

PARKER RIDGE **SUBDIVISION**

REDFORD PLACE DRIVE
Rolesville, NC, 27571

DRAINAGE AND EROSION CONTROL CALCULATIONS

PREPARED FOR:

LENNAR CORPORATION
1100 Perimeter Park Drive, Suite 112
Morrisville, NC 27596

PREPARED BY:

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5440 Wade Park Boulevard, Suite 102



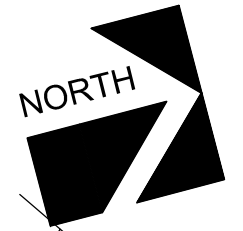
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ATTACHMENT 1: DRAINAGE AREA MAPS – SCM 1



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NC LICENSE #C-4397

SCM 1 DRAINAGE MAP

DATE: 7/27/2023
SCALE: 1" = 50'

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY BGE INC. SHALL BE WITHOUT LIABILITY TO BGE INC.

SCM 1 - 10 YR STORM

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-158 (BMP 1)	0.622	2.03	0.083	0.450
YI-157 (BMP 1)	0.028	0.10	0.083	0.500
YI-149 (BMP 1)	0.515	1.87	0.083	0.500
YI-148 (BMP 1)	0.002	0.01	0.083	0.550
DI-151 (BMP 1)	0.034	0.15	0.083	0.600
DI-156 (BMP 1)	0.080	0.35	0.083	0.600
DI-121 (BMP 1)	0.153	0.72	0.083	0.650
CB-133 (BMP 1)	0.480	2.43	0.083	0.700
DI-120 (BMP 1)	0.279	1.41	0.083	0.700
DI-134 (BMP 1)	0.084	0.44	0.083	0.720
DI-125 (BMP 1)	0.200	1.09	0.083	0.750
DI-126 (BMP 1)	0.116	0.63	0.083	0.750
DI-150 (BMP 1)	0.106	0.58	0.083	0.750
DI-123 (BMP 1)	0.143	0.80	0.083	0.770
DI-124 (BMP 1)	0.173	0.97	0.083	0.770
DI-122 (BMP 1)	0.226	1.26	0.083	0.770

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-146 (BMP 1)	0.520	2.90	0.083	0.770
DI-145 (BMP 1)	0.297	1.72	0.083	0.800
CB-128 (BMP 1)	0.141	0.84	0.083	0.820
CB-106 (BMP 1)	0.121	0.75	0.083	0.850
CB-110 (BMP 1)	0.206	1.27	0.083	0.850
CB-109 (BMP 1)	0.221	1.36	0.083	0.850
DDI-143 (BMP 1)	0.367	2.26	0.083	0.850
DI-142 (BMP 1)	0.227	1.40	0.083	0.850
DI-137 (BMP 1)	0.249	1.53	0.083	0.850
DI-134A (BMP 1)	0.298	1.84	0.083	0.850
TCB-102 (BMP 1)	0.454	2.80	0.083	0.850
CB-104 (BMP 1)	0.135	0.83	0.083	0.850
CB-103 (BMP 1)	0.089	0.55	0.083	0.850
CB-112 (BMP 1)	0.055	0.35	0.083	0.870
DI-135 (BMP 1)	0.302	1.90	0.083	0.870
DI-136 (BMP 1)	0.192	1.21	0.083	0.870

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-127 (BMP 1)	0.060	0.38	0.083	0.870
CB-114 (BMP 1)	0.071	0.45	0.083	0.870
CB-111 (BMP 1)	0.040	0.25	0.083	0.870
CB-113 (BMP 1)	0.048	0.31	0.083	0.880
CB-107 (BMP 1)	0.104	0.67	0.083	0.890
DI-138 (BMP 1)	0.081	0.53	0.083	0.900
DCB-116 (BMP 1)	0.388	2.56	0.083	0.910
DCB-129 (BMP 1)	0.305	2.01	0.083	0.910
CB-108 (BMP 1)	0.028	0.19	0.083	0.920
DI-144 (BMP 1)	0.044	0.30	0.083	0.920
CB-105 (BMP 1)	0.040	0.28	0.083	0.950
CB-115 (BMP 1)	0.007	0.05	0.083	0.950
DI-141 (BMP 1)	0.048	0.33	0.083	0.950
CB-131 (BMP 1)	0.002	0.02	0.083	0.950
CB-132 (BMP 1)	0.040	0.28	0.083	0.950
DI-140 (BMP 1)	0.150	1.03	0.083	0.950

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-118 (BMP 1)	0.014	0.09	0.083	0.950
CB-119 (BMP 1)	0.029	0.20	0.083	0.950
CB-147 (BMP 1)	0.064	0.44	0.083	0.950
DI-139 (BMP 1)	0.043	0.29	0.083	0.950
CB-154 (BMP 1)	0.059	0.40	0.083	0.950
CB-155 (BMP 1)	0.078	0.54	0.083	0.950
CB-153 (BMP 1)	0.015	0.11	0.083	0.950
CB-153A (BMP 1)	0.160	1.08	0.083	0.950
CB-117 (BMP 1)	0.111	0.76	0.083	0.950
CB-101 (BMP 1)	0.093	0.64	0.083	0.950

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-118 (BMP 1)	0.09	0.00	2.43	100.0	399.11	399.11	4.0	2.94	3.97
CB-112 (BMP 1)	0.34	0.01	0.34	98.0	400.78	400.78	4.0	2.25	2.25
CB-111 (BMP 1)	0.25	0.00	6.86	99.6	395.70	395.70	4.0	5.24	4.77
CB-114 (BMP 1)	0.43	0.02	2.82	95.8	398.93	398.93	4.0	4.06	4.01
DI-125 (BMP 1)	1.09	0.00	1.09	100.0	399.53	399.53	4.0	3.05	3.05
DI-140 (BMP 1)	1.00	0.04	1.00	96.6	393.81	393.81	4.0	2.92	2.92
CB-113 (BMP 1)	0.30	0.00	6.40	98.8	396.24	396.24	4.0	3.17	4.75
CB-119 (BMP 1)	0.20	0.00	1.34	100.0	399.40	399.40	4.0	3.84	3.29
CB-117 (BMP 1)	0.68	0.08	0.68	88.9	399.87	399.87	4.0	2.63	2.63
CB-115 (BMP 1)	0.07	0.00	3.36	100.0	396.40	396.40	4.0	6.24	4.12
DI-151 (BMP 1)	0.15	0.00	0.15	100.0	400.28	400.28	4.0	1.80	1.80
DI-150 (BMP 1)	0.58	0.00	0.58	100.0	401.05	401.05	4.0	2.56	2.56
CB-110 (BMP 1)	1.03	0.24	7.68	80.9	395.03	395.03	4.0	5.36	4.99
DI-126 (BMP 1)	0.63	0.00	1.17	100.0	400.38	400.38	4.0	2.59	3.17
DCB-116 (BMP 1)	2.65	0.00	2.65	100.0	398.40	398.40	8.0	4.08	4.08
CB-109 (BMP 1)	1.09	0.28	30.64	79.6	387.59	387.59	4.0	4.87	6.67

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-139 (BMP 1)	0.29	0.00	1.27	100.0	393.32	393.32	4.0	2.96	3.19
DI-124 (BMP 1)	0.94	0.03	0.94	97.1	395.42	395.42	4.0	2.97	2.97
DI-138 (BMP 1)	0.53	0.00	1.76	99.7	392.98	392.98	4.0	3.24	3.58
CB-108 (BMP 1)	0.19	0.00	0.19	100.0	392.66	392.66	4.0	1.86	1.86
CB-107 (BMP 1)	0.82	0.14	32.72	85.6	387.17	387.17	4.0	6.66	6.89
DI-123 (BMP 1)	0.78	0.01	1.70	98.3	392.10	392.10	4.0	2.55	3.44
CB-127 (BMP 1)	0.57	0.05	22.38	91.9	387.64	387.64	4.0	5.84	5.92
DI-137 (BMP 1)	1.43	0.11	3.08	93.0	392.48	392.48	4.0	2.98	4.31
DI-134A (BMP 1)	1.67	0.17	1.67	91.0	392.85	392.85	4.0	3.39	3.39
DI-136 (BMP 1)	1.25	0.07	4.22	94.5	391.54	391.54	4.0	5.45	4.49
CB-106 (BMP 1)	0.67	0.08	0.67	89.3	392.80	392.80	4.0	2.61	2.61
CB-105 (BMP 1)	0.40	0.01	33.38	96.6	386.75	386.75	4.0	7.04	7.19
CB-132 (BMP 1)	0.28	0.00	3.99	99.2	390.27	390.27	4.0	4.11	4.41
CB-131 (BMP 1)	0.02	0.00	11.86	100.0	389.36	389.36	4.0	5.80	4.41
DI-134 (BMP 1)	0.44	0.00	2.08	99.9	392.52	392.52	4.0	3.03	3.77
CB-133 (BMP 1)	1.69	0.74	3.72	69.5	392.24	392.24	4.0	3.99	4.31

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-128 (BMP 1)	0.77	0.12	22.09	86.7	388.00	388.00	4.0	6.39	6.66
DI-135 (BMP 1)	1.78	0.20	5.75	90.1	390.70	390.70	4.0	4.23	5.02
CB-130 (BMP 1)	0.80	0.13	17.94	85.9	389.31	389.31	4.0	4.18	6.26
DCB-129 (BMP 1)	2.26	0.00	19.82	100.0	388.44	388.44	8.0	6.98	6.34
CB-103 (BMP 1)	0.52	0.04	35.61	93.2	385.66	385.66	4.0	1.34	7.34
CB-153 (BMP 1)	0.11	0.00	1.18	100.0	385.41	385.41	4.0	6.24	3.05
CB-153A (BMP 1)	1.08	0.00	1.08	100.0	388.39	388.39	4.0	2.98	2.98
CB-104 (BMP 1)	0.79	0.12	2.27	86.3	385.66	385.66	4.0	1.15	1.45
DI-141 (BMP 1)	0.33	0.00	8.06	100.0	389.79	389.79	4.0	4.88	5.01
DI-158 (BMP 1)	2.03	0.00	2.03	100.0	389.54	389.54	4.0	3.56	3.56
YI-148 (BMP 1)	0.01	0.00	1.87	100.0	389.27	389.27	4.0	8.18	3.48
TCB-102 (BMP 1)	2.84	0.00	41.15	100.0	385.38	385.38	12.0	6.37	7.36
CB-147 (BMP 1)	0.53	0.04	1.42	93.1	387.65	387.65	4.0	2.91	3.36
DI-146 (BMP 1)	2.46	0.44	2.46	84.9	390.80	390.80	4.0	3.91	3.91
DI-121 (BMP 1)	0.72	0.00	0.72	100.0	387.87	387.87	4.0	2.76	2.76
YI-157 (BMP 1)	0.10	0.00	0.10	100.0	389.13	389.13	4.0	1.57	1.57

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-120 (BMP 1)	1.41	0.00	4.02	100.0	387.35	387.35	4.0	1.01	4.20
YI-149 (BMP 1)	1.87	0.00	1.87	100.0	391.71	391.71	4.0	3.48	3.48
DI-145 (BMP 1)	1.58	0.14	1.58	91.7	391.23	391.23	4.0	3.46	3.46
DI-144 (BMP 1)	0.44	0.00	2.01	99.9	390.69	390.69	4.0	4.60	3.51
DI-142 (BMP 1)	1.31	0.08	7.84	93.9	390.24	390.24	4.0	4.42	4.81
CB-154 (BMP 1)	0.40	0.00	0.93	100.0	388.16	388.16	4.0	2.73	2.86
DI-156 (BMP 1)	0.35	0.00	1.51	100.0	385.67	385.67	4.0	1.41	1.32
CB-101 (BMP 1)	0.68	0.00	42.86	100.0	385.26	385.26	4.0	7.33	7.67
DDI-143 (BMP 1)	2.35	0.00	6.66	100.0	390.60	390.60	8.0	1.87	4.71
CB-155 (BMP 1)	0.54	0.00	0.54	100.0	388.68	388.68	4.0	2.47	2.47
DI-122 (BMP 1)	1.20	0.06	1.20	94.9	385.91	385.91	4.0	3.07	3.07

10-YR ANALYSIS

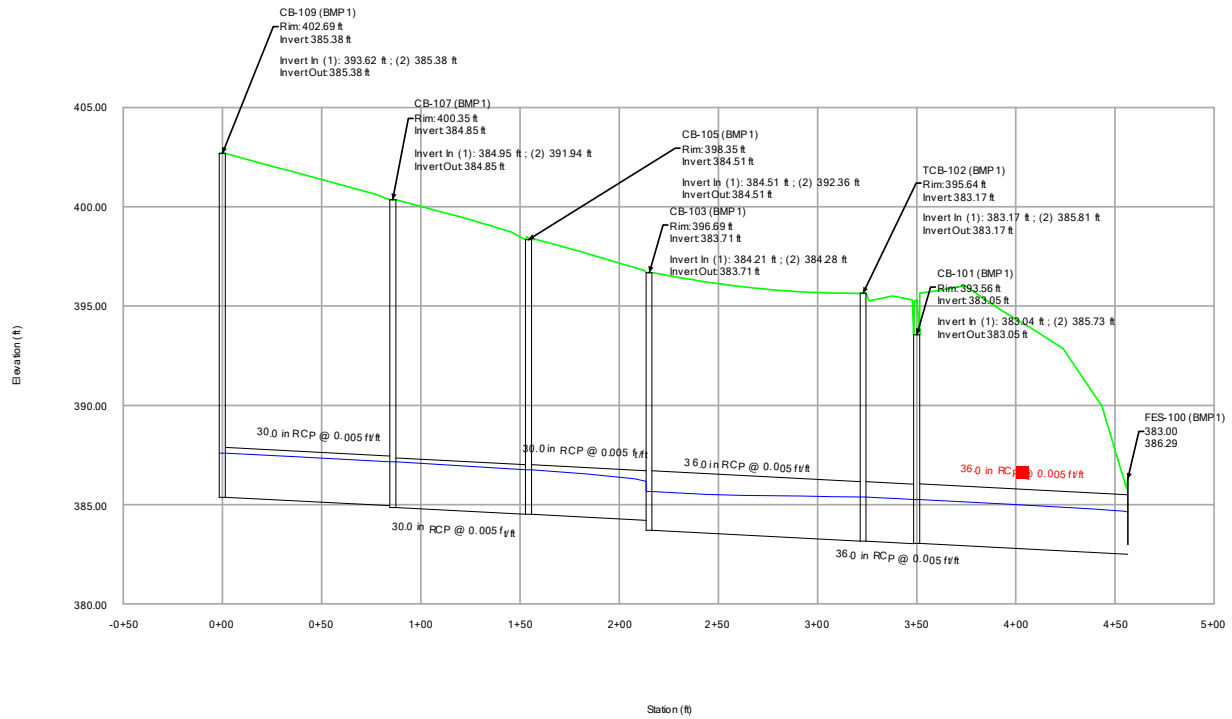
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-114 TO CB-118 (BMP 1)	15.0	0.006	3.97	4.06	2.43	5.02	399.11	398.94
CB-118 TO DI-125 (BMP 1)	15.0	0.005	3.05	2.94	1.09	4.57	399.53	399.11
CB-118 TO CB-119 (BMP 1)	15.0	0.005	3.29	2.89	1.34	4.79	399.40	399.11
CB-111 TO CB-112 (BMP 1)	15.0	0.019	2.25	3.47	0.34	8.85	400.78	400.21
CB-111 TO CB-113 (BMP 1)	18.0	0.005	4.75	5.24	6.40	7.46	396.24	395.74
CB-110 TO CB-111 (BMP 1)	18.0	0.005	4.77	5.36	6.86	7.43	395.70	395.03
CB-113 TO CB-114 (BMP 1)	15.0	0.005	4.01	4.18	2.82	4.71	398.93	398.77
DI-139 TO DI-140 (BMP 1)	18.0	0.005	2.92	2.96	1.00	7.54	393.81	393.34
CB-113 TO CB-115 (BMP 1)	18.0	0.005	4.12	3.17	3.36	7.47	396.40	396.24
CB-113 TO DI-151 (BMP 1)	15.0	0.028	1.80	3.09	0.15	10.83	400.28	399.23
CB-119 TO DI-126 (BMP 1)	15.0	0.009	3.17	3.84	1.17	6.11	400.38	399.51
CB-115 TO CB-117 (BMP 1)	18.0	0.007	2.63	2.89	0.68	8.53	399.87	399.73
CB-115 TO CB-116 (BMP 1)	15.0	0.018	4.08	6.24	2.65	8.74	398.40	396.36
DI-126 TO DI-150 (BMP 1)	15.0	0.005	2.56	2.59	0.58	4.60	401.05	400.45
CB-109 TO CB-110 (BMP 1)	18.0	0.005	4.99	5.67	7.68	7.43	395.03	394.69
CB-107 TO CB-109 (BMP 1)	30.0	0.005	6.67	6.66	30.64	29.00	387.59	387.17
CB-109 TO CB-127 (BMP 1)	30.0	0.007	5.92	4.87	22.38	33.18	387.64	387.59
DI-138 TO DI-139 (BMP 1)	15.0	0.005	3.19	3.24	1.27	4.58	393.32	392.99
DI-123 TO DI-124 (BMP 1)	15.0	0.036	2.97	2.55	0.94	12.20	395.42	392.10
DI-137 TO DI-138 (BMP 1)	15.0	0.006	3.58	2.98	1.76	4.95	392.98	392.48
CB-107 TO CB-108 (BMP 1)	18.0	0.019	1.86	2.86	0.19	14.66	392.66	392.05
CB-105 TO CB-107 (BMP 1)	30.0	0.005	6.89	7.04	32.72	28.96	387.17	386.75
CB-107 TO DI-123 (BMP 1)	15.0	0.005	3.44	3.54	1.70	4.55	392.10	391.46
CB-127 TO CB-128 (BMP 1)	30.0	0.006	6.66	5.84	22.09	32.06	388.00	387.64
DI-136 TO DI-137 (BMP 1)	15.0	0.011	4.31	5.45	3.08	6.87	392.48	391.44
CB-133 TO DI-134 (BMP 1)	15.0	0.005	3.39	3.03	1.67	4.50	392.85	392.52
DI-135 TO DI-136 (BMP 1)	18.0	0.006	4.49	4.23	4.22	8.04	391.54	390.70
CB-105 TO CB-106 (BMP 1)	18.0	0.005	2.61	2.61	0.67	7.43	392.80	392.66
CB-103 TO CB-105 (BMP 1)	30.0	0.005	7.19	8.06	33.38	29.00	386.75	386.17
CB-132 TO CB-133 (BMP 1)	18.0	0.074	4.31	4.11	3.72	28.55	392.24	390.27

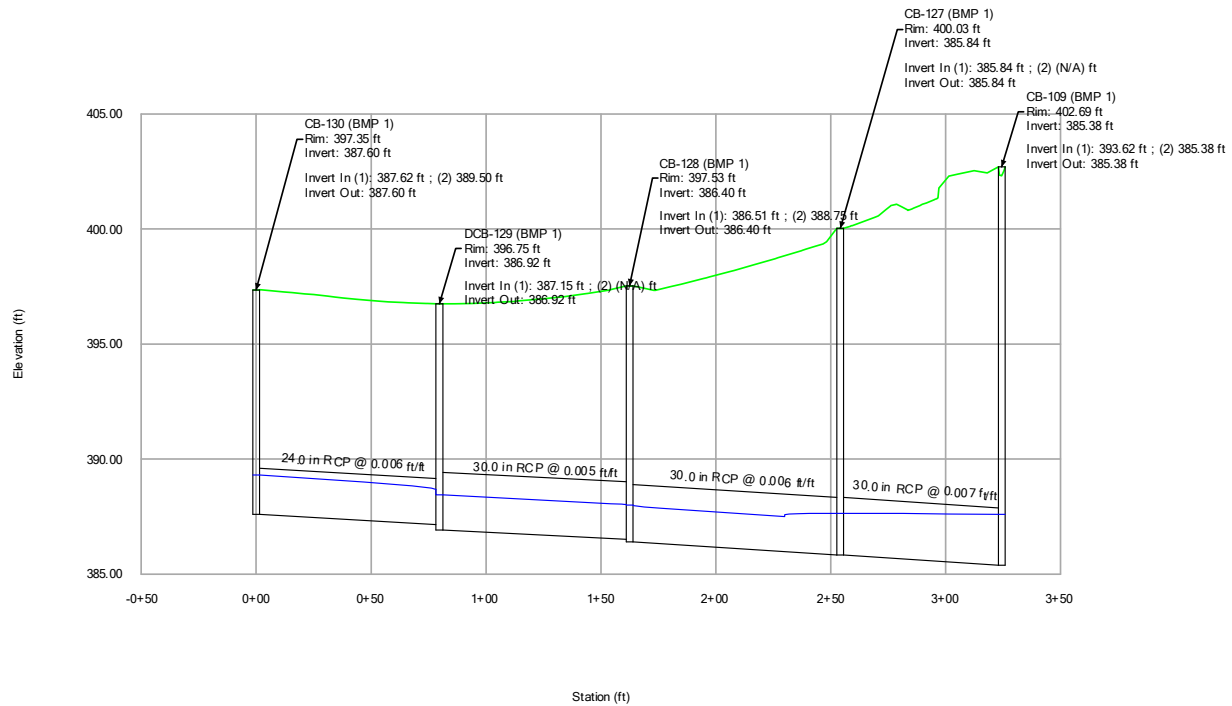
10-YR ANALYSIS **Conduit Results - Time: 0.00 hours**

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-131 TO CB-132 (BMP 1)	18.0	0.010	4.41	5.53	3.99	10.49	390.27	389.52
CB-131 TO DI-141 (BMP 1)	18.0	0.005	5.01	5.80	8.06	7.43	389.79	389.36
CB-130 TO CB-131 (BMP 1)	24.0	0.005	4.41	4.18	11.86	16.29	389.36	389.31
CB-133 TO DI-134 (1) (BMP 1)	15.0	0.006	3.77	3.99	2.08	5.19	392.52	392.25
CB-128 TO CB-129 (BMP 1)	30.0	0.005	6.34	6.39	19.82	28.87	388.44	388.02
CB-128 TO YI-147 (BMP 1)	15.0	0.006	1.57	1.64	0.10	4.82	389.13	388.87
CB-128 TO YI-148 (BMP 1)	18.0	0.018	3.48	5.44	1.87	14.17	389.27	388.62
CB-130 TO DI-135 (BMP 1)	18.0	0.008	5.02	5.68	5.75	9.67	390.70	390.34
CB-129 TO CB-130 (BMP 1)	24.0	0.006	6.26	6.98	17.94	16.99	389.31	388.68
CB-102 TO CB-103 (BMP 1)	36.0	0.005	7.34	6.37	35.61	47.19	385.66	385.38
CB-103 TO CB-104 (BMP 1)	18.0	0.005	1.45	1.34	2.27	7.52	385.66	385.66
FES-152 TO CB-153 (BMP 1)	18.0	0.011	3.05	4.04	1.18	10.91	385.41	384.83
CB-153 TO CB-153A (BMP 1)	18.0	0.040	2.98	6.24	1.08	20.94	388.39	385.43
CB-104 TO DI-156 (BMP 1)	18.0	0.005	1.32	1.15	1.51	7.42	385.67	385.66
DI-141 TO DI-142 (BMP 1)	18.0	0.005	4.81	4.88	7.84	7.43	390.24	389.79
DI-120 TO DI-158 (BMP 1)	18.0	0.022	3.56	2.48	2.03	15.46	389.54	387.35
YI-148 TO YI-149 (BMP 1)	18.0	0.054	3.48	8.18	1.87	24.44	391.71	389.13
CB-101 TO CB-102 (BMP 1)	36.0	0.005	7.36	7.33	41.15	46.26	385.38	385.26
CB-102 TO DI-120 (BMP 1)	15.0	0.005	4.20	4.77	4.02	4.57	387.35	386.62
CB-101 TO CB-147 (BMP 1)	15.0	0.030	3.36	6.28	1.42	11.25	387.65	386.03
CB-147 TO CB-154 (BMP 1)	18.0	0.005	2.86	2.91	0.93	7.57	388.16	387.74
DI-143 TO DI-146 (BMP 1)	15.0	0.005	3.91	2.30	2.46	4.75	390.80	390.60
DI-120 TO DI-121 (BMP 1)	15.0	0.006	2.76	1.01	0.72	4.93	387.87	387.35
DI-144 TO DI-145 (BMP 1)	15.0	0.012	3.46	4.60	1.58	6.99	391.23	390.61
DI-143 TO DI-144 (BMP 1)	15.0	0.005	3.51	1.87	2.01	4.57	390.69	390.60
DI-142 TO DI-143 (BMP 1)	18.0	0.005	4.71	4.42	6.66	7.43	390.60	390.24
CB-154 TO CB-155 (BMP 1)	18.0	0.007	2.47	2.73	0.54	8.65	388.68	388.25
DI-156 TO DI-122 (BMP 1)	18.0	0.005	3.07	1.41	1.20	7.43	385.91	385.67
FES-100 TO CB-101 (BMP 1)	36.0	0.005	7.67	7.97	42.86	47.93	385.26	384.63

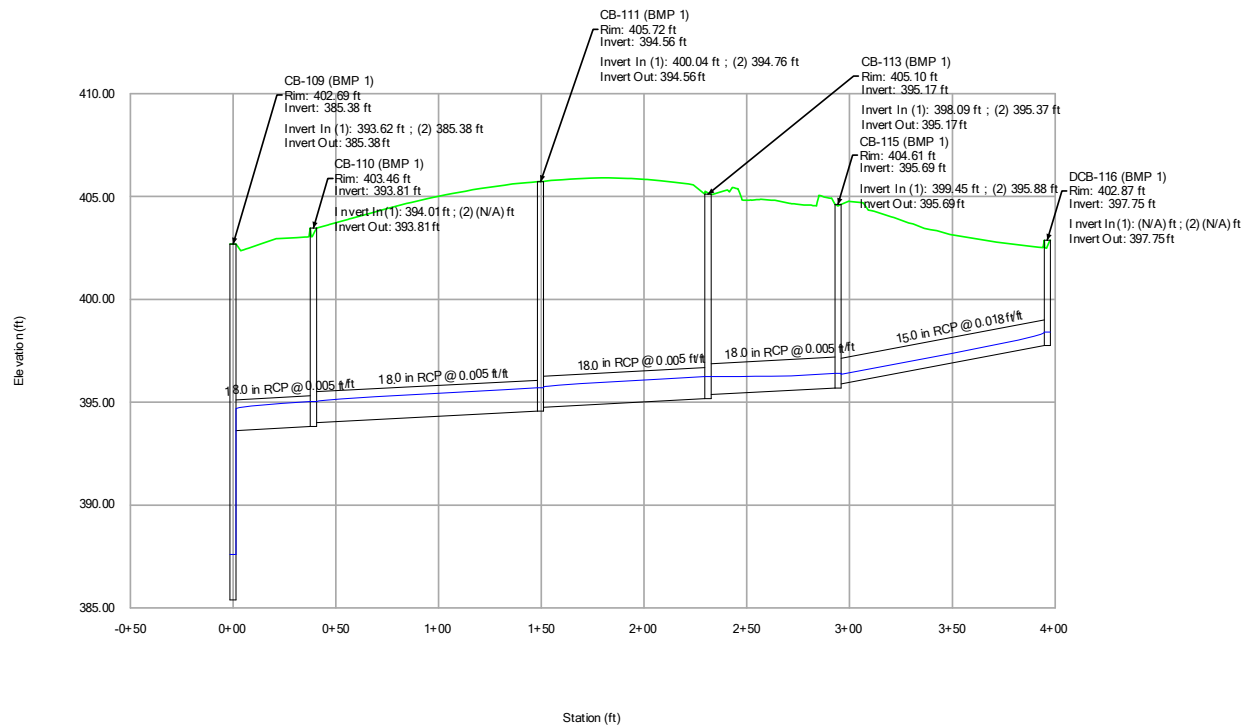
10-YR ANALYSIS



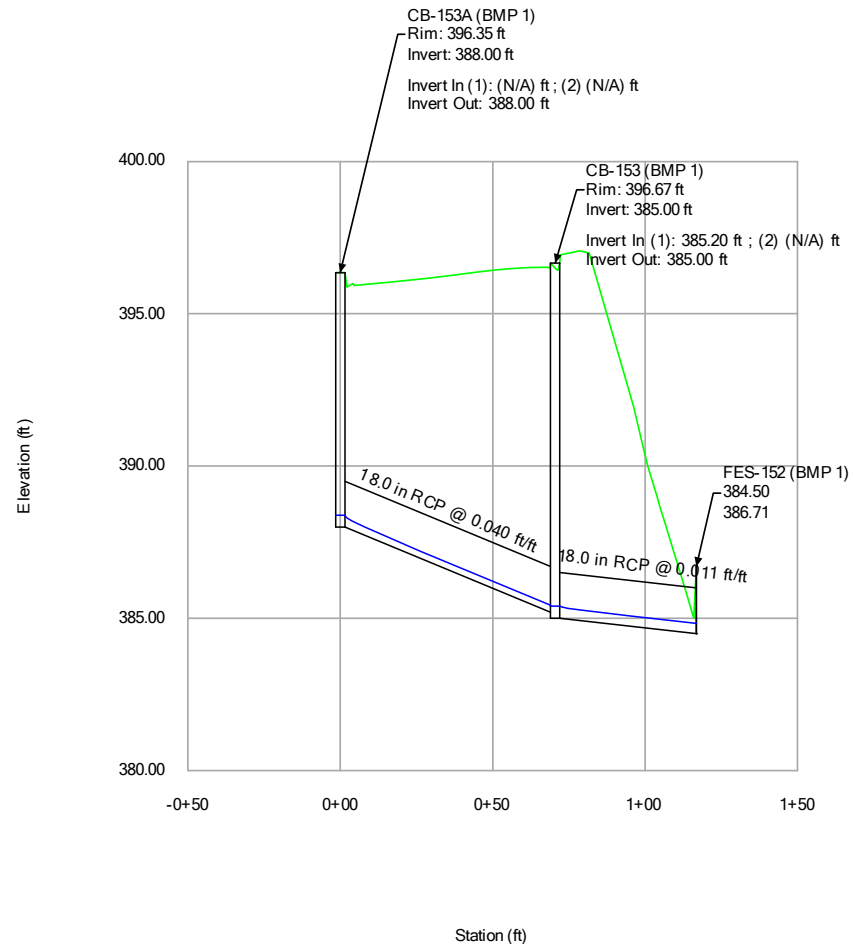
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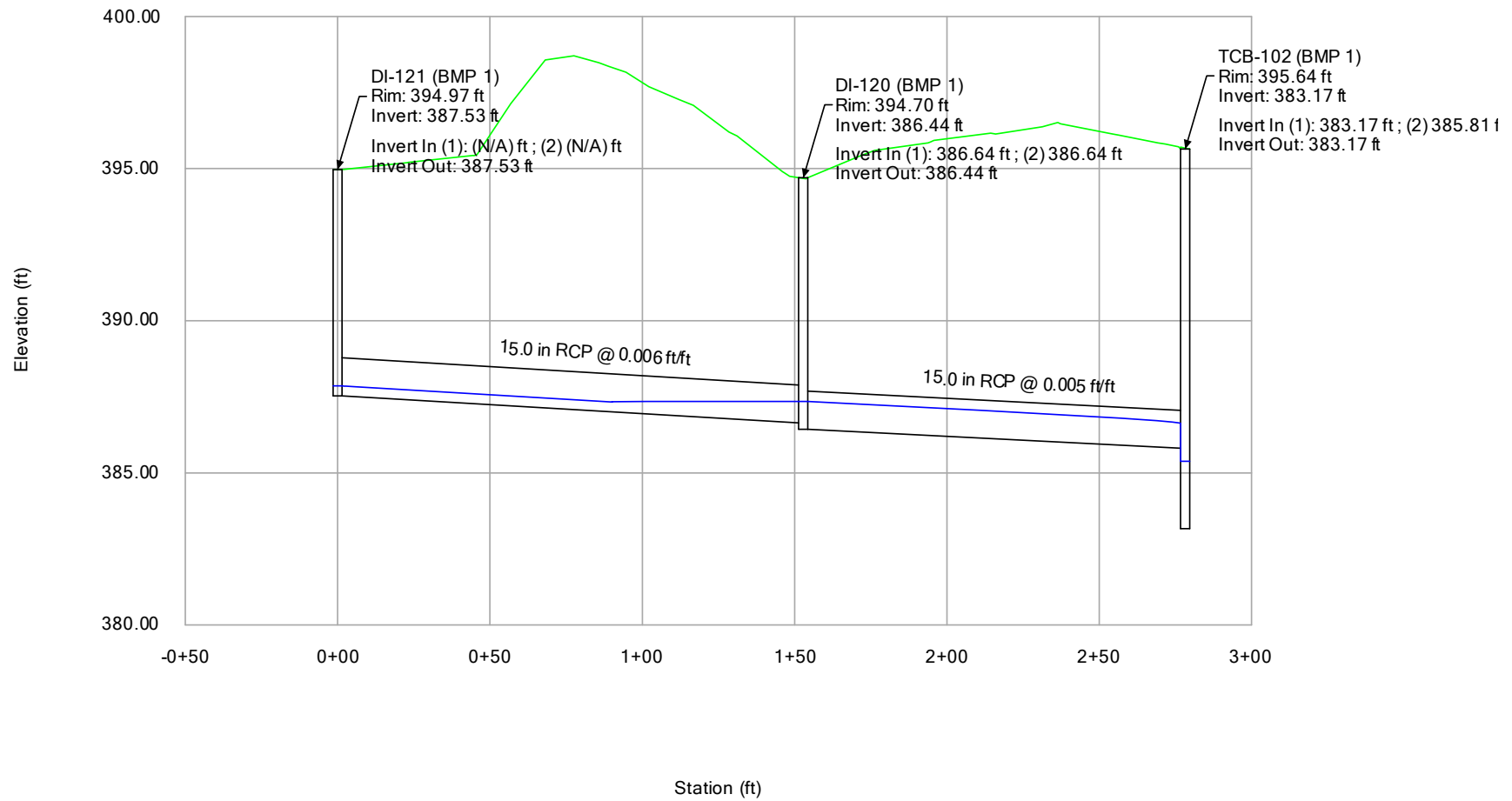
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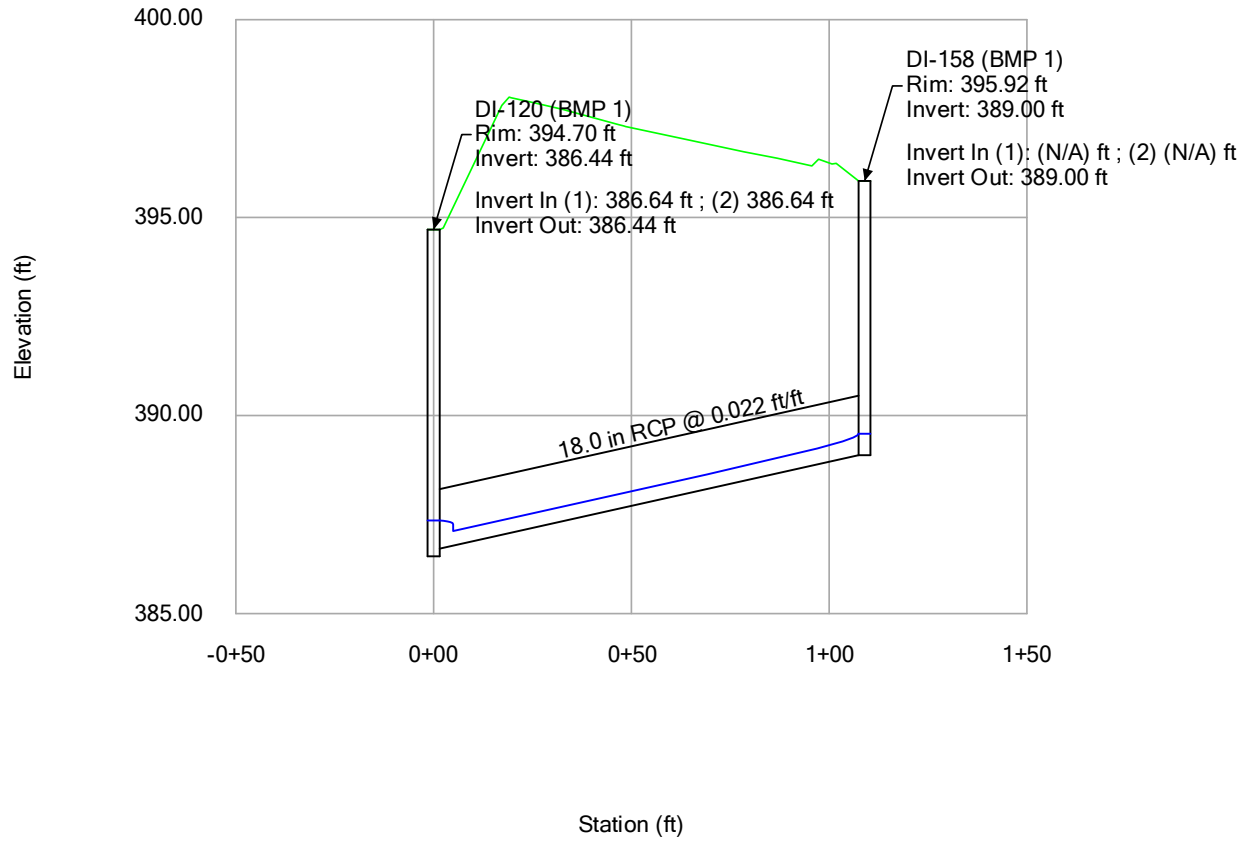
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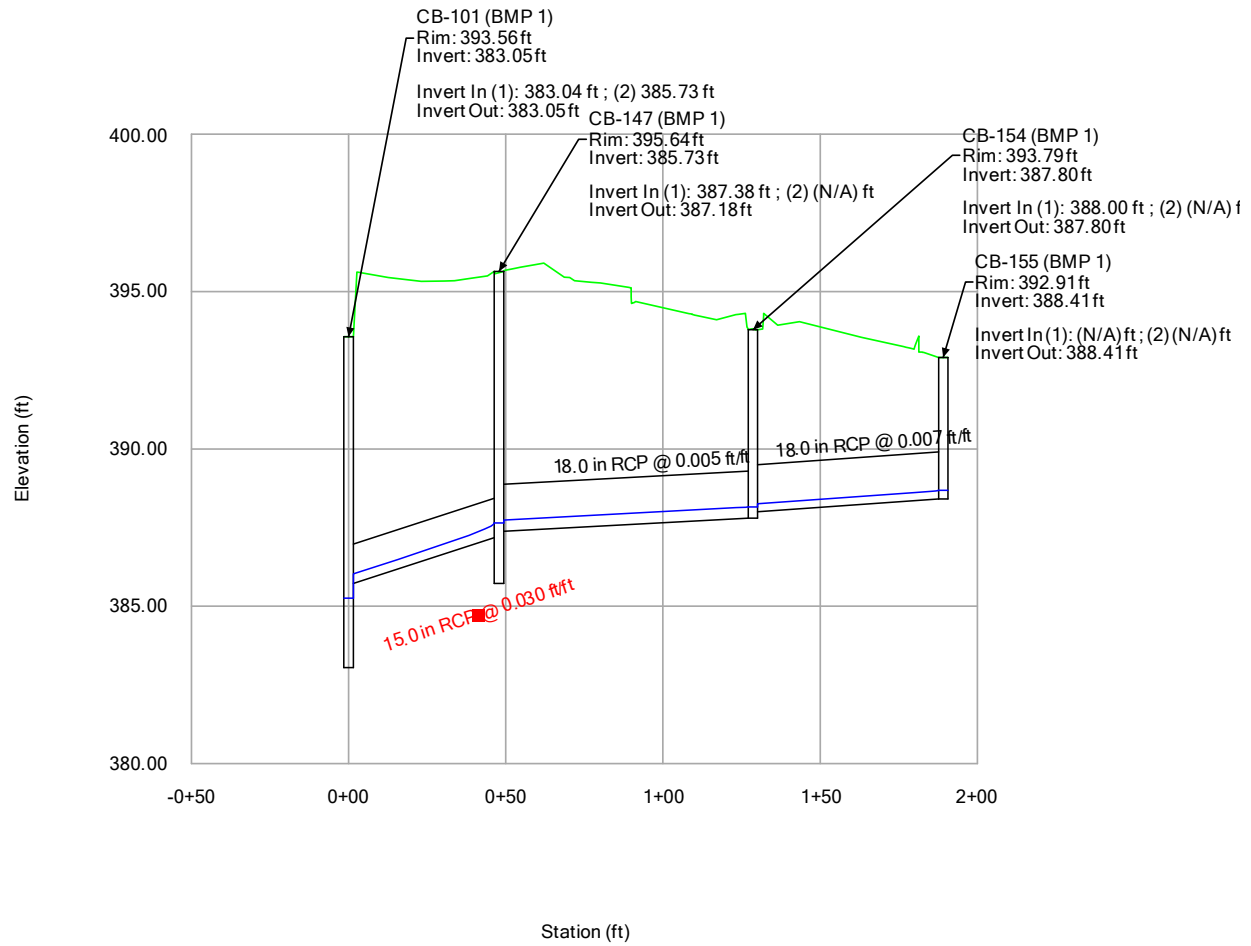
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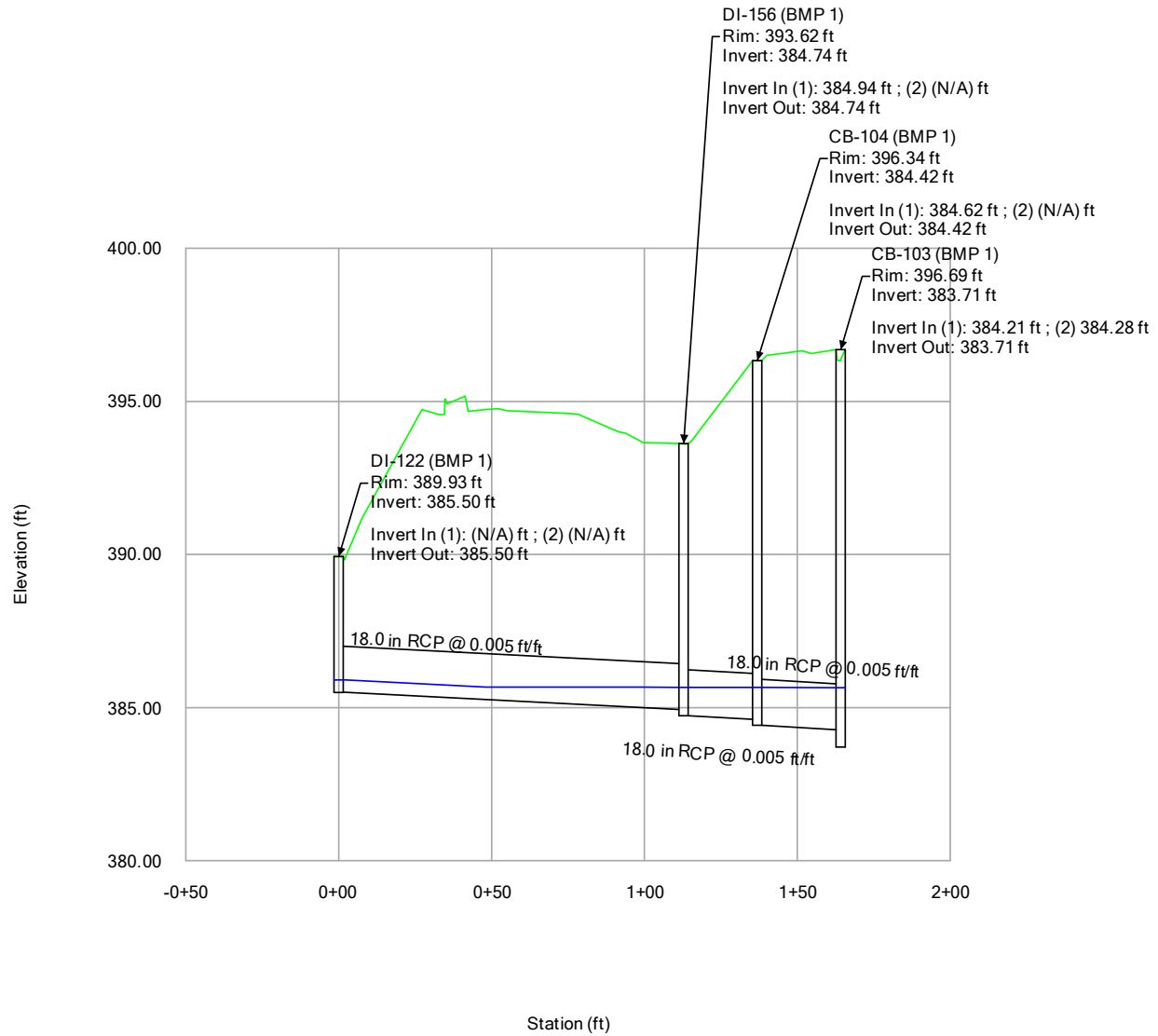
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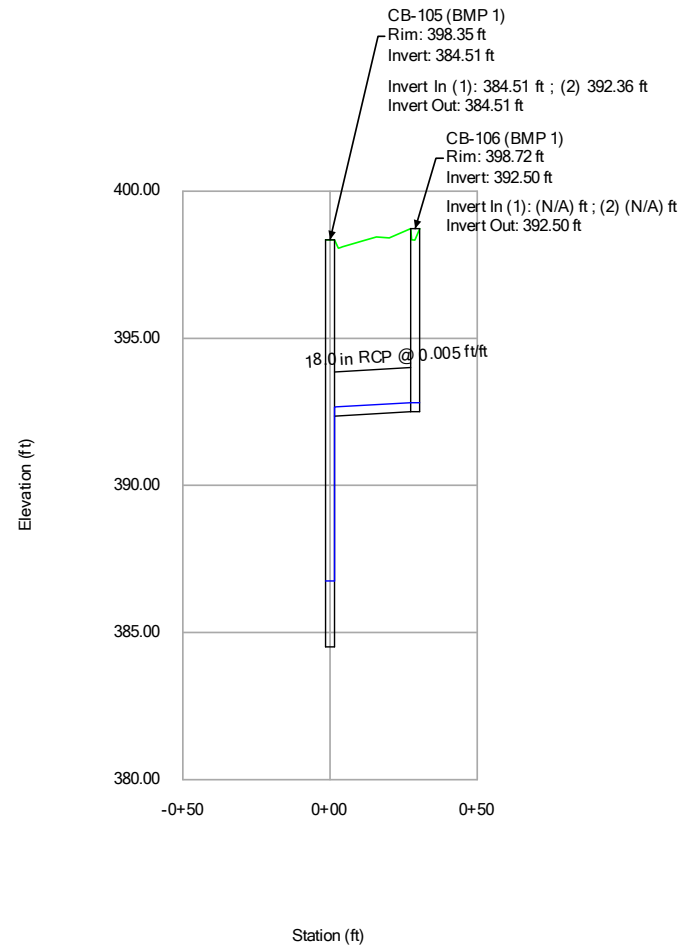
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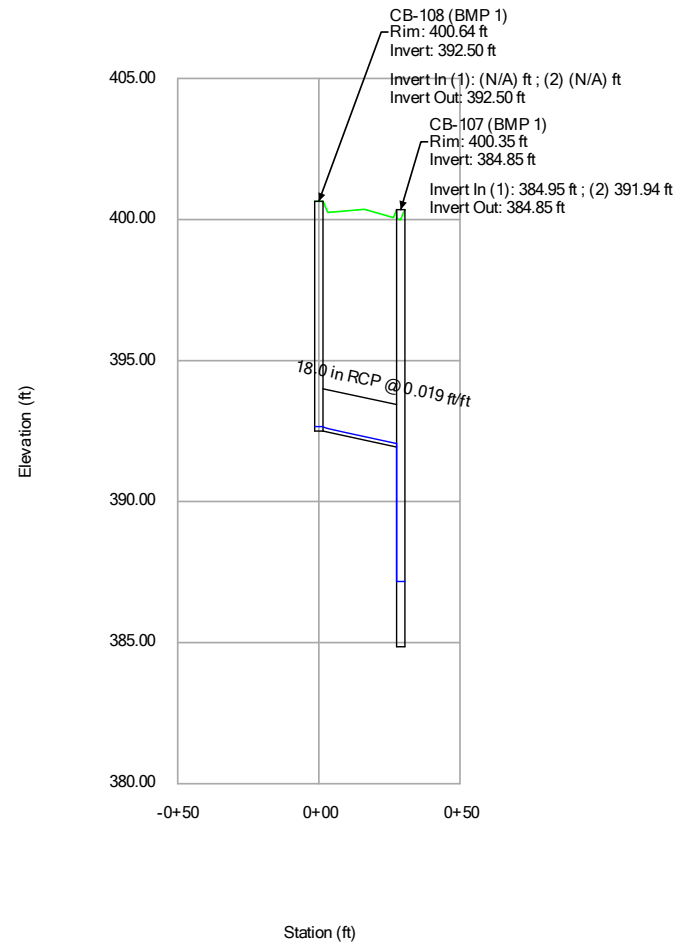
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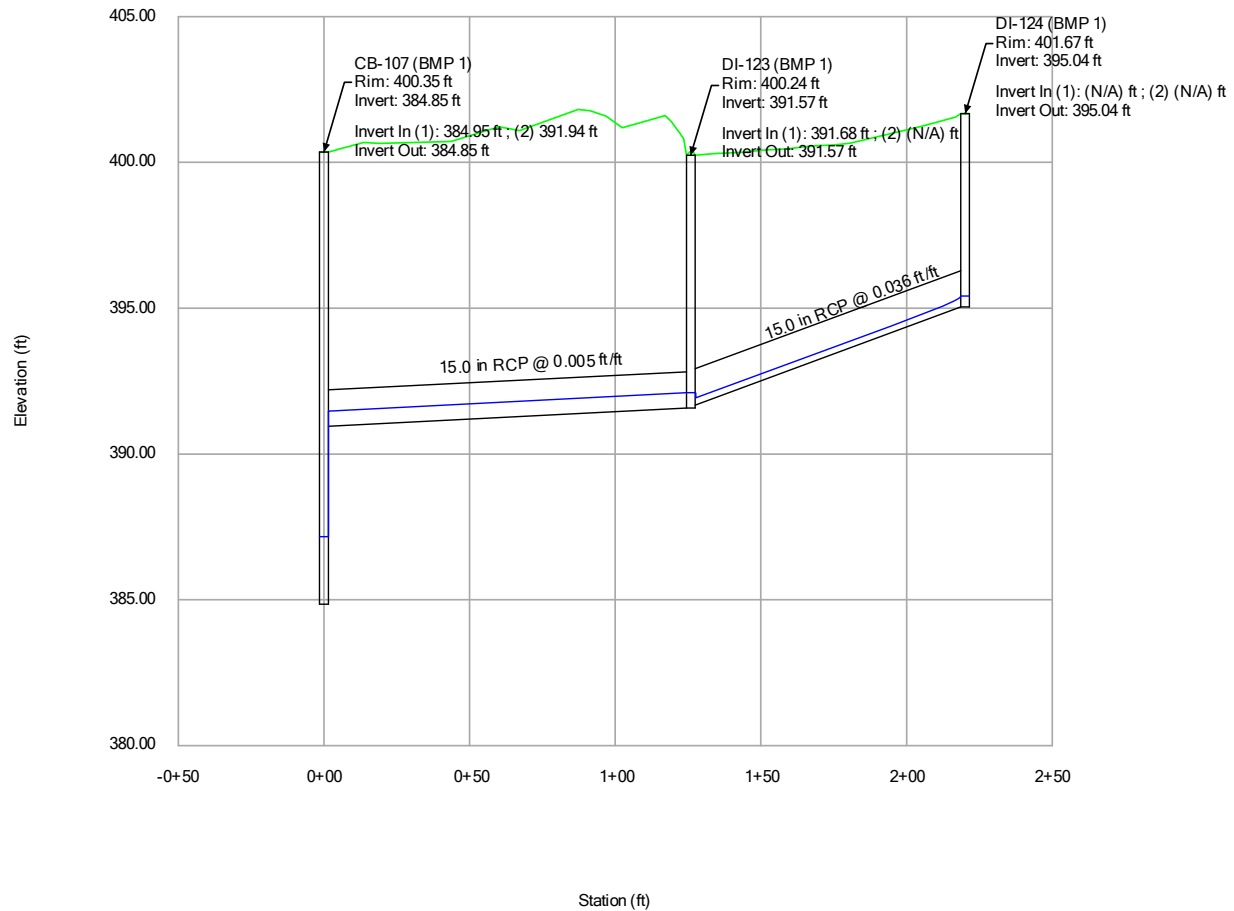
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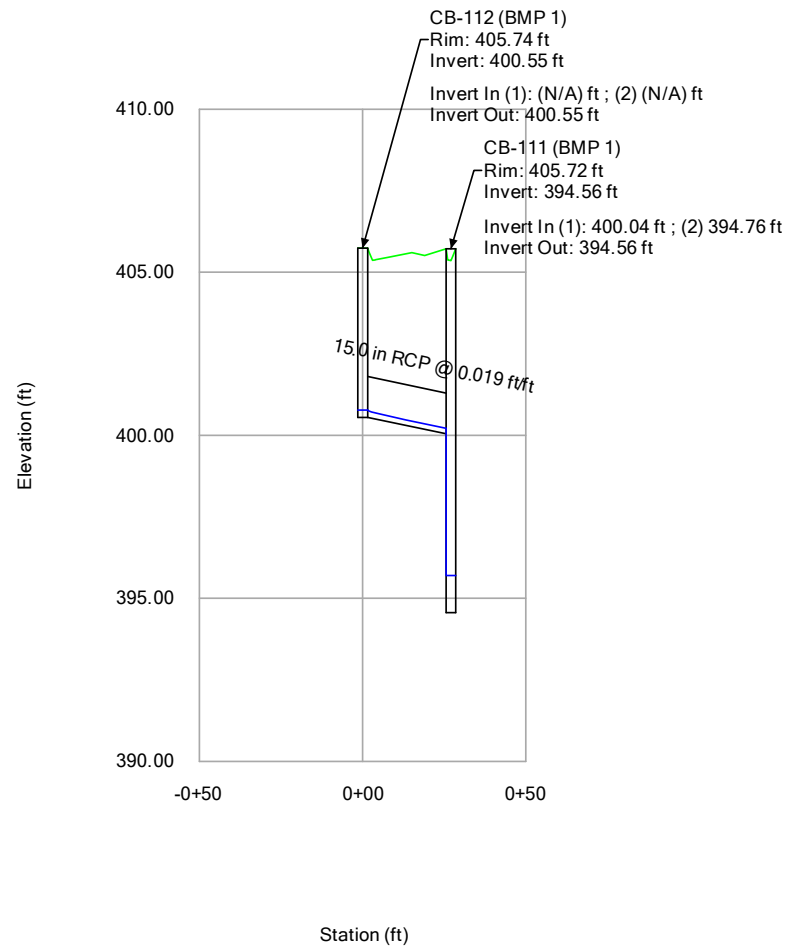
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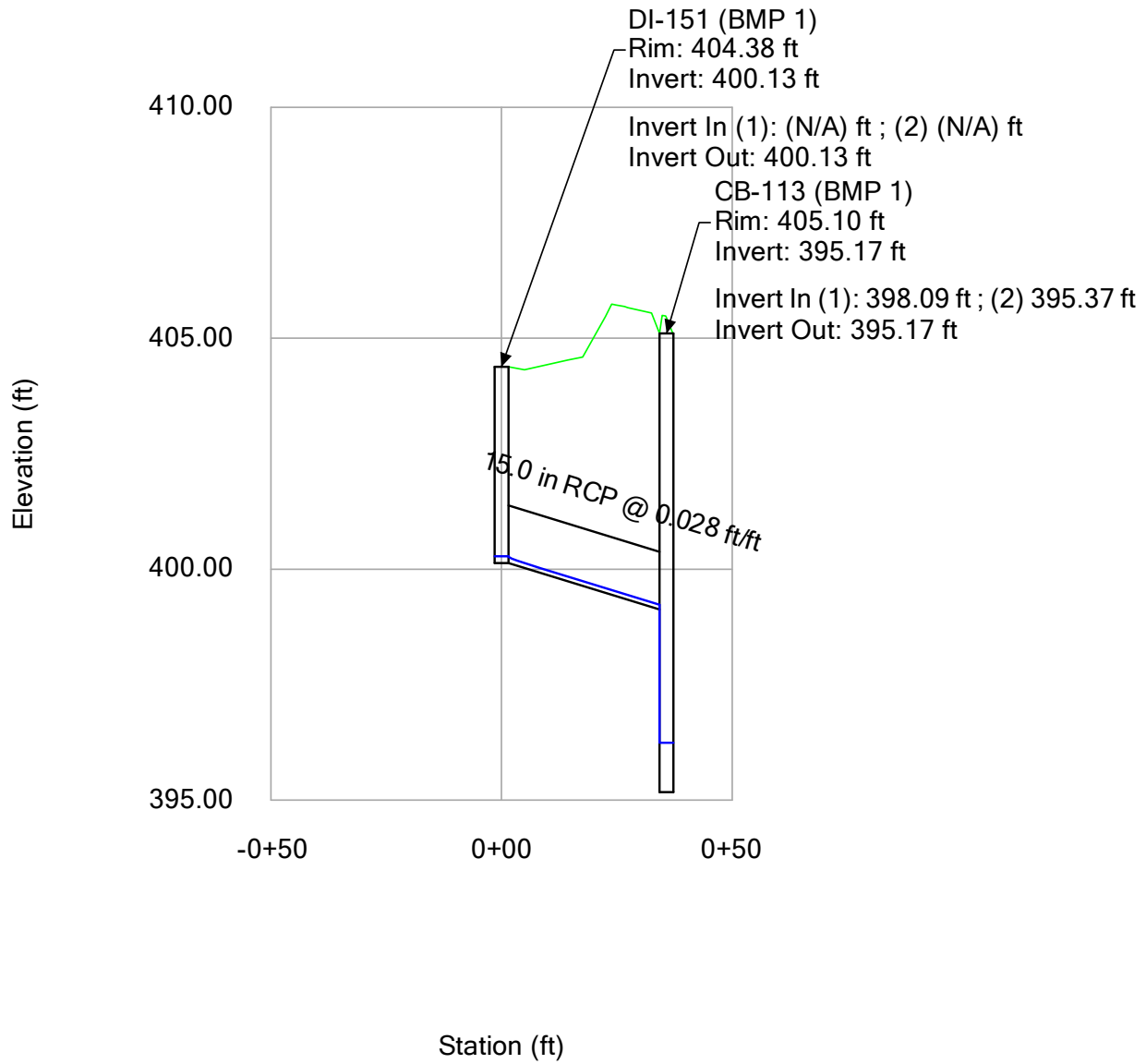
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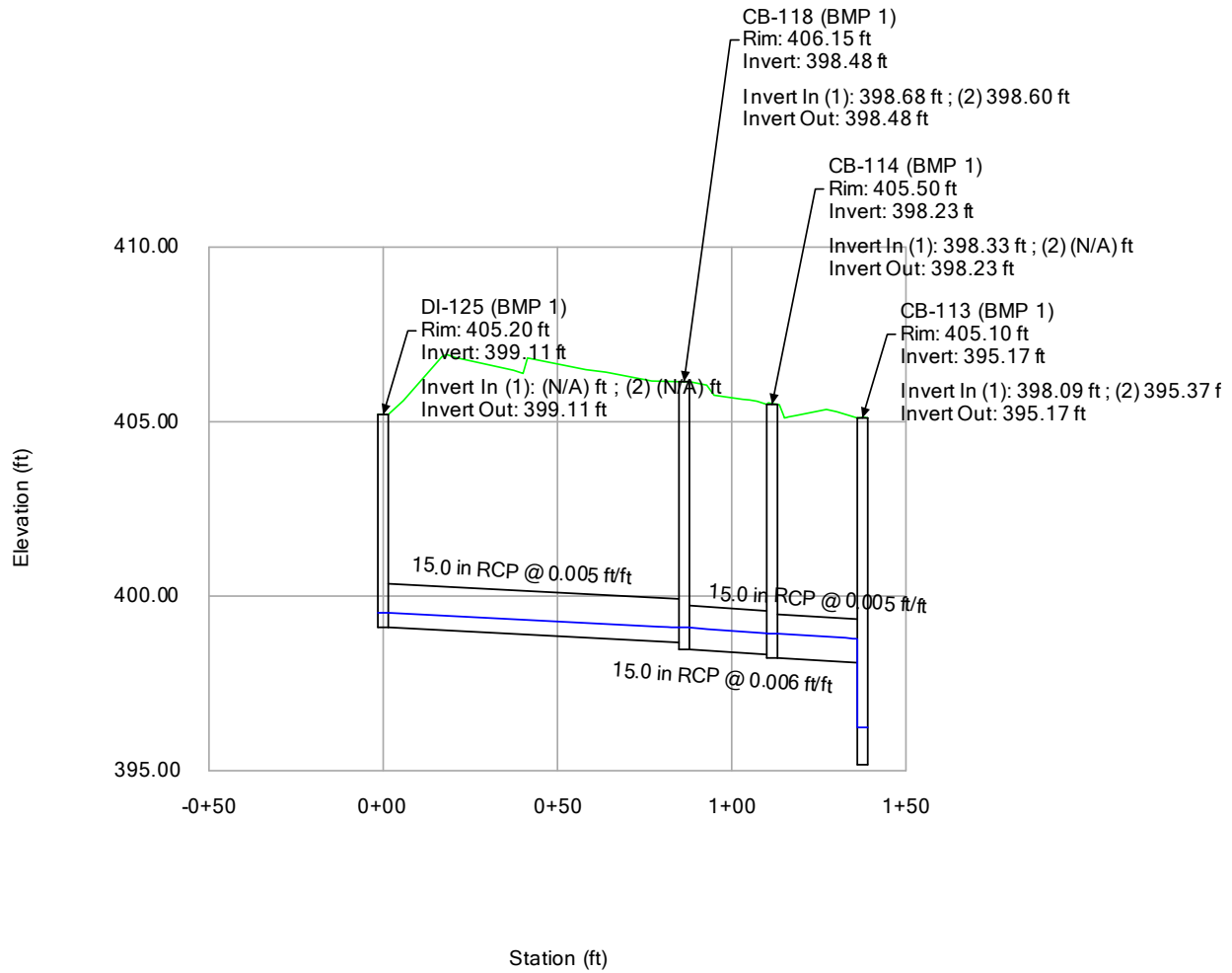
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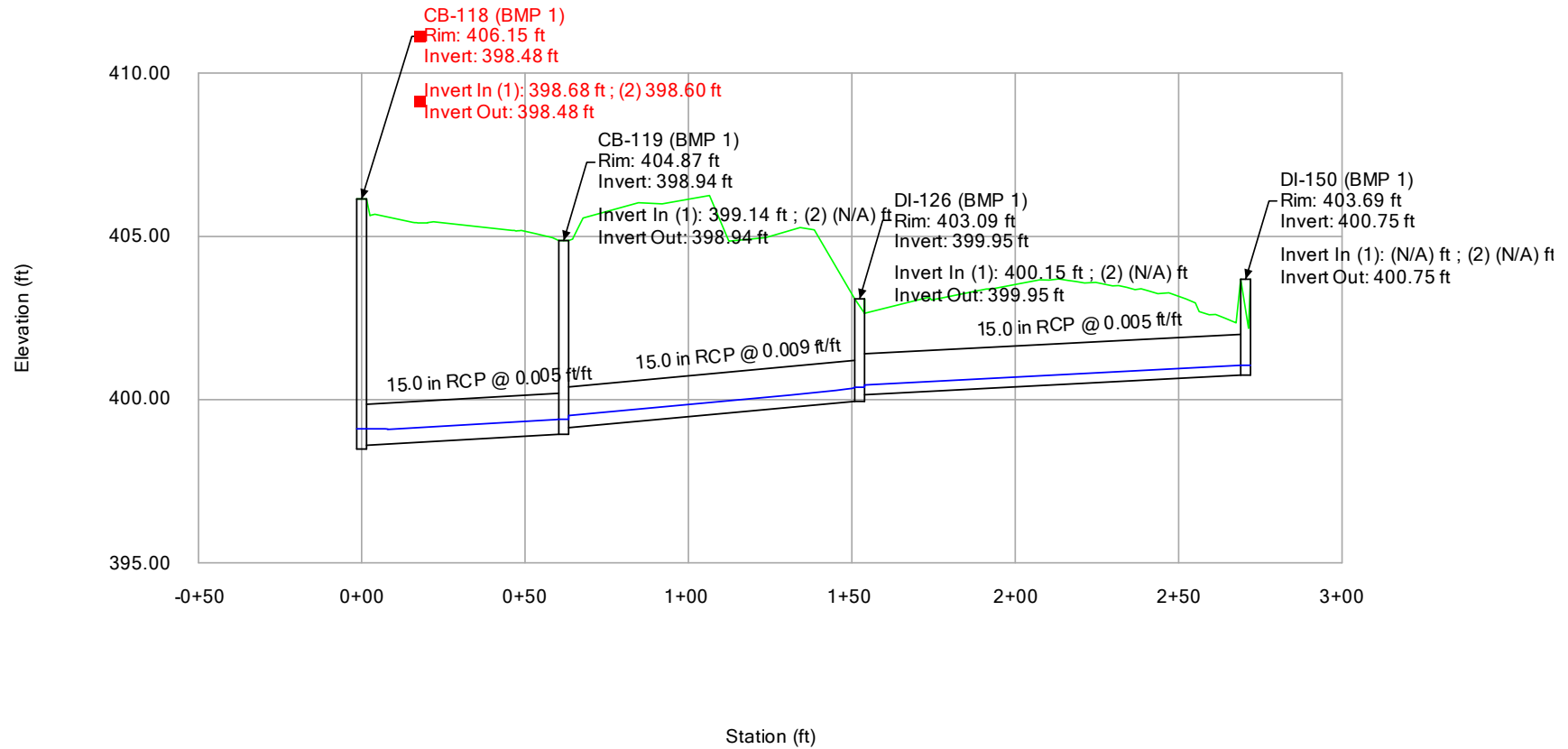
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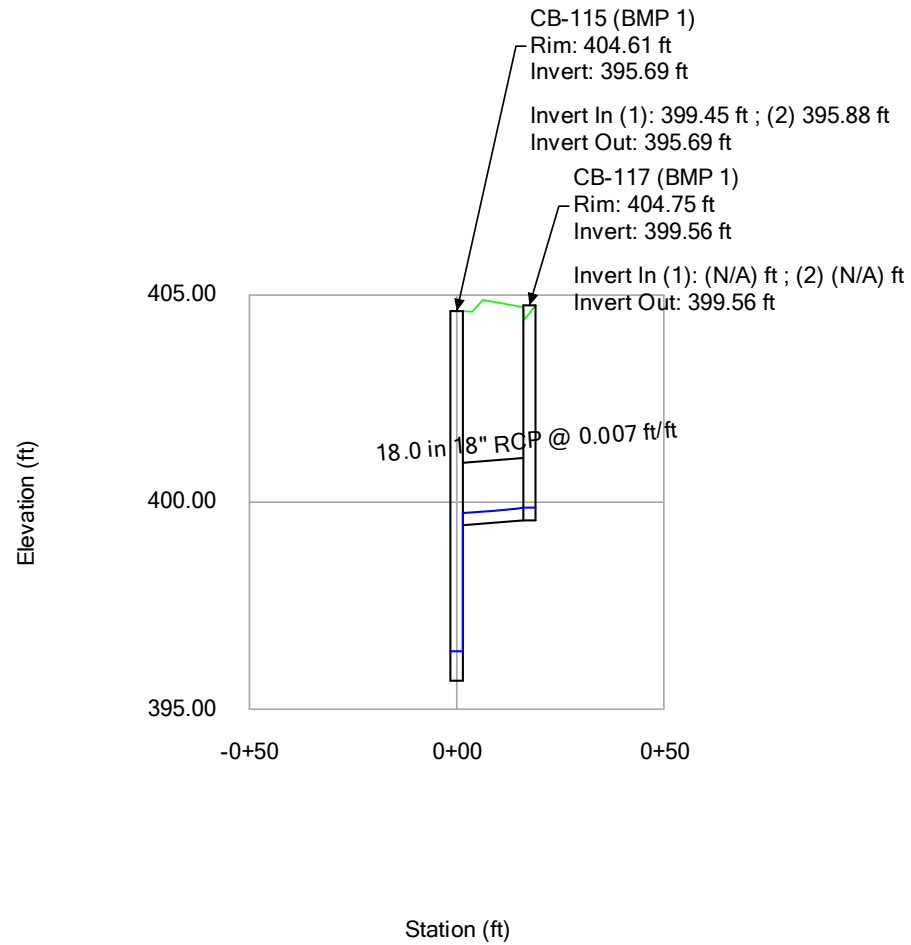
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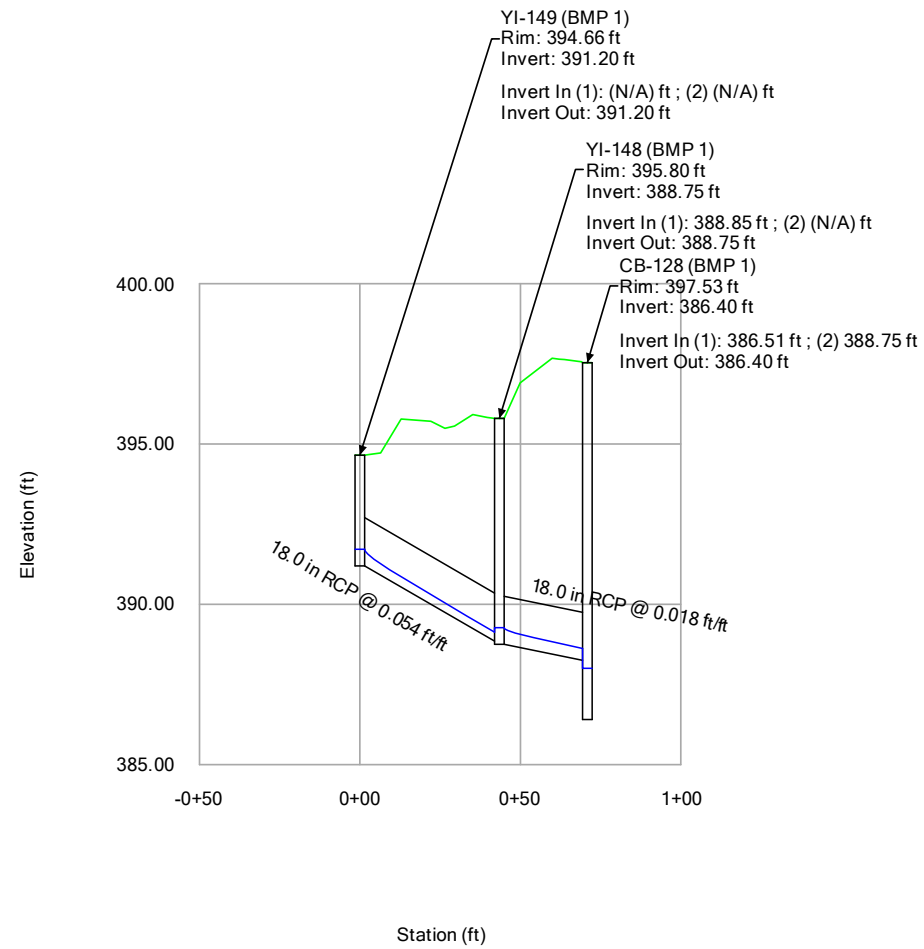
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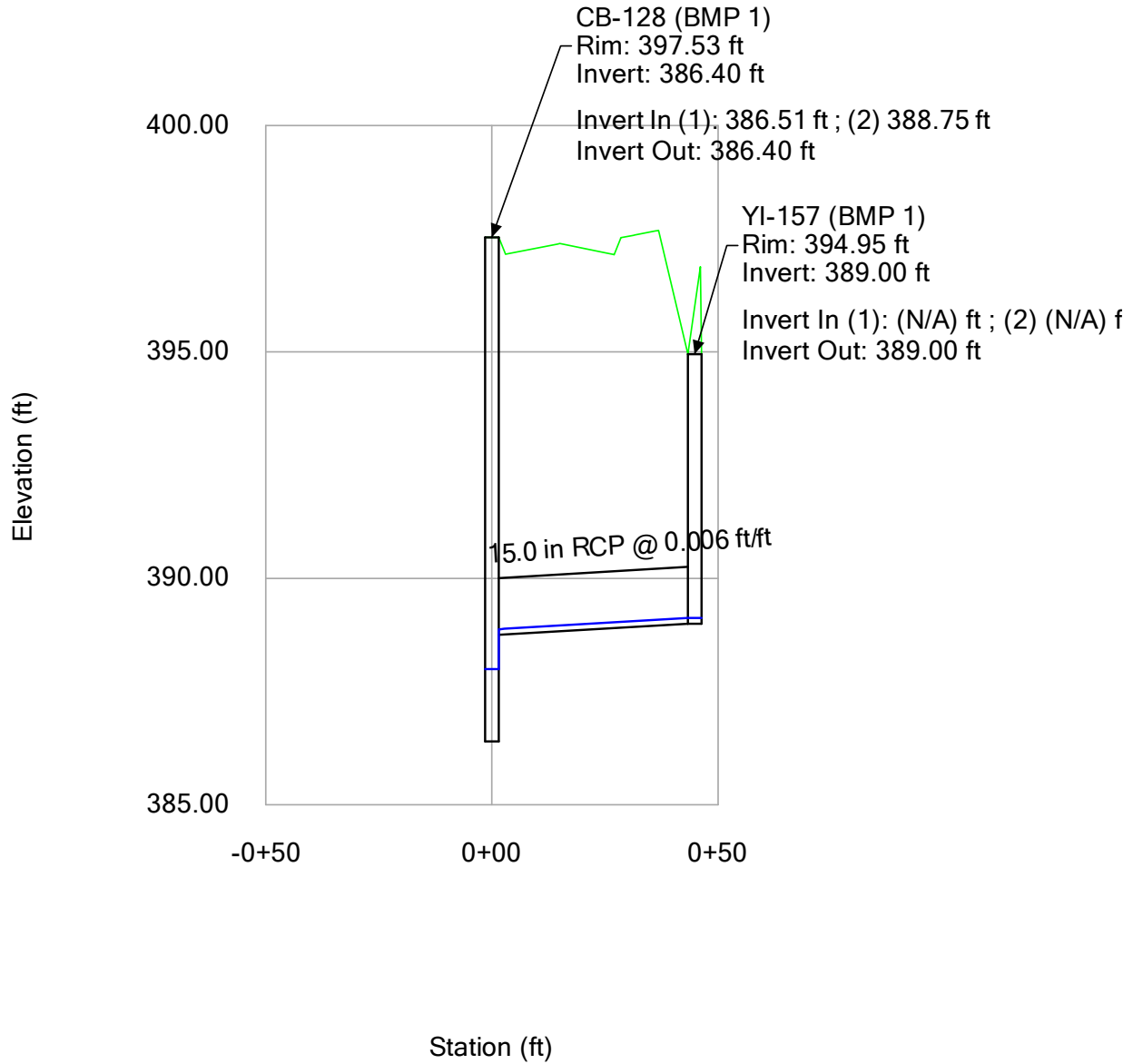
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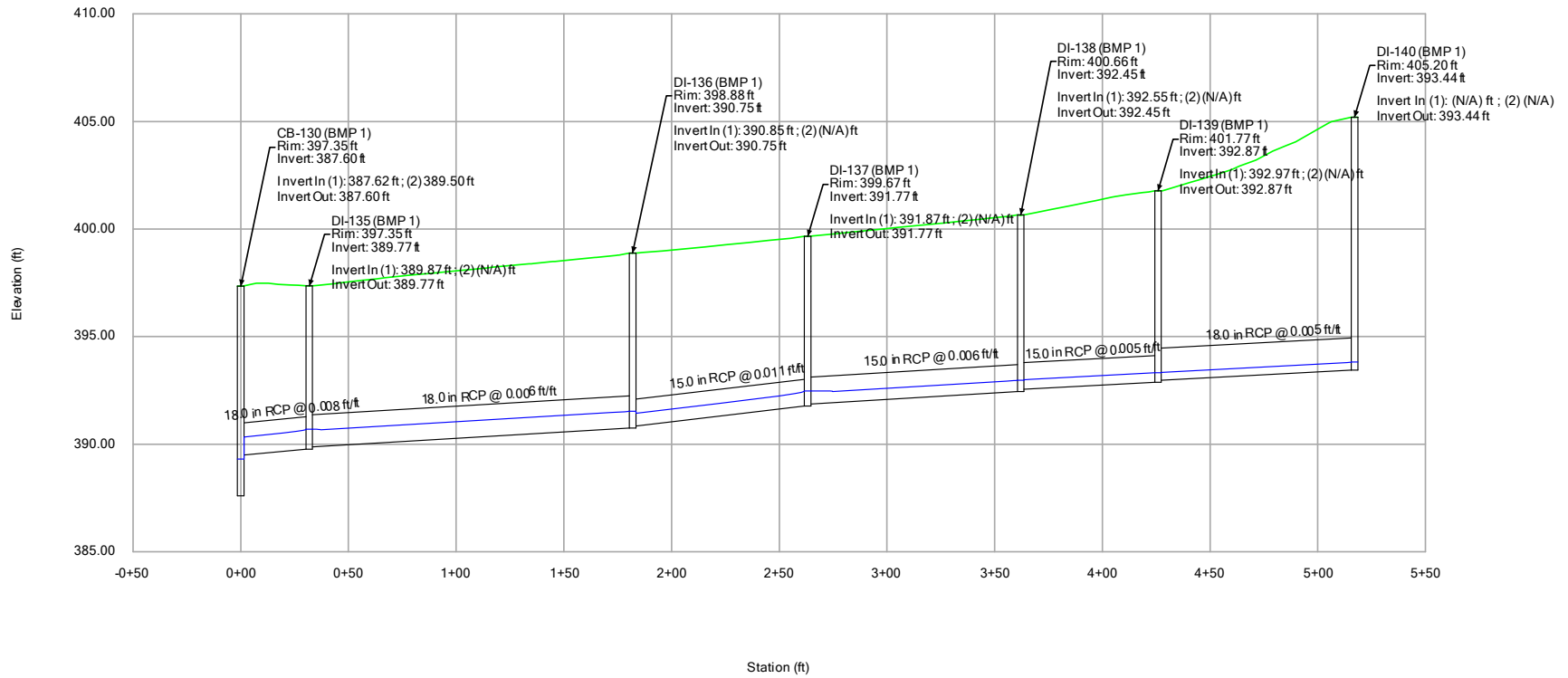
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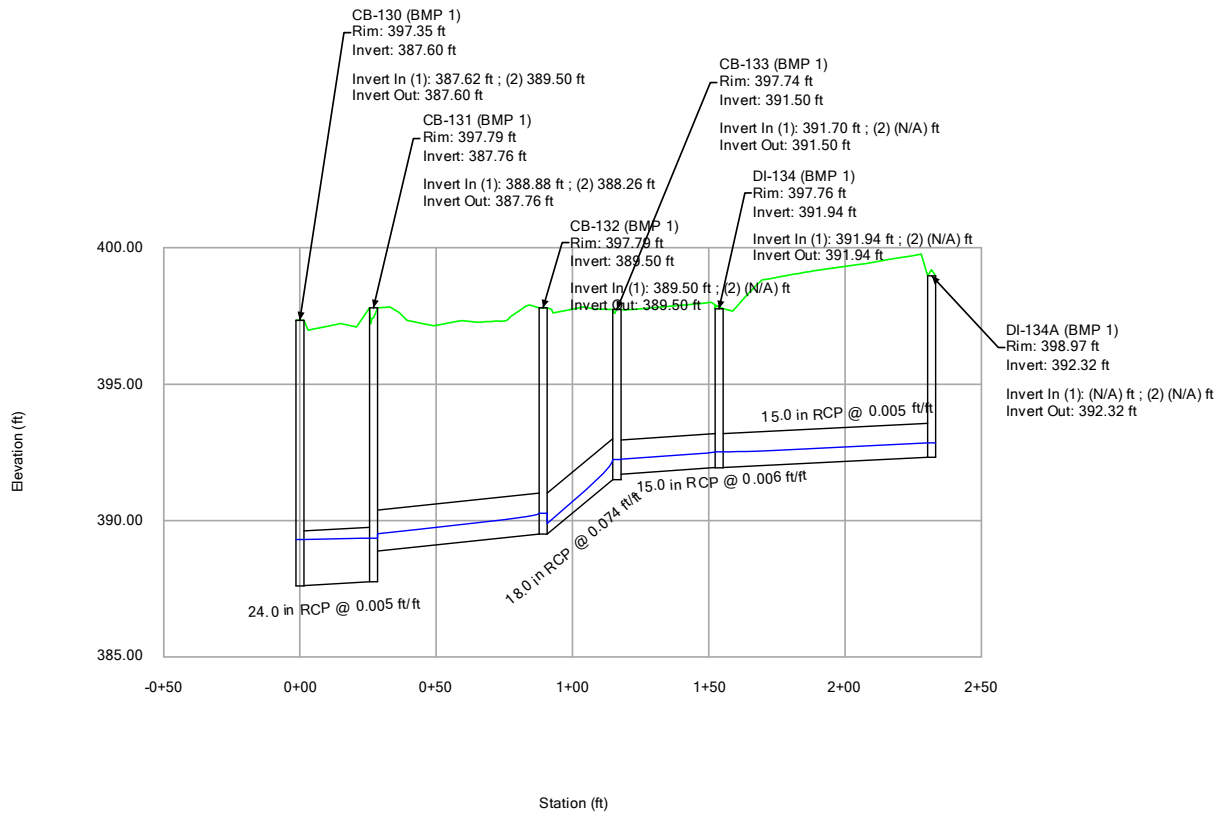
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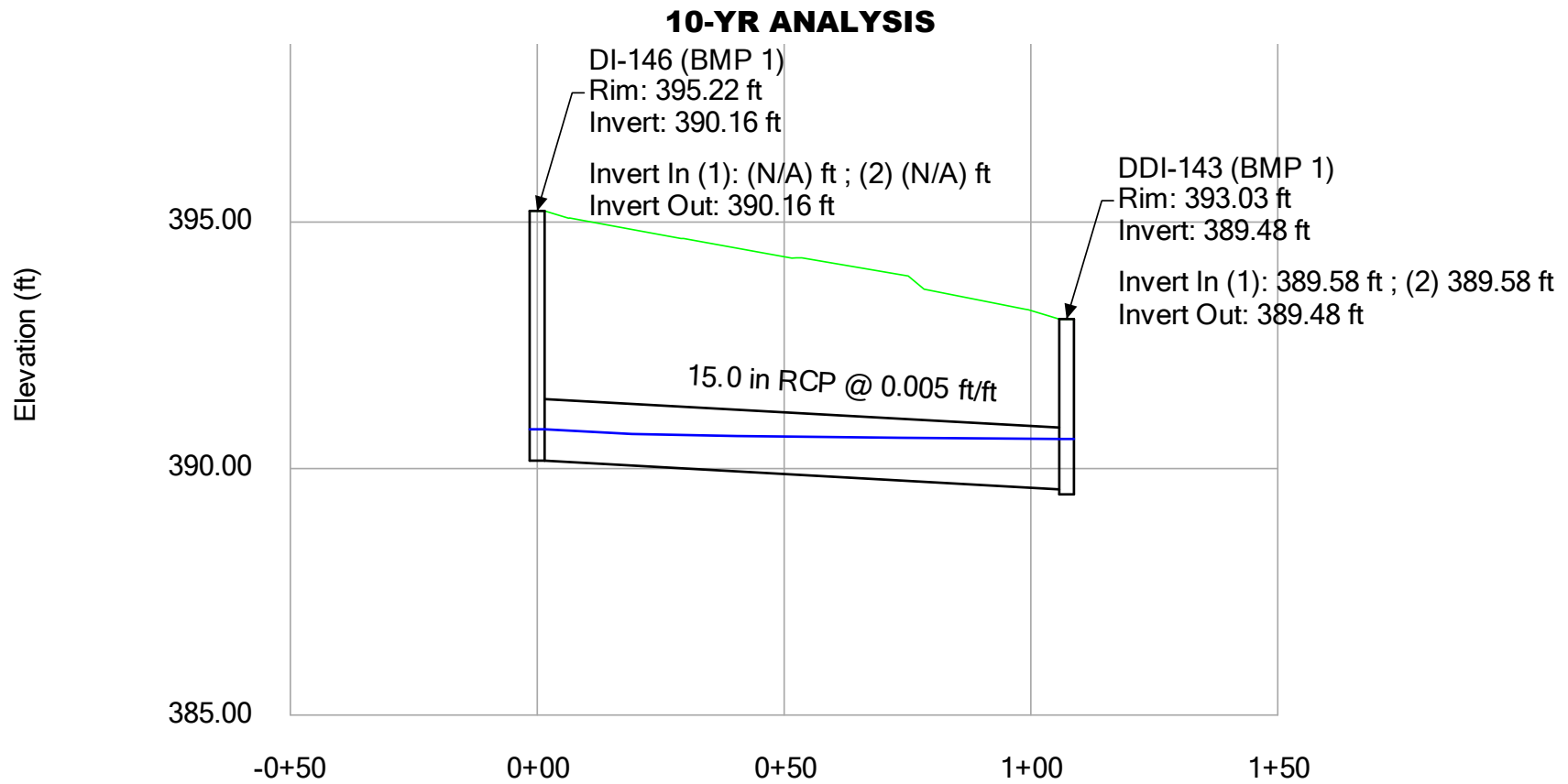


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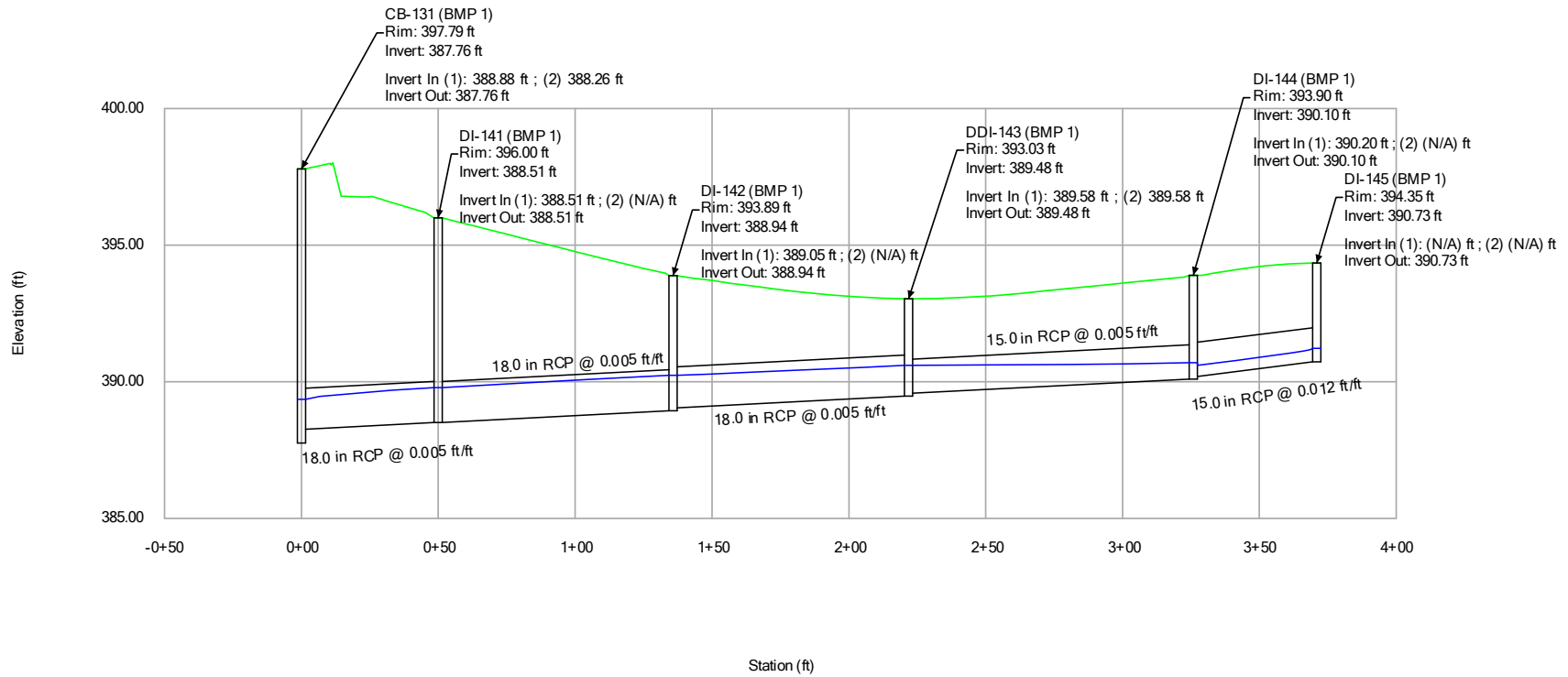


10-YR ANALYSIS





10-YR ANALYSIS



SCM 1 - 25 YR STORM

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-158 (BMP 1)	0.622	2.25	0.083	0.450
YI-157 (BMP 1)	0.028	0.11	0.083	0.500
YI-149 (BMP 1)	0.515	2.07	0.083	0.500
YI-148 (BMP 1)	0.002	0.01	0.083	0.550
DI-151 (BMP 1)	0.034	0.16	0.083	0.600
DI-156 (BMP 1)	0.080	0.38	0.083	0.600
DI-121 (BMP 1)	0.153	0.80	0.083	0.650
CB-133 (BMP 1)	0.480	2.70	0.083	0.700
DI-120 (BMP 1)	0.279	1.57	0.083	0.700
DI-134 (BMP 1)	0.084	0.49	0.083	0.720
DI-125 (BMP 1)	0.200	1.21	0.083	0.750
DI-126 (BMP 1)	0.116	0.70	0.083	0.750
DI-150 (BMP 1)	0.106	0.64	0.083	0.750
DI-123 (BMP 1)	0.143	0.88	0.083	0.770
DI-124 (BMP 1)	0.173	1.07	0.083	0.770
DI-122 (BMP 1)	0.226	1.40	0.083	0.770

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-146 (BMP 1)	0.520	3.22	0.083	0.770
DI-145 (BMP 1)	0.297	1.91	0.083	0.800
CB-128 (BMP 1)	0.141	0.93	0.083	0.820
CB-106 (BMP 1)	0.121	0.83	0.083	0.850
CB-110 (BMP 1)	0.206	1.41	0.083	0.850
CB-109 (BMP 1)	0.221	1.51	0.083	0.850
DDI-143 (BMP 1)	0.367	2.51	0.083	0.850
DI-142 (BMP 1)	0.227	1.55	0.083	0.850
DI-137 (BMP 1)	0.249	1.70	0.083	0.850
DI-134A (BMP 1)	0.298	2.04	0.083	0.850
TCB-102 (BMP 1)	0.454	3.11	0.083	0.850
CB-104 (BMP 1)	0.135	0.92	0.083	0.850
CB-103 (BMP 1)	0.089	0.61	0.083	0.850
CB-112 (BMP 1)	0.055	0.38	0.083	0.870
DI-135 (BMP 1)	0.302	2.11	0.083	0.870
DI-136 (BMP 1)	0.192	1.34	0.083	0.870

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-127 (BMP 1)	0.060	0.42	0.083	0.870
CB-114 (BMP 1)	0.071	0.50	0.083	0.870
CB-111 (BMP 1)	0.040	0.28	0.083	0.870
CB-113 (BMP 1)	0.048	0.34	0.083	0.880
CB-107 (BMP 1)	0.104	0.75	0.083	0.890
DI-138 (BMP 1)	0.081	0.59	0.083	0.900
DCB-116 (BMP 1)	0.388	2.84	0.083	0.910
DCB-129 (BMP 1)	0.305	2.23	0.083	0.910
CB-108 (BMP 1)	0.028	0.21	0.083	0.920
DI-144 (BMP 1)	0.044	0.33	0.083	0.920
CB-105 (BMP 1)	0.040	0.31	0.083	0.950
CB-115 (BMP 1)	0.007	0.05	0.083	0.950
DI-141 (BMP 1)	0.048	0.37	0.083	0.950
CB-131 (BMP 1)	0.002	0.02	0.083	0.950
CB-132 (BMP 1)	0.040	0.31	0.083	0.950
DI-140 (BMP 1)	0.150	1.15	0.083	0.950

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-118 (BMP 1)	0.014	0.11	0.083	0.950
CB-119 (BMP 1)	0.029	0.22	0.083	0.950
CB-147 (BMP 1)	0.064	0.49	0.083	0.950
DI-139 (BMP 1)	0.043	0.33	0.083	0.950
CB-154 (BMP 1)	0.059	0.45	0.083	0.950
CB-155 (BMP 1)	0.078	0.60	0.083	0.950
CB-153 (BMP 1)	0.015	0.12	0.083	0.950
CB-153A (BMP 1)	0.160	1.22	0.083	0.950
CB-117 (BMP 1)	0.111	0.85	0.083	0.950
CB-101 (BMP 1)	0.093	0.71	0.083	0.950

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-118 (BMP 1)	0.11	0.00	2.70	100.0	399.14	399.14	4.0	2.93	4.11
CB-112 (BMP 1)	0.37	0.01	0.37	97.2	400.79	400.79	4.0	2.30	2.30
CB-111 (BMP 1)	0.28	0.00	7.62	99.2	395.81	395.81	4.0	5.37	4.84
CB-114 (BMP 1)	0.47	0.03	3.13	94.7	398.98	398.98	4.0	4.17	4.11
DI-125 (BMP 1)	1.21	0.00	1.21	100.0	399.55	399.55	4.0	3.14	3.14
DI-140 (BMP 1)	1.10	0.05	1.10	95.8	393.83	393.83	4.0	2.99	2.99
CB-113 (BMP 1)	0.33	0.01	7.11	98.1	396.33	396.33	4.0	3.12	4.83
CB-119 (BMP 1)	0.22	0.00	1.49	100.0	399.42	399.42	4.0	3.95	3.40
CB-117 (BMP 1)	0.75	0.11	0.75	87.3	399.88	399.88	4.0	2.69	2.69
CB-115 (BMP 1)	0.08	0.00	3.74	100.0	396.44	396.44	4.0	6.43	4.23
DI-151 (BMP 1)	0.16	0.00	0.16	100.0	400.29	400.29	4.0	1.85	1.85
DI-150 (BMP 1)	0.64	0.00	0.64	100.0	401.07	401.07	4.0	2.64	2.64
CB-110 (BMP 1)	1.11	0.29	8.51	79.1	395.13	395.13	4.0	5.38	5.17
DI-126 (BMP 1)	0.70	0.00	1.30	100.0	400.40	400.40	4.0	2.67	3.26
DCB-116 (BMP 1)	2.95	0.00	2.95	100.0	398.44	398.44	8.0	4.24	4.24
CB-109 (BMP 1)	1.19	0.34	33.96	77.8	388.07	388.07	4.0	5.06	6.92

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-139 (BMP 1)	0.33	0.00	1.40	100.0	393.34	393.34	4.0	3.04	3.28
DI-124 (BMP 1)	1.03	0.04	1.03	96.3	395.44	395.44	4.0	3.05	3.05
DI-138 (BMP 1)	0.58	0.00	1.94	99.5	393.00	393.00	4.0	3.34	3.69
CB-108 (BMP 1)	0.21	0.00	0.21	100.0	392.67	392.67	4.0	1.91	1.91
CB-107 (BMP 1)	0.91	0.18	36.27	83.5	387.48	387.48	4.0	6.92	7.39
DI-123 (BMP 1)	0.86	0.02	1.88	97.7	392.13	392.13	4.0	2.56	3.53
CB-127 (BMP 1)	0.64	0.07	24.83	90.0	388.32	388.32	4.0	4.99	5.06
DI-137 (BMP 1)	1.57	0.14	3.39	91.8	392.51	392.51	4.0	3.05	4.46
DI-134A (BMP 1)	1.83	0.21	1.83	89.7	392.88	392.88	4.0	3.47	3.47
DI-136 (BMP 1)	1.38	0.10	4.66	93.3	391.58	391.58	4.0	5.58	4.65
CB-106 (BMP 1)	0.73	0.10	0.73	87.8	392.82	392.82	4.0	2.67	2.67
CB-105 (BMP 1)	0.46	0.02	37.04	94.9	386.95	386.95	4.0	7.44	7.60
CB-132 (BMP 1)	0.30	0.00	4.35	98.7	390.30	390.30	4.0	4.23	4.54
CB-131 (BMP 1)	0.02	0.00	13.06	100.0	389.55	389.55	4.0	5.49	4.40
DI-134 (BMP 1)	0.49	0.00	2.28	99.8	392.55	392.55	4.0	3.11	3.89
CB-133 (BMP 1)	1.83	0.87	4.06	67.7	392.27	392.27	4.0	4.09	4.43

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-128 (BMP 1)	0.85	0.15	24.49	84.8	388.54	388.54	4.0	5.15	5.48
DI-135 (BMP 1)	1.96	0.25	6.35	88.6	390.74	390.74	4.0	4.36	5.23
CB-130 (BMP 1)	0.93	0.19	19.82	83.0	389.49	389.49	4.0	4.27	6.44
DCB-129 (BMP 1)	2.57	0.00	21.97	100.0	388.69	388.69	8.0	7.36	5.93
CB-103 (BMP 1)	0.58	0.05	39.52	91.7	385.87	385.87	4.0	1.41	7.25
CB-153 (BMP 1)	0.12	0.00	1.33	100.0	385.43	385.43	4.0	6.46	3.16
CB-153A (BMP 1)	1.22	0.00	1.22	100.0	388.41	388.41	4.0	3.08	3.08
CB-104 (BMP 1)	0.87	0.16	2.50	84.4	385.89	385.89	4.0	1.04	1.42
DI-141 (BMP 1)	0.37	0.00	8.90	100.0	389.93	389.93	4.0	5.01	5.15
DI-158 (BMP 1)	2.25	0.00	2.25	100.0	389.57	389.57	4.0	3.68	3.68
YI-148 (BMP 1)	0.01	0.00	2.08	100.0	389.29	389.29	4.0	8.43	3.59
TCB-102 (BMP 1)	3.16	0.00	45.71	100.0	385.60	385.60	12.0	6.44	7.44
CB-147 (BMP 1)	0.59	0.06	1.59	91.3	387.68	387.68	4.0	3.00	3.47
DI-146 (BMP 1)	2.69	0.53	2.69	83.4	390.95	390.95	4.0	3.30	3.30
DI-121 (BMP 1)	0.80	0.00	0.80	100.0	387.88	387.88	4.0	2.84	2.84
YI-157 (BMP 1)	0.11	0.00	0.11	100.0	389.13	389.13	4.0	1.62	1.62

