CITY OF PORT WENTWORTH

CITY COUNCIL

JULY 22, 2021

Council Meeting Room	Regular Meeting	6:30 PM

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

2. PRAYER AND PLEDGE OF ALLEGIANCE

3. ROLL CALL - CLERK OF COUNCIL

4. APPROVAL OF AGENDA

5. RECOGNITION OF SPECIAL GUESTS

6. ELECTIONS & APPOINTMENTS

7. ADOPTION OF MINUTES

A. City Council - Regular Meeting - Jun 24, 2021 6:30 PM

8. COMMUNICATIONS & PETITIONS

A. City Manager Updates

9. COMMITTEE REPORTS

A. Committee Reports

10. CONSENT AGENDA

11. UNFINISHED BUSINESS

12. NEW BUSINESS

A. DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan

- Public Hearing
- Action

B. Zoning Map Amendment 7-0906-01-028 Exley Highway 21

- Public Hearing
- Action

C. Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21

- Public Hearing
- Action

D. Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road

- Public Hearing

- Action

E. Site Plan Review Application (General) Jasper Village Phase II

- Public Hearing
- Action

F. Site Plan Review Application (Specific) 7-0977-01-028 Lineage

- Public Hearing
- Action

13. RESOLUTIONS/ORDINANCES/PROCLAMATIONS

14. EXECUTIVE SESSION

15. PUBLIC COMMENTS - REGISTERED SPEAKERS

16. ADJOURNMENT

CITY OF PORT WENTWORTH

CITY COUNCIL

JUNE 24, 2021

Council Meeting Room | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Mayor Gary Norton called the meeting to order.

Council Member Glenn Jones made an announcement regarding one of the City of Port Wentworth long time police officers, Jimmy Hollingsworth, who has served the City for 14 years.

Councilman Jones stated that Officer Hollingsworth is currently facing some hard times after having brain surgery and asked that Pastor Mongin offer a special prayer for him during the opening prayer for the meeting. Councilman Jones also asked everyone to please keep Officer Hollingsworth in their prayers.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Rev. Paul Mongin, Pastor of First Baptist Church of Port Wentworth, led in prayer and Mayor Norton led in the Pledge of Allegiance.

3. ROLL CALL - CLERK OF COUNCIL

Attendee Name	Title	Status	Arrived
Linda Smith	Mayor Pro Tem	Present	
Mark Stephens	Council Member	Present	
Lynwood Griner	Council Member	Present	
Glenn Jones	Council Member	Present	
Thomas Barbee	Council Member	Present	
Gary Norton	Mayor	Present	
James L. Coursey	City Attorney	Present	
Edwin L. Booth	City Manager	Present	
Shanta Scarboro	Clerk of Council	Present	
Brian Harvey	Director of Development Services	Present	
Lance Moore	Chief of Fire Operations	Present	
Yolanda Irizarry	Director of Human Resources	Present	
Tiffany Lancaster	Director of Leisure Services	Present	
Matt Libby	Chief of Police	Present	
Chris Lee	Project Manager	Present	

4. APPROVAL OF AGENDA

Council Member Glenn Jones made a motion to approve the agenda. Seconded by Council Member Lynwood Griner. Vote was unanimous.

5. RECOGNITION OF SPECIAL GUESTS

There were none to report.

6. ELECTIONS & APPOINTMENTS

There were none to report.

Minutes Acceptance: Minutes of Jun 24, 2021 6:30 PM (Adoption of Minutes)

7. ADOPTION OF MINUTES

A. City Council - Regular Meeting - May 27, 2021 6:30 PM

Council Member Thomas Barbee made a motion to accept the minutes of the May 27, 2021 regular City Council Meeting with the following addition:

1. that the effective date of June 1st for Council Member Donald Hodges' resignation be included in the official minutes of the May 27, 2021 City Council Meeting.

Shanta Scarboro, Clerk of Council, stated that she would go back and review the LIVE Facebook recording to see if in fact this was stated by Council Member Hodges.

Seconded by Council Member Mark Stephens. Vote was unanimous.

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Thomas Barbee, Council Member
SECONDER:	Mark Stephens, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee

B. Executive Session - May 27, 2021

Council Member Thomas Barbee made a motion to approve the May 27, 2021 Executive Session Minutes. Seconded by Mayor Pro Tem Linda Smith. Vote was unanimous.

8. COMMUNICATIONS & PETITIONS

A. One Chatham

Chester Ellis, Chairman of the Chatham County Board of Commissioners, was present to discuss with Mayor and Council the initiative titled “One Chatham”.

B. Lemonade Day

Jenna Wheeler, Marketing Manager for Jenny Rutherford Real Estate, was present to introduce "Lemonade Day" to Mayor and Council. Ms. Wheeler also share what the initiative was about and to ask if the City would join in on the business model to make August 21, 2021 official Lemonade Day by way of a Mayoral Proclamation.

Council Member Glenn Jones recommended that Ms. Wheeler speak with the Director of Leisure Services , Tiffany Lancaster, for contacts of the parents of Port Wentworth children.

Council Member Thomas Barbee made a motion to declare August 21, 2021 Lemonade Day. Seconded by Council Member Glenn Jones. Vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Thomas Barbee, Council Member
SECONDER:	Glenn Jones, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee, Norton

C. Greenline Architecture, Inc.

Monica Mastriannia, President of Greenline Architecture, was present to discuss the design plans for the Veterans Memorial, Fire, Police, and Administrative buildings that are being planned for construction behind City Hall. During the meeting, Ms. Mastriannia requested for Council to hold a Council Workshop to go over the intricacies of the design

Minutes Acceptance: Minutes of Jun 24, 2021 6:30 PM (Adoption of Minutes)

in more detail. The date, time and location of the workshop will be announced later via the City website and Facebook page.

D. Impact Fee Study for Port Wentworth, Georgia Proposed by Duncan Associates

Edwin L. Booth, City Manager, was present to discuss the Impact Fee Study proposal submitted by Duncan Associates.

Council Member Mark Stephens made a motion to approve Duncan Associates completing the Impact Fee Study for the proposed Impact Fees for the City of Port Wentworth. Seconded by Council Member Lynwood Griner. Vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Mark Stephens, Council Member
SECONDER:	Lynwood Griner, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee, Norton

E. City Manager Updates

Edwin L. Booth, City Manager, was present to provide the following updates to Mayor and Council:

1. the new bridge being constructed by the Georgia Department of Transportation (GDOT). GDOT will be meeting with the City Manager on July 6, 2021 to discuss the details of construction;

2. the Savannah National Wildlife Preserve is asking the City of Port Wentworth to put up a new fence to help prevent unauthorized parties from entering onto the property. Both the City and representatives of the Preserve will have access to the gate code; and

3. the draft Comprehensive Plan for the City of Port Wentworth is complete and will be presented to Council during the July 2021 City Council Meeting, before the plan is presented to the State of Georgia.

9. COMMITTEE REPORTS

A. Committee Reports

Council Member Lynwood Griner made a motion to approve the committee reports. Seconded by Council Member Glenn Jones. Vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Lynwood Griner, Council Member
SECONDER:	Glenn Jones, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee

10. CONSENT AGENDA

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Glenn Jones, Council Member
SECONDER:	Lynwood Griner, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee, Norton

A. Yearly Contract Renewal by and between Senior Citizens, Inc. and the City of Port Wentworth

Minutes Acceptance: Minutes of Jun 24, 2021 6:30 PM (Adoption of Minutes)

Patti Lyons, President of Senior Citizens, Inc., was present to answer any questions or concerns of Mayor and Council.

B. Bonnybridge Secondary Outfall Improvements Pay Request No. 2

11. UNFINISHED BUSINESS

There were none to report.

12. NEW BUSINESS

A. Temsco Maintenance Agreement

Edwin L. Booth, City Manager, was present to discuss the Temsco Maintenance Agreement recommended by ClearWater Solutions, LLC to provide maintenance services for the Wastewater Treatment Facility.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Glenn Jones, Council Member
SECONDER:	Linda Smith, Mayor Pro Tem
AYES:	Smith, Stephens, Griner, Jones, Barbee

B. Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road

Council Member Glenn Jones made a motion to delay for one month due to a representative not being present to discuss the site plan. Seconded by Council Member Lynwood Griner. Council Member Mark Stephens voted No/Nay.

RESULT:	**APPROVED [4 TO 1]**
MOVER:	Glenn Jones, Council Member
SECONDER:	Lynwood Griner, Council Member
AYES:	Smith, Griner, Jones, Barbee
NAYS:	Stephens

C. Site Plan Review Application (Specific) 120 Pinderpoint Road Trailer Yard

Chad Zittrouer, Kern & Co. LLC, was present to answer any questions of Mayor and Council.

Mayor Pro Tem Linda Smith made a motion to approve provided all unresolved conditions related to the site plan are met before the project commences. Seconded by Council Member Glenn Jones. Vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Linda Smith, Mayor Pro Tem
SECONDER:	Glenn Jones, Council Member
AYES:	Smith, Stephens, Griner, Jones, Barbee

D. Site Plan Review Application (Specific) 7-0977-01-028 Lineage

Chad Zittrouer, Kern & Co. LLC, communicated via email on June 23, 2021 requesting that Item 12D., Site Plan Review Application for PIN # 7-0977-01-028 (Hendley Road), be postponed to the July 22, 2021 City Council Meeting.

13. RESOLUTIONS/ORDINANCES/PROCLAMATIONS

Minutes Acceptance: Minutes of Jun 24, 2021 6:30 PM (Adoption of Minutes)

A. Ordinance No. 21-01, Budget FY22, Second Reading

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Mark Stephens, Council Member
SECONDER:	Linda Smith, Mayor Pro Tem
AYES:	Smith, Stephens, Griner, Jones, Barbee

14. EXECUTIVE SESSION

There were none to report.

15. PUBLIC COMMENTS - REGISTERED SPEAKERS

There were none to report.

16. ADJOURNMENT

Mayor Pro Tem Linda Smith made a motion to adjourn. Seconded by Council Member Glenn Jones. Vote was unanimous.

_____

Mayor Gary Norton

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2021.

ATTEST:

_____

Shanta M. Scarboro, Clerk of Council

Minutes Acceptance: Minutes of Jun 24, 2021 6:30 PM (Adoption of Minutes)

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: City Administrator
Category: Report
Prepared By: Shanta Scarboro
Department Head: Edwin L. Booth

AGENDA ITEM (ID # 2475)

DOC ID: 2475

City Manager Updates

Issue/Item: City Manager Updates.

City Manager Edwin Booth will discuss a few updates related to the business affairs of the City.

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: All
Category: Report
Prepared By: Shanta Scarboro
Department Head: Brian Harvey

AGENDA ITEM (ID # 2468)

DOC ID: 2468

Committee Reports

ATTACHMENTS:

- Development Services Monthly Report June 2021 (PDF)
- Fire Department Monthly Report June 2021 (PDF)
- Leisure Services Department Monthly Report July 2021 (PDF)
- Police Department Monthly Report July 2021 (PDF)
- ClearWater Solutions, LLC Monthly Report June 2021 (PDF)

DEVELOPMENT SERVICES MONTHLY REPORT / JUNE 2021

INSPECTIONS / P&Z

Building Permits Issued: 40
Building Estimated Cost: $5,200,587.35
Permit Fees Paid: $192,553.18
Inspections Completed: 225
Plan Reviews Completed: 40

Attachment: Development Services Monthly Report June 2021 (2468 : Committee Reports)

To: Mayor Norton and City Council

From: Chief Lance Moore

Date: July 13, 2021

Ref: Committee Report

Sir,

The following is a summary of the incident responses and activity for the Fire Department between the dates of June 1, 2021 and July 1, 2021.

3 building fires

1 vehicle fires

108 emergency medical calls

20 motor vehicle collisions

0 carbon monoxide investigation

3 public service

14 dispatched and cancelled in route.

12 fire alarms

2 open area fires

0 hazardous materials related.

0 elevator rescues

1 power line related

Total: 164

- **Hydrant maintenance continued through the period.**
- **Completed phase 1 of the training facility improvements.**
- **Hosted a live fire training event for Pooler Fire recruit class.**

Attachment: Fire Department Monthly Report June 2021 (2468 : Committee Reports)

July 2021 LEISURE SERVCIES DEPARTMENT REPORT

05/10/2021 Leisure Service Programs and Events for July and August

- We are planning a Leisure Services Kick off to Fall on Saturday July 24th 11:00-2:00. Behind City Hall. Tumbling Parents show, Dance team exabit ion, volleyball, Fall sports info, bouncy, water slides and free hotdogs and drinks.
- Outdoor Movie Night July 23rd is Hook and August 13th is The Indian in Cupboard.
- Tumbling classes are July 1st through 31st and August 6 – 28th.
- Feeding program daily will continue until August 4th. Our daily serving is from the front patio of the P.B. Edwards Jr. Gym. Emergency Feeding for children 18 and under. We pass out a cold breakfast and a hot lunch daily from 11:30-1:00pm. We will serve about 15-25 meals daily. This is in partnership with the Second Harvest Food Bank of Savannah.
- Elegant Dolls Dance Majorette team practice on Tuesday and Thursday and are working on a fundraiser closer to August.
- Girls Scouts Stopped for the month of July and will start back in August.
- Adult Volleyball on Monday's in July and August.
- Football Camp is July 19-23.
- Football season practice starts July 26th Games start September 20th.
- Soccer season practice starts August 2nd Games start September 6th.
- Volleyball practice starts August 9th
- Cheerleading practice starts August 9th.
- Registration for Fall sports started June 15th – August 15th (Football, Cheerleading, Soccer, Volleyball and Tumbling)
- CPR, First Aide and AED training Blended Learning July 1 – August 17 in class training August 18th
- Skate Night October 15th.

Ed Young Senior Center

- Daily in person lunch will be served at 12:00 in the dining hall. Must pre-register the day before.
- Outside of Senior Center painted the week of July 6-14.
- Continue the meals on wheels for Seniors that cannot come out by driving to pick up meals the meals will be taken to their house.

Ed Young Senior Center weekly numbers are an average for the weeks in June

- June 1-4 Meals ordered (11) meals served (11) clients attended (11).
- June 7-11 (Meals ordered (13) meals served (13) clients attended (13).
- June 14-18 (Meals ordered (15) meals served (15) clients attended (15).
- June 21-25 (Meals ordered (12) meals served (12) clients attended (12).
- June 28-30 (Meals ordered (13) meals served (13) clients attended (13).

Attachment: Leisure Services Department Monthly Report July 2021 (2468 : Committee Reports)

Administrative and Operations

- Continue to create, update and import all upcoming programs into Tyler Parks and Rec online system
- Continue to create meal count for Children's Feeding program daily/weekly and e-mail to Second Harvest
- Advertise and pass out flyers for Drive in Movies Starting in July and August,
- Continue to complete refunds, transfers of daily payments of programs and rentals monthly.
- Create ongoing Leisure Services employee bi-weekly work schedule.
- Keep Leisure Services Facebook page and City web page up to date on social media.
- Continue monitoring daily deposits and credit card import/export for all sports and rentals through our payment portal and Tyler Parks and Rec program.
- Continue to manage the cash and receivables from our Tyler Parks and Rec system. Daily deposits.
- Continue to manage team in maintaining cleanliness of all Leisure Services Departments facilities.
- Department reports due July 9th for Council meeting July 22nd.
- Department Head meeting July21st.
- Reconcile Monthly May P-card Statement and turn in to accounts payable by June due July 9th.
- Complete line item transfers.
- Interview and conduct reference checks.

Mobley Park

- Have electric Pole straighten out and add Pick nick tables and shade on slab.
- Put up new pick nick tables and shade over slabs where old sheds use to be.
- Build brick stand for Mobley Park Sign for entrance to park.
- Line football field ready for Fall ball.
- Continue to weed-eat all around building and fences.
- Disinfect weekly all playgrounds, benches, pic-nick tables with pressure washer at all parks, concession stands and pavilions. Keep parking lot at Mobley Park cut and clean.
- Take trash cans in and out of park weekly for pick up, Weekly Clean bathrooms and kill ants on all fields.
- Keep parking lot clean and weed eat.

Armadale Walking Path

- Spray ant spray on ant beds.
- Continue to cut grass, weed-eat and edge walking path.
- Consistently change out doggie station.

Festival Site/Soccer Fields and Tommy Thomas Pavilion

- Cut area low for June Movie Drive in nights. (set up parking for drive in movie)
- Line for Fall soccer programs.
- Start gathering quotes for new bathrooms and concessions.
- Change out dog trash stations and add new dog waste bags. Cut grass, weed eat and edge park weekly.

Houlihan Boat Landing

- Cut and weed eat boat ramp area and retention ponds.
- Update Kiosk at boat landing. Roll up water hoses bi weekly and clean up trash in parking lot bi weekly.
- Add two new picknick tables and shade to boat landing.

Houston Church

- Cut and weed-eat Houston Church weekly.
- Clean, dust and mop church monthly.

Attachment: Leisure Services Department Monthly Report July 2021 (2468 : Committee Reports)

Warren Drive Playground / Park

- Add new benches and pick nick tables with shade.
- Continue to disinfect playground area bi weekly. Continue to cut grass, weed eat, edge weekly. Cleanou doggie station.

Della Steel Park

- Work with developer from Kern and Company on park improvements.
- Disinfect playground area, picnic tables and pavilion area.
- Clean parking lot and pull trash cans to front of park.
- Cleanout doggie station.

P.B. Edwards Jr. Gym

- Add mini blinds to windows in top of gym.
- Have tumbling equipment set up on Friday's and Saturday's.
- Have gym ready for weekend rentals.
- Setting up volleyball net on Monday's.
- Daily starting at 8:00am the delivery of the food and passing it out starting at 11:30am – 1:00pm serving station for giving out cold breakfast and hot lunches to average of 50 people in partnership with Second Harvest Food and Feeding Program.
- Disinfect gym after each daily use.
- Re-stripe handy-cap parking spaces in August on gym side.
- Continued to buff and clean gym floor as needed.
- Cut, weed-eat and edge around gym and annex building weekly.

Community House

- Church Rental on Sunday's until December.
- Elegant Dolls Dance team on Tuesday and Thursday 5:00-7:00.
- Continue to manage Leisure services team in cutting, weed eating, edging and blowing grass and mainta the gym/annex/senior center/warren drive park/ Dela Steel Park/Houston Church and Community Hous
- Continue to weekly clean bathrooms, kitchen, main area and check on AC etc.

Fountain

- Trim bushes, cut grass, pull weeds at fountain every other week.
- Refill fountain with water when it drops weekly.

Annex Building

- Keep building outside neat and clean.

Attachment: Leisure Services Department Monthly Report July 2021 (2468 : Committee Reports)

Attachment: Leisure Services Department Monthly Report July 2021 (2468 : Committee Reports)

To: Mayor Norton
From: Chief Libby
Date: July 13, 2021
Ref: Committee report
Sir,

Below is summary of the all the department's activity for the period of **June 14, 2021, through July 12, 2021.** The summary will provide Council the total number of calls for service police units responded to as well as citations issued.

Police:

Since **June 14, 2021,** the police department has issued **1509 citations**. Officers conducted **1581** traffic stops. The department has made **97** arrests. **6** DUI cases were made along with **36** cases for possession of controlled substance and drug objects. The department was **3471** issued case report numbers for service calls. The department conducted **1066** residential and business checks. The department conducted **31** suspicious persons / vehicles stop. The department has responded to **81 accidents**. The department responded to **2** EMS calls. The department has taking **383** incident reports. The department has also conducted **78** combined walking patrols of both schools the Renasant Bank and other businesses.

Officers have attended **over 127** hours of training this month.

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

POLICE CALLS DISPATCHED
BY DAY OF THE MONTH
BY AGENCY

STARTING DATE: 06/01/2021
ENDING DATE: 06/30/2021

CHATHAM 911 COMMUNICATIONS SERVICES

	BL	CC	GC	PL	PW	SP	TB	TOTAL
06/01/2021	17	277	46	79	99	836	12	1,366
06/02/2021	7	395	61	82	88	884	9	1,526
06/03/2021	7	396	33	60	89	864	3	1,452
06/04/2021	7	299	62	75	114	941	6	1,504
06/05/2021	10	251	60	84	92	787	17	1,301
06/06/2021	7	238	37	75	73	725	13	1,168
06/07/2021	14	358	61	50	114	678	13	1,288
06/08/2021	14	345	48	92	89	750	11	1,349
06/09/2021	16	310	61	112	86	841	12	1,438
06/10/2021	8	249	40	104	94	872	16	1,383
06/11/2021	27	294	59	144	103	793	25	1,445
06/12/2021	40	282	59	82	105	677	18	1,263
06/13/2021	39	264	37	47	125	642	21	1,175
06/14/2021	8	270	45	63	91	792	11	1,280
06/15/2021	24	284	79	87	90	831	11	1,406
06/16/2021	11	342	47	82	102	988	14	1,586
06/17/2021	4	389	58	77	104	803	22	1,457
06/18/2021	22	271	83	86	101	803	7	1,373
06/19/2021	35	258	71	68	107	779	10	1,328
06/20/2021	23	179	81	53	111	759	9	1,215
06/21/2021	11	290	50	59	110	775	12	1,307
06/22/2021	5	341	70	65	124	783	13	1,401
06/23/2021	26	251	65	71	111	827	18	1,369
06/24/2021	9	243	35	97	129	877	12	1,402
06/25/2021	18	323	70	93	101	741	28	1,374
06/26/2021	12	331	53	86	127	727	17	1,353
06/27/2021	7	398	36	74	104	532	35	1,186
06/28/2021	4	271	51	62	113	630	11	1,142
06/29/2021	24	221	65	66	130	696	10	1,212
06/30/2021	24	320	51	84	90	859	18	1,446
TOTAL	480	8,940	1,674	2,359	3,116	23,492	434	40,495

**NOTE: Excludes calls where Animal Services was primary responder*

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

CRASH LOCATION REPORT

For Crashes occurring between 6/14/2021 and 7/12/2021

REPORT GENERATED ON: 7/13/2021 3:04:43 PM

Port Wentworth PD

ACCIDENT#	ROAD OF OCCURRENCE/LOCATION	AT INTERSECTION WITH	ACCIDENT DATE	TIME
210616038			6/16/2021	08:54
210705062			7/5/2021	11:45
210706055			7/6/2021	11:36
210702004		O'LEARY RD	7/2/2021	00:17
210624057	200 RALEY ROAD		6/23/2021	23:55
210614069	BAYBERRY	SR 21	6/14/2021	17:33
210628086	BONNY BRIDGE RD		6/28/2021	19:47
210705086	BONNYBRIDGE	STATE ROUTE 21	7/5/2021	16:30
210615035	BOURNE	SR-21	6/15/2021	08:42
210615059	BOURNE AVE	SR-21	6/15/2021	15:00
210618065	CROSSGATE RD	GA SR 25	6/18/2021	16:08
210616060	DIXIE ST	AIKIN ST	6/16/2021	15:00
210624058	GA HIGHWAY 21	COOK ST	6/24/2021	10:51
210626068	GEORGIA 405/INTERSTATE 95		6/25/2021	12:34
210623046	GEORGIA WELCOME CENTER		6/23/2021	12:45
210629041	GRANGE	PORT ENTRY - GATE 8	6/29/2021	08:05
210701026	GRANGE RD	JIMMY DELOACH PKWY	7/1/2021	08:27
210615066	GULFSTREAM RD	STATE ROUTE 21	6/15/2021	16:42
210627076	HALYARD DRIVE	NEWPORT BLVD	6/27/2021	18:02
210709034	HINDLEY RD	SR-21	7/9/2021	07:47
210624042	I-95		6/24/2021	07:40
210624040	I-95		6/24/2021	07:40
210702085	I-95		7/2/2021	15:35
210702088	I-95		7/2/2021	16:13
210626067	I-95		6/26/2021	12:34
210617086	I-95	MM 109	6/17/2021	18:37
210709079	I-95	SR-21	7/9/2021	14:49
210702083	I-95 NB		7/2/2021	15:30
210626096	I95		6/26/2021	18:00
210628077	INTERSTATE 95		6/28/2021	16:55
210709070	INTERSTATE 95		7/9/2021	13:11
210619022	MARKET BLVD		6/19/2021	02:52
210701043	MEINHARD RD		7/1/2021	18:08
210623048	O'LEARY RD		6/23/2021	12:47
210709090	OLD MILL RD	SR-21	7/9/2021	17:00
210614076	OLEARY RD	S.R. 21	6/14/2021	20:15
210630076	PILOT TRAVEL CENTER		6/30/2021	21:17
210126082	S.R. 21	BONNY BRIDGE RD	6/26/2021	16:46
210706059	S.R. 21	COOK ST	7/6/2021	12:18
210616028	SR 21		6/16/2021	07:12
210628081	SR 21		6/28/2021	18:28
210622051	SR 21	INTERSTATE I-95	6/22/2021	11:05
210618052	SR-21		6/18/2021	13:20

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

CRASH LOCATION REPORT

For Crashes occurring between 6/14/2021 and 7/12/2021

REPORT GENERATED ON: 7/13/2021 3:04:43 PM

Port Wentworth PD

ACCIDENT#	ROAD OF OCCURRENCE/LOCATION	AT INTERSECTION WITH	ACCIDENT DATE	TIME
210623083	SR-21		6/23/2021	18:59
210706036	SR-21		7/6/2021	07:44
210709087	SR-21		7/9/2021	16:06
210616027	SR-21		6/16/2021	07:10
210625062	SR-21		6/25/2021	17:45
210701041	SR-21	TRAVELERS WAY	7/1/2021	17:15
210614067	STATE ROUTE 21		6/14/2021	17:05
210708077	STATE ROUTE 21	COLDBROOK STATION	7/8/2021	18:10
210614070	STATE ROUTE 21	COLDBROOK STATION CIRCLE	6/14/2021	17:45
210615087	STATE ROUTE 21	INTERSTATE 95	6/15/2021	22:54
210614072	STATE ROUTE 21	TRAVELERS WAY	6/14/2021	18:40
210623073	STATE ROUTE 21	TRAVELERS WAY	6/23/2021	16:53
210615070	STATE ROUTE 30		6/15/2021	17:42

TOTAL CRASHES ON REPORT 56

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

PORT WENTWORTH PD CRASH ANALYSIS REPORT	2021

Total Number of Crashes:	**56**
Accidents with Injuries:	**6**
Accidents with Fatalities:	**0**

FREQUENCY

Monday:	**10**
Tuesday:	**10**
Wednesday:	**10**
Thursday:	**8**
Friday:	**13**
Saturday:	**4**
Sunday:	**1**

00:01 - 08:00 Hours:	**8**
08:01 - 16:00 Hours:	**20**
16:01 - 24:00 Hours:	**28**

00:01 - 06:00 Hours:	**2**
06:01 - 12:00 Hours:	**14**
12:01 - 18:00 Hours:	**28**
18:01 - 24:00 Hours:	**12**

Top Contributing Factors (top 4 listed)

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

PORT WENTWORTH PD CRASH ANALYSIS REPORT	2021

Most Frequent Crash Locations and Quantity:

Traffic Conditions Complaint / Request Locations:

Speed Buggy Locations:

Traffic Citation Analysis Period: 6/14/2021 to 7/12/2021

Total Citations Issued: 1509

Top Citations Issued (top 4 listed)

40-6-181 - SPEEDING IN EXCESS OF MAXIMUM LIMITS (437)

40-6-121 - IMPROPER U-TURN (80)

40-2-8 - EXPIRED REGISTRATION (78)

40-6-16(B) - APPROACHING AUTHORIZED EMERGENCY VEHICLE (58)

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

Citation Violations reported between 6/14/2021 and 7/12/2021

Violation:	Code:	Total:
TRUCK ON A CITY STREET	13-5	5
DISORDERLY CONDUCT	15-1	1
POSSESSION OF DRUG RELATED OBJECTS-CITY ORDINANCE	15-8A	1
FALSE STATEMENTS OR WRITINGS; CONCEAL FACTS OR FRAUDULENT DOCUMENTS IN MATTERS OF GOVERNMENT	16-10-20	2
OBSTRUCTION OF LAW ENFORCEMENT OFFICERS- FELONY	16-10-24(B)	3
OBSTRUCTION/HINDER LAW ENFORCEMENT OFFICER-MISD	16-10-24A	4
GIVING FALSE NAME, ADDRESS, OR BIRTHDATE TO LAW ENFORCEMENT OFFICER	16-10-25	2
TAMPERING WITH EVIDENCE - FELONY	16-10-94	2
POSSESSION OF FIREARM OR KNIFE DURING COMMISSION OF OR ATTEMPT TO COMMIT A CRIME	16-11-106	1
POSSESSION OF FIREARM BY CONVICTED FELON OR FIRST OFFENDER	16-11-131	2
AFFRAY	16-11-32	4
TERRORISTIC THREATS AND ACTS	16-11-37	1
TERRORISTIC ACTS	16-11-37(B)(2)	1
CONTRIBUTING TO DELIQUENCY OF A MINOR - FELONY	16-12-1	1
CONTRIBUTING TO DELIQUENCY OF A MINOR - MISDEMEANOR	16-12-1	1
POSESSION OF MARIJUANA	16-13-2(B)	6
POSSESSION MARIJUANA- LESS THAN 1 OZ.	16-13-2(B)	2
POSSESSION SCHEDULE IV DRUGS	16-13-28	1
POSSESSION OF CONTROLLED SUBSTANCE	16-13-30	8
POSSESSION CONTOLLED SUBSTANCE MDMA	16-13-30(A)	1
COCAINE- POSSESSION WITH INTENT	16-13-30(B)	3
POSSESSION WITH INTENT TO DISTRIBUTE/MANUFACTURE IMITATION CONTROLLED SUBSTANCE	16-13-30(I)	2
POSSESSION OF MARIJUANA MORE THAN 1 OZ	16-13-30J	1
TRAFFICKING IN COCAINE, ILLEGAL DRUGS, MARIJUANA, OR METHAMPHETAMINE	16-13-31	1
POSSESSION AND USE OF DRUG RELATED OBJECTS	16-13-32.2	8
ATTEMPT OR CONSPIRACY TO VIOLATE GEORGIA CONTROLLED SUBSTANCE ACT - FELONY	16-13-33	1
DANGEROUS DRUGS- SALE, MANUFACTURE, DELIVER, OR POSSESS	16-13-72	1
DRUGS NOT IN ORIGINAL CONTAINER - MISDEMEANOR	16-13-75	1
SIMPLE ASSAULT	16-5-20	1
AGGRAVATED ASSAULT	16-5-21	2
SIMPLE BATTERY	16-5-23	2
BATTERY	16-5-23.1	3
CRUELTY TO CHILDREN 3RD DEGREE OR 3RD SUBSEQUENT OFFENSE	16-5-70D	3
AGGRAVATED STALKING	16-5-91	1
AGGRAVATED SODOMY	16-6-2	1
CHILD MOLESTATION-FELONY	16-6-4	1
AGGRAVATED CHILD MOLESTATION	16-6-4C	1
CRIMINAL TRESPASS	16-7-21	1

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THEFT BY TAKING - FELONY	16-8-2	1
THEFT OF LOST/MISLAID PROPERTY - MISDEMEANOR	16-8-6	1
THEFT BY RECEIVING STOLEN PROPERTY - FELONY	16-8-7	3
THEFT BY RECEIVING STOLEN PROPERTY - MISDEMEANOR	16-8-7	1
DOG TAG REQUIRED	4-18	1
DOG SHOTS REQUIREMENT	4-19	1
DOG AT LARGE	4-20	1
NO OR DEFECTIVE BRAKE WARNING DEVICE	40-1-8(H) 393.51	1
TAG/ REGISTRATION REQUIREMENTS	40-2-20	9
OBSCURING TAG FRAME OR TINTED TAG COVERS PROHIBITED	40-2-41	3
ACQUIRING LICENSE PLATE FOR PURPOSE OF CONCEALING IDENTIFICATION OF MOTOR VEHICLE	40-2-5	1
OBSCURING LICENSE PLATE IN ORDER TO IMPEDE SURVEILLANCE EQUIPMENT	40-2-6.1	1
USE OF LICENSE PLATE WITH INTENT TO CONCEAL	40-2-7	2
EXPIRED REGISTRATION	40-2-8	78
FAILURE TO AFFIX DECAL TO PLATE	40-2-8	1
IMPROPER DISPLAY OF TAG	40-2-8	3
NO TAG	40-2-8	8
FAILURE TO OBTAIN GA TAG IN 30 DAYS	40-2-90	3
DRIVING WHILE LICENSE SUSPENDED OR REVOKED-MISDEMEANOR	40-5-121	46
PERMITTING UNLICENSED DRIVER TO DRIVE	40-5-122	2
POSSESSION/USE OF FRAUDULENT LICENSE	40-5-125	1
SUSPENDED COMMERCIAL LICENSE	40-5-146(B)1	1
DRIVING WITHOUT A VALID LICENSE- MISDEMEANOR	40-5-20	55
EXPIRED DRIVER'S LICENSE 2-5 MONTHS	40-5-20(B)	2
FAILURE TO OBTAIN GEORGIA LICENSE IN 30 DAYS	40-5-20(C)	6
EXPIRED DRIVER'S LICENSE6 MONTHS OR MORE	40-5-20C	9
CLASS CP LICENSE (INSTRUCTIONAL PERMIT)	40-5-24	4
VIOLATION OF CLASS D RESTRICTIONS	40-5-24(B)(1)(A)	1
LICENSE TO BE EXHIBITED ON DEMAND	40-5-29B	17
VIOLATION OF LICENSE RESTRICTIONS	40-5-30	2
IMPROPER NAME/ADDRESS ON LICENSE	40-5-33	14
VIOLATION OF CONDITIONS ON LIMITED DRIVING PERMIT	40-5-64	2
NO INSURANCE	40-6-10	29
IMPROPER LEFT OR RIGHT TURN	40-6-120	18
IMPROPER U-TURN	40-6-121	80
FAILURE TO SIGNAL WHEN TURNING OR CHANGING LANES	40-6-123	5
FAILURE TO USE TURN SIGNAL	40-6-124	2
SUSPENDED REGISTRATION	40-6-15	47
APPROACHING AUTHORIZED EMERGENCY VEHICLE	40-6-16(B)	58
IMPROPER TAG	40-6-166	2
TOO FAST FOR CONDITIONS	40-6-180	33
SPEEDING IN EXCESS OF MAXIMUM LIMITS	40-6-181	437
IMPEDING THE FLOW OF TRAFFIC	40-6-184	8
SLOW POKE LAW (LEFT LANE DRIVING PROHIBITED)	40-6-184 (C)	7
SPEEDING IN CONSTRUCTION ZONE	40-6-188	2

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Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

FAILURE TO OBEY TRAFFIC CONTROL DEVICE	40-6-20	55
STOPPING, STANDING, OR PARKING OUTSIDE OF BUSINESS OR RESIDENTIAL DISTRICTS	40-6-202	9
IMPROPER STOPPING	40-6-203	24
PARKING IN ROADWAY	40-6-203	11
OBSTRUCTING AN INTERSECTION	40-6-205	1
IMPROPER BACKING	40-6-240	3
FAILURE TO EXERCISE DUE CARE	40-6-241(B)	2
UNLAWFUL USE OF WIRELESS DEVICE	40-6-241(C)	39
UNLAWFUL USE OF WIRELESS DEVICE (CMV)	40-6-241(D)	1
OPEN CONTAINER OF ALCOHOL IN MOTOR VEHICLE	40-6-253	1
HIT AND RUN; DUTY OF DRIVER TO STOP AT OR RETURN TO SCENE OF ACCIDENT	40-6-270	1
FAILURE TO NOTIFY OWNER UPON STRIKING A FIXED OBJECT	40-6-272	1
FAILURE TO REPORT ACCIDENT WITH INJURY/DEATH/DAMAGE	40-6-273	1
PROHIBITING MOPEDS ON PUBLIC ROADS AND HIGHWAY	40-6-353	1
LOW SPEED VEHICLE ON HIGHWAY	40-6-362	1
RECKLESS DRIVING	40-6-390	1
DUI/ALCOHOL/LESS SAFE	40-6-391A1	5
DUI/DRUGS/LESS SAFE	40-6-391A2	1
DRIVING ON WRONG SIDE OF ROADWAY	40-6-40	3
IMPROPER PASSING	40-6-42	3
UNLAWFUL PASSING ON RIGHT	40-6-43A	3
IMPROPER PASSING ON RIGHT	40-6-43B	5
PASSING IN A NO PASSING ZONE	40-6-46	7
DRIVING WRONG WAY ON ONE WAY	40-6-47	2
FAILURE TO MAINTAIN LANE/IMPROPER LANE CHANGE	40-6-48	49
FOLLOWING TOO CLOSELY	40-6-49	7
DRIVING IN DIVIDED HIGHWAY, CONTROLLED ACCESS ROADWAYS, AND EMERGENCY LANES	40-6-50	9
DRIVING IN THE EMERGENCY LANE/SHOULDER	40-6-50B	22
LEFT LANE VIOLATION	40-6-52	7
TRUCKS OVER 6 WHEEL MUST STAY TO RIGHT	40-6-52	1
FAILURE TO YIELD RIGHT OF WAY AT INTERSECTION	40-6-70	2
FAILURE TO YIELD WHILE TURNING LEFT	40-6-71	6
FAILURE TO STOP AT STOP SIGN	40-6-72	15
FAILURE TO YIELD WHEN ENTERING ROADWAY	40-6-73	3
FAILURE TO YIELD FOR AUTHORIZED EMERGENCY VEHICLE	40-6-74	4
PEDESTRIAN MUST WALK ON SIDEWALK/SHOULDER	40-6-96	1
FAILURE TO USE HEADLIGHTS AFTER DARK/WHEN RAINING	40-8-20	6
HEADLIGHT REQUIREMENTS	40-8-22	7
TAIL LIGHTS REQUIRED	40-8-23	8
TAG LIGHT REQUIRED	40-8-23 (D)	2
NO BRAKE LIGHTS OR WORKING TURN SIGNALS	40-8-25	15
STANDARDS FOR BRAKE LIGHTS/SIGNAL DEVICES	40-8-26	5
NO AMBER LIGHTS	40-8-27	1
NO LIGHT OR FLAG ON PROJECTING LOAD	40-8-27	1
FAILURE TO DIM HEADLIGHTS	40-8-31	2

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OPERATING VEHICLE W/ALTERED SUSPENSION	40-8-6	1
NO HORN/IMPROPER USE OF HORN	40-8-70A	1
WINDSHIELD/WINDOW/WIPER REQUIREMENTS	40-8-73	6
WINDOW GLAZING VIOLATION/TINTED WINDOWS	40-8-73.1	9
TIRE REQUIREMENT	40-8-74	1
SAFETY RESTRAINT / MINOR UNDER 8	40-8-76	6
SEATBELT- CHILD	40-8-76	3
SAFETY RESTRAINT--OVER 18 YEARS	40-8-761	27
SAFETY RESTRAINT/MINOR 8 TO 17 YOA	40-8-761000	3
OPERATING VEHICLE WITH UNAUTHORIZED BLUE LIGHTS	40-8-90	2
UNLAWFUL USE OF BLUE LIGHTS ON VEHICLE	40-8-90	4
Total Events:		1509

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

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Incident Types reported between 6/14/2021 and 7/12/2021

Events:	Total:
ABANDONED VEHICLE TOWED	1
AFFRAY	1
Agency Assist	2
AGGRAVATED ASSAULT	1
AMPHETAMINE- POSSESSION OF	5
AMPHETAMINE- SALE OF	1
ANIMAL COMPLAINT	1
APPROACHING AUTHORIZED EMERGENCY VEHICLE	1
BATTERY	3
BURGLARY	1
BURGLARY - 1ST DEGREE (FELONY)	1
CIVIL MATTER	5
CLASS CP LICENSE (INSTRUCTIONAL PERMIT)	1
COMPUTER PORNOGRAPHY	1
CONTRIBUTING TO DELIQUENCY OF A MINOR - FELONY	1
CRIMINAL DAMAGE TO PROPERTY - 2ND DEGREE	1
CRIMINAL TRESPASS	7
CRUELTY TO CHILDREN-3RD DEGREE	1
DAMAGE TO PROPERTY	12
DANGEROUS DRUGS- SALE, MANUFACTURE, DELIVER, OR POSSESS	1
DEATH INVESTIGATION	2
DISORDERLY CONDUCT	5
DISORDERLY HOUSE	1
DOG AT LARGE	1
DOMESTIC DISPUTE	13
DRIVING WHILE LICENSE SUSPENDED OR REVOKED- FELONY	1
DRIVING WHILE LICENSE SUSPENDED OR REVOKED- MISDEMEANOR	45
DRIVING WITHOUT A VALID LICENSE- MISDEMEANOR	55
DRUGS NOT IN ORIGINAL CONTAINER - MISDEMEANOR	2
DUI - LESS SAFE- ALCOHOL	3
DUI - LESS SAFE- DRUGS	2
DUI/ALCOHOL/LESS SAFE	1
ENTERING AUTOMOBILE OR OTHER MOTOR VEHICLE WITH INTENT TO COMMIT THEFT OR FELONY	1
EXPIRED DRIVER'S LICENSE6 MONTHS OR MORE	3
EXPIRED REGISTRATION	5
FAILURE TO MAINTAIN LANE/IMPROPER LANE CHANGE	9
FAILURE TO NOTIFY OWNER UPON STRIKING A FIXED OBJECT	1

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FAILURE TO OBEY TRAFFIC CONTROL DEVICE	2
FAILURE TO REPORT ACCIDENT WITH INJURY/DEATH/DAMAGE	1
FAILURE TO SIGNAL	1
FAILURE TO USE HEADLIGHTS AFTER DARK/WHEN RAINING	2
FAILURE TO YIELD WHEN ENTERING ROADWAY	1
FALSE IDENTIFICATION DOCUMENT - FELONY	1
FIRE-STRUCTURE	1
FIRE-VEHICLE	1
FOLLOWING TOO CLOSELY	1
FRAUDULENT DRIVERS LICENSE OR IDENTIFICATION CARD; FALSE STATEMENTS IN APPLICATIONS- FELONY	1
GIVING FALSE NAME, ADDRESS, OR BIRTHDATE TO LAW ENFORCEMENT OFFICER	2
HARASSING COMMUNICATIONS	1
HEADLIGHT REQUIREMENTS	1
HIT AND RUN; DUTY OF DRIVER TO STOP AT OR RETURN TO SCENE OF ACCIDENT	1
IDENTITY THEFT	1
IMPROPER NAME/ADDRESS ON LICENSE	1
IMPROPER STOPPING	1
IMPROPER TAG	1
IMPROPER U-TURN	6
LOST/MISLAID PROPERTY	3
MEDICAL CALL	1
MENTAL HEALTH TRANSPORT	5
MISCELLANEOUS REPORT	26
MISSING PERSON	2
NO AMBER LIGHTS	1
NO BRAKE LIGHTS OR WORKING TURN SIGNALS	1
NO BUSINESS LICENSE	1
NO INSURANCE	4
OBSTRUCTION OF LAW ENFORCEMENT OFFICERS - MISDEMEANOR	7
OPEN CONTAINER OF ALCOHOL IN MOTOR VEHICLE	1
POSESSION OF MARIJUANA	9
Possesion of controlled substance wih intent to distribute	1
POSSESSION AND USE OF DRUG RELATED OBJECTS	8
POSSESSION OF CONTROLLED SUBSTANCE	4
POSSESSION OF FIREARM BY CONVICTED FELON OR FIRST OFFENDER	1
POSSESSION OF FIREARM OR KNIFE DURING COMMISSION OF OR ATTEMPT TO COMMIT A CRIME	2
POSSESSION OF MARIJUANA MORE THAN 1 OZ	1
POSSESSION OF TOBACCO PRODUCTS BY A MINOR	1
POSSESSION SCHEDULE III DRUG-FELONY	1
POSSESSION W INTENT TO DISTRIBUTE CONTROLL SUBSTANCE	2
RECKLESS DRIVING	1
RECOVERED CONTRABAND	1
RECOVERED PROPERTY-NOT STOLEN	1
RUNAWAY JUVENILE	1
SAFETY RESTRAINT / MINOR UNDER 8	2
SEATBELT- ADULT	2
SEXUAL BATTERY - MISDEMEANOR	1
SIMPLE ASSAULT	2
SIMPLE BATTERY AGAINST POLICE OFFICER/LE DOG/CORRECTIONS OR DETENTION OFFICER	1
SLOW POKE LAW (LEFT LANE DRIVING PROHIBITED)	1
SPEEDING IN EXCESS OF MAXIMUM LIMITS	19
STANDARDS FOR BRAKE LIGHTS/SIGNAL DEVICES	1
SUICIDE THREAT/ATTEMPT	3
SUSPECTED ELDER ABUSE	1
SUSPENDED COMMERCIAL LICENSE	1
SUSPENDED REGISTRATION	3
TAG/ REGISTRATION REQUIREMENTS	2
TERRORISTIC THREATS AND ACTS	3
TERRORISTIC THREATS ON LAW ENFORCEMENT- FELONY	1
THEFT BY CONVERSION - MISDEMEANOR	1
THEFT BY DECEPTION - FELONY	1
THEFT BY RECEIVING STOLEN PROPERTY - FELONY	3

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Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

THEFT BY TAKING - FELONY	6
THEFT BY TAKING - MISDEMEANOR	2
THEFT BY TAKING- MOTOR VEHICLE	1
THEFT OF LOST/MISLAID PROPERTY - MISDEMEANOR	1
TOO FAST FOR CONDITIONS	2
TRAFFICKING IN COCAINE, ILLEGAL DRUGS, MARIJUANA, OR METHAMPHETAMINE	1
UNLAWFUL USE OF WIRELESS DEVICE	2
USE OF LICENSE PLATE WITH INTENT TO CONCEAL	1
WANTED PERSON	6
WARRANT SERVED	1
WINDSHIELD/WINDOW/WIPER REQUIREMENTS	1
Total Events:	383

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

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Code Violations

	Code Enforcement Cases	
311 Clifton Dr	Grass	Completed
206 Osteen	Grass	Completed
210 phillips	Grass	Completed
316 Phillips	Tires/grass	Completed
214 Pinehurst	Yard Debris	Completed
Church	Abandoned Vehicle	Completed
820 Crossgate Rd	Grass	Open
114 Falkirk	Yard waste	Open
815 Aiken Dr	Yard Waste	Open
831 Crossgate Rd	Grass	Completed
64 Burnt Oak Rd	Grass	Open
107 Aberfeldy St	Structure	Open
19 Warren Dr	Grass	Open
21 Warren Dr	Grass	Completed
27 Warren Dr	Grass	Open
29 Warren Dr	Grass	Open
40 Warren Dr	Grass	Open
33 Warren Dr	Grass	Completed
35 Warren Dr	Grass	Completed
58 Warren Dr	Grass	Completed
6 Ponderosa	Grass	Open
19 Treadway	Grass	Completed
22 Treadway	Grass	Completed
12 Treadway	Grass	Completed
204 Providence	Grass	Open
15 Lanvale St	Grass/vehicle	Open
3 Alen Brook	Yard Debris	Completed
36 Raintree	Grass	Open
47 Springwater	Grass	Completed
**** 211 Clifton Dr	City Attorney is processing paper work for Demolition Order	

Port Wentworth Police Department
323 Cantyre Street
Port Wentworth, Georgia 31407

Matthew W. Libby
Chief of Police

Telephone: (912) 964-4360
Fax: (912) 966-7405

Monthly Training Report
June 14th, 2021- July 13th 2021

Chief Libby,

During this period, the training unit completed or coordinated **27 training classes**, trained **72 students** on various topics, and provided a total **127 hours** of training. The training Unit currently has **1 cadet** in the Georgia Public Safety Training Center Police Academy. The training unit also had 1 cadet in the Georgia Public Safety Training Center Academy Graduate with **408 hours of training**. The training and recruiting unit have also worked with hiring more officers resulting in **9 new hires**, 1 currently in the academy, 5 currently working, and 3 starting in August.

Training Classes Completed

a. 14June2021

i. Backup Weapon Qualification **(1 Hour)**

1. 2 Officers

b. 14June2021

i. Firearms Qualification **(1 Hour)**

1. 2 Officers

c. 15June2021

i. Pursuit Intervention Technique Classroom Training (**4 Hours**)

1. 2 Officers

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

Port Wentworth Police Department
323 Cantyre Street
Port Wentworth, Georgia 31407

Matthew W. Libby
Chief of Police

Telephone: (912) 964-4360
Fax: (912) 966-7405

d. 16June2021

i. Pursuit Intervention Technique Training (**16 Hours**)

1. 17 Officers

e. 21June2021

i. Firearms Qualification (**1 Hour**)

1. 1 Officer

f. 21June2021

i. Backup Weapon Qualification (**1 Hour**)

1. 1 Officer

g. 28June2021

i. Tactical Response Unit Training **(4 Hours)**

1. 3 Officers

h. 28June2021

i. Firearms Qualification **(1 Hour)**

1. 3 Officers

i. 26June2021-02July2021

i. Crisis Intervention Team **(40 Hours)**

1. 1 Student

j. 29June2021

i. Backup Weapon Qualification **(1 Hour)**

1. 1 Officer

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

Port Wentworth Police Department
323 Cantyre Street
Port Wentworth, Georgia 31407

Matthew W. Libby
Chief of Police

Telephone: (912) 964-4360
Fax: (912) 966-7405

k. 29June2021

i. Firearms Qualification (**1 Hour**)

1. 1 Officer

l. 01July2021

i. Backup Weapon Qualification (**1 Hour**)

1. 4 Officers

m. 01July2021

i. Shotgun Qualification (**1 Hour**)

1. 2 Officers

n. 01July2021

i. Patrol Rifle Qualification (**1 Hour**)

1. 3 Officers

o. 01July2021

i. Firearm Qualification (**1 Hour**)

1. 4 Officers

p. 07July2021

i. Tactical Response Training (**5 Hour**)

1. 4 Officers

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

Port Wentworth Police Department

323 Cantyre Street
Port Wentworth, Georgia 31407

Matthew W. Libby
Chief of Police

Telephone: (912) 964-4360
Fax: (912) 966-7405

q. 14May2021-13June2021

i. ONLINE CLASSES **(47 Total Hours)**

1. 11 Classes - 21 Officers

Respectfully,

Lieutenant Nathan Jentzen
Sergeant Justin Hardy
Training Unit

Attachment: Police Department Monthly Report July 2021 (2468 : Committee Reports)

Port Wentworth, Ga
Monthly Operating Report
June 2021

Water Distribution:

Hydrant Flushing program:

- Established a flushing program to obtain a safe and stable water supply.
- Volume of flushing since the beginning has been stabilized due to an established and consistent flushing program.
- Auto flusher at Mossy Oak Cove flushed for 60 mins per day
- Auto flusher at Armadale Road flushed for 30 mins per day

Ground Water Withdrawal: 1,044,700 Gallons
Purchase Water from Savannah I&D: 28,603,655 Gallons

Compliance:

- Took monthly Micro-Biological samples and sent to lab. **(Results: Passed)**
- All monthly reports turned into EPD.

Maintenance:

- Repaired water leak at 103 Phillips Ave.
- Repaired water leak at 205 Clifton Dr.
- Repaired water leak at 501 Old Richmond Rd.
- Repaired water leak at 30 Lake Shore Blvd.
- Repaired water leak and buried service line at 14 Horne Place.

Wastewater Collection:

- Checked all lift stations (17) at least twice a week and performed routine maintenance.
- Cleaned probes, transducers, and floats as needed.

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Port Wentworth, Ga
Monthly Operating Report
June 2021

Cold Stream Lift Station					Horne Place Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	2163.9	13.4			2	1560.8	0	798.3	2.2
3					3				
4					4				
5					5				
6					6				
7					7				
8	38.2*		*		8	1571.6*	10.8	800.0*	1.7
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14					14	1591.1	19.5	802.0	2.0
15					15				
16	61.8	23.6			16	1609.8	18.7	802.3	0.3
17					17				
18	90.1*	28.3	*		18	1618.4*	8.6	802.7*	0.4
19					19				
20					20				
21	96.2	6.1	102.8		21	1645.0	26.6	802.7	0
22					22				
23	*		*		23	1645.7*	0.7	803.6*	0.9
24					24				
25					25			804.3	0.7
26					26				
27					27				
28			126.6	23.8	28			806.1*	1.8
29	*		*		29	*			
30	*		141.3*	14.7	30	*		807.2*	1.1
31					31				

* Or * = Rain Day

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

CWS
Building communities. | Impacting lives.

Port Wentworth, Ga
Monthly Operating Report
June 2021

	Armadale Lift Station					Rideshare Lift Station			
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	1018.8	13.1	21262.8	11.5	2	2481.5	14.4	9009.3	8.0
3					3				
4					4	2487.8	6.3	9012.7	3.4
5					5				
6					6				
7					7				
8	1037.1*	18.3	21278.5*	15.7	8	2499.8*	12.0	9020.2*	7.5
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14	1075.5	38.4	21329.1	50.6	14	2516.2	16.4	9030.8	10.6
15					15				
16	1082.0	6.5	21335.3	6.2	16	2520.5	4.3	9034.2	3.4
17					17				
18	1087.6*	5.6	21340.1*	4.8	18	2525.5*	5.0	9038.0*	3.8
19					19				
20					20				
21	1094.2	6.6	21345.8	5.7	21	2532.1	6.6	9043.2	5.2
22					22				
23	1094.2*	0	21358.3*	12.5	23	2536.5*	4.4	9046.5*	3.3
24					24				
25	1094.3	0.1	21371.9	13.6	25	2540.7	4.2	9049.7	3.2
26					26				
27					27				
28	1094.3	0	21392.6	20.7	28	2546.7	6.0	9054.6	4.9
29	*		*		29	*		*	
30	1101.4*	7.1	21397.6*	5.0	30	2552.6*	5.9	9059.6*	5.0
31					31				

*** or * = Rain Day**

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Port Wentworth, Ga
Monthly Operating Report
June 2021

Waffle House Lift Station					Pine Forest Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2					2	11574.9	9.0	12994.3	6.9
3					3				
4					4	11581.9	7.0	12998.3	4.0
5					5				
6					6				
7					7				
8	*		*		8	11590.8*	8.9	13005.9*	7.6
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14					14				
15					15				
16					16	11606.5	15.7	13019.0	13.1
17					17				
18	18.6*		20.5*		18	11610.5*	4.0	13022.0*	3.0
19					19				
20					20				
21					21	11614.7	4.2	13025.4	3.4
22					22				
23	30.8*	12.2	34.5*	14.0	23	11618.0*	3.3	13027.0*	1.6
24					24				
25	35.8	5.0	40.1	5.6	25				
26					26	11621.6	3.6	13030.7	3.7
27					27				
28	42.4	6.6	47.4	7.3	28	11625.8	4.2	13034.2	3.5
29	*		*		29	*		*	
30	50.2*	7.8	57.4*	10.0	30	11649.7*	23.9	13048.1*	13.9
31					31				

* Or * = Rain Day

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Port Wentworth, Ga
Monthly Operating Report
June 2021

Lakeside Lift Station					Cherry St. Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	10581.6	16.9	11731.6	18.0	2	2498.5	7.7	4479.6	7.8
3					3				
4	10588.4	6.8	11739.8	8.2	4	2503.5	5.0	4483.8	4.2
5					5				
6					6				
7					7				
8	10603.5*	15.1	11756.0*	16.2	8	2511.7*	8.2	4492.3*	8.5
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14	10626.0	22.5	11778.9	22.9	14	2524.0	12.3	4506.1	13.8
15					15				
16	10633.2	7.2	11787.0	8.1	16	2527.9	3.9	4510.4	4.3
17					17				
18	10641.4*	8.2	11795.8*	8.8	18	2532.2*	4.3	4515.3*	4.9
19					19				
20					20				
21	10652.4	11.0	11807.7	11.9	21	2537.8	5.6	4521.6	6.3
22					22				
23	10660.1*	7.7	11815.7*	8.0	23	2541.9*	4.1	4526.1*	4.5
24					24				
25	10667.5	7.4	11823.3	7.6	25	2545.7	3.8	4530.3	4.2
26					26				
27					27				
28	10678.1	10.6	11834.2	10.9	28	2551.1	5.4	4536.6	6.3
29	*		*		29	*		*	
30	10688.9*	10.8	11845.4*	11.2	30	2557.1*	6.0	4543.4*	6.8
31					31				

*** Or * = Rain Day**

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Port Wentworth, Ga
Monthly Operating Report
June 2021

Cold Creek Pass Lift Station					Goose Neck Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	7893.3	21.7	7266.6	0	2	5272.7	12.3	4909.4	12.3
3					3				
4	7904.9	11.6	7266.6	0	4	5276.6	3.9	4914.5	5.1
5					5				
6					6				
7					7				
8	7916.5*	11.6	7277.6*	0	8	5282.9*	6.3	4923.0*	8.5
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14	7932.6	16.1	7293.2	15.6	14				
15					15				
16	7942.2	9.6	7293.8	0.6	16	5296.6	13.7	4935.3	12.3
17					17				
18	7954.5*	12.3	7293.8*	0	18	5300.4*	3.8	4938.3*	3.0
19					19				
20					20				
21	7970.1	15.6	7293.8	0	21	5305.8	5.4	4942.0	3.7
22					22				
23	7979.2*	9.1	7293.8*	0	23	5309.5*	3.7	4946.0*	4.0
24					24				
25	7984.6	5.4	7299.0	5.2	25	5312.9	3.4	4948.8	2.8
26					26				
27	7992.0	7.4	7306.1	7.1	27				
28					28	5317.5	4.6	4952.9	4.1
29	7998.5*	6.5	7311.8*	5.7	29	*		*	
30	*		*		30	5322.2*	4.7	4956.7*	3.8
31					31				

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Port Wentworth, Ga
Monthly Operating Report
June 2021

Amberly Lift Station					Lake Shore Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	3584.2	5.2	3598.0	2.7	2	2000.0	5.2	168.1	5.8
3					3				
4	3586.3	2.1	3600.0	2.0	4	2002.3	2.3	170.5	2.4
5					5				
6					6				
7					7				
8	3590.6*	4.3	3604.2*	4.2	8	2007.3*	5.0	176.0*	5.5
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14	3596.6	6.0	3610.1	5.9	14	2014.4	7.1	183.8	7.8
15					15				
16	3598.5	1.9	3612.0	1.9	16	2016.7	2.3	186.2	2.4
17					17				
18	3600.8*	2.3	3614.2*	2.2	18	2019.3*	2.6	189.2*	3.0
19					19				
20					20				
21	3603.7	2.9	3617.0	2.8	21	2022.9	3.6	193.1	3.9
22					22				
23	*		*		23	2025.3*	2.4	195.6*	2.5
24					24				
25	3605.7	2.0	3619.0	2.0	25	2027.6	2.3	198.1	2.5
26					26				
27					27				
28	3608.5	2.8	3621.8	2.8	28	2030.8	3.2	201.6	3.5
29	*		*		29	*		*	
30	3612.1*	3.6	3622.9*	1.1	30	2033.5*	2.7	204.7*	3.1
31					31				

*** Or * = Rain Day**

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Port Wentworth, Ga
Monthly Operating Report
June 2021

Newport Lift Station					Saussy Rd. Lift Station				
Date	Pump #1	Usage	Pump #2	Usage	Date	Pump #1	Usage	Pump #2	Usage
1					1				
2	3057.7	6.4	2969.4	6.3	2	1683.2	0.9	2443.3	1.0
3					3				
4	3060.8	3.1	2972.5	3.1	4	1683.9	0.7	2443.9	0.6
5					5				
6					6				
7					7				
8	3066.3*	5.5	2978.2*	5.7	8	1684.8*	0.9	2445.0*	1.1
9					9				
10					10				
11					11				
12					12				
13	*		*		13	*		*	
14	3075.1	8.8	2986.9	8.7	14	1686.0	1.2	2446.3	1.3
15					15				
16	3077.8	2.7	2989.8	2.9	16	1686.4	0.4	2446.7	0.4
17					17				
18	3080.9*	3.1	2992.6*	2.8	18	1686.8*	0.4	2447.2*	0.5
19					19				
20					20				
21	3085.1	4.2	2997.1	4.5	21	1687.4	0.6	2447.8	0.6
22					22				
23	3087.9*	2.8	3000.0*	2.9	23	1687.8*	0.4	2448.3*	0.5
24					24				
25	3090.8	2.9	3002.8	2.8	25	1688.2	0.4	2448.7	0.4
26					26				
27					27				
28	3094.7	3.9	3006.9	4.1	28	1688.9	0.7	2449.4	0.7
29	*		*		29	*		*	
30	3097.9*	3.2	3010.1*	3.2	30	1689.7*	0.8	2450.3*	0.9
31					31				

* Or * = Rain Day

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Port Wentworth, Ga
Monthly Operating Report
June 2021

Crossgate Lift Station				
Date	Pump #1	Usage	Pump #2	Usage
1				
2	1082.1	0	102.9	0.1
3				
4				
5				
6				
7				
8	1082.2*	0.1	103.1*	0.2
9				
10				
11				
12				
13	*		*	
14	1082.6	0.4	103.3	0.2
15				
16	1082.7	0.1	103.4	0.1
17				
18	1082.8*	0.1	103.5*	0.1
19				
20				
21	1082.8	0	103.6	0.1
22				
23	1082.9*	0.1	103.7*	0.1
24				
25	1083.0	0.1	103.9	0.2
26				
27				
28	1083.0	0	103.9	0
29	*		*	
30	1083.2*	0.2	104.0*	0.1
31				

* Or * = Rain Day

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Recommendations for Wastewater Collection System:

- Upgrade Coldstream Lift Station Force Main to 12”
- Upgrade lift station pumps in Rice Hope Subdivision.
- Complete rehabilitation of Coldstream Lift Station wet well and effluent pipes.
- Inflow/Infiltration on the Downtown Area Sewer System needs to be investigated, found, and repaired.

Streets & Drainage:

Ditch Mowing	22,245 Ft
Ditches Dug	300 Ft
Ditch Debris Removal	0 Tons
Culverts Cleaned Out	0
Shoulder Mowing	165,440 Ft
Shoulder Litter Picked Up by Hand	3 Bags
Debris Pick Up Tonnage Landfill	0 Tons
Shop Dumpster Tonnage for Shoulder Litter	2.12 Tons
Potholes Fixed	10
Street Signs Replaced/Repaired	3 + 1 New sign installed
Sign Pole Replaced	2
Catch Basin Repair	0
Street Sweeping Curbs	0 Ft
Street Sweeping Tonnage	0 Tons

Maintenance:

- Mow easement between Turnberry St & Aberfeldy St.
- Mow easement between Bonnybridge Rd and Warren Dr.
- Mow easement at 312 Phillips Ave.
- Cleared trash/debris from storm drains on Maple St (2x).
- Cleared trash/debris from floodgate at Armadale Rd
- Tree removal on Coleraine Dr (Storm Damage).
- Straightened all street signs in Rice Creek Subdivision
- Straightened all street signs in Lakeshore Subdivision
- Grounds maintenance at lift stations.
- Grounds maintenance at 305 South Coastal Hwy (2x).
- Grounds maintenance at 7224 Highway 21 (2x).
- Grounds maintenance at well #1, Appleby water tower, Berrien water tower.

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Solid Waste:

Damaged Trash Cans	0
Trash Cans Picked Up	0

Wastewater Treatment Plant:

Maintenance:

- Grounds maintenance (grass, ditches, brush, weeding, herbicide, etc.) (x3).
- Emptied and washed out disk filter basins (x3).
- Washed out UV trough (x2).
- Cleaned turbidity meter (Weekly).
- Greased bar rack, effluent pumps, reuse pumps, sidestream pumps (Weekly).
- Ran belt press (Weekly).
- Greased belt press.
- Replenished nutrient for biological odor control (x2).
- Sprayed down belt press and area (Weekly).
- Pulled and cleaned UV racks (x2).
- Replaced motor on drive for disk filter #2.
- Replaced pressure transducer in SBR #1.
- Changed oil in disk filter backwash pumps.
- Replaced terminal block for decant valve #2 and cleaned leads.
- Fixed overhead door in blower room.
- Moved decant valve actuator from basin 1 to basin 2 (Decant valve on basin 1 leaks and basin 2 actuator will no longer operate remotely).
- Cleaned and mopped admin weekly.

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Port Wentworth, Ga
Monthly Operating Report
June 2021

Attachment: ClearWater Solutions, LLC Monthly Report June 2021 (2468 : Committee Reports)

Compliance:

Raw Wastewater Treated monthly avg. **1.157** MGD, Total raw waste **34.714** MG

Parameter	Monthly Performance Indicator Discharged from plant	Target or Limit
BOD % Removal	99%	**≥85%**
Suspended Solids % Removal	99%	**≥85%**
Effluent: Total Phosphorous Monthly Avg.	0.49 mg/L	**≤1.0mg/L**
Total Ammonia (as N) Monthly Avg.	0.32 mg/L	**≤1.0mg/L**
Ultimate Oxygen Demand Monthly Avg.	0.0 lbs./day	**0.0 lbs./day**
Injected Dissolved Oxygen Monthly Avg.	110.7 lbs./day	**≥36 lbs./day/ Million Gallon**
Solids Disposal: Sludge, total dry weight in lbs.	18,546 lbs.	**Report**

Rainfall Monthly Total: 8.52”

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: City Administrator
Category: Public Hearing
Prepared By: Shanta Scarboro
Department Head: Edwin L. Booth

AGENDA ITEM (ID # 2474)

DOC ID: 2474

DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan

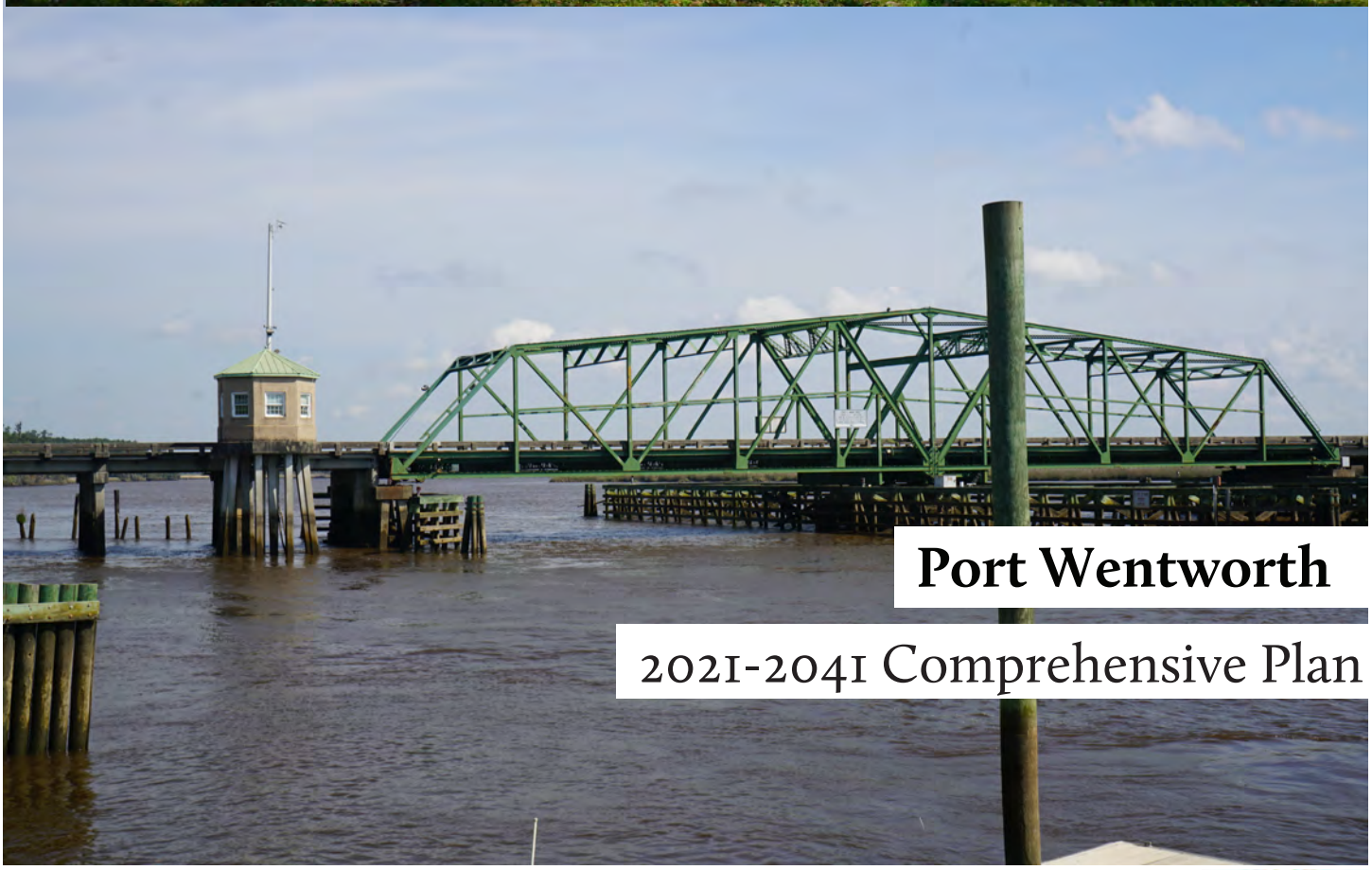
Issue/Item: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan

Background: The comprehensive plan, also known as a general plan, master plan or land-use plan, is a document designed to guide the future actions of a community. It presents a vision for the future, with long-range goals and objectives for all activities that affect the local government.

Recommendation: Approval.

ATTACHMENTS:

- DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (PDF)



Port Wentworth

2021-2041 Comprehensive Plan

Coastal Regional Commission OF GEORGIA

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

Adoption documents will go here

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

CITY OF PORT WENTWORTH 2021-2041 COMPREHENSIVE PLAN ACKNOWLEDGEMENTS

City of Port Wentworth Mayor and City Council
Garry Norton, Mayor
Linda Smith, Mayor Pro Tem
Mark Stephens, Council
Lynwood Griner, Council
Glenn Jones, Council
Thomas Barbee, Council

City of Port Wentworth Staff
Ed Booth, City Manager
Shanta Scarboro, Clerk of Council
Brian Harvey, Development Services Director

Stakeholder Commitee Members
Alfred Boyett
Brenda Boulware
Chance Raehn
Chris Hayes
CJ Neesmith
Derrick Sample
Doug Highsmith
Ed Booth
Gabrielle Nelson
Georgia W Benton
James Collins
James Coursey
Julius Robinson
Lauree Morris
Linda Smith
Murray Marshall
Rosetta Franklin
Stephen Ezelle
Wanda Rolff

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

COASTAL REGIONAL COMMISSION

Allen Burns, Executive Director

Planning and Government Services Team

Eric Landon, Director of Planning & Government Services

Russ Marane, Senior Planner/Interim Planning Director

Aaron Carpenter, Senior Planner/Grant Specialist

Cole Mullis, Regional Planner

Scott Berson, Regional Planner

Hunter Key, GIS/IT Director

Megan Hunnicutt, GIS Manager

Tara Lopez, GIS Analyst

Heather Cummings, GIS Analyst

Teresa Townsend, Administrative Assistant

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

EXECUTIVE SUMMARY

The State of Georgia has instituted minimum standards and procedures to provide a framework for the development, management, and implementation of local comprehensive plans. They reflect an important interest of the state: maintaining healthy and economically vibrant cities and counties that are vital to the state's economic prosperity.

City comprehensive planning should be conducted in the context of Georgia's strong and vibrant intergovernmental system that clearly recognizes the important role cities and counties play in fostering the state's image as an attractive place to invest, conduct business, and raise families.

Comprehensive plans are fact-based and create an environment of predictability for business and industry, property owners, investors, and residents. Plans are important for many local government functions from emergency management to land use to economic development. Comprehensive plans are thorough in explaining relationships between issues, which enhances coordination across those issues.

The Comprehensive Plan for the City of Port Wentworth 2020-2040 contains goals, policies, and strategies to address challenges and leverage strengths. The plan also includes a five-year work program with specific steps to be taken to manage growth, combat blight, improve services and facilities, and preserve access to the City's most tangible resources. The work program identified partners to collaborate on those efforts. Some of the efforts included are ongoing in current programs, while others require new efforts and actions to bring them into reality. When viewed in its entirety, the plan provides direction for ensuring the viability of the City's future.

As stated in the standards and procedures for local comprehensive planning, it is essential that local governments recognize that:

- Assets can be accentuated and improved
- Liabilities can be mitigated and changed over time
- Potential can be sought after and developed

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

COMMUNITY VISION

Port Wentworth will adopt a proactive approach to development policy to ensure that citizens fully benefit from new developments, and to preserve its character as a livable family-oriented city.

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The vision addresses the City's desire to make growth work for residents. The vision is supported by the following overarching goals created to help shape the City of Port Wentworth's development:

1	*Port Wentworth will research and utilize all policy tools at its disposal to ensure development keeps with Port Wentworth's character and aligns with the needs of its residents.*
2	*Port Wentworth will foster the development of a diverse commercial sector.*
3	*Port Wentworth will provide recreational opportunities for its citizens.*
4	*Port Wentworth will address traffic congestion.*
5	*Port Wentworth will provide a reasonable density of housing.*
6	*Port Wentworth will provide high quality public services to its residents.*

The City of Port Wentworth's vision is further defined by the **Character Area Map**. The Character Area Map plays a role in guiding future development and is further supported by the **Future Land Use** which also provides guidance on future land uses that is in keeping with the Town's vision.

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

Table of Contents

1 Plan Overview 10
1.1 Purpose 11
1.2 Scope 12
1.3 Methodology 14

2 Needs and Opportunities 15
2.1 Methodology 16
2.2 Needs & Opportunities 18

3 Community Vision and Goals 26
3.1 Vision Statement 26
3.2 Goals and Policies 27
3.4 Quality Community Objectives 32

4 Land Use 35
4.1 Character Areas 36

5 Housing 44
5.1 Housing Types 46
5.2 Occupancy 47
5.3 Housing Costs 48
5.4 Cost Burdened Housing 48
5.5 Condition of Housing 49
5.6 Jobs / Housing Balance 49

6 Transportation 50
6.1 Roads and Highways 52
6.2 Road Network Hierarchy 53
6.3 Alternative Modes of Transportation 54

7 Coastal Vulnerability and Resilience 55
7.1 Natural Hazards 56
7.2 Storm Surge and Development 56
7.3 Coastal Hazards Mitigation Policy 59
7.4 Vulnerable Populations 59
7.5 Income and Poverty Level 60
7.6 Means of Transportation 60
7.7 Housing Type 60

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

8 Economic Development 61
8.1 Economic Base 63
8.2 Unemployment Rate 64
8.3 Occupation 64
8.4 Class of Labor Force and Places of Employment 65
8.5 Live/Work 66
8.6 Workforce Development Issues 67

9 Broadband 68
9.1 Broadband in Georgia 69
9.2 Broadband in Port Wentworth 69
9.3 Planning Considerations 70

10 Community Work Program 71
10.2 Short Term Work Program 72
10.3 Report of Accomplishments 76

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

1

PLAN OVERVIEW

1.1 Purpose
1.2 Scope
1.3 Methodology

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

PURPOSE 1.1

The City of Port Wentworth's Comprehensive Plan is a living document updated and shaped by its leadership, staff and citizens. It is a policy guide for making zoning and land use decisions, and it sets policies for City officials and staff concerning the future development of the City.

The Comprehensive Plan is a long-range land use plan to guide future growth and the physical development of the City. The goals and policies within the Comprehensive Plan are designed to help the City of Port Wentworth become prosperous, healthy, equitable, and resilient.

The City of Port Wentworth's Comprehensive Plan is a five year update as required by the "The Minimum Standards and Procedures for Local Comprehensive Planning," (Minimum Standards) adopted by the Georgia Department of Community Affairs (DCA). The latest version of these standards can be found in O.C.G.A Chapter 110-12-1, effective March 2014.

In meeting these standards, this Plan enables the City to maintain its Qualified Local Government (QLG) status, making it eligible to receive certain types of state funding. This plan update reassesses where the City of Port Wentworth is today, and how it intends to grow in the future. Following the Minimum Standards, the Plan presents a community vision, goals and a work program designed to make the vision a reality.

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SCOPE 1.2

In keeping with the Minimum Standards, this plan is presented in three components:

1. **COMMUNITY VISION** - which lays out the future vision and goals that the community wants to achieve in text and maps;

2. **NEEDS AND OPPORTUNITIES** – which provides a list of the various needs and opportunities that the community will address; and

3. **COMMUNITY WORK PROGRAM,** which provides a 5-year Short Term Work Program designed to address the needs and opportunities. This program includes activities, initiatives, programs, ordinances and administrative systems to be put into place or maintained to implement the plan.

In addition, the plan incorporates planning elements as defined by the DCA Minimum Standards that are important to shaping the future of the City of Port Wentworth.

The Housing, Transportation, Coastal Vulnerability and Resilience, and Economic Development elements primarily analyze statistical data from the American Community Survey to provide context on the issues facing the community.

Also included are a Record of Accomplishments highlighting the success of the previous Short-Term Work Program, and a description of the public involvement process.

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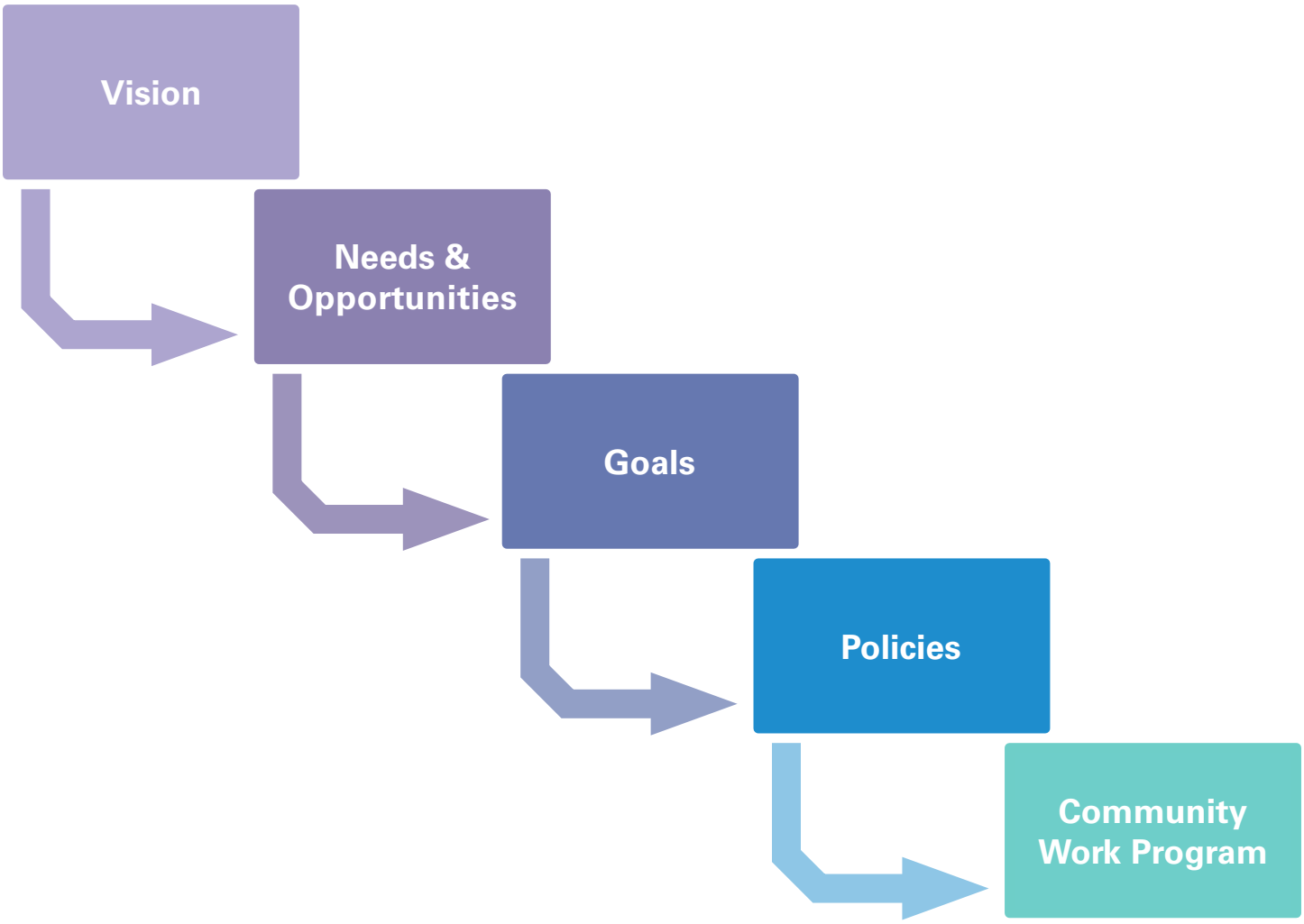
Boundary and Description

Port Wentworth was founded in 1733 and began as a set of rice and cotton plantations. In 1793 on Mulberry Grove Plantation, Eli Whitney changed American and world history by creating the first cotton gin, which significantly increased the efficiency of cotton production. Port Wentworth is also home to a Civil War battle site, and hosts historic churches and praise houses like Houston Museum that were crucial to African American religious history.

Port Wentworth borders South Carolina, and the historic Houlihan Bridge serves as a crossing between the two states. The City lies near the Savannah River and the Savannah Wildlife Refuge.

Port Wentworth has experienced tremendous growth in a short period of time. In 2010, the population was under 5,000. According to the 2019 Census data, the population is over 8,000. However, the current population is probably closer to 10,000, and in 10 years may grow to 15,000 or 20,000.

The city has experienced rapid change due to the expansion of the Georgia Ports Authority. Many hundreds of acres of warehousing space have been built around the City. This causes 3 major problems for the City: 1) traffic congestion and road wear from freight trucks; 2) declining property values and negative environmental impacts from industry; and 3) loss of developable land with little benefit in terms of employment or tax revenue. Addressing the issues resulting from rapid industrial development in Port Wentworth will be the primary challenge for City officials in the future.



METHODOLOGY 1.3

The public outreach effort launched for this plan update includes two public hearings and four Steering Committee meetings.

The Steering Committee was formed comprised of members representing a cross-section of the community including elected officials, key staff, members of the planning and zoning board, representatives of the business community, and residents. A survey was sent out on utility bills to solicit residents' feedback during the process.

Comprehensive Plan Schedule

April 22, 2021: First Public Hearing:
The commencement of the comprehensive planning process was announced at the Port Wentworth Council meeting.

May 5, 2021: Visioning Meeting
The stakeholder committee met to formulate the vision and goals for the City.

May 19, 2021: Needs & Opportunities Meeting
The stakeholder committee met to determine the Needs & Opportunities for the City. This was done through a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis.

May 26, 2021: Land Use Meeting
The stakeholder committee met to determine the Character Areas for the City, which establish a basis for future land use decisions rooted in community values.

June 2, 2021: Final Meeting

The stakeholder committee met to finalize discussion on land use and review any other issues related to the comprehensive plan.

July 22, 2021: Second Public Hearing
The draft plan was presented for the council for discussion and approval before transmission to the Department of Community Affairs.

Goals of the Stakeholder Committee

- **Seek agreement on key issues.**
- **Help craft a common vision for the future.**
- **Provide guidance on action needed to achieve that vision.**
- **Affirm public input.**

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2

NEEDS & OPPORTUNITIES

2.1 Methodology
2.2 Needs & Opportunities

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METHODOLOGY 2.1

The process which identified the Needs and Opportunities unique to the City was based on stakeholder involvement and the results from the community survey.

Needs provide a sense of what problems need to be addressed, and Opportunities provide insight into potential that can be exploited for the benefit of the community. In order to achieve the City of Port Wentworth's vision and goals for the future, a number of Needs and Opportunities that the City must address were identified.

The stakeholder committee engaged in a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to determine the Needs & Opportunities of Port Wentworth.

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STRENGTHS

- City has money
- Ideal location for new development in the region
- Proximity of rail, water, air, shipping, storage, and highway access are attractive for developers
- Good amount of land available for development
- Good amount of capacity for sewage system, with planned expansion

WEAKNESSES

- Lack of restaurants
- Lack of post office
- City ordinances are out of date
- Narrow streets with parking issues
- Dependence on Savannah for water
- Divided city with volatile politics
- Traffic congestion
- Lack of access to recreation or nature areas
- Historic resources ignored

OPPORTUNITIES

- Sports complex and public services complex
- Influx of federal funding
- Review of zoning ordinances to more carefully guide development and leverage remaining land
- Redevelopment in south
- Make developers pay for improvements
- Capitalize on historic assets, natural areas, and river access
- Use of elementary school building for community purpose
- Growth from hotels could bring restaurants

THREATS

- Storms, hurricanes, and flooding
- Blight & unmaintained property
- Closure of schools could threaten ability to attract permanent residents
- Unplanned growth may worsen traffic and cause issues for public utilities capacity

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NEEDS AND OPPORTUNITIES 2.2

Input from the Stakeholder Committee and the community survey helped determine Port Wentworth's Needs and Opportunities as part of the comprehensive planning process.

Population

Port Wentworth is experiencing rapid population growth, with several large multi-family residential developments due to arrive. Many of the new arrivals are young and have families, so the potential to keep lifelong residents is there. However, many long-time residents are leaving due to traffic frustration.

Needs

- Increase public service capacity to accommodate rapid population growth
- Encourage long-time residents to stay
- Make the city friendlier for young families by providing activities and services that are tailored to the increasing number of school aged children
- Raise capacity at schools to accommodate growth
- Upgrade and add recreational facilities for children that children can easily and safely access
- Expanded City services including: solid waste collection, wastewater capacity, public works and public safety

Opportunities

- Work with the SCCPSS to maintain existing school facilities and to plan for new facilities, including the location of a middle and high school in the City
- Inventory facilities and services directed towards school age children and families and develop these services
- Perform a comprehensive assessment of City services and determine the amount of remaining "capacity"
- Develop a plan to expand City infrastructure, services, and facilities as the population continues to grow
- Work with developers to identify the need and make provisions for additional city services

Economic Development

The city is experiencing rapid development, but not in a way that serves the needs and desires of City residents. There is an overall lack of business diversity throughout the City.

Needs

- Reduction and calming of truck traffic on Highway 25 to encourage foot and car traffic
- Improvement of the aesthetics of the downtown district to better appeal to potenti customers
- Improvement in the perception of the downtown area
- Redevelopment projects in the downtown are
- Expansion in the number and variety of restaurants
- Stronger presence of code enforcement to address vacant and/or derelict buildings

Opportunities

- Opportunity to revitalize downtown Port Wentworth through beautification, code enforcement, improving walkability, and attracting a variety of businesses
- Encourage beautification and revitalization of existing commercial structures through façad grants. Target specific owners who will participate and set an example
- Continue to demolish derelict and blighted structures

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- Develop a plan for downtown revitalization that includes the following:
    - An evaluation of the local market to ensure that any new downtown and neighborhood commercial development matches the identified needs and available demographics.
    - A recruitment and retention strategy to attract and support small neighborhood-based businesses in the downtown district and other appropriate commercial businesses to other areas of the City.
    - Coordination with the Tourism Council's branding plan.
    - Economic incentives to encourage redevelopment in the downtown district, including a loan guarantee program.
    - Identified potential redevelopment projects in the downtown district.
    - Consider public/private partnerships to implement desired redevelopment projects.
    - Identified potential sites for multi-family development in or near the downtown district.
    - A streamlined approval process for new developments and redevelopments that are consistent with the desired character of the downtown area.
    - Consideration of changes to the downtown that will follow the bridge upgrade

- Attract a diverse mix of businesses, including sit-down restaurants, throughout the city
- Develop a strategy to address poorly maintained and vacant structures along the Highway 25 corridor
- Increase code enforcement for vacant structures, property maintenance, and commercial truck traffic
- Covenant and sell public land in or near the downtown district for the purpose of multi-family development
- Support, through the permitting of appropriate neighborhood commercial projects, the development of the commercial area of Rice Hope
- Opportunity to reap benefits for the citizens from the growth in the hotel business along I-95, particularly by attracting restaurants
- Opportunity to take advantage of EDA grants to develop downtown and attract the desired types of businesses
- Opportunity to pursue a business incubator

Port Expansion

The Georgia Ports Authority and Gulfstream are expanding, and this has major consequences for the City. It squeezes out the available land for the city, causes traffic congestion and road wear, can reduce property values, as well as negative externalities related to stormwater and industrial waste.

Needs

- Solutions to the truck traffic which is increasing and causing congestion and traffi safety issues
- Future planning and zoning regulations to ensure future transportation, warehousing, and other industrial development takes plac in the appropriate area of the City
- Solutions to the traffic congestion on Highway 21

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Opportunities

- Extension of the Jimmy DeLoach Highway will provide an alternative route for truck traffic
- There are opportunities for spin-off and support operations for logistics, truck servicing, and Gulfstream part assembly to be located in Port Wentworth
- Areas appropriate for warehousing should be clearly defined
- Completion of the Benton Boulevard Extension to the Effingham County Parkway will provide an alternate route to Highway 21

Historic & Cultural Tourism

With its natural assets (proximity to Savannah Wildlife Refuge and Houlihan Boat Landing) and its historic assets (Eli Whitney, Houston Museum, and Battle of Monteith Swamp), Port Wentworth has potential for tourism. However, it has not been supported in the past.

Needs

- Better advertisement of the historical and cultural resources of the City
- More tourism-based businesses (or businesses that support tourism) that can take advantage of the City's location directly adjacent to the Savannah Wildlife Refuge

Opportunities

- Support the Tourism Council's efforts to "brand" Port Wentworth
- Develop an exhibition display at the Georgia DOT Welcome Center on Highway 95 that will feature the City's unique history and location near the Savannah Wildlife Refuge
- Improve the Houlihan Bridge boating ramp area as an amenity for the City and to spur related boating/fishing businesses
- Support the Houston Museum by providing water and sewer services and installing bathrooms

Housing

The city has experienced a rapid increase in residential developments to the point that the majority of all housing units were built after 2000. Currently, there is a wide variety of housing types and price points.

Needs

- A variety of housing options for people of varying income levels and life stages
- Programs that focus on home-ownership
- Maintenance and general upkeep of property, both owner-occupied and renter
- Ensure new housing developments are provid sufficient public services

Opportunities

- Continue to allow for and encourage the development of a variety of housing types and densities with a range of housing costs in appropriate areas
- Identify and keep an electronic database of historic houses
- Investigate tools and incentives to encourage t restoration of historic housing
- Encourage homeownership
- Explore DCA homeownership programs and other state or federal programs
- Expand code enforcement
- Make owners and landlords more accountable for property maintenance and neglect
- Explore opportunities for retirement housing/ living

Land Use

With industrial warehousing developments now dominating large portions of the City, land use is a controversial topic in Port Wentworth. It is the City's responsibility to ensure development is coordinated with the character of the surrounding area, particularly when it is located near neighborhoods.

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Needs

- Appropriate commercial development proximate to residential areas, i.e. intensive commercial uses such as warehousing are not appropriate for neighborhood commercial nodes
- Preservation of rural communities such as Monteith/Meinhard and Swamp Fox
- Concentration of the more intensive commercial development in the I-95 Interchange area and in appropriate areas along Highway 21

Opportunities

- Identify an area between Jimmy DeLoach Parkway and Highway 21 for multi-family residential
- Identify the remaining area adjacent to Highway 25 for neighborhood commercial development with adequate parking
- Ensure that the zoning ordinance clearly defines appropriate uses and is coordinated with the desired character of the area
- The Crossgate area contains a large undeveloped track of land with potential for commercial development along Highway 21
- Usage of the elementary school building for a community purpose if it closes permanently

Facilities and Services

The rapid development the city is currently experiencing from warehousing developments, residential developments, and new businesses, are providing a strain on the City's capacity for public services.

Needs

- City services, community facilities, and utilities that have the capacity to service the growth
- Optimal ISO rating to ensure that fire insurance rates are kept low
- Solutions to inflow and infiltration problems within the existing wastewater collection system
- Additional recreational facilities within the City
- Provide sufficient water and sewer service throughout the City to prevent annexation of Port Wentworth land by Savannah

Opportunities

- Pursue creative means to gain more City revenue from warehouses and new development, such as impact fees, tax allocation districts, community benefit agreements, or betterment levies
- Determine the existing and desired level of service for all City services and infrastructur
- Perform a public safety services study to evaluate the need to create police precincts a provide additional fire service
- Expand requirement for developers to incorporate fire suppression into their proje
- Provide publicly accessible greenspace/open space in new development and redevelopme
- Assess the capacity of existing and future planned services and facilities, and utilize thi information when permitting new development
- Implement a water conservation program th incorporates water reuse and addresses wate loss to comply with applicable environmenta permits
- The public works department must be expanded to provide additional and more effective service
- Implement and utilize an impact fees progra for police, fire, roads, wastewater, and recreation, according to legal feasibility
- Improve the Houlihan Bridge Boat Landing constructing a dry dock, adding amenities, a connecting it to the City through a sidewalk/ boardwalk
- Explore ways to extend city infrastructure to areas not currently served by public water service, whether currently developed or undeveloped
- Find ways to reduce dependence upon the C of Savannah for water services
- Coordinate with Chatham County, neighboring municipalities, and regional and state organizations to determine the optimal provision of services and avoid duplication o efforts

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Transportation

Rapid development has also placed great strain on Port Wentworth's transportation network. The existing level of service is poor and does not provide for adequate connectivity, or sufficient opportunity for alternative transportation.

Needs

- Traffic calming measures along Highway 25
- Safety measure to decrease vehicle accidents on Highways 25 and 21 Solutions to congestion on Highway 21 in general and specifically at the I-95 interchange area
- More opportunities for public transit

Opportunities

- The existing Park & Ride facilities are a success and the City should continue to support them
- The City should consider identifying additional Park & Ride locations south of I-95 and north of the Rice Hope entrance
- Existing sidewalks provide a good alternative transportation network and the City should continue to allow for their use and work to provide a safe multi-use trail network for the carts
- The City should continue to support transportation projects that will improve the level of service and reduce truck traffic on Highways 21 and 25, including Jimmy DeLoach Parkway extension and Effingham Parkway
- Consider the development of a private bus system that would connect Port Wentwort to the existing CAT network that could be sponsored by local community businesses
- Opportunity to work with Chatham Area Transit to provide transit service to Port Wentworth, to take cars off the road and reduce congestion
- Opportunity to work with GDOT to reduc congestion along Highway 21

Natural & Cultural Resources

The massive development pressures facing Port Wentworth are diminishing ecological integrity, connection to history, and the cultural significan of community resources.

Needs

- Identification and preservation of historic sites and artifacts
- A facility or location where people can visit learn about the history of the area
- Linkages between greenspace, parks, cultur or historic interest points, local trail system state designated bike routes, and existing trails in neighboring communities

Opportunities

- An inventory of historic sites and structures should be updated and maintained
- This inventory should be considered in the approval of rezoning and development projects
- The City should consider developing a historic interpretive display at the GDOT Welcome Center to highlight the area's history. This display could also house exhibits related to the Savannah Wildlife Refuge and St. Augustine Creek
- The City should work with the Chamber of Commerce and Tourism Council to promo Port Wentworth as a place for history/eco-based tourism
- The City should complete improvements to the Houlihan Bridge Boat Landing to encourage the development of the eco-tourism industry and related businesses

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- The City should support projects that connect parks and points of interest in Port Wentworth, including a sidewalk or boardwalk to connect to the Houlihan Bridge Boat Landing
- The Savannah Wildlife Refuge is an important ecological resource and should be capitalized on
- Opportunity to properly commemorate Port Wentworth history and provide historical markers for major historical events, including the Battle of Monteith and the site of the invention of the cotton gin

Conservation

It is imperative for the City to recognize and consider the ecological impacts of development activity, and to prioritize preservation and creation of greenspace for the benefit of residents.

Needs

- Greenspace preservation during development projects to ensure adequate land area is available for infiltration of stormwater
- Education for citizens, developers and local officials to help them better understand the environmental impacts of development

Opportunities

- The City should require new smart-growth developments to set aside a required minimum amount of greenspace
- Implement SWMP in compliance with the City's Phase I MS4 NPDES permit
- Implement the recommendations of the City's Drainage Masterplan and Capital Improvement Program
- Consider the implementation of a stormwater utility to fund implementation of the Drainage Masterplan and Capital Improvement Program
- Provide education about resource conservation and protection that includes the public, local elected officials, developers, economic developers, etc.
- Consider the development of a stormwater util to fund the SWMP, drainage analysis, and capi programs
- The State of Georgia has issued the Coastal Georgia Water and Wastewater Plan with new requirements for water withdrawal permit holders
- The City should ensure that development that takes place adjacent to or upstream of the Savannah Wildlife Refuge does not have an adverse impact on this resource
- Participate in the Federal Emergency Management Agency (FEMA) Community Rating System (CRS) program for floodplain management to reduce flooding risk to propert in the City and to lower flood insurance rates f property owners

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3

COMMUNITY VISION

3.1 Vision Statement
3.2 Community Goals
3.3 Community Policies
3.4 Quality Community Objectives Analysis

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COMMUNITY VISION AND GOALS 3

The Community Vision and Goals identify the City of Port Wentworth's direction for the future and are intended to serve as a guide to Port Wentworth officials in day-to-day decision making. They are the product of public involvement and include the following components:

- Vision Statement: what kind of community the City wants to become in the future
- Overarching Community Goals: directions for how the City will attain this vision
- General Policies: strategies that will help the City achieve each goal
- Character Areas Map and Narrative: a division of the City into distinct neighborhoods, each with its own vision

VISION STATEMENT 3.1

The Community Vision paints a picture of what the City of Port Wentworth desires to become. The vision statement offered below was refined through discussion with the Stakeholder Committee.

"Port Wentworth will adopt a proactive approach to development policy to ensure that citizens fully benefit from new developments, and to preserve its character as a livable family-oriented city."

The City of Port Wentworth is committed to achieving this vision through the following goals. These goals are supported by community policies that, if followed, will bring the City closer to its goals, and, ultimately, its vision.

1) Port Wentworth will research and utilize all policy tools at its disposal to ensure development keeps with Port Wentworth's character and aligns with the needs of its residents.

2) Port Wentworth will foster the development of a diverse commercial sector.

3) Port Wentworth will provide recreational opportunities for its citizens.

4) Port Wentworth will address traffic congestion.

5) Port Wentworth will provide a reasonable density of housing.

6) Port Wentworth will provide high quality public services to its residents.

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1

Align development with city character and resident needs

Port Wentworth is the ideal location for development in Chatham County, particularly for Port-related growth. As such, the City does not need to expend great effort to attract development; it is already arriving. The City is in a good position to negotiate benefits for its citizens when development comes due to the desirability of the location.

- Pursue every feasible avenue to make new development pay for itself in order to avoid burdening current residents with the cost of new public service extensions
- Develop and implement an impact fee ordinance, and complete annual Capital Improvement Elements to ensure all impact fees collected are legal
- Pursue policies that encourage or require new developments to incorporate greenspace
- Encourage development that is sensitive to the historic context, sense of place, and overal setting of the community
- Preserve areas with a rural character

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2

Foster the Development of a Diverse Commercial Sector

While Port Wentworth is experiencing a great deal of development, much of this new development is limited to industrial warehousing or highway commercial developments. Generally, these developments do not provide much benefit to Port Wentworth residents. Intentional policy must be directed toward attracting the kinds of businesses that full-time residents will enjoy.

- Pursue opportunities for revitalization of and reinvestment in south Port Wentworth to attract appropriate businesses
- Promote economic development in north Port Wentworth
- Support programs for retention, expansion and creation of businesses that are a good fit for the community's economy in terms of job skill requirements and linkages to existing businesses

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3

Provide Recreational Opportunities for Residents

A great deal of residential development has occurred in a very short timespan, so services for residents haven't been able to keep pace with the new arrivals. There is a shortage of recreational options throughout the City, but particularly in the north. While recreational options should meet the needs of residents of all ages, there is particular concern about providing recreation for children to keep them from playing in the street. The planned sports park near Newport will do much to address this, but the City should provide multiple venues for children and teenagers to safely gather together.

- Invest in parks and open space, particularly within and near residential areas
- Pursue general use recreational venues for children and teens
- Make road changes as necessary to ensure the safety of streets in residential areas

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4

Address Traffic Congestion

Rapid development along the highways and industrial warehousing has caused a major traffic problem for Port Wentworth that severely impacts quality of life for residents. The community survey indicated that many residents were considering leaving the City or planning to, largely due to traffic frustration. Unfortunately, much of the traffic problem is outside the City's jurisdiction, but it is imperative that the City make the importance of traffic easement known to the relevant parties, and do everything possible to coordinate with them.

- Coordinate regionally with neighboring jurisdictions to address traffic congestion and road wear
- Consider impact on traffic flow and patterns for all new developments
- Make necessary road changes to improve traffic flow
- Encourage alternative modes of transportation wherever possible to take cars off the road

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5

Provide A Reasonable Density of Housing

Port Wentworth has experienced a massive increase of new residential developments in recent years, su that the majority of all housing units within the City were built after 2000.
Like all cities, Port Wentworth must balance the dual imperatives of providing sufficient housing for a reasonable cost, and maintaining densities consistent with community character. The appropriate densi for each area will vary, and the vision for the Character Area should be consulted for all residential development decisions.

- Consult Character Area vision and strategies for new residential developments
- Consider the balance of housing supply and employment
- Encourage development of housing opportunities that enable residents to live close to their places of employments
- Remove dilapidated buildings and improve code enforcement
- Encourage and support home ownership
- Pursue opportunities for infill residential development

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6

Provide High Quality Public Services

One of the greatest concerns for Port Wentworth is that the current massive development pressures will strain and undermine the City's capacity to provide utilities and services to residents.

- Ensure new development does not cause a decline in existing levels of service
- Discourage sprawl development patterns to avoid overloading public service capacity
- Ensure that capital improvements needed to accommodate future development are provided concurrent with new development
- Coordinate provision of public facilities and services with land use planning

QUALITY COMMUNITY OBJECTIVES 3.4

DCA's Vision: Every Georgia community offers a quality of life where people and businesses can grow and prosper. This section is used as a guide to determine which Quality Community Objectives the City of Port Wentworth will seek to accomplish with future planning efforts and developments.

1. Economic Prosperity

Encourage development or expansion of businesses and industries suitable for the community.

Port Wentworth is experiencing rapid development due to the expansion of the Georgia Ports Authority. The question is not "is development coming," but how to make the coming development work for the citizens. Good visionary policy should direct the coming development to the geographic areas that are most appropriate. All parts of Port Wentworth could use more commercial development. North Port Wentworth has little commercial variety, and the south portion could use redevelopment and infill development.

2. Resource Management

Promote efficient use of natural resources and identify and protect environmentally sensitive areas.

The City must be cognizant of how recent and future development will impact its environment and its consumption of resources, particularly water. Floodplains and wetlands are endangered by new development, and preserving these will require active effort and forward-thinking policy.

3. Local Preparedness

Identify and put in place prerequisites for the type of future the community seeks to achieve.

Port Wentworth must take a proactive approach to land use. As Port Wentworth will continue to be the preferred location for new port-related industrial development, policymakers must decide how to best locate these developments to avoid imposing negative externalities on residents and natural resources.

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4. Efficient Land Use

Maximize use of existing infrastructure by encouraging redevelopment; designing new development to minimize the amount of land consumed; and, carefully planning expansion of public infrastructure.

For Port Wentworth, preparing for the future largely means preparing for the consequences of rapid industrial and residential development. The City is currently pursuing opportunities to develop its infrastructure and public services using funds gained from new developments. Stormwater runoff will become a major issue in the future with the high concentration of industrial developments within City limits, and addressing this will require coordination between the City, developers, and neighboring jurisdictions.

5. Sense of Place

Protect and enhance the community's unique qualities that are important to defining the community's character.

The City's historic, natural and communal resources have not always been prioritized, and have been threatened by recent industrial development. The City must do more to protect and highlight these as essential elements of the community.

6. Regional Cooperation

Cooperate with neighboring jurisdictions to address shared needs by actively participating in regional organizations.

Port Wentworth should work closely with Chatham County, neighboring municipalities, and Effingham County to ensure optimal provision of service, avoid duplication of efforts, and address shared problems. Of particular regional concern are stormwater runoff, road damage and traffic congestion caused by industrial freight, and any other negative externalities caused by rapid industrial development.

7. Housing Options

Promote an adequate range of safe, affordable, inclusive, and efficient housing in the community.

Port Wentworth is committed to providing affordable and workforce housing. Large multi-family residential developments are coming to Port Wentworth rapidly. The challenge will be to provide sufficient services to these new developments.

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8. Transportation Options

Address the transportation needs, challenges and opportunities of all community residents.

Port Wentworth is plagued by traffic congestion, largely caused by warehouse development in the north of Port Wentworth. The City must pursue creative remedies and solutions to address this before it causes a flight of long term residents. Public transit (through CAT or other means), bicycle paths and improved pedestrian connectivity would all benefit the City by taking cars off the road.

9. Educational Opportunities

Make educational and training opportunities readily available to enable all community residents to improve their job skills, adapt to technological advances, manage their finances, or pursue life ambitions.

Educational opportunity is a weakness for Port Wentworth. After the closure of the elementary school, Rice Creek School is the only school within City limits, and only serves 3rd grade to 8th grade students. Port Wentworth should work with SCCPSS to establish a high school within City limits, and to determine if there is any opportunity for a re-opening or relocation of the elementary school. Post-secondary education is an opportunity: the City would provide a good location for satellite campuses for Georgia colleges and universities.

10. Community Health

Ensure community residents, regardless of age, ability, or income, have access to critical goods and services, safe and clean neighborhoods, and excellent work opportunities.

Port Wentworth must prioritize the provision of public services in the future, as new developments will place a great strain on existing service. Also, ensuring that community resources (water, nature, and public venues) are not harmed by pollutants emerging from industrial developments will be essential to community health and integrity. New parks and recreational facilities (and active transportation connections to these) will serve to improve the health, wellbeing, and enjoyment of the community.

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4

LAND USE

4.1 Character Areas and Defining Narrative
4.2 Future Land Use

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CHARACTER AREAS AND DEFINING NARRATIVE 4.1

The Character Areas Map, along with the character area narratives that follow, lay out a vision, specific goals, appropriate land uses, and implementation strategies for Port Wentworth's unique sub-areas, districts, and neighborhoods. There are six character areas in total.

Interpretation of the Character Area Map is provided in the supporting text to be considered along with the City's zoning, the Future Land Use map, and other local policies when decision-makers consider land development questions or requests. The supporting text provides written description of the patterns of development that the City will encourage in each area.

The supporting narrative provides policy direction for regulating development with the goal of furthering consistent character within each area as defined by the City's vision. Where appropriate, statements for policy and goals are also established.

City of Port Wentworth Character Areas

- Traditional Village
- Rural Neighborhood
- Suburban
- Highway Commercial Corridor
- Industrial Park
- Open Space

Character Area Stats will go here

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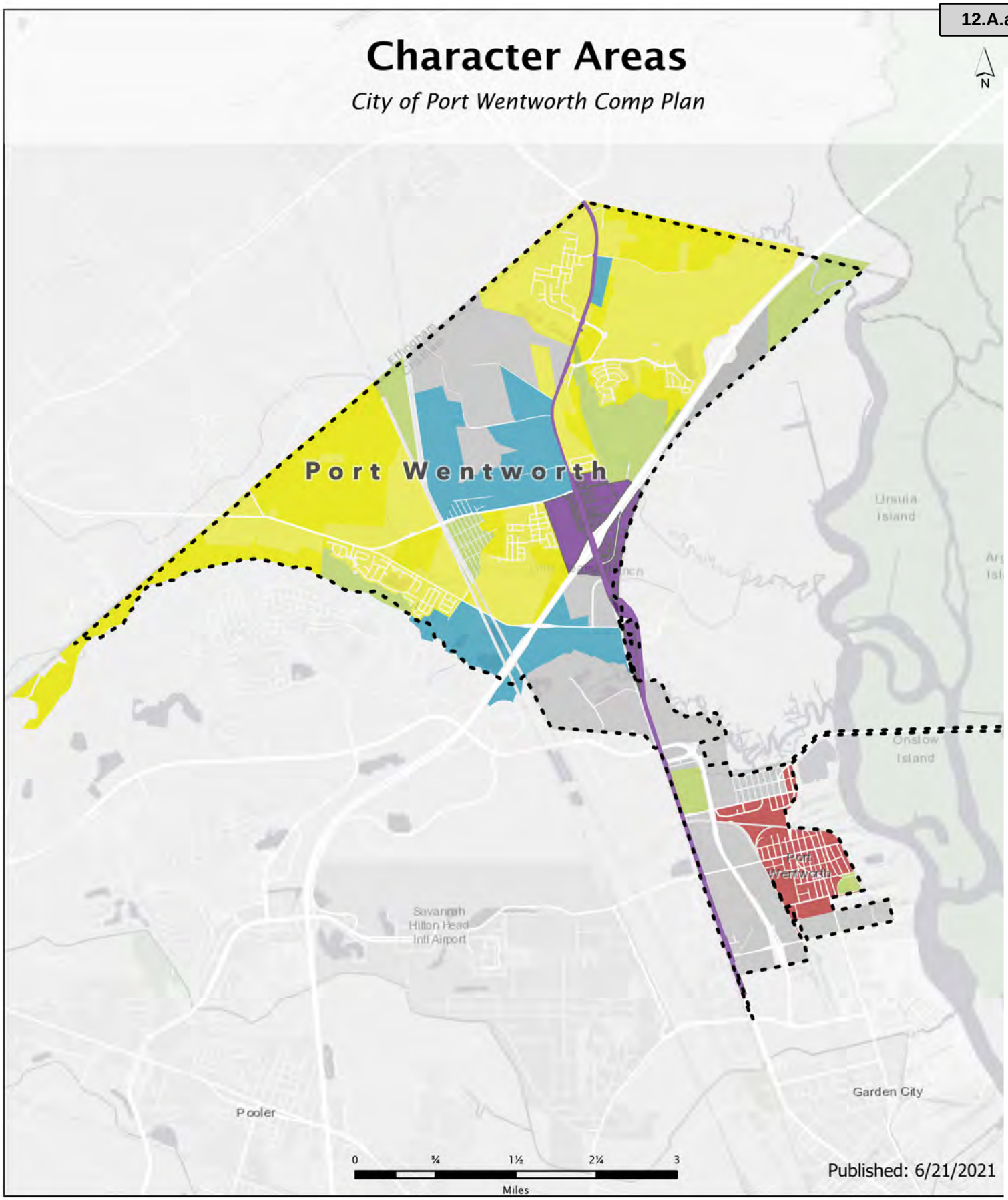
Character Areas

City of Port Wentworth Comp Plan



Character Areas

- Highway Commercial Interchange Area
- Industrial Park
- Open Space
- Rural Neighborhood
- Suburban
- Traditional Village

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Traditional Village

Character Area Description

This character area comprises the historic downtown district surrounded by older residential areas with more traditional development patterns. Characteristics include grid street pattern; sidewalks; small, regular lots; and neighborhood-scale businesses.

Current Zoning

E-D-Z, P-C-1, P-C-3, P-I-1, P-I-2, P-RIP, PUD-O, R-1

Future Zoning Considerations:

The industrial zoning categories are not consistent with the desired development character for this area. The City may wish to consider form-based standards or an overlay for property currently zoned industrial in this area. Neighborhood scale commercial development, recreation, and residential infill development are the most desirable uses.

Implementation Strategies

- Encourage facade improvements along the commercial main street area.
- Develop and enforce commercial and residential property maintenance standards.
- Incorporate golf carts into any plans and projects related to the sidewalk network and pedestrian environment.
- Develop a recruitment and retention strategy for small businesses in this area.
- Identify and support infill development and redevelopment along the Highway 21 and Highway 25 corridors.
- Support installation of the bikeway/sidewalk along Highway 25 to provide a community connection to the Savannah Wildlife Refuge.
- Explore options for mixed-use, multi-family development at the City-owned property near the Police and Fire stations.
- Support the location of a supermarket or farmers market to provide healthy food choices.

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RURAL RESIDENTIAL Character Area Description

This area is rural, undeveloped land with little development pressure for suburban growth. Development patterns include low pedestrian orientation and access, very large lots, open space, and high degree of building separation.

Current Zoning

C-1, C-3, M-P-O, P-C-1, P-C-2, P-C-3, P-D-R, P-I-1, P-R-M, P-RIP, PUD-O, R-1, R-A

Future Zoning Considerations

There is a significant amount of undeveloped land within this character area, with pressure for future development. The City should explore the potential for Purchase/Transfer of Development Rights or other methods that provide a method for people to maintain the existing rural state of their properties, while still allowing for future development.

- Consider development of a sidewalk/streetscape plan that includes bikeways, sidewalks, and street lights along major corridors.
- Maintain rural neighborhood atmosphere while accommodating appropriate family-oriented commercial uses to serve residents.
- Residential development should consist of traditional lower-density residential uses.
- Limit / prohibit instances of spot zoning.
- Investigate methods and funding sources to provide water and sewer service for areas currently on septic systems and private wells.
- New commercial or industrial development adjacent to this neighborhood should be required to include landscaping & significant vegetated buffers.
- Identify, preserve and promote historic, natural, and cultural resources.
- Identify areas appropriate for development and direct future growth to those areas, while preserving rural areas and communities.

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SUBURBAN

Character Area Description

These areas include where typical types of suburban residential subdivision development have occurred or will occur in the future.

Development within these areas is encouraged to include neo-traditional, conservation subdivision, or cluster development patterns.

Current Zoning

C-1, M-P-O, P-C-1, P-C-2, P-C-3, P-RM, P-RIP, R-1, R-A

Future Zoning Considerations

Current zoning categories are generally consistent with the current and desired future character of these areas. While large areas of undeveloped land still remain, it will be important to ensure new development adheres to the desired character and vision for this area.

Implementation Strategies

- New developments should have strong walkable connections within and between neighborhoods.
- Encourage roadway connectivity.
- Allow for smaller local roads and associated right‐of‐ways.
- Allow for appropriate neighborhood scale mixed uses within planned developments to serve the daily needs of the residents and provide a destination for pedestrians and to minimize the need for long trips.
- Require the preservation of trees during the development process and postdevelopment.
- Allow for various housing types and residential densities within planned developments.
- Ensure the adequate capacity of infrastructure for existing and future development through sound long‐range planning.

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HIGHWAY COMMERCIAL CORRIDOR

Character Area Description

This character area includes the corridor along Highway 21 that serves as the main pathway through the City, including the intersection with I-95 that serves as the primary commercial hub. Features include location of restaurants, trucking stops and shelters and associated service businesses.

Current Zoning

C-1, M-P-O, P-C-1, P-C-2, P-C-3, P-R-M, P-RIP,

R-A

Future Zoning Considerations

The existing zoning categories within this area are appropriate for a commercial anchor area within the City. Design standards, signage, and pedestrian safety are elements that will be important in achieving a sense a place and regional identity as development continues. Alleviating traffic congestion will also play an important role in making this area a desirable location for residents and daily commuters to do business.

Implementation Strategies

- Develop and enforce design and landscape standards.
- Restrict uses to commercial uses consistent with the character of the area.
- Encourage uses that serve tourists and visitors.
- Install welcome signage and landscaping.
- Require all new development and redevelopment to connect to the existing sidewalk network.
- Require pedestrian and automotive interconnections between commercial development along local highway corridors and nearby residential development.
- Support roadway projects that ease congestion along Highways 21.
- Participate in and support projects to ensure that local highway corridors that are also hurricane evacuation routes have an adequate level of service.

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INDUSTRIAL PARK

Character Area Description

Land uses in this area include higher intensity manufacturing, assembly, processir transportation, and warehouse activities.

Current Zoning

C-2, C-3, E-D-Z, I-1, P-C-2, P-C-3, P-I-1, P-I-2, P-RIP, R-1, R-A

Future Zoning Considerations

Given the expansion of the Georgia Ports Authority, future industrial development is unavoidable. The City will need to use this plan and the zoning ordinance to ensure that industrial development takes place in a manner that doesn't negatively impact or have a detrimental impact on existing developed areas.

Implementation Strategies

- Enforce existing ordinances related to water quality protection in industrial areas.
- Review existing stormwater design standards to ensure adequate consideration is
- given to water quantity and quality treatment in industrial areas.
- Ensure that industrial uses do not adversely impact surrounding residential and
- commercial areas.
- Consider transportation issues when approving future industrial areas.
- Consider fiscal impacts of new industrial development to the municipality prior to
- approval.
- Do not permit transportation or warehousing activities in other character areas.
- Require master planning of future industrial areas and parks.

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OPEN SPACE Character Area Description

Open space is an area of protected lands established for recreation, alternative transportation, or conservation purposes. This area includes ecological, cultural and recreational amenities.

Current Zoning

M-P-O, P-C-2, P-C-3, P-RIP, R-1, R-A

Future Zoning Considerations

All of the zoning categories above, with the possible exception of R-A are not consistent with the long-term preservation of open space in a natural state. Consider acquiring conservation easements and deed restrictions prevent the future development of land within these areas. The City may also wish to create a conservation zoni category to ensure the preservation of these areas.

Implementation Strategies

- Maintain undeveloped property within Open Space areas in as natural of astate as possible.
- Explore passive recreational use of these areas through trails and multi-use paths.
- Consider density bonuses for developments that preserve open spaces and natural areas.

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5

HOUSING

5.1 Housing Types
5.2 Occupancy
5.3 Housing Costs
5.4 Cost-burdened Housing
5.5 Condition of Housing
5.6 Job-Housing Balance

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

The Housing section provides a framework for promoting a diverse housing supply, protecting and improving the health and livability of the City's communities, and making adequate provisions for the housing needs of all economic segments of the community. The City must foster housing that is affordable to those at all income levels - from low-income and workforce families, to those earning higher wages.

Housing demand is largely driven by economic conditions and demographics. Demographic characteristics influence market demand with regard to the number of households; household size, make-up and tenure (owner v. renter); and preference for styles and amenities.
Port Wentworth's housing stock is almost all new, as a massive influx of residential developments and residents has occurred in the last 2 decades. The City faces unique housing challenges in providing public services and a high quality of life for these new residents.

The City's distinct communities include residential districts that are differentiated by housing density, age, size, architectural style, condition, and neighborhood commercial districts with mixed housing types. These communities, each with their own unique character, offer a variety of housing and lifestyle opportunities.

Some of the factors that local governments can influence are the supply of available residential land; the availability of public services; development regulations (density and design), and support for low and moderate income housing through funding or incentives.

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Total Housing Units: 3,637
Occupied Units: 3258
Vacant Units: 379

60.5% of housing units are owner-occupied, 39.5% are renter-occupied

73% of housing units in Port Wentworth are single-unit detached

HOUSING TYPES 5.1

In 2019, Port Wentworth had a total of roughly 3,637 housing units, of which 3258 (89.6%) are occupied.

The majority of the occupied housing types in Port Wentworth are detached single units, and the percentage of single family homes decreased from 2010 to 2019, from 80.4% to 73%. The second most common housing type is apartments with more than 20 units, at 8.9% of total housing units. This housing type experienced the most growth from 2010 to 2019, up 5.6 percentage points from the 2010 level of 3.3%.

From 2010 to 2019, the total occupied housing units in Port Wentworth increased from 2,067 to 3,637.

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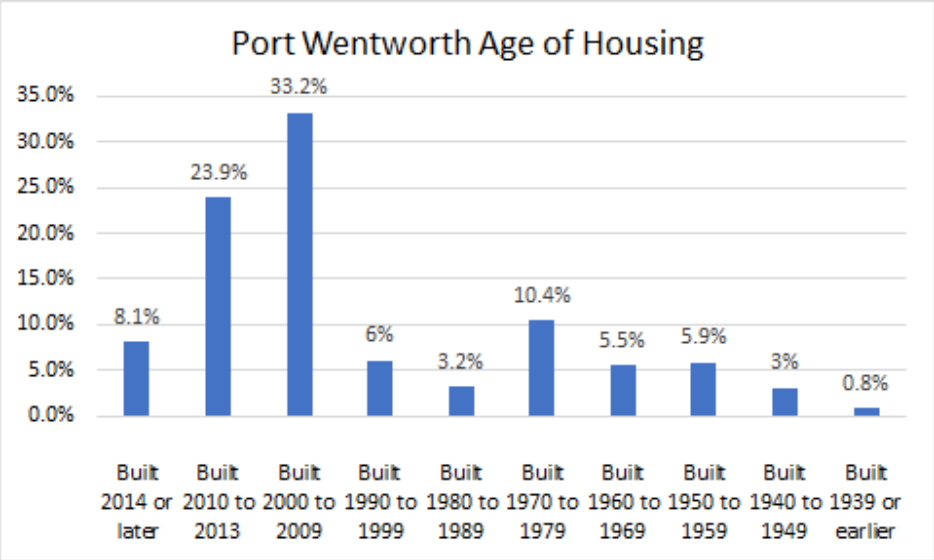
Age of Occupied Housing

The housing stock of Port Wentworth is remarkably new. The largest category of housing age is housing units built from 2000 to 2009, at 33.2%. 62.5% of all housing units were built after 2000. To compare, for Chatham County as a whole only 26.3% of housing units were built after 2000, and for Georgia as a whole only 19.2% of housing units were built after 2000. 25.6% of housing units in the City were built before 1980.



U.S. Census Bureau

62.5% of housing units in Port Wentworth were built after 2000.

OCCUPANCY 5.2

From 2010 to 2019, the number of occupied housing units increased by 1,395. The ratio of owner-occupied to renter-occupied narrowed significantly from 2010 to 2019. The portion of renter-occupied housing units increased by 12 percentage points.

Total housing units increased by 1,570 units from 2010 to 2019. The percent of vacant units increased 0.5% from 2010 to 2019.

Occupancy Characteristics

Type	2010	2015	2019
Total Housing Units	2,067	3,005	3,637
Occupied housing units	1,863	2,628	3,258
Owner occupied	72.5%	56.8%	60.5%
Renter-occupied	27.5%	41.4%	39.5%
Vacant	9.9%	12.5%	10.4%

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HOUSING COSTS 5.3

Housing cost for both renters and home owners increased from 2010-2019, but the increases were in line with simultaneous increases in home value and median household income.

Category	2010	2015	2019	2010-2019 Change
Median Rent	$1,070	$940	$1,310	22.4%
Median Monthly Mortgaged Housing Costs	$1,271	$1,343	$1,344	5.7%
Median Monthly Non-Mortgaged Housing Costs	$322	$384	$380	18.0%
Median Home Value	$138,500	$156,800	$160,700	16.0%
Median Household Income Comparison	$ 44,054	$61,643	$79,327	80.1%
Per Capita Income Comparison	$20,578	$34,453	$36,820	78.9%

COST BURDENED HOUSING 5.4

Cost-burdened households are those households paying 30 percent or more of their net income on housing costs. The proportion of cost burdened households has fallen substantially in Port Wentworth over the last 10 years.

In 2010, the percentage of renters in the City of Port Wentworth that were cost burdened was 69%. By 2019, it had fallen to 32.9%. There were similar substantial declines in cost burdened households for mortgaged homeowners (44.6% to 16.3%) and non-mortgaged homeowners (8.1% to 0%).

In 2019, the proportion of cost-burdened households in Port Wentworth was lower than the county and state proportion for all categories.

From 2010 to 2015, the percentage of cost-burdened renters dropped 38.2 percentage points.

From 2010-2019, housing units with a mortgage that were cost burdened decreased by 28.3 percentage points.

	2010			2015			2019		
Category	PW	Chatham	Georgia	PW	Chatham	Georgia	PW	Chatham	Geor
Renter Cost Burdened	69.0%	56.7%	51.4%	30.8%	54.6%	50.0%	32.9%	50.9%	4
Mortgaged Cost Burdened	44.6%	39.5%	35.6%	26.1%	36.0%	30.3%	16.3%	24.8%	2
Non-mortgaged Cost Burdened	8.1%	14.5%	13.8%	10.2%	16.0%	12.2%	0.0%	11.4%	1

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CONDITION OF HOUSING 5.5

Good housing conditions are essential for people's health and affects childhood development.

Condition of housing includes those units with insufficient plumbing and kitchen facilities. In 2019, 100% of units had complete plumbing facilities, and 100% had complete kitchen facilities.

JOB HOUSING BALANCE 5.6

A job to housing ratio in the range of 0.75 to 1.5 is considered beneficial for reducing vehicle miles traveled. The job to housing ratio indicates whether an area has enough housing for employees to live near employment and sufficient jobs in residential areas. An imbalance in jobs and housing creates longer commute times, more single driver commutes, and loss of job opportunities for workers without vehicles.

The most recent data from 2018 indicates that Port Wentworth supplies 2,946 jobs and contains 3,509 housing units, giving a ratio of 0.84. A balanced community generally has a jobs-housing ratio of 1.25 to 1.75. The City of Port Wentworth is below the target range for a balanced community.

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6

TRANSPORTATION

6.1 Roads and Highways
6.2 Road Network Hierarchy
6.3 Alternative Modes of Transportation

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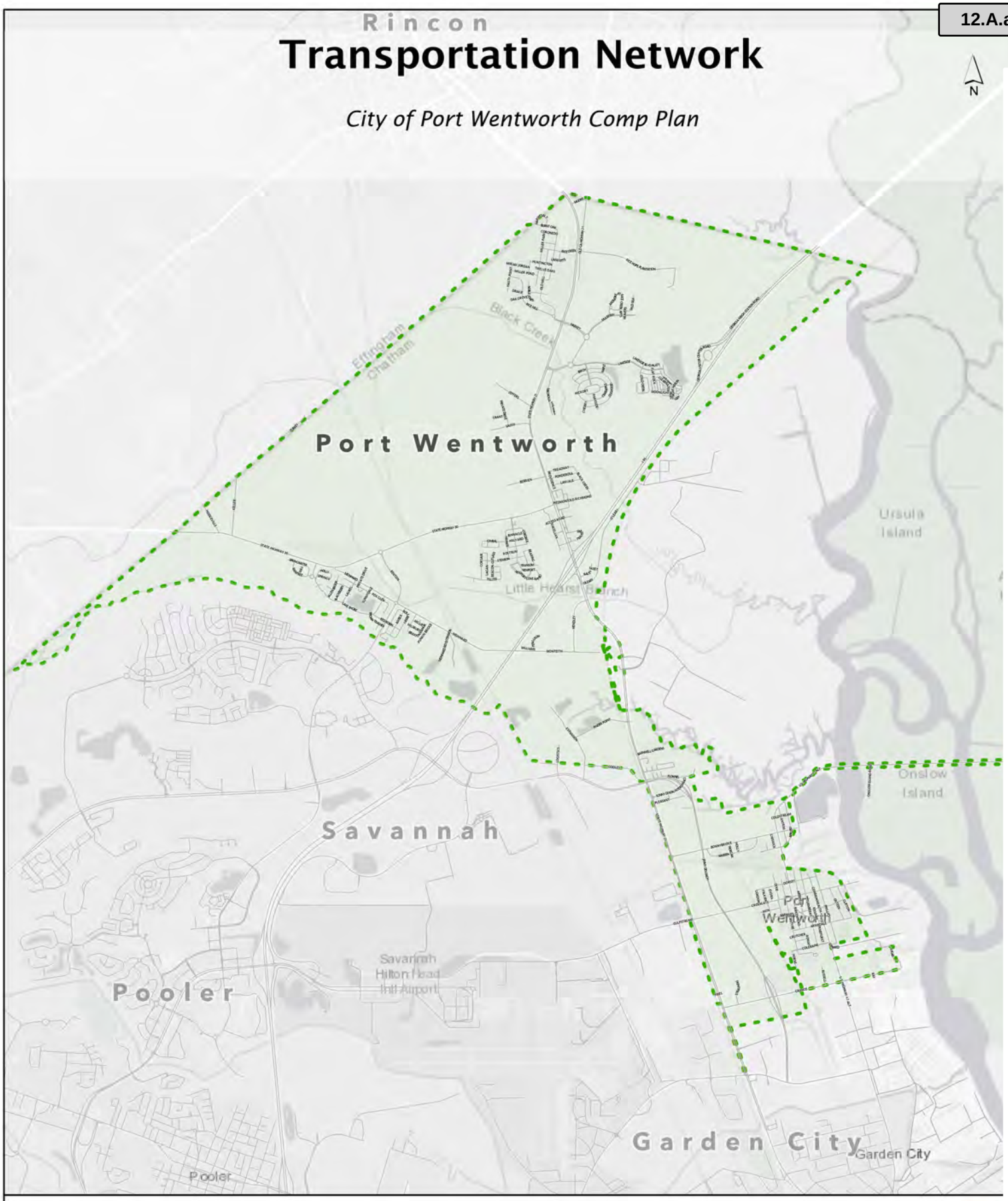
Rincon Transportation Network

City of Port Wentworth Comp Plan



Roads

Port Wentworth City Limits

0 0.65 1.3 1.95 2.6

Miles

Coastal Regional

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Transportation is an important component of the economy as economic opportunities are linked to the mobility of people, goods, and information. The relationship between the quantity and quality of transport infrastructure and the level of economic development is apparent. Highly connected networks are efficient and provide economic and social opportunities that result in positive multipliers effects suc as better accessibility to markets, employment, tourism activities, and additional investment.

Transportation contributes directly to economic activity through roads. Ensuring that workers can reach their places of employment on time is vital for the City's economy. Transportation facilities are the arter for economic growth and proper management and maintenance of these facilities is imperative.

ROADS & HIGHWAYS 6.1

The City of Port Wentworth is made up of approximately 100 miles of streets and roadways. The City contains a 5-mile stretch of Interstate 95 and is the first exit in the State of Georgia when traveling south from South Carolina. Local roads account for over half of the transportation network in the City, with State and Federally maintained roads accounting for the majority of the rest.

Inter-County Travel

Inter-county travel in Port Wentworth is primarily north-south in nature, and relies on I-95 and Highways 21 and 25.

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ROAD NETWORK HIERARCHY 6.2

Freeways
Limited access roads, freeways or motorways, including most toll roads are at the top of the hierarchy. These roads provide largely uninterrupted travel, often using partial or full access control, and are designed for high speeds.

Arterials
Major through roads that are expected to carry large volumes of traffic are designated as arterials. These are often divided into major and minor arterials, and rural and urban arterials. Examples of urban arterials in Port Wentworth include I-95, Highways 21 and 25, and Jimmy DeLoach Parkway.

Collectors
Next in the hierarchy are collector roads, which collect traffic from local roads, and distribute it to arterials. Traffic using a collector is usually going to or coming from somewhere nearby. Examples of collectors in Port Wentworth include Bonnybridge Road, Gulfstream Road, Lakeside Boulevard, and Meinhard Road.

Local Roads
These roads are at the bottom of the hierarchy, have the lowest speed limit, and carry low volumes of traffic. In some areas, these roads may be unpaved.

Bridges
Houlihan Bridge connects Georgia to South Carolina. The bridge is historic and is a central asset for the City. However, it is due to be replaced with an upgraded bridge.

Parking
Parking is not perceived to be a problem within the City. The majority of commercial development in recent years has taken place in the northern part of the City along the Highway 21 corridor. Parking here is primarily surface parking designed to serve the immediate locations. Parking downtown is a mix of on-street and surface parking lots along the Coastal Highway corridor.

.

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ALTERNATIVE MODES OF TRANSPORTATION 6.3

Alternative Transportation

Old Port Wentworth has an extensive sidewalk network throughout. However, in northern Port Wentworth, walkability is mostly limited to neighborhood sidewalks. High volumes of traffic make walking or bicycling dangerous or undesirable in many parts of the City.

Golf carts are a common method of intracity travel, and are permitted by City code to drive on local streets.

Public Transportation

Chatham Area Transit does not provide service to Port Wentworth. There is local interest in CAT service, or some connection to CAT routes, but this has not yet materialized.

Industrial and Port Logistics

The Ports are expanding, and freight truck traffic on Port Wentworth roads has become a staple of everyday life in Port Wentworth, and will continue to be so. This causes both infrastructural and safety issues for City residents, so freight trucks must be considered for all transportation planning decisions.

Growth and Traffic Congestion

The growth of the Ports will cause more and more traffic on City roads. To avoid losing residents, the City will need to make remedial road changes, or facilitate non-vehicular travel so that City residents can have good quality of life even with traffic issues.

Other Transportation

Port Wentworth has close proximity to Savannah-Hilton Head International Airport, and active freight rail lines.

CORE MPO

Port Wentworth is a member of the Coastal Regional Metropolitan Planning Organization, which handles transportation planning for the Savannah urbanized area. Items relating to Port Wentworth mentioned in the MPO's most recent plan, Mobility 2045, are as follows:

1) SR 25/US 17 @ Savannah River in Port Wentworth
2) SR/US 17 @ Middle River in Port Wentworth
3) Safety Improvements South of SR 25 At Cross Gate Intersection in Port Wentworth and Avertedly Street Intersection in Port Wentworth

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7

COASTAL VULNERABILITY AND RESILIENCE

7.1 Natural Hazards
7.2 Storm Surge and Development
7.3 Coastal Hazard Mitigation Policies
7.4 Vulnerable Populations
7.5 Income and Poverty Level
7.6 Means of Transportation
7.6 Housing Type

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Coastal Vulnerability and Resilience

Resilient communities minimize any disaster's disruption to everyday life and their local economies. Resilient communities are not only prepared to help prevent or minimize the loss or damage to life, property, and the environment, but they also have the ability to quickly return citizens to work, reopen businesses, and restore other essential services needed for a full and timely economic recovery.

NATURAL HAZARDS 7.1

Port Wentworth is a coastal community, and is close to the Savannah River. As such, the City must be cognizant of the risks of floods and hurricanes. The following storm surge and flood zone maps give context to the risks and challenges the City faces against natural disasters.

STORM SURGE AND FLOOD RISK 7.2

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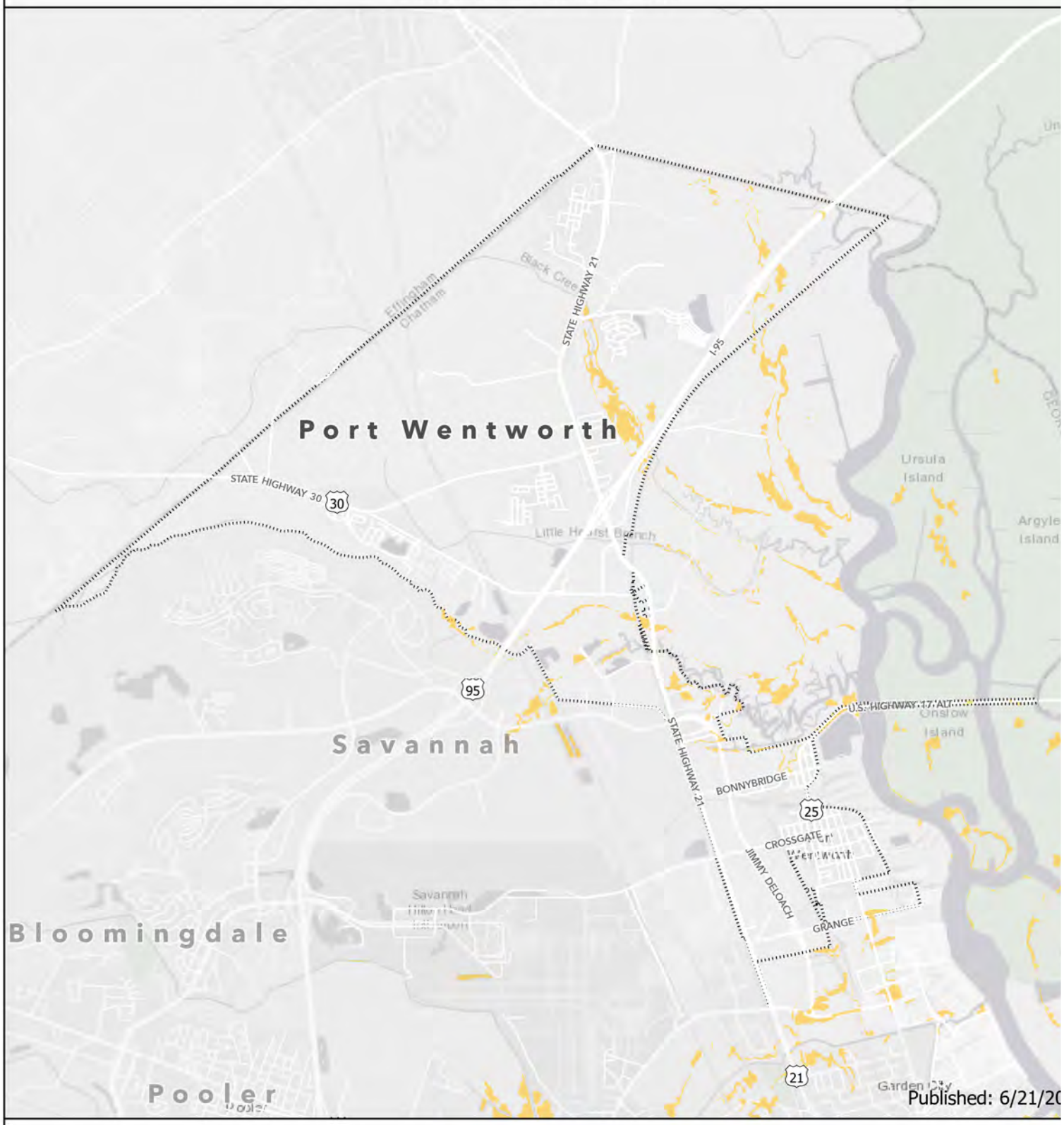
NOAA Storm Surge Risk

City of Port Wentworth Comp Plan

NOAA SLOSH Storm Surge Model Effective 2016



Storm Surge Category 1

Port Wentworth City Limits

0 ¾ 1½ 2¼ 3

Miles

Coastal Regional

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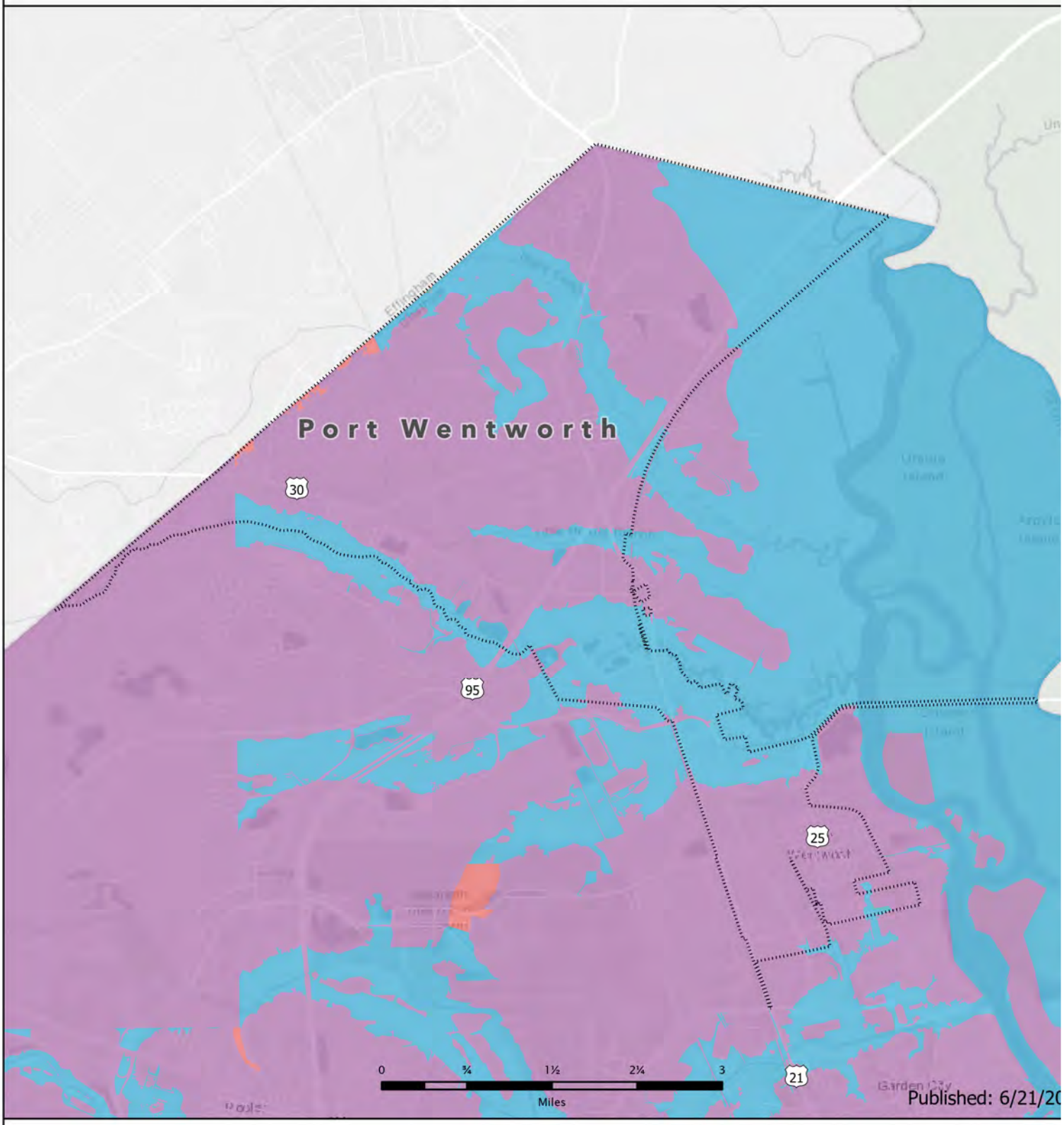
FEMA Flood Zone Risk

City of Port Wentworth Comp Plan

FEMA Flood Zones Effective 2019



FEMA Flood Zones

FLD_ZONE

A

AE- 1% Annual Chance

VE

X- Minimal Chance

Port Wentworth City Limits

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HAZARD MITIGATION POLICIES 7.3

Port Wentworth has flood hazard reduction policies contained within its Code of Ordinances.
Areas designated Coastal High Hazard areas have special requirements for development and property maintenance. Port Wentworth has a Stormwater Management Ordinance and Flood Damage Prevention Ordinance. The City follows the Coastal Stormwater Supplement to the Stormwater Management Manual when addressing riparian buffers. Port Wentworth intends to participate in Chatham County's stormwater management plan.

VULNERABLE POPULATIONS 7.4

A key factor in examining resiliency is quantifying vulnerable populations. These populations include those residents who live in vulnerable areas, the 100-year and 500-year flood plains, but also those who may have difficulty in heeding evacuation orders due to age, income, and mobility.

The most vulnerable populations include children less than five years old, the elderly and frail elderly, persons living in poverty, and persons without reliable transportation that live in communities with limited public transportation. For elderly, we have identified the percentage of the population 65 and older. There is no specific age cohort for frail elderly, but the literature defines frailty in people 65 and older that called for the diagnosis when three or more of the following five criteria were present: unintentional weight loss of 10 pounds or more in the past year, self-reported exhaustion, weakness as measured by grip strength, slow walking speed and low physical activity. The frail elderly are individuals, over 65 years of age, dependent on others for activities of daily living.

8% of Port Wentworth's population are children under 5 years old. 12.2% are over the age of 65.

The most vulnerable populations include children less than five years old, the elderly and frail elderly, persons living in poverty, and persons without reliable transportation that live in communities with limited public transportation.

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INCOME AND POVERTY LEVEL 7.5

Income can directly relate to a family's ability to have reliable transportation, which then directly relates to a family's ability to evacuate their homes in the event of an evacuation order. Income also impinges upon a family's ability to secure temporary lodging (hotels or motels beyond publicly provided shelter, or to obtain replacement housing should they lose their homes due to a storm event or natural disaster.

According to the U. S. Census Bureau, Port Wentworth's median household income in 2019 was $79,327. 1.6% of residents make below $10,000 a year, and 8.1% make below $25,000 a year. Poverty levels are established by the federal government and are based upon income and family size. 1.5% of Port Wentworth residents fall below the poverty level.

MEANS OF TRANSPORTATION 7.6

The U. S. Census reports on the number of vehicles available to households. This is an important indicator of the percentage of the population that has reliable transportation should they need to evacuate their homes in the event of a storm or other natural disaster. In Port Wentworth, there are no households that do not have a vehicle.

HOUSING TYPE 7.7

Mobile homes have been identified as a particularly vulnerable type of housing during storm events due to their susceptibility to damage caused by high winds and flying debris. In Port Wentworth, there are no mobile homes.

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8

ECONOMIC DEVELOPMENT

8.1 Economic Base
8.2 Employment
8.3 Occupation
8.4 Class of Labor Force and Places of Employment
8.5 Workforce Development Issues

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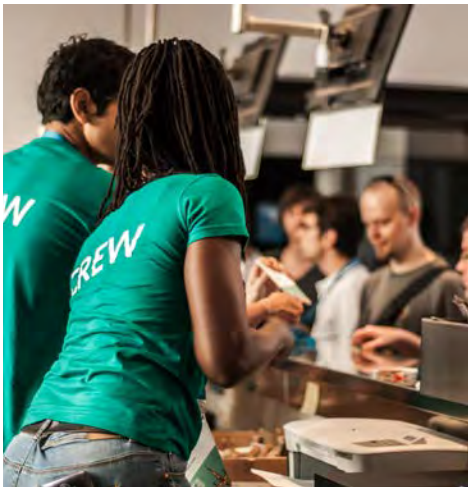

Economic Development

Economic development creates the conditions for economic growth and improved quality of life by expanding the capacity of individuals, firms, and communities to maximize the use of their talents and skills to support innovation, and responsibly produce and trade valuable goods and services. Economic Development requires effective, collaborative institutions focused on advancing mutual gain for the public and the private sector.

Economic development is policy intervention with the goal of improving the economic and social well-being of its community. Economic growth is observable through productivity and the rise in the value of services produced. Increasing productivity can raise living standards because more income improves the ability to purchase goods and services, and improve housing and education.

Port Wentworth's economic development and economic growth can be leveraged through industrial development in the top three industry types identified including:

1. **Public administration: 26%**
2. **Educational services, health care, and social assistance: 18.2%**
3. **Transportation and warehousing and utilities: 12.5%**

The projections of modest growth in in-demand industry sectors are important to the future of Port Wentworth's economy.

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ECONOMIC BASE 8.1

The table provides the percentages of Port Wentworth workforce employed in each industry type from 2010 to 2019.

Industry	2010	2015	2019
Employed population 16 years and over	1,625	3,067	3
Agriculture, forestry, fishing and hunting, and mining:	0.0%	0%	%
Construction	14.6%	9%	%
Manufacturing	16.6%	8%	%
Wholesale trade	6.3%	0%	%
Retail trade	6.4%	5%	%
Transportation and warehousing, and utilities:	16.9%	7%	%
Information	0.8%	1%	%
Finance and insurance, and real estate and rental and leasing:	3.8%	17%	%
Professional, scientific, and management, and administrative and waste management services:	5.9%	15%	%
Educational services, and health care and social assistance:	12.7%	25%	%
Arts, entertainment, and recreation, and accommodation and food services:	1.7%	1%	%
Other services, except public administration	9.9%	5%	%
Public administration	4.4%	7%	%

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EMPLOYMENT 8.2

The unemployment rate for Port Wentworth has remained decreased from about 7% to 5% This is lower than the Chatham County 2019 unemployment rate of 6.1%, but about the same as the Georgia unemployment rate of 4.8%.

Employment Status	2010	2015	2019
Population 16 years and over	3,426	4,997	608
In labor force	69.40%	80.30%	74.40%
Armed Forces	1.50%	2.10%	3%
Unemployment Rate	6.90%	5.50%	5.20%

OCCUPATION 8.3

The U.S. Census reports five primary occupation types and the proportion of total employed in each occupation for Port Wentworth are presented below.

Category	Percent
Civilian employed population 16 years and over	4,115
Management, business, science, and arts occupations:	38%
Service occupations:	27%
Sales and office occupations:	13%
Natural resources, construction, and maintenance occupations:	7%
Production, transportation, and material moving occupations:	14%

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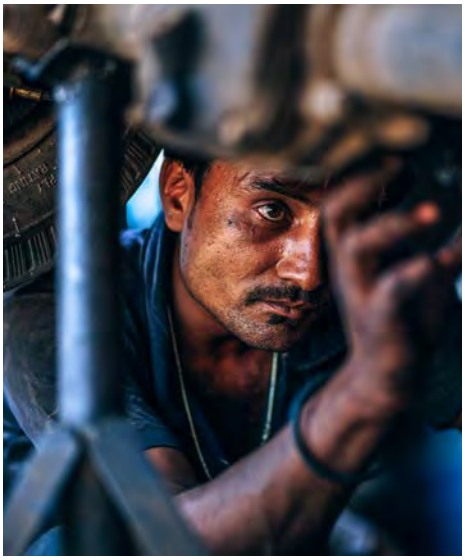

CLASS OF LABOR FORCE AND PLACES OF EMPLOYMENT 8.4

The class of workers in the labor force includes 55 percent percent private and salary workers, 29 percent government workers, and 6 percent self-employed workers.

Category	Percent
Private for-profit wage and salary workers:	55%
Private not-for-profit wage and salary workers	4%
Local government workers	6%
State government workers	18%
Federal government workers	11%
Self-employed in own not incorporated business workers	6%

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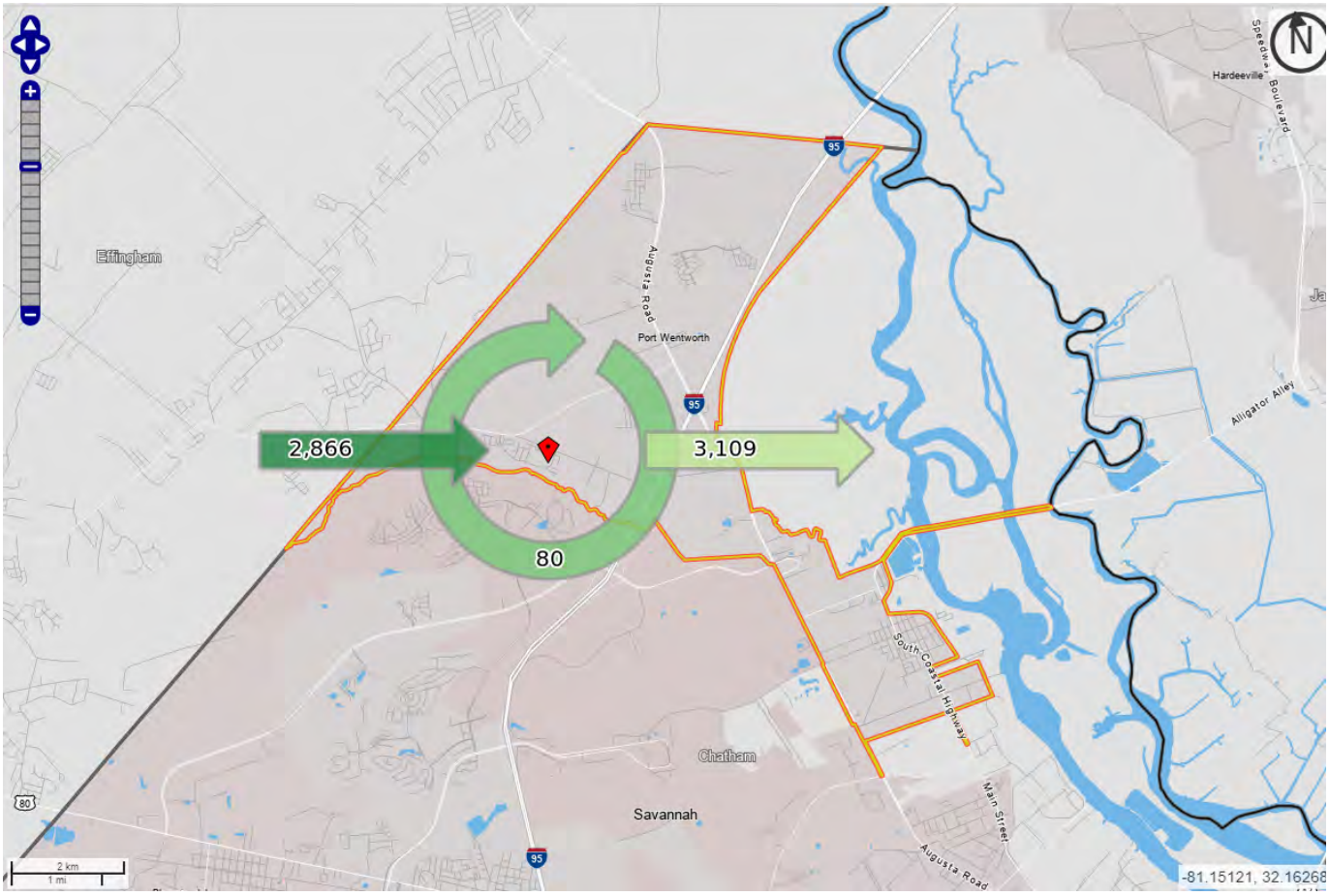
LIVE/WORK 8.6

In 2018, only 80 people both lived and worked in Port Wentworth. This suggests that Port Wentworth residents mostly commute to work outside the City, and the workers serving Port Wentworth come in from outside the City. This mismatch is exacerbated by traffic congestion, which can vastly increase commute times. The following inflow/outflow map shows those who work in Port Wentworth but live outside on the left, those who live in Port Wentworth but work elsewhere on the right, and those who live and work in Port Wentworth in the middle.



Source: Census On The Map 2018

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WORKFORCE DEVELOPMENT ISSUES 8.6

Workforce development issues, which threaten quality economic development in the region include:

- **High poverty rate;**
- **Low rates of educational attainment;**
- **Inferior skill levels for high-wage; and**
- **A poor level of occupational "soft skills."**

These factors present the risk of disinvestment and also pose difficulty in recruiting new firms to the area.

Coastal Workforce

One of the primary roles of the Coastal Workforce is to provide leadership and coordination of economic development and workforce programs.

Coastal Workforce coordinates and participates in partnerships that align with business, such as organized labor, community organizations, economic development practices, and education that enhances the economic viability. Coastal Workforce also coordinates with government agencies, such as human services, education systems (e.g., public school systems, community colleges, and universities), unions, and industry and trade associations.

Coastal Workforce is charged with ensuring that its job centers are business/customer-focused and outcome-based, with the placement of job seekers who meet businesses' hiring needs being a high priority. Because Coastal Workforce maintains effective workforce development systems, it enables many quality connections, matching employers' specific needs with those seeking gainful employment. All centers concentrate on the existing and emerging economic conditions and in-demand target industries.

Department of Community Affairs Economic Development

DCA offers a variety of economic development incentives and tools designed to help promote growth and job creation throughout the state.

U.S. Department of Agriculture Rural Development

USDA provides economic opportunity through financial assistance programs for a variety of rural applications, including funding to develop essential community facilities, projects that will create and retain employment in rural areas, and other activities leading to the development or expansion of small and emerging private businesses in rural areas.

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9

BROADBAND

9.1 Broadband in Georgia
9.2 Broadband in Port Wentworth
9.3 Planning Considerations

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9 BROADBAND

Broadband Internet service has evolved to be critically important for nearly all aspects of modern life, from business to education, healthcare, agriculture, tourism and government. The state of Georgia launched the Georgia Broadband Deployment Initiative in 2018 to identify areas of Georgia insufficiently served by broadband and to work on promotion and deployment of those broadband in those areas.

State goals indicate broadband Internet speeds should be a minimum of 25 megabits per second (mbps) download and 3 Mbps upload, which is in line with minimum standards from the Federal Communications Commission (FCC).

Communities are now required to include a broadband element within their local comprehensive plans. The purpose is "to ensure that a community adopts a strategy that demonstrates the promotion of broadband within the community."

9.1 Broadband in Georgia

Roughly 90 percent of the Georgia population is considered served by the standards for Broadband. The 2020 broadband map, produced by the Georgia Department of Community Affairs, highlights a significant digital divide between rural Georgia and metropolitan regions. In total, 70% of Georgia's unserved locations are in rural areas, and 31% of rural Georgia is unserved. As these rural areas continue to face pressures from population and job loss, a lack of quality broadband service presents yet another challenge for recruiting and retaining talented workers and businesses.

9.2 Broadband in Port Wentworth

Most of Port Wentworth is considered to be fully served, with the exception of one census block in the northeast that is 93% unserved. All areas of Port Wentworth have providers that offer speeds greater than 25/3 Mbps.

However, the definition of acceptability of broadband speed is relative. For example, the COVID-19 pandemic highlighted the importance of high-quality, stable and fast broadband when it forced a massive cultural shift toward video-based work and education. This data-heavy usage can be taxing on slower broadband networks, even if they meet the 25/3 minimum standard.

Small businesses and healthcare operations often need advanced speeds as well to function reliably or competitively.

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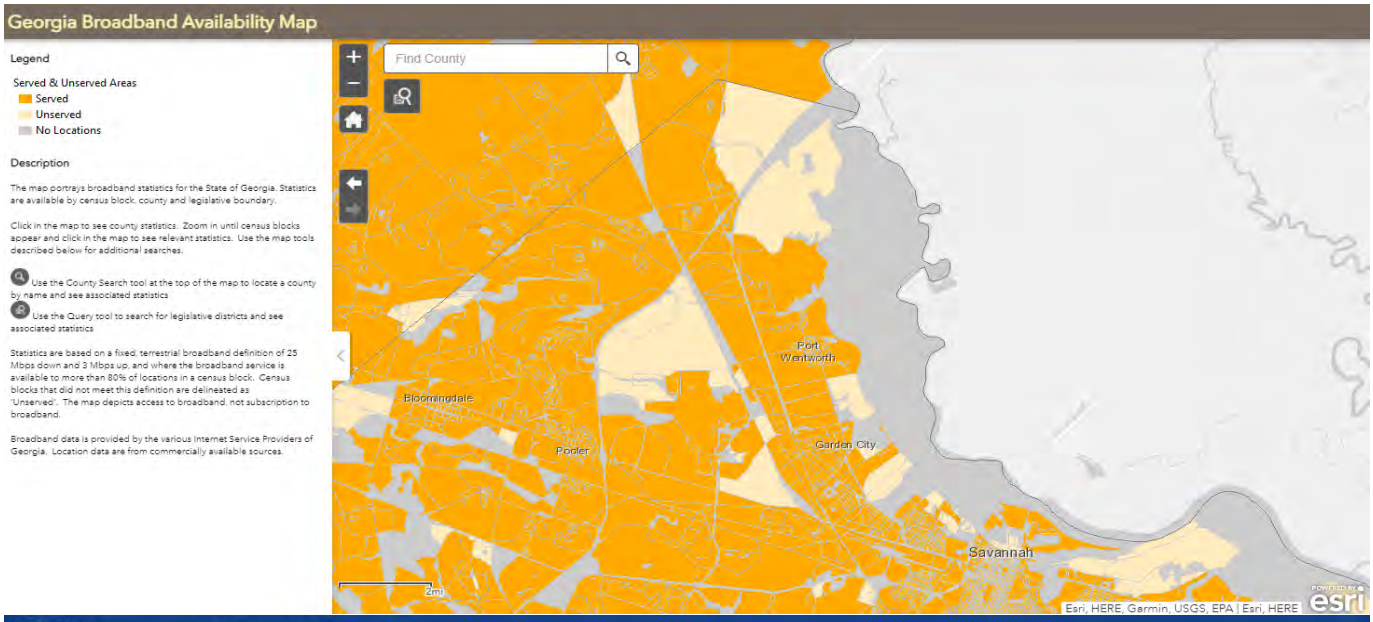
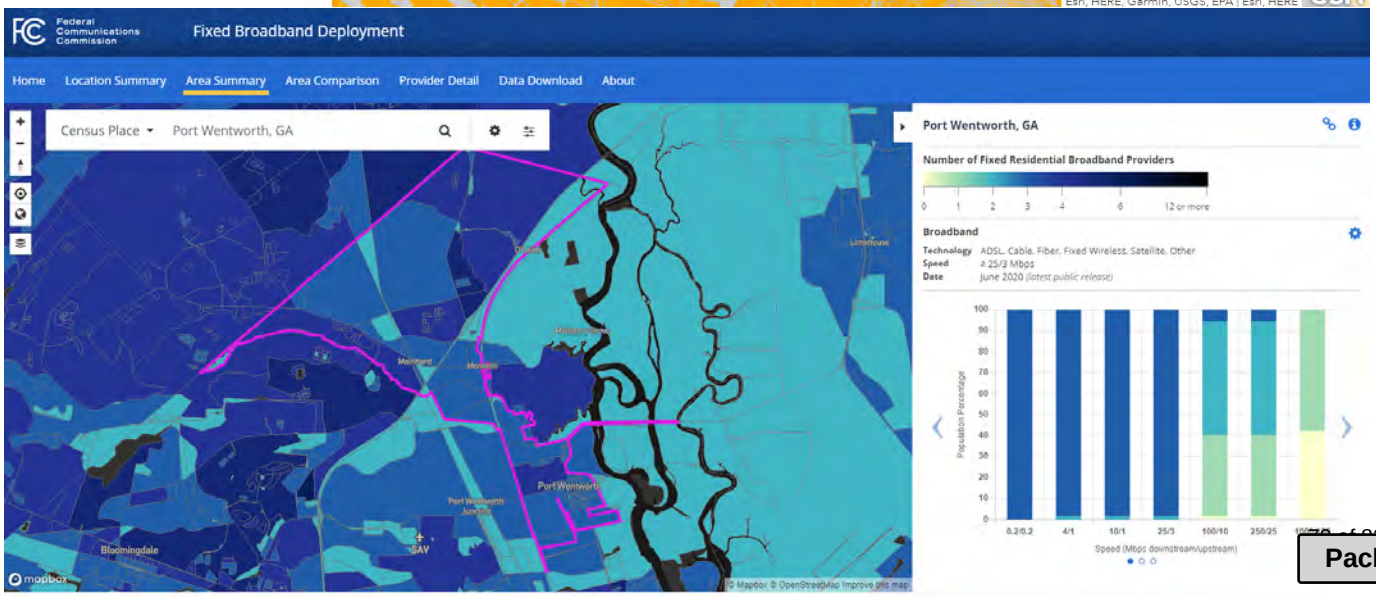
9.3 Planning Considerations

Port Wentworth should continue to monitor Internet speeds and service and continue to promote its broadband accessibility as an important benefit for residents, visitors, and businesses. It should monitor new grant and partnership funding opportunities from the state and federal governments to expand choice and speed for its citizens. The City should take its broadband infrastructure into account when planning response and mitigation procedures for natural disasters to keep disruption to a minimum during hazardous events and
recovery.

Additionally, the City should proactively monitor and address new advances in broadband and Internet technology, including the continued development of 5G "small cell" wireless facilities. Small cells, which are wireless antennas, will help increase telecommunication companies' network capacities and speeds. These technologies are essential to present and future technologies, such as smart cars and smart cities. The Georgia Municipal Association has created a model ordinance and permitting process for this technology, and more information is likely to come in the near future from state and federal agencies as deployment expands.





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10

COMMUNITY WORK PROGRAM

10.1 Short Term Work Program
10.2 Report of Accomplishments

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Community Work Program

The Community Work Program is the overall strategy for achieving Port Wentworth's Vision of the Future, addressing the community goals, encouraging compliance with the Character Areas, and for addressing each of the needs and opportunities. The Community Work Program identifies specific programs and tasks to be undertaken by the City to implement the Plan. A proposed schedule, responsible parties, and potential funding sources are outlined within this plan. The Georgia Department of Community Affairs requires that cities complete an implementation plan as well as a report of accomplishments, which is a status update summarizing the previous work plan. Included below are the 2021-2025 Community Work Plan and the 2016-2021 Report of Accomplishment:

Community Work Plan

Activities	*Year*					*Responsible Party*	*Cost Estimate*	*Funding Sources*
	2021	*2022*	*2023*	*2024*	*2025*			
Economic Development								
Develop an Urban Redevelopment Plan	X	X	X			City	$5,000	General Fund (GF)
Support Senora Guadalupe Festival in the Fall and coordinate with Garden City on festival implementation (Dec 12)	X	X	X	X	X	Chamber of Commerce (Chamber)	$5,000/yr	Hotel/Motel Tax (H/T)
Support Stand up for America Day festivities	X	X	X	X	X	City	$40,000/yr	GF
Implement the Master Plan for Old Port Wentworth.	X	X	X	X	X	City	TBD	GF/Special Purpose Local Option Sales Tax (SPLOST)
Create and maintain an inventory of potential infill and redevelopment commercial properties.	X	X	X	X	X	City	Staff Time	General Fund

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Activities	Year					Responsible Party	Cost Estimate	Funding Sources
	2021	2022	2023	2024	2025			
Implement vacant structure demolition program.	X	X	X	X	X	Budgets every year fund to demolish	$20,000/yr	GF
Explore the creation of a City sponsored neighborhood clean-up program to include targeted neighborhood clean ups.	X	X	X	X	X	Volunteers	Staff Time	GF
Implement impact fee ordinance	X					City & Impact Fee Committee	Staff Time	GF
Complete annual Capital Improvement Elements for impact fees	X	X	X	X	X	City	Staff Time	GF
Create a signage theme with a unified color scheme and install Wayfinding signage throughout the City.	X	X	X	X	X	City/Chamber	TBD	GF/Grants
Develop and implement a business recruitment and retention program.	X	X	X	X	X	City/Contractor	$75,000	GF
Promote tourism in Port Wentworth.	X	X	X	X	X	City/Chamber	$200,000+	H/T
Housing								
Identify & rezone land in or near the downtown district for the purpose of multi-family development.	X	X	X	X	X	City	Staff Time	GF
Land Use								
Develop a downtown revitalization strategy	X	X	X	X	X	City	Planner Staff Time	GF
Review and update Zoning Ordinance to be consistent with this Plan	X	X	X	X	X	City	Staff Time	GF
Ensure that any future development of the ED Zone is compatible with surrounding land uses and consistent with the City's regulations.	X	X	X	X	X	City	Staff Time	GF
Develop design standards for the Old Port Wentworth Master Plan Development to ensure that infill development is compatible in the Traditional Village area.	X					City	Planner Staff Time	GF
Hire a full-time planner	X					City	$70,000	GF
Implement and enforce landscaping/tree standards.	X	X	X	X	X	City	Staff Time	GF
Identify areas that are to be preserved as rural residential areas.	X					City	Planner Staff	GF
Transportation								
Work with the MPO to help facilitate construction of the Effingham Parkway.	X	X				City/GDOT	$40 Million	GDOT

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Activities	Year					Responsible Party	Cost Estimate	Funding Sources
	2021	2022	2023	2024	2025			
Natural and Cultural Resources								
Pursue opportunities for historic preservation and commemoration	X	X	X	X	X	City	Staff Time	GF
Develop and implement a Parks & Recreation Masterplan that addresses recreational facilities, public spaces, and greenspace acquisition and includes programming for all ages.	X					City	$200,000	GF/SPLOST
Consider the development of a stormwater utility to fund implementation of the NPDES Phase I SWMP, drainage analysis, and capital programs.	X	X	X	X	X	City	$75,000	Future Utility Revenue
Adopt basin-specific provisions in the stormwater ordinance to address capacity limitations in the downtown basin (based on the results of the masterplan.)	X	X	X	X	X	City	Staff Time	GF
Facilities and Services								
Perform a study to determine the capacity and level of service for City services and infrastructure	X					City	Planner Staff Time	Grant/GF
Utilize the results of this study when permitting new development.	X	X	X	X	X	City	Staff Time	GF
Perform aid to construction study for water, sewer, and stormwater	X	X	X	X	X	City	$20,000	W&S
Sewer pipe replacement	X	X	X	X	X	City	$600,000-$800,000	W&S
Create a CIP list based on the City's Capital Budget and keep it updated.	X	X	X	X	X	City	Staff Time	GF
Perform a labor wage / rate study	X					City / UGA (Carl Vinson)	$10,000	GF
Upgrade/purchase new fire protection equipment	X	X	X	X	X	City	$500,000	Fire Fee Revenue
Acquire property and construct a new Fire Station in North Port Wentworth	X					City	$2 Million	Fire Fee Revenue/ SPLOST
Purchase new Police cruisers and equipment	X	X	X	X	X	City	TBD	GF
Implement Stormwater Masterplan priority projects	X					City	$700,000	SPLOST
Identify opportunities to loop water system	X	X	X	X	X	City	Varies	W&S
Evaluate the potential for blending water systems	X					City	TBD	W&S

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Activities	Year					Responsible Party	Cost Estimate	Funding Sources
	2021	2022	2023	2024	2025			
Implement street improvements	X	X	X	X	X	City	$500,000	GF/LMIG
Acquire property and construct a sports complex	X	X	X	X	X	City	$11 million	SPLOST
Install generator at City Hall	X					City	$30,000	GF
Purchase turning target system and judgmental pistol simulation system for police department	X					Police Dept.	$135,000	Police
Explore locations for dog parks within or near existing residential areas of the City	X	X	X	X		City	$5,000	GF
Explore options to develop a recreational facility or tourist center on the City property near the water tower near Berrien Road	X	X	X	X	X	City	Staff Time	GF
Other Activities								
Identify and implement goals from the Blueprint that apply to Port Wentworth	X					City	Planner Staff Time	GF
Coordinate with CEMA on disaster preparedness exercises	X	X	X	X	X	City	TBD	GF
Deter development within the high risk flood areas of the City	X	X	X	X	X	City	TBD	GF
Prepare and adopt a resolution in support of the Chatham County Blueprint	X					City	Planner Staff Time	GF

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Report of Accomplishments

City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Economic Development		
Develop an Urban Redevelopment Plan	Underway	Progress has been made, and will be completed once the City has a full-time planner. It is anticipated that this will be completed in 2023.
Support Señora Guadalupe Festival in the Fall and coordinate with Garden City on festival implementation	Underway	This is a yearly tradition.
Support Stand Up For America Day festivities	Underway	This is a yearly tradition.
Implement the Master Plan for Old Port Wentworth	Underway	This is an ongoing yearly activity.
Create and maintain an inventory of potential infill and redevelopment commercial properties	Underway	The upgrade of the Houlihan Bridge will make this item a priority.
Implement vacant structure demolition program	Underway	This is an ongoing activity.
Explore the creation of a City sponsored neighborhood clean-up program	Underway	This activity is ongoing.
Coordinate with the DOT to establish promotional space for Port Wentworth in the new Welcome Center	Complete	Completed in 2020.
Build a City flex space for small business development	Complete	Completed in 2020.

