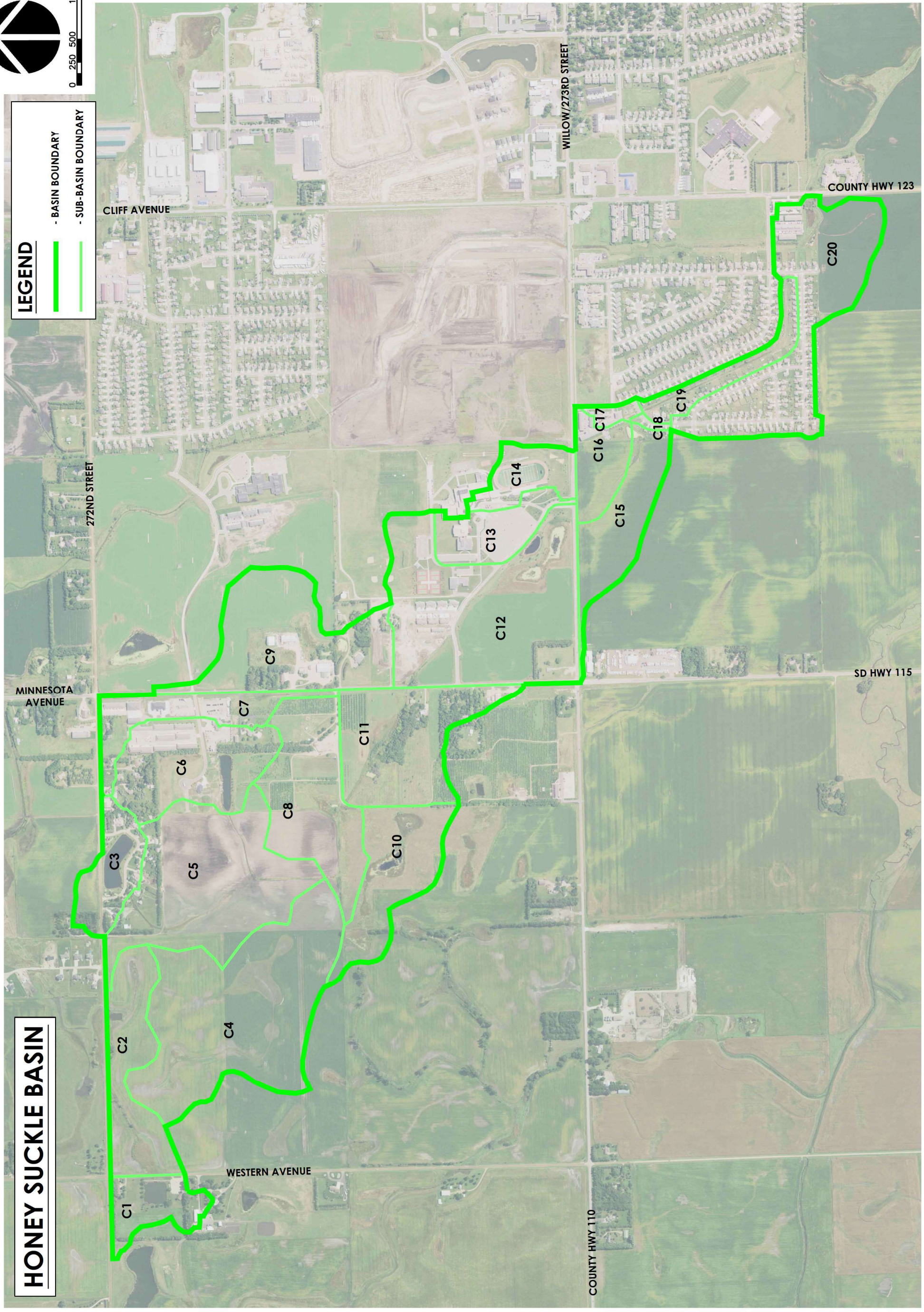
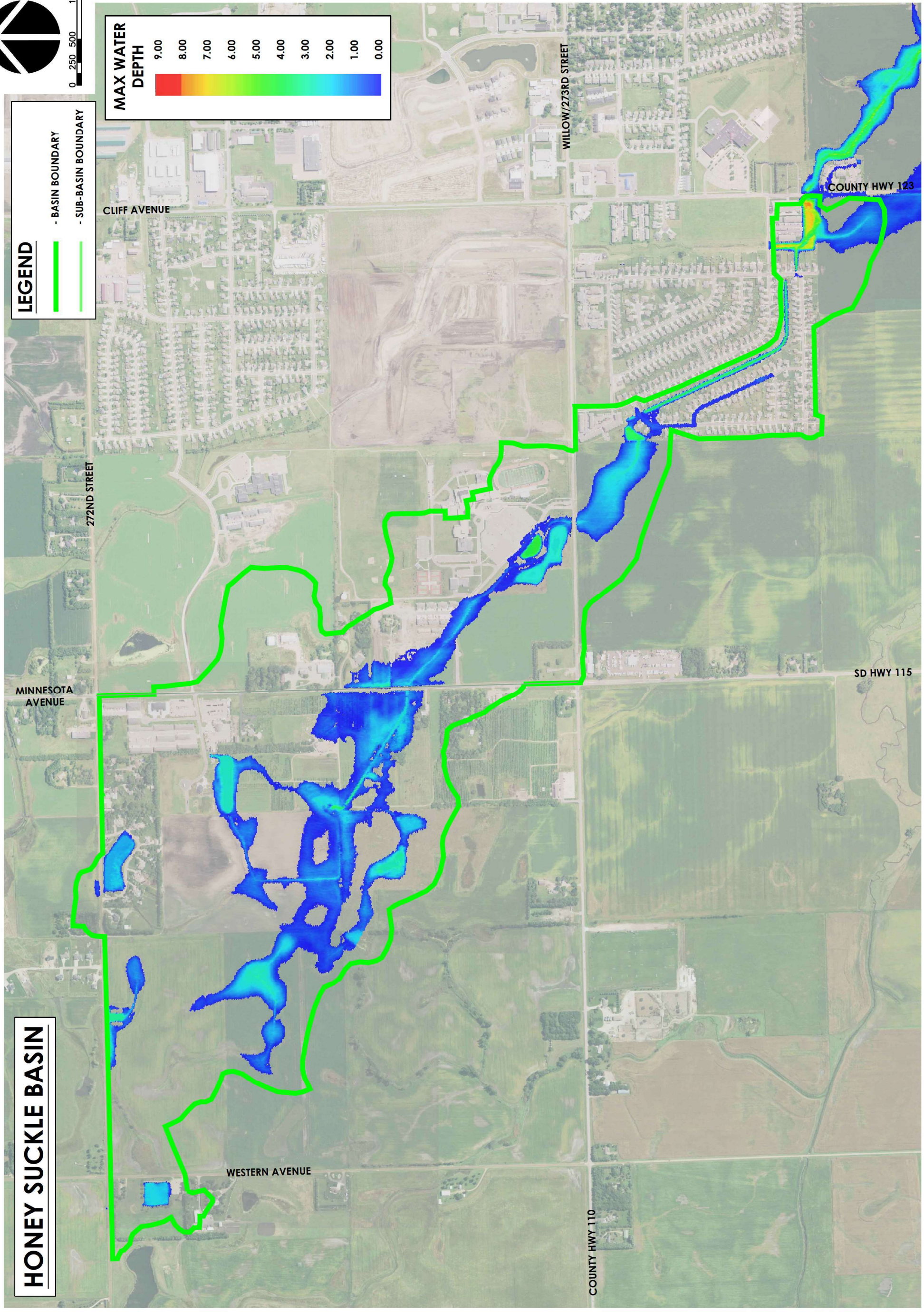
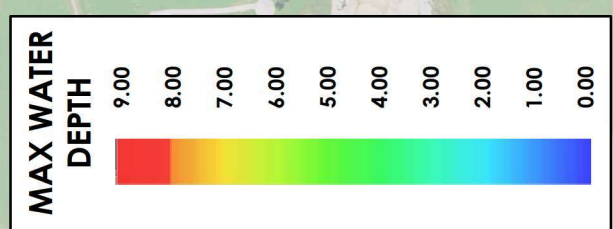
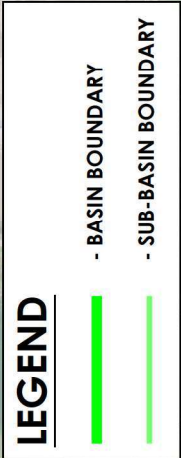
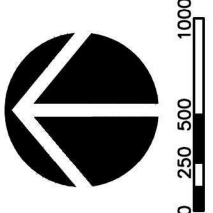