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-120 (BMP 1)	1.57	0.00	4.46	100.0	387.44	387.44	4.0	0.97	4.24
YI-149 (BMP 1)	2.07	0.00	2.07	100.0	391.74	391.74	4.0	3.59	3.59
DI-145 (BMP 1)	1.73	0.18	1.73	90.4	391.25	391.25	4.0	3.56	3.56
DI-144 (BMP 1)	0.51	0.00	2.23	99.8	390.91	390.91	4.0	2.41	2.66
DI-142 (BMP 1)	1.44	0.11	8.66	92.9	390.48	390.48	4.0	4.24	4.90
CB-154 (BMP 1)	0.45	0.00	1.03	100.0	388.18	388.18	4.0	2.81	2.94
DI-156 (BMP 1)	0.38	0.00	1.66	100.0	385.89	385.89	4.0	1.11	1.14
CB-101 (BMP 1)	0.77	0.00	47.63	100.0	385.47	385.47	4.0	7.44	7.78
DDI-143 (BMP 1)	2.62	0.00	7.36	100.0	390.83	390.83	8.0	1.82	4.40
CB-155 (BMP 1)	0.60	0.00	0.60	100.0	388.70	388.70	4.0	2.54	2.54
DI-122 (BMP 1)	1.32	0.09	1.32	93.9	385.93	385.93	4.0	3.15	3.15

25-YR ANALYSIS

Conduit Results - Time: 0.00 hours

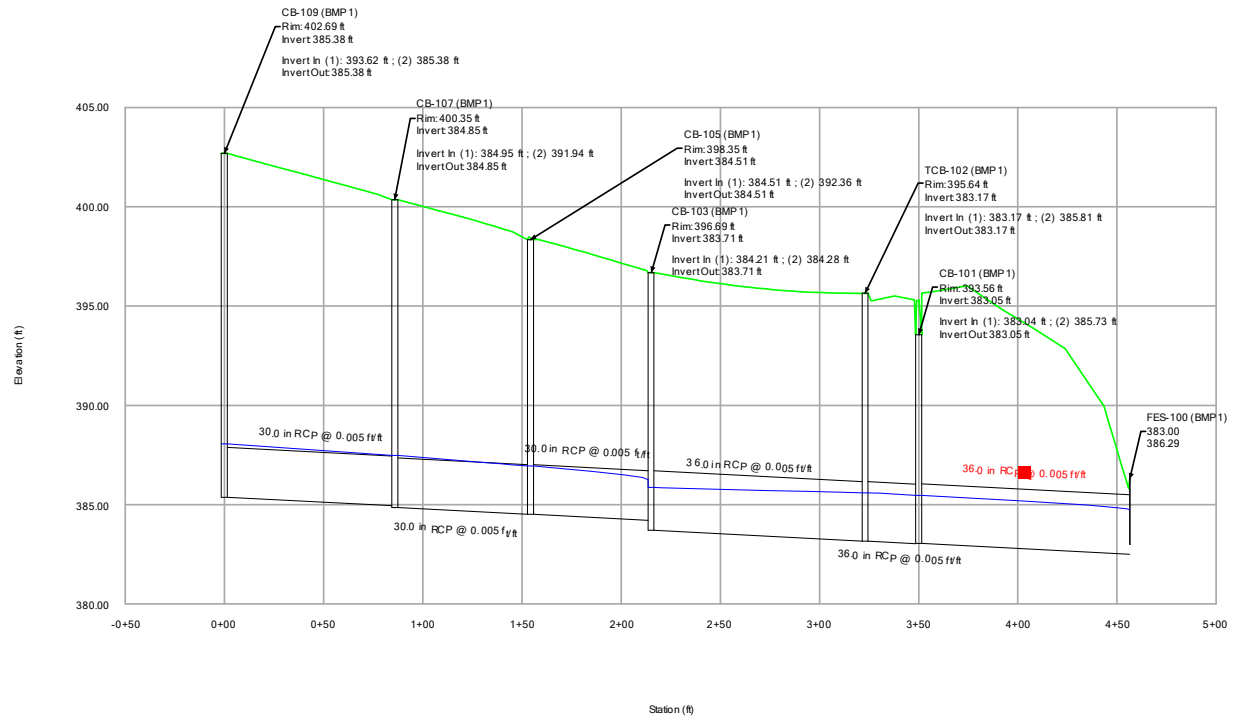
Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-114 TO CB-118 (BMP 1)	15.0	0.006	4.11	4.17	2.70	5.02	399.14	398.98
CB-118 TO DI-125 (BMP 1)	15.0	0.005	3.14	2.93	1.21	4.57	399.55	399.14
CB-118 TO CB-119 (BMP 1)	15.0	0.005	3.40	2.93	1.49	4.79	399.42	399.14
CB-111 TO CB-112 (BMP 1)	15.0	0.019	2.30	3.58	0.37	8.85	400.79	400.22
CB-111 TO CB-113 (BMP 1)	18.0	0.005	4.83	5.37	7.11	7.46	396.33	395.81
CB-110 TO CB-111 (BMP 1)	18.0	0.005	4.84	5.38	7.62	7.43	395.81	395.13
CB-113 TO CB-114 (BMP 1)	15.0	0.005	4.11	4.33	3.13	4.71	398.98	398.81
DI-139 TO DI-140 (BMP 1)	18.0	0.005	2.99	3.04	1.10	7.54	393.83	393.36
CB-113 TO CB-115 (BMP 1)	18.0	0.005	4.23	3.12	3.74	7.47	396.44	396.33
CB-113 TO DI-151 (BMP 1)	15.0	0.028	1.85	3.21	0.16	10.83	400.29	399.23
CB-119 TO DI-126 (BMP 1)	15.0	0.009	3.26	3.95	1.30	6.11	400.40	399.53
CB-115 TO CB-117 (BMP 1)	18.0	0.007	2.69	2.97	0.75	8.53	399.88	399.75
CB-115 TO CB-116 (BMP 1)	15.0	0.018	4.24	6.43	2.95	8.74	398.44	396.39
DI-126 TO DI-150 (BMP 1)	15.0	0.005	2.64	2.67	0.64	4.60	401.07	400.46
CB-109 TO CB-110 (BMP 1)	18.0	0.005	5.17	5.96	8.51	7.43	395.13	394.74
CB-107 TO CB-109 (BMP 1)	30.0	0.005	6.92	6.92	33.96	29.00	388.07	387.48
CB-109 TO CB-127 (BMP 1)	30.0	0.007	5.06	5.06	24.83	33.18	388.32	388.07
DI-138 TO DI-139 (BMP 1)	15.0	0.005	3.28	3.34	1.40	4.58	393.34	393.02
DI-123 TO DI-124 (BMP 1)	15.0	0.036	3.05	2.56	1.03	12.20	395.44	392.13
DI-137 TO DI-138 (BMP 1)	15.0	0.006	3.69	3.05	1.94	4.95	393.00	392.51
CB-107 TO CB-108 (BMP 1)	18.0	0.019	1.91	2.95	0.21	14.66	392.67	392.06
CB-105 TO CB-107 (BMP 1)	30.0	0.005	7.39	7.44	36.27	28.96	387.48	386.95
CB-107 TO DI-123 (BMP 1)	15.0	0.005	3.53	3.65	1.88	4.55	392.13	391.49
CB-127 TO CB-128 (BMP 1)	30.0	0.006	5.48	4.99	24.49	32.06	388.54	388.32
DI-136 TO DI-137 (BMP 1)	15.0	0.011	4.46	5.58	3.39	6.87	392.51	391.47
CB-133 TO DI-134 (BMP 1)	15.0	0.005	3.47	3.11	1.83	4.50	392.88	392.55
DI-135 TO DI-136 (BMP 1)	18.0	0.006	4.65	4.36	4.66	8.04	391.58	390.74
CB-105 TO CB-106 (BMP 1)	18.0	0.005	2.67	2.68	0.73	7.43	392.82	392.67
CB-103 TO CB-105 (BMP 1)	30.0	0.005	7.60	8.56	37.04	29.00	386.95	386.27
CB-132 TO CB-133 (BMP 1)	18.0	0.074	4.43	4.23	4.06	28.55	392.27	390.30

25-YR ANALYSIS

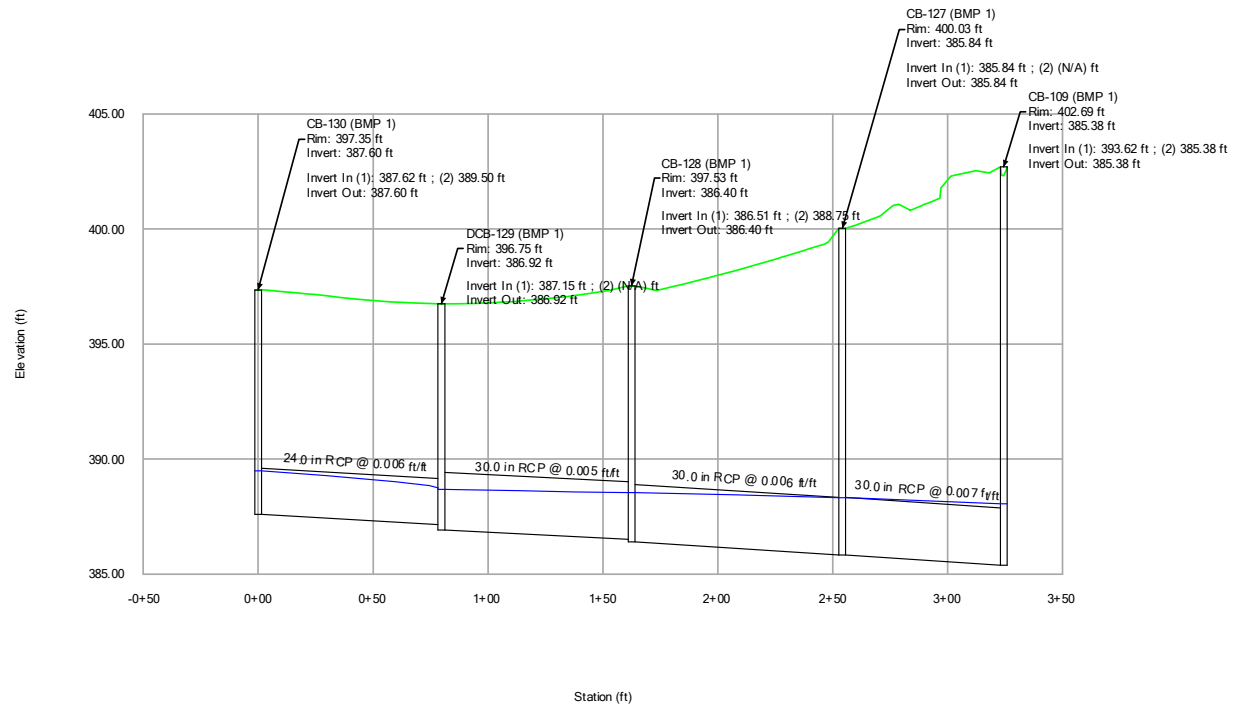
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-131 TO CB-132 (BMP 1)	18.0	0.010	4.54	5.66	4.35	10.49	390.30	389.55
CB-131 TO DI-141 (BMP 1)	18.0	0.005	5.15	5.49	8.90	7.43	389.93	389.55
CB-130 TO CB-131 (BMP 1)	24.0	0.005	4.40	4.27	13.06	16.29	389.55	389.49
CB-133 TO DI-134 (1) (BMP 1)	15.0	0.006	3.89	4.09	2.28	5.19	392.55	392.28
CB-128 TO CB-129 (BMP 1)	30.0	0.005	5.93	5.15	21.97	28.87	388.69	388.54
CB-128 TO YI-147 (BMP 1)	15.0	0.006	1.62	1.68	0.11	4.82	389.13	388.88
CB-128 TO YI-148 (BMP 1)	18.0	0.018	3.59	5.58	2.08	14.17	389.29	388.65
CB-130 TO DI-135 (BMP 1)	18.0	0.008	5.23	5.82	6.35	9.67	390.74	390.39
CB-129 TO CB-130 (BMP 1)	24.0	0.006	6.44	7.36	19.82	16.99	389.49	388.75
CB-102 TO CB-103 (BMP 1)	36.0	0.005	7.25	6.44	39.52	47.19	385.87	385.60
CB-103 TO CB-104 (BMP 1)	18.0	0.005	1.42	1.41	2.50	7.52	385.89	385.87
FES-152 TO CB-153 (BMP 1)	18.0	0.011	3.16	4.18	1.33	10.91	385.43	384.85
CB-153 TO CB-153A (BMP 1)	18.0	0.040	3.08	6.46	1.22	20.94	388.41	385.45
CB-104 TO DI-156 (BMP 1)	18.0	0.005	1.14	1.04	1.66	7.42	385.89	385.89
DI-141 TO DI-142 (BMP 1)	18.0	0.005	4.90	5.01	8.66	7.43	390.48	389.93
DI-120 TO DI-158 (BMP 1)	18.0	0.022	3.68	2.36	2.25	15.46	389.57	387.44
YI-148 TO YI-149 (BMP 1)	18.0	0.054	3.59	8.43	2.07	24.44	391.74	389.15
CB-101 TO CB-102 (BMP 1)	36.0	0.005	7.44	7.44	45.71	46.26	385.60	385.47
CB-102 TO DI-120 (BMP 1)	15.0	0.005	4.24	4.98	4.46	4.57	387.44	386.67
CB-101 TO CB-147 (BMP 1)	15.0	0.030	3.47	6.48	1.59	11.25	387.68	386.05
CB-147 TO CB-154 (BMP 1)	18.0	0.005	2.94	3.00	1.03	7.57	388.18	387.75
DI-143 TO DI-146 (BMP 1)	15.0	0.005	3.30	2.19	2.69	4.75	390.95	390.83
DI-120 TO DI-121 (BMP 1)	15.0	0.006	2.84	0.97	0.80	4.93	387.88	387.44
DI-144 TO DI-145 (BMP 1)	15.0	0.012	3.56	2.41	1.73	6.99	391.25	390.91
DI-143 TO DI-144 (BMP 1)	15.0	0.005	2.66	1.82	2.23	4.57	390.91	390.83
DI-142 TO DI-143 (BMP 1)	18.0	0.005	4.40	4.24	7.36	7.43	390.83	390.48
CB-154 TO CB-155 (BMP 1)	18.0	0.007	2.54	2.81	0.60	8.65	388.70	388.27
DI-156 TO DI-122 (BMP 1)	18.0	0.005	3.15	1.11	1.32	7.43	385.93	385.89
FES-100 TO CB-101 (BMP 1)	36.0	0.005	7.78	8.38	47.63	47.93	385.47	384.75

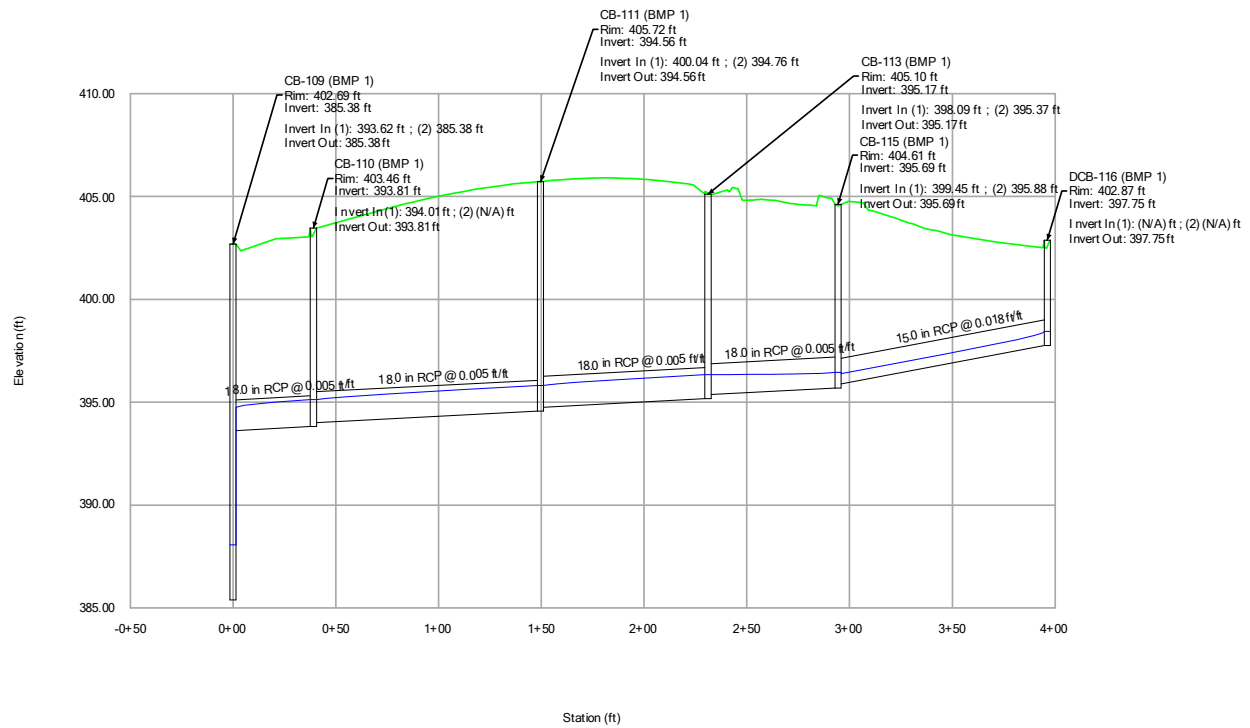
25-YR ANALYSIS



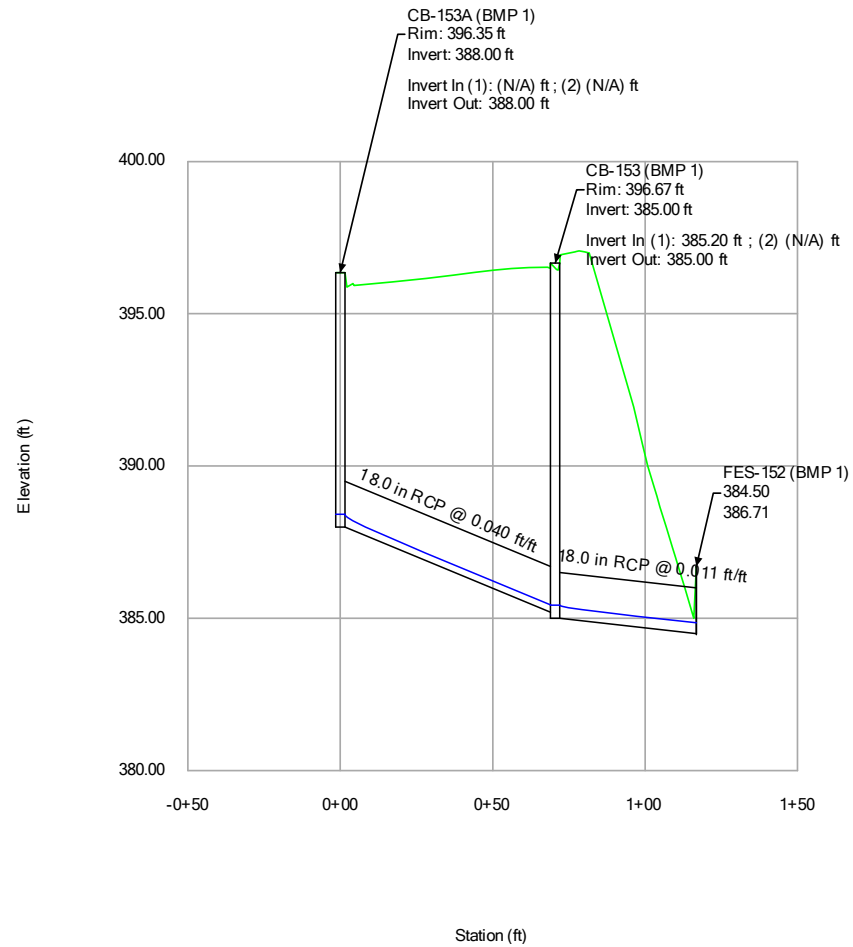
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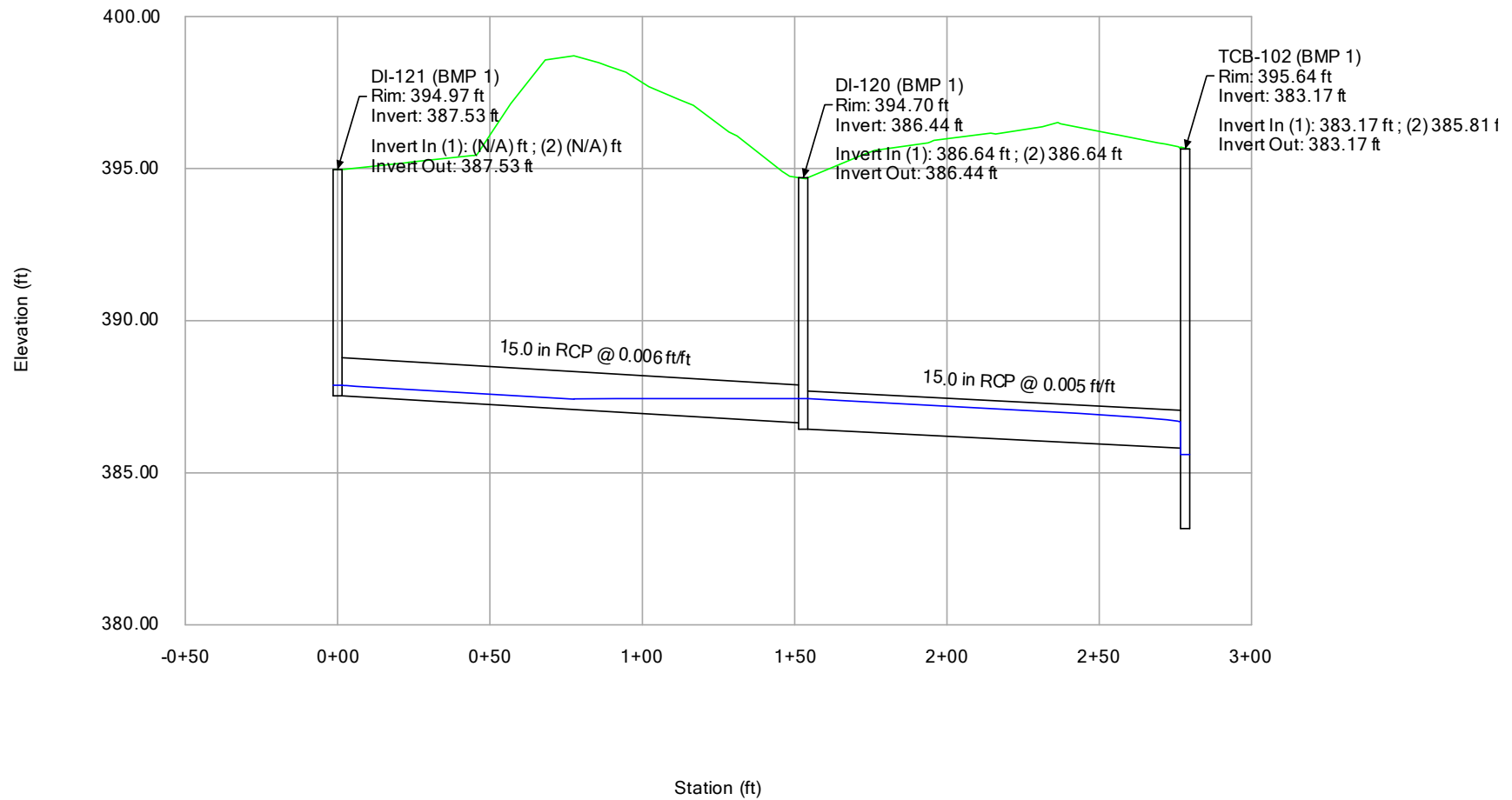
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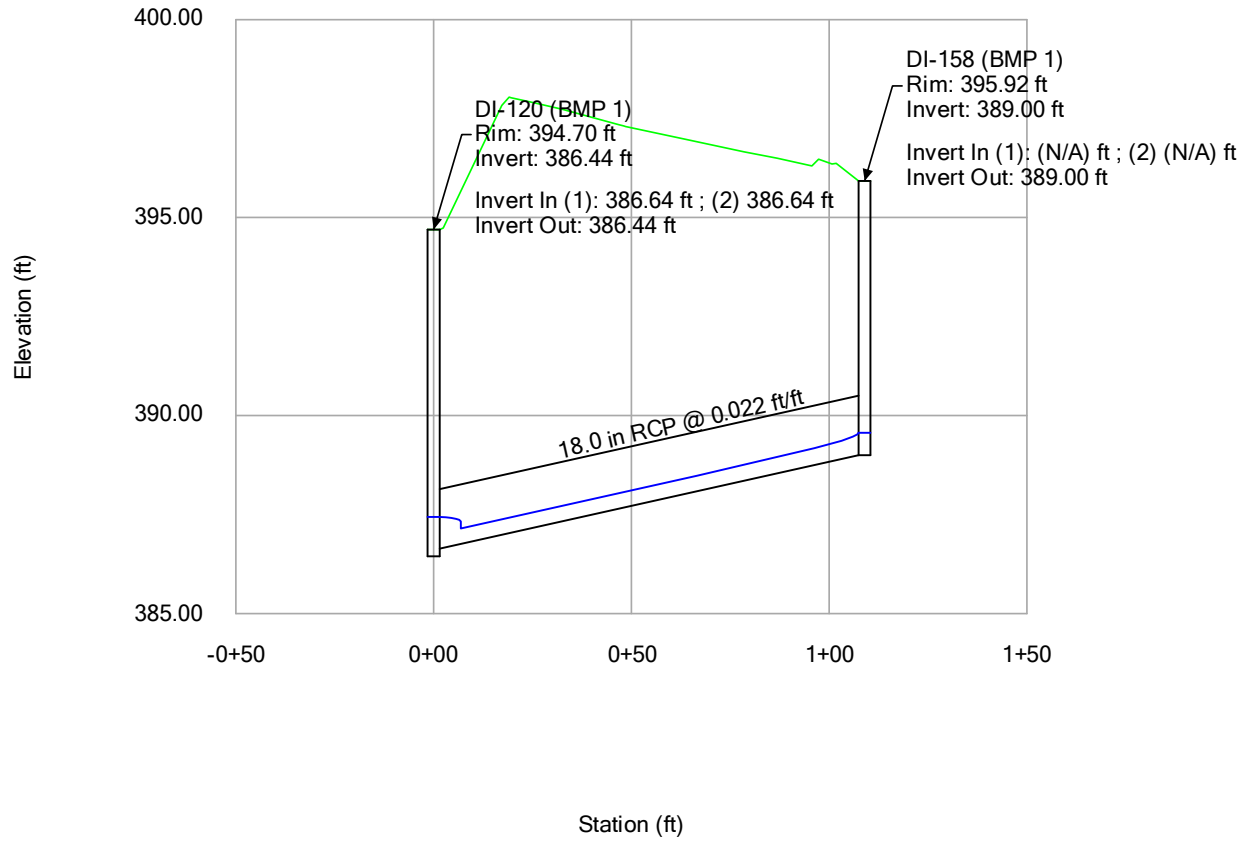
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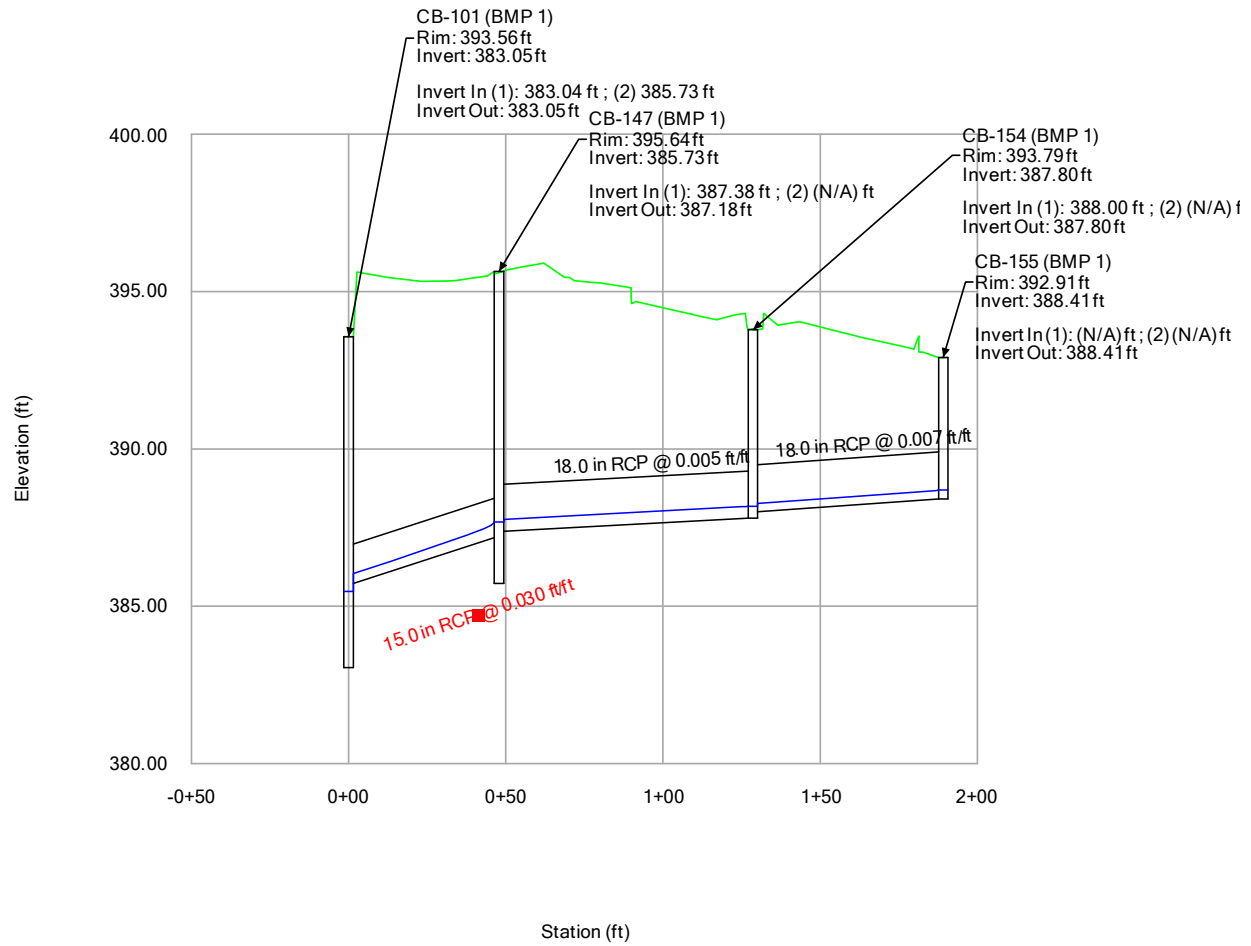
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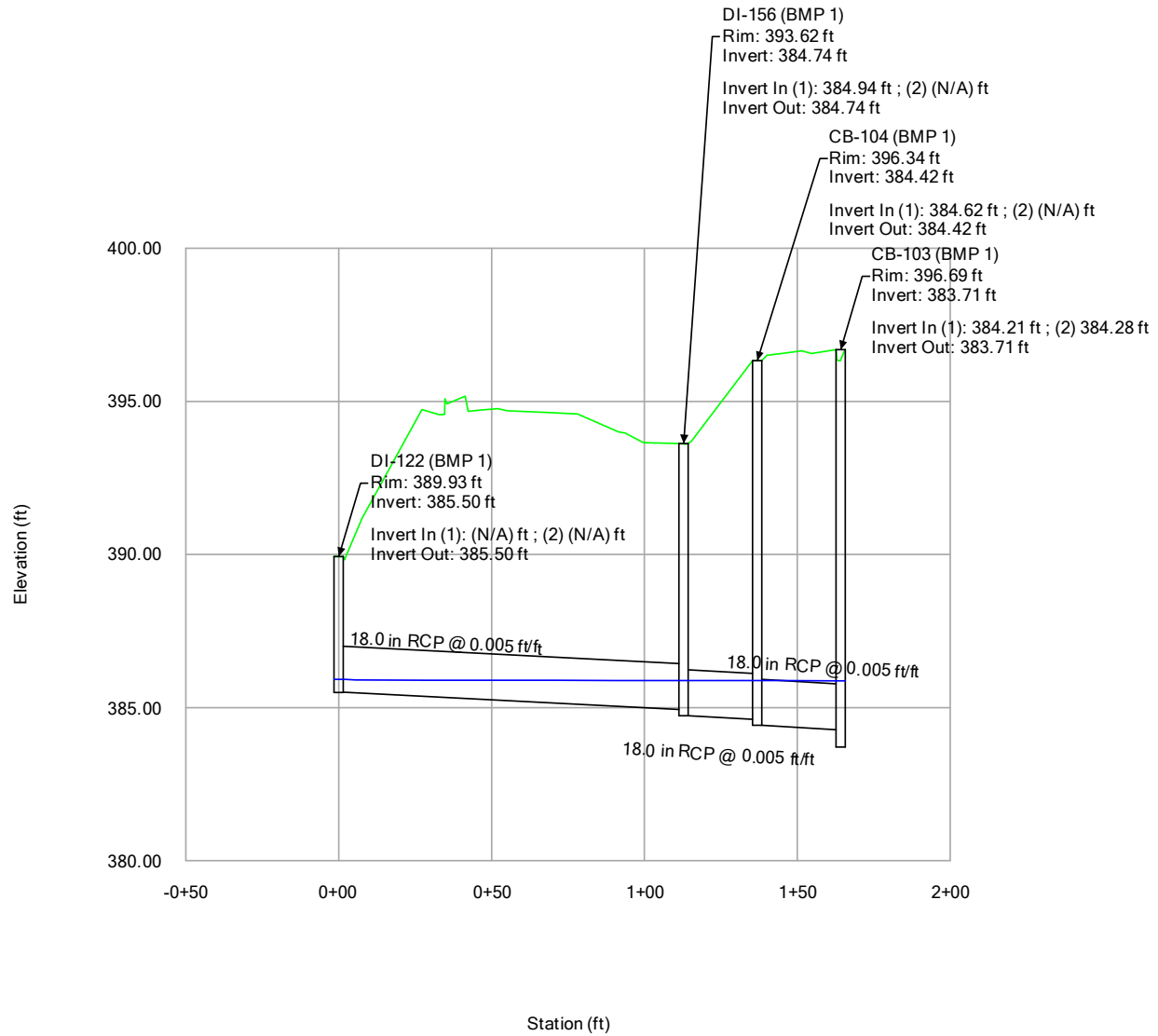
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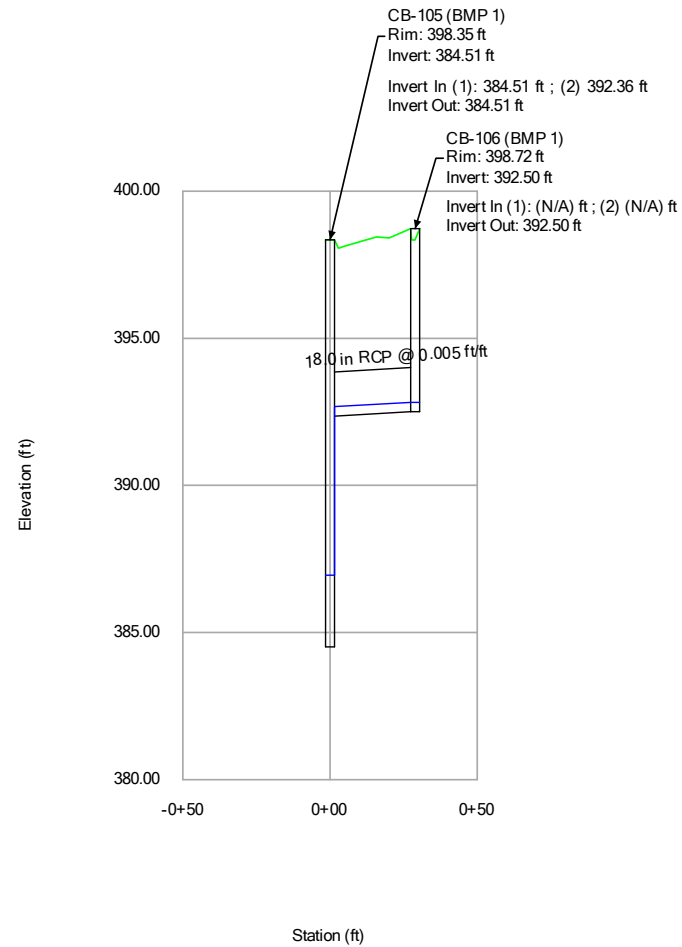
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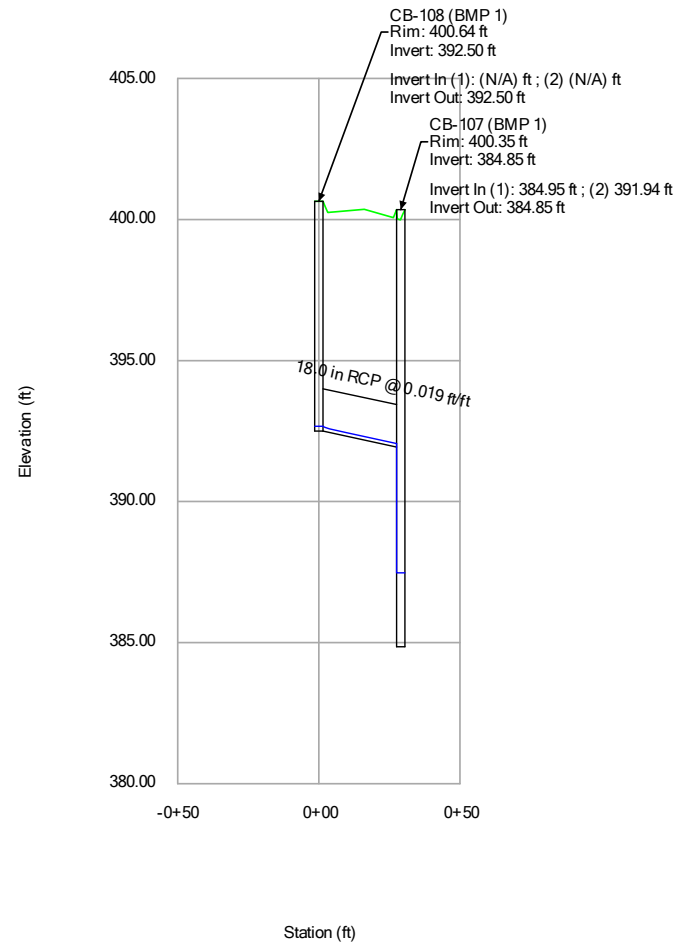
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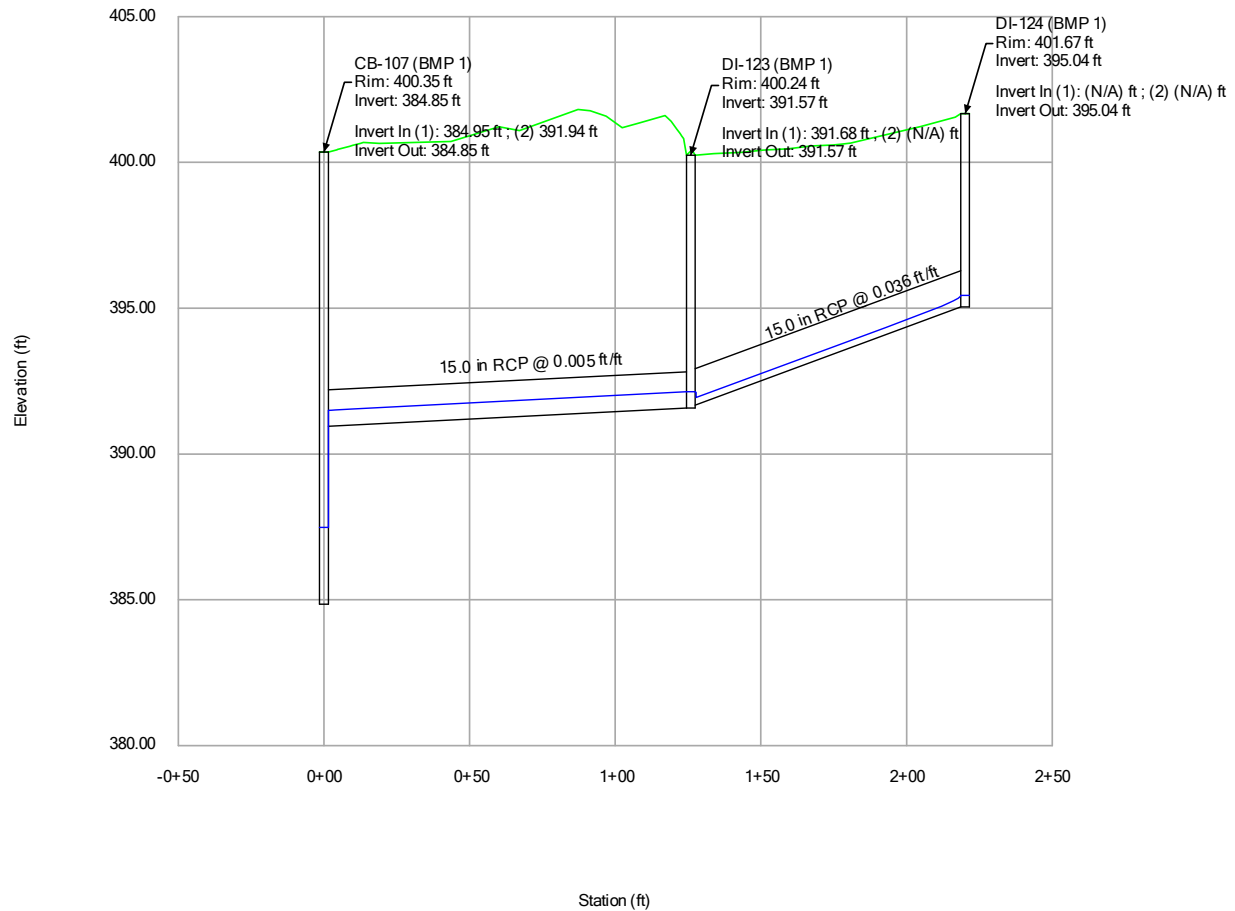
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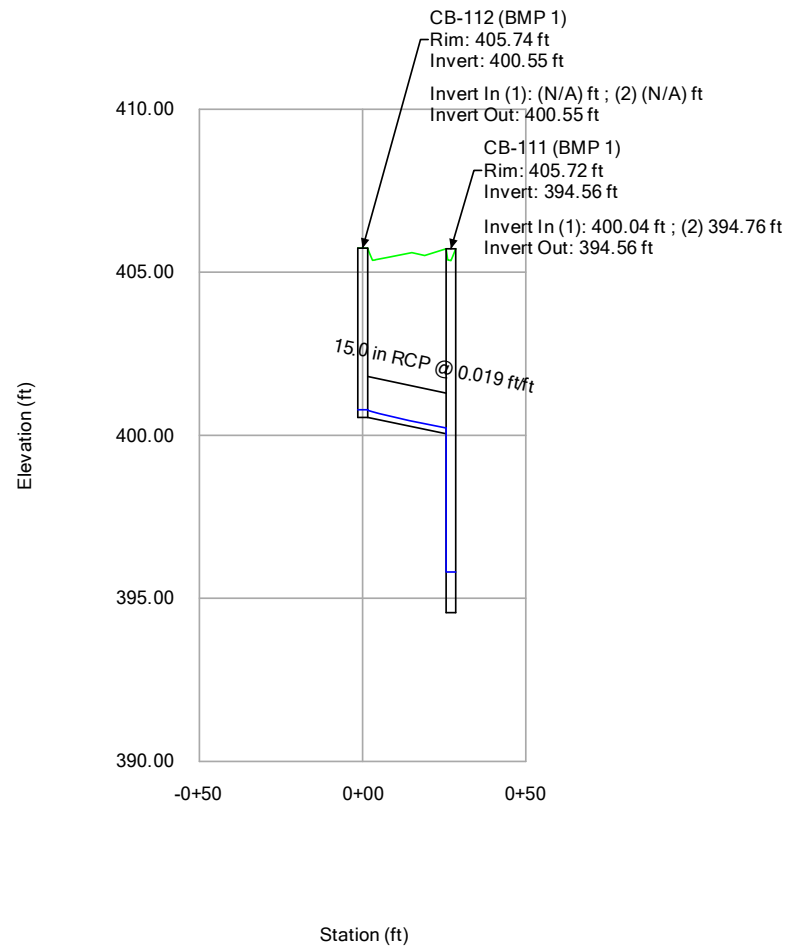
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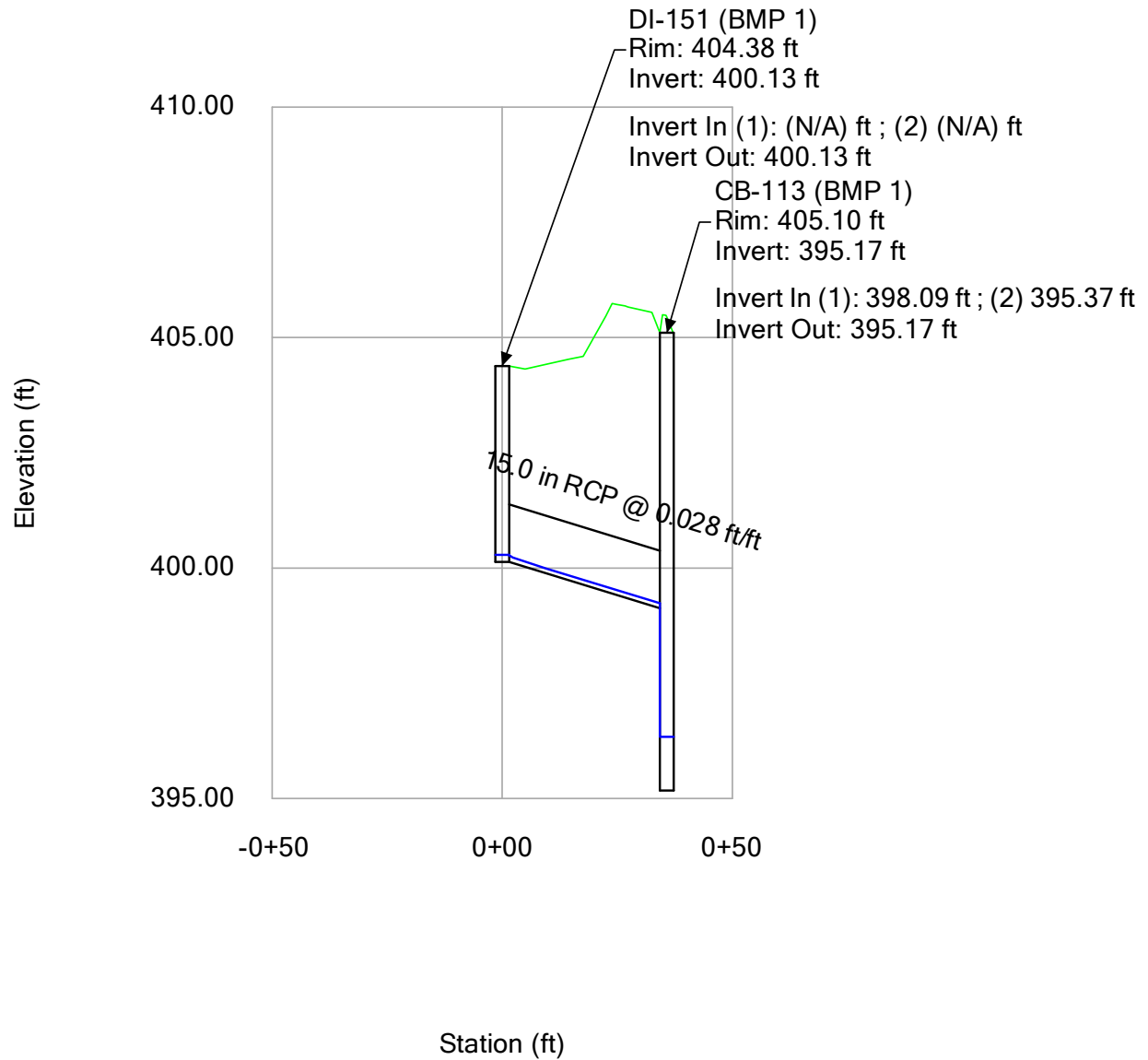
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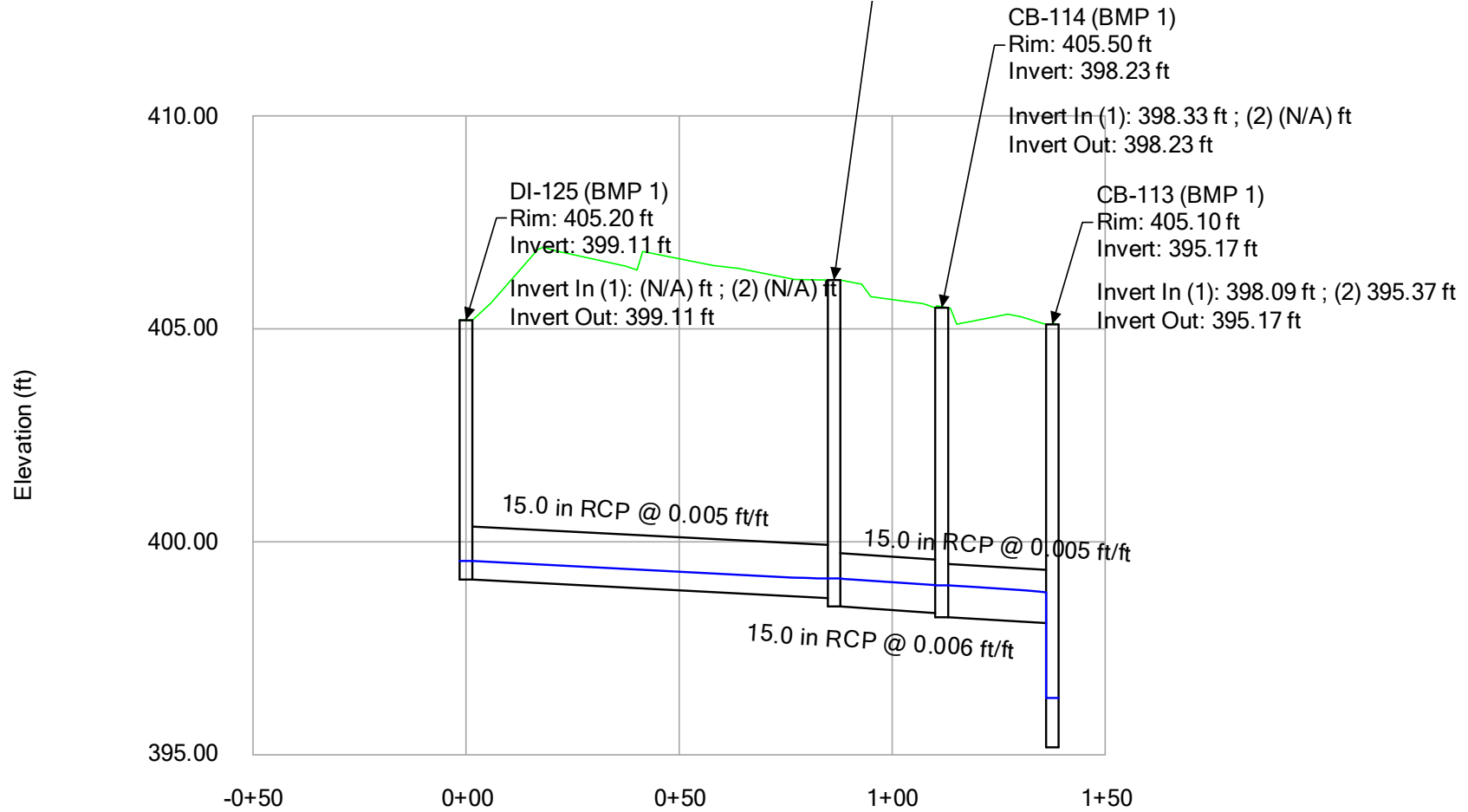
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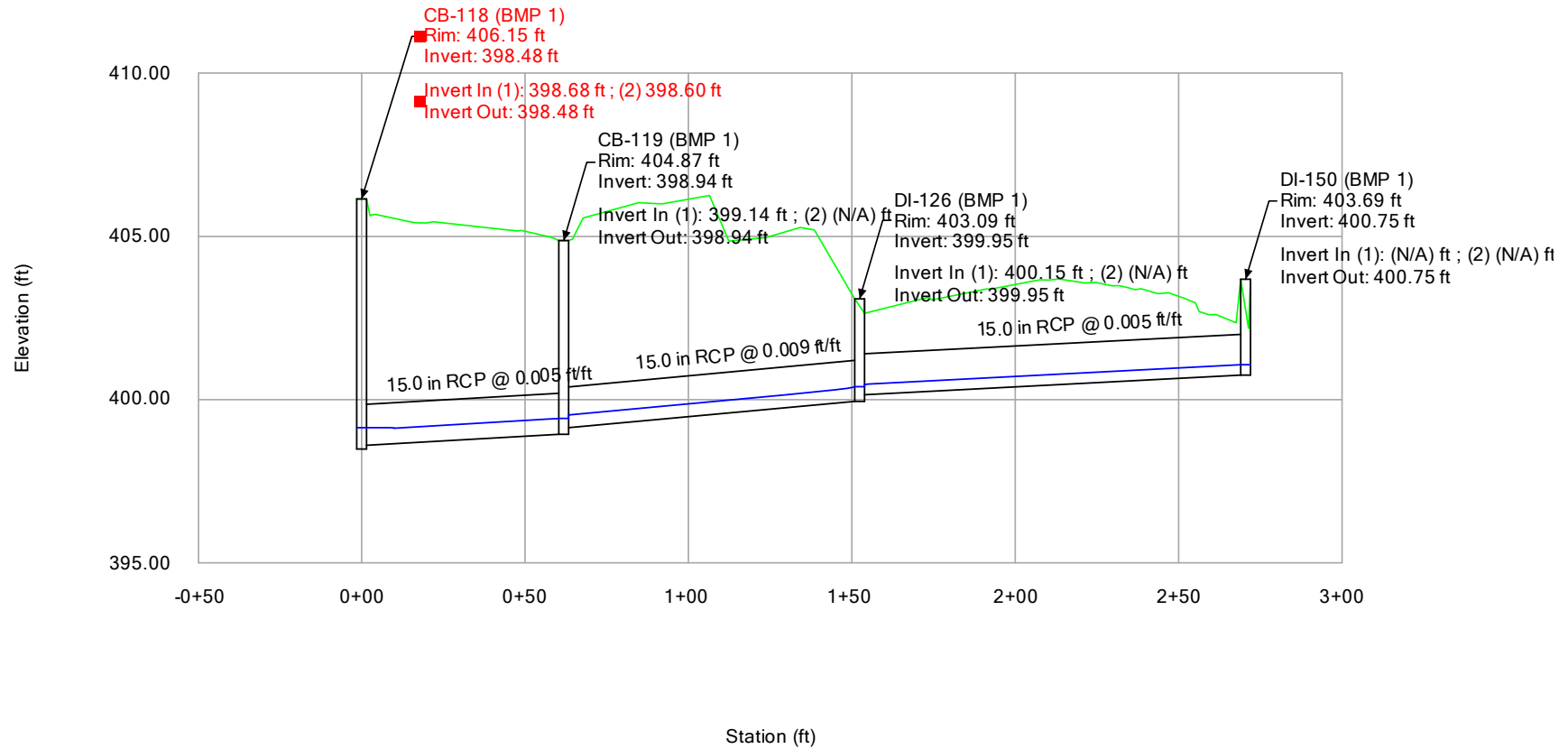
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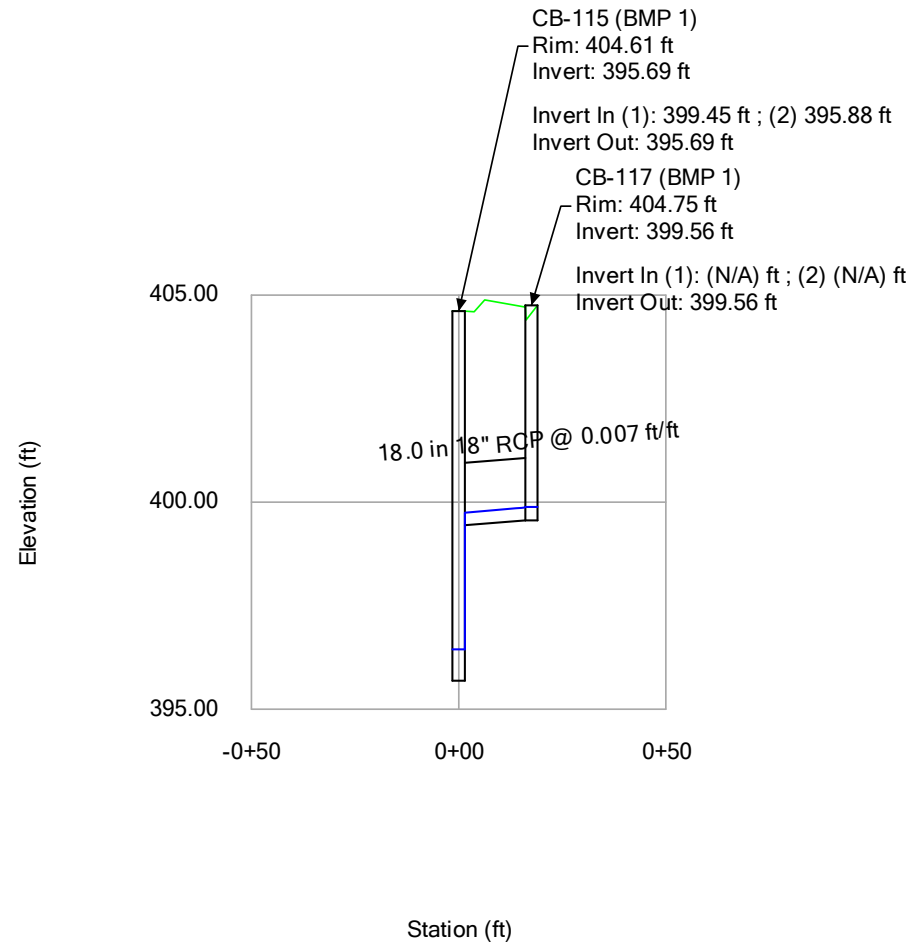
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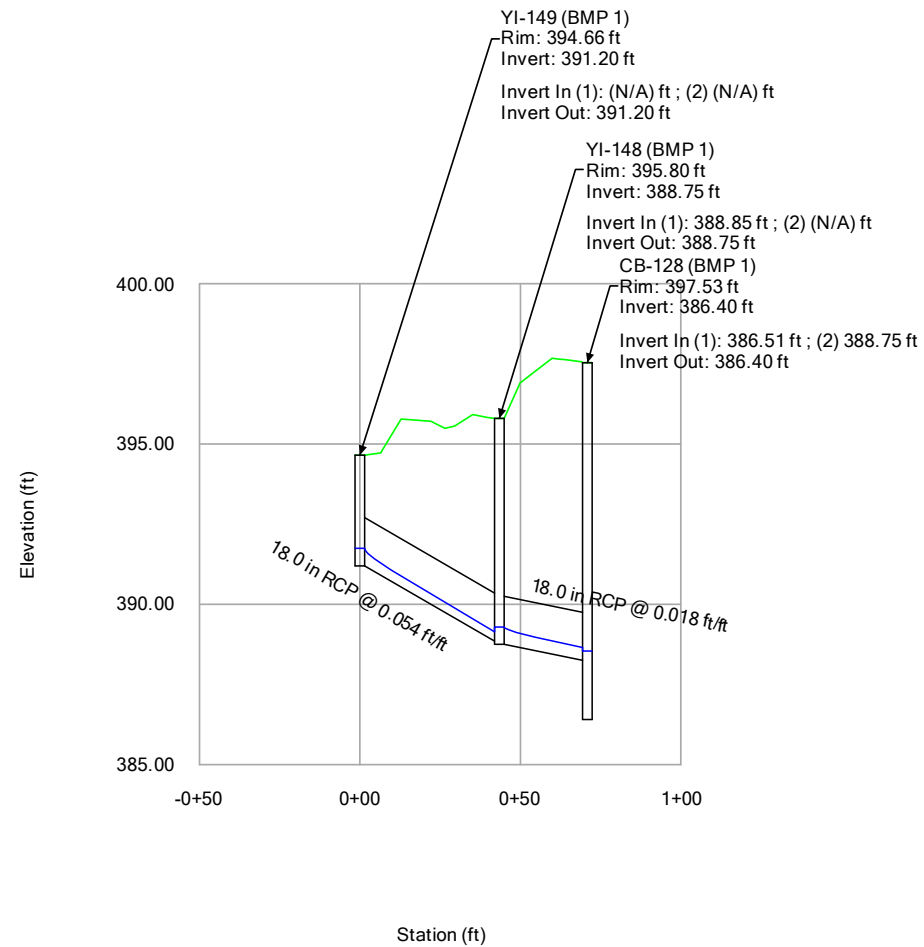
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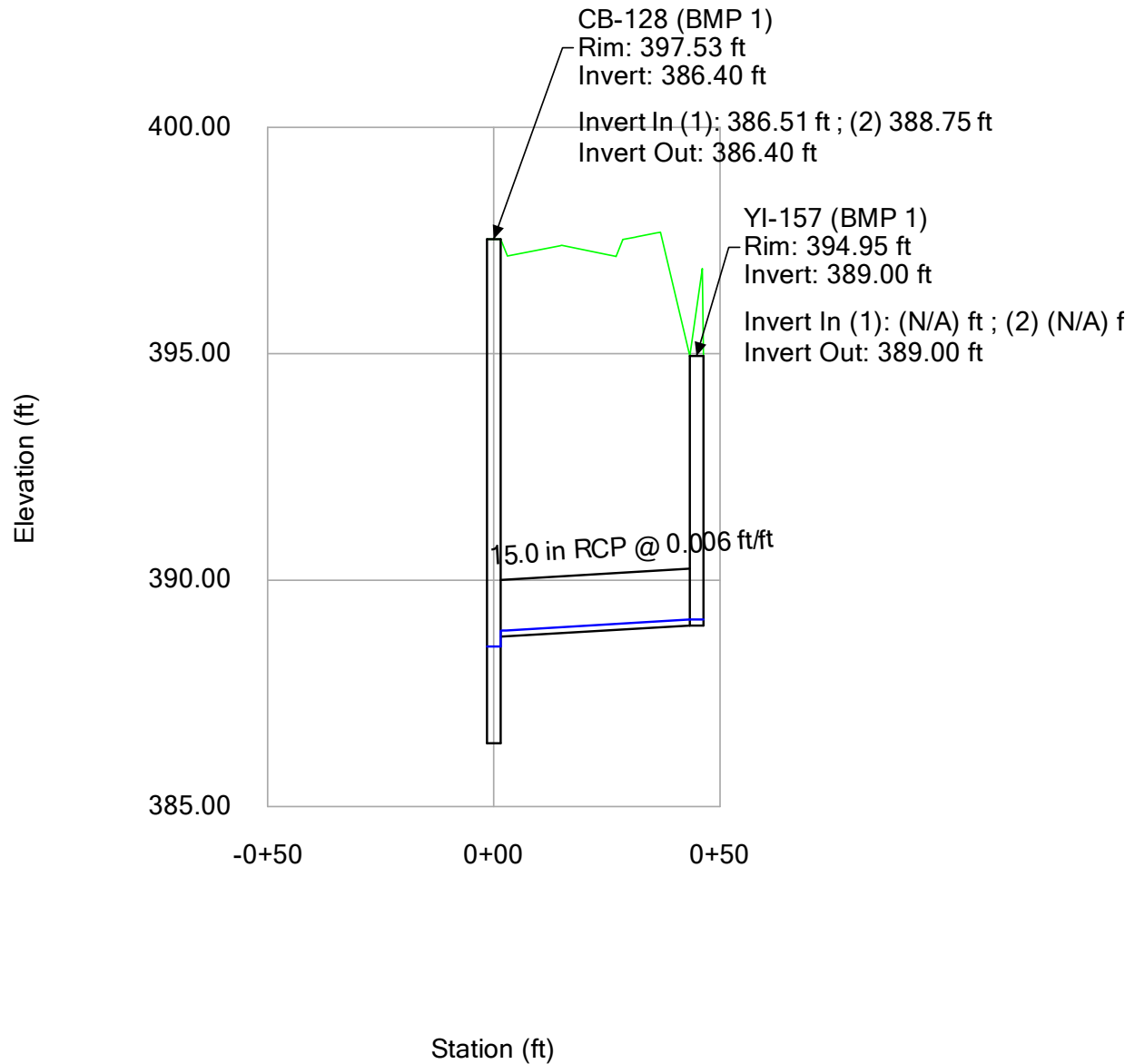
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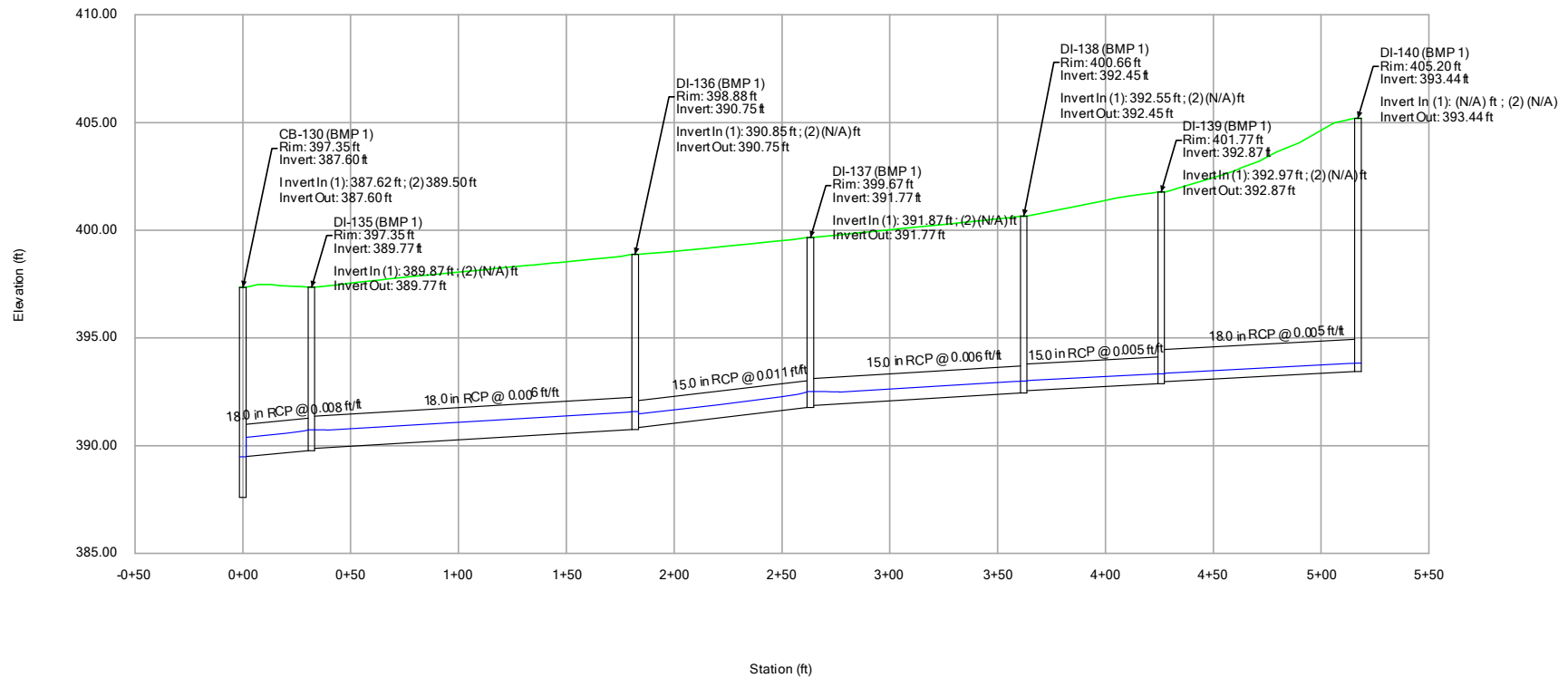
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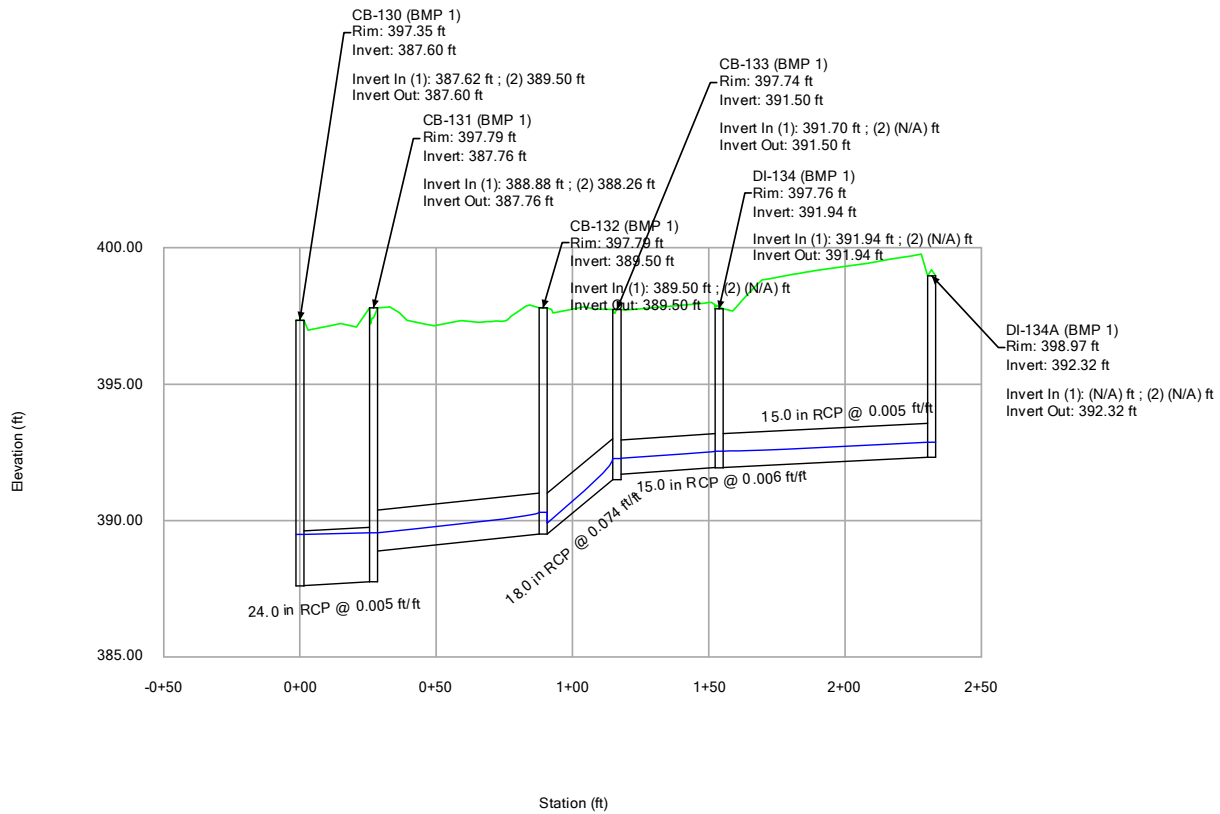
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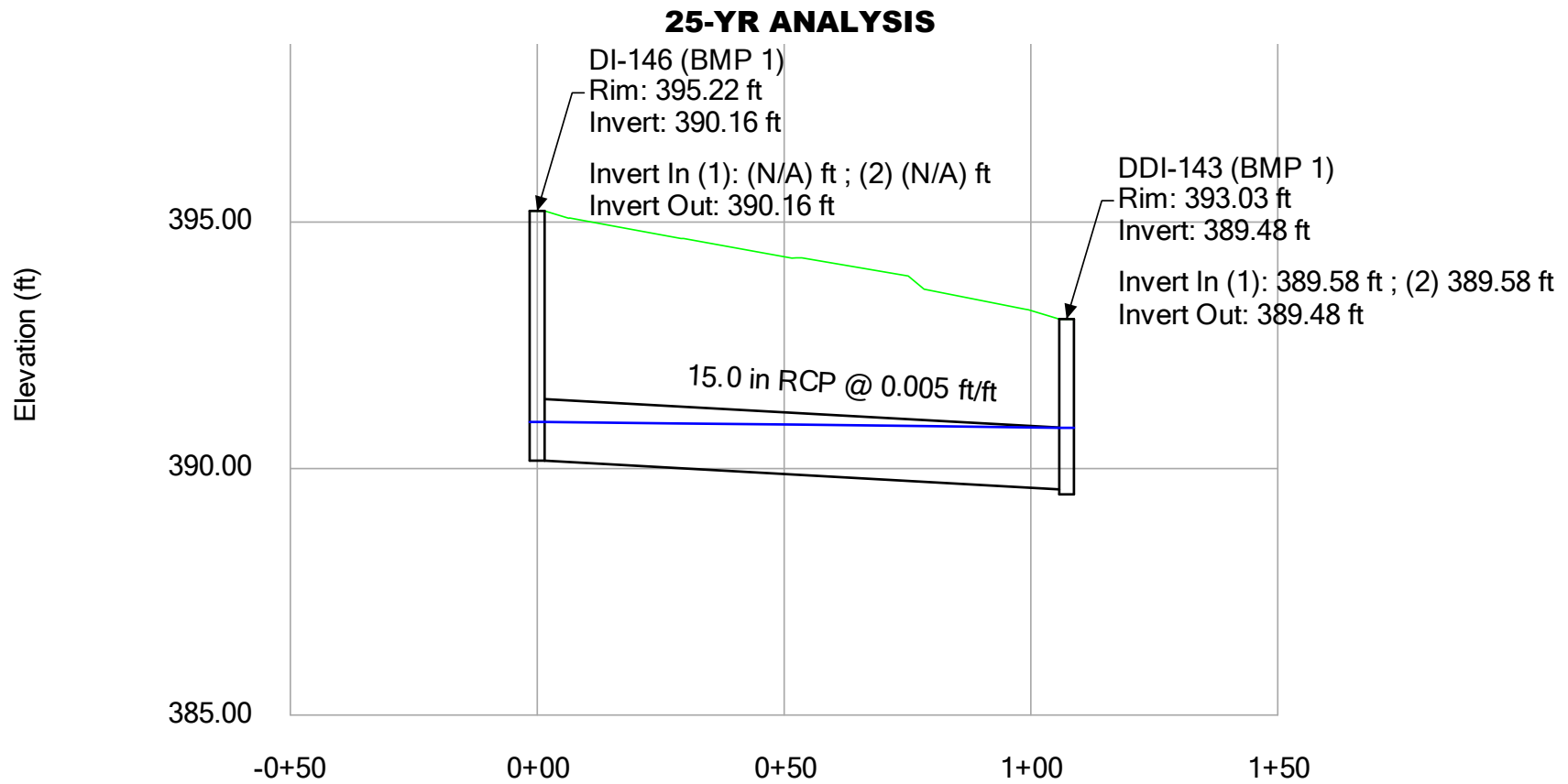


25-YR ANALYSIS

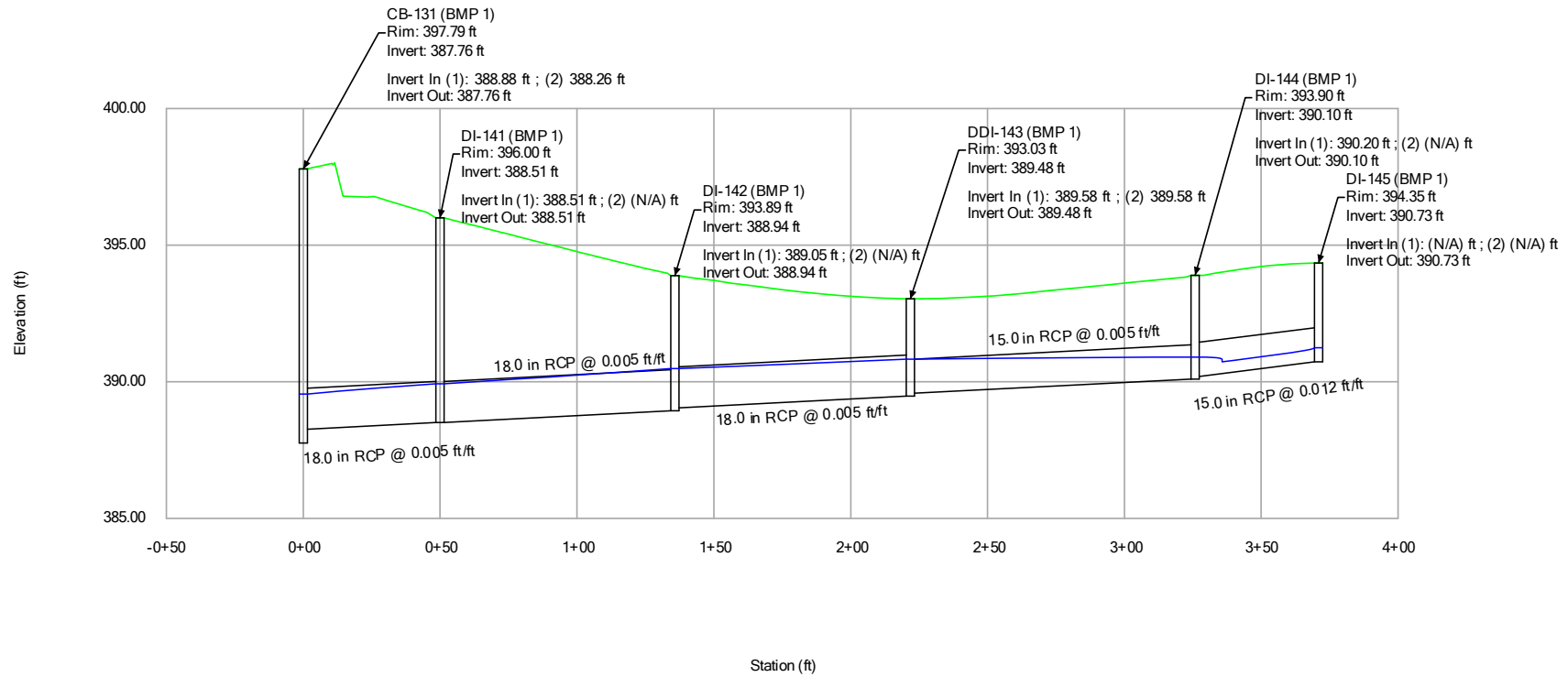


25-YR ANALYSIS





25-YR ANALYSIS



SCM 1 – INLET SPREAD

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
DCB-116 (BMP 1)	0.388	0.361	2.05	0.00	2.05	8.7	2.6
DDI-143 (BMP 1)	0.367	0.319	1.81	0.00	5.25	8.6	2.1
TCB-102 (BMP 1)	0.454	0.389	2.20	0.00	32.00	7.9	2.4
DCB-129 (BMP 1)	0.305	0.296	1.68	0.00	15.47	7.8	2.3
CB-133 (BMP 1)	0.480	0.248	1.41	0.50	3.02	7.0	2.2
DI-135 (BMP 1)	0.302	0.249	1.41	0.10	4.52	6.8	1.6
DI-145 (BMP 1)	0.297	0.224	1.27	0.08	1.27	6.5	1.6
CB-153A (BMP 1)	0.160	0.152	0.86	0.00	0.86	6.4	2.0
DI-137 (BMP 1)	0.249	0.202	1.14	0.06	2.44	6.3	1.5
DI-142 (BMP 1)	0.227	0.185	1.05	0.04	6.19	6.1	1.5
DI-136 (BMP 1)	0.192	0.171	0.97	0.03	3.32	5.9	1.4
CB-109 (BMP 1)	0.221	0.158	0.89	0.17	23.89	5.5	1.8
DI-140 (BMP 1)	0.150	0.140	0.79	0.01	0.79	5.4	1.3
CB-110 (BMP 1)	0.206	0.149	0.84	0.15	6.00	5.3	1.7
CB-101 (BMP 1)	0.093	0.091	0.52	0.00	33.29	4.8	1.6
CB-107 (BMP 1)	0.104	0.111	0.63	0.07	25.50	4.5	1.6

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

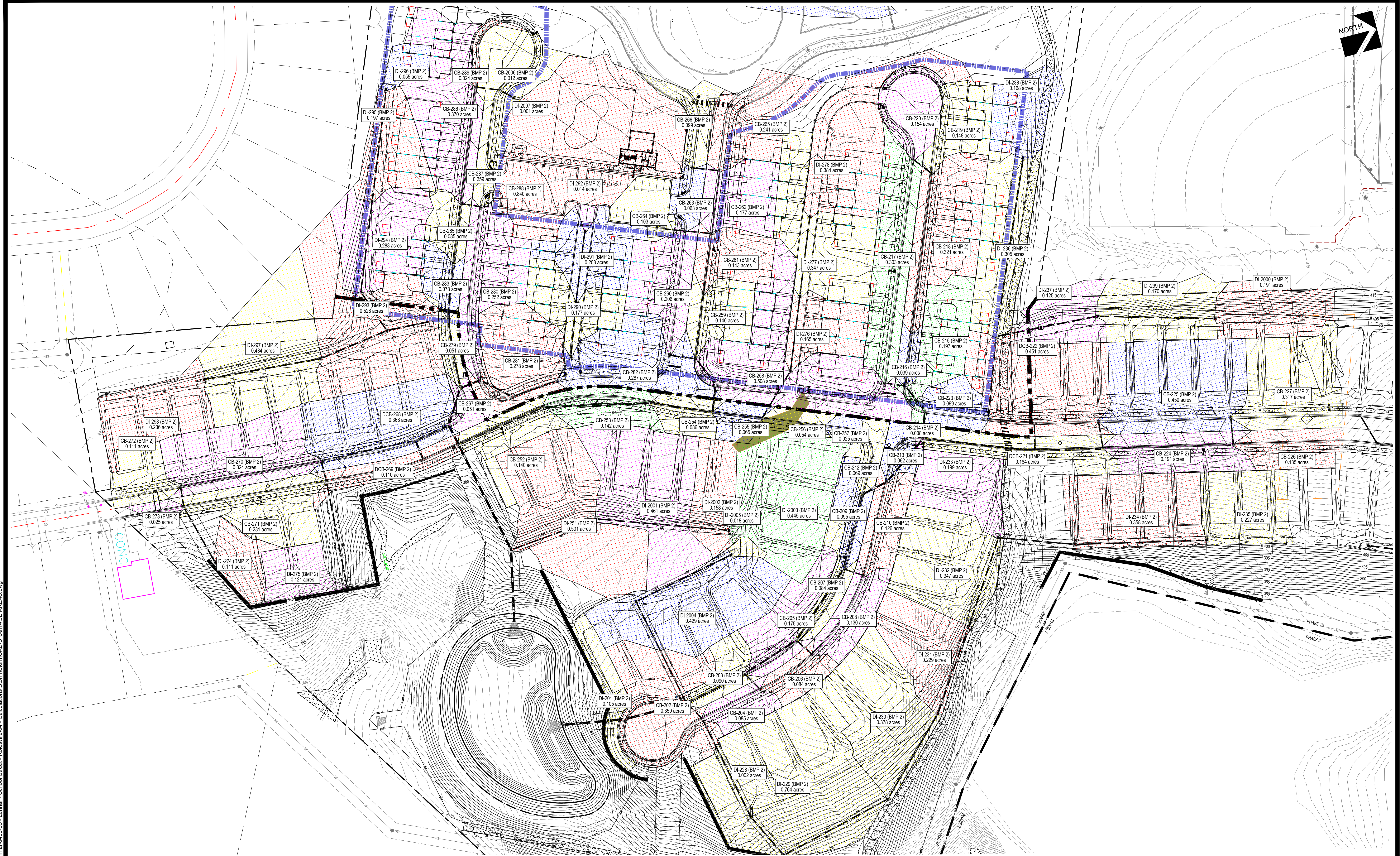
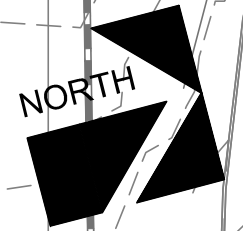
Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-104 (BMP 1)	0.135	0.111	0.63	0.07	1.80	4.5	1.6
CB-128 (BMP 1)	0.141	0.108	0.61	0.06	17.23	4.4	1.5
DI-138 (BMP 1)	0.081	0.073	0.41	0.00	1.38	4.2	1.0
CB-130 (BMP 1)	(N/A)	0.098	0.56	0.05	14.10	4.2	1.5
CB-106 (BMP 1)	0.121	0.096	0.54	0.04	0.54	4.1	1.5
DI-144 (BMP 1)	0.044	0.055	0.31	0.00	1.57	3.8	0.9
CB-127 (BMP 1)	0.060	0.075	0.43	0.02	17.43	3.5	1.3
DI-141 (BMP 1)	0.048	0.045	0.26	0.00	6.35	3.5	0.8
CB-103 (BMP 1)	0.089	0.073	0.41	0.02	27.75	3.5	1.3
CB-147 (BMP 1)	0.064	0.070	0.40	0.01	1.10	3.4	1.3
DI-139 (BMP 1)	0.043	0.040	0.23	0.00	1.00	3.4	0.8
CB-114 (BMP 1)	0.071	0.060	0.34	0.01	2.20	3.1	1.2
CB-105 (BMP 1)	0.040	0.050	0.28	0.00	26.01	2.7	1.1
CB-112 (BMP 1)	0.055	0.047	0.27	0.00	0.27	2.7	1.1
CB-113 (BMP 1)	0.048	0.042	0.24	0.00	4.97	2.5	1.1
CB-132 (BMP 1)	0.040	0.038	0.22	0.00	3.23	2.3	1.0

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-111 (BMP 1)	0.040	0.035	0.20	0.00	5.34	2.1	1.0
CB-108 (BMP 1)	0.028	0.026	0.15	0.00	0.15	1.8	0.9
CB-153 (BMP 1)	0.015	0.015	0.08	0.00	0.94	1.8	0.9
CB-115 (BMP 1)	0.007	0.008	0.05	0.00	2.62	1.2	0.6
CB-131 (BMP 1)	0.002	0.002	0.01	0.00	9.43	0.7	0.4

ATTACHMENT 2: DRAINAGE AREA MAPS – SCM 2



G:\NC\Projects\Lemnar\0430-03 - Lemnar - School Street - Rolesville\04 - Calculations\Storm\StormCAD\DRAINAGE AREAS.dwg



5440 WADE PARK BLVD, SUITE 102
RALEIGH NC 27607
www.bgeinc.com
NC LICENSE #C-4397

SCM 2 DRAINAGE MAP

DATE: 7/27/2023
SCALE: 1" = 50'

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY BGE INC. SHALL BE WITHOUT LIABILITY TO BGE INC.

