# **APPENDIX**

# BLOCK 23

## **BLOCK 23 – Description of Avoidance and Minimization**

Description of Avoidance and Minimization:

## Veridea - West Village

<u>Impact #1.1 (Road Crossing)</u> – wetland impacts have been minimized by shifting the road to the west. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent wetland impacts. Please refer to impact exhibit "Crossing #1.1".

Impact #1.2A (Road Crossing)- This crossing will occur perpendicular to the wetland and stream and will occur at the top of the drainage to minimize impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent wetland and stream impacts. Please refer to impact exhibit "Crossing #1.2A".

Impact #1.2B (Lot Fill)- This Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #1.2B".

<u>Impact #1.3 (Fill)</u>- Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #1.3".

Impact #1.4 (Fill)- wetland and open water impacts have been minimized by shifting the road and fill to the west.. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #1.4".

Impact #1.5 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #1.5".

Impact #1.6 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.6".

<u>Impact #1.7 (Road Crossing)</u>- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1

mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.7".

Impact #1.8 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.8".

Impact #1.9 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.9".

Impact #1.10 (Road Crossing)- This crossing will occur perpendicular to the stream and wetland and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio for permanent stream and wetland impacts. Please refer to impact exhibit "Impact Area #1.10".

<u>Impact #1.11A (Road Crossing)</u>- This crossing will occur at the top of the wetland drainage to minimize impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent wetland impacts. Please refer to impact exhibit "Crossing #1.11A".

<u>Impact #1.11B (Road Crossing)</u>- This crossing will occur at the narrowest portion of the wetland drainage and will utilize headwalls at the culvert outlets to minimize wetland impacts to the maximum extent practicable to minimize impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent wetland impacts. Please refer to impact exhibit "Crossing #1.11B".

Impact #1.12 (Lot Fill) – Please refer to impact exhibit Area 1.12.

Impact #1.13 (Road Crossing)- This crossing will occur at the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #1.13".

Impact #1.14 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.14".

<u>Impact #1.15 (Road Crossing)</u>- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum

extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.15".

Impact #1.16 (Road Crossing)- This crossing will occur perpendicular to the stream and wetland and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio for permanent stream and wetland impacts. Please refer to impact exhibit "Impact Area #1.16".

Impact #1.17 (Road Crossing)- Compensatory mitigation has been proposed at a 2:1 mitigation ratio for permanent wetland impacts. Please refer to impact exhibit "Impact Area #1.17".

Impact #1.18 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.18".

Impact #1.19 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio for permanent stream and wetland impacts. Please refer to impact exhibit "Impact Area #1.19".

Impact #1.20 (Utility Crossing)- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Additionally, the sanitary sewer and Force Main will utilize the same easement to minimize impacts. Please refer to impact exhibit "Impact Area #1.20".

Impact #1.21 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.21".

Impact #1.22 (Utility Crossing)- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Additionally, the sanitary sewer and Force Main will utilize the same easement to minimize impacts. Please refer to impact exhibit "Impact Area #1.22".

Impact #1.23 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a

2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #1.23".

### <u>Veridea – East Village</u>

Impact #2.1A-1 (Utility Crossing)-This utility connection location was existing, and the utility impacts have been minimized to the maximum extent practicable. Compensatory mitigation is proposed at a 1:1 mitigation ratio for the "change of function" to the wetland. Please refer to impact exhibit "Impact Area #2.1A-1".

<u>Impact 2.1A-2 (Utility Crossing)</u>- This utility impact was shifted to the west to minimize impacts to the maximum extent practicable. Compensatory mitigation is proposed at a 1:1 mitigation ratio for the "change of function" to the wetland. Please refer to impact exhibit "Impact Area #2.1A-2".

<u>Impact 2.1A-3 (Utility Crossing)</u>- This utility impact was shifted to the west to minimize impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.1A-3".

Impact #2.1B (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.1B".

Impact #2.2A (Road Crossing)- This road crossing will occur perpendicular to the stream and will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts and 1:1 mitigation ratio for permanent-no permanent loss wetland impacts. Please refer to impact exhibit "Impact Area #2.2A".

Impact #2.2B (Utility Crossing)- This utility impact was shifted to the west to minimize impacts to the maximum extent practicable. Compensatory mitigation is proposed at a 1:1 mitigation ratio for the "change of function" to the wetland. Please refer to impact exhibit Area 2.2B.

Impact #2.2C (Road Crossing)- Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit Area 2.2C.

<u>Impact #2.3 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.3".

<u>Impact #2.4 (Road Crossing)</u>- This crossing will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation.

Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.4".

Impact #2.5 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.5".

<u>Impact #2.6 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.6".

<u>Impact #2.7 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.7".

<u>Impact #2.8 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Additionally, the sanitary sewer and Force Main will utilize the same easement to minimize impacts. Please refer to impact exhibit "Impact Area #2.8".

Impact #2.9 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.9".

Impact #2.10 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.10".

<u>Impact #2.11 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.11".

Impact #2.12 (Utility Crossing)- Please refer to impact exhibit "Impact Area #2.12".

<u>Impact #2.13 (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit "Impact Area #2.13".

<u>Impact #2.14 (Road Crossing)</u>- This crossing will occur at the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.14".

<u>Impact #2.15 (Road Crossing)</u>-Stream and wetland impacts have been avoided in this location. Please refer to impact exhibit Area 2.15.

Impact #2.16 (Fill)- This fill activity will occur at the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #2.16".

Impact #2.17 (Road Crossing)- This crossing will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.17".

<u>Impact #2.18 (Road Crossing)</u>- This crossing will occur at the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.18".

Impact #2.19A (Road Crossing)- This crossing will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.19A".

Impact #2.19B (Road Crossing)- This crossing will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.19B".

<u>Impact #2.19C (Utility Crossing)</u>- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit Area 2.19C.

Impact #2.20 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.20".

Impact #2.21A (Road Crossing)- This crossing will occur the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.21A".

<u>Impact #2.21B (Utility Crossing</u>)- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit Area 2.21B.

Impact #2.22 (Road Crossing)- This crossing will utilize headwalls and walls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.22".

<u>Impact #2.23 (Utility Crossing</u>)- This crossing will occur perpendicular to the stream to minimize stream impacts to the maximum extent practicable. Please refer to impact exhibit Area 2.23.

Impact #2.24 (Road Crossing)- This crossing will occur the top of the drainage to minimize stream impacts to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream. Please refer to impact exhibit "Impact Area #2.24".

### Veridea - South Village

Impact #3.1 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.1".

Impact #3.2 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.2".

Impact #3.3 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.3".

Impact #3.4A (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.4".

<u>Impact #3.4B (Road Crossing)</u>- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a

2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.4B".

Impact #3.5 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.5".

Impact #3.6 (Road Crossing)- This crossing will occur perpendicular to the stream and will utilize headwalls at the culvert outlets to minimize stream impacts to the maximum extent practicable. Additionally, a riprap dissipator pad will be used to minimize stream velocities and stream degradation. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent stream impacts. Please refer to impact exhibit "Impact Area #3.6".

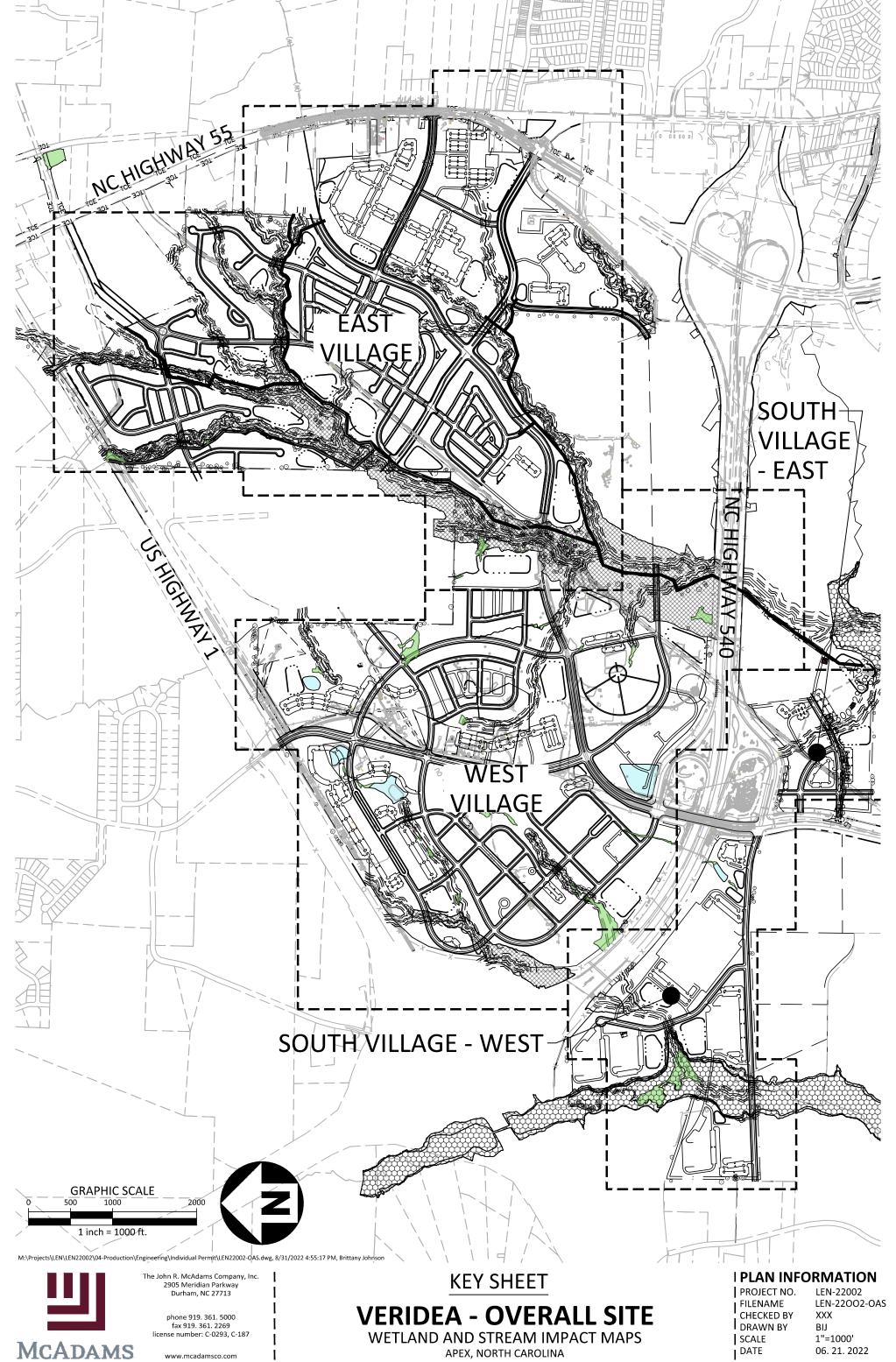
### Veridea - Off-Site

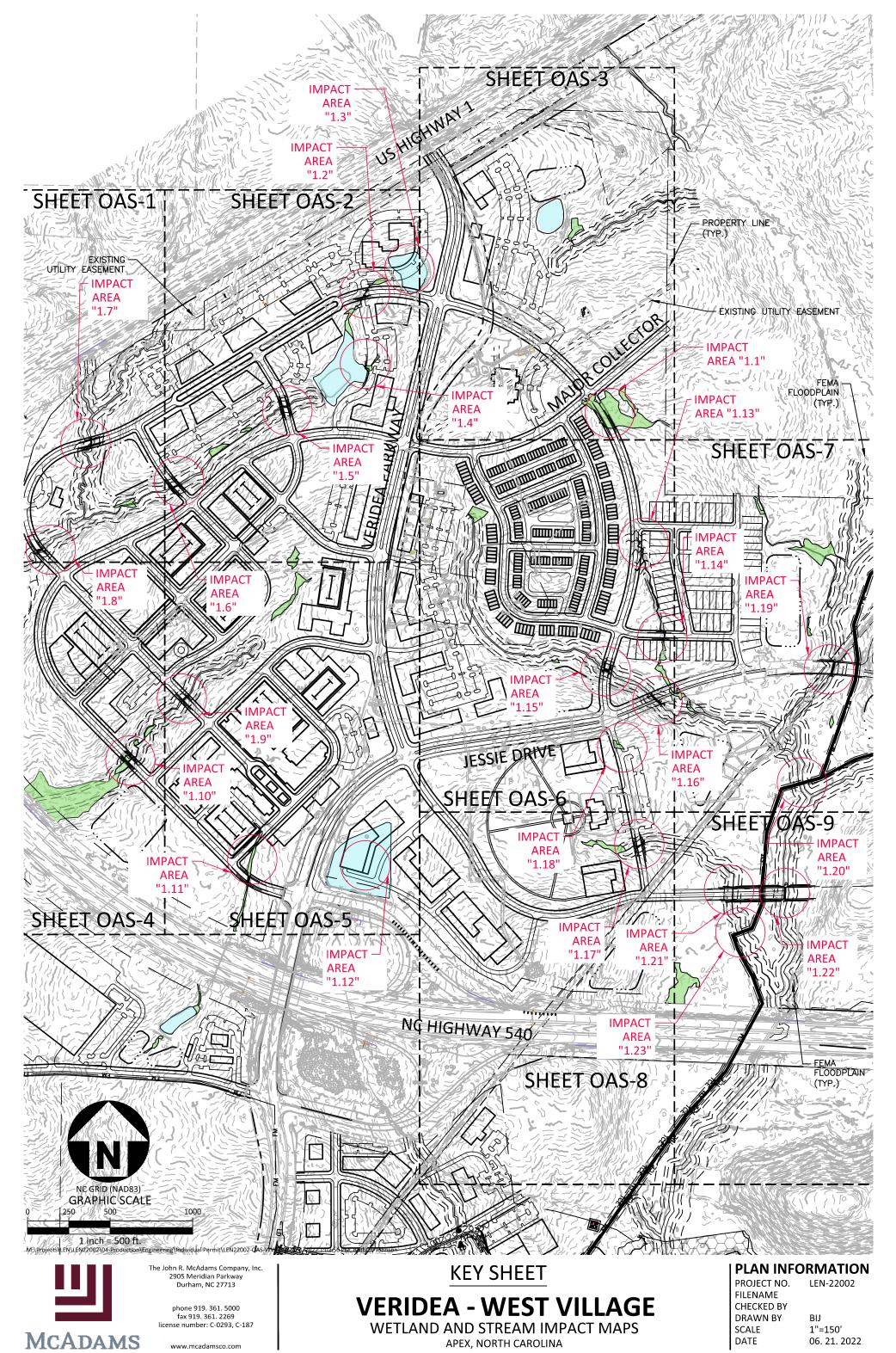
<u>Impact #4.1 (Road Widening)</u>- This widening is required at an existing road location with existing wetlands. Wetland impacts will be minimized to the maximum extent practicable. Compensatory mitigation has been proposed at a 2:1 mitigation ratio to offset permanent wetland impacts. Please refer to impact exhibit "Impact Area #4.1".

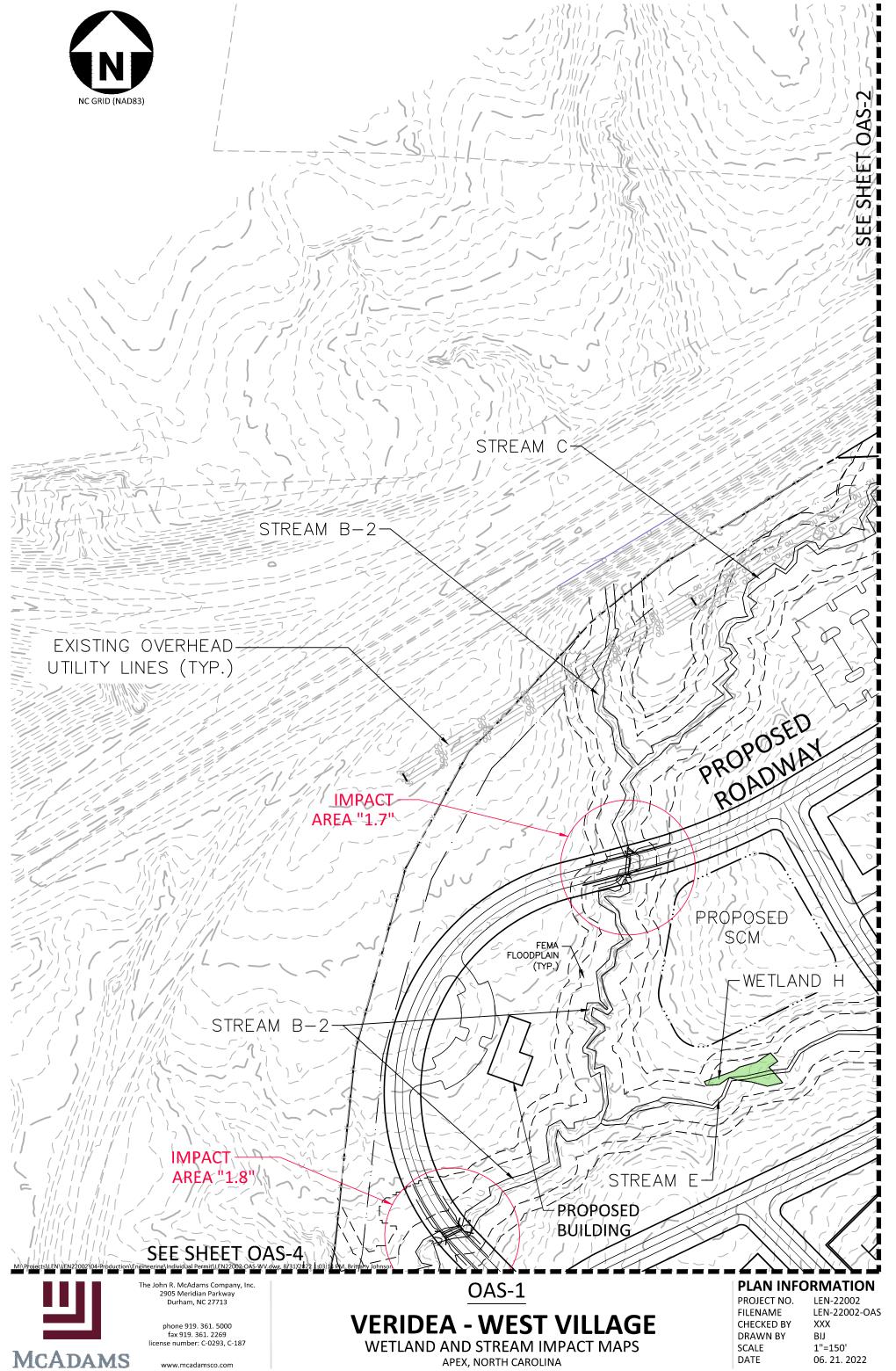
Impact #4.2 (Utility Crossing)- This impact has been shifted to southeast to the maximum extent practicable. Compensatory mitigation has been proposed at a 1:1 mitigation ratio to offset the "change of function" wetland impacts. Please refer to impact exhibit "Impact Area #4.2".

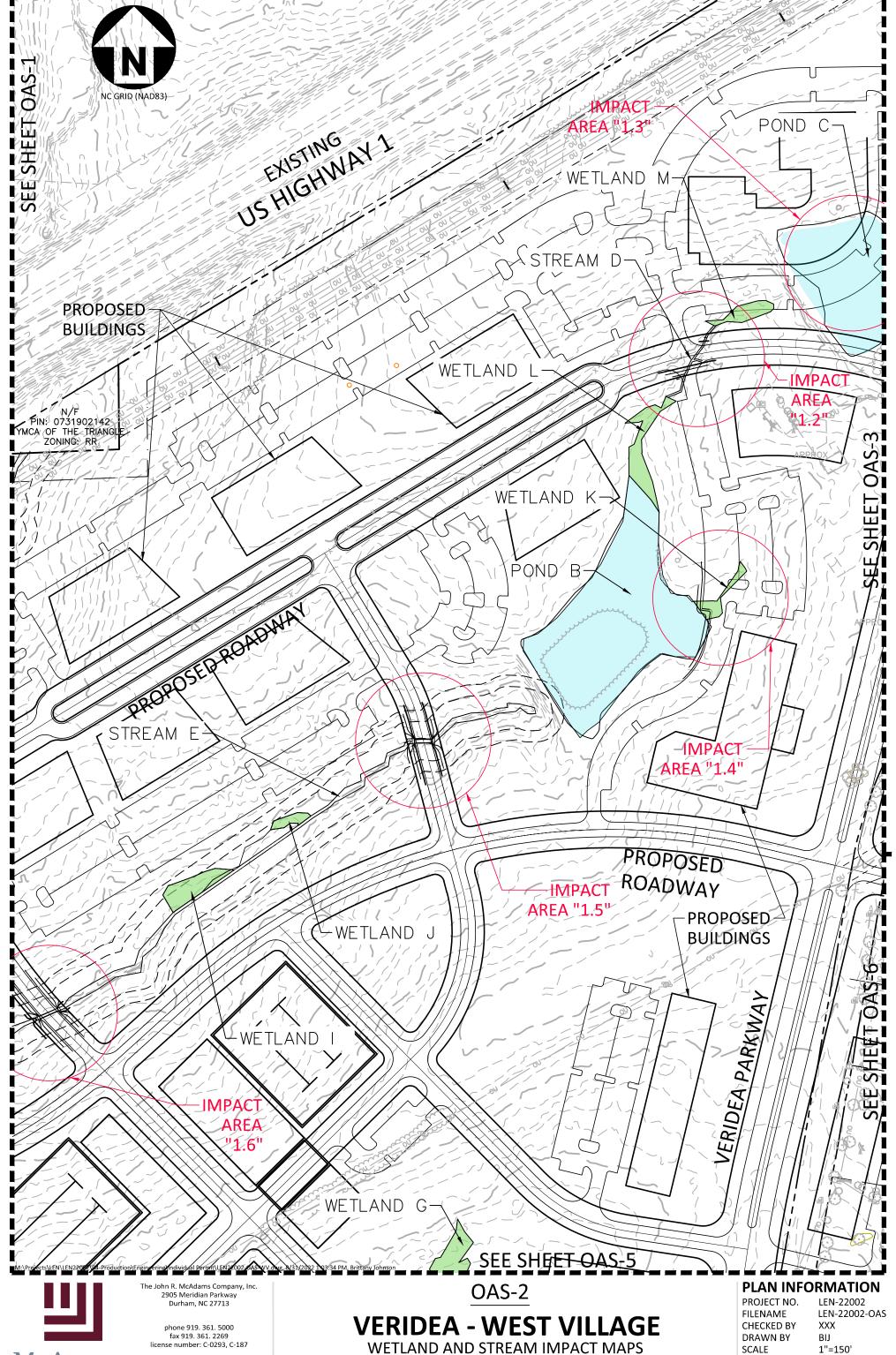
<u>Impact #4.3 (Road Crossing)</u>-Stream and wetland impacts have been avoided in this location. Please refer to impact exhibit Area 4.3.

# WETLAND AND STREAM IMPACT MAPS









**MCADAMS** 

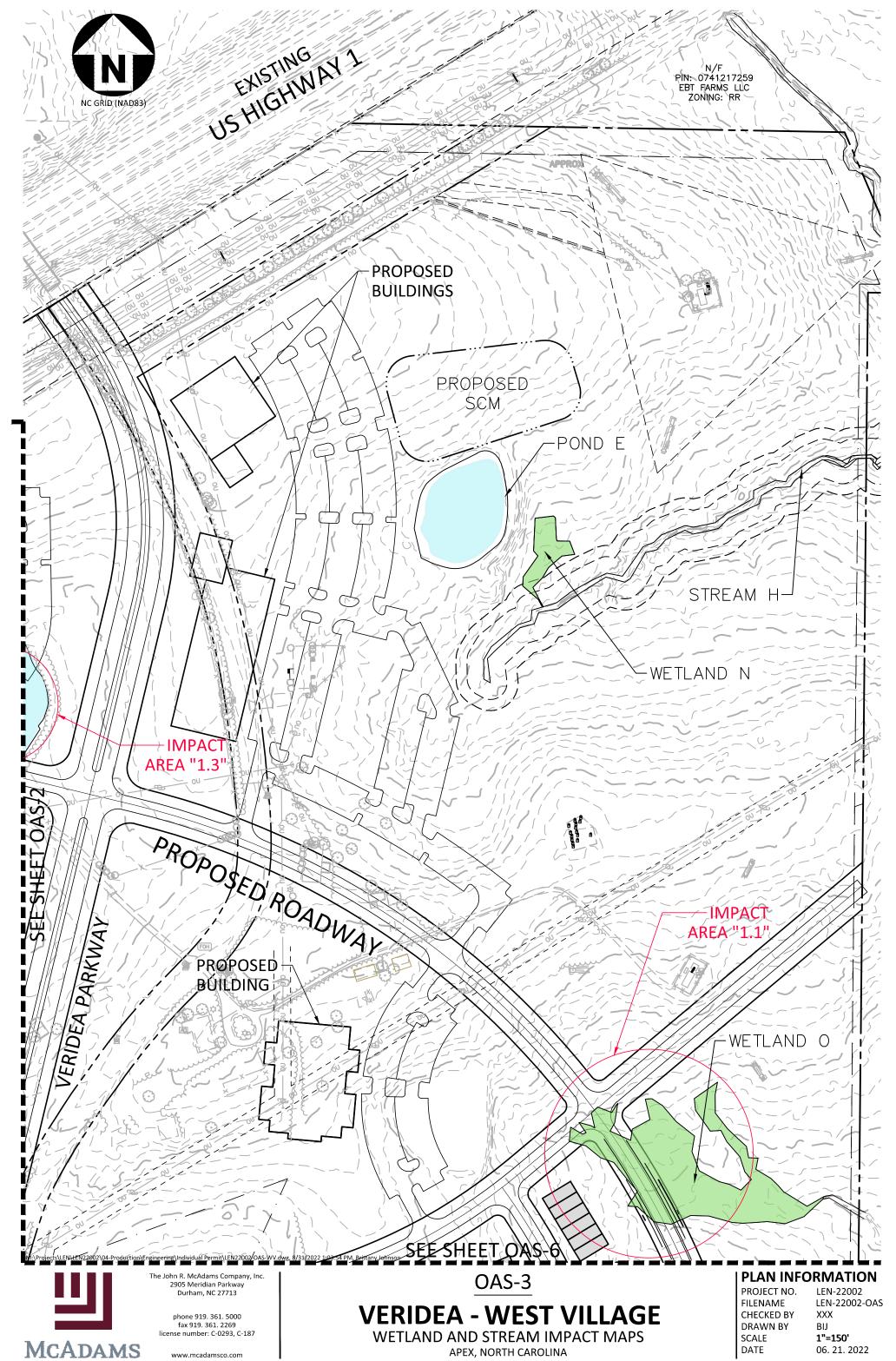
www.mcadamsco.com

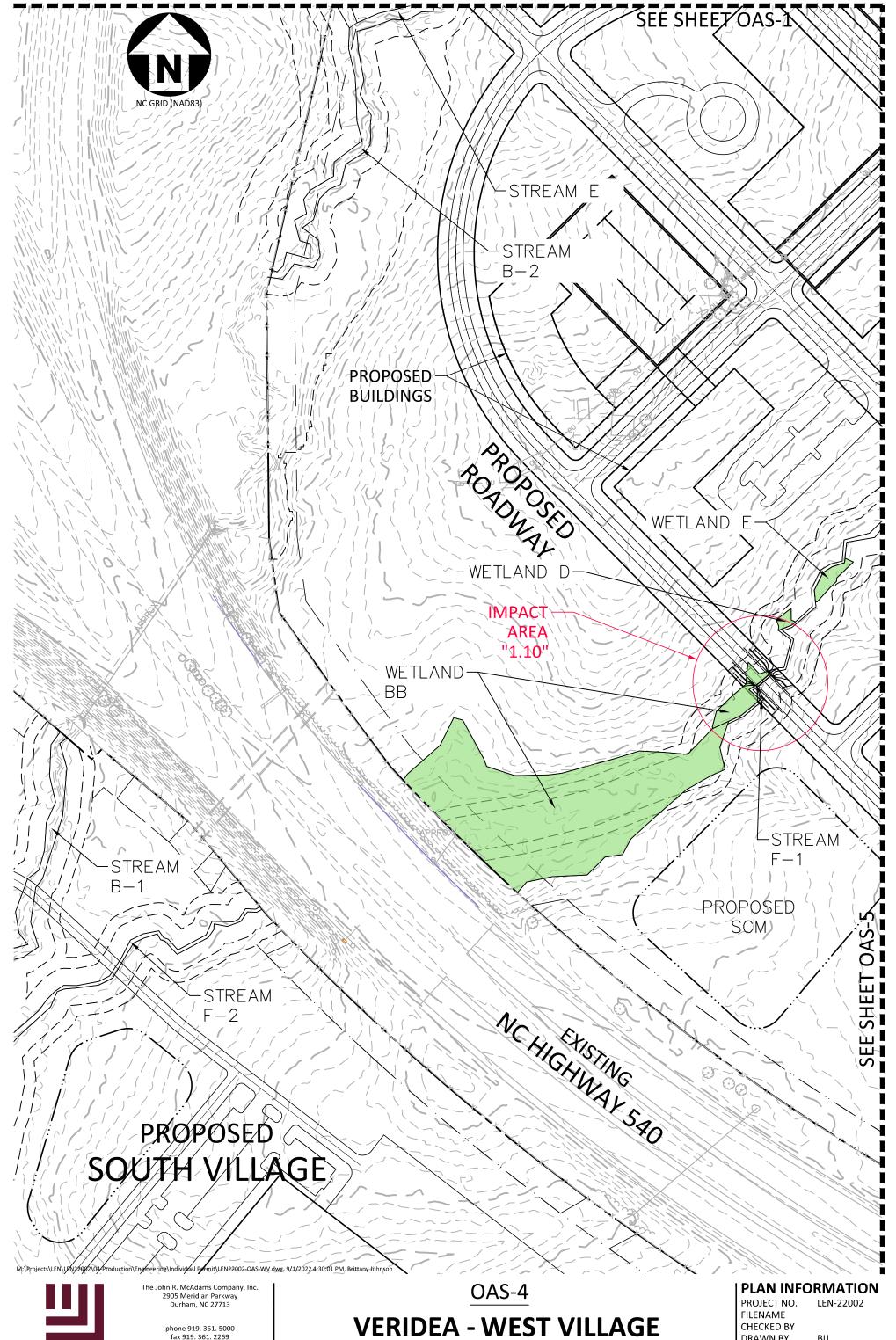
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