LEGEND

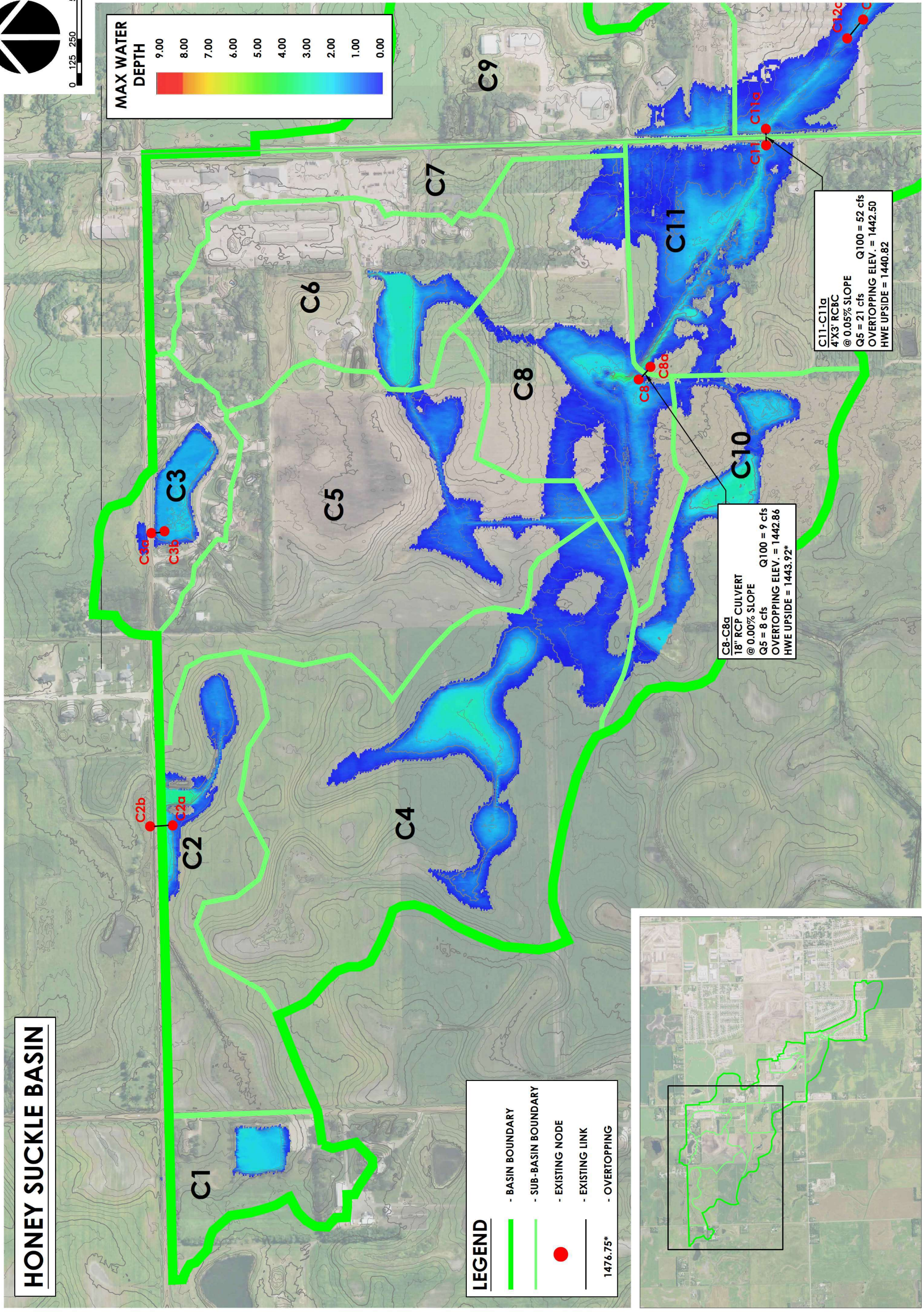
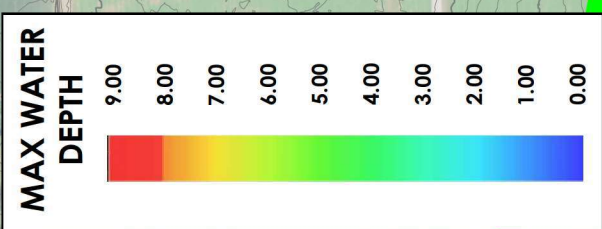
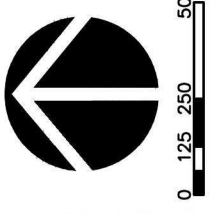
- BASIN BOUNDARY
- SUB-BASIN BOUNDARY