SCM 2 – 10 YR STORM

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-228 (BMP 2)	0.002	0.00	0.083	0.350
DI-2005 (BMP 2)	0.018	0.05	0.083	0.350
DI-2007 (BMP 2)	0.001	0.00	0.083	0.350
CB-289 (BMP 2)	0.024	0.06	0.083	0.350
DI-2000 (BMP 2)	0.191	0.62	0.083	0.450
DI-299 (BMP 2)	0.170	0.56	0.083	0.450
DI-237 (BMP 2)	0.125	0.41	0.083	0.450
DI-236 (BMP 2)	0.305	1.10	0.083	0.500
DI-201 (BMP 2)	0.105	0.38	0.083	0.500
DI-238 (BMP 2)	0.168	0.67	0.083	0.550
CB-288 (BMP 2)	0.840	3.35	0.083	0.550
DI-297 (BMP 2)	0.484	1.93	0.083	0.550
DI-278 (BMP 2)	0.384	1.81	0.083	0.650
DI-235 (BMP 2)	0.227	1.07	0.083	0.650
CB-209 (BMP 2)	0.095	0.45	0.083	0.650
CB-207 (BMP 2)	0.084	0.40	0.083	0.650

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-251 (BMP 2)	0.531	2.50	0.083	0.650
DI-293 (BMP 2)	0.528	2.49	0.083	0.650
DI-298 (BMP 2)	0.236	1.11	0.083	0.650
DI-234 (BMP 2)	0.358	1.68	0.083	0.650
DI-229 (BMP 2)	0.764	3.60	0.083	0.650
DI-274 (BMP 2)	0.111	0.55	0.083	0.680
CB-205 (BMP 2)	0.175	0.89	0.083	0.700
DI-2001 (BMP 2)	0.461	2.34	0.083	0.700
DI-296 (BMP 2)	0.055	0.28	0.083	0.700
DI-295 (BMP 2)	0.197	1.00	0.083	0.700
DI-294 (BMP 2)	0.283	1.44	0.083	0.700
DI-232 (BMP 2)	0.347	1.79	0.083	0.710
DI-2003 (BMP 2)	0.445	2.32	0.083	0.720
CB-227 (BMP 2)	0.317	1.77	0.083	0.770
CB-226 (BMP 2)	0.135	0.75	0.083	0.770
CB-224 (BMP 2)	0.191	1.07	0.083	0.770

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-225 (BMP 2)	0.450	2.51	0.083	0.770
DI-233 (BMP 2)	0.199	1.11	0.083	0.770
DI-231 (BMP 2)	0.229	1.28	0.083	0.770
DI-230 (BMP 2)	0.378	2.11	0.083	0.770
CB-210 (BMP 2)	0.126	0.71	0.083	0.770
CB-204 (BMP 2)	0.085	0.47	0.083	0.770
CB-203 (BMP 2)	0.090	0.50	0.083	0.770
DI-2004 (BMP 2)	0.429	2.40	0.083	0.770
DI-2002 (BMP 2)	0.158	0.88	0.083	0.770
CB-261 (BMP 2)	0.143	0.80	0.083	0.770
CB-2006 (BMP 2)	0.012	0.07	0.083	0.770
DCB-268 (BMP 2)	0.368	2.05	0.083	0.770
CB-270 (BMP 2)	0.324	1.81	0.083	0.770
CB-271 (BMP 2)	0.231	1.29	0.083	0.770
DI-275 (BMP 2)	0.121	0.68	0.083	0.770
CB-287 (BMP 2)	0.259	1.50	0.083	0.800

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-290 (BMP 2)	0.177	1.04	0.083	0.810
CB-272 (BMP 2)	0.111	0.65	0.083	0.810
CB-202 (BMP 2)	0.350	2.08	0.083	0.820
CB-281 (BMP 2)	0.278	1.65	0.083	0.820
CB-252 (BMP 2)	0.140	0.83	0.083	0.820
DCB-222 (BMP 2)	0.451	2.78	0.083	0.850
CB-217 (BMP 2)	0.303	1.87	0.083	0.850
CB-215 (BMP 2)	0.197	1.22	0.083	0.850
CB-208 (BMP 2)	0.130	0.80	0.083	0.850
DI-276 (BMP 2)	0.165	1.02	0.083	0.850
DI-277 (BMP 2)	0.347	2.14	0.083	0.850
CB-260 (BMP 2)	0.206	1.27	0.083	0.850
CB-282 (BMP 2)	0.287	1.77	0.083	0.850
CB-253 (BMP 2)	0.142	0.87	0.083	0.850
DI-291 (BMP 2)	0.208	1.28	0.083	0.850
CB-283 (BMP 2)	0.078	0.48	0.083	0.850

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-285 (BMP 2)	0.085	0.52	0.083	0.850
CB-286 (BMP 2)	0.370	2.28	0.083	0.850
CB-259 (BMP 2)	0.140	0.86	0.083	0.850
CB-219 (BMP 2)	0.148	0.94	0.083	0.870
CB-218 (BMP 2)	0.321	2.02	0.083	0.870
CB-206 (BMP 2)	0.084	0.53	0.083	0.870
CB-258 (BMP 2)	0.508	3.21	0.083	0.870
CB-265 (BMP 2)	0.241	1.52	0.083	0.870
CB-262 (BMP 2)	0.177	1.12	0.083	0.870
CB-280 (BMP 2)	0.252	1.59	0.083	0.870
CB-223 (BMP 2)	0.099	0.63	0.083	0.880
CB-255 (BMP 2)	0.065	0.41	0.083	0.880
CB-254 (BMP 2)	0.086	0.55	0.083	0.880
CB-266 (BMP 2)	0.099	0.65	0.083	0.900
DCB-269 (BMP 2)	0.110	0.72	0.083	0.900
CB-212 (BMP 2)	0.069	0.46	0.083	0.910

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-220 (BMP 2)	0.154	1.06	0.083	0.950
CB-216 (BMP 2)	0.039	0.27	0.083	0.950
CB-214 (BMP 2)	0.008	0.05	0.083	0.950
DCB-221 (BMP 2)	0.184	1.27	0.083	0.950
CB-213 (BMP 2)	0.062	0.43	0.083	0.950
CB-257 (BMP 2)	0.025	0.17	0.083	0.950
CB-256 (BMP 2)	0.054	0.37	0.083	0.950
CB-263 (BMP 2)	0.063	0.44	0.083	0.950
CB-264 (BMP 2)	0.103	0.71	0.083	0.950
CB-267 (BMP 2)	0.051	0.35	0.083	0.950
CB-279 (BMP 2)	0.051	0.35	0.083	0.950
DI-292 (BMP 2)	0.014	0.09	0.083	0.950
CB-273 (BMP 2)	0.025	0.17	0.083	0.950

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-238 (BMP 2)	0.67	0.00	0.67	100.0	398.80	398.80	0.0	2.61	2.61
CB-220 (BMP 2)	0.89	0.17	0.89	84.0	396.78	396.78	4.0	2.93	2.93
DI-2000 (BMP 2)	0.62	0.00	0.62	100.0	397.79	397.79	0.0	2.57	2.57
CB-219 (BMP 2)	0.80	0.13	1.68	85.9	396.68	396.68	4.0	1.86	3.53
CB-226 (BMP 2)	0.67	0.08	1.99	89.2	397.03	397.03	4.0	3.27	3.72
CB-227 (BMP 2)	1.33	0.44	1.33	75.2	397.21	397.21	4.0	3.22	3.22
DI-298 (BMP 2)	1.11	0.00	1.11	100.0	395.89	395.89	0.0	3.01	3.01
DI-278 (BMP 2)	1.81	0.00	1.81	100.0	394.64	394.64	0.0	3.61	3.61
DI-235 (BMP 2)	1.07	0.00	1.07	100.0	393.44	393.44	0.0	3.09	3.09
CB-265 (BMP 2)	1.18	0.34	1.76	77.8	393.95	393.95	4.0	1.20	3.58
CB-266 (BMP 2)	0.59	0.06	0.59	91.4	394.00	394.00	4.0	2.61	2.61
DI-236 (BMP 2)	1.10	0.00	3.21	100.0	390.24	390.24	0.0	2.38	4.05
CB-262 (BMP 2)	1.14	0.31	3.95	78.6	393.21	393.21	4.0	3.20	4.39
CB-263 (BMP 2)	0.47	0.03	1.10	94.8	393.17	393.17	4.0	2.40	2.88
CB-289 (BMP 2)	0.06	0.00	0.13	100.0	390.29	390.29	4.0	1.47	1.73
DI-296 (BMP 2)	0.28	0.00	0.28	100.0	392.75	392.75	0.0	2.14	2.14

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-218 (BMP 2)	1.55	0.61	3.14	71.7	392.80	392.80	4.0	5.57	4.08
CB-264 (BMP 2)	0.64	0.07	0.64	90.0	393.35	393.35	4.0	2.67	2.67
DI-2007 (BMP 2)	0.00	0.00	0.00	100.0	392.51	392.51	0.0	0.53	0.53
CB-2006 (BMP 2)	0.07	0.00	0.07	100.0	390.61	390.61	4.0	0.82	1.35
DI-277 (BMP 2)	2.14	0.00	3.90	100.0	392.65	392.65	0.0	2.56	4.71
DI-299 (BMP 2)	0.56	0.00	1.16	100.0	391.90	391.90	0.0	5.27	3.04
CB-216 (BMP 2)	0.77	0.12	5.29	86.8	391.69	391.69	4.0	2.89	4.87
CB-217 (BMP 2)	1.48	0.56	1.48	72.7	391.65	391.65	4.0	3.40	3.40
DI-237 (BMP 2)	0.41	0.00	1.54	100.0	390.38	390.38	0.0	3.17	3.15
CB-215 (BMP 2)	0.99	0.22	6.22	81.6	388.67	388.67	4.0	7.99	5.18
DI-292 (BMP 2)	0.09	0.00	0.09	100.0	390.87	390.87	0.0	1.60	1.60
CB-214 (BMP 2)	0.05	0.00	19.03	100.0	388.22	388.22	4.0	6.39	7.19
CB-261 (BMP 2)	0.92	0.19	4.82	83.2	390.71	390.71	4.0	8.52	4.71
CB-224 (BMP 2)	0.95	0.20	4.80	82.6	389.77	389.77	4.0	3.70	4.30
CB-225 (BMP 2)	1.95	1.00	1.95	66.1	390.82	390.82	4.0	3.59	3.59
CB-286 (BMP 2)	1.61	0.67	4.70	70.7	388.57	388.57	4.0	0.14	4.66

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-287 (BMP 2)	1.17	0.33	3.31	78.0	388.86	388.86	4.0	3.25	4.23
DCB-222 (BMP 2)	3.89	0.00	7.42	100.0	389.65	389.65	12.0	3.23	4.98
DCB-221 (BMP 2)	1.47	0.00	13.27	100.0	389.40	389.40	8.0	5.29	6.08
CB-257 (BMP 2)	0.17	0.00	0.17	100.0	387.69	387.69	4.0	1.82	1.82
DI-276 (BMP 2)	1.02	0.00	4.87	100.0	389.38	389.38	0.0	8.77	5.18
CB-223 (BMP 2)	0.75	0.11	3.85	87.3	389.77	389.77	4.0	3.74	3.81
CB-288 (BMP 2)	2.14	1.21	2.14	64.0	389.73	389.73	4.0	3.81	3.81
DI-234 (BMP 2)	1.68	0.00	2.71	100.0	386.04	386.04	0.0	2.64	4.12
CB-213 (BMP 2)	0.41	0.02	19.29	96.3	387.11	387.11	4.0	8.87	7.25
DI-295 (BMP 2)	1.00	0.00	1.25	100.0	388.42	388.42	0.0	1.03	3.23
CB-285 (BMP 2)	0.98	0.21	5.57	82.0	386.40	386.40	4.0	4.19	4.96
CB-212 (BMP 2)	0.44	0.02	19.63	95.6	386.98	386.98	4.0	6.25	6.36
CB-256 (BMP 2)	0.36	0.01	5.37	97.4	386.23	386.23	4.0	0.17	4.44
CB-273 (BMP 2)	0.17	0.00	0.70	100.0	379.23	379.23	4.0	2.55	2.70
CB-272 (BMP 2)	0.60	0.06	1.28	91.2	379.02	379.02	4.0	2.74	3.19
CB-260 (BMP 2)	1.04	0.25	1.04	80.6	387.42	387.42	4.0	3.06	3.06

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-259 (BMP 2)	0.88	0.17	6.66	84.1	387.37	387.37	4.0	0.99	5.33
DI-291 (BMP 2)	1.28	0.00	1.35	100.0	387.44	387.44	0.0	0.23	3.30
CB-255 (BMP 2)	0.41	0.02	14.30	96.3	385.64	385.64	4.0	2.35	6.27
CB-258 (BMP 2)	2.07	1.13	8.65	64.7	386.20	386.20	4.0	8.67	5.18
CB-283 (BMP 2)	0.63	0.07	13.69	90.4	380.98	380.98	4.0	4.31	6.16
CB-254 (BMP 2)	0.52	0.04	14.73	93.2	383.68	383.68	4.0	10.25	6.35
CB-210 (BMP 2)	0.65	0.07	0.65	89.9	384.13	384.13	4.0	2.68	2.68
CB-209 (BMP 2)	0.44	0.02	20.38	95.4	384.08	384.08	4.0	1.18	7.48
DI-2003 (BMP 2)	2.32	0.00	2.32	100.0	386.61	386.61	0.0	3.91	3.91
DI-294 (BMP 2)	1.44	0.00	2.62	100.0	385.79	385.79	0.0	2.44	4.07
DI-290 (BMP 2)	1.04	0.00	2.35	100.0	384.14	384.14	0.0	2.25	3.93
CB-282 (BMP 2)	1.93	0.97	4.23	66.4	381.57	381.57	4.0	2.71	4.87
CB-280 (BMP 2)	1.41	0.50	7.27	73.8	375.59	375.59	4.0	6.20	4.15
CB-279 (BMP 2)	0.41	0.02	20.81	96.4	375.67	375.67	4.0	2.93	7.42
DI-233 (BMP 2)	1.11	0.00	3.77	100.0	382.24	382.24	0.0	8.17	4.33
CB-253 (BMP 2)	0.79	0.12	15.34	86.4	380.82	380.82	4.0	6.21	6.47

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-270 (BMP 2)	1.38	0.48	4.13	74.3	378.30	378.30	4.0	2.08	4.82
CB-281 (BMP 2)	1.79	0.84	5.94	68.2	380.51	380.51	4.0	4.26	5.09
CB-271 (BMP 2)	1.04	0.25	1.66	80.6	378.83	378.83	4.0	2.71	3.52
CB-208 (BMP 2)	0.76	0.11	0.76	87.0	381.26	381.26	4.0	2.78	2.78
CB-207 (BMP 2)	0.40	0.01	21.29	96.5	380.25	380.25	4.0	13.04	7.67
DI-274 (BMP 2)	0.55	0.00	0.55	100.0	381.29	381.29	0.0	2.51	2.51
DI-2005 (BMP 2)	0.05	0.00	0.05	100.0	380.85	380.85	0.0	1.34	1.34
DI-297 (BMP 2)	1.93	0.00	3.01	100.0	382.16	382.16	0.0	2.43	4.02
CB-252 (BMP 2)	0.82	0.14	44.37	85.6	375.30	375.30	4.0	6.86	9.65
CB-267 (BMP 2)	0.98	0.22	29.10	81.9	375.34	375.34	4.0	2.85	7.52
DCB-269 (BMP 2)	1.11	0.00	1.11	100.0	375.34	375.34	8.0	0.82	0.82
DCB-268 (BMP 2)	2.75	0.00	7.62	100.0	375.34	375.34	12.0	0.57	3.56
DI-293 (BMP 2)	2.49	0.00	7.91	100.0	381.23	381.23	0.0	10.46	4.96
CB-206 (BMP 2)	0.59	0.06	0.59	91.4	379.80	379.80	4.0	2.61	2.61
CB-205 (BMP 2)	0.78	0.12	22.42	86.5	376.86	376.86	4.0	13.66	7.92
DI-275 (BMP 2)	0.68	0.00	0.68	100.0	380.33	380.33	0.0	2.67	2.67

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-2002 (BMP 2)	0.88	0.00	3.20	100.0	378.72	378.72	0.0	3.17	4.37
DI-232 (BMP 2)	1.79	0.00	5.48	100.0	376.30	376.30	0.0	3.92	4.93
CB-204 (BMP 2)	0.50	0.03	12.03	93.9	359.65	359.65	4.0	6.57	5.84
CB-203 (BMP 2)	0.57	0.05	36.55	91.9	359.15	359.15	4.0	4.90	8.49
DI-2004 (BMP 2)	2.40	0.00	2.36	100.0	376.19	376.19	0.0	0.07	3.76
CB-202 (BMP 2)	2.16	0.00	38.32	100.0	355.32	355.32	8.0	15.60	8.74
DI-228 (BMP 2)	0.00	0.00	11.75	100.0	360.78	360.78	0.0	6.19	5.79
DI-2001 (BMP 2)	2.34	0.00	5.49	100.0	372.75	372.75	0.0	3.20	5.49
DI-231 (BMP 2)	1.28	0.00	6.66	100.0	371.40	371.40	0.0	9.91	5.33
DI-251 (BMP 2)	2.50	0.00	51.38	100.0	357.32	357.32	0.0	20.95	10.82
DI-230 (BMP 2)	2.11	0.00	8.63	100.0	362.00	362.00	0.0	13.05	5.18
DI-229 (BMP 2)	3.60	0.00	11.83	100.0	361.30	361.30	0.0	4.69	5.81
DI-201 (BMP 2)	0.38	0.00	38.62	100.0	354.10	354.10	0.0	12.91	8.76

10-YR ANALYSIS **Conduit Results - Time: 0.00 hours**

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-236 TO DI-238 (BMP 2)	18.0	0.030	2.61	4.89	0.67	18.13	398.80	391.98
CB-219 TO CB-220 (BMP 2)	15.0	0.008	2.93	1.86	0.89	5.77	396.78	396.68
DI-299 TO DI-2000 (BMP 2)	18.0	0.039	2.57	5.27	0.62	20.87	397.79	391.88
CB-218 TO CB-219 (BMP 2)	15.0	0.019	3.53	5.57	1.68	8.89	396.68	392.74
CB-226 TO CB-227 (BMP 2)	15.0	0.005	3.22	3.27	1.33	4.57	397.21	397.03
CB-224 TO CB-226 (BMP 2)	15.0	0.034	3.72	7.22	1.99	11.95	397.03	391.25
DI-297 TO DI-298 (BMP 2)	18.0	0.093	3.01	2.43	1.11	32.06	395.89	382.16
DI-277 TO DI-278 (BMP 2)	15.0	0.021	3.61	2.56	1.81	9.47	394.64	392.65
DI-234 TO DI-235 (BMP 2)	15.0	0.045	3.09	2.64	1.07	13.76	393.44	386.04
CB-262 TO CB-265 (BMP 2)	15.0	0.010	3.58	3.20	1.76	6.43	393.95	393.21
CB-265 TO CB-266 (BMP 2)	15.0	0.008	2.61	1.20	0.59	5.78	394.00	393.95
DI-236 TO DI-237 (BMP 2)	18.0	0.004	3.15	2.38	1.54	6.92	390.38	390.24
CB-223 TO DI-236 (BMP 2)	18.0	0.005	4.05	3.74	3.21	7.43	390.24	389.77
CB-261 TO CB-262 (BMP 2)	18.0	0.033	4.39	8.52	3.95	19.10	393.21	390.42
CB-262 TO CB-263 (BMP 2)	15.0	0.008	2.88	1.41	1.10	5.78	393.17	393.21
CB-263 TO CB-264 (BMP 2)	15.0	0.008	2.67	2.40	0.64	5.78	393.35	393.17
CB-286 TO CB-289 (BMP 2)	15.0	0.016	1.73	0.14	0.13	8.28	390.29	388.57
CB-289 TO CB-2006 (BMP 2)	15.0	0.005	1.35	1.47	0.07	4.57	390.61	390.45
DI-295 TO DI-296 (BMP 2)	15.0	0.032	2.14	1.03	0.28	11.51	392.75	388.42
CB-216 TO CB-218 (BMP 2)	18.0	0.020	4.08	2.89	3.14	14.75	392.80	391.69
CB-2006 TO DI-2007 (BMP 2)	15.0	0.038	0.53	0.82	0.00	12.56	392.51	391.76
DI-276 TO DI-277 (BMP 2)	15.0	0.035	4.71	8.77	3.90	12.06	392.65	389.07
DI-237 TO DI-299 (BMP 2)	18.0	0.006	3.04	3.17	1.16	7.81	391.90	391.49
CB-216 TO CB-217 (BMP 2)	15.0	0.010	3.40	1.82	1.48	6.48	391.65	391.69
CB-215 TO CB-216 (BMP 2)	18.0	0.025	4.87	7.99	5.29	16.74	391.69	390.40
CB-214 TO CB-215 (BMP 2)	18.0	0.011	5.18	6.39	6.22	11.23	388.67	388.11
DI-291 TO DI-292 (BMP 2)	15.0	0.042	1.60	0.23	0.09	13.31	390.87	387.44
CB-213 TO CB-214 (BMP 2)	24.0	0.013	7.19	8.87	19.03	26.02	388.22	387.03

10-YR ANALYSIS **Conduit Results - Time: 0.00 hours**

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-214 TO DCB-221 (BMP 2)	24.0	0.010	6.08	5.36	13.27	22.05	389.40	388.22
CB-259 TO CB-261 (BMP 2)	18.0	0.041	4.71	4.36	4.82	21.32	390.71	387.37
CB-224 TO CB-225 (BMP 2)	15.0	0.005	3.59	3.70	1.95	4.59	390.82	390.63
DCB-221 TO CB-224 (BMP 2)	24.0	0.008	4.30	2.77	4.80	20.25	389.77	389.40
CB-286 TO CB-287 (BMP 2)	15.0	0.006	4.23	4.42	3.31	4.81	388.86	388.68
CB-285 TO CB-286 (BMP 2)	18.0	0.030	4.66	4.19	4.70	18.32	388.57	386.40
CB-287 TO CB-288 (BMP 2)	15.0	0.038	3.81	3.25	2.14	12.64	389.73	388.86
DCB-221 TO DCB-222 (BMP 2)	18.0	0.005	4.98	5.29	7.42	7.53	389.65	389.40
DCB-222 TO CB-223 (BMP 2)	18.0	0.004	3.81	3.23	3.85	6.78	389.77	389.65
CB-256 TO CB-257 (BMP 2)	18.0	0.027	1.82	0.17	0.17	17.26	387.69	386.23
CB-256 TO DI-276 (BMP 2)	15.0	0.026	5.18	8.35	4.87	10.42	389.38	387.26
DI-233 TO DI-234 (BMP 2)	15.0	0.038	4.12	8.17	2.71	12.56	386.04	382.15
CB-212 TO CB-213 (BMP 2)	24.0	0.013	7.25	6.25	19.29	25.74	387.11	386.98
DI-294 TO DI-295 (BMP 2)	15.0	0.024	3.23	2.44	1.25	10.00	388.42	385.79
CB-283 TO CB-285 (BMP 2)	18.0	0.035	4.96	9.56	5.57	19.63	386.40	383.61
CB-209 TO CB-212 (BMP 2)	24.0	0.006	6.36	7.32	19.63	16.88	386.98	386.13
CB-255 TO CB-256 (BMP 2)	24.0	0.018	4.44	2.35	5.37	30.62	386.23	385.64
CB-272 TO CB-273 (BMP 2)	15.0	0.005	2.70	2.74	0.70	4.57	379.23	379.09
CB-273 TO DI-274 (BMP 2)	15.0	0.005	2.51	2.55	0.55	4.57	381.29	380.89
CB-270 TO CB-272 (BMP 2)	15.0	0.005	3.19	2.08	1.28	4.57	379.02	378.30
CB-259 TO CB-260 (BMP 2)	15.0	0.019	3.06	0.99	1.04	8.80	387.42	387.37
CB-258 TO CB-259 (BMP 2)	18.0	0.028	5.33	8.67	6.66	17.44	387.37	385.92
DI-290 TO DI-291 (BMP 2)	15.0	0.050	3.30	2.25	1.35	14.46	387.44	384.14
CB-254 TO CB-255 (BMP 2)	24.0	0.024	6.27	10.25	14.30	35.14	385.64	383.31
CB-255 TO CB-258 (BMP 2)	24.0	0.009	5.18	6.22	8.65	20.94	386.20	385.76
CB-279 TO CB-283 (BMP 2)	24.0	0.009	6.16	7.18	13.69	21.22	380.98	380.03

10-YR ANALYSIS

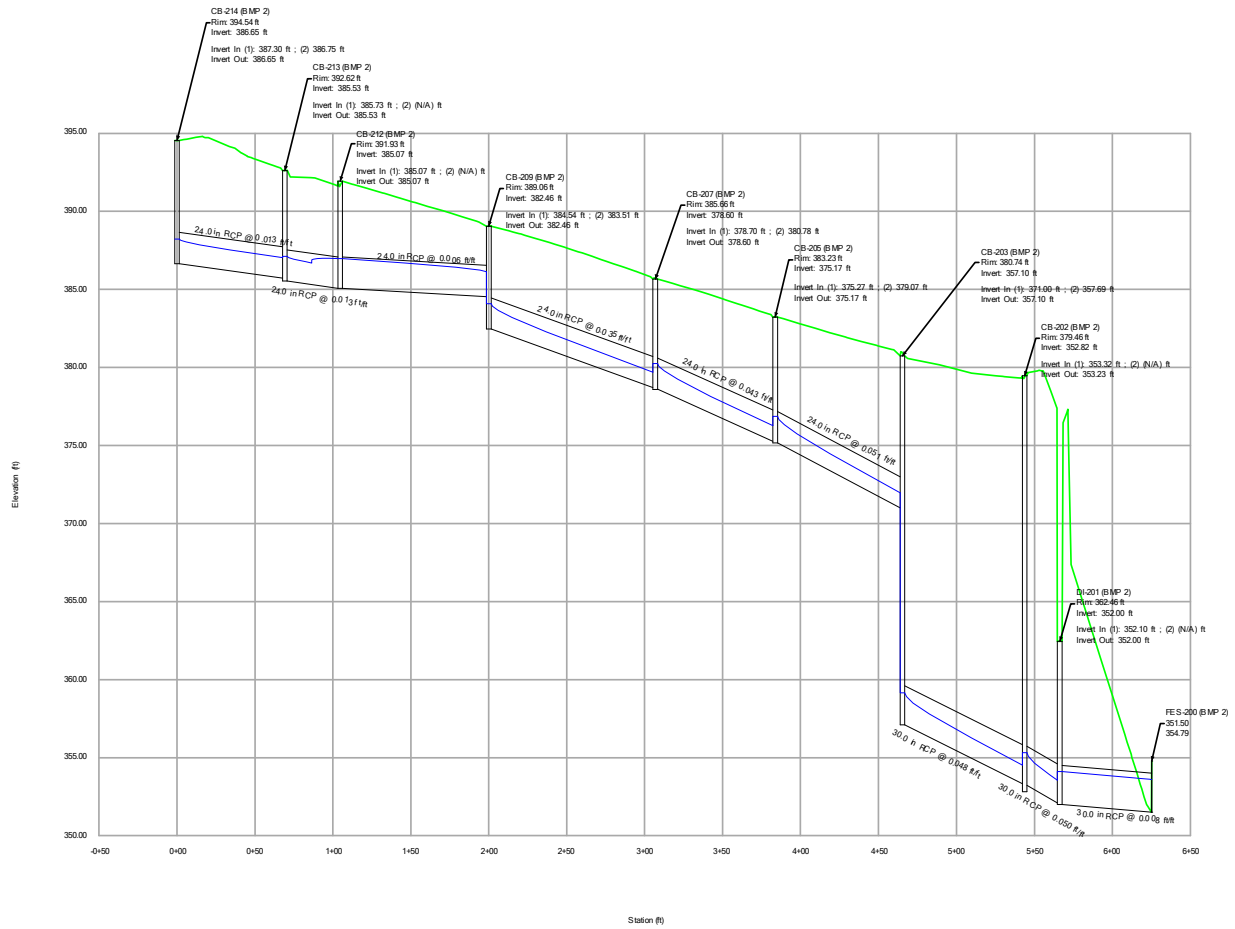
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-283 TO DI-293 (BMP 2)	24.0	0.005	4.96	4.31	7.91	15.48	381.23	380.98
CB-253 TO CB-254 (BMP 2)	24.0	0.022	6.35	6.21	14.73	33.18	383.68	380.82
CB-209 TO CB-210 (BMP 2)	15.0	0.011	2.68	1.18	0.65	6.85	384.13	384.08
CB-207 TO CB-209 (BMP 2)	24.0	0.035	7.48	13.04	20.38	42.44	384.08	379.70
DI-2002 TO DI-2003 (BMP 2)	15.0	0.157	3.91	3.17	2.32	25.56	386.61	378.72
DI-293 TO DI-294 (BMP 2)	15.0	0.078	4.07	10.46	2.62	18.02	385.79	380.92
CB-282 TO DI-290 (BMP 2)	15.0	0.080	3.93	2.71	2.35	18.27	384.14	381.57
CB-281 TO CB-282 (BMP 2)	15.0	0.020	4.87	4.26	4.23	9.06	381.57	380.51
CB-280 TO CB-281 (BMP 2)	18.0	0.010	5.09	6.20	5.94	10.75	380.51	379.90
CB-279 TO CB-280 (BMP 2)	24.0	0.011	4.15	2.93	7.27	23.84	375.59	375.67
CB-267 TO CB-279 (BMP 2)	24.0	0.008	7.42	7.17	20.81	20.51	375.67	375.34
DI-232 TO DI-233 (BMP 2)	18.0	0.056	4.33	3.92	3.77	24.83	382.24	376.30
CB-252 TO CB-253 (BMP 2)	24.0	0.023	6.47	10.51	15.34	34.05	380.82	377.74
CB-268 TO CB-270 (BMP 2)	15.0	0.010	4.82	5.63	4.13	6.54	378.30	376.97
CB-270 TO CB-271 (BMP 2)	15.0	0.007	3.52	3.96	1.66	5.56	378.83	378.59
CB-271 TO DI-275 (BMP 2)	15.0	0.005	2.67	2.71	0.68	4.58	380.33	379.65
CB-207 TO CB-208 (BMP 2)	15.0	0.005	2.78	2.80	0.76	4.62	381.26	381.12
CB-205 TO CB-207 (BMP 2)	24.0	0.043	7.67	13.66	21.29	47.05	380.25	376.27
DI-2004 TO DI-2005 (BMP 2)	15.0	0.040	1.34	0.07	0.05	12.84	380.85	376.19
DI-293 TO DI-297 (BMP 2)	18.0	0.012	4.02	3.07	3.01	11.58	382.16	381.23
CB-252 TO CB-267 (BMP 2)	30.0	0.008	7.52	6.86	29.10	37.00	375.34	375.30
DI-251 TO CB-252 (BMP 2)	30.0	0.075	9.65	20.95	44.37	112.60	375.30	363.12
CB-267 TO CB-268 (BMP 2)	24.0	0.007	3.56	2.85	7.62	18.34	375.34	375.34
CB-268 TO CB-269 (BMP 2)	24.0	0.011	0.82	0.57	1.11	23.86	375.34	375.34
CB-205 TO CB-206 (BMP 2)	15.0	0.015	2.61	3.77	0.59	7.90	379.80	379.31
CB-203 TO CB-205 (BMP 2)	24.0	0.051	7.92	14.77	22.42	51.15	376.86	371.98
DI-2001 TO DI-2002 (BMP 2)	15.0	0.053	4.37	3.20	3.20	14.91	378.72	372.75

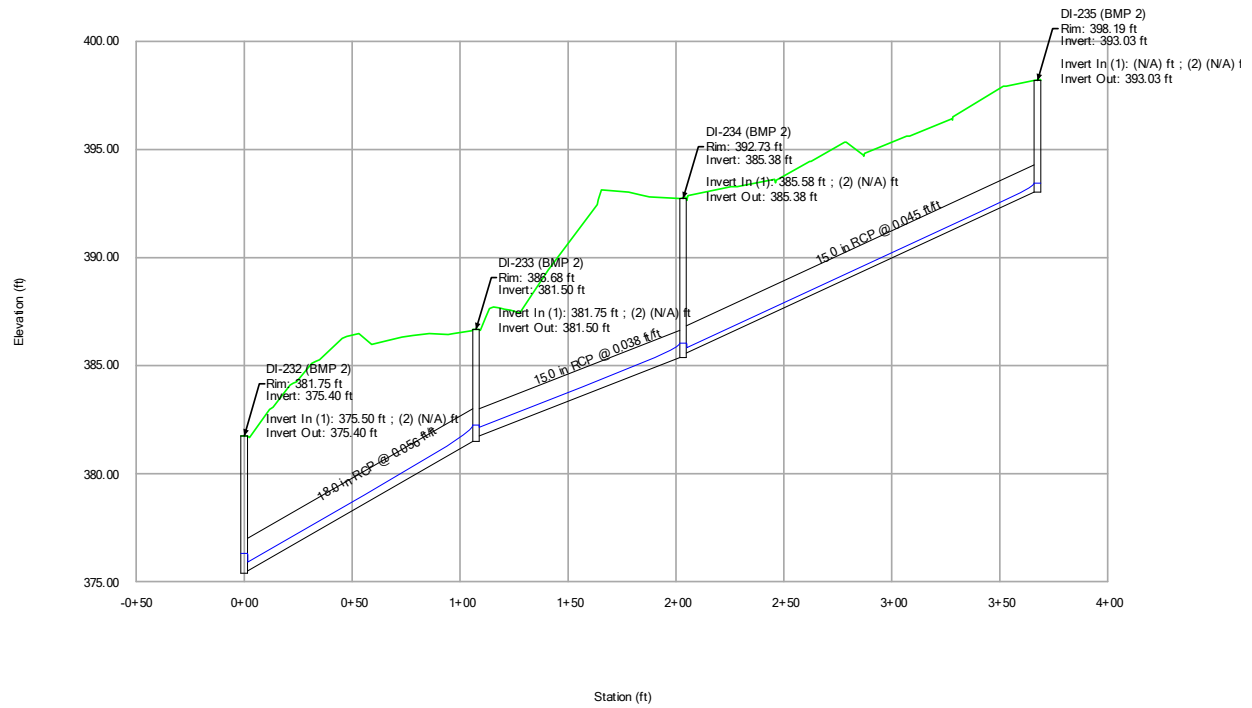
10-YR ANALYSIS
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-231 TO DI-232 (BMP 2)	18.0	0.039	4.93	9.91	5.48	20.76	376.30	371.03
CB-204 TO DI-228 (BMP 2)	24.0	0.008	5.79	6.57	11.75	19.80	360.78	359.61
CB-203 TO CB-204 (BMP 2)	24.0	0.025	5.84	4.90	12.03	35.84	359.65	359.15
CB-202 TO CB-203 (BMP 2)	30.0	0.048	8.49	15.60	36.55	90.05	359.15	354.53
CB-203 TO DI-2004 (BMP 2)	15.0	0.005	3.76	3.93	2.36	4.59	376.19	375.45
DI-201 TO CB-202 (BMP 2)	30.0	0.050	8.74	12.91	38.32	91.65	355.32	353.56
DI-228 TO DI-229 (BMP 2)	24.0	0.007	5.81	6.19	11.83	18.29	361.30	360.82
DI-251 TO DI-2001 (BMP 2)	15.0	0.060	5.49	11.74	5.49	15.87	372.75	365.51
DI-230 TO DI-231 (BMP 2)	18.0	0.072	5.33	13.05	6.66	28.18	371.40	362.00
FES-250 TO DI-251 (BMP 2)	30.0	0.038	10.82	15.84	51.38	80.13	357.32	353.07
DI-229 TO DI-230 (BMP 2)	24.0	0.005	5.18	4.69	8.63	16.56	362.00	361.30
FES-200 TO DI-201 (BMP 2)	30.0	0.008	8.76	8.78	38.62	37.78	354.10	353.60

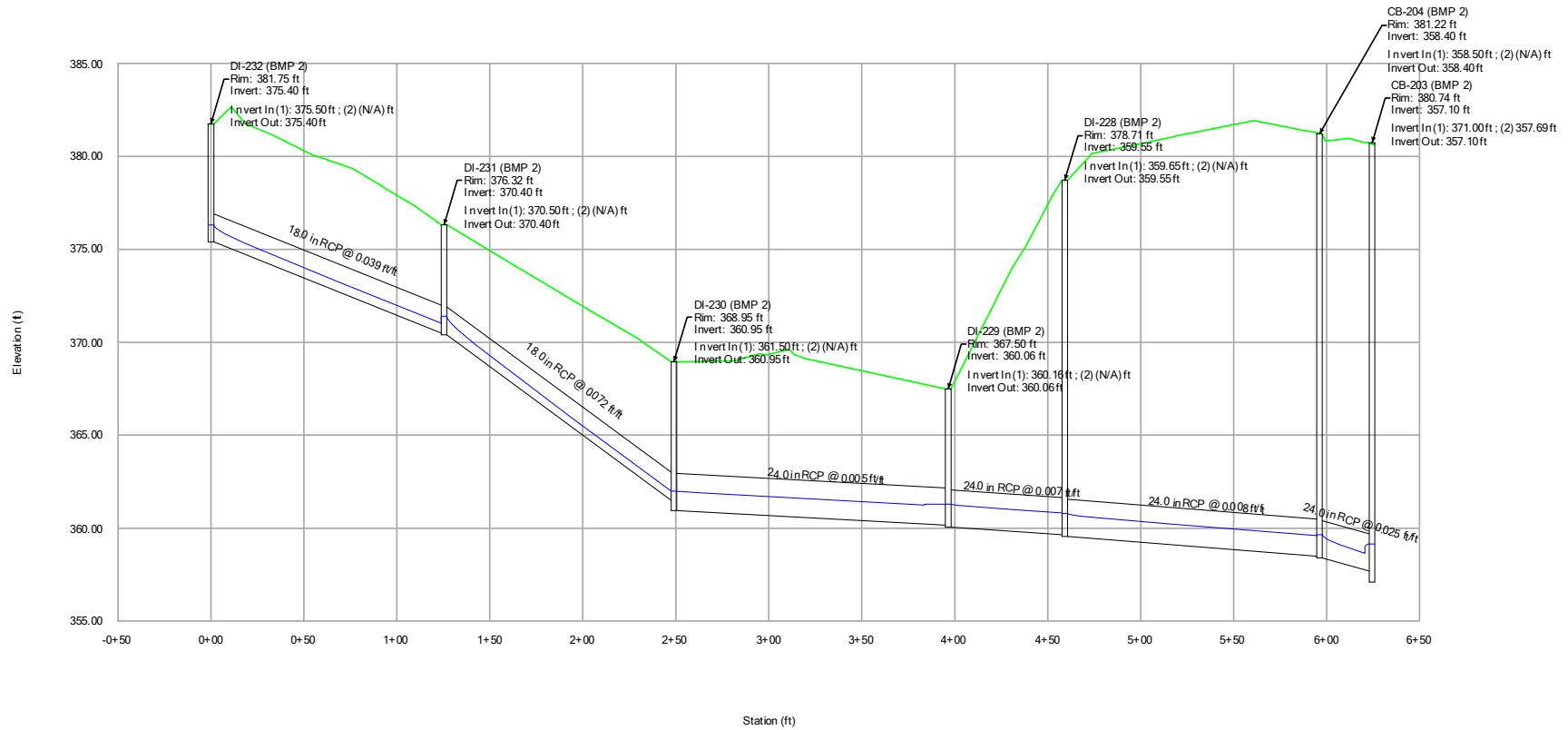
10-YR ANALYSIS



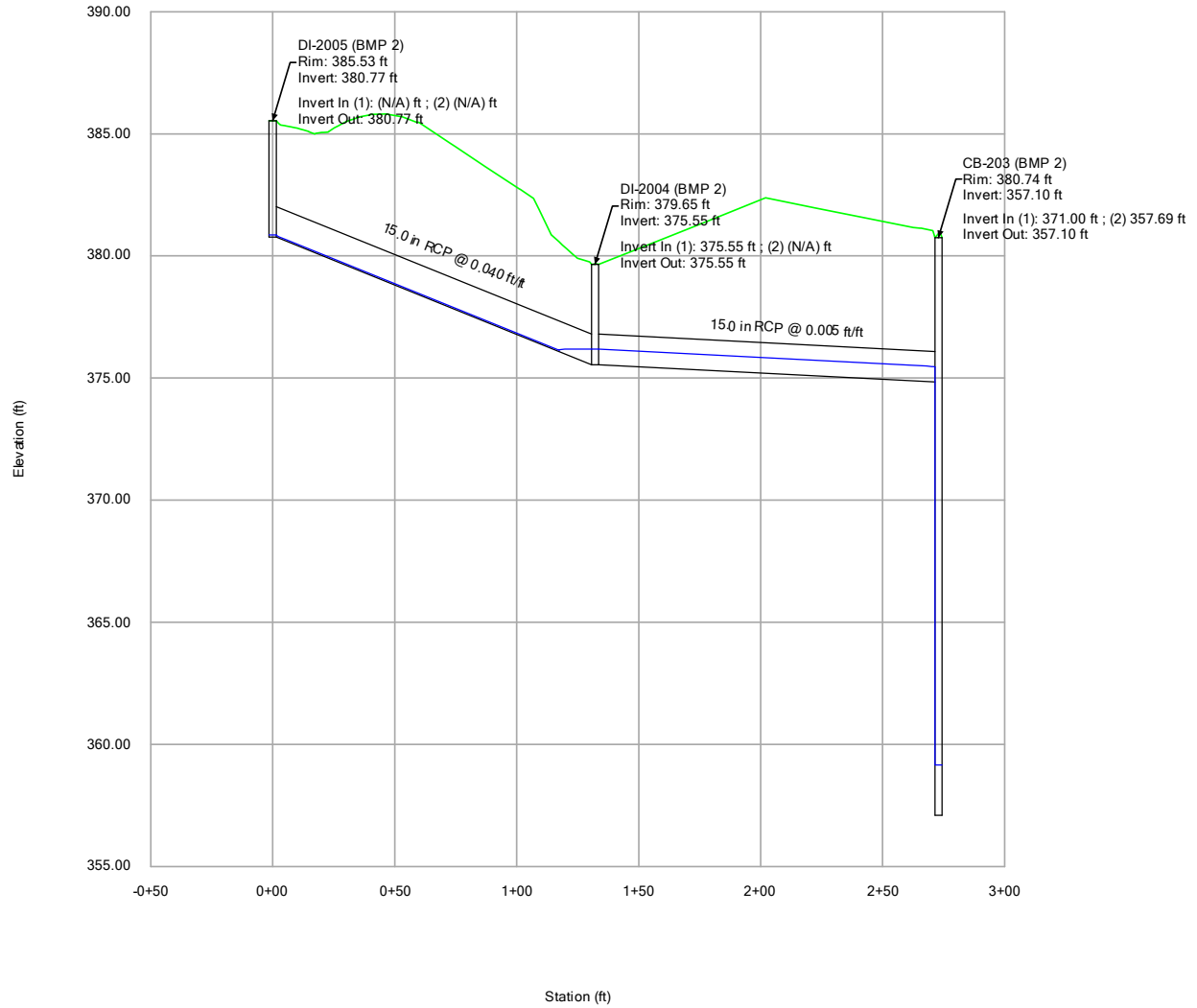
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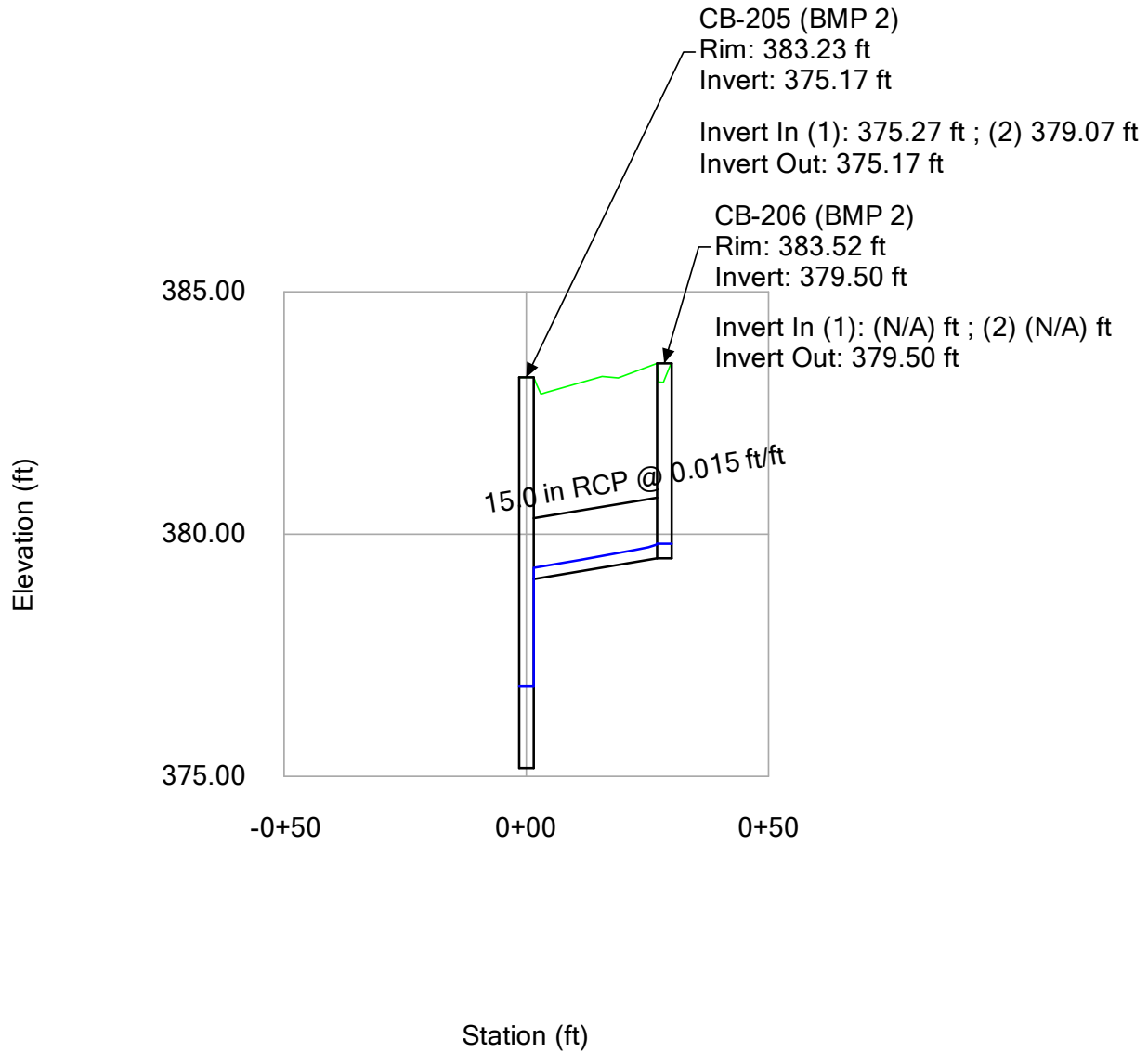
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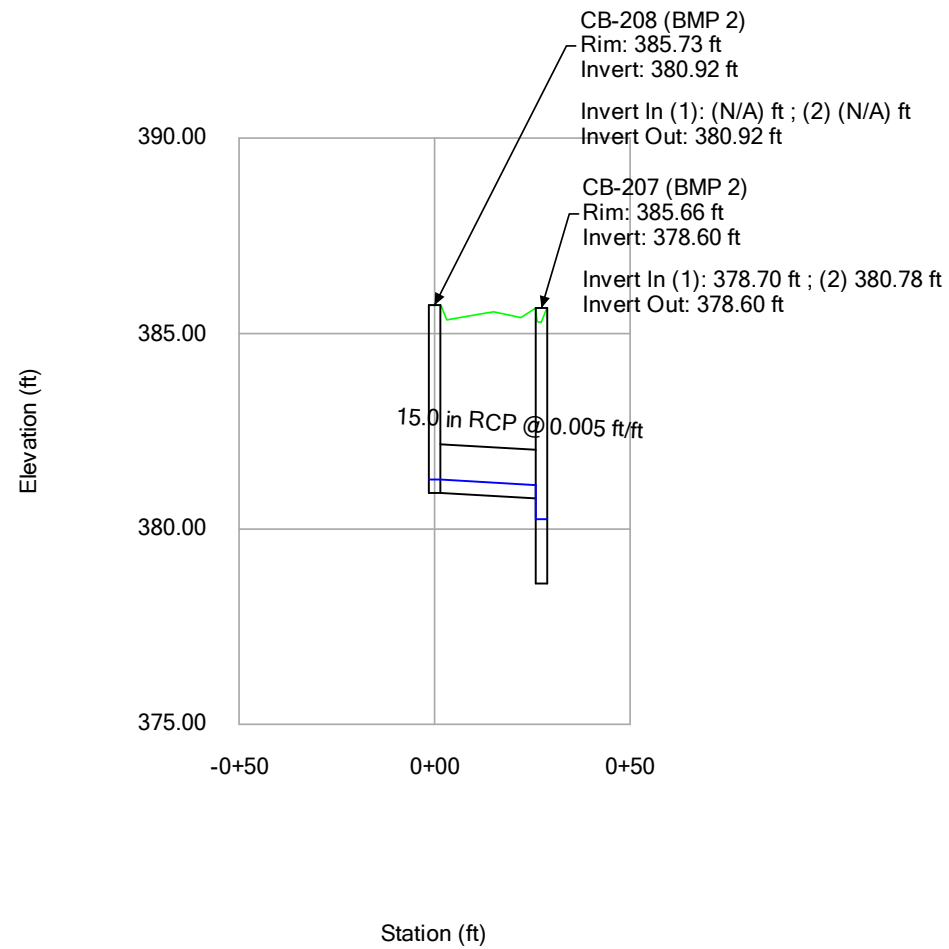
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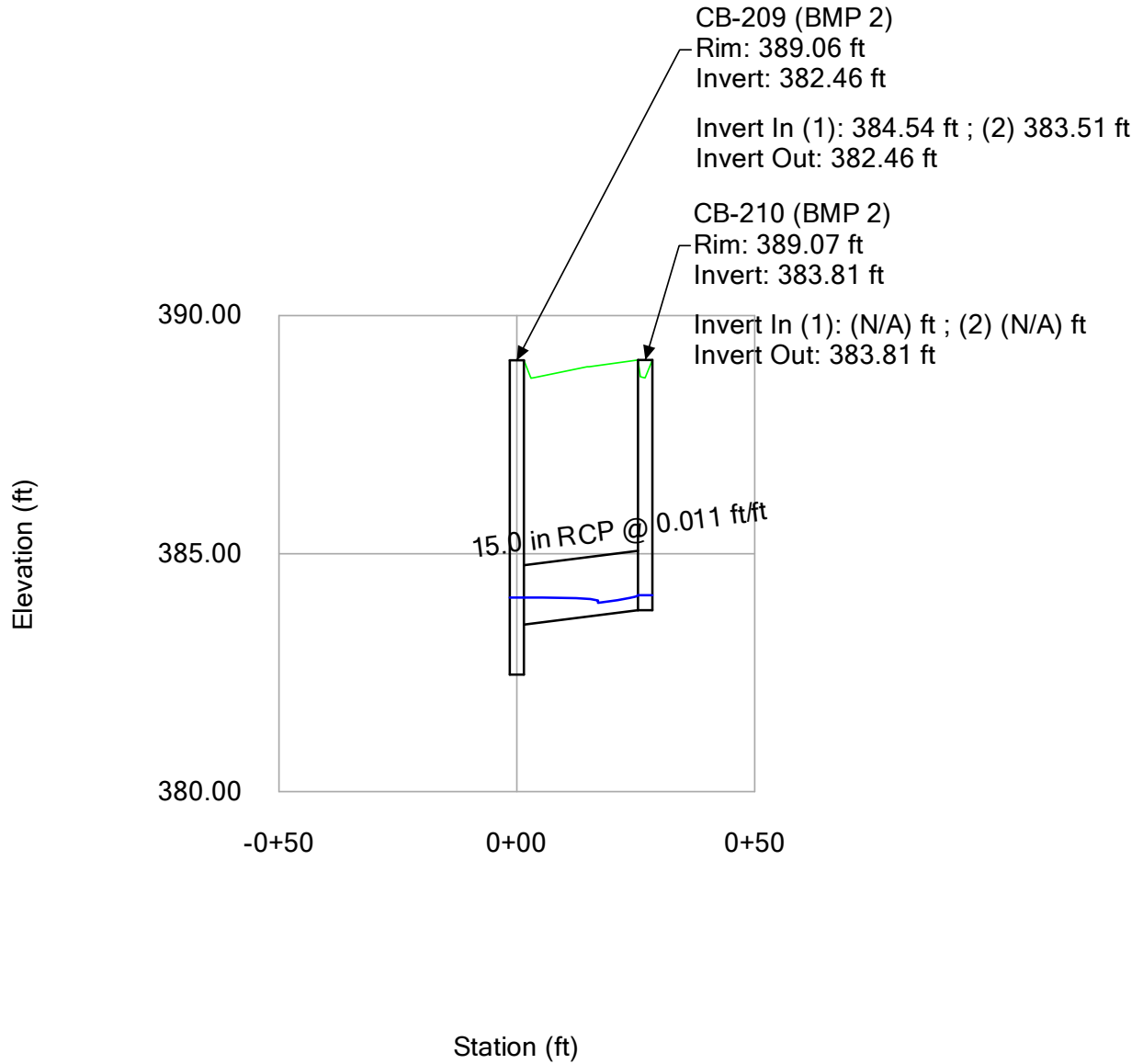
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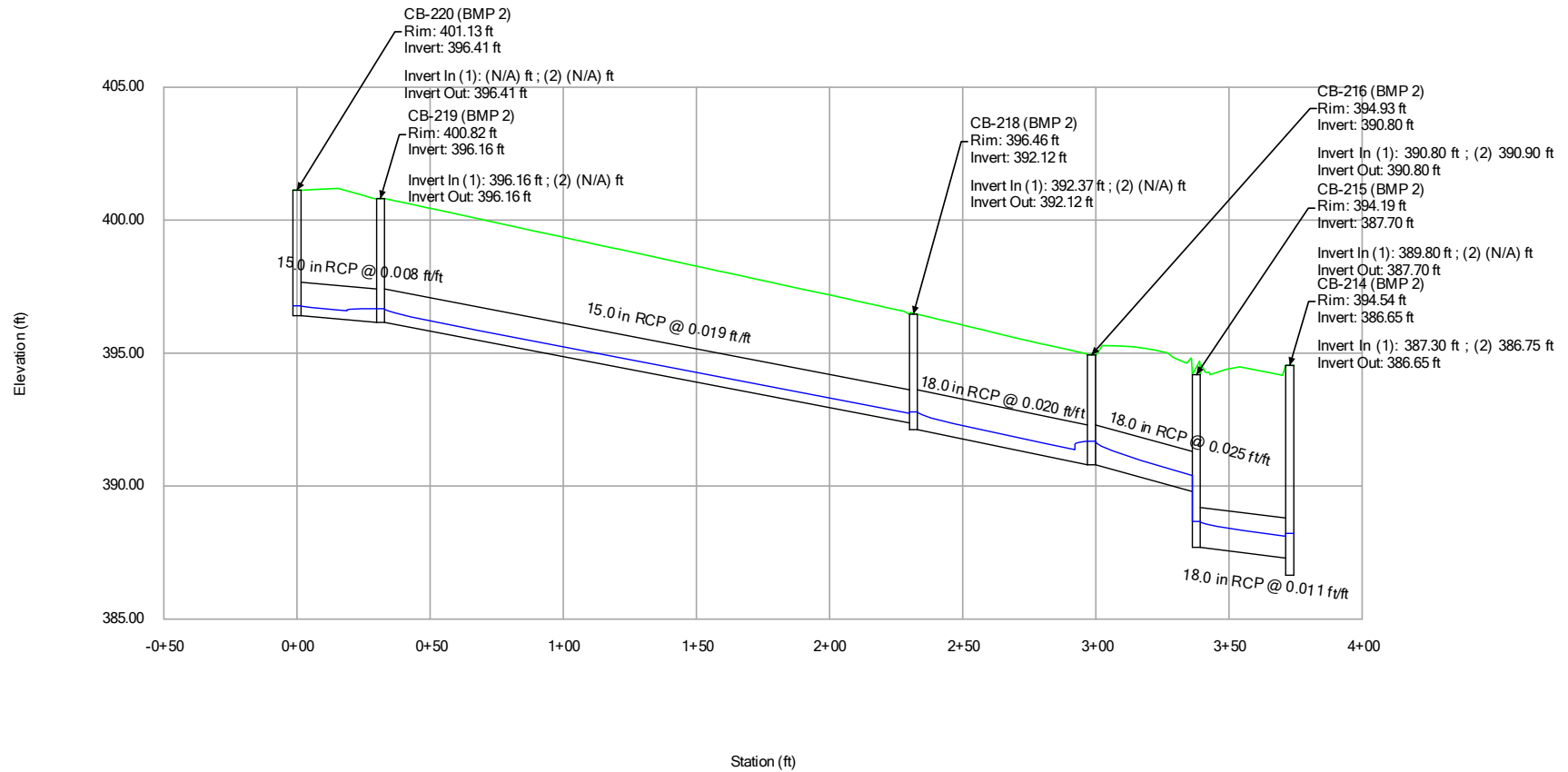
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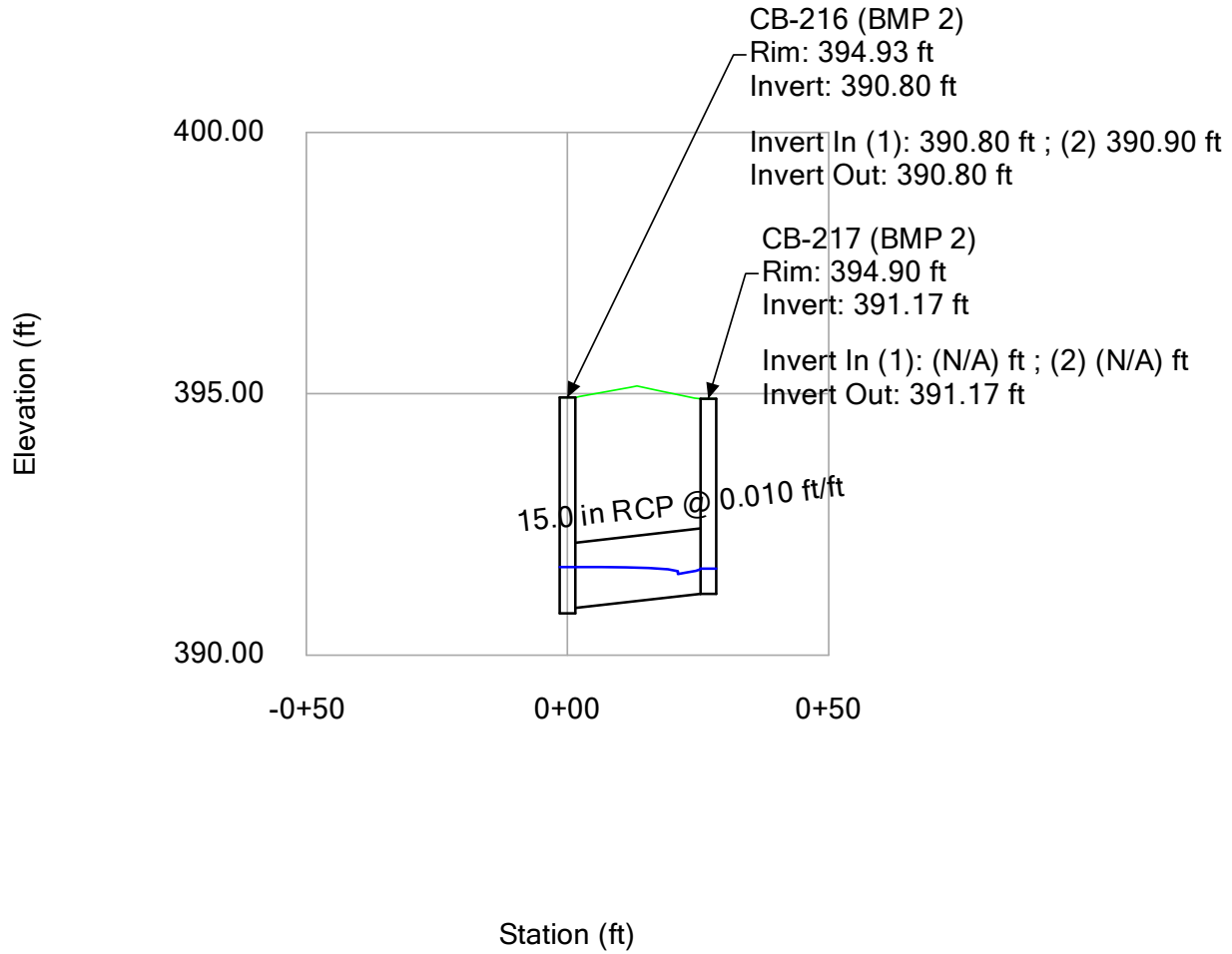
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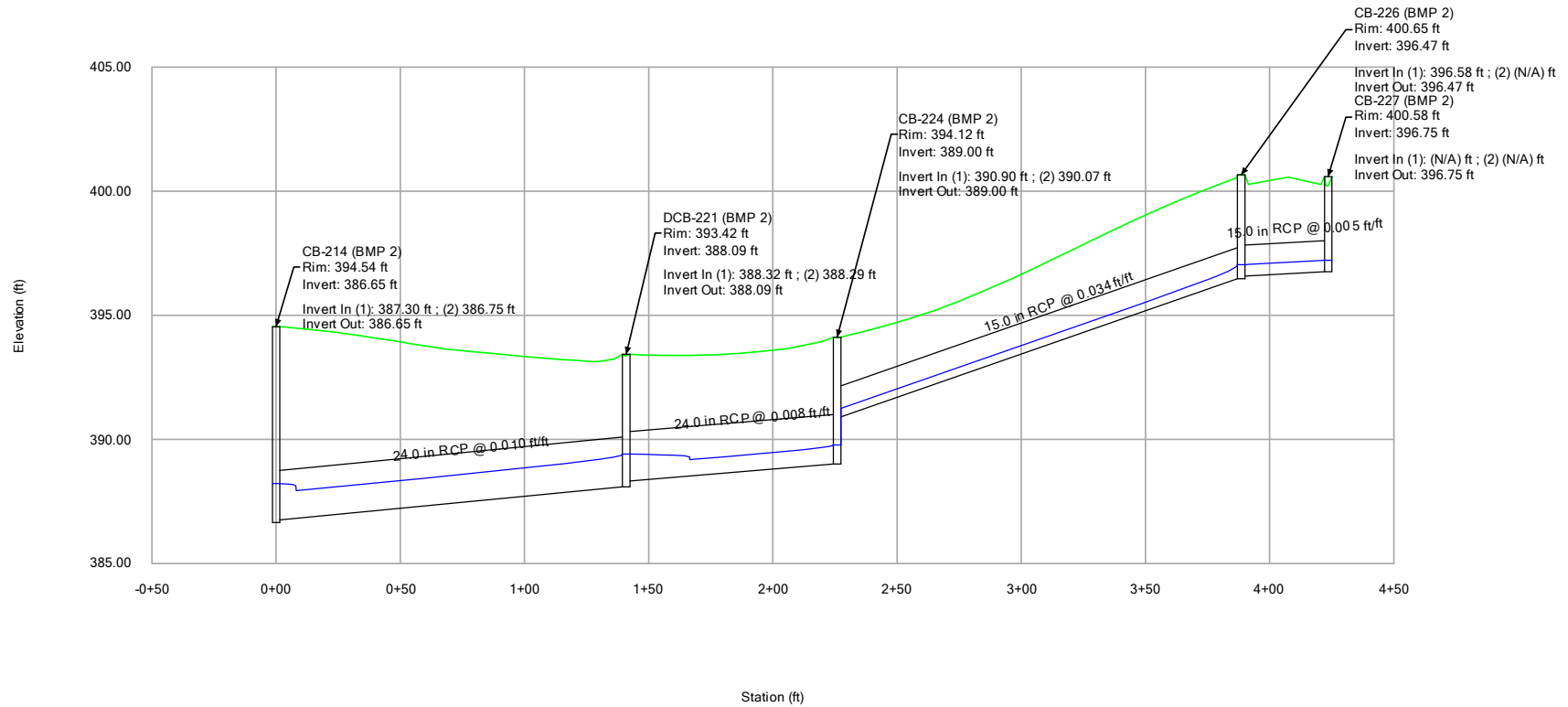
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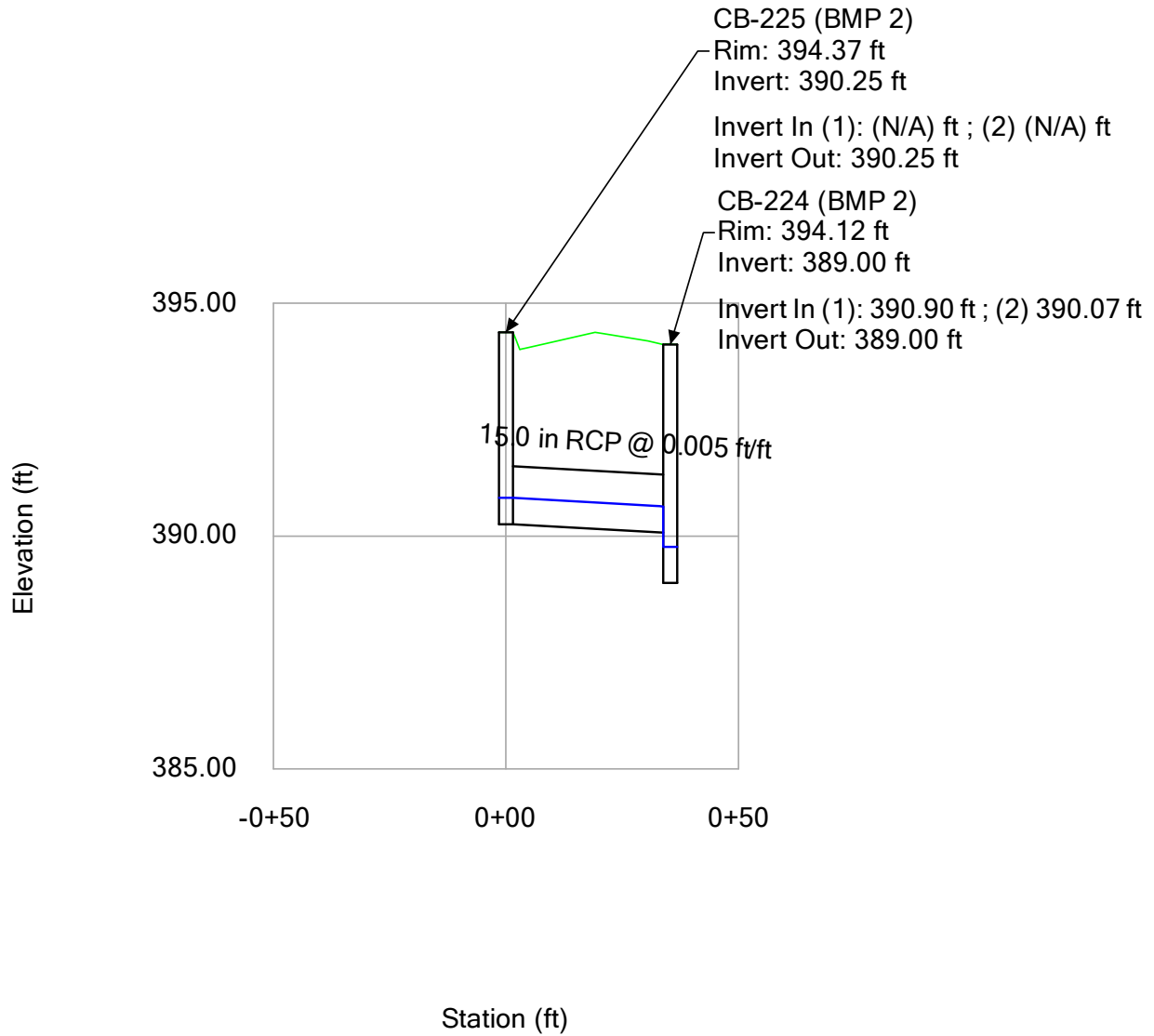
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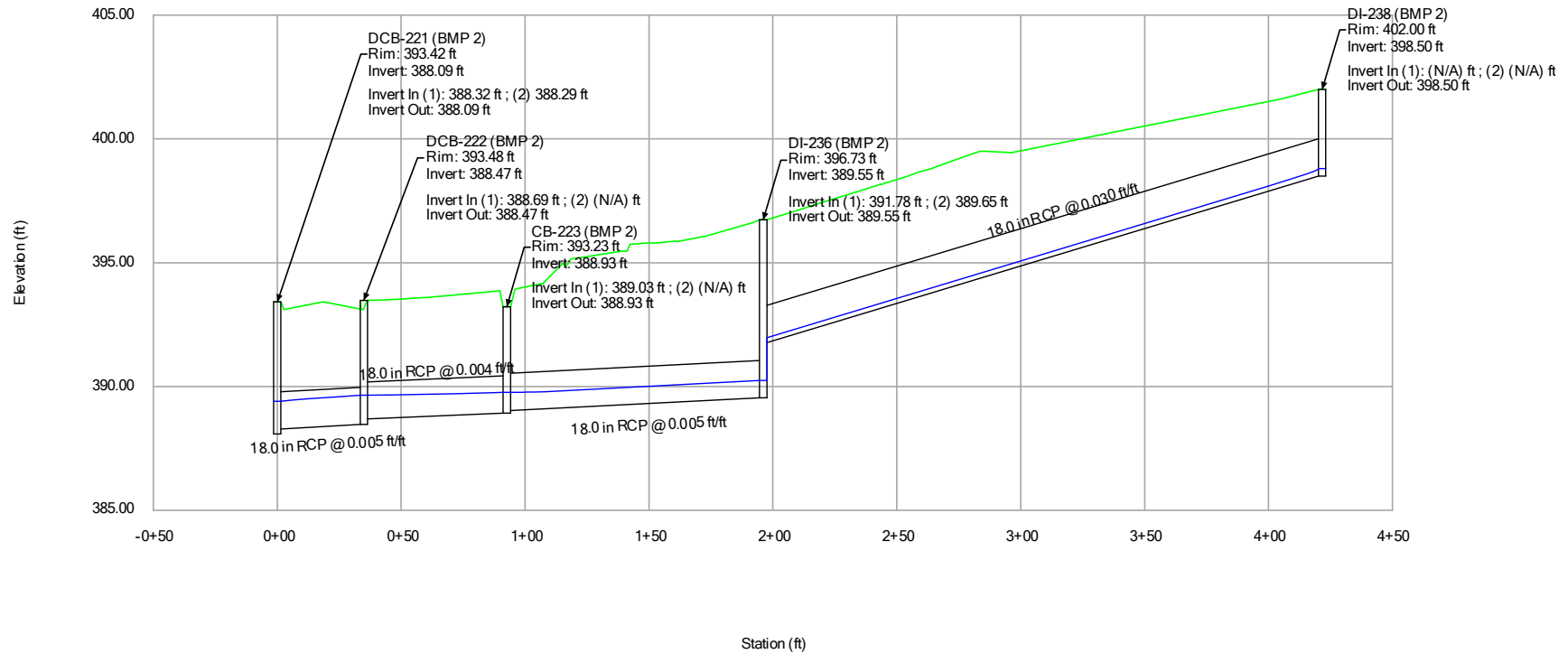
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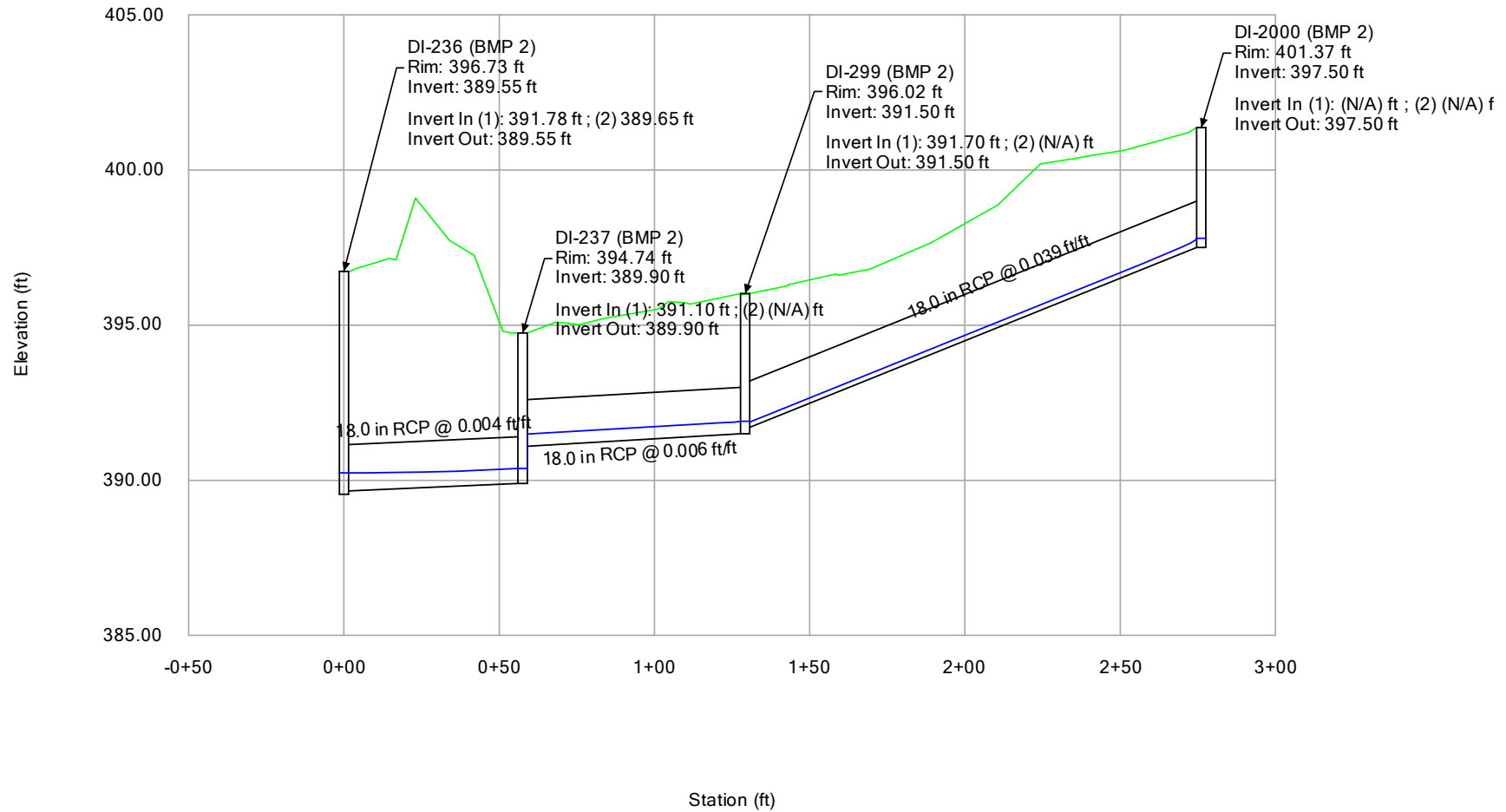
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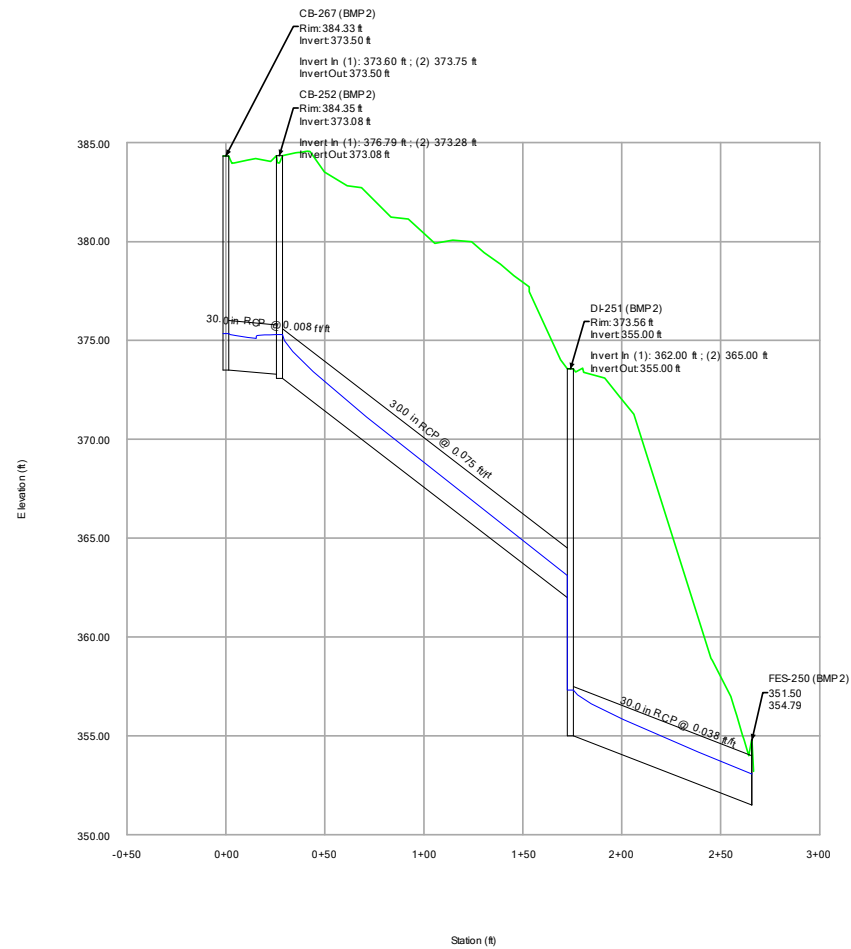
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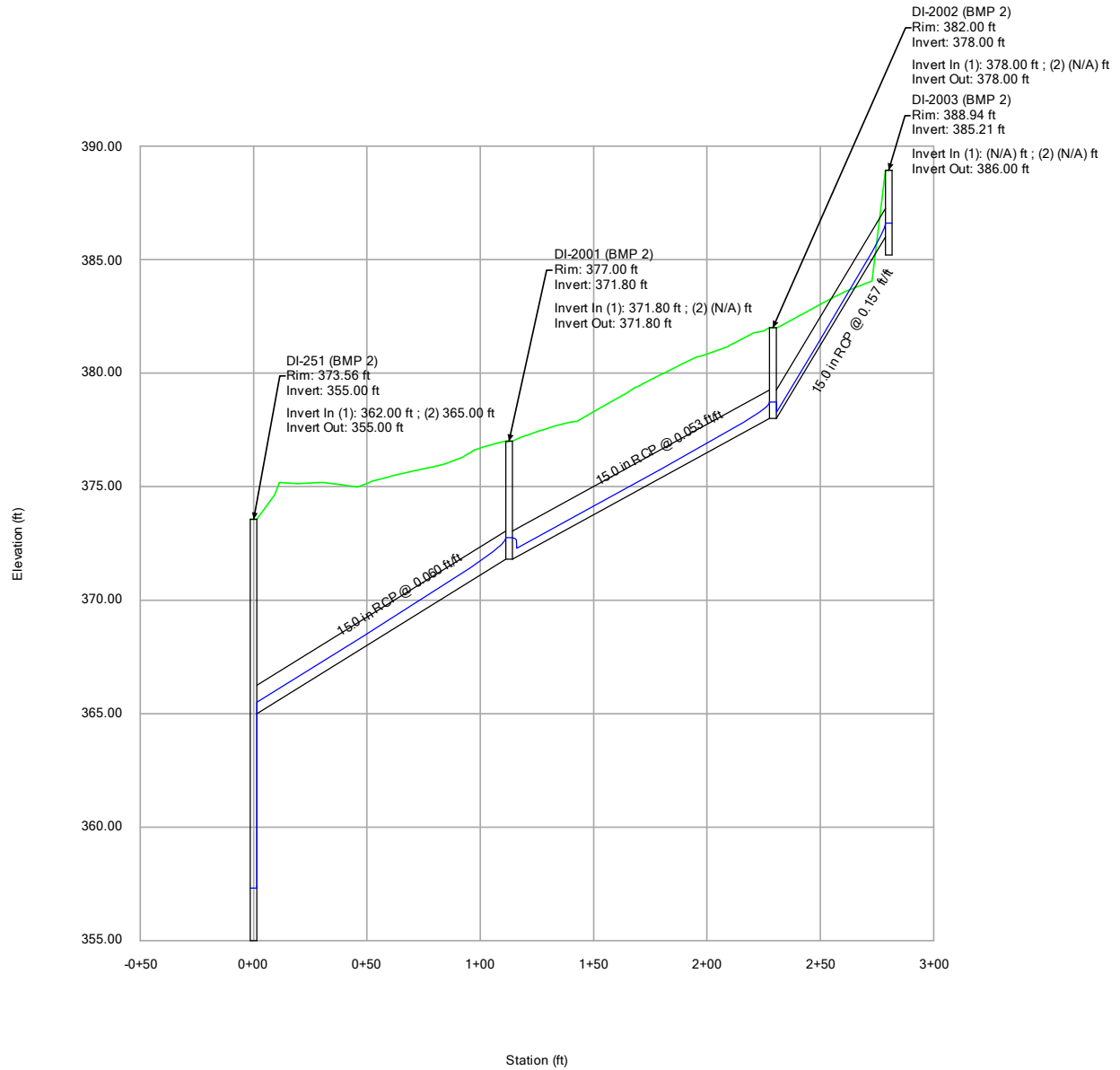
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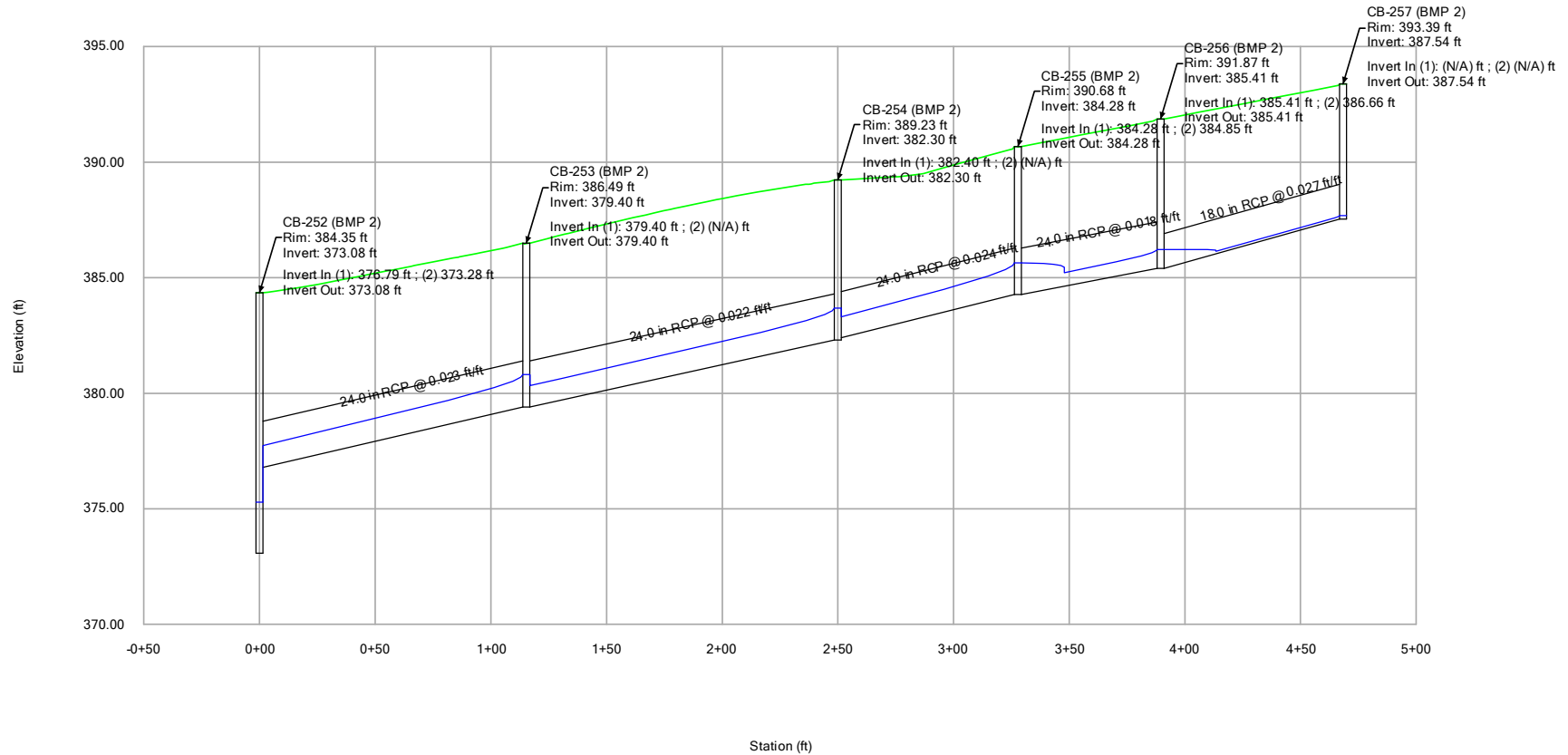
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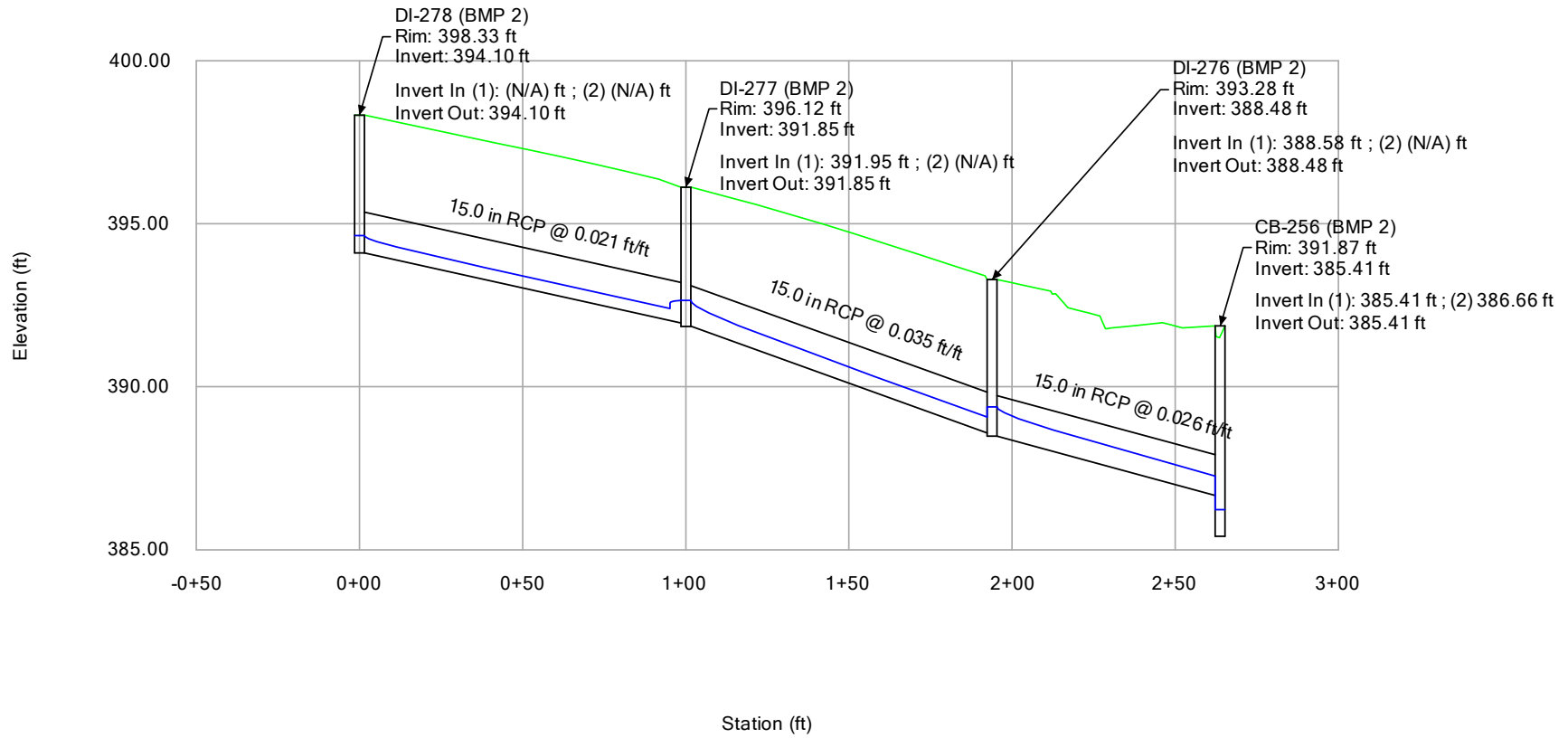
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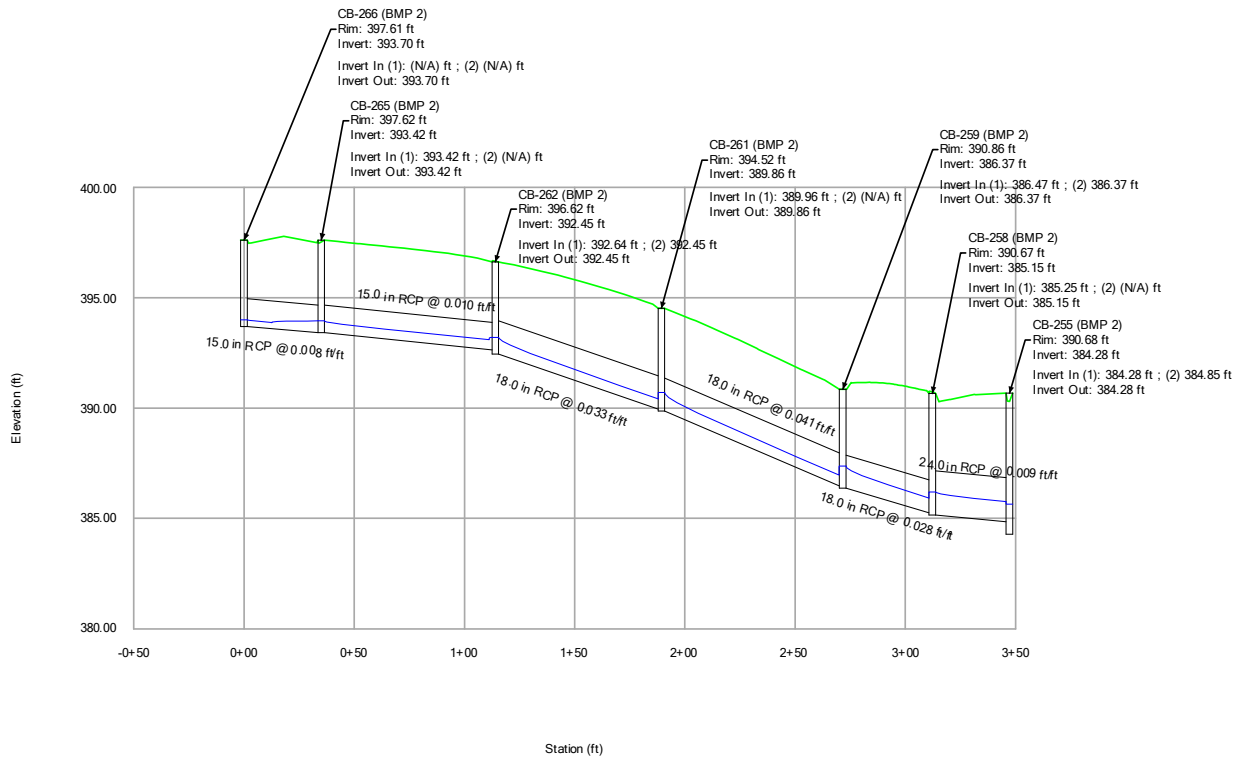
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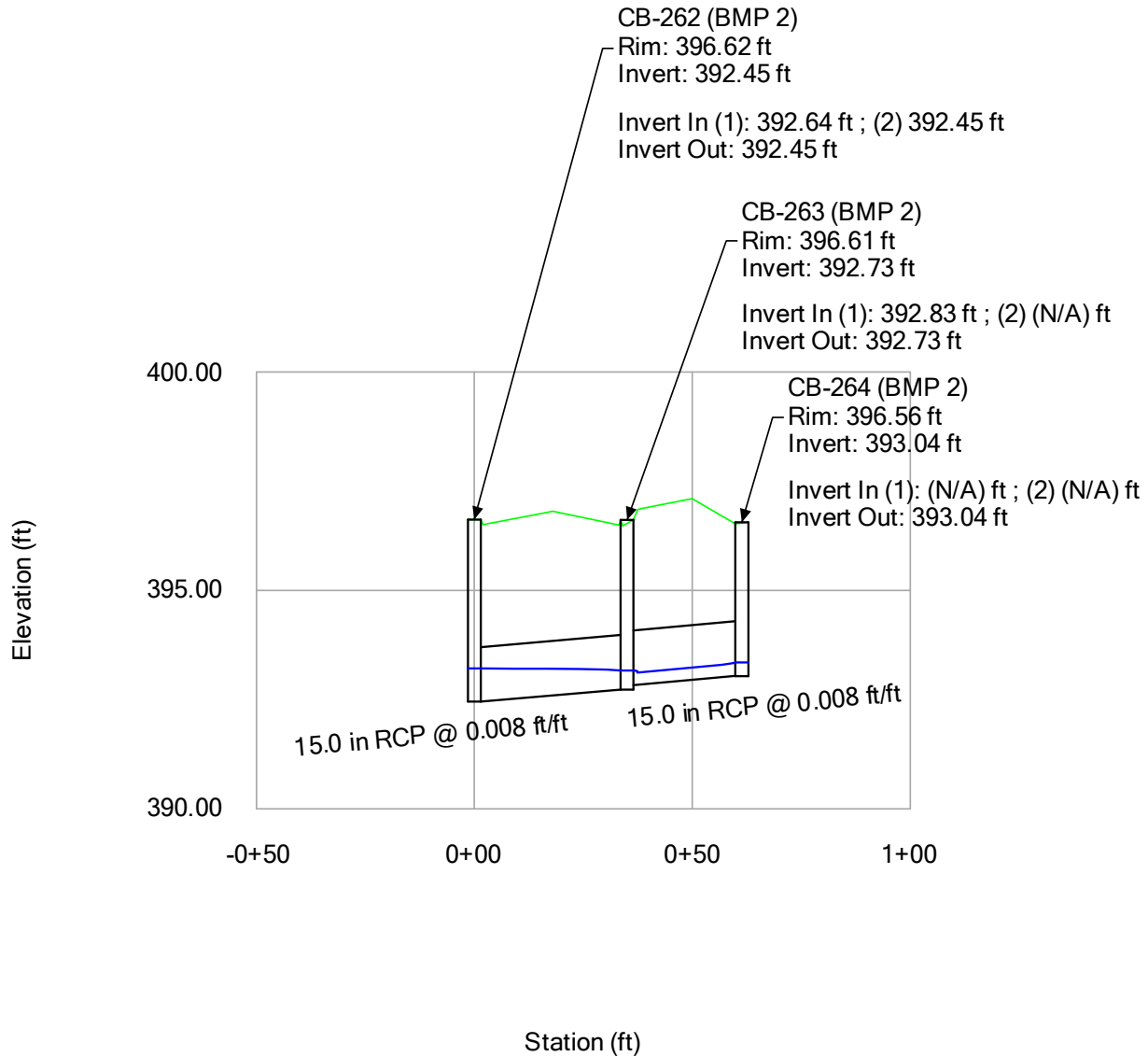
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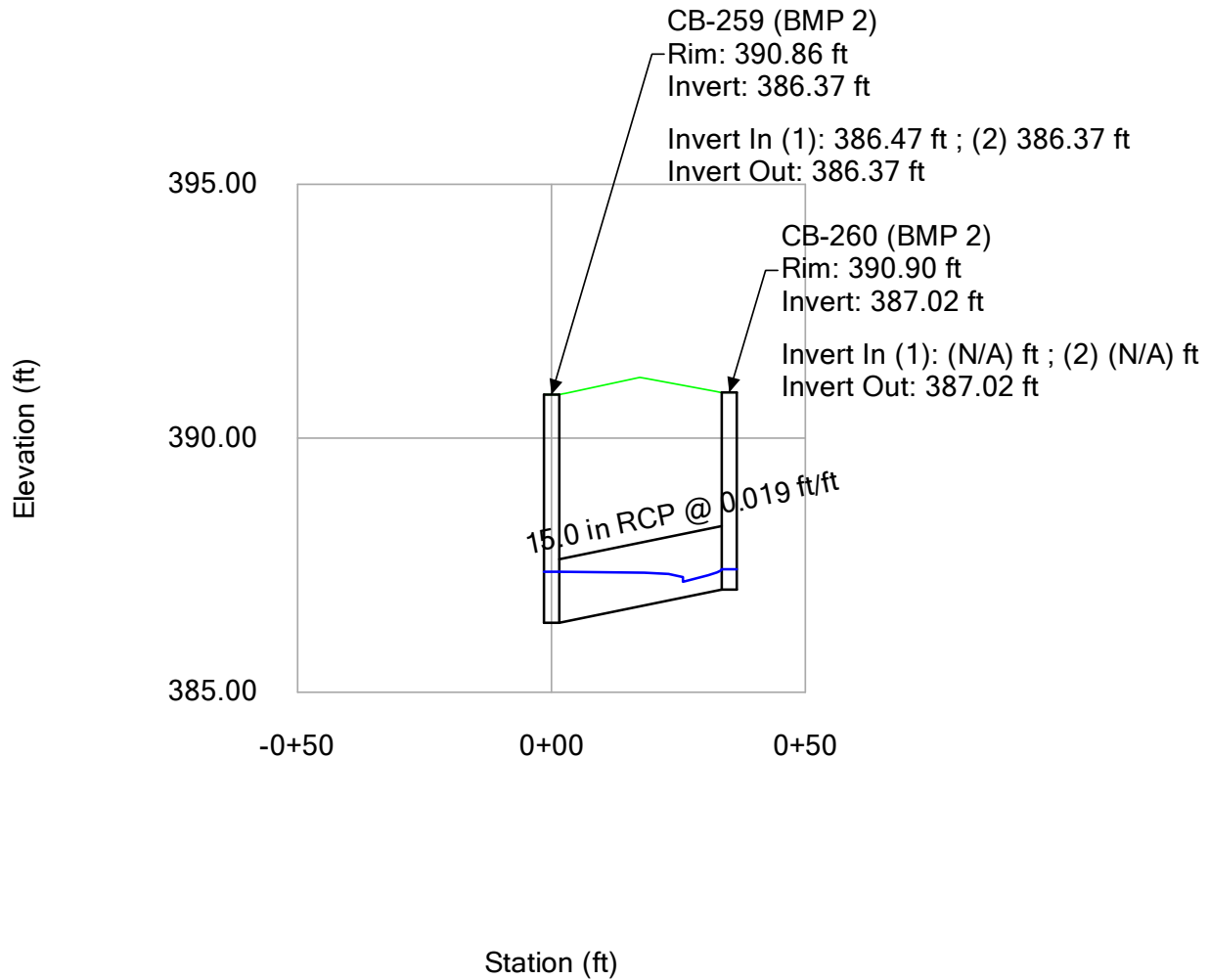
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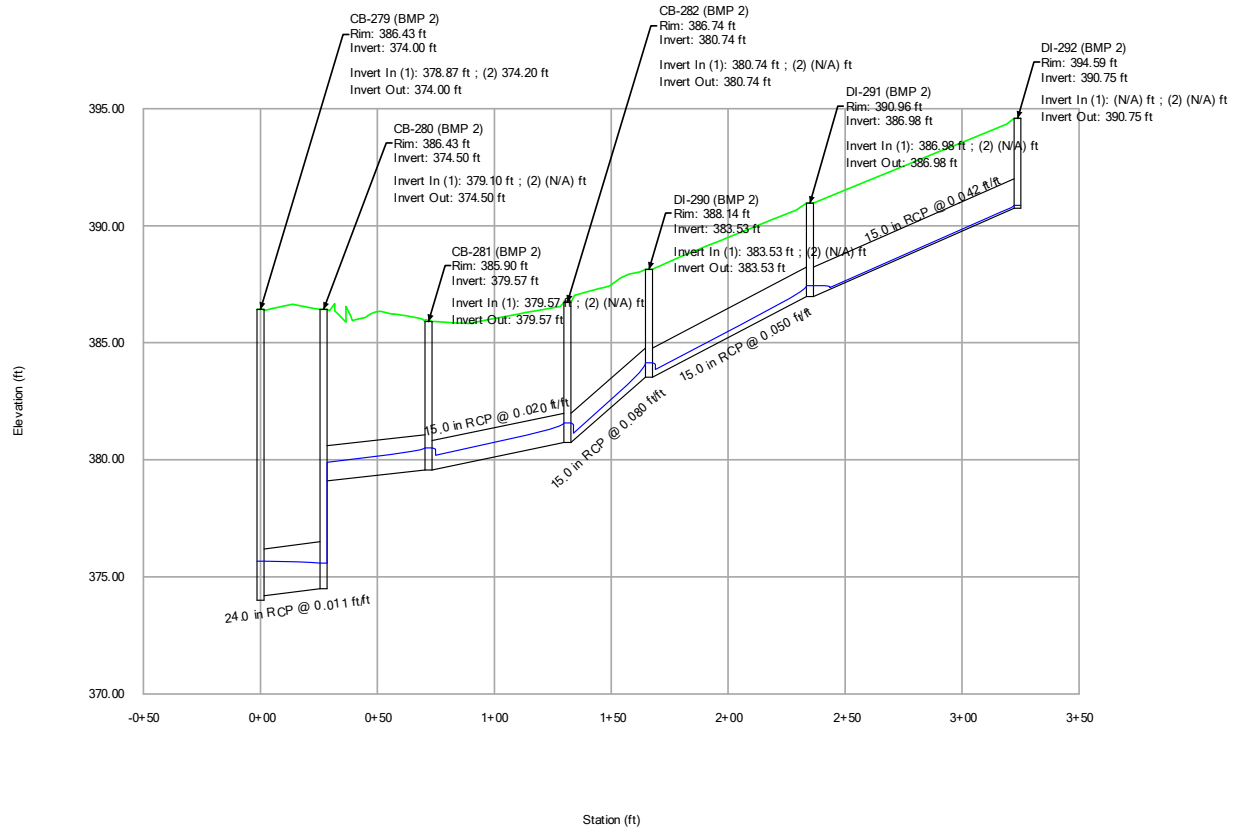
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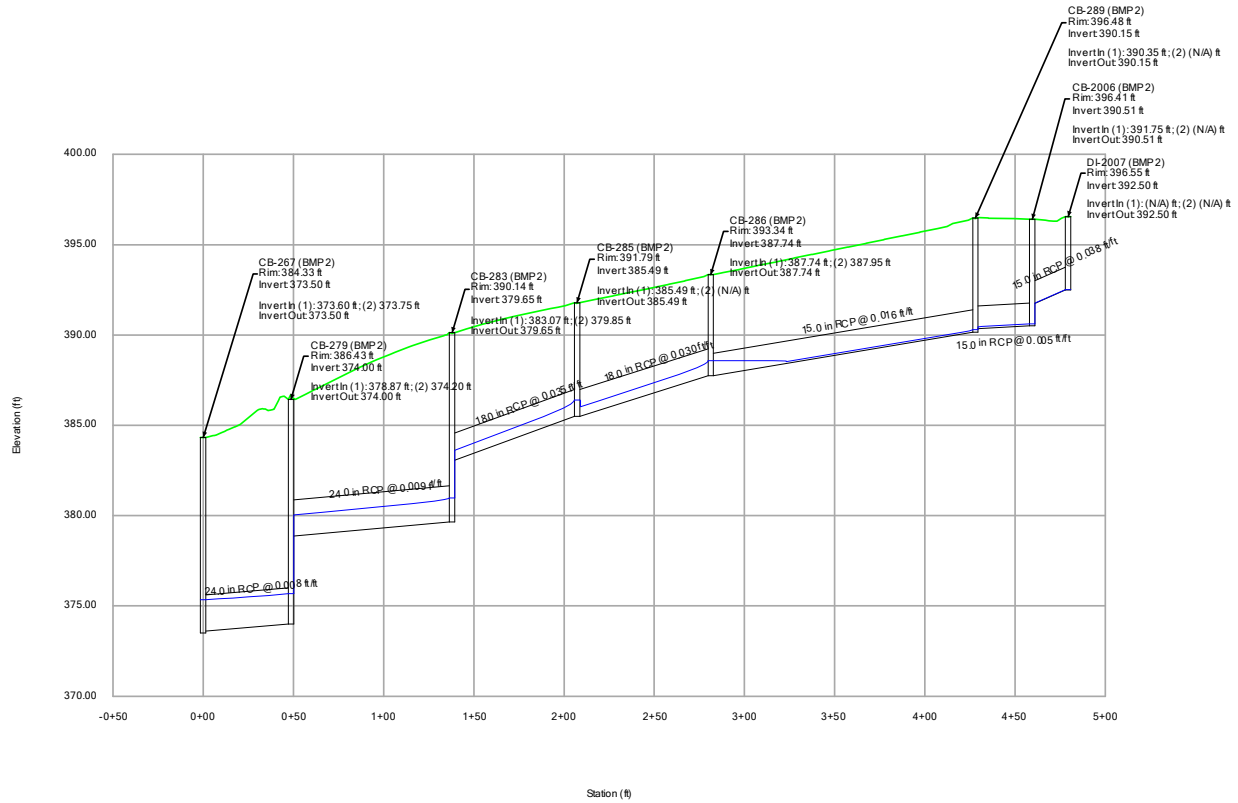
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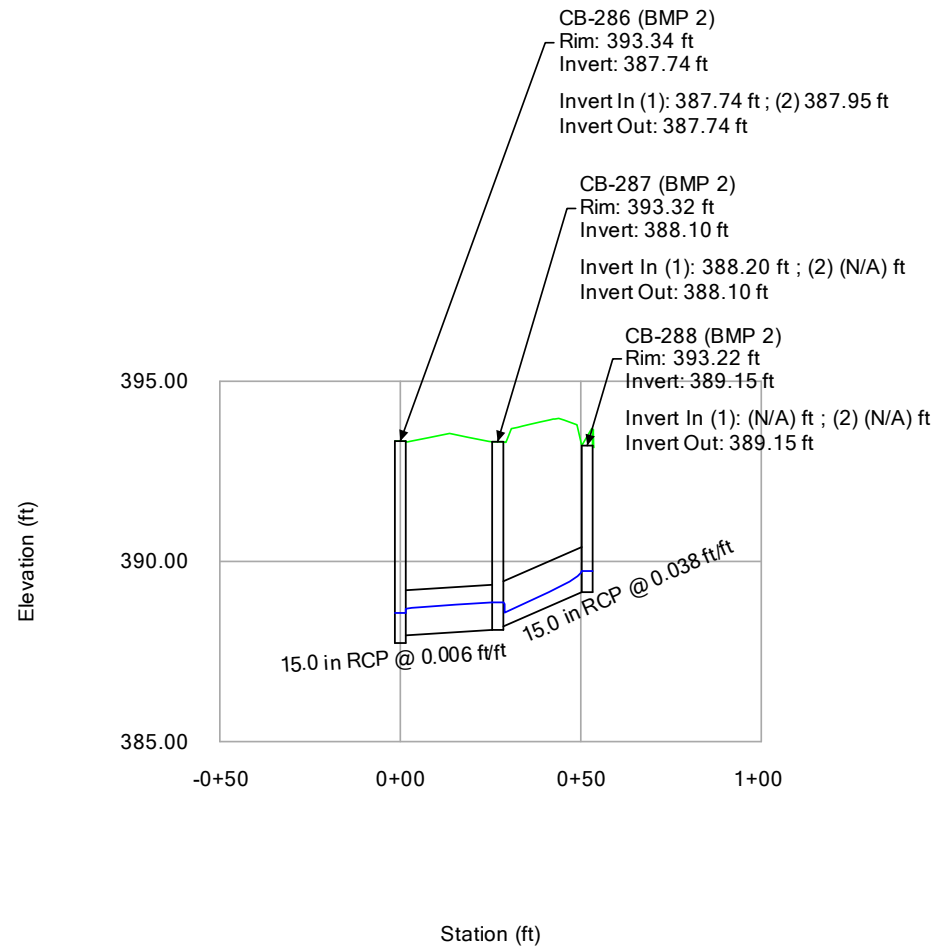
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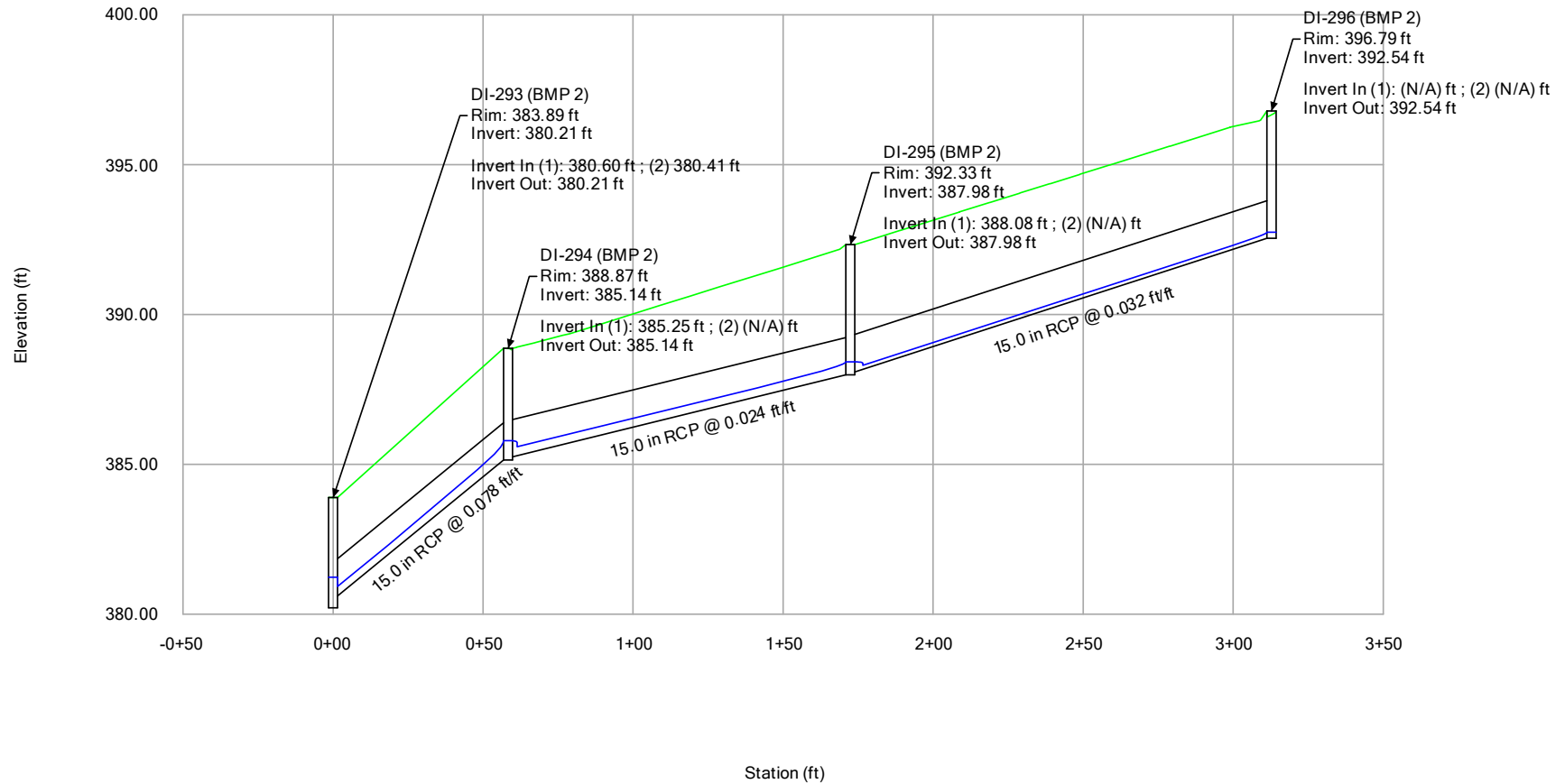
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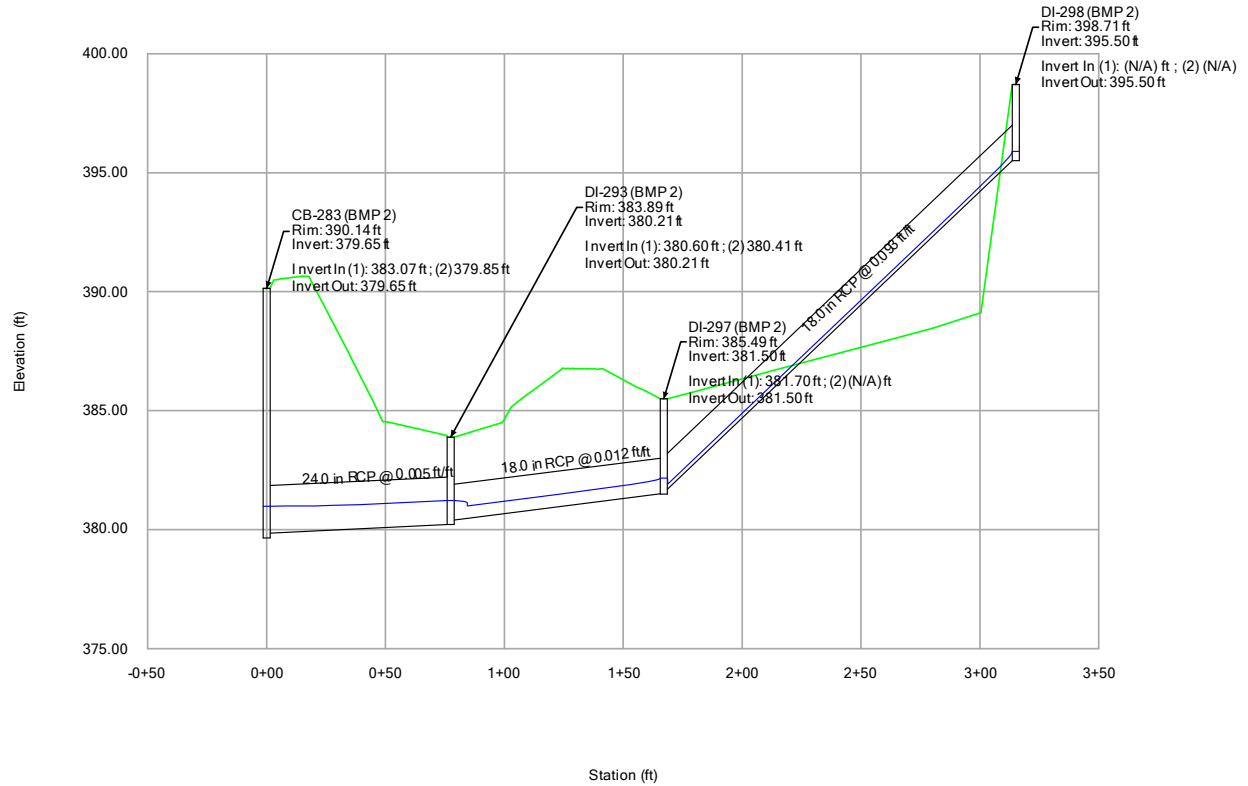
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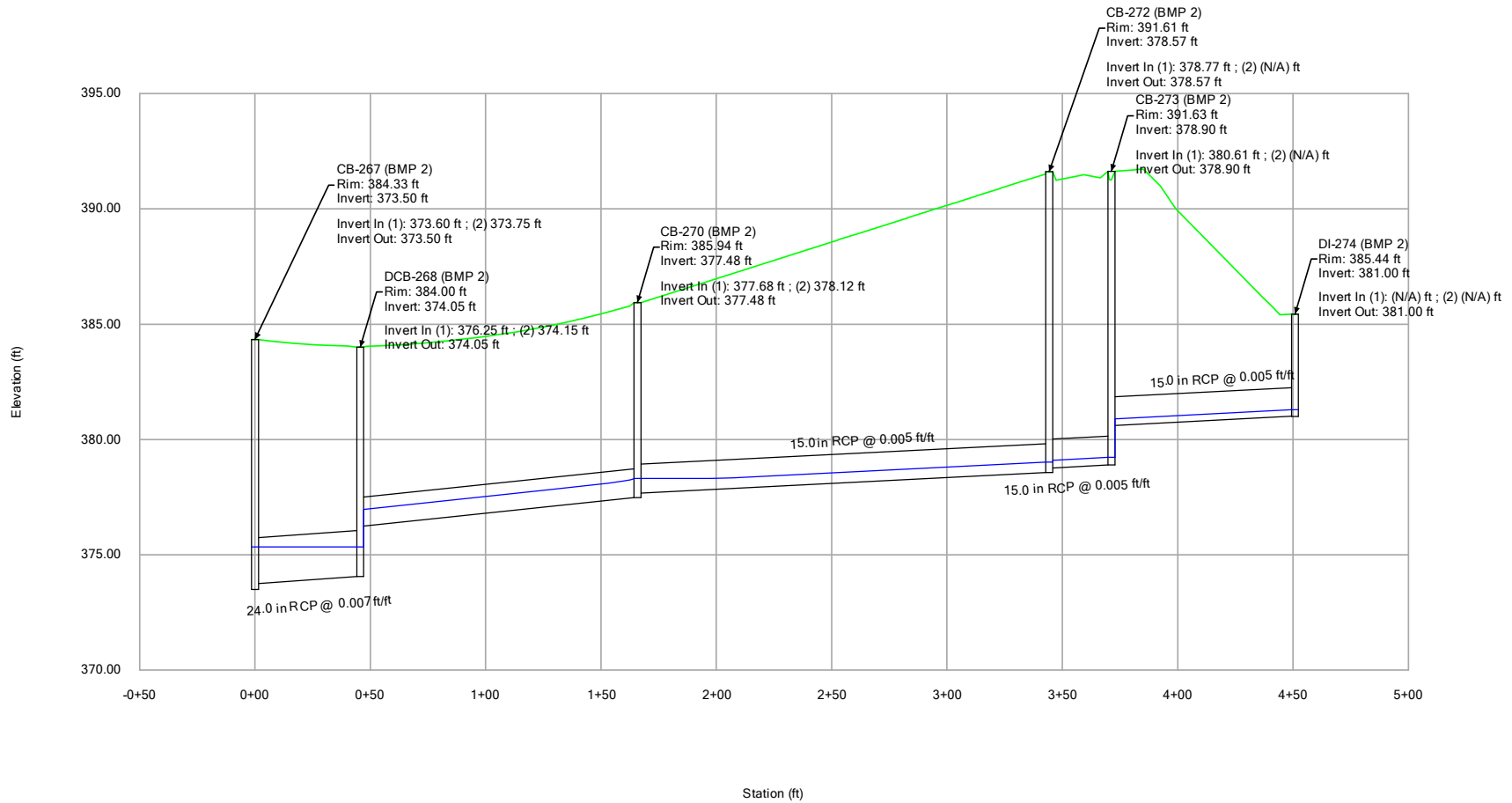
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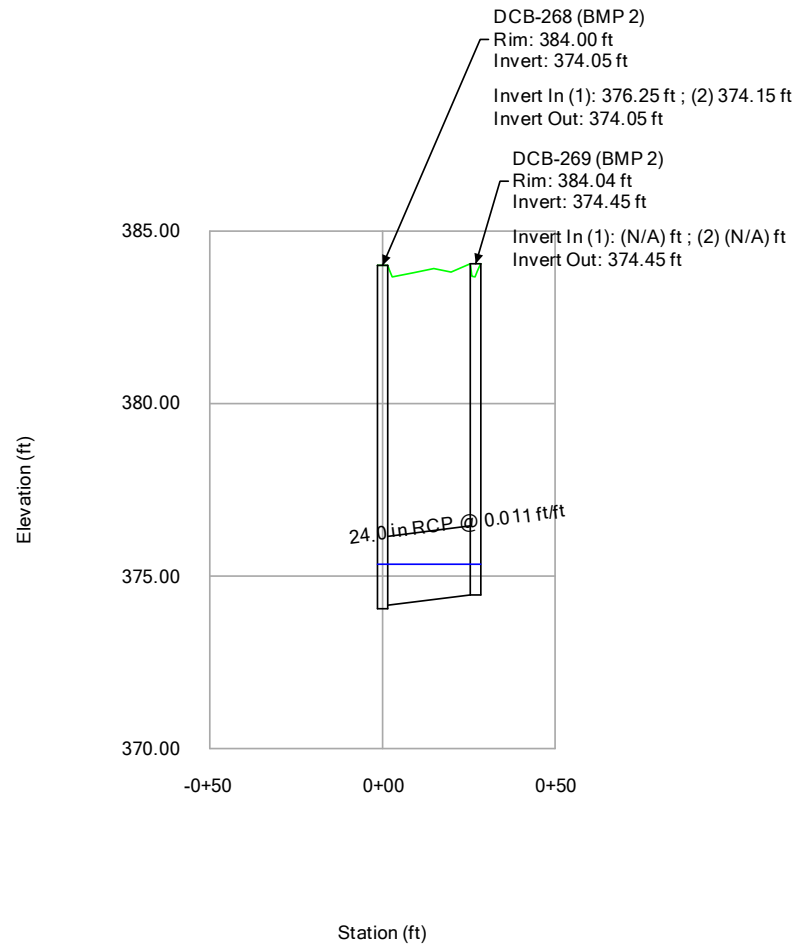
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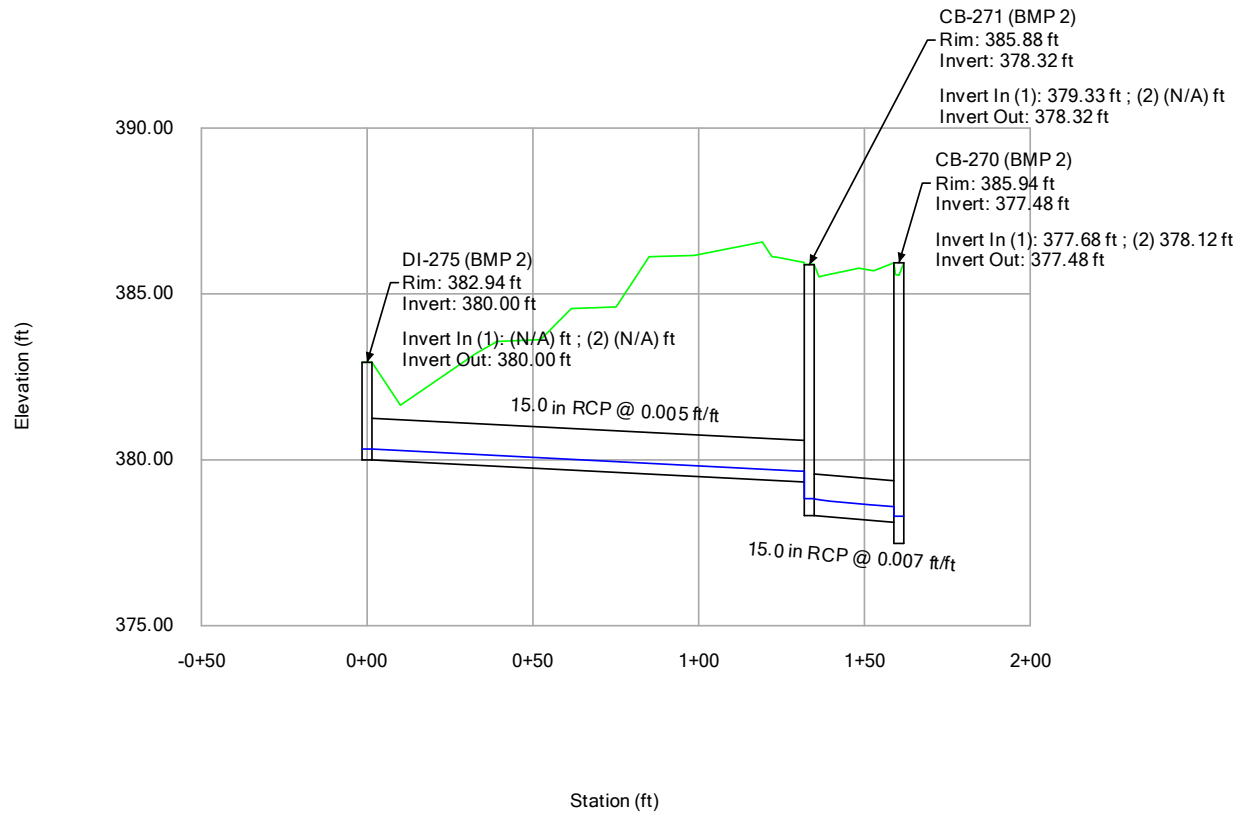
10-YR ANALYSIS