City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Create a signage theme with a unified color scheme and install Wayfinding signage throughout the City	Underway	This activity is ongoing.
Develop and implement a business recruitment and retention program	Underway	This activity is ongoing.
Promote tourism in Port Wentworth	Underway	An RFQ has been completed.
Housing		
Identify and rezone land in or near the downtown district for the purpose of multi-family development	Underway	This activity is ongoing.
Amend zoning code to allow for upstairs residential downstairs commercial mixed use developments	Canceled	There was an absence of buildings with appropriate design for this purpose.
Land Use		
Update community work program	Canceled	This is already a regular part of the comprehensive planning process, and the City's planner will review the work program regularly.
Develop a zoning category for conservation land and rezone undevelopable wetlands as appropriate	Underway	This activity is ongoing.
Develop and implement landscaping/tree standards	Underway	Standards have been developed, but enforcement is ongoing.
Identify areas to be preserved as rural residential areas	Underway	This activity is ongoing.
Transportation		
Provide better signage identifying existing bus stops and make improvements to the facilities	Canceled	There are no bus stops within City limits.
Work with state DOT to designate Bonnie Bridge Road as a local street	Canceled	Bonnie Bridge Road has too much traffic. The City would prefer that GDOT take over jurisdiction of the road.
Expand the Port Wentworth Police Department Traffic Unit	Complete	Completed in 2021, 4 new positions added.
Increase police presence during peak traffic times along major corridors	Complete	Completed in 2020.

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City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Work with the MPO to help facilitate construction of the Benton Boulevard Extension	Complete	Completed in 2021.
Work with the MPO to help facilitate construction of the Effingham Parkway	Underway	Out for bid, will be completed by 2023.
Support the continuation of Jimmy DeLoach	Complete	Completed in 2018.
Support construction of the pedestrian bridge over Hwy 21 connecting Rice Creek and school	Complete	Completed in 2019.
Create a quiet zone on Crossgate Rd around rail road tracks	Complete	Completed in 2019.
Increase pedestrian safety by installing crosswalks on Hwy 25	Complete	Completed in 2018.
Natural and Cultural Resources		
Develop and maintain a GIS inventory of historic, cultural and natural resources	Complete	Completed in 2019.
Make this inventory publicly available so that new developments can plan around valuable resources	Complete	Completed in 2019.
Include the consideration of this inventory as part of the site plan review and re-zoning process	Complete	Completed in 2019.
Develop and implement a Parks & Recreation Masterplan that addresses recreational facilities, public spaces, and greenspace acquisition and includes programming for all ages	Underway	An RFQ for developer to do the masterplan has been completed, the plan is expected to be done in 2022.
Work to renew lease or acquire Houlihan Boat Facility and make identified improvements (ramp improvements, fishing pier)	Postponed	Any action on this item must wait until the GDOT upgrade of the bridge is complete.
Plan for multi-use trail access to Houllihan Boat Facility	Postponed	Any action on this item must wait until the GDOT upgrade of the bridge is complete.

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port

City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Amend Development Regulations to require active recreation and passive open space preservation in all planned developments	Complete	Completed in 2018.
Consider the development of a stormwater utility to fund implementation of the NPDES Phase I SWMP, drainage analysis, and capital programs	Underway	This activity is ongoing.
Continue to implement water conservation programs through public awareness campaign	Complete	Completed in 2019.
Support implementation and enforcement of NPDES Phase I MS4 Stormwater Permit.	Complete	Completed in 2021.
Seek flood insurance reductions through participation in the Community Rating System (CRS) program of the NFIP	Canceled	This item was canceled because it was too costly.
Adopt basin-specific provisions in the stormwater ordinance to address capacity limitations in the downtown basin (based on the results of the masterplan.)	Underway	This activity is ongoing.
Facilities and Services		
Perform a study to determine the capacity and level of service for City services and infrastructure	Underway	This activity is ongoing, and expected to be completed next year, following the hiring of the planner.
Utilize the results of this study when permitting new development	Underway	This will be a yearly activity.
Perform aid to construction study for water, sewer, and stormwater	Underway	This will be a yearly activity.
Work with Chatham County Board of Education (BOE) to maintain Port Wentworth Elementary School	Canceled	Port Wentworth Elementary School has closed.
Create a CIP list based on the City's Capital Budget and keep it updated	Underway	This activity is ongoing.
Perform a labor wage/rate study	Underway	This item is expected to be completed in 2021.

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port

City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Upgrade/purchase new fire protection equipment	Underway	This is a yearly activity.
Acquire property and construct a new Fire Station in North Port Wentworth	Underway	This item is expected to be completed in 2022.
Purchase new police cruisers and equipment	Underway	This is a yearly activity. 7 new cars have been purchases in 2021.
Perform capital upgrades and asset replacement on the wastewater treatment plant.	Complete	Completed in 2021.
Video and clean sanitary sewer lines in Newport Subdivision	Complete	Completed in 2021.
Implement Reuse Water Masterplan	Canceled	This activity was canceled because it was too costly.
Implement Stormwater Masterplan priority projects	Underway	This activity is expected to be completed in 2021.
Identify opportunities to loop water system	Underway	This will be a yearly activity.
Evaluate the potential for blending water systems	Underway	This activity is expected to be completed in 2022.
Look for opportunities to increase efficiency by contracting out specific Public Works Services	Complete	Completed in 2018.
Implement street improvements	Underway	This will be a yearly activity.
Identify locations to loop the water system	Complete	Completed in 2019.
Acquire property and construct a sports complex	Underway	This activity is ongoing and will take several years.

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port

City of Port Wentworth Report of Accomplishments 2016 - 2021		
Activity	**Status**	**Explanation**
Renovate concession area in gym	Complete	Completed in 2019.
Install generator in City Hall	Underway	This activity is expected to be complete in 2021.
Reuse distribution main from WWTF	Canceled	This item was canceled because it was too costly.
Construct a solid waste handling facility	Canceled	This activity was contracted out and is no longer handled by the City.
Purchase turning target system and judgmental pistol simulation system for police department	Underway	This item is expected to be complete in 2021.
Complete remodeling and upgrades to the court offices and court room	Complete	Completed in 2019
Explore locations for dog parks within or near existing residential areas of the City	Underway	This activity is ongoing, and expected to be completed in 2024.
Other Activities		
Identify and implement goals from the Blueprint that apply to Port Wentworth	Underway	This will be a yearly activity.
Coordinate with CEMA on disaster preparedness exercises	Underway	This will be a yearly activity.
Deter development within the high risk flood areas of the City	Underway	This will be a yearly activity.
Prepare and adopt a resolution in support of the Chatham County Blueprint	Underway	Expected to be complete in 2021.

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APPENDIX A:
PUBLIC INVOLVEMENT SUMMARY

Attachment: DRAFT City of Port Wentworth 2021 - 2041 Comprehensive Plan (2474 : DRAFT City of Port Wentworth 2021 - 2041 Comprehensive

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

AGENDA ITEM (ID # 2472)

DOC ID: 2472

Zoning Map Amendment Application submitted by Thomas Exley Jr., and the Estate of Thomas Exley Sr., for PIN # 7-0906-01-028 (Highway 21) to Rezone from RA (Residential Agriculture) to P-C-2 (Planned Community Business) and P-R-M (Planned Residential Multifamily) Zoning Districts for the purpose of a mixed-use development.

Issue/Item: Zoning Map Amendment Application submitted by Thomas Exley Jr., and the Estate of Thomas Exley Sr., for PIN # 7-0906-01-028 (Highway 21) to Rezone from RA (Residential Agriculture) to P-C-2 (Planned Community Business) and P-R-M (Planned Residential Multifamily) Zoning Districts for the purpose of a mixed-use development.

Background: The subject property is currently vacant woodland. There are no buildings or structures on the subject property.

Facts and Findings: The total amount of property to be rezoned is 31.43 acres. The applicant is requesting to rezone 29.52 acres to P-R-M (Planned Residential Multifamily) to develop either an Apartment Complex or a Townhome development. The applicant is requesting to rezone 1.91 acres to P-C-2 (Planned Community Business) for a commercial out parcel. All projects will also include associated parking, drainage, and water and sewer utilities. The proposed access is near the first round-a-bout on Rice Mill Road in the Rice Creek Subdivision.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, July 12, 2021 at 6:30 PM. **/ UPDATE: THE PLANNING COMMISSION VOTED UNANIMOUSLY TO APPROVE THE APPLICATION.**

ATTACHMENTS:

- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (PDF)
- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-APO (PDF)
- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Zoning Exhibit 6.11.21 (PDF)
- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Timeline (PDF)
- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Apt Concept (PDF)
- 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Townhome Concept (PDF)
- Planning Commission Minutes July 12, 2021 DRAFT (PDF)

RECEIVED JUN 14 2021 BY: MDB

APPLICATION TO AMEND THE ZONING MAP OF PORT WENTWORTH, GEORGIA

Name of Applicant: Thomas L. Exley JR & Estate of Thomas L. Exley SR. Phone #: 912 658-1625

Mailing Address: PO Box 1338 Rincon, GA 31326

Name of Property Owner: Thomas L. Exley JR & Estate of Thomas L. Exley SR. Phone #: 912 658-1625
(Use back if more than one owner)

Address of Property: 0 Augusta Road Port Wentworth, GA 31407

PIN #: 7-0906-01-028 Number of Acres: 31.43

Zoning Classification: Present R-A Requested PC2, PRM

Use of Property: Present Vacant/Residential Requested Mixed Use

✓ If the requested change is to extend an existing adjacent zoning district to include this property, explain below why the proposed change should be made.

_____ If the requested change is not to extend an adjacent zoning district, explain below why this property should be placed in a different zoning district than all adjoining properties. (How does it differ from adjoining properties and why should it be subject to different restrictions than those applying to adjoining properties?)

To Develop multifamily & Expand adjacent Commercial District

Attach the following documents:

1. Written legal description of the property (e.g. copy of deed) – full metes and bounds description rather than plat reference.
2. Name, PIN #, property address and mailing address of owners of all properties within 250 feet of this property.
3. Plat showing property lines with lengths and bearings, adjoining streets, locations of existing buildings, north arrow and scale. **Submit fifteen (15) copies of the plat in 11"x17" or larger and one copy in 8.5"x11".**
4. Site Plan of proposed use of property. **Submit fifteen (15) copies in 11"x17" or larger and one copy in 8.5"x11".**
5. Disclosure of Campaign Contributions and Gifts form.
6. Disclosure of Financial Interests form.
7. If property owner and applicant are not the same, Authorization by Property Owner form or Authorization of Attorney form.
8. Filing fee of $356 + $50 per acre + $50 Administrative Fee, payable to the City of Port Wentworth.

APPLICATION MUST BE FILED 20 BUSINESS DAYS PRIOR TO THE PLANNING COMMISSION MEETING AT WHICH THEY ARE TO BE CONSIDERED.

I hereby authorize the staff of the City of Port Wentworth to inspect the premises of the above described property and to post this property with the duly required notices. I hereby depose and say that all statements herein and attached statements submitted are true and correct to the best of my knowledge and belief.

Sworn to and subscribed before me this 11 day of June, 2021.

Carol A Russell
Notary Public

CAROL A RUSSELL NOTARY Comm. Exp. 07/19/22 PUBLIC TOOMBS COUNTY, GA

Executrix of the Est of Thomas L Exley SR

Deke M. Exley
Signature of Applicant

Thomas L Exley

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

AUTHORIZATION OF PROPERTY OWNER

Application for Rezoning or Variance

I swear that I am the owner of the property which is the subject matter of the attached application, as is shown in the records of Port Wentworth, Georgia.

I authorize the person named below to act as applicant in the pursuit of a variance or for the rezoning of this property.

Name of Applicant: Thomas L. Exley, JR & Estate of Thomas L. Exley JR

Address: PO Box 1338 Rincon, GA 31326

Telephone Number: 912 658-1625

Bebe H. Exley Executrix of Estate of Thomas L. 2/

Signature of Owner

Thomas L Exley

Personally appeared before me

Bebe H. Exley & Thomas L. Exley

who swears that the information contained in this authorization is true and correct to the best of his or her knowledge and belief.

Carol A Russell

Notary Public

CAROL A RUSSELL NOTARY PUBLIC TOOMBS COUNTY, GA Comm. Exp. 07/19/22

June 11, 2021

Date

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

(Required by Title 36, Chapter 67A, Official Code of Georgia Annotated)

Reference: Application filed on _____ , 20_____ , to rezone real property described as follows:

Within the two years preceding the above filing date, the applicant has made campaign contributions aggregating $250.00 or more to each member of the City Council of the City of Port Wentworth who will consider the application and is listed below. List (1) the name and official position of the local government official and (2) the dollar amount, description and date of each such campaign contribution.

I hereby depose and say that all statements herein are true, correct and complete to the best of my knowledge and belief.

Sworn to and subscribed before me this

11 day of June , 2021

Carol A Russell

Notary Public

CAROL A RUSSELL NOTARY PUBLIC TOOMBS COUNTY, GA Comm. Exp. 07/19/22

Executive Estate of Duke N. Exley

Signature of Applicant

Thomas L Exley

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

LEGAL DESCRIPTION - PARCEL B1

COMMENCING AT THE INTERSECTION OF THE SOUTHERN MITER RIGHT-OF-WAY LINE OF RICE MILL ROAD WITH THE WE RN RIGHT-OF-WAY LINE OF GEORGIA HIGHWAY NO. 21, EXTEND THENCE SOUTH 19 DEGREES 05 MINUTES 27 SECONDS WE \ DISTANCE OF 274.55 FEET TO A POINT BEGINNING;

EXTEND THENCE SOUTH 19 DEGREES 05 MINUTES 27 SECONDS WEST A DISTANCE OF 509.67 FEET TO A POINT;

EXTEND THENCE NORTH 61 DEGREES 02 MINUTES 05 SECONDS WEST A DISTANCE OF 879.68 FEET TO A POINT;

EXTEND THENCE NORTH 15 DEGREES 37 MINUTES 35 SECONDS WEST A DISTANCE OF 583.15 FEET TO A POINT;

EXTEND THENCE NORTH 23 DEGREES 03 MINUTES 47 SECONDS EAST A DISTANCE OF 112.51 FEET TO A POINT;

EXTEND THENCE NORTH 29 DEGREES 30 MINUTES 52 SECONDS EAST A DISTANCE OF 51.55 FEET TO A POINT;

EXTEND THENCE NORTH 70 DEGREES 26 MINUTES 20 SECONDS WEST A DISTANCE OF 104.58 FEET TO A POINT;

EXTEND THENCE NORTH 75 DEGREES 00 MINUTES 52 SECONDS WEST A DISTANCE OF 262.13 FEET TO A POINT;

EXTEND THENCE SOUTH 24 DEGREES 58 MINUTES 51 SECONDS WEST A DISTANCE OF 205.56 FEET TO A POINT;

EXTEND THENCE SOUTH 48 DEGREES 23 MINUTES 10 SECONDS WEST A DISTANCE OF 195.75 FEET TO A POINT;

EXTEND THENCE SOUTH 00 DEGREES 20 MINUTES 04 SECONDS EAST A DISTANCE OF 543.75 FEET TO A POINT;

EXTEND THENCE SOUTH 45 DEGREES 20 MINUTES 55 SECONDS WEST A DISTANCE OF 210.72 FEET TO A POINT;

EXTEND THENCE NORTH 73 DEGREES 43 MINUTES 00 SECONDS WEST A DISTANCE OF 192.68 FEET TO A POINT;

EXTEND THENCE NORTH 40 DEGREES 47 MINUTES 10 SECONDS WEST A DISTANCE OF 148.63 FEET TO A POINT;

EXTEND THENCE NORTH 13 DEGREES 08 MINUTES 25 SECONDS WEST A DISTANCE OF 257.44 FEET TO A POINT;

EXTEND THENCE NORTH 28 DEGREES 19 MINUTES 23 SECONDS EAST A DISTANCE OF 361.16 FEET TO A POINT;

EXTEND THENCE NORTH 78 DEGREES 27 MINUTES 28 SECONDS EAST A DISTANCE OF 159.42 FEET TO A POINT;

EXTEND THENCE NORTH 03 DEGREES 38 MINUTES 14 SECONDS EAST A DISTANCE OF 422.47 FEET TO A POINT;

EXTEND THENCE NORTH 22 DEGREES 19 MINUTES 34 SECONDS EAST A DISTANCE OF 130.11 FEET TO A POINT;

EXTEND THENCE SOUTH 67 DEGREES 40 MINUTES 26 SECONDS EAST A DISTANCE OF 1636.10 FEET TO A POINT;

EXTEND THENCE SOUTH 33 DEGREES 08 MINUTES 01 SECONDS WEST A DISTANCE OF 9.03 FEET TO A POINT;

EXTEND THENCE SOUTH 44 DEGREES 39 MINUTES 38 SECONDS WEST A DISTANCE OF 35.01 FEET TO A POINT;

EXTEND THENCE SOUTH 44 DEGREES 37 MINUTES 50 SECONDS EAST A DISTANCE OF 88.32 FEET TO A POINT;

EXTEND THENCE SOUTH 19 DEGREES 05 MINUTES 27 SECONDS WEST A DISTANCE OF 274.55 FEET TO A POINT;

EXTEND THENCE SOUTH 70 DEGREES 54 MINUTES 33 SECONDS EAST A DISTANCE OF 250.00 FEET TO THE POINT OF BEC IIN

HAVING AN AREA OF 29.52 ACRES

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

LEGAL DESCRIPTION - PARCEL B1-A

BEGINNING AT THE INTERSECTION OF THE SOUTHERN MITER RIGHT-OF-WAY LINE OF RICE MILL ROAD WITH TH WESTERN RIGHT-OF-WAY LINE OF GEORGIA HIGHWAY NO. 21;

EXTEND THENCE SOUTH 19 DEGREES 05 MINUTES 27 SECONDS WEST A DISTANCE OF 274.55 FEET TO A POINT;

EXTEND THENCE NORTH 70 DEGREES 54 MINUTES 33 SECONDS WEST A DISTANCE OF 250.00 FEET TO A POINT;

EXTEND THENCE NORTH 19 DEGREES 05 MINUTES 27 SECONDS EAST A DISTANCE OF 274.55 FEET TO A POINT;

EXTEND THENCE NORTH 44 DEGREES 37 MINUTES 50 SECONDS WEST A DISTANCE OF 88.32 FEET TO A POINT;

EXTEND THENCE NORTH 44 DEGREES 39 MINUTES 38 SECONDS EAST A DISTANCE OF 35.01 FEET TO A POINT;

EXTEND THENCE SOUTH 45 DEGREES 09 MINUTES 23 SECONDS EAST A DISTANCE OF 56.87 FEET TO A POINT;

EXTEND THENCE NORTH 44 DEGREES 50 MINUTES 37 SECONDS EAST A DISTANCE OF 19.38 FEET TO A POINT;

THENCE ALONG A CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 250.00', (AND BEING SUBTENDED B A CHORD BERING OF SOUTH 61 DEGREES 28 MINUTES 35 SECONDS EAST, A CHORD DISTANCE OF 81.94), ALONG SAID ARC A DISTANCE OF 82.32', TO A POINT;

EXTEND THENCE SOUTH 70 DEGREES 54 MINUTES 33 SECONDS EAST A DISTANCE OF 123.60 FEET TO A POINT;

EXTEND THENCE SOUTH 25 DEGREES 54 MINUTES 33 SECONDS EAST A DISTANCE OF 70.71 FEET TO THE POINT OF BEGINNING. HAVING AN AREA OF 1.91 ACRES

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00317373 6/21/2021 2:00 PM
OPER: ME TERM: 011
REF#: CK 5580

TRAN: 112.0000 BLDG PERMIT
210229 1,977.50CR
EXLEY, THOMAS
7-0906-01-028
DEV-ZMA 1,977.50CR

TENDERED: 1,977.50 CHECK
APPLIED: 1,977.50-

CHANGE: 0.00

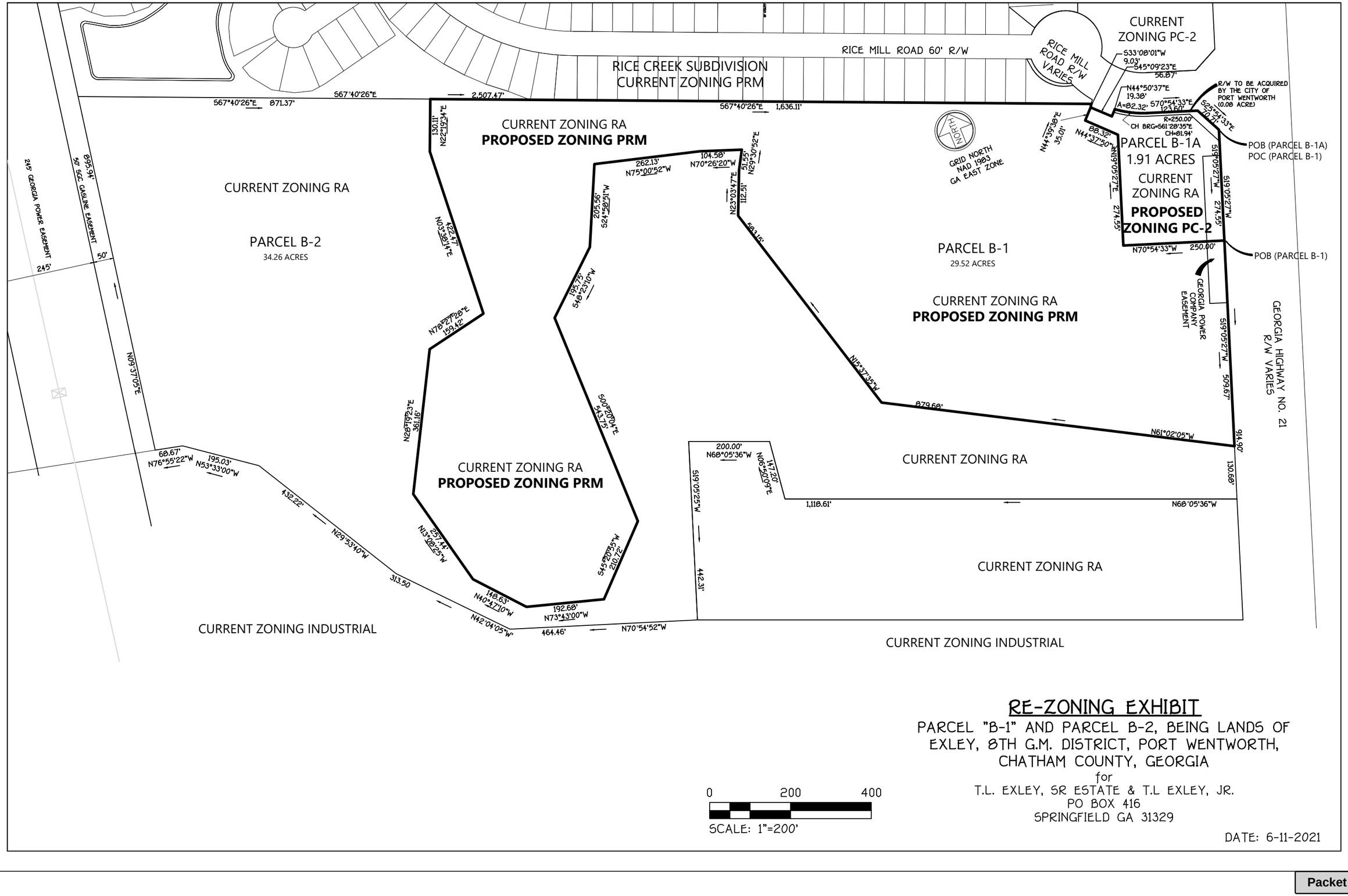
WWW.CITYOFPORTWENTWORTH.COM

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Application (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

Adjacent Property Owners

Owner Name	Mailing Address 1	City	Stat	Zip
Steven Umanzor	38 Rice Mill Road	Port Wentworth	GA	31407
Michael & Tina Banks	40 Rice Mill Road	Port Wentworth	GA	31407
Sharell E Belanfante	42 Rice Mill Road	Port Wentworth	GA	31407
Chunti M Brown	44 Rice Mill Road	Port Wentworth	GA	31407
Candice A Hester	46 Rice Mill Road	Port Wentworth	GA	31407
Fredrick Love	48 Rice Mill Road	Port Wentworth	GA	31407
Sidney & Mary Bryan Greene	26 Noble Jones Ct	Port Wentworth	GA	31407
Kyle M Eslick	28 Noble Jones Ct	Port Wentworth	GA	31407
Duoc Nguyen etal	30 Noble Jones Ct	Port Wentworth	GA	31407
William T Cardriche & Delores R Eason	32 Noble Jones Ct	Port Wentworth	GA	31407
John Lopaz & Melfenia Baker	34 Noble Jones Ct	Port Wentworth	GA	31407
Thomas Exley Jr	PO Box 1338	Rincon	GA	31326

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-APO (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)



RE-ZONING EXHIBIT

PARCEL "B-1" AND PARCEL B-2, BEING LANDS OF EXLEY, 8TH G.M. DISTRICT, PORT WENTWORTH, CHATHAM COUNTY, GEORGIA

for

T.L. EXLEY, SR ESTATE & T.L EXLEY, JR.
PO BOX 416
SPRINGFIELD GA 31329

DATE: 6-11-2021

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Zoning Exhibit 6.11.21 (2472 : Zoning Map Amendment 7-0906-01-028 Exley

Project Timeline

PIN 7-0906-01-028, Exley Property – ZMA

- 6/14/2021—application received- complete.
- 6/25/2021—received updated townhome concept plan.
- 7/12/2021—Planning Commission voted to approve.

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Timeline (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)

PROPOSED WETLAND IMPACT
FOR 80' ACCESS AND
UTILITY EASEMENT
0.10 ACRES
4,317.77 SF

RICE MILL ROAD
R/W VARIES

OUT PARCEL

LOT 1
1.91 ACRES
83,195.63 SF

GEORGIA HIGHWAY NO. 21
R/W VARIES

APPROXIMATE UPLAND
AREA FOR APARTMENTS
18.5 ACRES
18-3 STORY BUILDINGS

NORTH

SKETCH PLAN
PROPOSED APARTMENTS
EXLEY, BVH & McALLISTER, 1ST DISTRICT, 1ST WENTWORTH,
CHATHAM COUNTY, GEORGIA
WENTWORTH, GA

PARCEL B, TEN CT PORT

T&T Exley Properties, LLC
PO BOX 416
SPRINGFIELD GA 31329

0 100 200
SCALE: 1"=100'

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Apt Concept (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway

Attachment: 7-0906-01-028 HWY 21 ZMA RA-PC2, PRM JULY 2021-Townhome Concept (2472 : Zoning Map Amendment 7-0906-01-028 Exley

CITY OF PORT WENTWORTH

PLANNING COMMISSION

JULY 12, 2021

Council Meeting Room | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Chairman CJ Neesmith called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Commissioner Bright led the Prayer and Pledge of Allegiance.

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rufus Bright	Planning Commissioner	Present	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Absent	
Lauree Morris	Planning Commissioner	Absent	
CJ Neesmith	Planning Commissioner	Present	
Gabrielle Nelson	Planning Commissioner	Present	
Brian Harvey	Director of Development Services	Present	
Melanie Ellis	Building Inspector	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - Jun 14, 2021 6:30 PM

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

6. ZONING MAP AMENDMENTS (REZONING)

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)

A. Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., on behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

The applicant, Phillip McCorkle, was present. Mr. McCorkle gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what type of warehouses these would be and how may employees. Mr. McCorkle responded that at this time they do not know what companies will be in the warehouses and they estimate between 400 to 800 employees. Commissioner Herrin asked what the impact would be on the residents that live on Saussy Road. Mr. McCorkle responded that there will be minimum impact on the residents and the closest warehouse would be 1500 feet away from the closest home. He also stated there would be a 100-foot buffer with a 15-foot-high berm between the property and the residents.

Public Comments:

LaRay Benton - 135 Saussy Road - Spoke against the application

Tonya Brown - 150 Berrien Road - Spoke against the application

Lashawn Benton - 135 Saussy Road - Spoke against the application

J. P. Robinson - 225 Grant Road - Spoke against the application

Janet Bryant - 154 Berrien Road - Spoke against the application

After the public comment section was closed, Commissioner Nelson made a motion to Deny this application. Commissioner Bright seconded the motion to Deny the application. The vote to deny was unanimous

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Gabrielle Nelson, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

B. Zoning Map Amendment Application submitted by Thomas Exley Jr., and the Estate of Thomas Exley Sr., for PIN # 7-0906-01-028 (Highway 21) to Rezone from RA (Residential Agriculture) to P-C-2 (Planned Community Business) and P-R-M (Planned Residential Multifamily) Zoning Districts for the purpose of a mixed-use development.

Murray Marshall was present on behalf of the application. Mr. Marshall gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked how many homes would be in this development. Mr. Marshall answered that they estimate around 200 units. Chairman Neesmith asked what type of commercial project would be under the P-C-2 zoning. Mr. Marshall answered that they envision a strip type commercial development, similar to what is near the Lakeside Blvd entrance of Rice Hope. Commissioner Bright asked if this development would use the same path for the pedestrian bridge overpass. Mr. Marshall answered yes, they will encourage residents to use the pedestrian bridge. Commissioner Nelson asked if the residents in Rice Creek had been notified. Mr. Marshall answered that all property owners within the 250 feet were notified per the City ordinance and that signs have been posted.

Public Comments:

J. P. Robinson - 225 Grant Road - Asked questions regarding stormwater runoff and the impact on Black Creek. Mr. Marshall responded that currently Rice Creek drains through

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)

this property and into Black Creek and this project would tie into the existing drainage and that the development must retain post-development runoff on the site.

LaRay Benton - 135 Saussy Road - Asked where the entrance to the development would be and if the project would have any amenities. Mr. Marshall answer that the entrance would be at the existing curb cut on Rice Mill Road and that they will ask permission from GDOT to have a right in - right out off Highway 21 and that this type of project would have some type of amenities.

After the public comments section was closed, Commissioner Nelson asked if once this project would be similar to Jasper Village and that there would not be any negative impact on the storm drainage to the existing residents of Rice Creek. Mr. Marshall responded that the development should be a product that is competition for Jasper Village and that there will be no impact on the existing residents because this project is downhill from Rice Creek and that they will capture all the runoff that is required by regulation. Commissioner Herrin made a motion to approve the application. Commissioner Franklin seconded the motion to approve. The vote to approve the application was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

A. Site Plan Review Application submitted by Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a General Development Site Plan to allow a Single-Family Home Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

The applicant, Shane Malek, was present. Mr. Malek gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what the price range for these units was. Mr. Malek answered that the 1-bedroom started around $1150 a month in rent and the range goes up from there and this includes all the maintenance associated with the homes. Commissioner Nelson asked if the traffic in that area had been impacted. Mr. Malek stated that so far he has seen or heard any negative complaints on the traffic. Chairman Neesmith asked where the entrance for this phase would be. Mr. Malek responded that there would be the main entrance to Old Augusta Road, and they would like to improve and use Moore Drive as well. Commissioner Herrin asked if they would pave Moore Drive. Mr. Malek responded yes, they would like to pave if allowed to use it.

Public Comments:

Lashawn Benton - 150 Berrin Road - Asked about the fire separation between homes. Mr. Malek stated that they build to the fire code requirements and the homes would have a 10-foot separation.

Phillip Moore - 96 Moore Drive - Asked if the road that they are using for a construction road would remain in use after the development was finished. Mr. Malek responded that they do not want to use that road for the development and the road would stay as is.

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)

LaRay Benton - 135 Saussy Road - Asked if Old Highway 21 would be included in this project. Mr. Malek responded the improvements to Moore Drive would stop at Old Highway 21.
Betty Moore - 96 Moore Drive - Spoke in favor for the application.
After the public comments section was closed, Commissioner Bright made a motion to approve the application. Commissioner Nelson seconded the motion to approve the application. The vote to approve was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Rufus Bright, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

9. NEW BUSINESS

10. ADJOURNMENT

A. Adjournment

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

_____
Chairman

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2021.

_____
Secretary

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2472 : Zoning Map Amendment 7-0906-01-028 Exley Highway 21)

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

AGENDA ITEM (ID # 2473)

DOC ID: 2473

Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., on behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

Issue/Item: Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., on behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

Background: The subject property is currently vacant woodland. There are no buildings or structures on the subject property.

Facts and Findings: The subject property is composed of 6 separate parcels. The assemblage of the property is 404.69 acres of which approximately 125 acres is wetland areas. The proposed project consists of 5,629,500 square feet of warehouse space associated auto parking, trailer parking, drainage, utility, access and infrastructure improvements. This project's Development Impact Assessment is under review by City Engineer's T.R. Long Engineering, P.C.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, July 12, 2021 at 6:30 PM. **/ UPDATE: THE PLANNING COMMISSION VOTED TO DENY THIS APPLICATION. THE VOTE WAS UNANIMOUS.**

ATTACHMENTS:

- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Property Exhibit 5.13.21 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Timeline (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 C1 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 C2 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 C3A (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 C3B (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 C4 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- 1st Comment Letter TR Long 7.2.21 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- 2nd Comment Letter TR Long 7.9.21 (PDF)

- Planning Commission Minutes July 12, 2021 DRAFT (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA 6.17.21 (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-2 Noise Study Exhibits (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (PDF)
- VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit D - FEMA Map (PDF)

210184

RECEIVED MAY 14 2021 BY: MLE

APPLICATION TO AMEND THE ZONING MAP OF PORT WENTWORTH, GEORGIA

Name of Applicant: Phillip R. McCorkle, McCorkle, Johnson, & McCoy, LLP Phone #: (912) 232-6000/(912) 232-7416

Mailing Address: 319 Tattnall Street Savannah, Georgia 31401

Name of Property Owner: Please see attachment 1 Phone #: _____
(Use back if more than one owner)

Address of Property: Tax records indicate "Saussy Rd 31407"

PIN #: Please see attachment 2 Number of Acres: 404.41

Zoning Classification:	Present	R-A	Requested	P-I-1
Use of Property:	Present	Vacant	Requested	Warehousing

X If the requested change is to extend an existing adjacent zoning district to include this property, explain below why the proposed change should be made.

_____ If the requested change is not to extend an adjacent zoning district, explain below why this property should be placed in a different zoning district than all adjoining properties. (How does it differ from adjoining properties and why should it be subject to different restrictions than those applying to adjoining properties?)

The adjacent properties to the North are (i) part on a large industrial park located mostly in Effingham County and (ii) a tract recently rezoned by Council to P-I-1. Subject Property is a natural extension of thse areas that are zoned for and being developed for warehousing.

Attach the following documents:

1. Written legal description of the property (e.g. copy of deed) – full metes and bounds description rather than plat reference.
2. Name, PIN #, property address and mailing address of owners of all properties within 250 feet of this property.
3. Plat showing property lines with lengths and bearings, adjoining streets, locations of existing buildings, north arrow and scale. **Submit fifteen (15) copies of the plat in 11"x17" or larger and one copy in 8.5"x11".**
4. Site Plan of proposed use of property. **Submit fifteen (15) copies in 11"x17" or larger and one copy in 8.5"x11".**
5. Disclosure of Campaign Contributions and Gifts form.
6. Disclosure of Financial Interests form.
7. If property owner and applicant are not the same, Authorization by Property Owner form or Authorization of Attorney form.
8. Filing fee of $356 + $50 per acre + $50 Administrative Fee, payable to the City of Port Wentworth.

APPLICATION MUST BE FILED 20 BUSINESS DAYS PRIOR TO THE PLANNING COMMISSION MEETING AT WHICH THEY ARE TO BE CONSIDERED.

I hereby authorize the staff of the City of Port Wentworth to inspect the premises of the above described property and to post this property with the duly required notices. I hereby depose and say that all statements herein and attached statements submitted are true and correct to the best of my knowledge and belief.

Sworn to and subscribed before me this 14th day of May, 2021.

Signature of Applicant

Notary Public

Angela B Todaro
NOTARY PUBLIC
Chatham County, GEORGIA
My Commission Expires 01/31/2023

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Attachment 1

List of Property Owners

Samuel Varnedoe, Jr.	(706) 358-2964
Comer Varnedoe Meadows	(912) 856-6960

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Attachment 2

List of Property Identification Numbers (PIN)

Varnedoe and Meadows	7-0976-02-044	
	7-0976-02-043	(portion)
	7-0976-02-042	
	7-0976-02-040	
	7-0976-02-039	
	7-0976-02-037	
	7-0976-02-036	(portion)

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

COMMENCING AT A POINT AT THE INTERSECTION OF THE WESTERN RIGHT OF WAY OF GEORGIA HIGHWAY 21, VARIABLE WIDTH RIGHT OF WAY, AND THE NORTHERN PRIVATE RIGHT OF WAY OF JEFFERS ROAD (ALSO KNOWN AS COLDBROOK ROAD); THENCE ALONG THE NORTHERN PRIVATE RIGHT OF WAY OF JEFFERS ROAD (ALSO KNOWN AS COLDBROOK ROAD) THE FOLLOWING SIX COURSES AND DISTANCES: N56°43'31"W A DISTANCE OF 797.52' TO A POINT, N56°42'48"W A DISTANCE OF 974.85' TO A POINT, N15°04'35"W A DISTANCE OF 13.32' TO A POINT, N57°01'23"W A DISTANCE OF 540.55' TO A POINT, S11°05'32"E A DISTANCE OF 27.84' TO A POINT, N57°01'23"W A DISTANCE OF 816.66' TO A POINT; THENCE S13°12'10"E A DISTANCE OF 1,283.45' TO A POINT; THENCE S13°11'41"E A DISTANCE OF 138.91' TO A POINT, AND BEING THE **POINT OF BEGINNING**; THENCE S13°11'41"E A DISTANCE OF 877.27' TO A POINT; THENCE S82°26'30"W A DISTANCE OF 448.66' TO A POINT; THENCE S18°53'40"E A DISTANCE OF 532.06' TO A POINT; THENCE N82°26'30"E A DISTANCE OF 450.99' TO A POINT; THENCE S18°53'40"E A DISTANCE OF 54.38' TO A POINT; THENCE N79°52'46"E A DISTANCE OF 50.59' TO A POINT; THENCE S43°22'27"E A DISTANCE OF 290.58' TO A POINT; THENCE S10°31'44"E A DISTANCE OF 770.00' TO A POINT; THENCE S11°26'33"W A DISTANCE OF 552.06' TO A POINT; THENCE S76°12'20"W A DISTANCE OF 1,003.24' TO A POINT; THENCE S15°19'30"W A DISTANCE OF 547.57'' TO A POINT; THENCE S69°35'46"W A DISTANCE OF 207.74' TO A POINT; THENCE N88°37'15"W A DISTANCE OF 553.67' TO A POINT; THENCE S35°21'15"W A DISTANCE OF 420.51' TO A POINT; THENCE N72°23'15"W A DISTANCE OF 279.27' TO A POINT; THENCE S44°46'35"W A DISTANCE OF 675.05' TO A POINT; THENCE S86°41'55"W A DISTANCE OF 220.18' TO A POINT; THENCE N21°00'25"E A DISTANCE OF 826.52' TO A POINT; THENCE N12°16'54"W A DISTANCE OF 2023.79' TO A POINT; THENCE S89°20'25"E A DISTANCE OF 539.93' TO A POINT; THENCE N12°35'20"W A DISTANCE OF 765.78' TO A POINT; THENCE N87°26'00"W A DISTANCE OF 119.52' TO A POINT; THENCE N88°16'20"W A DISTANCE OF 678.48' TO A POINT; THENCE N26°55'25"W A DISTANCE OF 768.93' TO A POINT; THENCE S70°48'30"W A DISTANCE OF 1158.51' TO A POINT; THENCE N08°18'16"W A DISTANCE OF 2276.80' TO A POINT; THENCE N49°05'52"E A DISTANCE OF 1675.19' TO A POINT; THENCE S39°47'53"E A DISTANCE OF 367.29' TO A POINT; THENCE S69°43'54"E A DISTANCE OF 1399.65' TO A POINT; THENCE S13°44'15"E A DISTANCE OF 216.26' TO A POINT; THENCE S11°06'45"E A DISTANCE OF 824.16' TO A POINT; THENCE S11°55'55"E A DISTANCE OF 1004.20' TO A POINT; THENCE S11°55'59"E A DISTANCE OF 568.91' TO A POINT; THENCE S11°55'55"E A DISTANCE OF 275.81' TO A POINT; THENCE N81°56'10"E A DISTANCE OF 399.64' TO A POINT; THENCE N13°32'50"W A DISTANCE OF 276.45' TO A POINT; THENCE N81°56'10"E A DISTANCE OF 1091.13' TO THE **POINT OF BEGINNING**; AND CONTAINING 404.41 ACRES.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Surrounding Property Owners within 250 feet of Phase II

Angela A. Anderson
PIN: 70975 01001
Property Address: Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 120 Danbury Court, Pooler, Georgia 31322

John Henry Hargrove, Et al.
PIN: 70975 01002
Property Address: Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 924 Mill Court, Savannah, Georgia 31419

Brenda Ann Richards
PIN: 70975 01002A
Property Address: Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 918 Barberry Lane, Peachtree City, Georgia 30269

Everlina Jones & Clifford Reynolds
PIN: 70975 01002B
Property Address: 362 Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 160 Village Lake Drive, Pooler, Georgia 31322

Ruth W. Thomas
PIN: 70976 02014
Property Address: Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 788 Hancock Street, Brooklyn, New York 11233

Matthew Jerome Jackson, Sr.
PIN: 70976 02014A
Property Address: Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 3 Winoka Drive, Garden city, Georgia 31408

Willie Steele
PIN: 70976 02007
Property Address: Punkin Bridge Road, Port Wentworth, Georgia 31407
Mailing Address: P.O. Box 23092, Savannah, Georgia 31403

Edward B. Deal Properties No. 2, LLC
PIN: 70976 02009
Property Address: Berrien Avenue, Port Wentworth, Georgia 31407
Mailing Address: 301 Oxford Lane, Savannah, Georgia 31405

Raddie Jackson, et al.
PIN: 70976 02010
Property Address: Berrien Avenue, Port Wentworth, Georgia 31407
Mailing Address: 208 Jenks Street, Savannah, Georgia 31415

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Georgia Power Company
PIN 70975 01027
Property Address: 300 Saussy Road, Port Wentworth, Georgia 31407
Mailing Address: 241 Ralph McGill Blvd. NE, Bin 10180, Atlanta, Georgia 30308

Claretha Holmes, Dolres Hicks, Patricia Bing, Joseph (J.W.) Bowers, Clarence Bowers, Jimmy Bowers and Larry Bowers.
PIN: 70975 01014
Property Address: 0 Jeffers Rd, Port Wentworth, GA 31407
Mailing Address: P.O. Box 555616, Orlando, FL 32855

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

(Required by Title 36, Chapter 67A, Official Code of Georgia Annotated)

Reference: Application filed on May 14th, 20 21, to rezone real property described as follows:

Within the two years preceding the above filing date, the applicant has made campaign contributions aggregating $250.00 or more to each member of the City Council of the City of Port Wentworth who will consider the application and is listed below. List (1) the name and official position of the local government official and (2) the dollar amount, description and date of each such campaign contribution.

I hereby depose and say that all statements herein are true, correct and complete to the best of my knowledge and belief.

Sworn to and subscribed before me this

14 day of May, 2021

TONIA R. HARBER ANDERSON NOTARY PUBLIC CHATHAM COUNTY GEORGIA EXPIRES 11/12/2022

Notary Public

Signature of Applicant
Phillip R. McCorkle

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

DISCLOSURE OF FINANCIAL INTERESTS

(Required by Title 36, Chapter 67A, Official Code of Georgia Annotated)

Reference: Application filed on _____, 20_____, to rezone real property described as follows:

The undersigned official of the City of Port Wentworth has a property interest (Note 1) in said property as follows:

The undersigned official of the City of Port Wentworth has financial interest (Note 2) in a business entity (Note 3) which has property interest in said property, which financial interest is as follows:

The undersigned official of the City of Port Wentworth has a member of the family (Note 4) having a property interest in said property or a financial interest in a business entity which has a property interest in said property, which family member and property interest or financial interest are as follows:

Note 1: Property Interest – Direct ownership of real property, including any percentage of ownership less than total ownership
Note 2: Financial Interest – All direct ownership interests of the total assets or capital stock of a business entity where such ownership interest is 10 percent or more
Note 3: Business Entity – Corporation, partnership, limited partnership, firm, enterprise, franchise, association or trust
Note 4: Member of the family – Spouse, mother, father, brother, sister, son or daughter

---

I hereby depose and say that all statements herein are true, correct and complete to the best of my knowledge and belief.

Sworn to and subscribed before me this
_____ day of _____ , 20_____.

_____
Signature of Official

_____
Notary Public

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

AUTHORIZATION OF PROPERTY OWNER

Application for Rezoning or Variance

I swear that I am the owner of the property which is the subject matter of the attached application, as is shown in the records of Port Wentworth, Georgia.

I authorize the person named below to act as applicant in the pursuit of a variance or for the rezoning of this property.

Name of Applicant: Phillip R. McCorkle

Address: 319 Tattnall Street, Savannah, Georgia 31401

Telephone Number: (912) 232-6000

Signature of Owner

Comer Varnedoe Meadows

Personally appeared before me

Michelle Lawrence

who swears that the information contained in this authorization is true and correct to the best of his or her knowledge and belief.

Michelle Lawrence

Notary Public

1/20/21

Date

MICHELLE LAWRENCE NOTARY PUBLIC GEORGIA CHATHAM COUNTY EXPIRES 03-25-23

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

AUTHORIZATION OF PROPERTY OWNER

Application for Rezoning or Variance

I swear that I am the owner of the property which is the subject matter of the attached application, as is shown in the records of Port Wentworth, Georgia.

I authorize the person named below to act as applicant in the pursuit of a variance or for the rezoning of this property.

Name of Applicant: Phillip R. McCorkle

Address: 319 Tattnall Street, Savannah, Georgia 31401

Telephone Number: (912) 232-6000

Signature of Owner

Samuel Varnedoe, Jr.

Donnelly Marks POA for Samuel Varnedoe, Jr.

Personally appeared before me

Michelle Lawrence

who swears that the information contained in this authorization is true and correct to the best of his or her knowledge and belief.

Michelle Lawrence

Notary Public

January 14, 2021

Date

MICHELLE LAWRENCE NOTARY PUBLIC CHATHAM COUNTY GEORGIA EXPIRES 03-28-23

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00313387 5/14/2021 2:25 PM
OPER: ME TERM: 011
REF#: CK 2214

TRAN: 112.0000 BLDG PERMIT
210184 20,626.50CR
PHILLIP MCCORKLE
HIGHWAY 21
DEV-ZMA 20,626.50CR

TENDERED: 20,626.50 CHECK
APPLIED: 20,626.50-

CHANGE: 0.00

WWW.CITYOFPORTWENTWORTH.COM

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Application (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	13.32'	N15°04'35"W
L2	27.84'	S11°05'32"E
L3	138.91'	S13°11'41"E
L4	54.38'	S18°53'40"E
L5	50.59'	N79°52'46"E
L6	207.74'	S69°35'46"W
L7	119.52'	N87°26'00"W

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GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

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DATE: _____ BY: _____

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Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15779 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5373

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PROPERTY EXHIBIT OF VARNEDOE - WIGGINS PROPERTY AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:
PROPERTY EXHIBIT

SCALE:	1" = 300'
PROJECT NO:	200230.000
DATE:	5/13/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:
EX-1

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Thu, 13 May 2021 - 5:03pm mwallace
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDOE-WIGGINS - PH II PROPERTY EXHIBIT.dwg

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Property Exhibit 5.13.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

Project Timeline

Varnedoe-Wiggins Tract PH II ZMA

DIA Review by T.R. Long Engineering

- 5/14/2021—application received
- 5/18/2021—sent DIA to T.R. Long Engineering for review
- 5/18/2021—Sent email to Creative Approach to order signs
- 5/18/2021—DRI report received from CRC
- 6/1/2021—Sent email to Trent for review status
- 6/1/2021—Signs received from Creative Approach.
- 6/14/2021—email received from Phillip McCorkle asking to table this item to the July meeting.
- 6/21/2021—updated dates on zoning signs
- 6/23/2021—received resubmittal for DIA from Kern & Co. Forwarded to TR Long.
- 6/29/2021—sent email to TR Long for review update.
- 7/6/2021—Sent 1st comment letter from TR Long to applicants (Phillip McCorkle & Chad Zittrouer)
- 7/9/2021—received 2nd comment letter from TR Long to applicant. Sent to Applicant.
- 7/12/2021—The Planning Commission voted to deny the application.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- Timeline (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,572,650 SF
404.41 AC

TOTAL -
8,201,650 SF
766.56 AC

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GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 500 ft.

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Kern & Co., LLC
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Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 13179 (31416) Savannah, Georgia (912) 354-4626
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5575

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:
SITE PLAN

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	6/12/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:
C1

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Mon, 21 Jun 2021 - 2:09pm cstinnett
DRAWING PATH: G:\2020\200230.000\dwgs\VARNEDO-WIGGINS - Site GDP Exhibit 6.17.21-B.dwg

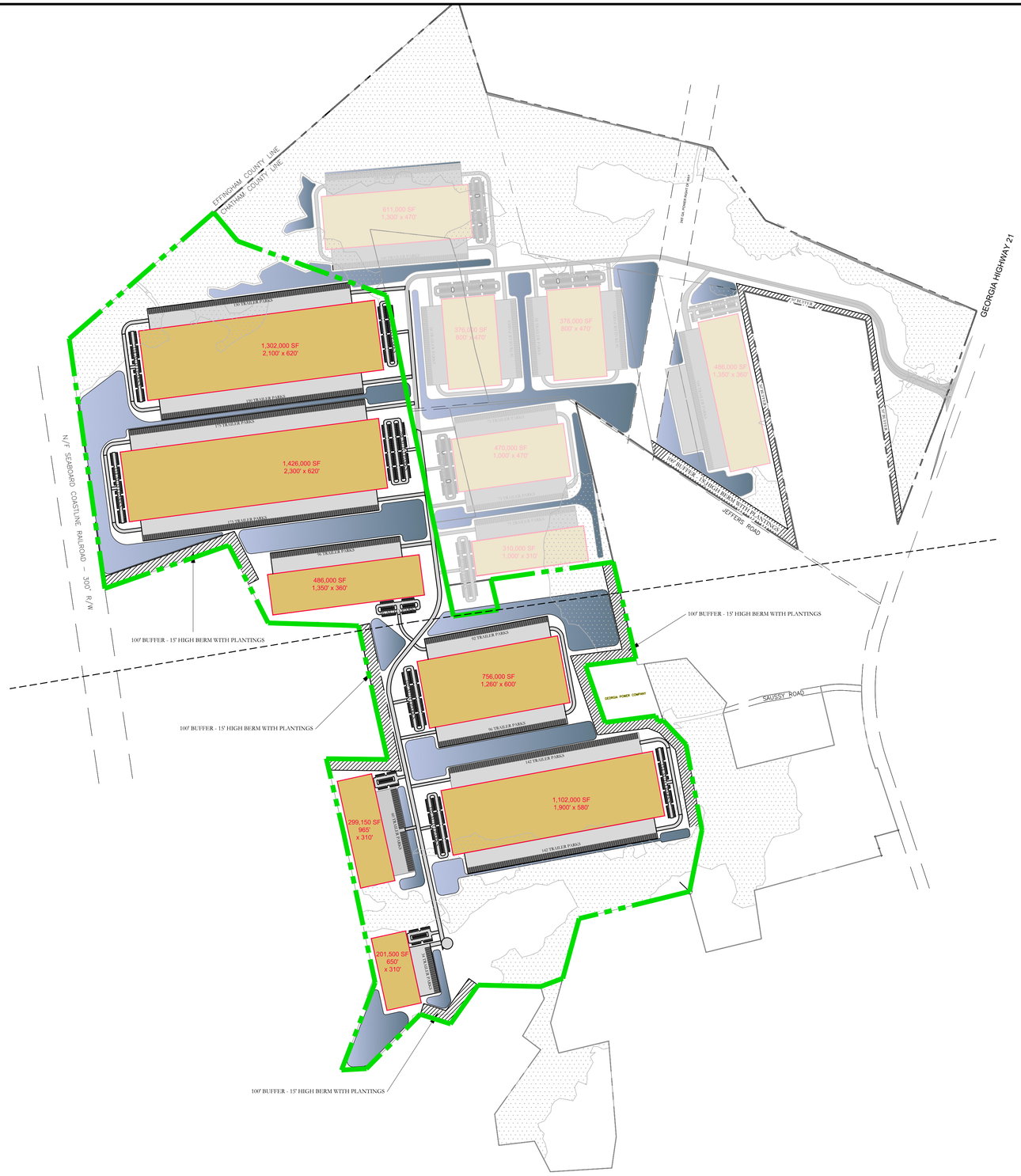
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PH1 JUNE 2021- GSP 6.23.21 C1 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,572,650 SF
404.41 AC

TOTAL -
8,201,650 SF
766.56 AC



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GRAPHIC SCALE

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319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5575

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:

SITE PLAN W/ PONDS

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	6/12/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:

C2

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Mon, 21 Jun 2021 - 2:03pm - cstroup
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDO-WIGGINS - Site GDP Exhibit 6.17.21-B.dwg

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PH1 JUNE 2021- GSP 6.23.21 C2 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,572,650 SF
404.41 AC

TOTAL -
8,201,650 SF
766.56 AC

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GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

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319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5353

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STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:
SITE PLAN W/ CONTOURS

SCALE:	1"= 300'
PROJECT NO:	200230.000
DATE:	6/12/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:
C-3A

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Mon, 21 Jun 2021 - 2:09pm crittmoser
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDOE-WIGGINS - Site GDP Exhibit 6.17.21-B.dwg

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- GSP 6.23.21 CJA (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,572,650 SF
404.41 AC

TOTAL -
8,201,650 SF
766.56 AC

Kern & Co., LLC
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Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 13179 (31416) Savannah, Georgia (912) 354-4626
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5575

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:

SITE PLAN W/ CONTOURS

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	6/12/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:

C-3B

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Mon, 21 Jun 2021 - 2:00pm cstrouser
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDOE-WIGGINS - Site GDP Exhibit 6.17.21-B.dwg

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PII JUNE 2021- GSP 6.23.21 CSB (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,572,650 SF
404.41 AC

TOTAL -
8,201,650 SF
766.56 AC

SOIL	
CAPE FEAR SOILS	Cc
POOLER FINE SANDY LOAM	Pn
WAHEE SANDY LOAM	Waf
ELLABELLE LOAMY SAND	El
OCILLA COMPLEX	Oj
OGEECHEE LOAMING FINE SAND	Ok

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GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 500 ft.

NOT FOR CONSTRUCTION
RELEASED FOR CONSTRUCTION
DATE: _____ BY: _____

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 13179 (31416) Savannah, Georgia (912) 354-4626
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5575

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE: SITE PLAN

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	6/12/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO: C4

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Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PH1 JUNE 2021- GSP 6.23.21 C4 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

Mon, 21 Jun 2021 - 2:03pm - cstrouse
DRAWING PATH: G:\2020\200230.000\.dwg\VARNEDOE-WIGGINS - Site GDP Exhibit 6.17.21-B.dwg

114 North Commerce Street
Hinesville, Georgia 31313
Office: (912) 368-5664
Fax: (912) 368-7206

T R LONG ENGINEERING, P.C.

308 Commercial Drive
Savannah, Georgia 31406
Office: (912) 335-1046
Fax: (912) 355-1642

July 2, 2021

Mr. Brian Harvey
City of Port Wentworth
7224 Georgia Highway 21
Port Wentworth, Georgia 31407

Re: Varnedoe-Wiggins Tract Phase 2
State Route 21
Port Wentworth, Georgia

Dear Mr. Harvey,

T. R. Long Engineering, P.C. has reviewed the "Development Impact Assessment, Varnedoe-Wiggins Tract - Phase 2" prepared by Kern & Co., LLC dated May 12, 2021. This submittal includes a Traffic Impact Analysis prepared by Kimley-Horn and Associates dated May 2021 and a Development of Regional Impact Report prepared by Coastal Regional Commission.

T. R. Long Engineering, P.C. recommends that the following items be addressed prior to approval:

1. The DRI states, in the School Section, "an estimated 200-400 employees will reside in Chatham County with approximately 50% of those families having children attending public school." Please reference and provide the supporting data for this statement. Additionally, from that supporting documentation, please provide the estimated increase the school system will experience from the refenced families.

2. The DRI states, in the Park and Recreation Section, "The development of this project will not have an impact on the local parks and recreation facilities." Please reference and provide the supporting data for this statement. If data is available for current capacity vs total capacity of those park systems, please provide it.

3. The DRI states, in the Public Safety (Police and Fire) Section, "The development of this project should have minimal impact on the police and fire departments." Please reference and provide the supporting data for the estimated increase in criminal activity, traffic accidents, and fire incidents as a result of the population increase due to the workers.

4. The DRI stated that a noise study would be provided at a later date. We recommend that a noise study be conducted, prior to approval, to ensure the proposed noise levels are below the maximum allowable limit. Detailed design should be included in the specific development plan.

5. Please revise Section D to include the designated future use of the property as stated by the City of Port Wentworth Comprehensive Plan and if this use coincides with that

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- 1st Comment Letter TR Long 7.2.21 (2473 : Zoning Map Amendment

designation. Additionally, please revise the greenspace percentage excluding the wetlands. If storm water infiltration is a concern, the wetlands should not be considered. Wetlands will generally contain poor, non-permeable soil, and/or have standing water that is not idle for storm water infiltration.

6. T. R. Long Engineering, P.C. recommends that the recommendations outlined in the Traffic Impact Analysis prepared by Kimley Horn be incorporated into the specific development plan for the Varnedoe-Wiggins Tract - Phase 2. The recommended improvements for the intersection of State Route 21 and Lakeside Boulevard are of particular importance since this intersection may currently meet the warrants for a traffic signal under current conditions.

7. T. R. Long Engineering, P.C. recommends that all improvements recommended in the Traffic Impact Analysis, and appropriate modifications, be designed, approved, and permitted by the Department of Transportation, The City of Port Wentworth, and the State of Georgia prior to the release of any Land Disturbing Activities or Building Permits.

Should you have any questions, comments, or require additional information please contact us.

Sincerely,

Trent R. Long, P.E.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- 1st Comment Letter TR Long 7.2.21 (2473 : Zoning Map Amendment

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July 9, 2021

Mr. Brian Harvey
City of Port Wentworth
7224 Georgia Highway 21
Port Wentworth, Georgia 31407

Re: Varnedoe-Wiggins Tract Phase 2
State Route 21
Port Wentworth, Georgia

Dear Mr. Harvey,

T. R. Long Engineering, P.C. has reviewed the "Development Impact Assessment, Varnedoe-Wiggins Tract - Phase 2" prepared by Kern & Co., LLC dated May 12, 2021. This submittal includes a Limited Noise Exposure Evaluation prepared by Terracon dated June 15, 2021, Traffic Impact Analysis prepared by Kimley-Horn and Associates dated May 2021, and a Development of Regional Impact Report prepared by Coastal Regional Commission.

T. R. Long Engineering, P.C. concurs with the findings of the Development Impact Assessment, Limited Noise Exposure Evaluation, and Traffic Impact Analysis along with the following recommendations:

1. T. R. Long Engineering, P.C. recommends that the recommendations outlined in the Traffic Impact Analysis prepared by Kimley Horn be incorporated into the specific development plan for the Varnedoe-Wiggins Tract - Phase 2. The recommended improvements for the intersection of State Route 21 and Lakeside Boulevard are of particular importance since this intersection may currently meet the warrants for a traffic signal under current conditions.
2. T. R. Long Engineering, P.C. recommends that the recommendations outlined in the Limited Noise Exposure Evaluation prepared by Terracon be incorporated into the specific development plan for the Varnedoe-Wiggins Tract - Phase 2.
3. T. R. Long Engineering, P.C. recommends that all improvements recommended in the Traffic Impact Analysis, Limited Noise Exposure Evaluation, and appropriate modifications, be designed, approved, and permitted by the Department of Transportation, The City of Port Wentworth, and the State of Georgia prior to the release of any Land Disturbing Activities or Building Permits.

Should you have any questions, comments, or require additional information please contact us.

Sincerely,

Adam Wilkinson, P.E.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- 2nd Comment Letter TR Long 7.9.21 (2473 : Zoning Map Amendment

CITY OF PORT WENTWORTH

PLANNING COMMISSION

JULY 12, 2021

Council Meeting Room | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Chairman CJ Neesmith called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Commissioner Bright led the Prayer and Pledge of Allegiance.

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rufus Bright	Planning Commissioner	Present	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Absent	
Lauree Morris	Planning Commissioner	Absent	
CJ Neesmith	Planning Commissioner	Present	
Gabrielle Nelson	Planning Commissioner	Present	
Brian Harvey	Director of Development Services	Present	
Melanie Ellis	Building Inspector	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - Jun 14, 2021 6:30 PM

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

6. ZONING MAP AMENDMENTS (REZONING)

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II

A. Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., on behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

The applicant, Phillip McCorkle, was present. Mr. McCorkle gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what type of warehouses these would be and how may employees. Mr. McCorkle responded that at this time they do not know what companies will be in the warehouses and they estimate between 400 to 800 employees. Commissioner Herrin asked what the impact would be on the residents that live on Saussy Road. Mr. McCorkle responded that there will be minimum impact on the residents and the closest warehouse would be 1500 feet away from the closest home. He also stated there would be a 100-foot buffer with a 15-foot-high berm between the property and the residents.

Public Comments:

LaRay Benton - 135 Saussy Road - Spoke against the application

Tonya Brown - 150 Berrien Road - Spoke against the application

Lashawn Benton - 135 Saussy Road - Spoke against the application

J. P. Robinson - 225 Grant Road - Spoke against the application

Janet Bryant - 154 Berrien Road - Spoke against the application

After the public comment section was closed, Commissioner Nelson made a motion to Deny this application. Commissioner Bright seconded the motion to Deny the application. The vote to deny was unanimous

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Gabrielle Nelson, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

B. Zoning Map Amendment Application submitted by Thomas Exley Jr., and the Estate of Thomas Exley Sr., for PIN # 7-0906-01-028 (Highway 21) to Rezone from RA (Residential Agriculture) to P-C-2 (Planned Community Business) and P-R-M (Planned Residential Multifamily) Zoning Districts for the purpose of a mixed-use development.

Murray Marshall was present on behalf of the application. Mr. Marshall gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked how many homes would be in this development. Mr. Marshall answered that they estimate around 200 units. Chairman Neesmith asked what type of commercial project would be under the P-C-2 zoning. Mr. Marshall answered that they envision a strip type commercial development, similar to what is near the Lakeside Blvd entrance of Rice Hope. Commissioner Bright asked if this development would use the same path for the pedestrian bridge overpass. Mr. Marshall answered yes, they will encourage residents to use the pedestrian bridge. Commissioner Nelson asked if the residents in Rice Creek had been notified. Mr. Marshall answered that all property owners within the 250 feet were notified per the City ordinance and that signs have been posted.

Public Comments:

J. P. Robinson - 225 Grant Road - Asked questions regarding stormwater runoff and the impact on Black Creek. Mr. Marshall responded that currently Rice Creek drains through

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II

this property and into Black Creek and this project would tie into the existing drainage and that the development must retain post-development runoff on the site.

LaRay Benton - 135 Saussy Road - Asked where the entrance to the development would be and if the project would have any amenities. Mr. Marshall answer that the entrance would be at the existing curb cut on Rice Mill Road and that they will ask permission from GDOT to have a right in - right out off Highway 21 and that this type of project would have some type of amenities.

After the public comments section was closed, Commissioner Nelson asked if once this project would be similar to Jasper Village and that there would not be any negative impact on the storm drainage to the existing residents of Rice Creek. Mr. Marshall responded that the development should be a product that is competition for Jasper Village and that there will be no impact on the existing residents because this project is downhill from Rice Creek and that they will capture all the runoff that is required by regulation. Commissioner Herrin made a motion to approve the application. Commissioner Franklin seconded the motion to approve. The vote to approve the application was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

A. Site Plan Review Application submitted by Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a General Development Site Plan to allow a Single-Family Home Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

The applicant, Shane Malek, was present. Mr. Malek gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what the price range for these units was. Mr. Malek answered that the 1-bedroom started around $1150 a month in rent and the range goes up from there and this includes all the maintenance associated with the homes. Commissioner Nelson asked if the traffic in that area had been impacted. Mr. Malek stated that so far he has seen or heard any negative complaints on the traffic. Chairman Neesmith asked where the entrance for this phase would be. Mr. Malek responded that there would be the main entrance to Old Augusta Road, and they would like to improve and use Moore Drive as well. Commissioner Herrin asked if they would pave Moore Drive. Mr. Malek responded yes, they would like to pave if allowed to use it.

Public Comments:

Lashawn Benton - 150 Berrin Road - Asked about the fire separation between homes. Mr. Malek stated that they build to the fire code requirements and the homes would have a 10-foot separation.

Phillip Moore - 96 Moore Drive - Asked if the road that they are using for a construction road would remain in use after the development was finished. Mr. Malek responded that they do not want to use that road for the development and the road would stay as is.

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II

LaRay Benton - 135 Saussy Road - Asked if Old Highway 21 would be included in this project. Mr. Malek responded the improvements to Moore Drive would stop at Old Highway 21.
Betty Moore - 96 Moore Drive - Spoke in favor for the application.
After the public comments section was closed, Commissioner Bright made a motion to approve the application. Commissioner Nelson seconded the motion to approve the application. The vote to approve was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Rufus Bright, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

9. NEW BUSINESS

10. ADJOURNMENT

A. Adjournment

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

_____
Chairman

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2021.

_____
Secretary

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II

DEVELOPMENT OF REGIONAL IMPACT REPORT

Prepared for
City of Port Wentworth, Georgia
DRI #3308
SPH-21 Industrial Park Phase II
May 18, 2021

Prepared by:
Coastal Regional Commission
1181 Coastal Dr. SW
Darien, GA

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

TABLE OF CONTENTS

1. APPLICATION INFORMATION 3
1.1 Jurisdiction 3
1.2 Applicant 3
2. PROJECT DESCRIPTION 3
2.1 Summary 3
3. PARCEL DATA 3
3.1 Size of Property 3
3.2 General Location 3
4. LAND USE INFORMATION 4
4.1 Site Map 4
4.2 Built Features 4
4.3 Future Development Map Designation (Character Area) 4
4.4 Zoning District 4
5. CONSISTENCY AND COMPATIBILITY ANALYSIS 4
5.1 Consistency with the Chatham County Comprehensive Plan 4
6. CONSISTENCY WITH REGIONAL PLAN OF COASTAL GEORGIA 5
6.1 Regional Development Map and Defining Narrative 5
6.2 Guiding Principles of the Regional Plan 5
6.3 Guiding Principles for Water and Wastewater 5
6.4 Guiding Principles for Stormwater Management 6
6.5 Guiding Principles for Transportation 6
6.6 Guiding Principles for Historic and Cultural Resources 7
6.7 Guiding Principles for Natural Resources 7
6.8 Guiding Principles for Regional Growth Management 8
6.9 Guiding Principles on Business and Industry 9
6.10 Guiding Principles for Agricultural Lands 10
6.11 Guiding Principles for Communities for a Lifetime - Livable Communities 11
6.12 Guiding Principles for Coastal Vulnerability and Resilience 12
7. REGIONAL RESOURCE PLAN AND RIR 13
7.1 The Regional Resource Plan 13
7.2 Area Requiring Special Attention 13
7.3 Natural Resources 13
7.4 Wetlands 15
8. COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY CEDS) 15
8.1 Population and Employment Trends 15
9. CRC Resources 15
9.1 Coastal Stormwater Supplement 15
9.2 Regional Design Guidelines 16

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

1. APPLICATION INFORMATION

1.1 Jurisdiction

City of Port Wentworth, Georgia
DRI # 3308
SPH-21 Industrial Park Phase II

1.2 Applicant

SPH-21, LLC
404-358-1178
chris@crossgateconsulting.com

2. PROJECT DESCRIPTION

2.1 Summary

This DRI is the second phase of development of the SPH-21 Industrial Park, Port Wentworth, GA. DRI 3270 covered the first phase of development. The second phase of the industrial park will comprise approximately 5,629,500 square feet of warehouses with associated infrastructure improvements. This represents approximately 68% of the overall project.

The developer is different from the current property owner. The current property owners are: Anthony Steele, Glenn Steele, Donnelly Marks - attorney in fact for Samuel Varnedoe Jr., Comer Varne

According to the DRI submittal, the estimated value at build out is $430,000,000. According to the DRI submittal the estimated annual local tax revenue for the project is $6,127,500.

3. PARCEL DATA

3.1 Size of Property

The project size is approximately 5,629,500 square feet.

3.2 General Location

The property is located in the Southeast Georgia region, referred to as the Coastal Region, consisting of ten counties and thirty-five communities. Pooler is in the northern part of the coastal region.

The DRI project is located along GA Highway 21.

The subject property is located in Port Wentworth, within Chatham County.

According to the United States Census Bureau, the 2019 population of Pooler was estimated to be 25,694.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

4. LAND USE INFORMATION

4.1 Site Map

The site plan for use of the property is attached.

4.2 Built Features

The applicant indicates that the development will not displace any existing uses.

4.3 Future Development Map Designation (Character Area)

According to the Character Areas Map from the City of Port Wentworth Comprehensive Plan, the project site is designated as Suburban and Rural Neighborhood. The Port Wentworth comprehensive plan has the following description for the Suburban character area: "These areas include where typical types of suburban residential subdivision development have occurred or will occur in the future. Development within these areas in encouraged to include neo-traditional, conservation subdivision, or cluster development patterns."
The following description is for the Rural Residential character area: "The area is rural, undeveloped land with little development pressure for suburban growth. Development patterns include low pedestrian orientation and access, very large lots, open space, and high degree of building separation."

4.4 Zoning District

The property is currently zoned Residential Agriculture. The Residential Agriculture zoning designation is defined in the Port Wentworth Code of Ordinances as follows: "The purpose of this district is to protect those more rural areas within Port Wentworth for future urban development and to protect certain rural highway roadside areas against strip development which can lead to traffic congestion, traffic hazards, and roadside blight."

5. CONSISTENCY AND COMPATIBILITY ANALYSIS

5.1 Consistency with the Comprehensive Plan

The Port Wentworth Comprehensive Plan was adopted in 2016. The Character Areas map designates this area as Suburban and Rural Residential. The proposed DRI site is designated as Residential-Agriculture.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

6. CONSISTENCY WITH REGIONAL PLAN OF COASTAL GEORGIA

6.1 Regional Development Map and Defining Narrative

The Regional Development Map illustrates the desired future land use patterns from the regions' Areas Requiring Special Attention and the regions' Projected Development Patterns using the following categories:

a. Conservation
b. Rural
c. Developed
d. Developing

The Regional Future Development Map designates the area as belonging to the Areas of Rapid Development and Areas of Significant Natural Resources designations.

6.2 Guiding Principles of the Regional Plan

Guiding Principles identify those overarching values which are to be utilized and evaluated for all decisions within the region. This section provides the analysis of the consistency between the proposed DRI and the Guiding Principles in the Regional Plan.

6.3 Guiding Principles for Water and Wastewater

Seven guiding principles are identified in the Regional Plan for water and wastewater:

1. Require the use of green building strategies to minimize water demand.
2. Promote the use of a standardized protocol to forecast water needs to meet reasonable future water needs throughout region.
3. Promote use of purple pipe and grey water techniques and use of surface water in addition to groundwater where appropriate.
4. Promote water conservation through use of a tiered rate system.
5. Promote the use of the best available technology, dependent on soil type, for wastewater treatment.
6. Large areas of Coastal Georgia are beyond the reach of urban wastewater infrastructure, or centralized wastewater treatment facilities. To ensure sustainable communities, require proper siting, design, construction, use, and maintenance of decentralized wastewater treatment, or ISTS (Individual Sewage Treatment Systems).
7. Pursue regional coordination in provision of water and wastewater facilities.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

6.4 Guiding Principles for Stormwater Management

Five guiding principles are identified in the Regional Plan for Stormwater Management:

1. Encourage development practices and sitings that do not significantly impact wetlands and habitat areas or allow for the preservation and conservation of wetlands and habitat areas through appropriate land use practices.
2. Promote the use of coast-specific quality growth principles and programs, such as the Green Growth Guidelines, Earthcraft Coastal Communities and the Coastal Supplement to the Georgia Stormwater Management Manual, to guide site planning and development.
3. Minimize impervious coverage wherever possible. The level of impervious cover in a development, rather than population density, is the best predictor of whether development will affect the quality of water resource.
4. Develop stormwater programs across the region.
5. Pursue State-level funding for regional water quality monitoring activities due to the statewide importance of coastal waters and estuaries.

6.5 Guiding Principles for Transportation

Seven guiding principles are identified in the Regional Plan for Transportation:

1. Provide the forum and the support to coordinate regional multi-modal transportation, including rail, airports, and public transportation, and also the planning and development of street connectivity and transit-oriented developments.
2. Promote the establishment of regional transportation compact(s) to provide a forum for local governments and MPO's to communicate and discuss transportation issues and decisions in the Coastal Region. These compacts do not replace the existing federal and State processes mandated in law, but provide a forum to communicate issues, ideas and discussions.
3. Promote coordination among agencies and jurisdictions in development of a region-wide, multi-modal transportation network, including transit, where applicable.
4. Encourage the coordination of transportation network improvements and land use planning.
5. Promote coordinated public infrastructure and school location planning with land use planning.
6. Maintain a human scale environment with context sensitive design practices.
7. Work to establish dedicated revenue source(s) for transportation improvements.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

6.6 Guiding Principles for Historic and Cultural Resources

Eleven guiding principles are identified in the Regional Plan for Historic and Cultural Resources:

1. Encourage local governments to examine proposed development areas prior to development approval and require mitigation to significant resources.
2. Encourage development practices and sitings that do not significantly impact cultural and historical areas.
3. Maintain viewsheds of significant cultural and historic assets.
4. Maintain a range of landscapes and environments that provide diversity of habitats, species, resources and opportunities for recreation, commerce, community enjoyment and cultural practices.
5. Designate culturally and/or archaeological and/or historically significant resource management areas for potential acquisition and/or protection.
6. Educate residents and visitors regarding the statewide importance of this region's cultural and historic resources.
7. Encourage utilization and cooperation of museums, universities, foundations, non-government organizations, professional associations, and private firms to advise and monitor management.
8. Promote the establishment of partnerships for the development and utilization of incentives to restore, remediate or reuse cultural resources as appropriate.
9. Compile the traditional lore and knowledge of local people and integrate their understandings and practices into planning and development.
10. Encourage coordination among agencies and jurisdictions in developing and funding heritage conservation land uses and ensuring public access to publicly held and supported conservation areas.
11. Promote designation of Main Street and Better Home Town Communities.

6.7 Guiding Principles for Natural Resources

Twenty guiding principles are identified in the Regional Plan for Natural Resources:

1. Promote the protection, restoration, enhancement and management of natural resources.
2. Continue the traditional use of land and water (such as farming, forestry, fishing, etc.) as feasible, provided that any significant impacts on resources can be prevented or effectively mitigated.
3. Protect and enhance Coastal Georgia's water resources, including surface water, groundwater, and wetlands and ground water recharge areas.
4. Protect and enhance water quality, quantity and flow regimes.
5. Commit to investing in the protection of natural resources before any restoration and/or remediation is needed.
6. Encourage the restoration and protection of wetlands to provide flooding, storm and habitat protection.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

7. Maintain viewsheds of significant natural resources.
8. Enhance access to natural resources for recreation, public education, and tourist attractions as appropriate within the protection mission.
9. Encourage utilization of universities, foundations, and non-government organizations to advise, monitor, and enhance management.
10. Promote the establishment of partnerships and funding mechanisms for the development and utilization of incentives to restore, rehabilitate, protect or reuse natural resources as appropriate.
11. Encourage development practices and sitings that do not significantly impact environmentally sensitive areas.
12. Promote low impact design practices that protect natural resources.
13. Promote to local governments a program of monitoring installation and impacts of individual and community docks along the coast.
14. Promote the monitoring of cumulative impacts of waterfront development along the coast.
15. Maintain a range of landscapes and environments that provide diversity of habitats, species, resources and opportunities for recreation, commerce, community enjoyment and cultural practices.
16. Encourage the development and use of a method to place a value on ecosystem services.
17. Promote the identification of innovative funding sources and development of ecosystem services markets (e.g. carbon, storm buffers, traditional land and water uses).
18. Promote the Adopt-a-Wetland program in areas that can be used as reference sites and that are within projected development areas.
19. Encourage coordination among agencies and jurisdictions in developing and funding conservation land uses and ensuring public access to publicly held and supported conservation areas.
20. Encourage coordination among agencies in studying the impacts of climate change and sea level rising.

6.8 Guiding Principles for Regional Growth Management

Twenty-three guiding principles are identified in the Regional Plan for Growth Management:

1. Encourage development that enhances the desired character of each of the region's cities and towns.
2. Avoid establishment of new land uses which may be incompatible with existing adjacent land uses.
3. Protect our military installations from land use changes that jeopardize their mission through creation or implementation of Joint Land Use Studies (JLUS).
4. Promote growth in those areas that can be efficiently served by infrastructure, such as water, wastewater and transportation.
5. Encourage infill development as an alternative to expansion.
6. Focus new development in compact nodes that can be served by public or community infrastructure providers.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

7. Maintain and enhance the scenic character of our rural highways and county roads.
8. Encourage clustered developments, particularly in areas that are suitable and proposed for development, that maximize open spaces, protect natural, cultural and historic resources, preserve wildlife habitat, and include green, low impact development strategies.
9. Encourage local governments to allow green, low impact developments as an alternative to traditional development standards and develop incentives encouraging their use.
10. Limit development in sensitive areas located near marshes and waterways, to low impact development that maintains our coastal character, while recognizing and protecting the sensitive environment.
11. Strongly encourage that new developments have minimal impacts on vital wetlands, coastal hammocks, marshes, and waterways.
12. Discourage lot-by-lot water and wastewater treatment systems for multiple lot developments.
13. Promote green building techniques to maximize energy efficiency and water conservation and minimize post construction impacts on the environment.
14. Encourage the development of a "transfer of development rights" (TDR) program.
15. Encourage development and compliance with minimum uniform land use and development standards for all local governments to adopt within the region.
16. Encourage coordination among agencies and jurisdictions in land use planning, regulation, review and permitting.
17. Promote affordable housing options.
18. Encourage the placement of new schools near existing infrastructure.
19. Partner with state, federal, non-governmental organizations and local governments to provide guidance on critical natural areas, land conservation efforts, and land use practices within each jurisdiction. Provide assistance in all outreach efforts forthcoming from this initiative.
20. Pursue opportunities for continuing education as it relates to regional issues.
21. Encourage enactment of impact fees to defray costs of new development.
22. Consider planning and/or managing a catastrophic event.
23. Promote reduction, reuse and recycle practices.

6.9 Guiding Principles on Business and Industry

Fourteen guiding principles are identified in the Regional Plan for Business and Industry.

1. Promote strategic distributions of business and industry across the region consistent with natural, cultural, historic and industrial resource strategies and encourage partnerships and collaboration between economic development agencies.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

2. Investigate ways to share costs and benefits across jurisdictional lines for both regional marketing and project support.
3. Incorporate community plans for the strategic use of land for manufacturing, distribution, etc., while recognizing and respecting natural resources and the unique differences between communities.
4. Coordinate with the Georgia Ports Authority (GPA) to identify their needs and identify mechanisms for the economic development industry to strengthen the GPA and its presence in logistics, distribution, and workforce development.
5. Leverage and incorporate the region's military installations (Fort Stewart Army Base, Hunter Army Airfield and Kings Bay Naval Base) and the Federal Law Enforcement Training Center to recruit economic development projects.
6. Incorporate Herty Advanced Materials Development Center's experience and position as a development center for the commercialization of materials and create incentives to retain a portion of pilot plant opportunities as new Georgia industries and to assist development authorities in increasing recruitment win rates.
7. Promote the historic nature, natural beauty and successful past and present performance of Coastal Georgia as a location site for film and clean high-tech industry and as a recruitment tool for opportunities.
8. Incorporate the Center of Innovation's (COI) statewide logistics plan into a regional strategy to assist in the recruitment of companies and leverage as support for industry.
9. Coordinate federal, State and local economic development funding programs and initiatives that affect the coast.
10. Enhance workforce development by collaborating with business, industry, and planning of educational entities that provide necessary workforce skills.
11. Increase existing industry retention and expansion rates.
12. Promote downtown revitalization efforts to enhance job creation and location of business and offices within downtown areas.
13. Incorporate current and future needs for housing, infrastructure, and natural resource protection into economic development initiatives.
14. Encourage international economic developments that support strategic industry sectors.
15. Enhance economic development and tourism opportunities by increasing cross functional communication.

6.10 Guiding Principles for Agricultural Lands

Ten guiding principles are identified in the Regional Plan for Agricultural Lands.

1. Strongly discourage the conversion of prime farmland to urban uses as it represents a loss to the region's landscape.
2. Wise use and protection of basic soil and water resources helps to achieve practical water quality goals and maintain viable agriculture.
3. Viable agriculture is the backbone of a functioning network of agriculture, open space, and natural areas and a range of strategies should be used to ensure the value of agricultural land.

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4. Promote learning about culinary traditions and culture.
5. Encourage agricultural biodiversity.
6. Promote local food traditions and provide opportunity for education of where food comes and how our food choices affect the rest of the world.
7. Promote connecting producers of foods with consumers through events and farmers markets.
8. Promote biodiversity through educational events and public outreach, promoting consumption of seasonal and local foods.
9. Promote community gardens within urban settings.
10. Encourage regional tasting events of local foods, music, talks, forums, workshops, and exhibitions in favor of local agricultural products.

6.11 Guiding Principles for Communities for a Lifetime - Livable Communities

Twelve guiding principles are identified in the Regional Plan for Communities for a Lifetime/Livable Communities:

1. The CRC promotes the concept of Lifelong Communities – places where people of all ages and abilities have access to the public landscape and services which enable them to live healthy and independent lives.
2. For a Lifelong Community to be truly successful it must be a complete community. Complete communities include the direct characteristics that at a minimum meet the needs of the user population, but also provided for a greater civic good by including elements that are beneficial to the environment, sensitive to a broad population and embrace economic\financially feasible regimes.
3. The region will encourage and promote the underlying issues that must be included in a Lifelong Community. The seven (7) basic tenets of a Lifelong Community are:
    a. Connectivity – the physical connection of streets, pedestrian networks and public spaces that promote ease of access, a direct coexistence with the existing urban fabric and barrier free mobility for all.
    b. Pedestrian access and transit – focuses on the access to public or privately supported methods of mass transit-oriented forms of mobility and focuses on pedestrian forms of mobility as a primary or equal method of transportation when compared to conventional vehicular modes.
    c. Neighborhood retail and services – proximity to vital and relevant supporting uses and services are necessary for a successful Lifelong Community. Mixture of uses, walkable streets and services oriented to a range of population needs is the context of this issue.
    d. Social interaction – social interaction with the full range of the population is a proven requirement of lifelong communities. Pedestrian accessible streets and dwellings, a full stratum of dwelling types, community programming elements and careful placement of improvements are key components in creating a socially vibrant community.

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e. Dwelling types – a range of dwelling types within a walkable range is crucial to meet the social, economic and physical goals of a lifelong community. Creative architectural and planning solutions, a strong but flexible regulatory framework and policies that promote efficient and sustainable methods of construction are among the crucial requirements of this issue.
f. Healthy living – accessibility to fitness, education, cultural and health maintenance programming elements are vital to a successful lifelong community and are the primary concerns of this issue.
g. Environmental and Sustainable Solutions – the creation of a complete community includes provisions for the appropriate preservation of natural and cultural resources. Promotion of sustainable construction techniques, preservation of natural and cultural resources, innovative methods of power generation and integrated food production are among some of primary components related to successfully executing this issue.

4. The region will determine its "aging readiness" to provide programs, policies and services that address the needs of older adults.
5. The region will determine its "aging readiness" to ensure that communities are "livable" for persons of all ages.
6. The region will harness the talent and experience of older adults
7. To determine "age readiness," local comprehensive plans should review:
   a. Demographics;
   b. Quantity, quality, and type of existing housing stock;
   c. Land use patterns; and
   d. Quantity, quality, and type of recreational needs.
8. Comprehensive plans will promote development patterns and design features to meet the needs of seniors.
9. Comprehensive plans and ordinances will promote Universal Design/Accessible Building Standards for buildings as well as recreational areas.
10. Comprehensive plans will include goals and objectives that specifically address the aging population.
11. Consider seniors and the elderly when reviewing site plans for new construction and/or renovations.
12. The region will ensure comprehensive plans permit basic services within walking distance recognizing it is a great convenience for all residents but an absolute necessity for an aging population.

6.12 Guiding Principles for Coastal Vulnerability and Resilience

Three guiding principles are identified in the Regional Plan for Coastal Vulnerability and Resilience.

1. The region believes that a community's resilience is measured by its sustained ability to prepare for, respond to, and fully bounce back from crises.
2. The regions strength is in our community's resilience and in understanding the region's vulnerabilities, and in taking positive collective actions to

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limit the impact of a disruptive crisis, and recovering rapidly from disasters.

3. The region believes in collaborating with a wide range of community resilience experts, community leaders and private sector partners to work together to increase collective capacities to respond to adversity with increased resources, competence, and connectedness to one another.

7. REGIONAL RESOURCE PLAN AND RIR

7.1 The Regional Resource Plan

The Regional Resource Plan (RIR) identifies Cultural and Historic and Natural Resources of regional importance. The Regional Resource Plan provides recommended best development practices, protective measures and policies for local governments to use within one mile of a regionally important resource. The proposed site is within RIR area related to wetlands.

7.2 Area Requiring Special Attention

The ARSA identifies areas requiring special attention, including:

Areas where rapid development or change of land uses are likely to occur, especially where the pace of development has and/or may outpace the availability of community facilities and services, including transportation.

The project site includes locations designated as wetlands and floodplains. According to the developer, "wetland/floodplain impacts to be minimized. Any required mitigation to meet local, state and federal regulations to be provided."

7.3 Natural Resources

Green Infrastructure

The U.S. Environmental Protection Agency defines Green Infrastructure as management approaches and technologies that utilize enhance and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse. This management approach attempts to keep stormwater onsite. It incorporates vegetation and natural resources as much as possible in development and redevelopment.

Green Infrastructure has a number of benefits, including reduced runoff, groundwater recharge, higher air quality, better aesthetics, reduces costs, lowers impacts on climate change, and provides environmental benefits that surpass improved water quality.

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Coastal Georgia's Green Infrastructure network is defined as a natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. A potential impact as a result of premature or poorly planned conversion of land to other uses is the failure to adequately protect and conserve natural resources such as wetlands, flood plains, native vegetation, lakes, streams, rivers, natural groundwater aquifer recharge areas, and other significant natural systems. The river corridors, floodplains and tributary streams are considered to be critical green infrastructure components, as they supply key social, economic and environmental benefits for local communities and provide important habitats for wildlife.

Green infrastructure planning provides an alternative to what is common practice in many communities: conserving land on a piecemeal basis without the benefit of a large framework plan that allows a comprehensive approach to land conservation. Areas of protected open space should follow natural features for recreation and conservation purposes, including greenways that link ecological, cultural and recreational amenities.

Green Infrastructure shall be considered first in the planning process and in reviewing comprehensive plans, zoning, development review processes and performance standards.

Principles for green infrastructure include identifying what is to be protected in advance of development; providing for linkage between natural areas; and designing a system that operates at different functional scales, across political jurisdictions, and through diverse landscapes. Additional principles include sound scientific and land use planning practices, providing funding upfront as a primary public investment (for example, through a dedicated tax or other funding mechanism), emphasizing the benefits to people and nature, and using the green infrastructure as the planning framework for conservation and development. The concept of green infrastructure planning is based on a strategic approach to ensuring environmental assets of natural and cultural value are integrated with land development, growth management and built infrastructure planning at the earliest stage.

Greenspace or greenway land needs to be set aside for pedestrian, equestrian, and bicycle connections between schools, churches, recreation areas, city centers, residential neighborhoods, and commercial areas. Open-space, parks, trails, greenways, and natural undeveloped land are not individual but an integrated and organized system. Green infrastructure is as an interconnected system. Key physical, natural, ecological, landscape, historical, access and recreational assets contribute to the functionality of the green infrastructure network. The green infrastructure network weaves together a network of recreational and nature areas. Properly planned greenways provide efficient pedestrian linkages that can serve as alternative transportation to and from work, to services and other daily destinations. Greenway linkages serve as outdoor recreation for biking, walking, and jogging. Green infrastructure encourages the creation of transportation

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corridors and connections, which can foster ecotourism, tourism and outdoor recreation.

7.4 Wetlands

The applicant indicates the proposed development will impact wetlands.

8. COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY CEDS)

8.1 Population and Employment Trends

County	2000	2015	2020	2025	2030
Chatham	232,048	275,057	286,869	297,352	307,472

Source: U.S. Census; Georgia Coast 2030: Population Projections for the 10-County Region

The county's population is expected to grow from its 2000 level of 232,048 to 307,472 by 2030, according to the US Census and the Governor's Office of Planning and Budget. The Coastal Region's population in 2030 is projected to be 962,956, which is an increase from the 2000 level of 558,350.

Chatham County, is a growing county in the region and had a 2019 population estimate of 289,430 according to the US Census. The Census population of Chatham County in 2000 was 232,048.

The Coastal Georgia region supported 312,400 jobs in 2000, and is expected to support 435,050 jobs in 2030. Chatham County is located in the Savannah, Georgia Metroplitan Statistical Area (MSA). The Savannah MSA unemployment rate in September 2020 was 6.7 percent.

9. CRC Resources

9.1 Coastal Stormwater Supplement

The CRC applauds Chatham County for adopting the CSS Ordinance and/or ensuring the Coastal Stormwater Supplement (CSS) is implemented for stormwater management.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

9.2 Regional Design Guidelines

The CRC recommends that the Chatham County ensure that new development creates an environment that contributes to the region's character. Regional Design Guidelines for the development are appropriate to implement quality growth.

Character Region Area for this area is *Tidewater Hearth* and may utilize the Character Key for *Industrial Areas*.

For technical assistance contact Cole Mullis, Regional Planner at cmullis@crc.ga.gov

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

SITE PLAN
PROVIDED BY THE APPLICANT

DRI #3308

SPH-21 Industrial Park Phase II

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,629,500 SF
404.69 AC

TOTAL -
8,258,500 SF
766.84 AC

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 500 ft.

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Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 13179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-5575

STAMP:

STAMP:

ORIGINAL RELEASED FOR CONSTRUCTION DATE:

NO	DATE	REVISION

PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE:
SITE PLAN

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	4/26/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ

SHEET NO:
C1

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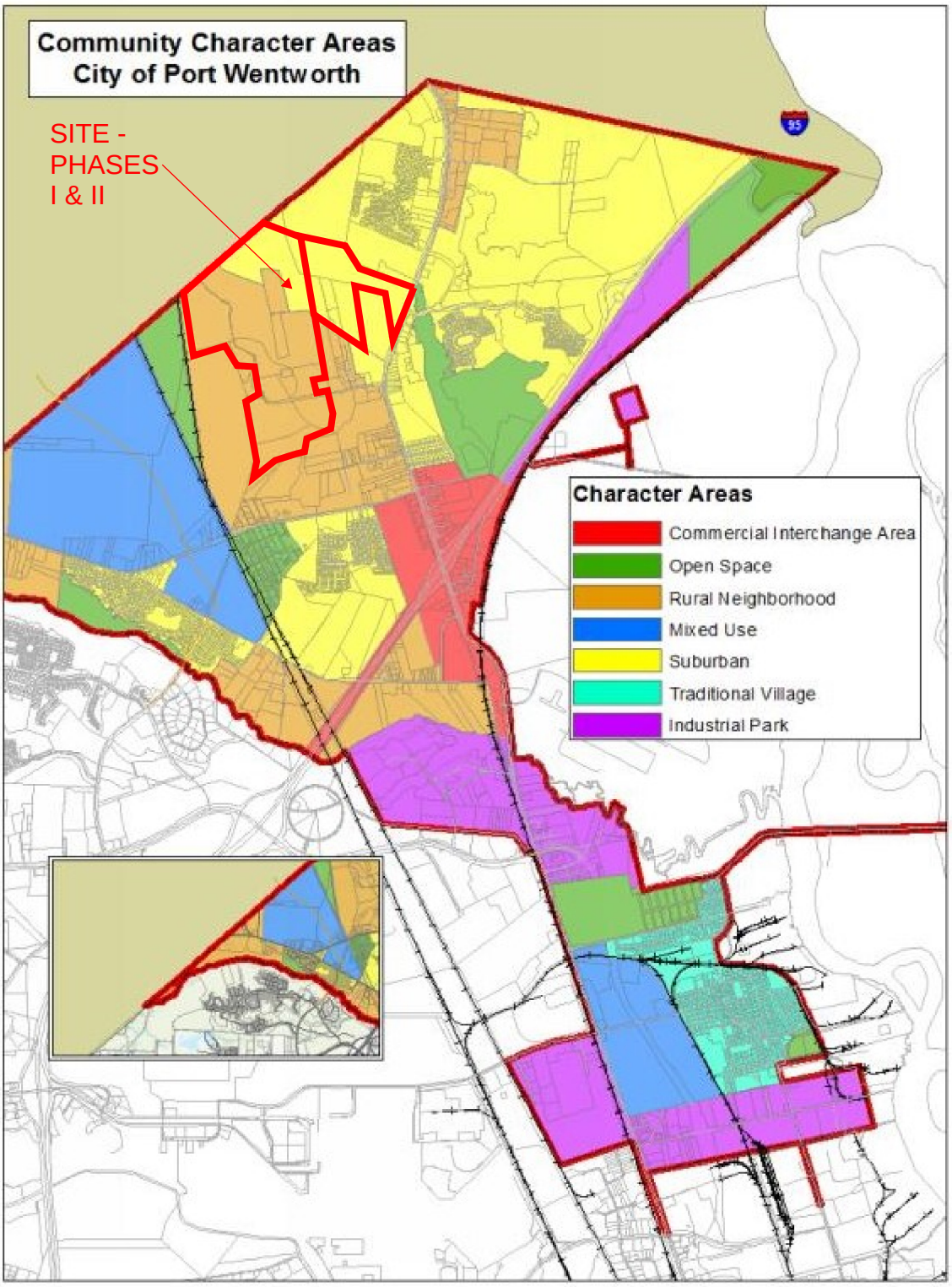
Tue, 04 May 2021 - 6:26am cstinnett
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDOE-WIGGINS - Site Layout 4.1_21_recover.dwg

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P1I JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS TRACT PHASE II HIGHWAY 21)

PORT WENTWORTH
CHARACTER AREAS MAP
DRI #3308

SPH-21 Industrial Park Phase II

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment



Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

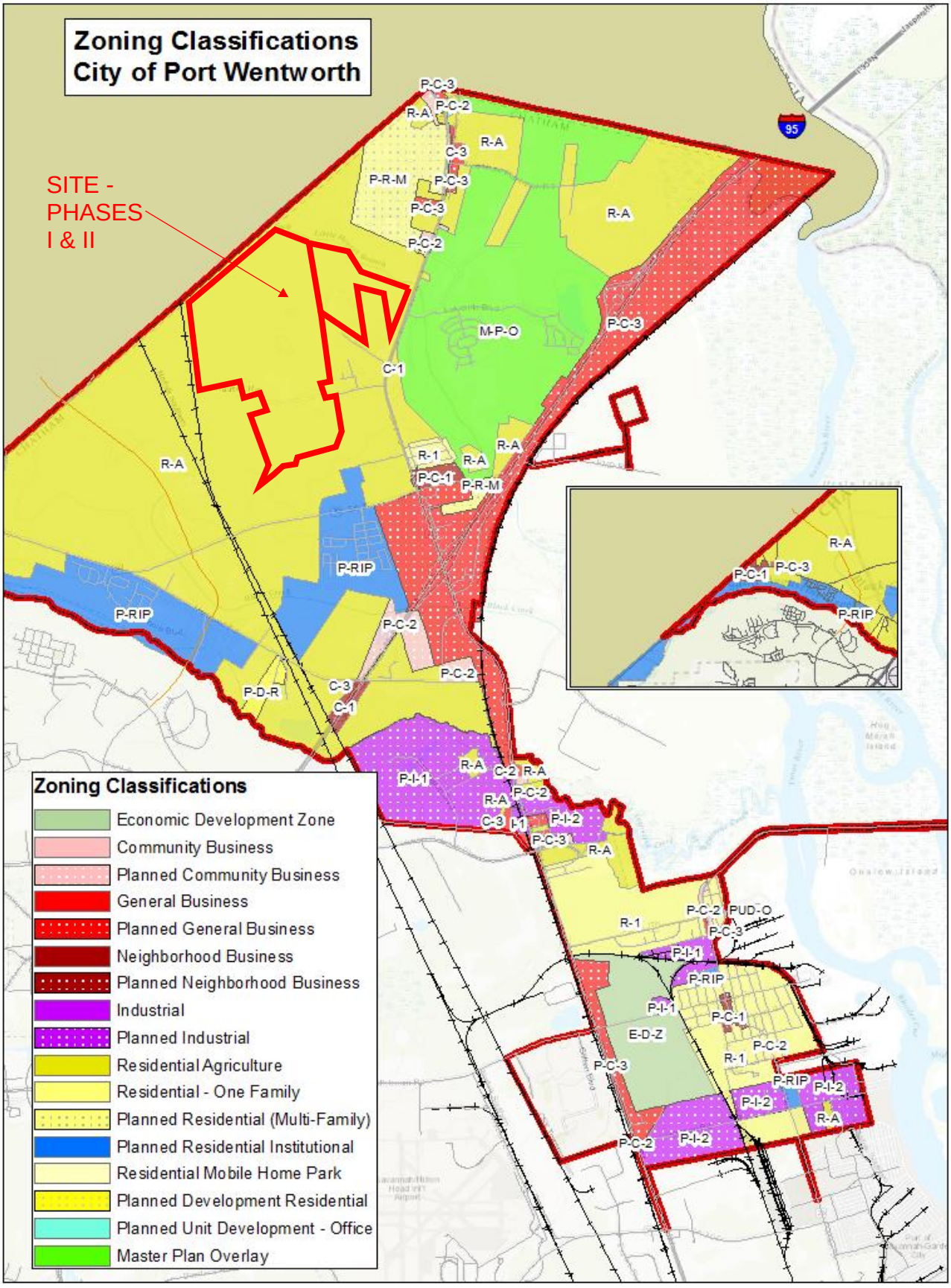
PORT WENTWORTH ZONING MAP

DRI #3308

SPH-21 Industrial

Park Phase II

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment


Zoning Classifications
City of Port Wentworth
SITE - PHASES I & II
Zoning Classifications
Economic Development Zone
Community Business
Planned Community Business
General Business
Planned General Business
Neighborhood Business
Planned Neighborhood Business
Industrial
Planned Industrial
Residential Agricultural
Residential - One Family
Planned Residential (Multi-Family)
Planned Residential Institutional
Residential Mobile Home Park
Planned Development Residential
Planned Unit Development - Office
Master Plan Overlay

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

PUBLIC COMMENTS

DRI #3308

SPH-21

Industrial Park

Phase II

Cole Mullis

From: Cornelia Reed <CReed@Savannahga.Gov>
Sent: Tuesday, May 18, 2021 1:06 PM
To: Cole Mullis
Cc: Bridget Lidy; James Laplander
Subject: City of Savannah Comments Regarding Review Requested for DRI #3308

Hello. The City of Savannah has reviewed this DRI project and has the following comments and concerns. The POC for this concern is also identified below and requests the following information is disclosed if City of Savannah services will be utilized:

COMMENTS/CONCERNS & DIRECT POC

We are doing our investigation for City of Savannah Water and Sewer. This project is in the City of Port Wentworth but they (Coastal Regional Commission - **DRI #3308**) need to send more information about this regarding:

- Who is supplying water & sewer
- Who is supplying electric service
- Address

We have not heard of a request for the City of Savannah to supply the I & D water to Port Wentworth or sewer service regarding DRI #3308.

Jim Laplander, PE
Director Water and Sewer Planning and Engineering Division
Water Resources Department
702 Stiles Avenue, Savannah, GA 31415
jlaplander@savannahga.gov
Office: 912.651.6573, Fax 912.650-7839, Mobile: (912) 658-6973

This concludes comments for the City of Savannah regarding this DRI project. Thank you

With best regard

Cornelia M. Reed, M.A.
Program Coordinator
Planning and Urban Design
5515 Abercorn Street, Savannah, GA 31405
P.O. Box 1027, Savannah, GA 31402
creed@savannahga.gov
O: 912.525-3100, ext. 1161
C: 912-346-8414
SAVANNAH
savannahga.gov

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DRI CRC Final Report 5.18.21 (2473 : Zoning Map Amendment

DEVELOPMENT IMPACT ASSESSMENT

VARNEDOE TRACT – PHASE II

GA HWY 21
PORT WENTWORTH, GA

PROJECT NO. 200230.000

PREPARED BY:

KERN & CO., LLC.
P.O. BOX 15179
7 MALL COURT
SAVANNAH, GA 31406
(912)-354-8400
FAX (912)-356-1865

~~**May 13, 2021**~~
June 17, 2021

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P11 JUNE 2021- DIA 6.17.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

I. *Executive Summary-*

The subject property is composed of all or portions of 6 separate parcels owned by a single property owner. The assemblage of the property is 404.69 acres of which approximately 125 acres is wetland areas. The proposed project phase consists of 5,629,500 SF of warehouse space associated auto parking, trailer parking, drainage, utility, access and infrastructure improvements.

II. *Introduction, Project Description, Objective, Environmental Setting-*

The subject property consists of all or portions of 6 separate tax parcels owned by a single property owner. The property is currently unoccupied. The majority of the property is wooded, some of which has been periodically timbered over the past several decades.

III. *Project Impacts and Mitigation Alternatives-*

A. Fiscal-

The estimated value of this project at the proposed 2029 completion date is $422,212,500.

-Annual Projected Taxes (Based upon $422,212,500 Valuation)

Port Wentworth	County	School Board
$702,560	$2,143,665	$3,188,720

B. Community Facilities-

1. Water Supply and Distribution- The development intends to connect to existing City of Port Wentworth Water Supply System. Improvements will be the responsibility of the owner/developer.

Estimate: 5,629,500 SF Total

Office: 67,554 SF @ 15 GPD / 200 SF =	5,067 GPD
Warehouse: 5,561,946 SF @ 3 GPD / 1000 SF =	16,686 GPD
Total:	21,753 GPD

The estimated demand for this site will be 21,753 GPD.

2. Wastewater Collection and Treatment- The development intends to connect to existing City of Port Wentworth Sanitary Sewer Collection System utilizing a pumping station and force main. Improvements will be the responsibility of the owner/developer.

Estimate: 5,629,500 SF Total

Office: 67,554 SF @ 15 GPD / 200 SF =	5,067 GPD
Warehouse: 5,561,946 SF @ 3 GPD / 1000 SF =	16,686 GPD
Total:	21,753 GPD

The estimated demand for this site will be 21,753 GPD.

3. Solid Waste- No amount of hazardous waste will be generated by the development. Each individual facility shall incorporate hazardous waste guidelines into their operation plan. OSHA, EPD as well as other state

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P1 JUNE 2021- DIA 6.17.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

and federal regulations shall be utilized for the preparation of these guidelines. The amount of non-recycled solid waste generated annually from the site is projected to be less than 5,915 tons. Additional waste such as pallets, cardboard, etc. shall be recycled. Each individual facility shall have on-site dumpsters and recycling containers.

4. Stormwater Management- The parcel drains directly into Black Creek, a tributary of the Savannah River. Post-development run-off rates will be required to meet Pre-development run-off rates and comply will all local, state and federal stormwater regulations. There will be a series of detention ponds, swales and additional stormwater infrastructure incorporated into the development as shown on the general development site plan. The design and construction of all stormwater infrastructure shall be in conformance with the City of Port Wentworth ordinances, policies, codes and guidelines and will be shown in detail in the specific development plan.

5. Stormwater Quality- The City of Port Wentworth requires compliance with the Georgia Coastal Stormwater Supplement, the development will meet the requirements utilizing grassed swales, grassed channels, stormwater ponds and additional BMP's listed in the Coastal Stormwater Supplement to address water quality and shall comply with the best management practices described in the City of Port Wentworth's stormwater ordinance.

6. Schools - The development of this project will have minimal direct impact on the local school system. However, an estimated 200-400 employees will reside in Chatham County with approximately 50% of those families having children attending public school.

7. Park and Recreation- The development of this project will not have an impact on the local parks and recreation facilities.

8. Public Safety (Police and Fire)- The development of this project should have minimal impact on the police and fire departments. The truck court areas will have secure fencing and be well lit. In addition, all gates will have knox box features for emergency vehicle access and each of the buildings will have an ESFR fire system.

9. Traffic Impact Study-

   See Attached Exhibit A

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P11 JUNE 2021- DIA 6.17.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

C. Environmental Quality

1. Noise- The noise ordinance identified the maximum receiving sound level limit to 55 dBA.

   See Attached Exhibit B.

2. Jurisdictional and Non-Jurisdictional Wetlands- Jurisdictional letters of approval has been provided from the United States Army Corps of Engineers. See attached Exhibit C. Wetland permitting from the USACE will be required in conjunction with the proposed development plan. Mitigation for wetland impacts shall be provided by the purchase of wetland credits and any alternative methods allowed by the USACE.

3. Floodplain- Based on my observation these properties are located .in Federal Emergency Management Agency, Insurance Rate Map Number 13051C0030G, Dated 8/16/18, Base Flood Elevation: 13'-14', NAVD 88. See attached Exhibit D.

4. Water of the State- Tidal impacted state waters do not exist on site. In addition, the GADNR utilizes a "Field Guide for Determining the Presence of State Waters that Require a Buffer". Utilizing the field guide, there was no presence of wrested vegetation requiring a buffer within the proposed development area. Based upon this determination, the only proposed state waters impacts are the jurisdictional wetland impacts which we acknowledge, the required permits to be obtained prior to development.

5. Historic Resources- No evidence of historical site observed.

D. Comprehensive Plan- The proposed development complies with the City of Port Wentworth's Comprehensive Plan. The proposed plan supports minimizing usage of water and wastewater with the proposed zoning to P-I-1 (warehouse distribution has one of the lower user rates per acre of development compared to other commercial or residential uses). The comprehensive plan identifies greenspace preservation to ensure adequate land area is available for stormwater infiltration. Based upon our site plan with the anticipated wetlands preservation, in excess of 50% of our development will be greenspace preservation area.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P1 JUNE 2021- DIA 6.17.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

E. Proposed Operating Plan- The proposed operating plan has not been defined at this time as we await results of the zoning application. However, the intent of the facility is to provide multiple warehouse distribution facilities which will operate under individual operating plans, these plans will ensure compliance with all federal, state and local regulations. The individual operating plans will also include but not limited to safety protocols and OSHA compliance. The proposed operating hours will be dictated by the individual tenants and their operation needs. Generally, the tenants serving the Georgia Port Authority operate during the same hours as the port. In addition, the property owner's association of the overall development will have an operating plan which will include maintenance of roadways, stormwater infrastructure, detention basins, etc. in addition to typical landscape/lawn maintenance.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA 6.17.21 (2473 : Zoning Map Amendment VARNEDOE-WIGGINS

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Varnedoe-Wiggins Tract Development
Master Plan
(Phase I and Phase II)
Port Wentworth, GA

Traffic Impact Analysis

Prepared for:

Kern and Co, LLC.
Savannah, GA

Prepared by:

Kimley»Horn

May 2021

© Kimley-Horn and Associates, Inc.

100 Bull Street, Suite 200
Savannah, GA 31401

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Traffic Impact Analysis for Varnedoe-Wiggins Tract Development Master Plan (Phase I and Phase II) Port Wentworth, GA

Prepared for:

Kern and Co, LLC.
Savannah, GA

Prepared by:

Kimley-Horn and Associates, Inc.
100 Bull Street, Suite 200
Savannah, GA 31401
(912) 721-8638

May 2021
013908000

TABLE OF CONTENTS

		Page No.
1.0	**EXECUTIVE SUMMARY**	**4**
2.0	**INTRODUCTION**	**7**
3.0	**EXISTING TRAFFIC CONDITIONS**	**9**
3.1	STUDY AREA	9
3.2	EXISTING TRAFFIC VOLUME DEVELOPMENT	12
4.0	**BACKGROUND TRAFFIC VOLUME DEVELOPMENT**	**14**
4.1	HISTORICAL BACKGROUND GROWTH TRAFFIC	14
4.2	APPROVED DEVELOPMENTS	14
4.3	PLANNED TRANSPORTATION PROJECTS	14
5.0	**SITE TRAFFIC VOLUME DEVELOPMENT**	**16**
5.1	SITE ACCESS AND TRIP GENERATION	16
5.2	SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT	18
5.3	2029 BUILD TRAFFIC VOLUMES	18
6.0	**CAPACITY ANALYSIS**	**23**
6.1	REGIONAL TRANSPORTATION NEEDS	24
6.2	SR 21/AUGUSTA ROAD AT RICE MILL ROAD/MARKET BOULEVARD	25
6.3	SR 21/AUGUSTA ROAD AT LAKESIDE BOULEVARD/SITE ACCESS	28
6.4	SR 21/AUGUSTA ROAD AT SR 30/PIEDMONT AVENUE/OLD RICHMOND ROAD	31
6.0	**AUXILIARY TURN LANE WARRANTS**	**34**
7.0	**RECOMMENDATIONS**	**35**
APPENDIX		**38**

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

List of Figures

	Page No.
FIGURE ES-1 – 2029 BUILD RECOMMENDED LANEAGE	6
FIGURE 2.1 – PROPOSED SITE PLAN	8
FIGURE 3.1 – STUDY AREA/SITE LOCATION	10
FIGURE 3.2 – EXISTING ROADWAY LANEAGE	11
FIGURE 3.3 – 2021 EXISTING PEAK HOUR TRAFFIC VOLUMES	13
FIGURE 4.1 – 2029 BACKGROUND AM AND PM PEAK HOUR TRAFFIC VOLUMES	15
FIGURE 5.1A – SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT (PASSENGER CARS)	19
FIGURE 5.1B – SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT (HEAVY TRUCKS)	20
FIGURE 5.2 – 2029 BUILD PEAK HOUR SITE TRAFFIC VOLUMES	21
FIGURE 5.3 – 2029 BUILD TOTAL PEAK HOUR TRAFFIC VOLUMES	22
FIGURE 8.1 – 2029 BUILD RECOMMENDED LANEAGE	37

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

List of Tables

	Page No.
TABLE 5.1 – TRIP GENERATION	17
TABLE 6.0A – VEHICULAR LOS CONTROL DELAY THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS	23
TABLE 6.0B – VEHICULAR LOS CONTROL DELAY THRESHOLDS FOR SIGNALIZED INTERSECTIONS	24
TABLE 6.2 – SR 21/AUGUSTA ROAD AT RICE MILL ROAD/MARKET BOULEVARD	27
TABLE 6.3 – SR 21/AUGUSTA ROAD AT LAKESIDE BOULEVARD/SITE ACCESS	30
TABLE 6.4 – SR 21/AUGUSTA ROAD AT SR 30/PIEDMONT AVENUE/OLD RICHMOND ROAD	33

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

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1.0 EXECUTIVE SUMMARY

The proposed Varnedoe-Wiggins industrial development is located on the west side of SR 21/Augusta Road in the vicinity of the SR 21/Augusta Road intersection with Lakeside Boulevard in Port Wentworth, Georgia. The subject site is a vacant, 767-acre parcel. Based on the site plan shown in **Figure 2.1,** the Varnedoe-Wiggins Master Plan will include approximately 8,258,500 square feet of warehouse space. Phase I of the proposed development will include approximately 2,629,000 square feet of warehouse space and Phase II will include approximately 5,626,500 square feet of warehouse space. The full build-out of the development is anticipated to be complete by 2029. Access to the development will include a proposed western approach at the intersection of SR 21/Augusta Road at Lakeside Boulevard.

This traffic impact analysis (TIA) evaluates traffic operations under 2021 Existing, 2029 Background, and 2029 Build conditions during the AM and PM peak hours at the following intersections:

- SR 21/Augusta Road at Rice Mill Road/Market Boulevard (Signalized)
- SR 21/Augusta Road at Lakeside Boulevard/Site Access (Unsignalized, Proposed Signalized)
- SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road (Signalized)

Kimley-Horn was retained to determine the potential traffic impacts of this development and identify transportation improvements that may be required to accommodate these impacts in accordance with the guidelines set forth in the Georgia Department of Transportation (GDOT) *Regulations for Driveway and Encroachment Control*. This report presents trip generation, trip distribution, capacity analyses, and recommendations for transportation improvements required to mitigate anticipated traffic demands generated by the subject development.

The following improvements are included in GDOT PI 0016361 and were considered in the 2029 background (no-build) and 2029 build conditions:

SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

- Construct an additional eastbound right-turn lane
  - One right-turn lane will be free-flow and unsignalized
  - One right-turn lane will be controlled by the signal
- Construct a dedicated eastbound left-turn lane
- Construct an additional southbound through lane

It is important to note that the eastbound right-turn is anticipated to spillback beyond the available storage for GDOT PI 0016361 in the background conditions. Consideration to extend the storage for the eastbound right-turn lane for GDOT PI 0016361 should be coordinated with the PI 0016361 team. This condition is independent of the proposed Varnedoe-Wiggins Tract Development.

The following regional transportation improvements were identified as a need in the 2029 background and 2029 build conditions:

SR 21/Augusta Road

SR 21/Augusta Road should be a six-lane highway throughout the study area (three northbound and three southbound through lanes) to support increased industrial traffic volume required to support growth at the Port of Savannah as well as background commercial and residential development in the region. This improvement is independent of the proposed Varnedoe-Wiggins

Tract Development and should be coordinated with the ongoing Effingham County Transportation Master Plan.

Based on the capacity analyses performed at each of the identified study intersections and the auxiliary turn lane warrant review contained herein, the following improvements have been identified to mitigate the impact of the proposed development on the adjacent street network under 2029 Build conditions:

SR 21/Augusta Road at Rice Mill Road/Market Boulevard

No laneage/approach improvements are recommended, but optimizing the signal cycle length, splits, and offsets would improve intersection operations.

SR 21/Augusta Road at Lakeside Boulevard/Site Access

- Conduct a full signal warrant analysis
  - Peak hour signal warrants are met for the AM and PM peak hours (MUTCD Signal Warrant #3) which suggests that other warrants will also be met
  - If warranted and approved by GDOT, install a traffic signal in accordance with GDOT standards and specifications to include remote access and coordination through cellular modem, 2070 controller, Statewide MAXTIME controller software, and integration with GDOT's real-time Automated Traffic Signal Performance Measures (ATSPM)
- Construct the eastbound approach to include a left-turn lane, a through lane, and dual right-turn lanes
- Modify the chevron area on the westbound approach to be a through lane, resulting in a left-turn lane, a through lane, and a right-turn lane
- Construct a southbound right-turn lane with a minimum storage of 250 feet
- Modify the northbound-U-Turn lane to be a shared left-turn/U-turn lane
- Modify the northbound chevroned median area to develop a second left-turn lane

SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

The following improvements should be implemented when the Phase I development of 2,629,000 square feet is exceeded:

- Construct an additional eastbound left-turn lane to create dual left-turn lanes
- Widen the westbound approach to include a left-turn lane, a through lane, and a right-turn lane
- Optimize the approach splits for the traffic signal

The recommended improvements identified within the study area are shown in **Figure ES-1**. These improvements are subject to approval by GDOT. All encroachments and improvements to the State roadway system shall be designed, permitted, and constructed in conformance to GDOT Standards and Details.

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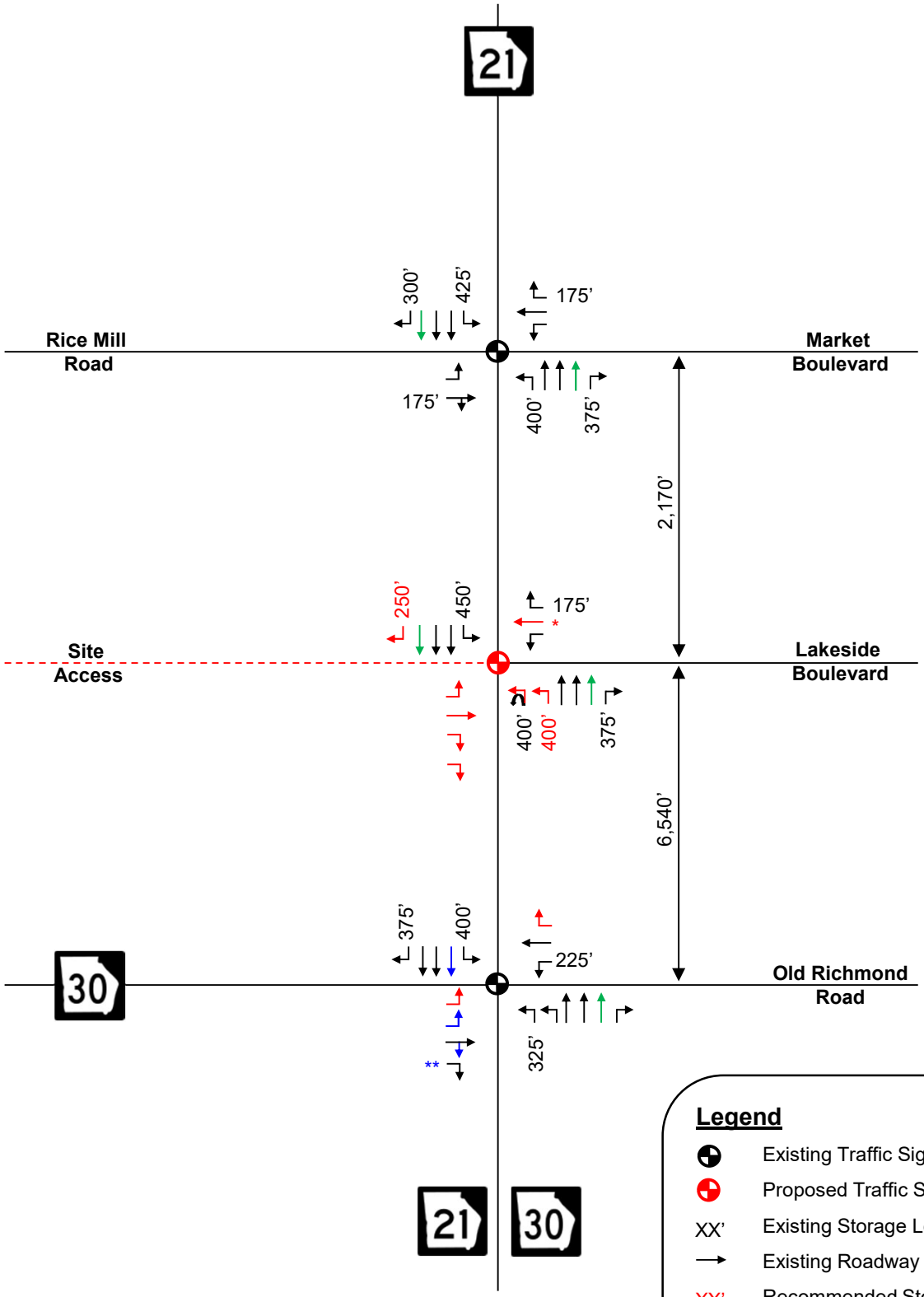

*Utilize existing pavement width and restripe approach to include a westbound through lane

**Proposed free-flow right-turn lane

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	2029 Build Recommended Roadway Laneage	Figure ES-1

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2.0 INTRODUCTION

The proposed Varnedoe-Wiggins industrial development is located on the west side of SR 21/Augusta Road in the vicinity of the SR 21/Augusta Road intersection with Lakeside Boulevard in Port Wentworth, Georgia. The subject site is a vacant, 767-acre parcel. Based on the site plan shown in Figure 2.1, the Varnedoe-Wiggins Master Plan will include approximately 8,258,500 square feet of warehouse space. Phase I of the proposed development will include approximately 2,629,000 square feet of warehouse space and Phase II of the proposed development will include approximately 5,626,500 square feet of warehouse space. The full build-out of the development is anticipated to be complete by 2029. Access to the development will include a proposed western approach at the intersection of SR 21/Augusta Road at Lakeside Boulevard.

This traffic impact analysis (TIA) evaluates traffic operations under 2021 Existing, 2029 Background, and 2029 Build conditions during the AM and PM peak hours at the following intersections:

- SR 21/Augusta Road at Rice Mill Road/Market Boulevard (Signalized)
- SR 21/Augusta Road at Lakeside Boulevard/Site Access (Unsignalized, Proposed Signalized)
- SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road (Signalized)

Kimley-Horn was retained to determine the potential traffic impacts of this development and identify transportation improvements that may be required to accommodate these impacts in accordance with the guidelines set forth in the Georgia Department of Transportation (GDOT) *Regulations for Driveway and Encroachment Control*. This report presents trip generation, trip distribution, capacity analyses, and recommendations for transportation improvements required to mitigate anticipated traffic demands generated by the subject development.

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PROJECT SUMMARY:

PHASE I -
2,629,000 SF
362.15 AC

PHASE II -
5,629,500 SF
404.69 AC

TOTAL -
8,258,500 SF
766.84 AC

Figure 2.1

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 500 ft.

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PLANS OF VARNEDOE-WIGGINS TRACT AT GA HWY 21 - PORT WENTWORTH, GA

DRAWING TITLE: SITE PLAN

SCALE:	1" = 500'
PROJECT NO:	200230.000
DATE:	4/26/21
DRAWN BY:	CRZ
CHECKED BY:	CRZ
SHEET NO:	C1

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Mon, 26 Apr 2021 - 7:00am cstrosser
DRAWING PATH: G:\2020\200230.000\dwg\VARNEDOE-WIGGINS - Site Layout 4.19.21.dwg

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3.0 EXISTING TRAFFIC CONDITIONS

3.1 STUDY AREA

The study area for this TIA includes the following intersections:

- SR 21/Augusta Road at Rice Mill Road/Market Boulevard (Signalized)
- SR 21/Augusta Road at Lakeside Boulevard/Site Access (Unsignalized, Proposed Signalized)
- SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road (Signalized)

Figure 3.1 shows the study area intersections and the site location, and **Figure 3.2** shows the existing roadway laneage at the study intersections.

The primary roadways within the vicinity of the site are SR 21/Augusta Road and SR 30/Piedmont Avenue. Minor roadways within the vicinity of the site are Old Richmond Road, Lakeside Boulevard, Rice Mill Road, and Market Boulevard. Key characteristics of each of these roadways are summarized below.

SR 21/Augusta Road is a seven-lane section from I-95 to SR 30/Piedmont Avenue and a four-lane section north of SR 30/Piedmont Avenue. SR 21/Augusta Road is a divided principal arterial with a posted speed limit of 45 mph from I-95 to SR 30/Piedmont Avenue and 55 mph north of SR 30/Piedmont Avenue. Per GDOT continuous count station data, SR 21/Augusta Road had a 2019 Annual Average Daily Traffic volume (AADT) of 35,900 vpd, including approximately 7% heavy trucks.

SR 30/Piedmont Avenue is a two-lane minor arterial with a posted speed limit of 55 mph. Per GDOT continuous count station data, SR 30/Piedmont Avenue had a 2019 AADT of 13,100 vpd, including 6% heavy trucks.

Old Richmond Road is a two-lane local roadway without a posted speed limit. Historical AADTs and truck percentage data for Old Richmond Road were not available.

Lakeside Boulevard is a two-lane local roadway with a posted speed limit of 25 mph. Historical AADTs and truck percentage data for Lakeside Boulevard was not available.

Rich Mill Road is a two-lane local roadway with a posted speed limit of 20 mph. Historical AADTs and truck percentage data for Rice Mill Road were not available.

Market Boulevard is a two-lane local roadway with a posted speed limit of 25 mph. Historical AADTs and truck percentage data for Market Boulevard were not available.

Study Intersections

1. SR 21/Augusta Road at Rice Mill Road/Market Boulevard
2. SR 21/Augusta Road at Lakeside Boulevard/Site Access
3. SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	Site Location Map	Figure 3.1

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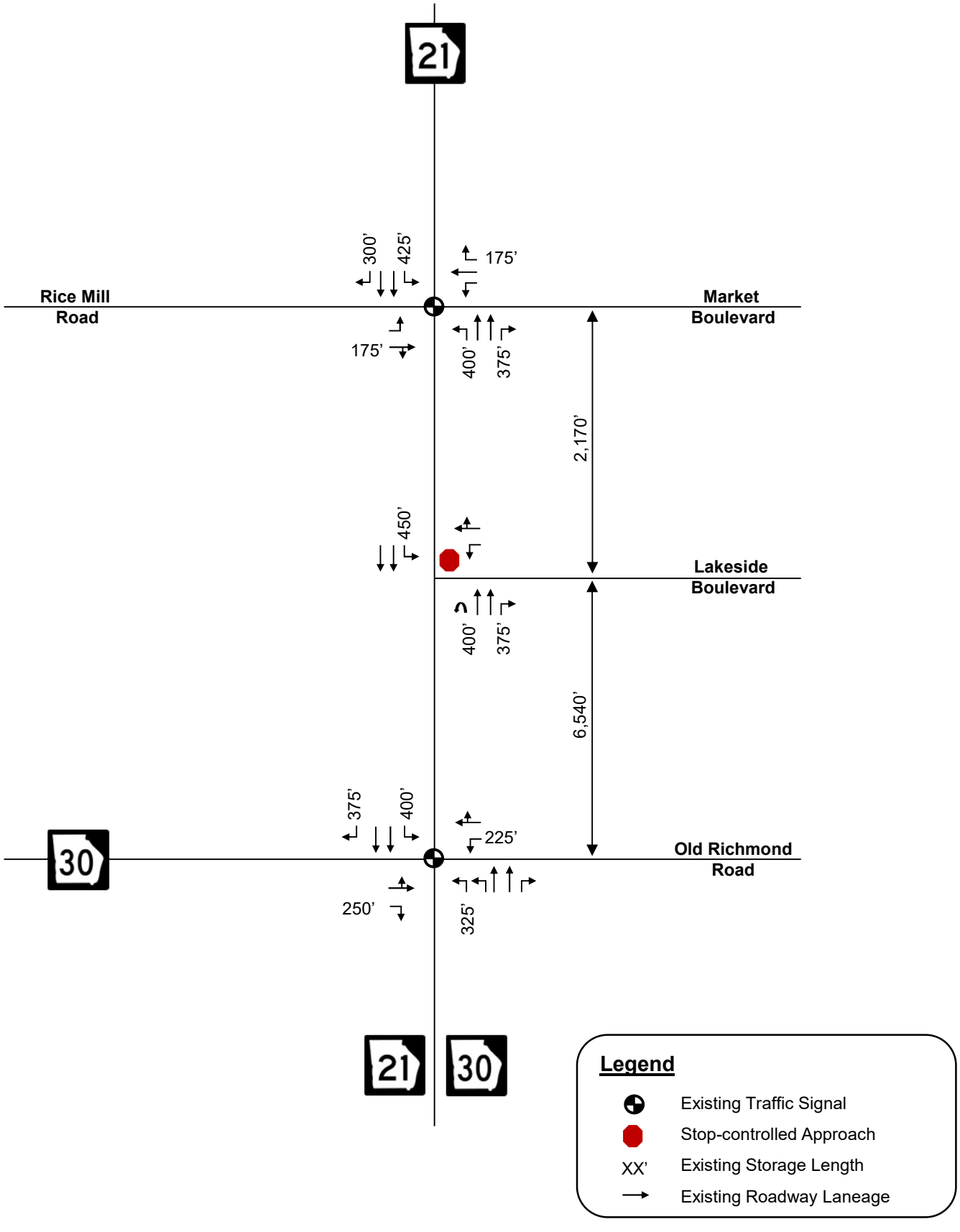

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	Existing Laneage	Figure 3.2

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3.2 EXISTING TRAFFIC VOLUME DEVELOPMENT

Peak hour turning movement counts (TMCs) were collected at the study intersections on Tuesday, March 9, 2021 (7:00 to 9:00 AM, 11:00 AM to 1:00 PM, and 4:00 to 6:00 PM) to facilitate the development of 2021 Existing traffic volumes. Though only the traditional AM and PM peak hours of travel were studied in detail as part of this TIA, further discussion regarding the selection of the three count periods noted above is provided in **Section 5.1**. To account for the continued influence of COVID-19 on travel patterns and to provide a thorough understanding of the distribution of traffic throughout the study area, 48-hour classification counts were also collected on Tuesday, March 9, 2021 and Wednesday, March 10, 2021. These multi-day counts were averaged and compared to historical AADT data at the following locations:

- SR 21/Augusta Road [GDOT Count Stations 051-0109 and 051-0112]
- SR 30/Piedmont Avenue [GDOT Count Station 0151-0307]

Based on this comparison, a 1.2% adjustment factor was applied to peak hour TMCs to develop 2021 Existing traffic volumes. For the purposes of this TIA, it was assumed that these adjusted TMCs are reflective of traffic volumes that would be observed on a typical weekday with school in session in 2021.

These factored TMCs were balanced upward between study intersections. Balanced 2021 Existing TMCs were carried forward to develop 2029 Background and 2029 Build traffic volumes by incorporating background traffic growth and site traffic volumes as described in later sections of this report.

Peak hour intersection TMC data and volume development worksheets are provided in the **Appendix**.

Figure 3.3 illustrates the factored 2021 Existing AM and PM peak hour traffic volumes.

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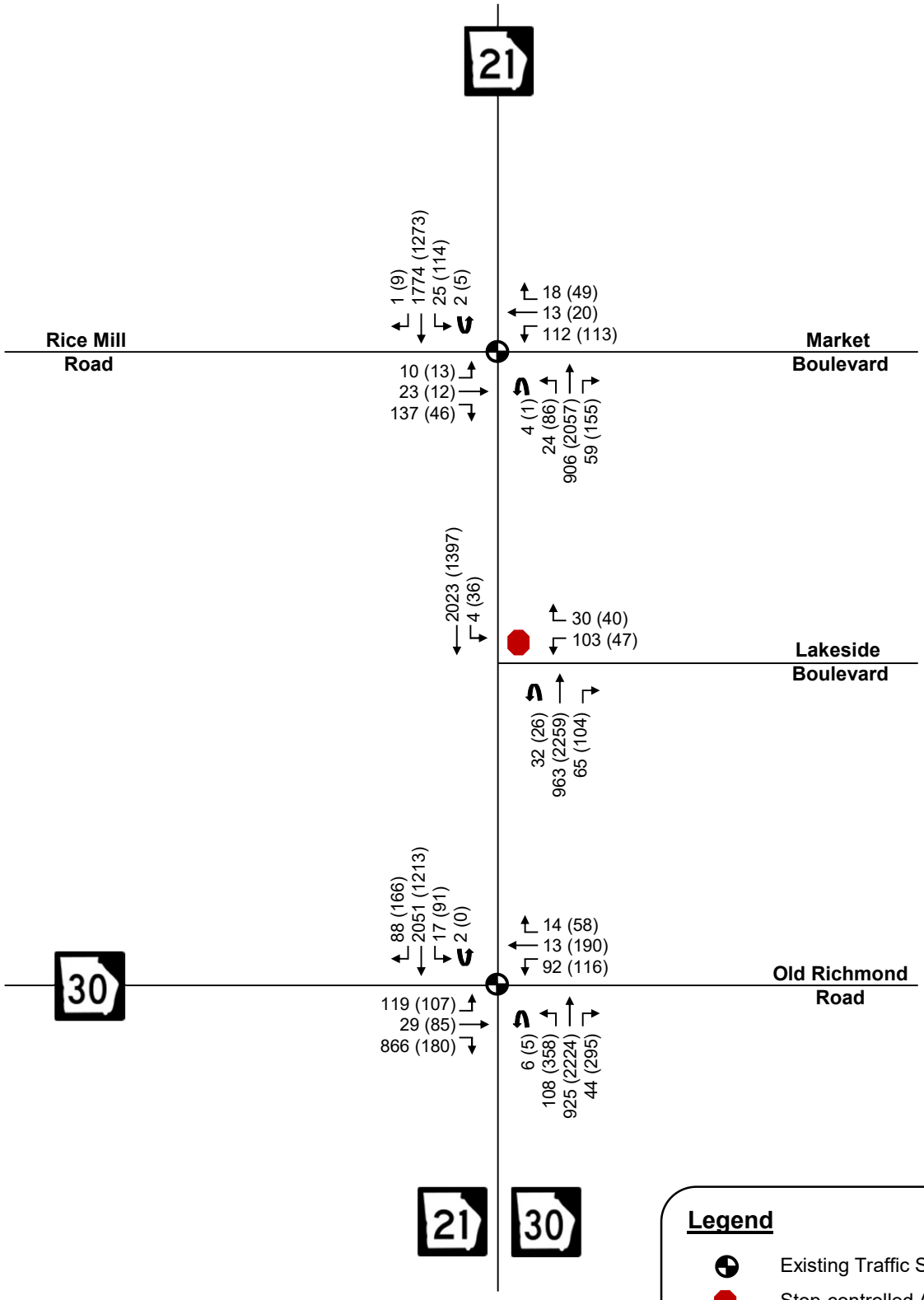

Kimley»Horn	**Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis**	**2021 Existing Balanced Peak Hour Traffic Volumes**	**Figure 3.3**

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4.0 BACKGROUND TRAFFIC VOLUME DEVELOPMENT

Projected background (non-development) traffic is defined as the expected growth or change in traffic volumes on the surrounding roadway network between the existing year (2021) and the expected build-out year (2029) absent the construction and opening of the proposed development. This includes both historical background growth and growth in traffic volumes caused by other specific approved developments near the proposed site. As noted previously, regional transportation improvements are required to accommodate background traffic volumes expected during the analysis period.

4.1 HISTORICAL BACKGROUND GROWTH TRAFFIC

Historical background growth is the anticipated increase in traffic volumes due to generalized growth in the study area that is independent of specific approved developments. Historical background growth traffic is calculated using an annual growth rate, which is applied to the existing traffic volumes up to the future horizon year. Based on GDOT count station data, CORE MPO Travel Demand Model outputs, and the Georgia Governor's Office of Planning and Budget Population Projections, an annual growth rate of 2% was assumed for this project and applied to the 2021 Existing peak hour traffic volumes throughout the study area to develop baseline 2029 Background traffic volumes. As mentioned in **Section 3.2**, it was assumed that the factored TMCs developed as part of this TIA are reflective of traffic volumes that would be observed on a typical weekday with school in session in 2021.

4.2 APPROVED DEVELOPMENTS

No other approved developments were identified within the study area for consideration in the development of this TIA. Based on future economic conditions, the proposed development may be expanded to include additional parcels. Therefore, the subject 767-acre site is referred to herein as Phase I and Phase II. This TIA will be amended as other phases are planned.

4.3 PLANNED TRANSPORTATION PROJECTS

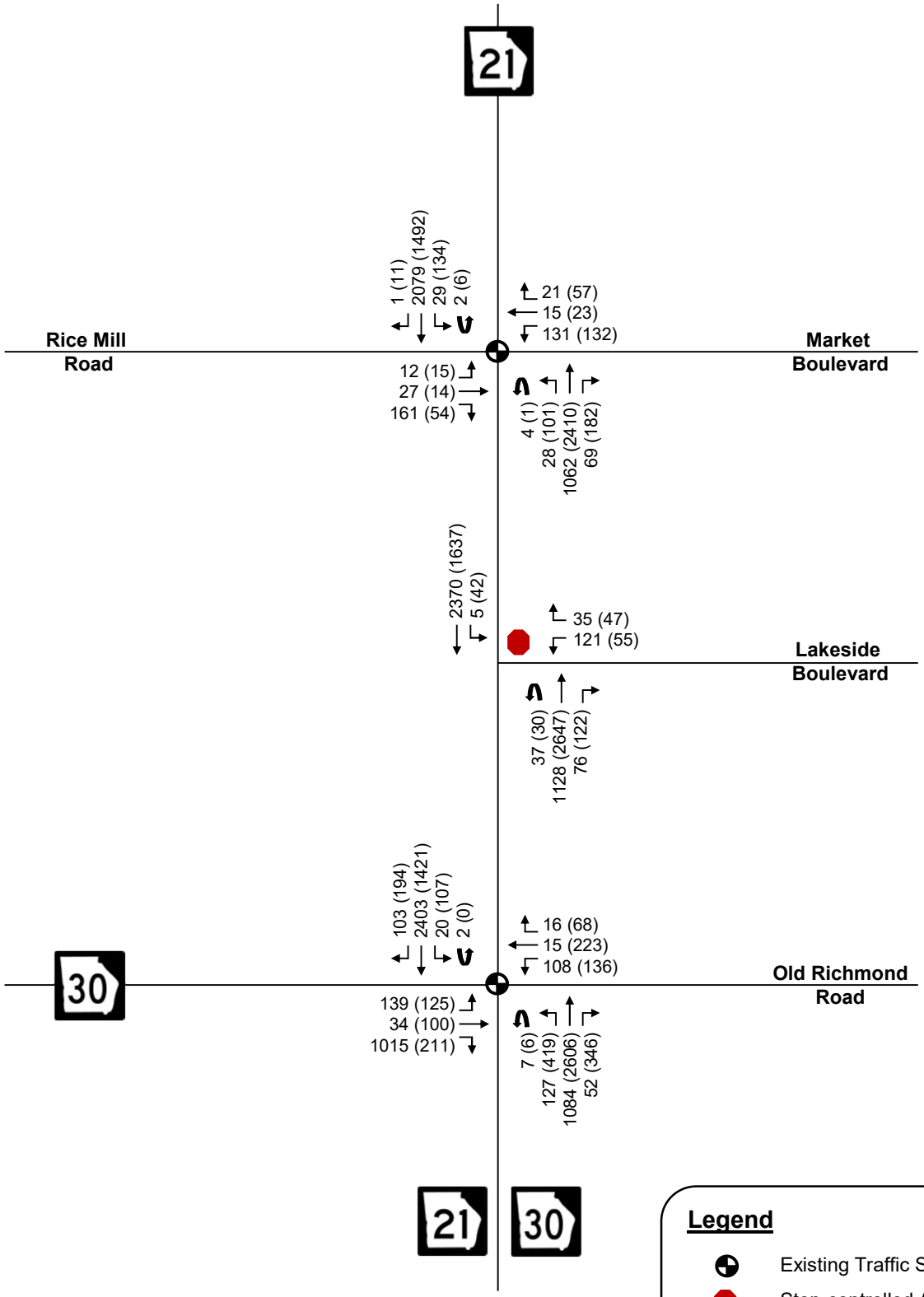
GDOT PI 0016361 and PI 0016441 are in/near the study area. GDOT PI 0016361 includes proposed improvements at the study area intersection of SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road. GDOT PI 0016441 includes improvements along SR 21/30/Augusta Road south of SR 30/Piedmont Avenue.

The following improvements are included in GDOT PI 0016361 and were considered in the 2029 background (no-build) and 2029 build conditions:

SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

- Construct an additional eastbound right-turn lane
  - One right-turn lane will be free-flow and unsignalized
  - One right-turn lane will be controlled by the signal
- Construct a dedicated eastbound left-turn lane
- Construct an additional southbound through lane

The 2029 Background traffic volumes are provided in **Figure 4.1**.



Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	2029 Background Peak Hour Traffic Volumes	Figure 4.1

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5.0 SITE TRAFFIC VOLUME DEVELOPMENT

Site traffic developed for this TIA consists of the vehicle trips expected to be generated after construction of the proposed development and the distribution and assignment of these trips throughout the surrounding study network.

5.1 SITE ACCESS AND TRIP GENERATION

Based on the site plan shown in **Figure 2.1**, access to the development will include a proposed western approach at the intersection of SR 21/Augusta Road at Lakeside Boulevard.

The trip generation potential of the proposed development was determined using the trip generation rates published in the ITE *Trip Generation Manual, 10th Edition* for the various Land Use Codes (LUCs) represented within the proposed site plan. As mentioned in **Section 2.0**, the proposed development will include approximately 8,258,500 square feet of warehouse space. Phase I of the proposed development will include approximately 2,629,000 square feet of warehouse space and Phase II will include approximately 5,626,500 square feet of warehouse space.

Table 5.1 summarizes the projected trip generation of the proposed development for both passenger cars and heavy trucks. During a typical weekday, the proposed development has the potential to generate 1,016 and 1,019 new external trips during the AM and PM peak hours of travel, respectively.

As discussed in **Section 3.2**, turning movement counts were collected during the traditional AM and PM peak hours of travel (7:00AM to 9:00AM and 4:00PM to 6:00PM) as well as the midday peak period (11:00AM to 1:00PM) to provide a thorough understanding of the existing distribution of traffic throughout the study area. Industrial land uses often exhibit peak site traffic volumes during off-peak periods on the surrounding roadway network. As such, the expected peak trip generation at the proposed site (i.e., “peak hour of generator”) was considered along with midday peak hour traffic volumes on the adjacent street network to determine if this additional analysis period was warranted. After further examination, it was determined that site trips expected to occur during the peak hour of generator are negligibly different than those anticipated during the AM and PM peak hour of adjacent street traffic. Furthermore, traffic count data collected as part of this TIA suggests that through volumes on SR 21/Augusta Road are more directionally balanced during off-peak periods, providing a more favorable operational condition regardless of site traffic patterns. As a result, only the traditional AM and PM peak hours of travel were considered in the analyses discussed throughout the remainder of this report.

All traffic counts collected as part of this TIA are provided in the **Appendix** for reference.

Table 5.1 - Trip Generation								
Land Use	**Intensity**	**Daily Trips**	**AM Peak Hour**			**PM Peak Hour**		
			Total	**In**	**Out**	**Total**	**In**	**Out**
Warehousing [ITE 150]	8,258,500 SF	13,094	1,016	782	234	1,019	275	744
Truck Trips[1]		*4,467*	*165*	*86*	*79*	*248*	*129*	*119*
Passenger Car Trips[2]		*8,627*	*851*	*696*	*155*	*771*	*146*	*625*
Subtotal		**13,094**	**1,016**	**782**	**234**	**1,019**	**275**	**744**
New External Trips		**13,094**	**1,016**	**782**	**234**	**1,019**	**275**	**744**

[1]Truck trip generation potential calculated based on the rates prescribed by the ITE *Trip Generation Manual, 10th Edition Supplement* for ITE Land Use Code 150
[2]Passenger car trip generation potential calculated as the difference between the total trip generation and anticipated truck trip generation

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5.2 SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT

New external trips generated by the proposed development were assigned to the surrounding network based on existing peak hour turning movements, 48-hour classification counts, surrounding land uses, population densities in the area, and the proposed site layout. Based on existing travel patterns, the following site traffic distribution was assumed for the purposes of this TIA:

- Passenger Cars
  - 30% to/from the north along SR 21/Augusta Road
  - 40% to/from the south along SR 21/Augusta Road
  - 30% to/from the west along SR 30/Piedmont Avenue
- Heavy Trucks
  - 5% to/from the north along SR 21/Augusta Road
  - 95% to/from the south along SR 21/Augusta Road

The overall site traffic distribution and assignments are shown in **Figure 5.1A** (Passenger Cars) and **Figure 5.1B** (Heavy Trucks).

5.3 2029 BUILD TRAFFIC VOLUMES

The 2029 Build traffic volumes include assignment of site-generated trips and 2029 Background traffic volumes. Projected 2029 Build traffic volumes during the AM and PM peak hours are summarized in the following figures:

- **Figure 5.2**: 2029 Build Peak Hour Site Traffic Volumes
- **Figure 5.3**: 2029 Build Total Peak Hour Traffic Volumes

Intersection volume development worksheets for all intersections within the study network are provided in the **Appendix**.

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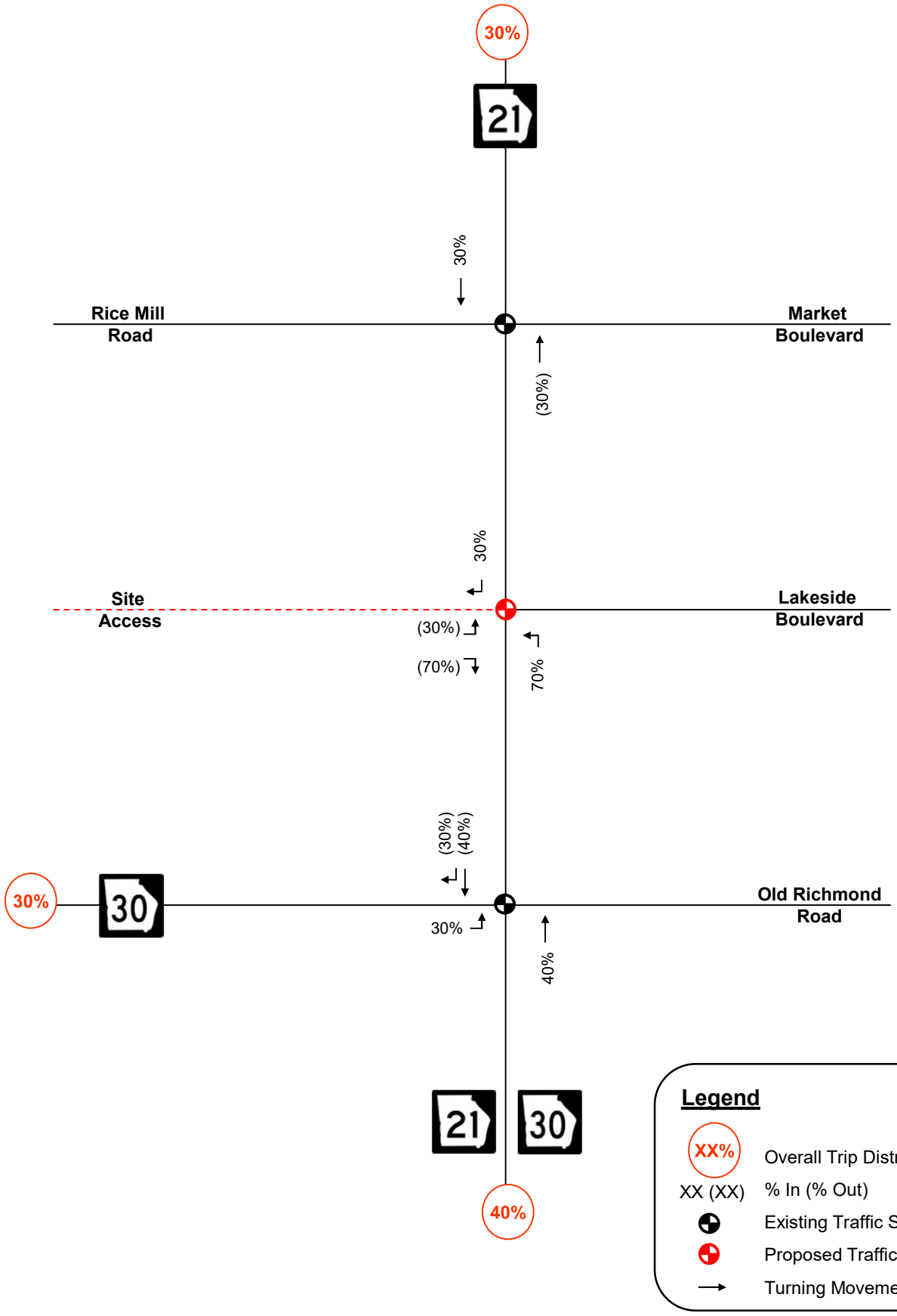

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	Site Traffic Distribution and Assignment (Passenger Cars)	Figure 5.1A

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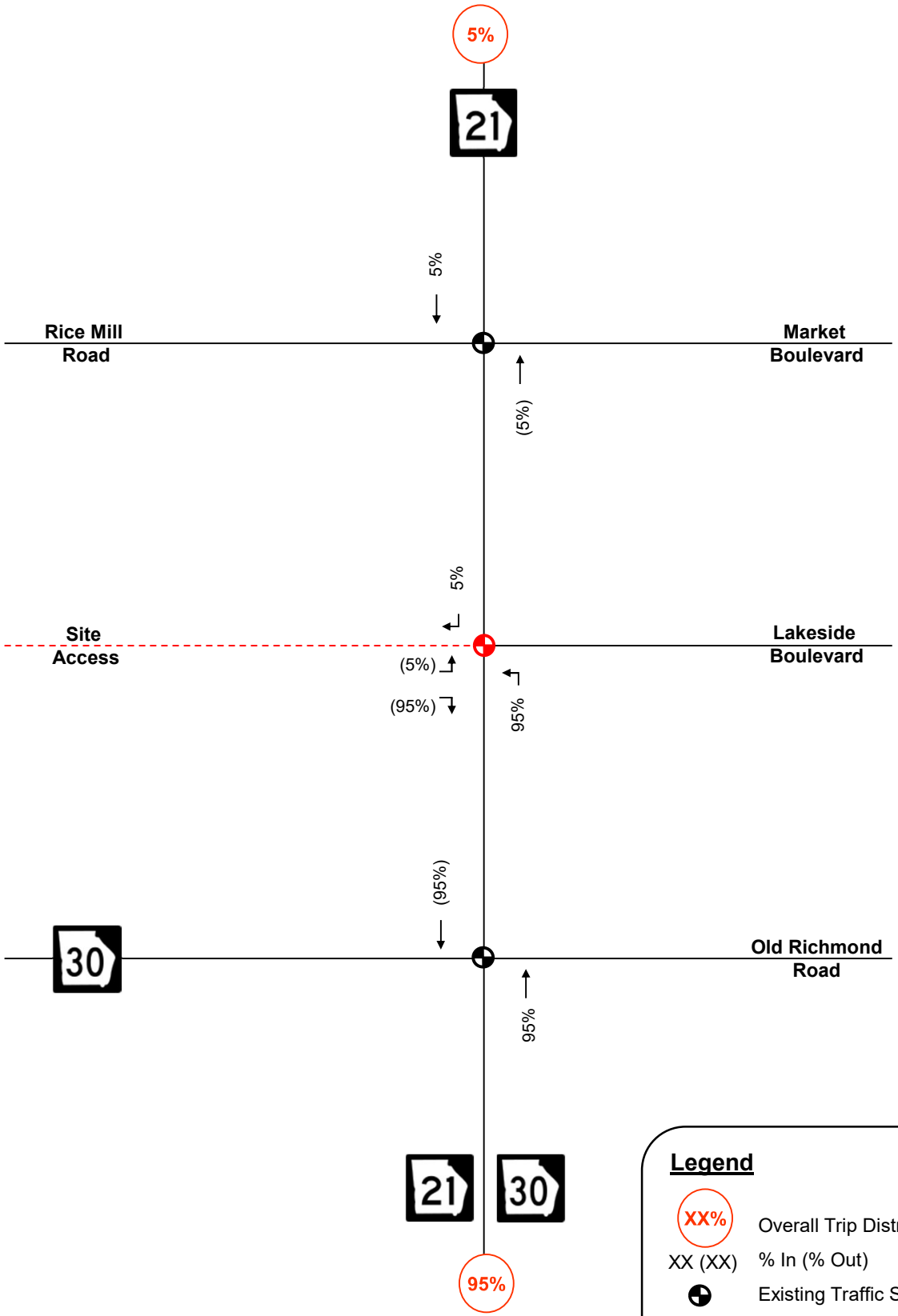

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	Site Traffic Distribution and Assignment (Heavy Vehicles)	Figure 5.1B

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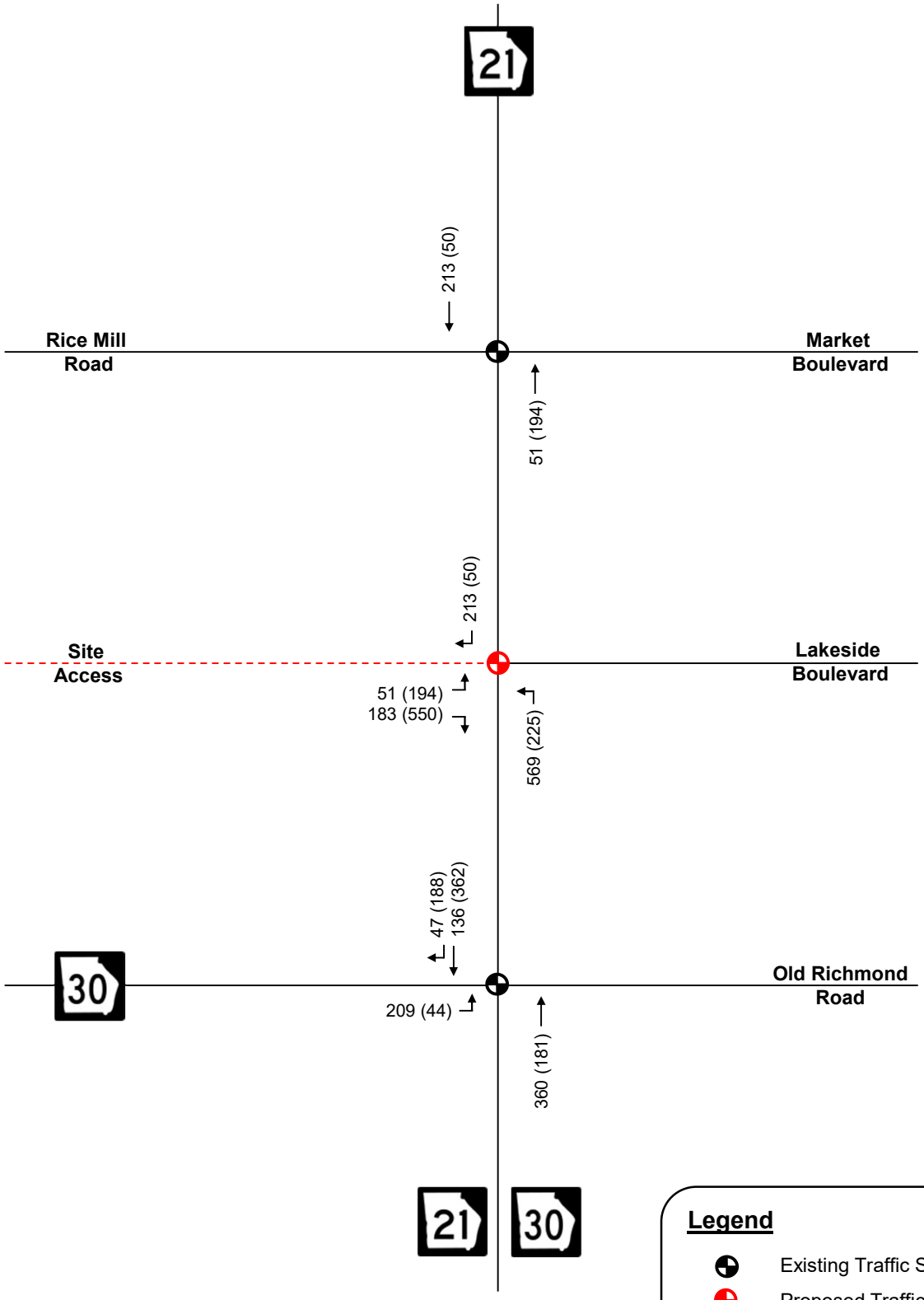

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	2029 Build Peak Hour Site Traffic Volumes	Figure 5.2

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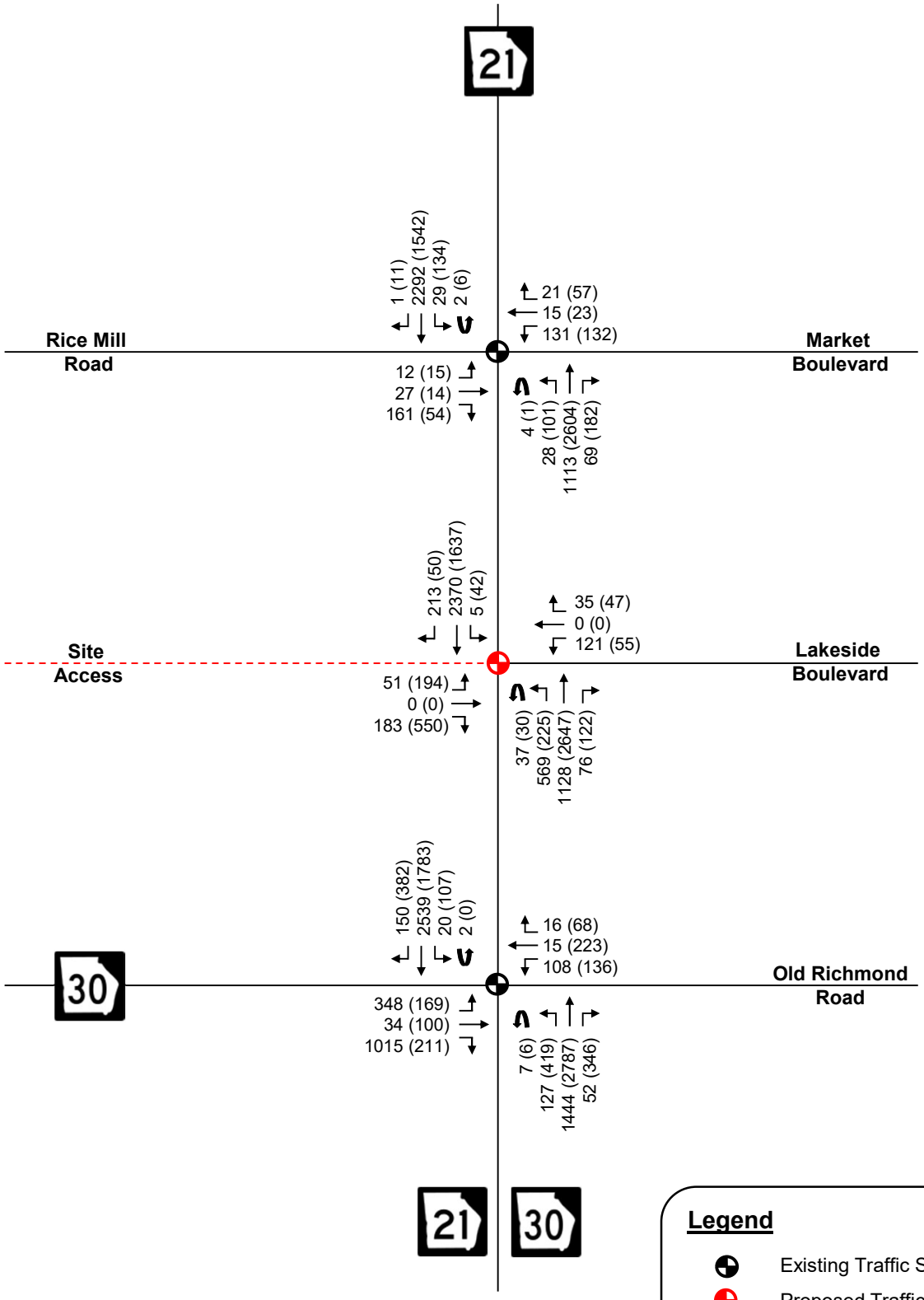

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	2029 Build Total Peak Hour Traffic Volumes	Figure 5.3

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6.0 CAPACITY ANALYSIS

Capacity analyses were performed for the AM and PM peak hours using Synchro Version 10 software to determine the operating characteristics at the signalized and stop-controlled intersections of the adjacent street network and to evaluate the impacts of the proposed development. In the *Highway Capacity Manual, 6th Edition* (HCM6), capacity is defined as "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point of uniform section of a lane or roadway during a given time period under prevailing conditions." Synchro uses methodologies contained in HCM6 to determine the operating characteristics of an intersection, which are typically evaluated in terms of level of service (LOS).

HCM6 defines LOS as a "quantitative stratification of a performance measure or measures representing quality of service" and is used to "translate complex numerical performance results into a simple A-F system representative of travelers' perceptions of the quality of service provided by a facility or service". The HCM defines six levels of service, LOS A through LOS F, with A having the best operating conditions from the traveler's perspective and F having the worst. However, it must be understood that "the LOS letter results hides much of the complexity of facility performance", and that "the appropriate LOS for a given system element in the community is a decision for local policy makers". According to HCM6, "for cost, environmental impact, and other reasons, roadways are typically designed not to provide LOS A conditions during peak periods but instead to provide some lower LOS that balances individual travers' desires against society's desires and financial resources. Nevertheless, during low-volume periods of the day, a system element may operate at LOS A."

LOS for a two-way stop-controlled (TWSC) intersection is determined by the control delay at the side-street approaches, typically during the highest volume periods of the day, the AM and PM peak periods. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. With respect to field measurements, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time the vehicle departs from the stop line. It is typical for stop sign-controlled side streets and driveways intersecting major streets to experience long delays during peak hours, particularly for left-turn movements. The majority of the traffic moving through the intersection on the major street experiences little or no delay.

Tables 6.0A and **6.0B** list the LOS control delay thresholds published in HCM6 for unsignalized and signalized intersections, respectively, as well as the unsignalized operational descriptions assumed herein.

Table 6.0A
Vehicular LOS Control Delay Thresholds for Unsignalized Intersections

Level-of-Service	Average Control Delay per Vehicle [sec/veh]	
A	≤ 10	Short Delays
B	> 10 – 15	
C	> 15 – 25	
D	> 25 – 35	Moderate Delays
E	> 35 – 50	
F	> 50	Long Delays

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Table 6.0B Vehicular LOS Control Delay Thresholds for Signalized Intersections	
Level-of-Service	**Average Control Delay per Vehicle [sec/veh]**
A	≤ 10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

Capacity analyses were performed under 2021 Existing, 2029 Background, and 2029 Build traffic conditions. Mitigation of traffic impacts associated with the proposed development were noted and recommended based on guidance provided in the GDOT *Regulations for Driveway and Encroachment Control* and GDOT *Design Policy Manual*, where applicable. When determining the traffic-related impact of the proposed development on the study area intersections, 2029 Background and 2029 Build conditions were compared. Delay and LOS are reported for each study intersection approach in the following subsections. Capacity analysis reports are included in the Appendix.

6.1 Regional Transportation Needs

At the signalized intersections of SR 21/Augusta Road at Rice Mill Road/Market Boulevard and SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road (Signalized), the 2029 Background and 2029 Build models forecast long delays on the northbound and southbound approaches. The following are maximum volumes, in vehicles per hour (VPH), are anticipated on SR 21/Augusta Road:

2029 Background:

- Northbound SR 21/Augusta Road AM: 1,239 vph
- Northbound SR 21/Augusta Road PM: 2,799 vph
- Southbound SR 21/Augusta Road AM: 2,528 vph
- Southbound SR 21/Augusta Road PM: 1,722 vph

2029 Build:

- Northbound SR 21/Augusta Road AM: 1,810 vph
- Northbound SR 21/Augusta Road PM: 3,024 vph
- Southbound SR 21/Augusta Road AM: 2,711 vph
- Southbound SR 21/Augusta Road PM: 2,242 vph

Recommendations

In the 2029 horizon year, the need to widen SR 21/Augusta Road to six lanes throughout the study area (three northbound and three southbound through lanes) is demonstrated to support the growth at the Port of Savannah. This improvement is independent of the proposed Varnedoe-Wiggins Tract Development and should be coordinated with the ongoing Effingham County Transportation Master Plan. The tables in the subsequent sections show the positive impact of this regional improvement.

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6.2 SR 21/AUGUSTA ROAD AT RICE MILL ROAD/MARKET BOULEVARD

Table 6.2 on the following page summarizes the LOS, control delay, and 95th percentile queue length at the intersection of SR 21/Augusta Road at Rice Mill Road/Market Boulevard under each analysis scenario. Five incremental analysis scenarios were evaluated, and they are summarized as follows:

- **2021 Existing:** Analyzes the roadway network as it exists today
- **2029 Background:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth
- **2029 Build:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth + the proposed development traffic
- **2029 Build OPT:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth + the proposed development traffic with signal optimization.
- **2029 Build OPT with Regional IMP:** Analyzes the roadway network with regional improvements for the existing traffic volume + the background traffic volume growth + the proposed development traffic with signal optimization.

Results

AM Peak Hour

As shown in **Table 6.2**, the model predicts that this intersection will operate at LOS B overall under 2021 Existing conditions with a volume-to-capacity ratio near 1.0 during the AM Peak Hour. For the 2029 Background conditions, the intersection is anticipated to operate at LOS C with a volume-to-capacity ratio (V/C) over 1.0. For the 2029 Build conditions, the intersection is anticipated to drop to LOS D, yet the V/C is anticipated to be the same as background conditions.

The eastbound and westbound approaches are anticipated to operate at LOS E and LOS F, respectively, for the analyzed scenarios. This is due to the amount of green time the northbound and southbound volumes require, versus the lower volume on the eastbound and westbound approaches. To mitigate the westbound left-turn delay, implementing permitted + protected flashing yellow arrow phasing was considered, however, the protected left-turn phase reduces the available green time for the northbound and southbound approaches, which results in longer northbound, southbound, and overall intersection delays. Therefore, adding the protected left-turn phase is not recommended to be implemented for the westbound left-turn.

To improve overall intersection operations, optimization of the signal cycle length, splits, and offsets is recommended. The model results for optimization improvements are included in **Table 6.2** as 2029 Build OPT. As tabulated, the westbound approach delay is anticipated to decrease by over 100 seconds in this scenario, however, the southbound approach delay is anticipated to increase.

The next step in the analysis incorporates the regional improvements mentioned in previous sections, and when combined with optimization of the signal cycle length, splits, and offsets, the intersection is expected to improve to LOS B.

PM Peak Hour

In the PM Peak Hour, the model predicts that this intersection will operate at LOS C overall under 2021 Existing conditions with a volume-to-capacity ration near 1.0. For the 2029 Background conditions, the intersection is anticipated to operate at LOS E with a V/C over 1.0. For the 2029 Build conditions, the intersection is anticipated to drop to LOS F with a V/C ratio greater than 1.0.

The eastbound and westbound approaches are anticipated to operate at LOS E for the analyzed scenarios. This is due to the amount of green time required for the northbound and southbound volumes versus that available for the lower volume eastbound and westbound approaches.

