Drainage Analysis for
SFWMD and Town of Windermere

Windermere Downtown Property

Town of Windermere, FL

Prepared by:

Kimley-Horn and Associates, Inc.
Orlando, Florida
K-H Project No. 149973004

February 2023

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Registry No. 35106

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Marcus I. Geiger, P.E.
FL P.E. # 89199

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1 SUMMARY

The Windermere Downtown Property project proposes the development of a 2.17-acre property for commercial purposes. The proposed project is located at the northeast corner of East 6th Avenue and Main Street in the Town of Windermere, Florida. In **Appendix A**, the limits of the project have been superimposed on a general location map, an aerial photograph, the USGS Quad map, and the FEMA Flood Insurance Rate Map (FIRM).

Stormwater runoff from the proposed development will be managed by an underground exfiltration system located within the parking lot and drive aisles of the site. The BMPs will provide treatment (quality) volume and attenuation (quantity) volume for the proposed development.

The proposed stormwater management system has been designed to meet or exceed all the requirements of South Florida Water Management District (SFWMD) and the Town of Windermere, FL.

2 EXISTING CONDITIONS

The existing property has minimal development with three (3) existing buildings along Main St. and two (2) single family homes along Oakdale. No wetlands exist on site. No existing stormwater treatment is provided on site.

Based on the topographic survey, the site slopes northwest. Elevations vary between ±124.63-ft along E. 6th Ave. and 121.30-ft (NAVD88) near the northwest property limits. Per the FEMA FIRM (Map Number 12095C0385F dated Sept. 25, 2009) located in Appendix A, the site is located in 'Zone X,' "Areas determined to be outside the 0.2% (500-year) annual chance floodplain".

2.1 SOILS

ECS Florida, LLC (ECS) performed a subsurface exploration and geotechnical engineering report for the proposed site. Please refer to the Geotechnical Engineering Report(s) prepared by ECS, dated May 27, 2022. Additionally, the SCS Soil Survey for the proposed site can be found in **Appendix A**.

2.2 GROUNDWATER

The groundwater levels were investigated and determined by Terracon and were included as part of their Geotechnical Engineering Report(s). Please refer to the Geotechnical Engineering Report(s) prepared by Terracon, dated May 27,2022.

Stormwater Management Area	Boring Label	Existing Conditions Natural Ground (ft.) (NAVD)	Measured Groundwater Approx. Elevation (ft.) (NAVD)	Estimated SHWT (ft.) (NAVD)	Control Elevation Used (ft.) (NAVD)
Basin A	A-02	123.56	114.06	115.56	115.50
	A-03	123.60	114.10	115.60	
	R-03	123.41	113.91	115.41	
Basin B	R-01	121.51	>111.51	113.51	114.50
	A-04	123.53	114.03	115.53	
	R-02	122.82	113.32	114.82	

2.3 EXISTING DRAINAGE

The existing undeveloped property contains no stormwater BMPs for onsite stormwater. The site is broken up into two (2) basins. Basin A (0.17-acres) is located at the southern edge of the site along E 6th Ave. and drains directly offsite into drainage inlets along E. 6th Avenue. Basin B (2.0-acres) is the majority of the site and drains northwest towards 5th Avenue. Runoff from Basin B is collected in drainage inlets along E. 5th Avenue. Site discharges from the property entering the inlets along E. 6th Ave. and E. 5th Ave. will enter the master drainage system originally permitted under SFWMD Permit No. 040701-24.

Please also refer to the USGS Quad Map in Appendix A and the Pre-Development Basin Map located in **Appendix B**.

2.3.1 BASINS

Existing site conditions consist of two (2) basin. Basin-A is a 0.17 acre basin at the south side of the site along E. 6th Avenue. Basin-B is a 2.0 acre basin that drains northwest to E. 5th Avenue. The table below provides the existing basin characteristics used to model existing conditions. Please refer to **Appendix A** for an exhibit showing location of basins under existing conditions.

	Basin A	Basin B
Drainage Basin Area (acres)	0.17	2.00
Time of Conc., TC (min.)	10	31
Composite Curve Number, CN	63.6	49.3
Node	South Outfall	North Outfall

Table 1:Existing Pre-Development Basin Summary Table

2.3.2 CN CALCULATIONS

CN values for the proposed property are based on the USGS values associated with the existing condition soils. See **Appendix B** for the associated drainage calculations and **Appendix D** for the modeling.

2.3.3 TIME OF CONCENTRATION

Time of concentration for Basin B has been calculated and included in

Appendix B. Due to the small size of Basin A, the time of concentration for this basin has been assumed to be the minimum 10-minute value based on TR-55 guidance.

2.3.4 TAILWATER CONDITION

The tailwater conditions for the boundary outfalls are based on the existing grades in the area the site ultimately outfalls. The associated tailwater grades are based on the topographic survey grades provided by Accuright Surveys of Orlando, Inc. dated March 17, 2021.

2.3.5 EXISTING DEVELOPMENT RUNOFF

The stormwater runoff from the pre-development basins was determined using Advanced Interconnected Channel & Pond Routing (ICPR v4.07.08) by Streamline Technologies, Inc. Please refer to **Appendix D** for the ICPR pre-development input data and drainage analysis results.

3 PROPOSED DEVELOPMENT

The Windermere Downtown Property project proposes the development of a 2.17-acre property for commercial purposes. Stormwater runoff from the proposed development will be managed by an underground exfiltration system located within the parking lot and drive aisles of the site. The BMPs will provide treatment (quality) volume and attenuation (quantity) volume for the proposed development. The proposed stormwater management system has been designed to meet or exceed all the requirements of South Florida Water Management District (SFWMD) and the Town of Windermere, FL.

3.1 STORMWATER MANAGEMENT

The proposed site is broken into two (2) basins, “Basin-A” and “Basin-B”. All stormwater within Basin-A drains into the Basin-A exfiltration trench system. All stormwater within Basin-B drains into the Basin-B exfiltration trench system. Exfiltration trenches A and B are interconnected to provide a combined treatment and attenuation volume.

The tables below summarize the parameters of the proposed exfiltration trenches and the control structure utilized in the stormwater design.

3.1.1 BASINS

The post-development drainage conditions were analyzed with multiple drainage basins. Please refer to *Table 2* below for the post-development contributing basin summary, and the Post-Development Drainage Basin Map located in **Appendix C** for details.

	Basin-A	Basin-B
Drainage Basin Area (acres)	1.738	0.694
Total Impervious Area (acres)	1.029	0.265
% Impervious	59.2%	38.2%
Time of Conc., TC (min.)	10	10
Composite Curve Number, CN	73.9	61.5
Node	Basin-A	Basin-B

Table 2: Proposed POST-Development Basin Summary Table

3.1.2 CN CALCULATIONS

A summary of the basin areas and associated CN numbers can be found in *Table 2* above. The CN calculations for the post-development conditions can be seen in **Appendix C**.

3.1.3 TIME OF CONCENTRATION

The time of concentration ('Tc') for the improved post-development drainage basins were established at 10 minutes. Please refer to the Post-Development Drainage Basin Map in **Appendix C**.

3.1.4 TAILWATER CONDITIONS

The tailwater conditions for the post-development condition are the same as the pre-development condition. Please refer to Section 2.3.4.

3.1.5 WATER QUALITY (TREATMENT) VOLUME (PER SFWMD)

Multiple stormwater systems will be utilized for the Best Management Practice (BMP) to reduce the discharge of pollutants associated with stormwater runoff from the development. The following standards are the water quality volume requirements per SFWMD ERP Applicants Handbook, Volume II, Section 4.2.1:

The Greater of:

0.5" of runoff over the Basin

OR

1.25" times the percentage of Impervious Area

PLUS

Additional 50% water quality treatment volume (for Impaired water body)

See *Table 3* below for a summary of the required and provided retention water quality (treatment) volumes. Please see **Appendix D** for water quality volume calculations.

Table 3: Required Wet Pond Treatment Volumes

Drainage Area	Drainage Area (acres)	Imp. Area for Water Quality (acres)	Required Water Quality Volume				***Provided Water Quality Volume
			0.5" Over Site	1.25" Over Impervious Area	50% Add. Impaired	Total Required	
BASIN-A	1.738	0.709	0.07 ac-ft	0.10 ac-ft	0.05 ac-ft	**0.15 ac-ft**	**0.56 ac-ft**
BASIN-B	0.694	0.265	0.03 ac-ft	0.03 ac-ft	0.01 ac-ft	**0.04 ac-ft**	**0.17 ac-ft**

3.1.6 WATER QUALITY VOLUME RECOVERY

Per SFWMD criteria, the exfiltration trenches are required to recover the treatment volume within 72 hours (3 days) following a storm event.

Table 4 below provides the Kh and Kv values used to model the recovery within the exfiltration trenches. A safety factor of 2.0 has been applied to the K_h & K_v rates. Any fill used to bring the system to the design elevation will be required to have these permeability rates.

Table 4: Permeability Rates

Node Name	K (Horizontal)* ft/day	K (Vertical)* ft/day
Basin A	10.65	7.1
Basin B	10.65	7.1

**Value includes safety factor of 2*

Recovery was determined utilizing ICPR (v4.07.08). As designed, the exfiltration trenches drawdown the required volume in less than 72 hours. Please see **Appendix E** for supporting recovery analysis and results.

3.1.7 PROPOSED DEVELOPMENT RUNOFF

The stormwater runoff from the post-development basins was determined using ICPR (v4.07.08) by Streamline Technologies, Inc. Please refer to **Appendix C** for the post-development drainage analysis results, input data, and nodal diagram. Please refer to *Table 5* below for a summary of the pre- vs. post- development peak discharge rates (Q).

Table 5: Peak Discharge Summary

	Pre-Development North Outfall Q_{max} (CFS)	**Post-Development North Outfall Q_{max} (CFS)**
25yr-72hr Storm Event	2.89	2.64

Table 6: Pond Maximum Stage Summary

Storm Event	**Basin A Max Stage (ft.) (NAVD)**	**Basin B Max Stage (ft.) (NAVD)**
10yr-24hr	121.51	121.51
25yr-72hr	122.79	122.76
100yr-72hr	123.33	123.01
Top of Trench/Pavers	123.25	120.00

3.1 CONCLUSION

This Drainage Analysis demonstrates the proposed improvements and design of the proposed stormwater management system meet or exceeds all the requirements of the South Florida Water Management District (SFWMD) and the Town of Windermere.

APPENDICES

VICINITY MAPS ..... APPENDIX A

- **General Location Map**
- **Aerial Photograph**
- **USGS Quad Map**
- **FEMA F.I.R.M.**
- **SCS SOIL SURVEY**

PRE - DEVELOPMENT
DRAINAGE BASIN MAP & CALCULATIONS..... APPENDIX B

POST - DEVELOPMENT
DRAINAGE BASIN MAP & CALCULATIONS..... APPENDIX C

DRAINAGE ANALYSIS per ICPR ..... APPENDIX D

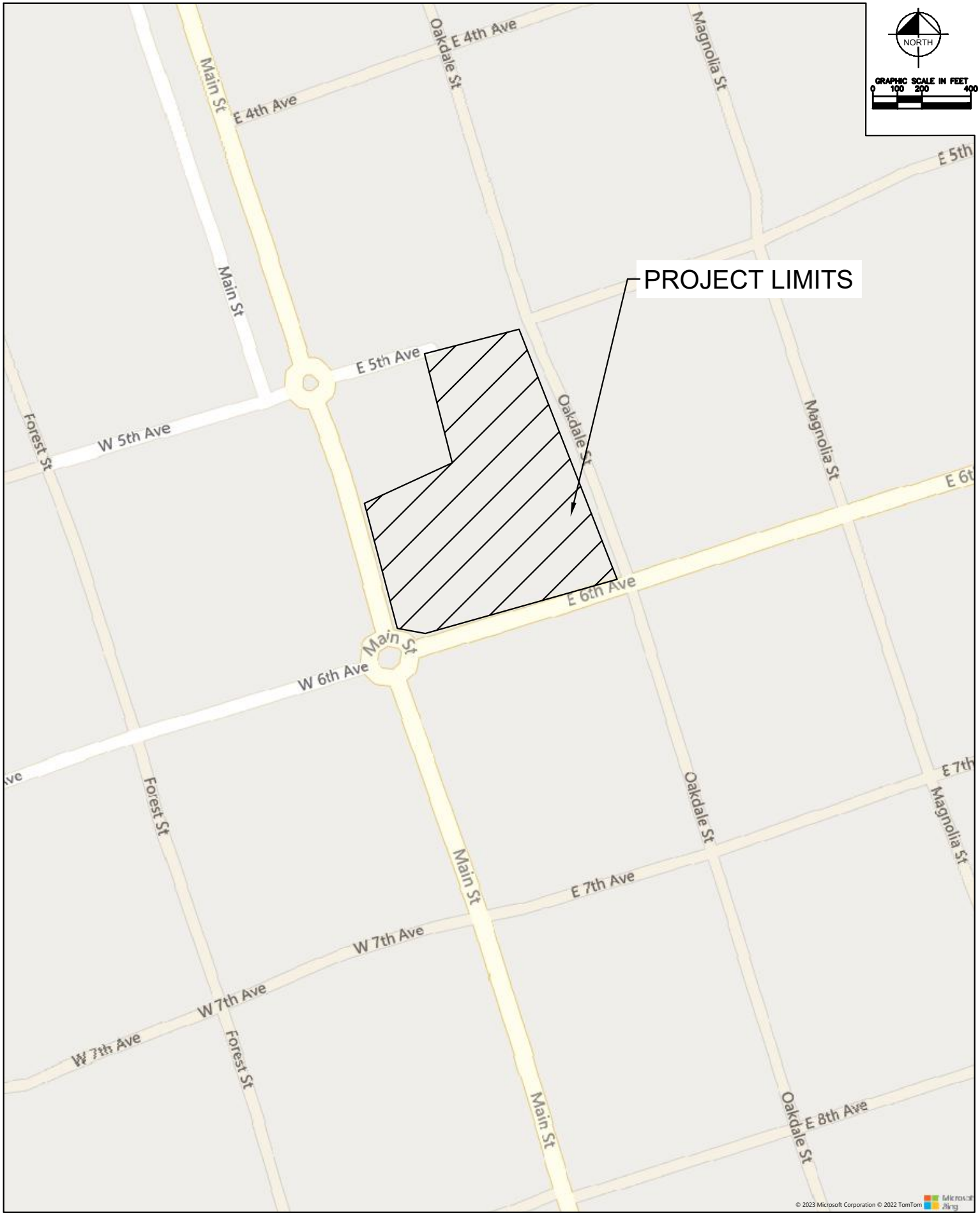
- **PRE-DEVELOPMENT**
- **POST-DEVELOPMENT**