10-YR ANALYSIS



10-YR ANALYSIS



SCM 2 – 25 YR STORM

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-228 (BMP 2)	0.002	0.01	0.083	0.350
DI-2005 (BMP 2)	0.018	0.05	0.083	0.350
DI-2007 (BMP 2)	0.001	0.00	0.083	0.350
CB-289 (BMP 2)	0.024	0.07	0.083	0.350
DI-2000 (BMP 2)	0.191	0.69	0.083	0.450
DI-299 (BMP 2)	0.170	0.62	0.083	0.450
DI-237 (BMP 2)	0.125	0.45	0.083	0.450
DI-236 (BMP 2)	0.305	1.23	0.083	0.500
DI-201 (BMP 2)	0.105	0.42	0.083	0.500
DI-238 (BMP 2)	0.168	0.74	0.083	0.550
CB-288 (BMP 2)	0.840	3.71	0.083	0.550
DI-297 (BMP 2)	0.484	2.14	0.083	0.550
DI-278 (BMP 2)	0.384	2.01	0.083	0.650
DI-235 (BMP 2)	0.227	1.19	0.083	0.650
CB-209 (BMP 2)	0.095	0.49	0.083	0.650
CB-207 (BMP 2)	0.084	0.44	0.083	0.650

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-251 (BMP 2)	0.531	2.78	0.083	0.650
DI-293 (BMP 2)	0.528	2.76	0.083	0.650
DI-298 (BMP 2)	0.236	1.24	0.083	0.650
DI-234 (BMP 2)	0.358	1.87	0.083	0.650
DI-229 (BMP 2)	0.764	3.99	0.083	0.650
DI-274 (BMP 2)	0.111	0.61	0.083	0.680
CB-205 (BMP 2)	0.175	0.99	0.083	0.700
DI-2001 (BMP 2)	0.461	2.59	0.083	0.700
DI-296 (BMP 2)	0.055	0.31	0.083	0.700
DI-295 (BMP 2)	0.197	1.11	0.083	0.700
DI-294 (BMP 2)	0.283	1.59	0.083	0.700
DI-232 (BMP 2)	0.347	1.98	0.083	0.710
DI-2003 (BMP 2)	0.445	2.58	0.083	0.720
CB-227 (BMP 2)	0.317	1.96	0.083	0.770
CB-226 (BMP 2)	0.135	0.84	0.083	0.770
CB-224 (BMP 2)	0.191	1.18	0.083	0.770

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-225 (BMP 2)	0.450	2.79	0.083	0.770
DI-233 (BMP 2)	0.199	1.23	0.083	0.770
DI-231 (BMP 2)	0.229	1.42	0.083	0.770
DI-230 (BMP 2)	0.378	2.34	0.083	0.770
CB-210 (BMP 2)	0.126	0.78	0.083	0.770
CB-204 (BMP 2)	0.085	0.53	0.083	0.770
CB-203 (BMP 2)	0.090	0.56	0.083	0.770
DI-2004 (BMP 2)	0.429	2.66	0.083	0.770
DI-2002 (BMP 2)	0.158	0.98	0.083	0.770
CB-261 (BMP 2)	0.143	0.89	0.083	0.770
CB-2006 (BMP 2)	0.012	0.07	0.083	0.770
DCB-268 (BMP 2)	0.368	2.28	0.083	0.770
CB-270 (BMP 2)	0.324	2.00	0.083	0.770
CB-271 (BMP 2)	0.231	1.43	0.083	0.770
DI-275 (BMP 2)	0.121	0.75	0.083	0.770
CB-287 (BMP 2)	0.259	1.67	0.083	0.800

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-290 (BMP 2)	0.177	1.15	0.083	0.810
CB-272 (BMP 2)	0.111	0.73	0.083	0.810
CB-202 (BMP 2)	0.350	2.31	0.083	0.820
CB-281 (BMP 2)	0.278	1.83	0.083	0.820
CB-252 (BMP 2)	0.140	0.92	0.083	0.820
DCB-222 (BMP 2)	0.451	3.08	0.083	0.850
CB-217 (BMP 2)	0.303	2.07	0.083	0.850
CB-215 (BMP 2)	0.197	1.35	0.083	0.850
CB-208 (BMP 2)	0.130	0.89	0.083	0.850
DI-276 (BMP 2)	0.165	1.13	0.083	0.850
DI-277 (BMP 2)	0.347	2.37	0.083	0.850
CB-260 (BMP 2)	0.206	1.41	0.083	0.850
CB-282 (BMP 2)	0.287	1.96	0.083	0.850
CB-253 (BMP 2)	0.142	0.97	0.083	0.850
DI-291 (BMP 2)	0.208	1.42	0.083	0.850
CB-283 (BMP 2)	0.078	0.53	0.083	0.850

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-285 (BMP 2)	0.085	0.58	0.083	0.850
CB-286 (BMP 2)	0.370	2.53	0.083	0.850
CB-259 (BMP 2)	0.140	0.96	0.083	0.850
CB-219 (BMP 2)	0.148	1.04	0.083	0.870
CB-218 (BMP 2)	0.321	2.25	0.083	0.870
CB-206 (BMP 2)	0.084	0.59	0.083	0.870
CB-258 (BMP 2)	0.508	3.56	0.083	0.870
CB-265 (BMP 2)	0.241	1.68	0.083	0.870
CB-262 (BMP 2)	0.177	1.24	0.083	0.870
CB-280 (BMP 2)	0.252	1.76	0.083	0.870
CB-223 (BMP 2)	0.099	0.70	0.083	0.880
CB-255 (BMP 2)	0.065	0.46	0.083	0.880
CB-254 (BMP 2)	0.086	0.61	0.083	0.880
CB-266 (BMP 2)	0.099	0.72	0.083	0.900
DCB-269 (BMP 2)	0.110	0.80	0.083	0.900
CB-212 (BMP 2)	0.069	0.51	0.083	0.910

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-220 (BMP 2)	0.154	1.17	0.083	0.950
CB-216 (BMP 2)	0.039	0.30	0.083	0.950
CB-214 (BMP 2)	0.008	0.06	0.083	0.950
DCB-221 (BMP 2)	0.184	1.41	0.083	0.950
CB-213 (BMP 2)	0.062	0.47	0.083	0.950
CB-257 (BMP 2)	0.025	0.19	0.083	0.950
CB-256 (BMP 2)	0.054	0.41	0.083	0.950
CB-263 (BMP 2)	0.063	0.48	0.083	0.950
CB-264 (BMP 2)	0.103	0.79	0.083	0.950
CB-267 (BMP 2)	0.051	0.39	0.083	0.950
CB-279 (BMP 2)	0.051	0.39	0.083	0.950
DI-292 (BMP 2)	0.014	0.10	0.083	0.950
CB-273 (BMP 2)	0.025	0.19	0.083	0.950

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-238 (BMP 2)	0.74	0.00	0.74	100.0	398.82	398.82	0.0	2.69	2.69
CB-220 (BMP 2)	0.97	0.21	0.97	82.2	396.80	396.80	4.0	3.00	3.00
DI-2000 (BMP 2)	0.69	0.00	0.69	100.0	397.81	397.81	0.0	2.64	2.64
CB-219 (BMP 2)	0.88	0.16	1.83	84.2	396.70	396.70	4.0	1.91	3.62
CB-226 (BMP 2)	0.73	0.10	2.16	87.6	397.06	397.06	4.0	3.30	3.82
CB-227 (BMP 2)	1.44	0.52	1.44	73.3	397.23	397.23	4.0	3.30	3.30
DI-298 (BMP 2)	1.24	0.00	1.24	100.0	395.92	395.92	0.0	3.09	3.09
DI-278 (BMP 2)	2.01	0.00	2.01	100.0	394.67	394.67	0.0	3.73	3.73
DI-235 (BMP 2)	1.19	0.00	1.19	100.0	393.46	393.46	0.0	3.18	3.18
CB-265 (BMP 2)	1.28	0.40	1.91	76.0	393.97	393.97	4.0	1.24	3.67
CB-266 (BMP 2)	0.65	0.07	0.65	89.9	394.01	394.01	4.0	2.68	2.68
DI-236 (BMP 2)	1.23	0.00	3.57	100.0	390.28	390.28	0.0	2.41	4.16
CB-262 (BMP 2)	1.26	0.39	4.32	76.4	393.25	393.25	4.0	3.21	4.53
CB-263 (BMP 2)	0.52	0.04	1.21	93.3	393.21	393.21	4.0	2.18	2.76
CB-289 (BMP 2)	0.07	0.00	0.14	100.0	390.29	390.29	4.0	1.51	1.78
DI-296 (BMP 2)	0.31	0.00	0.31	100.0	392.76	392.76	0.0	2.19	2.19

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-218 (BMP 2)	1.68	0.73	3.42	69.7	392.83	392.83	4.0	5.70	4.19
CB-264 (BMP 2)	0.70	0.09	0.70	88.5	393.37	393.37	4.0	2.74	2.74
DI-2007 (BMP 2)	0.00	0.00	0.00	100.0	392.52	392.52	0.0	0.56	0.56
CB-2006 (BMP 2)	0.07	0.00	0.07	100.0	390.62	390.62	4.0	0.84	1.39
DI-277 (BMP 2)	2.37	0.00	4.33	100.0	392.69	392.69	0.0	2.64	4.92
DI-299 (BMP 2)	0.62	0.00	1.29	100.0	391.92	391.92	0.0	5.45	3.13
CB-216 (BMP 2)	0.87	0.16	5.79	84.4	391.73	391.73	4.0	2.97	5.04
CB-217 (BMP 2)	1.61	0.67	1.61	70.7	391.68	391.68	4.0	3.48	3.48
DI-237 (BMP 2)	0.45	0.00	1.71	100.0	390.41	390.41	0.0	3.27	3.24
CB-215 (BMP 2)	1.08	0.27	6.81	79.9	388.71	388.71	4.0	8.16	5.38
DI-292 (BMP 2)	0.10	0.00	0.10	100.0	390.87	390.87	0.0	1.65	1.65
CB-214 (BMP 2)	0.06	0.00	21.07	100.0	388.29	388.29	4.0	6.53	7.62
CB-261 (BMP 2)	1.03	0.24	5.30	80.9	390.75	390.75	4.0	8.73	4.87
CB-224 (BMP 2)	1.04	0.25	5.22	80.7	389.81	389.81	4.0	3.80	4.41
CB-225 (BMP 2)	2.12	1.19	2.12	64.1	390.85	390.85	4.0	3.67	3.67
CB-286 (BMP 2)	1.74	0.79	5.09	68.9	388.61	388.61	4.0	0.15	4.80

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-287 (BMP 2)	1.27	0.40	3.57	76.2	388.90	388.90	4.0	3.25	4.29
DCB-222 (BMP 2)	4.42	0.00	8.34	100.0	389.76	389.76	12.0	3.18	5.16
DCB-221 (BMP 2)	1.66	0.00	14.76	100.0	389.48	389.48	8.0	5.57	6.36
CB-257 (BMP 2)	0.19	0.00	0.19	100.0	387.70	387.70	4.0	1.88	1.88
DI-276 (BMP 2)	1.13	0.00	5.41	100.0	389.42	389.42	0.0	9.01	5.45
CB-223 (BMP 2)	0.83	0.14	4.28	85.3	389.86	389.86	4.0	3.56	3.71
CB-288 (BMP 2)	2.31	1.41	2.31	62.1	389.76	389.76	4.0	3.90	3.90
DI-234 (BMP 2)	1.87	0.00	3.01	100.0	386.07	386.07	0.0	2.64	4.27
CB-213 (BMP 2)	0.45	0.02	21.36	95.2	387.55	387.55	4.0	7.04	6.80
DI-295 (BMP 2)	1.11	0.00	1.39	100.0	388.45	388.45	0.0	1.04	3.33
CB-285 (BMP 2)	1.09	0.28	6.06	79.6	386.44	386.44	4.0	4.30	5.13
CB-212 (BMP 2)	0.48	0.03	21.71	94.5	387.23	387.23	4.0	6.80	6.91
CB-256 (BMP 2)	0.40	0.01	5.96	96.5	386.27	386.27	4.0	0.18	4.59
CB-273 (BMP 2)	0.19	0.00	0.78	100.0	379.25	379.25	4.0	2.63	2.78
CB-272 (BMP 2)	0.65	0.07	1.41	89.8	379.05	379.05	4.0	2.82	3.28
CB-260 (BMP 2)	1.14	0.31	1.14	78.7	387.44	387.44	4.0	3.14	3.14

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-259 (BMP 2)	0.98	0.22	7.33	81.9	387.42	387.42	4.0	1.04	5.55
DI-291 (BMP 2)	1.42	0.00	1.50	100.0	387.47	387.47	0.0	0.24	3.41
CB-255 (BMP 2)	0.45	0.02	15.74	95.2	385.71	385.71	4.0	2.48	6.55
CB-258 (BMP 2)	2.24	1.32	9.47	62.9	386.25	386.25	4.0	8.85	5.35
CB-283 (BMP 2)	0.72	0.10	15.11	88.1	381.05	381.05	4.0	4.46	6.43
CB-254 (BMP 2)	0.58	0.05	16.22	91.7	383.75	383.75	4.0	10.47	6.64
CB-210 (BMP 2)	0.71	0.09	0.71	88.2	384.14	384.14	4.0	2.75	2.75
CB-209 (BMP 2)	0.49	0.03	22.56	94.1	384.15	384.15	4.0	1.11	7.95
DI-2003 (BMP 2)	2.58	0.00	2.58	100.0	386.64	386.64	0.0	4.05	4.05
DI-294 (BMP 2)	1.59	0.00	2.91	100.0	385.83	385.83	0.0	2.49	4.22
DI-290 (BMP 2)	1.15	0.00	2.61	100.0	384.18	384.18	0.0	2.33	4.07
CB-282 (BMP 2)	2.11	1.17	4.66	64.3	381.62	381.62	4.0	2.85	5.08
CB-280 (BMP 2)	1.55	0.61	8.01	71.7	375.89	375.89	4.0	6.34	3.44
CB-279 (BMP 2)	0.46	0.03	22.98	94.8	375.91	375.91	4.0	2.80	7.43
DI-233 (BMP 2)	1.23	0.00	4.19	100.0	382.29	382.29	0.0	8.40	4.48
CB-253 (BMP 2)	0.86	0.16	16.89	84.5	380.89	380.89	4.0	6.50	6.77

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-270 (BMP 2)	1.50	0.58	4.52	72.3	378.34	378.34	4.0	2.12	5.01
CB-281 (BMP 2)	1.98	1.03	6.56	65.8	380.56	380.56	4.0	4.47	5.29
CB-271 (BMP 2)	1.13	0.30	1.82	78.9	378.86	378.86	4.0	2.79	3.62
CB-208 (BMP 2)	0.84	0.15	0.84	85.2	381.28	381.28	4.0	2.86	2.86
CB-207 (BMP 2)	0.45	0.02	23.56	95.3	380.32	380.32	4.0	13.31	8.19
DI-274 (BMP 2)	0.61	0.00	0.61	100.0	381.31	381.31	0.0	2.58	2.58
DI-2005 (BMP 2)	0.05	0.00	0.05	100.0	380.86	380.86	0.0	1.37	1.37
DI-297 (BMP 2)	2.14	0.00	3.34	100.0	382.20	382.20	0.0	2.42	4.16
CB-252 (BMP 2)	0.90	0.18	49.14	83.6	375.37	375.37	4.0	7.37	10.43
CB-267 (BMP 2)	1.13	0.31	32.31	78.7	375.44	375.44	4.0	3.03	7.92
DCB-269 (BMP 2)	1.28	0.00	1.28	100.0	375.44	375.44	8.0	0.82	0.82
DCB-268 (BMP 2)	3.16	0.00	8.55	100.0	375.45	375.45	12.0	0.59	3.65
DI-293 (BMP 2)	2.76	0.00	8.79	100.0	381.29	381.29	0.0	3.09	5.08
CB-206 (BMP 2)	0.66	0.08	0.66	89.6	379.82	379.82	4.0	2.69	2.69
CB-205 (BMP 2)	0.86	0.15	24.81	84.7	376.93	376.93	4.0	13.94	8.48
DI-275 (BMP 2)	0.75	0.00	0.75	100.0	380.34	380.34	0.0	2.75	2.75

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-2002 (BMP 2)	0.98	0.00	3.55	100.0	378.76	378.76	0.0	3.30	4.54
DI-232 (BMP 2)	1.98	0.00	6.08	100.0	376.35	376.35	0.0	4.04	5.14
CB-204 (BMP 2)	0.56	0.05	13.37	92.3	359.72	359.72	4.0	6.73	6.10
CB-203 (BMP 2)	0.64	0.07	40.53	90.1	359.24	359.24	4.0	5.12	9.06
DI-2004 (BMP 2)	2.66	0.00	2.62	100.0	376.23	376.23	0.0	0.08	3.86
CB-202 (BMP 2)	2.42	0.00	42.52	100.0	355.41	355.41	8.0	15.93	9.36
DI-228 (BMP 2)	0.01	0.00	13.05	100.0	360.85	360.85	0.0	6.34	6.04
DI-2001 (BMP 2)	2.59	0.00	6.09	100.0	372.80	372.80	0.0	3.38	5.80
DI-231 (BMP 2)	1.42	0.00	7.39	100.0	371.45	371.45	0.0	5.13	5.58
DI-251 (BMP 2)	2.78	0.00	56.93	100.0	357.37	357.37	0.0	21.36	11.83
DI-230 (BMP 2)	2.34	0.00	9.58	100.0	362.06	362.06	0.0	13.43	5.37
DI-229 (BMP 2)	3.99	0.00	13.14	100.0	361.36	361.36	0.0	4.85	6.05
DI-201 (BMP 2)	0.42	0.00	42.85	100.0	354.41	354.41	0.0	8.97	8.83

25-YR ANALYSIS

Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-236 TO DI-238 (BMP 2)	18.0	0.030	2.69	5.04	0.74	18.13	398.82	391.99
CB-219 TO CB-220 (BMP 2)	15.0	0.008	3.00	1.91	0.97	5.77	396.80	396.70
DI-299 TO DI-2000 (BMP 2)	18.0	0.039	2.64	5.45	0.69	20.87	397.81	391.89
CB-218 TO CB-219 (BMP 2)	15.0	0.019	3.62	5.70	1.83	8.89	396.70	392.76
CB-226 TO CB-227 (BMP 2)	15.0	0.005	3.30	3.30	1.44	4.57	397.23	397.06
CB-224 TO CB-226 (BMP 2)	15.0	0.034	3.82	7.39	2.16	11.95	397.06	391.26
DI-297 TO DI-298 (BMP 2)	18.0	0.093	3.09	2.42	1.24	32.06	395.92	382.20
DI-277 TO DI-278 (BMP 2)	15.0	0.021	3.73	2.64	2.01	9.47	394.67	392.69
DI-234 TO DI-235 (BMP 2)	15.0	0.045	3.18	2.64	1.19	13.76	393.46	386.07
CB-262 TO CB-265 (BMP 2)	15.0	0.010	3.67	3.21	1.91	6.43	393.97	393.25
CB-265 TO CB-266 (BMP 2)	15.0	0.008	2.68	1.24	0.65	5.78	394.01	393.97
DI-236 TO DI-237 (BMP 2)	18.0	0.004	3.24	2.41	1.71	6.92	390.41	390.28
CB-223 TO DI-236 (BMP 2)	18.0	0.005	4.16	3.56	3.57	7.43	390.28	389.86
CB-261 TO CB-262 (BMP 2)	18.0	0.033	4.53	8.73	4.32	19.10	393.25	390.45
CB-262 TO CB-263 (BMP 2)	15.0	0.008	2.76	1.47	1.21	5.78	393.21	393.25
CB-263 TO CB-264 (BMP 2)	15.0	0.008	2.74	2.18	0.70	5.78	393.37	393.21
CB-286 TO CB-289 (BMP 2)	15.0	0.016	1.78	0.15	0.14	8.28	390.29	388.61
CB-289 TO CB-2006 (BMP 2)	15.0	0.005	1.39	1.51	0.07	4.57	390.62	390.46
DI-295 TO DI-296 (BMP 2)	15.0	0.032	2.19	1.04	0.31	11.51	392.76	388.45
CB-216 TO CB-218 (BMP 2)	18.0	0.020	4.19	2.97	3.42	14.75	392.83	391.73
CB-2006 TO DI-2007 (BMP 2)	15.0	0.038	0.56	0.84	0.00	12.56	392.52	391.76
DI-276 TO DI-277 (BMP 2)	15.0	0.035	4.92	9.01	4.33	12.06	392.69	389.10
DI-237 TO DI-299 (BMP 2)	18.0	0.006	3.13	3.27	1.29	7.81	391.92	391.51
CB-216 TO CB-217 (BMP 2)	15.0	0.010	3.48	1.87	1.61	6.48	391.68	391.73
CB-215 TO CB-216 (BMP 2)	18.0	0.025	5.04	8.16	5.79	16.74	391.73	390.43
CB-214 TO CB-215 (BMP 2)	18.0	0.011	5.38	6.53	6.81	11.23	388.71	388.16
DI-291 TO DI-292 (BMP 2)	15.0	0.042	1.65	0.24	0.10	13.31	390.87	387.47
CB-213 TO CB-214 (BMP 2)	24.0	0.013	7.62	7.04	21.07	26.02	388.29	387.55

25-YR ANALYSIS

Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-214 TO DCB-221 (BMP 2)	24.0	0.010	6.36	5.67	14.76	22.05	389.48	388.29
CB-259 TO CB-261 (BMP 2)	18.0	0.041	4.87	4.50	5.30	21.32	390.75	387.42
CB-224 TO CB-225 (BMP 2)	15.0	0.005	3.67	3.80	2.12	4.59	390.85	390.65
DCB-221 TO CB-224 (BMP 2)	24.0	0.008	4.41	2.78	5.22	20.25	389.81	389.48
CB-286 TO CB-287 (BMP 2)	15.0	0.006	4.29	4.55	3.57	4.81	388.90	388.71
CB-285 TO CB-286 (BMP 2)	18.0	0.030	4.80	4.30	5.09	18.32	388.61	386.44
CB-287 TO CB-288 (BMP 2)	15.0	0.038	3.90	3.25	2.31	12.64	389.76	388.90
DCB-221 TO DCB-222 (BMP 2)	18.0	0.005	5.16	5.57	8.34	7.53	389.76	389.48
DCB-222 TO CB-223 (BMP 2)	18.0	0.004	3.71	3.18	4.28	6.78	389.86	389.76
CB-256 TO CB-257 (BMP 2)	18.0	0.027	1.88	0.18	0.19	17.26	387.70	386.27
CB-256 TO DI-276 (BMP 2)	15.0	0.026	5.45	8.57	5.41	10.42	389.42	387.30
DI-233 TO DI-234 (BMP 2)	15.0	0.038	4.27	8.40	3.01	12.56	386.07	382.17
CB-212 TO CB-213 (BMP 2)	24.0	0.013	6.80	6.80	21.36	25.74	387.55	387.23
DI-294 TO DI-295 (BMP 2)	15.0	0.024	3.33	2.49	1.39	10.00	388.45	385.83
CB-283 TO CB-285 (BMP 2)	18.0	0.035	5.13	9.74	6.06	19.63	386.44	383.64
CB-209 TO CB-212 (BMP 2)	24.0	0.006	6.91	7.76	21.71	16.88	387.23	386.21
CB-255 TO CB-256 (BMP 2)	24.0	0.018	4.59	2.48	5.96	30.62	386.27	385.71
CB-272 TO CB-273 (BMP 2)	15.0	0.005	2.78	2.82	0.78	4.57	379.25	379.11
CB-273 TO DI-274 (BMP 2)	15.0	0.005	2.58	2.63	0.61	4.57	381.31	380.91
CB-270 TO CB-272 (BMP 2)	15.0	0.005	3.28	2.12	1.41	4.57	379.05	378.34
CB-259 TO CB-260 (BMP 2)	15.0	0.019	3.14	1.04	1.14	8.80	387.44	387.42
CB-258 TO CB-259 (BMP 2)	18.0	0.028	5.55	8.85	7.33	17.44	387.42	385.96
DI-290 TO DI-291 (BMP 2)	15.0	0.050	3.41	2.33	1.50	14.46	387.47	384.18
CB-254 TO CB-255 (BMP 2)	24.0	0.024	6.55	10.47	15.74	35.14	385.71	383.37
CB-255 TO CB-258 (BMP 2)	24.0	0.009	5.35	6.37	9.47	20.94	386.25	385.81
CB-279 TO CB-283 (BMP 2)	24.0	0.009	6.43	7.34	15.11	21.22	381.05	380.11

25-YR ANALYSIS

Conduit Results - Time: 0.00 hours

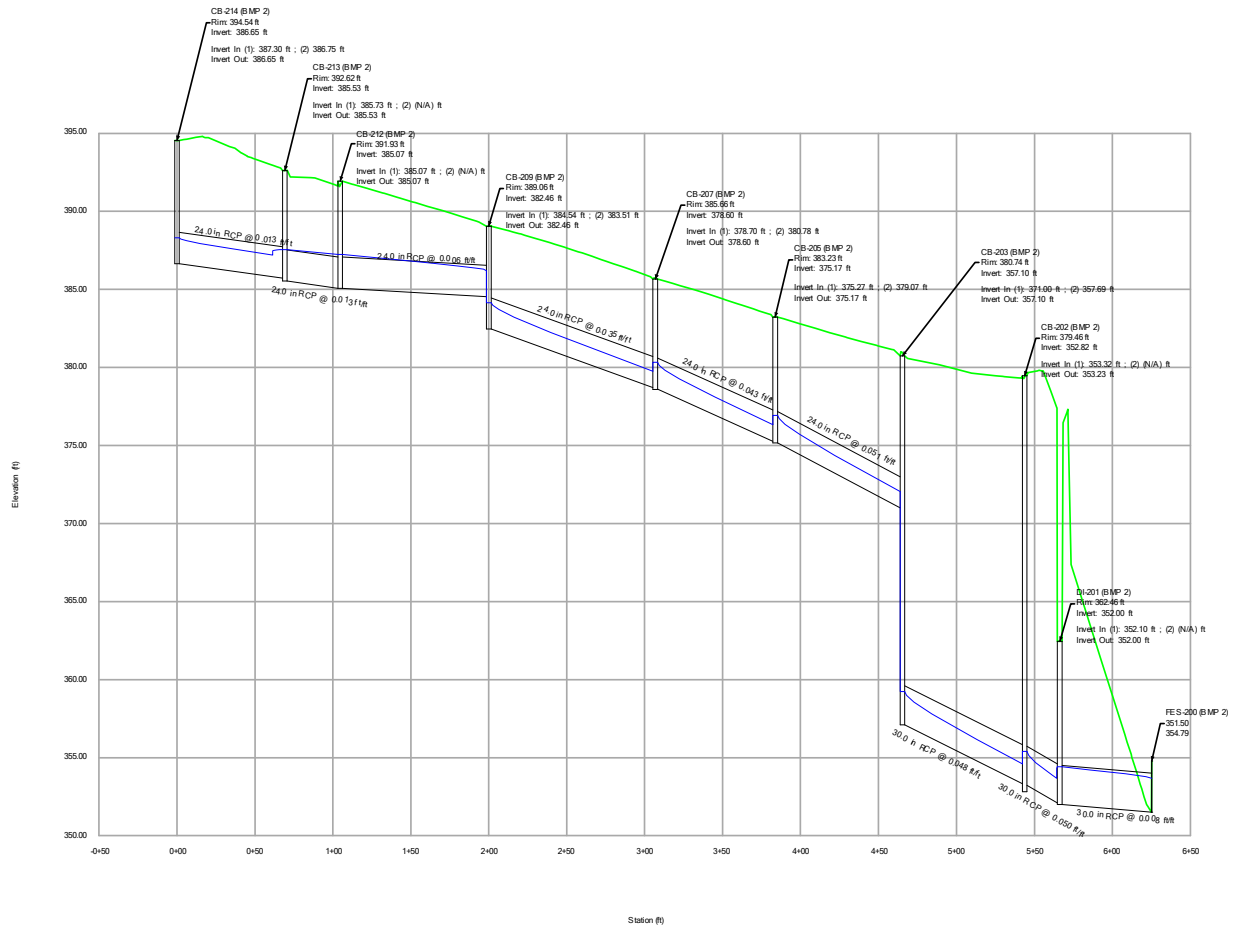
Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-283 TO DI-293 (BMP 2)	24.0	0.005	5.08	4.46	8.79	15.48	381.29	381.05
CB-253 TO CB-254 (BMP 2)	24.0	0.022	6.64	6.50	16.22	33.18	383.75	380.89
CB-209 TO CB-210 (BMP 2)	15.0	0.011	2.75	1.11	0.71	6.85	384.14	384.15
CB-207 TO CB-209 (BMP 2)	24.0	0.035	7.95	13.31	22.56	42.44	384.15	379.76
DI-2002 TO DI-2003 (BMP 2)	15.0	0.157	4.05	3.30	2.58	25.56	386.64	378.76
DI-293 TO DI-294 (BMP 2)	15.0	0.078	4.22	4.17	2.91	18.02	385.83	381.29
CB-282 TO DI-290 (BMP 2)	15.0	0.080	4.07	2.85	2.61	18.27	384.18	381.62
CB-281 TO CB-282 (BMP 2)	15.0	0.020	5.08	4.47	4.66	9.06	381.62	380.56
CB-280 TO CB-281 (BMP 2)	18.0	0.010	5.29	6.34	6.56	10.75	380.56	379.95
CB-279 TO CB-280 (BMP 2)	24.0	0.011	3.44	2.80	8.01	23.84	375.89	375.91
CB-267 TO CB-279 (BMP 2)	24.0	0.008	7.43	7.61	22.98	20.51	375.91	375.44
DI-232 TO DI-233 (BMP 2)	18.0	0.056	4.48	4.04	4.19	24.83	382.29	376.35
CB-252 TO CB-253 (BMP 2)	24.0	0.023	6.77	10.73	16.89	34.05	380.89	377.79
CB-268 TO CB-270 (BMP 2)	15.0	0.010	5.01	5.75	4.52	6.54	378.34	377.01
CB-270 TO CB-271 (BMP 2)	15.0	0.007	3.62	4.05	1.82	5.56	378.86	378.61
CB-271 TO DI-275 (BMP 2)	15.0	0.005	2.75	2.79	0.75	4.58	380.34	379.67
CB-207 TO CB-208 (BMP 2)	15.0	0.005	2.86	2.88	0.84	4.62	381.28	381.14
CB-205 TO CB-207 (BMP 2)	24.0	0.043	8.19	13.94	23.56	47.05	380.32	376.33
DI-2004 TO DI-2005 (BMP 2)	15.0	0.040	1.37	0.08	0.05	12.84	380.86	376.23
DI-293 TO DI-297 (BMP 2)	18.0	0.012	4.16	3.09	3.34	11.58	382.20	381.29
CB-252 TO CB-267 (BMP 2)	30.0	0.008	7.92	7.37	32.31	37.00	375.44	375.37
DI-251 TO CB-252 (BMP 2)	30.0	0.075	10.43	21.36	49.14	112.60	375.37	363.19
CB-267 TO CB-268 (BMP 2)	24.0	0.007	3.65	3.03	8.55	18.34	375.45	375.44
CB-268 TO CB-269 (BMP 2)	24.0	0.011	0.82	0.59	1.28	23.86	375.44	375.45
CB-205 TO CB-206 (BMP 2)	15.0	0.015	2.69	3.90	0.66	7.90	379.82	379.32
CB-203 TO CB-205 (BMP 2)	24.0	0.051	8.48	15.07	24.81	51.15	376.93	372.04
DI-2001 TO DI-2002 (BMP 2)	15.0	0.053	4.54	3.38	3.55	14.91	378.76	372.80

25-YR ANALYSIS

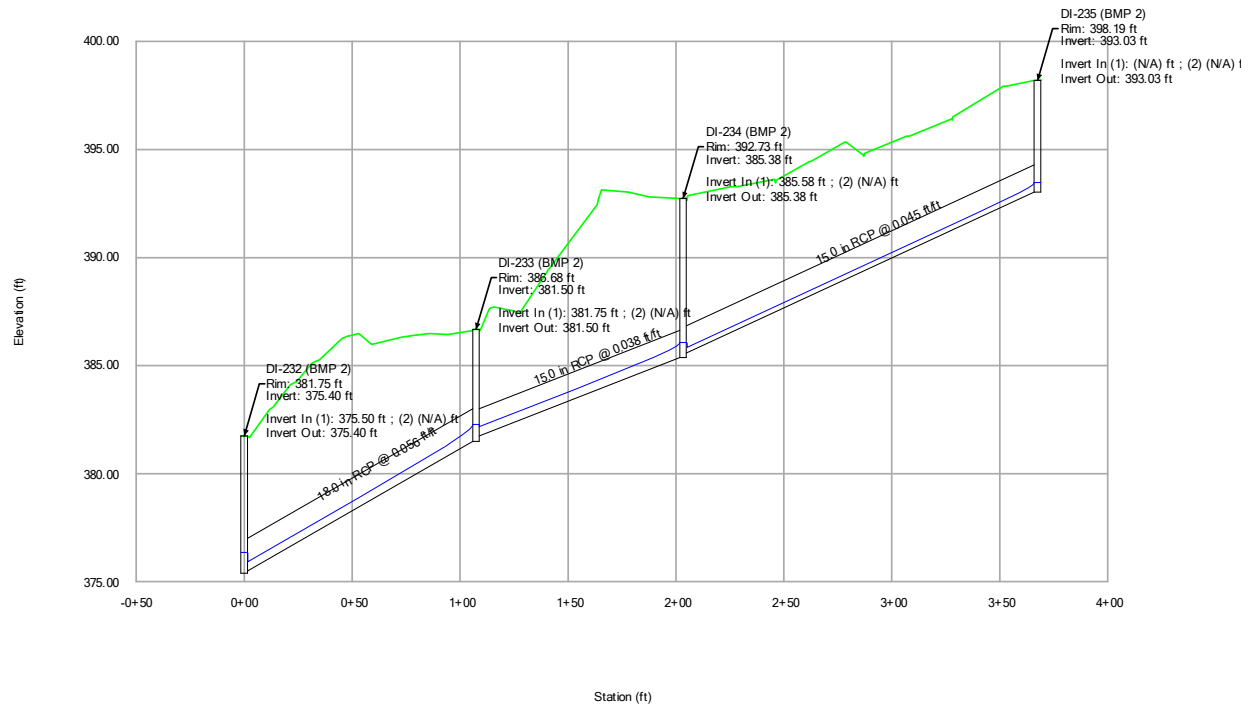
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-231 TO DI-232 (BMP 2)	18.0	0.039	5.14	5.13	6.08	20.76	376.35	371.45
CB-204 TO DI-228 (BMP 2)	24.0	0.008	6.04	6.73	13.05	19.80	360.85	359.69
CB-203 TO CB-204 (BMP 2)	24.0	0.025	6.10	5.12	13.37	35.84	359.72	359.24
CB-202 TO CB-203 (BMP 2)	30.0	0.048	9.06	15.93	40.53	90.05	359.24	354.61
CB-203 TO DI-2004 (BMP 2)	15.0	0.005	3.86	4.07	2.62	4.59	376.23	375.49
DI-201 TO CB-202 (BMP 2)	30.0	0.050	9.36	8.97	42.52	91.65	355.41	354.41
DI-228 TO DI-229 (BMP 2)	24.0	0.007	6.05	6.34	13.14	18.29	361.36	360.90
DI-251 TO DI-2001 (BMP 2)	15.0	0.060	5.80	12.08	6.09	15.87	372.80	365.54
DI-230 TO DI-231 (BMP 2)	18.0	0.072	5.58	13.43	7.39	28.18	371.45	362.03
FES-250 TO DI-251 (BMP 2)	30.0	0.038	11.83	16.23	56.93	80.13	357.37	353.18
DI-229 TO DI-230 (BMP 2)	24.0	0.005	5.37	4.85	9.58	16.56	362.06	361.36
FES-200 TO DI-201 (BMP 2)	30.0	0.008	8.83	9.41	42.85	37.78	354.41	353.69

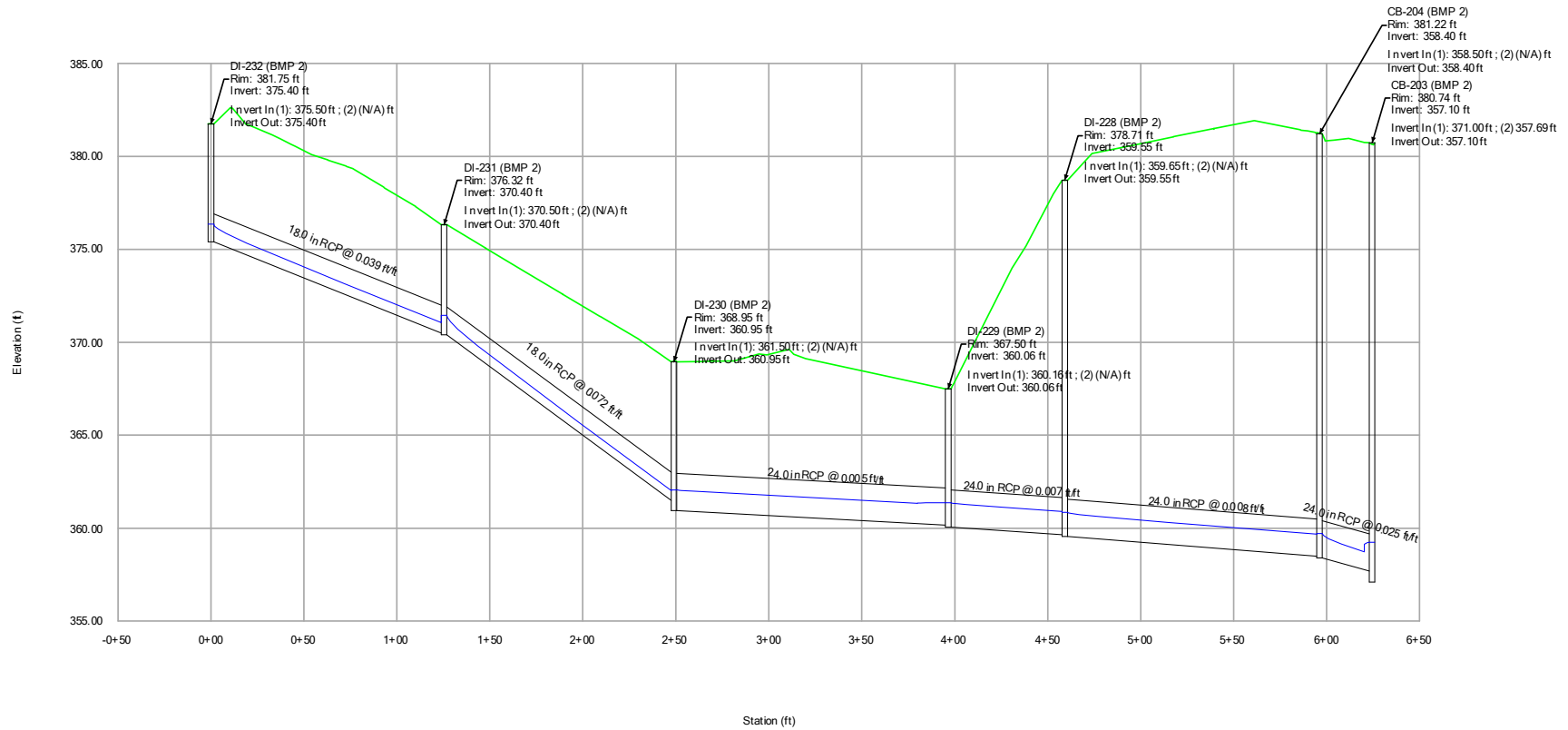
25-YR ANALYSIS



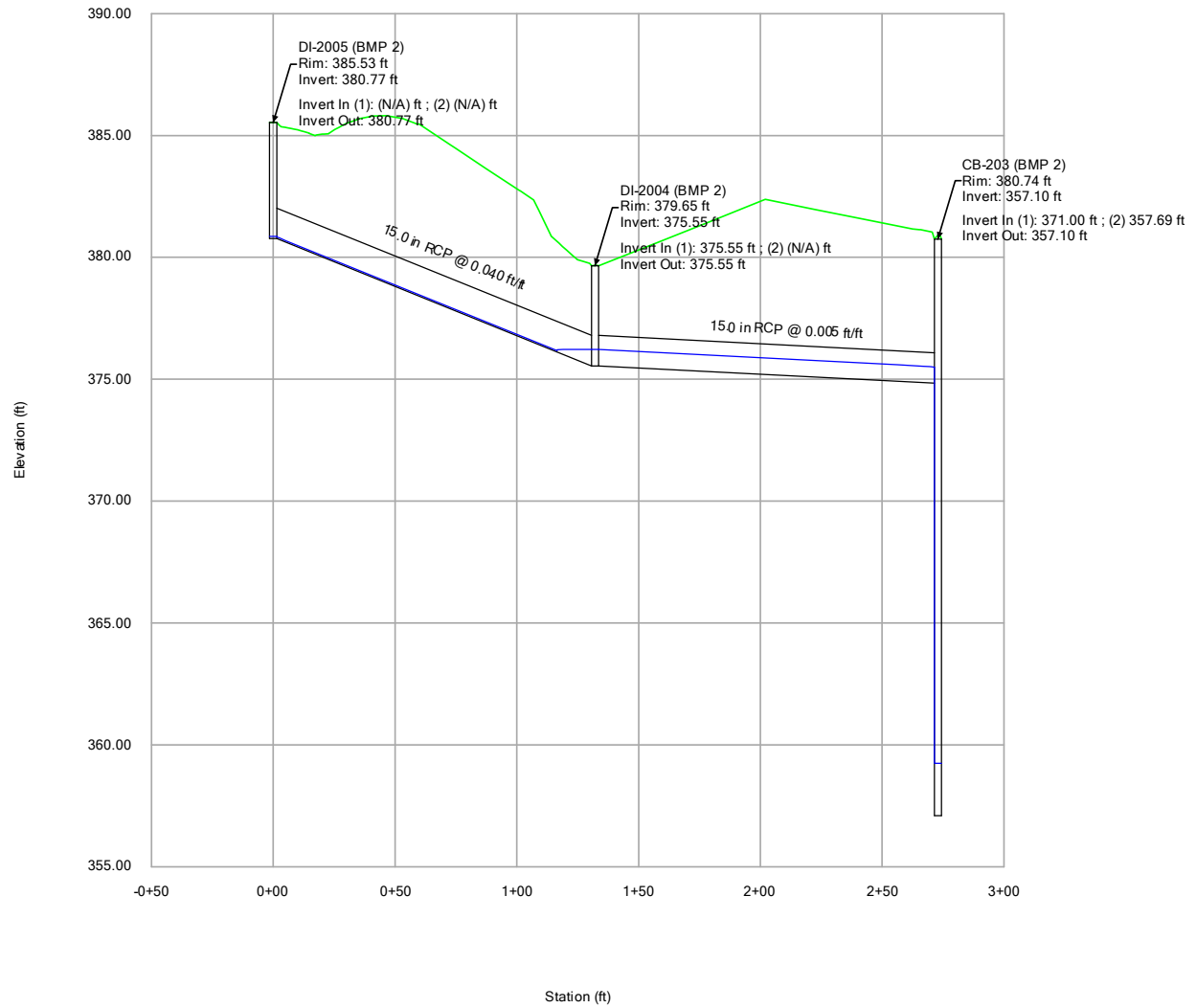
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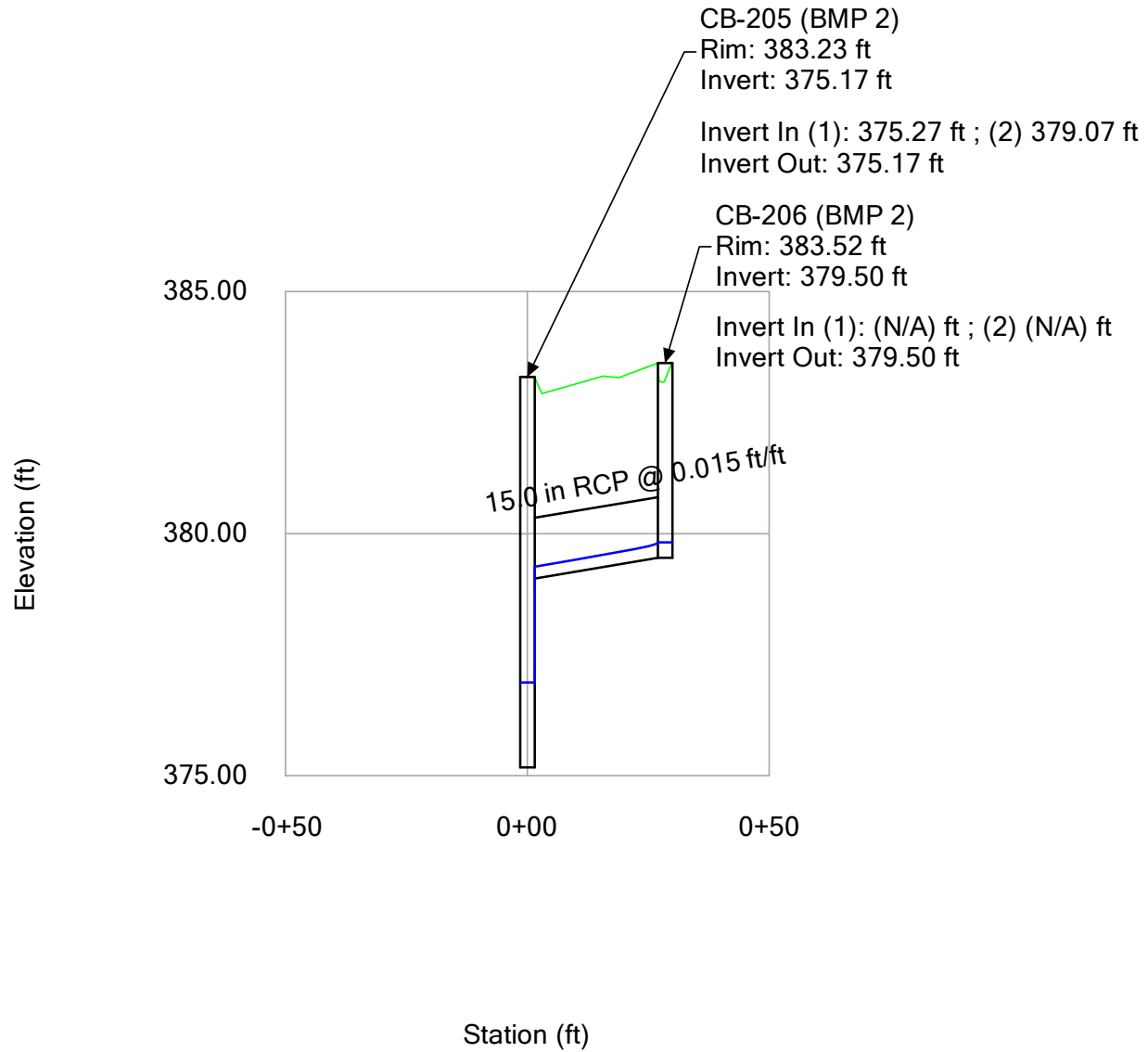
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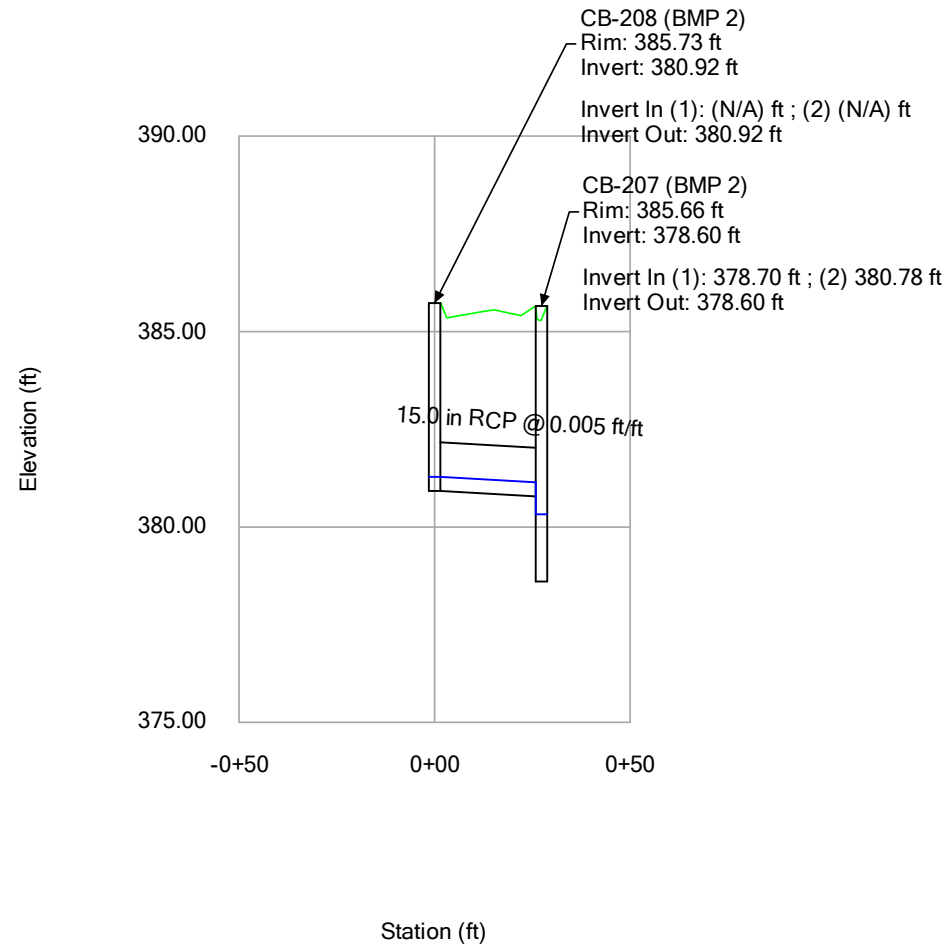
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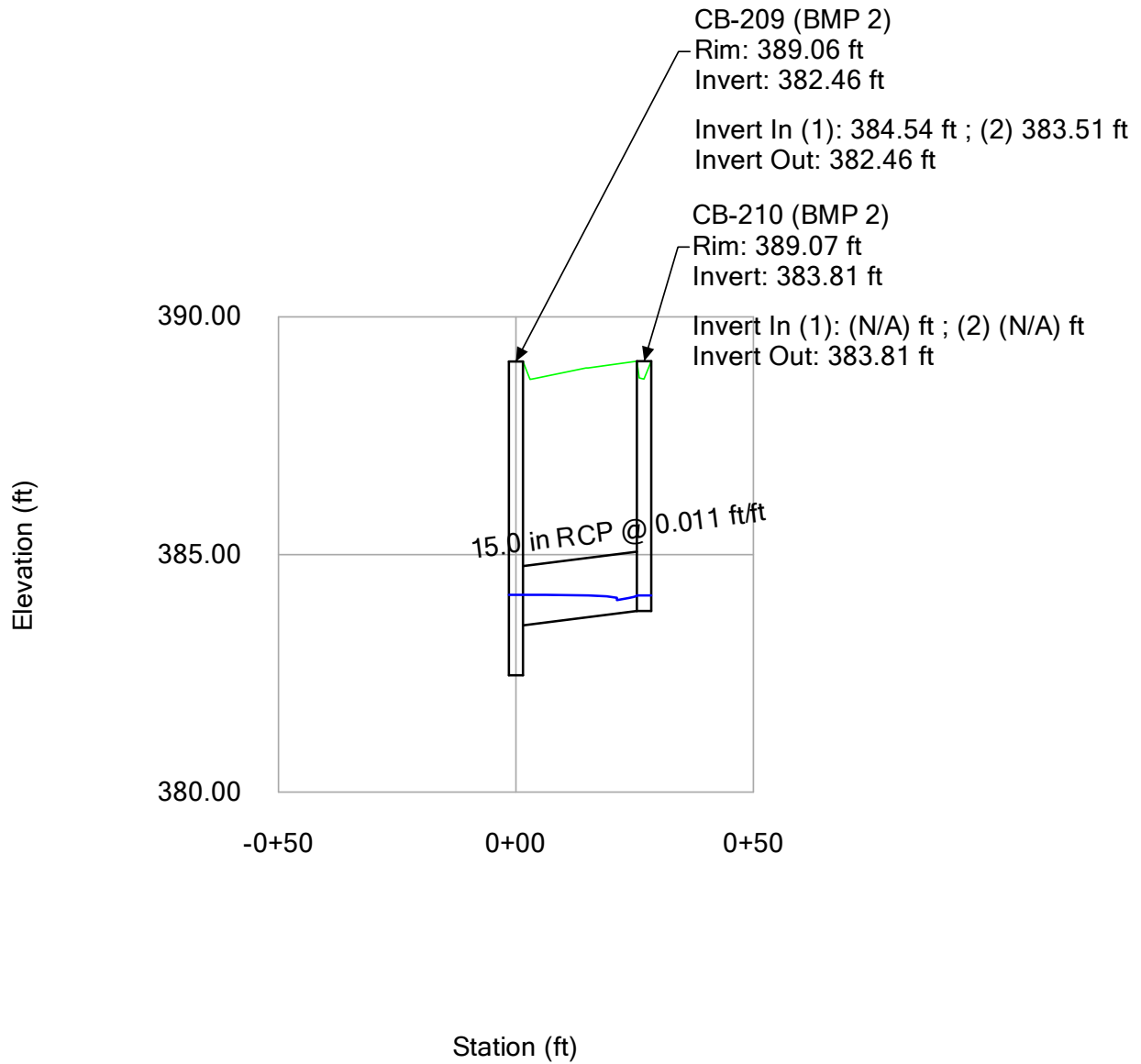
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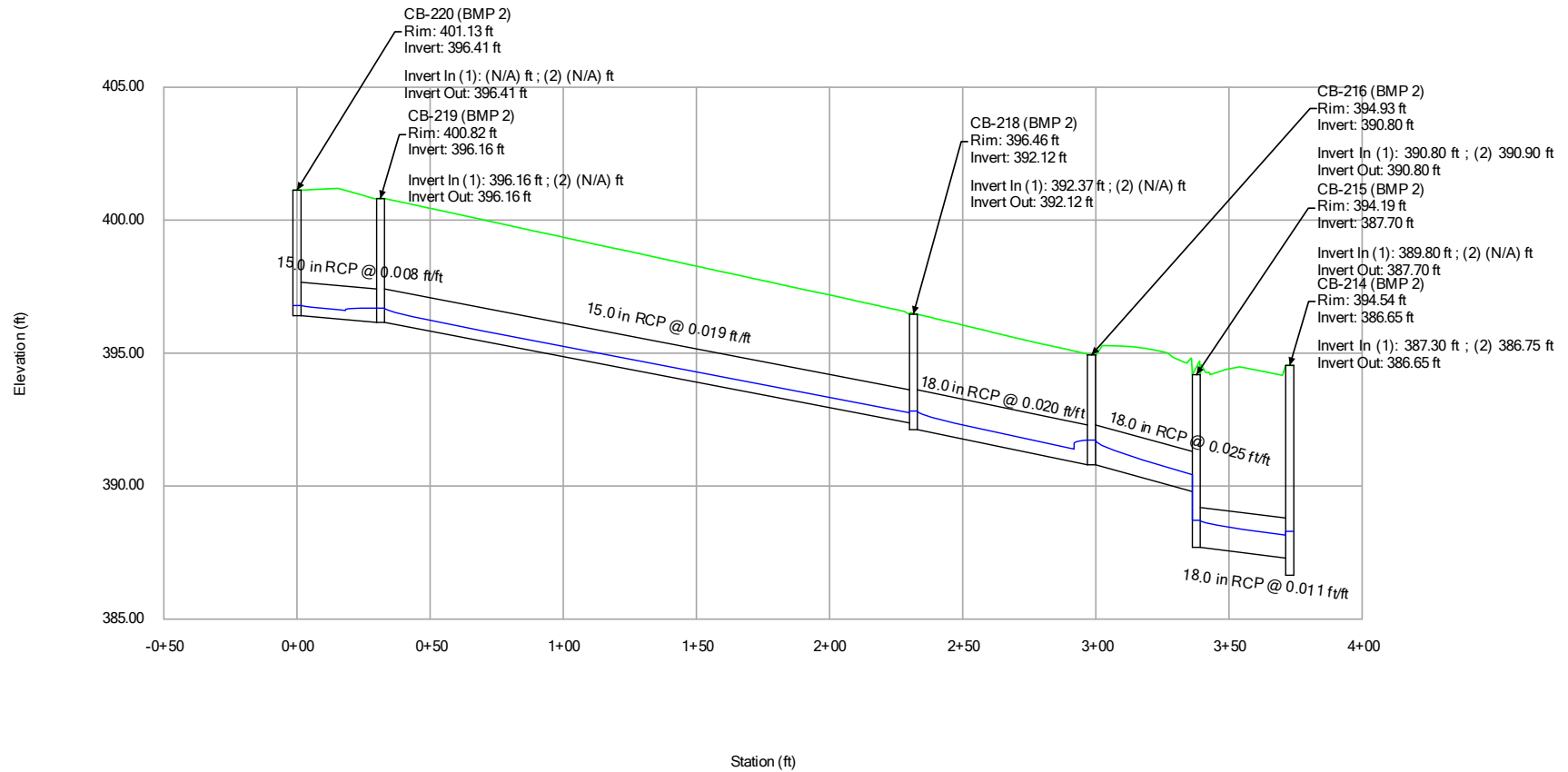
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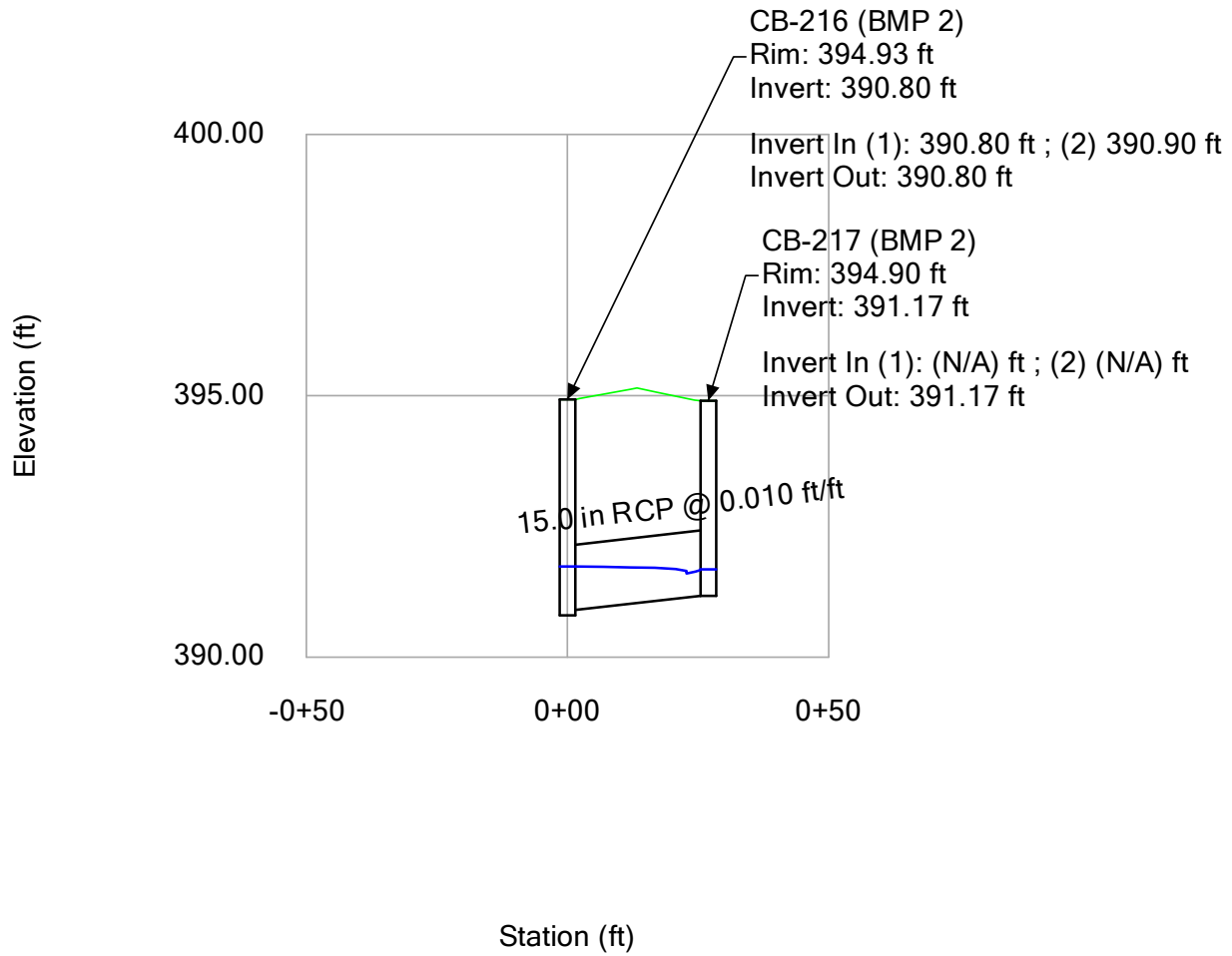
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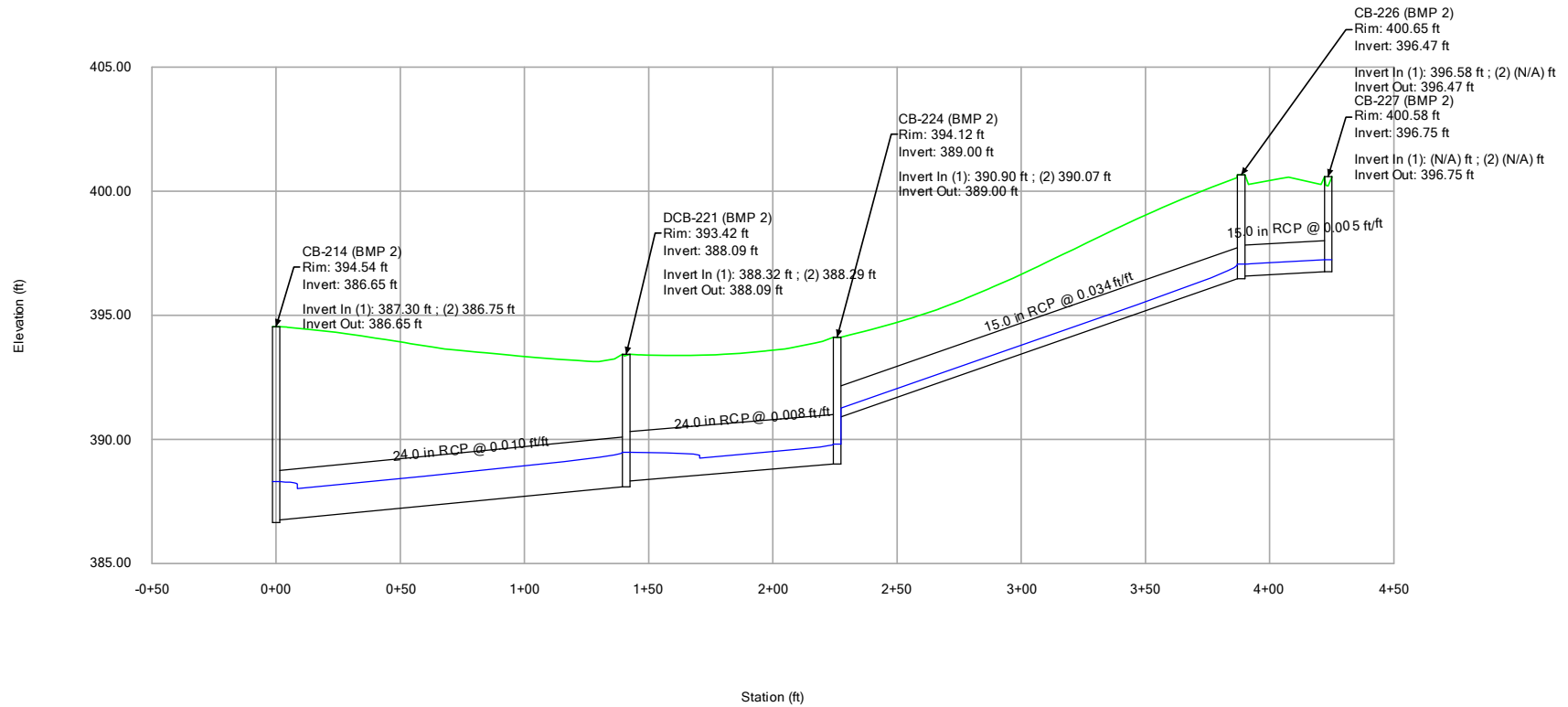
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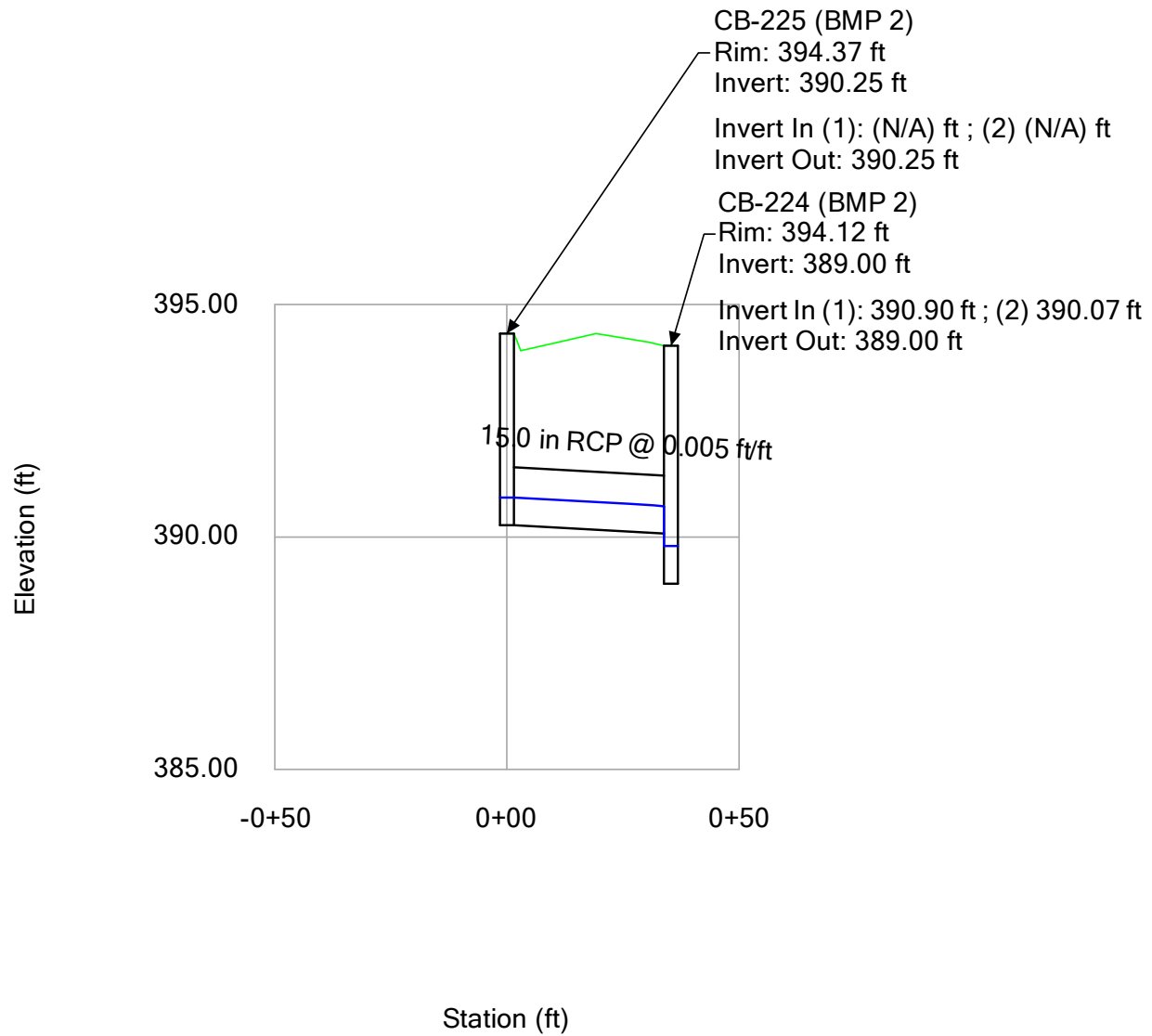
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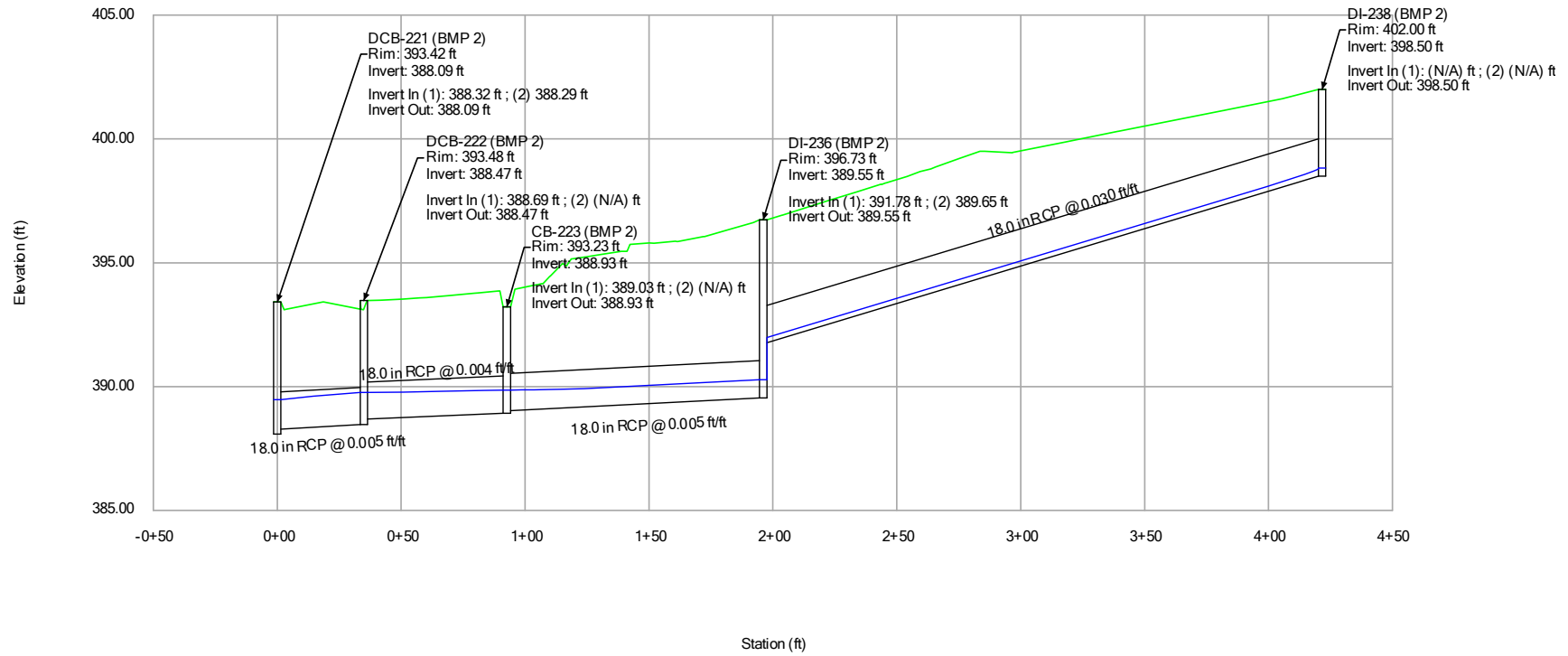
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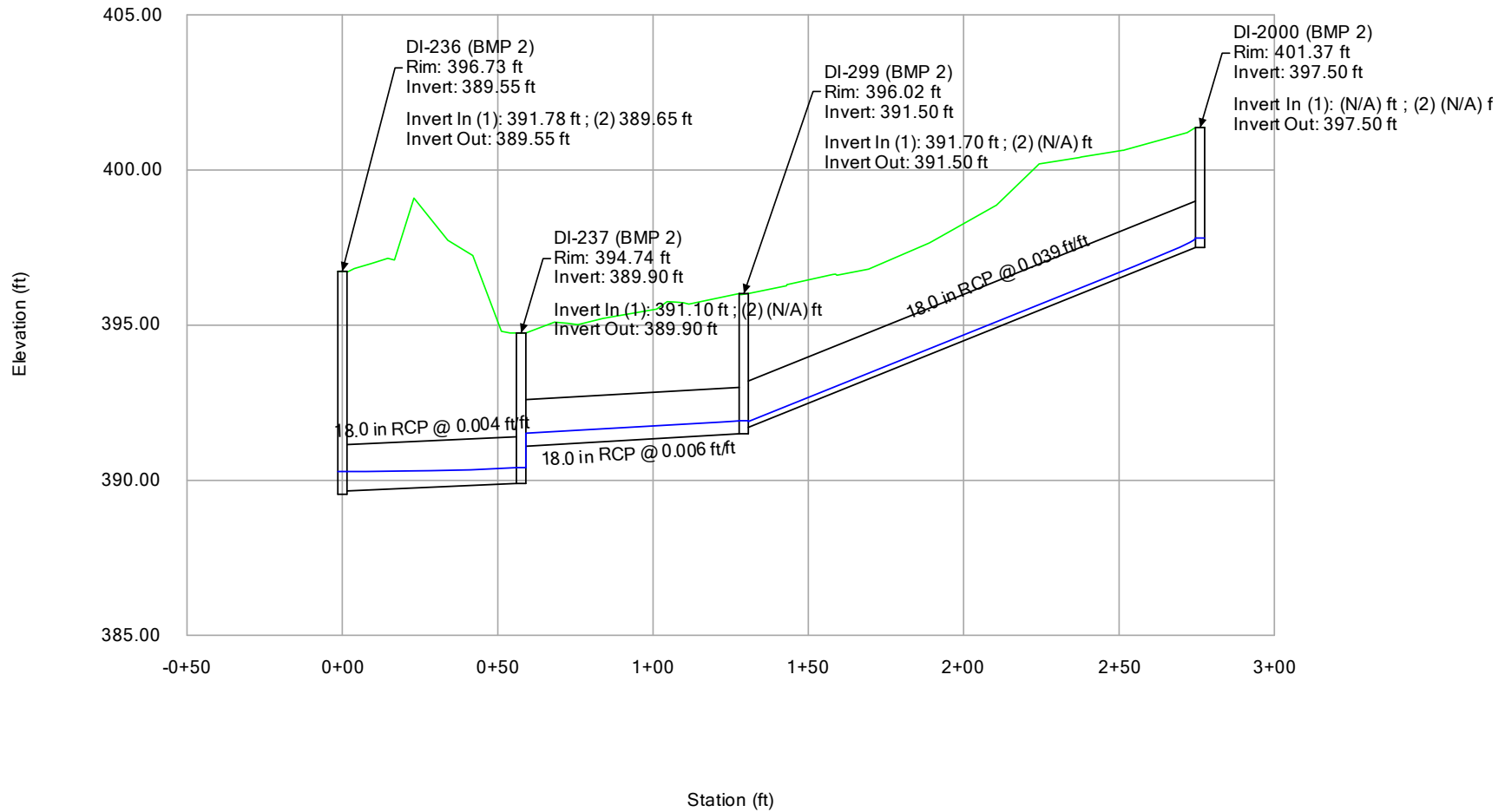
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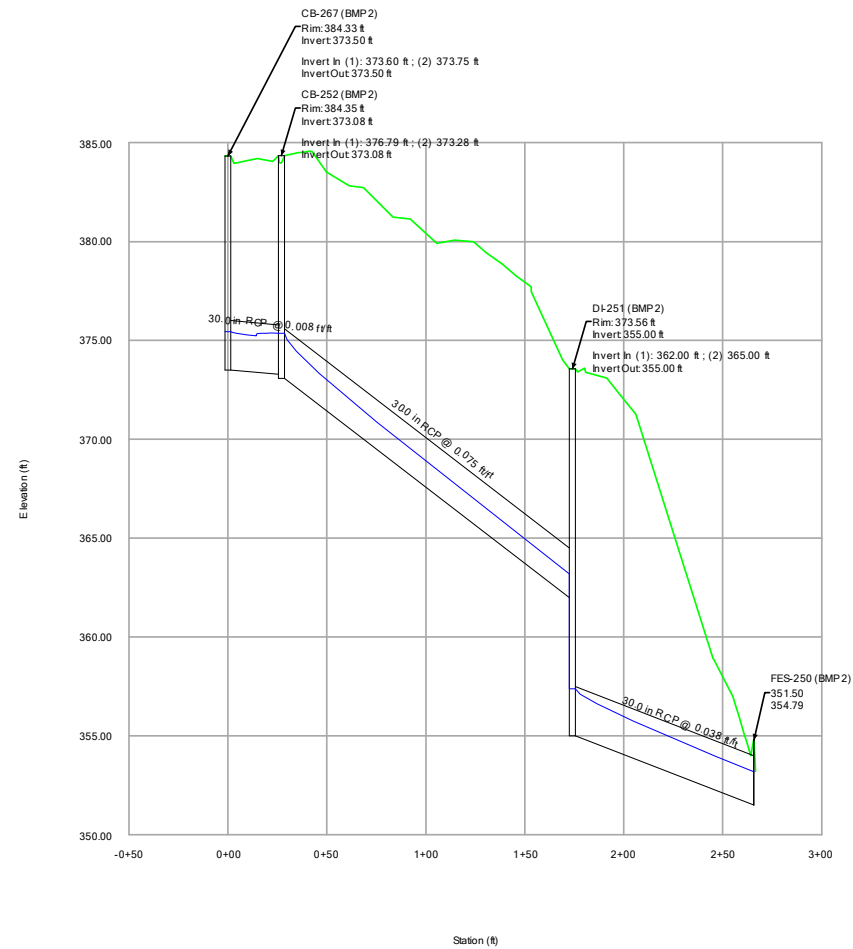
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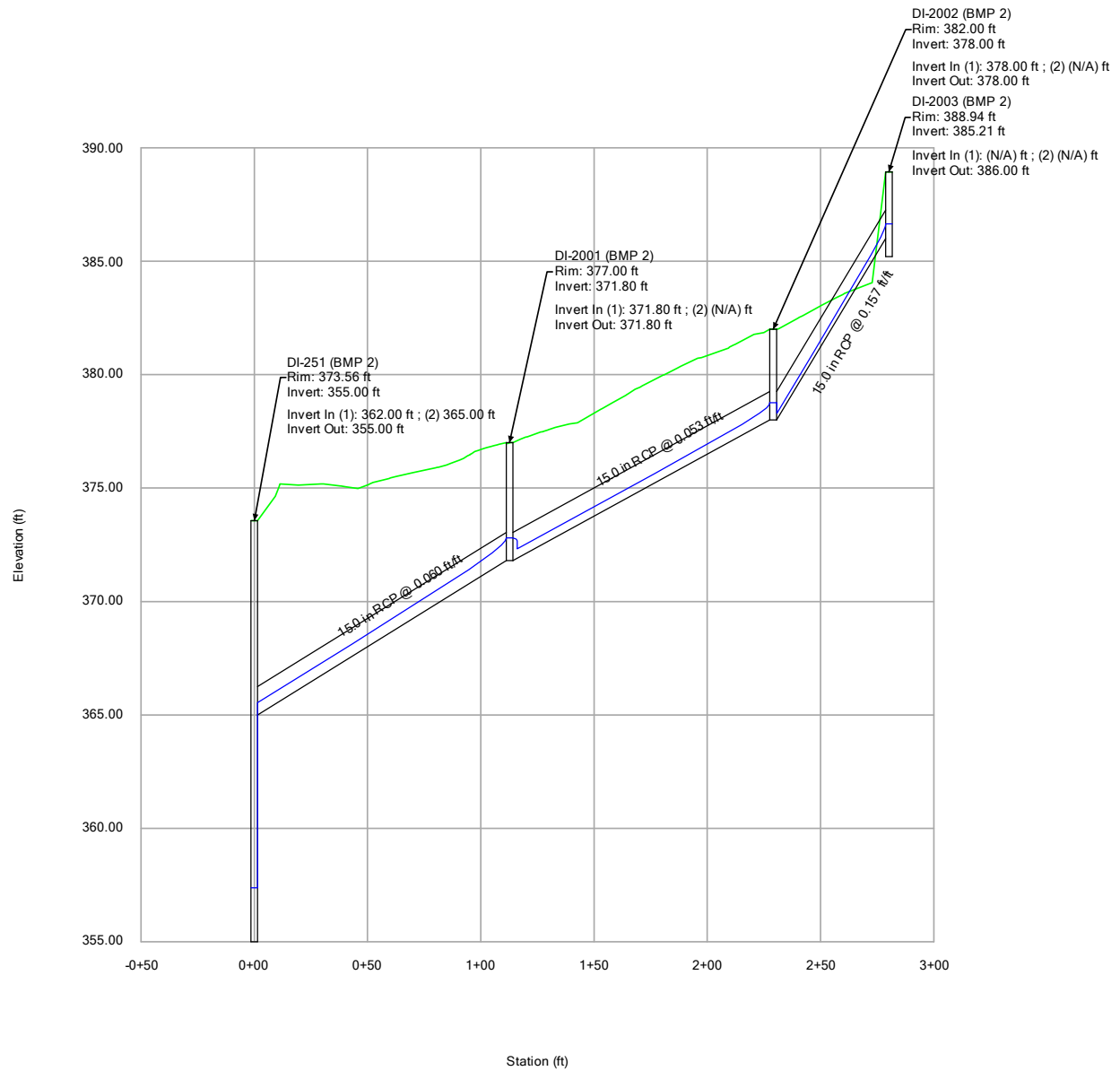
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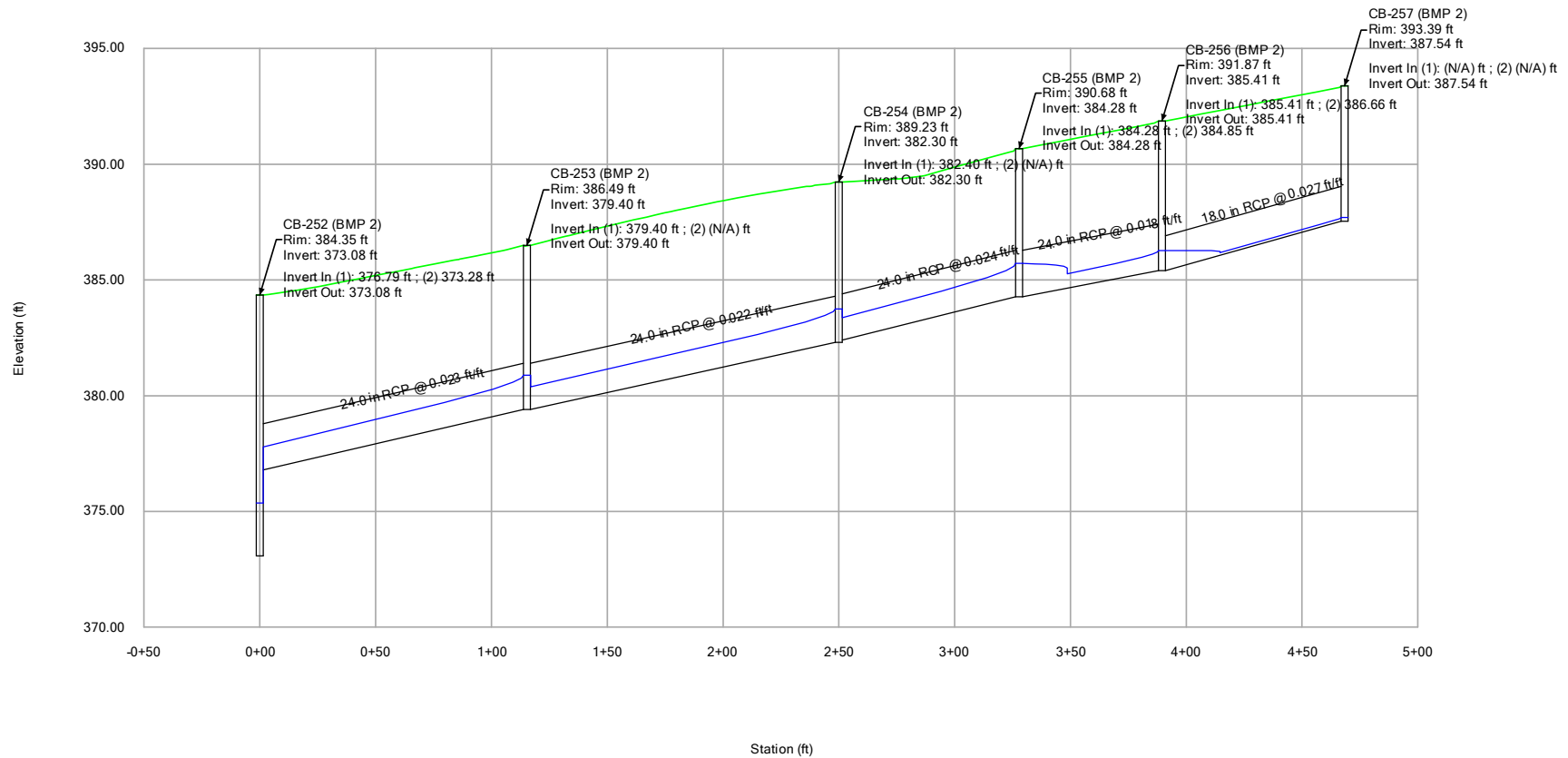
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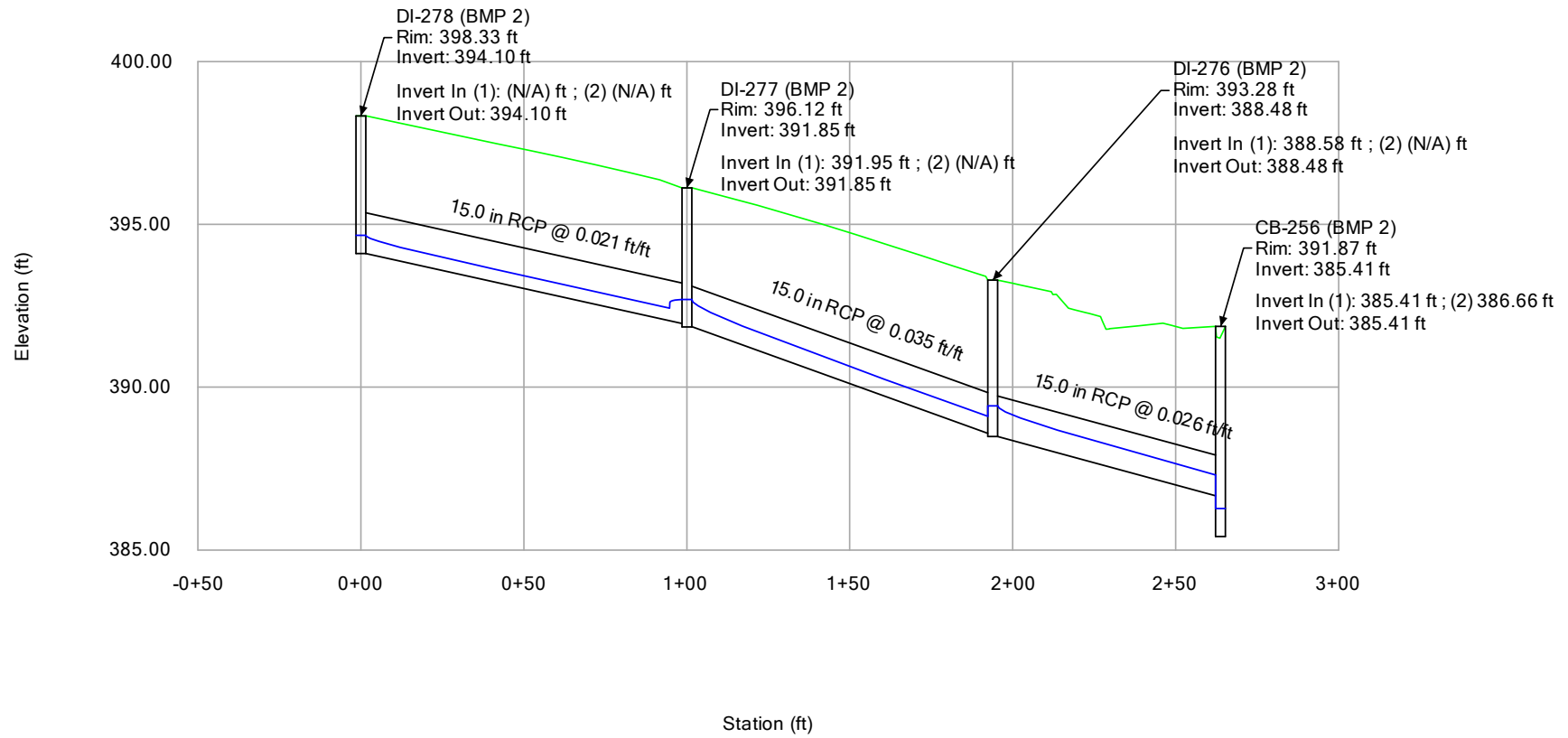
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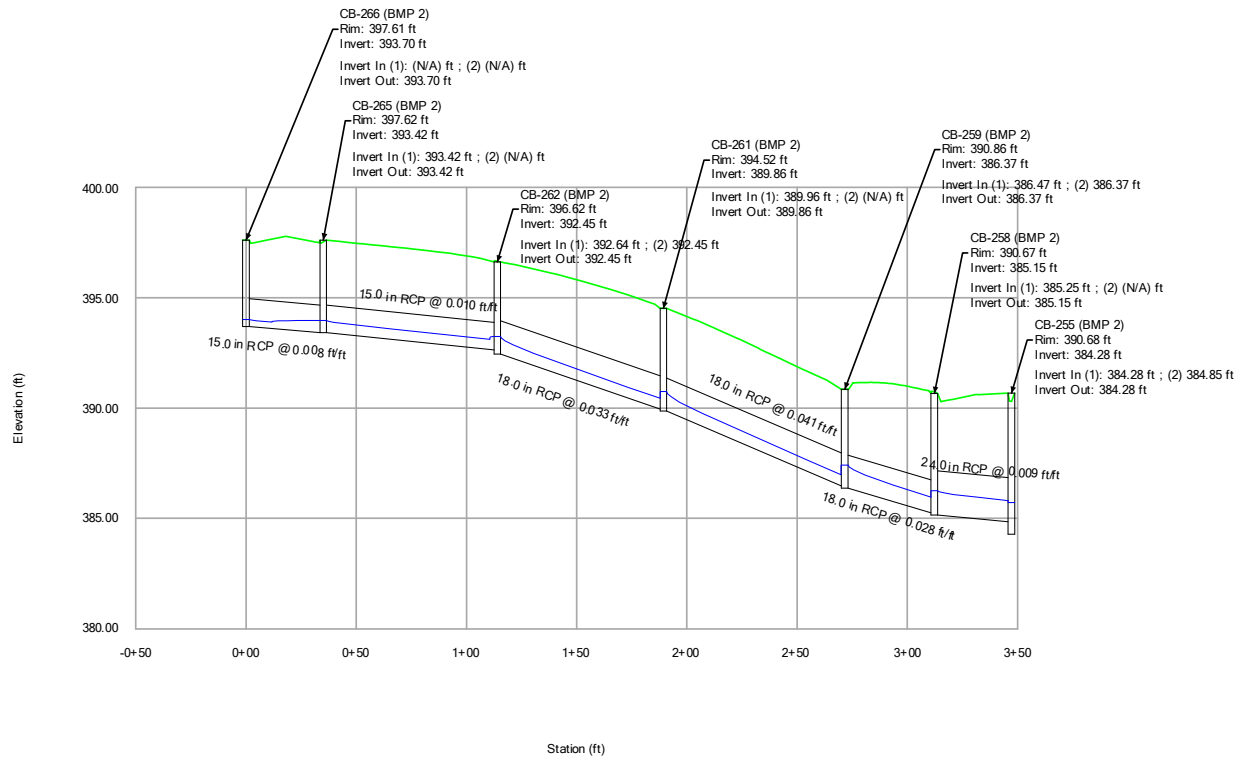
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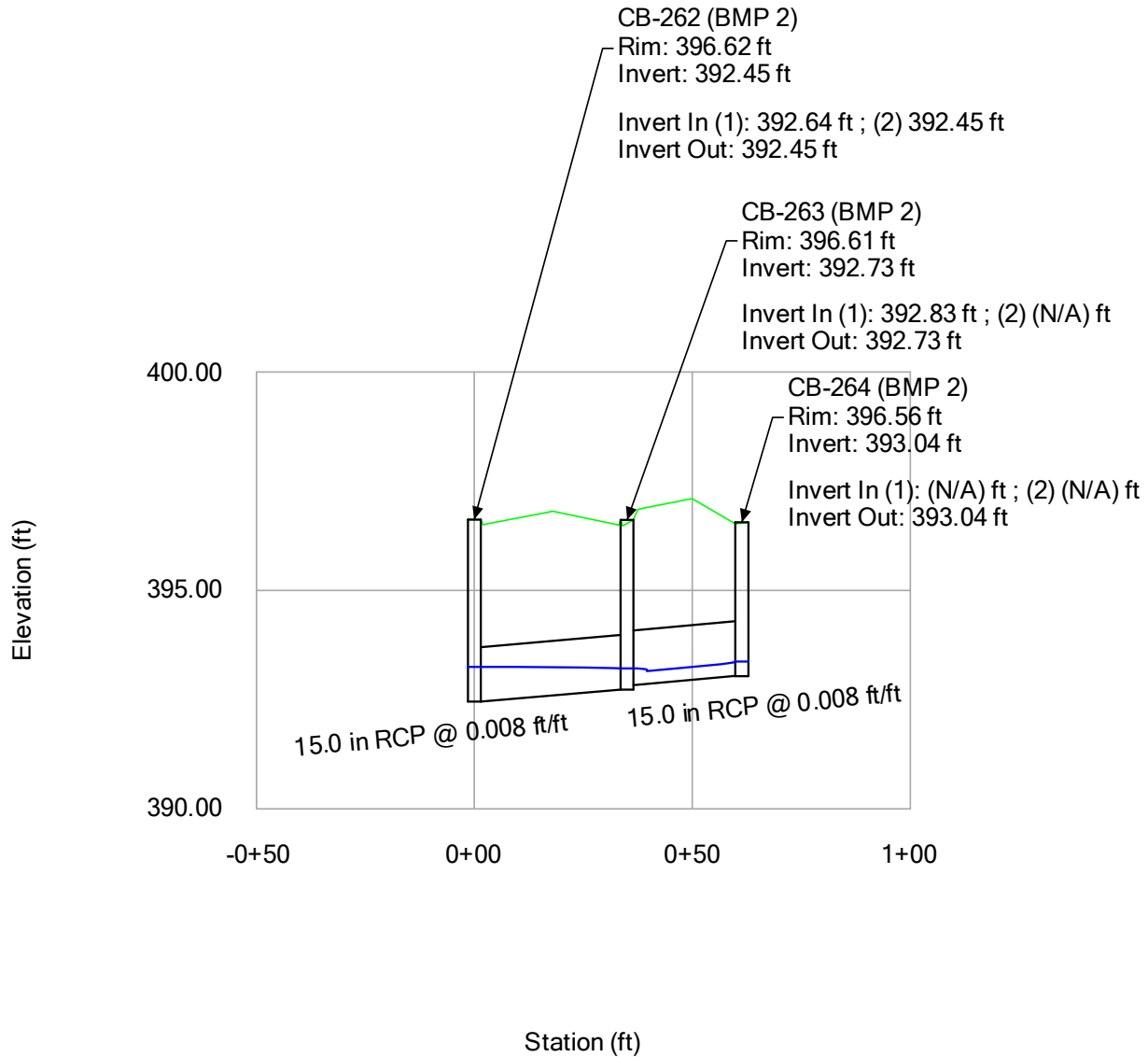
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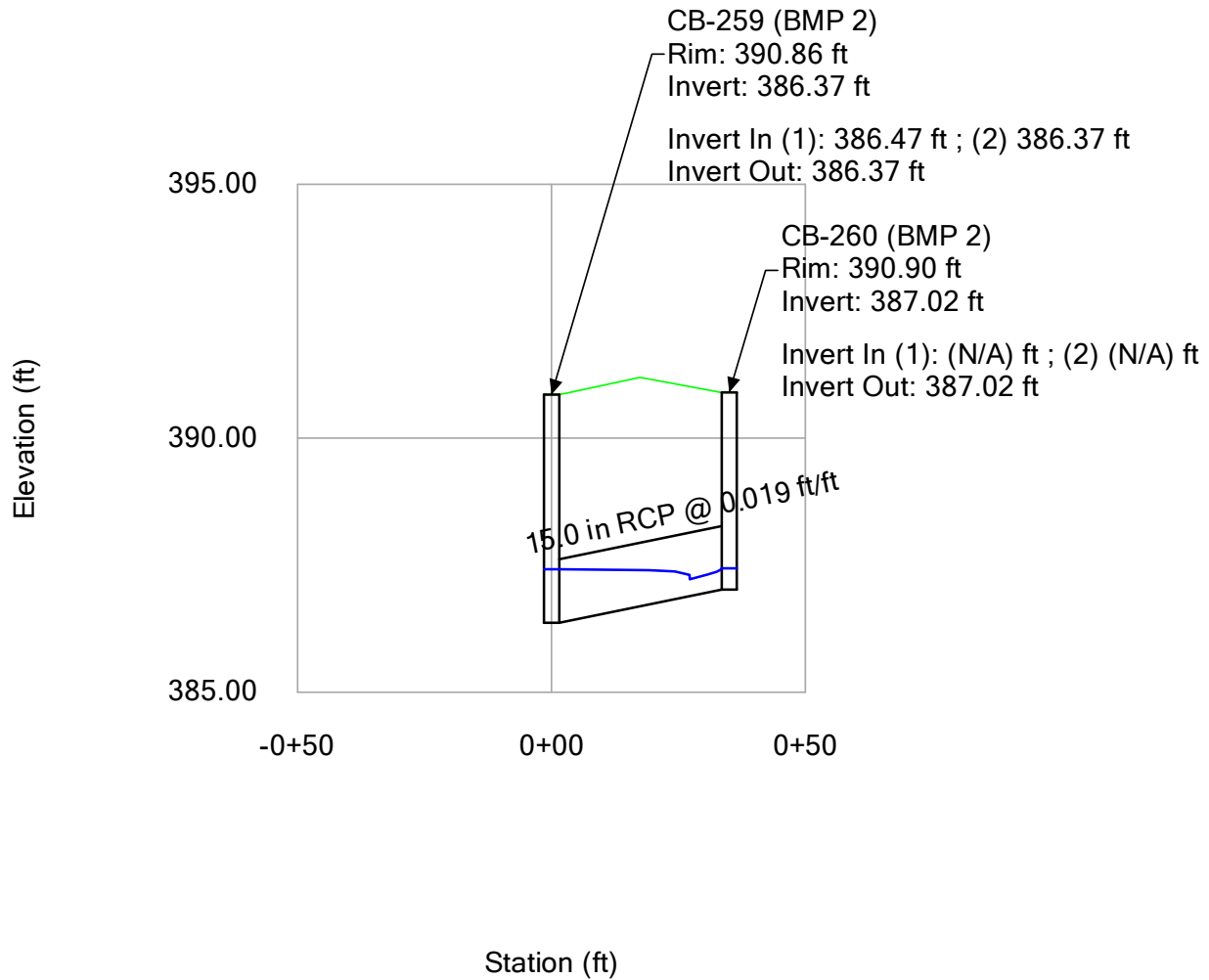
25-YR ANALYSIS



