	0.65	0.34	7.22	1.60	3.00	3.00	8.3	0.00	**RipRap**	0.037	0.38	**3.65**	1.98
DS 9N	0.80	0.34	7.22	1.96	3.00	3.00	9.5	0.00	**RipRap**	0.037	0.40	**4.03**	2.37
DS 10A	1.35	0.45	7.22	4.39	3.00	3.00	5.2	2.00	**RipRap**	0.037	0.37	**3.76**	1.21
DS 10B	2.50	0.45	7.22	8.12	3.00	3.00	4.1	2.00	**RipRap**	0.037	0.54	**4.11**	1.39
DS 11	0.95	0.45	7.22	3.09	3.00	3.00	0.8	2.00	**Reinforced Mesh(Grass)**	0.022	0.39	**2.53**	0.19
DS 12	2.33	0.31	7.22	5.22	3.00	3.00	1.0	3.00	**Reinforced Mesh(Grass)**	0.022	0.41	**3.05**	0.25
DS 13	1.05	0.45	7.22	3.41	3.00	3.00	7.0	1.00	**RipRap**	0.037	0.40	**4.16**	1.75
DS 14A	0.76	0.50	7.22	2.74	3.00	3.00	7.0	1.00	**RipRap**	0.037	0.35	**3.86**	1.53
DS 14B	0.90	0.46	7.22	2.99	3.00	3.00	4.0	0.00	**RipRap**	0.037	0.55	**3.24**	1.37
DS 15A	0.05	0.20	7.22	0.07	3.00	3.00	1.5	0.00	**Reinforced Mesh(Grass)**	0.022	0.15	**1.39**	0.14
DS 15B	0.28	0.38	7.22	0.77	3.00	3.00	9.0	0.00	**RipRap**	0.037	0.30	**3.23**	1.68
DS 15C	1.07	0.48	7.22	3.71	3.00	3.00	1.5	1.00	**Reinforced Mesh(Grass)**	0.022	0.46	**3.50**	0.43
DS 17	0.87	0.4	7.22	2.51	3.00	3.00	5.3	2.00	**RipRap**	0.037	0.28	**3.21**	0.91
DS 24A	0.34	0.49	7.22	1.20	3.00	3.00	6.9	2.00	**Reinforced Mesh(Grass)**	0.022	0.13	**3.95**	0.55
DS 24B	1.03	0.49	7.22	3.64	3.00	3.00	6.9	2.00	**RipRap**	0.037	0.31	**3.93**	1.35
DS 25	0.69	0.49	7.22	2.44	3.00	3.00	2.1	2.00	**Reinforced Mesh(Grass)**	0.022	0.26	**3.31**	0.35
DS 26A	0.20	0.49	7.22	0.71	3.00	3.00	4.0	2.00	**Reinforced Mesh(Grass)**	0.022	0.11	**2.76**	0.28
DS 26B	0.90	0.49	7.22	3.18	3.00	3.00	2.0	2.00	**RipRap**	0.037	0.41	**2.44**	0.51
DS 27	0.92	0.49	7.22	3.25	3.00	3.00	4.6	2.00	**RipRap**	0.037	0.33	**3.30**	0.95
DS 34	0.53	0.4	7.22	1.53	3.00	3.00	6.0	2.00	**Reinforced Mesh(Grass)**	0.022	0.15	**4.06**	0.56
DS 34A	0.11	0.4	7.22	0.32	3.00	3.00	2.4	2.00	**Reinforced Mesh(Grass)**	0.022	0.08	**1.77**	0.12
DS 34B	0.12	0.4	7.22	0.35	3.00	3.00	3.3	2.00	**Reinforced Mesh(Grass)**	0.022	0.08	**2.02**	0.16
DS 34C	0.13	0.4	7.22	0.38	3.00	3.00	3.7	2.00	**Reinforced Mesh(Grass)**	0.022	0.08	**2.16**	0.18