HONEY SUCKLE BASIN



HONEY SUCKLE BASIN



HONEY SUCKLE BASIN

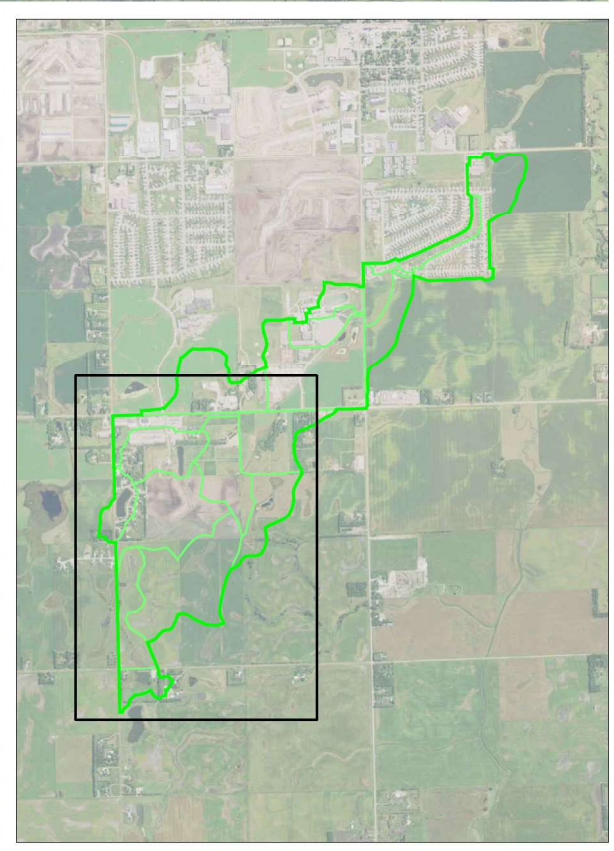
LEGEND

- BASIN BOUNDARY
- SUB-BASIN BOUNDARY
- EXISTING NODE
- EXISTING LINK
- OVERTOPPING

1476.75*

C8-C8a
 18" RCP CULVERT
 @ 0.00% SLOPE Q100 = 9 cfs
 Q5 = 8 cfs OVERTOPPING ELEV. = 1442.86
 HWE UPSIDE = 1443.92*

C11-C11a
 4'X3' RCBC
 @ 0.05% SLOPE Q100 = 52 cfs
 Q5 = 21 cfs OVERTOPPING ELEV. = 1442.50
 HWE UPSIDE = 1440.82

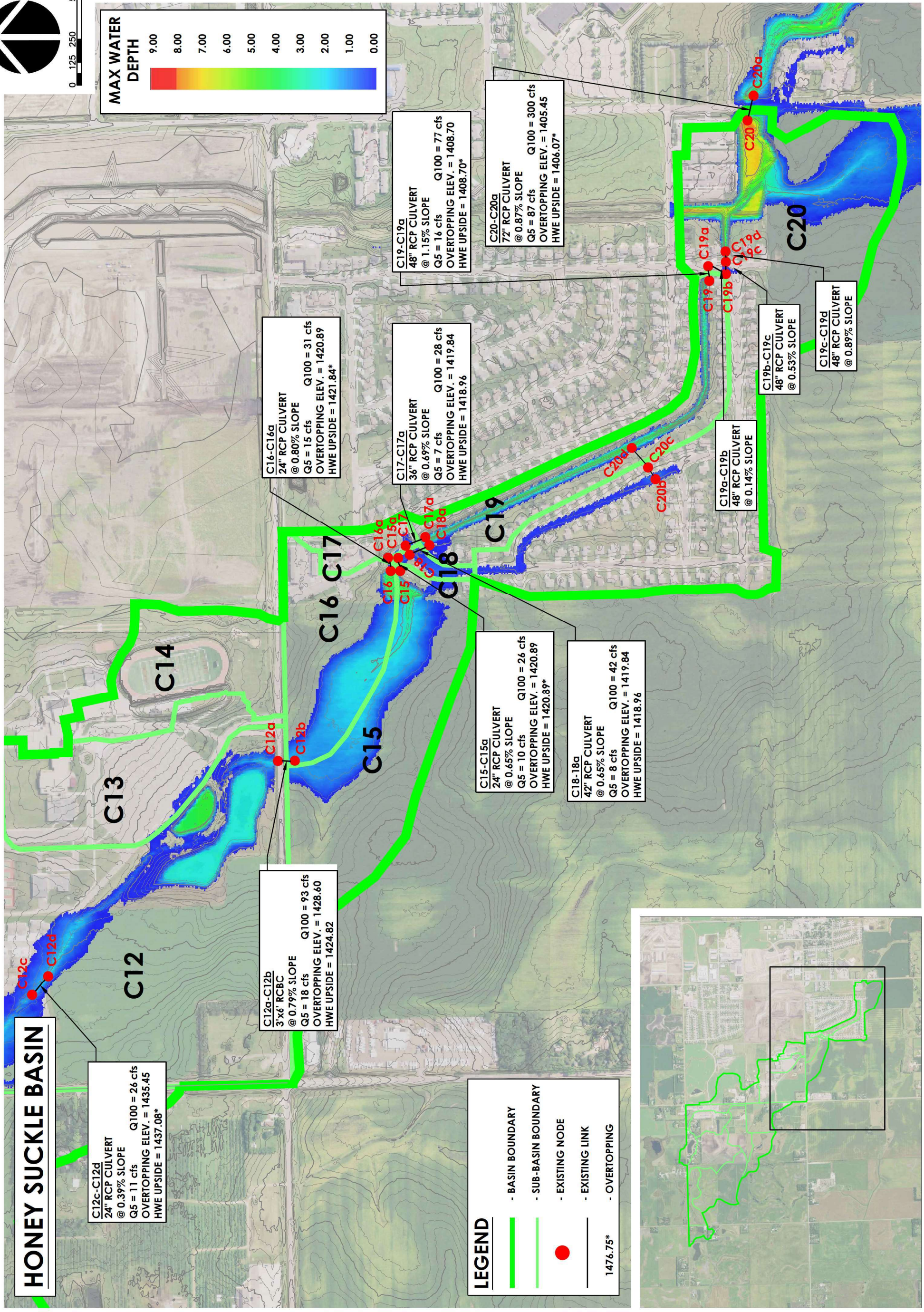
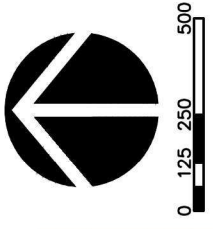