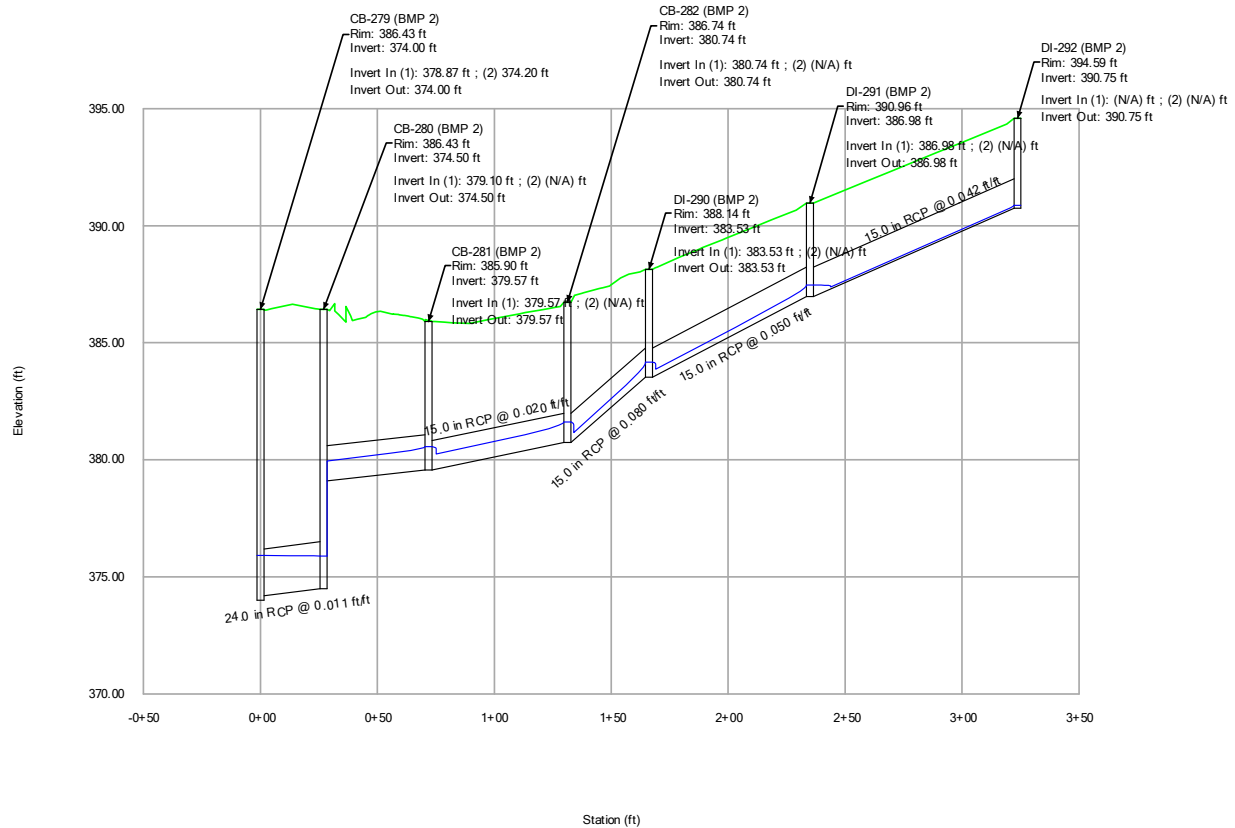
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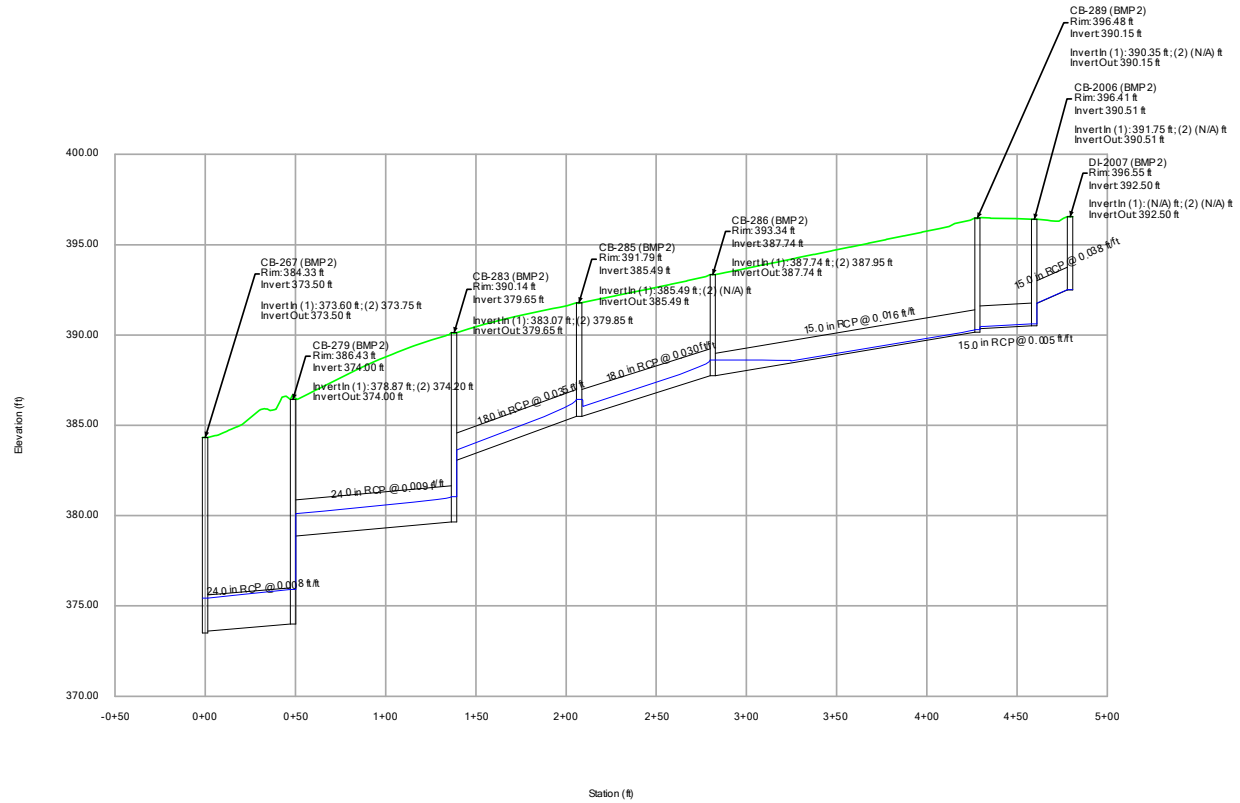
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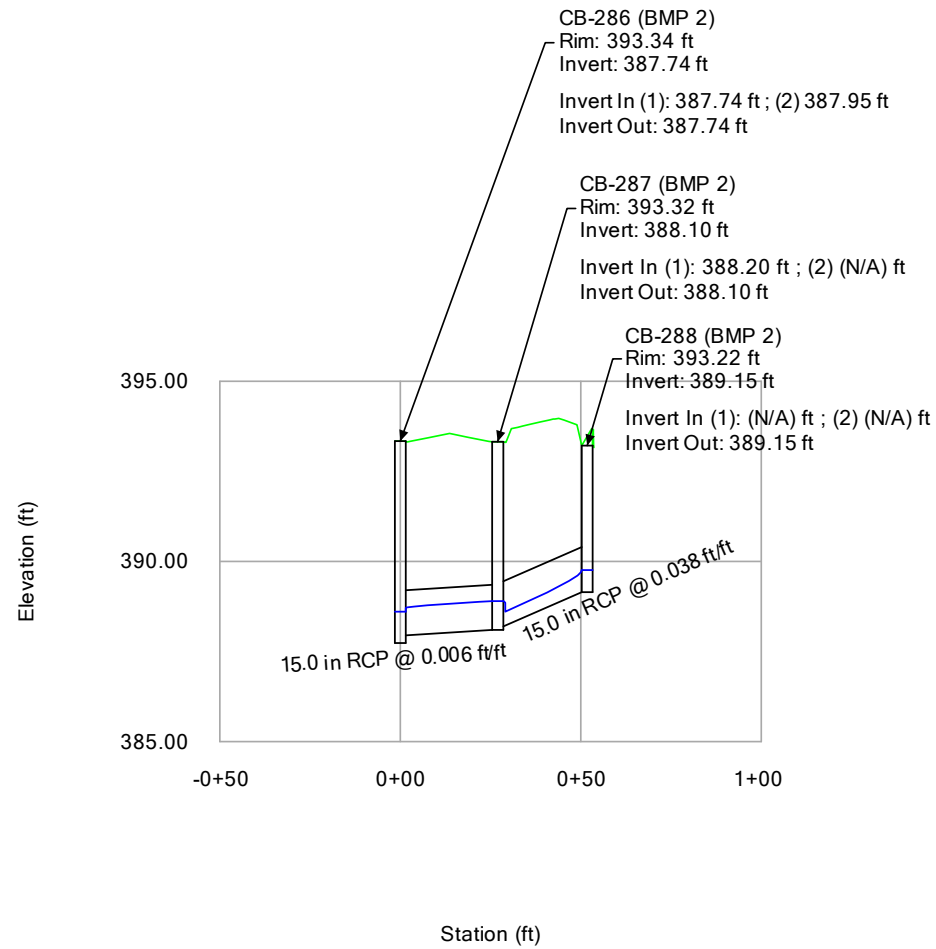
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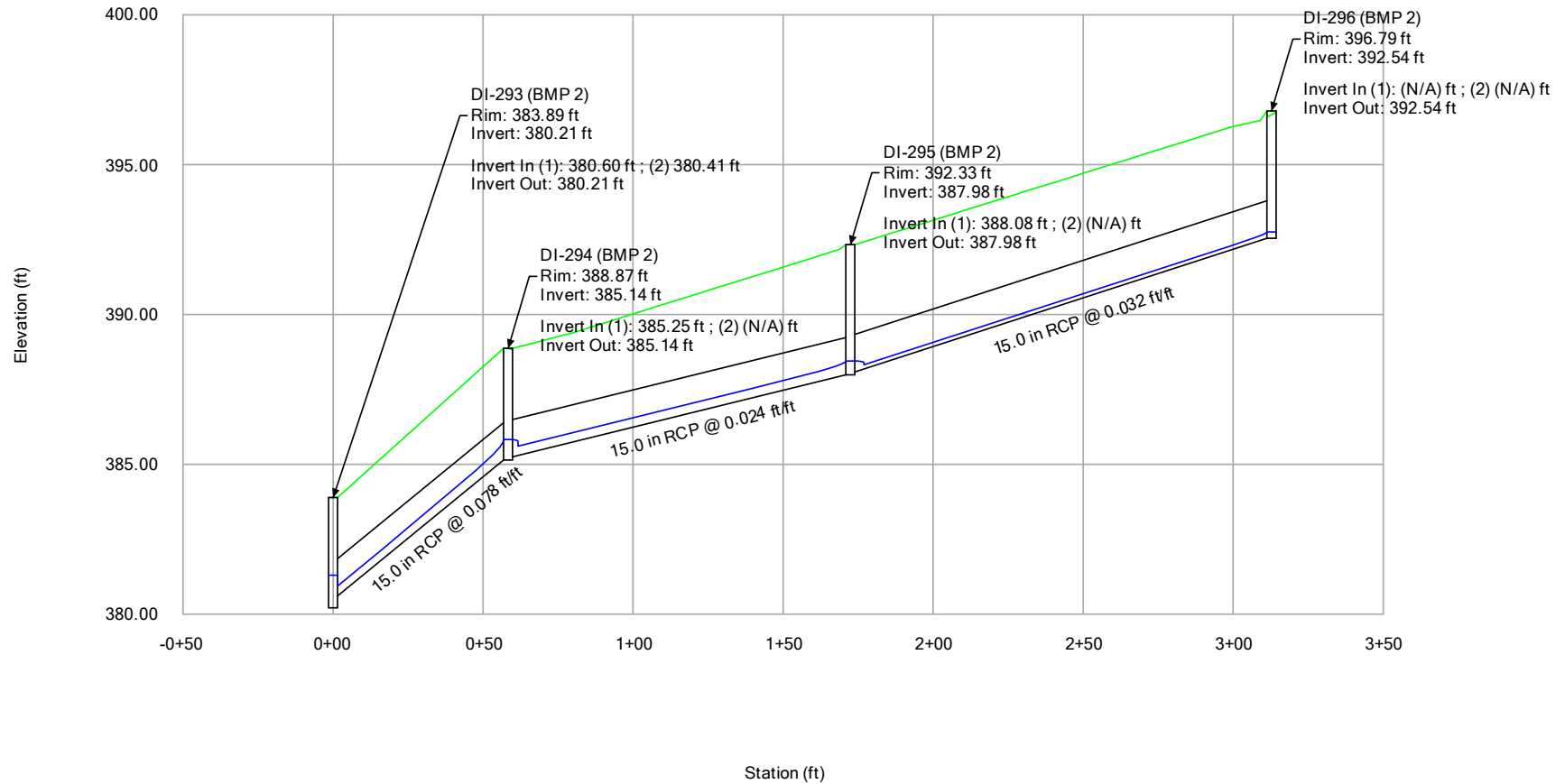
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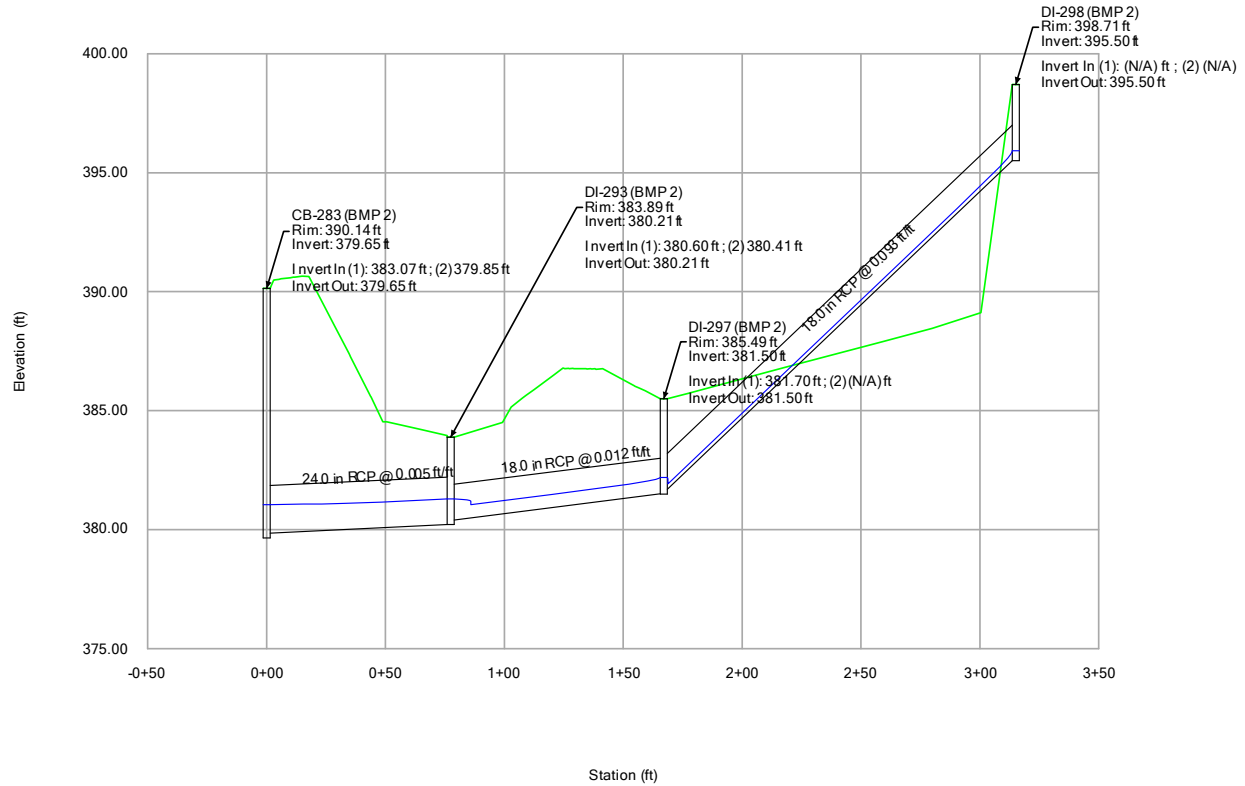
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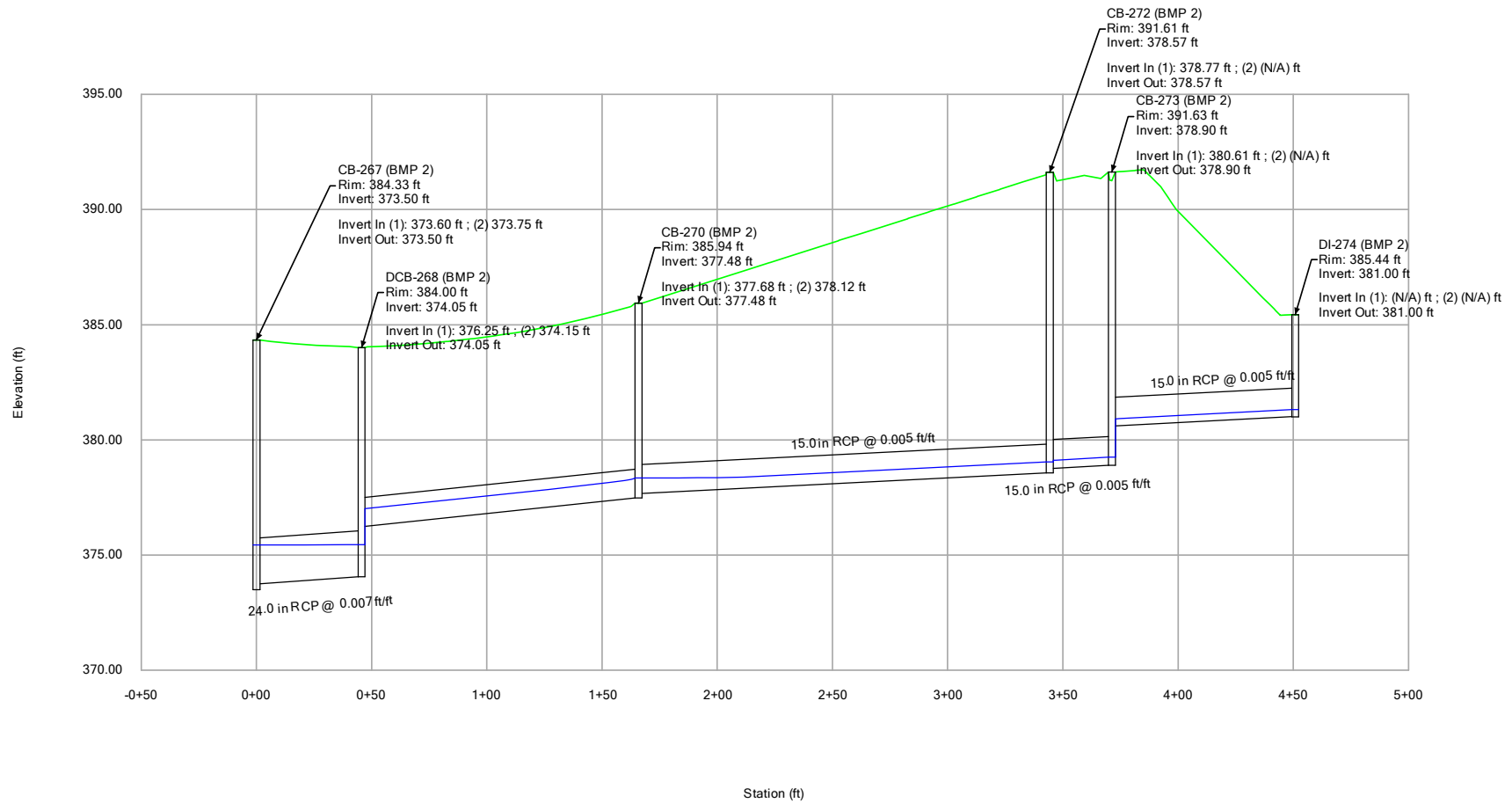
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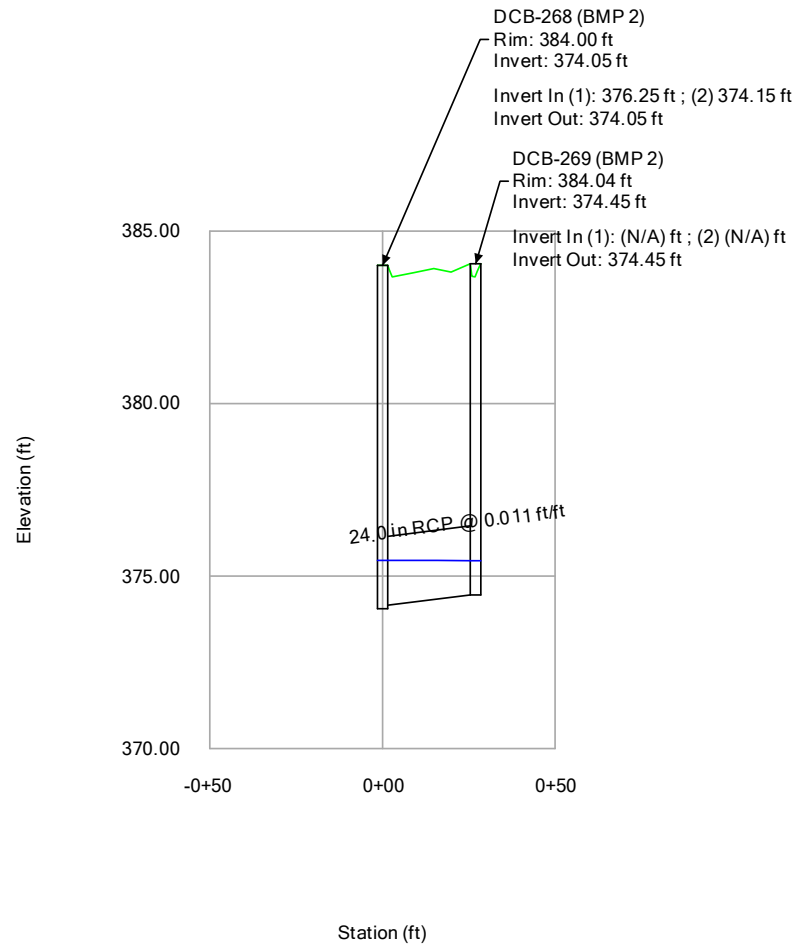
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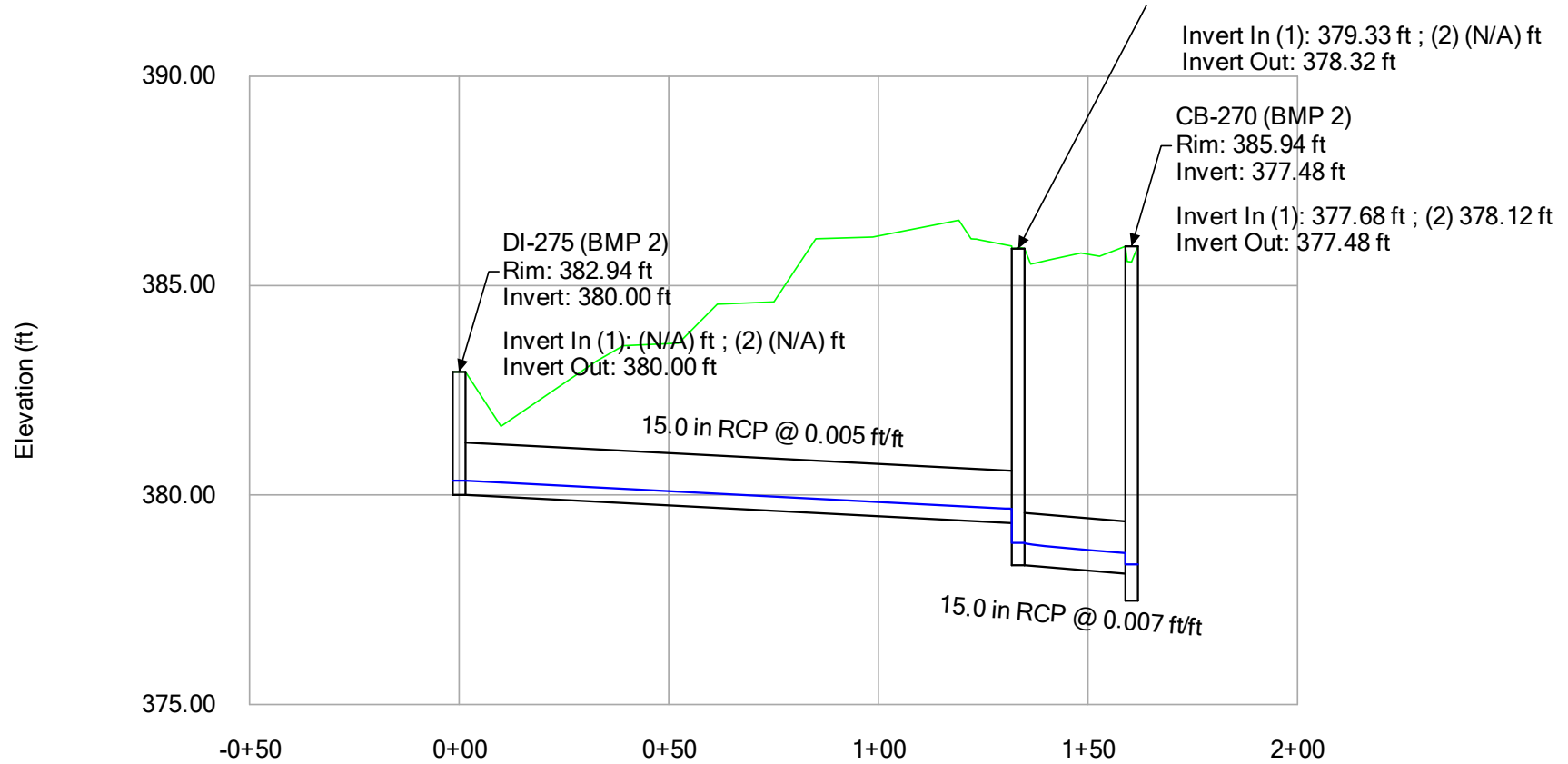
25-YR ANALYSIS



25-YR ANALYSIS



25-YR ANALYSIS



SCM 2 – INLET SPREAD

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
DCB-222 (BMP 2)	0.451	0.508	2.88	0.00	5.61	8.0	3.4
CB-202 (BMP 2)	0.350	0.292	1.66	0.00	29.77	7.7	2.3
DCB-268 (BMP 2)	0.368	0.353	2.00	0.00	5.81	7.5	2.3
CB-258 (BMP 2)	0.508	0.305	1.73	0.78	6.95	7.9	2.4
CB-225 (BMP 2)	0.450	0.282	1.60	0.65	1.60	7.5	2.3
CB-282 (BMP 2)	0.287	0.273	1.55	0.61	3.33	7.4	2.3
CB-281 (BMP 2)	0.278	0.248	1.41	0.50	4.67	7.0	2.2
DI-277 (BMP 2)	0.347	0.295	1.67	0.00	3.05	7.1	1.7
CB-286 (BMP 2)	0.370	0.236	1.34	0.44	3.87	6.8	2.1
CB-218 (BMP 2)	0.321	0.223	1.27	0.39	2.56	6.6	2.1
DI-278 (BMP 2)	0.384	0.250	1.41	0.00	1.41	6.7	1.6
CB-217 (BMP 2)	0.303	0.213	1.21	0.35	1.21	6.5	2.0
CB-280 (BMP 2)	0.252	0.201	1.14	0.31	5.74	6.2	2.0
CB-270 (BMP 2)	0.324	0.200	1.13	0.31	3.31	6.2	2.0
CB-227 (BMP 2)	0.317	0.194	1.10	0.28	1.10	6.1	1.9
CB-265 (BMP 2)	0.241	0.172	0.97	0.21	1.44	5.7	1.9

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-287 (BMP 2)	0.259	0.170	0.97	0.21	2.75	5.7	1.8
CB-262 (BMP 2)	0.177	0.160	0.91	0.18	3.17	5.5	1.8
DCB-269 (BMP 2)	0.110	0.139	0.79	0.00	0.79	5.2	1.7
DCB-221 (BMP 2)	0.184	0.195	1.11	0.00	10.27	5.1	2.7
CB-260 (BMP 2)	0.206	0.150	0.85	0.15	0.85	5.3	1.8
CB-271 (BMP 2)	0.231	0.151	0.85	0.15	1.34	5.3	1.8
DI-276 (BMP 2)	0.165	0.140	0.79	0.00	3.80	5.4	1.3
CB-215 (BMP 2)	0.197	0.144	0.81	0.14	5.01	5.2	1.7
CB-267 (BMP 2)	0.051	0.121	0.69	0.09	22.61	4.7	1.6
CB-285 (BMP 2)	0.085	0.132	0.75	0.11	4.53	4.9	1.7
CB-224 (BMP 2)	0.191	0.135	0.76	0.11	3.91	5.0	1.7
CB-261 (BMP 2)	0.143	0.125	0.71	0.09	3.84	4.8	1.6
CB-220 (BMP 2)	0.154	0.128	0.73	0.10	0.73	4.8	1.6
CB-259 (BMP 2)	0.140	0.121	0.68	0.08	5.30	4.7	1.6
CB-252 (BMP 2)	0.140	0.114	0.65	0.07	34.68	4.5	1.6
CB-219 (BMP 2)	0.148	0.116	0.66	0.08	1.37	4.6	1.6

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-253 (BMP 2)	0.142	0.111	0.63	0.07	12.18	4.5	1.6
CB-205 (BMP 2)	0.175	0.112	0.63	0.07	17.52	4.5	1.6
CB-216 (BMP 2)	0.039	0.099	0.56	0.05	4.24	4.2	1.5
CB-208 (BMP 2)	0.130	0.106	0.60	0.06	0.60	4.4	1.5
CB-223 (BMP 2)	0.099	0.102	0.58	0.05	2.99	4.3	1.5
CB-226 (BMP 2)	0.135	0.096	0.55	0.04	1.63	4.1	1.5
CB-210 (BMP 2)	0.126	0.092	0.52	0.04	0.52	4.0	1.4
CB-283 (BMP 2)	0.078	0.081	0.46	0.02	10.80	3.7	1.4
CB-272 (BMP 2)	0.111	0.085	0.48	0.03	1.01	3.8	1.4
CB-266 (BMP 2)	0.099	0.084	0.48	0.03	0.48	3.8	1.4
CB-206 (BMP 2)	0.084	0.080	0.45	0.02	0.45	3.7	1.4
CB-203 (BMP 2)	0.090	0.077	0.44	0.02	28.44	3.6	1.3
CB-254 (BMP 2)	0.086	0.073	0.42	0.02	11.70	3.5	1.3
CB-204 (BMP 2)	0.085	0.067	0.38	0.01	9.33	3.3	1.3
CB-263 (BMP 2)	0.063	0.064	0.36	0.01	0.87	3.2	1.2
CB-209 (BMP 2)	0.095	0.061	0.35	0.01	15.94	3.1	1.2

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-212 (BMP 2)	0.069	0.061	0.35	0.01	15.35	3.1	1.2
CB-213 (BMP 2)	0.062	0.058	0.33	0.01	15.08	3.0	1.2
CB-255 (BMP 2)	0.065	0.056	0.32	0.01	11.37	3.0	1.2
CB-279 (BMP 2)	0.051	0.053	0.30	0.00	16.37	2.8	1.2
CB-207 (BMP 2)	0.084	0.055	0.31	0.00	16.64	2.9	1.2
CB-256 (BMP 2)	0.054	0.051	0.29	0.00	4.19	2.8	1.1
CB-257 (BMP 2)	0.025	0.024	0.13	0.00	0.13	1.8	0.9
CB-273 (BMP 2)	0.025	0.024	0.13	0.00	0.55	1.8	0.9
CB-2006 (BMP 2)	0.012	0.009	0.05	0.00	0.05	1.3	0.6
CB-289 (BMP 2)	0.024	0.008	0.05	0.00	0.10	1.2	0.6
CB-214 (BMP 2)	0.008	0.007	0.04	0.00	14.88	1.2	0.6

ATTACHMENT 3: DRAINAGE AREA MAPS – SCM 3



DATE: 7/27/2023

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY BGE INC. SHALL BE WITHOUT LIABILITY TO BGE INC.

SCM 3 – 10 YR STORM

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-301 (BMP 3)	0.001	0.00	0.083	0.350
DI-354 (BMP 3)	0.002	0.01	0.083	0.350
DI-351 (BMP 3)	0.001	0.00	0.083	0.350
DI-355 (BMP 3)	0.007	0.02	0.083	0.350
DI-356 (BMP 3)	0.003	0.01	0.083	0.350
TCB-312 (BMP 3)	1.158	3.78	0.083	0.450
DI-376 (BMP 3)	0.623	7.50	0.083	0.500
DI-378 (BMP 3)	0.185	0.74	0.083	0.550
DI-377 (BMP 3)	0.168	1.89	0.083	0.550
DI-357 (BMP 3)	0.085	0.34	0.083	0.550
DI-358 (BMP 3)	0.022	0.09	0.083	0.550
CB-363 (BMP 3)	0.391	2.04	0.083	0.720
CB-373 (BMP 3)	0.281	1.52	0.083	0.750
DI-368 (BMP 3)	0.449	2.50	0.083	0.770
CB-369 (BMP 3)	0.357	1.99	0.083	0.770
DI-380 (BMP 3)	0.190	1.06	0.083	0.770

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-352 (BMP 3)	0.353	1.97	0.083	0.770
DI-353 (BMP 3)	0.019	0.10	0.083	0.770
CB-372 (BMP 3)	0.183	1.02	0.083	0.770
DCB-370 (BMP 3)	0.419	2.34	0.083	0.770
TCB-371 (BMP 3)	0.591	3.30	0.083	0.770
CB-303 (BMP 3)	0.105	0.59	0.083	0.770
CB-313 (BMP 3)	0.249	1.39	0.083	0.770
CB-314 (BMP 3)	0.290	1.62	0.083	0.770
DI-359 (BMP 3)	0.326	1.82	0.083	0.770
DI-360 (BMP 3)	0.313	1.75	0.083	0.770
DI-379 (BMP 3)	0.094	0.54	0.083	0.800
CB-375 (BMP 3)	0.025	0.15	0.083	0.820
CB-374 (BMP 3)	0.045	0.27	0.083	0.820
DCB-311 (BMP 3)	0.308	1.88	0.083	0.840
CB-307 (BMP 3)	0.174	1.07	0.083	0.850
CB-364 (BMP 3)	0.228	1.46	0.083	0.880

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-367 (BMP 3)	0.104	0.66	0.083	0.880
CB-362 (BMP 3)	0.130	0.83	0.083	0.880
CB-308 (BMP 3)	0.104	0.66	0.083	0.880
CB-310 (BMP 3)	0.055	0.37	0.083	0.920
CB-365 (BMP 3)	0.102	0.70	0.083	0.950
CB-368 (BMP 3)	0.041	0.28	0.083	0.950
CB-361 (BMP 3)	0.055	0.38	0.083	0.950
CB-368A (BMP 3)	0.065	0.45	0.083	0.950
CB-309 (BMP 3)	0.020	0.14	0.083	0.950
CB-305 (BMP 3)	0.031	0.22	0.083	0.950
CB-306 (BMP 3)	0.039	0.27	0.083	0.950
CB-304 (BMP 3)	0.029	0.20	0.083	0.950
CB-302 (BMP 3)	0.046	0.32	0.083	0.950

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-309 (BMP 3)	0.14	0.00	5.97	100.0	398.26	398.26	4.0	5.44	4.60
CB-305 (BMP 3)	0.22	0.00	7.81	99.9	397.99	397.99	4.0	3.83	5.01
CB-306 (BMP 3)	0.27	0.00	1.75	99.3	400.30	400.30	4.0	4.78	3.42
CB-304 (BMP 3)	0.20	0.00	7.97	100.0	397.01	397.01	4.0	4.94	5.04
CB-310 (BMP 3)	0.36	0.01	5.90	97.6	398.96	398.96	4.0	4.83	4.58
CB-364 (BMP 3)	1.14	0.31	1.77	78.6	400.16	400.16	4.0	1.71	3.58
CB-365 (BMP 3)	0.63	0.07	0.63	90.2	400.21	400.21	4.0	2.66	2.66
DI-353 (BMP 3)	0.10	0.00	0.10	98.9	401.21	401.21	2.0	1.60	1.60
CB-307 (BMP 3)	0.90	0.18	1.49	83.7	401.26	401.26	4.0	3.47	3.26
CB-308 (BMP 3)	0.60	0.06	0.60	91.1	401.72	401.72	4.0	2.54	2.54
DI-368 (BMP 3)	1.38	1.12	1.38	55.1	400.50	400.50	2.0	3.54	3.54
DCB-311 (BMP 3)	1.88	0.00	5.64	100.0	399.67	399.67	8.0	4.33	4.51
TCB-312 (BMP 3)	3.78	0.00	3.78	100.0	400.26	400.26	12.0	4.22	4.22
DI-379 (BMP 3)	0.44	0.11	2.34	80.1	389.75	389.75	2.0	7.76	3.73
CB-363 (BMP 3)	1.48	0.56	3.22	72.7	399.93	399.93	4.0	2.85	4.32
CB-362 (BMP 3)	0.73	0.10	3.91	87.8	399.60	399.60	4.0	4.38	4.72

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-303 (BMP 3)	0.54	0.04	0.54	92.6	399.29	399.29	4.0	2.55	2.55
CB-302 (BMP 3)	0.32	0.00	10.99	98.5	392.71	392.71	4.0	2.26	5.65
CB-367 (BMP 3)	1.00	0.23	2.37	81.6	395.80	395.80	4.0	4.57	3.94
DI-352 (BMP 3)	1.16	0.81	1.23	58.9	400.28	400.28	2.0	0.64	3.09
CB-361 (BMP 3)	0.45	0.02	6.63	95.1	390.39	390.39	4.0	4.89	3.54
DI-378 (BMP 3)	0.55	0.18	0.55	75.2	397.75	397.75	2.0	2.48	2.48
DI-380 (BMP 3)	0.73	0.33	0.73	69.1	400.45	400.45	2.0	2.68	2.68
CB-368 (BMP 3)	0.30	0.00	14.87	98.8	391.17	391.17	4.0	6.34	6.38
DI-377 (BMP 3)	1.13	0.77	1.65	59.6	394.88	394.88	2.0	1.56	3.36
CB-375 (BMP 3)	0.15	0.00	0.15	100.0	397.96	397.96	4.0	1.72	1.72
CB-374 (BMP 3)	0.27	0.00	0.41	99.4	397.29	397.29	4.0	1.81	2.37
CB-369 (BMP 3)	1.58	0.64	1.58	71.2	391.69	391.69	4.0	3.41	3.41
CB-368A (BMP 3)	0.43	0.02	14.68	95.6	391.61	391.61	4.0	5.66	5.92
CB-373 (BMP 3)	1.19	0.34	1.19	77.8	392.67	392.67	4.0	3.13	3.13
CB-372 (BMP 3)	0.86	0.16	2.39	84.5	392.60	392.60	4.0	2.37	3.81
DCB-370 (BMP 3)	2.52	0.00	13.01	100.0	392.17	392.17	8.0	3.99	5.66

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
TCB-371 (BMP 3)	4.28	0.00	8.38	100.0	392.28	392.28	12.0	4.58	5.13
DI-356 (BMP 3)	0.01	0.00	21.02	100.0	390.41	390.41	2.0	2.67	6.44
DI-360 (BMP 3)	1.06	0.69	1.06	60.8	395.89	395.89	2.0	2.97	2.97
DI-376 (BMP 3)	2.97	4.53	4.46	39.6	394.27	394.27	2.0	2.34	4.38
DI-357 (BMP 3)	0.30	0.04	2.43	87.2	390.69	390.69	2.0	4.18	3.77
DI-358 (BMP 3)	0.09	0.00	2.18	99.5	391.31	391.31	2.0	5.03	3.64
CB-314 (BMP 3)	1.27	0.40	1.27	76.2	393.85	393.85	4.0	3.19	3.19
CB-313 (BMP 3)	1.11	0.29	2.36	79.3	393.64	393.64	4.0	3.24	3.93
DI-359 (BMP 3)	1.10	0.72	2.11	60.2	392.43	392.43	2.0	4.94	3.61
DI-301 (BMP 3)	0.00	0.00	10.85	100.0	387.48	387.48	2.0	10.30	5.62
DI-355 (BMP 3)	0.02	0.00	23.17	100.0	390.07	390.07	2.0	6.40	6.56
DI-351 (BMP 3)	0.00	0.00	24.93	100.0	387.44	387.44	2.0	10.23	6.64
DI-354 (BMP 3)	0.01	0.00	22.97	100.0	389.51	389.51	2.0	6.79	6.77
YI-3004 (BMP 3)	0.00	0.00	50.00	100.0	383.76	383.76	0.0	7.64	7.64

10-YR ANALYSIS

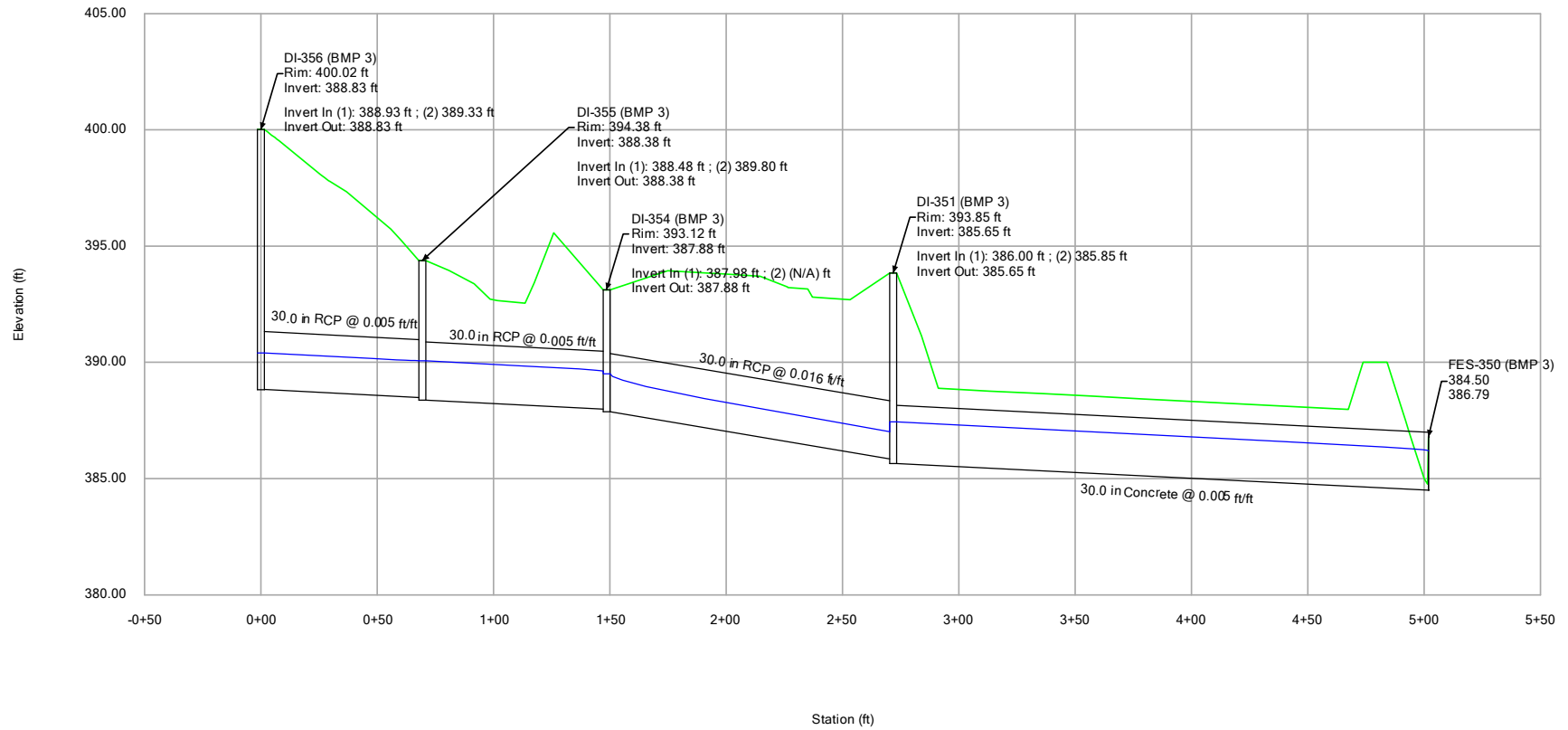
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-309 TO CB-310 (BMP 3)	24.0	0.007	4.58	5.44	5.90	19.50	398.96	398.26
CB-305 TO CB-309 (BMP 3)	24.0	0.005	4.60	3.83	5.97	16.07	398.26	397.99
CB-305 TO CB-306 (BMP 3)	18.0	0.005	3.42	3.44	1.75	7.43	400.30	400.12
CB-304 TO CB-305 (BMP 3)	24.0	0.020	5.01	4.94	7.81	31.97	397.99	397.01
CB-306 TO CB-307 (BMP 3)	18.0	0.014	3.26	4.78	1.49	12.55	401.26	400.35
CB-302 TO CB-304 (BMP 3)	24.0	0.020	5.04	8.35	7.97	32.04	397.01	395.27
CB-310 TO DCB-311 (BMP 3)	24.0	0.006	4.51	4.83	5.64	16.84	399.67	399.00
CB-364 TO CB-365 (BMP 3)	15.0	0.006	2.66	1.71	0.63	4.93	400.21	400.16
CB-363 TO CB-364 (BMP 3)	15.0	0.008	3.58	2.85	1.77	5.62	400.16	399.93
DI-352 TO DI-353 (BMP 3)	18.0	0.014	1.60	0.64	0.10	12.37	401.21	400.28
CB-307 TO CB-308 (BMP 3)	18.0	0.012	2.54	3.47	0.60	11.64	401.72	401.23
CB-367 TO DI-368 (BMP 3)	12.0	0.012	3.54	4.57	1.38	3.96	400.50	400.11
DCB-311 TO DCB-312 (BMP 3)	18.0	0.005	4.22	4.33	3.78	7.43	400.26	400.07
DI-379 TO DI-380 (BMP 3)	18.0	0.016	2.68	4.06	0.73	13.38	400.45	398.54
DI-351 TO DI-379 (BMP 3)	18.0	0.069	3.73	1.35	2.34	27.65	389.75	387.44
DI-379 TO DI-352 (BMP 3)	18.0	0.066	3.09	7.76	1.23	27.05	400.28	389.58
CB-362 TO CB-363 (BMP 3)	15.0	0.006	4.32	4.38	3.22	4.99	399.93	399.72
CB-361 TO CB-362 (BMP 3)	15.0	0.014	4.72	6.30	3.91	7.70	399.60	398.23
CB-302 TO CB-303 (BMP 3)	15.0	0.009	2.55	3.03	0.54	5.98	399.29	398.96
CB-302 TO CB-313 (BMP 3)	15.0	0.007	3.93	2.26	2.36	5.59	393.64	392.71
DI-301 TO CB-302 (BMP 3)	24.0	0.027	5.65	10.30	10.99	37.15	392.71	387.25
CB-361 TO CB-367 (BMP 3)	15.0	0.010	3.94	4.89	2.37	6.51	395.80	395.34
DI-356 TO CB-361 (BMP 3)	24.0	0.007	3.54	2.67	6.63	18.71	390.39	390.41
DI-377 TO DI-378 (BMP 3)	18.0	0.024	2.48	1.56	0.55	16.40	397.75	394.88
CB-368 TO CB-368A (BMP 3)	24.0	0.005	5.92	6.34	14.68	16.37	391.61	391.26
DI-356 TO CB-368 (BMP 3)	24.0	0.009	6.38	7.25	14.87	21.16	391.17	390.57
DI-376 TO DI-377 (BMP 3)	18.0	0.006	3.36	2.34	1.65	8.05	394.88	394.27
CB-374 TO CB-375 (BMP 3)	15.0	0.005	1.72	1.81	0.15	4.57	397.96	397.73

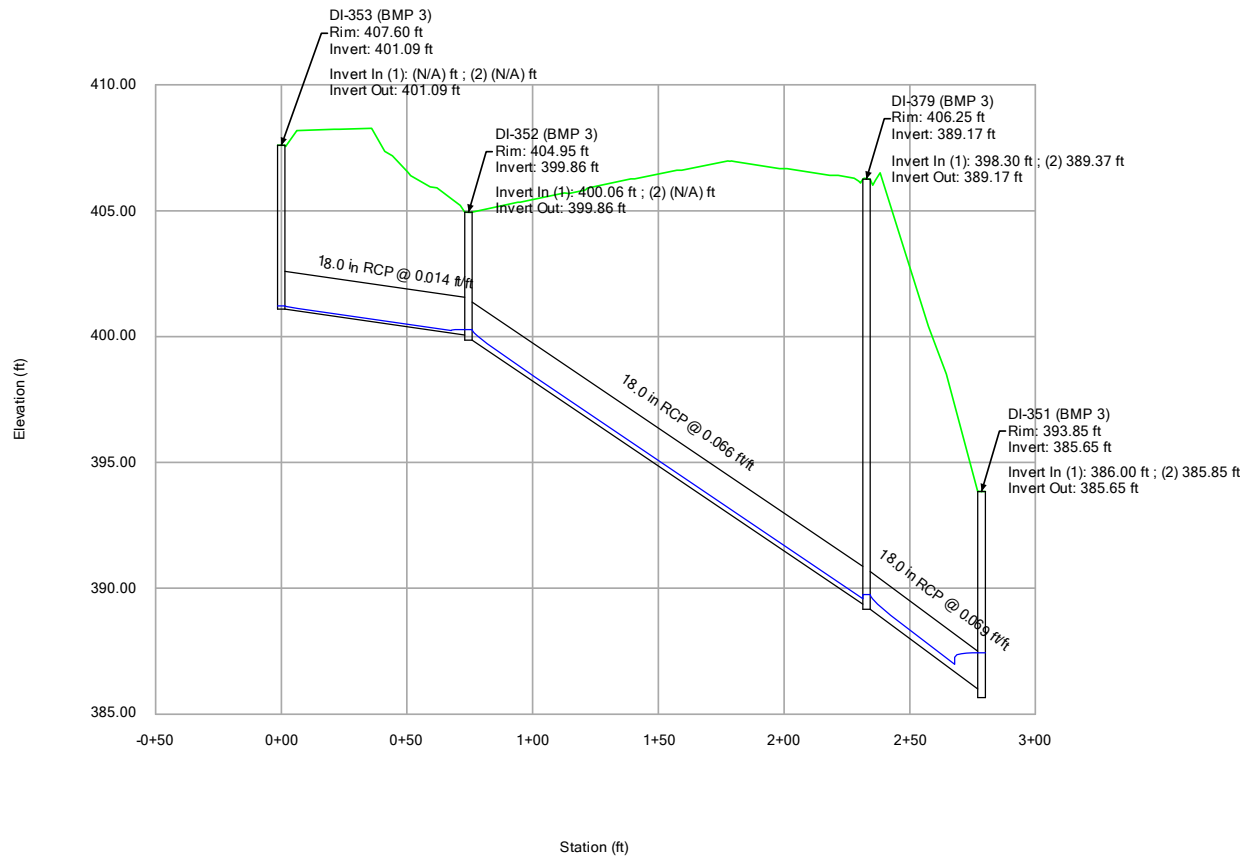
10-YR ANALYSIS
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-372 TO CB-374 (BMP 3)	15.0	0.040	2.37	1.09	0.41	12.90	397.29	392.60
CB-368A TO CB-369 (BMP 3)	15.0	0.005	3.41	2.69	1.58	4.62	391.69	391.61
CB-368A TO DCB-370 (BMP 3)	24.0	0.005	5.66	5.66	13.01	15.94	392.17	391.61
CB-372 TO CB-373 (BMP 3)	15.0	0.005	3.13	2.37	1.19	4.57	392.67	392.60
DCB-370 TO CB-372 (BMP 3)	15.0	0.005	3.81	3.95	2.39	4.65	392.60	392.17
DCB-370 TO DCB-371 (BMP 3)	24.0	0.010	5.13	3.99	8.38	22.66	392.28	392.17
DCB-371 TO DI-376 (BMP 3)	18.0	0.005	4.38	4.58	4.46	7.40	394.27	393.61
DI-355 TO DI-356 (BMP 3)	30.0	0.005	6.44	6.40	21.02	29.00	390.41	390.07
DI-359 TO DI-360 (BMP 3)	18.0	0.021	2.97	4.94	1.06	15.16	395.89	392.35
DI-357 TO DI-358 (BMP 3)	18.0	0.007	3.64	4.18	2.18	8.97	391.31	390.70
DI-355 TO DI-357 (BMP 3)	18.0	0.011	3.77	4.94	2.43	11.01	390.69	390.28
DI-358 TO DI-359 (BMP 3)	18.0	0.012	3.61	5.03	2.11	11.74	392.43	391.28
CB-313 TO CB-314 (BMP 3)	15.0	0.005	3.19	3.24	1.27	4.57	393.85	393.67
FES-300 TO DI-301 (BMP 3)	24.0	0.011	5.62	7.32	10.85	23.44	387.48	385.46
DI-354 TO DI-355 (BMP 3)	30.0	0.005	6.56	6.79	23.17	29.00	390.07	389.62
DI-351 TO DI-354 (BMP 3)	30.0	0.016	6.77	10.23	22.97	52.65	389.51	387.02
FES-350 TO DI-351 (BMP 3)	30.0	0.005	6.64	7.01	24.93	28.99	387.44	386.20
FES-3003 TO YI-3004 (BMP 3)	36.0	0.005	7.64	8.59	50.00	47.16	383.76	382.30

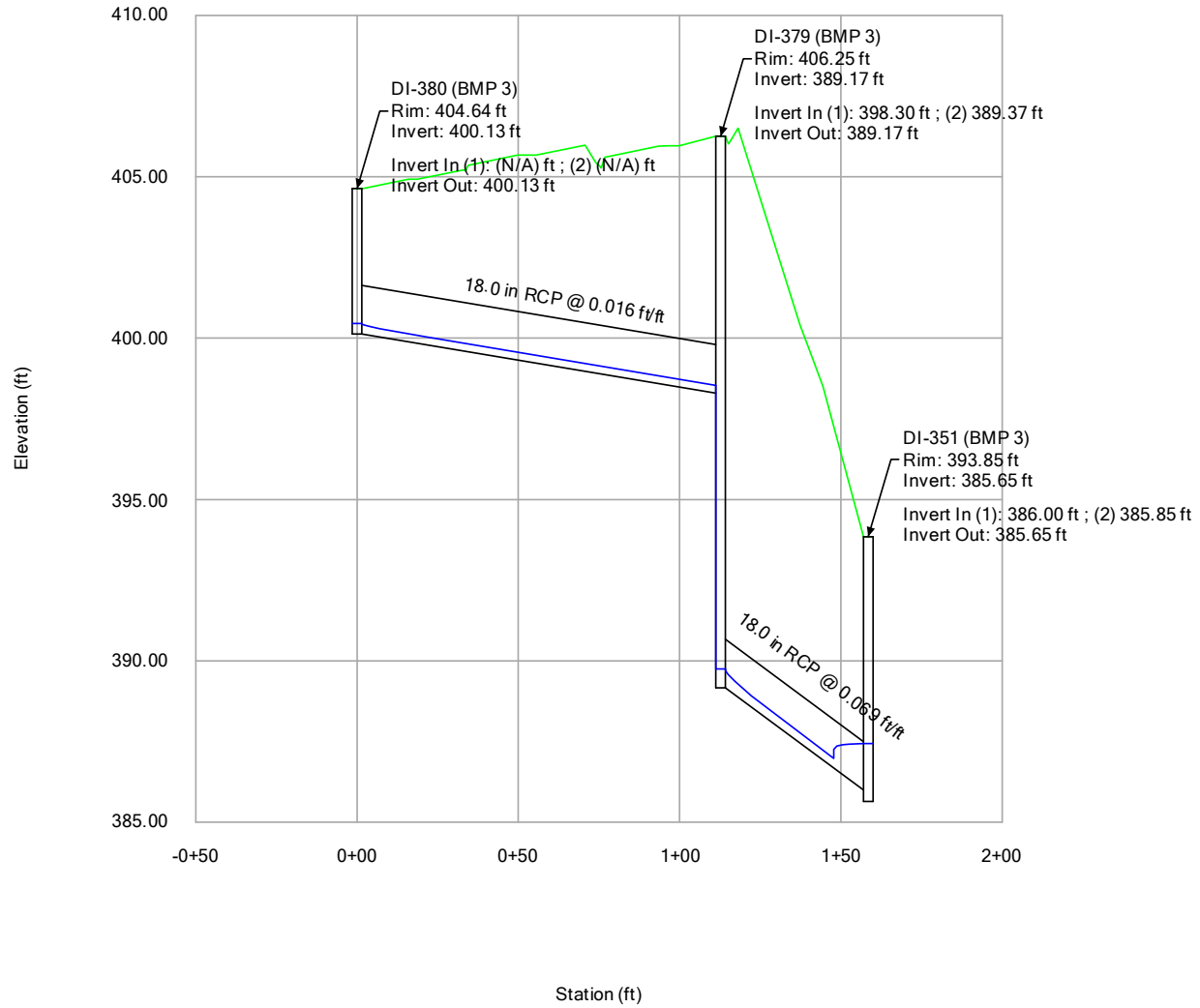
10-YR ANALYSIS



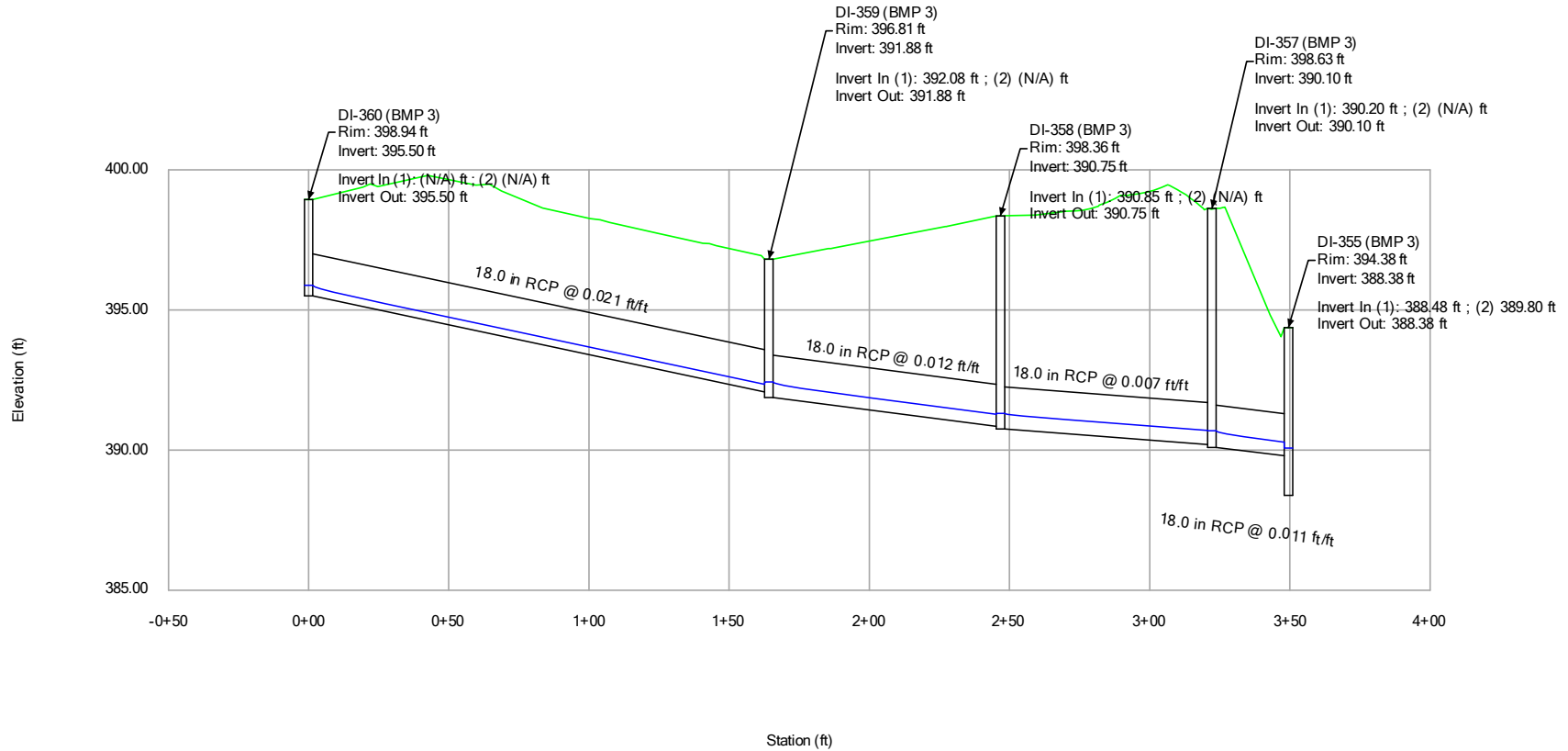
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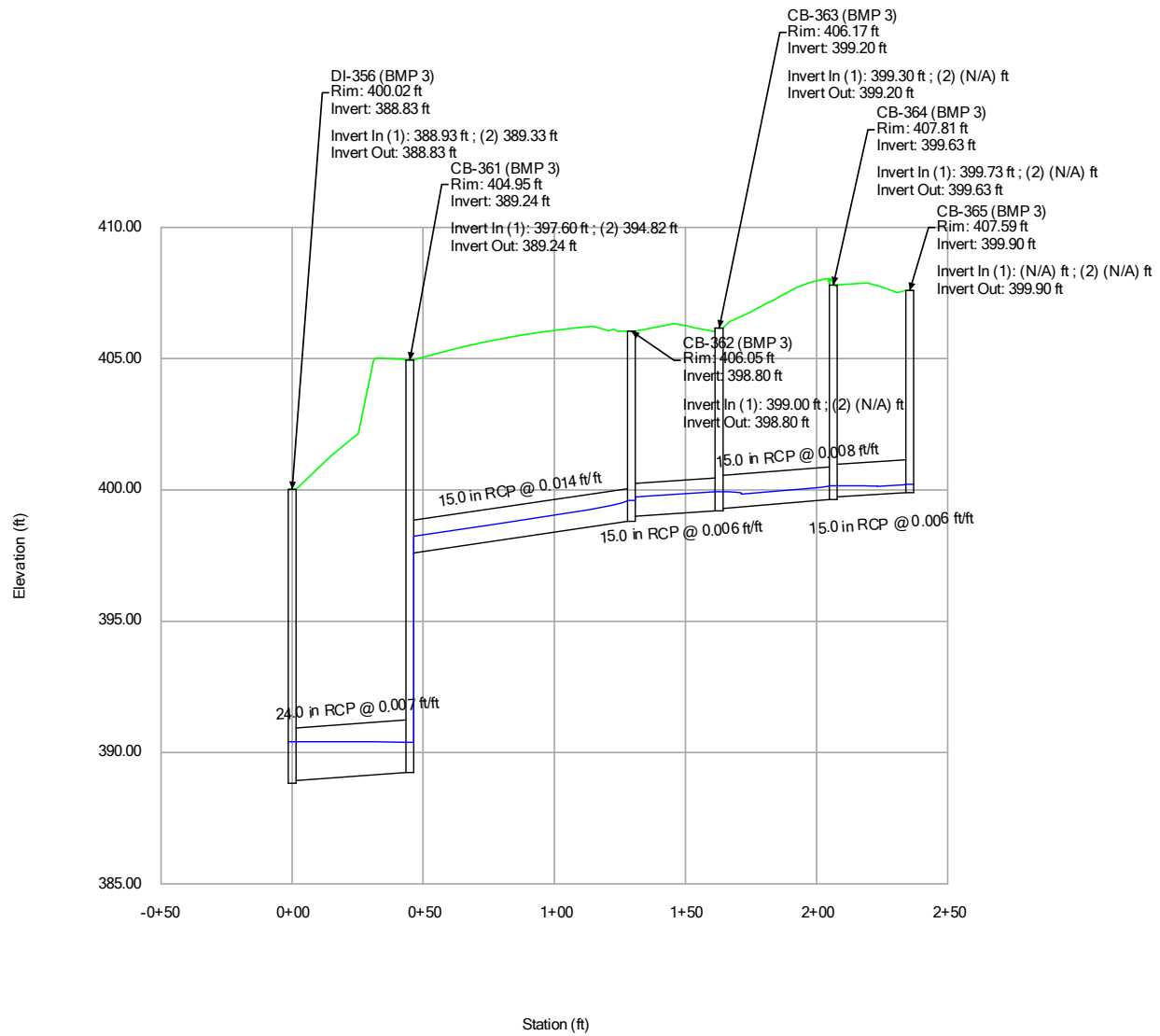
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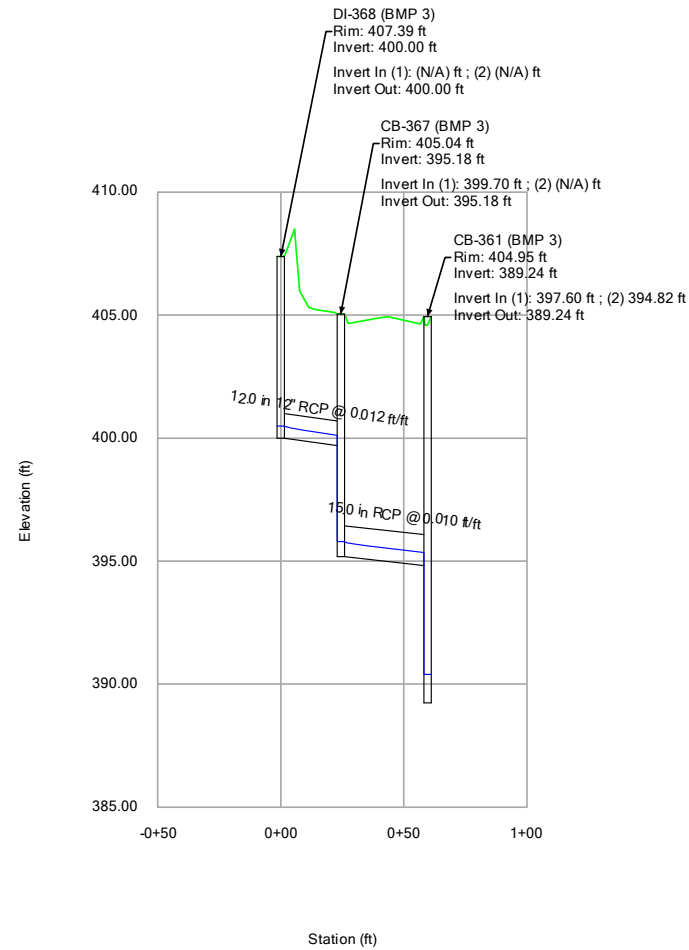
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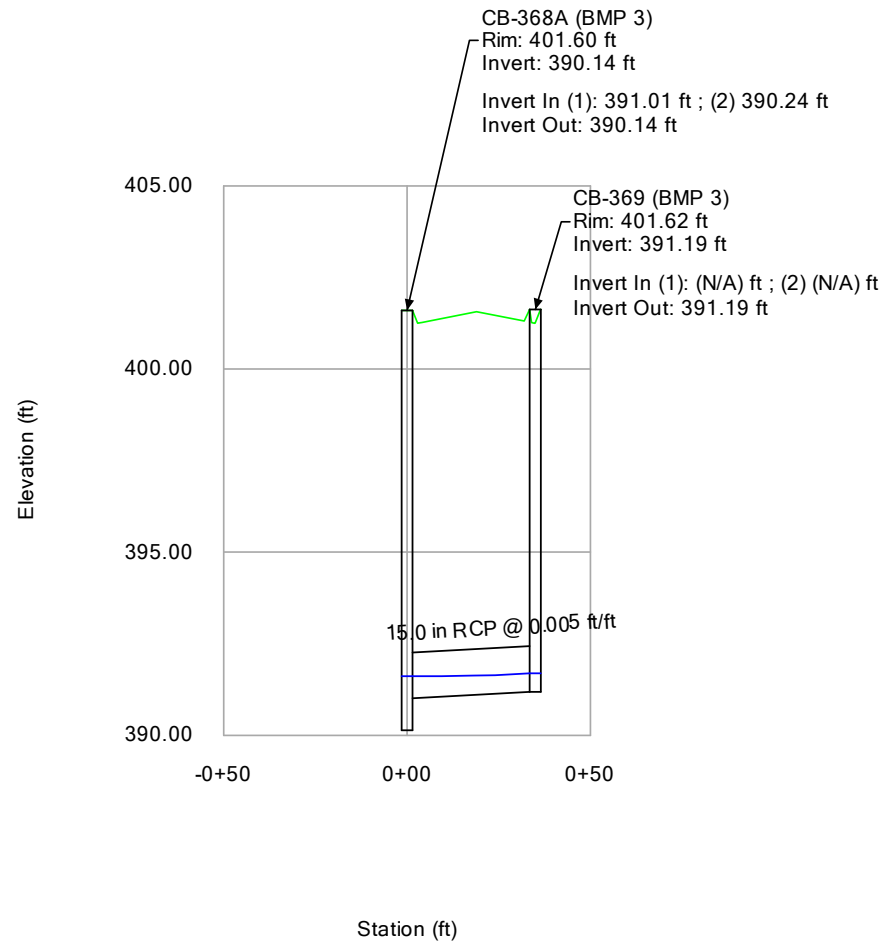
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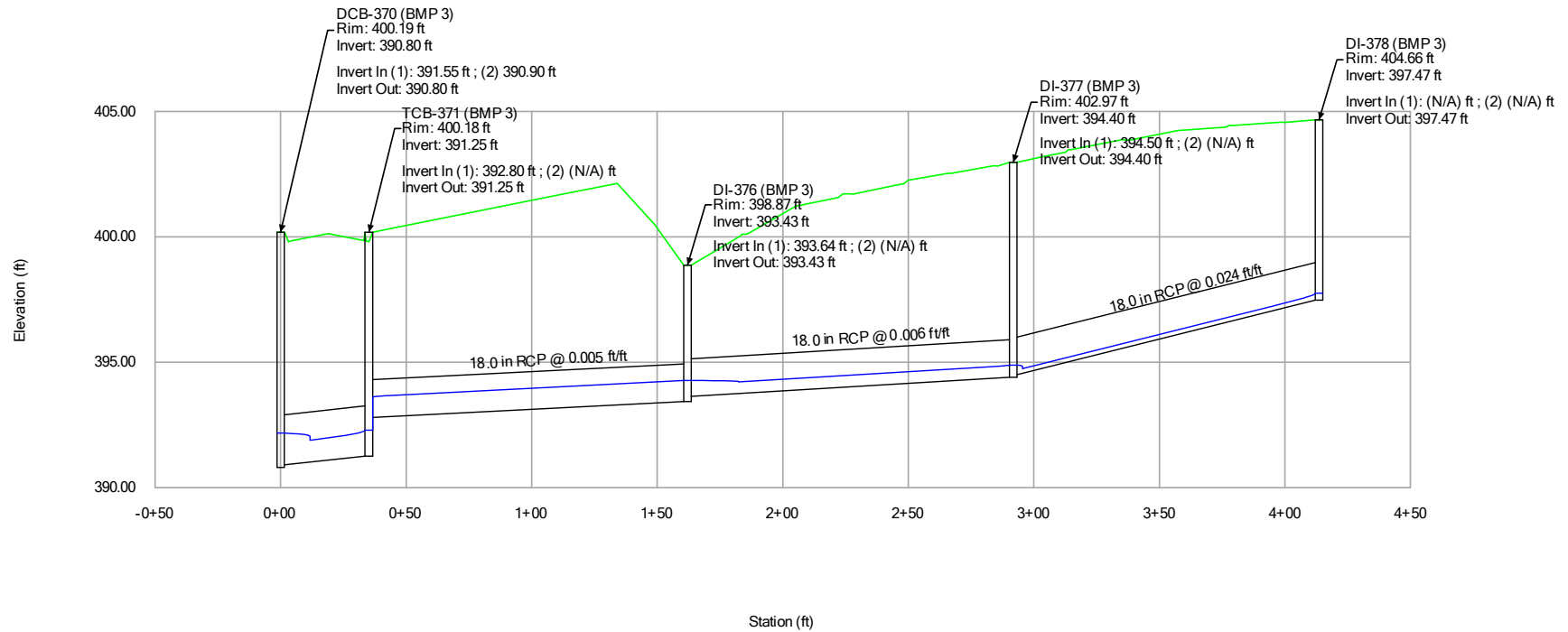
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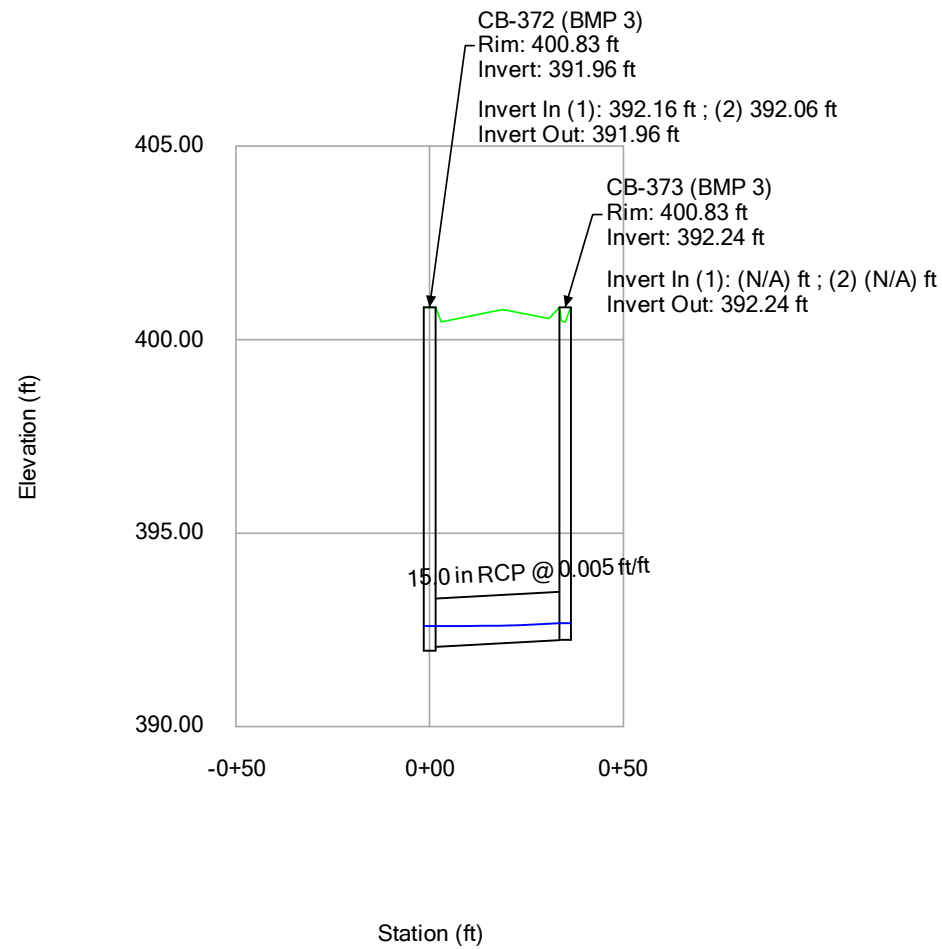
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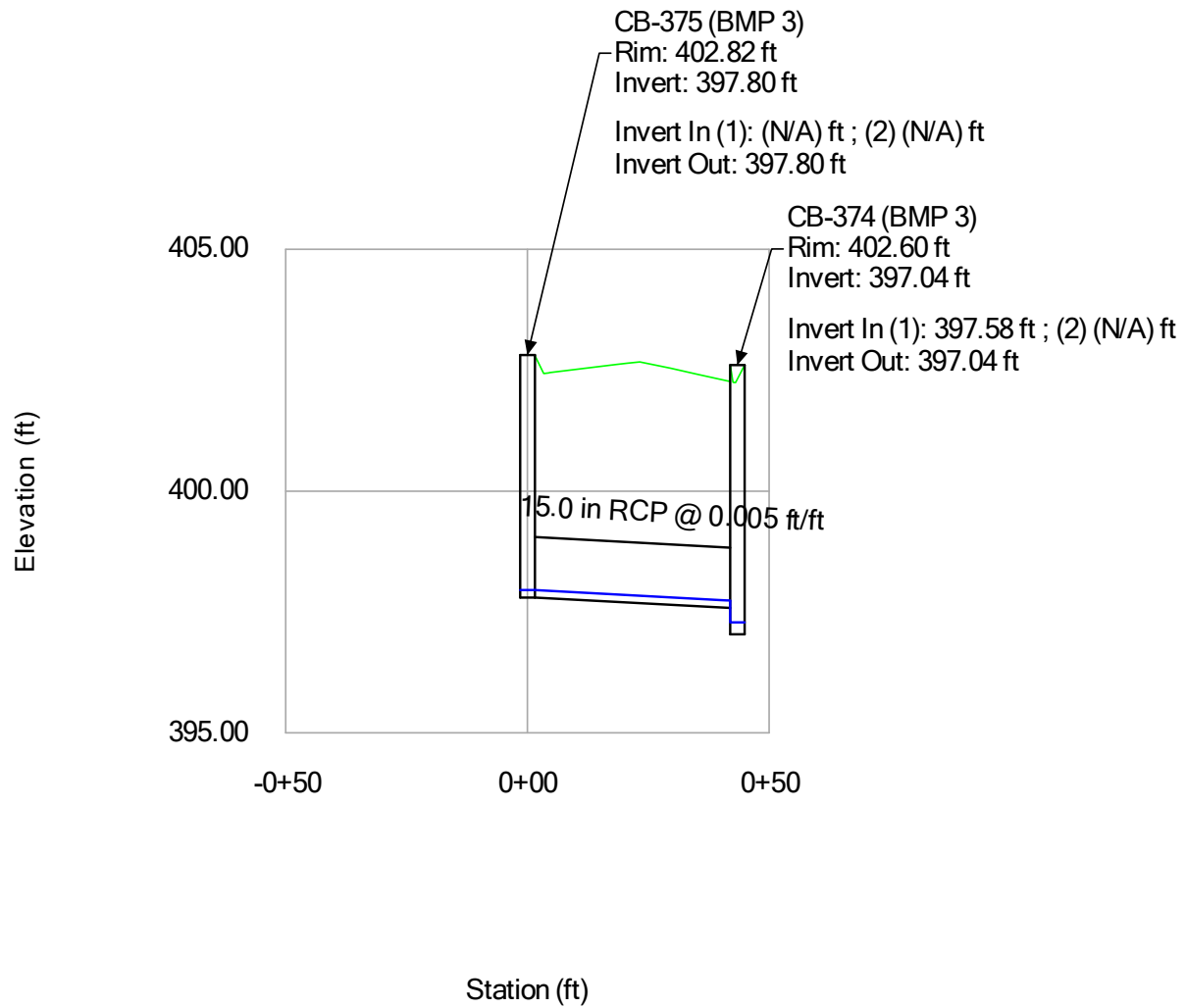
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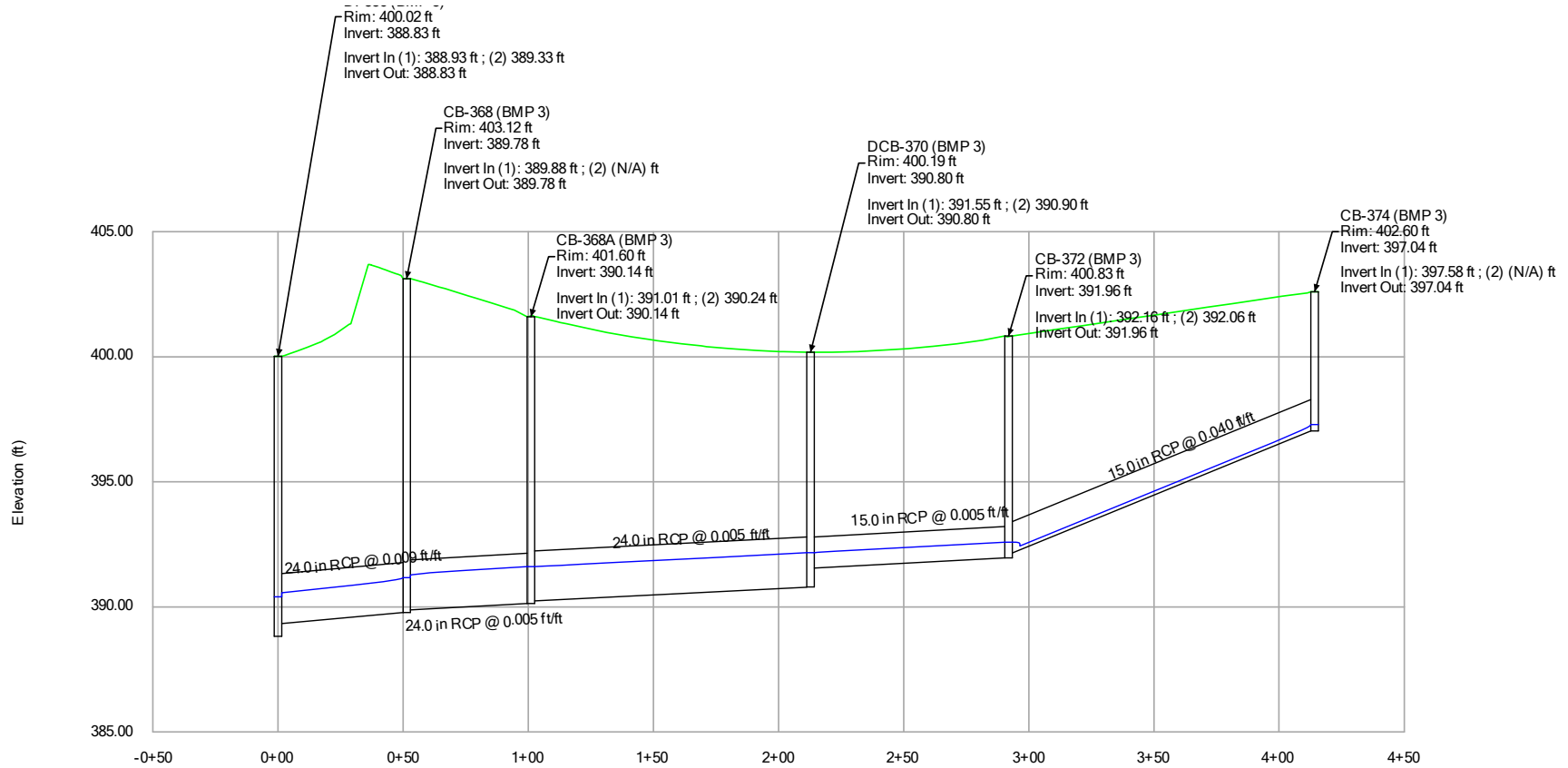
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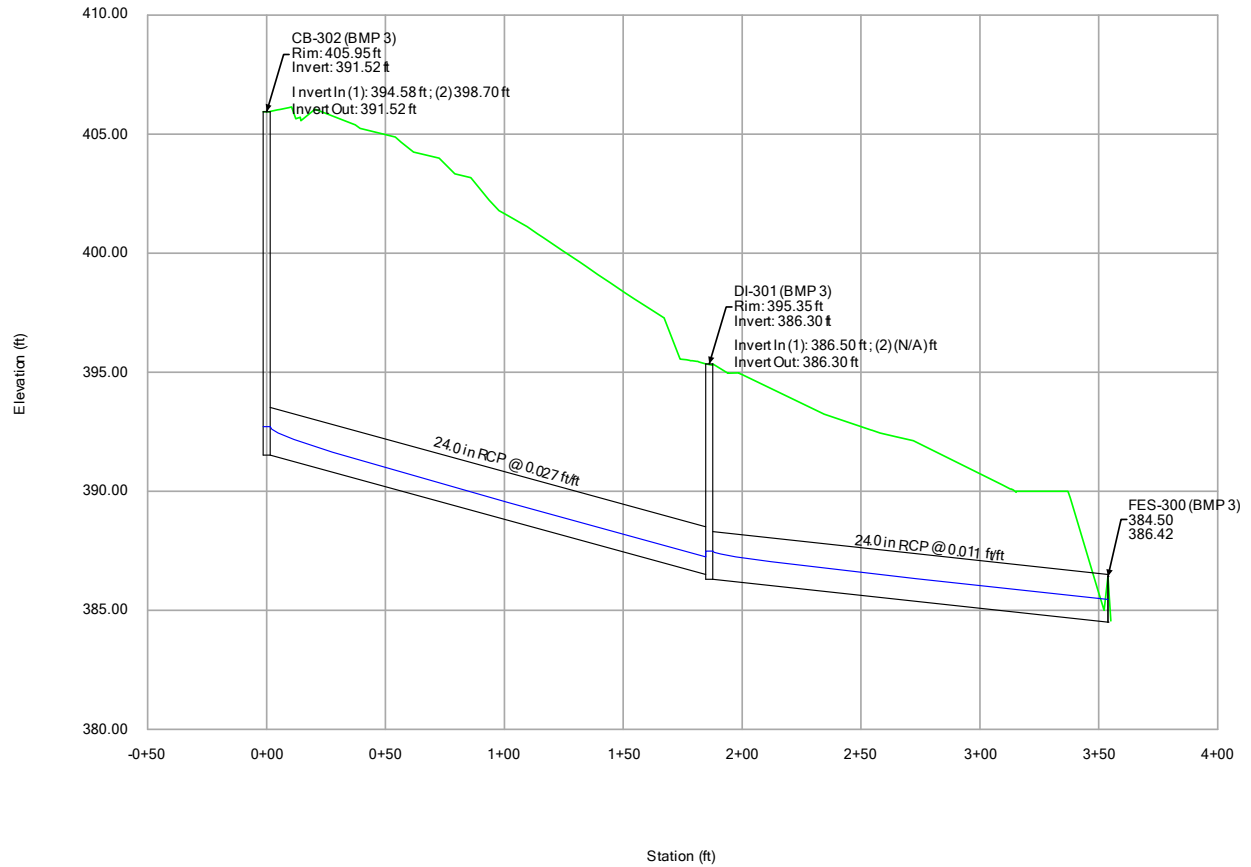
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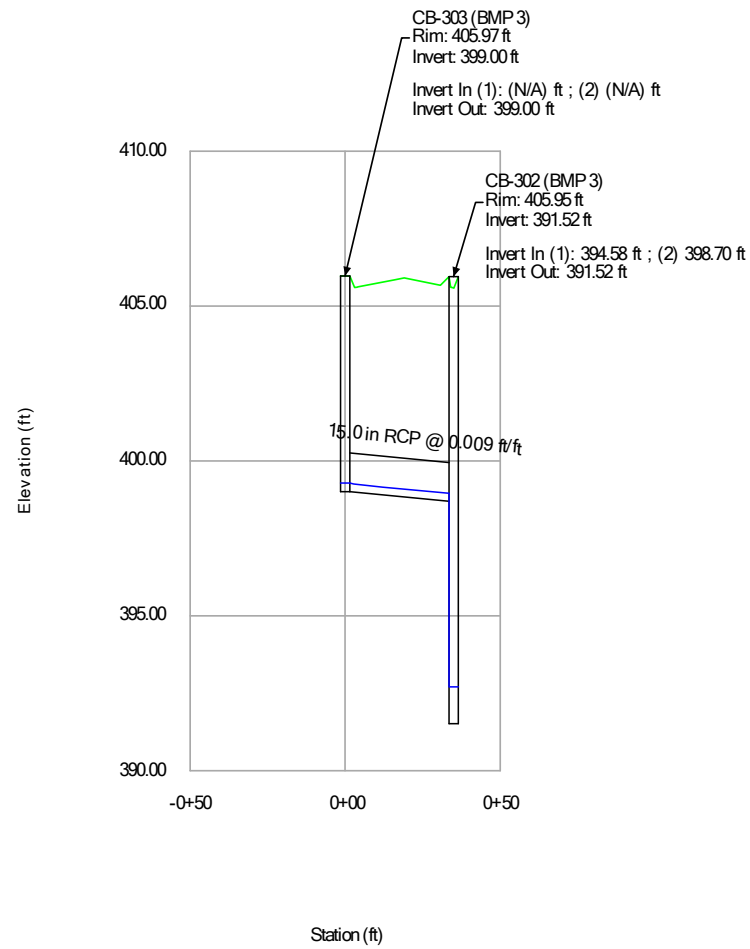
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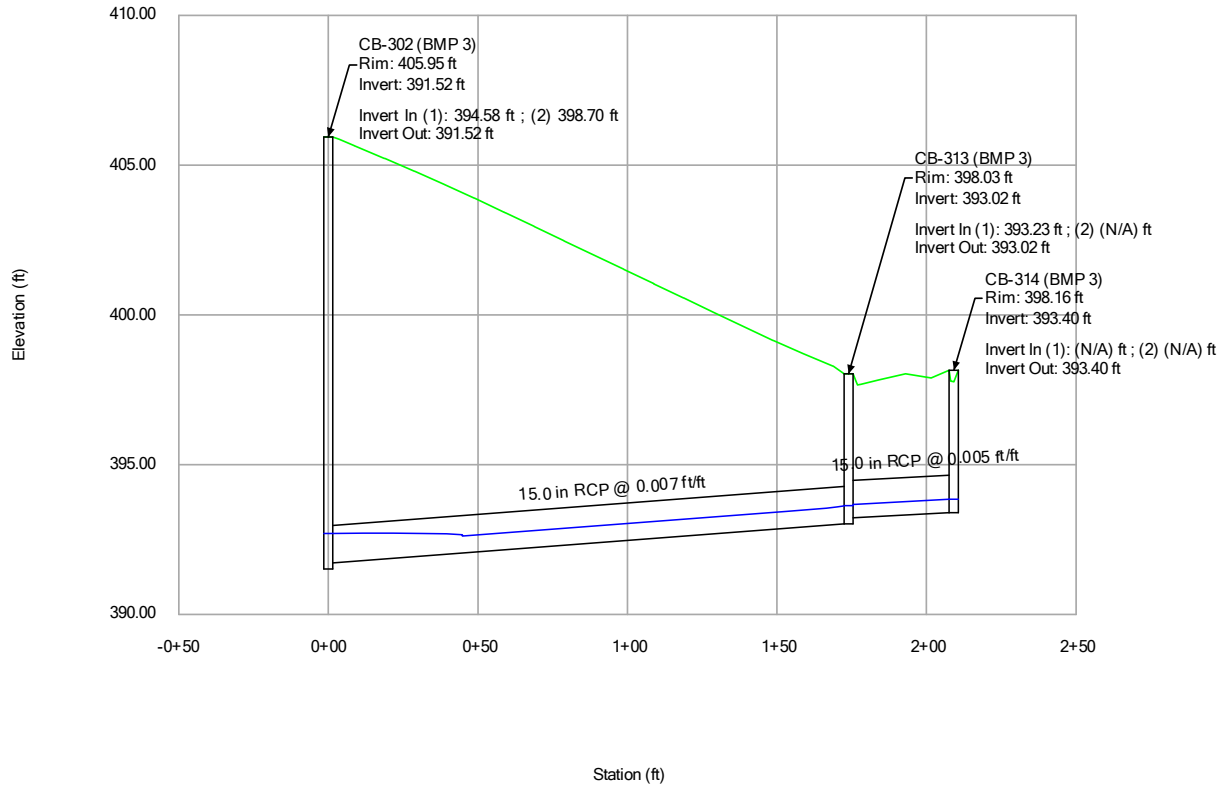
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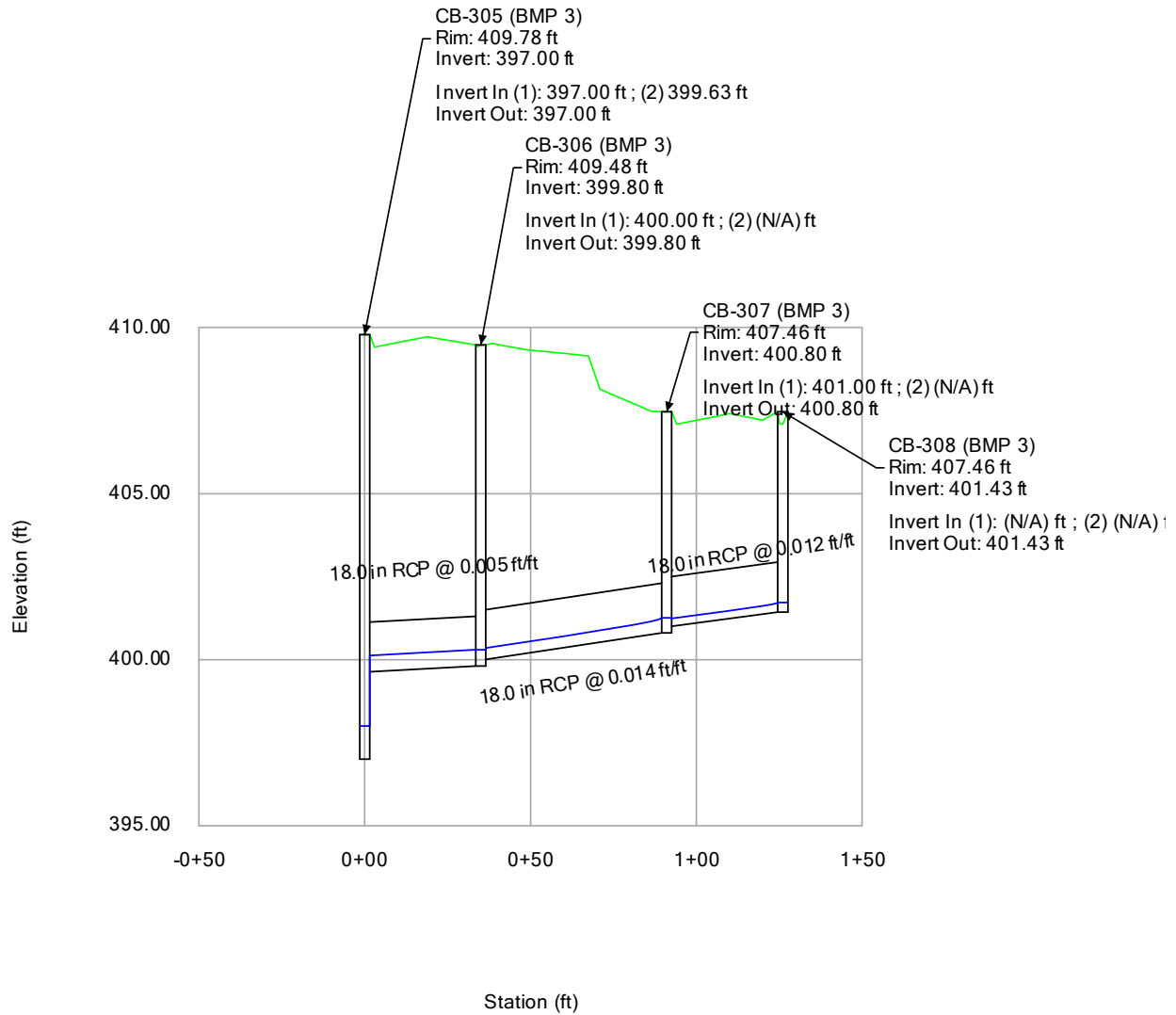
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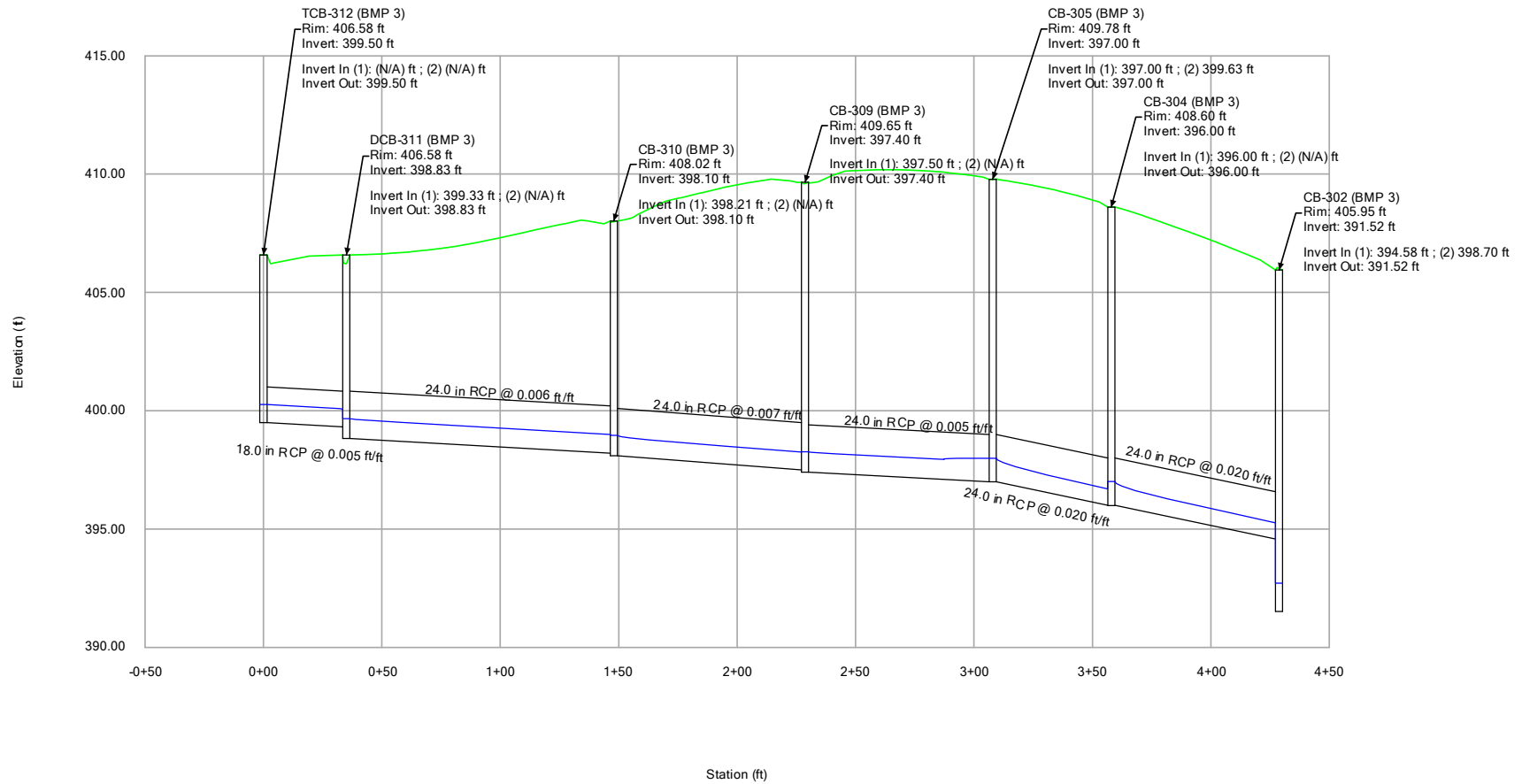
10-YR ANALYSIS



