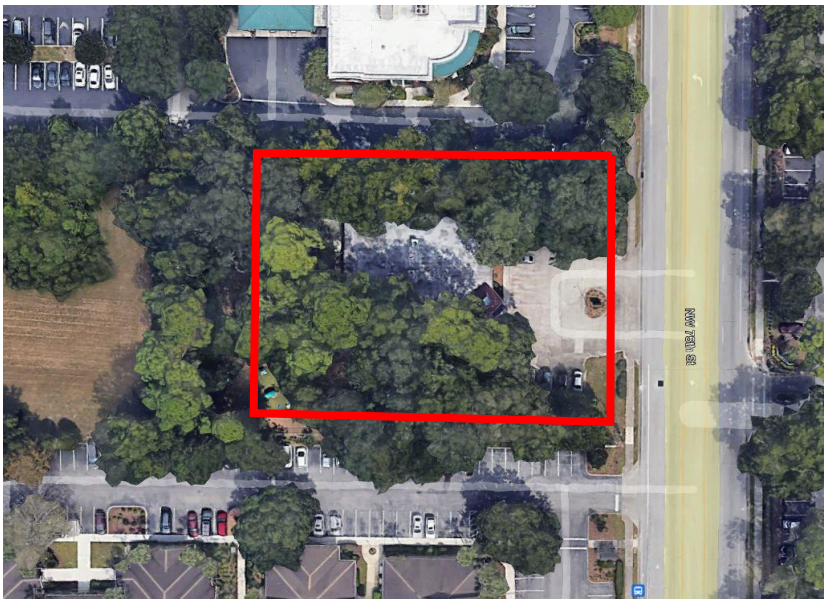
DRAINAGE DESIGN NOTES

for

Premier Preschool



Engineer of Record:
Claudia Vega, PE
Cert. No. 51532

Project Designer:
Quentin Humeau, EI

Submitted to:
Alachua County
St-John's River Water Management District

Submitted:
November 20, 2023

DRAINAGE DESIGN NOTES

Prepared for

Premier Preschool

Professional Engineer of Record:

Claudia Vega, PE
Cert. No. 51532

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Attachments

EXECUTIVE SUMMARY

The Premier Preschool project proposes the construction of a 3,900 S.F. building addition with associated parking, drainage, and utility improvements. A new dry retention basin and an underground basin are proposed to serve the proposed improvements.

The proposed dry retention basin, Basin 1, is located South of the project area. The proposed underground basin is located under the new proposed parking. Basin 1 and the underground basin will provide the required attenuation of the 100-YR critical storm events including the 240-HR(10 day) such that the post-development discharge rate is less than the pre-development discharge rate, as required by St-John's River Water Management District (SJRWMD) and Alachua County.

Basin 1 discharges West while the underground basin is self-contained.

INTRODUCTION

The Premier Preschool project proposes the construction of a 3,900 S.F. building addition with associated parking, drainage, and utility improvements. A new dry retention basin and an underground basin are proposed to serve the proposed improvements.

The proposed project is located in Alachua county on tax parcel 06656-057-001. The address of the project site is 10 SW 75th Street, Gainesville, Florida 32607, and the Section, Township, and Range of the project are S05, T10S, R19E. Figure 1 - Tax Parcel Map by Alachua County Property Appraiser shows the tax parcel. Figure 2, on the next page, shows an Aerial of the project site.

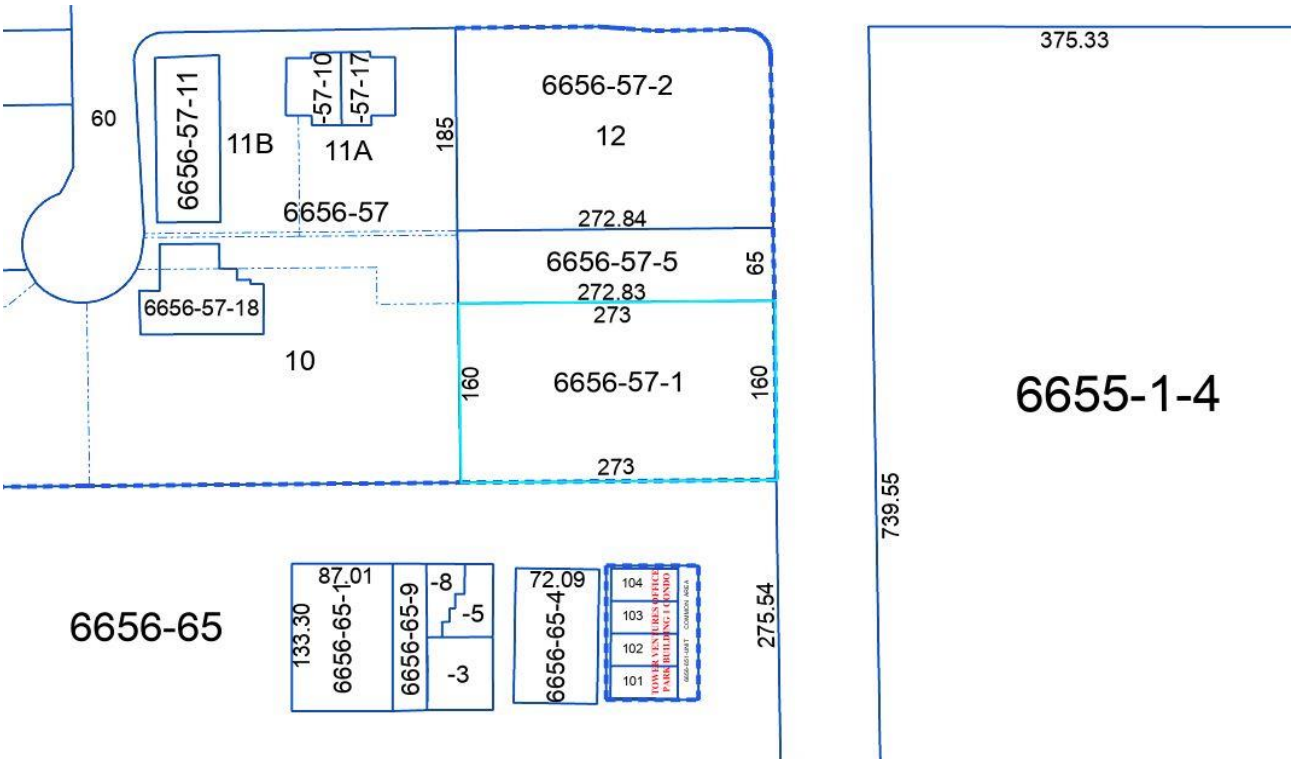


Figure 1 - Tax Parcel Map from Alachua County Property Appraiser

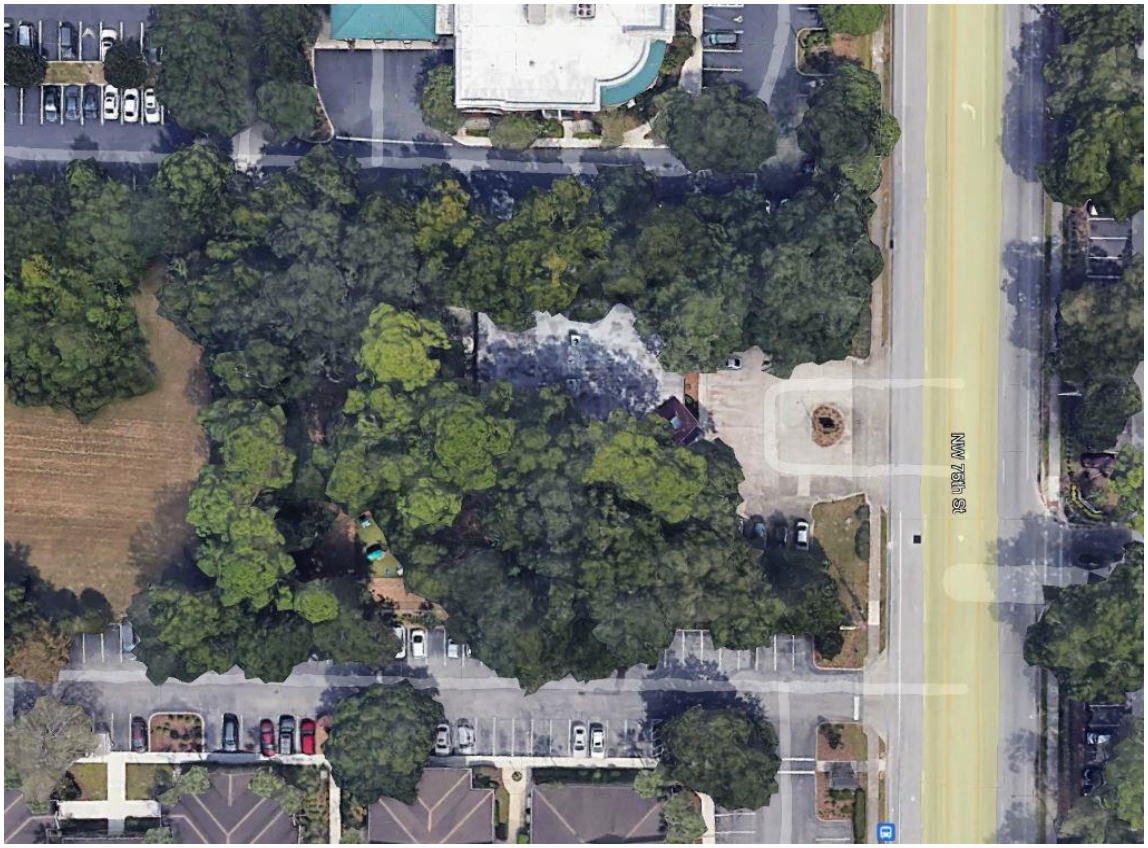


Figure 2 - Aerial of Project Site

DRAINAGE DESIGN NOTES

I. PROJECT NAME

Premier Preschool Addition
10 SW 75th Street, Gainesville, Florida 32607

II. PROJECT LOCATION

County: Alachua
Section: 5 Township: 10 South Range: 19 East

III. GENERAL PROJECT INFORMATION

1. The proposed development consists of the construction of a 3,900 S.F. building addition with associated drainage and utility improvements.

IV. DRAINAGE AND DESIGN CRITERIA

1. St-John's River Water Management District (SJRWMD):
   Meet requirements of 40C-42

2. Alachua County Unified Land Development Code:
   Meets requiremtns of Chapter 407 - Article 9

V. SITE SOILS INFORMATION

Universal Engineering Sciences conducted two subsurface investigations on the site and summarized their findings in reports No. 1932295 dated February 9th, 2022 and No. 2027685 dated July 12th 2023. Copies of the reports are provided in Attachment A.

VI. EXISTING SITE CONDITIONS

The existing site consists of an existing preschool and parking lot.

VII. DRAINAGE DESCRIPTION

1. Pre-development Conditions
   The site has a topography ranging from an elevation of 73.25 ft to 67.25 ft. There is an existing school and parking lot, along with slabs of concrete and a shed. The parking lot drains South to a small existing depression, while the rest of the site sheet flows West to property line.

2. Post-development Conditions
   The proposed stormwater conveyance system consists of one dry retention basin and one underground basin that will provide water quality treatment, recovery, and attenuation as required by the St-John's River Water Management District and Alachua County, Florida. The dry basin will discharge West at a rate lower or equal to pre-development conditions and the underground basin will be self-contained.

   Pre and Post-development conditions have been met as required by the St-John's River Water Management District and Alachua County, Florida.

VIII DRAINAGE DESIGN

1) PRE DEVELOPMENT DRAINAGE AREAS

Pre-Development Area 1	Area (sf)	Area (Acres)	Curve CN
Existing Impervious	6,795	0.16	98.0
Open (A Soils)	5,289	0.12	39.0
TOTALS	**12,084**	**0.28**	**72.18**

Pre-Development Area 2	Area (sf)	Area (Acres)	Curve CN
Existing Impervious	8,061	0.19	98.0
Mulch	671	0.02	68.0
Open (A Soils)	23,590	0.54	39.0
TOTALS	**31,651**	**0.73**	**55.47**

2) POST DEVELOPMENT DRAINAGE AREAS

Post Development Area 1	Area (sf)	Area (Acres)	Curve CN
Proposed Impervious	6,989	0.16	98.0
Open (100% A Soils)	5,095	0.12	39.0
TOTALS	**12,084**	**0.28**	**73.12**

Post Development Area 2	Area (sf)	Area (Acres)	Curve CN
Proposed Impervious	6,219	0.14	98.0
Open (100% A Soils)	3,235	0.07	39.0
TOTALS	**9,454**	**0.22**	**77.81**

Post Development Area 3	Area (sf)	Area (Acres)	Curve CN
Proposed Impervious	8,027	0.18	98.0
Basin 1	2,839	0.07	100.0
Open (100% A Soils)	11,331	0.26	39.0
TOTALS	**22,197**	**0.51**	**68.14**

3) BASIN STORAGE DATA

Basin 1

Stage (MSL)	Area (SF)	Area (ac)	Volume (CF)	Vol. V1 (AC-FT)	
66.00	1,011	0.023	0	0.000	
67.00	1,462	0.034	1,237	0.028	*WQTV*
68.00	1,971	0.045	2,953	0.068	
69.00	2,535	0.058	5,206	0.120	
69.50	2,839	0.065	6,550	0.150	

Proposed Underground Basin

Stage (MSL)	Area (SF)	Area (ac)	Void Area (ac)	Volume (CF)	Volume (AC-FT)	
65.50	2,583	0.059	0.056	0	0.000	
66.26	2,583	0.059	0.056	1,865	0.043	*WQTV*
68.32	2,583	0.059	0.056	6,920	0.159	

Surface Area for Infiltration (90% of Basin Area): 0.053 ac

R-Tank Units

Module	Width (in)	Length (in)	Height (ft)	Volume (cf)	Storage (cf)	Area (sf)
Double (HD)	15.75	28.15	2.82	8.69	8.25	3.08

Basin	Basin Area (sf)	R-Tanks (#)	R-Tank (type)
Proposed Basin	2,583	839	*Double (HD)*

4) WATER QUALITY TREATMENT VOLUME

The basin provide water quality treatment volume per SJRWMD and Alachua County criteria for dry retention basins. This criteria includes two thresholds, whichever of the two is greater:

Volume V1 = 1.00 inches of rainfall over the total area
Volume V2 = 1.25 inches over the impervious area plus
0.50 inches over the total area

Drainage Area	Volume V1 (c.f.)	Volume V2 (c.f.)	Treat. Vol Required	Treat. Vol Provided
DA-2	788	1,042	1,042	1,237
DA-3	1,850	1,259	1,850	1,865
TOTAL	**2,638**	**2,301**	**2,891**	**3,101**

5) SUBSURFACE INVESTIGATION INFORMATION

Based on the Soils Reports No. 1870988, dated June 1st, 2021, and No. 2027685, dated July 12th 2023, prepared by Universal Engineering Sciences, the recommendations of the soil characteristics are summarized below:

Soil Report No. 1870988	
Soil Boring	B-2 thu B-4
Basin	Basin 1
Average Ground El.	69.00
Depth Confined layer (ft)	5.50
Confining Layer El.	63.50
Depth of groundwater (ft)	5.00
Groundwater El.	64.00
Vertical (ft/d)	7.00
Safety factor	2.00
Vertical Infiltration rate (ft/d)	3.50
Horizontal (ft/d)	13.00
Safety factor	2.00
Horizontal infiltration rate (ft/d	6.50
Fillable porosity (%)	25.00

Soil Report No. 2027685	
Soil Boring	B-1 and B-2
Basin	Underground
Average Ground El.	70.00
Depth Confined layer (ft)	7.00
Confining Layer El.	63.00
Depth of groundwater (ft)	6.50
Groundwater El.	63.50
Vertical (ft/d)	6.00
Safety factor	2.00
Vertical Infiltration rate (ft/d)	3.00
Horizontal (ft/d)	10.00
Safety factor	2.00
Horizontal infiltration rate (ft/d	5.00
Fillable porosity (%)	25.00

6) STRUCTURE INFORMATION

The stormwater management facilities will have structures for discharge as follows:

CONTROL STRUCTURE	Basin 1
Invert	68.75
Width (in)	12.00
Depth (in)	9.00

7) RECOVERY OF TREATMENT VOLUME FOR DRY RETENTION SYSTEM

The criteria for the recovery of the system is the recovery of the required water quality volume within 72 hours following the critical storm event and the total recovery of the 25 yr-24hr storm within 14 days following the storm event.

WQTV	
Basin 1 WQTV (ac-ft):	0.028
Recovery Time (hrs):	26.25
Basin 2 WQTV (ac-ft):	0.043
Recovery Time (hrs):	16.75

Total Recovery	
Basin 1 Max Stage:	68.87
Recovery Time (days):	11.77
14 Day Stage:	66.00
Basin 2 Max Stage:	66.55
Recovery Time (days):	8.88
14 Day Stage:	65.50

8) STORM ROUTING RESULTS

Drainage Areas Pre 1 and Post 1 have been modeled using SRWMD and Alachua County required storms. See Attachments C for modeling inputs and results. Summary below:

Storm Event	Pre DA-1 vs Post DA-1			Pre DA-2 vs Post DA-2 & 3		
	Pre DA-1	Post DA-1	Difference	Pre DA-2	Post DA-2	Difference
100YR-001HR	1.25	1.29	**0.04**	1.45	0.00	**-1.45**
100YR-002HR	1.06	1.09	**0.03**	1.32	0.00	**-1.32**
100YR-004HR	0.65	0.67	**0.02**	1.05	0.12	**-0.93**
100YR-008HR	0.74	0.75	**0.01**	1.29	0.27	**-1.02**
100YR-024HR	0.25	0.26	**0.01**	0.46	0.25	**-0.21**
100YR-072HR	0.18	0.18	**0.00**	0.40	0.29	**-0.11**
100YR-168HR	0.13	0.13	**0.00**	0.30	0.21	**-0.09**
100YR-240HR	0.17	0.17	**0.00**	0.39	0.28	**-0.11**
25YR-24HR	0.18	0.19	**0.01**	0.30	0.12	**-0.18**
MEAN ANNUAI	0.06	0.06	**0.00**	0.05	0.00	**-0.05**

Storm Event	Basin 1		Underground Basin	
	Stage	Freeboard (ft)	Stage	Freeboard (ft)
100YR-001HR	67.78	1.72	66.12	2.20
100YR-002HR	68.30	1.20	66.27	2.05
100YR-004HR	68.87	0.63	66.51	1.81
100YR-008HR	68.96	0.54	66.62	1.70
100YR-024HR	68.95	0.55	67.17	1.15
100YR-072HR	68.97	0.53	67.62	0.70
100YR-168HR	68.93	0.57	67.76	0.56
100YR-240HR	68.97	0.53	67.81	0.51
25YR-24HR	68.87	0.63	66.55	1.77
MEAN ANNUAI	67.16	2.34	65.52	2.80

9) BASIN MAINTENANCE PLAN

Basins shall be mowed regularly to avoid excessive vegetative growth. Mowing schedule should be monthly during winter months and more frequently (biweekly) during summer months.

Basin shall be cleaned out annually of any accumulated sedimentation buildup. If the basins are showing excessive sedimentation accumulation at the basin bottom, the basin bottom shall be scraped clean more often as the condition dictates.

Basin side slopes shall be maintained with a good stand of grass. Seasonal grasses shall be planted to avoid erosion (winter rye, summer millet).

Basin that do not drawdown properly and maintain standing water for an extended period of time may require remedial action. The engineer shall be notified to help coordinate remedial action in the event this occurs.

The required landscaping shall be maintained in a sound condition at all times. Any dead landscaping materials shall be replaced immediately to assure public safety.

Attachment A

Geotechnical Report by Universal Engineering Sciences

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Environmental Engineering
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

LOCATIONS:
Atlanta
Daytona Beach
Fort Myers
Fort Pierce
Gainesville
Jacksonville
Kissimmee
Leesburg
Miami
Ocala
Orlando (Headquarters)
Palm Coast
Panama City
Pensacola
Rockledge
Sarasota
Tampa
West Palm Beach

February 9, 2022

Premier Preschool of Gainesville
10 SW 75th Street
Gainesville, FL 32618

Attention: Dr. Suzana Sargent
Director

Reference: **Report of Geotechnical Consulting Services**
Premier Preschool of Gainesville Addition – Stormwater Management System
10 SW 75th Street
Gainesville, Alachua County, Florida
UES Project No. 0230.2200001.0000 UES Report No. 1932295

Dear Dr. Sargent:

Universal Engineering Sciences, LLC (UES) has completed geotechnical engineering services for the stormwater management area at the subject project in Gainesville, Alachua County, Florida, as authorized in Proposal 1920552, dated December 20, 2021. This Report presents the results of our subsurface field exploration, laboratory soil testing programs, and recommendations for the proposed stormwater management system.

Objectives

The objectives of our geotechnical consulting services on this portion of the project have been summarized as follows:

- Explore the subsurface conditions within the proposed new stormwater management facility system,
- Perform a series of laboratory tests on selected subsurface soil specimens to assist with engineering soil classifications and to establish the relevant soil composition and permeability characteristics,
- Classify and stratify the various soil strata in the soil test borings,
- Evaluate the groundwater level in the area of exploration and make appropriate recommendations,
- Recommend appropriate subsurface soil design parameter values for design of the on-site stormwater management system.

Project Information

The subject parcel is located at 10 SW 75th Street in Gainesville, Alachua County, Florida. Current site development plans include construction of stormwater management facilities for a proposed addition at the existing Premier Preschool of Gainesville. Our office was provided with a Concept Plan prepared by EDA, Inc. The number and locations of the borings were selected by EDA engineers-surveyors-planners, Inc. (EDA).

Site Conditions

UES personnel visited the project parcel during the performance of the field portion of this geotechnical study. Our on-site observations have been summarized as follows. At the time of our exploration the project area was developed as an existing preschool. Our office was provided with a drawing titled, “Concept V3,” prepared by EDA, Inc.

Local Geology

The general geology of central Alachua County is characterized by a surface veneer of Pleistocene and Pliocene sands and sandy clays overlying the Miocene-age Hawthorn Group. The Hawthorn Group includes a highly variable mixture of interbedded quartz sands, clays, carbonates, pebbles and grains occurring with thicknesses of up to 150 feet. In the general area of the subject project, it is anticipated that the Hawthorn Group is laterally discontinuous and perforated.

The general hydrogeology of Alachua County consists of three aquifer systems; a surficial aquifer, an intermediate aquifer, and the Floridan aquifer system. The surficial aquifer exists as an unconfined water table situated over the impermeable Hawthorn Group and is usually a subdued reflection of surface topography. The intermediate aquifer system includes all rocks that collectively retard the exchange of water between the overlying surficial aquifer system and the underlying Floridan aquifer system. Water in this system is contained under confined conditions. The Floridan aquifer system is a thick, carbonate sequence that functions regionally as a water-yielding hydraulic unit. Water exists under confined conditions. The potentiometric surface map of the upper Floridan Aquifer suggests groundwater elevations, outside perched zones, on the order of +40 to +50 feet, NGVD in the general site area.

General Area Soils Information

The United States Department of Agriculture (USDA) *Soil Survey of Alachua County*, *Florida* describes the near-surface soil profile in the project parcel as Millhopper soils. Millhopper soil is nearly level to gently sloping and moderately well drained; the water table is at a depth of 40 to 60 inches for 1 to 4 months, and at a depth of 60 to 72 inches for 2 to 4 months during most years. Engineering properties for Millhopper soil are summarized below in Table 1.

Table 1 – Relevant Engineering Index Properties of Millhopper Soil

Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0-58	Sand	SP-SM, SM	5-20	NP	Low	6.0-20 in/hr
58-64	Loamy sand, loamy fine sand	SM	15-22	NP	Low	2.0-6.0 in/hr
64-89	Sandy loam, fine sandy loam, sandy clay loam	SM, SM-SC, SC	18-40	NP-10	Low	0.06-2.0 in/hr

Subsurface Exploration

The field geotechnical testing activities were started and completed on January 31, 2022. Field tests for this portion of the geotechnical study included four (4) soil test borings to depths of 10 to 15 feet, performed at accessible locations shown on the attached Boring Location Plan. The actual test locations shown were approximate, and were staked in the field by UES personnel using existing landmarks and site features. The boreholes were backfilled to grade upon field work

completion.

Standard Penetration Test (SPT) Borings: Penetration tests were performed in accordance with ASTM Procedure D-1586, *Penetration Test and Split-Barrel Sampling of Soils*. This test procedure generally involves driving a 1.4-inch I.D. split-tube sampler into the soil profile in six inch increments for a minimum distance of 18 inches using a 140-pound hammer free-falling 30 inches. The total number of blows required to drive the sampler the second and third 6-inch increments is designated as the N-value, and provides an indication of in-place soil strength, density and consistency.

Auger Borings: The auger borings were performed in accordance with ASTM Procedure D-1452, *Standard Practice for Soil Investigation and Sampling by Auger Borings*. Hand augers were performed, which involve advancing a hand held sampler into the soil and inspecting the soil recovered. The recovered soil samples were recorded and placed in plastic jars for further soil classification and testing.

Representative portions of the soil samples recovered were transported to our laboratory. The soil samples were classified and stratified by a Geotechnical Engineer. The results of the classification and stratification have been shown on the attached Boring Logs and summarized below. It should be noted that soil conditions might vary between the soil strata interfaces which are shown. The soil boring data reflects information from the specific test locations only.

This Report has presented an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards.

Subsurface Findings

The field exploration performed for this project disclosed subsurface conditions that were generally consistent with the local geology and general area soils information described above. The subsurface conditions found in the soil test borings have been summarized in the attached Boring Logs and described below.

The soil test borings generally encountered very loose to loose sand to sand with silt [SP/SP-SM] to depths of 4 to 7.5 feet followed by clayey sand to sandy clay [SC/CH] to boring termination depths. The groundwater level was not encountered below the ground surface in the soil borings at the time of our field exploration. Fluctuations of the groundwater levels should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

Laboratory Soil Tests

The soil samples recovered from the field exploration program were placed in containers and returned to our soils laboratory, where the Geotechnical Engineer visually classified the samples. Laboratory soil tests are performed to aid in the classification of the soils, and to help in the evaluation of engineering characteristics of the soils. Representative soil samples were selected for percent fines determination, moisture content and permeability tests. The test results have been presented on the attached Boring Logs and summarized in Table 2.

Percent Passing No. 200 Sieve: Certain recovered soil samples were selected to determine the percentage of fines. In these tests the soil samples were dried and washed over a No. 200 mesh sieve. The percent of soil by weight passing the sieve was the percentage of fines or portion of the sample in the silt and clay size range. This test was conducted in accordance with ASTM Procedure D-1140, Amount of Material in Soils Finer Than the #200 Sieve.

Permeability: Representative soil samples were selected to determine the permeability rate of the soil. Constant head permeability tests were performed on remolded representative samples of the near surface soils from the proposed stormwater management area. These tests were conducted following the concepts outlined in ASTM D-2434, Standard Test Method for Permeability of Granular Soils (Constant Head and Falling Head).

Moisture Content: Certain recovered soil samples were selected to determine their moisture content. The moisture content is the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles. This test was conducted in accordance with ASTM Procedure D-2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.

Table 2 – Laboratory Soil Test Results

Test Location	Sample Depth	Type of Test	Results	Soil Description
B-1	3 feet	% Finer #200	10 %	Sand, with silt
		Moisture Content	3 %	
		Permeability	8 feet/day	
B-2	1.5 feet	% Finer #200	9 %	Sand, with silt
		Moisture Content	2 %	
		Permeability	9 feet/day	
B-3	3.5 feet	% Finer #200	8 %	Sand, with silt
		Moisture Content	1 %	
		Permeability	11 feet/day	
B-4	4.5 feet	% Finer #200	25 %	Clayey Sand
		Moisture Content	9%	
		Permeability	< 0.1 feet/day	

Stormwater Management System

The laboratory test data indicates that the sandy soils in the proposed stormwater management area for this project generally have permeability rates of approximately 8 to 11 feet per day at the boring locations. The silty-clayey sands encountered directly underneath the surficial clean sands have permeability rate of less than 0.1 feet per day and would behave as a confining (restrictive) layer in the stormwater management areas. Based upon the above findings, shallow lenses of clayey sandy soils were encountered near the existing ground surface. Over excavation of this material beneath the pond bottom may be needed to facilitate stormwater exfiltration and to prevent a non-uniform dry retention area. We recommend that you consider the soil parameters presented in Table 4 for design of the stormwater management system on the subject project site. It should be noted that the below referenced values are measured values and do not incorporate a factor of safety.

Table 4 – Stormwater Management System Soil Design Parameters		
Corresponding Soil Boring Test Locations	B-1	B-2/B-4
Average Depth to Confining Layer, feet	4.5	5.5
Estimated Unsaturated Vertical Infiltration Rate, feet per day	6	7
Estimated Horizontal Hydraulic Conductivity, feet per day	10	13
Estimated Fillable Porosity, percentage	25	25
Estimated Depth of Seasonal High Water Table, feet[1]	4	5

[1]Normal seasonal high water table (SHWT) will be the result of perched conditions.

Stormwater Management System Fill Suitability

The recovered soil samples were classified using visual and textural means, and limited laboratory testing. We offer the following ***preliminary guidelines*** for the use of on-site soils, such as those excavated from the proposed shallow retention areas, as fill material for the project.

Soil materials excavated and classified as fine sands to sand with silts and sand with clay (SP, SP-SM, SP-SC), with typically 12% fines or less (silt/clay fraction), may be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, provided said materials are properly dried, placed, and compacted.

Soil materials excavated and classified as silty fine sands [SM], with typically 12% to 25% fines, may also be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, after significant drying and some mixing with the fine sand material described above. Proper placement, proof rolling and compaction must also be performed.

Soil materials excavated and classified as clayey sand, silt or clay (SC, ML, MH, CL, and CH) and any organic-laden soils (5% or greater organics by weight) should not be reused as fill beneath buildings or pavement sections. These materials could be used in green areas, if applicable and in non-structural applications where excessive ground subsidence will not create functional or aesthetic problems. It should be noted that silt and clay materials will retain water and if used may become saturated and soft for a significant period of time following a rain event.

Soil borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information to negate presence of anomalous materials or for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect such anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

Report Limitations

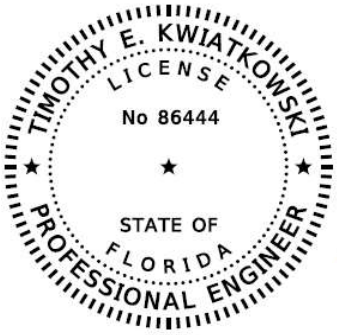
This Report has been prepared for the exclusive use of Premier Preschool of Gainesville, and members of the Design/Construction Team for the specific project discussed in this Report. This Report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. If any changes in the design or location of the project elements as outlined in this Report are planned, the conclusions and recommendations contained in this Report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved, in writing, by UES.

