AGENDA

CITY OF ARCHER
16870 SW 134TH AVENUE
P.O. BOX 39
ARCHER, FL 32618-0039

March 7th, 2024

6:00 p.m. **PLANNING AND ZONING BOARD MEETING** **ARCHER CITY HALL**

All persons wishing to participate and speak on an issue at the public meeting have the right, through the Chair, to ask questions of staff or other speakers, to seek clarification of comments made by staff or other speakers, and to respond to the comments or presentations of staff or other speakers. All persons who present written materials for consideration must ensure that a copy of those materials is provided to the Deputy City Clerk for inclusion in the record of proceedings and official minutes.
All persons are advised that, if they decide to appeal any decision made at this public hearing or meeting, they will need a record of the proceedings and, for such purpose, they may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.
All interested people are invited to attend and be heard.
If any accommodation is needed for persons with disabilities, please contact Archer City Hall (352) 495-2880 (voice) or (352) 495-9337 (TDD).

CALL TO ORDER
PLEDGE OF ALLEGIANCE
QUORUM CHECK

I. Consent Agenda
- **A.** Approve minutes from the meeting on August 7, 2023

II. New Business
- **A.** Elect New Chair and Vice Chair
- **B.** Resolution No. 2024-03, Conditional Use Permit- CUP 23-01, by Ronnie LLC for a Concrete Batch Plant within an Industrial (I) Zoning District

III. Public Comment

IV. Motion to Adjourn

CITY OF ARCHER
16870 SW 134th Ave, Archer, Florida 32618-0039
Phone: 352-495-2880 Fax: 352-495-2445

PLANNING & ZONING BOARD MEETING MINUTES

Monday, August 7, 2023, at 6:00 PM
Meeting was held In Person and via Zoom

MINUTES, WHICH ARE PUBLIC RECORD, ARE NOTES TAKEN TO PROVIDE A SUMMARY MEMORANDUM OF MEETINGS OR HEARINGS AND CONTAIN ALL OFFICIAL ACTIONS TAKEN. MINUTES ARE NOT INTENDED TO BE A WORD-FOR-WORD OR VERBATIM TRANSCRIPTION OF THE MEETING.

Quorum Present:
Chair, Scott Dreyfuss
Vice Chair, Shaun Willis
Linda Kasicki
Ryan Wilhour
Ann Green

Staff Present:
City Manager, Charles Hammond
City Attorney, Kiersten Ballou
Deputy City Clerk, Deanna Alltop

CALL TO ORDER
Chair Dreyfuss called the meeting to order at 6:00pm.

PLEDGE OF ALLEGIANCE
Chair Dreyfuss led the Pledge of Allegiance.

QUORUM CHECK
All board members are present.

I. Consent Agenda

A. Approve minutes from the meeting on July 6, 2022
Board member Ann Green motioned to approve the consent agenda, seconded by board member Shaun Willis.
No public comment
Motion Carried: 5-0

II. New Business

A. Elect New Chair and Vice Chair
Board member Ann Green motioned for Scott Dreyfuss to continue as Chair, seconded by board member Shaun Willis.
No public comment
Motion Carried: 5-0

Board member Linda Kasicki motioned for Shaun Willis to serve as Vice Chair, seconded by board member Ann Green.
No public comment
Motion Caried: 5-0

B. Resolution No. 2023-22, LDC 23-01, Amendment to the Text of the City of Archer Land Development Code, Amending Section 15.02 Entitled Zoning Districts, Agricultural District by Adding Recreational Vehicle Parks as a Permitted Use
City Attorney Ballou read Resolution No. 2023-22 by title only.
Board member Linda Kasicki motioned to approve Resolution No. 2023-22, seconded by board member Ann Green.
Heather from Kimley-Horn reviewed the amendment to the land development code.
Public comment: Laurie Costello
Motion Carried: 5-0

Vice Chair Shaun Willis motioned to amend the previous motion to include language to outline the quantity of RV's, to tents to cabins based on acreage. Add arterial setbacks, noise, and safety buffer, seconded by board member Linda Kasicki.
No public comment
Motion Carried: 5-0

Vice Chair Shaun Willis motioned to amend the previous motions to add the City of Archer staff to inspect the site every year and submit a report, seconded by board member.
Linda Kasicki.
No public comment
Motion Carried: 5-0

III. Public Comment

Vice Mayor Kathy Penny visited the RV park in Williston, they do have guests that live there full time, and temporary.

IV. Motion to Adjourn

Board member Linda Kasicki motioned to adjourn the meeting at 6:23pm, seconded by Vice Chair Shaun Willis.

Scott Dreyfuss, Chair

Charles Hammond, City Manager

RESOLUTION NO. 2024-03

A RESOLUTION OF THE PLANNING AND ZONING BOARD OF THE CITY OF ARCHER, FLORIDA, RECOMMENDING TO THE CITY COMMISSION OF THE CITY OF ARCHER, FLORIDA, APPROVAL OF A CONDITIONAL USE PERMIT FOR A CONCRETE BATCH PLANT WITHIN AN INDUSTRIAL (I) ZONING DISTRICT, AS PROVIDED WITHIN TABLE 16.06, ITEM 4.2 OF THE LAND DEVELOPMENT CODE ON CERTAIN LANDS WITHIN THE CORPORATE LIMITS OF THE CITY OF ARCHER, FLORIDA; REPEALING RESOLUTIONS IN CONFLICT; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Archer Land Development Code, hereinafter referred to as the Land Development Code, empowers the Planning and Zoning Board of the City of Archer, Florida, hereinafter referred to as the Planning and Zoning Board, to recommend to the City Commission of the City of Archer, Florida, hereinafter referred to as the City Commission, approval or denial of conditional use permits, in accordance with said Code;

WHEREAS, an application for a conditional use permit, as described below, has been filed with the City;

WHEREAS, pursuant to the Land Development Code, the Planning and Zoning Board held the required public hearing, with public notice on said conditional use permit, as described below, and considered all comments received during said public hearing and the Concurrency Management Assessment concerning said application for a conditional use permit, as described below;

WHEREAS, the Planning and Zoning Board has determined and found that approval of said conditional use permit, as described below, would promote the public health, safety, morals, order, comfort, convenience, appearance, prosperity or general welfare;

WHEREAS, the Planning and Zoning Board has determined and found that the conditional use permit is generally compatible with adjacent properties, other property in the district and natural resources; and

WHEREAS, the Planning and Zoning Board has determined and found that:

a. The proposed conditional use complies with the Land Development Code of the City;
b. The proposed conditional use will not interfere with or adversely affect the health, safety, or welfare of the surrounding community area;
c. The proposed conditional use will not adversely affect or contribute to the deterioration of quality of life, or property values in the immediate neighborhood;
d. The proposed conditional use is consistent with the character of and existing land use patterns in the surrounding area; and
e. The proposed conditional use complies with the Comprehensive Plan of the City.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING AND ZONING BOARD OF THE CITY OF ARCHER, FLORIDA, THAT:

Section 1. Pursuant to an application, CUP 23-01, by Ronnie LLC, to approve a conditional use permit for a concrete batch plant within an INDUSTRIAL (I) zoning district, as provided for in Table 16.06, Item 4.2 of the Land Development Code, in accordance with a site plan dated October 16, 2023, revised on January 25, 2024, and submitted as part of an application dated November 8, 2023, the Planning and Zoning Board hereby recommends to the City Commission, approval of a conditional use permit, as described above, subject to the conditions and safeguards hereinafter specified, to be located on property described, as follows:

A parcel of land lying within Section 17, Township 11 South, Range 18 East, Alachua County, Florida. Being more particularly described, as follows: The East 1/2 of the East 1/2 of the Northeast 1/4 of said Section 17, South of State Road 24 and North of the abandoned railroad right-of-way,

Containing 18.92 acres, more or less.

AND

A parcel of land lying within Section 17, Township 11 South, Range 18 East, Alachua County, Florida. Being more particularly described, as follows: The East 1/2 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of said Section 17.

Containing 5.00 acres, more or less.

AND

A parcel of land lying within Section 17, Township 11 South, Range 18 East, Alachua County, Florida. Being more particularly described, as follows: Lots 7 and 8 of Block 1, and Block 12 of the City of Archer, as recorded in the Public Records of Alachua County, Florida.

Containing 0.25 acre, more or less.

All said lands containing 24.17 acres, more or less.

Section 2. The Planning and Zoning Board hereby recommends that the site plan, as described above and herewith made a part of this resolution by reference, shall govern the development and use of the above described property. The Planning and Zoning Board hereby recommends that any deviation from the site plan shall be deemed a violation of the Land Development Code.

Section 3. The Planning and Zoning Board hereby recommends that:

a. The use of land approved by the conditional use permit be in place or a valid permit be in force for the location of such land use within twelve (12) months of the effective date of the resolution granting the conditional use permit;

b. If such land use is not in place within twelve (12) months of the effective date of the resolution granting the conditional use permit, the conditional use permit be revoked and of no force and effect; and

c. If such land use approved by a conditional use permit is discontinued for six (6) months or longer such use be deemed abandoned.

Section 4. All resolutions in conflict with this resolution are hereby repealed to the extent of such conflict.

Section 5. This resolution shall become effective upon adoption.

PASSED AND DULY ADOPTED in special session with a quorum present and voting, by the Planning and Zoning Board, this 7th day of March 2024.

Attest:

PLANNING AND ZONING BOARD
OF THE CITY OF ARCHER, FLORIDA

Charles A. Hammond, City Manager

Scott Dreyfuss, Chair

APPROVED AS TO FORM AND LEGALITY:

_____

Danielle C. Adams, City Attorney or
Kiersten N. Ballou, City Attorney or

CITY OF ARCHER
CONDITIONAL USE PERMIT PLAN CHECKLIST

APPLICATION NO. CUP 23-01 (Arnold)

DATE February 16, 2024

The conditional use permit required to be submitted by the requirements of the Land Development Code shall include the following elements from Section 26.04 of the Land Development Code:

1. Generally:

✓ a. A recent aerial photograph encompassing the project area and identifying the project area and total land areas. The scale shall be no smaller than one (1) inch equals one hundred (100) feet;

✓ b. A soil map of the site (existing U.S. Soil Conservation Service Maps [U.S. Natural Resources Conservation Service] are acceptable);

✓ c. A map of vegetative covering including adjacent wetlands;

✓ d. A legal description of the property to be developed;

✓ e. Grading plans that specifically include perimeter grading;

✓ f. Paving, road, and building plans showing the location, dimensions, and specifications of roads and buildings, including elevations;

✓ g. Floor area, height and types of buildings;

✓ h. Identification of zoning designation of property and all adjoining property including property across any street;

✓ i. Certification that the subject property is, or is not, within a historic district; and

✓ j. Certification that complies with all dimensional requirements of **Section 19**.

✓ 2. Certification that the property does or does not lie within an area of special flood hazard, and if the property is within a special flood hazard area, certification of compliance with **Section 20**.

✓ 3. A certification that handicapped accessibility requirements have been met **(Section 21.02 and Section 21.06(5)**.

✓ 4. Driveway access to public streets **(Section 21.03)**.

✓ 5. An off-street parking and loading plan **(Section 21.06 and Section 21.07)**.

N/A 6. Plans for drive-up windows **(Section 21.10)**.

N/A 7. Classification of any streets to be constructed **(Section 21.16)** with detailed plans showing streets and drainage facilities **(Section 21.17)**.

N/A 8. Plans for any sidewalks to be constructed **(Section 21.18)**.

✓ 9. Fire hydrants and proposed locations thereof **(Section 21.19)** and fire safety lanes and access **(Section 21.20)**.

✓ 10. Solid waste storage facilities **(Section 21.21-23)**.

✓ 11. A stormwater management plan **(Section 21.30)** meeting the stormwater design criteria of **Section 21.29**.

✓ 12. With regard to tree protection:

✓ a. The location and identity by common name of all protected trees to be retained and those to be removed. Groups of trees in close proximity (five feet spacing or closer) may be designated as "clusters" with the estimated total number noted. This information shall be summarized in tabular form on the plan;

✓ b. Any proposed changes in the natural grade affecting trees to be retained;

✓ c. A statement of why any protected trees are to be removed;

✓ d. A statement of the measures to be taken to comply with the tree protection requirements during development **(Section 21.42)**; and

✓ e. Identification of any required landscape buffer areas **(Section 21.47)** together with a detail of the actual proposed buffer in compliance with **Section 21.45**.

✓ 13. Industrial activities shall include a fire suppression plan, hazardous materials plan, emission discharge plan, and noise plan **(Section 21.64)**.

N/A 14. Subdivisions of land shall meet the requirements of **Section 22, Part 1**.

N/A 15. Mobile home parks shall meet the requirements of **Section 22, Part 2**.

N/A 16. Recreational vehicle park shall meet the requirements of **Section 22, Part 3**.

17. With regard to signs:

N/A a. A blueprint or ink drawing of the plans and specifications of the sign, and the method of its construction and attachment to the building or ground. The plans shall show all pertinent structural details, wind pressure requirements, display materials in accordance with the requirements of this Land Development Code and the building and electrical codes adopted by the City. The plan shall clearly illustrate the type of sign or sign structure as defined in this Land Development Code; the design of the sign, including dimensions, colors and material; the aggregate sign area; the dollar value of the sign; maximum and minimum heights of the sign; and sources of illumination;

N/A b. For ground signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas and other existing ground signs on the parcel;

(2) All protected trees that will be damaged or removed for the construction and display of the signs; and

(3) The speed limit on adjacent streets.

N/A c. For building signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas, buildings and structures on the parcel;

(2) The number, size, type and location of all existing signs on the same parcel, except a single business unit and a multiple occupancy complex shall not be required to delineate the signs of other business units; and

(3) A building elevation or other documentation indicating the building dimensions.

T 18. Certification that the property is or is not in an environmental constraint area as defined in **Section 24.01**; if the property is in an environmental constraint area, identify that the area complies with required setbacks **(Section 24.03 and 24.04)**, and complies with **Section 24.02**.

T 19. If the project is one half (1/2) acre or larger in size, or five (5) or more dwelling units or single family lots, an endangered species habitat study.

T 20. Certification that the proposed development is consistent with the Comprehensive Plan and the consistency and concurrency requirements of **Section 25**.

CITY OF ARCHER
CONDITIONAL USE PERMIT PLAN CHECKLIST

APPLICATION NO. CUP 23-01 (Arnold)

DATE February 13, 2024

The conditional use permit required to be submitted by the requirements of the Land Development Code shall include the following elements from Section 26.04 of the Land Development Code:

1. Generally:

✓ a. A recent aerial photograph encompassing the project area and identifying the project area and total land areas. The scale shall be no smaller than one (1) inch equals one hundred (100) feet;

✓ b. A soil map of the site (existing U.S. Soil Conservation Service Maps [U.S. Natural Resources Conservation Service] are acceptable);

✓ c. A map of vegetative covering including adjacent wetlands;

✓ d. A legal description of the property to be developed;

✓ e. Grading plans that specifically include perimeter grading;

✓ f. Paving, road, and building plans showing the location, dimensions, and specifications of roads and buildings, including elevations;

✓ g. Floor area, height and types of buildings;

✓ h. Identification of zoning designation of property and all adjoining property including property across any street;

✓ i. Certification that the subject property is, or is not, within a historic district; and

✓ j. Certification that complies with all dimensional requirements of **Section 19**.

✓ 2. Certification that the property does or does not lie within an area of special flood hazard, and if the property is within a special flood hazard area, certification of compliance with **Section 20**.

✓ 3. A certification that handicapped accessibility requirements have been met **(Section 21.02 and Section 21.06(5)**.

✓ 4. Driveway access to public streets **(Section 21.03)**.

✓ 5. An off-street parking and loading plan **(Section 21.06 and Section 21.07)**.

N/A 6. Plans for drive-up windows **(Section 21.10)**.

N/A 7. Classification of any streets to be constructed **(Section 21.16)** with detailed plans showing streets and drainage facilities **(Section 21.17)**.

N/A 8. Plans for any sidewalks to be constructed **(Section 21.18)**.

✓ 9. Fire hydrants and proposed locations thereof **(Section 21.19)** and fire safety lanes and access **(Section 21.20)**.

✓ 10. Solid waste storage facilities **(Section 21.21-23)**.

TBD 11. A stormwater management plan **(Section 21.30)** meeting the stormwater design criteria of **Section 21.29**.

The site plan submitted shows the location of proposed ponds. However, the City Engineer needs to determine if the stormwater management plan meets the stormwater design criteria of Section 21.29 of the Land Development Code.

✓ 12. With regard to tree protection:

✓ a. The location and identity by common name of all protected trees to be retained and those to be removed. Groups of trees in close proximity (five feet spacing or closer) may be designated as "clusters" with the estimated total number noted. This information shall be summarized in tabular form on the plan;

✓ b. Any proposed changes in the natural grade affecting trees to be retained;

✓ c. A statement of why any protected trees are to be removed;

✓ d. A statement of the measures to be taken to comply with the tree protection requirements during development **(Section 21.42)**; and

✓ e. Identification of any required landscape buffer areas **(Section 21.47)** together with a detail of the actual proposed buffer in compliance with **Section 21.45**.

✓ 13. Industrial activities shall include a fire suppression plan, hazardous materials plan, emission discharge plan, and noise plan **(Section 21.64)**.

N/A 14. Subdivisions of land shall meet the requirements of **Section 22, Part 1**.

N/A 15. Mobile home parks shall meet the requirements of **Section 22, Part 2**.

N/A 16. Recreational vehicle park shall meet the requirements of **Section 22, Part 3**.

17. With regard to signs:

N/A a. A blueprint or ink drawing of the plans and specifications of the sign, and the method of its construction and attachment to the building or ground. The plans shall show all pertinent structural details, wind pressure requirements, display materials in accordance with the requirements of this Land Development Code and the building and electrical codes adopted by the City. The plan shall clearly illustrate the type of sign or sign structure as defined in this Land Development Code; the design of the sign, including dimensions, colors and material; the aggregate sign area; the dollar value of the sign; maximum and minimum heights of the sign; and sources of illumination;

N/A b. For ground signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas and other existing ground signs on the parcel;

(2) All protected trees that will be damaged or removed for the construction and display of the signs; and

(3) The speed limit on adjacent streets.

N/A c. For building signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas, buildings and structures on the parcel;

(2) The number, size, type and location of all existing signs on the same parcel, except a single business unit and a multiple occupancy complex shall not be required to delineate the signs of other business units; and

(3) A building elevation or other documentation indicating the building dimensions.

T 18. Certification that the property is or is not in an environmental constraint area as defined in **Section 24.01**; if the property is in an environmental constraint area, identify that the area complies with required setbacks **(Section 24.03 and 24.04)**, and complies with **Section 24.02**.

T 19. If the project is one half (1/2) acre or larger in size, or five (5) or more dwelling units or single family lots, an endangered species habitat study.

T 20. Certification that the proposed development is consistent with the Comprehensive Plan and the consistency and concurrency requirements of **Section 25**.

CITY OF ARCHER
CONDITIONAL USE PERMIT PLAN CHECKLIST

APPLICATION NO. CUP 23-00 (Arnold)

DATE January 23, 2024

The conditional use permit required to be submitted by the requirements of the Land Development Code shall include the following elements from Section 26.04 of the Land Development Code:

1. Generally:

✓ a. A recent aerial photograph encompassing the project area and identifying the project area and total land areas. The scale shall be no smaller than one (1) inch equals one hundred (100) feet;

✓ b. A soil map of the site (existing U.S. Soil Conservation Service Maps [U.S. Natural Resources Conservation Service] are acceptable);

✓ c. A map of vegetative covering including adjacent wetlands;

NO d. A legal description of the property to be developed;

The Conditional Use Permit application submitted for a proposed concrete batch plant is to be located on the western vacant portion of the site of the former Maddox Foundry. The Conditional Use Permit application submitted lists four parcel identification numbers. Of the four parcel identification numbers only two are classified and zoned industrial, 05046-000-000 and 05047-000-000. The others two parcel identification numbers, 05050-000-000 and 05049-000-000, are classified and zoned residential. The applicant needs to remove from the Conditional Use Permit application parcel identification numbers 05050-000-000 and 05049-000-000.

The Project Information section on Sheet No. C-000 lists five parcel identification numbers. Of the five parcel identification numbers only two are classified and zoned industrial, 05046-000-000 and 05047-000-000. The others three parcel identification numbers, 05050-000-000, 04993-000-000, and 04992-000-000 are classified and zoned residential. The applicant needs to remove from Sheet C-000 parcel identification numbers 05050-000-000, 04993-000-000, and 04992-000-000.

The legal description submitted includes all of the above listed parcels, however, it should only describe the western vacant portion of the site upon which the proposed concrete batch plant will be located. Therefore, the applicant needs to revise the legal description accordingly.

✓ e. Grading plans that specifically include perimeter grading;

NO f. Paving, road, and building plans showing the location, dimensions, and specifications of roads and buildings, including elevations;

The site plan shows the location of a proposed 12 foot x 40 foot office building. However, the elevations of the proposed structure were not submitted. The applicant needs to update the site plan to include the elevation dimensions of the proposed structure

NO g. Floor area, height and types of buildings;

The site plan shows a proposed 12 foot x 40 foot office building. However, the height and type of the proposed building is not stated. The applicant needs to update the site plan to show the area, height and type of the proposed building.

✓ h. Identification of zoning designation of property and all adjoining property including property across any street;

✓ i. Certification that the subject property is, or is not, within a historic district; and

✓ j. Certification that complies with all dimensional requirements of **Section 19**.

✓ 2. Certification that the property does or does not lie within an area of special flood hazard, and if the property is within a special flood hazard area, certification of compliance with **Section 20**.

✓ 3. A certification that handicapped accessibility requirements have been met **(Section 21.02 and Section 21.06(5)**.

✓ 4. Driveway access to public streets **(Section 21.03)**

NO 5. An off-street parking and loading plan **(Section 21.06 and Section 21.07)**.

The accessible parking detail shown on Sheet No. C-102 shows the proposed handicapped parking space is 12 feet by 18 feet. However, according to Section 21.06.5 of the Land Development Code the minimum off-street handicapped parking space is to be a minimum of 12 feet in width by 20 feet in length. Therefore, the site plan needs to be updated to show the handicapped parking space as 12 feet in width by 20 feet in length on both Sheet C-101 and Sheet C-102.

N/A 6. Plans for drive-up windows **(Section 21.10)**.

N/A 7. Classification of any streets to be constructed **(Section 21.16)** with detailed plans showing streets and drainage facilities **(Section 21.17)**.

N/A 8. Plans for any sidewalks to be constructed **(Section 21.18)**.

NO 9. Fire hydrants and proposed locations thereof **(Section 21.19)** and fire safety lanes and access **(Section 21.20)**.

The applicant's cover letter states that an existing fire hydrant is located in the center of the site. However, the location of said existing fire hydrant is not clearly labeled on the site plan. The applicant needs to update the site plan to clearly show and label the existing fire hydrant.

✓ 10. Solid waste storage facilities **(Section 21.21-23)**.

TBD 11. A stormwater management plan **(Section 21.30)** meeting the stormwater design criteria of **Section 21.29**.

The site plan submitted shows the location of proposed ponds. However, the City Engineer will need to determine if the stormwater management plan meets the stormwater design criteria of Section 21.29 of the Land Development Code.

✓ 12. With regard to tree protection:

✓ a. The location and identity by common name of all protected trees to be retained and those to be removed. Groups of trees in close proximity (five feet spacing or closer) may be designated as "clusters" with the estimated total number noted. This information shall be summarized in tabular form on the plan;

✓ b. Any proposed changes in the natural grade affecting trees to be retained;

✓ c. A statement of why any protected trees are to be removed;

✓ d. A statement of the measures to be taken to comply with the tree protection requirements during development **(Section 21.42)**; and

✓ e. Identification of any required landscape buffer areas **(Section 21.47)** together with a detail of the actual proposed buffer in compliance with **Section 21.45**.

✓ 13. Industrial activities shall include a fire suppression plan, hazardous materials plan, emission discharge plan, and noise plan **(Section 21.64)**.

N/A 14. Subdivisions of land shall meet the requirements of **Section 22, Part 1**.

N/A 15. Mobile home parks shall meet the requirements of **Section 22, Part 2**.

N/A 16. Recreational vehicle park shall meet the requirements of **Section 22, Part 3**.

17. With regard to signs:

N/A a. A blueprint or ink drawing of the plans and specifications of the sign, and the method of its construction and attachment to the building or ground. The plans shall show all pertinent structural details, wind pressure requirements, display materials in accordance with the requirements of this Land Development Code and the building and electrical codes adopted by the City. The plan shall clearly illustrate the type of sign or sign structure as defined in this Land Development Code; the design of the sign, including dimensions, colors and material; the aggregate sign area; the dollar value of the sign; maximum and minimum heights of the sign; and sources of illumination;

N/A b. For ground signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas and other existing ground signs on the parcel;

(2) All protected trees that will be damaged or removed for the construction and display of the signs; and

(3) The speed limit on adjacent streets.

N/A c. For building signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas, buildings and structures on the parcel;

(2) The number, size, type and location of all existing signs on the same parcel, except a single business unit and a multiple occupancy complex shall not be required to delineate the signs of other business units; and

(3) A building elevation or other documentation indicating the building dimensions.

✓ 18. Certification that the property is or is not in an environmental constraint area as defined in **Section 24.01**; if the property is in an environmental constraint area, identify that the area complies with required setbacks **(Section 24.03 and 24.04)**, and complies with **Section 24.02**.

✓ 19. If the project is one half (1/2) acre or larger in size, or five (5) or more dwelling units or single family lots, an endangered species habitat study.

✓ 20. Certification that the proposed development is consistent with the Comprehensive Plan and the consistency and concurrency requirements of **Section 25**.

October 16, 2023, Submitted Documents

2603 NW 13th St, Box 314
Gainesville, FL 32609
Ph. (352) 281-4928
gmuereng.com

October 16, 2023

City of Archer

Re: CUP 22-00 (Arnold)
Concrete Plant CUP

This package is submitted in response to comments dated September 23, 2022 for the Conditional Use and Site Plan Application for the above referenced project. Please see attached the following list of items and the responses to the comments received. Please contact us if you should have any questions.

Attachments (1 copies and emailed electronic copies):

- Aerial Map
- Soil Map
- Vegetative Cover Map
- Endangered Species Habitat Study
- Legal Description
- Deed
- CUP Justification Report with Hazardous Mat., Emission, Noise, and Fire Analysis.
- Soil Boring and Testing Report for Stormwater Design
- Stormwater Management Report
- Site Construction Plans with Buffers, Setbacks, Stormwater, Equipment Elevations

Response to Comments dated Sept 23, 2022

The conditional use permit required to be submitted by the requirements of the Land Development Code shall include the following elements from Section 26.04 of the Land Development Code:

1. Generally:
~~a. A recent aerial photograph encompassing the project area and identifying the project area and total land areas. The scale shall be no smaller than one (1) inch equals one hundred (100) feet;~~ Aerial is attached.

b. A soil map of the site (existing U.S. Soil Conservation Service Maps [U.S. Natural Resources Conservation Service] are acceptable); *A soil map of the site was not submitted with the application. The applicant needs to submit a soil map*

of the site. Please note that existing U.S. Soil Conservation Service Maps [U.S. Natural Resources Conservation Service] are acceptable. Soil map is attached.

c. A map of vegetative covering including adjacent wetlands; Vegetative cover map attached.

d. A legal description of the property to be developed; *The application and drawing submitted identifies the subject property as Parcel "F." However, the boundary survey submitted with the application labeled the subject property as parcel "E." The applicant needs to update the application and the drawing to state Parcel "E" and not Parcel "F."*
The legal description on the copy of the boundary survey submitted electronically is blurry and difficult to read. A clearer copy of the legal description needs to be submitted by the applicant.
See the attached legal description.

e. Grading plans that specifically include perimeter grading; *Grading plans were not submitted with the application. The applicant needs to submit grading plans.*
See the attached site plans.

f. Paving, road, and building plans showing the location, dimensions, and specifications of roads and buildings, including elevations; *The site plan shows the location of a proposed 12 foot x 40 foot office building. However, the elevations of the proposed structure were not submitted. The applicant needs to update the site plan to include the dimensions of all proposed structures (batch plant, add mix tank, water tank, fuel tank, etc.).*
These plans have been added to the site plans.

g. Floor area, height and types of buildings; *The site plan shows a proposed 12 foot x 40 foot office building. However, the height and type of the building is not stated. The applicant needs to update the site plan to show the area, height and type of all proposed structures on the site.*
These plans have been added to the site plans.

h. Identification of zoning designation of property and all adjoining property including property across any street; *The zoning designation of the subject property and all adjoining properties including property across a street was not shown on the site plan. The applicant needs to update the site plan to show the zoning designation of the subject property and all adjoining properties including property across any street.*
The adjacent zonings have been added to the plans on sheets C-000 and C-101 & C-102.

i. Certification that the subject property is, or is not, within a historic district; and *The applicant needs to certify on the site plan that the subject property is or is not within a historic district.*
The City has historic district requirements, however, no historic districts have been designated to date.

j. Certification that complies with all dimensional requirements of Section 19. *The applicant needs to certify on the site plan that the proposed use complies with all dimensional requirements of Section 19 of the Land Development Code.*
See the certification on the cover sheet of the site plans.

2. Certification that the property does or does not lie within an area of special flood hazard, and if the property is within a special flood hazard area, certification of compliance with Section 20. *The applicant needs to certify on the site plan that the property does or does not lie within an area of special flood hazard, and if the property lies within a special flood hazard area certification of compliance with Section 20 of the Land Development Code.*

See the certification on the cover sheet of the site plans.

3. A certification that handicapped accessibility requirements have been met (Section 21.02 and Section 21.06(5). *The applicant needs to certify on the site plan that the handicapped accessibility requirements have been met in accordance with Section 21.02 and Section 21.06(5) of the Land Development Code.*

See the certification on the cover sheet of the site plans. Please note that the accessible pathway from the east side of the site along SW 170th ST where a sidewalk was recently constructed.

4. Driveway access to public streets (Section 21.03) *The site plan shows two driveway access points onto SW 170th Street. However, the driveways are not dimensioned to ensure that they comply with the minimum curb break of 24 feet as required by Section 21.03 of the Land Development Code. The applicant needs to update the site plan to show the driveway dimensions.*

See the site plans.

5. An off-street parking and loading plan (Section 21.06 and Section 21.07). *The proposed use of the subject property is a concrete batch plant. The site plan submitted shows a total of 12 proposed off-street parking spaces and no handicapped parking space. One of the 12 proposed parking spaces needs to be a handicapped parking space.*

See the site plans.

The site plan submitted does not show the full dimensions the proposed parking spaces. According to Section 21.06.4 of the Land Development Code, the minimum off-street parking spaces are to be a minimum of nine feet in width by 18 feet in length. According to Section 21.06.5 of the Land Development Code the minimum off-street handicapped parking space is to be a minimum of 12 feet in width by 20 feet in length and it needs to include a five-foot aisle.

See the site plans.

In accordance with Section 21.06.2.b of the Land Development Code, the required off street parking area shall be surfaced with asphalt, concrete or such material as may be durable, yet, of a porous construction to permit percolation of surface runoff. The surface shall be maintained in a smooth, well graded condition.

See the site plans.

In accordance with Section 21.06.7 of the Land Development Code, the applicant needs to update the site plan to show a minimum of ten percent of any off street parking area landscaped with grass, plants, shrubs and/or trees. Required landscaping may, in part, be located along the periphery of the off street parking area; however, where possible, a portion of the required landscaping shall also be located within the interior of the off street parking area and shall be located in such a manner as to divide and break up the expanse of paving and guide traffic flow and direction.

See the site plans for the landscape plan.

Each separate landscaped area shall contain a minimum of 180 square feet and shall have a minimum dimension of at least nine feet, and shall include at least one canopy tree, with the remaining area adequately landscaped with sit rubs, ground cover or other landscaping material (see Section 21.44).
See the site plans for the landscape plan.

The total number of trees shall not be less titan one for each one hundred 180 square feet or fraction thereof of required landscaping. Trees shall be a minimum of one inch in diameter as measured six incites above the ground, and eight feet in height immediately after planting. Trees shall not be planted closer than two feet to public roads or other public works.
See the site plans for the landscape plan.

Required landscaped areas shall be properly maintained (to include an irrigation system, replanting of dead or damaged vegetation and pruning of healthy vegetation) and continued so long as the main use continues. Failure to maintain the landscaped area as required herein shall be a violation of the Land Development Code.
See the site plans for the landscape plan.

~~6. Plans for drive-up windows (Section 21.10).~~ N/A

~~7. Classification of any streets to be constructed (Section 21.16) with detailed plans showing streets and drainage facilities (Section 21.17).~~ N/A

~~8. Plans for any sidewalks to be constructed (Section 21.18).~~ N/A

9. Fire hydrants and proposed locations thereof (Section 21.19) and fire safety lanes and access (Section 21.20). *The site plan does not show the location of existing or proposed fire hydrants. The applicant needs to update the site plan to show existing and proposed fire hydrants. If there are no existing or proposed fire hydrants, please so state on the site plan.*
See sheet C-202 for the existing fire hydrant location within the center of the site.

10. Solid waste storage facilities (Section 21.21-23). *The site plan does not show the location solid waste storage facilities. The applicant needs to update the site plan to show the location of solid waste storage facilities.*
See sheet C-101 of the plans for the solid waste dumpster locations.

11. A stormwater management plan (Section 21.30) meeting the stormwater design criteria of Section 21.29. *The site plan submitted shows the location of proposed ponds. However, the City Engineer will need to determine if the stormwater management plan meets the stormwater design criteria of Section 21.29 of the Land Development Code.*
See the attached stormwater management report and the plans showing the engineered system. We are also concurrently permitting the stormwater system with the SRWMD and FDOT.

12. With regard to tree protection:

a. The location and identity by common name of all protected trees to be retained and those to be removed. Groups of trees in close proximity (five feet spacing or closer) may be designated as "clusters" with the estimated total number noted. This information shall be summarized in tabular form on the plan; *An aerial map of the subject property was submitted with the application showing trees on the property. However, the site plan does not show the location and identity, by common name, of all protected trees to be retained and those to be removed. If any trees will be removed, the applicant needs to update the site plan to summarize this information in tabular form. If no trees will be removed from the site, then so state on the site plan.*

See sheet C-051 of the site plans and the landscape plan.

b. Any proposed changes in the natural grade affecting trees to be retained; *The site plan does not show proposed changes in the natural grade affecting trees to be retained. The applicant needs to update the site plan to show changes in the natural grade affecting trees to be retained.*

See the updated site plans.

c. A statement of why any protected trees are to be removed; *The site plan does not indicate whether or not any protected trees will be removed. If protected trees will be removed, the applicant needs to update the site plan with a statement of why protected trees are to be removed. If protected trees will not be removed, please so state on the site plan.*

See the site plans for the landscape plan.

d. A statement of the measures to be taken to comply with the tree protection requirements during development (Section 21.42); and *The site plan does not include a statement of the measures to be taken to comply with the tree protection requirements during development. The applicant needs to update the site plan to add a statement of the measures to be taken to comply with the tree protection requirements during development (Section 21.42).*

See the site plans for the landscape plan.

e. Identification of any required landscape buffer areas (Section 21.47) together with a detail of the actual proposed buffer in compliance with Section 21.45. *The subject property abuts a parcel to the west that is currently zoned C-2 and, according to Section 21.47 of the Land Development Code, a partially opaque buffer is required in accordance with Section 21.45.2 of the Land Development Code. Also, on the south, the subject property abuts land that is zoned R-2 and, according to Section 21.47 of the Land Development Code, an opaque buffer is required in accordance with Section 21.45.1 of the Land Development Code. The applicant needs to update the site plan to show the required buffers.*

The buffers along with the setbacks are shown now on Sheet C-101 and the Landscape Plan.

13. Industrial activities shall include a fire suppression plan, hazardous materials plan, emission discharge plan, and noise plan (Section 21.64). *A fire suppression plan, a hazardous material plan, an emission discharge plan, and a noise*

plan were not submitted with the application by the applicant. The applicant needs to submit a fire suppression plan, a hazardous material plan, an emission discharge plan, and a noise plan.

See the attached CUP Justification Report.

~~14. Subdivisions ofland shall meet the requirements of Section 22, Part 1.~~ N/A

~~15. Mobile home parks shall meet the requirements of Section 22, Part 2.~~ N/A

~~16. Recreational vehicle park shall meet the requirements of Section 22, Part 3.~~ N/A

17. With regard to signs:

a. A blueprint or ink drawing of the plans and specifications of the sign, and the method of its construction and attachment to the building or ground. The plans shall show all pertinent structural details, wind pressure requirements, display materials in accordance with the requirements of this Land Development Code and the building and electrical codes adopted by the City. The plan shall clearly illustrate the type of sign or sign structure as defined in this Land Development Code; the design of the sign, including dimensions, colors and material; the aggregate sign area; the dollar value of the sign; maximum and minimum heights of the sign; and sources of illumination; *The application submitted did not include plans and specifications of signs for the proposed use. The applicant needs to submit plans and specifications of signs for the proposed use. If no signs will be provided, please state so on the site plan.*

No sign is proposed, this industrial use will not be accessible by the public. See the cover sheet for a statement.

b. For ground signs, a plan to scale which indicates clearly:
(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas and other existing ground signs on the parcel;
(2) All protected trees that will be damaged or removed for the construction and display of the signs; and
(3) The speed limit on adjacent streets.
The application submitted did not include plans and specifications of signs for the proposed use. If the site will include signs, please be advised per Section 23.15 of the Land Development Code, a conditional use permit will be required prior to the erection of any permanent sign. Therefore, the sign review for this proposed development will be part of a separate conditional use permit application. If no signs will be provided, please state so on the site plan.

No sign is proposed, this industrial use will not be accessible by the public. See the cover sheet for a statement.

c. For building signs, a plan to scale which indicates clearly:

(1) The location of the sign relative to property lines, rights-of-way, streets, alleys, sidewalks, vehicular access and parking areas, buildings and structures on the parcel;

No sign is proposed, this industrial use will not be accessible by the public. See the cover sheet for a statement.

(2) The number, size, type and location of all existing signs on the same parcel, except a single business unit and a multiple occupancy complex shall not be required to delineate the signs of other business units; and
No sign is proposed, this industrial use will not be accessible by the public. See the cover sheet for a statement.

(3) A building elevation or other documentation indicating the building dimensions.
The application submitted did not include a building elevation. The applicant needs to submit a building elevation.
See the elevations included with the plans.

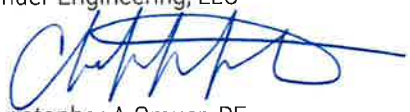
18. Certification that the property is or is not in an environmental constraint area as defined in Section 24.01; if the property is in an environmental constraint area, identify that the area complies with required setbacks (Section 24.03 and 24.04), and complies with Section 24.02. *The applicant needs to certify that the property is not in an environmental constraint area.*
See the certification on the cover sheet of the site plans.

19. If the project is one half (1/2) acre or larger in size, or five (5) or more dwelling units or single family lots, an endangered species habitat study.
The application submitted did not include an endangered species habitat study. The applicant needs to submit an endangered species habitat study.
See the included endangered species habitat study.

20. Certification that the proposed development is consistent with the Comprehensive Plan and the consistency and concurrency requirements of Section 25. *The applicant needs to certify that the proposed development is consistent with the Comprehensive Plan and the consistency and concurrency requirement of Section 25 of the Land Development Code.*
See the certification on the cover sheet of the site plans.

Please let us know if you need any additional information for your review.

Sincerely,
Gmuer Engineering, LLC



Christopher A Gmuer, PE
President

2603 NW 13th St, Box 314
Gainesville, FL 32609
Ph. (352) 281-4928
gmuereng.com

Conditional Use Permit
Justification Report

for

Concrete Batch Plant

CUP 22-00 (Arnold)
13370 SW 170th Street
Archer Florida
Parcel Number: 05046-000-000

Prepared for: Ronnie, LLC
Ronald E. Arnold, Sr., Managing Member
14506 NW 50th PL, Alachua, FL 32615

Date:
October 9, 2023

Prepared by:
Gmuer Engineering, LLC
Ralph Hilliard, Planning and
Development Consultant
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2603 NW 13th ST Box 314
Gainesville, FL 32609
www.gmuereng.com
(352) 593-3134

1. APPLICANT:
Ronnie, LLC - Ronald E. Arnold, Sr., Managing Member
14506 NW 50th PL, Alachua, FL 32615

2. LOCATION OF PROPERTY: Southwest corner of SR241 (SW 170th ST) & SR24
TP#s 05046-000-000, 05047-000-000, 05050-000-000, 05049-000-000

3. OWNER:
Ronnie, LLC - Ronald E. Arnold, Sr., Managing Member
14506 NW 50th PL, Alachua, FL 32615

4. LEGAL DESCRIPTION: See attached Legal Description Exhibit and ALTA Survey in Site Plans

5. LEGAL DOCUMENT SHOWING OWNERSHIP: See attached Deed.

6. PLOT PLAN: See the attached Site Plans

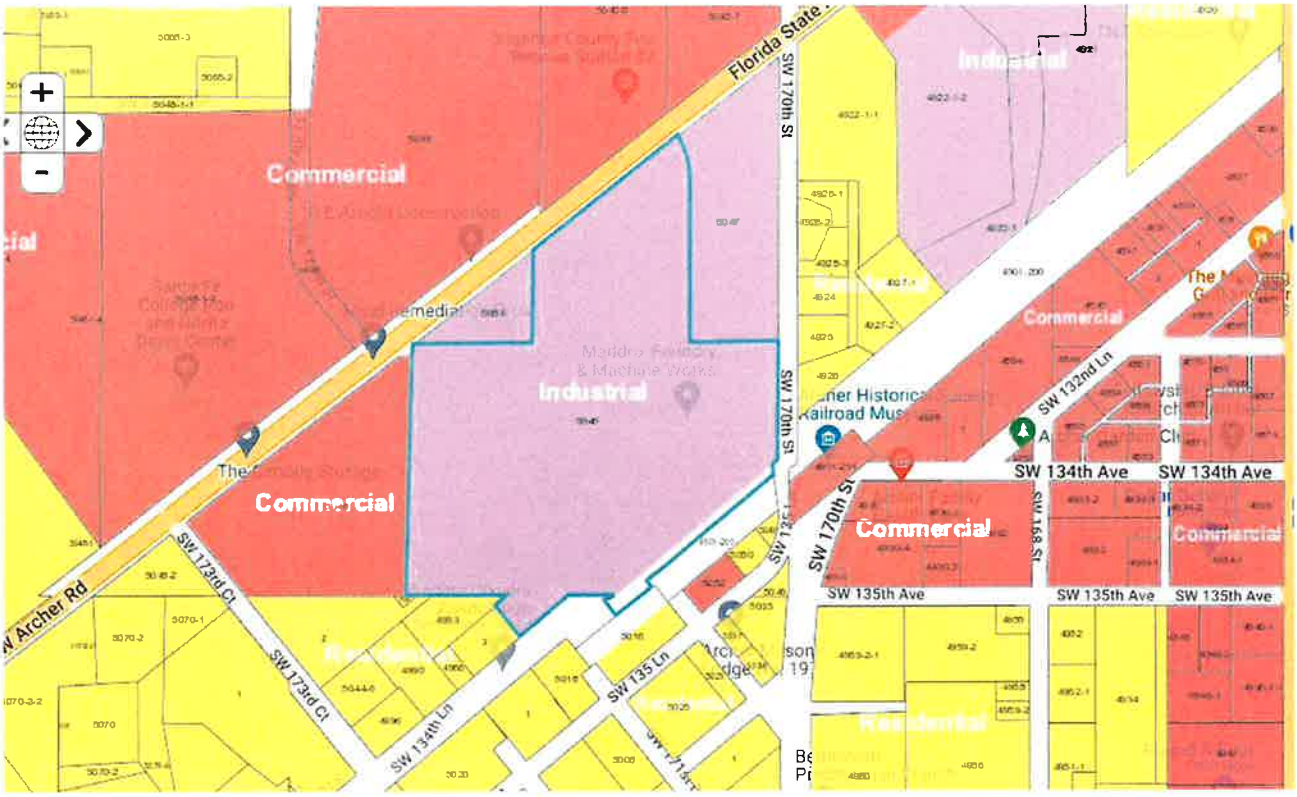
7. Names and Addresses of all property owners and abutting properties with a map reflecting boundaries of parcels affected
See Master Plan Sheet C-100 in the submitted site plans for a map of the following owners.
TP#05054-000-000 Family Life Church Of God Inc - 17259 SW Archer Rd, Archer, FL 32618
TP#05048-000-000 The Canopy Storage, LLC - 4605 NW 6th ST, Gainesville, FL 32606
TP#05044-002-000 Bass & Behringer & Beltz Co-Trustees – 306 S. Main ST, Chiefland, FL 32626
TP#04990-000-000 Karen A. Roy – 17236 SW 134th LN, Archer, FL 32618
TP#04988-000-000 Karen A. Roy – 17236 SW 134th LN, Archer, FL 32618
TP#04988-003-000 Daniel K & Kimberly D Jones - 17200 SW 134th LN, Archer, FL 32618
TP#05016-000-000 Linda Clarke - 17122 SW 135th LN, Archer, FL 32618
TP# 04901-200-000 City of Archer - 16870 SW 134th AVE, Archer, FL 32618
TP#05052-000-000 Todd Kirkland – 17028 SW 135th LN, Archer, FL 32618
TP#05035-000-000 City of Archer - 16870 SW 134th AVE, Archer, FL 32618
TP#04901-201-000 Archer Historical Society, Inc. – PO Box 654, Archer, FL 32618
TP#04926-000-000 Mary M. Hope – PO Box 177, Archer, FL 32618
TP#04925-000-000 Mary M. Hope – PO Box 177, Archer, FL 32618
TP#04924-000-000 Ouida M. Allen – PO Box 215, Archer, FL 32618
TP#04928-003-000 Deeks-Nater & Nater, PO Box 1365, Archer, FL 32618
TP#04928-002-000 Jennifer & IRA Judson Philpot – 25323 N CR 1491, Alachua, FL 32615
TP#04928-001-000 Helen Rose Johnson – PO Box 636, Archer, FL 32618
TP#04922-001-001 WB Properties, LLC C/O Benjamin Walker Jr. – 2424 S. Peninsula DR, Daytona Beach, FL 32118
TP#05046-007-000 McGurn Foundry, LLC – 101 SE 2nd PL, Ste 117, Gainesville, FL 32601
TP#05046-008-000 City of Archer - 16870 SW 134th AVE, Archer, FL 32618

TP#05045-000-000 Ronnie, LLC – 14506 NW 50th PL, Alachua, FL 32615

8. Summarize your request: Include current usage and proposed usage

This is a request for a conditional use permit to allow a Concrete Batch Plant on land designated for Industrial use. The property is currently the vacant Maddox Foundry and Machine Shop industrial site. The foundry was a factory for casting metal, a process where metal is melted and poured into specially shaped containers to produce metal objects, and operated for 117 years. The maps below show the land use and zoning of the property and surrounding properties.

Land Use Map

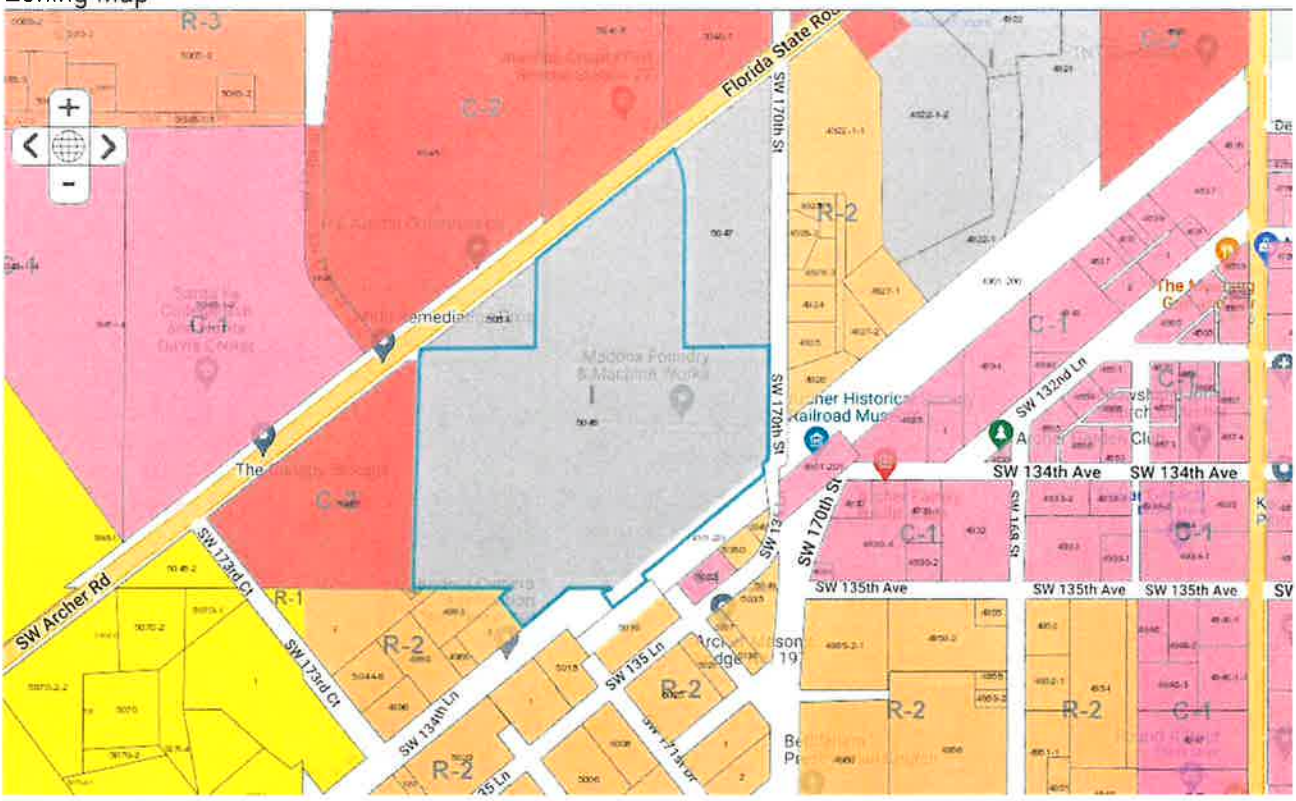


ADDITIONAL QUESTION SECTION

1. Current Zoning/Land Use Classification

Section 15.05 of the City of Archer Land Development Code states, "The industrial heavy (I) district is designed primarily to accommodate manufacturing and heavy industrial activity".