PIPING & STRUCTURES SUMMARY-PHASE THREE

Downstream Structure	Upstream Structure	Pipe Size (in)	Length (ft)	Slope (%)	Downstream Rim Elev (ft)	Upstream Rim Elev (ft)	Downstream Invert (ft)	Upstream Invert (ft)	Q(10) Downstream Velocity (fps)
CB 331	CB 334	18	62.09	1.60	350.64	351.42	342.45	343.44	6.98
CB 331	CB 332	15	73.93	0.50	350.64	350.10	342.45	342.82	3.82
CB 332	CB 332 A	15	9.00	1.00	350.10	350.09	343.02	343.11	3.07
CB 332 A	CB 333	15	41.00	1.00	350.09	350.09	343.31	343.72	2.77
CB 333	CB 333 A	15	9.00	1.00	350.09	350.10	343.92	344.01	2.12
CB 334	CB 335	18	108.80	1.25	351.42	351.67	343.64	345.00	4.46
CB 335	CB 336	18	45.96	0.50	351.67	350.19	345.20	345.43	3.66
CB 336	CB 337	15	27.00	0.52	350.19	350.19	345.62	345.76	3.05
CB 336	CB 336 A	15	9.00	0.50	350.19	350.60	345.83	345.88	1.73
CB 337	CB 337 A	15	9.00	2.78	350.19	350.60	345.75	346.00	1.44
CB 338 A	CB 338 B	24	27.00	0.40	356.51	356.51	351.78	351.89	4.43
CB 338 B	CB 338 E	24	42.16	1.40	356.51	358.02	351.99	352.58	3.66
CB 338 B	CB 338 C	15	4.00	0.45	356.51	356.57	352.64	352.66	2.13
CB 338 C	YI 338 D	15	22.54	0.50	356.57	355.75	352.76	352.87	1.95
CB 338 E	CB 340	24	111.08	0.50	358.02	360.18	352.68	353.24	3.94
CB 338 E	CB 339	18	27.05	0.50	358.02	358.01	353.26	353.40	1.71
CB 340	FES INLET 351	18	64.00	1.02	360.18	356.22	353.74	354.39	3.13
CB 340	CB 341	18	153.88	1.56	360.18	364.24	353.74	356.14	6.89
CB 341	CB 342	18	153.88	2.81	364.24	368.23	356.34	360.66	3.10
CB 342	CB 343	15	68.21	3.29	368.23	369.09	360.91	363.15	3.20
CB 343	CB 344	15	42.17	0.54	369.09	368.34	363.35	363.58	3.60
CB 344	CB 346	15	201.96	3.08	368.34	375.31	363.77	370.00	2.19
CB 344	CB 345	15	27.00	0.51	368.34	368.34	363.77	363.91	1.57
CB 346	CB 347	15	41.14	0.92	375.31	374.96	370.20	370.57	3.10
CB 347	CB 348	15	27.00	0.49	374.96	374.96	370.77	370.91	2.13
CB 350	FES INLET 350 A	18	24.00	0.48	358.36	355.66	353.79	353.91	1.72
CB 350	CB 352	42	64.32	0.59	358.36	359.29	351.99	352.38	5.21
CB 352	FES INLET 352 A	15	24.00	0.52	359.29	356.25	354.63	354.75	0.46
CB 352	CB 353	42	63.17	0.61	359.29	360.19	352.58	352.96	5.17
CB 353	FES INLET 353 A	15	24.00	1.21	360.19	357.00	355.21	355.50	0.86
CB 353	CB 354	42	102.76	1.20	360.19	361.68	353.16	354.39	5.19
CB 354	CB 355	42	45.16	0.50	361.68	361.28	354.59	354.82	5.57
CB 355	CB 359	30	127.82	1.00	361.28	363.86	355.82	357.10	4.14
CB 355	CB 356	36	26.94	1.13	361.28	361.28	355.32	355.62	5.09
CB 356	FES INLET356 A	15	20.86	1.00	361.28	359.25	357.37	357.58	1.08
CB 356	CB 357	36	49.57	0.61	361.28	362.85	355.72	356.02	4.69
CB 357	CB 374	36	87.91	1.78	362.85	364.11	356.12	357.69	4.83
CB 357	CB 358	15	27.10	1.26	362.85	362.85	357.08	357.43	0.46