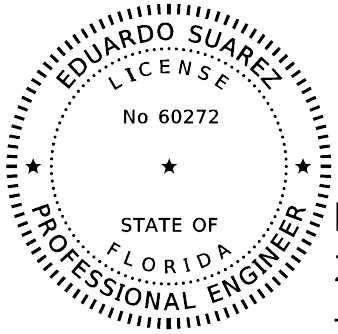
UES performs hydraulic conductivity tests, including the two most common, i.e., DRI and remolded laboratory permeability testing, using generally accepted practices of the local engineering community. These common tests are the quickest and most economical for stormwater management system design. However, the user of this information is cautioned that the potential variability of results and reproducibility associated with these types of tests can be significant. It is important to note that there are many factors influencing the permeability of a soil. These factors include, but are not limited to, soil grain size, soil particle arrangement and structure, dispersion of soil fines, density, and degree of saturation, soil heterogeneity, and soil anisotropy. Also, the permeability measured by such tests may not be representative of that of the total effective aquifer thickness. Factors of safety can compensate for part of the inherent test limitations but the Designer must exercise judgment regarding final selection and applicability of provided soil design input parameters. Should the modeling analysis indicate marginally acceptable compliance with Water Management District design criteria, it may be advisable to perform more extensive and representative in-situ permeability testing by collecting “undisturbed” horizontal and vertical soil samples and/or installing grouted piezometers or wells for slug testing. UES can perform these field tests if desired. Additionally, the actual exfiltration rates from the pond may be influenced by pond geometry, natural soil variability, in-situ depositional characteristics and soil density, retention volume, and groundwater mounding effects. Also, it is important to note that the upper in-situ soil zone is usually altered during the excavation and grading operations by heavy, vibrating earthwork equipment. Due to these numerous factors cited above, published literature suggests that the permeability of a soil can only be estimated to within an order of magnitude. Therefore, appropriate factors of safety should be incorporated into the design process.

Closure

We have enjoyed being a part of the engineering team on this project, and appreciate the opportunity to have assisted you towards its successful completion. Please contact our office if you have any questions or need further assistance.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, LLC
Certificate of Authorization Number 549





Eduardo Suarez
2022.02.09 15:35:22
-05'00'

Timothy E. Kwiatkowski, P.E.
Project Geotechnical Engineer
Florida P.E. No. 86444

Eduardo Suarez, P.E.
Senior Geotechnical Engineer
Florida P.E. No. 60272

This item has been electronically signed and sealed by Eduardo Suarez, PE on the date adjacent to the seal using Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Attachments: Boring Location Plan, Boring Logs, Key to Boring Logs,
GBA Document, Constraints and Restrictions, General Conditions

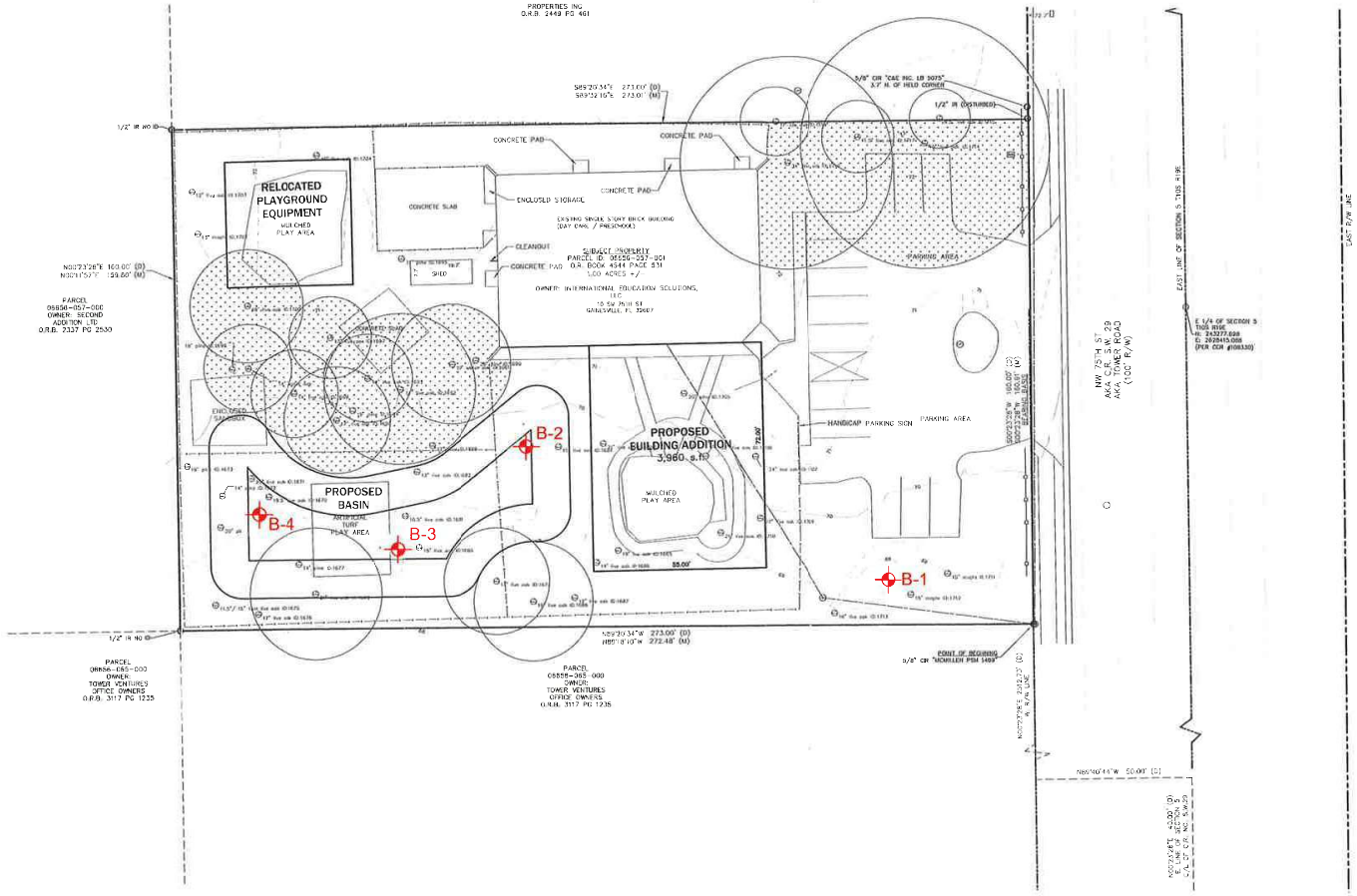
cc: EDA engineers-surveyors-planners, Inc.

APPENDIX A

Boring Location Plan

Boring Logs

Key to Boring Logs



LEGEND

BORING LOCATION

NOTE: ALL SOIL TEST BORING LOCATIONS SHOWN ARE APPROXIMATE.

THE PREMIER PRESCHOOL

THE PREMIER PRESCHOOL, STORMWATER MANAGEMENT EXPANSION
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING LOCATION PLAN

DRAWN BY: KD | DATE: 2/7/22
CHECKED BY: ES | DATE: 2/7/22
SCALE: 1"=40' | ACADFILE:0230.2200001-A
PROJECT NO: 0230.2200001.0000 | REPORT NO 1932295

UNIVERSAL ENGINEERING SCIENCES

PAGE NO:
A - 1

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2200001.0000
REPORT NO.:	1932295
PAGE:	A-2

PROJECT: THE PREMIER PRESCHOOL, STORMWATER MANAGEMENT EXPANSION
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: THE PREMIER PRESCHOOL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

DATE STARTED: 1/31/22
DATE FINISHED: 1/31/22
DRILLED BY: S. HILLIGOSS
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORGANIC CONTENT (%)
0						Loose to very loose tan SAND, with silt [SP-SM]						
1												
2		1-2-2	4									
3							10	3			8	
4		1-1-1	2									
5						Loose orange and brown clayey SAND [SC]						
		3-4-4	8									
6						Medium dense gray and orange very clayey SAND to sandy CLAY [SC/CH]						
7		7-8-12	20									
8												
		5-7-7	14									
9												
10		6-6-8	14			Stiff orange and gray sandy CLAY [CL]						
11												
12												
13												
14												
15		6-5-6	11			Boring Terminated at 15'						

BORING THE PREMIER PRESCHOOL.GPJ GAINESVILLE TEMPLATE.GDT 2/9/22

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2200001.0000
REPORT NO.:	1932295
PAGE:	A-3

PROJECT: THE PREMIER PRESCHOOL, STORMWATER MANAGEMENT EXPANSION
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: THE PREMIER PRESCHOOL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

DATE STARTED: 1/31/22
DATE FINISHED: 1/31/22
DRILLED BY: S. HILLIGOSS
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORGANIC CONTENT (%)
0						3" Concrete						
1						Loose tan SAND, with silt [SP-SM]						
2		4-2-2	4				9	2			9	
3												
4		3-2-2	4			Stiff orange and brown sandy CLAY [CL]						
5												
6		3-4-7	11			Loose tan and light brown SAND, with trace of clay [SP-SC]						
7		1-3-5	8			Very stiff orange, green and gray CLAY [CH], with trace of sand						
8												
9		3-6-9	15			Medium dense tan and light brown very clayey SAND [SC]						
10		4-6-10	16									
11												
12												
13												
14						Firm gray and orange sandy CLAY [CL], with trace of rock						
15		2-2-4	6			Boring Terminated at 15'						

BORING THE PREMIER PRESCHOOL.GPJ GAINESVILLE TEMPLATE.GDT 2/9/22

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2200001.0000
REPORT NO.:	1932295
PAGE:	A-4

PROJECT: THE PREMIER PRESCHOOL, STORMWATER MANAGEMENT EXPANSION
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-3** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: THE PREMIER PRESCHOOL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

DATE STARTED: 1/31/22
DATE FINISHED: 1/31/22
DRILLED BY: S. HILLIGOSS
TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORGANIC CONTENT (%)
0						Brown SAND, with silt [SP-SM]						
1	X					Tan and light brown SAND, with silt [SP-SM]						
2												
3												
4	X					Tan very fine SAND, with silt [SP-SM]						
5							8	1			11	
6												
7												
8	X					Orange and light brown very clayey SAND [SC]						
9												
10						Boring Terminated at 10'						

BORING THE PREMIER PRESCHOOL.GPJ GAINESVILLE TEMPLATE.GDT 2/9/22

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2200001.0000
REPORT NO.:	1932295
PAGE:	A-5

PROJECT: THE PREMIER PRESCHOOL, STORMWATER MANAGEMENT EXPANSION
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-4** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: THE PREMIER PRESCHOOL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

DATE STARTED: 1/31/22
DATE FINISHED: 1/31/22
DRILLED BY: S. HILLIGOSS
TYPE OF SAMPLING: ASTM D-1586

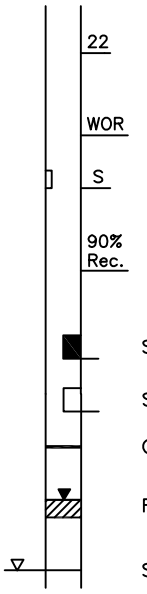
DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORGANIC CONTENT (%)
0						Brown SAND [SP], with trace of roots						
1						Tan and light brown SAND, with silt [SP-SM]						
2												
3						Tan very fine SAND, with silt [SP-SM]						
4						Light brown and orange clayey SAND [SC]						
5							25	9			<0.1	
6												
7												
8												
9												
10						Boring Terminated at 10'						

BORING THE PREMIER PRESCHOOL.GPJ GAINESVILLE TEMPLATE.GDT 2/9/22

UNIVERSAL
ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS



22	Number of Blows of a 140–lb Weight Falling 30 in. Required to Drive Standard Spoon One Foot
WOR	Weight of Drill Rods
S	Thin–Wall Shelby Tube Undisturbed Sampler Used
90% Rec.	Percent Core Recovery from Rock Core–Drilling Operations
	Sample Taken at this Level
	Sample Not Taken at this Level
	Change in Soil Strata
	Free Ground Water Level
	Seasonal High Ground Water Level

GRANULAR MATERIALS

Relative Density	Safety Hammer SPT N (Blows/Ft.)	Automatic Hammer SPT N (Blows/Ft.)
Very Loose	Less than 4	Less than 3
Loose	4–10	3–8
Medium Dense	10–30	8–24
Dense	30–50	24–40
Very Dense	>50	>40

COHESIVE MATERIALS

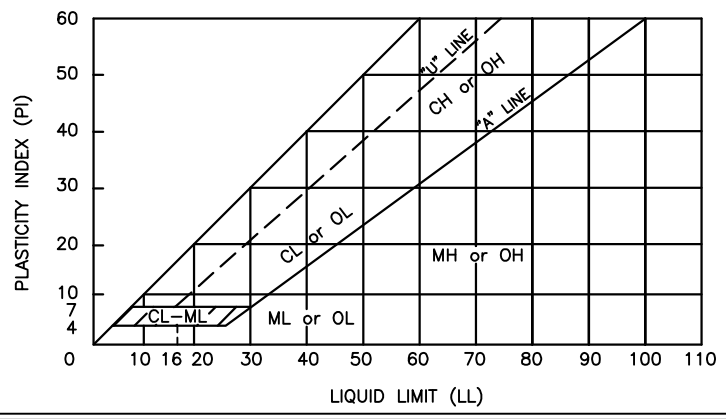
Consistency	Safety Hammer SPT N (Blows/Ft.)	Automatic Hammer SPT N (Blows/Ft.)
Very Soft	Less than 2	Less than 1
Soft	2–4	1–3
Firm	4–8	3–6
Stiff	8–15	6–12
Very Stiff	15–30	12–24
Hard	>30	>24

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 200 sieve	CLEAN GRAVELS	GW	Well–graded gravels and gravel–sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel–sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel–sand–silt mixtures
			GC	Clayey gravels, gravel–sand–clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well–graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand–silt mixtures
			SC	Clayey sands, sand–clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomacaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly organic Soils			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3–in. (75mm) sieve.

PLASTICITY CHART



APPENDIX B

Important Information About Your Geotechnical Engineering Report
Constraint and Restrictions

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

UNIVERSAL
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Universal Engineering Sciences, LLC
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES **1.1** *Universal Engineering Sciences, LLC*, and its subsidiaries and affiliated companies ("UES"), is responsible for providing the services described under the Scope of Services. The term "UES" as used herein includes all of UES's agents, employees, professional staff, and subcontractors. **1.2** The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys, plans and specifications, and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product. **1.3** The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties in writing.

SECTION 2: STANDARD OF CARE **2.1** Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made. **2.2** Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the work is to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.

SECTION 3: SITE ACCESS AND SITE CONDITIONS **3.1** Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Scope of Services. **3.2** The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: BILLING AND PAYMENT **4.1** UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications. **4.2** Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts. **4.3** If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 5: OWNERSHIP AND USE OF DOCUMENTS **5.1** All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES. Neither Client nor any other entity shall change or modify UES's instruments of service. **5.2** Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose. **5.3** UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report or completion of the Scope of Services, during which period the records will be made available to the Client in a reasonable time and manner. **5.4** All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other entity, or used or relied upon by any other entity, without the express written consent of UES. Client is the only entity to which UES owes any duty or duties, in contract or tort, pursuant to or under this Agreement.

SECTION 6: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS **6.1** Client represents that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site. **6.2** Under this agreement, the term hazardous materials include hazardous materials, hazardous wastes, hazardous substances (40 CFR 261.31, 261.32, 261.33), petroleum products, polychlorinated biphenyls, asbestos, and any other material defined by the U.S. EPA as a hazardous material. **6.3** Hazardous materials may exist at a site where there is no reason to believe they are present. The discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. The discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials. **6.4** UES will notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client will make any disclosures required by law to the appropriate governing agencies. Client will hold UES harmless for all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials. **6.5** Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 7: RISK ALLOCATION **7.1** Client agrees that UES's liability for any damage on account of any breach of contract, error, omission, or professional negligence will be limited to a sum not to exceed $50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of $1,000,000.00 upon Client's written request at the time of accepting UES's proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $400.00, whichever is greater. If Client prefers a $2,000,000.00 limit on contractual or professional liability, UES agrees to increase the limits up to a maximum of $2,000,000.00 upon Client's written request at the time of accepting UES's proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $800.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance. **7.2** Client shall not be liable to UES and UES shall not be liable to Client for any incidental, special, or consequential damages (including lost profits, loss of use, and lost savings) incurred by either party due to the fault of the other, regardless of the nature of the fault, or whether it was committed by Client or UES, their employees, agents, or subcontractors; or whether such liability arises in breach of contract or warranty, tort (including negligence), statutory, or any other cause of action. **7.3** As used in this Agreement, the terms "claim" or "claims" mean any claim in contract, tort, or statute alleging negligence, errors, omissions, strict liability, statutory liability, breach of contract, breach of warranty, negligent misrepresentation, or any other act giving rise to liability.

SECTION 8: INSURANCE **8.1** UES represents it and its agents, staff and consultants employed by UES, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 7, whichever is less. The Client agrees to defend, indemnify, and save UES harmless for loss, damage or liability arising from acts by Client, Client's agents, staff, and others employed by Client. **8.2** Under no circumstances will UES indemnify Client from or for Client's own actions, negligence, or breaches of contract. **8.3**

To the extent damages are covered by property insurance, Client and UES waive all rights against each other and against the contractors, consultants, agents, and employees of the other for damages, except such rights as they may have to the proceeds of such insurance.

SECTION 9: DISPUTE RESOLUTION **9.1** All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to mediation or non-binding arbitration, before and as a condition precedent to other remedies provided by law. **9.2** If a dispute arises and that dispute is not resolved by mediation or non-binding arbitration, then: (a) the claim will be brought in the state or federal courts having jurisdiction where the UES office which provided the service is located; and (b) the prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, expert witness fees, and other claim related expenses.

SECTION 10: TERMINATION **10.1** This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof, or in the case of a force majeure event such as terrorism, act of war, public health or other emergency. Such termination shall not be effective if such substantial failure or force majeure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses. **10.2** In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records, and reports.

SECTION 11: REVIEWS, INSPECTIONS, TESTING, AND OBSERVATIONS **11.1** Plan review, private provider inspections, and building inspections are performed for the purpose of observing compliance with applicable building codes. Threshold inspections are performed for the purpose of observing compliance with an approved threshold inspection plan. Construction materials testing ("CMT") is performed to document compliance of certain materials or components with applicable testing standards. UES's performance of plan reviews, private provider inspections, building inspections, threshold inspections, or CMT, or UES's presence on the site of Client's project while performing any of the foregoing activities, is not a representation or warranty by UES that Client's project is free of errors in either design or construction. **11.2** If UES is retained to provide construction monitoring or observation, UES will report to Client any observed work which, in UES's opinion, does not conform to the plans and specifications provided to UES. UES shall have no authority to reject or terminate the work of any agent or contractor of Client. No action, statements, or communications of UES, or UES's site representative, can be construed as modifying any agreement between Client and others. UES's performance of construction monitoring or observation is not a representation or warranty by UES that Client's project is free of errors in either design or construction. **11.3** Neither the activities of UES pursuant to this Agreement, nor the presence of UES or its employees, representatives, or subcontractors on the project site, shall be construed to impose upon UES any responsibility for means or methods of work performance, superintendence, sequencing of construction, or safety conditions at the project site. Client acknowledges that Client or its contractor is solely responsible for project jobsite safety. **11.4** Client is responsible for scheduling all inspections and CMT activities of UES. All testing and inspection services will be performed on a will-call basis. UES will not be responsible for tests and inspections that are not performed due to Client's failure to schedule UES's services on the project, or for any claims or damages arising from tests and inspections that are not scheduled or performed.

SECTION 12: ENVIRONMENTAL ASSESSMENTS Client acknowledges that an Environmental Site Assessment ("ESA") is conducted solely to permit UES to render a professional opinion about the likelihood or extent of regulated contaminants being present on, in, or beneath the site in question at the time services were conducted. No matter how thorough an ESA study may be, findings derived from the study are limited and UES cannot know or state for a fact that a site is unaffected by reportable quantities of regulated contaminants as a result of conducting the ESA study. Even if UES states that reportable quantities of regulated contaminants are not present, Client still bears the risk that such contaminants may be present or may migrate to the site after the ESA study is complete.

SECTION 13: SUBSURFACE EXPLORATIONS **13.1** Client acknowledges that subsurface conditions may vary from those observed at locations where borings, surveys, samples, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed or provided by UES. **13.2** Subsurface explorations may result in unavoidable cross-contamination of certain subsurface areas, as when a probe or boring device moves through a contaminated zone and links it to an aquifer, underground stream, or other hydrous body not previously contaminated. UES is unable to eliminate totally cross-contamination risk despite use of due care. Since subsurface explorations may be an essential element of UES's services indicated herein, Client shall, to the fullest extent permitted by law, waive any claim against UES, and indemnify, defend, and hold UES harmless from any claim or liability for injury or loss arising from cross-contamination allegedly caused by UES's subsurface explorations. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 14: SOLICITATION OF EMPLOYEES Client agrees not to hire UES's employees except through UES. In the event Client hires a UES employee within one year following any project through which Client had contact with said employee, Client shall pay UES an amount equal to one-half of the employee's annualized salary, as liquidated damages, without UES waiving other remedies it may have.

SECTION 15: ASSIGNS Neither Client nor UES may delegate, assign, sublet, or transfer its duties or interest in this Agreement without the written consent of the other party.

SECTION 16: GOVERNING LAW AND SURVIVAL **16.1** This Agreement shall be governed by and construed in accordance with the laws of the jurisdiction in which the UES office performing the services hereunder is located. **16.2** In any of the provisions of this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired and will survive. Limitations of liability and indemnities will survive termination of this agreement for any cause.

SECTION 17: INTEGRATION CLAUSE **17.1** This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein. **17.2** This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.

SECTION 18: WAIVER OF JURY TRIAL Both Client and UES waive trial by jury in any action arising out of or related to this Agreement.

SECTION 19: INDIVIDUAL LIABILTY PURSUANT TO FLORIDA STAT. 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

July 12, 2023

Premier Preschool of Gainesville
10 SW 75th Street
Gainesville, FL 32618

Attention: Dr. Suzana Sargent
Director

Reference: **Addendum to Report of Geotechnical Consulting Services**
Premier Preschool of Gainesville Addition – Stormwater Management System
10 SW 75th Street
Gainesville, Alachua County, Florida
UES Project No. 0230.2300064.0000 UES Report No. 2027685

Dear Dr. Sargent:

Universal Engineering Sciences, LLC (UES) has completed additional geotechnical engineering services for the stormwater management area at the subject project in Gainesville, Alachua County, Florida, as authorized in Proposal 2019340, dated May 16, 2023. UES previously performed a geotechnical exploration at this project site and presented our findings in our *Report of Geotechnical Consulting Services*, Report No. 1932295, dated February 9, 2022. This addendum report presents the results of our supplemental subsurface field exploration, laboratory soil testing programs, and recommendations for the proposed stormwater management facilities.

Objectives

The objectives of our geotechnical consulting services on this portion of the project have been summarized as follows:

- Explore the subsurface conditions within the proposed new stormwater management facility system,
- Perform a series of laboratory tests on selected subsurface soil specimens to assist with engineering soil classifications and to establish the relevant soil composition and permeability characteristics,
- Classify and stratify the various soil strata in the soil test borings,
- Evaluate the groundwater level in the area of exploration and make appropriate recommendations,
- Recommend appropriate subsurface soil design parameter values for design of the on-site stormwater management system.

Project Information

The subject parcel is located at 10 SW 75th Street in Gainesville, Alachua County, Florida. Current site development plans include construction of stormwater management facilities for a proposed addition at the existing Premier Preschool of Gainesville. Our office was provided with a Concept Plan prepared by EDA, Inc. The number and locations of the borings were selected by EDA engineers-surveyors-planners, Inc. (EDA).

Site Conditions

UES personnel visited the project parcel during the performance of the field portion of this geotechnical study. Our on-site observations have been summarized as follows. At the time of our exploration the project area was developed as an existing preschool. Our office was provided with a drawing titled, "Dimension and Utility Plan," prepared by EDA, Inc.

Local Geology

The general geology of central Alachua County is characterized by a surface veneer of Pleistocene and Pliocene sands and sandy clays overlying the Miocene-age Hawthorn Group. The Hawthorn Group includes a highly variable mixture of interbedded quartz sands, clays, carbonates, pebbles and grains occurring with thicknesses of up to 150 feet. In the general area of the subject project, it is anticipated that the Hawthorn Group is laterally discontinuous and perforated.

The general hydrogeology of Alachua County consists of three aquifer systems; a surficial aquifer, an intermediate aquifer, and the Floridan aquifer system. The surficial aquifer exists as an unconfined water table situated over the impermeable Hawthorn Group and is usually a subdued reflection of surface topography. The intermediate aquifer system includes all rocks that collectively retard the exchange of water between the overlying surficial aquifer system and the underlying Floridan aquifer system. Water in this system is contained under confined conditions. The Floridan aquifer system is a thick, carbonate sequence that functions regionally as a water-yielding hydraulic unit. Water exists under confined conditions. The potentiometric surface map of the upper Floridan Aquifer suggests groundwater elevations, outside perched zones, on the order of +40 to +50 feet, NGVD in the general site area.

General Area Soils Information

The United States Department of Agriculture (USDA) *Soil Survey of Alachua County*, *Florida* describes the near-surface soil profile in the project parcel as Millhopper soils. Millhopper soil is nearly level to gently sloping and moderately well drained; the water table is at a depth of 40 to 60 inches for 1 to 4 months, and at a depth of 60 to 72 inches for 2 to 4 months during most years. Engineering properties for Millhopper soil are summarized below in Table 1.

Table 1 – Relevant Engineering Index Properties of Millhopper Soil

Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0-58	Sand	SP-SM, SM	5-20	NP	Low	6.0-20 in/hr
58-64	Loamy sand, loamy fine sand	SM	15-22	NP	Low	2.0-6.0 in/hr
64-89	Sandy loam, fine sandy loam, sandy clay loam	SM, SM-SC, SC	18-40	NP-10	Low	0.06-2.0 in/hr

Subsurface Exploration

The field geotechnical testing activities were started and completed on July 5, 2023. Field tests for this portion of the geotechnical study included two (2) soil test borings to depths of 15 feet, performed at accessible locations shown on the attached Boring Location Plan. The actual test locations shown were approximate, and were staked in the field by UES personnel using existing landmarks and site features. The boreholes were backfilled to grade upon field work completion.

Standard Penetration Test (SPT) Borings: Penetration tests were performed in accordance with ASTM Procedure D-1586, *Penetration Test and Split-Barrel Sampling of Soils*. This test procedure generally involves driving a 1.4-inch I.D. split-tube sampler into the soil profile in six inch increments for a minimum distance of 18 inches using a 140-pound hammer free-falling 30 inches. The total number of blows required to drive the sampler the second and third 6-inch increments is designated as the N-value, and provides an indication of in-place soil strength, density and consistency.

Auger Borings: The auger borings were performed in accordance with ASTM Procedure D-1452, *Standard Practice for Soil Investigation and Sampling by Auger Borings*. Hand augers were performed, which involve advancing a hand held sampler into the soil and inspecting the soil recovered. The recovered soil samples were recorded and placed in plastic jars for further soil classification and testing.

Representative portions of the soil samples recovered were transported to our laboratory. The soil samples were classified and stratified by a Geotechnical Engineer. The results of the classification and stratification have been shown on the attached Boring Logs and summarized below. It should be noted that soil conditions might vary between the soil strata interfaces which are shown. The soil boring data reflects information from the specific test locations only.

This Report has presented an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards.

Subsurface Findings

The field exploration performed for this project disclosed subsurface conditions that were generally consistent with the local geology and general area soils information described above. The subsurface conditions found in the soil test borings have been summarized in the attached Boring Logs and described below.

The soil test borings generally encountered loose to medium dense sand to sand with silt [SP/SP-SM] to depths of 4 to 7 feet followed by clayey sand to sandy clay [SC/CH] to boring termination depths. The groundwater level was not encountered below the ground surface in the soil borings at the time of our field exploration. Fluctuations of the groundwater levels should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

Laboratory Soil Tests

The soil samples recovered from the field exploration program were placed in containers and returned to our soils laboratory, where the Geotechnical Engineer visually classified the samples. Laboratory soil tests are performed to aid in the classification of the soils, and to help in the evaluation of engineering characteristics of the soils. Representative soil samples were selected for percent fines determination, moisture content and permeability tests. The test results have been presented on the attached Boring Logs and summarized in Table 2.

Percent Passing No. 200 Sieve: Certain recovered soil samples were selected to determine the percentage of fines. In these tests the soil samples were dried and washed over a No. 200 mesh sieve. The percent of soil by weight passing the sieve was the percentage of fines or portion of the sample in the silt and clay size range. This test was conducted in accordance with ASTM Procedure D-1140, Amount of Material in Soils Finer Than the #200 Sieve.

Permeability: Representative soil samples were selected to determine the permeability rate of the soil. Constant head permeability tests were performed on remolded representative samples of the near surface soils from the proposed stormwater management area. These tests were conducted following the concepts outlined in ASTM D-2434, Standard Test Method for Permeability of Granular Soils (Constant Head and Falling Head).

Moisture Content: Certain recovered soil samples were selected to determine their moisture content. The moisture content is the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles. This test was conducted in accordance with ASTM Procedure D-2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.

Table 2 – Laboratory Soil Test Results

Test Location	Sample Depth	Type of Test	Results	Soil Description
B-1	3.5 feet	% Finer #200	8 %	Sand, with silt
		Moisture Content	5 %	
		Permeability	13 feet/day	
B-1	9 feet	% Finer #4	100 %	Clayey Sand
		% Finer #10	100 %	
		% Finer #40	93 %	
		% Finer #60	69 %	
		% Finer #100	44 %	
		% Finer #200	28 %	
		Moisture Content	17 %	
B-2	3.5 feet	% Finer #4	100 %	Sand, with silt
		% Finer #10	100 %	
		% Finer #40	93 %	
		% Finer #60	68 %	
		% Finer #100	36 %	
		% Finer #200	10 %	
		Moisture Content	3 %	
B-2	6 feet	% Finer #200	22 %	Silty-Clayey Sand
		Moisture Content	13 %	
		Permeability	0.4 feet/day	

Stormwater Management System

The laboratory test data indicates that the sandy soils in the proposed stormwater management area for this project generally have permeability rates of approximately 0.4 to 13 feet per day at the boring locations. The clayey sands encountered directly underneath the surficial sands have permeability rate of less than 0.1 feet per day and would behave as a confining (restrictive) layer in the stormwater management areas. Based upon the above findings, shallow lenses of clayey sandy soils were encountered near the existing ground surface. Over excavation of this material beneath the pond bottom may be needed to facilitate stormwater exfiltration and to prevent a non-uniform dry retention area. We recommend that you consider the soil parameters presented in Table 3 for design of the stormwater management system on the subject project site. It should be noted that the below referenced values are measured values and do not incorporate a factor of safety.

