

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

gmuereng.com

September 21, 2018

Troy Crews, Chief Building Official
Columbia County Building & Zoning Department
Post Office Box 1529
Lake City, FL 32056-1529

Re: 788 SW Manatee Terr, Fort White, Columbia County Flood Certification

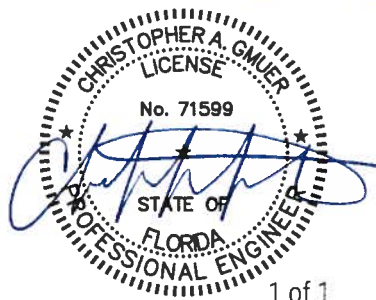
Dear Troy or Reviewing Staff,

The property owner of Parcel ID # 00-00-00-00578-019 at approximately 788 SW Manatee Terr, Fort White, FL 32038 is proposing to locate a home on the property with an application to the building department. The home proposes an elevated stilt foundation system without any enclosed areas within the flood plain. Based on the location, a flood certification from a licensed engineer is required. The site is located within Zone AE on map 12023C0467C, effective on 02/04/2009 and is within the floodway of the Santa Fe River. The site has a Base Flood Elevation established at 33.9 NAVD88.

Per section 8.5.2.1 of the Columbia County Land Development Regulations, all new construction of any residential building shall have the lowest floor elevation no lower than one foot above the base flood elevation. Per section 8.5.7.a of the Columbia County Land Development Regulations, floodways are an extremely hazardous area. Certification by a registered professional engineer is required prior to constructing new encroachments. The engineer shall perform hydraulic and hydrologic analyses performed in accordance with standard engineering practice demonstrating that encroachments would not result in any increase in flood levels during occurrence of the base flood discharge.

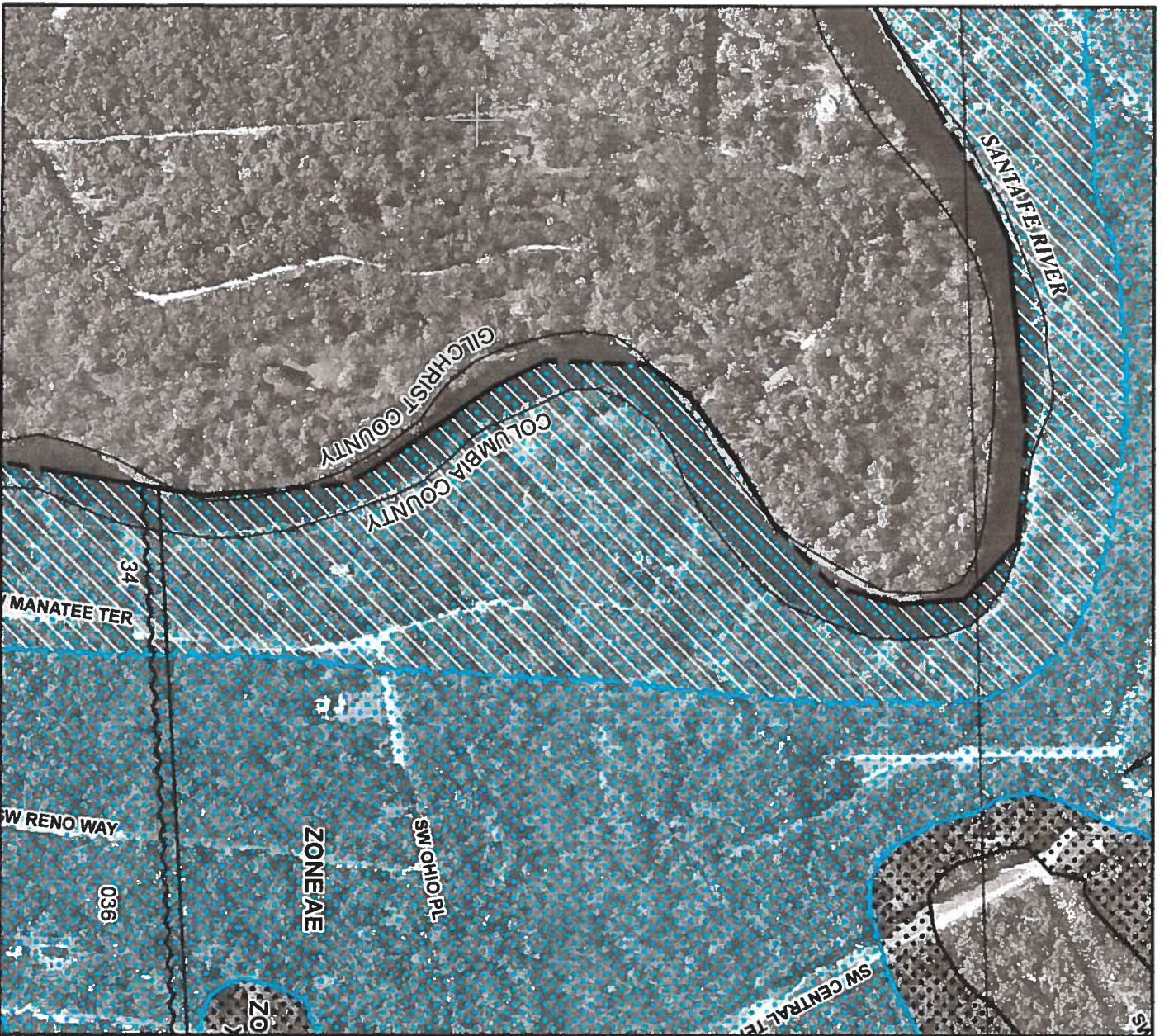
I have completed a hydraulic analysis that has been reviewed by SRWMD, and I certify that the installation of the home on an elevated stilt foundation system without any enclosed areas will not result in any water surface rise as long as the lowest floor elevation is constructed at elevation **35.00 NAVD88** or higher. No solid foundations are allowed and no fill is allowed.