CB 359	YI 360	15	42.66	0.77	363.86	361.55	357.15	357.48	0.51
CB 359	CB 362	24	130.78	3.52	363.86	366.99	357.80	362.40	4.87
CB 359	CB 361	15	28.03	0.65	363.86	364.01	357.15	357.33	0.82
CB 362	CB 364	24	43.13	0.63	366.99	367.90	362.60	362.87	4.53
CB 362	CB 363	15	45.61	2.67	366.99	368.43	363.00	364.22	1.51
CB 364	CB 365	24	27.00	0.69	367.90	367.90	363.07	363.26	3.85
CB 365	CB 369	18	145.69	0.73	367.90	369.29	363.76	364.83	4.89
CB 365	CB 366	18	43.13	5.30	367.90	370.95	363.76	366.04	1.90
CB 366	CB 367	15	70.67	5.21	370.95	375.24	366.29	369.97	2.21
CB 367	YI 368	15	28.00	5.81	375.24	375.30	370.17	371.80	2.25
CB 369	YI 369 A	15	82.77	8.88	369.29	377.00	365.13	372.48	2.16
CB 369	CB 369 A	18	9.00	0.40	369.29	368.88	365.03	365.06	3.66
CB 369 A	CB 370	18	180.08	2.01	368.88	373.39	365.26	368.88	3.67
CB 370	CB 371	15	44.69	1.35	373.39	374.52	369.08	369.68	4.11
CB 371	CB 372	15	27.00	0.99	374.52	374.52	369.88	370.15	3.61
CB 372	CB 373	15	44.43	0.90	374.52	376.95	370.35	370.75	1.81
CB 374	CB 374 A	30	100.60	0.90	364.11	365.58	358.19	359.10	7.38
CB 374 A	FES 374 B	24	70.90	0.51	365.58	362.00	359.60	359.95	0.88
CB 374 A	CB 375	30	100.00	1.49	365.58	367.06	359.30	360.79	5.96
CB 393	CB 394	15	27.00	0.50	355.69	355.69	351.98	352.12	3.31
CB 393	CB 393 A	15	7.91	0.50	355.69	355.69	351.83	351.87	1.13
CB 394	CB 394 A	15	7.91	0.56	355.69	355.69	352.21	352.25	1.65
CB 404	CB 406	24	53.56	6.48	307.96	309.06	298.20	301.67	5.01
CB 404	CB 405	15	57.26	0.75	307.96	306.23	298.75	299.18	2.07
CB 405	CB 405 A	15	8.00	1.71	306.23	306.23	299.38	299.52	2.27
CB 406	CB 407	24	39.46	3.62	309.06	310.07	301.87	303.30	4.12
CB 407	CB 408	24	105.43	2.60	310.07	312.90	303.50	306.24	4.45
CB 408	CB 409	24	160.14	2.50	312.90	316.92	306.44	310.44	4.09
CB 409	CB 410	24	160.00	3.37	316.92	322.42	310.64	316.04	4.34
CB 410	CB 410 A	18	76.13	4.23	322.42	325.70	316.54	319.76	4.34
CB 410 A	CB 411	18	69.57	4.24	325.70	328.63	319.96	322.91	4.64
CB 411	CB 411 A	15	68.03	3.79	328.63	331.49	323.16	325.74	4.88
CB 411 A	CB 412	15	66.18	3.79	331.49	334.39	325.94	328.45	3.92
CB 412	CB 413	15	44.23	6.30	334.39	338.12	328.65	331.44	3.41
CB 413	CB 414	15	41.00	0.71	338.12	338.12	331.64	331.93	2.10
CB 420	CB 422	30	88.97	4.99	315.51	322.99	305.63	310.07	16.24
CB 420	CB 421	15	38.65	4.58	315.51	313.46	304.00	305.77	0.76
CB 422	CB 423	30	83.20	5.00	322.99	329.75	316.23	320.39	16.21
CB 423	CB 423 A	30	27.00	0.49	329.75	329.75	322.25	322.38	5.39
CB 423 A	CB 424	30	56.34	5.02	329.75	331.49	322.58	325.41	5.24
CB 424	CB 439	24	43.96	0.50	331.49	331.44	325.91	326.13	3.09
CB 424	CB 425	24	67.56	0.50	331.49	332.00	325.91	326.25	6.54