Table 3 – Stormwater Management System Soil Design Parameters	
Corresponding Soil Boring Test Locations	B-1/B-2
Average Depth to Confining Layer, feet	7
Estimated Unsaturated Vertical Infiltration Rate, feet per day	6
Estimated Horizontal Hydraulic Conductivity, feet per day	10
Estimated Fillable Porosity, percentage	25
Estimated Depth of Seasonal High Water Table, feet[1]	6.5

[1]Normal seasonal high water table (SHWT) will be the result of perched conditions.

Stormwater Management System Fill Suitability

The recovered soil samples were classified using visual and textural means, and limited laboratory testing. We offer the following ***preliminary guidelines*** for the use of on-site soils, such as those excavated from the proposed shallow retention areas, as fill material for the project.

Soil materials excavated and classified as fine sands to sand with silts and sand with clay (SP, SP-SM, SP-SC), with typically 12% fines or less (silt/clay fraction), may be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, provided said materials are properly dried, placed, and compacted.

Soil materials excavated and classified as silty fine sands [SM], with typically 12% to 25% fines, may also be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, after significant drying and some mixing with the fine sand material described above. Proper placement, proof rolling and compaction must also be performed.

Soil materials excavated and classified as clayey sand, silt or clay (SC, ML, MH, CL, and CH) and any organic-laden soils (5% or greater organics by weight) should not be reused as fill beneath buildings or pavement sections. These materials could be used in green areas, if applicable and in non-structural applications where excessive ground subsidence will not create functional or aesthetic problems. It should be noted that silt and clay materials will retain water and if used may become saturated and soft for a significant period of time following a rain event.

Soil borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information to negate presence of anomalous materials or for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect such anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended.

Report Limitations

This Report has been prepared for the exclusive use of Premier Preschool of Gainesville, and members of the Design/Construction Team for the specific project discussed in this Report. This Report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. If any changes in the design or location of the project elements as outlined in this Report are planned, the conclusions and recommendations contained in this Report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved, in writing, by UES.

UES performs hydraulic conductivity tests, including the two most common, i.e., DRI and remolded laboratory permeability testing, using generally accepted practices of the local engineering community. These common tests are the quickest and most economical for stormwater management system design. However, the user of this information is cautioned that the potential variability of results and reproducibility associated with these types of tests can be significant. It is important to note that there are many factors influencing the permeability of a soil. These factors include, but are not limited to, soil grain size, soil particle arrangement and structure, dispersion of soil fines, density, and degree of saturation, soil heterogeneity, and soil anisotropy. Also, the permeability measured by such tests may not be representative of that of the total effective aquifer thickness. Factors of safety can compensate for part of the inherent test limitations but the Designer must exercise judgment regarding final selection and applicability of provided soil design input parameters. Should the modeling analysis indicate marginally acceptable compliance with Water Management District design criteria, it may be advisable to perform more extensive and representative in-situ permeability testing by collecting “undisturbed” horizontal and vertical soil samples and/or installing grouted piezometers or wells for slug testing. UES can perform these field tests if desired. Additionally, the actual exfiltration rates from the pond may be influenced by pond geometry, natural soil variability, in-situ depositional characteristics and soil density, retention volume, and groundwater mounding effects. Also, it is important to note that the upper in-situ soil zone is usually altered during the excavation and grading operations by heavy, vibrating earthwork equipment. Due to these numerous factors cited above, published literature suggests that the permeability of a soil can only be estimated to within an order of magnitude. Therefore, appropriate factors of safety should be incorporated into the design process.

Closure

We have enjoyed being a part of the engineering team on this project, and appreciate the opportunity to have assisted you towards its successful completion. Please contact our office if you have any questions or need further assistance.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, LLC
Certificate of Authorization Number 549

TIMOTHY E. KWIATKOWSKI LICENSE No 86444 STATE OF FLORIDA PROFESSIONAL ENGINEER

Timothy E. Kwiatkowski, P.E.
Project Geotechnical Engineer
Florida P.E. No. 86444

EDUARDO SUAREZ LICENSE No 60272 STATE OF FLORIDA PROFESSIONAL ENGINEER

Eduardo Suarez
2023.07.12
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Eduardo Suarez, P.E.
Senior Geotechnical Engineer
Florida P.E. No. 60272

This item has been electronically signed and sealed by Eduardo Suarez, PE on the date adjacent to the seal using Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Attachments: Boring Location Plan, Boring Logs, Key to Boring Logs, GBA Document, Constraints and Restrictions, General Conditions

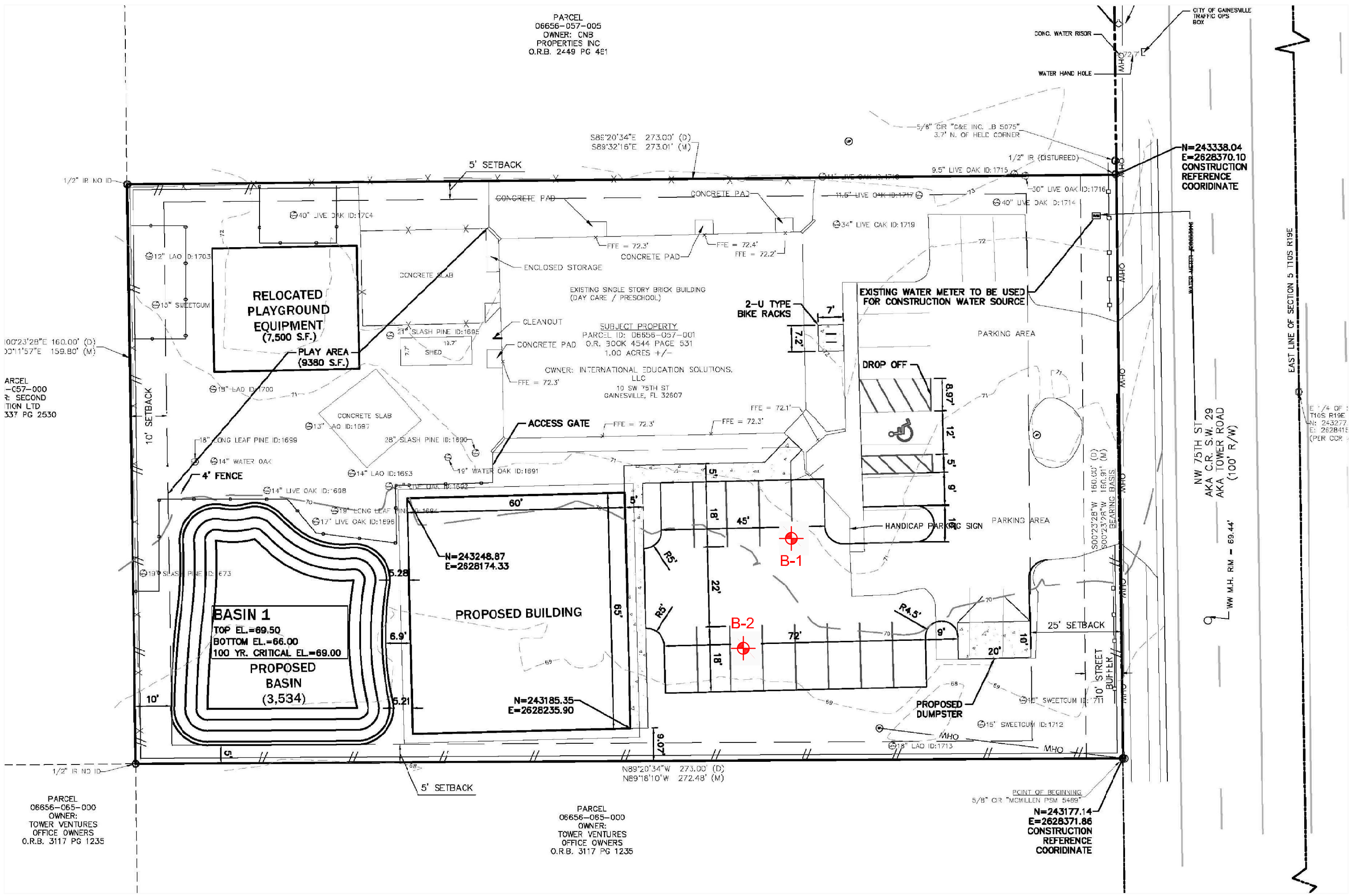
cc: EDA engineers-surveyors-planners, Inc.

APPENDIX A

Boring Location Plan

Boring Logs

Key to Boring Logs



LEGEND

BORING LOCATION

NOTE: ALL SOIL TEST BORING LOCATIONS SHOWN ARE APPROXIMATE.

GRAY CONSTRUCTION SERVICES, INC.

DRAWN BY:	KD	DATE:	7/10/23
CHECKED BY:	ES	DATE:	7/10/23
SCALE:	1"=30'	ACADFILE:	0230.2300064-A
PROJECT NO:	0230.2300064.0000	REPORT:	2027685

PREMIER PRESCHOOL ADDITION-SMA
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING LOCATION PLAN

UES

PAGE NO:
A - 1

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2300064.0000
REPORT NO.:	2027685
PAGE:	A-2

PROJECT: PREMIER PRESCHOOL ADDITION-SMA
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: GRAY CONSTRUCTION SERVICES, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

DATE STARTED: 7/5/23
DATE FINISHED: 7/5/23
DRILLED BY: R. PEREZ
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORGANIC CONTENT (%)
0												
1						Medium dense to loose tan SAND, with silt [SP-SM]						
2		5-6-5	11									
3												
4		2-2-2	4				8	5			13	
5												
		2-2-3	5									
6						Medium dense tan silty SAND [SM]						
7		5-5-6	11			Medium dense gray and orange clayey SAND [SC]						
8												
		6-7-8	15									
9												
10		7-8-8	16				28	17				
11												
12												
13												
14												
15		5-6-6	12			Boring Terminated at 15'						

NEW LOGO BORING LOG PREMIER PRESCHOOL ADDITION.GPJ GAINESVILLE TEMPLATE.GDT 7/12/23

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.2300064.0000
REPORT NO.:	2027685
PAGE:	A-3

PROJECT: PREMIER PRESCHOOL ADDITION-SMA
10 SW 75TH STREET
GAINESVILLE, FLORIDA

BORING DESIGNATION: **B-2** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: GRAY CONSTRUCTION SERVICES, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): NE
DATE OF READING: NA
EST. W.S.W.T. (ft):

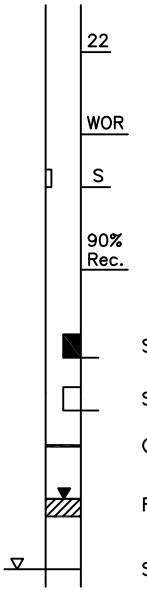
DATE STARTED: 7/5/23
DATE FINISHED: 7/5/23
DRILLED BY: R. PEREZ
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORGANIC CONTENT (%)
0						Loose brown SAND, with silt [SP-SM]						
1												
2		2-2-3	5									
3						Loose tan SAND, with silt [SP-SM]						
4		2-2-2	4			Medium dense brown silty clayey SAND [SM-SC]	10	3				
5		4-5-5	10									
6												
7		5-5-6	11			Loose brown, gray clayey SAND [SC]	22	13			0.4	
8		4-4-5	9									
9												
10		3-4-4	8									
11												
12												
13												
14						Medium dense light tan silty SAND [SM]						
15		5-5-6	11			Boring Terminated at 15'						

NEW LOGO BORING LOG PREMIER PRESCHOOL ADDITION.GPJ GAINESVILLE TEMPLATE.GDT 7/12/23

KEY TO BORING LOGS

SYMBOLS



22	Number of Blows of a 140–lb Weight Falling 30 in. Required to Drive Standard Spoon One Foot
WOR	Weight of Drill Rods
S	Thin–Wall Shelby Tube Undisturbed Sampler Used
90% Rec.	Percent Core Recovery from Rock Core–Drilling Operations
	Sample Taken at this Level
	Sample Not Taken at this Level
	Change in Soil Strata
	Free Ground Water Level
	Seasonal High Ground Water Level

GRANULAR MATERIALS

Relative Density	Safety Hammer SPT N (Blows/Ft.)	Automatic Hammer SPT N (Blows/Ft.)
Very Loose	Less than 4	Less than 3
Loose	4–10	3–8
Medium Dense	10–30	8–24
Dense	30–50	24–40
Very Dense	>50	>40

COHESIVE MATERIALS

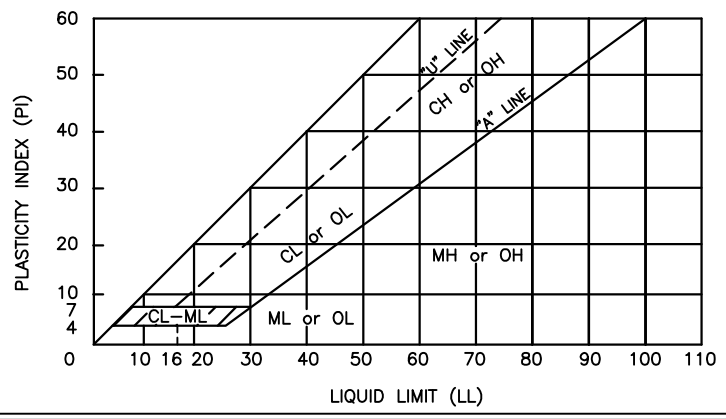
Consistency	Safety Hammer SPT N (Blows/Ft.)	Automatic Hammer SPT N (Blows/Ft.)
Very Soft	Less than 2	Less than 1
Soft	2–4	1–3
Firm	4–8	3–6
Stiff	8–15	6–12
Very Stiff	15–30	12–24
Hard	>30	>24

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 200 sieve	CLEAN GRAVELS	GW	Well–graded gravels and gravel–sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel–sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel–sand–silt mixtures
			GC	Clayey gravels, gravel–sand–clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well–graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand–silt mixtures
			SC	Clayey sands, sand–clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomacaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly organic Soils			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3–in. (75mm) sieve.

PLASTICITY CHART



APPENDIX B

Important Information About Your Geotechnical Engineering Report
Constraint and Restrictions

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

UES™

Universal Engineering Sciences, LLC
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES **1.1** *Universal Engineering Sciences, LLC*, and its subsidiaries and affiliated companies ("UES"), is responsible for providing the services described under the Scope of Services. The term "UES" as used herein includes all of UES's agents, employees, professional staff, and subcontractors. **1.2** The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys, plans and specifications, and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product. **1.3** The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties in writing.

SECTION 2: STANDARD OF CARE **2.1** Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made. **2.2** Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the work is to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.

SECTION 3: SITE ACCESS AND SITE CONDITIONS **3.1** Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Scope of Services. **3.2** The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: BILLING AND PAYMENT **4.1** UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications. **4.2** Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts. **4.3** If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 5: OWNERSHIP AND USE OF DOCUMENTS **5.1** All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES. Neither Client nor any other entity shall change or modify UES's instruments of service. **5.2** Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose. **5.3** UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report or completion of the Scope of Services, during which period the records will be made available to the Client in a reasonable time and manner. **5.4** All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other entity, or used or relied upon by any other entity, without the express written consent of UES. Client is the only entity to which UES owes any duty or duties, in contract or tort, pursuant to or under this Agreement.

SECTION 6: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS **6.1** Client represents that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site. **6.2** Under this agreement, the term hazardous materials include hazardous materials, hazardous wastes, hazardous substances (40 CFR 261.31, 261.32, 261.33), petroleum products, polychlorinated biphenyls, asbestos, and any other material defined by the U.S. EPA as a hazardous material. **6.3** Hazardous materials may exist at a site where there is no reason to believe they are present. The discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. The discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials. **6.4** UES will notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client will make any disclosures required by law to the appropriate governing agencies. Client will hold UES harmless for all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials. **6.5** Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 7: RISK ALLOCATION **7.1** Client agrees that UES's liability for any damage on account of any breach of contract, error, omission, or professional negligence will be limited to a sum not to exceed $50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of $1,000,000.00 upon Client's written request at the time of accepting UES's proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $400.00, whichever is greater. If Client prefers a $2,000,000.00 limit on contractual or professional liability, UES agrees to increase the limits up to a maximum of $2,000,000.00 upon Client's written request at the time of accepting UES's proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or $800.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance. **7.2** Client shall not be liable to UES and UES shall not be liable to Client for any incidental, special, or consequential damages (including lost profits, loss of use, and lost savings) incurred by either party due to the fault of the other, regardless of the nature of the fault, or whether it was committed by Client or UES, their employees, agents, or subcontractors; or whether such liability arises in breach of contract or warranty, tort (including negligence), statutory, or any other cause of action. **7.3** As used in this Agreement, the terms "claim" or "claims" mean any claim in contract, tort, or statute alleging negligence, errors, omissions, strict liability, statutory liability, breach of contract, breach of warranty, negligent misrepresentation, or any other act giving rise to liability.

SECTION 8: INSURANCE **8.1** UES represents it and its agents, staff and consultants employed by UES, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 7, whichever is less. The Client agrees to defend, indemnify, and save UES harmless for loss, damage or liability arising from acts by Client, Client's agents, staff, and others employed by Client. **8.2** Under no circumstances will UES indemnify Client from or for Client's own actions, negligence, or breaches of contract. **8.3**

To the extent damages are covered by property insurance, Client and UES waive all rights against each other and against the contractors, consultants, agents, and employees of the other for damages, except such rights as they may have to the proceeds of such insurance.

SECTION 9: DISPUTE RESOLUTION **9.1** All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to mediation or non-binding arbitration, before and as a condition precedent to other remedies provided by law. **9.2** If a dispute arises and that dispute is not resolved by mediation or non-binding arbitration, then: (a) the claim will be brought in the state or federal courts having jurisdiction where the UES office which provided the service is located; and (b) the prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, expert witness fees, and other claim related expenses.

SECTION 10: TERMINATION **10.1** This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof, or in the case of a force majeure event such as terrorism, act of war, public health or other emergency. Such termination shall not be effective if such substantial failure or force majeure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses. **10.2** In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records, and reports.

SECTION 11: REVIEWS, INSPECTIONS, TESTING, AND OBSERVATIONS **11.1** Plan review, private provider inspections, and building inspections are performed for the purpose of observing compliance with applicable building codes. Threshold inspections are performed for the purpose of observing compliance with an approved threshold inspection plan. Construction materials testing ("CMT") is performed to document compliance of certain materials or components with applicable testing standards. UES's performance of plan reviews, private provider inspections, building inspections, threshold inspections, or CMT, or UES's presence on the site of Client's project while performing any of the foregoing activities, is not a representation or warranty by UES that Client's project is free of errors in either design or construction. **11.2** If UES is retained to provide construction monitoring or observation, UES will report to Client any observed work which, in UES's opinion, does not conform to the plans and specifications provided to UES. UES shall have no authority to reject or terminate the work of any agent or contractor of Client. No action, statements, or communications of UES, or UES's site representative, can be construed as modifying any agreement between Client and others. UES's performance of construction monitoring or observation is not a representation or warranty by UES that Client's project is free of errors in either design or construction. **11.3** Neither the activities of UES pursuant to this Agreement, nor the presence of UES or its employees, representatives, or subcontractors on the project site, shall be construed to impose upon UES any responsibility for means or methods of work performance, superintendence, sequencing of construction, or safety conditions at the project site. Client acknowledges that Client or its contractor is solely responsible for project jobsite safety. **11.4** Client is responsible for scheduling all inspections and CMT activities of UES. All testing and inspection services will be performed on a will-call basis. UES will not be responsible for tests and inspections that are not performed due to Client's failure to schedule UES's services on the project, or for any claims or damages arising from tests and inspections that are not scheduled or performed.

SECTION 12: ENVIRONMENTAL ASSESSMENTS Client acknowledges that an Environmental Site Assessment ("ESA") is conducted solely to permit UES to render a professional opinion about the likelihood or extent of regulated contaminants being present on, in, or beneath the site in question at the time services were conducted. No matter how thorough an ESA study may be, findings derived from the study are limited and UES cannot know or state for a fact that a site is unaffected by reportable quantities of regulated contaminants as a result of conducting the ESA study. Even if UES states that reportable quantities of regulated contaminants are not present, Client still bears the risk that such contaminants may be present or may migrate to the site after the ESA study is complete.

SECTION 13: SUBSURFACE EXPLORATIONS **13.1** Client acknowledges that subsurface conditions may vary from those observed at locations where borings, surveys, samples, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed or provided by UES. **13.2** Subsurface explorations may result in unavoidable cross-contamination of certain subsurface areas, as when a probe or boring device moves through a contaminated zone and links it to an aquifer, underground stream, or other hydrous body not previously contaminated. UES is unable to eliminate totally cross-contamination risk despite use of due care. Since subsurface explorations may be an essential element of UES's services indicated herein, Client shall, to the fullest extent permitted by law, waive any claim against UES, and indemnify, defend, and hold UES harmless from any claim or liability for injury or loss arising from cross-contamination allegedly caused by UES's subsurface explorations. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 14: SOLICITATION OF EMPLOYEES Client agrees not to hire UES's employees except through UES. In the event Client hires a UES employee within one year following any project through which Client had contact with said employee, Client shall pay UES an amount equal to one-half of the employee's annualized salary, as liquidated damages, without UES waiving other remedies it may have.

SECTION 15: ASSIGNS Neither Client nor UES may delegate, assign, sublet, or transfer its duties or interest in this Agreement without the written consent of the other party.

SECTION 16: GOVERNING LAW AND SURVIVAL **16.1** This Agreement shall be governed by and construed in accordance with the laws of the jurisdiction in which the UES office performing the services hereunder is located. **16.2** In any of the provisions of this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired and will survive. Limitations of liability and indemnities will survive termination of this agreement for any cause.

SECTION 17: INTEGRATION CLAUSE **17.1** This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein. **17.2** This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.

SECTION 18: WAIVER OF JURY TRIAL Both Client and UES waive trial by jury in any action arising out of or related to this Agreement.

SECTION 19: INDIVIDUAL LIABILTY PURSUANT TO FLORIDA STAT. 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

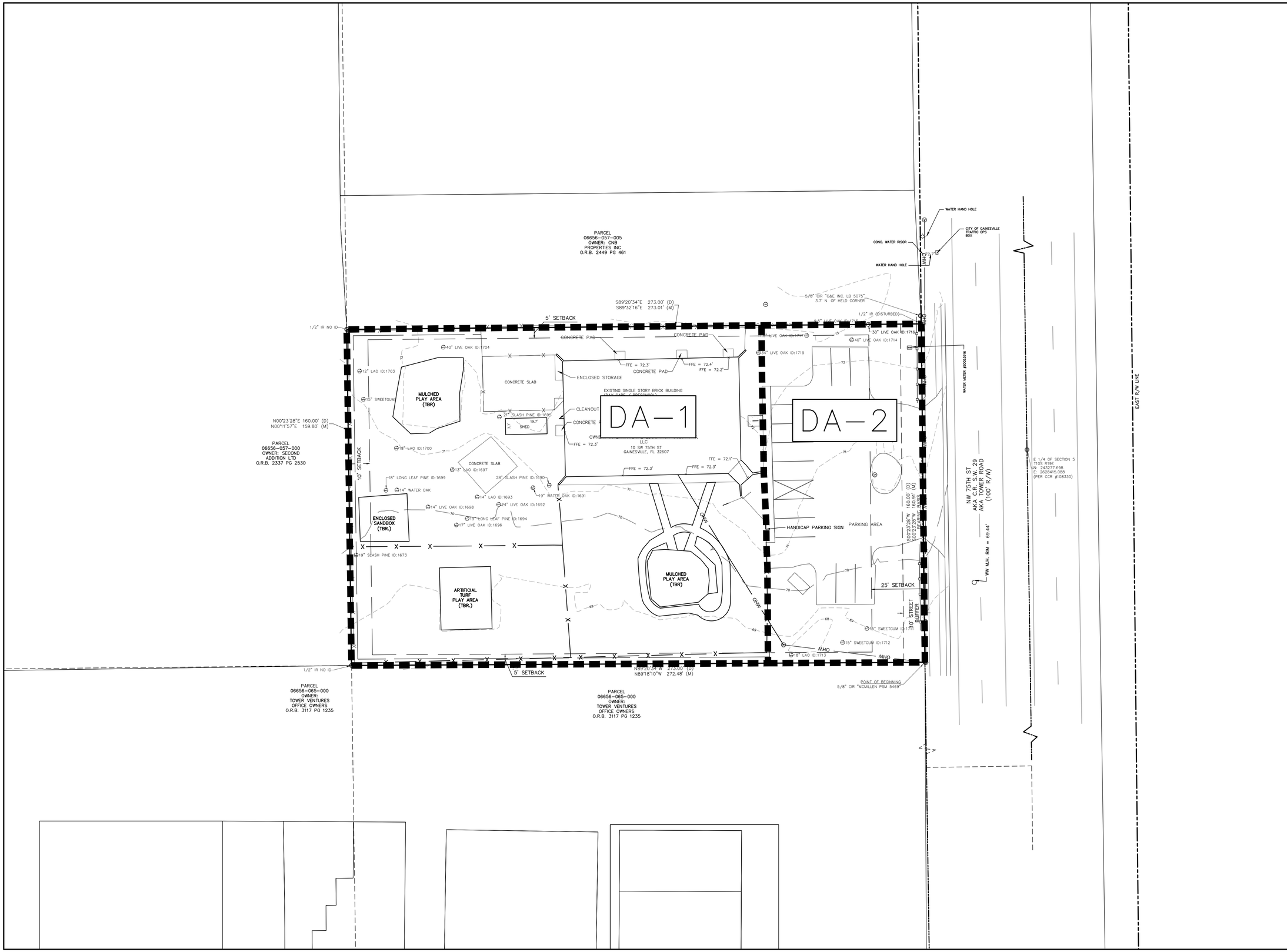
Attachment B

Aerial Photographs


NW 75th St

Attachment C

Pre and Post-Development Drainage Maps



eda consultants inc.

EB 2389
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GAINESVILLE, FLORIDA 32601
TEL. (352) 373-3541
www.edafl.com mail@edafl.com

NORTH

SCALE: 1" = 20'

0

GRAPHIC SCALE

No.	Date	Comment

Professional Engineer of Record:

Engineer Certificate No.

Project No: 21-162

Project phase: SUBMITTAL

Project title:

PREMIER PRESCHOOL
ADDITION
ALACHUA COUNTY,
FLORIDA

Sheet title:

PRE-DEVELOPMENT DRAINAGE AREA

Designed:	QH
Drawn:	LBO
Checked:	CSV
Date:	06/06/2022

Sheet No.: PRE

WATER HAND HOLE

5/8" CIR "C&E INC. LB 5075"
3.7' N. OF HELD CORNER

1/2" IR (DISTURBED)

1/2" IR NO ID

5' SETBACK

9.5" LIVE OAK ID:1715

30" LIVE OAK ID:1716

11.5" LIVE OAK ID:1717

40" LIVE OAK ID:1714

LIVE OAK ID:1719

40" LIVE OAK ID:1704

12" LAO ID:1703

15" SWEETGUM

21" SLASH PINE ID:1695

18" LAO ID:1700

10' SETBACK

13" LAO ID:1697

18" LONG LEAF PINE ID:1699

14" WATER OAK

28" SLASH PINE ID:1690

19" WATER OAK ID:1691

14" LAO ID:1693

14" LIVE OAK ID:1698

24" LIVE OAK ID:1692

19" LONG LEAF PINE ID:1694

17" LIVE OAK ID:1696

19" SLASH PINE ID:1673

DA 2

DA 1

DA 3

B-2

B-3

B-1

BASIN 1
TOP EL.=69.50
BOTTOM EL.=66.00
100 YR. CRITICAL EL.=68.97

BASIN 2 (UNDERGROUND)
TOP EL.=68.32
BOTTOM EL.=65.50
100 YR. CRITICAL EL.=67.81

25' SETBACK

10' STREET BUFFER

15" SWEETGUM ID:1711

15" SWEETGUM ID:1712

18" LAO ID:1713

OHW

1/2" IR NO ID

5' SETBACK

POINT OF BEGINNING
5/8" CIR "MCMILLEN PSM 5469"

eda consultants inc.
EB 2389
720 S.W. 2nd Ave, South Tower, Suite 300
GAINESVILLE, FLORIDA 32601
TEL. (352) 373-3541
www.edafl.com mail@edafl.com

NORTH
SCALE: 1" = 10'
0 5 10 20
GRAPHIC SCALE

No.	Date	Comment

Professional Engineer of Record:

Engineer Cerlificate No.