DRAWDOWN (RECOVERY) ANALYSIS per PONDS ..... APPENDIX E

APPENDIX A

PROJECT MAPS

- General Location Map
- Aerial Photograph
- USGS Quad Map
- FEMA F.I.R.M.
- SCS SOIL MAP



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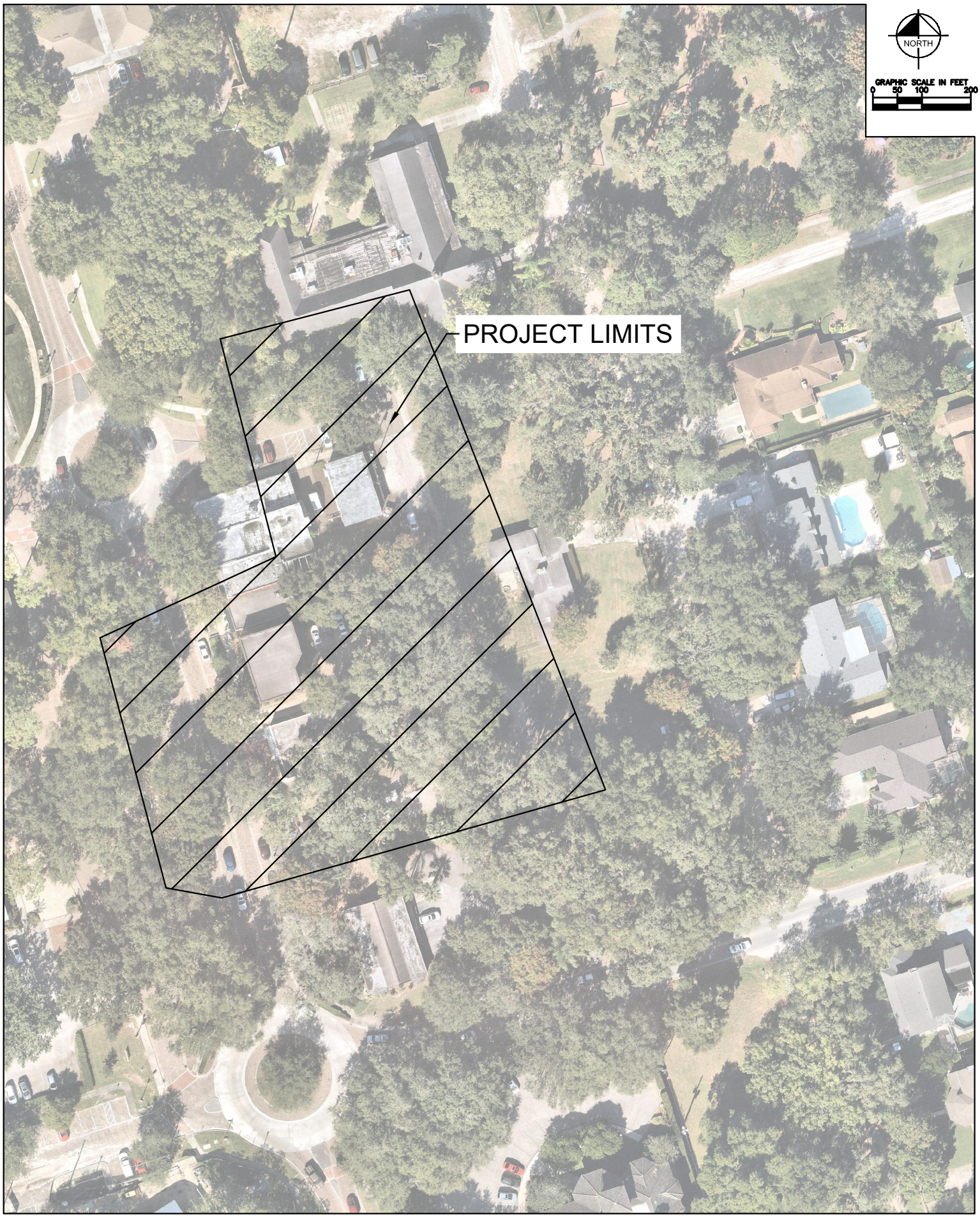
EX-2

WINDERMERE DOWNTOWN PROPERTY

WINDERMERE, FLORIDA

LOCATION MAP

Kimley»Horn



EX-1

WINDERMERE DOWNTOWN PROPERTY

WINDERMERE, FLORIDA

AERIAL MAP

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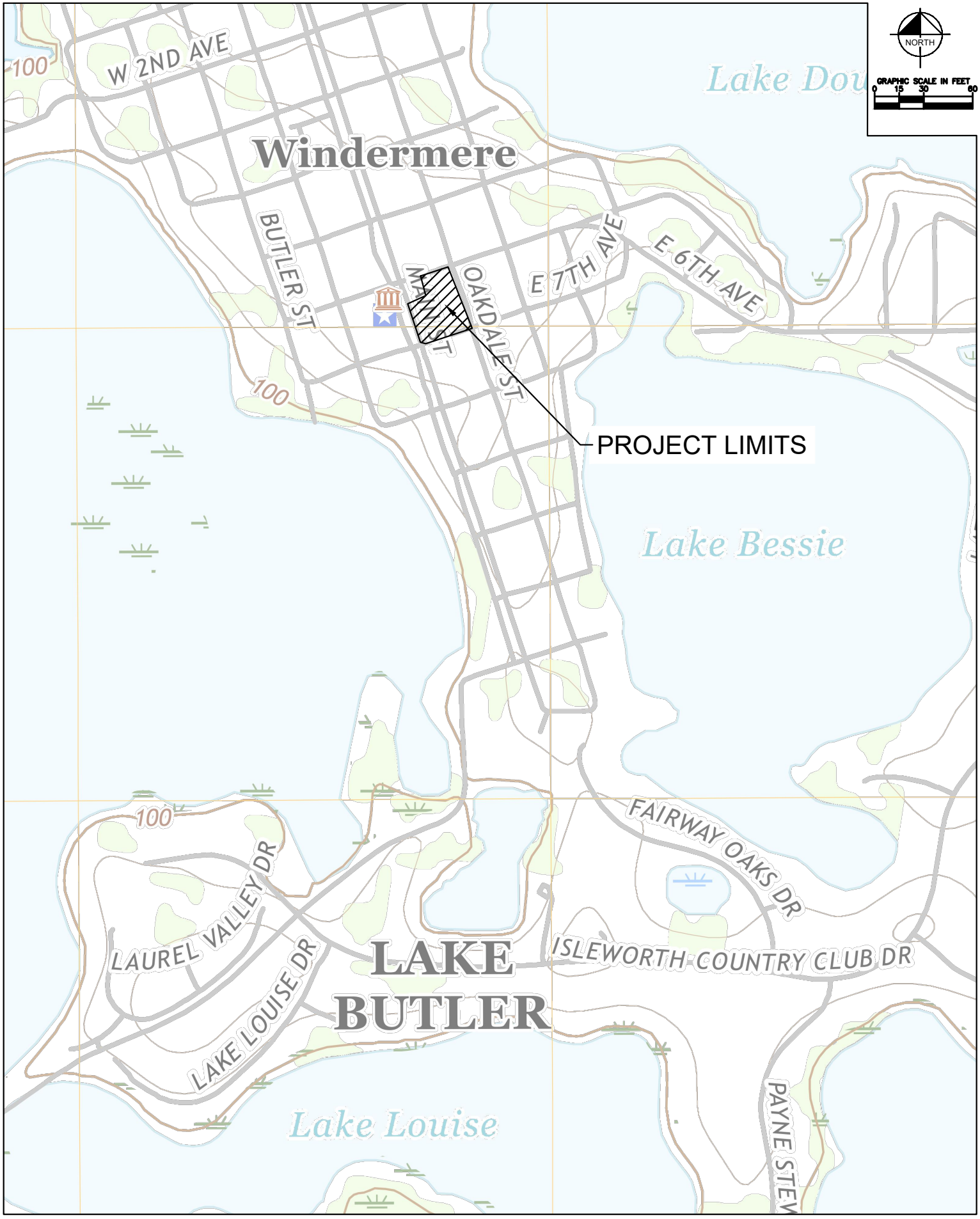

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EX-4

WINDERMERE DOWNTOWN PROPERTY

WINDERMERE, FLORIDA

USGS QUAD MAP

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EX-5

WINDERMERE DOWNTOWN PROPERTY

WINDERMERE, FLORIDA

FEMA F.I.R.M. MAP

Kimley»Horn

Map Unit Symbol	Map Unit Name
48	Tavares fine sand-Urban land complex, 0 to 5 percent slopes

EX-3

WINDERMERE DOWNTOWN PROPERTY

WINDERMERE, FLORIDA

SCS SOIL SURVEY

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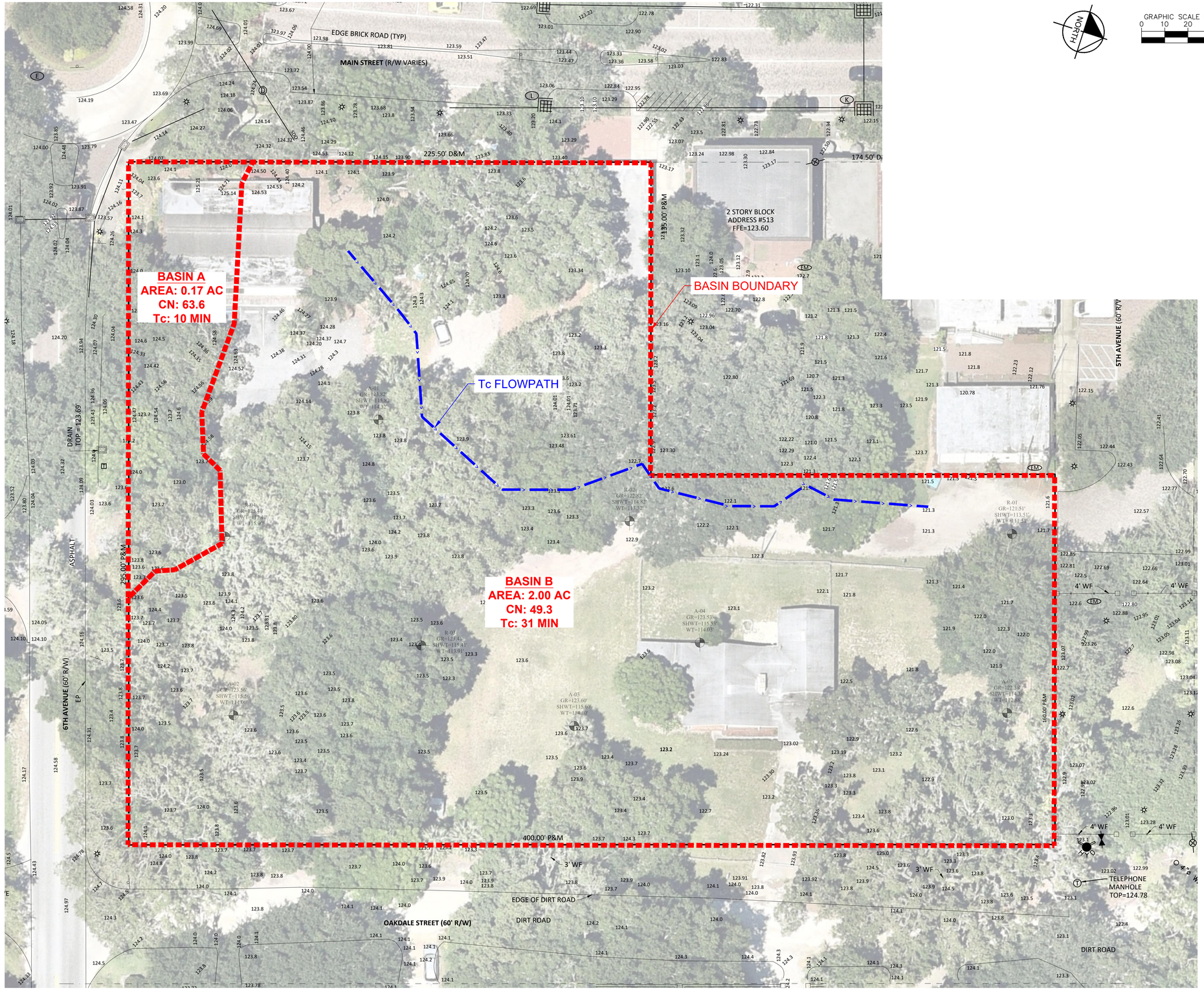
APPENDIX B

PRE - DEVELOPMENT

- DRAINAGE BASIN MAP
- Tc CALCULATION
- CN CALCULATION



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No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL
FL LICENSE NUMBER
DATE:

KHA PROJECT 149973004
DATE 02/18/2022
SCALE AS SHOWN
DESIGNED BY MIG
DRAWN BY CML
CHECKED BY MIG

PRE-DEVELOPMENT DRAINAGE MAP

WINDERMERE DOWNTOWN PROPERTY

TOWN OF WINDERMERE FL

SHEET NUMBER
PRE-01

Worksheet 3 : Time of Concentration (T_c) or travel time (T_t)

Project	WINDERMERE DOWNTOWN PROPERTY	By	MIG	Date	2/24/2022
Location	WINDERMERE, FL	Checked	JAM	Date	2/24/2022
		Pre	X	Post	
		T_c	X	T_t	

			Basin	PRE-A	PRE-B			
Sheet flow (Applicable to Tc only)								
			Segment ID		Overland			
1.	Surface Description (Table 3-1)				Short Grass			
2.	Manning's Roughness coeff., n (Table 3-1)				0.20			
3.	Flow Length, L (total L ≤ 300 ft)		ft		300			
4.	2-Yr 24-Hr rainfall, P_2		in		4.5			
5.	Land slope, s		ft/ft		0.012			
6.	$T_t = 0.007(nL)^{0.8} / P_2^{0.5} s^{0.4}$		hr		0.515			
Shallow Concentrated Flow								
			Segment ID		Overland			
7.	Surface Description (Paved or Unpaved)				Unpaved			
8.	Flow Length, L		ft		25.8			
9.	Watercourse slope, s		ft/ft		0.002			
10.	Average Velocity, V (figure 3-1)		ft/s		1.75			
11.	$T_t = L / 3600V$		hr		0.004			
Channel Flow								
			Segment ID					
12.	Cross sectional flow area, a		ft^2					
13.	Wetted perimeter, p_w		ft					
14.	Hydraulic Radius, $r = a / p_w$		ft					
15.	Channel Slope, s		ft/ft					
16.	Manning's Roughness coeff., n							
17.	$V = 1.49 r^{2/3} s^{1/2} / n$		ft/s					
18.	Flow Length, L		ft					
19.	T_t =		hr					
20.	Watershed or subarea T_c or T_t (Adding T_t in Steps 6,11,and 19)		hr		0.52	0.00	0.00	0.00
		or	min	10	31	0	0	0

(210-VI-TR-55, Second Ed., June 1986)

CURVE NUMBER WORKSHEET

PRE-DEVELOPMENT FOR BASIN-A

Basin Area = 0.17 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.10	A	Cover > 75%	39	3.8
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.070	A,B,C,D	Impervious (Pavement, Concrete, Surface Waters)	98	6.9
			WEIGHTED CURVE NUMBER =	**63.6**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

PRE-DEVELOPMENT FOR BASIN-B

Basin Area = 2.00 acres

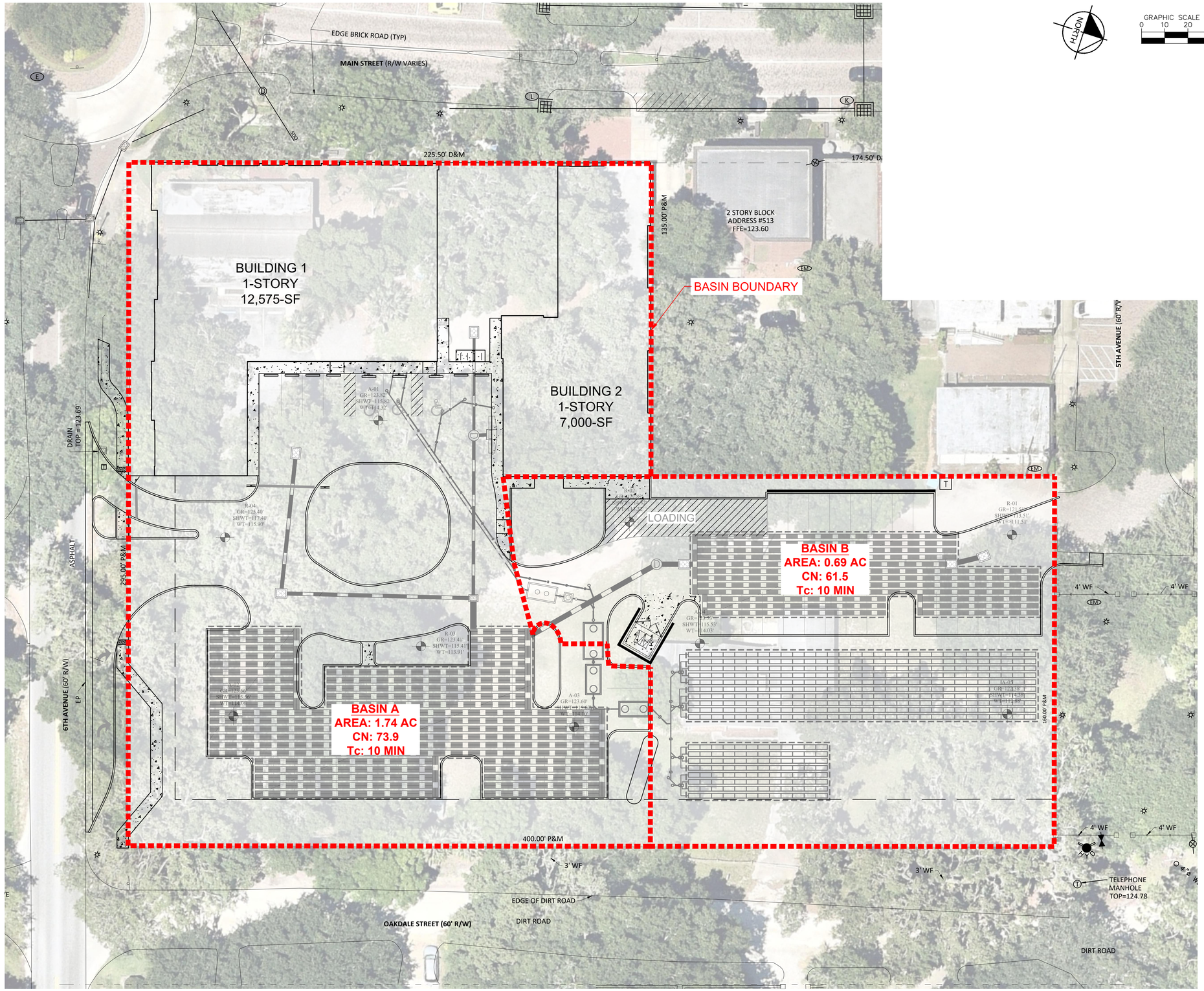
AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
1.65	A	Cover > 75%	39	64.3
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.348	A,B,C,D	Impervious (Pavement, Concrete, Surface Waters)	98	34.1
			WEIGHTED CURVE NUMBER =	**49.3**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

APPENDIX C

POST - DEVELOPMENT

- **DRAINAGE BASIN MAP**
- **CN CALCULATION**
- **TREATMENT VOLUME CALC & STAGE/STORAGE**



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189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

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FL LICENSE NUMBER

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DATE	02/16/2022
SCALE	AS SHOWN
DESIGNED BY	MIG
DRAWN BY	CML
CHECKED BY	MIG

POST-DEVELOPMENT DRAINAGE MAP

WINDERMERE DOWNTOWN PROPERTY

TOWN OF WINDERMERE FL

SHEET NUMBER
POST-01

CURVE NUMBER WORKSHEET

POST-DEVELOPMENT BASIN A

Basin Area = 1.74 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.579	A	Cover > 75%	39	22.6
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.130	A,B,C,D	PAVEDRAIN	39	5.1
0.579	A,B,C,D	Impervious (Pavement, Concrete)	98	56.8
0.450	A,B,C,D	Impervious (Building/Roof Area)	98	44.1
			WEIGHTED CURVE NUMBER =	**73.9**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

SFWMD - WATER QUALITY CRITERIA

DRY RETENTION A

Basin Area =	1.74	acres
Pervious Area =	0.58	acres
Water surface area =	0.00	acres
Roof Area =	0.45	acres
Impervious Area (Excluding water surface/roof area) =	0.709	acres

1. Compute the first 1-inch of runoff from the developed project:

= 1 inch x 1.74 ac. x (1ft/12in) x 50%
= **0.07** **ac-ft.** for the first inch of runoff

2. Compute 2.5-inches times the percentage of imperviousness:

a. Site area for water quality pervious/impervious calculations only:

= Total project - (water surface + roof)
= 1.74 ac. - (0.00 ac. + 0.45 ac.)
= 1.74 ac. - 0.45 ac.
= **1.29** **acres** of site area for water quality pervious/impervious

b. Impervious area for water quality pervious/impervious calculations only:

= (Site area for water quality pervious/impervious) - pervious area
= 1.29 ac. - 0.58 ac.
= **0.71** **acres** of impervioуus area for water quality pervious/impervious

c. Percentage of impervious for water quality:

= (Impervious area for water quality/Site area for water quality) x 100%
= (0.71 ac. / 1.29 ac.) x 100%
= **55.0%** **impervious**

d. For 2.5 inches times the percentage impervious:

= 2.5 in. x 0.55
= **1.38** **inches** to be treated

e. Compute volume required for water quality Dry Retention:

= inches to be treated x (total site - lakes) x 50%
= 1.38 " x (1.74 ac. - 0.00 ac.) x (1ft/12in) x 50%
= **0.10** **acre-ft.** required dry retention storage

3. Provide additional 50% water quality treatment volume (per FDEP impaired water-body):

= 0.10 **acre-ft.** x 1.5
= **0.15** **acre-ft.**

REQUIRED DRY RETENTION VOLUME = 0.149 ACRE-FT. = 6,511 CF

PROVIDED DRY RETENTION VOLUME = 0.563 ACRE-FT. = 24,542 CF

STAGE VERSUS STORAGE RELATIONSHIP

Windermere Downtown Property
Town of Windermere, FL

Overall System Footprint =	9,643	sf
Pipe Diameter =	29	in
Pipe Invert =	118.00	ft
Total Pipe Length =	2,659	ft
Stone Porosity =	40	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth (ft)	Section Area (sf)	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac-ft)
STONE	120.42	2.42	2.42	4.59	0.00	0.0	0.0	0.0	16,639.1	
	120.42	2.42	2.42	4.59	0.00	0.0	0.0	0.0	16,639.1	
	120.42	**2.42**	**2.42**	**4.59**	**0.05**	**131.2**	**268.9**	**400.1**	**16,639.1**	**0.38198**
	120.33	2.33	2.33	4.54	0.09	235.9	227.1	463.0	16,239.0	0.37280
	120.25	**2.25**	**2.25**	**4.45**	**0.11**	**300.0**	**201.4**	**501.4**	**15,776.0**	**0.36217**
	120.17	2.17	2.17	4.34	0.13	348.5	182.0	530.5	15,274.6	0.35066
	120.08	2.08	2.08	4.20	0.15	387.5	166.4	553.9	14,744.0	0.33848
	120.00	**2.00**	**2.00**	**4.06**	**0.16**	**419.6**	**153.6**	**573.2**	**14,190.1**	**0.32576**
	119.92	1.92	1.92	3.90	0.17	446.4	142.9	589.3	13,616.9	0.31260
	119.83	1.83	1.83	3.73	0.18	468.8	133.9	602.7	13,027.6	0.29907
	119.75	**1.75**	**1.75**	**3.56**	**0.18**	**487.3**	**126.5**	**613.8**	**12,424.9**	**0.28524**
	119.67	1.67	1.67	3.37	0.19	502.5	120.4	622.9	11,811.1	0.27115
	119.58	1.58	1.58	3.18	0.19	514.6	115.6	630.2	11,188.2	0.25685
	119.50	**1.50**	**1.50**	**2.99**	**0.20**	**523.8**	**111.9**	**635.7**	**10,558.0**	**0.24238**
	119.42	1.42	1.42	2.79	0.20	530.2	109.3	639.6	9,922.3	0.22779
	119.33	1.33	1.33	2.60	0.20	534.1	107.8	641.9	9,282.8	0.21310
PIPE	**119.25**	**1.25**	**1.25**	**2.39**	**0.20**	**535.3**	**107.3**	**642.6**	**8,640.9**	**0.19837**
	119.17	1.17	1.17	2.19	0.20	534.1	107.8	641.9	7,998.2	0.18361
	119.08	1.08	1.08	1.99	0.20	530.2	109.3	639.6	7,356.4	0.16888
	119.00	**1.00**	**1.00**	**1.79**	**0.20**	**523.8**	**111.9**	**635.7**	**6,716.8**	**0.15420**
	118.92	0.92	0.92	1.60	0.19	514.6	115.6	630.2	6,081.1	0.13960
	118.83	0.83	0.83	1.40	0.19	502.5	120.4	622.9	5,450.9	0.12514
	118.75	**0.75**	**0.75**	**1.21**	**0.18**	**487.3**	**126.5**	**613.8**	**4,828.0**	**0.11084**
	118.67	0.67	0.67	1.03	0.18	468.8	133.9	602.7	4,214.2	0.09674
	118.58	0.58	0.58	0.85	0.17	446.4	142.9	589.3	3,611.5	0.08291
	118.50	**0.50**	**0.50**	**0.69**	**0.16**	**419.6**	**153.6**	**573.2**	**3,022.2**	**0.06938**
	118.42	0.42	0.42	0.53	0.15	387.5	166.4	553.9	2,449.0	0.05622
	118.33	0.33	0.33	0.38	0.13	348.5	182.0	530.5	1,895.1	0.04351
	118.25	**0.25**	**0.25**	**0.25**	**0.11**	**300.0**	**201.4**	**501.4**	**1,364.6**	**0.03133**
	118.17	0.17	0.17	0.14	0.09	235.9	227.1	463.0	863.1	0.01982
	118.08	0.08	0.08	0.05	0.05	131.2	269.0	400.2	400.2	0.00919
	118.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.0**	**0.0**	**0.0**	**0.0**	**0.00000**
STONE	118.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	
	118.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Avg. Area (SF)	Volume (CF)	Volume Sum (CF)	Volume Sum (Ac-Ft)
1-IN ABOVE STRUCTURE	123.42	3.00	9,643	0.221		804	27,514	0.6316
					9,643			
TOP OF STRUCTURE (1-IN)	123.33	2.91	9,643	0.221		804	26,710	0.6132
					9,643			
TOP OF PAVERS	**123.25**	2.83	9,643	0.221		1,004	25,907	0.5947
					9,643			
TOP OF #57 STONE/BOTTOM OF PAVERS	122.75	2.33	9,643	0.221		1,205	24,903	0.5717
					9,643			
TOP OF #4 STONE	122.25	1.83	9,643	0.221		7,059	23,698	0.5440
					9,643			
BOTTOM OF STONE	120.42	0	9,643	0.221		0	16,639	0.3820

NOTE:

VOID RATIO OF 0.25 USED FOR THE TOP 6-INCH LAYER OF #57 STONE AND 0.40 FOR THE 22-INCH LAYER OF #4 STONE.