Sincerely,
Gmuer Engineering, LLC
Christopher A Gmuer, PE
President

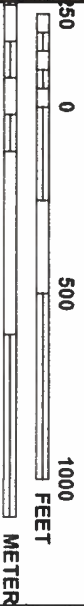


1 of 1

**Digitally signed by
Christopher Gmuer
Date: 2018.09.21
13:25:50 -04'00'**



MAP SCALE 1" = 500'



NFIP

PANEL 0467C

FIRM

FLOOD INSURANCE RATE MAP
COLUMBIA COUNTY,
FLORIDA
AND INCORPORATED AREAS

PANEL 467 OF 552

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
COLUMBIA COUNTY 12030 0467 C

Notice to User: The Map Number shown below should be used when preparing map orders. The Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
12030C0467C
EFFECTIVE DATE
FEBRUARY 4, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.fema.gov

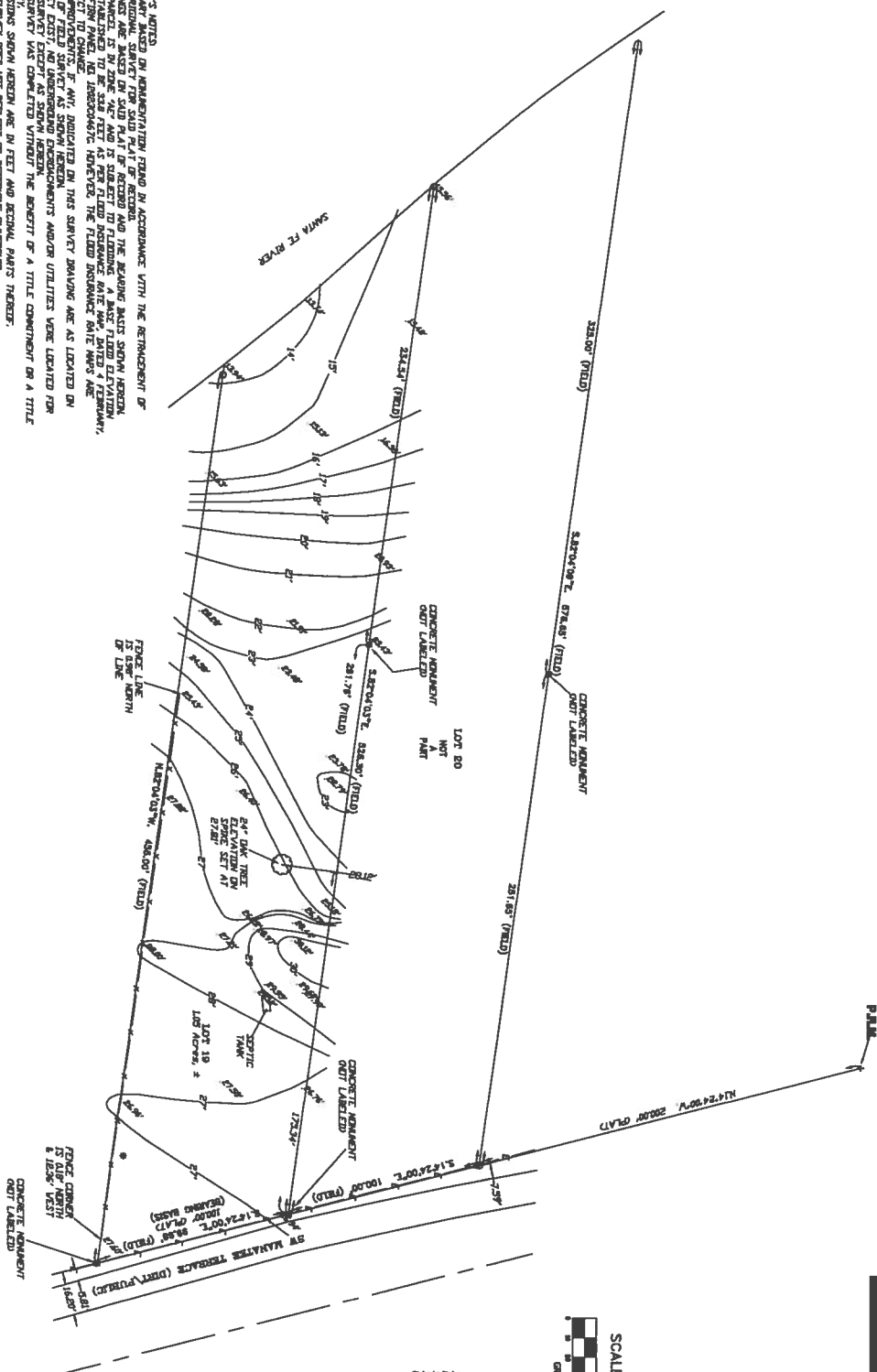
COLUMBIA COUNTY, FLORIDA

[illegible]

SCALE: 1" = 40'



DESCRIPTION
LOT 19 OF UNIT 2 OF THREE RIVERS ESTATES, INC., A
SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED
IN PLAT BOOK 4, PAGE 37 OF THE PUBLIC RECORDS OF
CLAIMIDA COUNTY, FLORIDA.



- 1 SURVEYORS' NOTES.
- 2 THE SURVEYOR HAS REQUESTED THAT THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF
- 3 THE ORIGINAL SURVEY OF THIS LAND. THE SURVEYOR HAS REQUESTED THAT THE FOLLOWING BE IN
- 4 ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND. THE SURVEYOR HAS
- 5 REQUESTED THAT THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY
- 6 OF THIS LAND. THE SURVEYOR HAS REQUESTED THAT THE FOLLOWING BE IN ACCORDANCE WITH THE
- 7 REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND. THE SURVEYOR HAS REQUESTED THAT THE
- 8 FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 9 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 10 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 11 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 12 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 13 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 14 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.
- 15 THE FOLLOWING BE IN ACCORDANCE WITH THE REQUIREMENT OF THE ORIGINAL SURVEY OF THIS LAND.

CERTIFIED TO:

NEEDS ANALYSIS

FIELD BOOK: 307 PAGE(S): 61-62, 64

SURVIVORS CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS BY CHAPTER 34-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472627, FLORIDA STATUTES.

FIELD SURVEY DATE

DRAWING DATE

L. SCOTT BRITT, PSM
CERTIFICATION # 0007

NOTE: UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.

BRITT SURVEYING
& MAPPING, LLC

LAND SURVEYORS AND MAPPERS, L.B. # 8016

LAKE CITY, FLORIDA 32025

WWW.BRITTSARVY.COM
TELEPHONE: (386) 752-7163 FAX: (386) 752-5573

WORK ORDER # 1-24908

==== Basins =====

```
Name: NULL                      Node: Downstream          Status: Onsite
Group: BASE                     Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256          Peaking Factor: 256.0
Rainfall File:                 Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000      Time of Conc(min): 10.00
Area(ac): 0.000                Time Shift(hrs): 0.00
Curve Number: 100.00           Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00
```