06. 21. 2022

88 of 303

DATE





**MCADAMS** 

fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

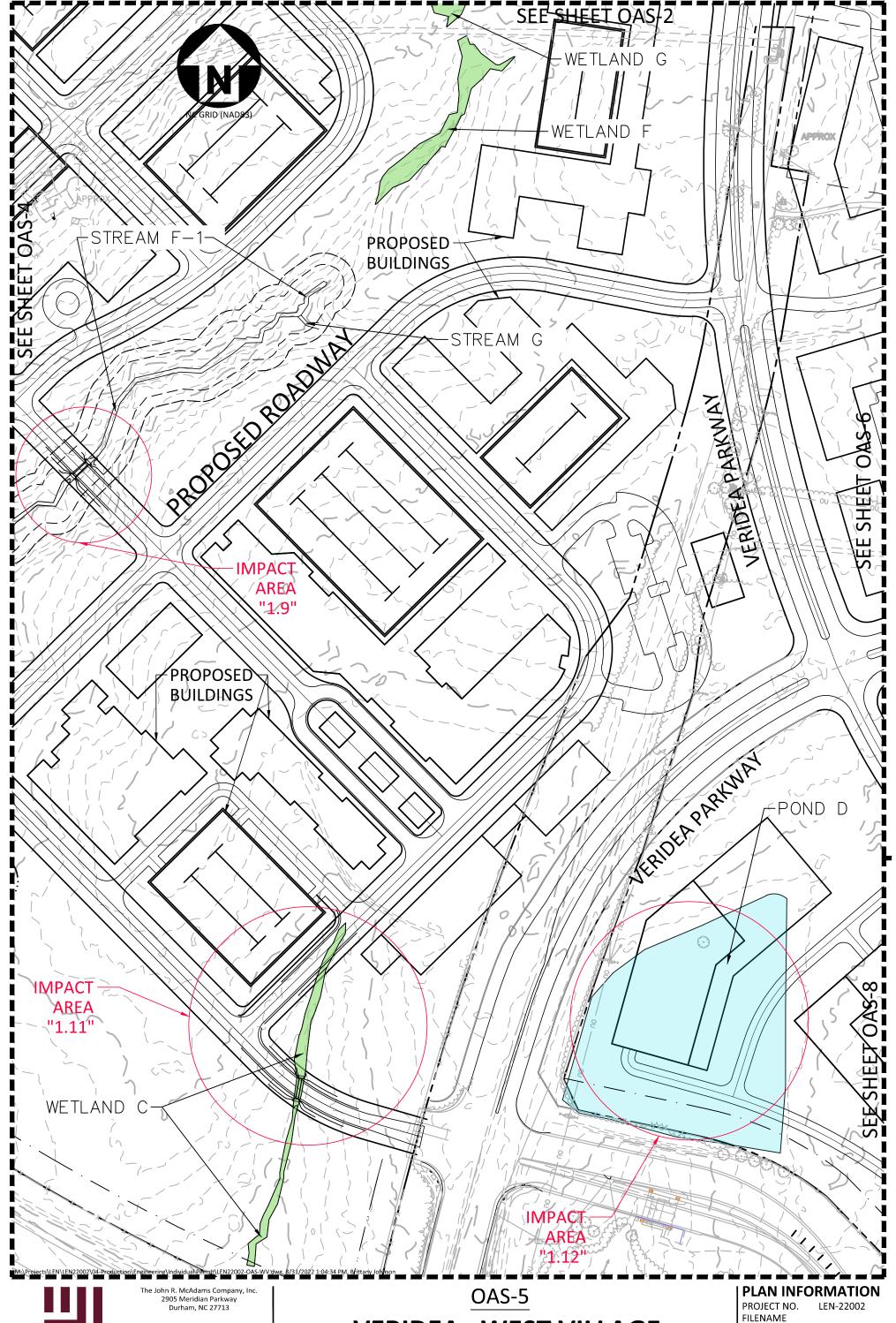
DRAWN BY

SCALE

DATE

BIJ 1"=150'

06. 21. 2022 90 of 303





www.mcadamsco.com

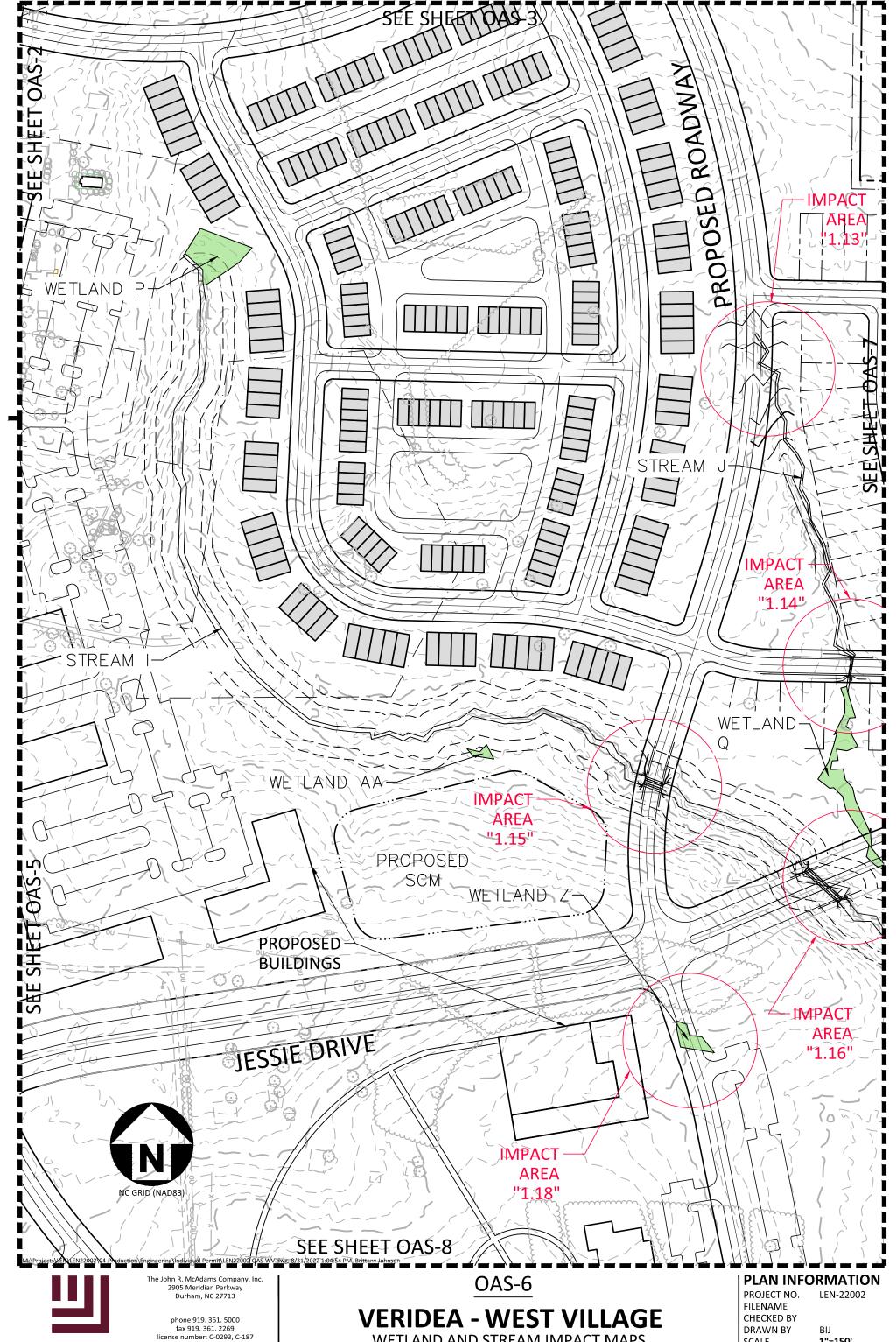
## **VERIDEA - WEST VILLAGE**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME CHECKED BY DRAWN BY SCALE

DATE

BIJ 1"=150' 06. 21. 2022

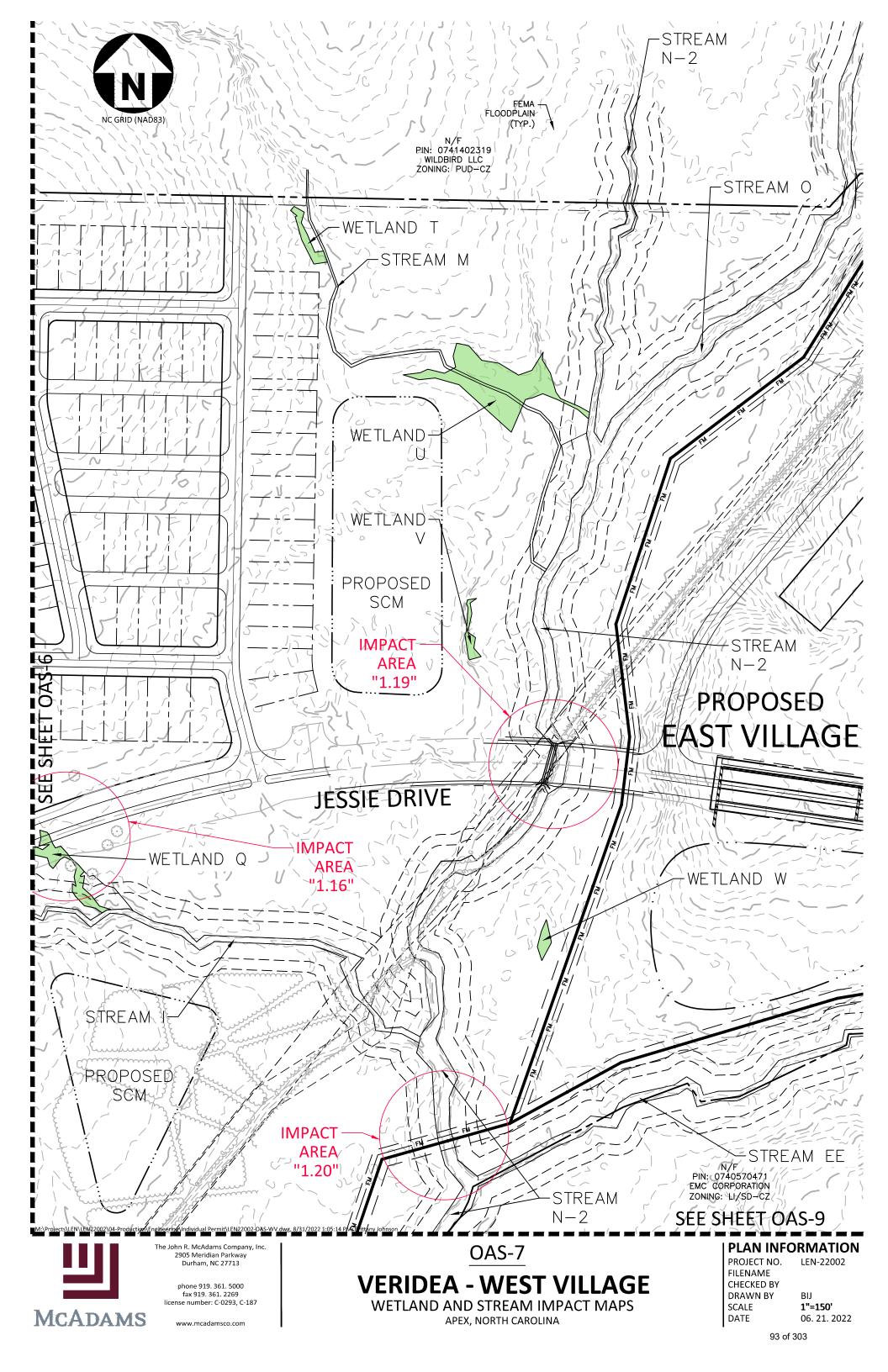


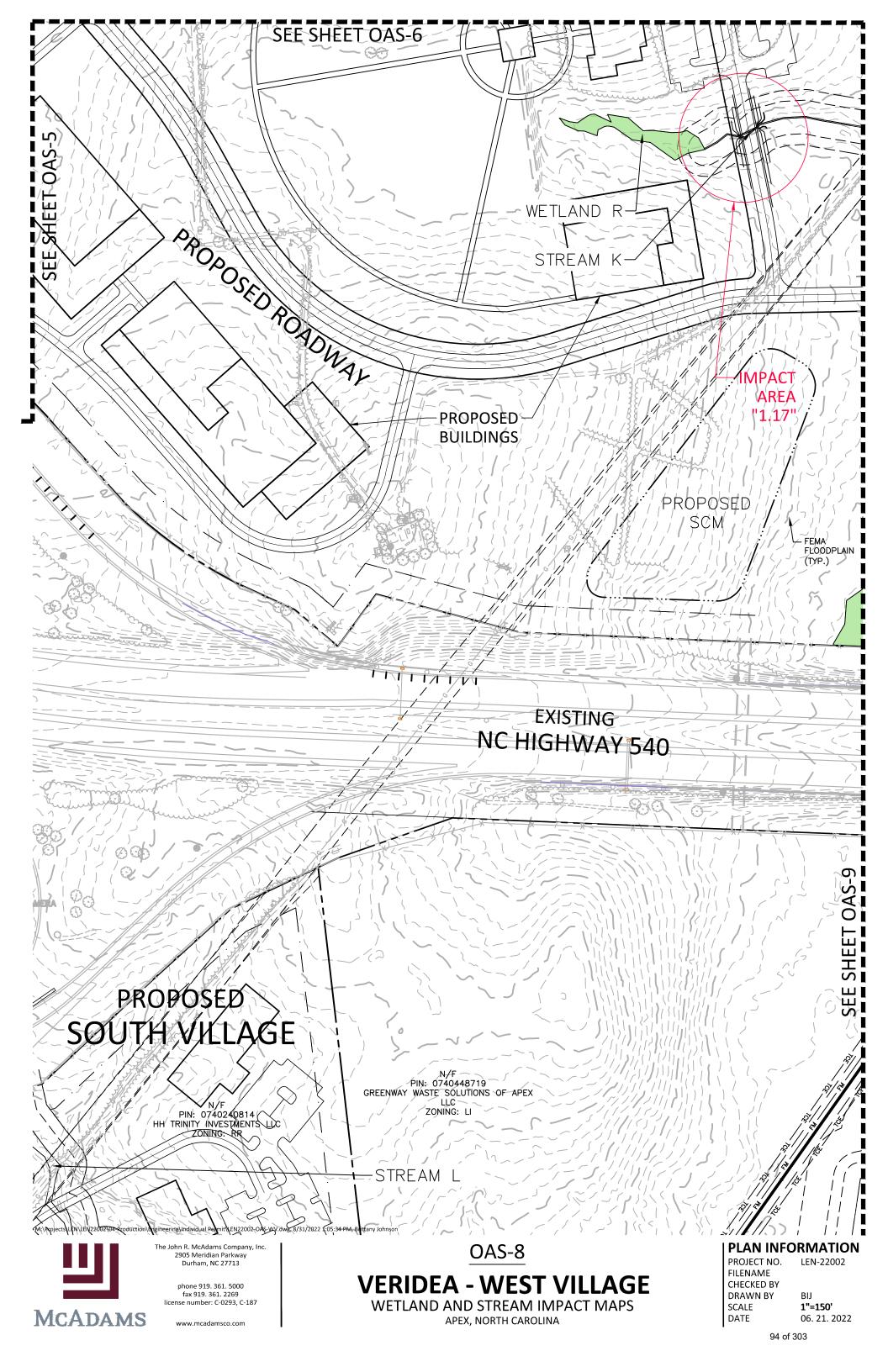
**MCADAMS** 

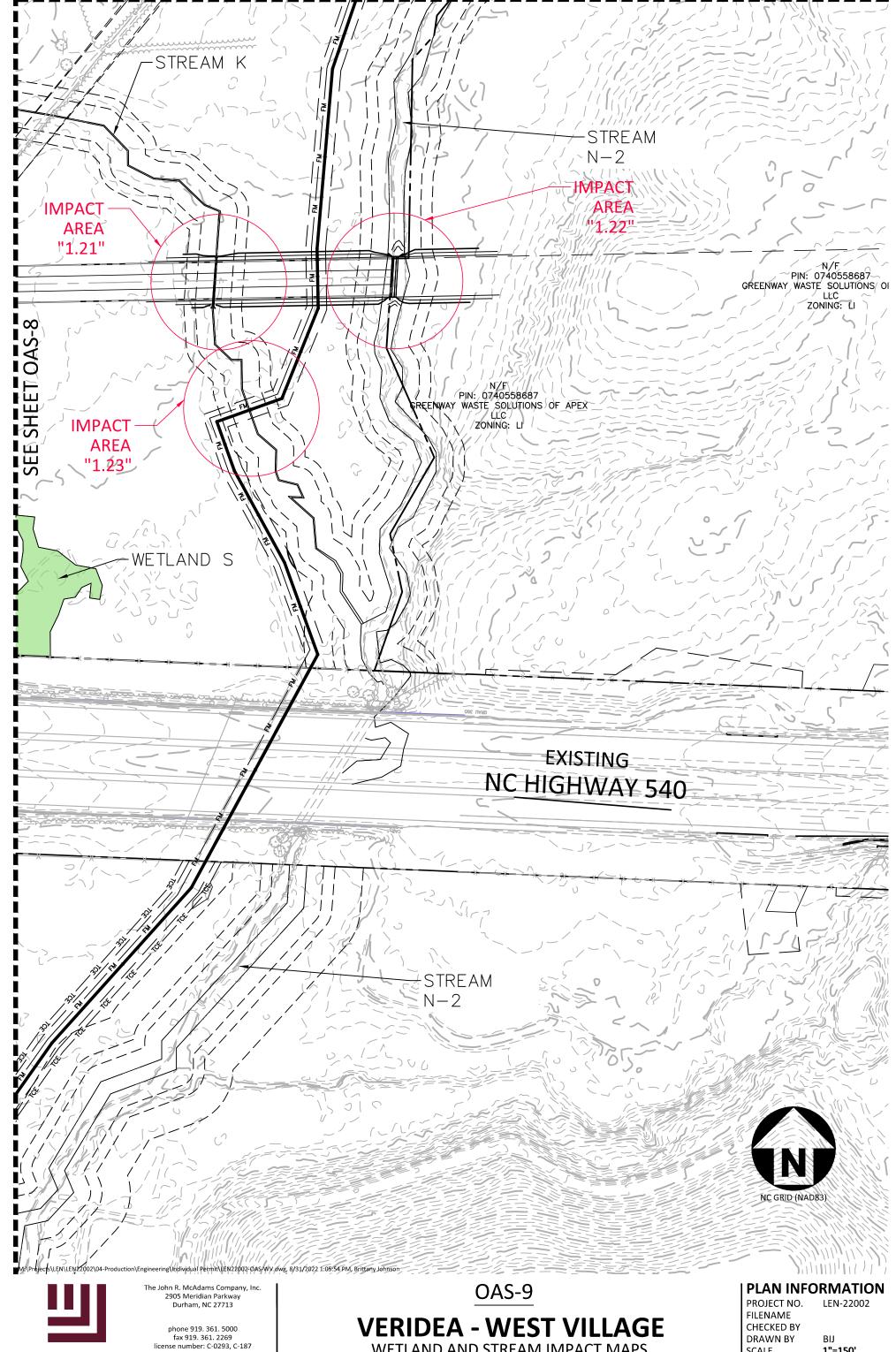
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