CURVE NUMBER WORKSHEET

POST-DEVELOPMENT BASIN B

Basin Area = 0.694 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.429	A	Cover > 75%	39	16.7
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.265	A,B,C,D	Impervious (Pavement, Concrete, Surface Waters)	98	26.0
			WEIGHTED CURVE NUMBER =	**61.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

SFWMD - WATER QUALITY CRITERIA

DRY RETENTION B

Basin Area =	0.694	acres
Pervious Area =	0.429	acres
Water surface area =	0.00	acres
Roof Area =	0.00	acres
Impervious Area (Excluding water surface/roof area) =	0.265	acres

1. Compute the first 1-inch of runoff from the developed project:

= 1 inch x 0.69 ac. x (1ft/12in) x 50%
= **0.03** **ac-ft.** for the first inch of runoff

2. Compute 2.5-inches times the percentage of imperviousness:

a. Site area for water quality pervious/impervious calculations only:

= Total project - (water surface + roof)
= 0.69 ac. - (0.00 ac. + 0.00 ac.)
= 0.69 ac. - 0.00 ac.
= **0.69** **acres** of site area for water quality pervious/impervious

b. Impervious area for water quality pervious/impervious calculations only:

= (Site area for water quality pervious/impervious) - pervious area
= 0.69 ac. - 0.43 ac.
= **0.27** **acres** of impervioуus area for water quality pervious/impervious

c. Percentage of impervious for water quality:

= (Impervious area for water quality/Site area for water quality) x 100%
= (0.27 ac. / 0.69 ac.) x 100%
= **38.2%** **impervious**

d. For 2.5 inches times the percentage impervious:

= 2.5 in. x 0.38
= **0.95** **inches** to be treated

e. Compute volume required for water quality Dry Retention:

= inches to be treated x (total site - lakes) x 50%
= 0.95 " x (0.69 ac. - 0.00 ac.) x (1ft/12in) x 50%
= **0.03** **acre-ft.** required dry retention storage

3. Provide additional 50% water quality treatment volume (per FDEP impaired water-body):

= 0.03 **acre-ft.** x 1.5
= **0.04** **acre-ft.**

REQUIRED DRY RETENTION VOLUME = 0.043 ACRE-FT. = 1,890 CF

PROVIDED DRY RETENTION VOLUME = 0.169 ACRE-FT. = 7,377 CF

CONTECH® ENGINEERED SOLUTIONS

STAGE VERSUS STORAGE RELATIONSHIP

Windermere Downtown Property
Town of Windermere, FL

Overall System Footprint =	5,264	sf
Pipe Diameter =	24	in
Pipe Invert =	118.00	ft
Total Pipe Length =	1,680	ft
Stone Porosity =	40	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth (ft)	Section Area (sf)	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac-ft)
STONE	120.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	7,377.3	
	120.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	7,377.3	
	120.00	**2.00**	**2.00**	**3.14**	**0.04**	**75.2**	**145.4**	**220.6**	**7,377.3**	**0.1694**
	119.92	1.92	1.92	3.10	0.08	134.8	121.5	256.3	7,156.7	0.1643
	119.83	1.83	1.83	3.02	0.10	170.7	107.2	277.9	6,900.3	0.1584
	119.75	**1.75**	**1.75**	**2.91**	**0.12**	**197.4**	**96.5**	**293.9**	**6,622.5**	**0.1520**
	119.67	1.67	1.67	2.80	0.13	218.4	88.1	306.5	6,328.6	0.1453
	119.58	1.58	1.58	2.67	0.14	235.2	81.4	316.6	6,022.1	0.1382
	119.50	**1.50**	**1.50**	**2.53**	**0.15**	**248.7**	**76.0**	**324.7**	**5,705.5**	**0.1310**
	119.42	1.42	1.42	2.38	0.15	259.4	71.7	331.1	5,380.8	0.1235
	119.33	1.33	1.33	2.22	0.16	267.7	68.4	336.1	5,049.7	0.1159
	119.25	**1.25**	**1.25**	**2.07**	**0.16**	**273.7**	**66.0**	**339.7**	**4,713.6**	**0.1082**
	119.17	1.17	1.17	1.90	0.17	277.7	64.4	342.1	4,373.9	0.1004
	119.08	1.08	1.08	1.74	0.17	279.6	63.6	343.2	4,031.9	0.0926
PIPE	**119.00**	**1.00**	**1.00**	**1.57**	**0.17**	**279.6**	**63.6**	**343.2**	**3,688.6**	**0.0847**
	118.92	0.92	0.92	1.40	0.17	277.7	64.4	342.1	3,345.4	0.0768
	118.83	0.83	0.83	1.24	0.16	273.7	66.0	339.7	3,003.3	0.0689
	118.75	**0.75**	**0.75**	**1.08**	**0.16**	**267.7**	**68.4**	**336.1**	**2,663.6**	**0.0611**
	118.67	0.67	0.67	0.92	0.15	259.4	71.7	331.1	2,327.6	0.0534
	118.58	0.58	0.58	0.76	0.15	248.7	76.0	324.7	1,996.5	0.0458
	118.50	**0.50**	**0.50**	**0.61**	**0.14**	**235.2**	**81.4**	**316.6**	**1,671.8**	**0.0384**
	118.42	0.42	0.42	0.47	0.13	218.4	88.1	306.5	1,355.2	0.0311
	118.33	0.33	0.33	0.34	0.12	197.4	96.5	293.9	1,048.7	0.0241
	118.25	**0.25**	**0.25**	**0.23**	**0.10**	**170.7**	**107.2**	**277.9**	**754.8**	**0.0173**
	118.17	0.17	0.17	0.13	0.08	134.8	121.5	256.3	477.0	0.0109
	118.08	0.08	0.08	0.04	0.04	75.2	145.4	220.6	220.6	0.0051
	118.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0000**
STONE	118.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	
	118.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	

APPENDIX D

DRAINAGE ANALYSIS

Per ICPR

PRE-DEVELOPMENT
DRAINAGE ANALYSIS

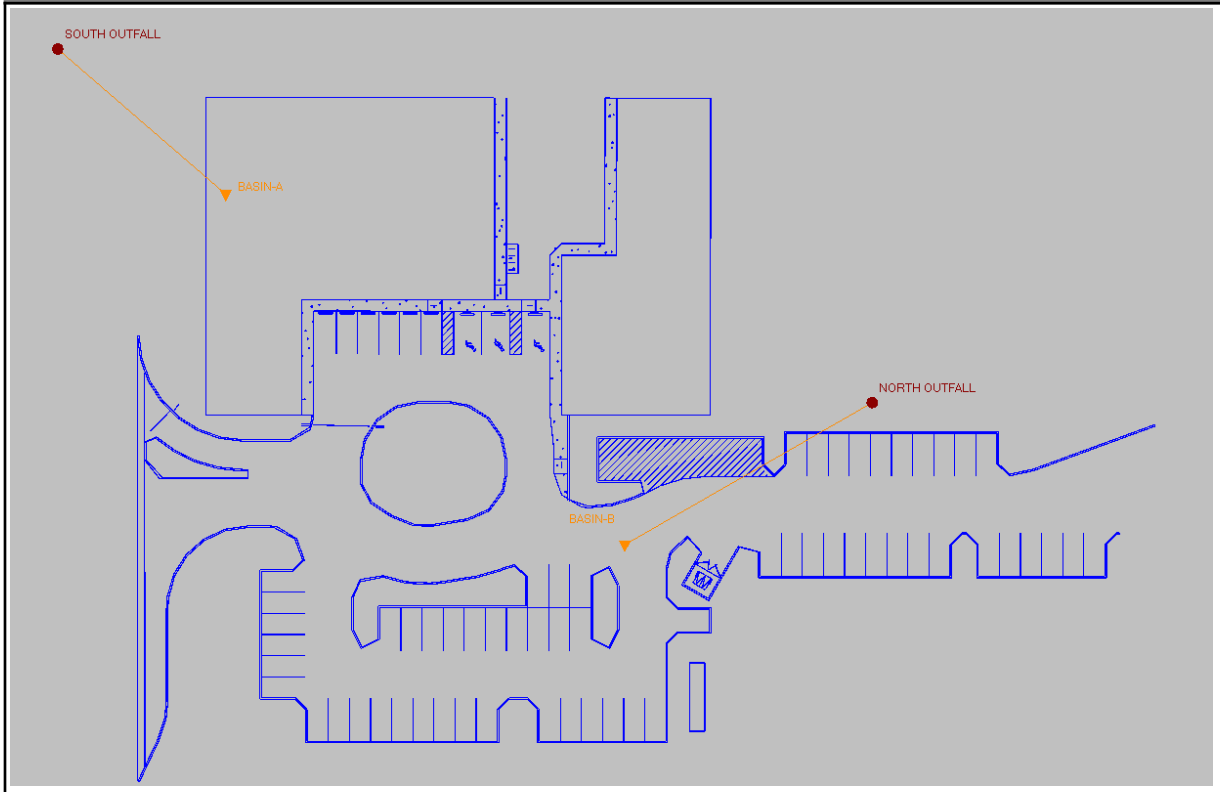
Simple Basin Runoff Summary [PRE-CONDITIONS]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN-A	100YR-72HR	0.83	60.0167	13.60	8.52	0.1700	63.6	0.00	0.00
BASIN-B	100YR-72HR	4.52	60.2167	13.60	6.10	2.0000	49.3	0.00	0.00
BASIN-A	10YR-24HR	0.43	12.0500	7.90	3.65	0.1700	63.6	0.00	0.00
BASIN-B	10YR-24HR	1.50	12.4167	7.90	2.12	2.0000	49.3	0.00	0.00
BASIN-A	25YR-72HR	0.59	60.0167	10.50	5.80	0.1700	63.6	0.00	0.00
BASIN-B	25YR-72HR	2.89	60.2333	10.50	3.81	2.0000	49.3	0.00	0.00

Node Max Conditions [PRE-CONDITIONS]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
NORTH OUTFALL	100YR-72HR	121.50	121.50	0.0000	4.52	0.00	0
SOUTH OUTFALL	100YR-72HR	123.34	123.34	0.0000	0.83	0.00	0
NORTH OUTFALL	10YR-24HR	121.50	121.50	0.0000	1.50	0.00	0
SOUTH OUTFALL	10YR-24HR	123.34	123.34	0.0000	0.43	0.00	0
NORTH OUTFALL	25YR-72HR	121.50	121.50	0.0000	2.89	0.00	0
SOUTH OUTFALL	25YR-72HR	123.34	123.34	0.0000	0.59	0.00	0

Background Image: Pre-Condition



Simple Basin: BASIN-A

Scenario:	PRE-CONDITIONS
Node:	SOUTH OUTFALL
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.1700 ac
Curve Number:	63.6
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN-B

Scenario:	PRE-CONDITIONS
Node:	NORTH OUTFALL
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	31.0000 min
Max Allowable Q:	999999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	2.0000 ac
Curve Number:	49.3
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: NORTH OUTFALL

Scenario:	PRE-CONDITIONS
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	121.50 ft
Warning Stage:	121.50 ft
Boundary Stage:	

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	121.50
0	0	0	96.0000	121.50

Comment:

Node: SOUTH OUTFALL

Scenario:	PRE-CONDITIONS
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	123.34 ft
Warning Stage:	123.34 ft
Boundary Stage:	

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	123.34
0	0	0	96.0000	123.34

Comment: Top of inlet along 6th Ave

Simulation: 100YR-72HR

Scenario: PRE-CONDITIONS
Run Date/Time: 3/2/2022 5:25:41 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	77.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:

Vertical Layers Set:	
Impervious Set:	SITE
Roughness Set:	
Crop Coef Set:	
Fillable Porosity Set:	
Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	13.60 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: SFWMD 100 yr / 72 hr

Simulation: 10YR-24HR

Scenario:	PRE-CONDITIONS
Run Date/Time:	3/2/2022 5:25:55 PM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 7.90 in
Storm Duration: 24.0000 hr

Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 10 yr / 24 hr

Simulation: 25YR-72HR

Scenario: PRE-CONDITIONS
Run Date/Time: 3/2/2022 5:26:36 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	77.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources		Lookup Tables	
Rainfall Folder:		Boundary Stage Set:	
Reference ET Folder:		Extern Hydrograph Set:	
Unit Hydrograph Folder:		Curve Number Set:	SITE
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	SITE
		Roughness Set:	
		Crop Coef Set:	
		Fillable Porosity Set:	
		Conductivity Set:	
		Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	10.50 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: SFWMD 25 yr / 72 hr