10-YR ANALYSIS



10-YR ANALYSIS



SCM 3 – 25 YR STORM

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-301 (BMP 3)	0.001	0.00	0.083	0.350
DI-354 (BMP 3)	0.002	0.01	0.083	0.350
DI-351 (BMP 3)	0.001	0.00	0.083	0.350
DI-355 (BMP 3)	0.007	0.02	0.083	0.350
DI-356 (BMP 3)	0.003	0.01	0.083	0.350
TCB-312 (BMP 3)	1.158	3.78	0.083	0.450
DI-376 (BMP 3)	0.623	7.50	0.083	0.500
DI-378 (BMP 3)	0.185	0.74	0.083	0.550
DI-377 (BMP 3)	0.168	1.89	0.083	0.550
DI-357 (BMP 3)	0.085	0.34	0.083	0.550
DI-358 (BMP 3)	0.022	0.09	0.083	0.550
CB-363 (BMP 3)	0.391	2.04	0.083	0.720
CB-373 (BMP 3)	0.281	1.52	0.083	0.750
DI-368 (BMP 3)	0.449	2.50	0.083	0.770
CB-369 (BMP 3)	0.357	1.99	0.083	0.770
DI-380 (BMP 3)	0.190	1.06	0.083	0.770

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-352 (BMP 3)	0.353	1.97	0.083	0.770
DI-353 (BMP 3)	0.019	0.10	0.083	0.770
CB-372 (BMP 3)	0.183	1.02	0.083	0.770
DCB-370 (BMP 3)	0.419	2.34	0.083	0.770
TCB-371 (BMP 3)	0.591	3.30	0.083	0.770
CB-303 (BMP 3)	0.105	0.59	0.083	0.770
CB-313 (BMP 3)	0.249	1.39	0.083	0.770
CB-314 (BMP 3)	0.290	1.62	0.083	0.770
DI-359 (BMP 3)	0.326	1.82	0.083	0.770
DI-360 (BMP 3)	0.313	1.75	0.083	0.770
DI-379 (BMP 3)	0.094	0.54	0.083	0.800
CB-375 (BMP 3)	0.025	0.15	0.083	0.820
CB-374 (BMP 3)	0.045	0.27	0.083	0.820
DCB-311 (BMP 3)	0.308	1.88	0.083	0.840
CB-307 (BMP 3)	0.174	1.07	0.083	0.850
CB-364 (BMP 3)	0.228	1.46	0.083	0.880

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-367 (BMP 3)	0.104	0.66	0.083	0.880
CB-362 (BMP 3)	0.130	0.83	0.083	0.880
CB-308 (BMP 3)	0.104	0.66	0.083	0.880
CB-310 (BMP 3)	0.055	0.37	0.083	0.920
CB-365 (BMP 3)	0.102	0.70	0.083	0.950
CB-368 (BMP 3)	0.041	0.28	0.083	0.950
CB-361 (BMP 3)	0.055	0.38	0.083	0.950
CB-368A (BMP 3)	0.065	0.45	0.083	0.950
CB-309 (BMP 3)	0.020	0.14	0.083	0.950
CB-305 (BMP 3)	0.031	0.22	0.083	0.950
CB-306 (BMP 3)	0.039	0.27	0.083	0.950
CB-304 (BMP 3)	0.029	0.20	0.083	0.950
CB-302 (BMP 3)	0.046	0.32	0.083	0.950

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-309 (BMP 3)	0.14	0.00	5.97	100.0	398.26	398.26	4.0	5.44	4.60
CB-305 (BMP 3)	0.22	0.00	7.81	99.9	397.99	397.99	4.0	3.83	5.01
CB-306 (BMP 3)	0.27	0.00	1.75	99.3	400.30	400.30	4.0	4.78	3.42
CB-304 (BMP 3)	0.20	0.00	7.97	100.0	397.01	397.01	4.0	4.94	5.04
CB-310 (BMP 3)	0.36	0.01	5.90	97.6	398.96	398.96	4.0	4.83	4.58
CB-364 (BMP 3)	1.14	0.31	1.77	78.6	400.16	400.16	4.0	1.71	3.58
CB-365 (BMP 3)	0.63	0.07	0.63	90.2	400.21	400.21	4.0	2.66	2.66
DI-353 (BMP 3)	0.10	0.00	0.10	98.9	401.21	401.21	2.0	1.60	1.60
CB-307 (BMP 3)	0.90	0.18	1.49	83.7	401.26	401.26	4.0	3.47	3.26
CB-308 (BMP 3)	0.60	0.06	0.60	91.1	401.72	401.72	4.0	2.54	2.54
DI-368 (BMP 3)	1.38	1.12	1.38	55.1	400.50	400.50	2.0	3.54	3.54
DCB-311 (BMP 3)	1.88	0.00	5.64	100.0	399.67	399.67	8.0	4.33	4.51
TCB-312 (BMP 3)	3.78	0.00	3.78	100.0	400.26	400.26	12.0	4.22	4.22
DI-379 (BMP 3)	0.44	0.11	2.34	80.1	389.75	389.75	2.0	7.76	3.73
CB-363 (BMP 3)	1.48	0.56	3.22	72.7	399.93	399.93	4.0	2.85	4.32
CB-362 (BMP 3)	0.73	0.10	3.91	87.8	399.60	399.60	4.0	4.38	4.72

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-303 (BMP 3)	0.54	0.04	0.54	92.6	399.29	399.29	4.0	2.55	2.55
CB-302 (BMP 3)	0.32	0.00	10.99	98.5	392.71	392.71	4.0	2.26	5.65
CB-367 (BMP 3)	1.00	0.23	2.37	81.6	395.80	395.80	4.0	4.57	3.94
DI-352 (BMP 3)	1.16	0.81	1.23	58.9	400.28	400.28	2.0	0.64	3.09
CB-361 (BMP 3)	0.45	0.02	6.63	95.1	390.39	390.39	4.0	4.89	3.54
DI-378 (BMP 3)	0.55	0.18	0.55	75.2	397.75	397.75	2.0	2.48	2.48
DI-380 (BMP 3)	0.73	0.33	0.73	69.1	400.45	400.45	2.0	2.68	2.68
CB-368 (BMP 3)	0.30	0.00	14.87	98.8	391.17	391.17	4.0	6.34	6.38
DI-377 (BMP 3)	1.13	0.77	1.65	59.6	394.88	394.88	2.0	1.56	3.36
CB-375 (BMP 3)	0.15	0.00	0.15	100.0	397.96	397.96	4.0	1.72	1.72
CB-374 (BMP 3)	0.27	0.00	0.41	99.4	397.29	397.29	4.0	1.81	2.37
CB-369 (BMP 3)	1.58	0.64	1.58	71.2	391.69	391.69	4.0	3.41	3.41
CB-368A (BMP 3)	0.43	0.02	14.68	95.6	391.61	391.61	4.0	5.66	5.92
CB-373 (BMP 3)	1.19	0.34	1.19	77.8	392.67	392.67	4.0	3.13	3.13
CB-372 (BMP 3)	0.86	0.16	2.39	84.5	392.60	392.60	4.0	2.37	3.81
DCB-370 (BMP 3)	2.52	0.00	13.01	100.0	392.17	392.17	8.0	3.99	5.66

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
TCB-371 (BMP 3)	4.28	0.00	8.38	100.0	392.28	392.28	12.0	4.58	5.13
DI-356 (BMP 3)	0.01	0.00	21.02	100.0	390.41	390.41	2.0	2.67	6.44
DI-360 (BMP 3)	1.06	0.69	1.06	60.8	395.89	395.89	2.0	2.97	2.97
DI-376 (BMP 3)	2.97	4.53	4.46	39.6	394.27	394.27	2.0	2.34	4.38
DI-357 (BMP 3)	0.30	0.04	2.43	87.2	390.69	390.69	2.0	4.18	3.77
DI-358 (BMP 3)	0.09	0.00	2.18	99.5	391.31	391.31	2.0	5.03	3.64
CB-314 (BMP 3)	1.27	0.40	1.27	76.2	393.85	393.85	4.0	3.19	3.19
CB-313 (BMP 3)	1.11	0.29	2.36	79.3	393.64	393.64	4.0	3.24	3.93
DI-359 (BMP 3)	1.10	0.72	2.11	60.2	392.43	392.43	2.0	4.94	3.61
DI-301 (BMP 3)	0.00	0.00	10.85	100.0	387.48	387.48	2.0	10.30	5.62
DI-355 (BMP 3)	0.02	0.00	23.17	100.0	390.07	390.07	2.0	6.40	6.56
DI-351 (BMP 3)	0.00	0.00	24.93	100.0	387.44	387.44	2.0	10.23	6.64
DI-354 (BMP 3)	0.01	0.00	22.97	100.0	389.51	389.51	2.0	6.79	6.77
YI-3004 (BMP 3)	0.00	0.00	50.00	100.0	383.76	383.76	0.0	7.64	7.64

25-YR ANALYSIS

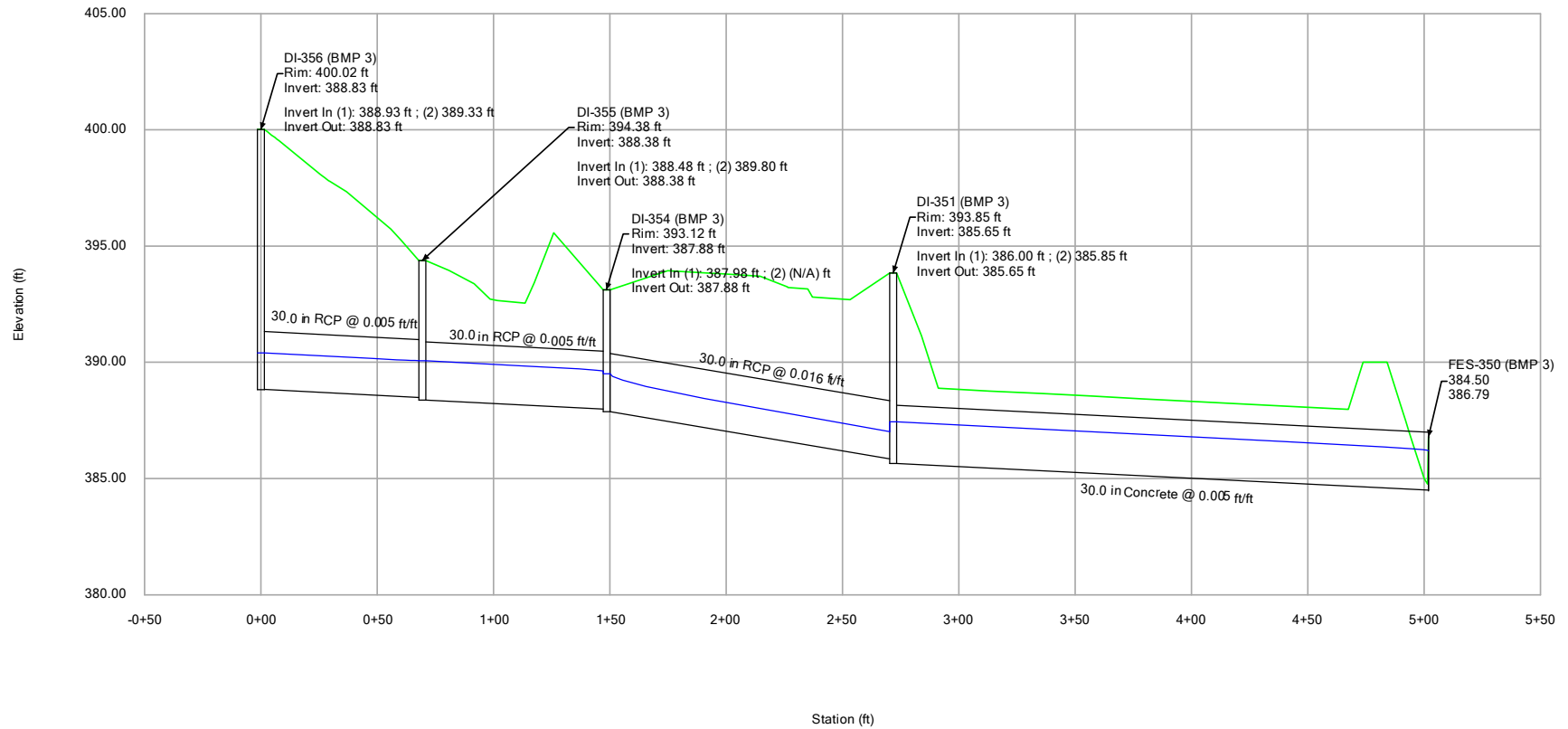
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-309 TO CB-310 (BMP 3)	24.0	0.007	4.58	5.44	5.90	19.50	398.96	398.26
CB-305 TO CB-309 (BMP 3)	24.0	0.005	4.60	3.83	5.97	16.07	398.26	397.99
CB-305 TO CB-306 (BMP 3)	18.0	0.005	3.42	3.44	1.75	7.43	400.30	400.12
CB-304 TO CB-305 (BMP 3)	24.0	0.020	5.01	4.94	7.81	31.97	397.99	397.01
CB-306 TO CB-307 (BMP 3)	18.0	0.014	3.26	4.78	1.49	12.55	401.26	400.35
CB-302 TO CB-304 (BMP 3)	24.0	0.020	5.04	8.35	7.97	32.04	397.01	395.27
CB-310 TO DCB-311 (BMP 3)	24.0	0.006	4.51	4.83	5.64	16.84	399.67	399.00
CB-364 TO CB-365 (BMP 3)	15.0	0.006	2.66	1.71	0.63	4.93	400.21	400.16
CB-363 TO CB-364 (BMP 3)	15.0	0.008	3.58	2.85	1.77	5.62	400.16	399.93
DI-352 TO DI-353 (BMP 3)	18.0	0.014	1.60	0.64	0.10	12.37	401.21	400.28
CB-307 TO CB-308 (BMP 3)	18.0	0.012	2.54	3.47	0.60	11.64	401.72	401.23
CB-367 TO DI-368 (BMP 3)	12.0	0.012	3.54	4.57	1.38	3.96	400.50	400.11
DCB-311 TO DCB-312 (BMP 3)	18.0	0.005	4.22	4.33	3.78	7.43	400.26	400.07
DI-379 TO DI-380 (BMP 3)	18.0	0.016	2.68	4.06	0.73	13.38	400.45	398.54
DI-351 TO DI-379 (BMP 3)	18.0	0.069	3.73	1.35	2.34	27.65	389.75	387.44
DI-379 TO DI-352 (BMP 3)	18.0	0.066	3.09	7.76	1.23	27.05	400.28	389.58
CB-362 TO CB-363 (BMP 3)	15.0	0.006	4.32	4.38	3.22	4.99	399.93	399.72
CB-361 TO CB-362 (BMP 3)	15.0	0.014	4.72	6.30	3.91	7.70	399.60	398.23
CB-302 TO CB-303 (BMP 3)	15.0	0.009	2.55	3.03	0.54	5.98	399.29	398.96
CB-302 TO CB-313 (BMP 3)	15.0	0.007	3.93	2.26	2.36	5.59	393.64	392.71
DI-301 TO CB-302 (BMP 3)	24.0	0.027	5.65	10.30	10.99	37.15	392.71	387.25
CB-361 TO CB-367 (BMP 3)	15.0	0.010	3.94	4.89	2.37	6.51	395.80	395.34
DI-356 TO CB-361 (BMP 3)	24.0	0.007	3.54	2.67	6.63	18.71	390.39	390.41
DI-377 TO DI-378 (BMP 3)	18.0	0.024	2.48	1.56	0.55	16.40	397.75	394.88
CB-368 TO CB-368A (BMP 3)	24.0	0.005	5.92	6.34	14.68	16.37	391.61	391.26
DI-356 TO CB-368 (BMP 3)	24.0	0.009	6.38	7.25	14.87	21.16	391.17	390.57
DI-376 TO DI-377 (BMP 3)	18.0	0.006	3.36	2.34	1.65	8.05	394.88	394.27
CB-374 TO CB-375 (BMP 3)	15.0	0.005	1.72	1.81	0.15	4.57	397.96	397.73

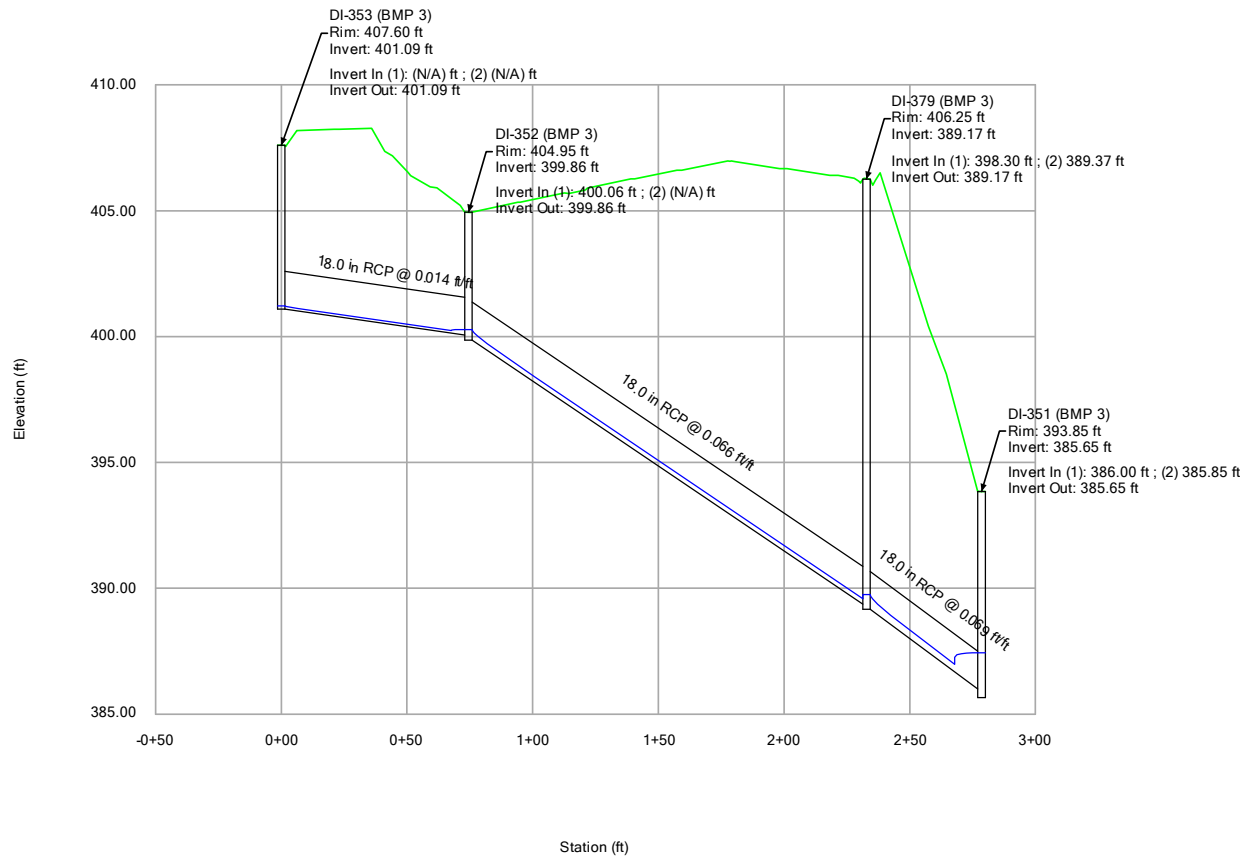
25-YR ANALYSIS
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-372 TO CB-374 (BMP 3)	15.0	0.040	2.37	1.09	0.41	12.90	397.29	392.60
CB-368A TO CB-369 (BMP 3)	15.0	0.005	3.41	2.69	1.58	4.62	391.69	391.61
CB-368A TO DCB-370 (BMP 3)	24.0	0.005	5.66	5.66	13.01	15.94	392.17	391.61
CB-372 TO CB-373 (BMP 3)	15.0	0.005	3.13	2.37	1.19	4.57	392.67	392.60
DCB-370 TO CB-372 (BMP 3)	15.0	0.005	3.81	3.95	2.39	4.65	392.60	392.17
DCB-370 TO DCB-371 (BMP 3)	24.0	0.010	5.13	3.99	8.38	22.66	392.28	392.17
DCB-371 TO DI-376 (BMP 3)	18.0	0.005	4.38	4.58	4.46	7.40	394.27	393.61
DI-355 TO DI-356 (BMP 3)	30.0	0.005	6.44	6.40	21.02	29.00	390.41	390.07
DI-359 TO DI-360 (BMP 3)	18.0	0.021	2.97	4.94	1.06	15.16	395.89	392.35
DI-357 TO DI-358 (BMP 3)	18.0	0.007	3.64	4.18	2.18	8.97	391.31	390.70
DI-355 TO DI-357 (BMP 3)	18.0	0.011	3.77	4.94	2.43	11.01	390.69	390.28
DI-358 TO DI-359 (BMP 3)	18.0	0.012	3.61	5.03	2.11	11.74	392.43	391.28
CB-313 TO CB-314 (BMP 3)	15.0	0.005	3.19	3.24	1.27	4.57	393.85	393.67
FES-300 TO DI-301 (BMP 3)	24.0	0.011	5.62	7.32	10.85	23.44	387.48	385.46
DI-354 TO DI-355 (BMP 3)	30.0	0.005	6.56	6.79	23.17	29.00	390.07	389.62
DI-351 TO DI-354 (BMP 3)	30.0	0.016	6.77	10.23	22.97	52.65	389.51	387.02
FES-350 TO DI-351 (BMP 3)	30.0	0.005	6.64	7.01	24.93	28.99	387.44	386.20
FES-3003 TO YI-3004 (BMP 3)	36.0	0.005	7.64	8.59	50.00	47.16	383.76	382.30

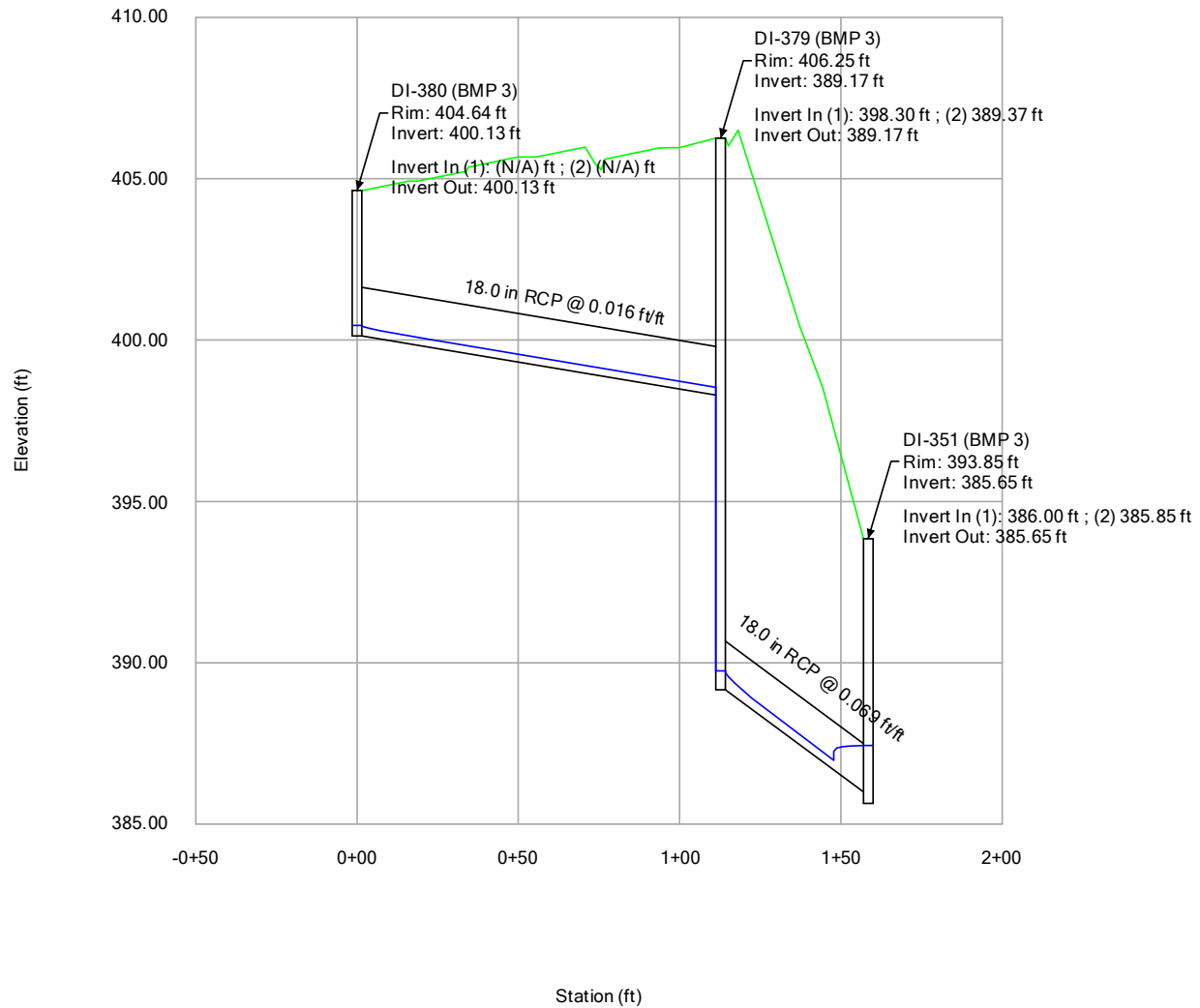
25-YR ANALYSIS



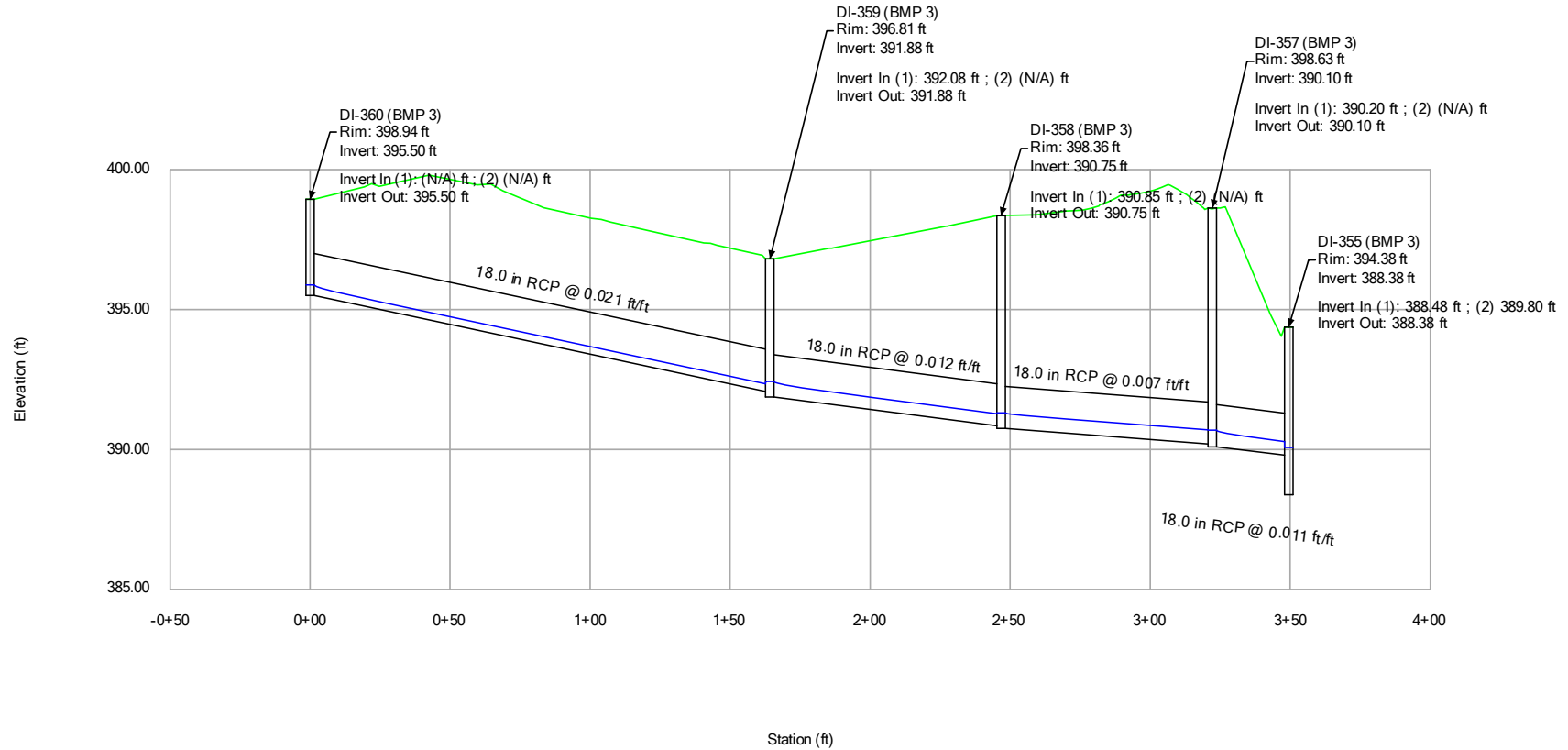
25-YR ANALYSIS



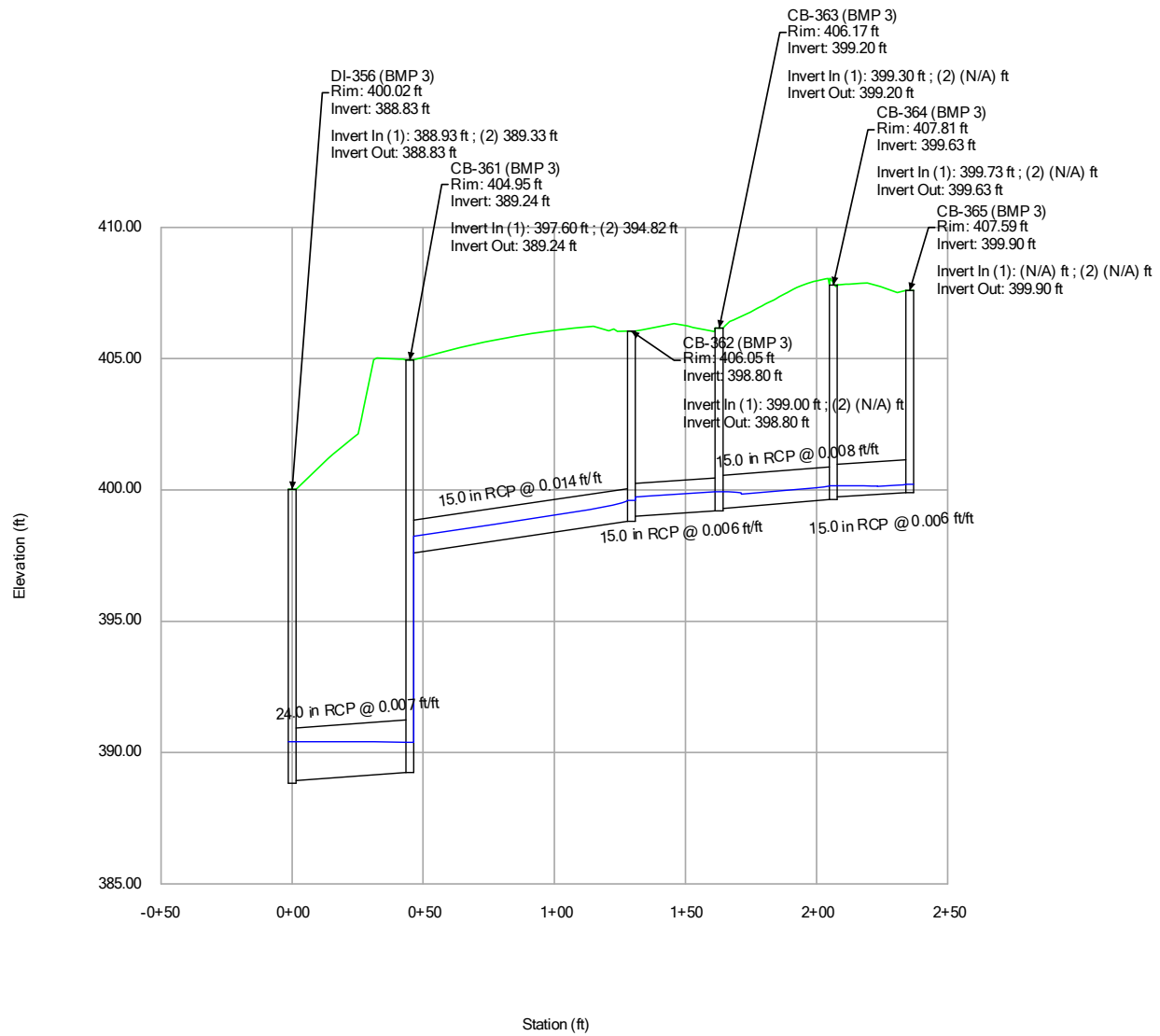
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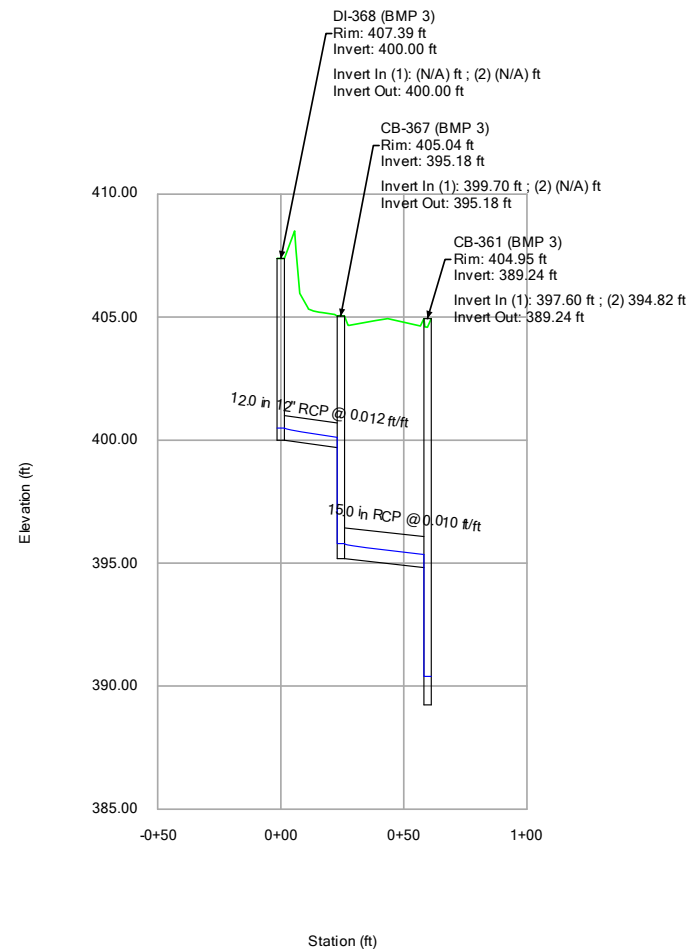
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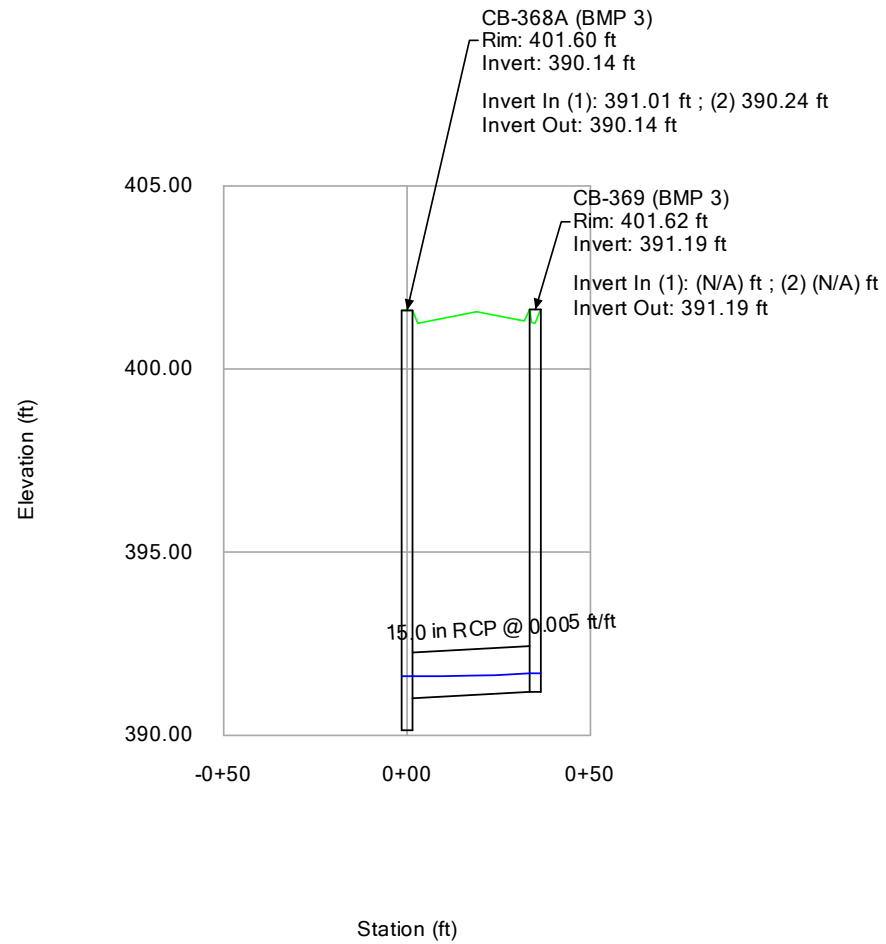
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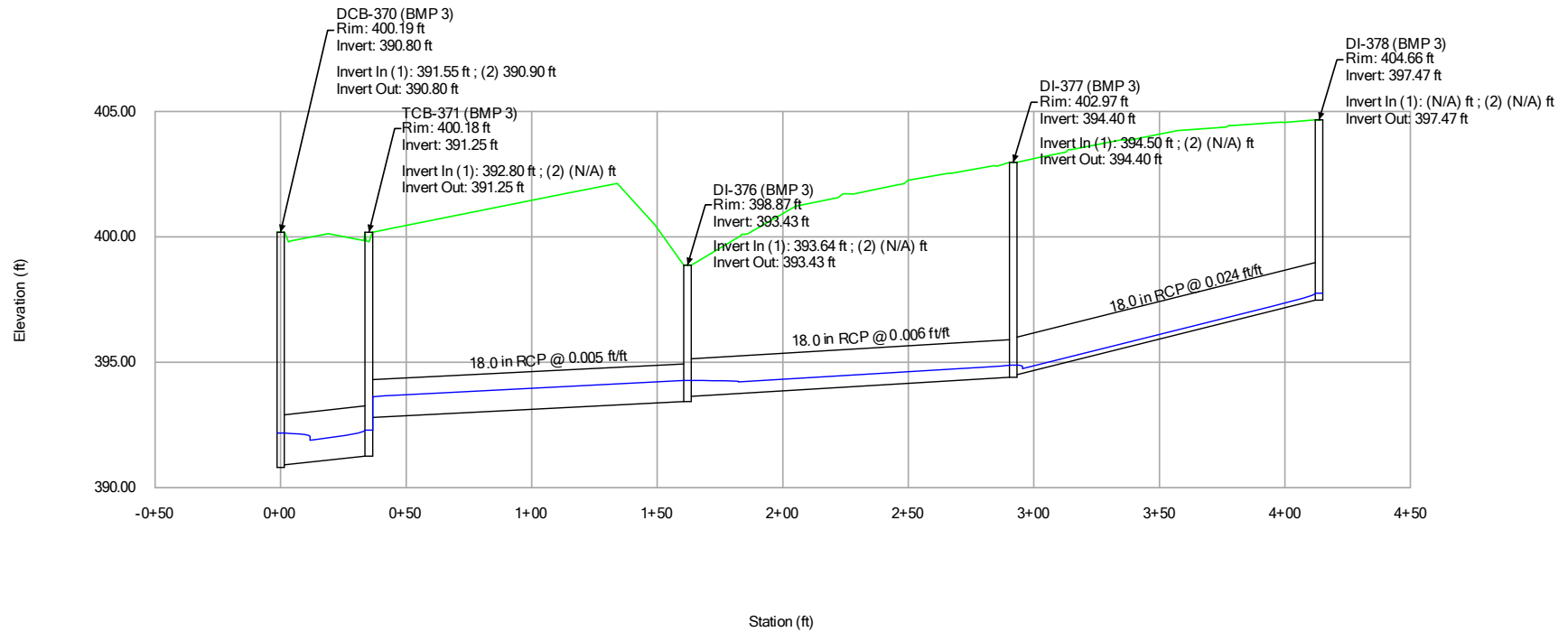
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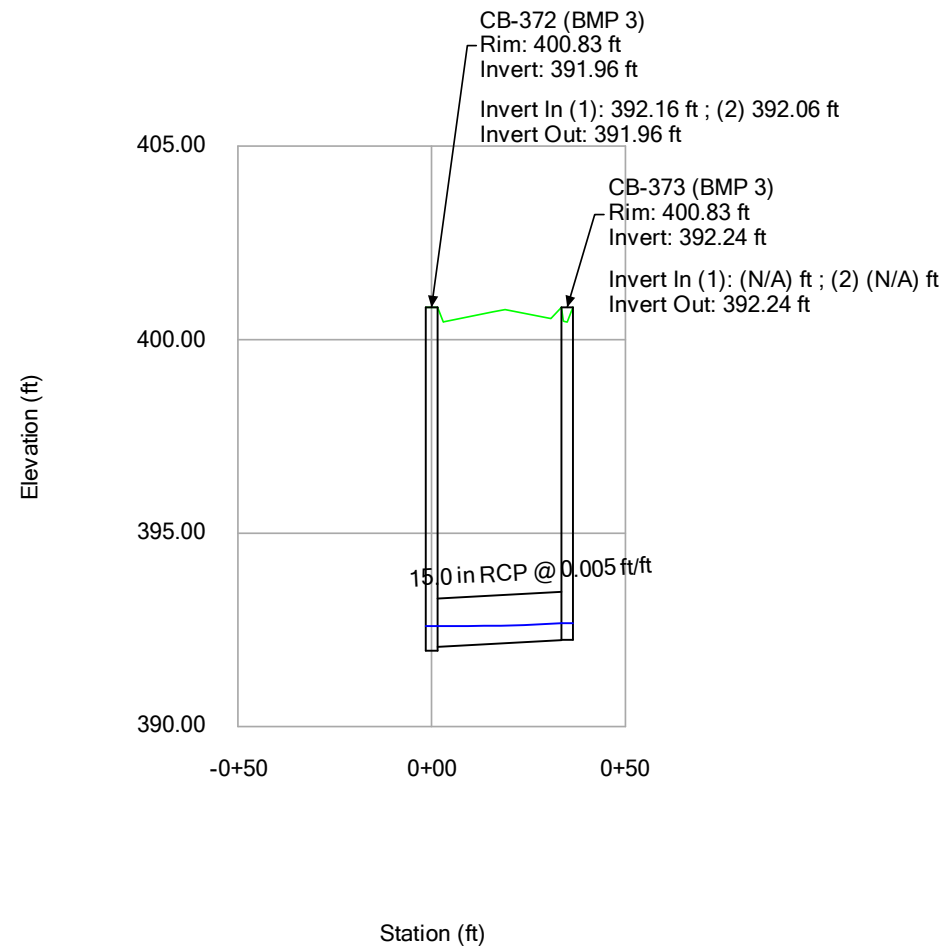
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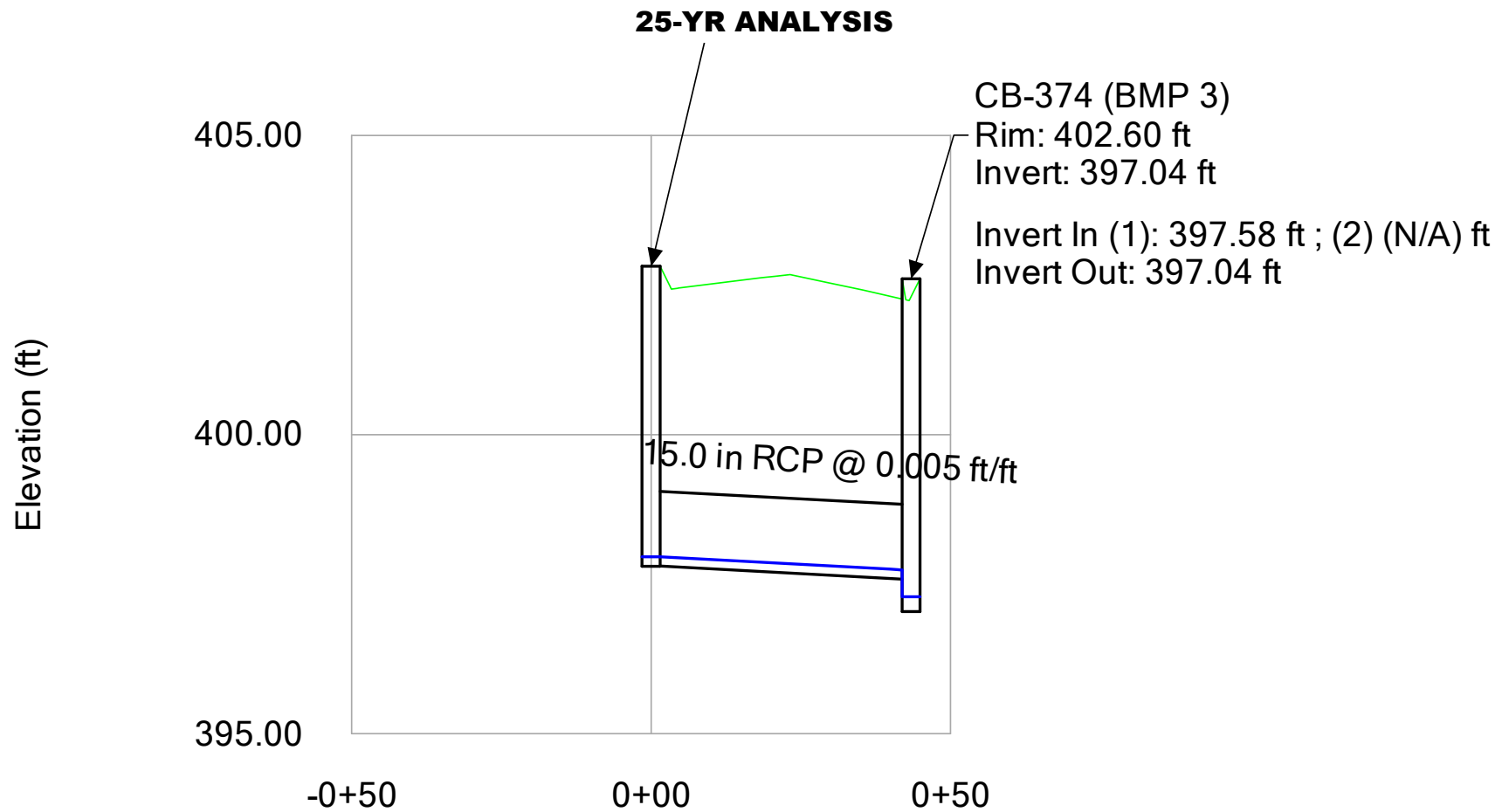


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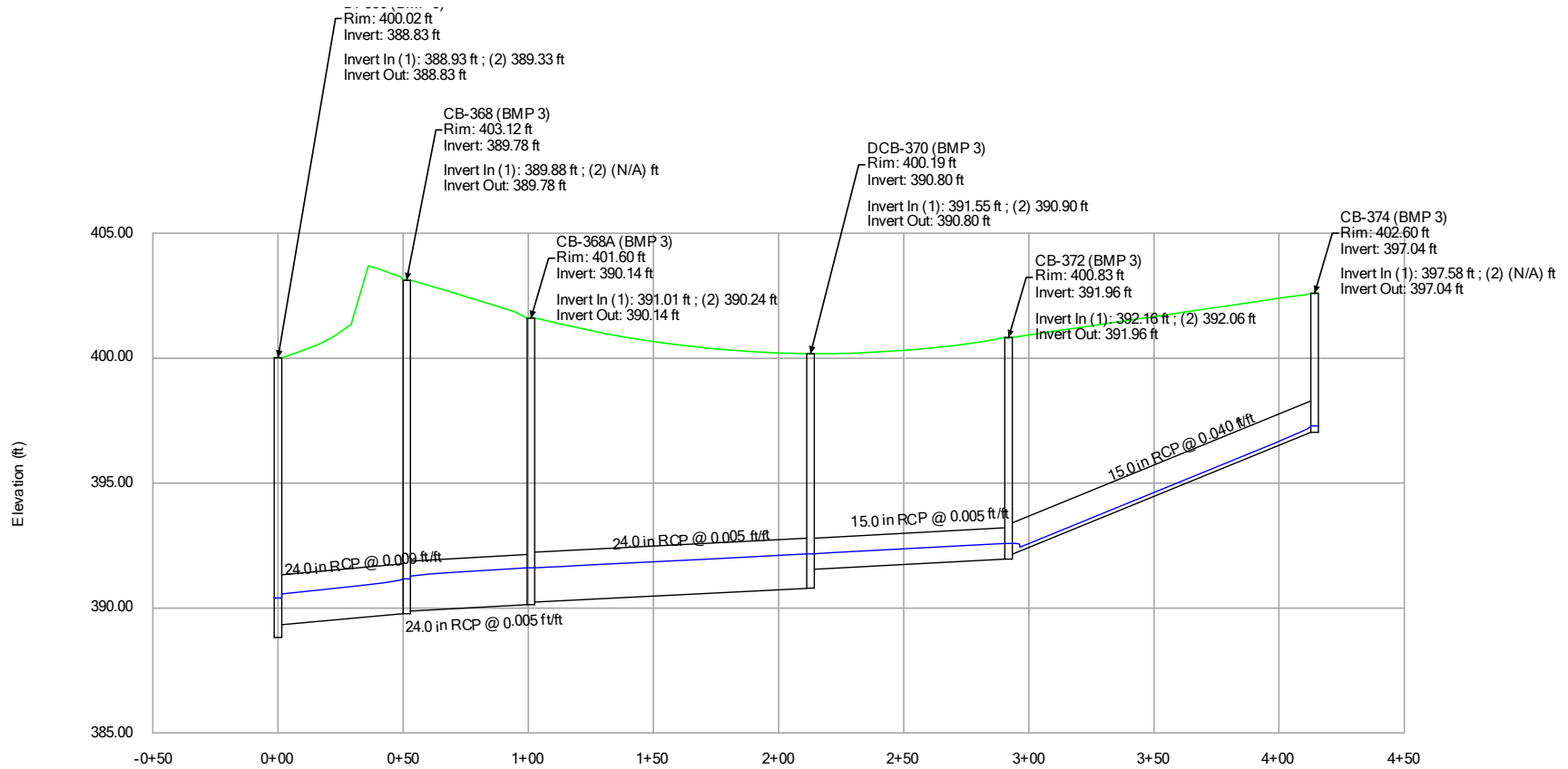


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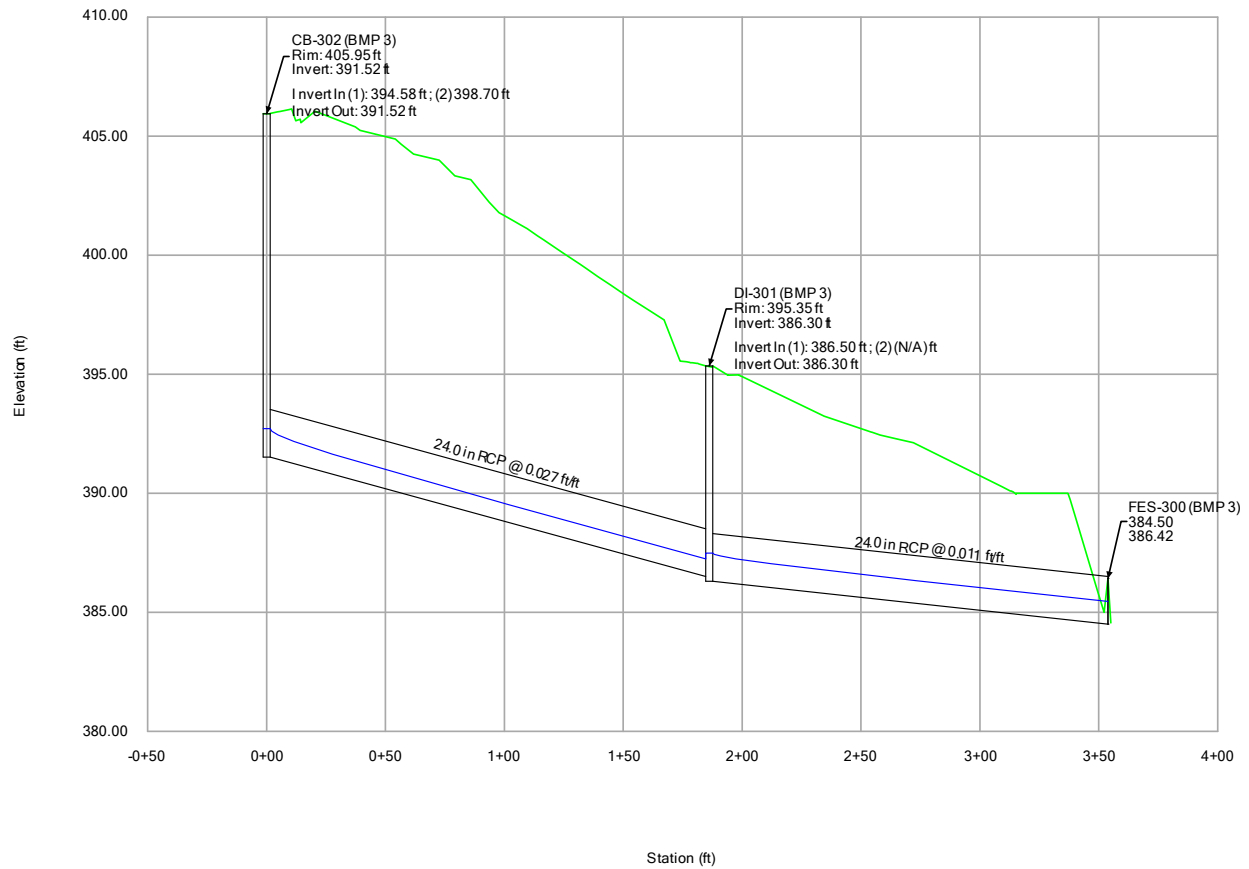




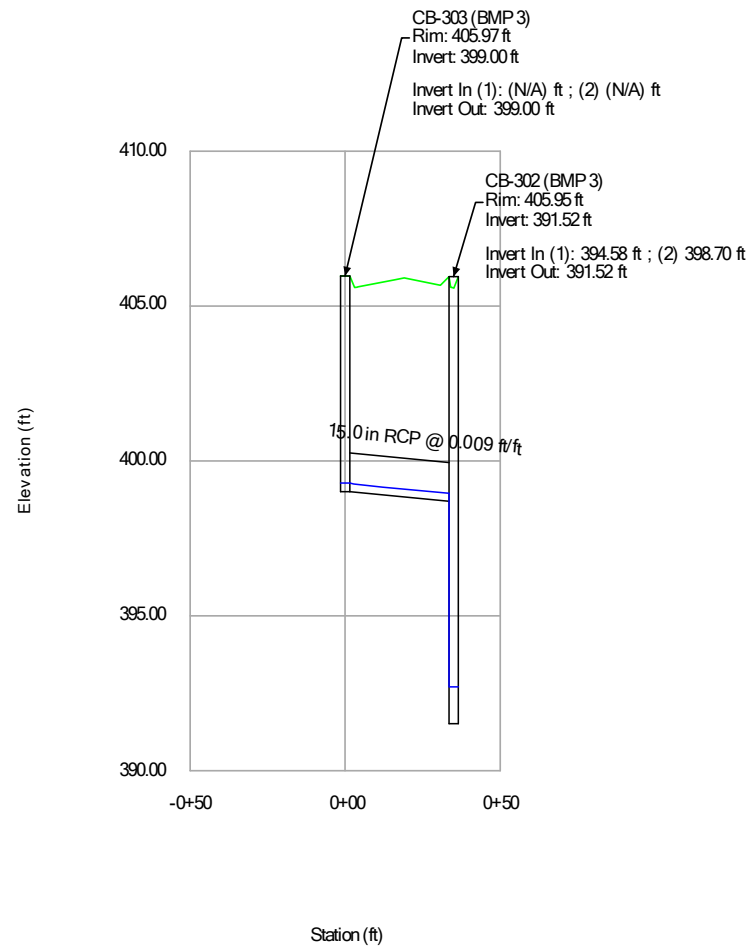
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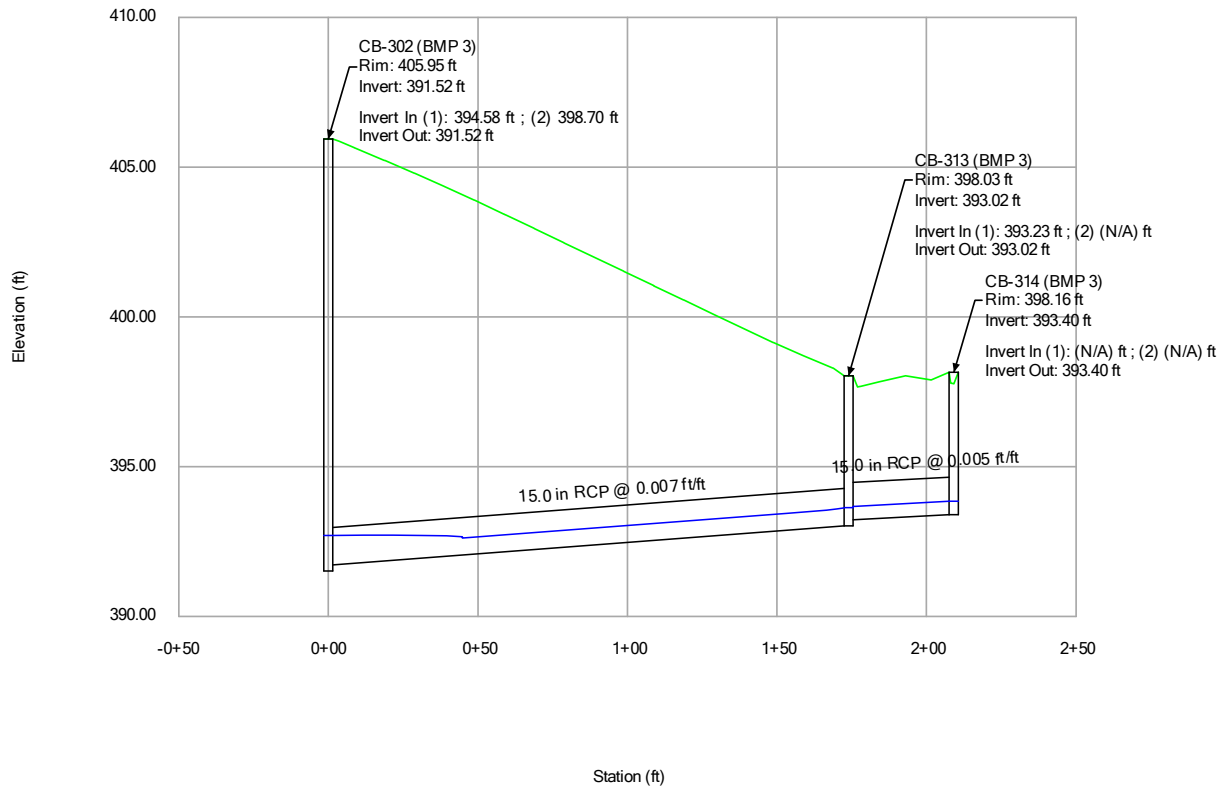
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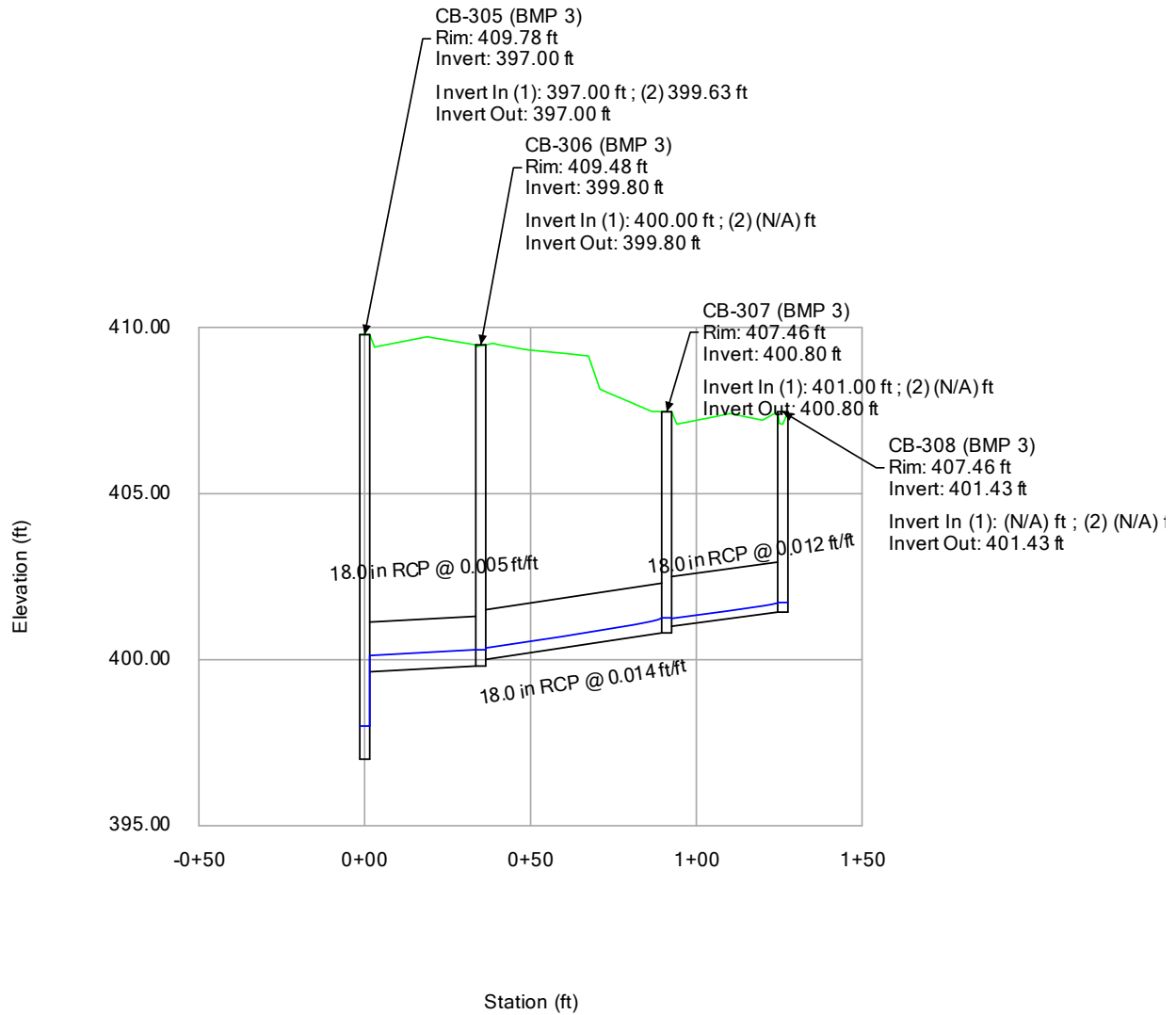
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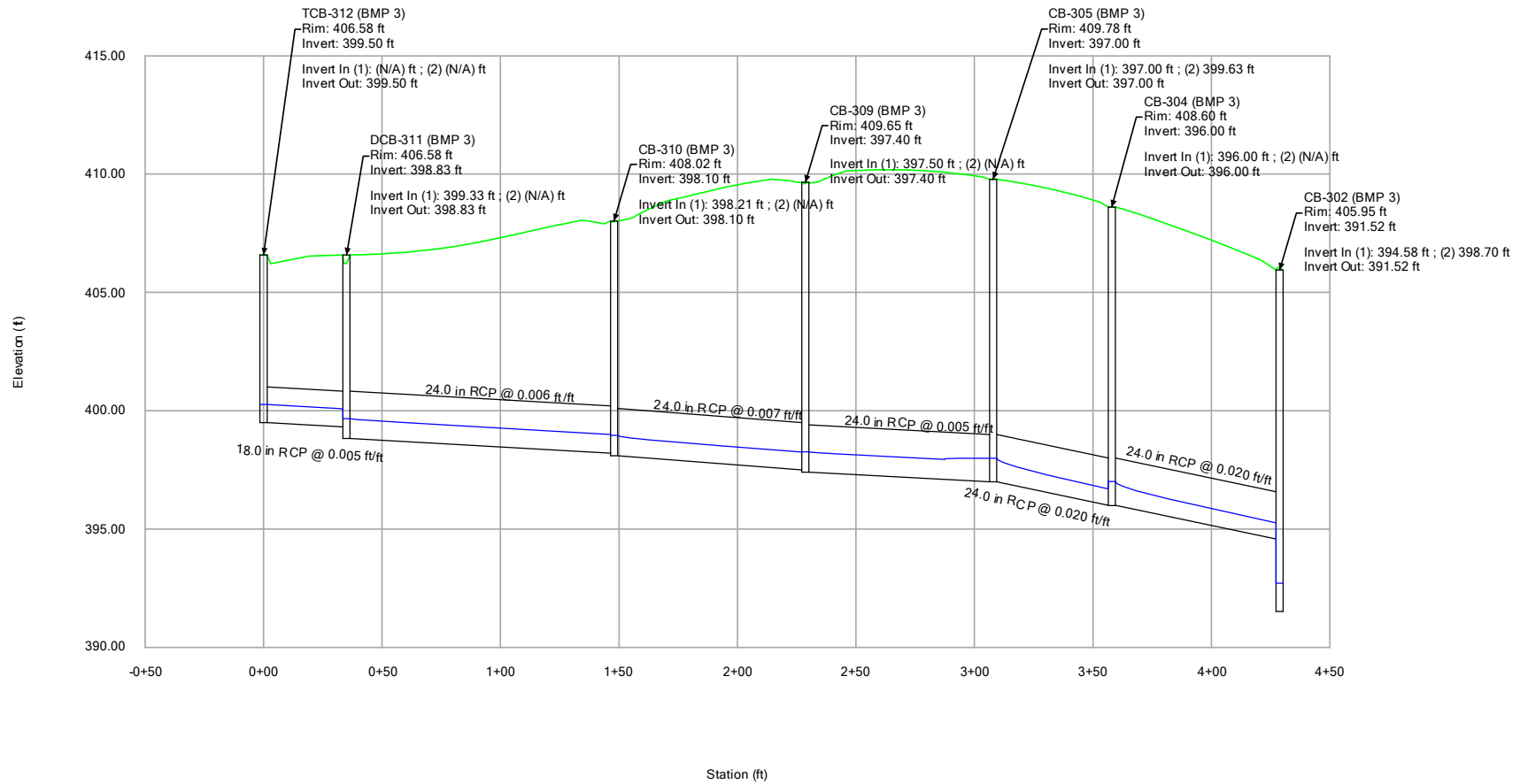
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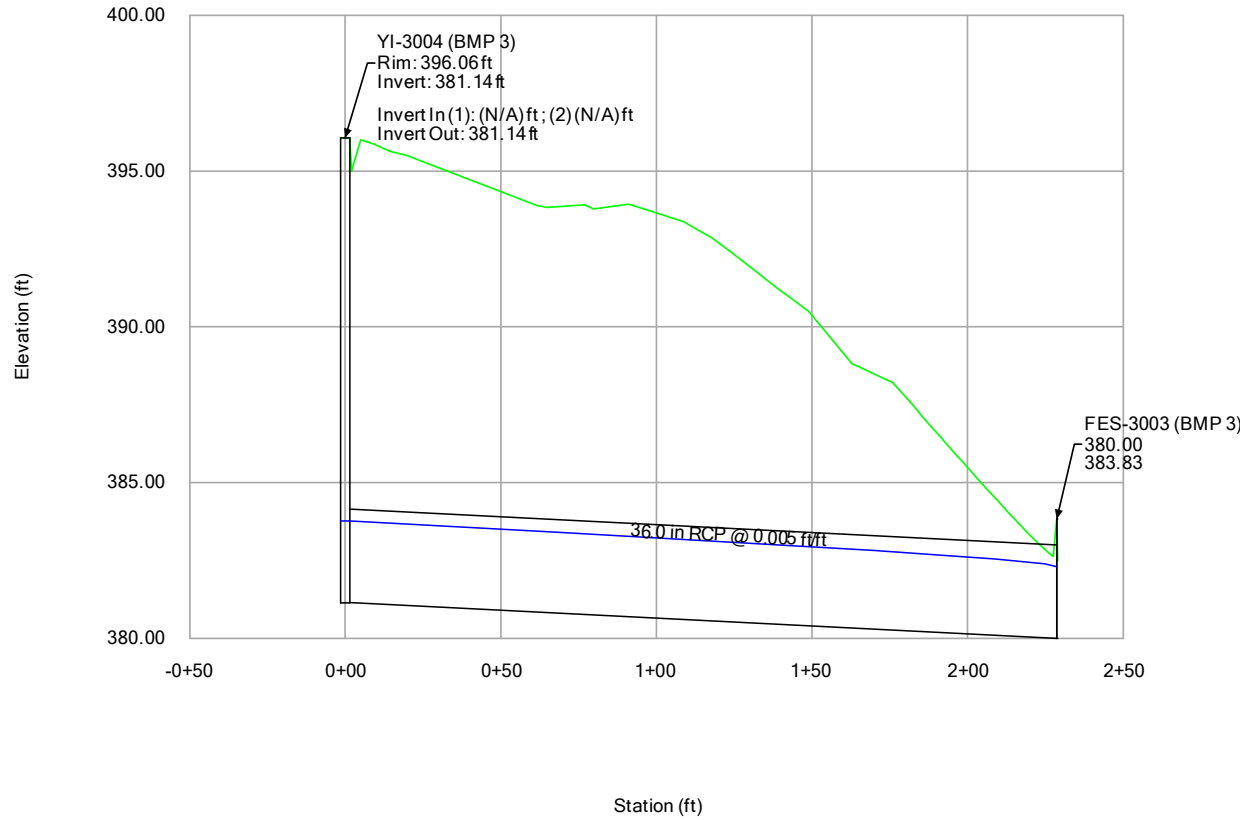
25-YR ANALYSIS



25-YR ANALYSIS



25-YR ANALYSIS



SCM 3 – INLET SPREAD

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
TCB-371 (BMP 3)	0.591	0.564	3.19	0.00	6.64	8.5	3.5
TCB-312 (BMP 3)	1.158	0.521	2.95	0.00	2.95	8.2	3.4
DCB-370 (BMP 3)	0.419	0.341	1.93	0.00	10.28	7.2	3.2
CB-369 (BMP 3)	0.357	0.225	1.28	0.40	1.28	6.7	2.1
CB-363 (BMP 3)	0.391	0.217	1.23	0.37	2.64	6.5	2.0
DCB-311 (BMP 3)	0.308	0.259	1.47	0.00	4.40	6.1	2.9
CB-314 (BMP 3)	0.290	0.183	1.04	0.25	1.04	5.9	1.9
CB-373 (BMP 3)	0.281	0.172	0.98	0.21	0.98	5.7	1.9
CB-364 (BMP 3)	0.228	0.166	0.94	0.20	1.45	5.6	1.8
CB-313 (BMP 3)	0.249	0.160	0.91	0.18	1.93	5.5	1.8
CB-367 (BMP 3)	0.104	0.136	0.77	0.12	1.92	5.0	1.7
CB-307 (BMP 3)	0.174	0.130	0.74	0.10	1.21	4.9	1.7
CB-372 (BMP 3)	0.183	0.125	0.71	0.09	1.94	4.8	1.6
CB-362 (BMP 3)	0.130	0.104	0.59	0.06	3.21	4.3	1.5
CB-365 (BMP 3)	0.102	0.091	0.51	0.04	0.51	4.0	1.4
CB-308 (BMP 3)	0.104	0.086	0.49	0.03	0.49	3.8	1.4

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-303 (BMP 3)	0.105	0.077	0.44	0.02	0.44	3.6	1.3
CB-361 (BMP 3)	0.055	0.060	0.34	0.01	5.38	3.1	1.2
CB-368A (BMP 3)	0.065	0.061	0.34	0.01	11.61	3.1	1.2
CB-310 (BMP 3)	0.055	0.050	0.28	0.00	4.60	2.8	1.1
CB-302 (BMP 3)	0.046	0.044	0.25	0.00	8.70	2.5	1.1
CB-368 (BMP 3)	0.041	0.040	0.23	0.00	11.75	2.4	1.0
CB-306 (BMP 3)	0.039	0.037	0.21	0.00	1.41	2.3	1.0
CB-374 (BMP 3)	0.045	0.037	0.21	0.00	0.32	2.2	1.0
CB-305 (BMP 3)	0.031	0.030	0.17	0.00	6.13	2.0	0.9
CB-304 (BMP 3)	0.029	0.028	0.16	0.00	6.25	1.9	0.9
CB-375 (BMP 3)	0.025	0.021	0.12	0.00	0.12	1.7	0.8
CB-309 (BMP 3)	0.020	0.019	0.11	0.00	4.66	1.7	0.8

ATTACHMENT 4: DRAINAGE AREA MAPS – SCM 4

G:\NCA\Projects\Lennar\8430-03 - Lennar - School Street - Rolesville\04 - Calculations\Storm\StormCAD\DRAINAGE AREAS.dwg



5440 WADE PARK BLVD, SUITE 102
RALEIGH NC 27607
www.bgeinc.com
NC LICENSE #C-4397

SCM 4 DRAINAGE MAP

DATE: 7/27/2023
0 50' 100' 150'
SCALE: 1" = 50'

SCM 4 – 10 YR STORM

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-479 (BMP 4)	0.001	0.00	0.083	0.350
DI-451 (BMP 4)	0.092	0.27	0.083	0.400
DI-478 (BMP 4)	0.167	0.73	0.083	0.600
DI-477 (BMP 4)	0.291	1.27	0.083	0.600
DI-480 (BMP 4)	0.111	0.52	0.083	0.640
DI-476 (BMP 4)	0.063	0.30	0.083	0.650
DI-415 (BMP 4)	0.922	4.55	0.083	0.680
DI-401 (BMP 4)	0.469	2.31	0.083	0.680
DI-416 (BMP 4)	0.368	1.82	0.083	0.680
DI-402 (BMP 4)	0.536	2.72	0.083	0.700
DI-469 (BMP 4)	0.122	0.62	0.083	0.700
DI-474 (BMP 4)	0.097	0.49	0.083	0.700
DI-403 (BMP 4)	0.198	1.04	0.083	0.720
DI-471 (BMP 4)	0.201	1.05	0.083	0.720
DI-470 (BMP 4)	0.253	1.32	0.083	0.720
DI-472 (BMP 4)	0.194	1.01	0.083	0.720

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-409 (BMP 4)	0.152	0.85	0.083	0.770
CB-410 (BMP 4)	0.122	0.68	0.083	0.770
CB-411 (BMP 4)	0.248	1.39	0.083	0.770
CB-412 (BMP 4)	0.279	1.56	0.083	0.770
CB-468 (BMP 4)	0.357	1.99	0.083	0.770
DI-473 (BMP 4)	0.250	1.40	0.083	0.770
CB-455 (BMP 4)	0.190	1.06	0.083	0.770
CB-456 (BMP 4)	0.152	0.85	0.083	0.770
CB-452 (BMP 4)	0.264	1.48	0.083	0.770
CB-453 (BMP 4)	0.011	0.06	0.083	0.770
CB-463 (BMP 4)	0.112	0.63	0.083	0.770
CB-462 (BMP 4)	0.198	1.11	0.083	0.770
CB-457 (BMP 4)	0.184	1.03	0.083	0.770
CB-461 (BMP 4)	0.053	0.30	0.083	0.770
CB-408 (BMP 4)	0.168	0.94	0.083	0.770
DI-404 (BMP 4)	0.048	0.28	0.083	0.800

10-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-454 (BMP 4)	0.136	0.79	0.083	0.800
CB-458 (BMP 4)	0.123	0.71	0.083	0.800
CB-406 (BMP 4)	0.333	2.03	0.083	0.840
CB-407 (BMP 4)	0.170	1.04	0.083	0.840
CB-467 (BMP 4)	0.075	0.46	0.083	0.840
CB-459 (BMP 4)	0.048	0.29	0.083	0.840
CB-405 (BMP 4)	0.311	1.99	0.083	0.880
CB-460 (BMP 4)	0.025	0.17	0.083	0.950
CB-464 (BMP 4)	0.054	0.37	0.083	0.950
CB-466 (BMP 4)	0.081	0.56	0.083	0.950

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-404 (BMP 4)	0.25	0.03	0.25	89.9	397.51	397.51	2.0	2.02	2.02
DI-403 (BMP 4)	0.72	0.32	0.96	69.5	393.21	393.21	2.0	4.38	2.88
CB-461 (BMP 4)	0.29	0.00	5.26	99.0	385.49	385.49	4.0	4.78	4.56
CB-464 (BMP 4)	0.36	0.01	0.36	97.4	393.82	393.82	4.0	2.29	2.29
CB-460 (BMP 4)	0.17	0.00	0.17	100.0	391.85	391.85	4.0	1.79	1.79
CB-459 (BMP 4)	0.29	0.00	5.62	99.0	384.99	384.99	4.0	4.86	4.98
DI-478 (BMP 4)	0.55	0.18	0.55	75.4	392.97	392.97	2.0	2.56	2.56
CB-462 (BMP 4)	0.92	0.19	5.04	83.2	385.97	385.97	4.0	4.58	4.50
CB-463 (BMP 4)	0.57	0.05	3.82	91.8	386.17	386.17	4.0	4.20	4.22
CB-412 (BMP 4)	1.21	0.35	1.21	77.4	392.64	392.64	4.0	3.19	3.19
CB-411 (BMP 4)	1.10	0.29	2.29	79.4	390.86	390.86	4.0	3.56	3.89
DI-416 (BMP 4)	1.09	0.72	1.09	60.2	388.46	388.46	2.0	2.99	2.99
CB-410 (BMP 4)	0.83	0.14	3.10	85.4	386.69	386.69	4.0	11.04	4.32
CB-409 (BMP 4)	0.74	0.11	0.74	87.4	391.14	391.14	4.0	2.78	2.78
CB-408 (BMP 4)	0.81	0.13	1.54	85.9	386.65	386.65	4.0	3.50	3.43
CB-458 (BMP 4)	0.64	0.07	0.64	90.0	388.33	388.33	4.0	2.63	2.63

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-457 (BMP 4)	0.87	0.16	6.92	84.4	383.72	383.72	4.0	5.07	4.81
DI-474 (BMP 4)	0.40	0.09	0.40	81.7	390.82	390.82	2.0	2.35	2.35
CB-466 (BMP 4)	0.57	0.05	3.30	91.9	386.43	386.43	4.0	4.05	4.06
DI-415 (BMP 4)	2.10	2.44	3.14	46.3	386.48	386.48	2.0	1.73	4.02
CB-407 (BMP 4)	0.95	0.20	3.99	82.7	385.90	385.90	4.0	4.02	4.28
CB-405 (BMP 4)	2.26	0.00	13.06	100.0	385.14	385.14	4.0	4.65	6.04
CB-406 (BMP 4)	2.58	0.00	6.46	100.0	385.30	385.30	4.0	4.41	4.71
DI-477 (BMP 4)	0.84	0.43	1.32	66.2	389.38	389.38	2.0	3.65	3.28
DI-473 (BMP 4)	0.90	0.50	0.90	64.5	388.39	388.39	2.0	2.94	2.94
DI-401 (BMP 4)	1.30	1.01	16.41	56.4	384.01	384.01	2.0	5.73	6.68
DI-476 (BMP 4)	0.26	0.03	1.56	89.1	384.50	384.50	2.0	6.33	3.45
DI-469 (BMP 4)	0.48	0.14	0.87	78.0	389.52	389.52	2.0	3.59	2.91
CB-454 (BMP 4)	0.75	0.11	3.76	87.2	383.63	383.63	4.0	3.50	4.22
CB-452 (BMP 4)	1.25	0.38	13.33	76.5	381.23	381.23	4.0	1.31	5.56
CB-453 (BMP 4)	0.17	0.00	3.92	100.0	383.48	383.48	4.0	4.32	4.38
DI-471 (BMP 4)	0.73	0.32	1.60	69.3	386.30	386.30	2.0	4.54	3.48

10-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-402 (BMP 4)	1.47	1.26	2.37	53.8	387.17	387.17	2.0	2.70	3.74
CB-467 (BMP 4)	0.48	0.03	2.78	94.4	386.86	386.86	4.0	3.14	3.90
DI-470 (BMP 4)	0.87	0.46	3.11	65.4	384.19	384.19	2.0	1.16	4.06
CB-468 (BMP 4)	1.46	0.54	1.46	73.1	387.01	387.01	4.0	3.31	3.31
DI-479 (BMP 4)	0.00	0.00	0.41	100.0	381.29	381.29	2.0	2.32	2.29
DI-472 (BMP 4)	0.71	0.31	0.71	69.9	384.46	384.46	2.0	2.74	2.74
DI-451 (BMP 4)	0.24	0.03	13.64	90.5	380.50	380.50	2.0	5.15	4.43
CB-455 (BMP 4)	1.14	0.31	1.86	78.7	381.39	381.39	4.0	2.78	3.48
DI-480 (BMP 4)	0.42	0.10	0.42	80.9	381.99	381.99	2.0	2.31	2.31
CB-456 (BMP 4)	0.74	0.11	0.74	87.5	381.64	381.64	4.0	2.74	2.74