Zoning Map



2. Requested Permitted Use: Concrete Batch Plant

3. Will the proposed use be contrary to the City of Archer's Zoning Regulations?

The proposed use will not be contrary to the City of Archer's zoning regulations and will comply specifically with the performance standards set forth Section 17.01 of the City's land development code.

Sec. 17.01. - Performance standards.
All uses and activities permitted in any zoning district within this land development code shall conform to the standards of performance described below:

1. Fire and explosion hazards. In any zoning district, all uses shall comply with applicable standards set forth in the rules & regulations of the state fire marshal.

The use shall comply with all with all applicable standards, rules and regulation as required by the State Fire Marshall. Fire Safety Equipment shall be provided as required and employees will be properly trained and certified to use the equipment. Concrete batch plants are not a higher risk. Following NFPA 1 Section 18.4 the fire demand for the small building proposed are negligible and the site is already populated with Fire Hydrants due to the historical use of the site.

2. Emissions. Regulations controlling smoke, dust, dirt, or visible emissions shall be the same as those contained in Chapter 17-2, Florida Administrative Code. Regulations controlling open burning shall be the same as those contained in Chapter 17-5, Florida Administrative Code

Concrete Batch Plants are regulated by the State of Florida Department of Environmental Protection (FDEP), and must comply with air emission standards as promulgated in the Florida Administrative Code. All Concrete Batch Plants operate under an Air General Permit (AGP) and must comply with F.A.C. 62-296.414 (See attached). An AGP is an authorization by rule to construct and operate the facility and does not require action by the FDEP. The terms and conditions of an AGP are set forth in rule F.A.C. 62-210.310(5)(b).

3 Fumes. Regulations controlling the emission of any fumes, vapors, or gases of a noxious toxic or corrosive nature shall be the same as those contained in Chapter 17-2, Florida Administrative Code.

The use shall comply with applicable regulations, specifically F.A.C. 62-296.414.

4. Atmosphere. Activities which may produce any adverse effect on the temperature, motion, or humidity of the atmosphere beyond the lot lines, shall not be permitted, with the exception that in the industrial district this standard shall apply at the boundaries of the district and not at the lot lines of the individual properties located within the district.

The use will not produce any adverse effects on the temperature, motion or humidity beyond or near the property lines of the property.

5. Odor. Regulations controlling the emission of odorous gases and other odorous matter shall be the same as those contained in Chapter 17-2, Florida Administrative Code

It is not anticipated that there will be any odorous gases emitting from the site.

6. Glare. There shall be no direct glare, visible from any district permitting residential use, caused by unshielded flood lights or other sources of high intensity lighting.

Residential areas shall be protected from direct glare from any light source on the site by use of full-cutoff lighting fixtures in addition to perimeters buffers around the perimeter of the property exceeding all requirements of the land development code for industrial uses next to residential.

Sec. 17.02. - Noise.

The operation of the plant shall comply with the noise regulation of the City.

4. What is the existing land use pattern in district?

North	Church, FDOT Right-of- Way, Commercial and Industrial To the northwest is a church (.89 acres) that has been adjacent to the Maddox Industrial Foundry for its full history, the rest of the site abuts SW Archer Rd (SR24) with Commercial properties located north of SR24.
West	Commercial To the west of the site is commercial property recently developed as long term storage of vehicles, There are several substantial trees along the property line.
Southwest and Southeast	Residential and City Owned Property To the southwest there are residential parcels abutting the property, with a parcel owned by the applicant sharing the most common boundary of the abutting properties. To the southeast are vacated and unimproved right-of-way owned by the City of Archer that separates the residential properties from the site.
East	City Right-of Way and Residential To the east of the actual location of the Batch is the existing Maddox Foundry then SW 170th Street with residential properties east.

5. Will change/development/etc. be compatible to adjacent districts?

The existing site consists of the Maddox industrial foundry facility which has operated on the property for over a century. The proposed concrete batch plant will be located on the western portion of the site in the existing footprint of the historical industrial uses and will even require the removal of a couple of the minor buildings and very large piles of spent casting sand from the industrial metal foundry.

The northern side of the site is a church that has been adjacent to the Maddox Industrial Foundry for its full history. The proposed plan will angle the on-site driveway south away from the church and will add a buffer that doesn't exist today, the required 7ft Partial Opaque Buffer per LDC requirements which includes a 6ft opaque fence plus landscaping at a minimum.

The western property is adjacent to land designated for commercial and developed as a long term storage of vehicles. This is compatible with generally accepted planning principles for the location of industrial uses. The commercial property will also be provided with the required 7ft Partial Opaque Buffer per LDC requirements and requires a 6ft opaque fence plus landscaping at a minimum.

The southern area of the site is the closest to residential uses. The siting of the plant was purposely kept within the limits of the historical industrial use footprint away from residential areas in order to not change the existing environment for the adjacent residential areas. Additionally, the Applicant owns additional property further south beyond the historical industrial use footprint. The site plan shows that these properties provide for a separation from the residential uses that far exceeds the minimum 10ft Partial Opaque Buffer per LDC requirements of a 6ft opaque fence plus landscaping.

The eastern side of the proposed concrete batch plant is the Maddox Foundry itself and has no concern of compatibility of adjacent uses.

6. What effect will the proposed change/development/etc. have on area

a. Living conditions:

The proposed plant should not have a negative impact on the living conditions in the area. The location of the development is on a historically active industrial property, within the historic footprint of the industrial uses, away from most residential areas and the use of the existing private industrial driveway for access will minimize conflicts with local residents of the area.

b. traffic?

Access to and from the site will be via private internal driveway. This will reduce the number of trips on local street and SW 170th Street.

c. drainage?

Drainage in the areas will not change and will be improved. The proposed stormwater pond will provide water quality treatment for all stormwater runoff as it flows north, the stormwater facility retains orders of magnitude more runoff, and meets attenuation requirements for modern design storm events up to the 100 year frequency and 10 days long of rainfall. The design will be permitted with the Suwannee River Water Management District and the FDOT Drainage Department.

d. light and air to adjacent areas?

The site plan for the site is designed to prevent direct glare from the Plant operation onto adjacent properties by use of full-cutoff lighting fixtures in addition to perimeters buffers around the perimeter of the property exceeding all requirements of the land development code for industrial uses. The plant is required to meet air emission standards as regulated by FDEP.

e. property values in adjacent areas?

Property values in the area should remain stable as the industrial use of the site is not changing, and values may increase as the existing Maddox Plant facilities are re-purposed into a mixture of uses that evolves to meet the needs of the area.

7. Will the proposed change/development/etc. be a deterrent to the improvement or development of adjacent property in accordance with existing regulation?

When considering the use and re-purpose of major portions on the property into a more community servicing facility and focal point for the City, the proposed change will allow the owners to re-invest in the area.

9. Is the change/development/etc. suggested out of scale with the needs of the neighborhood or the City of Archer?

The proposed development is consistent with the scale of the Maddox Foundry and Machine Shop that had operated on the site for 117 years. The overall re-imagining of the Maddox Foundry will provide the City Archer with an economic boost. It is anticipated that the northeastern portions of the site could be re-purposed with small shops that could function as a business incubator for start-up businesses, as well as Maddox Foundry Museum themed brewery if proposed in the future and allowed by zoning.

Summary

This is a request for a conditional use permit for a concrete bath plant on an existing heavy industrial site (Maddox Foundry). The property has an Industrial land use and zoning. The Batch Plant will be located on the western portion of the existing industrial site, only a couple of the existing buildings will be removed leaving intact the vast majority of the buildings and facilities. The location of the plant is within the footprint of the industrial activities and storage piles of spent casting sand, the proposed setbacks and buffer screening from adjacent properties reduces any impact that the facility will have on adjacent uses. The site plan meets or exceeds minimum setback requirements with added buffering and screening. Truck traffic will be restricted mainly to the existing private driveway historically serving the industrial activities of the site. Plant operations will comply with all State and Local regulations.

62-296.414 Concrete Batching Plants.

The following requirements apply to emissions units producing concrete and concrete products by batching or mixing cement and other materials. This rule also applies to facilities processing cement and other materials for the purposes of producing concrete, and to equipment used to mix cement and soil for onsite soil augmentation or stabilization.

(1) Stack Emissions. Emissions from silos, weigh hoppers (batchers), and other enclosed storage and conveying equipment shall be controlled to the extent necessary to limit visible emissions to 5 percent opacity.

(2) Unconfined Emissions. The owner or operator shall take reasonable precautions to control unconfined emissions from hoppers, storage and conveying equipment, conveyor drop points, truck loading and unloading, roads, parking areas, stock piles, and yards as required by paragraph 62-296.320(4)(c), F.A.C. For concrete batching plants the following shall constitute reasonable precautions:

(a) Management of roads, parking areas, stock piles, and yards, which shall include one or more of the following:

1. Paving and maintenance of roads, parking areas, and yards.

2. Application of water or environmentally safe dust-suppressant chemicals when necessary to control emissions.

3. Removal of particulate matter from roads and other paved areas under control of the owner or operator to mitigate reentrainment, and from building or work areas to reduce airborne particulate matter.

4. Reduction of stock pile height or installation of wind breaks to mitigate wind entrainment of particulate matter from stock piles.

(b) Use of spray bar, chute, or partial enclosure to mitigate emissions at the drop point to the truck.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements.

(a) The reference test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R., Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(c) Visible emissions tests of silo dust collector exhaust points shall be conducted while loading the silo at a rate that is representative of the normal silo loading rate. The minimum loading rate shall be 25 tons per hour unless such rate is unachievable in practice. If emissions from the weigh hopper (batcher) operation are also controlled by the silo dust collector, the batching operation shall be in operation during the visible emissions test. The batching rate during the emissions test shall be representative of the normal batching rate and duration. Each test report shall state the actual silo loading rate during emissions testing and, if applicable, whether or not batching occurred during emissions testing.

(d) If emissions from the weigh hopper (batcher) operation are controlled by a dust collector which is separate from the silo dust collector, visible emissions tests of the weigh hopper (batcher) dust collector exhaust point shall be conducted while batching at a rate that is representative of the normal batching rate and duration. Each test report shall state the actual batching rate during emissions testing.

(4) Frequency of Testing.

(a) The owner or operator of any concrete batching plant using an air general permit shall have a visible emissions test conducted for stack emissions referenced in subsection 62-296.414(1), F.A.C., no later than sixty (60) days after commencing initial operation, and annually thereafter.

(b) The owner or operator of any concrete batching plant operating under the authority of an air construction permit or air operation permit shall have a visible emissions test conducted for stack emissions referenced in subsection 62-296.414(1), F.A.C., prior to submitting the application for an initial air operation permit, and annually thereafter.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–Formerly 17-2.600(14), 17-296.414, Amended 11-23-94, 1-1-96, 11-13-97, 1-10-07, 7-10-14, 11-5-20.

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J.K. JESS IRBY, ESQ.
Clerk of the Court, Alachua County, Florida
ERECORDED Receipt # 1120717
Doc Stamp-Mort: $0.00
Doc Stamp-Deed: $7,000.00
Intang. Tax: $0.00

Prepared by and return to:
James D. Salter, Esq.
Attorney at Law
Salter Feiber, P.A.
3940 N.W. 16th Boulevard Bldg B
Gainesville, FL 32605
352-376-8201
File Number: **22-0250.2 DE**

[Space Above This Line For Recording Data]

Special Warranty Deed

This Special Warranty Deed made this 12th day of **December, 2022** between **McGurn Foundry, LLC, a Florida limited liability company** whose post office address is **101 S.E. 2nd Place, Suite 117, Gainesville, FL 32601**, grantor, and **Ronnie, LLC, a Florida limited liability company** whose post office address is **14506 N.W. 50th Place, Alachua, FL 32615**, grantee:

(Whenever used herein the terms grantor and grantee include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth, that said grantor, for and in consideration of the sum TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Alachua County, Florida**, to-wit:

See Exhibit "A" attached hereto and made a part hereof as if fully set forth herein.

Parcel Identification Numbers: 04992-000-000; 04993-000-000; 05046-000-000; 05047-000-000; 05049-000-000; and 05050-000-000.

Subject to covenants, conditions, restrictions, easements, reservations, and limitations of record, if any.

Together with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under grantors, but against none other.

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Witness Name: James D. Salter

Witness Name: Dorene Erickson

McGurn Foundry, LLC, a Florida limited liability company

By: _____
Kenneth R. McGurn, as Manager

State of Florida
County of Alachua

The foregoing instrument was acknowledged before me by means of [X] physical presence or [_] online notarization, this 12th day of December, 2022 by Kenneth R. McGurn, Manager of McGurn Foundry, LLC, a Florida limited liability company, on behalf of the company, who [X] is personally known to me or [X] has produced a driver's license as identification.

[Notary Seal]

JAMES D. SALTER
Commission # HH 253573
Expires May 30, 2026

_____
Notary Public

Printed Name: _____

My Commission Expires: _____

EXHIBIT "A"

PARCEL 1:

THAT PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST I/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED SOUTHEAST OF STATE ROAD NO. 24 (66-FOOT RIGHT OF WAY) LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORDS BOOK 1374, PAGE 477, AND LESS AND EXCEPT THAT PARCEL DESCRIBED IN OFFICIAL RECORDS BOOK 1912, PAGE 1422, ALL OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 2:

THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED NORTHWEST OF THE ABANDONED SEABOARD COASTLINE RAILROAD (100-FOOT RIGHT OF WAY).

LESS AND EXCEPT THE EAST 25 FEET THEREOF FOR MAGNOLIA STREET RIGHT OF WAY PER MAINTENANCE MAP RECORDED IN BOOK 31, PAGE 92 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 3:

BEGINNING ON THE NORTHWESTERLY BOUNDARY LINE OF THE SEABOARD COASTLINE RAILROAD COMPANY'S 100-FOOT RIGHT OF WAY AT ITS INTERSECTION WITH THE WEST LINE OF MAGNOLIA STREET, SAID POINT BEING 50 FEET NORTHWESTWARDLY, MEASURED AT RIGHT ANGLES, FROM THE CENTER LINE OF SAID MAIN TRACK; RUNNING THENCE WESTWARDLY ALONG SAID NORTHWESTERLY RIGHT OF WAY LINE 630 FEET; THENCE SOUTHEASTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING COURSE, 50 FEET; THENCE EASTERWARDLY AT RIGHT ANGLES FROM THE PRECEDING COURSE, 178 FEET; THENCE NORTHWESTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING COURSE, 20 FEET; THENCE EASTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING AND PARALLEL WITH SAID NORTHWESTERLY RIGHT OF WAY LINE, 425 FEET MORE OR LESS TO THE WEST LINE OF MAGNOLIA STREET; THENCE NORTHWARDLY ALONG THE WEST LINE OF MAGNOLIA STREET 39 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

PARCEL 4:

THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED SOUTHEAST OF THE SEABOARD COASTLINE RAILROAD (100-FOOT RIGHT OF WAY) LESS THAT CERTAIN PARCEL OF LAND DEEDED TO J. M. SYLVESTER IN DEED RECORDED IN DEED BOOK 86, PAGE 24, OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND ALSO LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORD BOOK 1583, PAGE 1855, OF SAID PUBLIC RECORDS; ALSO LESS AND EXCEPT ANY MAINTAINED RIGHT OF WAY FOR MAIN STREET.

PARCEL 5:

THE EAST 1/2 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4, SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA.

PARCEL 6:

BLOCK 12, LOTS 7 AND 8, BLOCK I, LOT 2, BLOCK 4, AND LOTS I, 2, 3, 4, 5, AND 6, BLOCK 5, ORIGINAL ARCHER, AS PER PLAT THEREOF RECORDED IN PLAT BOOK A, PAGE 83 1/2, AND ANY VACATED STREETS AND/OR ALLEYWAYS APPURTENANT TO THE SUBJECT PROPERTY AS CONTAINED IN THAT CERTAIN ORDINANCE BY THE CITY OF ARCHER RECORDED IN O.R. BOOK 2211, PAGE 1109, ALL OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

JB | DS

PARCEL 7:

A TRACT OF LAND SITUATED IN SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, CITY OF ARCHER, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF THE AFOREMENTIONED SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST FOR THE POINT OF REFERENCE AND RUN SOUTH 00 DEG. 05 MIN. 31 SEC. EAST, ALONG THE EAST LINE OF SAID SECTION 17, A DISTANCE OF 1217.47 FEET TO A NAIL AND CAP AT THE INTERSECTION OF SAID EAST LINE WITH THE SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24 (66 FOOT RIGHT OF WAY) AND THE TRUE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00 DEG. 05 MIN. 31 SEC. EAST, ALONG SAID EAST LINE, A DISTANCE OF 764.03 FEET TO A NAIL AND CAP AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 17; THENCE RUN SOUTH 89 DEG. 53 MIN. 39 SEC. WEST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, A DISTANCE OF 260.24 FEET TO A CONCRETE MONUMENT; THENCE RUN NORTH 03 DEG. 20 MIN. 08 SEC. WEST, A DISTANCE OF 537.22 FEET TO A CONCRETE MONUMENT ON THE AFOREMENTIONED SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24; THENCE RUN NORTH 51 DEG. 49 MIN. 40 SEC. EAST, ALONG SAID SOUTHERLY RIGHT OF WAY LINE A DISTANCE OF 369.23 FEET TO THE TRUE POINT OF BEGINNING.

LESS AND EXCEPT THE EAST 25 FEET THEREOF FOR MAGNOLIA STREET RIGHT OF WAY PER MAINTENANCE MAP RECORDED IN BOOK 31, PAGE 92 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

LESS AND EXCEPT ANY PORTION THAT LIES WITHIN THE RIGHT OF WAY FOR MAGNOLIA STREET AND LESS AND EXCEPT THAT PORTION THAT LIES WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 24, AS MORE PARTICULARLY DESCRIBED IN O.R. BOOK 1908, PAGE 866, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND BEING DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE CITY OF ARCHER, SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA; THENCE NORTH 00º47'19" WEST ALONG THE EAST LINE OF SAID SECTION 17, A DISTANCE OF 4,151.61 FEET; THENCE SOUTH 51º07'26" WEST, A DISTANCE OF 58.67 FEET; THENCE SOUTH 38º52'34" EAST, A DISTANCE OF 34.33 FEET TO THE INTERSECTION OF THE SOUTHEASTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24, WITH THE WESTERLY RIGHT OF WAY LINE OF MAGNOLIA STREET, (A 50.00 FOOT RIGHT OF WAY), AND THE POINT OF BEGINNING; THENCE SOUTH 00º47'19" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 25.00 FEET, THENCE NORTH 64º46'30" WEST, A DISTANCE OF 21.93 FEET TO A POINT ON SAID SOUTHEASTERLY RIGHT OF WAY LINE; THENCE NORTH 51º14'19" EAST ALONG SAID SOUTHEASTERLY RIGHT OF WAY LINE, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

RECORDED IN OFFICIAL RECORDS
INSTRUMENT # 3516783 6 PG(S)
9/28/2023 3:46 PM
BOOK 5123 PAGE 1583
J.K. JESS IRBY, ESQ.–Clerk
Clerk of the Court, Alachua County, Florida
ERECORDED Receipt # 1169079
Doc Stamp-Mort: $0.00
Doc Stamp-Deed: $0.00
Intang. Tax: $0.00

EXHIBIT 2

IN THE CIRCUIT COURT OF THE EIGHTH JUDICIAL CIRCUIT
IN AND FOR ALACHUA COUNTY, FLORIDA

MCGURN FOUNDRY, LLC, a Florida Limited Liability Company, and KENNETH R. MCGURN, an individual,

Plaintiffs,

v. Case No.: 01-2019-CA-001645

MADDOX FOUNDRY & MACHINE WORKS, LLC, a Florida Limited Liability Company; FLETCHER J. HOPE aka FLETCHER J. HOPE, JR., an individual; MARY M. HOPE, an individual; UNITED STATES OF AMERICA, DEPARTMENT OF THE TREASURY – INTERNAL REVENUE SERVICE; and, UNKNOWN TENANTS IN POSSESSION,

Defendants.
_____/

AMENDED CERTIFICATE OF TITLE
(Amending Only Exhibit A, Description of Real Property)

The undersigned Clerk of the Court, certifies that she executed and filed a certificate of sale in this action on OCTOBER 11, 2022, for the property described herein and that no objections to the sale have been filed within the time allowed for filing objections.

The following property in Alachua and Levy County, Florida:

- SEE SCHEDULE A ATTACHED –

Was sold to: McGurn Foundry LLC whose address is: 101 SE 2nd Place, Suite 117 Gainesville, FL 32601. c/o

Witness my hand and the deal of this court on SEPTEMBER 28, 2023.

J.K. "JESS" IRBY, ESQ.
CLERK OF THE CIRCUIT COURT
[redacted]
BY: Marilyn Pulkens
Deputy Clerk

Bid Amount: $100.00

Documentary Stamps: $.70 paid

J.K. "JESS" IRBY, ESQ.
CLERK OF THE CIRCUIT COURT
CIVIL DIVISION
201 E UNIVERSITY AVE
GAINESVILLE, FL 32601

12445841-1

Copies furnished to

Berger Singerman LLP
313 North Monroe Street, Suite 301
Tallahassee, Florida 32301

Maddox Foundry & Machine Works LLC
13370 SW 170st
Archer FL 32618

Mary M. Hope
16990 SW 133rf Place
Archer Florida 32618

McGurn Foundry LLC
c/o Michael J. Niles, Esq.
Berger Singerman LLP
313 N. Monroe Street, Suite 301
Tallahassee Florida 32301

Fletcher J Hope
16990 SW 133rd Place
Archer FL 32618

United States of America Department of Treasury
C/o US Attorney North Division,
111 North Adams

Schedule A to Amended Certificate of Title

PARCEL 1:

THAT PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED SOUTHEAST OF STATE ROAD NO. 24 (66-FOOT RIGHT OF WAY) LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORDS BOOK 1374, PAGE 477, AND LESS AND EXCEPT THAT PARCEL DESCRIBED IN OFFICIAL RECORDS BOOK 1912, PAGE 1422, ALL OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

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PARCEL 3:

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RECORDED IN DEED BOOK 86, PAGE 24, OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND ALSO LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORD BOOK 1583, PAGE 1858, OF SAID PUBLIC RECORDS; ALSO LESS AND EXCEPT ANY MAINTAINED RIGHT OF WAY FOR MAIN STREET.

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DISTANCE OF 537.22 FEET TO A CONCRETE MONUMENT ON THE AFOREMENTIONED SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24; THENCE RUN NORTH 51 DEG. 49 MIN. 40 SEC. EAST, ALONG SAID SOUTHERLY RIGHT OF WAY LINE A DISTANCE OF 369.23 FEET TO THE TRUE POINT OF BEGINNING. LESS AND EXCEPT ANY PORTION THAT LIES WITHIN THE RIGHT OF WAY FOR MAGNOLIA STREET AND LESS AND EXCEPT THAT PORTION THAT LIES WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 24, AS MORE PARTICULARLY DESCRIBED IN O.R. BOOK 1908, PAGE 866, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND BEING DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE CITY OF ARCHER, SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEAST CORNER OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA; THENCE NORTH 00°47'19" WEST ALONG THE EAST LINE OF SAID SECTION 17, A DISTANCE OF 4,151.61 FEET; THENCE SOUTH 51°07'26" WEST, A DISTANCE OF 58.67 FEET; THENCE SOUTH 38°52'34" EAST, A DISTANCE OF 34.33 FEET TO THE INTERSECTION OF THE SOUTHEASTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24, WITH THE WESTERLY RIGHT OF WAY LINE OF MAGNOLIA STREET, (A 50.00 FOOT RIGHT OF WAY), AND THE POINT OF BEGINNING; THENCE SOUTH 00°47'19" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 25.00 FEET, THENCE NORTH 64°46'30" WEST, A DISTANCE OF 21.93 FEET TO A POINT ON SAID SOUTHEASTERLY RIGHT OF WAY LINE; THENCE NORTH 51°14'19" EAST ALONG SAID SOUTHEASTERLY RIGHT OF WAY LINE, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

AND

A TRACT OF LAND SITUATED IN SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF THE AFOREMENTIONED SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST FOR THE POINT OF REFERENCE AND RUN S.00°05'31"E., ALONG THE EAST LINE OF SAID SECTION 17, A DISTANCE OF 1113.97 FEET TO THE INTERSECTION OF SAID EAST LINE WITH THE NORTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24 (66 FOOT RIGHT OF WAY); THENCE RUN S.51°47'06"W., ALONG SAID NORTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24, A DISTANCE OF 31.26 FEET TO A CONCRETE MONUMENT AND THE TRUE POINT OF BEGINNING; THENCE CONTINUE S.51°47'06"W., ALONG SAID NORTHERLY RIGHT OF WAY LINE, A DISTANCE OF 381.62 FEET TO A STEEL ROD AND CAP; THENCE RUN N.00°05'31"W., A DISTANCE OF 407.63 FEET TO A STEEL ROD AND CAP; THENCE RUN N.89°45'16"E., A DISTANCE OF 300.22 FEET TO A STEEL ROD AND CAP; THENCE RUN S.00°05'31"E., PARALLEL WITH AND 25.00 FEET WEST OF THE AFOREMENTIONED EAST LINE OF SECTION 17, A DISTANCE OF 173.73 FEET TO THE TRUE POINT OF BEGINNING, CONTAINING 2.000 ACRES MORE OR LESS.

AND

LOTS 29 AND 30, BLOCK B, FRUITLAND HEIGHTS, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 13, PUBLIC RECORDS OF LEVY COUNTY, FLORIDA

LONGLEAF
ENVIRONMENTAL

Environmental Memorandum

To: Christopher A. Gmuer, PE
President, Gmuer Engineering
From: Patrick Griffin & Kurt Howell

Date: June 27, 2023
Re: Maddox Foundry, 13370 SW 170th St, Archer, FL 32618 Marion County

The Maddox Foundry property is located at 13370 SW 170th St, Archer, FL, in Alachua County. **PROJECT LOCATION MAP** The proposed improvement includes the Maddox Foundry and ready mix batch plant and associated infrastructure.

This report reviews the possible impacts to federal and state protected species, wetland systems, and essential fish habitat. Project biologists familiar with Florida's natural communities conducted a wetland evaluation and endangered species assessment of the proposed project on June 22, 2023. The purpose of these assessments was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and aerial photographic interpretation. Environmental resources within the project study area were initially identified through the review of several mapping resources, including the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soils map; Florida Fish and Wildlife Conservation Commission (FFWCC), Florida Land Cover Classification System (FLCCS) map; U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) map; Florida Natural Areas Inventory (FNAI); Suwannee River Water Management District (SRWMD) and Alachua County data. Project biologists assessed all potential wetland and surface water features, verified land uses categories, and identified any listed species or their habitat within and adjacent (100 feet) to the project limits.

During field investigations, wetland and surface water habitats within the project study area were visually inspected and photographed. Exotic plant infestations, altered hydrologic conditions, shifts in historical plant communities, and any other disturbances were noted. Attention was given to identifying wildlife and/or signs of wildlife utilization at each wetland and their adjacent upland habitats. All upland, wetland, and surface water habitat types within the project study area were classified using FLUCFCS (FDOT 1999). Additionally, wetlands and surface waters were classified using the USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

No wetlands were identified during site inspection. No Federal or State listed species were identified within the project or within 100-foot buffer during site inspections. The proposed project will have no involvement with Essential Fish Habitat as none exists within the project study area.

LONGLEAF
ENVIRONMENTAL

SOILS:
Based on the online NRCS Web Soil Survey tool (NRCS 2023), three soil types are mapped within the project study area. **NRCS SOIL MAP** provides a map of the location of each soil type within the project study area. None of the soil types reported within the project study area are defined as hydric. The approximate acreage of each soil type located within the project study are listed below.

3 –ARREDONDO FINE SAND, 0 TO 5 PERCENT SLOPES (5.9 acres) – Non-hydric soil. Sandy soils on ridges and dunes of xeric uplands.

4 –ARREDONDO-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES (12.4 acres) – Non-hydric soil. Ridges on marine terraces, hills on marine terraces.

8 – MILLHOPPER SAND, 0 TO 5 PERCENT SLOPES (2.0 acres) – Non-hydric soil. Sandy soils on rises, knolls, and ridges of mesic uplands.

30 – KENDRICK SAND, 2 TO 5 PERCENT SLOPES (0.9 acres) – Non-hydric soil. Sandy over loamy soils on knolls and ridges of mesic uplands.

EXISTING LAND USE/VEGETATIVE COVER:
Suwannee River Water Management District land use map depicting existing land uses and habitats within the project study area are provided in **LAND USE MAP**. The list below provides land use and habitat types, their classifications and total acreage within the project study area.

1130: Low Density, Mixed Units (Fixed and Mobile Home Units) (0.2 acres) Residential land characterized by a relatively small number of homes per acre. This land use classification is associated with the adjacent property.

1550: Other Light Industrial (13.6 acres) Steel fabrication, small boat manufacturing, electronic manufacturing and assembly plants are typical examples of light industrial enterprises. Maddox Foundry is a steel fabrication company, and this land use includes buildings and associated infrastructure.

1720: Religious (0.2 acres) All buildings that can be related to this category are included. Many religious facilities support schools and day care centers which reside within their property. This land use classification is associated with the adjacent property.

4100: Upland Coniferous Forests (0.1 acres) Any natural forest stand whose canopy is at least 66 percent dominated by Coniferous species is classified as a Coniferous Forest.
4340: Upland Mixed - Coniferous / Hardwood (6.5 acres) This class is reserved for those forested areas in which neither upland conifers nor hardwoods achieve a 66 percent crown

canopy dominance. At the time of the site inspection, most of the tree canopy and associated understory had been cleared from the site.

8370: Surface Water Collection Features (0.9 acres) Man-made stormwater collection and/or treatment facilities.

WETLAND/SURFACE WATERS:

For the purposes of this report, wetlands are defined pursuant to 62-340 F.A.C., Section 373.019 (27) Florida Statutes (F.S.), and surface waters are defined as open water bodies or man-made, upland-cut water courses with a defined channel and bank structure.

During field reviews of the project study area, environmental scientists identified existing wetland and surface water communities. Each wetland and surface water habitat within the project study area was classified using FLUCFCS (FDOT 1999) and the USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al. 1979). Wetland boundaries were identified in accordance with the State of Florida Wetlands Delineation Manual (Chapter 62-340, F.A.C.), the criteria found within the U.S. Army Corps of Engineers (USACE) 1987 Corps of Engineers Wetland Delineation Manual (USACE 1987) and 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (USACE 2010). **WETLAND MAP** provides a map of the location of each surface water type within the project study area.

PUBHx – Palustrine, Unconsolidated Bottom, Permanently flooded, excavated. (0.6 acres) Freshwater pond with spatterdock and water lily.

PEM1Fx – Palustrine, Emergent, Persistent, Semipermanently flooded, excavated. (0.5 acres) Wet ditches/canals (OSWs containing predominately hydric vegetation) were identified along the eastern and western portions of the property.

PROTECTED SPECIES:

Listed species are afforded special protection by federal and state agencies. This special protection is federally administered by the U.S. Department of the Interior, USFWS pursuant to the Endangered Species Act of 1973, as amended (ESA). The USFWS administers the federal list of animal species (50 CFR 17) and plant species (50 CFR 23).

Administered by the FWC, the State of Florida affords special protection to animal species designated as State-designated Threatened, pursuant to Chapter 68A-27, F.A.C. The State of Florida also protects and regulates plant species designated as endangered, threatened, or commercially exploited as identified on the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C.

LONGLEAF
ENVIRONMENTAL

The evaluation included literature and database reviews of the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Natural Areas Inventory (FNAI). The evaluation also included field assessments of the project study area, to identify the potential occurrence of protected species and/or presence of federally designated critical habitat.

During field reviews, the project study area was canvassed for direct observations of protected species or evidence of protected species utilization including trails, tracks, scat, nests, burrows, or vocalizations. The purpose of the reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and aerial photo interpretation, and to document flora and fauna. Attention was given to identifying dominant plant species composition for each community and identifying wildlife or signs of wildlife utilization within each wetland and upland community. The FNAI was utilized for documented occurrences of protected species within one mile of the project study area.

Based on the evaluation of collected data, field reviews, FNAI data and database searches, the protected species discussed below were considered as having the potential to occur within or adjacent to the project study area. For a species to be considered potentially present, the project study area must be within the species' distribution range.

- *Mycteria americana* Wood Stork
- *Agrimonia incisa* Incised groove-bur
- *Antigone canadensis pratensis* Florida Sandhill Crane
- *Asplenium x curtissii* Curtiss' spleenwort
- *Asplenium x heteroresiliens* Morzenti's spleenwort
- *Asplenium x plenum* ruffled spleenwort
- *Athene cunicularia floridana* Florida Burrowing Owl
- *Corynorhinus rafinesquii* Rafinesque's Big-eared Bat
- *Drymarchon couperi* Eastern Indigo Snake
- *Forestiera godfreyi* Godfrey's swampprivet
- *Gopherus polyphemus* Gopher Tortoise
- *Lithobates capito* Gopher Frog
- *Matelea floridana* Florida spiny-pod
- *Myotis austroriparius* Southeastern Myotis
- *Notophthalmus perstriatus* Striped Newt
- *Phyllanthus liebmannianus ssp. platylepis* pinewoods dainties
- *Pituophis melanoleucus* Pine Snake
- *Pycnanthemum floridanum* Florida mountain-mint
- *Sideroxylon alachuense* Silver buckthorn

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In addition to the federal and state listed species identified, other protected species, including the bald eagle, southern fox squirrel, and Florida black bear, have the potential to occur within the project study area.

No Federal or State listed species were identified within the project or within 100-foot buffer during site inspections.

Respectfully Submitted,

Kurt W. Howell
Principal Environmental Scientist
Longleaf Environmental Consulting

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Photograph 1 Maddox Foundry

Photograph 2 Maddox Foundry southeast property line

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ENVIRONMENTAL

Photograph 3 Maddox Foundry southwest property line

Photograph 4 Maddox Foundry southwest property line

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Photograph 5 western property line and berm

Photograph 6 western property line looking east

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Photograph 7 surface water feature

Photograph 8 surface water feature

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Photograph 9 surface water feature east of church

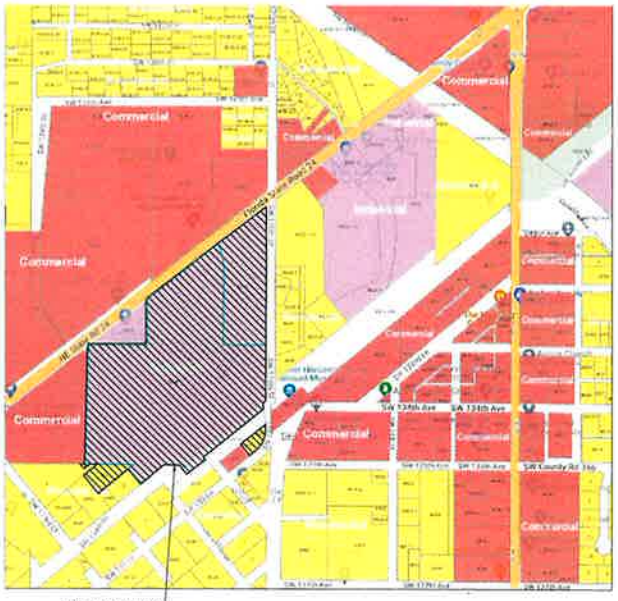
Photograph 10 northern portion of the property

LONGLEAF
ENVIRONMENTAL

Photograph 11 northern portion of the property

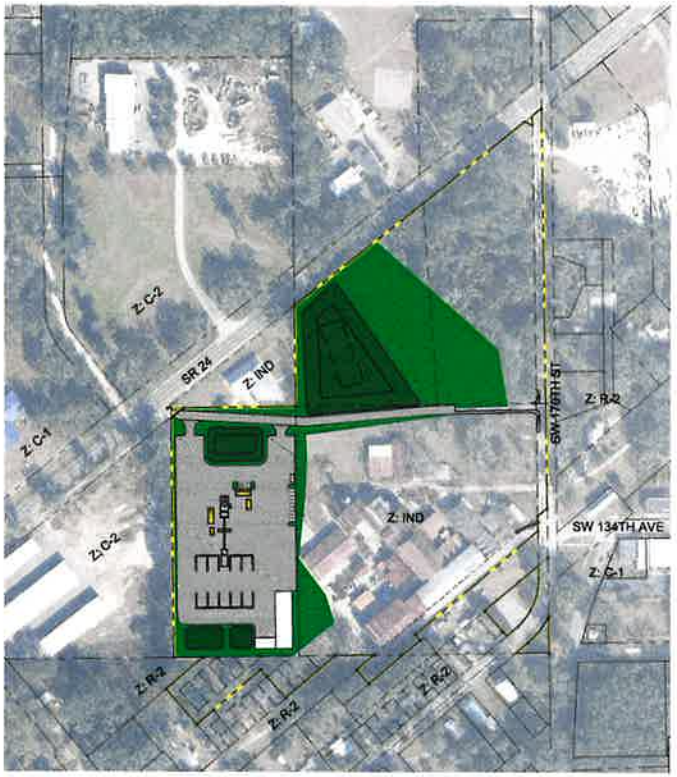
Photograph 12 northern portion of the property

MADDOX FOUNDRY & READY MIX BATCH PLANT



SITE LOCATION

VICINITY MAP



SITE PLAN MAP

PROJECT INFORMATION

PROJECT NAME: MADDOX FOUNDRY & READY MIX BATCH PLANT

OWNER: RONNIE, LLC
14506 NW 60TH PLACE
ALACHUA, FL 32615

PROJECT LOCATION: 7F8R5045-009-000, 05047-000-000, 05050-000-000, 04993-000-000, 04992-002-000
13270 SW 170TH ST
ARCHER, FL 32618

CIVIL ENGINEER: CHRISTOPHER A. GMUER, PE
GMUER ENGINEERING, LLC
(352) 281-4428
2603 NW 13TH ST BLDG 314
GAINESVILLE, FL 32609

LAND USE: INDUSTRIAL
ZONING: INDUSTRIAL

SETBACKS: FRONT 75FT (ARTERIAL ROAD FRONTAGE)
FRONT 50FT (NON-ARTERIAL FRONTAGE)
SIDE 35FT
REAR 35FT

BUFFERS: VARIES BASED ON THE ADJACENT USE
R-2 RESIDENTIAL: O (OPAQUE) 10FT WIDE (6FT FENCE AND LANDSCAPING)
C-2 COMMERCIAL: PO (PARTIAL OPAQUE) 7.5FT WIDE (6FT FENCE AND LANDSCAPING)
I INDUSTRIAL: B (BROKEN) 10F WIDE

OPAQUE BUFFER REQUIREMENTS
WIDTH: 10 FT MIN
CANOPY TREES: MIN 2 PER 100 FEET
UNDERSTORY TREES: MIN 1 PER 100 FEET
SHRUBS: MIN 12 PER 100 FEET
FENCE: MIN SIX FOOT HIGH 100% CLOSED FACE WOODEN FENCE

PARTIALLY OPAQUE BUFFER REQUIREMENTS
WIDTH: 7.5 FT MIN
CANOPY TREES: MIN 2 PER 100 FEET
UNDERSTORY TREES: MIN 1 PER 100 FEET
SHRUBS: MIN 8 PER 100 FEET
FENCE: MIN SIX FOOT HIGH MAX 30% OPEN FACE WOODEN FENCE

SHRUBS FOR THE BUFFER SHALL BE PLANTED ON THE PUBLIC OR PROPERTY LINE SIDE OF THE FENCE

FENCE TO BE CONSTRUCTED OF MATERIALS WITH A MINIMUM LIFE EXPECTANCY OF TEN YEARS OR THE EQUIVALENT

BROKEN BUFFER REQUIREMENTS
WIDTH: 10 FT MIN
CANOPY TREES: MIN 1 PER 100 FEET
UNDERSTORY TREES: MIN 1 PER 100 FEET
SHRUBS: MIN 8 PER 100 FEET

CERTIFICATIONS

THE PROPOSED USE COMPLIES WITH ALL DIMENSIONAL REQUIREMENTS OF SECTION 10 OF THE LAND DEVELOPMENT CODE

THE PROPERTY DOES NOT LIE WITHIN AN AREA OF SPECIAL FLOOD HAZARD

HANDICAPPED ACCESSIBILITY REQUIREMENTS HAVE BEEN MET IN ACCORDANCE WITH SECTION 21.07 AND SECTION 31.09(5) OF THE LAND DEVELOPMENT CODE

THE PROPERTY IS NOT IN AN ENVIRONMENTAL CONSTRAINT AREA

THE PROPOSED DEVELOPMENT IS CONSISTENT WITH THE COMPREHENSIVE PLAN AND THE CONSISTENCY AND CONCURRENCY REQUIREMENT OF SECTION 35 OF THE LAND DEVELOPMENT CODE

SHEET INDEX

PROMO: BUDGETING
CONSTRUCTION: BUDGETING

PERMITTING / DESIGN REVISIONS
2023-10-18 75% PLANS FOR INITIAL SUBMITTALS (CITY CLEARSITE, SJRWMD, FDOT DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER A. GMUER
FL PE # 71509
2023-10-18

Gmuer ENGINEERING
FL CA # 31183
2603 NW 13th ST., Suite 314 · Gainesville, FL 32609
(352) 281-4428

CLIENT: RONNIE, LLC
DESIGN: C.A. GMUER, PE
QUALITY CONTROL: C.A. GMUER, PE
CDP / ERP, PLAN APP #: TBD
WMD APP #: TBD
DEQ PROJECT #: 23-0018

MADDOX FOUNDRY & READY MIX BATCH PLANT

COVER & SHEET INDEX

C-000

STORMWATER MINIMUM OPERATION AND MAINTENANCE STANDARDS

[illegible]

STORMWATER INSPECTION REPORTING

[illegible]

EROSION CONTROL AND STABILIZATION

[illegible]

WARRANTIES

1 IF NOT SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS ALL IMPROVEMENTS SHALL BE WARRANTED BY THE CONTRACTOR TO THE OWNER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. THIS WARRANTEE WILL ALSO EXTEND TO THE MAINTENANCE ENTITY OF ANY OTHER IMPROVEMENTS INCLUDING ROADS SIDEWALKS, UTILITIES, STORM PIPING, ETC OR TO THE EXTENT REQUIRED BY THEIR APPLICABLE DESIGN STANDARDS

DESIGN ELEMENTS AND INFORMATION FURNISHED BY OTHERS

1 THE ENGINEER AND ITS CONSULTANTS PREPARED THESE PLANS AND DESIGN DOCUMENTS THROUGH THE USE OR RELIANCE UPON DESIGN ELEMENTS AND INFORMATION ORDINARILY OR CUSTOMARILY FURNISHED BY OTHERS, INCLUDING, BUT NOT LIMITED TO SURVEYORS, GEOTECHNICAL ENGINEERS, ENVIRONMENTAL CONSULTANTS, ARCHITECTS, BUILDING SYSTEMS ENGINEERS, SPECIALTY CONTRACTORS, MANUFACTURERS, SUPPLIERS, AND THE PUBLISHERS OF TECHNICAL STANDARDS. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR DESIGN ERROR AND OMISSIONS RESULTING FROM THE QUALITY OF THIS INFORMATION
2 ALL POINTS OF COORDINATION OR INTERFACE BETWEEN THESE PLANS AND DESIGN DOCUMENTS AND THE PLANS AND DESIGN DOCUMENTS OF OTHERS MUST BE COMPARED BY THE CONTRACTOR
3 CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCURING MATERIALS AND INSTALLATION

UTILITY LOCATES, RELOCATION, PROTECTION, AND TERMINATION

1 UTILITY LOCATES SHALL BE COMPLETED BY THE CONTRACTOR PRIOR TO THE INITIATION OF SITE CONSTRUCTION
2 PROPOSED UTILITY TAPS AND CROSSINGS SHALL BE PHYSICALLY LOCATED AND VERIFIED BY THE CONTRACTOR AS SOON AS PRACTICABLE AND SHALL CONTACT THE ENGINEER IMMEDIATELY WITH ANY DISCREPANCIES OR CONFLICTS
3 UTILITY RELOCATION, SUPPORT, PROTECTION, TERMINATION, CAPPING, AND REMOVAL SHALL BE COORDINATED BY THE CONTRACTOR WITH UTILITY COMPANIES. ADEQUATE TIME SHALL BE PROVIDED FOR PROPER COORDINATION AND TO MINIMIZE SERVICE INTERRUPTIONS
4 CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES TO THE UTILITY COMPANY FOR THEIR SERVICES

SAFETY AND TEMPORARY TRAFFIC CONTROL (MAINTENANCE OF TRAFFIC)

1 ALL SAFETY REGULATIONS AND PRACTICES SHALL BE ENFORCED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THIS PROJECT. THIS ALSO INCLUDES THE TRAVELING PUBLIC. THE FOLLOWING IS A NOTICE TO THE CONTRACTOR AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT OR ENFORCE SAFETY REGULATIONS
2 LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
3 ALL SUBSURFACE CONSTRUCTION SHALL CONFORM TO THE PROVISIONS SET FORTH BY THE "TRENCH SAFETY ACT"
4 TEMPORARY TRAFFIC CONTROL (TTC) IS REQUIRED FOR ALL WORKS ON HIGHWAYS, ROADS, STREETS, BIKE LANES, SIDEWALKS AND SHALL HAVE A TTC PLAN. THE PLAN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER THAT IS FDOT ADVANCED MOT CERTIFIED AT THE COST OF THE CONTRACTOR. ALL WORK SHALL BE EXECUTED UNDER THE ESTABLISHED TTC PLAN AND THE REVIEWING AGENCY'S APPROVED PROCEDURES. THE PLAN AND WORK SHALL BE AT THE CONTRACTOR'S EXPENSE

GENERAL AND MISCELLANEOUS NOTES

1 THESE PLANS, DESIGN DOCUMENTS, AND NOTES ARE NOT EXHAUSTIVE. ALL THE APPLICABLE CONSTRUCTION STANDARDS AND DETAILS THAT ARE LISTED, REFERENCED, OR IMPLIED ARE INCLUDED IN THE CONTRACT DOCUMENTS BY REFERENCE
2 IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE REVIEWING AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN
3 THE REPAIR OF DAMAGE EITHER ABOVE OR BELOW GROUND BY THE CONTRACTOR OR SUB-CONTRACTORS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DAMAGE WILL BE IN THE OPINION OF THE OWNER, APPLICABLE AGENCY, OR ENGINEER. ALL REPAIRS SHALL BE MADE AT CONTRACTOR EXPENSE IN A MANNER SPECIFIED BY THE PARTICULAR ENTITY
4 CONTRACTOR IS RESPONSIBLE FOR GRADING ALL PAVEMENT, SIDEWALKS, AND GRADING AROUND BUILDINGS TO DRAIN POSITIVELY. INTERSECTIONS SHALL BE TRANSITIONED TO PROVIDE SMOOTH DRIVING SURFACE WHILE MAINTAINING POSITIVE DRAINAGE
5 CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY OBSERVED AREAS OF POOR DRAINAGE PRIOR TO PLACEMENT OF CURBS OR PAVEMENT COURSES
6 ALL UNDERGROUND UTILITIES MUST BE INSTALLED, INSPECTED, AND TESTED PRIOR TO PAVEMENT BASE OR SIDEWALK INSTALLATION

TREE PRESERVATION AND DEMOLITION

1 CONTRACTOR SHALL VERIFY AND PROTECT ALL EXISTING TREES AND NATURAL VEGETATION THAT ARE INDICATED TO REMAIN UNDISTURBED ON THE PLANS
2 TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY DEMOLITION
3 ALL TREES NOT SPECIFICALLY SHOWN TO BE PRESERVED OR REMOVED SHALL CONFIRMED WITH THE REVIEWING AGENCY AND THE OWNER. THE PROTECTION OR REMOVAL IS AT THE COST OF THE CONTRACTOR
4 CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES
5 DISTURBED AREAS SHALL BE CLEARED AND GRUBBED TO REMOVE ALL ROOTS, MISCELLANEOUS VEGETATION, DELETERIOUS MATERIAL, DEBRIS, ETC
6 SOME ITEMS TO BE REMOVED OR SALVAGED MAY NOT BE DEPICTED ON THE PLANS OR SURVEY. CONTRACTOR SHALL BE AWARE OF ALL EXISTING IMPROVEMENTS WITHIN THE CONSTRUCTION LIMITS AND CONFIRM AN INVENTORY WITH THE OWNER
7 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OR SALVAGE OF ALL EXISTING BUILDINGS, STRUCTURES, SLABS, CONCRETE, ASPHALT, DEBRIS PILES, SIGNS, ETC, AND THEIR APPURTENANCES UNLESS OTHERWISE NOTED. ALL ITEMS SHALL BE PROPERLY DISPOSED IN A LEGAL MANNER
8 PROVIDE PROTECTION AS NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS SHOWN IN THE PLANS TO REMAIN

PERMITTING, CONSTRUCTION STANDARDS, SUBMITTALS, REQUESTS FOR INFORMATION, INSPECTIONS, TESTING, PUNCH LISTS, RECORD DRAWINGS, AND AS-BUILTS