Project No: 21-162

Project phase: SUBMITTAL

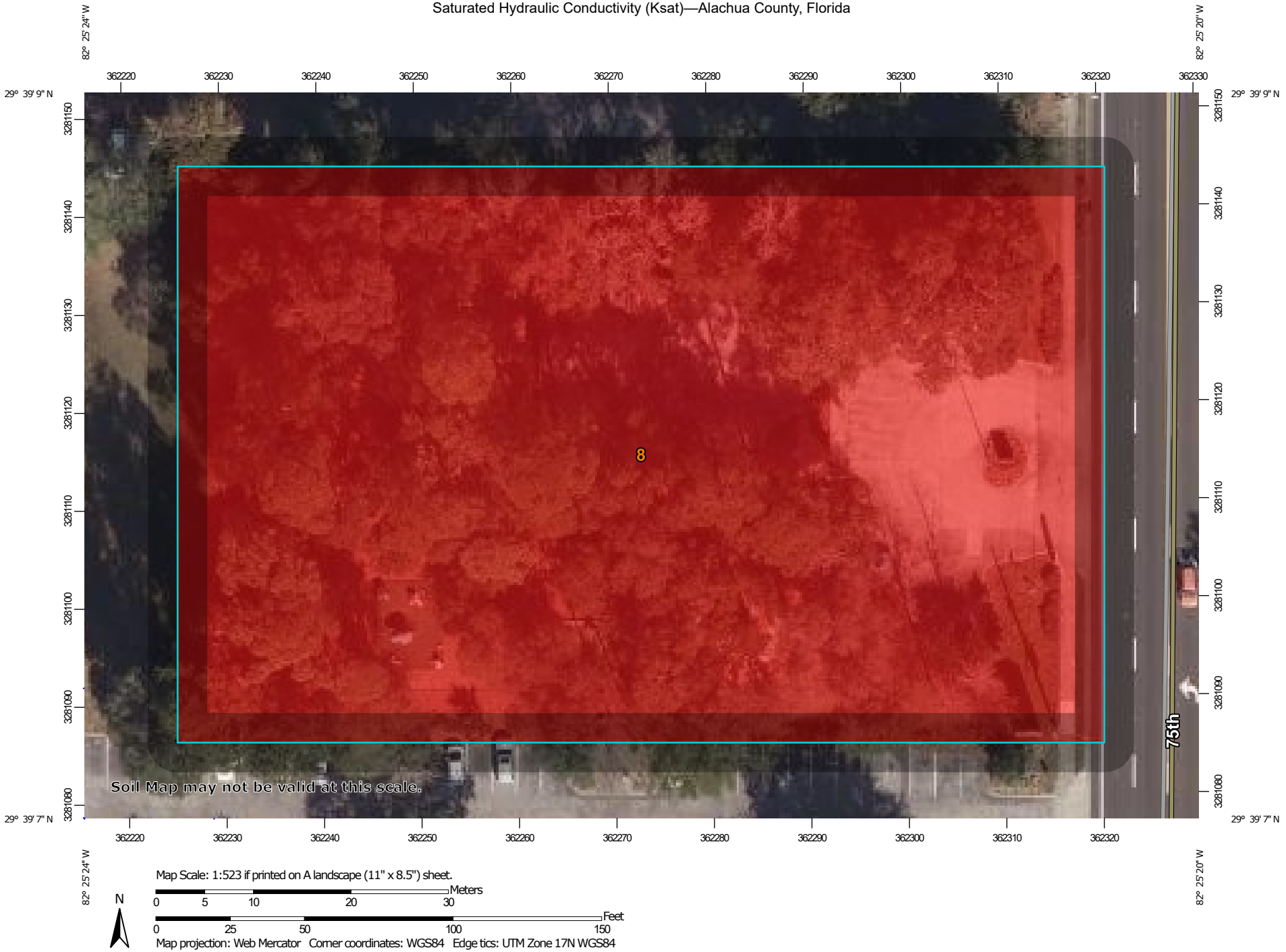
Project title:
PREMIER PRESCHOOL ADDITION
ALACHUA COUNTY, FLORIDA

Sheet title:
POST-DEVELOPMENT DRAINAGE AREA

Designed: QH	Sheet No.: POST
Drawn: LBO	
Checked: CSV	
Date: 07/19/2023	

Attachment D

Soils Map



Map Scale: 1:523 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

= 63.6040

Not rated or not available

Soil Rating Lines

= 63.6040

Not rated or not available

Soil Rating Points

= 63.6040

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alachua County, Florida
Survey Area Data: Version 22, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 20, 2019—Jan 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
8	Millhopper sand, 0 to 5 percent slopes	63.6040	1.4	100.0%
Totals for Area of Interest			**1.4**	**100.0%**

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

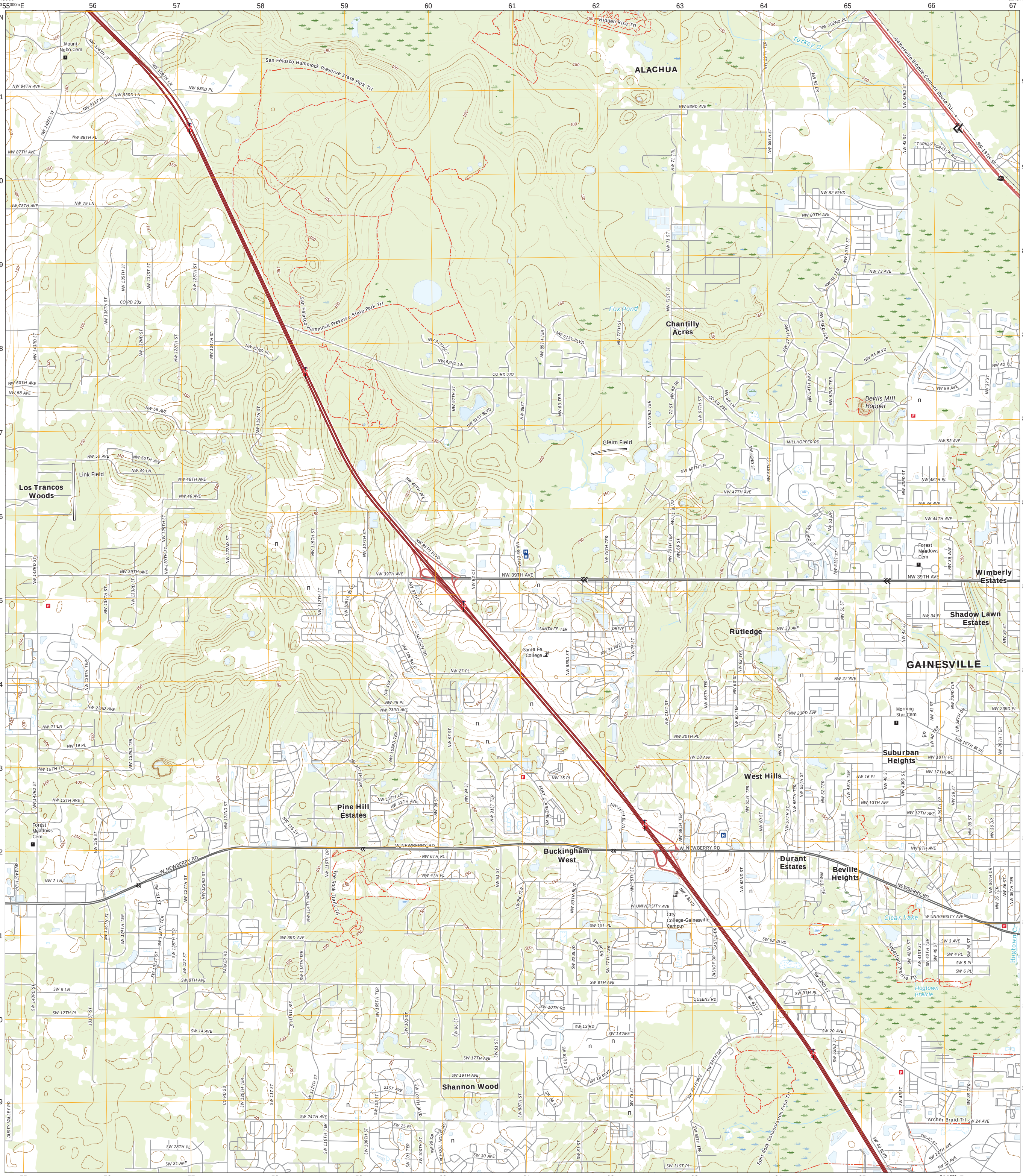
Attachment E

Quad Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

GAINESVILLE WEST QUADRANGLE
FLORIDA - ALACHUA COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 17R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....NAIP, November 2019
Roads.... U.S. Census Bureau, 2016
Names....GNIS, 1979 - 2020
Hydrography....National Hydrography Dataset, 1899 - 2020
Contours....National Elevation Dataset, 2012 - 2018
Boundaries....Multiple sources; see metadata file 2018 - 2019
Public Land Survey System....BLM, 2020
Wetlands....FWS National Wetlands Inventory 1984

MN
GN
5°55´
105 MILS
0°43´
13 MILS

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
LN
Grid Zone Designation 17R

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard.

QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 High Springs
2 Alachua
3 Monteocha
4 Newberry
5 Gainesville East
6 Archer
7 Arredondo
8 Micanopy

ROAD CLASSIFICATION

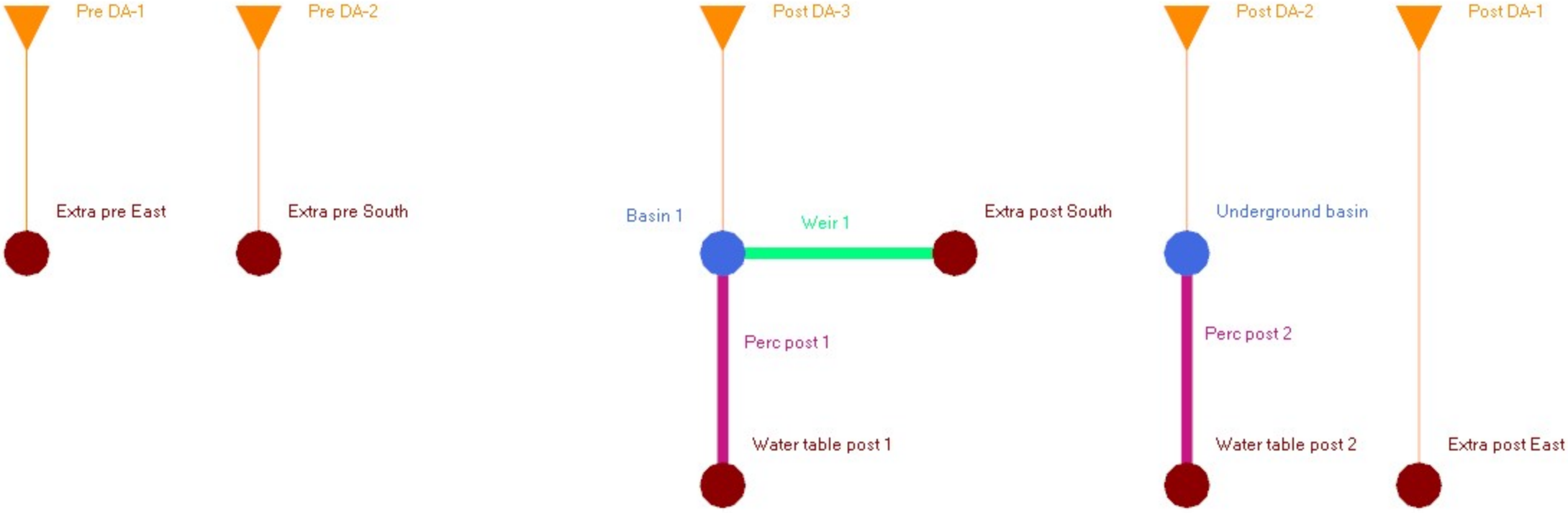
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

GAINESVILLE WEST, FL
2021

7643016360586
NSN. 7643016360586
NGA REF NO. USGSX24K16652

Attachment F

Pre and Post-Development ICPR Model


Pre DA-1
Pre DA-2
Extra pre East
Extra pre South
Post DA-3
Post DA-2
Post DA-1
Basin 1
Weir 1
Extra post South
Underground basin
Perc post 1
Perc post 2
Water table post 1
Water table post 2
Extra post East

Simple Basin: Post DA-1

Scenario:	Scenario1
Node:	Extra post East
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	0.2800 ac
Curve Number:	73.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Post DA-2

Scenario:	Scenario1
Node:	Underground basin
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	0.2200 ac
Curve Number:	77.8
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Post DA-3

Scenario:	Scenario1
Node:	Basin 1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	0.5100 ac
Curve Number:	68.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Pre DA-1

Scenario:	Scenario1
Node:	Extra pre East
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	0.2800 ac
Curve Number:	72.2
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: Pre DA-2

Scenario:	Scenario1
Node:	Extra pre South
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	0.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH484
Peaking Factor:	484.0
Area:	0.7300 ac
Curve Number:	55.5
% Impervious:	0.00
% DCIA:	0.00

% Direct: 0.00
Rainfall Name:

Comment:

Node: Basin 1

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 66.00 ft
Warning Stage: 69.00 ft

Stage [ft]	Area [ac]	Area [ft2]
66.00	0.0230	1002
67.00	0.0340	1481
68.00	0.0450	1960
69.00	0.0580	2526
69.50	0.0650	2831

External Hydrograph

Comment:

Node: Extra post East

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: Extra post South

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: Extra pre East

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: Extra pre South

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Comment:

Node: Underground basin

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 65.50 ft
Warning Stage: 67.82 ft

Stage [ft]	Area [ac]	Area [ft2]
65.50	0.0560	2439
68.32	0.0560	2439

Comment:

Node: Water table post 1

Scenario:	Scenario1
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	0.00 ft
Warning Stage:	0.00 ft
Boundary Stage:	

Comment:

Node: Water table post 2

Scenario:	Scenario1
Type:	Time/Stage
Base Flow:	0.00 cfs
Initial Stage:	0.00 ft
Warning Stage:	0.00 ft
Boundary Stage:	

Comment:

Percolation Link: Perc post 1

Scenario:	Scenario1	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	Basin 1		
To Node:	Water table post 1	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	207.00 ft
Flow Direction:	Both	Perimeter 2:	518.00 ft
Aquifer Base Elevation:	63.50 ft	Perimeter 3:	2403.00 ft
Water Table Elevation:	64.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	300.00 ft
Horizontal Conductivity:	6.500 fpd	# of Cells P1 to P2:	2
Vertical Conductivity:	3.500 fpd	# of Cells P2 to P3:	5
Fillable Porosity:	0.250		
Layer Thickness:	2.00 ft		

Comment:

Percolation Link: Perc post 2

Scenario:	Scenario1	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	Underground basin		
To Node:	Water table post 2	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	218.00 ft
Flow Direction:	Both	Perimeter 2:	618.00 ft

Aquifer Base Elevation:	63.00 ft		
Water Table Elevation:	63.50 ft	Perimeter 3:	3018.00 ft
Annual Recharge Rate:	0 ipy	Distance P1 to P2:	50.00 ft
Horizontal Conductivity:	5.000 fpd	Distance P2 to P3:	300.00 ft
Vertical Conductivity:	3.000 fpd	# of Cells P1 to P2:	10
Fillable Porosity:	0.250	# of Cells P2 to P3:	30
Layer Thickness:	2.00 ft		

Comment:

Weir Link: Weir 1

Scenario:	Scenario1	**Bottom Clip**	
From Node:	Basin 1	Default:	0.00 ft
To Node:	Extra post South	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Rectangular	Ref Node:	
Invert:	68.75 ft	**Discharge Coefficients**	
Control Elevation:	68.75 ft	Weir Default:	2.800
Max Depth:	0.75 ft	Weir Table:	
Max Width:	1.00 ft	Orifice Default:	0.600
Fillet:	0.00 ft	Orifice Table:	

Comment:

Simulation: 100yr-001hr

Scenario:	Scenario1
Run Date/Time:	8/28/2023 3:46:28 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	73.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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: Global
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-1
Rainfall Amount: 4.40 in
Storm Duration: 1.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100yr-002hr

Scenario: Scenario1
Run Date/Time: 8/28/2023 3:47:08 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	74.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:

Green-Ampt Set:	
Vertical Layers Set:	
Impervious Set:	
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:	~FDOT-2
		Rainfall Amount:	5.40 in
Edge Length Option:	Automatic	Storm Duration:	2.0000 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:

Simulation: 100yr-004hr

Scenario:	Scenario1
Run Date/Time:	8/28/2023 3:47:55 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	76.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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 100 ft2

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FDOT-4
Rainfall Amount: 6.72 in
Storm Duration: 4.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2

(2D):		(1D):	
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 100yr-008hr

Scenario: Scenario1
Run Date/Time: 8/28/2023 3:48:36 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	80.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:

Unit Hydrograph Folder:		Curve Number Set:	
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	
		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:	~FDOT-8
		Rainfall Amount:	8.00 in
Edge Length Option:	Automatic	Storm Duration:	8.0000 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:

Simulation: 100yr-024hr

Scenario:	Scenario1
Run Date/Time:	8/28/2023 3:49:25 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	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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: ~FDOT-24
Rainfall Amount: 11.04 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:

Simulation: 100yr-072hr

Scenario: Scenario1
Run Date/Time: 8/28/2023 3:50:21 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	144.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:	
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	
		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:	~FDOT-72
		Rainfall Amount:	13.80 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:

Simulation: 100yr-168hr

Scenario:	Scenario1
Run Date/Time:	8/28/2023 3:51:52 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	240.0000

Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]

Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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:	~FDOT-168
		Rainfall Amount:	16.00 in

Edge Length Option:	Automatic	Storm Duration:	168.0000 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:

Simulation: 100yr-240hr

Scenario: Scenario1
Run Date/Time: 8/28/2023 3:54:18 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	312.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:	
		Green-Ampt Set:	
		Vertical Layers Set:	
		Impervious Set:	
		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:	~FDOT-240
		Rainfall Amount:	18.00 in
Edge Length Option:	Automatic	Storm Duration:	240.0000 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:

Simulation: 25yr-24hr

Scenario:	Scenario1
Run Date/Time:	8/28/2023 3:57:30 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	336.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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
IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global

Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FDOT-24
		Rainfall Amount:	8.64 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:

Simulation: Mean Annual

Scenario: Scenario1
Run Date/Time: 8/28/2023 4:00:39 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	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:	
Green-Ampt Set:	
Vertical Layers Set:	
Impervious Set:	
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:	~FDOT-24
		Rainfall Amount:	4.20 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:

Simulation: WQTV

Scenario:	Scenario1
Run Date/Time:	7/27/2023 1:28:04 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 [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

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	60.0000

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:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:
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	Global

		Opt:	
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	
		Rainfall Amount:	0.00 in
Edge Length Option:	Automatic	Storm Duration:	0.0000 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:

Simple Basin Runoff Summary [Scenario1]

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
Post DA-1	100yr-001 hr	1.29	0.6333	4.40	1.83	0.2800	73.1	0.00	0.00
Post DA-2	100yr-001 hr	1.19	0.6333	4.40	2.20	0.2200	77.8	0.00	0.00
Post DA-3	100yr-001 hr	1.94	0.6500	4.40	1.48	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-001 hr	1.25	0.6333	4.40	1.76	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-001 hr	1.45	0.7000	4.40	0.72	0.7300	55.5	0.00	0.00
Post DA-1	100yr-002 hr	1.09	0.8333	5.40	2.62	0.2800	73.1	0.00	0.00
Post DA-2	100yr-002 hr	0.98	0.8167	5.40	3.04	0.2200	77.8	0.00	0.00
Post DA-3	100yr-002 hr	1.67	0.8333	5.40	2.19	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-002 hr	1.06	0.8333	5.40	2.53	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-002 hr	1.32	0.8667	5.40	1.22	0.7300	55.5	0.00	0.00
Post DA-1	100yr-004 hr	0.67	2.0333	6.72	3.72	0.2800	73.1	0.00	0.00
Post DA-2	100yr-004 hr	0.59	2.0333	6.72	4.21	0.2200	77.8	0.00	0.00
Post DA-3	100yr-004 hr	1.05	2.0500	6.72	3.21	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-004 hr	0.65	2.0500	6.72	3.62	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-004 hr	1.05	2.5333	6.72	2.00	0.7300	55.5	0.00	0.00
Post DA-1	100yr-008 hr	0.75	4.0000	8.00	4.84	0.2800	73.1	0.00	0.00
Post DA-2	100yr-008 hr	0.64	4.0000	8.00	5.38	0.2200	77.8	0.00	0.00
Post DA-3	100yr-008 hr	1.25	4.0167	8.00	4.26	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-008 hr	0.74	4.0000	8.00	4.73	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-008 hr	1.29	4.0167	8.00	2.84	0.7300	55.5	0.00	0.00
Post DA-1	100yr-024 hr	0.26	12.0000	11.04	7.61	0.2800	73.1	0.00	0.00
Post DA-2	100yr-024 hr	0.21	12.0000	11.04	8.25	0.2200	77.8	0.00	0.00
Post DA-3	100yr-024 hr	0.43	12.0000	11.04	6.93	0.5100	68.1	0.00	0.00

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
Pre DA-1	100yr-024 hr	0.25	12.0000	11.04	7.48	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-024 hr	0.46	12.0167	11.04	5.11	0.7300	55.5	0.00	0.00
Post DA-1	100yr-072 hr	0.18	59.9333	13.80	10.22	0.2800	73.1	0.00	0.00
Post DA-2	100yr-072 hr	0.15	59.9167	13.80	10.91	0.2200	77.8	0.00	0.00
Post DA-3	100yr-072 hr	0.32	59.9333	13.80	9.46	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-072 hr	0.18	59.9333	13.80	10.08	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-072 hr	0.40	59.9500	13.80	7.37	0.7300	55.5	0.00	0.00
Post DA-1	100yr-168 hr	0.13	160.0000	16.00	12.33	0.2800	73.1	0.00	0.00
Post DA-2	100yr-168 hr	0.10	160.0000	16.00	13.05	0.2200	77.8	0.00	0.00
Post DA-3	100yr-168 hr	0.23	160.0000	16.00	11.52	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-168 hr	0.13	160.0000	16.00	12.18	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-168 hr	0.30	160.0000	16.00	9.26	0.7300	55.5	0.00	0.00
Post DA-1	100yr-240 hr	0.17	184.0000	18.00	14.27	0.2800	73.1	0.00	0.00
Post DA-2	100yr-240 hr	0.13	184.0000	18.00	15.02	0.2200	77.8	0.00	0.00
Post DA-3	100yr-240 hr	0.30	184.0000	18.00	13.43	0.5100	68.1	0.00	0.00
Pre DA-1	100yr-240 hr	0.17	184.0000	18.00	14.11	0.2800	72.2	0.00	0.00
Pre DA-2	100yr-240 hr	0.39	184.0000	18.00	11.03	0.7300	55.5	0.00	0.00
Post DA-1	25yr-24hr	0.19	12.0000	8.64	5.41	0.2800	73.1	0.00	0.00
Post DA-2	25yr-24hr	0.16	12.0000	8.64	5.98	0.2200	77.8	0.00	0.00
Post DA-3	25yr-24hr	0.30	12.0000	8.64	4.81	0.5100	68.1	0.00	0.00
Pre DA-1	25yr-24hr	0.18	12.0000	8.64	5.29	0.2800	72.2	0.00	0.00
Pre DA-2	25yr-24hr	0.30	12.0167	8.64	3.29	0.7300	55.5	0.00	0.00
Post DA-1	Mean Annual	0.06	12.0167	4.20	1.69	0.2800	73.1	0.00	0.00
Post DA-2	Mean Annual	0.06	12.0000	4.20	2.04	0.2200	77.8	0.00	0.00
Post DA-3	Mean Annual	0.08	12.0167	4.20	1.35	0.5100	68.1	0.00	0.00
Pre DA-1	Mean Annual	0.06	12.0167	4.20	1.62	0.2800	72.2	0.00	0.00

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
Pre DA-2	Mean Annual	0.05	15.0167	4.20	0.64	0.7300	55.5	0.00	0.00

Node Max Conditions [Scenario1]

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 1	100yr-001hr	69.00	67.78	0.0010	1.94	0.08	1857
Extra post East	100yr-001hr	0.00	0.00	0.0000	1.29	0.00	0
Extra post South	100yr-001hr	0.00	0.00	0.0000	0.00	0.00	0
Extra pre East	100yr-001hr	0.00	0.00	0.0000	1.25	0.00	0
Extra pre South	100yr-001hr	0.00	0.00	0.0000	1.45	0.00	0
Underground basin	100yr-001hr	67.82	66.12	-0.0009	1.19	0.08	2439
Water table post 1	100yr-001hr	0.00	0.00	0.0000	0.08	0.00	0
Water table post 2	100yr-001hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	100yr-002hr	69.00	68.30	-0.0010	1.67	0.09	2132
Extra post East	100yr-002hr	0.00	0.00	0.0000	1.09	0.00	0
Extra post South	100yr-002hr	0.00	0.00	0.0000	0.00	0.00	0
Extra pre East	100yr-002hr	0.00	0.00	0.0000	1.06	0.00	0
Extra pre South	100yr-002hr	0.00	0.00	0.0000	1.32	0.00	0
Underground basin	100yr-002hr	67.82	66.27	-0.0009	0.98	0.08	2439
Water table post 1	100yr-002hr	0.00	0.00	0.0000	0.09	0.00	0
Water table post 2	100yr-002hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	100yr-004hr	69.00	68.87	0.0010	1.05	0.22	2455
Extra post East	100yr-004hr	0.00	0.00	0.0000	0.67	0.00	0
Extra post South	100yr-004hr	0.00	0.00	0.0000	0.12	0.00	0
Extra pre East	100yr-004hr	0.00	0.00	0.0000	0.65	0.00	0
Extra pre South	100yr-004hr	0.00	0.00	0.0000	1.05	0.00	0
Underground basin	100yr-004hr	67.82	66.51	-0.0008	0.59	0.08	2439
Water table post 1	100yr-004hr	0.00	0.00	0.0000	0.10	0.00	0
Water table post 2	100yr-004hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	100yr-008hr	69.00	68.96	0.0010	1.25	0.37	2504
Extra post East	100yr-008hr	0.00	0.00	0.0000	0.75	0.00	0
Extra post	100yr-008hr	0.00	0.00	0.0000	0.27	0.00	0

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]
South							
Extra pre East	100yr-008hr	0.00	0.00	0.0000	0.74	0.00	0
Extra pre South	100yr-008hr	0.00	0.00	0.0000	1.29	0.00	0
Underground basin	100yr-008hr	67.82	66.62	0.0009	0.64	0.08	2439
Water table post 1	100yr-008hr	0.00	0.00	0.0000	0.10	0.00	0
Water table post 2	100yr-008hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	100yr-024hr	69.00	68.95	0.0010	0.43	0.28	2499
Extra post East	100yr-024hr	0.00	0.00	0.0000	0.26	0.00	0
Extra post South	100yr-024hr	0.00	0.00	0.0000	0.25	0.00	0
Extra pre East	100yr-024hr	0.00	0.00	0.0000	0.25	0.00	0
Extra pre South	100yr-024hr	0.00	0.00	0.0000	0.46	0.00	0
Underground basin	100yr-024hr	67.82	67.17	0.0010	0.21	0.08	2439
Water table post 1	100yr-024hr	0.00	0.00	0.0000	0.05	0.00	0
Water table post 2	100yr-024hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	100yr-072hr	69.00	68.97	0.0010	0.32	0.32	2511
Extra post East	100yr-072hr	0.00	0.00	0.0000	0.18	0.00	0
Extra post South	100yr-072hr	0.00	0.00	0.0000	0.29	0.00	0
Extra pre East	100yr-072hr	0.00	0.00	0.0000	0.18	0.00	0
Extra pre South	100yr-072hr	0.00	0.00	0.0000	0.40	0.00	0
Underground basin	100yr-072hr	67.82	67.62	0.0010	0.15	0.05	2439
Water table post 1	100yr-072hr	0.00	0.00	0.0000	0.04	0.00	0
Water table post 2	100yr-072hr	0.00	0.00	0.0000	0.05	0.00	0
Basin 1	100yr-168hr	69.00	68.93	0.0010	0.23	0.23	2487
Extra post East	100yr-168hr	0.00	0.00	0.0000	0.13	0.00	0
Extra post South	100yr-168hr	0.00	0.00	0.0000	0.21	0.00	0
Extra pre East	100yr-168hr	0.00	0.00	0.0000	0.13	0.00	0
Extra pre South	100yr-168hr	0.00	0.00	0.0000	0.30	0.00	0
Underground	100yr-168hr	67.82	67.76	0.0010	0.10	0.05	2439

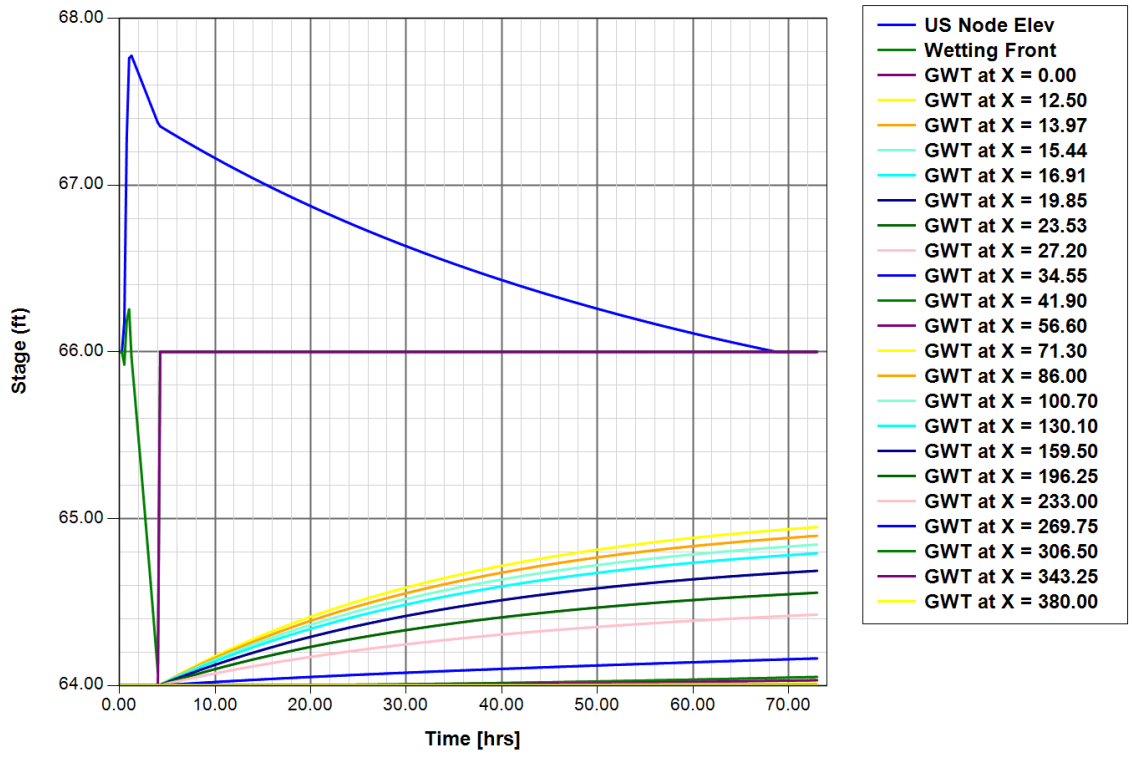
Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
basin							
Water table post 1	100yr-168hr	0.00	0.00	0.0000	0.04	0.00	0
Water table post 2	100yr-168hr	0.00	0.00	0.0000	0.05	0.00	0
Basin 1	100yr-240hr	69.00	68.97	0.0010	0.30	0.30	2507
Extra post East	100yr-240hr	0.00	0.00	0.0000	0.17	0.00	0
Extra post South	100yr-240hr	0.00	0.00	0.0000	0.28	0.00	0
Extra pre East	100yr-240hr	0.00	0.00	0.0000	0.17	0.00	0
Extra pre South	100yr-240hr	0.00	0.00	0.0000	0.39	0.00	0
Underground basin	100yr-240hr	67.82	67.81	0.0010	0.13	0.07	2439
Water table post 1	100yr-240hr	0.00	0.00	0.0000	0.04	0.00	0
Water table post 2	100yr-240hr	0.00	0.00	0.0000	0.07	0.00	0
Basin 1	25yr-24hr	69.00	68.87	0.0010	0.30	0.15	2453
Extra post East	25yr-24hr	0.00	0.00	0.0000	0.19	0.00	0
Extra post South	25yr-24hr	0.00	0.00	0.0000	0.12	0.00	0
Extra pre East	25yr-24hr	0.00	0.00	0.0000	0.18	0.00	0
Extra pre South	25yr-24hr	0.00	0.00	0.0000	0.30	0.00	0
Underground basin	25yr-24hr	67.82	66.55	0.0007	0.16	0.08	2439
Water table post 1	25yr-24hr	0.00	0.00	0.0000	0.05	0.00	0
Water table post 2	25yr-24hr	0.00	0.00	0.0000	0.08	0.00	0
Basin 1	Mean Annual	69.00	67.16	0.0010	0.08	0.04	1557
Extra post East	Mean Annual	0.00	0.00	0.0000	0.06	0.00	0
Extra post South	Mean Annual	0.00	0.00	0.0000	0.00	0.00	0
Extra pre East	Mean Annual	0.00	0.00	0.0000	0.06	0.00	0
Extra pre South	Mean Annual	0.00	0.00	0.0000	0.05	0.00	0
Underground basin	Mean Annual	67.82	65.52	-0.0001	0.06	0.07	2439
Water table post 1	Mean Annual	0.00	0.00	0.0000	0.04	0.00	0
Water table post 2	Mean Annual	0.00	0.00	0.0000	0.07	0.00	0