SCALE 1"=150' DATE 06. 21. 2022





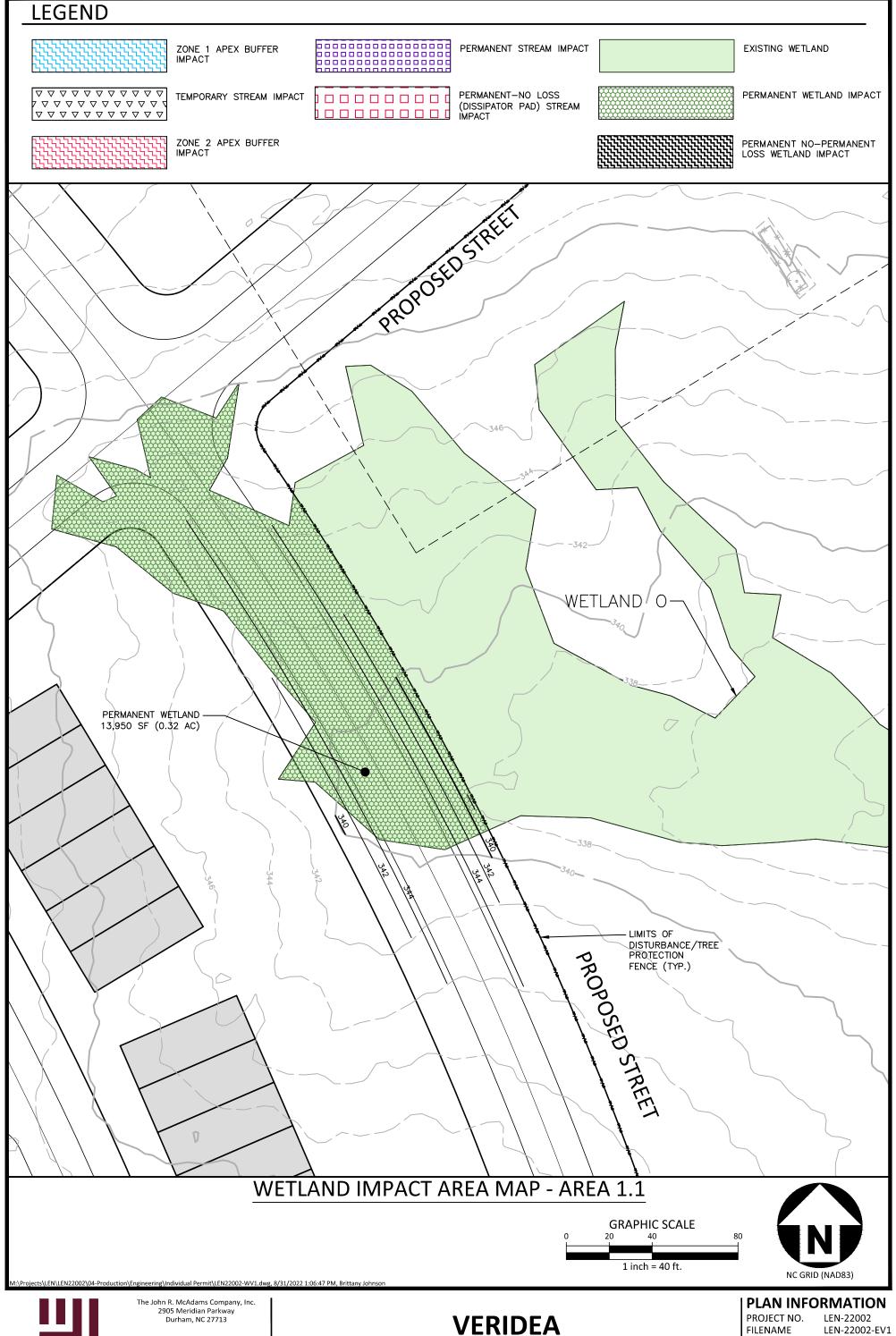


**MCADAMS** 

www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

SCALE 1"=150' DATE 06. 21. 2022



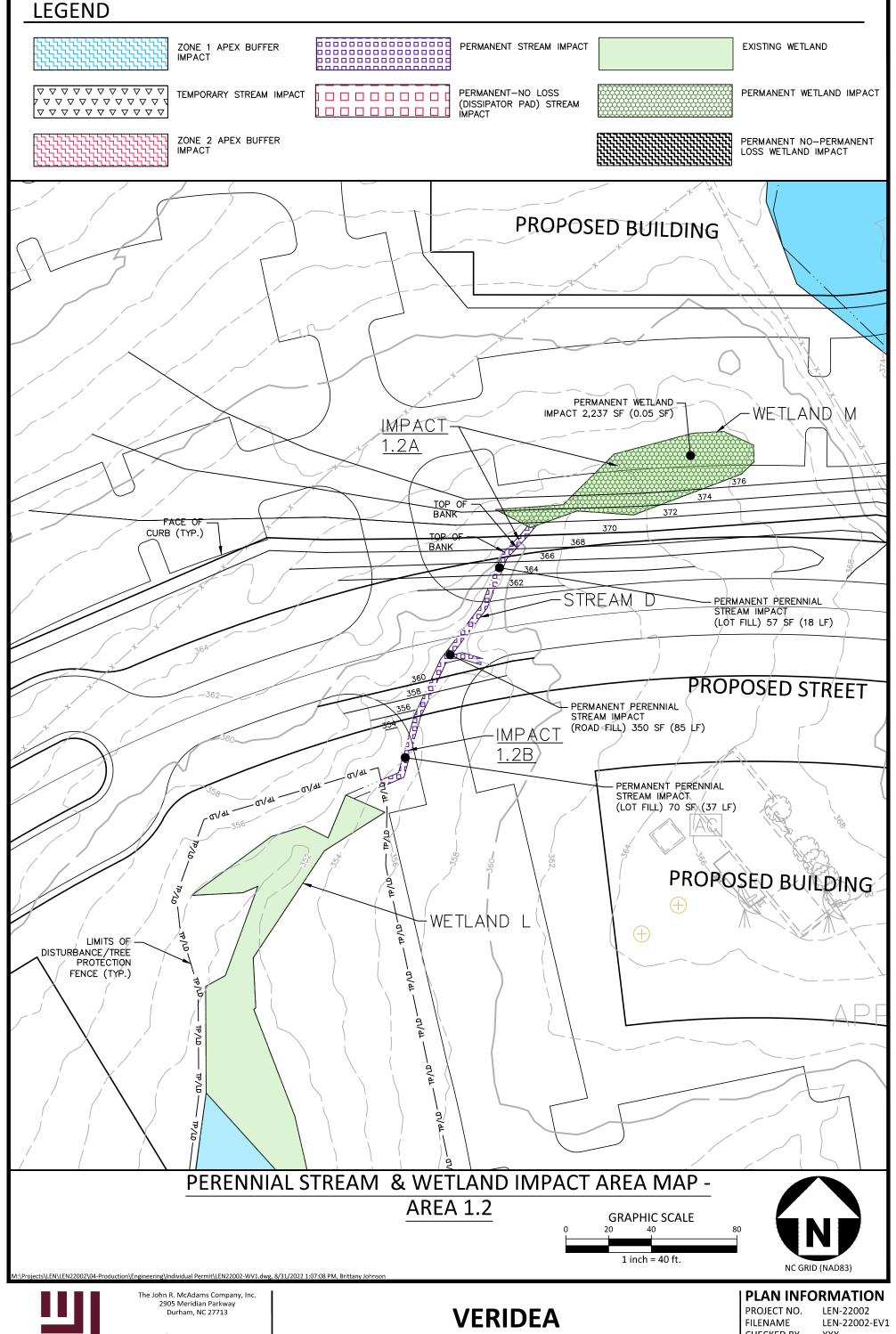


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





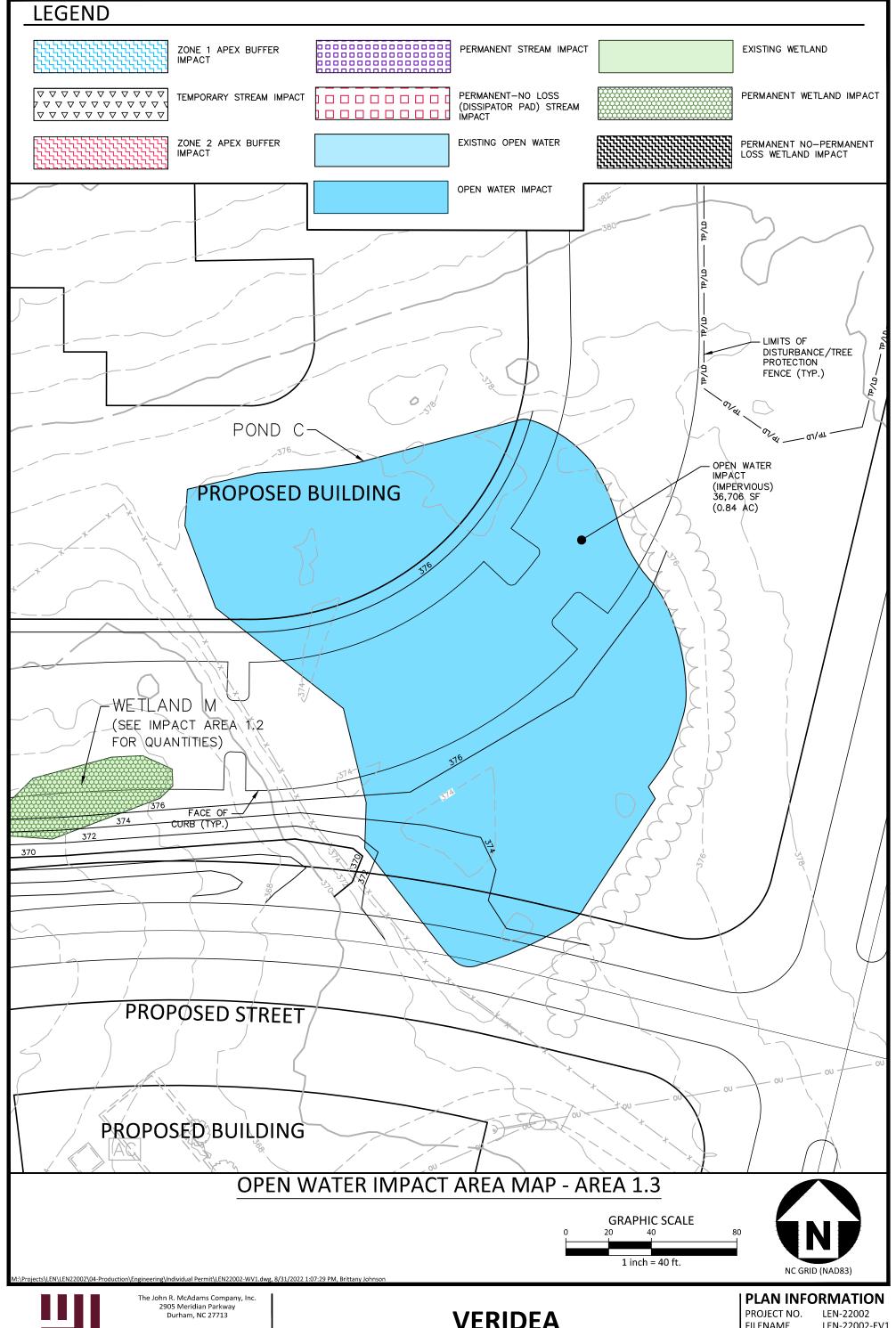
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





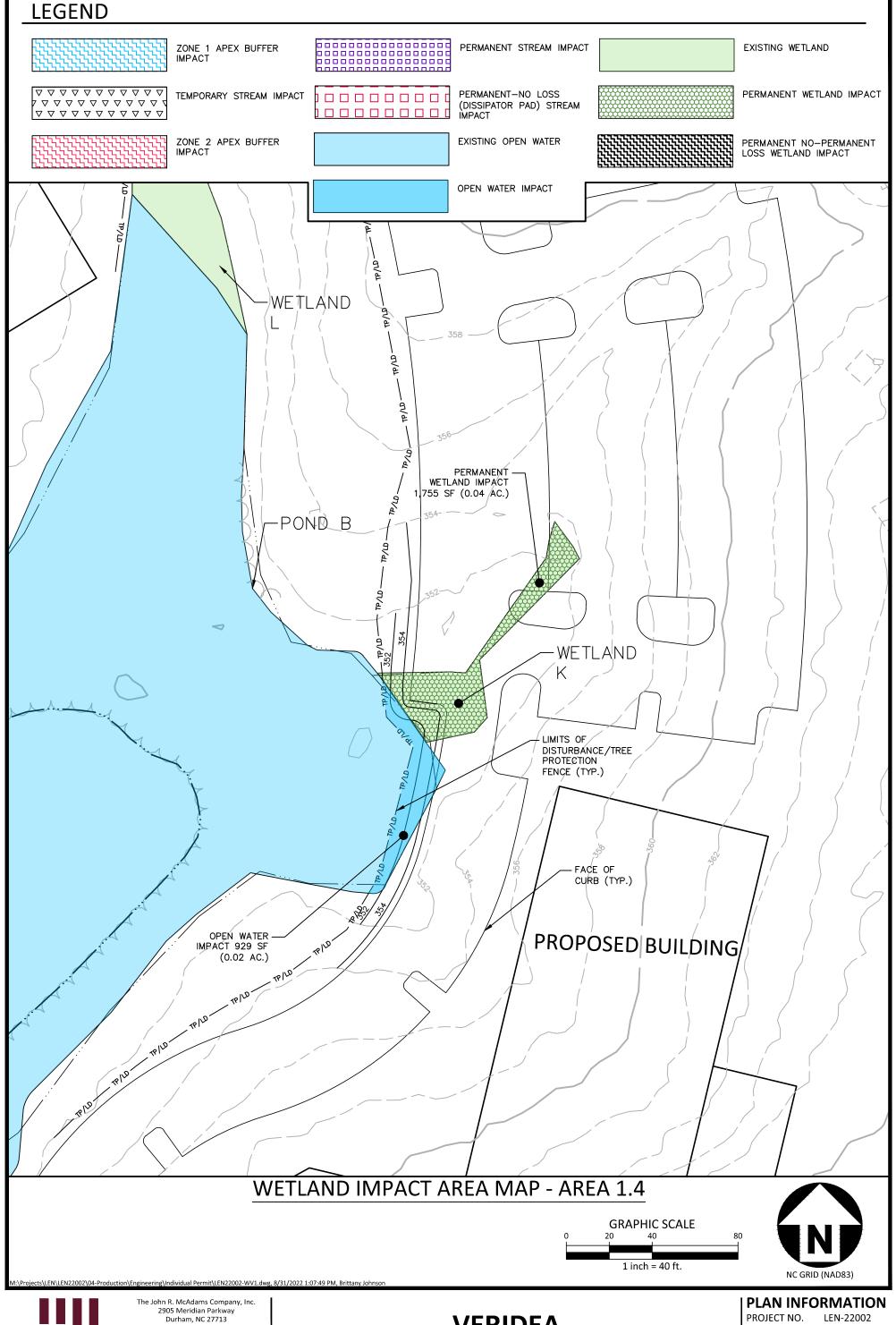
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





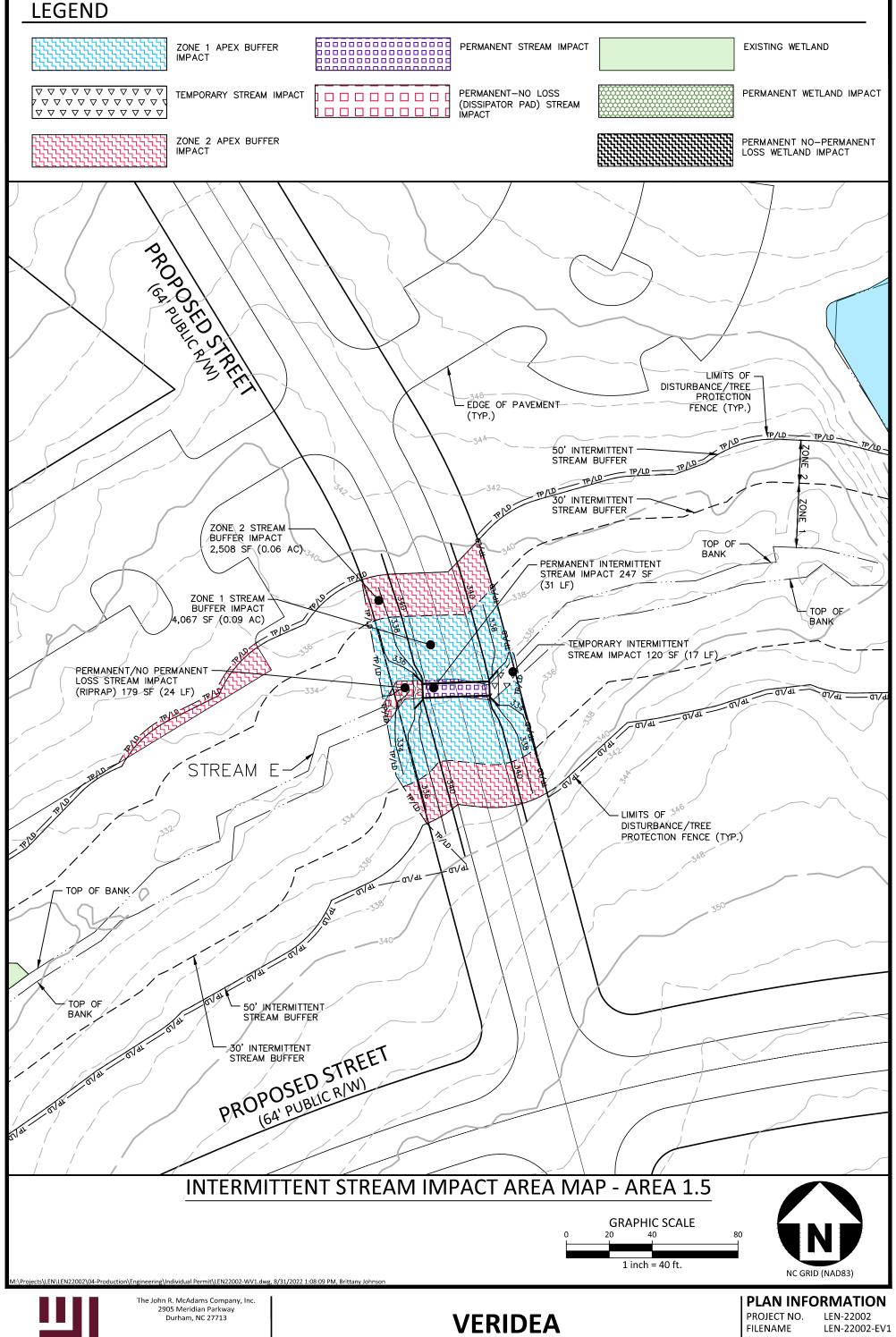
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





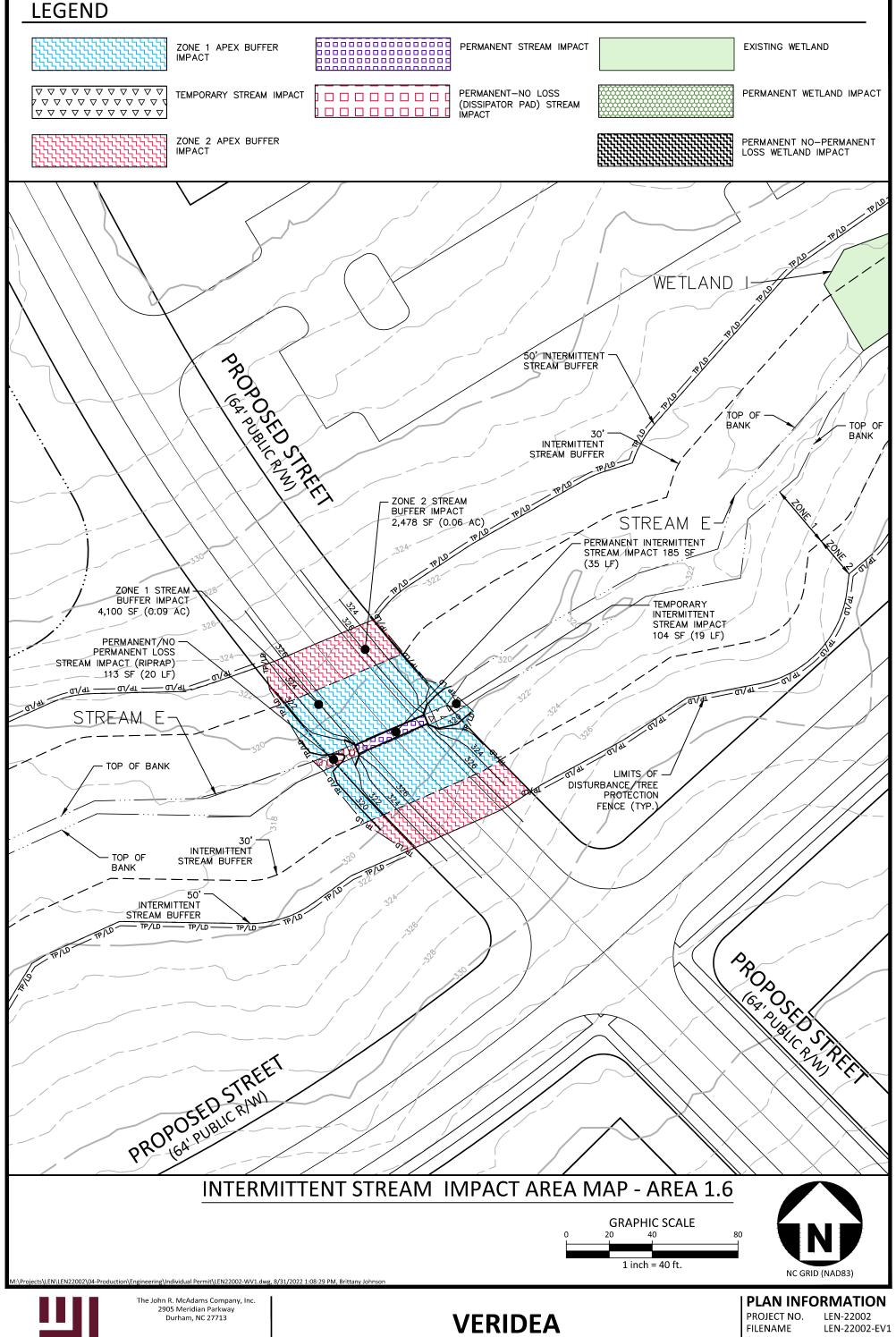
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





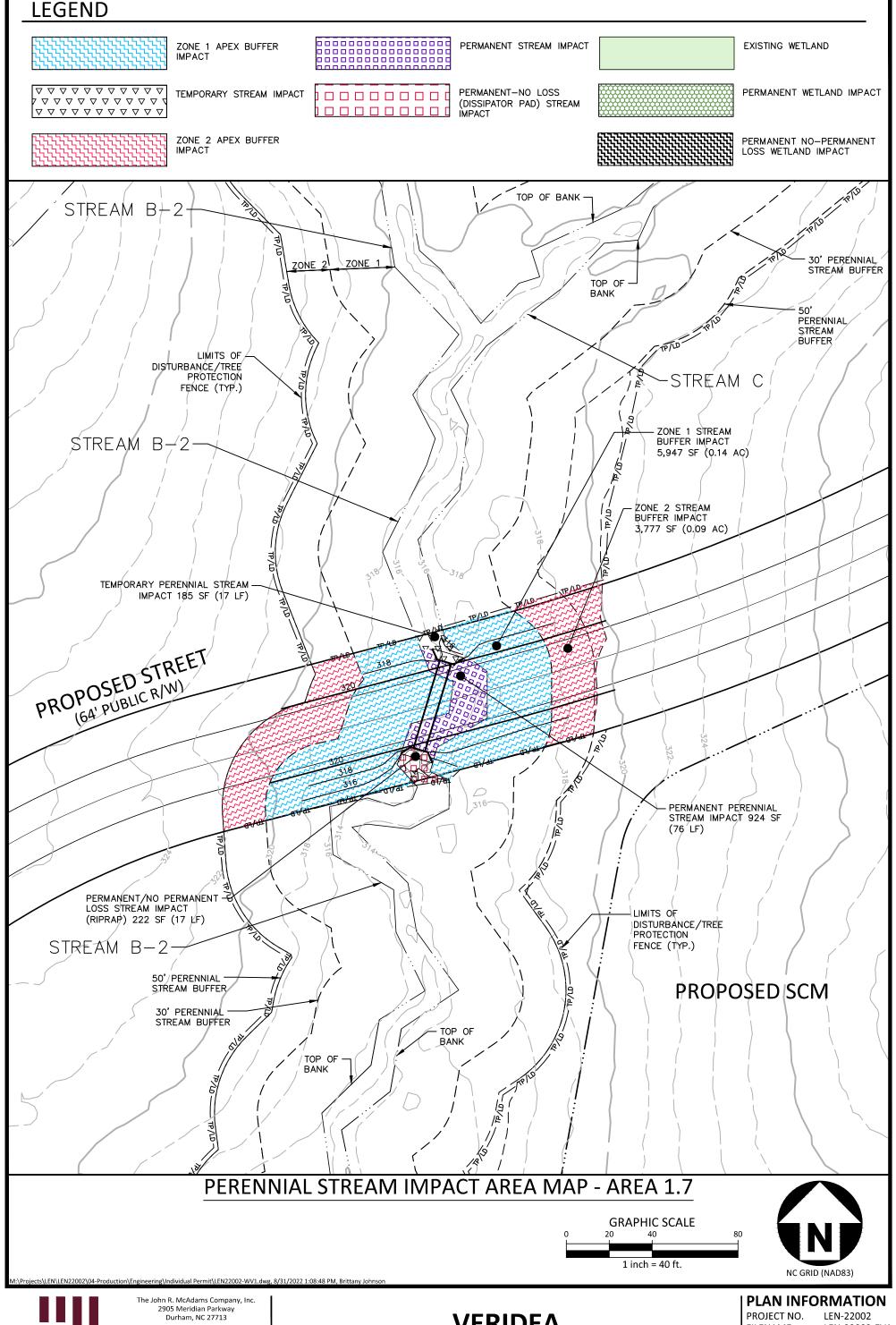
icense number: C-0293, C-18

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO.
FILENAME
CHECKED BY
DRAWN BY
SCALE

DATE





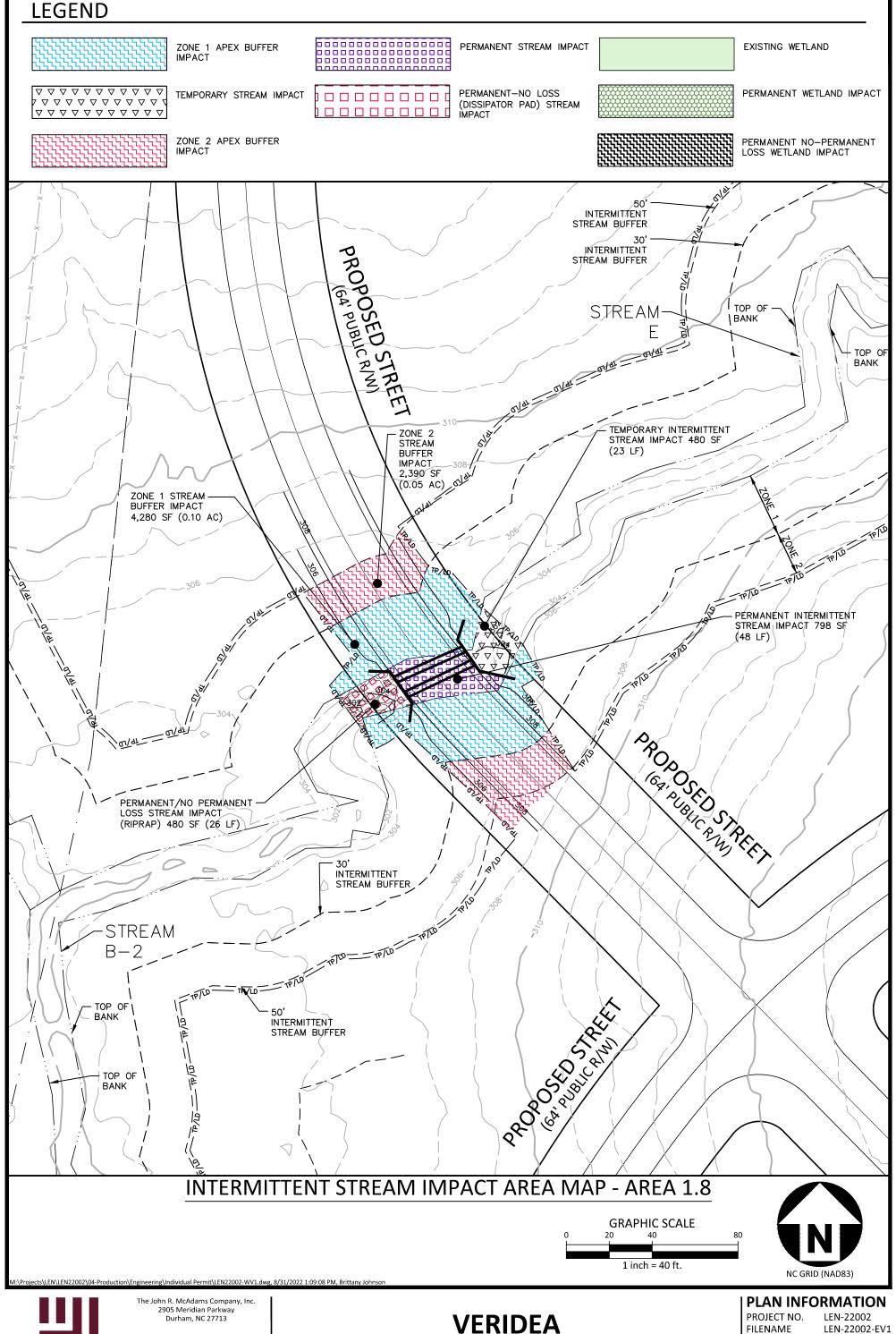
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