1 SITE CLEARING AND DEMOLITION MAY NOT BE ABLE TO BEGIN UNTIL CERTAIN PERMITS HAVE BEEN ISSUED AND MAY REQUIRE PRE-CONSTRUCTION MEETINGS, INSPECTIONS, CLEARANCES. THESE PERMITS ARE TYPICALLY ISSUED BY THE APPLICABLE WATER MANAGEMENT DISTRICT AND THE MUNICIPALITY
2 OTHER PERMITS ARE REQUIRED PRIOR TO COMPLETING OTHER SITE COMPONENTS SUCH AS THE UTILITY CONSTRUCTION PERMITS, DRIVEWAY CONNECTION PERMITS, ROW USE PERMITS, ETC
3 CONTRACTOR IS RESPONSIBLE FOR BECOMING FAMILIAR WITH AND OBTAINING ALL REQUIRED PERMITS, BONDS, TESTING, INSPECTIONS, CERTIFICATIONS, ETC PRIOR TO AND DURING CONSTRUCTION (E.G. FDEP CGP, DEWATERING, MOT, WATER/SEWER INSPECTIONS)
4 A COMPLETE SET OF PERMITTED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK
5 THE CONTRACTOR IS RESPONSIBILITY TO VERIFY THE CONSTRUCTION STANDARDS APPLICABLE TO EACH PORTION OF THE PROJECT. A SUGGESTED LIST OF APPLICABLE STANDARDS TYPICALLY ACCOMPANY THIS NOTE ON THIS PLAN SHEET
6 CONTRACTOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER INDICATING MATERIALS AND MANNER OF INSTALLATION FOR ALL COMPONENTS OF THE PROJECT PRIOR TO PROCUREMENT OF MATERIALS AND INSTALLATION (E.G. PRECAST STRUCTURES, MANUFACTURED ITEMS). FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE
7 ALL REQUESTS FOR INFORMATION SHALL BE SUBMITTED TO THE ENGINEER FOR RESPONSE BEFORE COMMENCING THE RELATED WORK VIA THE OWNER'S CONSTRUCTION DOCUMENTATION PROCESS
8 CONTRACTOR IS RESPONSIBLE FOR COMPILING A LIST INSPECTIONS AND FIELD VISITS DESIRED BY THE OWNER AND THE ENGINEER AND REASONABLY SCHEDULING THOSE INSPECTIONS
9 CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND COORDINATING ALL INSPECTIONS REQUIRED BY THE REVIEWING AGENCIES AS LISTED IN THE PERMITS, INSPECTOR'S REQUEST, OR IMPLIED BY THE DESIGN STANDARDS
10 CONTRACTOR SHALL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM TESTING OF MATERIALS, SOILS, UTILITIES, ETC. THE TESTING SHALL BE IN ACCORDANCE WITH THE APPROVED PERMITS, CONSTRUCTION STANDARDS, INSPECTOR'S REQUEST, DESIGN REPORTS, AND STANDARD PAVING AND GRADING TESTING. THIS SHALL INCLUDE DENSITY TESTING IN ALL PAVEMENT AREAS, UTILITY TRENCH COMPACTION ESPECIALLY UNDER ROADS AND OTHER PAVED AREAS, CONCRETE, AND OTHER MATERIALS TESTING
11 SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR ALL RETESTING COSTS AND ANY RECONSTRUCTION REQUIRED TO MEET THE TESTING REQUIREMENTS
12 CONTRACTOR SHALL COORDINATE WITH THE ENGINEER THE SCHEDULE OF PUNCH LIST SITE VISITS WITH THE CONSTRUCTION SCHEDULE TO AVOID REPEAT VISITS. A TIMELINE OF ADDRESSING THE PUNCH LIST ITEMS SHALL BE PROVIDED IN A TIMELY MANNER. ANY DISPUTES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ENGINEER
13 RECORD DRAWINGS ARE DEFINED AS NOTES AND OTHER DOCUMENTATION COLLECTED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AS IT RELATES TO INSTALLATION PROGRESS, FIELD CONDITIONS, MEANS, METHODS, DEVIATIONS, AND OTHER VARIATIONS FROM THE CONTRACT DOCUMENTS. THE DOCUMENTATION MUST BE MADE AVAILABLE TO THE OWNER, ENGINEER, AND REVIEWING AGENCIES UPON REQUEST. RECORD DRAWINGS ARE NOT INTENDED TO BE EXHAUSTIVE, HOWEVER, VERIFICATION OF INSTALLED CONDITIONS CAN BE REQUESTED AT THE COST OF THE CONTRACTOR UTILIZING STANDARD METHODS
14 CONTRACTOR SHALL CONFIRM REQUIREMENTS TO PROVIDE COMPLETE AS-BUILT INFORMATION TO THE OWNER, ENGINEER, AND REVIEWING AGENCIES AT THE COST OF THE CONTRACTOR
15 AS-BUILTS ARE DEFINED AS A DRAWING PRODUCED BY A REGISTERED LAND SURVEYOR BASED ON FIELD MEASUREMENTS OF THE FINISHED SITE IMPROVEMENTS WITH LOCATIONS, ELEVATIONS, AND DESCRIPTION OF IMPROVEMENTS. THEY SHOULD MEET REVIEWING AGENCIES REQUIREMENTS PER PERMIT AND CLOSEOUT REQUIREMENTS. THEY SHOULD ALSO MEET THE OWNER'S NEED FOR LENDING, WARRANTEE, AND OTHER REQUIREMENTS
16 AS-BUILTS CONTAIN AT A MINIMUM BUILDING LOCATION AND FINISHED FLOOR ELEVATIONS, ACCESSIBLE ROUTE AND PARKING GRADES, PAVEMENT GRADE BREAKS, GRAVITY STRUCTURE TOP ELEVATIONS AND PIPE SIZES AND INVERTS, PRESSURE SYSTEM FITTINGS AND VALVES, SAMPLING POINTS, STORMWATER FACILITY TOP AND BOTTOM PERIMETERS AND OTHER FEATURES, OUTFALL STRUCTURE DETAILS, ETC. AND OTHER LOCATIONS WHERE FIELD CONDITIONS DO NOT MATCH THE CONTRACT DOCUMENTS
17 ADDITIONAL AS-BUILT INFORMATION MAY BE REQUIRED DURING CONSTRUCTION INSTALLATIONS AT CRITICAL AREAS. THIS INCLUDES BUT IS NOT LIMITED TO PIPE CROSSINGS OF WATER MAINS WITH LESS THAN 18 INCHES OF CLEARANCE OR WHEN PARALLEL UTILITIES WITH WATER MAINS HAVE LESS THAN 10 FEET OF CLEARANCE

WORK WITHIN THE COUNTY RIGHT-OF-WAY

1 A RIGHT-OF-WAY USE PERMIT SHALL BE REQUIRED FOR ANY WORK WITHIN THE RIGHT-OF-WAY THAT INCLUDES LIGHTING, LANDSCAPING, AND IRRIGATION. PERMITS SHALL BE REQUIRED FROM CCPW
2 CONTRACTOR SHALL OBTAIN AN APPROVED MAINTENANCE OF TRAFFIC (MOT) PLAN FROM CCPW PRIOR TO COMMENCING CONSTRUCTION IN THE RIGHT-OF-WAY OF US 441
3 THE METHOD AND MANNER OF PERFORMING THE WORK AND THE QUALITIES OF MATERIAL FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY CCPW FOR WORK WITHIN THEIR RESPECTIVE RIGHT-OF-WAY
4 NO WORK SHALL BE DONE NOR MATERIALS USED IN THE RIGHT-OF-WAY WITHOUT INSPECTION BY CCPW. THE CONTRACTOR SHALL FURNISH CCPW WITH EVERY REASONABLE FACILITY FOR ASCERTAINING WHETHER THE WORK PERFORMED AND MATERIALS USED ARE IN ACCORDANCE WITH THE REQUIREMENTS AND INTENT OF THE PLANS AND SPECIFICATIONS
5 CCPW RESERVES THE RIGHT TO MODIFY THE PROPOSED WORK WITHIN RESPECTIVE RIGHT-OF-WAY TO ENSURE COMPATIBILITY WITH EXISTING IMPROVEMENTS. SUCH MODIFICATION COST SHALL BE BORNE BY THE CONTRACTOR.
6 CCPW SHALL BE NOTIFIED 24 HOURS IN ADVANCE FOR INSPECTION OF PERTINENT STAGES OF CONSTRUCTION WITHIN THEIR RESPECTIVE RIGHT-OF-WAY; SUBGRADE PREPARATION, LIMEROCK PLACEMENT, INSPECTION OF THE SWEPT LIMEROCK BASE PRIOR TO THE PLACEMENT OF ASPHALT AND OTHERS AS REQUIRED FOR APPROVAL

STANDARD ABBREVIATIONS

ADJ	ADJACENT
ALUM	ALUMINUM
APT	APARTMENT
ASPH	ASPHALT
B&J	BORE & JACK
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
BOW	BOTTOM OF WALL
BSL	BUILDING SETBACK LINE
C&G	CURB & GUTTER
C1	CURVE ONE
CATV	CABLE TELEVISION
CEC	CLAY ELECTRIC COOPERATIVE
CF	CUBIC FEET
CI	CAST IRON
CIP	CAST IN PLACE
CL	CENTER LINE
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
C/O	CLEAN OUT
COMM	COMMUNICATIONS
CONC	CONCRETE
CY	CUBIC YARD
DBI	DITCH BOTTOM INLET
DDCBP	DOUBLE DETECTOR CHECK BACKFLOW PREVENTER
DEG	DEGREES
DHWL	DESIGN HIGH WATER LEVEL
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
E	EAST
EL	ELEVATION
ELEC	ELECTRIC
EOP	EDGE OF PAVEMENT
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EX	EXISTING
FOC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FIRE LINE
FM	FORCE MAIN
FO	FIBER OPTIC
FP	FLOOD PLAIN
FT	FEET
FUT	FUTURE
GALV	GALVANIZED
GV	GATE VALVE
HC	HANDICAP
HORIZ	HORIZONTAL
HR	HOUR
INV	INVERT
LF	LINEAR FEET
L1	LINE ONE
LAT	LATITUDE
LONG	LONGITUDE
LT	LEFT
MAINT	MAINTENANCE
MAX	MAXIMUM
MES	MITERED END SECTION
MH	MANHOLE
MIN	MINIMUM
MO	MONTH
MUTCD	MANUAL ON UNIFORM TRAFFIC DESIGN
N	NORTH
N/A	NOT APPLICABLE
NE	NORTH EAST
NG	NATURAL GRADE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTH WEST
OC	ON CENTER
PE	PROFESSIONAL ENGINEER
POB	POINT OF BEGINNING
POE	POINT OF ENDING
PL	PROPERTY LINE
PRI	PRIMARY
PRM	PERMANENT REFERENCE MARKER
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
PUD	PLANNED URBAN DEVELOPMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
ROW	RIGHT OF WAY
RPZBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RT	RIGHT
S	SOUTH
SW	SIDEWALK
SE	SOUTH EAST
SF	SQUARE FEET
SG	SWITCH GEAR
SPC	SPACE
SS	SANITARY SEWER
ST	STORM SEWER
STCO	STORM CLEANOUT (TYP ROOF DRAINS)
STA	STATION
STD	STANDARD
STL	STEEL
SW	SOUTH WEST
SY	SQUARE YARD
TBRC	TRAFFIC BEARING RING & COVER
TEL	TELEPHONE
TX	TRANSFORMER
TV	TELEVISION
TOW	TOP OF WALL
TYP	TYPICAL
UTIL	UTILITY
VCP	VITRIFIED CLAY PIPE
VEH	VEHICLE
W	WEST
W/	WITH
WWW	WATER / WASTEWATER
WM	WATER MAIN
WS	WATER SERVICE
WW	WASTEWATER
YR	YEAR

GENERAL LEGEND - SEE PLANS FOR ADDITIONAL CALLOUTS

EXISTING CABLE
EXISTING COMMUNICATIONS
EXISTING ELECTRIC OVERHEAD
EXISTING ELECTRIC UNDERGROUND
EXISTING FIBER OPTIC
EXISTING FIRE
EXISTING FORCE MAIN
EXISTING GAS
EXISTING RECLAIMED WATER
EXISTING STORM
EXISTING TELEPHONE
EXISTING WATER
PROPOSED CABLE
PROPOSED COMMUNICATIONS
PROPOSED ELECTRIC OVERHEAD
PROPOSED ELECTRIC UNDERGROUND
PROPOSED FIBER OPTIC
PROPOSED FIRE
PROPOSED FORCE MAIN
PROPOSED GAS
PROPOSED RECLAIMED WATER
PROPOSED STORM
PROPOSED TELEPHONE
PROPOSED WATER
PROPOSED WASTEWATER
EXISTING ELEVATION CONTOUR
PROPOSED ELEVATION CONTOUR
SWALE CENTERLINE
PROPOSED GRADE SPOT ELEVATION
SILT FENCE
TREE BARRICADE
SETBACK
BUFFER
PROPERTY BOUNDARY
EXISTING FENCE

STORMWATER POLLUTION PREVENTION PLAN

[illegible]

PRICING | BUDGETING
CONSTRUCTION | BUDGETING

PERMITTING / DESIGN REVISIONS
2023-06-23 60% PLANS
2023-10-16 75% PLANS FOR INITIAL SUBMITTALS (CITY CUP/SITE, SRWMD, FDOT DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER A. GMUER
FL PE # 71509
2023-10-16

Gmuer ENGINEERING
FL CA # 31533 gmuereng.com (352) 281-4928
2603 NW 13th ST, Box 314 Gainesville, FL 32609

CLIENT	RONNIE, LLC
DESIGN	C.A. GMUER, PE
QUALITY CONTROL	C.A. GMUER, PE
CUP / SITE PLAN APP #	TBD
WMD APP #	TBD
GEng PROJECT #	22-0019

MADDOX FOUNDRY & READY MIX BATCH PLANT

NOTES & LEGEND

C-010

EXISTING CONDITIONS MAP

C-020

MADDOX FOUNDRY & READY MIX BATCH PLANT

CLIENT	ROANKE, LLC
DESIGN	C.A. GAMLER, PE
QUALITY CONTROL	C.A. GAMLER, PE
CUP / SITE PLAN APP #	TBD
WMD APP #	TBD
GFay PROJ# CT #	23-0019

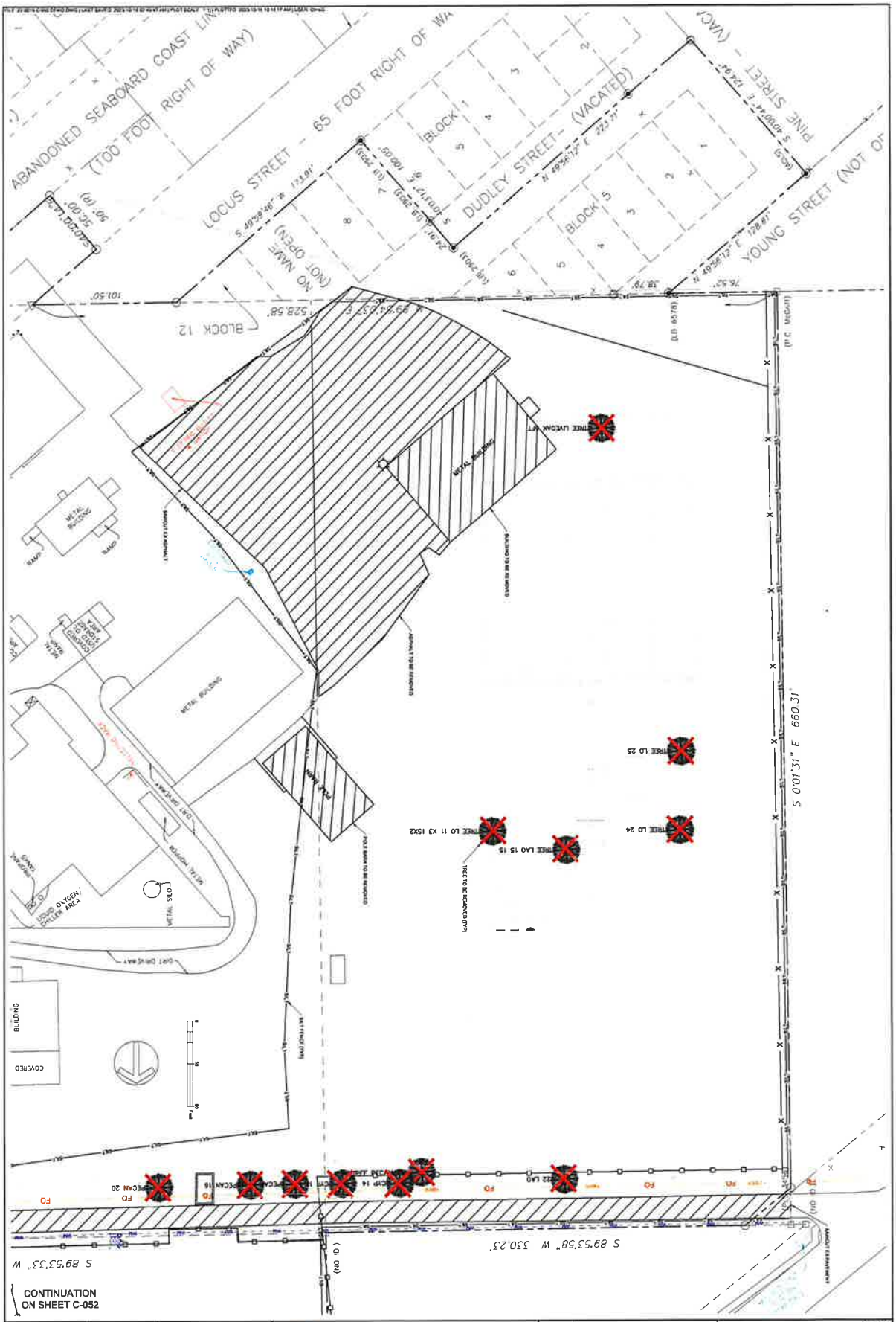
Gmuer ENGINEERING
FL CA # 31533 gmuering.com (352) 291-4629
2620 NW 13th ST, Ste 314 Gainesville, FL 32609

CERTIFICATE OF AUTHORIZATION NUMBER 31533
STATE OF FLORIDA
ENGINEER OF RECORD
CHRISTOPHER A. GAMLER, PE
LICENSE NUMBER 71015
10-18-2023

PERMITTING / DESIGN REVISIONS

2022-06-25 60% PLANS
2023-10-18 75% PLANS FOR INITIAL SUBMITTALS
(CITY CUP/SITE, ERWMD, FDOT DRAINAGE)

PRICING	BUDGETING
CONSTRUCTION	BUDGETING



C-051

DEMOLITION & EROSION CONTROL PLAN

MADDOX FOUNDRY & READY MIX BATCH PLANT

CLIENT	RONNIE, LLC
DESIGN	C.A. GMUER, PE
QUALITY CONTROL	C.A. GMUER, PE
CUP / SITE PLAN APP #	TBD
WMD APP #	TBD
Gmuer PROJECT #	23-0019

Gmuer ENGINEERING

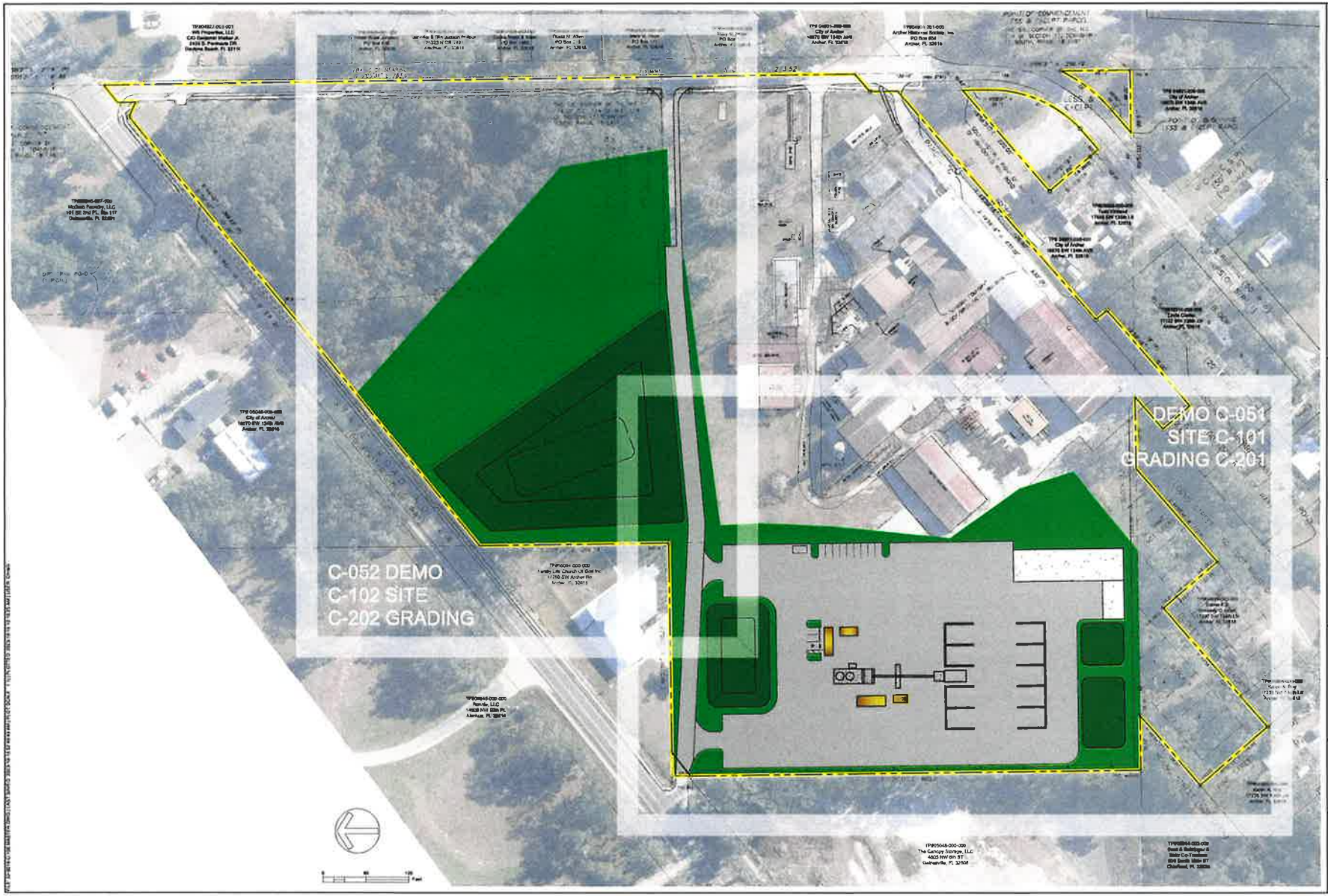
FL CA # 31533 gmuereng.com (352) 781-4626
2903 NW 13th ST. Ste 314 Gainesville, FL 32609

PERMITTING / DESIGN REVISIONS

2022-06-25 60% PLANS
2023-10-16 75% PLANS FOR INITIAL SUBMITTALS (CITY CUP/SITE, SJRWMD, PEDT DRAINAGE)

PRICING	BUDGETING
CONSTRUCTION	BUDGETING

C-052	DEMOLITION & EROSION CONTROL PLAN	MADDOX FOUNDRY & READY MIX BATCH PLANT	CLIENT: ROMME, LLC DESIGN: C.A. GMUER, PE QUALITY CONTROL: C.A. GMUER, PE CUP / SITE PLAN APP #: TBD WMD APP #: TBD GEng PROJECT #: 23-0018	Gmuer ENGINEERING FL CA # 31533 gmuereng.com (352) 291-4628 2625 NW 13th ST, Box 314 Gainesville, FL 32609	PERMITTING / DESIGN REVISIONS 2023-06-25 60% PLANS 2023-10-16 75% PLANS FOR INITIAL SUBMITTALS (CITY CUP/SITE, SRWMD, FDOT DRAINAGE)
					PRICING: BUDGETING CONSTRUCTION: BUDGETING



BUDGETING

PRICING

CONSTRUCTION

PERMITTING / DESIGN REVISIONS

2022-09-23 90% PLANS FOR INITIAL SUBMITTALS
2022-10-13 FDEP COMMENTS
(CITY COMMENTS, SWMD, FDOT DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER R.A. GAUER
FL PE # 71199
2023-10-16

Gmuer ENGINEERING
FL CA # 31531 - engineering cert. - (352) 281-4424
2403 NW 13th St. Ste 314 - Gainesville, FL 32609

CLIENT: ROMME, LLC

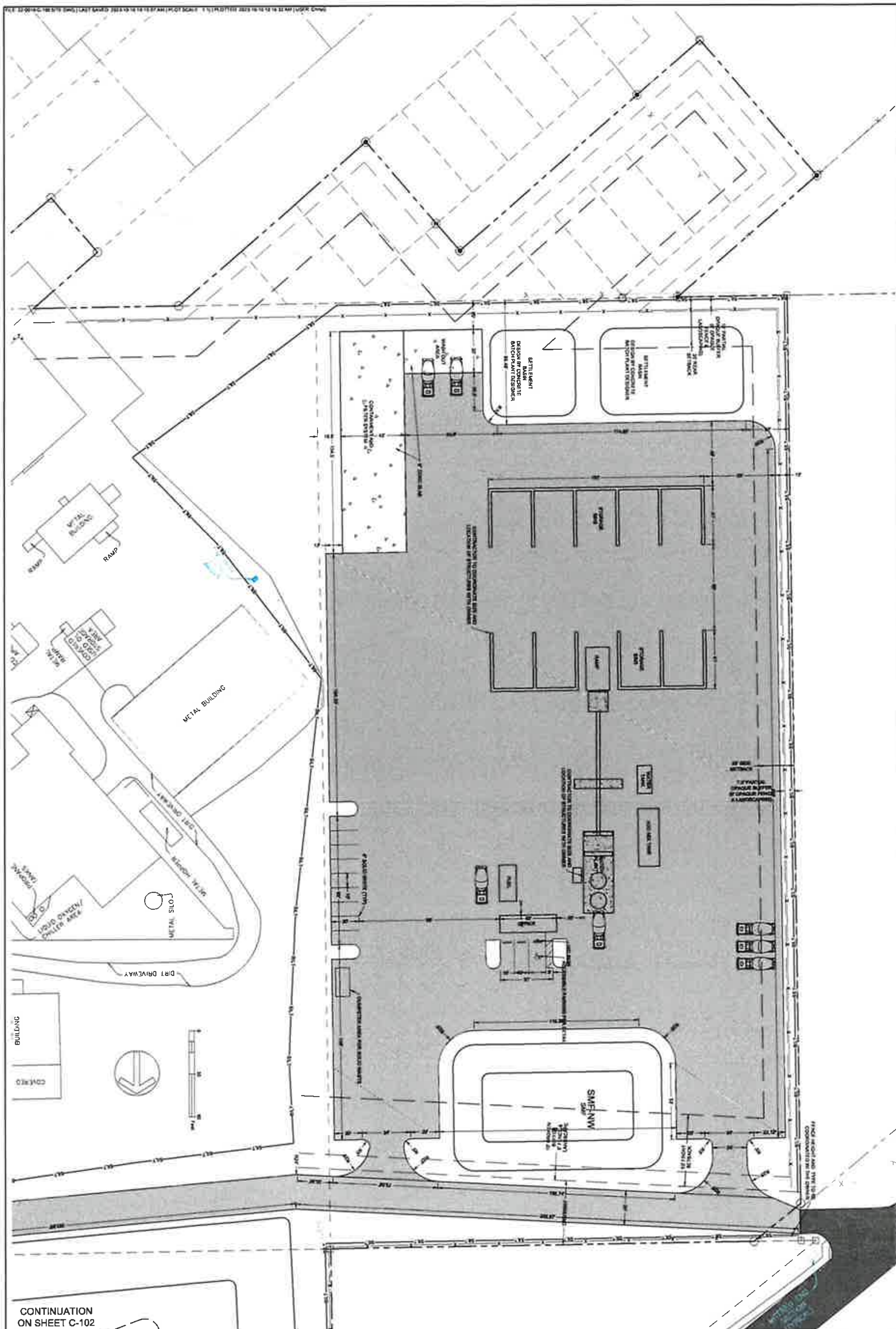
DESIGN: C.A. GAUER, PE
QUALITY CONTROL: C.A. GAUER, PE

CITY SITE PLAN APP #: TBD
WMD APP #:
ERP PROJECT #: 27-0019

MADDOX FOUNDRY & READY MIX BATCH PLANT

MASTER SITE PLAN & KEY MAP

C-100



CONTINUATION ON SHEET C-102

SITE & HORIZONTAL CONTROL PLAN	C-101
MADDOX FOUNDRY & READY MIX BATCH PLANT	

CLIENT	ROANIE, LLC
DESIGN	C.A. GMUER, PE
QUALITY CONTROL	C.A. GMUER, PE
CUP / SITE PLAN APP #	TBD
WMD APP #	TBD
GEng PROJECT #	22-0019

Gmuer ENGINEERING

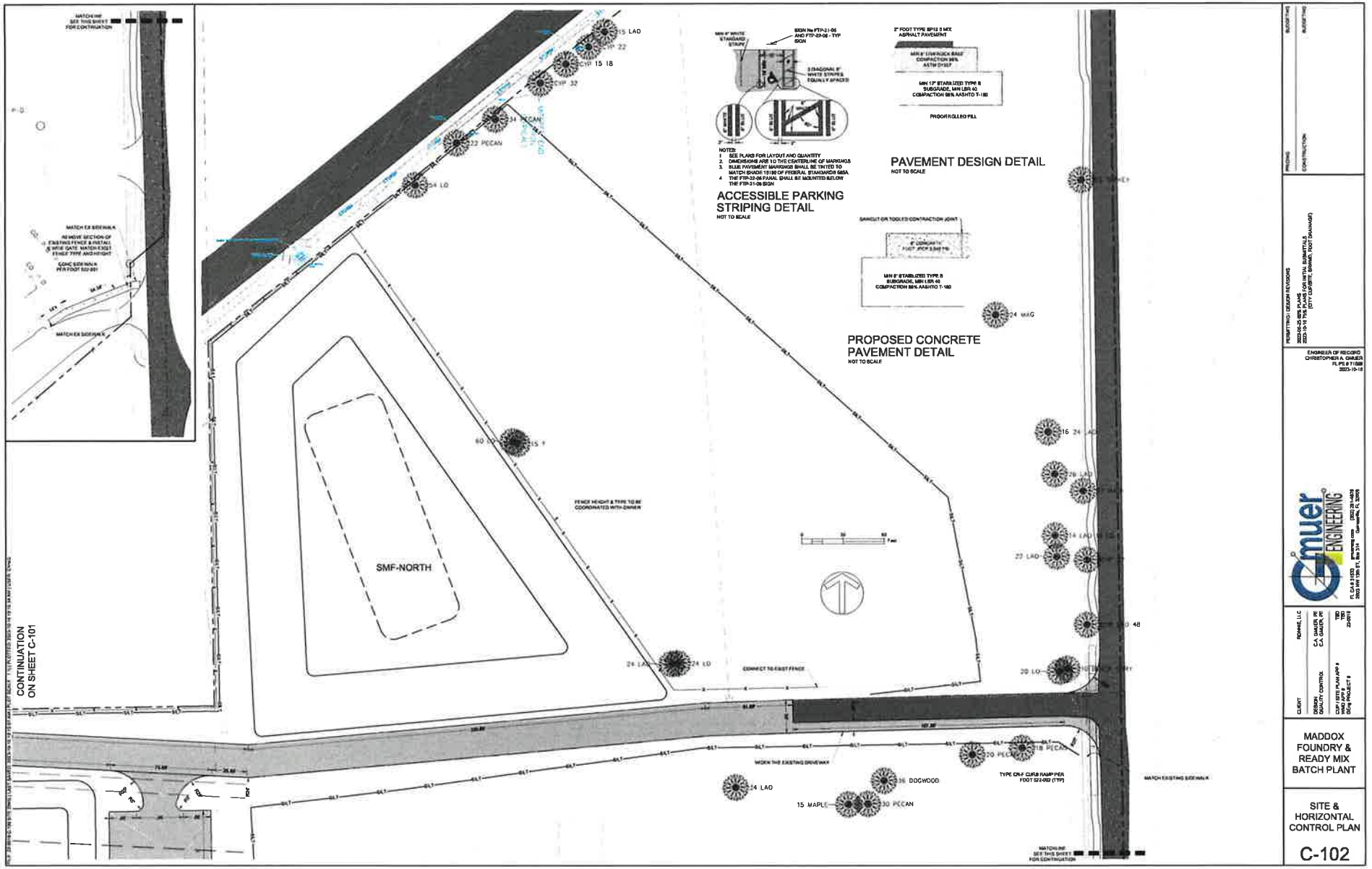
FL CA # 31533 gmuereng.com (352) 281-4928
2603 NW 13th ST. Box 314 Gainesville, FL 32609

ENGINEER OF RECORD
CHRISTOPHER A. GMUER
FL PE # 71698
2023-10-18

PERMITTING / DESIGN REVISIONS

2022-08-25 60% PLANS
2023-10-18 75% PLANS FOR INITIAL SUBMITTALS
(CITY CUP/SITE, SRWMD, FDOT DRAINAGE)

PRICING	BUDGETING
CONSTRUCTION	BUDGETING



PERMITTING / DESIGN REVISIONS
1 2023-10-13 RE-SUBMITTAL
2023-10-13 RE-SUBMITTAL
2023-10-13 TPS PLANS FOR INITIAL SUBMITTALS
(CITY CUP SITE, SWMD, FDOT DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER A. GAUER
FL PE # 71158
2023-10-13

PERMITTING
CONSTRUCTION

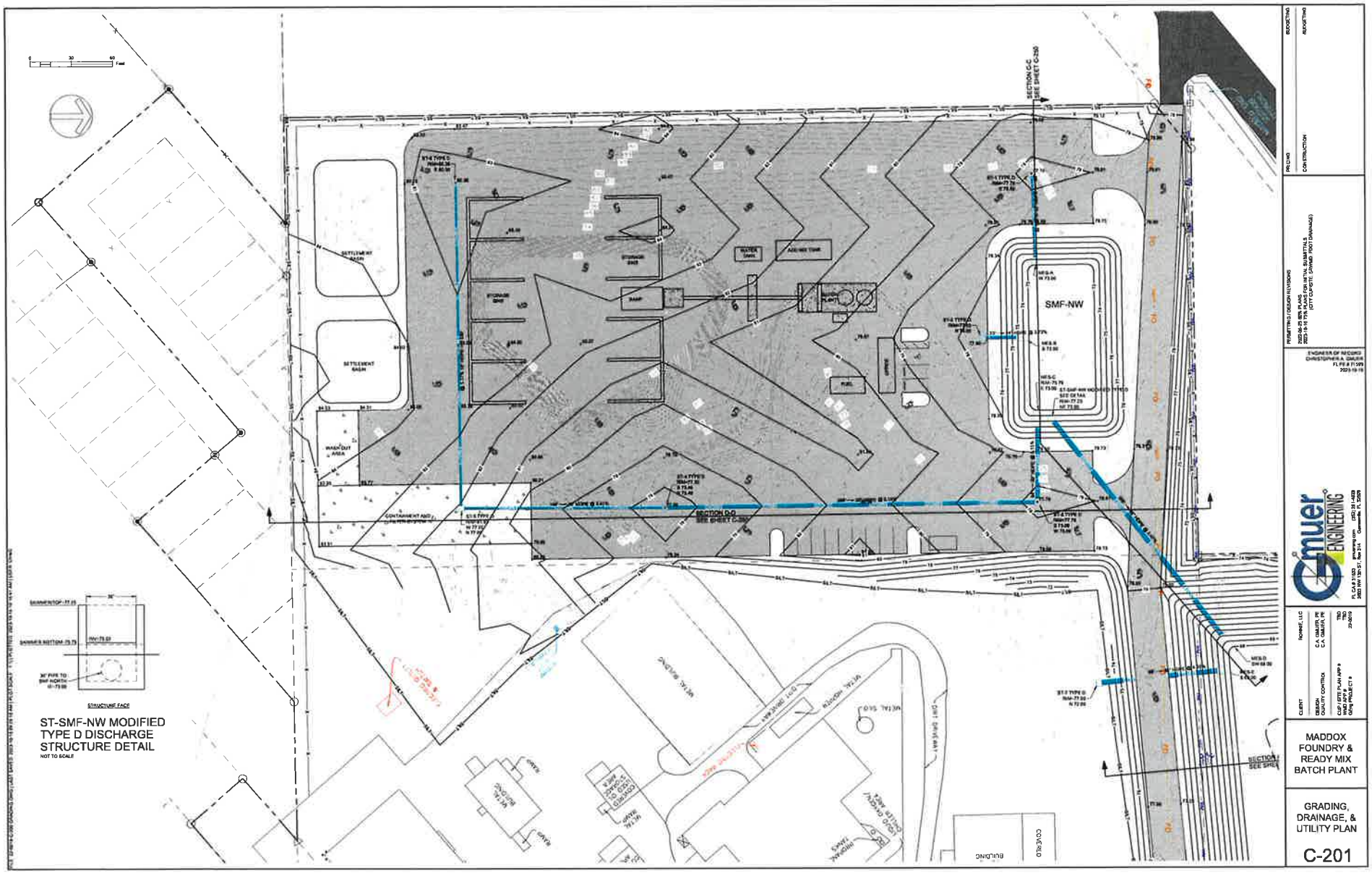
CLIENT: ROMME, LLC
DESIGN: C.A. GAUER, PE
QUALITY CONTROL: C.A. GAUER, PE
CUP / SDP PLAN APP #: TBD
WMD APP #: TBD
GCPD PROJECT #: 23-013

Gauer Engineering
FL CA# 31323
2553 NW 53rd St., Ste 310 Gainesville, FL 32605 (352) 281-4828

MADDOX FOUNDRY & READY MIX BATCH PLANT

SITE & HORIZONTAL CONTROL PLAN

C-102



ST-SMF-NW MODIFIED TYPE D DISCHARGE STRUCTURE DETAIL

NOT TO SCALE

BIDDING	BIDDING
PRICING	CONSTRUCTION

PERMITTING / DESIGN REVISIONS

2023-06-05 95% PLANS
2023-10-16 TRC PLANS FOR INITIAL SUBMITTAL
(DRY RETENTION, GRAND TOUR DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER A. OMUER
FL PE # 71572
2023-10-16

Omuer ENGINEERING
2063 NW 13th ST., Ste 214 • Gainesville, FL 32609

CLIENT: RONNIE, LLC

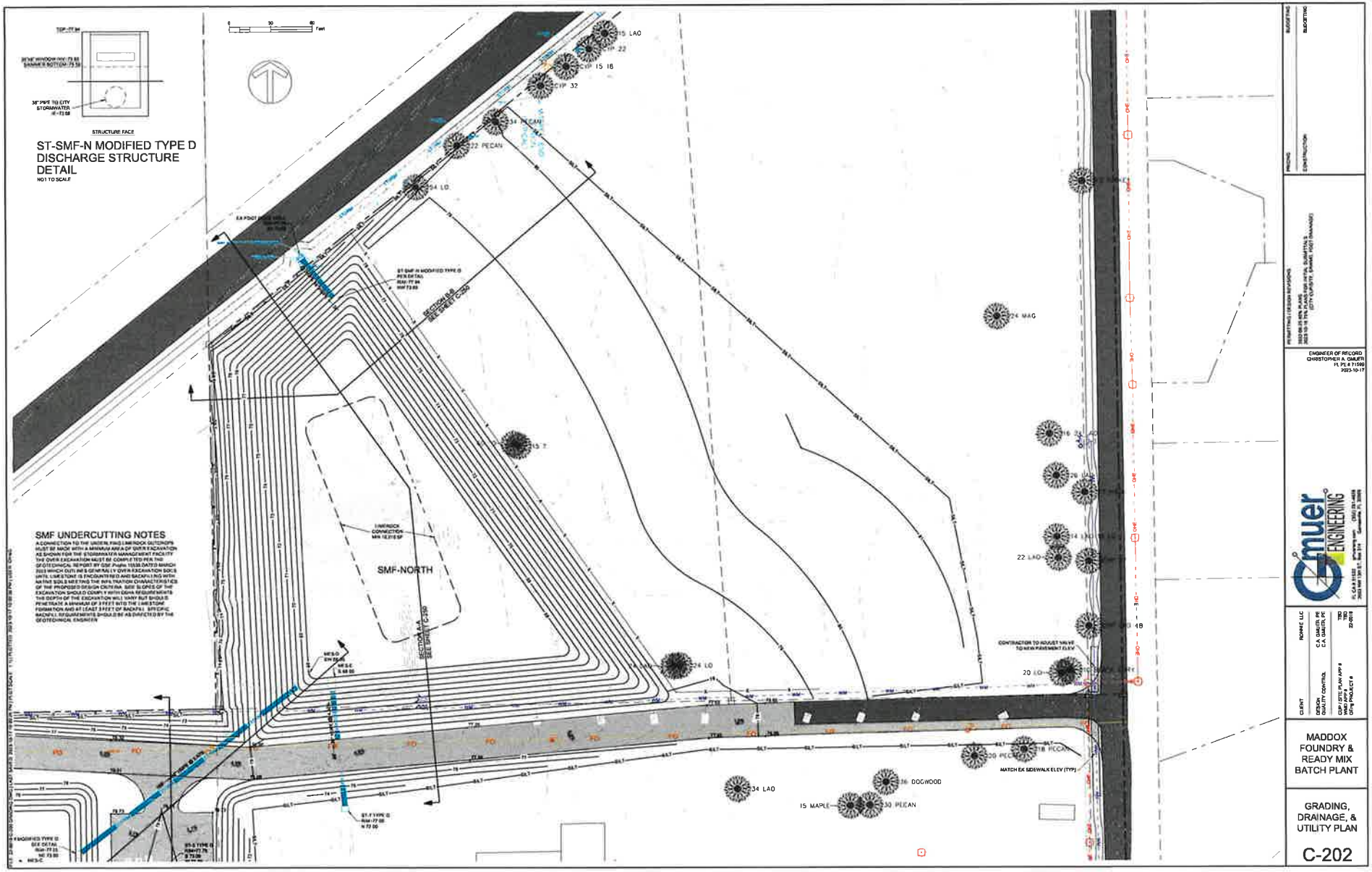
DESIGN: C.A. OMUER, PE
QUALITY CONTROL: C.A. OMUER, PE

CUP / SITE PLAN APP #: TBD
SWD PROJECT #: 24-2010
SWD PHASE / CT #:

MADDOX FOUNDRY & READY MIX BATCH PLANT

GRADING, DRAINAGE, & UTILITY PLAN

C-201



BIDDING

PRICING — BIDDING

CONSTRUCTION

PERMITTING | DESIGN REVISIONS

2023.09.25 95% PLANS
2023.10.16 TTA PLANS (WTA, SURVEY) &
(CITY SUPPORT, GRADE, HWD DRAINAGE)

ENGINEER OF RECORD
CHRISTOPHER A. OMUETI
FL PE # 71590
2023-10-17

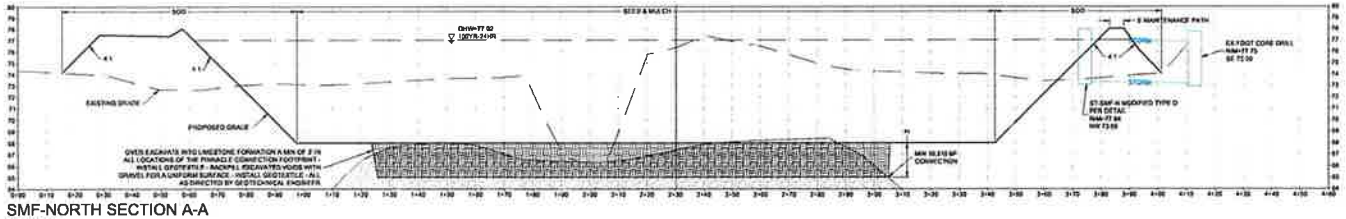
Omuer Engineering
30 CLAY STREET, Ste 1 — ORMOND BEACH, FL 32174

CLIENT: ROMIC LLC
DESIGN: C.A. OMUETI, PE
QUALITY CONTROL: C.A. OMUETI, PE
CSP / SITE PLAN APP #: TBD
WMD APP #: TBD
Orig PROJECT #: 23-0018

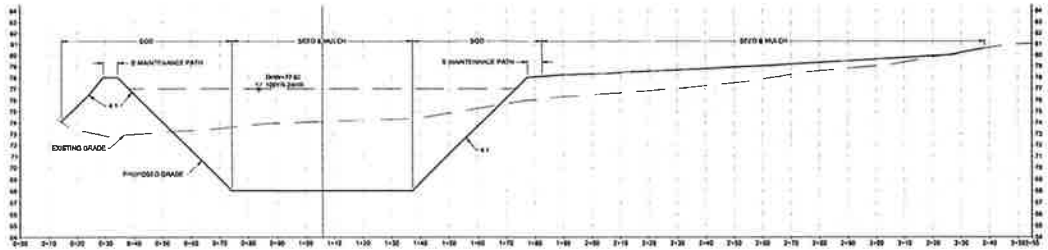
MADDOX FOUNDRY & READY MIX BATCH PLANT

GRADING, DRAINAGE, & UTILITY PLAN

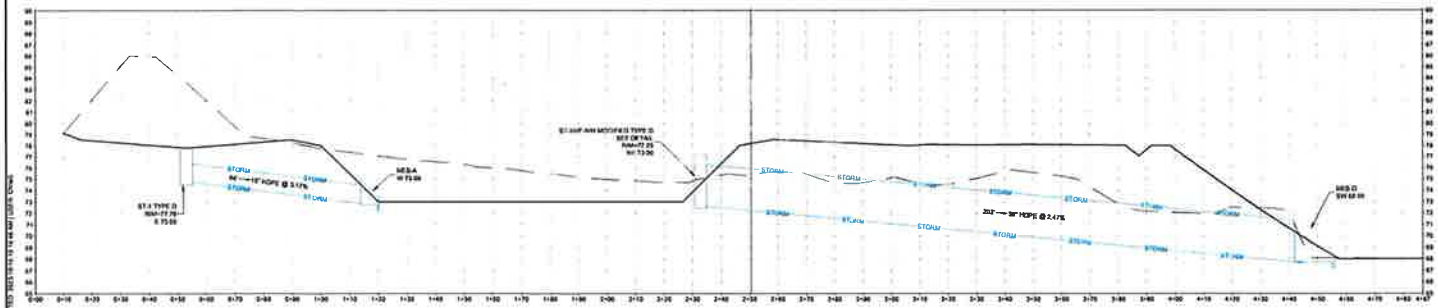
C-202



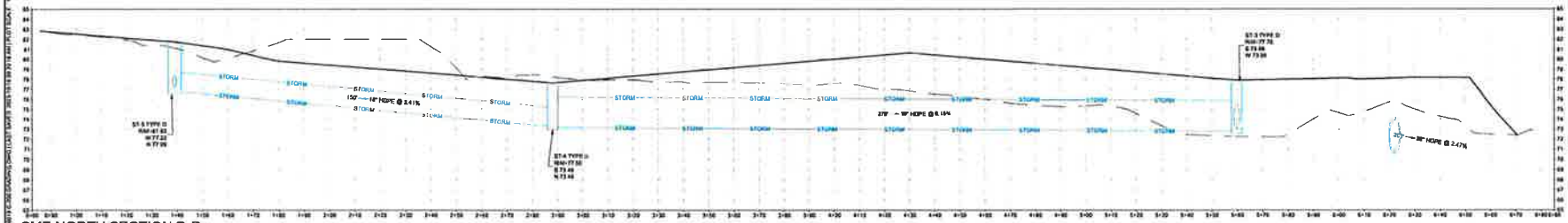
SMF-NORTH SECTION A-A



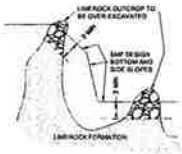
SMF-NORTH SECTION B-B



SMF-NORTH SECTION C-C



SMF-NORTH SECTION D-D

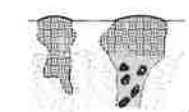


NOTES: THE FOLLOWING SHALL BE PERFORMED FOR BOTH THE PROPOSED UNDERCUT AREA AND IN THE EVENT ANY LIMEROCK OUTCROP FEATURE IS ENCOUNTERED WITHIN THE LIMITS OF THE STORMWATER MANAGEMENT FACILITY (SMF) DURING ITS CONSTRUCTION / EXCAVATION

1. NOTIFY THE WATER MANAGEMENT DISTRICT AND THE APPLICABLE MUNICIPAL OR COUNTY PUBLIC WORKS WHEN THE FEATURES ARE ENCOUNTERED AND PRIOR TO COMMENCING EXCAVATION AND BACKFILL OPERATIONS
2. OVER-EXCAVATE THE OUTCROP A MINIMUM OF THREE (3) FEET BEYOND THE SMF DESIGN BOTTOM AND / OR SIDE SLOPES - INDIVIDUAL BOULDERS CAN BE REMOVED ENTIRELY AT THE OPTION OF THE CONTRACTOR
3. BACKFILL THE THE EXCAVATED VOLUME TO THE SMF DESIGN LIMITS WITH SOILS MEETING THE BACKFILL REQUIREMENTS SPECIFIED IN THE GEOTECH REPORT
4. THE BACKFILL MATERIAL SHALL BE PLACED AS PER THE GEOTECH REPORT
5. SEE THE KARST FEATURE REPAIR DETAIL IF ANY KARST FEATURES ARE ENCOUNTERED - E G SOLUTION CAVITIES, SINKHOLES

STORMWATER MANAGEMENT FACILITY LIMEROCK OUTCROP OVER-EXCAVATION AND BACKFILL DETAIL

NOT TO SCALE



NOTES: THE FOLLOWING SHALL BE PERFORMED IN THE EVENT ANY KARST FEATURES FORM DURING CONSTRUCTION - E G SOLUTION CAVITIES, CHIMNEYS, SINKHOLES

1. NOTIFY THE WATER MANAGEMENT DISTRICT AND THE APPLICABLE MUNICIPAL OR COUNTY PUBLIC WORKS IMMEDIATELY WHEN THE FEATURES ARE ENCOUNTERED - THE METHOD OF REPAIR SHALL BE SUBMITTED FOR REVIEW, COMMENT, AND APPROVAL PRIOR TO ATTEMPTING ANY REPAIR
2. SHALLOW KARST FEATURE BARE TYPICALLY LESS THAN 6' DEEP AND ONLY HAVE SMALL VOIDS IN THE LIMESTONE - THE FEATURE CAN BE REPAIRED BY BACKFILLING WITH A LOWER PERMEABILITY MATERIAL SUCH AS CLAYEY-SAND OR CLAY - COMPACT THE BACKFILL AND CREATE A SMALL MOUND SLIGHTLY ABOVE GRADE TO ACCOUNT FOR SETTLING
3. DEEP KARST FEATURES SHALL BE REPAIRED MORE PERMANENTLY - EXCAVATE THE FEATURE TO THE LIMESTONE BEDROCK - PLUG VOIDS IN THE BEDROCK WITH CLEAN GROUT - BACKFILL OVER THE PLUG WITH A LOWER-PERMEABILITY MATERIAL SUCH AS CLAYEY-SAND OR CLAY - COMPACT THE BACKFILL TO GRADE

KARST FEATURE REPAIR DETAIL

NOT TO SCALE

BIDDING

BIDDING

PROGRESS

CONSTRUCTION

PERMITTING DESIGN REVISIONS

2023-04-05 SMF PLANS FOR INITIAL SUBMITTALS
2023-10-19 75% PLANS FOR INITIAL SUBMITTALS (CITY COMMENTS, SHAND, POST DAN HAND)