To improve overall intersection operations, optimization of the signal cycle length, splits, and offsets is recommended. The model results for optimization improvements are included in **Table 6.2** as 2029 Build OPT. As tabulated, the northbound approach delay is anticipated to decrease by over 13 seconds in this scenario, however, the southbound approach delay is anticipated to increase slightly.

The next step in the analysis incorporates the regional improvements mentioned in previous sections, and when combined with optimization of the signal cycle length, splits, and offsets are considered, the intersection is anticipated to improve to LOS A.

Recommendations

No laneage/approach improvements are recommended, but optimizing the signal cycle length, splits, and offsets would improve intersection operations.

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Table 6.2 - SR 21/Augusta Road at Rice Mill Road/Market Boulevard														
Condition	Measure	EB		WB			NB			SB			Intersection	
		EBL	EBTR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	LOS (Delay (Sec/Veh)	V/C
AM Peak Hour														
2021 Existing	LOS (Delay)	E (60.8)		F (115.9)			B (11.3)			B (15.4)			B (19.2)	0.93
	Synchro 95th Q	27'	65'	#323'	32'	0'	m10'	184'	9'	9'	671'	0'		
2029 Background	LOS (Delay)	E (61.2)		F (170.6)			B (13.2)			C (22.4)			C (26.4)	1.14
	Synchro 95th Q	30'	91'	#371'	36'	0'	m20'	234'	m9'	10'	990'	0'		
2029 Build	LOS (Delay)	E (61.2)		F (170.6)			B (14.1)			D (38.0)			D (35.7)	1.14
	Synchro 95th Q	30'	91'	#371'	36'	0'	m11'	m218'	m5'	10'	#1366'	0'		
2029 Build OPT	LOS (Delay)	E (56.0)		E (64.0)			A (2.4)			E (69.3)			D (46.0)	1.08
	Synchro 95th Q	25'	75'	#241'	30'	0'	m41'	355'	22'	23'	#1750'	0'		
2029 Build OPT with Regional IMP	LOS (Delay)	E (56.0)		E (64.0)			A (0.9)			B (19.7)			B (15.7)	0.75
	Synchro 95th Q	25'	70'	#226'	29'	0'	46'	243'	22'	25'	#967'	0'		
PM Peak Hour														
2021 Existing	LOS (Delay)	E (58.5)		E (65.0)			C (28.9)			B (19.0)			C (26.9)	0.93
	Synchro 95th Q	32'	41'	176'	38'	10'	m3'	m860'	m26'	143'	614'	0'		
2029 Background	LOS (Delay)	E (56.5)		E (63.8)			F (85.0)			C (27.2)			E (62.0)	1.12
	Synchro 95th Q	35'	43'	198'	40'	19'	m29'	m828'	m31'	170'	#948'	0'		
2029 Build	LOS (Delay)	E (56.5)		E (63.8)			F (121.9)			C (27.7)			F (84.2)	1.21
	Synchro 95th Q	35'	43'	198'	40'	19'	m27'	m851'	m29'	170'	#1004'	0'		
2029 Build OPT	LOS (Delay)	E (58.5)		E (66.1)			F (108.8)			C (29.6)			E (77.4)	0.99
	Synchro 95th Q	35'	44'	204'	42'	21'	m95'	m#1476'	m54'	176'	#1009'	0'		
2029 Build OPT with Regional IMP	LOS (Delay)	E (58.5)		E (66.1)			A (1.7)			B (15.8)			A (9.9)	0.83
	Synchro 95th Q	35'	44'	204'	42'	0'	83'	#1167'	m14'	176'	504'	0'		

m – Volume for 95th percentile queue is metered by upstream signal

- 95th percentile volume exceeds capacity; queue may be longer

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6.3 SR 21/Augusta Road at Lakeside Boulevard/Site Access

Table 6.3 on the following page summarizes the LOS, control delay, and 95th percentile queue length at the intersection of SR 21/Augusta Road at Lakeside Boulevard/Site Access under each analysis scenario. Five incremental analysis scenarios were evaluated, and they are summarized as follows:

- **2021 Existing:** Analyzes the roadway network as it exists today
- **2029 Background:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth
- **2029 Build:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth + the proposed development traffic. The intersection operates with stop-control on the eastbound and westbound approaches in this scenario.
- **2029 Build SIG:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth + the proposed development traffic. The intersection is signalized in this scenario.
- **2029 Build SIG with Regional IMP:** Analyzes the roadway network with regional improvements for the existing traffic volume + the background traffic volume growth + the proposed development traffic under signalized operations.

Results

As shown in **Table 6.3**, long delays are predicted along the side street (eastbound and westbound) for the analyzed scenarios if the intersection operates with side-street stop-control. These long delays are a result of the lack of available gaps in the northbound and southbound traffic for the side street turning movements.

Signal control was also analyzed for this intersection, and the results of this analysis are tabulated as 2029 Build SIG. In this scenario, the overall intersection is anticipated to operate at LOS D during the AM and PM peak hours. To implement a signal at the intersection of SR 21/Augusta Road at Lakeside Boulevard/Site Access, other intersection improvements are required including the following:

- Construct the eastbound approach with a left-turn lane, a through lane, and dual right-turn lanes
- Modify the chevron area on the westbound approach to be a through lane, resulting in a left-turn lane, a through lane, and a right-turn lane
- Construct a southbound right-turn lane with a minimum storage of 250 feet
- Modify the northbound-U-turn lane to be a shared left-turn/U-turn lane
- Modify the northbound chevroned median area to develop a second left-turn lane

The next step in the analysis incorporates the regional improvements mentioned in previous sections, and when combined with signalization of the intersection, the intersection is anticipated to improve to LOS B during the AM and PM peak hours.

GDOT ICE Analysis

A GDOT ICE Analysis was performed at this intersection, and the following control scenarios were analyzed:

- Multilane Roundabout
- RCUT (stop-control)
- Right-In/Right-Out (RI/RO) with downstream U-turn
- Traffic Signal

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A multilane roundabout resulted in high V/C ratios, longer overall intersection delays than the other analyzed conditions, and scored low (-1.5) for the ICE Stage 2 Score. Furthermore, a multilane roundabout on SR 21/Augusta Road is precited to impede through volumes resulting in long queues on SR 21/Augusta Road. Additionally, there will be limited gaps for the side-street volumes to enter the roundabout due to the high northbound and southbound peak hour traffic volumes.

The RCUT and RI/RO resulted in similar side-street delays as the traffic signal (all near 300 seconds in the AM and PM peak hours). However, for the RCUT, the northbound left-turns from SR 21/Augusta Road onto the Site Access, are anticipated to experience long delays in the AM and PM peak hours due to high opposing volume on SR 21Augusta Road. The RCUT scored a -1.9 for the ICE Stage 2 Score.

The RI/RO alternative redistributes the northbound, southbound, eastbound, and westbound left-turns to U-turn bulbs resulting in long delays for the U-turn movements. This is a result of high through volumes on SR 21/Augusta Road which limit the number of available gaps for the U-turning vehicles. The delays for the RI/RO scenario were similar to the RCUT, and the ICE Stage 2 Score for the RI/RO matched the RCUT at -1.9.

The traffic signal scored the highest in the ICE Stage 2 analysis with a score of 5.3. The traffic signal creates gaps for the side-street left-turn movements as well as mainline left-turn movements with protected phasing. The traffic signal provided better side-street delays than the RI/RO with downstream U-turn and the RCUT alternative, additionally, the mainline left-turn/U-turn delays were lower for the traffic signal than the RI/RO and RCUT.

Recommendations

- Conduct a full signal warrant analysis
  - Peak hour signal warrants are met for the AM and PM peak hours (MUTCD Signal Warrant #3) which suggests that other warrants will also be met
  - If warranted and approved by GDOT, install a traffic signal in accordance with GDOT standards and specifications to include remote access and coordination through cellular modem, 2070 controller, Statewide MAXTIME controller software, and integration with GDOT's real-time Automated Traffic Signal Performance Measures (ATSPM)
- Construct the eastbound approach to include a left-turn lane, a through lane, and dual right-turn lanes
- Modify the chevron area on the westbound approach to be a through lane, resulting in a left-turn lane, a through lane, and a right-turn lane
- Construct a southbound right-turn lane with a minimum storage of 250 feet
- Modify the northbound-U-Turn lane to be a shared left-turn/U-turn lane
- Modify the northbound chevroned median area to develop a second left-turn lane

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Table 6.3 - SR 21/Augusta Road at Lakeside Boulevard/Site Access													
Condition	Measure	EB		WB		NB			SB			Intersection	
		EBL	EBTR	WBL	WBTR	NBLU	NBT	NBR	SBL	SBT	SBR	LOS (Delay (Sec/Veh)	V/C
AM Peak Hour													
2021 Existing	LOS (Delay)	N/A		F ($)		A (5.9)			A (0.0)			N/A	2.07
	Synchro 95th Q			275'	8'	78'	0'	0'	0'	0'	N/A		
2029 Background	LOS (Delay)	N/A		+		B (18.7)			A (0.0)			N/A	+
	Synchro 95th Q			-	10'	135'	0'	0'	3'	0'	N/A		
2029 Build	LOS (Delay)	+		+		+			A (0.0)			N/A	+
	Synchro 95th Q	+	443'	+	10'	+	0'	0'	3'	0'	0'		
2029 Build SIG	LOS (Delay)	E (69.8)		F (92.7)		E (59.1)			C (20.7)			D (38.3)	1.23
	Synchro 95th Q	91'	14'	185'	0'	m#370'	m351'	m7'	m1'	m#1312'	m0'		
2029 Build SIG with Regional IMP	LOS (Delay)	E (69.8)		F (92.7)		C (25.2)			A (0.9)			B (13.8)	0.94
	Synchro 95th Q	91'	0'	185'	0'	#481'	301'	m14'	m1'	#1009'	m0'		
PM Peak Hour													
2021 Existing	LOS (Delay)	N/A		F ($)		A (0.4)			A (0.8)			N/A	1.84
	Synchro 95th Q			168'	23'	18'	0'	0'	20'	0'	N/A		
2029 Background	LOS (Delay)	N/A		F ($)		A (0.7)			A (1.3)			N/A	2.00
	Synchro 95th Q			235'	43'	30'	0'	0'	38'	0'	0'		
2029 Build	LOS (Delay)	+		+		+			A (1.3)			N/A	+
	Synchro 95th Q	+	1235'	+	43'	+	0'	0'	38'	0'	0'		
2029 Build SIG	LOS (Delay)	F (81.5)		E (64.2)		D (53.3)			A (2.2)			D (36.6)	1.07
	Synchro 95th Q	266'	#304'	85'	0'	m100'	m70'	m0'	m29'	#995'	m0'		
2029 Build SIG with Regional IMP	LOS (Delay)	E (72.9)		E (62.2)		B (17.2)			A (1.1)			B (14.5)	0.83
	Synchro 95th Q	259'	185'	83'	0'	m101'	m699'	m4'	64'	348'	m2'		

+ - Volume exceeds capacity, calculation for delay not made by HCM software

- 95th percentile volume exceeds capacity; queue may be longer

m – Volume for 95th percentile queue is metered by upstream signal

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6.4 SR 21/Augusta Road at SR 30/Piedmont avenue/Old Richmond Road

Table 6.3 on the following page summarizes the LOS, control delay, and 95th percentile queue length at the intersection of SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road under each analysis scenario. Five incremental analysis scenarios were evaluated, and they are summarized as follows:

- **2021 Existing:** Analyzes the roadway network as it exists today
- **2029 Background:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth
- **2029 Build:** Analyzes the roadway network as it exists today with the addition of background traffic volume growth + the proposed development traffic. The intersection operates with stop-control on the eastbound and westbound approaches in this scenario.
- **2029 Build IMP:** Analyzes the roadway network with turn lane improvements on the eastbound and westbound approaches with the existing traffic volume + the addition of background traffic volume growth + the proposed development traffic.
- **2029 Build IMP with Regional IMP:** Analyzes the roadway network with regional improvements + turn lane improvements on the eastbound and westbound approaches with the existing traffic volume + the addition of background traffic volume growth + the proposed development traffic.

GDOT PI 0016361 and 0016441 are in/near the study area. GDOT PI 0016361 is at the study area intersection of SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road. GDOT PI 0016441 includes improvements along SR 21/30/Augusta Road south of SR 30/Piedmont Avenue.

The following improvements are included in GDOT PI 0016361 and were considered in the 2029 Background (no-build) and 2029 Build conditions:

SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

- Construct an additional eastbound right-turn lane
  - One right-turn lane will be free-flow and unsignalized
  - One right-turn lane will be controlled by the signal
- Construct a dedicated eastbound left-turn lane
- Construct an additional southbound through lane

It is important to note that the eastbound right-turn is anticipated to spillback beyond the available storage for GDOT PI 0016361 in the background conditions. Consideration to extend the storage for the eastbound right-turn lane for GDOT PI 0016361 should be coordinated with the PI 0016361 team. This condition is independent of the proposed Varnedoe-Wiggins Tract Development.

Results

As shown in **Table 6.4**, this intersection operates at LOS D during the AM peak hour and LOS F during the PM peak hour in the 2021 Existing scenario. For the 2029 Background scenario, which includes the implementation of GDOT project PI 0016361 and 0016441, the model indicates that the intersection LOS will improve to LOS C during the AM peak hour but remain at LOS F in the PM. For the 2029 Build scenario, the model predicts that the intersection will drop to LOS E during the AM peak hour and remain at LOS F during the PM peak hour. The drop in LOS is due to delay increases for the eastbound left-turn and northbound through.

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Recommendations

To mitigate the anticipated increase in delay, the following improvements are recommended when the Phase I development of 2,629,000 square feet is exceeded:

- Construct an additional eastbound left-turn lane to create dual left-turn lanes
- Widen the westbound approach to include a left-turn lane, a through lane, and a right-turn lane
- Optimize the approach splits for the traffic signal

With the additional turn lanes and optimization of the signal, the overall intersection is anticipated to operate at LOS D during the AM peak hour and LOS F during the PM peak hour. Implementation of the regional improvements do not improve the overall LOS, but significant delay improvements are demonstrated. For example, the northbound through queue is anticipated to decease by 562 feet (from the build improved conditions) during the AM peak hour and 985 feet during the PM peak hour. Further, the northbound approach delay is anticipated to decrease by 161.6 seconds from the build improved conditions.

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Table 6.4 - SR 21/Augusta Road at SR 30/Piedmont Ave/Old Richmond Road															
Condition	Measure	EB			WB		NB			SB			Intersection	
		EBL	EBT	EBR	WBL	WBT	NBLU	NBT	NBR	SBL	SBT	SBR	LOS (Delay (Sec/Veh)	V/C
AM Peak Hour														
2021 Existing	LOS (Delay)	E (63.7)			E (57.8)		B (19.1)			D (45.5)			D (38.6)	1
	Synchro 95th Q	N/A	126'	#1283'	109'	25'	90'	512'	0'	m34'	m#1593'	m33'		
2029 Background	LOS (Delay)	F (92.2)			E (77.7)		C (31.7)			C (20.4)			C (28.8)	1.09
	Synchro 95th Q	140'	#486'	#764'	#179'	29'	#144'	#681'	0'	m33'	m#1117'	m12'		
2029 Build	LOS (Delay)	F (599.2)			E (77.7)		C (32.5)			C (23.4)			E (71.4)	2.15
	Synchro 95th Q	368'	#486'	#764'	#179'	29'	#144'	#1090'	0'	m31'	m#1182'	m44'		
2029 Build IMP	LOS (Delay)	E (77.3)			E (58.3)		D (49.1)			C (31.3)			D (41.8)	1.23
	Synchro 95th Q	245'	369'	#701'	103'	29'	#153'	#1288'	5'	m28'	m#1045'	m21'		
2029 Build IMP with Regional IMP	LOS (Delay)	E (77.5)			E (58.3)		D (39.3)			C (33.0)			D (39.4)	1.23
	Synchro 95th Q	245'	369'	#702'	104'	29'	#153'	#726'	5'	m34'	m#1442'	m28'		
PM Peak Hour														
2021 Existing	LOS (Delay)	E (72.5)			D (43.4)		F (174.8)			D (49.3)			F (122.9)	1.34
	Synchro 95th Q	N/A	221'	37'	170'	301'	#277'	#1746'	198'	m126'	m#747'	m70'		
2029 Background	LOS (Delay)	F (118.3)			F (145.1)		F (167.8)			D (50.0)			F (129.0)	1.37
	Synchro 95th Q	138'	166'	40'	149'	373'	286'	#2149'	239'	m#176'	m#617'	m85'		
2029 Build	LOS (Delay)	F (191.8)			F (145.1)		F (226.2)			D (54.7)			F (163.4)	1.53
	Synchro 95th Q	#248'	166'	40'	149'	373'	286'	#2377'	239'	m#189'	m#938'	m226'		
2029 Build IMP	LOS (Delay)	F (84.9)			E (79.0)		F (270.6)			D (54.4)			F (175.8)	1.58
	Synchro 95th Q	135'	195'	133'	166'	325'	#355'	#2325'	133'	m#175'	m#802'	m120'		
2029 Build IMP with Regional IMP	LOS (Delay)	F (83.3)			E (70.1)		F (109.0)			E (55.0)			F (87.3)	1.24
	Synchro 95th Q	128'	201'	140'	168'	#428'	#367'	#1340'	100'	m#242'	#771'	218'		

m – Volume for 95th percentile queue is metered by upstream signal

- 95th percentile volume exceeds capacity, queue may be longer

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 :

6.0 AUXILIARY TURN LANE WARRANTS

Warrants for additional turn lane improvements at the proposed site access point along SR 21/Augusta Road beyond those necessary for capacity, were determined based on a review of Section 4.9 in the GDOT *Regulations for Driveway and Encroachment Control*. The results of the warrants for left- and right-turn lanes are summarized below with additional data included in the **Appendix**.

A southbound right-turn lane should be constructed at the intersection of SR 21/Augusta Road at Lakeside Boulevard/Site Access with 250 feet of full-width storage.

A northbound U-turn lane already exists at this intersection, therefore auxiliary turn lane warrants were not analyzed for the northbound left-turn.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

7.0 RECOMMENDATIONS

The following improvements are included in GDOT PI 0016361 and were considered in the 2029 background (no-build) and 2029 build conditions:

SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

- Construct an additional eastbound right-turn lane
  - One right-turn lane will be free-flow and unsignalized
  - One right-turn lane will be controlled by the signal
- Construct a dedicated eastbound left-turn lane
- Construct an additional southbound through lane

It is important to note that the eastbound right-turn is anticipated to spillback beyond the available storage for GDOT PI 0016361 in the background conditions. Consideration to extend the storage for the eastbound right-turn lane for GDOT PI 0016361 should be coordinated with the PI 0016361 team. This condition is independent of the proposed Varnedoe-Wiggins Tract Development.

The following regional transportation improvements were identified as a need in the 2029 background and 2029 build conditions:

SR 21/Augusta Road

SR 21/Augusta Road should be a six-lane highway throughout the study area (three northbound and three southbound through lanes) to support increased industrial traffic volume required to support growth at the Port of Savannah as well as background commercial and residential development in the region. This improvement is independent of the proposed Varnedoe-Wiggins Tract Development and should be coordinated with the ongoing Effingham County Transportation Master Plan.

Based on the capacity analyses performed at each of the identified study intersections and the auxiliary turn lane warrant review contained herein, the following improvements have been identified to mitigate the impact of the proposed development on the adjacent street network under 2029 Build conditions:

SR 21/Augusta Road at Rice Mill Road/Market Boulevard

No laneage/approach improvements are recommended, but optimizing the signal cycle length, splits, and offsets would improve intersection operations.

SR 21/Augusta Road at Lakeside Boulevard/Site Access

- Conduct a full signal warrant analysis
  - Peak hour signal warrants are met for the AM and PM peak hours (MUTCD Signal Warrant #3) which suggests that other warrants will also be met
  - If warranted and approved by GDOT, install a traffic signal in accordance with GDOT standards and specifications to include remote access and coordination through cellular modem, 2070 controller, Statewide MAXTIME controller software, and integration with GDOT's real-time Automated Traffic Signal Performance Measures (ATSPM)
- Construct the eastbound approach to include a left-turn lane, a through lane, and dual right-turn lanes
- Modify the chevron area on the westbound approach to be a through lane, resulting in a left-turn lane, a through lane, and a right-turn lane
- Construct a southbound right-turn lane with a minimum storage of 250 feet

- Modify the northbound-U-Turn lane to be a shared left-turn/U-turn lane
- Modify the northbound chevroned median area to develop a second left-turn lane

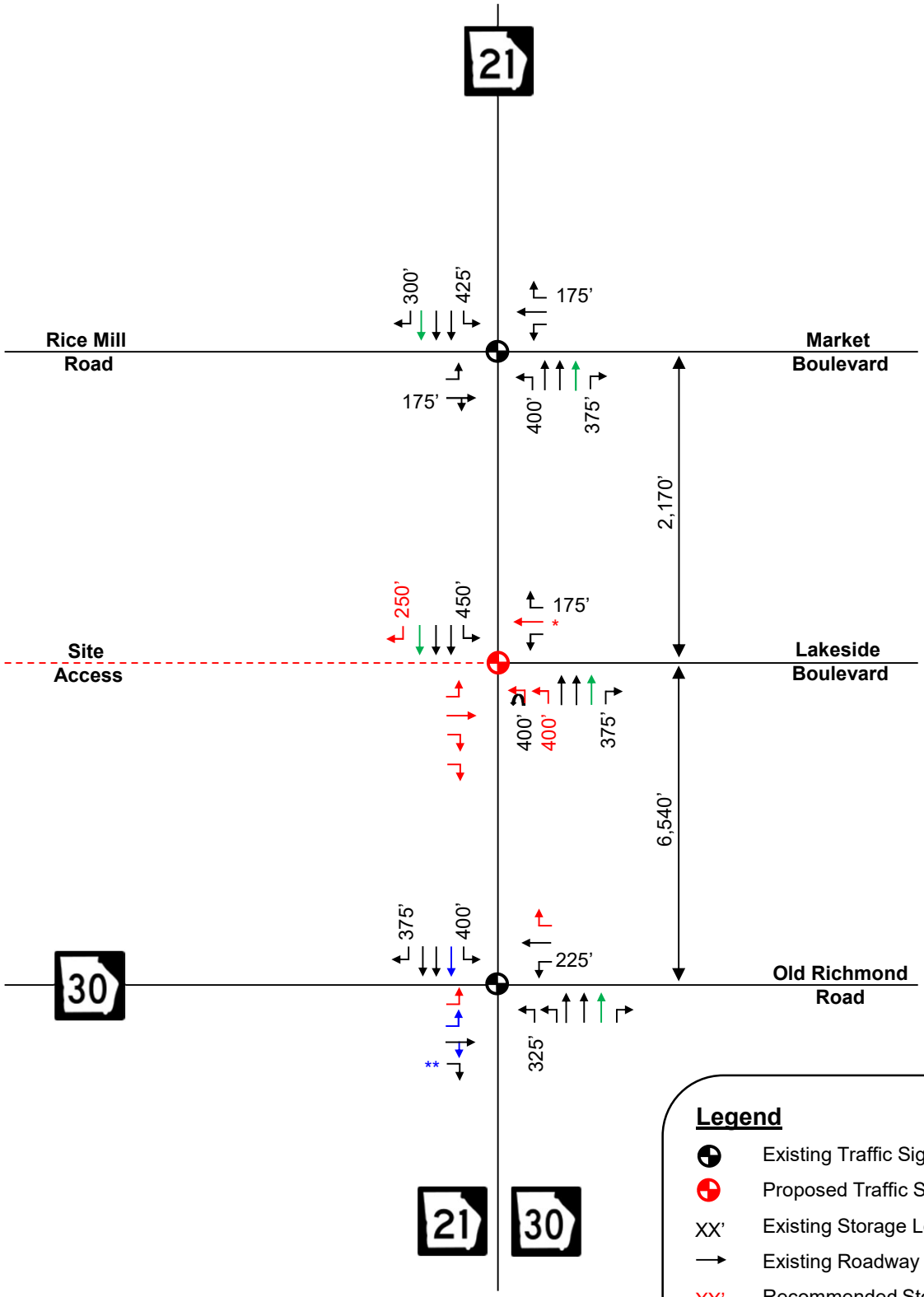
SR 21/Augusta Road at SR 30/Piedmont Avenue/Old Richmond Road

The following improvements should be implemented when the Phase I development of 2,629,000 square feet is exceeded:

- Construct an additional eastbound left-turn lane to create dual left-turn lanes
- Widen the westbound approach to include a left-turn lane, a through lane, and a right-turn lane
- Optimize the approach splits for the traffic signal

The recommended improvements identified within the study area are shown in **Figure 8.1**. The improvements shown on this figure are subject to approval by GDOT. All encroachments and improvements to the State roadway systems shall be designed, permitted, and constructed in conformance to GDOT Standards and Details.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-



*Utilize existing pavement width and restripe approach to include a westbound through lane

**Proposed free-flow right-turn lane

Kimley»Horn	Varnedoe-Wiggins Tract Development Master Plan Traffic Impact Analysis	2029 Build Recommended Roadway Laneage	Figure 8.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Kimley»Horn

APPENDIX

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Turning Movement Counts

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 :

Varnedoe Wiggins Count Map

48-Hour Volume/Classification Count

6-Hour Turning Movement Count

Kimley»Horn

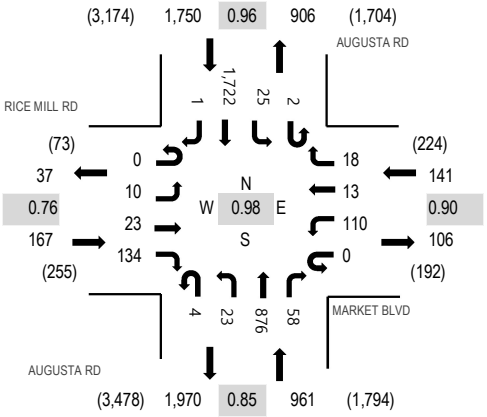
March 4, 2021 1 of 2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 :

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

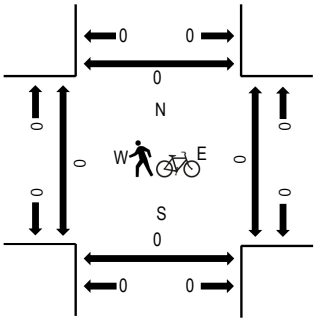
Location: #1 AUGUSTA RD & MARKET BLVD AM
Date: Tuesday, March 9, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	RICE MILL RD Eastbound				MARKET BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	4	35	0	29	1	1	0	3	180	22	1	8	447	0	732	3,019	0	0	0	0
7:15 AM	0	4	10	41	0	31	4	4	1	7	222	19	0	2	425	1	771	2,960	0	0	0	0
7:30 AM	0	2	6	36	0	27	5	5	0	7	205	14	0	4	432	0	743	2,811	0	0	0	0
7:45 AM	0	3	3	22	0	23	3	8	3	6	269	3	1	11	418	0	773	2,695	0	0	0	0
8:00 AM	0	3	0	22	0	8	3	5	2	6	187	6	1	3	424	3	673	2,428	0	0	0	0
8:15 AM	0	0	1	21	0	11	1	4	0	6	197	12	0	10	357	2	622		0	0	0	0
8:30 AM	0	1	0	30	0	14	0	16	1	6	201	13	2	14	329	0	627		0	0	0	1
8:45 AM	0	1	2	7	0	16	2	3	0	7	177	12	0	13	266	0	506		0	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	4	0	0	0	0	109	1	0	0	61	0	175
Lights	0	10	21	132	0	100	13	17	4	20	733	55	2	25	1,638	1	2,771
Mediums	0	0	2	2	0	6	0	1	0	3	34	2	0	0	23	0	73
Total	0	10	23	134	0	110	13	18	4	23	876	58	2	25	1,722	1	3,019

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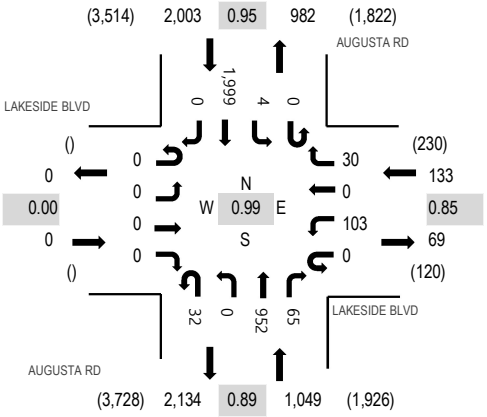
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

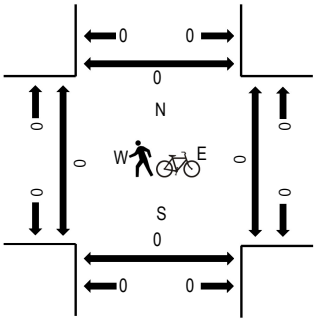
Location: #2 AUGUSTA RD & LAKESIDE BLVD AM
Date: Tuesday, March 9, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	LAKESIDE BLVD Eastbound				LAKESIDE BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	24	0	6	6	0	205	20	0	1	528	0	790	3,185	0	0	0	0
7:15 AM	0	0	0	0	0	28	0	10	11	0	244	9	0	0	504	0	806	3,078	0	0	0	0
7:30 AM	0	0	0	0	0	23	0	3	7	0	234	18	0	2	503	0	790	2,938	0	0	0	0
7:45 AM	0	0	0	0	0	28	0	11	8	0	269	18	0	1	464	0	799	2,764	0	0	0	0
8:00 AM	0	0	0	0	0	19	0	7	9	0	191	10	0	4	443	0	683	2,485	0	0	0	0
8:15 AM	0	0	0	0	0	20	0	5	5	0	221	6	1	5	403	0	666		0	0	0	0
8:30 AM	0	0	0	0	0	18	0	4	4	0	205	11	1	4	369	0	616		0	0	0	0
8:45 AM	0	0	0	0	0	22	0	2	3	0	203	9	0	2	279	0	520		0	0	0	0

Peak Rolling Hour Flow Rates

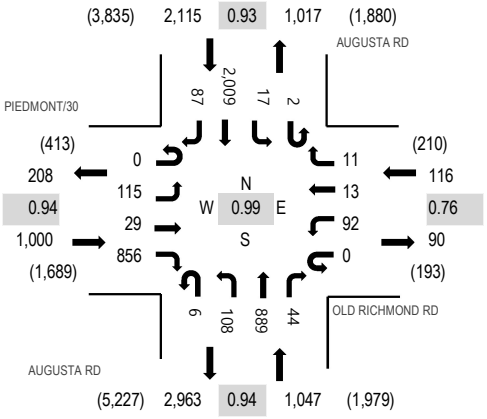
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	109	0	0	0	68	0	178
Lights	0	0	0	0	0	103	0	29	32	0	804	62	0	4	1,897	0	2,931
Mediums	0	0	0	0	0	0	0	0	0	0	39	3	0	0	34	0	76
Total	0	0	0	0	0	103	0	30	32	0	952	65	0	4	1,999	0	3,185

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

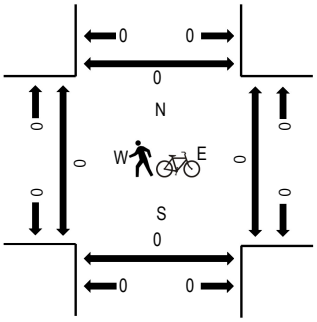
Location: #3 AUGUSTA RD & OLD RICHMOND RD AM
Date: Tuesday, March 9, 2021
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	PIEDMONT/30 Eastbound				OLD RICHMOND RD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	30	4	194	0	32	1	5	3	24	192	5	1	2	546	18	1,057	4,278	0	0	0	0
7:15 AM	0	25	3	233	0	23	4	3	0	35	219	7	1	5	498	21	1,077	4,160	0	0	0	0
7:30 AM	0	29	11	226	0	22	3	1	1	32	231	17	0	4	481	23	1,081	4,029	0	0	0	0
7:45 AM	0	31	11	203	0	15	5	2	2	17	247	15	0	6	484	25	1,063	3,784	0	0	0	0
8:00 AM	0	20	10	180	0	15	4	2	1	31	188	9	0	1	468	10	939	3,435	0	0	0	0
8:15 AM	0	28	6	163	0	23	5	0	2	29	210	14	0	8	442	16	946		0	0	0	0
8:30 AM	0	30	11	124	0	12	1	2	2	27	177	8	0	7	416	19	836		0	0	0	0
8:45 AM	0	26	5	86	0	19	11	0	3	35	180	16	0	8	308	17	714		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	6	0	0	0	1	0	2	117	3	0	2	60	0	191
Lights	0	113	29	836	0	91	13	10	6	93	735	37	1	14	1,923	83	3,984
Mediums	0	2	0	14	0	1	0	0	0	13	37	4	1	1	26	4	103
Total	0	115	29	856	0	92	13	11	6	108	889	44	2	17	2,009	87	4,278

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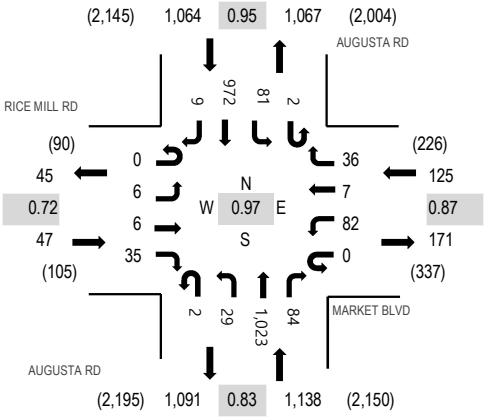
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

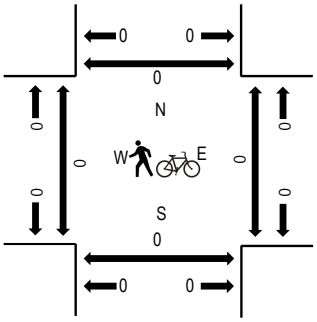
Location: #1 AUGUSTA RD & MARKET BLVD Noon
Date: Tuesday, March 9, 2021
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:00 PM - 12:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	RICE MILL RD Eastbound				MARKET BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	2	0	7	0	17	1	3	1	9	249	14	1	16	231	2	553	2,252	0	0	0	0
11:15 AM	0	2	2	10	0	13	1	8	0	8	230	16	0	19	273	3	585	2,310	0	0	0	0
11:30 AM	0	3	1	18	0	18	2	7	0	8	195	21	1	33	245	1	553	2,273	0	0	0	0
11:45 AM	0	2	2	9	0	22	2	7	0	6	227	28	0	14	240	2	561	2,324	0	0	0	0
12:00 PM	0	0	2	12	0	21	1	12	0	8	245	23	0	22	261	4	611	2,374	0	0	0	0
12:15 PM	0	3	2	8	0	17	4	10	0	5	214	16	1	15	251	2	548		0	0	0	0
12:30 PM	0	1	2	10	0	21	0	3	1	10	251	23	1	30	250	1	604		0	0	0	0
12:45 PM	0	2	0	5	0	23	2	11	1	6	313	22	0	14	210	2	611		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	118	1	0	1	102	0	222
Lights	0	6	5	34	0	80	7	35	2	28	869	81	2	78	836	9	2,072
Mediums	0	0	1	1	0	2	0	1	0	1	36	2	0	2	34	0	80
Total	0	6	6	35	0	82	7	36	2	29	1,023	84	2	81	972	9	2,374

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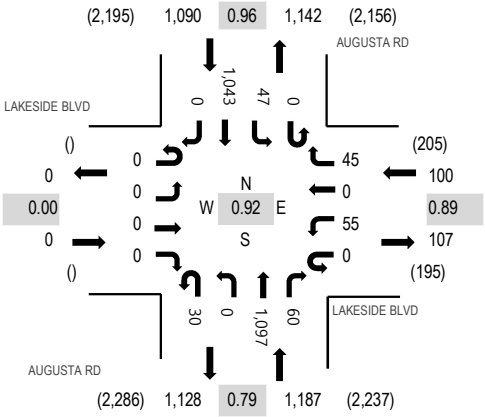
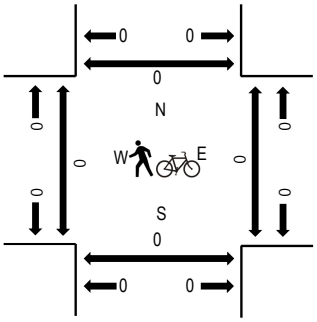
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: #2 AUGUSTA RD & LAKESIDE BLVD Noon
Date: Tuesday, March 9, 2021
Peak Hour: 12:00 PM - 01:00 PM
Peak 15-Minutes: 12:45 PM - 01:00 PM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	LAKESIDE BLVD Eastbound				LAKESIDE BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	0	0	0	0	11	0	10	3	0	257	16	0	8	248	0	553	2,260	0	0	0	0
11:15 AM	0	0	0	0	0	18	0	10	3	0	244	15	0	6	282	0	578	2,304	0	0	0	0
11:30 AM	0	0	0	0	0	16	0	10	4	0	227	15	0	10	275	0	557	2,262	0	0	0	0
11:45 AM	0	0	0	0	0	19	0	11	10	0	245	11	0	7	269	0	572	2,304	0	0	0	0
12:00 PM	0	0	0	0	0	6	0	17	11	0	253	12	0	18	280	0	597	2,377	0	0	0	0
12:15 PM	0	0	0	0	0	14	0	12	2	0	231	10	0	15	252	0	536		0	0	0	0
12:30 PM	0	0	0	0	0	17	0	6	7	0	270	17	0	9	273	0	599		0	0	0	0
12:45 PM	0	0	0	0	0	18	0	10	10	0	343	21	0	5	238	0	645		0	0	0	0

Peak Rolling Hour Flow Rates

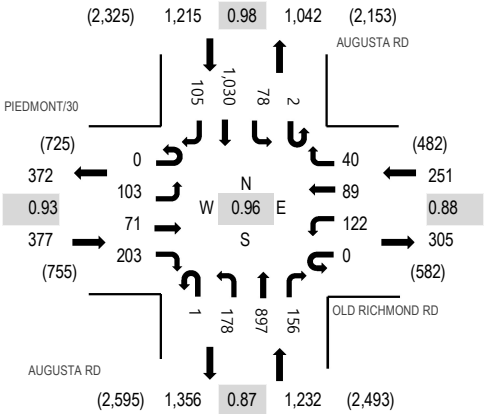
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	118	0	0	0	102	0	220
Lights	0	0	0	0	0	54	0	44	30	0	937	57	0	45	906	0	2,073
Mediums	0	0	0	0	0	1	0	1	0	0	42	3	0	2	35	0	84
Total	0	0	0	0	0	55	0	45	30	0	1,097	60	0	47	1,043	0	2,377

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

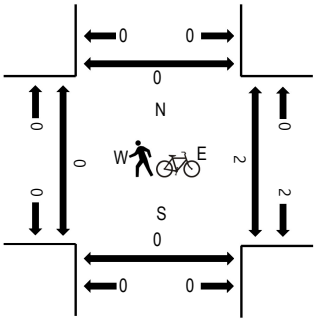
Location: #3 AUGUSTA RD & OLD RICHMOND RD Noon
Date: Tuesday, March 9, 2021
Peak Hour: 11:15 AM - 12:15 PM
Peak 15-Minutes: 11:15 AM - 11:30 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	PIEDMONT/30 Eastbound				OLD RICHMOND RD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	25	15	53	0	15	14	6	3	38	226	35	1	18	205	31	685	3,004	0	0	0	0
11:15 AM	0	22	15	49	0	27	23	7	0	72	235	43	0	13	267	28	801	3,075	0	0	0	0
11:30 AM	0	27	21	57	0	32	19	5	1	33	184	45	0	27	256	28	735	2,970	0	0	0	0
11:45 AM	0	22	12	51	0	35	22	19	0	39	240	35	2	19	263	24	783	3,051	0	2	0	0
12:00 PM	0	32	23	46	0	28	25	9	0	34	238	33	0	19	244	25	756	3,051	0	0	0	0
12:15 PM	0	29	28	43	0	44	22	7	0	33	171	34	0	14	239	32	696		0	0	0	0
12:30 PM	0	29	11	52	0	31	14	11	1	44	279	38	1	14	257	34	816		0	0	0	0
12:45 PM	0	36	11	46	0	36	20	11	0	43	279	37	0	22	214	28	783		0	0	0	0

Peak Rolling Hour Flow Rates

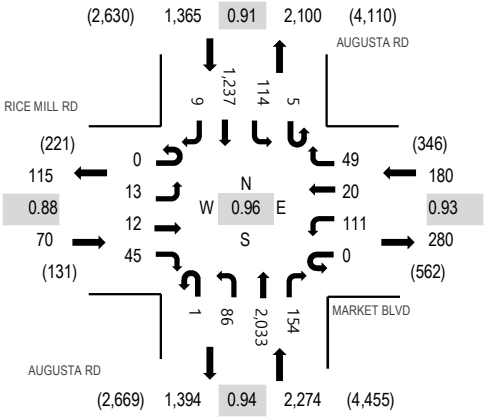
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	8	0	0	0	0	0	6	97	1	0	0	129	1	243
Lights	0	100	71	181	0	120	87	40	1	154	760	155	2	75	859	102	2,707
Mediums	0	2	0	14	0	2	2	0	0	18	40	0	0	3	42	2	125
Total	0	103	71	203	0	122	89	40	1	178	897	156	2	78	1,030	105	3,075

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

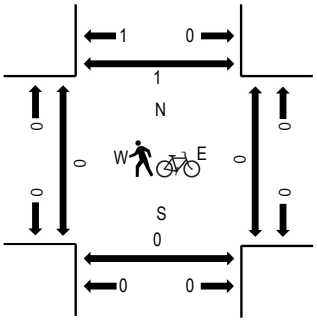
Location: #1 AUGUSTA RD & MARKET BLVD PM
Date: Tuesday, March 9, 2021
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	RICE MILL RD Eastbound				MARKET BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	1	13	0	17	0	11	0	18	502	29	2	34	261	2	890	3,729	0	0	0	0
4:15 PM	0	3	2	8	0	22	4	15	2	20	507	44	2	25	307	3	964	3,849	0	0	0	0
4:30 PM	0	3	4	7	0	32	4	15	1	21	472	43	2	22	301	3	930	3,857	0	0	0	0
4:45 PM	0	3	4	9	0	32	2	14	1	33	496	36	3	27	284	1	945	3,889	0	0	0	1
5:00 PM	0	4	2	15	0	27	4	14	0	25	536	43	1	26	312	1	1,010	3,833	0	0	0	0
5:15 PM	0	4	2	11	0	25	9	12	0	13	482	41	1	35	335	2	972		0	0	0	0
5:30 PM	0	2	4	10	0	27	5	9	0	15	519	34	0	26	306	5	962		0	0	0	0
5:45 PM	0	4	6	10	0	28	4	14	0	25	457	40	1	32	266	2	889		0	0	0	0

Peak Rolling Hour Flow Rates

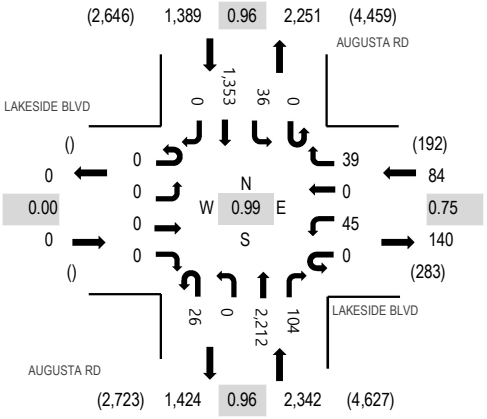
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	2	0	0	0	0	32	1	0	0	43	0	78
Lights	0	13	12	44	0	109	20	49	1	86	1,988	153	5	114	1,171	9	3,774
Mediums	0	0	0	1	0	0	0	0	0	0	13	0	0	0	23	0	37
Total	0	13	12	45	0	111	20	49	1	86	2,033	154	5	114	1,237	9	3,889

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

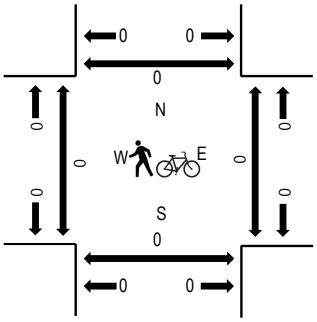
Location: #2 AUGUSTA RD & LAKESIDE BLVD PM
Date: Tuesday, March 9, 2021
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	LAKESIDE BLVD Eastbound				LAKESIDE BLVD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	12	0	13	5	0	552	21	0	7	279	0	889	3,714	0	0	0	0
4:15 PM	0	0	0	0	1	9	0	9	10	0	547	25	1	7	321	0	930	3,784	0	0	0	0
4:30 PM	0	0	0	0	0	11	0	21	11	0	522	30	0	12	329	0	936	3,795	0	0	0	0
4:45 PM	0	0	0	0	0	10	0	10	5	0	580	28	0	9	317	0	959	3,815	0	0	0	0
5:00 PM	0	0	0	0	0	11	0	9	6	0	546	28	0	7	352	0	959	3,751	0	0	0	0
5:15 PM	0	0	0	0	0	10	0	9	8	0	527	25	0	11	351	0	941		0	0	0	0
5:30 PM	0	0	0	0	0	14	0	11	7	0	559	23	0	9	333	0	956		0	0	0	0
5:45 PM	0	0	0	0	1	16	0	15	5	0	528	29	0	10	291	0	895		0	0	0	0

Peak Rolling Hour Flow Rates

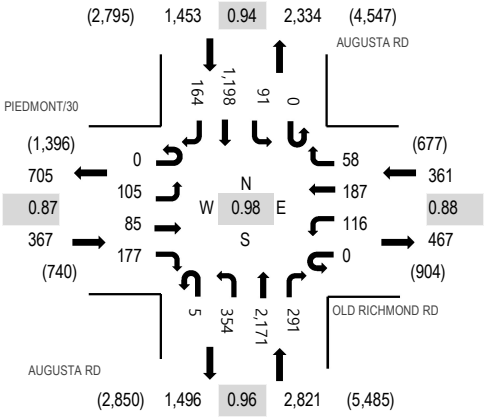
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	35	0	0	0	45	0	80
Lights	0	0	0	0	0	42	0	39	26	0	2,163	104	0	36	1,284	0	3,694
Mediums	0	0	0	0	0	3	0	0	0	0	14	0	0	0	24	0	41
Total	0	0	0	0	0	45	0	39	26	0	2,212	104	0	36	1,353	0	3,815

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

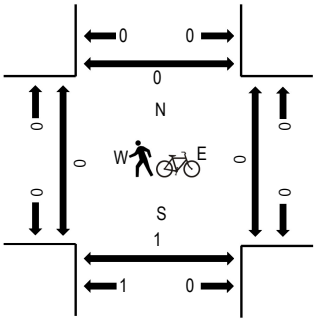
Location: #3 AUGUSTA RD & OLD RICHMOND RD PM
Date: Tuesday, March 9, 2021
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	PIEDMONT/30 Eastbound				OLD RICHMOND RD Westbound				AUGUSTA RD Northbound				AUGUSTA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	40	16	35	0	30	31	14	0	111	471	84	1	23	249	33	1,138	4,695	0	0	0	0
4:15 PM	0	29	26	39	0	28	48	14	4	70	510	65	1	20	290	46	1,190	4,833	0	0	0	2
4:30 PM	0	28	30	33	0	24	34	14	0	79	526	72	0	10	298	55	1,203	4,907	0	0	0	0
4:45 PM	0	39	22	36	0	29	36	14	0	109	512	51	0	18	259	39	1,164	4,957	0	0	0	0
5:00 PM	0	25	13	43	0	24	49	8	1	83	566	77	0	20	318	49	1,276	5,002	0	0	1	0
5:15 PM	0	33	14	50	0	37	50	16	2	107	523	67	0	24	297	44	1,264		0	0	0	0
5:30 PM	0	21	35	55	0	34	50	16	0	74	511	77	0	23	320	37	1,253		0	0	0	0
5:45 PM	0	26	23	29	0	21	38	18	2	90	571	70	0	24	263	34	1,209		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	3	39	0	0	0	41	0	84
Lights	0	105	85	172	0	110	186	58	5	344	2,118	288	0	89	1,132	161	4,853
Mediums	0	0	0	5	0	6	0	0	0	7	14	3	0	2	25	3	65
Total	0	105	85	177	0	116	187	58	5	354	2,171	291	0	91	1,198	164	5,002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Traffic Volume Development

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

INTERSECTION VOLUME DEVELOPMENT

GA 21/Augusta Road and Rice Mill Road /Market Boulevard
AM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				Rice Mill Road Eastbound				Market Boulevard Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	23	886	58	4	25	1,742	1	2	10	23	134	0	110	13	18	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	1	20	1	0	0	32	0	0	0	0	3	0	2	0	0	0
2021 Existing Traffic	24	906	59	4	25	1,774	1	2	10	23	137	0	112	13	18	0
2021 Existng PHF	0.82	0.81	0.66	0.33	0.57	0.96	0.25	0.50	0.63	0.58	0.82	0.90	0.89	0.65	0.56	0.90
2023 PHF	0.82	0.81	0.66	0.33	0.57	0.95	0.25	0.50	0.63	0.58	0.82	0.90	0.89	0.65	0.56	0.90
2021 Existing Heavy Vehicle %	13%	16%	5%	2%	2%	5%	2%	2%	2%	9%	2%	2%	9%	2%	6%	2%
2023 Build Heavy Vehicle %	13%	16%	5%	2%	2%	5%	2%	2%	2%	9%	2%	2%	9%	2%	6%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	25	943	61	4	26	1,846	1	2	10	24	143	0	117	14	19	0
2029 Background Traffic	28	1,062	69	5	29	2,079	1	2	12	27	161	0	131	15	21	0
Percent Inbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	0	47	0	0	0	209	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment (Trucks)	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Total Project Trips (Balanced)	0	51	0	0	0	213	0	0	0	0	0	0	0	0	0	0
2023 Buildout Total	25	994	61	4	26	2,059	1	2	10	24	143	0	117	14	19	0
2029 Buildout Total	28	1,113	69	4	29	2,292	1	2	12	27	161	0	131	15	21	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

PM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				Rice Mill Road Eastbound				Market Boulevard Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	86	2,057	155	1	114	1,252	9	5	13	12	45	0	111	20	49	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	0	0	0	0	0	21	0	0	0	0	1	0	2	0	0	0
2021 Existing Traffic	86	2,057	155	1	114	1,273	9	5	13	12	46	0	113	20	49	0
2021 Existng PHF	0.65	0.95	0.88	0.25	0.81	0.92	0.45	0.42	0.81	0.75	0.75	0.90	0.87	0.56	0.88	0.90
2023 PHF	0.65	0.95	0.88	0.25	0.81	0.92	0.45	0.42	0.81	0.75	0.75	0.90	0.87	0.56	0.88	0.90
2021 Existing Heavy Vehicle %	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Build Heavy Vehicle %	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	89	2,140	161	1	119	1,324	9	5	14	12	48	0	118	21	51	0
2029 Background Traffic	101	2,410	182	1	134	1,492	11	6	15	14	54	0	132	23	57	0
Percent Inbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	0	188	0	0	0	44	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment (Trucks)	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Total Project Trips (Balanced)	0	194	0	0	0	50	0	0	0	0	0	0	0	0	0	0
2023 Buildout Total	89	2,334	161	1	119	1,374	9	5	14	12	48	0	118	21	51	0
2029 Buildout Total	101	2,604	182	1	134	1,542	11	6	15	14	54	0	132	23	57	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

5/7/2021 14:50

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

INTERSECTION VOLUME DEVELOPMENT

GA 21/Augusta Road and Site Access/Lakeside Boulevard
AM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				Site Access Eastbound				Lakeside Boulevard Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	963	65	32	4	2,023	0	0	0	0	0	0	103	0	30	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	963	65	32	4	2,023	0	0	0	0	0	0	103	0	30	0
2021 Existng PHF	0.90	0.89	0.81	0.73	0.50	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.68	0.90
2023 PHF	0.90	0.89	0.81	0.73	0.50	0.95	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.68	0.90
2021 Existing Heavy Vehicle %	2%	15%	5%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%
2023 Build Heavy Vehicle %	16%	15%	5%	2%	2%	5%	4%	2%	10%	2%	42%	2%	2%	2%	3%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	0	1,002	68	33	4	2,105	0	0	0	0	0	0	107	0	31	0
2029 Background Traffic	0	1,128	76	37	5	2,370	0	0	0	0	0	0	121	0	35	0
Percent Inbound Assignment (Passenger Cars)	70%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	70%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	487	0	0	0	0	0	209	0	47	0	108	0	0	0	0	0
Percent Inbound Assignment (Trucks)	95%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	95%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	82	0	0	0	0	0	4	0	4	0	75	0	0	0	0	0
Total Project Trips (Balanced)	569	0	0	0	0	0	213	0	51	0	183	0	0	0	0	0
2023 Buildout Total	569	1,002	68	33	4	2,105	213	0	51	0	183	0	107	0	31	0
2029 Buildout Total	569	1,128	76	37	5	2,370	213	0	51	0	183	0	121	0	35	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

PM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				Site Access Eastbound				Lakeside Boulevard Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	2,239	104	26	36	1,369	0	0	0	0	0	0	45	0	39	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	0	20	0	0	0	28	0	0	0	0	0	0	2	0	1	0
2021 Existing Traffic	0	2,259	104	26	36	1,397	0	0	0	0	0	0	47	0	40	0
2021 Existng PHF	0.90	0.95	0.93	0.81	0.82	0.96	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.90	0.89	0.90
2023 PHF	0.90	0.95	0.93	0.81	0.82	0.96	0.90	0.90	0.90	0.90	0.90	0.90	0.80	0.90	0.89	0.90
2021 Existing Heavy Vehicle %	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	7%	2%	2%	2%
2023 Build Heavy Vehicle %	56%	2%	2%	2%	2%	5%	14%	2%	5%	2%	22%	2%	7%	2%	2%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	0	2,350	108	27	37	1,453	0	0	0	0	0	0	49	0	42	0
2029 Background Traffic	0	2,647	122	30	42	1,637	0	0	0	0	0	0	55	0	47	0
Percent Inbound Assignment (Passenger Cars)	70%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	70%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	102	0	0	0	0	0	44	0	188	0	437	0	0	0	0	0
Percent Inbound Assignment (Trucks)	95%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	95%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	123	0	0	0	0	0	6	0	6	0	113	0	0	0	0	0
Total Project Trips (Balanced)	225	0	0	0	0	0	50	0	194	0	550	0	0	0	0	0
2023 Buildout Total	225	2,350	108	27	37	1,453	50	0	194	0	550	0	49	0	42	0
2029 Buildout Total	225	2,647	122	30	42	1,637	50	0	194	0	550	0	55	0	47	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

5/7/2021 14:50

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

INTERSECTION VOLUME DEVELOPMENT

GA 21/Augusta Road and GA 30/Piedmont Avenue/Old Richmond Road
AM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				GA 30/Piedmont Avenue Eastbound				Old Richmond Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	108	900	44	6	17	2,034	87	2	115	29	866	0	92	13	11	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	0	25	0	0	0	17	1	0	4	0	0	0	0	0	3	0
2021 Existing Traffic	108	925	44	6	17	2,051	88	2	119	29	866	0	92	13	14	0
2021 Existng PHF	0.77	0.90	0.65	0.50	0.71	0.92	0.87	0.50	0.93	0.66	0.92	0.90	0.72	0.65	0.55	0.90
2023 PHF	0.77	0.90	0.65	0.50	0.71	0.92	0.88	0.50	0.91	0.66	0.92	0.90	0.72	0.65	0.55	0.90
2021 Existing Heavy Vehicle %	14%	17%	16%	2%	18%	4%	5%	50%	2%	2%	2%	2%	2%	2%	9%	2%
2023 Build Heavy Vehicle %	14%	19%	16%	2%	18%	7%	4%	50%	2%	2%	2%	2%	2%	2%	9%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	112	962	46	6	18	2,134	92	2	124	30	901	0	96	14	15	0
2029 Background Traffic	127	1,084	52	7	20	2,403	103	2	139	34	1,015	0	108	15	16	0
Percent Inbound Assignment (Passenger Cars)	0%	40%	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	40%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	0	278	0	0	0	61	47	0	209	0	0	0	0	0	0	0
Percent Inbound Assignment (Trucks)	0%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	0%	0%	0%	0%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	0	82	0	0	0	75	0	0	0	0	0	0	0	0	0	0
Total Project Trips (Balanced)	0	360	0	0	0	136	47	0	209	0	0	0	0	0	0	0
2023 Buildout Total	112	1,322	46	6	18	2,270	139	2	333	30	901	0	96	14	15	0
2029 Buildout Total	127	1,444	52	7	20	2,539	150	2	348	34	1,015	0	108	15	16	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

PM PEAK HOUR

Description	GA 21/Augusta Road Northbound				GA 21/Augusta Road Southbound				GA 30/Piedmont Avenue Eastbound				Old Richmond Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	358	2,197	295	5	91	1,213	166	0	105	85	180	0	116	190	58	0
Adjustment Factor*																
Adjusted Volumes																
Volume Balancing	0	27	0	0	0	0	0	0	2	0	0	0	0	0	0	0
2021 Existing Traffic	358	2,224	295	5	91	1,213	166	0	107	85	180	0	116	190	58	0
2021 Existng PHF	0.83	0.95	0.95	0.63	0.95	0.94	0.83	0.90	0.80	0.61	0.80	0.90	0.78	0.93	0.81	0.90
2023 PHF	0.83	0.95	0.95	0.63	0.95	0.93	0.87	0.90	0.83	0.61	0.80	0.90	0.78	0.93	0.81	0.90
2021 Existing Heavy Vehicle %	3%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%
2023 Build Heavy Vehicle %	3%	7%	2%	2%	2%	11%	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%
Annual Growth Rate	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
2023 Background Traffic	372	2,314	307	5	95	1,262	173	0	111	88	187	0	121	198	60	0
2029 Background Traffic	419	2,606	346	6	107	1,421	194	0	125	100	211	0	136	223	68	0
Percent Inbound Assignment (Passenger Cars)	0%	40%	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Passenger Cars)	0%	0%	0%	0%	0%	40%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Passenger Cars	0	58	0	0	0	249	188	0	44	0	0	0	0	0	0	0
Percent Inbound Assignment (Trucks)	0%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment (Trucks)	0%	0%	0%	0%	0%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Calculated) - Trucks	0	123	0	0	0	113	0	0	0	0	0	0	0	0	0	0
Total Project Trips (Balanced)	0	181	0	0	0	362	188	0	44	0	0	0	0	0	0	0
2023 Buildout Total	372	2,495	307	5	95	1,624	361	0	155	88	187	0	121	198	60	0
2029 Buildout Total	419	2,787	346	6	107	1,783	382	0	169	100	211	0	136	223	68	0

*Traffic volumes adjusted to account for the influence of COVID-19 on travel patterns and based on count data at adjacent intersections

5/7/2021 14:50

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection Capacity Analysis

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

2021 Existing Conditions

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2021 Existing AM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	207	126	20	32	34	1119	89	48	1848	4
v/c Ratio	0.14	0.84	2.57	0.13	0.15	0.17	0.51	0.08	0.12	0.74	0.00
Control Delay	62.2	56.0	786.8	61.2	1.4	6.6	8.0	1.5	3.6	14.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	56.0	786.8	61.2	1.4	6.6	8.0	1.5	3.6	14.9	0.0
Queue Length 50th (ft)	14	82	~191	17	0	4	128	0	7	570	0
Queue Length 95th (ft)	27	65	#323	32	0	m10	184	9	9	671	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	118	245	49	159	216	230	2189	1110	437	2504	1179
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.84	2.57	0.13	0.15	0.15	0.51	0.08	0.11	0.74	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2021 Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	10	23	137	112	13	18	4	24	906	59	2	25
Future Volume (veh/h)	10	23	137	112	13	18	4	24	906	59	2	25
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1767	1767	1767	1870	1811		1707	1663	1826		1870
Adj Flow Rate, veh/h	16	40	0	126	20	0		29	1119	0		44
Peak Hour Factor	0.63	0.58	0.82	0.89	0.65	0.56		0.82	0.81	0.66		0.57
Percent Heavy Veh, %	2	9	9	9	2	6		13	16	5		2
Cap, veh/h	157	151		135	160			212	2185			419
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.00		0.05	0.69	0.00		0.06
Sat Flow, veh/h	1392	1767	0	1291	1870	1535		1626	3159	1547		1781
Grp Volume(v), veh/h	16	40	0	126	20	0		29	1119	0		44
Grp Sat Flow(s),veh/h/ln	1392	1767	0	1291	1870	1535		1626	1580	1547		1781
Q Serve(g_s), s	1.5	3.0	0.0	9.0	1.4	0.0		0.6	23.7	0.0		0.9
Cycle Q Clear(g_c), s	2.9	3.0	0.0	12.0	1.4	0.0		0.6	23.7	0.0		0.9
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	157	151		135	160			212	2185			419
V/C Ratio(X)	0.10	0.26		0.93	0.12			0.14	0.51			0.11
Avail Cap(c_a), veh/h	157	151		135	160			279	2185			473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	60.5	59.9	0.0	67.0	59.1	0.0		13.7	10.3	0.0		6.7
Incr Delay (d2), s/veh	0.3	0.9	0.0	57.9	0.3	0.0		0.3	0.9	0.0		0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	0.0	6.7	0.7	0.0		0.3	7.2	0.0		0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	60.8	0.0	124.9	59.5	0.0		14.0	11.2	0.0		6.8
LnGrp LOS	E	E		F	E			B	B			A
Approach Vol, veh/h		56	A		146	A			1148	A		
Approach Delay, s/veh		60.8			115.9				11.3			
Approach LOS		E			F				B			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	105.7		20.0	15.7	104.3		20.0				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	12.5	92.5		12.0	12.5	92.5		12.0				
Max Q Clear Time (g_c+I1), s	2.6	49.6		5.0	2.9	25.7		14.0				
Green Ext Time (p_c), s	0.0	42.3		0.1	0.0	51.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		19.2
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

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Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1774	1
Future Volume (veh/h)	1774	1
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1848	0
Peak Hour Factor	0.96	0.25
Percent Heavy Veh, %	5	2
Cap, veh/h	2434	
Arrive On Green	0.70	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	1848	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	47.6	0.0
Cycle Q Clear(g_c), s	47.6	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2434	
V/C Ratio(X)	0.76	
Avail Cap(c_a), veh/h	2434	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	13.3	0.0
Incr Delay (d2), s/veh	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.8	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	15.6	0.0
LnGrp LOS	B	
Approach Vol, veh/h	1892	A
Approach Delay, s/veh	15.4	
Approach LOS	B	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	23.7

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	103	30	32	963	65	4	2023
Future Vol, veh/h	103	30	32	963	65	4	2023
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Yield	-	-	Free	-	None
Storage Length	0	0	400	-	375	450	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	92	68	73	89	81	50	95
Heavy Vehicles, %	2	3	2	15	5	2	5
Mvmt Flow	112	44	44	1082	80	8	2129

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2251	541	2129	0	-	1082	0
Stage 1	1170	-	-	-	-	-	-
Stage 2	1081	-	-	-	-	-	-
Critical Hdwy	6.84	6.96	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.33	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 35	483	61	-	0	640	-
Stage 1	257	-	-	-	0	-	-
Stage 2	287	-	-	-	0	-	-
Platoon blocked, %				-			-
Mov Cap-1 Maneuver	~ 10	483	61	-	-	640	-
Mov Cap-2 Maneuver	~ 54	-	-	-	-	-	-
Stage 1	~ 72	-	-	-	-	-	-
Stage 2	284	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s$	477.4	5.9	0
HCM LOS	F		

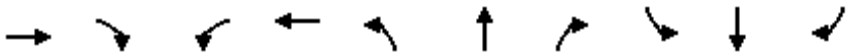
Minor Lane/Major Mvmt	NBU	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	61	-	54	483	640	-
HCM Lane V/C Ratio	0.719	-	2.073	0.091	0.013	-
HCM Control Delay (s)	152.7	-	$ 660.3	13.2	10.7	-
HCM Lane LOS	F	-	F	B	B	-
HCM 95th %tile Q(veh)	3.1	-	11	0.3	0	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2021 Existing AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	941	128	45	152	1028	68	28	2229	101
v/c Ratio	0.35	1.39	0.31	0.08	0.64	0.70	0.09	0.37	1.58	0.15
Control Delay	36.3	212.6	35.7	17.0	74.6	33.4	0.2	65.0	293.5	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	212.6	35.7	17.0	74.6	33.4	0.2	65.0	293.5	12.2
Queue Length 50th (ft)	116	~1023	85	12	70	403	0	25	~1512	13
Queue Length 95th (ft)	126	#1283	109	25	90	512	0	m34	m#1593	m33
Internal Link Dist (ft)	546			1558		3417			6441	
Turn Bay Length (ft)		250	225		325			400		375
Base Capacity (vph)	490	678	417	592	283	1467	742	252	1414	687
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.39	0.31	0.08	0.54	0.70	0.09	0.11	1.58	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary — Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive — 2021 Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	119	29	866	92	13	14	6	108	925	44	2	17
Future Volume (veh/h)	119	29	866	92	13	14	6	108	925	44	2	17
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1693	1648	1663		1633
Adj Flow Rate, veh/h	128	44	0	128	20	0		140	1028	0		24
Peak Hour Factor	0.93	0.66	0.92	0.72	0.65	0.55		0.77	0.90	0.65		0.71
Percent Heavy Veh, %	2	2	2	2	2	2		14	17	16		18
Cap, veh/h	190	50		247	263			184	2083			56
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.00		0.06	0.67	0.00		0.04
Sat Flow, veh/h	1035	356	1585	1362	1870	0		3127	3131	1409		1555
Grp Volume(v), veh/h	172	0	0	128	20	0		140	1028	0		24
Grp Sat Flow(s),veh/h/ln	1391	0	1585	1362	1870	0		1564	1566	1409		1555
Q Serve(g_s), s	15.9	0.0	0.0	0.0	1.3	0.0		6.2	22.9	0.0		2.1
Cycle Q Clear(g_c), s	17.2	0.0	0.0	12.2	1.3	0.0		6.2	22.9	0.0		2.1
Prop In Lane	0.74		1.00	1.00		0.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	240	0		247	263			184	2083			56
V/C Ratio(X)	0.72	0.00		0.52	0.08			0.76	0.49			0.43
Avail Cap(c_a), veh/h	552	0		532	655			286	2083			252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	59.7	0.0	0.0	56.9	52.3	0.0		64.9	11.7	0.0		66.1
Incr Delay (d2), s/veh	3.9	0.0	0.0	1.7	0.1	0.0		2.4	0.8	0.0		2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	4.5	0.6	0.0		2.5	7.5	0.0		0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.7	0.0	0.0	58.6	52.4	0.0		67.3	12.5	0.0		68.1
LnGrp LOS	E	A		E	D			E	B			E
Approach Vol, veh/h		172	A		148	A			1168	A		
Approach Delay, s/veh		63.7			57.8				19.1			
Approach LOS		E			E				B			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.4	95.9		28.7	11.3	100.0		28.7				
Change Period (Y+Rc), s	7.2	6.9		9.0	* 6.3	6.9		9.0				
Max Green Setting (Gmax), s	12.8	55.1		49.0	* 23	46.1		49.0				
Max Q Clear Time (g_c+I1), s	8.2	91.0		19.2	4.1	24.9		14.2				
Green Ext Time (p_c), s	0.1	0.0		0.5	0.0	17.8		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		38.6
HCM 6th LOS		D

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2051	88
Future Volume (veh/h)	2051	88
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1826
Adj Flow Rate, veh/h	2229	0
Peak Hour Factor	0.92	0.87
Percent Heavy Veh, %	4	5
Cap, veh/h	2223	
Arrive On Green	0.64	0.00
Sat Flow, veh/h	3497	1547
Grp Volume(v), veh/h	2229	0
Grp Sat Flow(s),veh/h/ln	1749	1547
Q Serve(g_s), s	89.0	0.0
Cycle Q Clear(g_c), s	89.0	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2223	
V/C Ratio(X)	1.00	
Avail Cap(c_a), veh/h	2223	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	25.5	0.0
Incr Delay (d2), s/veh	19.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	38.5	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	45.3	0.0
LnGrp LOS	F	
Approach Vol, veh/h	2253	A
Approach Delay, s/veh	45.5	
Approach LOS	D	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2021 Existing PM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	16	77	130	36	56	136	2165	176	153	1384	20
v/c Ratio	0.09	0.28	0.73	0.14	0.19	0.45	1.02	0.18	0.66	0.65	0.02
Control Delay	52.3	19.4	81.5	53.5	3.8	14.4	35.9	2.7	47.5	20.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	19.4	81.5	53.5	3.8	14.4	35.9	2.7	47.5	20.9	0.0
Queue Length 50th (ft)	13	13	120	30	0	20	~1161	21	87	408	0
Queue Length 95th (ft)	32	41	176	38	10	m3	m860	m26	143	614	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	395	518	381	539	522	304	2131	1000	234	2127	1015
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.15	0.34	0.07	0.11	0.45	1.02	0.18	0.65	0.65	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2021 Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	13	12	46	113	20	49	1	86	2057	155	5	114
Future Volume (veh/h)	13	12	46	113	20	49	1	86	2057	155	5	114
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1870	1870	1870		1870
Adj Flow Rate, veh/h	16	16	0	130	36	0		132	2165	0		141
Peak Hour Factor	0.81	0.75	0.75	0.87	0.56	0.88		0.65	0.95	0.88		0.81
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	185	217		201	217			339	2333			194
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00		0.07	0.66	0.00		0.07
Sat Flow, veh/h	1372	1870	0	1397	1870	1585		1781	3554	1585		1781
Grp Volume(v), veh/h	16	16	0	130	36	0		132	2165	0		141
Grp Sat Flow(s),veh/h/ln	1372	1870	0	1397	1870	1585		1781	1777	1585		1781
Q Serve(g_s), s	1.5	1.1	0.0	13.3	2.5	0.0		3.2	77.7	0.0		5.3
Cycle Q Clear(g_c), s	4.1	1.1	0.0	14.4	2.5	0.0		3.2	77.7	0.0		5.3
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	185	217		201	217			339	2333			194
V/C Ratio(X)	0.09	0.07		0.65	0.17			0.39	0.93			0.73
Avail Cap(c_a), veh/h	423	542		444	542			346	2333			201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	59.6	57.1	0.0	63.5	57.7	0.0		11.6	21.9	0.0		42.3
Incr Delay (d2), s/veh	0.2	0.1	0.0	3.4	0.4	0.0		0.7	8.0	0.0		12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0	5.0	1.2	0.0		1.1	29.9	0.0		5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	57.3	0.0	67.0	58.1	0.0		12.3	29.9	0.0		54.3
LnGrp LOS	E	E		E	E			B	C			D
Approach Vol, veh/h		32	A		166	A			2297	A		
Approach Delay, s/veh		58.5			65.0				28.9			
Approach LOS		E			E				C			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	102.7		24.9	17.5	102.7		24.9				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.5	69.5		42.0	10.5	69.5		42.0				
Max Q Clear Time (g_c+I1), s	5.2	35.1		6.1	7.3	79.7		16.4				
Green Ext Time (p_c), s	0.1	32.2		0.1	0.1	0.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		26.9	
HCM 6th LOS		C	

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2021 Existing PM

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Traffic Volume (veh/h)	1273	9
Future Volume (veh/h)	1273	9
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1384	0
Peak Hour Factor	0.92	0.45
Percent Heavy Veh, %	5	2
Cap, veh/h	2278	
Arrive On Green	0.66	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	1384	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	33.1	0.0
Cycle Q Clear(g_c), s	33.1	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2278	
V/C Ratio(X)	0.61	
Avail Cap(c_a), veh/h	2278	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	14.2	0.0
Incr Delay (d2), s/veh	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	15.4	0.0
LnGrp LOS	B	
Approach Vol, veh/h	1525	A
Approach Delay, s/veh	19.0	
Approach LOS	B	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	10.6

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	47	40	26	2259	104	36	1397
Future Vol, veh/h	47	40	26	2259	104	36	1397
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Yield	-	-	Free	-	None
Storage Length	0	0	400	-	375	450	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	80	89	81	95	93	82	96
Heavy Vehicles, %	7	2	2	2	2	2	5
Mvmt Flow	59	45	32	2378	112	44	1455

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	3258	1189	1455	0	-	2378	0
Stage 1	2442	-	-	-	-	-	-
Stage 2	816	-	-	-	-	-	-
Critical Hdwy	6.94	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-	-
Follow-up Hdwy	3.57	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 6	180	169	-	0	201	-
Stage 1	~ 48	-	-	-	0	-	-
Stage 2	383	-	-	-	0	-	-
Platoon blocked, %				-			-
Mov Cap-1 Maneuver	~ 4	180	169	-	-	201	-
Mov Cap-2 Maneuver	~ 32	-	-	-	-	-	-
Stage 1	~ 39	-	-	-	-	-	-
Stage 2	299	-	-	-	-	-	-

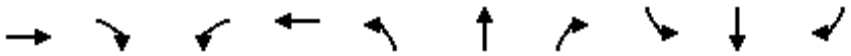
Approach	WB	NB	SB
HCM Control Delay, s	$ 389.7	0.4	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBU	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	169	-	32	180	201	-
HCM Lane V/C Ratio	0.19	-	1.836	0.25	0.218	-
HCM Control Delay (s)	31.2	-	$ 663.8	31.5	27.8	-
HCM Lane LOS	D	-	F	D	D	-
HCM 95th %tile Q(veh)	0.7	-	6.7	0.9	0.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2021 Existing PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	273	225	149	276	439	2341	311	96	1290	200
v/c Ratio	0.98	0.37	0.65	0.54	0.93	1.36	0.37	0.68	0.89	0.26
Control Delay	99.7	6.3	60.1	46.1	88.7	198.1	16.2	80.6	43.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.7	6.3	60.1	46.1	88.7	198.1	16.2	80.6	43.5	8.3
Queue Length 50th (ft)	251	0	122	207	214	~1556	110	81	629	54
Queue Length 95th (ft)	221	37	170	301	#277	#1746	198	m126	m#747	m70
Internal Link Dist (ft)	546			1558		3417			6441	
Turn Bay Length (ft)		250	225		325			400		375
Base Capacity (vph)	295	627	241	539	472	1719	831	203	1449	781
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.36	0.62	0.51	0.93	1.36	0.37	0.47	0.89	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2021 Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	107	85	180	116	190	58	5	358	2224	295	91	1213
Future Volume (veh/h)	107	85	180	116	190	58	5	358	2224	295	91	1213
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1870	1870		1856	1870	1870	1870	1826
Adj Flow Rate, veh/h	134	139	0	149	204	0		431	2341	0	96	1290
Peak Hour Factor	0.80	0.61	0.80	0.78	0.93	0.81		0.83	0.95	0.95	0.95	0.94
Percent Heavy Veh, %	2	2	2	5	2	2		3	2	2	2	5
Cap, veh/h	179	149		311	535			468	1754		120	1450
Arrive On Green	0.29	0.29	0.00	0.29	0.29	0.00		0.14	0.49	0.00	0.07	0.42
Sat Flow, veh/h	495	521	1585	1220	1870	0		3428	3554	1585	1781	3469
Grp Volume(v), veh/h	273	0	0	149	204	0		431	2341	0	96	1290
Grp Sat Flow(s),veh/h/ln	1016	0	1585	1220	1870	0		1714	1777	1585	1781	1735
Q Serve(g_s), s	26.7	0.0	0.0	0.0	12.7	0.0		18.0	71.6	0.0	7.7	50.0
Cycle Q Clear(g_c), s	39.3	0.0	0.0	20.6	12.7	0.0		18.0	71.6	0.0	7.7	50.0
Prop In Lane	0.49		1.00	1.00		0.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	328	0		311	535			468	1754		120	1450
V/C Ratio(X)	0.83	0.00		0.48	0.38			0.92	1.33		0.80	0.89
Avail Cap(c_a), veh/h	343	0		324	555			468	1754		205	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	0.0	0.0	44.3	41.5	0.0		61.8	36.7	0.0	66.7	39.1
Incr Delay (d2), s/veh	15.5	0.0	0.0	1.1	0.4	0.0		23.1	154.6	0.0	4.6	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	0.0	4.8	6.0	0.0		9.2	66.8	0.0	3.6	22.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	0.0	0.0	45.5	41.9	0.0		84.9	191.4	0.0	71.3	47.6
LnGrp LOS	E	A		D	D			F	F		E	D
Approach Vol, veh/h		273	A		353	A			2772	A		1386
Approach Delay, s/veh		72.5			43.4				174.8			49.3
Approach LOS		E			D				F			D

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	67.5		50.5	16.0	78.5		50.5				
Change Period (Y+Rc), s	7.2	6.9		9.0	* 6.3	6.9		9.0				
Max Green Setting (Gmax), s	19.8	59.1		43.0	* 17	63.1		43.0				
Max Q Clear Time (g_c+I1), s	20.0	52.0		41.3	9.7	73.6		22.6				
Green Ext Time (p_c), s	0.0	6.8		0.2	0.0	0.0		1.3				

Intersection Summary		
HCM 6th Ctrl Delay		122.9
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	166
Future Volume (veh/h)	166
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.83
Percent Heavy Veh, %	2
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1585
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	A
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

2029 Background Conditions

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2029 Background AM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	243	147	23	38	39	1311	105	55	2166	4
v/c Ratio	0.16	0.99	3.00	0.14	0.18	0.24	0.60	0.09	0.16	0.90	0.00
Control Delay	62.9	87.9	972.5	61.7	1.8	17.6	10.7	2.8	4.1	24.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	87.9	972.5	61.7	1.8	17.6	10.7	2.8	4.1	24.2	0.0
Queue Length 50th (ft)	16	120	~231	20	0	9	195	1	9	835	0
Queue Length 95th (ft)	30	91	#371	36	0	m20	234	m9	10	990	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	118	245	49	159	216	192	2189	1113	372	2418	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.99	3.00	0.14	0.18	0.20	0.60	0.09	0.15	0.90	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Background AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	12	27	161	131	15	21	4	28	1062	69	2	29
Future Volume (veh/h)	12	27	161	131	15	21	4	28	1062	69	2	29
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1767	1767	1767	1870	1811		1707	1663	1826		1870
Adj Flow Rate, veh/h	19	47	0	147	23	0		34	1311	0		51
Peak Hour Factor	0.63	0.58	0.82	0.89	0.65	0.56		0.82	0.81	0.66		0.57
Percent Heavy Veh, %	2	9	9	9	2	6		13	16	5		2
Cap, veh/h	155	151		129	160			169	2175			357
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.00		0.05	0.69	0.00		0.06
Sat Flow, veh/h	1388	1767	0	1283	1870	1535		1626	3159	1547		1781
Grp Volume(v), veh/h	19	47	0	147	23	0		34	1311	0		51
Grp Sat Flow(s),veh/h/ln	1388	1767	0	1283	1870	1535		1626	1580	1547		1781
Q Serve(g_s), s	1.8	3.5	0.0	8.5	1.6	0.0		0.7	30.9	0.0		1.0
Cycle Q Clear(g_c), s	3.4	3.5	0.0	12.0	1.6	0.0		0.7	30.9	0.0		1.0
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	155	151		129	160			169	2175			357
V/C Ratio(X)	0.12	0.31		1.14	0.14			0.20	0.60			0.14
Avail Cap(c_a), veh/h	155	151		129	160			229	2175			407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	60.8	60.1	0.0	67.4	59.2	0.0		26.7	11.6	0.0		8.4
Incr Delay (d2), s/veh	0.4	1.2	0.0	120.5	0.4	0.0		0.6	1.2	0.0		0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	0.0	9.0	0.8	0.0		0.7	9.5	0.0		0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	61.3	0.0	187.9	59.6	0.0		27.3	12.9	0.0		8.6
LnGrp LOS	E	E		F	E			C	B			A
Approach Vol, veh/h		66	A		170	A			1345	A		
Approach Delay, s/veh		61.2			170.6				13.2			
Approach LOS		E			F				B			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	105.2		20.0	16.1	103.9		20.0				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	12.5	92.5		12.0	12.5	92.5		12.0				
Max Q Clear Time (g_c+I1), s	2.7	72.4		5.5	3.0	32.9		14.0				
Green Ext Time (p_c), s	0.0	20.1		0.1	0.0	52.2		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Background AM

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2079	1
Future Volume (veh/h)	2079	1
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	2166	0
Peak Hour Factor	0.96	0.25
Percent Heavy Veh, %	5	2
Cap, veh/h	2420	
Arrive On Green	0.70	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	2166	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	70.4	0.0
Cycle Q Clear(g_c), s	70.4	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2420	
V/C Ratio(X)	0.89	
Avail Cap(c_a), veh/h	2420	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	17.0	0.0
Incr Delay (d2), s/veh	5.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	22.7	0.0
LnGrp LOS	C	
Approach Vol, veh/h	2217	A
Approach Delay, s/veh	22.4	
Approach LOS	C	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	6.2

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	121	35	37	1128	76	5	2370
Future Vol, veh/h	121	35	37	1128	76	5	2370
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Yield	-	-	Free	-	None
Storage Length	0	0	400	-	375	450	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	92	68	73	89	81	50	95
Heavy Vehicles, %	2	3	2	15	5	2	5
Mvmt Flow	132	51	51	1267	94	10	2495

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	2637	634	2495	0	-	1267	0
Stage 1	1369	-	-	-	-	-	-
Stage 2	1268	-	-	-	-	-	-
Critical Hdwy	6.84	6.96	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.33	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 19	419	~ 35	-	0	544	-
Stage 1	201	-	-	-	0	-	-
Stage 2	228	-	-	-	0	-	-
Platoon blocked, %				-			-
Mov Cap-1 Maneuver	0	419	~ 35	-	-	544	-
Mov Cap-2 Maneuver	0	-	-	-	-	-	-
Stage 1	0	-	-	-	-	-	-
Stage 2	224	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		18.7	0
HCM LOS	-		

Minor Lane/Major Mvmt	NBU	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	~ 35	-	-	419	544	-
HCM Lane V/C Ratio	1.448	-	-	0.123	0.018	-
HCM Control Delay (s)	$ 486.5	-	-	14.8	11.7	-
HCM Lane LOS	F	-	-	B	B	-
HCM 95th %tile Q(veh)	5.4	-	-	0.4	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Background AM

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	149	581	574	150	52	179	1204	80	32	2612	118
v/c Ratio	0.28	1.16	1.06	1.28	0.12	1.19	0.88	0.11	0.58	1.28	0.17
Control Delay	31.2	132.1	93.6	207.1	19.5	189.2	45.0	0.3	71.6	169.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	132.1	93.6	207.1	19.5	189.2	45.0	0.3	71.6	169.0	7.3
Queue Length 50th (ft)	88	~617	~515	~118	15	~101	535	0	30	~1101	8
Queue Length 95th (ft)	140	#486	#764	#179	29	#144	#681	0	m33	m#1117	m12
Internal Link Dist (ft)		546			1558		3417			6441	
Turn Bay Length (ft)			250	225		325			400		375
Base Capacity (vph)	538	500	539	117	513	150	1367	696	55	2034	711
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	1.16	1.06	1.28	0.10	1.19	0.88	0.11	0.58	1.28	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary — Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive — 2029 Background AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	139	34	1015	108	15	16	7	127	1084	52	2	20
Future Volume (veh/h)	139	34	1015	108	15	16	7	127	1084	52	2	20
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1693	1648	1663		1633
Adj Flow Rate, veh/h	149	0	0	150	23	0		165	1204	0		28
Peak Hour Factor	0.93	0.66	0.92	0.72	0.65	0.55		0.77	0.90	0.65		0.71
Percent Heavy Veh, %	2	2	2	2	2	2		14	17	16		18
Cap, veh/h	178	0		196	107			152	2098			56
Arrive On Green	0.04	0.00	0.00	0.04	0.06	0.00		0.05	0.67	0.00		0.04
Sat Flow, veh/h	1781	0	3170	1781	1870	0		3127	3131	1409		1555
Grp Volume(v), veh/h	149	0	0	150	23	0		165	1204	0		28
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	0		1564	1566	1409		1555
Q Serve(g_s), s	5.0	0.0	0.0	5.0	1.6	0.0		6.8	28.9	0.0		2.5
Cycle Q Clear(g_c), s	5.0	0.0	0.0	5.0	1.6	0.0		6.8	28.9	0.0		2.5
Prop In Lane	1.00		1.00	1.00		0.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	178	0		196	107			152	2098			56
V/C Ratio(X)	0.84	0.00		0.77	0.22			1.09	0.57			0.50
Avail Cap(c_a), veh/h	178	0		196	561			152	2098			56
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	64.2	0.0	0.0	63.4	63.0	0.0		66.6	12.4	0.0		66.3
Incr Delay (d2), s/veh	28.0	0.0	0.0	16.4	1.0	0.0		98.0	1.1	0.0		2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	3.8	0.8	0.0		4.7	9.4	0.0		1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	0.0	0.0	79.8	64.0	0.0		164.6	13.5	0.0		69.1
LnGrp LOS	F	A		E	E			F	B			E
Approach Vol, veh/h		149	A		173	A			1369	A		
Approach Delay, s/veh		92.2			77.7				31.7			
Approach LOS		F			E				C			

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	98.0	11.0	17.0	11.3	100.7	11.0	17.0
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	6.8	57.1	5.0	42.0	* 5	59.8	5.0	42.0
Max Q Clear Time (g_c+I1), s	8.8	54.9	7.0	0.0	4.5	30.9	7.0	3.6
Green Ext Time (p_c), s	0.0	2.2	0.0	0.0	0.0	25.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Traffic Volume (veh/h)	2403	103
Future Volume (veh/h)	2403	103
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1841	1826
Adj Flow Rate, veh/h	2612	0
Peak Hour Factor	0.92	0.87
Percent Heavy Veh, %	4	5
Cap, veh/h	3270	
Arrive On Green	0.65	0.00
Sat Flow, veh/h	5025	1547
Grp Volume(v), veh/h	2612	0
Grp Sat Flow(s),veh/h/ln	1675	1547
Q Serve(g_s), s	52.9	0.0
Cycle Q Clear(g_c), s	52.9	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	3270	
V/C Ratio(X)	0.80	
Avail Cap(c_a), veh/h	3270	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	17.8	0.0
Incr Delay (d2), s/veh	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	19.9	0.0
LnGrp LOS	B	
Approach Vol, veh/h	2640	A
Approach Delay, s/veh	20.4	
Approach LOS	C	

Timer - Assigned Phs
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2029 Background PM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	91	152	41	65	159	2537	207	179	1622	24
v/c Ratio	0.09	0.29	0.76	0.14	0.20	0.61	1.28	0.22	0.64	0.81	0.03
Control Delay	50.0	17.6	80.9	51.1	5.2	44.8	154.4	4.2	46.9	30.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	17.6	80.9	51.1	5.2	44.8	154.4	4.2	46.9	30.1	0.1
Queue Length 50th (ft)	16	16	139	34	0	83	~1632	36	109	621	0
Queue Length 95th (ft)	35	43	198	40	19	m29	m828	m31	170	#948	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	393	526	376	539	522	262	1976	936	278	1994	958
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.17	0.40	0.08	0.12	0.61	1.28	0.22	0.64	0.81	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	15	14	54	132	23	57	1	101	2410	182	6	134
Future Volume (veh/h)	15	14	54	132	23	57	1	101	2410	182	6	134
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1870	1870	1870		1870
Adj Flow Rate, veh/h	19	19	0	152	41	0		155	2537	0		165
Peak Hour Factor	0.81	0.75	0.75	0.87	0.56	0.88		0.65	0.95	0.88		0.81
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	206	250		224	250			272	2257			179
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00		0.07	0.64	0.00		0.07
Sat Flow, veh/h	1366	1870	0	1393	1870	1585		1781	3554	1585		1781
Grp Volume(v), veh/h	19	19	0	152	41	0		155	2537	0		165
Grp Sat Flow(s),veh/h/ln	1366	1870	0	1393	1870	1585		1781	1777	1585		1781
Q Serve(g_s), s	1.8	1.3	0.0	15.5	2.8	0.0		4.0	92.1	0.0		9.3
Cycle Q Clear(g_c), s	4.6	1.3	0.0	16.8	2.8	0.0		4.0	92.1	0.0		9.3
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	206	250		224	250			272	2257			179
V/C Ratio(X)	0.09	0.08		0.68	0.16			0.57	1.12			0.92
Avail Cap(c_a), veh/h	419	542		441	542			279	2257			179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	57.7	55.0	0.0	62.3	55.6	0.0		21.3	26.5	0.0		52.5
Incr Delay (d2), s/veh	0.2	0.1	0.0	3.6	0.3	0.0		2.6	62.3	0.0		45.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.0	5.8	1.4	0.0		2.9	52.7	0.0		8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	55.1	0.0	65.9	55.9	0.0		24.0	88.7	0.0		98.4
LnGrp LOS	E	E		E	E			C	F			F
Approach Vol, veh/h		38	A		193	A			2692	A		
Approach Delay, s/veh		56.5			63.8				85.0			
Approach LOS		E			E				F			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	100.1		27.4	18.0	99.6		27.4				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.5	69.5		42.0	10.5	69.5		42.0				
Max Q Clear Time (g_c+I1), s	6.0	48.0		6.6	11.3	94.1		18.8				
Green Ext Time (p_c), s	0.1	21.1		0.1	0.0	0.0		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		62.0
HCM 6th LOS		E

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Background PM

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Traffic Volume (veh/h)	1492	11
Future Volume (veh/h)	1492	11
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1622	0
Peak Hour Factor	0.92	0.45
Percent Heavy Veh, %	5	2
Cap, veh/h	2216	
Arrive On Green	0.64	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	1622	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	46.0	0.0
Cycle Q Clear(g_c), s	46.0	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2216	
V/C Ratio(X)	0.73	
Avail Cap(c_a), veh/h	2216	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	17.8	0.0
Incr Delay (d2), s/veh	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	20.0	0.0
LnGrp LOS	B	
Approach Vol, veh/h	1787	A
Approach Delay, s/veh	27.2	
Approach LOS	C	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	32.5

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	55	47	30	2647	122	42	1637
Future Vol, veh/h	55	47	30	2647	122	42	1637
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	Yield	-	-	Free	-	None
Storage Length	0	0	400	-	375	450	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	80	89	81	95	93	82	96
Heavy Vehicles, %	7	2	2	2	2	2	5
Mvmt Flow	69	53	37	2786	131	51	1705

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	3815	1393	1705	0	-	2786	0
Stage 1	2860	-	-	-	-	-	-
Stage 2	955	-	-	-	-	-	-
Critical Hdwy	6.94	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-	-
Follow-up Hdwy	3.57	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	~ 2	131	116	-	0	138	-
Stage 1	~ 27	-	-	-	0	-	-
Stage 2	323	-	-	-	0	-	-
Platoon blocked, %				-			-
Mov Cap-1 Maneuver	~ 1	131	116	-	-	138	-
Mov Cap-2 Maneuver	~ 15	-	-	-	-	-	-
Stage 1	~ 18	-	-	-	-	-	-
Stage 2	203	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	1221.4	0.7	1.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBU	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	116	-	15	131	138	-
HCM Lane V/C Ratio	0.319	-	4.583	0.403	0.371	-
HCM Control Delay (s)	50	-	$ 2121.3	49.9	45.7	-
HCM Lane LOS	E	-	F	E	E	-
HCM 95th %tile Q(veh)	1.2	-	9.4	1.7	1.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Background PM

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	156	227	201	174	324	515	2743	364	113	1512	234
v/c Ratio	0.88	0.61	0.42	0.71	0.83	0.83	1.74	0.47	0.56	0.83	0.32
Control Delay	85.4	55.0	8.0	59.0	70.3	68.9	365.2	19.2	72.0	38.3	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	55.0	8.0	59.0	70.3	68.9	365.2	19.2	72.0	38.3	8.4
Queue Length 50th (ft)	112	194	0	127	285	240	~2029	146	92	517	66
Queue Length 95th (ft)	138	166	40	149	373	286	#2149	239	m#176	m#617	m85
Internal Link Dist (ft)		546			1558		3417			6441	
Turn Bay Length (ft)			250	225		325			400		375
Base Capacity (vph)	178	500	578	245	527	622	1573	780	202	1825	732
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.45	0.35	0.71	0.61	0.83	1.74	0.47	0.56	0.83	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary — Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive — 2029 Background PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	125	100	211	136	223	68	6	419	2606	346	107	1421
Future Volume (veh/h)	125	100	211	136	223	68	6	419	2606	346	107	1421
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1870	1870		1856	1870	1870	1870	1826
Adj Flow Rate, veh/h	156	239	0	174	240	0		505	2743	0	113	1512
Peak Hour Factor	0.80	0.61	0.80	0.78	0.93	0.81		0.83	0.95	0.95	0.95	0.94
Percent Heavy Veh, %	2	2	2	5	2	2		3	2	2	2	5
Cap, veh/h	133	272		132	272			539	2060		82	2305
Arrive On Green	0.03	0.15	0.00	0.03	0.15	0.00		0.16	0.58	0.00	0.05	0.46
Sat Flow, veh/h	1781	1870	1585	1739	1870	0		3428	3554	1585	1781	4985
Grp Volume(v), veh/h	156	239	0	174	240	0		505	2743	0	113	1512
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1739	1870	0		1714	1777	1585	1781	1662
Q Serve(g_s), s	5.0	18.2	0.0	5.0	18.2	0.0		21.1	84.0	0.0	6.7	33.9
Cycle Q Clear(g_c), s	5.0	18.2	0.0	5.0	18.2	0.0		21.1	84.0	0.0	6.7	33.9
Prop In Lane	1.00		1.00	1.00		0.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	133	272		132	272			539	2060		82	2305
V/C Ratio(X)	1.17	0.88		1.32	0.88			0.94	1.33		1.37	0.66
Avail Cap(c_a), veh/h	133	542		132	542			539	2060		82	2305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	60.7	0.0	61.5	60.8	0.0		60.4	30.5	0.0	69.2	30.1
Incr Delay (d2), s/veh	131.3	9.0	0.0	187.0	9.2	0.0		23.8	152.7	0.0	227.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	9.0	0.0	9.4	9.4	0.0		10.8	76.4	0.0	8.2	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	192.7	69.7	0.0	248.6	70.0	0.0		84.2	183.2	0.0	296.4	31.6
LnGrp LOS	F	E		F	E			F	F		F	C
Approach Vol, veh/h		395	A		414	A			3248	A		1625
Approach Delay, s/veh		118.3			145.1				167.8			50.0
Approach LOS		F			F				F			D

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	73.9	11.0	30.1	13.0	90.9	11.0	30.1
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	22.8	46.1	5.0	42.0	* 6.7	63.1	5.0	42.0
Max Q Clear Time (g_c+I1), s	23.1	35.9	7.0	20.2	8.7	86.0	7.0	20.2
Green Ext Time (p_c), s	0.0	9.8	0.0	0.7	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	129.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	194
Future Volume (veh/h)	194
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.83
Percent Heavy Veh, %	2
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1585
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	A
Approach Delay, s/veh	
Approach LOS	

Timer - Assigned Phs
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

2029 Build-out Conditions

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2029 Build AM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	243	147	23	38	39	1374	105	55	2413	4
v/c Ratio	0.16	0.99	3.00	0.14	0.18	0.24	0.63	0.09	0.17	1.00	0.00
Control Delay	62.9	87.9	972.5	61.7	1.8	13.7	11.7	2.4	4.2	39.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.9	87.9	972.5	61.7	1.8	13.7	11.7	2.4	4.2	39.6	0.0
Queue Length 50th (ft)	16	120	~231	20	0	8	281	5	9	~1239	0
Queue Length 95th (ft)	30	91	#371	36	0	m11	m218	m5	10	#1366	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	118	245	49	159	216	192	2189	1113	354	2418	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.99	3.00	0.14	0.18	0.20	0.63	0.09	0.16	1.00	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Future Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1767	1767	1767	1870	1811		1707	1663	1826		1870
Adj Flow Rate, veh/h	19	47	0	147	23	0		34	1374	0		51
Peak Hour Factor	0.63	0.58	0.82	0.89	0.65	0.56		0.82	0.81	0.66		0.57
Percent Heavy Veh, %	2	9	9	9	2	6		13	16	5		2
Cap, veh/h	155	151		129	160			138	2175			338
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.00		0.05	0.69	0.00		0.06
Sat Flow, veh/h	1388	1767	0	1283	1870	1535		1626	3159	1547		1781
Grp Volume(v), veh/h	19	47	0	147	23	0		34	1374	0		51
Grp Sat Flow(s),veh/h/ln	1388	1767	0	1283	1870	1535		1626	1580	1547		1781
Q Serve(g_s), s	1.8	3.5	0.0	8.5	1.6	0.0		0.7	33.6	0.0		1.0
Cycle Q Clear(g_c), s	3.4	3.5	0.0	12.0	1.6	0.0		0.7	33.6	0.0		1.0
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	155	151		129	160			138	2175			338
V/C Ratio(X)	0.12	0.31		1.14	0.14			0.25	0.63			0.15
Avail Cap(c_a), veh/h	155	151		129	160			197	2175			388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	60.8	60.1	0.0	67.4	59.2	0.0		38.5	12.0	0.0		9.1
Incr Delay (d2), s/veh	0.4	1.2	0.0	120.5	0.4	0.0		0.9	1.4	0.0		0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	0.0	9.0	0.8	0.0		0.8	10.3	0.0		0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	61.3	0.0	187.9	59.6	0.0		39.4	13.4	0.0		9.3
LnGrp LOS	E	E		F	E			D	B			A
Approach Vol, veh/h		66	A		170	A			1408	A		
Approach Delay, s/veh		61.2			170.6				14.1			
Approach LOS		E			F				B			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	105.2		20.0	16.1	103.9		20.0				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	12.5	92.5		12.0	12.5	92.5		12.0				
Max Q Clear Time (g_c+I1), s	2.7	98.7		5.5	3.0	35.6		14.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	51.4		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		35.7	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Traffic Volume (veh/h)	2292	1
Future Volume (veh/h)	2292	1
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	2413	0
Peak Hour Factor	0.95	0.25
Percent Heavy Veh, %	5	2
Cap, veh/h	2420	
Arrive On Green	0.70	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	2413	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	96.7	0.0
Cycle Q Clear(g_c), s	96.7	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2420	
V/C Ratio(X)	1.00	
Avail Cap(c_a), veh/h	2420	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	21.0	0.0
Incr Delay (d2), s/veh	17.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.7	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	38.6	0.0
LnGrp LOS	D	
Approach Vol, veh/h	2464	A
Approach Delay, s/veh	38.0	
Approach LOS	D	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	51	0	183	121	0	35	37	569	1128	76	5	2370	213
Future Vol, veh/h	51	0	183	121	0	35	37	569	1128	76	5	2370	213
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	-	Free	-	-	None
Storage Length	0	-	-	0	-	175	-	400	-	375	450	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	90	68	73	90	89	81	50	95	90
Heavy Vehicles, %	10	2	42	2	2	3	2	16	15	5	2	5	4
Mvmt Flow	57	0	203	132	0	51	51	632	1267	94	10	2495	237

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	4634	5267	1366	3901	5385	634	2731	2732	0	-	1267	0	0
Stage 1	2634	2634	-	2633	2633	-	-	-	-	-	-	-	-
Stage 2	2000	2633	-	1268	2752	-	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.54	7.74	7.54	6.54	6.96	6.44	4.42	-	-	4.14	-	-
Critical Hdwy Stg 1	6.7	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.02	3.72	3.52	4.02	3.33	2.52	2.36	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	~ 96	~ 1	0	419	~ 24	~ 115	-	0	544	-	-
Stage 1	~ 21	48	-	~ 24	48	-	-	-	-	0	-	-	-
Stage 2	~ 56	48	-	178	42	-	-	-	-	0	-	-	-
Platoon blocked, %									-			-	-
Mov Cap-1 Maneuver	0	0	~ 96	-	0	419	~ -34	~ -34	-	-	544	-	-
Mov Cap-2 Maneuver	0	0	-	~ 23	47	-	-	-	-	-	-	-	-
Stage 1	~ 21	47	-	~ 24	48	-	-	-	-	-	-	-	-
Stage 2	~ 49	48	-	-	41	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s				0
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	96	-	-	419	544	-	-
HCM Lane V/C Ratio	-	-	-	2.118	-	-	0.123	0.018	-	-
HCM Control Delay (s)	-	-	-	$ 608.7	-	0	14.8	11.7	-	-
HCM Lane LOS	-	-	-	F	-	A	B	B	-	-
HCM 95th %tile Q(veh)	-	-	-	17.7	-	-	0.4	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

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Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Build AM

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	581	574	150	52	179	1604	80	32	2760	170
v/c Ratio	0.71	1.16	1.06	1.28	0.12	1.19	1.19	0.11	0.58	1.40	0.24
Control Delay	46.4	132.1	93.6	207.1	19.5	189.2	130.0	0.3	71.1	216.5	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	132.1	93.6	207.1	19.5	189.2	130.0	0.3	71.1	216.5	13.0
Queue Length 50th (ft)	264	~617	~515	~118	15	~101	~950	0	29	~1228	40
Queue Length 95th (ft)	368	#486	#764	#179	29	#144	#1090	0	m31	m#1182	m44
Internal Link Dist (ft)		546			1558		3417			6441	
Turn Bay Length (ft)			250	225		325			400		375
Base Capacity (vph)	538	500	539	117	513	150	1344	696	55	1977	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	1.16	1.06	1.28	0.10	1.19	1.19	0.11	0.58	1.40	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	348	34	1015	108	15	16	7	127	1444	52	2	20
Future Volume (veh/h)	348	34	1015	108	15	16	7	127	1444	52	2	20
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1693	1618	1663		1633
Adj Flow Rate, veh/h	382	0	0	150	23	0		165	1604	0		28
Peak Hour Factor	0.91	0.66	0.92	0.72	0.65	0.55		0.77	0.90	0.65		0.71
Percent Heavy Veh, %	2	2	2	2	2	2		14	19	16		18
Cap, veh/h	178	0		196	107			152	2060			56
Arrive On Green	0.04	0.00	0.00	0.04	0.06	0.00		0.05	0.67	0.00		0.04
Sat Flow, veh/h	1781	0	3170	1781	1870	0		3127	3075	1409		1555
Grp Volume(v), veh/h	382	0	0	150	23	0		165	1604	0		28
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	0		1564	1537	1409		1555
Q Serve(g_s), s	5.0	0.0	0.0	5.0	1.6	0.0		6.8	50.4	0.0		2.5
Cycle Q Clear(g_c), s	5.0	0.0	0.0	5.0	1.6	0.0		6.8	50.4	0.0		2.5
Prop In Lane	1.00		1.00	1.00		0.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	178	0		196	107			152	2060			56
V/C Ratio(X)	2.15	0.00		0.77	0.22			1.09	0.78			0.50
Avail Cap(c_a), veh/h	178	0		196	561			152	2060			56
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	65.1	0.0	0.0	63.4	63.0	0.0		66.6	15.9	0.0		66.3
Incr Delay (d2), s/veh	534.1	0.0	0.0	16.4	1.0	0.0		98.0	3.0	0.0		2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	30.1	0.0	0.0	3.8	0.8	0.0		4.7	16.4	0.0		1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	599.2	0.0	0.0	79.8	64.0	0.0		164.6	18.9	0.0		69.1
LnGrp LOS	F	A		E	E			F	B			E
Approach Vol, veh/h		382	A		173	A			1769	A		
Approach Delay, s/veh		599.2			77.7				32.5			
Approach LOS		F			E				C			

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	98.0	11.0	17.0	11.3	100.7	11.0	17.0
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	6.8	57.1	5.0	42.0	* 5	59.8	5.0	42.0
Max Q Clear Time (g_c+I1), s	8.8	64.9	7.0	0.0	4.5	52.4	7.0	3.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Traffic Volume (veh/h)	2539	150
Future Volume (veh/h)	2539	150
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1796	1841
Adj Flow Rate, veh/h	2760	0
Peak Hour Factor	0.92	0.88
Percent Heavy Veh, %	7	4
Cap, veh/h	3191	
Arrive On Green	0.65	0.00
Sat Flow, veh/h	4904	1560
Grp Volume(v), veh/h	2760	0
Grp Sat Flow(s),veh/h/ln	1635	1560
Q Serve(g_s), s	62.9	0.0
Cycle Q Clear(g_c), s	62.9	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	3191	
V/C Ratio(X)	0.86	
Avail Cap(c_a), veh/h	3191	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	19.5	0.0
Incr Delay (d2), s/veh	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	22.9	0.0
LnGrp LOS	C	
Approach Vol, veh/h	2788	A
Approach Delay, s/veh	23.4	
Approach LOS	C	

Timer - Assigned Phs
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

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Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2029 Build PM

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	91	152	41	65	159	2741	207	179	1676	24
v/c Ratio	0.09	0.29	0.76	0.14	0.20	0.64	1.39	0.22	0.64	0.84	0.03
Control Delay	50.0	17.6	80.9	51.1	5.2	48.9	200.5	4.0	46.9	31.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	17.6	80.9	51.1	5.2	48.9	200.5	4.0	46.9	31.4	0.1
Queue Length 50th (ft)	16	16	139	34	0	84	~1844	34	109	662	0
Queue Length 95th (ft)	35	43	198	40	19	m27	m851	m29	170	#1004	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	393	526	376	539	522	251	1976	932	278	1994	958
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.17	0.40	0.08	0.12	0.63	1.39	0.22	0.64	0.84	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary — Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard — 2029 Build PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Future Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1870	1870	1870		1870
Adj Flow Rate, veh/h	19	19	0	152	41	0		155	2741	0		165
Peak Hour Factor	0.81	0.75	0.75	0.87	0.56	0.88		0.65	0.95	0.88		0.81
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	206	250		224	250			261	2257			179
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00		0.07	0.64	0.00		0.07
Sat Flow, veh/h	1366	1870	0	1393	1870	1585		1781	3554	1585		1781
Grp Volume(v), veh/h	19	19	0	152	41	0		155	2741	0		165
Grp Sat Flow(s),veh/h/ln	1366	1870	0	1393	1870	1585		1781	1777	1585		1781
Q Serve(g_s), s	1.8	1.3	0.0	15.5	2.8	0.0		4.0	92.1	0.0		9.3
Cycle Q Clear(g_c), s	4.6	1.3	0.0	16.8	2.8	0.0		4.0	92.1	0.0		9.3
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	206	250		224	250			261	2257			179
V/C Ratio(X)	0.09	0.08		0.68	0.16			0.59	1.21			0.92
Avail Cap(c_a), veh/h	419	542		441	542			268	2257			179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00		1.00
Uniform Delay (d), s/veh	57.7	55.0	0.0	62.3	55.6	0.0		23.9	26.5	0.0		52.5
Incr Delay (d2), s/veh	0.2	0.1	0.0	3.6	0.3	0.0		3.4	100.8	0.0		45.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.0	5.8	1.4	0.0		3.4	64.7	0.0		8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	55.1	0.0	65.9	55.9	0.0		27.2	127.3	0.0		98.4
LnGrp LOS	E	E		E	E			C	F			F
Approach Vol, veh/h		38	A		193	A			2896	A		
Approach Delay, s/veh		56.5			63.8				121.9			
Approach LOS		E			E				F			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	100.1		27.4	18.0	99.6		27.4				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.5	69.5		42.0	10.5	69.5		42.0				
Max Q Clear Time (g_c+I1), s	6.0	51.0		6.6	11.3	94.1		18.8				
Green Ext Time (p_c), s	0.1	18.3		0.1	0.0	0.0		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	84.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build PM

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Traffic Volume (veh/h)	1542	11
Future Volume (veh/h)	1542	11
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1676	0
Peak Hour Factor	0.92	0.45
Percent Heavy Veh, %	5	2
Cap, veh/h	2216	
Arrive On Green	0.64	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	1676	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	49.0	0.0
Cycle Q Clear(g_c), s	49.0	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2216	
V/C Ratio(X)	0.76	
Avail Cap(c_a), veh/h	2216	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	18.3	0.0
Incr Delay (d2), s/veh	2.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.8	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	20.8	0.0
LnGrp LOS	C	
Approach Vol, veh/h	1841	A
Approach Delay, s/veh	27.7	
Approach LOS	C	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	194	0	550	55	0	47	30	225	2647	122	42	1637	50
Future Vol, veh/h	194	0	550	55	0	47	30	225	2647	122	42	1637	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	-	Free	-	-	None
Storage Length	0	-	-	0	-	175	-	400	-	375	450	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	80	90	89	81	90	95	93	82	96	90
Heavy Vehicles, %	5	2	22	7	2	2	2	56	2	2	2	5	14
Mvmt Flow	216	0	611	69	0	53	37	250	2786	131	51	1705	56

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	3802	5195	881	4315	5223	1393	1761	1761	0	-	2786	0	0
Stage 1	1835	1835	-	3360	3360	-	-	-	-	-	-	-	-
Stage 2	1967	3360	-	955	1863	-	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.54	7.34	7.64	6.54	6.94	6.44	5.22	-	-	4.14	-	-
Critical Hdwy Stg 1	6.6	5.54	-	6.64	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.54	-	6.64	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.02	3.52	3.57	4.02	3.32	2.52	2.76	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 1	0	~ 253	0	0	131	106	~ 185	-	0	138	-	-
Stage 1	~ 76	125	-	~ 7	20	-	-	-	-	0	-	-	-
Stage 2	~ 62	20	-	268	121	-	-	-	-	0	-	-	-
Platoon blocked, %									-			-	-
Mov Cap-1 Maneuver	0	0	~ 253	-	0	131	~ -17	~ -17	-	-	138	-	-
Mov Cap-2 Maneuver	0	0	-	~ 7	20	-	-	-	-	-	-	-	-
Stage 1	~ 76	79	-	~ 7	20	-	-	-	-	-	-	-	-
Stage 2	~ 37	20	-	-	76	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s				1.3
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	+	-	-	253	-	-	131	138	-	-
HCM Lane V/C Ratio	-	-	-	2.415	-	-	0.403	0.371	-	-
HCM Control Delay (s)	-	-	-	$ 679.6	-	0	49.9	45.7	-	-
HCM Lane LOS	-	-	-	F	-	A	E	E	-	-
HCM 95th %tile Q(veh)	-	-	-	49.4	-	-	1.7	1.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Build PM

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	204	227	201	174	324	515	2934	364	113	1917	439
v/c Ratio	1.15	0.61	0.42	0.71	0.83	0.83	1.96	0.47	0.56	1.11	0.55
Control Delay	154.5	55.0	8.0	59.0	70.3	68.9	458.1	19.2	73.5	95.1	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	154.5	55.0	8.0	59.0	70.3	68.9	458.1	19.2	73.5	95.1	11.8
Queue Length 50th (ft)	~178	194	0	127	285	240	~2263	146	95	~784	164
Queue Length 95th (ft)	#248	166	40	149	373	286	#2377	239	m#189	m#938	m226
Internal Link Dist (ft)		546			1558		3417			6441	
Turn Bay Length (ft)			250	225		325			400		375
Base Capacity (vph)	178	500	578	245	527	622	1500	780	202	1726	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.45	0.35	0.71	0.61	0.83	1.96	0.47	0.56	1.11	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	169	100	211	136	223	68	6	419	2787	346	107	1783
Future Volume (veh/h)	169	100	211	136	223	68	6	419	2787	346	107	1783
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1870	1870		1856	1796	1870	1870	1737
Adj Flow Rate, veh/h	204	239	0	174	240	0		505	2934	0	113	1917
Peak Hour Factor	0.83	0.61	0.80	0.78	0.93	0.81		0.83	0.95	0.95	0.95	0.93
Percent Heavy Veh, %	2	2	2	5	2	2		3	7	2	2	11
Cap, veh/h	133	272		132	272			539	1978		82	2193
Arrive On Green	0.03	0.15	0.00	0.03	0.15	0.00		0.16	0.58	0.00	0.05	0.46
Sat Flow, veh/h	1781	1870	1585	1739	1870	0		3428	3413	1585	1781	4742
Grp Volume(v), veh/h	204	239	0	174	240	0		505	2934	0	113	1917
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1739	1870	0		1714	1706	1585	1781	1581
Q Serve(g_s), s	5.0	18.2	0.0	5.0	18.2	0.0		21.1	84.0	0.0	6.7	52.9
Cycle Q Clear(g_c), s	5.0	18.2	0.0	5.0	18.2	0.0		21.1	84.0	0.0	6.7	52.9
Prop In Lane	1.00		1.00	1.00		0.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	133	272		132	272			539	1978		82	2193
V/C Ratio(X)	1.53	0.88		1.32	0.88			0.94	1.48		1.37	0.87
Avail Cap(c_a), veh/h	133	542		132	542			539	1978		82	2193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	60.7	0.0	61.5	60.8	0.0		60.4	30.5	0.0	69.2	35.2
Incr Delay (d2), s/veh	273.4	9.0	0.0	187.0	9.2	0.0		23.8	220.2	0.0	227.3	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	9.0	0.0	9.4	9.4	0.0		10.8	92.0	0.0	8.2	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	334.8	69.7	0.0	248.6	70.0	0.0		84.2	250.7	0.0	296.4	40.4
LnGrp LOS	F	E		F	E			F	F		F	D
Approach Vol, veh/h		443	A		414	A			3439	A		2030
Approach Delay, s/veh		191.8			145.1				226.2			54.7
Approach LOS		F			F				F			D

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	73.9	11.0	30.1	13.0	90.9	11.0	30.1
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	22.8	46.1	5.0	42.0	* 6.7	63.1	5.0	42.0
Max Q Clear Time (g_c+I1), s	23.1	54.9	7.0	20.2	8.7	86.0	7.0	20.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	163.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	382
Future Volume (veh/h)	382
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1870
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.87
Percent Heavy Veh, %	2
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1585
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1585
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	A
Approach Delay, s/veh	
Approach LOS	

Timer - Assigned Phs
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

2029 Build-out Conditions
Improved

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	243	147	23	38	39	1374	105	55	2413	4
v/c Ratio	0.07	0.57	0.94	0.06	0.10	0.26	0.74	0.11	0.22	1.17	0.00
Control Delay	44.5	31.0	114.5	44.3	0.5	21.3	15.8	4.0	11.4	112.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	31.0	114.5	44.3	0.5	21.3	15.8	4.0	11.4	112.9	0.0
Queue Length 50th (ft)	15	109	141	18	0	6	300	13	16	~1537	0
Queue Length 95th (ft)	25	75	#241	30	0	m41	320	16	23	#1750	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	363	512	198	490	465	152	1861	962	249	2056	983
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.47	0.74	0.05	0.08	0.26	0.74	0.11	0.22	1.17	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Future Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1767	1767	1767	1870	1811		1707	1663	1826		1870
Adj Flow Rate, veh/h	19	47	0	147	23	0		34	1374	0		51
Peak Hour Factor	0.63	0.58	0.82	0.89	0.65	0.56		0.82	0.81	0.66		0.57
Percent Heavy Veh, %	2	9	9	9	2	6		13	16	5		2
Cap, veh/h	243	267		229	282			130	2012			404
Arrive On Green	0.15	0.15	0.00	0.16	0.15	0.00		0.10	1.00	0.00		0.06
Sat Flow, veh/h	1388	1767	0	1283	1870	1535		1626	3159	1547		1781
Grp Volume(v), veh/h	19	47	0	147	23	0		34	1374	0		51
Grp Sat Flow(s),veh/h/ln	1388	1767	0	1283	1870	1535		1626	1580	1547		1781
Q Serve(g_s), s	1.8	3.5	0.0	16.7	1.6	0.0		0.9	0.0	0.0		1.3
Cycle Q Clear(g_c), s	3.4	3.5	0.0	20.1	1.6	0.0		0.9	0.0	0.0		1.3
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	243	267		229	282			130	2012			404
V/C Ratio(X)	0.08	0.18		0.64	0.08			0.26	0.68			0.13
Avail Cap(c_a), veh/h	399	465		373	493			156	2012			418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		2.00	2.00	2.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		0.83	0.83	0.00		1.00
Uniform Delay (d), s/veh	56.2	55.5	0.0	62.5	54.7	0.0		36.3	0.0	0.0		7.2
Incr Delay (d2), s/veh	0.1	0.3	0.0	3.0	0.1	0.0		0.9	1.6	0.0		0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	0.0	5.7	0.8	0.0		0.8	0.4	0.0		0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	55.8	0.0	65.5	54.9	0.0		37.1	1.6	0.0		7.3
LnGrp LOS	E	E		E	D			D	A			A
Approach Vol, veh/h		66	A		170	A			1408	A		
Approach Delay, s/veh		56.0			64.0				2.4			
Approach LOS		E			E				A			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	104.3		30.7	16.3	103.0		30.7				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.0	77.5		39.5	10.0	77.5		39.5				
Max Q Clear Time (g_c+I1), s	2.9	98.8		5.5	3.3	2.0		22.1				
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	66.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		46.0	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

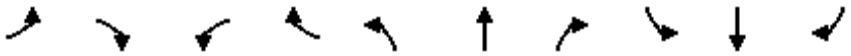
Vernadoe-Wiggins Tract
2029 Build AM Improved

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2292	1
Future Volume (veh/h)	2292	1
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	2413	0
Peak Hour Factor	0.95	0.25
Percent Heavy Veh, %	5	2
Cap, veh/h	2238	
Arrive On Green	0.65	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	2413	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	96.8	0.0
Cycle Q Clear(g_c), s	96.8	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2238	
V/C Ratio(X)	1.08	
Avail Cap(c_a), veh/h	2238	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	26.6	0.0
Incr Delay (d2), s/veh	44.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	47.8	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	70.6	0.0
LnGrp LOS	F	
Approach Vol, veh/h	2464	A
Approach Delay, s/veh	69.3	
Approach LOS	E	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved



Lane Group	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	203	132	51	683	1267	94	10	2495	237
v/c Ratio	0.23	0.48	0.53	0.15	1.25	0.56	0.07	0.03	1.31	0.21
Control Delay	54.2	6.0	62.9	1.0	147.9	24.8	3.5	1.6	159.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	6.0	62.9	1.0	147.9	24.8	3.5	1.6	159.6	0.1
Queue Length 50th (ft)	48	0	115	0	~440	452	9	1	~1646	0
Queue Length 95th (ft)	91	14	185	0	m282	m350	m7	m1	m#1312	m0
Internal Link Dist (ft)						6444			2132	
Turn Bay Length (ft)				175	400		375	450		375
Base Capacity (vph)	246	444	249	348	548	2268	1272	334	1902	1106
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.46	0.53	0.15	1.25	0.56	0.07	0.03	1.31	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	51	0	183	121	0	35	37	569	1128	76	5	2370
Future Volume (veh/h)	51	0	183	121	0	35	37	569	1128	76	5	2370
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1752	1870	1278	1870	1870	1856		1663	1678	1826	1870	1826
Adj Flow Rate, veh/h	57	0	0	132	0	0		632	1267	0	10	2495
Peak Hour Factor	0.90	0.90	0.90	0.92	0.90	0.68		0.90	0.89	0.81	0.50	0.95
Percent Heavy Veh, %	10	2	42	2	2	3		16	15	5	2	5
Cap, veh/h	151	1		167	1			512	2620		412	2382
Arrive On Green	0.06	0.00	0.00	0.07	0.00	0.00		0.17	0.82	0.00	0.06	1.00
Sat Flow, veh/h	1668	1870	1906	1781	1870	1572		3072	3188	1547	1781	3469
Grp Volume(v), veh/h	57	0	0	132	0	0		632	1267	0	10	2495
Grp Sat Flow(s),veh/h/ln	1668	1870	953	1781	1870	1572		1536	1594	1547	1781	1735
Q Serve(g_s), s	5.0	0.0	0.0	10.0	0.0	0.0		25.0	17.6	0.0	0.1	103.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	10.0	0.0	0.0		25.0	17.6	0.0	0.1	103.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	151	1		167	1			512	2620		412	2382
V/C Ratio(X)	0.38	0.00		0.79	0.00			1.23	0.48		0.02	1.05
Avail Cap(c_a), veh/h	159	200		167	200			512	2620		475	2382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00		0.09	0.09	0.00	0.09	0.09
Uniform Delay (d), s/veh	68.3	0.0	0.0	70.4	0.0	0.0		62.5	4.0	0.0	2.6	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	22.3	0.0	0.0		107.0	0.1	0.0	0.0	22.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	6.2	0.0	0.0		17.0	3.6	0.0	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	0.0	0.0	92.7	0.0	0.0		169.5	4.0	0.0	2.6	22.7
LnGrp LOS	E	A		F	A			F	A		A	F
Approach Vol, veh/h		57	A		132	A			1899	A		2742
Approach Delay, s/veh		69.8			92.7				59.1			20.7
Approach LOS		E			F				E			C

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	107.0	14.0	0.0	8.7	127.3	13.3	0.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	23.0	81.0	8.0	14.0	8.0	96.0	8.0	14.0
Max Q Clear Time (g_c+I1), s	27.0	105.0	12.0	0.0	2.1	19.6	7.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	27.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

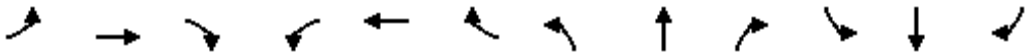
User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	213
Future Volume (veh/h)	213
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1841
Adj Flow Rate, veh/h	237
Peak Hour Factor	0.90
Percent Heavy Veh, %	4
Cap, veh/h	1167
Arrive On Green	1.00
Sat Flow, veh/h	1560
Grp Volume(v), veh/h	237
Grp Sat Flow(s),veh/h/ln	1560
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	1167
V/C Ratio(X)	0.20
Avail Cap(c_a), veh/h	1167
HCM Platoon Ratio	2.00
Upstream Filter(I)	0.09
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Build AM Improved



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	581	574	150	23	29	174	1604	80	32	2760	170
v/c Ratio	0.52	0.93	0.79	0.66	0.05	0.07	1.25	1.46	0.11	0.63	1.73	0.18
Control Delay	59.4	56.0	39.4	41.1	39.6	0.3	212.5	247.0	3.0	86.8	351.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	56.0	39.4	41.1	39.6	0.3	212.5	247.0	3.0	86.8	351.7	3.7
Queue Length 50th (ft)	188	443	425	80	16	0	~109	~1150	0	30	~1454	30
Queue Length 95th (ft)	245	369	#701	103	29	0	#153	#1288	5	m28	m#1045	m21
Internal Link Dist (ft)		546			1558			3417			6444	
Turn Bay Length (ft)			250	225			325			400		375
Base Capacity (vph)	752	628	723	296	531	506	139	1099	792	51	1596	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.93	0.79	0.51	0.04	0.06	1.25	1.46	0.10	0.63	1.73	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build AM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	348	34	1015	108	15	16	134	1444	52	2	20	2539
Future Volume (veh/h)	348	34	1015	108	15	16	134	1444	52	2	20	2539
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1767	1693	1618	1663		1633	1796
Adj Flow Rate, veh/h	382	0	0	150	23	0	174	1604	0		28	2760
Peak Hour Factor	0.91	0.66	0.92	0.72	0.65	0.55	0.77	0.90	0.65		0.71	0.92
Percent Heavy Veh, %	2	2	2	2	2	9	14	19	16		18	7
Cap, veh/h	437	0		330	100		142	1853			52	2867
Arrive On Green	0.12	0.00	0.00	0.09	0.05	0.00	0.05	0.60	0.00		0.03	0.58
Sat Flow, veh/h	3563	0	3170	1781	1870	1497	3127	3075	1409		1555	4904
Grp Volume(v), veh/h	382	0	0	150	23	0	174	1604	0		28	2760
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	1497	1564	1537	1409		1555	1635
Q Serve(g_s), s	15.8	0.0	0.0	11.4	1.8	0.0	6.8	65.0	0.0		2.7	80.2
Cycle Q Clear(g_c), s	15.8	0.0	0.0	11.4	1.8	0.0	6.8	65.0	0.0		2.7	80.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	437	0		330	100		142	1853			52	2867
V/C Ratio(X)	0.87	0.00		0.45	0.23		1.23	0.87			0.54	0.96
Avail Cap(c_a), veh/h	539	0		403	524		142	1853			52	2867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00		0.09	0.09
Uniform Delay (d), s/veh	64.7	0.0	0.0	55.6	68.1	0.0	71.6	24.7	0.0		71.4	29.6
Incr Delay (d2), s/veh	12.7	0.0	0.0	1.0	1.2	0.0	149.3	5.7	0.0		0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.0	5.3	0.9	0.0	5.6	23.3	0.0		1.1	29.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	0.0	0.0	56.6	69.2	0.0	220.9	30.5	0.0		71.9	30.9
LnGrp LOS	E	A		E	E		F	C			E	C
Approach Vol, veh/h		382	A		173	A		1778	A			2788
Approach Delay, s/veh		77.3			58.3			49.1				31.3
Approach LOS		E			E			D				C

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	94.6	19.6	21.8	11.3	97.3	24.4	17.0
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	6.8	49.4	19.7	45.0	* 5	52.1	22.7	42.0
Max Q Clear Time (g_c+I1), s	8.8	82.2	13.4	0.0	4.7	67.0	17.8	3.8
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	150
Future Volume (veh/h)	150
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1841
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.88
Percent Heavy Veh, %	4
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1560
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1560
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	A
Approach Delay, s/veh	
Approach LOS	

Timer - Assigned Phs

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard
2029 Build PM Improved

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	91	152	41	65	159	2741	207	179	1676	24
v/c Ratio	0.09	0.29	0.76	0.14	0.21	0.61	1.39	0.22	0.62	0.84	0.03
Control Delay	52.0	18.2	83.9	53.1	5.7	29.2	204.3	15.2	47.4	31.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	18.2	83.9	53.1	5.7	29.2	204.3	15.2	47.4	31.7	0.1
Queue Length 50th (ft)	16	16	145	35	0	112	~1859	68	114	683	0
Queue Length 95th (ft)	35	44	204	42	21	m95	m#1476	m54	176	#1009	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	380	511	364	521	505	259	1978	933	287	2003	960
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.18	0.42	0.08	0.13	0.61	1.39	0.22	0.62	0.84	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Future Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1870	1870	1870		1870
Adj Flow Rate, veh/h	19	19	0	152	41	0		155	2741	0		165
Peak Hour Factor	0.81	0.75	0.75	0.87	0.56	0.88		0.65	0.95	0.88		0.81
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	204	249		221	249			260	2298			167
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00		0.07	0.65	0.00		0.07
Sat Flow, veh/h	1366	1870	0	1393	1870	1585		1781	3554	1585		1781
Grp Volume(v), veh/h	19	19	0	152	41	0		155	2741	0		165
Grp Sat Flow(s),veh/h/ln	1366	1870	0	1393	1870	1585		1781	1777	1585		1781
Q Serve(g_s), s	1.9	1.3	0.0	16.1	2.9	0.0		4.1	97.0	0.0		9.8
Cycle Q Clear(g_c), s	4.8	1.3	0.0	17.4	2.9	0.0		4.1	97.0	0.0		9.8
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	204	249		221	249			260	2298			167
V/C Ratio(X)	0.09	0.08		0.69	0.16			0.60	1.19			0.99
Avail Cap(c_a), veh/h	404	524		426	524			260	2298			167
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		0.09	0.09	0.00		1.00
Uniform Delay (d), s/veh	59.7	56.9	0.0	64.5	57.6	0.0		23.8	26.5	0.0		56.0
Incr Delay (d2), s/veh	0.2	0.1	0.0	3.8	0.3	0.0		0.3	87.1	0.0		66.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.0	6.0	1.4	0.0		3.2	62.7	0.0		9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	57.0	0.0	68.3	57.9	0.0		24.1	113.6	0.0		122.4
LnGrp LOS	E	E		E	E			C	F			F
Approach Vol, veh/h		38	A		193	A			2896	A		
Approach Delay, s/veh		58.5			66.1				108.8			
Approach LOS		E			E				F			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	104.5		28.0	17.5	104.5		28.0				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.0	75.0		42.0	10.0	75.0		42.0				
Max Q Clear Time (g_c+I1), s	6.1	51.5		6.8	11.8	99.0		19.4				
Green Ext Time (p_c), s	0.1	23.1		0.1	0.0	0.0		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		77.4
HCM 6th LOS		E

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

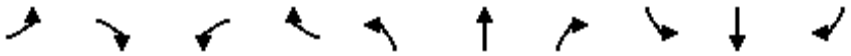
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1542	11
Future Volume (veh/h)	1542	11
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1676	0
Peak Hour Factor	0.92	0.45
Percent Heavy Veh, %	5	2
Cap, veh/h	2244	
Arrive On Green	0.65	0.00
Sat Flow, veh/h	3469	1585
Grp Volume(v), veh/h	1676	0
Grp Sat Flow(s),veh/h/ln	1735	1585
Q Serve(g_s), s	49.5	0.0
Cycle Q Clear(g_c), s	49.5	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	2244	
V/C Ratio(X)	0.75	
Avail Cap(c_a), veh/h	2244	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	18.1	0.0
Incr Delay (d2), s/veh	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	20.4	0.0
LnGrp LOS	C	
Approach Vol, veh/h	1841	A
Approach Delay, s/veh	29.6	
Approach LOS	C	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved



Lane Group	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	216	611	69	53	287	2786	131	51	1705	56
v/c Ratio	0.64	0.95	0.22	0.16	0.85	1.24	0.12	0.30	0.92	0.07
Control Delay	58.7	54.4	45.7	1.0	94.5	125.3	0.0	28.9	21.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.7	54.4	45.7	1.0	94.5	125.3	0.0	28.9	21.6	0.1
Queue Length 50th (ft)	180	171	52	0	153	~1904	0	9	848	0
Queue Length 95th (ft)	266	#304	85	0	m100	m70	m0	m29	#995	m0
Internal Link Dist (ft)						6459			2132	
Turn Bay Length (ft)				175	400		375	450		375
Base Capacity (vph)	338	649	313	343	344	2246	1060	179	1858	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.94	0.22	0.15	0.83	1.24	0.12	0.28	0.92	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	194	0	550	55	0	47	30	225	2647	122	42	1637
Future Volume (veh/h)	194	0	550	55	0	47	30	225	2647	122	42	1637
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1826	1870	1574	1796	1870	1870		1070	1870	1870	1870	1826
Adj Flow Rate, veh/h	216	0	0	69	0	0		250	2786	0	51	1705
Peak Hour Factor	0.90	0.90	0.90	0.80	0.90	0.89		0.90	0.95	0.93	0.82	0.96
Percent Heavy Veh, %	5	2	22	7	2	2		56	2	2	2	5
Cap, veh/h	268	68		206	1			290	2605		155	2243
Arrive On Green	0.13	0.00	0.00	0.06	0.00	0.00		0.15	0.73	0.00	0.12	1.00
Sat Flow, veh/h	1739	1870	2348	1711	1870	1585		1977	3554	1585	1781	3469
Grp Volume(v), veh/h	216	0	0	69	0	0		250	2786	0	51	1705
Grp Sat Flow(s),veh/h/ln	1739	1870	1174	1711	1870	1585		989	1777	1585	1781	1735
Q Serve(g_s), s	18.6	0.0	0.0	5.7	0.0	0.0		18.5	110.0	0.0	0.9	0.0
Cycle Q Clear(g_c), s	18.6	0.0	0.0	5.7	0.0	0.0		18.5	110.0	0.0	0.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	268	68		206	1			290	2605		155	2243
V/C Ratio(X)	0.81	0.00		0.33	0.00			0.86	1.07		0.33	0.76
Avail Cap(c_a), veh/h	268	299		223	200			290	2605		179	2243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00		0.09	0.09	0.00	0.45	0.45
Uniform Delay (d), s/veh	65.2	0.0	0.0	63.3	0.0	0.0		62.5	20.0	0.0	40.8	0.0
Incr Delay (d2), s/veh	16.2	0.0	0.0	0.9	0.0	0.0		2.6	32.2	0.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.0	0.0	2.6	0.0	0.0		4.6	46.4	0.0	1.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.5	0.0	0.0	64.2	0.0	0.0		65.1	52.2	0.0	41.3	1.1
LnGrp LOS	F	A		E	A			E	F		D	A
Approach Vol, veh/h		216	A		69	A			3036	A		1812
Approach Delay, s/veh		81.5			64.2				53.3			2.2
Approach LOS		F			E				D			A

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	101.0	13.5	9.5	13.0	114.0	23.0	0.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	20.0	75.0	9.0	22.0	9.0	86.0	17.0	14.0
Max Q Clear Time (g_c+I1), s	20.5	2.0	7.7	0.0	2.9	112.0	20.6	0.0
Green Ext Time (p_c), s	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

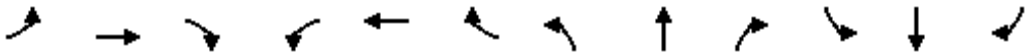
Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	50
Future Volume (veh/h)	50
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1693
Adj Flow Rate, veh/h	56
Peak Hour Factor	0.90
Percent Heavy Veh, %	14
Cap, veh/h	928
Arrive On Green	1.00
Sat Flow, veh/h	1434
Grp Volume(v), veh/h	56
Grp Sat Flow(s),veh/h/ln	1434
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	928
V/C Ratio(X)	0.06
Avail Cap(c_a), veh/h	928
HCM Platoon Ratio	2.00
Upstream Filter(I)	0.45
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.1
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
Vernadoe-Wiggins Tract
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive
2029 Build PM Improved



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	204	227	201	174	240	84	512	2934	364	113	1917	439
v/c Ratio	0.76	0.83	0.33	0.72	0.82	0.21	0.92	1.71	0.34	0.91	1.01	0.48
Control Delay	86.1	83.2	22.3	59.3	83.5	1.3	83.5	351.3	7.3	99.8	56.6	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.1	83.2	22.3	59.3	83.5	1.3	83.5	351.3	7.3	99.8	56.6	10.8
Queue Length 50th (ft)	102	216	91	132	229	0	260	~2218	76	~119	~632	95
Queue Length 95th (ft)	135	195	133	166	325	0	#355	#2325	133	m#175	m#802	m120
Internal Link Dist (ft)		546			1558			3417			6459	
Turn Bay Length (ft)			250	225			325			400		375
Base Capacity (vph)	274	314	614	243	335	424	557	1711	1064	124	1903	910
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.72	0.33	0.72	0.72	0.20	0.92	1.71	0.34	0.91	1.01	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build PM Improved

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	100	211	136	223	68	425	2787	346	107	1783	382
Future Volume (veh/h)	169	100	211	136	223	68	425	2787	346	107	1783	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1870	1870	1856	1796	1870	1870	1737	1870
Adj Flow Rate, veh/h	204	239	0	174	240	0	512	2934	0	113	1917	0
Peak Hour Factor	0.83	0.61	0.80	0.78	0.93	0.81	0.83	0.95	0.95	0.95	0.93	0.87
Percent Heavy Veh, %	2	2	2	5	2	2	3	7	2	2	11	2
Cap, veh/h	251	265		205	283		475	1863		80	2114	
Arrive On Green	0.07	0.14	0.00	0.08	0.15	0.00	0.14	0.55	0.00	0.04	0.45	0.00
Sat Flow, veh/h	3563	1870	1585	1739	1870	1585	3428	3413	1585	1781	4742	1585
Grp Volume(v), veh/h	204	239	0	174	240	0	512	2934	0	113	1917	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1739	1870	1585	1714	1706	1585	1781	1581	1585
Q Serve(g_s), s	8.5	18.9	0.0	12.0	18.7	0.0	20.8	81.9	0.0	6.7	56.4	0.0
Cycle Q Clear(g_c), s	8.5	18.9	0.0	12.0	18.7	0.0	20.8	81.9	0.0	6.7	56.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	265		205	283		475	1863		80	2114	
V/C Ratio(X)	0.81	0.90		0.85	0.85		1.08	1.58		1.42	0.91	
Avail Cap(c_a), veh/h	285	337		205	337		475	1863		80	2114	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.30	0.30	0.00
Uniform Delay (d), s/veh	68.7	63.4	0.0	53.1	62.0	0.0	64.6	34.1	0.0	71.7	38.7	0.0
Incr Delay (d2), s/veh	14.7	22.7	0.0	27.2	16.0	0.0	63.5	261.4	0.0	209.8	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	10.4	0.0	7.3	10.3	0.0	13.1	99.2	0.0	7.7	21.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.5	86.1	0.0	80.3	78.0	0.0	128.1	295.4	0.0	281.4	41.0	0.0
LnGrp LOS	F	F		F	E		F	F		F	D	
Approach Vol, veh/h		443	A		414	A		3446	A		2030	A
Approach Delay, s/veh		84.9			79.0			270.6			54.4	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	73.8	18.0	30.2	13.0	88.8	16.6	31.7
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	20.8	61.1	12.0	27.0	* 6.7	76.1	12.0	27.0
Max Q Clear Time (g_c+I1), s	22.8	58.4	14.0	20.9	8.7	83.9	10.5	20.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.4	0.0	0.0	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	175.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

2029 Build-out Conditions
Regional Improvement

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	243	147	23	38	39	1374	105	55	2413	4
v/c Ratio	0.07	0.57	0.94	0.06	0.10	0.26	0.51	0.11	0.20	0.82	0.00
Control Delay	43.8	29.9	112.8	43.6	0.5	25.1	11.9	4.3	11.1	29.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	29.9	112.8	43.6	0.5	25.1	11.9	4.3	11.1	29.3	0.0
Queue Length 50th (ft)	15	107	142	18	0	7	202	13	16	700	0
Queue Length 95th (ft)	25	70	#226	29	0	46	206	19	25	#967	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	391	544	213	527	494	152	2672	961	282	2951	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.45	0.69	0.04	0.08	0.26	0.51	0.11	0.20	0.82	0.00

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Future Volume (veh/h)	12	27	161	131	15	21	4	28	1113	69	2	29
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1767	1767	1767	1870	1811		1707	1663	1826		1870
Adj Flow Rate, veh/h	19	47	0	147	23	0		34	1374	0		51
Peak Hour Factor	0.63	0.58	0.82	0.89	0.65	0.56		0.82	0.81	0.66		0.57
Percent Heavy Veh, %	2	9	9	9	2	6		13	16	5		2
Cap, veh/h	243	267		229	283			171	2891			404
Arrive On Green	0.15	0.15	0.00	0.16	0.15	0.00		0.10	1.00	0.00		0.06
Sat Flow, veh/h	1388	1767	0	1283	1870	1535		1626	4540	1547		1781
Grp Volume(v), veh/h	19	47	0	147	23	0		34	1374	0		51
Grp Sat Flow(s),veh/h/ln	1388	1767	0	1283	1870	1535		1626	1513	1547		1781
Q Serve(g_s), s	1.8	3.5	0.0	16.7	1.6	0.0		0.9	0.0	0.0		1.3
Cycle Q Clear(g_c), s	3.4	3.5	0.0	20.1	1.6	0.0		0.9	0.0	0.0		1.3
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	243	267		229	283			171	2891			404
V/C Ratio(X)	0.08	0.18		0.64	0.08			0.20	0.48			0.13
Avail Cap(c_a), veh/h	427	501		399	530			197	2891			418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		2.00	2.00	2.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		0.93	0.93	0.00		1.00
Uniform Delay (d), s/veh	56.2	55.5	0.0	62.4	54.7	0.0		17.2	0.0	0.0		7.2
Incr Delay (d2), s/veh	0.1	0.3	0.0	3.0	0.1	0.0		0.5	0.5	0.0		0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.6	1.6	0.0	5.7	0.8	0.0		0.4	0.1	0.0		0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	55.8	0.0	65.4	54.8	0.0		17.7	0.5	0.0		7.3
LnGrp LOS	E	E		E	D			B	A			A
Approach Vol, veh/h		66	A		170	A			1408	A		
Approach Delay, s/veh		56.0			64.0				0.9			
Approach LOS		E			E				A			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	104.2		30.7	16.3	103.0		30.7				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	10.0	74.5		42.5	10.0	74.5		42.5				
Max Q Clear Time (g_c+I1), s	2.9	52.0		5.5	3.3	2.0		22.1				
Green Ext Time (p_c), s	0.0	22.5		0.2	0.0	62.1		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

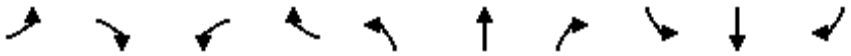
Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	2292	1
Future Volume (veh/h)	2292	1
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	2413	0
Peak Hour Factor	0.95	0.25
Percent Heavy Veh, %	5	2
Cap, veh/h	3215	
Arrive On Green	0.64	0.00
Sat Flow, veh/h	4985	1585
Grp Volume(v), veh/h	2413	0
Grp Sat Flow(s),veh/h/ln	1662	1585
Q Serve(g_s), s	50.0	0.0
Cycle Q Clear(g_c), s	50.0	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	3215	
V/C Ratio(X)	0.75	
Avail Cap(c_a), veh/h	3215	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	18.3	0.0
Incr Delay (d2), s/veh	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.3	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	20.0	0.0
LnGrp LOS	B	
Approach Vol, veh/h	2464	A
Approach Delay, s/veh	19.7	
Approach LOS	B	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional



Lane Group	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	57	203	132	51	683	1267	94	10	2495	237
v/c Ratio	0.23	0.38	0.53	0.15	0.96	0.39	0.07	0.03	1.01	0.23
Control Delay	54.2	2.0	62.9	1.0	58.7	19.6	3.5	1.6	37.3	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	2.0	62.9	1.0	58.7	19.6	3.5	1.6	37.3	0.7
Queue Length 50th (ft)	48	0	115	0	366	313	9	1	~943	8
Queue Length 95th (ft)	91	0	185	0	m375	m317	m11	m1	#1009	m0
Internal Link Dist (ft)						6458			2132	
Turn Bay Length (ft)				175	400		375	450		375
Base Capacity (vph)	246	557	249	348	710	3259	1272	350	2470	1049
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.36	0.53	0.15	0.96	0.39	0.07	0.03	1.01	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	51	0	183	121	0	35	37	569	1128	76	5	2370
Future Volume (veh/h)	51	0	183	121	0	35	37	569	1128	76	5	2370
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1752	1870	1278	1870	1870	1856		1663	1678	1826	1870	1826
Adj Flow Rate, veh/h	57	0	0	132	0	0		632	1267	0	10	2495
Peak Hour Factor	0.90	0.90	0.90	0.92	0.90	0.68		0.90	0.89	0.81	0.50	0.95
Percent Heavy Veh, %	10	2	42	2	2	3		16	15	5	2	5
Cap, veh/h	151	1		167	1			676	3764		434	3157
Arrive On Green	0.06	0.00	0.00	0.07	0.00	0.00		0.22	0.82	0.00	0.06	1.00
Sat Flow, veh/h	1668	1870	1906	1781	1870	1572		3072	4580	1547	1781	4985
Grp Volume(v), veh/h	57	0	0	132	0	0		632	1267	0	10	2495
Grp Sat Flow(s),veh/h/ln	1668	1870	953	1781	1870	1572		1536	1527	1547	1781	1662
Q Serve(g_s), s	5.0	0.0	0.0	10.0	0.0	0.0		30.3	10.2	0.0	0.1	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	10.0	0.0	0.0		30.3	10.2	0.0	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	151	1		167	1			676	3764		434	3157
V/C Ratio(X)	0.38	0.00		0.79	0.00			0.94	0.34		0.02	0.79
Avail Cap(c_a), veh/h	159	200		167	200			676	3764		496	3157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00		0.30	0.30	0.00	0.46	0.46
Uniform Delay (d), s/veh	68.3	0.0	0.0	70.4	0.0	0.0		57.4	3.3	0.0	1.9	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	22.3	0.0	0.0		8.1	0.1	0.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	6.2	0.0	0.0		12.1	2.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	0.0	0.0	92.7	0.0	0.0		65.5	3.4	0.0	1.9	1.0
LnGrp LOS	E	A		F	A			E	A		A	A
Approach Vol, veh/h		57	A		132	A			1899	A		2742
Approach Delay, s/veh		69.8			92.7				24.1			0.9
Approach LOS		E			F				C			A

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	99.0	14.0	0.0	8.7	127.3	13.3	0.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	31.0	73.0	8.0	14.0	8.0	96.0	8.0	14.0
Max Q Clear Time (g_c+I1), s	32.3	2.0	12.0	0.0	2.1	12.2	7.0	0.0
Green Ext Time (p_c), s	0.0	64.3	0.0	0.0	0.0	26.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

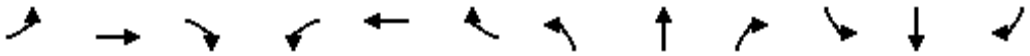
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	213
Future Volume (veh/h)	213
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1841
Adj Flow Rate, veh/h	237
Peak Hour Factor	0.90
Percent Heavy Veh, %	4
Cap, veh/h	1084
Arrive On Green	1.00
Sat Flow, veh/h	1560
Grp Volume(v), veh/h	237
Grp Sat Flow(s),veh/h/ln	1560
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	1084
V/C Ratio(X)	0.22
Avail Cap(c_a), veh/h	1084
HCM Platoon Ratio	2.00
Upstream Filter(I)	0.46
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.2
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.1
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.2
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	581	574	150	23	29	174	1604	80	32	2760	170
v/c Ratio	0.52	0.93	0.80	0.67	0.05	0.07	1.25	1.01	0.11	0.62	1.73	0.18
Control Delay	59.5	56.2	39.6	41.7	39.6	0.3	212.5	73.2	3.0	106.9	350.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	56.2	39.6	41.7	39.6	0.3	212.5	73.2	3.0	106.9	350.0	2.7
Queue Length 50th (ft)	188	443	427	80	16	0	~109	~629	0	30	~1447	26
Queue Length 95th (ft)	245	369	#702	104	29	0	#153	#726	5	m34	m#1442	m28
Internal Link Dist (ft)		546			1558			3417			6458	
Turn Bay Length (ft)			250	225			325			400		375
Base Capacity (vph)	750	627	722	294	530	506	139	1581	791	52	1599	978
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.93	0.80	0.51	0.04	0.06	1.25	1.01	0.10	0.62	1.73	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build AM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	348	34	1015	108	15	16	134	1444	52	2	20	2539
Future Volume (veh/h)	348	34	1015	108	15	16	134	1444	52	2	20	2539
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1767	1693	1618	1663		1633	1796
Adj Flow Rate, veh/h	382	0	0	150	23	0	174	1604	0		28	2760
Peak Hour Factor	0.91	0.66	0.92	0.72	0.65	0.55	0.77	0.90	0.65		0.71	0.92
Percent Heavy Veh, %	2	2	2	2	2	9	14	19	16		18	7
Cap, veh/h	437	0		330	100		142	2663			52	2868
Arrive On Green	0.12	0.00	0.00	0.09	0.05	0.00	0.05	0.60	0.00		0.03	0.58
Sat Flow, veh/h	3563	0	3170	1781	1870	1497	3127	4418	1409		1555	4904
Grp Volume(v), veh/h	382	0	0	150	23	0	174	1604	0		28	2760
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	1497	1564	1473	1409		1555	1635
Q Serve(g_s), s	15.8	0.0	0.0	11.4	1.8	0.0	6.8	34.0	0.0		2.7	80.2
Cycle Q Clear(g_c), s	15.8	0.0	0.0	11.4	1.8	0.0	6.8	34.0	0.0		2.7	80.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	437	0		330	100		142	2663			52	2868
V/C Ratio(X)	0.87	0.00		0.45	0.23		1.23	0.60			0.54	0.96
Avail Cap(c_a), veh/h	537	0		402	524		142	2663			53	2868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00		0.22	0.22
Uniform Delay (d), s/veh	64.7	0.0	0.0	55.6	68.1	0.0	71.6	18.6	0.0		71.4	29.6
Incr Delay (d2), s/veh	12.8	0.0	0.0	1.0	1.2	0.0	149.3	1.0	0.0		1.2	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.0	5.3	0.9	0.0	5.6	11.2	0.0		1.1	29.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	0.0	0.0	56.6	69.2	0.0	220.9	19.6	0.0		72.6	32.6
LnGrp LOS	E	A		E	E		F	B			E	C
Approach Vol, veh/h		382	A		173	A		1778	A			2788
Approach Delay, s/veh		77.5			58.3			39.3				33.0
Approach LOS		E			E			D				C

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	94.6	19.6	21.8	11.3	97.3	24.4	17.0
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	6.8	49.5	19.6	45.0	* 5.1	52.1	22.6	42.0
Max Q Clear Time (g_c+I1), s	8.8	82.2	13.4	0.0	4.7	36.0	17.8	3.8
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.0	15.6	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	150
Future Volume (veh/h)	150
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1841
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.88
Percent Heavy Veh, %	4
Cap, veh/h	
Arrive On Green	0.00
Sat Flow, veh/h	1560
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	1560
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	1.00
Upstream Filter(I)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	
Approach Vol, veh/h	A
Approach Delay, s/veh	
Approach LOS	

Timer - Assigned Phs

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues

1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	19	91	152	41	65	159	2741	207	179	1676	24
v/c Ratio	0.09	0.29	0.76	0.14	0.18	0.56	0.96	0.22	0.64	0.57	0.02
Control Delay	52.0	18.2	83.9	53.1	1.1	32.8	19.8	1.9	48.9	21.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	18.2	83.9	53.1	1.1	32.8	19.8	1.9	48.9	21.0	0.0
Queue Length 50th (ft)	16	16	145	35	0	67	164	1	115	350	0
Queue Length 95th (ft)	35	44	204	42	0	83	#1167	m14	176	504	0
Internal Link Dist (ft)		451		1235			2132			2600	
Turn Bay Length (ft)					175	400		375	425		300
Base Capacity (vph)	380	511	364	521	545	330	2870	962	278	2941	1001
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.18	0.42	0.08	0.12	0.48	0.96	0.22	0.64	0.57	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
1: SR 21/Augusta Road & Rice Mill Road/Market Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Future Volume (veh/h)	15	14	54	132	23	57	1	101	2604	182	6	134
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		1870	1870	1870		1870
Adj Flow Rate, veh/h	19	19	0	152	41	0		155	2741	0		165
Peak Hour Factor	0.81	0.75	0.75	0.87	0.56	0.88		0.65	0.95	0.88		0.81
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2		2
Cap, veh/h	204	249		221	249			305	3303			233
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00		0.13	1.00	0.00		0.07
Sat Flow, veh/h	1366	1870	0	1393	1870	1585		1781	5106	1585		1781
Grp Volume(v), veh/h	19	19	0	152	41	0		155	2741	0		165
Grp Sat Flow(s),veh/h/ln	1366	1870	0	1393	1870	1585		1781	1702	1585		1781
Q Serve(g_s), s	1.9	1.3	0.0	16.1	2.9	0.0		4.2	0.0	0.0		4.4
Cycle Q Clear(g_c), s	4.8	1.3	0.0	17.4	2.9	0.0		4.2	0.0	0.0		4.4
Prop In Lane	1.00		0.00	1.00		1.00		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	204	249		221	249			305	3303			233
V/C Ratio(X)	0.09	0.08		0.69	0.16			0.51	0.83			0.71
Avail Cap(c_a), veh/h	404	524		426	524			403	3303			242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		2.00	2.00	2.00		1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00		0.44	0.44	0.00		1.00
Uniform Delay (d), s/veh	59.7	56.9	0.0	64.5	57.6	0.0		10.6	0.0	0.0		18.6
Incr Delay (d2), s/veh	0.2	0.1	0.0	3.8	0.3	0.0		0.6	1.2	0.0		8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.0	6.0	1.4	0.0		1.3	0.4	0.0		3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	57.0	0.0	68.3	57.9	0.0		11.2	1.2	0.0		27.3
LnGrp LOS	E	E		E	E			B	A			C
Approach Vol, veh/h		38	A		193	A			2896	A		
Approach Delay, s/veh		58.5			66.1				1.7			
Approach LOS		E			E				A			

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	104.5		28.0	17.5	104.5		28.0				
Change Period (Y+Rc), s	7.5	7.5		8.0	7.5	7.5		8.0				
Max Green Setting (Gmax), s	18.3	66.7		42.0	10.7	74.3		42.0				
Max Q Clear Time (g_c+I1), s	6.2	28.8		6.8	6.4	2.0		19.4				
Green Ext Time (p_c), s	0.3	36.5		0.1	0.2	72.1		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

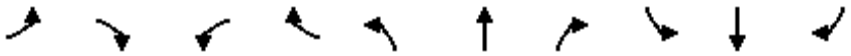
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Traffic Volume (veh/h)	1542	11
Future Volume (veh/h)	1542	11
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1826	1870
Adj Flow Rate, veh/h	1676	0
Peak Hour Factor	0.92	0.45
Percent Heavy Veh, %	5	2
Cap, veh/h	3224	
Arrive On Green	0.65	0.00
Sat Flow, veh/h	4985	1585
Grp Volume(v), veh/h	1676	0
Grp Sat Flow(s),veh/h/ln	1662	1585
Q Serve(g_s), s	26.8	0.0
Cycle Q Clear(g_c), s	26.8	0.0
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	3224	
V/C Ratio(X)	0.52	
Avail Cap(c_a), veh/h	3224	
HCM Platoon Ratio	1.00	1.00
Upstream Filter(I)	1.00	0.00
Uniform Delay (d), s/veh	14.1	0.0
Incr Delay (d2), s/veh	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	0.0
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	14.7	0.0
LnGrp LOS	B	
Approach Vol, veh/h	1841	A
Approach Delay, s/veh	15.8	
Approach LOS	B	
Timer - Assigned Phs		

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional



Lane Group	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	216	611	69	53	287	2786	131	51	1705	56
v/c Ratio	0.63	0.84	0.22	0.16	0.76	0.87	0.12	0.31	0.66	0.07
Control Delay	56.9	28.4	44.4	1.0	75.9	12.2	0.5	31.8	22.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	28.4	44.4	1.0	75.9	12.2	0.5	31.8	22.3	0.3
Queue Length 50th (ft)	180	100	52	0	122	992	3	21	228	0
Queue Length 95th (ft)	259	185	83	0	m101	m699	m4	64	348	m2
Internal Link Dist (ft)						6427			2132	
Turn Bay Length (ft)				175	400		375	450		375
Base Capacity (vph)	353	762	322	353	423	3216	1057	167	2565	830
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.80	0.21	0.15	0.68	0.87	0.12	0.31	0.66	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
2: SR 21/Augusta Road & Site Access/Lakeside Boulevard

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	194	0	550	55	0	47	30	225	2647	122	42	1637
Future Volume (veh/h)	194	0	550	55	0	47	30	225	2647	122	42	1637
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No				No			No
Adj Sat Flow, veh/h/ln	1826	1870	1574	1796	1870	1870		1070	1870	1870	1870	1826
Adj Flow Rate, veh/h	216	0	0	69	0	0		250	2786	0	51	1705
Peak Hour Factor	0.90	0.90	0.90	0.80	0.90	0.89		0.90	0.95	0.93	0.82	0.96
Percent Heavy Veh, %	5	2	22	7	2	2		56	2	2	2	5
Cap, veh/h	291	93		225	1			300	3675		193	3132
Arrive On Green	0.14	0.00	0.00	0.06	0.00	0.00		0.15	0.72	0.00	0.12	1.00
Sat Flow, veh/h	1739	1870	2348	1711	1870	1585		1977	5106	1585	1781	4985
Grp Volume(v), veh/h	216	0	0	69	0	0		250	2786	0	51	1705
Grp Sat Flow(s),veh/h/ln	1739	1870	1174	1711	1870	1585		989	1702	1585	1781	1662
Q Serve(g_s), s	18.3	0.0	0.0	5.6	0.0	0.0		18.4	50.5	0.0	0.9	0.0
Cycle Q Clear(g_c), s	18.3	0.0	0.0	5.6	0.0	0.0		18.4	50.5	0.0	0.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	291	93		225	1			300	3675		193	3132
V/C Ratio(X)	0.74	0.00		0.31	0.00			0.83	0.76		0.26	0.54
Avail Cap(c_a), veh/h	291	324		252	212			356	3675		204	3132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00		0.09	0.09	0.00	0.78	0.78
Uniform Delay (d), s/veh	63.2	0.0	0.0	61.4	0.0	0.0		61.8	13.0	0.0	18.9	0.0
Incr Delay (d2), s/veh	9.7	0.0	0.0	0.8	0.0	0.0		1.4	0.1	0.0	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.0	2.5	0.0	0.0		4.5	15.7	0.0	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.9	0.0	0.0	62.2	0.0	0.0		63.2	13.1	0.0	19.5	0.5
LnGrp LOS	E	A		E	A			E	B		B	A
Approach Vol, veh/h		216	A		69	A			3036	A		1812
Approach Delay, s/veh		72.9			62.2				17.2			1.1
Approach LOS		E			E				B			A

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.8	98.2	13.5	11.5	13.0	112.0	25.0	0.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	25.0	67.0	10.0	24.0	8.0	84.0	19.0	15.0
Max Q Clear Time (g_c+I1), s	20.4	2.0	7.6	0.0	2.9	52.5	20.3	0.0
Green Ext Time (p_c), s	0.3	39.2	0.0	0.0	0.0	30.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [NBR, EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

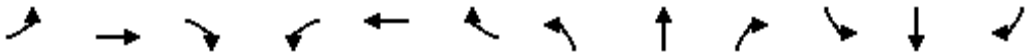
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	50
Future Volume (veh/h)	50
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1693
Adj Flow Rate, veh/h	56
Peak Hour Factor	0.90
Percent Heavy Veh, %	14
Cap, veh/h	901
Arrive On Green	1.00
Sat Flow, veh/h	1434
Grp Volume(v), veh/h	56
Grp Sat Flow(s),veh/h/ln	1434
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	901
V/C Ratio(X)	0.06
Avail Cap(c_a), veh/h	901
HCM Platoon Ratio	2.00
Upstream Filter(I)	0.78
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.1
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Queues
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	204	227	201	174	240	84	512	2934	364	113	1917	439
v/c Ratio	0.62	0.80	0.35	0.64	0.83	0.22	1.13	1.19	0.33	1.20	0.98	0.46
Control Delay	73.2	79.0	24.3	52.3	84.7	1.3	137.5	125.3	5.1	195.1	62.5	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.2	79.0	24.3	52.3	84.7	1.3	137.5	125.3	5.1	195.1	62.5	15.5
Queue Length 50th (ft)	100	217	95	130	230	0	~300	~1266	51	~140	530	140
Queue Length 95th (ft)	128	201	140	168	#428	0	#367	#1340	100	m#242	#771	218
Internal Link Dist (ft)		546			1558			3417			6427	
Turn Bay Length (ft)			250	225			325			400		375
Base Capacity (vph)	434	282	581	276	289	389	455	2459	1101	94	1965	996
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.80	0.35	0.63	0.83	0.22	1.13	1.19	0.33	1.20	0.98	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

HCM 6th Signalized Intersection Summary
3: SR 21/Augusta Road & SR 30/Piedmont Ave/Black Creek Drive

Vernadoe-Wiggins Tract
2029 Build PM Improved_Regional

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	100	211	136	223	68	425	2787	346	107	1783	382
Future Volume (veh/h)	169	100	211	136	223	68	425	2787	346	107	1783	382
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1870	1870	1856	1796	1870	1870	1737	1870
Adj Flow Rate, veh/h	204	239	0	174	240	0	512	2934	0	113	1917	0
Peak Hour Factor	0.83	0.61	0.80	0.78	0.93	0.81	0.83	0.95	0.95	0.95	0.93	0.87
Percent Heavy Veh, %	2	2	2	5	2	2	3	7	2	2	11	2
Cap, veh/h	257	263		227	303		453	2583		91	2087	
Arrive On Green	0.07	0.14	0.00	0.09	0.16	0.00	0.13	0.53	0.00	0.05	0.44	0.00
Sat Flow, veh/h	3563	1870	1585	1739	1870	1585	3428	4904	1585	1781	4742	1585
Grp Volume(v), veh/h	204	239	0	174	240	0	512	2934	0	113	1917	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1739	1870	1585	1714	1635	1585	1781	1581	1585
Q Serve(g_s), s	8.5	18.9	0.0	12.8	18.5	0.0	19.8	79.0	0.0	7.7	57.0	0.0
Cycle Q Clear(g_c), s	8.5	18.9	0.0	12.8	18.5	0.0	19.8	79.0	0.0	7.7	57.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	263		227	303		453	2583		91	2087	
V/C Ratio(X)	0.79	0.91		0.77	0.79		1.13	1.14		1.24	0.92	
Avail Cap(c_a), veh/h	451	299		227	303		453	2583		91	2087	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.66	0.66	0.00
Uniform Delay (d), s/veh	68.5	63.5	0.0	50.3	60.5	0.0	65.1	35.5	0.0	71.2	39.5	0.0
Incr Delay (d2), s/veh	5.5	27.8	0.0	14.6	13.5	0.0	83.4	66.6	0.0	153.2	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	10.7	0.0	6.6	10.0	0.0	13.7	45.3	0.0	7.4	22.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	91.3	0.0	64.9	73.9	0.0	148.5	102.1	0.0	224.4	45.1	0.0
LnGrp LOS	E	F		E	E		F	F		F	D	
Approach Vol, veh/h		443	A		414	A		3446	A		2030	A
Approach Delay, s/veh		83.3			70.1			109.0			55.0	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	72.9	20.0	30.1	14.0	85.9	16.8	33.3
Change Period (Y+Rc), s	7.2	6.9	6.0	9.0	* 6.3	6.9	6.0	9.0
Max Green Setting (Gmax), s	19.8	63.1	14.0	24.0	* 7.7	76.1	19.0	19.0
Max Q Clear Time (g_c+I1), s	21.8	59.0	14.8	20.9	9.7	81.0	10.5	20.5
Green Ext Time (p_c), s	0.0	4.1	0.0	0.2	0.0	0.0	0.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	87.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Turn Lane Warrant Analysis

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

4.9 Auxiliary Turn Lanes

4.9.1 When Deceleration Lanes Are Required

The provisions of this section should generally apply to auxiliary lanes installed on the approach to an intersection that provide for deceleration and storage of vehicles waiting to turn right or left. Such lanes are always beneficial and will be required in conjunction with commercial driveway permits when projected traffic volumes exceed minimum levels as provided in the sections below.

All existing utilities which would be under new pavement or in auxiliary/deceleration lanes should be relocated before final grading and paving, and at no cost to DOT. Existing utilities which are found to be not in conflict with construction may be allowed if a Retention Request is processed by the utility owner and approved by the Department.

4.9.1.1 Minimum Requirements for Right Turn Deceleration Lanes

Right turn deceleration lanes must be constructed at no cost to the Department if the daily site generated Right Turn Volumes (RTV) based on ITE Trip Generation (assuming a reasonable distribution of entry volumes) meet or exceed the values shown in Table 4-6. Passing lane sections fall under the criteria for two or more lanes.

Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

Table 4-6 Minimum Volumes Requiring Right Turn Lanes

In the event the District Traffic Engineer determines that field conditions or other factors indicate that it would be in the best interest of the Department, use the form in **Appendix F** to document a waiver for the deceleration lane requirement, the District Traffic Engineer must document the recommendations using the form in **Appendix F**. The recommendations shall be approved by the District Engineer and be attached to the Permit. The District Traffic Engineer may also require the addition of a Right Turn lane, even when the conditions in Table 4-6 are not met, if roadway geometry or field conditions indicate that the safety of the traveling public would be improved. The recommendation must be documented and approved by the District Traffic Engineer for inclusion with the Permit.

The R/W for auxiliary/deceleration lanes may be dedicated in fee simple to the Department for the Department to maintain or the applicant must sign an agreement with the Department to maintain the lane to the Department's standards and to hold harmless the Department in the event that section of roadway is identified in any liability action. A Limited Warranty Deed is not acceptable when R/W is donated to the Department. See section 2.5 for details regarding RW dedication procedures.

AADT is greater than 10,000 and right-turns are greater than 50, so a right-turn lane is required

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

GDOT ICE
Analysis

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A): N/A Request By: GDOT

County: Chatham GDOT District: 5 - Jesup

Major (State) Road: SR-21 Speed Limit: 55 mph

Minor (Crossing) ST: Site Access #1 Speed Limit: < 35 mph

Major ST Direction: North/South Area Type: Suburb/Transition

Intersection Control: Conventional (Minor Stop)

Prepared By: Kimley-Horn Analyst: DBT

Date: 4/2/2021 Project ID: 13908000

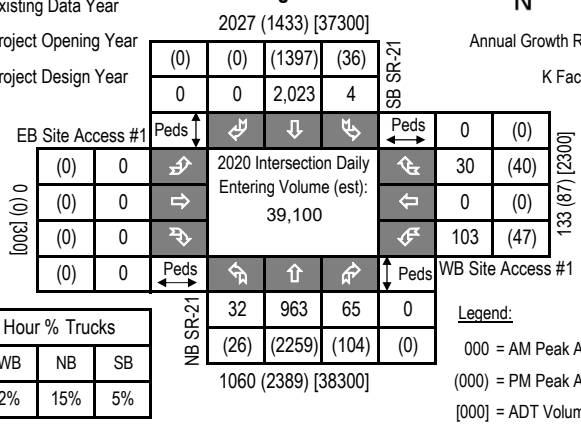
Project Purpose: Driveway for proposed Vernadoe-Wiggins Tract

2020	Existing Data Year
2023	Project Opening Year
2033	Project Design Year

Annual Growth Rate: 2.0%

K Factor*: 10%

2020 Existing Year Volumes



Peak Hour % Trucks			
EB	WB	NB	SB
2%	2%	15%	5%

Legend:

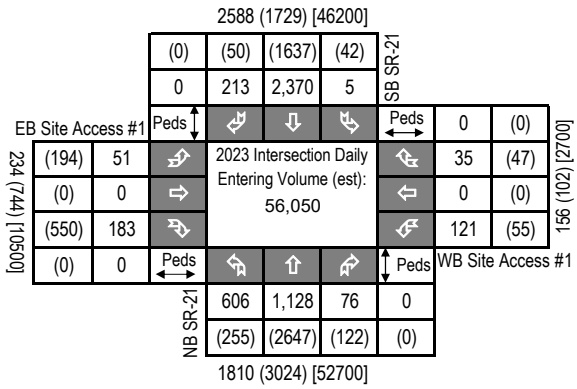
000 = AM Peak Approach Vol

(000) = PM Peak Approach Vol

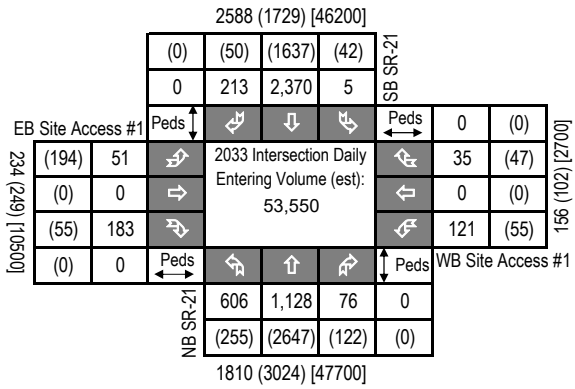
[000] = ADT Volume (Estimate)

Approach Splits: SR-21 - 0.96 / Site Access #1 - 0.04

2023 Opening Year Volumes



2033 Design Year Volumes



Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

Tool Goal: The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

Requirements: An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "**Waiver**" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

Two-Stage Process: A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

Stage 1: Screening Decision Record Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

Stage 2: Alternative Selection Decision Record Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

GDOT ICE STAGE 1: SCREENING DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI #	N/A
Project Location:	SR-21 @ Site Access #1
Existing Control:	Conventional (Minor Stop)
Prepared by:	Kimley-Horn
Date:	4/2/2021

Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column

Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2

	Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)	1. Does alternative address the project need in a balanced manner and in scale with the project?	2. Does alternative improve safety performance in terms of reducing severe crashes?	3. Does alternative incorporate safety, convenience and accessibility for pedestrians and/or bicyclists?	4. Does alternative improve (or preserve) traffic operations (congestion, delay, reliability, etc.)?	5. Does alternative appear feasible given the site characteristics, constrains & location context?	6. Does alternative appear feasible with respect to other project factors?	7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?	**Screening Decision Justification:**
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	**Yes**	**Yes**	No	High site traffic volumes lead to poor operations under this alternative.
	Conventional (All-Way Stop)	No	**Yes**	No	No	No	No	No	Major street peak hour traffic volumes are too high.
	Mini Roundabout	No	No	No	No	No	No	No	Too many through volumes
	Single Lane Roundabout	No	No	No	No	No	No	No	Cant be a single lane because of through lanes
	Multilane Roundabout	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Alternative warrants further consideration.
	RCUT (stop control)	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Expected daily truck volume is too high.
	RIRO w/down stream U-Turn	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Diverted left-turn volume is too high.
	High-T (unsignalized)	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Offset-T Intersections	No	No	No	No	No	No	No	N/A.
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	N/A.
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	N/A.
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A.
	Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A.
Signalized Intersections	Traffic Signal	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Alternative warrants further consideration.
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	SR- 21cross section and volumes are not supportive of this type of solution.
	RCUT (signalized)	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Continuous Green-T	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Jughandle	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Quadrant Roadway	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Diverging Diamond	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	Single Point Interchange	No	No	No	No	No	No	No	SR-21 cross section and volumes are not supportive of this type of solution.
	No LT Lane Improvements No RT Lane Improvements	No	No	No	No	No	No	No	N/A.
	Other Signalized (provide description):	No	No	No	No	No	No	No	N/A.

= Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

GDOT ICE STAGE 2: ALTERNATIVE SELECTION DECISION RECORD

ICE Version 2.15 | Revised 07/01/2019

GDOT PI # (or N/A): N/A
County: Chatham
Project Location: SR-21 @ Site Access #1
Existing Intersection Control: Conventional (Minor Stop)

GDOT District: 5 - Jesup
Area Type: Suburb/Transition

Date: 4/2/2021
Agency/Firm: Kimley-Horn
Analyst: DBT

Type of Analysis: Conventional Non-Safety Funded Project

Opening / Design Year Traffic Operations

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Measure of Effectiveness	Intersection Delay	
Traffic Analysis Software Used	Synchro 10	
Analysis Time Period	AM Peak Hr	PM Peak Hr
2023 Opening Yr No-Build Peak Hr Intersection Delay	500.0 sec	500.0 sec
2023 Opening Yr No-Build Peak Hr Intersection V/C	2.71	5.00
2033 Design Yr No-Build Peak Hr Intersection Delay	500.0 sec	500.0 sec
2033 Design Yr No-Build Peak Hr Intersection V/C ratio	5.00	5.00

Complete Streets Warrants Met?
- ☐ PEDESTRIANS
- ☐ BICYCLES
- ☐ TRANSIT

Crash Type: Crash Data: Enter most recent 5 years of crash data	Crash Severity: PDO	Injury Crash*	Fatal Crash*	
Angle	16	0	0	23%
Head-On	2	0	0	3%
Rear End	35	0	0	51%
Sideswipe - same	9	0	0	13%
Sideswipe - opposite	0	0	0	0%
Not Collision w/Motor Veh	7	0	0	10%
TOTALS:	69	0	0	69

* Number of crashes resulting in injuries / fatalities, not number of persons

Alternatives Analysis:

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Proposed Control Type/Improvement:	Multilane Roundabout	RCUT (stop control)	RIRO w/down stream U-Turn	Traffic Signal	N/A
Project Cost: (From CostEst Worksheet)	*Additional description here*	*Additional description here*	*Additional description here*	*Add LT bays all approaches*	
Construction Cost	$1,307,000	$156,000	$388,000	$341,000	
ROW Cost	$385,000	$0	$0	$0	
Environmental Cost	$0	$0	$0	$0	
Reimbursable Utility Cost	$16,000	$2,000	$5,000	$6,000	
Design & Contingency Cost	$392,000	$40,000	$100,000	$119,000	
Cost Adjustment (justification req'd)	0%	0%	0%	0%	
Total Cost	$2,100,000	$198,000	$493,000	$466,000	
Traffic Operations:					
Traffic Analysis Software Used	Other (explain below)	Other (explain below)	Synchro 10	--select one--	
Analysis Period	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	AM Peak Hr / PM Peak Hr	
2033 Design Yr Build Intersection Delay	352.5 sec / 200.1 sec	500.0 sec / 500.0 sec	500.0 sec / 500.0 sec	38.3 sec / 36.6 sec	
2033 Design Yr Build Intersection V/C	2.40 / 2.10	2.71 / 2.00	2.71 / 2.00	1.23 / 1.07	
Safety Analysis:					
Predefined CRF: PDO	32%	31%	35%	39%	
Predefined CRF: Fatal/Inj	71%	53%	54%	40%	
Predefined CRF Source:	FHWA Clearinghouse #s 236 / 237	NC/MO Table 4-7	FHWA Clearinghouse #s 5555 / 5556	FHWA Clearinghouse #s 7982 / 7984	
User Defined CRF: PDO					
User Defined CRF: Fatal/Inj					
User Defined CRF Source (write in if applicable):					
Environmental Impacts:[1]					
Historic District/Property	None	None	None	None	
Archaeology Resources	None	None	None	None	
Graveyard	None	None	None	None	
Stream	None	None	None	None	
Underground Tank/Hazmat	None	None	None	None	
Park Land	None	None	None	None	
EJ Community	None	None	None	None	
Wooded Area	None	None	None	None	
Wetland	None	None	None	None	

*Note: If environmental impact is significant (**RED**), provide justification impact won't jeopardize project delivery using "Env" worksheet*

[1] *Environmental impacts are only preliminary estimates; detailed environmental impact documentation will be included with project concept report*

Stakeholder Posture:					
Local Community Support	Neutral	Neutral	Neutral	Neutral	
GDOT Support	Neutral	Neutral	Neutral	Neutral	
Final ICE Stage 2 Score:	-1.5	-1.9	-1.9	5.3	
Rank of Control Type Alternatives:	2	4	3	1	

Note: Stage 2 score is not given (shown as "-") if signal or AWS is selected as control type but respective warrants are not met

Provide additional comments and/or explain any unique analysis inputs, or results (as necessary): Sidra Intersection 9.0 was used as a supporting tool for roundabout capacity analyses. The single-lane and multilane roundabout alternatives consider an eastbound right-turn bypass lane to serve proposed Site Access #1. For the two-way stop control conditions considered under the No-Build analyses, only the minor street approach experiencing the largest control delay was reported.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

GDOT ICE TOOL: COST ESTIMATING AID

ICE Version 2.15 | Revised 07/01/2019

Project Information

Location:	SR-21 @ Site Access #1	County:	Chatham	Date:	4/2/2021
GDOT PI # (or N/A):	N/A	Area Type:	Suburb/Transition	Agency/Firm:	Kimley-Horn
Existing Intersection Control:	Conventional (Minor Stop)	GDOT District:	5 - Jesup	Analyst:	DBT
Type of Analysis:	Conventional Non-Safety Funded Project			Major Street Direction:	North/South

Table 1: Existing Conditions

	NB SR-21			SB SR-21			EB Site Access #1			WB Site Access #1		
Movement	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn	Left Turn	Thru	Right Turn
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	0
Lane Widths*	12'	12'	12'	12'	12'	12'	12'	12'	12'	12'	12'	12'
Bay Length**	0'		175'	0'		0'	0'		0'	0'		0'
Median Width		0'			0'			0'			0'	
Right-of-Way	30'						0'					

Table 2: Proposed Conditions

	Multilane Roundabout	RCUT (stop control)	RIRO w/down stream U-Turn	Traffic Signal	N/A
Proposed Pavement Type	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt	F.D. Asphalt
Reimbursable Utility:	Minimal	Minimal	Minimal	Minimal	Minimal
# of Driveway(s) Impacted	1	1	0	0	0
Modify/Replace Traffic Signal	0	0	1	0	0
Lighting Poles (ea)	0	0	0	0	0
Flashing Beacons (ea)	0	0	0	0	0
RFB/PHB Ped Crossings (ea)	0	0	0	0	0
New/Replace Sidewalks (LF)	0'	0'	0'	0'	0'
New/Replace Cross Drains (LF)	0'	0'	0'	0'	0'
New/Replace Guardrail (LF)	0'	0'	0'	0'	0'
New Retaining Wall (LF)	0'	0'	0'	0'	0'
Bridge:New/Widen/Replace (sqft)	0	0	0	0	0
Add'l ROW/Easements/Demolition	$0	$0	$0	$0	$0

Site Context

Topography:	Level
Traffic Mgmt Plan:	Maintain Traffic
Project Size:	Single Intersection

Cost Multipliers

Grading Complete:	15%
Reimbursable Utility:	2%
Traffic Control:	20%
Project Size:	0%
Prelim Engineering:	15%
Project Contingency:	20%

Intersections

Signal Poles	Mast Arm
Design Vehicle	WB-67
Existing Interchange?	No

Roundabouts

Inscribed DIA - Mini	80
Inscribed DIA - Single	140
Inscribed DIA - Multi	180
Circulating Lane Width	16

ROW Costs

Prevalent ROW Type:	Mixed (Average)
ROW Cost/Acre:	$308,438
ROW Multiplier:	1.6

Table 3: Control Type Cost Breakdown

Pay Item	Per Ln Mi Unit Cost	Unit Cost	Multilane Roundabout		RCUT (stop control)		Turn		Traffic Signal		N/A	
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
New Construction (Base & Pave)	$500K/LM	$9.47/sqft	42,963	$549,242	5,000	$47,348	5,500	$52,083	16,000	$151,515		
Roadway Mill and Overlay	$64K/LM	$1.21/sqft	0	$0	0	$0	0	$0	0	$0		
Urban C&G/Drainage - both sides	441-6720	$19.08/LF	3330	$85,773	700	$13,356	800	$15,264	4,000	$76,320		
Rural Typ Drainage - both sides	$150K/LM	$2.84/LF	0	$0	0	$0	0	$0	0	$0		
Concrete Island (sqyd)	n/a	$51.58/syd	450	$31,335	500	$25,790	250	$12,895	0	$0		
Median Landscaping	$100K/LM	$1.89/LF	3600	$9,205	1,050	$1,989	1,200	$2,273	0	$0		
Typical Driveways Impacted (ea)	n/a	$7,500 ea	1	$10,125	1	$7,500	0	$0	0	$0		
Typical E&S Control Temp/Perm	$150K/LM	$34.09/LF	1200	$55,227	350	$11,932	400	$13,636	2,000	$68,182		
Roundabout Truck Apron (sqft)	n/a	$10.25/sqft	3833	$53,039	0	$0	0	$0	0	$0		
Signing & Marking	$0	$22.73/LF	1,200	$36,823	350	$7,956	400	$9,092	2,000	$45,460		
Flashing Beacon (ea)	n/a	$20,000 ea	0	$0	0	$0	0	$0	0	$0		
New Traffic Signal (Mast Arms)	674-1000	$182,575ea	0	$0	0	$0	1	$182,575	0	$0		
Lighting (per pole)	n/a	$5,607 ea	0	$0	0	$0	0	$0	0	$0		
Signalized Ped Crossings (ea)	n/a	$19,637 ea	0	$0	0	$0	0	$0	0	$0		
6' Sidewalk (LF)	n/a	$49.23/LF	0	$0	0	$0	0	$0	0	$0		
New/replace cross drains (LF)	n/a	$41.31/LF	0	$0	0	$0	0	$0	0	$0		
Typical Guardrail (LF)	n/a	$65.56/LF	0	$0	0	$0	0	$0	0	$0		
Retaining Wall (LF)	n/a	$808.52/LF	0	$0	0	$0	0	$0	0	$0		
Bridge widen/replace (SF)	n/a	$210/sqft	0	$0	0	$0	0	$0	0	$0		
Env Costs (from Stage 2 impacts)	n/a	n/a	0	$0	0	$0	0	$0	0	$0		
Grading Complete - 15%	n/a	n/a		$252,346		$17,381		$43,173		$0		
Traffic Control - 20%	n/a	n/a		$224,307		$23,174		$57,564		$0		
Reimbrusable Utility	n/a	n/a		$16,615		$2,317		$5,756		$6,830		
Preliminary Engineering - 15%	n/a	n/a		$168,231		$17,381		$43,173		$51,222		
Contigency - 20%	n/a	n/a		$224,307		$23,174		$57,564		$68,295		
ROW Cost/Acre: Mixed (Average)	n/a	$308,438ac		$240,746		$308		$308		$0		
Add'l ROW / Displacement / Demo	n/a	n/a		$0		$0		$0		$0		
ROW Multiplier - 1.6	n/a	n/a		$144,447		$185		$185		$0		
Project Scale Reduction - 0.0%	n/a	n/a		$0		$0		$0		$0		
Grand Total Costs				**$2,102,000**		**$200,000**		**$496,000**		**$468,000**		

Table 4: Assumption Adjustments/Quantity Overrides

Alternative Evaluated	Assumptions:	Pavement	Calculated ROW (ac)	User Override*	Calculated Pavement	User Override*	Major ST Const Limits	User Override*	Minor ST Const Limits	User Override*
Multilane Roundabout	--select one--	F.D. Asphalt	0.78	0.0	42,963	0.0	600	0.0	600	0.0
RCUT (stop control)	Loons/Leftovers Only	F.D. Asphalt	1.03	0.0	29,358	5,000.0	1,320	200.0	510	150.0
RIRO w/down stream U-Turn	Loons/Leftovers Only	F.D. Asphalt	1.03	0.0	22,158	5,500.0	1,320	250.0	510	150.0
Traffic Signal	Pave/Overlay Intersection	F.D. Asphalt	0.00	0.0	16,000	0.0	1,000	0.0	1,000	0.0
N/A	#N/A	F.D. Asphalt	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit A Traffic Study (2473 : Zoning Map Amendment VARNEDOE-

Limited Noise Exposure Evaluation

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

June 15, 2021
Terracon Project No. ES217065

Prepared for:

Kern & Co., LLC
Savannah, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

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Terracon

June 15, 2021

Kern & Co., LLC
PO Box 15179
Savannah, Georgia 31416

Attn: Mr. Chad Zittrouer, PE
E: CZittrouer@kernengineering.com

Re: Limited Noise Exposure Evaluation
Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia
Terracon Project No. ES217065

Dear Mr. Zittrouer:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Limited Noise Exposure Evaluation report for the above-referenced site. This assessment was performed in accordance with Supplement to Agreement for Services No. PES217151, dated June 1, 2021.

We appreciate the opportunity to be of service to you on this project. In addition to noise evaluation services, our professionals provide **geotechnical, environmental, construction materials, and facilities services** on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at www.terracon.com.

If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Leah R. Moore, EIT
Senior Staff Environmental Engineer

William S. Anderson, III, PE
Senior Principal / Southeast Division Manager

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

TABLE OF CONTENTS

Section			Page No.
1.0	**INTRODUCTION**		**1**
	1.1	Project Description	1
	1.2	Noise Overview	2
	1.3	Purpose	3
	1.4	Scope of Work	3
	1.5	Reliance	3
2.0	**FIELD ACTIVITIES**		**4**
	2.1	Background Sound Level Data Collection	4
	2.2	Observed Noise Sources	4
3.0	**EXISTING SOUND LEVELS**		**5**
	3.1	Average Leq Measurements	6
	3.2	Peak 1-Hour Leq Measurements	7
4.0	**PROJECTED SOUND LEVELS**		**7**
5.0	**CONCLUSIONS AND RECOMMENDATIONS**		**9**
	5.1	Conclusions	9
	5.2	Recommendations	10

APPENDICES

APPENDIX A Figure 1 - Vicinity & Topographic Map

Figure 2A - Northern Site Diagram

Figure 2B - Southern Site Diagram

Figure 3 - Northern Existing Sound Levels

Figure 4A - Northern Projected Sound Levels

Figure 4B - Southern Projected Sound Levels

APPENDIX B Field Documentation

APPENDIX C Sound Level Meter Session Reports

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Limited Noise Exposure Evaluation

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Terracon Project No. ES217065
June 15, 2021

1.0 INTRODUCTION

1.1 Project Description

Terracon Consultants, Inc. (Terracon) has completed this Limited Noise Exposure Evaluation on behalf of Kern & Co., LLC for the Varnedoe-Wiggins Tract Phases I and II rezoning project located west of Georgia Highway 21 (Augusta Road) in Port Wentworth, Chatham County, Georgia. The location of the subject site is depicted on a Vicinity and Topographic Map provided as Figure 1 of Appendix A as reproduced on a portion of the 2020 Port Wentworth, Georgia United States Geological Survey (USGS) 7.5-minute series topographic map. Diagrams of the subject site are included as Figures 2A and 2B of Appendix A.

As shown on Figures 2A and 2B, the subject site currently consists primarily of undeveloped wooded land transected by a Georgia Power overhead transmission line easement. Chatham County subject parcel numbers 70975 01026Y and 70975 01017A, addressed as 222 and 226 Jeffers Road respectively, are residentially developed and would be redeveloped as part of the proposed project. The subject parcels are currently zoned as Residential-Agriculture (R-A). As part of the proposed project, the parcels will be rezoned as Industrial (I-1), which is required to meet I-2 standards for warehousing.

Black Creek forms portions of the northern property boundary. Based on site observations, land parcels to the north-northwest have already been developed or are under construction as warehouse facilities within the Georgia International Trade Center (GITC) development along Trade Center Parkway. North-northeastern adjoining Chatham County parcel numbers 70906 01029 and 70906 01030 currently consist of undeveloped wooded land but are zoned for residential development. These parcels are followed by the existing Rice Creek residential neighborhood. Additional residential developments exist to the south-southeast and east of the subject site along Georgia Highway 21, Saussy Road, Grant Road, and Berrien Road. Western adjoining Chatham County and Effingham County land parcels consist of undeveloped wooded land and a Seaboard Coastline rail line.

The proposed Varnedoe-Wiggins Tract development will consist of 13 warehouse/truck terminal buildings of various size and orientation, employee vehicle parking areas, truck/trailer parking

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

areas, and access roadways. Several 100-feet wide buffers completed with 15-feet tall earthen berms with 2:1 slopes and topped with vegetation and trees are proposed along the shared property boundaries including along Jeffers Road, the Georgia Power substation and end of Saussy Road, and various locations along the southern and western property boundaries.

The layout of the proposed development is depicted in Figures 3, 4A, and 4B in Appendix A.

1.2 Noise Overview

Noise is typically defined as unwanted or undesirable sound. The basic parameters of noise include intensity, frequency content, and variation with time. Noise intensity is determined by the level of sound, which is expressed in units of decibels (dB). The range of normally encountered sound on the decibel scale can be expressed by values between 0 dB and 120 dB. On a relative basis, a 3-dB change in sound level generally represents a barely perceptible change in a common outdoor setting. A 5-dB positive change represents a "noticeable" change and a 10-dB positive change is typically perceived as a doubling in volume. Similarly, a 10-dB decrease in noise levels is perceived as a 50% reduction in volume.

The frequency of noise is related to the tone or pitch of the sound and is expressed in terms of cycles per second, or hertz (Hz). The human ear can detect a wide range of frequencies from about 20 Hz to 17,000 Hz. However, because the sensitivity of human hearing varies with frequency, the A-weighting system is commonly used. A-weighting is applied to instrument-measured sound levels in an effort to account for the relative loudness perceived by the human ear, as the ear is less sensitive to low audio frequencies.

A-weighting is employed by arithmetically adding a table of values, listed by octave or third-octave bands, to the measured sound pressure levels in dB. The resulting octave band measurements are logarithmically added to provide a single A-weighted value describing the sound and the units are written as dB(A). The A-weighted sound level is widely accepted as a proper unit for describing environmental noise and has been adopted as the unit of measure by the Occupational Safety and Health Administration (OSHA), the American Conference of Governmental Industrial Hygienists (ACGIH), the Federal Highway Administration (FHWA), and the U.S. Environmental Protection Agency (EPA).

Because environmental noise fluctuates from moment to moment, it is common practice to condense all of this information into a single value known as the equivalent sound level (Leq). The Leq is a measure of the average sound energy during a specified period of time (typically 1 hour or 24 hours). The Leq is defined as the constant level that, over a given period of time, transmits the same amount of acoustical energy to a receiver as the actual time-varying sound. Peak 1-hour Leq provides the worst case equivalent hourly noise level for a given time period.

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1.3 Purpose

The purpose of this evaluation was to satisfy the criteria set forth in the City of Port Wentworth, Georgia Code of Ordinances, Appendix B, Article V, Section 5.2. Specifically, Part C (Environmental Quality) of the Development Impact Assessment requirements in order to comply with I-2 zoning, states that a developer shall provide a noise study that includes the following:

- A 24-hour base-line survey of existing ambient sound levels (in Leq) at or near the property boundaries at intervals of not more than 300-feet.
- Estimated sound level data for the proposed development, with supporting documentation.
- A plat depicting the expected acoustic impact of the proposed development in 5-dB increments.

In addition, the ordinance states that where the noise generated by the proposed development is expected to exceed 55 dB(A) at any point along the property line, the developer shall provide a detailed proposal for noise-reduction measures, including, but not limited to, berms, sound-absorbing barriers, and vegetative buffers, and shall depict said improvements on the Preliminary General Site Plan submitted as part of the General Development Plan. The proposed parcel rezoning and warehouse development necessitates this Limited Noise Exposure Evaluation.

1.4 Scope of Work

Pursuant to the completion of this Limited Noise Exposure Evaluation, Terracon's scope of work included a review of historical existing sound levels in the vicinity of the subject site, as well as the estimation and depiction of the expected acoustic impact of the proposed warehouse development in 5-decibel increments. A detailed discussion of Terracon's procedures, historical existing sound level data, and sound level projections are included in the following sections. Conclusions and recommendations are presented at the end of this report.

1.5 Reliance

This report is prepared for the exclusive use and reliance of Kern & Co., LLC (the client) and the City of Port Wentworth. Use or reliance by any other party is prohibited without the written authorization of the client and Terracon Consultants, Inc.

Reliance on this report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in this report, the Supplement to Agreement for Services dated June 1, 2021, and the Agreement for Services between Terracon and Kern & Co., LLC, dated March 8, 2021. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

2.0 FIELD ACTIVITIES

2.1 Background Sound Level Data Collection

In August 2020, Terracon collected existing background sound levels from various locations directly north of the current subject site as part of a separate rezoning project. Two (2) of these locations, referred to herein as M4 (2020) and M5 (2020), were located along the current northern property boundary as shown in Figure 3 in Appendix A. Location M4 (2020) was located near the center of the northern property boundary where the Georgia Power easement access road terminates on the north side of adjoining Black Creek. Location M5 (2020) was within the undeveloped wooded area directly north of the subject site's northwestern corner. These two (2) locations are considered representative of existing background conditions along the transecting Georgia Power overhead transmission line easement and along property boundaries with undeveloped wooded lands for the current subject site. As such, new sound level measurements were not performed for similar locations during the current study.

During the Varnedoe-Wiggins Tract Phase I noise study in March 2021, Terracon collected additional existing background sound levels from two (2) locations, M1 and M2, along property boundaries with Georgia Highway 21 and Jeffers Road as shown in Figure 3 in Appendix A. As shown, location M1 was located on the eastern property boundary along Georgia Highway 21. Location M2 was located on the southern property boundary along Jeffers Road. Location M2 is considered representative of the residences along Saussy Road as well, so new sound level measurements were not performed during the current study.

Sound levels at the subject site were recorded for approximate 24-hour periods from March 15, 2021 through March 18, 2021. At each location, sound levels were recorded utilizing laboratory and field-calibrated Quest Technologies ANSI Type II SoundPro Model DL sound level meters. Data from the sound level meters were digitally imported utilizing the 3M™ Detection Management Software and processed utilizing Microsoft Excel. Photographs of the sound level meter locations and field observations are included in Appendix B.

2.2 Observed Noise Sources

During the collection of existing sound levels, a log was kept noting the time of day, meteorological conditions, and on-site/off-site noise sources. At monitoring location M1, the primary noise source was traffic along Georgia Highway 21. Traffic included heavy trucks (tractor-trailers, dump trucks, etc.), light and medium trucks, buses, motorcycles, and passenger vehicles. At location M2, traffic noise from nearby Georgia Highway 21 was not as loud but was still noticeable. The occasional vehicle traversing Jeffers Road also contributed to vehicular noise at location M2. Locations M2, M4 (2020), and M5 (2020) were in predominantly undeveloped areas where on-site noise sources primarily consisted of wildlife such as birds, insects, and frogs. In addition to vehicular traffic, other off-site noise sources included occasional jet, airplane, and helicopters passing overhead.

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3.0 EXISTING SOUND LEVELS

The following sections provide summaries of the recorded sound levels at the subject site property boundaries. Session data from each meter location was digitally imported utilizing the 3M™ Detection Management Software and processed utilizing Microsoft Excel. The session reports for each location run as provided by the 3M™ software are provided in Appendix C. As shown on these reports, the software program automatically calculates an overall Leq for each session based on all the sound level data collected during that run. These values include, however, all potentially falsely elevated readings that may be associated with user interactions (setting up the meter, checking the batteries, approaching/leaving the meter locations, etc.) as well as non-typical environmental noise sources such as thunderstorms and rain. As such, Terracon further processes the sound level data to remove these "false" readings in order to calculate more accurate sound levels.

The following table lists all the data points removed from each meter session for the purposes of calculating existing sound levels.

Table 3.1 - Data Removed from Sound Level Analysis

Location / Session	Actual Start Time & Date	Actual Stop Time & Date	Modified Start Time & Date	Modified Stop Time & Date	Readings Removed from Data	Comments
M1	13:34 3/17/2021	13:06 3/18/2021	13:36 3/17/2021	12:29 3/18/2021	13:34-13:35 3/17/2021	Setting up meter/departing
					14:07-14:11 3/17/2021	Stopped session to check battery
					16:47-16:51 3/17/2021	Stopped session to check SD card
					12:30-13:06 3/18/2021	Rainfall followed by approaching/ breaking down meter
M2	11:48 3/15/2021	12:20 3/16/2021	11:52 3/15/2021	12:12 3/16/2021	11:48-11:51 3/15/2021	Setting up meter/departing
					12:13-12:20 3/16/2021	Surveyor's passing location, Terracon approaching/ breaking down meter
M4 (2020)	10:17 8/6/2020	09:41 8/7/2020	10:25 8/6/2020	09:39 8/7/2020	10:17-10:24 8/6/2020	Setting up meter/departing
					16:37 8/6/2020	Thunder
					16:51-19:03 8/6/2020	Thunderstorm/ rain

Location / Session	Actual Start Time & Date	Actual Stop Time & Date	Modified Start Time & Date	Modified Stop Time & Date	Readings Removed from Data	Comments
M4 (2020) *Continued*	10:17 8/6/2020	09:41 8/7/2020	10:25 8/6/2020	09:39 8/7/2020	20:59-00:03 8/6-7/2020	Thunderstorm/ rain
					09:40-09:41 8/7/2020	Approaching/ breaking down meter
M5 (2020)	10:00 8/6/2020	09:21 8/7/2020	10:03 8/6/2020	09:18 8/7/2020	10:00-10:02 8/6/2020	Setting up meter/departing
					16:37 8/6/2020	Thunder
					16:51-18:47 8/6/2020	Thunderstorm/ rain
					21:01-03:38 8/6-7/2020	Thunderstorm/ rain
					09:19-09:21 8/7/2020	Approaching/ breaking down meter

3.1 Average Leq Measurements

Using the sound level data as modified in Section 3.0, Terracon recalculated the 24-hour average Leq values at each measurement location as well as average day and night Leq values. 'Day' measurements refer to the hours between 07:00 and 19:00 when the development would be the most active. 'Night' measurements refer to the hours between 19:00 and 07:00 when development operations would be reduced. The sound levels are presented in the following table.

Table 3.2 - Summary of Average Leq Measurements

Location	24-Hour Average Leq dB(A)	"Day" Average Leq dB(A)	"Night" Average Leq dB(A)
M1	68.12	69.86	65.60
M2	54.87	57.08	49.88
M4 (2020)	52.54	50.66	53.87
M5 (2020)	50.28	47.11	53.06

*Values in red exceed the City of Port Wentworth 55 dB(A) reference threshold.

The existing 24-hour average Leq values at the subject site ranged from 50.28 dB(A) at location M5 (2020) to 68.12 dB(A) at location M1. Average "day" Leq values were higher than their respective average "night" Leq values at meter locations closer to off-site adjacent Georgia Highway 21 traffic (locations M1 and M2); whereas average "night" Leq values were generally higher in the more wooded locations [locations M4 (2020) and M5 (2020)], likely due to increased

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nocturnal wildlife/insect activity. The highest average "night" Leq, however, was recorded at location M1 which was located closest to the Georgia Highway 21. The 24-hour average Leq measurements are depicted on Figure 3 in Appendix A.

As noted in the Table 3.2, the existing 24-hour average Leq as well as the average "day" and "night" Leq sound levels at location M1 already exceed the 55 dB(A) threshold referenced in the City of Port Wentworth Code of Ordinances. Existing traffic noise generated along Georgia Highway 21 dominates the noise environment in this location and represents the existing sound levels experienced by commercial and residential developments adjacent to this roadway. The average "day" Leq sound level at location M2 also exceeds the 55 dB(A) threshold due to increased daytime traffic noise along Georgia Highway 21 and represents the existing noise environment for residences near the roadway.

3.2 Peak 1-Hour Leq Measurements

Maximum hourly Leq values were identified for each measurement location as shown in the table below. Peak 1-hour Leq values ranged from 56.01 dB(A) at location M5 (2020) to 70.56 dB(A) at location M1. The peak 1-hour Leq at M1 occurred during morning rush hour traffic on Georgia Highway 21. At locations M4 (2020) and M5 (2020), the peak hourly Leq values took place during the late evening/early morning hours, indicating they were likely due to active nocturnal wildlife and insects, especially after the thunderstorms that took place overnight from August 6, 2020 to August 7, 2020 (noise from the thunderstorms themselves were removed from the calculations as indicated in Table 3.1 previously).

Table 3.3 - Summary of Peak 1-Hour Leq Measurements

Location	Peak 1-Hour Leq dB(A)	Time Period	Date
M1	70.56	07:06-08:05	3/18/2021
M2	61.09	12:21-13:20	3/15/2021
M4	56.61	23:54-00:53	8/7/2020
M5	56.01	03:29-04:28	8/7/2020

*Values in red exceed the City of Port Wentworth 55 dB(A) reference threshold.

4.0 PROJECTED SOUND LEVELS

Based on Terracon's experience with similar warehouse developments, average noise levels of 75 dB(A) at 50-feet are typical within the warehouse loading/unloading areas and truck turnaround areas. These activities are considered point noise sources from which noise projects spherically away from the source in all directions. Noise attenuates, or decays, with distance away from the

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source. Factors such as topography, vegetation, and atmospheric conditions can further reduce noise across a distance. "Hard" flat ground surfaces, such as water, concrete/pavement, and hard-packed soil, are considered reflective surfaces where the ground does not provide any additional attenuation. The standard attenuation rate for hard site conditions is 6 dB per doubling of distance for point sources. "Soft" ground surfaces such as normal unpacked earth, vegetation, and wooded land, are considered absorptive and provide an additional 1.5 dB reduction per doubling of distance, for a total of 7.5 dB per distance doubled from the point noise source.

Additional noise reduction can be achieved using noise barriers such as noise walls or berms. As shown on Figures 4A and 4B in Appendix A, several 100-feet wide buffers completed with earthen berms are proposed between the site developments and adjoining properties. The berms will be 15-feet tall with 2:1 slopes and will be topped with vegetation and trees. A 5 dB(A) reduction in noise can be achieved by breaking the line of sight between a noise source and the receiver using a noise barrier. An additional 1 dB(A) reduction can be achieved for each additional 2-feet above the line of sight to the top of the wall or berm.

Based on the topographic data in the Line of Sight Exhibit (dated March 4, 2021) provided by Kern & Co., LLC and updated elevation data gathered for the current study, the proposed berms would break the horizontal line of sight toward a 6-feet tall receiver standing off-site at approximately 6-feet up each berm. The additional 9-feet height of the proposed 15-feet tall berm would provide an additional minimum 4 dB(A) reduction (1 dB(A) per 2-feet increase) on top of the 5 dB(A) line of sight reduction; yielding a total 9 dB(A) noise level reduction between the subject site developments and adjoining properties.

As shown in Figures 4A and 4B of Appendix A, Terracon conservatively projected the future sound levels beginning at 75 dB(A) from the edges of the proposed trailer parking and turnaround areas. Surrounding site conditions were assumed to be "soft". Using the equation below, the approximate distances from the noise sources to each sound level contour were determined:

$$D = D_o * 10^{((75\ dB(A) - \text{Projected Sound Level in } dB(A))/\alpha)}$$

Where:
D = Distance from the point noise source
D_o = Reference measurement distance (50-feet in this case)
α = 20 for hard ground cover, 25 for soft ground cover. Assumes value of 7.5 dB(A) reduction for soft cover and 6 dB(A) reduction for hard cover per doubled distance.

The resulting sound level contours are depicted on Figures 4A and 4B. As shown, projected noise levels are not expected to significantly increase at the background sound level measurement locations above their existing levels (see Section 3.0). Projected sound levels may be in excess of 55 dB(A) in a couple isolated areas along the eastern property boundaries within the adjoining

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Georgia Power easement and substation; however, these areas are are unlikely to be developed with noise sensitive receptors in the future.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Existing 24-hour average Leq values at the subject site ranged from 50.28 dB(A) at location M5 (2020) to 68.12 dB(A) at location M1. Average "day" Leq values were higher than their respective average "night" Leq values at meter locations closer to off-site adjacent Georgia Highway 21 traffic (locations M1 and M2); whereas average "night" Leq values were generally higher in the more wooded locations [locations M4 (2020) and M5 (2020)], likely due to increased nocturnal wildlife/insect activity.

The existing 24-hour average Leq as well as the average "day" and "night" Leq sound levels at location M1 already exceed the 55 dB(A) threshold referenced in the City of Port Wentworth Code of Ordinances. Existing traffic noise generated along Georgia Highway 21 dominates the noise environment in this location and represents the existing sound levels experienced by commercial and residential developments adjacent to this roadway. The average "day" Leq sound level at location M2 also exceeds the 55 dB(A) threshold due to increased daytime traffic noise along Georgia Highway 21 and represents the existing noise environment for residences near the roadway.

Existing maximum hourly Leq values ranged from 56.01 dB(A) at location M5 (2020) to 70.56 dB(A) at location M1. The peak 1-hour Leq at M1 occurred during morning rush hour traffic on Georgia Highway 21. At locations M4 (2020) and M5 (2020), the peak hourly Leq values took place during the late evening/early morning hours, indicating they were likely due to active nocturnal wildlife and insects, especially after the thunderstorms that took place overnight from August 6, 2020 to August 7, 2020.

Conservative projected sound levels indicate on-site levels should primarily attenuate to 55 dB(A) or less within the subject parcel limits except for a couple isolated areas along the eastern property boundaries within the adjoining Georgia Power easement and substation. The Georgia Power easement and substation are unlikely to be developed with noise sensitive receptors in the future. As such, the proposed development is not expected to significantly increase average sound levels at the property boundaries and will not result in significant noise impacts to off-site receivers.

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5.2 Recommendations

Terracon recommends the proposed earthen berms be constructed as indicated in Appendix A and herein in order to reduce the potential for adverse noise impacts off-site. Terracon also recommends leaving as much native woodland untouched as possible between the northern property developments and access roads and the northern adjoining residential land parcels to further reduce sound impacts to any future residential developments. No other recommendations are made at this time.

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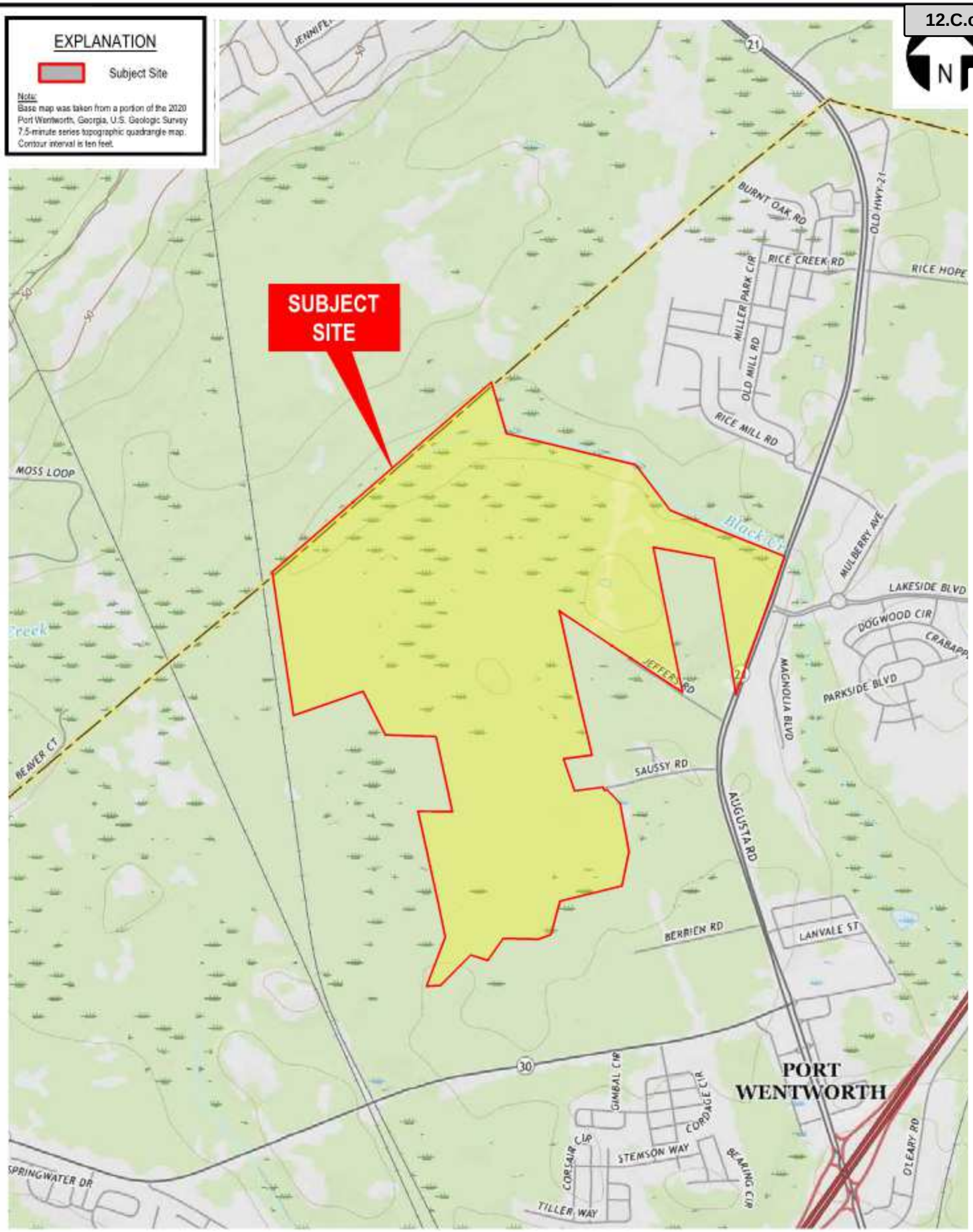
Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

APPENDIX A

Figures



0 1,000' 2,000'
1" = 2,000'
SCALE IN FEET

Project Mngr:	LRM
Drawn By:	JDG
Checked By:	LRM
Approved By:	WSA
Project No.	ES217065
Scale:	AS SHOWN
File Name:	ES217065-2.dwg
Date:	June 10, 2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax (912) 629 4001

VICINITY AND TOPOGRAPHIC MAP

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham Coun

Figu 1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Designed	LRM	Scale	ES21706S
Drawn By	JDG	Scale	AS SHOWN
Checked By	LRM	File Name	ES21706S.dwg
Approved By	WSA	Date	June 10, 2021

Terracon
Consulting Engineers & Scientists
2324 Riverbend Avenue
Statesboro, Georgia 30458
Phone: (912) 212-0616 Fax: (912) 212-0616

NORTHERN SITE DIAGRAM

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figure 2A

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Terracon Consulting Engineers & Scientists	Designed	LRM	ES217065
	Drawn	JDG	AS SHOWN
	Checked	LRM	ES217065.dwg
	Approved	WSA	June 10, 2021

SOUTHERN SITE DIAGRAM

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figure 2B

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Drawn By:	LRM
Checked By:	JDC
Approved By:	LRM
Scale:	WSA
Project No:	ES21706S
File Name:	AS SHOWN
Date:	ES21706S.dwg
	June 11, 2021

Terracon
Consulting Engineers & Scientists

NORTHERN PROJECTED SOUND LEVELS

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figure 4A

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Designed By:	LRM	Job No:	ES21705
Drawn By:	JDG	Scale:	AS SHOWN
Checked By:	LRM	File Name:	ES21705.dwg
Approved By:	WSA	Date:	June 11, 2021

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2004 Mowery Avenue
Post Office Box 1691
Thomson, Georgia 30824
Fax: 706.595.4555

SOUTHERN PROJECTED SOUND LEVELS

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figure 4B

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

APPENDIX B

Field Documentation

VARNEDOE-WIGGINS TRACT NOISE STUDY

Terracon Project No. ES217065

LOCATION ID: M1

Latitude, Longitude: 32.215983°, -81.198786°

Location Description: Along eastern property boundary adjoining Augusta Road/Highway 21 right-of-way.

FIELD NOTES

SESSION A

- Measurement Date(s): March 17, 2021 to March 18, 2021
- Session Start Time: 1334 on March 17, 2021
- Session End Time: 1306 on March 18, 2021

OBSERVATIONS

- Location is closest to Augusta Road/Highway 21 and represents existing noise experienced by receivers along the roadway.
- Ambient noise is dominated by vehicular traffic on Augusta Road/Highway 21 including heavy trucks (tractor-trailers, dump trucks, etc.), buses (school and public transportation), light trucks, passenger vehicles, and motorcycles. Occasional airplanes overhead.

EQUIPMENT AND DATA COLLECTION

Sound Level Meter Type 2, Quest Technologies SoundPro DL-2 (Meter No. 23423)
Noise measurements collected at 1-minute intervals.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

VARNEDOE-WIGGINS TRACT NOISE STUDY

Terracon Project No. ES217065

LOCATION ID: M2

Latitude, Longitude: 32.212770°, -81.204351°
Location Description: Along southern property boundary with Jeffers Road.

FIELD NOTES

SESSION A

- Measurement Date(s): March 15, 2021 to March 16, 2021
- Session Start Time: 1148 on March 15, 2021
- Session End Time: 1220 on March 16, 2021

OBSERVATIONS

- Ambient noise consists of vehicular traffic from Augusta Road/Highway 21 including heavy trucks (tractor-trailers, dump trucks, etc.), buses (school and public transportation), light trucks, passenger vehicles, and motorcycles; occasional vehicles traveling along Jeffers Road; wildlife (insects, birds, frogs); and aircraft passing overhead.

EQUIPMENT AND DATA COLLECTION

Sound Level Meter Type 2, Quest Technologies SoundPro DL-2 (Meter No. 23423)
Noise measurements collected at 1-minute intervals.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

GITC CHATHAM PARCEL NOISE STUDY
Terracon Project No. ES207015

LOCATION ID: M4

Latitude, Longitude: 32.222065, -81.205707
Location Description: Near southeastern-most property corner where the overhead transmission line easement access road dead ends at Black Creek.

FIELD NOTES

SESSION A

- Measurement Date(s): August 6, 2020 to August 7, 2020
- Session Start Time: 1017 on August 6, 2020
- Session End Time: 0941 on August 7, 2020

OBSERVATIONS

- Ambient noise included wildlife (insects, birds, frogs, gator barks); and occasional jet, airplane, and helicopters overhead.
- There were thunderstorms on-site and in the surrounding area from approximately 1651 to 1903 on August 6, 2020 and overnight from 2059 on August 6, 2020 to 0003 on August 7, 2020.

EQUIPMENT AND DATA COLLECTION

Sound Level Meter Type 2, Quest Technologies SoundPro DL-2 (Meter No. 35597)
Noise measurements collected at 1-minute intervals.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

GITC CHATHAM PARCEL NOISE STUDY
Terracon Project No. ES207015

LOCATION ID: M5

Latitude, Longitude: 32.225899, -81.212235
Location Description: Within the wooded southwestern property corner near the adjoining property stormwater retention pond outfall and access road.

FIELD NOTES

SESSION A

- Measurement Date(s): August 6, 2020 to August 7, 2020
- Session Start Time: 1000 on August 6, 2020
- Session End Time: 0921 on August 7, 2020

OBSERVATIONS

- Ambient noise included wildlife (insects, birds, frogs); occasional jet, airplane, and helicopters overhead; construction equipment occasionally passing on the access road; and water flowing into the surrounding wetlands from the adjoining stormwater retention pond outfall.
- There were thunderstorms on-site and in the surrounding area from approximately 1651 to 1847 on August 6, 2020 and overnight from 2101 on August 6, 2020 to 0338 on August 7, 2020.

EQUIPMENT AND DATA COLLECTION

Sound Level Meter Type 2, Quest Technologies SoundPro DL-2 (Meter No. 35598)
Noise measurements collected at 1-minute intervals.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

APPENDIX C

Sound Level Meter Session Reports

Location M1: Session Report #1

Meter No. 23423
3/17/2021

Information Panel

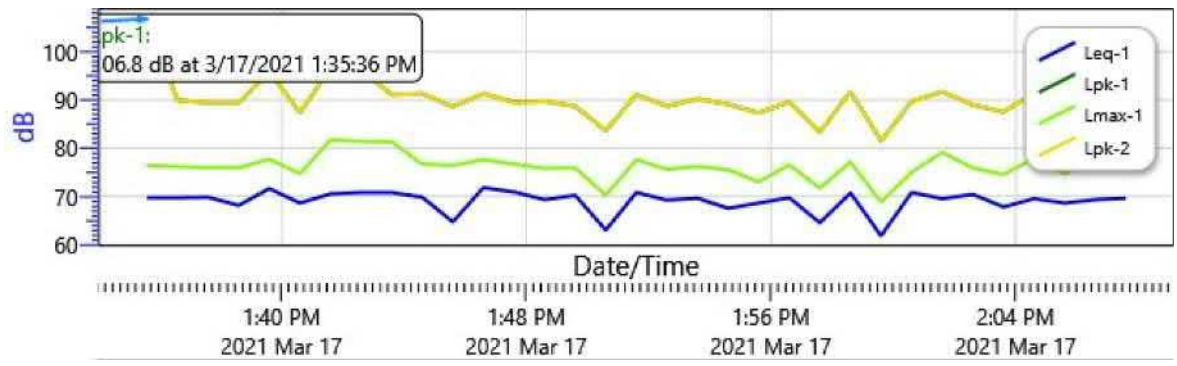
Name	5299_BLM060003_18032021_150104
Start Time	3/17/2021 1:37:34 PM
Stop Time	3/17/2021 2:07:19 PM
Device Name	BLV060003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
cc	1	69.5 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

5299_BLM060003_18032021_150104: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3/17/2021 1:35:36 PM	69.7	76.4	62.7	106.8
1:36:36 PM	69.7	76.2	59.8	89.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:37:36 PM	69.8	73.9	54.4	89.4
1:38:36 PM	68.1	75.9	50.8	89.4
1:39:36 PM	71.6	77.7	60.7	93.8
1:40:36 PM	68.6	74.7	60.1	87.4
1:41:36 PM	70.3	81.7	52.3	96.4
1:42:36 PM	70.8	81.4	62.9	96.2
1:43:36 PM	70.8	81.3	57.4	91.1
1:44:36 PM	69.8	76.7	60.3	91.3
1:45:36 PM	64.7	76.4	47	88.6
1:46:36 PM	71.8	77.6	49.6	91.3
1:47:36 PM	70.9	76.7	60.6	89.5
1:48:36 PM	69.3	73.8	61.7	89.7
1:49:36 PM	70.2	75.9	59.1	88.7
1:50:36 PM	63	70.2	49.1	83.6
1:51:36 PM	70.8	77.6	62.1	91.1
1:52:36 PM	69.2	75.6	58.8	88.7
1:53:36 PM	69.6	76.2	57.2	90.2
1:54:36 PM	67.5	75.5	54.5	89.1
1:55:36 PM	68.6	73	61.2	87.3
1:56:36 PM	69.7	76.3	58.6	89.6
1:57:36 PM	64.5	71.7	56.3	83.3
1:58:36 PM	70.7	77.1	57.8	91.7
1:59:36 PM	61.8	68.8	52.4	81.3
2:00:36 PM	70.8	75	63.7	89.7
2:01:36 PM	69.5	79.1	58	91.7
2:02:36 PM	70.4	73.9	64	89
2:03:36 PM	67.8	74.5	61.5	87.5
2:04:36 PM	69.5	77.9	59.2	91.4
2:05:36 PM	68.6	74.7	57.4	88.5
2:06:36 PM	69.3	78	63.5	92.1
2:07:36 PM	69.6	76.8	61	89.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Location M1: Session Report No. 2

Meter No. 23423
3/17/2021

Information Panel

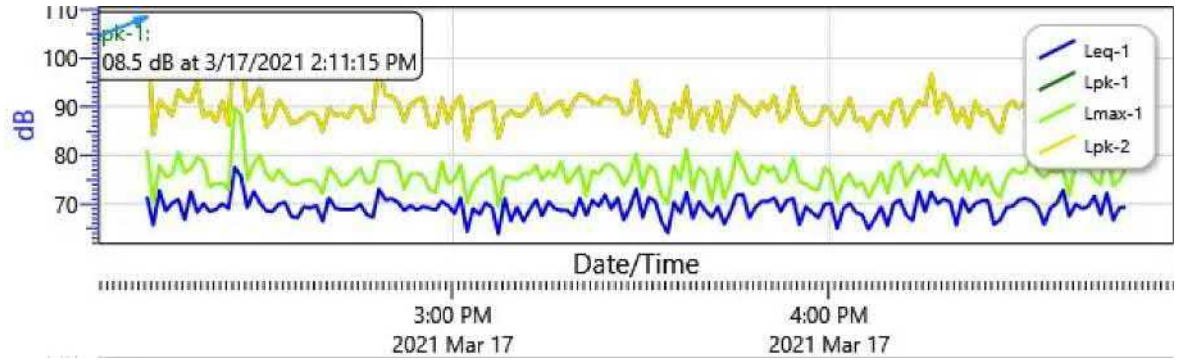
Name	S300_BLM060003_18032021_150105
Start Time	3/17/2021 2:10:15 PM
Stop Time	3/17/2021 7:17:32 PM
Device Name	BLV060003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lp	1	69.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

S300_BLM060003_18032021_150105: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3/17/2021 2:11:15 PM	71.5	81.1	62.6	108.5
3:12:15 PM	65.6	70.2	54	84.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:13:13 PM	72.7	77.9	60.7	91.3
2:14:13 PM	68.5	75.5	56.2	89.8
2:15:13 PM	70.1	76	56.1	88.2
2:16:13 PM	70.9	80.6	58.3	93.3
2:17:13 PM	66.7	76.3	60.7	91.4
2:18:13 PM	72.3	77.2	60.8	91.2
2:19:13 PM	68.7	79.6	57.4	95
2:20:13 PM	70	78.7	60.1	87.9
2:21:13 PM	68.4	73.3	56.1	88.9
2:22:13 PM	68.8	74.1	59.9	86.9
2:23:13 PM	70	74.3	64.7	91.1
2:24:13 PM	69	72.8	62.2	86.2
2:25:13 PM	77.3	89.7	59.1	105.2
2:26:13 PM	75.6	88.3	62	100
2:27:13 PM	69.7	74.9	62.7	89.3
2:28:13 PM	72.3	78.2	63.3	91.3
2:29:13 PM	70.2	80	59.9	94
2:30:13 PM	68.5	76.9	59.4	85.9
2:31:13 PM	68.4	74.8	57.6	87.4
2:32:13 PM	69.9	77.1	60.4	91.3
2:33:13 PM	70.3	75.9	59.5	89.5
2:34:13 PM	67.4	74	57.8	86.3
2:35:13 PM	67.1	74	53.4	86.9
2:36:13 PM	69.4	74.7	61.2	87.8
2:37:13 PM	69.1	75	57.1	88.9
2:38:13 PM	69.6	74.3	61.4	88.7
2:39:13 PM	66.4	72.1	56.3	84.9
2:40:13 PM	71.2	77.4	64.6	89.8
2:41:13 PM	69.1	75.9	59.9	88.7
2:42:13 PM	68.8	73.7	62.1	88.6
2:43:13 PM	68.8	74.2	62.2	87.7
2:44:13 PM	68.9	75.7	61.9	90.1
2:45:13 PM	69.9	77.4	59.9	89.9
2:46:13 PM	67.8	74.2	56.9	86.9
2:47:13 PM	67.2	74.3	56.8	87.3
2:48:13 PM	73	78.9	63.3	99
2:49:13 PM	70.8	78.7	56.8	97.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:50:13 PM	71	78.9	53.7	92.1
2:51:13 PM	70.3	77.9	55.2	90.8
2:52:13 PM	68.6	73.1	58.6	87
2:53:13 PM	69.6	76.1	59.3	90.4
2:54:13 PM	68.7	76.2	60.1	91.3
2:55:13 PM	69.4	75.9	61.2	91.9
2:56:13 PM	69.1	72.9	67.4	86.4
2:57:13 PM	68.7	72.3	60.2	85.8
2:58:13 PM	70.3	78.6	54.4	91.8
2:59:13 PM	69.6	74.2	57.9	86.7
3:00:13 PM	68	75	52.7	90.3
3:01:13 PM	71.2	78	52.9	92.1
3:02:13 PM	64.3	70.3	51.2	83.3
3:03:13 PM	69	73.8	56.9	89.2
3:04:13 PM	67.8	73.3	58.3	89.7
3:05:13 PM	70.2	76.3	58.2	90.6
3:06:13 PM	69.2	77.3	57.9	90.9
3:07:13 PM	63.8	69.3	50.9	83.3
3:08:13 PM	71.1	78.6	61.3	88
3:09:13 PM	66.3	73.3	58.6	89.1
3:10:13 PM	69.3	75	60.7	88.7
3:11:13 PM	66.4	76.3	56.4	88.4
3:12:13 PM	68.7	76.1	60.3	89.8
3:13:13 PM	70.8	78	60.9	92.3
3:14:13 PM	67.3	74.8	51.8	88.6
3:15:13 PM	70.4	76.7	64.6	89.1
3:16:13 PM	69	78.6	61.8	90.2
3:17:13 PM	68.6	78.7	59	91.1
3:18:13 PM	68.6	74.2	62.6	88
3:19:13 PM	67.4	75.9	59.4	91.2
3:20:13 PM	71.1	77.8	62.9	92.3
3:21:13 PM	67.6	71.6	62.5	92.1
3:22:13 PM	70.7	76.9	63	90.9
3:23:13 PM	69.3	76.1	63.3	90.6
3:24:13 PM	71.8	78.1	61.2	92.1
3:25:13 PM	68.9	78	56.3	91.4
3:26:13 PM	71.2	76.6	63.4	91.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:27:13 PM	66.6	73.7	53.2	88.4
3:28:13 PM	69.4	76.1	61.5	88.9
3:29:13 PM	73	80.2	60.2	93.4
3:30:13 PM	67.7	73.1	57.1	86.6
3:31:13 PM	71.3	77.9	58.2	91
3:32:13 PM	70.5	76.8	55.6	89.2
3:33:13 PM	66.4	71.8	56.9	84.6
3:34:13 PM	64	70	55.9	84
3:35:13 PM	70.3	77.8	63.7	90.6
3:36:13 PM	68.1	74.9	57	87.8
3:37:13 PM	72.3	81.2	66.4	94
3:38:13 PM	67	72.8	58.6	83.3
3:39:13 PM	70.4	77.4	61.5	89
3:40:13 PM	68.6	76.1	60.5	89.7
3:41:13 PM	67.7	70.7	60.6	83.7
3:42:13 PM	69.4	77.3	62.7	91.1
3:43:13 PM	65.8	71.1	56.5	84.9
3:44:13 PM	68.3	74.4	57.3	87.6
3:45:13 PM	71.8	80.7	63.5	92.3
3:46:13 PM	71.9	77.4	63.1	90.9
3:47:13 PM	67.1	74.4	57.3	89.8
3:48:13 PM	69.3	74.1	60.3	88.1
3:49:13 PM	70.5	78	61.3	90.9
3:50:13 PM	70.5	76.5	62.4	89.4
3:51:13 PM	71.2	77.7	66.9	92.2
3:52:13 PM	68.4	74.3	61.8	87.1
3:53:13 PM	70.7	75.4	65.7	88.4
3:54:13 PM	71.1	79.4	62.6	94
3:55:13 PM	65.7	74.5	57.5	89.1
3:56:13 PM	69.4	74.1	61.7	86.8
3:57:13 PM	68.2	73.1	60.1	86.1
3:58:13 PM	67.1	72.8	58.4	86.8
3:59:13 PM	69.9	77.5	61.9	90.1
4:00:13 PM	70.1	76.3	58.2	88.9
4:01:13 PM	64.9	70.6	52.4	86.4
4:02:13 PM	69	74.7	55.2	88.8
4:03:13 PM	70.1	76.7	63.1	91.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:04:13 PM	68.2	73.4	62.4	87.1
4:05:13 PM	67.7	74.4	58.8	87.7
4:06:13 PM	64.7	71.3	56.2	85.1
4:07:13 PM	66.9	73.8	57.7	88.3
4:08:13 PM	69.3	76.5	63.5	89
4:09:13 PM	65.5	72.2	58.4	86.3
4:10:13 PM	70	77.3	63.6	90.7
4:11:13 PM	70.8	78.6	58.1	91.5
4:12:13 PM	67.7	73.5	59.5	86.1
4:13:13 PM	66.5	75.9	55.1	88.7
4:14:13 PM	72.5	78	64.7	91.1
4:15:13 PM	68.4	73.7	61	90.3
4:16:13 PM	72.4	77.1	63.6	96.6
4:17:13 PM	70	75.6	62.5	88.7
4:18:13 PM	71	80.1	61.8	97.8
4:19:13 PM	70.4	76.5	61.4	91.1
4:20:13 PM	65.6	73.7	54.5	86.8
4:21:13 PM	71	76.9	63.1	89.6
4:22:13 PM	68.3	72.8	59.7	85.7
4:23:13 PM	70	77.5	61.4	91
4:24:13 PM	70.6	73.7	65.9	88.3
4:25:13 PM	70.7	76.2	64.4	89.1
4:26:13 PM	65.7	72.7	56	86.3
4:27:13 PM	66.7	71.3	60.3	84.7
4:28:13 PM	69.2	75.5	60.2	90.1
4:29:13 PM	69.5	77.7	62.7	91.1
4:30:13 PM	70.8	76.3	61	89.7
4:31:13 PM	71.1	76.6	62.9	91
4:32:13 PM	70.6	80.7	61.4	93.1
4:33:13 PM	69.2	76.5	63.3	91.9
4:34:13 PM	65.7	73.3	50.4	87.2
4:35:13 PM	69.1	76.9	55.7	89.8
4:36:13 PM	70.1	76.5	59.1	90.4
4:37:13 PM	72.8	77.1	65.5	90.8
4:38:13 PM	67.4	71.6	60.3	86.5
4:39:13 PM	69.9	78.7	63.2	94
4:40:13 PM	69	77.1	63.7	90.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:41:15 PM	69.4	77.3	61.8	89.4
4:42:15 PM	71.6	78.1	62.6	89.7
4:43:15 PM	67.8	73.9	60.7	87.3
4:44:15 PM	77.7	87.4	67.6	97.9
4:45:15 PM	66.6	73.6	60.2	85.9
4:46:15 PM	69.2	74.9	63.3	88.7
4:47:15 PM	69.3	77.7	62.9	90.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Location M1: Session Report No. 3

Meter No. 23423
3/17-18/2021

Information Panel

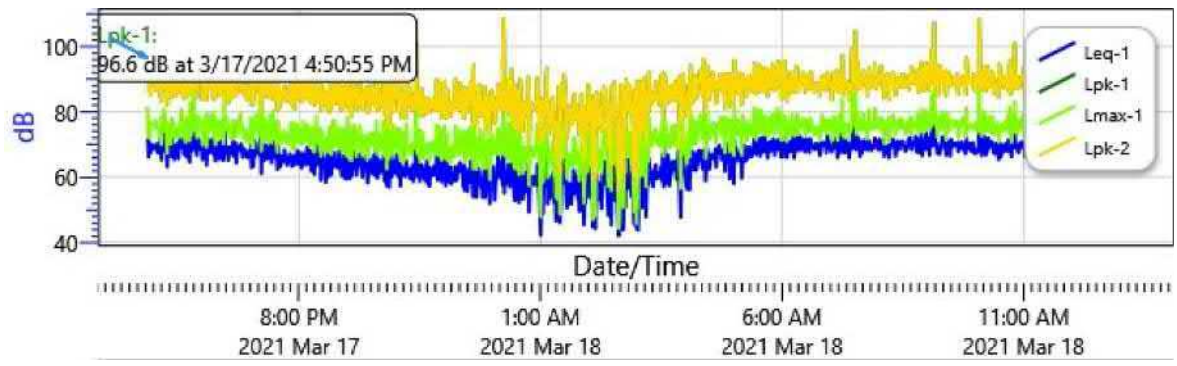
Name	S301_BLM060003_18032021_150106
Start Time	3/17/2021 4:49:55 PM
Stop Time	3/18/2021 1:07:19 PM
Device Name	BLV060003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
cc	1	67.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

S301_BLM060003_18032021_150106: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3/17/2021 4:50:55 PM	70.9	81.6	53.8	96.6
4:51:55 PM	71.4	79.3	63.6	108.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:52:53 PM	66.1	72.1	57.4	86.6
4:53:53 PM	70.7	74.8	64.3	89.3
4:54:53 PM	67.4	71.9	62.2	85.2
4:55:53 PM	68	76.1	57.4	88.8
4:56:53 PM	68.3	76.9	62.7	89.6
4:57:53 PM	69.8	76.3	61.9	89.2
4:58:53 PM	69	76.3	61.9	89.4
4:59:53 PM	68.6	76.2	61.8	89.9
5:00:53 PM	69.6	77.4	61.3	90.2
5:01:53 PM	68.8	74.8	63.4	86.7
5:02:53 PM	70.1	75.2	64.6	89.9
5:03:53 PM	67.5	74.6	60.2	88.2
5:04:53 PM	70	75.1	66.1	88.6
5:05:53 PM	69.3	74.7	63.4	88.4
5:06:53 PM	67.3	72.3	53.6	84.7
5:07:53 PM	72.2	78.3	64.3	91.3
5:08:53 PM	65.2	69.9	55.3	83.3
5:09:53 PM	71.3	77.3	60.9	89.3
5:10:53 PM	69.7	74	60.4	88.1
5:11:53 PM	68.8	80.8	53	92.3
5:12:53 PM	73.9	79.6	68.7	97.8
5:13:53 PM	67.6	76.1	54.3	90.3
5:14:53 PM	71.3	73	64.6	88.3
5:15:53 PM	63.1	67.2	58.4	82.2
5:16:53 PM	68.9	75.7	58	90.2
5:17:53 PM	69.3	76.4	63.8	100.7
5:18:53 PM	69.4	75.3	62.9	88
5:19:53 PM	69.4	73.7	59.8	88.3
5:20:53 PM	66.3	70.1	60.3	84.7
5:21:53 PM	72	78	63.6	96.3
5:22:53 PM	67.8	73.8	59.4	89.2
5:23:53 PM	69.2	76.3	54.7	89.9
5:24:53 PM	65.3	72.3	55.6	86.6
5:25:53 PM	69.8	74.8	61.3	87.3
5:26:53 PM	67.3	71.9	59.1	85.1
5:27:53 PM	68.1	73.2	59.4	89.1
5:28:53 PM	70.7	74.3	67.1	87.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:29:53 PM	65.5	72.4	58.1	85.8
3:30:53 PM	71.1	75.1	60.3	88.7
3:31:53 PM	68.8	72.8	63.2	86
3:32:53 PM	70.4	80.3	56	93.8
3:33:53 PM	71.7	80.7	61.8	96.8
3:34:53 PM	70.1	75	61.5	87.8
3:35:53 PM	70.7	76.6	61.6	91.1
3:36:53 PM	66.9	71.7	62.9	84.1
3:37:53 PM	70.7	77.1	60.6	91
3:38:53 PM	66.6	70.6	61.3	84.7
3:39:53 PM	71.5	78.3	63.9	91.7
3:40:53 PM	66	73	58.7	88
3:41:53 PM	69.8	74.8	62.1	89.3
3:42:53 PM	69.4	75.9	60.4	89.7
3:43:53 PM	64.5	71.1	51.1	85.3
3:44:53 PM	73	82.7	62	100.2
3:45:53 PM	68	72.8	59.6	86.4
3:46:53 PM	71	75.3	60.3	88
3:47:53 PM	71.5	76.9	66.5	90.3
3:48:53 PM	75.7	88.9	61.6	108.3
3:49:53 PM	70	74.4	64.9	88.3
3:50:53 PM	68	74.9	60.7	87.4
3:51:53 PM	70.8	75.2	64.9	88.4
3:52:53 PM	66.6	72.1	60	84.4
3:53:53 PM	70.2	78.7	60.9	92.5
3:54:53 PM	71.6	77.6	58	91.7
3:55:53 PM	68.5	78.3	60.8	91.8
3:56:53 PM	70.8	77.3	63.2	90.9
3:57:53 PM	68.8	76.9	59.3	90.7
3:58:53 PM	69.8	75.6	58.8	88.1
3:59:53 PM	65.3	69.8	58.4	83.6
6:00:53 PM	69.3	75.1	62.3	87.9
6:01:53 PM	67	72.5	55.2	86
6:02:53 PM	67.6	74.1	59.6	87.4
6:03:53 PM	72.2	79	65.1	100.8
6:04:53 PM	63.6	69.2	52.1	83.8
6:05:53 PM	71.3	79.4	63.5	93.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:06:53 PM	68.4	76	57.6	90.6
6:07:53 PM	69.9	79	63.4	91.5
6:08:53 PM	67.4	74.5	60.7	87.5
6:09:53 PM	69.4	77.8	59.7	89.9
6:10:53 PM	71.6	76.1	66.1	88.9
6:11:53 PM	69.3	75.7	63.9	89.6
6:12:53 PM	69.8	79.9	60.8	91.4
6:13:53 PM	66.8	71.7	62.4	83.8
6:14:53 PM	70.5	78.3	61.9	92.3
6:15:53 PM	64.9	69.9	56.8	84.7
6:16:53 PM	68.8	74.9	62.3	87.9
6:17:53 PM	68.9	74.7	61.3	87.7
6:18:53 PM	67.3	72.4	57.6	86.8
6:19:53 PM	70.4	77.2	62.6	91
6:20:53 PM	65.4	72.3	56.9	85.3
6:21:53 PM	69.7	75.6	64.3	87.9
6:22:53 PM	71	77.1	63.4	91.6
6:23:53 PM	67.9	75.9	59.7	89.7
6:24:53 PM	68.3	73.6	62	86.2
6:25:53 PM	65.1	70.2	54	83.8
6:26:53 PM	75.4	88	64.5	103.1
6:27:53 PM	68.7	74.6	56.7	87.5
6:28:53 PM	67.6	74.8	54.3	88.4
6:29:53 PM	68.3	78.4	61.7	93
6:30:53 PM	69	75.2	61.4	89.1
6:31:53 PM	65.1	74.3	55.3	87.8
6:32:53 PM	69.2	72.7	63.8	85.9
6:33:53 PM	69	75.1	62.2	92.2
6:34:53 PM	67	74.3	57.5	86.8
6:35:53 PM	68.3	71.5	63.2	84.3
6:36:53 PM	68.2	75.6	58.2	89.9
6:37:53 PM	71	77.2	61.3	91.4
6:38:53 PM	66.3	72.1	54.7	84.9
6:39:53 PM	67.6	73.7	54.3	87.7
6:40:53 PM	70.3	77.3	60.3	90.7
6:41:53 PM	64.3	72.3	52.2	85.2
6:42:53 PM	68.6	73.3	58.6	86.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:43:53 PM	69.4	73.9	63	88.9
6:44:53 PM	68.4	73.8	57.2	88.7
6:45:53 PM	68.2	75.1	62.3	89
6:46:53 PM	69.3	79.6	57	91.8
6:47:53 PM	70.1	76.7	53.8	90.3
6:48:53 PM	68.1	74.3	56.2	86.3
6:49:53 PM	66	73.1	50.6	86.7
6:50:53 PM	67.9	71.8	63.4	85.4
6:51:53 PM	68.7	73.9	62.8	87
6:52:53 PM	68.1	74.7	59.1	88.7
6:53:53 PM	66.8	73.8	57.7	87.7
6:54:53 PM	66.3	70.4	54.8	83.9
6:55:53 PM	65.8	73	59	85.9
6:56:53 PM	67.7	71.7	59.8	84.3
6:57:53 PM	66.9	71.8	59.7	84.9
6:58:53 PM	66.6	73.7	53.7	86.1
6:59:53 PM	69.9	78	61.1	92.3
7:00:53 PM	67.8	69.1	51.7	87.1
7:01:53 PM	68.9	73	57.3	89.6
7:02:53 PM	63.2	69	53	82.3
7:03:53 PM	71.4	76.3	59.7	89.9
7:04:53 PM	66.3	73.9	56.6	88.4
7:05:53 PM	70.3	79.1	59.8	94.3
7:06:53 PM	67.4	76.6	54.1	91.1
7:07:53 PM	68.1	77	59.3	90.7
7:08:53 PM	67.6	73.9	56.4	88.3
7:09:53 PM	67.8	72.6	58.1	86
7:10:53 PM	66.6	73.8	57.3	90.3
7:11:53 PM	74.8	88.4	67.3	101.3
7:12:53 PM	61	68	49.3	81.3
7:13:53 PM	71.6	81.1	61.2	98.3
7:14:53 PM	68.2	75	57.6	88.9
7:15:53 PM	66.3	72.1	55.3	86.9
7:16:53 PM	65.1	71	54.9	83.2
7:17:53 PM	68.3	77.3	59.4	90.6
7:18:53 PM	69.7	77.7	55.7	91.3
7:19:53 PM	68.7	73	61.9	87

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:20:53 PM	65.6	74.3	53.9	87.7
7:21:53 PM	66	70.7	57.1	84.3
7:22:53 PM	68.1	76.1	58.9	89
7:23:53 PM	65.8	77.4	56.7	87.3
7:24:53 PM	71.8	79	64.3	92.6
7:25:53 PM	64.3	70.4	56.2	84
7:26:53 PM	69.4	75.6	63.1	89.5
7:27:53 PM	70.8	80.3	55.7	100.3
7:28:53 PM	66.2	72.3	53.3	85.3
7:29:53 PM	69	76.2	59.8	90.1
7:30:53 PM	65.9	72.1	53.5	83.7
7:31:53 PM	68.3	74.9	58.7	86.2
7:32:53 PM	62.3	67.6	53.3	80.5
7:33:53 PM	69.5	77.1	57.3	88.6
7:34:53 PM	67.8	77.7	48.6	81.3
7:35:53 PM	65.8	73.1	50.8	85.6
7:36:53 PM	63.4	71.4	44.4	83.6
7:37:53 PM	66.3	70.3	58.1	83.1
7:38:53 PM	66.2	71.8	52.8	84.8
7:39:53 PM	66.7	71.4	56.3	84.3
7:40:53 PM	64.7	73.4	50.7	87.1
7:41:53 PM	68.3	74.2	57.7	87.9
7:42:53 PM	65.6	73.8	52.2	86.3
7:43:53 PM	65.8	72.6	55.5	84.7
7:44:53 PM	63.6	70.2	48.2	83.5
7:45:53 PM	65.3	70.7	54.1	83.3
7:46:53 PM	66.1	71.7	53.4	85.2
7:47:53 PM	65.8	70.5	53.6	84.3
7:48:53 PM	67.1	73.3	53.8	86.7
7:49:53 PM	66.1	76.8	52.2	89.6
7:50:53 PM	63.3	68.9	47.6	82.4
7:51:53 PM	66.1	70.7	57	84.5
7:52:53 PM	63.5	69.3	51.9	83
7:53:53 PM	63.6	68.1	56	81
7:54:53 PM	66.7	76.5	52.6	89.6
7:55:53 PM	66.3	71.6	55.8	84.4
7:56:53 PM	65.9	74.9	48.3	89

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:57:53 PM	68.1	76.1	47.8	90
7:58:53 PM	63.9	70.5	48.4	84.1
7:59:53 PM	67.3	72.7	55.9	83.4
8:00:53 PM	64.6	74.3	53.8	88.4
8:01:53 PM	67.3	73	54.6	86.7
8:02:53 PM	62.7	72.9	48.9	83
8:03:53 PM	65	70	50.6	83.7
8:04:53 PM	67.1	77.2	47.3	89.4
8:05:53 PM	65.8	72	53.2	83.4
8:06:53 PM	65.8	74.7	54.7	86.8
8:07:53 PM	63.7	70.9	51.5	84.5
8:08:53 PM	66.4	73.1	48.6	90.2
8:09:53 PM	69.1	76	51.1	89.8
8:10:53 PM	67.8	75.4	56.5	88.8
8:11:53 PM	63.9	71.7	50.9	83.8
8:12:53 PM	64.4	69.5	52.9	82.9
8:13:53 PM	68.1	73.9	62.5	86.1
8:14:53 PM	61.8	69.9	49.5	83.7
8:15:53 PM	66.9	75	52.8	90.1
8:16:53 PM	63.9	71.5	50.6	84.6
8:17:53 PM	66.1	73.1	57.7	86.9
8:18:53 PM	60.8	67.7	52.6	82.2
8:19:53 PM	64.7	71.5	54.7	83.7
8:20:53 PM	69.8	78.6	58.3	92.2
8:21:53 PM	66	71.9	56.8	84.9
8:22:53 PM	63.8	70.6	57.5	83.7
8:23:53 PM	65	74.2	54.4	88.7
8:24:53 PM	64.6	72.9	52.8	83.8
8:25:53 PM	67.3	75.1	55.8	87.4
8:26:53 PM	58.9	66.4	47.9	80.5
8:27:53 PM	67.6	74.3	53.6	88
8:28:53 PM	62.8	69.2	50.1	83.2
8:29:53 PM	66.2	71.1	51	85.5
8:30:53 PM	65.4	69.7	53	82.1
8:31:53 PM	63.7	68.4	51.4	82.4
8:32:53 PM	58.3	67.8	47.2	82
8:33:53 PM	65.4	72	53.3	86

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:34:53 PM	63.5	71.6	48	84.1
8:35:53 PM	67.1	71.3	56.3	85.8
8:36:53 PM	60.1	67.6	48.2	80
8:37:53 PM	67	73.4	54.1	90.8
8:38:53 PM	64.8	68.6	54.6	82.2
8:39:53 PM	60.7	66.9	48.3	81.2
8:40:53 PM	63.9	70.8	49.9	86
8:41:53 PM	66.3	77.3	54.2	90.1
8:42:53 PM	66.4	74.3	53.2	87.7
8:43:53 PM	67.4	77.3	53.7	90.6
8:44:53 PM	63.1	69.1	47.3	82.6
8:45:53 PM	64.7	69.6	59.3	83.9
8:46:53 PM	64.8	69.4	57.6	83.8
8:47:53 PM	62.8	69.3	48.1	82.7
8:48:53 PM	64.6	74.3	48.6	88.7
8:49:53 PM	68.1	73.1	60.9	88.2
8:50:53 PM	64.7	71.3	47.9	84.1
8:51:53 PM	67.2	68.3	50.4	80.5
8:52:53 PM	60.3	67.6	47.3	80.6
8:53:53 PM	64.8	70.9	59	83.3
8:54:53 PM	64.4	74.7	46.9	87.6
8:55:53 PM	66.3	72.1	56.4	85.5
8:56:53 PM	59.6	67.3	43.3	81.4
8:57:53 PM	63.3	73.3	52.1	87.1
8:58:53 PM	59.3	66.4	46.7	82.5
8:59:53 PM	68.6	78.7	50.7	91.1
9:00:53 PM	63.6	74.7	50.9	88
9:01:53 PM	64.4	69.7	50.9	83.2
9:02:53 PM	59.5	65.3	49.5	80.7
9:03:53 PM	64.3	69.7	53	84.1
9:04:53 PM	60.2	65.1	49.8	78.6
9:05:53 PM	65.8	75.3	57.1	87.6
9:06:53 PM	63.2	74.4	51.3	89.6
9:07:53 PM	62.6	71	49.3	84.6
9:08:53 PM	68	76	50.6	89.3
9:09:53 PM	63.9	70	52.3	84.8
9:10:53 PM	60.3	66.3	43.3	80.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:11:53 PM	63.3	73.4	49.1	84.9
9:12:53 PM	64	73.2	54.8	82
9:13:53 PM	67	74	58.6	87.7
9:14:53 PM	66.1	73.6	51.3	90.3
9:15:53 PM	63.8	69.8	56.2	83.1
9:16:53 PM	63.4	71.7	44.9	84.3
9:17:53 PM	62.1	66.8	51.6	81
9:18:53 PM	59.8	66.4	48.6	81.3
9:19:53 PM	66.3	72.6	58.1	83.8
9:20:53 PM	63.3	72.8	46	85.6
9:21:53 PM	63.2	70	48.9	83.3
9:22:53 PM	64.3	72.3	50.9	87.3
9:23:53 PM	63.7	70.7	53.1	83.2
9:24:53 PM	58.1	63.3	46.1	79.7
9:25:53 PM	60.8	66.3	51.1	80
9:26:53 PM	62.3	68.7	49.9	81.3
9:27:53 PM	65.4	73.6	56.7	87.3
9:28:53 PM	64.6	71.8	56	88.1
9:29:53 PM	63	73.1	56	86.6
9:30:53 PM	61.2	70.3	46.3	84.2
9:31:53 PM	60.9	70	47.1	82.8
9:32:53 PM	66.7	73.2	52.3	87.2
9:33:53 PM	60.3	68.9	51.3	82.6
9:34:53 PM	61.2	68.3	48.9	81.8
9:35:53 PM	69.2	77.2	56.8	92.3
9:36:53 PM	59.6	66.9	46.3	87.3
9:37:53 PM	61.3	67.6	52	80.3
9:38:53 PM	65.1	73.3	50.4	86.7
9:39:53 PM	63.4	69.3	51.8	81
9:40:53 PM	61.4	69.7	43	84.2
9:41:53 PM	64.3	71.9	50.3	84.3
9:42:53 PM	61.4	68.1	47.8	87.3
9:43:53 PM	62.3	68.3	50	81.3
9:44:53 PM	66.8	77.2	48.2	91.3
9:45:53 PM	58.7	66.4	44.8	79.2
9:46:53 PM	64.3	70.7	49.2	88
9:47:53 PM	66.4	72.9	57.1	86

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:48:55 PM	57.2	62.3	47.9	76.8
9:49:55 PM	67.4	76.1	53	89
9:50:55 PM	63.4	71	44.9	84.7
9:51:55 PM	56.8	63.3	44.4	73.1
9:52:55 PM	64.8	73.9	51.2	88.2
9:53:55 PM	67.6	73.9	52.7	88.3
9:54:55 PM	60	66.9	50.9	79.7
9:55:55 PM	61.3	69	48.8	82.8
9:56:55 PM	64.3	73.9	53	88.9
9:57:55 PM	64.9	73.8	50.1	87.7
9:58:55 PM	61.9	69.2	49.3	85
9:59:55 PM	61.2	72	45.3	84.2
10:00:55 PM	66.9	74.7	46.1	90
10:01:55 PM	62.6	73.2	49.4	87.5
10:02:55 PM	60.1	67.3	47.7	80.7
10:03:55 PM	62.3	69.1	45.3	83.6
10:04:55 PM	64.3	74.8	44.6	88.3
10:05:55 PM	57.7	63.7	45.4	80
10:06:55 PM	63.4	72.4	49.2	85.4
10:07:55 PM	60.5	64.4	52.8	78
10:08:55 PM	67.8	73.6	50.8	85.6
10:09:55 PM	62.5	72	46.2	85.1
10:10:55 PM	62.2	70.7	46.9	83.7
10:11:55 PM	60.1	65.4	46.8	77.9
10:12:55 PM	65	76.3	46.4	90.8
10:13:55 PM	67.8	70.3	46.4	90.3
10:14:55 PM	62.7	68.4	53.6	82.2
10:15:55 PM	61.8	68.7	50.4	87.6
10:16:55 PM	60.5	68.9	50.6	83.7
10:17:55 PM	59.4	67.1	42.5	82
10:18:55 PM	62.5	69.7	42.9	82.2
10:19:55 PM	59.9	66.6	46.5	80.4
10:20:55 PM	63.5	70.3	46.1	84.5
10:21:55 PM	58.6	68.5	44.3	81.8
10:22:55 PM	61.5	70.3	49.2	84.9
10:23:55 PM	65.4	73.2	54.3	86
10:24:55 PM	74.8	87.1	57.9	101.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:25:35 PM	61.9	71.4	47	84.1
10:26:35 PM	60.1	67.2	44.3	80.6
10:27:35 PM	61	66.9	47.8	80.8
10:28:35 PM	64.9	74.1	50.7	87.1
10:29:35 PM	58.6	64.6	47.9	78.6
10:30:35 PM	63.6	74.2	53	86.2
10:31:35 PM	63.8	72	46.1	84.7
10:32:35 PM	63.2	73.8	44.4	87
10:33:35 PM	61.1	68.1	45.8	82
10:34:35 PM	59.6	65.5	45.1	78.9
10:35:35 PM	62.6	69.9	45.4	83.8
10:36:35 PM	58.7	67.1	44.3	79.8
10:37:35 PM	58.9	67.4	46.1	80
10:38:35 PM	64.9	70.2	52.5	84.3
10:39:35 PM	57.7	69.7	44.3	83
10:40:35 PM	63	70.4	51.2	83.4
10:41:35 PM	57.1	64.9	48.6	79.7
10:42:35 PM	62.2	69.9	45.3	83.4
10:43:35 PM	60.6	69.8	44.9	82.9
10:44:35 PM	60.4	69.3	44.6	81.8
10:45:35 PM	62.7	69.5	51.7	81.4
10:46:35 PM	63.2	70.8	50.4	84
10:47:35 PM	60.6	67.1	49.2	80.8
10:48:35 PM	62.4	70.3	48	82.6
10:49:35 PM	62.4	70	46	83.8
10:50:35 PM	66.8	76.1	50.1	90
10:51:35 PM	59	66.7	47.3	80.3
10:52:35 PM	61.8	71.7	50.7	83.4
10:53:35 PM	65.2	75.3	45.4	88.8
10:54:35 PM	66.7	73.5	47.8	85.6
10:55:35 PM	60.6	66	45.3	80.9
10:56:35 PM	58.5	65.2	45.4	78
10:57:35 PM	62.4	72.3	50	84.9
10:58:35 PM	65.9	74.7	53.8	88.3
10:59:35 PM	61	69.1	47.6	81
11:00:35 PM	65.3	75.6	47.2	89.1
11:01:35 PM	57.3	63.3	45.3	79.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:02:35 PM	59.9	63.3	45.6	78
11:03:35 PM	64.4	73.2	48.9	86.8
11:04:35 PM	60.6	65.1	48.6	79.1
11:05:35 PM	59.7	66.4	48.9	80.8
11:06:35 PM	58.4	64.1	50	78.6
11:07:35 PM	63	68.8	51.3	83.1
11:08:35 PM	57.9	66.3	46.1	80.1
11:09:35 PM	59.3	66	43.3	80
11:10:35 PM	60.9	67.3	44.1	81
11:11:35 PM	58.7	69.7	44.8	83.6
11:12:35 PM	60.2	66.2	45.9	81.3
11:13:35 PM	63.1	73.6	44	90.1
11:14:35 PM	61.6	68.1	46.8	82.6
11:15:35 PM	58.9	68.3	45.6	81.6
11:16:35 PM	63.7	71.7	46.3	84.3
11:17:35 PM	61.4	70.3	49.4	84.4
11:18:35 PM	62	66.6	50.3	80.4
11:19:35 PM	64.4	74.4	51.7	88.8
11:20:35 PM	61.7	68.1	49.8	84.1
11:21:35 PM	62	73.3	50.4	86.8
11:22:35 PM	62.2	70.7	44.8	84.3
11:23:35 PM	56.9	68.3	46.6	78.2
11:24:35 PM	63.7	74	46	87.4
11:25:35 PM	58.7	64.3	45.3	78.3
11:26:35 PM	62.3	73.7	46.6	86.3
11:27:35 PM	58.3	63.8	48.1	79.7
11:28:35 PM	58.6	66	41.2	79.8
11:29:35 PM	61.6	74.3	41.1	86.9
11:30:35 PM	61.7	71.3	48.2	85.1
11:31:35 PM	58.3	66.7	47.3	82.3
11:32:35 PM	64.9	73.3	50.3	89
11:33:35 PM	60.3	71.1	47.1	83.4
11:34:35 PM	63.2	74.3	43.9	87.7
11:35:35 PM	53.9	62.3	44.3	76.9
11:36:35 PM	72	83.4	51.1	94.6
11:37:35 PM	58.6	67.3	42.3	81.1
11:38:35 PM	60.8	67.4	51.8	80.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:38:35 PM	53.8	62.4	46.6	73.8
11:40:35 PM	60.2	68.7	46	83.1
11:41:35 PM	62.6	72	47.3	85.1
11:42:35 PM	67.7	69.6	53.7	83.7
11:43:35 PM	62.2	74.9	42.6	88.1
11:44:35 PM	58.1	63.8	44.2	78.7
11:45:35 PM	56.8	66.8	42.8	81.7
11:46:35 PM	59.2	67.9	44.6	80.9
11:47:35 PM	53.7	63.4	42.7	79.3
11:48:35 PM	58.9	65.3	44	80.7
11:49:35 PM	62	73.8	44.9	87.7
11:50:35 PM	53.7	62.6	40.4	73
11:51:35 PM	56.6	62.7	44.6	75.6
11:52:35 PM	62.9	70.6	45.9	82.8
11:53:35 PM	67	71.4	43.7	84.3
11:54:35 PM	62	67.6	48.1	80.7
11:55:35 PM	57.9	69.2	42.6	82.6
11:56:35 PM	51.8	59.9	42.9	73.9
11:57:35 PM	60.8	70.9	42.7	83.7
11:58:35 PM	62	73.6	46.3	86.4
11:59:35 PM	58.3	67	46.6	80.9
3/18/2021 12:00:35 AM	63.2	71.9	43.3	84.6
12:01:35 AM	58.7	67.3	43	82
12:02:35 AM	52.9	67.1	41.9	76.3
12:03:35 AM	58.3	67.1	44.3	79.9
12:04:35 AM	60.4	68	48	81.6
12:05:35 AM	60.1	67.1	48.8	81.6
12:06:35 AM	66.2	74.9	53.6	88
12:07:35 AM	64	74.6	53.7	88.3
12:08:35 AM	61.8	67.8	51.2	82.3
12:09:35 AM	59.6	67.3	45.8	81.1
12:10:35 AM	61.6	67.6	49.9	81.3
12:11:35 AM	64.6	74.1	48.2	87
12:12:35 AM	57.3	67.1	43	80.9
12:13:35 AM	78.7	92.3	50.2	108.3
12:14:35 AM	55	66.6	43.7	82.3
12:15:35 AM	61.3	70.4	43.9	83.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:16:35 AM	60.4	67.6	47.7	82.2
12:17:35 AM	58.5	67.1	43.5	80.2
12:18:35 AM	57.9	66.2	44	80.8
12:19:35 AM	63.8	76.3	43.8	89.9
12:20:35 AM	61	66.8	53.2	80.2
12:21:35 AM	56.9	64.7	43.9	78.6
12:22:35 AM	58.4	65.1	45	78.9
12:23:35 AM	69.3	80.2	45.4	93.3
12:24:35 AM	59.1	71.9	43.1	81.1
12:25:35 AM	60.7	71.8	45.5	84.7
12:26:35 AM	54.4	62.7	45.5	73.8
12:27:35 AM	52.7	63	42.9	76.2
12:28:35 AM	64.7	74.3	45.2	88.3
12:29:35 AM	54.2	62.4	42.7	73.9
12:30:35 AM	60.7	72.4	43.6	86.7
12:31:35 AM	57.9	68.1	44.9	82.2
12:32:35 AM	52.1	60.7	43.6	73.2
12:33:35 AM	60.5	71.7	43.3	85.5
12:34:35 AM	63.8	76.6	44.5	90.1
12:35:35 AM	56.6	66.1	42.4	80
12:36:35 AM	55.1	66.1	41.5	79
12:37:35 AM	53.1	61	43	74.1
12:38:35 AM	57.6	68.9	42.8	79.8
12:39:35 AM	61.4	69.1	51.3	82.8
12:40:35 AM	55.3	65.8	42.8	80.6
12:41:35 AM	58.7	68.7	44.9	87.3
12:42:35 AM	59.9	67.7	46.9	82.2
12:43:35 AM	55.9	63.3	44.7	78.3
12:44:35 AM	66.5	78.9	49.1	90.7
12:45:35 AM	49.2	57.4	43.4	70.9
12:46:35 AM	58.6	67.3	44.4	83
12:47:35 AM	58.9	68	44.4	81.5
12:48:35 AM	58.9	69.3	45.1	82.1
12:49:35 AM	60.2	68.4	44.3	81.6
12:50:35 AM	58.3	67	45.3	80.7
12:51:35 AM	57.5	66.2	44.3	80.8
12:52:35 AM	58.3	67.6	47.1	81.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:53:55 AM	59.9	67.7	42.9	82.1
12:54:55 AM	57.6	70.2	41.6	83.9
12:55:55 AM	63.9	76.3	43.6	90.3
12:56:55 AM	60.4	71.8	41.4	83
12:57:55 AM	58.7	67.3	42.9	84.3
12:58:55 AM	55.4	63	41.3	76.2
12:59:55 AM	49.1	57.8	40.1	70.7
1:00:55 AM	60.3	71.1	45.2	83.4
1:01:55 AM	57.7	68.6	43.4	83.3
1:02:55 AM	48.6	58.4	40.7	72.4
1:03:55 AM	57.9	67.4	44.5	81.9
1:04:55 AM	62	71.2	43.6	84.2
1:05:55 AM	57	66.7	44.2	79.5
1:06:55 AM	61.8	73.8	44.4	89.4
1:07:55 AM	68	77.3	50.1	93.3
1:08:55 AM	51.7	59.7	44.6	72.7
1:09:55 AM	58.3	65.8	45.7	78.4
1:10:55 AM	53.4	63.1	41	79.9
1:11:55 AM	53.8	64.3	42.1	76.4
1:12:55 AM	59.9	68.3	41.3	82.3
1:13:55 AM	58.4	69.9	45.7	83
1:14:55 AM	61.1	70.8	43.5	84.3
1:15:55 AM	57.2	64.9	42.2	78.9
1:16:55 AM	52.2	60.3	44.2	74
1:17:55 AM	57.6	64.4	44.8	77.1
1:18:55 AM	46.4	53.7	42.6	63.9
1:19:55 AM	52.6	59.1	43.8	73.7
1:20:55 AM	47.5	53	43	66.2
1:21:55 AM	50.4	58	43	71.9
1:22:55 AM	62	74.3	43.3	87.7
1:23:55 AM	45.9	48.3	43.3	60.9
1:24:55 AM	50.6	59.9	42.9	73.9
1:25:55 AM	60	72.1	43.2	84.8
1:26:55 AM	63.5	73.7	46	88.9
1:27:55 AM	58.2	66.3	43.8	81.7
1:28:55 AM	65.2	75.5	44.8	91.3
1:29:55 AM	67	74.6	44.1	88.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:30:53 AM	61.7	71.4	44.8	83.9
1:31:53 AM	54.7	63.9	42.6	77.3
1:32:53 AM	50.5	59.6	41.5	72.2
1:33:53 AM	57.8	59.6	43.4	74.7
1:34:53 AM	56.6	66.8	42.8	81.7
1:35:53 AM	58	66.8	46.1	79.7
1:36:53 AM	53.5	64.2	43.2	79.9
1:37:53 AM	51.6	63.5	42.5	77.5
1:38:53 AM	56.7	66.2	43.3	80.3
1:39:53 AM	55	63.3	41.1	76.3
1:40:53 AM	62.1	71.1	48	84.7
1:41:53 AM	60.9	72.3	48	83.3
1:42:53 AM	54.9	66	43.5	79.8
1:43:53 AM	55.7	64.1	43.6	77.8
1:44:53 AM	60.3	68.7	43.7	87.1
1:45:53 AM	53.4	63.5	43.3	79.9
1:46:53 AM	56.3	65.7	43.5	78.8
1:47:53 AM	49.5	58.9	41	71
1:48:53 AM	56.1	65.2	44.9	79.2
1:49:53 AM	57.5	61.9	48.7	73.3
1:50:53 AM	61.5	72.6	45.7	85.7
1:51:53 AM	59.4	61.4	43.1	70.4
1:52:53 AM	57.4	63	43	78.9
1:53:53 AM	45.3	51.9	43.8	65.2
1:54:53 AM	57.1	66.1	43.4	81.4
1:55:53 AM	51.9	61	41.8	74.3
1:56:53 AM	56.3	65.4	42.8	78.1
1:57:53 AM	53.8	61.7	43	74.7
1:58:53 AM	60.9	73.9	42.3	88.3
1:59:53 AM	63	74.6	44.7	87.8
2:00:53 AM	57.8	66	44.7	81.4
2:01:53 AM	60.3	69.9	42.6	83.5
2:02:53 AM	53.4	64	43.5	75.8
2:03:53 AM	57.6	69.1	43.3	82.8
2:04:53 AM	44.6	46.9	43.6	59.6
2:05:53 AM	61.3	70.9	44.3	85
2:06:53 AM	58.7	68.7	43.4	81.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:07:53 AM	44.1	47.9	42.3	60.2
2:08:53 AM	54.8	67.3	43.4	80.6
2:09:53 AM	60.6	72.1	43.9	86
2:10:53 AM	53.1	67.7	44.4	73.8
2:11:53 AM	58.3	68.6	44.3	81.6
2:12:53 AM	57.3	66.8	44	80.1
2:13:53 AM	56.7	64.1	44.1	77.4
2:14:53 AM	53.8	62.7	43.4	75.7
2:15:53 AM	50.3	61.3	43.2	74.2
2:16:53 AM	59.7	67.8	44.6	80.8
2:17:53 AM	61.8	71	43.7	83.7
2:18:53 AM	64.7	74.3	44.1	87.8
2:19:53 AM	57.8	70.1	44.4	84.8
2:20:53 AM	58.9	72.1	42	86.3
2:21:53 AM	61	69.8	44.3	81.7
2:22:53 AM	52.1	64	42.6	79.1
2:23:53 AM	48.2	57.1	41.4	69.6
2:24:53 AM	59.9	69.7	42.4	82.3
2:25:53 AM	55.2	66.3	42.8	79.7
2:26:53 AM	56.9	67.9	41.1	82.3
2:27:53 AM	45.7	55.7	42.7	64
2:28:53 AM	63.9	75.1	43.7	88.2
2:29:53 AM	60.4	71.6	42.9	84.9
2:30:53 AM	58.7	67.8	42.9	81.3
2:31:53 AM	62.8	75.2	43.8	89.2
2:32:53 AM	57.6	64.3	40.3	79
2:33:53 AM	53.3	63.8	41.1	77.7
2:34:53 AM	55.5	64.4	41.6	77.8
2:35:53 AM	47.4	57.8	40.5	71.1
2:36:53 AM	41.9	44.1	40.1	56.1
2:37:53 AM	42.1	45.3	39.4	56.7
2:38:53 AM	54.6	64.4	43.1	78.1
2:39:53 AM	59.9	70.6	43.4	88
2:40:53 AM	62	74.3	42.8	87.6
2:41:53 AM	59.5	72.1	42	85.6
2:42:53 AM	43.8	50.6	40.9	61.3
2:43:53 AM	53.9	60.6	41.7	73.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:44:53 AM	50.6	61.3	41.1	73.9
2:45:53 AM	66.8	77.2	43.2	90
2:46:53 AM	59.3	70.4	42.9	84.4
2:47:53 AM	56.3	66.4	42.1	79.9
2:48:53 AM	63.4	73.9	43.4	88.4
2:49:53 AM	57.4	68.1	42.3	82.8
2:50:53 AM	61	73.4	41.7	87.4
2:51:53 AM	58.7	69.7	44.4	82.2
2:52:53 AM	53.9	64.3	43.2	78.6
2:53:53 AM	58.6	68.1	43.2	82.1
2:54:53 AM	52.6	59.7	42.6	73.6
2:55:53 AM	45.6	49.3	43.1	60.6
2:56:53 AM	60.6	71.7	44.4	84.6
2:57:53 AM	61.9	74.3	44.3	87
2:58:53 AM	44.1	45.6	42	58
2:59:53 AM	64.4	75.9	42.3	89.3
3:00:53 AM	43.6	50.4	41.8	63.9
3:01:53 AM	59.4	69.3	43.4	82.3
3:02:53 AM	61.3	72.4	44.3	85.7
3:03:53 AM	63.1	73.3	44.4	89.3
3:04:53 AM	60.1	66	46.3	80.3
3:05:53 AM	50.3	60.3	40.7	73.7
3:06:53 AM	60.1	71.6	43.3	83.4
3:07:53 AM	62.4	68.8	46	82.3
3:08:53 AM	64.3	76.9	44.3	90.3
3:09:53 AM	58.3	70.4	42.4	84.9
3:10:53 AM	47.7	57	42.2	69.8
3:11:53 AM	58.4	67.3	42.8	80.6
3:12:53 AM	60.7	70.4	43.4	84.8
3:13:53 AM	57.6	64.8	44.8	80
3:14:53 AM	63.6	78.2	46	92.1
3:15:53 AM	59.4	70.9	45.8	85.3
3:16:53 AM	59.7	71.2	46.3	82.3
3:17:53 AM	61.3	69.6	45	83.4
3:18:53 AM	59.1	71.2	47.1	83.6
3:19:53 AM	57	71.3	43.4	83.3
3:20:53 AM	61.8	74	45.4	86.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:21:53 AM	62.6	71.9	47.1	83.8
3:22:53 AM	63.7	74.7	50.5	89.3
3:23:53 AM	59.4	71.7	45.9	84.1
3:24:53 AM	60.4	70.6	44.8	83.8
3:25:53 AM	61.2	70	42.4	83.7
3:26:53 AM	60.2	71.4	44.8	83.3
3:27:53 AM	59.8	69.3	42.5	82
3:28:53 AM	63.1	70.7	44.3	84
3:29:53 AM	63.3	74.7	43.2	91.1
3:30:53 AM	58.7	70.8	40.4	84.1
3:31:53 AM	67.1	78.1	47.2	91.9
3:32:53 AM	56.9	66.4	41.6	78.6
3:33:53 AM	68.6	78.1	45.9	91.4
3:34:53 AM	65.8	77.1	47	90.7
3:35:53 AM	61.9	73.7	44.6	86.7
3:36:53 AM	58	69.3	42.2	82.3
3:37:53 AM	66.8	72.7	43.8	87.3
3:38:53 AM	64.5	73.9	49.5	85.9
3:39:53 AM	57.3	68.8	43	83.4
3:40:53 AM	60.9	69.3	41.4	83.3
3:41:53 AM	60.7	70.4	44.7	84.3
3:42:53 AM	64.3	73.6	46.2	87.9
3:43:53 AM	64.6	73	43.6	83.9
3:44:53 AM	62.1	70.3	41.7	83.9
3:45:53 AM	63.1	71	42	84.6
3:46:53 AM	64.8	73.9	46.9	89.4
3:47:53 AM	63.8	73.4	50.9	85.9
3:48:53 AM	59.2	69.2	44.1	83.1
3:49:53 AM	63.4	73.5	43.7	89.1
3:50:53 AM	67.8	76.3	53.6	88.8
3:51:53 AM	67.1	73.3	54.4	90.6
3:52:53 AM	55.4	63.8	42	78.5
3:53:53 AM	47.5	56.5	41.9	69.2
3:54:53 AM	64.8	73.8	42.1	91
3:55:53 AM	66.7	74.1	52.3	88
3:56:53 AM	63.6	78.2	46.6	91.4
3:57:53 AM	63	72.3	47.3	83.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:58:53 AM	61.4	66.9	48.3	80.4
3:59:53 AM	60.2	70.6	42	83.9
4:00:53 AM	57.2	66.4	41.6	80.3
4:01:53 AM	56.7	64.7	43.7	78.6
4:02:53 AM	61.3	70.7	49	84.1
4:03:53 AM	63.3	74	50	88.3
4:04:53 AM	56	66.1	43.4	78.1
4:05:53 AM	67.9	80.4	49.1	94.2
4:06:53 AM	64.8	78.9	50.6	87.3
4:07:53 AM	67.9	77	51.1	90.1
4:08:53 AM	64.7	74.9	45.3	87.4
4:09:53 AM	62.1	69.9	42.9	82.9
4:10:53 AM	63.2	71	45.4	84.3
4:11:53 AM	67.2	77.2	52.3	91
4:12:53 AM	67	70.7	46.1	83.9
4:13:53 AM	63.3	72.1	42.2	84.3
4:14:53 AM	63.6	71	49.4	87.3
4:15:53 AM	68	76	49.8	90.1
4:16:53 AM	66.3	74.8	52.2	90.1
4:17:53 AM	68.2	79	51.8	92.4
4:18:53 AM	65	75.9	47.4	89.4
4:19:53 AM	66.2	76.8	50.3	91.2
4:20:53 AM	62.3	71.8	47.7	85.1
4:21:53 AM	67.8	76	54.1	88.7
4:22:53 AM	68.3	79.2	46.8	96.2
4:23:53 AM	67.8	77.3	43.7	91.7
4:24:53 AM	58.7	63.6	43.1	80.2
4:25:53 AM	62.7	68.6	45.4	82.8
4:26:53 AM	68.6	80.1	45.1	94.1
4:27:53 AM	64.8	72.2	53.1	83.9
4:28:53 AM	67.1	75.3	48.1	90.1
4:29:53 AM	62.4	71.5	50.4	83.9
4:30:53 AM	63.1	72.8	51	85.4
4:31:53 AM	65.6	73	45.6	89
4:32:53 AM	66.9	75.9	52.8	89.7
4:33:53 AM	66.6	74.6	48	92.1
4:34:53 AM	65.8	76.8	44.3	89.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:35:53 AM	65.5	73	48	86.3
4:36:53 AM	68.6	75.4	53	87.2
4:37:53 AM	63	70.3	46.3	82.6
4:38:53 AM	66.7	74.6	46.7	88.4
4:39:53 AM	68.8	75.9	56.3	88.7
4:40:53 AM	67.3	73.7	49.3	88.1
4:41:53 AM	69.7	76.4	53.9	91.7
4:42:53 AM	67.6	75.2	50.7	87.2
4:43:53 AM	68.2	78.3	50.2	91.3
4:44:53 AM	65.3	72.9	54.1	86.6
4:45:53 AM	66.8	73.9	55.8	86.6
4:46:53 AM	65.7	74	49.1	83.7
4:47:53 AM	68.3	78.4	53.3	91
4:48:53 AM	61.7	67.5	46.9	81.2
4:49:53 AM	69.1	78.7	47.3	91.3
4:50:53 AM	70.4	77.6	52.7	90.2
4:51:53 AM	64.6	74.2	48.3	87.2
4:52:53 AM	67.6	75.5	50.4	88
4:53:53 AM	68.7	77.3	56	91.4
4:54:53 AM	59.4	67.7	41.7	81.3
4:55:53 AM	69.9	77.5	46.9	91.5
4:56:53 AM	64.4	71.6	45.8	83.3
4:57:53 AM	70.4	77.3	56.3	91.7
4:58:53 AM	68.3	75.1	52.6	89.1
4:59:53 AM	57.9	66.6	46.8	82.8
5:00:53 AM	71.1	81.9	50	93.7
5:01:53 AM	64.7	73.2	51.1	86.9
5:02:53 AM	68.9	76	59.9	90
5:03:53 AM	67.1	75.5	51.4	89.1
5:04:53 AM	67.2	77.3	49.6	92.3
5:05:53 AM	66.2	72.7	50.3	83.8
5:06:53 AM	65	74.6	49.9	89.6
5:07:53 AM	66.3	72.7	56.3	86.1
5:08:53 AM	66.9	73.6	47.2	86.7
5:09:53 AM	59.6	66.7	45.7	82.2
5:10:53 AM	67	78.9	45.2	91.4
5:11:53 AM	68.3	76.7	53.3	88.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:12:53 AM	69.8	76.3	53.9	90.1
3:13:53 AM	64.8	74.7	48.9	89.3
3:14:53 AM	68.2	75.3	47	87.9
3:15:53 AM	65.6	71.1	56.7	84.7
3:16:53 AM	66.4	72.1	52.1	86.2
3:17:53 AM	69.2	77	57	90.8
3:18:53 AM	68.9	75.7	59.3	89.1
3:19:53 AM	69	75.7	54.3	90.3
3:20:53 AM	68.3	74.3	60.1	87.4
3:21:53 AM	66.7	73	57.8	86.9
3:22:53 AM	66.9	74.3	55.2	87.8
3:23:53 AM	68.2	72.3	56.4	86.2
3:24:53 AM	71.3	81.3	54.9	94.8
3:25:53 AM	69.7	79.2	51.8	93.3
3:26:53 AM	69.1	74	54.7	87.4
3:27:53 AM	66.8	71.3	51.3	85.7
3:28:53 AM	69.3	76.1	53.3	89.6
3:29:53 AM	68.3	76.3	51.8	89.7
3:30:53 AM	71.7	80.6	51.7	94.6
3:31:53 AM	71.7	77.2	64.3	90.7
3:32:53 AM	66.4	73.6	56.4	86.3
3:33:53 AM	71.4	80.4	54.1	92.7
3:34:53 AM	72	79.3	53.4	93.2
3:35:53 AM	67.8	73	56.6	86.7
3:36:53 AM	68.8	73.3	60.4	86.4
3:37:53 AM	68.3	73.4	53.7	86.4
3:38:53 AM	72.4	78.6	58.8	93.3
3:39:53 AM	67.3	73	54.9	86.1
3:40:53 AM	70.4	75.6	54.8	87.7
3:41:53 AM	66.8	72.3	55.9	84.8
3:42:53 AM	69	76.8	56.2	89
3:43:53 AM	68.4	78.7	55.3	92.8
3:44:53 AM	70.8	76.8	58.4	89.4
3:45:53 AM	68	73.7	52.3	87.3
3:46:53 AM	69	76.3	59.3	89.6
3:47:53 AM	68.8	79.3	53.9	94.6
3:48:53 AM	71.6	79	61.6	92.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:49:53 AM	70.4	76.6	56.9	90.4
5:50:53 AM	66.6	72.8	54.9	86.6
5:51:53 AM	70.8	78.7	53.5	93
5:52:53 AM	69.9	74.4	56.9	87.4
5:53:53 AM	68.3	78.3	54.5	92.6
5:54:53 AM	71.5	81.1	53.4	95.4
5:55:53 AM	69.8	78.7	58.9	91.4
5:56:53 AM	70	80	52.6	92.2
5:57:53 AM	71	78.3	62.1	94.9
5:58:53 AM	66.1	71.3	54	84
5:59:53 AM	70	77.4	59.7	90.7
6:00:53 AM	66.2	71.3	53.2	84.3
6:01:53 AM	72.3	76.9	60.2	92.6
6:02:53 AM	71.2	78.8	58.2	93.7
6:03:53 AM	68.4	73.6	53.7	86
6:04:53 AM	69.9	78	59.7	92.6
6:05:53 AM	65.9	71	52.7	83.4
6:06:53 AM	69.2	74.3	60.7	87.6
6:07:53 AM	67.8	73.8	56.8	88.5
6:08:53 AM	70.7	73.6	62.6	89.4
6:09:53 AM	67.8	72.9	58.7	85.8
6:10:53 AM	68.1	74.9	56.4	86.8
6:11:53 AM	71.3	79.2	61.1	91.9
6:12:53 AM	68.6	76.6	52.4	90.2
6:13:53 AM	72.7	77.8	62.1	91.8
6:14:53 AM	65.8	72.8	58.9	86.8
6:15:53 AM	68.7	72.5	61.3	86
6:16:53 AM	68.9	73	59.4	88.3
6:17:53 AM	70.6	78.7	50.6	94
6:18:53 AM	72.4	79.2	65	92.2
6:19:53 AM	68.1	73.1	56.6	86.3
6:20:53 AM	71.5	76.6	62.6	90.2
6:21:53 AM	69.5	75.5	60.7	87.6
6:22:53 AM	72.4	76.3	65.6	90.1
6:23:53 AM	70.2	76.6	61.2	89.6
6:24:53 AM	68.2	73.4	53.5	89.1
6:25:53 AM	71	77.9	61.4	91.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:26:53 AM	71.4	77.9	60.5	91.7
6:27:53 AM	70.8	75.7	60	89
6:28:53 AM	67.7	72.9	54.9	86
6:29:53 AM	71.6	75.7	64.7	90.8
6:30:53 AM	70.8	75.8	63.2	90.2
6:31:53 AM	71.3	77.8	61.9	91.1
6:32:53 AM	69.4	75.2	63.7	89
6:33:53 AM	67.3	73.9	55.1	87.1
6:34:53 AM	71.7	78	64.3	91.9
6:35:53 AM	70	76.4	62.4	92.2
6:36:53 AM	69.6	75.7	58.7	88.3
6:37:53 AM	69.8	73	61.6	87.6
6:38:53 AM	68.7	73.8	57.6	87
6:39:53 AM	69.6	73	61.2	86.2
6:40:53 AM	68.4	74.7	60	87.6
6:41:53 AM	70.2	75.2	61.3	87.8
6:42:53 AM	68.7	73.3	53.6	88.9
6:43:53 AM	70.2	74.3	63.1	88.1
6:44:53 AM	68.3	73	63.4	86.7
6:45:53 AM	69.4	73.2	63.8	87.7
6:46:53 AM	66.6	71.3	59.2	85.1
6:47:53 AM	67.8	73.2	58.6	88.8
6:48:53 AM	70.7	73.4	63.7	89.8
6:49:53 AM	70.4	79.1	57.1	90.8
6:50:53 AM	69.8	74.2	58	87.6
6:51:53 AM	69.3	76.6	57.7	91
6:52:53 AM	70.6	77.6	58.1	90.3
6:53:53 AM	70.6	76.6	63.8	90.1
6:54:53 AM	67.4	73.3	58.1	86.6
6:55:53 AM	72.6	76.3	67.7	91.9
6:56:53 AM	69.4	76	54	89.8
6:57:53 AM	71	77.3	53.8	89.6
6:58:53 AM	69.1	77.3	56.7	88.3
6:59:53 AM	69	74.3	54.2	87.6
7:00:53 AM	67.6	74.3	53.7	87.2
7:01:53 AM	68	71.1	62.3	83.7
7:02:53 AM	68.6	73.9	53.6	88.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:03:53 AM	71.2	78.6	59.5	91.9
7:04:53 AM	68.8	73.7	54.9	87
7:05:53 AM	69.7	73.9	59.5	88.5
7:06:53 AM	69.5	74.7	63.8	87.6
7:07:53 AM	72.1	77.7	63.3	92.6
7:08:53 AM	65.9	71.2	55.4	86.3
7:09:53 AM	72.4	78.8	66	91.4
7:10:53 AM	67	74.4	58.8	89.3
7:11:53 AM	70.2	75	64.1	88.5
7:12:53 AM	71.5	79.3	54.7	92.7
7:13:53 AM	68.1	74	53.5	86
7:14:53 AM	74.1	83.9	68	97.4
7:15:53 AM	67.6	72.3	55.4	85.2
7:16:53 AM	70.9	75.6	59.8	88.7
7:17:53 AM	67.5	73.7	60.9	88.8
7:18:53 AM	70.5	75.9	56.2	89.2
7:19:53 AM	71	76	63	89.5
7:20:53 AM	67.5	75.9	54.1	87.8
7:21:53 AM	71.3	76.3	66.6	88.4
7:22:53 AM	69.8	71.2	53.8	83.7
7:23:53 AM	69.4	74.7	56.7	87.8
7:24:53 AM	68.9	73.8	57.3	86.6
7:25:53 AM	68.4	74.9	58.8	87.6
7:26:53 AM	74.4	85.5	64.7	99.4
7:27:53 AM	70	76.5	63.5	90
7:28:53 AM	69	76.1	64.9	89.3
7:29:53 AM	70.1	76.2	60.3	90.6
7:30:53 AM	78.8	88.7	63.9	104.8
7:31:53 AM	68.3	73.1	62.9	86
7:32:53 AM	71	77	57.4	91.1
7:33:53 AM	72.3	79.9	63.7	93.2
7:34:53 AM	69.6	76	61.5	89.4
7:35:53 AM	69.9	77.3	60.8	90.7
7:36:53 AM	66.3	74.3	56.2	87
7:37:53 AM	70.9	75.3	54.2	88.6
7:38:53 AM	67.3	76.1	58.2	89.8
7:39:53 AM	69.8	74.7	58.3	88.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:40:53 AM	71.1	79.4	60.3	92.3
7:41:53 AM	68.3	74.6	56.6	89.3
7:42:53 AM	71.1	76.6	63.7	89.9
7:43:53 AM	70.1	76.3	56.7	90.1
7:44:53 AM	71.6	75.3	66.4	89.8
7:45:53 AM	68.2	71.6	62	85
7:46:53 AM	69.7	75.7	62.8	90.1
7:47:53 AM	71.1	80.4	61.9	93.3
7:48:53 AM	68.9	74.7	58.3	87.2
7:49:53 AM	69.8	75.3	58.5	89.4
7:50:53 AM	68.1	74.6	57.3	87.8
7:51:53 AM	69.3	74.8	53.8	88.1
7:52:53 AM	68.6	76.2	60.2	90.3
7:53:53 AM	68.9	75	55.1	88.1
7:54:53 AM	71.9	81.1	53.4	94.7
7:55:53 AM	69.8	76.8	58.2	91.1
7:56:53 AM	70.1	75.2	64.6	87.2
7:57:53 AM	69.2	76.7	59.2	89.3
7:58:53 AM	71	75.3	61.8	88.4
7:59:53 AM	68.2	77.7	53.1	91.1
8:00:53 AM	71.6	78.1	64.3	90
8:01:53 AM	68.3	74.5	61	89.3
8:02:53 AM	70.4	78	59.2	94.1
8:03:53 AM	70.9	76.8	51.2	92.2
8:04:53 AM	69.2	74	56.6	87.2
8:05:53 AM	71.3	77.7	60.3	91
8:06:53 AM	66.3	70.2	56.6	84.4
8:07:53 AM	69.2	74.6	60.4	87.9
8:08:53 AM	68.3	75.8	57.1	89.9
8:09:53 AM	67.2	73	56.9	86.4
8:10:53 AM	68.9	73.4	59.3	91.4
8:11:53 AM	69.8	77.8	53.7	91.6
8:12:53 AM	65.8	71.1	52	83.8
8:13:53 AM	70	78.4	54.6	91.7
8:14:53 AM	69.3	76	59.9	90
8:15:53 AM	70	76.3	52.7	89.3
8:16:53 AM	69.7	76.7	53	89.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:17:53 AM	71.6	79.1	62.3	91.9
8:18:53 AM	69.7	76.6	57.2	89.8
8:19:53 AM	70.4	74.8	57.2	88.2
8:20:53 AM	66.4	72.9	53.8	83.7
8:21:53 AM	69.8	75.6	60.9	87.6
8:22:53 AM	70.2	73.8	62	88.6
8:23:53 AM	71	77.3	57.4	90.5
8:24:53 AM	69.3	75.9	58.7	87.9
8:25:53 AM	68.4	73.8	54.3	89.2
8:26:53 AM	70.1	77.9	57.8	90.5
8:27:53 AM	70.6	75	62.1	87.9
8:28:53 AM	70.6	73.3	58.2	89.3
8:29:53 AM	71	77.7	64.3	91.7
8:30:53 AM	69.9	74.5	62.7	87.6
8:31:53 AM	69	73.1	61.8	88.8
8:32:53 AM	67.9	75.1	53	87.7
8:33:53 AM	68.1	73	60.4	89.3
8:34:53 AM	68.8	75.4	57.5	88.4
8:35:53 AM	69.3	77.1	58.6	90.2
8:36:53 AM	71.6	76.9	62.8	90.9
8:37:53 AM	69.4	74	61.9	86.8
8:38:53 AM	72.1	77.5	63.1	91.3
8:39:53 AM	70	78.4	57.7	91.2
8:40:53 AM	68.3	73.1	59.8	93.7
8:41:53 AM	70.3	75.5	61.5	89
8:42:53 AM	70.5	76.6	59.3	89.3
8:43:53 AM	70.1	75.6	62.9	90.1
8:44:53 AM	69.8	76.9	58	91.1
8:45:53 AM	72.5	76.9	65.1	89.7
8:46:53 AM	67.7	75.2	55	88.1
8:47:53 AM	71.7	79.1	66.2	92.6
8:48:53 AM	70.8	78.1	62.3	91.2
8:49:53 AM	67.4	73.5	59.8	85.9
8:50:53 AM	71.3	77.8	61.9	91.6
8:51:53 AM	67.6	75.9	56.3	89.4
8:52:53 AM	73	80.8	59.1	93.1
8:53:53 AM	66.3	73.9	54.4	87.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:54:53 AM	69.9	73.8	54.6	89
8:55:53 AM	68.4	73.9	53.6	86.5
8:56:53 AM	68.7	73.8	59.5	86.6
8:57:53 AM	71.6	80.3	54.7	93
8:58:53 AM	73.5	78.7	60.7	92.8
8:59:53 AM	69.1	73.1	52.3	89.7
9:00:53 AM	68.4	76.2	53.7	90
9:01:53 AM	71.6	79.1	58.9	94.2
9:02:53 AM	66.6	74.4	53.6	86.7
9:03:53 AM	72.2	76.8	67.3	90.8
9:04:53 AM	69.4	76.1	63	88.9
9:05:53 AM	74.4	83.1	57	98.9
9:06:53 AM	69.7	80.6	55.7	90.9
9:07:53 AM	69.3	77.7	55	92
9:08:53 AM	73.7	89.2	53.2	107.3
9:09:53 AM	71.2	77.3	61.3	87.4
9:10:53 AM	69.6	73.3	59.4	88
9:11:53 AM	70.3	78.3	61.3	94.6
9:12:53 AM	67.1	72.1	53.3	84.8
9:13:53 AM	68.7	78.4	54.7	90.2
9:14:53 AM	68.3	76.5	59.1	89.7
9:15:53 AM	67	74.5	56.2	88.7
9:16:53 AM	69.6	78.6	59.3	93.8
9:17:53 AM	70.1	76	56.6	88.8
9:18:53 AM	72.3	80.1	65.2	92
9:19:53 AM	70.6	73.3	61.3	90
9:20:53 AM	70.6	78.7	59.6	92.2
9:21:53 AM	68.7	74	59.2	83.7
9:22:53 AM	71.5	77.9	67.7	91.2
9:23:53 AM	66.6	71.2	59	85
9:24:53 AM	71.3	79.7	62.2	92.4
9:25:53 AM	70.9	76.5	58.2	89.5
9:26:53 AM	71	77.9	61	92.2
9:27:53 AM	69.7	74.7	60.7	88.3
9:28:53 AM	66.4	74.4	52.9	87.9
9:29:53 AM	71.5	76.8	65.3	89.2
9:30:53 AM	69.5	73.9	63.7	88.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:31:53 AM	69.3	76	58.4	89.3
9:32:53 AM	70.2	77.2	55	90.5
9:33:53 AM	70.3	75.6	62.4	90
9:34:53 AM	69.6	75.6	60	88.6
9:35:53 AM	70	75.5	59.3	89.1
9:36:53 AM	70.5	77.2	64.3	91.6
9:37:53 AM	70.6	76.8	63.8	89
9:38:53 AM	67.7	72	60.2	85.3
9:39:53 AM	69.7	75.8	58.7	88.7
9:40:53 AM	69.1	75.7	57.7	88.8
9:41:53 AM	70.4	75.5	52.1	89.8
9:42:53 AM	70.8	77	63.3	90.6
9:43:53 AM	68.6	76.1	55.6	90.3
9:44:53 AM	69.4	78.2	54.4	91.1
9:45:53 AM	69.8	75.7	54.3	88.1
9:46:53 AM	68.2	76.2	53.8	90.6
9:47:53 AM	67.1	72.1	58.4	83.3
9:48:53 AM	72.2	81.3	60.6	96.5
9:49:53 AM	68.5	74.3	55.2	92.8
9:50:53 AM	68.6	74.9	59.2	88.7
9:51:53 AM	70	75.7	54.3	89.5
9:52:53 AM	70	75.3	55.1	88.7
9:53:53 AM	70.3	75.4	60.1	89.3
9:54:53 AM	67.9	76	49.3	88.6
9:55:53 AM	68.8	75	59.8	89.5
9:56:53 AM	70.5	75.6	61.4	89.3
9:57:53 AM	67.6	74.7	58.9	91.6
9:58:53 AM	68.3	74.4	54.1	86.8
9:59:53 AM	67	76.9	53.9	89.9
10:00:35 AM	67.7	74.6	53.1	88.2
10:01:35 AM	67.4	74.1	58.3	86.2
10:02:35 AM	68.8	75.9	61.3	88.8
10:03:35 AM	68	73.8	60.4	87.7
10:04:35 AM	77.4	89.9	63	108.3
10:05:35 AM	69.9	76.1	57.9	89.5
10:06:35 AM	71.5	75.3	65.6	90
10:07:35 AM	66.5	72.3	54.3	86.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:08:35 AM	69.4	75.6	58.5	89.3
10:09:35 AM	69.6	75.6	60.5	89.4
10:10:35 AM	72.5	80.2	65	93.9
10:11:35 AM	67.8	73.8	53.5	89.3
10:12:35 AM	66.7	74	59.7	86.4
10:13:35 AM	71	76.7	59.8	90.3
10:14:35 AM	67.8	75.9	59.7	88.9
10:15:35 AM	72	78.5	58.4	93.7
10:16:35 AM	68.9	74.2	57	89
10:17:35 AM	69.6	74.7	58.4	87.6
10:18:35 AM	71	76.5	63.9	90.2
10:19:35 AM	69.4	73.3	62.5	89.6
10:20:35 AM	70.6	78.6	58.2	92.1
10:21:35 AM	69.9	76.9	59.2	89.3
10:22:35 AM	67.7	72.9	57.8	83.7
10:23:35 AM	67.1	73.2	58.9	88
10:24:35 AM	67.2	74.2	57.7	87
10:25:35 AM	70.2	75.3	61	87.9
10:26:35 AM	67.2	73.3	57.4	86.4
10:27:35 AM	69.4	76.8	60.5	90
10:28:35 AM	65.3	70.8	57.5	84.5
10:29:35 AM	66.6	75.1	53.8	94.6
10:30:35 AM	70.3	74.8	62.2	92.6
10:31:35 AM	66.2	73.1	55.1	89
10:32:35 AM	69.4	75.7	51.1	89.5
10:33:35 AM	69.5	76.1	51.7	89.4
10:34:35 AM	67.6	74	59.1	87.4
10:35:35 AM	68.5	76	59.9	90.6
10:36:35 AM	70.1	77.1	58.9	90.7
10:37:35 AM	68	73	54.5	87.6
10:38:35 AM	69.6	75.2	61.1	88.2
10:39:35 AM	69	75.3	60.5	89
10:40:35 AM	71.4	79.1	60.9	93.8
10:41:35 AM	67.8	73.4	56.9	86.3
10:42:35 AM	70.8	81.4	53.8	95.8
10:43:35 AM	68.2	72.9	59.6	85.5
10:44:35 AM	66.7	70.6	61.5	83.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:45:35 AM	72.4	79.2	66.1	92.1
10:46:35 AM	70.7	78	59	93.3
10:47:35 AM	69	77.9	58.3	90.7
10:48:35 AM	77.9	83.7	53.7	101.1
10:49:35 AM	69.1	78.9	58	87.1
10:50:35 AM	69.3	76.3	60.9	89.6
10:51:35 AM	69.7	76.7	59.7	90.4
10:52:35 AM	67.6	73.1	59	87.1
10:53:35 AM	67.3	77.8	53	90.3
10:54:35 AM	70.4	76.6	58.7	90.7
10:55:35 AM	68.9	74.7	60.1	87.8
10:56:35 AM	70.6	76.4	54.6	89.3
10:57:35 AM	70.3	75.7	56.3	89.3
10:58:35 AM	69.3	76.1	62.3	89.4
10:59:35 AM	70.9	79.1	59.9	93.1
11:00:35 AM	68.6	75.4	62.8	90.3
11:01:35 AM	66.2	71	60	84.3
11:02:35 AM	69.9	76.3	67.8	88.1
11:03:35 AM	71.6	77.3	63.8	90.7
11:04:35 AM	68.4	74.8	57.3	87.7
11:05:35 AM	69.3	75.3	63.3	87.7
11:06:35 AM	69	76	60.2	89.4
11:07:35 AM	71.8	82.3	63	97.3
11:08:35 AM	69.7	75	60.2	88.6
11:09:35 AM	69.2	73.3	62.3	86.9
11:10:35 AM	70.3	74.6	64.4	87.9
11:11:35 AM	66.4	71.3	57.3	83.8
11:12:35 AM	68.1	73.2	62	90.6
11:13:35 AM	73.7	79.8	68.1	93.4
11:14:35 AM	71.7	76.3	64.7	89.4
11:15:35 AM	70	74.2	64.6	87.2
11:16:35 AM	69.9	75.8	61.3	89.6
11:17:35 AM	72.3	79.9	61.9	94
11:18:35 AM	68.9	77.3	54.7	91.3
11:19:35 AM	72	77.4	63.7	89.3
11:20:35 AM	72.7	79.1	62.4	92.1
11:21:35 AM	71.7	76.7	67.7	89.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:22:35 AM	69.4	72.4	60.6	85.3
11:23:35 AM	72	78	66.1	92.7
11:24:35 AM	70	74.7	62.4	88.4
11:25:35 AM	67	76.3	57	93.1
11:26:35 AM	72.4	77.6	61.3	90.8
11:27:35 AM	62.7	71.3	55.5	82
11:28:35 AM	72.4	77.1	57.1	92.1
11:29:35 AM	67.3	73.3	61.7	87.8
11:30:35 AM	69.3	75.5	57	90.6
11:31:35 AM	71.3	79.1	64.4	93.7
11:32:35 AM	73.5	80.8	65.4	97.1
11:33:35 AM	71	73.3	61	90.3
11:34:35 AM	67.2	72.9	57.4	85.5
11:35:35 AM	70.6	78.9	61	93.5
11:36:35 AM	71.4	79.4	63.7	94
11:37:35 AM	67.7	76.3	58.2	88.2
11:38:35 AM	72.3	79	66.4	92
11:39:35 AM	65.1	74	50.4	86.6
11:40:35 AM	72.9	79.4	60.4	96.2
11:41:35 AM	68.1	74.3	59.7	87.6
11:42:35 AM	67.3	72.6	60.5	86.7
11:43:35 AM	69.4	75.8	61.4	89.9
11:44:35 AM	69.4	74.9	64.2	87.8
11:45:35 AM	69.5	75.8	60.2	89.2
11:46:35 AM	63.7	71.4	53.3	84.9
11:47:35 AM	71	77.9	67.7	91.7
11:48:35 AM	71.8	78.3	61.7	92.1
11:49:35 AM	70.6	76.3	63.5	89.8
11:50:35 AM	71.7	76.6	67.8	89.7
11:51:35 AM	65.1	71.8	58.8	82.8
11:52:35 AM	69.1	75.7	60.6	88.1
11:53:35 AM	63.9	72	53.7	85.9
11:54:35 AM	72.3	77.6	65.8	92.6
11:55:35 AM	66.5	74.4	54	87.7
11:56:35 AM	70.5	76.6	51.5	90.1
11:57:35 AM	69.4	75.4	58	88.7
11:58:35 AM	68.7	74.4	61.5	89.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:59:35 AM	68.6	75.3	61.3	89.1
12:00:35 PM	69.7	76.9	57.8	89.9
12:01:35 PM	72.2	79	62.4	92.4
12:02:35 PM	69.1	73.4	51.6	86.3
12:03:35 PM	67.6	74.2	57	86.7
12:04:35 PM	68.6	74.7	53.9	87.3
12:05:35 PM	70.1	81.2	62.4	93.3
12:06:35 PM	70.9	78.1	61.6	91.3
12:07:35 PM	69.7	76.2	61.4	89.9
12:08:35 PM	70.2	75.9	63	89.2
12:09:35 PM	71.1	76	63.6	88.3
12:10:35 PM	70.4	78	61.3	91.9
12:11:35 PM	72.3	76.6	63.3	89.3
12:12:35 PM	68.4	74.7	61.1	87.8
12:13:35 PM	71.8	80	61.4	98.2
12:14:35 PM	71.2	77.2	63	92.9
12:15:35 PM	71.3	77.3	63.3	90.7
12:16:35 PM	67.8	75.6	59.8	88.7
12:17:35 PM	69.3	74.4	61.1	92.1
12:18:35 PM	68.8	73.2	60.6	88.6
12:19:35 PM	66.6	70	60.2	84.3
12:20:35 PM	68.8	75.8	63.3	90.3
12:21:35 PM	72.4	80.3	63.1	97.3
12:22:35 PM	70.3	75.9	66.2	91
12:23:35 PM	67.8	74.3	58.8	88
12:24:35 PM	75.9	88.2	67.3	103.6
12:25:35 PM	69.7	74.6	61.7	89.4
12:26:35 PM	67.2	73	60.2	86.7
12:27:35 PM	73.1	77.3	65.8	91
12:28:35 PM	67.4	72.7	60.4	85.6
12:29:35 PM	70.3	74.6	64	87.9
12:30:35 PM	69.2	77.2	54.9	90.8
12:31:35 PM	68.2	75.1	55.4	90.7
12:32:35 PM	71.7	78.3	65.1	90.8
12:33:35 PM	68.8	73.5	57.7	86.7
12:34:35 PM	69.8	75.7	62.8	88
12:35:35 PM	72.8	78	65.3	91.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:36:55 PM	68	74.4	61.8	86.9
12:37:55 PM	72.9	81.9	60.7	95.8
12:38:55 PM	66.7	71.7	60.2	84.4
12:39:55 PM	70.9	76.9	67.3	91.1
12:40:55 PM	68.6	73.1	59	90.3
12:41:55 PM	71.8	81	64.8	93.9
12:42:55 PM	72.7	76.4	64.5	90.4
12:43:55 PM	69.4	76	64.1	89.7
12:44:55 PM	72.1	76.6	66.2	89.7
12:45:55 PM	70.3	74.9	64.6	89.3
12:46:55 PM	69	73.5	59.5	86.1
12:47:55 PM	71.9	76.3	59	89.9
12:48:55 PM	71.6	76.8	66.6	90.5
12:49:55 PM	67.7	73.1	58.8	89.3
12:50:55 PM	73.9	78.6	70.3	97.9
12:51:55 PM	67.6	74.4	54.6	86.9
12:52:55 PM	72.4	78.3	53	91.1
12:53:55 PM	71.5	78.3	66	93.7
12:54:55 PM	68.6	72.1	63	86
12:55:55 PM	72.7	77	63.6	91.1
12:56:55 PM	70.6	78.6	61.4	97
12:57:55 PM	69.8	74.5	61.6	87.6
12:58:55 PM	72.1	78.1	61.2	91.1
12:59:55 PM	69.7	75.2	60.1	88.6
1:00:53 PM	71.2	77.2	61.3	90.1
1:01:53 PM	69.9	76.7	61.7	90.7
1:02:53 PM	72.3	78	62.2	91.3
1:03:53 PM	70.9	78.1	58.4	90.9
1:04:53 PM	70.1	76.5	64	90.7
1:05:53 PM	69	71.9	63.1	86.1
1:06:53 PM	71.4	74.3	63.6	87.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Location M2: 24-Hour Session Report

Meter No. 23423
3/15-16/2021

Information Panel

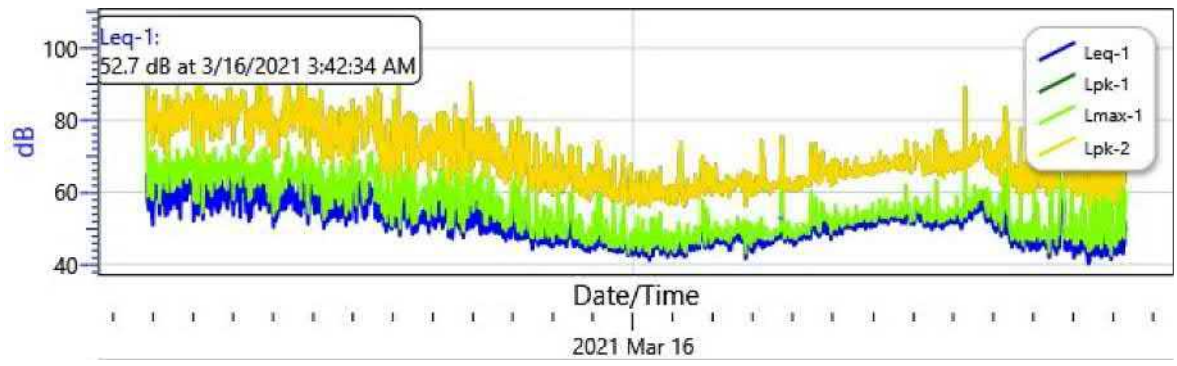
Name	5298_BLM060003_16032021_123435
Start Time	3/15/2021 11:48:35 AM
Stop Time	3/16/2021 12:20:26 PM
Device Name	BLV060003
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lc	1	54.8 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

5298_BLM060003_16032021_123435: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3/15/2021 11:48:35 AM	65.1	79	51.7	107.7
11:50:35 AM	57.6	65.1	50.5	79.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:51:35 AM	55.5	58.9	51.2	76.7
11:52:35 AM	56	63.4	50.6	78.3
11:53:35 AM	59.9	69.2	52.7	84.9
11:54:35 AM	67.6	70.9	53.7	86.3
11:55:35 AM	57.3	64.1	53.1	82.3
11:56:35 AM	58.3	63.2	53.3	83.1
11:57:35 AM	52.9	58	48.4	73.7
11:58:35 AM	50.9	58.4	47.6	74
11:59:35 AM	55.1	58.9	52.1	74.2
12:00:35 PM	67.4	70.8	57.5	84.9
12:01:35 PM	65	71.5	54.3	88.3
12:02:35 PM	62.4	69.2	52.2	83.6
12:03:35 PM	59.6	65.9	51.6	81.7
12:04:35 PM	58.5	62.9	51.5	79.4
12:05:35 PM	59.6	64.7	53.3	80.7
12:06:35 PM	59.1	62.6	54.4	76.6
12:07:35 PM	57.7	64.1	49.9	77.6
12:08:35 PM	53.8	57.1	50.1	74.1
12:09:35 PM	58.3	68	49.3	81.2
12:10:35 PM	56.5	61.1	50.7	73.1
12:11:35 PM	60.7	66.5	55.5	81.7
12:12:35 PM	57.7	63.9	50.4	79.3
12:13:35 PM	57.6	63.4	51.5	79.7
12:14:35 PM	62.3	69.2	51.3	86.8
12:15:35 PM	60.7	66.4	55.3	83.8
12:16:35 PM	58.8	68.9	50.6	87.7
12:17:35 PM	53.3	61.1	51.3	70.6
12:18:35 PM	59.7	66.2	52.4	81.8
12:19:35 PM	54.4	63.9	49.1	77.7
12:20:35 PM	53.9	60.2	51.3	71.6
12:21:35 PM	61.9	69.9	50.8	84.9
12:22:35 PM	66.4	72.7	55.1	86.7
12:23:35 PM	61.7	66.9	54.6	81.3
12:24:35 PM	59.5	68.2	52.5	81.4
12:25:35 PM	55.3	64.6	50.1	80.6
12:26:35 PM	62.5	67.1	51.7	82.6
12:27:35 PM	56.6	60.7	52.6	73.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:28:35 PM	57.8	63	49.5	77.9
12:29:35 PM	60.5	68.2	50.1	85.2
12:30:35 PM	58.2	66.1	50.2	83
12:31:35 PM	59.4	63.1	57	79.7
12:32:35 PM	56.9	62.7	52.5	77.5
12:33:35 PM	57.9	63.4	50.3	80.2
12:34:35 PM	55.7	62.1	51.9	77.1
12:35:35 PM	62.8	71.8	52.6	89.1
12:36:35 PM	64.7	70.3	56.1	88.8
12:37:35 PM	60.4	67	54.3	83.8
12:38:35 PM	56.3	63.1	50.5	81.7
12:39:35 PM	52.7	61.3	48.8	78.3
12:40:35 PM	61.1	67.8	51.3	82.2
12:41:35 PM	62.7	67.7	54.2	83.7
12:42:35 PM	59.6	66	52.7	79.3
12:43:35 PM	63.9	69.1	54.1	83.7
12:44:35 PM	57.8	64	50	77.7
12:45:35 PM	61.4	68.5	53	87
12:46:35 PM	63.8	69.2	55.5	82.8
12:47:35 PM	64.3	69.2	53.6	83.3
12:48:35 PM	63.6	69.9	53	85.3
12:49:35 PM	57.7	62.8	51.4	77.9
12:50:35 PM	63.3	71.8	52.9	87.3
12:51:35 PM	60.9	70.7	51.3	87.1
12:52:35 PM	63.6	68.5	58.2	83.4
12:53:35 PM	60.9	69.4	51.6	86.6
12:54:35 PM	59.8	66.3	52.7	82.4
12:55:35 PM	61.5	68.5	52.1	83.2
12:56:35 PM	67.5	68	53	85.4
12:57:35 PM	60.8	67.4	55.4	82
12:58:35 PM	60.5	69.7	50.3	84.6
12:59:35 PM	52.1	57.9	48.7	73
1:00:35 PM	53.7	58.5	48.7	72.8
1:01:35 PM	58.9	66.8	52.1	81.3
1:02:35 PM	54.1	57.1	49.5	75.2
1:03:35 PM	63.4	75.6	51	93.9
1:04:35 PM	64.7	71.5	54.7	86.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:05:33 PM	56.7	62.9	50.5	78
1:06:33 PM	53.8	57.2	50.3	74.5
1:07:33 PM	58.5	68.6	50.8	87.3
1:08:33 PM	59.1	63.8	57.3	79.7
1:09:33 PM	59.9	66.8	51.6	80.7
1:10:33 PM	63.3	70.2	55	86.9
1:11:33 PM	65.8	74.8	55.9	89.5
1:12:33 PM	63.7	70	51.3	85
1:13:33 PM	52.5	54.4	50.9	68.1
1:14:33 PM	57.7	64.3	52.3	78.3
1:15:33 PM	60.3	68.8	52.9	84.2
1:16:33 PM	60.5	66.2	49.3	80.4
1:17:33 PM	56.1	62.7	49	78.6
1:18:33 PM	63	70.1	52.3	86.9
1:19:33 PM	59.4	64.3	51.3	77.9
1:20:33 PM	60.8	65.8	53.1	80.4
1:21:33 PM	58.9	64	53	79
1:22:33 PM	55.6	60.9	49.1	78.9
1:23:33 PM	62.1	70.2	51.1	85.2
1:24:33 PM	62.5	69.2	50	84.3
1:25:33 PM	59.3	65.3	51.7	81.1
1:26:33 PM	53.7	59	49.2	74.7
1:27:33 PM	54.7	59.2	50.8	74.3
1:28:33 PM	62.7	70.7	53.1	84.8
1:29:33 PM	57.1	64.5	49.9	80.7
1:30:33 PM	63.3	71.1	54.1	83.8
1:31:33 PM	63.9	72.2	51.8	86.6
1:32:33 PM	56.1	63.2	51.5	76.7
1:33:33 PM	59.5	66	50.9	79.4
1:34:33 PM	54.9	61.2	51.8	75.5
1:35:33 PM	61.3	68	51.6	82.4
1:36:33 PM	54.4	62.5	46.8	78.6
1:37:33 PM	55.4	62	51.6	76.8
1:38:33 PM	55.9	64.6	48.4	79.4
1:39:33 PM	55.9	62.3	53.2	75.1
1:40:33 PM	58.2	68.3	50.8	81.9
1:41:33 PM	63.3	69.5	51.8	83.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:42:33 PM	61	68.2	48.1	82.6
1:43:33 PM	58.4	68.1	50.1	82.7
1:44:33 PM	58	64.9	51.2	81
1:45:33 PM	60.4	68.3	52	81.9
1:46:33 PM	57.7	67.7	52.6	83.7
1:47:33 PM	60.8	66.3	52.9	84.7
1:48:33 PM	57.9	66.7	50.9	81.8
1:49:33 PM	56.3	60.8	51	78.3
1:50:33 PM	55.4	61.9	49.6	78.8
1:51:33 PM	65.1	73	54.3	88.8
1:52:33 PM	61.1	67.4	56.1	81.9
1:53:33 PM	59.3	68.3	52.3	82.6
1:54:33 PM	63	71.2	50.3	88.9
1:55:33 PM	59.2	67	50.8	85.3
1:56:33 PM	58.3	64.3	50.8	81.6
1:57:33 PM	56.8	64.4	51.9	80.3
1:58:33 PM	59.4	67	53.1	84.1
1:59:33 PM	53.7	57.9	51.7	73.3
2:00:33 PM	62.9	68.9	53.1	83.2
2:01:33 PM	57	62.4	49.7	78.7
2:02:33 PM	60.9	67.8	52.4	84.7
2:03:33 PM	62.8	70.1	52.7	86.4
2:04:33 PM	60.6	68.6	51.6	83.8
2:05:33 PM	57.8	63.1	51.9	81.7
2:06:33 PM	60.8	65.7	54	80.8
2:07:33 PM	67.7	68.8	53.6	83.4
2:08:33 PM	61.7	68.1	52.8	83
2:09:33 PM	53	61.6	49.1	83
2:10:33 PM	61.3	67.1	50.3	85.8
2:11:33 PM	61.6	66.1	51.3	83.7
2:12:33 PM	62.8	72.6	51.2	88.1
2:13:33 PM	60.3	71.3	48.8	87.7
2:14:33 PM	63	69.6	54.8	85.4
2:15:33 PM	63.9	72.8	50.7	87.6
2:16:33 PM	64.6	72.2	56.3	84.7
2:17:33 PM	60.3	68.7	48.9	83.4
2:18:33 PM	54.4	61.7	49.3	73.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:19:33 PM	56.1	61.6	50.3	73.1
2:20:33 PM	61.9	67.9	50.4	81.8
2:21:33 PM	59.2	65.7	50.5	80.1
2:22:33 PM	51.9	57.7	47	70.8
2:23:33 PM	58.6	67.2	50.1	82.6
2:24:33 PM	57.4	66.9	48.8	81.9
2:25:33 PM	55.1	65.7	48.3	87.9
2:26:33 PM	53.1	58.6	50.3	72.3
2:27:33 PM	57.2	64.9	50.9	81.3
2:28:33 PM	56.4	62.2	52.4	77.9
2:29:33 PM	60.7	67.9	53.5	83.9
2:30:33 PM	60.1	66.6	51.6	82.4
2:31:33 PM	60.4	67	52.6	83.9
2:32:33 PM	57.2	61.8	49.9	79.9
2:33:33 PM	58.3	67.6	52.4	84
2:34:33 PM	60.3	65.6	49.6	81.2
2:35:33 PM	62.1	70.9	51.3	89.7
2:36:33 PM	58.6	66.1	49.7	80.9
2:37:33 PM	58.1	67.8	49.1	82.7
2:38:33 PM	57.2	64.1	50.1	78.3
2:39:33 PM	55.2	62.1	49.3	76.4
2:40:33 PM	60	65.3	52.7	80.2
2:41:33 PM	56.8	64.2	51.9	80.3
2:42:33 PM	61.6	67.9	53.6	85.1
2:43:33 PM	63.4	71.9	51.8	90.2
2:44:33 PM	63	70.8	52.7	84.3
2:45:33 PM	56.3	62.7	50.2	78.2
2:46:33 PM	61.5	65.8	55.2	83.1
2:47:33 PM	65.2	72.3	54.6	90.3
2:48:33 PM	61.2	69.9	51.8	84.6
2:49:33 PM	59	67.9	53.3	81.3
2:50:33 PM	56.3	60.3	53.2	76.4
2:51:33 PM	59.4	65.9	51.8	84.2
2:52:33 PM	54.4	57.4	52.2	72.9
2:53:33 PM	55.8	60.3	51	74.3
2:54:33 PM	58.4	67.8	50.3	84
2:55:33 PM	63.2	70.3	50.2	86.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:56:33 PM	60.1	65.7	52.6	79.7
2:57:33 PM	59.8	67.1	52.6	81
2:58:33 PM	56.8	63.4	51.6	79.3
2:59:33 PM	50.3	53.3	46.7	69.3
3:00:33 PM	56.3	64.2	46.7	80.8
3:01:33 PM	53.9	57.2	51.8	70.9
3:02:33 PM	52	54.9	50.2	71
3:03:33 PM	53.9	61.1	49	75.1
3:04:33 PM	54.1	60.7	48.9	73.8
3:05:33 PM	53.2	55.6	49	69.8
3:06:33 PM	55.7	62.8	49.3	79.3
3:07:33 PM	56.3	63	50.6	78.3
3:08:33 PM	57.4	63.1	50.7	78.3
3:09:33 PM	58.2	65.2	52.9	79.9
3:10:33 PM	57.6	63.7	52.9	78
3:11:33 PM	58.6	63.4	49.9	80
3:12:33 PM	55.1	59.8	52.3	76.1
3:13:33 PM	59.7	67	48.3	82.4
3:14:33 PM	61.7	67.3	51.4	82.7
3:15:33 PM	59.3	63.8	54.8	84.3
3:16:33 PM	55.3	61.4	48.1	75.7
3:17:33 PM	63.2	71.3	50.4	89.3
3:18:33 PM	55.6	61.3	52.8	75.3
3:19:33 PM	58.4	65.7	51.3	82.1
3:20:33 PM	58.2	66.6	53.9	81.9
3:21:33 PM	63.7	73.9	54.6	90.7
3:22:33 PM	59.3	68.7	50.8	81.9
3:23:33 PM	57	64.3	50.6	78.7
3:24:33 PM	58.4	65.3	53.7	79.6
3:25:33 PM	60.2	65.4	53.2	81.3
3:26:33 PM	61.7	69.6	52.7	83.9
3:27:33 PM	62.3	69.1	49.9	83.4
3:28:33 PM	57.3	62.2	52.3	78.3
3:29:33 PM	57.3	63.3	50.7	77.3
3:30:33 PM	55.1	63.6	51.3	77.8
3:31:33 PM	56.4	65.3	52.3	79.2
3:32:33 PM	58.7	64.3	51.4	80.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:33:33 PM	57.9	64.3	53.6	80.8
3:34:33 PM	59.6	65.6	53.9	85
3:35:33 PM	54.3	62.5	50.5	80.2
3:36:33 PM	56.7	66.1	52.7	83.3
3:37:33 PM	57.4	66.1	50.1	80.1
3:38:33 PM	61.6	71	54	89.2
3:39:33 PM	65.7	70.6	53	86.7
3:40:33 PM	53.3	58.2	50.6	75.4
3:41:33 PM	63.9	70.4	54.3	88.4
3:42:33 PM	60.9	69	52.5	87.1
3:43:33 PM	55.9	64.2	52.9	78.6
3:44:33 PM	58.3	66.9	53.7	84.1
3:45:33 PM	60.9	67.4	52.1	81.8
3:46:33 PM	59.1	66.6	52.3	82.3
3:47:33 PM	62.1	70.1	53	89.4
3:48:33 PM	55.9	63.3	52.3	81
3:49:33 PM	53.9	57.3	51.7	72.6
3:50:33 PM	56.8	62.9	49.7	77.1
3:51:33 PM	51.2	54.3	48.2	67.8
3:52:33 PM	55.8	60.6	50.9	74.3
3:53:33 PM	61.4	67.3	53.7	85.7
3:54:33 PM	61.3	68.6	52.7	82.5
3:55:33 PM	60.4	66.3	53.8	80
3:56:33 PM	58.1	66.3	51	81.4
3:57:33 PM	62.6	69.5	50	82.1
3:58:33 PM	57.3	62.7	51.8	78.1
3:59:33 PM	61	68.2	49.2	82.8
4:00:33 PM	56.4	60.9	53.1	73.4
4:01:33 PM	54.1	59.6	49.1	76.9
4:02:33 PM	59	66.7	48.8	83.4
4:03:33 PM	58.7	63.6	54.3	81.2
4:04:33 PM	56.5	65.6	49.9	80.5
4:05:33 PM	59.1	66.2	51.4	81.7
4:06:33 PM	55.2	62.3	50.6	77.7
4:07:33 PM	54.3	59.4	50.6	73
4:08:33 PM	57.3	66.7	51.4	80.5
4:09:33 PM	59.1	66.6	50.3	80.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:10:33 PM	60.1	69.9	52.8	88.4
4:11:33 PM	56.9	64.7	52.5	80.5
4:12:33 PM	56	66	49.6	80.5
4:13:33 PM	57.3	64.1	50.7	68.7
4:14:33 PM	54.1	57.5	49.9	70.4
4:15:33 PM	50	52.6	47.6	68.5
4:16:33 PM	53.9	57.6	51.6	71.9
4:17:33 PM	51.1	53.5	48.6	71.1
4:18:33 PM	55.3	62	48.6	76
4:19:33 PM	53.5	56.7	51.9	77.8
4:20:33 PM	57.8	63.8	51.2	81.2
4:21:33 PM	55.9	62.3	51.4	76.6
4:22:33 PM	52.1	55.6	50.1	70
4:23:33 PM	54.3	60.6	49.7	80.3
4:24:33 PM	54.9	62.6	51	77.9
4:25:33 PM	58.2	67.4	50.7	83.6
4:26:33 PM	53	57.2	50.4	72.1
4:27:33 PM	53.9	55.8	51.7	69
4:28:33 PM	57.8	68.8	50.2	82.6
4:29:33 PM	54.8	61.3	49.6	73.4
4:30:33 PM	58.1	64.7	51.6	80.4
4:31:33 PM	53.3	58.8	49	74.5
4:32:33 PM	54.7	61.4	50.8	73.7
4:33:33 PM	57.1	65.1	49.3	81.9
4:34:33 PM	57.6	63.2	50.4	76.1
4:35:33 PM	54.2	59.2	50.7	77.3
4:36:33 PM	52	58.6	47.9	73.4
4:37:33 PM	52.8	56.4	51	70.4
4:38:33 PM	57.2	63.2	52.7	77.8
4:39:33 PM	55.4	60.4	50.1	75
4:40:33 PM	53	57.1	48.8	70.7
4:41:33 PM	59.8	68.7	48.7	83.4
4:42:33 PM	55.4	61	52.3	78.2
4:43:33 PM	53.6	58.7	50.1	70.8
4:44:33 PM	53.3	59.1	50.1	74
4:45:33 PM	55.4	61.5	49.4	76
4:46:33 PM	55	63.3	49.6	80.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:47:33 PM	56.2	63.8	50.2	79.2
4:48:33 PM	50.8	53.7	49.4	67.1
4:49:33 PM	55.3	59.5	52.6	73.5
4:50:33 PM	61.5	67.9	50.6	87
4:51:33 PM	60	66.6	52.5	80.3
4:52:33 PM	58	63.7	50.1	79.7
4:53:33 PM	57.5	59.9	49.6	76.6
4:54:33 PM	53.1	55.6	50.7	70
4:55:33 PM	52.6	54.9	50.4	69.1
4:56:33 PM	61.3	69.5	53	84
4:57:33 PM	63.7	69.6	52.1	83.1
4:58:33 PM	63.8	70.4	53.8	83.6
4:59:33 PM	55.1	61.8	51.1	76.5
5:00:33 PM	58.5	64.2	54.2	78
5:01:33 PM	56.7	61.6	51	73.9
5:02:33 PM	56.7	63.4	49.9	76.5
5:03:33 PM	51.7	56.5	49.2	70.9
5:04:33 PM	57.8	67	48.7	71
5:05:33 PM	62.3	68.5	51.8	82.4
5:06:33 PM	61	66.8	50	80.1
5:07:33 PM	60.9	66.4	53.4	82.1
5:08:33 PM	62.8	68.7	52.8	83.7
5:09:33 PM	57.6	63.2	49.1	80.1
5:10:33 PM	58.6	64.2	46.8	79.1
5:11:33 PM	56.5	64.8	47.9	79.6
5:12:33 PM	56.7	61.4	51.8	76.7
5:13:33 PM	56	64.1	47.4	79.1
5:14:33 PM	53.1	56.8	49.3	72.2
5:15:33 PM	56.2	61.8	49	78
5:16:33 PM	52.6	59.2	48.7	73.8
5:17:33 PM	56.1	62	49.7	73.8
5:18:33 PM	57.8	64.8	49.4	80.5
5:19:33 PM	53.5	58.7	50.4	73.7
5:20:33 PM	59.1	64.7	51.6	79.8
5:21:33 PM	60.1	67.9	51.1	82.1
5:22:33 PM	62.8	70.5	50.1	86.3
5:23:33 PM	67.3	68	53.3	81.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:24:33 PM	56.9	67.6	50.3	82.7
3:25:33 PM	59.6	67.3	54	78.7
3:26:33 PM	61	71.2	52.9	84.3
3:27:33 PM	59.7	64.7	51.8	80.1
3:28:33 PM	59.3	64.3	54.2	79
3:29:33 PM	59.3	63	50.8	79.3
3:30:33 PM	60.7	65.3	54.6	81.7
3:31:33 PM	58.7	63	51.8	76.8
3:32:33 PM	52.8	57.7	47.8	74.1
3:33:33 PM	57.8	63.7	48.7	78.9
3:34:33 PM	60	67.3	49.6	88.9
3:35:33 PM	56.9	62.8	49.2	82.7
3:36:33 PM	54.1	59.6	50.3	71.8
3:37:33 PM	52.1	57.2	49.6	70.6
3:38:33 PM	54.3	59.9	50.4	73.8
3:39:33 PM	64.7	71.8	52.9	87.2
3:40:33 PM	55.2	59.6	50.1	73.2
3:41:33 PM	55.7	62.7	50	78.7
3:42:33 PM	52.7	54.7	51.1	67.6
3:43:33 PM	53	60	49.4	74.2
3:44:33 PM	53.3	55.9	51.7	73.7
3:45:33 PM	50.8	53.9	49.2	67.3
3:46:33 PM	51.3	53.6	49.7	66.6
3:47:33 PM	52.8	54.3	51.6	67.1
3:48:33 PM	49.1	51.9	47.1	64.1
3:49:33 PM	54.7	61	48.7	74.6
3:50:33 PM	58.2	63.9	50.3	79
3:51:33 PM	54.1	58.9	48.2	73.3
3:52:33 PM	58.1	64.4	53.7	80
3:53:33 PM	50.7	53.2	47.9	69.8
3:54:33 PM	50.3	53.1	48.1	68.7
3:55:33 PM	50.8	53.4	49	65.8
3:56:33 PM	50	52.2	48.3	65
3:57:33 PM	49.8	50.7	48.7	64.3
3:58:33 PM	50.3	51.8	49.7	65
3:59:33 PM	56.6	61.6	49.9	76.4
6:00:33 PM	58.7	66.6	51.8	83.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:01:33 PM	62.2	68.6	58.3	88.3
6:02:33 PM	57.8	63.3	51.1	79.3
6:03:33 PM	56.9	62.1	51.9	76.1
6:04:33 PM	50.4	53.6	47.9	68.6
6:05:33 PM	53.3	56.6	48.7	69.6
6:06:33 PM	53.9	59.1	47.6	74.2
6:07:33 PM	53.9	66	46.3	90.3
6:08:33 PM	50.7	54.7	48.8	67.3
6:09:33 PM	48	50.1	46.4	63.1
6:10:33 PM	51.2	54.2	46.7	66.3
6:11:33 PM	55.1	62.1	50.6	77.6
6:12:33 PM	53.3	60.6	48.8	73.1
6:13:33 PM	52.4	60	50	72.2
6:14:33 PM	55.8	62.5	47.8	73.9
6:15:33 PM	56.4	63.3	49.7	78.7
6:16:33 PM	53.1	58.8	50.3	77.2
6:17:33 PM	59.4	63.8	50.1	80.9
6:18:33 PM	58.9	66.4	50.9	80.8
6:19:33 PM	55.2	61.6	50.3	76.4
6:20:33 PM	50.2	53	48.2	67.3
6:21:33 PM	53.7	56.1	51.9	69.1
6:22:33 PM	51.4	55	48.2	71.6
6:23:33 PM	57.9	67.1	49.9	82.3
6:24:33 PM	54	59.4	49.3	73.2
6:25:33 PM	52.3	58.3	50	71.6
6:26:33 PM	51	54.7	49.7	70.7
6:27:33 PM	51.7	53.1	49.9	67.7
6:28:33 PM	48.4	51.1	46.7	63.7
6:29:33 PM	50.9	52.9	48.7	66.8
6:30:33 PM	54.2	63.3	48.9	81.4
6:31:33 PM	57.1	66	49.8	80.3
6:32:33 PM	53.1	58.4	48.9	74.4
6:33:33 PM	49	51.6	46.7	66.3
6:34:33 PM	49.4	53	46.9	67.3
6:35:33 PM	50.9	54.9	47.6	71
6:36:33 PM	51	54.9	47.6	72.3
6:37:33 PM	52.7	57	50.4	69.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:38:33 PM	53.3	57.2	50.6	71.3
6:39:33 PM	51.5	56	48.8	68.9
6:40:33 PM	52.2	57.8	49.9	73.3
6:41:33 PM	53.6	59.3	46.9	74.6
6:42:33 PM	53.1	58.4	47.2	72.7
6:43:33 PM	54.8	61	51.4	77.1
6:44:33 PM	51.5	59.2	47.7	71.1
6:45:33 PM	53.5	58.8	48.9	73.6
6:46:33 PM	52.3	56.4	49.7	69.3
6:47:33 PM	55.6	61.6	48.4	78
6:48:33 PM	52.1	58.9	49.2	75.2
6:49:33 PM	51.1	53.1	48.9	73.1
6:50:33 PM	52.4	60.8	49.3	73.7
6:51:33 PM	51.1	55.5	46.5	70.1
6:52:33 PM	48.8	52.3	43.7	64.3
6:53:33 PM	52.6	56.7	49.5	70.5
6:54:33 PM	57.1	64.1	49.4	78.7
6:55:33 PM	54.1	62.3	50.1	77.6
6:56:33 PM	56.8	62.4	50.4	76.7
6:57:33 PM	53.9	60.1	49	73.3
6:58:33 PM	55.2	60.4	49.6	75.1
6:59:33 PM	50.8	54.1	47.7	68.2
7:00:33 PM	53.2	59.3	46.4	73.9
7:01:33 PM	55.1	60.3	46.2	76.1
7:02:33 PM	50	53.4	45.7	66.4
7:03:33 PM	51.7	61.7	45.1	73.9
7:04:33 PM	55.9	61.9	48.6	76.1
7:05:33 PM	52.5	60.6	47.5	73.2
7:06:33 PM	53	63.3	47.3	81.5
7:07:33 PM	51.9	58.1	47.6	73.5
7:08:33 PM	53	58.9	49.1	73
7:09:33 PM	58.4	66.3	49.1	81.9
7:10:33 PM	53	58.4	49.3	72
7:11:33 PM	56.3	66.3	47.9	80.2
7:12:33 PM	52.4	58.5	47.8	73.3
7:13:33 PM	50.1	53.8	47.8	67.4
7:14:33 PM	51.1	60.1	47.4	73.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:15:33 PM	57.9	67.3	48	82.2
7:16:33 PM	53.7	64.7	47.9	80.5
7:17:33 PM	52.8	55.9	48.8	70.6
7:18:33 PM	51.9	59.9	48.8	73
7:19:33 PM	57.5	63.5	49.9	81
7:20:33 PM	55.5	63.4	46.5	78.8
7:21:33 PM	54.1	59.5	47.7	78.4
7:22:33 PM	47.6	50.3	46.1	62.9
7:23:33 PM	48	49.9	47.4	63.6
7:24:33 PM	55.7	62.7	45.1	76.7
7:25:33 PM	53.7	58.5	49.4	74.9
7:26:33 PM	53.9	59.3	48	73.2
7:27:33 PM	55.4	60.8	48	75.7
7:28:33 PM	47.1	50.5	45.5	63.4
7:29:33 PM	49.9	57.3	47.8	66
7:30:33 PM	52.9	60.4	45.8	77
7:31:33 PM	50.9	55.2	46.4	67.2
7:32:33 PM	54.7	66.3	49.7	84.1
7:33:33 PM	60.2	67.5	48.8	81
7:34:33 PM	56.7	64	48.1	80
7:35:33 PM	57.7	63.5	49	78.5
7:36:33 PM	50.8	56.1	46.2	73.3
7:37:33 PM	50.8	56.3	46.3	71.6
7:38:33 PM	50	51.8	48.1	66.4
7:39:33 PM	52.7	58	45.7	72.6
7:40:33 PM	55.4	64.6	47.7	80.1
7:41:33 PM	49.4	51.7	47.8	62.7
7:42:33 PM	48.4	50.4	46.4	63.1
7:43:33 PM	49	52.5	46.3	67
7:44:33 PM	47.5	49.2	46.1	62.5
7:45:33 PM	48.8	52.6	46.9	71
7:46:33 PM	49.7	52.6	46.6	69
7:47:33 PM	50.7	54.6	48.9	68.1
7:48:33 PM	56.5	64	47	80.1
7:49:33 PM	52.5	55.4	50.3	69
7:50:33 PM	50.4	53.1	48.5	66.3
7:51:33 PM	49.7	53.3	47	63.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:52:33 PM	53.8	63.3	46.9	77.3
7:53:33 PM	54	62.8	49.4	80.2
7:54:33 PM	54.6	63.8	47.3	76.3
7:55:33 PM	67.7	69.4	50.1	90.1
7:56:33 PM	62.2	69	47.3	84.1
7:57:33 PM	50.2	56.3	47.6	72.2
7:58:33 PM	54.3	61.7	47.3	76.3
7:59:33 PM	50.4	54.8	47.3	67.2
8:00:33 PM	51.6	59.3	46.1	71.6
8:01:33 PM	55.3	62.1	46.3	76.8
8:02:33 PM	53.4	59.4	46	74.7
8:03:33 PM	57.6	61.7	50.2	76.7
8:04:33 PM	51.4	58.3	47	69.9
8:05:33 PM	53.7	61.7	48.7	77.4
8:06:33 PM	56.4	63.8	51	77.4
8:07:33 PM	53	58.7	49.8	69.3
8:08:33 PM	50.3	55.8	47.2	74
8:09:33 PM	49.3	56.9	46.7	72
8:10:33 PM	48.4	58.3	46.4	69.3
8:11:33 PM	57.4	63.4	49.3	77.8
8:12:33 PM	53.1	59.1	47.3	74.3
8:13:33 PM	51	56.6	45.6	71.7
8:14:33 PM	49	54.7	45.1	71.3
8:15:33 PM	51.7	59.9	46.7	74.8
8:16:33 PM	48.8	51.3	45.8	64.6
8:17:33 PM	51.3	57.1	47.3	70.7
8:18:33 PM	52.6	59.8	48.9	72.6
8:19:33 PM	48.6	53.6	45.9	67.2
8:20:33 PM	48.8	51	46.6	65.1
8:21:33 PM	58.3	63.4	50.3	80.7
8:22:33 PM	49.1	54	47.6	71.6
8:23:33 PM	50.2	55	47.3	71.4
8:24:33 PM	49.2	55.4	47	70.4
8:25:33 PM	52.9	61.2	47.3	73
8:26:33 PM	50.8	58	48.3	73.8
8:27:33 PM	50	53.9	47.7	68.7
8:28:33 PM	55.3	64.2	47.2	78.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:29:33 PM	53.7	59	46.8	73.1
8:30:33 PM	50.1	56.9	46.2	72.9
8:31:33 PM	48.9	52	47.5	67.6
8:32:33 PM	48.7	57.6	47	69.6
8:33:33 PM	50	54.8	48.3	68.8
8:34:33 PM	49.4	53.7	47.7	67.1
8:35:33 PM	49.7	57.8	46	73.5
8:36:33 PM	53.2	59.1	47.2	75.8
8:37:33 PM	48.6	54.4	45.7	66.8
8:38:33 PM	49.1	52.9	47.5	64.5
8:39:33 PM	48.6	52.4	47	68.3
8:40:33 PM	48.7	53.3	45.8	68.8
8:41:33 PM	48.8	55	45.3	69.3
8:42:33 PM	51.4	58	45.2	72.5
8:43:33 PM	49.5	57.6	46.6	66.7
8:44:33 PM	47.6	50.2	45.7	64.1
8:45:33 PM	50	52.7	47.1	67.8
8:46:33 PM	48.5	52.4	46.1	68.4
8:47:33 PM	47.9	49.4	46.3	62.6
8:48:33 PM	46.6	49.3	45.7	62.9
8:49:33 PM	49.1	52.8	46.7	67.8
8:50:33 PM	48.6	50.6	47	64
8:51:33 PM	49.2	53.5	44.8	68.7
8:52:33 PM	49.6	52.7	45.2	72.4
8:53:33 PM	48	50.9	45.1	63.9
8:54:33 PM	49	53.3	45.7	69.7
8:55:33 PM	47.3	50.9	45.2	64.1
8:56:33 PM	51.5	59.6	45.5	74
8:57:33 PM	55.2	62.5	47.6	79.1
8:58:33 PM	50.6	58.7	46.4	72.2
8:59:33 PM	49.9	57.3	45	73.3
9:00:33 PM	52.1	63.2	45.2	76.1
9:01:33 PM	55	63	46.2	74.9
9:02:33 PM	47.7	52.1	45.9	66.4
9:03:33 PM	49.2	52.5	45	67
9:04:33 PM	47	52.5	45.1	66.9
9:05:33 PM	48.6	51.4	45.3	64.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:06:33 PM	46.8	49.2	43.4	62.4
9:07:33 PM	57	63.8	48.5	80.5
9:08:33 PM	55.4	62.7	46.7	80.4
9:09:33 PM	52.6	59.8	46.3	73.7
9:10:33 PM	49.3	52.2	45.6	66
9:11:33 PM	48.9	51	46.7	67.9
9:12:33 PM	47	48.4	45.8	62.6
9:13:33 PM	47.4	52.6	44.9	68
9:14:33 PM	48.6	52.4	46.3	70.4
9:15:33 PM	52.6	58.4	47.6	75.4
9:16:33 PM	48.2	50	46.8	65
9:17:33 PM	47.2	53.6	44.9	68.1
9:18:33 PM	50	57.5	46.2	72.4
9:19:33 PM	49.4	54.9	45.4	69.3
9:20:33 PM	47.5	54.4	43.1	69.1
9:21:33 PM	52.4	62.7	45.6	76.6
9:22:33 PM	50.8	57.2	45.8	72.5
9:23:33 PM	47.6	50.3	45.9	66.8
9:24:33 PM	48	49.3	46.5	62.5
9:25:33 PM	46.4	48.7	44.3	61.4
9:26:33 PM	46.1	47.5	44.8	62.5
9:27:33 PM	46.2	50.1	43.9	66.7
9:28:33 PM	44.2	47.6	43	64.9
9:29:33 PM	46.2	47.5	44	60.8
9:30:33 PM	46.7	50	45	63.8
9:31:33 PM	47.1	49.7	44.7	63.4
9:32:33 PM	46.6	52.1	44	67.4
9:33:33 PM	49.5	59.5	44.7	73.8
9:34:33 PM	47.7	53.1	44.5	70.6
9:35:33 PM	49.2	56.8	45	73.8
9:36:33 PM	45.6	47.1	44.3	59.8
9:37:33 PM	45.2	47.9	44.1	62.7
9:38:33 PM	47.7	52.6	46.1	63.5
9:39:33 PM	45.8	47.6	44.4	60.6
9:40:33 PM	46.7	48.9	44.4	61.5
9:41:33 PM	47.2	49.1	45.2	62.5
9:42:33 PM	48.8	52.9	44.9	67.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:43:35 PM	45.8	47.5	44.3	61.1
9:44:35 PM	47.4	51.1	44.3	64
9:45:35 PM	50.4	56.3	44.6	71.8
9:46:35 PM	48	54.7	43.8	68.3
9:47:35 PM	47.8	54.1	43.8	73.6
9:48:35 PM	46	50.6	44.2	63.7
9:49:35 PM	47.8	55.7	43.6	70.5
9:50:35 PM	47.1	51	43.1	64.1
9:51:35 PM	45.5	47.8	44.2	61.1
9:52:35 PM	46.4	48.3	44.7	62.7
9:53:35 PM	46.1	47.9	44.4	60.6
9:54:35 PM	48.8	51.1	47.3	64.3
9:55:35 PM	48.1	49.1	47.5	68.6
9:56:35 PM	49.8	53.1	48.5	70.6
9:57:35 PM	47.3	53.4	44.7	66.3
9:58:35 PM	44.8	46.4	43.6	59.2
9:59:35 PM	47	49.1	45.1	63.2
10:00:35 PM	46.6	48.9	45	61.5
10:01:35 PM	48.4	51.6	45.2	65.9
10:02:35 PM	46.4	49.4	44.9	63
10:03:35 PM	45.7	48.7	44.3	62.7
10:04:35 PM	46.7	48.9	44.5	62.7
10:05:35 PM	47.1	49.4	43.9	62.9
10:06:35 PM	51.1	63.1	43.4	77.7
10:07:35 PM	48.3	52.3	45.8	66.7
10:08:35 PM	46.7	51.9	44.6	67.7
10:09:35 PM	45.5	47.6	44.4	60.8
10:10:35 PM	49.5	54.9	44.3	70.6
10:11:35 PM	49.7	56.4	44.7	68.1
10:12:35 PM	49.4	53.6	44.6	67.3
10:13:35 PM	47	50.2	43.8	63.1
10:14:35 PM	46	47.4	44.9	60.1
10:15:35 PM	46	51.5	43.8	65.1
10:16:35 PM	45.8	47.4	44.3	61.9
10:17:35 PM	46.2	48.2	45	64
10:18:35 PM	45.5	47.4	43.9	61.6
10:19:35 PM	44.9	47.6	43.4	67.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:20:35 PM	47.1	51	44.2	66.3
10:21:35 PM	46.9	50.1	44.5	62.9
10:22:35 PM	47.4	51.5	43.7	64.3
10:23:35 PM	50.9	57.7	47.9	68.9
10:24:35 PM	51.3	59.7	45.3	70
10:25:35 PM	54.3	59.9	49.2	72.9
10:26:35 PM	50	56.6	46	71.1
10:27:35 PM	47.4	52.8	44.2	65.4
10:28:35 PM	50	59	45.4	72.3
10:29:35 PM	45.5	48.5	43.4	67.9
10:30:35 PM	45	47.5	42.8	60.6
10:31:35 PM	46.1	47.6	44.6	60.4
10:32:35 PM	45.1	47.3	43.8	60.6
10:33:35 PM	46.5	49.5	45.1	63.6
10:34:35 PM	47	52.7	44.6	66.9
10:35:35 PM	45.5	47.4	43.6	61.1
10:36:35 PM	47.2	49.4	44.2	63
10:37:35 PM	47.3	51.3	44.7	70.7
10:38:35 PM	49.1	52	46.9	72.3
10:39:35 PM	48.5	53.7	44.7	68.7
10:40:35 PM	44.8	51.4	43.3	61.5
10:41:35 PM	45.1	46.1	44	59.4
10:42:35 PM	47	52.1	43.6	63.3
10:43:35 PM	44.7	48.4	42.7	61.4
10:44:35 PM	44.2	46.3	42.9	59.2
10:45:35 PM	45.7	47.9	44	64
10:46:35 PM	45.9	47.5	43.7	60.7
10:47:35 PM	46.3	47.9	44.4	61.7
10:48:35 PM	43.7	45.1	41.8	58.9
10:49:35 PM	44.3	48.1	42.7	61.9
10:50:35 PM	45.4	48.4	43.4	63.7
10:51:35 PM	45.1	48.6	43.4	61.1
10:52:35 PM	45.4	48	43.6	62
10:53:35 PM	45.3	50	42.8	67.7
10:54:35 PM	43.4	45.5	42.1	57.8
10:55:35 PM	45.4	47.8	43.2	64.1
10:56:35 PM	45.7	50.3	43.7	63.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:57:35 PM	44.5	45.4	43.4	59.3
10:58:35 PM	45.7	47.4	44.2	60.6
10:59:35 PM	45.8	47.6	43.6	61.1
11:00:35 PM	48.7	54.6	46.1	67.4
11:01:35 PM	45	48.4	42.5	64
11:02:35 PM	44.1	46.4	42.5	66.7
11:03:35 PM	45.6	47.4	43.7	60.6
11:04:35 PM	48.5	50.6	45.8	63.8
11:05:35 PM	45	47.5	43.2	61.1
11:06:35 PM	48.4	57.3	43.9	72.2
11:07:35 PM	52.6	59.9	44.1	74.1
11:08:35 PM	47.3	49.7	45.1	63.7
11:09:35 PM	45.5	48.5	43.3	62.1
11:10:35 PM	51.4	59	42.8	71.4
11:11:35 PM	47.7	51.9	43.9	64
11:12:35 PM	47.7	53.6	44.7	67.5
11:13:35 PM	45.5	46.7	44.8	59.9
11:14:35 PM	44.6	46	43.6	59.8
11:15:35 PM	45.2	46.4	43.8	59.3
11:16:35 PM	45	46.7	43.6	60.1
11:17:35 PM	46.9	49.1	44.5	61.8
11:18:35 PM	47.9	50.4	45.1	63.7
11:19:35 PM	47.6	52.3	44.7	63.9
11:20:35 PM	45.3	46.3	44.2	60.3
11:21:35 PM	44.8	45.9	43.7	59.5
11:22:35 PM	45.5	49	43.7	66.7
11:23:35 PM	43.9	45	42.6	58.8
11:24:35 PM	45.2	46.5	43.6	60.7
11:25:35 PM	44.4	45.7	43.4	58.6
11:26:35 PM	45.2	46.7	43.8	60
11:27:35 PM	44.4	45.6	43.4	59.1
11:28:35 PM	43.8	44.9	42.7	57.8
11:29:35 PM	43.9	46.6	42	58.9
11:30:35 PM	51.5	56.7	43.9	69.7
11:31:35 PM	46.5	52.1	43.9	63.1
11:32:35 PM	43.6	44.7	42.5	58
11:33:35 PM	44.6	46.8	43	60.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:34:35 PM	43.4	44.9	42.3	57.9
11:35:35 PM	43.8	47.6	42.4	60.6
11:36:35 PM	43.6	45	42.5	57.4
11:37:35 PM	43.3	43.7	41.7	58.7
11:38:35 PM	44.2	45.8	42.4	58.9
11:39:35 PM	44.7	46.7	43.2	59.6
11:40:35 PM	45.1	46.5	43.9	59.1
11:41:35 PM	45.8	51.4	43.5	63.3
11:42:35 PM	45.7	47.6	43.4	61.8
11:43:35 PM	43.4	44.6	41.9	58
11:44:35 PM	47	52.8	42.1	65
11:45:35 PM	50.6	56.6	44.6	70
11:46:35 PM	46.5	54.4	41.6	67
11:47:35 PM	45.1	48.6	43.5	61.8
11:48:35 PM	44.7	46	42.7	59.7
11:49:35 PM	44.2	46.8	43.1	59.8
11:50:35 PM	44	46.1	41.9	59.4
11:51:35 PM	43.4	46.4	41.3	59.4
11:52:35 PM	42.4	43.1	41.4	56.6
11:53:35 PM	42.9	46.3	40.6	60.3
11:54:35 PM	43.1	45.2	40.9	57.9
11:55:35 PM	44	46.6	41.3	63.5
11:56:35 PM	44.2	48.7	41.4	67.7
11:57:35 PM	44.6	47.8	42.3	61.9
11:58:35 PM	43.9	46.3	42.8	60.6
11:59:35 PM	42.6	44.2	41.6	57.3
3/16/2021 12:00:35 AM	44.7	49.6	42.9	62.6
12:01:35 AM	44.5	46.1	43.4	59.1
12:02:35 AM	43.9	45.8	42.5	58.1
12:03:35 AM	43.6	46.4	41.7	59.2
12:04:35 AM	43	45.4	41.7	58.3
12:05:35 AM	45	48.7	42.1	61.6
12:06:35 AM	48.5	53.3	42.9	65.5
12:07:35 AM	43.3	45.4	42	60.9
12:08:35 AM	42.2	43.9	41.2	56.3
12:09:35 AM	43.6	45.1	42.2	59.9
12:10:35 AM	43	44.8	41.9	57.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:11:35 AM	43.9	46	41.6	59.6
12:12:35 AM	45.7	48.1	43.9	62.1
12:13:35 AM	43.9	46	42.2	58.5
12:14:35 AM	48.6	52.3	44.7	63.7
12:15:35 AM	44.9	46.5	43.6	60.9
12:16:35 AM	42.8	43.7	41.6	57.9
12:17:35 AM	42.3	44	40.3	56.9
12:18:35 AM	43.6	46	40.3	58.7
12:19:35 AM	44.2	48.7	41.1	62.7
12:20:35 AM	42.9	43.9	41.6	58.7
12:21:35 AM	42.2	44.2	40.9	57.1
12:22:35 AM	42.8	44.1	41.3	58.7
12:23:35 AM	42.5	44.3	41.5	58.8
12:24:35 AM	41.1	42.9	39.9	56.3
12:25:35 AM	45.3	47.3	42.7	60.1
12:26:35 AM	48	52.9	45	63.5
12:27:35 AM	44.1	45.6	42.1	59
12:28:35 AM	45.9	48.3	42.4	61.7
12:29:35 AM	42.4	45	40.9	58.1
12:30:35 AM	47.4	52.9	41.7	63.7
12:31:35 AM	45.2	46.2	43.6	60.2
12:32:35 AM	45.9	49.5	43.8	62.8
12:33:35 AM	45.7	49.3	43.2	62.1
12:34:35 AM	44.4	45.4	43.4	58.3
12:35:35 AM	45.6	47.2	44	60.2
12:36:35 AM	44.6	46.2	43.3	58.6
12:37:35 AM	47.1	52.8	43.3	64.3
12:38:35 AM	44.5	46.4	42.8	60
12:39:35 AM	45.6	50.6	42	63.9
12:40:35 AM	46	54.4	43.4	66.9
12:41:35 AM	42.8	44.3	41.3	58
12:42:35 AM	44.6	47.3	41.5	59.8
12:43:35 AM	43.1	46.3	40.1	58.9
12:44:35 AM	45.3	47.6	42	60.8
12:45:35 AM	43.6	45.9	42	61.2
12:46:35 AM	43.8	45.4	42.3	59.5
12:47:35 AM	44.8	47.4	43	61.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:48:35 AM	46	49.3	42.3	61.3
12:49:35 AM	43.1	44.6	41.9	58.4
12:50:35 AM	42.6	43.7	41.3	57.3
12:51:35 AM	42	43.6	40.7	56.9
12:52:35 AM	44.7	46	43.6	58.4
12:53:35 AM	43.7	44.7	42.8	57.6
12:54:35 AM	45	47.4	43.7	59.2
12:55:35 AM	46.3	49	44.1	61.9
12:56:35 AM	44.8	47.6	43.7	60.1
12:57:35 AM	45.1	47.6	43.2	59.6
12:58:35 AM	42.8	44.3	41.3	57
12:59:35 AM	44.7	47.8	43.2	60.1
1:00:35 AM	46	48.7	42.7	61.9
1:01:35 AM	42.5	43.4	41.2	57.3
1:02:35 AM	42.7	43.4	41.3	58.7
1:03:35 AM	42.9	44.2	41.5	58.2
1:04:35 AM	42.8	44.2	41.2	56.8
1:05:35 AM	42.5	45.6	40.5	59.1
1:06:35 AM	44.4	47	41.3	60.5
1:07:35 AM	46.1	51.6	41.1	63.7
1:08:35 AM	45.3	49.3	42.5	65.4
1:09:35 AM	45.5	50.8	42.1	63.6
1:10:35 AM	44.4	48.9	40.4	71.8
1:11:35 AM	42.9	48.9	41.1	73.8
1:12:35 AM	44	46.2	42.3	59.1
1:13:35 AM	44.3	48	41.3	61.6
1:14:35 AM	42.9	44.8	41.5	57.7
1:15:35 AM	43.3	44.8	41.8	58.6
1:16:35 AM	42.1	43.8	41.1	56.2
1:17:35 AM	43.1	44.6	41.6	57.5
1:18:35 AM	42.2	43.4	41.1	56.8
1:19:35 AM	44.2	45.6	42.5	58.2
1:20:35 AM	46.1	48.5	44.3	61.5
1:21:35 AM	46.2	51.2	44.4	63.6
1:22:35 AM	44.7	46.4	42.8	59.4
1:23:35 AM	45	46.3	42.8	60.4
1:24:35 AM	43.7	47.3	43.6	60.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:25:35 AM	43.8	45.9	41.3	58.7
1:26:35 AM	44.5	46.4	41.5	58.8
1:27:35 AM	45.7	48.5	44.1	61.6
1:28:35 AM	44.6	47.3	42.6	61.3
1:29:35 AM	45.3	47.3	43.1	60.7
1:30:35 AM	44.4	46.8	42	58.9
1:31:35 AM	43.9	45.8	42.6	58.8
1:32:35 AM	45.4	46.5	43.7	59.9
1:33:35 AM	47.1	50.6	43.9	64.8
1:34:35 AM	44.7	47.8	42.3	60
1:35:35 AM	46.7	49.8	44.5	63.5
1:36:35 AM	44.6	47.1	43.2	59.7
1:37:35 AM	45.8	48.5	43.8	61.3
1:38:35 AM	44.3	45.7	43	58.5
1:39:35 AM	46	48.9	44.7	61.3
1:40:35 AM	46.4	50.4	44	62.9
1:41:35 AM	47.1	49.3	45	61.8
1:42:35 AM	46.9	50	45.4	63.1
1:43:35 AM	51	57.7	46.9	69.5
1:44:35 AM	50.4	57.7	45.8	69.8
1:45:35 AM	48.9	50	47	63.1
1:46:35 AM	46.4	49.4	43.7	62.1
1:47:35 AM	44.9	45.8	43.8	59.3
1:48:35 AM	44.5	45.5	43.7	59.9
1:49:35 AM	45.6	51.6	43.9	63.8
1:50:35 AM	52.4	53.3	47.4	67.8
1:51:35 AM	52.5	53.8	50.4	66.2
1:52:35 AM	47.3	50.4	45.7	61.8
1:53:35 AM	47	50.7	43.8	67.6
1:54:35 AM	44.7	47.7	43.1	66.1
1:55:35 AM	44.6	48.4	43.1	66.3
1:56:35 AM	44.4	45.9	43.2	61.4
1:57:35 AM	45.1	47	44.1	59.3
1:58:35 AM	45.4	48.9	43.3	63.4
1:59:35 AM	44.9	46.8	43.1	60.1
2:00:35 AM	46.4	49	43.7	63
2:01:35 AM	45.9	48.2	44	61.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:02:35 AM	47.6	50.8	46.5	63.9
2:03:35 AM	49.2	51.8	46.6	67.7
2:04:35 AM	47.8	50.6	46	62.5
2:05:35 AM	46.7	47.7	44.9	60.7
2:06:35 AM	46	47.8	44.2	61.2
2:07:35 AM	46.3	47.7	44.8	60.2
2:08:35 AM	47.1	48.3	45.8	60.9
2:09:35 AM	47.9	49.4	46.2	62.2
2:10:35 AM	47.7	50.3	45.3	62.7
2:11:35 AM	45.7	47	44.3	59.9
2:12:35 AM	46	47	44.6	60.9
2:13:35 AM	45.9	47	44.7	59.4
2:14:35 AM	46.7	48.3	45	61.2
2:15:35 AM	47.4	49.5	45.9	62
2:16:35 AM	47.4	49.1	46.1	61.9
2:17:35 AM	47.7	49.2	46.1	63
2:18:35 AM	46.4	48.9	44.9	61.9
2:19:35 AM	45.5	46.9	44	60.7
2:20:35 AM	47	49	44.4	61.6
2:21:35 AM	49.9	52.1	44.7	64.6
2:22:35 AM	45.5	46.9	44.3	60.1
2:23:35 AM	44	46.1	42	58.6
2:24:35 AM	46.1	48.2	43.8	60.3
2:25:35 AM	45.5	46.7	44	60.7
2:26:35 AM	44.1	47.4	42.9	60.8
2:27:35 AM	47.5	50.3	45.4	63.3
2:28:35 AM	46.8	49	44.4	61.6
2:29:35 AM	47.3	48.7	45.9	61.5
2:30:35 AM	46.7	48.1	44.4	60.7
2:31:35 AM	46.4	48.5	45.5	60.8
2:32:35 AM	47.6	49.3	46.2	61.3
2:33:35 AM	48.1	50	46.5	67.9
2:34:35 AM	47.4	48.9	46	62
2:35:35 AM	48	49.9	46.2	63.3
2:36:35 AM	48.1	53.1	44.9	64.6
2:37:35 AM	47.3	49.8	44.7	62.4
2:38:35 AM	46.7	51.3	44.7	64.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:39:35 AM	47.7	50.3	46.3	62.1
2:40:35 AM	48.6	51.1	46.1	63.3
2:41:35 AM	46.8	49.8	45.5	62.8
2:42:35 AM	46.4	48.5	43.9	61.9
2:43:35 AM	46.2	50.1	43.1	62.4
2:44:35 AM	47.1	50.7	43	63.6
2:45:35 AM	46	47.9	44.7	60.3
2:46:35 AM	48.9	52.5	46	66
2:47:35 AM	45.3	48.1	41.1	60.3
2:48:35 AM	41.6	43.9	39.9	56.3
2:49:35 AM	43.1	49.8	40	62.7
2:50:35 AM	45.3	49.7	41.3	62.1
2:51:35 AM	47.1	51.7	41.9	65.4
2:52:35 AM	45.7	47.6	43.3	60.8
2:53:35 AM	44.8	46.7	43.6	59.1
2:54:35 AM	47.8	51.7	44.2	64.3
2:55:35 AM	47.8	51.6	43.6	64.8
2:56:35 AM	43.7	45.1	42.7	59.9
2:57:35 AM	47.4	50.9	43.1	62.9
2:58:35 AM	44.1	47.6	40.7	62.1
2:59:35 AM	43.3	46.9	40.8	60
3:00:35 AM	45.1	47.8	43	60.7
3:01:35 AM	45.5	47.3	44.1	60.3
3:02:35 AM	44.7	46.5	42.8	59.3
3:03:35 AM	46.1	49.9	42.8	62.9
3:04:35 AM	46.7	51.1	42.4	63.4
3:05:35 AM	47	50.9	43.9	64.5
3:06:35 AM	47.5	51.3	45.4	63.1
3:07:35 AM	46.1	49.5	44	61.7
3:08:35 AM	45.8	48.1	43.5	61
3:09:35 AM	45.8	47.5	43.9	60.3
3:10:35 AM	45.4	49.4	43.3	63.5
3:11:35 AM	45.3	47.5	43.5	61.1
3:12:35 AM	47	53	43	74.4
3:13:35 AM	44.6	47.3	42	64.2
3:14:35 AM	46.5	49.7	42	61.7
3:15:35 AM	44.8	49.4	41.9	70