WEST HARRISBURG MASTER DRAINAGE PLAN
 COYOTE, WESTERN, HONEY SUCKLE, HONEY SUCKLE, MINNESOTA BASINS

HARRISBURG, SOUTH DAKOTA
 SEI PROJECT #: 18044

HONEY SUCKLE
 BASIN EXISTING
 LINKS & NODES



HONEY SUCKLE BASIN

C12c-C12d
 24" RCP CULVERT
 @ 0.39% SLOPE
 Q5 = 11 cfs Q100 = 26 cfs
 OVERTOPPING ELEV. = 1435.45
 HWE UPSIDE = 1437.08*

C12a-C12b
 3'x6' RCBC
 @ 0.79% SLOPE
 Q5 = 18 cfs Q100 = 93 cfs
 OVERTOPPING ELEV. = 1428.60
 HWE UPSIDE = 1424.82

C16-C16a
 24" RCP CULVERT
 @ 0.80% SLOPE
 Q5 = 15 cfs Q100 = 31 cfs
 OVERTOPPING ELEV. = 1420.89
 HWE UPSIDE = 1421.84*

C17-C17a
 36" RCP CULVERT
 @ 0.69% SLOPE
 Q5 = 7 cfs Q100 = 28 cfs
 OVERTOPPING ELEV. = 1419.84
 HWE UPSIDE = 1418.96

C15-C15a
 24" RCP CULVERT
 @ 0.65% SLOPE
 Q5 = 10 cfs Q100 = 26 cfs
 OVERTOPPING ELEV. = 1420.89
 HWE UPSIDE = 1420.89*

C18-18a
 42" RCP CULVERT
 @ 0.65% SLOPE
 Q5 = 8 cfs Q100 = 42 cfs
 OVERTOPPING ELEV. = 1419.84
 HWE UPSIDE = 1418.96

C19-C19a
 48" RCP CULVERT
 @ 1.15% SLOPE
 Q5 = 16 cfs Q100 = 77 cfs
 OVERTOPPING ELEV. = 1408.70
 HWE UPSIDE = 1408.70*

C20-C20a
 72" RCP CULVERT
 @ 0.87% SLOPE
 Q5 = 87 cfs Q100 = 300 cfs
 OVERTOPPING ELEV. = 1405.45
 HWE UPSIDE = 1406.07*

C19a-C19b
 48" RCP CULVERT
 @ 0.14% SLOPE

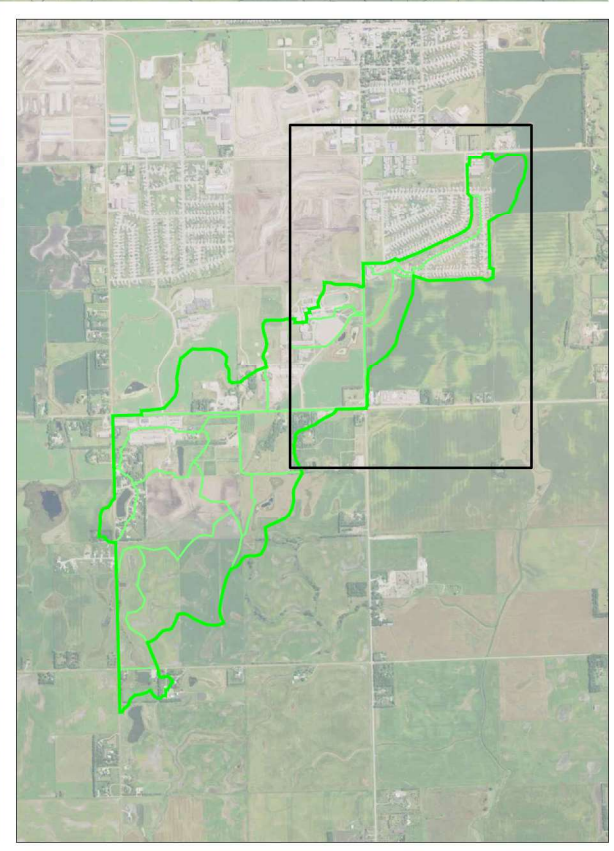
C19b-C19c
 48" RCP CULVERT
 @ 0.53% SLOPE

C19c-C19d
 48" RCP CULVERT
 @ 0.89% SLOPE

LEGEND

- BASIN BOUNDARY
- SUB-BASIN BOUNDARY
- EXISTING NODE
- EXISTING LINK
- OVERTOPPING

1476.75*



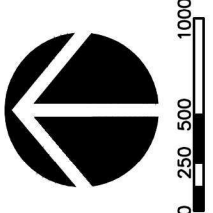


WEST HARRISBURG MASTER DRAINAGE PLAN
 COYOTE, WESTERN, HONEY SUCKLE, MINNESOTA BASINS
 HARRISBURG, SOUTH DAKOTA
 SEI PROJECT #: 18044