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 1	WQTV	69.00	67.00	-0.0010	0.00	0.06	1481
Extra post East	WQTV	0.00	0.00	0.0000	0.00	0.00	0
Extra post South	WQTV	0.00	0.00	0.0000	0.00	0.00	0
Extra pre East	WQTV	0.00	0.00	0.0000	0.00	0.00	0
Extra pre South	WQTV	0.00	0.00	0.0000	0.00	0.00	0
Underground basin	WQTV	67.82	66.26	-0.0009	0.00	0.08	2439
Water table post 1	WQTV	0.00	0.00	0.0000	0.06	0.00	0
Water table post 2	WQTV	0.00	0.00	0.0000	0.08	0.00	0

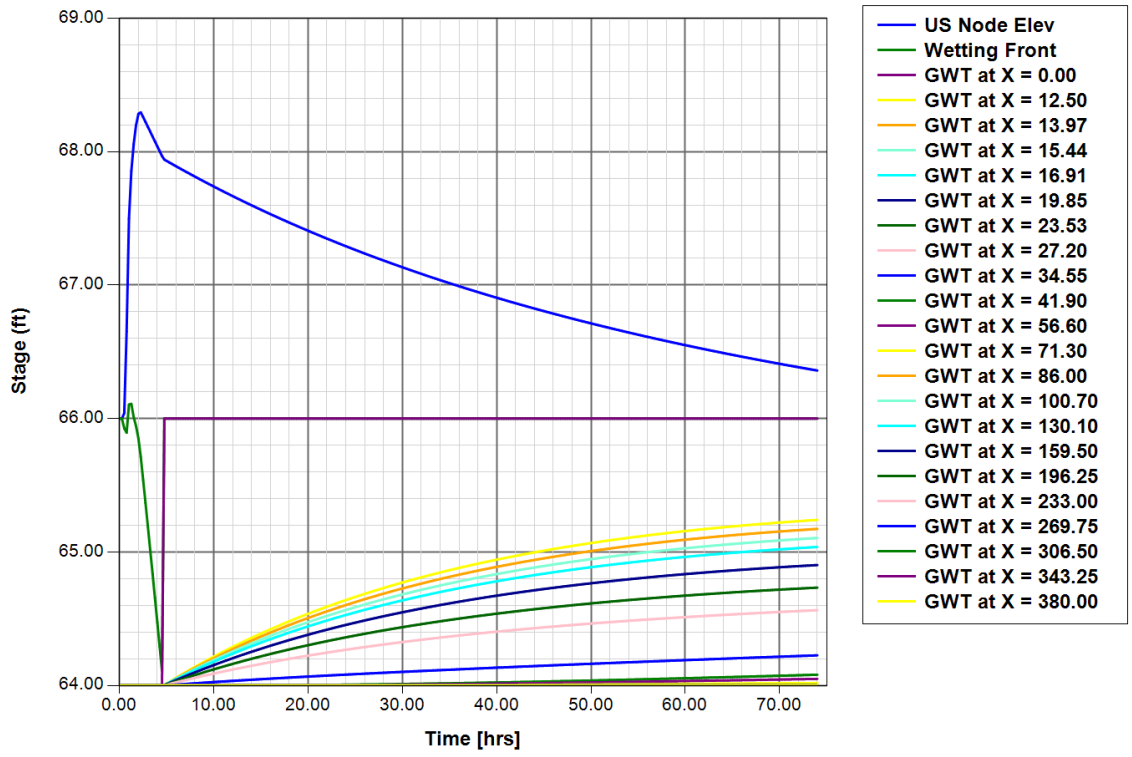
Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
Perc post 1	100yr-001hr	0.08	0.00	-0.05	0.00	0.00	0.00
Perc post 2	100yr-001hr	0.08	0.00	-0.05	0.00	0.00	0.00
Weir 1	100yr-001hr	0.00	0.00	0.00	0.00	0.00	0.00
Perc post 1	100yr-002hr	0.09	0.00	-0.06	0.00	0.00	0.00
Perc post 2	100yr-002hr	0.08	0.00	-0.05	0.00	0.00	0.00
Weir 1	100yr-002hr	0.00	0.00	0.00	0.00	0.00	0.00
Perc post 1	100yr-004hr	0.10	0.00	-0.06	0.00	0.00	0.00
Perc post 2	100yr-004hr	0.08	0.00	-0.04	0.00	0.00	0.00
Weir 1	100yr-004hr	0.12	0.00	0.00	0.98	0.98	0.98
Perc post 1	100yr-008hr	0.10	0.00	-0.07	0.00	0.00	0.00
Perc post 2	100yr-008hr	0.08	0.00	-0.03	0.00	0.00	0.00
Weir 1	100yr-008hr	0.27	0.00	0.00	1.28	1.28	1.28
Perc post 1	100yr-024hr	0.05	0.00	-0.04	0.00	0.00	0.00
Perc post 2	100yr-024hr	0.08	0.00	-0.06	0.00	0.00	0.00
Weir 1	100yr-024hr	0.25	0.00	0.00	1.25	1.25	1.25
Perc post 1	100yr-072hr	0.04	0.00	-0.04	0.00	0.00	0.00
Perc post 2	100yr-072hr	0.05	0.00	0.01	0.00	0.00	0.00
Weir 1	100yr-072hr	0.29	0.00	0.00	1.32	1.32	1.32
Perc post 1	100yr-168hr	0.04	0.00	-0.04	0.00	0.00	0.00
Perc post 2	100yr-168hr	0.05	0.00	-0.02	0.00	0.00	0.00
Weir 1	100yr-168hr	0.21	0.00	0.00	1.19	1.19	1.19
Perc post 1	100yr-240hr	0.04	0.00	-0.04	0.00	0.00	0.00
Perc post 2	100yr-240hr	0.07	0.00	-0.03	0.00	0.00	0.00
Weir 1	100yr-240hr	0.28	0.00	0.00	1.30	1.30	1.30
Perc post 1	25yr-24hr	0.05	0.00	-0.04	0.00	0.00	0.00
Perc post 2	25yr-24hr	0.08	0.00	-0.06	0.00	0.00	0.00
Weir 1	25yr-24hr	0.12	0.00	0.00	0.97	0.97	0.97
Perc post 1	Mean Annual	0.04	0.00	-0.04	0.00	0.00	0.00
Perc post 2	Mean Annual	0.07	0.00	-0.02	0.00	0.00	0.00
Weir 1	Mean Annual	0.00	0.00	0.00	0.00	0.00	0.00
Perc post 1	WQTV	0.06	0.00	-0.04	0.00	0.00	0.00
Perc post 2	WQTV	0.08	0.00	-0.05	0.00	0.00	0.00
Weir 1	WQTV	0.00	0.00	0.00	0.00	0.00	0.00

Perc Link: Perc post 1 (Sim: 100yr-001hr) [Perc post 1]



Perc Link: Perc post 1 (Sim: 100yr-002hr) [Perc post 1]



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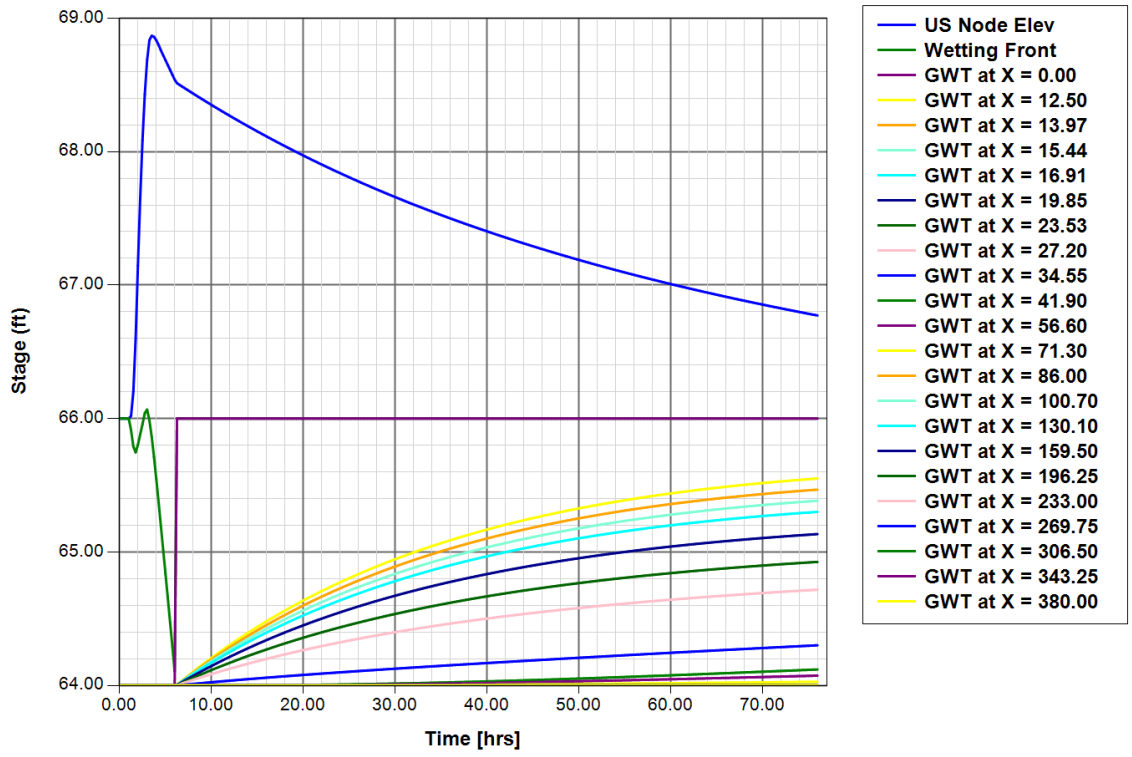

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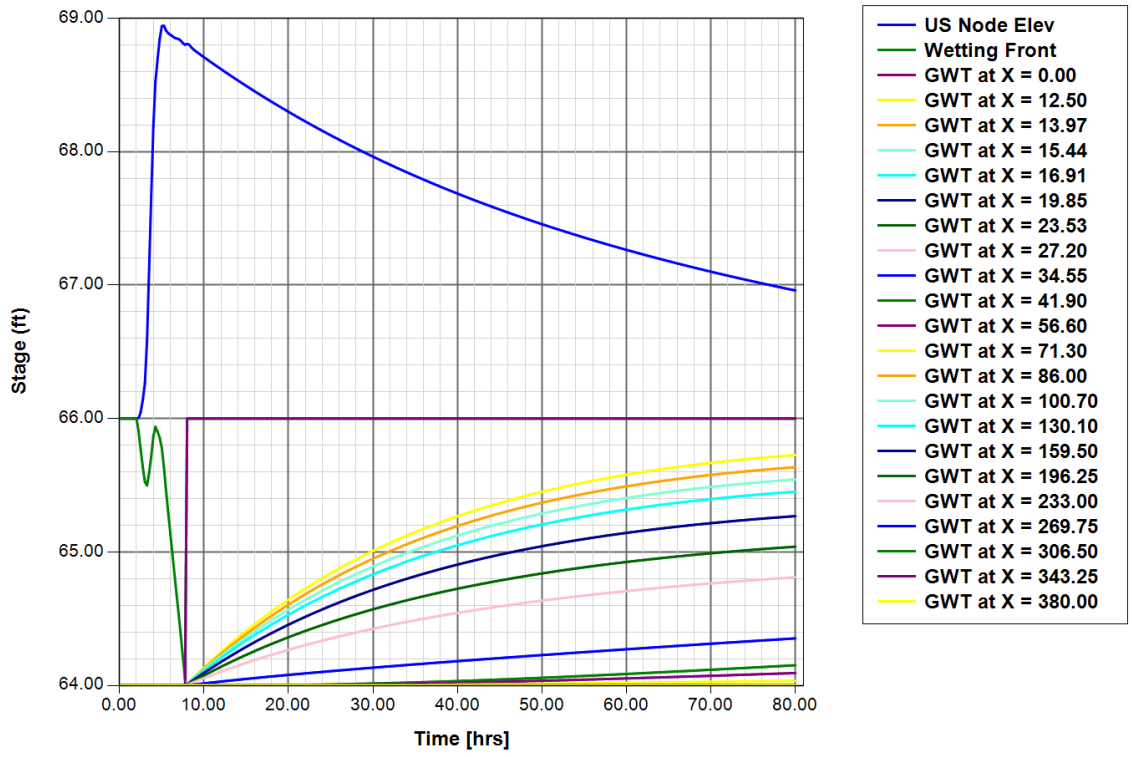

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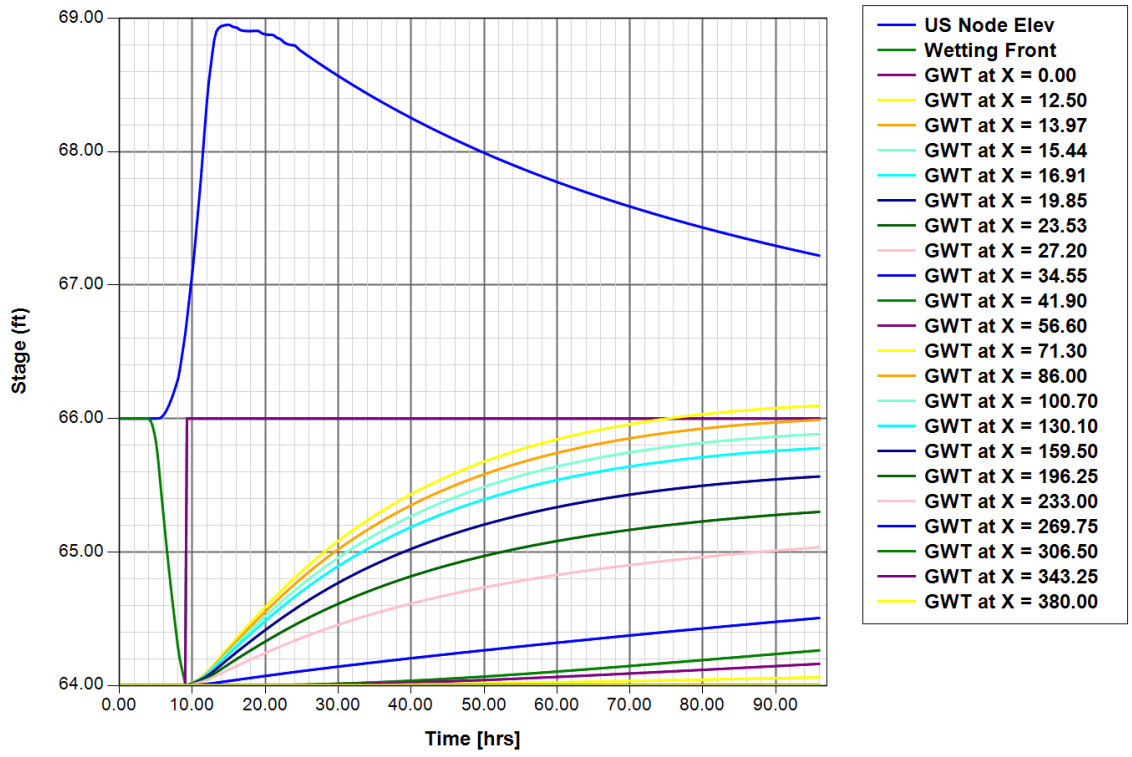
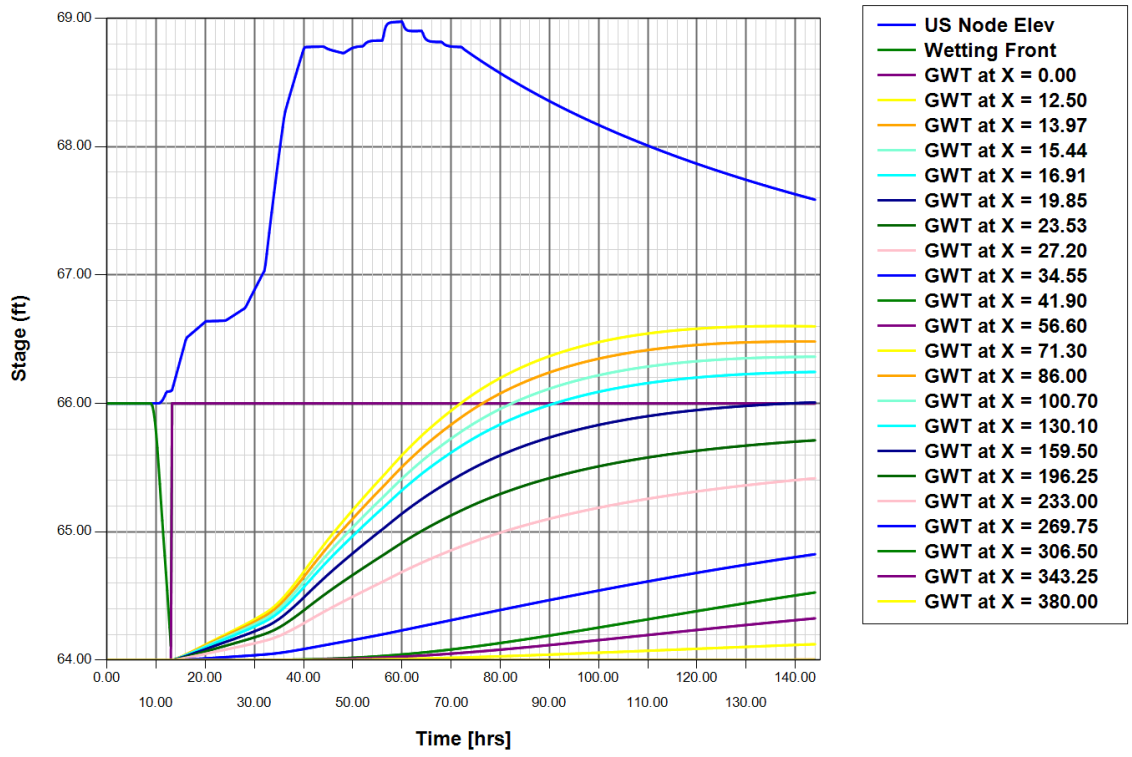
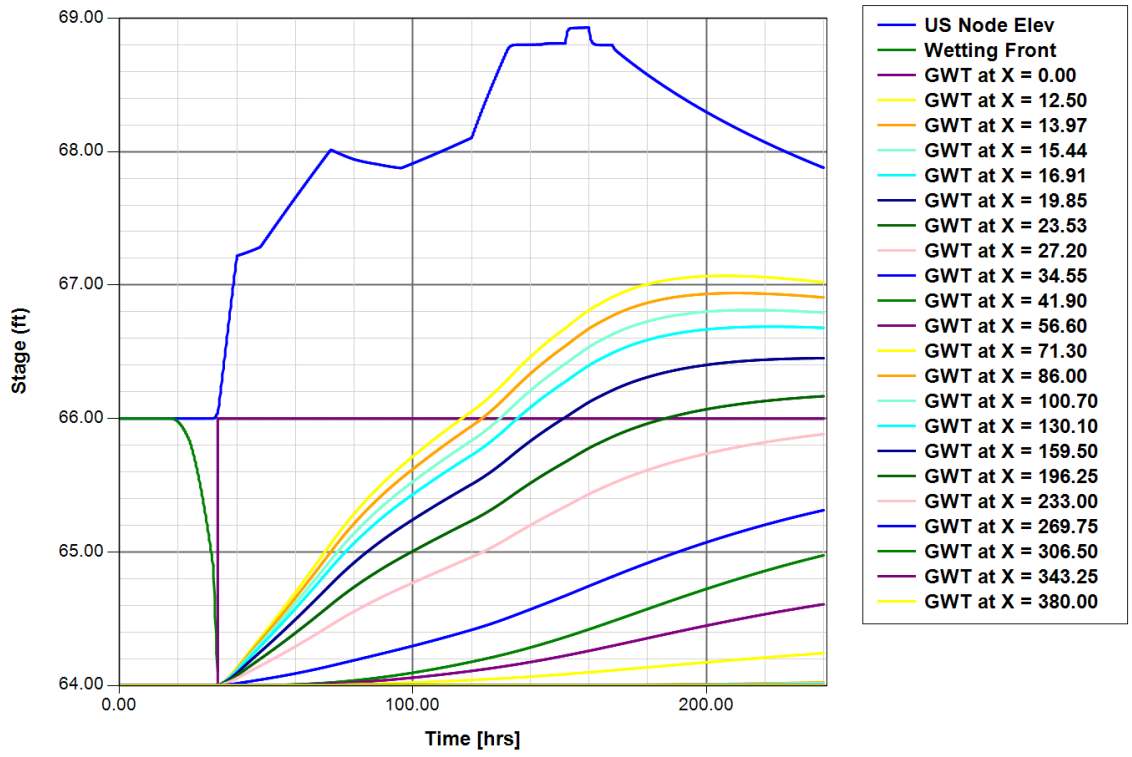


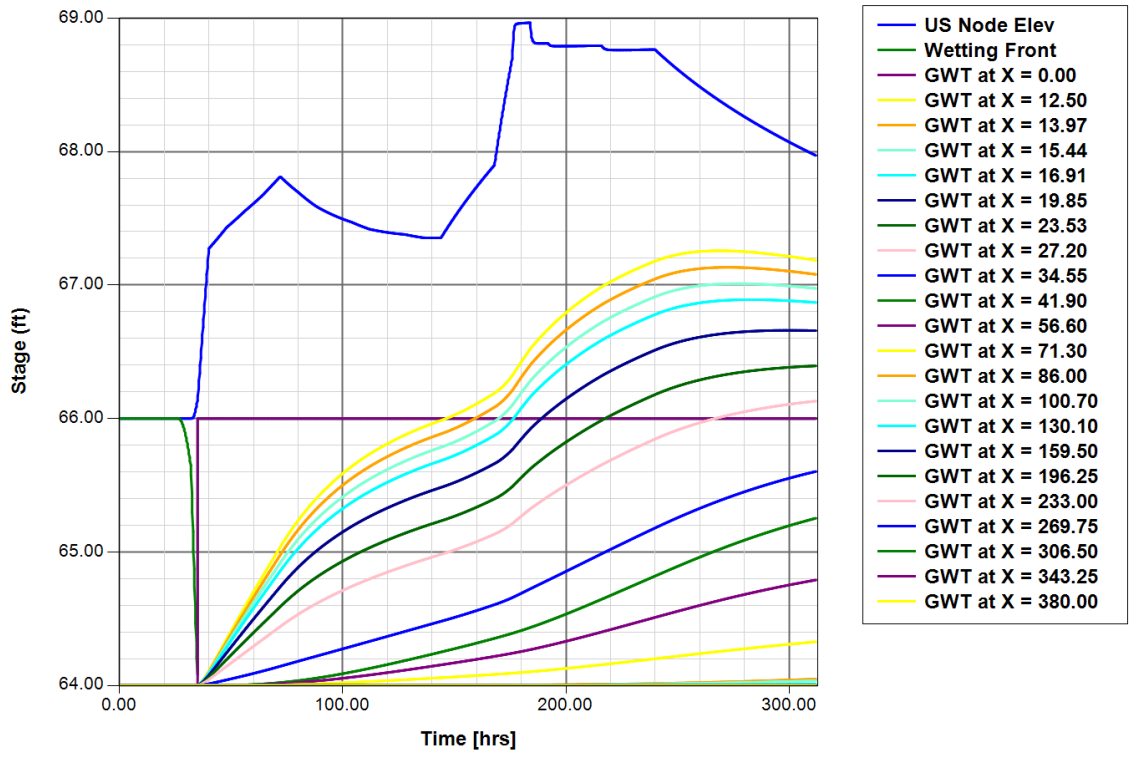
Perc Link: Perc post 1 (Sim: 100yr-072hr) [Perc post 1]



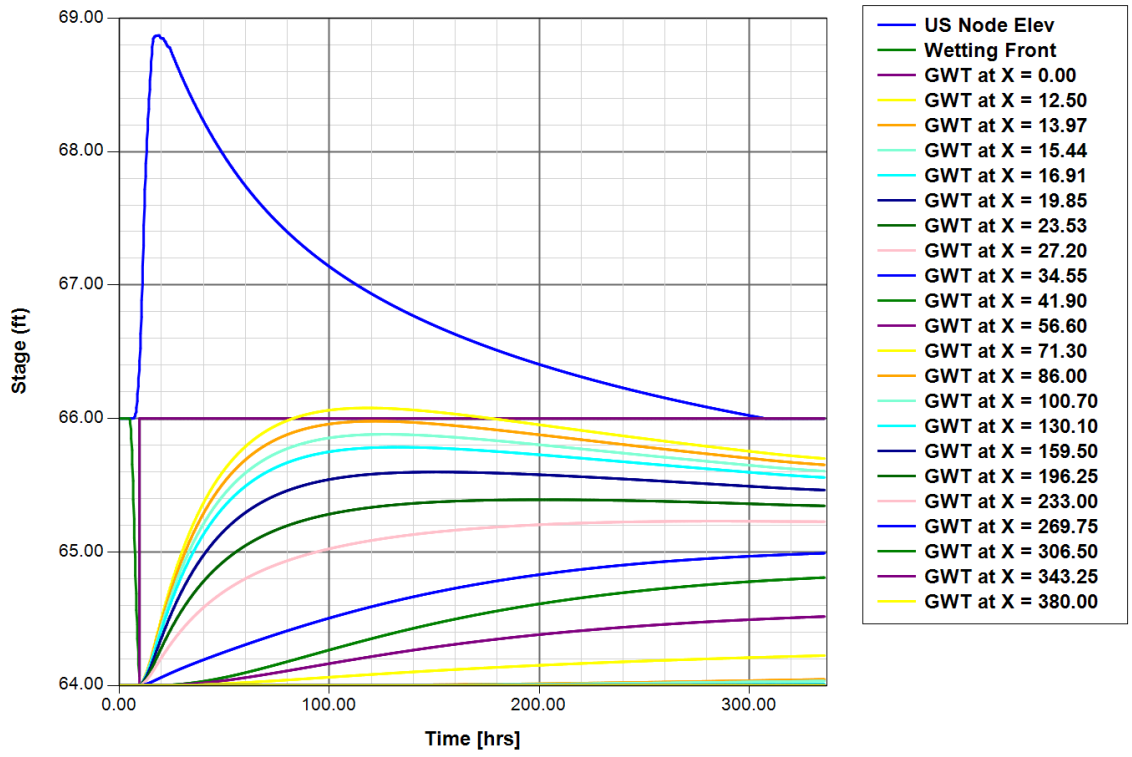
Perc Link: Perc post 1 (Sim: 100yr-168hr) [Perc post 1]



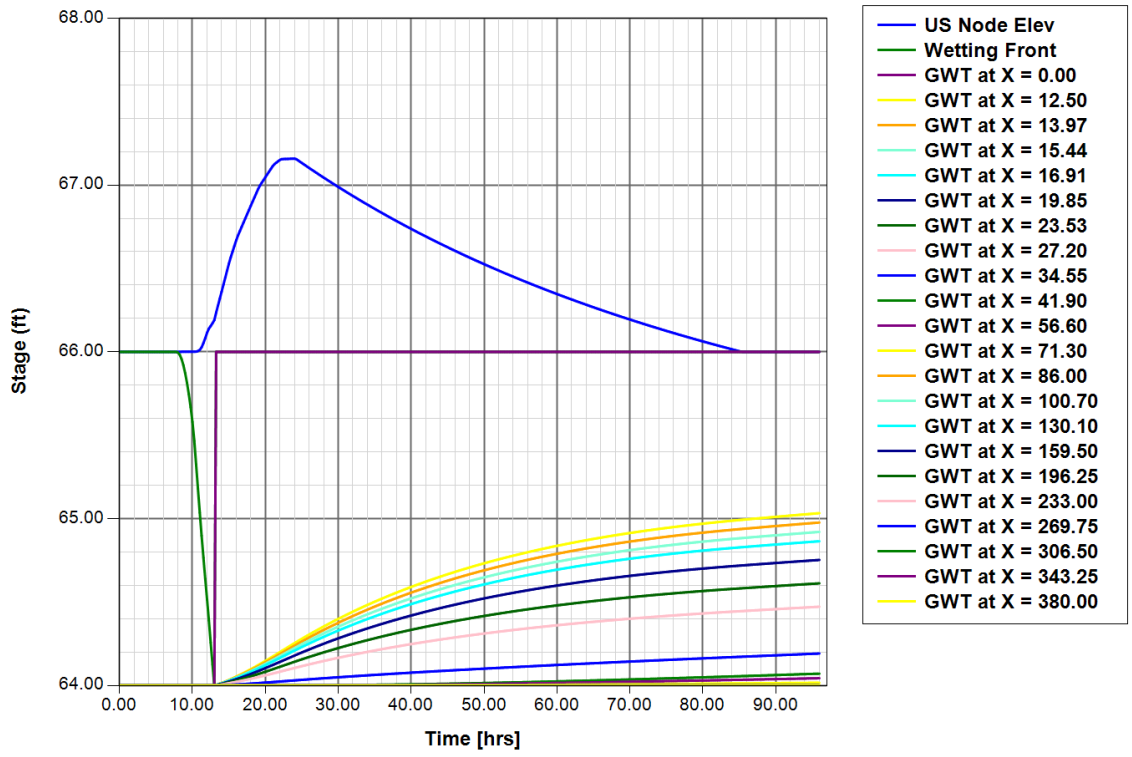
Perc Link: Perc post 1 (Sim: 100yr-240hr) [Perc post 1]



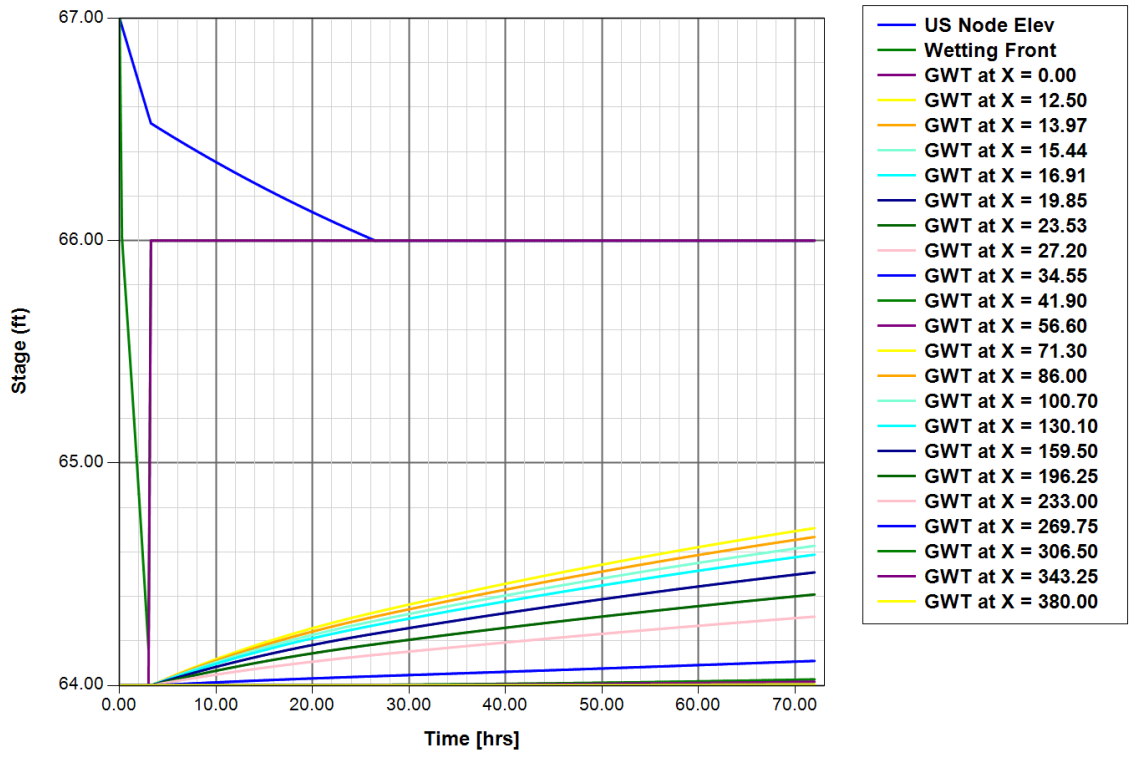
Perc Link: Perc post 1 (Sim: 25yr-24hr) [Perc post 1]