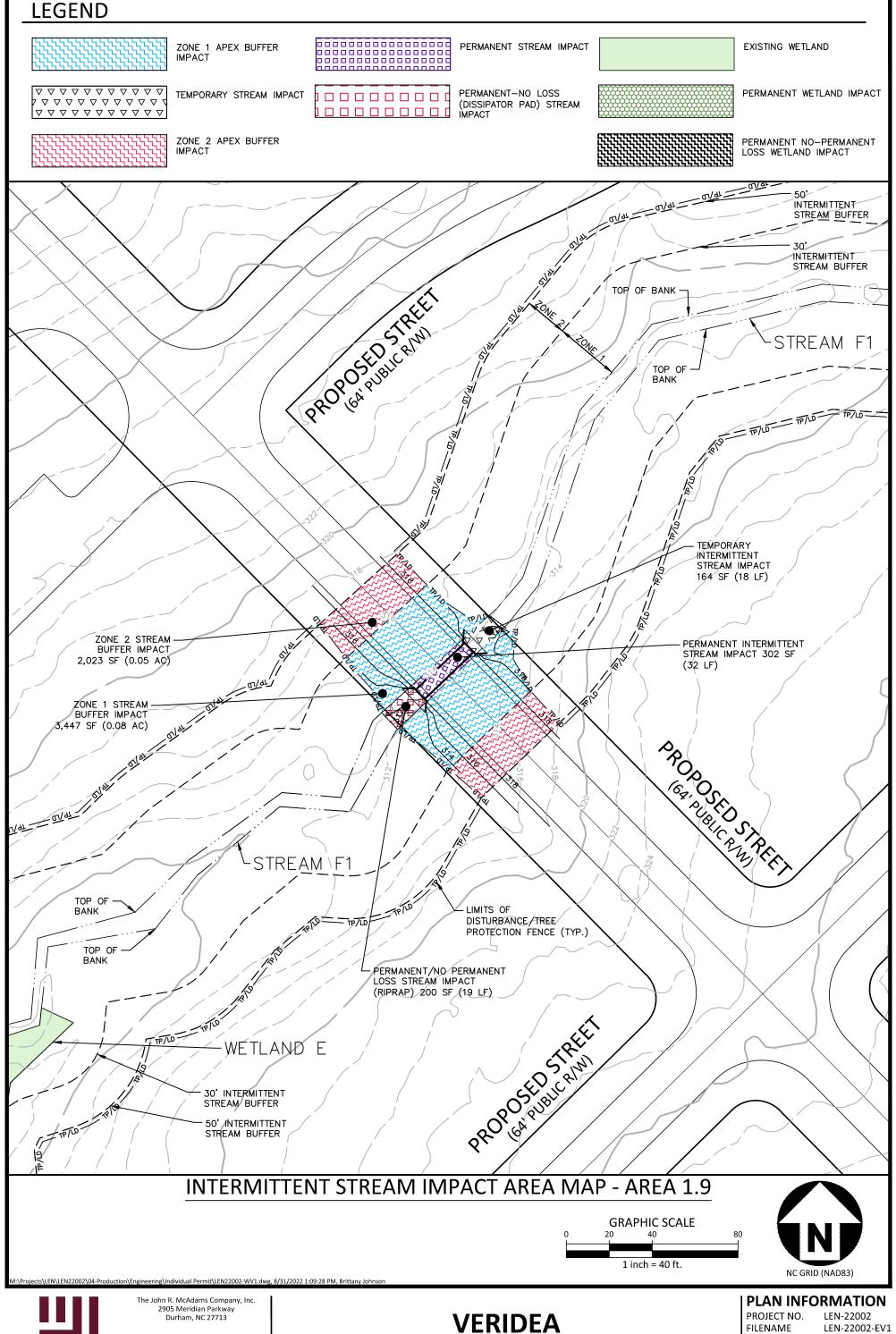
## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





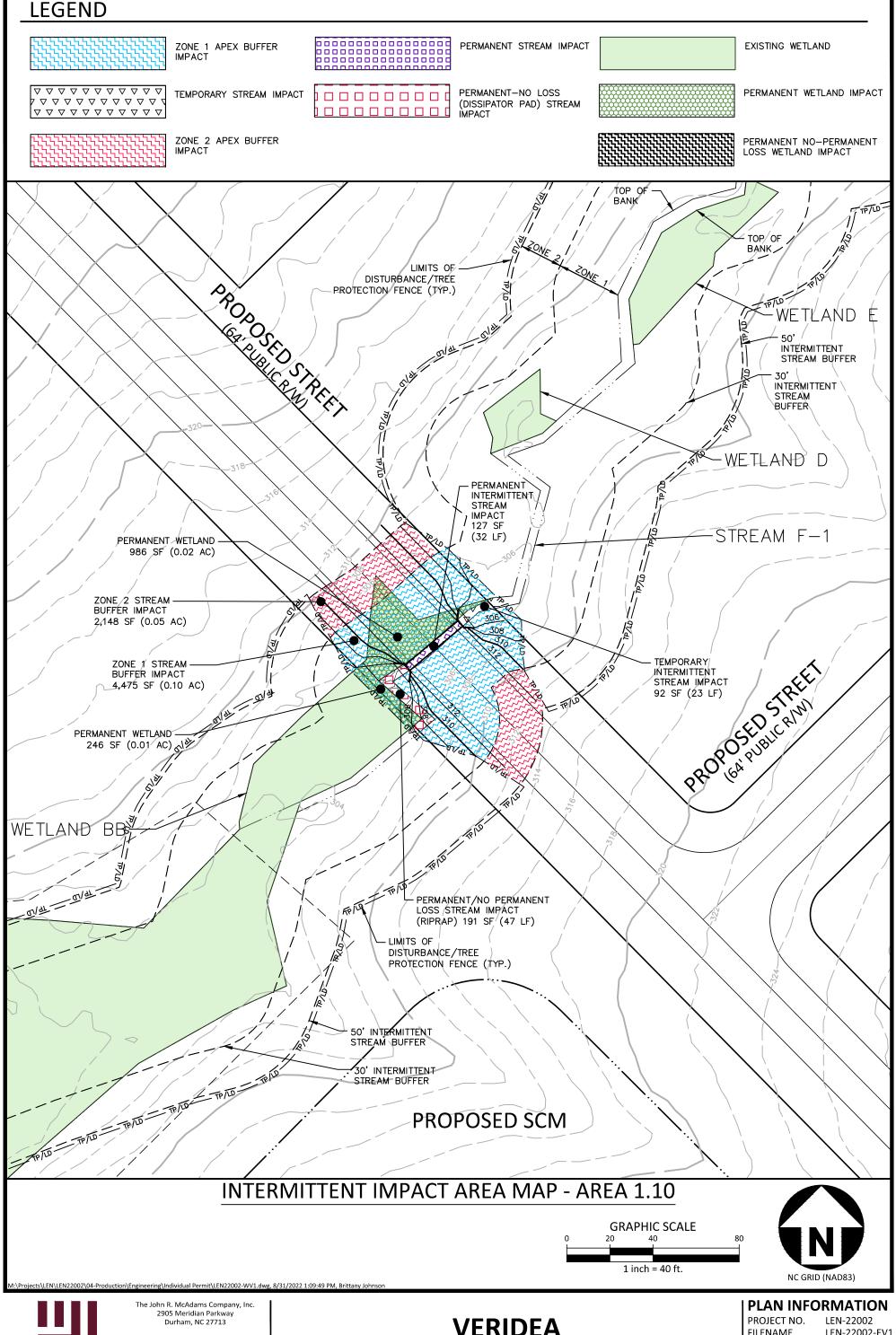
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





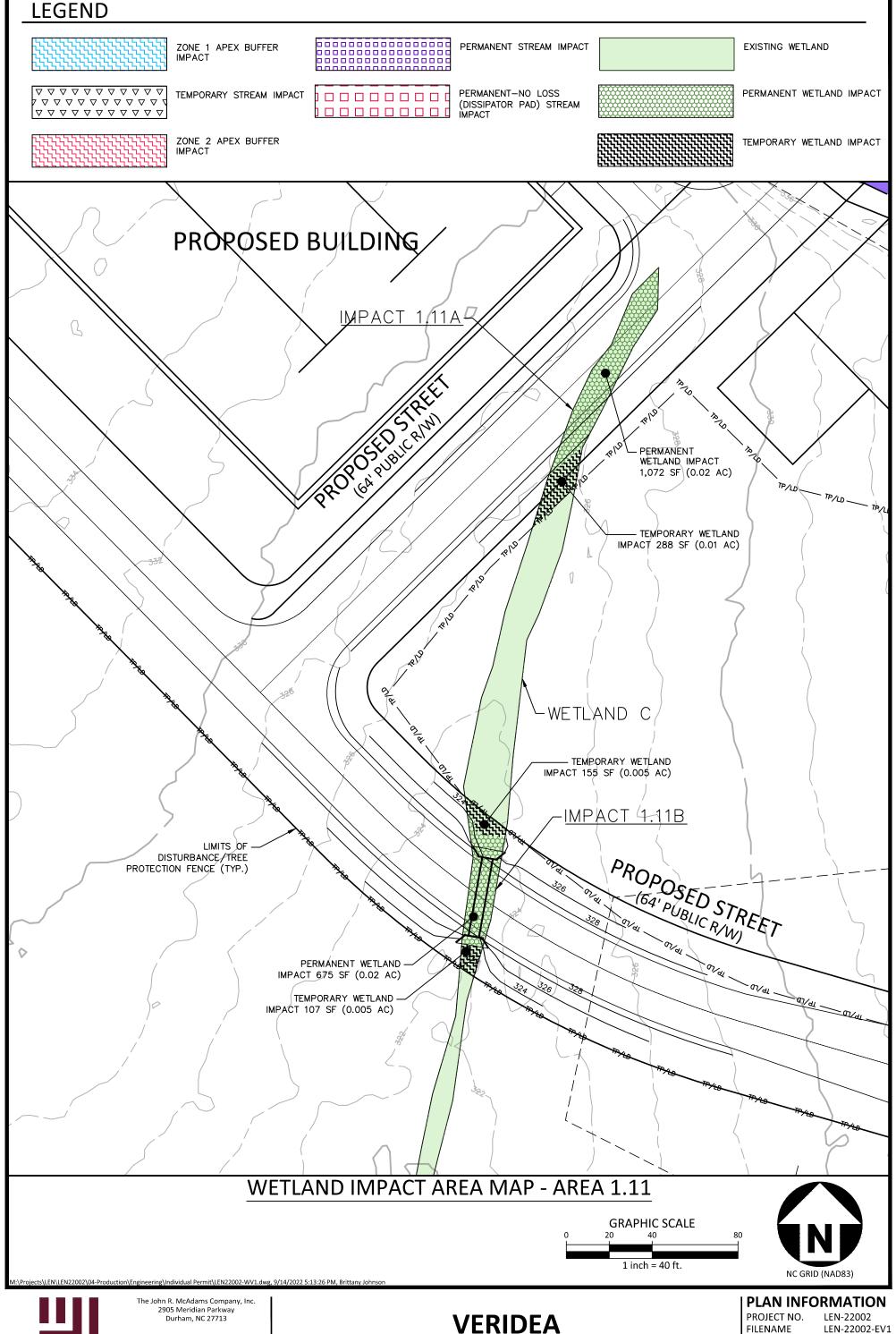
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

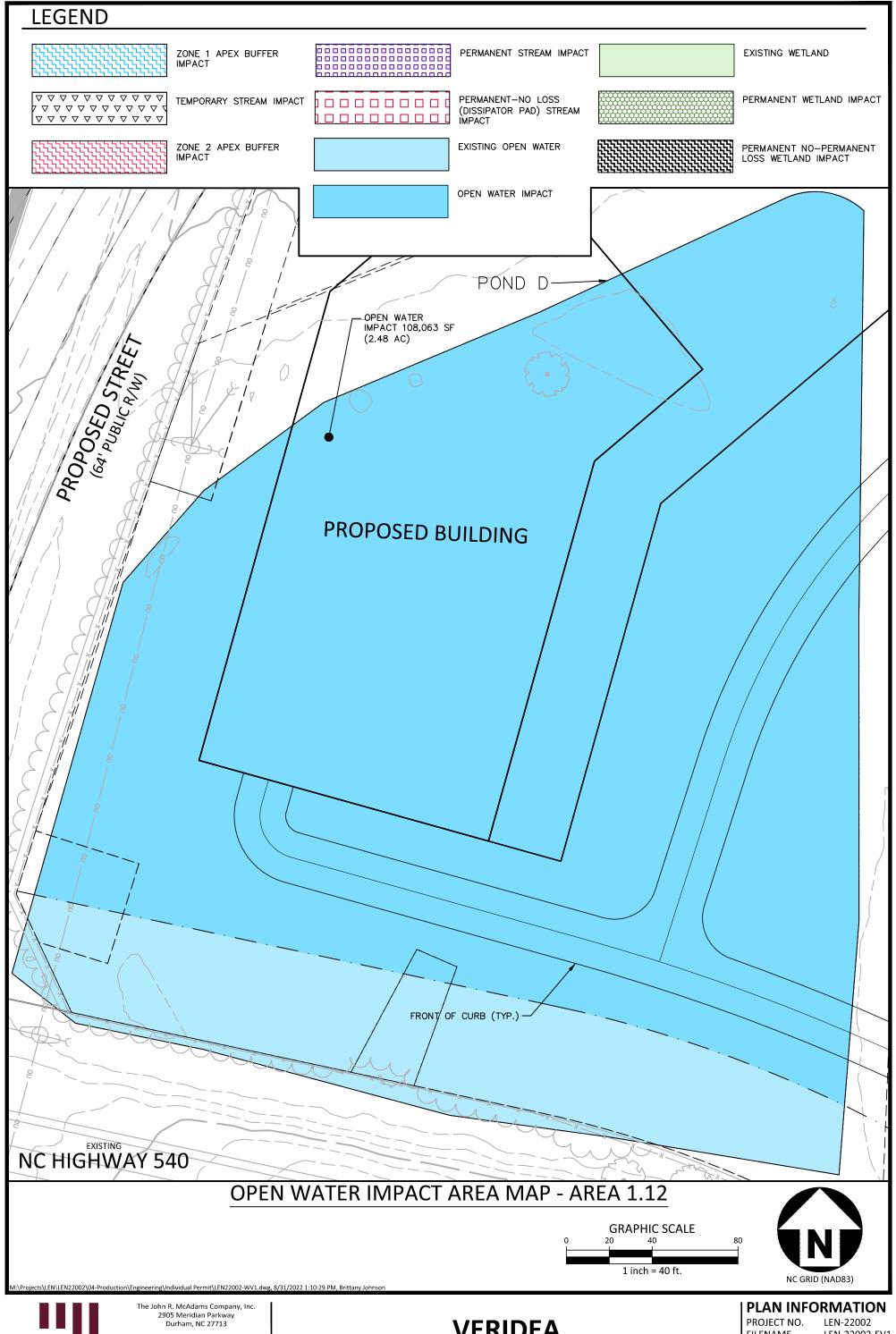
## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





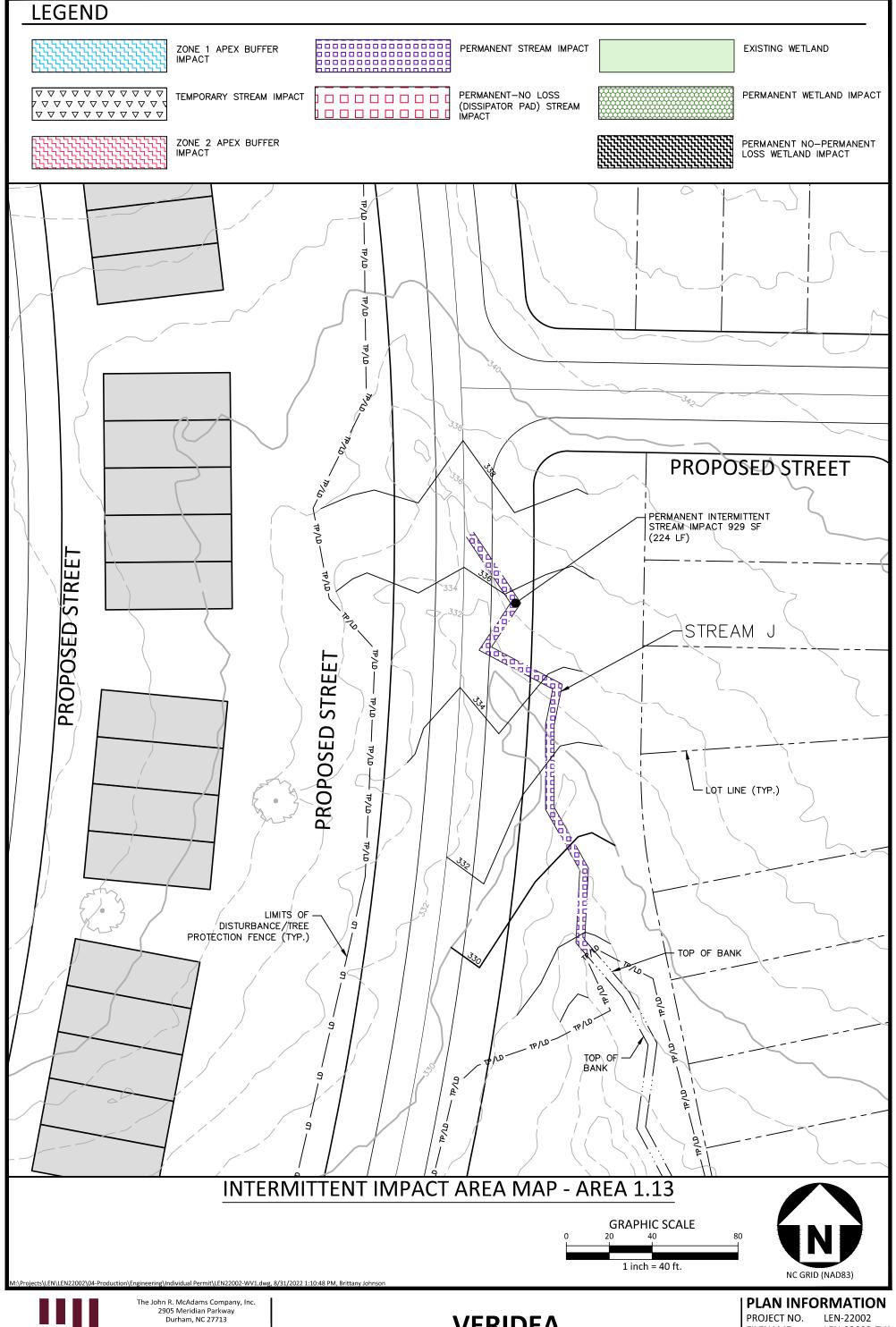
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





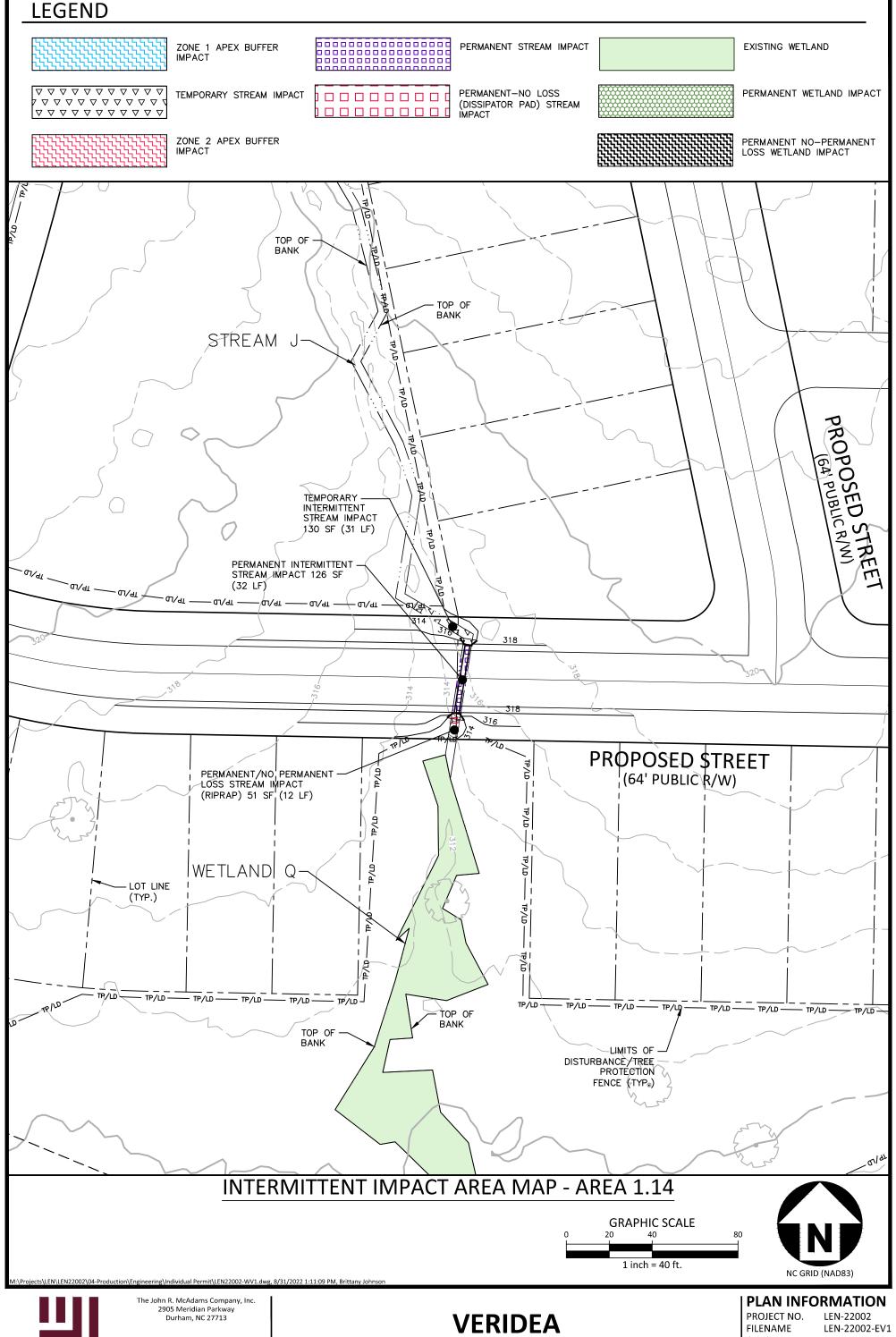
www.mcadamsco.com

## **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





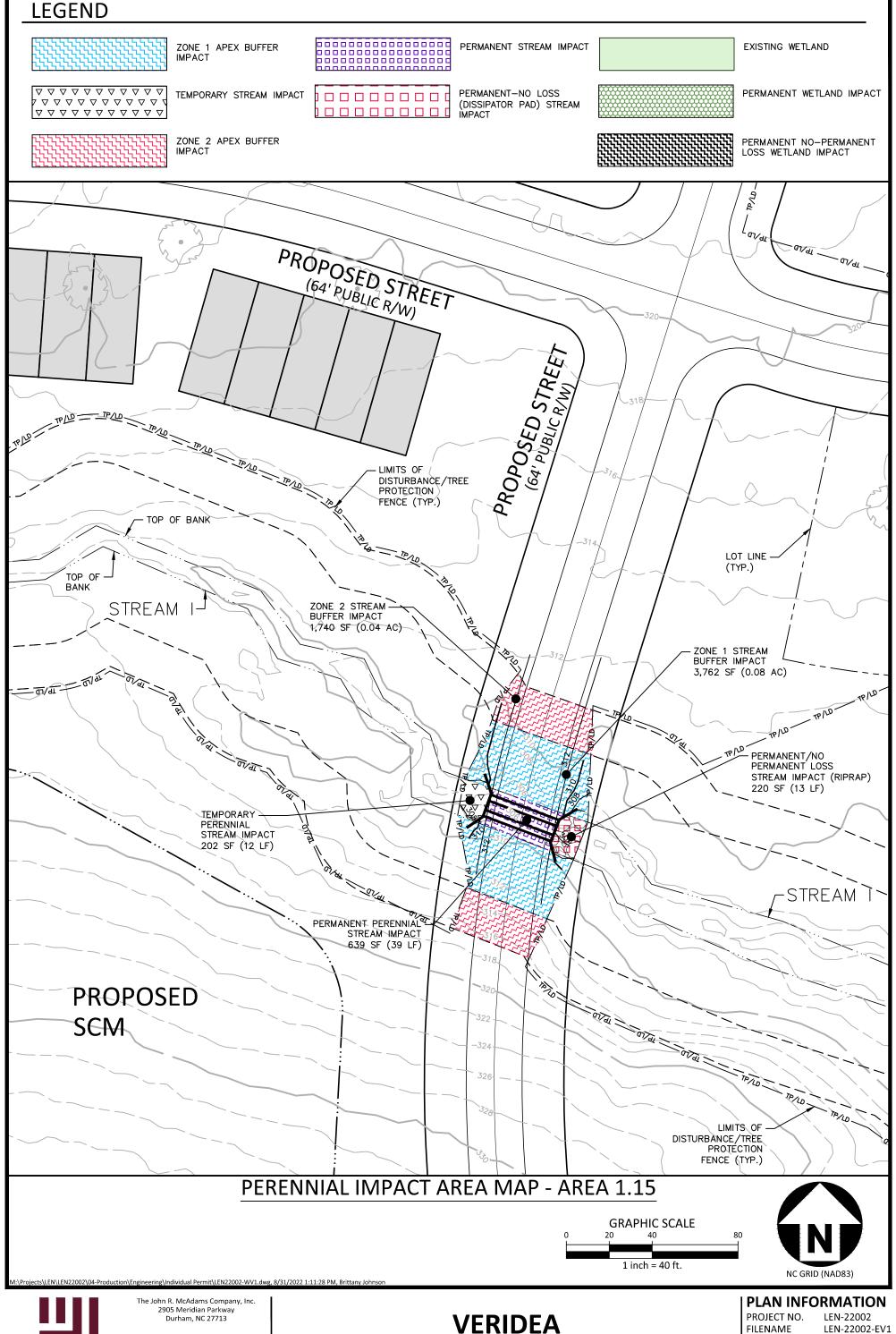
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022





www.mcadamsco.com

### **VERIDEA**

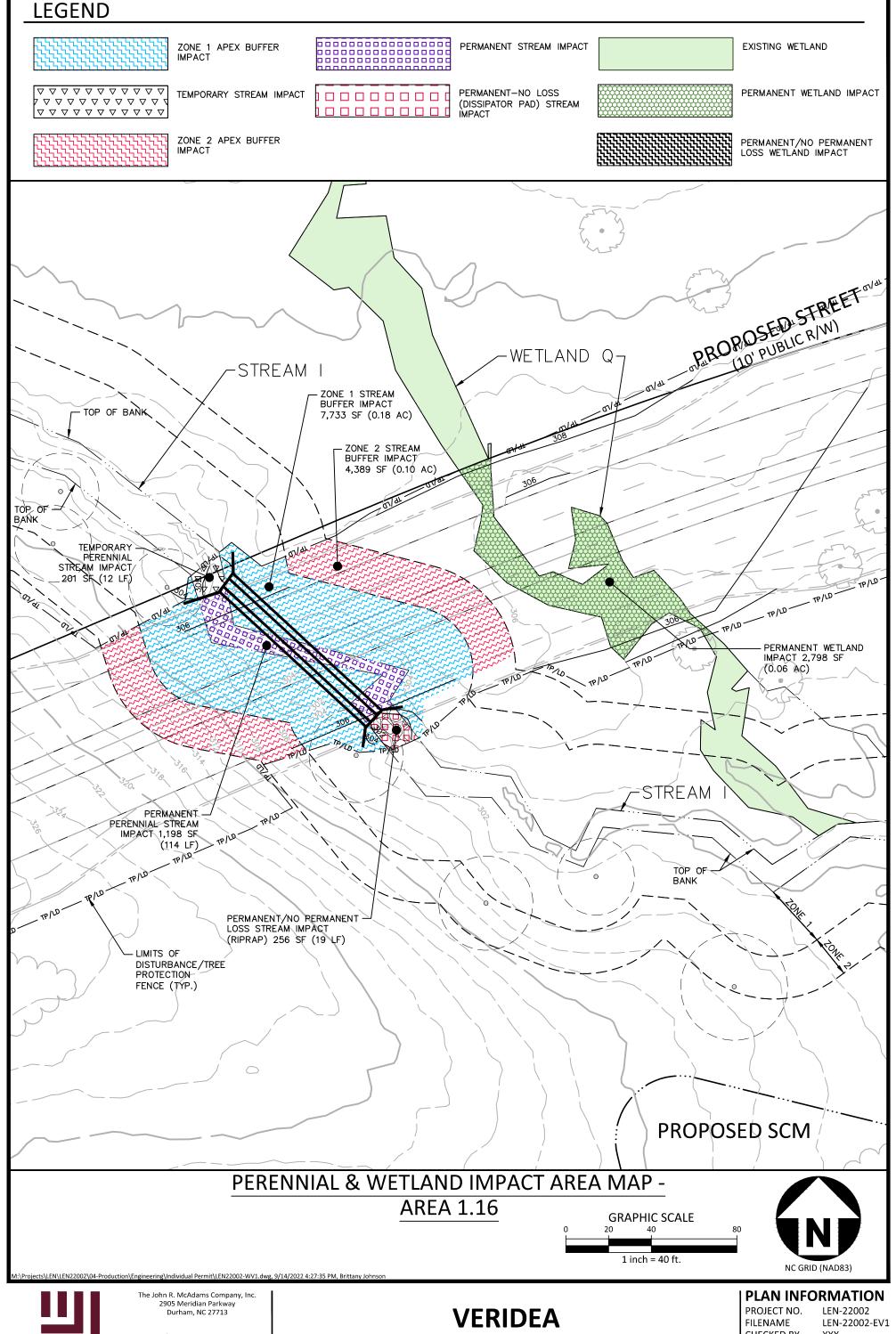
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40'