HONEY SUCKLE
 BASIN XPSWMM
 EXISTING RESULTS

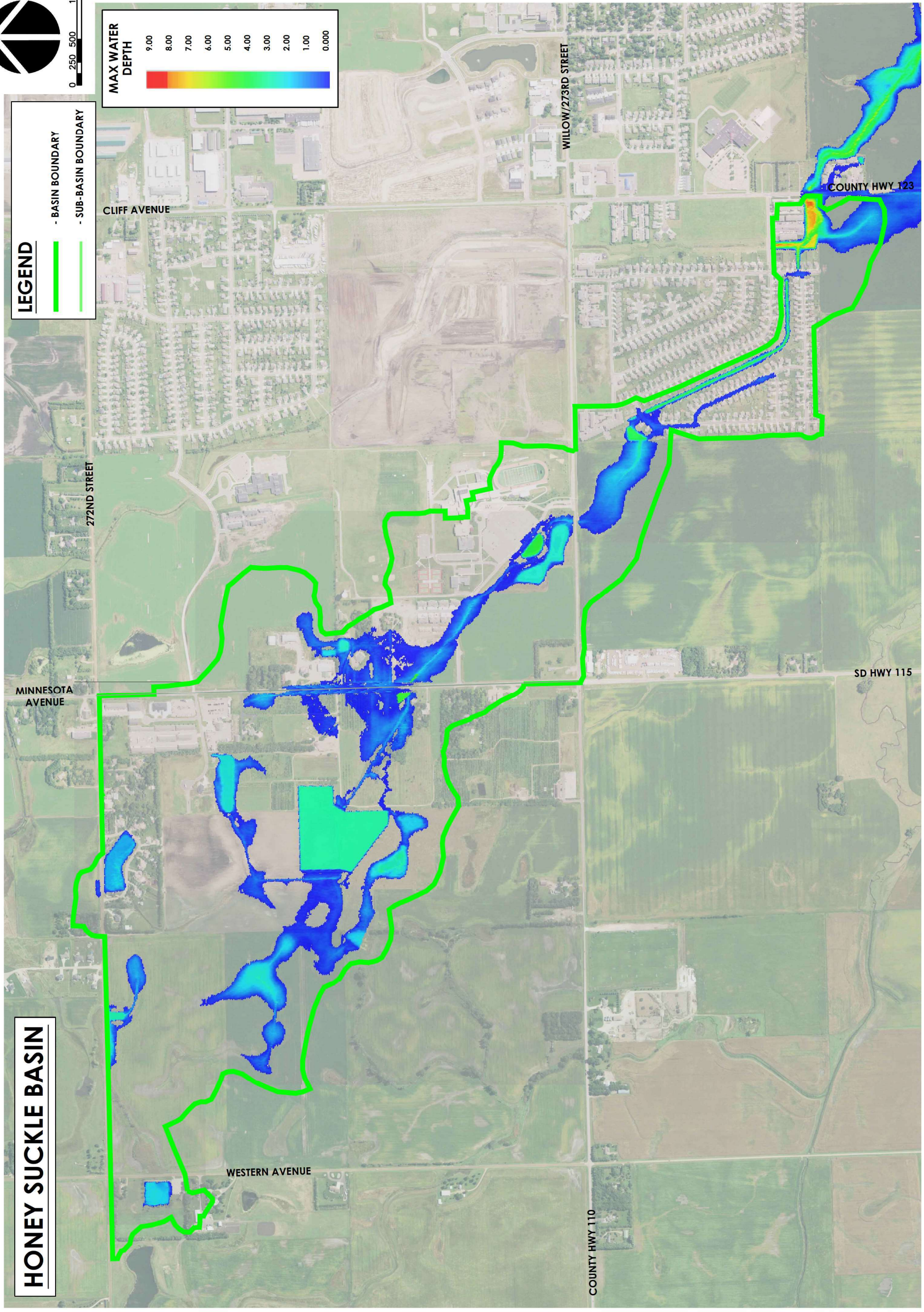
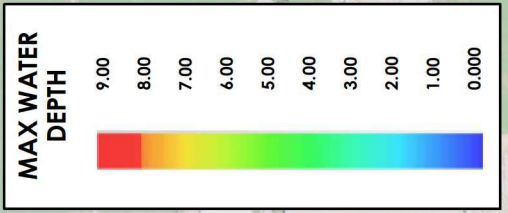
Node Name	Area ac	Curve Number	Time of Concentration (min)	5-YEAR			100-YEAR		
				Max Flow (cfs)	Max Water Depth (ft)	Max Flow (cfs)	Max Water Depth (ft)		
C1	11.00	75.2	54.4	6.6	0.9	20.4	2.2		
C2	28.00	75.5	36.0	22.9	2.0	69.9	3.2		
C3	16.20	77.6	63.0	10.1	1.4	29.0	2.4		
C4	78.40	71.5	52.4	37.0	2.2	131.4	3.1		
C5	61.30	72.6	65.9	26.5	1.5	90.3	2.4		
C6	35.10	80.3	72.1	22.9	1.7	61.6	2.6		
C7	18.90	82.6	104.8	10.5	0.7	26.6	1.2		
C8	39.70	75.1	46.6	26.3	4.3	81.9	5.2		
C9	47.90	69.5	67.9	15.9	2.7	61.5	3.4		
C10	28.50	77.6	44.4	22.8	1.0	65.7	1.8		
C11	39.90	72.3	41.9	23.6	2.7	80.7	3.7		
C12	76.90	76.1	58.0	46.3	1.8	139.9	2.5		
C13	16.00	80.0	74.9	10.0	0.4	27.1	0.6		
C14	12.90	82.7	64.0	10.5	1.6	26.3	2.1		
C15	21.90	72.0	54.5	10.4	1.4	36.3	3.2		
C16	12.90	65.0	51.4	3.5	1.6	16.8	4.1		
C17	2.67	75.0	18.6	3.2	1.4	9.7	4.0		
C18	2.67	75.0	15.8	3.5	1.2	10.4	3.8		
C19	12.48	75.0	18.6	15.0	2.8	45.3	6.3		
C20	52.61	75.0	27.9	49.5	5.5	152.5	9.2		

Link Name	Length (ft)	Diameter (Height) ft	Shape	Conduit Slope	Roughness	Design Full Flow cfs	Upstream Node Name	Upstream Invert Elevation ft	Downstream Node Name	Downstream Invert Elevation ft	5-Year			100-Year		
											Max Flow cfs	Max Velocity ft/s	Maximum Water Elevation (US) ft	Max Flow cfs	Max Velocity ft/s	Maximum Water Elevation (US) ft
C2a-C2b	41.0	1.50	Circular	0.20	0.024	2.5	C2b	1451.92	C2a	1451.84	-4.11	-2.32	1454.41	-8.8	-5.0	1454.97
C3a-C3b	60.0	0.50	Circular	3.45	0.013	1.0	C3a	1454.93	C3b	1452.86	0.00	0.00	1454.93	-0.1	-0.6	1455.87
C8-C8a	42.0	1.50	Circular	0.00	0.024	0.2	C8	1438.59	C8a	1438.69	8.49	4.75	1443.01	8.9	5.0	1443.92
C11-C11a	39.0	3.00	Rectangular	0.05	0.013	28.0	C11	1437.15	C11a	1437.13	21.22	2.02	1439.82	52.3	4.4	1440.82
C12a-C12b	43.0	3.00	Rectangular	0.79	0.013	183.0	C12a	1421.59	C12b	1421.35	18.25	1.94	1423.22	93.2	5.2	1424.82
C12c-C12d	260.0	2.22	Special	0.39	0.013	24.8	C12c	1433.50	C12d	1433.00	11.13	0.93	1436.21	26.4	1.0	1437.08
C15-C15a	69.0	2.00	Circular	0.65	0.013	18.3	C15	1417.70	C15a	1417.25	10.43	4.56	1419.13	26.4	8.4	1420.89
C16-C16a	69.0	2.00	Circular	0.80	0.013	20.2	C16	1417.74	C16a	1417.19	14.58	5.62	1419.30	30.5	9.6	1421.84
C17-C17a	116.0	3.00	Circular	0.69	0.013	55.4	C17	1414.95	C17a	1414.15	7.41	2.64	1416.37	28.2	4.0	1418.96
C18-C18a	116.0	3.50	Circular	0.66	0.013	81.4	C18	1415.13	C18a	1414.37	7.96	2.89	1416.37	41.9	4.2	1418.96
C19-C19a	50.3	4.00	Circular	1.15	0.013	124.9	C19	1402.37	C19a	1401.99	15.60	2.12	1405.15	77.2	6.1	1408.70
C19a-C19b	129.9	4.00	Circular	0.15	0.013	54.9	C19a	1401.89	C19b	1401.70	15.90	1.46	1405.13	77.2	6.1	1408.28
C19b-C19c	37.4	4.00	Circular	0.54	0.013	105.1	C19b	1401.70	C19c	1401.50	15.94	1.39	1405.11	77.2	6.1	1407.92
C19c-C19d	28.1	4.00	Circular	0.89	0.013	135.5	C19c	1401.50	C19d	1401.25	16.01	1.34	1405.11	77.2	6.1	1407.82
C20-C20a	104.8	6.00	Circular	0.87	0.013	394.7	C20	1396.87	C20a	1395.96	86.69	3.17	1402.37	300.0	10.6	1406.07
C20b-C20c	36.0	2.00	Circular	0.28	0.013	11.9	C20b	1411.00	C20c	1410.90	-0.46	-1.28	1412.64	-0.8	0.3	1414.71
C20c-C20d	180.0	3.00	Circular	0.31	0.013	36.9	C20c	1409.90	C20d	1409.35	-2.91	-1.05	1412.64	-3.5	-1.4	1414.71