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:16:35 AM	44.9	50.4	42.3	63.2
3:17:35 AM	45.7	47.8	43.6	60.6
3:18:35 AM	45.2	48.7	43.9	61.6
3:19:35 AM	45.7	48.3	43.3	61.1
3:20:35 AM	46.4	50.1	44.7	63.1
3:21:35 AM	45.5	49.5	42.3	61.3
3:22:35 AM	46.5	49.5	44	62.4
3:23:35 AM	45.9	48.3	44.5	60.7
3:24:35 AM	45.6	47.1	43.7	60.4
3:25:35 AM	45.5	46.8	44.1	59.6
3:26:35 AM	46.4	48	44.7	60.4
3:27:35 AM	45.9	47.9	44.3	61.3
3:28:35 AM	45.8	47.1	44	61.2
3:29:35 AM	46	48.1	44.3	61.6
3:30:35 AM	47.4	48.4	46	62.6
3:31:35 AM	47.1	49.8	45.4	62.8
3:32:35 AM	46.7	49.5	44	61.8
3:33:35 AM	47.5	48.7	45.3	62.1
3:34:35 AM	46.9	48.5	44.9	61.5
3:35:35 AM	47.3	48.7	45.9	61.3
3:36:35 AM	47.2	49.7	45.1	62.2
3:37:35 AM	47.4	48.7	45.8	61.6
3:38:35 AM	47.6	49.4	46.1	62.9
3:39:35 AM	47.2	49.2	45.9	62.8
3:40:35 AM	48	50.3	45.7	63.1
3:41:35 AM	48.7	50	47.2	63
3:42:35 AM	52.7	62.2	47.6	74.8
3:43:35 AM	52.5	62.4	47.4	75.5
3:44:35 AM	47.9	49.7	46.6	63.7
3:45:35 AM	47.6	49.4	46	62.4
3:46:35 AM	46.8	48	45.2	60.5
3:47:35 AM	46.2	47.3	44.6	60.7
3:48:35 AM	46.5	48.3	44.1	60.9
3:49:35 AM	48.2	49.9	46.4	63.4
3:50:35 AM	47.7	49.5	46.5	61.9
3:51:35 AM	49.4	51.9	47.1	63.6
3:52:35 AM	49.1	52	46.5	63.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:53:35 AM	46.9	48.4	45.7	61
3:54:35 AM	47	48.8	45.4	61.6
3:55:35 AM	46.2	47.5	44.7	60.9
3:56:35 AM	46.7	47.9	44.6	60.6
3:57:35 AM	47.3	50	45.7	62
3:58:35 AM	46.2	47.6	44.8	60.8
3:59:35 AM	47.1	48.9	45.4	61.7
4:00:35 AM	46.5	48.2	44.5	62.6
4:01:35 AM	45.3	47.7	44.1	61.6
4:02:35 AM	45.8	48.7	44.7	60.3
4:03:35 AM	46.2	47	45.4	60.3
4:04:35 AM	45.8	47.3	45	60.3
4:05:35 AM	48.4	51.3	46.6	62.7
4:06:35 AM	48.1	51.1	46.2	64.2
4:07:35 AM	47.5	48.8	46.4	61.8
4:08:35 AM	47.6	48.9	46.4	61.7
4:09:35 AM	46.9	48.1	45.3	61.6
4:10:35 AM	47	48.9	45.7	61
4:11:35 AM	47.1	49.1	45.5	60.9
4:12:35 AM	46.7	48.6	45.2	60.9
4:13:35 AM	48.7	50.5	46.8	64.3
4:14:35 AM	48.5	51.4	46.7	64.3
4:15:35 AM	48.1	51.1	46.3	63.9
4:16:35 AM	48.4	50	46.7	63.1
4:17:35 AM	47.6	49.9	45.7	62.5
4:18:35 AM	47.8	49.3	46.7	62.7
4:19:35 AM	47.1	48.6	46.1	62.1
4:20:35 AM	47.6	50.7	45.4	62.7
4:21:35 AM	48.1	50.7	46	63.5
4:22:35 AM	48.3	49.6	47.3	63
4:23:35 AM	47.5	48.5	46.6	61.7
4:24:35 AM	49.4	50.8	47.7	64
4:25:35 AM	47.1	50.1	45.9	62
4:26:35 AM	50.5	57.6	46.6	70.4
4:27:35 AM	52.1	60.3	48.8	73.5
4:28:35 AM	49.8	51	48.9	63.7
4:29:35 AM	49.7	51.4	48	64.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:30:35 AM	50.3	51.5	48.4	63.6
4:31:35 AM	49.9	53.9	47.8	69.3
4:32:35 AM	50.4	52.8	47.6	65.3
4:33:35 AM	48.8	51.5	47.1	63.3
4:34:35 AM	49.4	58.4	47.3	73.4
4:35:35 AM	48.4	50.9	46.9	63.9
4:36:35 AM	48.4	50.9	46.7	62.8
4:37:35 AM	48.4	50.3	47.1	63.5
4:38:35 AM	47.7	49.6	46.5	62.5
4:39:35 AM	47.8	49.1	46.6	62.6
4:40:35 AM	48.1	50	46.4	62.8
4:41:35 AM	51.2	54.6	48.4	70.1
4:42:35 AM	52.1	57	48.9	69.5
4:43:35 AM	52.4	55.2	50.4	68.8
4:44:35 AM	49.4	57.1	43.6	71.7
4:45:35 AM	48.9	52.4	46.1	65.1
4:46:35 AM	49.7	52.7	48	65.2
4:47:35 AM	49.9	52.9	46.9	65.8
4:48:35 AM	51.7	54.2	46.8	66.7
4:49:35 AM	49.1	52.8	46.1	63.6
4:50:35 AM	48.5	52.2	45	65.5
4:51:35 AM	49.4	52.7	46.5	65.7
4:52:35 AM	50.8	54	45.3	67.2
4:53:35 AM	48.6	51.3	46.3	63.4
4:54:35 AM	49.2	51.5	46.6	65.8
4:55:35 AM	50.7	52.3	46.9	63.1
4:56:35 AM	46.9	48.7	45.4	61.9
4:57:35 AM	49.5	51.1	48.1	63.7
4:58:35 AM	49	50.8	47	68.7
4:59:35 AM	48.4	49.9	47	62.5
5:00:35 AM	50	52	47.5	63.3
5:01:35 AM	50.4	52.7	47.8	65.1
5:02:35 AM	49.4	53.3	46.9	68.1
5:03:35 AM	51	56.3	46.5	69.1
5:04:35 AM	48.2	49.9	46.3	62.9
5:05:35 AM	50.7	54.9	45.3	68.1
5:06:35 AM	49.1	53.7	46.4	66.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:07:35 AM	49.2	51.2	46.3	64.7
3:08:35 AM	51.3	54	46	68.4
3:09:35 AM	48.7	52.2	45.4	64.7
3:10:35 AM	49.9	52.3	43.7	63.7
3:11:35 AM	49.3	51.8	47.1	65.2
3:12:35 AM	48.5	52.3	46.3	65.6
3:13:35 AM	48.5	50.4	47.2	64.5
3:14:35 AM	50.8	52.5	48.6	65.3
3:15:35 AM	51.4	52.9	48.9	66.3
3:16:35 AM	52.1	53.4	50.3	66.2
3:17:35 AM	50.1	51.1	49	63.8
3:18:35 AM	50.3	52.7	48.3	67
3:19:35 AM	51.7	53.4	49.7	65.9
3:20:35 AM	51.5	53.4	49.2	69.1
3:21:35 AM	50.3	53.6	48.9	66.7
3:22:35 AM	51.8	54.2	49.5	67.1
3:23:35 AM	51.3	52.5	49.8	63.5
3:24:35 AM	50.1	51.2	48.6	64.8
3:25:35 AM	50.3	51.4	49.1	65.6
3:26:35 AM	50.2	52.6	48.3	63.8
3:27:35 AM	51.1	52.5	50	65.5
3:28:35 AM	50.7	51.9	49.2	63.4
3:29:35 AM	50	51.1	49.1	64.4
3:30:35 AM	50.3	52.4	48.6	65.1
3:31:35 AM	51.9	53.2	50.7	66.4
3:32:35 AM	49.5	51.7	47.1	64.3
3:33:35 AM	50.2	53.1	47.2	65.4
3:34:35 AM	52	56.2	50.5	69.6
3:35:35 AM	50.3	51.9	48.5	65.6
3:36:35 AM	51.9	53.8	50.5	65.9
3:37:35 AM	50.8	52	49.5	64.6
3:38:35 AM	51.8	53.5	50.6	67.5
3:39:35 AM	51.8	53.8	49.9	66.6
3:40:35 AM	50.5	52.1	49.5	64.9
3:41:35 AM	51.8	53.1	50.5	66.1
3:42:35 AM	50.8	52.1	49.3	66.5
3:43:35 AM	52.1	54.4	50.5	66.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:44:35 AM	51.4	52.8	50.1	63.4
5:45:35 AM	50.6	53.4	49.4	66.6
5:46:35 AM	52.6	54.7	50.8	67.1
5:47:35 AM	51	52.8	50	67.3
5:48:35 AM	49.8	53.6	47.8	66.8
5:49:35 AM	50.5	54.9	47.5	67.2
5:50:35 AM	52.5	53.6	51.7	66.5
5:51:35 AM	51.3	52	50.3	63.3
5:52:35 AM	51.4	53.2	50.1	66.4
5:53:35 AM	50.7	52.2	49.3	65.1
5:54:35 AM	52.2	53.5	50.9	66.4
5:55:35 AM	52.5	53.1	51.4	67.7
5:56:35 AM	50.2	53	48.3	67.4
5:57:35 AM	50.6	52.3	49	63.5
5:58:35 AM	50.8	52.4	49.5	63.1
5:59:35 AM	52.1	57	50.1	69.3
6:00:35 AM	51	52.3	50	63.1
6:01:35 AM	50.5	52.1	49.4	67.9
6:02:35 AM	51.4	52.3	50.3	63.9
6:03:35 AM	50.6	51.9	49.5	63.3
6:04:35 AM	52.5	53.7	51.7	66.5
6:05:35 AM	51.2	52.7	50	66.8
6:06:35 AM	51.9	54.3	50.7	67.3
6:07:35 AM	52.1	53.8	49.6	66.2
6:08:35 AM	52.4	54.1	50.1	67.5
6:09:35 AM	52.8	53.4	50.3	67.4
6:10:35 AM	53.1	57.9	49.9	71.2
6:11:35 AM	53.5	55.5	51.9	67.9
6:12:35 AM	51.6	55.8	49.8	68.6
6:13:35 AM	51.9	53.2	49.6	66
6:14:35 AM	51.8	53	50.5	67.1
6:15:35 AM	52	53.3	51	66.3
6:16:35 AM	52.3	53.1	51.2	66.5
6:17:35 AM	51.7	53	50.3	66.3
6:18:35 AM	53.2	54.2	52.4	67.3
6:19:35 AM	53.9	58.1	51.4	69.8
6:20:35 AM	53.7	54.6	52	67.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:21:35 AM	51.8	53.5	48.6	66.1
6:22:35 AM	51.3	52.8	48.6	66.3
6:23:35 AM	52.7	53.8	50.6	67.1
6:24:35 AM	52.4	54.3	50.5	66.8
6:25:35 AM	52.8	54.4	51	67.5
6:26:35 AM	52.6	53.1	49.8	67.4
6:27:35 AM	52.9	54	52.1	67.1
6:28:35 AM	53.3	54.8	51.7	68.3
6:29:35 AM	52.6	53.8	51.2	67.8
6:30:35 AM	52.5	53.5	51	67
6:31:35 AM	52.1	54.8	49.8	67.7
6:32:35 AM	54.7	57	53.2	70.1
6:33:35 AM	52.9	54.6	50.7	67.8
6:34:35 AM	53	54.1	51.4	67.8
6:35:35 AM	52.9	54.7	52.1	69.3
6:36:35 AM	52.3	53.2	51.6	66.6
6:37:35 AM	52.6	54.1	51.8	66.6
6:38:35 AM	52.5	53.8	51.3	67.2
6:39:35 AM	52.7	53	51.9	68.8
6:40:35 AM	52.3	53.3	51.1	66.3
6:41:35 AM	53	57.2	50.6	70.5
6:42:35 AM	52.2	53.3	50.6	66.3
6:43:35 AM	51.4	53	50.1	66.1
6:44:35 AM	53.8	55.3	52.2	67.5
6:45:35 AM	52.4	54.1	51.3	67.5
6:46:35 AM	54.1	55.9	52.7	68.9
6:47:35 AM	52	53.8	50.4	66.6
6:48:35 AM	51.4	54.2	49.1	67.1
6:49:35 AM	55.1	61.9	51.5	74.2
6:50:35 AM	53.8	57.9	51.3	70.6
6:51:35 AM	54	55	53	68.5
6:52:35 AM	53.2	54.4	52.5	67
6:53:35 AM	54.9	56.8	53.6	69.7
6:54:35 AM	53.2	53.7	51.4	68.3
6:55:35 AM	52.1	53.5	51.1	66.3
6:56:35 AM	51.2	51.9	49.9	65.3
6:57:35 AM	51.7	53.3	50.3	66.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:58:35 AM	52.3	53.3	51.3	66.9
6:59:35 AM	51.9	53.2	50.4	67
7:00:35 AM	51.3	53.3	50.1	66.8
7:01:35 AM	51.1	52.4	49.7	66.3
7:02:35 AM	53.4	56.6	52.1	71
7:03:35 AM	55.2	58.6	51.3	73.7
7:04:35 AM	54.7	57.8	50.9	71
7:05:35 AM	54.3	58.3	51.6	72.9
7:06:35 AM	53.4	56.1	50	71.2
7:07:35 AM	54.1	57.3	51.5	70.7
7:08:35 AM	52.9	56	50.8	69.6
7:09:35 AM	52.4	54.4	50.7	70.1
7:10:35 AM	51.9	54.4	49.4	69
7:11:35 AM	52.9	54.6	50.1	69.1
7:12:35 AM	53.8	55.3	51	70
7:13:35 AM	53	55.6	50.3	71.3
7:14:35 AM	52.8	53	50.4	69
7:15:35 AM	51.9	54.2	49.3	66.7
7:16:35 AM	50.8	52.1	49.6	66
7:17:35 AM	50.4	51.6	49.3	64.8
7:18:35 AM	53.9	56.7	49.6	69.8
7:19:35 AM	50.7	52.6	48.8	66.1
7:20:35 AM	51.3	54.3	48.8	67.3
7:21:35 AM	52.1	56	49.8	71.7
7:22:35 AM	54.2	59	50.1	72.7
7:23:35 AM	51.7	53.3	50.7	63.3
7:24:35 AM	51.6	58.1	47.9	70.4
7:25:35 AM	50.4	52	48.1	66.4
7:26:35 AM	50.9	52.7	49.7	65.4
7:27:35 AM	50.3	52.8	49.3	67.3
7:28:35 AM	49.7	51.8	48.3	63.9
7:29:35 AM	51.9	53.6	49	67.7
7:30:35 AM	51.2	52.4	50.1	66
7:31:35 AM	50.8	52.7	49.1	63.8
7:32:35 AM	50.4	52.6	48.9	67.1
7:33:35 AM	51	52.7	49.6	68.7
7:34:35 AM	53.1	67	49.4	74.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:35:35 AM	54.2	63.3	51.9	76.9
7:36:35 AM	52.4	53.5	51.3	66.9
7:37:35 AM	52.7	56.7	51.1	69.4
7:38:35 AM	51	53.1	49.7	63.6
7:39:35 AM	50.6	51.5	49.7	64.8
7:40:35 AM	51.5	54.3	48.4	68.1
7:41:35 AM	51.6	53.4	48.7	70.6
7:42:35 AM	52.1	55	49.9	77.2
7:43:35 AM	49.9	52.3	48.5	71
7:44:35 AM	51.9	53	50.5	67.8
7:45:35 AM	50.2	51.8	48.7	70.8
7:46:35 AM	50.4	51.8	48.9	64.2
7:47:35 AM	51.6	53.9	49.7	66.9
7:48:35 AM	51.9	53.8	50.5	66.9
7:49:35 AM	51.3	54	49.9	74.1
7:50:35 AM	51.4	54.1	49.9	69.3
7:51:35 AM	51.1	52.5	50	69.6
7:52:35 AM	51.9	53.1	50.9	65.8
7:53:35 AM	53	55.9	51	69
7:54:35 AM	51.8	54.3	50	67.3
7:55:35 AM	51.7	53.5	50.5	66.5
7:56:35 AM	52.1	54.3	49.8	66.8
7:57:35 AM	51.6	54	48.8	68.4
7:58:35 AM	52.1	55.2	50.2	70.6
7:59:35 AM	51.6	53.6	49.9	67.5
8:00:35 AM	52.2	54.2	49.3	67.8
8:01:35 AM	51.5	52.6	50.2	65.6
8:02:35 AM	52.1	53.6	50.7	67.3
8:03:35 AM	52.2	54.5	50.4	67.1
8:04:35 AM	51.5	54.6	49.2	67.6
8:05:35 AM	54.1	58.9	50.1	71.1
8:06:35 AM	53.5	56.8	50.5	69.6
8:07:35 AM	52.7	54.4	51	68.4
8:08:35 AM	51.7	53.7	49.4	67.2
8:09:35 AM	51.3	53.9	49.3	66.7
8:10:35 AM	52.1	54.8	49.9	70
8:11:35 AM	51.4	53.3	47.3	67.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:12:35 AM	49.9	52.2	46.9	66.3
8:13:35 AM	50.2	53.7	48.1	71.5
8:14:35 AM	52.3	55.5	49.6	68
8:15:35 AM	52.7	55.7	48.6	67
8:16:35 AM	52.3	53.6	49.9	67.2
8:17:35 AM	52.4	55	50.4	68
8:18:35 AM	57	69.8	48.7	89.1
8:19:35 AM	51.8	53.3	49.9	66
8:20:35 AM	53.2	57.6	49	72
8:21:35 AM	53.5	57.2	50.3	68.9
8:22:35 AM	53.5	57.2	52	70.9
8:23:35 AM	53.3	57.3	51	71.4
8:24:35 AM	55.6	58.4	52.8	71.9
8:25:35 AM	52.9	55.3	50.8	67.4
8:26:35 AM	55.1	57.3	52.1	69.4
8:27:35 AM	54	56.8	51	72.7
8:28:35 AM	52.5	55	50.1	68.1
8:29:35 AM	54.7	57	52.2	70.8
8:30:35 AM	55.7	57.4	53.3	70.9
8:31:35 AM	55.6	57.5	52.2	72.3
8:32:35 AM	55.6	62	51.1	75.8
8:33:35 AM	56.7	58.8	54.8	71.2
8:34:35 AM	54.2	55.9	51.6	68.8
8:35:35 AM	55.4	57.9	51.2	71.1
8:36:35 AM	54.4	57.4	51.1	70.3
8:37:35 AM	56.5	58.7	51.8	71.5
8:38:35 AM	55.3	57.9	53.1	69.9
8:39:35 AM	57.9	60.6	54.3	73.1
8:40:35 AM	56.7	58.7	53.5	73.7
8:41:35 AM	55	59.3	51.6	73.4
8:42:35 AM	56.8	59.9	53.8	73.9
8:43:35 AM	55.6	58.3	53.3	73.1
8:44:35 AM	57.6	60.6	53.6	73.7
8:45:35 AM	56.1	58.3	54.1	73.2
8:46:35 AM	55.8	59.3	53.4	73.1
8:47:35 AM	55.6	59.9	53.2	72.8
8:48:35 AM	57.7	56.1	50.8	69.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:49:35 AM	54.1	57.7	52.1	69.3
8:50:35 AM	51.7	54.6	49.5	67.1
8:51:35 AM	55.3	61.2	50.2	73.3
8:52:35 AM	52.1	53.3	50.7	67.1
8:53:35 AM	53.8	59	49.5	72.3
8:54:35 AM	54.8	59.9	50.1	74.2
8:55:35 AM	52.7	54.9	51.2	66.6
8:56:35 AM	53.3	56.2	51.3	70.5
8:57:35 AM	53.8	57	50.8	70.9
8:58:35 AM	51.7	56.3	48.9	70
8:59:35 AM	51.3	53.3	50.1	65.9
9:00:35 AM	50.6	52.8	48.3	63.3
9:01:35 AM	49.9	53.4	47.9	67.5
9:02:35 AM	51.2	53.5	48.2	66
9:03:35 AM	52.1	55.3	47.9	71.4
9:04:35 AM	49	51	47.2	65.1
9:05:35 AM	51.3	53.9	49.1	69.1
9:06:35 AM	49.5	56.1	47.6	73.1
9:07:35 AM	51.2	54.6	48.6	68.8
9:08:35 AM	50.7	54.3	47.3	69
9:09:35 AM	50.9	55.3	47.7	70.7
9:10:35 AM	52.1	59.3	47.7	74.7
9:11:35 AM	49.6	52.1	47.6	67.1
9:12:35 AM	47.8	49.6	45.5	62.4
9:13:35 AM	48.8	50.4	46.1	64.1
9:14:35 AM	50.9	53.7	46.3	66.3
9:15:35 AM	53.2	60	46	70.2
9:16:35 AM	54.7	60.8	46	73
9:17:35 AM	57.5	62.5	45.7	75.6
9:18:35 AM	52.3	66.3	46.6	83.7
9:19:35 AM	48.6	56.3	46.6	74.1
9:20:35 AM	48.5	55.9	46.6	71.5
9:21:35 AM	48.6	54	45.1	70.4
9:22:35 AM	59.5	67.1	47.8	79
9:23:35 AM	51.1	56.7	47.8	71.4
9:24:35 AM	47.6	50.4	45.1	65.3
9:25:35 AM	47.7	51.5	44.9	66.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:26:35 AM	46	48.3	44.3	62.3
9:27:35 AM	47.4	49.4	44.9	63.1
9:28:35 AM	46.8	46.9	43.2	62.3
9:29:35 AM	47.6	51.1	44.7	68
9:30:35 AM	45.8	47.3	44.7	62.1
9:31:35 AM	45.7	47.6	44.2	61.8
9:32:35 AM	45.9	48.3	43.7	63.1
9:33:35 AM	46.8	48.4	45.4	62
9:34:35 AM	46.2	49.2	44.4	63.2
9:35:35 AM	47	52.2	45	66.8
9:36:35 AM	46.9	50.2	43.5	61.9
9:37:35 AM	44.8	46.6	42.3	59.9
9:38:35 AM	44.8	46.9	43.3	60
9:39:35 AM	44.6	49	42.8	64.7
9:40:35 AM	45.4	47.4	43.3	60.6
9:41:35 AM	48.3	60.6	43.4	77.7
9:42:35 AM	46.9	49.9	44.4	63.7
9:43:35 AM	45.9	49.9	44.3	67.4
9:44:35 AM	46.2	47.7	44.5	61
9:45:35 AM	43.6	45.4	42.2	59.8
9:46:35 AM	46	50.8	43.1	67.7
9:47:35 AM	46.8	50	44.6	62.7
9:48:35 AM	46.9	50.7	44.4	68.1
9:49:35 AM	46.1	47.3	45	60.6
9:50:35 AM	46.1	47.7	44.4	60.7
9:51:35 AM	45.5	48.1	43	61.8
9:52:35 AM	46.8	51.5	43.5	68.2
9:53:35 AM	47.8	49.7	45.5	63.7
9:54:35 AM	45.1	46.9	43.9	60
9:55:35 AM	44.8	47.5	43.1	61.6
9:56:35 AM	43.9	46.9	41.5	60.3
9:57:35 AM	47.6	51.6	43.8	67.7
9:58:35 AM	48.5	52.3	45.5	65.3
9:59:35 AM	47.3	50.8	44.3	63.2
10:00:35 AM	45.6	49.4	43.7	69.2
10:01:35 AM	44.5	46.6	43.2	61.2
10:07:35 AM	53.8	63.8	44	79.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:03:35 AM	44.8	48.3	42.3	61.2
10:04:35 AM	45.2	50.1	41.2	65.9
10:05:35 AM	43.9	47.9	42.2	68.5
10:06:35 AM	46.3	51.4	42.7	73.7
10:07:35 AM	48.4	57	44.2	74.1
10:08:35 AM	46.8	52.9	43.4	69.3
10:09:35 AM	44.3	46.7	42.4	62.9
10:10:35 AM	45.3	46.6	44	61.4
10:11:35 AM	45.1	47	41.9	62
10:12:35 AM	46.4	49.1	43.6	63.9
10:13:35 AM	45.3	48	42.3	64.3
10:14:35 AM	45.4	48.6	42.1	62.8
10:15:35 AM	45.7	48.2	43	62
10:16:35 AM	45.5	47.7	43.5	64.4
10:17:35 AM	46.6	50.7	44.3	66
10:18:35 AM	45.6	48.1	42.2	68.3
10:19:35 AM	45.9	50.6	42.2	68.2
10:20:35 AM	44.5	48	40.4	61.9
10:21:35 AM	44.9	46.4	42.5	59.5
10:22:35 AM	45.1	48.3	41.9	62.3
10:23:35 AM	44	47.1	42.1	60.1
10:24:35 AM	41.9	43.5	40	60.4
10:25:35 AM	43.4	44.3	42.3	61.1
10:26:35 AM	45.3	52.7	42.7	72.7
10:27:35 AM	57.3	68.8	44.4	85.1
10:28:35 AM	53.8	63.1	44.4	93
10:29:35 AM	44.8	47.5	43.5	61.3
10:30:35 AM	47.2	50.5	44.1	64.7
10:31:35 AM	46.4	49.8	44.4	64.4
10:32:35 AM	47	50.9	42.7	64.4
10:33:35 AM	43.9	47.3	42.2	61.3
10:34:35 AM	45.6	48.9	43.6	64.8
10:35:35 AM	42.9	45.4	40.8	66.6
10:36:35 AM	47.6	50.7	42.5	63.8
10:37:35 AM	44.8	48.3	42.4	61.5
10:38:35 AM	45.3	48.2	43	62.8
10:39:35 AM	44.6	49.7	42.6	63.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:40:35 AM	47.9	58.2	42.7	72.6
10:41:35 AM	55.7	62.9	47.1	75.4
10:42:35 AM	57.7	61.5	49.5	78.2
10:43:35 AM	55.6	60.7	46.3	74.7
10:44:35 AM	55.9	62.1	45.6	76.9
10:45:35 AM	57.9	63.6	44.5	77.2
10:46:35 AM	57.6	61.5	43.5	77.1
10:47:35 AM	48.9	60.1	44.1	73.7
10:48:35 AM	44.1	47.1	40.7	61.3
10:49:35 AM	45.4	49.3	42.5	67.5
10:50:35 AM	46	50.2	42.2	63
10:51:35 AM	43.9	47.3	40.9	62
10:52:35 AM	45.9	47.9	43.3	62.8
10:53:35 AM	44.6	47.8	41.9	61.6
10:54:35 AM	45.7	48.6	42.9	67.8
10:55:35 AM	46.6	50.6	43.3	63.8
10:56:35 AM	44.1	47.4	41.8	63.6
10:57:35 AM	47	58	40.9	77.1
10:58:35 AM	50.8	61.1	43.4	74.7
10:59:35 AM	50.9	53.3	45.1	67.9
11:00:35 AM	46.1	48	41.4	64.8
11:01:35 AM	41.8	45.6	39	60.6
11:02:35 AM	42.1	46.7	39.3	61.6
11:03:35 AM	45.3	49.7	41.4	63
11:04:35 AM	47.8	53.7	42.2	70.9
11:05:35 AM	43.4	50.3	40	68.3
11:06:35 AM	43.2	45.6	40.3	59.2
11:07:35 AM	45.1	47.7	42.4	60.3
11:08:35 AM	44.6	48	41.7	64.7
11:09:35 AM	44	49.9	40.2	66.8
11:10:35 AM	43.2	47.3	40.2	60
11:11:35 AM	44.8	48.1	41.5	63.7
11:12:35 AM	47	55.7	41.6	72.5
11:13:35 AM	44.4	47.3	42.1	61.2
11:14:35 AM	45.3	47.1	43.4	60.2
11:15:35 AM	49	55.1	44	69.7
11:16:35 AM	55.7	61.1	47.1	76.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:17:35 AM	49.4	53.3	43.1	69.6
11:18:35 AM	44	46.8	41.8	60.1
11:19:35 AM	46.8	50.4	43	63.1
11:20:35 AM	43.1	49.1	38.3	60.8
11:21:35 AM	43.4	46.2	41.6	62.6
11:22:35 AM	41.1	43.3	39	61.2
11:23:35 AM	40.7	43.7	38.3	57.1
11:24:35 AM	41.7	44.4	39.3	60.3
11:25:35 AM	40.8	43.9	38.3	56.6
11:26:35 AM	46.7	56.3	42.7	68.9
11:27:35 AM	57.2	65.4	44.7	81.1
11:28:35 AM	45	50.1	41.6	61
11:29:35 AM	42.9	44.6	40.7	57.3
11:30:35 AM	58.2	71.8	40.2	84.9
11:31:35 AM	44.3	46.4	42	64.9
11:32:35 AM	42.3	45.7	38.6	59.3
11:33:35 AM	56.3	69.9	42.8	90.8
11:34:35 AM	48.7	55.9	41.8	69.1
11:35:35 AM	43.9	45.7	42.8	60.1
11:36:35 AM	42.9	46	39.7	59.3
11:37:35 AM	43.9	45.9	40.8	61.1
11:38:35 AM	53.1	58	44.5	71.4
11:39:35 AM	44.8	50.3	40.5	63.6
11:40:35 AM	44.8	49.2	42.1	63.9
11:41:35 AM	42.1	47.9	39.1	62.6
11:42:35 AM	43	44.6	41.4	58.9
11:43:35 AM	42.1	49	40.1	64.6
11:44:35 AM	45.9	50.3	40.8	66
11:45:35 AM	46.5	51.9	42.4	64.5
11:46:35 AM	51.2	63	41.2	79.4
11:47:35 AM	52.9	59.6	42.1	74.2
11:48:35 AM	43	46.3	40.8	63.3
11:49:35 AM	42.5	46	40	59.6
11:50:35 AM	43.6	46	41.8	59.6
11:51:35 AM	54.8	64.2	43.2	78.3
11:52:35 AM	46.9	54.3	42.9	63.8
11:53:35 AM	43	45.1	41.3	61.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:54:35 AM	42.6	44.9	39.6	58.2
11:55:35 AM	42.9	48.3	38.8	64.7
11:56:35 AM	44.8	52.4	40.9	70
11:57:35 AM	41.4	42.7	40.1	59
11:58:35 AM	54.9	63.1	40.3	81.6
11:59:35 AM	46.3	49.2	44	61.9
12:00:35 PM	45.7	49.2	43.6	63.7
12:01:35 PM	42.9	45.4	41.8	56.6
12:02:35 PM	43.4	46.2	41.3	60.1
12:03:35 PM	43.4	48.1	40.6	65.6
12:04:35 PM	43.4	45.2	40.7	63.4
12:05:35 PM	42.7	43.6	40	58.2
12:06:35 PM	42.9	47.3	39	58.7
12:07:35 PM	53.6	61.6	39.8	77.3
12:08:35 PM	44.7	47.9	39.6	61.8
12:09:35 PM	43.8	47.6	39.3	61.1
12:10:35 PM	44.1	47.1	40.3	64
12:11:35 PM	43.4	48	38.6	61
12:12:35 PM	44.2	48.6	41.3	61.9
12:13:35 PM	60.2	68.9	44.9	82.6
12:14:35 PM	47.7	50.9	44.8	63.7
12:15:35 PM	53	59	39.5	70.2
12:16:35 PM	49.3	61.4	38.7	79.8
12:17:35 PM	45.4	47.4	43.9	62.7
12:18:35 PM	51.9	59.3	43.1	74
12:19:35 PM	49.3	57.7	42.9	67.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Location M4: 24-hour Session Report

Meter No. 035597
8/6-7/2020

Information Panel

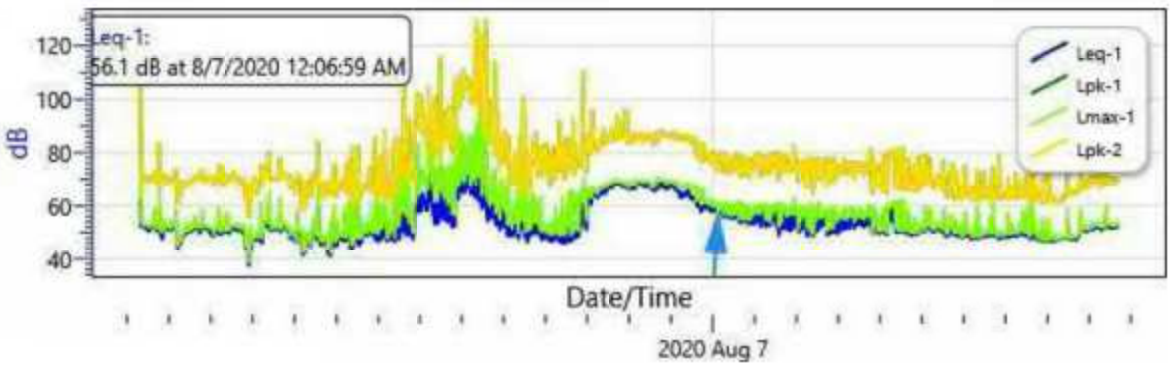
Name	S047_BGQ080007_07082020_115533
Start Time	8/6/2020 10:17:00 AM
Stop Time	8/7/2020 9:41:24 AM
Device Name	BGQ080007
Model Type	Soundpro DL
Device Firmware Rev	R.13F
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	61.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

S047_BGQ080007_07082020_115533: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8/6/2020 10:18:00 AM	62.6	77.9	51.5	110.1
10:19:00 AM	62.1	84.4	51.7	79

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:20:00 AM	55.3	59.7	52.2	72.3
10:21:00 AM	52.4	53.3	51.3	70
10:22:00 AM	52	52.5	51	70.4
10:23:00 AM	52.3	53.2	51	69.7
10:24:00 AM	52.3	53.2	50.6	71.5
10:25:00 AM	51.4	52.7	49.7	70.1
10:26:00 AM	51	52.8	49	69.2
10:27:00 AM	51.4	53	50	70.4
10:28:00 AM	51.9	52.9	50.6	69.6
10:29:00 AM	51.6	52.6	50.3	68.8
10:30:00 AM	50.4	52.0	48.5	69.8
10:31:00 AM	50.4	51.7	48.8	69
10:32:00 AM	51.5	52.1	50.6	69.1
10:33:00 AM	51.9	53	50.5	69.4
10:34:00 AM	51.8	53.2	50.8	70.9
10:35:00 AM	51.9	52.6	51.1	70.5
10:36:00 AM	52.2	53.2	50.8	69.9
10:37:00 AM	52.5	54.5	51	70
10:38:00 AM	52.3	54.7	51.2	71.2
10:39:00 AM	53.1	58.8	49.7	72.8
10:40:00 AM	50.7	51.5	49.5	70
10:41:00 AM	51.6	52.5	50.2	70.1
10:42:00 AM	51.6	52.6	50.1	68.7
10:43:00 AM	50.8	52.2	49.6	69.7
10:44:00 AM	51.5	55.1	49.5	69.7
10:45:00 AM	58.4	66.9	48.7	83.4
10:46:00 AM	49.5	50.7	47.1	67.7
10:47:00 AM	49.9	50.9	48	68.6
10:48:00 AM	50.2	50.8	48.5	68.8
10:49:00 AM	47.5	50.2	46.1	67.3
10:50:00 AM	48.0	50.4	46.6	69.8
10:51:00 AM	50.3	51.3	48.2	68.7
10:52:00 AM	51.3	53.1	50.1	69.2
10:53:00 AM	52.1	51.9	50.1	70.9
10:54:00 AM	51.7	52.3	50.5	70.2
10:55:00 AM	51.4	52.2	50.1	69.4
10:56:00 AM	51.5	52.3	50.2	70.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:57:00 AM	51.8	52.4	50.6	71.5
10:58:00 AM	51.3	52.1	49.8	70.1
10:59:00 AM	51.2	51.9	50.3	69.5
11:00:00 AM	50.7	51.7	49.7	68.5
11:01:00 AM	51.2	52.5	50.3	68.5
11:02:00 AM	50.8	51.5	48.8	69.1
11:03:00 AM	51.2	52.2	50.3	69.2
11:04:00 AM	51.7	54.4	50.3	69.8
11:05:00 AM	51.4	53.3	50	69.5
11:06:00 AM	51.1	52.1	50.1	70
11:07:00 AM	51.6	52.7	50.5	69.4
11:08:00 AM	51.4	52.3	50.9	70.2
11:09:00 AM	54	59	50.3	73.9
11:10:00 AM	45.9	50.3	43.9	64.9
11:11:00 AM	44.2	45.2	42.4	61
11:12:00 AM	43.9	44.8	42.5	61.5
11:13:00 AM	45.7	46.9	44.4	62.1
11:14:00 AM	45	46.1	43.2	60
11:15:00 AM	45.9	46.7	45.1	64.4
11:16:00 AM	45.9	47.4	44.8	64.4
11:17:00 AM	47.9	49	45.8	67.1
11:18:00 AM	48.5	49.3	47.2	68.6
11:19:00 AM	48.5	49.5	47	67.3
11:20:00 AM	48.5	49.1	46.7	67.6
11:21:00 AM	49.1	50.5	47	68
11:22:00 AM	49	50.7	47.7	68
11:23:00 AM	49.1	51	47.3	67.9
11:24:00 AM	50.1	53.6	48.5	68
11:25:00 AM	50	51.9	48.3	69
11:26:00 AM	49.8	50.6	48.3	68.6
11:27:00 AM	50.3	51.2	49.4	68.5
11:28:00 AM	50	50.6	48.4	67.8
11:29:00 AM	50.2	50.8	49.1	69.2
11:30:00 AM	50.8	51.7	49.8	68.5
11:31:00 AM	50.9	52.6	49.6	69.1
11:32:00 AM	51	52.8	50	69.5
11:33:00 AM	50.6	51.5	49.3	69.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:34:00 AM	50.8	51.7	49.4	69.6
11:35:00 AM	52.3	56	50.8	70.8
11:36:00 AM	51.9	53.6	50.8	70.9
11:37:00 AM	51.7	52.9	49.8	71.2
11:38:00 AM	51.4	52.2	50.4	71
11:39:00 AM	51.7	52.3	50.6	71.4
11:40:00 AM	52.5	53.2	51.1	71.4
11:41:00 AM	52.2	52.9	51.1	71.2
11:42:00 AM	51.4	52.8	46.8	71.3
11:43:00 AM	49.6	51.6	45.5	69.5
11:44:00 AM	51.8	52.7	50.7	71.3
11:45:00 AM	51.8	52.9	50.6	71.2
11:46:00 AM	51.4	52.5	49.6	69.5
11:47:00 AM	54.1	58.6	51.1	73.8
11:48:00 AM	51.7	52.6	50.7	70.9
11:49:00 AM	51.6	52.2	50.7	68.8
11:50:00 AM	51.6	52.7	50.4	70.6
11:51:00 AM	51.6	52	51.1	70.2
11:52:00 AM	51.1	52.2	49.9	69.5
11:53:00 AM	51.3	52.1	50.1	69.9
11:54:00 AM	51.6	52.4	50.5	69.6
11:55:00 AM	51.7	52.6	50.7	69.5
11:56:00 AM	51.7	52.3	50.3	70.4
11:57:00 AM	50.3	51.9	48.6	69.4
11:58:00 AM	50.8	51.6	49.4	70.2
11:59:00 AM	50.9	51.5	49.1	70.8
12:00:00 PM	48.9	51.0	46.1	70.4
12:01:00 PM	49.6	51.1	47.4	69.3
12:02:00 PM	48.8	51.2	46.3	69.7
12:03:00 PM	48.6	49.3	46.6	67.8
12:04:00 PM	49.9	51.5	47.6	70.2
12:05:00 PM	50.5	51.5	48.6	69.9
12:06:00 PM	51.6	52.6	49.5	70.9
12:07:00 PM	50.7	52.5	46.9	70.4
12:08:00 PM	49.5	51.6	47.1	70.6
12:09:00 PM	50.9	51.7	48.8	70.6
12:10:00 PM	52.8	59.4	49.8	74.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:11:00 PM	54.3	58.4	49.4	75
12:12:00 PM	49.4	50.2	47.3	68.3
12:13:00 PM	49.1	50.4	47.5	67.8
12:14:00 PM	49.9	52.8	48.3	71.7
12:15:00 PM	50.3	51.7	49.5	69.3
12:16:00 PM	50.4	51.1	49.7	69.1
12:17:00 PM	50.6	51	49.8	69.5
12:18:00 PM	49.7	50.8	47.8	67.8
12:19:00 PM	50.3	52	48.1	69.9
12:20:00 PM	51.9	56.1	48.8	71.3
12:21:00 PM	50.2	50.9	48.7	69.2
12:22:00 PM	50.8	53.9	48.8	69.8
12:23:00 PM	54.1	57.2	50	70.9
12:24:00 PM	50.1	51.1	48.3	69.1
12:25:00 PM	50.1	50.9	48.7	69.1
12:26:00 PM	49.5	50.8	47.8	68.9
12:27:00 PM	50.8	51.9	49.6	69.8
12:28:00 PM	51.3	52.3	50	70.6
12:29:00 PM	51.4	52.2	50.1	69.9
12:30:00 PM	51.3	52.7	50.3	70.4
12:31:00 PM	51	52.9	48.5	71.1
12:32:00 PM	52.3	53.2	50.6	72.7
12:33:00 PM	52.4	53.3	50.6	72.5
12:34:00 PM	51.9	53.2	50.5	71.3
12:35:00 PM	51.7	52.6	50.4	71.7
12:36:00 PM	50.9	53.4	46.3	70.6
12:37:00 PM	50.5	51.8	46.2	69.8
12:38:00 PM	50.8	53.2	48.8	68.7
12:39:00 PM	51	51.6	49.6	69.1
12:40:00 PM	50.8	51.9	49.4	68.9
12:41:00 PM	50.6	51.9	49.2	69.1
12:42:00 PM	51.2	52.1	50.1	69.8
12:43:00 PM	51.6	52.7	50.7	69.4
12:44:00 PM	51.9	52.9	50.8	70.6
12:45:00 PM	49.5	51.2	47.2	67.8
12:46:00 PM	51.2	51.9	50.3	68.6
12:47:00 PM	51.2	51.8	50.3	69.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:48:00 PM	48.4	51.3	44.2	69
12:49:00 PM	44.2	45.2	42.7	62.1
12:50:00 PM	45.5	46.8	44.2	64.1
12:51:00 PM	43.7	45.4	42	63.1
12:52:00 PM	41.9	47	38	65.4
12:53:00 PM	37.3	39	36	57.4
12:54:00 PM	37.7	38.5	36.9	55.9
12:55:00 PM	41.8	51	38.1	66.6
12:56:00 PM	45.4	52.5	41.4	67.3
12:57:00 PM	43.5	45.5	41.2	61.5
12:58:00 PM	46.4	47.5	45	65.1
12:59:00 PM	46.9	48.3	45.7	65.5
1:00:00 PM	46.8	48.8	43.6	67.7
1:01:00 PM	46.8	48.9	44.8	70.7
1:02:00 PM	47.4	48.2	46.6	65.8
1:03:00 PM	48.3	49.1	47.5	67.4
1:04:00 PM	48.2	49.1	47.1	68.4
1:05:00 PM	47.7	49.9	45.9	67
1:06:00 PM	47	48	45.8	64.8
1:07:00 PM	48.9	50.1	47.7	67.8
1:08:00 PM	48.1	49.1	46.8	68.5
1:09:00 PM	49.4	50.6	47.7	69
1:10:00 PM	47.3	50.8	43.5	68.2
1:11:00 PM	53.8	61.7	47.1	75.1
1:12:00 PM	45.8	47.8	43.9	68.6
1:13:00 PM	49.8	52.1	47.5	68.4
1:14:00 PM	50.8	52.1	49.6	70
1:15:00 PM	51.6	52.8	50.4	70.1
1:16:00 PM	52.5	53.6	49.7	72.4
1:17:00 PM	52.7	53.9	50.5	73.6
1:18:00 PM	53.7	54.5	52.8	74.5
1:19:00 PM	52.7	53.9	50.9	74.3
1:20:00 PM	52.4	54.3	50.4	75.3
1:21:00 PM	52.5	54	51.1	72.2
1:22:00 PM	52.9	55.9	51.6	72.5
1:23:00 PM	59.6	65.7	52.5	80.3
1:24:00 PM	50.9	52.9	49	69.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:02:00 PM	48.2	50.7	46.1	69.7
2:03:00 PM	53.7	58.7	49	72.4
2:04:00 PM	49.3	50.9	47.6	70.8
2:05:00 PM	50.1	50.9	48.7	70.1
2:06:00 PM	50.3	51	49.3	70.4
2:07:00 PM	49.7	51.7	47.4	69.7
2:08:00 PM	50	50.9	48.9	70.3
2:09:00 PM	48.2	51.1	43.4	69.5
2:10:00 PM	42	44	40.5	60.1
2:11:00 PM	41.5	42.5	40.6	61.9
2:12:00 PM	41.9	42.8	41.1	58.8
2:13:00 PM	42.3	43	41.8	68.2
2:14:00 PM	42.6	43.3	42.1	59.5
2:15:00 PM	45	46.4	42.2	66.1
2:16:00 PM	46.8	48.3	45.5	68
2:17:00 PM	48.5	49.9	47.1	69
2:18:00 PM	48	49.9	46.7	67.7
2:19:00 PM	47.6	48.6	46.5	65.3
2:20:00 PM	46.8	49.3	45	65.4
2:21:00 PM	45.5	46.6	44.3	64.6
2:22:00 PM	44.6	45.4	43.7	63.6
2:23:00 PM	46.2	47.1	44.7	64.1
2:24:00 PM	47.4	48.6	46	66.5
2:25:00 PM	48.3	49.1	47.1	68.4
2:26:00 PM	51	55.3	48.6	72.6
2:27:00 PM	49.6	50.5	48.4	68.1
2:28:00 PM	50.8	53.4	49.1	68.5
2:29:00 PM	48.8	50.4	47.1	69.2
2:30:00 PM	50	50.9	47.2	68
2:31:00 PM	47.3	48.7	46	67.6
2:32:00 PM	49.4	50.7	48	68.4
2:33:00 PM	59.4	69.4	48.3	84.2
2:34:00 PM	48.3	49.4	46.7	68.1
2:35:00 PM	48.1	49.5	45.1	66.9
2:36:00 PM	45.3	46.9	43.7	65.5
2:37:00 PM	47.4	49.1	44.4	66.7
2:38:00 PM	46.2	49.2	43.2	67.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:39:00 PM	45.2	46.4	42.2	63
2:40:00 PM	45.5	46.8	42.4	64.3
2:41:00 PM	45.9	47.8	42.4	67
2:42:00 PM	47.2	48.3	42.4	68.5
2:43:00 PM	47.2	48.6	42.5	67
2:44:00 PM	47.6	48.5	46	67.4
2:45:00 PM	47.3	48.4	46	68.4
2:46:00 PM	45	47.8	41.1	67.2
2:47:00 PM	42	43.9	39.6	64.5
2:48:00 PM	43.5	45.1	40.2	66.5
2:49:00 PM	43.4	45	39.7	65.2
2:50:00 PM	47	53.5	40.4	68.3
2:51:00 PM	41.1	42.2	39.1	67.3
2:52:00 PM	48.6	49	41.5	68.1
2:53:00 PM	49.9	54.9	42.9	71.6
2:54:00 PM	44.4	48.2	41.9	64.2
2:55:00 PM	45.6	47.3	43.8	65.5
2:56:00 PM	47.4	55.2	42.2	71.6
2:57:00 PM	53.5	59.8	44.7	75.5
2:58:00 PM	44.9	46.6	42.6	65.7
2:59:00 PM	46.1	47.7	44	66.4
3:00:00 PM	44.8	47.4	43.5	63.6
3:01:00 PM	47.2	50.3	42.6	66.6
3:02:00 PM	48	53.7	46.1	68.2
3:03:00 PM	47.4	48.4	46.3	67.3
3:04:00 PM	48.1	49.3	46.5	67.6
3:05:00 PM	48.4	49.8	47.2	68.8
3:06:00 PM	48.6	49.9	47.2	67.1
3:07:00 PM	49	50.2	47.7	68.6
3:08:00 PM	46.8	48.5	45.6	66.9
3:09:00 PM	47.7	49	45.8	66.3
3:10:00 PM	47.8	49	43.9	65.9
3:11:00 PM	50.5	57.6	45.1	71.8
3:12:00 PM	48.8	48.6	47.1	67.3
3:13:00 PM	46.9	48	45.9	66.7
3:14:00 PM	47.1	49	45.1	64.8
3:15:00 PM	54.2	60.7	46.7	76

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:16:00 PM	49.1	54.6	45.6	68.4
3:17:00 PM	48.9	51	47.1	67.1
3:18:00 PM	56.4	62.8	45.9	76.7
3:19:00 PM	48.8	46.6	42.5	64.6
3:20:00 PM	44.6	45.3	43.4	60.8
3:21:00 PM	57.7	64.3	43.5	78
3:22:00 PM	60	67.3	47.6	81.9
3:23:00 PM	44.2	45.4	42.7	61.5
3:24:00 PM	44.3	45.8	42.5	61.8
3:25:00 PM	47	48.3	45	64.1
3:26:00 PM	46.8	47.4	45.8	64.4
3:27:00 PM	53.9	59.8	46.5	76.2
3:28:00 PM	50	56.3	46	66.9
3:29:00 PM	48.3	48.1	45.2	63
3:30:00 PM	58.6	68.5	45.9	82.4
3:31:00 PM	56.1	65.8	43.8	81.4
3:32:00 PM	45.1	47.8	43.7	66.2
3:33:00 PM	45.8	48.4	42.7	63.1
3:34:00 PM	45.8	48.7	44	64.3
3:35:00 PM	47.8	50.2	46.5	66.7
3:36:00 PM	47.3	48	46.3	65.6
3:37:00 PM	48.5	50.3	47.1	66.3
3:38:00 PM	49.5	51.6	47.7	67.6
3:39:00 PM	50.1	53.5	48.6	67.8
3:40:00 PM	49.4	51.1	47.8	66.7
3:41:00 PM	49.8	51.9	49	66.5
3:42:00 PM	48.9	49.9	48	67.1
3:43:00 PM	48.7	49.7	47.5	66.9
3:44:00 PM	49.4	53.2	47.7	68.4
3:45:00 PM	50.3	52.4	49	67.8
3:46:00 PM	50.4	51.9	48.9	67.3
3:47:00 PM	50	57	48.1	74.4
3:48:00 PM	49.7	50.9	48.4	68
3:49:00 PM	50	51	49.1	66.7
3:50:00 PM	49.3	50.3	48.1	66.7
3:51:00 PM	49.2	51.6	47.8	65.7
3:52:00 PM	48.7	49.9	47.6	65

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:53:00 PM	48.1	50.3	46.6	65.6
3:54:00 PM	47.9	51.7	46.1	65.3
3:55:00 PM	54.8	67.7	42.9	85.7
3:56:00 PM	46.9	50.5	43.8	63.2
3:57:00 PM	49.4	54.7	45.9	68
3:58:00 PM	47.1	49.4	45.8	63.1
3:59:00 PM	46.5	49.7	45.1	64.4
4:00:00 PM	46.8	54.1	44.4	66.9
4:01:00 PM	50.6	60.9	44.4	78
4:02:00 PM	47.6	52.9	45.1	68
4:03:00 PM	48	50.5	44.6	73.5
4:04:00 PM	49	58	46.6	72.9
4:05:00 PM	47.5	51.1	45.6	64.1
4:06:00 PM	50.6	57.9	47.8	74.3
4:07:00 PM	49.8	58	46.4	73.2
4:08:00 PM	51.4	57.7	46.4	75.5
4:09:00 PM	53.3	68.7	45.8	88.2
4:10:00 PM	50.2	63.1	46.2	67.5
4:11:00 PM	49.1	54.7	46.2	69.3
4:12:00 PM	46.7	48	45.8	62.4
4:13:00 PM	47	48.1	46	62.9
4:14:00 PM	47.6	50.3	46.4	69
4:15:00 PM	47.9	49.4	46.9	63.5
4:16:00 PM	47.8	51.1	46.2	64.9
4:17:00 PM	49	54.9	45.8	69.4
4:18:00 PM	49	53.1	47.1	66.6
4:19:00 PM	49.5	54.8	47.5	69.0
4:20:00 PM	47.2	51.9	45.6	68.8
4:21:00 PM	53.5	64	45.1	81.5
4:22:00 PM	50.5	60.3	45.4	73.0
4:23:00 PM	48.4	48.1	45.5	62.7
4:24:00 PM	56	67.7	45.5	84.4
4:25:00 PM	55.2	68.1	43.8	85.0
4:26:00 PM	49.7	56.6	47.3	69.9
4:27:00 PM	54.7	61.5	47.7	76.8
4:28:00 PM	48.2	57.1	45	71.5
4:29:00 PM	47.3	52.4	45.8	65.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:30:00 PM	52.1	65.1	44.8	80.5
4:31:00 PM	51	63.5	46.2	80.5
4:32:00 PM	53.2	65.7	44.8	79.8
4:33:00 PM	53.5	66.7	45.7	84.6
4:34:00 PM	57.6	70.8	47	85.1
4:35:00 PM	50.5	57.8	45.5	73.9
4:36:00 PM	52	62.4	46.1	78.3
4:37:00 PM	73.8	87.9	44.7	108.3
4:38:00 PM	56.9	67.1	47.1	83.2
4:39:00 PM	48.9	56.2	45.2	71.7
4:40:00 PM	56.7	69.1	46.1	83.8
4:41:00 PM	56.5	69.1	47.4	84.9
4:42:00 PM	60.6	71.6	46.8	92.5
4:43:00 PM	49.3	54.8	45.8	68
4:44:00 PM	49	53.5	46.5	69.6
4:45:00 PM	50.6	58.2	47.2	73.1
4:46:00 PM	51.6	58.6	46.6	76.7
4:47:00 PM	49.1	53.5	47	70
4:48:00 PM	49.6	52.6	47.5	77.8
4:49:00 PM	47.4	50.1	45.1	73.4
4:50:00 PM	51.3	58.7	45.6	87.5
4:51:00 PM	55.6	61.3	49.7	90.1
4:52:00 PM	56.1	60.9	52.9	88.3
4:53:00 PM	58.9	63.9	56.6	90.7
4:54:00 PM	60.2	64.6	57.5	98.7
4:55:00 PM	60.8	73.8	54.3	96.9
4:56:00 PM	65.2	80.3	52.6	99.5
4:57:00 PM	70.1	83.3	54.1	102.3
4:58:00 PM	57.7	64.3	50.7	97.9
4:59:00 PM	61.6	71.4	55	96.7
5:00:00 PM	64.6	74.8	54.9	101.7
5:01:00 PM	58.2	68.9	50.7	87.4
5:02:00 PM	62.2	70.2	50	87.9
5:03:00 PM	64.5	73.5	51.5	94.9
5:04:00 PM	61.6	71.6	51.6	88.2
5:05:00 PM	61.9	69.9	52.6	88.4
5:06:00 PM	61.9	69.9	49.7	86.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:07:00 PM	61.4	68	49.8	83.6
5:08:00 PM	59.4	67.6	51.5	84.8
5:09:00 PM	58.3	66.4	47.5	81.7
5:10:00 PM	58.9	66.6	48.2	81.8
5:11:00 PM	62.7	69.6	50.1	84.3
5:12:00 PM	72.4	86.5	49.6	105.7
5:13:00 PM	62	72.3	46	89.3
5:14:00 PM	65.7	77	44.9	95.5
5:15:00 PM	68.6	79.7	46.6	98.4
5:16:00 PM	67.2	80	43.6	97
5:17:00 PM	67	76.1	45.5	91.9
5:18:00 PM	56.1	65.7	43.9	80.6
5:19:00 PM	60.6	71.6	46.1	85
5:20:00 PM	53.2	61.8	42.6	78.5
5:21:00 PM	59.5	67.5	42.8	85.2
5:22:00 PM	60.7	74.1	47.2	101.1
5:23:00 PM	55.6	67.6	46.1	83.4
5:24:00 PM	57.6	66.2	45.8	81
5:25:00 PM	53.3	63.6	44.5	80.8
5:26:00 PM	60.2	70	44	84.6
5:27:00 PM	59.8	70.8	47.6	85.8
5:28:00 PM	55.5	66.1	44.8	78.6
5:29:00 PM	74.9	88.8	44.2	115.3
5:30:00 PM	56.6	66.5	47.1	79.5
5:31:00 PM	57	70.8	44.6	85.1
5:32:00 PM	60.3	72.8	44.9	87
5:33:00 PM	55.1	65.5	45.7	84.8
5:34:00 PM	54.6	64.4	46.4	82.3
5:35:00 PM	55.7	67.2	48.8	85.9
5:36:00 PM	62.7	73.7	48.3	89.4
5:37:00 PM	60.7	73.7	49.2	95.2
5:38:00 PM	63.2	74.3	48.9	90.2
5:39:00 PM	53.9	60.8	48.9	88.3
5:40:00 PM	55.6	63.1	49.1	89.5
5:41:00 PM	56.9	64.7	50.8	85.4
5:42:00 PM	63.6	75.1	52.2	97.4
5:43:00 PM	56.9	66.3	49.2	87.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:44:00 PM	55.3	63.4	48.8	82.8
5:45:00 PM	52.1	57.1	47.1	80.9
5:46:00 PM	55.4	67.3	47.8	95.8
5:47:00 PM	56.1	62.2	49.1	89.3
5:48:00 PM	63.8	70	50.4	95.0
5:49:00 PM	57.3	56.7	46.1	77.7
5:50:00 PM	69.8	83.3	49.8	101
5:51:00 PM	75.3	88.0	50.2	108.0
5:52:00 PM	75.3	88.1	48.1	106.2
5:53:00 PM	75.2	88	50.6	104.9
5:54:00 PM	62.4	69.1	58.3	96.7
5:55:00 PM	64.3	67.6	61.7	97.1
5:56:00 PM	65.2	69.5	62.6	100.3
5:57:00 PM	69.8	80.7	62.4	101.2
5:58:00 PM	65.6	70	62.7	104.1
5:59:00 PM	75.7	87.8	60.7	107.2
6:00:00 PM	68.3	78.8	58.6	100.3
6:01:00 PM	71.8	85.4	62.9	111.1
6:02:00 PM	66	72.7	62.8	110.4
6:03:00 PM	65	68.8	62.2	105.2
6:04:00 PM	70.5	83.5	61.7	104.6
6:05:00 PM	66.6	75.4	60.9	104.3
6:06:00 PM	67.2	77.1	62.4	108.1
6:07:00 PM	67.8	72.6	64.7	108.3
6:08:00 PM	68.9	73.3	64.7	106.3
6:09:00 PM	71.1	78.8	65.6	105.8
6:10:00 PM	73.1	85.7	65.3	107.3
6:11:00 PM	67.5	76.1	61.4	103.1
6:12:00 PM	64.6	67.6	61.6	104.6
6:13:00 PM	68.7	79.8	59.4	98.5
6:14:00 PM	69.3	80.8	58.9	103
6:15:00 PM	74.5	86.7	60.5	104.2
6:16:00 PM	69.4	83	57	103.3
6:17:00 PM	68.7	70.1	60.3	109
6:18:00 PM	66.6	76.2	60.8	100
6:19:00 PM	63.3	68.2	60	100.6
6:20:00 PM	73.7	90.7	59.8	129.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:21:00 PM	66.9	77.6	59	103.6
6:22:00 PM	78.6	91	58	127.3
6:23:00 PM	61.9	71.3	55.9	98.1
6:24:00 PM	80.9	95.1	57.1	117
6:25:00 PM	64.1	73.2	56	94.2
6:26:00 PM	80.5	93.5	53.9	123.9
6:27:00 PM	64.2	72.7	57.8	94.8
6:28:00 PM	58.9	64	55.7	97.6
6:29:00 PM	60	64.4	56.8	99.5
6:30:00 PM	64.9	77.6	53.6	110.1
6:31:00 PM	69.9	85.5	53.5	122.9
6:32:00 PM	60.7	68.8	56.5	91.8
6:33:00 PM	74.4	89.9	56	120.4
6:34:00 PM	80.7	98.4	56.5	129.5
6:35:00 PM	61.9	75.1	53.9	115.1
6:36:00 PM	56.7	63.3	52	88.4
6:37:00 PM	54.2	61.4	51.3	86.7
6:38:00 PM	57	65	50.8	88.2
6:39:00 PM	58	67.5	50.1	85.1
6:40:00 PM	58.7	67.7	50.8	86
6:41:00 PM	55.5	61.8	52.5	83.6
6:42:00 PM	59.3	65.9	52.9	99.5
6:43:00 PM	55.7	61.3	53.3	87.2
6:44:00 PM	61.8	72.2	51.1	90.4
6:45:00 PM	56.3	63.8	52	87.4
6:46:00 PM	56	66.4	50.7	83.7
6:47:00 PM	60.3	73.8	51.8	114.1
6:48:00 PM	53	57.5	49.8	79.3
6:49:00 PM	53.5	60	49.4	78.4
6:50:00 PM	55.7	62.2	51	78.4
6:51:00 PM	55.1	62.9	49.2	94.9
6:52:00 PM	52.9	61.5	47.5	77.2
6:53:00 PM	58.8	64.9	47.9	83.5
6:54:00 PM	51	55.2	47.7	73.1
6:55:00 PM	54.2	63.2	48.2	77.8
6:56:00 PM	54.2	63.1	45.7	76.3
6:57:00 PM	59.3	69.9	45.6	84.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:58:00 PM	56.1	67	46.3	81.5
6:59:00 PM	52.1	59.5	46.1	76.8
7:00:00 PM	52	61.9	44.8	76.6
7:01:00 PM	52.6	64	45.2	88
7:02:00 PM	56.6	67.3	44.4	85.5
7:03:00 PM	55	64	47.9	80.9
7:04:00 PM	49.7	53.2	46.3	80.3
7:05:00 PM	48.6	53.1	45.5	75.2
7:06:00 PM	56	67.3	45.3	86.3
7:07:00 PM	54.5	64.8	47	81.3
7:08:00 PM	49.7	52.7	47.3	69.4
7:09:00 PM	48.9	53.8	45.5	68.5
7:10:00 PM	50.1	56.1	46.3	73
7:11:00 PM	48.7	55.1	43.4	70.9
7:12:00 PM	48.6	53.6	45.7	68.4
7:13:00 PM	50.1	57.4	46.1	73.6
7:14:00 PM	49.3	56.7	46.4	71.6
7:15:00 PM	51.2	56.6	47.1	70.8
7:16:00 PM	53.5	61.4	46.1	77.7
7:17:00 PM	52	59.8	45.3	76.4
7:18:00 PM	49.6	53.5	45.7	68.8
7:19:00 PM	54.2	65.8	45.5	80.6
7:20:00 PM	47.6	49.9	45.5	64.7
7:21:00 PM	48	55.2	47.5	71.1
7:22:00 PM	51.3	56.9	47.4	71.3
7:23:00 PM	56.2	70.4	44.6	85.7
7:24:00 PM	54.9	60	48.1	79.5
7:25:00 PM	51.3	56.1	46.8	70.1
7:26:00 PM	51.1	54.4	47.3	72.4
7:27:00 PM	55.1	60.5	48.9	79.9
7:28:00 PM	59.7	78.4	46.3	101.1
7:29:00 PM	65.7	77.2	48.5	94.3
7:30:00 PM	48.6	50.5	45.7	65.9
7:31:00 PM	55.9	65.9	45.1	82.5
7:32:00 PM	48.4	50.9	45.5	63.8
7:33:00 PM	46.3	50.6	43.3	65
7:34:00 PM	48.2	50.9	45	66.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:35:00 PM	50.2	55.9	45.3	70.9
7:36:00 PM	49.5	52	47.6	71.8
7:37:00 PM	50.8	60.9	44.6	75.9
7:38:00 PM	48.8	51.3	43.7	67
7:39:00 PM	50.2	55.4	45.4	74.5
7:40:00 PM	52	56.9	47	76.7
7:41:00 PM	56.1	65	49.3	82.7
7:42:00 PM	59.3	63.1	52.7	81.7
7:43:00 PM	51.4	58	47.6	85.9
7:44:00 PM	49.5	53.7	46.6	77.5
7:45:00 PM	53.5	62.3	48.8	87.0
7:46:00 PM	51.1	53.6	49.3	80.9
7:47:00 PM	50.5	55.8	47.6	81.3
7:48:00 PM	54.3	61.6	47.8	78.3
7:49:00 PM	50.6	53.1	48.4	80.7
7:50:00 PM	49.9	52.5	47.3	70.8
7:51:00 PM	48.5	51	46.7	76.7
7:52:00 PM	59.3	63.6	49	81.9
7:53:00 PM	50.6	53.5	47.5	71.2
7:54:00 PM	47.1	50.2	44.5	72
7:55:00 PM	47.6	50.9	44.9	82.3
7:56:00 PM	49.7	52.9	47.2	80.3
7:57:00 PM	48.6	51.3	46.8	74
7:58:00 PM	48.4	50.7	46.2	74.8
7:59:00 PM	50	53.2	47.7	79.4
8:00:00 PM	48.4	51	46	78.6
8:01:00 PM	48.8	52.8	46.7	83.3
8:02:00 PM	48	50.5	45.3	71.6
8:03:00 PM	47.2	49.4	44.6	74
8:04:00 PM	48.9	52.7	45.6	79.2
8:05:00 PM	47.3	49.6	44.1	74.9
8:06:00 PM	46.7	49.5	43.8	67.7
8:07:00 PM	48.4	52.3	44.4	70.5
8:08:00 PM	48.8	50.7	47	76.7
8:09:00 PM	49.4	54.1	45.3	75.6
8:10:00 PM	46.5	49.1	43.6	71.5
8:11:00 PM	47.4	51.5	44.5	82.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:12:00 PM	47.9	50.3	45.9	76.5
8:13:00 PM	49.4	52	45.1	69.9
8:14:00 PM	54.2	58.7	48.5	76.9
8:15:00 PM	53.5	57.4	47.2	77.2
8:16:00 PM	47.6	49.6	45.4	74.2
8:17:00 PM	47.5	50.6	44.4	75
8:18:00 PM	50	52.2	47.7	75.1
8:19:00 PM	48.5	54.2	45	92
8:20:00 PM	46.3	48.9	43.2	77.2
8:21:00 PM	46.4	49.1	42.6	73.1
8:22:00 PM	47.9	50.8	44.2	73.7
8:23:00 PM	59.1	63.2	47.7	80.4
8:24:00 PM	50.3	55.6	47.5	73.5
8:25:00 PM	47.5	50.5	43.2	83
8:26:00 PM	45.7	49.3	43	72.1
8:27:00 PM	47.5	50.7	43.3	70
8:28:00 PM	46.9	49.7	44.8	73.1
8:29:00 PM	47.4	56.2	43.9	84.1
8:30:00 PM	46.2	55.9	42.9	85.5
8:31:00 PM	48.5	53	44.1	73.2
8:32:00 PM	49.9	54.7	47.8	76.1
8:33:00 PM	60.8	65.3	46.2	81.8
8:34:00 PM	53.6	64	44.6	87
8:35:00 PM	46.8	49.7	43.1	77.1
8:36:00 PM	46.6	49	43.4	75.1
8:37:00 PM	47.9	50.9	44.8	74.6
8:38:00 PM	59.5	66.1	48.9	82.3
8:39:00 PM	60.3	64.2	46.4	92.6
8:40:00 PM	47.6	50.3	45.5	79.7
8:41:00 PM	47.9	51	45.4	71.4
8:42:00 PM	48.8	51.6	46.5	78.3
8:43:00 PM	50.6	56	46.2	77
8:44:00 PM	58.9	64.4	47.4	79.8
8:45:00 PM	57	61.3	47.3	80
8:46:00 PM	48.3	51.1	45.6	78.3
8:47:00 PM	48.6	50.9	45.4	79.5
8:48:00 PM	52.3	56.2	47.1	74.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:49:00 PM	61.6	64.9	55.2	81.9
8:50:00 PM	52.2	61.2	47.1	78.6
8:51:00 PM	52.3	61.7	48.7	79.6
8:52:00 PM	63.1	66.1	58.8	82.7
8:53:00 PM	59.8	65.8	50.8	83.7
8:54:00 PM	54.8	70.6	47	110.4
8:55:00 PM	54.5	63	47	80.8
8:56:00 PM	63.3	66.1	55.6	82.4
8:57:00 PM	54.3	57.6	50.6	76
8:58:00 PM	51	54.8	48.7	72.5
8:59:00 PM	63.7	66.3	54.3	84.1
9:00:00 PM	63	65.9	58.2	83.2
9:01:00 PM	62	64.1	56.9	80.7
9:02:00 PM	61.9	64.6	55.7	87.1
9:03:00 PM	63.1	65.1	60.4	82.9
9:04:00 PM	62.8	65.1	59.5	81.9
9:05:00 PM	60.5	63.2	56.1	79.7
9:06:00 PM	62.9	65.3	60.9	82.1
9:07:00 PM	64.3	66.9	61.7	96.1
9:08:00 PM	64.4	65.4	62.8	82.3
9:09:00 PM	64.2	65.8	60.8	83.5
9:10:00 PM	64.3	65.6	62	82.5
9:11:00 PM	64.4	65.9	62.9	82.9
9:12:00 PM	65.4	66.3	64.3	84.1
9:13:00 PM	64	66.1	60.8	83
9:14:00 PM	62.9	64.6	61.8	80.6
9:15:00 PM	64.3	66.1	62.1	82.8
9:16:00 PM	64.5	65.8	62.6	82.6
9:17:00 PM	65.5	66.7	63.4	83.4
9:18:00 PM	64.7	66.2	61.7	83.6
9:19:00 PM	65.5	66.6	63.2	84.6
9:20:00 PM	65.1	67.1	63.2	83.1
9:21:00 PM	64.7	67	62.7	83.7
9:22:00 PM	66.3	67.5	63.7	85.1
9:23:00 PM	66	67.2	64.5	80.1
9:24:00 PM	65.9	67.2	63.4	85
9:25:00 PM	64.6	68	62.3	85.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:26:00 PM	66	68	52.9	84.5
9:27:00 PM	66	67.4	53.1	83.5
9:28:00 PM	66.8	68.3	55.4	85.7
9:29:00 PM	67.4	68.1	56.2	86.1
9:30:00 PM	66.5	67.8	54.5	84.6
9:31:00 PM	67.7	68.7	55.7	86.4
9:32:00 PM	67.2	68.3	55.5	84.9
9:33:00 PM	67.4	68.7	54.8	85
9:34:00 PM	68.1	69.1	56.9	89.1
9:35:00 PM	68	69	56.9	86.3
9:36:00 PM	67.1	68.6	55.2	84.2
9:37:00 PM	68.2	69.1	57.2	85.7
9:38:00 PM	68.5	69.6	57.5	85.9
9:39:00 PM	68.2	69.3	57	86.7
9:40:00 PM	68.3	69	57.4	85.9
9:41:00 PM	68.1	68.9	57.1	86.7
9:42:00 PM	68.2	69.1	56.9	93.7
9:43:00 PM	68	68.8	56.7	91.6
9:44:00 PM	68.1	69.7	56.8	85.8
9:45:00 PM	68.1	68.8	57.4	86.4
9:46:00 PM	68.3	69	57.2	87.6
9:47:00 PM	68	69.1	56.8	87.5
9:48:00 PM	67.8	69	56.6	85.9
9:49:00 PM	67.5	68.7	55.7	85.4
9:50:00 PM	68.3	69.1	57.1	86.4
9:51:00 PM	67.8	68.7	55.9	86.3
9:52:00 PM	67.4	68.6	56	85.5
9:53:00 PM	67.2	68.2	55.7	85.5
9:54:00 PM	67.3	68.3	56.1	86.2
9:55:00 PM	67	68.2	55.9	85.9
9:56:00 PM	67.1	67.9	56.2	86
9:57:00 PM	66.9	68.1	55.7	83.6
9:58:00 PM	66.5	67.6	55.7	85.6
9:59:00 PM	66.2	67	55.1	83.6
10:00:00 PM	67.7	69.1	55.3	86.2
10:01:00 PM	67.6	69.2	55.3	87
10:02:00 PM	67.9	69	56	87.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:03:00 PM	66.7	69.1	54.8	87
10:04:00 PM	66.5	68.2	55.1	84.8
10:05:00 PM	67.3	68.5	55.9	85.1
10:06:00 PM	66.8	68.2	57.9	84.8
10:07:00 PM	67.8	69.1	55.9	85.9
10:08:00 PM	66.4	67.8	55.5	83.5
10:09:00 PM	68.2	69.4	56.8	86.7
10:10:00 PM	68.4	69.6	56.7	87.2
10:11:00 PM	68.5	69.6	57.4	87.2
10:12:00 PM	68.4	69.3	57.1	86.5
10:13:00 PM	68.4	69.2	57	86.2
10:14:00 PM	68.5	69.4	57.3	86.1
10:15:00 PM	68.4	69.2	57.1	86.4
10:16:00 PM	68.1	69.3	56.5	85.5
10:17:00 PM	68.2	69.1	56.4	86.9
10:18:00 PM	67.8	68.9	56.9	86.8
10:19:00 PM	67.6	68.7	56.1	86.3
10:20:00 PM	67.5	68.6	56.4	84.7
10:21:00 PM	67.1	68.7	55.7	84
10:22:00 PM	68.3	69.4	57.4	85.5
10:23:00 PM	68.1	69.2	56.8	85.3
10:24:00 PM	67.7	68.8	56.3	85
10:25:00 PM	67.5	68.7	55.8	85.6
10:26:00 PM	67.8	68.8	56.6	86.1
10:27:00 PM	67.8	68.9	56.5	85.7
10:28:00 PM	67.9	69.1	56.3	86.8
10:29:00 PM	67.3	68.6	57.6	85.5
10:30:00 PM	67	68.4	54.9	85.2
10:31:00 PM	66.4	67.3	55.2	86
10:32:00 PM	66.6	68.2	54.7	85.8
10:33:00 PM	66.6	67.9	55.4	84.4
10:34:00 PM	66.9	68	55.5	84.5
10:35:00 PM	65.6	67.2	54.2	82.9
10:36:00 PM	67	68.9	53.7	85.5
10:37:00 PM	67.3	69.1	55.8	86.6
10:38:00 PM	67.7	68.9	55.6	85.6
10:39:00 PM	67.6	68.9	55	86.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:40:00 PM	66.3	68.4	54	84.3
10:41:00 PM	68.6	70.1	56.2	87.9
10:42:00 PM	68.8	70.6	57.1	88.3
10:43:00 PM	68.1	69.7	55.4	86.6
10:44:00 PM	68.4	69.5	56.6	87.0
10:45:00 PM	68.4	69.7	56.8	87.5
10:46:00 PM	67.7	70	57.9	87.5
10:47:00 PM	67.1	69.8	53.3	88.1
10:48:00 PM	68.2	69.8	55.4	86.9
10:49:00 PM	68.1	69.5	55	87.4
10:50:00 PM	67.2	69.5	53.7	86.1
10:51:00 PM	67.3	69	54.4	86.7
10:52:00 PM	66.4	69.1	53.2	86.9
10:53:00 PM	66.2	68.3	53.7	86.4
10:54:00 PM	66.4	69	53.7	86.3
10:55:00 PM	67.1	68.9	54.4	86.1
10:56:00 PM	67.4	69	53.9	86.3
10:57:00 PM	67.6	69.3	57.9	87
10:58:00 PM	67.5	68.9	54.7	86
10:59:00 PM	67.8	69.3	55.5	86.5
11:00:00 PM	67.6	69	55.6	87.2
11:01:00 PM	67.4	69	54.7	85.4
11:02:00 PM	67.3	68.9	54.3	86.2
11:03:00 PM	67.4	69.4	57.4	87.1
11:04:00 PM	66.7	68.9	53.7	87
11:05:00 PM	67.2	69.3	53.1	87.1
11:06:00 PM	67	69	52.4	87.9
11:07:00 PM	65.6	67.6	52.6	85.8
11:08:00 PM	65.9	68.3	52	85.9
11:09:00 PM	65.4	68.4	51.8	87.1
11:10:00 PM	65.4	67.9	50.7	86.2
11:11:00 PM	65.7	68	52.6	85.8
11:12:00 PM	64.1	66.8	50.9	84.6
11:13:00 PM	63.2	66.9	49.3	84.6
11:14:00 PM	63.8	66.5	50.4	85.4
11:15:00 PM	63.2	66.4	50.4	85.1
11:16:00 PM	64.6	67.2	50.9	85.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:17:00 PM	64	67.6	59.7	86.3
11:18:00 PM	63.6	66.9	60.6	85
11:19:00 PM	64.4	67.6	60.9	85.7
11:20:00 PM	64.1	67.2	60.6	86.3
11:21:00 PM	64.9	67.8	61.3	86.4
11:22:00 PM	65	67.4	61.7	86.5
11:23:00 PM	65.8	68.7	61.1	85.3
11:24:00 PM	65.9	68.3	60.6	85.8
11:25:00 PM	64.5	68.4	59.9	86.3
11:26:00 PM	64.2	67.7	60.2	84.7
11:27:00 PM	62.9	67	58.7	83.8
11:28:00 PM	63.8	66.9	60	85.4
11:29:00 PM	62.5	66.1	59.2	84.8
11:30:00 PM	63	66.3	60.2	84.8
11:31:00 PM	63.1	66.4	58.1	84.3
11:32:00 PM	62.5	66.3	58.7	83.5
11:33:00 PM	62.2	66.1	58.5	83.6
11:34:00 PM	63	66.3	59.8	84.1
11:35:00 PM	63.3	67.6	58.4	85.5
11:36:00 PM	60.4	61.9	58.2	78.4
11:37:00 PM	62.3	66.3	59.7	83.1
11:38:00 PM	59.8	64.2	57	81.4
11:39:00 PM	61.2	63.8	59	82
11:40:00 PM	59.7	63.3	57.5	79.5
11:41:00 PM	61.8	66.2	57	83.3
11:42:00 PM	57.6	60.8	55.9	77.6
11:43:00 PM	59.5	60.8	56.3	76.6
11:44:00 PM	58.5	60.6	56.3	78.2
11:45:00 PM	61.4	66.3	56.9	83.7
11:46:00 PM	62.6	66.6	56.9	81.4
11:47:00 PM	59.3	61.8	56.9	77
11:48:00 PM	59.4	61.2	57	77.8
11:49:00 PM	59.6	61.3	57.7	77.6
11:50:00 PM	59.1	60.9	56.8	78.7
11:51:00 PM	60.3	61.8	57.6	80
11:52:00 PM	59.3	61.7	56.7	80
11:53:00 PM	59.6	62.3	57.4	79.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:54:00 PM	59.1	61.7	55.2	79.9
11:55:00 PM	59.8	62	57	79.8
11:56:00 PM	58.1	60.3	55.6	76.1
11:57:00 PM	59.4	62.2	55.3	79.6
11:58:00 PM	57.8	59.9	55.3	77
11:59:00 PM	57.7	59.8	55.9	76.6
8/ //2020 12:00:00 AM	58.7	60.6	56.4	78.1
12:01:00 AM	58.8	60.6	55.8	79
12:02:00 AM	58.3	60.5	56.6	77.9
12:03:00 AM	59.1	61.3	57	80.3
12:04:00 AM	58.5	61.2	55.8	77.4
12:05:00 AM	58.2	60	55.7	77.5
12:06:00 AM	57.9	59.5	55.5	76.2
12:07:00 AM	56.1	57.1	55.1	73.3
12:08:00 AM	57.4	60.4	55.4	77.6
12:09:00 AM	57.1	60.5	55	76.3
12:10:00 AM	58.2	61.3	55.5	78.8
12:11:00 AM	57.5	60.3	55	79.5
12:12:00 AM	57.3	60.8	54.9	79.6
12:13:00 AM	58.3	60.3	56.7	79.1
12:14:00 AM	57.2	60.4	54.7	78.3
12:15:00 AM	55.8	56.8	54.5	72.4
12:16:00 AM	57.3	61.3	54.6	80
12:17:00 AM	57.6	61.3	55.2	79.9
12:18:00 AM	57.3	60.1	54.6	79.7
12:19:00 AM	57.7	61.1	55.1	79.5
12:20:00 AM	57.6	59.9	55.3	76.3
12:21:00 AM	55.6	57.4	54.7	74.2
12:22:00 AM	55.6	56.6	54.6	72.4
12:23:00 AM	56.7	59.2	54.1	76.2
12:24:00 AM	55.5	56.6	54.5	72.1
12:25:00 AM	57	60.2	54.8	75.9
12:26:00 AM	55.1	56.2	53.6	73.1
12:27:00 AM	55.5	58.9	52.1	75.3
12:28:00 AM	55.9	58.7	53.6	77.8
12:29:00 AM	58.1	59.7	55.8	78.6
12:30:00 AM	57.4	60.7	54.2	78.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:31:00 AM	55.4	57	52.5	74.1
12:32:00 AM	57.9	60.4	54.7	78.9
12:33:00 AM	57.8	61.3	53.4	79.6
12:34:00 AM	56.7	61.6	54.3	79.1
12:35:00 AM	55	56.9	53.9	75
12:36:00 AM	58.4	61.8	52.5	79
12:37:00 AM	53.9	54.9	52.6	71.3
12:38:00 AM	55.5	60.7	53.5	78.2
12:39:00 AM	57.9	61.5	53.3	78.6
12:40:00 AM	53.7	55.4	50.2	71.8
12:41:00 AM	56.5	60.3	52.7	77
12:42:00 AM	57.1	60.4	53.3	77.5
12:43:00 AM	54	56.6	51.1	74.2
12:44:00 AM	53.9	54.8	52.9	71.2
12:45:00 AM	56.7	60.8	50.9	78.3
12:46:00 AM	54.6	57.9	51.7	75.9
12:47:00 AM	54.2	58.7	50.4	77.8
12:48:00 AM	55.6	59.1	51.8	75.4
12:49:00 AM	55.4	59.3	52.5	76.4
12:50:00 AM	53.3	54.7	50.8	71.9
12:51:00 AM	53.9	56.4	52.9	72.8
12:52:00 AM	57	60.1	51.3	77.4
12:53:00 AM	55.5	58.4	52.1	76.4
12:54:00 AM	53	55	50.4	70.6
12:55:00 AM	55.5	58.1	51.7	74.9
12:56:00 AM	55.4	58	53.4	75.4
12:57:00 AM	55.1	58.4	52.4	74.9
12:58:00 AM	55	58.5	52.2	78.3
12:59:00 AM	55.7	58.7	51.8	75.9
1:00:00 AM	53.1	57.4	50.4	75.6
1:01:00 AM	53.1	59.1	49.7	77.3
1:02:00 AM	56.5	60	54.5	77.8
1:03:00 AM	56.8	60.4	51.6	78.1
1:04:00 AM	56.7	59.7	52	79.9
1:05:00 AM	55.7	58.7	50.6	77.2
1:06:00 AM	54	56.9	51.6	74.7
1:07:00 AM	57.2	60.9	53.2	77.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:08:00 AM	52.1	57.2	49.6	76.9
1:09:00 AM	55.6	58.9	49.1	75.6
1:10:00 AM	54.6	60.4	50	78.4
1:11:00 AM	58	60.6	55.6	78.3
1:12:00 AM	55.7	60.1	50.6	78.9
1:13:00 AM	54.5	58.8	50.9	76
1:14:00 AM	56.2	60.3	50.5	78.2
1:15:00 AM	52.3	54.6	49.9	72.8
1:16:00 AM	55.6	59.4	51.4	78.3
1:17:00 AM	52.8	55.1	49.3	72
1:18:00 AM	55.7	60.5	50.7	78.7
1:19:00 AM	52.5	56.8	49.5	76
1:20:00 AM	56	58.2	53.6	76.7
1:21:00 AM	52.4	54.1	50.6	72.1
1:22:00 AM	56.2	59.3	51.2	77.7
1:23:00 AM	55	57.4	51.7	73.8
1:24:00 AM	54	56.3	51.1	74.3
1:25:00 AM	56.3	59.8	50.7	79.9
1:26:00 AM	56.3	60.3	50	78.6
1:27:00 AM	56.5	59.2	50.1	77.2
1:28:00 AM	55.3	59.7	48	77
1:29:00 AM	56.8	60	50.1	77.6
1:30:00 AM	56.1	59.5	51	77
1:31:00 AM	51.9	59.3	48.7	75.8
1:32:00 AM	58.6	60.7	53.9	80.4
1:33:00 AM	54.7	59.8	50.3	76.8
1:34:00 AM	48.9	52.2	47.6	69.6
1:35:00 AM	56.8	60.9	48.8	80.1
1:36:00 AM	54.7	60	48	77.2
1:37:00 AM	57.7	61.3	50.3	78.3
1:38:00 AM	51.3	53.8	48.1	72
1:39:00 AM	57	60.5	49.6	78.8
1:40:00 AM	53.2	57.8	48.7	75
1:41:00 AM	51.6	57.8	47.8	76
1:42:00 AM	56	59.7	49.3	78
1:43:00 AM	53.3	58.8	47.7	76
1:44:00 AM	56.1	60.3	47.9	79.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:45:00 AM	53	57.6	47.7	74.6
1:46:00 AM	51.2	56.1	48	72.1
1:47:00 AM	56.1	58.4	53.9	75.2
1:48:00 AM	50.8	56.7	47.7	72.9
1:49:00 AM	53.8	57.2	49.3	75.4
1:50:00 AM	51.4	56.8	48.7	73.4
1:51:00 AM	56.6	59.5	50.2	77.1
1:52:00 AM	50.7	57.6	48.2	73.3
1:53:00 AM	51.6	57	48.8	74.3
1:54:00 AM	55.6	58.2	50.8	75.4
1:55:00 AM	51.7	56.6	49.6	73.8
1:56:00 AM	59	63.3	51.6	82.6
1:57:00 AM	52.3	60.8	49.1	77.7
1:58:00 AM	54	58.3	49.8	75.1
1:59:00 AM	53.3	59	49.8	76.5
2:00:00 AM	57.8	57.8	49	74.8
2:01:00 AM	56.3	59.4	50	76.3
2:02:00 AM	50.2	51.1	48.9	68.7
2:03:00 AM	54.9	58.5	49.2	75.6
2:04:00 AM	56	59.3	51.1	76.1
2:05:00 AM	50.7	54.3	49	70
2:06:00 AM	53.6	58.9	48.2	76
2:07:00 AM	54.4	58.9	48.8	76.9
2:08:00 AM	55.8	59.6	48.1	76.4
2:09:00 AM	51.4	56.2	49.3	71.8
2:10:00 AM	55.8	59.4	50.1	76.2
2:11:00 AM	55.6	59	51.6	76.8
2:12:00 AM	52.6	57.8	48.8	74.3
2:13:00 AM	56.9	59.1	50.9	76.8
2:14:00 AM	48.7	51.8	47.8	67.2
2:15:00 AM	53.2	58.9	47.7	75
2:16:00 AM	55.2	59	49.4	77.4
2:17:00 AM	50.6	54.3	47.2	73.3
2:18:00 AM	55.7	59.1	49.8	76.1
2:19:00 AM	49.3	50.6	46.9	67.8
2:20:00 AM	56.1	61.2	47.3	78.8
2:21:00 AM	54.1	61	47.7	77.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:22:00 AM	48.5	49.4	47.6	64.4
2:23:00 AM	55.5	58.8	48.6	75
2:24:00 AM	49.1	50.3	47.8	66.4
2:25:00 AM	58.6	58.2	49.1	75.7
2:26:00 AM	54.1	57.9	50.8	75.4
2:27:00 AM	55.6	59	48.9	77
2:28:00 AM	50.5	54.7	47.9	70.2
2:29:00 AM	53.7	59.9	48.1	76.2
2:30:00 AM	55.9	59.7	49.6	75.4
2:31:00 AM	51	56.7	49	72.7
2:32:00 AM	51.9	56	50.2	69.5
2:33:00 AM	58.2	61.4	52.8	77.9
2:34:00 AM	55.1	57.9	52.6	73.4
2:35:00 AM	53.4	55.7	51	71.5
2:36:00 AM	53.3	57.5	49.2	74.2
2:37:00 AM	52.5	56.3	48.8	73.6
2:38:00 AM	54.1	58.1	49.1	75.9
2:39:00 AM	52.9	57	48.8	74
2:40:00 AM	55	58.3	48.9	76.1
2:41:00 AM	53.8	58	48.3	75.4
2:42:00 AM	56.4	58.9	48.2	77.8
2:43:00 AM	49.1	50.5	48.1	67.7
2:44:00 AM	53	57.6	49.2	77.2
2:45:00 AM	52.6	58	47.8	76.5
2:46:00 AM	49.2	51.4	47.9	69.7
2:47:00 AM	50.8	52.2	49	70.7
2:48:00 AM	55.3	58.7	49.5	76.3
2:49:00 AM	55.4	58.3	48.6	76.6
2:50:00 AM	53.3	56.8	48.6	73.8
2:51:00 AM	49.8	52.9	47.1	68.8
2:52:00 AM	49.9	51.4	47.2	68.7
2:53:00 AM	56.2	60	47.3	78.4
2:54:00 AM	52.6	56.3	49.9	72.4
2:55:00 AM	51.6	56.5	47.6	74.5
2:56:00 AM	51.5	55.9	48.5	72.8
2:57:00 AM	52.2	55.5	48.1	71
2:58:00 AM	49.4	54.5	47.9	71.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:59:00 AM	50.6	55.2	48.1	73.6
3:00:00 AM	52.6	56.4	48.7	74.5
3:01:00 AM	53.5	57	49.4	74.9
3:02:00 AM	55.2	57.5	52	74.6
3:03:00 AM	50.5	55.3	47.9	72.5
3:04:00 AM	54.7	57.7	50.5	75.1
3:05:00 AM	52.9	56.8	48.6	74.4
3:06:00 AM	51.4	56.6	48	74.4
3:07:00 AM	56.1	59	51.9	77.8
3:08:00 AM	53.6	58.2	49.6	76.4
3:09:00 AM	51.2	54.9	49.3	74.8
3:10:00 AM	55.2	57	51.8	75.3
3:11:00 AM	51.6	54.9	49.1	71.9
3:12:00 AM	52.2	55.4	50.5	72.8
3:13:00 AM	52.5	57	49.2	75.4
3:14:00 AM	54.3	58.5	49.6	76.6
3:15:00 AM	51.4	57.3	49.5	74.9
3:16:00 AM	53	58	49.1	74.9
3:17:00 AM	54.1	58	49.7	74.5
3:18:00 AM	55.5	59.4	51	76.4
3:19:00 AM	54	56.5	51.6	74.6
3:20:00 AM	55.4	59	51.4	75.5
3:21:00 AM	55.9	58.9	50.5	76.5
3:22:00 AM	51.5	54	50	70.2
3:23:00 AM	56	58.5	51.9	76
3:24:00 AM	53.4	56.6	50.4	73.9
3:25:00 AM	54.9	57.9	51.6	75.9
3:26:00 AM	55.3	58.2	50.7	75
3:27:00 AM	52.8	55.6	50.2	73.2
3:28:00 AM	53.5	56.1	49.9	73.6
3:29:00 AM	54.2	58.7	49.7	75.9
3:30:00 AM	53.9	59	49.6	76.4
3:31:00 AM	53.9	56.2	51.6	73.9
3:32:00 AM	56.3	58.7	52.1	75.6
3:33:00 AM	52.4	55.5	48.7	72.7
3:34:00 AM	52.5	55.5	49.9	73.6
3:35:00 AM	55.2	57.9	52.3	75.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:36:00 AM	52.1	55	49.5	71.3
3:37:00 AM	54.2	57.7	49.5	76
3:38:00 AM	53.7	57.9	50.3	75.4
3:39:00 AM	55.2	58	50	75.5
3:40:00 AM	52.7	57	50.2	72.5
3:41:00 AM	53.5	56.3	50.6	73
3:42:00 AM	53.5	56.5	50.9	75.1
3:43:00 AM	56.2	59.5	50.1	76.9
3:44:00 AM	53.2	56.3	50.6	73.6
3:45:00 AM	53	56.7	50.8	73.7
3:46:00 AM	56.8	60.5	54.1	81.5
3:47:00 AM	51.9	60.6	49	80.8
3:48:00 AM	49.6	50.1	48.8	64.7
3:49:00 AM	52.4	56.6	49.5	71.7
3:50:00 AM	54.7	57.8	50.5	76.4
3:51:00 AM	50.6	53.7	49.6	67
3:52:00 AM	50.3	54.1	49.6	67.5
3:53:00 AM	53.2	58.8	49.4	75
3:54:00 AM	53.8	58.2	50.6	75
3:55:00 AM	50.6	51.5	49.8	68.4
3:56:00 AM	50.2	51.8	48.6	68.5
3:57:00 AM	49.4	50.4	48.6	67.4
3:58:00 AM	50.1	52.7	48.9	69.6
3:59:00 AM	50.8	53.1	49.6	71.3
4:00:00 AM	49.9	51.8	49.2	70
4:01:00 AM	54.7	57.1	50.1	76
4:02:00 AM	49.9	50.5	49	65.7
4:03:00 AM	50.5	52.5	49.6	69.1
4:04:00 AM	50.4	51.4	49.2	67.3
4:05:00 AM	55.6	59.1	50.8	78.6
4:06:00 AM	51.1	56.7	47.6	74.3
4:07:00 AM	49.4	50.8	47.7	65.6
4:08:00 AM	49.7	52.6	48.1	70.9
4:09:00 AM	49.7	50.3	48.8	66.1
4:10:00 AM	49.3	50.1	48.7	64.7
4:11:00 AM	57.3	60.5	49.5	80.3
4:12:00 AM	55.3	59	50.3	79.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:13:00 AM	55	60.1	48.5	80.9
4:14:00 AM	58.7	61.5	51.2	80.8
4:15:00 AM	55.1	60.4	48.7	80.7
4:16:00 AM	58.9	61.4	53.2	80.5
4:17:00 AM	54	59.5	48.5	78.3
4:18:00 AM	58.7	60.8	52.5	80.3
4:19:00 AM	55.8	59.7	48.9	79.8
4:20:00 AM	57.3	60.7	50.2	78.9
4:21:00 AM	56.3	61	49.3	80.1
4:22:00 AM	50.1	51.7	48.8	67.2
4:23:00 AM	58.6	61.6	50.7	79.9
4:24:00 AM	55.7	61.1	49.1	79.7
4:25:00 AM	49.8	50.6	49	66.6
4:26:00 AM	54.8	60.7	48.1	81.7
4:27:00 AM	56.9	61.7	49.5	81.7
4:28:00 AM	50	50.6	49.2	66.3
4:29:00 AM	53.6	60.2	49.4	80.5
4:30:00 AM	59.1	62.2	50.4	81.5
4:31:00 AM	54.2	61.3	47.9	81.4
4:32:00 AM	58.8	61.2	48.1	80.6
4:33:00 AM	58	62.4	48.6	81.7
4:34:00 AM	49.7	50.5	48.5	66.6
4:35:00 AM	50.1	51	49.3	67.2
4:36:00 AM	49.6	50.9	48.4	66.4
4:37:00 AM	49.8	51.1	48.3	66.7
4:38:00 AM	51.5	53.5	50.1	70.5
4:39:00 AM	55.3	58.4	50.6	77.8
4:40:00 AM	51.9	57.7	48.8	77.5
4:41:00 AM	49.2	50.4	48	66.6
4:42:00 AM	49.7	51.5	48.6	66.3
4:43:00 AM	49.2	50	48.1	66.3
4:44:00 AM	48.7	49.8	47.6	65.9
4:45:00 AM	49.9	51.1	49	67.8
4:46:00 AM	50	52.2	48.9	65.8
4:47:00 AM	49.5	50.1	48.8	66.8
4:48:00 AM	49.8	53.7	48	71
4:49:00 AM	52.5	55.4	49.7	75.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:50:00 AM	49.6	50.8	48.7	67.8
4:51:00 AM	49.2	49.9	48.6	65.9
4:52:00 AM	49.8	51.4	48.6	71.7
4:53:00 AM	49.1	50	48	65.6
4:54:00 AM	50.4	51.4	49.4	78.0
4:55:00 AM	50.5	51.5	49.6	67.6
4:56:00 AM	50.6	52	49.8	69
4:57:00 AM	51.4	52.2	50.4	68.2
4:58:00 AM	51.5	52.4	50.9	68.5
4:59:00 AM	51.4	52.6	49.8	68.8
5:00:00 AM	51.8	53.1	50	78.3
5:01:00 AM	50.9	51.6	50.1	68
5:02:00 AM	50.3	50.8	49.5	67.4
5:03:00 AM	49.9	51	48.5	67.3
5:04:00 AM	54.6	59.7	50	79.1
5:05:00 AM	55.4	59.5	50.6	77.3
5:06:00 AM	51.7	52.4	50.7	69.2
5:07:00 AM	51.5	52.6	50.6	69
5:08:00 AM	51.8	53.2	50.6	68.8
5:09:00 AM	51.7	52.5	50.8	69.6
5:10:00 AM	51.2	52.1	50.5	69.1
5:11:00 AM	54.8	58.8	50.1	77.7
5:12:00 AM	52.4	58.5	49.4	77.6
5:13:00 AM	50.5	51.6	49	68.1
5:14:00 AM	50.6	51.9	48.8	69
5:15:00 AM	50.1	51	49	67.8
5:16:00 AM	50.2	51.5	48.7	67.7
5:17:00 AM	50.7	51.6	49.7	66.6
5:18:00 AM	50.4	52	48.3	68.2
5:19:00 AM	50.4	51.4	49.1	70
5:20:00 AM	51.3	53.4	49.9	69.2
5:21:00 AM	52.3	54.2	49.9	71.4
5:22:00 AM	52	53.7	51	70.1
5:23:00 AM	51.2	52.3	50.1	68.3
5:24:00 AM	51.5	52.6	50.7	69.2
5:25:00 AM	51.4	52.2	50.6	68.5
5:26:00 AM	51.1	52.2	50	68.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:27:00 AM	50.8	51.8	49.9	68.5
5:28:00 AM	50.7	52.1	49.6	67.8
5:29:00 AM	50.1	51.1	49.1	66.4
5:30:00 AM	53	58.3	49.6	77
5:31:00 AM	53.1	58.8	48.8	76.3
5:32:00 AM	51	54.2	48.9	70.8
5:33:00 AM	48.7	50.4	47.8	66.1
5:34:00 AM	49.9	50.9	48.7	66.2
5:35:00 AM	49	50.1	48.1	63.3
5:36:00 AM	48.4	49.5	47.7	63.1
5:37:00 AM	49.2	50.6	48.3	65
5:38:00 AM	49.7	50.5	49	67
5:39:00 AM	49.3	52.9	47.6	68.2
5:40:00 AM	49.7	52.6	48.2	66.7
5:41:00 AM	51.9	55.1	48.8	72.6
5:42:00 AM	53.9	57.1	49.9	75.7
5:43:00 AM	50.4	54.4	47.9	75.2
5:44:00 AM	50.3	51.9	49.3	67.8
5:45:00 AM	49.2	50.3	48.5	65.9
5:46:00 AM	48.8	49.7	48	62.8
5:47:00 AM	48.9	50.2	47.7	65.6
5:48:00 AM	51.4	54.7	48.1	73
5:49:00 AM	51.1	54.7	48.7	72.8
5:50:00 AM	49.7	52.3	47.9	69.9
5:51:00 AM	49.1	50.3	48.1	63.5
5:52:00 AM	48.4	50.3	47.8	65.5
5:53:00 AM	49.1	51.1	47.9	65.9
5:54:00 AM	48.8	51.4	47.7	64.3
5:55:00 AM	47.8	48.3	47.2	62.4
5:56:00 AM	48.7	50.1	47.9	63.4
5:57:00 AM	48.3	48.8	47.8	62.0
5:58:00 AM	48	48.8	47.6	67.1
5:59:00 AM	48.6	50.1	47.7	63.0
6:00:00 AM	49.8	51.6	48.9	65.9
6:01:00 AM	53.6	57.7	48.9	75.1
6:02:00 AM	51.5	57.1	48.5	75
6:03:00 AM	48.8	49.7	48.4	63.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:04:00 AM	48.7	50	47.7	64.4
6:05:00 AM	49.1	49.9	48.4	65.4
6:06:00 AM	48.8	49.7	47.7	66.3
6:07:00 AM	49.7	51.3	48.6	66.5
6:08:00 AM	48.5	49.5	47.3	65.9
6:09:00 AM	47.9	50.7	46.5	67.3
6:10:00 AM	47.4	48.9	46.7	63.1
6:11:00 AM	47.5	48.6	46.8	62.8
6:12:00 AM	47.8	49.4	47.1	64.1
6:13:00 AM	47.7	48.3	47.1	62.9
6:14:00 AM	48.2	48.8	47.7	62.2
6:15:00 AM	49.1	53.3	47.6	67
6:16:00 AM	49	52	47.7	64.8
6:17:00 AM	48.8	50.7	47.8	64.3
6:18:00 AM	47.6	48.7	47	62.8
6:19:00 AM	54	59.5	46.9	72.8
6:20:00 AM	51.8	58.8	47.4	71.1
6:21:00 AM	48.2	49.2	47.6	63.5
6:22:00 AM	47.7	48.2	47.1	62
6:23:00 AM	48.4	49.3	47.7	64.1
6:24:00 AM	49.6	51.1	48.3	64.8
6:25:00 AM	49.7	51.1	48.7	64.1
6:26:00 AM	48.8	50.4	47.6	64.6
6:27:00 AM	48.2	49.2	47.5	63.5
6:28:00 AM	48.5	49.5	47.9	72.7
6:29:00 AM	48.8	49.7	47.9	63.6
6:30:00 AM	48.9	49.7	48.1	64.0
6:31:00 AM	48.8	49.8	47.9	63.3
6:32:00 AM	48.3	49.5	47.7	62.9
6:33:00 AM	49.7	50	48.5	63.7
6:34:00 AM	49	50.8	48.1	66.0
6:35:00 AM	48.7	49.8	48.3	64.1
6:36:00 AM	48.8	51.1	47.9	64.1
6:37:00 AM	49.9	51.2	48.3	67.7
6:38:00 AM	48.5	49.5	47.9	63.2
6:39:00 AM	48.6	49.8	47.8	63
6:40:00 AM	49.8	51	48.9	65

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:41:00 AM	56.5	62.3	49.9	74.6
6:42:00 AM	50.4	52.5	48.8	67.3
6:43:00 AM	49	50	47.9	64.8
6:44:00 AM	48.8	50.2	48.2	64.1
6:45:00 AM	48.5	49.8	47.5	65
6:46:00 AM	48.7	49.7	47.5	64
6:47:00 AM	48.1	49	47.6	62.9
6:48:00 AM	47.9	48.5	47.2	62.7
6:49:00 AM	47.6	49.6	47	63.6
6:50:00 AM	47.5	49.8	46.9	70.1
6:51:00 AM	48.1	49.3	47.5	63.8
6:52:00 AM	48.3	49.6	47.4	64.3
6:53:00 AM	48.8	50.1	47.5	65.7
6:54:00 AM	48	48.7	47.4	62.9
6:55:00 AM	48.2	49.2	47.6	63.7
6:56:00 AM	48.1	49	47.4	62.5
6:57:00 AM	48.2	49.7	47.5	63.7
6:58:00 AM	48.8	50.2	48	64.2
6:59:00 AM	49.1	50.6	47.9	64.1
7:00:00 AM	48.2	49.7	47.5	63.5
7:01:00 AM	49.6	51.5	47.8	64.6
7:02:00 AM	48.4	49.3	47.6	62.9
7:03:00 AM	53.1	57.1	48.1	70.3
7:04:00 AM	48	49.1	46.8	63.7
7:05:00 AM	48.4	49.5	47.4	63.1
7:06:00 AM	48.4	49.5	47.2	63.8
7:07:00 AM	48.8	50.6	47.7	63.5
7:08:00 AM	52	53.4	50.2	66.4
7:09:00 AM	51.4	53.4	49.3	66.8
7:10:00 AM	48.6	49.5	47.8	63
7:11:00 AM	48.5	50.8	47.4	64.1
7:12:00 AM	49.4	50.4	48	64.1
7:13:00 AM	48.4	50	47.5	64.1
7:14:00 AM	48.5	50.1	47.3	72.3
7:15:00 AM	48.8	50.4	48	64.2
7:16:00 AM	48.5	49.4	47.8	62.7
7:17:00 AM	48.7	49.4	48.1	63.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:18:00 AM	49	50.4	48.2	63.4
7:19:00 AM	49.9	51	48	64.1
7:20:00 AM	50	51.6	47.9	65.4
7:21:00 AM	50.3	53.9	47.7	68.4
7:22:00 AM	50.2	51.3	48.8	68.4
7:23:00 AM	49	50.9	48.7	63.8
7:24:00 AM	49.4	50.4	48.7	64.4
7:25:00 AM	50.1	54.3	48	66.2
7:26:00 AM	52.9	58.4	49.3	69.8
7:27:00 AM	49.1	50.2	48.3	63.3
7:28:00 AM	48.8	49.8	48.1	64.7
7:29:00 AM	52.4	58.1	47.9	71
7:30:00 AM	50.6	57.3	47.5	68.8
7:31:00 AM	49.2	50	48.4	64.5
7:32:00 AM	48.7	50	47.4	63.1
7:33:00 AM	48.1	49.3	47.3	62
7:34:00 AM	48.7	50.7	47.3	64.3
7:35:00 AM	47.5	48.5	46.3	61.3
7:36:00 AM	59.8	68.3	47.4	80.9
7:37:00 AM	50.2	55.5	47.2	67.7
7:38:00 AM	49.7	52.1	48.3	65.2
7:39:00 AM	51.6	58	47.5	72.1
7:40:00 AM	47.9	50.2	47	67.9
7:41:00 AM	49	53.9	47	67.6
7:42:00 AM	47.9	49.1	47.2	62.5
7:43:00 AM	47.7	49.4	46.9	63
7:44:00 AM	48.5	50.5	46.8	65.3
7:45:00 AM	47.6	49.4	46.6	64.4
7:46:00 AM	46.9	47.7	46	62.6
7:47:00 AM	47.7	48.3	47.1	62.8
7:48:00 AM	47.7	48.9	46.9	62.7
7:49:00 AM	47.6	50.2	46.5	63.4
7:50:00 AM	48	50.8	46.8	64.1
7:51:00 AM	47.2	48.6	46.3	61.9
7:52:00 AM	46.7	47.3	46.2	61.5
7:53:00 AM	50.7	55.8	46.7	69.6
7:54:00 AM	50.1	55.6	46.3	69

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:55:00 AM	46.8	48.4	46.1	62.5
7:56:00 AM	46.6	47	46	61.4
7:57:00 AM	46.7	47.7	46	61.5
7:58:00 AM	46.9	47.9	46.3	62.1
7:59:00 AM	47.1	49.6	46.3	77.9
8:00:00 AM	46.6	47.1	46	63.8
8:01:00 AM	46.5	47.4	45.9	70.8
8:02:00 AM	49.8	54.6	46.6	64.8
8:03:00 AM	47.4	48.8	46.6	62.6
8:04:00 AM	47.2	47.9	46.3	63
8:05:00 AM	47.2	48.1	46.5	62.3
8:06:00 AM	46.5	48	45.8	61.8
8:07:00 AM	46.7	48.1	46.3	62.1
8:08:00 AM	46.6	47.2	46.1	61.9
8:09:00 AM	46.8	48.6	46.4	63.2
8:10:00 AM	47.3	49.1	46.6	62.4
8:11:00 AM	47.6	49.3	46.4	63.1
8:12:00 AM	47	47.5	46.4	62.2
8:13:00 AM	46.8	47.4	46.3	61.5
8:14:00 AM	47	47.4	46.4	60.9
8:15:00 AM	47.2	47.8	46.5	61.7
8:16:00 AM	47.4	47.9	46.8	61.5
8:17:00 AM	47.4	47.9	47	61.8
8:18:00 AM	47.5	48.1	46.9	61.6
8:19:00 AM	47.9	48.3	47.4	67.1
8:20:00 AM	47.9	48.4	47.1	62.6
8:21:00 AM	47.8	48.2	47.3	62.1
8:22:00 AM	47.8	48.5	47.3	64.4
8:23:00 AM	48	48.5	47.3	64.2
8:24:00 AM	48.7	48.8	47.6	63.9
8:25:00 AM	48.3	48.9	47.6	63.5
8:26:00 AM	48.1	48.6	47.7	64
8:27:00 AM	48.4	51.4	47.5	64.1
8:28:00 AM	53	59.3	46.9	72.2
8:29:00 AM	47.4	47.8	46.8	63.9
8:30:00 AM	47.3	48.1	46.5	64.8
8:31:00 AM	47.5	47.9	47.1	65.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:32:00 AM	47.6	48.9	47.1	64.4
8:33:00 AM	47.6	48.4	47	65
8:34:00 AM	47.2	47.8	46.6	65.2
8:35:00 AM	47.5	47.9	46.8	65.5
8:36:00 AM	47.7	48.3	47.2	65.2
8:37:00 AM	48.2	48.8	47.4	65.6
8:38:00 AM	47.2	48.1	46.4	64.3
8:39:00 AM	48.1	48.8	47.6	64.8
8:40:00 AM	47.5	48.5	46.4	64.7
8:41:00 AM	47.2	48.4	45.3	64.8
8:42:00 AM	48	48.6	47.3	66.1
8:43:00 AM	47.9	48.9	46.7	65.4
8:44:00 AM	48.3	49.2	46.8	66.8
8:45:00 AM	48.8	49.6	48	65.8
8:46:00 AM	50.2	50.7	49.6	66.3
8:47:00 AM	51.2	54.4	50.3	69
8:48:00 AM	54.1	58.8	50.1	71.6
8:49:00 AM	50.4	51.1	49.8	66.4
8:50:00 AM	50.9	51.4	50.1	67.9
8:51:00 AM	51.2	51.6	50.8	68.6
8:52:00 AM	51	51.4	50.4	67.4
8:53:00 AM	50.9	51.5	49.7	67.2
8:54:00 AM	50.5	51.5	49.6	66.8
8:55:00 AM	50.9	51.6	50.2	67.7
8:56:00 AM	50.7	50.9	49.7	68.6
8:57:00 AM	50.2	51.2	49.6	67.9
8:58:00 AM	51.4	52.1	50.6	69.8
8:59:00 AM	51	51.8	49.2	68.7
9:00:00 AM	51.2	53.7	49.1	67.2
9:01:00 AM	51.3	51.8	50.3	68.5
9:02:00 AM	51	51.9	50.3	70.2
9:03:00 AM	51.2	52.2	50.2	69
9:04:00 AM	51.6	52.8	50.4	69.5
9:05:00 AM	50.8	51.8	49.2	74.2
9:06:00 AM	50.9	52.5	49.5	69
9:07:00 AM	52.2	52.9	51.1	70.5
9:08:00 AM	51.9	52.9	50.8	69.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:09:00 AM	52.1	52.7	51.2	69.7
9:10:00 AM	51.9	52.7	50.8	71.4
9:11:00 AM	51.5	53.1	49.9	69.7
9:12:00 AM	52.5	54.3	50.4	70.6
9:13:00 AM	52	53.3	50	69.4
9:14:00 AM	51.4	52.7	50.4	67.1
9:15:00 AM	52.1	52.9	51.3	69.1
9:16:00 AM	51	52.4	49.3	69.1
9:17:00 AM	50.9	52.1	49.3	67.7
9:18:00 AM	51.5	52.1	50.4	71.6
9:19:00 AM	51.5	52.3	50.1	68.9
9:20:00 AM	51.7	52.4	50.8	68.3
9:21:00 AM	51.2	51.8	50.4	68.3
9:22:00 AM	51.7	52.6	50.9	71
9:23:00 AM	53	55.3	52.1	70.2
9:24:00 AM	56.4	60.5	52.3	74.3
9:25:00 AM	52.6	55.5	51.7	70.4
9:26:00 AM	52	53.3	51	68.2
9:27:00 AM	52.4	53.1	51.7	69.1
9:28:00 AM	52.2	52.8	51.1	69.7
9:29:00 AM	51.9	52.7	50.6	69
9:30:00 AM	51.5	52.8	49.9	69.3
9:31:00 AM	52.5	53.7	51.6	70.1
9:32:00 AM	52.7	53.4	52	69
9:33:00 AM	52	53.3	50.8	68.5
9:34:00 AM	51.6	52.3	51	69.5
9:35:00 AM	51.4	52.4	50.1	68.4
9:36:00 AM	52.1	52.5	51.4	70.4
9:37:00 AM	51.8	53.3	50.9	69.1
9:38:00 AM	51.7	52.5	50.8	69.5
9:39:00 AM	51.9	52.9	51.1	69.1
9:40:00 AM	52.3	53.2	51.4	69.8
9:41:00 AM	51.9	53.9	50	69

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Location M5: 24-hour Session Report

Meter No. 35598
8/6-7/2020

Information Panel

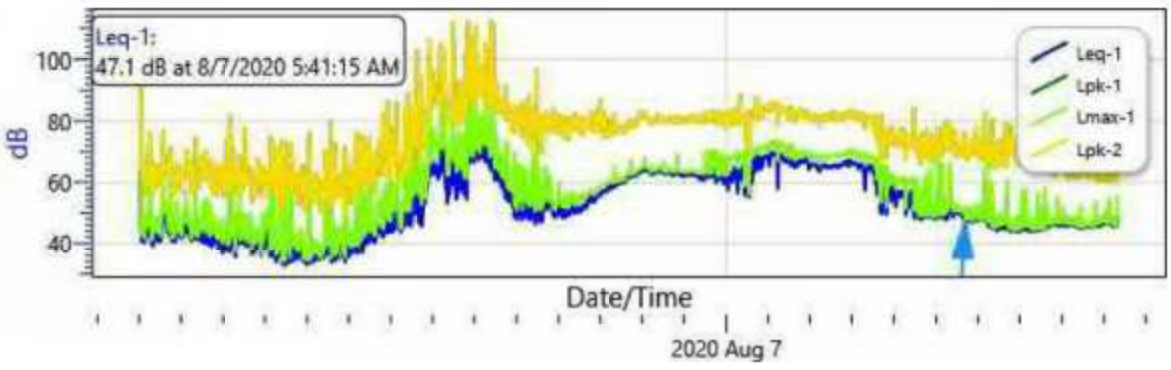
Name	S030_BGQ080006_07082020_114656
Start Time	8/6/2020 10:00:15 AM
Stop Time	8/7/2020 9:21:09 AM
Device Name	BGQ080006
Model Type	Sound Pro DL
Device Firmware Rev	R.13F
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Lec	1	61.8 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Chart

S030_BGQ080006_07082020_114656: Logged Data Chart



Logged Data Table

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8/6/2020 10:01:15 AM	63.9	79.2	47.7	111.1
10:02:15 AM	5.3	54.9	40.9	91.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:03:15 AM	40.8	42.9	40.2	68.8
10:04:15 AM	41	43.4	40.2	61.3
10:05:15 AM	41.5	45.1	40.7	61.7
10:06:15 AM	42.1	44.8	40.8	62.9
10:07:15 AM	40.5	41.8	39.6	56.2
10:08:15 AM	45.7	49.9	39.7	63.8
10:09:15 AM	44.2	49.8	39.4	63.2
10:10:15 AM	44.9	50	40	63.8
10:11:15 AM	42.3	45.5	39.5	58.8
10:12:15 AM	43.4	47.8	39.9	67.8
10:13:15 AM	47.8	55.7	41.7	69.6
10:14:15 AM	54.6	61.1	45.9	76.4
10:15:15 AM	48	51.1	40.1	68.7
10:16:15 AM	40.8	42.1	39.9	59.8
10:17:15 AM	40	41.3	38.8	59.5
10:18:15 AM	40.5	44.4	38.5	59.7
10:19:15 AM	39.3	42.1	38	56.5
10:20:15 AM	42	46.1	39.3	61.1
10:21:15 AM	44.2	48.9	41	66.2
10:22:15 AM	41.6	44.4	39.8	64.6
10:23:15 AM	42.8	45.4	41.1	65.6
10:24:15 AM	42	44.3	40.6	60.4
10:25:15 AM	41.8	44.1	40.7	58.7
10:26:15 AM	41.2	46.3	39.3	62.2
10:27:15 AM	40.7	46.6	37.7	61.6
10:28:15 AM	44.2	48.8	40.7	64
10:29:15 AM	42.2	47	39.5	62.7
10:30:15 AM	41	42.6	39.8	60.5
10:31:15 AM	42.5	45.6	40.3	64.1
10:32:15 AM	44.8	49.8	40.9	64.5
10:33:15 AM	49.6	58	42.8	71.4
10:34:15 AM	53.9	63.6	41.6	76.7
10:35:15 AM	46.7	50.6	42.4	67.4
10:36:15 AM	47.7	51.6	43	67.1
10:37:15 AM	48.1	53.9	42.6	67.4
10:38:15 AM	48	52.2	42.3	68.4
10:39:15 AM	46.2	52.1	41.5	67.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:40:15 AM	43.9	47.2	41.6	65
10:41:15 AM	43.5	46.3	41.5	63.6
10:42:15 AM	43.7	47.6	41.9	60.9
10:43:15 AM	42.8	44.1	41.6	58.7
10:44:15 AM	50.6	57.4	40.8	71.5
10:45:15 AM	47	55.6	37.9	67.1
10:46:15 AM	40.8	42.1	38.2	56.6
10:47:15 AM	40.9	43.1	39.5	58
10:48:15 AM	40.8	42	38.8	56
10:49:15 AM	40.9	42.5	39.5	56.3
10:50:15 AM	40.8	42.8	36.3	62.8
10:51:15 AM	40.8	44.1	37.1	58.2
10:52:15 AM	47	53.5	41.1	65.1
10:53:15 AM	46.9	53.9	41.9	66
10:54:15 AM	42.5	44.3	40.9	60.3
10:55:15 AM	43.9	47.8	42.1	61.7
10:56:15 AM	43	44.3	42.1	64.8
10:57:15 AM	43.1	44.2	42.2	60.9
10:58:15 AM	42.8	44.2	41.8	59.2
10:59:15 AM	42.1	43	41.3	63.7
11:00:15 AM	41.8	42.7	40.6	57.2
11:01:15 AM	42.7	44.4	41.7	61.5
11:02:15 AM	44.3	51.7	41.5	64.8
11:03:15 AM	42.8	48.3	40.2	62.5
11:04:15 AM	46.7	50.1	41.7	65
11:05:15 AM	43.9	46.8	40.4	61.2
11:06:15 AM	48.9	57.1	42.9	70.6
11:07:15 AM	46.2	49.9	43.5	70
11:08:15 AM	46.1	52.1	42.4	70.3
11:09:15 AM	48.9	53.4	42.9	67.5
11:10:15 AM	44.2	48.7	40.6	67.6
11:11:15 AM	42.3	46.7	39.4	67
11:12:15 AM	42	44.9	39.9	66.1
11:13:15 AM	41.7	46	39.9	67.3
11:14:15 AM	41	41.9	39.8	64.5
11:15:15 AM	42.1	43.2	41.4	56.7
11:16:15 AM	43.7	47.9	42.1	61.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:17:15 AM	43.2	45.9	42	60.6
11:18:15 AM	42.8	45.1	41.3	60.4
11:19:15 AM	41.8	43.4	41.1	57.6
11:20:15 AM	49.3	59.6	41.4	74.5
11:21:15 AM	42.1	43.4	41.3	58.2
11:22:15 AM	41.5	42.4	40.1	57.7
11:23:15 AM	41.2	42.1	39.2	57.8
11:24:15 AM	41.3	44.3	40.1	59.2
11:25:15 AM	41.7	45.3	40	60.9
11:26:15 AM	43.6	48.2	40.8	62
11:27:15 AM	42.5	45.3	40.5	61.3
11:28:15 AM	41.9	45.4	38.6	62.5
11:29:15 AM	40.8	41.8	38.5	68.5
11:30:15 AM	43.1	48.6	40	61.5
11:31:15 AM	44.3	51.8	39.9	65.3
11:32:15 AM	42.8	47.5	38.7	65.3
11:33:15 AM	40.1	43.6	38.2	62.3
11:34:15 AM	47.3	55	39.1	70.4
11:35:15 AM	49.9	53.9	42.6	68.3
11:36:15 AM	42.2	45.7	38.5	61.4
11:37:15 AM	44.7	53.9	37.4	67.4
11:38:15 AM	40.6	46.6	36.7	66.4
11:39:15 AM	39.8	43.8	35.9	62.9
11:40:15 AM	39.5	42.5	36.9	58.6
11:41:15 AM	45	52.8	38.1	67
11:42:15 AM	40.3	44.7	38.4	61.4
11:43:15 AM	39.1	43.1	36.6	60.7
11:44:15 AM	41.2	49.3	37	63.1
11:45:15 AM	40.4	43.6	37	56.7
11:46:15 AM	43.7	47	40.1	62.4
11:47:15 AM	43.8	47.8	40.6	63.1
11:48:15 AM	41.8	43.9	40	61.9
11:49:15 AM	41.3	43.2	38.8	56
11:50:15 AM	40.9	42	40	65.8
11:51:15 AM	40.6	41.1	39.1	58.1
11:52:15 AM	38.4	41.7	35.1	59.4
11:53:15 AM	39	44.5	36	58.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:54:15 AM	40	42	36.3	58.8
11:55:15 AM	41.6	43.7	39.3	64
11:56:15 AM	41.8	47.8	39.1	63.5
11:57:15 AM	39.9	47.1	35.2	64.8
11:58:15 AM	36.9	40	34.1	57.3
11:59:15 AM	37.9	40.3	36.4	55.4
12:00:15 PM	39.8	41.8	37.6	59.5
12:01:15 PM	41.8	44.3	38.9	66.5
12:02:15 PM	40	42.3	38.2	57.5
12:03:15 PM	38.1	41.9	36.1	61.5
12:04:15 PM	39.2	44.2	35.9	58.7
12:05:15 PM	38.3	49.7	35.9	74.3
12:06:15 PM	37.8	39.6	36.9	56.2
12:07:15 PM	38.6	43.5	36.7	66.2
12:08:15 PM	37.9	42	36.4	67.4
12:09:15 PM	37.4	40.4	34.7	63.4
12:10:15 PM	56.4	66	39.4	80.6
12:11:15 PM	54.8	67.5	40.4	81.7
12:12:15 PM	42.5	51.7	35.5	67.4
12:13:15 PM	41.5	52	36.5	71.9
12:14:15 PM	40.1	42.8	37.1	61.1
12:15:15 PM	38.8	42.1	36.2	56.5
12:16:15 PM	38.3	43.3	34.4	65
12:17:15 PM	35.7	37.5	33.5	58.4
12:18:15 PM	39	42.1	35.3	58.9
12:19:15 PM	44.2	49.8	38.4	64
12:20:15 PM	45.3	49.6	39.9	63.8
12:21:15 PM	39.8	44.8	38.2	62.2
12:22:15 PM	47.7	53.9	39.1	66.4
12:23:15 PM	49.7	56.6	40.4	68.9
12:24:15 PM	40.6	41.5	39.5	50
12:25:15 PM	40.3	42	38.5	61.2
12:26:15 PM	40.5	42	39.9	60.1
12:27:15 PM	40.2	41.9	39.3	62.6
12:28:15 PM	41	42.9	40	57.8
12:29:15 PM	42.1	46.9	39.9	60.9
12:30:15 PM	41.7	50	39.3	77.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:31:15 PM	39.5	42.3	36.1	64.7
12:32:15 PM	40.1	41.2	39.1	60.5
12:33:15 PM	39.1	42.3	36	60.4
12:34:15 PM	39.3	40.4	35.4	59.6
12:35:15 PM	40.1	43.9	37.4	60
12:36:15 PM	40	44.9	39.3	60.4
12:37:15 PM	39.5	41.2	38.8	60.9
12:38:15 PM	42.8	50.3	38.3	64.8
12:39:15 PM	40.2	47.7	35.9	63.8
12:40:15 PM	39.1	43.6	36.5	60
12:41:15 PM	36.5	38.3	35.2	53.8
12:42:15 PM	36.6	41.5	33	59
12:43:15 PM	39.2	41.9	37.5	59.7
12:44:15 PM	39.3	43.7	36.7	60.8
12:45:15 PM	37.7	40.4	34.6	56.4
12:46:15 PM	38.6	40.5	37.6	56.5
12:47:15 PM	39	41	37.9	59.5
12:48:15 PM	42.2	45	38.4	68.1
12:49:15 PM	41.3	45.2	38.8	67
12:50:15 PM	41.1	45.3	37.6	61.5
12:51:15 PM	39.1	45.5	35.6	64.6
12:52:15 PM	37.7	40.7	35	62.8
12:53:15 PM	36.6	38.9	34.9	57.3
12:54:15 PM	36.1	36.7	35.6	55.3
12:55:15 PM	42	49.3	35.5	65.1
12:56:15 PM	42.3	47.3	39.8	60.3
12:57:15 PM	39.3	40.9	37.7	62.8
12:58:15 PM	38.1	41.1	36.3	60
12:59:15 PM	40.7	45.2	36	63.5
1:00:15 PM	44.5	49.8	39.6	67.7
1:01:15 PM	40	50.6	48	63.8
1:02:15 PM	48.5	50.2	46.5	63.1
1:03:15 PM	43.5	46.8	39.3	59.3
1:04:15 PM	40.3	47	37	62.6
1:05:15 PM	37.8	41.5	34.2	57
1:06:15 PM	36.1	37.9	34.9	56.6
1:07:15 PM	43.2	57.6	33.3	74.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:08:15 PM	42.1	47.6	36	66.9
1:09:15 PM	35.8	38.3	33	60.3
1:10:15 PM	41.8	51.5	33.7	64.9
1:11:15 PM	48.5	57.3	37.8	73.8
1:12:15 PM	38	43.2	33.8	58
1:13:15 PM	47.7	54.3	33.9	71.7
1:14:15 PM	37	41.3	33.3	62.1
1:15:15 PM	34.1	36.5	32.9	61.5
1:16:15 PM	35	38.4	33.4	60.1
1:17:15 PM	34.9	36.8	33	55.1
1:18:15 PM	36.7	38.2	34.6	63
1:19:15 PM	37.4	38.2	34.8	59.7
1:20:15 PM	37.6	38.6	35.6	52.6
1:21:15 PM	36.3	40.3	33.4	63.2
1:22:15 PM	52.6	59.3	36.7	72.3
1:23:15 PM	48.5	54.4	33.8	67.6
1:24:15 PM	33.4	34.4	32.8	52.5
1:25:15 PM	45.3	51.2	33.8	73.4
1:26:15 PM	38.6	45.6	33.3	62.4
1:27:15 PM	33.6	35.1	32.5	54.1
1:28:15 PM	32.8	34.6	32.2	67
1:29:15 PM	44.6	59	33	72.9
1:30:15 PM	36.8	39.8	34.9	61.6
1:31:15 PM	34.3	39.9	32	55.2
1:32:15 PM	34.5	44.2	32.1	61.9
1:33:15 PM	33.8	38.5	32.4	63.1
1:34:15 PM	36.5	43.2	33.5	62.8
1:35:15 PM	34	35.3	32.8	57.8
1:36:15 PM	42.8	48.7	32.9	64.6
1:37:15 PM	51.5	58.9	34.7	72.8
1:38:15 PM	42.1	49.6	33.5	67.5
1:39:15 PM	35.2	40.6	33.8	58.4
1:40:15 PM	35.1	39.7	33.2	60.9
1:41:15 PM	34.4	39.2	33.2	60.9
1:42:15 PM	36.4	41.6	33.7	60
1:43:15 PM	38.1	42.1	33.7	57.3
1:44:15 PM	35.8	38.2	33.6	62.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:45:15 PM	35.9	37.8	32.4	53.9
1:46:15 PM	36.2	38.3	34.7	61.5
1:47:15 PM	35.1	37.6	33.1	53.1
1:48:15 PM	36.7	44	33.6	59.4
1:49:15 PM	37.7	45.2	34.9	61.7
1:50:15 PM	36.9	38.8	35.5	57
1:51:15 PM	38	39.1	36.5	58.4
1:52:15 PM	39	44.3	34.8	65.7
1:53:15 PM	37.1	41.6	33.4	62.5
1:54:15 PM	34.6	36.2	33.5	54.5
1:55:15 PM	34	34.9	33.2	52.1
1:56:15 PM	35.8	39.3	33.6	61
1:57:15 PM	34	36.1	32.6	62.4
1:58:15 PM	33.3	35.7	32.4	60.3
1:59:15 PM	33.3	37.2	32.4	58.8
2:00:15 PM	33.1	34.4	32.4	66
2:01:15 PM	33.5	37	32.5	58.5
2:02:15 PM	47	57.6	34	70.5
2:03:15 PM	47.3	56.9	35.2	76
2:04:15 PM	35.1	38.9	33.7	54.3
2:05:15 PM	33.8	35	33	53.3
2:06:15 PM	37	41.3	33.2	56.1
2:07:15 PM	36.9	42.1	33.5	58.8
2:08:15 PM	34.8	36.8	33.1	59.1
2:09:15 PM	34.7	40.1	33.5	57.7
2:10:15 PM	36	39.7	34.6	59.5
2:11:15 PM	35.1	37.7	33.8	61
2:12:15 PM	35.9	41	33.6	63.2
2:13:15 PM	35.8	39.3	34.4	61
2:14:15 PM	35.9	38.8	33.8	57.8
2:15:15 PM	35.6	37.6	34.4	56.7
2:16:15 PM	34.8	36.2	34	59.6
2:17:15 PM	34.9	39.3	34	60.9
2:18:15 PM	34.9	35.6	34.1	54.3
2:19:15 PM	34.9	35.4	34.3	55.4
2:20:15 PM	35.2	36	34.2	56.7
2:21:15 PM	35.2	36.1	34.3	52.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:22:15 PM	35.5	36.3	34.7	52.5
2:23:15 PM	36	38.7	35.2	55.4
2:24:15 PM	35.5	38.2	34.5	60.4
2:25:15 PM	39.2	48.5	33.5	63.5
2:26:15 PM	48.1	54.9	36.7	70.5
2:27:15 PM	37.6	42.9	35.3	56.1
2:28:15 PM	45	50	36	60.1
2:29:15 PM	36.5	39.6	35	54.6
2:30:15 PM	38.7	44.6	35	66.2
2:31:15 PM	36.9	43.8	32.8	70.3
2:32:15 PM	36.4	45.6	32.9	58.6
2:33:15 PM	56.4	66.3	34.6	79.8
2:34:15 PM	34	35.1	32.7	50.6
2:35:15 PM	33.9	36.4	32.8	57.9
2:36:15 PM	35.6	37.7	33.9	55.3
2:37:15 PM	38	42.1	34.2	56.8
2:38:15 PM	34.9	40	33	53.9
2:39:15 PM	36	46.8	33.1	72.7
2:40:15 PM	37.6	42.8	33.7	64.8
2:41:15 PM	34.6	36.4	33.4	56.2
2:42:15 PM	36.1	41.9	33.1	57
2:43:15 PM	35.4	39.5	33.4	55.4
2:44:15 PM	35.5	37.9	33.8	56.6
2:45:15 PM	41.3	45.2	37.8	57.7
2:46:15 PM	39.9	40.7	35.3	58.1
2:47:15 PM	38.9	41.7	35	62.3
2:48:15 PM	40.1	40.5	39.6	56.1
2:49:15 PM	40.2	43.8	39.3	58
2:50:15 PM	39.5	44.5	35.5	60.3
2:51:15 PM	35.4	36.9	33.8	52
2:52:15 PM	36.3	42.6	33.5	58.3
2:53:15 PM	48.2	54.6	34.9	71.5
2:54:15 PM	34	35.6	33.2	49.2
2:55:15 PM	41.7	49	33.7	64.1
2:56:15 PM	48	55.2	36.1	60.8
2:57:15 PM	39.4	46.3	34.1	59.2
2:58:15 PM	37	44.1	34	61.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:59:15 PM	35.6	40.6	33.9	62.4
3:00:15 PM	36.2	40.3	34	60.9
3:01:15 PM	37.5	41.4	34.7	57.1
3:02:15 PM	37.2	39.2	36.1	53.5
3:03:15 PM	38	40.6	36.4	64.4
3:04:15 PM	38.8	43.7	36.7	61.3
3:05:15 PM	37.1	40	36.2	56.9
3:06:15 PM	37.3	42.5	36.4	66.1
3:07:15 PM	37.8	39.3	36.3	55.9
3:08:15 PM	38.4	42.5	36.9	59.1
3:09:15 PM	38.2	40	36.8	57.9
3:10:15 PM	40	51.1	35.8	67.9
3:11:15 PM	53	61.2	37.9	76.2
3:12:15 PM	36.9	39.8	35.2	57.7
3:13:15 PM	36.9	39.4	35.3	54
3:14:15 PM	39.4	44.1	36.4	56.7
3:15:15 PM	48.6	56.2	38.2	73.3
3:16:15 PM	38.6	40.9	37.3	59.4
3:17:15 PM	50.8	59.9	37.8	74.9
3:18:15 PM	47.3	60.4	36.3	74.7
3:19:15 PM	37.3	42.1	35.8	60.9
3:20:15 PM	40.7	45.5	37.2	65.1
3:21:15 PM	54	60.1	39.8	74.9
3:22:15 PM	43.2	49.4	38.7	62.6
3:23:15 PM	40	43	38.4	61.5
3:24:15 PM	39.8	44	37.9	59.9
3:25:15 PM	41.8	45.1	39.2	61.3
3:26:15 PM	40.6	47.4	38.5	63
3:27:15 PM	49.7	55.6	41.7	70.2
3:28:15 PM	40.6	45.2	39.1	62.1
3:29:15 PM	41.3	44.2	39.4	60.3
3:30:15 PM	54.3	60	43.7	74.8
3:31:15 PM	43.6	49.7	40.2	62.8
3:32:15 PM	44.4	48.1	40	64.7
3:33:15 PM	42.5	48.4	39.9	64.3
3:34:15 PM	41.2	43.3	39.9	60.2
3:35:15 PM	41.3	46.2	39.2	68.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:36:15 PM	40.4	43	38.6	64.4
3:37:15 PM	41.1	42.7	39.6	58.4
3:38:15 PM	41.5	46.1	39.5	67.9
3:39:15 PM	43.2	45.1	41.1	60.6
3:40:15 PM	45.5	52.1	42.8	68.5
3:41:15 PM	46.7	54.3	42.9	69.5
3:42:15 PM	43.9	48.3	41.4	71.2
3:43:15 PM	43.7	51.6	41.4	69
3:44:15 PM	43.7	52	40.6	69.4
3:45:15 PM	44.2	48.9	42	74.5
3:46:15 PM	44.8	54.9	41.8	72.2
3:47:15 PM	42.8	46.1	39.7	62.3
3:48:15 PM	42.1	45	40.1	66.8
3:49:15 PM	45.3	57.6	41.3	82.1
3:50:15 PM	43.7	46.5	41.1	73.9
3:51:15 PM	47.7	55.7	42.5	71.9
3:52:15 PM	46.5	53.3	42.6	70.5
3:53:15 PM	49.3	59.9	41.5	76
3:54:15 PM	43.5	52.5	41.3	68.5
3:55:15 PM	53.6	67.5	40.3	86.5
3:56:15 PM	44.8	48	41	61.4
3:57:15 PM	44.8	49.4	42.2	63.5
3:58:15 PM	44.8	49	41.8	67.5
3:59:15 PM	43.8	47.4	42.3	61.1
4:00:15 PM	46.6	53.9	42.6	69.1
4:01:15 PM	50.2	59.9	42.6	77.5
4:02:15 PM	45.7	54.4	41.6	68.6
4:03:15 PM	47.3	56	42.3	70.9
4:04:15 PM	44.2	51.8	42.2	67.2
4:05:15 PM	46	51.5	43	65.5
4:06:15 PM	48.3	54.9	45.2	69
4:07:15 PM	47.2	55.2	43.6	69.7
4:08:15 PM	52.3	63.5	44.7	85.9
4:09:15 PM	49.7	61.7	43.9	81
4:10:15 PM	46.4	52.5	43.5	65.1
4:11:15 PM	45.1	46.3	43.6	60
4:12:15 PM	44.5	46.2	42.8	61.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:13:15 PM	44.8	48.2	43.6	61.4
4:14:15 PM	44	45	43.2	60.1
4:15:15 PM	44.8	45.4	43.8	60.8
4:16:15 PM	44.9	50.5	43.1	64.4
4:17:15 PM	45.7	52.4	43.7	67.9
4:18:15 PM	46.3	55.1	43.1	69.4
4:19:15 PM	46.1	51.3	43.8	67.1
4:20:15 PM	53.8	65.9	42.3	83.2
4:21:15 PM	46.5	53.8	42.2	67.5
4:22:15 PM	47.1	57.5	42.5	70.8
4:23:15 PM	46.4	50.5	43.2	63.0
4:24:15 PM	57.9	70.2	44.9	89
4:25:15 PM	48.1	56.1	42.9	71.6
4:26:15 PM	58.9	68.7	44.9	85.1
4:27:15 PM	50.3	60.4	43.9	75.3
4:28:15 PM	45.7	51	43.5	65.6
4:29:15 PM	47.3	57.1	44.1	69.7
4:30:15 PM	52.4	65.8	47.1	83.6
4:31:15 PM	50.6	62.4	44.5	77
4:32:15 PM	53.3	66.2	44.2	83.6
4:33:15 PM	55	65.7	47.5	81.1
4:34:15 PM	49.9	57	46	72.7
4:35:15 PM	50.3	59.2	46.2	73.2
4:36:15 PM	54.2	64.1	45.2	78.4
4:37:15 PM	71.8	85.5	43.9	107.7
4:38:15 PM	55.5	64.7	43.3	80.4
4:39:15 PM	47	55.9	41.7	72.0
4:40:15 PM	57.2	69.8	41.4	85.6
4:41:15 PM	55.3	69.3	42.6	84.8
4:42:15 PM	62.7	77.3	43.7	94.9
4:43:15 PM	45.8	52.8	42.3	66.1
4:44:15 PM	48.5	58.5	43.3	73.1
4:45:15 PM	50.3	58.1	43.4	72
4:46:15 PM	55.2	66.6	46.5	82.9
4:47:15 PM	52.3	55.9	47.3	73.4
4:48:15 PM	52.9	55	50.2	71.2
4:49:15 PM	55.1	58.1	51.8	79.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:50:15 PM	57.4	59.8	55.4	79.5
4:51:15 PM	59.1	60.5	57.1	81.2
4:52:15 PM	59.3	61.4	58	83.8
4:53:15 PM	61.7	67.5	58.1	83.7
4:54:15 PM	61.6	65.7	58.9	91.6
4:55:15 PM	68.9	83.1	50.6	101.5
4:56:15 PM	72.9	87.2	59.1	106.1
4:57:15 PM	62.5	66.8	59.4	83.1
4:58:15 PM	65.9	72.2	50.5	90.6
4:59:15 PM	63.8	67.1	59.1	88.7
5:00:15 PM	67.5	77.1	55.5	95.9
5:01:15 PM	62.9	73.8	52.9	93
5:02:15 PM	63.6	73.3	52.8	93
5:03:15 PM	65.6	74.9	50.4	92.1
5:04:15 PM	63.9	74.9	50.6	90.4
5:05:15 PM	65.1	72.1	49.7	86.2
5:06:15 PM	62.7	72.7	48.1	86.2
5:07:15 PM	61.1	68.4	48.5	85.5
5:08:15 PM	63.4	71.8	50.5	85.3
5:09:15 PM	62.2	71.8	48.7	84.1
5:10:15 PM	63.8	75	45.7	89.4
5:11:15 PM	74	87.6	49.9	104.8
5:12:15 PM	65.3	71.3	51.4	88.4
5:13:15 PM	63.6	73.6	47	89.8
5:14:15 PM	67.9	80.4	46.3	100.8
5:15:15 PM	73.7	84.4	49.9	102.6
5:16:15 PM	64.8	75.7	47.4	91.2
5:17:15 PM	68.8	79.9	44.8	98.2
5:18:15 PM	58.1	70.2	43.6	86
5:19:15 PM	61.8	73	44.4	86.5
5:20:15 PM	53.2	62.5	43.5	79.3
5:21:15 PM	60.2	69.5	46.1	82.3
5:22:15 PM	61.7	70.8	45.1	83.7
5:23:15 PM	56	66.2	45.9	84.2
5:24:15 PM	58.9	68	48.1	81.2
5:25:15 PM	59.8	68.3	49.2	85.1
5:26:15 PM	61.4	70.4	51.8	84.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:27:15 PM	61.3	71.3	54.4	84.8
5:28:15 PM	76.6	91.9	52.1	111.8
5:29:15 PM	69.4	82.1	53.5	101.7
5:30:15 PM	59.5	66.8	53	80.1
5:31:15 PM	62.6	72.4	53.9	84.9
5:32:15 PM	57.5	67.9	50.7	81
5:33:15 PM	54.6	65.2	48.2	82.1
5:34:15 PM	55.5	63.5	48.6	78.4
5:35:15 PM	58.8	70	51.7	84.4
5:36:15 PM	63.2	72.8	53.9	86.7
5:37:15 PM	63.5	76	50.2	93.1
5:38:15 PM	64.7	75.5	54.2	89.3
5:39:15 PM	57.6	61.5	54.3	70.8
5:40:15 PM	59.1	64.6	56.4	84.2
5:41:15 PM	62.5	66.4	57	85.6
5:42:15 PM	65	75.9	50.2	91.2
5:43:15 PM	59	64.6	57.1	82.3
5:44:15 PM	56.2	63.4	54.7	80.2
5:45:15 PM	57.7	61.5	53.6	83.5
5:46:15 PM	57.5	62.2	53.9	83.4
5:47:15 PM	66.9	79.2	54.5	101.6
5:48:15 PM	54.5	61.4	49.7	84.4
5:49:15 PM	65.1	76.1	49	92
5:50:15 PM	78.4	92.1	50.3	112.1
5:51:15 PM	66.2	77	51.5	93.5
5:52:15 PM	76.8	87.7	53.3	108.2
5:53:15 PM	76.5	89.8	54.1	105.5
5:54:15 PM	67.6	68.6	56.3	93.5
5:55:15 PM	67.6	68.6	66.4	89.7
5:56:15 PM	69.7	80.7	56.5	95.3
5:57:15 PM	71.7	83.2	56.1	100.5
5:58:15 PM	66.5	68.8	65.2	84.8
5:59:15 PM	76.3	88.2	65.4	107.4
6:00:15 PM	68.2	77.3	54.1	91.3
6:01:15 PM	76.3	90.7	65.2	110.3
6:02:15 PM	68.5	71.1	57	91.1
6:03:15 PM	69.3	71.9	57.4	89

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:04:15 PM	71	81	56.2	101.1
6:05:15 PM	67.3	72.9	53.5	89
6:06:15 PM	69.4	70.2	57.8	88.7
6:07:15 PM	69	69.7	58.1	91.9
6:08:15 PM	70.6	76	58.7	93.7
6:09:15 PM	70.8	77.8	58.7	96
6:10:15 PM	71.9	82	57.2	97.8
6:11:15 PM	68.3	73.9	56.3	88.6
6:12:15 PM	68.7	78.7	55.9	97.6
6:13:15 PM	70.9	79.6	55.5	95.9
6:14:15 PM	66.9	71.9	54.3	85.7
6:15:15 PM	74.6	85.2	54.1	105.3
6:16:15 PM	68.6	78.5	55.5	95.1
6:17:15 PM	68.8	73.7	54.7	92.9
6:18:15 PM	66.7	73.5	53.5	85.4
6:19:15 PM	66.1	72.9	53.7	88.7
6:20:15 PM	67.1	74.5	53.2	90.8
6:21:15 PM	64.8	68.5	52.2	86.8
6:22:15 PM	72.6	84.8	52.3	105.3
6:23:15 PM	76.6	88.6	51.6	112.6
6:24:15 PM	63.9	70.3	51.5	89.1
6:25:15 PM	65	69.7	50.7	85.6
6:26:15 PM	78.7	97.7	50.1	111.4
6:27:15 PM	63.1	69.2	59.1	85.6
6:28:15 PM	60.7	64.8	58.6	85.9
6:29:15 PM	60.9	65.9	57.6	82.5
6:30:15 PM	61.9	69.1	57.1	86.7
6:31:15 PM	65.3	75.1	58.6	92.4
6:32:15 PM	62.3	70.6	59.6	84.2
6:33:15 PM	61.3	64.2	59.4	85.1
6:34:15 PM	62.4	69.3	58.9	84.0
6:35:15 PM	60.3	67	58.7	83.2
6:36:15 PM	60.1	65	58.2	86.1
6:37:15 PM	60.6	65.6	57.6	87.2
6:38:15 PM	58.5	61.9	56.8	86.9
6:39:15 PM	61.6	68.6	55.4	85
6:40:15 PM	59.1	66.6	55.4	83