10-YR ANALYSIS

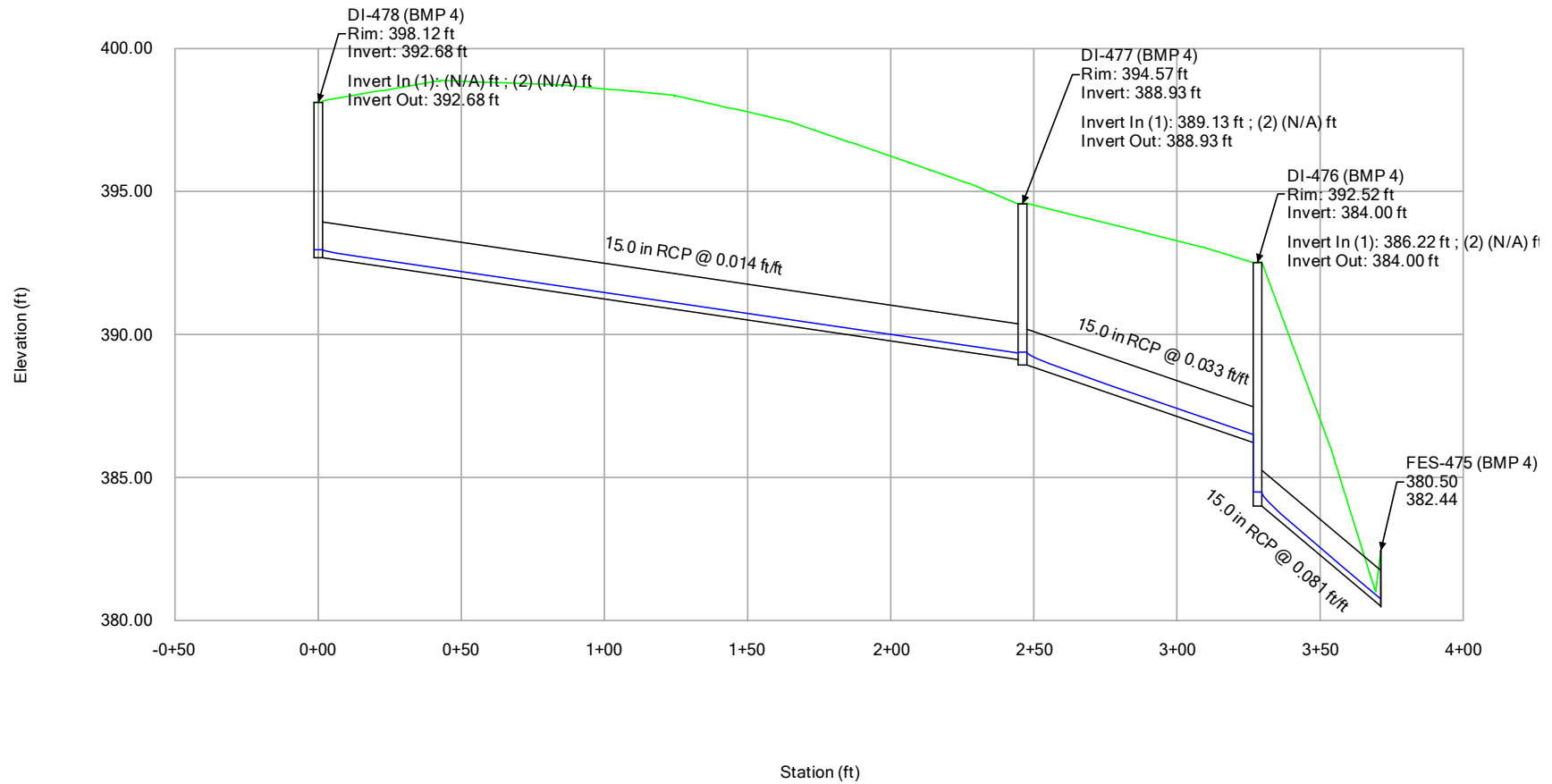
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-403 TO DI-404 (BMP 4)	18.0	0.051	2.02	4.38	0.25	23.64	397.51	393.15
DI-402 TO DI-403 (BMP 4)	18.0	0.047	2.88	2.70	0.96	22.80	393.21	387.17
CB-459 TO CB-461 (BMP 4)	18.0	0.005	4.56	4.86	5.26	7.43	385.49	385.05
CB-461 TO CB-462 (BMP 4)	18.0	0.005	4.50	4.78	5.04	7.39	385.97	385.53
CB-462 TO CB-464 (BMP 4)	15.0	0.080	2.29	5.90	0.36	18.33	393.82	389.87
CB-459 TO CB-460 (BMP 4)	15.0	0.005	1.79	1.88	0.17	4.57	391.85	391.71
CB-457 TO CB-459 (BMP 4)	18.0	0.006	4.98	5.07	5.62	8.34	384.99	384.19
DI-477 TO DI-478 (BMP 4)	15.0	0.014	2.56	3.65	0.55	7.76	392.97	389.35
CB-462 TO CB-463 (BMP 4)	15.0	0.005	4.22	4.58	3.82	4.57	386.17	385.97
CB-463 TO CB-466 (BMP 4)	15.0	0.005	4.06	4.20	3.30	4.58	386.43	386.17
CB-411 TO CB-412 (BMP 4)	15.0	0.007	3.19	3.56	1.21	5.43	392.64	392.33
CB-410 TO CB-411 (BMP 4)	15.0	0.101	3.89	11.04	2.29	20.53	390.86	386.46
DI-415 TO DI-416 (BMP 4)	18.0	0.017	2.99	1.73	1.09	13.77	388.46	386.48
CB-405 TO CB-410 (BMP 4)	15.0	0.007	4.32	4.67	3.10	5.59	386.69	385.95
CB-408 TO CB-409 (BMP 4)	15.0	0.010	2.78	3.50	0.74	6.46	391.14	390.74
CB-405 TO CB-408 (BMP 4)	15.0	0.011	3.43	4.40	1.54	6.64	386.65	385.61
CB-457 TO CB-458 (BMP 4)	15.0	0.005	2.63	2.67	0.64	4.57	388.33	388.19
CB-452 TO CB-457 (BMP 4)	24.0	0.006	4.81	5.10	6.92	16.87	383.72	382.94
DI-469 TO DI-474 (BMP 4)	15.0	0.018	2.35	3.59	0.40	8.62	390.82	389.53
CB-466 TO CB-467 (BMP 4)	15.0	0.005	3.90	4.05	2.78	4.57	386.86	386.43
CB-407 TO DI-415 (BMP 4)	18.0	0.005	4.02	4.02	3.14	7.42	386.48	385.90
CB-406 TO CB-407 (BMP 4)	18.0	0.005	4.28	4.41	3.99	7.43	385.90	385.82
CB-405 TO CB-406 (BMP 4)	18.0	0.005	4.71	4.65	6.46	7.43	385.30	385.14
DI-401 TO CB-405 (BMP 4)	24.0	0.009	6.04	5.73	13.06	21.27	385.14	384.01
DI-476 TO DI-477 (BMP 4)	15.0	0.033	3.28	6.33	1.32	11.74	389.38	386.50
DI-471 TO DI-473 (BMP 4)	15.0	0.018	2.94	4.54	0.90	8.59	388.39	386.27
FES-400 TO DI-401 (BMP 4)	24.0	0.010	6.68	7.75	16.41	22.26	384.01	381.78
DI-401 TO DI-402 (BMP 4)	18.0	0.018	3.74	5.90	2.37	14.02	387.17	385.42
FES-475 TO DI-476 (BMP 4)	15.0	0.081	3.45	9.14	1.56	18.41	384.50	380.75
CB-467 TO DI-469 (BMP 4)	15.0	0.070	2.91	7.29	0.87	17.05	389.52	387.69

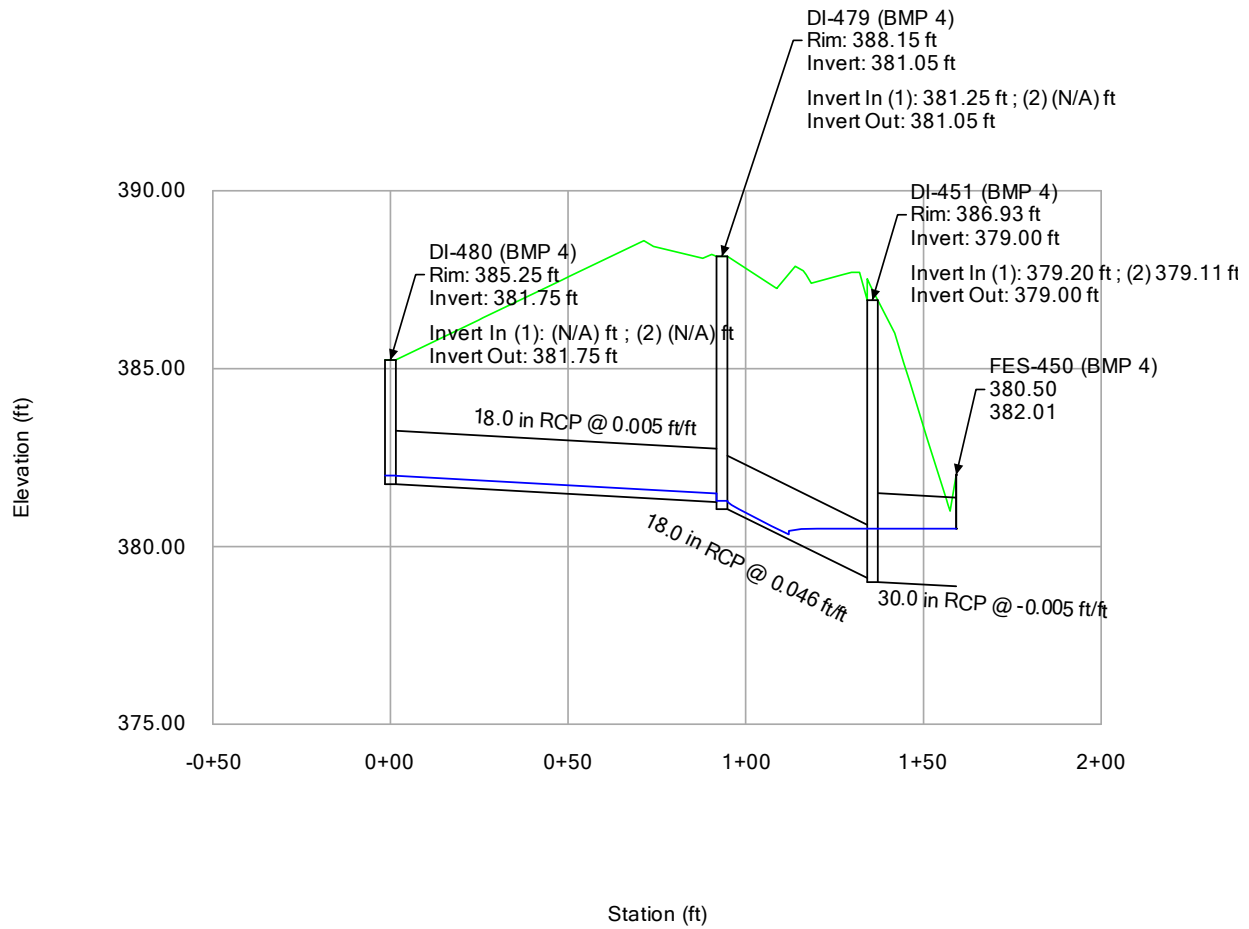
10-YR ANALYSIS **Conduit Results - Time: 0.00 hours**

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-454 TO DI-470 (BMP 4)	18.0	0.005	4.06	3.50	3.11	7.56	384.19	383.63
CB-453 TO CB-454 (BMP 4)	18.0	0.005	4.22	4.32	3.76	7.44	383.63	383.56
CB-452 TO CB-455 (BMP 4)	18.0	0.006	3.48	1.31	1.86	8.03	381.39	381.23
CB-452 TO CB-453 (BMP 4)	18.0	0.008	4.38	5.08	3.92	9.48	383.48	383.18
DI-451 TO CB-452 (BMP 4)	30.0	0.005	5.56	5.15	13.33	29.10	381.23	380.50
DI-470 TO DI-471 (BMP 4)	15.0	0.018	3.48	5.35	1.60	8.57	386.30	384.63
CB-467 TO CB-468 (BMP 4)	15.0	0.005	3.31	3.14	1.46	4.57	387.01	386.86
DI-470 TO DI-472 (BMP 4)	15.0	0.005	2.74	1.16	0.71	4.64	384.46	384.19
DI-451 TO DI-479 (BMP 4)	18.0	0.046	2.29	0.24	0.41	22.47	381.29	380.50
DI-479 TO DI-480 (BMP 4)	18.0	0.005	2.31	2.32	0.42	7.69	381.99	381.49
FES-450 TO DI-451 (BMP 4)	30.0	-0.005	4.43	4.05	13.64	29.27	380.50	380.50
CB-455 TO CB-456 (BMP 4)	15.0	0.005	2.74	2.78	0.74	4.57	381.64	381.47

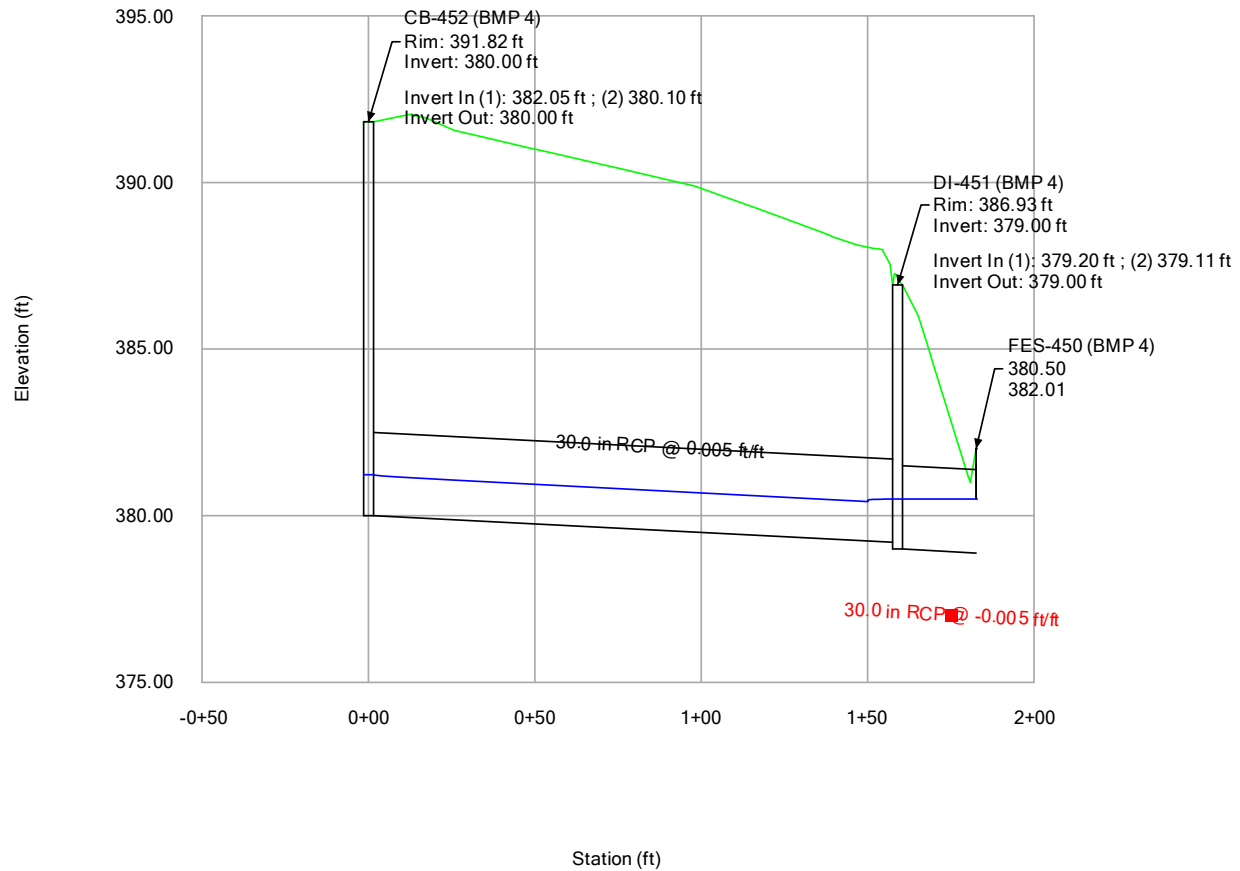
10-YR ANALYSIS



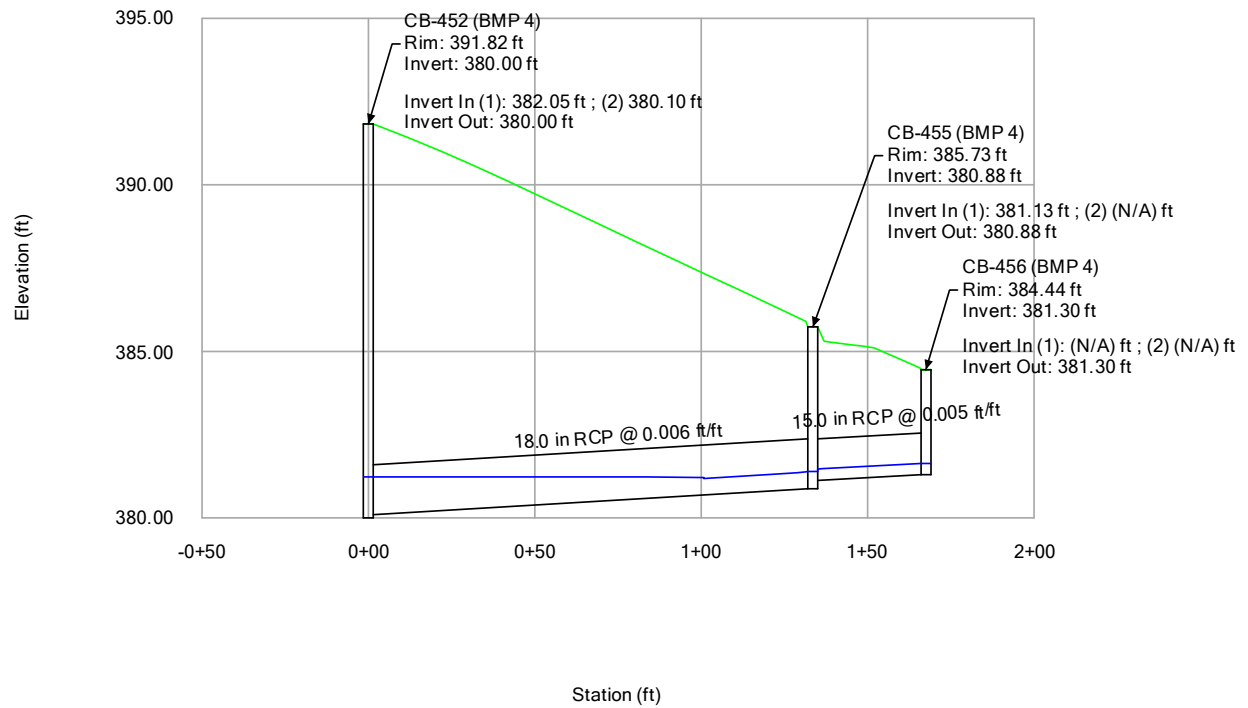
10-YR ANALYSIS



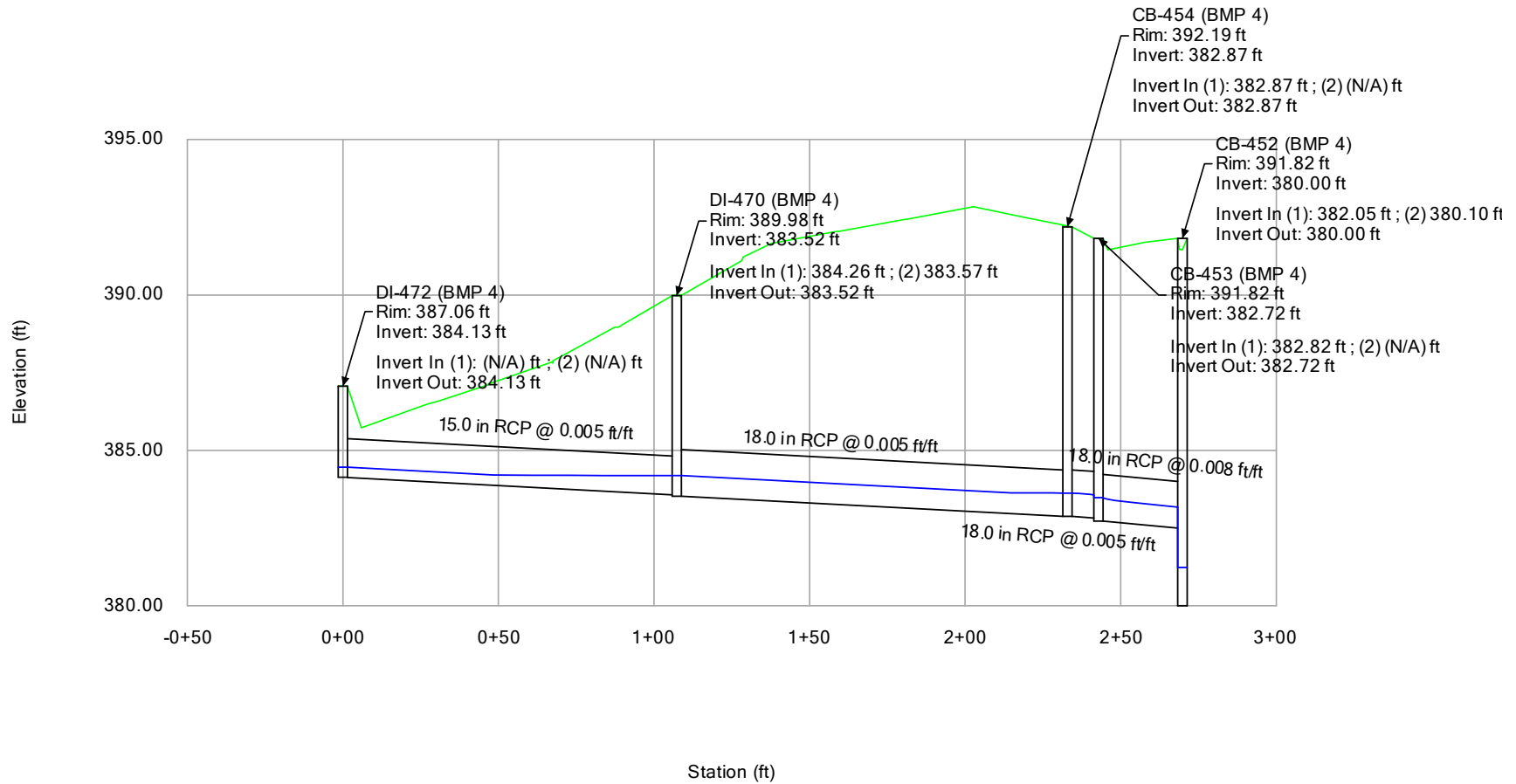
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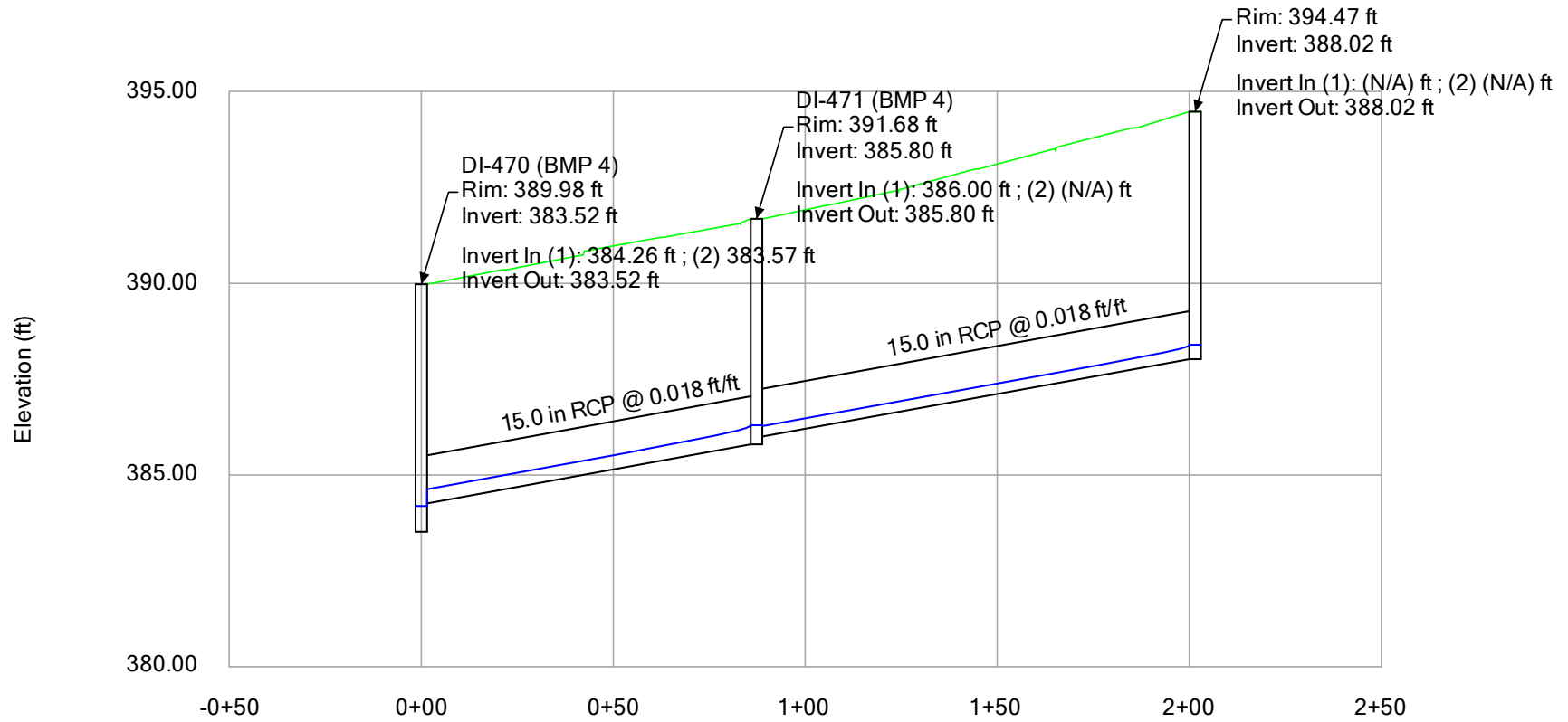
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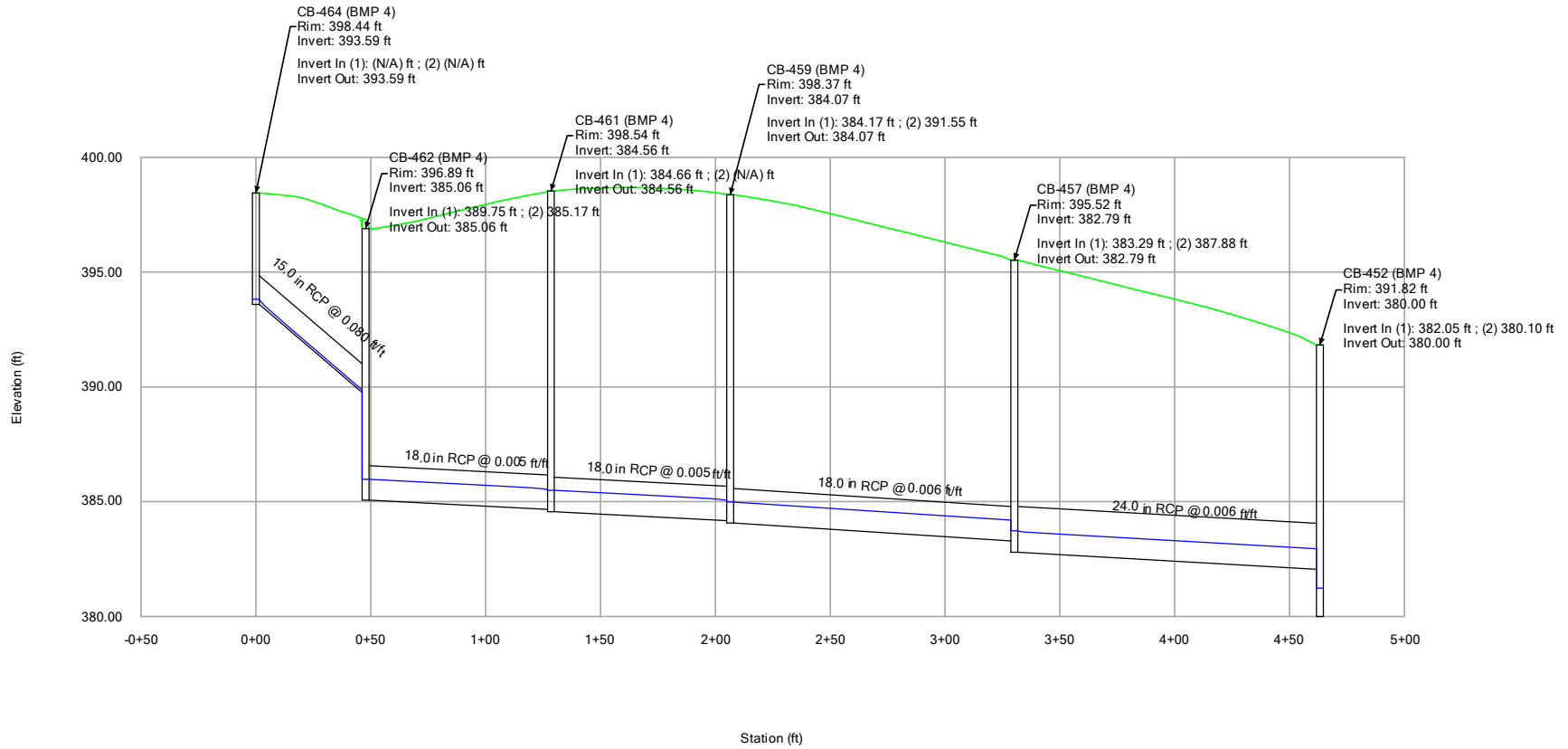
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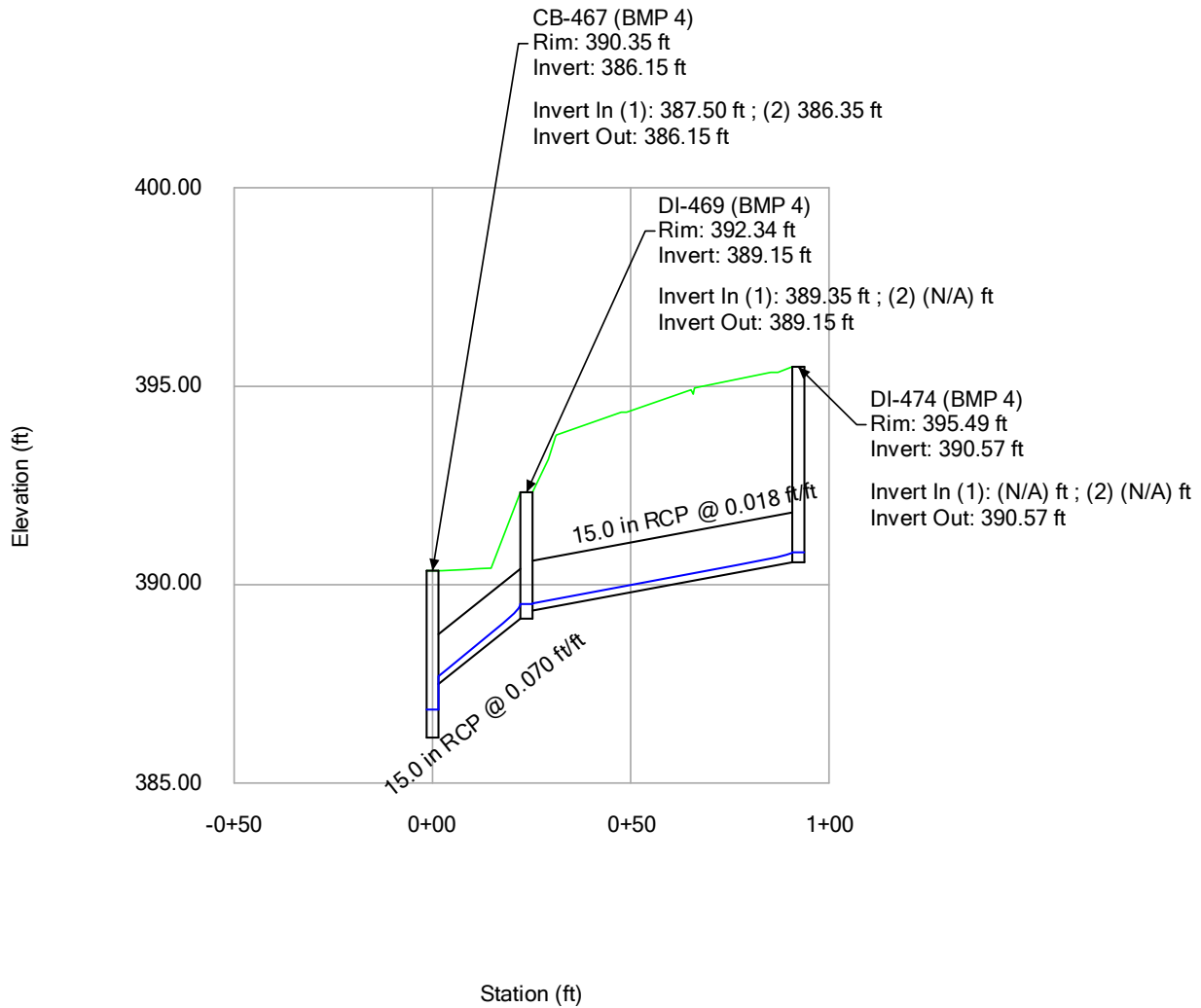
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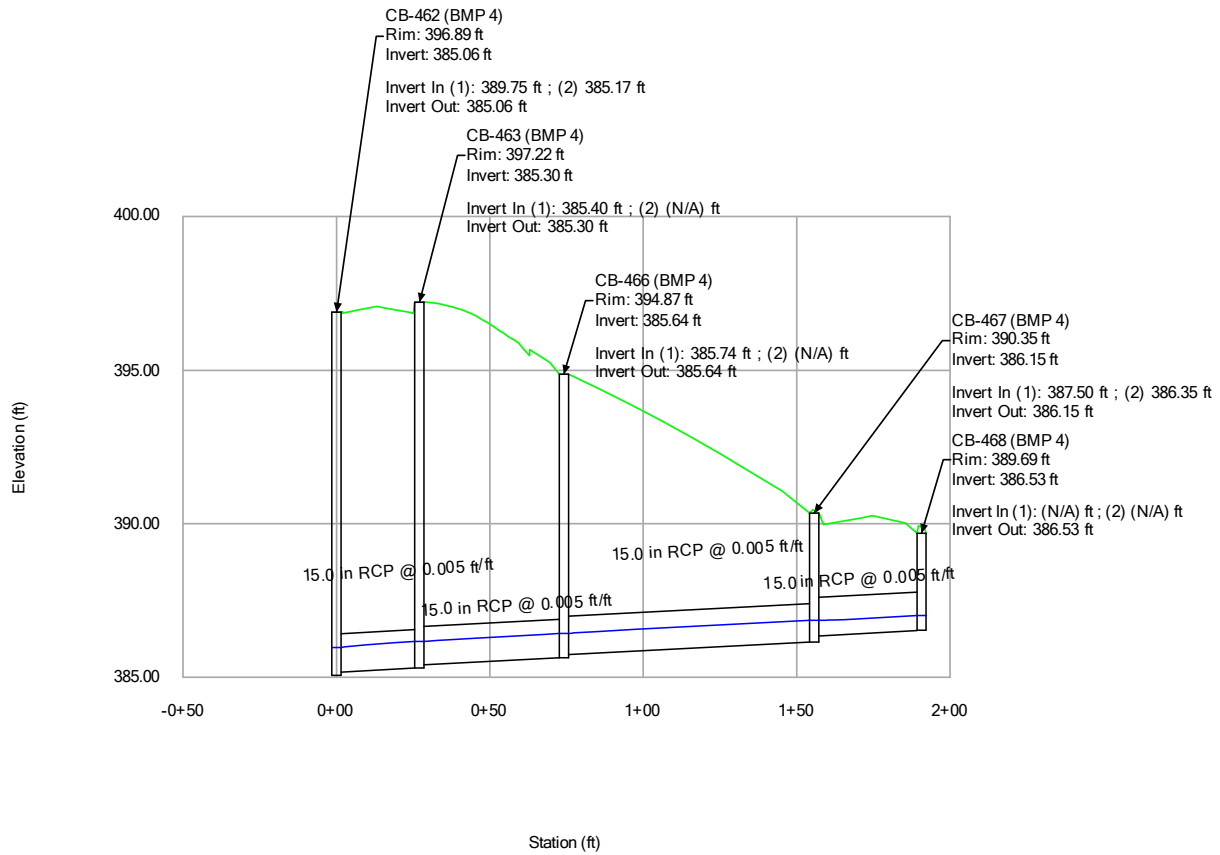
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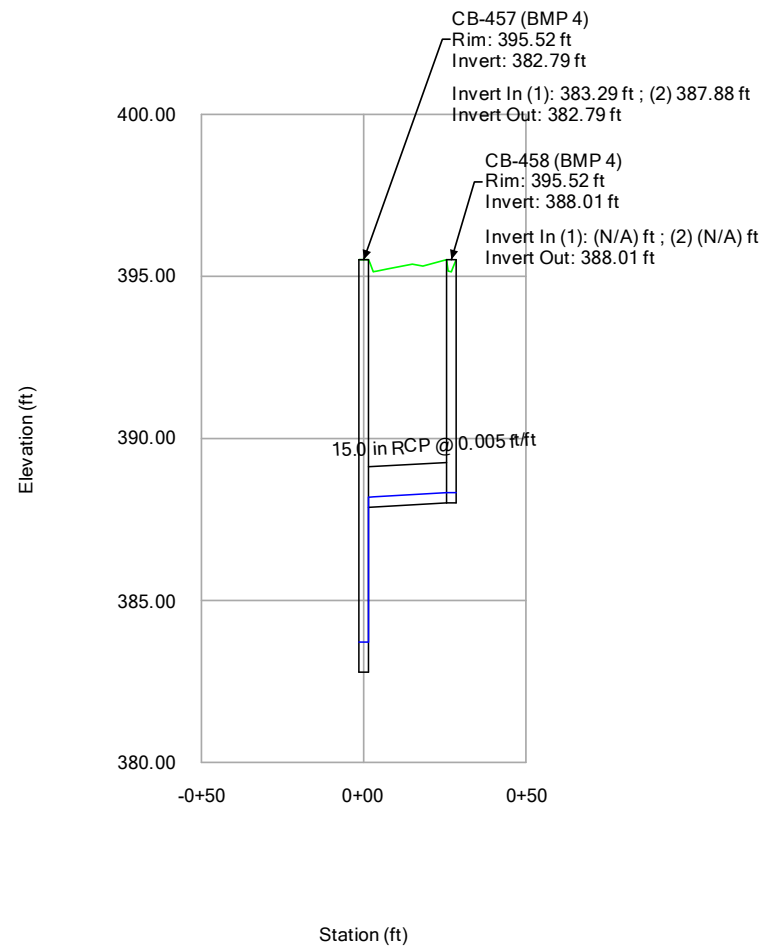
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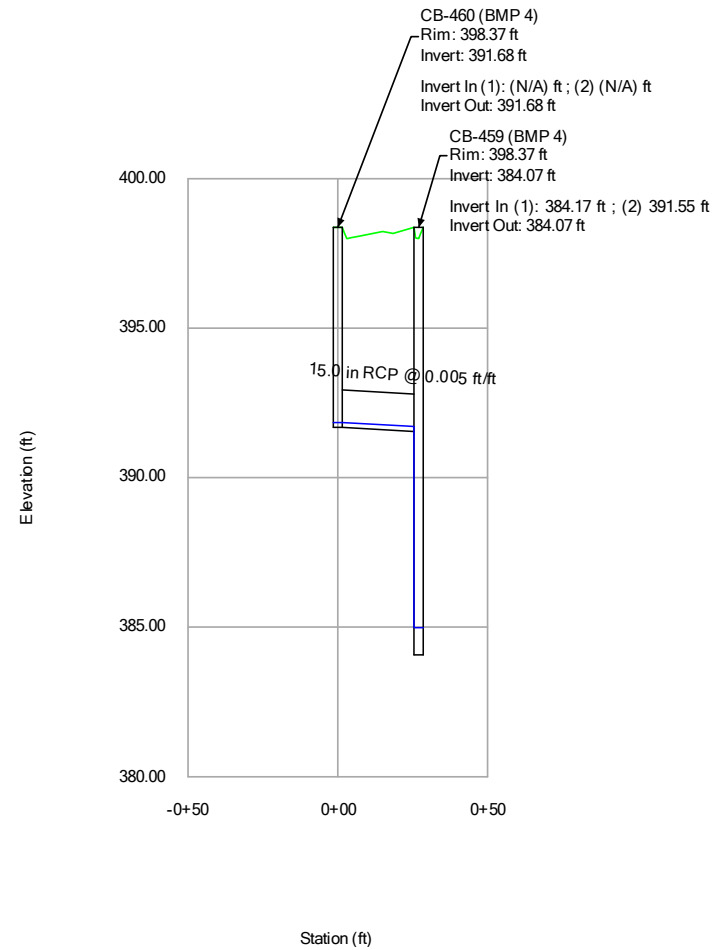
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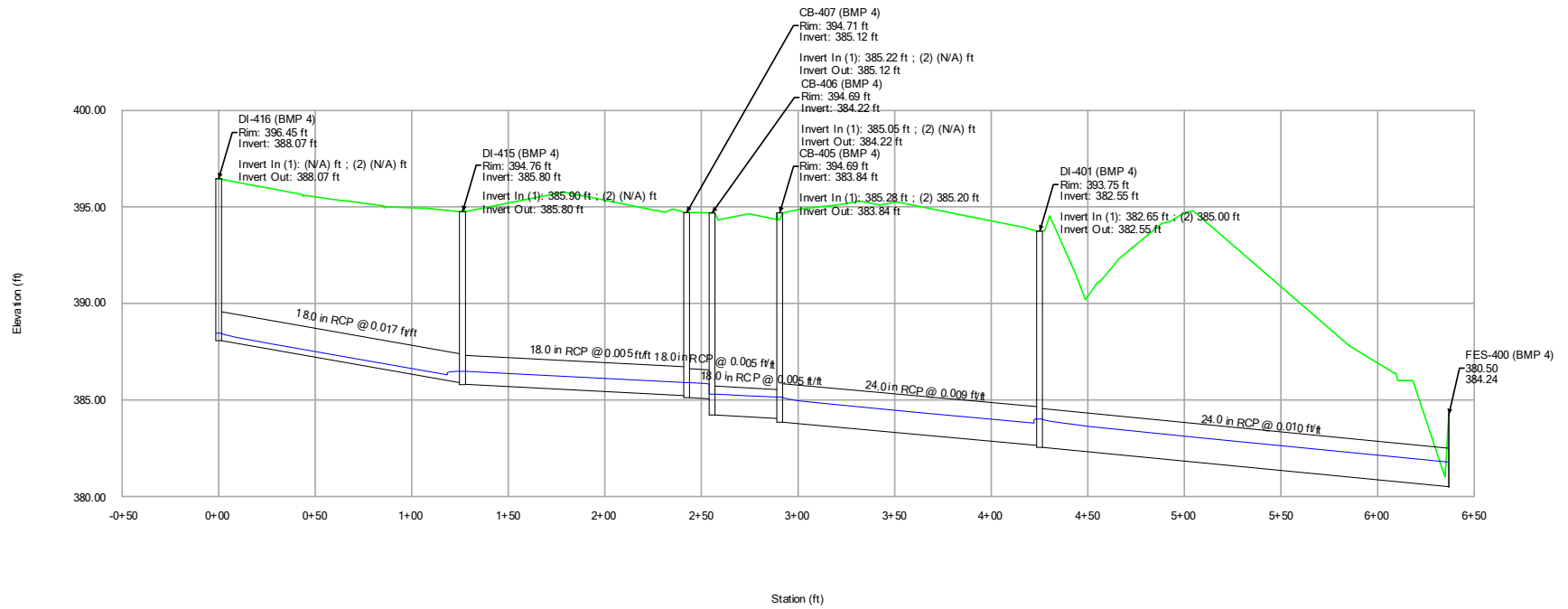
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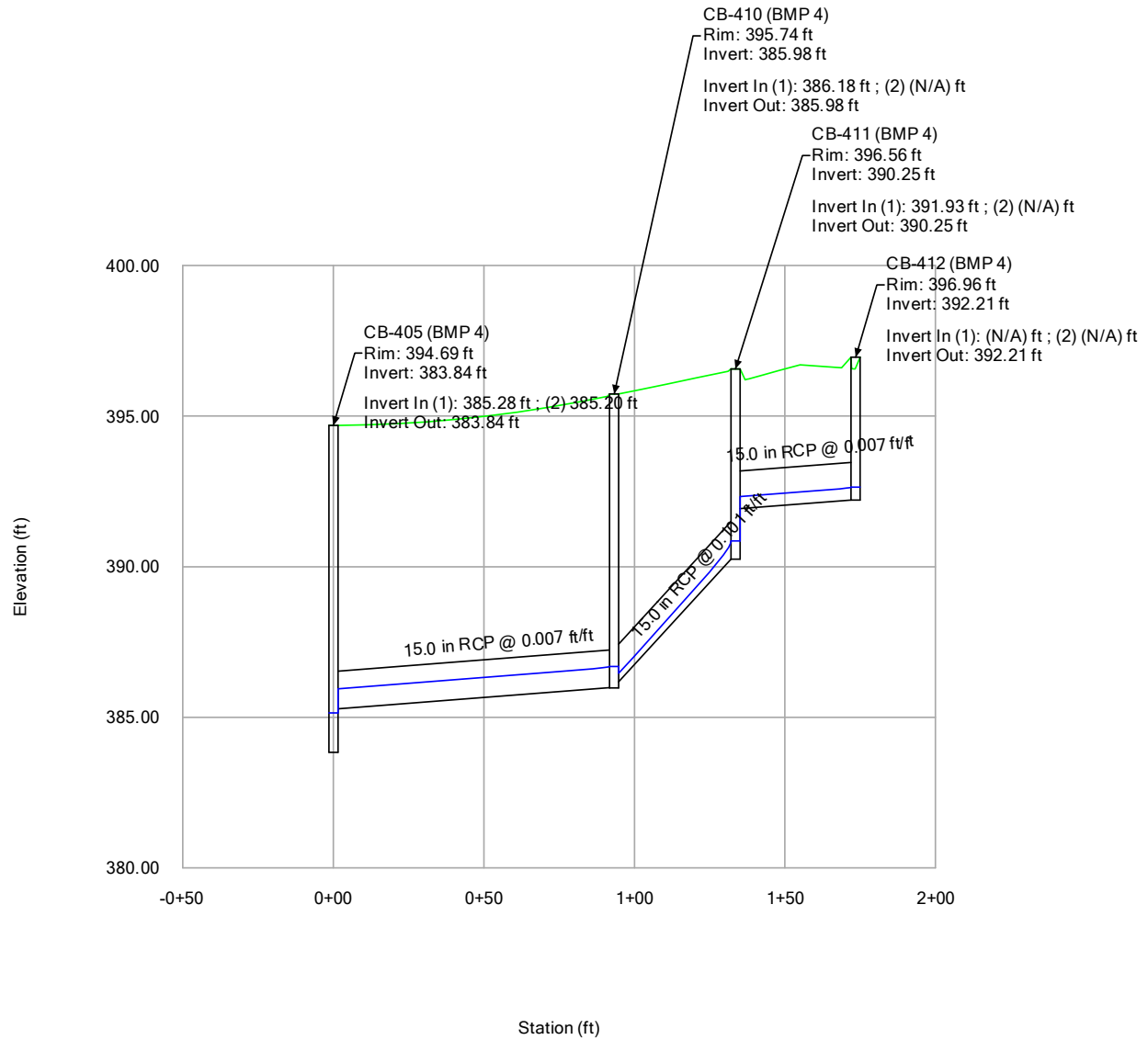
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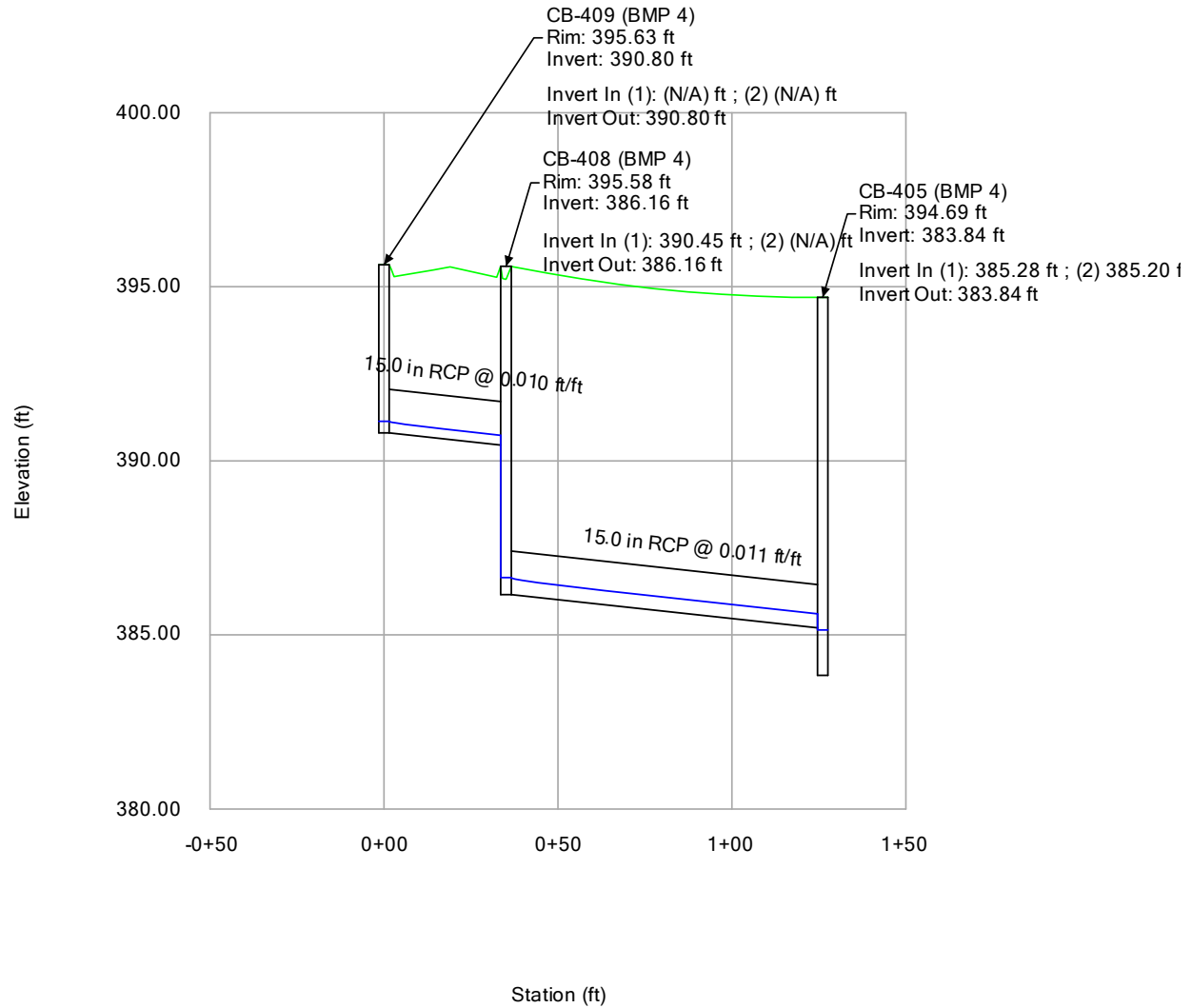
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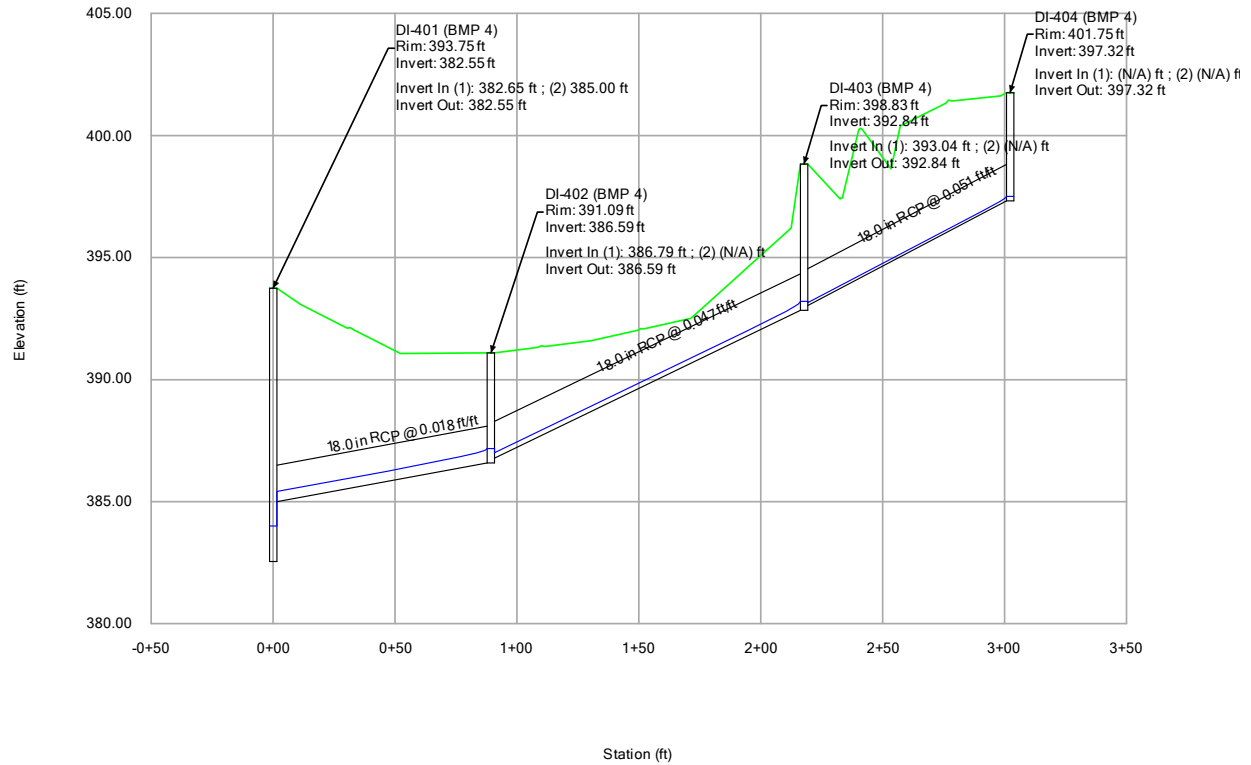
10-YR ANALYSIS



10-YR ANALYSIS



10-YR ANALYSIS



SCM 4 – 25 YR STORM

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
DI-479 (BMP 4)	0.001	0.00	0.083	0.350
DI-451 (BMP 4)	0.092	0.30	0.083	0.400
DI-478 (BMP 4)	0.167	0.81	0.083	0.600
DI-477 (BMP 4)	0.291	1.40	0.083	0.600
DI-480 (BMP 4)	0.111	0.57	0.083	0.640
DI-476 (BMP 4)	0.063	0.33	0.083	0.650
DI-415 (BMP 4)	0.922	5.05	0.083	0.680
DI-401 (BMP 4)	0.469	2.57	0.083	0.680
DI-416 (BMP 4)	0.368	2.02	0.083	0.680
DI-402 (BMP 4)	0.536	3.02	0.083	0.700
DI-469 (BMP 4)	0.122	0.69	0.083	0.700
DI-474 (BMP 4)	0.097	0.55	0.083	0.700
DI-403 (BMP 4)	0.198	1.15	0.083	0.720
DI-471 (BMP 4)	0.201	1.17	0.083	0.720
DI-470 (BMP 4)	0.253	1.47	0.083	0.720
DI-472 (BMP 4)	0.194	1.13	0.083	0.720

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-409 (BMP 4)	0.152	0.94	0.083	0.770
CB-410 (BMP 4)	0.122	0.76	0.083	0.770
CB-411 (BMP 4)	0.248	1.54	0.083	0.770
CB-412 (BMP 4)	0.279	1.73	0.083	0.770
CB-468 (BMP 4)	0.357	2.21	0.083	0.770
DI-473 (BMP 4)	0.250	1.55	0.083	0.770
CB-455 (BMP 4)	0.190	1.18	0.083	0.770
CB-456 (BMP 4)	0.152	0.94	0.083	0.770
CB-452 (BMP 4)	0.264	1.64	0.083	0.770
CB-453 (BMP 4)	0.011	0.07	0.083	0.770
CB-463 (BMP 4)	0.112	0.69	0.083	0.770
CB-462 (BMP 4)	0.198	1.23	0.083	0.770
CB-457 (BMP 4)	0.184	1.14	0.083	0.770
CB-461 (BMP 4)	0.053	0.33	0.083	0.770
CB-408 (BMP 4)	0.168	1.04	0.083	0.770
DI-404 (BMP 4)	0.048	0.31	0.083	0.800

25-YR ANALYSIS

CATCHMENTS - Time: 0.00 hours

Outflow Element	Scaled Area (acres)	Flow (Total Out) (cfs)	Time of Concentration (hours)	Runoff Coefficient (Rational)
CB-454 (BMP 4)	0.136	0.88	0.083	0.800
CB-458 (BMP 4)	0.123	0.79	0.083	0.800
CB-406 (BMP 4)	0.333	2.25	0.083	0.840
CB-407 (BMP 4)	0.170	1.15	0.083	0.840
CB-467 (BMP 4)	0.075	0.51	0.083	0.840
CB-459 (BMP 4)	0.048	0.32	0.083	0.840
CB-405 (BMP 4)	0.311	2.21	0.083	0.880
CB-460 (BMP 4)	0.025	0.19	0.083	0.950
CB-464 (BMP 4)	0.054	0.41	0.083	0.950
CB-466 (BMP 4)	0.081	0.62	0.083	0.950

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-404 (BMP 4)	0.27	0.04	0.27	88.5	397.51	397.51	2.0	2.06	2.06
DI-403 (BMP 4)	0.78	0.37	1.04	67.8	393.22	393.22	2.0	4.49	2.95
CB-461 (BMP 4)	0.32	0.01	5.75	98.4	385.55	385.55	4.0	4.94	4.64
CB-464 (BMP 4)	0.40	0.01	0.40	96.5	393.84	393.84	4.0	2.35	2.35
CB-460 (BMP 4)	0.19	0.00	0.19	100.0	391.86	391.86	4.0	1.85	1.85
CB-459 (BMP 4)	0.32	0.00	6.16	98.5	385.03	385.03	4.0	5.02	5.16
DI-478 (BMP 4)	0.59	0.21	0.59	73.7	392.98	392.98	2.0	2.62	2.62
CB-462 (BMP 4)	1.00	0.23	5.51	81.4	386.03	386.03	4.0	4.64	4.58
CB-463 (BMP 4)	0.63	0.07	4.18	90.4	386.22	386.22	4.0	4.23	4.31
CB-412 (BMP 4)	1.31	0.42	1.31	75.6	392.66	392.66	4.0	3.27	3.27
CB-411 (BMP 4)	1.19	0.34	2.48	77.6	390.88	390.88	4.0	3.64	4.00
DI-416 (BMP 4)	1.18	0.84	1.18	58.6	388.48	388.48	2.0	3.05	3.05
CB-410 (BMP 4)	0.92	0.18	3.38	83.3	386.72	386.72	4.0	11.30	4.46
CB-409 (BMP 4)	0.81	0.13	0.81	85.8	391.15	391.15	4.0	2.85	2.85
CB-408 (BMP 4)	0.88	0.16	1.67	84.2	386.67	386.67	4.0	3.59	3.52
CB-458 (BMP 4)	0.70	0.09	0.70	88.5	388.34	388.34	4.0	2.70	2.70

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
CB-457 (BMP 4)	0.95	0.20	7.56	82.7	383.77	383.77	4.0	5.17	4.96
DI-474 (BMP 4)	0.44	0.11	0.44	80.0	390.83	390.83	2.0	2.41	2.41
CB-466 (BMP 4)	0.64	0.07	3.60	90.2	386.48	386.48	4.0	4.05	4.14
DI-415 (BMP 4)	2.26	2.78	3.38	44.8	386.51	386.51	2.0	1.75	4.10
CB-407 (BMP 4)	1.04	0.25	4.31	80.7	385.94	385.94	4.0	4.04	4.36
CB-405 (BMP 4)	2.55	0.00	14.39	100.0	385.21	385.21	4.0	4.82	6.29
CB-406 (BMP 4)	2.92	0.00	7.11	100.0	385.39	385.39	4.0	4.53	4.80
DI-477 (BMP 4)	0.91	0.50	1.43	64.4	389.40	389.40	2.0	3.74	3.36
DI-473 (BMP 4)	0.97	0.58	0.97	62.8	388.41	388.41	2.0	3.01	3.01
DI-401 (BMP 4)	1.41	1.16	18.01	54.7	384.08	384.08	2.0	5.99	6.99
DI-476 (BMP 4)	0.29	0.04	1.69	87.7	384.52	384.52	2.0	6.49	3.54
DI-469 (BMP 4)	0.53	0.16	0.95	76.3	389.53	389.53	2.0	3.68	2.98
CB-454 (BMP 4)	0.83	0.14	4.08	85.4	383.66	383.66	4.0	3.55	4.31
CB-452 (BMP 4)	1.37	0.47	14.58	74.5	381.29	381.29	4.0	1.37	5.73
CB-453 (BMP 4)	0.21	0.00	4.28	100.0	383.51	383.51	4.0	4.44	4.51
DI-471 (BMP 4)	0.79	0.38	1.73	67.5	386.32	386.32	2.0	4.64	3.56

25-YR ANALYSIS

Inlets - Time: 0.00 hours

Label	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Capture Efficiency (Calculated) (%)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Grate Length (ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)
DI-402 (BMP 4)	1.58	1.44	2.56	52.2	387.20	387.20	2.0	2.68	3.83
CB-467 (BMP 4)	0.54	0.04	3.03	92.9	386.89	386.89	4.0	3.08	3.98
DI-470 (BMP 4)	0.94	0.53	3.37	63.7	384.22	384.22	2.0	1.19	4.15
CB-468 (BMP 4)	1.58	0.64	1.58	71.2	387.03	387.03	4.0	3.38	3.38
DI-479 (BMP 4)	0.00	0.00	0.44	100.0	381.30	381.30	2.0	2.38	2.34
DI-472 (BMP 4)	0.77	0.36	0.77	68.1	384.47	384.47	2.0	2.80	2.80
DI-451 (BMP 4)	0.26	0.03	14.93	89.2	380.50	380.50	2.0	5.63	4.84
CB-455 (BMP 4)	1.26	0.39	2.05	76.4	381.42	381.42	4.0	2.85	3.58
DI-480 (BMP 4)	0.45	0.12	0.45	79.3	382.00	382.00	2.0	2.36	2.36
CB-456 (BMP 4)	0.81	0.13	0.81	85.9	381.66	381.66	4.0	2.81	2.81

25-YR ANALYSIS

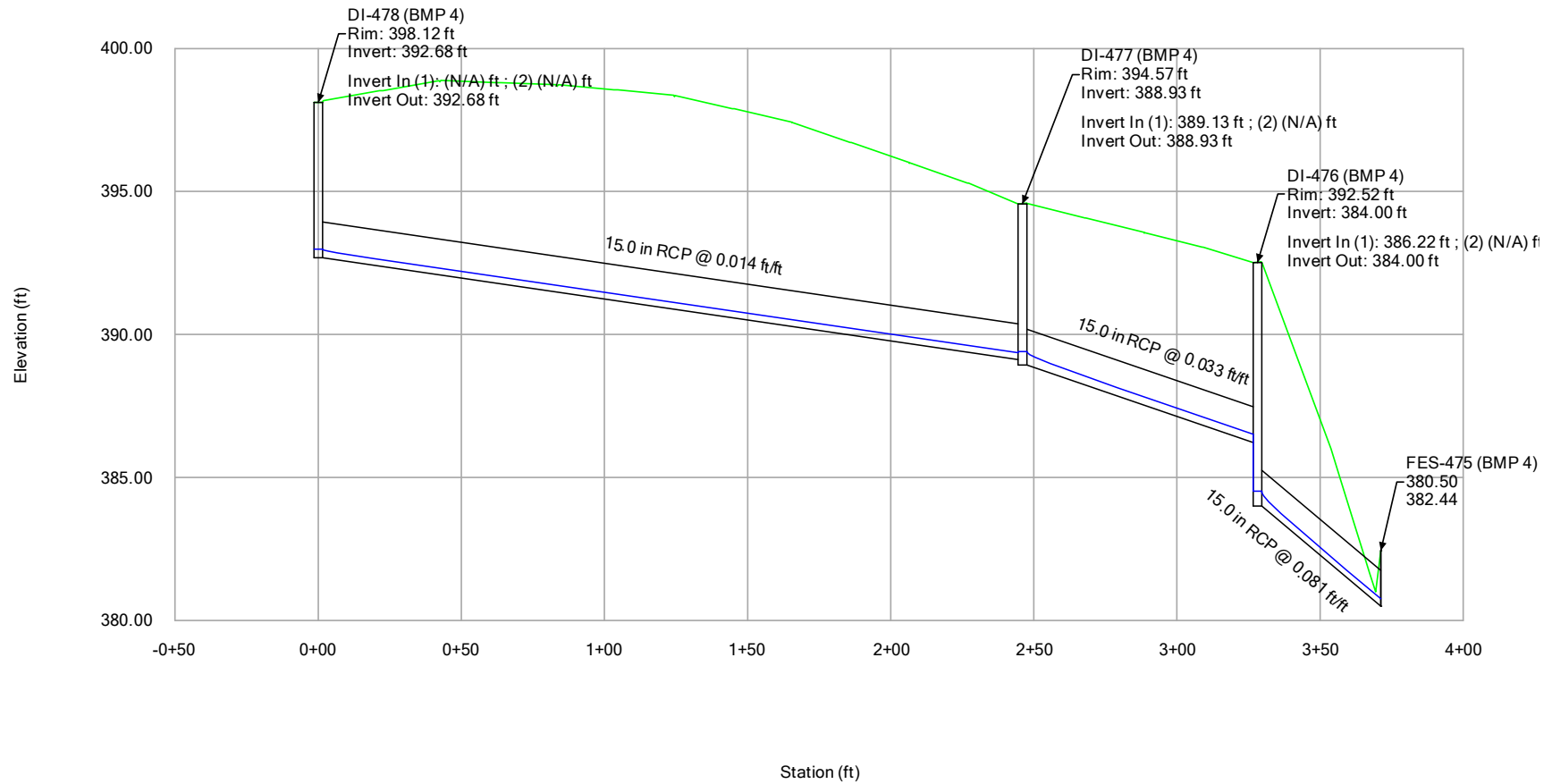
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
DI-403 TO DI-404 (BMP 4)	18.0	0.051	2.06	4.49	0.27	23.64	397.51	393.15
DI-402 TO DI-403 (BMP 4)	18.0	0.047	2.95	2.68	1.04	22.80	393.22	387.20
CB-459 TO CB-461 (BMP 4)	18.0	0.005	4.64	5.02	5.75	7.43	385.55	385.10
CB-461 TO CB-462 (BMP 4)	18.0	0.005	4.58	4.94	5.51	7.39	386.03	385.57
CB-462 TO CB-464 (BMP 4)	15.0	0.080	2.35	6.07	0.40	18.33	393.84	389.88
CB-459 TO CB-460 (BMP 4)	15.0	0.005	1.85	1.94	0.19	4.57	391.86	391.72
CB-457 TO CB-459 (BMP 4)	18.0	0.006	5.16	5.17	6.16	8.34	385.03	384.25
DI-477 TO DI-478 (BMP 4)	15.0	0.014	2.62	3.74	0.59	7.76	392.98	389.36
CB-462 TO CB-463 (BMP 4)	15.0	0.005	4.31	4.64	4.18	4.57	386.22	386.03
CB-463 TO CB-466 (BMP 4)	15.0	0.005	4.14	4.23	3.60	4.58	386.48	386.22
CB-411 TO CB-412 (BMP 4)	15.0	0.007	3.27	3.64	1.31	5.43	392.66	392.35
CB-410 TO CB-411 (BMP 4)	15.0	0.101	4.00	11.30	2.48	20.53	390.88	386.47
DI-415 TO DI-416 (BMP 4)	18.0	0.017	3.05	1.75	1.18	13.77	388.48	386.51
CB-405 TO CB-410 (BMP 4)	15.0	0.007	4.46	4.77	3.38	5.59	386.72	385.98
CB-408 TO CB-409 (BMP 4)	15.0	0.010	2.85	3.59	0.81	6.46	391.15	390.75
CB-405 TO CB-408 (BMP 4)	15.0	0.011	3.52	4.51	1.67	6.64	386.67	385.63
CB-457 TO CB-458 (BMP 4)	15.0	0.005	2.70	2.74	0.70	4.57	388.34	388.20
CB-452 TO CB-457 (BMP 4)	24.0	0.006	4.96	5.22	7.56	16.87	383.77	382.99
DI-469 TO DI-474 (BMP 4)	15.0	0.018	2.41	3.68	0.44	8.62	390.83	389.54
CB-466 TO CB-467 (BMP 4)	15.0	0.005	3.98	4.05	3.03	4.57	386.89	386.48
CB-407 TO DI-415 (BMP 4)	18.0	0.005	4.10	4.04	3.38	7.42	386.51	385.94
CB-406 TO CB-407 (BMP 4)	18.0	0.005	4.36	4.53	4.31	7.43	385.94	385.85
CB-405 TO CB-406 (BMP 4)	18.0	0.005	4.80	4.82	7.11	7.43	385.39	385.21
DI-401 TO CB-405 (BMP 4)	24.0	0.009	6.29	5.99	14.39	21.27	385.21	384.08
DI-476 TO DI-477 (BMP 4)	15.0	0.033	3.36	6.49	1.43	11.74	389.40	386.52
DI-471 TO DI-473 (BMP 4)	15.0	0.018	3.01	4.64	0.97	8.59	388.41	386.28
FES-400 TO DI-401 (BMP 4)	24.0	0.010	6.99	7.89	18.01	22.26	384.08	381.87
DI-401 TO DI-402 (BMP 4)	18.0	0.018	3.83	6.04	2.56	14.02	387.20	385.43
FES-475 TO DI-476 (BMP 4)	15.0	0.081	3.54	9.36	1.69	18.41	384.52	380.76
CB-467 TO DI-469 (BMP 4)	15.0	0.070	2.98	7.48	0.95	17.05	389.53	387.70

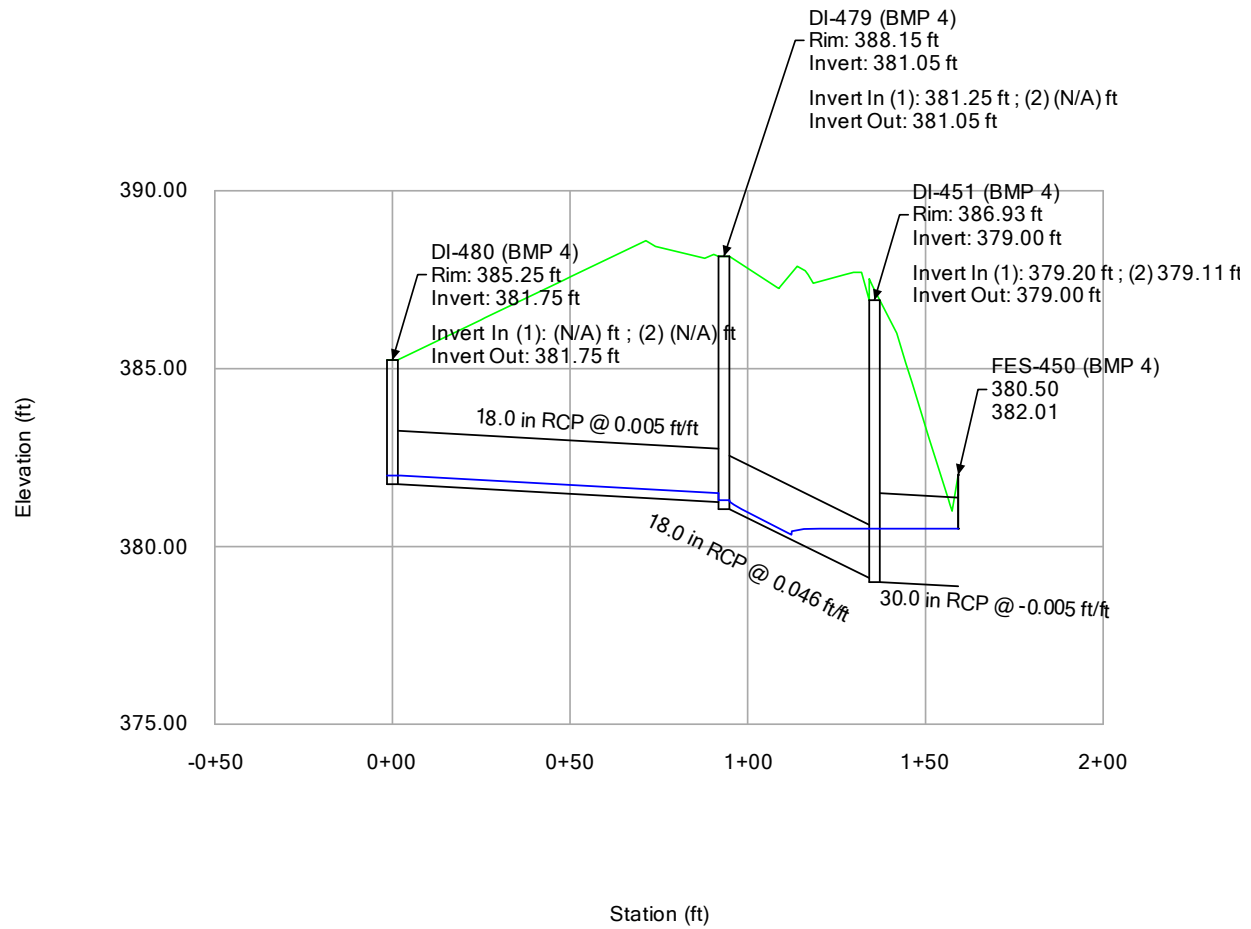
25-YR ANALYSIS
Conduit Results - Time: 0.00 hours

Label	Diameter (in)	Slope (Calculated) (ft/ft)	Velocity (In) (ft/s)	Velocity (Out) (ft/s)	Flow (cfs)	Capacity (Full Flow) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CB-454 TO DI-470 (BMP 4)	18.0	0.005	4.15	3.55	3.37	7.56	384.22	383.66
CB-453 TO CB-454 (BMP 4)	18.0	0.005	4.31	4.44	4.08	7.44	383.66	383.59
CB-452 TO CB-455 (BMP 4)	18.0	0.006	3.58	1.37	2.05	8.03	381.42	381.29
CB-452 TO CB-453 (BMP 4)	18.0	0.008	4.51	5.19	4.28	9.48	383.51	383.21
DI-451 TO CB-452 (BMP 4)	30.0	0.005	5.73	5.63	14.58	29.10	381.29	380.50
DI-470 TO DI-471 (BMP 4)	15.0	0.018	3.56	5.47	1.73	8.57	386.32	384.64
CB-467 TO CB-468 (BMP 4)	15.0	0.005	3.38	3.08	1.58	4.57	387.03	386.89
DI-470 TO DI-472 (BMP 4)	15.0	0.005	2.80	1.19	0.77	4.64	384.47	384.22
DI-451 TO DI-479 (BMP 4)	18.0	0.046	2.34	0.26	0.44	22.47	381.30	380.50
DI-479 TO DI-480 (BMP 4)	18.0	0.005	2.36	2.38	0.45	7.69	382.00	381.50
FES-450 TO DI-451 (BMP 4)	30.0	-0.005	4.84	4.43	14.93	29.27	380.50	380.50
CB-455 TO CB-456 (BMP 4)	15.0	0.005	2.81	2.85	0.81	4.57	381.66	381.48

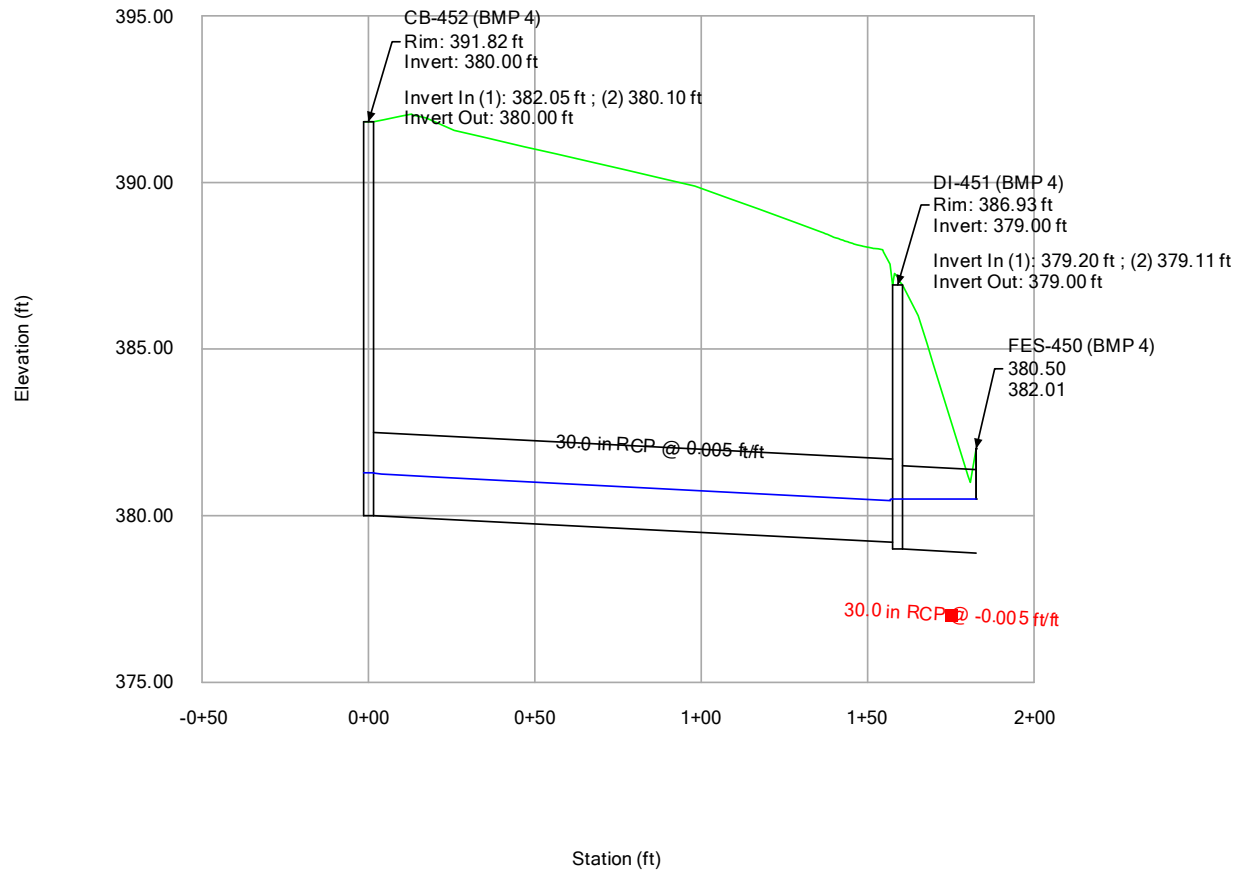
25-YR ANALYSIS



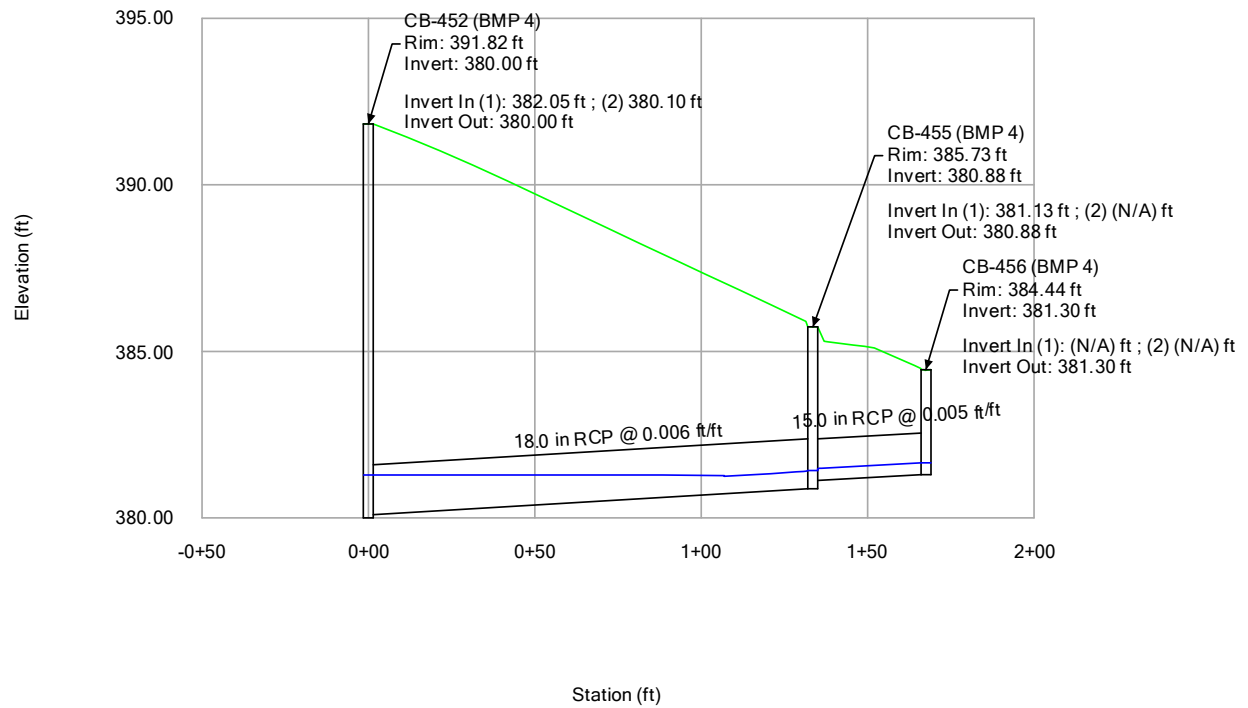
25-YR ANALYSIS



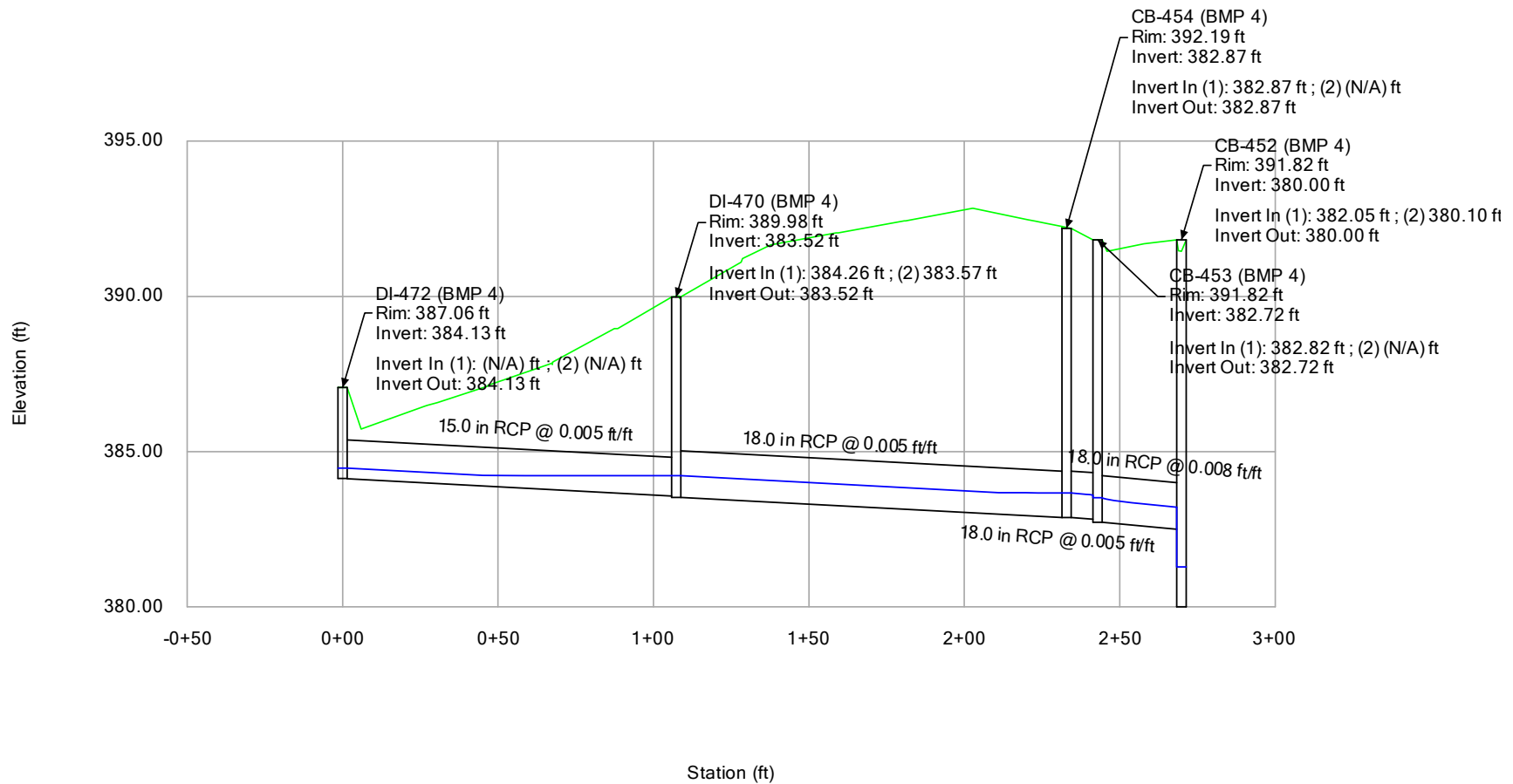
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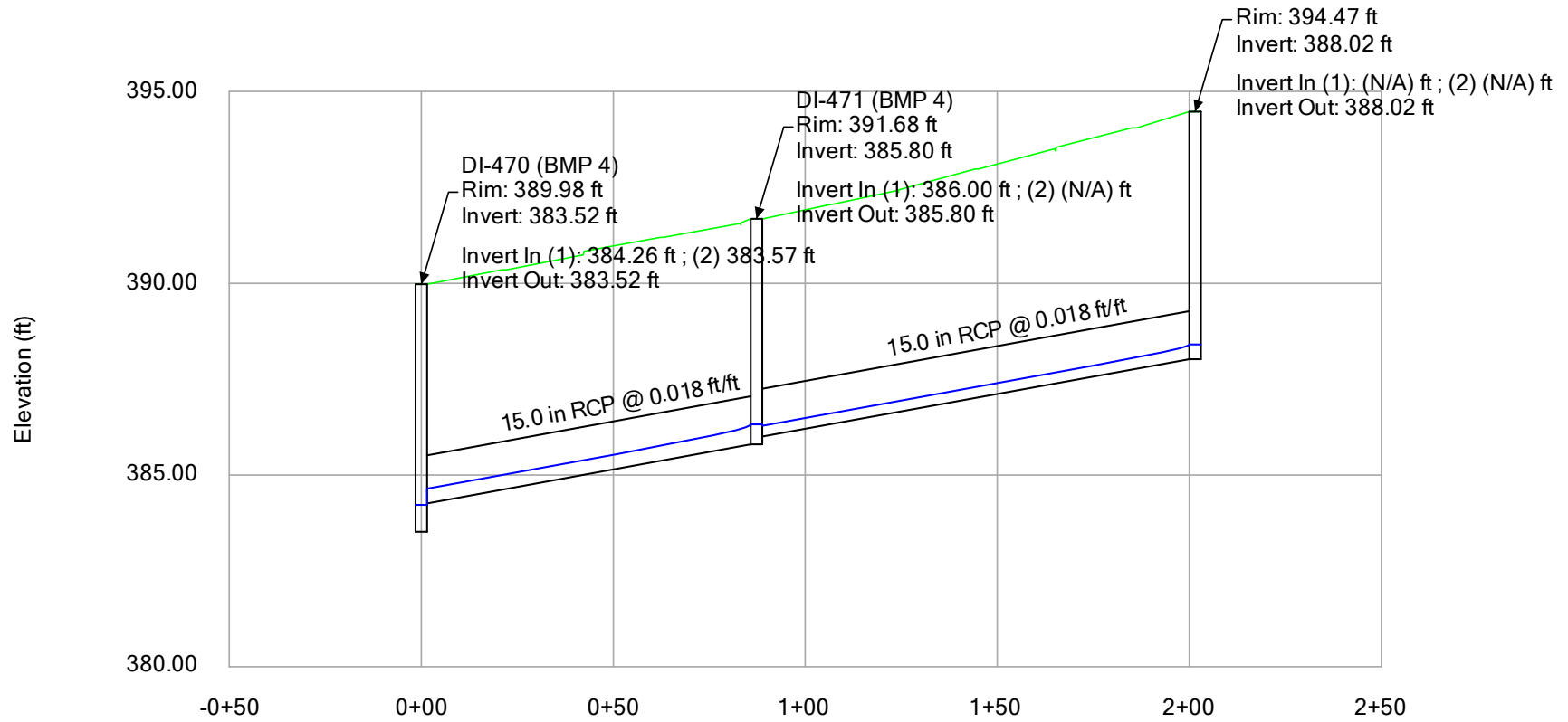
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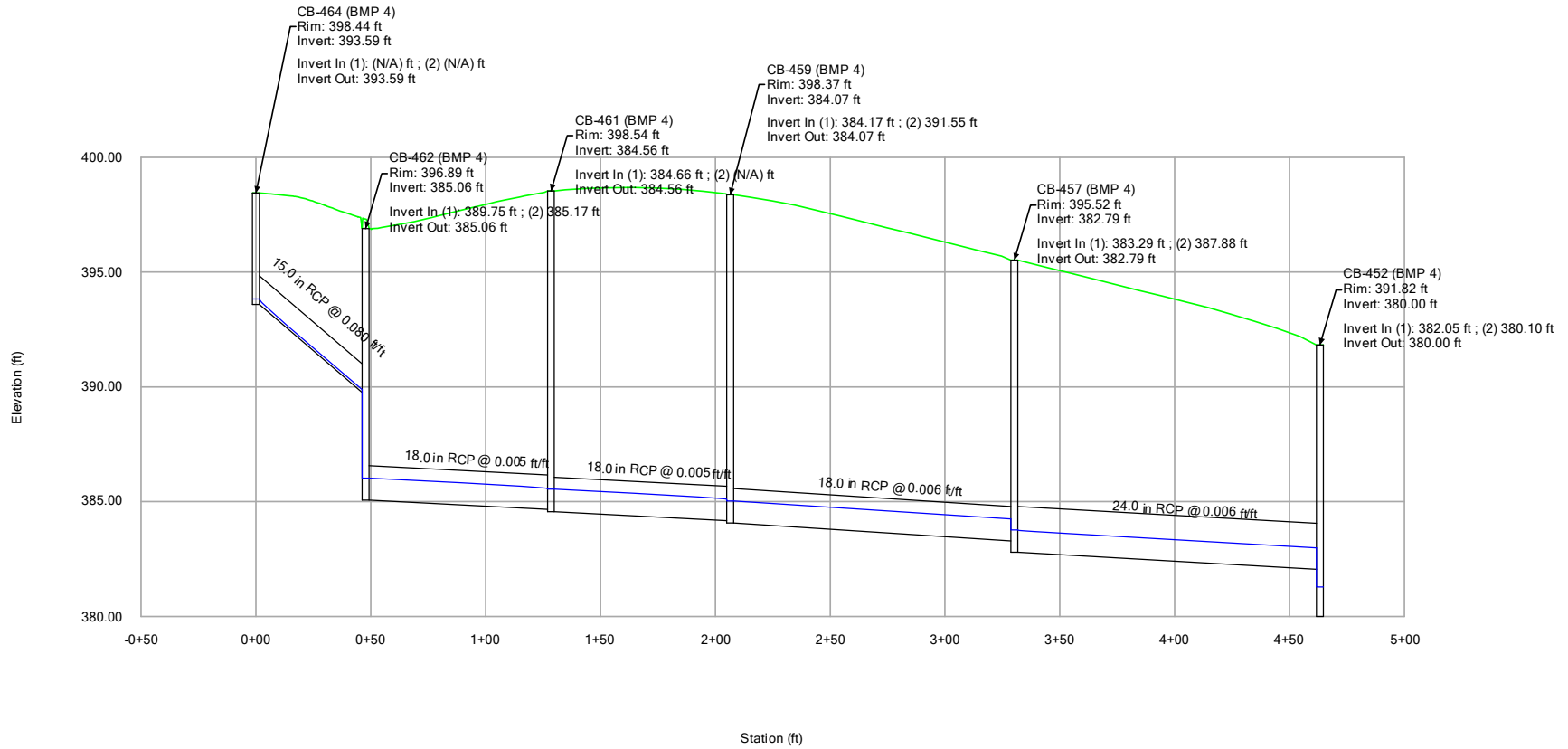
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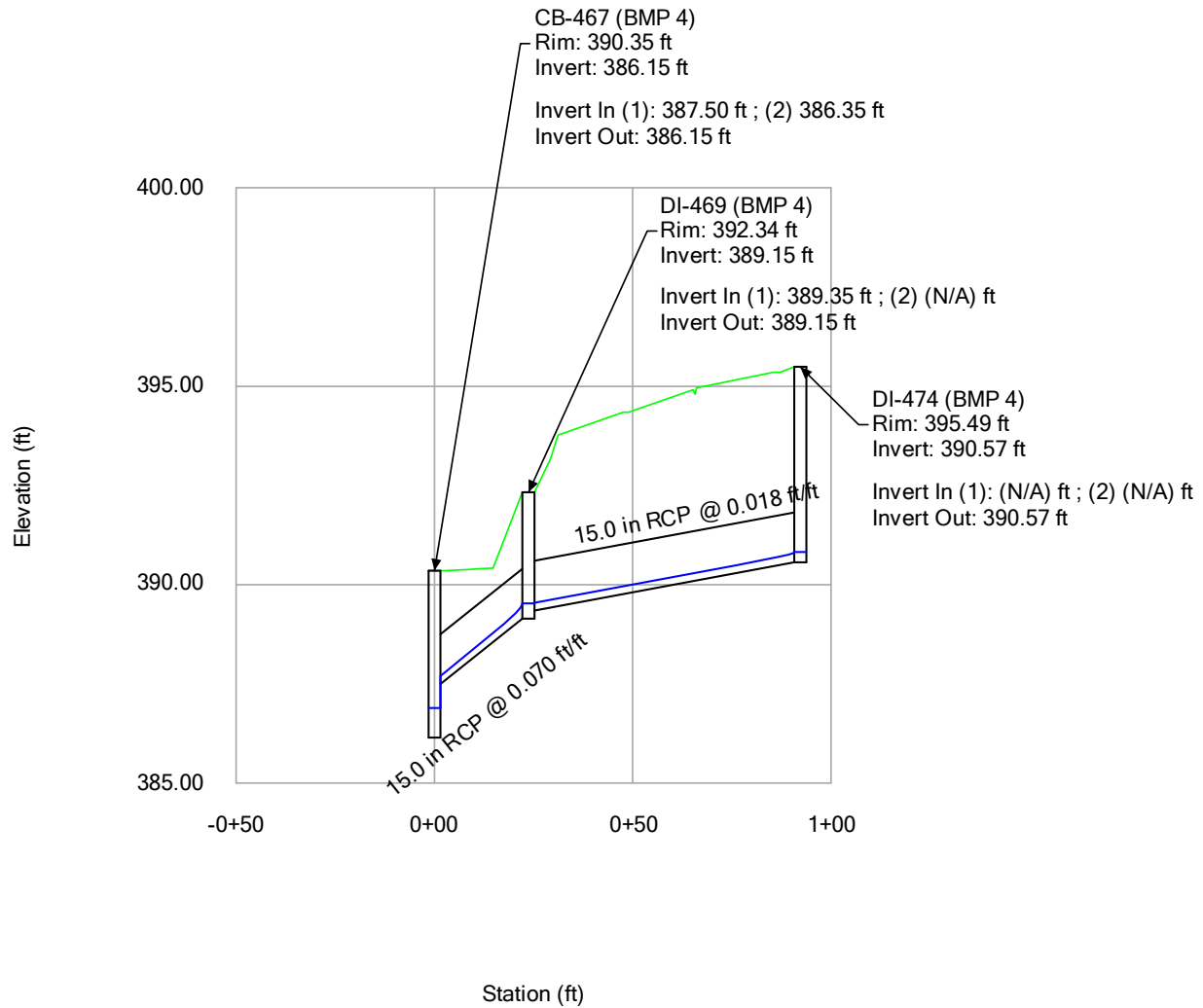
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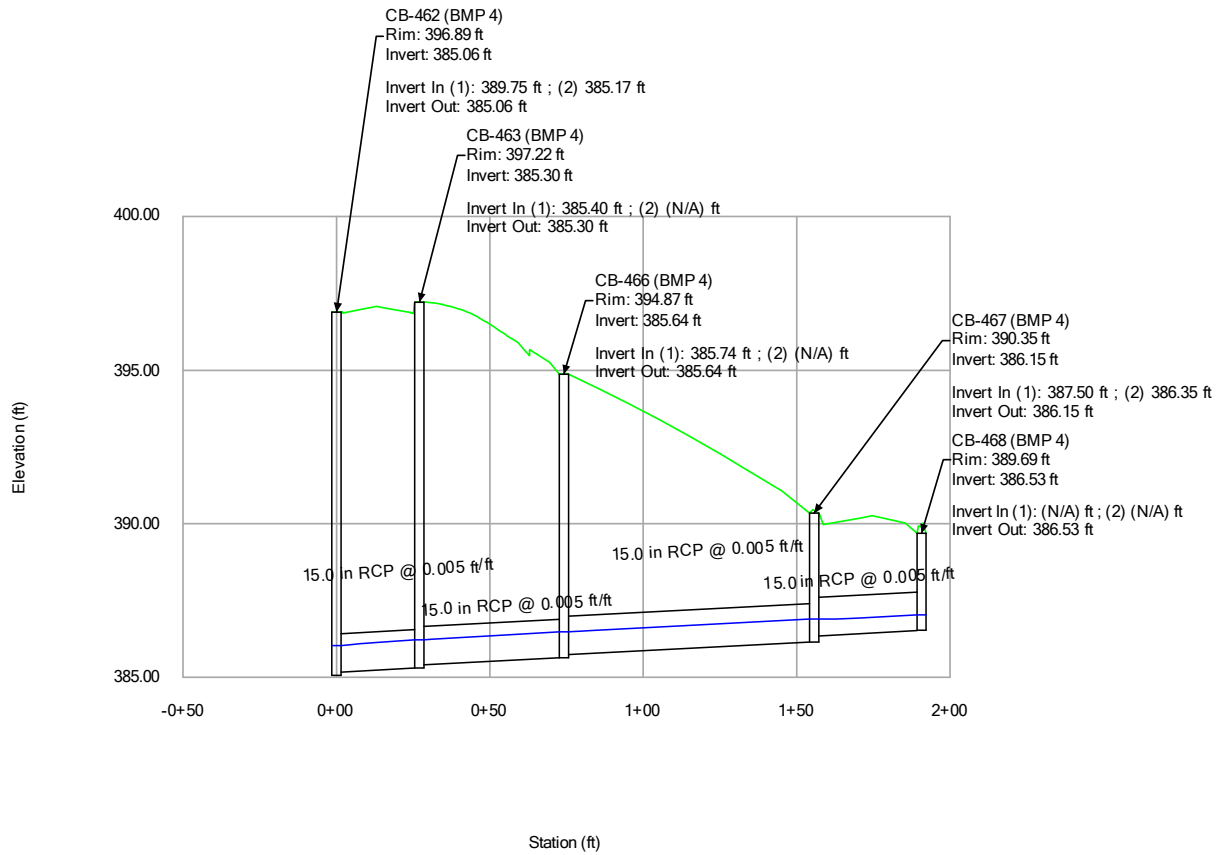
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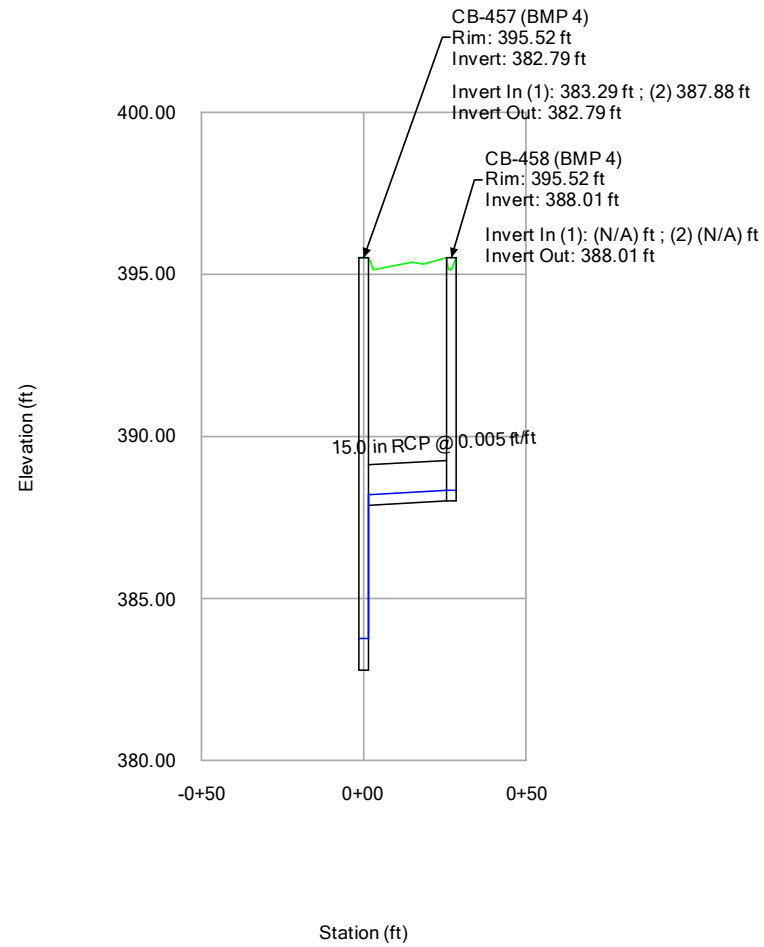
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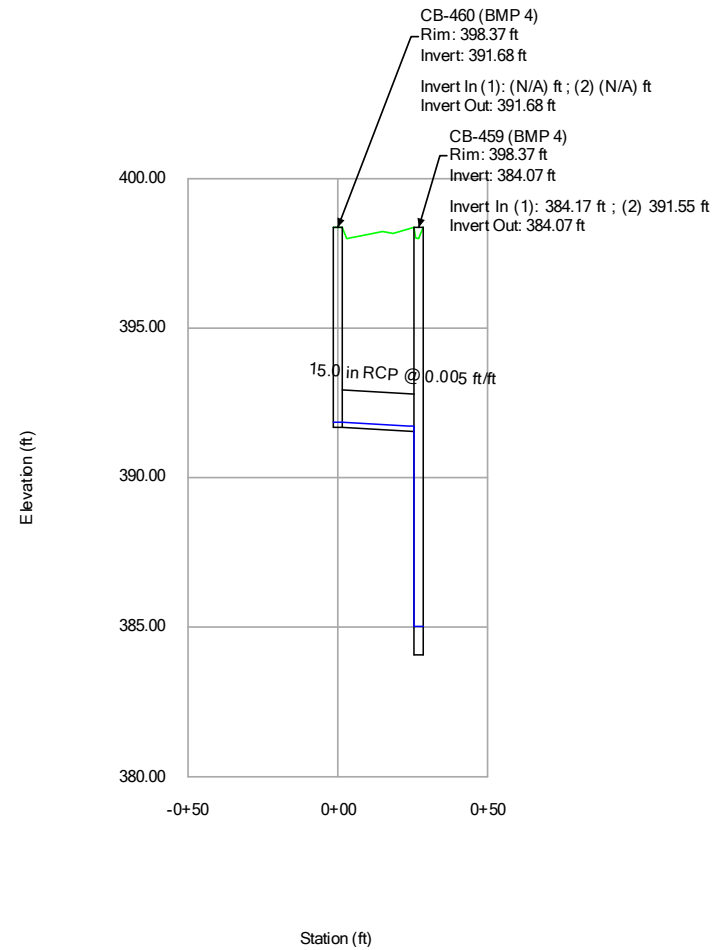
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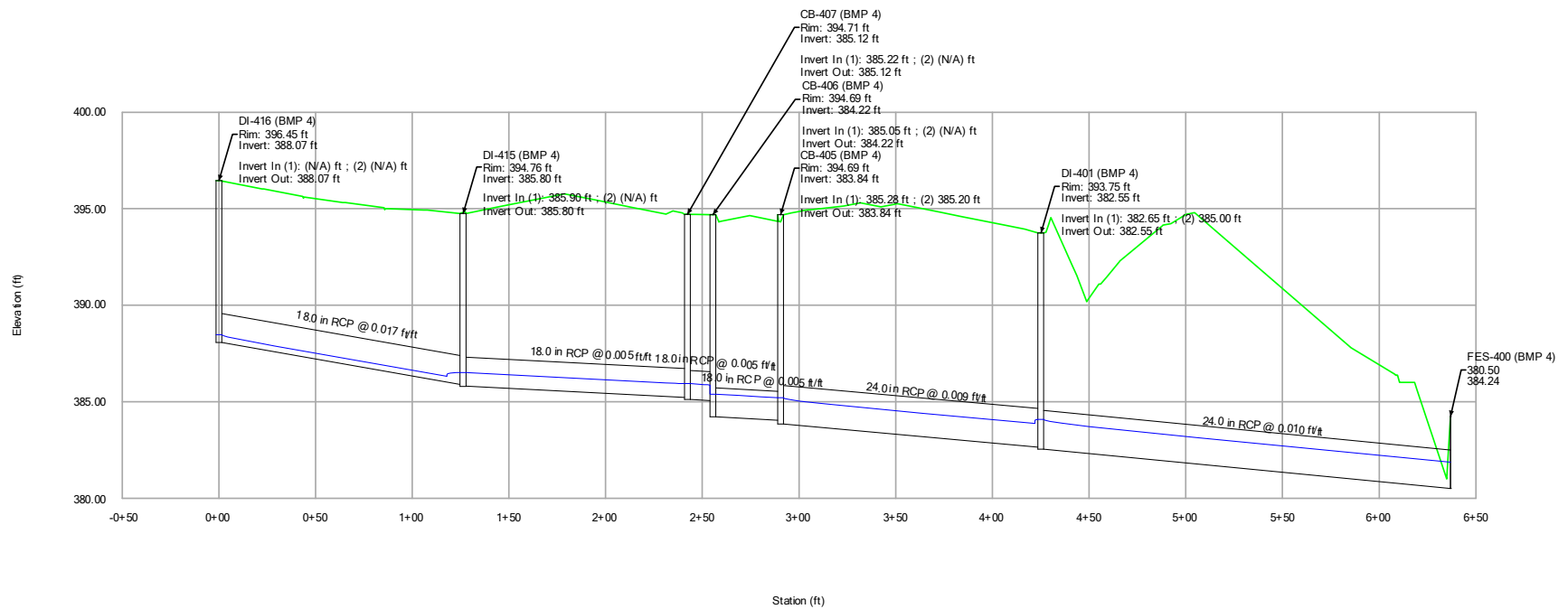
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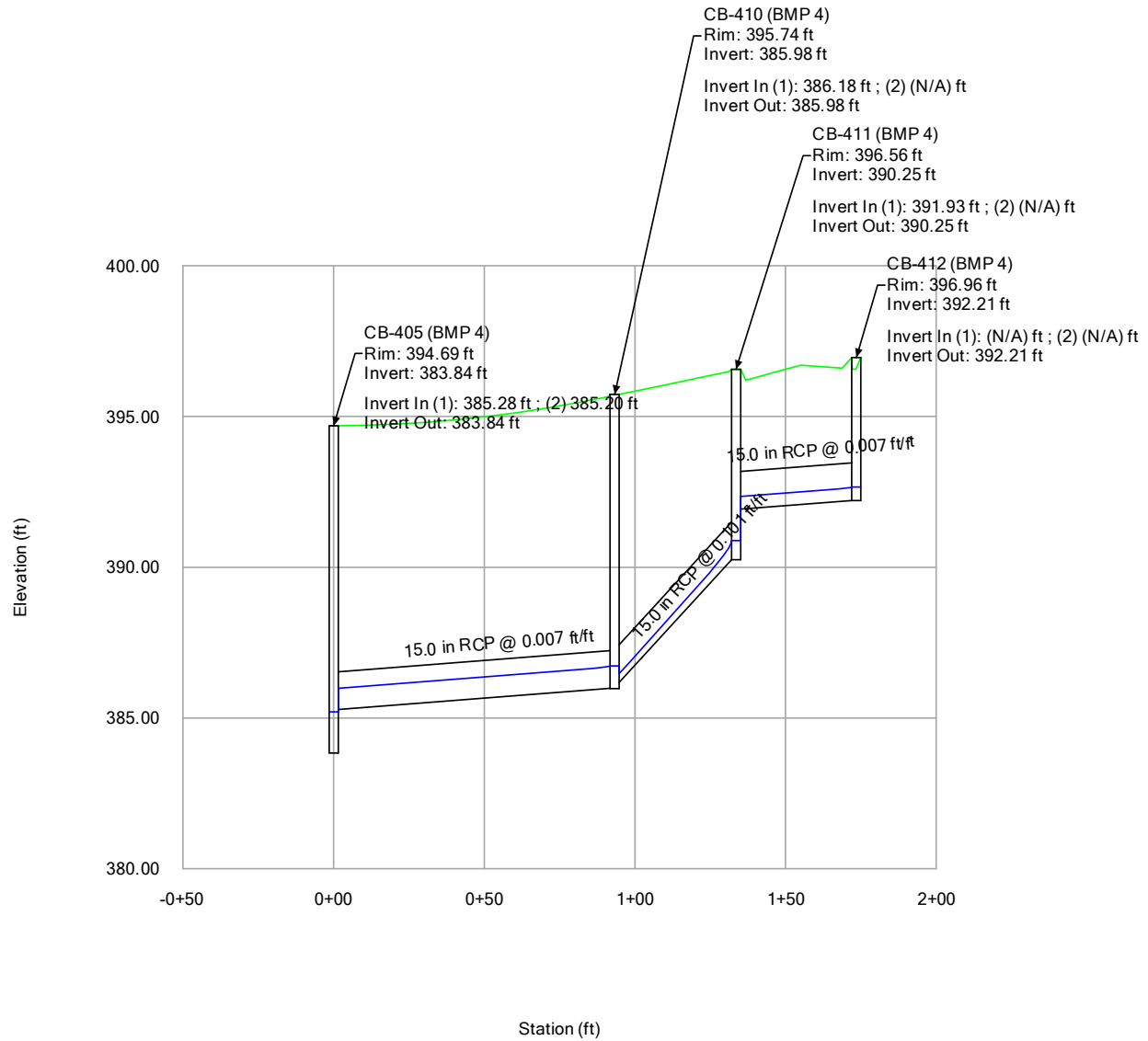
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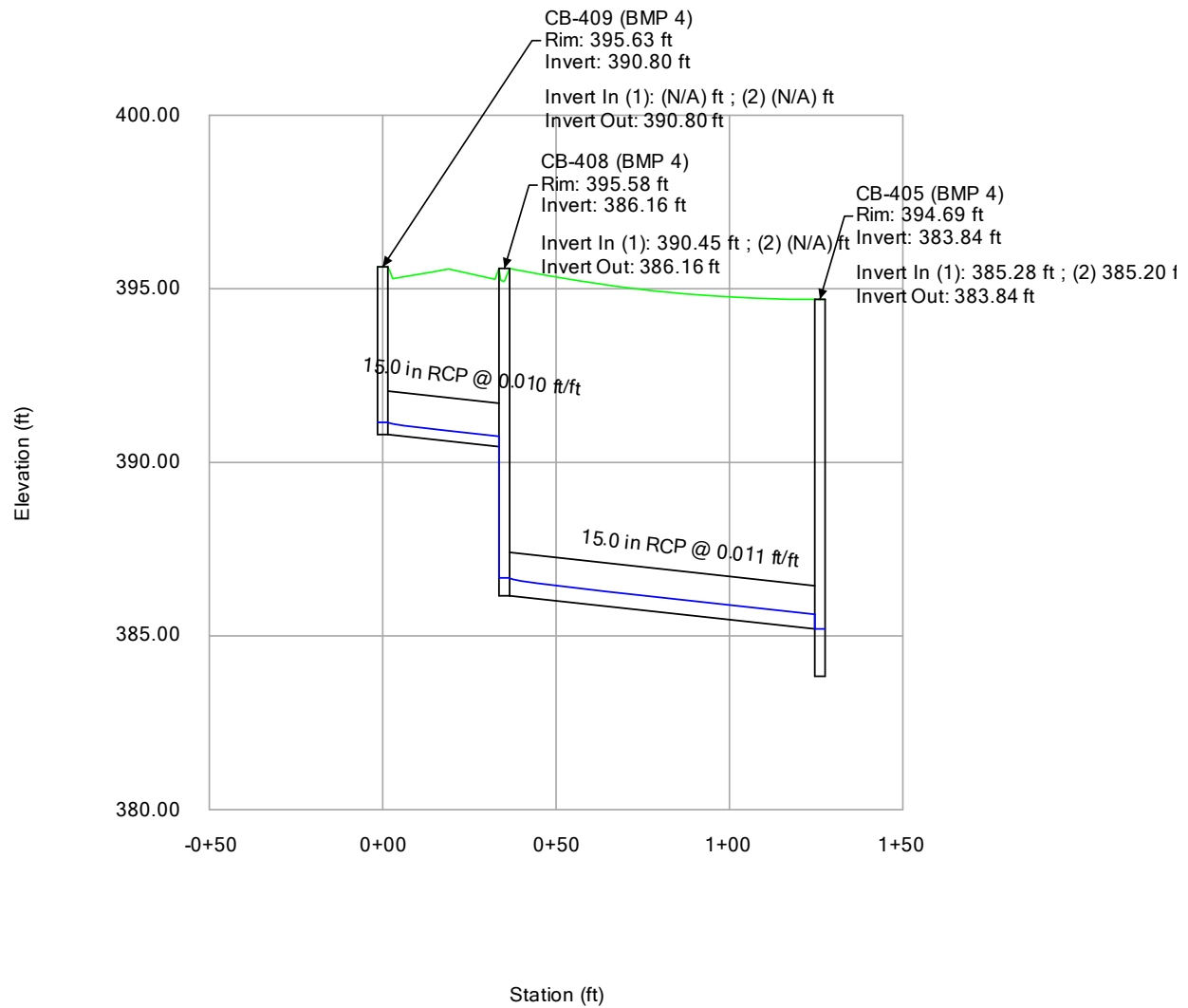
25-YR ANALYSIS