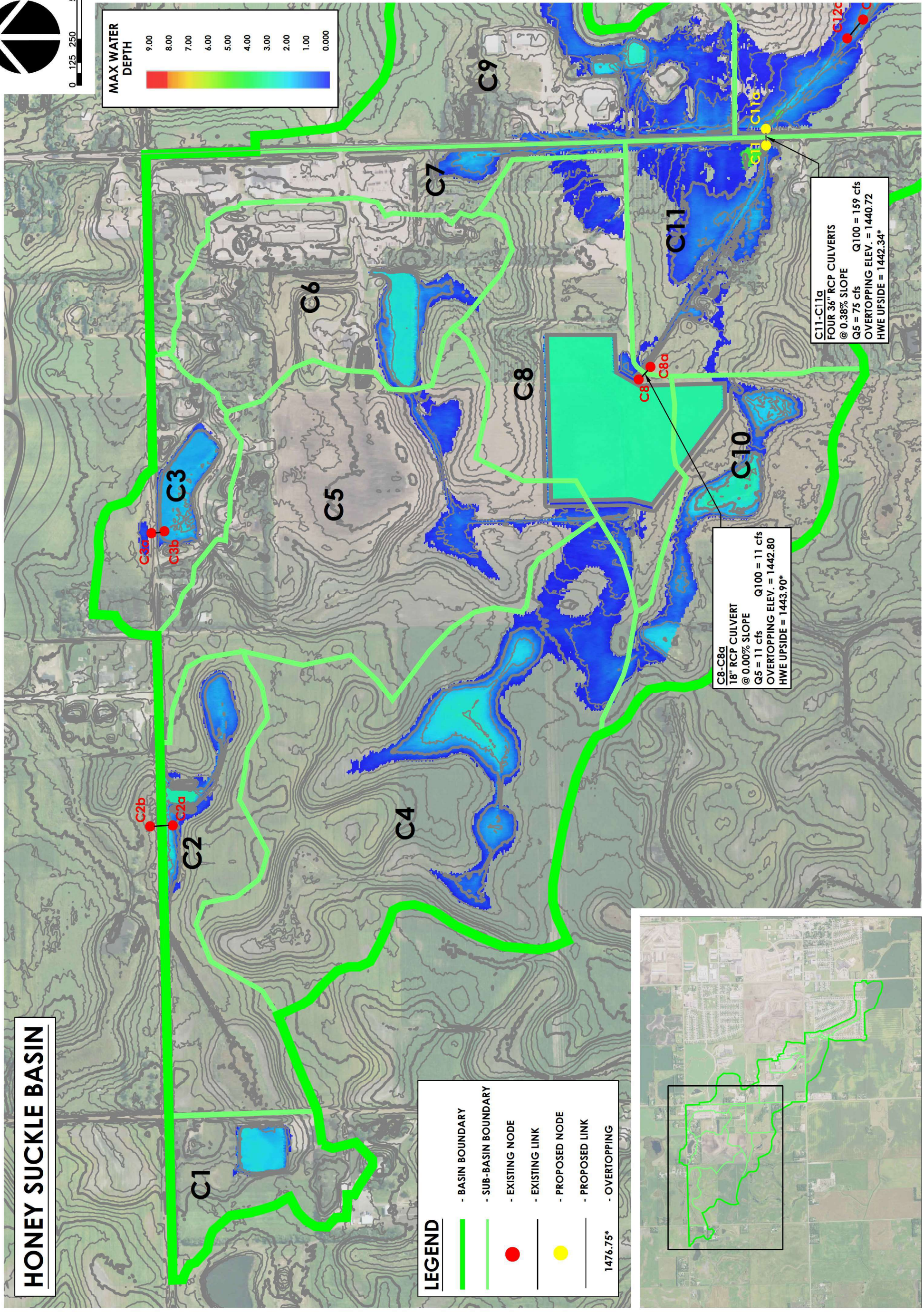
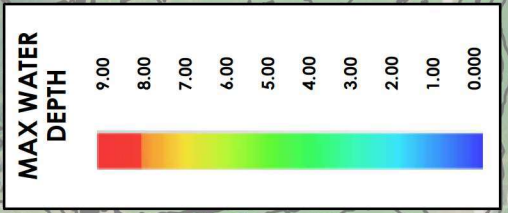
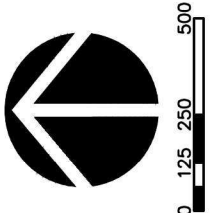