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:41:15 PM	58.4	67.3	53.9	86.5
6:42:15 PM	57.2	65.4	52.4	81.7
6:43:15 PM	55.2	60.7	51.4	82.9
6:44:15 PM	63.1	73.6	51.1	91.4
6:45:15 PM	54.5	58.0	51.2	80.8
6:46:15 PM	57.5	70.6	51.9	87.8
6:47:15 PM	59.1	71.8	51.8	85
6:48:15 PM	54	57.7	50.3	82.2
6:49:15 PM	56.6	63.9	50.5	81.4
6:50:15 PM	56.7	63.9	51.2	81.5
6:51:15 PM	54.1	62.4	49.4	79.1
6:52:15 PM	53.1	59.8	47.2	76.9
6:53:15 PM	55.5	62.6	48.2	80.8
6:54:15 PM	52.1	59.7	47.8	83
6:55:15 PM	56	64.9	47.8	81.2
6:56:15 PM	48.7	52.5	45.5	77.2
6:57:15 PM	59.3	69.9	46	84.8
6:58:15 PM	56.1	64.7	46.8	81.2
6:59:15 PM	52.5	60.5	46.4	76.4
7:00:15 PM	48.1	51.1	45	79.1
7:01:15 PM	52.8	62.3	47.2	79.3
7:02:15 PM	58	65.5	46	83.9
7:03:15 PM	49.4	55.5	46.3	80
7:04:15 PM	50.9	54.1	48.3	79.8
7:05:15 PM	49.7	54.1	46.8	84.7
7:06:15 PM	56.7	66.1	45.7	85.9
7:07:15 PM	47.9	51.8	45.6	78.4
7:08:15 PM	48.3	51.3	45.4	75.9
7:09:15 PM	48.8	56.1	45.3	74.6
7:10:15 PM	55.7	62.9	45.7	82.7
7:11:15 PM	52.4	61.7	45	79.1
7:12:15 PM	56.4	64.2	44.8	80.3
7:13:15 PM	49.6	57	45.5	77.4
7:14:15 PM	48.9	55.6	45.1	77.1
7:15:15 PM	49.6	53.4	45.6	73
7:16:15 PM	48.2	53.7	44.6	85.2
7:17:15 PM	51.4	57.6	45.5	88.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:18:15 PM	47.9	52.3	42.5	76.1
7:19:15 PM	52.9	63.9	47.8	79.6
7:20:15 PM	48.1	53.3	43.5	71.1
7:21:15 PM	51.6	55.2	47.8	74.7
7:22:15 PM	48.7	53.7	43.6	78.8
7:23:15 PM	56.6	69.4	44	84.7
7:24:15 PM	51.7	56.3	46.5	79.7
7:25:15 PM	48.2	52.1	44	77.1
7:26:15 PM	46.4	50.8	42.7	80.4
7:27:15 PM	47.5	51.7	44.2	77
7:28:15 PM	66.5	77.8	44.1	90.8
7:29:15 PM	49.4	55.9	45	77.6
7:30:15 PM	49.4	53.1	47.9	76.9
7:31:15 PM	56.3	65.2	47.8	80.3
7:32:15 PM	47.8	51.2	44.7	81.2
7:33:15 PM	47.9	53.7	43.7	70.1
7:34:15 PM	47.1	51.3	43.6	69.6
7:35:15 PM	50.8	57.1	46.2	75.1
7:36:15 PM	47.4	52.1	44.8	72.7
7:37:15 PM	51.1	59.6	45.1	81.4
7:38:15 PM	51.4	53.7	49	77.8
7:39:15 PM	54.7	58	51.4	79.9
7:40:15 PM	58	64.1	52.5	78.9
7:41:15 PM	55.3	65	49.7	83.2
7:42:15 PM	54	62.1	49	77.8
7:43:15 PM	51.3	54.9	49.4	81.3
7:44:15 PM	54.3	60.7	50.9	81.9
7:45:15 PM	51.8	53.8	50.3	81
7:46:15 PM	52.1	54.3	49.9	76.2
7:47:15 PM	57.8	62.1	49.7	80.6
7:48:15 PM	54.5	61.7	49.6	81.5
7:49:15 PM	51.6	54.4	47.9	81.4
7:50:15 PM	52.1	54.6	49.6	77.4
7:51:15 PM	49.6	51.5	47.1	80.6
7:52:15 PM	51.1	54.2	47.5	84.1
7:53:15 PM	49.1	52.6	46.1	81.8
7:54:15 PM	48.6	53.3	45.6	78.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:55:15 PM	49.1	53.1	46.3	78.7
7:56:15 PM	49.2	51.8	46.3	81.5
7:57:15 PM	49.7	53.9	46.3	75.8
7:58:15 PM	50.1	53.2	46	82.2
7:59:15 PM	50.9	55.1	45.9	79.6
8:00:15 PM	52.6	60	47.7	79.9
8:01:15 PM	49.9	53.4	46.1	81.8
8:02:15 PM	53.2	56.4	46.6	81.7
8:03:15 PM	49	52.9	45.9	78.1
8:04:15 PM	49.2	52.8	46.3	76.7
8:05:15 PM	48.5	52.1	45.7	79.2
8:06:15 PM	49.2	53.6	45.1	75.2
8:07:15 PM	48.6	52.8	45	74.7
8:08:15 PM	51.6	54.3	46.8	76.9
8:09:15 PM	50	53.7	46.2	75.7
8:10:15 PM	48.8	51.8	45.4	74.3
8:11:15 PM	50.2	56.3	46.4	81.8
8:12:15 PM	50.1	53.8	47	79.2
8:13:15 PM	50.5	53.1	47	78
8:14:15 PM	50.2	54.6	45.9	74
8:15:15 PM	49.4	52.3	46.5	78.3
8:16:15 PM	51.5	54.9	48.4	78.7
8:17:15 PM	50.3	53.4	47.6	79.9
8:18:15 PM	51	57	50.8	78.5
8:19:15 PM	52	57	47.5	78.9
8:20:15 PM	50.8	53.6	48.4	78.2
8:21:15 PM	50.2	53.9	47.6	79
8:22:15 PM	49.9	53	46.6	82.6
8:23:15 PM	51.3	54.6	45.7	77.4
8:24:15 PM	50.3	54.2	46.3	79.8
8:25:15 PM	52	54.5	49.2	80.9
8:26:15 PM	51.8	54.6	47.7	80.5
8:27:15 PM	50.4	55.7	45.9	77.7
8:28:15 PM	50.6	51.1	47.3	77.1
8:29:15 PM	50.1	52.7	46.2	80.3
8:30:15 PM	51.7	56.1	46	77.1
8:31:15 PM	52.2	56.2	47.2	77.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:32:15 PM	50.7	54.1	47	76.2
8:33:15 PM	50.9	54.2	48.3	78.6
8:34:15 PM	52.5	54.8	47.9	81.8
8:35:15 PM	52.6	55.3	48.4	75.5
8:36:15 PM	52	54.5	49.3	75.9
8:37:15 PM	52.5	55.7	49	80.1
8:38:15 PM	52.6	55.1	48.8	77.6
8:39:15 PM	51.6	55.9	47.7	80.6
8:40:15 PM	54.4	56.3	51.6	79.5
8:41:15 PM	52.9	56	50	78.2
8:42:15 PM	54.1	56.6	51.6	80.7
8:43:15 PM	54.1	57	51.1	79.6
8:44:15 PM	54.8	56.6	51.9	77.6
8:45:15 PM	54.8	56.9	51.1	78
8:46:15 PM	55.8	57.6	52.8	78.4
8:47:15 PM	53.7	56.5	51	82.9
8:48:15 PM	54	56.5	51.2	77.3
8:49:15 PM	55.1	57.2	52.6	81.9
8:50:15 PM	54.6	56.8	52.7	80.2
8:51:15 PM	53.6	56.8	51.9	81.2
8:52:15 PM	54.3	56.6	52.8	80.7
8:53:15 PM	54.8	56.3	53.6	76.3
8:54:15 PM	54.9	57.3	53.2	77.8
8:55:15 PM	55.9	57.5	53.3	83.9
8:56:15 PM	55.8	58.1	53.2	76.3
8:57:15 PM	55.6	58.1	53.6	76.2
8:58:15 PM	55.8	57.6	53.8	79.8
8:59:15 PM	56.7	58.1	54.8	87.2
9:00:15 PM	55.7	58.4	53.6	80
9:01:15 PM	57.5	59.5	55.1	82.2
9:02:15 PM	57.5	59.5	56	80.8
9:03:15 PM	57.3	59.2	55.6	83.2
9:04:15 PM	57	59.7	54.7	77.4
9:05:15 PM	57.4	59.1	55.9	75
9:06:15 PM	57.5	59.5	55.9	74.6
9:07:15 PM	57.5	59.1	56.3	81
9:08:15 PM	57.9	60	56.4	80.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:09:15 PM	57	59.7	54.8	74.6
9:10:15 PM	58.7	60.5	55.5	75.9
9:11:15 PM	58.4	60.1	56.9	76.8
9:12:15 PM	58.2	60.5	56.3	75.7
9:13:15 PM	58.9	60.7	57.4	75.7
9:14:15 PM	58	60.1	56.9	75.5
9:15:15 PM	59.3	60.5	58.3	76.5
9:16:15 PM	58.3	60	57	80.1
9:17:15 PM	58.1	60	56.8	82.6
9:18:15 PM	58.8	60.3	57.6	81
9:19:15 PM	60.6	65.5	57.4	80.9
9:20:15 PM	59.3	60.4	57.6	78.8
9:21:15 PM	58.9	60.2	57.5	76.2
9:22:15 PM	59.2	60.1	57.5	76.9
9:23:15 PM	59.6	60.6	58.4	76.4
9:24:15 PM	59.3	60.7	58.1	76.2
9:25:15 PM	59.9	61	58.9	78.1
9:26:15 PM	60	60.8	58.8	76.2
9:27:15 PM	60	61.2	59	76.2
9:28:15 PM	59.7	60.4	58.8	76.6
9:29:15 PM	60.3	61	59.6	76.7
9:30:15 PM	60.8	61.7	59.8	77.8
9:31:15 PM	61.1	62.7	59.7	77.7
9:32:15 PM	61.3	62.2	60.1	78.1
9:33:15 PM	60.4	61.4	59.6	76.1
9:34:15 PM	59.9	60.9	58.4	76.3
9:35:15 PM	60.8	62	60	77.1
9:36:15 PM	61.4	62.2	60	78.3
9:37:15 PM	61.3	62.2	60	78.6
9:38:15 PM	61.9	62.7	60.6	77.9
9:39:15 PM	61.3	62.5	60.3	78.4
9:40:15 PM	61.9	62.7	60.9	77.4
9:41:15 PM	62.3	63.1	61.1	78.2
9:42:15 PM	62.4	63.2	61.6	80.1
9:43:15 PM	63.7	67.5	60.9	80.7
9:44:15 PM	62.4	64	61.3	79.2
9:45:15 PM	62.1	63	61.1	78.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
9:45:15 PM	61.8	63	50.4	79.2
9:47:15 PM	62.1	62.7	51	78.6
9:48:15 PM	62.2	63.2	51	78.3
9:49:15 PM	62.1	63.1	51.3	78.9
9:50:15 PM	62.4	63.4	51.4	80
9:51:15 PM	62.6	63.5	51.9	78.8
9:52:15 PM	63.2	64.1	52.1	80.8
9:53:15 PM	63.2	64	52	81.1
9:54:15 PM	63.3	64.4	52.1	81.8
9:55:15 PM	63.4	64.3	52.4	81
9:56:15 PM	63.2	64.3	51.1	81.4
9:57:15 PM	63.3	64.6	51.7	81.5
9:58:15 PM	63.6	64.8	51.1	83.5
9:59:15 PM	63.6	65.1	51.6	81.3
10:00:15 PM	63.8	65.1	52	83.1
10:01:15 PM	63.8	64.9	52.4	82
10:02:15 PM	64.1	64.1	52.2	81.7
10:03:15 PM	64.4	65.4	52.9	81.6
10:04:15 PM	64	65.1	52.6	82
10:05:15 PM	64	65.3	52.7	82
10:06:15 PM	63.7	65.5	52.6	81.7
10:07:15 PM	64	64.8	53	80.5
10:08:15 PM	64	64.6	53	80
10:09:15 PM	64	64.5	53.3	81
10:10:15 PM	64.1	64.7	53.5	80
10:11:15 PM	63.8	64.8	51.5	79.7
10:12:15 PM	62.6	63.5	51.4	79
10:13:15 PM	63.3	64.3	51.4	80.7
10:14:15 PM	63.4	64.2	52.6	80.1
10:15:15 PM	63.4	64.1	52.7	79.8
10:16:15 PM	62.8	63.9	51.5	80.7
10:17:15 PM	63.1	63.8	51.8	80.7
10:18:15 PM	63.3	63.9	52	79.6
10:19:15 PM	63.7	64.3	52.8	80.4
10:20:15 PM	63.2	64.2	52	81.1
10:21:15 PM	63.2	64	52	80.1
10:22:15 PM	63.6	64.7	52.4	82.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
10:23:15 PM	64	64.8	52.7	81.1
10:24:15 PM	64.2	64.9	53.2	80.5
10:25:15 PM	63.7	64.8	52.7	80.4
10:26:15 PM	63.4	64.6	52.2	81.2
10:27:15 PM	63.6	64.6	52.6	81
10:28:15 PM	63.4	64.3	52.6	81.1
10:29:15 PM	63.1	64	51.8	81.4
10:30:15 PM	63.3	66.7	51.7	80.4
10:31:15 PM	62.6	63.3	51.8	79.5
10:32:15 PM	62.9	63.5	52.1	80.1
10:33:15 PM	62.9	63.9	52	79.9
10:34:15 PM	63.1	63.9	52.3	80.7
10:35:15 PM	63	63.8	51.7	80.1
10:36:15 PM	62.9	63.7	50.4	80.3
10:37:15 PM	63.1	64.3	51.2	80.7
10:38:15 PM	63.2	64.9	52	80.2
10:39:15 PM	63.4	64.1	52.8	81.1
10:40:15 PM	63.3	64.4	52	80.7
10:41:15 PM	62.9	64	51.6	81.2
10:42:15 PM	62.3	63.8	48.7	80.5
10:43:15 PM	62.3	63.6	50.3	80.8
10:44:15 PM	62.5	63.5	50.2	81.5
10:45:15 PM	63	64	51.7	80
10:46:15 PM	62.5	63.3	51.3	79.4
10:47:15 PM	62.9	63.6	51.9	79.6
10:48:15 PM	63.4	64.1	52.6	80.4
10:49:15 PM	64.1	68.1	52.5	81.4
10:50:15 PM	64.1	69.1	52	81.9
10:51:15 PM	62.8	63.8	51.6	79.4
10:52:15 PM	63.1	64	51.4	80
10:53:15 PM	63.1	64	51.9	79.2
10:54:15 PM	62.2	63.6	51.1	79.2
10:55:15 PM	62.9	63.7	51.3	80.5
10:56:15 PM	62.7	63.1	51.1	79.9
10:57:15 PM	62.5	63.5	51.1	80
10:58:15 PM	62	63.5	50.1	80.4
10:59:15 PM	62.6	63.6	51.1	80.6

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:00:15 PM	62.5	63.5	51.4	80.6
11:01:15 PM	62	63.2	50.2	81
11:02:15 PM	62.9	63.6	51.7	80.6
11:03:15 PM	63	63.7	52.2	79.7
11:04:15 PM	62.7	63.8	51.3	81.3
11:05:15 PM	62.7	63.6	50.8	80.3
11:06:15 PM	62.8	63.7	51.7	80.7
11:07:15 PM	62.5	63.6	59	80.2
11:08:15 PM	62.5	63.3	50.9	80.4
11:09:15 PM	62.8	63.6	51.3	81.5
11:10:15 PM	62.2	63.4	50.4	80.5
11:11:15 PM	62.6	63.6	51.2	80.4
11:12:15 PM	63	64	51.8	82.1
11:13:15 PM	63.3	64.2	52	80.7
11:14:15 PM	63	63.9	51.6	80.3
11:15:15 PM	62.3	63.3	50.8	80.6
11:16:15 PM	62.2	63.2	50.6	81.9
11:17:15 PM	62.1	63.1	50.3	80.2
11:18:15 PM	61.9	63.3	50	80.4
11:19:15 PM	62.3	63.2	50.6	80.6
11:20:15 PM	61.5	63.1	58.4	80.6
11:21:15 PM	61.3	63	58.7	79.8
11:22:15 PM	62	63	50.1	80.9
11:23:15 PM	61.6	63	59.6	80.2
11:24:15 PM	60.8	62.8	57.3	79.6
11:25:15 PM	61.9	63.1	58.9	81.6
11:26:15 PM	61.9	63	50.5	80.7
11:27:15 PM	62.3	63.2	50.7	80.5
11:28:15 PM	60.9	62.8	58.8	80
11:29:15 PM	61.9	63	50.4	80.1
11:30:15 PM	62.2	69.2	59	82.3
11:31:15 PM	63.9	70.5	58.7	82.9
11:32:15 PM	63.1	69.4	50.2	82.5
11:33:15 PM	62.9	69.7	50	81.9
11:34:15 PM	61.8	62.9	50.6	80.1
11:35:15 PM	63	69.8	54.9	82.5
11:36:15 PM	62.9	69.7	50	81.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
11:37:15 PM	62	63	60.5	80.3
11:38:15 PM	61.7	62.9	60.2	79.8
11:39:15 PM	62.9	69.7	60.6	82.6
11:40:15 PM	63	69.5	59.6	83.4
11:41:15 PM	63.5	70.5	58.9	83
11:42:15 PM	64.7	70.9	57.9	83.5
11:43:15 PM	62.6	68.6	60.3	82.3
11:44:15 PM	62.8	70	59.1	82.5
11:45:15 PM	59.9	62.8	56.3	80.3
11:46:15 PM	61.5	62.7	58.2	79
11:47:15 PM	62.4	69.8	57.3	82.7
11:48:15 PM	61.1	62.4	59	80.1
11:49:15 PM	63	69.6	59.5	81.7
11:50:15 PM	61.1	62.3	58.2	79.4
11:51:15 PM	63.4	69.5	58.9	82.3
11:52:15 PM	63.4	69.4	59.6	82.4
11:53:15 PM	62.9	69.5	57.4	82.8
11:54:15 PM	61.9	69	56.9	81
11:55:15 PM	62.1	67.1	55.8	80
11:56:15 PM	59.6	62.4	57.7	82
11:57:15 PM	60	65.2	56.8	77.6
11:58:15 PM	62.2	68.2	58.1	81.5
11:59:15 PM	62.5	68.1	56.9	81
8/7/2020 12:00:15 AM	60.1	62.5	56.1	80.8
12:01:15 AM	63.1	68.5	56.6	82.9
12:02:15 AM	57.5	62.5	55.8	79.7
12:03:15 AM	63.7	68.2	57.1	82.7
12:04:15 AM	61.7	68.1	55.7	79
12:05:15 AM	60.8	68	55.7	80.9
12:06:15 AM	63	68.4	54.8	81.2
12:07:15 AM	60.4	68.1	54.7	81.7
12:08:15 AM	60.2	67.7	54.5	78.9
12:09:15 AM	63.3	68.6	55	82.5
12:10:15 AM	61.7	68.8	55.5	84
12:11:15 AM	64.9	68.8	55.8	81.9
12:12:15 AM	63	68.4	55.4	79.8
12:13:15 AM	63.8	68.9	55.3	80.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:14:15 AM	63.4	68.4	54.8	81.8
12:15:15 AM	61.7	68.7	54.5	83.2
12:16:15 AM	56.6	64.7	55	79.1
12:17:15 AM	64.1	69.4	55.1	82.4
12:18:15 AM	63.8	69.7	54.9	81.4
12:19:15 AM	61.4	68.5	54.5	81.7
12:20:15 AM	62.6	68.7	55.2	88.6
12:21:15 AM	64.3	69.6	56.2	80.4
12:22:15 AM	61	69.6	54.3	80.9
12:23:15 AM	61.1	68.6	54.5	79.7
12:24:15 AM	65.8	70	55.7	80.8
12:25:15 AM	62.9	70.1	54.6	81
12:26:15 AM	56	58.8	54.6	73.2
12:27:15 AM	63	70.2	55.1	81.2
12:28:15 AM	61.8	70.1	54.4	81.3
12:29:15 AM	65	71	55	80.7
12:30:15 AM	66	72.2	54.1	83.3
12:31:15 AM	64.7	70.1	54.9	82.2
12:32:15 AM	55.2	56.4	54.1	70.5
12:33:15 AM	62.1	69.4	54.8	81
12:34:15 AM	63.9	69.2	55.1	80.8
12:35:15 AM	61.2	68.7	54	79.3
12:36:15 AM	59.8	68.7	54.2	80.2
12:37:15 AM	63.6	69.1	54.3	81
12:38:15 AM	67.4	70.5	56	83.1
12:39:15 AM	67.2	70.7	56.2	83.4
12:40:15 AM	63.2	69	54.8	81.8
12:41:15 AM	67.6	71.3	57.7	84.4
12:42:15 AM	68.4	70.6	60.4	83.5
12:43:15 AM	69.1	71.3	62.7	87.9
12:44:15 AM	67.5	70.6	57.8	83.8
12:45:15 AM	67.2	69.8	56.3	82.7
12:46:15 AM	64.3	69.9	55.8	80.6
12:47:15 AM	68.1	70.7	57.7	84.1
12:48:15 AM	68.4	70.4	60.4	83.4
12:49:15 AM	64.4	70.2	55.9	82.9
12:50:15 AM	66.5	70.9	57.2	82

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
12:51:15 AM	65.2	70	56.5	81.2
12:52:15 AM	66.2	70 8	54	82.3
12:53:15 AM	68.3	70 8	60.4	83.8
12:54:15 AM	68.3	72 4	58.9	85
12:55:15 AM	68.8	71	61.1	83.8
12:56:15 AM	68.6	71 6	61.1	83.9
12:57:15 AM	68.6	72 1	57.7	84.9
12:58:15 AM	68.5	72	60.4	84.4
12:59:15 AM	67.7	72	58.3	84.9
1:00:15 AM	67.5	70 5	55.5	84
1:01:15 AM	65.4	71 3	54.4	83.1
1:02:15 AM	69.5	72 6	53	84.6
1:03:15 AM	69.7	73 5	60.2	86.1
1:04:15 AM	70	73 2	62	85.8
1:05:15 AM	69.5	73 3	59.9	85.3
1:06:15 AM	69 3	71 7	61 8	85 2
1:07:15 AM	69.5	71 5	63.4	84.2
1:08:15 AM	68.8	72	60.3	83.9
1:09:15 AM	69.6	71 8	65.3	84.6
1:10:15 AM	69.5	73 2	63.1	85.3
1:11:15 AM	69.5	73 6	62.3	85.9
1:12:15 AM	69.1	71 8	59.3	83.8
1:13:15 AM	67.9	67 4	63.7	78.9
1:14:15 AM	68.2	71 7	57.2	83.4
1:15:15 AM	68.6	71 9	59.9	84.8
1:16:15 AM	69	73 6	59.7	85.2
1:17:15 AM	67.9	71 8	60.9	83.6
1:18:15 AM	68.2	71 7	61.1	83.9
1:19:15 AM	68.7	71 9	60.7	84.7
1:20:15 AM	69.5	72 7	62.8	84.2
1:21:15 AM	67.3	71 2	60.1	83.8
1:22:15 AM	67.8	71 3	61.7	83.5
1:23:15 AM	66.6	69 1	61	83
1:24:15 AM	66.7	70 6	59.7	82.5
1:25:15 AM	67.3	69 5	62.1	82.2
1:26:15 AM	67.8	70 3	61.8	82.9
1:27:15 AM	67.8	72	62.4	82.9

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
1:28:15 AM	67.3	72	58.8	84
1:29:15 AM	67.2	70 3	60.6	82.6
1:30:15 AM	65.8	68	59.9	80.7
1:31:15 AM	66.9	69 9	59.9	82.6
1:32:15 AM	67.1	70 4	60.9	84.5
1:33:15 AM	67.8	72 8	60.5	84.1
1:34:15 AM	67	70 7	59.8	83.2
1:35:15 AM	65.2	68 4	60	81.1
1:36:15 AM	65.5	67 6	60.8	80.7
1:37:15 AM	65	67 4	60.5	81
1:38:15 AM	64.9	67 2	60	79.8
1:39:15 AM	66.1	69 1	60.4	80.5
1:40:15 AM	66.9	69 5	62.5	82.1
1:41:15 AM	66.7	69 4	61.6	82.6
1:42:15 AM	66.6	68 8	61.9	81.5
1:43:15 AM	65 6	69 4	56 8	81.9
1:44:15 AM	67.2	69 4	59.6	82.9
1:45:15 AM	67.4	69 4	62.2	84
1:46:15 AM	67.6	70 3	59.8	82.8
1:47:15 AM	67.4	69 8	61.1	82.5
1:48:15 AM	66.8	69 3	60.5	82.2
1:49:15 AM	66.4	69	59.9	81.7
1:50:15 AM	67.1	69 4	62.3	81.5
1:51:15 AM	67.1	69 6	59.8	82.8
1:52:15 AM	67	69 1	61.4	82.4
1:53:15 AM	67.4	70 1	61	83.4
1:54:15 AM	68.1	70 3	61.9	82.3
1:55:15 AM	67.7	70 6	61.4	83.5
1:56:15 AM	67.4	70 1	62.5	82.1
1:57:15 AM	64.4	68 9	52.8	80.4
1:58:15 AM	64.3	68 9	52.2	82
1:59:15 AM	65.1	67 4	58.4	80.5
2:00:15 AM	65.4	68	61.2	82.3
2:01:15 AM	65.3	67 6	60.1	80.5
2:02:15 AM	66	69 5	60.3	81.9
2:03:15 AM	66.1	68 7	62	80.5
2:04:15 AM	65.8	68 7	60.9	80.8

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Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:05:15 AM	65.7	68.1	50.7	80.8
2:06:15 AM	65.9	68.7	52.6	80.2
2:07:15 AM	65.9	68.8	50.3	81.8
2:08:15 AM	65.8	68.9	50.5	81.5
2:09:15 AM	65.1	67.8	58.6	80.8
2:10:15 AM	64.7	67.4	59.8	81.3
2:11:15 AM	64.1	66.6	50.3	80.9
2:12:15 AM	64.2	67.5	50.1	79.7
2:13:15 AM	63.6	65.9	58.7	78.2
2:14:15 AM	65.5	68.5	51.6	80.6
2:15:15 AM	65.9	69.1	58.5	81.7
2:16:15 AM	65.2	68.7	58.6	81
2:17:15 AM	65.9	68.5	59	81.2
2:18:15 AM	65.2	69	56.7	81
2:19:15 AM	66.1	69.2	51	81.1
2:20:15 AM	65.5	68.7	59.8	82.5
2:21:15 AM	64.8	68.4	57.9	81
2:22:15 AM	65.3	68.3	50.9	80.8
2:23:15 AM	65.2	68	56.9	80.8
2:24:15 AM	65.5	69	47.7	82.3
2:25:15 AM	65.2	68.7	50.7	80.8
2:26:15 AM	64.8	68.8	59.2	80.4
2:27:15 AM	65.1	68.5	58.7	81.1
2:28:15 AM	64.8	68.3	58	80.4
2:29:15 AM	65.3	68.7	59.8	82.4
2:30:15 AM	64.7	68.6	57.5	81
2:31:15 AM	65.5	68.8	50.9	81.2
2:32:15 AM	65.5	69	55.7	81.8
2:33:15 AM	65.7	69.2	50.6	83.4
2:34:15 AM	65.6	68.8	59.8	81.7
2:35:15 AM	65.6	68.8	59.5	81.4
2:36:15 AM	66	68.7	50.5	81.5
2:37:15 AM	65	68.1	59.7	80.1
2:38:15 AM	65.4	69	59.7	81.8
2:39:15 AM	65.3	69.6	50.6	81.5
2:40:15 AM	64.8	69	58.8	82.5
2:41:15 AM	65.8	69.3	57.1	81.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
2:42:15 AM	65.1	68.3	50	80.8
2:43:15 AM	65.6	68.4	60.8	80.7
2:44:15 AM	66.1	69.5	60.2	82.2
2:45:15 AM	65.6	69.5	58.7	81.9
2:46:15 AM	65.8	69.1	59.7	81.7
2:47:15 AM	66.2	69.1	60.7	82.3
2:48:15 AM	66.6	69.1	61.3	81.7
2:49:15 AM	65.8	68.7	59.8	82.3
2:50:15 AM	66.1	68.8	59.6	81.4
2:51:15 AM	67.2	70.1	61.6	82.7
2:52:15 AM	66	68.9	59.5	81
2:53:15 AM	66.5	69.6	59.8	82.1
2:54:15 AM	65.8	68.8	57.6	81.4
2:55:15 AM	65.3	69	56	82
2:56:15 AM	67.4	70.8	60.2	82.9
2:57:15 AM	67	69.2	60.1	83.3
2:58:15 AM	66.5	71	59.8	82.7
2:59:15 AM	66.8	69.6	60.1	82.3
3:00:15 AM	66.3	69	59.2	81.2
3:01:15 AM	66	70.3	58.7	83.7
3:02:15 AM	66	68.6	62.9	81.2
3:03:15 AM	66.5	70.3	58.5	81.8
3:04:15 AM	66	69.7	58.6	82.3
3:05:15 AM	66.4	69.4	60	82.2
3:06:15 AM	65.9	68.9	59	81.7
3:07:15 AM	65.3	67.7	58.9	80.3
3:08:15 AM	64.6	68.7	55.7	81.2
3:09:15 AM	65.7	68.8	59.2	80.6
3:10:15 AM	65.9	68.4	60	80.8
3:11:15 AM	65.5	68.5	59.6	81.7
3:12:15 AM	65.9	70.1	60.9	83
3:13:15 AM	66.1	70.3	57.5	82.6
3:14:15 AM	64.6	68.4	54.3	80.4
3:15:15 AM	63.7	68.3	55.7	80.3
3:16:15 AM	64	67.9	53.7	80.8
3:17:15 AM	61.4	67.1	51.2	80.1
3:18:15 AM	57.5	65.7	51	77.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:19:15 AM	63.2	68.3	56.6	81.1
3:20:15 AM	65.5	69.4	59.4	81.9
3:21:15 AM	64.4	67.1	58.3	81
3:22:15 AM	65.1	68.3	58.8	81.6
3:23:15 AM	65	68.3	58.3	81.8
3:24:15 AM	64.6	68.7	57.3	82
3:25:15 AM	64	68.3	59	81.3
3:26:15 AM	65.7	68.9	57.5	81.9
3:27:15 AM	65.5	68.5	59.1	81.2
3:28:15 AM	64.5	68.8	58	81.6
3:29:15 AM	64.6	67.8	55.3	80.4
3:30:15 AM	63.2	66.2	53.5	78.3
3:31:15 AM	62.5	68.2	51	79.6
3:32:15 AM	63.5	67.9	53.2	80.1
3:33:15 AM	59.6	64.5	50.1	76.6
3:34:15 AM	62.5	67.7	51.5	81.2
3:35:15 AM	56.1	61.1	49.1	74.4
3:36:15 AM	59.5	64.9	49.2	76.8
3:37:15 AM	58.7	64.2	48.8	76.6
3:38:15 AM	60.3	68	48.6	80.9
3:39:15 AM	50.6	53.5	48.9	69.2
3:40:15 AM	50.2	54.1	48.5	71.4
3:41:15 AM	51.4	53.7	49.7	82.4
3:42:15 AM	50	54.9	48.5	68.1
3:43:15 AM	60	64.9	49.9	77.5
3:44:15 AM	59.6	66.1	50.8	76.8
3:45:15 AM	59.8	64.4	48.4	76.3
3:46:15 AM	56.6	60.6	48.8	73.2
3:47:15 AM	58.5	64.8	48.4	76.3
3:48:15 AM	51.5	57	47.3	71
3:49:15 AM	49.6	52.1	48.2	67.8
3:50:15 AM	59.1	65.3	48.5	77.5
3:51:15 AM	55	61	48.5	75.1
3:52:15 AM	55.5	59	49.1	73.2
3:53:15 AM	56.1	60.8	48.3	73.3
3:54:15 AM	55.9	62.6	48.5	75.4
3:55:15 AM	58.2	62.7	49.7	75.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
3:56:15 AM	58.7	60	48.6	72.4
3:57:15 AM	56.9	61.7	48.4	78.3
3:58:15 AM	57.7	61.5	48.5	73.5
3:59:15 AM	59	62.2	49.7	74.9
4:00:15 AM	56.1	61.9	48.5	74.5
4:01:15 AM	58.7	62.5	49.7	74.8
4:02:15 AM	52.1	58	47.6	73.3
4:03:15 AM	54.8	59.9	47.8	72.3
4:04:15 AM	54.7	59.5	48.1	74
4:05:15 AM	56.4	60.8	49.8	72.7
4:06:15 AM	56.2	60.5	48.6	72.1
4:07:15 AM	55.8	59.9	48.3	75.4
4:08:15 AM	57.3	61.3	49.9	77.5
4:09:15 AM	55.4	61.2	47.8	71.9
4:10:15 AM	56	60.6	48	72.7
4:11:15 AM	55.3	59.4	48.9	73
4:12:15 AM	56.8	60.1	48	72.6
4:13:15 AM	57.3	61.9	47.9	77.7
4:14:15 AM	56.2	60.9	48.4	73.2
4:15:15 AM	56.1	59.8	48	73.5
4:16:15 AM	49.5	51.7	47.6	67.7
4:17:15 AM	51	56.5	47.5	72.6
4:18:15 AM	52.5	59.6	47.7	75.7
4:19:15 AM	52.6	60.3	47.7	72.2
4:20:15 AM	55.9	60.6	46.3	71.5
4:21:15 AM	51.9	59.6	46.8	71.9
4:22:15 AM	54.1	60.7	46.6	73.4
4:23:15 AM	57.3	60.7	47.4	71.8
4:24:15 AM	57	61.8	48.9	73.5
4:25:15 AM	56.8	61.1	48.9	74.4
4:26:15 AM	56.7	61.3	48.8	74
4:27:15 AM	53.8	60.7	46.9	73
4:28:15 AM	48.3	51.4	46.5	84.2
4:29:15 AM	50.8	52.5	48.8	71.3
4:30:15 AM	49.7	50.7	49	72.5
4:31:15 AM	56.2	61.3	48	72.3
4:32:15 AM	52.7	61.1	48.1	73.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
4:33:15 AM	53.3	60.1	46.3	71.1
4:34:15 AM	49.1	51.4	46.1	68.2
4:35:15 AM	48.3	49.3	47.5	74.3
4:36:15 AM	50	52.7	48.6	68.7
4:37:15 AM	50.2	53.7	47.8	71.1
4:38:15 AM	47.9	49.7	47	66
4:39:15 AM	52	57.2	47.9	69.6
4:40:15 AM	51.7	57.5	48.1	71
4:41:15 AM	49.7	52.2	47.9	76.4
4:42:15 AM	48.5	49.2	47.9	69.4
4:43:15 AM	53.1	62.2	47.9	73
4:44:15 AM	50.4	56	47.4	69.1
4:45:15 AM	49.4	52.2	48.1	68.4
4:46:15 AM	48.8	49.4	48.4	68.4
4:47:15 AM	49.6	53	47.9	77.3
4:48:15 AM	54.7	60.5	49.5	74.7
4:49:15 AM	48.9	49.5	48.3	69.9
4:50:15 AM	48.8	49.4	48.3	67.1
4:51:15 AM	59.2	64.4	49	75.2
4:52:15 AM	56.1	64.7	48.8	75.6
4:53:15 AM	48.8	49.5	48.2	71.3
4:54:15 AM	48.8	49.2	48.4	69.2
4:55:15 AM	50.8	53.7	48.4	68.8
4:56:15 AM	49	52	47.8	71.5
4:57:15 AM	48	48.8	47.6	66.6
4:58:15 AM	49.5	52.2	47.6	74.3
4:59:15 AM	48.9	50.5	48.1	67.6
5:00:15 AM	48.4	49.2	47.9	66.9
5:01:15 AM	49.5	51.5	48	74.1
5:02:15 AM	58.1	66.8	47.1	77.9
5:03:15 AM	52.9	66.8	47.6	76.7
5:04:15 AM	56.1	66.3	48.1	77
5:05:15 AM	49.7	51.9	48.1	70.8
5:06:15 AM	48.5	49.1	47.9	72.9
5:07:15 AM	48.6	49.3	48.1	68.5
5:08:15 AM	49.9	52.2	48.3	69.7
5:09:15 AM	56.1	66.4	47.6	77.3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:10:15 AM	48.7	49.7	48	73.5
5:11:15 AM	49.7	51.7	48.1	71
5:12:15 AM	48.7	52.2	47.4	76.5
5:13:15 AM	47.7	49.8	47	79.6
5:14:15 AM	49.3	52.4	47.6	71.5
5:15:15 AM	51.1	53.5	47.5	70.6
5:16:15 AM	48.6	51.5	47.2	74.5
5:17:15 AM	48.7	51	47.5	79.7
5:18:15 AM	50.6	57.5	47.1	71.2
5:19:15 AM	56.5	65.2	47.1	75.9
5:20:15 AM	56.3	66.2	47.1	76.4
5:21:15 AM	51	52.8	49.3	72.6
5:22:15 AM	51.1	53.3	49.1	70.7
5:23:15 AM	50.8	52.7	47	77
5:24:15 AM	48.6	50.6	46.9	70.3
5:25:15 AM	50.8	53	47.6	70.4
5:26:15 AM	50	51	49.3	68.8
5:27:15 AM	50.1	51.2	49.4	76.8
5:28:15 AM	51.1	52.9	49.6	70.4
5:29:15 AM	50.2	51.3	49.5	70.2
5:30:15 AM	50.2	51.5	49	72.6
5:31:15 AM	50.6	52.9	49.1	69.7
5:32:15 AM	49.8	50.7	49.1	70.7
5:33:15 AM	49.9	51.1	48.6	71.1
5:34:15 AM	49.4	50.6	47.4	68.6
5:35:15 AM	50	51.3	48.8	71.9
5:36:15 AM	49.4	50.2	47.9	69.6
5:37:15 AM	49	50.2	46.9	71
5:38:15 AM	48.4	50.8	46.8	69.1
5:39:15 AM	50	51.8	46.9	68.9
5:40:15 AM	48.6	51.3	46.8	70.5
5:41:15 AM	47.1	47.6	46.8	68
5:42:15 AM	48.4	51.2	46.8	75.3
5:43:15 AM	48.3	51.5	46.9	68.2
5:44:15 AM	48.3	51.5	46.2	69.2
5:45:15 AM	48.3	51.2	45.9	67.6
5:46:15 AM	49.2	52.3	46.8	71.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
5:47:15 AM	47.2	48.1	46.8	70.1
5:48:15 AM	48.8	51.2	45.9	68.9
5:49:15 AM	47.6	51.2	46.9	71.4
5:50:15 AM	48.5	51.2	46.9	73.9
5:51:15 AM	48.6	51.4	47	71.5
5:52:15 AM	47	47.6	45.9	71.3
5:53:15 AM	48.7	51	47.1	71.2
5:54:15 AM	49	51.9	47.4	71.3
5:55:15 AM	49.4	52	48	69.4
5:56:15 AM	47.7	48.8	46.7	76
5:57:15 AM	47.7	48.5	47.2	71
5:58:15 AM	49	51.2	47.2	78.3
5:59:15 AM	48.9	52.3	46.9	72.4
6:00:15 AM	47.6	48.3	46	70.6
6:01:15 AM	47.7	48.1	47.2	68.2
6:02:15 AM	48.2	49.3	47.1	69.8
6:03:15 AM	49.5	52.6	47.6	72.3
6:04:15 AM	48	49	47.3	70.2
6:05:15 AM	48	48.5	46.8	70.3
6:06:15 AM	48.6	51.1	47.6	67.7
6:07:15 AM	49.1	52	47.2	71.6
6:08:15 AM	47.6	48.1	47	67.3
6:09:15 AM	47.6	48	47	69.2
6:10:15 AM	60.8	70.6	47.1	81.2
6:11:15 AM	65	72.3	47.3	83
6:12:15 AM	54.3	70.7	47.5	73.3
6:13:15 AM	48	50.7	46.5	68.2
6:14:15 AM	45.8	47.4	44.1	69.4
6:15:15 AM	45.5	47.3	44.4	71.1
6:16:15 AM	46.4	48.5	45.1	65.1
6:17:15 AM	46.8	49.7	44.6	70.8
6:18:15 AM	45.2	45.7	44.7	70.4
6:19:15 AM	55.6	60.4	45.1	72.7
6:20:15 AM	47.5	51.8	45.5	80.5
6:21:15 AM	46.4	48.2	45.1	73.1
6:22:15 AM	45.6	47.7	44.6	69.7
6:23:15 AM	44.7	45.1	44.3	65.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
6:24:15 AM	45.2	47.1	42.4	71.7
6:25:15 AM	46.2	49.1	42.7	66.9
6:26:15 AM	45.6	47.6	43.7	72.6
6:27:15 AM	44.3	45.7	43.5	64.8
6:28:15 AM	44.9	46.6	44.1	70.2
6:29:15 AM	46.7	48.1	44.5	67.7
6:30:15 AM	47.1	49.9	45.1	73.8
6:31:15 AM	45.9	50.2	44	68.1
6:32:15 AM	46	47.8	44.5	72.7
6:33:15 AM	44.8	46.1	42.2	66.7
6:34:15 AM	44.8	46.9	44.1	67.5
6:35:15 AM	45.3	47.5	43.7	65.7
6:36:15 AM	45.6	48	43.9	72.8
6:37:15 AM	44.8	46.8	43.9	69.1
6:38:15 AM	45.6	46.6	43.9	71.3
6:39:15 AM	46.4	48.1	44.5	70.4
6:40:15 AM	47.2	49.8	45.1	65
6:41:15 AM	55.8	61.2	47.5	73.8
6:42:15 AM	46.4	48.2	44.7	74.5
6:43:15 AM	44.9	46.5	44.1	72.5
6:44:15 AM	44.5	45.2	44	71.5
6:45:15 AM	44.2	44.9	43.8	69
6:46:15 AM	44.1	46.1	43.7	78.6
6:47:15 AM	44.1	44.8	43.8	75.4
6:48:15 AM	45.3	46.6	44.2	72.5
6:49:15 AM	46.2	47.7	44.1	71.1
6:50:15 AM	44.2	44.7	43.8	70.9
6:51:15 AM	44.5	45	43.9	69.5
6:52:15 AM	44.1	44.8	43.7	70.1
6:53:15 AM	44.5	45.1	43.9	71.6
6:54:15 AM	44.1	44.9	43.7	67.3
6:55:15 AM	44.4	49.2	43.7	74.7
6:56:15 AM	44.1	44.8	43.7	71.7
6:57:15 AM	44.2	44.6	43.8	66.5
6:58:15 AM	45	46.3	44	65.5
6:59:15 AM	43.9	44.8	43.5	74.2
7:00:15 AM	44.4	45.5	43.7	78.7

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:01:15 AM	44.6	45.5	42.2	69.9
7:02:15 AM	46.2	51.4	42.6	73.9
7:03:15 AM	53	57.1	45.7	69.7
7:04:15 AM	46.4	49.1	42.2	70.1
7:05:15 AM	44.6	45.6	44	72.6
7:06:15 AM	44.8	45.8	42.5	75.8
7:07:15 AM	45.7	48.5	42.6	71.1
7:08:15 AM	54.9	57.9	48.5	73.7
7:09:15 AM	46.8	51.4	42.4	69.7
7:10:15 AM	44.4	45.8	43.8	75.8
7:11:15 AM	46.1	50.5	44.1	77.3
7:12:15 AM	44.2	45.8	43.7	74.6
7:13:15 AM	44.5	45.6	43.8	71.3
7:14:15 AM	44.1	45.4	43.7	75.6
7:15:15 AM	45	47.3	43.9	68.9
7:16:15 AM	45.3	47.9	43.8	70
7:17:15 AM	44.3	44.8	43.9	68.6
7:18:15 AM	44.2	45.3	43.8	73.8
7:19:15 AM	44	44.5	43.6	64.9
7:20:15 AM	44.2	45	43.8	71.7
7:21:15 AM	44.7	45.9	44	67.7
7:22:15 AM	45.8	48.1	42.3	71.6
7:23:15 AM	44.4	45	43.9	65.5
7:24:15 AM	44.2	44.8	43.7	64.1
7:25:15 AM	51	56.4	42.6	76.7
7:26:15 AM	45.2	49.5	42.1	70.8
7:27:15 AM	44.4	45	44	74.6
7:28:15 AM	44.7	45.4	42.1	69.7
7:29:15 AM	48.7	52.3	42.7	76.5
7:30:15 AM	45.7	47.8	42.1	66
7:31:15 AM	45.4	48.5	42.1	73.8
7:32:15 AM	44.6	45.4	42.3	73.5
7:33:15 AM	44.4	44.7	42.1	70.6
7:34:15 AM	44.5	45	42.2	72.1
7:35:15 AM	45	46.2	42.5	70.7
7:36:15 AM	52.2	58.3	45.1	71
7:37:15 AM	46.1	48.5	45.2	83.4

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
7:38:15 AM	49.3	52.9	45	68.3
7:39:15 AM	47	51.3	45.4	68.5
7:40:15 AM	45.8	46.7	45.1	65
7:41:15 AM	45.4	46.3	44.8	71
7:42:15 AM	46.7	47.7	45.5	65.8
7:43:15 AM	46	46.8	44.9	64
7:44:15 AM	46.1	46.5	45.5	72.2
7:45:15 AM	46.3	47.9	44.8	69.4
7:46:15 AM	46.4	47.5	45.4	70.6
7:47:15 AM	46.3	46.8	45.6	72.5
7:48:15 AM	46	46.6	45.3	65.9
7:49:15 AM	46	46.5	45.3	62
7:50:15 AM	46.2	46.7	45.7	63.7
7:51:15 AM	47	48.9	44.8	68.4
7:52:15 AM	46.3	49	44.9	75.6
7:53:15 AM	51.1	55.4	45.2	72.5
7:54:15 AM	47.4	51.2	45.3	74.2
7:55:15 AM	45.7	46.8	44.8	67.4
7:56:15 AM	46.4	46.9	45.4	65.4
7:57:15 AM	45.8	46.8	44.6	64.8
7:58:15 AM	46.3	47.3	45.2	64.9
7:59:15 AM	46.7	47.1	46.4	67.1
8:00:15 AM	46.4	47.1	45.3	72.8
8:01:15 AM	46.2	48.5	45	77.4
8:02:15 AM	48.6	51.8	46.6	64.4
8:03:15 AM	46.5	47.4	44.9	63.8
8:04:15 AM	45.6	46.6	44.4	66.1
8:05:15 AM	46.3	46.8	45.4	66.5
8:06:15 AM	46	46.9	45.3	62.9
8:07:15 AM	47	48.9	45.6	72.2
8:08:15 AM	46	46.7	44.8	61.3
8:09:15 AM	45.9	46.9	44.9	71.8
8:10:15 AM	46.7	48	45.3	65.7
8:11:15 AM	46.6	47.7	45.8	70.4
8:12:15 AM	46.2	46.8	45.4	72.3
8:13:15 AM	45.9	46.4	45.3	61.7
8:14:15 AM	46.1	48.5	45.5	79.5

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:15:15 AM	46	46.4	45.4	63.8
8:16:15 AM	46.4	47.7	45.4	63
8:17:15 AM	46.1	47.3	45.3	64.3
8:18:15 AM	45.9	47.2	45.1	64.2
8:19:15 AM	45.8	46.3	45	69.4
8:20:15 AM	46.1	46.6	45.3	61.4
8:21:15 AM	46.8	49.4	45.5	65.7
8:22:15 AM	46.2	48.7	45.3	67.2
8:23:15 AM	46.2	47.2	45	61.5
8:24:15 AM	44.9	45.6	42.4	65.4
8:25:15 AM	45.1	47	44.6	62.3
8:26:15 AM	45.2	45.6	44.7	61.7
8:27:15 AM	47.9	52.3	44.7	66.1
8:28:15 AM	45	47.3	44.5	64.9
8:29:15 AM	44.9	45.2	44.4	67.5
8:30:15 AM	45	47.4	44.2	62
8:31:15 AM	45.8	47.6	44.4	63.9
8:32:15 AM	45.5	46.1	42.4	72.4
8:33:15 AM	45.9	46.6	45.1	63.7
8:34:15 AM	45.4	46.1	44.4	68.8
8:35:15 AM	45.4	46	42.9	67.2
8:36:15 AM	45.6	46.1	45.2	64.2
8:37:15 AM	45.5	46	45	65.9
8:38:15 AM	45.5	46	45.1	69.3
8:39:15 AM	46	46.4	45.6	61.4
8:40:15 AM	45.6	46	45.3	65.5
8:41:15 AM	46.1	47	45.4	64.1
8:42:15 AM	46	47.7	44.8	64.7
8:43:15 AM	45.5	45.9	45.1	65
8:44:15 AM	45.3	46.1	44.6	60
8:45:15 AM	45.4	45.7	45	63.1
8:46:15 AM	45.8	47.9	44.9	72.5
8:47:15 AM	47.4	49.9	46.3	67.8
8:48:15 AM	49	53.8	45.3	66.3
8:49:15 AM	45.8	46.5	45.1	60.5
8:50:15 AM	46.6	47.4	46	61.3
8:51:15 AM	47.3	48.8	46.4	66.8

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

Date/Time	Leq-1	Lmax-1	Lmin-1	Lpk-1
8:52:15 AM	45.8	46.6	45	60.3
8:53:15 AM	45.6	46.5	45.1	63.9
8:54:15 AM	45.7	47.8	45	66
8:55:15 AM	46.4	48.3	45.2	60.8
8:56:15 AM	46.1	47.9	45	68.6
8:57:15 AM	46.5	48.7	45.4	64.7
8:58:15 AM	46.2	47.2	45.8	60.8
8:59:15 AM	46.5	48.8	45.9	62.9
9:00:15 AM	48.9	50	47.3	65.7
9:01:15 AM	47	47.6	46.5	62.3
9:02:15 AM	48.2	50.5	46.6	66.4
9:03:15 AM	48.2	50	46.2	62.2
9:04:15 AM	47.8	51.6	46.3	63.9
9:05:15 AM	46.3	46.6	46	60.3
9:06:15 AM	46.2	46.4	45.9	60.3
9:07:15 AM	48	55	45.7	65.7
9:08:15 AM	46.7	52.1	44.6	67.8
9:09:15 AM	46.1	47.6	44.8	64.4
9:10:15 AM	46.2	47.8	45	66.8
9:11:15 AM	45.8	48.9	44.9	63.3
9:12:15 AM	46.1	48.4	45	62.4
9:13:15 AM	45.5	46	45.2	59.9
9:14:15 AM	45.8	46.7	45.7	60
9:15:15 AM	46.5	48.2	45.6	61.7
9:16:15 AM	46.5	48.8	45.6	63
9:17:15 AM	45.8	46.1	45.3	60
9:18:15 AM	45.9	47.5	45.3	61.3
9:19:15 AM	48.6	55.5	45.5	69.9
9:20:15 AM	48.3	54.8	44.9	75.2

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-1 Noise Study (2473 : Zoning Map Amendment

EXPLANATION

- SUBJECT SITE BOUNDARY
- PARCEL BOUNDARY
- RIGHT OF WAY

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham and Effingham County tax maps, and on-site observations. Parcel boundaries are approximate. Not intended for construction purposes.

0 300' 600'
1" = 600'

ADJACENT PARCEL
Owner: SFG CH GITC 2C, LLC
PIN: 04660008A08
±75.43 acres

ADJACENT PARCEL
Owner: SFG CH Chatham Tract, LLC
PIN: 70906 01039
±81.16 acres

ADJACENT PARCEL
Owner: Exley Thomas L Sr. & Thomas L Jr.
PIN: 70906 01028
±45.31 acres

ADJACENT PARCEL
Owner: Exley Thomas L Sr. & Thomas L Jr.
PIN: 70906 01029
±68.71 acres

ADJACENT PARCEL
Owner: Exley Thomas L Sr. & Thomas L Jr.
PIN: 70906 01030
±9.92 acres

ADJACENT PARCEL
Owner: BEP Rice Hope, LLC
PIN: 70906 04074
±6.16 acres

ADJACENT PARCEL
Owner: BEP RH Tract 2, LLC
PIN: 70906 04028
±1.75 acres

ADJACENT PARCEL
Owner: J Rice Hope, LLC
PIN: 70906 04029
±1.55 acres

ADJACENT PARCEL
Owner: PWJB, LLC
PIN: 70906 04030
±1.29 acres

ADJACENT PARCEL
Owner: Riya Properties, LLC
PIN: 70906 04031
±1.05 acres

ADJACENT PARCEL
Owner: Dolawk, LLC
PIN: 70906 04032
±0.97 acres

ADJACENT PARCEL
Owner: Rice Hope - CJ, LLC
PIN: 70906 04067
±3.23 acres

ADJACENT PARCEL
Owner: T and T Exley Properties, LLC
PIN: 04660008A00
±438.96 acres

SUBJECT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02041
±126.27 acres

SUBJECT PARCEL
Owner: GW Investments, LLC
PIN: 70906 01001B
±108.05 acres

SUBJECT PARCEL
Owner: Wiggin Gary
Portion of PIN: 70975 01025
Portion of ±58.04 acres

SUBJECT PARCEL
Owner: Jeffers Lynn Sr.
PIN: 70975 01026Z
±9.26 acres

SUBJECT PARCEL
Owner: Jeffers Lynn Sr.
PIN: 70975 01026Y
±5.05 acres

SUBJECT PARCEL
Owner: Steele Fred Jr.
PIN: 70975 01016
±24.39 acres

SUBJECT PARCEL
Owner: Jeffers Lynn Sr.
PIN: 70975 01017A
±0.94 acres

ADJACENT PARCEL
Owner: Royal Ronald A
PIN: 70975 01024
±48.48 acres

ADJACENT PARCEL
Owner: Steele Fred Jr.
PIN: 70975 01012
±6.58 acres

ADJACENT PARCEL
Owner: Wiggin Gary
Portion of PIN: 70975 01025
Portion of ±58.04 acres

ADJACENT PARCEL
Owner: Jones James
PIN: 70975 01013
±7.64 acres

SUBJECT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02043
±140.25 acres

SUBJECT PARCEL
Owner: Varnedoe Sam
L Jr. ETAL
Portion of PIN: 70976 02043
Portion of ±140.25 acres

SUBJECT PARCEL
Owner: Steele Glenn A
& Steele Anthony
PIN: 70975 01015
±12.27 acres

ADJACENT PARCEL
Owner: Holmes & Hicks Claretha & Dorles ETAL
PIN: 70975 01014
±20.10 acres

SUBJECT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02044
±71.74 acres

245 GA. POWER RIGHT OF WAY
GEORGIA HIGHWAY 21
JEFFERS ROAD
NIF SEABOARD COASTLINE RAILROAD - 300' R/W
SAUSSY ROAD
GEORGIA HIGHWAY 21

Project Mngr:	LRM
Drawn By:	JDG
Checked By:	LRM
Approved By:	WSA

Project No.	ES217065
Scale:	AS SHOWN
File Name:	ES217065.dwg
Date:	June 10, 2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

NORTHERN SITE DIAGRAM

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figur 2A

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA P1 JUNE 2021- DIA Exhibit B-2 Noise Study Exhibits (2473 : Zoning Map Amendment

EXPLANATION

SUBJECT SITE BOUNDARY

PARCEL BOUNDARY

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham and Effingham County tax maps, and on-site observations. Parcel boundaries are approximate. Not intended for construction purposes.

0 300' 600'

1" = 600'

SUBJECT PARCEL
Owner: Steele Glenn A & Steele Anthony
PIN: 70976 02017
±2.28 acres

ADJACENT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
PIN: 70976 02040
±7.47 acres

SUBJECT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02044
±71.74 acres

SUBJECT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
PIN: 70976 02042
±31.33 acres

ADJACENT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
Portion of PIN: 70976 02036
Portion of ±76.26 acres

ADJACENT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
PIN: 70976 02035
±48.06 acres

SUBJECT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
Portion of PIN: 70976 02036
Portion of ±76.26 acres

ADJACENT PARCEL
Owner: Hargrove John Henry ETAL
PIN: 70975 01002
±5.38 acres

ADJACENT PARCEL
Owner: Richards Brenda Ann
PIN: 70975 01002A
±3.56 acres

SUBJECT PARCEL
Owner: Vernedoe Sam L Jr. ETAL
PIN: 70976 02039
±66.00 acres

ADJACENT PARCEL
Owner: Jackson Raddie ETAL
PIN: 70976 02010
±13.05 acres

ADJACENT PARCEL
Owner: Reynolds Everlina Jones & Clifford
PIN: 70975 01002B
±6.98 acres

ADJACENT PARCEL
Owner: Edward B Deal Properties No. 2, LLC
PIN: 70976 02009
±7.47 acres

ADJACENT PARCEL
Owner: Capallo David V ETAL
PIN: 70976 01016
±335.56 acres

ADJACENT PARCEL
Owner: Steele Willie
PIN: 70976 02007
±29.90 acres

SUBJECT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02037
±48.94 acres

ADJACENT PARCEL
Owner: Varnedoe Sam L Jr. ETAL
PIN: 70976 02038
±25.34 acres

ADJACENT PARCEL
Owner: Anderson & Sparkman M C & Char
PIN: 70975 01001
±242.27 acres

ADJACENT PARCEL
Owner: Thomas Ruth W
PIN: 70976 02014
±6.49 acres

ADJACENT PARCEL
Owner: Jackson Matthew Jerome Sr.
PIN: 70976 02014A
±8.68 acres

NIF SEABOARD COASTLINE RAILROAD - 300' R/W

SAUSSY ROAD

GEORGIA HIGHWAY 21

BERRIEN ROAD

GEORGIA STATE ROUTE 30

Project Mngr:	LRM
Drawn By:	JDG
Checked By:	LRM
Approved By:	WSA

Project No.	ES217065
Scale:	AS SHOWN
File Name:	ES217065.dwg
Date:	June 10, 2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

SOUTHERN SITE DIAGRAM

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figur 2B

EXPLANATION

- SUBJECT SITE BOUNDARY
- PARCEL BOUNDARY
- RIGHT OF WAY
- 50' VEGETATED BUFFER
- 100' BUFFER - 15' HIGH BERM WITH PLANTINGS
- SOUND LEVEL MEASUREMENT LOCATION
- 52.54 dB(A) — 24-HOUR AVERAGE LEQ IN dB(A)

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham and Effingham County tax maps, the "Plans of Varnedoe-Wiggins Tract at GA HWY 21 - Port Wentworth, GA" Site Plan provided by Kern & Co., LLC dated 5/26/2021, and on-site observations. Parcel boundaries are approximate. Not intended for construction purposes.

dB(A) - A-weighted sound level in decibels.

0 300' 600'
1" = 600'

M5 (2020)
50.28 dB(A)

M4 (2020)
52.54 dB(A)

245' GA. POWER RIGHT OF WAY

M1
68.12 dB(A)

GEORGIA HIGHWAY 21

611,000 SF
1,300' x
470'

376,000 SF
800' x 470'

376,000 SF
800' x 470'

486,000 SF
1,350' x
360'

100' BUFFER - 15' HIGH BERM WITH PLANTINGS

M2
54.87 dB(A)

JEFFERS ROAD

EFFINGHAM COUNTY LINE

CHATHAM COUNTY LINE

470,000 SF
1,000' x
470'

1,240,000 SF
2,000' x 620'

470,000 SF
1,000' x 470'

100' BUFFER - 15' HIGH BERM WITH PLANTINGS

GEORGIA HIGHWAY 21

N/F SEABOARD COASTLINE RAILROAD - 300' R/W

1,426,000 SF
2,300' x 620'

455,000 SF
1,300' x 350'

SAUSSY ROAD

Project Mngr:	LRM	Project No.	ES217065
Drawn By:	JDG	Scale:	AS SHOWN
Checked By:	LRM	File Name:	ES217065.dwg
Approved By:	WSA	Date:	June 10, 2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

NORTHERN EXISTING SOUND LEVELS

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figur
3

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021 (2473 : Zoning Map Amendment
E 2021- DIA Exhibit B-2 Noise Study Exhibits

EXPLANATION

- SUBJECT SITE BOUNDARY
- PARCEL BOUNDARY
- RIGHT OF WAY
- 50' VEGETATED BUFFER
- 100' BUFFER - 15' HIGH BERM WITH PLANTINGS
- 55 dB(A) AVERAGE A-WEIGHTED EQUIVALENT SOUND LEVEL
- PROJECTED ACOUSTIC IMPACT CONTOUR

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham and Effingham County tax maps, the "Plans of Varnedoe-Wiggins Tract at GA HWY 21 - Port Wentworth, GA" Site Plan provided by Kern & Co., LLC dated 5/26/2021, and on-site observations. Parcel boundaries are approximate. Not intended for construction purposes.

dB(A) - A-weighted sound level in decibels.

0 300' 600'
1" = 600'

245 GA POWER RIGHT OF WAY
GEORGIA HIGHWAY 21
JEFFERS ROAD
SAUSSY ROAD
EFFINGHAM COUNTY LINE
CHATHAM COUNTY LINE
NIF SEABOARD COASTLINE RAILROAD - 300' R/W

611,000 SF
1,300' x
470'

376,000 SF
800' x 470'

376,000 SF
800' x 470'

486,000 SF
1,350' x
360'

1,240,000 SF
2,000' x 620'

470,000 SF
1,000' x
470'

1,426,000 SF
2,300' x 620'

470,000 SF
1,000' x 470'

455,000 SF
1,300' x 350'

55 dB(A)
60 dB(A)
65 dB(A)
70 dB(A)
75 dB(A)

Project Mngr:	LRM
Drawn By:	JDG
Checked By:	LRM
Approved By:	WSA

Project No.	ES217065
Scale:	AS SHOWN
File Name:	ES217065.dwg
Date:	June 11, 2021

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

NORTHERN PROJECTED SOUND LEVELS

Varnedoe-Wiggins Tract - Phases I & II
Georgia Highway 21
Port Wentworth, Chatham County, Georgia

Figur

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-2 Noise Study Exhibits (2473 : Zoning Map Amendment

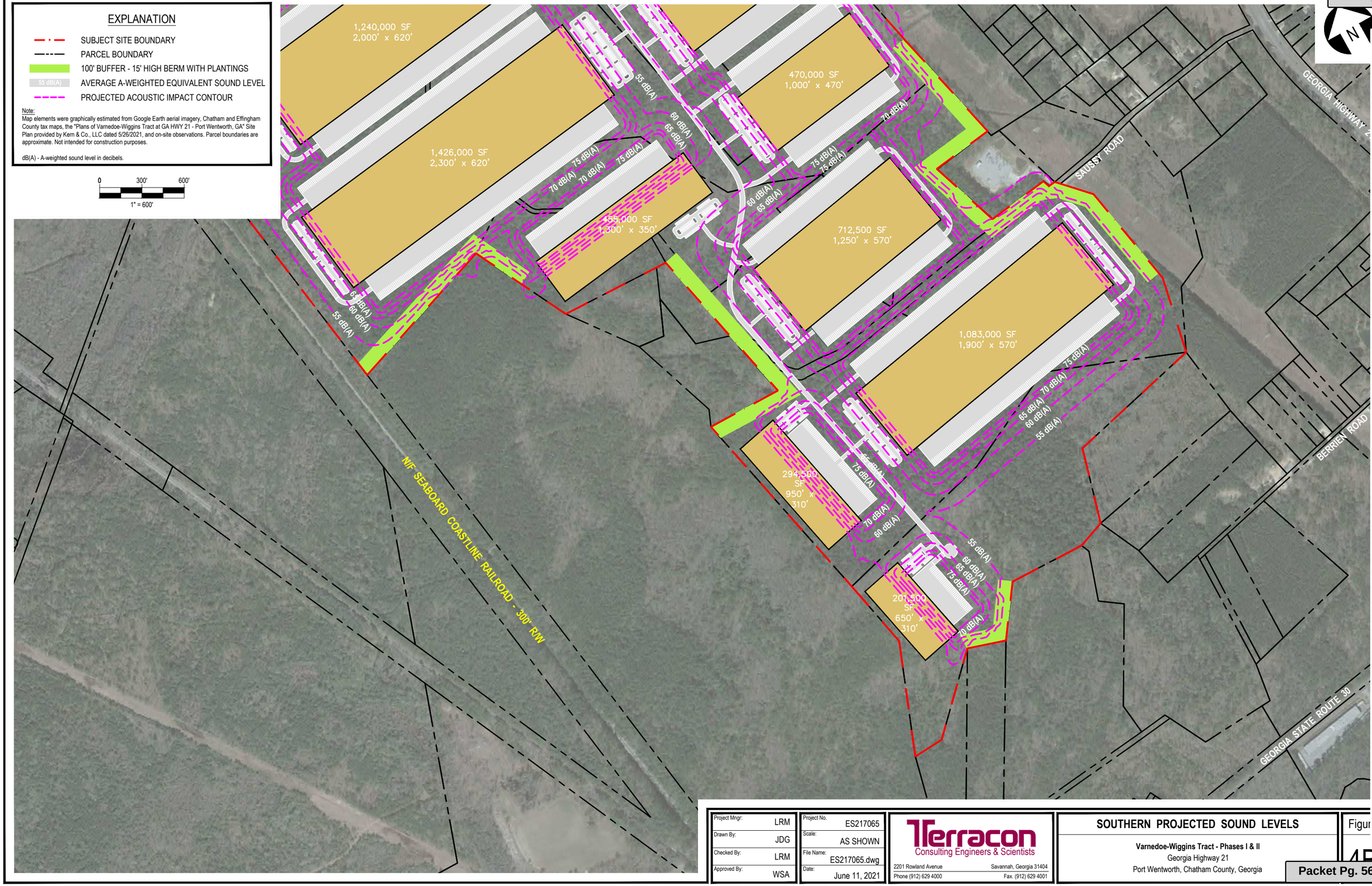
EXPLANATION

- SUBJECT SITE BOUNDARY
- PARCEL BOUNDARY
- 100' BUFFER - 15' HIGH BERM WITH PLANTINGS
- 55 dB(A) AVERAGE A-WEIGHTED EQUIVALENT SOUND LEVEL
- PROJECTED ACOUSTIC IMPACT CONTOUR

Note:
Map elements were graphically estimated from Google Earth aerial imagery, Chatham and Effingham County tax maps, the "Plans of Varnedoe-Wiggins Tract at GA HWY 21 - Port Wentworth, GA" Site Plan provided by Kern & Co., LLC dated 5/26/2021, and on-site observations. Parcel boundaries are approximate. Not intended for construction purposes.

dB(A) - A-weighted sound level in decibels.

0 300' 600'
1" = 600'



Project Mngr:	LRM	Project No.	ES217065	Terracon Consulting Engineers & Scientists	SOUTHERN PROJECTED SOUND LEVELS
Drawn By:	JDG	Scale:	AS SHOWN	2201 Rowland Avenue Savannah, Georgia 31404	Varnedoe-Wiggins Tract - Phases I & II
Checked By:	LRM	File Name:	ES217065.dwg	Phone (912) 629 4000 Fax. (912) 629 4001	Georgia Highway 21
Approved By:	WSA	Date:	June 11, 2021		Port Wentworth, Chatham County, Georgia

Figur 4B

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit B-2 Noise Study Exhibits (2473 : Zoning Map Amendment

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT
100 W OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3604

August 21, 2019

Regulatory Division
SAS-2018-00940

Mr. Comer Meadows
Mr. Samuel Varnedoe
Post Office Box 2379
Tybee Island, Georgia 31328

Dear Mr. Meadows and Mr. Varnedoe:

I refer to a letter dated October 12, 2018, submitted on your behalf by Mr. Brandon Wall of Sligh Environmental Consultants, Incorporated, requesting a delineation of aquatic resources for your 654.26 acre site located of Highway 21, in Chatham County, Georgia (Latitude 32.2085, Longitude -81.2147). This project has been assigned number SAS-2018-00940 and it is important that you refer to this number in all communication concerning this matter.

The enclosed survey entitled "Sam L. Varnedoe, JR., ET. AL", sheets 1-11, dated August 13, 2019, and signed by registered land surveyor James M. Anderson identifies the delineation limits of all aquatic resources within the review area. The wetlands were delineated in accordance with criteria contained in the 1987 "Corps of Engineers Wetland Delineation Manual," as amended by the most recent regional supplements to the manual. This delineation will remain valid for a period of 5-years unless new information warrants revision prior to that date.

If you intend to sell property that is part of a project that requires Department of the Army Authorization, it may be subject to the Interstate Land Sales Full Disclosure Act. The Property Report required by Housing and Urban Development Regulation must state whether, or not a permit for the development has been applied for, issued or denied by the U.S. Army Corps of Engineers (Part 320.3(h) of Title 33 of the Code of Federal Regulations).

This communication does not convey any property rights, either in real estate or material, or any exclusive privileges. It does not authorize any injury to property, invasion of rights, or any infringement of federal, state or local laws, or regulations. It does not obviate your requirement to obtain state or local assent required by law for the development of this property. If the information you have submitted, and on which the U.S. Army Corps of Engineers has based its determination is later found to be in error, this decision may be revoked.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment

Thank you in advance for completing our on-line Customer Survey Form located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. We value your comments and appreciate your taking the time to complete a survey each time you have interaction with our office.

If you have any questions, please call me at (912) 652-5022.

Sincerely,

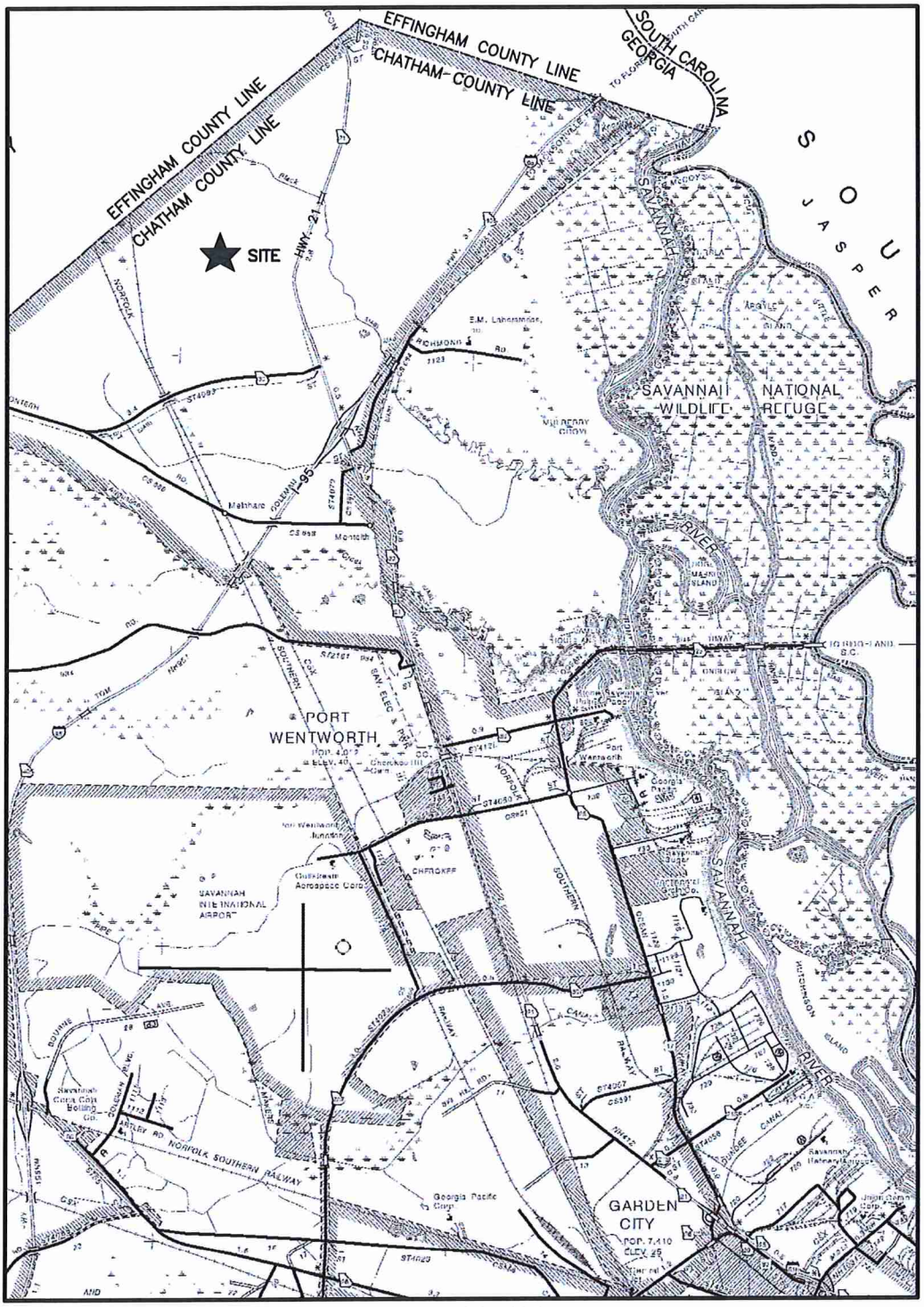
J Scott Guinn

Scott Guinn
Regulatory Specialist, Coastal Branch

Enclosures

Copy Furnished: Mr. Brandon Wall, Sligh Environmental Consultants, Incorporated.

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment



VICINITY MAP

GEORGIA REGISTERED NO. 2113 8-13-19 LAND SURVEYOR JAMES M. ANDERSON

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

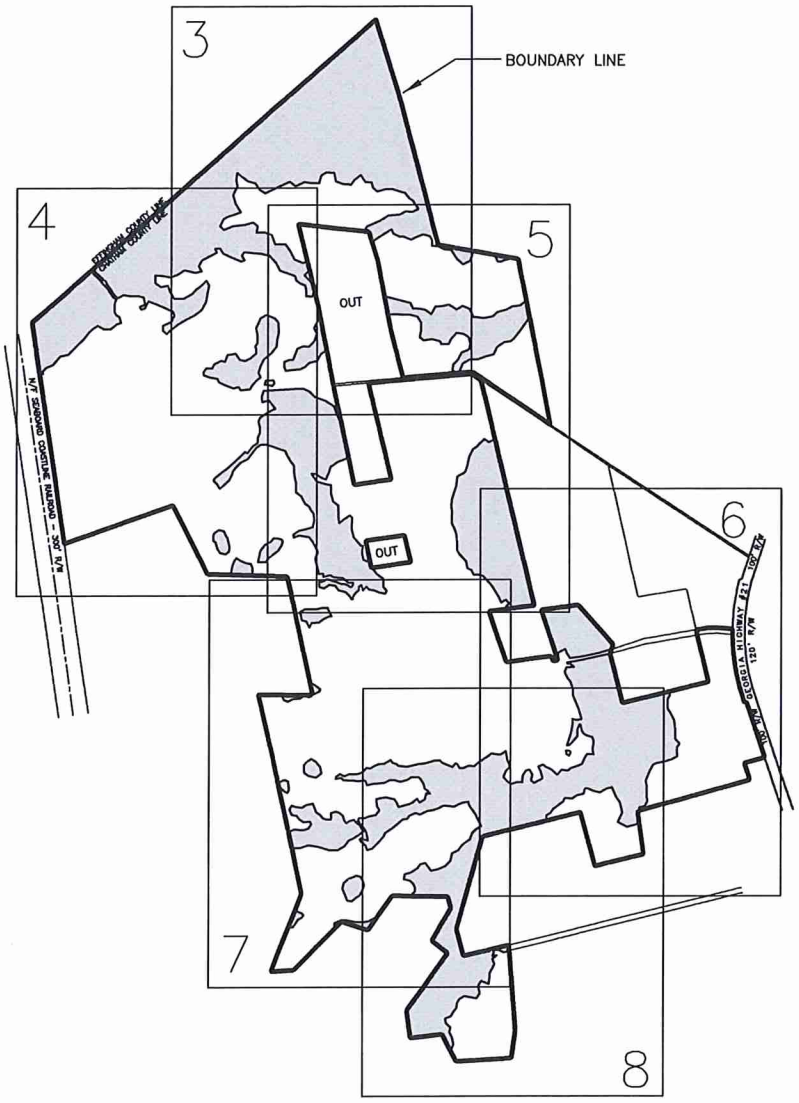
LOCATION: 8TH. G.M.D. CHATHAM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: N/A
JN18111.DWG
SHEET 1

"I HEREBY CERTIFY THAT THE WETLANDS AS SHOWN ON THIS SURVEY WERE LOCATED USING GPS EQUIPMENT AT SUB-METER ACCURACY. THE PURPOSE OF THIS SURVEY IS FOR THE LOCATION OF WETLANDS ONLY AND NOT BOUNDARY ESTABLISHMENT OR PROPERTY CONVEYANCE."

Juan M. Anderson

JAMES M. ANDERSON & ASSOCIATES, INC.
REGISTERED LAND SURVEYORS
P.O. BOX 894 104 OAK STREET
STATESBORO, GA. 30459
PHONE: (912) 764–2002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment



TOTAL BOUNDARY ACREAGE

BOUNDARY TRACT = 654.262 AC.

BOUNDARY

WETLANDS	=	225.893 AC.
UPLANDS	=	428.369 AC.
TOTAL	=	654.262 AC.

WETLANDS ACREAGE

WETLAND AREA "A"	=	87.109 AC.
WETLAND AREA "B"	=	4.873 AC.
WETLAND AREA "C"	=	24.297 AC.
WETLAND AREA "D"	=	1.839 AC.
WETLAND AREA "E"	=	17.762 AC.
WETLAND AREA "F"	=	9.377 AC.
WETLAND AREA "G"	=	0.096 AC.
WETLAND AREA "H"	=	0.216 AC.
WETLAND AREA "J"	=	0.630 AC.
WETLAND AREA "K"	=	0.626 AC.
WETLAND AREA "M"	=	0.810 AC.
WETLAND AREA "N"	=	0.522 AC.
WETLAND AREA "P"	=	0.198 AC.
WETLAND AREA "Q"	=	0.880 AC.
WETLAND AREA "R"	=	69.327 AC.
WETLAND AREA "S"	=	5.588 AC.
WETLAND AREA "U"	=	0.037 AC.
WETLAND AREA "V"	=	0.251 AC.
WETLAND AREA "W"	=	0.151 AC.
WETLAND AREA "X"	=	0.149 AC.
WETLAND AREA "Y"	=	0.433 AC.
WETLAND AREA "Z"	=	0.722 AC.
TOTAL WETLAND AREA	=	225.893 AC.

UPLANDS ACREAGE

UPLAND AREA "A"	=	18.342 AC.
UPLAND AREA "B"	=	300.646 AC.
UPLAND AREA "C"	=	0.101 AC.
UPLAND AREA "D"	=	19.322 AC.
UPLAND AREA "E"	=	29.840 AC.
UPLAND AREA "F"	=	10.994 AC.
UPLAND AREA "G"	=	25.361 AC.
UPLAND AREA "H"	=	0.078 AC.
UPLAND AREA "J"	=	8.354 AC.
UPLAND AREA "K"	=	15.331 AC.
TOTAL UPLAND AREA	=	428.369 AC.

GRID NORTH—GA. EAST ZONE

1200 0 1200 2400 3600

GRAPHIC SCALE — FEET

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

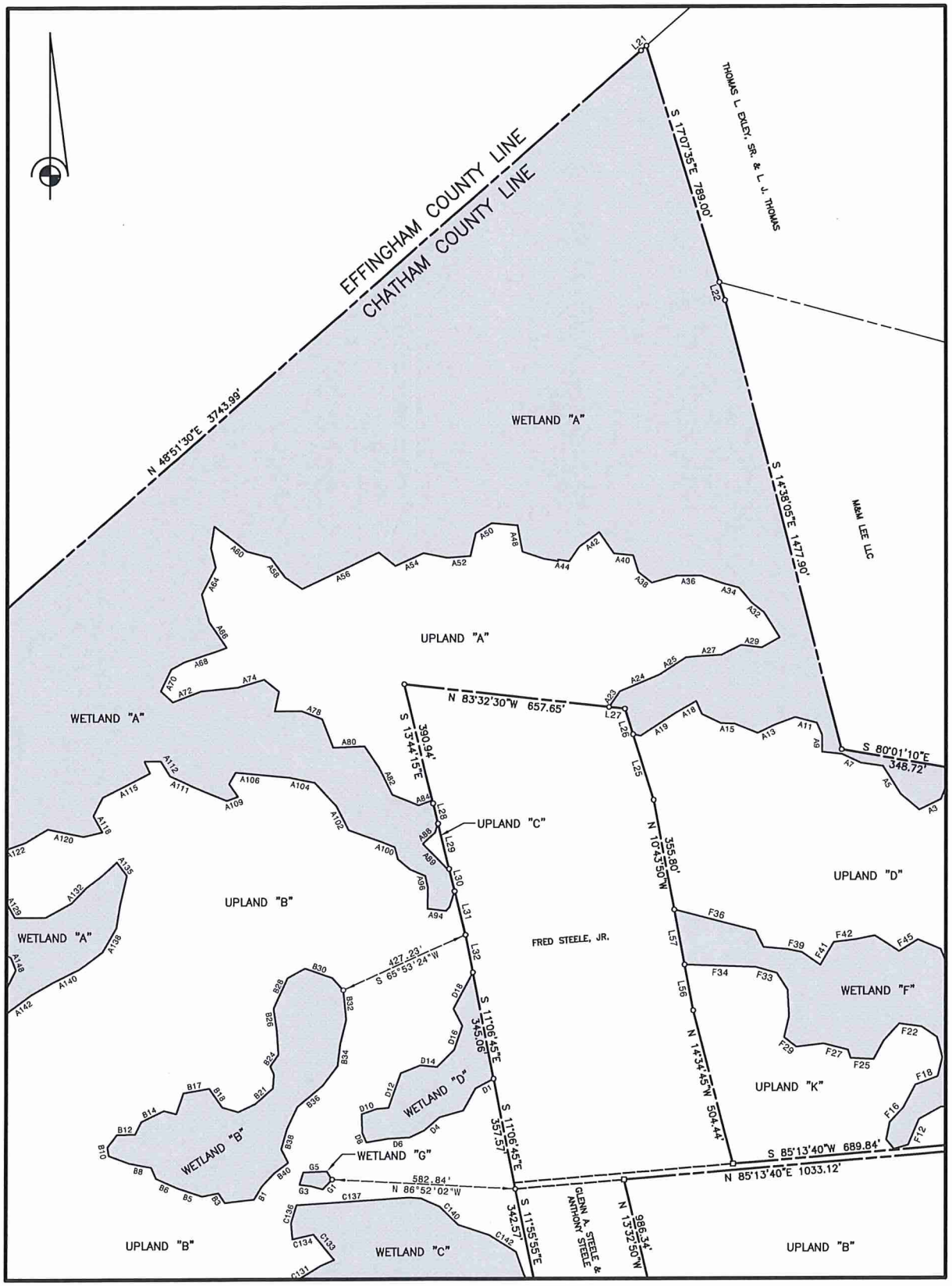
LOCATION: 8TH. G.M.D. CHATHAM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON—GA. R.L.S. 2113
SCALE: 1" = 1200'
JN18111.DWG
SHEET 2

GEORGIA REGISTERED NO. 2113 8-13-19 LAND SURVEYOR JAMES M. ANDERSON

"I HEREBY CERTIFY THAT THE WETLANDS AS SHOWN ON THIS SURVEY WERE LOCATED USING GPS EQUIPMENT AT SUB-METER ACCURACY. THE PURPOSE OF THIS SURVEY IS FOR THE LOCATION OF WETLANDS ONLY AND NOT BOUNDARY ESTABLISHMENT OR PROPERTY CONVEYANCE."

James M. Anderson

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment



300 0 300 600 900

GRAPHIC SCALE – FEET

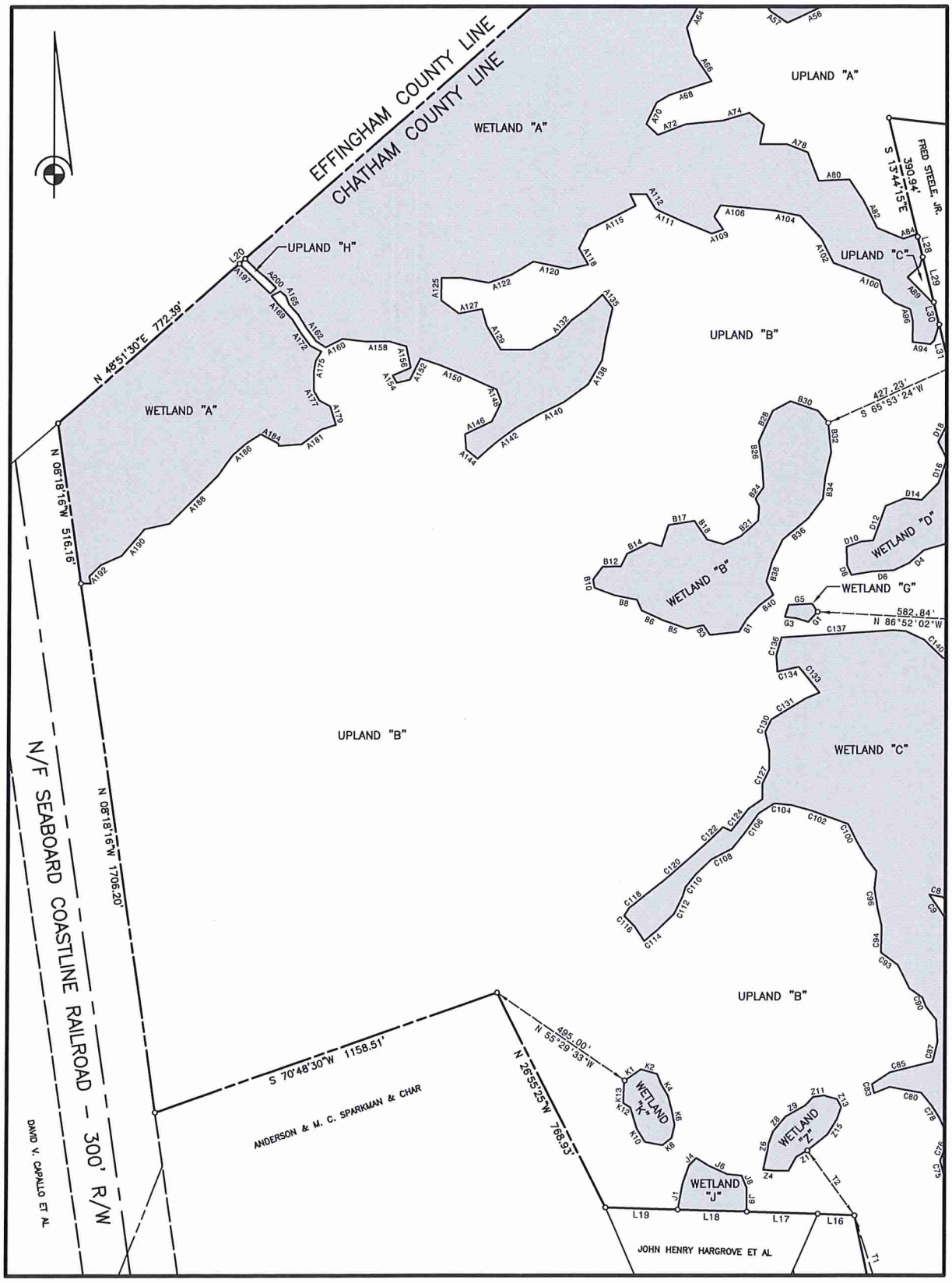
WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 3

JAMES M. ANDERSON & ASSOCIATES, INC.
REGISTERED LAND SURVEYORS
P.O. BOX 894 104 OAK STREET
STATESBORO, GA. 30459
PHONE: (912) 764–2002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment



WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 4

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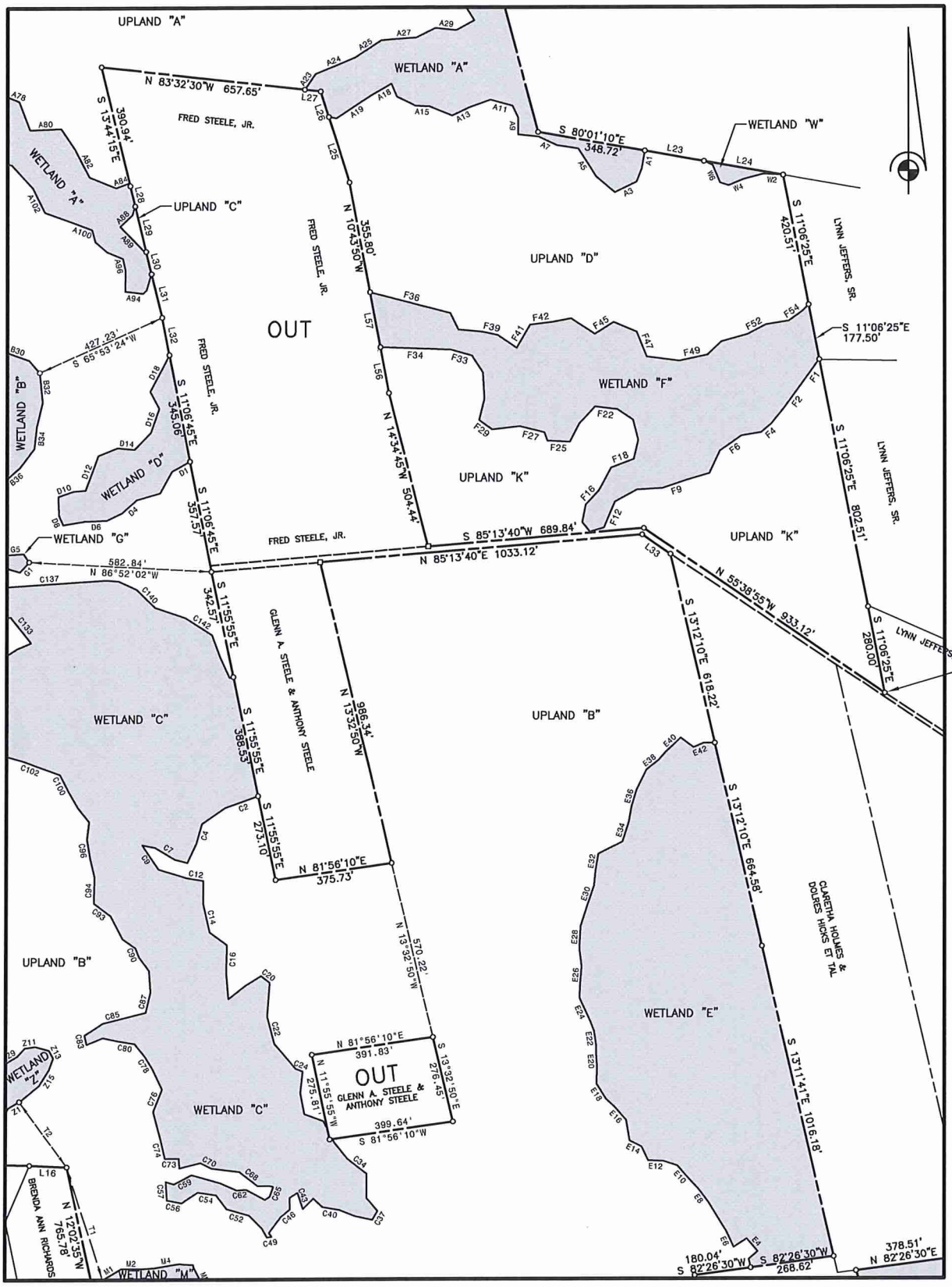

300 0 300 600 900

GRAPHIC SCALE – FEET

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 5

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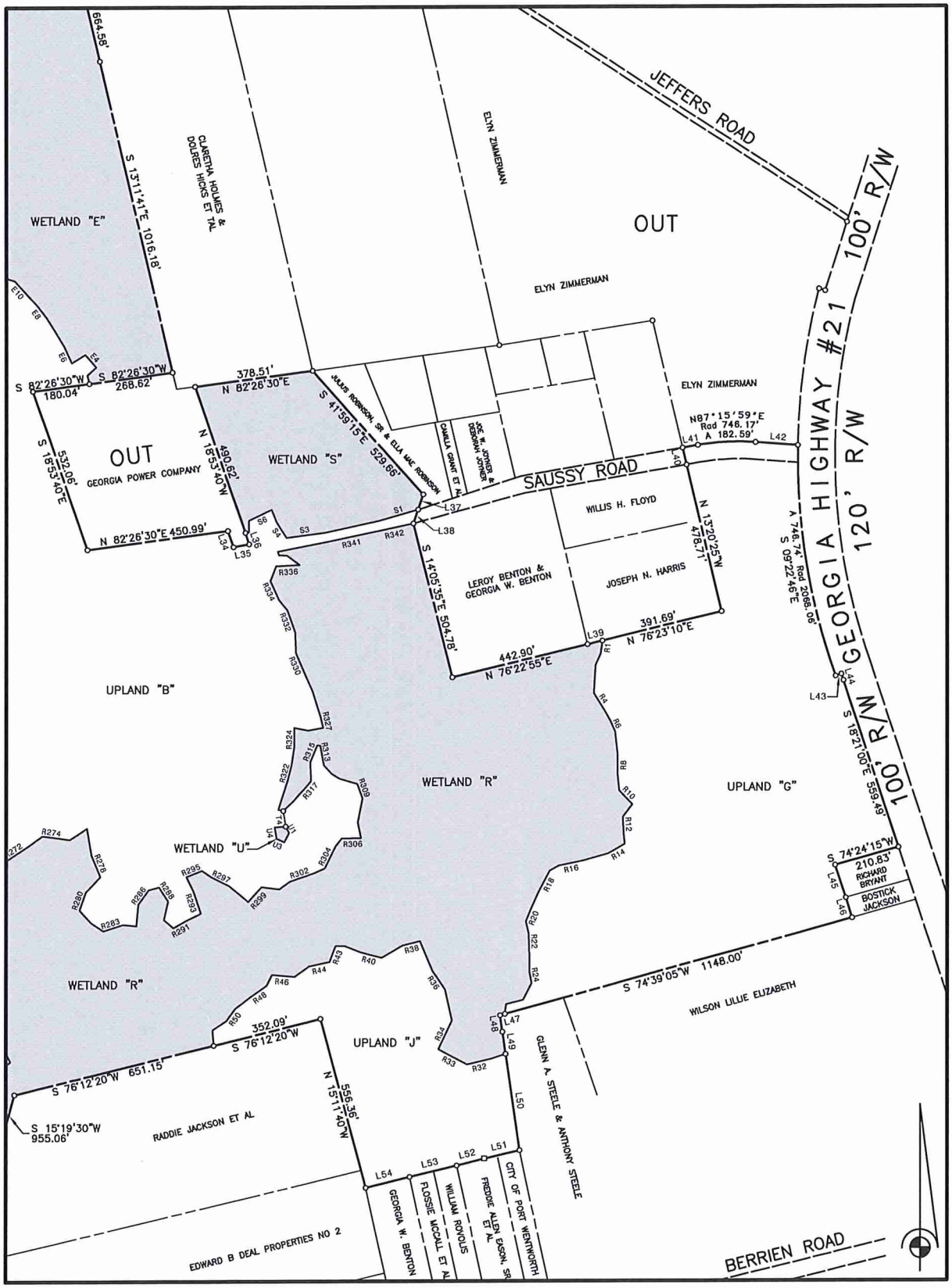

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 6

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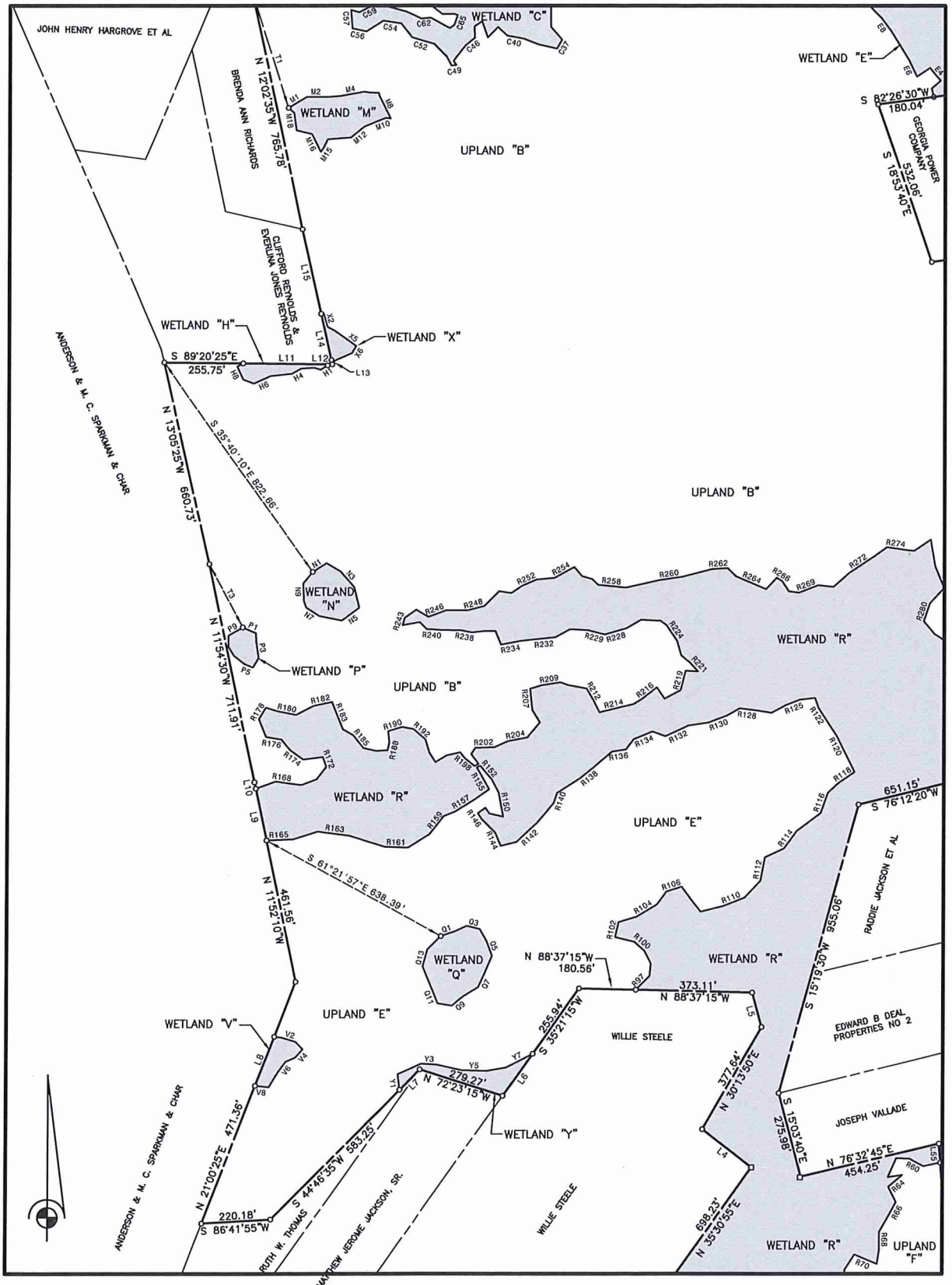

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON–GA. R.L.S. 2113
SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 7

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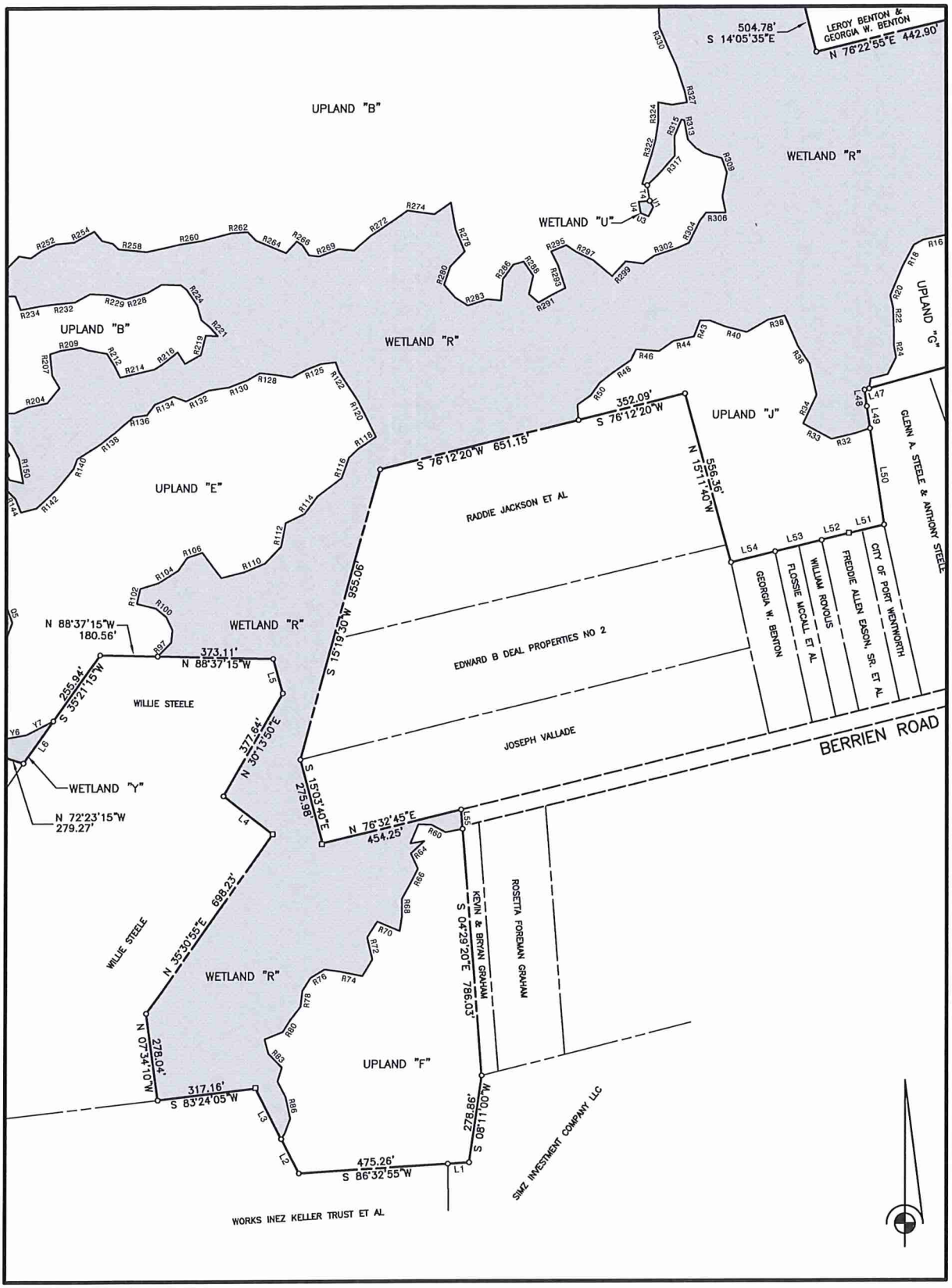

300 0 300 600 900

GRAPHIC SCALE – FEET

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATAHM CO., GA.
CITY OF PORT WENTWORTH
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SCALE: 1" = 300'
JN18111.CRD & JN18111.DWG
SHEET 8

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Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment

WETLAND AREA "A"

COURSE	BEARING	DISTANCE
A1	S 09°55'14" W	57.78'
A2	S 21°50'46" W	44.84'
A3	S 64°22'22" W	77.31'
A4	N 50°12'25" W	78.37'
A5	N 32°26'00" W	105.66'
A6	N 81°23'13" W	69.90'
A7	N 65°09'32" W	65.56'
A8	N 83°28'52" W	64.05'
A9	N 00°43'06" W	54.63'
A10	N 24°45'20" W	41.26'
A11	N 75°09'44" W	72.08'
A12	S 70°33'44" W	72.23'
A13	S 63°21'53" W	58.70'
A14	N 67°45'36" W	79.12'
A15	N 87°05'12" W	45.17'
A16	N 64°13'54" W	66.03'
A17	N 23°38'57" W	44.86'
A18	S 60°56'12" W	74.29'
A19	S 57°02'20" W	135.08'
A20	N 79°01'22" W	24.28'
A21	N 17°32'50" W	85.60'
A22	N 83°32'30" W	51.10'
A23	N 34°41'40" E	60.86'
A24	N 67°32'17" E	138.18'
A25	N 56°53'32" E	99.05'
A26	N 84°45'56" E	35.76'
A27	N 86°26'54" E	79.10'
A28	N 63°22'38" E	68.82'
A29	S 83°44'00" E	66.11'
A30	N 61°34'32" E	65.58'
A31	N 32°29'19" W	95.72'
A32	N 50°49'46" W	49.54'
A33	N 40°58'29" W	61.87'
A34	N 74°10'07" W	53.72'
A35	N 70°45'46" W	74.78'
A36	S 89°31'47" W	77.74'
A37	S 74°31'31" W	80.71'
A38	N 51°56'43" W	54.34'
A39	N 17°39'09" W	56.21'
A40	N 84°14'19" W	61.50'
A41	N 35°09'59" W	82.42'
A42	S 53°56'00" W	78.82'
A43	S 35°01'12" W	56.57'
A44	N 80°16'14" W	35.75'
A45	S 04°21'21" E	4.71'
A46	N 80°50'22" W	45.54'
A47	N 71°41'25" W	73.87'
A48	N 10°43'10" W	85.36'
A49	N 85°35'14" W	82.08'
A50	S 58°13'07" W	59.87'
A51	S 13°18'07" W	74.87'
A52	S 85°36'18" W	72.05'
A53	N 78°05'39" W	76.95'
A54	S 65°33'33" W	99.34'
A55	N 52°21'20" W	70.16'
A56	S 64°38'38" W	268.05'
A57	N 55°55'13" W	65.97'
A58	N 36°27'11" W	77.59'
A59	N 74°55'47" W	80.24'
A60	N 51°17'34" W	46.50'
A61	N 53°19'22" W	84.49'
A62	S 08°40'26" W	70.67'
A63	S 14°15'21" E	62.55'
A64	S 27°45'07" W	96.40'
A65	S 15°12'44" E	91.00'
A66	S 33°47'02" E	99.68'
A67	S 70°26'38" W	39.77'
A68	S 72°08'06" W	104.61'
A69	S 59°46'32" W	45.68'
A70	S 25°49'49" W	76.28'
A71	S 46°35'25" E	51.78'
A72	N 69°16'49" E	96.90'
A73	N 84°00'01" E	119.62'
A74	N 73°56'00" E	87.79'
A75	S 51°12'11" E	61.23'
A76	S 12°10'28" W	63.79'
A77	S 89°44'53" E	87.31'
A78	S 68°19'38" E	68.85'
A79	S 20°59'22" E	97.55'
A80	N 87°45'52" E	99.78'
A81	S 34°02'31" E	79.24'
A82	S 26°51'52" E	99.62'
A83	S 67°48'22" E	90.59'
A84	N 70°41'29" E	45.07'
A85	S 24°32'08" E	9.42'
A86	S 13°44'15" E	66.37'
A87	S 17°24'35" W	30.32'
A88	S 47°28'03" W	52.71'
A89	S 44°28'33" E	110.36'
A90	S 81°27'23" E	5.90'
A91	S 13°44'15" E	73.15'
A92	S 17°12'03" W	53.42'
A93	S 45°19'39" W	16.33'
A94	N 83°06'49" W	57.78'
A95	N 01°14'29" E	65.22'
A96	N 12°28'44" W	40.29'
A97	N 67°49'45" W	54.39'
A98	N 49°39'08" W	50.40'
A99	N 15°12'15" W	40.07'
A100	N 68°56'38" W	52.02'
A101	N 69°59'35" W	106.36'
A102	N 26°32'44" W	85.70'
A103	N 42°58'21" W	101.19'
A104	N 78°04'35" W	82.45'
A105	N 84°36'29" W	74.48'
A106	N 84°11'48" W	98.33'
A107	S 31°00'15" W	41.76'
A108	S 35°24'01" E	50.97'
A109	S 70°40'39" W	39.55'
A110	N 67°24'35" W	114.86'
A111	N 65°07'31" W	81.95'
A112	N 32°37'37" W	55.85'
A113	N 89°43'41" W	52.24'
A114	S 25°49'57" E	41.34'
A115	S 63°02'07" W	169.02'
A116	S 26°55'46" W	66.15'
A117	S 29°21'56" E	27.66'
A118	S 29°38'11" E	31.94'
A119	S 77°06'36" W	63.40'
A120	N 77°48'36" W	114.17'
A121	S 58°56'16" W	81.78'
A122	S 70°40'15" W	78.16'
A123	N 79°46'28" W	92.27'
A124	S 89°18'58" W	61.48'
A125	S 01°10'37" W	71.07'
A126	S 53°41'35" E	71.50'
A127	N 79°01'18" E	75.96'
A128	S 16°10'48" E	54.72'
A129	S 30°37'29" E	89.94'
A130	N 89°47'15" E	97.83'

WETLAND AREA "A"

COURSE	BEARING	DISTANCE
A131	N 61°08'34" E	94.91'
A132	N 42°47'34" E	66.13'
A133	N 53°47'04" E	59.78'
A134	N 47°07'36" E	67.46'
A135	S 36°17'43" E	53.09'
A136	S 12°35'34" W	97.24'
A137	S 08°41'07" W	72.96'
A138	S 30°02'32" W	88.98'
A139	S 53°28'21" W	94.21'
A140	S 63°43'50" W	90.49'
A141	S 60°02'08" W	78.74'
A142	S 54°03'23" W	85.35'
A143	S 48°54'25" W	77.57'
A144	N 51°55'21" W	47.68'
A145	N 04°17'55" W	48.27'
A146	N 64°49'58" E	95.47'
A147	N 26°48'23" E	69.96'
A148	N 21°54'11" W	42.94'
A149	N 66°06'54" W	98.89'
A150	N 67°52'59" W	100.39'
A151	N 70°54'20" W	67.15'
A152	S 27°04'34" W	75.93'
A153	S 76°29'39" W	41.38'
A154	N 30°30'17" W	27.19'
A155	N 66°49'19" E	61.61'
A156	N 12°04'39" W	70.06'
A157	N 73°20'39" W	52.63'
A158	S 89°57'03" W	74.57'
A159	N 82°51'43" W	78.26'
A160	S 63°26'17" W	60.42'
A161	N 57°29'51" W	38.41'
A162	N 37°18'54" W	53.16'
A163	N 31°24'38" W	49.02'
A164	N 41°44'33" W	44.78'
A165	N 21°24'58" W	27.85'
A166	N 49°25'17" W	24.05'
A167	S 63°09'53" W	31.97'
A168	S 39°34'41" E	32.66'
A169	S 45°28'29" E	25.59'
A170	S 41°44'33" E	44.78'
A171	S 30°54'40" E	44.82'
A172	S 37°10'24" E	55.89'
A173	S 62°38'13" E	40.31'
A174	S 31°30'18" W	34.76'
A175	S 10°04'03" W	35.58'
A176	S 00°00'35" E	59.71'
A177	S 30°25'38" E	37.32'
A178	S 62°02'15" E	38.84'
A179	S 17°33'55" E	61.26'
A180	S 71°40'45" W	49.21'
A181	S 53°48'27" W	79.25'
A182	S 86°02'14" W	73.41'
A183	N 10°31'22" W	7.52'
A184	N 61°33'53" W	63.17'
A185	S 57°51'38" W	54.87'
A186	S 49°03'50" W	53.47'
A187	S 35°38'56" W	83.00'
A188	S 45°53'14" W	220.22'
A189	S 77°31'47" W	83.28'
A190	S 40°26'24" W	110.94'
A191	S 66°41'35" W	73.26'
A192	S 45°21'42" W	51.43'
A193	S 11°19'05" E	23.92'
A194	N 88°53'47" W	31.23'
A195	N 08°18'16" W	516.16'
A196	N 48°51'30" E	772.39'
A197	S 46°00'42" E	49.90'
A198	S 46°00'42" E	86.33'
A199	N 47°53'16" E	25.93'
A200	N 45°21'00" W	48.19'
A201	N 49°17'22" W	41.98'
A202	N 46°00'42" W	47.85'
A203	N 48°51'30" E	3743.99'
A204	N 48°54'00" E	23.19'
A205	S 17°07'35" E	789.00'
A206	S 17°35'50" E	60.06'
A207	S 14°38'05" E	1477.90'
A208	S 80°01'10" E	348.72'

WETLAND AREA "B"

COURSE	BEARING	DISTANCE
B1	S 30°36'27" W	48.85'
B2	S 84°01'20" W	94.24'
B3	N 33°56'07" W	37.13'
B4	S 78°19'36" W	53.11'
B5	N 71°27'02" W	80.49'
B6	N 65°33'35" W	77.51'
B7	N 23°59'41" W	38.17'
B8	N 78°58'20" W	73.32'
B9	N 69°16'48" W	67.83'
B10	N 10°08'18" W	26.91'
B11	N 36°48'48" E	50.32'
B12	N 88°57'25" E	58.50'
B13	N 26°09'24" E	45.25'
B14	N 64°07'14" E	79.52'
B15	S 74°37'15" E	40.28'
B16	N 18°31'11" E	70.46'
B17	N 80°26'41" E	84.85'
B18	S 34°30'05" E	72.54'
B19	S 74°01'47" E	54.86'
B20	N 64°41'33" E	59.30'
B21	N 48°53'23" E	75.01'
B22	N 04°20'06" E	45.09'
B23	N 25°46'02" W	28.23'
B24	N 35°43'42" E	46.07'
B25	N 04°18'31" W	77.24'
B26	N 08°27'54" W	69.14'
B27	N 23°45'49" E	42.91'
B28	N 24°54'02" E	64.23'
B29	N 61°18'37" E	63.44'
B30	S 70°39'13" E	91.99'
B31	S 41°02'57" E	51.38'
B32	S 05°37'19" E	95.01'
B33	S 13°05'13" W	78.81'
B34	S 06°29'44" W	70.57'
B35	S 37°04'53" W	77.72'
B36	S 49°44'43" W	104.73'
B37	S 25°44'24" W	77.86'
B38	S 15°53'16" W	66.43'
B39	S 27°17'09" E	48.66'
B40	S 53°02'08" W	54.60'
B41	S 43°53'45" W	59.23'

WETLAND AREA "C"

COURSE	BEARING	DISTANCE
C1	S 56°36'13" W	0.70'
C2	S 70°32'12" W	111.12'
C3	S 55°52'40" W	89.88'
C4	S 15°38'40" W	65.15'
C5	S 24°44'12" W	67.55'
C6	N 75°40'10" W	41.71'
C7	N 59°08'27" W	74.74'
C8	N 78°42'35" W	41.56'
C9	S 34°17'10" E	93.67'
C10	S 72°14'10" E	15.74'
C11	S 73°07'30" E	79.60'
C12	S 80°48'54" E	52.37'
C13	S 00°20'34" E	76.07'
C14	S 13°12'19" E	90.68'
C15	S 53°39'31" E	69.31'
C16	S 01°30'33" W	88.20'
C17	S 05°05'25" E	83.20'
C18	N 51°48'59" E	68.72'
C19	N 59°13'37" E	58.10'
C20	S 53°38'13" E	35.20'
C21	S 04°06'10" W	108.32'
C22	S 14°39'00" E	89.70'
C23	S 40°48'28" E	105.43'
C24	S 69°42'51" E	23.65'
C25	S 06°02'17" W	69.86'
C26	S 51°03'15" W	0.47'
C27	S 11°27'12" E	67.19'
C28	S 69°36'33" E	64.30'
C29	S 26°35'57" E	29.75'
C30	S 11°55'55" E	33.03'
C31	N 81°56'10" E	8.82'
C32	S 26°35'57" E	11.91'
C33	S 38°59'43" E	86.71'
C34	S 52°05'44" E	77.76'
C35	S 00°06'48" E	77.95'
C36	S 41°19'17" E	55.11'
C37	S 30°34'12" W	33.49'
C38	N 77°02'00" W	59.38'
C39	N 68°27'48" W	51.90'
C40	N 79°47'52" W	53.68'
C41	N 47°14'15" W	39.59'
C42	S 45°28'24" W	46.81'
C43	N 18°30'22" W	54.13'
C44	S 57°26'53" W	29.73'
C45	S 02°28'26" E	36.95'
C46	S 51°43'35" W	37.82'
C47	S 36°59'56" W	63.69'
C48	S 36°42'32" E	15.15'
C49	S 79°20'39" W	15.65'
C50	N 28°20'45" W	32.88'
C51	N 44°59'10" W	58.81'
C52	N 73°57'07" W	74.34'
C53	N 37°56'45" W	56.37'
C54	N 80°52'49" W	58.64'
C55	S 57°09'12" W	63.19'
C56	N 78°07'21" W	46.88'
C57	N 04°05'28" W	59.11'
C58	S 73°09'08" E	27.25'
C59	N 62°57'25" E	64.15'
C60	S 73°53'14" E	96.12'
C61	S 66°15'27" E	56.78'
C62	N 84°14'57" E	29.01'
C63	S 61°51'58" E	69.98'
C64	N 55°48'16" E	18.20'
C65	N 19°36'42" E	33.01'
C66	N 75°09'00" W	10.55'
C67	N 89°01'26" W	40.50'
C68	N 52°23'41" W	73.23'
C69	N 83°04'13" W	90.03'
C70	N 63°50'56" W	39.44'
C71	S 76°27'21" W	69.46'
C72	N 04°13'38" W	30.20'
C73	N 88°43'57" W	43.76'
C74	N 13°51'27" W	63.07'
C75	N 14°26'40" W	90.49'
C76	N 21°21'48" E	75.98'
C77	N 25°26'21" W	73.03'
C78	N 32°17'48" W	45.02'
C79	N 38°13'32" W	52.70'
C80	N 80°24'29" W	56.85'
C81	N 78°34'33" W	46.23'
C82	S 68°24'27" W	54.63'
C83	N 13°27'55" W	29.65'
C84	N 56°45'02" E	68.95'
C85	N 75°59'40" E	71.93'
C86	N 76°17'36" E	68.72'
C87	N 13°27'21" E	65.66'
C88	N 03°57'52" W	70.18'
C89	N 36°53'32" W	53.51'
C90	N 21°27'29" W	30.97'
C91	N 55°12'12" W	50.48'
C92	N 27°09'45" W	83.28'
C93	N 53°29'19" W	67.83'
C94	N 01°26'32" E	83.04'
C95	N 13°07'10" W	58.55'
C96	N 09°11'13" W	63.71'
C97	N 06°17'55" E	56.00'
C98	N 37°12'10" W	56.58'
C99	N 30°10'39" W	60.27'
C100	N 26°50'37" W	60.09'
C101	N 70°10'38" W	68.30'
C102	N 69°53'32" W	55.07'
C103	N 73°47'05" W	67.20'
C104	N 84°49'50" W	54.79'
C105	S 57°59'40" W	58.86'
C106	S 36°04'43" W	78.43'
C107	S 38°07'47" W	62.69'
C108	S 62°46'57" W	76.03'
C109	S 45°38'47" W	68.51'
C110	S 39°05'48" W	51.43'
C111	S 17°10'17" W	32.97'
C112	S 26°15'43" W	61.46'
C113	S 46°48'01" W	76.03'
C114	S 50°20'39" W	52.35'
C115	N 33°40'20" W	55.99'
C116	N 45°10'04" W	47.81'
C117	N 32°50'46" E	29.70'
C118	N 51°41'02" E	62.20'
C119	N 51°43'44" E	81.58'
C120	N 49°03'37" E	101.46'

WETLAND AREA "C"

COURSE	BEARING	DISTANCE
C121	N 48°30'56" E	67.05'
C122	N 46°42'20" E	85.17'
C123	S 64°13'24" E	27.95'
C124	N 38°25'01" E	89.84'
C125	N 55°12'34" E	53.74'
C126	N 00°39'56" W	49.07'
C127	N 25°52'37" E	51.12'
C128	N 00°58'36" W	62.19'
C129	N 12°05'41" W	58.07'
C130	N 24°38'28" E	44.57'
C131	N 56°08'44" E	128.05'
C132	N 67°12'30" E	47.43'
C133	N 38°53'53" W	105.45'
C134	S 77°02'02" W	68.37'
C135	N 05°03'21" W	52.00'
C136	N 16°45'30" E	59.88'
C137	N 86°17'32" E	359.70'
C138	S 84°45'05" E	39.66'
C139	S 65°29'27" E	63.90'
C140	S 45°34'46" E	81.93'
C141	S 71°17'58" E	104.08'
C142	S 57°19'27" E	100.46'
C143	S 19°45'05" E	74.21'
C144	S 25°00'02" E	74.06'
C145	N 73°47'02" E	11.92'
C146	S 11°55'55" E	388.53'

WETLAND AREA "D"

COURSE	BEARING	DISTANCE
D1	S 61°32'07" W	65.38'
D2	S 28°43'29" W	79.79'
D3	S 74°07'20" W	77.83'
D4	S 48°58'31" W	62.54'
D5	S 64°24'16" W	53.70'
D6	S 87°15'24" W	71.02'
D7	S 80°19'33" W	67.97'
D8	N 23°37'12" W	33.47'
D9	N 02°30'17" W	59.61'
D10	N 70°48'32" E	51.52'
D11	N 85°17'00" E	37.75'
D12	N 19°51'20" E	116.91'
D13	N 68°50'30" E	67.03'
D14	S 84°20'54" E	53.42'
D15	N 44°27'55" E	76.39'
D16	N 19°05'40" E	80.71'
D17	N 27°44'08" W	61.29'
D18	N 27°37'43" E	120.43'
D19	N 27°37'43" E	10.41'
D20	S 11°06'45" E	345.06'

WETLAND AREA "E"

COURSE	BEARING	DISTANCE
E1	S 82°26'30" W	288.62'
E2	N 14°14'53" W	27.91'
E3	N 49°22'08" E	38.29'
E4	N 41°00'41" W	53.52'
E5	S 57°42'28" W	49.83'
E6	N 25°39'16" W	57.99'
E7	N 31°30'55" W	107.78'
E8	N 36°08'42" W	52.29'
E9	N 43°55'04" W	33.17'
E10	N 41°38'10" W	67.16'
E11	N 71°53'07" W	46.00'
E12	N 87°10'20" W	48.99'
E13	N 26°21'50" W	48.67'
E14	N 64°06'52" W	42.88'
E15	N 09°30'18" W	67.73'
E16	N 41°51'50" W	58.13'
E17	N 46°59'59" W	34.99'
E18	N 32°45'14" W	56.32'
E19	N 02°01'26" E	54.87'
E20	N 04°00'08" W	34.37'
E21	N 01°18'16" W	35.80'
E22	N 08°40'00" W	42.56'
E23	N 21°14'41" W	31.34'
E24	N 24°39'34" W	85.33'
E25	N 02°34'28" E	40.65'
E26	N 04°17'58" E	60.68'
E27	N 07°40'55" W	56.69'
E28	N 03°32'35" E	70.94'
E29	N 17°48'23" E	68.18'
E30	N 18°56'55" E	68.47'
E31	N 05°50'36" E	48.09'
E32	N 08°48'20" E	53.44'
E33	N 63°14'05" E	86.48'
E34	N 17°55'02" E	65.63'
E35	N 10°12'58" E	50.90'
E36	N 16°27'10" E	55.13'
E37	N 26°34'33" E	71.49'
E38	N 52°16'16" E	50.26'
E39	N 41°10'04" E	33.55'
E40	N 47°05'28" E	66.08'
E41	S 52°53'54" E	50.65'
E42	N 66°30'31" E	33.83'
E43	N 88°53'24" E	36.02'
E44	S 13°12'10" E	664.58'
E45	S 13°11'41" E	1016.18'

"I HEREBY CERTIFY THAT THE WETLANDS AS SHOWN ON THIS SURVEY WERE LOCATED USING GPS EQUIPMENT AT SUB-METER ACCURACY. THE PURPOSE OF THIS SURVEY IS FOR THE LOCATION OF WETLANDS ONLY AND NOT BOUNDARY ESTABLISHMENT OR PROPERTY CONVEYANCE."

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATHAM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON-GA. R.L.S. 2113
JN18111.CRD & JN18111.DWG
SHEET 9

JAMES M. ANDERSON & ASSOCIATES, INC.
REGISTERED LAND SURVEYORS
P.O. BOX 894 104 OAK STREET
STATESBORO, GA. 30459
PHONE: (912) 764-2002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment

WETLAND AREA "F"

COURSE	BEARING	DISTANCE
F1	S 36°19'24" W	107.64'
F2	S 36°19'24" W	87.59'
F3	S 39°11'49" W	60.00'
F4	S 49°57'53" W	43.17'
F5	S 80°46'39" W	64.41'
F6	S 55°01'29" W	83.57'
F7	S 25°42'24" W	79.44'
F8	S 73°31'49" W	75.68'
F9	S 71°24'05" W	80.29'
F10	S 86°28'08" W	82.27'
F11	S 61°23'33" W	79.81'
F12	S 23°19'11" W	89.13'
F13	S 73°19'55" W	47.31'
F14	N 39°46'06" W	38.94'
F15	N 11°07'59" E	56.90'
F16	N 43°21'01" E	62.71'
F17	N 28°27'17" E	82.97'
F18	N 69°31'06" E	76.23'
F19	N 13°47'15" E	62.44'
F20	N 14°59'13" W	66.57'
F21	N 55°49'22" W	59.82'
F22	N 82°37'39" W	72.09'
F23	S 42°48'56" W	73.43'
F24	S 27°43'36" W	66.43'
F25	N 86°50'13" W	73.09'
F26	N 19°47'50" W	27.44'
F27	N 75°24'18" W	80.73'
F28	S 83°08'13" W	87.54'
F29	N 53°15'15" W	50.63'
F30	N 13°45'12" E	69.05'
F31	N 03°22'48" W	84.33'
F32	N 32°55'38" W	64.04'
F33	N 74°12'17" W	68.75'
F34	N 87°57'06" W	227.97'
F35	N 10°43'50" W	178.70'
F36	S 75°33'39" E	288.07'
F37	S 25°13'42" E	58.52'
F38	S 84°43'49" E	78.31'
F39	S 77°32'50" E	46.62'
F40	S 55°57'18" E	72.35'
F41	N 30°32'05" E	84.44'
F42	N 82°52'15" E	72.15'
F43	N 79°10'24" E	60.49'
F44	S 56°54'54" E	91.42'
F45	N 58°17'53" E	71.28'
F46	S 67°10'53" E	79.16'
F47	S 22°46'59" E	85.49'
F48	S 82°21'38" E	104.97'
F49	N 77°47'37" E	90.73'
F50	N 47°01'21" E	61.91'
F51	N 74°34'27" E	87.21'
F52	N 62°09'47" E	65.06'
F53	N 80°50'35" E	75.37'
F54	N 54°57'11" E	50.46'
F55	N 45°17'03" E	31.57'
F56	S 11°06'25" E	177.50'

WETLAND AREA "G"

COURSE	BEARING	DISTANCE
G1	S 43°04'19" W	43.72'
G2	N 73°40'19" W	39.76'
G3	N 83°09'02" W	35.24'
G4	N 16°42'40" E	40.71'
G5	N 87°21'22" E	73.84'
G6	S 34°09'04" E	31.23'

WETLAND AREA "H"

COURSE	BEARING	DISTANCE
H1	S 57°22'24" W	32.30'
H2	N 71°54'18" W	20.84'
H3	S 86°45'51" W	41.08'
H4	S 61°33'39" W	35.61'
H5	S 83°42'16" W	68.32'
H6	S 65°46'51" W	58.39'
H7	N 67°58'10" W	35.89'
H8	N 25°55'20" W	45.52'
H9	N 61°43'47" E	22.00'
H10	S 89°20'25" E	274.32'

WETLAND AREA "J"

COURSE	BEARING	DISTANCE
J1	N 10°39'27" E	79.07'
J2	N 10°39'27" E	7.35'
J3	N 19°29'05" E	60.99'
J4	N 45°39'28" E	32.10'
J5	S 58°34'37" E	46.41'
J6	S 65°54'55" E	65.90'
J7	S 83°38'09" E	45.04'
J8	S 22°48'48" E	41.82'
J9	S 00°51'08" E	72.75'
J10	S 00°51'08" E	4.16'
J11	N 88°16'20" W	221.26'

WETLAND AREA "K"

COURSE	BEARING	DISTANCE
K1	N 55°11'39" E	62.83'
K2	S 73°54'20" E	55.03'
K3	S 21°08'52" E	34.28'
K4	S 31°04'17" E	43.51'
K5	S 14°55'58" E	50.93'
K6	S 11°23'28" E	44.71'
K7	S 13°07'26" W	42.89'
K8	S 51°46'13" W	37.27'
K9	N 79°11'35" W	57.63'
K10	N 32°31'34" W	49.72'
K11	N 16°55'09" W	71.06'
K12	N 58°00'07" W	26.46'
K13	N 01°38'34" E	57.52'
K14	N 10°14'52" E	14.51'

WETLAND AREA "M"

COURSE	BEARING	DISTANCE
M1	N 58°54'18" E	68.10'
M2	S 89°53'41" E	65.23'
M3	N 86°22'23" E	43.95'
M4	N 80°03'47" E	77.40'
M5	S 83°14'30" E	14.30'
M6	S 87°02'02" E	31.06'
M7	S 15°41'31" E	10.27'
M8	S 26°41'26" E	81.02'
M9	N 83°04'44" W	15.27'
M10	S 69°53'57" W	25.77'
M11	S 66°42'21" W	49.29'
M12	S 51°00'58" W	54.49'
M13	S 85°48'10" W	75.58'
M14	S 25°18'17" W	29.40'
M15	S 33°48'44" W	16.25'
M16	N 26°15'37" W	63.41'
M17	N 76°00'34" W	50.90'
M18	N 08°18'54" W	56.32'
M19	N 49°17'12" W	24.36'

WETLAND AREA "N"

COURSE	BEARING	DISTANCE
N1	N 57°32'24" E	52.12'
N2	S 59°17'38" E	52.08'
N3	S 41°41'50" E	66.72'
N4	S 13°36'00" E	67.77'
N5	S 53°43'50" W	69.31'
N6	N 78°45'33" W	72.51'
N7	N 57°08'05" W	50.50'
N8	N 18°56'56" W	21.75'
N9	N 02°16'05" W	56.48'
N10	N 38°52'48" E	47.19'

WETLAND AREA "P"

COURSE	BEARING	DISTANCE
P1	S 66°38'37" E	45.30'
P2	S 02°36'27" E	29.78'
P3	S 08°35'52" E	50.79'
P4	S 30°12'27" W	35.41'
P5	N 67°50'40" W	29.31'
P6	N 51°16'13" W	42.98'
P7	N 31°49'24" W	34.54'
P8	N 00°08'54" E	34.85'
P9	N 60°12'25" E	53.11'

WETLAND AREA "Q"

COURSE	BEARING	DISTANCE
Q1	N 72°02'58" E	50.23'
Q2	N 64°45'19" E	39.52'
Q3	S 76°07'59" E	42.86'
Q4	S 29°14'14" E	43.85'
Q5	S 20°19'32" E	49.48'
Q6	S 22°07'31" W	64.14'
Q7	S 25°13'26" W	45.68'
Q8	S 58°16'07" W	56.29'
Q9	S 50°43'41" W	45.98'
Q10	N 81°48'24" W	46.84'
Q11	N 21°27'24" W	53.20'
Q12	N 22°42'43" W	74.36'
Q13	N 14°55'02" E	56.48'
Q14	N 45°26'10" E	60.83'

WETLAND AREA "R"

COURSE	BEARING	DISTANCE
R1	S 07°15'46" W	41.79'
R2	S 24°29'50" W	40.08'
R3	S 03°21'27" W	89.30'
R4	S 31°42'22" E	68.22'
R5	S 28°07'55" E	36.24'
R6	S 24°51'56" E	35.89'
R7	S 06°35'20" E	77.08'
R8	S 01°12'30" W	55.11'
R9	S 06°00'28" E	54.76'
R10	S 43°03'42" E	61.52'
R11	S 36°21'32" W	50.73'
R12	S 03°20'03" E	55.45'
R13	S 05°09'09" E	30.04'
R14	S 60°52'00" W	61.53'
R15	S 74°32'00" W	83.18'
R16	S 78°10'10" W	77.94'
R17	S 61°48'41" W	33.63'
R18	S 27°25'33" W	75.69'
R19	S 23°59'03" W	58.45'
R20	S 22°14'09" W	43.79'
R21	S 12°32'56" E	38.88'
R22	S 02°31'00" E	60.58'
R23	S 00°02'09" W	59.14'
R24	S 10°19'51" E	39.56'
R25	S 26°49'57" W	59.52'
R26	S 76°10'21" W	56.11'
R27	S 07°44'41" W	31.71'
R28	S 74°39'05" W	15.84'
R29	S 08°17'00" E	52.77'
R30	S 08°17'00" E	71.00'
R31	S 72°14'36" W	48.76'
R32	S 76°30'19" W	79.54'
R33	N 61°40'58" W	103.45'
R34	N 25°30'26" E	100.27'
R35	N 12°36'27" W	101.74'
R36	N 33°43'27" W	69.12'
R37	N 22°49'39" W	103.87'
R38	S 76°17'41" W	56.04'
R39	S 59°58'00" W	77.65'
R40	N 75°23'58" W	69.03'
R41	N 68°32'35" W	54.66'
R42	S 89°40'39" W	30.21'
R43	S 20°36'20" W	53.99'
R44	S 78°00'38" W	68.04'
R45	S 54°40'36" W	55.96'
R46	N 85°28'19" W	73.87'
R47	S 25°43'42" W	38.03'
R48	S 55°27'47" W	71.86'
R49	S 52°11'59" W	51.08'
R50	S 35°47'17" W	49.13'
R51	S 56°17'04" W	52.11'
R52	S 03°52'24" E	38.09'
R53	S 03°52'24" E	10.85'
R54	S 76°12'20" W	651.15'
R55	S 15°19'30" W	955.06'
R56	S 15°03'40" E	275.98'
R57	N 76°32'45" E	454.25'
R58	S 04°29'20" E	61.42'
R59	S 78°54'18" W	55.90'
R60	N 62°30'03" W	51.74'
R61	N 88°09'46" W	41.05'
R62	S 23°26'46" W	65.81'
R63	N 80°45'55" E	45.66'
R64	S 48°25'43" W	58.75'
R65	S 26°02'35" E	53.89'
R66	S 27°18'19" W	49.22'
R67	S 29°40'15" W	60.65'
R68	S 01°03'27" E	54.72'
R69	S 08°08'41" W	47.22'
R70	N 67°34'49" W	78.14'
R71	S 32°06'09" W	59.33'
R72	S 13°13'10" E	71.34'
R73	S 30°41'35" W	41.70'
R74	N 78°19'33" W	71.00'
R75	N 81°11'39" W	50.08'
R76	S 58°24'21" W	52.89'
R77	S 32°22'45" W	48.24'
R78	S 06°03'43" W	49.83'
R79	S 37°49'58" W	52.60'
R80	S 32°08'51" W	46.47'
R81	S 67°53'32" W	62.15'
R82	S 15°10'14" E	46.60'
R83	S 44°15'57" E	61.65'
R84	S 16°49'54" W	46.15'
R85	S 27°11'42" E	55.64'
R86	S 12°46'41" E	70.89'
R87	S 21°50'09" W	51.50'
R88	S 31°50'28" W	19.56'
R89	N 27°21'15" W	180.76'
R90	S 83°24'05" W	317.16'
R91	N 07°34'10" W	278.04'
R92	N 35°30'55" E	698.23'
R93	N 52°30'05" W	200.29'
R94	N 30°13'56" E	377.84'
R95	N 15°39'25" W	113.85'
R96	N 88°37'15" W	373.11'
R97	N 44°36'03" E	61.22'
R98	N 06°00'35" E	40.32'
R99	N 26°20'46" W	45.63'
R100	N 49°11'06" W	42.99'
R101	N 75°47'25" W	62.25'
R102	N 13°04'51" E	48.85'
R103	N 72°39'46" E	59.18'
R104	N 58°27'01" E	75.95'
R105	N 36°11'28" E	49.98'
R106	N 72°08'38" E	50.77'
R107	S 37°35'35" E	62.03'
R108	S 37°42'51" E	38.72'
R109	N 76°01'23" E	76.31'
R110	N 68°24'28" E	71.90'
R111	N 43°47'13" E	74.52'
R112	N 10°36'21" E	76.36'
R113	N 65°00'47" E	66.36'
R114	N 36°48'37" E	70.43'
R115	N 53°15'10" E	95.37'
R116	N 19°46'57" E	68.52'
R117	N 45°46'20" E	44.12'
R118	N 56°15'19" E	64.70'
R119	N 27°01'12" W	62.42'
R120	N 26°22'54" W	68.17'

WETLAND AREA "R"

COURSE	BEARING	DISTANCE
R121	N 33°26'45" W	61.90'
R122	N 32°51'33" W	43.97'
R123	N 19°43'08" W	33.67'
R124	S 83°10'34" W	48.01'
R125	S 69°08'46" W	48.17'
R126	S 62°18'37" W	53.37'
R127	N 80°56'41" W	43.92'
R128	N 82°52'27" W	59.00'
R129	S 60°42'18" W	47.19'
R130	S 69°19'05" W	63.36'
R131	S 81°39'15" W	65.53'
R132	S 64°55'46" W	81.23'
R133	N 69°10'07" W	43.99'
R134	S 66°53'05" W	64.01'
R135	S 37°12'06" W	41.44'
R136	S 81°19'16" W	44.12'
R137	S 49°02'26" W	78.51'
R138	S 51°24'12" W	53.83'
R139	S 57°25'09" W	88.67'
R140	S 19°12'43" W	32.67'
R141	S 39°58'40" W	84.26'
R142	S 46°55'21" W	88.74'
R143	S 75°31'21" W	51.07'
R144	N 22°41'45" W	46.08'
R145	N 44°58'27" W	62.41'
R146	N 34°09'16" W	21.32'
R147	N 53°53'05" E	29.87'
R148	S 35°23'11" E	22.01'
R149	S 76°28'51" E	45.26'
R150	N 10°28'30" W	78.31'
R151	N 28°17'09" W	48.27'
R152	N 39°50'43" W	56.66'
R153	S 64°27'11" W	12.71'
R154	S 31°41'15" E	22.97'
R155	S 29°18'23" E	57.45'
R156	S 54°33'52" W	59.92'
R157	S 58°07'19" W	69.40'
R158	S 68°23'35" W	39.96'
R159	S 38°30'03" W	74.48'
R160	S 58°54'05" W	82.30'
R161	N 87°39'16" W	74.79'
R162	N 72°28'33" W	116.75'
R163	N 82°19'36" W	103.22'
R164	S 72°17'04" W	81.98'
R165	S 87°59'23" W	85.16'
R166	N 11°52'10" W	168.99'
R167	N 69°49'25" E	66.58'
R168	S 81°36'17" E	43.70'
R169	S 82°20'06" E	40.13'
R170	N 69°11'17" E	51.82'
R171	N 37°22'58" E	50.76'
R172	N 19°37'59" W	32.98'
R173	S 82°22'19" W	63.20'
R174	N 54°39'30" W	51.79'
R175	N 40°01'42" W	44.57'
R176	N 81°13'38" W	49.37'
R177	N 21°37'54" W	62.17'
R178	N 31°36'16" E	43.10'
R179	S 73°04'21" E	40.41'
R180	S 78°29'30" E	58.75'
R181	N 62°09'13" E	62.75'
R182	N 77°47'53" E	60.24'
R183	S 21°49'24" E	94.81'
R184	S 60°15'30" E	39.15'
R185	S 39°08'18" E	51.80'
R186	S 76°21'06" E	42.17'
R187	N 85°31'06" E	35.88'
R188	N 12°22'58" E	25.89'
R189	N 05°36'37" W	35.15'
R190	N 73°05'19" E	47.57'
R191	S 78°04'26" E	36.78'
R192	S 49°57'26" E	51.13'
R193	S 17°31'36" E	43.79'
R194	S 31°37'33" E	35.72'
R195	N 60°02'55" E	42.76'
R196	N 77°01'45" E	44.59'
R197	S 38°38'55" E	23.69'
R198	S 51°19'06" E	39.80'
R199	N 62°50'27" E	14.27'
R200	N 37°15'30" W	38.86'
R201	N 32°42'41" E	24.20'
R202	N 87°40'11" E	61.29'
R203	N 66°26'58" E	46.11'
R204	N 78°42'12" E	62.86'
R205	N 39°27'35" E	62.07'
R206	N 31°26'46" W	46.56'
R207	N 05°41'16" W	68.07'
R208	N 72°07'36" E	37.10'
R209	N 81°19'30" E	62.64'
R210	S 70°41'34" E	26.78'
R211	S 79°45'31" E	60.67'
R212	S 30°31'28" E	44.09'
R213	S 26°19'22" E	42.39'
R214	N 76°23'17" E	110.35'
R215	N 58°07'05" E	28.96'
R216	N 52°13'38" E	62.48'
R217	S 34°34'12" E	43.77'
R218	N 61°38'51" E	58.26'
R219	N 14°31'46" E	63.55'
R220	S 87°11'55" E	39.28'
R221	N 42°46'43" W	38.36'
R222	N 50°35'46" W	36.17'
R223	N 16°01'48" W	48.66'
R224	N 34°28'12" W	59.75'
R225	N 52°10'53" W	23.94'
R226	N 87°32'46" W	62.39'
R227	S 59°01'41" W	52.04'
R228	S 74°08'22" W	71.76'
R229	N 76°22'32" W	55.04'
R230	N 86°23'57" W	57.83'

GEORGIA REGISTERED
NO. 2113
8-13-19
LAND SURVEYOR
JAMES M. ANDERSON

"I HEREBY CERTIFY THAT THE WETLANDS AS SHOWN ON THIS SURVEY WERE LOCATED USING GPS EQUIPMENT AT SUB-METER ACCURACY. THE PURPOSE OF THIS SURVEY IS FOR THE LOCATION OF WETLANDS ONLY AND NOT BOUNDARY ESTABLISHMENT OR PROPERTY CONVEYANCE."

WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATHAM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON-GA. R.L.S. 2113
JN18111.CRD & JN18111.DWG
SHEET 10

JAMES M. ANDERSON & ASSOCIATES, INC.
REGISTERED LAND SURVEYORS
P.O. BOX 894 104 OAK STREET
STATESBORO, GA. 30459
PHONE: (912) 764-2002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment

WETLAND AREA "R"

COURSE	BEARING	DISTANCE
R231	S 61°46'32" W	54.87'
R232	S 84°29'29" W	68.88'
R233	S 82°42'15" W	43.84'
R234	S 79°07'33" W	62.16'
R235	N 22°32'14" W	47.22'
R236	N 88°35'26" W	31.42'
R237	S 83°34'49" W	43.56'
R238	N 80°12'11" W	34.72'
R239	N 88°11'50" W	70.44'
R240	N 86°59'55" W	40.24'
R241	N 47°40'36" W	33.25'
R242	S 79°48'46" W	55.78'
R243	N 18°07'44" E	24.99'
R244	N 55°19'11" E	44.79'
R245	S 59°26'13" E	45.48'
R246	N 69°13'58" E	62.33'
R247	S 88°48'59" E	67.24'
R248	N 74°28'52" E	56.11'
R249	N 45°15'57" E	66.78'
R250	S 80°30'58" E	38.13'
R251	N 55°38'23" E	41.52'
R252	N 66°18'42" E	50.32'
R253	N 84°41'59" E	59.01'
R254	N 61°30'04" E	72.21'
R255	S 39°53'18" E	38.30'
R256	S 74°58'10" E	34.95'
R257	S 45°42'42" E	26.59'
R258	S 84°13'14" E	88.01'
R259	N 77°21'04" E	108.35'
R260	N 81°26'55" E	75.53'
R261	N 75°14'12" E	96.22'
R262	N 86°58'00" E	52.00'
R263	S 45°24'24" E	37.75'
R264	S 67°23'44" E	104.54'
R265	N 42°48'55" E	49.84'
R266	S 58°09'18" E	21.40'
R267	S 33°08'32" E	38.78'
R268	S 82°47'53" E	32.86'
R269	N 69°14'14" E	66.25'
R270	S 84°10'04" E	48.91'
R271	N 48°39'19" E	66.04'
R272	N 56°20'09" E	99.26'
R273	N 54°12'44" E	47.43'
R274	S 81°58'34" E	59.08'
R275	S 82°09'29" E	28.18'
R276	N 56°07'35" E	64.98'
R277	S 09°55'52" E	86.80'
R278	S 22°40'45" E	74.67'
R279	S 43°32'15" W	67.05'
R280	S 19°08'19" W	60.71'
R281	S 41°18'17" E	54.30'
R282	S 57°37'32" E	46.92'
R283	N 72°34'20" E	65.90'
R284	S 84°29'49" E	42.62'
R285	N 05°21'54" E	68.87'
R286	N 35°12'53" E	55.70'
R287	N 75°00'33" E	34.72'
R288	S 34°15'16" E	53.44'
R289	S 13°18'14" W	60.88'
R290	S 49°59'43" E	39.89'
R291	N 60°34'36" E	45.08'
R292	N 63°48'07" E	51.73'
R293	N 17°52'57" W	76.44'
R294	N 26°32'52" W	49.18'
R295	N 67°49'48" E	52.39'
R296	S 55°19'08" E	36.80'
R297	S 63°52'41" E	62.33'
R298	S 49°51'21" E	79.16'
R299	N 42°39'23" E	64.24'
R300	S 82°35'27" E	56.57'
R301	N 54°57'31" E	42.89'
R302	N 71°31'00" E	81.40'
R303	N 85°37'02" E	37.48'
R304	N 26°28'21" E	79.01'
R305	N 37°40'40" E	30.90'
R306	N 88°49'07" E	62.62'
R307	N 11°24'46" W	50.56'
R308	N 10°46'33" E	78.00'
R309	N 19°34'46" W	48.69'
R310	N 74°03'47" W	60.24'
R311	N 56°57'50" W	30.11'
R312	N 42°41'38" W	36.65'
R313	N 10°21'53" W	61.95'
R314	N 76°35'38" W	9.55'
R315	S 23°11'01" W	58.47'
R316	S 01°54'39" E	60.64'
R317	S 41°27'58" W	37.82'
R318	S 41°09'38" W	45.24'
R319	S 46°46'49" W	46.48'
R320	N 76°45'07" W	17.24'
R321	N 18°18'14" E	97.52'
R322	N 14°38'23" E	49.07'
R323	N 08°57'00" E	56.36'
R324	N 00°14'12" E	64.13'
R325	S 79°12'22" E	45.17'
R326	N 79°55'25" E	48.62'
R327	N 11°46'08" W	35.12'
R328	N 18°19'52" W	86.07'
R329	N 24°33'22" W	53.44'
R330	N 22°53'14" W	79.80'
R331	N 01°46'03" W	65.72'
R332	N 19°49'30" W	75.56'
R333	N 40°46'59" W	41.93'
R334	N 24°27'28" W	66.54'
R335	N 21°34'03" E	50.10'
R336	N 86°40'13" E	78.42'
R337	N 53°49'51" W	50.12'
R338	N 87°08'00" W	26.09'
R339	N 20°56'12" W	12.05'
R340	N 79°04'28" E	160.02'
R341	N 78°09'43" E	176.43'
R342	N 78°09'22" E	107.88'
R343	S 14°05'35" E	504.78'
R344	N 76°22'55" E	442.90'
R345	N 76°23'10" E	49.53'

WETLAND AREA "S"

COURSE	BEARING	DISTANCE
S1	S 73°58'04" W	131.74'
S2	S 78°09'33" W	175.73'
S3	S 82°30'39" W	123.67'
S4	N 33°39'10" W	60.05'
S5	N 21°33'12" W	42.56'
S6	S 64°34'34" W	79.91'
S7	S 00°57'39" W	37.27'
S8	S 82°24'12" W	11.38'
S9	N 18°53'40" W	490.62'
S10	N 82°26'30" E	378.51'
S11	S 41°59'15" E	529.66'
S12	S 18°50'40" W	50.95'

WETLAND AREA "U"

COURSE	BEARING	DISTANCE
U1	S 29°26'17" E	22.84'
U2	S 27°30'10" W	33.23'
U3	N 67°21'50" W	27.58'
U4	N 09°28'16" W	36.23'
U5	N 85°08'56" E	35.66'

WETLAND AREA "V"

COURSE	BEARING	DISTANCE
V1	S 83°21'07" E	22.43'
V2	S 73°33'06" E	47.93'
V3	S 43°21'36" E	33.16'
V4	S 42°36'47" W	35.59'
V5	S 85°38'57" W	34.19'
V6	S 36°09'06" W	39.80'
V7	S 30°58'44" W	57.33'
V8	N 83°04'51" W	43.26'
V9	N 21°00'25" E	167.81'

WETLAND AREA "W"

COURSE	BEARING	DISTANCE
W1	N 86°43'20" W	6.69'
W2	N 88°39'48" W	55.38'
W3	S 75°38'36" W	66.83'
W4	S 67°47'57" W	52.60'
W5	N 71°27'17" W	28.41'
W6	N 23°26'27" W	60.97'
W7	N 65°26'34" W	30.29'
W8	S 80°01'10" E	258.05'

WETLAND AREA "X"

COURSE	BEARING	DISTANCE
X1	N 79°49'37" E	7.71'
X2	S 16°27'34" E	44.84'
X3	S 63°29'43" E	27.14'
X4	S 54°30'08" E	47.74'
X5	S 54°21'43" E	36.27'
X6	S 30°57'32" W	25.94'
X7	S 66°23'17" W	58.69'
X8	S 57°22'24" W	13.17'
X9	N 12°35'20" W	159.30'

WETLAND AREA "Y"

COURSE	BEARING	DISTANCE
Y1	N 07°04'41" W	50.31'
Y2	N 65°59'27" E	82.50'
Y3	S 86°30'25" E	50.82'
Y4	S 77°22'48" E	82.70'
Y5	S 88°42'03" E	77.54'
Y6	N 80°39'08" E	62.74'
Y7	N 82°51'08" E	98.70'
Y8	S 35°21'15" W	164.57'
Y9	N 72°23'15" W	279.27'
Y10	S 44°46'35" W	91.80'

WETLAND AREA "Z"

COURSE	BEARING	DISTANCE
Z1	S 59°54'44" W	40.69'
Z2	S 28°08'29" W	50.92'
Z3	N 89°49'05" W	39.98'
Z4	N 84°59'33" W	40.05'
Z5	N 12°23'58" E	67.30'
Z6	N 07°12'18" E	17.93'
Z7	N 20°32'27" E	41.73'
Z8	N 39°34'24" E	62.07'
Z9	N 59°55'21" E	69.80'
Z10	N 43°24'22" E	37.52'
Z11	N 82°06'25" E	34.09'
Z12	S 74°50'23" E	45.32'
Z13	S 27°04'04" E	28.19'
Z14	S 19°27'53" W	40.03'
Z15	S 31°30'59" W	58.31'
Z16	S 51°30'40" W	82.39'

TIE LINES

COURSE	BEARING	DISTANCE
T1	N 17°30'25" W	378.35'
T2	N 36°22'31" W	258.11'
T3	S 28°07'09" E	228.61'
T4	N 08°47'15" W	50.07'

BOUNDARY LINES

COURSE	BEARING	DISTANCE
L1	S 86°26'30" W	67.76'
L2	N 27°21'15" W	122.94'
L3	N 27°21'15" W	180.76'
L4	N 52°30'05" W	200.29'
L5	N 15°39'25" W	113.85'
L6	S 35°21'15" W	164.57'
L7	S 44°46'35" W	91.80'
L8	N 21°00'25" E	167.81'
L9	N 11°52'10" W	188.99'
L10	N 11°52'10" W	20.70'
L11	S 89°20'25" E	274.32'
L12	S 89°20'25" E	9.86'
L13	N 12°35'20" W	5.76'
L14	N 12°35'20" W	159.30'
L15	N 12°35'20" W	276.19'
L16	N 87°26'00" W	119.52'
L17	N 88°16'20" W	225.37'
L18	N 88°16'20" W	221.26'
L19	N 88°16'20" W	231.85'
L20	N 48°51'30" E	24.09'
L21	N 48°54'00" E	23.19'
L22	S 17°35'50" E	60.08'
L23	S 80°01'10" E	191.31'
L24	S 80°01'10" E	258.05'
L25	N 17°32'50" W	218.78'
L26	N 17°32'50" W	85.60'
L27	N 83°32'30" W	51.10'
L28	S 13°44'15" E	66.37'
L29	S 13°44'15" E	148.46'
L30	S 13°44'15" E	73.15'
L31	S 13°44'15" E	143.11'
L32	S 11°06'45" E	121.53'
L33	S 55°38'55" E	109.89'
L34	S 18°53'40" E	54.38'
L35	N 79°52'46" E	50.59'
L36	N 18°53'40" W	38.44'
L37	S 18°50'40" W	50.95'
L38	S 18°50'40" W	46.07'
L39	N 76°23'10" E	49.53'
L40	N 13°22'10" W	55.29'
L41	N 80°14'44" E	49.33'
L42	S 85°43'25" E	134.34'
L43	N 71°47'30" E	19.91'
L44	S 18°08'30" E	21.05'
L45	S 18°30'15" E	109.24'
L46	S 17°54'25" E	66.75'
L47	S 74°39'05" W	15.84'
L48	S 08°17'00" E	52.77'
L49	S 08°17'00" E	71.00'
L50	S 08°17'00" E	309.23'
L51	S 76°51'23" W	116.44'
L52	S 76°02'32" W	89.43'
L53	S 76°30'10" W	153.36'
L54	S 76°05'25" W	143.50'
L55	S 04°29'20" E	61.42'
L56	N 10°43'50" W	148.35'
L57	N 10°43'50" W	178.70'

NOTES:

1. WETLAND DELINEATION FLAGGED BY SLIGH ENVIRONMENTAL CONSULTANTS, INC. DATED JUNE 11, 2018
2. BOUNDARY INFORMATION WAS COMPILED FROM A PLAT OF THIS PROPERTY BY PAUL WILDER RLS #1559 DATED MARCH 22, 1983 AND RECORDED IN PLAT CABINET B PAGES 48A AND 48B OF THE CLERK OF SUPERIOR COURT OF EFFINGHAM COUNTY, AND PLATS OF ADJACENT PROPERTIES RECORDED IN P.B. 50 PAGE 379 AND P.B. 41 PAGE 70 OF THE CLERK OF SUPERIOR COURT OF CHATHAM COUNTY.
3. A PORTION OF THIS PROPERTY MAY BE CONSIDERED WETLANDS UNDER THE JURISDICTION OF THE CORPS OF ENGINEERS. OWNERS MAY BE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE OF THESE WETLAND AREAS WITHOUT PROPER AUTHORIZATION.
4. LINES F34, F36, & F37 WERE DETERMINED BY AVAILABLE LIDAR INFORMATION AT REQUEST OF USACE AFTER SITE VISIT.

GEORGIA REGISTERED NO. 2113 8-13-19 LAND SURVEYOR JAMES M. ANDERSON

"I HEREBY CERTIFY THAT THE WETLANDS AS SHOWN ON THIS SURVEY WERE LOCATED USING GPS EQUIPMENT AT SUB-METER ACCURACY. THE PURPOSE OF THIS SURVEY IS FOR THE LOCATION OF WETLANDS ONLY AND NOT BOUNDARY ESTABLISHMENT OR PROPERTY CONVEYANCE."

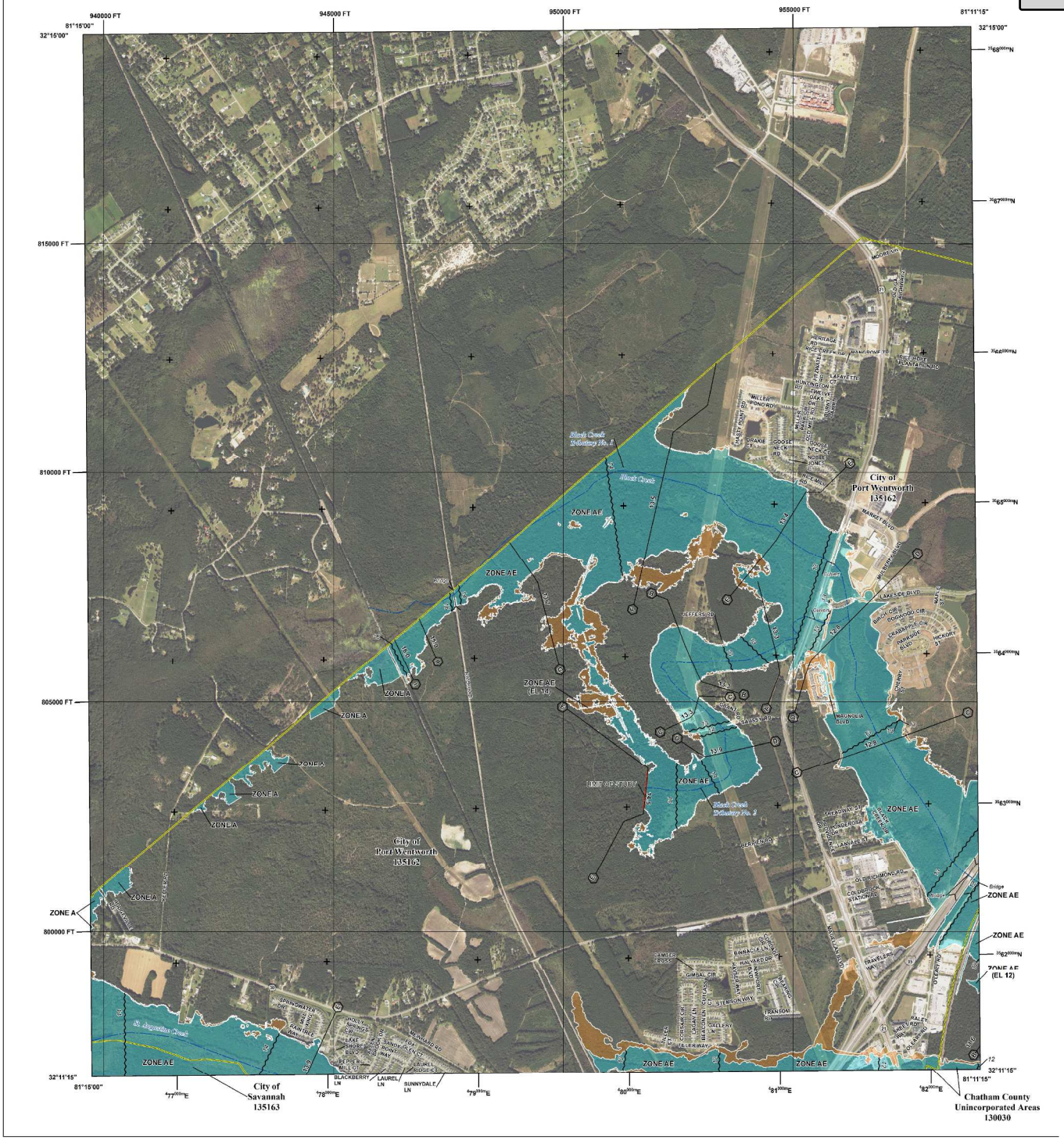
WETLANDS MAP FOR:

SAM L. VARNEDOE, JR., ET. AL.

LOCATION: 8TH. G.M.D. CHATHAM CO., GA.
CITY OF PORT WENTWORTH
DRAWN: OCTOBER 4, 2018
BY: JAMES M. ANDERSON-GA. R.L.S. 2113
JN18111.CRD & JN18111.DWG
SHEET 11

JAMES M. ANDERSON & ASSOCIATES, INC.
REGISTERED LAND SURVEYORS
P.O. BOX 894 104 OAK STREET
STATESBORO, GA. 30459
PHONE: (912) 764-2002

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit C - Wetland Delineation (2473 : Zoning Map Amendment



FLOOD HAZARD INFORMATION

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

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTP://MSC.FEMA.GOV

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*

OTHER AREAS
- NO SCREEN: Areas of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert or Storm Sewer
- Accredited or Provisionally Accredited Levee, Dike, or Floodwall
- Non-accredited Levee, Dike or Floodwall
- (E) 18.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevations (BFE)
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)

OTHER FEATURES
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital orthophotography provided by the NAIP. This imagery was flown in 2015 and was produced at 1 meter resolution.

SCALE

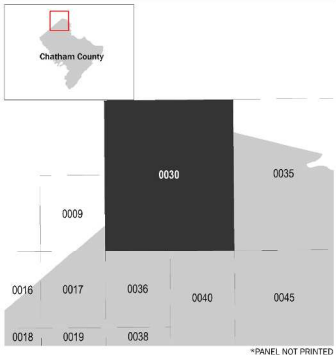
Map Projection: NAD 1983 StatePlane Georgia East FIPS 1001 Feet; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 1,000 feet 1:12,000

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

PANEL LOCATOR



*PANEL NOT PRINTED

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

CHATHAM COUNTY, GEORGIA and Incorporated Areas

PANEL 030 OF 455

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHATHAM COUNTY	130030	0030	G
PORT WENTWORTH, CITY OF	135162	0030	G
SAVANNAH, CITY OF	135163	0030	G

VERSION NUMBER 2.3.2.1

Attachment: VARNEDOE-WIGGINS HWY 21 PH II ZMA PI1 JUNE 2021- DIA Exhibit D - FEMA Map (2473 : Zoning Map Amendment VARNEDOE-

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

AGENDA ITEM (ID # 2469)

DOC ID: 2469

Site Plan Review Application submitted by Phillip McCorkle, McCorkle, Johnson & McCoy LLP., of behalf of L-A Savannah Crossgate, LLC., for PIN # 7-0035-01-007 (Northeast corner of Crossgate Rd & Jimmy Deloach Parkway) for a General Development Site Plan to allow a warehouse development in a P-I-1 (Planned Industrial) Zoning District

Issue/Item: Site Plan Review Application submitted by Phillip McCorkle, McCorkle, Johnson & McCoy LLP., of behalf of L-A Savannah Crossgate, LLC., for PIN # 7-0035-01-007 (Northeast corner of Crossgate Rd & Jimmy Deloach Parkway) for a General Development Site Plan to allow a warehouse development in a P-I-1 (Planned Industrial) Zoning District

Background: The subject property is currently vacant woodland. There are no buildings or structures on the subject property.

Facts and Findings: The proposed project consist of a 332,450 s.f. warehouse and a 96,250 s.f. warehouse with associated parking, utilities, drainage and infrastructure improvements. The entrance will be located off of Crossgate Road.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, April 12, 2021 at 6:30 PM. **/ UPDATE: THE PLANNING COMMISSION VOTED UNANIMOUSLY TO APPROVE THIS APPLICATION.**

ATTACHMENTS:

- PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (PDF)
- PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-SITE PLAN 3.11.21 (PDF)
- Planning Commission Minutes April 12, 2021 (PDF)

200283

RECEIVED
MAR 11 2021
BY: KS

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

Site Plan Review Application

Site Plan Application is required for all new construction in a "P" or "MPO" zone as defined in the Zoning Ordinance of the City of Port Wentworth.

Site Plan Type (*Check One*): ☑ General / Concept ☐ Specific Development

Site Plan Address: Northeast corner of Crossgate Road and Jimmy Deloach Parkway

PIN #(s): 7-0035-01-007

Zoning: P-I-1 Estimated Cost of Construction: $ 20,000,000.00

Type of Construction:

Applicant's Name: Phillip R. McCorkle

Mailing Address: McCorkle, Johnson & McCoy, LLP, 319 Tattnall St., Savannah, GA 31401

Phone #: (912) 232-6000 Email: prm@mccorklejohnson.com

Owner's Name (If Different form Applicant): L-A Savannah Crossgate, LLC

Mailing Address: 1960 Satellite Boulevard, Suite 3000, Duluth, GA 30097

Phone #: (770) 962-3000 Email: chayes@crossgateconsulting.com

I hereby acknowledge that the above information is true and correct.

Applicant's Signature — Date: 3/10/21

Owner's Signature (If Different form Applicant) — Date

Please see page 2 for required submittal checklist

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

Site Plan Review Application Submittal Checklist

Documentation below is required for a complete submittal.

- ☑ Signed and Completed Application
- ☑ 3 Full size sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☑ 15 half size (11" X 17") sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ 2 copies of hydrology reports (if applicable)
- ☑ Names, mailing address, and PIN number of all property owners within 250 feet of all property lines
- ☑ 1 8 ½" X 11" of site plan civil drawings or concept plan (depending on type of site plan)
- ☑ PDF of entire submittal (either flash drive or CD)
- ☐ Other Engineering details or reports may be required once submittal has been received
- ☐ Site plan review fee check
    - No Land Disturbance- $206.00 Site Plan Fee + $50.00 Admin Fee = Total $256.00
    - With Land Disturbance - $836.00 Site Plan Fee + $50.00 Admin Fee = Total $886.00

Additional Fee Statement: If engineer review cost to the City exceeds the site plan review fee that is paid at the time of initial application submittal, you may be required to pay additional review cost.

I have read and agree to the above additional fee statement

Applicant's Signature

3/11/21
Date

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00289827 10/16/2020 11:06 AM
OPER: ME TERM: 011
REF#: CK 2510

TRAN: 112.0000 BLDG PERMIT
200283 886.00CR
L-A SAVANNAH CROSSGATE, LLC
7-0035-01-007
DEV-SPR 886.00CR

TENDERED: 886.00 CHECK
APPLIED: 886.00-

CHANGE: 0.00

WWW.CITYOFPORTWENTWORTH.COM

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

AUTHORIZATION OF PROPERTY OWNER

Application for Rezoning or Variance

I swear that I am the owner of the property which is the subject matter of the attached application, as is shown in the records of Port Wentworth, Georgia.

I authorize the person named below to act as applicant in the pursuit of a variance or for the rezoning of this property.

Name of Applicant: Phillip R. McCorkle, McCorkle, Johnson & McCoy, LLP

Address: 319 Tattnall Street, Savannah, Georgia 31401

Telephone Number: (912) 232-6000

L-A Crossgate-Savannah, LLC

Signature of Owner

By: Gerald A. Ronon

Its: Authorized Signatory

Personally appeared before me

Gerald A. Ronon

who swears that the information contained in this authorization is true and correct to the best of his or her knowledge and belief.

Notary Public

SHELLY KACZYNSKI NOTARY PUBLIC GWINNETT COUNTY, GEORGIA MY COMMISSION EXPIRES MARCH 6, 2023

9/9/2020

Date

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Name:	NRPH, Inc.
PIN:	70035 01005
Property Address:	1000 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	NRPH, Inc. c/o Noritake Co., Inc. 15-22 Fair Lawn Avenue. Suite 2A Fair Lawn, New Jersey 07410

Name:	Georgia Power Company
PIN:	70035 01006
Property Address:	Highway 21 Port Wentworth, Georgia 31407
Mailing Address:	Georgia Power Company Tax Department Bin 10120 241 Ralph McGill Boulevard NE Atlanta, Georgia 30308

Name:	Stravinksi Development Group, LLC
PIN:	70033 01004
Property Address:	Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Stravinksi Development Group, LLC 413 W. Yosemite Avenue, Suite 105 Madera, California 93637

Name:	Southern Region Industrial Realty, Inc.
PIN:	70009 01001
Property Address:	Birkenhead Street Port Wentworth, Georgia 31407
Mailing Address:	Southern Region Industrial Realty, Inc. c/o Norfolk Southern Tax Department Attn: Braulia Charris 3 Commercial Place, Unit 209 Norfolk, Virginia 23510

Name:	Southern Region Industrial Realty, Inc.
PIN:	70009 01002
Property Address:	Coastal Highway Port Wentworth, Georgia 31407
Mailing Address:	Southern Region Industrial Realty, Inc. c/o Norfolk Southern Tax Department Attn: Braulia Charris 3 Commercial Place, Unit 209

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Norfolk, Virginia 23510

Name:	Southern Region Industrial Realty, Inc.
PIN:	70010 01001
Property Address:	Dorset Road Port Wentworth, Georgia 31407
Mailing Address:	Southern Region Industrial Realty, Inc. c/o Norfolk Southern Tax Department 3 Commercial Place, Unit 209 Norfolk, Virginia 23510

Name:	Crossgate Industrial Investors, LLC
PIN:	70035 01008
Property Address:	1500 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Crossgate Industrial Investors, LLC 1776 Peachtree Street NW, Suite 100 Atlanta, Georgia 30309

Name:	Savannah Economic Development Authority
PIN:	70033 01005
Property Address:	1501 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Savannah Economic Development Authority 131 Hutchinson Island Road Savannah, Georgia 31421

Name:	Savannah Economic Development Authority
PIN:	70009 02002
Property Address:	1 Birkenhead Street Port Wentworth, Georgia 31407
Mailing Address:	Savannah Economic Development Authority 131 Hutchinson Island Road Savannah, Georgia 31421

Name:	Kelly Laperal Gunn
PIN:	70008 03037
Property Address:	60 Warren Drive Port Wentworth, Georgia 31407
Mailing Address:	Kelly Laperal Gunn 117 Wren Court Savannah, Georgia 31419

Name:	Johnny R. Berry
PIN:	70008 03036

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Property Address:	58 Warren Drive Port Wentworth, Georgia 31407
Mailing Address:	Johnny R. Berry 215 Shearhouse Road Guyton, Georgia 31312
Name:	Cynthia D. Gunn & Kelly L. Gunn
PIN:	70008 03035
Property Address:	56 Warren Drive Port Wentworth, Georgia 31407
Mailing Address:	Cynthia D. Gunn & Kelly L. Gunn 117 Wren Court Savannah, Georgia 31419
Name:	Daniel E. McMahon
PIN:	70008 03034
Property Address:	54 Warren Drive Port Wentworth, Georgia 31407
Mailing Address:	Daniel E. McMahon 54 Warren Drive Savannah, Georgia 31407
Name:	John Patrick Cooper
PIN:	70008 03033
Property Address:	52 Warren Drive Port Wentworth, Georgia 31407
Mailing Address:	John Patrick Cooper 52 Warren Drive Port Wentworth, Georgia 31407
Name:	Julia McCaskle & Sarah Harris
PIN:	70010 18008
Property Address:	101 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Julia McCaskle & Sarah Harris 2059 Lilac Court, Apt. A Augusta, Georgia 30905
Name:	Robert Ewing Hendrick, Jr.
PIN:	70010 18007
Property Address:	103 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Robert Ewing Hendrick, Jr. 103 Gordon Street Port Wentworth, Georgia 31407

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Name:	Gary Wilson Norton & Donna Norton
PIN:	70010 18006
Property Address:	105 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Gary Wilson Norton & Donna Norton 105 Gordon Street Port Wentworth, Georgia 31407

Name:	Karen D. Partain & Edith F. Partain
PIN:	70010 18005
Property Address:	107 Gordon Road Port Wentworth, Georgia 31407
Mailing Address:	Karen D. Partain & Edith F. Partain 107 Gordon Road Port Wentworth, Georgia 31407

Name:	Julie Stallings Perry
PIN:	70010 18004
Property Address:	109 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Julie Stallings Perry 109 Gordon Street Port Wentworth, Georgia 31407

Name:	Jacqueline Watson
PIN:	70010 18003
Property Address:	111 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Jacqueline Watson 111 Gordon Street Port Wentworth, Georgia 31407

Name:	Pamela Brownfield
PIN:	70010 18002
Property Address:	113 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Pamela Brownfield 113 Gordon Street Port Wentworth, Georgia 31407

Name:	Owen E. McIntosh, Sr. & Erma J. McIntosh
PIN:	70010 18001
Property Address:	115 Gordon Street Port Wentworth, Georgia 31407

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Mailing Address:	Owen E. McIntosh, Sr. & Erma J. McIntosh 115 Gordon Street Port Wentworth, Georgia 31407
Name:	Real Life Christian Fellowship Church
PIN:	70013 03010
Property Address:	841 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Real Life Christian Fellowship Church P.O. Box 18344 Garden City, Georgia 31408
Name:	Real Life Christian Fellowship Church
PIN:	70013 03001
Property Address:	841 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Real Life Christian Fellowship Church P.O. Box 18344 Garden City, Georgia 31408
Name:	Hugh Vernon Morris
PIN:	70013 03002
Property Address:	908 Akin Drive Port Wentworth, Georgia 31407
Mailing Address:	Hugh Vernon Morris 908 Akin Drive Port Wentworth, Georgia 31407
Name:	Robert M. Schoenbeck & Shannon M. Tomlinson
PIN:	70013 03009
Property Address:	829 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Robert M. Schoenbeck & Shannon M. Tomlinson 829 Crossgate Road Port Wentworth, Georgia 31407
Name:	Wanda D. Rollf
PIN:	70010 17017
Property Address:	836 Crossgate Road Port Wentworth, Georgia 31407
Mailing Address:	Wanda D. Rollf 836 Crossgate Road Port Wentworth, Georgia 31407
Name:	Brad Derek Coleman & Harris H. Moore, Jr.