PIPING & STRUCTURES SUMMARY-PHASE THREE

Downstream Structure	Upstream Structure	Pipe Size (in)	Length (ft)	Slope (%)	Downstream Rim Elev (ft)	Upstream Rim Elev (ft)	Downstream Invert (ft)	Upstream Invert (ft)	Q(10) Downstream Velocity (fps)
CB 425	S INLET 425	15	15.55	5.00	332.00	330.25	327.20	327.98	0.49
CB 425	CB 426	24	108.27	1.72	332.00	334.64	326.45	328.32	5.12
CB 426	CB 427	24	38.89	3.51	334.64	336.48	328.52	329.88	5.39
CB 427	CB 428	24	27.00	2.33	336.48	336.62	330.08	330.71	5.23
CB 428	CB 429	24	62.00	1.00	336.62	337.88	330.91	331.53	4.70
CB 429	YI 429 A	15	159.50	4.55	337.88	348.37	332.28	339.53	0.81
CB 429	CB 430	24	70.00	1.00	337.88	339.38	331.73	332.43	4.70
CB 430	CB 431	24	50.10	1.50	339.38	340.49	332.63	333.38	4.92
CB 431	CB 438	15	27.03	1.74	340.49	340.49	334.13	334.60	0.85
CB 431	CB 432	24	63.60	1.50	340.49	340.40	333.58	334.53	4.39
CB 432	CB 433	18	47.32	0.69	340.40	340.80	335.03	335.36	5.47
CB 433	CB 434	18	29.17	4.70	340.80	341.38	335.56	336.93	4.65
CB 434	CB 435	18	46.09	1.50	341.38	342.29	337.13	337.82	4.85
CB 435	CB 436	15	63.82	1.18	342.29	343.23	338.02	338.78	5.47
CB 436	YI 437	15	145.44	6.78	343.23	355.57	338.98	348.84	3.52
CB 439	CB 439 A	24	9.00	0.50	331.44	331.44	326.33	326.38	3.50
CB 439 A	CB 439 B	24	9.00	0.56	331.44	331.44	326.57	326.62	3.76
CB 439 B	CB 440	18	67.25	0.51	331.44	332.02	327.12	327.46	5.39
CB 440	S INLET 440	18	25.53	0.50	332.02	329.10	327.46	327.58	0.60
CB 440	CB 441	15	136.53	2.25	332.02	336.00	327.71	330.77	3.19
CB 441	CB 442	15	49.19	3.10	336.00	337.93	330.97	332.50	3.26
CB 442	CB 443	15	27.00	1.02	337.93	337.93	332.70	332.97	3.33
CB 443	CB 443 A	15	5.00	1.00	337.93	338.18	333.17	333.22	2.05
CB 470	CB 471	15	41.00	1.00	331.48	331.48	326.89	327.30	3.23
CB 470	CB 470 A	15	5.00	1.00	331.48	331.48	326.90	326.95	1.42
CB 471	CB 471 A	15	5.73	1.00	331.48	331.48	327.50	327.56	2.12
CB 472	CB 473	36	129.39	1.75	332.75	340.76	326.75	329.01	10.43
CB 472	CB 470	15	90.41	1.21	332.75	331.48	325.60	326.69	5.43
CB 473	CB 474	36	42.58	1.99	340.76	341.33	333.94	334.79	10.78
CB 474	CB 475	36	103.49	6.00	341.33	347.65	334.99	341.20	3.89
CB 475	YI 475 A	15	48.00	9.00	347.65	357.25	342.95	347.27	7.40
CB 475	CB 476	30	260.35	5.33	347.65	361.52	341.85	355.72	3.99
CB 476	CB 477	30	45.96	3.00	361.52	362.41	355.92	357.30	4.74