ENGINEER OF RECORD
CHRISTOPHER A. GAUER
FL PE # 71-585
2023-10-19

Gauer ENGINEERING
FL CA # 3125 gauerengineering.com (352) 331-4524
2622 NW 30TH PLACE, GAINESVILLE, FL 32605

OWNER: NOMAC, LLC

DESIGN: C.A. GAUER, PE
QUALITY CONTROL: C.A. GAUER, PE

CUP / SITE PLAN APP #: TBD
MOD APP #: TBD
Cog PROJECT #: 21-0019

MADDOX FOUNDRY & READY MIX BATCH PLANT

CROSS SECTIONS AND DETAILS

C-250

LANDSCAPE NOTES

1. SUBSTITUTIONS OF PLANT MATERIAL WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT OR DESIGNEE. IF PROOF IS SUBMITTED THAT ANY PLANT SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR THE USE OF THE NEAREST EQUIVALENT SIZE OR VARIETY WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
2. SOD SHALL BE NURSERY GROWN SOD AS CLASSIFIED BY THE AMERICAN SOD PRODUCERS ASSOCIATION
3. SOD SHALL BE CERTIFIED FREE OF NOXIOUS WEEDS BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES' DIVISION OF PLANT INDUSTRY, HAVE BEEN CUT REGULARLY AT A HEIGHT OF 1 1/2 INCHES AND HOLD TOGETHER FIRMLY WHEN 0 18 INCH X 24 INCH PIECE IS PICKED UP WITH ONLY ONE HAND. THE SOD SHALL HAVE ITS ROOTS EMBEDDED IN A LAYER OF CLEAN SOIL 3/4 INCH TO 1 INCH THICK.
4. SOD SHALL BE HARVESTED, DELIVERED AND TRANSPLANTED WITH IN A PERIOD OF 48 HOURS UNLESS A SUITABLE PRESERVATION METHOD IS APPROVED PRIOR TO DELIVERY
5. PROVIDE ALL PLANT MATERIALS AS INDICATED ON THE DRAWING. THE SIZES THAT ARE INDICATED ARE THE MINIMUM ACCEPTABLE SIZES
6. ALL PLANT MATERIAL NOT OTHERWISE SPECIFIED AS SPECIMEN SHALL BE FLORIDA GRADE NO 1 OR BETTER QUALITY GRADED IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS PUBLISHED BY THE STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE. PLANTS JUDGED TO BE NOT IN ACCORDANCE WITH SAID STANDARDS WILL BE REJECTED
7. THE NUMBER OF PLANTS SPECIFIED SHALL TAKE PRECEDENCE OVER THE GRAPHIC PLANT SYMBOLS. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES REQUIRED FOR THE COMPLETION OF THE WORK AND SHALL BE RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF ALL PLANTS AND MATERIALS INDICATED ON THE DRAWINGS AND SPECIFICATIONS
8. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR DESIGNEE "IMMEDIATELY" OF ANY DISCREPANCIES IN THE PLANS OR SPECIFICATIONS
9. PROTECT THE WORK, THE PUBLIC, AND PROPERTY OWNER FROM INJURY OR LOSS ARISING IN CONNECTION WITH THIS CONTRACT. PROVIDE ADEQUATE BARRICADES, NIGHT LIGHTS, ETC. TO PROTECT THE PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ON Y DAMAGE OR INJURY DUE TO THEIR ACT OR NEGLECT
10. PLANTS AND PLANTING AREAS SHALL BE MULCHED WITHIN TWO DAYS AFTER PLANTING WITH A THREE INCH DEEP LAYER OF THE PRESCRIBED MULCH MATERIAL, ENTIRELY COVERING THE PIT OR BED AROUND EACH POINT, BUT NOT WITHIN 6" OF TREE TRUNKS
11. AS PLANTING OPERATIONS PROGRESS, ALL ROPE, WIRE, BURLAP, EMPTY CONTAINERS, ROOTS CLODS AND ALL OTHER DEBRIS SHALL BE REMOVED DAILY, AND THE SITE KEPT NEAT AT ALL TIMES
12. ANY EXCESS EXCAVATED TOPSOIL OR RICH LOAM SHALL BE PLACED AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE
13. AFTER PLANTING OPERATIONS ARE FINISHED, ALL PAVED AREAS WHICH MAY HAVE BECOME STREWN WITH SOIL OR OTHER MATERIAL SHALL BE THOROUGHLY CLEANED BY SWEEPING AND, IF NECESSARY, WASHING.
14. THE LANDSCAPE ARCHITECT OR DESIGNEE RESERVE THE RIGHT TO INSPECT THE WORK DURING THE EXECUTION OF THE CONTRACT. THE CONTRACTOR SHALL REVIEW THE ENTIRE PROJECT WITH THE LANDSCAPE ARCHITECT AND THE OWNER FOR FINAL INSPECTION TO OBTAIN APPROVAL FOR FINAL PAYMENT
15. FOR A PERIOD OF ONE YEAR FROM AND AFTER THE DATE OF THE FINAL ACCEPTANCE OF HIS WORK, CONTRACTOR SHALL PROMPTLY AND PROPERLY REPAIR OR REPLACE ALL DEFECTIVE MATERIALS, EQUIPMENT, PLANTS, OR WORKMANSHIP WHICH BECOMES EVIDENT DURING THAT PERIOD, AND SHALL DO SO AT NO ADDITIONAL COST TO THE OWNER.
16. MAINTENANCE: THE HOLDER OF THE CERTIFICATE OF OCCUPANCY SHALL BE THE RESPONSIBLE PARTY FOR THE MAINTENANCE OF ALL LANDSCAPE AREAS WHICH SHALL BE MAINTAINED SO AS TO PRESENT A HEALTHY, NEAT AND ORDERLY APPEARANCE AT ALL TIMES AND SHALL BE KEPT FREE FROM REFUSE AND DEBRIS. ALL PLANTED AREAS SHALL BE PROVIDED WITH A READILY AVAILABLE WATER SUPPLY TO ENSURE VIGOROUS HEALTHY GROWTH AND DEVELOPMENT. MAINTENANCE SHALL INCLUDE THE REPLACEMENT OF ALL DEAD PLANT MATERIAL
17. TREES NOT WITHIN PLANTING BEDS SHALL BE SLEEVED WITH 12" OF PLASTIC TURING TO PROTECT TRUNKS FROM MOWER/TRIMMER DAMAGE.
18. TREES WILL BE STAKED AS NEEDED AND WILL BE REMOVED AFTER ONE YEAR. (OWNER SHALL REMOVE ANY TREE STAKING)
19. NO ASPHALT, CONCRETE, LIMEROCK, OR CONSTRUCTION DEBRIS IS ALLOWED IN LANDSCAPE BEDS. IF AREA MUST BE EXCAVATED, SOIL IN PLANTING BEDS SHALL BE REPLACED WITH HIGH QUALITY DEEP FILL OF PH 6-6.5
20. NEW TREES TO BE INSTALLED SHALL HAVE PLANTING PIT TWICE THE DIAMETER OF THE CONTAINER. THE FIRST ROOT ARISING FROM THE TRUNK SHALL BE NO DEEPER THAN 2" BELOW THE SOIL SURFACE WHEN PLANTED. THE SURFACE OF THE ROOT BALL SHALL BE 1"- 2" ABOVE GRADE WHEN PLANTING IS COMPLETED
21. OWNER WILL SEEK A VARIANCE FROM THE CITY OF ARCHER FOR THE IRRIGATION OF THE PROPOSED LANDSCAPE MATERIAL. TREES AND PLANTS WILL BE MANUALLY WATERED

BUFFER REQUIREMENTS

BUFFERS VARIES BASED ON THE ADJACENT USE
R-3 RESIDENTIAL O (OPAQUE) 15FT WIDE (6FT FENCE AND LANDSCAPING)
C-2 COMMERCIAL PO (PARTIAL OPAQUE) 7.5FT WIDE (5FT FENCE AND LANDSCAPING)
I INDUSTRIAL B (BROKEN) 10F WIDE

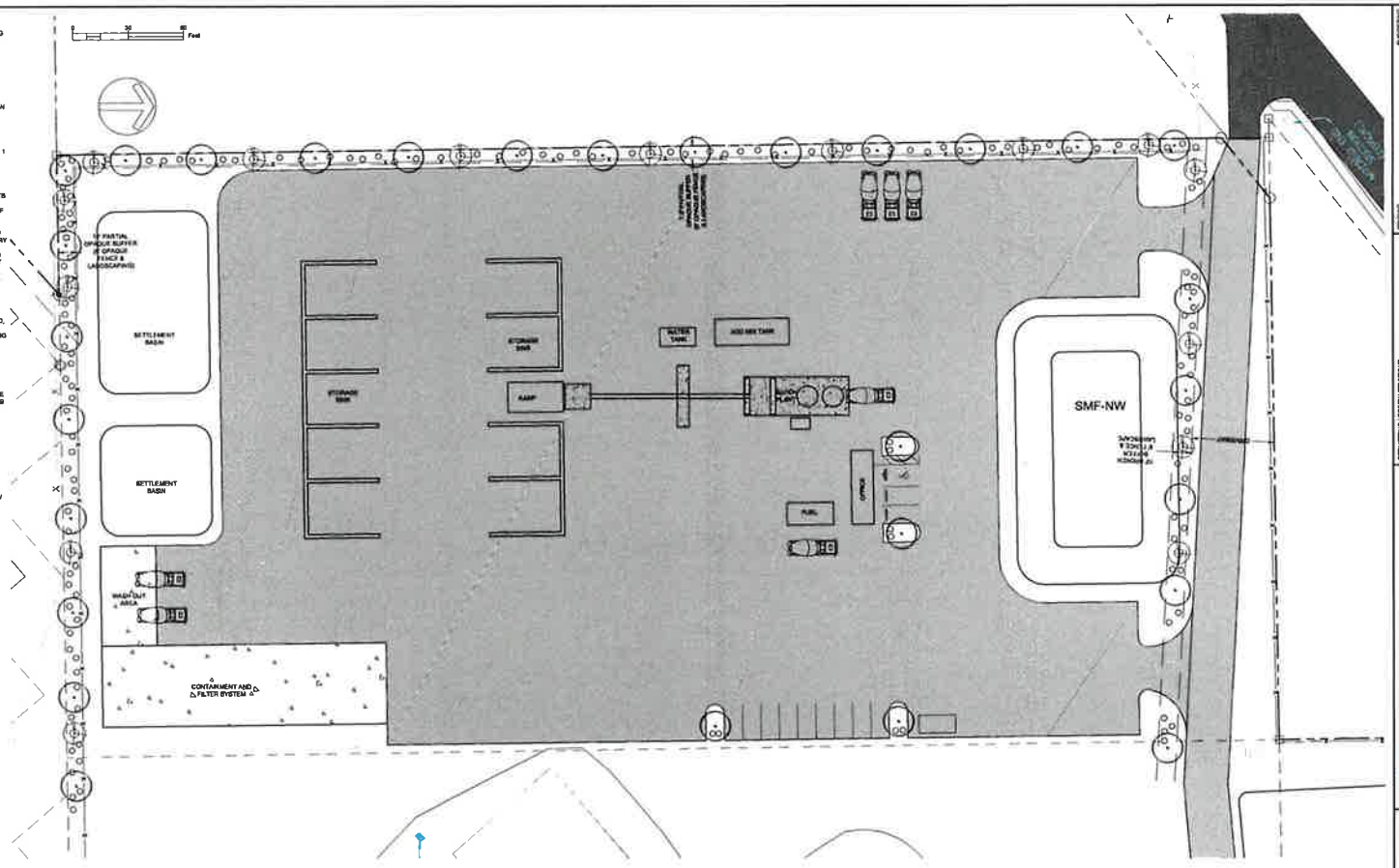
OPAQUE BUFFER REQUIREMENTS
WIDTH 10 FT MIN
CANOPY TREES MIN 2 PER 100 FEET
UNDERSTORY TREES MIN 1 PER 100 FEET
SHRUBS MIN 12 PER 100 FEET
FENCE MIN SIX FOOT HIGH 100% CLOSED FACE WOODEN FENCE

PARTIALLY OPAQUE BUFFER REQUIREMENTS
WIDTH 7.5 FT MIN
CANOPY TREES MIN 2 PER 100 FEET
UNDERSTORY TREES MIN 1 PER 100 FEET
SHRUBS MIN 8 PER 100 FEET
FENCE MIN SIX FOOT HIGH MAX 50% OPEN FACE WOODEN FENCE

SHRUBS FOR THE BUFFER SHALL BE PLANTED ON THE PUBLIC OR PROPERTY LINE SIDE OF THE FENCE

FENCE TO BE CONSTRUCTED OF MATERIALS WITH A MINIMUM LIFE EXPECTANCY OF TEN YEARS OR THE EQUIVALENT

BROKEN BUFFER REQUIREMENTS
WIDTH 10 FT MIN
CANOPY TREES MIN 1 PER 100 FEET
UNDERSTORY TREES MIN 1 PER 100 FEET
SHRUBS MIN 8 PER 100 FEET



LANDSCAPE CALCULATIONS

OPAQUE BUFFER = 415 FT
8 CANOPY TREES
4 UNDERSTORY TREES
50 SHRUBS

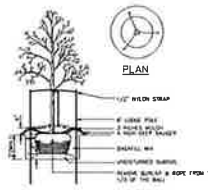
PARTIALLY OPAQUE BUFFER = 646 FT
13 CANOPY TREES
7 UNDERSTORY TREES
52 SHRUBS

BROKEN BUFFER = 300 FT
4 CANOPY TREES
4 UNDERSTORY TREES
28 SHRUBS

COMPOSITE PLANT LIST:

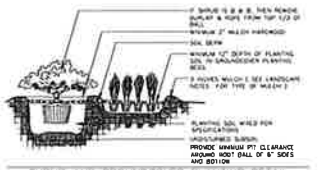
PLANT LIST (NOTE: GALLON SIZES ARE GIVEN AS A REFERENCE. SIZES SPECIFIED IN NOTES TAKES PRECEDENCE.)

SYM	SCIENTIFIC NAME	COMMON NAME	QUANTITY	SIZE	NOTES
TREES LO	QUERCUS VIRGINIANA	LIVE OAK	29 EA.	30 GAL	10' – 12' X 4' – 6' min., 2 1/2" CALP MIN., CENTRAL MAIN LEADER. FLORIDA FANCY NO. 1 MIN
UNDERST. TREES EH	ILEX X ATTENUATA "E PALAT"	EAST PALATKA HOLLY	15 EA	10 GAL	
SHRUBS SV	VIBURNUM ODORATISSIMUM	SWEET VIBURNUM	138 EA.	03 GAL	24" X 18" MIN., FLORIDA FANCY No. 1 MIN.
SOD	PASPALUM NOTATUM	BAHIA	TBD	TBD	TO BE WEED AND PEST FREE FOR A PERIOD OF 60 DAYS
SEED	PASPALUM NOTATUM	BAHIA	TBD		TO BE SAND GROWN AND PLANTED WITHIN 2 DAYS OF HARVESTING
MULCH	PINE BARK CHIPS		TBD		3" UNIFORM THICK LAYER OF MULCH MINIMUM.



NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE

TREE PLANTING
NTS



SHRUB AND GROUNDCOVER PLANTING DETAIL
NTS

CLIENT	ROMMS, LLC
DESIGN	C.A. OMUER, PE
QUALITY CONTROL	C.A. OMUER, PE
CUP / SITE PLAN APP #	TBD
PERMIT #	TBD
OMI PROJECT #	23-0418

PERMITTING / DESIGN REVISIONS	
2023-06-23 SITE PLANS	
2023-10-19 75% PLANS FOR INITIAL SUBMITTAL (DOT/FDEP/FIRE MARSHAL/ROAD/DRAINAGE)	

ENGINEER OF RECORD
CHRISTOPHER A. OMUER
FL PE # 71599
2023-10-19

Omuer ENGINEERING
FL CA # 31535 | 2602 NW 13th St., Ste 214 | Gainesville, FL 32609 | (352) 281-4608

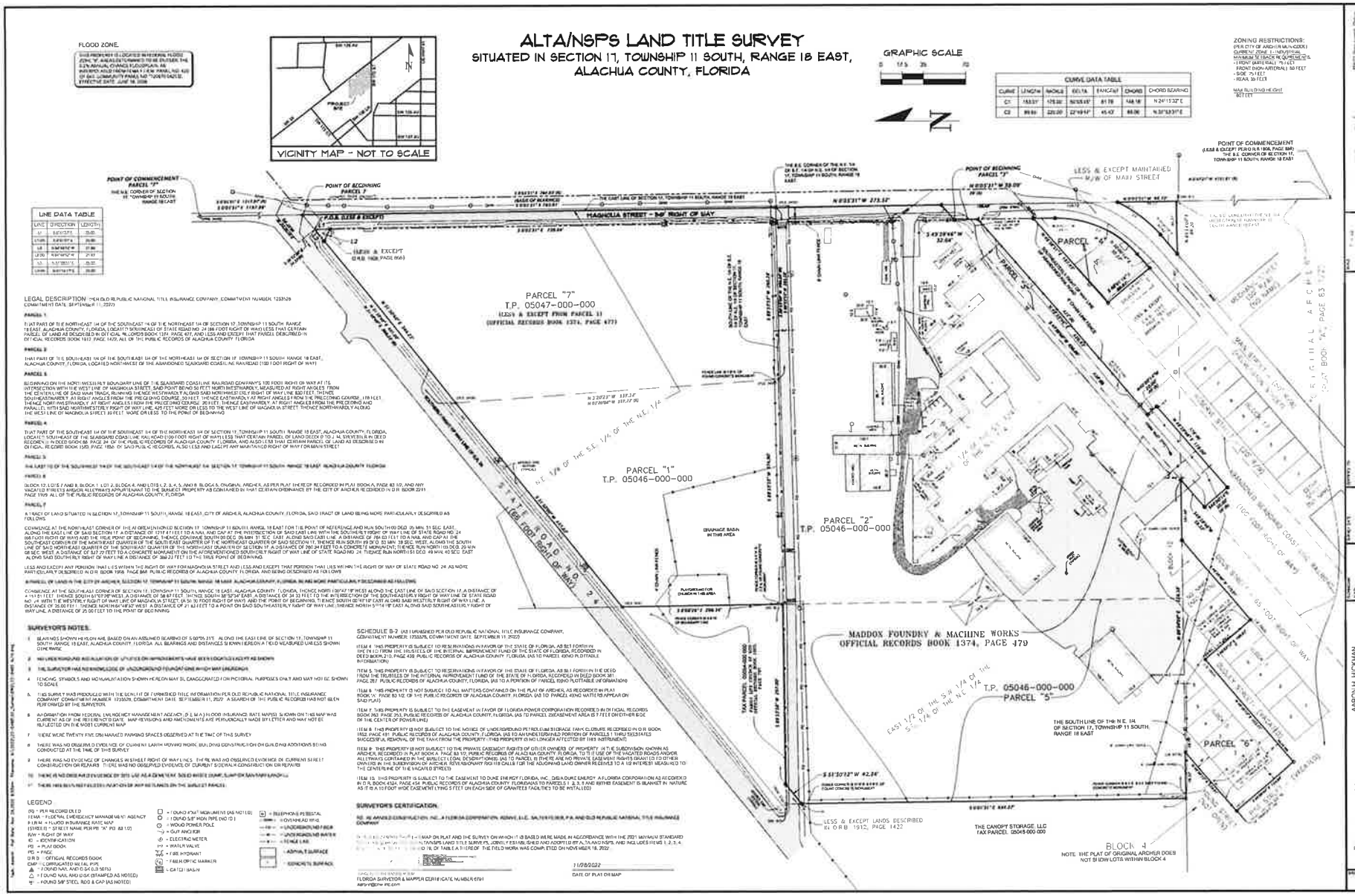
MADDOX FOUNDRY & READY MIX BATCH PLANT

LANDSCAPE PLAN

L-100

ALTA/NSPS LAND TITLE SURVEY

SITUATED IN SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA



CURVE DATA TABLE

CURVE	LENGTH	RADIUS	DELTA	RANGE(s)	CHORD	CHORD BEARING
C1	153.51'	175.00'	50°15'15"	81.78'	148.68'	N 24°15'32" E
C2	99.84'	225.00'	25°49'54"	45.47'	99.00'	N 25°53'37" E

LINE DATA TABLE

LINE	DIRECTION	LENGTH
L1	S 61°13'37" E	75.00'
L1(R)	S 61°07'30" E	75.00'
L2	S 28°46'23" W	27.00'
L2(R)	S 28°52'30" W	27.00'
L3	N 61°13'37" W	75.00'
L3(R)	N 61°07'30" W	75.00'

ZONING RESTRICTIONS:
(PER CITY OF ARCHER M-1 ZONING)
CURRENT ZONE: I - INDUSTRIAL
MINIMUM SETBACK REQUIREMENTS:
- FRONT (ARTERIAL) 75 FEET
- FRONT (NON-ARTERIAL) 50 FEET
- SIDE 25 FEET
- REAR 35 FEET

MAXIMUM BUILDING HEIGHT 50 FEET

LEGAL DESCRIPTION

PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER 1253126 COMMITMENT DATE: SEPTEMBER 11, 2022

PARCEL 1:

THAT PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED WITHIN THE LIMITS OF STATE ROAD NO. 24 (66 FOOT RIGHT OF WAY) LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORDS BOOK 1374, PAGE 477, AND LESS AND EXCEPT THAT PARCEL DESCRIBED IN OFFICIAL RECORDS BOOK 1912, PAGE 1422, ALL OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 2:

THAT PART OF THE SOUTH HALF (S 1/2) OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED NORTHWEST OF THE ABANDONED SEABOARD COAST LINE RAILROAD (100 FOOT RIGHT OF WAY).

PARCEL 3:

BEGINNING ON THE NORTHWESTERLY BOUNDARY LINE OF THE SEABOARD COAST LINE RAILROAD COMPANY'S 100 FOOT RIGHT OF WAY AT ITS INTERSECTION WITH THE WEST LINE OF MAGNOLIA STREET, SAID POINT BEING 50 FEET NORTHWESTWARDLY, MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID MAIN TRACK, RUNNING THENCE WESTWARDLY ALONG SAID NORTHWESTERLY RIGHT OF WAY LINE 330 FEET, THENCE SOUTHEASTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING COURSE, 20 FEET, THENCE EASTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING COURSE, 189 FEET, THENCE NORTHWESTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING COURSE, 20 FEET, THENCE EASTWARDLY, AT RIGHT ANGLES FROM THE PRECEDING AND PARALLEL WITH SAID NORTHWESTERLY RIGHT OF WAY LINE, 425 FEET MORE OR LESS TO THE WEST LINE OF MAGNOLIA STREET, THENCE NORTHWARDLY ALONG THE WEST LINE OF MAGNOLIA STREET 35 FEET MORE OR LESS TO THE POINT OF BEGINNING.

PARCEL 4:

THAT PART OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, LOCATED SOUTHEAST OF THE SEABOARD COAST LINE RAILROAD (100 FOOT RIGHT OF WAY) LESS THAT CERTAIN PARCEL OF LAND DEEDED TO J. M. SYLVESTER IN DEED RECORDED IN DEED BOOK 88, PAGE 34 OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND ALSO LESS THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN OFFICIAL RECORD BOOK 1503, PAGE 1886 OF SAID PUBLIC RECORDS, ALSO LESS AND EXCEPT ANY MAINTAINED RIGHT OF WAY FOR MAIN STREET.

PARCEL 5:

THE EAST 110 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA.

PARCEL 6:

BLOCK 12, LOTS 7 AND 8, BLOCK 1, LOT 2, BLOCK 4, AND LOTS 1, 2, 3, 4, 5, AND 6, BLOCK 5, ORIGINAL ARCHER, AS PER PLAT THEREOF RECORDED IN PLAT BOOK A, PAGE 63 1/2, AND ANY VACATED STREETS AND/OR ALLEYWAYS APPURTENANT TO THE SUBJECT PROPERTY AS CONTAINED IN THAT CERTAIN ORDINANCE BY THE CITY OF ARCHER RECORDED IN O.R. BOOK 2291 PAGE 1769, ALL OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA.

PARCEL 7:

A TRACT OF LAND SITUATED IN SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, CITY OF ARCHER, ALACHUA COUNTY, FLORIDA, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF THE ALDERMAN/HOLTED SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST FOR THE POINT OF REFERENCE AND RUN SOUTH 00 DEG. 05 MIN. 51 SEC. EAST ALONG THE EAST LINE OF SAID SECTION 17 A DISTANCE OF 1319.47 FEET TO A NAIL AND CAP AT THE INTERSECTION OF SAID EAST LINE WITH THE SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24 (66 FOOT RIGHT OF WAY) AND THE POINT OF BEGINNING. THENCE CONTINUE SOUTH 00 DEG. 05 MIN. 51 SEC. EAST ALONG SAID EAST LINE A DISTANCE OF 264.63 FEET TO A NAIL AND CAP AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 17, THENCE RUN SOUTH 89 DEG. 33 MIN. 39 SEC. WEST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 17, A DISTANCE OF 280.24 FEET TO A CONCRETE MONUMENT, THENCE RUN NORTH 00 DEG. 20 MIN. 08 SEC. WEST, A DISTANCE OF 317.22 FEET TO A CONCRETE MONUMENT ON THE AFOREMENTIONED SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24, THENCE RUN NORTH 61 DEG. 49 MIN. 40 SEC. EAST ALONG SAID SOUTHERLY RIGHT OF WAY LINE A DISTANCE OF 366.21 FEET TO THE TRUE POINT OF BEGINNING.

LESS AND EXCEPT ANY PORTION THAT LIES WITHIN THE RIGHT OF WAY FOR MAGNOLIA STREET AND LESS AND EXCEPT THAT PORTION THAT LIES WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 24 AS MORE PARTICULARLY DESCRIBED IN O.R. BOOK 1968, PAGE 868 PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA, AND BEING DESCRIBED AS FOLLOWS:

A PARCEL OF LAND IN THE CITY OF ARCHER, SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA, THENCE NORTH 00°42'18" WEST ALONG THE EAST LINE OF SAID SECTION 17 A DISTANCE OF 1319.51 FEET, THENCE SOUTH 89°59'39" WEST A DISTANCE OF 38.87 FEET TO THE INTERSECTION OF THE SOUTHERLY RIGHT OF WAY LINE OF STATE ROAD NO. 24 WITH THE WESTERLY RIGHT OF WAY LINE OF MAGNOLIA STREET, (A 50.00 FOOT RIGHT OF WAY) AND THE POINT OF BEGINNING. TH ENCE SOUTH 00°42'18" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 35.00 FEET, THENCE NORTH 89°47'42" WEST A DISTANCE OF 21.42 FEET TO A POINT ON SAID SOUTHEASTERLY RIGHT OF WAY LINE, THENCE NORTH 61°13'37" EAST ALONG SAID SOUTHEASTERLY RIGHT OF WAY LINE, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE BASED ON AN ASSUMED BEARING OF S 00°05'51" E ALONG THE EAST LINE OF SECTION 17, TOWNSHIP 11 SOUTH, RANGE 18 EAST, ALACHUA COUNTY, FLORIDA. ALL BEARINGS AND DISTANCES SHOWN HEREON A FIELD MEASURED UNLESS SHOWN OTHERWISE.
2. NO UNDERGROUND INSTALLATIONS OF UTILITIES OR IMPROVEMENTS HAVE BEEN LOCATED, EXCEPT AS SHOWN.
3. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND TANKS OR ANY HAZARDOUS.
4. FENCING, SYMBOLS AND MONUMENTATION SHOWN HEREON MAY BE EXAGGERATED FOR PICTORIAL PURPOSES ONLY AND MAY NOT BE SHOWN TO SCALE.
5. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF FURNISHED TITLE INFORMATION PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY COMMITMENT NUMBER 1253126, COMMITMENT DATE: SEPTEMBER 11, 2022. A SEARCH OF THE PUBLIC RECORDS HAS NOT BEEN PERFORMED BY THE SURVEYOR.
6. AN OBSERVATION FROM FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD INSURANCE RATE MAPPED, SHOWN ON THIS MAP WAS CURRENT AS OF THE REFERENCED DATE. MAP REVISIONS AND AMENDMENTS ARE PERIODICALLY MADE BY LETTER AND MAY NOT BE REFLECTED ON THE MOST CURRENT MAP.
7. THERE WERE TWENTY FIVE (25) MARKED PARKING SPACES OBSERVED AT THE TIME OF THIS SURVEY.
8. THERE WAS NO OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS BEING CONDUCTED AT THE TIME OF THIS SURVEY.
9. THERE WAS NO OBSERVED EVIDENCE OF CHANGES IN STREET RIGHT OF WAY LINES. THE RE WAS NO OBSERVED EVIDENCE OF CURRENT STREET CONSTRUCTION OR REPAIRS. THERE WAS NO OBSERVED EVIDENCE OF CURRENT SIDEWALK CONSTRUCTION OR REPAIRS.
10. THERE IS NO OBSERVED EVIDENCE OF SITE USE AS A DUMPSTER, SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
11. THERE WAS NO OBSERVED EVIDENCE OF SITE USE AS A CEMETERY.

LEGEND

(R) - PER RECORDED
FEMA - FEDERAL EMERGENCY MANAGEMENT AGENCY
F.I.R.M. - FLOOD INSURANCE RATE MAP
(STREET) - STREET NAME PER PR "A" PG 63 1/2
R/W - RIGHT OF WAY
ID - IDENTIFICATION
PB - PLAT BOOK
PG - PAGE
O.R.B. - OFFICIAL RECORDS BOOK
CMP - CORRUGATED METAL PIPE
- FOUND NAIL AND DISK (LB 5075)
- FOUND NAIL AND DISK (STAMPED AS NOTED)
- FOUND 5/8" STEEL ROD & CAP (AS NOTED)
- FOUND 4"X4" MONUMENT (AS NOTED)
- FOUND 5/8" IRON PIPE (NO ID)
- WOOD POWER POLE
- GUY ANCHOR
- ELECTRIC METER
- WATER VALVE
- FIRE HYDRANT
- FIBER OPTIC MARKER
- CATCH BASIN
- TELEPHONE PEDESTAL
- OVERHEAD WIRE
- UNDERGROUND WIRE
- UNDERGROUND WATER
- FENCE LINE
- ASPHALT SURFACE
- CONCRETE SURFACE

SCHEDULE B-2

(AS FURNISHED PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 1253126, COMMITMENT DATE: SEPTEMBER 11, 2022)

ITEM 4: THIS PROPERTY IS SUBJECT TO RESERVATIONS IN FAVOR OF THE STATE OF FLORIDA, AS SET FORTH IN THE DEED FROM THE TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA, RECORDED IN DEED BOOK 210, PAGE 439, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO PARCEL 4)(NO PLOTTABLE INFORMATION)

ITEM 5: THIS PROPERTY IS SUBJECT TO RESERVATIONS IN FAVOR OF THE STATE OF FLORIDA, AS SET FORTH IN THE DEED FROM THE TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA, RECORDED IN DEED BOOK 381, PAGE 287, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO A PORTION OF PARCEL 5)(NO PLOTTABLE INFORMATION)

ITEM 6: THIS PROPERTY IS NOT SUBJECT TO ALL MATTERS CONTAINED ON THE PLAT OF ARCHER, AS RECORDED IN PLAT BOOK "A", PAGE 63 1/2, OF THE PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO PARCEL 6)(NO MATTERS APPEAR ON SAID PLAT)

ITEM 7: THIS PROPERTY IS SUBJECT TO THIS EASEMENT IN FAVOR OF FLORIDA POWER CORPORATION RECORDED IN OFFICIAL RECORDS BOOK 263, PAGE 253, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO PARCEL 2)(EASEMENT AREA IS 7 FEET ON EITHER SIDE OF THE CENTER OF POWER LINE)

ITEM 8: THIS PROPERTY IS NOT SUBJECT TO THE NOTICE OF UNDERGROUND PETROLEUM STORAGE TANK CLOSURE RECORDED IN O.R. BOOK 1852, PAGE 491, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO AN UNDEFINED PORTION OF PARCELS 1 THRU 5)(ESTATES SUCCESSFUL REMOVAL OF THE TANK FROM THE PROPERTY - THIS PROPERTY IS NO LONGER AFFECTED BY THIS INSTRUMENT)

ITEM 9: THIS PROPERTY IS NOT SUBJECT TO THE PRIVATE EASEMENT RIGHTS OF OTHER OWNERS OF PROPERTY IN THE SUBDIVISION, KNOWN AS ARCHER, RECORDED IN PLAT BOOK A, PAGE 63 1/2, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. TO THE USE OF THE VACATED ROADS AND/OR ALLEYWAYS CONTAINED IN THE SUBJECT LEGAL DESCRIPTION(S). (AS TO PARCEL 6) (THERE ARE NO PRIVATE EASEMENT RIGHTS GRANTED TO OTHER OWNERS IN THE SUBDIVISION OF ARCHER. REVERSIONARY RIGHTS BELONG TO THE ADJOINING LAND OWNER PURSUANT TO A 1/2 INTEREST MEASURED TO THE CENTERLINE OF THE VACATED STREETS)

ITEM 10: THIS PROPERTY IS SUBJECT TO THE EASEMENT TO DUKE ENERGY FLORIDA, INC., D/B/A DUKE ENERGY, A FLORIDA CORPORATION AS RECORDED IN O.R. BOOK 4534, PAGE 454, PUBLIC RECORDS OF ALACHUA COUNTY, FLORIDA. (AS TO PARCELS 1, 2, 3, 4 AND 6)(THIS EASEMENT IS BLANKET IN NATURE AS IT IS A 10 FOOT WIDE EASEMENT LYING 5 FEET ON EACH SIDE OF GRANTEES FACILITIES TO BE INSTALLED)

SURVEYOR'S CERTIFICATION

TO: [illegible] CONSTRUCTION, INC., A FLORIDA CORPORATION; ADAM'S, LLC, SAL'S REVENUE, P.A. AND OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 10(a), 11(a), 13, 16, 17, 18, 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 18, 2022.

11/28/2022
DATE OF PLAT OR MAP

[illegible]
FLORIDA SURVEYOR & MAPPER CERTIFICATE NUMBER 6761
aaron@chw-inc.com

AARON H. HICKMAN
FLORIDA REGISTERED SURVEYOR & MAPPER NO. 6761
Professional Surveyor & Mapper For License No. 6761

This map prepared by

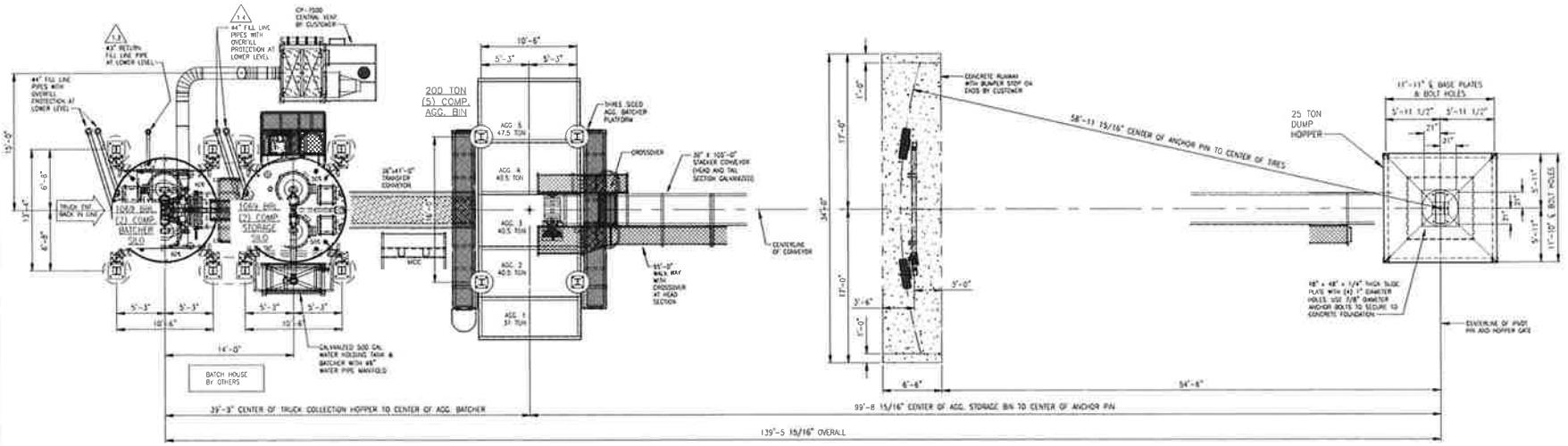
Certificate of Authorization No. LB 5075
Florida Statute 472.027 and the Corresponding Technical Standards
SIGNATURE AND SEAL OF ELECTRONIC DIGITAL SIGNATURE AS A FLORIDA LICENSED SURVEYOR AND MAPPER

CHW
Professional Consultants

REVISIONS
1 - 11-28-2022 - ADDED TABLE A ITEMS 16, 17, 18, 19 AND ONE PERSON TO SHEET, ADJUST SCALE & ADDRESS

DRAWN BY: NJD
CHECKED BY: AHH
APPROVED BY: AHH
DATE: 11-28-2022
SCALE: N/A
PROJECT NUMBER: 22-0480

SHEET NO. 1 OF 1



OVERALL CONCRETE BATCH PLANT KEY PLAN

Stephens
711 W 4th St
TOMPKINSVILLE, KY 42167
PHONE (270)487-0174

APPROVAL REQ'D

PLEASE CHECK THIS DRAWING CAREFULLY AND MARK APPROPRIATE BOX:

☐ APPROVED AS DRAWN

☐ NOT APPROVED, RESUBMITTAL REQ'D

CUSTOMER NOTE: NO FABRICATION WILL TAKE PLACE BY STEPHENS WITHOUT A SIGNED COPY WITH CUSTOMER APPROVAL

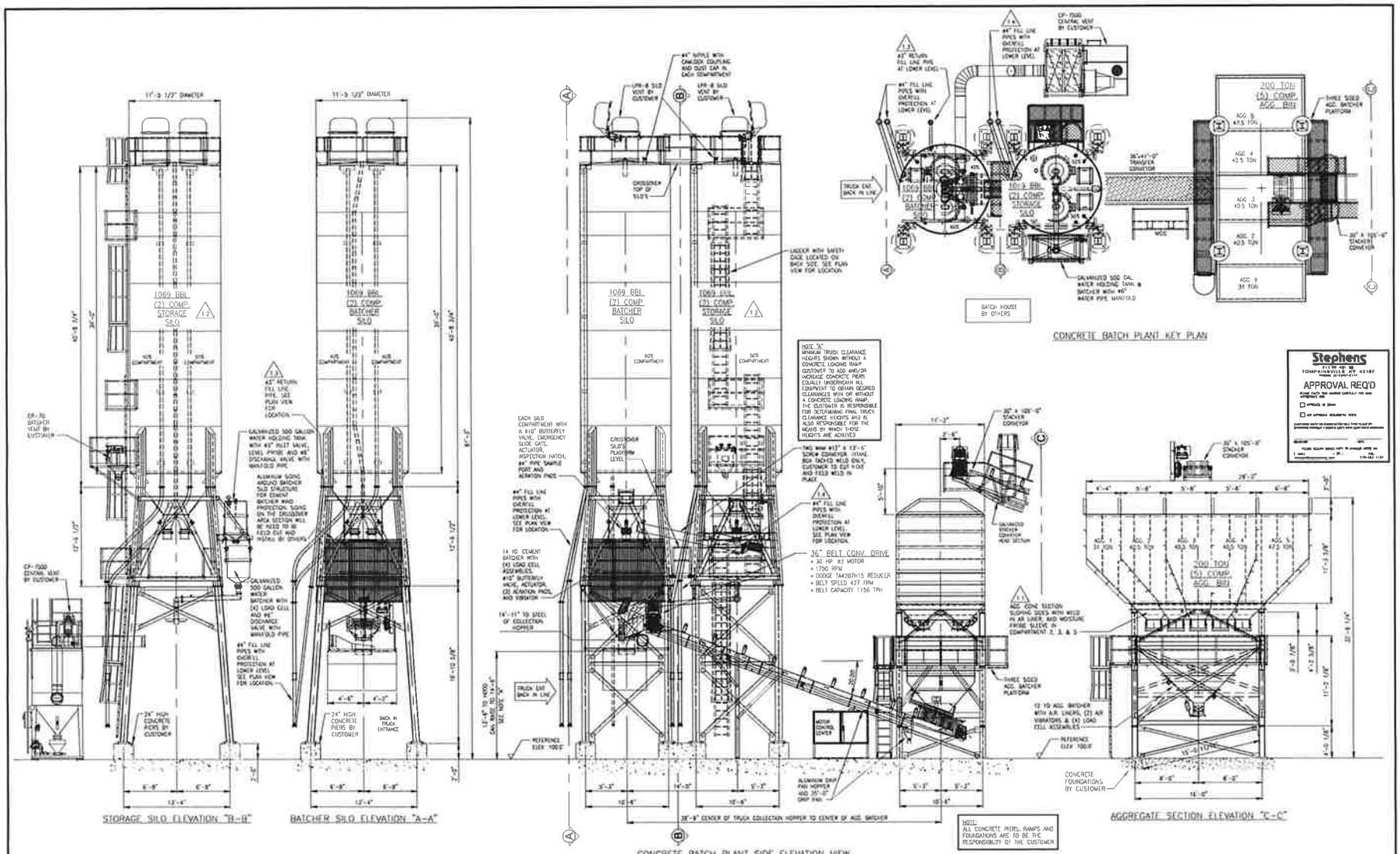
SIGNATURE _____ DATE _____

PLEASE RETURN SIGNED COPY TO ADDRESS ABOVE OR

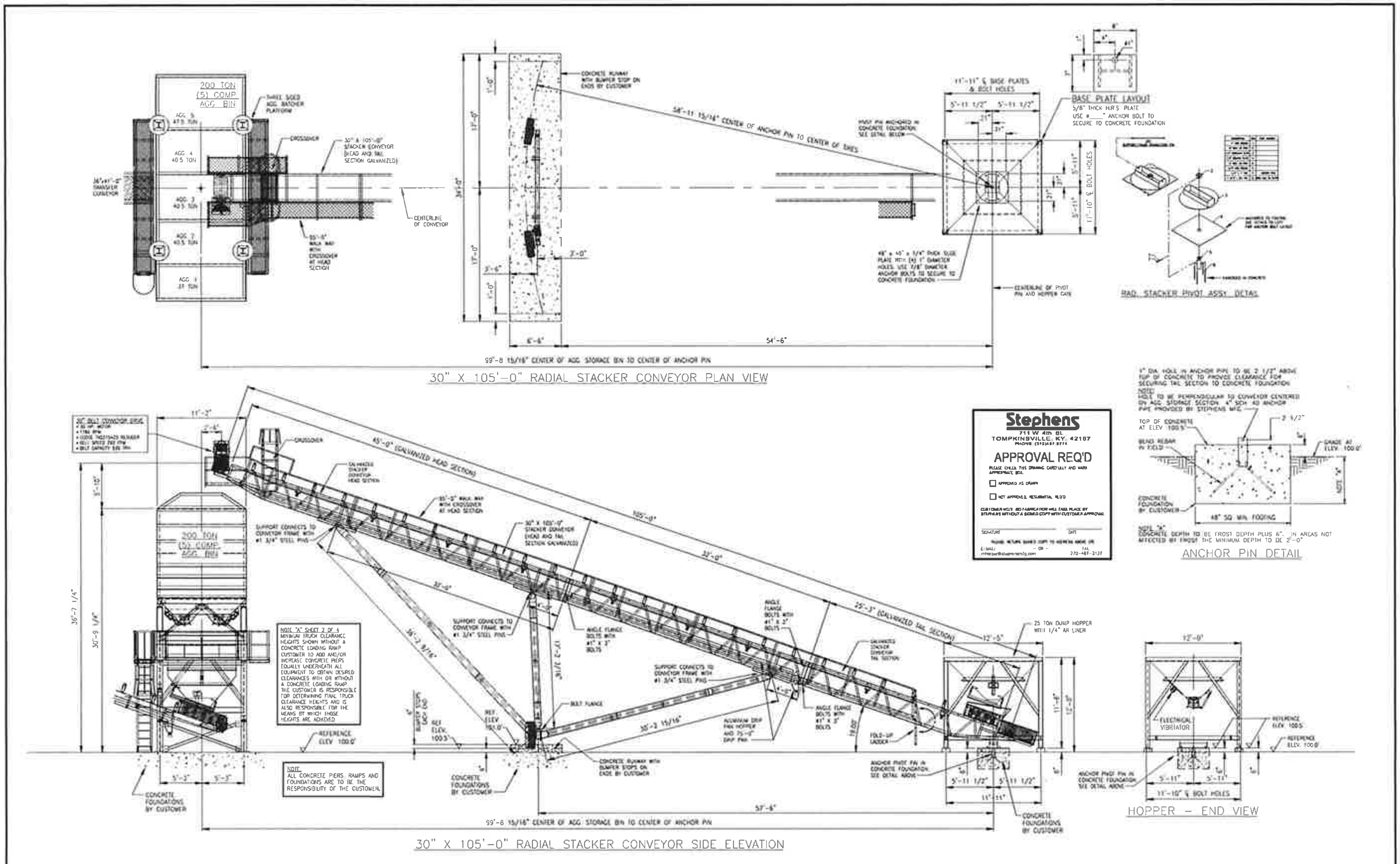
E-MAIL _____ OR _____ FAX

mwarren@stephensmfg.com 270-487-2127

-	-	-	-	-	-	1.2	05/24/21	Aux. storage bin changed from 60/40 split to 50/50 split	CONFIDENTIAL DISCLOSURE THE DRAWING & THE DATA/ART PROPERTY OF STEPHENS MANUFACTURING CO., INC. THE RECIPIENT ACCEPTS THAT ITS EXISTENCE AND CONTENTS, AND ALSO THAT IT COPIED OR USED, SHALL BE KEPT IN CONFIDENCE BY THE RECIPIENT WITHOUT WRITTEN CONSENT	DRAWN BY: MDH	Stephens TOMPKINSVILLE, KY. 42167	FOR: ARGOS DAVENPORT, FL	JOB NO: 64049
-	-	-	1.4	05/24/21	Moved aux storage silo to line pipes from 2 o'clock to 10 o'clock position	1.1	05/24/21	Moisture probe sleeves in aggregate storage bin compartment 3, 3, and 5		DATE: 05/14/2021		TITLE: OVERALL CONCRETE BATCH PLANT PLAN VIEW	SHEET NO: 1 OF 4	REV NO: 1
-	-	-	1.3	05/24/21	Moved 3" diameter return line to batcher silo 40/5 compartment	NO	DATE	REVISION		SCALE: NONE				



–	–	–	–	–	–	1.2	05/24/21	Aux. storage silo changed from 60/40 split to 50/50 split	CONFIDENTIAL STATEMENT: THE DRAWING & THE BELOW PROPERTY OF STEPHENS MANUFACTURING CO., INC. THE RECIPIENT AGREES TO: (1) EXECUTE ITS EXAMINATION, AND NOT USE IN COPIES OR DISCLOSE TO OTHERS PARTIES FOR USE IN COMPETITION WITHOUT WRITTEN CONSENT	DRAWN BY: MDH	Stephens TOMPKINSVILLE, KY. 42167	JOB NAME: ARDOS DAVENPORT, FL	JOB NO. 64049
–	–	–	1.4	05/24/21	Moved aux storage silo to line pipes from 2 o'clock to 10 o'clock position	1.1	05/24/21	Moisture probe sleeves in aggregate storage bin compartment 2, 3, and 5		DATE: 05/14/2021		TITLE: CONCRETE BATCH PLANT LAYOUT	SHEET NO. 2 OF 4	REV. NO. 1
–	–	–	1.3	05/24/21	Moved 3" diameter return line to batcher silo #2/3 compartment	NO.	DATE	REVISION		SCALE: NONE				



Stephens
711 W 4th St.
TOMPKINSVILLE, KY. 42167

APPROVAL REQ'D

☐ APPROVED AS DRAWN

☐ NOT APPROVED, RESUBMITTAL REQ'D

SIGNATURE ____________ DATE ____________

DRAWN BY	MDH
DATE	05/14/2021
SCALE	NONE

Stephens TOMPKINSVILLE, KY. 42167

FOR: ARGOS
DAVENPORT, FL

TITLE: 30" x 105'-0" RADIAL STACKER CONVEYOR ELEVATION AND PLAN VIEW

JOB NO. 64049

SHEET NO. 3 OF 4

REV. NO. 0

CONCRETE BATCH PLANT LOADS PER COLUMN

1 KIP EQUALS 1,000 POUNDS

DESCRIPTION OF ITEM	VERTICAL LOADS				HORIZONTAL SHEAR			
	DEAD (D)	LIVE (L)	WIND (Wind)	SEISMIC (0.7*E)	DEAD (D)	LIVE (L)	WIND (Wind)	SEISMIC (0.7*E)
COLUMN LINE "A" – 1069 BBL (2) COMP. BATCHER SILO	140 KIPS	104.0 KIPS	±79.6 KIPS	±41.6 KIPS	1.0 KIPS	7.4 KIPS	8.2 KIPS	3.2 KIPS
COLUMN LINE "B" – 1069 BBL (2) COMP. BATCHER SILO	140 KIPS	104.0 KIPS	±78.6 KIPS	±41.6 KIPS	1.0 KIPS	7.4 KIPS	8.2 KIPS	3.2 KIPS
COLUMN LINE "C" – 1069 BBL (2) COMP. STORAGE SILO	140 KIPS	104.0 KIPS	±63.8 KIPS	±41.6 KIPS	1.0 KIPS	7.4 KIPS	5.4 KIPS	3.2 KIPS
COLUMN LINE "D" – 1069 BBL (2) COMP. STORAGE SILO	140 KIPS	104.0 KIPS	±63.8 KIPS	±41.6 KIPS	1.0 KIPS	7.4 KIPS	5.4 KIPS	3.2 KIPS
COLUMN LINE "E" – 200 TON/12 HR AGGREGATE SECTION	20.3 KIPS	123.0 KIPS	±23.1 KIPS	±13.3 KIPS	0.0 KIPS	2.0 KIPS	6.4 KIPS	2.6 KIPS
COLUMN LINE "F" – 200 TON/12 HR AGGREGATE SECTION	20.3 KIPS	123.0 KIPS	±23.1 KIPS	±13.3 KIPS	0.0 KIPS	0.0 KIPS	6.4 KIPS	2.6 KIPS
COLUMN LINE "X" – 36" BELT BATCH CONVEYOR SUPPORT	1.0 KIPS	1.0 KIPS	11.7 KIPS	0.3 KIPS	0.0 KIPS	0.0 KIPS	2.0 KIPS	0.1 KIPS

DESIGN CRITERIA

WIND AND SEISMIC LOADS PER THE INTERNATIONAL BUILDING CODE 2015 EDITION.