Simulation: recovery

Scenario:	RECOVERY
Run Date/Time:	2/9/2023 1:40:10 PM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

Hydrology [sec]	Surface Hydraulics	Groundwater [sec]

		[sec]	
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	No Rainfall
Max dZ:	1.0000 ft	OF Region Rain Opt:	No Rainfall
Link Optimizer Tol:	0.0001 ft		
Edge Length Option:	Automatic		
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: RECOVERY

POST-DEVELOPMENT DRAINAGE ANALYSIS

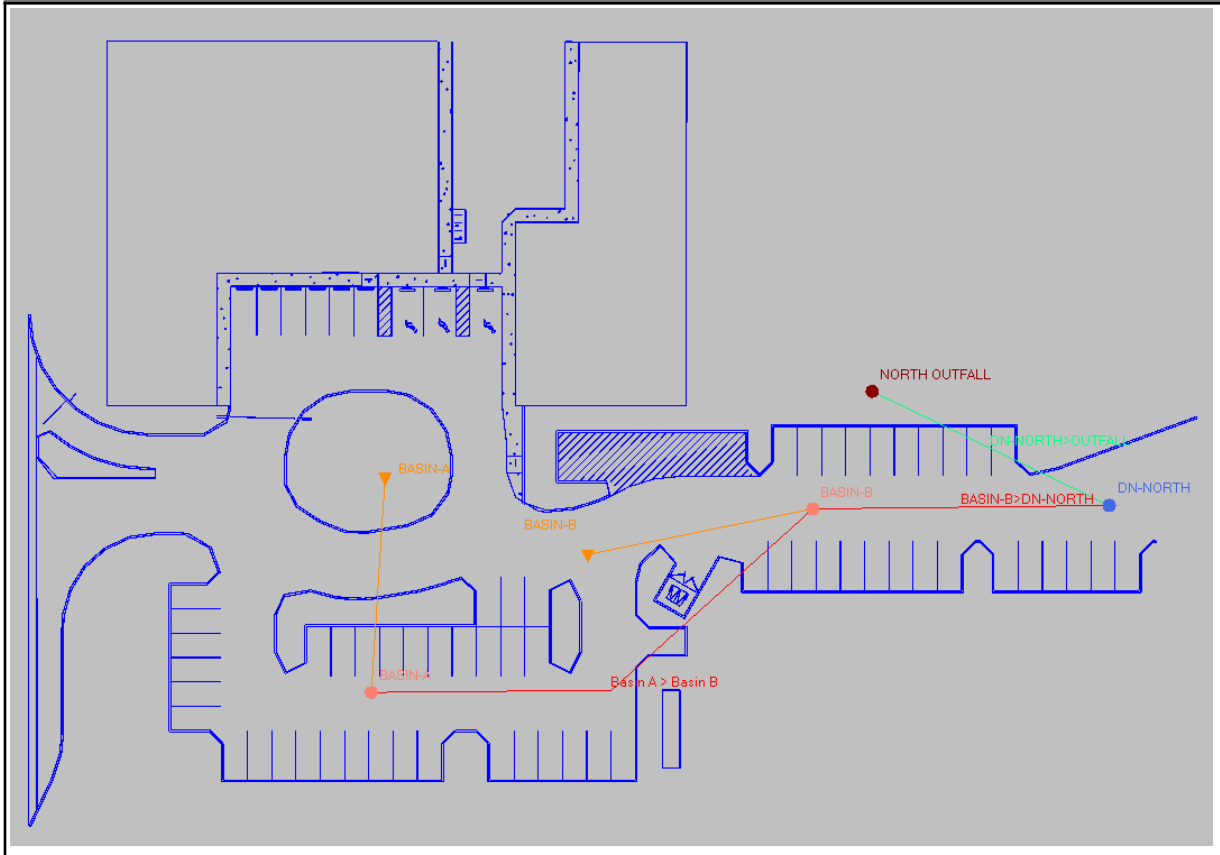
Simple Basin Runoff Summary [POST-CONDITIONS]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN-A	100YR-72HR	9.48	60.0167	13.60	10.11	1.7380	73.9	0.00	0.00
BASIN-B	100YR-72HR	3.31	60.0167	13.60	8.18	0.6940	61.5	0.00	0.00
BASIN-A	10YR-24HR	5.91	12.0500	7.90	4.82	1.7380	73.9	0.00	0.00
BASIN-B	10YR-24HR	1.65	12.0667	7.90	3.42	0.6940	61.5	0.00	0.00
BASIN-A	25YR-72HR	6.97	60.0167	10.50	7.19	1.7380	73.9	0.00	0.00
BASIN-B	25YR-72HR	2.31	60.0167	10.50	5.51	0.6940	61.5	0.00	0.00

Node Max Conditions [POST-CONDITIONS]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
BASIN-A	100YR-72HR	123.25	123.33	0.0010	9.48	6.71	14014
BASIN-B	100YR-72HR	122.60	123.01	0.0010	9.41	9.55	4184
DN-NORTH	100YR-72HR	122.60	122.98	0.0011	9.55	9.35	100
NORTH OUTFALL	100YR-72HR	121.50	121.50	0.0000	9.35	0.00	0
BASIN-A	10YR-24HR	123.25	122.51	0.0010	5.91	1.29	7755
BASIN-B	10YR-24HR	122.60	122.51	0.0010	2.94	0.07	4184
DN-NORTH	10YR-24HR	122.60	122.51	0.0010	0.07	0.02	100
NORTH OUTFALL	10YR-24HR	121.50	121.50	0.0000	0.00	0.00	0
BASIN-A	25YR-72HR	123.25	122.79	0.0010	6.97	1.96	7755
BASIN-B	25YR-72HR	122.60	122.76	0.0010	3.84	3.60	4184
DN-NORTH	25YR-72HR	122.60	122.76	0.0011	3.60	2.64	100
NORTH OUTFALL	25YR-72HR	121.50	121.50	0.0000	2.64	0.00	0

Background Image: Post-Condition



Simple Basin: BASIN-A

Scenario:	POST-CONDITIONS
Node:	BASIN-A
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	1.7380 ac
Curve Number:	73.9
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN-B

Scenario:	POST-CONDITIONS
Node:	BASIN-B
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.6940 ac
Curve Number:	61.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: BASIN-A

Scenario:	POST-CONDITIONS
Type:	Stage/Volume
Base Flow:	0.00 cfs
Initial Stage:	118.00 ft
Warning Stage:	123.25 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
123.33	0.61	26711
123.25	0.59	25905
122.75	0.57	24903
122.25	0.54	23697
120.42	0.38	16639
120.25	0.36	15776
120.00	0.33	14190
119.75	0.29	12425
119.50	0.24	10558
119.25	0.20	8641
119.00	0.15	6717
118.75	0.11	4828
118.50	0.07	3022
118.25	0.03	1365
118.00	0.00	0

Comment:

Node: BASIN-B

Scenario: POST-CONDITIONS
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 118.00 ft
Warning Stage: 122.60 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
120.00	0.17	7379
119.75	0.15	6621
119.50	0.13	5706
119.25	0.11	4713
119.00	0.08	3690
118.75	0.06	2662
118.50	0.04	1673
118.25	0.02	754
118.00	0.00	0

Comment:

Node: DN-NORTH

Scenario: POST-CONDITIONS
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 118.00 ft
Warning Stage: 122.60 ft

Comment:

Node: NORTH OUTFALL

Scenario: POST-CONDITIONS
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 121.50 ft
Warning Stage: 121.50 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	121.50
0	0	0	96.0000	121.50

Comment:

Pipe Link: BASIN-B>DN-NORTH		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	118.00 ft	Invert:	118.00 ft
	S	Manning's N:	0.0220	Manning's N:	0.0220
From Node:	BASIN-B	Geometry: Circular		Geometry: Circular	
To Node:	DN-NORTH	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	6.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: Basin A > Basin B		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	118.00 ft	Invert:	118.00 ft
	S	Manning's N:	0.0220	Manning's N:	0.0220
From Node:	BASIN-A	Geometry: Circular		Geometry: Circular	
To Node:	BASIN-B	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	75.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Weir Link: DN-NORTH>OUTFALL			
Scenario:	POST-CONDITIONS	Bottom Clip	
From Node:	DN-NORTH	Default:	0.00 ft
To Node:	NORTH OUTFALL	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Rectangular	Ref Node:	
Invert:	122.60 ft	Discharge Coefficients	
Control Elevation:	122.60 ft	Weir Default:	2.800

Max Depth: 3.08 ft
Max Width: 4.08 ft
Fillet: 0.00 ft

Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Simulation: 100YR-72HR

Scenario: POST-CONDITIONS
Run Date/Time: 2/9/2023 6:33:26 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	77.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Lookup Tables

Boundary Stage Set:

Reference ET Folder:		Extern Hydrograph Set:	
Unit Hydrograph Folder:		Curve Number Set:	SITE
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	SITE
		Roughness Set:	
		Crop Coef Set:	
		Fillable Porosity Set:	
		Conductivity Set:	
		Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	13.60 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: SFWMD 100 yr / 72 hr

Simulation: 10YR-24HR

Scenario:	POST-CONDITIONS
Run Date/Time:	2/9/2023 6:33:56 PM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000

Max Calculation Time: 60.0000

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global

Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	7.90 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 10 yr / 24 hr

Simulation: 25YR-72HR

Scenario: POST-CONDITIONS
Run Date/Time: 2/9/2023 6:35:11 PM
Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	77.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	10.50 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: SFWMD 25 yr / 72 hr

APPENDIX E

DRAWDOWN (RECOVERY) ANALYSIS

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	0.0000	123.33	0.00	0.00
RECOVERY	recovery	BASIN-A	0.2504	120.91	0.00	0.21
RECOVERY	recovery	BASIN-A	0.5005	120.53	0.01	0.25
RECOVERY	recovery	BASIN-A	0.7506	120.24	0.01	0.28
RECOVERY	recovery	BASIN-A	1.0001	120.02	0.01	0.32
RECOVERY	recovery	BASIN-A	1.2502	119.86	0.01	0.34
RECOVERY	recovery	BASIN-A	1.5006	119.74	0.01	0.36
RECOVERY	recovery	BASIN-A	1.7502	119.64	0.01	0.38
RECOVERY	recovery	BASIN-A	2.0016	119.55	0.01	0.39
RECOVERY	recovery	BASIN-A	2.2501	119.47	0.01	0.41
RECOVERY	recovery	BASIN-A	2.5013	119.40	0.01	0.42
RECOVERY	recovery	BASIN-A	2.7513	119.33	0.01	0.43
RECOVERY	recovery	BASIN-A	3.0007	119.27	0.01	0.44
RECOVERY	recovery	BASIN-A	3.2511	119.22	0.01	0.45
RECOVERY	recovery	BASIN-A	3.5003	119.18	0.01	0.46
RECOVERY	recovery	BASIN-A	3.7500	119.14	0.01	0.47
RECOVERY	recovery	BASIN-A	4.0044	119.10	0.01	0.47
RECOVERY	recovery	BASIN-A	4.2500	119.06	0.01	0.48
RECOVERY	recovery	BASIN-A	4.5005	119.03	0.01	0.49
RECOVERY	recovery	BASIN-A	4.7521	119.00	0.01	0.49
RECOVERY	recovery	BASIN-A	5.0020	118.97	0.01	0.50
RECOVERY	recovery	BASIN-A	5.2519	118.94	0.01	0.50
RECOVERY	recovery	BASIN-A	5.5030	118.91	0.01	0.51
RECOVERY	recovery	BASIN-A	5.7515	118.88	0.01	0.51
RECOVERY	recovery	BASIN-A	6.0020	118.86	0.01	0.52
RECOVERY	recovery	BASIN-A	6.2516	118.83	0.01	0.52
RECOVERY	recovery	BASIN-A	6.5035	118.81	0.01	0.52
RECOVERY	recovery	BASIN-A	6.7509	118.78	0.01	0.53
RECOVERY	recovery	BASIN-A	7.0024	118.76	0.01	0.53

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	7.2501	118.74	0.01	0.54
RECOVERY	recovery	BASIN-A	7.5040	118.72	0.01	0.54
RECOVERY	recovery	BASIN-A	7.7532	118.70	0.01	0.54
RECOVERY	recovery	BASIN-A	8.0038	118.68	0.01	0.55
RECOVERY	recovery	BASIN-A	8.0855	118.67	0.01	0.55
RECOVERY	recovery	BASIN-A	8.1677	118.67	0.01	0.55
RECOVERY	recovery	BASIN-A	8.2562	118.66	0.01	0.55
RECOVERY	recovery	BASIN-A	8.3343	118.65	0.01	0.55
RECOVERY	recovery	BASIN-A	8.4221	118.65	0.01	0.55
RECOVERY	recovery	BASIN-A	8.5061	118.64	0.01	0.55
RECOVERY	recovery	BASIN-A	8.5895	118.63	0.01	0.55
RECOVERY	recovery	BASIN-A	8.6686	118.63	0.01	0.55
RECOVERY	recovery	BASIN-A	8.7575	118.62	0.01	0.56
RECOVERY	recovery	BASIN-A	8.8409	118.61	0.01	0.56
RECOVERY	recovery	BASIN-A	8.9184	118.61	0.01	0.56
RECOVERY	recovery	BASIN-A	9.0044	118.60	0.01	0.56
RECOVERY	recovery	BASIN-A	9.0871	118.60	0.01	0.56
RECOVERY	recovery	BASIN-A	9.1688	118.59	0.01	0.56
RECOVERY	recovery	BASIN-A	9.2594	118.58	0.01	0.56
RECOVERY	recovery	BASIN-A	9.3410	118.58	0.01	0.56
RECOVERY	recovery	BASIN-A	9.4248	118.57	0.01	0.56
RECOVERY	recovery	BASIN-A	9.5069	118.57	0.01	0.56
RECOVERY	recovery	BASIN-A	9.5852	118.56	0.01	0.57
RECOVERY	recovery	BASIN-A	9.6722	118.55	0.01	0.57
RECOVERY	recovery	BASIN-A	9.7578	118.55	0.01	0.57
RECOVERY	recovery	BASIN-A	9.8415	118.54	0.01	0.57
RECOVERY	recovery	BASIN-A	9.9174	118.54	0.01	0.57
RECOVERY	recovery	BASIN-A	10.0004	118.53	0.01	0.57
RECOVERY	recovery	BASIN-A	10.0884	118.53	0.01	0.57