CB 477	CB 478	30	27.00	1.00	362.41	362.41	357.50	357.77	5.01
CB 477	CB 477 A	15	5.02	1.02	362.41	362.42	358.55	358.60	2.03
CB 478	CB 481	24	45.86	0.50	362.41	364.47	358.27	358.50	5.63
CB 478	CB 478 A	18	5.00	1.00	362.41	362.42	358.77	358.82	5.80
CB 478 A	CB 479	18	136.00	3.38	362.42	368.46	359.02	363.61	2.55
CB 479	CB 480	15	150.00	2.43	368.46	372.96	363.91	367.56	2.07
CB 481	CB 483	24	139.49	1.46	364.47	366.70	358.70	360.74	4.20
CB 481	CB 482	18	60.25	1.00	364.47	365.42	359.03	359.63	0.95
CB 483	YI 483-A	15	32.00	9.84	366.70	370.75	360.99	364.14	0.58
CB 483	CB 484	18	80.00	1.00	366.70	367.65	361.24	362.04	6.49
CB 484	CB 484 A	18	9.00	0.50	367.65	367.76	362.24	362.29	5.44
CB 484 A	CB 485	18	72.90	0.67	367.76	368.63	362.58	363.06	5.11
CB 485	CB 486	18	46.17	1.00	368.63	368.33	363.26	363.72	4.50
CB 486	CB 488	18	125.81	6.31	368.33	377.07	363.92	371.86	2.52
CB 486	CB 487	18	27.00	0.49	368.33	368.33	363.92	364.06	2.93
CB 487	CB 490	15	46.06	1.01	368.33	369.73	364.31	364.77	3.40
CB 488	YI 488-A	15	72.00	4.00	377.07	379.50	371.86	374.74	0.45
CB 488	CB 489	15	27.69	1.01	377.07	377.49	372.11	372.39	3.19
CB 489	YI 489-A	15	95.32	5.00	377.49	381.25	372.42	377.19	2.27
CB 490	CB 491	15	32.00	1.00	369.73	370.12	364.97	365.29	2.22
CB 801	CB 809	18	45.96	7.18	366.71	367.02	359.70	363.00	13.09
CB 801	CB 804	15	41.00	1.60	366.71	366.71	358.45	359.11	1.32
CB 801	CB 802	15	127.12	0.56	366.71	363.22	358.40	359.11	0.68
CB 802	CB 803	15	41.00	0.50	363.22	363.22	359.31	359.52	2.27
CB 804	CB 805	15	45.96	0.50	366.71	367.02	359.31	359.53	3.05
CB 805	CB 807	15	141.83	0.50	367.02	365.31	359.73	360.44	2.71
CB 805	CB 806	15	27.00	0.48	367.02	367.02	360.95	361.09	2.02
CB 807	CB 808	15	27.00	0.50	365.31	365.31	360.64	360.78	2.22
CB 809	CB 810	18	27.00	1.44	367.02	367.02	363.40	363.79	3.32
CB 810	CB 814	15	143.21	3.65	367.02	372.99	364.04	369.26	1.75
CB 810	CB 811	15	45.96	0.50	367.02	369.20	364.04	364.27	1.31
CB 811	CB 813	15	41.00	0.50	369.20	369.20	364.47	364.67	0.81
EW 3	HW 4	84	118.00	0.25	339.70	340.00	331.70	332.00	0.00
EW 5	HW 6	60	78.00	0.26	351.80	352.00	345.80	346.00	10.34
EW 7	HW 8	54	78.00	3.78	351.80	352.00	344.05	347.00	22.81
EW1	HW 2	84	118.00	0.25	339.70	340.00	330.70	331.00	10.16
FES 815	ES INLET 81	15	66.55	1.50	359.00	360.00	357.50	358.50	6.13