WIND LOAD CRITERIA:
- WIND SPEED – Vasd = 109 MPH (Vult = 140 MPH)
- WIND IMPORTANCE FACTOR – Iw = 1.0
- EXPOSURE CATEGORY = C
- TOPOGRAPHIC FACTOR = Kzt = 1.0
- GUST RESPONSE FACTOR = G = 0.90
- DIRECTIONALITY FACTOR = Kd = 0.90
- PRESSURE EXPOSURE COEFFICIENT = Kz = 1.03 (85 FT = EXPOSURE C)
- VELOCITY PRESSURE = qz = 33.83 PSF

SEISMIC LOAD CRITERIA:
- SEISMIC IMPORTANCE FACTOR = Ie = 1.0
- OCCUPANCY CATEGORY = II
- MAPPED ACCELERATIONS – SS=0.073, S1=0.035
- SITE CLASS = D
- DESIGN ACCELERATIONS – SDS=0.078, SD1=0.056
- SEISMIC DESIGN CATEGORY: A
- SEISMIC FORCE-RESISTING SYSTEM – ASYMMETRICALLY BRACED OR UNBRACED LEGS
  (R=2, TABLE 15.4-2)
- BASE SHEAR – V = 0.059W (CS=0.059)
- NON-BUILDING STRUCTURE SIMILAR TO BUILDINGS SECTION 15.5

SEISMIC LOADS SHOWN IN COLUMN LOAD TABLE ARE 0.7*E FOR USE WITH ALLOWABLE STRESS DESIGN FOR LRFD, OR WHEN USED WITH LOAD COMBINATIONS PER IBC SECTION 1605. SEISMIC LOADS MUST BE MULTIPLIED BY (1/0.7) TO BECOME "E" FOR USE WITH STRENGTH VALUES

THE CALCULATION OF SEISMIC LOAD ASSUMES THE PRESENCE OF FULL DEAD AND LIVE LOADS.

ANCHOR BOLTS SHALL BE A36 MINIMUM. DESIGN OF ANCHORAGE FOR THE BOLTS SHOULD BE EQUAL TO THE FULL STRENGTH OF BOLT.

CONCRETE NOTE:

ALL CONCRETE PIERS, CONCRETE PITS, CONCRETE WALLS, CONCRETE RAMPS AND CONCRETE FOUNDATIONS ARE TO BE THE RESPONSIBILITY OF THE CUSTOMER.

GENERAL NOTES FOR EQUIPMENT MENTIONED ON THIS DRAWING:

CONCRETE FOUNDATIONS TO BE DESIGNED FOR LOADS SHOWN ON THIS DRAWING OR AS OTHERWISE SPECIFIED BY LOCAL CODES.

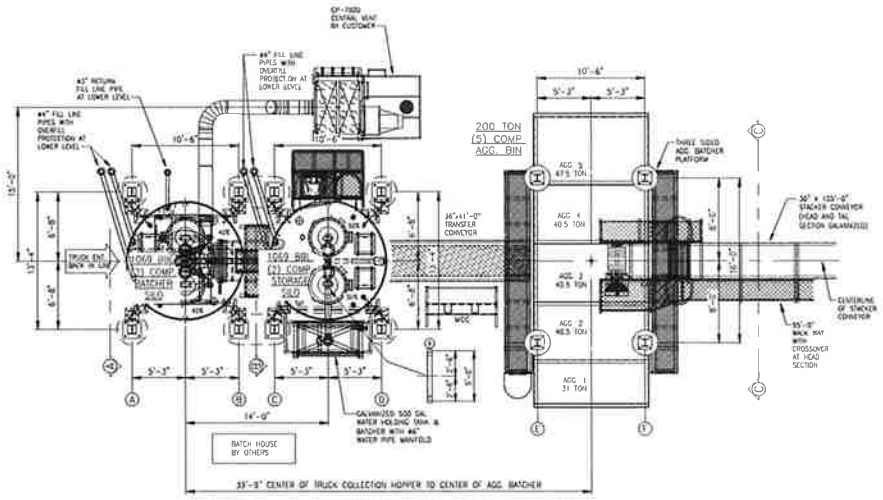
IMPORTANT NOTE: COMPLIANCE WITH LOCAL CODES IS THE RESPONSIBILITY OF THE CUSTOMER

CONCRETE FOUNDATIONS TO HAVE SUFFICIENT AREA SO AS NOT TO EXCEED THE ALLOWABLE BEARING VALUE OF THE SOIL AND MUST HAVE THE NECESSARY WEIGHT TO RESIST UPLIFT FROM WIND PRESSURE ON EQUIPMENT WHEN EMPTY.

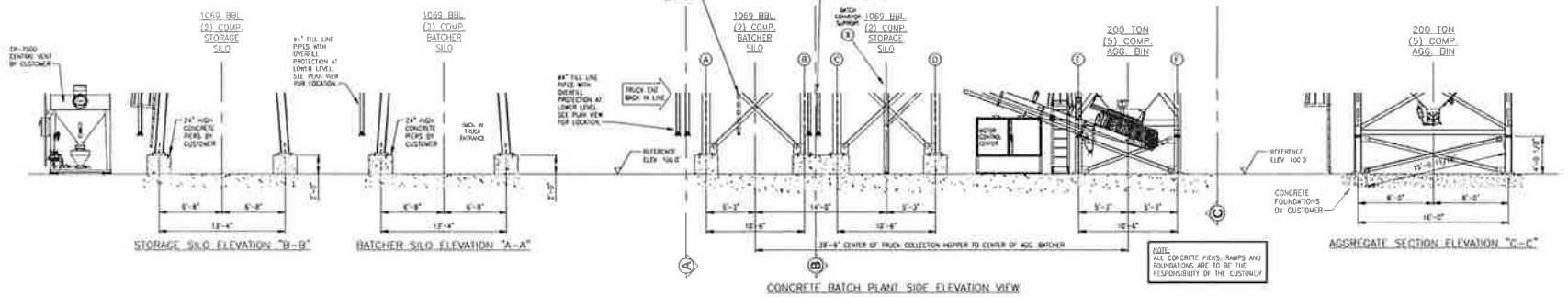
SEE EQUIPMENT ELEVATIONS ON SHEETS 2 & 3 FOR GENERAL ARRANGEMENT LAYOUT AND SEE CONCRETE PIER ELEVATIONS ON SHEET 4 (THIS SHEET) FOR BASE PLATE LEVEL ELEVATIONS

ANCHOR BOLTS TO BE FURNISHED BY THE CUSTOMER (NOTE: PLATES CAN BE WELDED TO STELL ANCHORED IN CONCRETE)

STEPHENS MFG. CO., INC ASSUMES NO RESPONSIBILITY FOR THE FOUNDATION EXCEPT TO FURNISH DIMENSIONS OF COLUMN BASES AND ANCHOR BOLTS LAYOUT. TOPS OF ALL CONCRETE PIERS MUST BE LEVEL AND IN SAME HORIZONTAL PLANE WITH ALLOWANCE FOR FINAL GROUTING.



CONCRETE BATCH PLANT BASE PLATE AND ANCHOR BOLT LAYOUT



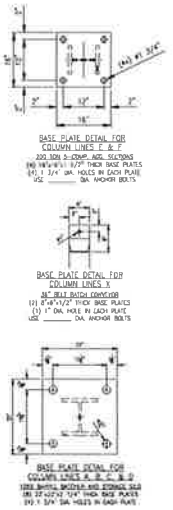
STORAGE SILO ELEVATION "B-B"

BATCHER SILO ELEVATION "A-A"

CONCRETE BATCH PLANT SIDE ELEVATION VIEW

AGGREGATE SECTION ELEVATION "C-C"

NOTE:
ALL CONCRETE PIERS, RAMPS AND FOUNDATIONS ARE TO BE THE RESPONSIBILITY OF THE CUSTOMER



NOTE "X" SHEET 2 OF 4
MINIMUM TRUCK CLEARANCE HEIGHTS SHOWN WITHOUT A CONCRETE LOADING RAMP. CUSTOMER TO ADD AND/OR INCREASE CONCRETE PIERS EQUALLY UNDERNEATH ALL EQUIPMENT TO OBTAIN DESIRED CLEARANCES, WITH OR WITHOUT A CONCRETE LOADING RAMP. THE CUSTOMER IS RESPONSIBLE FOR DETERMINING FINAL TRUCK CLEARANCE HEIGHTS AND IS ALSO RESPONSIBLE FOR THE MEANS BY WHICH THOSE HEIGHTS ARE ACHIEVED.

NO.	DATE	REVISION

CONFIDENTIAL DISCLOSURE: THE DRAWING IS THE EXCLUSIVE PROPERTY OF STEPHENS MANUFACTURING CO., INC. THE RECIPIENT ACCEPTS THAT THE DRAWING AND ITS CONTENTS WILL NOT BE DISCLOSED, REPRODUCED OR USED FOR THE USE OF CONSTRUCTION WITHOUT WRITTEN CONSENT.

DRAWN BY: MDH
DATE: 05/14/2021
SCALE: NONE

Stephens
TOMPKINSVILLE, KY. 42167

FOR: ARGOS
DAVENPORT, FL

TITLE: CONCRETE BATCH PLANT LOADS AND BASE PLATES & ANCHOR BOLT LAYOUT

JOB NO. 6-40-59
SHEET NO. 4 OF 4
REV. NO. 0

GSE Engineering & Consulting, Inc.

SUMMARY REPORT OF A GEOTECHNICAL SITE EXPLORATION

MADDOX FOUNDRY BATCH PLANT
ARCHER, ALACHUA COUNTY, FLORIDA

GSE PROJECT NO. 15535B

Prepared For:

RE ARNOLD CONSTRUCTION, INC.

MARCH 2023

GSE Engineering & Consulting, Inc.

March 24, 2023

Ronnie Arnold
RE Arnold Construction, Inc.
17210 SW Archer Road
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Subject: Summary Report of a Geotechnical Site Exploration
Maddox Foundry Batch Plant
Archer, Alachua County, Florida
GSE Project No. 15535B

GSE Engineering & Consulting, Inc. (GSE) is pleased to submit this geotechnical site exploration report for the above referenced project.

Presented herein are the findings and conclusions of our exploration, including the geotechnical parameters and recommendations to assist with building foundation, pavement, and stormwater management designs.

GSE appreciates this opportunity to have assisted you on this project. If you have any questions or comments concerning this report, please contact us.

Sincerely,

GSE Engineering & Consulting, Inc.

This item has been digitally signed and sealed by Jason E Gowland
Digitally signed by Jason E Gowland
Date: 2023.03.24 10:23:48 -04'00'
on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Cassandra R. Lindeman, E.I.
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CRL/JEG: hmp
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1.0 INTRODUCTION

1.1 General

GSE Engineering & Consulting, Inc. (GSE) has completed this geotechnical exploration for the proposed batch plant located in Archer, Alachua County, Florida. This exploration was performed in accordance with GSE Proposal No. 2022-137B dated November 29, 2022. You authorized our services on December 2, 2022.

1.2 Project Description

This project will consist of a batch plant and office building with associated driveway, parking, and stormwater management facilities. Mr. Chris Gmuer, P.E. with Gmuer Engineering provided information about the project including a site plan showing the proposed building, pond, and parking/driveway locations. In addition, GSE has performed Phase 1 and Phase 2 environmental work at the subject site and issued reports in regard to the findings (GSE Projects 15535 and 15535A). Please refer to these reports for additional information.

Stormwater management facilities are planned for the project. Currently, three locations are being considered. One is located at the northern portion of the property just east of the existing church, one just south of the existing church on the western portion of the property, and the other located at the southwestern portion of the property just south of a spoil pile.

The provided plan indicates the office building will be approximately 480 square feet. We anticipate the building will be a single-story office type structure. The plan also indicates a fuel area, a batch plant with ramp, an add mix tank, and a water tank. Structural loads have not been provided, but we anticipate the structures will be supported on shallow foundations with maximum column loads on the order of 150 kips or wall loads less than 2 kips per foot. We anticipate final grades, with the exception of the spoils pile, will be set within 1 to 2 feet of existing site grades.

A recent aerial photograph of the site was obtained and reviewed. The site plan and aerial photograph were used in preparation of this exploration and report.

1.3 Purpose

The purpose of this geotechnical exploration was to determine the general subsurface conditions, evaluate these conditions with respect to the proposed construction, and prepare geotechnical parameters and recommendations to assist with building foundation, stormwater management, and pavement designs.

2.0 FIELD AND LABORATORY TESTS

2.1 General Description

The procedures used for field sampling and testing are in general accordance with industry standards of care and established geotechnical engineering practices for this geographic region. This exploration consisted of performing five (5) Standard Penetration Test (SPT) borings to depths of 20 feet below land surface (bls) within the areas of the proposed building, batch plant, fuel depot, water tank, and mixing tank, four (4) auger borings to depths of 5 to 15 feet bls within the proposed pavement areas, and nineteen (19) auger borings to depths of 15 to 30 feet bls within the proposed stormwater management facilities.

The soil borings were performed at the approximate locations as shown on Figure 2. The borings were located at the site using the provided site plan, Global Positioning System (GPS) coordinates, and obvious site features as reference. The boring locations should be considered approximate. The soil borings were performed from February 6 through February 8, 2023.

2.2 Auger Borings

The auger borings were performed in accordance with ASTM D1452. The borings were performed with flight auger equipment that was rotated into the ground in a manner that reduces soil disturbance. After penetrating to the required depth, the auger was retracted, and the soils collected on the auger flights were field classified and placed in sealed containers. Representative samples of each stratum were retained from the auger boring. Results from the auger borings are provided in Section 5.1.

2.3 Standard Penetration Test Borings

The soil borings were performed with a drill rig employing flight auger drilling techniques and Standard Penetration Testing (SPT) in accordance with ASTM D1586. The SPTs were performed continuously to 10 feet and at 5-foot intervals thereafter. Soil samples were obtained at the depths where the SPTs were performed. The soil samples were classified in the field, placed in sealed containers, and returned to our laboratory for further evaluation.

After drilling to the sampling depth, the standard two-inch O.D. split-barrel sampler was seated by driving it 6 inches into the undisturbed soil. Then the sampler was driven an additional 12 inches by blows of a 140-pound hammer falling 30 inches. The number of blows required to produce the next 12 inches of penetration were recorded as the penetration resistance (N-value). These values and the complete SPT boring logs are provided in Section 5.2.

Upon completion of the sampling, the boreholes were abandoned in accordance with Water Management District guidelines.

2.4 Soil Laboratory Tests

The soil samples recovered from the soil borings were returned to our laboratory and examined to confirm the field descriptions. Representative samples were then selected for laboratory testing. The laboratory tests consisted of twenty-three (23) percent soil fines passing the No. 200 sieve determinations, twenty-three (23) natural moisture content determinations, four (4) Atterberg Limits tests, one (1) organic content determination, and fourteen (14) constant head hydraulic conductivity tests. These tests were performed in order to aid in classifying the soils and to further evaluate their engineering properties. The laboratory tests are provided in Section 5.3.

3.0 FINDINGS

3.1 Surface Conditions

Mr. Jason E. Gowland, P.E. visited the site to observe the site conditions and mark the boring locations.

The majority of the site is open grass. A small section of the site on the northern portion just east of the existing church is wooded. There is also a spoil pile on the southwestern portion of the site. Multiple areas of the site have been filled with spoils from the existing foundry located on the site. Some of this material is a cemented sand in large chunks that have been buried to provide a berm around the site. There are also existing stormwater management facilities at the site. One of the existing stormwater management facilities located north of the proposed batch plants has standing water during our site visit. The site is located to the north and west of Maddox Foundry and Machine Works.

The topography at the site is gently sloping. Regional topography can be characterized as gently to moderately sloping. The Alachua County Growth Management website indicates the site elevations across the site are near 68 to 90 feet[1].

3.2 Subsurface Conditions

The locations of the auger and SPT borings are provided on Figure 2. Complete logs for the borings are provided in Sections 5.1 and 5.2. Descriptions for the soils encountered are accompanied by the Unified Soil Classification System symbol (SM, SP-SM, etc.) and are based on visual examination of the recovered soil samples and the laboratory tests performed. Stratification boundaries between the soil types should be considered approximate, as the actual transition between soil types may be gradual.

The auger borings located within the proposed pavement areas encountered relatively consistent soil conditions. Borings R-1 and R-2 encountered sand with silt and traces of sandstone (SP-SM), silty sand with trace sandstone (SM), and poorly graded sand (SP) to the explored depths of 5 feet bls. Boring R-3 encountered 5.5 feet of poorly graded sand (SP) underlain by silty sand (SM) to the explored depth of 15 feet bls. Boring R-4 encountered 5.5 feet of sand with silt (SP-SM) underlain by 3.5 feet of poorly graded sand (SP), 2 feet of sand with trace clay (SP-SC) and 4 feet of clayey sand (SC) to the explored depth of 15 feet bls.

The auger borings located within the proposed stormwater management facilities encountered relatively consistent soil conditions across the site. The borings generally encountered 3.5 to 17.5 feet of poorly graded sand (SP), sand with silt (SP-SM), and silty sand (SM) underlain by interbedded layers of sand with trace clay (SP-SC), clayey and very clayey sands (SC, SC/CL), sandy clay (CL/CH), and clay with sand (CL/CH) to the explored depths of 15 and 30 feet bls. Borings P-2, P-7, P-8, and P-13 encountered limestone below the clay-rich soils to the explored depths of 15 and 30 feet bls. Boring P-11 encountered refusal conditions below the very clayey sand (SC/CL) and was terminated at 12 feet bls.

[1]Alachua County Growth Management website, http://mapgenius.alachuacounty.us/.

The SPT borings located within the proposed building, batch plant, fuel depot, water tank, and mixing tank areas also encountered relatively consistent soil conditions. The borings generally encountered 2.5 to 7.5 feet of poorly graded sand (SP), sand with silt (SP-SM), and sand with silt and clay (SP-SM/SC) underlain by interbedded layers of sand with trace clay (SP-SC), clayey and very clayey sands (SC, SC/CL), and limestone to the explored depths of 20 feet bls. Borings B-1, B-2, B-4, and B-5 encountered limestone at depths of 14.5 feet bls, 13 feet bls, 18.5 feet bls, and 17 feet bls, respectively, to the explored depths of 20 feet bls. Boring B-3 did not encounter limestone before reaching the explored depth of 20 feet bls.

The sandy soils (SP, SP-SM, SP-SM/SC, SP-SC) encountered in the SPT borings are generally in a very loose to dense condition with N-values ranging from 4 to 31 blows per foot. The clayey and very clayey sand (SC, SC/CL) layers are generally in a very loose to dense condition with N-values ranging from 3 to 31 blows per foot. The limestone encountered in the borings is generally in a very soft to hard condition with N-values ranging from 6 to 49 blows per foot.

The groundwater table was encountered in borings P-2 and P-8 at depths of 26.7 feet bls and 27.5 feet bls, respectively, at the time of our investigation.

3.3 Review of Published Data

Regional Geology

The site is located near the western portion of Alachua County. This area of Alachua County maps as the Ocala Limestone[2]. The following description is from the Geological Survey.

To – Ocala Limestone – Dall and Harris (1892) referred to the limestones exposed near Ocala, Marion County, in central peninsular Florida as the Ocala Limestone. Puri (1953, 1957) elevated the Ocala Limestone to group status recognizing its component formations on the basis of foraminiferal faunas (biozones). Scott (1991) reduced the Ocala Group to formational status in accordance with North American Stratigraphic Code (North American Commission on Stratigraphic Nomenclature, (1983).

The Ocala Limestone consists of nearly pure limestones and occasional dolostones. It can be subdivided into lower and upper facies on the basis of lithology. The lower member is composed of a white to cream-colored, fine to medium grained, poorly to moderately indurated, very fossiliferous limestone (grainstone and packstone). The lower facies may not be present throughout the areal extent of the Ocala Limestone and may be partially to completely dolomitized in some regions (Miller, 1986). The upper facies are a white, poorly to well indurated, poorly sorted, very fossiliferous limestone (grainstone, packstone and wackestone). Silicified, limestone (chert) is common in the upper facies. Fossils present in the Ocala Limestone include abundant large and smaller foraminifers, echinoids, bryozoans, and mollusks. The large foraminifera *Lepidocyclina* sp. is abundant in the upper facies and extremely limited in the lower facies. The presence of these large foraminifers in the upper facies is quite distinctive.

[2] Open-File Report 80, Thomas M. Scott, P.G. No. 99, Text to Accompany the Geological Map of Florida, Florida Geological Survey, 2001.

The Ocala Limestone is at or near the surface within the Ocala Karst District in the west-central to northwestern peninsula and within the Dougherty Plain District in the North-central panhandle (Scott, in preparation). In these areas, the Ocala Limestone exhibits extensive karstification. These karst features often have tens of feet (meters) of relief, dramatically influencing the topography of the Ocala Karst District and the Dougherty Plain District (Scott, in preparation). Numerous disappearing streams and springs occur within these areas.

The permeable, highly transmissive carbonates of the Ocala Limestone form an important part of the FAS. It is one of the most permeable rock units in the FAS (Miller, 1986).

Soil Survey

The majority of the site is mapped as two soil series by the Soil Conservation Service (SCS) Soil Survey for Alachua County[3]. The majority of the site is mapped as Arredondo-Urban land complex. The northern portion of the site just east of the existing church is mapped as Millhopper sand. The following soil descriptions are from the Soil Survey.

Arredondo-Urban land complex, 0 to 5 percent slopes – This complex consists of well-drained, nearly level to gently sloping Arredondo soils and Urban land. The areas are irregular in shape and range from about 25 to 150 acres. This complex is within urbanized areas of the county.

About 50 to 85 percent of each delineation is open areas of Arredondo soils. These open areas are gardens, vacant lots, lawns, or playgrounds. The areas are so small or so intermingled with areas of Urban land that it is impractical to map them separately. About 15 to 25 percent of the soils in these open areas have been modified by cutting, grading, and spreading of soil material during urban-related construction and development.

About 15 to 50 percent of each delineation is Urban land. Urban land consists of areas covered with buildings, streets, parking lots, sidewalks, and other structures. The Urban land of this map unit is generally developed on Arredondo sand or fine sand.

Typically, the surface layer of Arredondo soils is dark grayish brown fine sand about 6 inches thick. The subsurface layer is brownish yellow to yellowish brown fine sand to a depth of 47 inches. Between depths of 47 and 86 inches, the subsoil is yellowish brown. The upper 5 inches is loamy sand, and the lower 32 inches is sandy clay loam.

Included in mapping with this complex are minor areas of other soils closely associated with the Arredondo soils, such as Candler, Gainesville, and Kendrick soils. Small areas of Arredondo soils that have 5 to 8 percent slopes are in some areas.

The available water capacity of Arredondo soils is low in the surface and subsurface layers and low to medium in the subsoil. Permeability is rapid in the surface and subsurface layers and is moderately slow to moderate in the loamy subsoil. Organic matter content and natural fertility are low. The water table is more than 72 inches below the surface.

[3] Soil Survey of Alachua County, Florida. Soil Conservation Service, U.S. Department of Agriculture.

Millhopper sand, 0 to 5 percent slopes – This nearly level to gently sloping, moderately well-drained soil is in small and large irregularly shaped areas on uplands and on slightly rolling knolls in the broad flatwoods. Slopes are mostly nearly smooth or convex. The areas are variable in size. They range from about 10 to 250 acres.

Typically, the surface layer is dark grayish brown sand about 9 inches thick. The subsurface layer is sand or fine sand about 49 inches thick. The upper 17 inches is yellowish brown, the next 22 inches is light yellowish brown, and the lower 10 inches is very pale brown. The subsoil extends to a depth of 89 inches. The upper 6 inches is yellowish brown loamy sand that has grayish and brownish mottles; the next 22 inches is light gray, mottled sandy clay loam; and the lower 3 inches is light gray, mottled sandy loam.

Included with this soil in mapping are small areas of Arredondo, Bonneau, Fort Meade, Gainesville, Kanapaha, Lochloosa, and Sparr soils. Siliceous limestone boulders and small sinks are within some delineations. Small areas of Millhopper soils that have 5 to 8 percent slopes are also included. About 25 acres mapped as this Millhopper soil along the Santa Fe River is occasionally flooded. Total included areas are about 20 percent or less.

This Millhopper soil has a water table that 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. The available water capacity is low in the surface and subsurface layers and is low to medium in the subsoil. Permeability is rapid in the surface and subsurface layers, moderately rapid in the upper 6 inches of the subsoil, and slow to moderately slow below this depth. Natural fertility is low. Organic matter content is low to moderately low.

Hydrological Data

The Floridan Aquifer in the vicinity of the site has an elevation on the order of 40 to 50 feet[4]. This elevation is below land surface, indicating a downward hydraulic gradient occurs at the site.

3.4 Laboratory Soil Analysis

Selected soil samples recovered from the soil borings were analyzed for the percent soil fines passing the No. 200 sieve, natural moisture content, Atterberg Limits, organic content, and hydraulic conductivity. Samples selected for laboratory testing were collected at depths ranging from 1 to 15 feet bls. These tests were performed to confirm visual soil classification and evaluate their engineering properties. The complete laboratory report is provided in Section 5.3.

The laboratory tests indicate the tested soils consist of silty sand (SM), clayey sand (SC), and very clayey sand (SC/CL). The tested silty sand (SM) contains approximately 12 to 26 percent soil fines passing the No. 200 sieve with natural moisture contents of about 3.7 to 14 percent. The tested clayey sand (SC) contains approximately 25 to 26 percent soil fines passing the No. 200 sieve with natural moisture contents of about 11 to 13 percent. The tested very clayey sand (SC/CL) contains approximately 35 to 45 percent soil fines passing the No. 200 sieve with natural moisture contents of 13 to 19 percent.

[4] Potentiometric Surface of the Upper Floridan Aquifer in the St. Johns River Water Management District and Vicinity, Florida, 2019, U.S. Geological Survey.

Atterberg Limits tests indicate the tested very clayey sand (SC/CL) has Liquid Limit (LL) values of 24 to 38, Plastic Limit (PL) values of 14 to 18, and Plasticity Index (PI) values of 9 to 22. These values correspond to materials with low potential (LL < 50 and PI < 25) for expansive behavior[5].

The constant head hydraulic conductivity test results indicate the tested silty sand (SM) has hydraulic conductivity values of 0.7 to 4.5 feet per day. The tested clayey sand (SC) has hydraulic conductivity values of 0.4 to 0.7 feet per day.

The organic content determination indicates that the tested silty sand (SM) contains approximately 6.1 percent organic matter content. Typically, soils with greater than 5 percent organic content are considered unsuitable for foundation support.

[5] U.S. Department of the Army USA, 1983, Foundations in Expansive Soils, TM 5-818-7, p. 4-1.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 General

The following recommendations are made based upon our understanding of the proposed construction, a review of the attached soil borings and laboratory test data, and experience with similar projects and subsurface conditions. If plans or the location of proposed construction changes from those discussed previously, GSE requests the opportunity to review and possibly amend our recommendations with respect to those changes.

The final design of a foundation system is dependent upon adequate integration of geotechnical and structural engineering considerations. Consequently, GSE must review the final foundation design in order to evaluate the effectiveness and applicability of our initial analyses, and to determine if additional recommendations may be warranted. Without such a review, the recommendations presented herein could be misinterpreted or misapplied resulting in potentially unacceptable performance of the foundation system.

The performance of site improvements may be sensitive to their post-construction relationship to site groundwater levels, seepage zones, or soil/rock characteristics exposed at final site grades. GSE recommends that use of boring information for final design of all site improvements be predicated on proper horizontal and vertical control of borings.

In this section of the report, we present our geotechnical parameters and recommendations to assist with building foundation, stormwater management, and pavement designs as well as our general site preparation guidelines.

4.2 Groundwater

The groundwater table was encountered in borings P-2 and P-8 at depths of 26.7 feet bls and 27.5 feet bls, respectively. This likely represents the potentiometric surface of the Floridan Aquifer. However, based on the results of the soil borings and the Soil Survey, we anticipate a transient perched water table will develop on top of the clay-rich soils after periods of seasonal and heavy rainfall. Estimates for the perched water tables are shown on the individual boring logs. The absence of a surficial water table suggests the site is perforated.

4.3 Building Foundations

The soil borings near the proposed building, batch plant, fuel depot, water tank, and mixing tank areas encountered relatively consistent soil conditions. The borings generally encountered poorly graded sand, sand with silt, and sand with silt and trace clay underlain by sand with trace clay, clayey and very clayey sands, and limestone to the explored depths of 20 feet bls. Laboratory tests conducted on the very clayey sands indicate these soils have low to marginal potential for expansive behavior.

Based upon the soil conditions encountered and our limited understanding of the structural loads and site grading, we recommend the building be supported by conventional, shallow strip and/or spread foundations. We recommend the shallow foundations be designed for a maximum allowable gross bearing pressure of 2,500 psf. The gross bearing pressure is defined as the soil contact pressure that can be imposed from the maximum structural loads, weight of the concrete foundations, and weight of the soil above the foundations. The foundations should be designed based upon the maximum load that could be imposed by all loading conditions.

The foundations should be embedded a minimum of 18 inches below the lowest adjacent grade. Interior foundations or thickened sections should be embedded a minimum of 12 inches. The foundations should have minimum widths of 18 inches for strip footings, and 24 inches for columns, even though the maximum soil bearing pressure may not be fully developed.

Due to the mostly sandy nature of the majority of the near-surface soils, we expect settlement to be mostly elastic in nature. The majority of the settlement will occur on application of the loads, during and immediately following construction. Using the recommended maximum bearing pressure, the assumed maximum structural loads, and the field and laboratory test data which we have correlated into the strength and compressibility characteristics of the subsurface soils, we estimate the total settlements of the structure to be 1 inch or less, with approximately half of it occurring upon load application (during construction).

Differential settlement results from differences in applied bearing pressures and the variations in the compressibility characteristics of the subsurface soils. For the building pad prepared as recommended, we anticipate differential settlement of less than 1/2 inch.

Post-construction settlement of the structures will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics of the bearing soils; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundation; (3) site preparation and earthwork construction techniques used by the contractor, and (4) external factors, including but not limited to vibration from off-site sources and groundwater fluctuations beyond those normally anticipated for the naturally-occurring site and soil conditions which are present.

Our settlement estimates for the structure are based upon our limited understanding of the structural loads and site grading and the use of successful adherence to the site preparation recommendations presented later in this report. Any deviation from our project understanding and/or our site preparation recommendations could result in an increase in the estimated post-construction settlement of the structure.

4.4 Flexible Pavement

Overall soil conditions encountered by our borings at this site are suitable for supporting conventional limerock base and asphalt wearing surface pavements. We have not been provided the anticipated traffic loading conditions; therefore, the following pavement component recommendations should be used only as guidelines. The below recommendations are intended to be minimums. Increasing base course and asphalt thicknesses would increase the design life of the pavement.

We recommend a minimum separation of 24 inches be present between the bottom of the base course and the top of the clay-rich soils containing greater than about 25 percent soil fines. Review of the boring logs suggests this separation will likely be present along the majority of the alignment.

In areas where the minimum 24-inch separation is not able to be achieved through grading design, we recommend these soils be undercut. The undercut should extend a minimum of 24 inches beneath the bottom of the base course. The undercut should extend laterally until the clay-rich soils are no longer encountered and free-draining sandy soils have been penetrated. The undercut should be backfilled with either on-site or imported sandy free-draining soils containing less than 10 percent soil fines. The backfill should be placed in maximum 24-inch loose lifts that are compacted to a minimum 95 percent of the Modified Proctor maximum dry density (ASTM D1557).

4.4.1 Stabilized Subgrade

If a crushed limerock or recycled concrete base is used, we recommend a stabilized subgrade be located beneath the base. The stabilized subgrade should have a minimum Limerock Bearing Ratio (LBR) of 40, with minimum thicknesses of 6 inches for automobile parking areas and 12 inches for driveways.

The stabilized subgrade can be imported material or a mixture of imported and on-site material. If a mix is proposed, a mix design should be performed to determine the optimum mix proportions. The stabilized subgrade should be compacted to a minimum of 98 percent of the Modified Proctor maximum dry density (ASTM D1557) for soils with less than 15 percent fines content. Soils with 15 percent or greater fines content should be compacted to 100 percent of the Standard Proctor maximum dry density (ASTM D698).

4.4.2 Base Course

The base course can consist of either crushed limerock, soil cement, or recycled concrete. If you should use a soil cement base course, a stabilized subgrade is not required.

Limerock should have a LBR of at least 100, be obtained from a FDOT approved source and meet FDOT gradation requirements. The base course thickness should be a minimum of 6 inches in automobile parking areas, and 8 inches in driveway areas. The base course should be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D1557). We recommend a minimum 24 inches separation between the bottom of the limerock base course and the estimated seasonal high-water table. If site grading does not allow for this separation, we recommend underdrains be considered.

Soil cement can consist of an imported material or a blend of the on-site soils and cement. A mix design should be performed to determine the optimum cement content. We recommend the soil cement have a minimum 28-day compressive strength of 500 psi. Soil cement can be blended off-site (in a pug mill) or on site. Soil cement pills should be cast from each day's production to verify the recommended compressive strength has been achieved at 28 days. We recommend the soil cement base course be a minimum of 8 inches thick throughout the project. We recommend a minimum 18 inches separation between the bottom of the soil cement base course and the estimated seasonal high water table. If site grading does not allow for this separation, we recommend underdrains be considered.

Recycled concrete should have an LBR of at least 150, be obtained from a FDOT approved source and meet FDOT gradation requirements. The base course thickness should be a minimum of 8 inches. The base course should be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D1557). We recommend a minimum 12 inches separation between the bottom of the recycled concrete base course and the estimated seasonal high water table. If site grading does not allow for this separation, we recommend underdrains be considered.

4.4.3 Wearing Surface

The asphalt-wearing surface should consist of an FDOT Type SP Hot Mix Asphalt mixture. For automobile parking areas, the thickness should be a minimum of 1.5 inches. For driveway areas, the thickness should be a minimum of 2 inches. The asphalt-wearing surface should consist of an SP-12.5 mix. The asphalt should be compacted to at least 95 percent of the mix design density.

The constructability of differing asphalt thicknesses may be difficult, and having a uniform 2-inch thick asphalt wearing surface may be more practical.

4.5 Rigid Pavement

Concrete pavement is a rigid pavement that results in smaller load transfers to the subgrade soils than flexible pavement. For concrete pavement subgrade, we recommend using the existing surficial sands or recommended clean sand (SP) fill, compacted to at least 98 percent of the Modified Proctor maximum dry density without additional stabilization with the following stipulations:

1. Subgrade soils must be compacted to at least 98 percent of Modified Proctor maximum dry density to a depth of at least 2 feet prior to placement of concrete.
2. The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of the concrete.
3. The subgrade soils must be moistened prior to placement of concrete.
4. Concrete pavement thickness should be uniform throughout, with the exception of thickened edges (curb or footing).
5. The bottom of the pavement should be separated from the estimated seasonal high groundwater level by at least 18 inches.
6. Limerock or any other impermeable base is not suitable unless it meets the minimum recommended permeability of 10 feet/day.
7. The upper 12 inches of subgrade underlying the base course must also be "free-draining" and water that enters the base and subgrade must be allowed to seep out by gravity or if this is not possible, underdrains must be incorporated into the subgrade. A "bathtub" condition within the base/subgrade must be avoided.

Our recommendations for slab thickness for heavy-duty concrete pavements is based on a.) subgrade soils are compacted to 98 percent of the Modified Proctor maximum dry density, b.) modulus of subgrade reaction (k) of 200 pounds per cubic inch, c.) a 20-year design life, and d.) previously stated design parameters. For an anticipated heavy-duty traffic group, a minimum pavement thickness of 8 inches is recommended, using Table 3.4 from the FDOT *Rigid Pavement Design Manual*, January 2019.

We recommend using concrete with a minimum 28-day compressive strength of 4,000 pounds per square inch and a minimum 28-day flexural strength (modulus of rupture) of at least 600 pounds per square inch based on the third point loading of concrete beam test samples. Minimum control joint spacing of 15 by 15 feet is suggested. Layout of sawcut control joints should form square panels, and the depth of sawcut joint should be at least 1/4 of the concrete slab thickness (a minimum 2-inch sawcut control joint depth for the recommended 8-inch slab thickness). The joints should be sawed within six hours of concrete placement or as soon as the concrete has developed sufficient strength to support workers and equipment.

For further details on concrete pavement construction, refer to "Guide to Jointing Non-reinforced Concrete Pavements" published by the Florida Concrete and Products Associates, Inc. and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

4.6 Site Preparation

The soils at this site should be suitable for supporting the proposed construction using normal, good practice site preparation procedures. The following recommendations are our general guidelines for site preparation.

4.6.1 Stripping

Strip the construction limits and 10 feet beyond the perimeter of all grass, roots, topsoil, and other deleterious materials. You should expect to strip to depths of 12 or more inches. Deeper stripping will likely be necessary due to major root systems present at the site.

4.6.2 Dewatering

Temporary dewatering is not expected to be necessary for this project. However, if needed, we anticipate dewatering can be accomplished with sumps placed near the construction area, or with underdrains connected to a vacuum pump.

In any case, the site should always be graded to promote runoff and limit the amount of ponding. Localized ponding of stormwater is expected without proper grading during construction and could render previously acceptable surfaces unacceptable.

4.6.3 Proof-Rolling

Proof-roll the subgrade with heavy rubber-tired equipment, such as a loaded front-end loader or dump truck, to identify any loose or soft zones not found by the soil borings. The proof-rolling should be monitored by a geotechnical engineer or qualified technician. Undercut or otherwise treat these zones as recommended by the geotechnical engineer in this report.

4.6.4 Proof Compaction

Compact the subgrade to a density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557). The specified compaction should be obtained to a depth of 1 foot below the foundation bottoms and the existing grade prior to placing fill. Vibratory roller equipment should not be used within approximately 100 feet of existing structures. Lighter "walk-behind" compaction equipment may be used to achieve the degree of compaction.

Should clayey sand be encountered at the bearing surface, this material should be probed and visually confirmed to be unyielding in the upper 12 inches in lieu of density testing. If the foundation excavations penetrate the clayey sand, the excavation should be performed in a manner that reduces soil disturbance. Clayey sand soils (with fines content in excess of 15 percent) that are removed and replaced or appreciably disturbed need to be re-compacted to 98 percent of the Standard Proctor maximum dry density (ASTM D698).

4.6.5 Fill Placement

Imported fill placed to raise the site grades should consist of clean sand having less than 10 percent passing the No. 200 sieve. On-site soils meeting the requirements of Section 4.9 may also be used as structural fill. The fill should be placed in maximum 12-inch loose lifts that are compacted to at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557). If lighter "walk-behind" compaction equipment is used, this may require lifts of 4 inches or less to achieve the required degree of compaction.

4.7 Quality Control and Construction Materials Testing

It should be noted that the geotechnical engineering design does not end with the advertisement of the construction documents. As the geotechnical engineer of record, GSE is the most qualified to perform the construction materials testing that will be required for this project. The benefits of having the geotechnical engineer of record also perform the construction materials testing are numerous. If GSE continues to be involved with the project through construction, we will be able to constantly re-evaluate and possibly alter our geotechnical recommendations in a timely and cost-effective manner once final design and construction techniques are developed. This often results in cost savings for the project.

We recommend performing compaction testing beneath the concrete floor slab and the building foundations. We recommend one test be performed every 50 linear feet of continuous footing and every other column footing, per foot depth of fill or native material. We recommend a compaction test be performed for each 2,500 square feet of floor area or 10,000 square feet of pavement area per foot of fill or native material, or a minimum of three tests each, whichever is greater. Test all footing excavations to a depth of 12 inches at the frequencies stated above.

4.8 Stormwater Management

The soil conditions at the stormwater management facilities are relatively consistent. The borings generally encountered 3.5 to 17.5 feet of poorly graded sand, silty sand, and sand with silt underlain by clayey and very clayey sands, sandy clay, and clay with sand to the explored depths of 15 to 30 feet bls.

The water table was encountered in borings P-2 and P-8 at depths of 26.7 feet bls and 27.5 feet bls, respectively, at the time of our exploration. We anticipate the seasonal high groundwater table to be a transient perched condition on top of the clay-rich soils. Undercutting the clay-rich soils will lower the temporarily perched groundwater table.

The laboratory permeability tests indicate the tested silty sand has hydraulic conductivity values of 0.7 to 4.5 feet per day. The tested clayey sand has hydraulic conductivity values of 0.4 to 0.7 feet per day. **The underlying very clayey sand, sandy clay, and clay with sand are expected to be confining soils; however, the lack of a surficial water table suggests the site is perforated. Limestone was encountered as various depths at the boring locations. In addition, confining soils were not present in a few of the borings within the explored depths. Therefore, we are providing soil parameters for a perforated basin, you should model the basin area considering it may not entirely be perforated. Increasing the perforated basin area and depth should help infiltrate water to deeper pockets of sand and pervious limestone.** For your modeling purposes, we recommend you consider the seasonal high groundwater table to be the top of the Floridan Aquifer at 50 feet NAVD 88.

Based upon our findings and test results, our recommended soil parameters for the stormwater management design in the explored areas are presented below. The recommended parameters consider the results of the permeability tests, wash 200 determinations, and our experience with these types of soils. The parameters below do not consider a factor of safety.

Proposed Northern Stormwater Management Facility (P-1 to P-9)

1. Base elevation of effective or mobilized aquifer (average depth of confining layer) equal to greater than 30 feet bls.
2. Unsaturated vertical infiltration rate of 20 feet per day*.
3. Horizontal hydraulic conductivity equal to 5.5 feet per day.
4. Specific yield (fillable porosity) of 20 percent.
5. Average seasonal high groundwater table depth equal to 50 feet.

*For the area undercut and backfilled with clean sand connecting the underlying deeper sand and limestone

Proposed Northwestern Stormwater Management Facility (P-10 to P-15)

1. Base elevation of effective or mobilized aquifer (average depth of confining layer) equal to greater than 30 feet bls.
2. Unsaturated vertical infiltration rate of 20 feet per day*.
3. Horizontal hydraulic conductivity equal to 3 feet per day.
4. Specific yield (fillable porosity) of 20 percent.
5. Average seasonal high groundwater table depth equal to 50 feet NAVD 88.

*For the area undercut and backfilled with clean sand connecting the underlying deeper sand and limestone

Proposed Southwestern Stormwater Management Facility (P-16 to P-19)

1. Base elevation of effective or mobilized aquifer (average depth of confining layer) equal to 9 feet bls.
2. Unsaturated vertical infiltration rate of 1 foot per day.
3. Horizontal hydraulic conductivity equal to 1 foot per day.
4. Specific yield (fillable porosity) of 20 percent.
5. Average seasonal high groundwater table depth equal to 8.5 feet bls.

In areas where clay-rich soils are present at the basin bottom, we recommend these soils be undercut a minimum of 2 feet but preferably to the underlying sandy soils and limestone and backfilled with the on-site sands and sands with silt (SP, SP-SM) having a maximum of 12 percent soil fines passing the No. 200 sieve. The intent of this undercutting and replacement is to provide a more uniform sand "blanket" at the basin bottom that allows the migration of water to the deeper deposits of sand and limestone. This sand blanket will also reduce the potential for clay-fines leaching out of the soils when water is present in the basin that can result in a thin layer of confining type material on the basin bottom that can reduce the effectiveness of the basin.

4.9 Fill Suitability

The soils encountered at this site within the explored depths range from sands (SP) to clays (CL/CH). A discussion of the suitability for reuse as structural fill for each soil classification according to the Unified Soil Classification System (USCS) designation is provided below.

SP, SP/SM – Sands (SP) and sand with silt (SP/SM) have less than 5 percent and 12 percent soil fines passing the No. 200 sieve, respectively, and are typically well draining soils that are suitable for reuse as structural fill. The sands with silt may require moisture conditioning (drying) to make the material more workable. These soils will require stockpiling and drying before they are reused if they are excavated from below the water table.

SM – Silty sands (SM) can have between 12 percent and 50 percent soil fines passing the No. 200 sieve. Silty sands are typically non-plastic or have low plasticity and can be reused as structural fill with precautions. Silty sands can be moisture sensitive and difficult to work and compact and can rut if the moisture content is near or above the optimum moisture content. We recommend these soils be moisture conditioned (dried) so that the moisture content during use is at or below the optimum moisture content. Aerating and exposure to the sun is typically the most effective methods of drying these soils. It may not be practical to reuse these materials during the wet season, as frequent rain showers may not allow these soils to dry to a workable moisture content. Suitable silty sands are limited to soil having less than 30 percent soil fines passing the No. 200 sieve. Silty sands with more than 30 percent soil fines are especially moisture sensitive and are not recommended for reuse as structural fill. These soils will behave more as sandy silt, and for this reason, very silty sands having more than 30 percent soil fines passing the No. 200 sieve have been assigned a dual classification of SM/ML. Silty sand soils that are excavated from below the water table are not recommended for reuse as structural fill due to the amount of time that will be required to dry these soils to a workable condition.

SC – Clayey sand (SC) soils can have between 12 percent and 50 percent soil fines passing the No. 200 sieve. Clayey sands can have a high range of plasticity, varying from a PI of 7 or greater and plotting above the A-line to highly plastic. Friable clayey sands are typically suitable for use as structural fill with precautions. Clayey sands will be moisture sensitive and difficult to work and compact and can rut during placement if the moisture content is near or above the natural moisture content. We recommend these soils be moisture conditioned (dried) so that the moisture content during use is at or below the optimum moisture content. Aerating and exposure to the sun is typically the most effective methods of drying these soils. It may not be practical to reuse these materials during the wet season, as frequent rain showers may not allow these soils to dry to a workable moisture content. Suitable clayey sands are limited to soil having less than 30 percent soil fines passing the No. 200 sieve. Clayey sands with more than 30 percent soil fines passing the No. 200 sieve are especially moisture sensitive and are typically highly plastic and are not recommended for reuse as structural fill. These soils will behave more as sandy clay, and for this reason, very clayey sands having more than 30 percent soil fines passing the No. 200 sieve have been assigned a dual classification of SC/CH or SC/CL. Clayey sand soils that are excavated from below the water table are not recommended for reuse as structural fill due to the amount of time that will be required to dry these soils to a workable condition.

ML, MH, CL, CH – Silts and clays are not suitable materials for reuse as structural fill.

When using on-site soils as fill materials, we recommend the silty and clayey sand soils (SM, SC) be used in the lower depths of the fill. Sand and sand with silt (SP, SP-SM) should be used in the upper portions of the fill. We recommend a minimum of 2 feet of sand (SP, SP-SM) cover the silty and clayey sand fill materials to reduce the potential for soggy surface conditions due to the low permeability characteristics of the silty and clayey sand materials.

4.10 Surface Water Control and Landscaping

Roof gutters should be considered to divert runoff away from the building. The gutter downspouts should discharge a minimum of 10 feet from the structure to reduce the amount of water collecting around the foundations. Where possible, the gutter downspouts should discharge directly into the storm sewer system or onto the asphalt paved areas in order to reduce the amount of water collecting around the foundations. Grading of the site should be such that water is diverted away from the building on all sides to reduce the potential for erosion and water infiltration along the foundation.

With respect to landscaping, it is recommended that any trees and large "tree-like" shrubbery with potential for developing large root systems be planted a minimum distance of half their mature height, and preferably their expected final height, away from the structure. The purpose of this is to reduce the potential for foundation or slab movements from the growth of root systems as the landscaping matures. Consideration should also be given to using landscaping that has a low water demand, so that excessive irrigation is not conducted around the structures.

If excavations for underground utilities encounter the clay-rich soils, the excavations should be made such that they do not trap water (i.e., "swimming pool" or "bowl" effect). Sloping the excavations, installing underdrains, or extending the excavation to a more pervious area can achieve this. Allowing surface water to become trapped within utility trenches or other excavations (including footings) serves as a potential water source for the clay, which can result in shrink swell of these soils. Furthermore, during construction, surface water within the building areas must be controlled such that the water does not become trapped and represent a source of water for the underlying clay-rich soils. Mismanagement of the surface water during construction within the building footprint could result in subsequent post-construction slab movement.

The above recommendations are intended to maintain relatively consistent moisture contents within the clay-rich expansive soils encountered by the borings. The importance of proper surface water control and landscaping placement cannot be overemphasized in accomplishing this objective.

5.0 FIELD DATA

5.1 Auger Boring Logs

GSE Engineering
5590 SW 64th St
Gainesville, FL 32608
Telephone: 3523773233

CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-1

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Tan SAND
7.5		AU 2	(SC) Brown and orange clayey SAND *%PASS-200 = 25* *MC = 11* *k_h = 0.7 ft/day*
12.0		AU PS	
		AU 4	(SP-SC) Gray and brown SAND with trace clay
15.0			Bottom of borehole at 15.0 feet.

BORING NUMBER P-2

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING 26.7 ft CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 6.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Pale brown and gray SAND
4.0		AU PS	
		AU 2	(SC) Brown and orange clayey SAND
7.0		▽	
		AU 3	(SC/CL) Brown, gray, and orange very clayey SAND with trace limestone
10.0		AU 4	LIMESTONE
		▼	
30.0			Bottom of borehole at 30.0 feet.

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CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida

DATE PERFORMED 2/8/2023 **BORING NUMBER P-3**
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Tan SAND
5.0			
5		AU 2	(SC) Brown and orange clayey SAND
10			
13.0			
15		AU 3 PS	(SP-SC) Brown SAND with clay
15.0			Bottom of borehole at 15.0 feet.

DATE PERFORMED 2/8/2023 **BORING NUMBER P-4**
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Brown and gray silty SAND *%PASS-200 = 18* *MC = 3.7* *k_h = 1.7 ft/day*
5			
10		AU PS	
10.5			
		AU 2	(SC) Brown and orange clayey SAND
15			
15.0			Bottom of borehole at 15.0 feet.

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CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida

BORING NUMBER P-5

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
LOGGED BY WDI
AT TIME OF DRILLING NE
CHECKED BY CRL
ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Dark gray and brown SAND with silt
5.0		AU 2	(SM) Pale gray and brown silty SAND *%PASS-200 = 13* *MC = 7.4* *k_h = 4.5 ft/day*
10.5		AU PS	
		AU 3	(SP) Brown, gray, and orange SAND with trace clay
15.0			Bottom of borehole at 15.0 feet.