==== Nodes =====

```
Name: Downstream              Base Flow(cfs): 0.000      Init Stage(ft): 33.893
Group: BASE                   Warn Stage(ft): 34.000
Type: Time/Stage
```

Time(hrs)	Stage(ft)
0.00	33.893
1.00	33.893

```
Name: Upstream                Base Flow(cfs): 0.000      Init Stage(ft): 33.900
Group: BASE                   Warn Stage(ft): 34.000
Type: Time/Stage
```

Time(hrs)	Stage(ft)
0.00	33.900
1.00	33.900

==== Weirs =====

```
Name: Existing                From Node: Upstream
Group: BASE                   To Node: Downstream
Flow: Both                    Count: 1
Type: Vertical: Gravel        Geometry: Trapezoidal

Bottom Width(ft): 0.00
Left Side Slope(h/v): 50.00
Right Side Slope(h/v): 50.00
Invert(ft): 27.000
Control Elevation(ft): 27.000
Struct Opening Dim(ft): 200.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

```
Name: House                   From Node: Upstream
Group: BASE                   To Node: Downstream
Flow: Both                    Count: 1
Type: Vertical: Gravel        Geometry: Trapezoidal

Bottom Width(ft): 90.00
Left Side Slope(h/v): 40.00
Right Side Slope(h/v): 50.00
Invert(ft): 27.250
Control Elevation(ft): 27.250
Struct Opening Dim(ft): 200.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

==== Hydrology Simulations =====

Name: FLOOD
 Filename: C:\Users\cagmuer\Box Sync\Engineering\Projects Archive\17-0046 Lori Coronado 1ft Rise\2 Flood Letter\ICPR\FLOOD.R
 Override Defaults: Yes
 Storm Duration(hrs): 1.00
 Rainfall File: Fdot-1
 Rainfall Amount(in): 1.00

Time(hrs)	Print Inc(min)
60.000	5.00

==== Routing Simulations =====

Name: FLOOD Hydrology Sim: FLOOD
 Filename: C:\Users\cagmuer\Box Sync\Engineering\Projects Archive\17-0046 Lori Coronado 1ft Rise\2 Flood Letter\ICPR\FLOOD.I
 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): 1.00
 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

17-0046 1 Ft Rise

Nodes

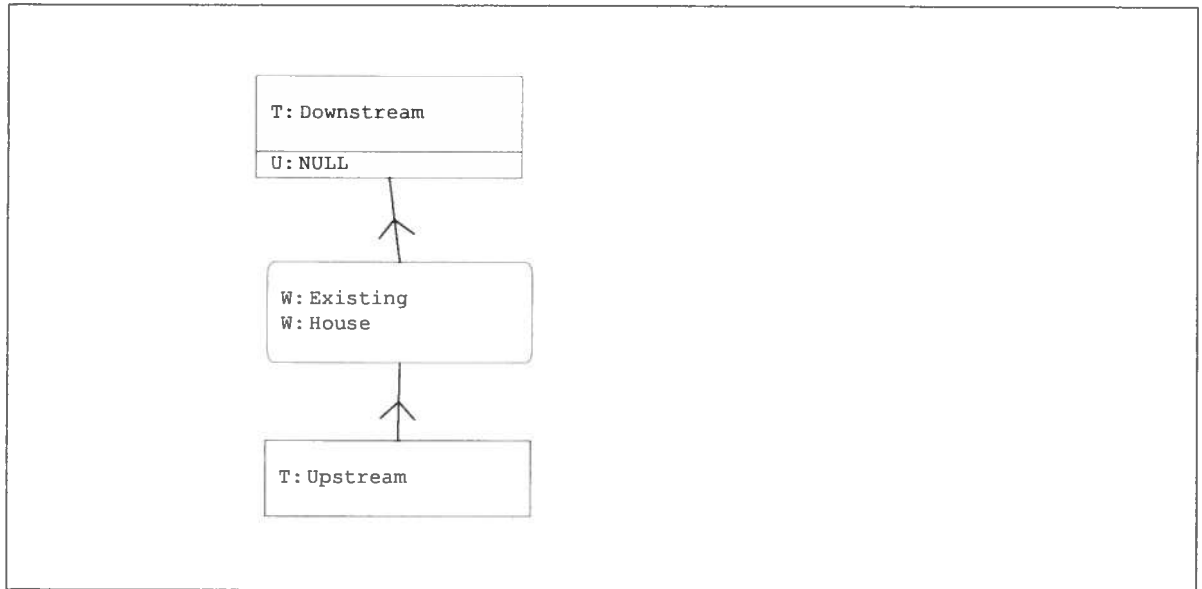
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins

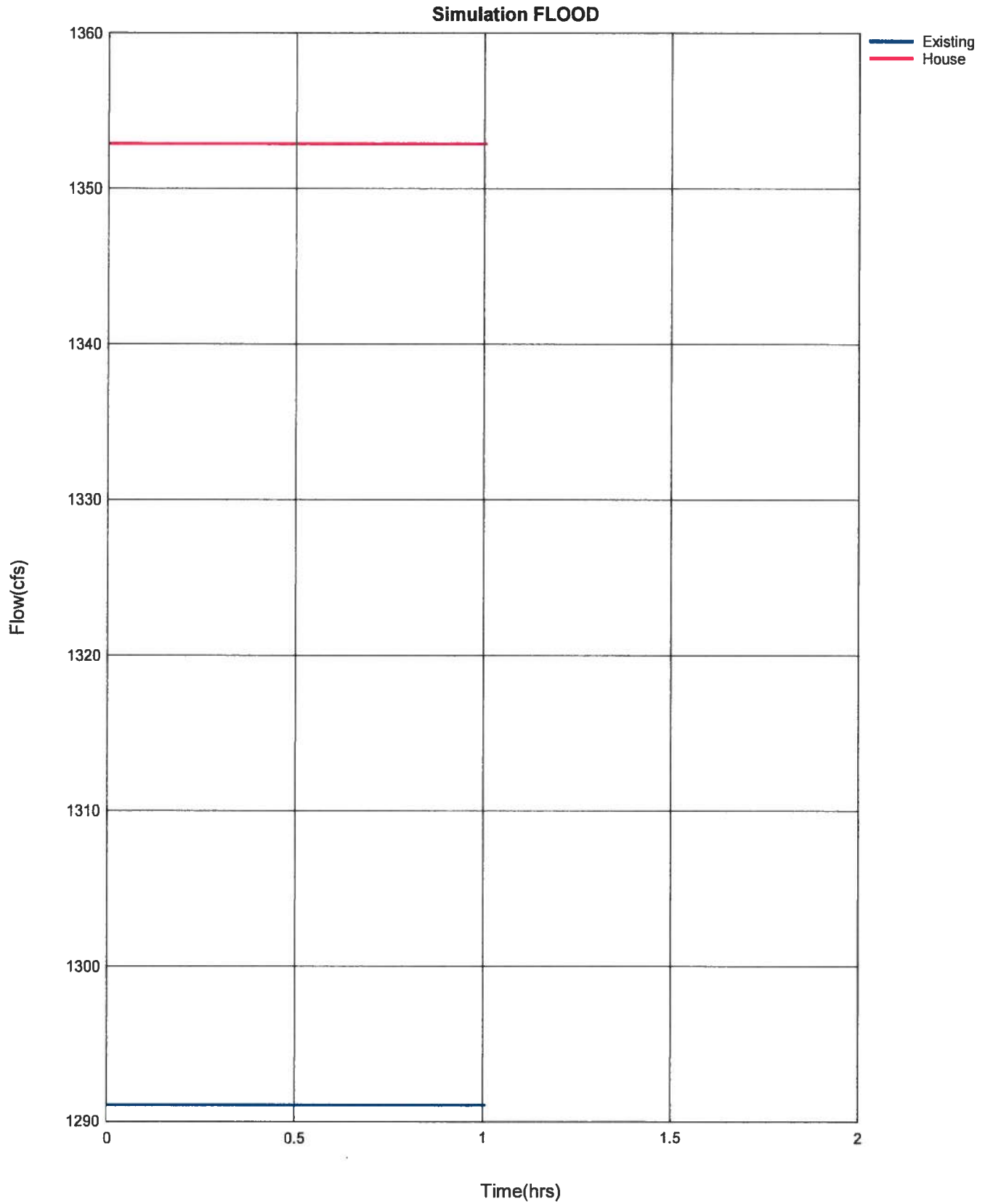
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links

P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



17-0046 1 Ft Rise



Christopher A Gmuer, PE - Gmuer Engineering, LLC - chrisg@gmuereng.com - 352-281-4928