06. 21. 2022



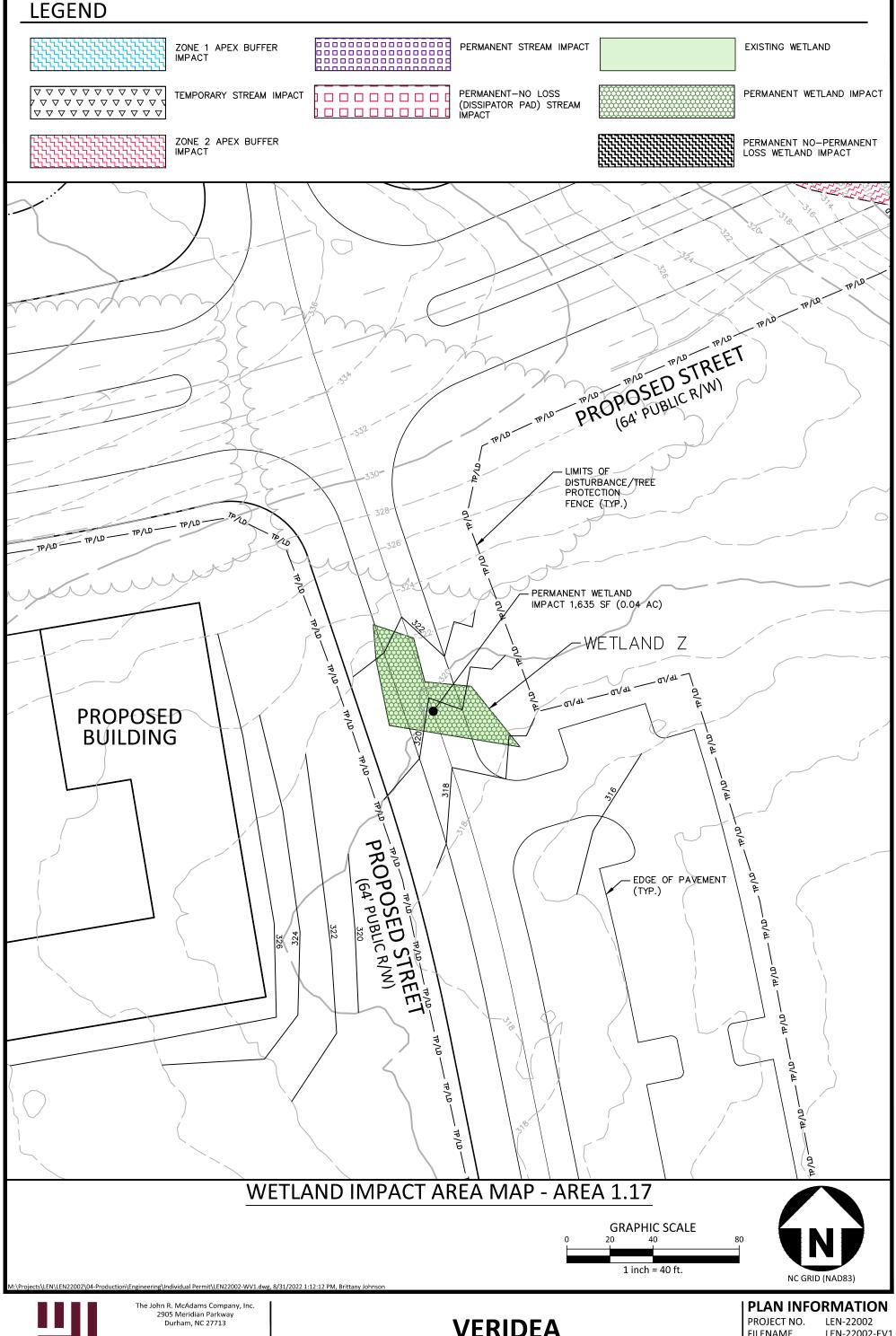


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE





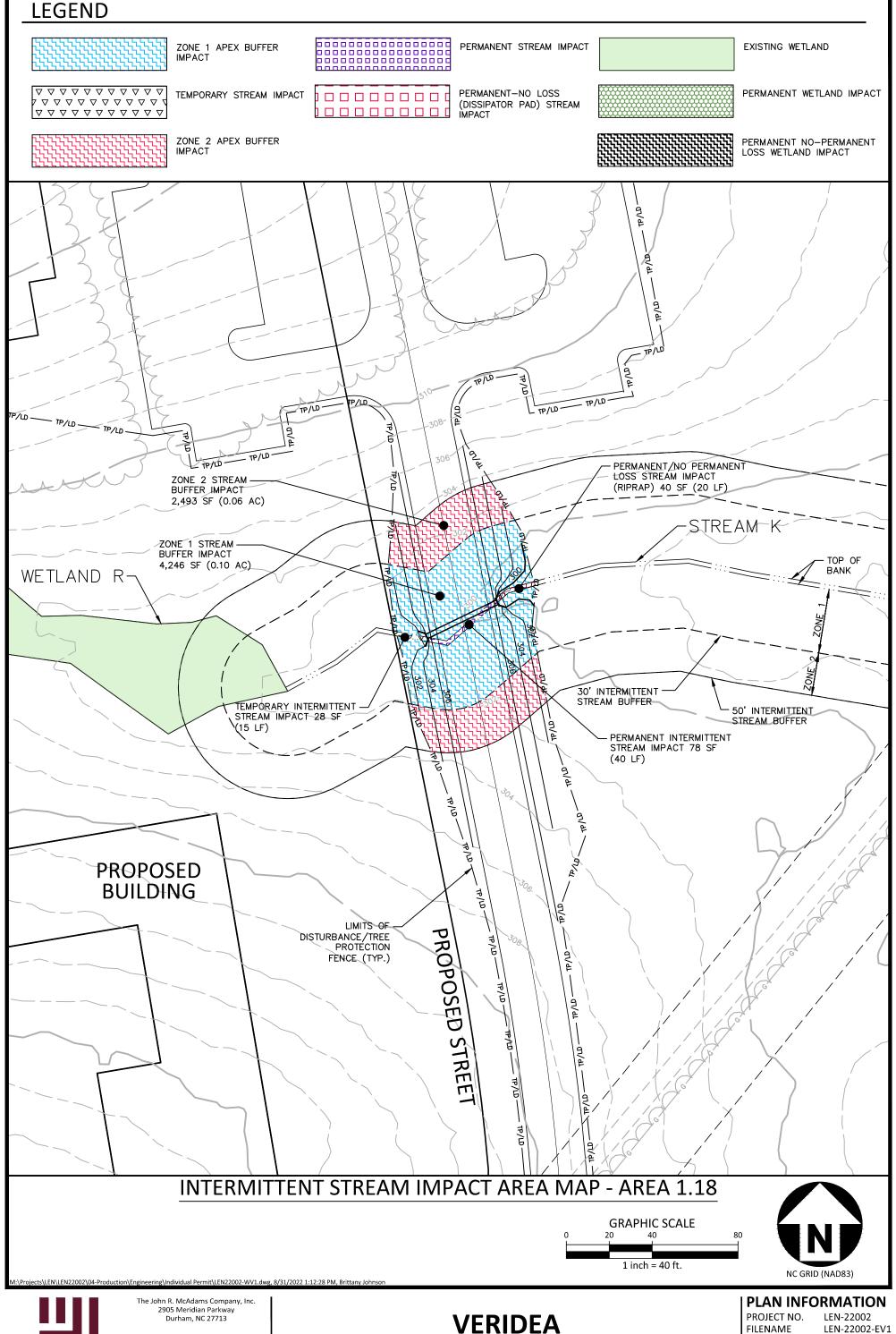
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





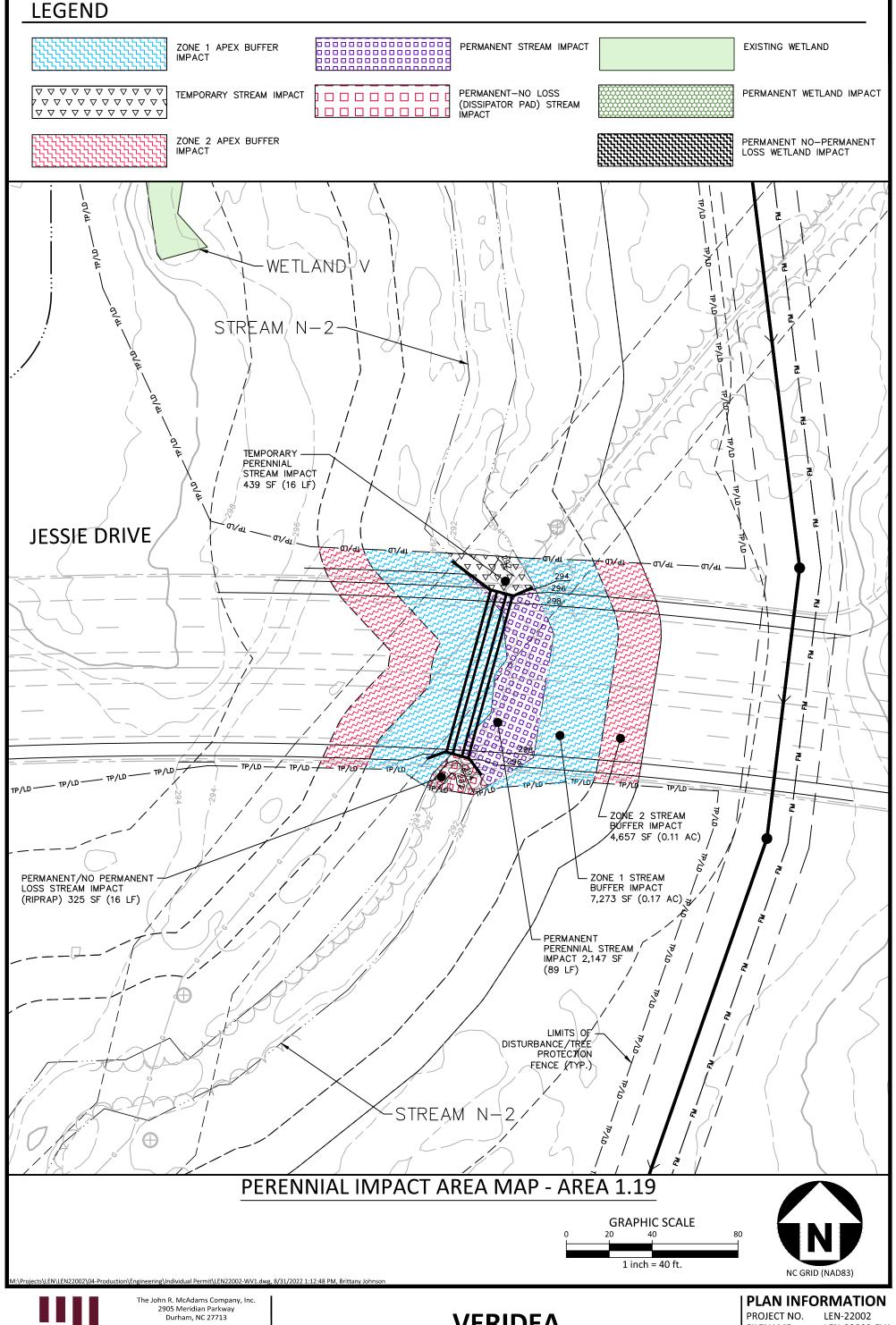
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





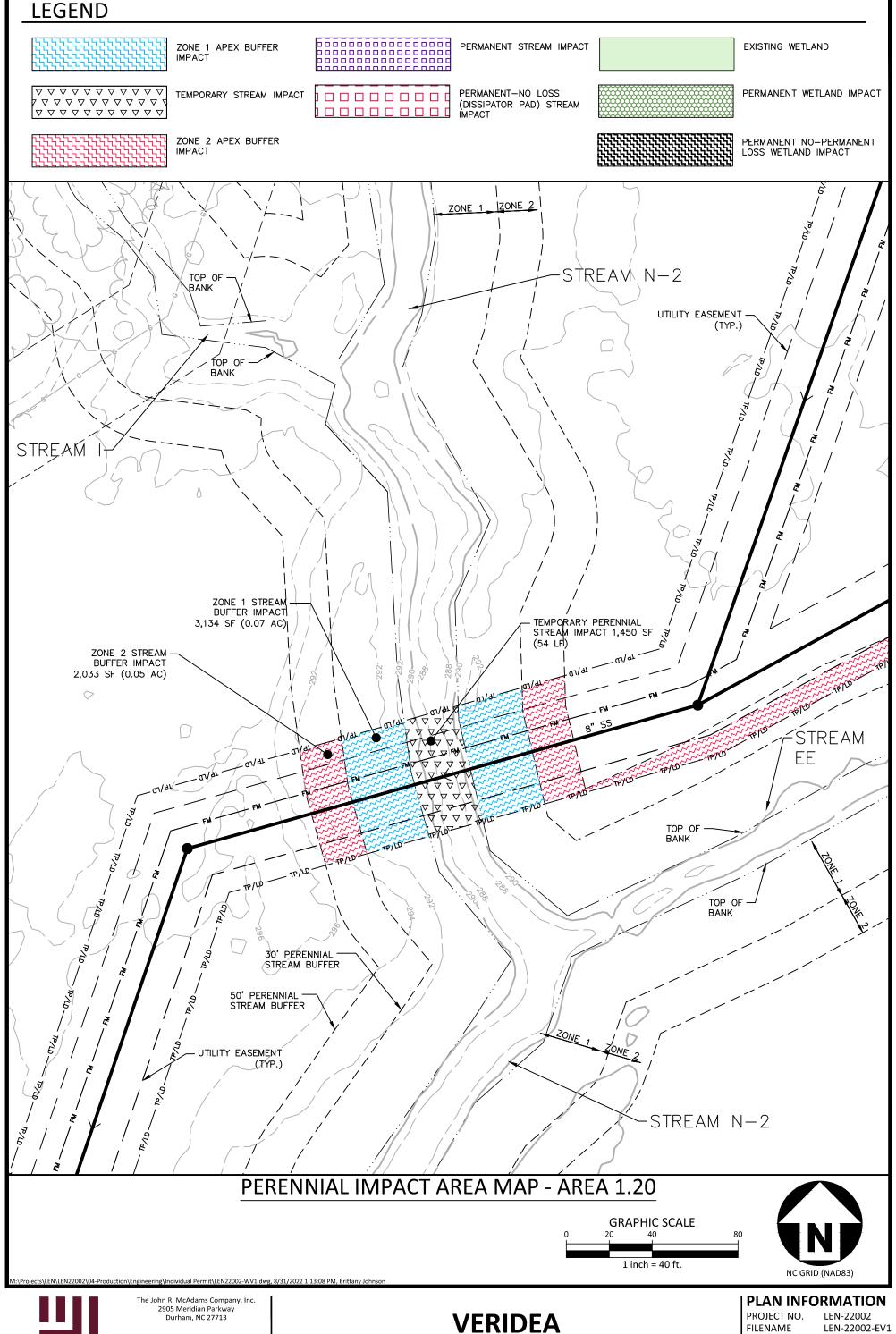
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





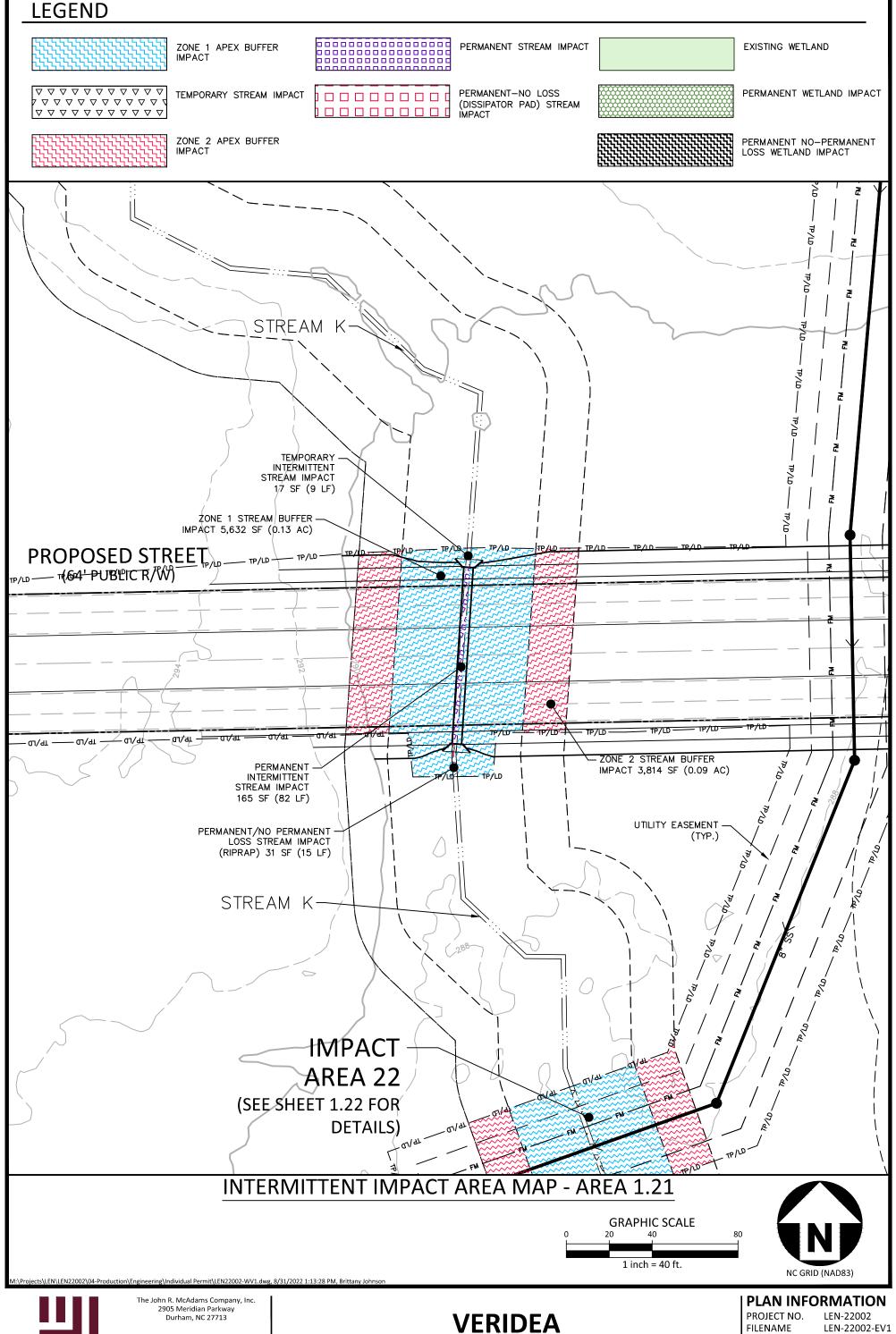
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





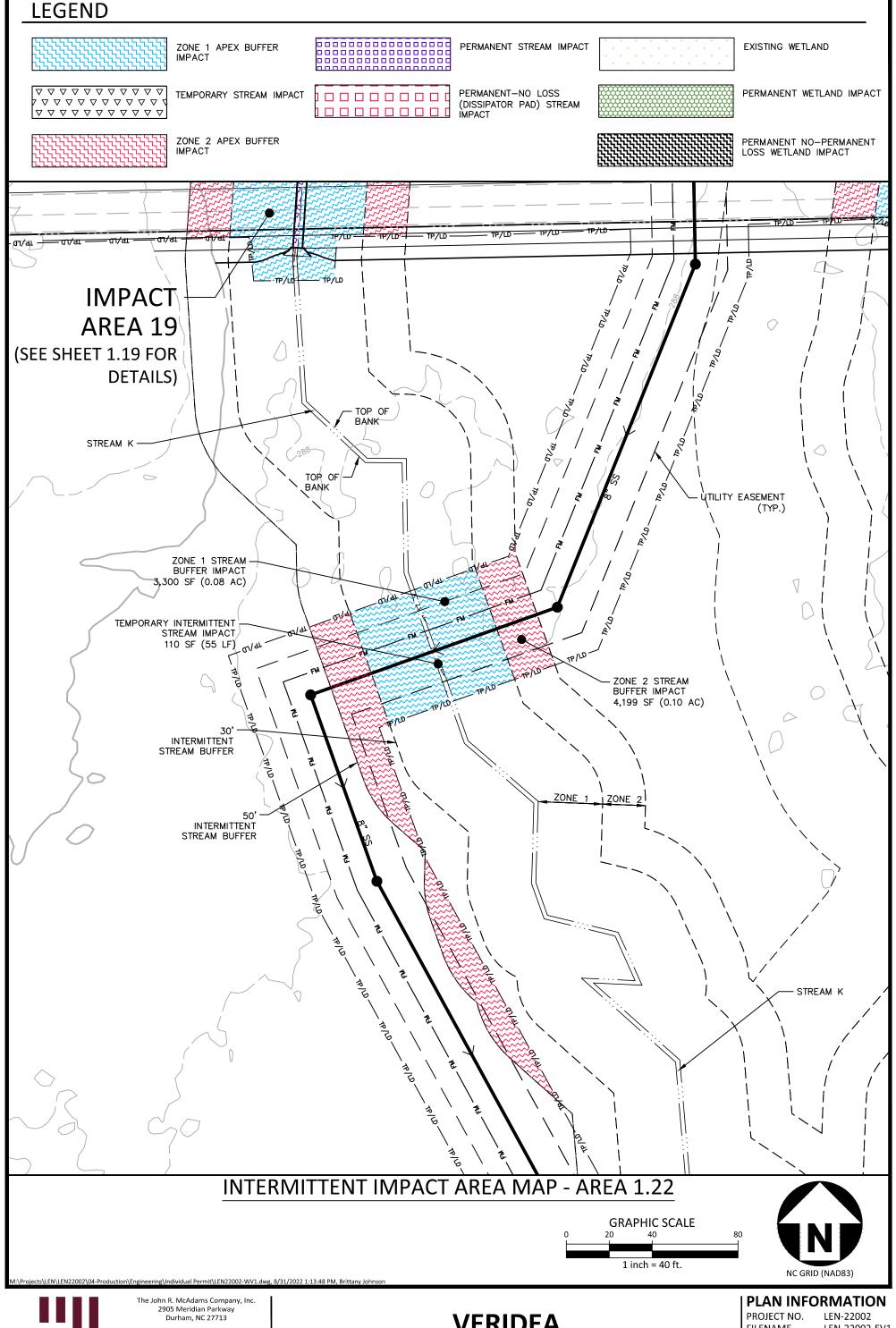
www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





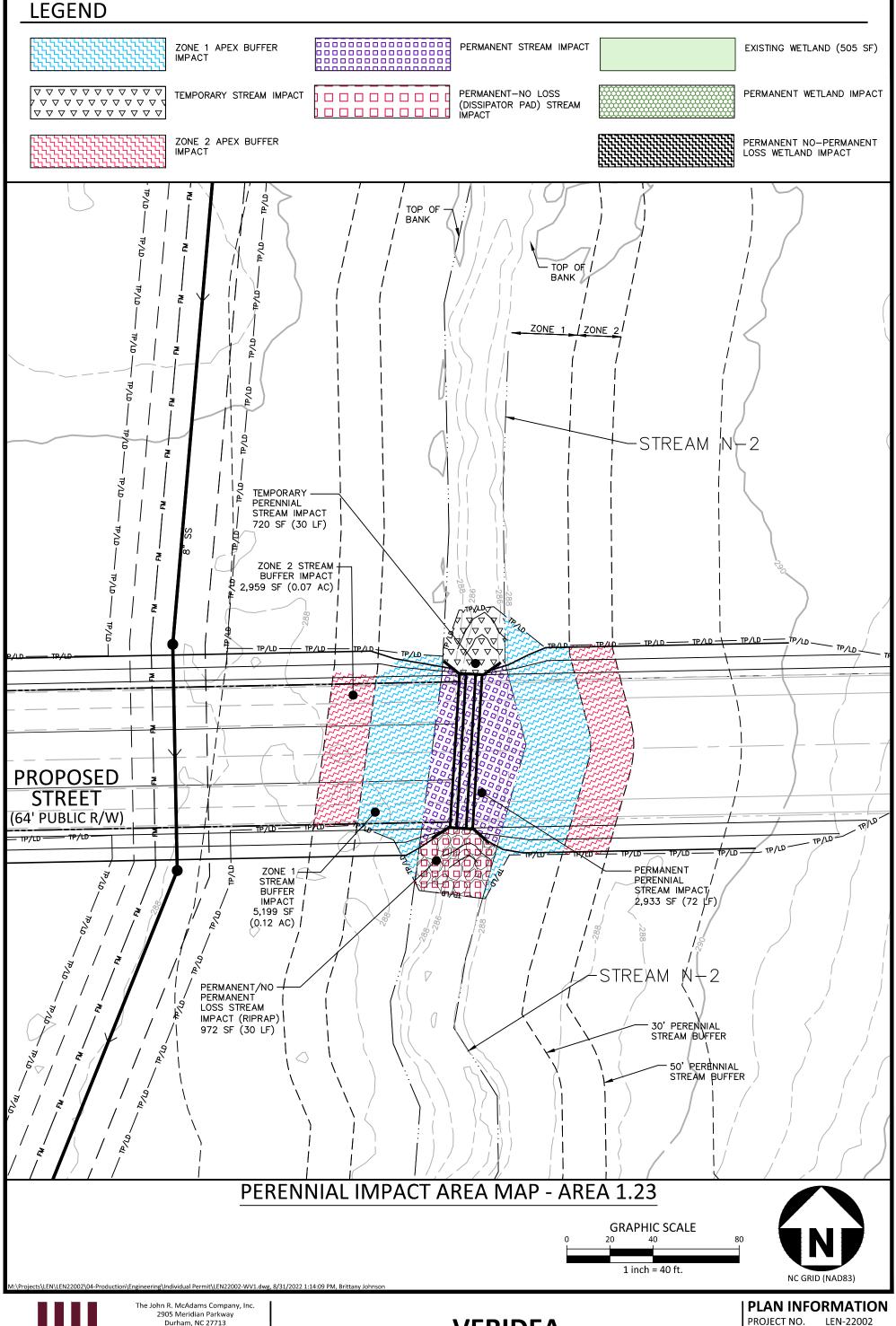
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