BORING NUMBER P-6

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
LOGGED BY WDI
AT TIME OF DRILLING NE
CHECKED BY CRL
ESTIMATED SEASONAL HIGH 10.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Dark gray and brown SAND
5.5		AU 2 PS	(SM) Pale brown and gray silty SAND *%PASS-200 = 14* *MC = 7.3 ; k_h = 2.6 ft/day*
8.0		AU 3	(SC) Brown and orange clayey SAND
11.0		AU 4	(CL/CH) Brown, gray, and orange sandy CLAY
15.0			Bottom of borehole at 15.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-7

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray and brown silty SAND
4.5			
5		AU 2	(SP) Brown SAND
6.0			
		AU 3	(SC) Pale brown and orange clayey SAND wth trace limestone
10			
10.5			
		AU 4	LIMESTONE
15			
15.0			Bottom of borehole at 15.0 feet.

BORING NUMBER P-8

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING 27.5 ft CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 8.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Brown and gray SAND with silt
5.5			
5		AU 2	(SM) Pale brown and gray silty SAND
		AU	*%PASS-200 = 19*
		PS	*MC = 6.7 ; k_h = 2.2 ft/day*
9.0			
10		AU 3	(CL/CH) Brown, gray, and orange sandy CLAY
12.5			
		AU 4	(SC/CL) Pale brown, gray, and orange very clayey SAND
16.0			
15			LIMESTONE
20		AU 5	
25			
30			
30.0			Bottom of borehole at 30.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-9

DATE PERFORMED 2/8/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 10.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Dark gray and brown SAND with silt
			3.0
		AU 2	(SP) Brown SAND
5			
			7.0
		AU 3 PS	(SM) Gray, brown, and orange silty SAND *%PASS-200 = 21* *MC = 9.5* *k_h = 0.7 ft/day*
10		▽	
			11.5
		AU 4	(CL/CH) Gray, brown, and orange sandy CLAY
15			15.0
			Bottom of borehole at 15.0 feet.

BORING NUMBER P-10

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 11.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Pale brown silty SAND *%PASS-200 = 21* *MC = 13 ; k_h = 1.9 ft/day*
		AU PS	
			4.5
5		AU 2	(SP) Brown, gray, and orange SAND with trace clay
			5.5
		AU 3	(SC) Brown and orange clayey SAND
10		▽	
			12.0
		AU 4	(SC/CL) Pale gray, brown, and orange very clayey SAND
15			
20			20.5
		AU 5 PS	(SP) Brown SAND with trace clay
25			
30			30.0
			Bottom of borehole at 30.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-11

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 4.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Gray and brown SAND with silt
3.0			
		AU 2 PS	(SP) Pale brown and gray SAND ▽
5			
5.5			
		AU 3	(CL/CH) Brown and orange CLAY with sand
10			
11.0			
12.0		AU 4	(SC/CL) Brown and orange very clayey SAND with trace flint rock
			Refusal at 12.0 feet. Bottom of borehole at 12.0 feet.

BORING NUMBER P-12

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SC/SM) Brown and gray SAND with silt and clay
4.0			
		AU 2	(SP) Pale brown and gray SAND
5			
7.0			
		AU 3 PS	(SC) Brown and orange clayey SAND *%PASS-200 = 26* *MC = 13* *k_h = 0.4 ft/day*
10			
11.5		AU 4	(SC) Brown, gray, and orange clayey SAND
15			
15.0			Bottom of borehole at 15.0 feet.

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CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida

BORING NUMBER P-13

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 4.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP-SM) Brown and gray SAND with silt and trace limestone
2.0			
		AU 2 PS	(SM) Pale brown and gray silty SAND *%PASS-200 = 16* *MC = 6.3* *k_h = 3.0 ft/day*
5			
5.5		AU 3	(CL/CH) Gray, brown, and orange sandy CLAY
10			
15			
16.5		AU 4	LIMESTONE
20			
20.0			LIMESTONE with brown clay
25		AU 5	
30			
30.0			Bottom of borehole at 30.0 feet.

BORING NUMBER P-14

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 2.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Gray and brown SAND
			▽
3.5			
		AU 2	(SC/CL) Brown and orange very clayey SAND *%PASS-200 = 42* *MC = 18*
5			
10			
15			
15.0			Bottom of borehole at 15.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-15

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH > 15 ft
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Brown and gray SAND
4.0			
5		AU 2	(SM) Brown and orange silty SAND *%PASS-200 = 18* *MC = 6.8* *k_h = 3.1 ft/day*
10			
15		AU PS	
15.0			Bottom of borehole at 15.0 feet.

BORING NUMBER P-16

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 16.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark brown and gray silty SAND with trace limestone
6.5			
10		AU 2 PS	(SM-PT) Dark gray and brown silty SAND with trace sandstone and organics *%PASS-200 = 20* *MC = 12* *k_h = 0.8 ft/day* *ORG = 6.1*
10.0			
15		AU 3	(SP) Pale brown and gray SAND ▽
17.5			
20		AU 4	(SC/CL) Pale brown, gray, and orange very clayey SAND
21.0			
25		AU 5	(SC) Brown and orange clayey SAND
26.5			
30		AU 6	(SC/CL) Brown and orange very clayey SAND
30.0			Bottom of borehole at 30.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

BORING NUMBER P-17

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 4.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Pale brown and gray silty SAND *%PASS-200 = 17* *MC = 5.9* *k_h = 2.8 ft/day*
5		AU PS ▽	
			5.5
		AU 2	(CL/CH) Gray, brown, and orange sandy CLAY
10			
15			15.0
			Bottom of borehole at 15.0 feet.

BORING NUMBER P-18

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS: LOGGED BY WDI
▼ AT TIME OF DRILLING NE CHECKED BY CRL
▽ ESTIMATED SEASONAL HIGH 5.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SP) Dark brown and gray SAND
			2.0
		AU 2 PS ▽	(SM) Brown and gray silty SAND *%PASS-200 = 20* *MC = 5.6* *k_h = 1.1 ft/day*
5			6.0
		AU 3	(CL/CH) Brown and orange CLAY with sand
10			
			12.0
		AU 4	(SC/CL) Gray, brown, and orange very clayey SAND
15			15.0
			Bottom of borehole at 15.0 feet.

(Continued Next Page)

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Gainesville, FL 32608
Telephone: 3523773233

CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

DATE PERFORMED 2/7/2023 **BORING NUMBER P-19**

DRILLING CONTRACTOR Whitaker Drilling, Inc.

GROUND WATER LEVELS: LOGGED BY WDI

▼ AT TIME OF DRILLING NE CHECKED BY CRL

▽ ESTIMATED SEASONAL HIGH 6.0 ft, perched

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0		AU 1	(SM) Dark gray silty SAND with trace flint rock
4.5			
5		AU 2 PS	(SM) Brown and gray silty SAND ▽ *%PASS-200 = 17* *MC = 7.0 ; k_h = 2.7 ft/day*
7.0			
10		AU 3	(SC/CL) Brown and orange very clayey SAND *%PASS-200 = 43* *MC = 16*
12.5			
15		AU 4	(SC) Gray, brown, and orange clayey SAND
16.5			
20		AU 5 PS	(SC) Brown and gray clayey SAND
20.0			
25		AU 6	(SP) Pale brown and orange SAND
30			
30.0			Bottom of borehole at 30.0 feet.

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CLIENT RE Arnold Construction, Inc. **PROJECT NAME** Maddox Foundry Batch Plant

PROJECT NUMBER 15535B **PROJECT LOCATION** Archer, Alachua County, Florida

DATE PERFORMED 2/7/2023 **BORING NUMBER R-1**

DRILLING CONTRACTOR Whitaker Drilling, Inc.

GROUND WATER LEVELS: LOGGED BY WDI

▼ AT TIME OF DRILLING NE CHECKED BY CRL

▽ ESTIMATED SEASONAL HIGH > 5 ft

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0.0			(SP-SM) Brown and orange SAND with silt and trace sandstone
		AU 1	
2.5			
5.0			5.0
			Bottom of borehole at 5.0 feet.

DATE PERFORMED 2/7/2023 **BORING NUMBER R-2**

DRILLING CONTRACTOR Whitaker Drilling, Inc.

GROUND WATER LEVELS: LOGGED BY WDI

▼ AT TIME OF DRILLING NE CHECKED BY CRL

▽ ESTIMATED SEASONAL HIGH > 5 ft

NOTES

DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0.0			(SM) Brown and gray silty SAND and trace sandstone
		AU 1	*%PASS-200 = 12*
			MC = 8.1
			2.0
2.5			(SP) Brown and gray SAND
		AU 2	
5.0			5.0
			Bottom of borehole at 5.0 feet.

(Continued Next Page)

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CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida

BORING NUMBER R-3

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
AT TIME OF DRILLING NE
ESTIMATED SEASONAL HIGH > 15 ft
LOGGED BY WDI
CHECKED BY CRL
NOTES

DEPTH (ft)	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0.0		(SP) Pale gray and brown SAND
	AU 1	
2.5		
5.0		
		5.5
		(SM) Pale brown and orange silty SAND
	AU 2	*%PASS-200 = 26*
7.5		*MC = 14*
10.0		
12.5	AU 3	
15.0		15.0
		Bottom of borehole at 15.0 feet.

BORING NUMBER R-4

DATE PERFORMED 2/7/2023
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
AT TIME OF DRILLING NE
ESTIMATED SEASONAL HIGH > 15 ft
LOGGED BY WDI
CHECKED BY CRL
NOTES

DEPTH (ft)	SAMPLE TYPE NUMBER	MATERIAL DESCRIPTION
0.0		(SP-SM) Dark brown, gray, and orange SAND with silt
	AU 1	
2.5		
5.0		
		5.5
		(SP) Pale brown and gray SAND
	AU 2	
7.5		
		9.0
		(SP) Pale brown SAND with trace clay
10.0	AU 3	
		11.0
		(SC) Pale brown and orange clayey SAND
	AU 4	
12.5		
15.0		15.0
		Bottom of borehole at 15.0 feet.

5.2 Standard Penetration Test Soil Boring Logs

GSE Engineering
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Gainesville, FL 32608
Telephone: 3523773233

BORING NUMBER B-1

CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida
DATE STARTED 2/6/23 **COMPLETED** 2/6/23
GROUND ELEVATION _____ **HOLE SIZE** _____
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Flight Auger
▼ **AT TIME OF DRILLING** NE
LOGGED BY WDI **CHECKED BY** CRL
▽ **ESTIMATED SEASONAL HIGH** 6.5 ft, perched
NOTES _____

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SP-SM) Medium dense gray and brown SAND with silt and trace limestone									20 40 60 80
				SPT 1	7-8-10 (18)						
			2.5								
		(SP) Medium dense pale brown and gray SAND		SPT 2	15-14-11 (25)						
			4.5								
5		(SP-SM) Very loose to loose brown, gray, and orange SAND with silt and trace clay		SPT 3	7-5-5 (10)						
		▽		SPT 4	4-2-2 (4)						
			7.5								
		(SC/CL) Very loose to loose gray and orange very clayey SAND		SPT 5	2-2-2 (4)						
				SPT 6	2-3-4 (7)	36	14	22	35	19	
10											
			14.5	SPT 7	3-4-5 (9)						
15		Hard LIMESTONE									
				SPT 8	22-23-26 (49)						
20			20								
		Bottom of borehole at 20.0 feet.									

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Gainesville, FL 32608
Telephone: 3523773233

BORING NUMBER B-2

CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida
DATE STARTED 2/6/23 **COMPLETED** 2/6/23
GROUND ELEVATION _____ **HOLE SIZE** _____
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Flight Auger
▼ **AT TIME OF DRILLING** NE
LOGGED BY WDI **CHECKED BY** CRL
▽ **ESTIMATED SEASONAL HIGH** 5.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SP-SM) Medium dense to dense gray and brown SAND with silt and trace limestone		SPT 1	9-8-23 (31)						20 40 60 80
			3.5	SPT 2	10-11-8 (19)						
5		(SP) Medium dense pale brown and gray SAND ▽		SPT 3	7-6-5 (11)						
			6	SPT 4	3-4-4 (8)	37	15	22	41	18	
		(SC/CL) Loose to medium dense gray and orange very clayey SAND		SPT 5	8-4-6 (10)						
10				SPT 6	6-7-7 (14)						
			13								
		Moderately hard LIMESTONE		SPT 7	15-16-14 (30)						
15											
				SPT 8	17-11-15 (26)						
20			20								
		Bottom of borehole at 20.0 feet.									

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BORING NUMBER B-3

CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida
DATE STARTED 2/6/23 **COMPLETED** 2/6/23
GROUND ELEVATION _____ **HOLE SIZE** _____
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Flight Auger
▼ **AT TIME OF DRILLING** NE
LOGGED BY WDI **CHECKED BY** CRL
▽ **ESTIMATED SEASONAL HIGH** 2.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SP) Loose pale brown and gray SAND									
		▽		SPT 1	4-4-4 (8)						
			3	SPT 2	3-2-3 (5)						
5		(SC/CL) Loose to medium dense brown and orange very clayey SAND		SPT 3	4-5-6 (11)	38	18	20	45	16	
			6	SPT 4	8-10-14 (24)						
		(SC) Medium dense to dense brown, gray, and orange clayey SAND		SPT 5	15-13-8 (21)						
10				SPT 6	15-18-13 (31)						
			12								
		(SP) Loose brown, gray, and orange SAND with trace clay		SPT 7	4-3-3 (6)						
15											
				SPT 8	3-3-4 (7)						
20			20								
		Bottom of borehole at 20.0 feet.									

20 40 60 80

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BORING NUMBER B-4

CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida
DATE STARTED 2/6/23 **COMPLETED** 2/6/23
GROUND ELEVATION _____ **HOLE SIZE** _____
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Flight Auger
▼ **AT TIME OF DRILLING** NE
LOGGED BY WDI **CHECKED BY** CRL
▽ **ESTIMATED SEASONAL HIGH** 1.5 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SP) Medium dense pale brown and gray SAND									20 40 60 80
		▽	2.5	SPT 1	5-8-6 (14)						
		(SC/CL) Loose brown and orange very clayey SAND		SPT 2	3-4-3 (7)	24	15	9	37	13	
5				SPT 3	2-4-5 (9)						
			6	SPT 4	6-7-8 (15)						
		(SC) Very loose to medium dense brown, gray, and orange clayey SAND		SPT 5	7-8-10 (18)						
				SPT 6	8-5-6 (11)						
10											
				SPT 7	2-1-2 (3)						
15			18.5								
		Soft LIMESTONE		SPT 8	5-7-5 (12)						
20			20								
		Bottom of borehole at 20.0 feet.									

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BORING NUMBER B-5

CLIENT RE Arnold Construction, Inc.
PROJECT NAME Maddox Foundry Batch Plant
PROJECT NUMBER 15535B
PROJECT LOCATION Archer, Alachua County, Florida
DATE STARTED 2/6/23 **COMPLETED** 2/6/23
GROUND ELEVATION _____ **HOLE SIZE** _____
DRILLING CONTRACTOR Whitaker Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Flight Auger
▼ **AT TIME OF DRILLING** NE
LOGGED BY WDI **CHECKED BY** CRL
▽ **ESTIMATED SEASONAL HIGH** 3.0 ft, perched
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	CONTACT DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX	PERCENT PASS NO. 200 SIEVE	MOISTURE CONTENT, %	▲ SPT N VALUE ▲
0		(SP) Loose to medium dense pale brown and gray SAND									
		▽		SPT 1	4-6-6 (12)						
				SPT 2	6-6-4 (10)						
			4								
5		(SC/CL) Loose to medium dense brown, gray, and orange very clayey SAND		SPT 3	2-2-3 (5)						
				SPT 4	4-6-11 (17)						
				SPT 5	11-5-11 (16)				38	13	
10				SPT 6	10-10-12 (22)						
			13.5								
		(SP) Medium dense brown, gray, and orange SAND with trace clay		SPT 7	6-8-9 (17)						
15											
			17								
		Very soft sandy LIMESTONE									
				SPT 8	3-3-3 (6)						
20			20								
		Bottom of borehole at 20.0 feet.									

SPT N VALUE scale: 20 40 60 80

SPT BORINGS - GINT STD US.GDT - 2/27/23 13:05 - Q:\PROJECTS\15535B MADDOX FOUNDRY BATCH PLANT\15535B BORINGS\15535B BORINGS.GPJ

5.3 Laboratory Results

GSE Engineering & Consulting, Inc.

SUMMARY REPORT OF LABORATORY TEST RESULTS

Project Number: 15535B

Project Name: Maddox Foundry Batch Plant

Boring Number	Depth (ft)	Soil Description	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Passing No. 200 Sieve	Organic Content (%)	Hydraulic Conductivity (ft/day)	Unified Soil Classification
B-1	8.5-10	Brown, gray, and orange very clayey SAND	19	36	14	22	35			SC/CL
B-2	5.5-7	Brown, gray, and orange very clayey SAND	18	37	15	22	41			SC/CL
B-3	4-5.5	Brown and orange very clayey SAND	16	38	18	20	45			SC/CL
B-4	2.5-4	Brown and orange very clayey SAND	13	24	15	9	37			SC/CL
B-5	7-8.5	Brown, gray, and orange very clayey SAND	13				38			SC/CL
R-2	1-1.5	Brown and gray silty SAND	8.1				12			SM
R-3	13-13.5	Pale brown and orange silty SAND	14				26			SM
P-14	4-4.5	Brown and orange very clayey SAND	18				42			SC/CL
P-21	7.5-8	Brown and orange very clayey SAND	16				43			SC/CL

GSE Engineering & Consulting, Inc.

SUMMARY REPORT OF LABORATORY TEST RESULTS

Project Number: 15535B

Project Name: Maddox Foundry Batch Plant

Boring Number	Depth (ft)	Soil Description	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Passing No. 200 Sieve	Organic Content (%)	Hydraulic Conductivity (ft/day)	Unified Soil Classification
P-1	10-12	Brown and orange clayey SAND	11				25		0.7	SC
P-4	8-10	Brown and gray silty SAND	3.7				18		1.7	SM
P-5	8-10	Pale gray and brown silty SAND	7.4				13		4.5	SM
P-6	6-8	Pale brown and gray silty SAND	7.3				14		2.6	SM
P-8	5-7	Pale brown and gray silty SAND	6.7				19		2.2	SM
P-9	8-10	Gray, brown, and orange silty SAND	9.5				21		0.7	SM
P-10	2-4	Pale brown silty SAND	13				21		1.9	SM
P-12	8-10	Brown and orange clayey SAND	13				26		0.4	SC
P-13	3-5	Pale brown and gray silty SAND	6.3				16		3.0	SM
P-15	13-15	Brown and orange silty SAND	6.8				18		3.1	SM
P-17	8-10	Dark gray and brown silty sand with trace sandstone and organics	12				20	6.1	0.8	SM-PT
P-18	3-5	Pale brown and gray silty SAND	5.9				17		2.8	SM

GSE Engineering & Consulting, Inc.

SUMMARY REPORT OF LABORATORY TEST RESULTS

Project Number: 15535B

Project Name: Maddox Foundry Batch Plant

Boring Number	Depth (ft)	Soil Description	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Passing No. 200 Sieve	Organic Content (%)	Hydraulic Conductivity (ft/day)	Unified Soil Classification
P-20	3-5	Brown and gray silty SAND	5.6				20		1.1	SM
P-21	5-7	Brown and gray silty SAND	7.0				17		2.7	SM

5.4 Key to Soil Classification

KEY TO SOIL CLASSIFICATION CHART

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests				SYMBOLS		GROUP NAME
				GRAPHIC	LETTER	
COARSE-GRAINED SOILS	Gravels	Clean Gravels	$Cu \geq 4$ and $1 \leq Cc \leq 3$		GW	Well graded GRAVEL
More than 50% retained on No. 200 sieve	More than 50% of coarse fraction retained on No. 4 sieve	Less than 5% fines	$Cu < 4$ and/or $1 > Cc > 3$		GP	Poorly graded GRAVEL
		Gravels with fines	Fines classify as ML or MH		GM	Silty GRAVEL
		More than 12% fines	Fines classify as CL or CH		GC	Clayey GRAVEL
	Sands	Clean Sands	$Cu \geq 6$ and $1 \leq Cc \leq 3$		SW	Well graded SAND
	50% or more of coarse fraction passes No. 4 sieve	Less than 5% fines	$Cu < 6$ and/or $1 > Cc > 3$		SP	Poorly graded SAND
		Sand with fines	Fines classify as ML or MH		SP-SM	SAND with silt
		5% ≤ fines < 12%	Fines classify as CL or CH		SP-SC	SAND with clay
		Sand with fines	Fines classify as ML or MH		SM	Silty SAND
		12% ≤ fines < 30%	Fines classify as CL or CH		SC	Clayey SAND
		Sand with fines	Fines classify as ML or MH		SM	Very silty SAND
		30% fines or more	Fines classify as CL or CH		SC	Very clayey SAND
FINE-GRAINED SOILS	Clays	inorganic	50% ≤ fines < 70%		CL/CH	Sandy CLAY
50% or more passes the No. 200 sieve			70% ≤ fines < 85%		CL/CH	CLAY with sand
			fines ≥ 85%		CL/CH	CLAY
	Silts and Clays	inorganic	PI > 7 and plots on/above "A" line		CL	Lean CLAY
	Liquid Limit less than 50		PI < 4 or plots below "A" line		ML	SILT
		organic	Liquid Limit - oven dried / Liquid Limit - not dried < 0.75		OL	Organic clay / Organic silt
	Silts and Clays	inorganic	PI plots on or above "A" line		CH	Fat CLAY
	Liquid Limit 50 or more		PI plots below "A" line		MH	Elastic SILT
		organic	Liquid Limit - oven dried / Liquid Limit - not dried < 0.75		OH	Organic clay / Organic silt
HIGHLY ORGANIC SOILS	Primarily organic matter, dark in color, and organic odor				PT	PEAT

CORRELATION OF PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY

	No. OF BLOWS, N	RELATIVE DENSITY
	0 - 4	Very Loose
	5 - 10	Loose
SANDS:	11 - 30	Medium dense
	31 - 50	Dense
	OVER 50	Very Dense

	No. OF BLOWS, N	RELATIVE DENSITY
	0 - 8	Very Soft
	9 - 18	Soft
LIMESTONE:	19 - 32	Moderately Hard
	33 - 50	Hard
	OVER 50	Very Hard

	No. OF BLOWS, N	CONSISTENCY
	0 - 2	Very Soft
SILTS	3 - 4	Soft
&	5 - 8	Firm
CLAYS:	9 - 15	Stiff
	16 - 30	Very Stiff
	31 - 50	Hard
	OVER 50	Very Hard

SAMPLE GRAPHIC TYPE LEGEND

Location of SPT Sample

Location of Auger Sample

PARTICLE SIZE IDENTIFICATION

BOULDERS:		Greater than 300 mm
COBBLES:		75 mm to 300 mm
GRAVEL:	Coarse -	19.0 mm to 75 mm
	Fine -	4.75 mm to 19.0 mm
SANDS:	Coarse -	2.00 mm to 4.75 mm
	Medium -	0.425 mm to 2.00 mm
	Fine -	0.075 mm to 0.425 mm
SILTS & CLAYS:		Less than 0.075 mm

LABORATORY TEST LEGEND

LL	=	Liquid Limit, %
PL	=	Plastic Limit, %
PI	=	Plasticity Index, %
% PASS - 200	=	Percent Passing the No. 200 Sieve
MC	=	Moisture Content, %
ORG	=	Organic Content, %
k_h	=	Horizontal Hydraulic Conductivity, ft/day

6.0 LIMITATIONS

6.1 Warranty

This report has been prepared 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.

6.2 Auger and SPT Borings

The determination of soil type and conditions was performed from the ground surface to the maximum depth of the borings, only. Any changes in subsurface conditions that occur between or below the borings would not have been detected or reflected in this report.

Soil classifications that were made in the field are based upon identifiable textural changes, color changes, changes in composition or changes in resistance to penetration in the intervals from which the samples were collected. Abrupt changes in soil type, as reflected in boring logs and/or cross sections may not actually occur, but instead, be transitional.

Depth to the water table is based upon observations made during the performance of the auger and SPT borings. This depth is an estimate and does not reflect the annual variations that would be expected in this area due to fluctuations in rainfall and rates of evapotranspiration.

6.3 Site Figures

The measurements used for the preparation of the figures in this report were made using the provided site plan and by estimating distances from existing structures and site features. Figures in this report were not prepared by a licensed land surveyor and should not be interpreted as such.

6.4 Unanticipated Soil Conditions

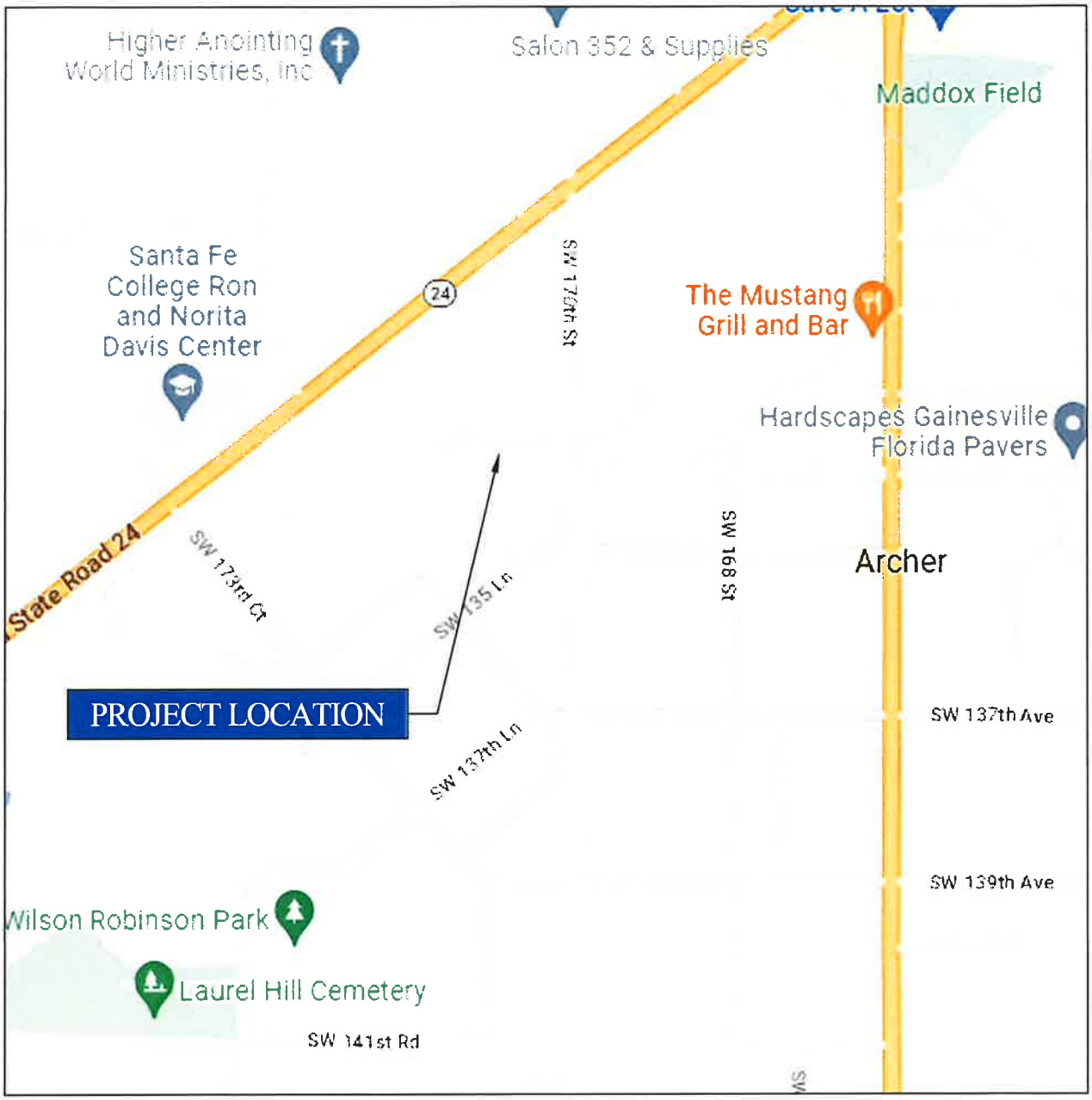
The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on Figure 2. This report does not reflect any variations that may occur between these borings.

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.

6.5 Misinterpretation of Soil Engineering Report

GSE Engineering & Consulting, Inc. 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 others make the conclusions or recommendations based upon the data presented, those conclusions or recommendations are not the responsibility of GSE.

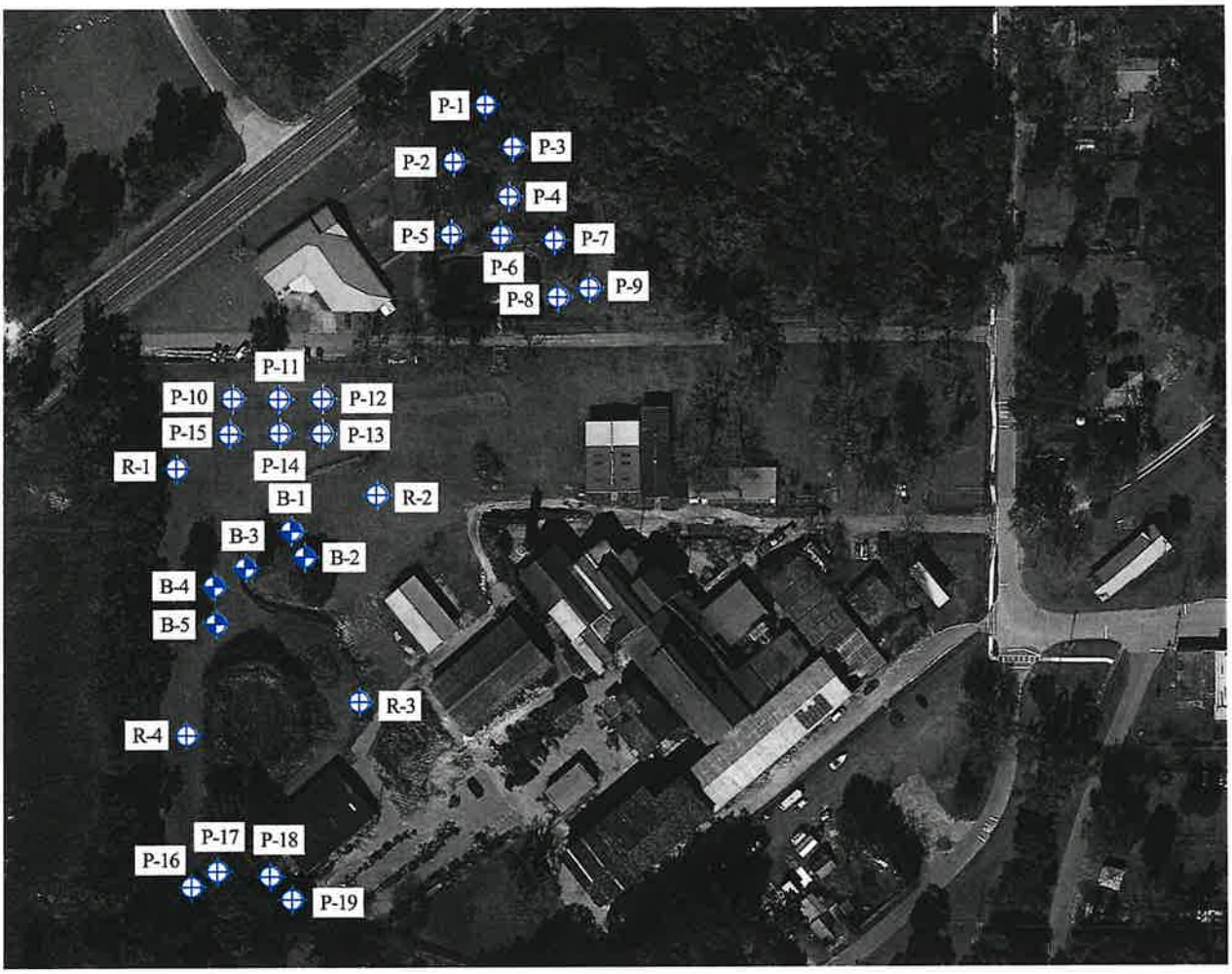
FIGURES



NORTH

NOT TO SCALE

MADDOX FOUNDRY BATCH PLANT ARCHER, ALACHUA COUNTY, FLORIDA GSE PROJECT NO. 15535B	PROJECT SITE LOCATION MAP		
	DESIGNED BY: CRL CHECKED BY : KLH DRAWN BY : JNM	GSE Engineering & Consulting, Inc	FIGURE 1



LEGEND:

SPT BORING

AUGER BORING

NORTH

0 200'

SCALE: 1" = 200' APPROX.

MADDOX FOUNDRY BATCH PLANT
ARCHER, ALACHUA COUNTY, FLORIDA
GSE PROJECT NO. 15535B

AERIAL PHOTOGRAPH SHOWING APPROXIMATE LOCATIONS OF FIELD TESTS

DESIGNED BY: CRL
CHECKED BY : KLH
DRAWN BY : JNM

GSE Engineering & Consulting, Inc.

FIGURE 2

2603 NW 13th St, Box 314
Gainesville, FL 32609
Ph. (352) 281-4928
gmuereng.com

Stormwater Management Report

for

Maddox Foundry &
Ready Mix Batch Plant

13370 SW 170th ST
Archer, FL 32618
TP#'s 05046-000-000, 05047-000-000, 05050-000-000, 04993-000-000, 04992-000-000
and 05045-000-000

Prepared for
Ronnie, LLC
Ronald E. Arnold, Sr., Managing Member
14506 NW 50th PL, Alachua, FL 32615

Date: October 9, 2023
Revised: Jan 31, 2024

Christopher A Gmuer
2024.02.07
16:00:02
'00'05-

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LICENSE
No. 71599
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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Project Description

The project is located at 13370 SW 170th ST, Archer, FL 32618 and has existing for over 100 years as the Maddox Foundry. The project proposes the construction of a concrete batch plant on the western portion of the site. The proposed stormwater facilities will collect runoff from the batch plant and the foundary and discharge north to the SR24 FDOT right-of-way where it will continue to a master stormwater management facility located on TP# 05045-000-000 at 17210 SW Archer Rd, Archer, FL 32618 and is being designed in coordination with FDOT for a drainage easement.

Pre-Development Drainage Narrative

The overall contributing watershed consists of the foundary property and some minor off-site areas as shown in the attached exhibits. The foundry consists of continuous rooftops and paved surfaces surounding these builings. The western part of the site has some outbuildings but is mainly occupied by large piles of spent casting sand of significant height and adjacent paved surfaces. The northern portion of the foundry property adjacent to SR24 is currently open space but was historically occupied by a few residential homes. The offsite areas contributing runoff are residential single family residences and public right-of-ways. The site runoff generally flows from the west, south, and east towards the north/center of the foundry site and continues through some existing man made depressional areas directly adjacent to SR24 where discharge continues north into SR24 and then continues north onto TP# 05045-000-000 which is also owned by the applicant. The existing FDOT inlets along SR24 currently do not drain anywhere and provides no crossing of SR24 besides overtopping. The site including TP# 05045-000-000 is a closed basin with a wholley owned depressional area. Maps are provided in this report of the delineation. As such, only post development stage and recovery were analyzed as no runoff leaves the site. The TP# 05045-000-000 site ahs a stormwater system that was permitted under SRWMD 210370-1.

There are several improvements within the depressional area directly adjacent to SR24. There are three onsite excavated areas that were constructed over the past 60 years. These excavations were likely constructed to help with local drainage issues. They are being replaced with the new stormwater management facilities. There is also a church adjacent to the site along SR24 which is also located on the south side of SR24. Currently there is no emergency overflow existing for the church but the proposed project will add a crossing of SR24 via pipe. The stormwater for the church was permitting under SRWMD 209032-1.

No floodplains or wetlands exist on the site.

Post-Development Drainage Narrative

The runoff from the proposed concret batch plant is collected by the southwestern drainage area and conveyed by pipe to the proposed Southwest Stormwater Management Facility (SMF-SW) which provides pre-treatement of the runoff per Alachua County standards. The discharge from SMF-SW is conveyed by pipe to the main Southeast Stormwater Management Facility (SMF-SE). It collects the runoff from southeast drainage area as well as the offsite contributing area, the existing foundry, and the onsite open areas. The SMF-SE provides treatment of the runoff and discharges to the by the control structure to the SR24 FDOT right-of-way to the north. The runoff from the SR24 right-of-way is collected in a ditch bottom inlet and all runoff is conveyed accross SR24 in a proposed pipe to an expanded Northwest Stormwater Management Facility (SMF-NW) which is wholley owned by the applicat. All runoff is retained within the owned property and as such no attenuation analysis is applicable. The SMF-NW will covered by a FDOT Drainage Easement is is being designed in cooperation with FDOT. The proposed SMF-SE has a maximum berm height above 5ft and as such a slope stability analysis has been included in this report.

Drainage Area Runoff Calculations

DA-NW (Northwest)	Hyd Soil	CN	C	Sq Ft	Acres	
SR24 Asphalt & Sidewalk	A	98	0.95	60,984	1.4000	5.9%
RE Arnold Construction	A	98	0.95	45,738	1.0500	4.4%
Family Life Church of God	A	98	0.95	12,574	0.2887	1.2%
Pond SMF-Northwest	A	100	1.00	185,791	4.2652	18.0%
Grassed Open Space	A	39	0.20	637,513	14.6353	61.6%
Grassed Open Space	B	61	0.20	91,891	2.1095	8.9%
TOTAL (weighted ave)		**58.7**	**0.43**	**1,034,491**	**23.7486**	100.0%

DA-SE (Southeast)	Hyd Soil	CN	C	Sq Ft	Acres	
Existing Maddox Foundry	A	98	0.95	195,298	4.4834	21.6%
Existing East/West Road	A	98	0.95	7,239	0.1662	0.8%
Magnolia St	A	98	0.95	30,893	0.7092	3.4%
Residential 1/3 acre Lots	A	57	0.43	178,174	4.0903	19.7%
Future Impervious	A	98	0.95	112,306	2.5782	12.4%
Pond SMF-SE Southeast	A	100	1.00	65,437	1.5022	7.2%
Grassed Open Space	A	39	0.20	294,455	6.7597	32.6%
Grassed Open Space	B	61	0.20	19,404	0.4455	2.1%
TOTAL (weighted ave)		**70.0**	**0.59**	**903,205**	**20.7347**	100.0%

DA-SW (Batch Plant)	Hyd Soil	CN	C	Sq Ft	Acres	
East/West Road Rebuilt	A	98	0.95	15,832	0.3635	7.4%
Concrete Plant	A	98	0.95	153,705	3.5286	72.2%
Pond SMF-SW Southwest	A	100	1.00	12,694	0.2914	6.0%
Grassed Open Space	A	39	0.20	30,583	0.7021	14.4%
TOTAL (weighted ave)		**89.6**	**0.85**	**212,814**	**4.8855**	100.0%

Time of Concentration

DA-NW (Northwest)

Sheet Flow	**Mann n**	**L ft**	**Rain in**	**Slope v/h**	**Tc min**
Residential Yard	0.24	200	4.25	0.010	28.4
Shallow Concentrated		**L ft**	**Vel ft/s**	**Slope v/h**	**Tc min**
Swale		1,031	1.90	0.014	9.0
Channel Flow			**Total Time of Concentration (min)**		**37.5**
None					

DA-SE (Southeast)

Sheet Flow	**Mann n**	**L ft**	**Rain in**	**Slope v/h**	**Tc min**
Residential Yard	0.24	200	4.25	0.010	28.4
Shallow Concentrated		**L ft**	**Vel ft/s**	**Slope v/h**	**Tc min**
Swale		1,008	1.80	0.012	9.3
Channel Flow			**Total Time of Concentration (min)**		**37.8**
None					

DA-SW (Batch Plant)

Sheet Flow	**Mann n**	**L ft**	**Rain in**	**Slope v/h**	**Tc min**
Pavement	0.01	100	4.25	0.020	1.1
Shallow Concentrated		**L ft**	**Vel ft/s**	**Slope v/h**	**Tc min**
Inverted Crown		470	1.40	0.005	5.6
Channel Flow			**Total Time of Concentration (min)**		**6.6**
None					

WQTV (Water Quality Treatment Volume)

DA-NW (Northwest)	**C**	**Inch**	**Sq Ft**	**Acres**	**Cu Ft**	**Ac-Ft**
Total WQTV	0.43	2.00	1,034,491	23.7486	**74,167**	**1.7026**

DA-SE (Southeast)	**C**	**Inch**	**Sq Ft**	**Acres**	**Cu Ft**	**Ac-Ft**
Total WQTV	0.59	2.00	903,205	20.7347	**88,730**	**2.0370**

DA-SW (Batch Plant)	**C**	**Inch**	**Sq Ft**	**Acres**	**Cu Ft**	**Ac-Ft**
Total WQTV	0.85	2.00	212,814	4.8855	**29,978**	**0.6882**

Soils Data

	SMF-NorthWest			SMF-SouthWest (Batch Plant)		
	Rel Depth	Elev		Rel Depth	Elev	
Ave Ex Ground Elevation	0	68		0	76	
Ave SHWT	-6	62		NAVD	50	
Ave Confining Layer	-8	60		-30	20	
Layer Thickness		4.00			23.00	
	Ft / Day	Safety	Ft / Day	Ft / Day	Safety	Ft / Day
Unsat Vert Conductivity	6.85	1 *	6.85	3	1 *	3.00
Horz Hyd Conductivity	4.25	1 *	4.25	3	1 *	3.00
Fillable Porosity	30 %			20 %		

	SMF-Southeast		
	Rel Depth	Elev	
	0	68	
	NAVD	50	
	-30	20	
		18.00	
	Ft / Day	Safety	Ft / Day
	5.5	1 *	5.50
	5.5	1 *	5.50
	20 %		

* Double WQTV Utilized by Rule

Over-Excavated Areas	SMF-NorthWest			SMF-Southeast		
	Rel Depth	Elev		Rel Depth	Elev	
Pond Bottom Elev	0	66.00		0	68.00	
Over Excav. Area & Qty	1,250 SF	x 3		710 SF	x 1	
Ave SHWT	NAVD	50		NAVD	50	
Ave Confining Layer	-30	20.00		-30	20.00	
Layer Thickness		16.00			18.00	
	Ft / Day	Safety	Ft / Day	Ft / Day	Safety	Ft / Day
Unsat Vert Conductivity	20	1 *	20.00	20	1 *	20.00
Horz Hyd Conductivity	5.5	1 *	5.50	5.5	1 *	5.50
Fillable Porosity	20 %			20 %		

ICPR Computational Perimeter Rings

The perimeter rings used in the ICPR percolation calculations have been adjusted following the methodology issued by ICPR.

Stage-Storage

SMF-NW (Northwest) Dry Retention		Stage Feet	Area Sq Ft	Area Acre	Cumulative Volume Cu Ft	Cumulative Volume Ac-Ft	
	Bottom	66.00	63,435	1.4563	0	0.0000	
		67.00	69,244	1.5896	66,340	1.5229	
		68.00	76,362	1.7530	139,143	3.1943	
	WQTV	**68.12**	**77,169**	**1.7716**	**148,334**	**3.4053**	**< 1 Day Recovery**
		69.00	83,374	1.9140	219,011	5.0278	
		70.00	94,678	2.1735	308,037	7.0715	
		71.00	104,658	2.4026	407,705	9.3596	
		72.00	137,983	3.1677	529,025	12.1447	
		73.00	185,791	4.2652	690,912	15.8612	
	Top	74.00	247,366	5.6787	907,491	20.8331	

SMF-SE (Southeast) Dry Retention		Stage Feet	Area Sq Ft	Area Acre	Cumulative Volume Cu Ft	Cumulative Volume Ac-Ft	
	Bottom	68.00	28,474	0.6537	0	0.0000	
		69.00	31,539	0.7240	30,007	0.6889	
		70.00	34,743	0.7976	63,148	1.4497	
		71.00	38,089	0.8744	99,564	2.2857	
		72.00	41,574	0.9544	139,395	3.2001	
		73.00	45,200	1.0376	182,782	4.1961	
	WQTV	**73.89**	**48,545**	**1.1145**	**224,597**	**5.1560**	**< 1 Day Recovery**
		74.00	48,967	1.1241	229,866	5.2770	
		75.00	52,874	1.2138	280,786	6.4460	
		76.00	56,921	1.3067	335,684	7.7062	
		77.00	61,109	1.4029	394,699	9.0610	
	Top	78.00	65,437	1.5022	457,972	10.5136	

Control Structure	Invert	Width	Height
ST-SMF-SE Weir	76.25	96"	N/A

SMF-SW (Batch Plant) Dry Retention		Stage Feet	Area Sq Ft	Area Acre	Cumulative Volume Cu Ft	Cumulative Volume Ac-Ft	
	Bottom	73.00	5,079	0.1166	0	0.0000	
		74.00	6,378	0.1464	5,729	0.1315	
	WQTV	**75.00**	**7,806**	**0.1792**	**12,821**	**0.2943**	**< 1 Day Recovery**
		76.00	9,345	0.2145	21,396	0.4912	
		77.00	10,970	0.2518	31,554	0.7244	
	Top	78.00	12,694	0.2914	43,386	0.9960	

Control Structure	Invert	Width	Height
ST-SMF-SW Weir	75.00	96"	N/A

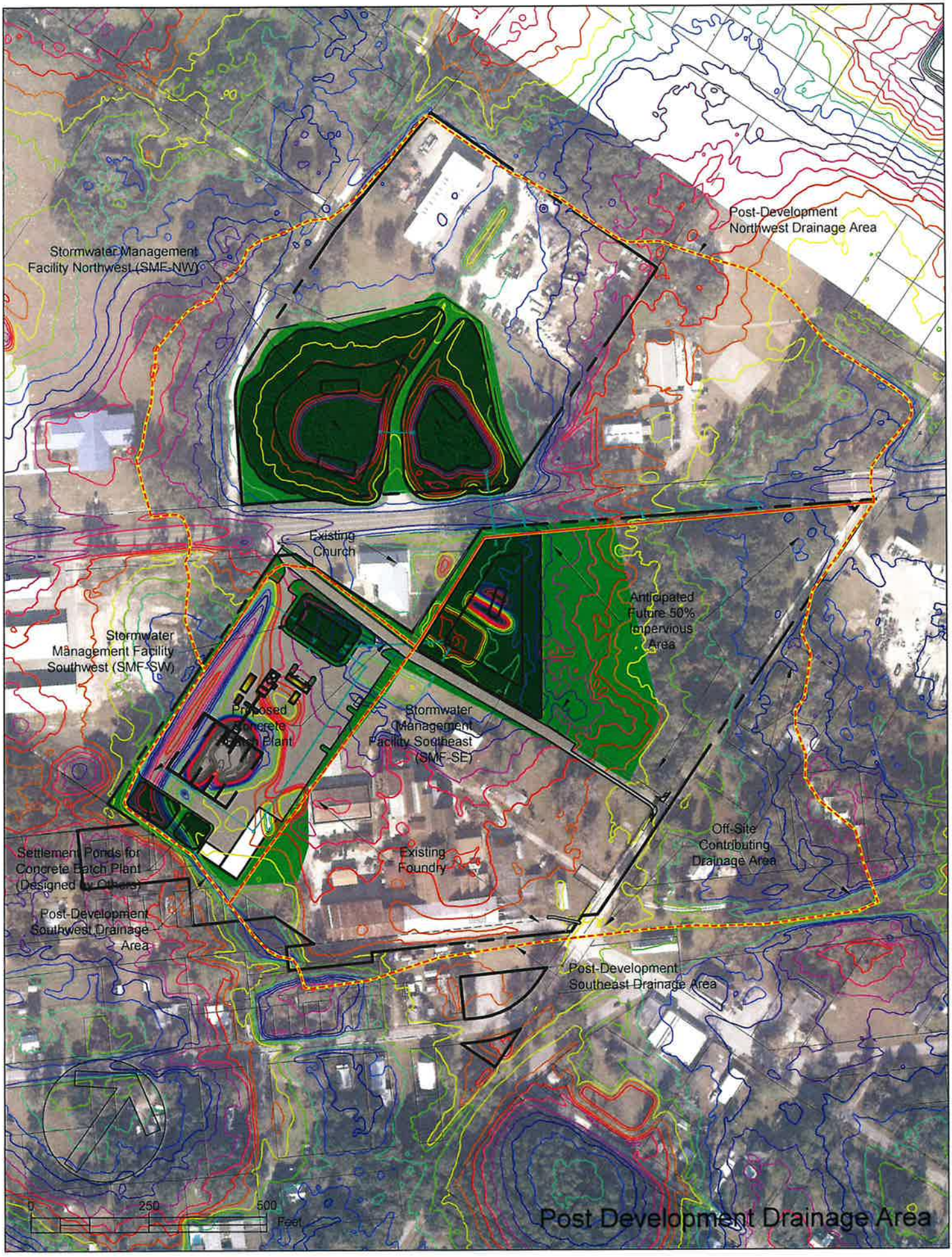
Design Storm Stage Elevations

Storm Event	Post-Development		
	SMF-NW (Northwest)	SMF-SE (Southeast)	SMF-SW (Batch Plant)
WQTV	N/A	None	None
FDOT 002Y001H	66.000	68.581	75.361
FDOT 002Y002H	66.000	69.097	75.322
FDOT 002Y004H	66.010	70.057	75.362
FDOT 002Y008H	66.007	70.364	75.402
FDOT 002Y024H	66.001	69.476	75.158
FDOT 002Y072H	66.025	69.475	75.118
FDOT 002Y168H	66.726	69.587	75.093
FDOT 002Y240H	66.951	70.565	75.12
FDOT 005Y001H	66.000	69.16	75.55
FDOT 005Y002H	66.003	69.92	75.522
FDOT 005Y004H	66.223	71.156	75.445
FDOT 005Y008H	66.236	71.61	75.472
FDOT 005Y024H	66.007	70.882	75.19
FDOT 005Y072H	66.691	70.57	75.141
FDOT 005Y168H	67.425	70.761	75.108
FDOT 005Y240H	67.689	71.378	75.135
FDOT 010Y001H	66.045	69.693	75.689
FDOT 010Y002H	66.131	70.642	75.67
FDOT 010Y004H	66.532	72.166	75.523
FDOT 010Y008H	66.595	72.792	75.534
FDOT 010Y024H	66.606	72.252	75.219
FDOT 010Y072H	67.515	71.667	75.163
FDOT 010Y168H	68.164	71.755	75.122
FDOT 010Y240H	68.430	72.175	75.15
FDOT 025Y001H	66.203	70.471	75.865
FDOT 025Y002H	66.426	71.655	75.828
FDOT 025Y004H	67.128	73.691	75.621
FDOT 025Y008H	67.303	74.624	75.627
FDOT 025Y024H	67.743	74.33	75.261
FDOT 025Y072H	68.870	73.59	75.194
FDOT 025Y168H	69.362	74.37	75.144
FDOT 025Y240H	69.578	74.909	75.173
FDOT 050Y001H	66.367	71.082	75.987
FDOT 050Y002H	66.714	72.462	75.931
FDOT 050Y004H	67.689	74.92	75.694
FDOT 050Y008H	67.997	75.976	75.976
FDOT 050Y024H	68.759	75.914	75.916
FDOT 050Y072H	70.067	75.637	75.637
FDOT 050Y168H	70.382	75.874	75.873
FDOT 050Y240H	70.477	76.083	76.082
FDOT 100Y001H	66.568	71.724	76.105
FDOT 100Y002H	67.043	73.281	76.026