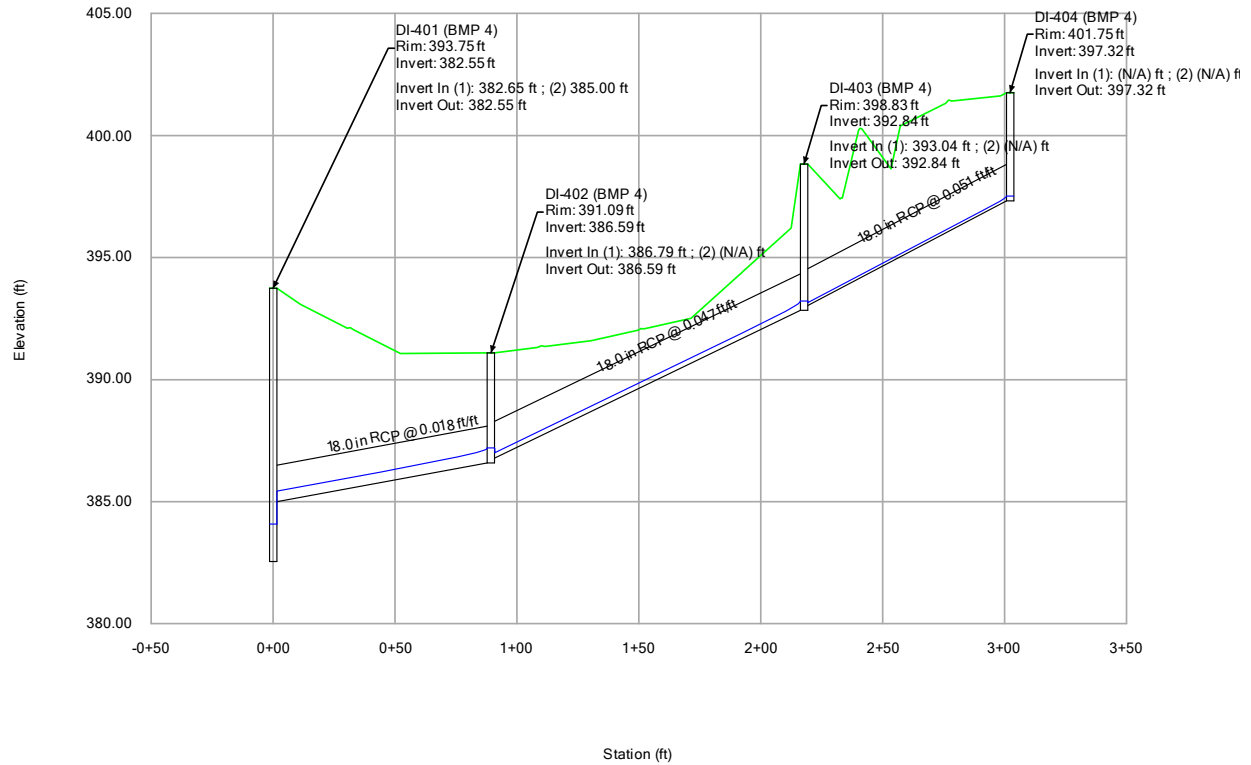
25-YR ANALYSIS



25-YR ANALYSIS



25-YR ANALYSIS



SCM 4 – INLET SPREAD

2-YR ANALYSIS

Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-406 (BMP 4)	0.333	0.339	1.92	0.00	5.14	10.3	2.9
CB-405 (BMP 4)	0.311	0.300	1.70	0.00	10.35	9.5	2.8
CB-468 (BMP 4)	0.357	0.213	1.21	0.35	1.21	6.4	2.0
CB-452 (BMP 4)	0.264	0.179	1.01	0.23	10.71	5.8	1.9
CB-412 (BMP 4)	0.279	0.175	0.99	0.22	0.99	5.8	1.9
CB-411 (BMP 4)	0.248	0.160	0.91	0.18	1.88	5.5	1.8
CB-455 (BMP 4)	0.190	0.158	0.89	0.17	1.48	5.5	1.8
CB-407 (BMP 4)	0.170	0.134	0.76	0.11	3.31	5.0	1.7
CB-462 (BMP 4)	0.198	0.133	0.75	0.11	4.07	5.0	1.7
CB-457 (BMP 4)	0.184	0.125	0.71	0.09	5.56	4.8	1.6
CB-408 (BMP 4)	0.168	0.116	0.66	0.08	1.25	4.6	1.6
CB-410 (BMP 4)	0.122	0.113	0.64	0.07	2.51	4.5	1.6
CB-409 (BMP 4)	0.152	0.106	0.60	0.06	0.60	4.4	1.5
CB-456 (BMP 4)	0.152	0.106	0.60	0.06	0.60	4.4	1.5
CB-454 (BMP 4)	0.136	0.105	0.60	0.06	3.09	4.3	1.5
CB-458 (BMP 4)	0.123	0.092	0.52	0.04	0.52	4.0	1.4

2-YR ANALYSIS

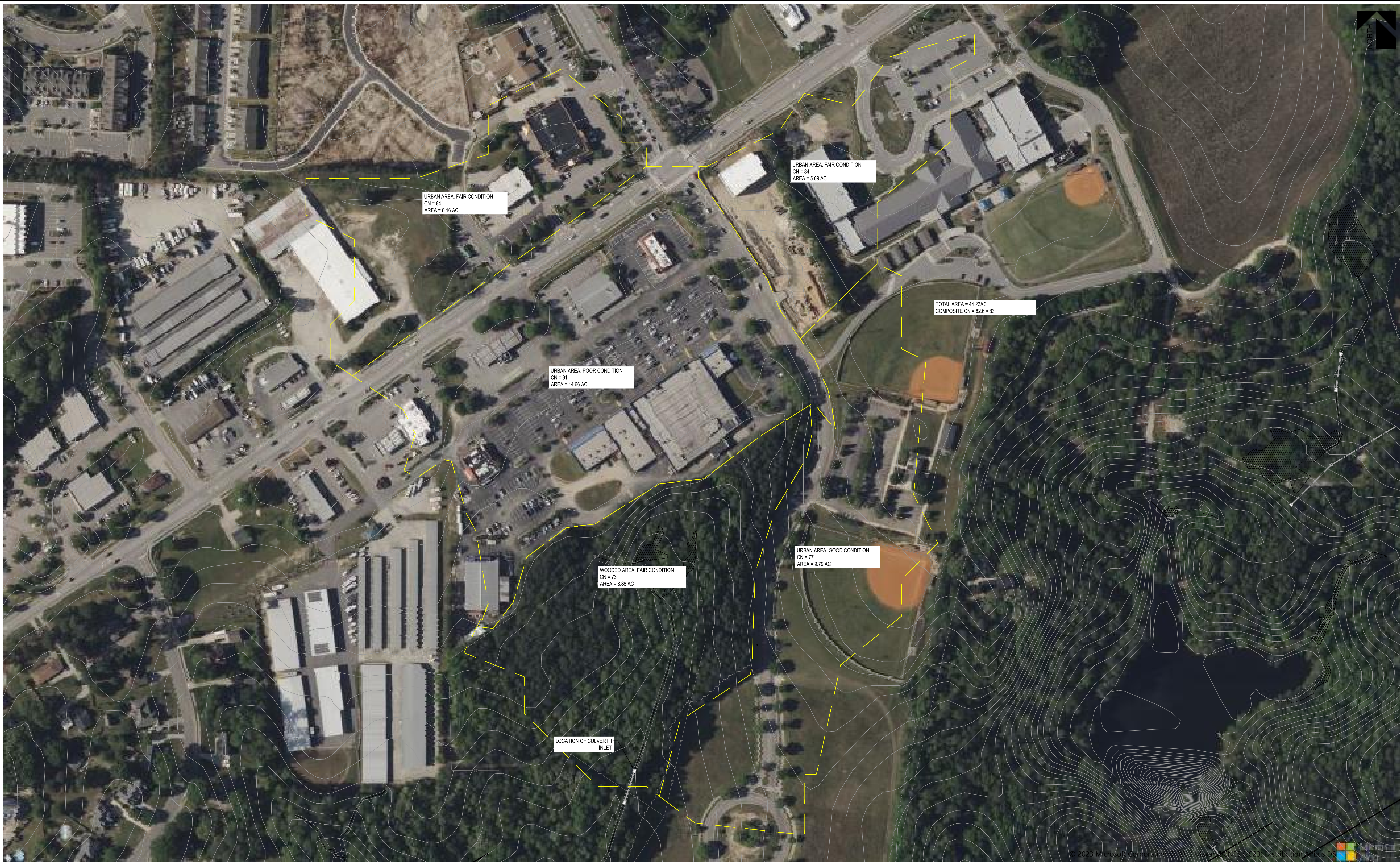
Inlet Spread - Time: 0.00 hours

Label	Inlet Drainage Area (acres)	Intercepted CA (acres)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Flow (Total Out) (cfs)	Spread / Top Width (ft)	Depth (Gutter) (in)
CB-463 (BMP 4)	0.112	0.082	0.46	0.03	3.09	3.7	1.4
CB-466 (BMP 4)	0.081	0.079	0.45	0.02	2.66	3.6	1.4
CB-467 (BMP 4)	0.075	0.065	0.37	0.01	2.27	3.3	1.3
CB-464 (BMP 4)	0.054	0.051	0.29	0.00	0.29	2.8	1.1
CB-461 (BMP 4)	0.053	0.041	0.23	0.00	4.23	2.4	1.1
CB-459 (BMP 4)	0.048	0.040	0.23	0.00	4.52	2.4	1.0
CB-460 (BMP 4)	0.025	0.024	0.14	0.00	0.14	1.8	0.9
CB-453 (BMP 4)	0.011	0.018	0.10	0.00	3.18	1.6	0.8

CULVERT CALCULATIONS

CULVERT 1

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CULVERT 1 DRAINAGE AREA

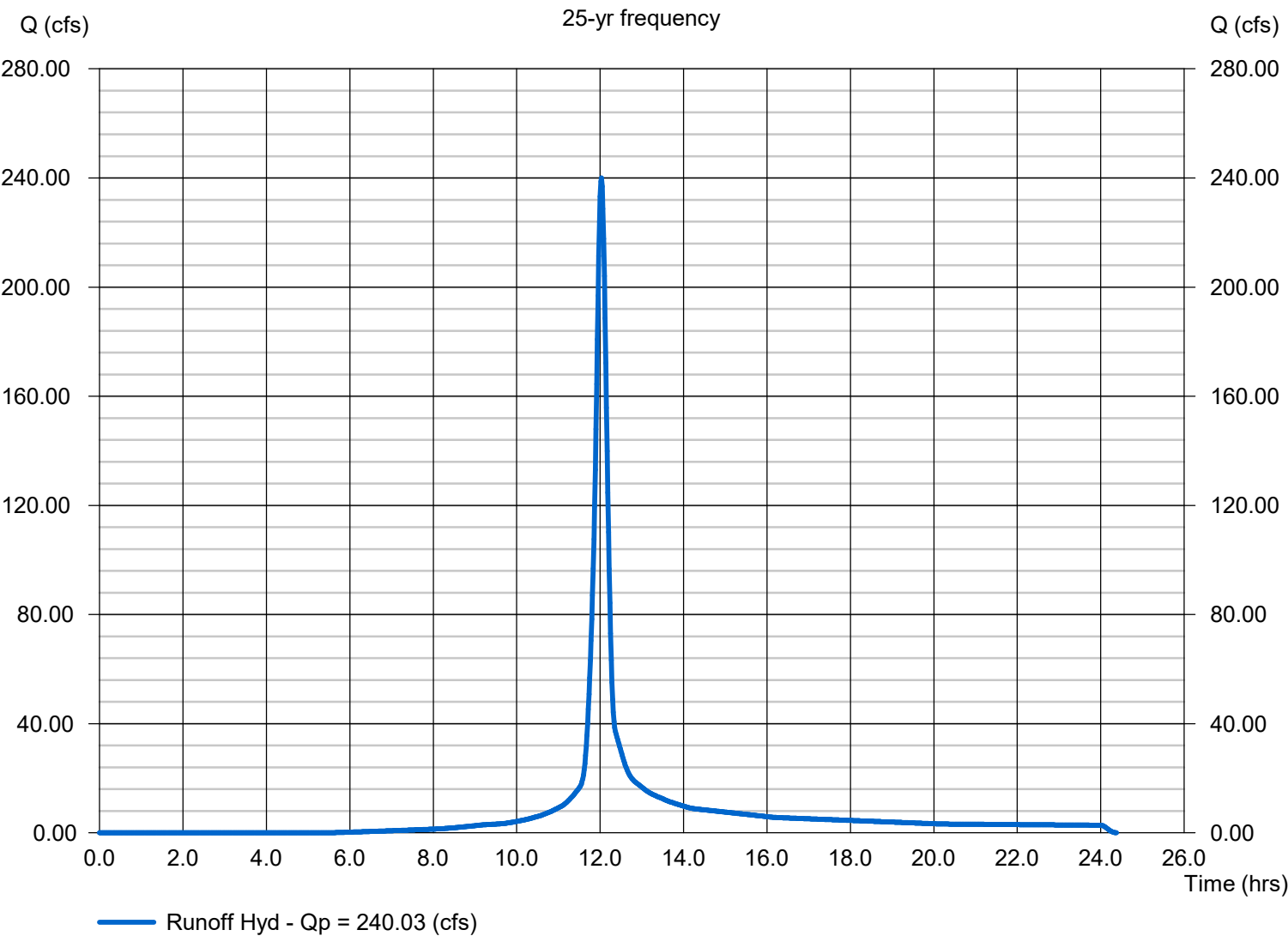
Hydrology Report

CULVERT 1 HYDROLOGY

Hydrograph type	=	SCS	Peak discharge (cfs)	=	240.03
Storm frequency (yrs)	=	25	Time interval (min)	=	1
Drainage area (ac)	=	44.230	Curve number (CN)	=	83
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	14
Total precip. (in)	=	6.00	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 656,889 (cuft); 15.080 (acft)

Runoff Hydrograph



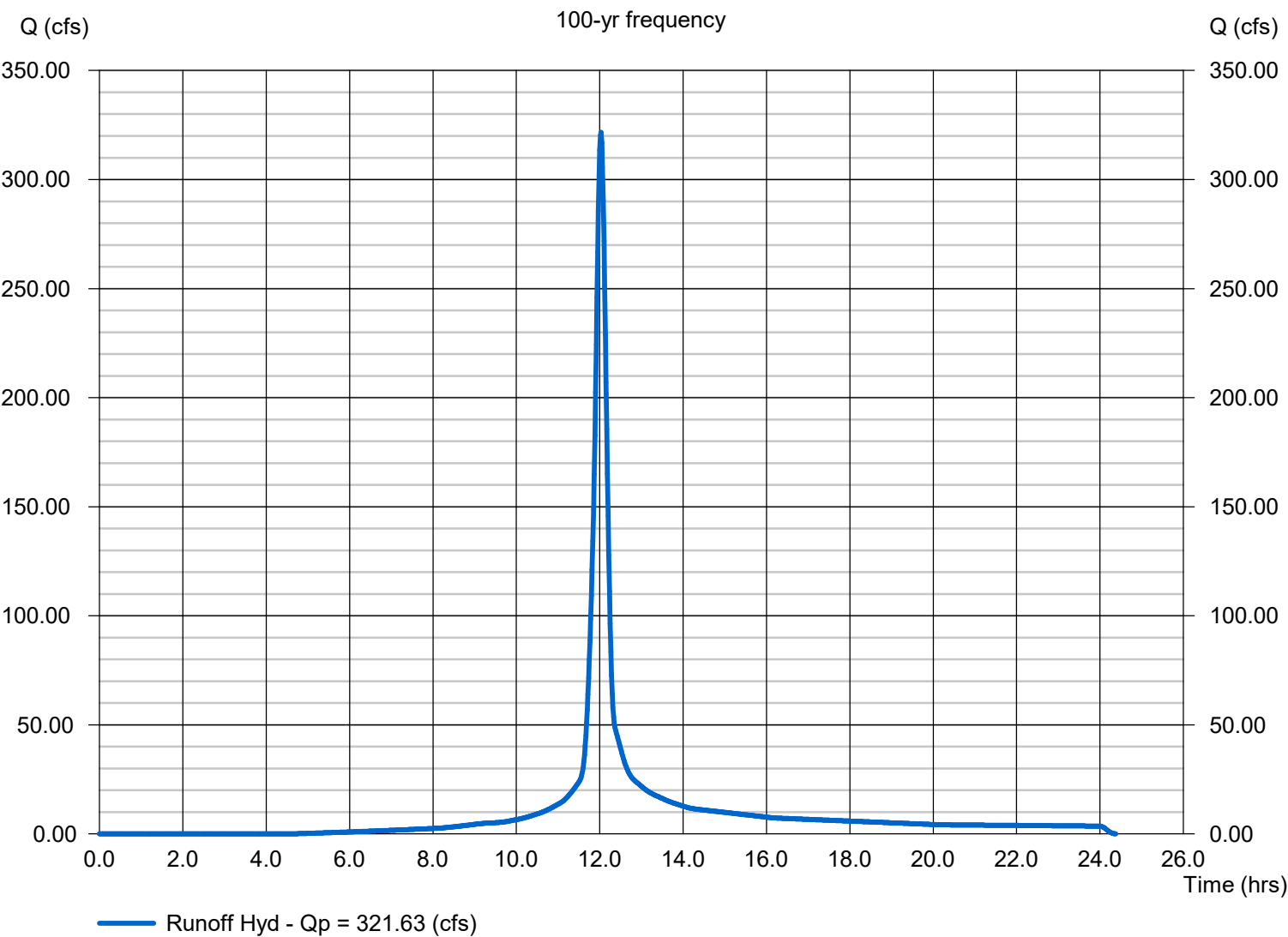
Hydrology Report

CULVERT 1 HYDROLOGY

Hydrograph type	=	SCS	Peak discharge (cfs)	=	321.63
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	44.230	Curve number (CN)	=	83
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	14
Total precip. (in)	=	7.56	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 892,400 (cuft); 20.487 (acft)

Runoff Hydrograph



TR55 Tc Worksheet

Hydraflow Express by Intelisolve

SCS

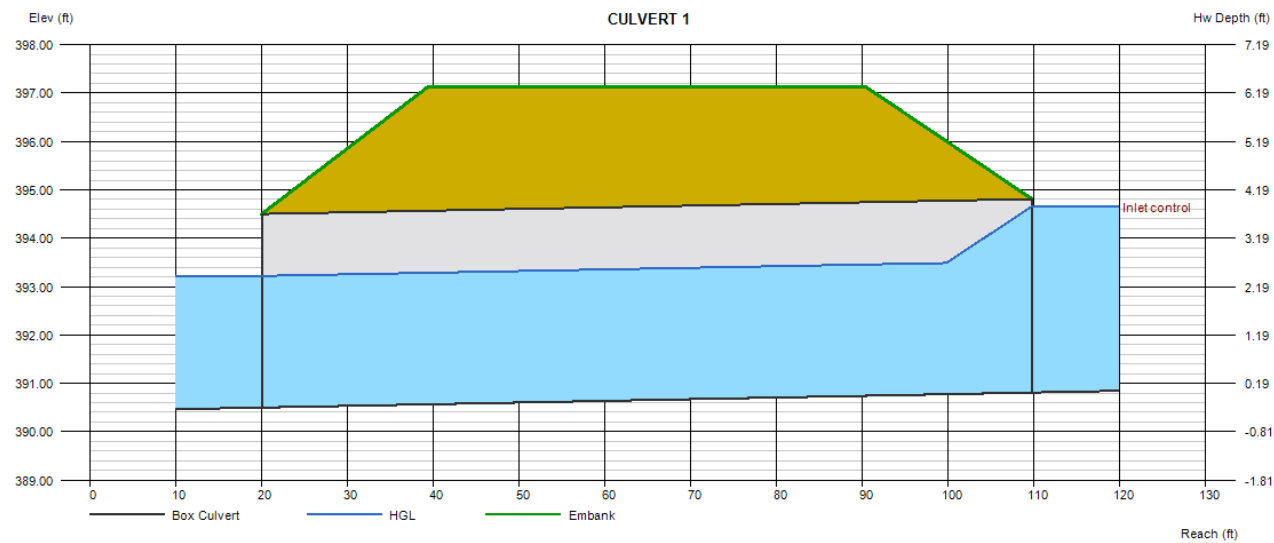
CULVERT 1 HYDROLOGY

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.011	0.400	0.011				
Flow length (ft)	= 300.0	0.0	0.0				
Two-year 24-hr precip. ((in))	= 3.46	0.00	0.00				
Land slope (%)	= 1.10	0.00	0.00				
Travel Time (min)	= 3.56	+	0.00	+	0.00	=	3.56
Shallow Concentrated Flow							
Flow length (ft)	= 791.00	0.00	0.00				
Watercourse slope (%)	= 1.50	0.00	0.00				
Surface description	= Paved	Paved	Paved				
Average velocity (ft/s)	= 2.49	0.00	0.00				
Travel Time (min)	= 5.30	+	0.00	+	0.00	=	5.30
Channel Flow							
X sectional flow area ((sqft))	= 8.70	0.00	0.00				
Wetted perimeter ((ft))	= 8.76	0.00	0.00				
Channel slope (%)	= 0.35	0.00	0.00				
Manning's n-value	= 0.045	0.015	0.015				
Velocity (ft/s)	= 1.95	0.00	0.00				
Flow length (ft)	= 573.0	0.0	0.0				
Travel Time (min)	= 4.8977380	0.00	0	+	0	=	4.90
Total Travel Time, Tc				14.00 min			

Culvert Report

CULVERT 1 (25-YR)

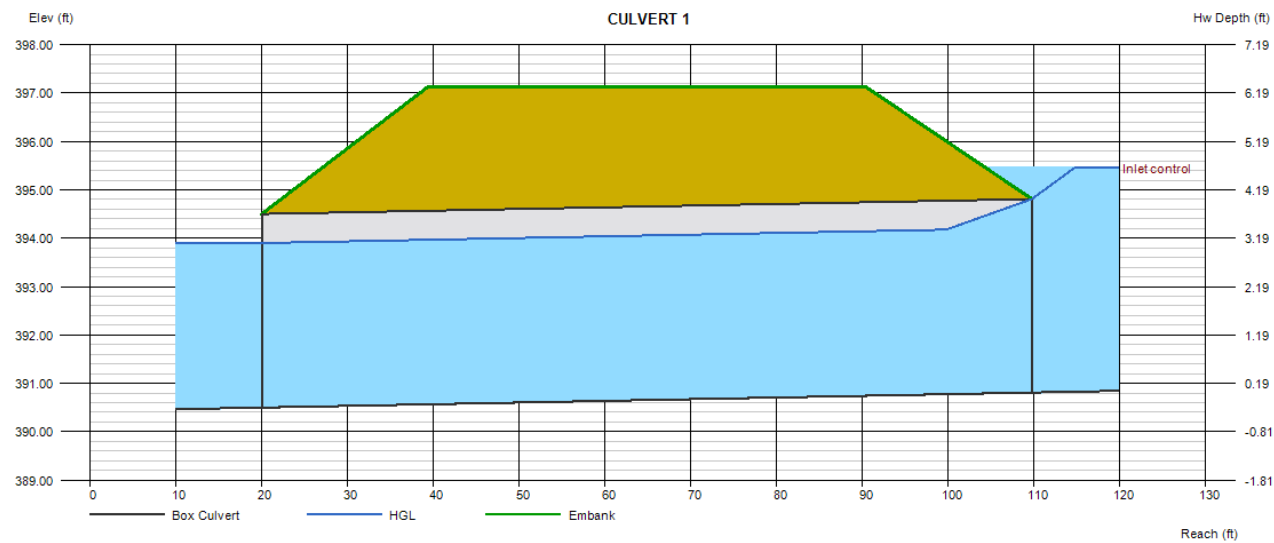
Invert Elev Dn (ft)	= 390.50	Calculations	
Pipe Length (ft)	= 89.75	Qmin (cfs)	= 0.00
Slope (%)	= 0.35	Qmax (cfs)	= 240.03
Invert Elev Up (ft)	= 390.81	Tailwater Elev (ft)	= Normal
Rise (in)	= 48.0		
Shape	= Box	Highlighted	
Span (in)	= 48.0	Qtotal (cfs)	= 240.00
No. Barrels	= 3	Qpipe (cfs)	= 240.00
n-Value	= 0.013	Qovertop (cfs)	= 0.00
Culvert Type	= Skewed Headwall, Chamfered or Beveled Inlet Edges	Veloc Dn (ft/s)	= 7.35
Culvert Entrance	= 3/4-in chamfers, 15D skewed headwall	Veloc Up (ft/s)	= 7.38
Coeff. K,M,c,Y,k	= 0.522, 0.667, 0.0402, 0.68, 0.2	HGL Dn (ft)	= 393.22
		HGL Up (ft)	= 393.52
		Hw Elev (ft)	= 394.66
		Hw/D (ft)	= 0.96
		Flow Regime	= Inlet Control
Embankment			
Top Elevation (ft)	= 397.13		
Top Width (ft)	= 51.00		
Crest Width (ft)	= 120.00		

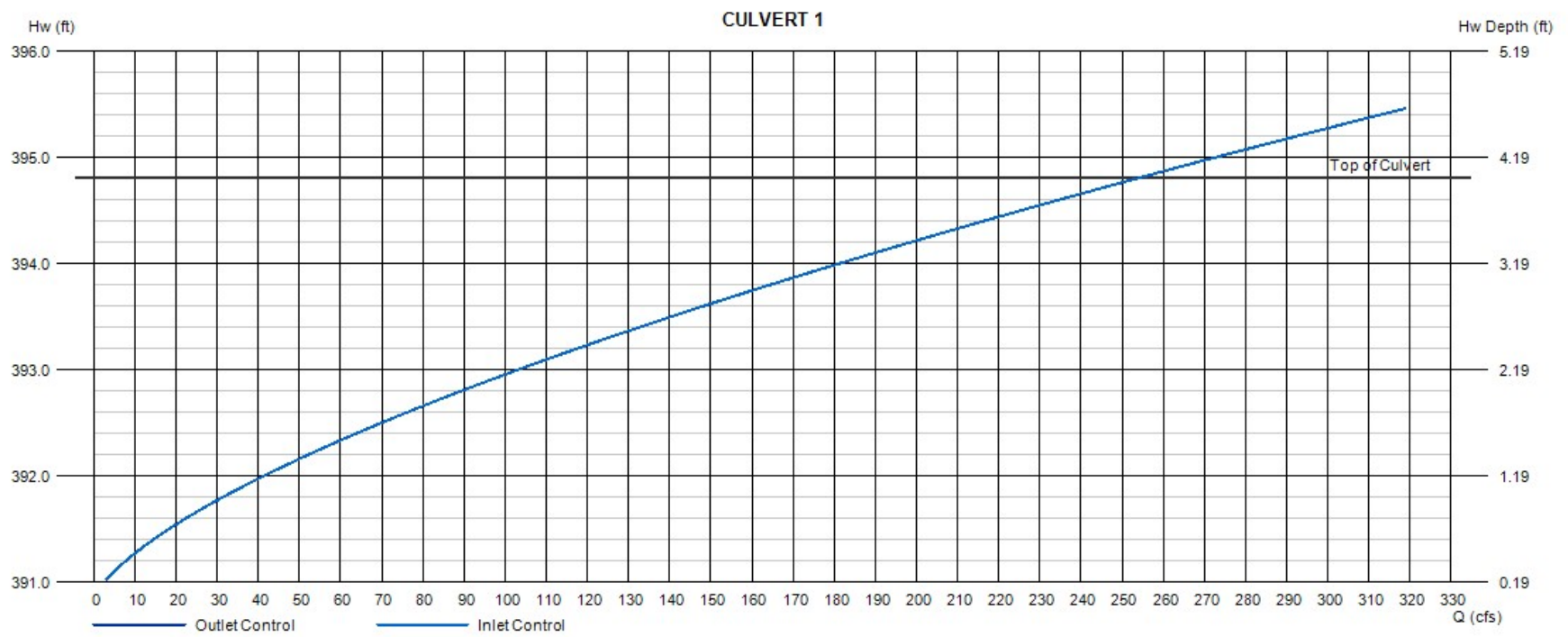


Culvert Report

CULVERT 1 (100-YR)

Invert Elev Dn (ft)	= 390.50	Calculations	
Pipe Length (ft)	= 89.75	Qmin (cfs)	= 0.00
Slope (%)	= 0.35	Qmax (cfs)	= 321.63
Invert Elev Up (ft)	= 390.81	Tailwater Elev (ft)	= Normal
Rise (in)	= 48.0		
Shape	= Box	Highlighted	
Span (in)	= 48.0	Qtotal (cfs)	= 318.78
No. Barrels	= 3	Qpipe (cfs)	= 318.78
n-Value	= 0.013	Qovertop (cfs)	= 0.00
Culvert Type	= Skewed Headwall, Chamfered or Beveled Inlet Edges	Veloc Dn (ft/s)	= 7.81
Culvert Entrance	= 3/4-in chamfers, 15D skewed headwall	Veloc Up (ft/s)	= 7.81
Coeff. K,M,c,Y,k	= 0.522, 0.667, 0.0402, 0.68, 0.2	HGL Dn (ft)	= 393.90
		HGL Up (ft)	= 394.21
		Hw Elev (ft)	= 395.46
		Hw/D (ft)	= 1.16
		Flow Regime	= Inlet Control
Embankment			
Top Elevation (ft)	= 397.13		
Top Width (ft)	= 51.00		
Crest Width (ft)	= 120.00		





CULVERT 2



BGE 5440 WADE PARK BLVD, SUITE 102
RALEIGH NC 27607
www.bgeinc.com
NC LICENSE #C-4397

CULVERT 2 DRAINAGE AREA

DATE: 7/10/2023
0 100' 200' 300'
SCALE: 1" = 100'

G:\NCA\Projects\Lennar\8430-03 - Lennar - School Street - Rolesville\04 - Calculations\Storm\Culverts\CULVERT DRAINAGE.dwg

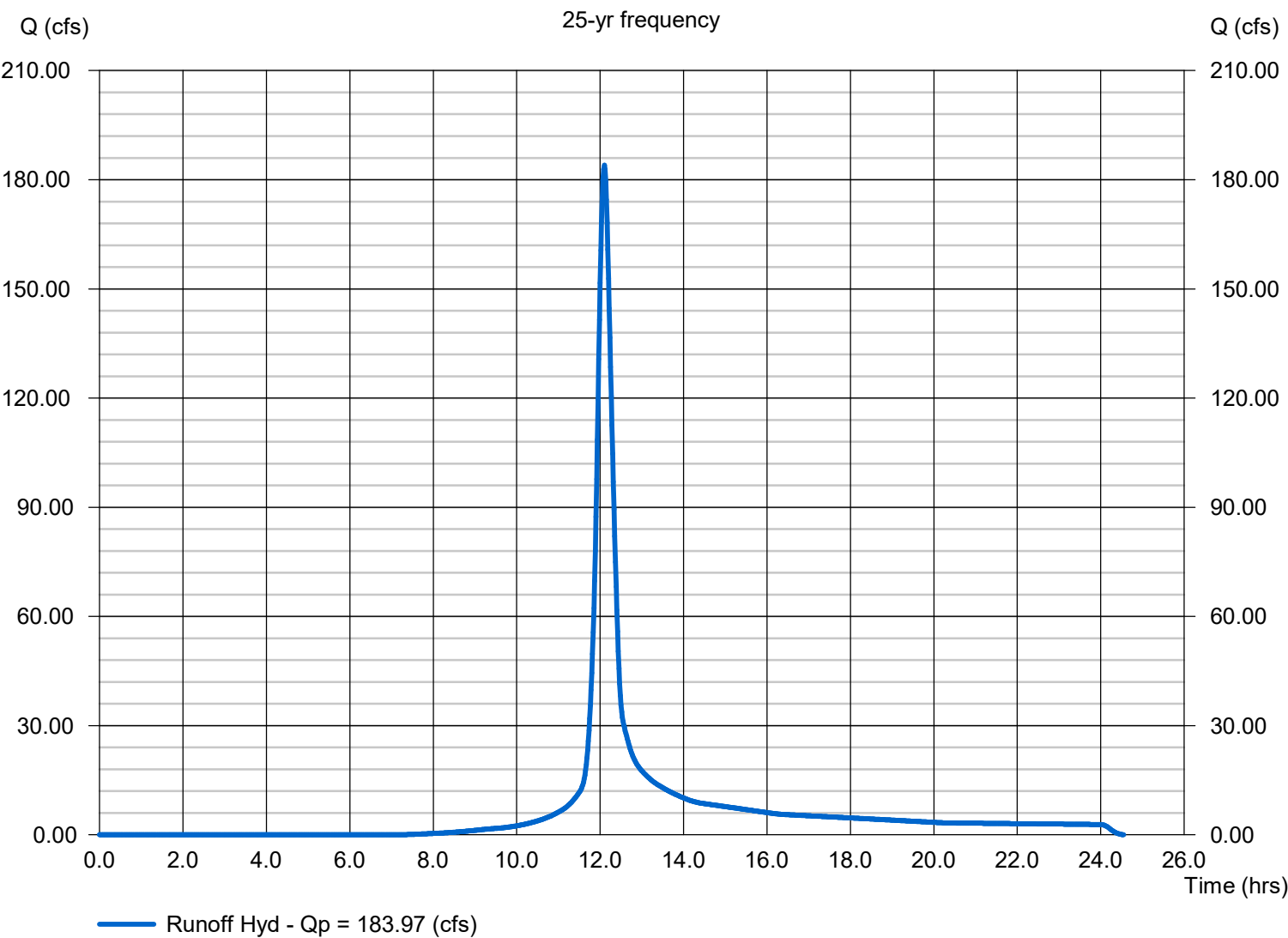
Hydrology Report

CULVERT 2 HYDROLOGY

Hydrograph type	=	SCS	Peak discharge (cfs)	=	183.97
Storm frequency (yrs)	=	25	Time interval (min)	=	1
Drainage area (ac)	=	47.400	Curve number (CN)	=	77
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	21
Total precip. (in)	=	6.00	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 604,372 (cuft); 13.874 (acft)

Runoff Hydrograph



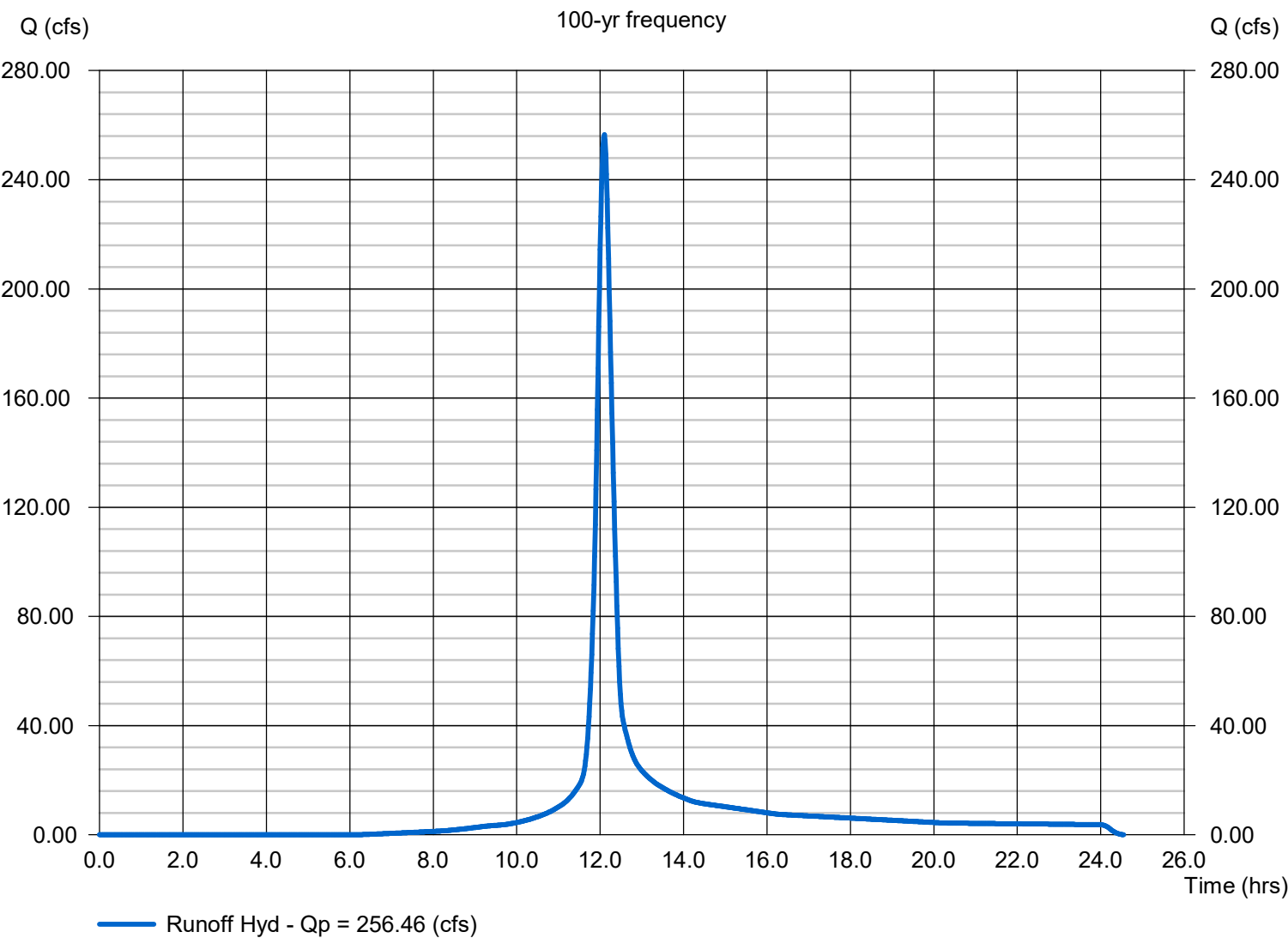
Hydrology Report

CULVERT 2 HYDROLOGY

Hydrograph type	=	SCS	Peak discharge (cfs)	=	256.46
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	47.400	Curve number (CN)	=	77
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	21
Total precip. (in)	=	7.56	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 846,403 (cuft); 19.431 (acft)

Runoff Hydrograph



TR55 Tc Worksheet

Hydraflow Express by Intelisolve

SCS

CULVERT 2 HYDROLOGY

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.050	0.011	0.011				
Flow length (ft)	= 300.0	0.0	0.0				
Two-year 24-hr precip. ((in))	= 3.46	0.00	0.00				
Land slope (%)	= 1.67	0.00	0.00				
Travel Time (min)	= 10.13	+	0.00	+	0.00	=	10.13
Shallow Concentrated Flow							
Flow length (ft)	= 1035.00	0.00	0.00				
Watercourse slope (%)	= 1.74	0.00	0.00				
Surface description	= Unpaved	Paved	Paved				
Average velocity (ft/s)	= 2.13	0.00	0.00				
Travel Time (min)	= 8.11	+	0.00	+	0.00	=	8.11
Channel Flow							
X sectional flow area ((sqft))	= 2.92	0.00	0.00				
Wetted perimeter ((ft))	= 6.67	0.00	0.00				
Channel slope (%)	= 1.30	0.00	0.00				
Manning's n-value	= 0.025	0.015	0.015				
Velocity (ft/s)	= 3.91	0.00	0.00				
Flow length (ft)	= 700.0	0.0	0.0				
Travel Time (min)	= 2.985979	0.00	0	+	0	=	2.99
Total Travel Time, Tc				21.00 min			

Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, Jul 11 2023

CULVERT 2 (25-YR)

Invert Elev Dn (ft) = 402.30
Pipe Length (ft) = 96.70
Slope (%) = 1.24
Invert Elev Up (ft) = 403.50
Rise (in) = 48.0
Shape = Box
Span (in) = 48.0
No. Barrels = 2
n-Value = 0.012
Culvert Type = Flared Wingwalls,
Top Edge Bevel
Culvert Entrance = 18D to 33.7D wingwall flare,
d=0.083D
Coeff. K,M,c,Y,k = 0.486, 0.667, 0.0249, 0.83, 0.2

Embankment

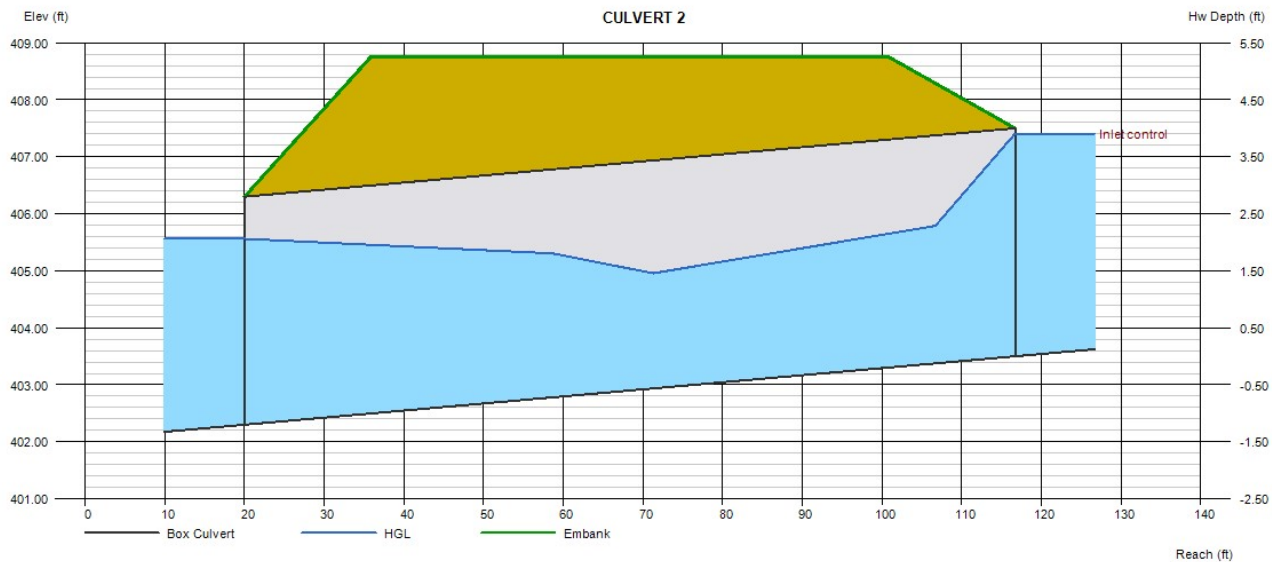
Top Elevation (ft) = 408.75
Top Width (ft) = 65.00
Crest Width (ft) = 110.00

Calculations

Qmin (cfs) = 0.00
Qmax (cfs) = 183.97
Tailwater Elev (ft) = (dc+D)/2

Highlighted

Qtotal (cfs) = 182.16
Qpipe (cfs) = 182.16
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 6.98
Veloc Up (ft/s) = 9.02
HGL Dn (ft) = 405.56
HGL Up (ft) = 406.02
Hw Elev (ft) = 407.41
Hw/D (ft) = 0.98
Flow Regime = Inlet Control



Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, Jul 11 2023

CULVERT 2 (100-YR)

Invert Elev Dn (ft) = 402.30
Pipe Length (ft) = 96.70
Slope (%) = 1.24
Invert Elev Up (ft) = 403.50
Rise (in) = 48.0
Shape = Box
Span (in) = 48.0
No. Barrels = 2
n-Value = 0.012
Culvert Type = Flared Wingwalls,
Top Edge Bevel
Culvert Entrance = 18D to 33.7D wingwall flare,
d=0.083D
Coeff. K,M,c,Y,k = 0.486, 0.667, 0.0249, 0.83, 0.2

Embankment

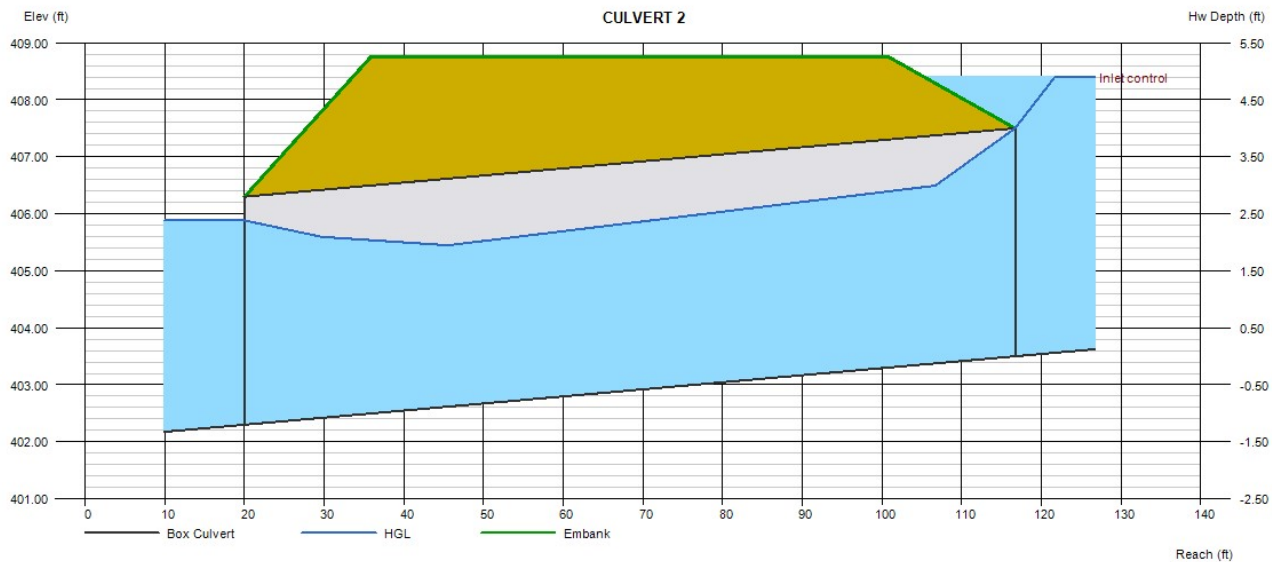
Top Elevation (ft) = 408.75
Top Width (ft) = 65.00
Crest Width (ft) = 110.00

Calculations

Qmin (cfs) = 0.00
Qmax (cfs) = 256.46
Tailwater Elev (ft) = (dc+D)/2

Highlighted

Qtotal (cfs) = 256.00
Qpipe (cfs) = 256.00
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 8.93
Veloc Up (ft/s) = 10.11
HGL Dn (ft) = 405.88
HGL Up (ft) = 406.67
Hw Elev (ft) = 408.40
Hw/D (ft) = 1.23
Flow Regime = Inlet Control



CULVERT 3

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BGE 5440 WADE PARK BLVD, SUITE 102
RALEIGH NC 27607
www.bgeinc.com
NC LICENSE #C-4397

CULVERT 3 DRAINAGE AREA

DATE: 7/10/2023
0 150' 300' 450'
SCALE: 1" = 150'

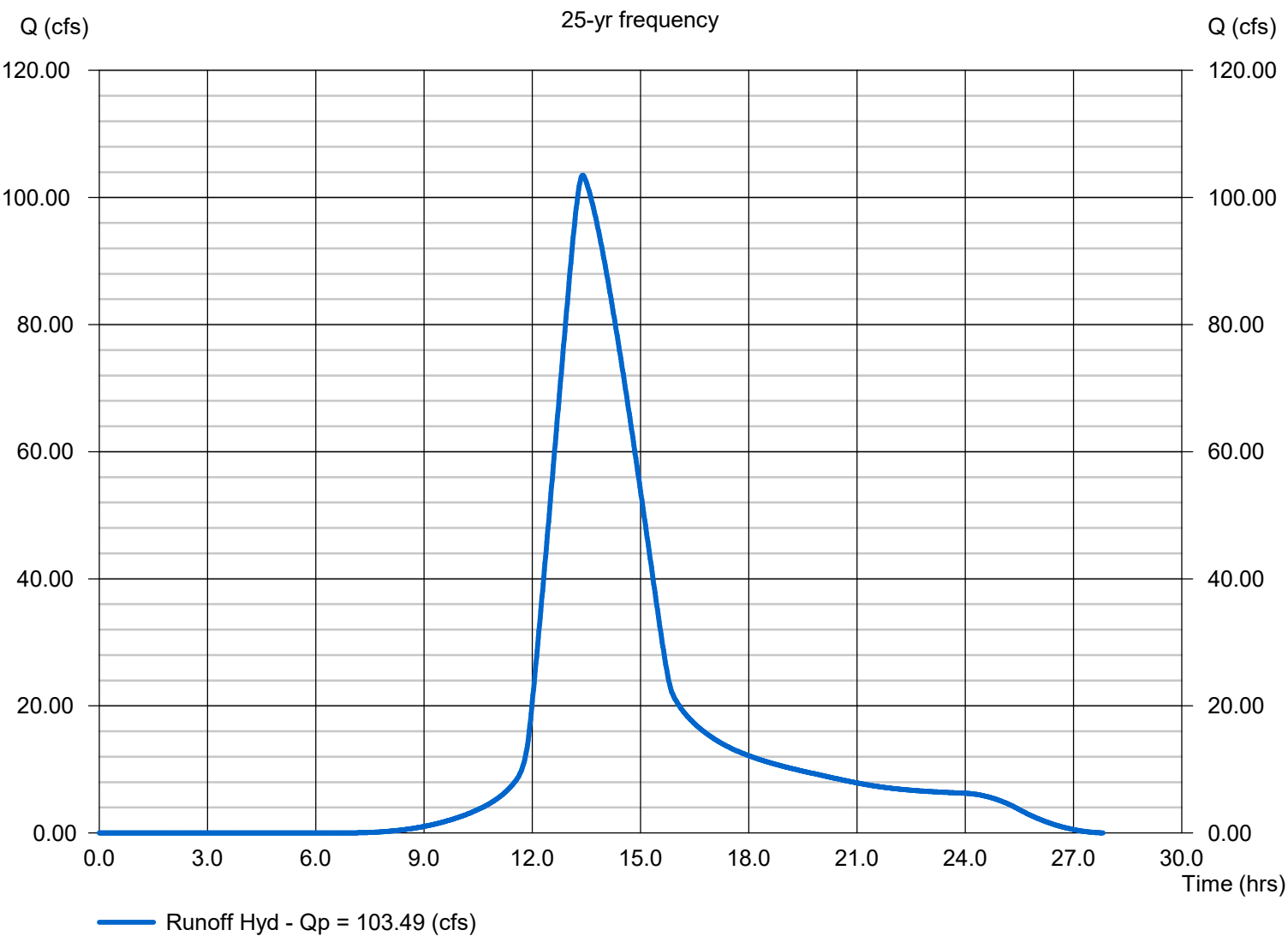
Hydrology Report

CULVERT 3 HYDROLOGY

Hydrograph type	= SCS	Peak discharge (cfs)	= 103.49
Storm frequency (yrs)	= 25	Time interval (min)	= 1
Drainage area (ac)	= 101.200	Curve number (CN)	= 80
Basin Slope (%)	= n/a	Hydraulic length (ft)	= n/a
Tc method	= User	Time of conc. (min)	= 150
Total precip. (in)	= 5.77	Storm Distribution	= Type II
Storm duration (hrs)	= 24	Shape factor	= 484

Hydrograph Volume = 1,311,226 (cuft); 30.102 (acft)

Runoff Hydrograph



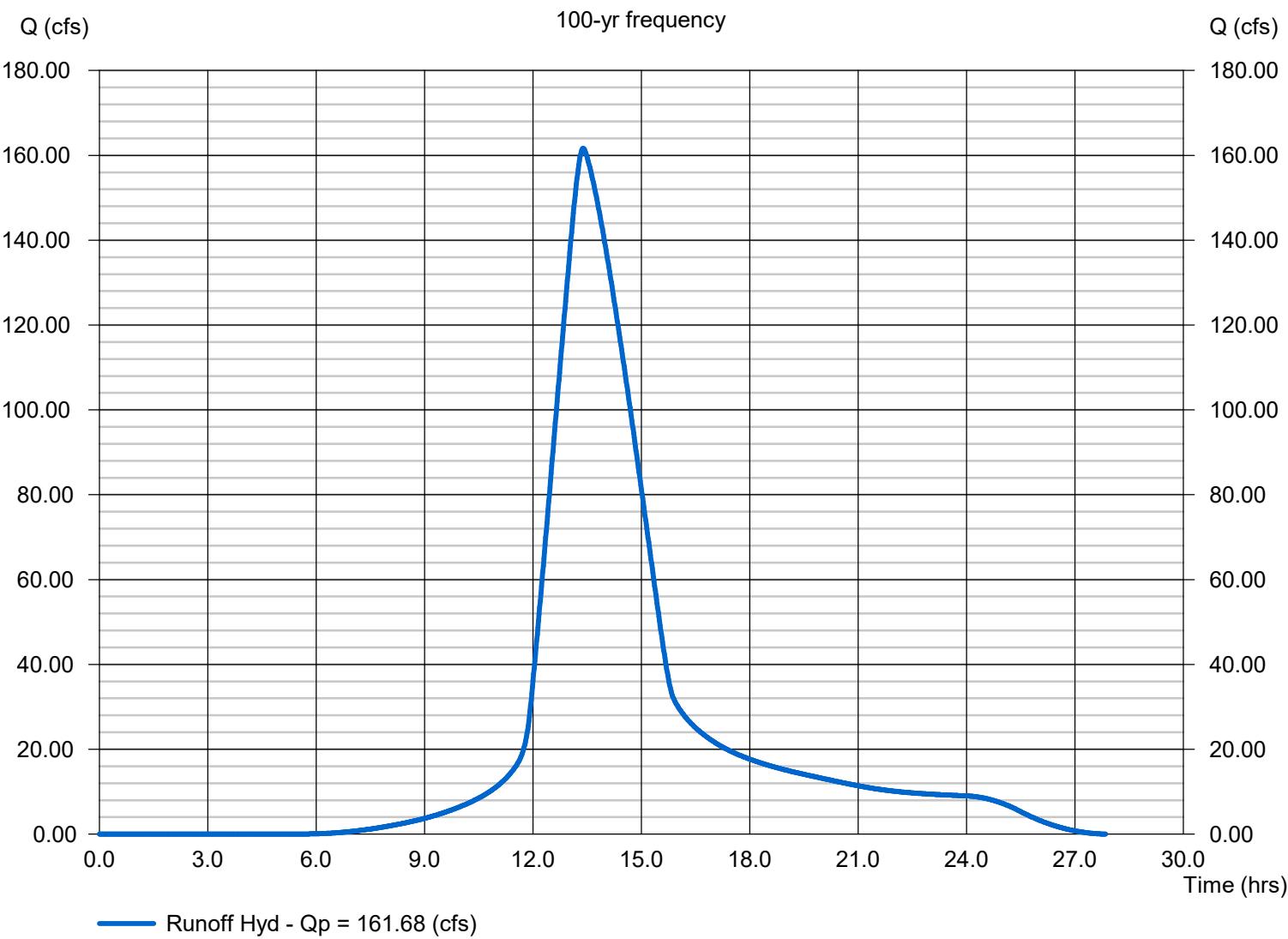
Hydrology Report

CULVERT 3 HYDROLOGY

Hydrograph type	=	SCS	Peak discharge (cfs)	=	161.68
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	101.200	Curve number (CN)	=	80
Basin Slope (%)	=	n/a	Hydraulic length (ft)	=	n/a
Tc method	=	User	Time of conc. (min)	=	150
Total precip. (in)	=	7.95	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 2,046,288 (cuft); 46.976 (acft)

Runoff Hydrograph



Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Monday, Oct 2 2023

CULVERT 3 (25-YR)

Invert Elev Dn (ft) = 346.23
Pipe Length (ft) = 44.60
Slope (%) = 0.83
Invert Elev Up (ft) = 346.60
Rise (in) = 36.0
Shape = Circular
Span (in) = 36.0
No. Barrels = 2
n-Value = 0.012
Culvert Type = Circular Concrete
Culvert Entrance = Groove end w/headwall (C)
Coeff. K,M,c,Y,k = 0.0018, 2, 0.0292, 0.74, 0.2

Embankment

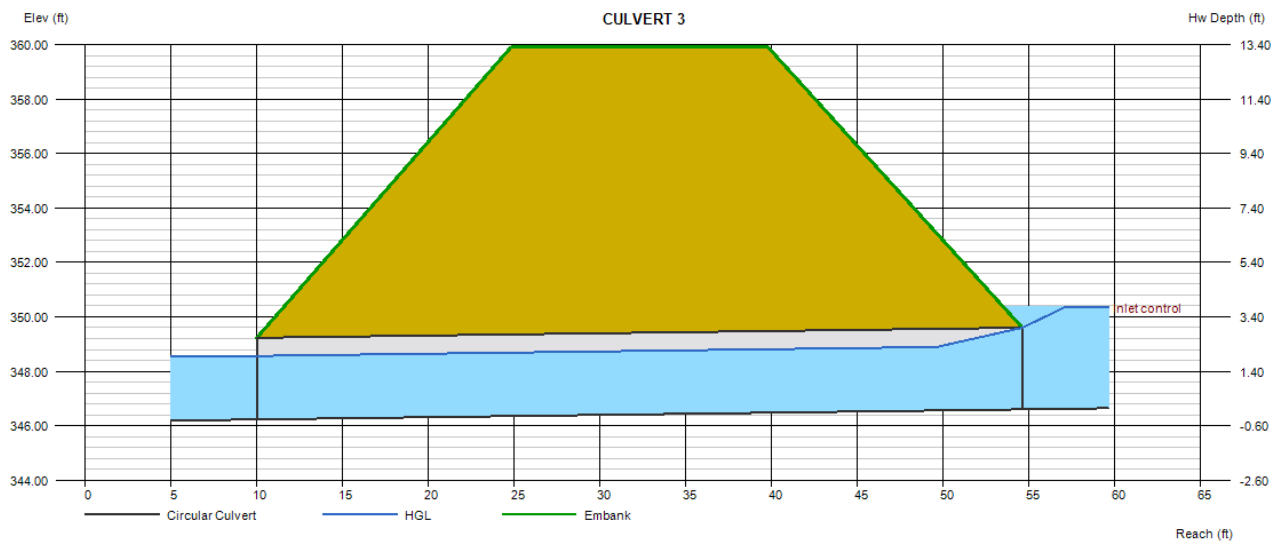
Top Elevation (ft) = 359.90
Top Width (ft) = 15.00
Crest Width (ft) = 40.00

Calculations

Qmin (cfs) = 0.00
Qmax (cfs) = 103.49
Tailwater Elev (ft) = Normal

Highlighted

Qtotal (cfs) = 103.00
Qpipe (cfs) = 103.00
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 8.73
Veloc Up (ft/s) = 8.73
HGL Dn (ft) = 348.56
HGL Up (ft) = 348.93
Hw Elev (ft) = 350.36
Hw/D (ft) = 1.25
Flow Regime = Inlet Control



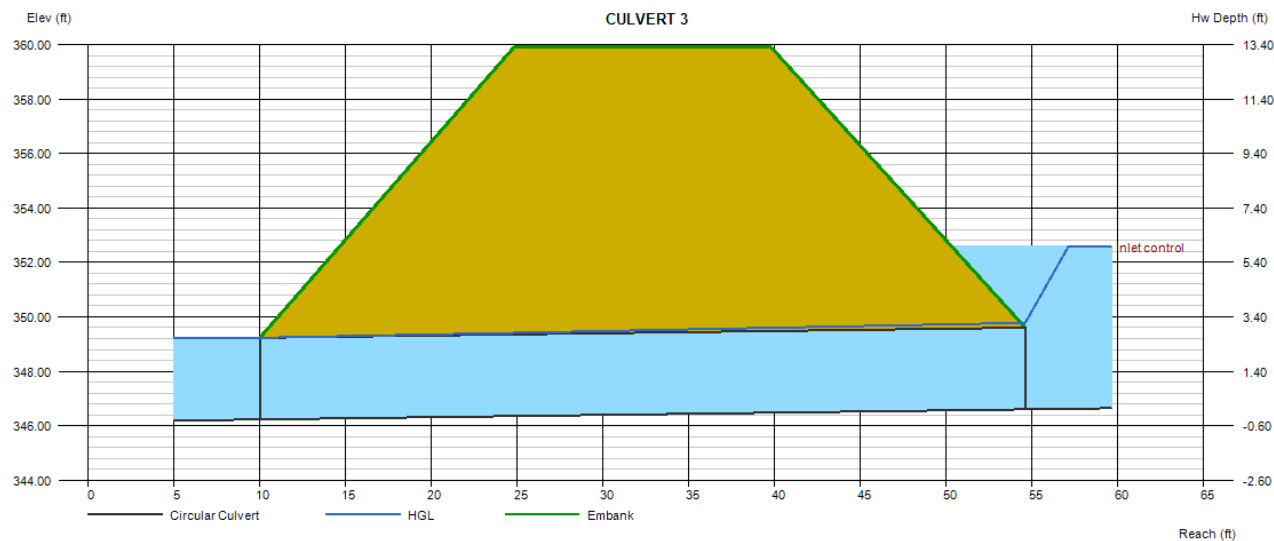
Culvert Report

CULVERT 3 (100-YR)

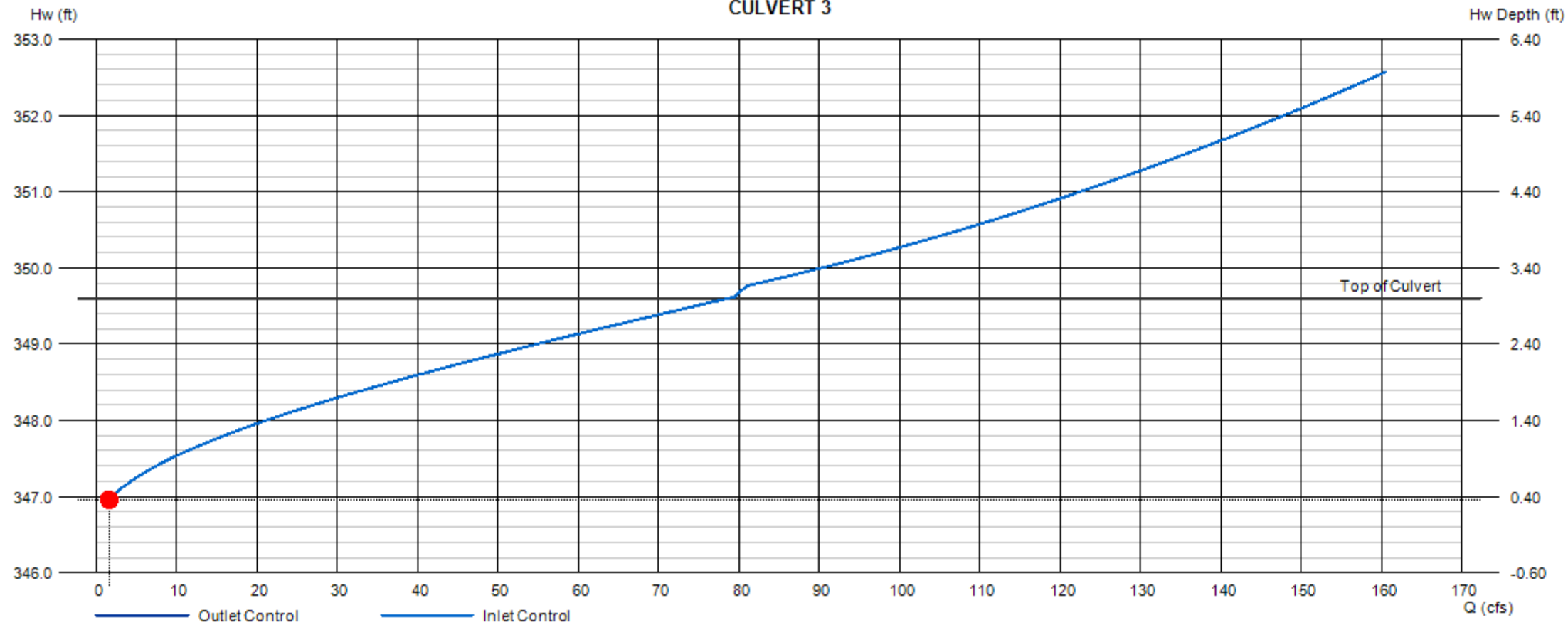
Invert Elev Dn (ft)	= 346.23
Pipe Length (ft)	= 44.60
Slope (%)	= 0.83
Invert Elev Up (ft)	= 346.60
Rise (in)	= 36.0
Shape	= Circular
Span (in)	= 36.0
No. Barrels	= 2
n-Value	= 0.012
Culvert Type	= Circular Concrete
Culvert Entrance	= Groove end w/headwall (C)
Coeff. K,M,c,Y,k	= 0.0018, 2, 0.0292, 0.74, 0.2

Embankment	
Top Elevation (ft)	= 359.90
Top Width (ft)	= 15.00
Crest Width (ft)	= 40.00

Calculations	
Qmin (cfs)	= 0.00
Qmax (cfs)	= 161.68
Tailwater Elev (ft)	= Normal
Highlighted	
Qtotal (cfs)	= 160.38
Qpipe (cfs)	= 160.38
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 11.35
Veloc Up (ft/s)	= 11.34
HGL Dn (ft)	= 349.23
HGL Up (ft)	= 349.78
Hw Elev (ft)	= 352.57
Hw/D (ft)	= 1.99
Flow Regime	= Inlet Control



CULVERT 3



CULVERT 4

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CULVERT 4 DRAINAGE AREA

DATE: 7/10/2023

0 100' 200' 300'
SCALE: 1" = 100'

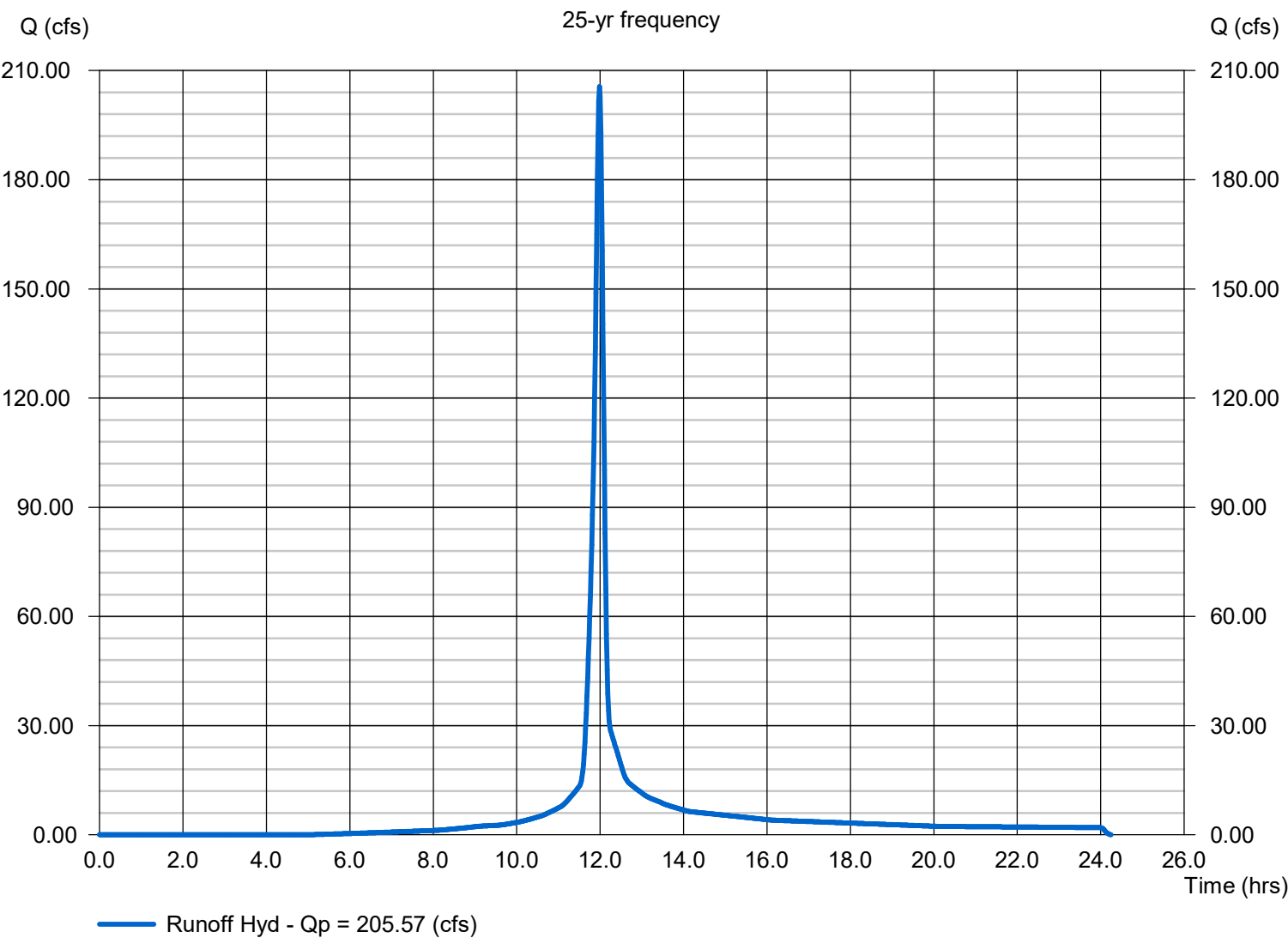
Hydrology Report

CULVERT 4

Hydrograph type	=	SCS	Peak discharge (cfs)	=	205.57
Storm frequency (yrs)	=	25	Time interval (min)	=	1
Drainage area (ac)	=	32.430	Curve number (CN)	=	85
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	9
Total precip. (in)	=	5.77	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 481,005 (cuft); 11.042 (acft)

Runoff Hydrograph



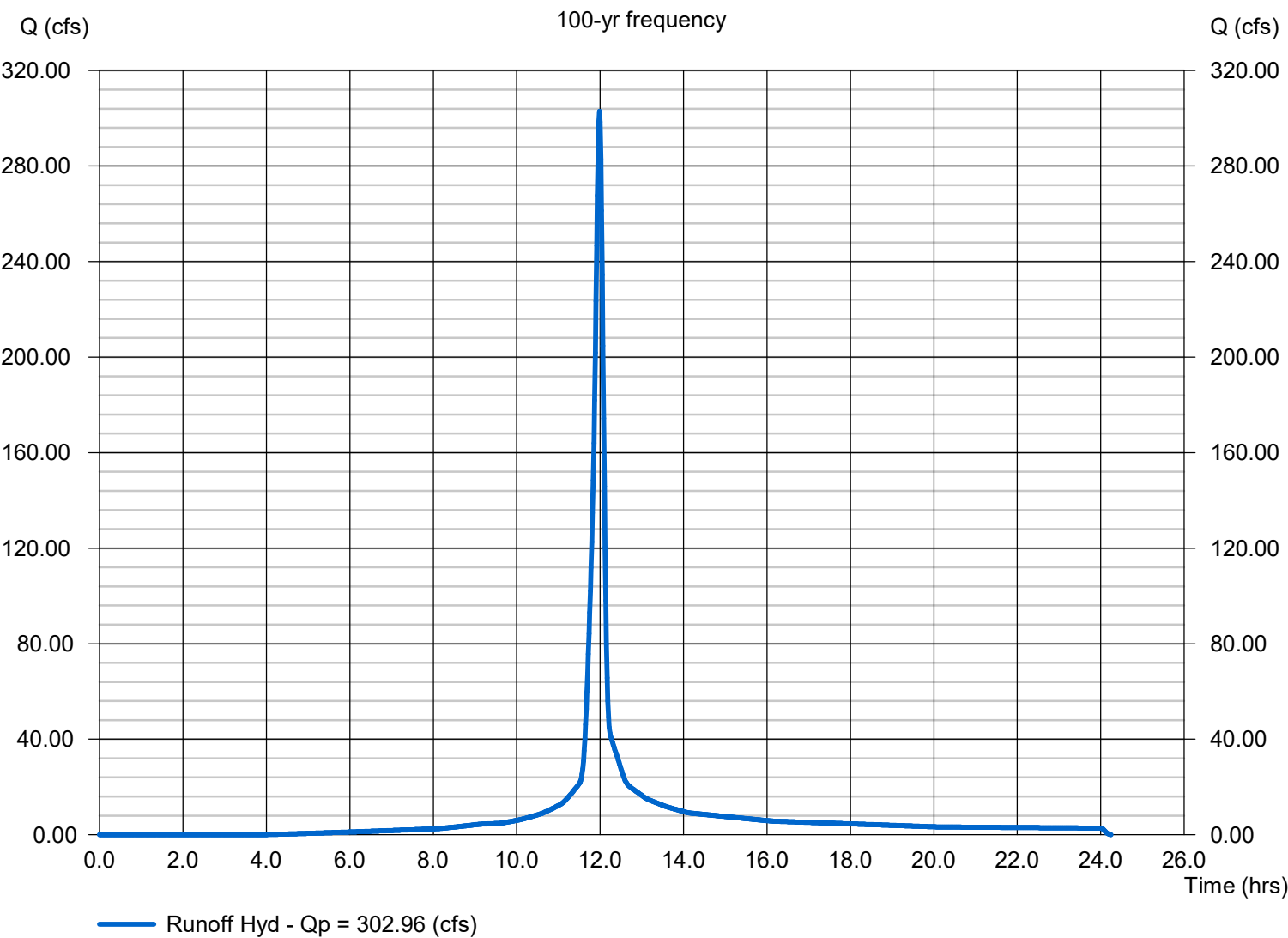
Hydrology Report

CULVERT 4

Hydrograph type	=	SCS	Peak discharge (cfs)	=	302.96
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	32.430	Curve number (CN)	=	85
Basin Slope (%)	=	See Worksheet	Hydraulic length (ft)	=	See Worksheet
Tc method	=	TR55	Time of conc. (min)	=	9
Total precip. (in)	=	7.95	Storm Distribution	=	Type II
Storm duration (hrs)	=	24	Shape factor	=	484

Hydrograph Volume = 725,749 (cuft); 16.661 (acft)

Runoff Hydrograph



TR55 Tc Worksheet

Hydraflow Express by Intelisolve

SCS

CULVERT 4

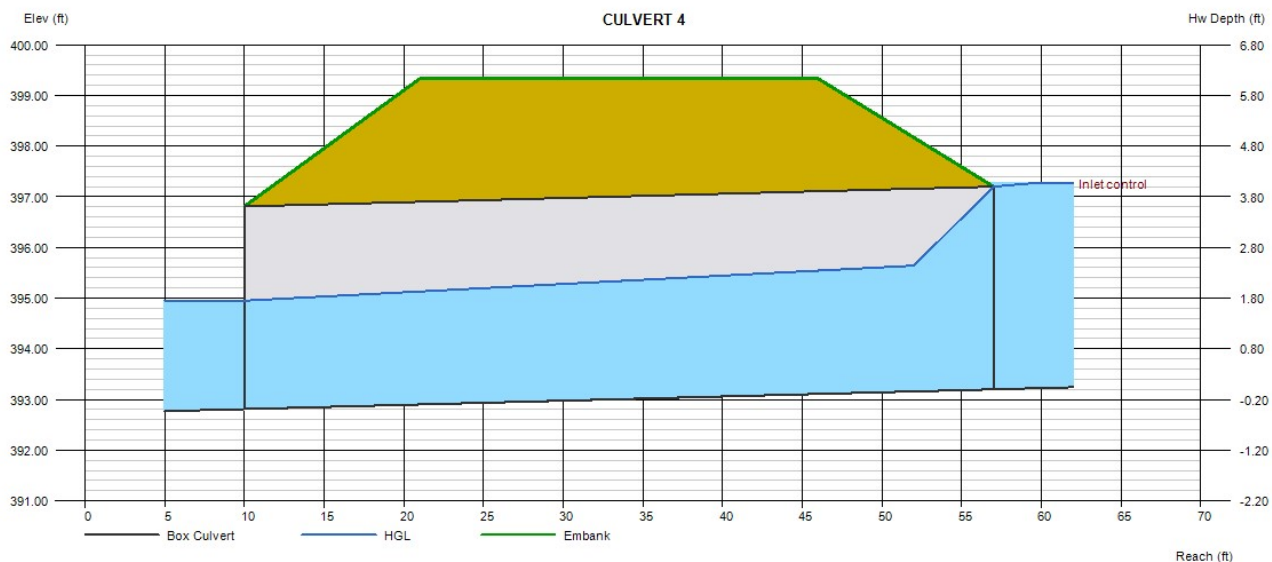
<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.011	0.011	0.011				
Flow length (ft)	= 300.0	0.0	0.0				
Two-year 24-hr precip. ((in))	= 2.20	0.00	0.00				
Land slope (%)	= 1.83	0.00	0.00				
Travel Time (min)	= 3.65	+	0.00	+	0.00	=	3.65
Shallow Concentrated Flow							
Flow length (ft)	= 775.00	160.00	0.00				
Watercourse slope (%)	= 1.68	7.50	0.00				
Surface description	= Paved	Unpaved	Paved				
Average velocity (ft/s)	= 2.63	4.42	0.00				
Travel Time (min)	= 4.90	+	0.60	+	0.00	=	5.51
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	+	0	+	0	=	0.00
Total Travel Time, Tc					9.00 min		

CULVERT 4 (25-YR)

Highlighted	
Qtotal (cfs)	= 205.00
Qpipe (cfs)	= 205.00
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 10.64
Veloc Up (ft/s)	= 9.02
HGL Dn (ft)	= 394.95
HGL Up (ft)	= 395.72
Hw Elev (ft)	= 397.27
Hw/D (ft)	= 1.02
Flow Regime	= Inlet Control

Embankment

Top Elevation (ft) = 399.33
Top Width (ft) = 25.00
Crest Width (ft) = 62.00



Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, Jul 11 2023

CULVERT 4 (100-YR)

Invert Elev Dn (ft) = 392.81
Pipe Length (ft) = 47.00
Slope (%) = 0.83
Invert Elev Up (ft) = 393.20
Rise (in) = 48.0
Shape = Box
Span (in) = 54.0
No. Barrels = 2
n-Value = 0.012
Culvert Type = Flared Wingwalls
Culvert Entrance = 30D to 75D wingwall flares
Coeff. K,M,c,Y,k = 0.026, 1, 0.0347, 0.81, 0.4

Embankment

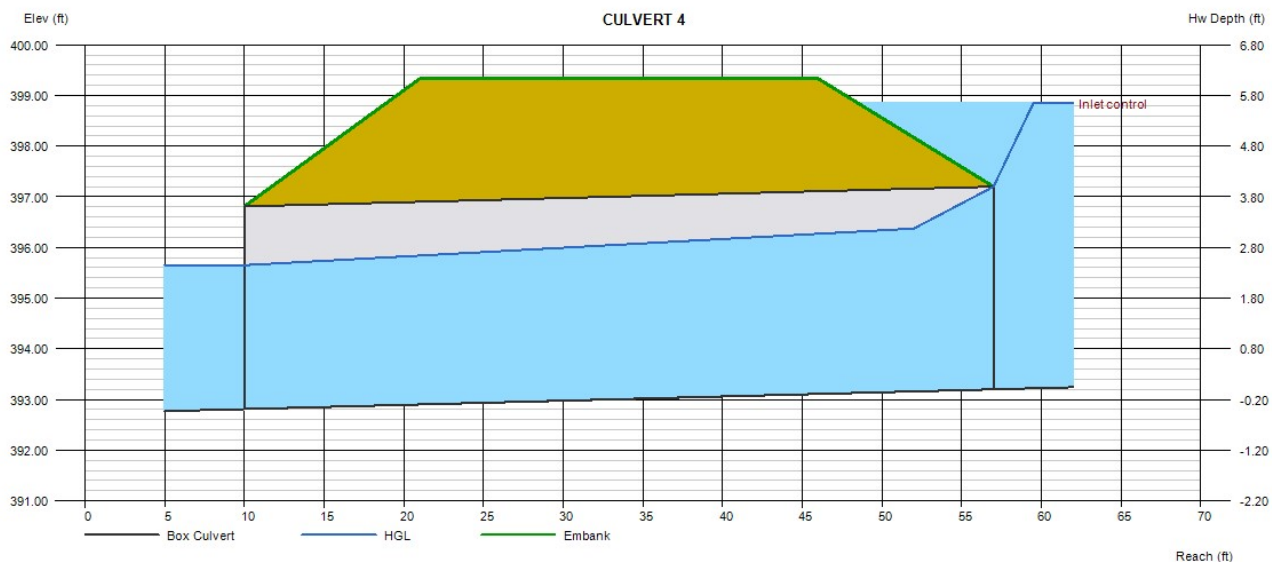
Top Elevation (ft) = 399.33
Top Width (ft) = 25.00
Crest Width (ft) = 62.00

Calculations

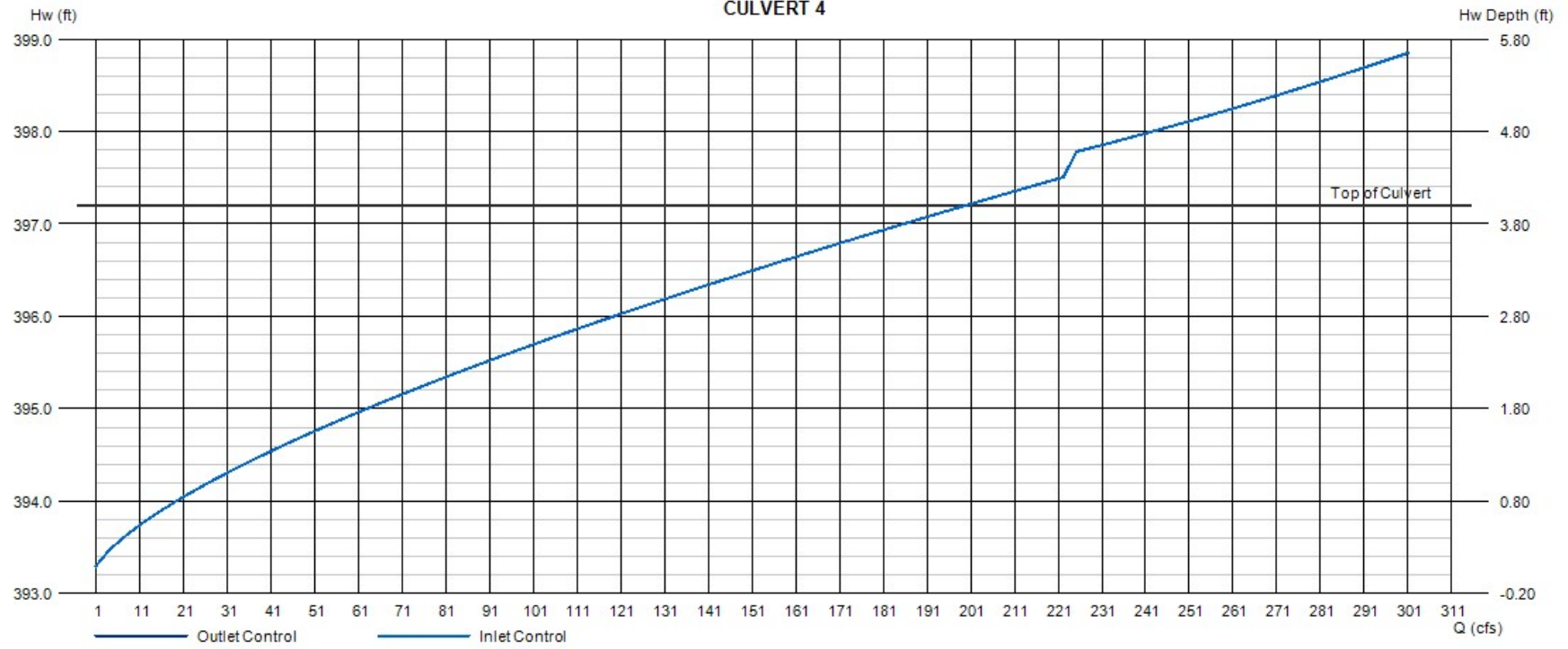
Qmin (cfs) = 1.00
Qmax (cfs) = 302.96
Tailwater Elev (ft) = Critical

Highlighted

Qtotal (cfs) = 300.97
Qpipe (cfs) = 300.97
Qovertop (cfs) = 0.00
Veloc Dn (ft/s) = 11.78
Veloc Up (ft/s) = 10.26
HGL Dn (ft) = 395.65
HGL Up (ft) = 396.46
Hw Elev (ft) = 398.85
Hw/D (ft) = 1.41
Flow Regime = Inlet Control



CULVERT 4



EROSION CONTROL DA MAP

SKIMMER BASIN CALCULATIONS

TEMPORARY DIVERSIONS

DISSIPATORS