FES SCM 8A	JB SCM 8A	18	155.99	0.52	357.00	361.00	352.94	353.75	3.62
FES 17	FES INLET 18	15	24.39	4.10	306.50	308.50	305.00	306.00	7.41
FES 19	FES INLET 20	15	26.23	5.72	326.50	328.50	324.40	325.90	8.34
FES 21	FES INLET 22	15	24.00	1.04	344.75	346.07	343.25	343.50	4.52
FES 23	FES INLET 24	18	38.42	0.65	345.33	345.71	343.00	343.25	6.95
FES 25	FES INLET 26	18	36.43	1.00	342.00	344.78	340.50	340.86	6.73
FES 30	JB 31	30	127.63	1.29	355.50	365.21	353.00	354.65	9.97
FES 330	CB 331	18	43.46	0.50	342.52	350.64	340.50	340.72	5.53
FES 338	CB 338 A	24	20.97	0.40	353.44	356.51	351.50	351.58	5.73
FES 349	CB 350	42	58.98	0.50	355.00	358.36	351.50	351.79	5.77
FES 392	JB 392 A	18	22.66	0.40	352.50	356.41	351.03	351.12	4.07
FES 401	YI 402	24	60.28	0.83	291.90	289.50	280.50	281.00	7.55
FES 419	YI 419 A	30	200.79	2.50	311.00	309.00	293.50	298.52	12.91
FES 469	CB 472	36	34.39	1.02	331.68	332.75	323.50	323.85	8.89
FES 800	CB 801	18	35.14	1.99	363.30	366.71	357.50	358.20	8.76
FES SCM 3B	OS SCM 3B	48	54.00	0.54	348.94	353.33	347.71	348.00	9.69
FES SCM 3C	OS SCM 3C	18	64.01	0.50	338.81	342.00	336.68	337.00	6.89
FES SCM 4B	OS SCM 4B	30	75.17	0.67	312.93	327.00	310.00	310.50	7.15
FES SCM 4C	OS SCM 4C	18	59.15	1.69	290.50	296.90	289.00	290.00	6.94
FES SCM 4E	OS SCM 4E	24	49.13	1.02	279.00	284.00	276.50	277.00	5.03
JB 31	YI 32	30	75.53	0.50	365.21	359.19	354.85	355.23	7.07
JB 392 A	CB 393	18	127.25	0.40	356.41	355.69	351.22	351.73	3.22
JB SCM 8A	OS SCM 8A	18	29.12	0.52	361.00	360.50	353.85	354.00	1.71
YI 402	YI 403	24	132.83	9.49	289.50	304.09	281.75	294.35	5.54
YI 403	CB 404	24	38.88	8.87	304.09	307.96	294.55	298.00	5.38
YI 419 A	CB 420	30	31.74	4.50	309.00	315.51	302.20	303.63	15.83

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NORTH CAROLINA AMERICAN ENGINEERING ASSOCIATES SOUTHEAST C-3881 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL SEAL 9810 ENGINEER JOHN R. HARMAN

8.17.21

NO.	DATE	REVISION:

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KALAS FALLS
PHASE 3
1832 ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 9900
CHECKED BY:
DRAWN BY:
DATE: FEB 18, 2021

SHEET TITLE:

DRAINAGE AREA EXHIBIT PHASE 3

SHEET NO.:

EXHIBIT P

North Carolina 811
www.nc811.org
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

August 16, 2021

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