FDOT 100Y004H	68.327	76.041	76.039
FDOT 100Y008H	69.430	76.669	76.677
FDOT 100Y024H	70.582	76.598	76.603
FDOT 100Y072H	72.143	76.68	76.686
FDOT 100Y168H	71.871	76.676	76.676
FDOT 100Y240H	72.132	76.65	76.651
SRWMD 100Y001H	66.734	72.201	76.188
SRWMD 100Y002H	67.179	73.599	76.061
SRWMD 100Y004H	67.879	75.275	75.717
SRWMD 100Y008H	68.155	76.243	76.243
SRWMD 100Y024H	70.764	76.612	76.619
SRWMD 100Y072H	71.668	76.643	76.647
SRWMD 100Y168H	71.936	76.689	76.69
SRWMD 100Y240H	72.865	76.821	76.826

Freeboard

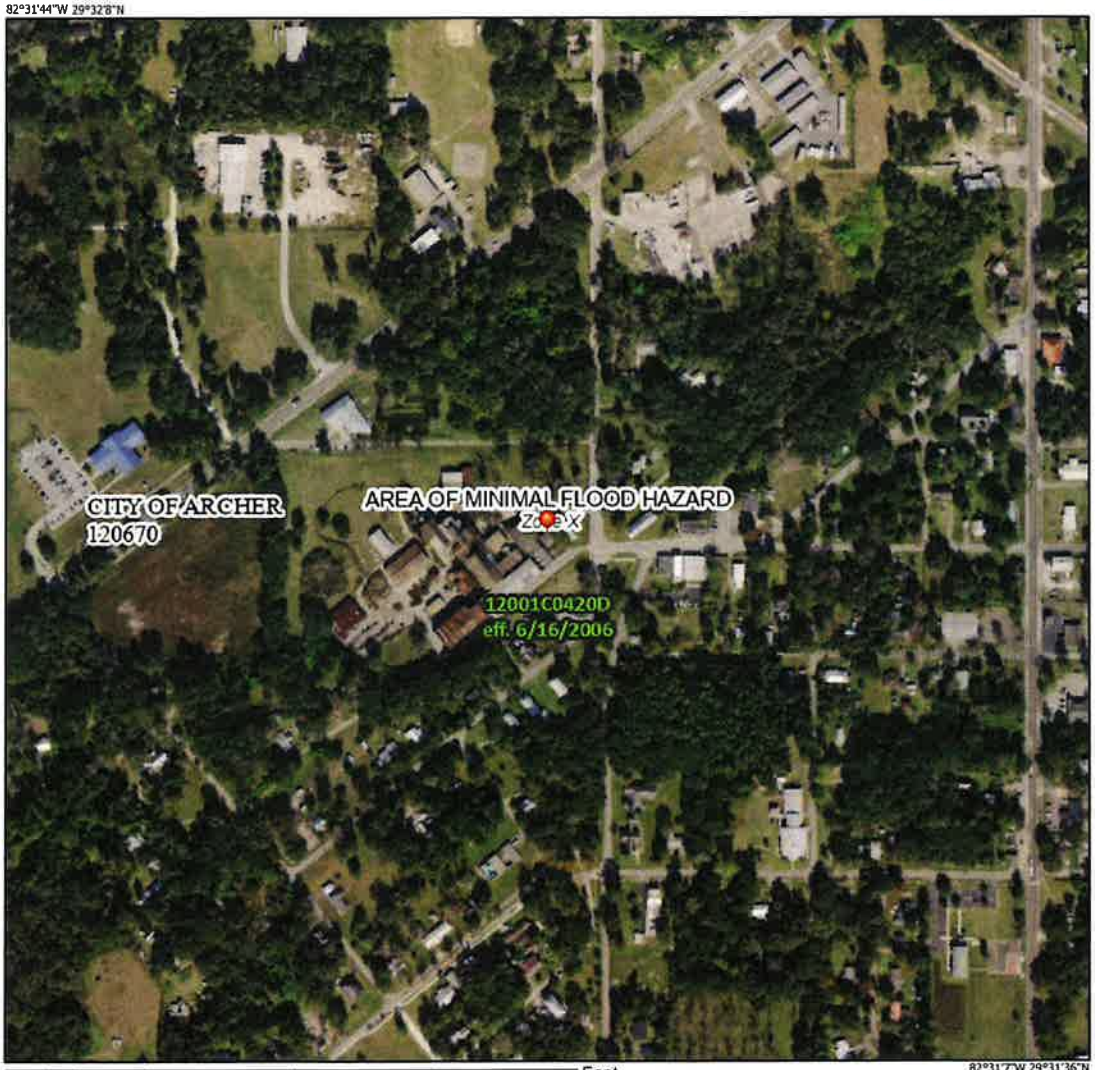
	SMF-NW (Northwest)	SMF-SE (Southeast)	SMF-SW (Batch Plant)
Pond Top Elevation	74.00	78.00	78.00
Design High Water Elev	72.87	76.82	76.83
Provided Freeboard (in)	**13.6**	**14.1**	**14.1**


Stormwater Management Facility Northwest (SMF-NW)
Post-Development Northwest Drainage Area
Existing Church
Anticipated Future 50% Impervious Area
Stormwater Management Facility Southwest (SMF-SW)
Proposed Concrete Batch Plant
Stormwater Management Facility Southeast (SMF-SE)
Off-Site Contributing Drainage Area
Settlement Ponds for Concrete Batch Plant (Designed by Others)
Existing Foundry
Post-Development Southwest Drainage Area
Post-Development Southeast Drainage Area
0
250
500
Feet
Post Development Drainage Area

National Flood Hazard Layer FIRMette

FEMA

82°31'44"W 29°32'8"N



82°31'7"W 29°31'36"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

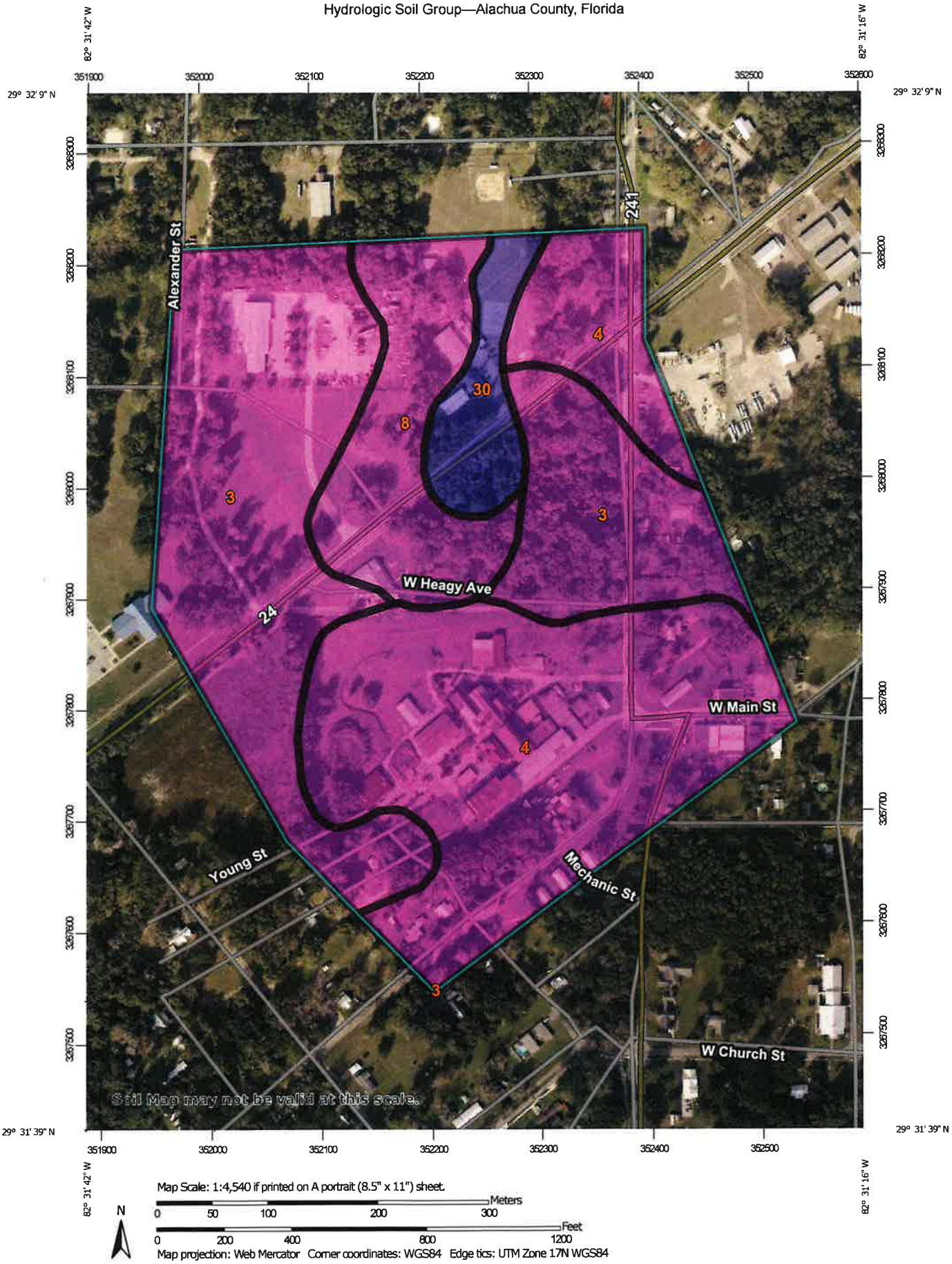
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/15/2023 at 1:28 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


82° 31' 42" W
82° 31' 16" W
29° 32' 9" N
29° 31' 39" N
351900
352000
352100
352200
352300
352400
352500
352600
3268300
3268200
3268100
3268000
3267900
3267800
3267700
3267600
3267500
Alexander St
241
W Heagy Ave
24
W Main St
Young St
Mechanic St
W Church St
4
30
8
3
3
4
3
Soil Map may not be valid at this scale.
Map Scale: 1:4,540 if printed on A portrait (8.5" x 11") sheet.
Meters
0 50 100 200 300
Feet
0 200 400 800 1200
N
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
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- 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 24, Aug 28, 2023

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

Date(s) aerial images were photographed: Jan 9, 2022—Feb 10, 2022

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Arredondo fine sand, 0 to 5 percent slopes	A	28.1	40.7%
4	Arredondo-Urban land complex, 0 to 5 percent slopes	A	28.7	41.6%
8	Millhopper sand, 0 to 5 percent slopes	A	8.7	12.6%
30	Kendrick sand, 2 to 5 percent slopes	B	3.6	5.2%
Totals for Area of Interest			**69.1**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOAA Atlas 14, Volume 9, Version 2
Location name: Archer, Florida, USA*
Latitude: 29.5318°, Longitude: -82.5251°
Elevation: 74 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.522 (0.435-0.628)	0.592 (0.492-0.712)	0.705 (0.584-0.851)	0.798 (0.657-0.968)	0.924 (0.731-1.16)	1.02 (0.788-1.31)	1.12 (0.829-1.47)	1.21 (0.859-1.66)	1.34 (0.907-1.89)	1.43 (0.944-2.07)
10-min	0.765 (0.637-0.919)	0.867 (0.721-1.04)	1.03 (0.855-1.25)	1.17 (0.962-1.42)	1.35 (1.07-1.70)	1.49 (1.15-1.91)	1.63 (1.21-2.16)	1.77 (1.26-2.42)	1.96 (1.33-2.77)	2.09 (1.38-3.03)
15-min	0.933 (0.777-1.12)	1.06 (0.879-1.27)	1.26 (1.04-1.52)	1.42 (1.17-1.73)	1.65 (1.31-2.07)	1.82 (1.41-2.33)	1.99 (1.48-2.63)	2.16 (1.53-2.96)	2.38 (1.62-3.38)	2.55 (1.69-3.70)
30-min	1.40 (1.16-1.68)	1.59 (1.32-1.91)	1.89 (1.57-2.29)	2.14 (1.77-2.60)	2.49 (1.97-3.12)	2.75 (2.12-3.52)	3.00 (2.23-3.96)	3.26 (2.31-4.45)	3.59 (2.44-5.08)	3.84 (2.54-5.56)
60-min	1.82 (1.51-2.18)	2.07 (1.72-2.48)	2.48 (2.06-2.99)	2.83 (2.33-3.44)	3.32 (2.64-4.19)	3.70 (2.86-4.76)	4.10 (3.05-5.43)	4.50 (3.20-6.17)	5.04 (3.43-7.16)	5.46 (3.61-7.90)
2-hr	2.24 (1.87-2.67)	2.54 (2.13-3.04)	3.07 (2.56-3.68)	3.52 (2.91-4.24)	4.15 (3.32-5.22)	4.66 (3.63-5.97)	5.19 (3.89-6.85)	5.74 (4.11-7.84)	6.49 (4.45-9.18)	7.08 (4.71-10.2)
3-hr	2.46 (2.06-2.92)	2.80 (2.34-3.32)	3.38 (2.82-4.04)	3.90 (3.24-4.68)	4.66 (3.75-5.87)	5.29 (4.14-6.77)	5.95 (4.48-7.85)	6.65 (4.78-9.08)	7.64 (5.26-10.8)	8.42 (5.62-12.1)
6-hr	2.88 (2.43-3.40)	3.26 (2.75-3.85)	3.95 (3.32-4.68)	4.59 (3.83-5.48)	5.59 (4.55-7.06)	6.44 (5.09-8.25)	7.37 (5.60-9.73)	8.39 (6.09-11.4)	9.85 (6.85-13.9)	11.0 (7.42-15.7)
12-hr	3.39 (2.88-3.97)	3.80 (3.22-4.46)	4.60 (3.88-5.42)	5.38 (4.52-6.38)	6.65 (5.47-8.40)	7.76 (6.19-9.93)	9.00 (6.90-11.9)	10.4 (7.60-14.1)	12.4 (8.69-17.4)	14.1 (9.52-19.9)
24-hr	3.94 (3.36-4.58)	4.43 (3.78-5.16)	5.41 (4.59-6.32)	6.38 (5.39-7.50)	7.96 (6.60-10.0)	9.37 (7.52-11.9)	10.9 (8.45-14.4)	12.7 (9.37-17.2)	15.3 (10.8-21.4)	17.5 (11.9-24.5)
2-day	4.52 (3.88-5.22)	5.15 (4.41-5.96)	6.38 (5.44-7.40)	7.58 (6.44-8.86)	9.53 (7.94-11.9)	11.2 (9.08-14.2)	13.2 (10.2-17.1)	15.3 (11.3-20.6)	18.4 (13.1-25.6)	21.0 (14.4-29.3)
3-day	4.96 (4.27-5.72)	5.63 (4.84-6.49)	6.94 (5.95-8.03)	8.24 (7.02-9.58)	10.3 (8.65-12.9)	12.2 (9.88-15.4)	14.3 (11.1-18.5)	16.6 (12.4-22.2)	20.0 (14.3-27.7)	22.9 (15.7-31.8)
4-day	5.39 (4.65-6.18)	6.04 (5.21-6.94)	7.36 (6.32-8.48)	8.68 (7.40-10.1)	10.8 (9.09-13.5)	12.8 (10.4-16.0)	14.9 (11.7-19.3)	17.3 (13.0-23.2)	20.9 (15.0-28.8)	23.9 (16.5-33.1)
7-day	6.55 (5.68-7.47)	7.13 (6.17-8.15)	8.36 (7.20-9.58)	9.62 (8.25-11.1)	11.7 (9.92-14.5)	13.7 (11.2-17.1)	15.9 (12.5-20.4)	18.3 (13.8-24.4)	22.0 (15.9-30.3)	25.1 (17.4-34.7)
10-day	7.52 (6.54-8.55)	8.11 (7.04-9.23)	9.33 (8.07-10.7)	10.6 (9.09-12.2)	12.7 (10.7-15.5)	14.5 (11.9-18.1)	16.7 (13.2-21.3)	19.1 (14.4-25.2)	22.7 (16.4-31.0)	25.7 (17.9-35.3)
20-day	10.1 (8.80-11.4)	11.0 (9.57-12.4)	12.6 (10.9-14.2)	14.0 (12.1-16.0)	16.2 (13.6-19.3)	18.0 (14.7-21.8)	19.9 (15.7-24.9)	22.0 (16.6-28.5)	24.9 (18.0-33.5)	27.3 (19.1-37.2)
30-day	12.3 (10.8-13.8)	13.5 (11.8-15.2)	15.5 (13.5-17.5)	17.2 (14.9-19.5)	19.5 (16.4-23.0)	21.4 (17.5-25.7)	23.2 (18.3-28.8)	25.1 (19.0-32.3)	27.7 (20.0-36.8)	29.6 (20.9-40.3)
45-day	15.3 (13.5-17.1)	16.9 (14.8-18.9)	19.4 (17.0-21.8)	21.4 (18.7-24.2)	24.1 (20.2-28.1)	26.1 (21.4-31.1)	28.0 (22.1-34.4)	29.9 (22.6-38.0)	32.2 (23.4-42.6)	33.9 (24.0-46.0)
60-day	18.1 (15.9-20.1)	19.9 (17.5-22.2)	22.8 (20.0-25.6)	25.2 (21.9-28.4)	28.2 (23.6-32.7)	30.4 (24.9-36.0)	32.4 (25.6-39.7)	34.4 (26.0-43.6)	36.8 (26.8-48.4)	38.5 (27.3-52.1)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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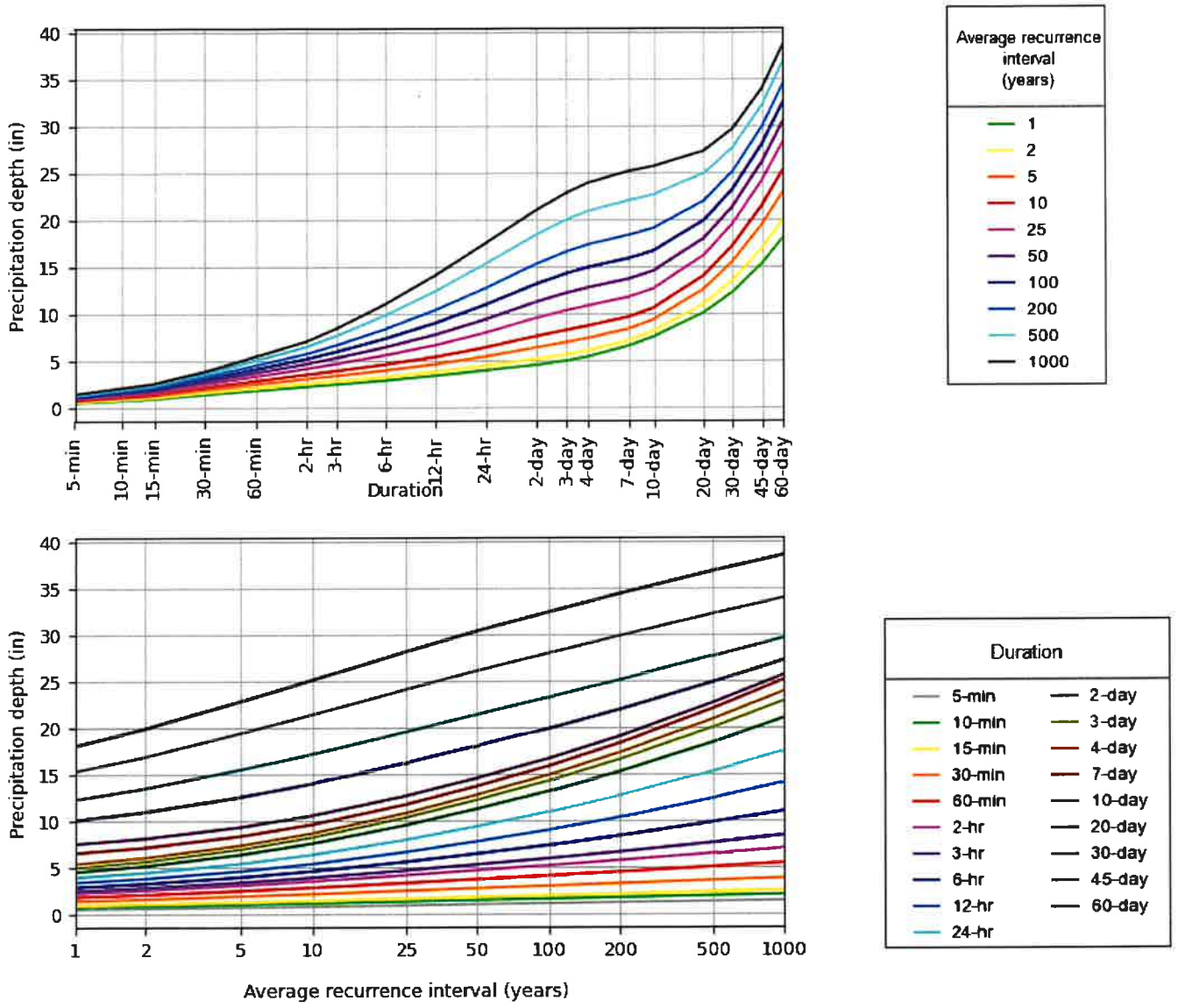
PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 29.5318°, Longitude: -82.5251°



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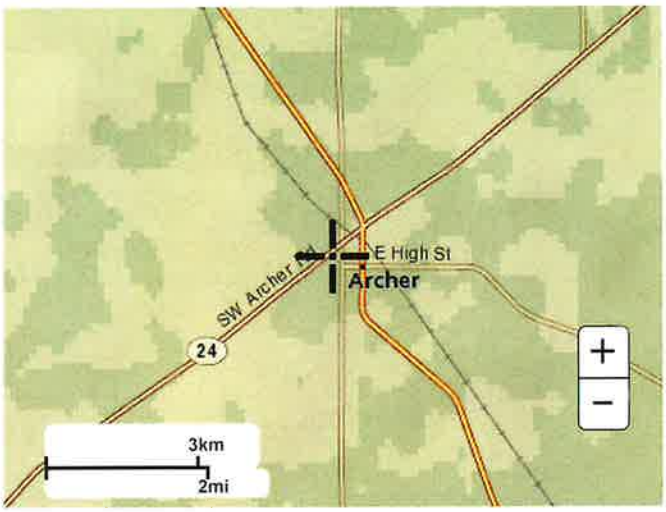
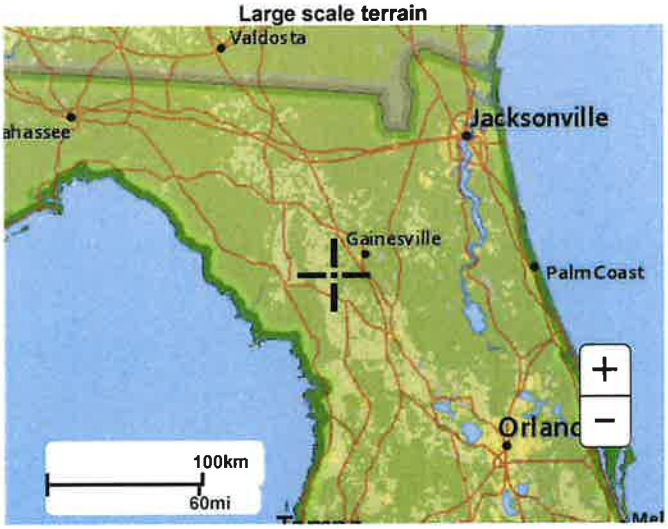
Maps & aerials

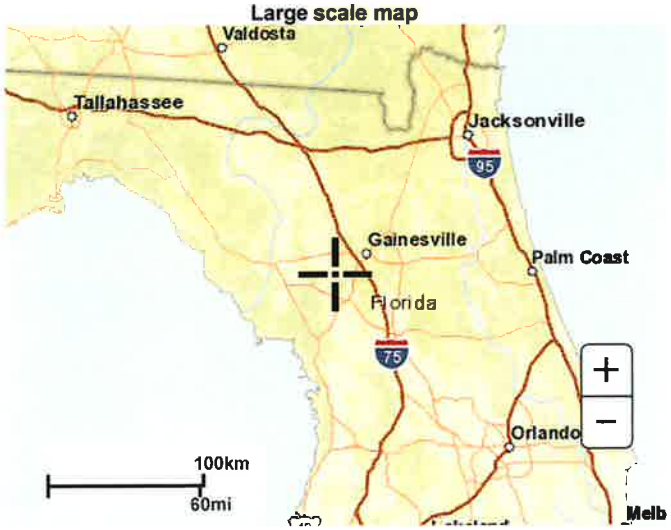
Small scale terrain



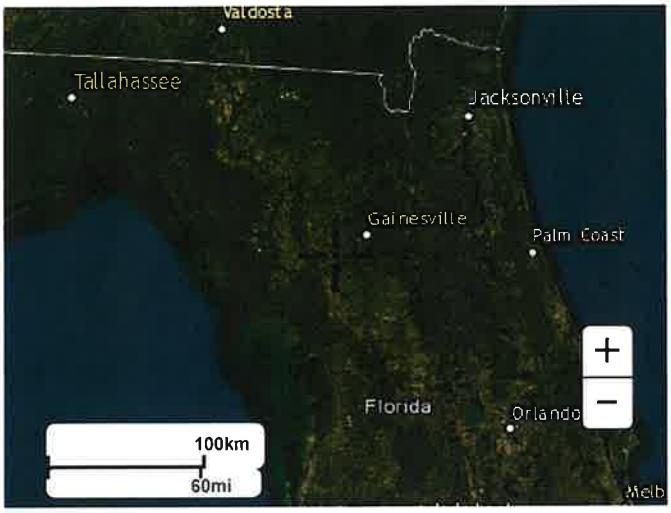
Large scale terrain



Large scale map



Large scale aerial



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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Slope Stability Analysis

Project Name Archer Concrete Plant

SLOPE STABILITY ANALYSIS
INFINITE SLOPE THEORY WITH SEEPAGE FORCES

Input Data

Saturated unit weight	120.0	pcf
Moist unit weight	105.0	pcf
Unit weight of water	62.4	pcf
Slope (Horiz/Vert)	**4.0**	
Inter-particle friction angle	40.0	deg.
% Saturated thickness	100%	

Intermediate Calcs

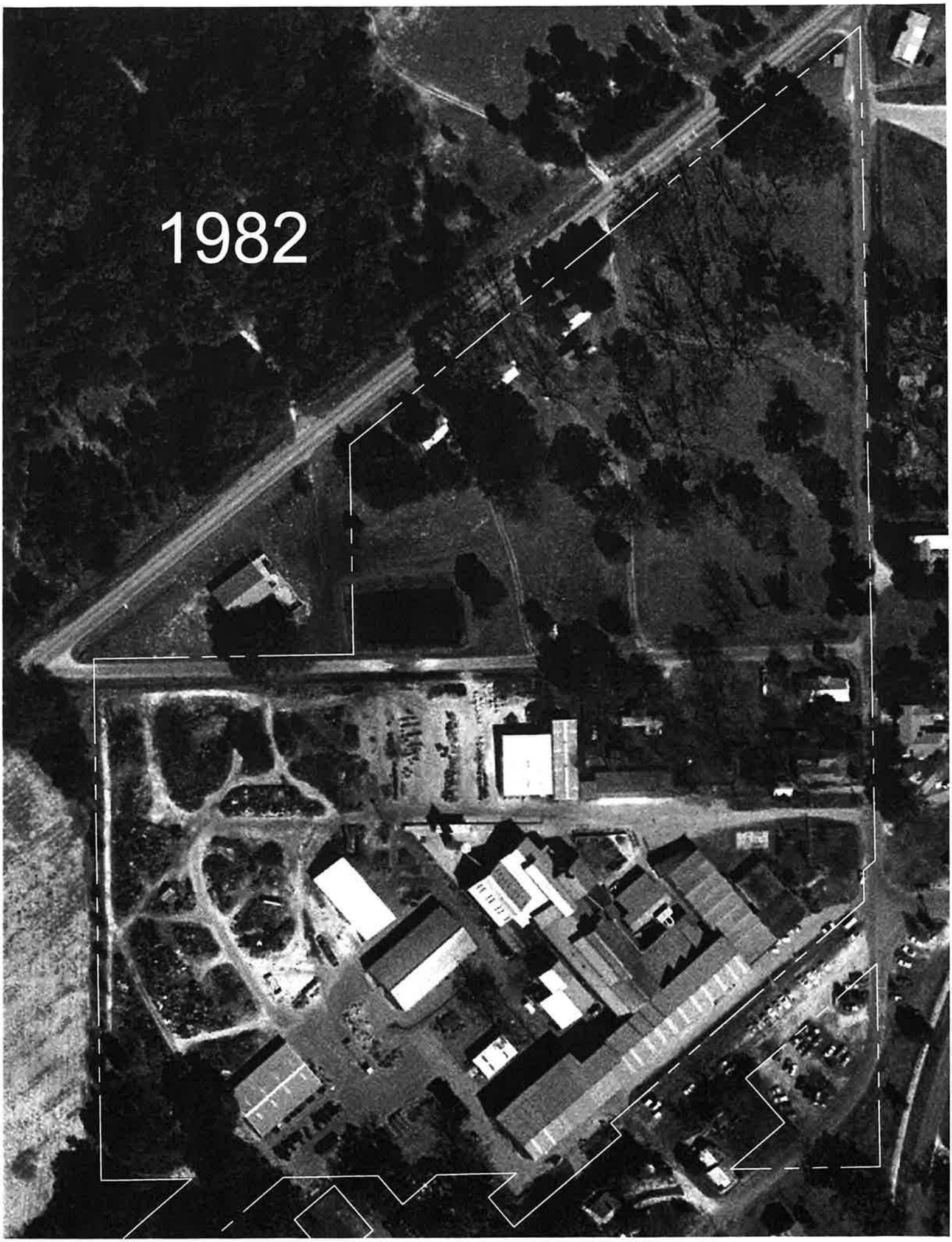
Effective/Buoyant Unit Weight	57.6	pcf
Slope Angle	14.0	deg.
Hydraulic Gradient	0.25	

Answer

Computed factor of safety (includes seepage forces)	**1.61**	
Required minimum factor of safety	1.2	


1964


1971


1982


1994


2004


2008


2011


2014

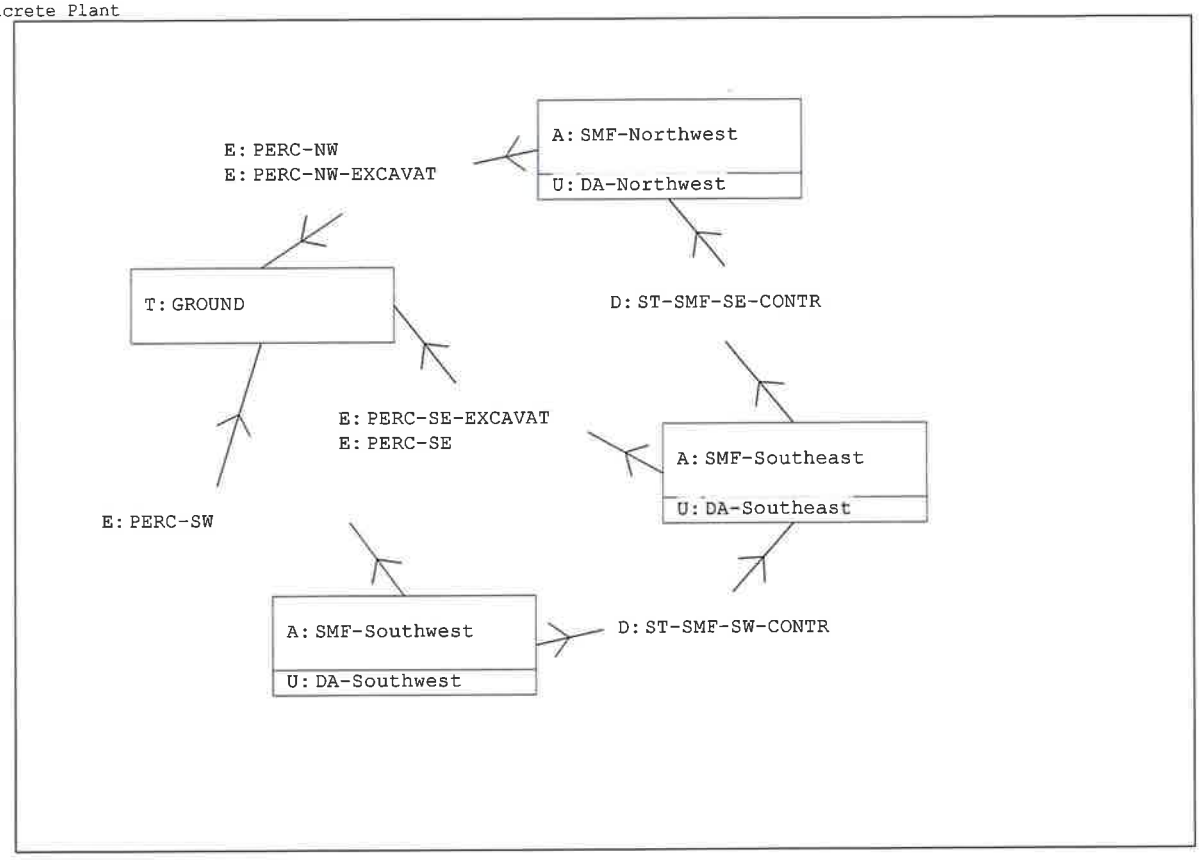

2017


2020

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



Basins

Name: DA-Northwest
Group: BASE
Node: SMF-Northwest
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 23.749
Curve Number: 58.70
DCIA(%): 0.00
Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 37.50
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: DA-Southeast
Group: BASE
Node: SMF-Southeast
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 20.735
Curve Number: 70.00
DCIA(%): 0.00
Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 37.80
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: DA-Southwest
Group: BASE
Node: SMF-Southwest
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 4.886
Curve Number: 89.60
DCIA(%): 0.00
Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.60
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Nodes

Name: GROUND
Group: BASE
Type: Time/Stage
Base Flow(cfs): 0.000
Init Stage(ft): 0.000
Warn Stage(ft): 0.000

Time(hrs)	Stage(ft)
0.00	0.000
999.00	0.000

Name: SMF-Northwest
Group: BASE
Type: Stage/Area
Base Flow(cfs): 0.000
Init Stage(ft): 66.000
Warn Stage(ft): 73.000

Stage(ft)	Area(ac)
66.000	1.4563
67.000	1.5896
68.000	1.7530
69.000	1.9140
70.000	2.1735
71.000	2.4026
72.000	3.1677
73.000	4.2652
74.000	5.6787

Name: SMF-Southeast
Group: BASE
Type: Stage/Area
Base Flow(cfs): 0.000
Init Stage(ft): 68.000
Warn Stage(ft): 77.000

Stage(ft)	Area(ac)
68.000	0.6537
69.000	0.7240
70.000	0.7976

71.000	0.8744
72.000	0.9544
73.000	1.0376
74.000	1.1241
75.000	1.2138
76.000	1.3067
77.000	1.4029
78.000	1.5022

Name: SMF-Southwest Base Flow(cfs): 0.000 Init Stage(ft): 73.000
Group: BASE Warn Stage(ft): 77.000
Type: Stage/Area

Stage(ft)	Area(ac)
73.000	0.1166
74.000	0.1464
75.000	0.1792
76.000	0.2145
77.000	0.2518
78.000	0.2914

Drop Structures

Name: ST-SMF-SE-CONTR From Node: SMF-Southeast Length(ft): 180.00
Group: BASE To Node: SMF-Northwest Count: 2

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Friction Equation:	Automatic
Span(in):	30.00	30.00	Solution Algorithm:	Most Restrictive
Rise(in):	30.00	30.00	Flow:	Both
Invert(ft):	69.000	66.000	Entrance Loss Coef:	0.000
Manning's N:	0.011000	0.011000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 1 for Drop Structure ST-SMF-SE-CONTR ***

TABLE

Count: 1 Bottom Clip(in): 0.000
Type: Vertical: Mavis Top Clip(in): 0.000
Flow: Both Weir Disc Coef: 3.200
Geometry: Rectangular Orifice Disc Coef: 0.600

Span(in): 96.00 Invert(ft): 76.250
Rise(in): 999.00 Control Elev(ft): 76.250

Name: ST-SMF-SW-CONTR From Node: SMF-Southwest Length(ft): 200.00
Group: BASE To Node: SMF-Southeast Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Friction Equation:	Automatic
Span(in):	36.00	36.00	Solution Algorithm:	Most Restrictive
Rise(in):	36.00	36.00	Flow:	Both
Invert(ft):	71.000	68.000	Entrance Loss Coef:	0.000
Manning's N:	0.011000	0.011000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 1 for Drop Structure ST-SMF-SW-CONTR ***

TABLE

Count: 1 Bottom Clip(in): 0.000
Type: Vertical: Fread Top Clip(in): 0.000
Flow: Both Weir Disc Coef: 3.200
Geometry: Rectangular Orifice Disc Coef: 0.600

Span(in): 96.00 Invert(ft): 75.000

Rise(in): 999.00 Control Elev(ft): 75.000

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==== Percolation Links ==========
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Name: PERC-NW From Node: SMF-Northwest Flow: Both
Group: BASE To Node: GROUND Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 60.000 Perimeter 1(ft): 1790.000
Water Table Elev(ft): 62.000 Perimeter 2(ft): 2037.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 3270.000
Horiz Conductivity(ft/day): 4.250 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 6.850 Distance 2 to 3(ft): 500.000
Effective Porosity(dec): 0.300 Num Cells 1 to 2: 10
Suction Head(in): 5.000 Num Cells 2 to 3: 30
Layer Thickness(ft): 4.000

Name: PERC-NW-EXCAVAT From Node: SMF-Northwest Flow: Both
Group: BASE To Node: GROUND Count: 3

Surface Area Option: User Specified
Bottom Elev(ft): 66.000 Surface Area(ac): 0.029
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 20.000 Perimeter 1(ft): 164.000
Water Table Elev(ft): 50.000 Perimeter 2(ft): 352.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 2049.000
Horiz Conductivity(ft/day): 5.500 Distance 1 to 2(ft): 30.000
Vert Conductivity(ft/day): 20.000 Distance 2 to 3(ft): 270.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 10
Suction Head(in): 5.000 Num Cells 2 to 3: 30
Layer Thickness(ft): 16.000

Name: PERC-SE From Node: SMF-Southeast Flow: Both
Group: BASE To Node: GROUND Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 20.000 Perimeter 1(ft): 1087.000
Water Table Elev(ft): 50.000 Perimeter 2(ft): 1401.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 1608.000
Horiz Conductivity(ft/day): 5.500 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 5.500 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 10
Suction Head(in): 5.000 Num Cells 2 to 3: 30
Layer Thickness(ft): 18.000

Name: PERC-SE-EXCAVAT From Node: SMF-Southeast Flow: Positive
Group: BASE To Node: GROUND Count: 1

Surface Area Option: User Specified
Bottom Elev(ft): 68.000 Surface Area(ac): 0.016
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 20.000 Perimeter 1(ft): 123.000
Water Table Elev(ft): 50.000 Perimeter 2(ft): 437.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 3264.000
Horiz Conductivity(ft/day): 5.500 Distance 1 to 2(ft): 50.000
Vert Conductivity(ft/day): 20.000 Distance 2 to 3(ft): 450.000
Effective Porosity(dec): 0.200 Num Cells 1 to 2: 10
Suction Head(in): 5.000 Num Cells 2 to 3: 30
Layer Thickness(ft): 18.000

Name: PERC-SW From Node: SMF-Southwest Flow: Positive
Group: BASE To Node: GROUND Count: 1

Surface Area Option: Vary based on Stage/Area Table
Vertical Flow Termination: Horizontal Flow Algorithm
Aquifer Base Elev(ft): 20.000 Perimeter 1(ft): 443.000
Water Table Elev(ft): 50.000 Perimeter 2(ft): 757.000
Ann Recharge Rate(in/year): 0.000 Perimeter 3(ft): 981.000

```
  Horiz Conductivity(ft/day): 3.000                  Distance 1 to 2(ft): 50.000
   Vert Conductivity(ft/day): 3.000                  Distance 2 to 3(ft): 450.000
     Effective Porosity(dec): 0.200                     Num Cells 1 to 2: 10
           Suction Head(in): 5.000                      Num Cells 2 to 3: 30
        Layer Thickness(ft): 23.000
```

Hydrology Simulations

```
         Name: 002Y001H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y001H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 1.00
          Rainfall File: FDOT-1
    Rainfall Amount(in): 2.07

Time(hrs)       Print Inc(min)
--------------- ---------------
2.000           2.50
```

```
         Name: 002Y002H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y002H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: FDOT-2
    Rainfall Amount(in): 2.54

Time(hrs)       Print Inc(min)
--------------- ---------------
4.000           2.50
```

```
         Name: 002Y004H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y004H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: FDOT-4
    Rainfall Amount(in): 3.26

Time(hrs)       Print Inc(min)
--------------- ---------------
6.000           2.50
```

```
         Name: 002Y008H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y008H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 8.00
          Rainfall File: FDOT-8
    Rainfall Amount(in): 3.80

Time(hrs)       Print Inc(min)
--------------- ---------------
12.000          2.50
```

```
         Name: 002Y024H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y024H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: FDOT-24
    Rainfall Amount(in): 4.43

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00
```

```
         Name: 002Y072H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y072H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: FDOT-72
    Rainfall Amount(in): 5.63

Time(hrs)       Print Inc(min)
--------------- ---------------
77.000          5.00
```

Name: 002Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: FDOT-168
Rainfall Amount(in): 7.13

Time(hrs)	Print Inc(min)
173.000	5.00

Name: 002Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\003Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: FDOT-240
Rainfall Amount(in): 8.11

Time(hrs)	Print Inc(min)
245.000	5.00

Name: 005Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: FDOT-1
Rainfall Amount(in): 2.48

Time(hrs)	Print Inc(min)
2.000	2.50

Name: 005Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y002H.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: FDOT-2
Rainfall Amount(in): 3.07

Time(hrs)	Print Inc(min)
4.000	2.50

Name: 005Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y004H.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00
Rainfall File: FDOT-4
Rainfall Amount(in): 3.95

Time(hrs)	Print Inc(min)
6.000	2.50

Name: 005Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y008H.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: FDOT-8
Rainfall Amount(in): 4.60

Time(hrs)	Print Inc(min)
12.000	2.50

Name: 005Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y024H.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FDOT-24
Rainfall Amount(in): 5.41

Time(hrs)	Print Inc(min)

30.000	5.00

Name: 005Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y072H.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: FDOT-72
Rainfall Amount(in): 6.94

Time(hrs)	Print Inc(min)
77.000	5.00

Name: 005Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: FDOT-168
Rainfall Amount(in): 8.36

Time(hrs)	Print Inc(min)
173.000	5.00

Name: 005Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: FDOT-240
Rainfall Amount(in): 9.33

Time(hrs)	Print Inc(min)
245.000	5.00

Name: 010Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: FDOT-1
Rainfall Amount(in): 2.83

Time(hrs)	Print Inc(min)
2.000	2.50

Name: 010Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y002H.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: FDOT-2
Rainfall Amount(in): 3.52

Time(hrs)	Print Inc(min)
4.000	2.50

Name: 010Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y004H.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00
Rainfall File: FDOT-4
Rainfall Amount(in): 4.59

Time(hrs)	Print Inc(min)
6.000	2.50

Name: 010Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y008H.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: FDOT-8
Rainfall Amount(in): 5.38

Time(hrs)	Print Inc(min)
12.000	2.50

Name: 010Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y024H.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FDOT-24
Rainfall Amount(in): 6.38

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 010Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y072H.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: FDOT-72
Rainfall Amount(in): 8.24

Time(hrs)	Print Inc(min)
77.000	5.00

Name: 010Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: FDOT-168
Rainfall Amount(in): 9.62

Time(hrs)	Print Inc(min)
173.000	5.00

Name: 010Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: FDOT-240
Rainfall Amount(in): 10.60

Time(hrs)	Print Inc(min)
245.000	5.00

Name: 025Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: FDOT-1
Rainfall Amount(in): 3.32

Time(hrs)	Print Inc(min)
2.000	2.50

Name: 025Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y002H.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: FDOT-2
Rainfall Amount(in): 4.15

Time(hrs)	Print Inc(min)
4.000	2.50

Name: 025Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y004H.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00

Rainfall File: FDOT-4
Rainfall Amount(in): 5.59

Time(hrs)	Print Inc(min)
6.000	2.50

Name: 025Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y008H.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: FDOT-8
Rainfall Amount(in): 6.65

Time(hrs)	Print Inc(min)
12.000	2.50

Name: 025Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y024H.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FDOT-24
Rainfall Amount(in): 7.96

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 025Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y072H.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: FDOT-72
Rainfall Amount(in): 10.30

Time(hrs)	Print Inc(min)
77.000	5.00

Name: 025Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: FDOT-168
Rainfall Amount(in): 11.70

Time(hrs)	Print Inc(min)
173.000	5.00

Name: 025Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: FDOT-240
Rainfall Amount(in): 12.70

Time(hrs)	Print Inc(min)
245.000	5.00

Name: 050Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: FDOT-1
Rainfall Amount(in): 3.70

Time(hrs)	Print Inc(min)
2.000	2.50

Name: 050Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y002H.R32

```
      Override Defaults: Yes
    Storm Duration(hrs): 2.00
          Rainfall File: FDOT-2
    Rainfall Amount(in): 4.66

Time(hrs)       Print Inc(min)
--------------- ---------------
4.000           2.50

-------------------------------------------------------------------------------------------------------
         Name: 050Y004H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y004H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 4.00
          Rainfall File: FDOT-4
    Rainfall Amount(in): 6.44

Time(hrs)       Print Inc(min)
--------------- ---------------
6.000           2.50

-------------------------------------------------------------------------------------------------------
         Name: 050Y008H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y008H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 8.00
          Rainfall File: FDOT-8
    Rainfall Amount(in): 7.76

Time(hrs)       Print Inc(min)
--------------- ---------------
12.000          2.50

-------------------------------------------------------------------------------------------------------
         Name: 050Y024H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y024H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: FDOT-24
    Rainfall Amount(in): 9.37

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

-------------------------------------------------------------------------------------------------------
         Name: 050Y072H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y072H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 72.00
          Rainfall File: FDOT-72
    Rainfall Amount(in): 12.20

Time(hrs)       Print Inc(min)
--------------- ---------------
77.000          5.00

-------------------------------------------------------------------------------------------------------
         Name: 050Y168H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y168H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 168.00
          Rainfall File: FDOT-168
    Rainfall Amount(in): 13.70

Time(hrs)       Print Inc(min)
--------------- ---------------
173.000         5.00

-------------------------------------------------------------------------------------------------------
         Name: 050Y240H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y240H.R32

      Override Defaults: Yes
    Storm Duration(hrs): 240.00
          Rainfall File: FDOT-240
    Rainfall Amount(in): 14.50

Time(hrs)       Print Inc(min)
--------------- ---------------
245.000         5.00

-------------------------------------------------------------------------------------------------------
         Name: 100Y001H
```

Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: FDOT-1
Rainfall Amount(in): 4.10

Time(hrs)	Print Inc(min)
2.000	2.50

Name: 100Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y002H.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: FDOT-2
Rainfall Amount(in): 5.19

Time(hrs)	Print Inc(min)
4.000	2.50

Name: 100Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y004H.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00
Rainfall File: FDOT-4
Rainfall Amount(in): 7.37

Time(hrs)	Print Inc(min)
6.000	2.50

Name: 100Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y008H.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: FDOT-8
Rainfall Amount(in): 9.00

Time(hrs)	Print Inc(min)
12.000	2.50

Name: 100Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y024H.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FDOT-24
Rainfall Amount(in): 10.90

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 100Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y072H.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: FDOT-72
Rainfall Amount(in): 14.30

Time(hrs)	Print Inc(min)
77.000	5.00

Name: 100Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: FDOT-168
Rainfall Amount(in): 15.90

Time(hrs)	Print Inc(min)
173.000	5.00

Name: 100Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: FDOT-240
Rainfall Amount(in): 16.70

Time(hrs)	Print Inc(min)
245.000	5.00

Name: AC100Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y001H.R32

Override Defaults: Yes
Storm Duration(hrs): 1.00
Rainfall File: Fdot-1
Rainfall Amount(in): 4.40

Time(hrs)	Print Inc(min)
2.000	2.50

Name: AC100Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y002H.R32

Override Defaults: Yes
Storm Duration(hrs): 2.00
Rainfall File: Fdot-2
Rainfall Amount(in): 5.40

Time(hrs)	Print Inc(min)
4.000	2.50

Name: AC100Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y004H.R32

Override Defaults: Yes
Storm Duration(hrs): 4.00
Rainfall File: Fdot-4
Rainfall Amount(in): 6.72

Time(hrs)	Print Inc(min)
6.000	5.00

Name: AC100Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y008H.R32

Override Defaults: Yes
Storm Duration(hrs): 8.00
Rainfall File: Fdot-8
Rainfall Amount(in): 8.00

Time(hrs)	Print Inc(min)
12.000	5.00

Name: AC100Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y024H.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Fdot-24
Rainfall Amount(in): 11.04

Time(hrs)	Print Inc(min)
30.000	5.00

Name: AC100Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y072H.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Fdot-72
Rainfall Amount(in): 13.80

Time(hrs)	Print Inc(min)

77.000 5.00

Name: AC100Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y168H.R32

Override Defaults: Yes
Storm Duration(hrs): 168.00
Rainfall File: Fdot-168
Rainfall Amount(in): 16.00

Time(hrs)	Print Inc(min)
173.000	5.00

Name: AC100Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y240H.R32

Override Defaults: Yes
Storm Duration(hrs): 240.00
Rainfall File: Fdot-240
Rainfall Amount(in): 18.00