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	10.1687	118.52	0.01	0.57
RECOVERY	recovery	BASIN-A	10.2577	118.51	0.01	0.57
RECOVERY	recovery	BASIN-A	10.3423	118.51	0.01	0.57
RECOVERY	recovery	BASIN-A	10.4274	118.50	0.01	0.57
RECOVERY	recovery	BASIN-A	10.5074	118.50	0.01	0.58
RECOVERY	recovery	BASIN-A	10.5896	118.49	0.01	0.58
RECOVERY	recovery	BASIN-A	10.6680	118.49	0.01	0.58
RECOVERY	recovery	BASIN-A	10.7519	118.48	0.01	0.58
RECOVERY	recovery	BASIN-A	10.8352	118.48	0.01	0.58
RECOVERY	recovery	BASIN-A	10.9263	118.47	0.01	0.58
RECOVERY	recovery	BASIN-A	11.0048	118.47	0.01	0.58
RECOVERY	recovery	BASIN-A	11.0904	118.46	0.01	0.58
RECOVERY	recovery	BASIN-A	11.1735	118.46	0.01	0.58
RECOVERY	recovery	BASIN-A	11.2559	118.45	0.01	0.58
RECOVERY	recovery	BASIN-A	11.3426	118.44	0.01	0.58
RECOVERY	recovery	BASIN-A	11.4267	118.44	0.01	0.58
RECOVERY	recovery	BASIN-A	11.5047	118.43	0.01	0.59
RECOVERY	recovery	BASIN-A	11.5912	118.43	0.01	0.59
RECOVERY	recovery	BASIN-A	11.6736	118.42	0.01	0.59
RECOVERY	recovery	BASIN-A	11.7617	118.42	0.01	0.59
RECOVERY	recovery	BASIN-A	11.8438	118.41	0.01	0.59
RECOVERY	recovery	BASIN-A	11.9204	118.41	0.01	0.59
RECOVERY	recovery	BASIN-A	12.0024	118.40	0.01	0.59
RECOVERY	recovery	BASIN-A	12.0901	118.40	0.01	0.59
RECOVERY	recovery	BASIN-A	12.1732	118.39	0.01	0.59
RECOVERY	recovery	BASIN-A	12.2522	118.39	0.01	0.59
RECOVERY	recovery	BASIN-A	12.3394	118.38	0.01	0.59
RECOVERY	recovery	BASIN-A	12.4235	118.38	0.01	0.59
RECOVERY	recovery	BASIN-A	12.5049	118.37	0.01	0.59

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	12.5932	118.37	0.01	0.60
RECOVERY	recovery	BASIN-A	12.6768	118.36	0.01	0.60
RECOVERY	recovery	BASIN-A	12.7606	118.36	0.01	0.60
RECOVERY	recovery	BASIN-A	12.8372	118.35	0.01	0.60
RECOVERY	recovery	BASIN-A	12.9187	118.35	0.01	0.60
RECOVERY	recovery	BASIN-A	13.0049	118.35	0.01	0.60
RECOVERY	recovery	BASIN-A	13.0840	118.34	0.01	0.60
RECOVERY	recovery	BASIN-A	13.1778	118.34	0.01	0.60
RECOVERY	recovery	BASIN-A	13.2506	118.33	0.01	0.60
RECOVERY	recovery	BASIN-A	13.3433	118.33	0.01	0.60
RECOVERY	recovery	BASIN-A	13.4187	118.32	0.01	0.60
RECOVERY	recovery	BASIN-A	13.5104	118.32	0.01	0.60
RECOVERY	recovery	BASIN-A	13.5971	118.31	0.01	0.60
RECOVERY	recovery	BASIN-A	13.6708	118.31	0.01	0.60
RECOVERY	recovery	BASIN-A	13.7537	118.30	0.01	0.61
RECOVERY	recovery	BASIN-A	13.8366	118.30	0.01	0.61
RECOVERY	recovery	BASIN-A	13.9199	118.29	0.01	0.61
RECOVERY	recovery	BASIN-A	14.0033	118.29	0.01	0.61
RECOVERY	recovery	BASIN-A	14.2533	118.28	0.01	0.61
RECOVERY	recovery	BASIN-A	14.5033	118.26	0.01	0.61
RECOVERY	recovery	BASIN-A	14.7533	118.25	0.01	0.61
RECOVERY	recovery	BASIN-A	15.0033	118.23	0.01	0.61
RECOVERY	recovery	BASIN-A	15.2533	118.22	0.01	0.62
RECOVERY	recovery	BASIN-A	15.5033	118.21	0.01	0.62
RECOVERY	recovery	BASIN-A	15.7533	118.20	0.01	0.62
RECOVERY	recovery	BASIN-A	16.0033	118.18	0.01	0.62
RECOVERY	recovery	BASIN-A	16.2533	118.17	0.01	0.62
RECOVERY	recovery	BASIN-A	16.5033	118.16	0.01	0.63
RECOVERY	recovery	BASIN-A	16.7533	118.15	0.01	0.63

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	17.0033	118.14	0.01	0.63
RECOVERY	recovery	BASIN-A	17.2599	118.12	0.01	0.63
RECOVERY	recovery	BASIN-A	17.5033	118.11	0.01	0.63
RECOVERY	recovery	BASIN-A	17.7566	118.10	0.01	0.63
RECOVERY	recovery	BASIN-A	18.0099	118.09	0.01	0.63
RECOVERY	recovery	BASIN-A	18.2633	118.08	0.01	0.63
RECOVERY	recovery	BASIN-A	18.5108	118.07	0.01	0.64
RECOVERY	recovery	BASIN-A	18.7544	118.06	0.01	0.64
RECOVERY	recovery	BASIN-A	19.0069	118.05	0.01	0.64
RECOVERY	recovery	BASIN-A	19.2569	118.04	0.01	0.64
RECOVERY	recovery	BASIN-A	19.5069	118.04	0.01	0.64
RECOVERY	recovery	BASIN-A	19.7569	118.03	0.01	0.64
RECOVERY	recovery	BASIN-A	20.0069	118.02	0.01	0.64
RECOVERY	recovery	BASIN-A	20.2569	118.01	0.01	0.64
RECOVERY	recovery	BASIN-A	20.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	20.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	21.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	21.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	21.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	21.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	22.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	22.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	22.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	22.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	23.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	23.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	23.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	23.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	24.0069	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	24.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	24.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	24.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	25.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	25.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	25.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	25.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	26.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	26.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	26.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	26.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	27.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	27.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	27.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	27.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	28.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	28.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	28.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	28.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	29.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	29.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	29.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	29.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	30.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	30.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	30.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	30.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	31.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	31.2569	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	31.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	31.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	32.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	32.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	32.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	32.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	33.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	33.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	33.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	33.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	34.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	34.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	34.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	34.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	35.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	35.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	35.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	35.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	36.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	36.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	36.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	36.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	37.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	37.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	37.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	37.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	38.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	38.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	38.5069	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	38.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	39.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	39.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	39.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	39.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	40.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	40.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	40.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	40.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	41.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	41.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	41.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	41.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	42.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	42.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	42.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	42.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	43.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	43.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	43.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	43.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	44.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	44.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	44.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	44.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	45.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	45.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	45.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	45.7569	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	46.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	46.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	46.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	46.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	47.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	47.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	47.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	47.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	48.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	48.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	48.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	48.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	49.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	49.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	49.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	49.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	50.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	50.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	50.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	50.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	51.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	51.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	51.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	51.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	52.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	52.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	52.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	52.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	53.0069	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	53.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	53.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	53.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	54.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	54.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	54.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	54.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	55.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	55.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	55.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	55.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	56.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	56.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	56.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	56.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	57.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	57.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	57.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	57.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	58.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	58.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	58.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	58.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	59.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	59.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	59.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	59.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	60.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	60.2569	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	60.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	60.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	61.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	61.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	61.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	61.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	62.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	62.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	62.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	62.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	63.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	63.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	63.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	63.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	64.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	64.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	64.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	64.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	65.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	65.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	65.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	65.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	66.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	66.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	66.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	66.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	67.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	67.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	67.5069	118.00	0.01	0.64

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-A	67.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	68.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	68.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	68.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	68.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	69.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	69.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	69.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	69.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	70.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	70.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	70.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	70.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	71.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	71.2569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	71.5069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	71.7569	118.00	0.01	0.64
RECOVERY	recovery	BASIN-A	72.0069	118.00	0.01	0.64
RECOVERY	recovery	BASIN-B	0.0000	120.00	0.00	0.00
RECOVERY	recovery	BASIN-B	0.2504	120.92	0.11	0.06
RECOVERY	recovery	BASIN-B	0.5005	120.53	0.11	0.08
RECOVERY	recovery	BASIN-B	0.7506	120.24	0.11	0.10
RECOVERY	recovery	BASIN-B	1.0001	120.02	0.12	0.11
RECOVERY	recovery	BASIN-B	1.2502	119.86	0.12	0.13
RECOVERY	recovery	BASIN-B	1.5006	119.74	0.12	0.14
RECOVERY	recovery	BASIN-B	1.7502	119.64	0.13	0.15
RECOVERY	recovery	BASIN-B	2.0016	119.55	0.13	0.16
RECOVERY	recovery	BASIN-B	2.2501	119.47	0.14	0.18
RECOVERY	recovery	BASIN-B	2.5013	119.40	0.14	0.19

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	2.7513	119.33	0.15	0.20
RECOVERY	recovery	BASIN-B	3.0007	119.27	0.15	0.21
RECOVERY	recovery	BASIN-B	3.2511	119.22	0.15	0.22
RECOVERY	recovery	BASIN-B	3.5003	119.18	0.16	0.22
RECOVERY	recovery	BASIN-B	3.7500	119.13	0.16	0.23
RECOVERY	recovery	BASIN-B	4.0044	119.09	0.16	0.24
RECOVERY	recovery	BASIN-B	4.2500	119.06	0.16	0.24
RECOVERY	recovery	BASIN-B	4.5005	119.03	0.16	0.25
RECOVERY	recovery	BASIN-B	4.7521	118.99	0.17	0.25
RECOVERY	recovery	BASIN-B	5.0020	118.96	0.17	0.26
RECOVERY	recovery	BASIN-B	5.2519	118.93	0.17	0.26
RECOVERY	recovery	BASIN-B	5.5030	118.91	0.17	0.26
RECOVERY	recovery	BASIN-B	5.7515	118.88	0.17	0.27
RECOVERY	recovery	BASIN-B	6.0020	118.85	0.17	0.27
RECOVERY	recovery	BASIN-B	6.2516	118.83	0.17	0.28
RECOVERY	recovery	BASIN-B	6.5035	118.81	0.18	0.28
RECOVERY	recovery	BASIN-B	6.7509	118.78	0.18	0.28
RECOVERY	recovery	BASIN-B	7.0024	118.76	0.18	0.29
RECOVERY	recovery	BASIN-B	7.2501	118.74	0.18	0.29
RECOVERY	recovery	BASIN-B	7.5040	118.72	0.18	0.29
RECOVERY	recovery	BASIN-B	7.7532	118.70	0.18	0.30
RECOVERY	recovery	BASIN-B	8.0038	118.68	0.18	0.30
RECOVERY	recovery	BASIN-B	8.0855	118.67	0.18	0.30
RECOVERY	recovery	BASIN-B	8.1677	118.66	0.18	0.30
RECOVERY	recovery	BASIN-B	8.2562	118.66	0.18	0.30
RECOVERY	recovery	BASIN-B	8.3343	118.65	0.18	0.30
RECOVERY	recovery	BASIN-B	8.4221	118.64	0.18	0.30
RECOVERY	recovery	BASIN-B	8.5061	118.64	0.18	0.30
RECOVERY	recovery	BASIN-B	8.5895	118.63	0.18	0.30