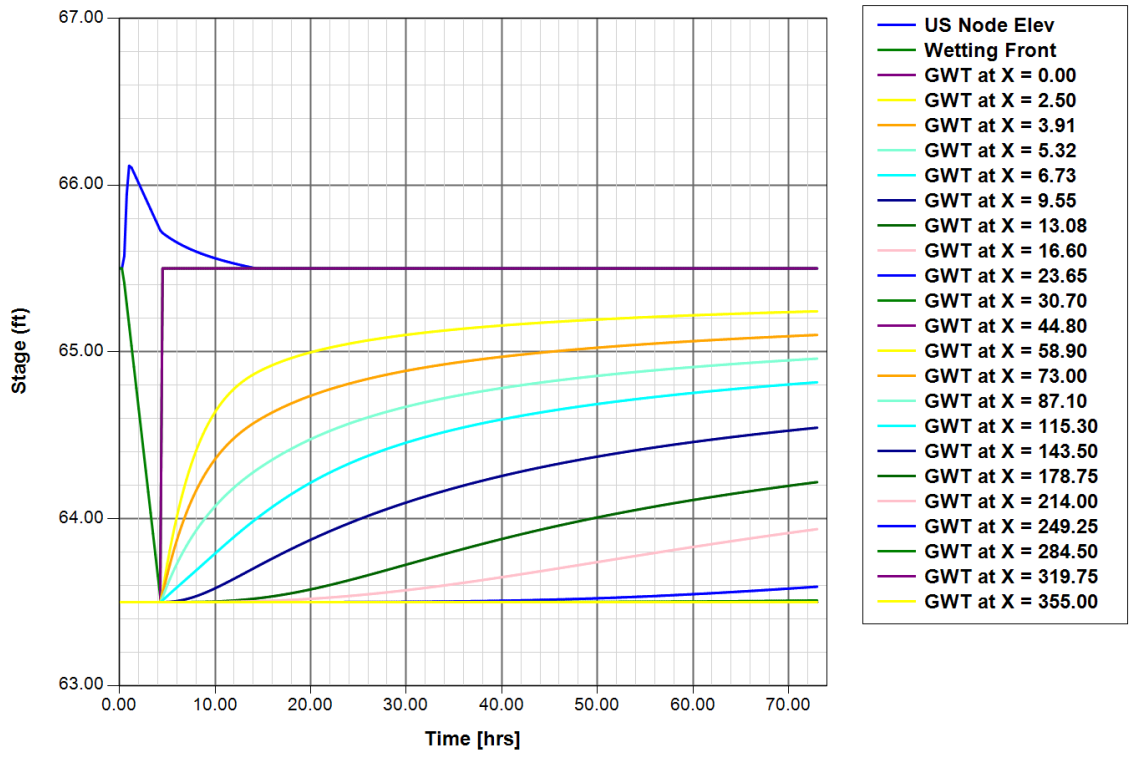
Perc Link: Perc post 1 (Sim: Mean Annual) [Perc post 1]



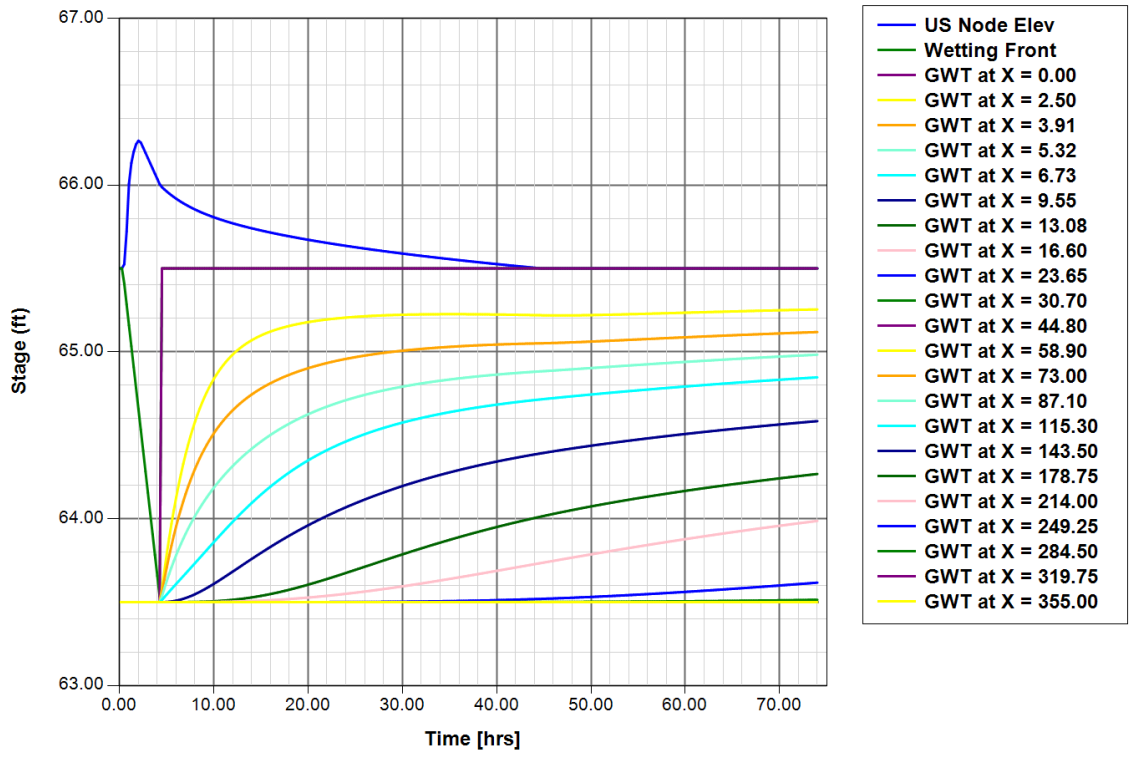
Perc Link: Perc post 1 (Sim: WQTV) [Perc post 1]



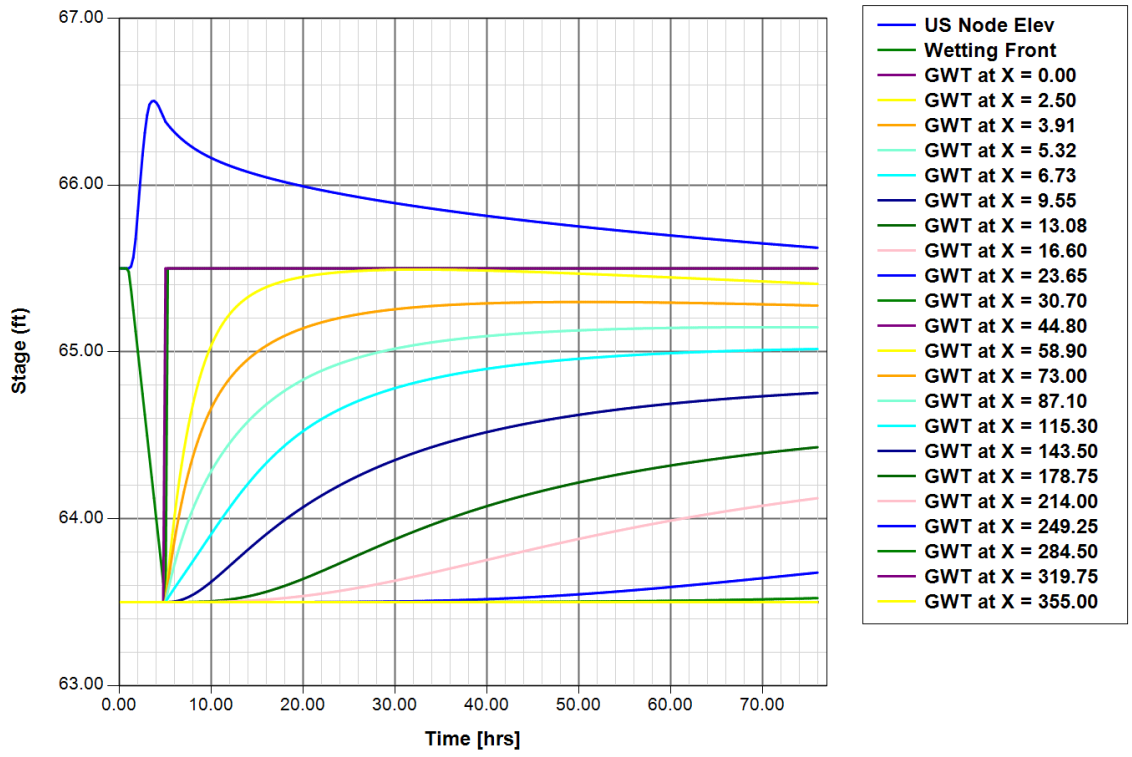
Perc Link: Perc post 2 (Sim: 100yr-001hr) [Perc post 2]



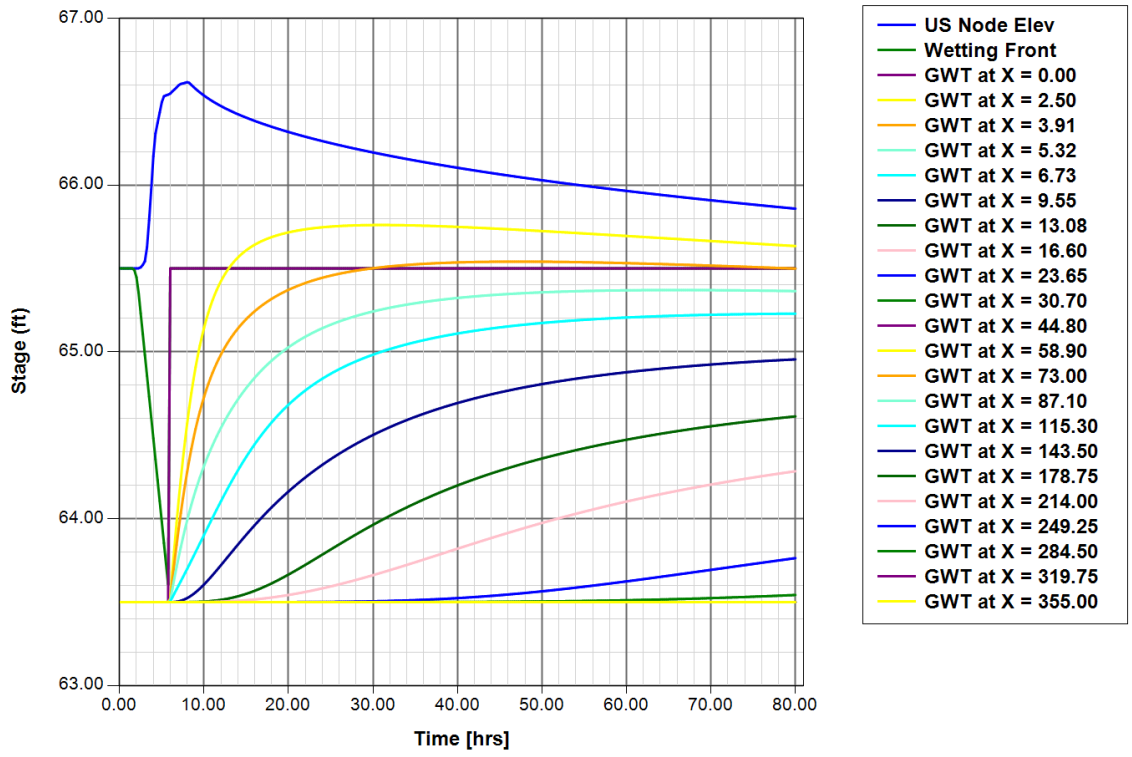
Perc Link: Perc post 2 (Sim: 100yr-002hr) [Perc post 2]



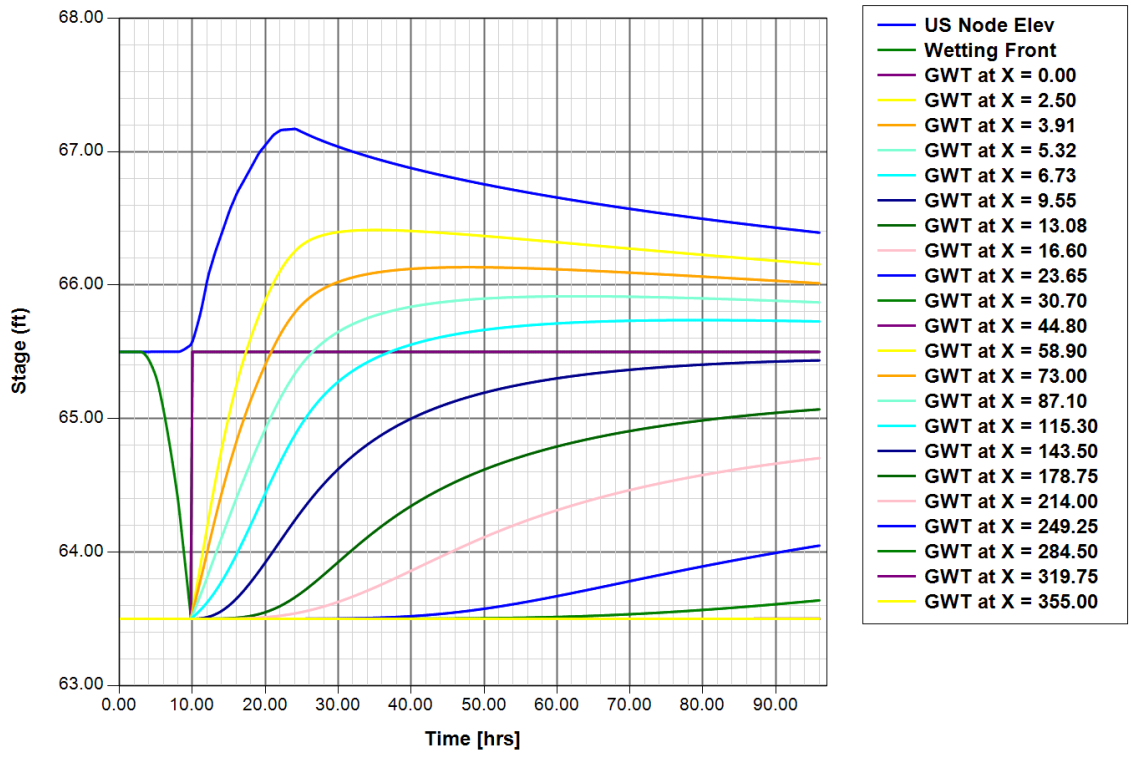
Perc Link: Perc post 2 (Sim: 100yr-004hr) [Perc post 2]



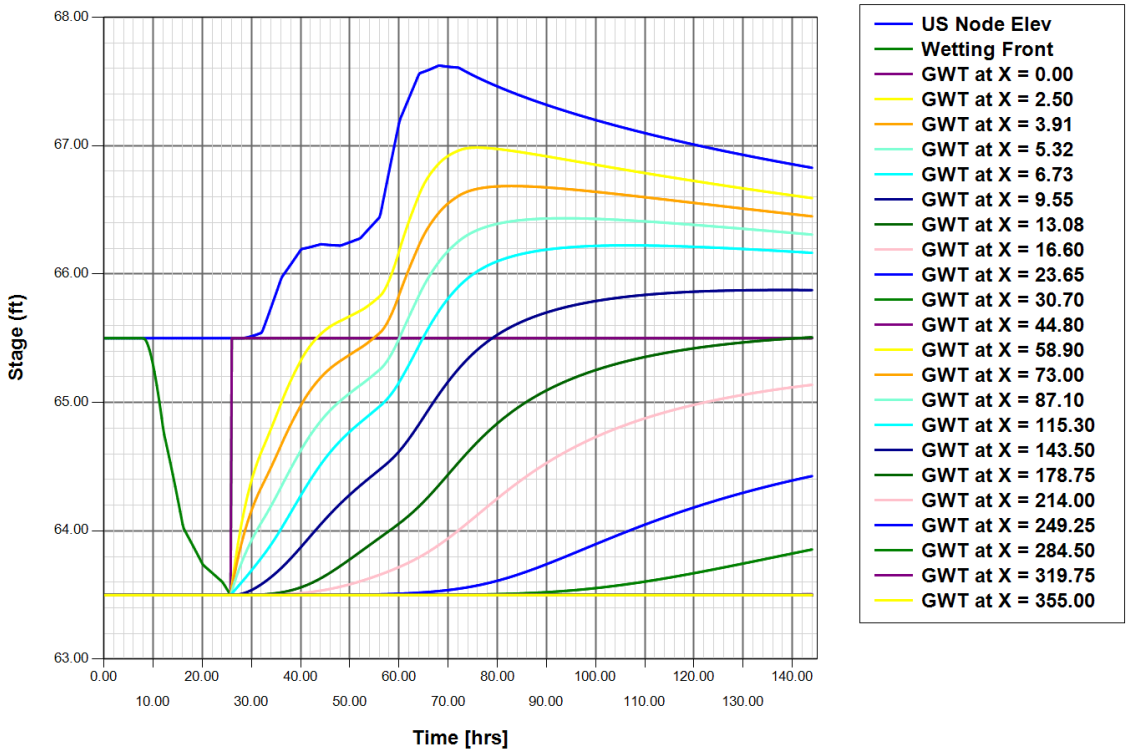
Perc Link: Perc post 2 (Sim: 100yr-008hr) [Perc post 2]



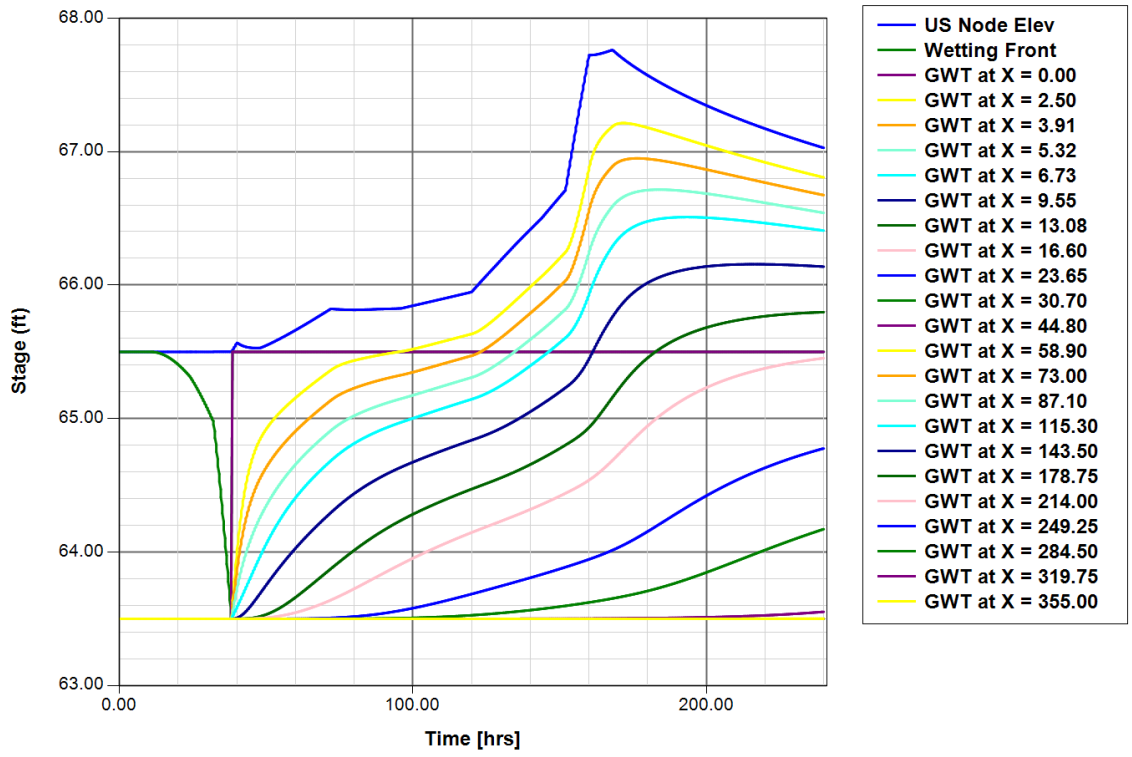
Perc Link: Perc post 2 (Sim: 100yr-024hr) [Perc post 2]



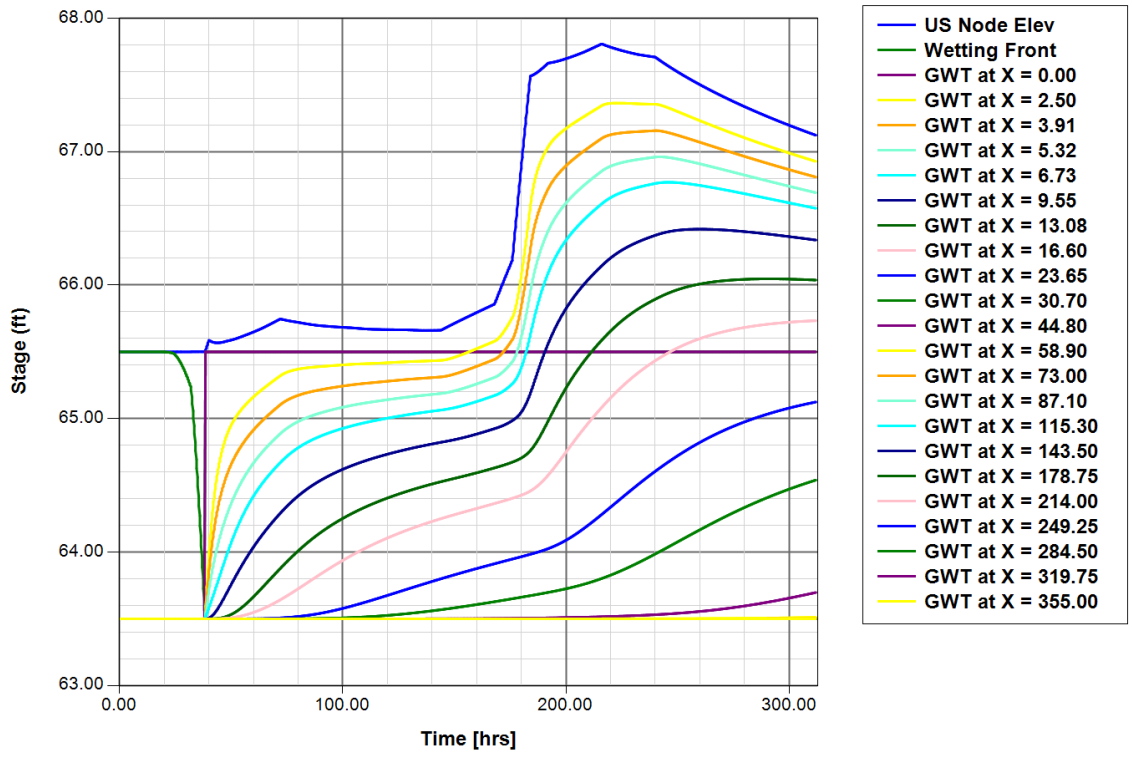
Perc Link: Perc post 2 (Sim: 100yr-072hr) [Perc post 2]



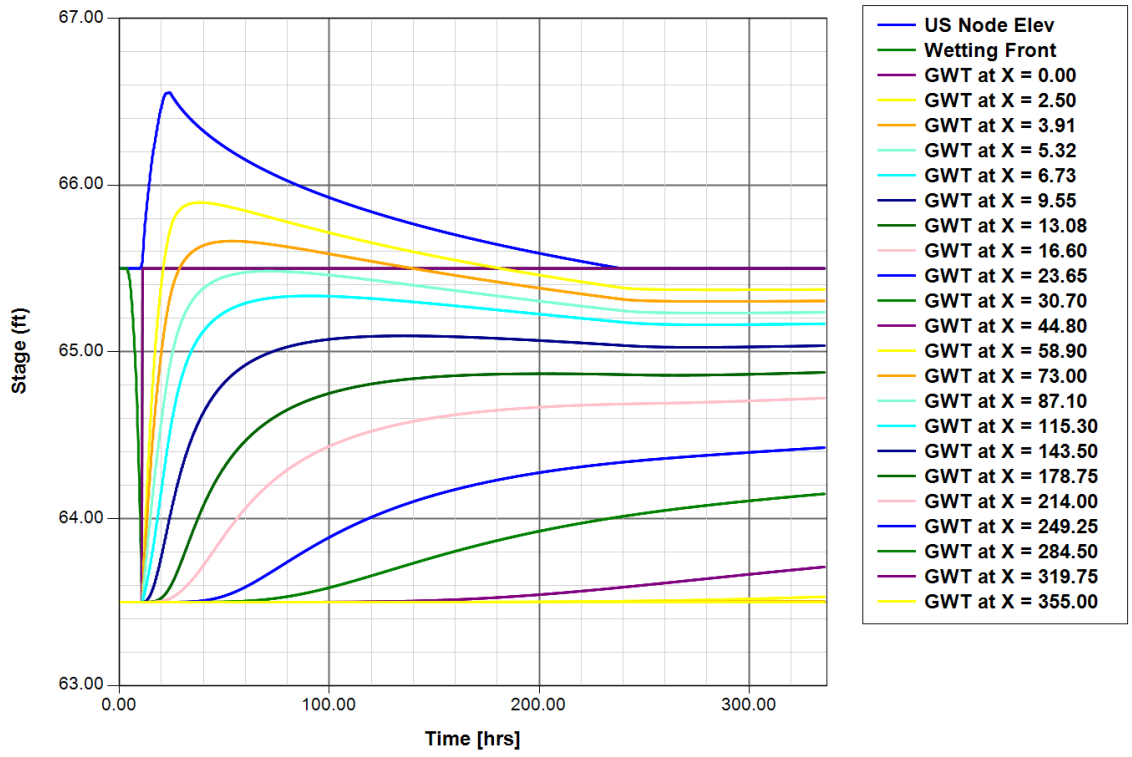
Perc Link: Perc post 2 (Sim: 100yr-168hr) [Perc post 2]



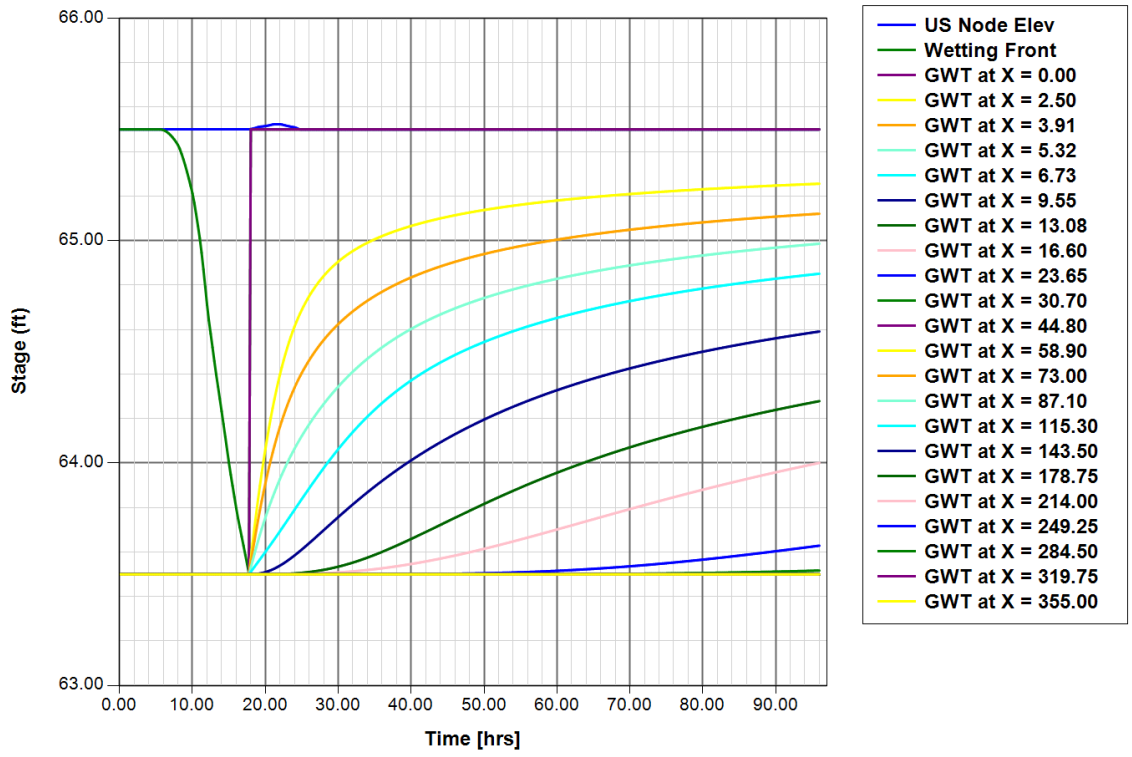
Perc Link: Perc post 2 (Sim: 100yr-240hr) [Perc post 2]