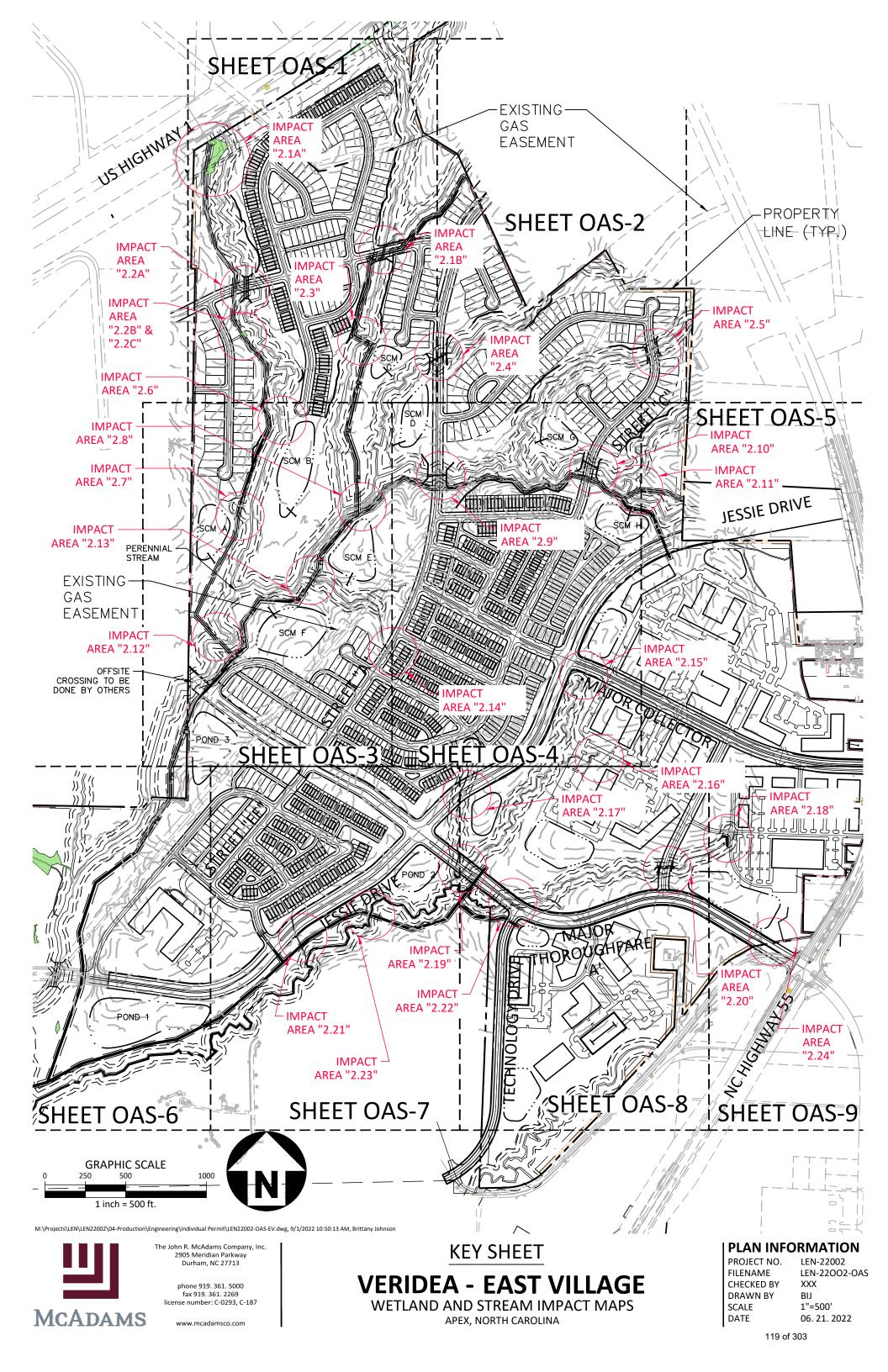
www.mcadamsco.com

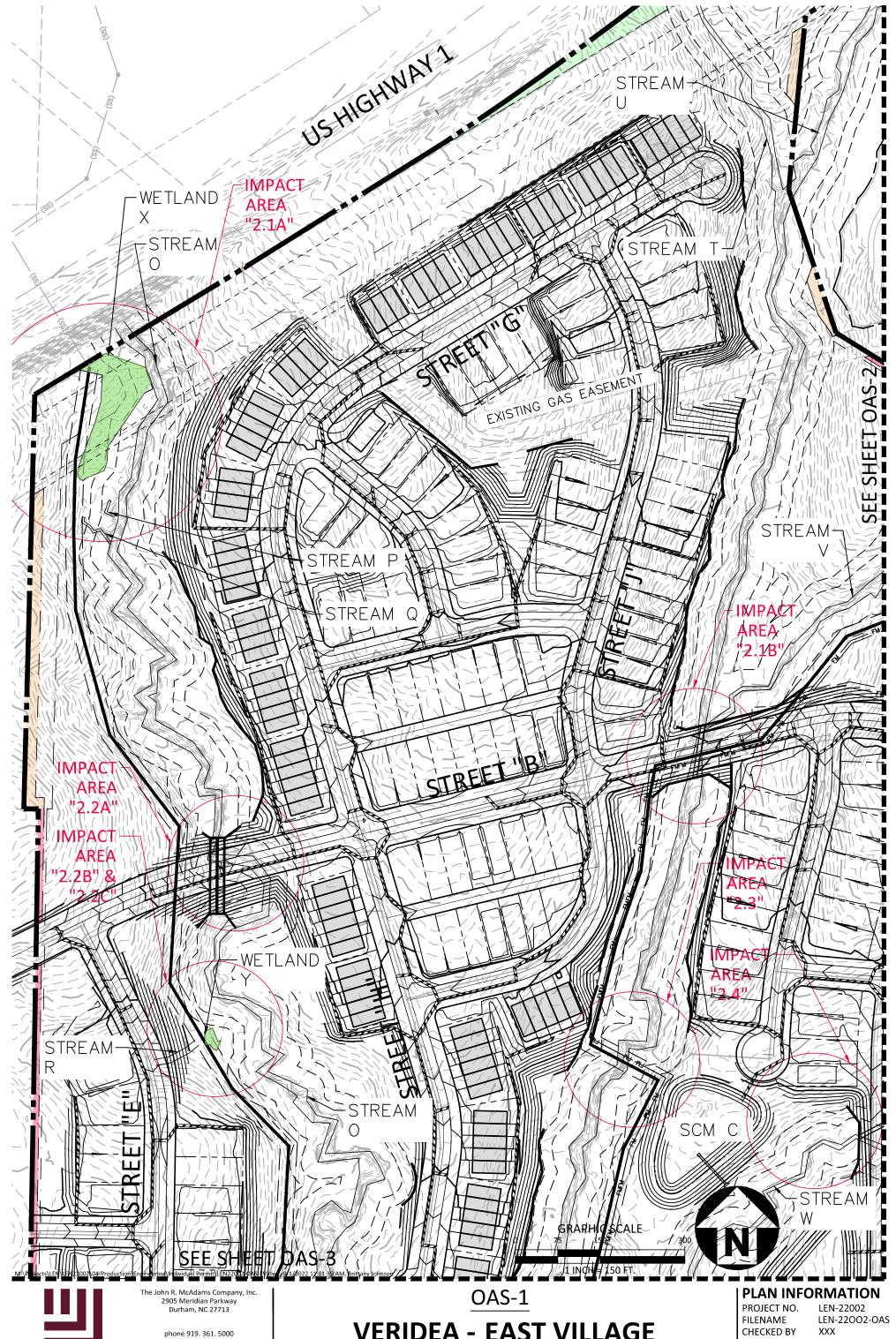
### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





**MCADAMS** 

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

# **VERIDEA - EAST VILLAGE**

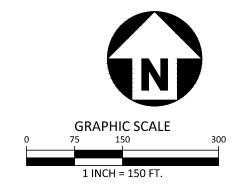
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

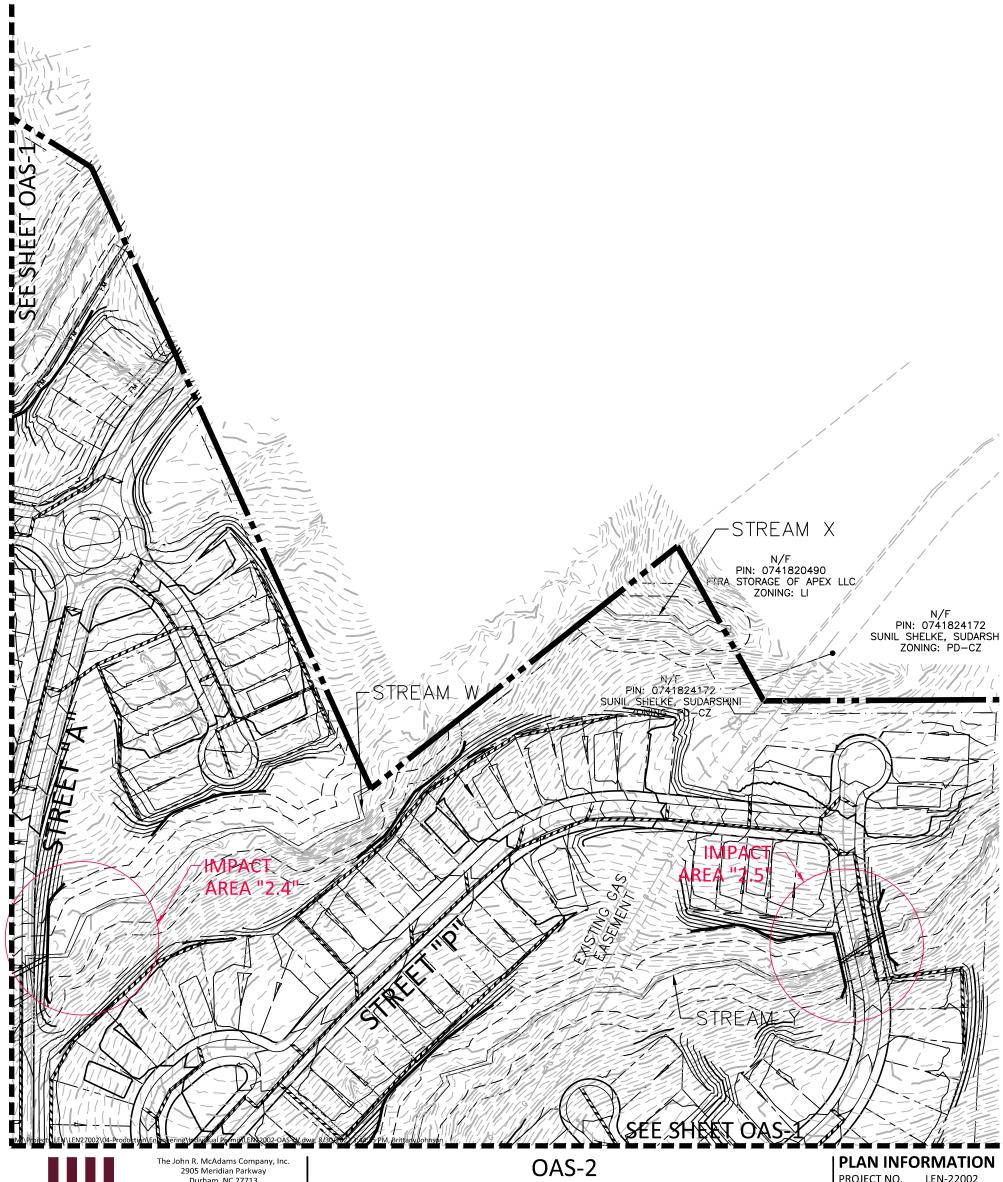
DRAWN BY SCALE

DATE

BIJ 1"=150'

06. 21. 2022





**MCADAMS** 

The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

# **VERIDEA - EAST VILLAGE**

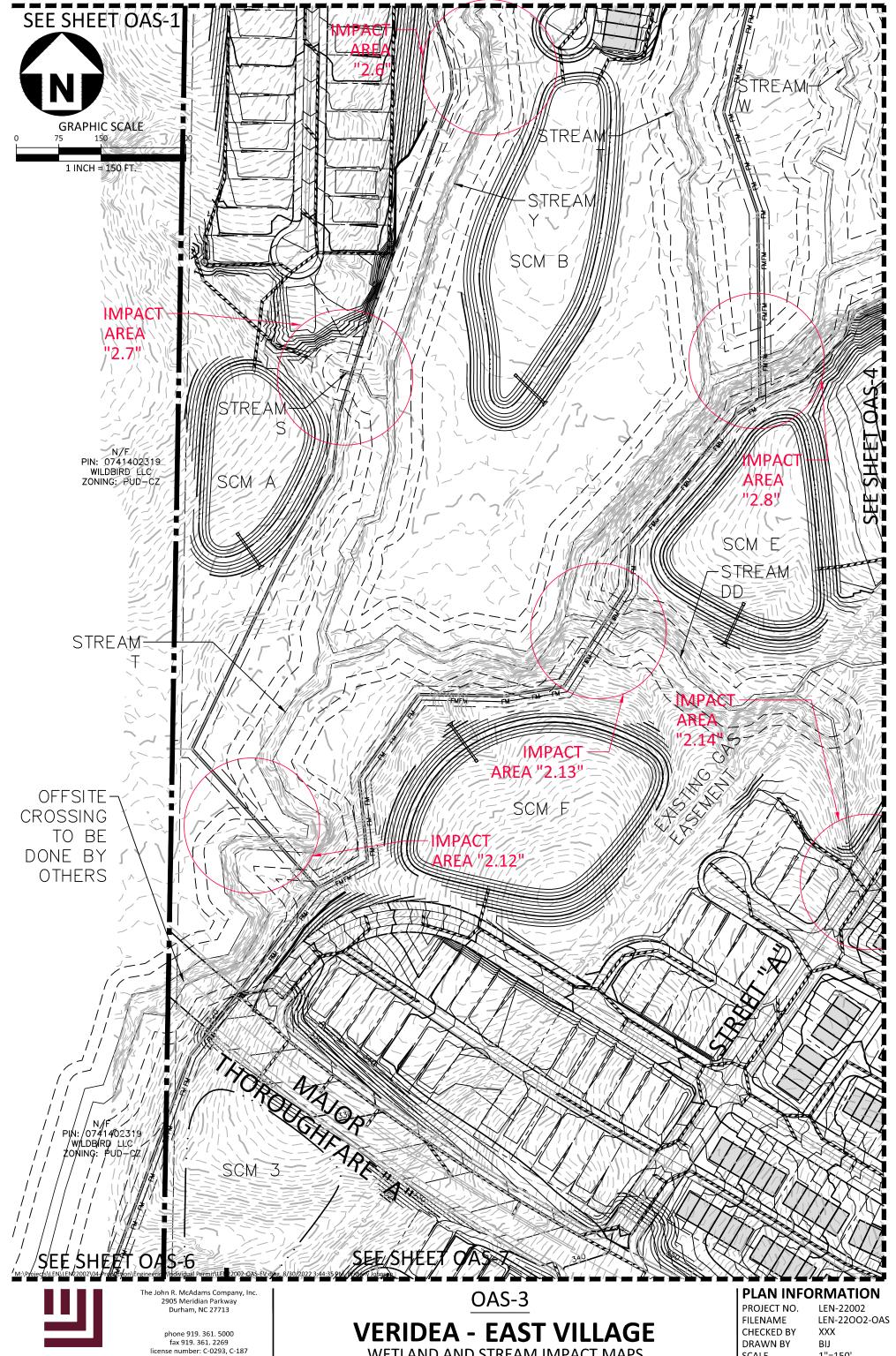
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE

LEN-22002-OAS XXX BIJ 1"=150' 06. 21. 2022

LEN-22002



www.mcadamsco.com

**MCADAMS** 

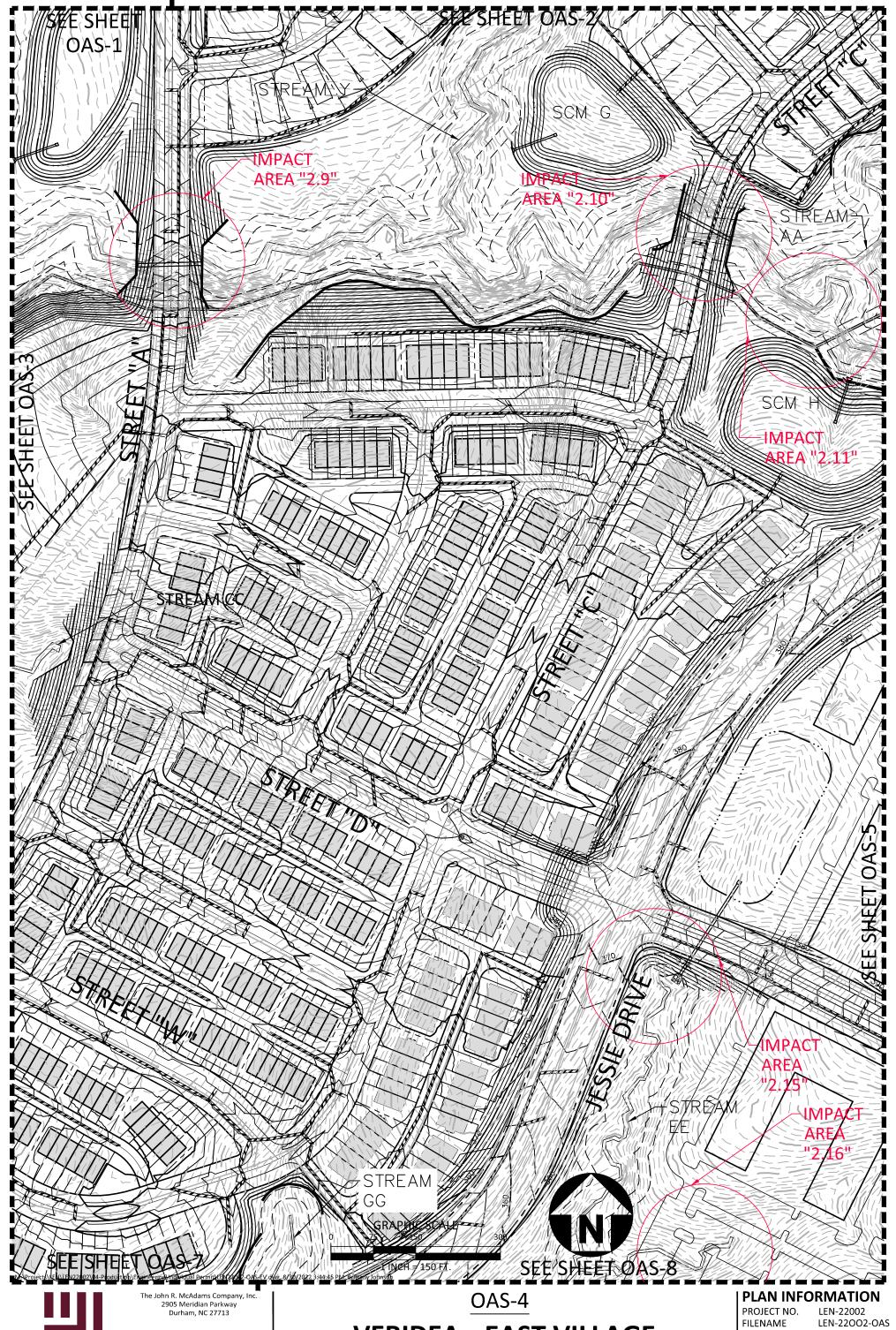
# **VERIDEA - EAST VILLAGE**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

DRAWN BY SCALE DATE

BIJ 1"=150'