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	8.6686	118.62	0.18	0.31
RECOVERY	recovery	BASIN-B	8.7575	118.62	0.18	0.31
RECOVERY	recovery	BASIN-B	8.8409	118.61	0.19	0.31
RECOVERY	recovery	BASIN-B	8.9184	118.61	0.19	0.31
RECOVERY	recovery	BASIN-B	9.0044	118.60	0.19	0.31
RECOVERY	recovery	BASIN-B	9.0871	118.59	0.19	0.31
RECOVERY	recovery	BASIN-B	9.1688	118.59	0.19	0.31
RECOVERY	recovery	BASIN-B	9.2594	118.58	0.19	0.31
RECOVERY	recovery	BASIN-B	9.3410	118.58	0.19	0.31
RECOVERY	recovery	BASIN-B	9.4248	118.57	0.19	0.31
RECOVERY	recovery	BASIN-B	9.5069	118.56	0.19	0.31
RECOVERY	recovery	BASIN-B	9.5852	118.56	0.19	0.31
RECOVERY	recovery	BASIN-B	9.6722	118.55	0.19	0.32
RECOVERY	recovery	BASIN-B	9.7578	118.55	0.19	0.32
RECOVERY	recovery	BASIN-B	9.8415	118.54	0.19	0.32
RECOVERY	recovery	BASIN-B	9.9174	118.54	0.19	0.32
RECOVERY	recovery	BASIN-B	10.0004	118.53	0.19	0.32
RECOVERY	recovery	BASIN-B	10.0884	118.52	0.19	0.32
RECOVERY	recovery	BASIN-B	10.1687	118.52	0.19	0.32
RECOVERY	recovery	BASIN-B	10.2577	118.51	0.19	0.32
RECOVERY	recovery	BASIN-B	10.3423	118.51	0.19	0.32
RECOVERY	recovery	BASIN-B	10.4274	118.50	0.19	0.32
RECOVERY	recovery	BASIN-B	10.5074	118.50	0.19	0.32
RECOVERY	recovery	BASIN-B	10.5896	118.49	0.19	0.32
RECOVERY	recovery	BASIN-B	10.6680	118.49	0.19	0.32
RECOVERY	recovery	BASIN-B	10.7519	118.48	0.19	0.32
RECOVERY	recovery	BASIN-B	10.8352	118.47	0.19	0.33
RECOVERY	recovery	BASIN-B	10.9263	118.47	0.19	0.33
RECOVERY	recovery	BASIN-B	11.0048	118.46	0.19	0.33

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	11.0904	118.46	0.19	0.33
RECOVERY	recovery	BASIN-B	11.1735	118.45	0.19	0.33
RECOVERY	recovery	BASIN-B	11.2559	118.45	0.19	0.33
RECOVERY	recovery	BASIN-B	11.3426	118.44	0.19	0.33
RECOVERY	recovery	BASIN-B	11.4267	118.44	0.19	0.33
RECOVERY	recovery	BASIN-B	11.5047	118.43	0.19	0.33
RECOVERY	recovery	BASIN-B	11.5912	118.43	0.19	0.33
RECOVERY	recovery	BASIN-B	11.6736	118.42	0.19	0.33
RECOVERY	recovery	BASIN-B	11.7617	118.42	0.19	0.33
RECOVERY	recovery	BASIN-B	11.8438	118.41	0.19	0.33
RECOVERY	recovery	BASIN-B	11.9204	118.41	0.19	0.33
RECOVERY	recovery	BASIN-B	12.0024	118.40	0.19	0.33
RECOVERY	recovery	BASIN-B	12.0901	118.40	0.19	0.34
RECOVERY	recovery	BASIN-B	12.1732	118.39	0.20	0.34
RECOVERY	recovery	BASIN-B	12.2522	118.39	0.20	0.34
RECOVERY	recovery	BASIN-B	12.3394	118.38	0.20	0.34
RECOVERY	recovery	BASIN-B	12.4235	118.38	0.20	0.34
RECOVERY	recovery	BASIN-B	12.5049	118.37	0.20	0.34
RECOVERY	recovery	BASIN-B	12.5932	118.37	0.20	0.34
RECOVERY	recovery	BASIN-B	12.6768	118.36	0.20	0.34
RECOVERY	recovery	BASIN-B	12.7606	118.36	0.20	0.34
RECOVERY	recovery	BASIN-B	12.8372	118.35	0.20	0.34
RECOVERY	recovery	BASIN-B	12.9187	118.35	0.20	0.34
RECOVERY	recovery	BASIN-B	13.0049	118.34	0.20	0.34
RECOVERY	recovery	BASIN-B	13.0840	118.34	0.20	0.34
RECOVERY	recovery	BASIN-B	13.1778	118.33	0.20	0.34
RECOVERY	recovery	BASIN-B	13.2506	118.33	0.20	0.34
RECOVERY	recovery	BASIN-B	13.3433	118.32	0.20	0.34
RECOVERY	recovery	BASIN-B	13.4187	118.32	0.20	0.35

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	13.5104	118.31	0.20	0.35
RECOVERY	recovery	BASIN-B	13.5971	118.31	0.20	0.35
RECOVERY	recovery	BASIN-B	13.6708	118.30	0.20	0.35
RECOVERY	recovery	BASIN-B	13.7537	118.30	0.20	0.35
RECOVERY	recovery	BASIN-B	13.8366	118.29	0.20	0.35
RECOVERY	recovery	BASIN-B	13.9199	118.29	0.20	0.35
RECOVERY	recovery	BASIN-B	14.0033	118.29	0.20	0.35
RECOVERY	recovery	BASIN-B	14.2533	118.27	0.20	0.35
RECOVERY	recovery	BASIN-B	14.5033	118.26	0.20	0.35
RECOVERY	recovery	BASIN-B	14.7533	118.24	0.20	0.35
RECOVERY	recovery	BASIN-B	15.0033	118.23	0.20	0.36
RECOVERY	recovery	BASIN-B	15.2533	118.22	0.20	0.36
RECOVERY	recovery	BASIN-B	15.5033	118.20	0.20	0.36
RECOVERY	recovery	BASIN-B	15.7533	118.19	0.20	0.36
RECOVERY	recovery	BASIN-B	16.0033	118.18	0.20	0.36
RECOVERY	recovery	BASIN-B	16.2533	118.16	0.20	0.36
RECOVERY	recovery	BASIN-B	16.5033	118.15	0.20	0.37
RECOVERY	recovery	BASIN-B	16.7533	118.13	0.21	0.37
RECOVERY	recovery	BASIN-B	17.0033	118.12	0.21	0.37
RECOVERY	recovery	BASIN-B	17.2599	118.10	0.21	0.37
RECOVERY	recovery	BASIN-B	17.5033	118.09	0.21	0.37
RECOVERY	recovery	BASIN-B	17.7566	118.07	0.21	0.37
RECOVERY	recovery	BASIN-B	18.0099	118.06	0.21	0.37
RECOVERY	recovery	BASIN-B	18.2633	118.04	0.21	0.37
RECOVERY	recovery	BASIN-B	18.5108	118.02	0.21	0.38
RECOVERY	recovery	BASIN-B	18.7544	118.01	0.21	0.38
RECOVERY	recovery	BASIN-B	19.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	19.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	19.5069	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	19.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	20.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	20.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	20.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	20.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	21.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	21.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	21.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	21.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	22.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	22.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	22.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	22.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	23.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	23.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	23.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	23.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	24.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	24.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	24.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	24.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	25.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	25.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	25.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	25.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	26.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	26.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	26.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	26.7569	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	27.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	27.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	27.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	27.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	28.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	28.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	28.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	28.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	29.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	29.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	29.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	29.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	30.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	30.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	30.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	30.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	31.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	31.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	31.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	31.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	32.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	32.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	32.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	32.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	33.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	33.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	33.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	33.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	34.0069	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	34.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	34.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	34.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	35.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	35.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	35.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	35.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	36.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	36.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	36.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	36.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	37.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	37.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	37.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	37.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	38.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	38.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	38.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	38.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	39.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	39.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	39.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	39.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	40.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	40.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	40.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	40.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	41.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	41.2569	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	41.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	41.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	42.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	42.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	42.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	42.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	43.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	43.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	43.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	43.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	44.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	44.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	44.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	44.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	45.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	45.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	45.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	45.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	46.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	46.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	46.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	46.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	47.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	47.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	47.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	47.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	48.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	48.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	48.5069	118.00	0.21	0.38

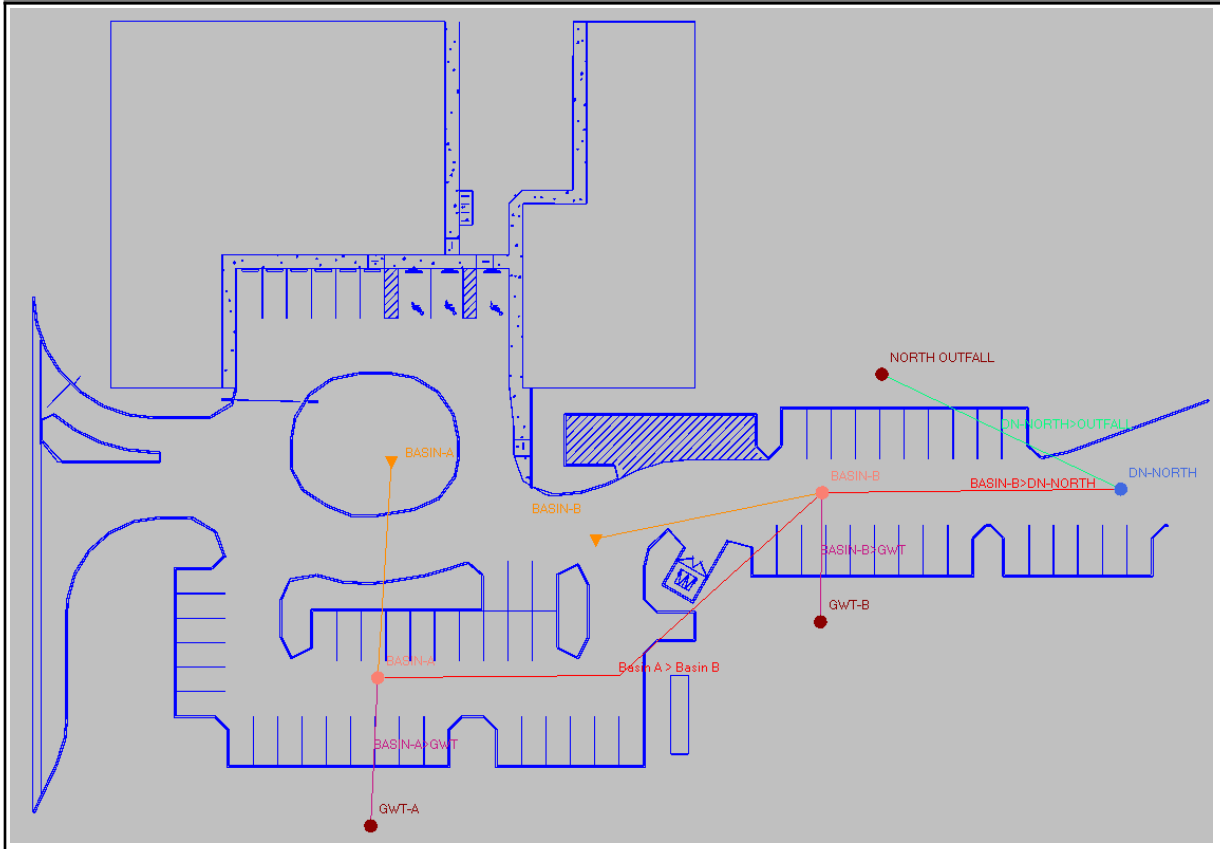
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	48.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	49.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	49.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	49.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	49.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	50.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	50.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	50.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	50.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	51.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	51.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	51.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	51.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	52.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	52.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	52.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	52.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	53.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	53.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	53.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	53.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	54.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	54.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	54.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	54.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	55.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	55.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	55.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	55.7569	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	56.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	56.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	56.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	56.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	57.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	57.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	57.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	57.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	58.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	58.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	58.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	58.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	59.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	59.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	59.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	59.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	60.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	60.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	60.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	60.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	61.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	61.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	61.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	61.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	62.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	62.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	62.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	62.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	63.0069	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	63.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	63.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	63.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	64.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	64.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	64.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	64.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	65.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	65.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	65.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	65.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	66.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	66.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	66.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	66.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	67.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	67.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	67.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	67.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	68.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	68.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	68.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	68.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	69.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	69.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	69.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	69.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	70.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	70.2569	118.00	0.21	0.38

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Inflow Volume [ac_ft]	Total Outflow Volume [ac_ft]
RECOVERY	recovery	BASIN-B	70.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	70.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	71.0069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	71.2569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	71.5069	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	71.7569	118.00	0.21	0.38
RECOVERY	recovery	BASIN-B	72.0069	118.00	0.21	0.38

Background Image: Recovery



Simple Basin: BASIN-A

Scenario:	RECOVERY
Node:	BASIN-A
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH323
Peaking Factor:	323.0
Area:	1.7380 ac
Curve Number:	73.9
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN-B

Scenario:	RECOVERY
Node:	BASIN-B
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.6940 ac
Curve Number:	61.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Node: BASIN-A

Scenario:	RECOVERY
Type:	Stage/Volume
Base Flow:	0.00 cfs
Initial Stage:	123.33 ft
Warning Stage:	123.25 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
123.33	0.61	26711
123.25	0.59	25905
122.75	0.57	24903
122.25	0.54	23697
120.42	0.38	16639
120.25	0.36	15776
120.00	0.33	14190
119.75	0.29	12425
119.50	0.24	10558
119.25	0.20	8641
119.00	0.15	6717
118.75	0.11	4828
118.50	0.07	3022
118.25	0.03	1365
118.00	0.00	0

Comment:

Node: BASIN-B

Scenario: RECOVERY
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 120.00 ft
Warning Stage: 122.60 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
120.00	0.17	7379
119.75	0.15	6621
119.50	0.13	5706
119.25	0.11	4713
119.00	0.08	3690
118.75	0.06	2662
118.50	0.04	1673
118.25	0.02	754
118.00	0.00	0

Comment:

Node: DN-NORTH

Scenario: RECOVERY
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 118.00 ft
Warning Stage: 122.60 ft

Comment:

Node: GWT-A

Scenario: RECOVERY
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 115.50 ft
Warning Stage: 115.50 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	115.50
0	0	0	96.0000	115.50

Comment:

Node: GWT-B

Scenario: RECOVERY
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 114.50 ft
Warning Stage: 114.50 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	114.50
0	0	0	96.0000	114.50

Comment:

Node: NORTH OUTFALL

Scenario: RECOVERY
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 121.50 ft
Warning Stage: 121.50 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	121.50
0	0	0	96.0000	121.50

Comment:

Percolation Link: BASIN-A>GWT

Scenario: RECOVERY
From Node: BASIN-A
To Node: GWT-A
Link Count: 1
Flow Direction: Both
Aquifer Base Elevation: 103.50 ft
Water Table Elevation: 115.50 ft
Annual Recharge Rate: 0 ipy
Horizontal Conductivity: 10.650 fpd
Vertical Conductivity: 7.100 fpd
Fillable Porosity: 0.300
Layer Thickness: 2.50 ft

Surface Area Option: User Specified
Bottom Elevation: 118.00 ft
Surface Area: 0.2214 ac
Vertical Flow Termination: Horizontal Flow Algorithm
Perimeter 1: 599.00 ft
Perimeter 2: 669.00 ft
Perimeter 3: 2038.00 ft
Distance P1 to P2: 50.00 ft
Distance P2 to P3: 450.00 ft
# of Cells P1 to P2: 10
# of Cells P2 to P3: 45

Comment:

Pipe Link: BASIN-B>DN-NORTH		Upstream		Downstream	
Scenario:	RECOVERY	Invert:	118.00 ft	Invert:	118.00 ft
From Node:	BASIN-B	Manning's N:	0.0220	Manning's N:	0.0220
To Node:	DN-NORTH	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	6.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Percolation Link: BASIN-B>GWT			
Scenario:	RECOVERY	Surface Area Option:	User Specified
From Node:	BASIN-B	Bottom Elevation:	118.00 ft
To Node:	GWT-B	Surface Area:	0.1129 ac
Link Count:	1	Vertical Flow Termination:	Horizontal Flow Algorithm
Flow Direction:	Both	Perimeter 1:	394.00 ft
Aquifer Base Elevation:	102.50 ft	Perimeter 2:	553.00 ft
Water Table Elevation:	114.50 ft	Perimeter 3:	1939.00 ft
Annual Recharge Rate:	0 ipy	Distance P1 to P2:	50.00 ft
Horizontal Conductivity:	10.650 fpd	Distance P2 to P3:	450.00 ft
Vertical Conductivity:	7.100 fpd	# of Cells P1 to P2:	10
Fillable Porosity:	0.300	# of Cells P2 to P3:	45
Layer Thickness:	3.50 ft		

Comment:

Pipe Link: Basin A > Basin B		Upstream		Downstream	
Scenario:	RECOVERY	Invert:	118.00 ft	Invert:	118.00 ft
From Node:	BASIN-A	Manning's N:	0.0220	Manning's N:	0.0220
To Node:	BASIN-B	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	75.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	

Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: DN-NORTH>OUTFALL

Scenario:	RECOVERY	**Bottom Clip**	
From Node:	DN-NORTH	Default:	0.00 ft
To Node:	NORTH OUTFALL	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	None	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Rectangular	Ref Node:	
Invert:	122.60 ft	**Discharge Coefficients**	
Control Elevation:	122.60 ft	Weir Default:	2.800
Max Depth:	3.08 ft	Weir Table:	
Max Width:	4.08 ft	Orifice Default:	0.600
Fillet:	0.00 ft	Orifice Table:	

Comment:

Simulation: recovery

Scenario:	RECOVERY
Run Date/Time:	2/10/2023 8:54:19 AM
Program Version:	ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0050 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: No Rainfall
OF Region Rain Opt: No Rainfall
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment: RECOVERY

APPENDIX F

Stormwater Hydraulics

FlexTable: Catchment Table

Label	Outflow Element	Runoff Coefficient (Rational)	Time of Concentration (min)	Flow (Total Out) (cfs)	Area (User Defined) (acres)
CM-1	D-3	0.900	10.0	0.86	
CM-2	D-2	0.900	10.0	2.69	
CM-3	D-5	0.900	10.0	1.51	
CM-4	D-2	0.850	10.0	0.67	
CM-5	D-1	0.900	10.0	0.66	
CM-6	D-5	0.800	10.0	1.60	

FlexTable: Catch Basin Table

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Captured) (cfs)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Flow (Total Out) (cfs)	Inlet Type	Spread / Top Width (ft)
D-1	123.45	115.55	0.66	121.53	121.57	7.98	Catalog Inlet	10.5
D-2	123.45	115.68	3.36	121.57	121.65	7.32	Catalog Inlet	25.1
D-3	123.00	117.06	0.86	121.65	121.67	0.86	Catalog Inlet	11.9
D-5	122.78	116.62	3.11	121.64	121.74	3.11	Catalog Inlet	11.9

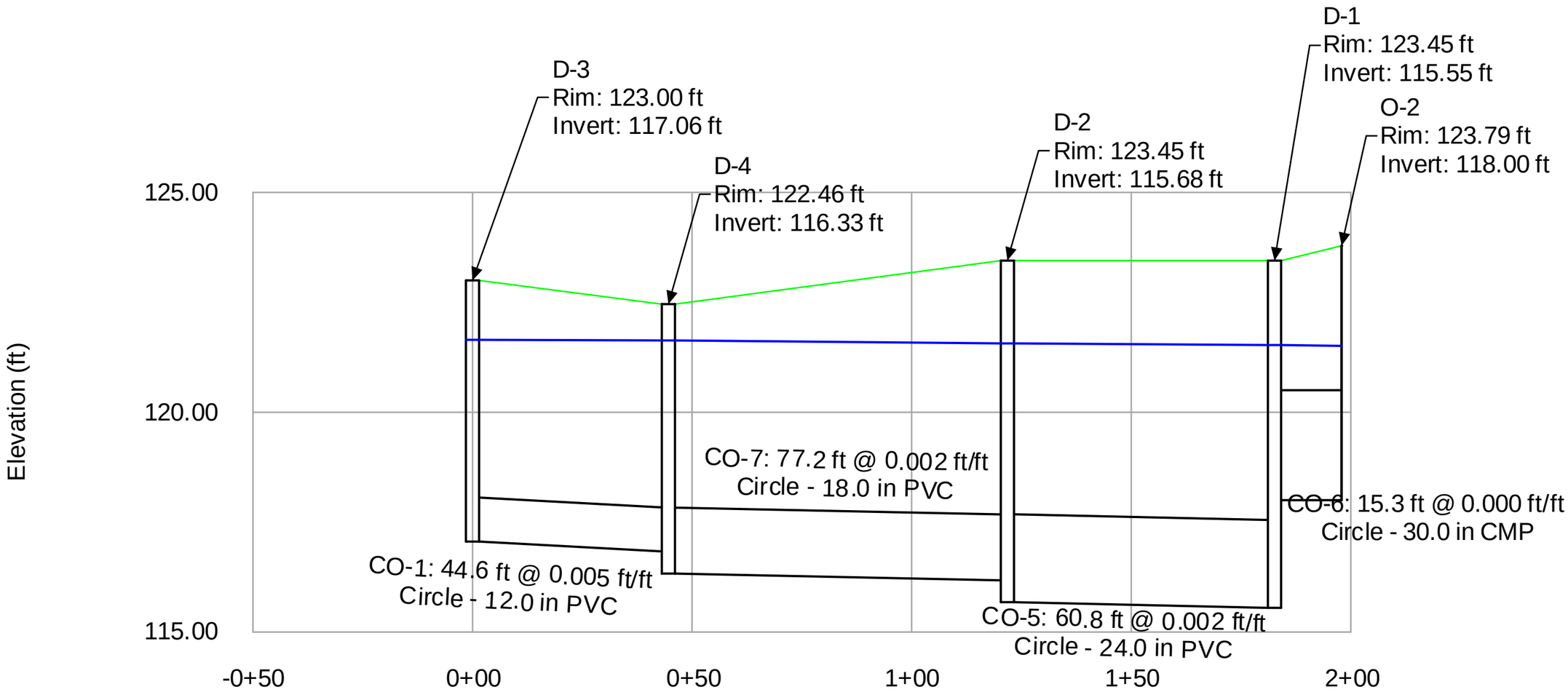
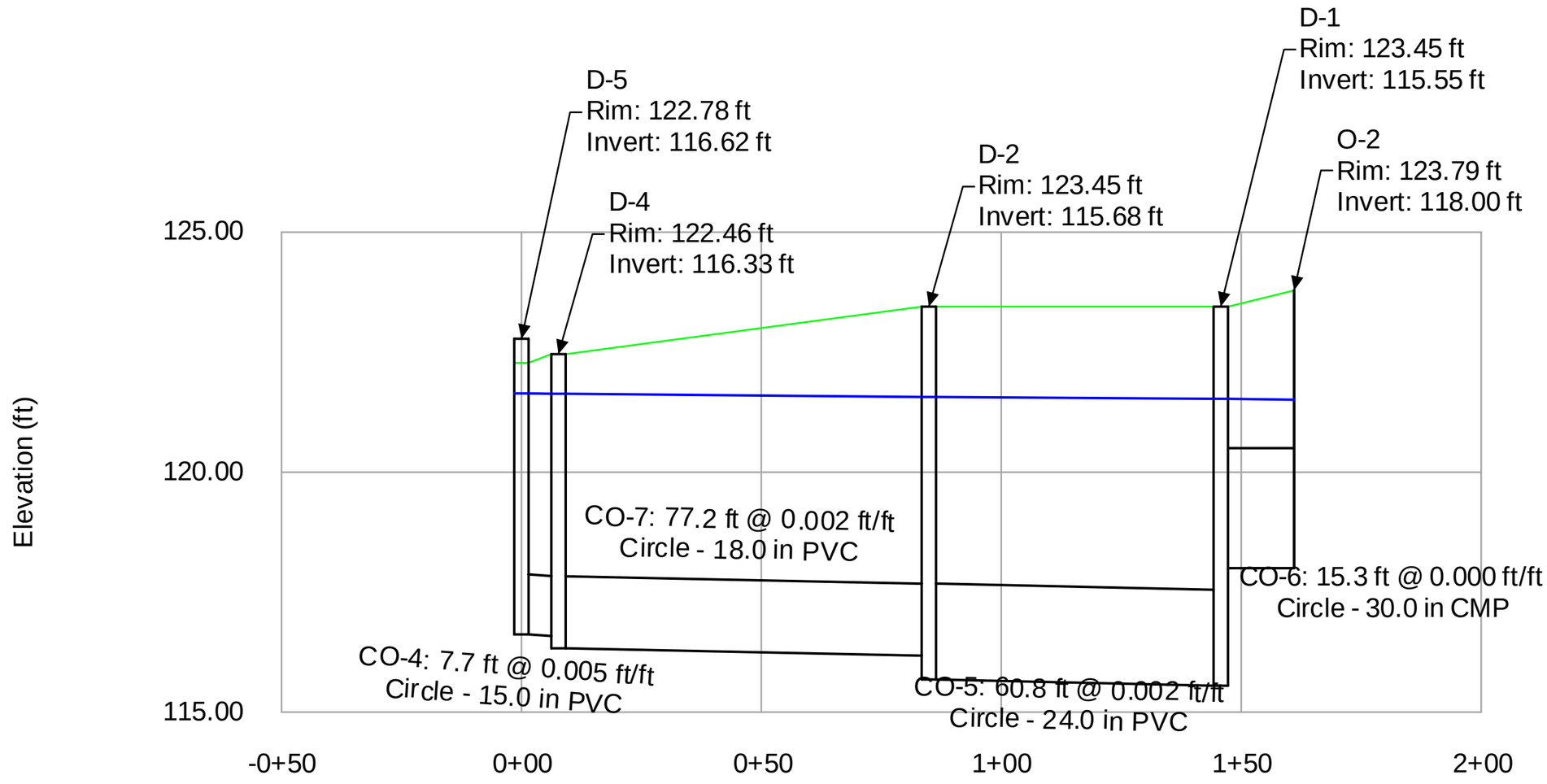
FlexTable: Conduit Table

Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Flow / Capacity (Design) (%)
CO-1	D-3	117.06	D-4	116.84	0.005	12.0	0.010	0.86	1.10	26.4
CO-6	D-1	118.00	O-2	118.00	0.000	30.0	0.024	7.98	1.63	3,593.5
CO-7	D-4	116.33	D-2	116.18	0.002	18.0	0.010	3.97	2.25	65.1
CO-5	D-2	115.68	D-1	115.55	0.002	24.0	0.010	7.32	2.33	55.6
CO-4	D-5	116.62	D-4	116.59	0.005	15.0	0.010	3.11	2.53	52.8

Conduit FlexTable: Combined Pipe/Node Report

Label	Start Node	Stop Node	Length (Unified) (ft)	System Intensity (in/h)	System CA (acres)	System Intensity (in/h)	System Rational Flow (cfs)	Rise (Unified) (ft)	Velocity (ft/s)	Invert (Start) (ft)	Invert (Stop) (ft)	Slope (Calculated) (ft/ft)
CO-1	D-3	D-4	44.6	10.350	0.083	10.350	0.86	1.00	1.10	117.06	116.84	0.005
CO-4	D-5	D-4	7.7	10.350	0.298	10.350	3.11	1.25	2.53	116.62	116.59	0.005
CO-5	D-2	D-1	60.8	10.344	0.702	10.344	7.32	2.00	2.33	115.68	115.55	0.002
CO-6	D-1	O-2	15.3	10.342	0.766	10.342	7.98	2.50	1.63	118.00	118.00	0.000
CO-7	D-4	D-2	77.2	10.347	0.381	10.347	3.97	1.50	2.25	116.33	116.18	0.002

Profile Report
Engineering Profile - Profile - 1 (2023-02-12 - WDP - SW Hydraulics.stsw)



Profile Report
Engineering Profile - Profile - 2 (2023-02-12 - WDP - SW Hydraulics.stsw)