LEGEND

- BASIN BOUNDARY
- SUB-BASIN BOUNDARY



HONEY SUCKLE BASIN



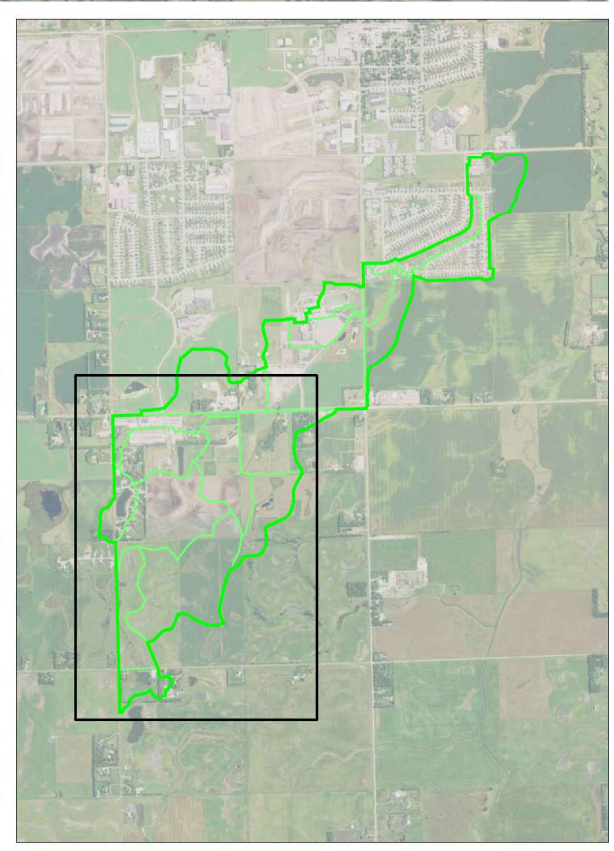
HONEY SUCKLE BASIN

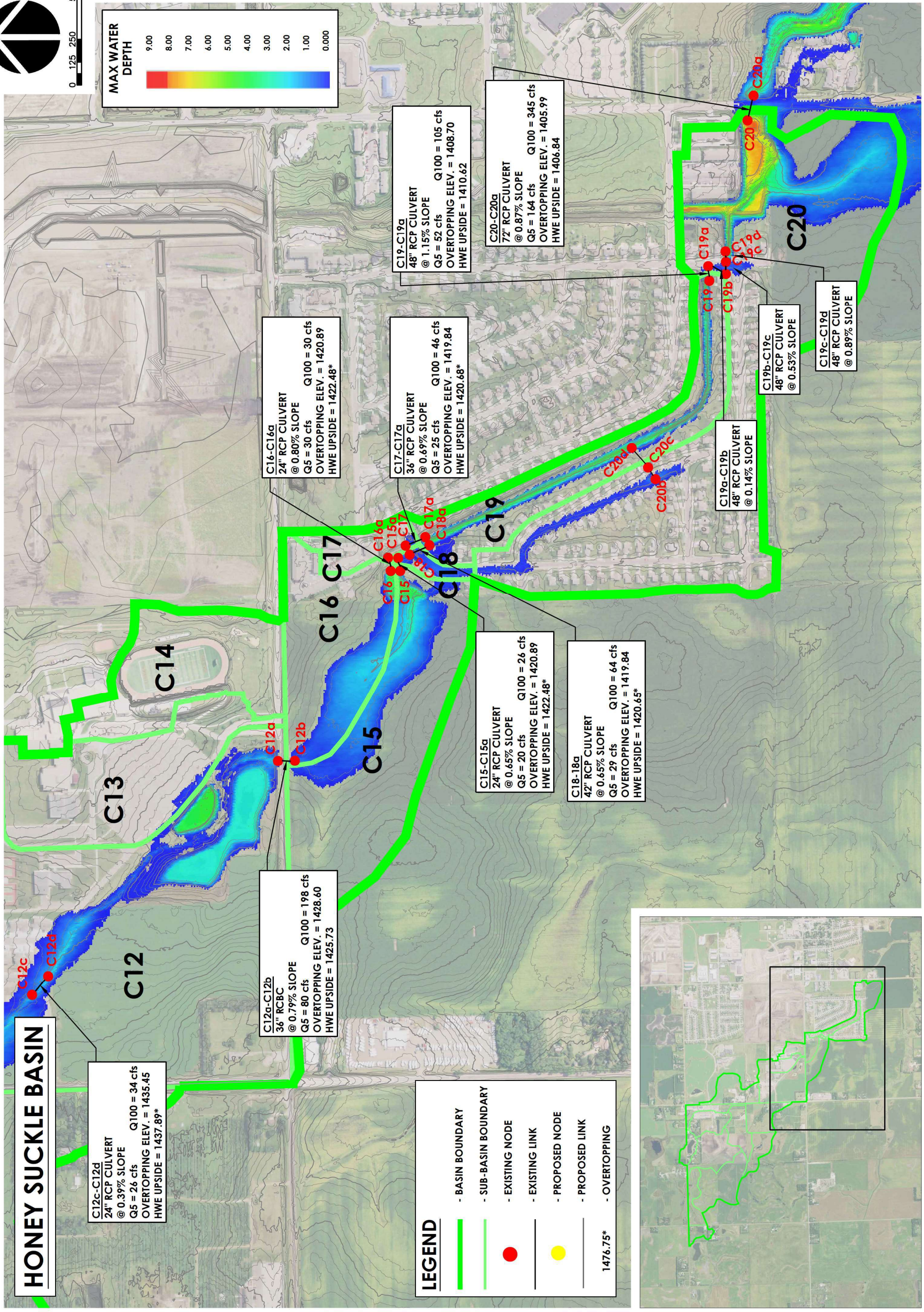
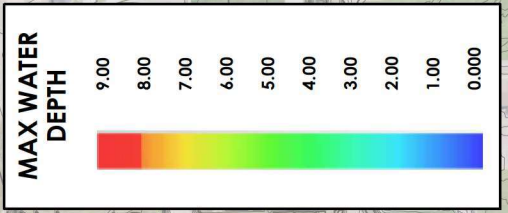
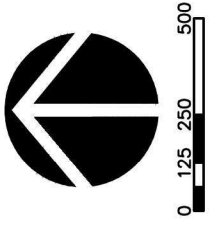
LEGEND

	- BASIN BOUNDARY
	- SUB-BASIN BOUNDARY
	- EXISTING NODE
	- EXISTING LINK
	- PROPOSED NODE
	- PROPOSED LINK
	- OVERTOPPING

C8-C8a
 18" RCP CULVERT
 @ 0.00% SLOPE
 Q5 = 11 cfs
 Q100 = 11 cfs
 OVERTOPPING ELEV. = 1442.80
 HWE UPSIDE = 1443.90*

C11-C11g
 FOUR 36" RCP CULVERTS
 @ 0.38% SLOPE
 Q5 = 75 cfs
 Q100 = 159 cfs
 OVERTOPPING ELEV. = 1440.72
 HWE UPSIDE = 1442.34*