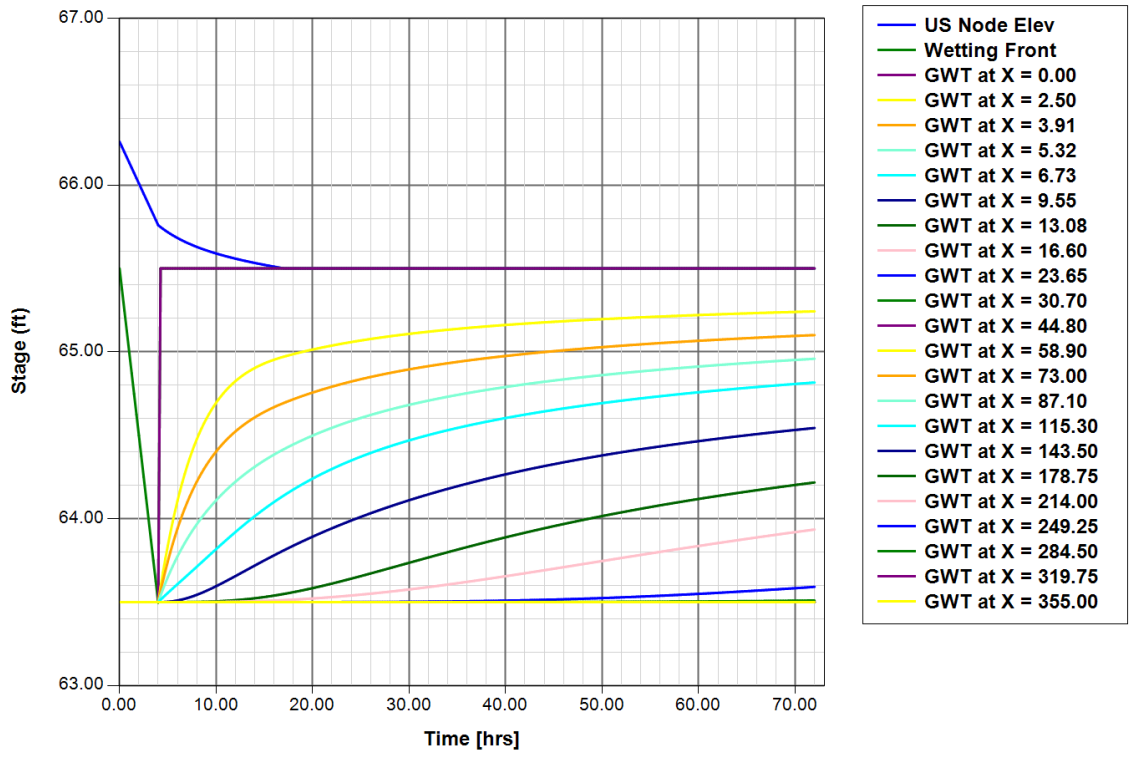
Perc Link: Perc post 2 (Sim: 25yr-24hr) [Perc post 2]



Perc Link: Perc post 2 (Sim: Mean Annual) [Perc post 2]



Perc Link: Perc post 2 (Sim: WQTV) [Perc post 2]



Attachment G

Recovery Analysis

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	0.0000	67.00
WQTV	Basin 1	0.2511	66.96
WQTV	Basin 1	0.5050	66.93
WQTV	Basin 1	0.7510	66.89
WQTV	Basin 1	1.0034	66.85
WQTV	Basin 1	1.2555	66.82
WQTV	Basin 1	1.5043	66.78
WQTV	Basin 1	1.7526	66.74
WQTV	Basin 1	2.0015	66.71
WQTV	Basin 1	2.2509	66.67
WQTV	Basin 1	2.5005	66.64
WQTV	Basin 1	2.7536	66.60
WQTV	Basin 1	3.0007	66.56
WQTV	Basin 1	3.2541	66.53
WQTV	Basin 1	3.5031	66.52
WQTV	Basin 1	3.7523	66.51
WQTV	Basin 1	4.0056	66.51
WQTV	Basin 1	4.2515	66.50
WQTV	Basin 1	4.5015	66.49
WQTV	Basin 1	4.7515	66.49
WQTV	Basin 1	5.0015	66.48
WQTV	Basin 1	5.2515	66.47
WQTV	Basin 1	5.5015	66.47
WQTV	Basin 1	5.7515	66.46
WQTV	Basin 1	6.0015	66.45
WQTV	Basin 1	6.2515	66.45
WQTV	Basin 1	6.5015	66.44
WQTV	Basin 1	6.7515	66.43
WQTV	Basin 1	7.0015	66.43
WQTV	Basin 1	7.2515	66.42
WQTV	Basin 1	7.5015	66.42
WQTV	Basin 1	7.7515	66.41
WQTV	Basin 1	8.0015	66.40
WQTV	Basin 1	8.2515	66.40
WQTV	Basin 1	8.5015	66.39
WQTV	Basin 1	8.7515	66.38
WQTV	Basin 1	9.0015	66.38
WQTV	Basin 1	9.2515	66.37
WQTV	Basin 1	9.5015	66.37
WQTV	Basin 1	9.7515	66.36
WQTV	Basin 1	10.0015	66.35
WQTV	Basin 1	10.2515	66.35

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	10.5015	66.34
WQTV	Basin 1	10.7515	66.33
WQTV	Basin 1	11.0015	66.33
WQTV	Basin 1	11.2515	66.32
WQTV	Basin 1	11.5015	66.32
WQTV	Basin 1	11.7515	66.31
WQTV	Basin 1	12.0015	66.30
WQTV	Basin 1	12.2515	66.30
WQTV	Basin 1	12.5015	66.29
WQTV	Basin 1	12.7515	66.29
WQTV	Basin 1	13.0015	66.28
WQTV	Basin 1	13.2515	66.28
WQTV	Basin 1	13.5015	66.27
WQTV	Basin 1	13.7515	66.26
WQTV	Basin 1	14.0015	66.26
WQTV	Basin 1	14.2515	66.25
WQTV	Basin 1	14.5015	66.25
WQTV	Basin 1	14.7515	66.24
WQTV	Basin 1	15.0015	66.24
WQTV	Basin 1	15.2515	66.23
WQTV	Basin 1	15.5015	66.22
WQTV	Basin 1	15.7515	66.22
WQTV	Basin 1	16.0015	66.21
WQTV	Basin 1	16.2515	66.21
WQTV	Basin 1	16.5015	66.20
WQTV	Basin 1	16.7515	66.20
WQTV	Basin 1	17.0015	66.19
WQTV	Basin 1	17.2515	66.19
WQTV	Basin 1	17.5015	66.18
WQTV	Basin 1	17.7515	66.18
WQTV	Basin 1	18.0015	66.17
WQTV	Basin 1	18.2515	66.16
WQTV	Basin 1	18.5015	66.16
WQTV	Basin 1	18.7515	66.15
WQTV	Basin 1	19.0015	66.15
WQTV	Basin 1	19.2515	66.14
WQTV	Basin 1	19.5015	66.14
WQTV	Basin 1	19.7515	66.13
WQTV	Basin 1	20.0015	66.13
WQTV	Basin 1	20.2515	66.12
WQTV	Basin 1	20.5015	66.12
WQTV	Basin 1	20.7515	66.11

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	21.0015	66.11
WQTV	Basin 1	21.2515	66.10
WQTV	Basin 1	21.5015	66.10
WQTV	Basin 1	21.7515	66.09
WQTV	Basin 1	22.0015	66.09
WQTV	Basin 1	22.2515	66.08
WQTV	Basin 1	22.5015	66.08
WQTV	Basin 1	22.7515	66.07
WQTV	Basin 1	23.0015	66.07
WQTV	Basin 1	23.2515	66.06
WQTV	Basin 1	23.5015	66.06
WQTV	Basin 1	23.7515	66.05
WQTV	Basin 1	24.0015	66.05
WQTV	Basin 1	24.2515	66.04
WQTV	Basin 1	24.5015	66.04
WQTV	Basin 1	24.7515	66.03
WQTV	Basin 1	25.0015	66.03
WQTV	Basin 1	25.2515	66.02
WQTV	Basin 1	25.5015	66.02
WQTV	Basin 1	25.7515	66.01
WQTV	Basin 1	26.0015	66.01
WQTV	Basin 1	26.2515	66.00
WQTV	Basin 1	26.5015	66.00
WQTV	Basin 1	26.7515	66.00
WQTV	Basin 1	27.0015	66.00
WQTV	Basin 1	27.2515	66.00
WQTV	Basin 1	27.5015	66.00
WQTV	Basin 1	27.7515	66.00
WQTV	Basin 1	28.0015	66.00
WQTV	Basin 1	28.2515	66.00
WQTV	Basin 1	28.5015	66.00
WQTV	Basin 1	28.7515	66.00
WQTV	Basin 1	29.0015	66.00
WQTV	Basin 1	29.2515	66.00
WQTV	Basin 1	29.5015	66.00
WQTV	Basin 1	29.7515	66.00
WQTV	Basin 1	30.0015	66.00
WQTV	Basin 1	30.2515	66.00
WQTV	Basin 1	30.5015	66.00
WQTV	Basin 1	30.7515	66.00
WQTV	Basin 1	31.0015	66.00
WQTV	Basin 1	31.2515	66.00

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	31.5015	66.00
WQTV	Basin 1	31.7515	66.00
WQTV	Basin 1	32.0015	66.00
WQTV	Basin 1	32.2515	66.00
WQTV	Basin 1	32.5015	66.00
WQTV	Basin 1	32.7515	66.00
WQTV	Basin 1	33.0015	66.00
WQTV	Basin 1	33.2515	66.00
WQTV	Basin 1	33.5015	66.00
WQTV	Basin 1	33.7515	66.00
WQTV	Basin 1	34.0015	66.00
WQTV	Basin 1	34.2515	66.00
WQTV	Basin 1	34.5015	66.00
WQTV	Basin 1	34.7515	66.00
WQTV	Basin 1	35.0015	66.00
WQTV	Basin 1	35.2515	66.00
WQTV	Basin 1	35.5015	66.00
WQTV	Basin 1	35.7515	66.00
WQTV	Basin 1	36.0015	66.00
WQTV	Basin 1	36.2515	66.00
WQTV	Basin 1	36.5015	66.00
WQTV	Basin 1	36.7515	66.00
WQTV	Basin 1	37.0015	66.00
WQTV	Basin 1	37.2515	66.00
WQTV	Basin 1	37.5015	66.00
WQTV	Basin 1	37.7515	66.00
WQTV	Basin 1	38.0015	66.00
WQTV	Basin 1	38.2515	66.00
WQTV	Basin 1	38.5015	66.00
WQTV	Basin 1	38.7515	66.00
WQTV	Basin 1	39.0015	66.00
WQTV	Basin 1	39.2515	66.00
WQTV	Basin 1	39.5015	66.00
WQTV	Basin 1	39.7515	66.00
WQTV	Basin 1	40.0015	66.00
WQTV	Basin 1	40.2515	66.00
WQTV	Basin 1	40.5015	66.00
WQTV	Basin 1	40.7515	66.00
WQTV	Basin 1	41.0015	66.00
WQTV	Basin 1	41.2515	66.00
WQTV	Basin 1	41.5015	66.00
WQTV	Basin 1	41.7515	66.00

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	42.0015	66.00
WQTV	Basin 1	42.2515	66.00
WQTV	Basin 1	42.5015	66.00
WQTV	Basin 1	42.7515	66.00
WQTV	Basin 1	43.0015	66.00
WQTV	Basin 1	43.2515	66.00
WQTV	Basin 1	43.5015	66.00
WQTV	Basin 1	43.7515	66.00
WQTV	Basin 1	44.0015	66.00
WQTV	Basin 1	44.2515	66.00
WQTV	Basin 1	44.5015	66.00
WQTV	Basin 1	44.7515	66.00
WQTV	Basin 1	45.0015	66.00
WQTV	Basin 1	45.2515	66.00
WQTV	Basin 1	45.5015	66.00
WQTV	Basin 1	45.7515	66.00
WQTV	Basin 1	46.0015	66.00
WQTV	Basin 1	46.2515	66.00
WQTV	Basin 1	46.5015	66.00
WQTV	Basin 1	46.7515	66.00
WQTV	Basin 1	47.0015	66.00
WQTV	Basin 1	47.2515	66.00
WQTV	Basin 1	47.5015	66.00
WQTV	Basin 1	47.7515	66.00
WQTV	Basin 1	48.0015	66.00
WQTV	Basin 1	48.2515	66.00
WQTV	Basin 1	48.5015	66.00
WQTV	Basin 1	48.7515	66.00
WQTV	Basin 1	49.0015	66.00
WQTV	Basin 1	49.2515	66.00
WQTV	Basin 1	49.5015	66.00
WQTV	Basin 1	49.7515	66.00
WQTV	Basin 1	50.0015	66.00
WQTV	Basin 1	50.2515	66.00
WQTV	Basin 1	50.5015	66.00
WQTV	Basin 1	50.7515	66.00
WQTV	Basin 1	51.0015	66.00
WQTV	Basin 1	51.2515	66.00
WQTV	Basin 1	51.5015	66.00
WQTV	Basin 1	51.7515	66.00
WQTV	Basin 1	52.0015	66.00
WQTV	Basin 1	52.2515	66.00

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	52.5015	66.00
WQTV	Basin 1	52.7515	66.00
WQTV	Basin 1	53.0015	66.00
WQTV	Basin 1	53.2515	66.00
WQTV	Basin 1	53.5015	66.00
WQTV	Basin 1	53.7515	66.00
WQTV	Basin 1	54.0015	66.00
WQTV	Basin 1	54.2515	66.00
WQTV	Basin 1	54.5015	66.00
WQTV	Basin 1	54.7515	66.00
WQTV	Basin 1	55.0015	66.00
WQTV	Basin 1	55.2515	66.00
WQTV	Basin 1	55.5015	66.00
WQTV	Basin 1	55.7515	66.00
WQTV	Basin 1	56.0015	66.00
WQTV	Basin 1	56.2515	66.00
WQTV	Basin 1	56.5015	66.00
WQTV	Basin 1	56.7515	66.00
WQTV	Basin 1	57.0015	66.00
WQTV	Basin 1	57.2515	66.00
WQTV	Basin 1	57.5015	66.00
WQTV	Basin 1	57.7515	66.00
WQTV	Basin 1	58.0015	66.00
WQTV	Basin 1	58.2515	66.00
WQTV	Basin 1	58.5015	66.00
WQTV	Basin 1	58.7515	66.00
WQTV	Basin 1	59.0015	66.00
WQTV	Basin 1	59.2515	66.00
WQTV	Basin 1	59.5015	66.00
WQTV	Basin 1	59.7515	66.00
WQTV	Basin 1	60.0015	66.00
WQTV	Basin 1	60.2515	66.00
WQTV	Basin 1	60.5015	66.00
WQTV	Basin 1	60.7515	66.00
WQTV	Basin 1	61.0015	66.00
WQTV	Basin 1	61.2515	66.00
WQTV	Basin 1	61.5015	66.00
WQTV	Basin 1	61.7515	66.00
WQTV	Basin 1	62.0015	66.00
WQTV	Basin 1	62.2515	66.00
WQTV	Basin 1	62.5015	66.00
WQTV	Basin 1	62.7515	66.00

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Basin 1	63.0015	66.00
WQTV	Basin 1	63.2515	66.00
WQTV	Basin 1	63.5015	66.00
WQTV	Basin 1	63.7515	66.00
WQTV	Basin 1	64.0015	66.00
WQTV	Basin 1	64.2515	66.00
WQTV	Basin 1	64.5015	66.00
WQTV	Basin 1	64.7515	66.00
WQTV	Basin 1	65.0015	66.00
WQTV	Basin 1	65.2515	66.00
WQTV	Basin 1	65.5015	66.00
WQTV	Basin 1	65.7515	66.00
WQTV	Basin 1	66.0015	66.00
WQTV	Basin 1	66.2515	66.00
WQTV	Basin 1	66.5015	66.00
WQTV	Basin 1	66.7515	66.00
WQTV	Basin 1	67.0015	66.00
WQTV	Basin 1	67.2515	66.00
WQTV	Basin 1	67.5015	66.00
WQTV	Basin 1	67.7515	66.00
WQTV	Basin 1	68.0015	66.00
WQTV	Basin 1	68.2515	66.00
WQTV	Basin 1	68.5015	66.00
WQTV	Basin 1	68.7515	66.00
WQTV	Basin 1	69.0015	66.00
WQTV	Basin 1	69.2515	66.00
WQTV	Basin 1	69.5015	66.00
WQTV	Basin 1	69.7515	66.00
WQTV	Basin 1	70.0015	66.00
WQTV	Basin 1	70.2515	66.00
WQTV	Basin 1	70.5015	66.00
WQTV	Basin 1	70.7515	66.00
WQTV	Basin 1	71.0015	66.00
WQTV	Basin 1	71.2515	66.00
WQTV	Basin 1	71.5015	66.00
WQTV	Basin 1	71.7515	66.00
WQTV	Basin 1	72.0015	66.00
WQTV	Underground basin	0.0000	66.26
WQTV	Underground basin	0.2511	66.23
WQTV	Underground basin	0.5050	66.20
WQTV	Underground basin	0.7510	66.17
WQTV	Underground basin	1.0034	66.13

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	1.2555	66.10
WQTV	Underground basin	1.5043	66.07
WQTV	Underground basin	1.7526	66.04
WQTV	Underground basin	2.0015	66.01
WQTV	Underground basin	2.2509	65.98
WQTV	Underground basin	2.5005	65.95
WQTV	Underground basin	2.7536	65.92
WQTV	Underground basin	3.0007	65.88
WQTV	Underground basin	3.2541	65.85
WQTV	Underground basin	3.5031	65.82
WQTV	Underground basin	3.7523	65.79
WQTV	Underground basin	4.0056	65.76
WQTV	Underground basin	4.2515	65.75
WQTV	Underground basin	4.5015	65.74
WQTV	Underground basin	4.7515	65.73
WQTV	Underground basin	5.0015	65.72
WQTV	Underground basin	5.2515	65.71
WQTV	Underground basin	5.5015	65.70
WQTV	Underground basin	5.7515	65.69
WQTV	Underground basin	6.0015	65.68
WQTV	Underground basin	6.2515	65.67
WQTV	Underground basin	6.5015	65.67
WQTV	Underground basin	6.7515	65.66
WQTV	Underground basin	7.0015	65.65
WQTV	Underground basin	7.2515	65.65
WQTV	Underground basin	7.5015	65.64
WQTV	Underground basin	7.7515	65.63
WQTV	Underground basin	8.0015	65.63
WQTV	Underground basin	8.2515	65.62
WQTV	Underground basin	8.5015	65.62
WQTV	Underground basin	8.7515	65.61
WQTV	Underground basin	9.0015	65.61
WQTV	Underground basin	9.2515	65.60
WQTV	Underground basin	9.5015	65.60
WQTV	Underground basin	9.7515	65.59
WQTV	Underground basin	10.0015	65.59
WQTV	Underground basin	10.2515	65.59
WQTV	Underground basin	10.5015	65.58
WQTV	Underground basin	10.7515	65.58
WQTV	Underground basin	11.0015	65.57
WQTV	Underground basin	11.2515	65.57
WQTV	Underground basin	11.5015	65.57

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	11.7515	65.56
WQTV	Underground basin	12.0015	65.56
WQTV	Underground basin	12.2515	65.56
WQTV	Underground basin	12.5015	65.55
WQTV	Underground basin	12.7515	65.55
WQTV	Underground basin	13.0015	65.55
WQTV	Underground basin	13.2515	65.54
WQTV	Underground basin	13.5015	65.54
WQTV	Underground basin	13.7515	65.54
WQTV	Underground basin	14.0015	65.53
WQTV	Underground basin	14.2515	65.53
WQTV	Underground basin	14.5015	65.53
WQTV	Underground basin	14.7515	65.52
WQTV	Underground basin	15.0015	65.52
WQTV	Underground basin	15.2515	65.52
WQTV	Underground basin	15.5015	65.52
WQTV	Underground basin	15.7515	65.51
WQTV	Underground basin	16.0015	65.51
WQTV	Underground basin	16.2515	65.51
WQTV	Underground basin	16.5015	65.51
WQTV	Underground basin	16.7515	65.50
WQTV	Underground basin	17.0015	65.50
WQTV	Underground basin	17.2515	65.50
WQTV	Underground basin	17.5015	65.50
WQTV	Underground basin	17.7515	65.50
WQTV	Underground basin	18.0015	65.50
WQTV	Underground basin	18.2515	65.50
WQTV	Underground basin	18.5015	65.50
WQTV	Underground basin	18.7515	65.50
WQTV	Underground basin	19.0015	65.50
WQTV	Underground basin	19.2515	65.50
WQTV	Underground basin	19.5015	65.50
WQTV	Underground basin	19.7515	65.50
WQTV	Underground basin	20.0015	65.50
WQTV	Underground basin	20.2515	65.50
WQTV	Underground basin	20.5015	65.50
WQTV	Underground basin	20.7515	65.50
WQTV	Underground basin	21.0015	65.50
WQTV	Underground basin	21.2515	65.50
WQTV	Underground basin	21.5015	65.50
WQTV	Underground basin	21.7515	65.50
WQTV	Underground basin	22.0015	65.50

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	22.2515	65.50
WQTV	Underground basin	22.5015	65.50
WQTV	Underground basin	22.7515	65.50
WQTV	Underground basin	23.0015	65.50
WQTV	Underground basin	23.2515	65.50
WQTV	Underground basin	23.5015	65.50
WQTV	Underground basin	23.7515	65.50
WQTV	Underground basin	24.0015	65.50
WQTV	Underground basin	24.2515	65.50
WQTV	Underground basin	24.5015	65.50
WQTV	Underground basin	24.7515	65.50
WQTV	Underground basin	25.0015	65.50
WQTV	Underground basin	25.2515	65.50
WQTV	Underground basin	25.5015	65.50
WQTV	Underground basin	25.7515	65.50
WQTV	Underground basin	26.0015	65.50
WQTV	Underground basin	26.2515	65.50
WQTV	Underground basin	26.5015	65.50
WQTV	Underground basin	26.7515	65.50
WQTV	Underground basin	27.0015	65.50
WQTV	Underground basin	27.2515	65.50
WQTV	Underground basin	27.5015	65.50
WQTV	Underground basin	27.7515	65.50
WQTV	Underground basin	28.0015	65.50
WQTV	Underground basin	28.2515	65.50
WQTV	Underground basin	28.5015	65.50
WQTV	Underground basin	28.7515	65.50
WQTV	Underground basin	29.0015	65.50
WQTV	Underground basin	29.2515	65.50
WQTV	Underground basin	29.5015	65.50
WQTV	Underground basin	29.7515	65.50
WQTV	Underground basin	30.0015	65.50
WQTV	Underground basin	30.2515	65.50
WQTV	Underground basin	30.5015	65.50
WQTV	Underground basin	30.7515	65.50
WQTV	Underground basin	31.0015	65.50
WQTV	Underground basin	31.2515	65.50
WQTV	Underground basin	31.5015	65.50
WQTV	Underground basin	31.7515	65.50
WQTV	Underground basin	32.0015	65.50
WQTV	Underground basin	32.2515	65.50
WQTV	Underground basin	32.5015	65.50

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	32.7515	65.50
WQTV	Underground basin	33.0015	65.50
WQTV	Underground basin	33.2515	65.50
WQTV	Underground basin	33.5015	65.50
WQTV	Underground basin	33.7515	65.50
WQTV	Underground basin	34.0015	65.50
WQTV	Underground basin	34.2515	65.50
WQTV	Underground basin	34.5015	65.50
WQTV	Underground basin	34.7515	65.50
WQTV	Underground basin	35.0015	65.50
WQTV	Underground basin	35.2515	65.50
WQTV	Underground basin	35.5015	65.50
WQTV	Underground basin	35.7515	65.50
WQTV	Underground basin	36.0015	65.50
WQTV	Underground basin	36.2515	65.50
WQTV	Underground basin	36.5015	65.50
WQTV	Underground basin	36.7515	65.50
WQTV	Underground basin	37.0015	65.50
WQTV	Underground basin	37.2515	65.50
WQTV	Underground basin	37.5015	65.50
WQTV	Underground basin	37.7515	65.50
WQTV	Underground basin	38.0015	65.50
WQTV	Underground basin	38.2515	65.50
WQTV	Underground basin	38.5015	65.50
WQTV	Underground basin	38.7515	65.50
WQTV	Underground basin	39.0015	65.50
WQTV	Underground basin	39.2515	65.50
WQTV	Underground basin	39.5015	65.50
WQTV	Underground basin	39.7515	65.50
WQTV	Underground basin	40.0015	65.50
WQTV	Underground basin	40.2515	65.50
WQTV	Underground basin	40.5015	65.50
WQTV	Underground basin	40.7515	65.50
WQTV	Underground basin	41.0015	65.50
WQTV	Underground basin	41.2515	65.50
WQTV	Underground basin	41.5015	65.50
WQTV	Underground basin	41.7515	65.50
WQTV	Underground basin	42.0015	65.50
WQTV	Underground basin	42.2515	65.50
WQTV	Underground basin	42.5015	65.50
WQTV	Underground basin	42.7515	65.50
WQTV	Underground basin	43.0015	65.50

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	43.2515	65.50
WQTV	Underground basin	43.5015	65.50
WQTV	Underground basin	43.7515	65.50
WQTV	Underground basin	44.0015	65.50
WQTV	Underground basin	44.2515	65.50
WQTV	Underground basin	44.5015	65.50
WQTV	Underground basin	44.7515	65.50
WQTV	Underground basin	45.0015	65.50
WQTV	Underground basin	45.2515	65.50
WQTV	Underground basin	45.5015	65.50
WQTV	Underground basin	45.7515	65.50
WQTV	Underground basin	46.0015	65.50
WQTV	Underground basin	46.2515	65.50
WQTV	Underground basin	46.5015	65.50
WQTV	Underground basin	46.7515	65.50
WQTV	Underground basin	47.0015	65.50
WQTV	Underground basin	47.2515	65.50
WQTV	Underground basin	47.5015	65.50
WQTV	Underground basin	47.7515	65.50
WQTV	Underground basin	48.0015	65.50
WQTV	Underground basin	48.2515	65.50
WQTV	Underground basin	48.5015	65.50
WQTV	Underground basin	48.7515	65.50
WQTV	Underground basin	49.0015	65.50
WQTV	Underground basin	49.2515	65.50
WQTV	Underground basin	49.5015	65.50
WQTV	Underground basin	49.7515	65.50
WQTV	Underground basin	50.0015	65.50
WQTV	Underground basin	50.2515	65.50
WQTV	Underground basin	50.5015	65.50
WQTV	Underground basin	50.7515	65.50
WQTV	Underground basin	51.0015	65.50
WQTV	Underground basin	51.2515	65.50
WQTV	Underground basin	51.5015	65.50
WQTV	Underground basin	51.7515	65.50
WQTV	Underground basin	52.0015	65.50
WQTV	Underground basin	52.2515	65.50
WQTV	Underground basin	52.5015	65.50
WQTV	Underground basin	52.7515	65.50
WQTV	Underground basin	53.0015	65.50
WQTV	Underground basin	53.2515	65.50
WQTV	Underground basin	53.5015	65.50

Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	53.7515	65.50
WQTV	Underground basin	54.0015	65.50
WQTV	Underground basin	54.2515	65.50
WQTV	Underground basin	54.5015	65.50
WQTV	Underground basin	54.7515	65.50
WQTV	Underground basin	55.0015	65.50
WQTV	Underground basin	55.2515	65.50
WQTV	Underground basin	55.5015	65.50
WQTV	Underground basin	55.7515	65.50
WQTV	Underground basin	56.0015	65.50
WQTV	Underground basin	56.2515	65.50
WQTV	Underground basin	56.5015	65.50
WQTV	Underground basin	56.7515	65.50
WQTV	Underground basin	57.0015	65.50
WQTV	Underground basin	57.2515	65.50
WQTV	Underground basin	57.5015	65.50
WQTV	Underground basin	57.7515	65.50
WQTV	Underground basin	58.0015	65.50
WQTV	Underground basin	58.2515	65.50
WQTV	Underground basin	58.5015	65.50
WQTV	Underground basin	58.7515	65.50
WQTV	Underground basin	59.0015	65.50
WQTV	Underground basin	59.2515	65.50
WQTV	Underground basin	59.5015	65.50
WQTV	Underground basin	59.7515	65.50
WQTV	Underground basin	60.0015	65.50
WQTV	Underground basin	60.2515	65.50
WQTV	Underground basin	60.5015	65.50
WQTV	Underground basin	60.7515	65.50
WQTV	Underground basin	61.0015	65.50
WQTV	Underground basin	61.2515	65.50
WQTV	Underground basin	61.5015	65.50
WQTV	Underground basin	61.7515	65.50
WQTV	Underground basin	62.0015	65.50
WQTV	Underground basin	62.2515	65.50
WQTV	Underground basin	62.5015	65.50
WQTV	Underground basin	62.7515	65.50
WQTV	Underground basin	63.0015	65.50
WQTV	Underground basin	63.2515	65.50
WQTV	Underground basin	63.5015	65.50
WQTV	Underground basin	63.7515	65.50
WQTV	Underground basin	64.0015	65.50

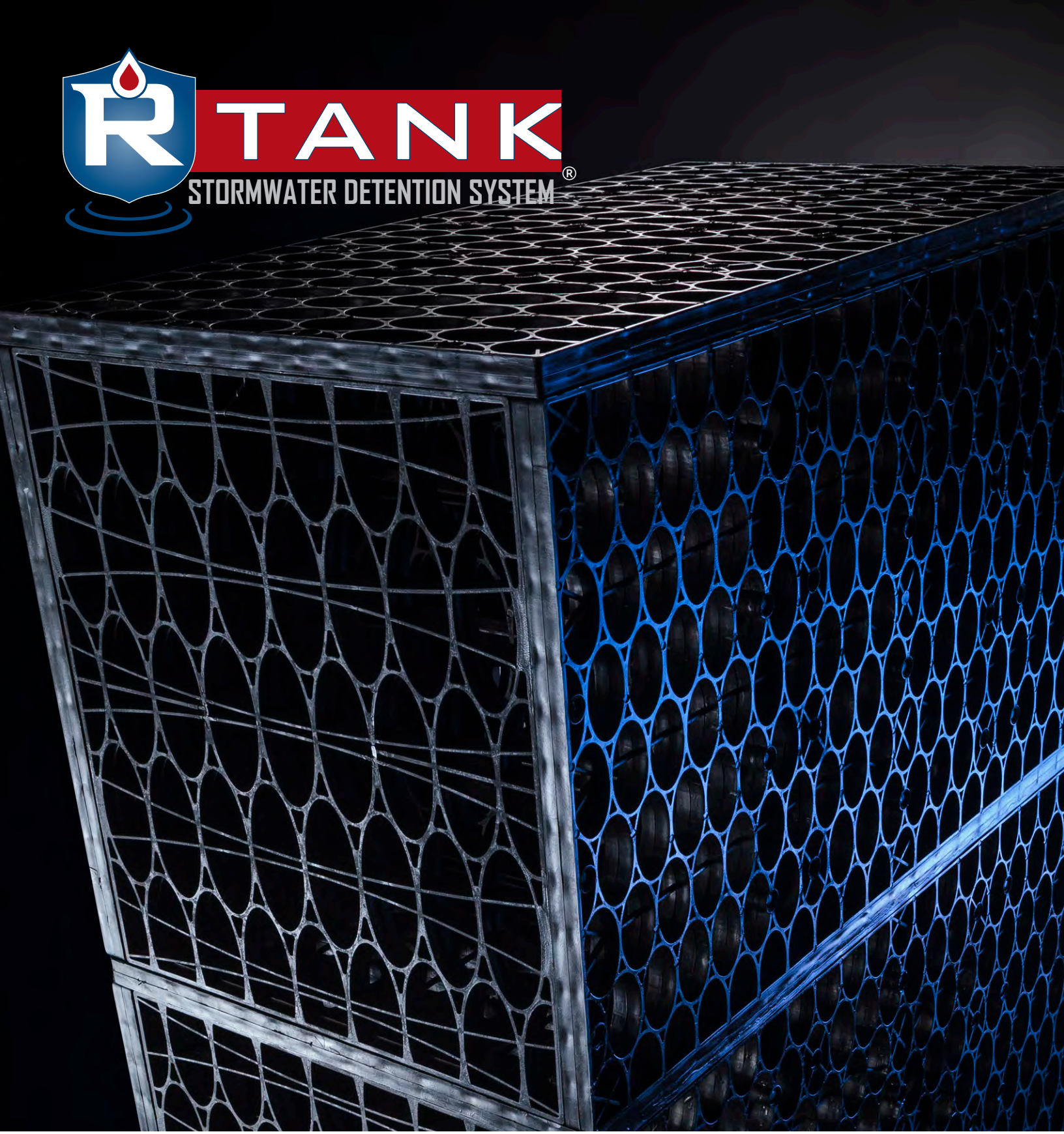
Sim	Node Name	Relative Time [hrs]	Stage [ft]
WQTV	Underground basin	64.2515	65.50
WQTV	Underground basin	64.5015	65.50
WQTV	Underground basin	64.7515	65.50
WQTV	Underground basin	65.0015	65.50
WQTV	Underground basin	65.2515	65.50
WQTV	Underground basin	65.5015	65.50
WQTV	Underground basin	65.7515	65.50
WQTV	Underground basin	66.0015	65.50
WQTV	Underground basin	66.2515	65.50
WQTV	Underground basin	66.5015	65.50
WQTV	Underground basin	66.7515	65.50
WQTV	Underground basin	67.0015	65.50
WQTV	Underground basin	67.2515	65.50
WQTV	Underground basin	67.5015	65.50
WQTV	Underground basin	67.7515	65.50
WQTV	Underground basin	68.0015	65.50
WQTV	Underground basin	68.2515	65.50
WQTV	Underground basin	68.5015	65.50
WQTV	Underground basin	68.7515	65.50
WQTV	Underground basin	69.0015	65.50
WQTV	Underground basin	69.2515	65.50
WQTV	Underground basin	69.5015	65.50
WQTV	Underground basin	69.7515	65.50
WQTV	Underground basin	70.0015	65.50
WQTV	Underground basin	70.2515	65.50
WQTV	Underground basin	70.5015	65.50
WQTV	Underground basin	70.7515	65.50
WQTV	Underground basin	71.0015	65.50
WQTV	Underground basin	71.2515	65.50
WQTV	Underground basin	71.5015	65.50
WQTV	Underground basin	71.7515	65.50
WQTV	Underground basin	72.0015	65.50

Attachment H

R-Tanks Specifications

RTANK®

STORMWATER DETENTION SYSTEM



LD HD SD UD XD

LET'S GET IT DONE®

ACF ENVIRONMENTAL

STORMWATER MANAGEMENT

IS YOUR STORMWATER SYSTEM TAKING UP TOO MUCH SPACE?