Time(hrs)	Print Inc(min)
245.000	5.00

Name: WQTV-SLUG
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\WQTV-SLUG.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Fdot-1
Rainfall Amount(in): 0.00

Time(hrs)	Print Inc(min)
73.000	5.00

Routing Simulations

Name: 002Y001H Hydrology Sim: 002Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 001 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y002H Hydrology Sim: 002Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 4.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 002 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run

BASE Yes

Name: 002Y004H Hydrology Sim: 002Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y004H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 6.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 004 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y008H Hydrology Sim: 002Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y008H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 12.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 008 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y024H Hydrology Sim: 002Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y024H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 024 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y072H Hydrology Sim: 002Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y168H Hydrology Sim: 002Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 002Y240H Hydrology Sim: 002Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\002Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

002 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 005Y001H Hydrology Sim: 005Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

005 yr / 001 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 005Y002H Hydrology Sim: 005Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

```
        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 4.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

005 yr / 002 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------
         Name: 005Y004H            Hydrology Sim: 005Y004H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y004H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 6.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

005 yr / 004 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------
         Name: 005Y008H            Hydrology Sim: 005Y008H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y008H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 12.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

005 yr / 008 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------
         Name: 005Y024H            Hydrology Sim: 005Y024H
     Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y024H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 30.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

005 yr / 024 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes
```

Name: 005Y072H Hydrology Sim: 005Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

005 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 005Y168H Hydrology Sim: 005Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

005 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 005Y240H Hydrology Sim: 005Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\005Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

005 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y001H Hydrology Sim: 010Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 001 hr

Time(hrs)	Print Inc(min)

999.000	5.000

Group	Run
BASE	Yes

Name: 010Y002H Hydrology Sim: 010Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 4.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 002 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y004H Hydrology Sim: 010Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y004H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 6.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 004 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y008H Hydrology Sim: 010Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y008H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 12.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 008 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y024H Hydrology Sim: 010Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y024H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00

Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 024 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y072H Hydrology Sim: 010Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y168H Hydrology Sim: 010Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 010Y240H Hydrology Sim: 010Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\010Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

010 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 025Y001H Hydrology Sim: 025Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y001H.I32

```
      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                     End Time(hrs): 2.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:

025 yr / 001 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------------
        Name: 025Y002H           Hydrology Sim: 025Y002H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y002H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                     End Time(hrs): 4.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:

025 yr / 002 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------------
        Name: 025Y004H           Hydrology Sim: 025Y004H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y004H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                     End Time(hrs): 6.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:

025 yr / 004 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes


-------------------------------------------------------------------------------------------------------
        Name: 025Y008H           Hydrology Sim: 025Y008H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y008H.I32

      Execute: Yes         Restart: No            Patch: No
  Alternative: No

       Max Delta Z(ft): 1.00                     Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
       Start Time(hrs): 0.000                     End Time(hrs): 12.00
     Min Calc Time(sec): 0.2500               Max Calc Time(sec): 60.0000
       Boundary Stages:                         Boundary Flows:

025 yr / 008 hr

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
```

BASE	Yes

Name: 025Y024H Hydrology Sim: 025Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y024H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

025 yr / 024 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 025Y072H Hydrology Sim: 025Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

025 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 025Y168H Hydrology Sim: 025Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

025 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 025Y240H Hydrology Sim: 025Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\025Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

025 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y001H Hydrology Sim: 050Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 001 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y002H Hydrology Sim: 050Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 4.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 002 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y004H Hydrology Sim: 050Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y004H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 6.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 004 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y008H Hydrology Sim: 050Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y008H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 12.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 008 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y024H Hydrology Sim: 050Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y024H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 024 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y072H Hydrology Sim: 050Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y168H Hydrology Sim: 050Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 050Y240H Hydrology Sim: 050Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\050Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

050 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y001H Hydrology Sim: 100Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 001 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y002H Hydrology Sim: 100Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 4.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 002 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y004H Hydrology Sim: 100Y004H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y004H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 6.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 004 hr

Time(hrs)	Print Inc(min)

999.000	5.000

Group	Run
BASE	Yes

Name: 100Y008H Hydrology Sim: 100Y008H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y008H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 12.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 008 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y024H Hydrology Sim: 100Y024H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y024H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 024 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y072H Hydrology Sim: 100Y072H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y072H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 77.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 072 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y168H Hydrology Sim: 100Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000

Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 168 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: 100Y240H Hydrology Sim: 100Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\100Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 245.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

100 yr / 240 hr

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: AC100Y001H Hydrology Sim: AC100Y001H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y001H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 2.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: AC100Y002H Hydrology Sim: AC100Y002H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y002H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 4.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	5.000

Group	Run
BASE	Yes

Name: AC100Y004H Hydrology Sim: AC100Y004H

```
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y004H.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000                    End Time(hrs): 6.00
    Min Calc Time(sec): 0.5000             Max Calc Time(sec): 60.0000
      Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------------
        Name: AC100Y008H          Hydrology Sim: AC100Y008H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y008H.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000                    End Time(hrs): 12.00
    Min Calc Time(sec): 0.5000             Max Calc Time(sec): 60.0000
      Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------------
        Name: AC100Y024H          Hydrology Sim: AC100Y024H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y024H.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000                    End Time(hrs): 30.00
    Min Calc Time(sec): 0.5000             Max Calc Time(sec): 60.0000
      Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes

------------------------------------------------------------------------------------------------------
        Name: AC100Y072H          Hydrology Sim: AC100Y072H
    Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y072H.I32

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

       Max Delta Z(ft): 1.00                   Delta Z Factor: 0.00500
   Time Step Optimizer: 10.000
      Start Time(hrs): 0.000                    End Time(hrs): 77.00
    Min Calc Time(sec): 0.5000             Max Calc Time(sec): 60.0000
      Boundary Stages:                        Boundary Flows:


Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         15.000
```

Group	Run
BASE	Yes

Name: AC100Y168H Hydrology Sim: AC100Y168H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y168H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 173.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: AC100Y240H Hydrology Sim: AC100Y240H
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\AC100Y240H.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 960.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes

Name: WQTV-SLUG Hydrology Sim: WQTV-SLUG
Filename: G:\Engineering\Projects\22-0019 Archer Concrete Plant\3 Stormwater\ICPR\WQTV-SLUG.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 72.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

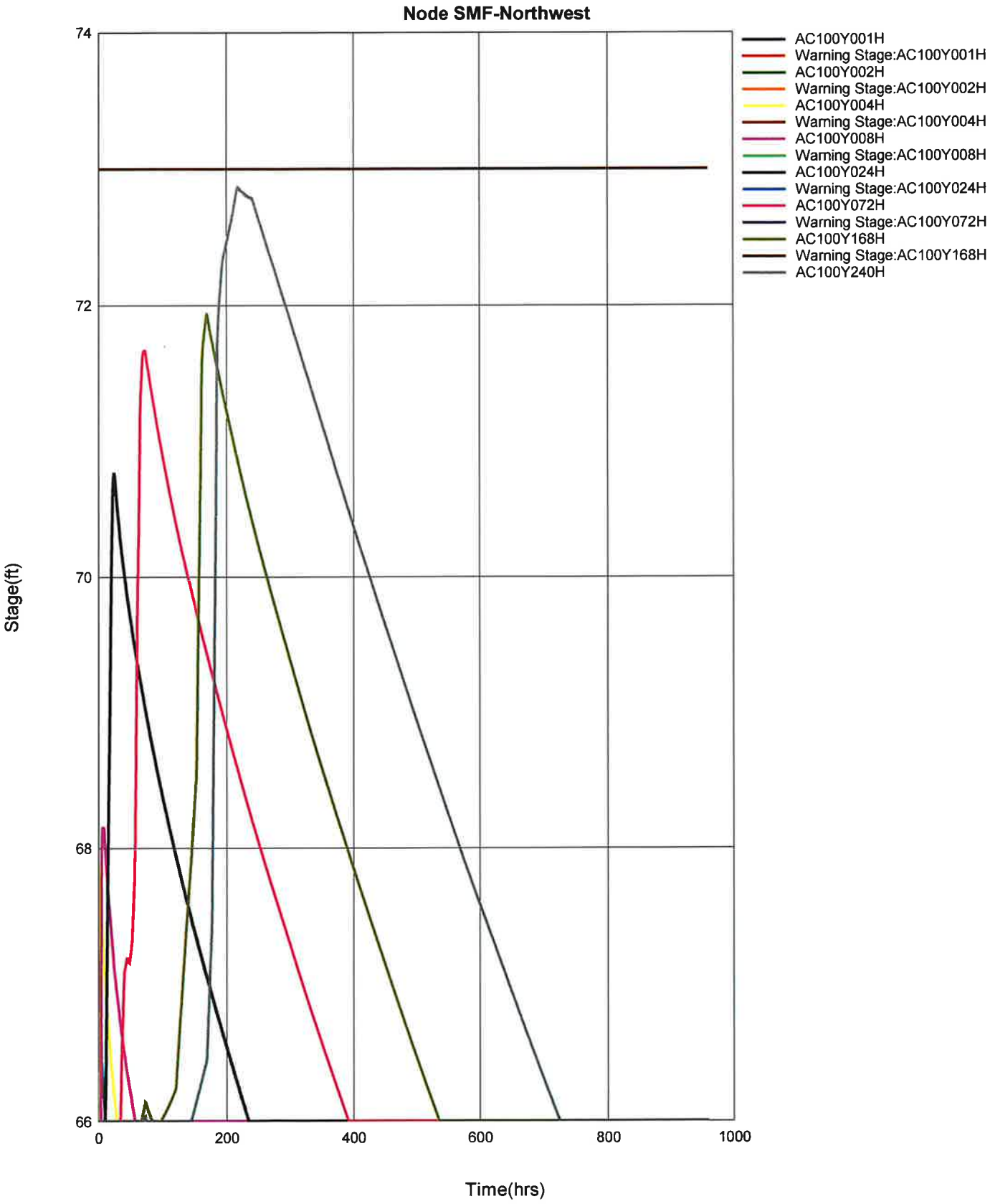
Time(hrs)	Print Inc(min)
72.000	5.000

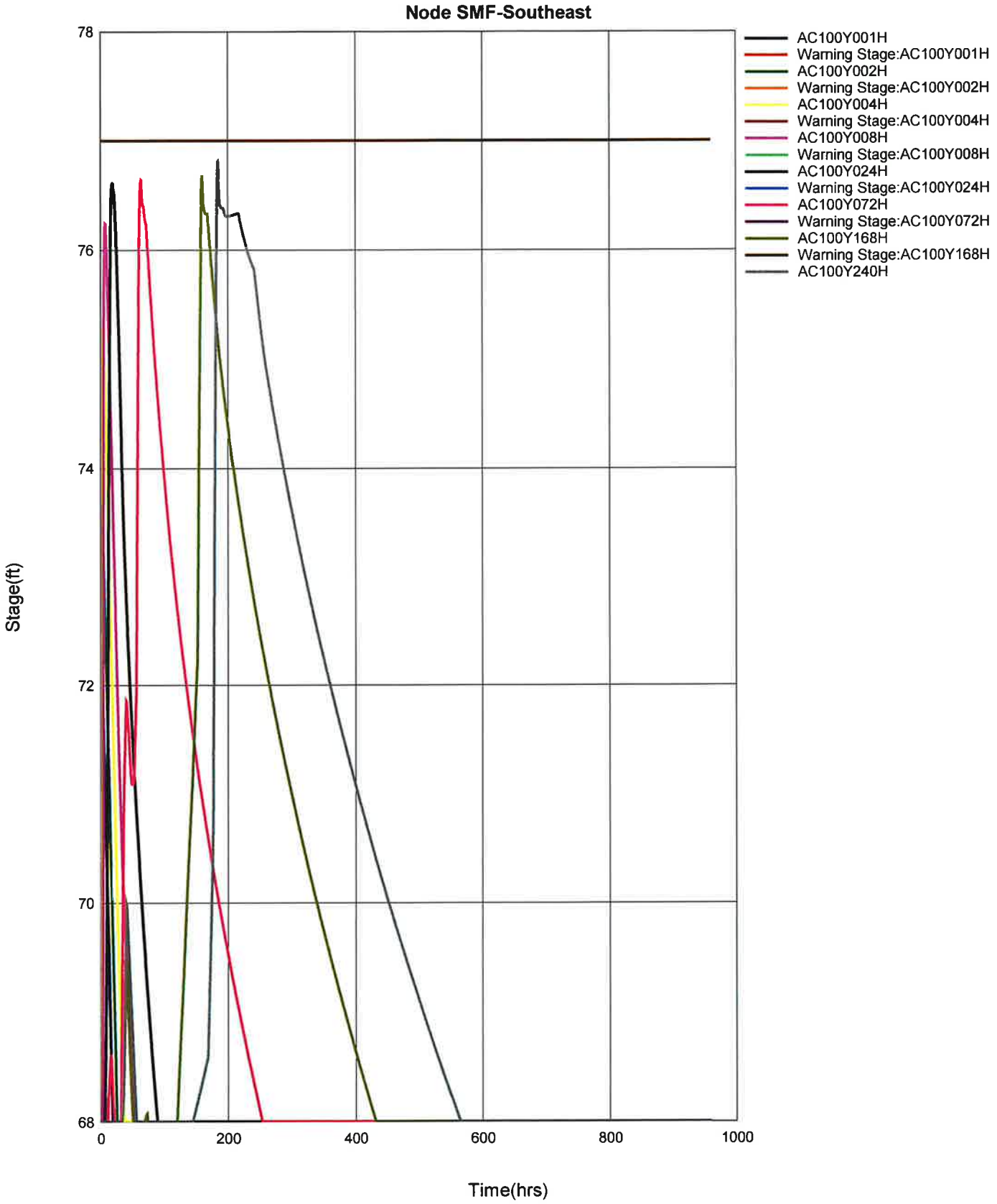
Group	Run
BASE	Yes

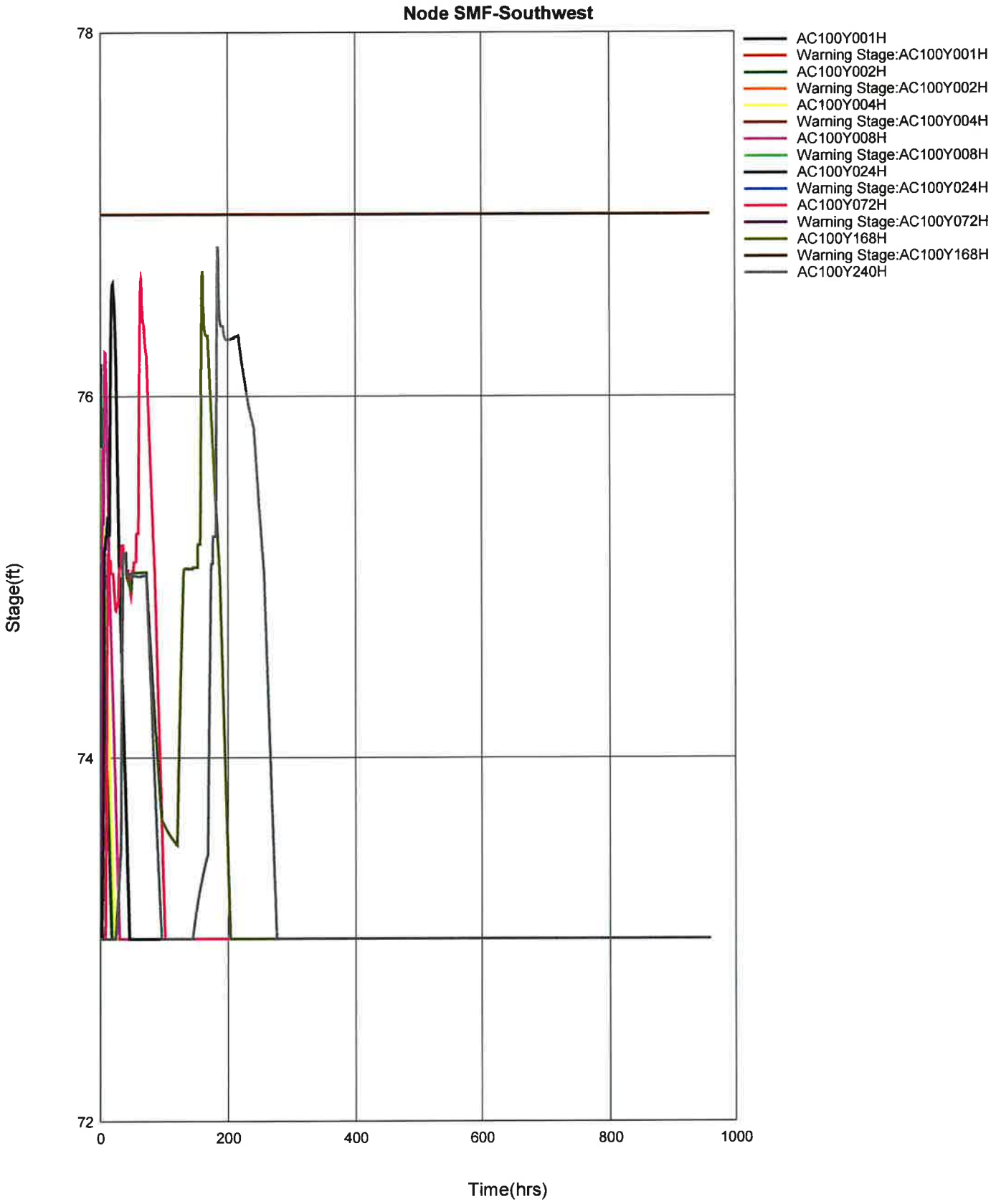
Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs
GROUND	BASE	002Y001H	0.00	0.000	0.000	0.0000	0	1.00	4.676	0.00
GROUND	BASE	002Y002H	0.00	0.000	0.000	0.0000	0	1.58	5.448	0.00
GROUND	BASE	002Y004H	0.00	0.000	0.000	0.0000	0	3.49	8.619	0.00
GROUND	BASE	002Y008H	0.00	0.000	0.000	0.0000	0	4.70	8.578	0.00
GROUND	BASE	002Y024H	0.00	0.000	0.000	0.0000	0	15.17	4.714	0.00
GROUND	BASE	002Y072H	0.00	0.000	0.000	0.0000	0	60.01	5.937	0.00
GROUND	BASE	002Y168H	0.00	0.000	0.000	0.0000	0	154.68	5.332	0.00
GROUND	BASE	002Y240H	0.00	0.000	0.000	0.0000	0	179.69	6.306	0.00
GROUND	BASE	005Y001H	0.00	0.000	0.000	0.0000	0	1.08	7.900	0.00
GROUND	BASE	005Y002H	0.00	0.000	0.000	0.0000	0	1.68	8.584	0.00
GROUND	BASE	005Y004H	0.00	0.000	0.000	0.0000	0	3.76	8.984	0.00
GROUND	BASE	005Y008H	0.00	0.000	0.000	0.0000	0	5.60	9.026	0.00
GROUND	BASE	005Y024H	0.00	0.000	0.000	0.0000	0	12.17	6.140	0.00
GROUND	BASE	005Y072H	0.00	0.000	0.000	0.0000	0	59.25	7.380	0.00
GROUND	BASE	005Y168H	0.00	0.000	0.000	0.0000	0	160.07	2.965	0.00
GROUND	BASE	005Y240H	0.00	0.000	0.000	0.0000	0	177.79	6.875	0.00
GROUND	BASE	010Y001H	0.00	0.000	0.000	0.0000	0	1.30	8.643	0.00
GROUND	BASE	010Y002H	0.00	0.000	0.000	0.0000	0	2.15	8.847	0.00
GROUND	BASE	010Y004H	0.00	0.000	0.000	0.0000	0	3.88	9.383	0.00
GROUND	BASE	010Y008H	0.00	0.000	0.000	0.0000	0	5.88	9.472	0.00
GROUND	BASE	010Y024H	0.00	0.000	0.000	0.0000	0	12.16	8.082	0.00
GROUND	BASE	010Y072H	0.00	0.000	0.000	0.0000	0	57.27	8.023	0.00
GROUND	BASE	010Y168H	0.00	0.000	0.000	0.0000	0	40.00	3.271	0.00
GROUND	BASE	010Y240H	0.00	0.000	0.000	0.0000	0	184.35	4.200	0.00
GROUND	BASE	025Y001H	0.00	0.000	0.000	0.0000	0	1.39	8.906	0.00
GROUND	BASE	025Y002H	0.00	0.000	0.000	0.0000	0	2.26	9.242	0.00
GROUND	BASE	025Y004H	0.00	0.000	0.000	0.0000	0	3.99	10.077	0.00
GROUND	BASE	025Y008H	0.00	0.000	0.000	0.0000	0	7.18	10.318	0.00
GROUND	BASE	025Y024H	0.00	0.000	0.000	0.0000	0	14.07	9.178	0.00
GROUND	BASE	025Y072H	0.00	0.000	0.000	0.0000	0	36.08	6.626	0.00
GROUND	BASE	025Y168H	0.00	0.000	0.000	0.0000	0	40.00	4.033	0.00
GROUND	BASE	025Y240H	0.00	0.000	0.000	0.0000	0	40.08	3.979	0.00
GROUND	BASE	050Y001H	0.00	0.000	0.000	0.0000	0	1.44	9.138	0.00
GROUND	BASE	050Y002H	0.00	0.000	0.000	0.0000	0	2.31	9.588	0.00
GROUND	BASE	050Y004H	0.00	0.000	0.000	0.0000	0	4.05	10.733	0.00
GROUND	BASE	050Y008H	0.00	0.000	0.000	0.0000	0	7.41	11.177	0.00
GROUND	BASE	050Y024H	0.00	0.000	0.000	0.0000	0	13.35	9.550	0.00
GROUND	BASE	050Y072H	0.00	0.000	0.000	0.0000	0	35.99	8.190	0.00
GROUND	BASE	050Y168H	0.00	0.000	0.000	0.0000	0	40.01	4.575	0.00
GROUND	BASE	050Y240H	0.00	0.000	0.000	0.0000	0	40.02	4.750	0.00
GROUND	BASE	100Y001H	0.00	0.000	0.000	0.0000	0	1.48	9.402	0.00
GROUND	BASE	100Y002H	0.00	0.000	0.000	0.0000	0	2.35	9.966	0.00
GROUND	BASE	100Y004H	0.00	0.000	0.000	0.0000	0	4.13	11.467	0.00
GROUND	BASE	100Y008H	0.00	0.000	0.000	0.0000	0	8.05	12.387	0.00
GROUND	BASE	100Y024H	0.00	0.000	0.000	0.0000	0	12.64	9.839	0.00
GROUND	BASE	100Y072H	0.00	0.000	0.000	0.0000	0	34.63	8.400	0.00
GROUND	BASE	100Y168H	0.00	0.000	0.000	0.0000	0	40.00	5.516	0.00
GROUND	BASE	100Y240H	0.00	0.000	0.000	0.0000	0	40.02	5.724	0.00
GROUND	BASE	AC100Y001H	0.00	0.000	0.000	0.0000	0	1.51	9.608	0.00
GROUND	BASE	AC100Y002H	0.00	0.000	0.000	0.0000	0	2.36	10.131	0.00
GROUND	BASE	AC100Y004H	0.00	0.000	0.000	0.0000	0	4.08	10.953	0.00
GROUND	BASE	AC100Y008H	0.00	0.000	0.000	0.0000	0	7.46	11.364	0.00
GROUND	BASE	AC100Y024H	0.00	0.000	0.000	0.0000	0	12.58	9.861	0.00
GROUND	BASE	AC100Y072H	0.00	0.000	0.000	0.0000	0	34.87	8.392	0.00
GROUND	BASE	AC100Y168H	0.00	0.000	0.000	0.0000	0	40.00	5.560	0.00
GROUND	BASE	AC100Y240H	0.00	0.000	0.000	0.0000	0	40.01	6.330	0.00
GROUND	BASE	WQTV-SLUG	0.00	0.000	0.000	0.0000	0	0.01	18.163	0.00
SMF-Northwest	BASE	002Y001H	1.40	66.000	73.000	0.0001	63438	1.08	2.240	1.00
SMF-Northwest	BASE	002Y002H	2.44	66.000	73.000	0.0001	63438	1.58	3.006	1.58
SMF-Northwest	BASE	002Y004H	3.27	66.010	73.000	-0.0004	63494	3.08	6.460	2.75
SMF-Northwest	BASE	002Y008H	4.45	66.007	73.000	-0.0001	63480	4.25	6.607	4.12
SMF-Northwest	BASE	002Y024H	15.48	66.001	73.000	0.0001	63440	15.17	2.244	15.17
SMF-Northwest	BASE	002Y072H	64.56	66.025	73.000	0.0008	63579	60.00	3.470	60.00
SMF-Northwest	BASE	002Y168H	161.01	66.726	73.000	0.0018	67654	159.99	3.380	154.68
SMF-Northwest	BASE	002Y240H	216.33	66.951	73.000	0.0017	68960	183.99	4.395	179.69
SMF-Northwest	BASE	005Y001H	1.27	66.000	73.000	-0.0001	63438	1.08	5.425	1.08
SMF-Northwest	BASE	005Y002H	1.50	66.003	73.000	0.0001	63451	1.33	6.271	1.24
SMF-Northwest	BASE	005Y004H	3.58	66.223	73.000	-0.0042	64730	2.83	10.647	3.47
SMF-Northwest	BASE	005Y008H	5.37	66.236	73.000	-0.0029	64809	4.25	11.485	5.27
SMF-Northwest	BASE	005Y024H	21.82	66.007	73.000	-0.0005	63477	12.16	3.698	12.16
SMF-Northwest	BASE	005Y072H	68.40	66.691	73.000	0.0018	67451	60.00	4.984	59.25
SMF-Northwest	BASE	005Y168H	168.28	67.425	73.000	0.0015	72265	159.99	4.276	150.73
SMF-Northwest	BASE	005Y240H	216.40	67.689	73.000	0.0018	74144	184.00	5.430	177.79
SMF-Northwest	BASE	010Y001H	1.26	66.045	73.000	-0.0020	63699	1.00	9.001	0.84
SMF-Northwest	BASE	010Y002H	2.02	66.131	73.000	-0.0031	64195	1.25	9.955	1.00
SMF-Northwest	BASE	010Y004H	3.77	66.532	73.000	-0.0045	66528	2.83	15.250	3.64
SMF-Northwest	BASE	010Y008H	5.56	66.595	73.000	-0.0032	66888	4.17	16.919	5.45
SMF-Northwest	BASE	010Y024H	22.64	66.606	73.000	0.0020	66958	12.16	5.494	12.16
SMF-Northwest	BASE	010Y072H	68.55	67.515	73.000	0.0019	72905	60.00	6.545	57.07
SMF-Northwest	BASE	010Y168H	168.34	68.164	73.000	0.0019	77509	160.00	5.206	40.00
SMF-Northwest	BASE	010Y240H	216.44	68.430	73.000	0.0018	79374	184.00	6.523	40.07
SMF-Northwest	BASE	025Y001H	1.39	66.203	73.000	-0.0032	64615	1.00	15.329	0.73
SMF-Northwest	BASE	025Y002H	2.23	66.426	73.000	-0.0035	65911	1.25	16.307	2.07
SMF-Northwest	BASE	025Y004H	3.94	67.128	73.000	-0.0045	70157	2.75	23.398	3.83
SMF-Northwest	BASE	025Y008H	5.95	67.303	73.000	-0.0024	71401	4.17	26.944	5.68
SMF-Northwest	BASE	025Y024H	24.14	67.743	73.000	0.0025	74531	12.16	8.713	14.07

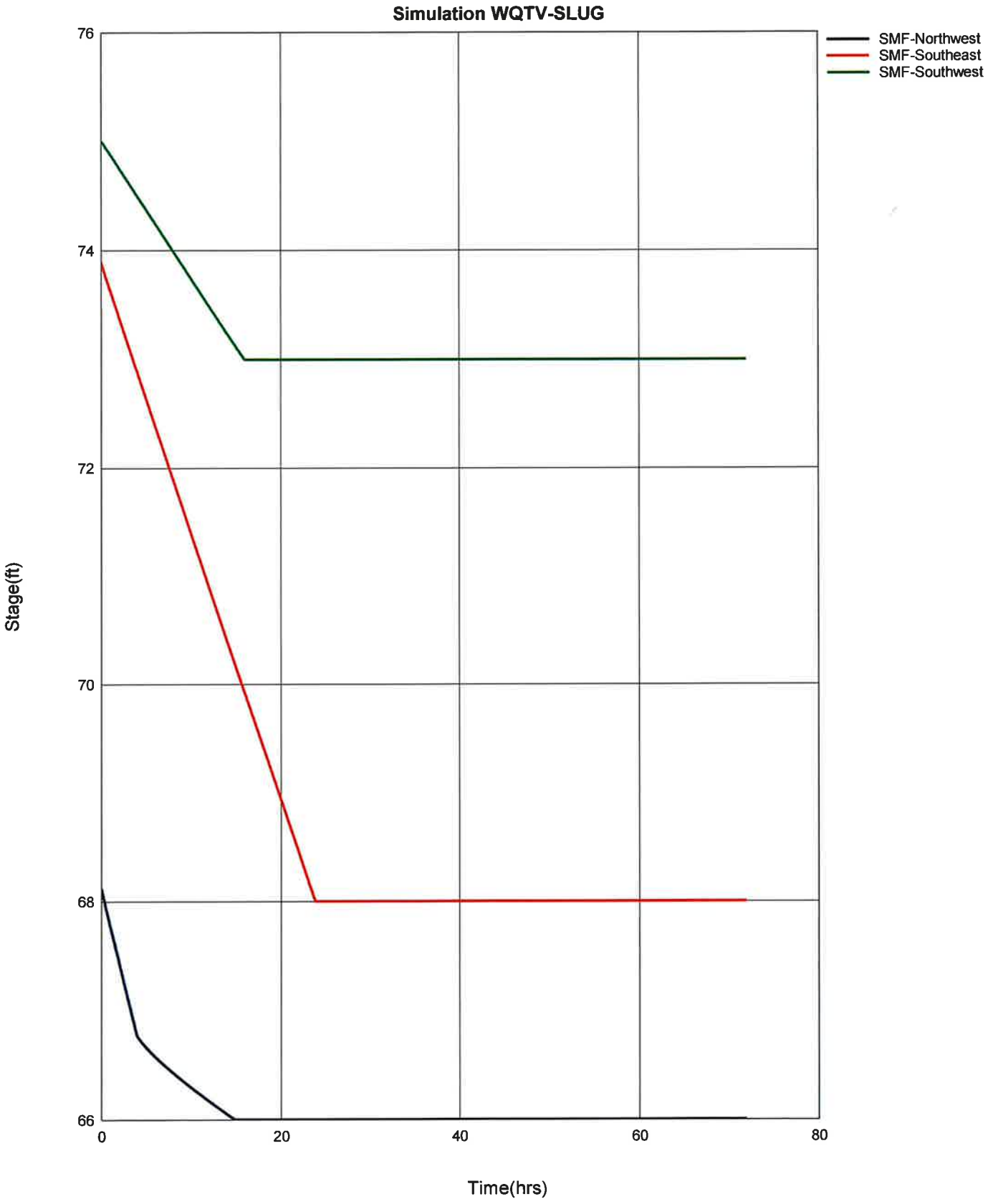
Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs
SMF-Northwest	BASE	025Y072H	68.90	68.870	73.000	0.0020	82465	60.00	9.082	36.02
SMF-Northwest	BASE	025Y168H	168.37	69.362	73.000	0.0021	87468	160.00	6.749	38.35
SMF-Northwest	BASE	025Y240H	216.51	69.578	73.000	0.0019	89906	184.00	8.344	40.03
SMF-Northwest	BASE	050Y001H	1.47	66.367	73.000	-0.0033	65567	1.00	20.997	1.33
SMF-Northwest	BASE	050Y002H	2.31	66.714	73.000	-0.0044	67582	1.25	22.103	2.18
SMF-Northwest	BASE	050Y004H	4.04	67.689	73.000	-0.0044	74145	2.75	30.850	3.91
SMF-Northwest	BASE	050Y008H	6.51	67.997	73.000	-0.0020	76338	4.17	36.420	5.83
SMF-Northwest	BASE	050Y024H	24.26	68.759	73.000	0.0030	81687	12.09	11.798	13.35
SMF-Northwest	BASE	050Y072H	72.19	70.067	73.000	0.0022	95351	60.00	11.453	35.99
SMF-Northwest	BASE	050Y168H	168.40	70.382	73.000	0.0022	98491	160.00	8.235	40.00
SMF-Northwest	BASE	050Y240H	216.57	70.477	73.000	0.0021	99433	184.00	9.911	40.02
SMF-Northwest	BASE	100Y001H	1.52	66.568	73.000	-0.0030	66734	1.00	27.569	1.38
SMF-Northwest	BASE	100Y002H	2.37	67.043	73.000	-0.0044	69547	1.17	28.884	2.26
SMF-Northwest	BASE	100Y004H	4.12	68.327	73.000	-0.0050	78655	2.67	39.577	3.98
SMF-Northwest	BASE	100Y008H	8.62	69.430	73.000	0.0031	88238	4.17	47.548	8.22
SMF-Northwest	BASE	100Y024H	24.26	70.582	73.000	0.0040	100481	12.08	15.321	12.64
SMF-Northwest	BASE	100Y072H	72.15	72.143	73.000	0.0039	144828	64.00	15.513	33.05
SMF-Northwest	BASE	100Y168H	168.51	71.871	73.000	0.0034	133687	160.08	16.760	40.00
SMF-Northwest	BASE	100Y240H	216.94	72.132	73.000	0.0031	144314	184.12	17.399	40.01
SMF-Northwest	BASE	AC100Y001H	1.56	66.734	73.000	-0.0029	67698	1.00	32.856	1.41
SMF-Northwest	BASE	AC100Y002H	2.39	67.179	73.000	-0.0044	70514	1.17	31.761	2.28
SMF-Northwest	BASE	AC100Y004H	4.07	67.879	73.000	-0.0044	75500	2.67	33.405	3.93
SMF-Northwest	BASE	AC100Y008H	8.41	68.155	73.000	-0.0019	77447	4.17	38.534	6.63
SMF-Northwest	BASE	AC100Y024H	24.26	70.764	73.000	0.0041	102305	12.08	15.649	12.58
SMF-Northwest	BASE	AC100Y072H	72.16	71.668	73.000	0.0037	126921	64.00	14.210	32.91
SMF-Northwest	BASE	AC100Y168H	168.53	71.936	73.000	0.0034	135867	160.08	17.202	40.00
SMF-Northwest	BASE	AC100Y240H	217.15	72.865	73.000	0.0039	179336	184.07	23.832	40.00
SMF-Northwest	BASE	WQTV-SLUG	0.00	68.120	73.000	-0.0047	77202	0.00	0.000	0.01
SMF-Southeast	BASE	002Y001H	1.53	68.581	77.000	-0.0038	30255	0.89	12.319	1.42
SMF-Southeast	BASE	002Y002H	2.39	69.097	77.000	-0.0041	31850	1.17	12.409	2.32
SMF-Southeast	BASE	002Y004H	4.14	70.057	77.000	0.0046	34933	2.58	16.138	4.06
SMF-Southeast	BASE	002Y008H	7.38	70.364	77.000	0.0050	35962	4.06	18.090	7.38
SMF-Southeast	BASE	002Y024H	19.84	69.476	77.000	0.0044	33062	12.03	5.411	19.84
SMF-Southeast	BASE	002Y072H	64.31	69.475	77.000	-0.0041	33060	60.00	5.169	64.31
SMF-Southeast	BASE	002Y168H	160.45	69.587	77.000	0.0033	33420	159.99	4.325	160.33
SMF-Southeast	BASE	002Y240H	184.53	70.565	77.000	0.0033	36633	183.99	5.788	184.53
SMF-Southeast	BASE	005Y001H	1.63	69.160	77.000	0.0039	32050	0.84	20.399	1.50
SMF-Southeast	BASE	005Y002H	2.47	69.920	77.000	-0.0041	34488	1.08	19.903	2.39
SMF-Southeast	BASE	005Y004H	4.21	71.156	77.000	0.0050	38632	2.57	22.958	4.14
SMF-Southeast	BASE	005Y008H	7.65	71.610	77.000	0.0050	40213	4.06	25.567	7.65
SMF-Southeast	BASE	005Y024H	21.35	70.882	77.000	0.0050	37696	12.03	7.751	21.35
SMF-Southeast	BASE	005Y072H	64.44	70.570	77.000	0.0045	36649	59.99	6.916	64.44
SMF-Southeast	BASE	005Y168H	160.65	70.761	77.000	0.0034	37288	159.99	5.303	160.04
SMF-Southeast	BASE	005Y240H	184.58	71.378	77.000	0.0034	39407	184.00	6.926	184.58
SMF-Southeast	BASE	010Y001H	1.69	69.693	77.000	-0.0034	33760	0.83	27.555	1.55
SMF-Southeast	BASE	010Y002H	2.51	70.642	77.000	-0.0032	36892	1.08	26.700	2.43
SMF-Southeast	BASE	010Y004H	4.26	72.166	77.000	0.0050	42176	2.56	29.640	4.19
SMF-Southeast	BASE	010Y008H	8.07	72.792	77.000	0.0050	44444	4.05	33.226	8.07
SMF-Southeast	BASE	010Y024H	21.52	72.252	77.000	0.0050	42489	12.02	10.168	21.52
SMF-Southeast	BASE	010Y072H	64.77	71.667	77.000	0.0050	40413	60.00	8.659	61.12
SMF-Southeast	BASE	010Y168H	160.77	71.755	77.000	0.0047	40720	160.00	6.303	160.09
SMF-Southeast	BASE	010Y240H	184.63	72.175	77.000	0.0035	42206	184.00	8.108	184.63
SMF-Southeast	BASE	025Y001H	1.76	70.471	77.000	0.0037	36319	0.83	38.120	1.61
SMF-Southeast	BASE	025Y002H	2.56	71.655	77.000	0.0044	40372	1.08	36.826	2.47
SMF-Southeast	BASE	025Y004H	4.30	73.691	77.000	0.0050	47800	2.55	40.560	4.22
SMF-Southeast	BASE	025Y008H	8.19	74.624	77.000	0.0050	51403	4.05	46.224	8.19
SMF-Southeast	BASE	025Y024H	21.98	74.330	77.000	0.0050	50255	12.02	14.241	21.98
SMF-Southeast	BASE	025Y072H	68.25	73.590	77.000	0.0050	47422	60.00	11.421	60.11
SMF-Southeast	BASE	025Y168H	168.09	74.370	77.000	0.0050	50413	160.00	7.945	40.31
SMF-Southeast	BASE	025Y240H	192.52	74.909	77.000	0.0047	52519	183.99	10.056	40.38
SMF-Southeast	BASE	050Y001H	1.80	71.082	77.000	0.0036	38375	0.83	46.791	1.64
SMF-Southeast	BASE	050Y002H	2.58	72.462	77.000	0.0043	43250	1.08	45.512	2.49
SMF-Southeast	BASE	050Y004H	4.33	74.920	77.000	0.0050	52561	2.54	50.153	4.33
SMF-Southeast	BASE	050Y008H	8.15	75.976	77.000	0.0050	56823	4.05	57.927	8.15
SMF-Southeast	BASE	050Y024H	22.09	75.914	77.000	0.0050	56572	12.02	17.955	22.09
SMF-Southeast	BASE	050Y072H	68.31	75.637	77.000	0.0050	55451	60.00	13.958	40.51
SMF-Southeast	BASE	050Y168H	168.07	75.874	77.000	0.0050	56409	158.82	9.481	40.41
SMF-Southeast	BASE	050Y240H	216.17	76.083	77.000	0.0043	57268	183.27	11.673	40.47
SMF-Southeast	BASE	100Y001H	1.83	71.724	77.000	0.0042	40611	0.83	56.341	1.66
SMF-Southeast	BASE	100Y002H	2.60	73.281	77.000	0.0050	46257	1.08	54.911	2.51
SMF-Southeast	BASE	100Y004H	4.32	76.041	77.000	0.0050	57090	2.52	60.878	4.32
SMF-Southeast	BASE	100Y008H	6.42	76.669	77.000	0.0050	59723	4.04	71.225	6.42
SMF-Southeast	BASE	100Y024H	19.18	76.598	77.000	0.0050	59424	12.01	22.028	19.18
SMF-Southeast	BASE	100Y072H	64.03	76.680	77.000	0.0050	59767	59.07	16.634	64.03
SMF-Southeast	BASE	100Y168H	160.19	76.676	77.000	0.0050	59752	156.51	11.124	160.17
SMF-Southeast	BASE	100Y240H	184.36	76.650	77.000	0.0050	59644	181.61	13.585	184.35
SMF-Southeast	BASE	AC100Y001H	1.85	72.201	77.000	0.0037	42301	0.83	63.760	1.68
SMF-Southeast	BASE	AC100Y002H	2.62	73.599	77.000	0.0050	47455	1.08	58.722	2.51
SMF-Southeast	BASE	AC100Y004H	4.31	75.275	77.000	0.0050	53987	2.52	53.311	4.31
SMF-Southeast	BASE	AC100Y008H	8.16	76.243	77.000	0.0050	57940	4.03	60.269	8.16
SMF-Southeast	BASE	AC100Y024H	19.12	76.612	77.000	0.0050	59486	12.01	22.402	19.12
SMF-Southeast	BASE	AC100Y072H	64.09	76.643	77.000	0.0050	59613	59.56	16.034	64.08
SMF-Southeast	BASE	AC100Y168H	160.17	76.689	77.000	0.0050	59807	156.42	11.200	160.16
SMF-Southeast	BASE	AC100Y240H	184.13	76.821	77.000	0.0050	60361	180.87	14.725	184.12
SMF-Southeast	BASE	WQTV-SLUG	0.00	73.890	77.000	-0.0030	48551	0.00	0.000	0.01
SMF-Southwest	BASE	002Y001H	0.84	75.361	77.000	0.0050	8362	0.58	14.092	0.84

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs
SMF-Southwest	BASE	002Y002H	1.05	75.322	77.000	0.0050	8300	0.79	11.856	1.05
SMF-Southwest	BASE	002Y004H	2.51	75.362	77.000	0.0050	8362	2.00	6.756	2.51
SMF-Southwest	BASE	002Y008H	4.01	75.402	77.000	0.0050	8425	4.00	6.949	4.01
SMF-Southwest	BASE	002Y024H	12.00	75.158	77.000	0.0050	8049	11.99	1.903	12.00
SMF-Southwest	BASE	002Y072H	59.99	75.118	77.000	0.0050	7987	59.91	1.312	59.99
SMF-Southwest	BASE	002Y168H	159.93	75.093	77.000	0.0048	7950	159.91	1.007	159.93
SMF-Southwest	BASE	002Y240H	183.99	75.120	77.000	0.0050	7990	183.99	1.340	183.99
SMF-Southwest	BASE	005Y001H	0.76	75.550	77.000	0.0050	8651	0.54	18.263	0.76
SMF-Southwest	BASE	005Y002H	0.90	75.522	77.000	0.0050	8609	0.79	15.269	0.90
SMF-Southwest	BASE	005Y004H	2.08	75.445	77.000	0.0050	8490	2.00	8.620	2.08
SMF-Southwest	BASE	005Y008H	4.00	75.472	77.000	0.0050	8532	4.00	8.679	4.00
SMF-Southwest	BASE	005Y024H	12.00	75.190	77.000	0.0050	8098	11.99	2.410	12.00
SMF-Southwest	BASE	005Y072H	59.96	75.141	77.000	0.0050	8023	59.92	1.640	59.96
SMF-Southwest	BASE	005Y168H	159.92	75.108	77.000	0.0050	7972	159.92	1.188	159.92
SMF-Southwest	BASE	005Y240H	184.00	75.135	77.000	0.0049	8014	184.00	1.550	184.00
SMF-Southwest	BASE	010Y001H	0.72	75.689	77.000	0.0050	8865	0.54	21.996	0.72
SMF-Southwest	BASE	010Y002H	0.87	75.670	77.000	0.0050	8836	0.79	18.169	0.87
SMF-Southwest	BASE	010Y004H	2.05	75.523	77.000	0.0050	8611	2.00	10.347	2.05
SMF-Southwest	BASE	010Y008H	4.00	75.534	77.000	0.0050	8627	4.00	10.356	4.00
SMF-Southwest	BASE	010Y024H	12.00	75.219	77.000	0.0050	8142	12.00	2.907	12.00
SMF-Southwest	BASE	010Y072H	59.95	75.163	77.000	0.0050	8056	59.91	1.963	59.95
SMF-Southwest	BASE	010Y168H	159.92	75.122	77.000	0.0049	7994	159.91	1.372	159.92
SMF-Southwest	BASE	010Y240H	183.99	75.150	77.000	0.0050	8037	183.99	1.768	183.99
SMF-Southwest	BASE	025Y001H	0.68	75.865	77.000	0.0050	9136	0.54	27.264	0.68
SMF-Southwest	BASE	025Y002H	0.85	75.828	77.000	0.0050	9079	0.79	22.227	0.85
SMF-Southwest	BASE	025Y004H	2.03	75.621	77.000	0.0050	8760	2.00	13.030	2.03
SMF-Southwest	BASE	025Y008H	4.00	75.627	77.000	0.0050	8770	4.00	13.066	4.00
SMF-Southwest	BASE	025Y024H	12.00	75.261	77.000	0.0050	8208	12.00	3.712	12.00
SMF-Southwest	BASE	025Y072H	59.94	75.194	77.000	0.0050	8105	59.91	2.472	59.94
SMF-Southwest	BASE	025Y168H	159.92	75.144	77.000	0.0050	8027	159.92	1.676	159.92
SMF-Southwest	BASE	025Y240H	183.99	75.173	77.000	0.0050	8072	183.99	2.128	183.99
SMF-Southwest	BASE	050Y001H	0.67	75.987	77.000	0.0050	9324	0.54	31.363	0.67
SMF-Southwest	BASE	050Y002H	0.84	75.931	77.000	0.0050	9237	0.79	25.496	0.84
SMF-Southwest	BASE	050Y004H	2.02	75.694	77.000	0.0050	8874	2.00	15.299	2.02
SMF-Southwest	BASE	050Y008H	8.06	75.976	77.000	0.0050	9307	3.96	15.421	4.00
SMF-Southwest	BASE	050Y024H	22.02	75.916	77.000	0.0050	9214	12.00	4.425	12.00
SMF-Southwest	BASE	050Y072H	68.32	75.637	77.000	0.0050	8785	59.92	2.940	59.93
SMF-Southwest	BASE	050Y168H	168.04	75.873	77.000	0.0050	9149	159.92	1.967	158.82
SMF-Southwest	BASE	050Y240H	216.14	76.082	77.000	0.0050	9478	184.00	2.435	183.26
SMF-Southwest	BASE	100Y001H	0.65	76.105	77.000	0.0050	9514	0.54	35.683	0.65
SMF-Southwest	BASE	100Y002H	0.84	76.026	77.000	0.0050	9386	0.79	28.880	0.84
SMF-Southwest	BASE	100Y004H	4.33	76.039	77.000	0.0050	9407	2.00	17.765	2.02
SMF-Southwest	BASE	100Y008H	6.43	76.677	77.000	0.0050	10444	3.96	18.044	4.00
SMF-Southwest	BASE	100Y024H	19.12	76.603	77.000	0.0050	10323	12.00	5.194	12.00
SMF-Southwest	BASE	100Y072H	64.01	76.686	77.000	0.0050	10458	59.91	3.457	59.07
SMF-Southwest	BASE	100Y168H	160.15	76.676	77.000	0.0049	10442	159.91	2.287	156.50
SMF-Southwest	BASE	100Y240H	184.37	76.651	77.000	0.0050	10401	184.00	2.810	181.61
SMF-Southwest	BASE	AC100Y001H	0.65	76.188	77.000	0.0050	9649	0.54	38.919	0.65
SMF-Southwest	BASE	AC100Y002H	0.84	76.061	77.000	0.0050	9443	0.79	30.222	0.84
SMF-Southwest	BASE	AC100Y004H	2.01	75.717	77.000	0.0050	8909	2.00	16.042	2.01
SMF-Southwest	BASE	AC100Y008H	8.12	76.243	77.000	0.0050	9738	4.00	15.927	4.00
SMF-Southwest	BASE	AC100Y024H	19.05	76.619	77.000	0.0050	10349	12.00	5.265	12.00
SMF-Southwest	BASE	AC100Y072H	64.03	76.647	77.000	0.0050	10395	59.92	3.334	59.55
SMF-Southwest	BASE	AC100Y168H	160.12	76.690	77.000	0.0050	10465	159.91	2.301	156.42
SMF-Southwest	BASE	AC100Y240H	184.07	76.826	77.000	0.0050	10686	184.00	3.032	180.87
SMF-Southwest	BASE	WQTV-SLUG	0.00	75.000	77.000	-0.0013	7806	0.00	0.000	0.01


Node SMF-Northwest
AC100Y001H
Warning Stage:AC100Y001H
AC100Y002H
Warning Stage:AC100Y002H
AC100Y004H
Warning Stage:AC100Y004H
AC100Y008H
Warning Stage:AC100Y008H
AC100Y024H
Warning Stage:AC100Y024H
AC100Y072H
Warning Stage:AC100Y072H
AC100Y168H
Warning Stage:AC100Y168H
AC100Y240H
Stage(ft)
74
72
70
68
66
0
200
400
600
800
1000
Time(hrs)


Node SMF-Southeast
78
76
74
72
70
68
Stage(ft)
0
200
400
600
800
1000
Time(hrs)
AC100Y001H
Warning Stage:AC100Y001H
AC100Y002H
Warning Stage:AC100Y002H
AC100Y004H
Warning Stage:AC100Y004H
AC100Y008H
Warning Stage:AC100Y008H
AC100Y024H
Warning Stage:AC100Y024H
AC100Y072H
Warning Stage:AC100Y072H
AC100Y168H
Warning Stage:AC100Y168H
AC100Y240H


Node SMF-Southwest
78
76
74
72
Stage(ft)
0
200
400
600
800
1000
Time(hrs)
AC100Y001H
Warning Stage:AC100Y001H
AC100Y002H
Warning Stage:AC100Y002H
AC100Y004H
Warning Stage:AC100Y004H
AC100Y008H
Warning Stage:AC100Y008H
AC100Y024H
Warning Stage:AC100Y024H
AC100Y072H
Warning Stage:AC100Y072H
AC100Y168H
Warning Stage:AC100Y168H
AC100Y240H


Simulation WQTV-SLUG
SMF-Northwest
SMF-Southeast
SMF-Southwest
Stage(ft)
76
74
72
70
68
66
0
20
40
60
80
Time(hrs)

Vegetative Cover Map