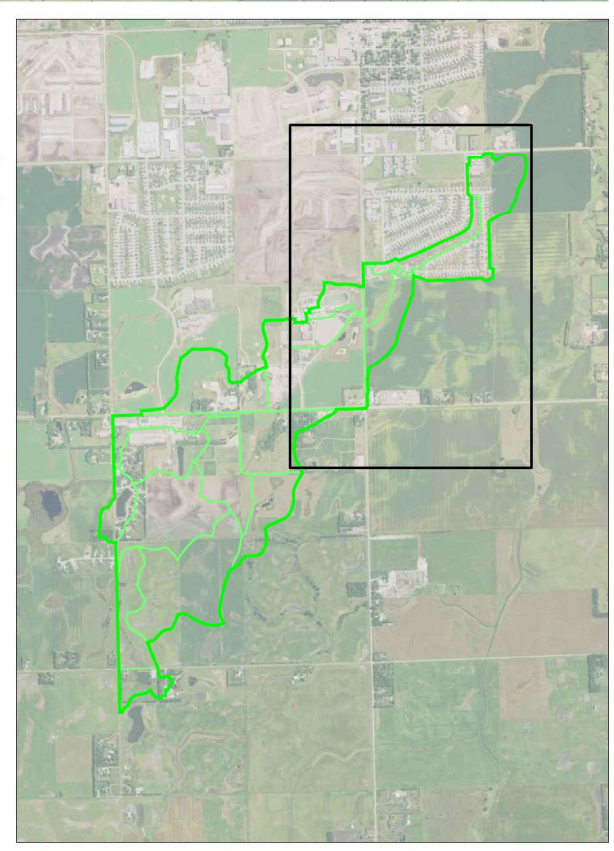




LEGEND

- BASIN BOUNDARY
- SUB-BASIN BOUNDARY
- EXISTING NODE
- EXISTING LINK
- PROPOSED NODE
- PROPOSED LINK
- OVERTOPPING

1476.75*





WEST HARRISBURG MASTER DRAINAGE PLAN
 COYOTE, WESTERN, HONEY SUCKLE, MINNESOTA BASINS

HARRISBURG, SOUTH DAKOTA
 SEI PROJECT #: 18044

HONEY SUCKLE
 BASIN XPSWMM
 PROP. RESULTS

Node Name	Area ac	Curve Number	Time of Concentration (min)	5-YEAR			100-YEAR		
				Max Flow (cfs)	Max Water Depth (ft)	Max Flow (cfs)	Max Water Depth (ft)	Max Flow (cfs)	Max Water Depth (ft)
C1	11.00	75.2	54.4	6.6	0.9	20.4	2.2		
C2	28.00	79.0	24.6	36.1	1.9	98.5	3.0		
C3	16.20	77.6	63.0	10.1	1.4	29.0	2.4		
C4	78.40	79.0	40.1	73.2	2.4	201.9	3.0		
C5	61.30	78.2	44.2	51.0	1.2	144.3	1.5		
C6	35.10	81.2	72.1	24.1	1.8	63.1	2.4		
C7	18.90	85.3	32.5	28.0	1.3	65.6	1.7		
C8b	39.70	82.7	23.6	63.4	0.9	157.2	3.1		
C9	47.90	69.5	67.9	15.9	0.8	61.5	1.2		
C10	28.50	79.0	31.0	31.7	1.1	87.1	1.8		
C11	39.90	80.6	27.6	52.2	3.9	136.8	4.5		
C12	76.90	81.3	35.4	88.6	1.8	229.3	2.7		
C13	16.00	80.0	74.9	10.0	0.3	27.1	0.5		
C14	12.90	82.7	64.0	10.5	1.3	26.3	1.6		
C15	21.90	79.0	41.3	20.0	2.3	55.3	3.2		
C16	12.90	84.0	25.6	20.9	2.3	50.3	4.2		
C17	2.67	75.0	18.6	3.2	2.2	9.7	4.1		
C18	2.67	75.0	15.8	3.5	2.0	10.4	3.9		
C19	12.48	75.0	18.3	15.1	3.3	45.7	7.0		
C20	52.61	76.7	27.9	55.0	6.2	160.7	9.6		

Link Name	Length (ft)	Diameter (Height) ft	Shape	Conduit Slope	Roughness	Design Full Flow cfs	5-Year				100-Year					
							Upstream Node Name	Upstream Invert Elevation ft	Downstream Node Name	Downstream Invert Elevation ft	Max Flow cfs	Max Velocity ft/s	Maximum Water Elevation (US) ft	Max Flow cfs	Max Velocity ft/s	Maximum Water Elevation (US) ft
C2a-C2b	41.0	1.50	Circular	0.20	0.024	2.5	C2b	1451.92	C2a	1451.84	-5.6	-3.2	1454.29	-9.6	-5.4	1455.49
C3a-C3b	60.0	0.50	Circular	3.45	0.013	1.0	C3a	1454.93	C3b	1452.86	0.0	0.0	1454.93	-0.1	-0.6	1455.86
C8-C8a	42.0	1.50	Circular	0.00	0.024	0.2	C8	1438.69	C8a	1438.69	0.0	0.0	1438.69	10.9	6.1	1442.99
C11-C11a	146.0	3.00	Circular	0.17	0.012	29.9	C11	1435.70	C11a	1435.45	41.2	1.5	1439.63	66.0	2.3	1440.22
C12a-C12b	43.0	3.00	Rectangular	0.79	0.013	183.0	C12a	1421.69	C12b	1421.35	26.1	4.3	1422.70	160.5	9.2	1424.82
C12c-C12d	260.0	2.22	Special	0.39	0.013	24.8	C12c	1433.50	C12d	1433.00	13.8	1.0	1436.40	25.5	1.0	1437.05
C15-C15a	69.0	2.00	Circular	0.65	0.013	18.3	C15	1417.70	C15a	1417.25	20.0	6.1	1420.04	25.7	8.1	1420.89
C16-C16a	69.0	2.00	Circular	0.80	0.013	20.2	C16	1417.74	C16a	1417.19	22.4	6.9	1420.05	30.6	9.7	1421.92
C17-C17a	116.0	3.00	Circular	0.69	0.013	55.4	C17	1414.95	C17a	1414.15	14.1	2.9	1417.13	30.8	4.3	1419.09
C18-C18a	116.0	3.50	Circular	0.66	0.013	81.4	C18	1415.13	C18a	1414.37	16.7	3.1	1417.13	45.6	4.6	1419.09
C19-C19a	50.3	4.00	Circular	1.15	0.013	124.9	C19	1402.37	C19a	1401.99	24.5	2.3	1405.63	83.5	6.6	1409.36
C19a-C19b	129.9	4.00	Circular	0.15	0.013	54.9	C19a	1401.89	C19b	1401.70	24.5	2.0	1405.59	83.4	6.6	1408.85
C19b-C19c	37.4	4.00	Circular	0.54	0.013	105.1	C19b	1401.70	C19c	1401.50	24.5	2.0	1405.56	82.0	6.5	1408.42
C19c-C19d	28.1	4.00	Circular	0.89	0.013	135.5	C19c	1401.50	C19d	1401.25	24.5	1.9	1405.55	82.6	6.6	1408.31
C20-C20a	104.8	6.00	Circular	0.87	0.013	394.7	C20	1396.87	C20a	1395.96	123.4	4.3	1403.06	318.6	11.2	1406.49
C20b-C20c	36.0	2.00	Circular	0.28	0.013	11.9	C20b	1411.00	C20c	1410.90	-0.7	-0.5	1413.11	2.4	0.8	1414.83
C20c-C20d	180.0	3.00	Circular	0.31	0.013	36.9	C20c	1409.90	C20d	1409.35	-5.3	-1.3	1413.11	2.9	-0.5	1414.83