Reduce the size with the R-Tank System, an efficient and versatile underground stormwater storage system. This system will reduce your underground stormwater storage system footprint to resolve a utility conflict or free up space for a future expansion.

It will also provide additional options for vehicular loading and cover depths, and deliver greater installation versatility.

DOES YOUR PROJECT REQUIRE A UNIQUE SOLUTION DUE TO DEPTH OR TRAFFIC LOADS?

With five different module configurations, R-Tank provides system height options from 2” to over 7’ deep. It also delivers support for HS-20 and HS-25 traffic, with cover depths from 6” to over 16’.

With an unlimited array of system footprints and configurations, R-Tank solves tough stormwater problems by adapting to the needs of your site - whether your’re designing a project at the beach with minimal depth over a water table or a deep system in the hills.

R TANK®

R-TANK®

BENEFITS

HIGH CAPACITY
- 95% void internal area

STRENGTH
- Easily supports traffic loading from parking lots and roads
- Module options for HS-20 and HS-25 rating with cover depths from 6 inches to 16 feet

DESIGN & CONSTRUCTION VERSATILITY
- Modules can be combined into various shapes efficiently and effectively use space
- Varied height from 2 inches to 7 feet

INCREASED INFILTRATION AND EXILFILTRATION
- Outer shell is 90% open
- Increases groundwater recharge, reducing post-construction discharge volumes

EASY TO TRANSPORT
- Can be supplied unassembled for reduced delivery costs

LIGHTWEIGHT AND QUICK TO INSTALL
- Installed by hand; no cranes required
- Reduces site access delays

RECYCLED CONTENT
- Manufactured with recycled polypropylene

R-TANK LD®
- Light Duty module (30 psi)
- Ideal for applications in green space
- Not rated for vehicular traffic
- 12” Minimum cover, 36” maximum cover
- Four internal plates

R-TANK HD®
- Heavy Duty module (33.4 psi)
- Standard module for HS-20 traffic applications
- 20” Minimum cover,
- 84” Maximum cover
- Five internal plates

R-TANK SD®
- Super Duty module (42.9 psi)
- Higher safety factors for shallow traffic applications and deeper cover
- 18” Minimum cover,
- 120” Maximum cover
- Five internal plates

R-TANK UD®
- Ultra Duty module (134.2 psi)
- Traffic loads with 12” of cover
- Available from 14” – 66” tall
- Ideal for high water table sites

R-TANK XD®
- Extreme Duty module (240.2 psi)
- Traffic loads with 6” cover
- 16.5’ maximum cover
- Available from 2” - 10’ tall
- 90% void

DESIGN CONSIDERATIONS

Many factors will influence the design of the R-Tank® system. While this list is not intended to be all-inclusive, the following design considerations are worth highlighting:

1. PRE-TREATMENT

Removing pollutants from runoff before they enter an underground detention system is the smart way to design & build a system. Trash Guard Plus® (see page 6) is a great tool for this. Be sure the system you select will remove, heavy sediments, gross pollutants (trash) and biodegradable debris.

2. BACKFILL MATERIALS

Backfill materials should be stone (<1.5" in diameter) or soil (GW, GP SW or SP per the Unified Soil Classification System). Material must be free from lumps, debris and sharp objects that could cut the geotextile. See the R-Tank® narrative specification section 2.03 for additional information.

3. RUNOFF REDUCTION

Most designs incorporate an outlet to drain the system at a controlled rate and/or an overflow to prevent flooding in extreme events. Any infiltration that can be achieved on the site should also be taken advantage of. Consider raising the invert of your outlet or creating a sump to capture and infiltrate the water quality volume whenever possible.

4. WATER TABLE

While installing R-Tank® below the water table is manageable, a stable base must be created to account for the system's ability to drain water out or limit its ability to enter the system. If a liner is used to prevent ground water from entering, measures must be taken to prevent the system from floating.

5. CONSTRUCTION LOADS

Construction loads are often the heaviest loads the system will experience. Care must be taken during backfilling and compaction (see specification section 3.05), and post-installation construction traffic should be routed around the system (Install Guide step 12).

6. LATERAL LOADS

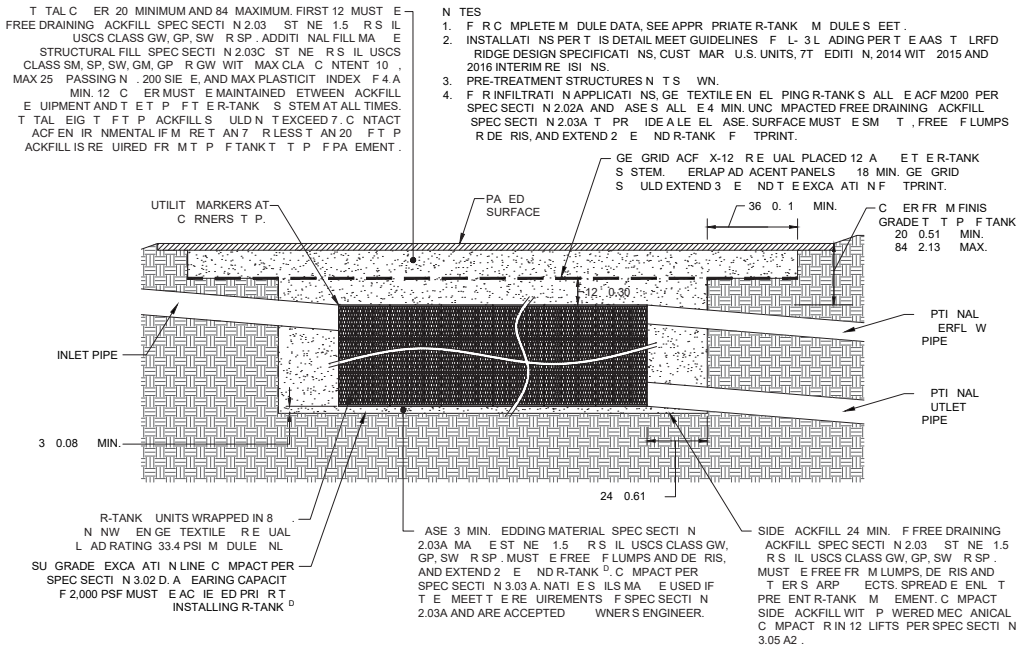
As systems get deeper, the loads acting on the sides of the tank increase. While vertical loads often control the design, lateral loads should also be considered.

7. R-TANK MODULES

Selecting the right module for your application is critical. See page 3 and the specs on the back of this brochure, for details. Our team is also here to help!

8. LOAD MODELING

A safety factor of >1.75 is required when designing an R-Tank System using the AASHTO LRFD Bridge Design Specifications. It is also necessary to run your own loading model with specific site requirements. Example models can be found in our Tech Note on loading capabilities, and minimum cover requirements can be found in the specs on the back of this brochure.



LOW IMPACT DESIGN & GREEN INFRASTRUCTURE

As much of the nation's Gray Infrastructure continues to decay, new concepts for rebuilding it are emerging through Green Infrastructure (GI) and Low Impact Development (LID). This type of reconstruction moves beyond traditional systems that do one thing well, to systems that accomplish multiple objectives simultaneously.

ACF Environmental has several technologies that dovetail with the goals of LID and GI and can play a significant role in the redevelopment process.

R-TANK®

Pipe and stone are used in traditional systems to move and store runoff. R-Tank accomplishes the same purpose with several additional benefits.

- Stores and moves runoff
- Moves water slowly, increasing time of concentration
- Open system encourages infiltration
- Fully accessible for maintenance
- Stores 138% more water than stone
- Maximizes storage potential of GI practices
- Easily handles traffic loads
- Ships flat to reduce site disturbance

PERMEABLE PAVEMENTS

Traditional pavements move vehicles efficiently, but are easily damaged by stormwater. ACF Environmental specializes in permeable pavements that handle traffic loads, while providing surface infiltration rates 10x higher than traditional pervious pavements, helping reduce the expense of long-term maintenance.

- Handles all vehicular loads
- Drains ten times faster than competing pervious pavements
- Reduces long-term maintenance costs
- Encourages infiltration
- Pair with R-Tank® to maximize water storage and transport

FOCALPOINT

Traditional landscaping adds aesthetic value to projects, but has more potential. Many developers turn to bioretention, but are forced to surrender massive land areas and dedicate significant future funds to maintenance. FocalPoint reduces the space requirements and maintenance costs of bioretention by up to 90% while providing similar pollutant removal.

- Adds aesthetic value to properties
- Cleans runoff to improve water quality
- Reduces space requirements and maintenance costs of traditional bioretention systems
- Encourages infiltration to reduce volume of water discharged
- Pairs with R-Tank® to maximize water storage and transport

R-Tank maximizes the storage capabilities of bioretention and permeable pavement systems.

MAINTENANCE

DESIGNING AN R-TANK SYSTEM WITH LONGEVITY & MAINTENANCE IN MIND IS A THREE-STEP PROCESS:

1. PREVENT

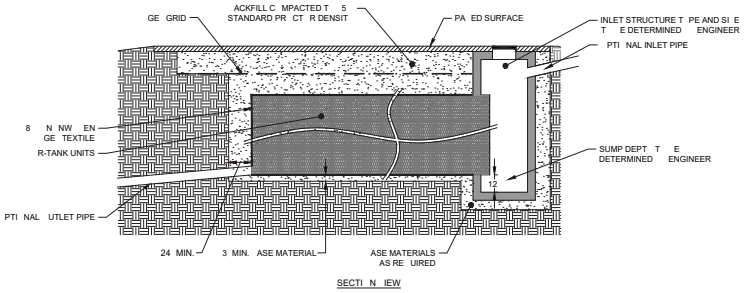
Keep debris and sediment out of the system by pre-treating runoff with the Trash Guard Plus® unit (see below). For a more centralized approach, you could consider having the R-Tank units penetrate the connecting structure, which allows the use of the R-Tank® as its own trash screen. This works best with a structure that includes a sump (see Inlet Connection drawing below).

2. ISOLATE

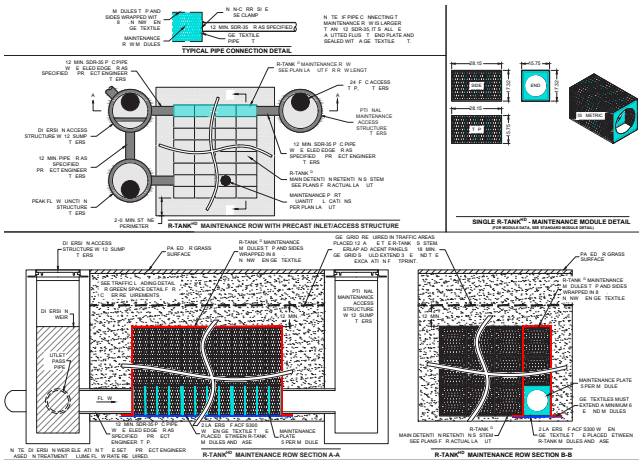
Trap solid pollutants inside the maintenance row (see Maintenance Row drawing below) where they can be easily removed, using the Maintenance Modules (available in LD, HD, and UD only). These modules are wrapped in geotextile to retain solids and are fully accessible by conventional jet-vac systems to remove captured pollutants.

3. PROTECT

Ensure a long system life by including maintenance ports to remove any pollutants that evade the pre-treatment system and maintenance row. Maintenance ports should be specified within 10’ of inlet and outlet connections, and roughly 50’ on center (see detail on page 7).



INLET CONNECTION



MAINTENANCE ROW

MAINTENANCE PREVENTION

TRASH GUARD PLUS ®

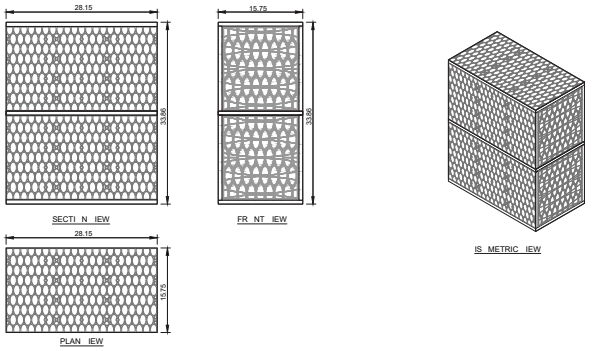
Trash Guard Plus® is a patented stormwater pretreatment device that captures debris, sediment and floatables. Easy to install and maintain, it is a fraction of the cost of other pretreatment devices.

BENEFITS

- Simple retrofit to existing catch basins
- Installs without heavy equipment
- Quick and easy assembly
- Adjusts to irregular catch basin bottoms and/or walls
- Eliminates stormwater trash at public parks, beaches, and waterways
- Removes harmful nutrients and regulated metals

TYPICAL DESIGN

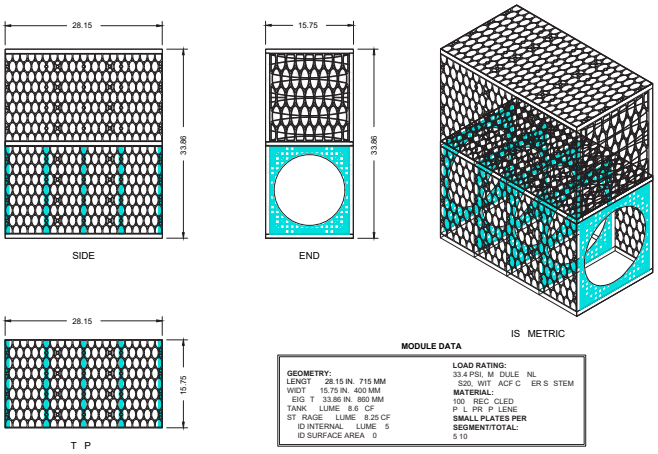
MODULE DRAWING - DOUBLE



MODULE DATA

GEOMETRY	LENGT 28.15 IN. 715 MM WIDT 15.75 IN. 400 MM EIG T 33.86 IN. 860 MM TANK LUME 8.6 CF ST RAGE LUME 8.25 CF ID INTERNAL LUME 5 ID SURFACE AREA 0	**LOAD RATING**	33.4 PSI, M DULE NL S25, WIT ACF C ER S STEM
		MATERIAL	100 REC CLED P L PR P LENE
		SMALL PLATES PER SEGMENT/TOTAL:	5 10

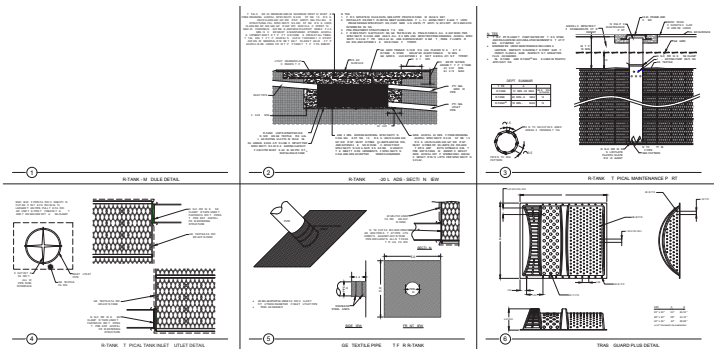
MAINTENANCE MODULE - DOUBLE



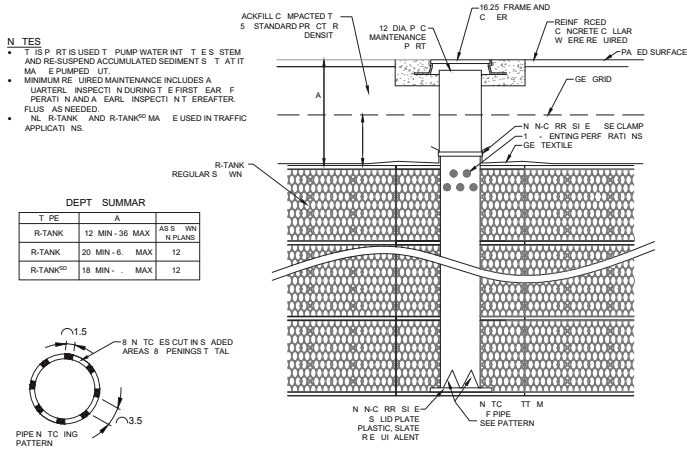
MODULE DATA

GEOMETRY: LENGT 28.15 IN. 715 MM WIDT 15.75 IN. 400 MM EIG T 33.86 IN. 860 MM TANK LUME 8.6 CF ST RAGE LUME 8.25 CF ID INTERNAL LUME 5 ID SURFACE AREA 0	**LOAD RATING:** 33.4 PSI, M DULE NL S20, WIT ACF C ER S STEM **MATERIAL:** 100 REC CLED P L PR P LENE **SMALL PLATES PER SEGMENT/TOTAL:** 5 10

COMPOSITE DETAILS



MAINTENANCE PORT



SELECTING THE RIGHT R-TANK MODULE

Cover Depth (inches)*	LD	HD	SD	UD	XD
Min. 6”	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20
12”	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20**	HS-20
14”	Green Space - No Traffic	Green Space - No Traffic	Green Space - No Traffic	HS-20	HS-20
18”	Green Space - No Traffic	Green Space - No Traffic	HS-20	HS-20	HS-20
20”	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
24”	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
36”	Green Space - No Traffic	HS-20	HS-20	HS-20	HS-20
48”		HS-20	HS-20	HS-20	HS-20
60”		HS-20	HS-20	HS-20	HS-20
72”		HS-20	HS-20		HS-20
84”			HS-20		HS-20
120”			HS-20		HS-20
160”					HS-20
Max. 200”					HS-20

HS-20 designation based on AASHTO LRFD Bridge Design Spec for single lane traffic. HS-25 loading is available. Call ACF for details.
*Cover depth is measured from top of module to finished grade or top of pavement
**The UD module requires STONE backfill (not soil) on sides at this depth

R-TANK SPECIFICATIONS

LD HD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight* (lbs)
Mini	15.75	28.15	9.45″/0.79′	2.42	2.30	10.1/10.9
Single(1)	15.75	28.15	17.32″/1.44′	4.44	4.22	15.7/17.3
Single + Mini(1.5)	15.75	28.15	25.98″/2.17′	6.67	6.33	23.6/25.9
Double (2)	15.75	28.15	33.86″/2.82′	8.69	8.25	29.1/32.3
Double + Mini(2.5)	15.75	28.15	42.52″/3.54′	10.91	10.36	37.0/41.0
Triple (3)	15.75	28.15	50.39″/4.20′	12.93	12.28	42.5/47.4
Triple + Mini(3.5)	15.75	28.15	59.06″/4.92′	15.15	14.39	50.4/56.0
Quad(4)	15.75	28.15	66.93″/5.58′	17.17	16.31	55.9/62.4
Quad + Mini(4.5)	15.75	28.15	75.59″/6.30′	19.39	18.42	63.8/71.0
Pent 5	15.75	28.15	83.46 6. 6	21.41	20.34	6 .3 77.4

Weights shown are for LD D odules.

SD

DIMENSIONS & CAPACITY

Module Seg ents	Width inch	Length inch	eight in ft	olu e cf	Capacity cf	Weight l s
Single 1	15.75	28.15	.45 0.7	2.42	2.30	10. 5
Dou le 2	15.75	28.15	18.12 1.51	4.64	4.41	1 .58
Triple 3	15.75	28.15	26.7 2.23	6.86	6.52	28.21
uad 4	15.75	28.15	35.46 2. 6	.08	8.63	36.84
Pent 5	15.75	28.15	44.13 3.68	11.30	10.74	45.47
e 6	15.75	28.15	52.80 4.40	13.52	12.84	54.10
Septa 7	15.75	28.15	61.47 5.12	15.74	14. 5	62.73
cto 8	15.75	28.15	70.14 5.85	17. 6	17.06	71.36
Nono	15.75	28.15	78.81 6.57	20.18	1 .17	7 .
Decka 10	15.75	28.15	87.48 7.2	22.40	21.28	88.62

UD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (in/ft)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	23.62	23.62	14.17″/1.18′	4.57	4.35	21.2
Double (2)	23.62	23.62	27.17″/2.26′	8.77	8.33	39.0
Triple (3)	23.62	23.62	40.16″/3.35′	12.97	12.32	56.8
Quad (4)	23.62	23.62	53.15″/4.43′	17.16	16.30	74.6
Pent (5)	23.62	23.62	66.14″/5.5′	21.35	20.29	92.4

XD

DIMENSIONS & CAPACITY

Module (Segments)	Width (inch)	Length (inch)	Height (inch)	Volume (cf)	Capacity (cf)	Weight (lbs)
Single (1)	19.68	23.62	1.97	0.53	0.48	4
Double (2)	19.68	23.62	3.94	1.06	0.95	8
Triple (3)	19.68	23.62	5.91	1.59	1.43	12
Quad (4)	19.68	23.62	7.87	2.12	1.91	16
Pent (5)	19.68	23.62	9.84	2.65	2.38	20

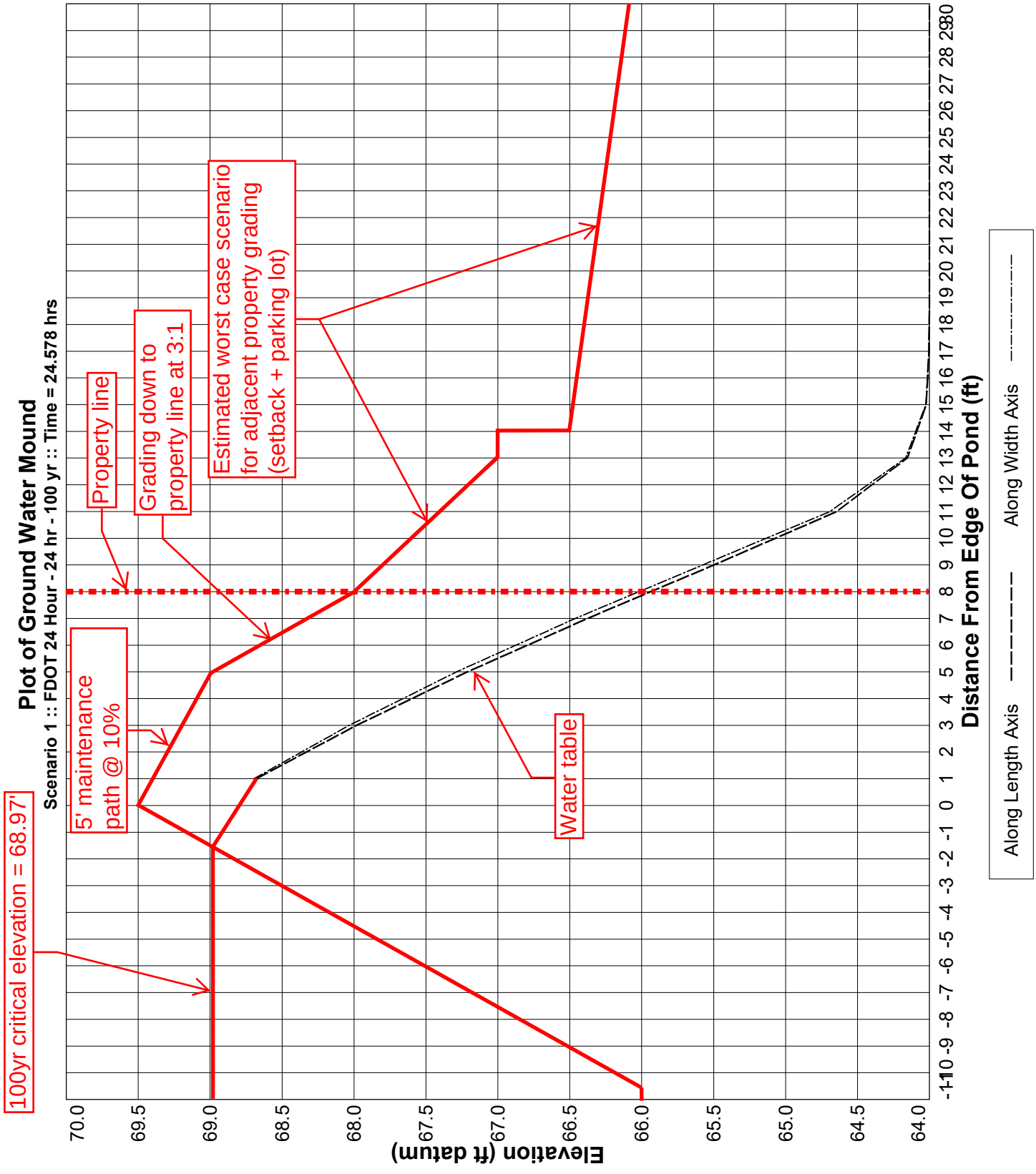
Note XD odules ay e stacked up to 10 tall 60 layers .

SPECIFICATIONS

Item	Description	LD	HD	SD	UD	XD
		Value	**Value**	**Value**	**Value**	**Value**
Void Area	Volume available for water storage	95%	95%	95%	95%	90%
Surface Area Void	% of exterior available for infiltration	90%	90%	90%	90%	90%
Compressive Strength	ASTM D 2412/ ASTM F 2318	30.0 psi	33.4 psi	42.9 psi	134.2 psi	240.2 psi
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs/cf	3.62 lbs/cf	3.96 lbs/cf	4.33 lbs/cf	7.55 lbs/cf
Rib Thickness	Thickness of load-bearing members	0.18″	0.18″	0.18″	-	-
Service Temperature	Safe temperature range for use	-14 - 167º F	-14 - 167º F	-14 - 167º F	-14 - 167º F	-14 - 167º F
Recycled Content	Use of recycled polypropylene	100%	100%	100%	100%	100%
Minimum Cover	Cover required for HS-20 loading	Not traffic rated	20″	18″	12″ - 14″	6″
	Cover required for HS-25 loading	Not traffic rated	24″	18″	15″ - 17″	6″
Maximum Cover	Maximum allowable cover depth	36″	6.99′	9.99′	5.0′	16.7′

Attachment I

Seepage Analysis


Plot of Ground Water Mound
Scenario 1 :: FDOT 24 Hour - 24 hr - 100 yr :: Time = 24.578 hrs
Elevation (ft datum)
Distance From Edge Of Pond (ft)
Along Length Axis
Along Width Axis
100yr critical elevation = 68.97'
Property line
Grading down to property line at 3:1
Estimated worst case scenario for adjacent property grading (setback + parking lot)
5' maintenance path @ 10%
Water table

PONDS Version 3.3.0278
Retention Pond Recovery - Refined Method
Copyright 2012
Devo Seereeram, Ph.D., P.E.

Project Data

Project Name: Premier Preschool

Simulation Description:
Project Number:

Engineer :

Supervising Engineer:

Date: 10-26-2023

Aquifer Data

Base Of Aquifer Elevation, [B] (ft datum):	63.50
Water Table Elevation, [WT] (ft datum):	64.00
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day):	6.50
Fillable Porosity, [n] (%):	25.00
Unsaturated Vertical Infiltration Rate, [Iv] (ft/day):	3.5
Maximum Area For Unsaturated Infiltration, [Av] (ft²):	2839.0

Geometry Data

Equivalent Pond Length, [L] (ft): 84.0

Equivalent Pond Width, [W] (ft): 20.0

Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft²)
66.00	1011.0
67.00	1462.0
68.00	1971.0
69.00	2535.0
69.50	2839.0

Discharge Structures

Discharge Structure #1 is active as weir

Structure Parameters

Description: Weir Flat

Weir elevation, (ft datum):	68.75
Weir coefficient:	5.361
Weir length, (ft):	1
Weir exponent:	4

Tailwater - disabled, free discharge

Discharge Structure #2 is inactive

Discharge Structure #3 is inactive

Scenario Input Data

Scenario 1 :: FDOT 24 Hour - 24 hr - 100 yr

Hydrograph Type:	Inline SCS
Modflow Routing:	Routed with infiltration
Repetitions:	1

Basin Area (acres)	0.510
Time Of Concentration (minutes)	10.0
DCIA (%)	0.0
Curve Number	68.14
Design Rainfall Depth (inches)	11.0
Design Rainfall Duration (hours)	24.0
Shape Factor	UHG 484
Rainfall Distribution	FDOT 24 Hour

Initial ground water level (ft datum) 64.00 (default)

No times after storm specified.