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

PIN:	70010 17016
Property Address:	114 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Brad Derek Coleman & Harris H. Moore, Jr. P.O. Box 525 Springfield, Georgia 31329

Name:	Edna Dollie Dixon
PIN:	70010 17015
Property Address:	112 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Edna Dollie Dixon 112 Gordon Street Port Wentworth, Georgia 31407

Name:	Richard Henry Chester
PIN:	70010 17014
Property Address:	110 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Richard Henry Chester 110 Gordon Street Port Wentworth, Georgia 31407

Name:	Teresa A. Strickland
PIN:	70010 17013
Property Address:	108 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Teresa A. Strickland 108 Gordon Street Port Wentworth, Georgia 31407

Name:	Jack G. Rigdon
PIN:	70010 17012
Property Address:	106 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Jack G. Rigdon 106 Gordon Street Port Wentworth, Georgia 31407

Name:	George Litzinger & Carol Litzinger
PIN:	70010 17011
Property Address:	104 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	George Litzinger & Carol Litzinger 104 Gordon Street

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

Property Owners Within 250 Feet
(As Requested by the Application Form)

Port Wentworth, Georgia 31407

Name:	Jeremy Hendrix
PIN:	70010 17010
Property Address:	102 Gordon Street Port Wentworth, Georgia 31407
Mailing Address:	Jeremy Hendrix 102 Gordon Street Port Wentworth, Georgia 31407

Q:\DATA\WPDATA\9300\9342-01 Property Owners Within 250 Feet.docx

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-APPLICATION (2469 : Site Plan Review Application

PREPARED FOR:

CONCEPTUAL LAYOUT EXHIBIT

PROJECT 350k & 96 SF

CITY OF PORT WENTWORTH / CHATHAM COUNTY / GA

MARCH 11, 2021

THOMAS & HUTTON

50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300

www.thomasandhutton.com

This map illustrates a general plan of the development which is for discussion purposes only, does not limit or bind the owner/developer, and is subject to change and revision without prior written notice to the holder. Dimensions, boundaries and position locations are for illustrative purposes only and are subject to an accurate survey and property description.

COPYRIGHT © 2020 THOMAS & HUTTON

Attachment: PIN #7-0035-01-007 CROSSGATE WAREHOUSES GSITE PLAN APRIL 2021-SITE PLAN 3.11.21 (2469 : Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road)

CITY OF PORT WENTWORTH

PLANNING COMMISSION

APRIL 12, 2021

Via Teleconference GoToMeeting | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Chairman CJ Neesmith called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Vice-Chairman Rufus Bright led the Prayer and Pledge of Allegiance.

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rufus Bright	Planning Commissioner	Present	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Present	
Lauree Morris	Planning Commissioner	Present	
CJ Neesmith	Planning Commissioner	Present	
Gabrielle Nelson	Planning Commissioner	Late	
Brian Harvey	Director of Development Services	Present	
Melanie Ellis	Permit Technician	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rufus Bright, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris
ABSENT:	Nelson

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - Mar 8, 2021 6:30 PM

RESULT:	**ACCEPTED AS AMENDED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris
ABSENT:	Nelson

6. ZONING MAP AMENDMENTS (REZONING)

Attachment: Planning Commission Minutes April 12, 2021 (2469 : Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road)

A. Zoning Map Amendment Application submitted by Joe McNamee for PIN's # 7-0906-02-003B & 7-0906-02-009 (8173 Old Highway 21) to Rezone from PUD-O (Planned Unit Development - Office) to P-C-1 (Planned Neighborhood Business) Zoning District for the purpose of Commercial Uses

The applicant Joe McNamee was present and gave a brief overview of why he would like to rezone his property and offered to answer any questions the Commission may have. Commissioner Morris asked exactly where the property was located. Mr. McNamee responded with the location of the property, which is on Highway 21 before you get to Randall's Package shop. There were no public comments. After several minutes of discussion, Commissioner Herrin made a motion to approve. Commissioner Morris seconded the motion to approve. The vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Lauree Morris, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris
ABSENT:	Nelson

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

A. Site Plan Review Application submitted by Phillip McCorkle, McCorkle, Johnson & McCoy LLP., of behalf of L-A Savannah Crossgate, LLC., for PIN # 7-0035-01-007 (Northeast corner of Crossgate Rd & Jimmy Deloach Parkway) for a General Development Site Plan to allow a warehouse development in a P-I-1 (Planned Industrial) Zoning District

The applicant, Phillip McCorkle was present. Mr. McCorkle gave a brief presentation and offered to answer any questions the commission may have. Commissioner Rollf asked what the plan is to keep trucks from going down Crossgate Road on the Highway 25 side of the railroad tracks. Mr. McCorkle responded that it's his understanding that additional "no truck" signage has been installed on Crossgate Road and that traffic citations issued by City of Port Wentworth Police would possibly assist in the stopping the truck traffic. Commissioner Rollf suggested the need for a traffic camera on Crossgate Road to issue tickets, similar to what is at the school. Commissioner Morris asked about buffers around the stormwater pond. Mr. McCorkle stated that more information on the buffer around the pond would be in the specific site plan once the pond has been designed. There were no public comments. After several minutes of discussion, Commissioner Morris made a motion to approve. Commissioner Franklin seconded the motion to approve. The vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris, Nelson

B. Site Plan Review Application submitted by Claret Communities, LLC., of behalf of Simz Investment Company, LLC., for PIN # 7-0976-02-027 (Highway 30) for a General Development Site Plan to allow a multi-family development in a P-RIP (Planned Residential Institutional) Zoning District

John Paul Moore, Thomas & Hutton, was present on behalf of the applicant. Mr. Moore gave a presentation on the project and offered to answer any questions the commission may have. Commissioner Bright asked if the items in the Department of the Army letter included in the application packet had been addressed. Mr. Moore responded that the letter addressed the wetlands on the property and they would not be disturbing them. Commissioner Bright asked questions regarding traffic concerns on Highway 30. Mr.

Attachment: Planning Commission Minutes April 12, 2021 (2469 : Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road)

Moore stated they would do a full traffic study for the specific development plan. Commissioner Herrin and Nelson stated the traffic on Highway 30 and Highway 21 currently is very dangerous. Nathan Long, Thomas & Hutton, stated that by the time this project construction is completed the GDOT improvements at the intersection of Highway 30 and Highway 21 should be completed. Commissioner Morris asked what the plan was to keep trash out of the wetland areas. Mr. Moore responded that the stormwater on the site would drain to the detention pond and be treated before discharged. Bill Rovolis, 104 Commonwealth Ave, asked about the total units of the project and if there would be any access from the property to Berrin Road. Mr. Moore responded 364 total units and there would be no access to Berrin Road from this project. Lee Terry, Claret Communities, LLC., stated this is a high quality project. After several minutes of discussion, Commissioner Morris made a motion to approve. Commissioner Franklin seconded the motion. Commissioner's Herrin, Franklin, Rollf, Morris and Nelson voted Yay. Commissioner Bright voted Nay. The motion passes 5-1.

RESULT:	**APPROVED [5 TO 1]**
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Morris, Nelson
NAYS:	Bright

C. Site Plan Review Application submitted by Joshua Cox, Buckel Design Group of behalf of Parker's #16 LLC., for PIN # 7-0035-01-003 & 7-0035-01-004 (6000 Highway 21) for a Specific Development Site Plan to allow a Truck Stop Expansion in a P-C-3 (Planned General Business) Zoning District

The applicant, Josh Cox, was present. Mr. Cox gave a presentation of the project and offered to answer any questions the Commission may have. Commissioner Herrin asked there would be any overnight parking. Mr. Cox responded that it is fueling operations only, no overnight truck parking. Commissioner Morris asked if they have responded to any of the comments from the City engineer review. Mr. Cox responded that they are working to resubmit soon. There were no public comments. After several minutes of discussion, Commissioner Morris made a motion to approve condition upon all engineer comments being addressed. Commissioner Herrin seconded the motion. The vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Bill Herrin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris, Nelson

D. Site Plan Review Application submitted by John Farmer, P.E., Fretus Engineering, LLC., of behalf of Yash Desai, Stature Investments for PIN # 7-0037-02-007 (Magellan Blvd, Port City Car Wash) for a Specific Development Site Plan to allow a Car Wash in a P-C-3 (Planned General Business) Zoning District

The applicant, John Farmer, was present. Mr. Farmer gave a brief presentation of the project and offered to answer any questions the Commission may have. Commissioner Herrin asked where this project was located. Mr. Farmer stated it was the property straight across from City Hall on Magellan Blvd. Commissioner Morris asked if they have responded to the City engineer's comments. Mr. Farmer responded they are working on resubmitting. Commissioner Bright asked what were the plans for the crosswalk. Mr. Farmer answered that they would be the standard ADA crosswalk with signage and markings. There were no public comments. After several minutes of discussion, Commissioner Morris made a motion to approve with the condition that all engineer comments be addressed. Commissioner Bright seconded the motion. The vote was unanimous.

Attachment: Planning Commission Minutes April 12, 2021 (2469 : Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road)

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris, Nelson

9. NEW BUSINESS

Commissioner Herrin asked that training be provided for the Commission. Mr. Harvey answer that he would work on it.

10. ADJOURNMENT

A. Adjournment

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Rollf, Morris, Nelson

Chairman

The foregoing minutes are true and correct and approved by me on this 10th day of May, 2021.

Secretary

Attachment: Planning Commission Minutes April 12, 2021 (2469 : Site Plan Review Application (General) PIN # 7-0035-01-007 Crossgate Road)

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

AGENDA ITEM (ID # 2471)

DOC ID: 2471

Site Plan Review Application submitted by Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a General Development Site Plan to allow a Single-Family Home Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

Issue/Item: Site Plan Review Application submitted by Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a General Development Site Plan to allow a Single-Family Home Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

Background: The subject property is currently undeveloped land. The first phase of Jasper Village is in Effingham County.

Facts and Findings: This project is a general development plan for a single family for rent neighborhood. The project will consist of 1, 2, 3, and 4 bedroom homes for a total of seventy (70) homes and all associated roads, drainage, water and sewer utilities, and parking.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, July 12, 2021 at 6:30 PM. **/ UPDATE: THE PLANNING COMMISSION VOTED UNANIMOUSLY TO APPROVE THIS APPLICATION.**

ATTACHMENTS:

- 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- APPLICATION (PDF)
- 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- Timeline (PDF)
- 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- SITE PLAN 6.11.21 (PDF)
- Planning Commission Minutes July 12, 2021 DRAFT (PDF)

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

RECEIVED
JUN 14 2021
BY: KS

Site Plan Review Application

Site Plan Application is required for all new construction in a "P" or "MPO" zone as defined in the Zoning Ordinance of the City of Port Wentworth.

#210230

Site Plan Type (*Check One*): ☑ General / Concept ☐ Specific Development

Site Plan Address: OLD HIGHWAY 21

PIN #(s): 70906 04064

Zoning: PUD Estimated Cost of Construction: $ 11,100,000.00

Type of Construction: SINGLE FAMILY FOR RENT

Applicant's Name: NEXT CHAPTER NEIGHBORHOODS

Mailing Address: 6 WALNUT LANE, NORTH AUGUSTA, SC 29860

Phone #: 706-831-3984 Email: SHANE@NEXTCHAPTERNEIGHBORHOODS.COM

Owner's Name (If Different form Applicant):

Mailing Address:

Phone #: Email:

I hereby acknowledge that the above information is true and correct.

Applicant's Signature — Date: 6/11/2021

Owner's Signature (If Different form Applicant) — Date

Please see page 2 for required submittal checklist

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- APPLICATION (2471 : Site Plan Review Application (General)

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

Site Plan Review Application Submittal Checklist

Documentation below is required for a complete submittal.

- ☑ Signed and Completed Application
- ☑ 3 Full size sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ 15 half size (11" X 17") sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ ~~2 copies of hydrology reports (if applicable)~~
- ☑ Names, mailing address, and PIN number of all property owners within 250 feet of all property lines
- ☐ 1 8 ½" X 11" of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ PDF of entire submittal (either flash drive or CD)
- ☐ ~~Other Engineering details or reports may be required once submittal has been received~~
- ☐ Site plan review fee check
    - No Land Disturbance- $206.00 Site Plan Fee + $50.00 Admin Fee = Total $256.00
    - With Land Disturbance - $836.00 Site Plan Fee + $50.00 Admin Fee = Total $886.00

Additional Fee Statement: If engineer review cost to the City exceeds the site plan review fee that is paid at the time of initial application submittal, you may be required to pay additional review cost.

I have read and agree to the above additional fee statement

Applicant's Signature

6/14/2021
Date

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- APPLICATION (2471 : Site Plan Review Application (General)

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00317374 6/21/2021 2:00 PM
OPER: ME TERM: 011
REF#: CK 1347

TRAN: 112.0000 BLDG PERMIT
210230 256.00CR
NEXT CHAPTER NEIGHBORHOODS
7-0906-04-064
DEV-SPR 256.00CR

TENDERED: 256.00 CHECK
APPLIED: 256.00-

CHANGE: 0.00

WWW.CITYOFPORTWENTWORTH.COM

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- APPLICATION (2471 : Site Plan Review Application (General)

Property Owners Within 250' Of Jasper Village Phase 2 Property Lines

Name	Mailing Address	PIN Number
MOORE PHILIP H & BETTY J*	96 MOORE DR, SAVANNAH, GA, 31407	70906 02001A
FIELDSTONE LAND GROUP LLC	204 WILEY BOTTOM RD, SAVANNAH, GA, 31411	70906 02002
FOSTER BENJAMIN	8177 OLD HIGHWAY 21, SAVANNAH, GA, 31407	70906 02007
MCNAMEE JOSEPH H	133 MCNAMEE LN, GUYTON, GA, 31312	70906 02009
MCNAMEE JOSEPH H	133 MCNAMEE LN, GUYTON, GA, 31312	70906 02003B
FOSTER HERBERT	8164 OLD HIGHWAY 21, PORT WENTWORTH, GA, 31407	70906 02004
STEELE JAMES	8168 OLD HIGHWAY 21, PORT WENTWORTH, GA, 31407	70906 03025
MAZZA JAMES D & SYLVIA	457 CYPRESS POINT RD, SPRINGFIELD, GA, 31329	70906 03020
BEP RH TRACT 2 LLC	100 LAKESIDE BLVD, PORT WENTWORTH, GA, 31407	70906 04011
FOSTER HERBERT	8164 OLD HIGHWAY 21, PORT WENTWORTH, GA, 31407	70906 03018
BRAZ & MOTTA CARLOS R & JENNIFER	149 BARRENTON RD, POOLER, GA, 31322	70906 03017
THOMPSON VALERIE MCCARR	4122 PINEY CREEK LN W, JACKSONVILLE, GA, 32277	70906 03008
SMART ETTA & DAVID	8174 OLD HIGHWAY 21, SAVANNAH, GA, 31407	70906 03009

Project Timeline

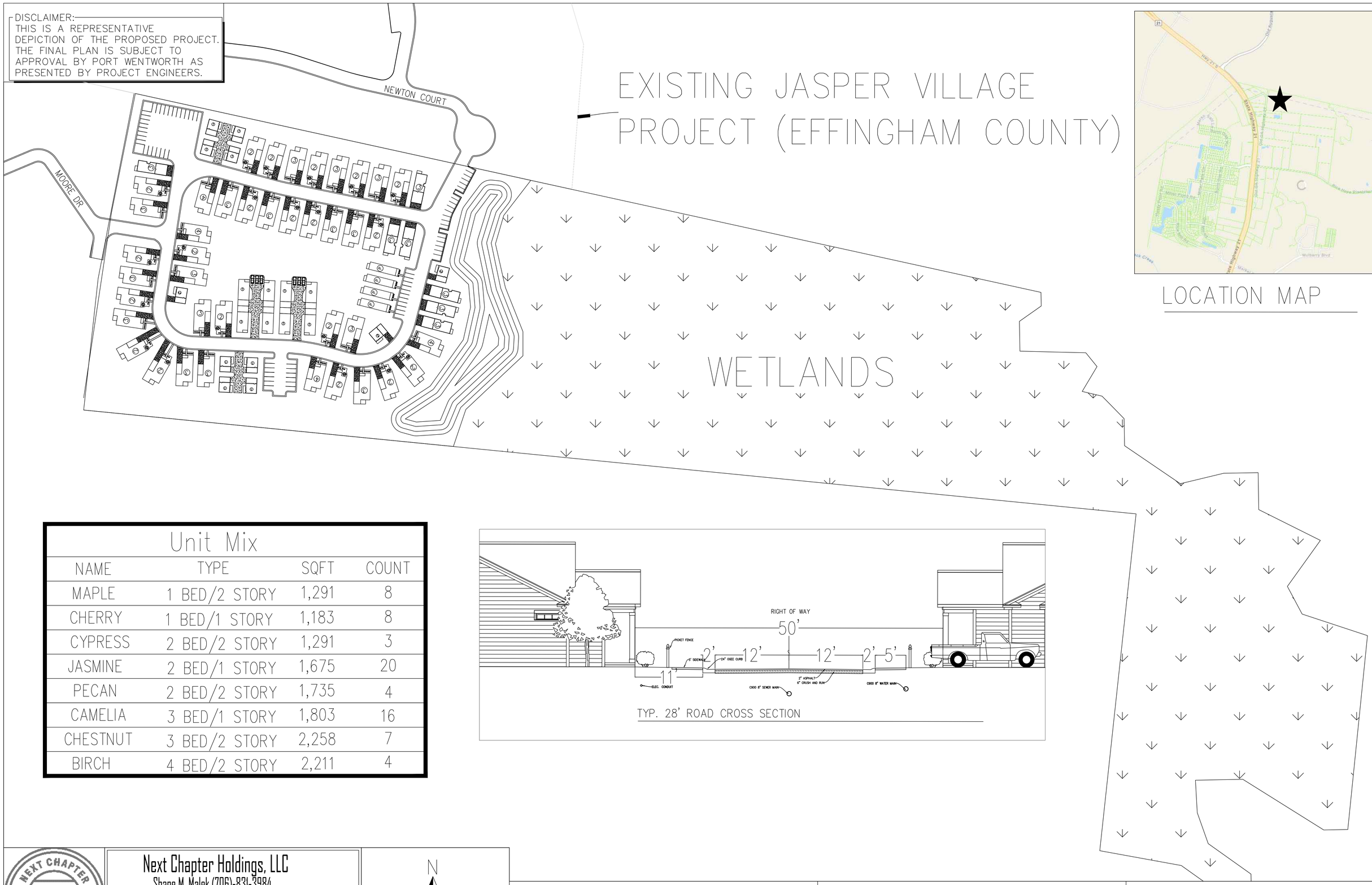
Jasper Village Ph II – G-Site Plan

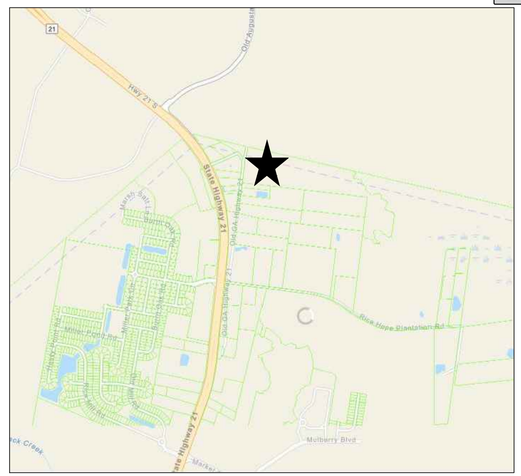
- 6/11/2021—application received- complete.
- 7/12/2021—Planning Commission voted to approve.

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- Timeline (2471 : Site Plan Review Application (General) Jasper

DISCLAIMER:
THIS IS A REPRESENTATIVE DEPICTION OF THE PROPOSED PROJECT. THE FINAL PLAN IS SUBJECT TO APPROVAL BY PORT WENTWORTH AS PRESENTED BY PROJECT ENGINEERS.

EXISTING JASPER VILLAGE PROJECT (EFFINGHAM COUNTY)





LOCATION MAP

Unit Mix			
NAME	TYPE	SQFT	COUNT
MAPLE	1 BED/2 STORY	1,291	8
CHERRY	1 BED/1 STORY	1,183	8
CYPRESS	2 BED/2 STORY	1,291	3
JASMINE	2 BED/1 STORY	1,675	20
PECAN	2 BED/2 STORY	1,735	4
CAMELIA	3 BED/1 STORY	1,803	16
CHESTNUT	3 BED/2 STORY	2,258	7
BIRCH	4 BED/2 STORY	2,211	4

TYP. 28' ROAD CROSS SECTION

Next Chapter Holdings, LLC
Shane M. Malek (706)-831-3984
shane@nextchapterneighborhoods.com

GENERAL NOTE
This drawing is the property of, and contains design data which is proprietary to Next Chapter Holdings, LLC. Reproduction, use, or transfer of this drawing, or any information contained herein, to others, except as specifically authorized in connection with this project only, is NOT permitted without written approval of Shane M. Malek.

N W E S

JASPER VILLAGE– PHASE 2	PORT WENTWORTH, GA	
VERSION 2	36.19 ACRES	NOT TO SCALE
6/11/2021	70 UNITS	

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- (2471 : Site Plan Review Application (General) Jasper Village Phase II)

DISCLAIMER:
THIS IS A REPRESENTATIVE DEPICTION OF THE PROPOSED PROJECT. THE FINAL PLAN IS SUBJECT TO APPROVAL BY PORT WENTWORTH AS PRESENTED BY PROJECT ENGINEERS.

Unit Mix	
MAPLE	8
CHERRY	8
CYPRESS	3
JASMINE	20
PECAN	4
CAMELIA	16
CHESTNUT	7
BIRCH	4

NEXT CHAPTER NEIGHBORHOODS
Next Chapter Holdings, LLC
Shane M. Malek (706)-831-3984
shane@nextchapterneighborhoods.com

GENERAL NOTE
This drawing is the property of, and contains design data which is proprietary to Next Chapter Holdings, LLC. Reproduction, use, or transfer of this drawing, or any information contained herein, to others, except as specifically authorized in connection with this project only, is NOT permitted without written approval of Shane M. Malek.

N W E S

JASPER VILLAGE– PHASE 2	PORT WENTWORTH, GA	
VERSION 2	11 ACRES DISTURBED	
6/11/2021	70 UNITS	

Attachment: 7-0906-04-064 JASPER VILLAGE PH 2-S-SITEPLAN JULY 2021- SITE PLAN 6.11.21 (2471 : Site Plan Review Application (General) Jasper Village Phase II)

CITY OF PORT WENTWORTH

PLANNING COMMISSION

JULY 12, 2021

Council Meeting Room | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Chairman CJ Neesmith called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Commissioner Bright led the Prayer and Pledge of Allegiance.

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rufus Bright	Planning Commissioner	Present	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Absent	
Lauree Morris	Planning Commissioner	Absent	
CJ Neesmith	Planning Commissioner	Present	
Gabrielle Nelson	Planning Commissioner	Present	
Brian Harvey	Director of Development Services	Present	
Melanie Ellis	Building Inspector	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - Jun 14, 2021 6:30 PM

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

6. ZONING MAP AMENDMENTS (REZONING)

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2471 : Site Plan Review Application (General) Jasper Village Phase II)

A. Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., on behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

The applicant, Phillip McCorkle, was present. Mr. McCorkle gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what type of warehouses these would be and how may employees. Mr. McCorkle responded that at this time they do not know what companies will be in the warehouses and they estimate between 400 to 800 employees. Commissioner Herrin asked what the impact would be on the residents that live on Saussy Road. Mr. McCorkle responded that there will be minimum impact on the residents and the closest warehouse would be 1500 feet away from the closest home. He also stated there would be a 100-foot buffer with a 15-foot-high berm between the property and the residents.

Public Comments:

LaRay Benton - 135 Saussy Road - Spoke against the application

Tonya Brown - 150 Berrien Road - Spoke against the application

Lashawn Benton - 135 Saussy Road - Spoke against the application

J. P. Robinson - 225 Grant Road - Spoke against the application

Janet Bryant - 154 Berrien Road - Spoke against the application

After the public comment section was closed, Commissioner Nelson made a motion to Deny this application. Commissioner Bright seconded the motion to Deny the application. The vote to deny was unanimous

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Gabrielle Nelson, Planning Commissioner
SECONDER:	Rufus Bright, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

B. Zoning Map Amendment Application submitted by Thomas Exley Jr., and the Estate of Thomas Exley Sr., for PIN # 7-0906-01-028 (Highway 21) to Rezone from RA (Residential Agriculture) to P-C-2 (Planned Community Business) and P-R-M (Planned Residential Multifamily) Zoning Districts for the purpose of a mixed-use development.

Murray Marshall was present on behalf of the application. Mr. Marshall gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked how many homes would be in this development. Mr. Marshall answered that they estimate around 200 units. Chairman Neesmith asked what type of commercial project would be under the P-C-2 zoning. Mr. Marshall answered that they envision a strip type commercial development, similar to what is near the Lakeside Blvd entrance of Rice Hope. Commissioner Bright asked if this development would use the same path for the pedestrian bridge overpass. Mr. Marshall answered yes, they will encourage residents to use the pedestrian bridge. Commissioner Nelson asked if the residents in Rice Creek had been notified. Mr. Marshall answered that all property owners within the 250 feet were notified per the City ordinance and that signs have been posted.

Public Comments:

J. P. Robinson - 225 Grant Road - Asked questions regarding stormwater runoff and the impact on Black Creek. Mr. Marshall responded that currently Rice Creek drains through

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2471 : Site Plan Review Application (General) Jasper Village Phase II)

this property and into Black Creek and this project would tie into the existing drainage and that the development must retain post-development runoff on the site.

LaRay Benton - 135 Saussy Road - Asked where the entrance to the development would be and if the project would have any amenities. Mr. Marshall answer that the entrance would be at the existing curb cut on Rice Mill Road and that they will ask permission from GDOT to have a right in - right out off Highway 21 and that this type of project would have some type of amenities.

After the public comments section was closed, Commissioner Nelson asked if once this project would be similar to Jasper Village and that there would not be any negative impact on the storm drainage to the existing residents of Rice Creek. Mr. Marshall responded that the development should be a product that is competition for Jasper Village and that there will be no impact on the existing residents because this project is downhill from Rice Creek and that they will capture all the runoff that is required by regulation. Commissioner Herrin made a motion to approve the application. Commissioner Franklin seconded the motion to approve. The vote to approve the application was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

A. Site Plan Review Application submitted by Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a General Development Site Plan to allow a Single-Family Home Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

The applicant, Shane Malek, was present. Mr. Malek gave an overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked what the price range for these units was. Mr. Malek answered that the 1-bedroom started around $1150 a month in rent and the range goes up from there and this includes all the maintenance associated with the homes. Commissioner Nelson asked if the traffic in that area had been impacted. Mr. Malek stated that so far he has seen or heard any negative complaints on the traffic. Chairman Neesmith asked where the entrance for this phase would be. Mr. Malek responded that there would be the main entrance to Old Augusta Road, and they would like to improve and use Moore Drive as well. Commissioner Herrin asked if they would pave Moore Drive. Mr. Malek responded yes, they would like to pave if allowed to use it.

Public Comments:

Lashawn Benton - 150 Berrin Road - Asked about the fire separation between homes. Mr. Malek stated that they build to the fire code requirements and the homes would have a 10-foot separation.

Phillip Moore - 96 Moore Drive - Asked if the road that they are using for a construction road would remain in use after the development was finished. Mr. Malek responded that they do not want to use that road for the development and the road would stay as is.

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2471 : Site Plan Review Application (General) Jasper Village Phase II)

LaRay Benton - 135 Saussy Road - Asked if Old Highway 21 would be included in this project. Mr. Malek responded the improvements to Moore Drive would stop at Old Highway 21.
Betty Moore - 96 Moore Drive - Spoke in favor for the application.
After the public comments section was closed, Commissioner Bright made a motion to approve the application. Commissioner Nelson seconded the motion to approve the application. The vote to approve was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Rufus Bright, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

9. NEW BUSINESS

10. ADJOURNMENT

A. Adjournment

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Rosetta Franklin, Planning Commissioner
SECONDER:	Gabrielle Nelson, Planning Commissioner
AYES:	Herrin, Bright, Franklin, Nelson
ABSENT:	Rollf, Morris

_____
Chairman

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2021.

_____
Secretary

Attachment: Planning Commission Minutes July 12, 2021 DRAFT (2471 : Site Plan Review Application (General) Jasper Village Phase II)

City Council
7224 GA Highway 21
Port Wentworth, GA 31407

SCHEDULED

Meeting: 07/22/21 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

AGENDA ITEM (ID # 2470)

DOC ID: 2470

Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of CH Realty IX - Sansone, Savannah 21-95, L.P., for a portion of PIN # 7-0977-01-028 (Hendley Road) for a Specific Development Site Plan to allow a Warehouse / Distribution Center (Lineage) in a P-I-2 (Planned Industrial) Zoning District

Issue/Item: Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of CH Realty IX - Sansone, Savannah 21-95, L.P., for a portion of PIN # 7-0977-01-028 (Hendley Road) for a Specific Development Site Plan to allow a Warehouse / Distribution Center (Lineage) in a P-I-2 (Planned Industrial) Zoning District

Background: The subject property is currently vacant woodland. There are no buildings or structures on the subject property. The General Development plan was approved during the regularly scheduled May 27, 2021 City Council Meeting.

Facts and Findings: The site plan consist of a 219,400 square foot warehouse / distribution center. The site plan also includes associated parking, utilities, drainage and infrastructure improvements. This application is under review by City Engineers, Thomas & Hutton.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, June 14, 2021 at 6:30 PM. **/ UPDATE: THE PLANNING COMMISSION VOTED 3-1 TO APPROVE THIS APPLICATION.**

ATTACHMENTS:

- 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (PDF)
- 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-1st Comment Letter T&H 5.26.21 (PDF)
- 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Timeline (PDF)
- Planning Commission Agenda Minutes June 14, 2021 DRAFT (PDF)
- 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (PDF)
- 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (PDF)

210185

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

RECEIVED
MAY 14 2021
BY: KS

Site Plan Review Application

Site Plan Application is required for all new construction in a "P" or "MPO" zone as defined in the Zoning Ordinance of the City of Port Wentworth.

Site Plan Type (*Check One*): ☒ General / Concept ☐ Specific Development

Site Plan Address: 0 Hendley Road

PIN #(s): Portion of 7-0977-01-028

Zoning: P-I-2 Estimated Cost of Construction: $

Type of Construction: Primarily Concrete Tilt-Wall Construction.

Applicant's Name: Kern & Co., LLC - Chad Zittrouer

Mailing Address: P O Box 15179 - Savannah, GA 31416

Phone #: 912-354-8400 Email: czittrouer@kernengineering.com

Developer Entity: Lineage Logistics
Owner's Name (If Different form Applicant): CH Realty IX - Sansone I Savannah 21-95, L.P.

Mailing Address: 3819 Maple Ave - Dallas, TX 75219

Developer Contact: Ken Burke
Phone #: 402-660-0989 Email: kburke@lineagelogistics.com

I hereby acknowledge that the above information is true and correct.

Chad Zittrouer

Applicant's Signature — Date: 5/14/21

See Exhibit A

Owner's Signature (If Different form Applicant) — Date: 5/14/21

Please see page 2 for required submittal checklist

Updated 4/28/2020

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-0977-

City of Port Wentworth
▪7224 Highway 21 ▪ Port Wentworth ▪ Georgia ▪ 31407 ▪ 912-999-2084

Site Plan Review Application Submittal Checklist

Documentation below is required for a complete submittal.

- ☒ Signed and Completed Application
- ☒ 5 ~~3~~ Full size sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☒ 15 half size (11" X 17") sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ 2 copies of hydrology reports (if applicable) N/A for concept
- ☒ Names, mailing address, and PIN number of all property owners within 250 feet of all property lines
- ☒ 1 8 ½" X 11" of site plan civil drawings or concept plan (depending on type of site plan)
- ☒ PDF of entire submittal (either flash drive or CD)
- ☐ Other Engineering details or reports may be required once submittal has been received
- ☒ Site plan review fee check
  - No Land Disturbance- $206.00 Site Plan Fee + $50.00 Admin Fee = Total $256.00
  - With Land Disturbance - $836.00 Site Plan Fee + $50.00 Admin Fee = Total $886.00

Additional Fee Statement: If engineer review cost to the City exceeds the site plan review fee that is paid at the time of initial application submittal, you may be required to pay additional review cost.

I have read and agree to the above additional fee statement

Chad Zittrouer

Applicant's Signature

5/14/21

Date

Updated 4/28/2020

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-0977-

EXHIBIT A

CH REALTY IX-SANSONE I SAVANNAH 21-95, L.P., a Delaware limited partnership

By: CH Realty IX/I Savannah 21-95 GP, L.L.C., a Delaware limited liability company, its general partner

By: Fund IX Managers, L.L.C., a Texas limited liability company, its manager

By: _____
Name: Matthew E. Colter
Title: Vice President

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-0977-

Adjacent Property Owners

PIN: 70977 01020, 70977 01019, 70977 01018 & 70977 01017
Owner: Georgia Power Company
Property Address: Monteith Road, Port Wentworth, GA 31407
Owners Address: 241 Ralph McGill Blvd NE, Atlanta, GA 30308

PIN: 70977 01027 & 70977 02002
Owner: CH Realty IX-Sansone I Savannah 21-95, L.P.
Property Address: Hendley Dr & Monteith Road, Port Wentworth, GA 31407
Owners Address: 3819 Maple Ave, Dallas, TX 75219

PIN: 70977 01016
Owner: Leon Thomas
Property Address: 208 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 208 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01015
Owner: Mae Frances Bryant
Property Address: 212 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 212 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01014
Owner: Robert L. Bryant & Cotea D. Jones
Property Address: 216 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 216 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01013
Owner: Wibert Hurst
Property Address: 220 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 220 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01012
Owner: Thelma Stewart, Robein Ruth Shubert and Marion Stewart
Property Address: 230 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 230 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01011
Owner: Mount Moriah Baptist Church
Property Address: 228 Monteith Rd, Port Wentworth, GA 31407
Owners Address: 228 Monteith Rd, Port Wentworth, GA 31407

PIN: 70977 01010
Owner: Body of Christ Church and Ministries
Property Address: Monteith Rd, Port Wentworth, GA 31407
Owners Address: 201 Birch Dr, Rincon, GA 31326

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-0977-

PIN: 70977 01008
Owner: Greenland Developers, Inc.
Property Address: 240 Monteith Rd, Port Wentworth, GA 31407
Owners Address: P.O. Box 1628, Springfield, GA 31329

PIN: 70977 01024 & 70977 01025
Owner: Walter M. Czura
Property Address: 135 Ferguson Rd Port Wentworth, GA 31407
Owners Address: P.O. Box 6567, Hilton Head, SC 29938

PIN: 70037 02002 & 70037 02002A
Owner: PFJ Southeast, LLC
Property Address: 7001 Highway 21, Port Wentworth, GA 31407
Owners Address: P.O. Box 54650, Lexington, KY 40555

PIN: 70037 02002B
Owner: City of Port Wentworth
Property Address: Augusta Rd, Port Wentworth, GA 31407
Owners Address: 7224 GA Highway 21, Port Wentworth, GA 31407

PIN: 70037 01043
Owner: Enmark Station, Inc
Property Address: 401 Oleary Dr, Port Wentworth, GA 31407
Owners Address: P.O. Box 728, Savannah, GA 31402

PIN: 70978 05018
Owner: Robert Lee Hester
Property Address: Monteith Rd, Port Wentworth, GA 31407
Owners Address: 8 Nanny Cove Ct, Bluffton, SC 29910

PIN: 70976 02021
Owner: Coastal Club Port Wentworth, LLC
Property Address: 50 Newport Rd, Port Wentworth, Ga 31407
Owners Address: 1031 West Morse Blvd, Suite 240, Winter Park, FL 32789

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-0977-

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00313404 5/14/2021 2:53 PM
OPER: ME TERM: 011
REF#: CK 6994

TRAN: 112.0000 BLDG PERMIT
210185 886.00CR
CH REALTY IX-SANDSONE SAVANNAH
7-0977-01-028
DEV-SPR 886.00CR

TENDERED: 886.00 CHECK
APPLIED: 886.00-

CHANGE: 0.00

WWW.CITYOFPORTWENTWORTH.COM

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Application (2470 : Site Plan Review Application (Specific) 7-

THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31405 | 912.234.5300
WWW.THOMASANDHUTTON.COM

May 26, 2021

Mr. Brian Harvey
Director of Development Services
City of Port Wentworth
305 South Coastal Highway
Port Wentworth, GA 31407

Re: Hendley Road Lineage
Port Wentworth, Georgia
Site Plan Review
J–25412.0021

Dear Brian:

We have received the site plan for the referenced project submittal. The following information was included in the submittal package:

- Hydrology Report, dated May 17, 2021
- Site Drawings of Project Bajor, Dated May 12, 2021

This site plan review was completed based on our interpretation of the latest City of Port Wentworth zoning ordinance and development regulations. Thomas & Hutton's review was performed in an effort to assess if the application package for the proposed improvements is in general conformance with City of Port Wentworth regulations. Our review shall not be interpreted as a detailed technical analysis of the design or for verification of technical sufficiency for elements of design. Under no circumstances shall our review and comments related to the site plans relieve the Applicant's Design Professional of their professional obligations and professional standards of care. As such, the design submitted by the Applicant's Design Professional shall be the sole responsibility of the Applicant's Design Professional. Thomas & Hutton shall not accept any responsibility for any liability due to design and construction, in whole or in part, for any aspect of the design and construction of design documents.

We have reviewed the submittal package and offer the comments noted below for consideration.

General Comments

1. The site is zoned as Planned General Business with a zoning code of P–C–3. There appears to be a PUD overlay district for the site. Please confirm that no additional PUD development requirements apply to the site.

2. Pursuant to the National Wetland Inventory (NWI), it appears that there are wetlands that exist onsite and will be impacted. Please provide a USACE JD, and, if wetland impacts are proposed, a USACE wetlands impact permit.

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-1st Comment Letter T&H 5.26.21 (2470 : Site Plan Review

3. The site lies within an Effective FEMA Zone X, area of minimal flood hazard; Zone X (shaded), area of moderate flood hazard; and special flood hazard area (SFHA) Zone AE with a base flood elevation (BFE) of 12 ft as documented on FEMA FIRM Panel 13051C0040H, effective August 16, 2018. Please confirm no floodplain impacts are proposed as a part of this development.

4. Please provide EPD water/wastewater permits, if applicable.

5. Please provide an NPDES NOI submittal package, GSWCC approval, and any other applicable permits.

Stormwater Comments

In accordance with the City of Port Wentworth Drainage and Flood Control Ordinance (PWSMO) Section 7–79, this project proposes site development that will involve the creation of 5,000 square feet or more of impervious cover that otherwise did not exist on the site previously. As such, all stormwater provisions apply to this site.

1. Provide all requirements of a stormwater management design plan as prescribed in Section 7–80(d) and 7-82 of the Port Wentworth Code of Ordinances. Runoff reduction appears to not be addressed within this submittal.

2. Please provide the Owner's Certification statement required by Section 7–80(d)(6) of Article III of the Drainage and Flood Control Ordinances within the Port Wentworth Code of Ordinances.

3. Please acknowledge that a performance bond will be required prior to construction, as listed in Section 7–80(h) of Article III of the Drainage and Flood Control Ordinances within the Port Wentworth Code of Ordinances.

4. Provide a stormwater management inspection and maintenance agreement and plan as prescribed in Section 7–80(e) of the Port Wentworth Code of Ordinances.

5. Per Section 3.7.10 of the CDM, please provide a statement of no adverse upstream or downstream impacts to the existing stormwater system.

6. Please provide existing and proposed drainage basin exhibits.

7. Additional stormwater design comments may arise upon submission of the requested requirements.

Water, Fire System, and Sanitary Sewer Design Comments

1. Please provide the Water/Wastewater Availability Request Form found in Appendix A of the Port Wentworth Comprehensive Design Manual (CDM) as required by Section 3.3 of the CDM.

2. Please provide signed and sealed design calculations and flow requirements for the water distribution system and fire flow requirements per Section 3.4 of the latest Port Wentworth CDM.

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-1st Comment Letter T&H 5.26.21 (2470 : Site Plan Review

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-1st Comment Letter T&H 5.26.21 (2470 : Site Plan Review

3. Please provide signed and sealed design calculations and flow requirements for the wastewater collection system per Section 3.5 of the latest Port Wentworth CDM.

4. Provide notes in the plans and specifications as indicated in Section 3.4.2(h) of the latest Port Wentworth CDM.

5. If no fire system is proposed, please provide a statement on the plans.

6. Complete and provide the Water Distribution System Check List (Exhibit 1 in the Comprehensive Development Manual.)

7. Complete and provide the Wastewater Collection System Check List (Section 3.5.3 Exhibit 1 in the Comprehensive Development Manual).

8. Complete and provide the Fire Protection Design Requirements form as found on page 17 of the Port Wentworth CDM.

9. Please provide typical profiles of proposed utilities and indicate finished grade and existing grade elevations per Section 3.1 of the latest Port Wentworth CDM.

10. Additional water, fire system, and sanitary sewer design comments may arise upon submission of the requested calculations and materials.

Plan Sheets Comments

1. Please provide existing roads, buildings, parking areas and other impervious surface per Section 7-80(b)(3) of the Port Wentworth Code of Ordinances.

Site Lighting Comments

1. Please provide a Site Lighting Plan for the development, if applicable.

Paving, Signage, and Parking Comments

1. Applicant shall ensure construction of sidewalks, ADA parking, and accessible routes are in conformance with federal ADA standards, latest edition. Please provide a note on the plans.

2. Provide all applicable details concerning the parking spaces, both handicap accessible and otherwise.

3. Any proposed signage will require a separate permit as outlined in Section 19.1–3 of Port Wentworth Code of Ordinances.

4. A building permit will be required as outlined in Section 7.3, Appendix B of Port Wentworth Code of Ordinances.

Thank you for your attention to this project. If there are any questions or comments, please feel free to call us at (912) 234–5300.

Sincerely,

THOMAS & HUTTON

Darby Burk

DMB/dmb

Enclosures

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-1st Comment Letter T&H 5.26.21 (2470 : Site Plan Review

Project Timeline

Specific Site Plan – Lineage Warehouse Hendley Road

Review By Thomas & Hutton

- 5/14/2021—Application received Incomplete:
  - Missing: PDF, Hydro, 15 Copies of Site Plan
- 5/14/2021—Sent email to Chad Zittrouer about missing items. Gave him until 5:00 PM on 5/17/2021 or it would not be on the June 2021 meetings.
- 5/17/2021--- received missing information.
- 5/18/2021—send package to Thomas & Hutton to start review.
- 5/26/2021—Received 1st Comment letter from Thomas & Hutton. Chad was copied on the email.
- 6/14/2021—sent email to Jennifer, T&H, for a status of the site plan review. Jennifer responded that as of 6/14/2021 @ 4:13 PM there had been no return comments or submittals from the applicant.
- 6/14/2021—Planning Commission voted to approve the application 3-1 during the regularly scheduled meeting.
- 6/23/2021—Email received from Chad Zittrouer requesting to table this item to the July City Council meeting.

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Timeline (2470 : Site Plan Review Application (Specific) 7-0977-01-

CITY OF PORT WENTWORTH

PLANNING COMMISSION

JUNE 14, 2021

Council Meeting Room | **Regular Meeting** | **6:30 PM**

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Chairman CJ Neesmith called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Commissioner Herrin led the Prayer and Pledge of Allegiance

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rufus Bright	Planning Commissioner	Absent	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Present	
Lauree Morris	Planning Commissioner	Absent	
CJ Neesmith	Planning Commissioner	Present	
Gabrielle Nelson	Planning Commissioner	Present	
Melanie Ellis	Building Inspector	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

Motion to approve the agenda with the following changes: Table item 6.A to the next available Planning Commission meeting at the applicants request and text change in item 8.B by changing "General" to "Specific" on line three.

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Nelson
ABSENT:	Bright, Morris

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - May 10, 2021 7:00 PM

Attachment: Planning Commission Agenda Minutes June 14, 2021 DRAFT (2470 : Site Plan Review Application (Specific) 7-0977-01-028

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Gabrielle Nelson, Planning Commissioner
SECONDER:	Bill Herrin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Nelson
ABSENT:	Bright, Morris

6. ZONING MAP AMENDMENTS (REZONING)

A. Zoning Map Amendment Application submitted by Phillip McCorkle, McCorkle, Johnson, McCoy, LLP., of behalf of Samuel Varnedoe, Jr., and Comer Varnedoe Meadows, for PIN's #'s 7-0976-02-044, portion of 7-0976-02-043, 7-0976-02-042, 7-0976-02-040, 7-0976-02-039, 7-0976-02-037, and a portion of 7-0976-02-036 (Saussy Road) to Rezone from RA (Residential Agriculture) to P-I-1 (Planned Industrial) Zoning District for the purpose of Warehousing

Item tabled to next available meeting per applicants request.

RESULT:	**DELAYED [UNANIMOUS] Next: 7/12/2021 6:30 PM**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Nelson
ABSENT:	Bright, Morris

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

A. Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of Northpoint Industrial, LLC., for of PIN #'s 7-0039-01-017, 7-0039-01-018Y, 7-0039-01-018Z, 7-0039-01-022Y, 7-0039-01-022Z, 7-0039-01-040, 7-0039-01-042, 7-0039-01-043 (120 Pinderpoint Road) for a Specific Development Site Plan to allow a Trailer Yard in a P-I-1 (Planned Industrial) Zoning District

Mark Crapps, Kern & Co., LLC., was present on behalf of the applicant and offered to answer any questions the commission may have. There were no questions/comments from the commission. There were no public comments. Commissioner Herrin made a motion to approve the application. Commissioner Rollf seconded the motion. The vote was unanimous.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Wanda Rollf, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Nelson
ABSENT:	Bright, Morris

B. Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of CH Realty IX - Sansone, Savannah 21-95, L.P., for a portion of PIN # 7-0977-01-028 (Hendley Road) for a Specific Development Site Plan to allow a Warehouse / Distribution Center (Lineage) in a P-I-2 (Planned Industrial) Zoning District

Mark Crapps, Kern & Co., LLC., was present on behalf of the applicant. Mr. Crapps gave a brief overview of the project and offered to answer any questions the commission may have. Commissioner Nelson asked if any changes have been made from the approved concept plan. Mr. Crapps responded no. There were no public comments. Commissioner Rollf made a motion to approve the application. Commissioner Franklin seconded the

Attachment: Planning Commission Agenda Minutes June 14, 2021 DRAFT (2470 : Site Plan Review Application (Specific) 7-0977-01-028

motion. Commissioners Herrin, Franklin, and Rollf voted Yes. Commissioner Nelson voted No. The motion passes 3-1.

RESULT:	**APPROVED [3 TO 1]**
MOVER:	Wanda Rollf, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf
NAYS:	Nelson
ABSENT:	Bright, Morris

9. NEW BUSINESS

10. ADJOURNMENT

A. Adjournment

RESULT:	**ADOPTED [UNANIMOUS]**
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Rollf, Nelson
ABSENT:	Bright, Morris

_____
Chairman

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2021.

_____
Secretary

Attachment: Planning Commission Agenda Minutes June 14, 2021 DRAFT (2470 : Site Plan Review Application (Specific) 7-0977-01-028

SITE DRAWINGS OF

PROJECT BAJOR

FOR

LINEAGE LOGISTICS

PORTWENTWORTH, GA

KC PROJECT #: 210067

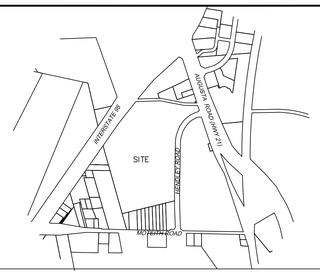
MAY 12, 2021

KC PROJECT # 210067.010

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

☐ NOT FOR CONSTRUCTION
☐ RELEASED FOR CONSTRUCTION
DATE: _____ BY: _____

VICINITY MAP:



PROJECT SITE DATA:

SITE DATA:

PROJECT AREA: 29.0 AC
AREA OF DISTURBANCE: 29 ACRES
ZONING: P-I-2
P.I.N.: 7-0977-01-028
PROJECT ADDRESS: 0 HENDLEY ROAD
PROJECT CITY: PORT WENTWORTH
DISTRICT NUMBER: ???
LOT NUMBER:
OWNER NAME: CH REALTY IX-SNASONE I SAVANNAH 21-95, LP
CONTACT: KEN BURKE
OWNER ADDRESS: 3819 MAPLE AVE
OWNER CITY: DALLAS, TX 75219
TELEPHONE NO.: 402-660-0989
DATE OF SURVEY: BY OTHERS
GOVERNING AGENCY: PORT WENTWORTH

INDEX OF DRAWINGS:

	COVER SHEET		
C-001	GENERAL NOTES		
C-002	STAKING PLAN		
C-003	PAVING, GRADING & DRAINAGE PLAN		
C-004	UTILITY PLAN		
C-005	INITIAL EROSION PLAN		
C-006	INTERMEDIATE EROSION PLAN		
C-007	FINAL EROSION PLAN		
C-008	SOIL EROSION & SEDIMENTATION CONTROL DETAILS		
C-009	SOIL EROSION & SEDIMENTATION CONTROL DETAILS		
C-0010	SOIL EROSION & SEDIMENTATION CONTROL DETAILS		
C-0011	SITE DETAILS		

VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

rkb architects, Inc.
2900 campanelli drive, brairthree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT: Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV:	DATE	DESCRIPTION

DRAWING NO.: C-001

TITLE: STAKING PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

SESC NOTES:

1. ALL NEW DISTURBED AREAS WILL BE GRASSED BY SEEDING OR SPRIGGING AS TEMPORARY STABILIZATION. ALL PERMANENT GRASS SHALL BE SOD.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE DUST CONTROL OF ALL DISTURBED AREAS BY THE USE OF WATER AND FAST GROWING, TEMPORARY VEGETATIVE ON ALL STOCKPILED SOILS.
4. CONTRACTOR WILL PROVIDE A CONSTRUCTION SCHEDULE INCLUDING ALL EROSION AND SEDIMENT CONTROL MEASURES.
5. CONTRACTOR SHALL PROVIDE 1.5"-3.5" STONE 6" THICK, 50' MIN. LONG BY 20' MIN. WIDE AT ALL CONSTRUCTION EXITS TO MINIMIZE TRANSPORT OF SOIL FROM SITE BY VEHICLE WHEELS.
6. ALL EXISTING INLETS AND DITCHES SUBJECT TO STORM WATER RUNOFF FROM THE SITE AND ALL NEW INLETS SHALL BE PROVIDED WITH HAY BALES SILT CARRIERS TO MINIMIZE SOIL TRANSPORT OFF SITE BY STORM WATERS.
7. ALL CONSTRUCTION WILL BE IN ACCORDANCE WITH THE GOVERNING AGENCY'S, STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS (AVAILABLE FROM THE CITY OF SAVANNAH'S WEBSITE) AND THE SPECIFICATIONS, NOTES AND DETAILS ON THESE DRAWINGS.
8. TESTING - COORDINATE ALL TESTING AS REQUIRED IN THE SPECIFICATIONS. PROVIDE ENGINEER WITH COPY DIRECT FROM TESTING LAB.
9. CONTRACTOR SHALL MAINTAIN SITE ON A DAILY BASIS TO PROVIDE FOR POSITIVE DRAINAGE. CONTRACTOR, AT HIS COST, SHALL GRADE SITE AND PROVIDE NECESSARY TEMPORARY DRAINAGE SWALES TO INSURE STORM WATER DOES NOT POND ON SITE.
10. PRIOR TO CONSTRUCTION, ALL BUILDING AREAS, PLUS 10 FEET ON EACH SIDE AND ALL AREAS TO BE PAVED, SHOULD BE STRIPPED OF ALL VEGETATION, TOP SOIL AND ROOT SYSTEMS.
11. SITE DRAINAGE SHALL BE ESTABLISHED TO PREVENT ANY PONDED WATER CONDITIONS WITHIN THE CONSTRUCTION AREA AND TO FACILITATE THE RAPID RUN-OFF OF STORM WATER.
12. ANY STUMP HOLES OR OTHER DEPRESSIONS SHOULD BE CLEARED OF LOOSE MATERIAL AND DEBRIS AND SHOULD THEN BE BACK FILLED WITH APPROVED FULL, THE BACK FILL SHOULD BE PLACED IN SIX INCH MAXIMUM LIFTS AND COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM-D-1557. TO 95% DENSITY IN ACCORDANCE WITH ASTM-D-1557.
13. ANY UTILITIES THAT UNDERLIE THE SITE SHOULD, UNLESS NOTED OTHERWISE, BE RELOCATED AND THE TRENCHES BACK FILLED WITH APPROVED SOIL. THE BACK FILL SHOULD BE PLACED IN SIX INCH MAXIMUM LIFTS AND COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM-D-1557.
14. THE SUBGRADE SHOULD BE PROOF ROLLED WITH A LOADED DUMP TRUCK TO LOCATE UNSTABLE OR SOFT AREAS. THESE AREAS SHOULD THEN BE INVESTIGATED TO DETERMINE THE CAUSE OF THE INSTABILITY. IF DUE TO UNSUITABLE SOIL, SUCH AS HIGHLY ORGANIC SOILS OR SOFT CLAYS, THE AREA SHOULD BE UNDERCUT TO A FIRM SOIL AND REPLACED WITH APPROVED FILL COMPACTED IN SIX INCH LIFTS TO MINIMUM DENSITY OF 95% IN ACCORDANCE WITH ASTM-D-1557. IF THE INSTABILITY IS DUE TO EXCESS MOISTURE IN OTHERWISE SUITABLE SOIL, THE AREA SHOULD BE DRAINED AND COMPACTED TO 95% DENSITY. ANY FILL REQUIRED TO LEVEL OR RAISE THE SITE SHOULD THAN BE PLACED IN 6" THICK LOOSE LIFTS AND COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM-D-1557.
15. ALL OF THE FILL FOR THIS PROJECT SHOULD CONSIST OF A CLEAN, FREE DRAINING SAND WITH A MAXIMUM OF 15% FINES. THE FILL SHOULD BE FREE OF OBJECTIONABLE ROOTS, CLAY LUMPS AND DEBRIS.
16. ANY FOOTING EXCAVATIONS THAT ARE DIRECTLY ADJACENT TO THE EXISTING FOUNDATIONS SHOULD BE DONE IN SMALL INCREMENTS TO AVOID UNDERMINING THEM AND CAUSING A LOSS OF SUPPORT TO THE EXISTING STRUCTURE. IF NECESSARY, THE EXCAVATIONS SHOULD BE SHEETED AND BRACED OR THE SOIL IN THE AFFECTED AREA SHOULD BE STABILIZED BY GROUTING.
17. THE FOOTING EXCAVATIONS AND ALL OF THE PREPARED SLAB UPGRADE SHOULD BE MAINTAINED IN A DRY AND COMPACTED CONDITION UNTIL THE CONCRETE IS PLACED. AREAS THAT ARE SOFTENED BY WATER OR BY CONSTRUCTION ACTIVITY BEARING. SHOULD BE REWORKED AND RECOMPUTED TO THE REQUIRED DENSITY AND BEARING.
18. MOISTURE CONTENT SHALL BE AT OR BELOW OPTIMUM.
19. ALL CONSTRUCTION WITHIN THE CITY'S RIGHT-OF-WAY WILL REQUIRE AN ENCROACHMENT PERMIT FROM PUBLIC WORKS DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THIS PERMIT PRIOR TO CONSTRUCTION.
20. ALL CONSTRUCTION SHALL CONFORM TO GOVERNING AGENCY'S TECHNICAL SPECIFICATIONS AND STANDARD CONSTRUCTION DETAILS.
21. THE DETENTION BASINS SHALL BE CONSTRUCTED IN CONJUNCTION WITH CLEARING AND GRADING TO HELP PREVENT THE LOSS OF SEDIMENT FROM THE SITE. THE CONTRACTOR SHALL CLEAN OUT ANY SEDIMENT DEPOSITED IN THE BASINS DURING THE CONSTRUCTION PERIOD SO THAT THE SPECIFIED WATER DEPTH AT NORMAL POOL IS MAINTAINED; THE CONTRACTOR MAY OVER EXCAVATE THE BASINS TO ACCOMPLISH THIS, IF DESIRED, AT THIS OWN EXPENSE AND WITH THE CONCURRENCE OF THE ENGINEER.
22. SEDIMENTATION BASIN SHALL BE CONSTRUCTED IN CONJUNCTION WITH CLEARING AND PRIOR TO ANY OTHER SITE WORK.

WATER - SEWER NOTES:

1. FOR ALL WATER, SANITARY SEWER LINES AND STORM DRAINAGE INSTALLATION. CALL - ONE CALL UTILITIES PROTECTION CENTER BEFORE YOU DIG DIAL 811 OR 1-800-282-7411. WWW.GEORGIA811.COM CALL 3 WORKING DAYS BEFORE YOU DIG.
2. IN ADDITION TO THE SEDIMENTATION AND EROSION CONTROL MEASURES AS INDICATED ON THE PLANS THE CONTRACTOR SHALL TAKE WHATEVER ACTIONS AS ARE NECESSARY TO ENSURE THAT ALL SEDIMENTATION IS CONFINED TO THE SITE AND THAT NO OFFSITE EROSION IS CAUSED BY THE WORK EITHER DIRECTLY OR INDIRECTLY.
3. HIGHLY CHLORINATED DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORMWATER SYSTEM. IT SHALL BE DISCHARGED INTO THE SANITARY SEWER SYSTEM AS PER THE ENGINEER DIRECTION AND THE CITY'S/COUNTY'S INSPECTION DEPARTMENT OBSERVATION.
4. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE HAZARDOUS TO TRAFFIC, THEY SHALL AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPE, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT FREE FROM DIRT AND OTHER FOREIGN MATTER AT ALL TIMES.
5. ANY DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND IT SHALL BE KEPT CLEAN BY APPROVED MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY APPROVED MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
6. CLEAN THE INTERIORS OF ALL PIPE BY WASHING OUT ALL DIRT BEFORE LAYING.
7. FLUSH THE NEW PIPE LINES UNTIL WATER RUNS CLEAR AT THE END OF ALL MAINS AND LATERALS. THIS SHOULD BE DONE AFTER THE PRESSURE TEST AND BEFORE DISINFECTION. A MINIMUM TIME OF 2 MINUTES AND UNTIL THE WATERMAIN RUNS CLEAR IS REQUIRED IN ORDER TO PURGE THE LINE OF ANY FOREIGN MATERIALS.
8. DURING INSTALLATION, WHEN PIPE LAYING IS NOT IN PROGRESS, A MECHANICAL JOINT PLUG OR CAP, AR APPROVED EQUAL, WILL BE USED TO FORM A WATER TIGHT SEAL AT BOTH ENDS OF THE LINE BEING LAID.
9. MAINTAIN A MINIMUM OF EIGHTEEN (18") INCH VERTICAL SEPARATION DISTANCE BETWEEN ALL WATER LINE/LATERALS AND ALL STORM DRAIN LINES AND SANITARY SEWER LINES/LATERALS.
10. IF AN IRRIGATION SYSTEM IS PROPOSED FOR SUBJECT DEVELOPMENT, COMPLY WITH THE FOLLOWING REQUIREMENTS BEFORE ANY CONNECTION TO THE CITY WATER SYSTEM:
    (A) SUBMIT PLANS AND SPECIFICATIONS FOR _ SUBJECT IRRIGATION SYSTEM.
    (B) INSTALL AN APPROVED BACKFLOW PREVENTOR ON THE IRRIGATION SYSTEM,(C) METER THE IRRIGATION SYSTEM IN ACCORDANCE WITH THE GOVERNING AGENCY'S SPECIFICATIONS.
    (D) RESTRAIN ALL CRITICAL BENDS AND CONNECTIONS.
    (E) PROVIDE ERU CALCULATIONS FOR THE IRRIGATION SYSTEM
11. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN APPROVED BACKFLOW PREVENTION DEVICE AND FIRE HYDRANT METER OBTAINED FROM THE GOVERNING AGENCY'S WATER OPERATION DEPARTMENT.
12. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE DONE BY THE CORE DRILL METHOD.
13. THE WATER SERVICE LATERAL SERVING THE FACILITY SHALL BE INSTALLED BY THE DEVELOPER/CONTRACTOR FROM THE WATER MAIN TO THE METERS. THE PUBLIC WORKS DEPARTMENT WILL ONLY MAKE THE WET TAP. THE GOVERNING AGENCY WILL NOT INSTALL THE WATER SERVICE LATERAL.
14. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CERTIFICATIONS OF BACKFLOW DEVICES TO THE ENGINEER.
15. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE GOVERNING AGENCY'S LATEST CONSTRUCTION SPECIFICATION AND DETAILS.
16. LOCATE HIGHPOINT OF WATERMAIN AND INSTALL AIR RELIEF VALVE TO FACILITATE AIR REMOVAL FROM WATERMAIN.
17. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
18. CONTRACTOR TO VERIFY ALL INVERT ELEVATIONS OF SANITARY SEWER LATERALS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER WITH INVERT DATA TO INSURE THERE ARE NO CONFLICTS.
19. SEE ARCHITECTURAL PLUMBING PLAN FOR EXACT TIE LOCATION & LINE SIZES.
20. ALL WATER METERS AND STRAINERS SHALL BE PURCHASED FROM THE CITY.
21. THE INDIVIDUAL REQUESTING WATER SERVICE SHALL BE RESPONSIBLE FOR EXCAVATION, TAPPING, AND BACKFILLING THE WATER MAIN FROM WHICH THE SERVICE IS REQUIRED.
22. ALL MATERIAL USED FROM TAP TO DISCHARGE PIPE SHALL BE M.J. DUCTILE IRON, RESTRAINED JOINT, INCLUDING BY-PASS.
23. ALL VALVES 4-INCHES OR LARGER SHALL BE INSTALLED IN A MANHOLE, FOR THE TAPPING VALVE ONLY.
24. ALL TAPPING SLEEVES SHALL BE DUCTILE IRON, MJ, AND PRESSURE TESTED AT 150 PSI FOR A MINIMUM OF ONE HOUR WITH A PRESSURE LOSS NO GREATER THAN 1 PSI.
25. THE GOVERNING AGENCY'S WATER DEPARTMENT SHALL INSPECT THE PRESSURE TEST, IF THE CITY DOES NOT INSPECT THE PRESSURE TEST, THE CITY WILL NOT ACCEPT ANY RESPONSIBILITY OF MAINTENANCE FOR THE TAPPING VALVE OR SLEEVE.
26. THE TAPPING GATE VALVE SHALL BE RESILIENT SEAT, EPOXY COATED, M.J. BY FLANGE, DOMESTIC MADE.
27. ALL MATERIAL USED AND WHICH COMES IN CONTACT WITH DRINKING WATER DURING ITS DISTRIBUTION SHALL NOT ADVERSELY AFFECT DRINKING WATER QUALITY OR PUBLIC HEALTH. MATERIALS MUST BE CERTIFIED FOR CONFORMATION WITH AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION STANDARD 61 (ANSI/NSF STANDARD 61).
28. BACKFLOW PREVENTOR, VALVES AND POST INDICATOR VALVES FOR FIRE SPRINKLER SYSTEMS SHALL BE ELECTRICALLY SUPERVISED BY A TAMPER SWITCH INSTALLED IN ACCORDANCE WITH NFPA72.
29. IF THIS IS AN EXISTING FACILITY, THE WATER METER AND BACKFLOW PREVENTOR WILL NEED TO MEET THE CURRENT STANDARDS.
30. FOR FORCE MAIN DISCHARGE MANHOLES (INCLUDING THE TWO (2) MANHOLES DOWNSTREAM OF THE DISCHARGE MANHOLE, FOR A TOTAL OF THREE (3) MANHOLES), DROP MANHOLES AND LIFT STATION WETWELLS: THE PROTECTIVE COATING SHALL BE A POLYMER BASED POLYURETHANE OR A HIGH-BUILD, SOLVENT-FREE EPOXY COATING. FOR SMALL LIFT STATIONS AT THE DISCRETION OF THE CITY, THE NUMBER OF MANHOLES REQUIRING COATING MAY BE REDUCED.
31. FOR LIFT STATION WETWELLS, THE COATING LIMITS SHALL INCLUDE FROM THE BOTTOM OF FILLET, WETWELL WALLS, AND ROOF. COATING SYSTEM SHALL OVERLAP 1" TO 2' WHERE HATCHES SIT ON THE ROOF; BUT SHALL EXCLUDE THE WETWELL FLOOR. FOR MANHOLES, THE COATING LIMITS SHALL INCLUDE FROM THE FLOW LINE IN THE TROUGH OF THE INVERT UP TO THE RING WITH A 1" TO 2' OVERLAY ON THE RING.
32. A CONTINUOUS RUN OF PLASTICIZED METALLIC TAPE SHALL BE INSTALLED ABOVE THE TOP OF PVC PIPE USED FOR GRAVITY SEWER AND FORCE MAINS AT APPROXIMATELY 30" BELOW FINISHED GRADE. THE TAPE SHALL BE SUITABLE FOR DETECTION WITH METAL PIPE LOCATION EQUIPMENT, COLOR CODED AND LABELEED TO IDENTIFY CONTENTS OF THE PIPE AND BRIGHTLY COLORED TO CONTRAST WITH THE SOIL, IN ADDITION TO THE TAPE, A CONTINUOUS RUN OF TRACER WIRE SHALL BE ATTACHED TO THE PIPE AND CONNECTED TO MANHOLE RINGS. ON PIPE RUNS GREATER THAN 500', THE TRACER WIRE SHALL BE ATTACHED TO A 2" GALVANIZED PIPE WITH A 180 DEGREE BEND AT THE TOP, EXTENDING 36" ABOVE GRADE FOR CONNECTION TO LOCATOR EQUIPMENT. THE MAXIMUM DISTANCE BETWEEN 2" PIPE STUBS SHALL BE 500'.
33. ALL SANITARY SEWER LATERALS SHALL BE PROPERLY MARKED AT THE POINT WHERE LATERALS TERMINATE WITH PVC PIPE PAINTED GREEN. ADDITIONAL MARKINGS SHALL BE STAMPED IN THE CURB OR MARKED ON THE EDGE OF PAVING WITH AN APPROVED PERMANENT MARKER CAPABLE OF BEING LOCATED BY A MAGNETIC LOCATOR. SUCH AS A NAIL WITH CAP, IF NO CURB PRESENT. LATERALS SHALL BE MARKED WITH MARKING TAPE AN TRACER WIRE AS DESCRIBED ABOVE.
34. A CONTINUOUS RUN OF PLASTICIZED METALLIC TAPE SHALL BE INSTALLED ABOVE THE TOP OF PVC PIPE USED FOR WATER MAINS AT APPROXIMATELY 18" TO 24" BELOW FINISHED GRADE. THE TAPE SHALL BE SUITABLE FOR DETECTION WITH METAL PIPE LOCATION EQUIPMENT. COLOR CODED AND LABELED TO IDENTIFY CONTENTS OF THE PIPE AND BRIGHTLY COLORED TO CONTRAST WITH THE SOIL. IN ADDITION TO THE TAPE, A CONTINUOUS RUN OF TRACER WIRE SHALL BE ATTACHED TO THE PIPE AND CONNECTED TO CURB STOPS AND BROUGHT TO TOP OF VALVE. ON PIPE RUNS GREATER THAN 500', THE TRACER WIRE SHALL BE ATTACHED TO A 2" GALVANIZED PIPE WITH A 180 DEGREE BEND AT THE TOP, EXTENDING 36" ABOVE GRADE FOR CONNECTION TO LOCATOR EQUIPMENT. THE MAXIMUM DISTANCE BETWEEN 2" PIPE STUBS SHALL BE 500'.
35. ALL WATER SERVICES SHALL BE PROPERLY MARKED ABOVE GROUND WITH PVC PIPE PAINTED BLUE. ADDITIONAL MARKINGS SHALL BE STAMPED IN THE CURB OR MARKED ON THE EDGE OF PAVING WITH AN APPROVED PERMANENT MARKER CAPABLE OF BEING LOCATED BY A MAGNETIC LOCATOR, SUCH AS A NAIL WITH CAP, IF NO CURB PRESENT. SERVICES SHALL BE MARKED WITH MARKING TAPE AN TRACER WIRE AS DESCRIBED ABOVE.
36. ALL SIGNS SHALL BE 30" HIGH INTENSITY OR DIAMOND GRADE.
37. THREE INCH AND LARGER WATER METER AND STRAINERS SHALL BE PURCHASED FROM THE CITY.

***CURRENT BUILDING CODE ALLOWS MAXIMUM OF 216' OF 4" SANITARY SEWER @ 1%.
***CURRENT BUILDING CODE ALLOWS MAXIMUM OF 700' OF 6" SANITARY SEWER @ 1%.
***CURRENT BUILDING CODE REQUIRES CLEANOUT EVERY 100' & AT TURNS > 45 DEGREES.

DEMOLITION NOTES:

1. MINIMUM OF 10 DAYS PRIOR TO DEMOLITION OF BUILDING, THE DEMOLITION CONTRACTOR SHALL NOTIFY THE EPD USING THE EPD FORMS OF THE DEMOLITION. (FORMS AVAILABLE FROM ENGINEER)
2.
3. SEE DEMOLITION PLAN FOR SCOPE OF WORK.
4. ALL WATER AND SANITARY SEWER LATERALS ASSOCIATED WITH THIS PROJECT ARE TO BE CAPPED PRIOR TO DEMOLITION.
5. CONTRACTOR TO LOCATE ALL EXISTING SEPTIC TANKS AND REMOVE.
6. ALL UTILITIES TO BE REMOVED BY LOCAL UTILITY COMPANIES.
7. ALL DEMOLITION DEBRIS SHALL BE PROPERLY DISPOSED OFFSITE AT THE CONTRACTOR'S EXPENSE.

SITE NOTES:

1. THE GOVERNING AGENCY RESERVES THE RIGHT TO ACCESS PROPERTY FOR ON SITE INSPECTIONS.
2. PROPOSED DETENTION AND/OR SEDIMENTATION POND SHALL BE CONSTRUCTED IN CONJUNCTION WITH CLEARING AND PRIOR TO ANY OTHER SITE WORK OR BUILDING ERECTION.
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSTALLED AS DEEMED NECESSARY BY ON SITE INSPECTION.
4. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR OF CONTROL STRUCTURE & DETENTION POND UPON COMPLETION OF THE CONTRACT.
5. CONTRACTOR WILL NEED TO OBTAIN A RIGHT OF WAY PERMIT PRIOR TO PERFORMING CONSTRUCTION ACTIVITY IN THE CITY'S/COUNTY'S RIGHT OF WAY.
6. NO TREE MULCHING WITHIN OR ON TOP OF THE DETENTION BASIN.
7. ALL DRAINAGE STRUCTURES GREATER THAN 3 FEET SHOULD HAVE STEPS FOR EASY ACCESS.
8. AS-BUILT SHALL CONTAIN ACCURATE INFORMATION INCLUDING DEPTH, LENGTH, SIZE, SLOPE OF PIPES. ALSO REQUIRED ARE SPOT ELEVATIONS ON THE STORMWATER DETENTION FACILITY, PAVEMENTS TO ENSURE THE SITE GRADING PLAN AND THE CAPACITY OF THE DETENTION FACILITY ARE BUILT ACCORDING TO THE ACCEPTED CONSTRUCTION PLANS. THE CONTRACTOR SHALL KEEP ACCURATE RECORDS FOR "AS BUILTS" PROPOSES AND PROVIDE THIS INFORMATION TO THE ENGINEER AT THE COMPLETION OF THE PROJECT. IF THE CONTRACTOR FAILS TO FURNISH THIS INFORMATION, THE ENGINEER WILL OBTAIN THE NECESSARY INFORMATION AND CHARGE THE CONTRACTOR FOR THE SERVICES. THE ENGINEER WILL CHECK INFORMATION PROVIDED BY THE CONTRACTOR FOR ACCURACY. AS BUILT INFORMATION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING: ALL UTILITIES INCLUDING INVERTS, TOP ELEVATIONS, PIPE LENGTHS AND TYPE OF CONSTRUCTION MATERIAL; SPOT ELEVATIONS ON FORCE MAINS AND WATER LINES. THE DISTANCE OF THE CENTERLINE UTILITIES FROM A PERMANENT STRUCTURE. ALL VALVE MANHOLES AND VALVE BOXES SHALL BE LOCATED WITH RESPECT TO A PERMANENT STRUCTURE. GRADES SHALL BE CONFIRMED IN ROADS AND PARKING AREAS AS WELL AS SWALES TO SHOW DIRECTION OF STORMWATER FLOW. THE FINISHED FLOOR ELEVATION SHALL BE SHOWN ON ALL BUILDINGS. IF THE LANDSCAPING IS CHANGED IN ANY WAY AN AS BUILT OF THE LANDSCAPE PLAN IS TO BE SUBMITTED TO THE ENGINEER; AND ANY OTHER REQUIREMENT MADE BY THE GOVERNING AGENCY'S.
9. THE GOVERNING AGENCY MAY RESERVE THE RIGHT TO REQUIRE TELEVISING, PER CITY TELEVISING MANUAL, OF ALL SANITARY SEWER LINES 8" OR LARGER, ALL NEWLY CONSTRUCTED STORMWATER LINES AND STORMWATER LINES WHERE DAMAGE COULD OCCUR DURING CONSTRUCTION.
10. ANY AND ALL UTILITY CROSSINGS FOR WATER MAINS BETWEEN STORM OR SEWER PIPING SHOULD BE ACCOMPLISHED BY USING OF 45° BENDS BOTH DOWN AND UP.
11. ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON THE PLANS AND ARE NOT NECESSARILY ACCURATE AS TO PLAN OR ELEVATION. UTILITY FACILITIES SUCH AS SERVICE LINES OR UNKNOWN FACILITIES NOT SHOWN ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES, EXCEPT AS NOTED BELOW. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UTILITY FACILITIES OTHER THAN SERVICE LINES FROM STREET MAINS TO ABUTTING PROPERTY WHEN SUCH FACILITIES ARE NOT SHOWN ON THE PLANS AND THEIR EXISTENCE IS UNKNOWN TO THE CONTRACTOR PRIOR TO THE DAMAGES OCCURRING PROVIDING THE ENGINEER DETERMINES THE CONTRACTOR HAS OTHERWISE FULLY COMPLIED WITH THE SPECIFICATIONS, AND OBTAINED UTILITY LOCATES AS REQUIRED.
12. CONTRACTOR WILL BE REQUIRED TO ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE GOVERNMENTAL AGENCY IN CHARGE OF THE PROJECT.
13. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND INSPECTIONS AS REQUIRED FOR APPROVAL OF THE WORK WITH THE GOVERNMENTAL AGENCY WITH JURISDICTION.
14. CONTRACTOR WILL BE RESPONSIBLE FOR COST OF AND COORDINATION WITH LOCAL UTILITY COMPANIES OR AGENCIES FOR RELOCATION OF, OR CONNECTION TO, ALL EXISTING UTILITIES INCLUDING POWER AND TELEPHONE POLES AND WIRES.
15. ALL ELEVATIONS ARE BASED ON MEAN SEA LEVEL DATUM. NAVD 88.
16. A MINIMUM SHOULDER WIDTH OF 4 FEET WITH A MINIMUM TRANSVERSE SLOPE OF 5% WILL BE PROVIDED ADJACENT TO CURBS AND WALKS. ALL WALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
17. MAXIMUM EARTH SLOPES WILL BE 3:1. GRADE FROM SHOULDER EDGE TO RIGHT- OF-WAY AT 1% MINIMUM.
18. UNSUITABLE SUBGRADE MATERIAL WILL BE DETECTED BY PROOF ROLLING A MINIMUM OF 2 PASSED WITH A MINIMUM TRUCK WEIGHT OF 40 KIPS AFTER ROADWAY HAS BEEN BROUGHT TO APPROXIMATE SUBGRADE ELEVATION, TO BE OBSERVED BY ENGINEER AND GOVERNMENTAL INSPECTOR.
19. REMOVAL AND REPLACEMENT OF UNSUITABLE SUBGRADE MATERIAL WILL BE PAID FOR ON A CUBIC YARD BASIS IN PLACE MEASUREMENT, AT SUCH AUTHORIZED PRICE PER CUBIC YARD, AS AUTHORIZED BY THE ENGINEER.
20. SUBGRADE WILL BE COMPACTED FOR A DEPTH OF 24" EXTENDING 24" BEYOND PAVEMENT EDGES, TO A MINIMUM OF 100% STANDARD PROCTOR DENSITY AS MEASURED A.A.S.H.O. METHOD T-99.
21. UNLESS OTHERWISE NOTED, ALL PAVEMENT MARKING WILL BE AN ENGINEER APPROVED VEHICULAR TRAFFIC PAINT. (WHITE IN COLOR & 4" WIDE)
22. PROVIDE 1/2" EXPANSION JOINT IN NEW WALKS FOR DEPTH OF CONCRETE, WITH BITUMINOUS SEAL FOR TOP 1 INCH MINIMUM DEPTH AT ABUTMENTS WITH BUILDINGS OR OTHER CONCRETE STRUCTURES.
23. SAW-CUT CONTRACTION JOINTS WILL BE PROVIDED IN ACCORDANCE WITH DETAILS, CUT TO BE 1/4 DEPTH OF CONCRETE MINIMUM.
24. ALL DIMENSIONS ARE TO EXTERIOR FACE OF BUILDING, EDGE OF SURFACE COURSE OR BACK OF CURBING.
25. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
26. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
27. SEE BUILDING PLANS FOR EXACT BUILDING DIMENSIONS.
28. ALL UTILITIES WILL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
29. THE CONTRACTOR IS RESPONSIBLE TO BRING PROPOSED MANHOLE TOPS TO GRADE.
30. HIGHLY CHLORINATED DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORMWATER SYSTEM. IT SHALL BE DISCHARGED INTO THE SANITARY SEWER SYATEM AS PER THE ENGINEER DIRECTION AND THE CITY'S/COUNTY'S INSPECTION DEPARTMENT OBSERVATION.

ADA NOTES:

1. ACCESSIBLE ROUTE - EXTERIOR: MINIMUM CLEAR WIDTH IS 3'. IF ACCESSIBLE ROUTE HAS LESS THAN 5' CLEAR WIDTH, THEN PASSING SPACES AT LEAST 5'X5' SHALL BE LOCATED EVERY 200' OR LESS (INTERSECTING SIDEWALKS SHOULD MEET THIS REQUIREMENT). LONGITUDINAL (RUNNING) SLOPE MAY NOT EXCEED 5% UNLESS RAMP IS INSTALLED (RAMPS MAY NOT EXCEED 8.33%). CROSS SLOPE MAY NOT EXCEED 2%. GAPS IN ROUTE MAY NOT EXCEED 1/2" IN WIDTH.
2. FINISHED SURFACE HEIGHT DIFFERENCE REQUIREMENTS:
   A. 0 TO 1/4" : NO REQUIREMENTS
   B. 1/4" TO 1/2" : BEVEL WITH 1:2 SLOPE
   C. LARGER THAN 1/2" : CONFORM TO REQUIREMENTS FOR RAMP
3. RAMPS: MAX RAMP SLOPE 8.33% (1:12) RAMPS STEEPER THAN 8.33% ARE NOT ACCEPTABLE MAX RISE FOR ANY RAMP RUN IS 30" (AT 8.33% SLOPE, MAXIMUM RUN OF RAMP IS 30') MAX CROSS SLOPE OF RAMP 2% (1:50)
   A. LANDINGS: RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP. LANDINGS SHALL BE AT LEAST AS WIDE AS RAMP LEADING TO IT. LANDING LENGTH SHALL BE MINIMUM 5' CLEAR IF RAMPS CHANGE DIRECTION AT LANDING. MINIMUM LANDING SIZE SHALL BE 5'X5', ALL LANDINGS ARE TO BE NO MORE THAN 2% SLOPE IN ANY DIRECTION.
   B. HANDRAILS: HANDRAILS REQUIRED ON BOTH SIDES (MIN. 36" CLEAR BETWEEN HANDRAILS) WHEN RAMP RISE IS GREATER THAN 6". PROVIDE MINIMUM 12" LONG HANDRAIL EXTENSIONS AT TOP AND BOTTOM LANDINGS. PROVIDE MINIMUM 2" HIGH EDGE PROTECTION OR RAIL WITH LESS THAN 4" CLEAR TO RAMP IF RAMP HAS DROP-OFFS. ROUTES BETWEEN BUILDINGS WITH ONLY DWELLING UNITS DO NOT HAVE TO HAVE HANDRAILS. STAIRS NOT ALLOWED AS PART OF ACCESSIBLE ROUTE BUT IF ADJACENT TO ROUTE OR PART OF TENANT SPACE MUST MEET REQUIREMENTS FOR STAIR RAILS.
4. CURB RAMPS:MAX SLOPE OF CURB RAMP 8.33% MAX SLOPE OF SIDE FLARES 10% MAX SLOPE OF ADJOINING GUTTERS, ROAD SURFACE, OR ACCESSIBLE ROUTE 5%. MIN WIDTH 36" (NOT INCLUDING SIDE FLARES). DETECTABLE WARNING IS REQUIRED ON CURB RAMPS IN PUBLIC RIGHT OF WAYS, AND SHALL BE 24" MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB LINE.
5. PAVEMENT MARKINGS: AS REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY (RECOMMENDED CROSSWALK MARKING TO DESIGNATE ACCESSIBLE PEDESTRIAN ROUTE)
6. PARKING SPACES: MINIMUM 8' WIDE ACCESSIBLE PARKING SPACE, MINIMUM 5' WIDE ACCESS AISLE AT STANDARD SPACES MINIMUM 8' WIDE ACCESS AISLE AT VAN ACCESSIBLE SPACES MAXIMUM 2% (1:50) SLOPE IN ANY DIRECTION
7. SIGNAGE: ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN ACCESSIBLE" MOUNTED BELOW THE SYMBOL. SUCH SIGNS SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE (60" ABOVE GRADE UNLESS OTHER HEIGHT REQUIRED BY LOCAL JURISDICTION).
8. ACCESSIBLE ROUTES: MUST COMPLY WITH ADA. THE FAIR HOUSING ACT AND ICC/ANSI A117.1-2003

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VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
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PROJECT NO.: 2021-002

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TIE LINE TABLE

LINE	LENGTH	DIRECTION
T1	15.54'	N54°50'13"E

LINE	LENGTH	DIRECTION
L1	42.85'	S73°57'25"W
L2	59.93'	S74°49'23"E
L3	63.22'	N56°50'25"W
L4	51.07'	S85°51'53"E
L5	51.71'	S48°20'00"W

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

Henrietta S Teele Estate
SMB 195, PG 68

300' R/W

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

N/F Greenland Developers, Inc
Deed Book 3432, Page 1
PIN 70977 01008

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Parcel 3
Cohen Hester Farm Place
1.323 Acres

Parcel 2
59.007 Acres

DETENTION AREA

NEW BUILDING
FF ELEV 22.67

Unpaved Fence

12' Private Road / 12' Lane
Plat Record Book H, Page 12

Maintained

Limited Access

Zone X
Zone X (Shaded)
Zone AE

Fence west of line 0.5'
Fence east of line 1.9'

Approximate Location of Floodplain Boundary

Billboard
(DB 3760 PG 24)

Toler No. 52

Toler No. 53

Toler No. 54

NGS Vertical Control Disk X395 15.43'

BM #1

Extreme West Portion of Drakie's Historic Map Book 4, Page 172 Plantation

Map Book 4, Page 172

Natural Gas and Utility Easement Permanent Easement (Deed Book 247L, Page 381)

SCG Pipeline, Inc.

Permit for crossing Pipeline Right of Way Deed Book 341T, Page 32

Colonial Oil Industries, Inc. Right of Way Easement 10' Easement Deed Book 10LQ, Page 663 Plat Record Book Y, Page 12L

Savannah Electric & Power Company Easement for Right of Way (Deed Book 10T, Page 373 Plat Record Book W, Page 85)

Georgia Power Co. Map File No. SLS Sheet 12 of 15

Gravel Drive

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

UTILITIES PROTECTION CENTER
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WWW.GEORGIA811.COM
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VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

rkb architects, Inc.
2900 campamaill drive, brainthree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA
EXPIRES 12/31/2021
No. 36260
PROFESSIONAL
5/13/21
REGISTERED
CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.: C-002

TITLE: STAKING PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2479 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

TIE LINE TABLE		
LINE	LENGTH	DIRECTION
T1	15.54'	N34°50'21"E

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	49.26'	S72°57'25"W
L2	83.93'	N72°49'27"E
L3	62.22'	N56°50'35"W
L4	51.04'	S85°51'53"E
L5	51.71'	S48°20'00"W

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Parcel 3
Cohen Hester Farm Place
1.323 Acres

Parcel 2
59.007 Acres

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

Henrietta S Teele Estate
SMB 195, PG 68

N/F Greenland Developers, Inc
Deed Book 7032, Page 1
PIN: 70977 01008

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

12' Private Road / 12' Late
Plat Record Book H, Page 12

Abandoned Tram Rd

Retained

DETENTION AREA
Du, Ds1, Ds2

NEW BUILDING
FF ELEV
22.67

Du, Ds1, Ds2

Billboard
(DB 3760 PG 24)

10' RECTANGULAR WEIR
IE 13.80

Toilet No. 51

Toilet No. 52

Toilet No. 53

Toilet No. 54

Extreme West Portion of Drakie's Historic Map Book 4, Page 172

Map Book 4, Page 172

Plantation

Gravel Drive

Zone X
Zone X (Shaded)
Zone AE
Approximate Location of Floodplain Boundary

Limited Access

Fence west of line 0.5'
Fence east of line 1'

Natural Gas and Utility Easement
(Deed Book 2471, Page 381)

Savannah Electric & Power Company
Easement for Right of Way
(Deed Book 10U, Page 373
Plat Record Book W, Page 85)

Colonial Oil Industries, Inc.
Right of Way Easement
Deed Book 10LQ, Page 663
Plat Record Book Y, Page 12L

Permit for Crossing
Pipeline Right of Way
Deed Book 3LTT, Page 432

Georgia Power Co
Map File No
SLS

NGS
Vertical
Control Disk
X395
15.43'

BM #1

I.E. = 10.69'

I.E. 12.43'

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
60 0 30 60 90 120
(IN FEET)
1 inch = 60 ft.

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VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

RKB
rkb architects, Inc.
2900 campanelli drive, brairthree, ma 02184
p 781.848.6000 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA
CERTIFICATE OF AUTHORIZATION
RKB ARCHITECTS, INC.
PROFESSIONAL
5/13/21
REGISTERED ARCHITECT
CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.: C-003

TITLE: PAVING & GRADING PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

TIE LINE TABLE		
LINE	LENGTH	DIRECTION
T1	15.54'	N54°50'13"E

LINE TABLE		
LINE	LENGTH	DIRECTION
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L3	63.22'	N56°50'25"W
L4	51.07'	S85°51'53"E
L5	51.71'	S48°20'00"W

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

Henrietta S Teele Estate
SMB 195, PG 68

300' R/W

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

N/F Greenland Developers, Inc
Deed Book 7032, Page 1
PIN: 70977 01008

Not Maintained

12' Private Road / 12' Lane
Plat Record Book H, Page 12

Map Book 4, Page 172

DETENTION AREA

NEW BUILDING FF ELEV 22.67

FIRE HYDRANT ASSEMBLY

4" PVC WATER MAIN

2-45° BENDS

10" PVC FIRE MAIN

10" X 10" TEE

6" PVC SANITARY LATERAL @ 1.00%

GRINDER LIFT STATION

243 LF 4" PVC SANITARY LATERAL @ 1.00%

100 LF 4" PVC SANITARY LATERAL @ 1.00%

4" X 4" TEE

2" POLYETHYLENE WATER LATERAL (DOMESTIC)

2" POLYETHYLENE WATER LATERAL (IRRIGATION)

3" SANITARY FORCEMAIN

10" PVC WATER MAIN (FIRE)

4" PVC LATERAL (DOMESTIC)

10" RPZ BACKFLOW PREVENTER (FIRE)

4" RPZ BACKFLOW PREVENTER (DOMESTIC)

10" X 4" TEE
4" VALVE IN BOX

4" X 2" TEE
2" VALVE IN BOX

2" RPZ BACKFLOW PREVENTER (IRRIGATION)

3" CHECK VALVE

CONNECT TO 3" SANITARY SEWER STUBOUT

CONNECT TO 10" STUBOUT WITH 10" VALVE IN MANHOLE

WATER METER

LATITUDE: 32.1821750
LONGITUDE: -81.1954000

BM #1

I.E. = 10.69'

I.E. 12.43'

Limited Access

Zone X
Zone X (Shaded)
Zone AE

Fence west of line 0.5'
Fence east of line 1.9'

Billboard (DB 3760 PG 24)

Approximate Location of Floodplain Boundary

Power Pole

Utility Pole No. 54

Utility Pole No. 53

Utility Pole No. 52

NGS Vertical Control Disk X395 "15 4.3"

Extreme West Portion of Drake's Historic Map Book 4, Page 172 Plantation

Gravel Drive

Natural Gas and Utility Easement (Deed Book 247L, Page 381)

Savannah Electric & Power Company Easement (Deed Book 10U, Page 373)

Colonial Oil Industries, Inc Right of Way Easement (Deed Book 10U, Page 652 Plat Record Book Y, Page 124)

Permit for Crossing Pipeline Right of Way (Deed Book 247T, Page 432)

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

rkb architects, Inc.
2900 campanelli drive, brairthree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA
CERTIFICATE OF AUTHORIZATION
No. RF 002992
PROFESSIONAL ENGINEER
5/13/21
CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.:
C-004

TITLE:
UTILITY PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	15.54'	N34°50'13"E

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	42.89'	S73°57'35"W
L2	50.00'	S73°42'23"E
L3	42.89'	N73°57'35"E
L4	21.05'	S85°51'53"E
L5	41.71'	S48°20'00"W

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

Henrietta S Teele Estate
SMB 195, PG 68

300' R/W

R/W

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
Flat Record Book 369L, Page 883
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

Parcel 3
1.323 Acres
Cohen Hester Farm Place

Parcel 2
59.007 Acres

N/F Greenland Developers, Inc.
Deed Book 3432, Page 1
PIN: 70977 01008

12' Private Road / 12' Lane
Plat Record Book H, Page 12
Subdivision Map Book 195, Page 68

Maintained Fence

SdI -NS
SILTFENCE

2 ROWS
SdI -S
SILTFENCE

Limited Access

Zone X
Zone X (Shaded)
Zone AE

Approximate Location of Floodplain Boundary

Fence west of line 0.5'
Fence east of line 1.9'

Map Book 4, Page 172

Extreme West Portion of Drakie's Historic Map Book 4, Page 172 Plantation

Georgia Power Co
Map File No
Sheet 12 of 16
S145

Colonial Oil Industries, Inc
10' Easement
Deed Book 10LO, Page 663
Plat Record Book Y, Page 12A

Savannah Electric & Power Company
Easement for Right of Way
Deed Book 10LT, Page 313
Plat Record Book W, Page 85)

Permit for Crossing
Pipeline Right of Way
Deed Book 41LT, Page 432

Natural Gas and Utility Easement
Permanent
(Deed Book 24L, Page 381)

SCG Pipeline, Inc.

Pj
Cc
Oj
Ok

LATITUDE: 32.1821750
LONGITUDE: -81.1954460

BM #1

Tower No 52
Tower No 53
Tower No 54

Gravel Drive

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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VICTORY
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CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

RKB architects, Inc.
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p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA
CERTIFICATE OF AUTHORIZATION
No. 002565
PROFESSIONAL
5/13/21
CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.: C-005

TITLE: INITIAL EROSION PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

LINE TABLE		
LINE	LENGTH	DIRECTION
L1	15.54'	N34°50'13"E

LINE TABLE		
LINE	LENGTH	DIRECTION
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L3	42.89'	N73°57'25"E
L4	23.05'	S85°51'53"E
L5	41.71'	S48°20'07"W

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

Henrietta S Teele Estate
SMB 195, PG 68

300' R/W

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Parcel 3
Cohen Hester Farm Place
1.323 Acres

Parcel 2
59.007 Acres

N/F Greenland Developers, Inc.
Deed Book 3432, Page 1
PIN: 70977 01008

DETENTION AREA

Du, Ds1, Ds2

Pj

Cc

Oj

Ok

Du, Ds1, Ds2

2 ROWS
SdI -S
SILTFENCE

SdI -NS
SILTFENCE

Limited Access

Zone X
Zone X (Shaded)
Zone AE
Approximate Location of Floodplain Boundary

Fence west of line 0.5'
Fence east of line 1.9'

12' Private Road / 12' Ingress, Egress & Utility Easement
Plat Record Book H, Page 12

Maintained

Map Book 4, Page 172

Extreme West Portion of Drakie's Historic Map Book 4, Page 172 Plantation

Georgia Power Co Easement
Map File No S145
Sheet 2 of 2

Colonial Oil Industries, Inc.
Deed Book 10LO, Page 663
10' Easement
Right of Way Easement
Plat Record Book Y, Page 12A

Permit for Crossing
Pipeline Right of Way
Deed Book 34TT, Page 432

Natural Gas and Utility Easement
Permanent Easement
(Deed Book 24TL, Page 381)

SCG Pipeline, Inc.

Savannah Electric & Power Company
Easement for Right of Way
(Deed Book 10LT, Page 313
Plat Record Book W, Page 85)

Tower No 52

Tower No 53

Tower No 54

NGS Vertical Control Disk X 395 15.43'

BM #1

LATITUDE: 32.1821750
LONGITUDE: -81.1954460

I.E. = 10.69'

I.E. 12.43'

Gravel Drive

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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VICTORY
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CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

RKB
rkb architects, Inc.
2900 campamaill drive, brailsfree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA
CERTIFICATE OF AUTHORIZATION
PSC-002565
PROFESSIONAL
5/13/21
ENGINEER
CHADWICK R. ZITTROUER

DATE ISSUED: xx.xx.xxxx
DRAWN BY: RID
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE
REV. | DESCRIPTION | DATE

DRAWING NO.: C-006

TITLE: INTERMEDIATE EROSION PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Kern & Co., LLC
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Architects • Landscape Architects • Environmental Scientist
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319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

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L5	51.71'	S48°20'07"W

SURVEY CONTROL:
1/2" IRON ROD
N 795,386.77
E 955,534.64
ELEVATION 16.32'

SURVEY CONTROL:
1/2" IRON ROD
N 796,038.34
E 955,339.12

Henrietta S Teele Estate
SMB 195, PG 68

300' R/W

Lot 1
N/F Walter M Czura
DB 3455, PG 290
PIN 70977 01024

Lot 2
N/F Walter M Czura
DB 3455, PG 290
PIN: 70977 01025

Georgia State Highway Department
Right of Way Proposed
Savannah-Summerton, S.C. Interstate Road
Chatham County
Limited Access Project
Federal Aid Project
I-95-1(20)101 R/W Phase II

Parcel C
Plat of a Division of the
Robert Hester Estate
Plat Record Book 45P, Page 13
N/F Robert Lee Hester
Deed Book 369L, Page 883
PIN: 70978 05018

Parcel 3
Cohen Hester Farm Place
1.323 Acres

Parcel 2
59.007 Acres

INTEL
VARIA
RIGHT

Sdf -NS SILTFENCE

N/F Greenland Developers, Inc.
Deed Book 342L, Page 1
PIN: 70977 01008

DETENTION AREA
Du, Ds1, Ds2

NEW BUILDING FF ELEV 22.67

Retained

Relocated Fence

12' Private Road / 12' Lane
Plat Record Book H, Page 12

2 ROWS Sdf -S SILTFENCE

Limited Access

Du, Ds1, Ds2

Billboard
DB 3760 PG 241

Fence west of line 0.5'

Fence east of line 1.9'

Zone X

Zone X (Shaded)

Zone AE

Approximate Location of Floodplain Boundary

Toler No. 52

Toler No. 53

Toler No. 54

Extreme West Portion of Drakie's Historic Map Book 4, Page 172 Plantation

Map Book 4, Page 172

Georgia Power Co. Map File No. SL45 Sheet 12 of 15

Savannah Electric & Power Company Easement for Right of Way (Deed Book 10U, Page 373 Plat Record Book W, Page 85)

Colonial Oil Industries, Inc. Right of Way Easement Deed Book 10U, Y, Page 12L Plat Record Book Y, Page 12L

Permit for crossing Pipeline Right of Way Deed Book 347T, Page 432

SCG Pipeline, Inc. Natural Gas and Utility Easement Permanent Easement (Deed Book 247L, Page 381)

Gravel Drive

NGS Vertical Control Disk X395 15.43'

BM #1

LATITUDE: 32.1821750
LONGITUDE: -81.1954460

I.E. = 10.69'

I.E. 12.43'

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

RKB
rkb architects, Inc.
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Lineage

GEORGIA
CERTIFICATE OF AUTHORIZATION
No. RB2985
PROFESSIONAL
5/13/21
CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.:
C-007

TITLE:
FINAL EROSION PLAN

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

EROSION AND SEDIMENTATION CONTROL ACTIVITIES SCHEDULE

TENTAIVE VS. SPECIFIC BEGIN/END DATES	APRIL 2021	MAY 2021	JUNE 2021	JULY 2021	AUGUST 2021	SEPTEMBER 2021
IMPLEMENTATION OF SILT FENCE, SEDIMENT STORAGE & CONSTRUCTION EXIT						
CLEARING, GRUBBING & INSTALL TREE PROTECTION FENCING						
EXCAVATION AND ROUGH GRADING						
CONSTR. OF TEMPORARY & PERMANENT SEDIMENTATION CONTROL & TEMP. GRASSING						
FINISHED GRADING						
PAVING, CONSTRUCTION UTILITIES, ETC.						
REMOVAL OF TEMPORARY SEDIMENTATION CONTROL STRUCTURES						
FINAL STABILIZATION & FINAL GRASSING						
MAINTENANCE OF BMP'S						

NOTE: NO CLEARING AND/OR GRUBBINGACTIVITIES WILL COMMENCE PRIOR TO THE INITIAL PERIMETER & SEDIMENT STORAGE BMP'S ARE IMPLEMENTED UNLESS THOSE ACTIVITIES ARE STRICTLY TO INSTALL SAID BMP'S.

Ds1

SITE PREPARATION
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS TERRACES AND SEDIMENT BARRIERS.
3. LOOSEN COMPACT SOIL TO AMINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS
1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE.
2. WOOD WASTER SHALL BE APPLEIED AT A DEPTHH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE SHOULD REMAIN ON SITE, BECHIPED AND APPLIED AS MULCH.
3. POLYEHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION.

APPLYING MULCH
1. DRY STRAW OR HAY MULCH AND WOOD CHIPS BE APPLIED UNIFORMLY BYHAND OR BY MECHANICAL EQUIPMENT
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20–30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES..

Ds2

Table 6.4.1- Temporary Cover or Companion Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR TEMPORARY COVER OR COMPANION CROPS

Species	Broadcast Rates		Resource Area	Planting Dates by Resource Area	Remarks
	Rate per Acre	Pure Live Speed (PLS) per 1000 sqft			
BARLEY *Hordeum vulgare*					
alone	3 bu. (144 lbs)	3.3 lbs	M-L	August - November	14,000 seed per pound. Winter hardy, Use on productive soils.
in mixture	1/2 bu. (24 lbs)	0.6 lb	P	August - December	
			C	September - December	
LESPEDEZA, ANNUAL *Lespedeza striata*					
alone	40 lbs	0.9 lb	M-L	February - April	200,000 seed per pound. May volunteer for several years. Use Inoculant EL.
in mixture	10 lbs	0.2 lb	P	February - April	
			C	January - March	
LOVEGRASS, WEEPING *Eragrostis curvula*					
alone	4 lbs	0.1 lb	M-L	March - June	1,100,000 seed per pound. May self for several years. Mix with Sericea lespedeza
in mixture	2 lbs	0.05 lb	P	March - June	
			C	February - June	
MILLET, BROWNTOP *Panicum fasciculatum*					
alone	40 lbs	0.9 lb	M-L	April - June	117,000 seed per pound. Quick dense cover. Will provide excessive competion in mixtures if seeded at high rate.
in mixture	10 lbs	0.2 lb	P	April - July	
			C	April - July	
MILLET, PEARL *Pennesetum glaucum*					
alone	50 lbs	1.1 lbs	M-L	March - July	88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
			P	April - August	
			C	April - August	
OATS *Avena sativa*					
alone	4 bu. (128 lbs)	2.9 lbs	M-L	September - November	13,000 seed per pound. Use on productive soils. Not as a winter hardy as rye or barley.
in mixture	1 bu. (32 lbs)	0.7 lb	P	September - November	
			C	September - November	
RYE *Secale cereale*					
alone	3 bu. (168 lbs)	3.9 lbs	M-L	July - November	18,000 seed per pound. Quick cover. Drought tolerant and winter hardy.
in mixture	1/2 bu. (28 lbs)	0.6 lb	P	August - December	
			C	January - February September - December	
RYEGRASS, ANNUAL *Lolium temulentum*					
alone	40 lbs	0.9 lb	M-L	January - April August - December	227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
			P	January - April August - December	
			C	January - March August - December	
SUDANGRASS *Sorghum sudanese*					
alone	60 lbs	1.4 lbs	M-L	April - August	55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.
			P	April - August	
			C	March - July	
TRITICALE *X Triticosecale*					
alone	3 bu. (144 lbs)	3.3 lbs	C	January, September–October, December	Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
in mixture	1/2 bu. (24 lbs)	0.6 lb			
WHEAT *Triticum aestivum*					
alone	3 bu. (180 lbs)	4.1 lbs	M-L	September - December	15,000 seed per pound. Winter hardy,
in mixture	1/2 bu. (30 lbs)	0.7 lb	P	October - December	
			C	January, October–December	

Temporary cover crops are very competitive and will crowd out perennials if seeded too heavily
Reduce seeding rates by 50 % when drilled.
M-L represents the Mountain, Blue Ridge, and ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents Southern Coastal Plain, Sand Hills, Black Lands, and Atlantic Coast Flatwoods MLRAs

AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE DETERMINED BY SOIL TEST FOR PH.

Table 6.2- Permanent Cover Crops
PLANT, PLANTING RATE, AND PLANTING DATE FOR PERMANENT COVER

Species	Broadcast Rates		Resource Area[2]	Planting Dates by Resource Area	Remarks
	Rate per Acre[1]	Pure Live Speed (PLS) per 1000 sqft			
BAHIA, PENSACOLA *Paspalum notatum*					
alone or with te temporary cover	60 lbs	1.4 lbs	P	March - June	194,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread
with other perennials	30 lbs	0.7 lb	C	February - May	
BAHIA, WIEMINGTON *Paspalum notatum*					
alone or with te temporary cover	60 lbs	1.4 lbs	M-L	March - May	
with other perennials	30 lbs	0.7 lb	P	February - May	Same
BERMUDA, COMMON *Cynodon dactyle x*					
hulled seed			P	April - May	1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fileds.
alone	10 lbs	0.2 lb	C	April - May	
with other perennials	6 lbs	0.7 lb			
BERMUDA, COMMON *Cynodon dactyle*					
Unhulled seed					
with temporary cover	10 lbs	0.2 lb	P	January - May October - December	Plant with winter annuals
with other perennials	6 lbs	0.1 lb	C	January November - December	Plant with Tall Fescue
BERMUDA SPRING'S *Cynodon dactyle x*					
Coastal, Common, Midland, or Tifi 44	40 cu ft or sod plugs 3' x 3'	0.9 cu ft	M-L	April - June	A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approximately 800 sprigs.
			P	April - June	
Coastal, Common, of Tifi 44			C	March - May	Same as above
Tifi 78			C	April - May	Southern Coastal Plain only
CENTIPEDE *Eremochloa Ophiuroides*					
	Block sod only		P	January - May November - December	Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas irrigation is needed until fully established. Do not plant near pastures. Winterhardy as far as north Athens and Atlanta.
			C	January - May November - December	
CROWNVETCH *Coronilla varia*					
with winter annuals or cool season grasses	15 lbs	0.3 lb	M-L	September - October	330, seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink and white blossoms spring to late fall. Mix with 30 pounds of Tall fescue or 15 pounds of rye Inoculate see with M Inoculant. Use from North Atlanta and Northward.
			P	September - October	
FESCUE, TALL *Festuca arundinacea*					
alone	50 lbs	1.1 lb	M-L	March - April August - October	227,000 seed per pound. Use alone only on better sites. Mix with perennial lespedeza or Crownvetch Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
with other perennials	30 lbs	0.7 lb	P	August - October	
KUDZU *Pueraria thumbergiana*					
Plants or crowns	3' - 7' apart		ALL	January - March	Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage.
LESPEDEZA SERICEA *Lespedeza cuneata*					
scarified	60 lbs	1.4 lb	M-L	April - May	350,000 seed per pound. Widely adapted. Low maintenance. Mix with Weeping lovegrass, Common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant. Mix with Tall fesue or winter annuals. Cut when seed mixture is mature, but before, it shatters. Add Tall fescue or winter annuals.
			P	March - May	
			C	February - May	
unscarified	75 lbs	1.7 lb	M-L	January - February	
			P	January - February	
			C	January - February	
seed - bearing hay	3 tons	1338 lbs	M-L	January - February	
			P	January	
			C	January	
LESPEDEZA *Ambro virgata* (experimtnal) *Lespedeza virgata DC* or ***Appalow*** *Lespedeza cuneata (Dumont) G. Don*					300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous in urban areas. Spreading-type growth. New growth has bronze coloration. Mix with weeping lovegrass, common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
			M-L	March - May	
			P	March - May	
			C	February - May	
scarified	60 lbs	1.4 lb			
unscarified	75 lbs	1.7 lb	M-L	January - February	
			P	January - February	
			C		
LESPEDEZA, SHRUB *Lespedeza bicolor Lespedeza thunnergii*					
plants	3' x 3'		M-L	January - March	Provide wildlife food and cover.
			P	January - March	
			C	January - February	
LOVEGRASS, WEEPING *Eragrostis curvuse*					
alone	4 lbs	0.1 lb	M-L	March - May	1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
with other perennials	2 lbs	0.05 lb	P	March - May	
			C	March - May	
MAIDENCANE *Panicum hemitomon*					
NOTE:	2' x 3' spacing	Adj.		February - April	For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
PANICGRASS, ATLANTIC COASTAL *Panicum amarum var amarulum*					
			P	March - April	Grows well on coastal sand dunes, borrow areas, and gravel pits. Provides winter cover for wildlife. Mix with Sericea lespedeza except on sand dunes.
	20 lbs	0.5 lb	C	March - April	
REED CANARY GRASS *Phalaris arundinacea*					
alone	50 lbs	1.1 lb	M-L	August - October	
with other perennials	30 lbs	0.7 lb	P	August - October	Grows similar to Tall fescue
SUNFLOWER, "ATTRI" MAXIMILLIAN *Helianthus maximilleri*					
			M-L	April - May	227,000 seed per pound. Mix with Weeping lovegrass or other low-growing grasses or legumes.
	10 lbs	0.2 lb	P	April - May	
			C	April - May	

1 Reduce seeding rates by 50% when drilled.
2 PLS is an abbreviation for Pure Live Seed. Refer to Section V E. of these specifications.
3 M-L represent to Mountain, Blue Ridge, and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Southern Coastal Plain, Sand Hills, Black Lands, and Atlantic Coast Flatwoods MLRAs. See Figure 6-4.1

AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE DETERMINED BY SOIL TEST FOR PH.

TABLE 6-1.1. FERTILIZER REQUIREMENTS

TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. Cool season grasses	First	1-10-10	1500 lbs./ac.	50-100 lbs./ac. 1/1/
	Second	6-12-12	1000 lbs./ac.	
	Maintenance	10-10-10	400 lbs./ac.	30
2. Cool season grasses and legumes.	First	06-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	
3. Ground covers	First	10-10-10	1300 lbs./ac. 3/	
	Second	10-10-10	1300 lbs./ac. 3/	
	Maintenance	10-10-10	1100 lbs./ac.	
4. Pine seedlings	First	20-10-5	one 21 gram pellet per seedling placed in the closing hole	
5. Shrub Lespedeza	First	0-10-10	700 lbs./ac.	
	Maintenance	0-10-10	700 lbs./ac.	
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	50 lbs./ac. 5/
7. Warm season grasses	First	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
	Second	6-12-12	800 lbs./ac.	50-100 lbs./ac. 3/
	Maintenance	10-10-10	400 lbs./ac.	50 lbs./ac.
8. Warm season grasses and legumes.	First	6-12-12	1500 lbs./ac.	50 lbs./ac./6/
	Second	0-10-10	1000 lbs./ac.	
	Maintenance	0-10-10	400 lbs./ac.	

1/ Apply in spring following seeding.
2/ Apply in split applications when high rates are used.
3/ Apply when plants are growing.
4/ Apply when plants are dormant.
5/ Apply to grass species only.
6/ Apply when plants grow to a height of 2 to 4 inches.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

COASTAL SWCD
Project Name: PROJECT BAJOR
Address: HENDLEY ROAD
City/County: PORT WENTWORTH, GEORGIA
Date on Plans: 5/13/2021
NAME AND EMAIL: LINEAGE LOGISTICS

TO BE SHOWN ON ES&PC PLAN

PAGE #	Y/N		
	Y	1.	The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1of the year in which the land-disturbing activity was permitted,(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
	Y	2.	Level II certification number issued by the Commission, signature and seal of the certified design professional.(Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
	N/A	3.	Limit of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist.*(A copy of the written approval by EPD must be attached to the plan for the plan to be reviewed.)
SESC 6	Y	4.	The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
SESC2	Y	5.	Provide the name, address and phone number of primary permittee.
SESC2	Y	6.	Note total and disturbed acreage of the project or phase under construction.
SESC2	Y	7.	Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
COVER	Y	8.	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
SESC6	Y	9.	Description of the nature of construction activity.
SESC2	Y	10.	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
SESC6	Y	11.	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc., which may be affected.
SESC5	Y	12.	Design professional's certification statement and signature that the site was visited prior to development of the ES&PC plan as stated on part iv page 23 of the permit.
SESC5	Y	13.	Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on part iv pg 22 of the permit.*
SESC5	Y	14.	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."*
SESC6	Y	15.	Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
	N/A	16.	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
SESC5	Y	17.	Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."*
SESC5	Y	18.	Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."*
SESC6	Y	19.	Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
SESC6	Y	20.	Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
SESC6	Y	21.	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
SESC6	N/A	22.	Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III, C of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
SESC6	N/A	23.	If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 21 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.*
SESC5	Y	24.	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drumat the construction site is prohibited.*
SESC5	Y	25.	Provide BMPs for the remediation of all petroleum spills and leaks.
SESC6	Y	26.	Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.*
SESC6	Y	27.	Description of practices to provide cover for building materials and building products on site.
SESC4	Y	28.	Description of the practices that will be used to reduce the pollutants in storm water discharges.*
SESC5	Y	29.	Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

PAGE #	Y/N		
SESC5	Y	30.	Provide complete requirements of inspections and record keeping by the primary permittee.*
SESC5	Y	31.	Provide complete requirements of sampling frequency and reportinof sampling results.*
SESC5	Y	32.	Provide complete details for retention of records as per Part IV.F. of the permit.*
SESC6	Y	33.	Description of analytical methods to be used to collect and analyze the samples from each location.*
SESC1,2,3	Y	34.	Appendix B rationale for NTU values at all outfall sampling points where applicable.*
SESC4	Y	35.	Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.*
SESC2	Y	36.	A description of appropriate controls and measures that will be implemented at the construction site including; (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage
SESC2	Y		BMPs, and final BMPs are the same, the plan may combine all of the BMPs into a single phase.*
		37.	Graphic scale and north arrow.
		38.	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
			Map Scale / Ground Slope / Contour Intervals, ft.
	N/A		1 inch = 100ft or larger scale / Flat 0 - 2% / 0,5 or 1
			Rolling 2 - 8% / 1 or 2
			Steep 8% + / 2,5 or 10
		39.	Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
ALL	Y	40.	Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 edition*
ALL	Y	41.	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
POST	Y	42.	Delineation of on-site wetlands and all state waters located on and within 200 feet of the
HYDRO	Y		project site.
PRE&POST	Y	43.	Delineation and acreage of contributing drainage basins on the project site.
		44.	Provide hydrology study and maps of drainage basins for both the pre- and post-developed
SESC1,2,3	Y		conditions.*
		45.	An estimate of the runoff coefficient or peak discharge flow of the site prior to and after
SESC1,2,3	Y		construction activities are completed.
ALL	Y	46.	Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate
SESC4	Y		discharges without erosion.Identify/Delineate all storm water discharge points.
		47.	Soil series for the project site and their delineation.
		48.	The limits of disturbance for each phase of construction.
		49.	Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the plan.
SESC7	Y	50.	Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
SESC7	Y	51.	Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
		52.	Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2021

SEDIMENT STORAGE CALCULATIONS:

DISTURBED AREA = -- AC

REQUIRED STORAGE:
67 CY/AC x -- AC = -- CY
-- CY x 27CF/CY = -- CF OF REQUIRED STORAGE

PROVIDED STORAGE :
(ELEV A – ELEV B)(-- SF AT ELEV A + -- SF AT ELEV B) / 2 = -- CF
OF PROVIDED STORAGE

CHAD ZITTROUER **GSWCC CERTIFICATION # 8150**

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

rkb architects, Inc.
zeno campanelli drive, brainttree, ma 02184
p 781.848.6600 f 781.848.6600 w rkbarch.com

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Lineage

GEORGIA REGISTERED PROFESSIONAL ENGINEER 5/13/21 CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.: C-008

TITLE: EROSION DETAILS-1

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

Hazardous Wastes:

All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. The job site superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the ESPCP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this ESPCP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous waste will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

Sanitary Wastes:

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations.

All sanitary waste units will be located in an area where the likelihood of the unit contributing to storm water discharge is negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic skid containers around the base, to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the Intermediate Erosion Control Plan Sheet by the contractor once the locations have been determined.
Sanitary Sewer will be provided by Municipal Authority/Septic System at the completion of this project.

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

Waste Materials:

All waste materials will be collected and stored in a securely lidded metal dumpster. The dumpster will meet all solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of once per week or more often if necessary and trash will be hauled as required by local regulations. No construction waste will be buried onsite.

All personnel will be instructed on proper procedures for waste disposal. A notice stating these practices will be posted at the jobsite and the contractor will be responsible for seeing that these procedures are followed.
ALL DISCHARGES FROM THIS SITE SHALL BE COMPOSED ENTIRELY OF STORM WATER WITH THE FOLLOWING EXCEPTIONS:

ACCEPTABLE NON-STORM WATER DISCHARGES

Storm water discharge from a construction site or construction activities that is mixed with a storm water discharge from an industrial source or activity other than construction where:

a. the industrial source or activity other than construction is located on the same site as the construction activity and is an integral part of the construction activity;

b. the storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of NPDES Permit No. GAR100001; and

c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

d. discharges from fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.

Spill Cleanup and Control Practices:

– Local, State and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.
– Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust and properly Labeled plastic and metal waste containers.
– Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills.
– All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, State and Federal regulations.
– FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-6602.
– FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITH IN 24 HOURS AT 1-800-424-6602.
– FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE EPD WILL BE CONTACTED WITHIN 24 HOURS.
– FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

The contractor shall notify the licensed professional who prepared this plan if more than 1320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has a capacity greater than 660 gallons. The Contractor will need a Spill Prevention Containment and Countermeasures Plan prepared by that licensed professional.

Product Specific Practices:

Petroleum Based Products – Containers for products such as fuels, lubricants and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from state water, natural drains and storm water inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minmize site contamination. Discharge of oils, fuels and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.

Points/Finishes/Solvents – All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.

Concrete Truck Washing – NO concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water onsite.

Fertilizer/Herbicieds – These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.

Building Materials – No building or construction materials will be buried or disposed of onsite. All such material will be disposed of in proper waste disposal procedures.

INSPECTIONS:

Permittee Requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary the site for the evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination has been submitted.
(2). Measure rainfall once every 24 hours except and non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.
(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day , whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measure are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.
(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is received by EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible , they shall be inspected to ascertain whether erosion control measure are effective in preventing significant impacts to receiving water(s).
(5). Based on the results of each inspection,the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.
(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.4.a.(5).of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/ or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify an incident, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance
The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements
This permit requires the monitoring of nephelometric turbidity in receiving waters or outfalls in accordance with this permit. This section is applicable to primary permittees with a total planned disturbance equal to or greater than one (1) acre and tertiary permittees with a total planned disturbance equal to or greater that five (5) acres. This section is not applicable to secondary permittees. The following procedures constitute EPD's guidelines for sampling turbidity.

a. Sampling Requirements shall include the following:
(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is equal to or more detailed that a 1:24000 map showing the location of the site or the common development: (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enter the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;
(2). The analytical method used to collect and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;
(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and
(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the timeline for submittal.

b. Sample Type. All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titles "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.
(1). Sample containers should be labeled prior to collecting samples.
(2). Samples should be well mixed before transferring to a secondary container.
(3). Large mouth, clean and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.
(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized, and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed using a direct reading, properly calibrated turbidimeter. Samples are not required to be cooled.
(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. Sampling Points
(1). For construction activities the primary permittee with a total planned disturbance equal to or greater than one (1) acre and tertiary permittee with a total planned disturbance equal to or greater than five (5) acres must sample all receiving waters , or all outfalls, or a combination of receiving water and outfalls. Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving waters and/or the storm water outfalls using the following minimum guidelines:
(a) The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving waters may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.
(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the permitted activity (i.e.,the discharge furthest downstream at the site) but upstream of any other storm water discharge not associated with permitted activity. Where appropriate, several downstream samples from across the receiving waters may need to be taken and arithmetic average of the turbidity of these samples used for the downstream turbidity value.
(c) Ideally the samples should be taken from horizontal and vertical center of the receiving waters or the storm water outfall channels.
(d) Care should be taken to avoid stirring the bottom sediments in the receiving waters or in the outfall storm water channel.
(e) The sampling container should be held so that the opening faces upstream.
(f) The samples should be kept free from floating debris.
(g) Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section , stabilized shall mean, for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscape areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and seeding of target crop perennials appropriate for the region).
(h) All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency)as to accurately reflect whether storm water runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

d. Sampling Frequency.
(1) The primary permittee must sample in accordance with Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and,or from a monitored outfall within forty-five (45) minutes or as soon as possible.,
(2) However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittes control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after beginning of the storm water discharge.
(3) Sampling by the permittee shall occur for the following qualifying events:
(a) For each area of the site that discharges to a receiving water or from an outfall, the first rain event reaches or exceeds 0.5 inch with a storm water discharge that allows for sampling during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location.
(b) In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in the permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;
(c) At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed , installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs or properly designed, installed and maintained;
(d) Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6)., or the tertiary permittee, in accordance with Part IV.D.4.c.(6)., must include a written justification in inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and
(e) Existing construction activities , i.e., those that are occurring on or before the effective date of this permit, that must met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.
*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week
(7) Non-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with stormwater discharge associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for non-storm water components of the discharge.

A. Reporting

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the report period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.
2. All sampling reports shall include the following information:
a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU," and
i. Certification statement that sampling as conducted as per the Plan.
3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The applicable permittees shall retain a copy of the proof of submittal at the construction site or the proof of the submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

F. Retention of Records

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all sampling information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit.
f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.
2. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the primary permittee's primary place of business once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at anytime upon written notification to the permittee.

STORMWATER SAMPLING
SAMPLE ANALYSIS

Storm water samples are to be analyzed in accordance with methodology and test procedures established by 40 CFR Part 136 and the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001."

Storm water is to be sampled for nephelometric turbidity units (NTU) at the outfall location. A discharge of storm water runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding 50, the value that was selected from Appendix B in Permit No. GAR100001. The NTU is based upon the disturbed acreage of 30 acres for the project site, the surface water drainage area of 4 square miles, and receiving water which supports warm water fisheries.

An "Erosion & Sedimentation Inspection and Maintenance Report" sheet is attached. Should inspection reveal any deficiencies, a copy of the report shall be sent to:

ATTN: Lineage Logistics
Attn: Ken Burke
3819 Maple Ave – Dallas, TX
402-660-0989

ATTN: Kern & Co.
7 Mall Court
Savannah, GA 31406
912-354-8400

Governing Agency: Georgia Environmental Protection Division
Coastal District – Brunswick Office
One Conservation Way
Brunswick, GA 31520
1-800-241-4113

The design professional who prepared the ES&PC plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

DATE OF INSPECTION: _____

I Certify the site was in compliance with the ES&PC Plan on the date of inspection.

_____
GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

Inspection revealed the following discrepancies from the ES&PC Plan.

_____
_____
_____

These deficiencies must be addressed within two days and a re-inspection scheduled.
Work shall not proceed on the site until design Professional Certification is obtained.

ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001.

CHAD ZITTROUER GSWCC CERTIFICATION # 8150

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

CHAD ZITTROUER GSWCC CERTIFICATION # 8150

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

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zeno campanelli drive, brairtree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA REGISTERED PROFESSIONAL ENGINEER CHADWICK R. ZITTROUER 5/13/21

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.:	DATE	DESCRIPTION

DRAWING NO.: C-009

TITLE: EROSION DETAILS-2

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

SECONDARY PERMITTEES

NOTE: THIS MASTER LIST TO BE COMPLETE AND SIGNED. KEPT IN THE ON SITE CONSTRUCTION TRAILER

SECONDARY PERMITTEE'S SIGN WHEN RECEIVING PLANS. ALL SECONDARY PERMITTEES MUST SUBMIT SECONDARY NOI AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION ACTIVITY.

NAME: PHONE:
COMPANY: FAX:
ADDRESS:
ADDRESS: _____
GSWCC LEVEL IA CERTIFICATION NO. _____ SIGNATURE

NAME: PHONE:
COMPANY: FAX:
ADDRESS:
ADDRESS: _____
GSWCC LEVEL IA CERTIFICATION NO. _____ SIGNATURE

APPENDIX B

Nephelometric Turbidity Unit (NTU) Tables

Cold Water (Trout Stream)

		Surface Water Drainage Area, square miles							
		0–4.99	5–9.99	10–24.99	25–49.99	50–99.99	100–249.99	250–499.99	500+
Site Size, acres	1.00–10	25	50	75	150	300	500	500	500
	10.01–25	25	25	50	75	150	200	500	500
	25.01–50	25	25	25	50	75	100	300	500
	50.01–100	20	25	25	35	59	75	150	300
	100.01+	20	20	25	25	25	50	60	100

Warm Water (Supporting Warm Water Fisheries)

		Surface Water Drainage Area, square miles							
		0–4.99	5–9.99	10–24.99	25–49.99	50–99.99	100–249.99	250–499.99	500+
Site Size, acres	1.00–10	75	150	200	400	750	750	750	750
	10.01–25	50	100	100	200	300	500	750	750
	25.01–50	50	50	100	100	200	300	750	750
	50.01–100	50	50	50	100	100	150	300	600
	100.01+	50	50	50	50	50	100	200	100

To use these tables, select the size (arces) of the facility or common development. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use.

EROSION AND SEDIMENT NARRATIVE NOTES

1. DESCRIPTION: AN 220,000 SF COLD STORAGE FACILITY WITH ASSOCIATED SITE IMPROVEMENTS.
2. SOILS, TOPOGRAPHIC AND DRAINAGE INFORMATION: FOR INFORMATION REGARDING THE SOILS, TOPOGRAPHIC AND DRAINAGE INFORMATION PLEASE REFERENCE THE PAVING, GRADING, AND DRAINAGE PLAN, AND THE SOIL EROSION PLAN OF THE CONSTRUCTION DRAWINGS. THE ENTIRE SITE IS COMPOSED OF SOIL TYPE
3. VEGETATION: THE EXISTING SITE IS CURRENTLY CLEARED.
4. EROSION CONTROL PROGRAM: VEGETATION AND MULCH WILL BE APPLIED TO APPLICABLE AREAS IMMEDIATELY AFTER VEGETATION AND MULCH WILL BE APPLIED TO APPLICABLE AREAS IMMEDIATELY AFTER GRADING IS COMPLETED. LAND WILL BE SCHEDULED TO LIMIT EXPOSURE OF BARE SOILS TO EROSION ELEMENTS. STORM WATER MANAGEMENT STRUCTURES WILL BE EMPLOYED TO PREVENT EROSION IN AREAS OF CONCENTRATED WATER FLOWS. EROSION AT THE EXITS OF ALL STORM WATER STRUCTURES WILL BE PREVENTED BY THE INSTILLATION OF STORM DRAIN OUTLET PROTECTION DEVICES. STORM DRAIN OUTLET PROTECTION DEVICES.
5. SEDIMENT CONTROL PROGRAM: SEDIMENT CONTROL WILL BE ACCOMPLISHED BY THE INSTALLATION OF SILT FENCE. A CONSTRUCTION EXIT BE INSTALLED TO PREVENT THE TRANSPORT OF SEDIMENT FROM THE SITE BY VEHICULAR TRAFFIC.
6. STANDARDS AND SPECIFICATIONS: ALL DESIGNS WILL CONFORM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE PUBLICATION ENTITLED, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
7. SAFETY PROTECTION: CONSTRUCTION ACTIVITIES WILL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LAWS, RULES AND REGULATIONS.
8. MAINTENANCE PROGRAM: SEDIMENT AND EROSION CONTROL MEASURES WILL BE INSPECTED DAILY. ANY DAMAGES OBSERVED WILL BE REPAIRED BY THE END OF THAT DAY. CLEANOUT OF SEDIMENT CONTROL STRUCTURES WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE SPECIFICATIONS AND SEDIMENT DISPOSAL ACCOMPLISHED BY SPREADING ON THE SITE. BARRIERS WILL REMAIN IN PLACE UNTIL SEDIMENT CONTRIBUTING AREAS ARE STABILIZED. THE SEDIMENT FENCES, AND THE BARRIERS WILL THEN BE REMOVED AND THE AREAS OCCUPIED BY THESE DEVICES WILL THEN BE VEGETATED. GUIDELINES FOR THE MAINTENANCE OF ESTABLISHED VEGETATION WILL BE PROVIDED TO THE OWNER WHEN ALL DISTURBED AREAS ARE STABILIZED.
9. **EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.**
10. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE OWNER.
11. "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001."
12. **THERE ARE NO STATE WATERS ON OR WITHIN 200' OF THIS SITE.** NO WRESTED VEGETATION – NO BUFFER REQUIRED.
13. ALL NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AAS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION WITHOUT FIRST ACQUIREING THE NECESSARY VARIANCES AND PERMITS.
14. THE POINT OF CONTACT FOR CIVIL SITE WORK FOR THIS PROJECT IS:
    KERN & CO., LLC
    P.O. BOX 15179
    SAVANNAH, GA 31416
    912.354.8400
15. DEVELOPER/OWNER/PRIMARY PERMITTEE:
    ATTN: Lineage Logistics
    Attn: Ken Burke
    3819 Maple Ave – Dallas, TX
    402-660-0989
16. TWENTY-FOUR HOUR CONTACT RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL: SHERRY KERN, KERN & CO., LLC 912-547-8402
17. DRAINAGE FLOWS THROUGH ? AND THEN INTO ?
18. RUNOFF COEFFICIENT
    PRE DEVELOPED: ?
    POST DEVELOPED: ?
19. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND-DISTURBING ACTIVITIES.**
20. **ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD OF GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**
21. ALL GRASSING SHALL BE IN ACCORDANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 1983 EDITION
22. CONTRACTOR SHOULD BE RESPONSIBLE FOR NOTIFYING THE ENGINEER SEVEN DAYS PRIOR TO CONSTRUCTION. IF CONTRACTOR FAILS TO NOTIFY ENGINEER A $1,000.00 FINE SHOULD BE ACCESSED.
23. HYDRAULIC SEEDING SHALL INCLUDE THE SEED, FERTILIZER, & WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER. APPLY IN A SLURRY UNIFORMLY OVER THE AREA AT A RATE OF 500 LBS/ACRE.
24. THE OPERATOR WILL ENSURE THAT ALL MEASURES AND FACILITIES FOR CONTROL OF EROSION AND SEDIMENTATION DURING SITE PREPARATION, OPERATION, AND/OR RECLAMATION ACTIVITIES SHALL ADHERE TO THE FOLLOWING:
25. ALL EROSION AND SEDIMENTATION CONTROL MEASURES OR FACILITIES, WHETHER TEMPORARY OR PERMANENT, SHALL BE CONTINUOUSLY MAINTAINED BY THE OPERATOR, SO AS TO BE EFFECTIVE.
26. SEDIMENT IN SURFACE RUNOFF WATER SHALL BE TRAPPED BY USE OF DEBRIS BASINS, SEDIMENT BASINS, SILT TRAPS, SEDIMENT BARRIERS OR SIMILAR STRUCTURES.
27. PERMANENT VEGETATION SHALL BE INSTALLED AS SOON AS POSSIBLE. TEMPORARY VEGETATION AND/OR MULCH SHALL BE EMPLOYED WHERE NECESSARY TO PROTECT EXPOSED CRITICAL AREAS UNTIL PERMANENT VEGETATION OR STABILIZATION IS ATTAINED.
28. NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED WHEREVER FEASIBLE TO PROVIDE FOR NATURAL BUFFER AREAS.
29. DIVERSIONS, DIKES, AND BERMS SHALL BE EMPLOYED TO RETAIN, DIRECT AND CONTROL SURFACE WATER RUNOFF FROM AFFECTED AREAS INTO SEDIMENT CONTROL STRUCTURES.
30. ALL SURFACE WATER DISCHARGES SHALL BE CONTROLLED AND RELEASED AT A NON-EROSIVE VELOCITY ONTO STABILIZED AREAS OR INTO STABILIZED CHANNELS.

CHAD ZITTROUER
GSWCC CERTIFICATION # 8150

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

VICTORY
UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com
PROJECT NO.: 2021-002

rkb architects, Inc.
zero campanelli drive, braintree, ma 02184
p 781.848.6600 f 781.848.6660 w rkbarch.com

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Lineage

GEORGIA CERTIFICATE OF AUTHORIZATION PSC-002265 PROFESSIONAL ENGINEER 5/13/21 CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.:
C-010

TITLE:
EROSION DETAILS-3

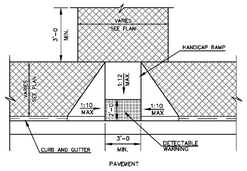
Attachment: 7-0977-01-028 HENDLEY RD LINEAGE 5-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

DETECTABLE WARNINGS ON WALKING SURFACE OF HANDICAP RAMP

DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN (23mm), A HEIGHT OF NOMINAL 0.2 IN (5mm) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN (60mm) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE

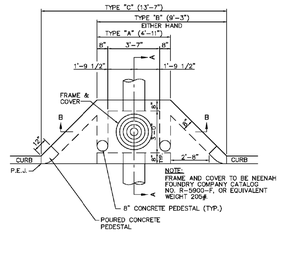
SURFACES SHALL MEET THE ADA ACCESSIBILITY GUIDELINES SECTION 4.29.2.



HANDICAP RAMP TYPE "A"

City of Port Wentworth TECHNICAL DETAILS P-4

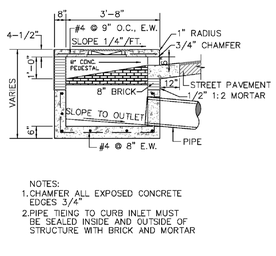
PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



PLAN OF CURB INLET

City of Port Wentworth TECHNICAL DETAILS SD-1

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



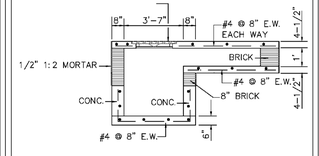
NOTES:
1. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4"
2. PIPE TIEING TO CURB INLET MUST BE SEALED INSIDE AND OUTSIDE OF STRUCTURE WITH BRICK AND MORTAR

CURB INLET SECTION A – A

City of Port Wentworth TECHNICAL DETAILS SD-3

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007

NOTE:
C.I. MANHOLE FRAME AND COVER EQUIVALENT TO NEENAH R-5900-F. FRAME AND COVER TO BE MACHINE FITTED PRIOR TO LEAVING SHOP. WEIGHT – 205 LBS.

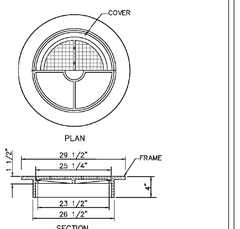


NOTES:
1. MATCH TOP OF PIPE ELEVATIONS WHEN DIFFERENT SIZE PIPES ARE CONSTRUCTED IN CURB INLET.
2. TYPE "B" INLET SHOWN

CURB INLET SECTION B – B

City of Port Wentworth TECHNICAL DETAILS SD-4

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007

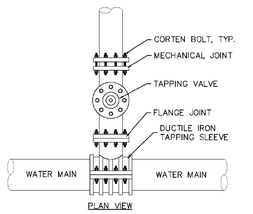


NOTES:
1. FRAME AND COVER TO BE NEENAH FOUNDRY COMPANY CATALOG NO. R-5900-F OR EQUIVALENT WEIGHT 205#.
2. COVER MUST HAVE FOUNDRY STAMP SHOWING THE UTILITY (DRAINAGE).

INLET FRAME & COVER

City of Port Wentworth TECHNICAL DETAILS SD-5

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



PLAN VIEW

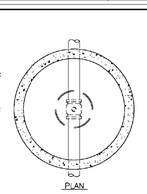
NOTE:
1. THE TAPPING SLEEVE AND VALVE MUST BE INSTALLED IN A MANHOLE. SEE DETAIL W-14 FOR THE MANHOLE DETAIL.

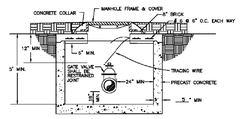
STANDARD TAPPING SLEEVE

City of Port Wentworth TECHNICAL DETAILS W-5

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007

NOTES:
1. MANHOLE FRAME AND COVER SHALL BE NEENAH FOUNDRY CO. CATALOG NO. R-1916-H, TYPE C, CLOSED, LOCKING.
2. THE BOTTOM OF THE MANHOLE FRAME SHALL NOT BE MORE THAN 12" ABOVE THE TOP OF THE MANHOLE STRUCTURE.
3. PRECAST CONCENTRIC CONE SECTIONS SHALL BE USED WHERE REQUIRED FOR DEPTH.
4. THE MANHOLE FRAME AND COVER MUST BE CENTERED OVER THE VALVE.

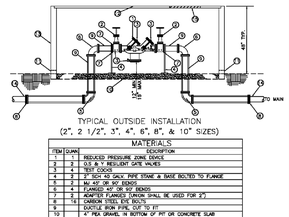




VALVE MANHOLE FOR 8" & GREATER GATE VALVE

City of Port Wentworth TECHNICAL DETAILS W-14

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



MATERIALS

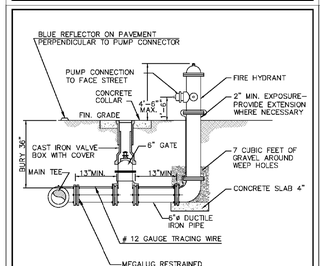
ITEM	QUAN	DESCRIPTION
1	1	REDUCED PRESSURE ZONE DEVICE
2	3	0.5 & 1" RESILIENT GATE VALVES
3	4	TEST COCKS
4	2	3" SCH 40 GALV. PIPE STAND & BASE BOLTED TO FLANGE
5	2	MJ, 45° OR 90° BENDS
6	4	FLANGED 45° OR 90° BENDS
7	2	ADAPTER FLANGES (1 EACH SHALL BE USED FOR 3")
8	1	ASSEMBLY FLANGE GASKET
9	1	DUCTILE IRON PIPE, TOP TO 6"
10	1	4" MIN GRAVEL IN BOTTOM OF PIT OR CONCRETE SLAB
11	2	DRAIN PORTS TOP ACCORDING TO PIPE SIZE
12	1	5/8 ALUMINUM TREAD PLATE / HATCH COVER W/ SUPPORTS AS NEEDED.
13	1	BOX-CONCRETE BLOCK, POURED CONCRETE OR PREFABRICATED
14	1	DI - 18" W/ GRATE
15	1	DI - 24" W/ MH FRAME
	1	2' X 2' MIN. HATCH

NOTES:
1. FOR FINAL APPROVAL, ASSEMBLY MUST BE CENTERED IN ENCLOSURE OF APPROVED, UNDER NO CONDITION SHALL ANY PART OF ASSEMBLY, INCLUDING THE SERVICE METER AND A BACKFLOW PREVENTER. BACKFLOW PREVENTER SHALL ALWAYS BE INSTALLED IMMEDIATELY DOWNSTREAM OF METER.
2. UNDER NO CIRCUMSTANCE SHALL TEST PORTS BE MODIFIED OR UTILIZED FOR ANY USE OTHER THAN BACKFLOW DEVICE TESTING.

REDUCED PRESSURE DETECTOR FOR FIRE SYSTEM

City of Port Wentworth TECHNICAL DETAILS W-24

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007

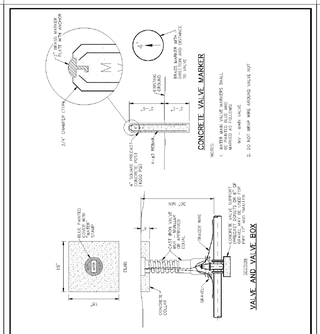


NOTE:
1. ALL JOINTS FROM MAIN TO HYDRANT SHALL BE RESTRAINED.
2. PROTECT BOLTS AND THREADS FROM CONCRETE.

STANDARD FIRE HYDRANT

City of Port Wentworth TECHNICAL DETAILS W-9

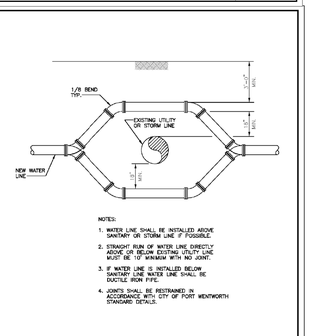
PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



WATER VALVE 4" OR 6"

City of Port Wentworth TECHNICAL DETAILS W-36

PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007

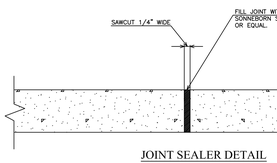


NOTES:
1. WATER LINE SHALL BE INSTALLED ABOVE SANITARY OR STORM LINE IF POSSIBLE.
2. STRAIGHT RUN OF WATER LINE DIRECTLY ABOVE OR BELOW EXISTING UTILITY LINE MUST BE 10' MINIMUM WITH NO JOINT.
3. IF WATER LINE IS INSTALLED BELOW SANITARY LINE WATER LINE SHALL BE DUCTILE IRON PIPE.
4. JOINTS SHALL BE RESTRAINED IN ACCORDANCE WITH CITY OF PORT WENTWORTH STANDARD DETAILS.

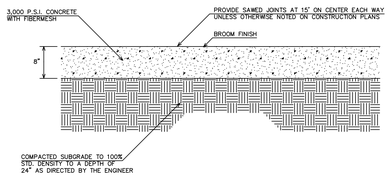
STANDARD UTILITY CROSSING

City of Port Wentworth TECHNICAL DETAILS W-6

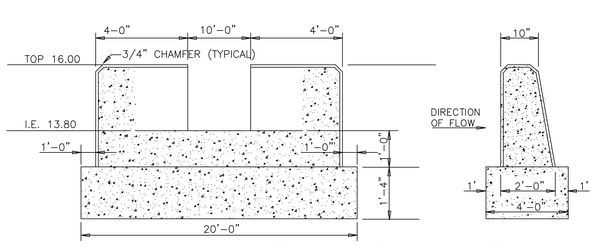
PREPARED BY STEVENSON & PALMER ENGINEERING, INC. SCALE: N.T.S. DATED: FEBRUARY 2007



JOINT SEALER DETAIL



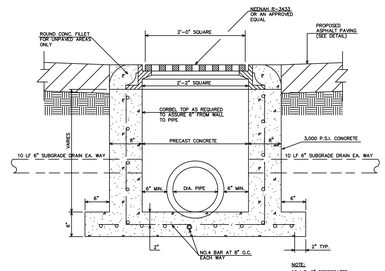
P-19 CONCRETE PAVEMENT



FRONT ELEVATION END ELEVATION

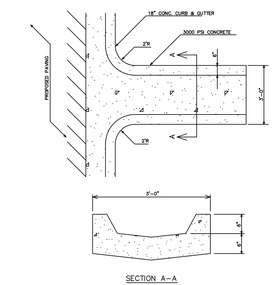
NOTE:

D-26 RETANGULAR WEIR



NOTE:
10 LF 6" PERFORATED SUBGRADE DRAIN TO BE INSTALLED EACH SIDE OF INLET TO BE INCLUDED IN COST OF INLET.

D-5 GRATE INLET



SECTION A–A

D-21 CONCRETE FLUME

VICTORY UNLIMITED CONSTRUCTION
CONTACT: Larry Longman
PHONE: +1(317) 777-6289
EMAIL: llongman@victoryuc.com

PROJECT NO.: 2021-002

rkb architects, Inc.
zeno campanelli drive, brainfree, ma 02184
p 781.848.6600 f 781.848.6600 w rkbarch.com

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Lineage

GEORGIA CERTIFICATE OF AUTHORIZATION NO. PEO2000 PROFESSIONAL ENGINEER 5/13/21 CHADWICK R. ZITTROUER

DATE ISSUED: XX.XX.XXXX
DRAWN BY: RJD
SCALE: As Noted
CONSULTANT PROJECT NO.: 2026

PROJECT:
Project Bajor
xxx Name Street,
Port Wentworth GA, 31407

REVISION SCHEDULE

REV.	DATE	DESCRIPTION

DRAWING NO.: C-011

TITLE: SITE DETAILS

Kern & Co., LLC
Consulting Engineers • Land Surveyors • Land Planners
Architects • Landscape Architects • Environmental Scientist
7 Mall Court (31406) P.O. Box 15179 (31416) Savannah, Georgia (912) 354-8400
319 Walnut Street Suite A Statesboro, Georgia 30458 Phone: (912) 225-3373

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Site Plan 5.12.21 (2470 : Site Plan Review Application (Specific) 7-0977-01-028 Lineage)

HYDROLOGY REPORT

FOR Ken Burke

LINEAGE LOGISTICS

0 Hendley Rd.
Port Wentworth, GA 31407

PROJECT NO. 210067.010

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Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

TABLE OF CONTENTS

SECTION 1 – PROJECT NARRATIVE / SITE OVERVIEW

1. **Site Overview:**
   - Design Requirements
   - Sedimentation and Erosion Control
   - Stormwater Quality and Management
2. **Pre-Development Analysis Summary:**
   - Pre-Development Drainage Area 1
3. **Post-Development Analysis Summary:**
   - Post-Development Drainage Area 1 (Routed Pond-2)
   - Existing Flows from Building 1 Site (Routed Ex. Swale)
   - Combined Post Development Flows from Pond-2 Routed and Ex. Swale Routed
4. **Wet Detention Pond Calculations (Building 2 Pond):**
   - Detention Pond Volume (Stage/Storage)
   - Detention Pond Runoff and Elevation Summary
5. **Ex. Swale Calculations (Building 1 Project Area Flows into Ex. Swale)**
   - Ex. Swale Volume (Stage/Storage)
   - Ex. Swale Runoff and Elevation Summary
6. **Whole Combined Network Calculations (Building 2 Pond and Ex. Building 1 Project Area Routed through Combined Network)**
   - Combined Network Volume – Building 2 Pond and Ex. Swale (Stage/Storage)
   - Combined Network Runoff and Elevation Summary
7. **Conclusions**
   - Pre vs. Post Development Runoff Analysis Summary

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

SECTION 2 – HYDROLOGIC CALCULATIONS (PRE VS. POST ANALYSIS)

APPENDICES

A – Calculation Methods & Reference Equations

B – Geotechnical report

Pre-Development and Post-Development Exhibits

1. PROJECT NARRATIVE / SITE OVERVIEW

GENERAL PROJECT INFORMATION

The Lineage Logistics 1 project consists of the construction of approximately 225,000 sf of refrigeration warehouse space and office space with a footprint of 14,000 sf located off 0 Hendley Road in the city of Port Wentworth, Georgia. The property is currently designated as Part of Parcel Bella N. Horning Act. The overall tract has been subdivided into two separate parcels. This portion of the overall project consists of approximately 29.3 acres total as shown on the construction plans and survey performed by Kern and Company, LLC.

This property currently consists of a single Tax Parcel; No. 70977 01028. Approximately 100 percent of the site was wooded before clearing.

There are four different soil types located within the proposed limits of construction per the web soil survey report on this site and are as follows:

- Cc Cape Fear — Hydrologic Soil Group B/D
- Pj Pelham loamy Sand — Hydrologic Soil Group C/D
- Oj Ocilla Complex — Hydrologic Soil Group B/D
- Ok Ogeechee Loamy Fine Sand — Hydrologic Soil Group B/D

This information was taken from the Web Soil Survey 2.1 – National Cooperative Soil Survey by NRCS).

DESIGN REQUIREMENTS

- Define the limits of the drainage basin or basins that contain this project. In this design we are utilizing only disturbed area.

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

- Document that major drainage infrastructure such as drainage connectors, ponds, and outfalls are adequate for all existing, proposed, and future development within the drainage basin.

- Document compliance with regulatory requirements of the State of Georgia and the City of Port Wentworth summarized as follows.

Georgia EPD

1) Sediment shall be prevented from leaving the site during construction.

City of Port Wentworth

1) **Stormwater Runoff Reduction**
   i) Reduce on-site runoff volume to the maximum extent practicable.
2) **Overbank Flood Protection**
   i) Peak discharge rates shall be detained for the 100-year 24-hour storm event so that post-development rates do not exceed pre-development rates.
3) **Extreme Flood Protection**
   i) Control or safety pass (as a minimum) the peak discharge generated by the 100-year 24-hour storm event.
4) **Peak Flow Attenuation – Port Wentworth**
   i) Control the peak discharge generated by the 1-year thru the 100-year design storm events.

SEDIMENTATION AND EROSION CONTROL

The work for the site will encompass roughly 48.51 acres of disturbance. The project will include three phases of erosion and sediment control management (due to limits of disturbance being more than 5 acres total), beginning with an initial clearing phase (initial phase). During the initial phase of the sediment and erosion control, single rows of silt fence with rock concentration outlets at natural discharge points on the site will be used to keep sediment and erosion from gathering outside the property during the clearing and grubbing stage. A construction entrance/exit and concrete washout will also be provided during the initial phase of erosion control management. During the intermediate phase of erosion control management, the proposed building pad will be graded, skimmer sediment basin will be dug, and the proposed storm pipe network construction will take place. Management will include drop inlet protection at all proposed grate inlets, the construction of the proposed skimmer sediment basin utilizing a tethered faircloth skimmer that cuts straight through the embankment and is connected to a 12" outlet pipe that flows through a stone energy dissipator before being released to natural property. These measures are included to the previously mentioned erosion control measures described above for the initial phase. The last phase (stabilization or final phase) will include paving and stabilization of the site. Much of the erosion control is best managed through the construction and use of the proposed skimmer sediment basin. Temporary diversion ditches will be used to channel flow to the sediment basin. Accessory features such as inlet protection, silt fence, and concentration outlets will also be used to assist

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

with bypass areas and smaller areas of concentrated flow. Upon stabilization, the skimmer basin will be converted into a permanent wet detention pond, and all silt fence, the construction entrance and concrete washout will be removed. It should be noted that the emergency spillway is larger during the intermediate erosion control phase when the pond area is being used as a skimmer sediment basin to keep the runoff from overtopping the basin. The reason for this is that there is no open top riser outlet control structure associated with the sediment basin as there is with the wet detention pond. The larger emergency spillway allows the basin to release enough of the stored runoff volume to keep it from overtopping the basin. The rip rap lined emergency spillway is 75 feet wide and 25 feet in length. This decreases to 30 feet wide and 25 feet long once the basin is converted into being used as a permanent wet detention pond. Calculations have been provided showing the stage storage analysis of both structures and the runoff elevation level for the 2 through 100 year 24 hour storm events.

STORMWATER QUALITY MANAGEMENT AND PROTECTION

To determine the necessary water quality volume, the impervious drainage contributing to the wet detention pond was determined (see Appendix D). Calculations were performed to determine the associated stage in the pond based on the water quality volume. Intelisolves' Hydraflow Hydrographs were used to determine the orifice size within a 24-hour period. Pond volume calculations were then performed for the 1 year thru the 100-year storm frequencies. The initial stage (not the control elevation/stage) for each pond was set to the stage determined from treatment volume/basin geometry calculations. The routing simulations were run with to determine if the discharge of the water quality volume exceeded 24 hours. If the discharge did exceed 24 hours, the size of the orifice needed to be increased so that a larger amount of the water quality volume would be discharged from the orifice and decrease the time to empty the WQv from the basin. The orifice was sufficient in size if the pond stage did not reach the control elevation/stage (normal water level) prior to the 24-hour period.

STORMWATER QUANTITY METHODOLOGY

The existing and proposed conditions were analyzed using the Intelisolves' Hydraflow Hydrographs to generate the runoff hydrographs for each of the drainage basins based on the SCS Hydrograph Method. The program is used to model rainfall and stormwater runoff and to perform hydraulic routing through the storm drainage system for each storm event. The hydrologic input data consists of information for each drainage basin, or sub watershed, within the project. Input variables include runoff curve number, rainfall distribution pattern, hydrograph peaking factor, area of each drainage basin, and time of concentration (see below sections for specifics on the values of these variables that were used in this model). The program generates runoff hydrographs for each sub watershed based on the user-specified variables.

The model hydraulic input consists of a system of nodes and links. Nodes represent locations where flows enter or exit the system, pipe or channel characteristics changes, or where stage/storage/time relationships are provided. Links represent traditional types of

hydraulic conveyance such as pipes, channels, drop structures, weirs, etc. The sizes, inverts, lengths, and pipe information, all lagoons and detention area stage-storage information and the respective within the model for a given storm, and flow conditions are determined.

Hydrographs for each drainage area are merged within the program, and the hydrologic results are then combined with the hydraulic information to model the hydraulic interactions of the entire drainage system. The results include detention area discharge rates and stage/storage information during the design storm events.

In addition, the ultimate discharge rate from the system cannot exceed the pre-developed runoff rate. Knowing this factor, the drainage system is designed by trial and error. The proposed pump system has been designed to release storm water over a 24-hour period of time and to release stormwater at the pre-developed flow rate or less.

STORM DRAINAGE SYSTEM

The site will drain to three individual storm drain systems. The analysis was conducted to verify that these drainage systems would not surcharge or reach a hydraulic grade line (HGL) than 6 inches from the surface due to the storm water runoff for the 25-year, 24-hour rainfall intensity. All of the curb inlets were evaluated for inlet spread using the 25-year, 24-hour rainfall intensity. Both systems function within the design parameters set forth by the City of Savannah and GADOT for both pipe design and inlet spread capacity.

Each system has been fitted with a properly sized riprap apron at the outflow for energy dissipation. All of the proposed storm drain profiles show that to the hydraulic gradient line (HGL) to no closer than 0.5' below the weir/rim elevation. Please see the storm drain analysis section of this document to see the stormwater plan and profiles for the proposed storm network.

END NARRATIVE

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

2. PRE-DEVELOPMENT ANALYSIS SUMMARY-

Pre-Development Drainage Area 1 (Only Single Drainage Area for this Project)

- Drainage Area, A_E: 35.18 Acres
- Design Basis: 25-year, 24-Hour Storm Events
- Time of Concentration, T_C: 50.0 min (Assumed)
- Runoff Coefficient: CN = 89 (100 Open with Poor Soils)
- Rainfall Intensity – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  - I_1 = 3.60 in
  - I_2 = 4.80 in
  - I_5 = 6.00 in
  - I_{10} = 6.72 in
  - I_{25} = 7.92 in
  - I_{50} = 8.88 in
  - I_{100} = 9.84 in
- Run-off , Q – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  - Q_1 = 33.54 cfs
  - Q_2 = 48.60 cfs
  - Q_5 = 63.68 cfs
  - Q_{10} = 72.71 cfs
  - Q_{25} = 87.69 cfs
  - Q_{50} = 99.62 cfs
  - Q_{100} = 111.51 cfs

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

3. POST-DEVELOPMENT ANALYSIS SUMMARY-

Post Development Bypass Drainage Area 1 (Drainage to Pond)

- Drainage Area, A_E: 35.18 Acres
- Design Basis: 25-year, 24-Hour Storm Events
- Time of Concentration, T_C: 8 min (Assumed)
- Runoff Coefficient: CN = 96 (See hydraflow tabulation charts for analysis)
- Rainfall Intensity – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  I_1 = 3.60 in
  I_2 = 4.80 in
  I_5 = 6.00 in
  I_{10} = 6.72 in
  I_{25} = 7.92 in
  I_{50} = 8.88 in
  I_{100} = 9.84 in
- Run-off, Q – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  Q_1 = 51.04 cfs
  Q_2 = 71.70 cfs
  Q_5 = 92.25 cfs
  Q_{10} = 104.52 cfs
  Q_{25} = 124.90 cfs
  Q_{50} = 141.13 cfs
  Q_{100} = 157.32 cfs

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Combined Post Development Flows from Pond-1 Routed and Pond-2

- Rainfall Intensity – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  - $I_1 = 3.60$ in
  - $I_2 = 4.80$ in
  - $I_5 = 6.00$ in
  - $I_{10} = 6.72$ in
  - $I_{25} = 7.92$ in
  - $I_{50} = 8.88$ in
  - $I_{100} = 9.84$ in

- Run-off, Q – 1, 2, 5, 10, 25, 50 & 100-year, 24-Hour Storm Events
  - $Q_1 = 18.30$ cfs
  - $Q_2 = 29.33$ cfs
  - $Q_5 = 40.42$ cfs
  - $Q_{10} = 46.67$ cfs
  - $Q_{25} = 56.49$ cfs
  - $Q_{50} = 64.30$ cfs
  - $Q_{100} = 72.09$ cfs

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

4. WET DETENTION POND CALCULATIONS -

POND VOLUME CHART:

Pond 1

ELEVATION	*AREA (SF)*	*VOLUME (CF)*	*CUMULATIVE VOLUME (CF)*
14	101,703	0	0
15	107,412	104,534	138,686
16	113,777	110,271	248,957

POND RUNOFF AND ELEVATION SUMMARY:

DESIGN STORM	FLOW RATE	PEAK ELEV
1 YR	6.50 cfs	14.19
2 YR	8.924 cfs	14.35
5 YR	10.69 cfs	14.50
10 YR	11.55 cfs	14.58
25 YR	12.83 cfs	14.72
50 YR	13.78 cfs	14.83
100 YR	14.68 cfs	14.94

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Pond 2

ELEVATION	*AREA (SF)*	*VOLUME (CF)*	*CUMULATIVE VOLUME (CF)*
14	56,277	0	0
15	64,568	60,369	79,230
16	72,915	66,692	148,012

POND RUNOFF AND ELEVATION SUMMARY:

DESIGN STORM	FLOW RATE	PEAK ELEV
1 YR	18.30 cfs	14.47
2 YR	29.33 cfs	14.72
5 YR	40.42 cfs	14.94
10 YR	46.67 cfs	15.05
25 YR	56.49 cfs	15.22
50 YR	64.30 cfs	15.35
100 YR	72.09 cfs	15.48

5. CONCLUSION-

PRE VS. POST FLOW RATE COMPARISON FOR PROJECT AREA STORM NETWORK:

* Post-development attenuated flow rates are less than pre-development flow rates.

* Post-development flow rates include outlet from proposed reservoir and post-development bypass drainage area 1.

* The Post 100-year storm event is less than the Pre 100-year storm event which accounts for channel protection, overbank protection, and extreme flood.

Appendix A

Calculation Methods & Reference Equations

The hydrologic analysis in this report was based on the methodologies and equations presented in Urban Hydrology for Small Watersheds (TR-55) and the Georgia Stormwater Management Manual. The specific approaches used to calculate each of the hydrologic parameters are described below.

Time of Concentration

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Sheet Flow

It was assumed that the most hydraulically distant points for each of the drainage basins sheet flows for the first 100 ft (from GA Stormwater Management Manual pg 2.1-25). The travel time for the sheet flow segments was then calculated using the following formula (GA Stormwater Management Manual equation 2.1.9):

$$T_t = \frac{0.42\ (n\,L)^{0.8}}{60\ (P_2)^{0.5}\ (S)^{0.4}}$$

where, T_t = travel time (hr)
n = Manning roughness coefficient for sheet flow
L = flow length (ft)
P_2 = 2-year, 24-hour rainfall (in)
S = land slope (ft/ft)

The "n" values were taken from GA Stormwater Management Manual Table 2.1.5-2 and the value of P_2 was set as 4.8 inches (from GA Stormwater Management Manual Table A-13) for Savannah, GA. The slopes (S) of the surfaces along the flow paths used for the hydraulic lengths were calculated from the topographic survey data.

Shallow Concentrated Flow

To estimate the travel time for the shallow concentrated flow segments, first, the average velocity was determined using the following equations (from GA Stormwater Management Manual Equation 2.1.10):

Unpaved surface:

$$V = 16.1345\ (S)^{0.5}$$

where, V = average velocity (ft/s)
S = land slope (ft/ft)

Paved surface:

$$V = 20.3282\ (S)^{0.5}$$

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

where, V = average velocity (ft/s)
S = land slope (ft/ft)

These two equations are based on the solution of Manning's equation (from GA Stormwater Management Manual Equation 2.1.12) with different assumptions for n (Manning's roughness coefficient) and r (hydraulic radius, ft). For unpaved areas, n is 0.05 and r is 0.4; for paved areas, n is 0.025 and r is 0.2.

Channel Flow

The velocity of the water in the ditch can be calculated using Manning's equation for Open Channel flow (from GA Stormwater Management Manual Equation 2.1.12):

$$V = \frac{1.49\,(R)^{2/3}\,(S)^{1/2}}{n}$$

where, V = average velocity (ft/s)
R = hydraulic radius (ft)
S = land slope (ft/ft)
n = Manning roughness coeff. for open channel flow

The total time of concentration (t_c) for each of the basins was determined by adding the travel times for the sheet, shallow concentrated, and open channel flow segments.

Rainfall Intensities

The rainfall intensity for storms with the 2-yr thru 50-yr return frequency in the Savannah metropolitan area can be calculated with the following equations (from GA Stormwater Management Manual Table A-13):

$$I_{25\text{-yr}} = 167.17 / (t_c + 28)^{0.8597}$$

$$I_{100\text{-yr}} = 220.00 / (t_c + 32)^{08671}$$

where, i = rainfall intensity (in/hr)
t_c = time of concentration (min)

Runoff Rates

The SCS method applicable to the Savannah metropolitan area is based on a storm event that has Type III time distribution. The empirical relationship: $I_a = 0.2\,S$ is used in the SCS method to estimate the initial abstraction, which represents the surface storage, interception, evaporation, and infiltration that occurs prior to runoff. Using this definition for I_a, the following equation is used to estimate the direct runoff from a 24-hr rainfall event (from GA Stormwater Management Manual, equation 2.1.6):

$$Q = \frac{(P - 0.2\,S)^2}{(P + 0.8\,S)}$$

where, Q = accumulated direct runoff (in)
P = accumulated rainfall (in)

S = potential maximum soil retention (in)
and S = (1000/CN) - 10

The 24 hour rainfall accumulations (P values) for the 25-year, and 100-year storms in the Savannah area are 7.92 and 9.84 inches respectively. Using those values, along with the respective Curve Numbers for each basin, the runoff volumes were calculated for each drainage basin.

EXHIBITS

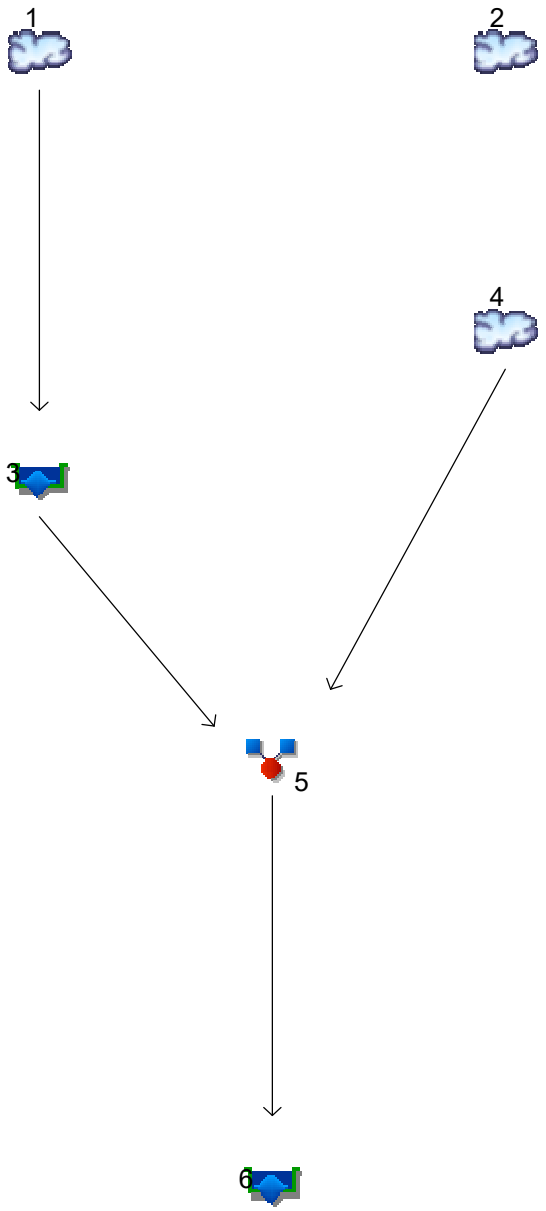
Exhibit-1 Pre-Developed

Exhibit-2 Post-Developed

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	1-Post-Development Flow (Pond 1)
2	SCS Runoff	Pre-Development Flow
3	Reservoir	Pond 1
4	SCS Runoff	2-Post Development Flow (Pond 2)
5	Combine	<no description>
6	Reservoir	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	------	22.14	30.01	-------	37.82	42.49	50.26	56.46	62.65	1-Post-Development Flow (Pond 1)
2	SCS Runoff	------	33.54	48.60	-------	63.68	72.71	87.69	99.62	111.51	Pre-Development Flow
3	Reservoir	1	6.505	8.924	-------	10.69	11.55	12.83	13.78	14.68	Pond 1
4	SCS Runoff	------	28.90	41.69	-------	54.43	62.03	74.64	84.67	94.67	2-Post Development Flow (Pond 2)
5	Combine	3, 4	32.31	48.28	-------	62.62	70.90	84.51	95.27	105.94	<no description>
6	Reservoir	5	18.30	29.33	-------	40.42	46.67	56.49	64.30	72.09	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	22.14	2	728	98,174	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	33.54	2	760	315,104	------	------	------	Pre-Development Flow
3	Reservoir	6.505	2	754	64,019	1	14.19	53,692	Pond 1
4	SCS Runoff	28.90	2	728	120,381	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	32.31	2	730	184,400	3, 4	------	------	<no description>
6	Reservoir	18.30	2	748	169,235	5	14.47	47,339	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

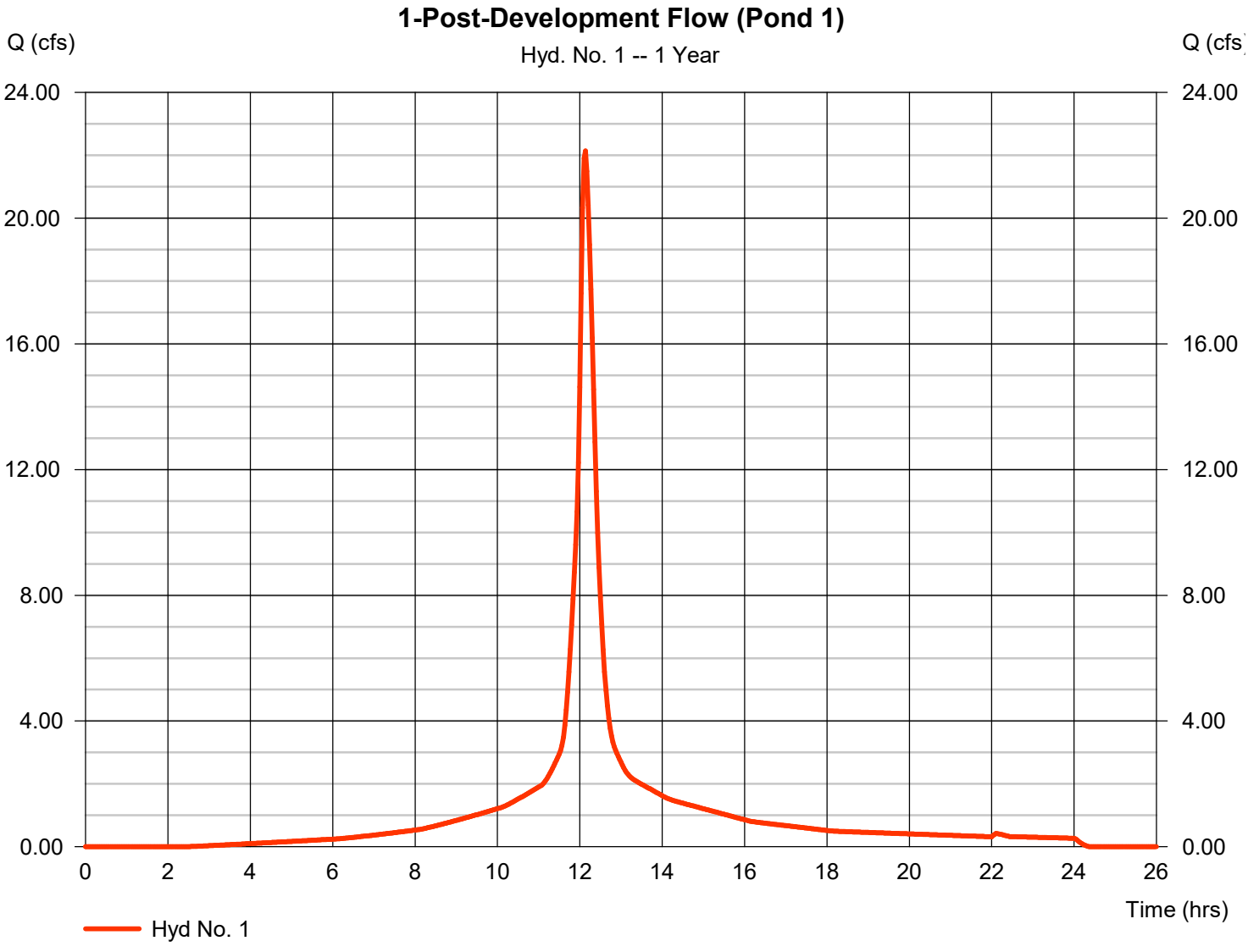
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 22.14 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 98,174 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 3.60 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

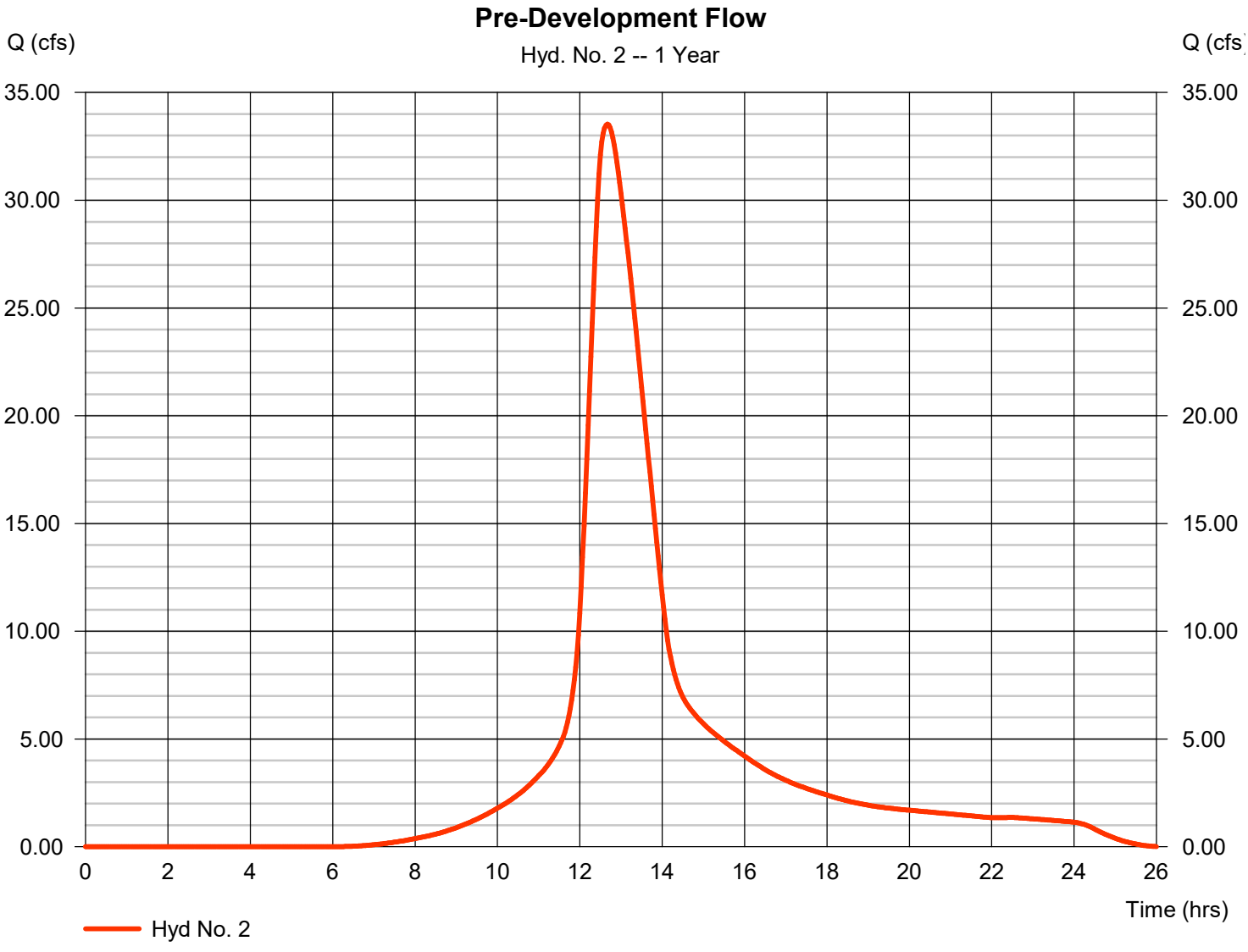
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	=	SCS Runoff	Peak discharge	=	33.54 cfs
Storm frequency	=	1 yrs	Time to peak	=	12.67 hrs
Time interval	=	2 min	Hyd. volume	=	315,104 cuft
Drainage area	=	35.180 ac	Curve number	=	89
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	50.00 min
Total precip.	=	3.60 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

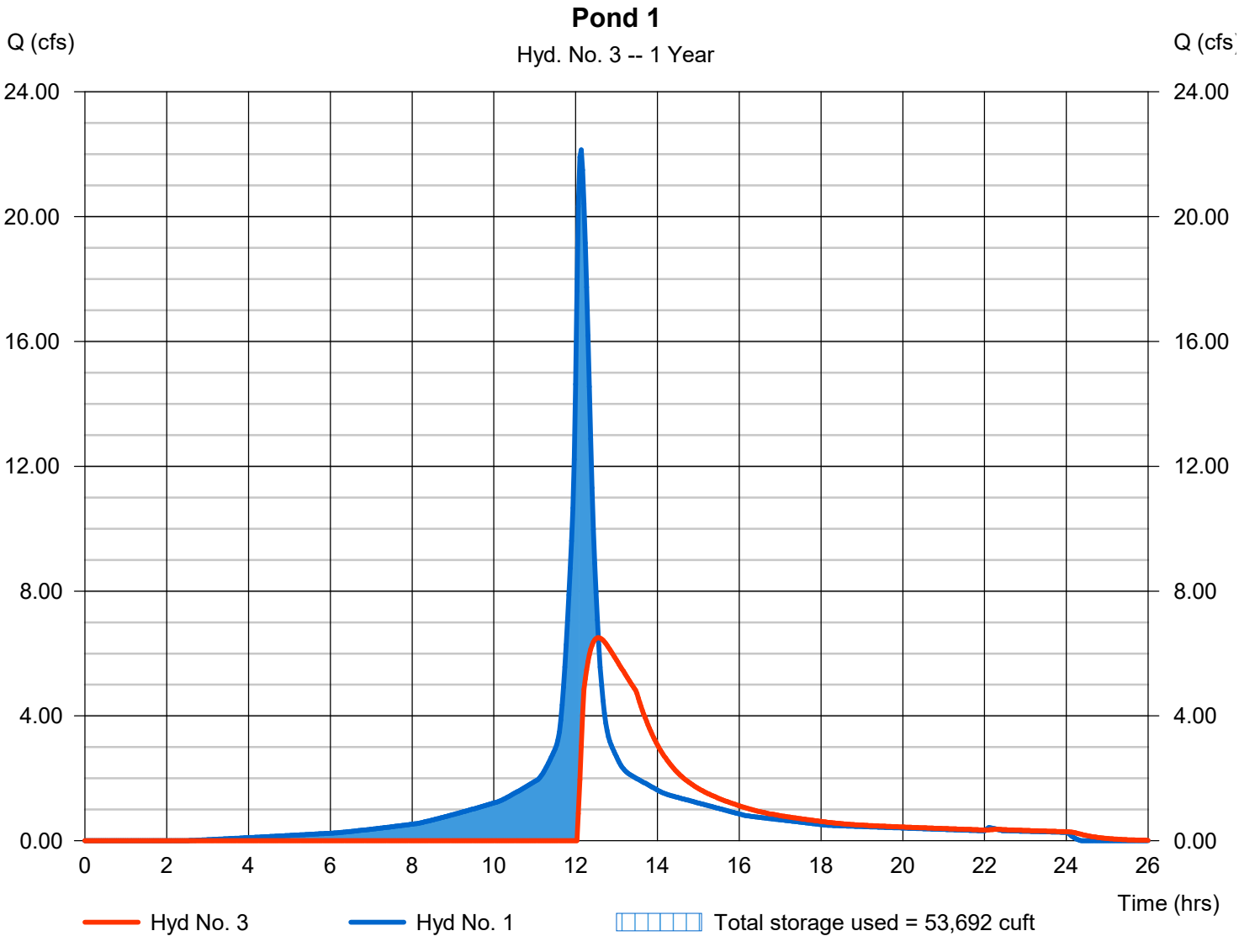
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 6.505 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.57 hrs
Time interval	= 2 min	Hyd. volume	= 64,019 cuft
Inflow hyd. No.	= 1 - 1-Post-Development Flow (Pond 1)	Max. Elevation	= 14.19 ft
Reservoir name	= Pond 1	Max. Storage	= 53,692 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Pond Report

Pond No. 1 - Pond 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 10.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	10.00	05	0	0
1.00	11.00	05	5	5
2.00	12.00	05	5	10
3.00	13.00	05	5	15
4.00	14.00	101,703	34,137	34,152
5.00	15.00	107,412	104,534	138,686
6.00	16.00	113,177	110,271	248,957

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	Inactive	Inactive	Inactive
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 12.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	Inactive	Inactive	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	Rect	---
Multi-Stage	= Yes	No	Yes	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 14.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	10.00	0.00	---	---	---	---	---	---	---	---	---	0.000
1.00	5	11.00	0.00	---	---	---	---	---	---	---	---	---	0.000
2.00	10	12.00	0.00	---	---	---	---	---	---	---	---	---	0.000
3.00	15	13.00	0.00	---	---	---	---	---	---	---	---	---	0.000
4.00	34,152	14.00	0.00	---	---	---	---	---	---	---	---	---	0.000
5.00	138,686	15.00	15.12 ic	---	---	---	---	---	---	---	---	---	15.12
6.00	248,957	16.00	21.39 ic	---	---	---	---	---	---	---	---	---	21.39

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

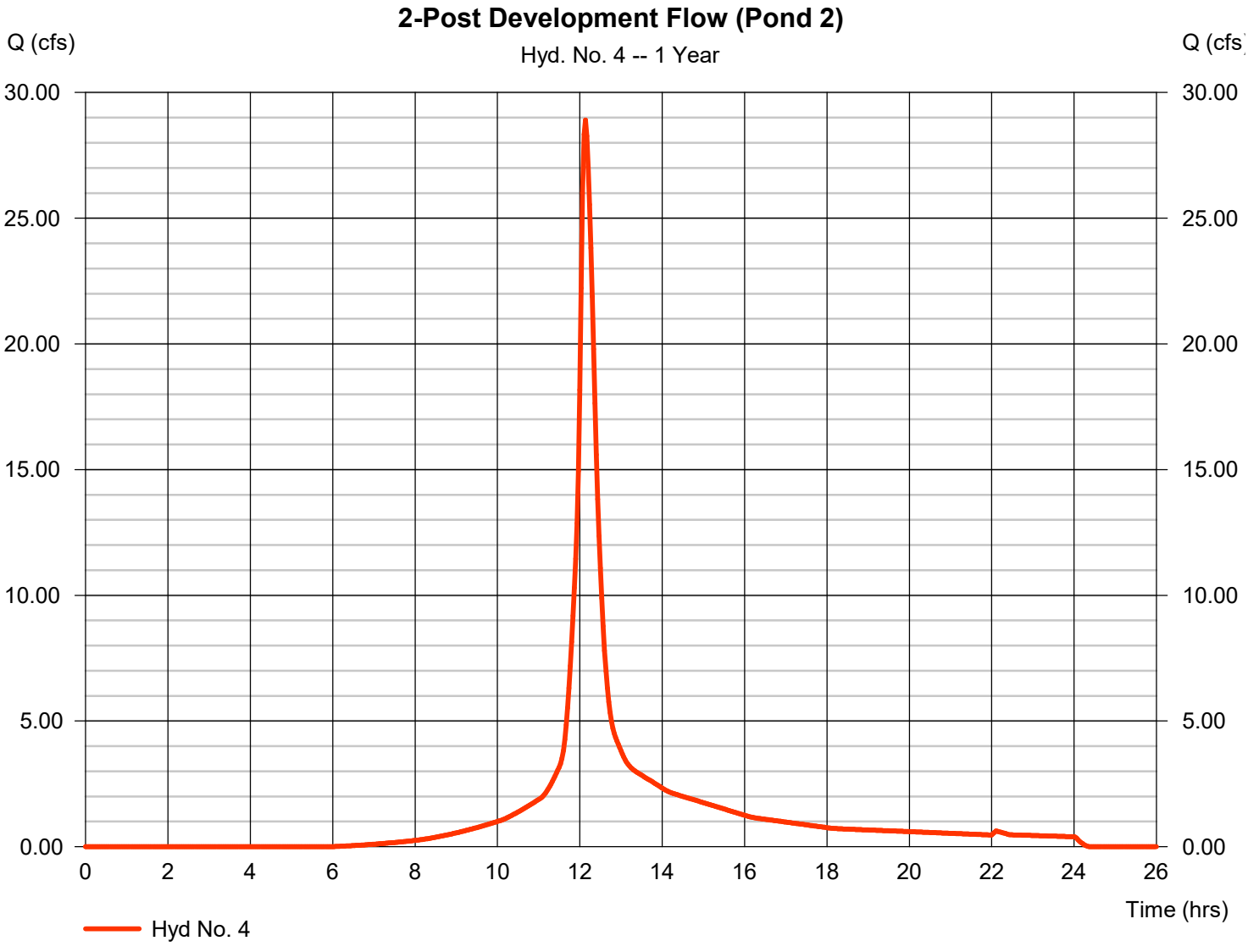
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	= SCS Runoff	Peak discharge	= 28.90 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 120,381 cuft
Drainage area	= 13.440 ac	Curve number	= 89*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 3.60 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

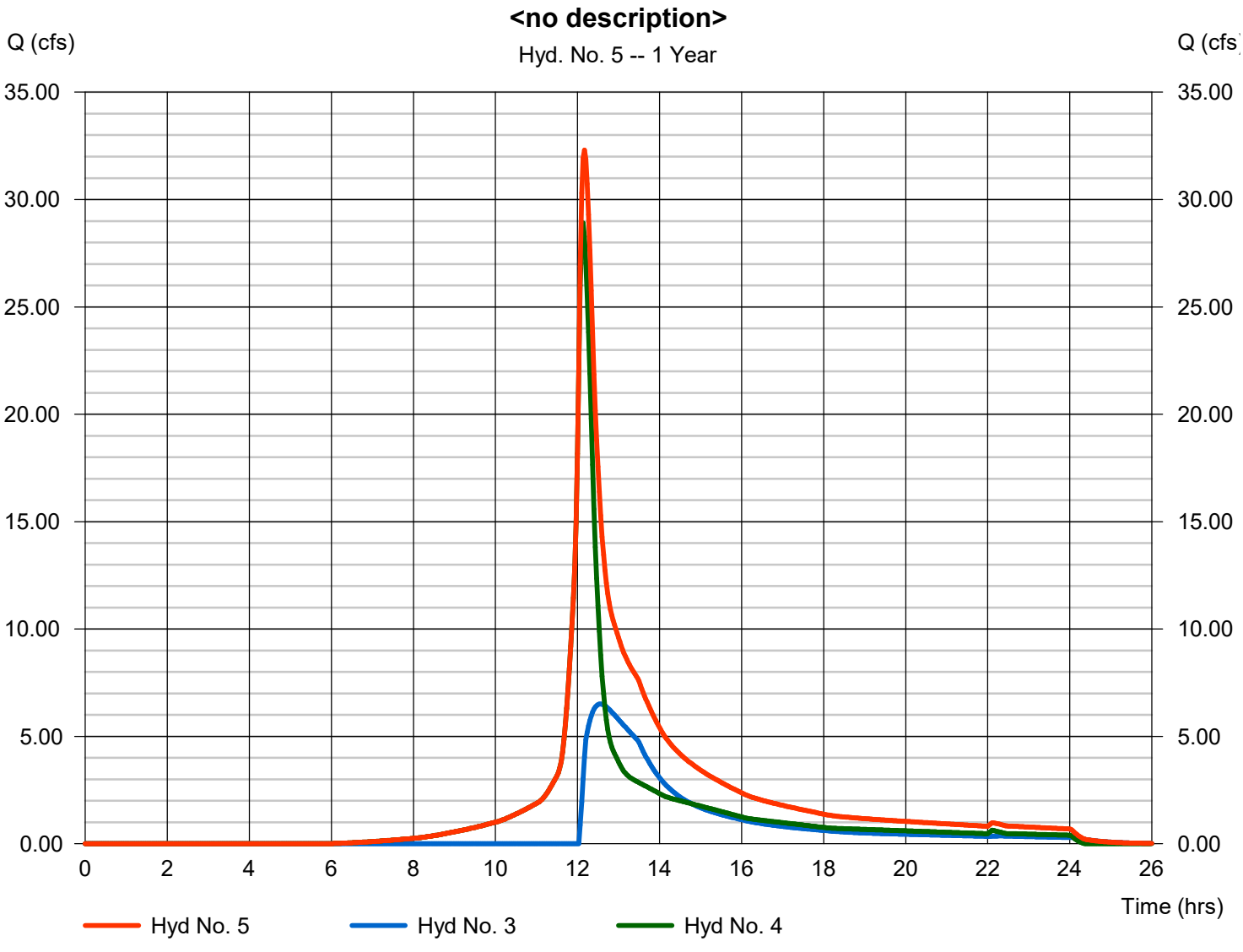
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 32.31 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 184,400 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

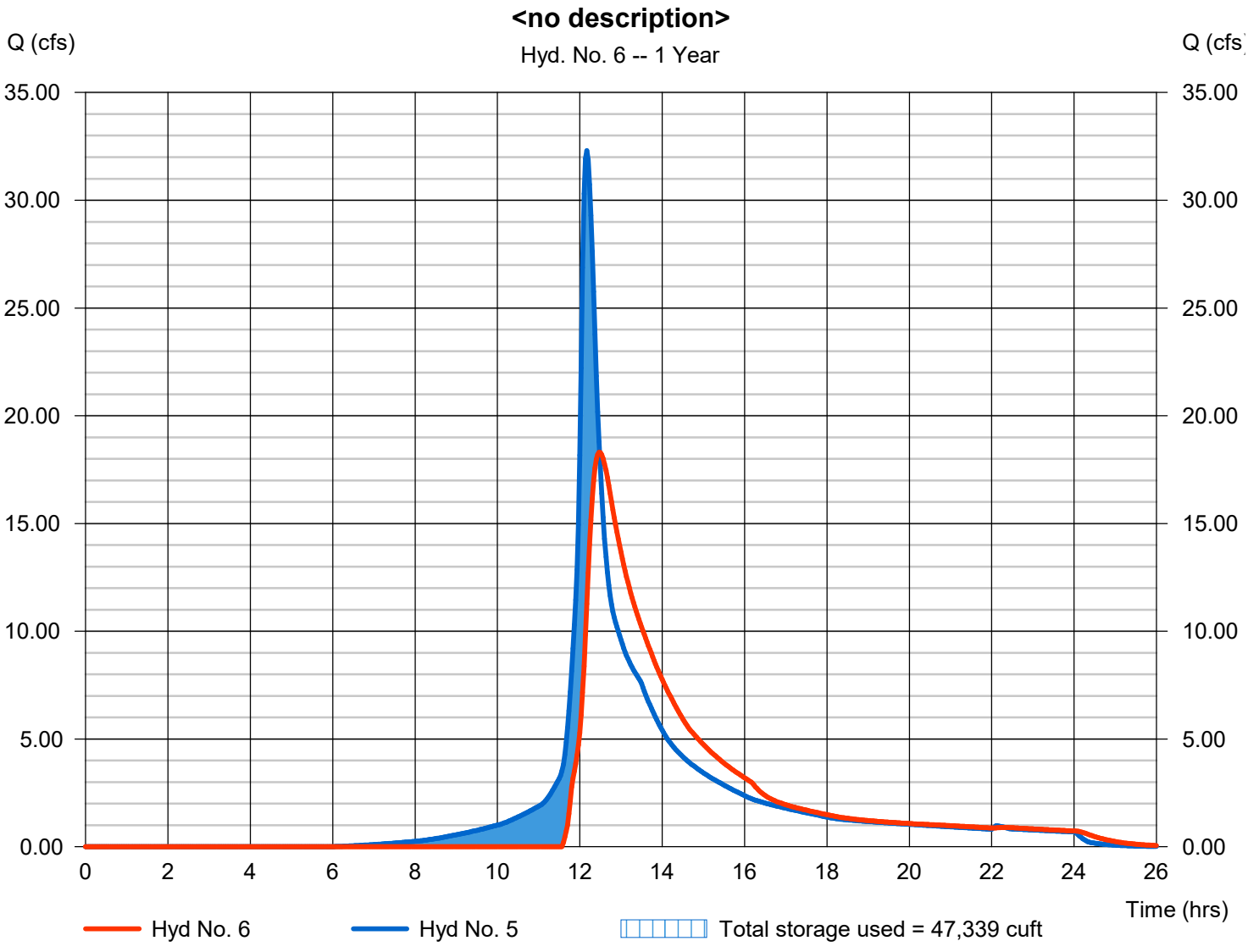
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 18.30 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.47 hrs
Time interval	= 2 min	Hyd. volume	= 169,235 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 14.47 ft
Reservoir name	= Pond 2	Max. Storage	= 47,339 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Pond Report

Pond No. 2 - Pond 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 10.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	10.00	05	0	0
1.00	11.00	05	5	5
2.00	12.00	05	5	10
3.00	13.00	05	5	15
4.00	14.00	56,277	18,936	18,951
5.00	15.00	64,568	60,369	79,320
6.00	16.00	72,915	68,692	148,012

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	Inactive	Inactive	Inactive	Inactive
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 10.00	Inactive	Inactive	Inactive
Crest El. (ft)	= 13.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	10.00	---	---	---	---	0.00	---	---	---	---	---	0.000
1.00	5	11.00	---	---	---	---	0.00	---	---	---	---	---	0.000
2.00	10	12.00	---	---	---	---	0.00	---	---	---	---	---	0.000
3.00	15	13.00	---	---	---	---	0.00	---	---	---	---	---	0.000
4.00	18,951	14.00	---	---	---	---	2.98	---	---	---	---	---	2.978
5.00	79,320	15.00	---	---	---	---	43.77	---	---	---	---	---	43.77
6.00	148,012	16.00	---	---	---	---	108.66	---	---	---	---	---	108.66

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	30.01	2	728	135,321	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	48.60	2	760	460,580	------	------	------	Pre-Development Flow
3	Reservoir	8.924	2	754	101,167	1	14.35	70,734	Pond 1
4	SCS Runoff	41.69	2	728	175,958	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	48.28	2	728	277,124	3, 4	------	------	<no description>
6	Reservoir	29.33	2	746	261,959	5	14.72	62,321	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

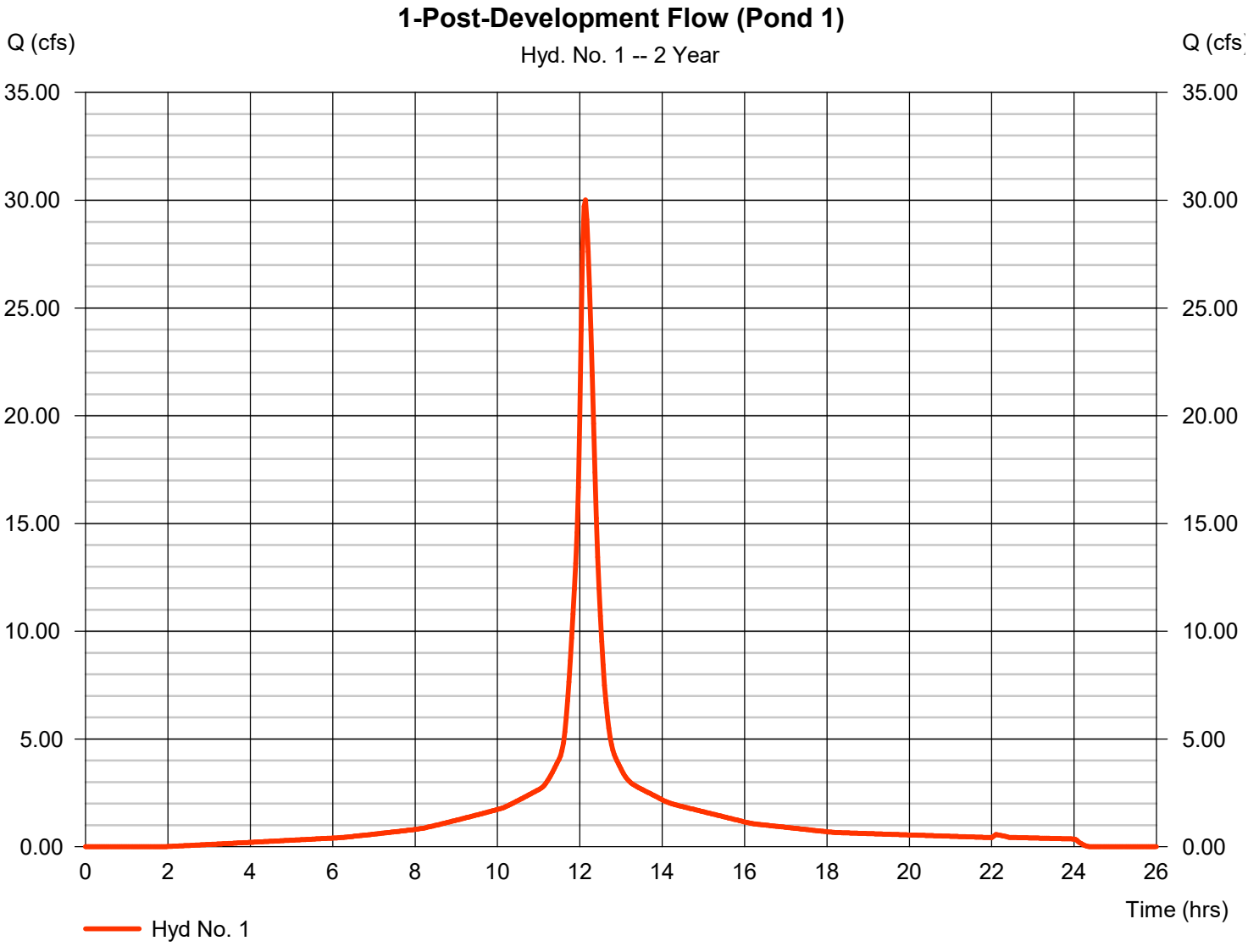
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 30.01 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 135,321 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 4.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

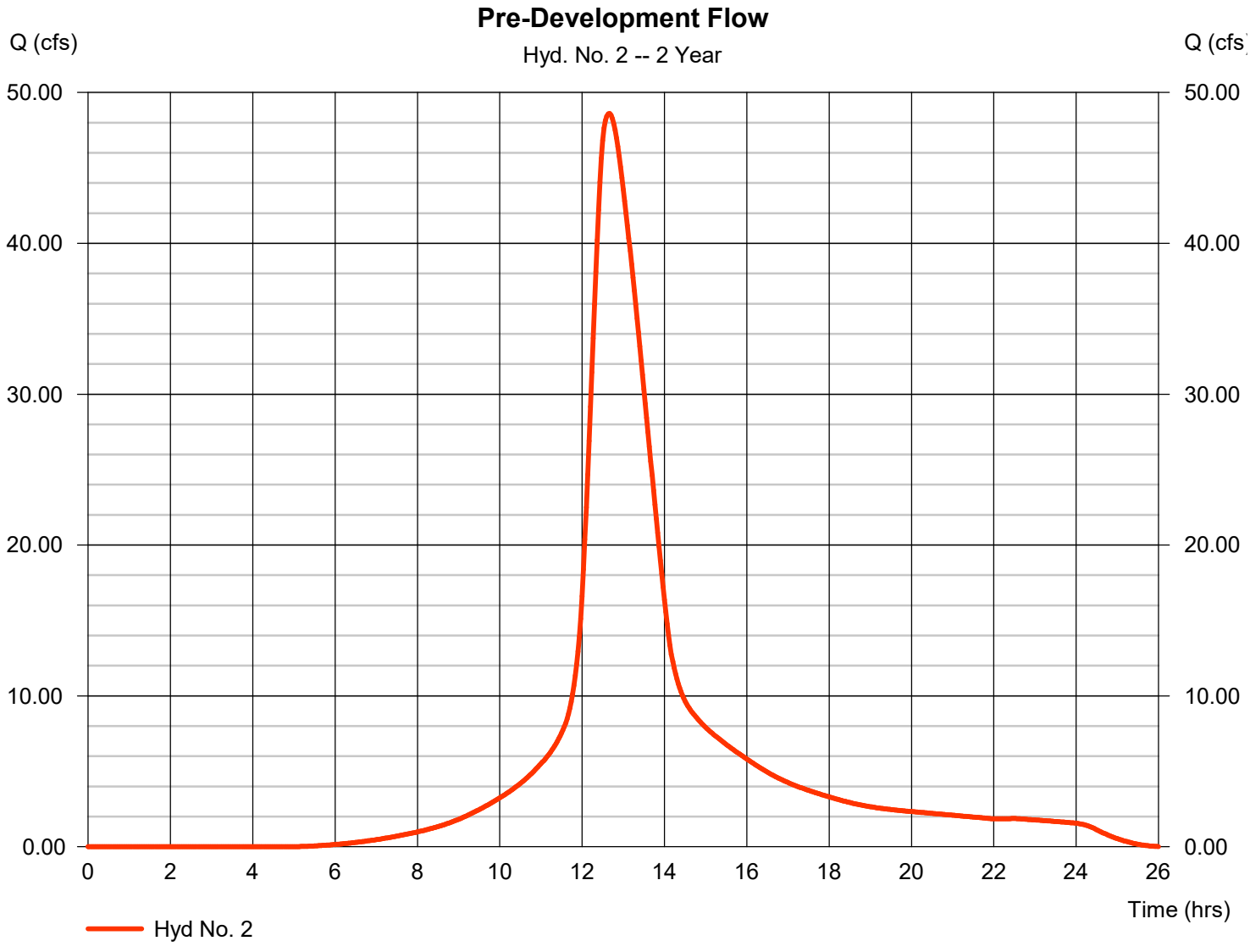
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	= SCS Runoff	Peak discharge	= 48.60 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.67 hrs
Time interval	= 2 min	Hyd. volume	= 460,580 cuft
Drainage area	= 35.180 ac	Curve number	= 89
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 50.00 min
Total precip.	= 4.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

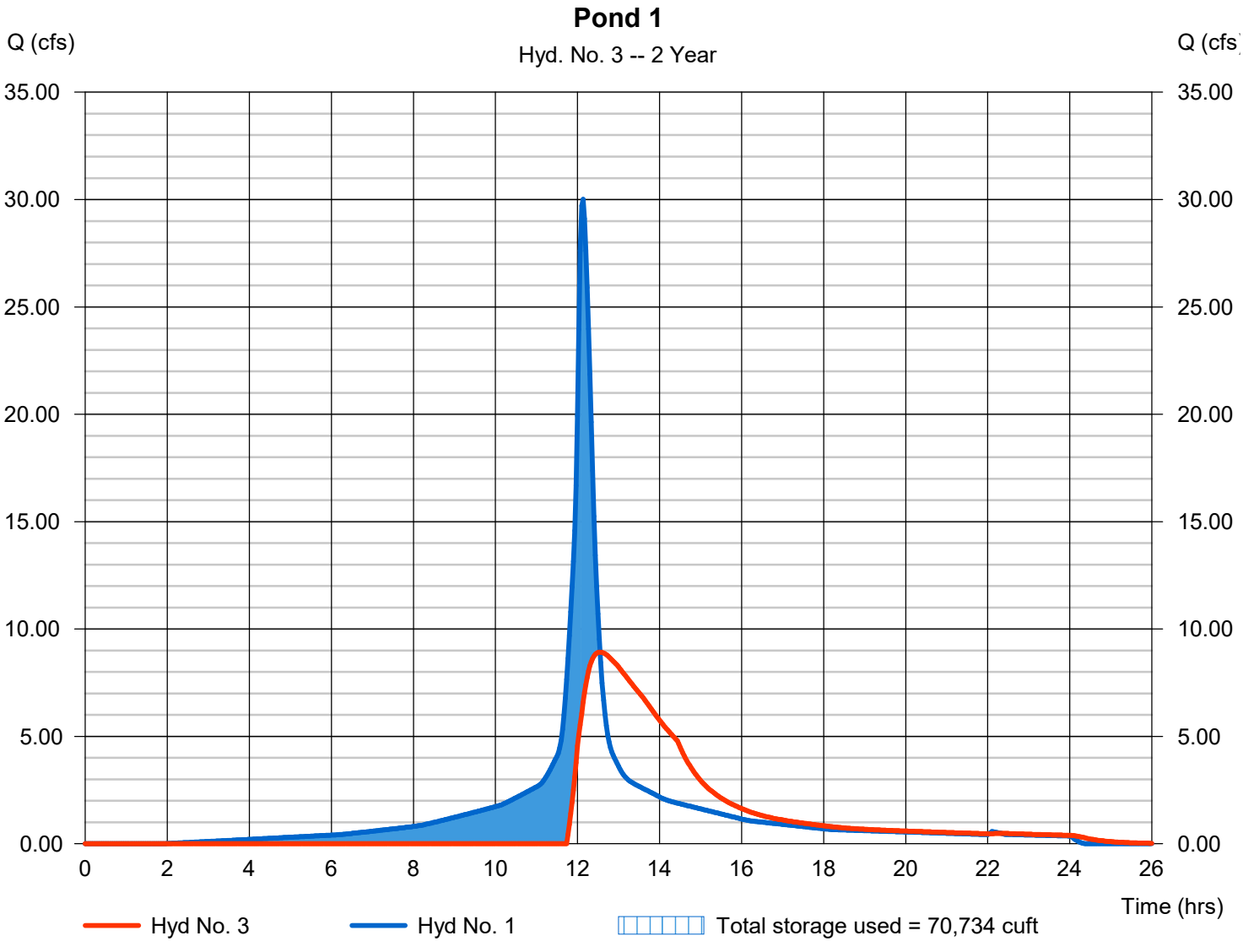
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 8.924 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.57 hrs
Time interval	= 2 min	Hyd. volume	= 101,167 cuft
Inflow hyd. No.	= 1 - 1-Post-Development Flow (Max.E)	Max. Elevation	= 14.35 ft
Reservoir name	= Pond 1	Max. Storage	= 70,734 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

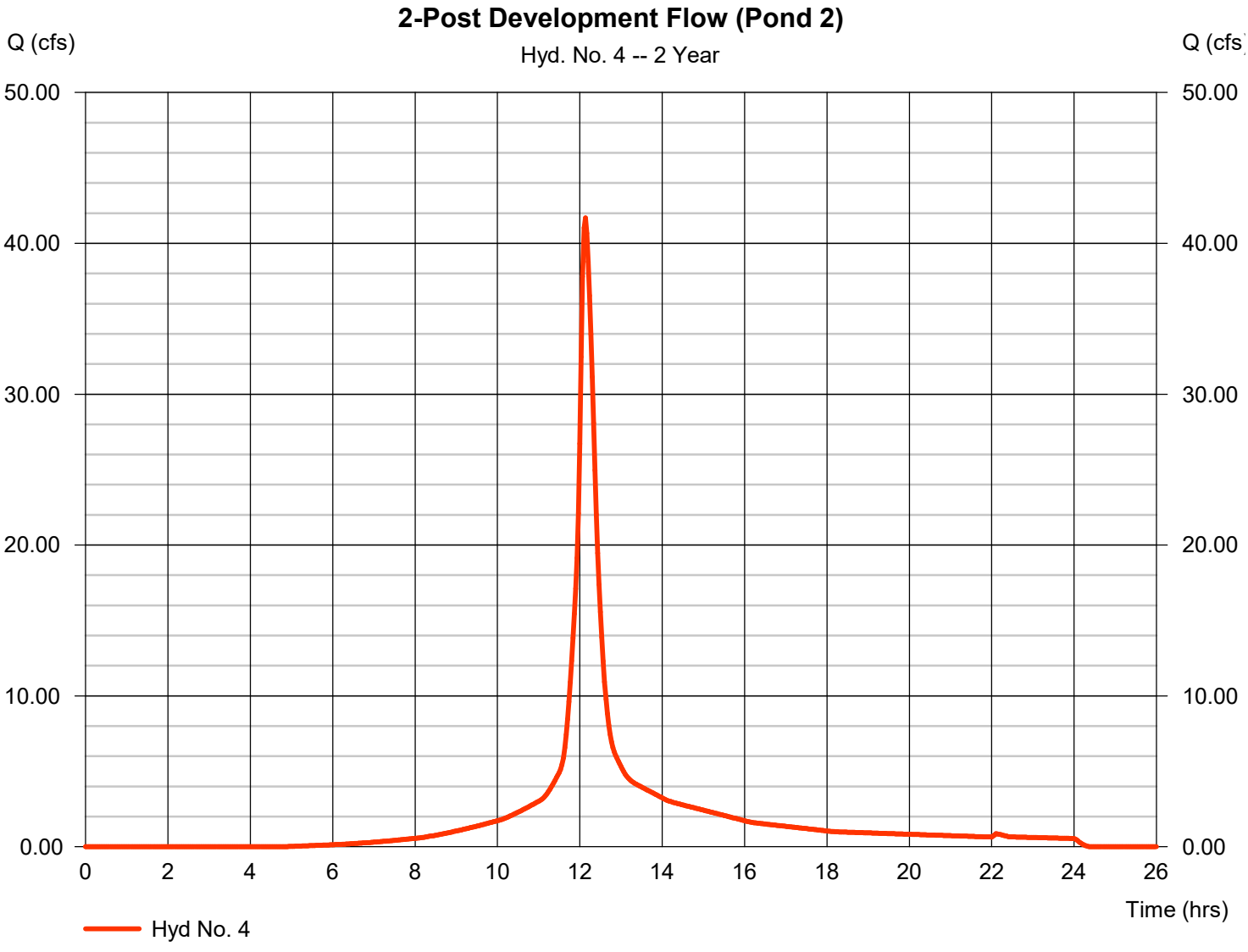
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	= SCS Runoff	Peak discharge	= 41.69 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 175,958 cuft
Drainage area	= 13.440 ac	Curve number	= 89*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 4.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

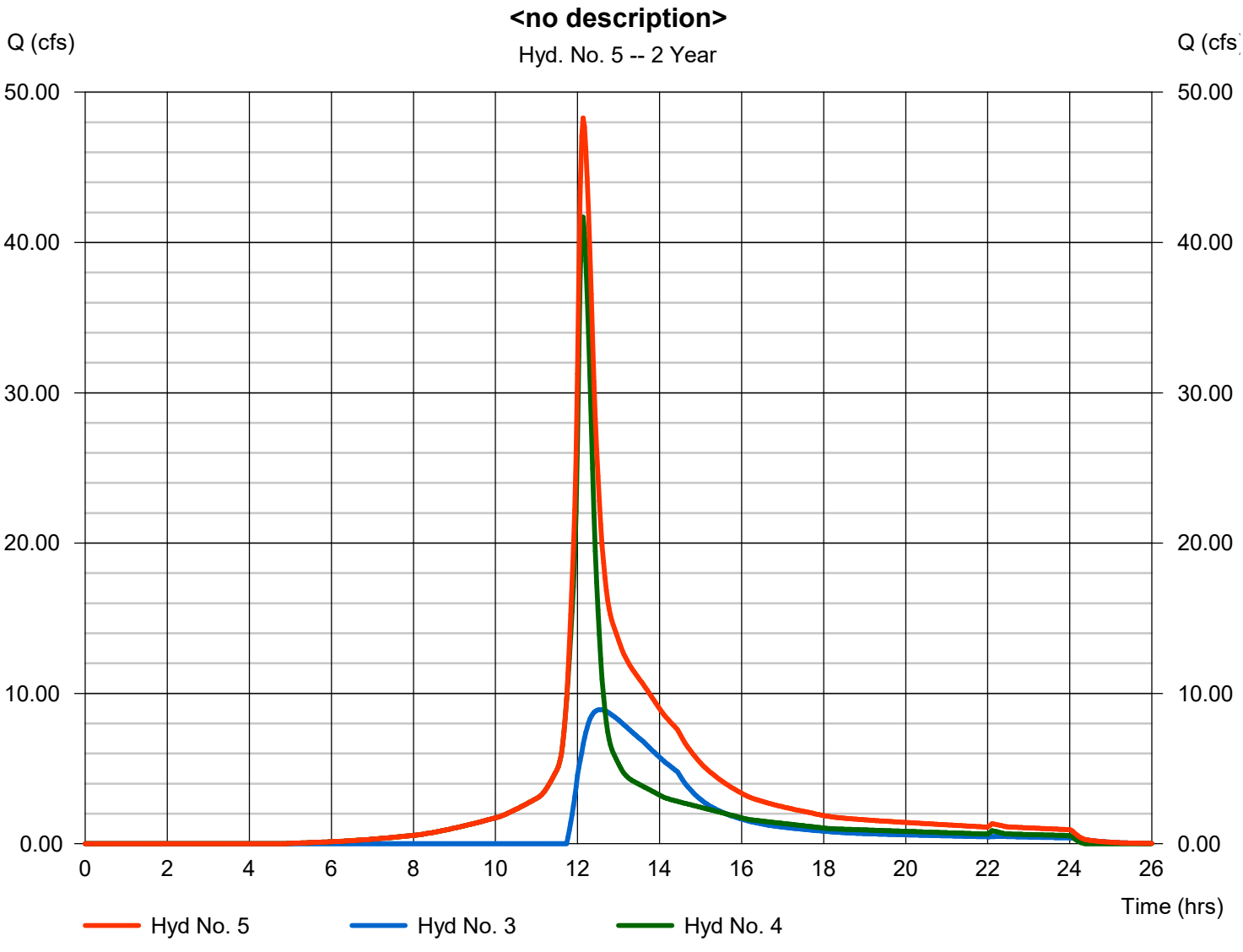
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 48.28 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 277,124 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

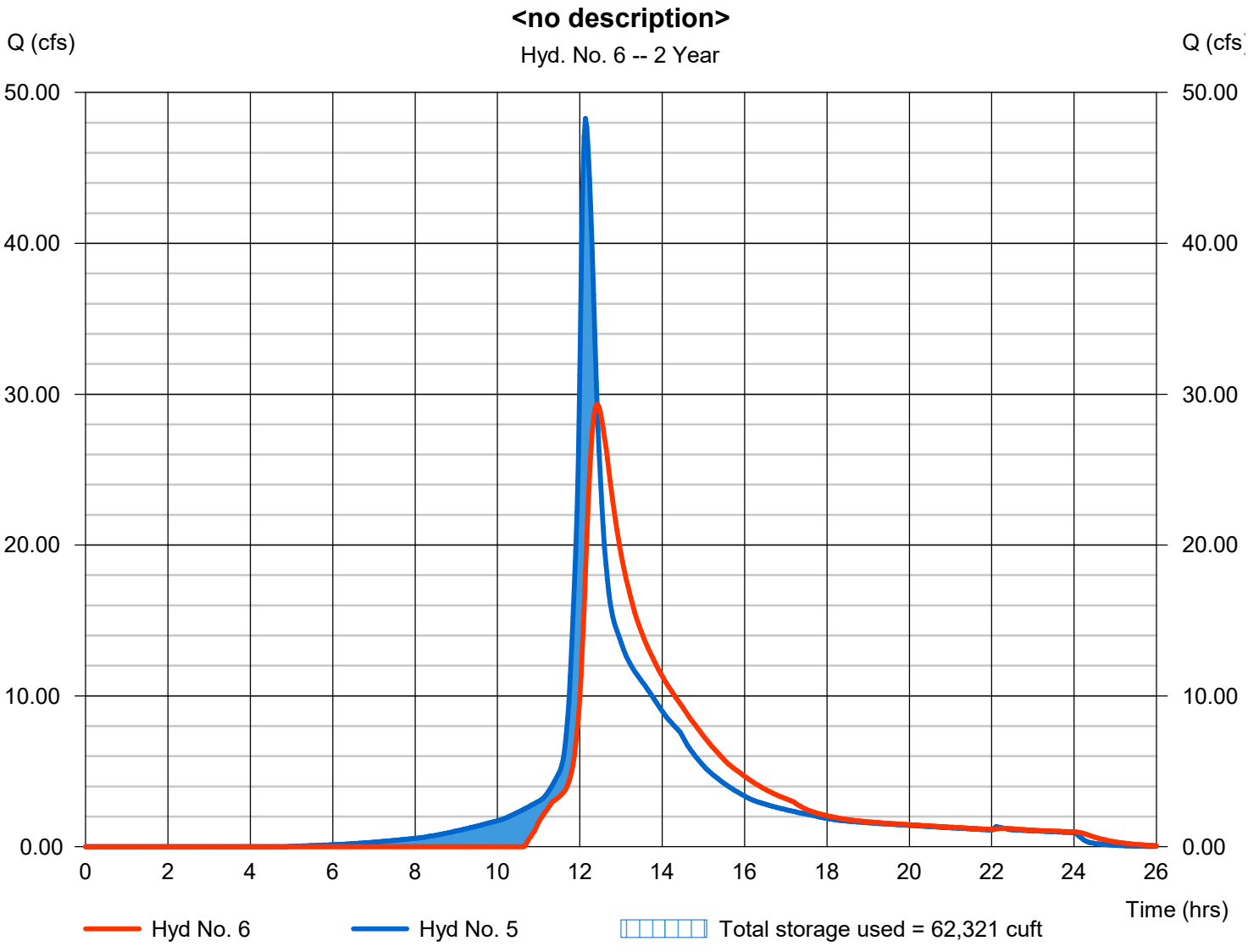
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 29.33 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.43 hrs
Time interval	= 2 min	Hyd. volume	= 261,959 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 14.72 ft
Reservoir name	= Pond 2	Max. Storage	= 62,321 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	37.82	2	728	172,590	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	63.68	2	758	609,104	------	------	------	Pre-Development Flow
3	Reservoir	10.69	2	754	138,436	1	14.50	86,407	Pond 1
4	SCS Runoff	54.43	2	728	232,699	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	62.62	2	728	371,135	3, 4	------	------	<no description>
6	Reservoir	40.42	2	744	355,969	5	14.94	75,544	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

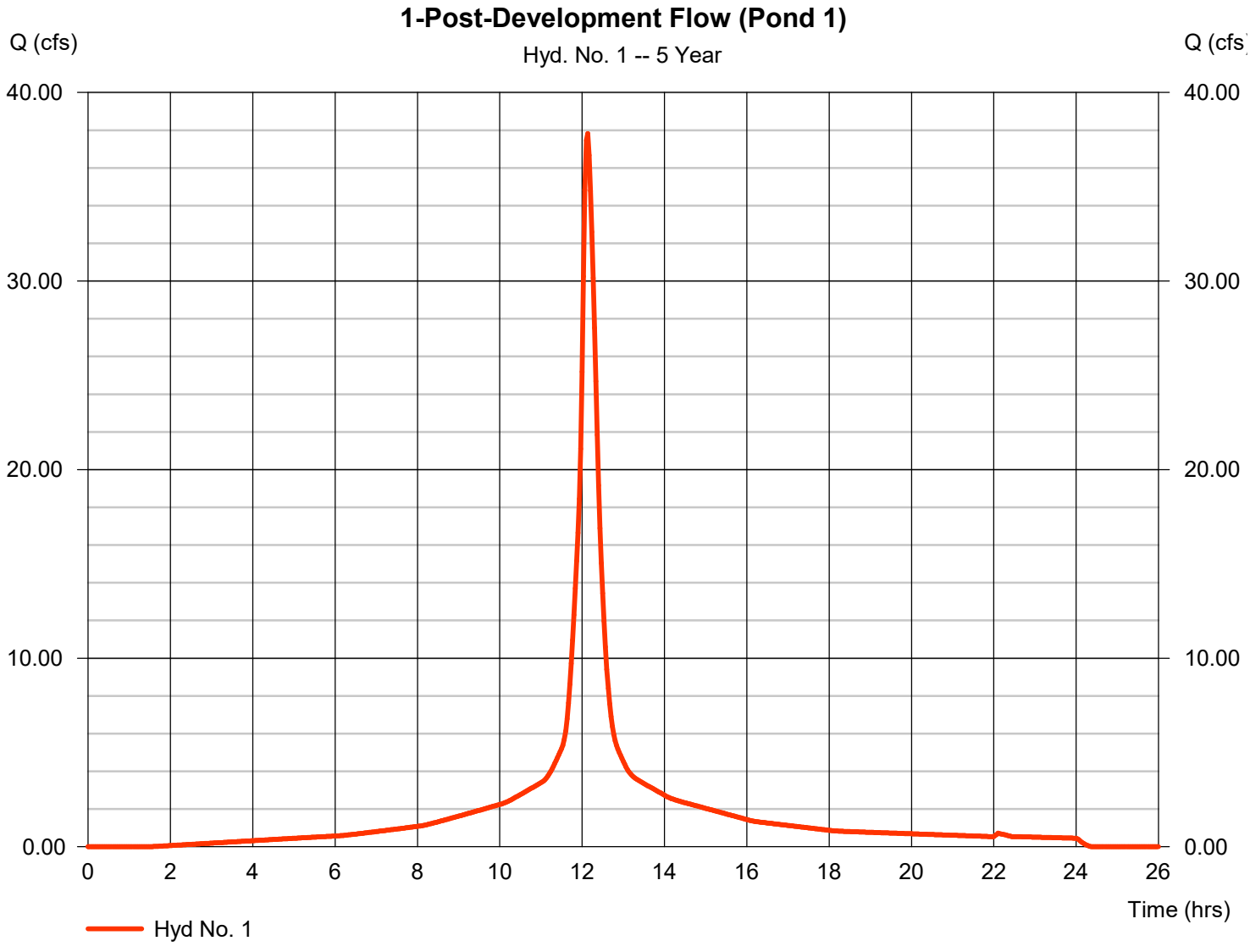
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 37.82 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 172,590 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

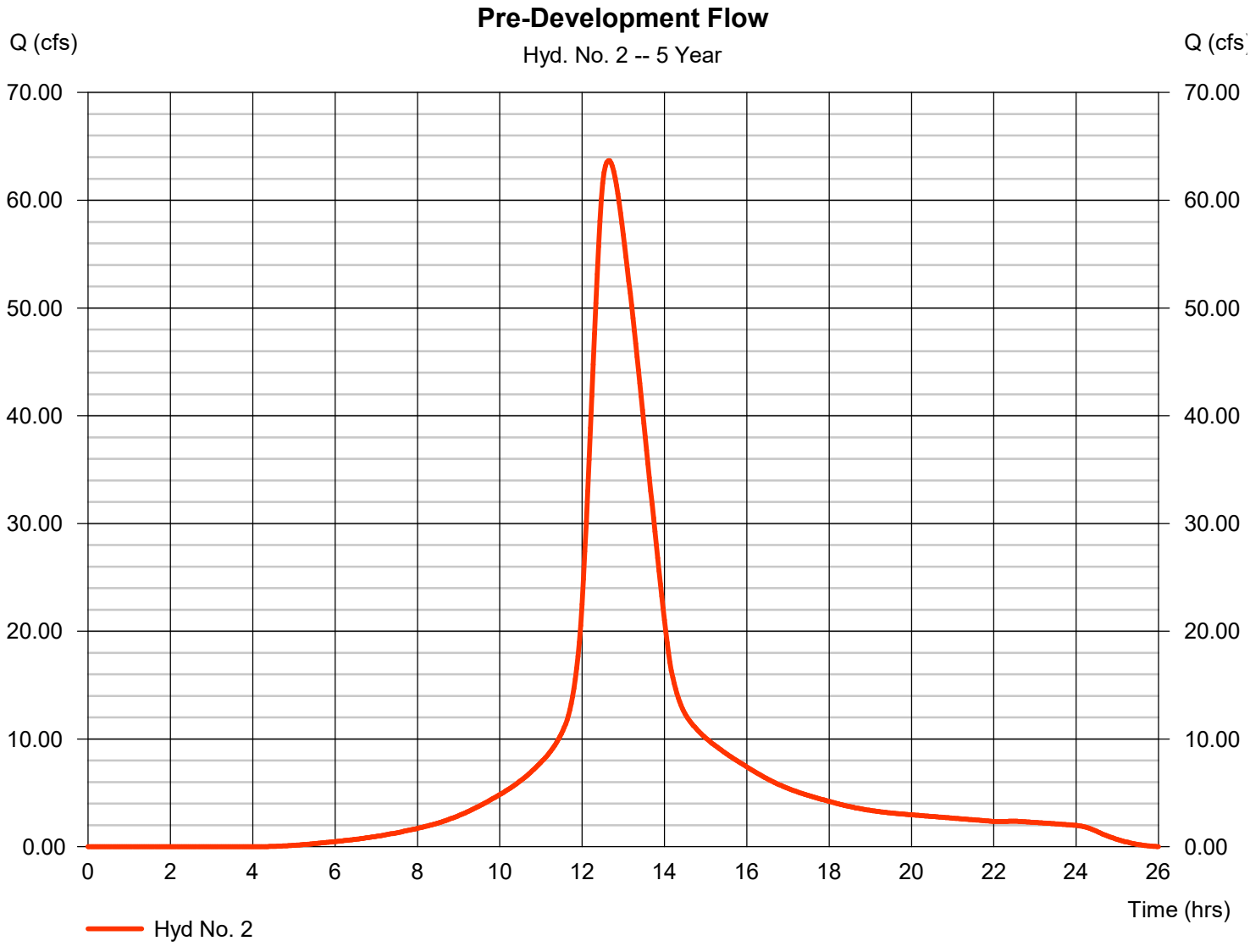
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	= SCS Runoff	Peak discharge	= 63.68 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.63 hrs
Time interval	= 2 min	Hyd. volume	= 609,104 cuft
Drainage area	= 35.180 ac	Curve number	= 89
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 50.00 min
Total precip.	= 6.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

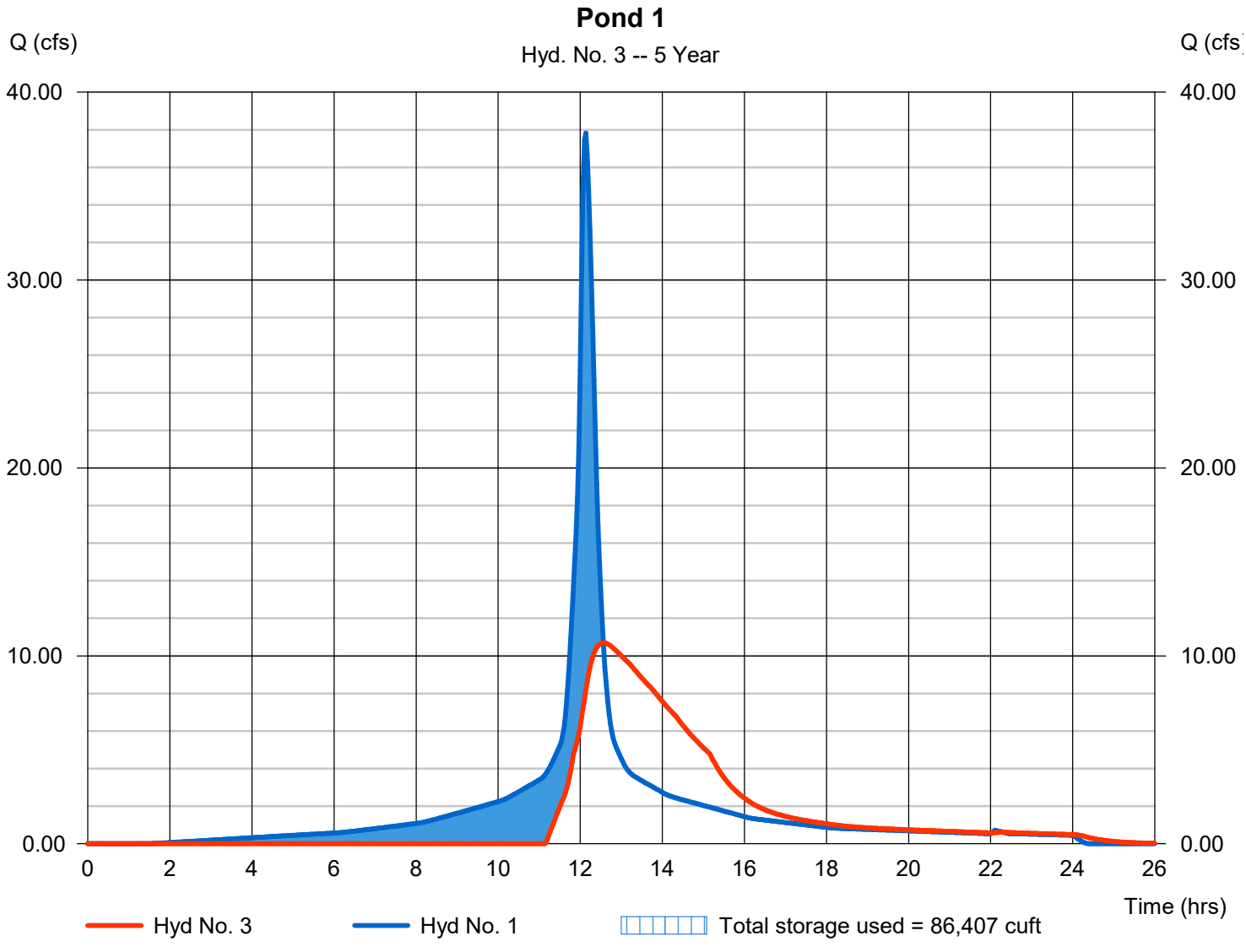
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	10.69 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.57 hrs
Time interval	=	2 min	Hyd. volume	=	138,436 cuft
Inflow hyd. No.	=	1 - 1-Post-Development Flow (Pond 1)	Max. Elevation	=	14.50 ft
Reservoir name	=	Pond 1	Max. Storage	=	86,407 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

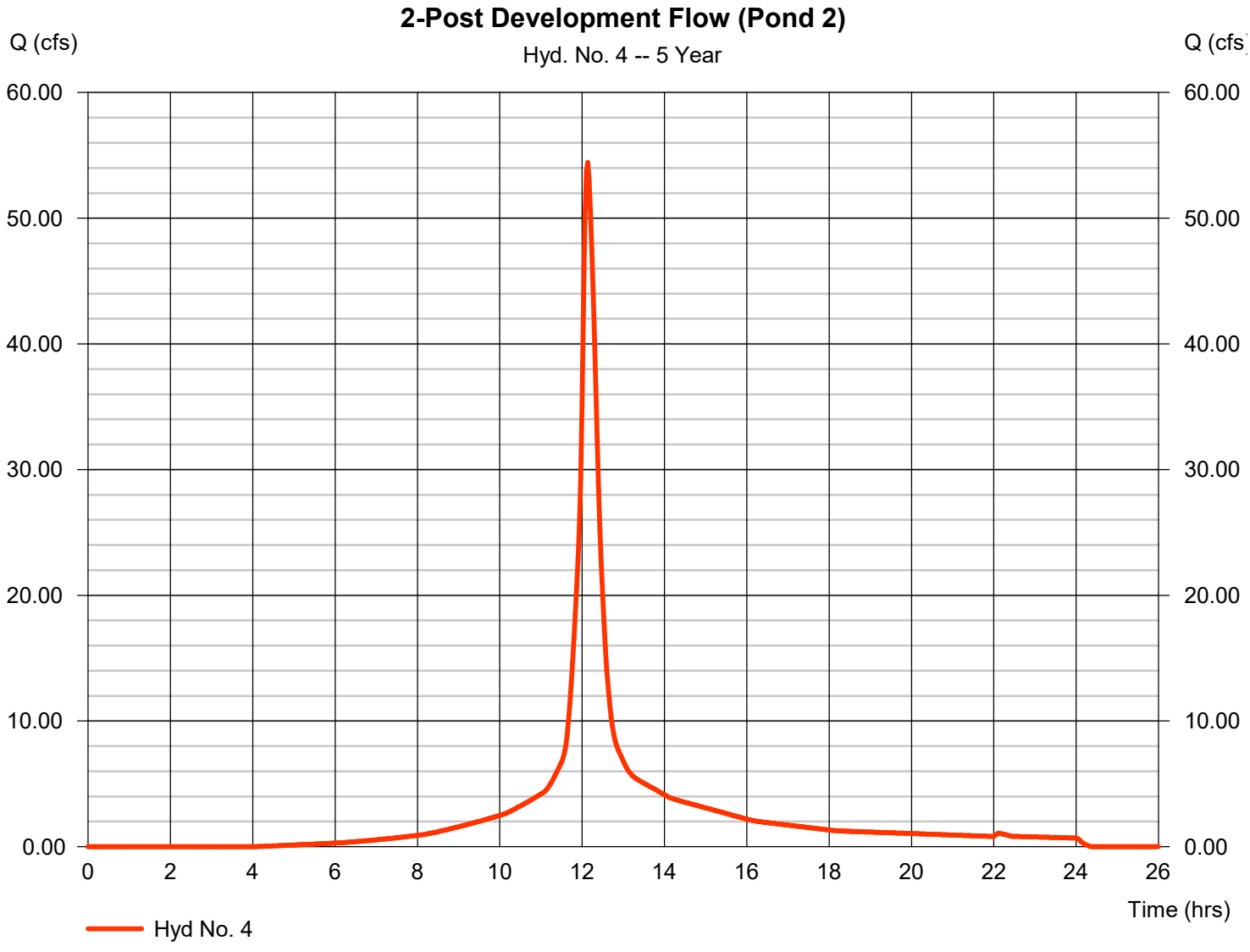
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	= SCS Runoff	Peak discharge	= 54.43 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 232,699 cuft
Drainage area	= 13.440 ac	Curve number	= 89*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

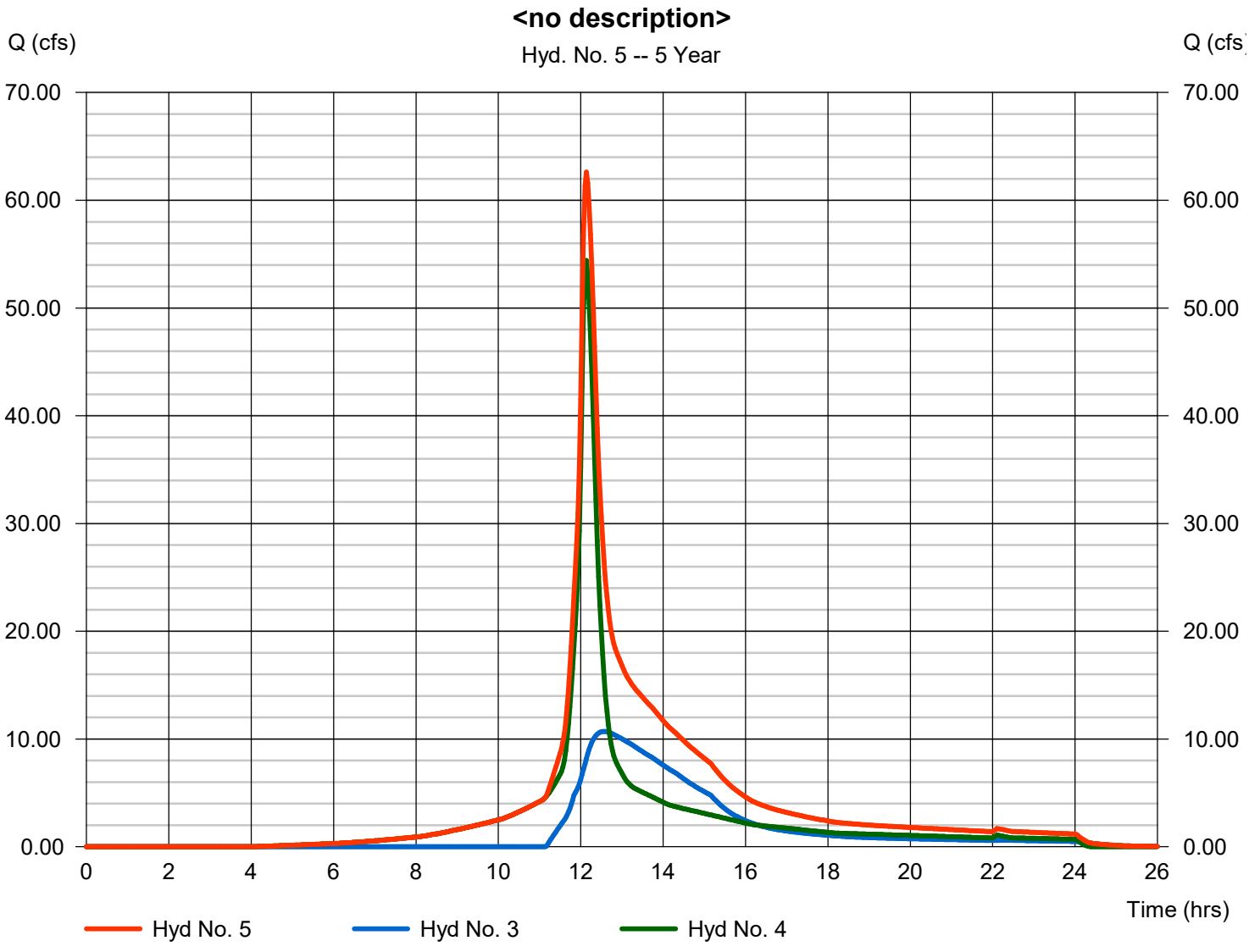
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 62.62 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 371,135 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

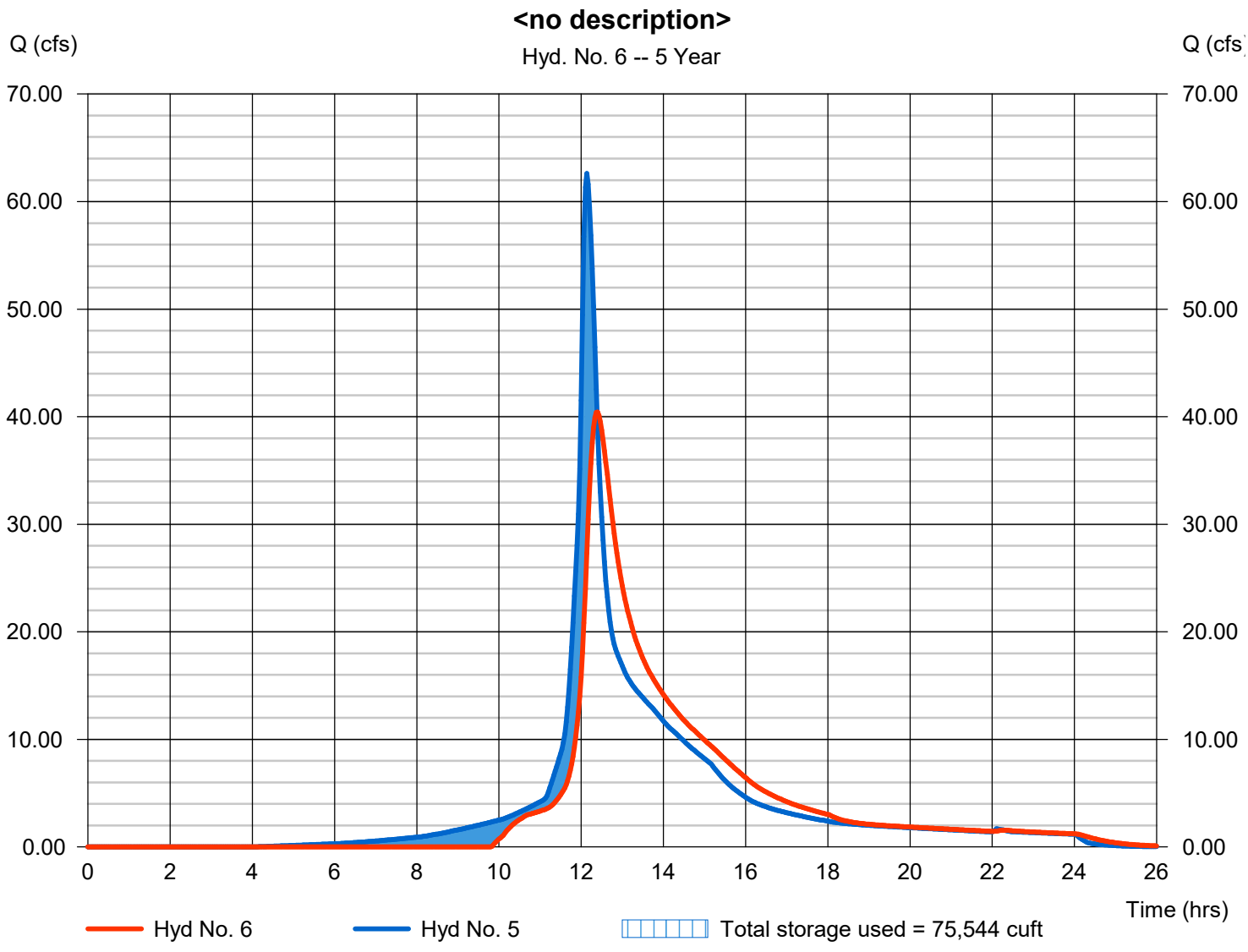
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 40.42 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.40 hrs
Time interval	= 2 min	Hyd. volume	= 355,969 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 14.94 ft
Reservoir name	= Pond 2	Max. Storage	= 75,544 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	42.49	2	728	194,984	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	72.71	2	758	699,090	------	------	------	Pre-Development Flow
3	Reservoir	11.55	2	754	160,830	1	14.58	95,147	Pond 1
4	SCS Runoff	62.03	2	728	267,077	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	70.90	2	728	427,907	3, 4	------	------	<no description>
6	Reservoir	46.67	2	742	412,741	5	15.05	82,878	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

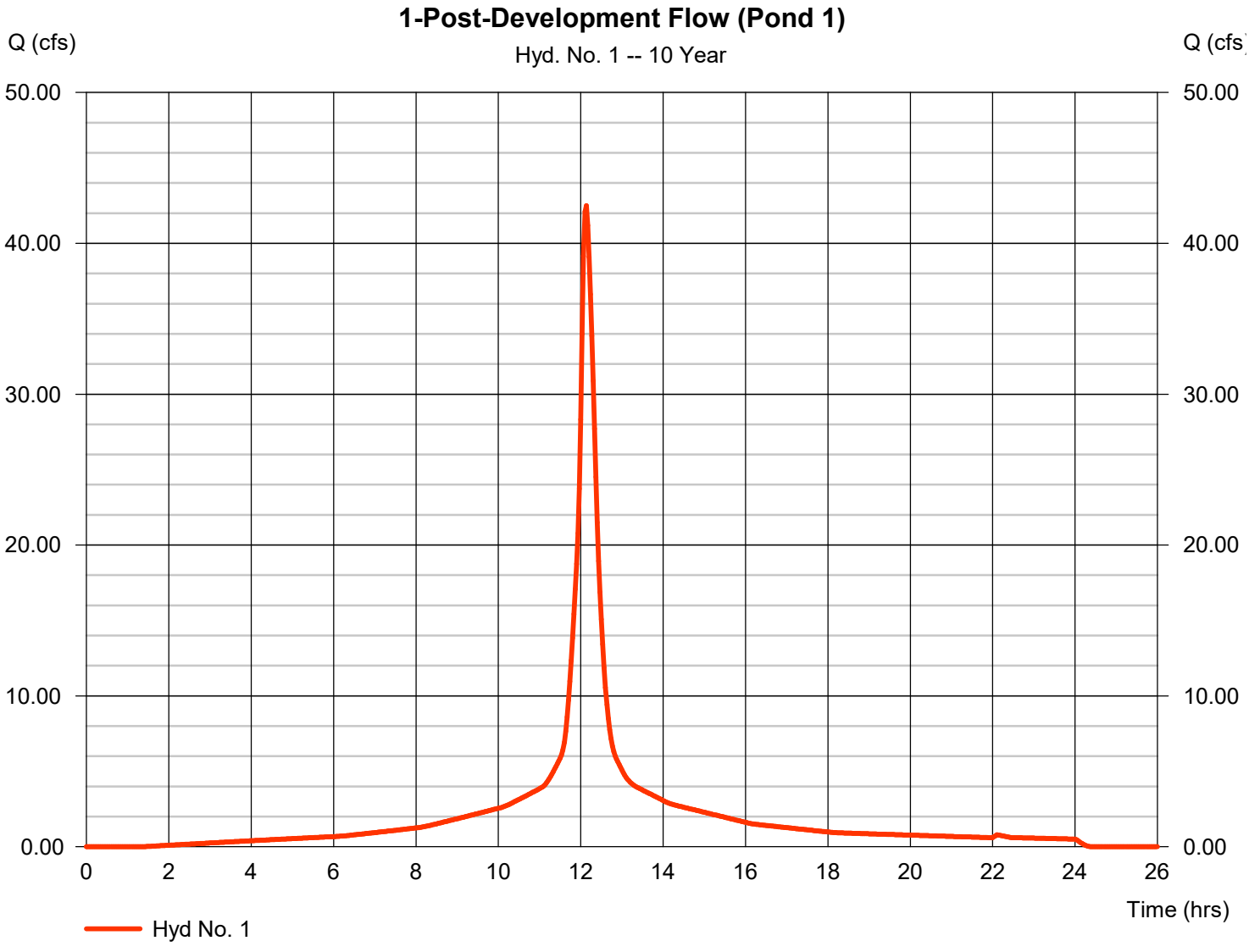
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 42.49 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 194,984 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

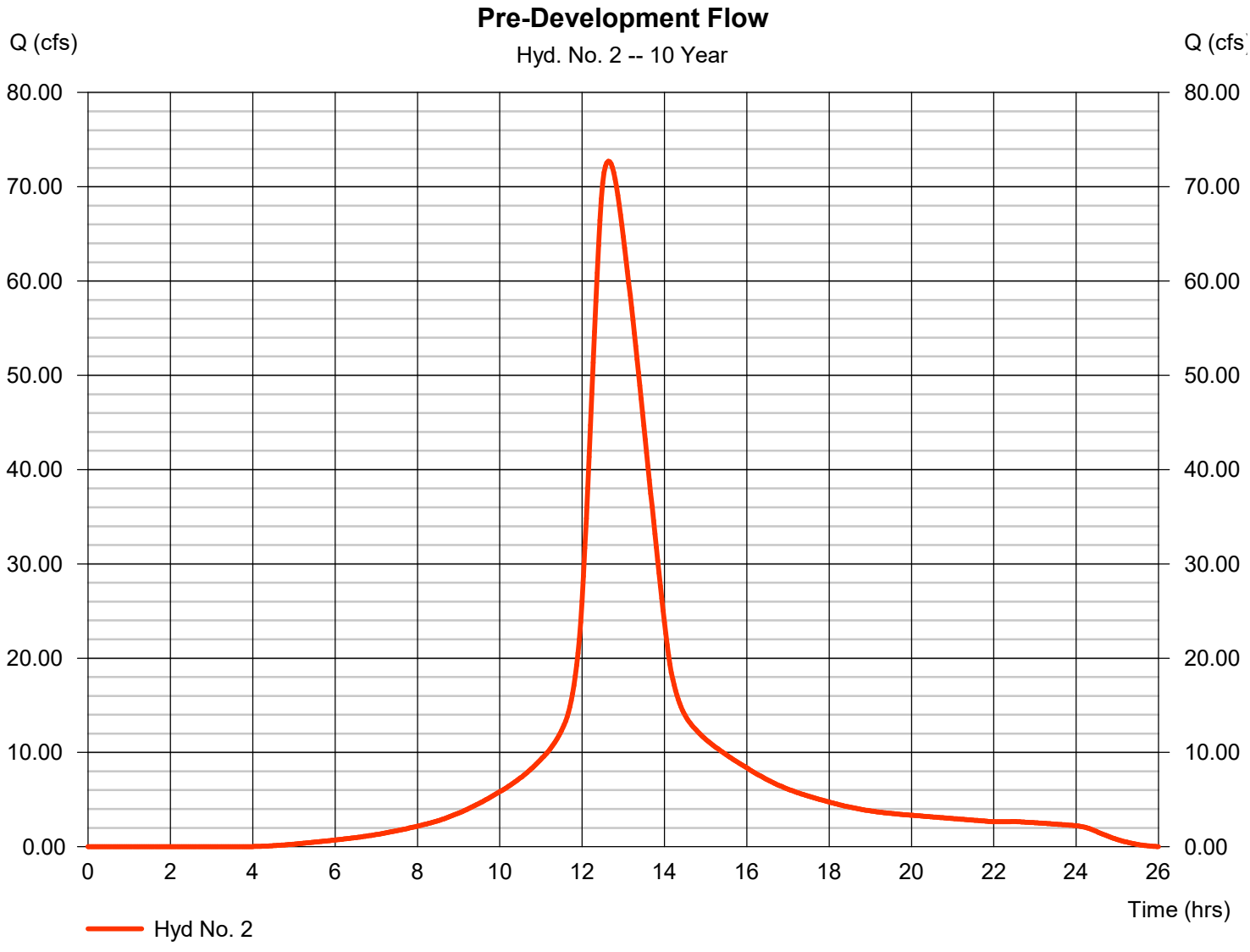
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	= SCS Runoff	Peak discharge	= 72.71 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.63 hrs
Time interval	= 2 min	Hyd. volume	= 699,090 cuft
Drainage area	= 35.180 ac	Curve number	= 89
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 50.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

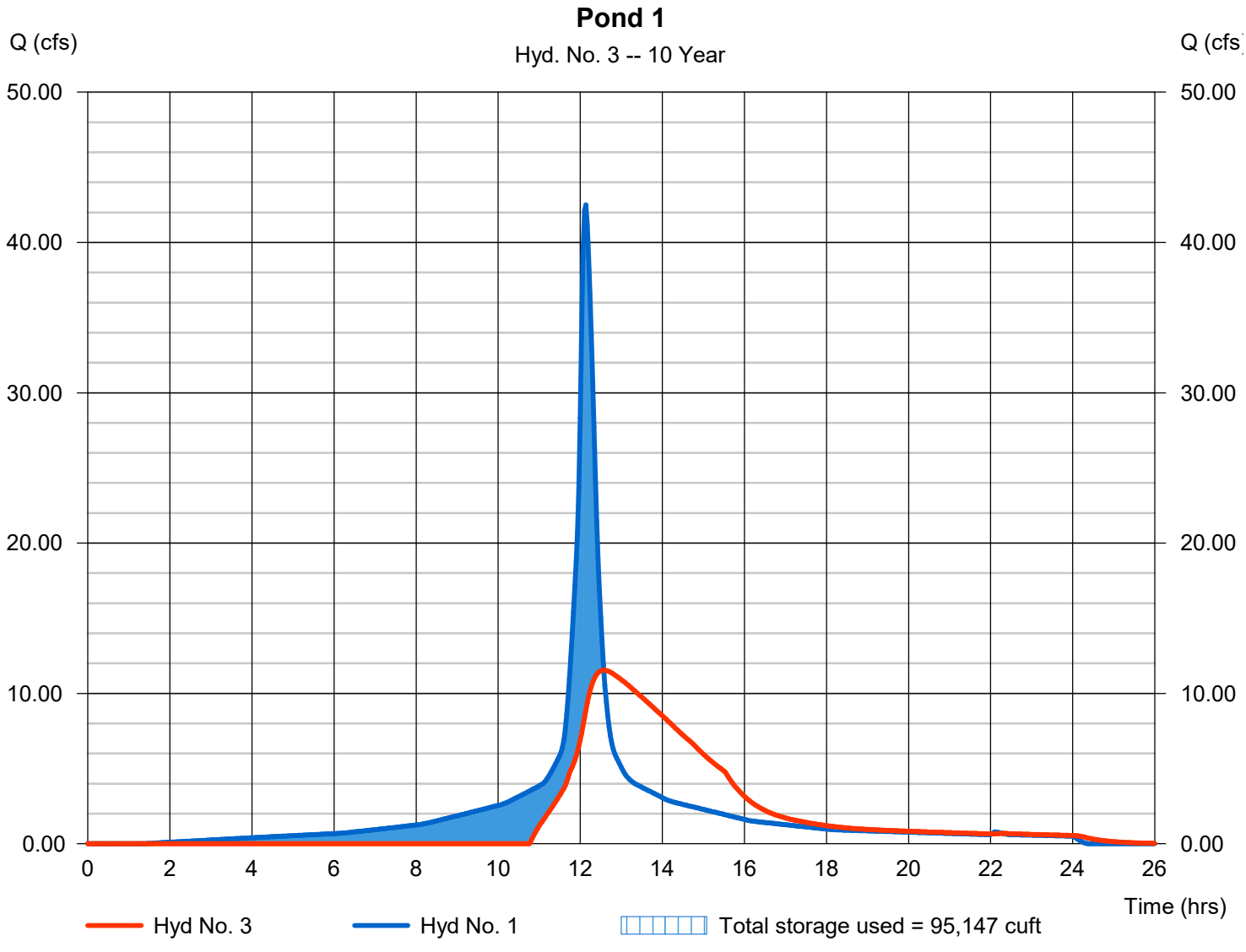
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 11.55 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.57 hrs
Time interval	= 2 min	Hyd. volume	= 160,830 cuft
Inflow hyd. No.	= 1 - 1-Post-Development Flow (Max.E)	Max. Elevation	= 14.58 ft
Reservoir name	= Pond 1	Max. Storage	= 95,147 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

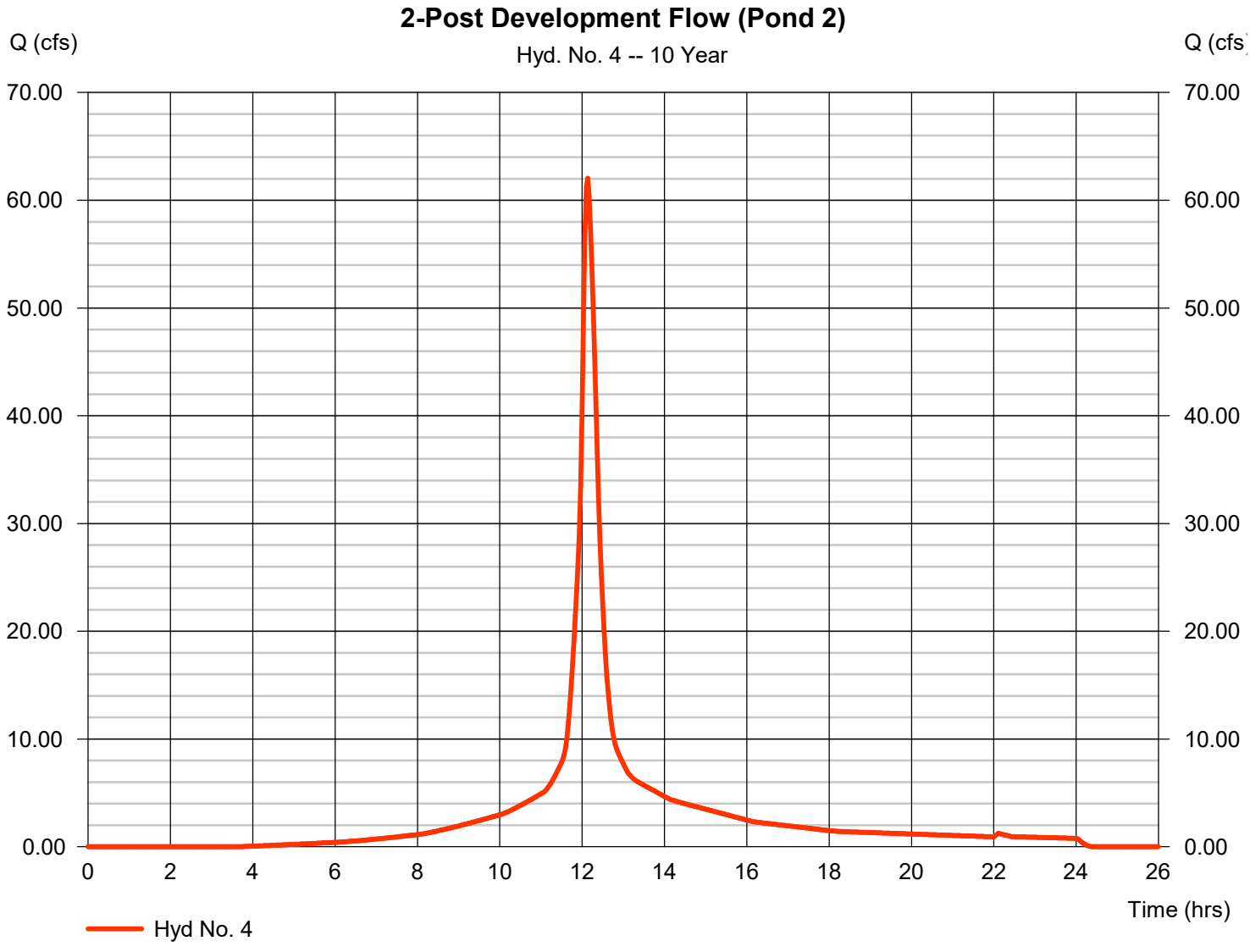
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	= SCS Runoff	Peak discharge	= 62.03 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 267,077 cuft
Drainage area	= 13.440 ac	Curve number	= 89*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

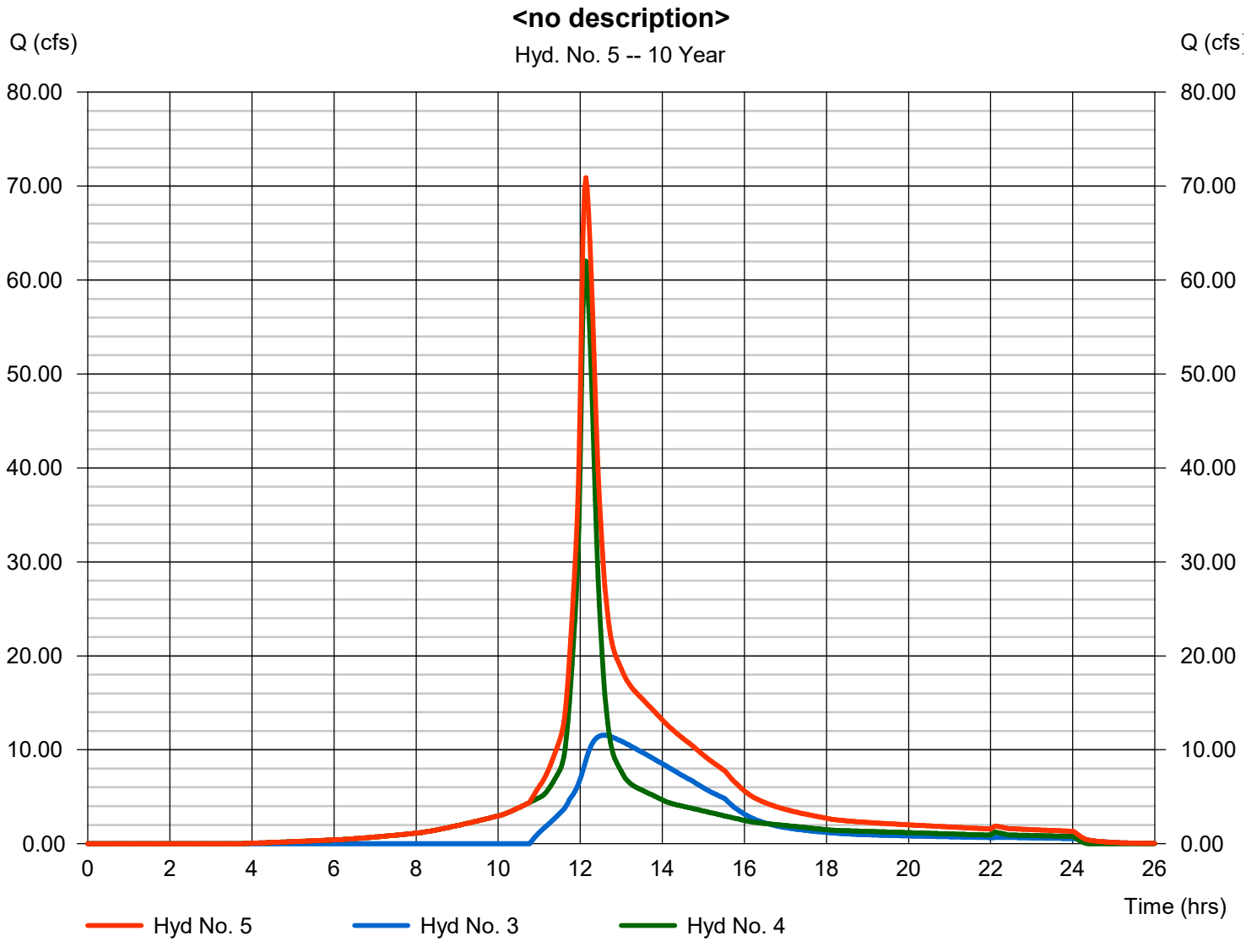
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 70.90 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 427,907 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

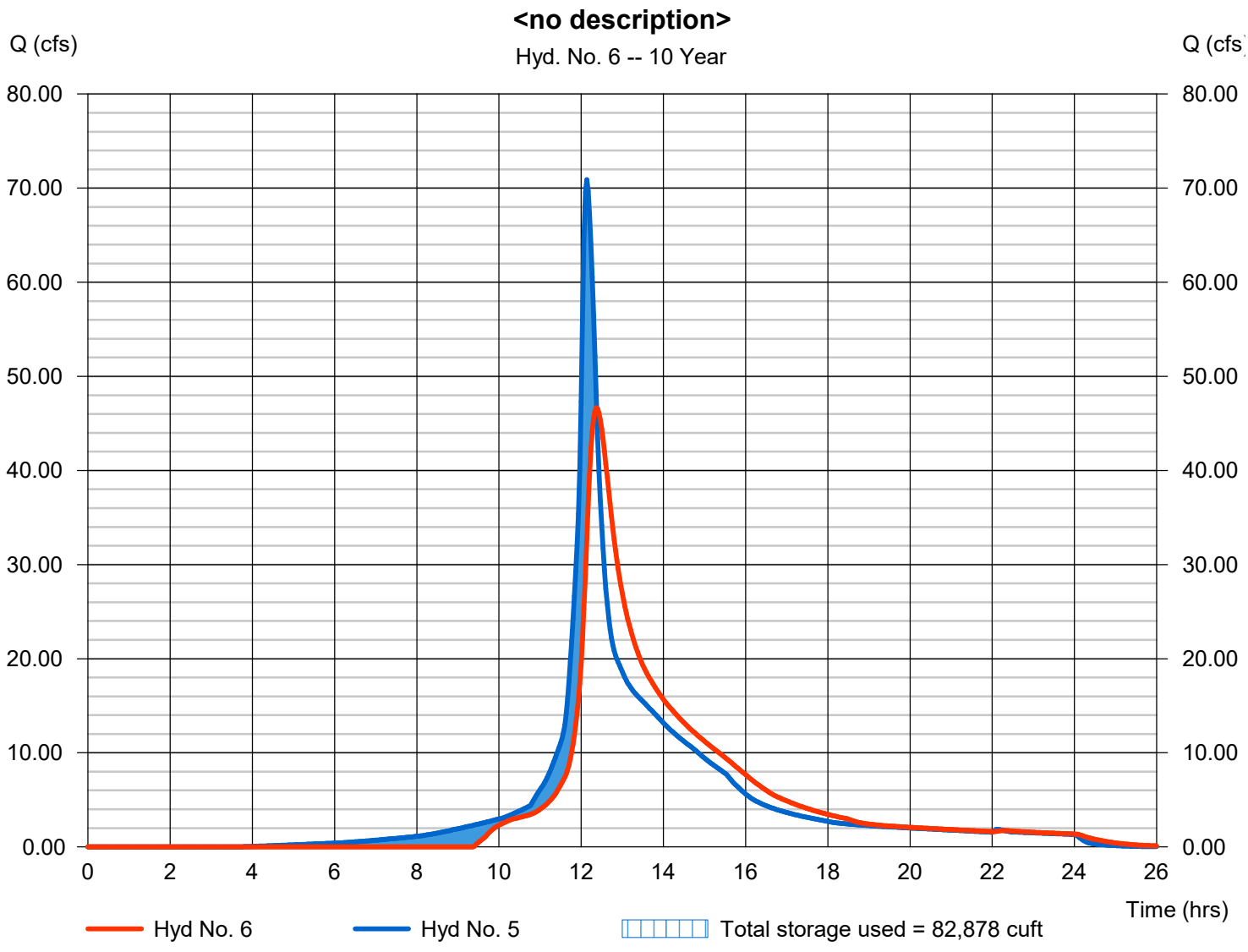
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 46.67 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.37 hrs
Time interval	= 2 min	Hyd. volume	= 412,741 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 15.05 ft
Reservoir name	= Pond 2	Max. Storage	= 82,878 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	50.26	2	728	232,342	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	87.69	2	758	850,008	------	------	------	Pre-Development Flow
3	Reservoir	12.83	2	756	198,187	1	14.72	109,430	Pond 1
4	SCS Runoff	74.64	2	728	324,733	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	84.51	2	728	522,920	3, 4	------	------	<no description>
6	Reservoir	56.49	2	742	507,755	5	15.22	94,570	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

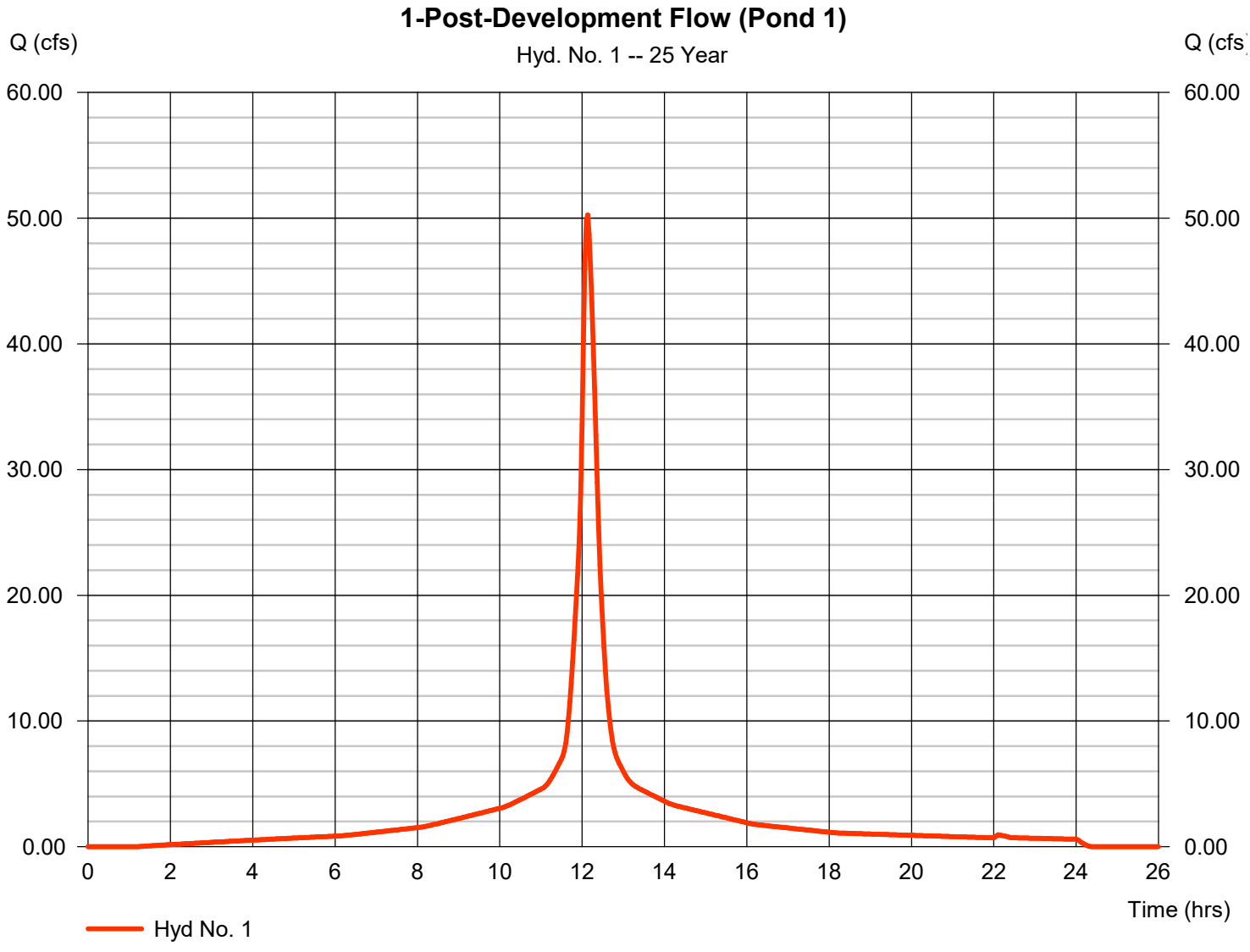
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 50.26 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 232,342 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 7.92 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

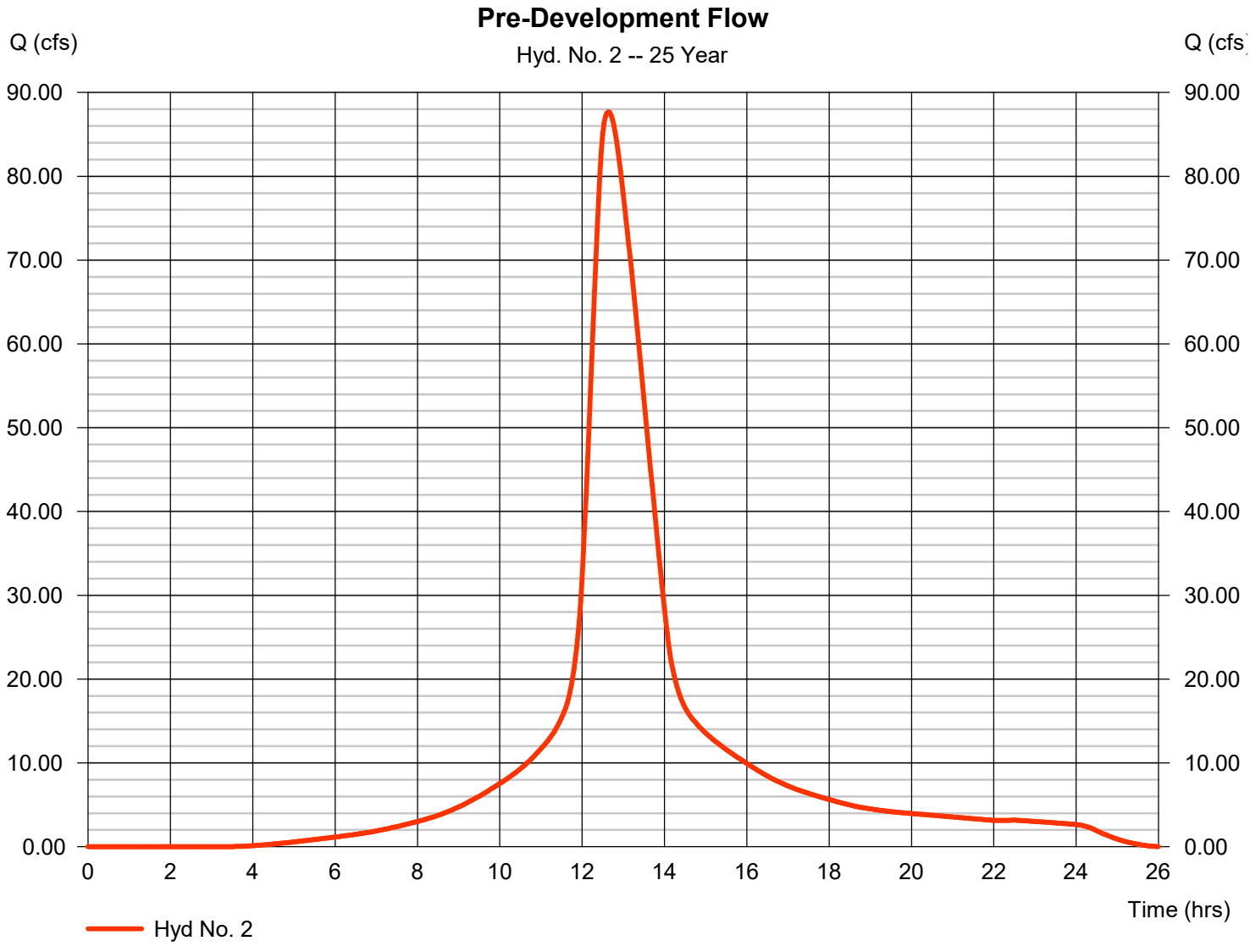
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	=	SCS Runoff	Peak discharge	=	87.69 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.63 hrs
Time interval	=	2 min	Hyd. volume	=	850,008 cuft
Drainage area	=	35.180 ac	Curve number	=	89
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	50.00 min
Total precip.	=	7.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

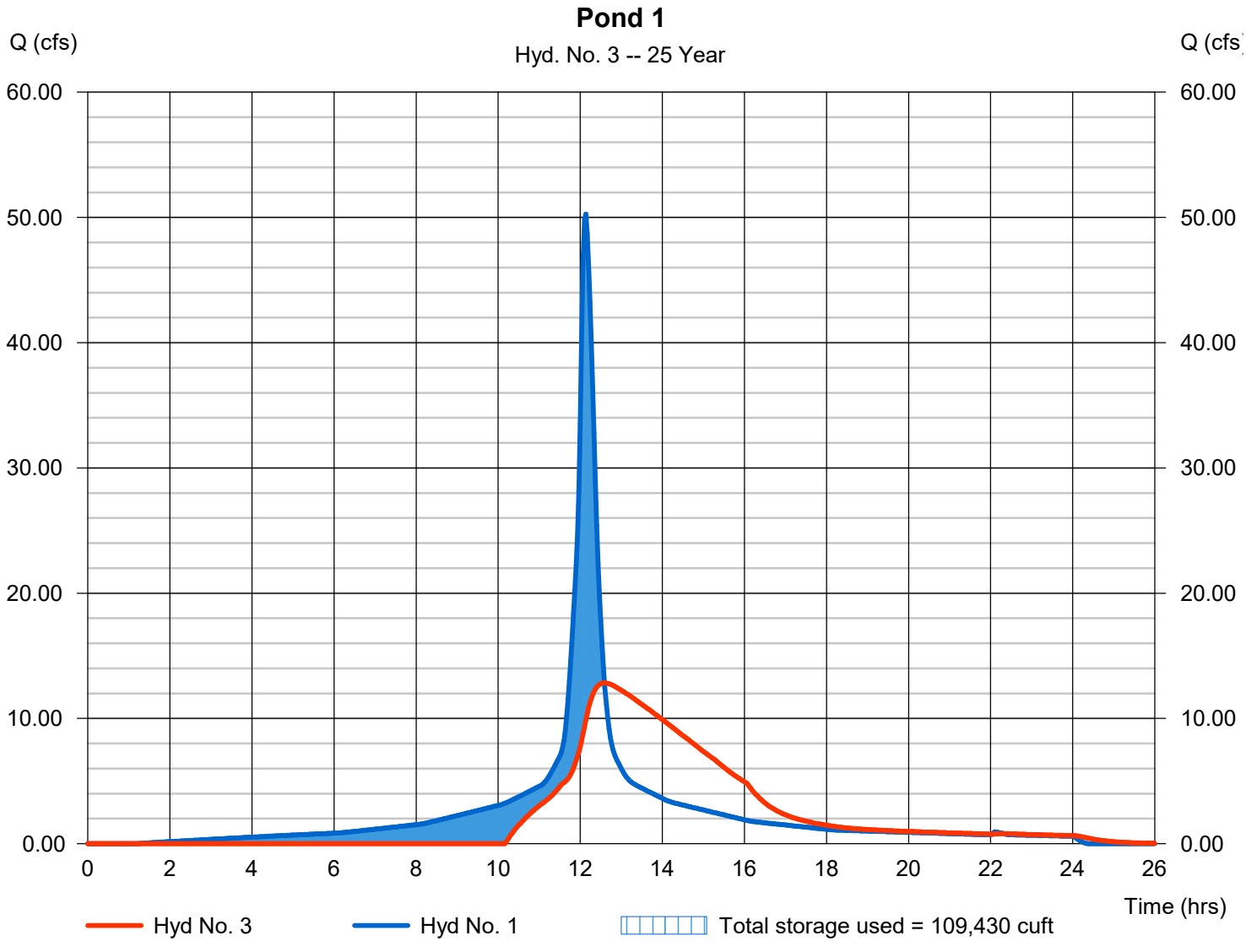
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	12.83 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.60 hrs
Time interval	=	2 min	Hyd. volume	=	198,187 cuft
Inflow hyd. No.	=	1 - 1-Post-Development Flow (Pond 1)	Max. Elevation	=	14.72 ft
Reservoir name	=	Pond 1	Max. Storage	=	109,430 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

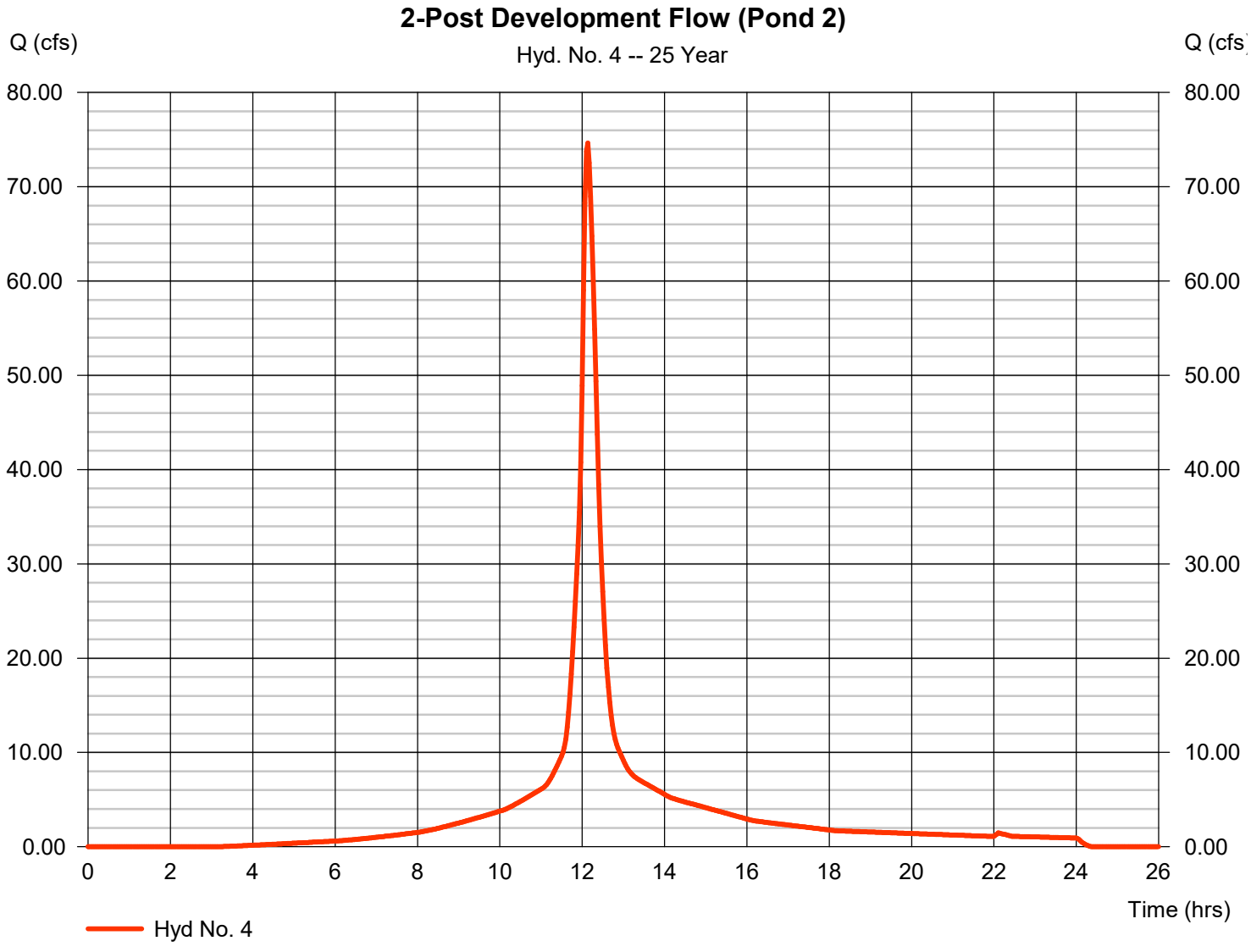
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	=	SCS Runoff	Peak discharge	=	74.64 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	324,733 cuft
Drainage area	=	13.440 ac	Curve number	=	89*
Basin Slope	=	0.5 %	Hydraulic length	=	990 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	7.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



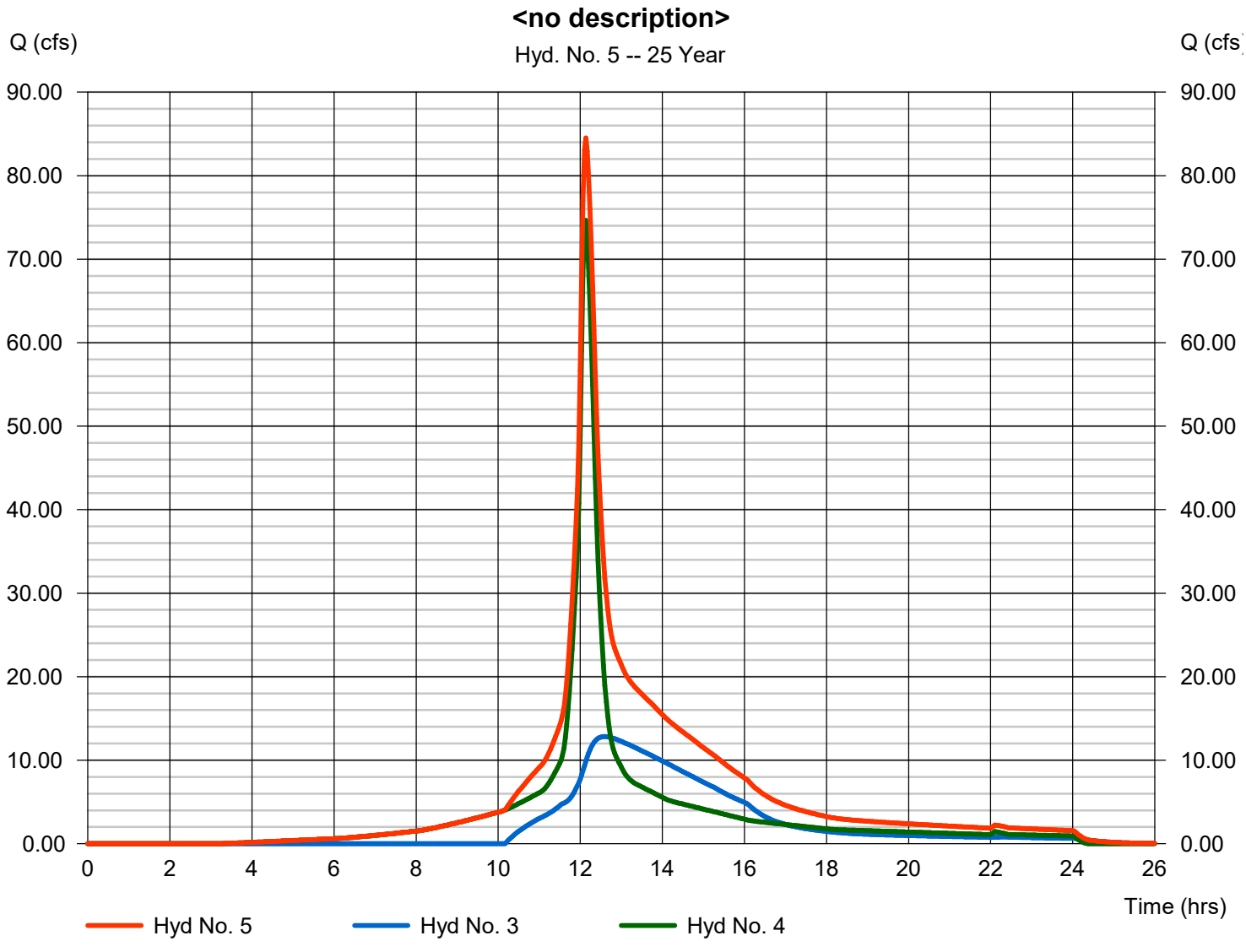
Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 84.51 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 522,920 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

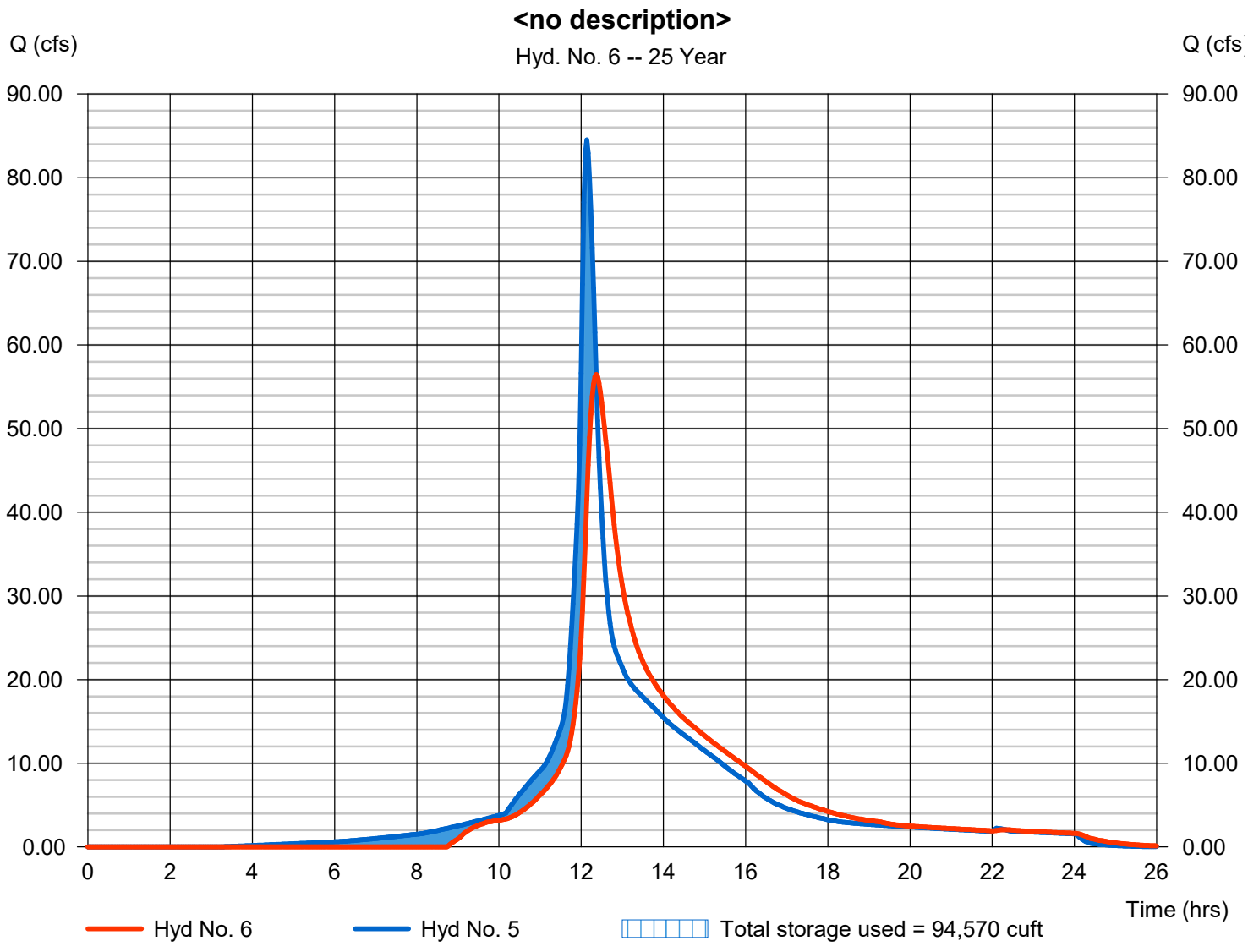
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 56.49 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.37 hrs
Time interval	= 2 min	Hyd. volume	= 507,755 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 15.22 ft
Reservoir name	= Pond 2	Max. Storage	= 94,570 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	56.46	2	728	262,249	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	99.62	2	758	971,345	------	------	------	Pre-Development Flow
3	Reservoir	13.78	2	756	228,095	1	14.83	120,951	Pond 1
4	SCS Runoff	84.67	2	728	371,087	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	95.27	2	728	599,182	3, 4	------	------	<no description>
6	Reservoir	64.30	2	742	584,017	5	15.35	103,376	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

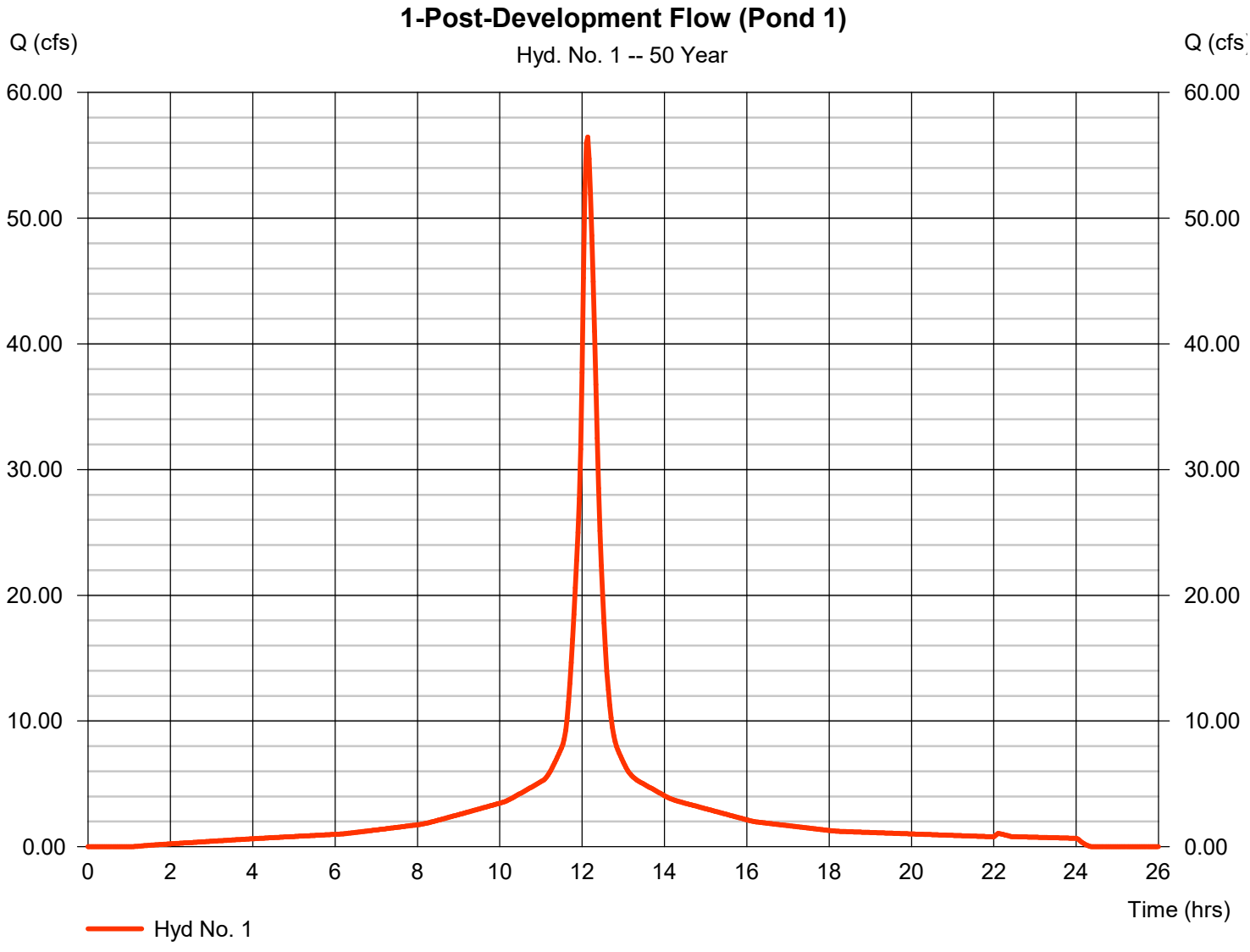
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 56.46 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 262,249 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 8.88 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

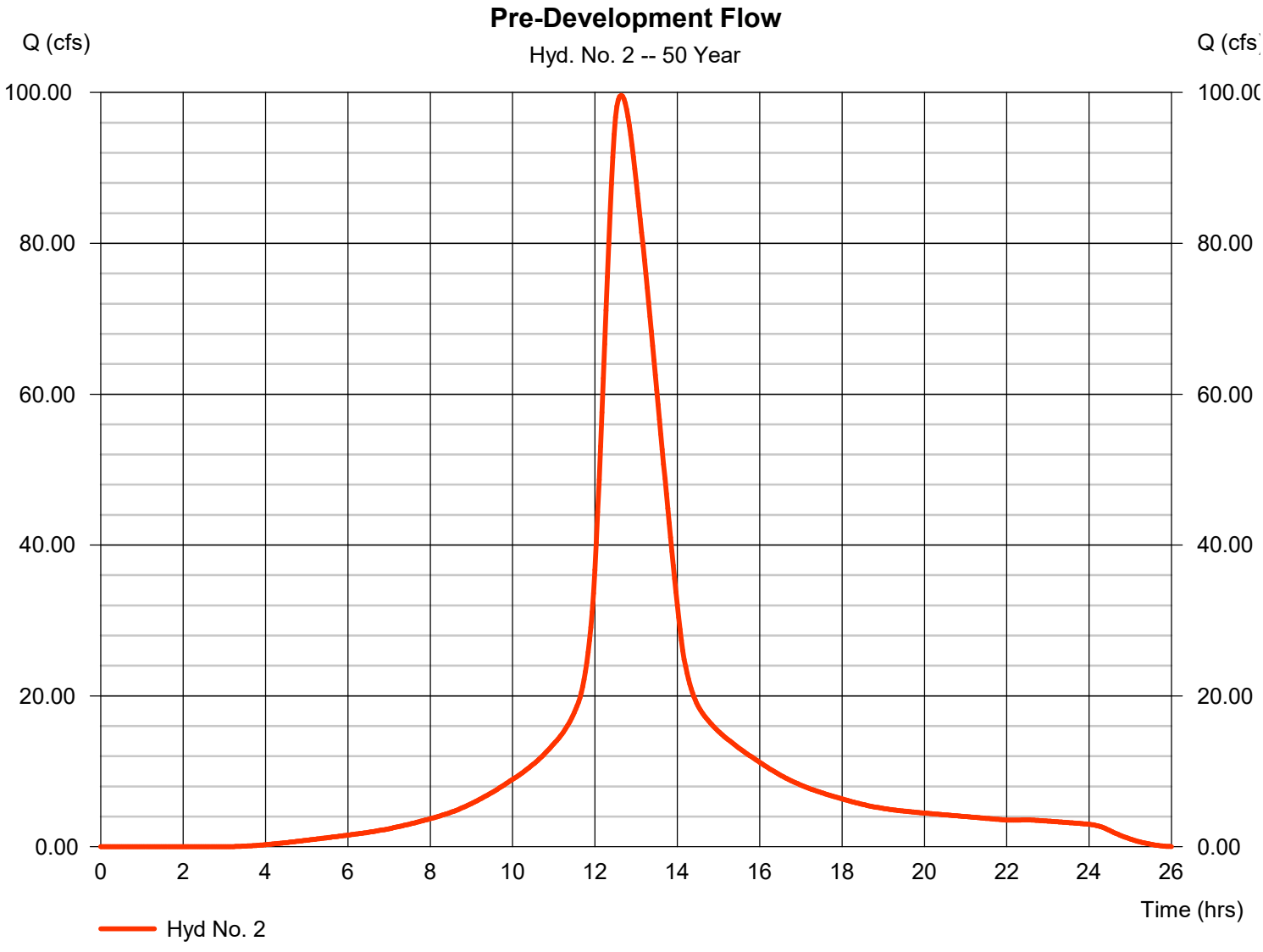
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	= SCS Runoff	Peak discharge	= 99.62 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.63 hrs
Time interval	= 2 min	Hyd. volume	= 971,345 cuft
Drainage area	= 35.180 ac	Curve number	= 89
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 50.00 min
Total precip.	= 8.88 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

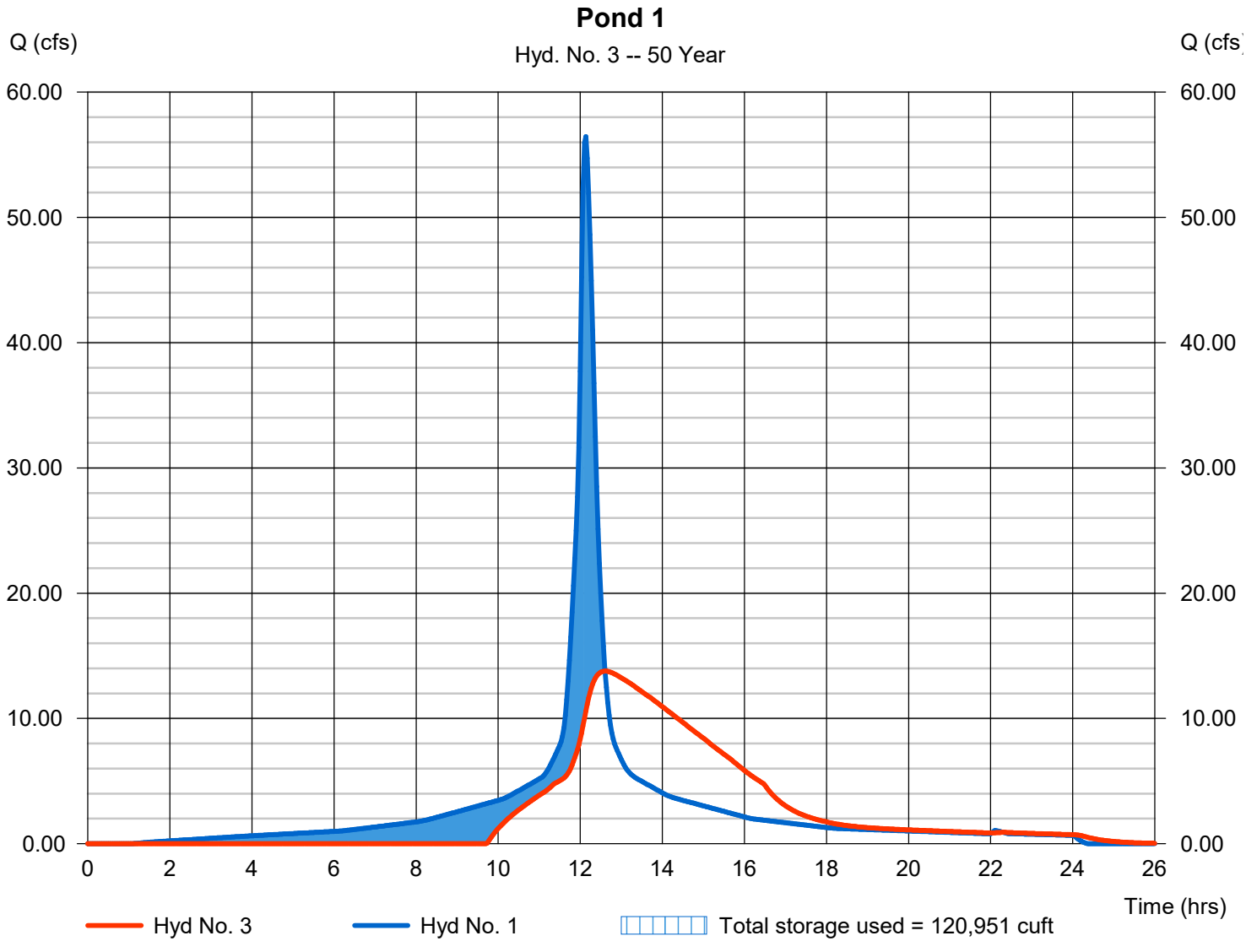
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	13.78 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.60 hrs
Time interval	=	2 min	Hyd. volume	=	228,095 cuft
Inflow hyd. No.	=	1 - 1-Post-Development Flow (Pond 1)	Max. Elevation	=	14.83 ft
Reservoir name	=	Pond 1	Max. Storage	=	120,951 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

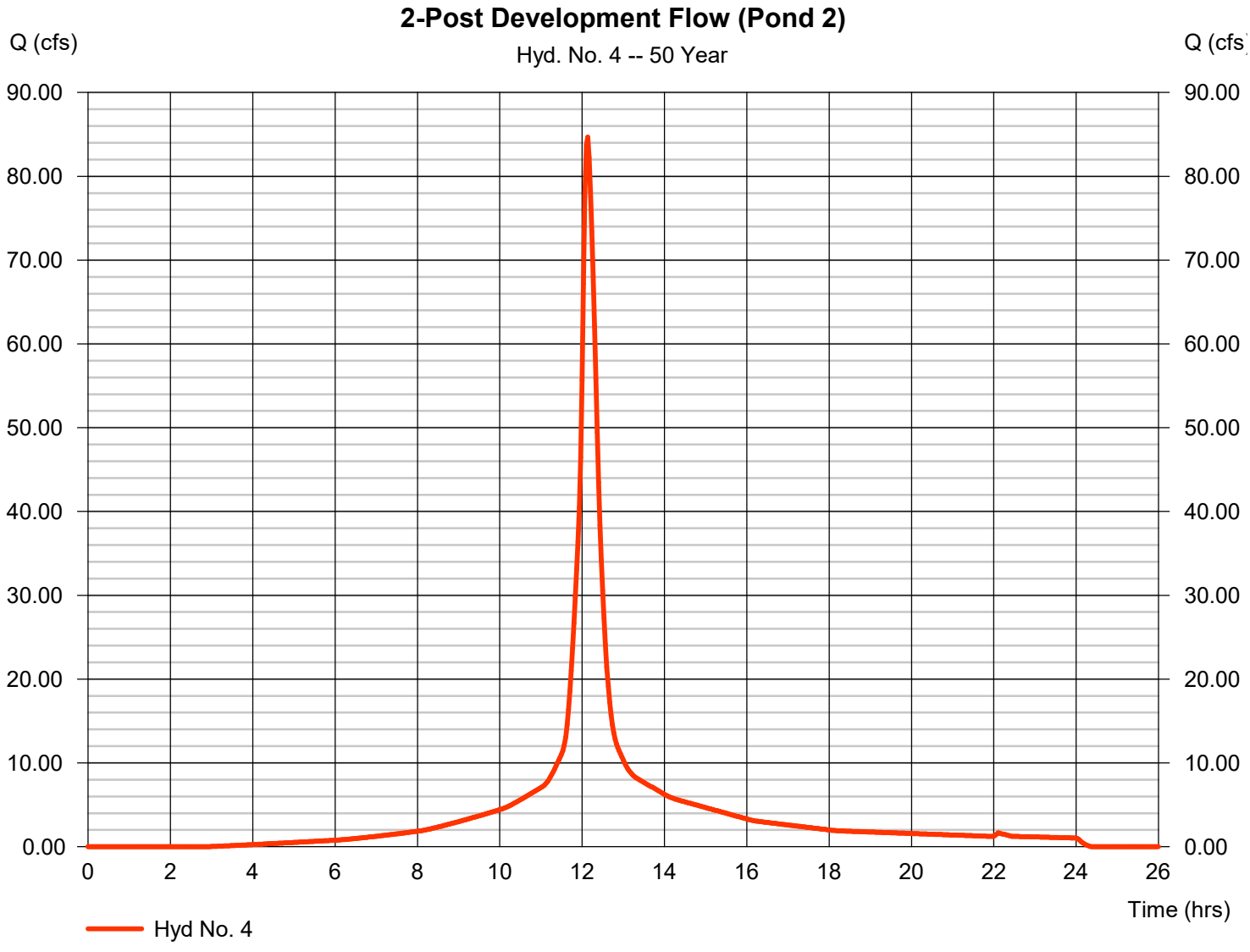
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	=	SCS Runoff	Peak discharge	=	84.67 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	371,087 cuft
Drainage area	=	13.440 ac	Curve number	=	89*
Basin Slope	=	0.5 %	Hydraulic length	=	990 ft
Tc method	=	User	Time of conc. (Tc)	=	8.00 min
Total precip.	=	8.88 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

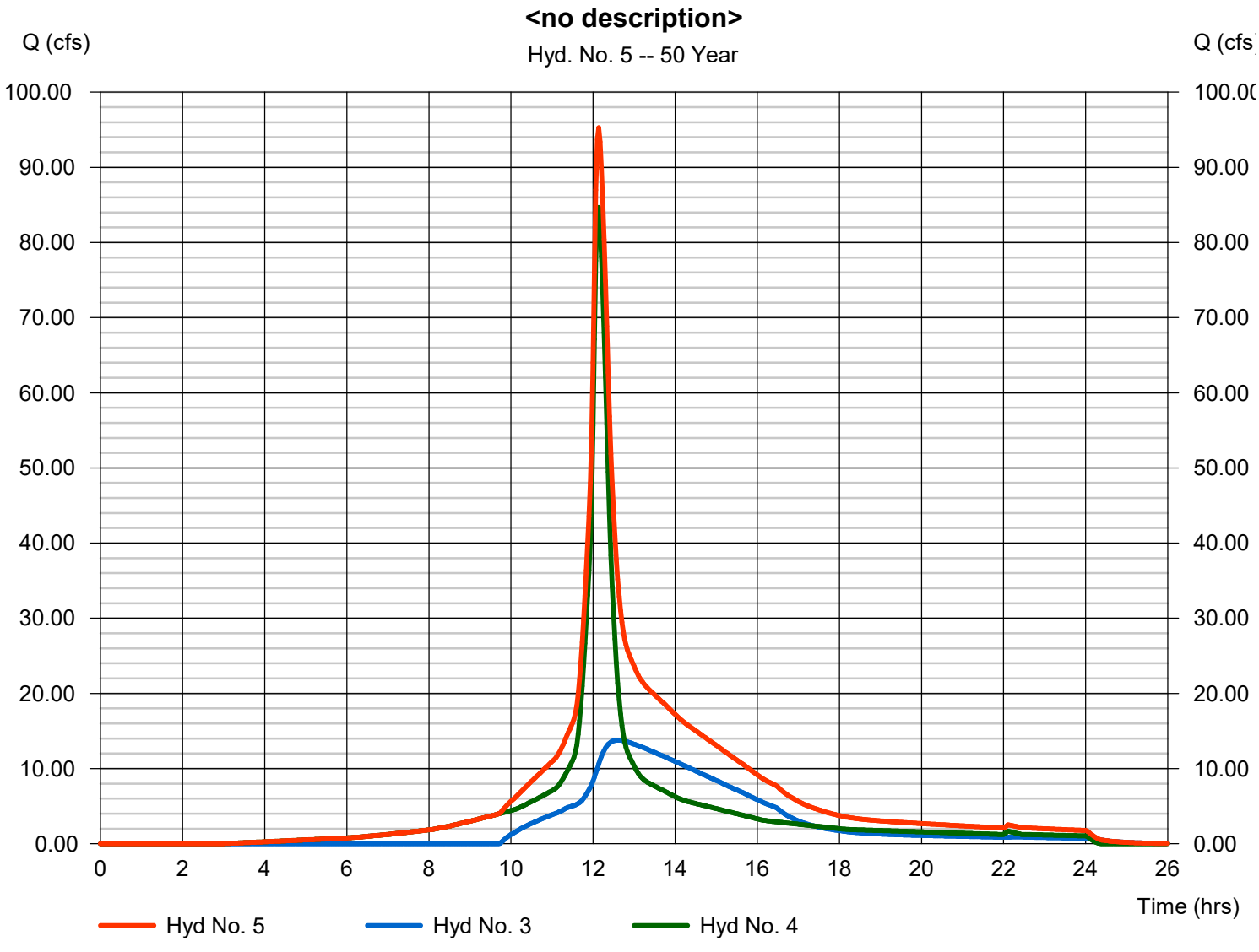
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 95.27 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 599,182 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

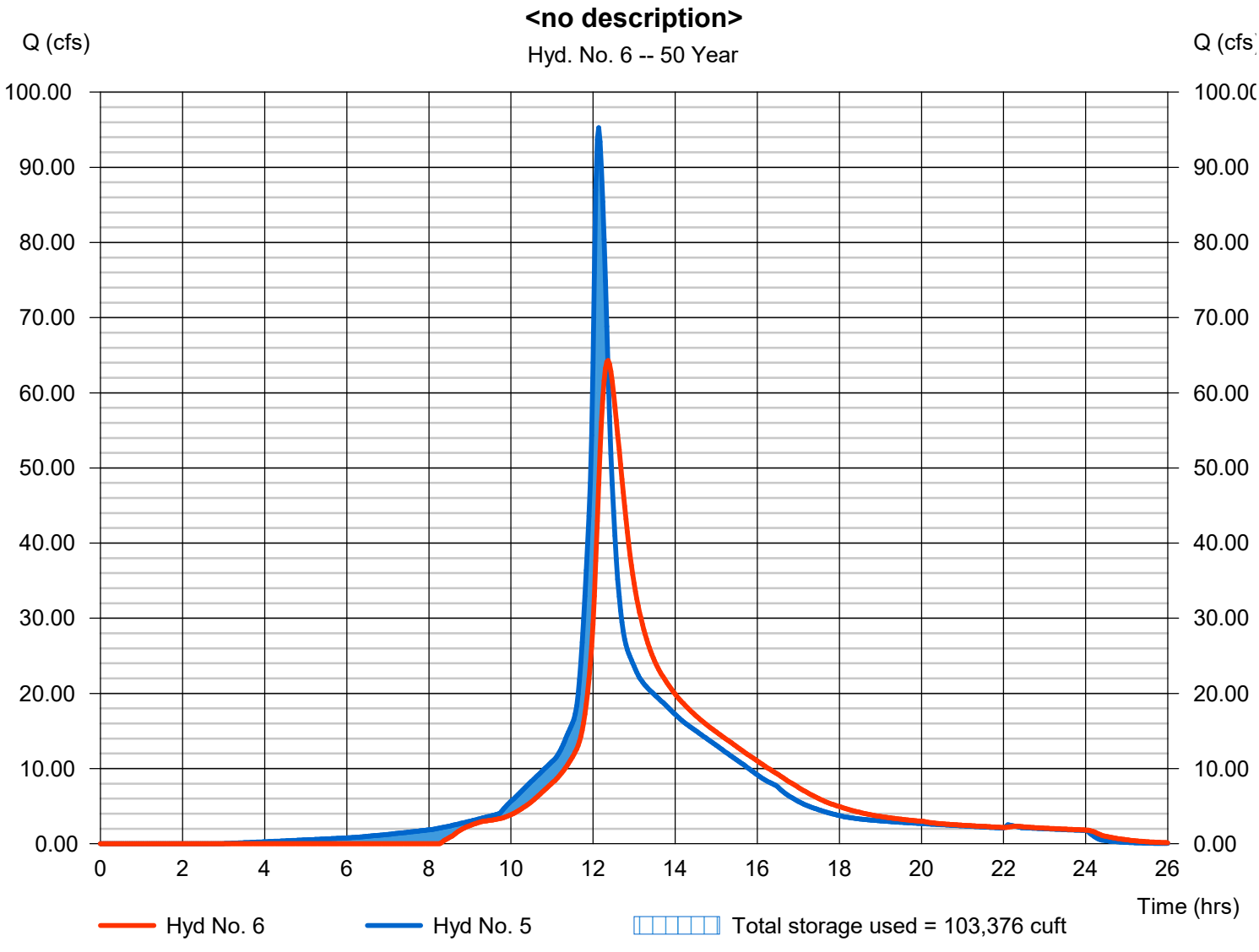
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 64.30 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.37 hrs
Time interval	= 2 min	Hyd. volume	= 584,017 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 15.35 ft
Reservoir name	= Pond 2	Max. Storage	= 103,376 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	62.65	2	728	292,168	------	------	------	1-Post-Development Flow (Pond 1)
2	SCS Runoff	111.51	2	758	1,093,063	------	------	------	Pre-Development Flow
3	Reservoir	14.68	2	756	258,014	1	14.94	132,629	Pond 1
4	SCS Runoff	94.67	2	728	417,588	------	------	------	2-Post Development Flow (Pond 2)
5	Combine	105.94	2	728	675,602	3, 4	------	------	<no description>
6	Reservoir	72.09	2	742	660,436	5	15.48	111,819	<no description>

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

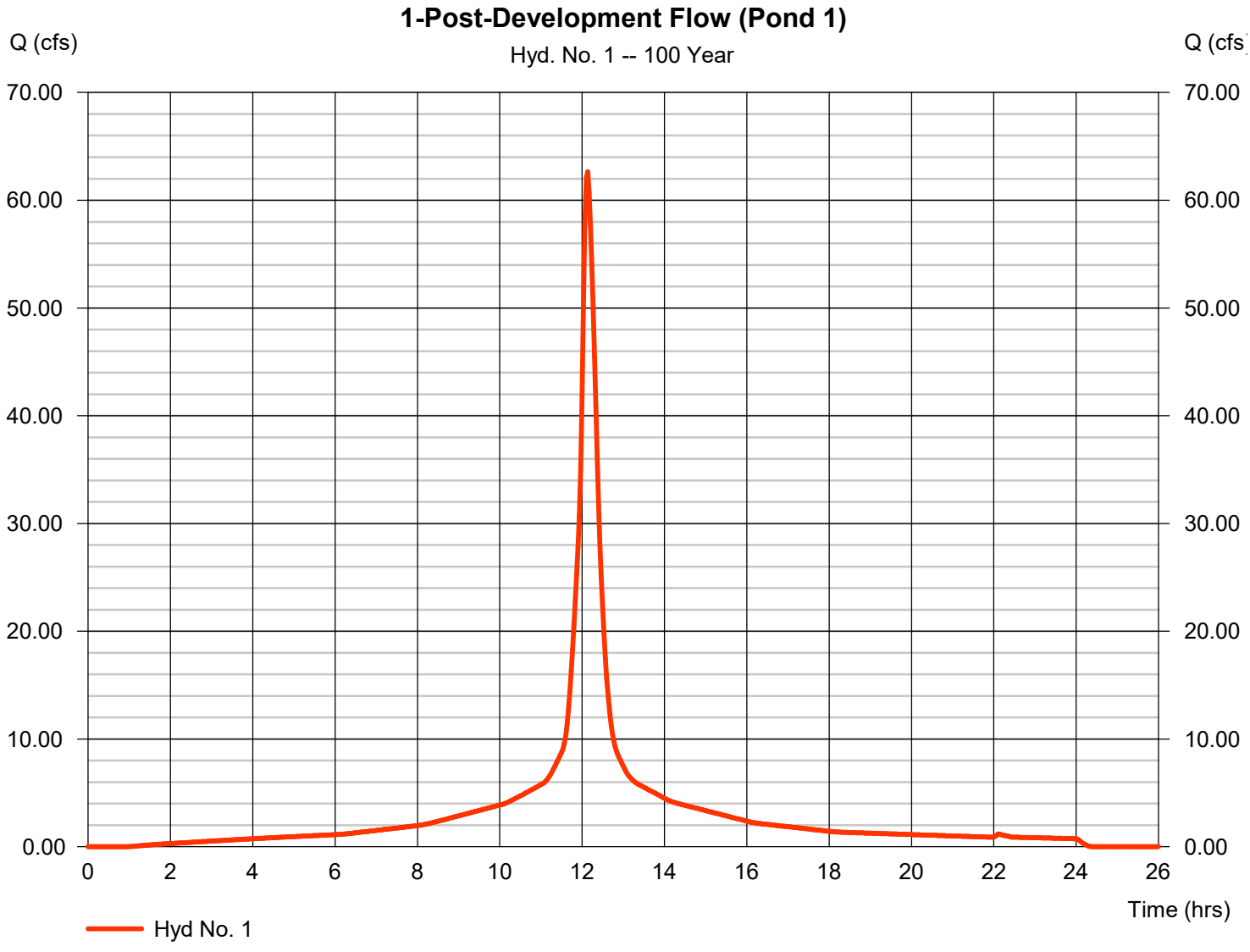
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 1

1-Post-Development Flow (Pond 1)

Hydrograph type	= SCS Runoff	Peak discharge	= 62.65 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 292,168 cuft
Drainage area	= 8.540 ac	Curve number	= 96*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 9.84 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(35.650 x 98) + (12.860 x 94) + (2.870 x 80)] / 8.540



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

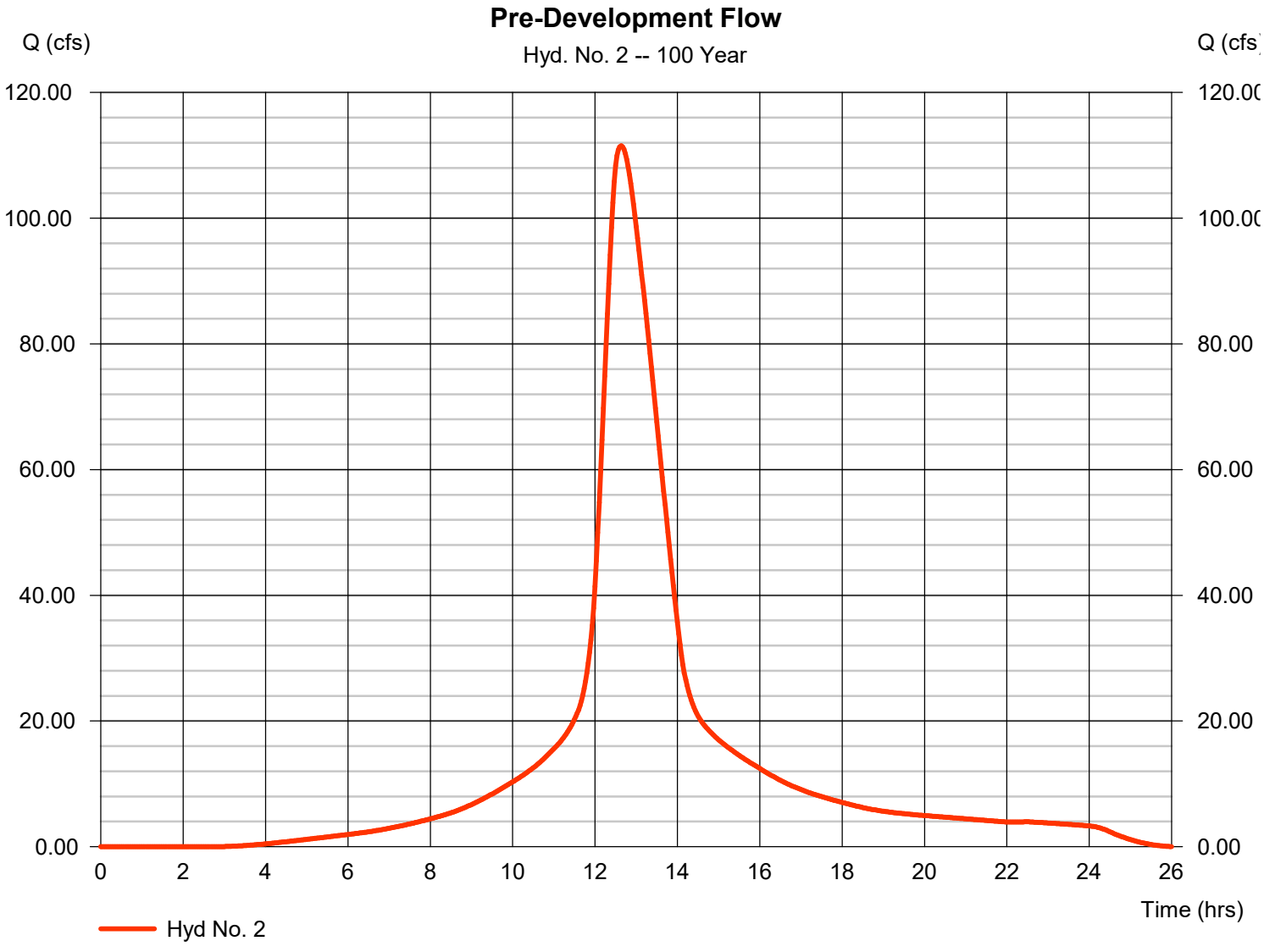
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 2

Pre-Development Flow

Hydrograph type	= SCS Runoff	Peak discharge	= 111.51 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.63 hrs
Time interval	= 2 min	Hyd. volume	= 1,093,063 cuft
Drainage area	= 35.180 ac	Curve number	= 89
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 50.00 min
Total precip.	= 9.84 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

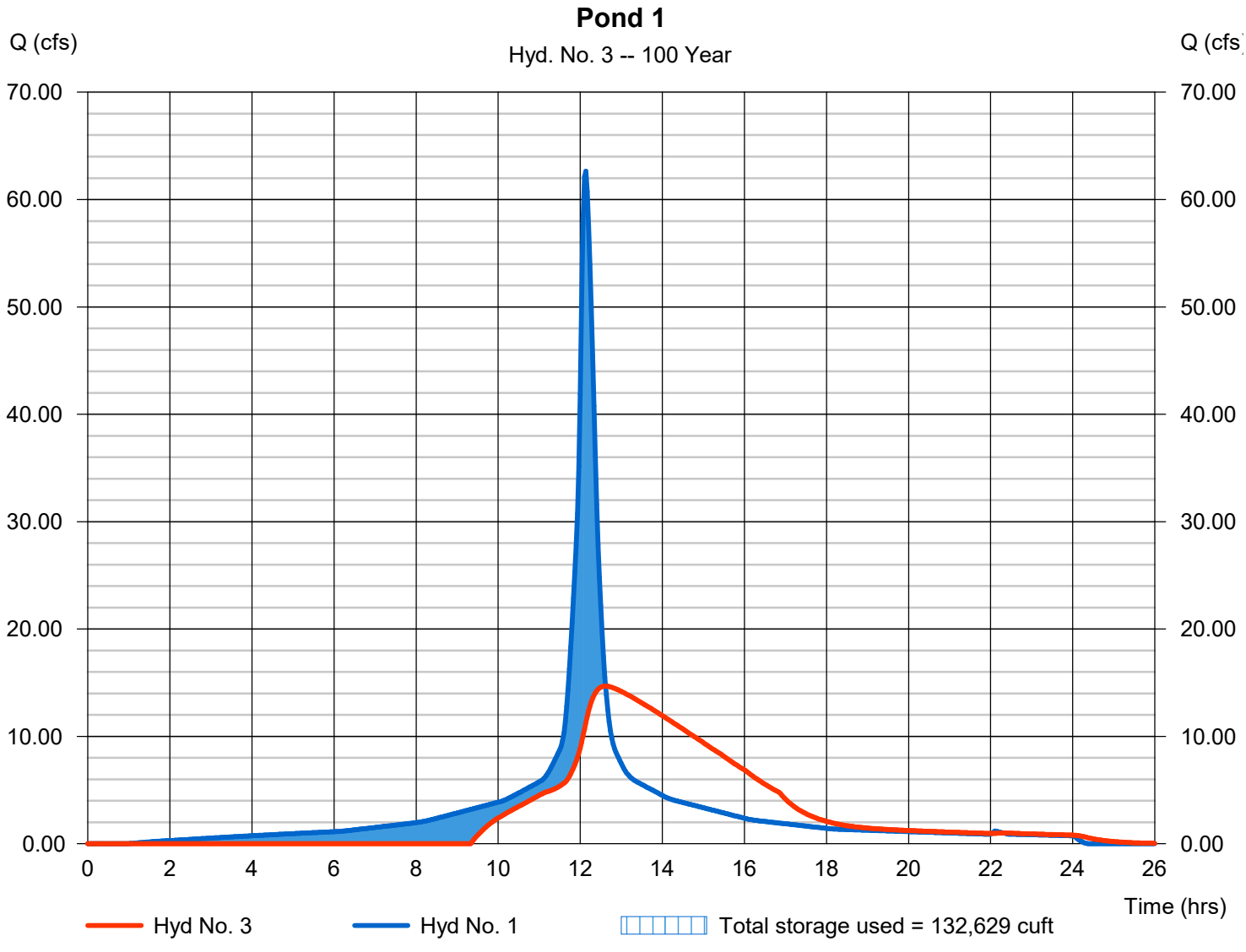
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 3

Pond 1

Hydrograph type	=	Reservoir	Peak discharge	=	14.68 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.60 hrs
Time interval	=	2 min	Hyd. volume	=	258,014 cuft
Inflow hyd. No.	=	1 - 1-Post-Development Flow (Pond E)	Max. Elevation	=	14.94 ft
Reservoir name	=	Pond 1	Max. Storage	=	132,629 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

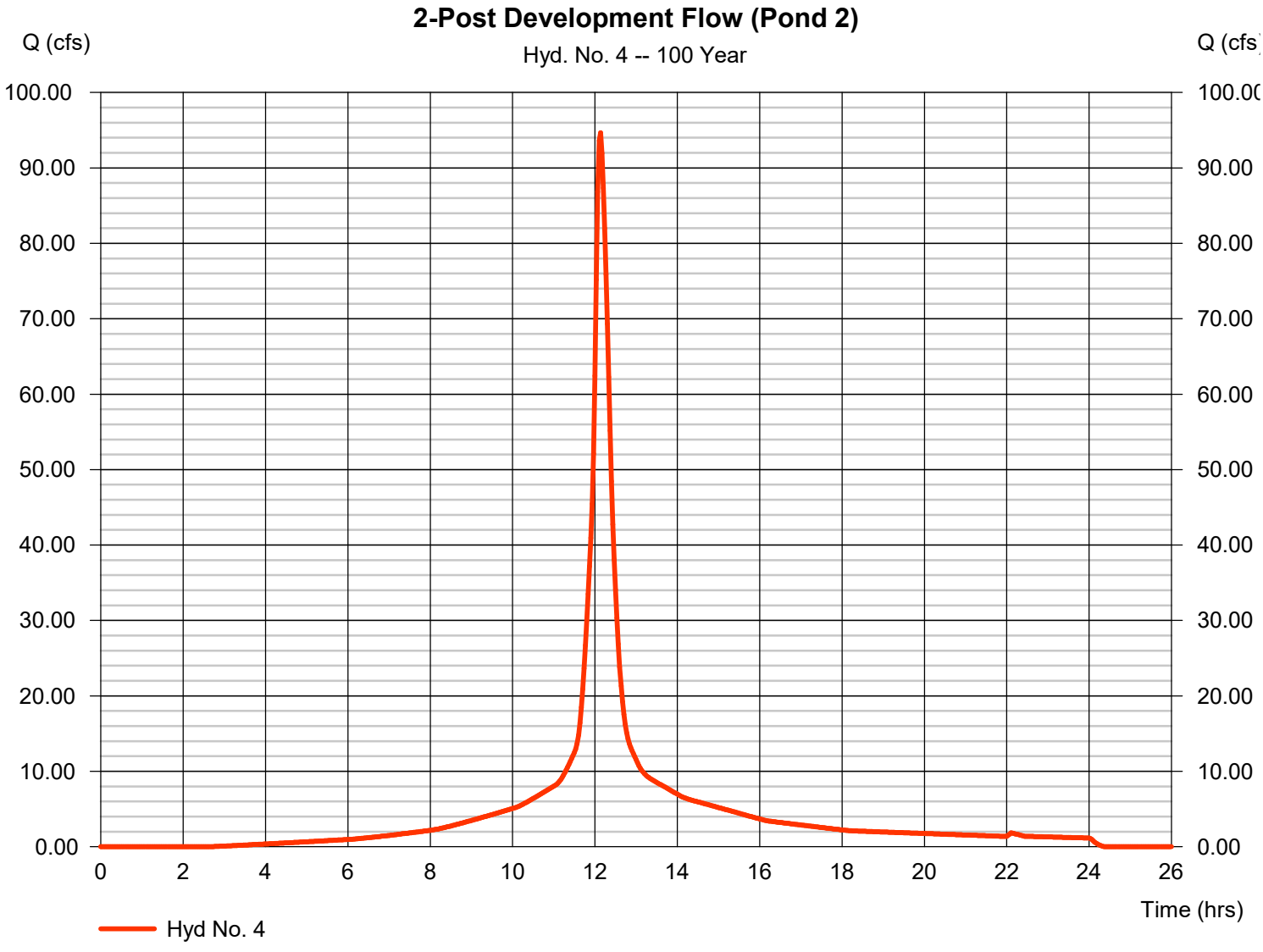
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 4

2-Post Development Flow (Pond 2)

Hydrograph type	= SCS Runoff	Peak discharge	= 94.67 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 417,588 cuft
Drainage area	= 13.440 ac	Curve number	= 89*
Basin Slope	= 0.5 %	Hydraulic length	= 990 ft
Tc method	= User	Time of conc. (Tc)	= 8.00 min
Total precip.	= 9.84 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 300

* Composite (Area/CN) = [(9.500 x 86) + (3.940 x 96)] / 13.440



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

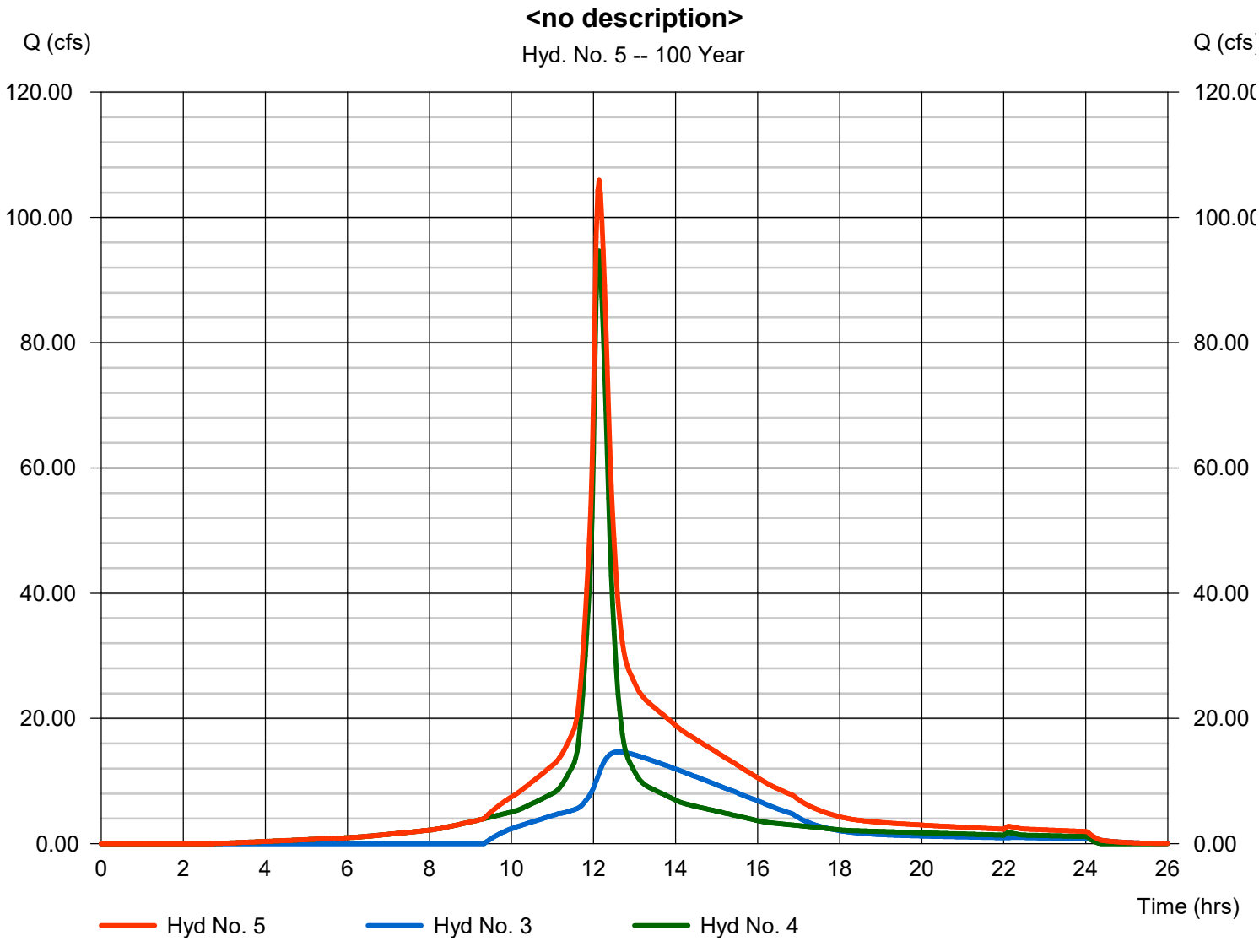
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 5

<no description>

Hydrograph type	= Combine	Peak discharge	= 105.94 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 675,602 cuft
Inflow hyds.	= 3, 4	Contrib. drain. area	= 13.440 ac



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Report

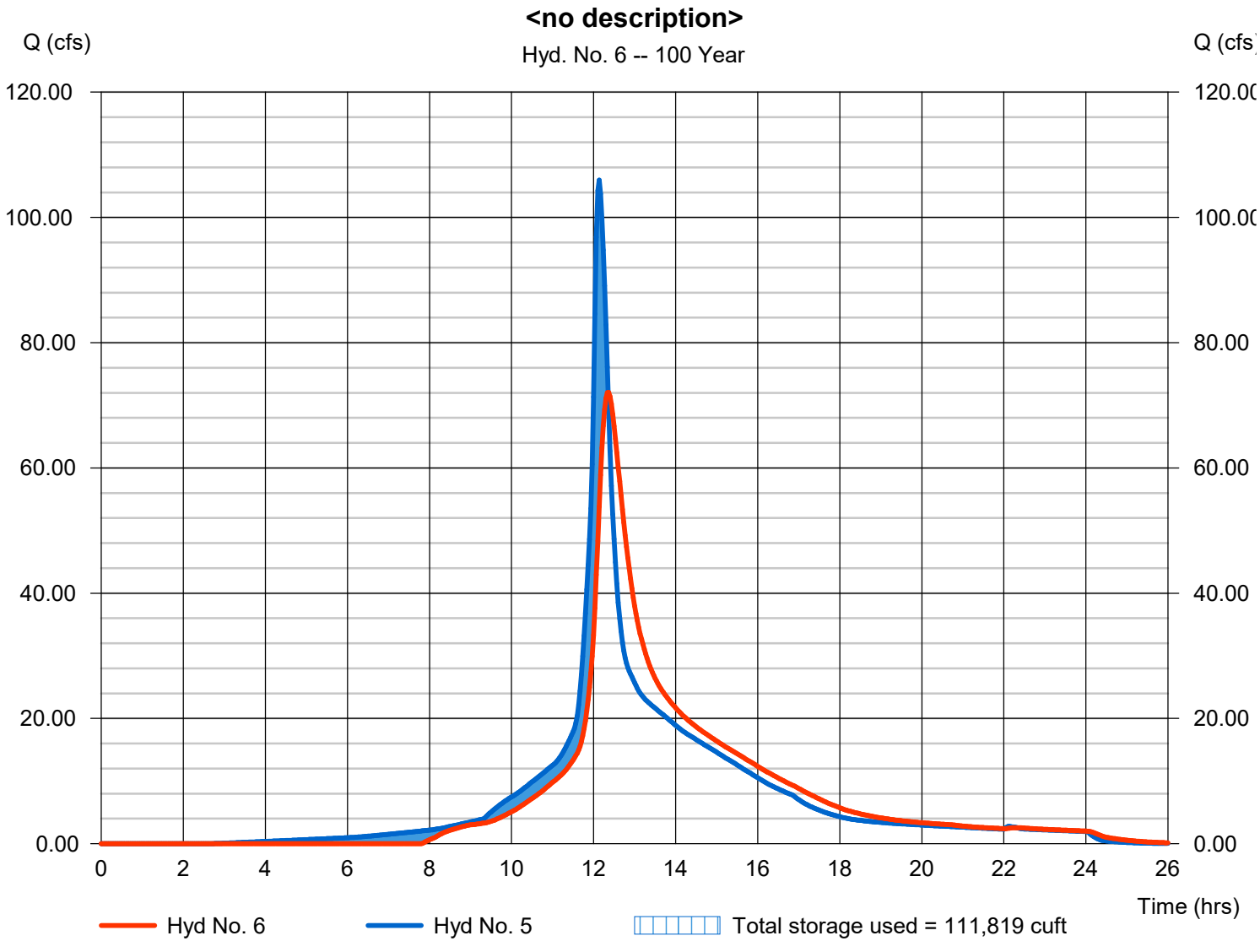
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Hyd. No. 6

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 72.09 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.37 hrs
Time interval	= 2 min	Hyd. volume	= 660,436 cuft
Inflow hyd. No.	= 5 - <no description>	Max. Elevation	= 15.48 ft
Reservoir name	= Pond 2	Max. Storage	= 111,819 cuft

Storage Indication method used.



Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydraflow Rainfall Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Monday, 05 / 17 / 2021

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	47.7900	12.0000	0.7585	--------
2	117.5700	20.0000	0.9086	--------
3	0.0000	0.0000	0.0000	--------
5	125.4600	23.0000	0.8696	--------
10	126.1200	24.0000	0.8401	--------
25	167.1700	28.0000	0.8597	--------
50	191.5700	30.0000	0.8619	--------
100	220.0000	32.0000	0.8671	--------

File name: savannah.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	5.57	4.58	3.92	3.45	3.09	2.81	2.58	2.39	2.23	2.09	1.97	1.86
2	6.31	5.35	4.65	4.12	3.70	3.36	3.08	2.85	2.65	2.48	2.33	2.19
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.92	6.00	5.31	4.76	4.33	3.97	3.67	3.42	3.20	3.01	2.84	2.69
10	7.45	6.52	5.81	5.25	4.80	4.42	4.10	3.83	3.60	3.39	3.21	3.05
25	8.27	7.33	6.59	6.00	5.51	5.09	4.75	4.44	4.18	3.95	3.74	3.56
50	8.94	7.97	7.20	6.58	6.06	5.62	5.25	4.92	4.64	4.39	4.16	3.96
100	9.61	8.61	7.81	7.15	6.61	6.14	5.74	5.39	5.09	4.82	4.58	4.36

Tc = time in minutes. Values may exceed 60.

Precip. file name: SAVANNAH.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	3.60	4.80	0.00	6.00	6.72	7.92	8.88	9.84
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	3.60	4.80	0.00	6.00	6.72	7.92	8.88	9.84

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydraflow Table of Contents

Watershed Model Schematic 1

Hydrograph Return Period Recap 2

1 - Year

Summary Report 3
Hydrograph Reports 4
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 4
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 5
Hydrograph No. 3, Reservoir, Pond 1 6
Pond Report - Pond 1 7
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 8
Hydrograph No. 5, Combine, <no description> 9
Hydrograph No. 6, Reservoir, <no description> 10
Pond Report - Pond 2 11

2 - Year

Summary Report 12
Hydrograph Reports 13
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 13
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 14
Hydrograph No. 3, Reservoir, Pond 1 15
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 16
Hydrograph No. 5, Combine, <no description> 17
Hydrograph No. 6, Reservoir, <no description> 18

5 - Year

Summary Report 19
Hydrograph Reports 20
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 20
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 21
Hydrograph No. 3, Reservoir, Pond 1 22
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 23
Hydrograph No. 5, Combine, <no description> 24
Hydrograph No. 6, Reservoir, <no description> 25

10 - Year

Summary Report 26
Hydrograph Reports 27
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 27
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 28
Hydrograph No. 3, Reservoir, Pond 1 29
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 30
Hydrograph No. 5, Combine, <no description> 31
Hydrograph No. 6, Reservoir, <no description> 32

25 - Year

Summary Report 33

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-

Hydrograph Reports **34**
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 34
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 35
Hydrograph No. 3, Reservoir, Pond 1 36
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 37
Hydrograph No. 5, Combine, <no description> 38
Hydrograph No. 6, Reservoir, <no description> 39

50 - Year

Summary Report **40**
Hydrograph Reports **41**
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 41
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 42
Hydrograph No. 3, Reservoir, Pond 1 43
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 44
Hydrograph No. 5, Combine, <no description> 45
Hydrograph No. 6, Reservoir, <no description> 46

100 - Year

Summary Report **47**
Hydrograph Reports **48**
Hydrograph No. 1, SCS Runoff, 1-Post-Development Flow (Pond 1) 48
Hydrograph No. 2, SCS Runoff, Pre-Development Flow 49
Hydrograph No. 3, Reservoir, Pond 1 50
Hydrograph No. 4, SCS Runoff, 2-Post Development Flow (Pond 2) 51
Hydrograph No. 5, Combine, <no description> 52
Hydrograph No. 6, Reservoir, <no description> 53

IDF Report **54**

Attachment: 7-0977-01-028 HENDLEY RD LINEAGE S-SITE PLAN JUNE 2021-Hydro 5.17.21 (2470 : Site Plan Review Application (Specific) 7-