06. 21. 2022





www.mcadamsco.com

# **VERIDEA - EAST VILLAGE**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

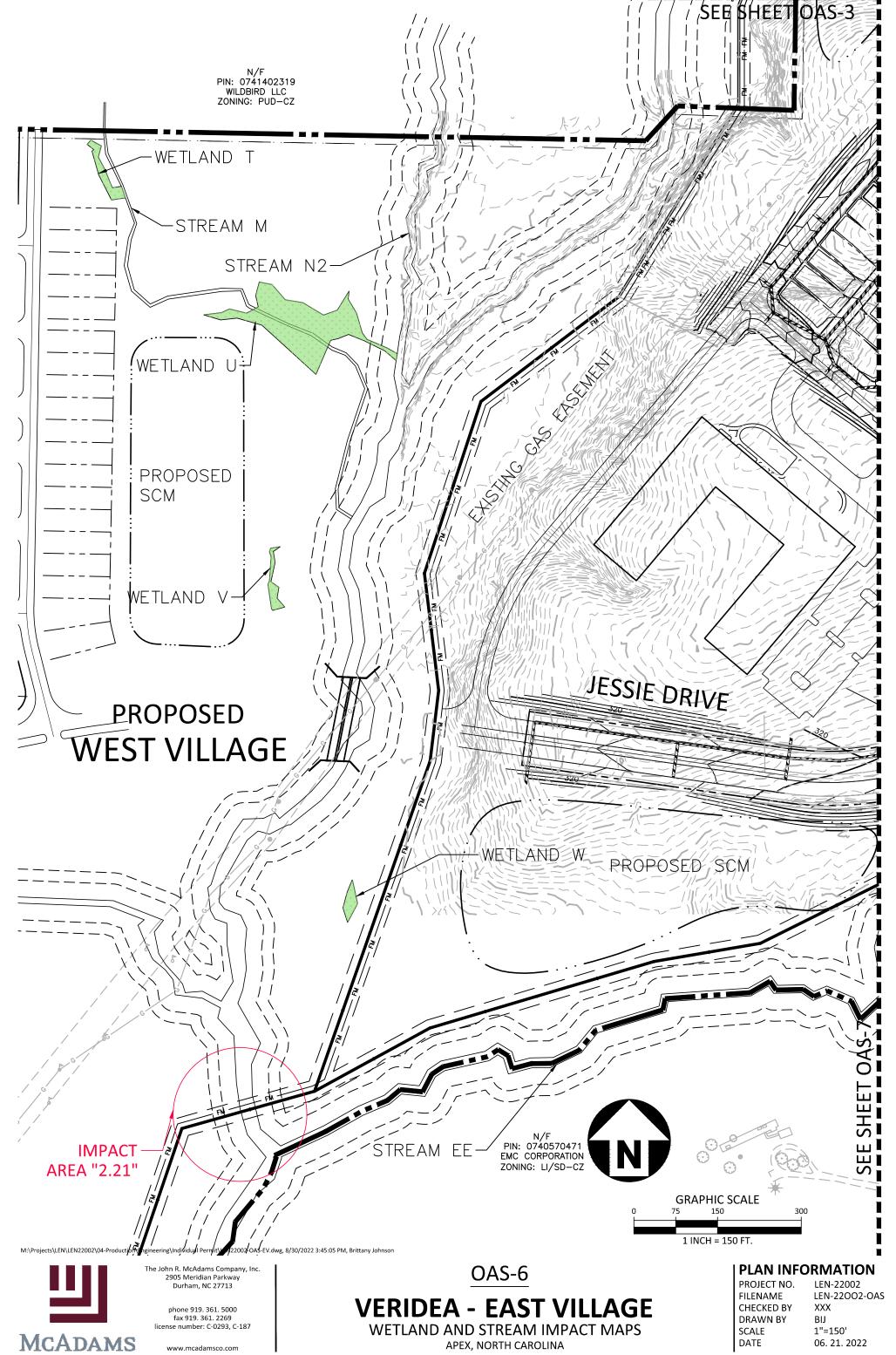
CHECKED BY DRAWN BY SCALE

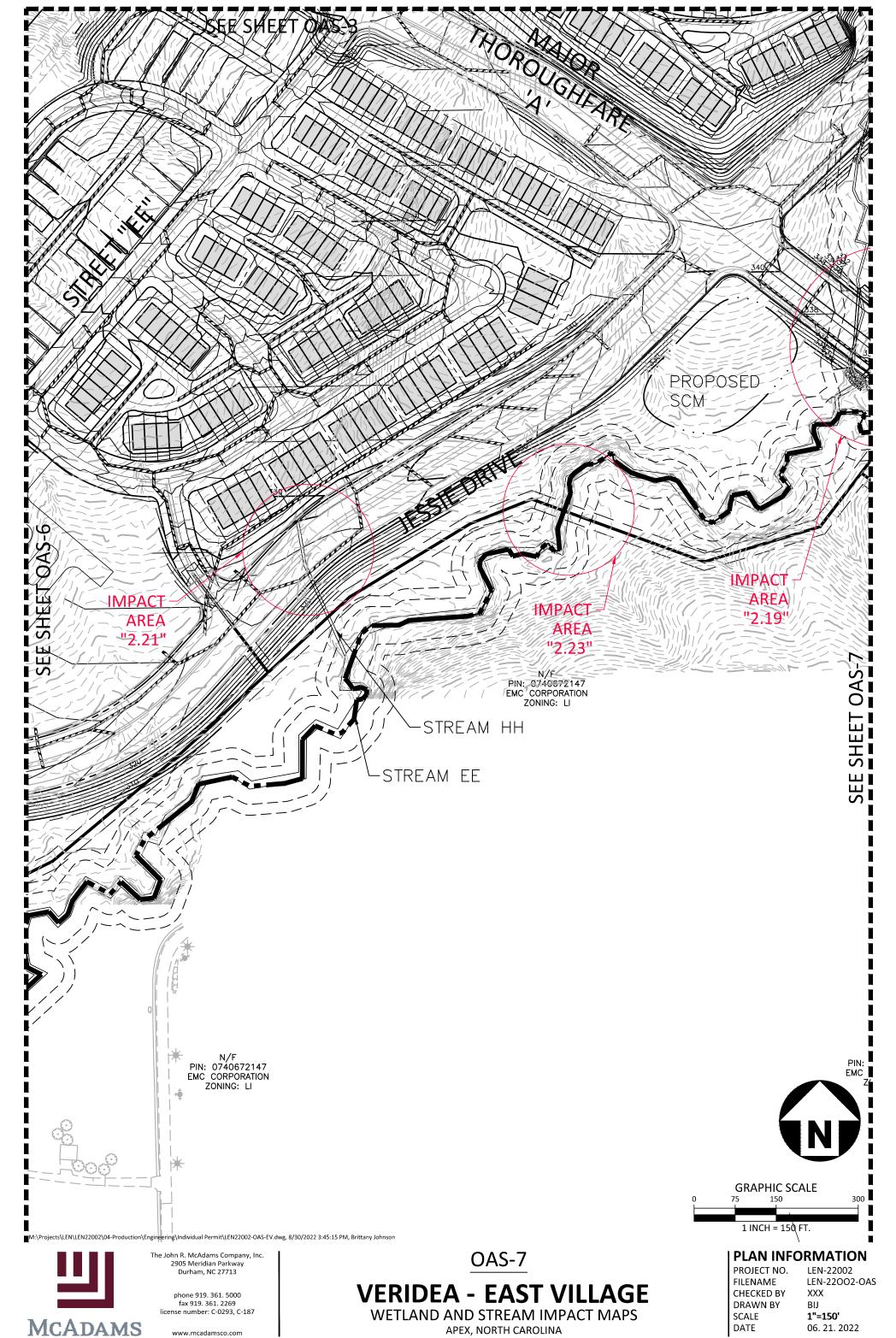
DATE

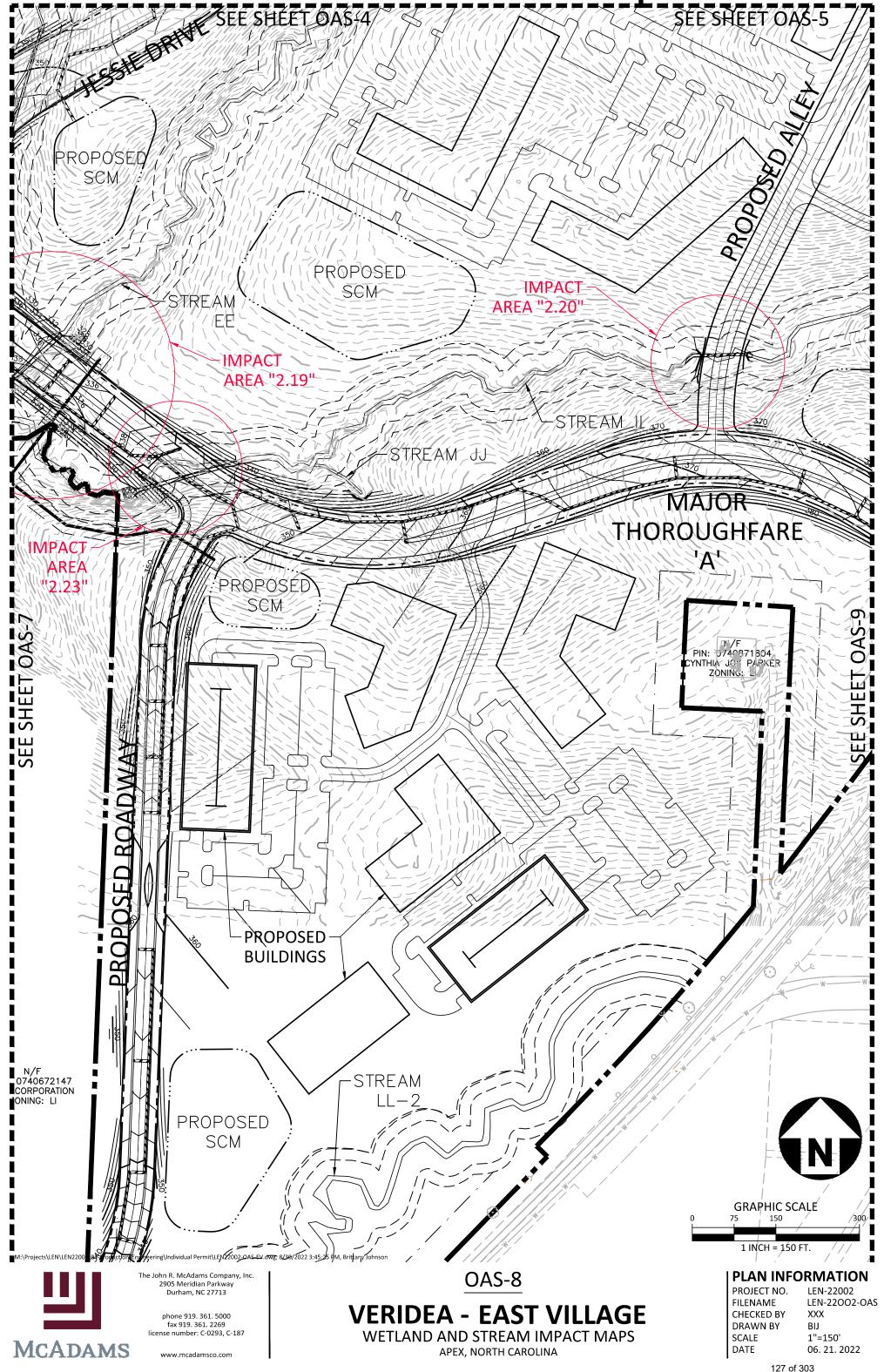
XXX BIJ 1"=150'

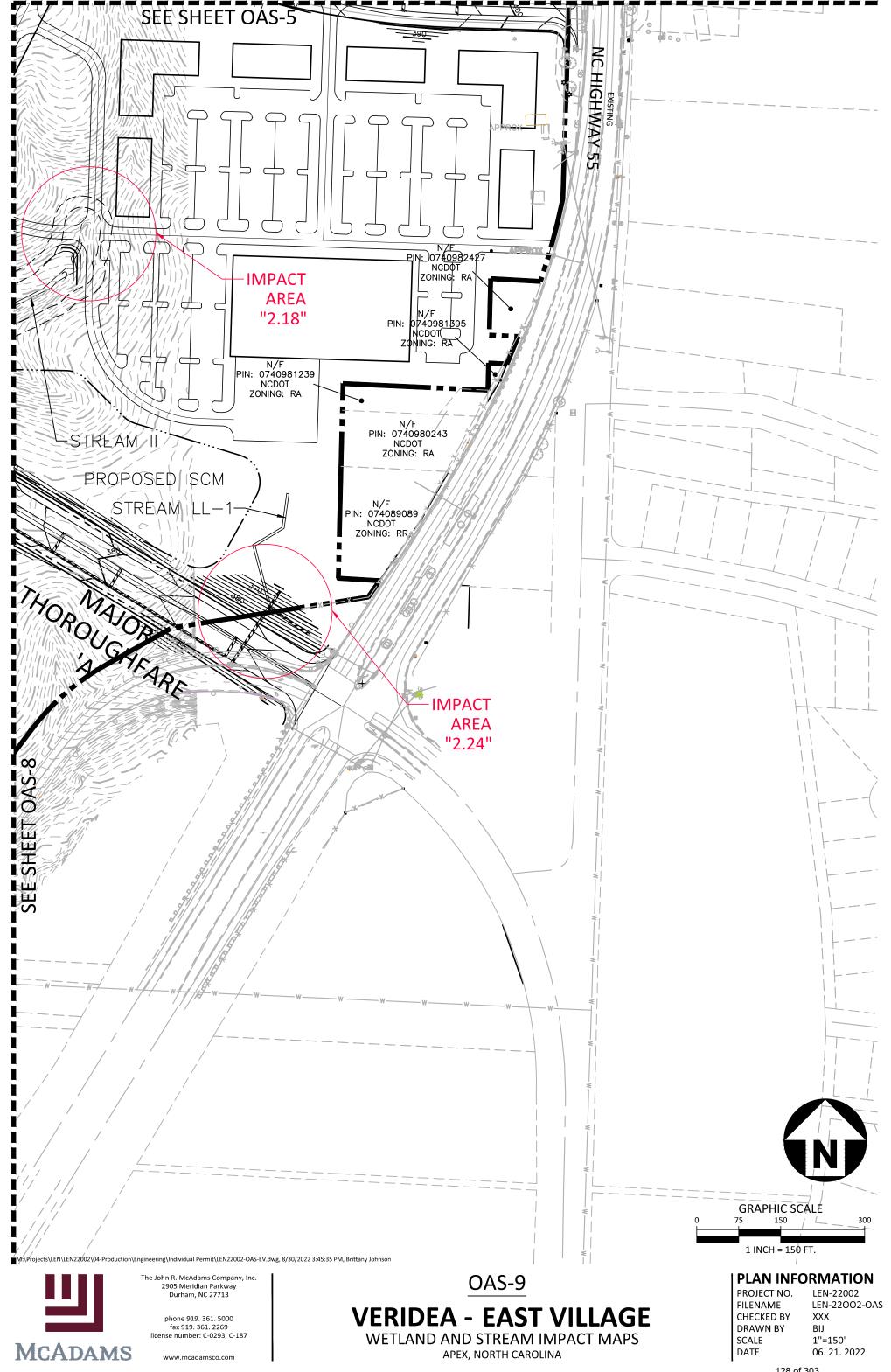
06. 21. 2022

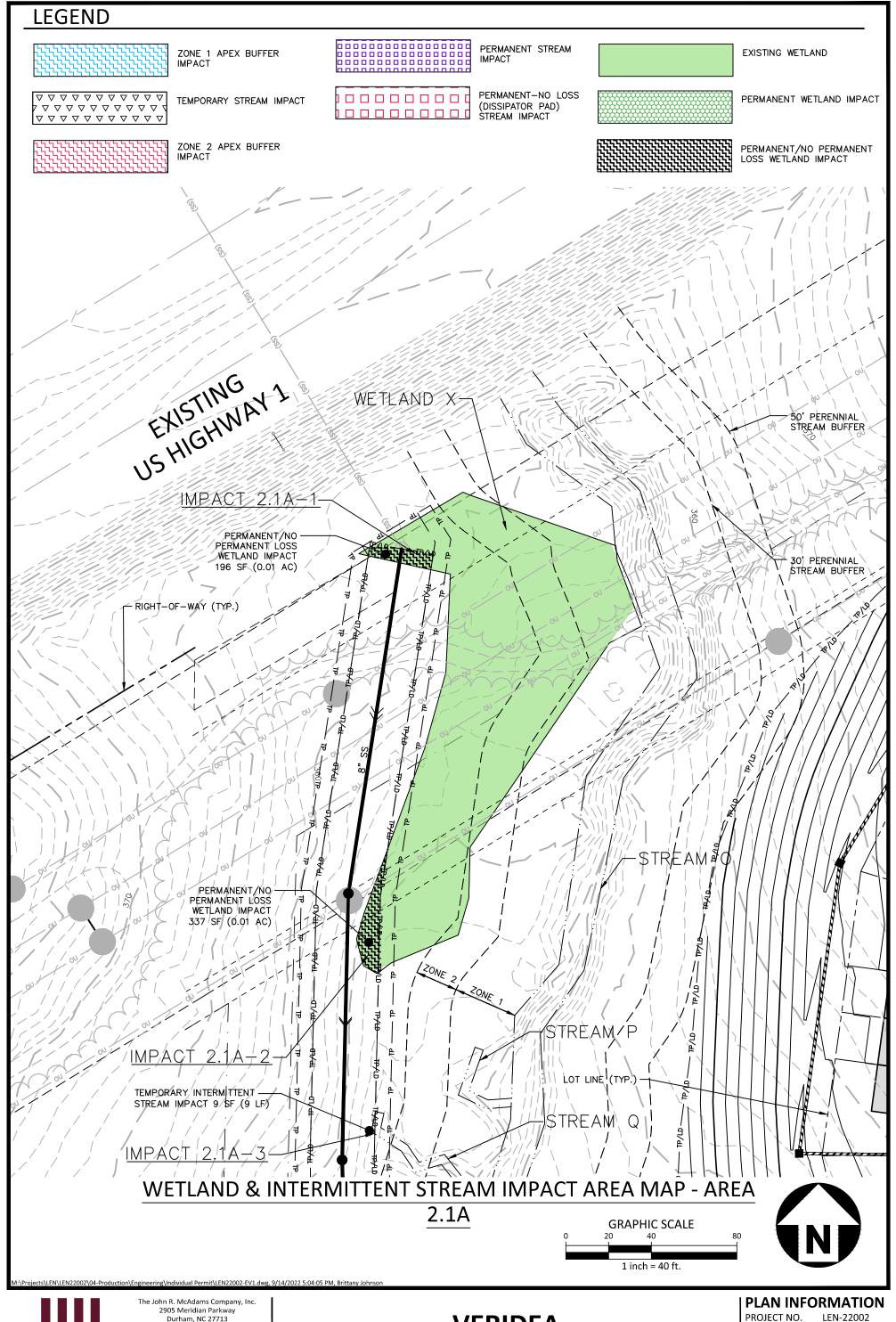














Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





Durham, NC 27713

phone 919, 361, 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

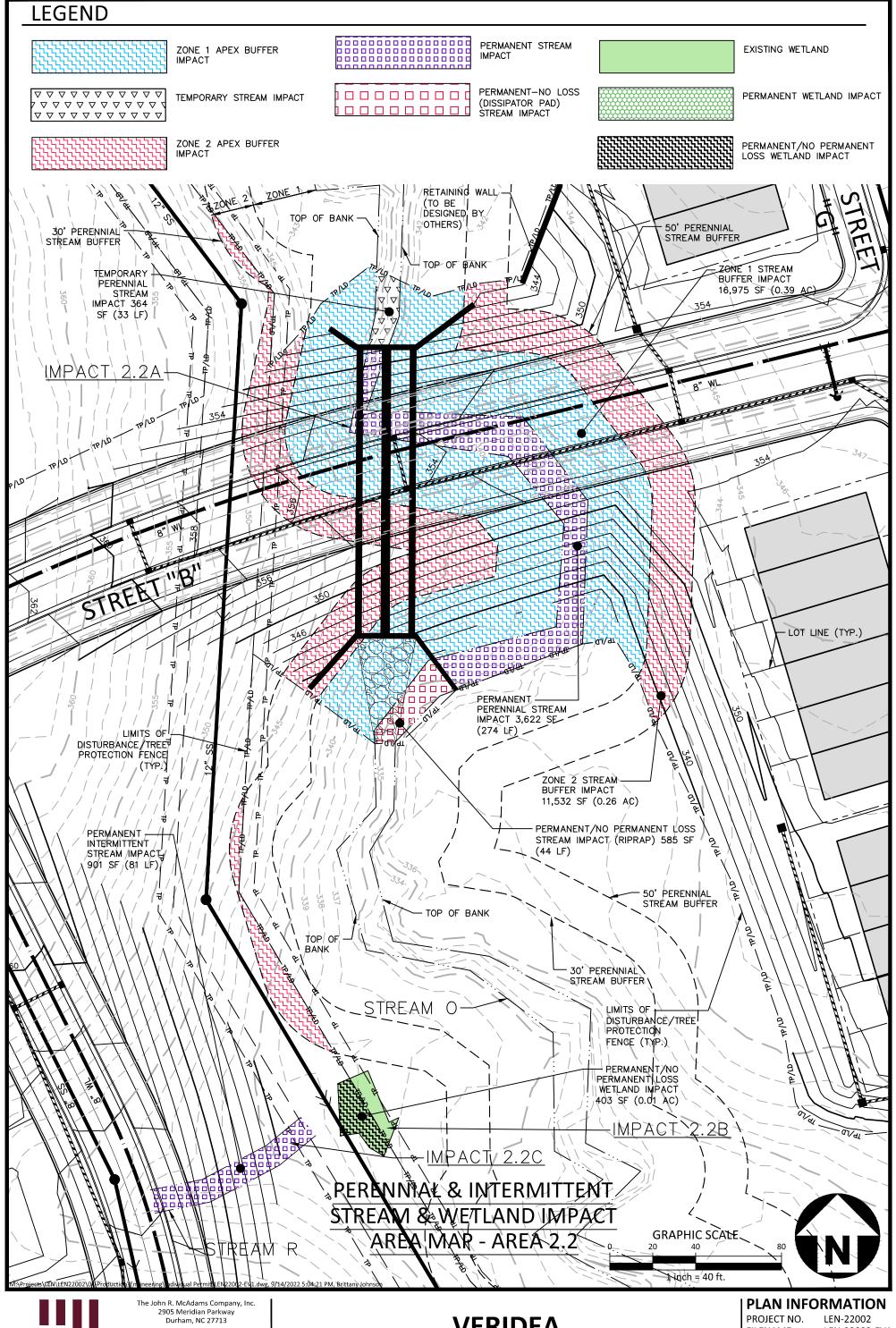
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. **FILENAME CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022

LEN-22002-EV1





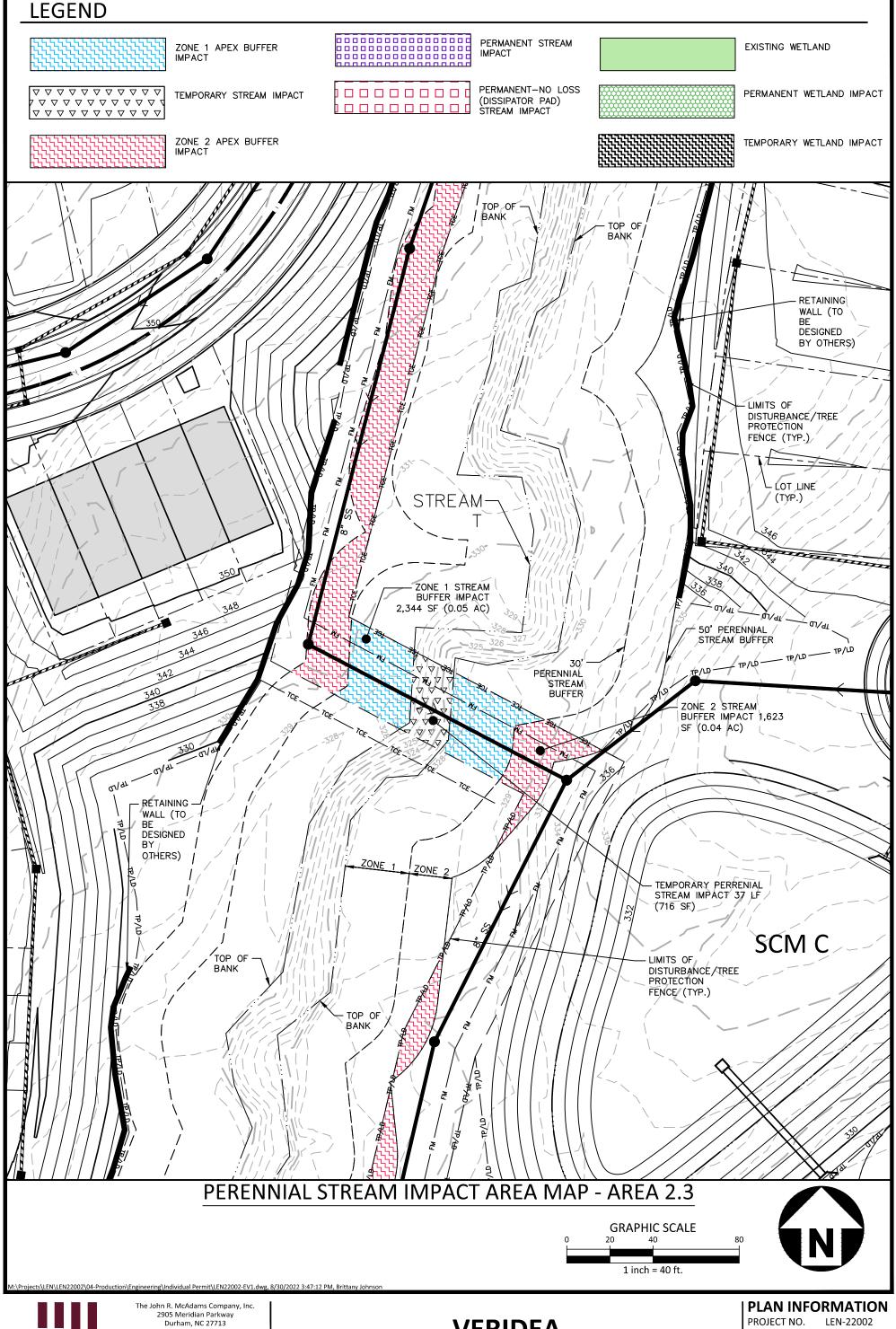
www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**FILENAME CHECKED BY** DRAWN BY SCALE

DATE





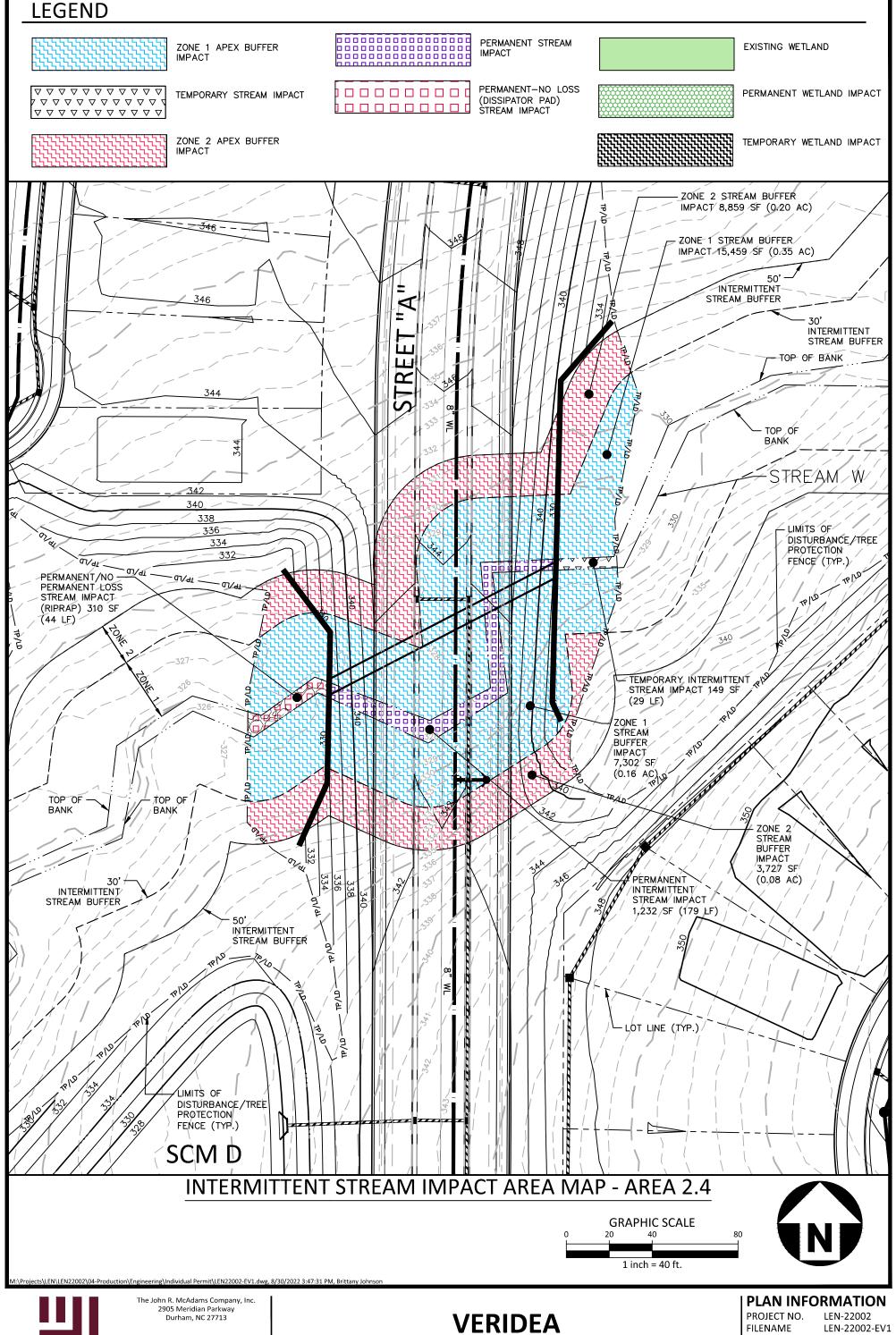
www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





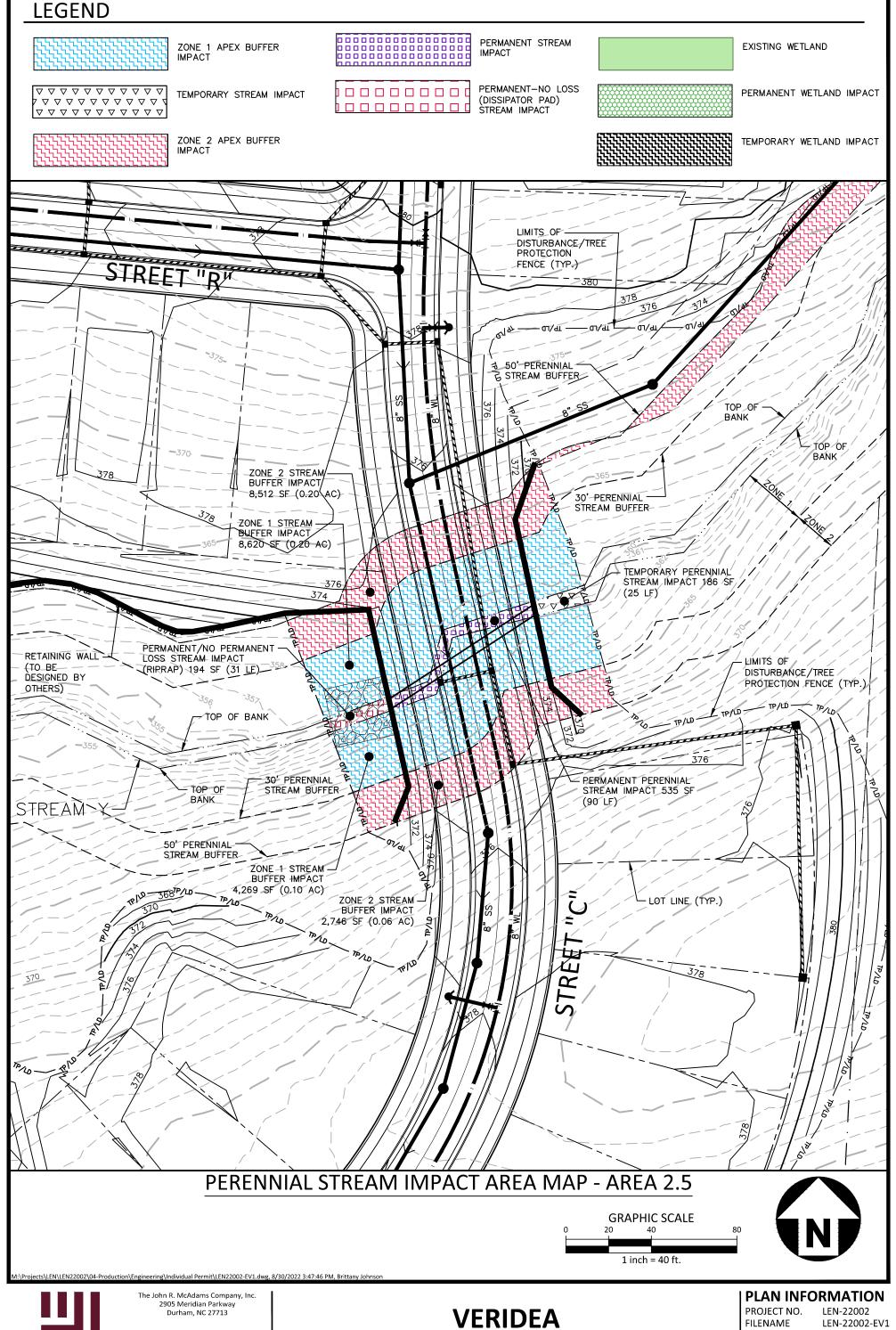
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE



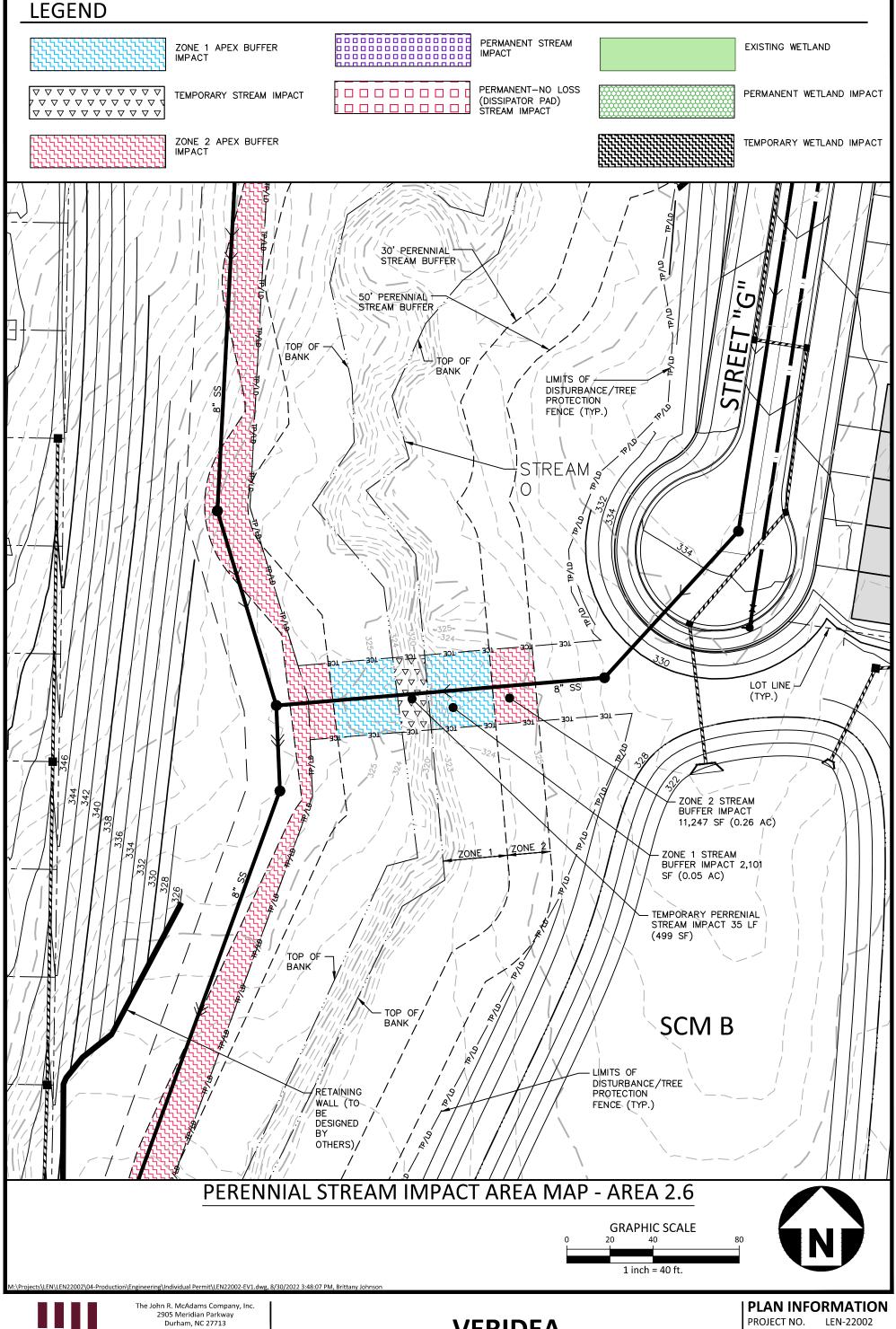


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

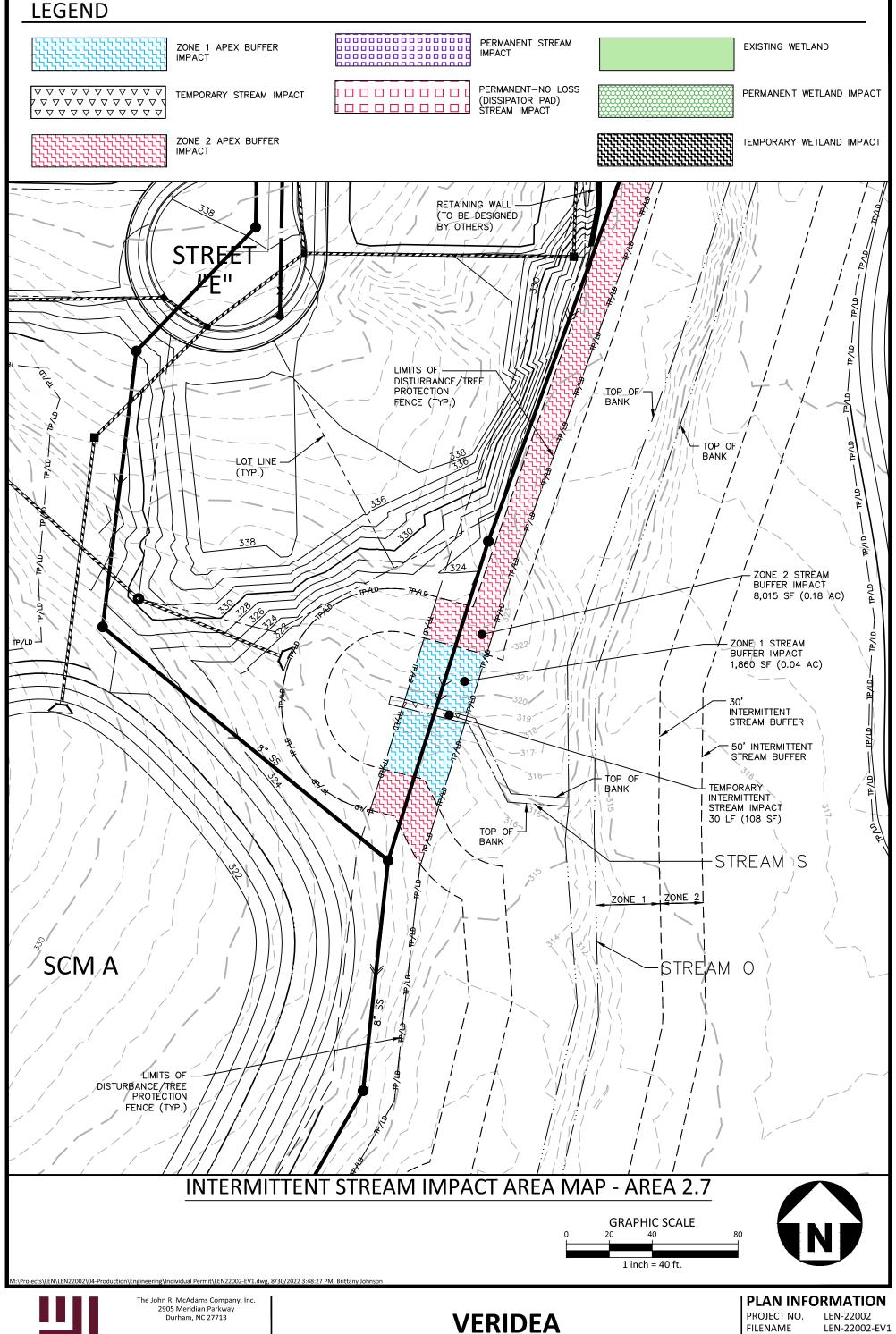
### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO.
FILENAME
CHECKED BY
DRAWN BY
SCALE

DATE





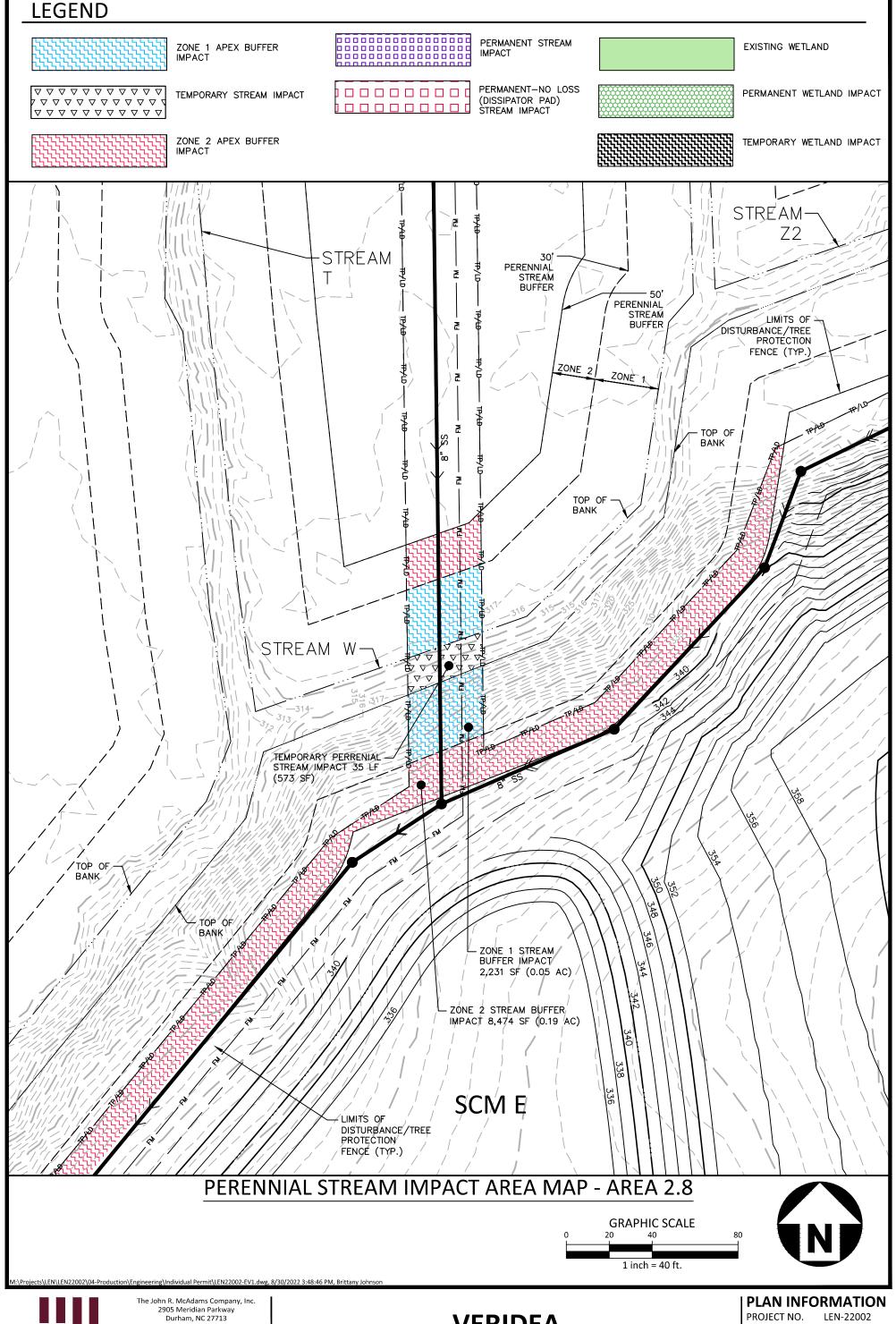
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

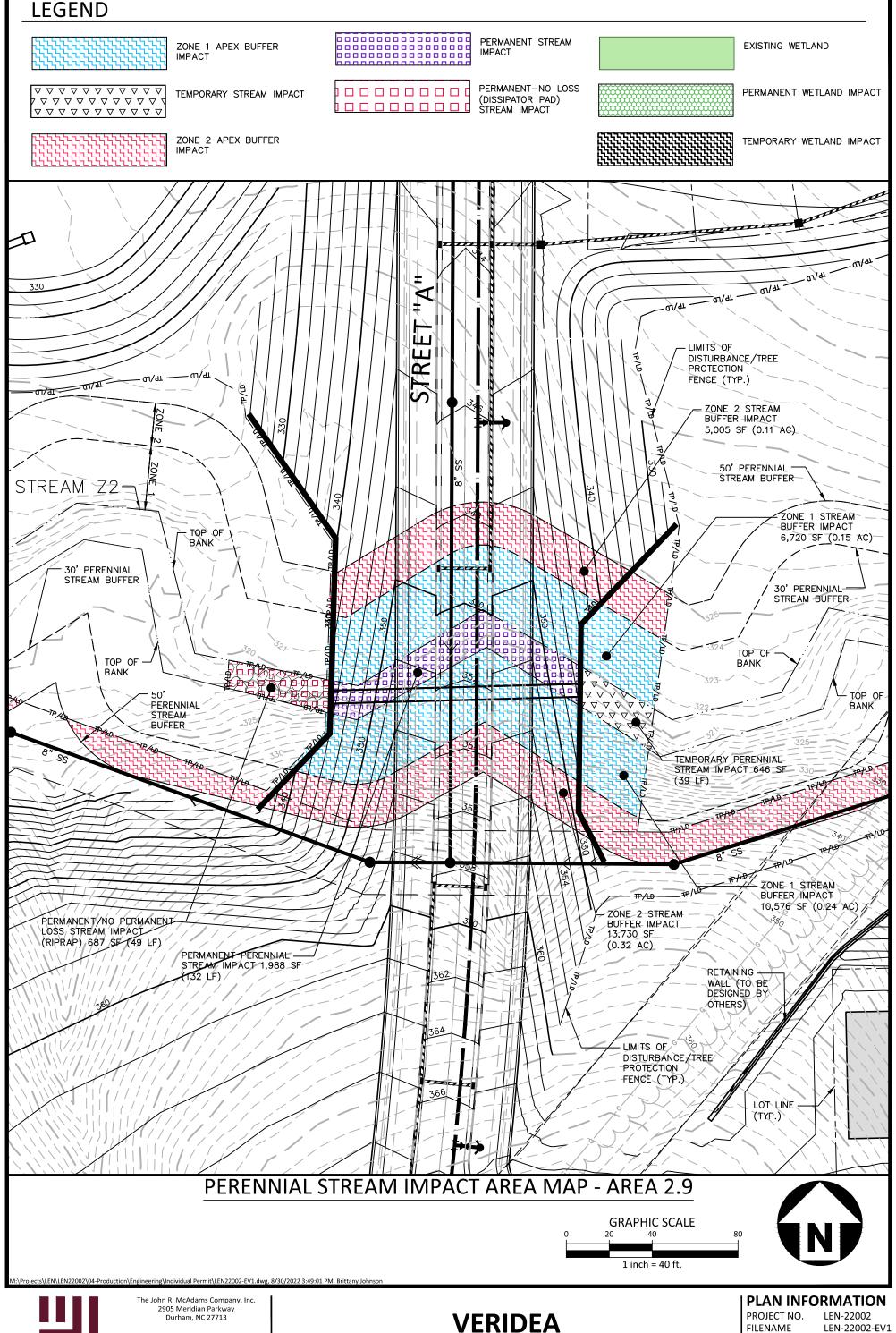
# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE





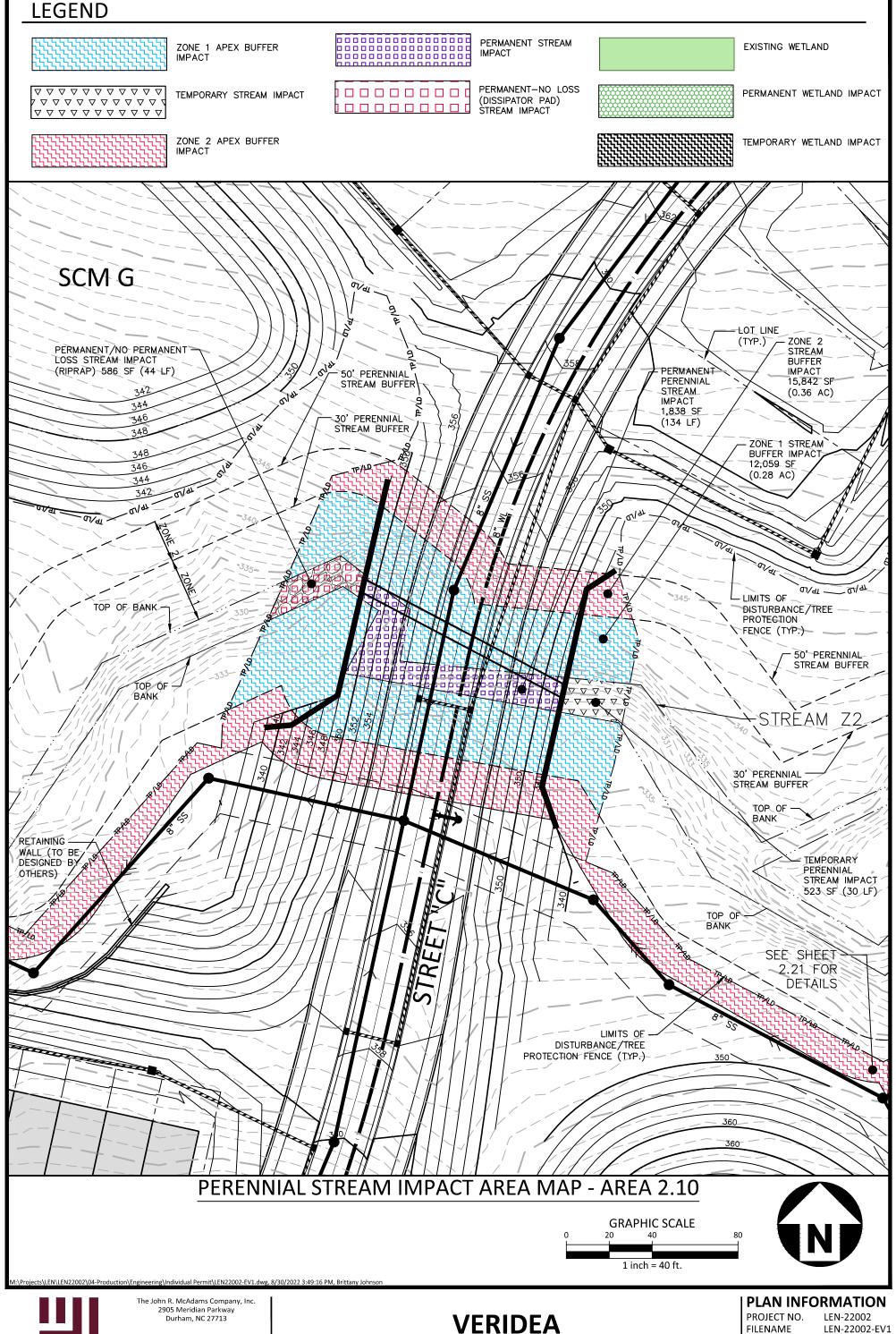
www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





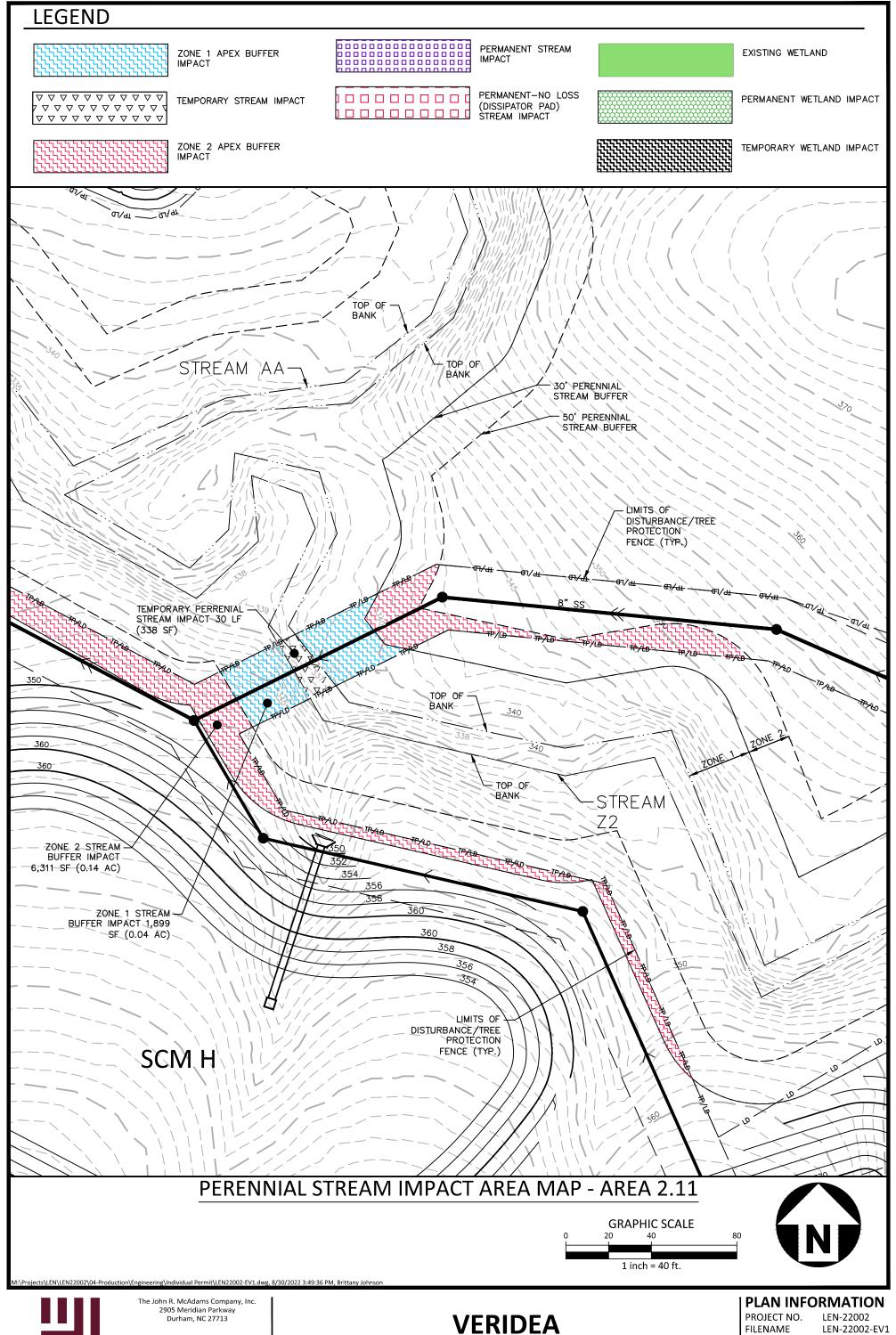
www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE



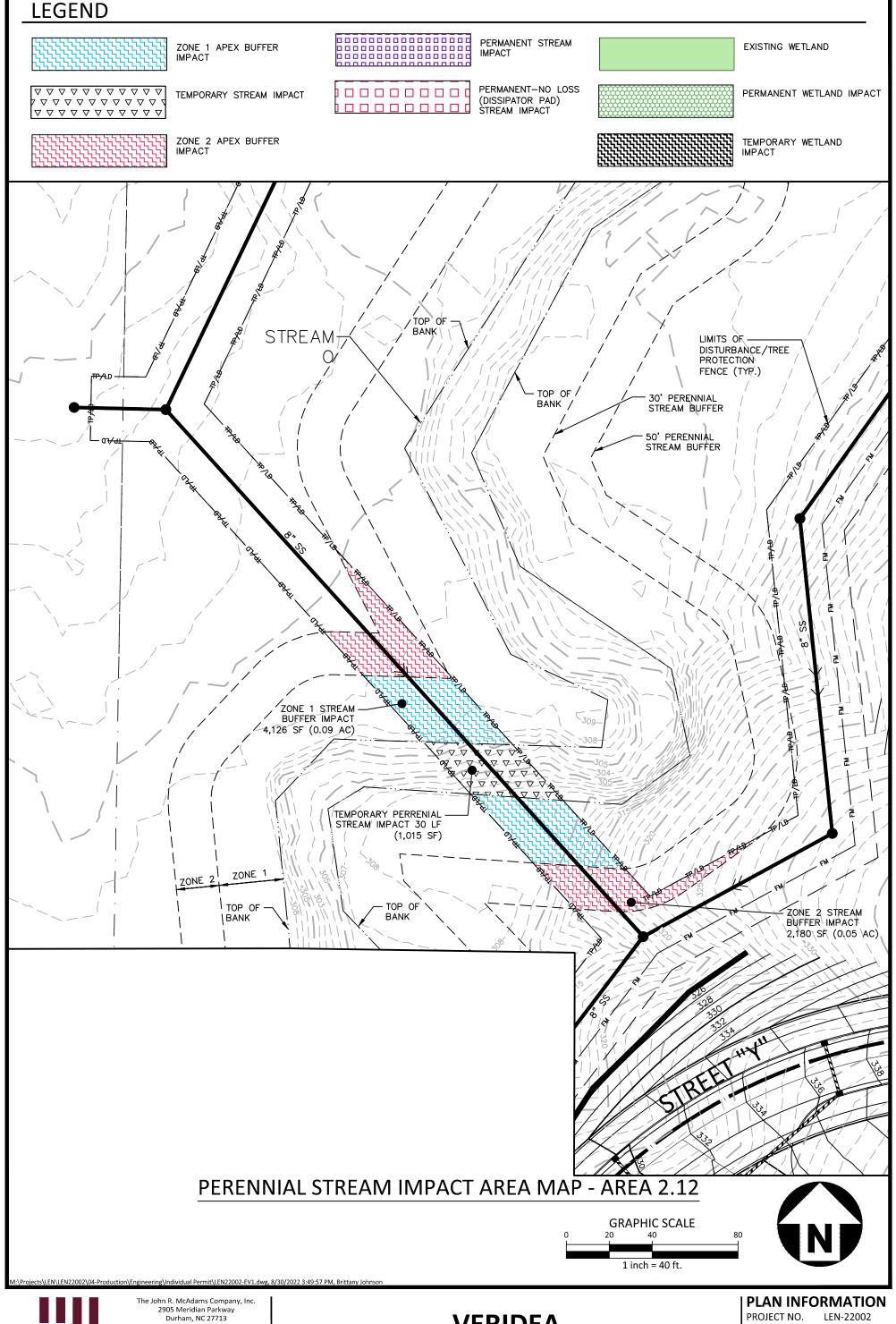


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

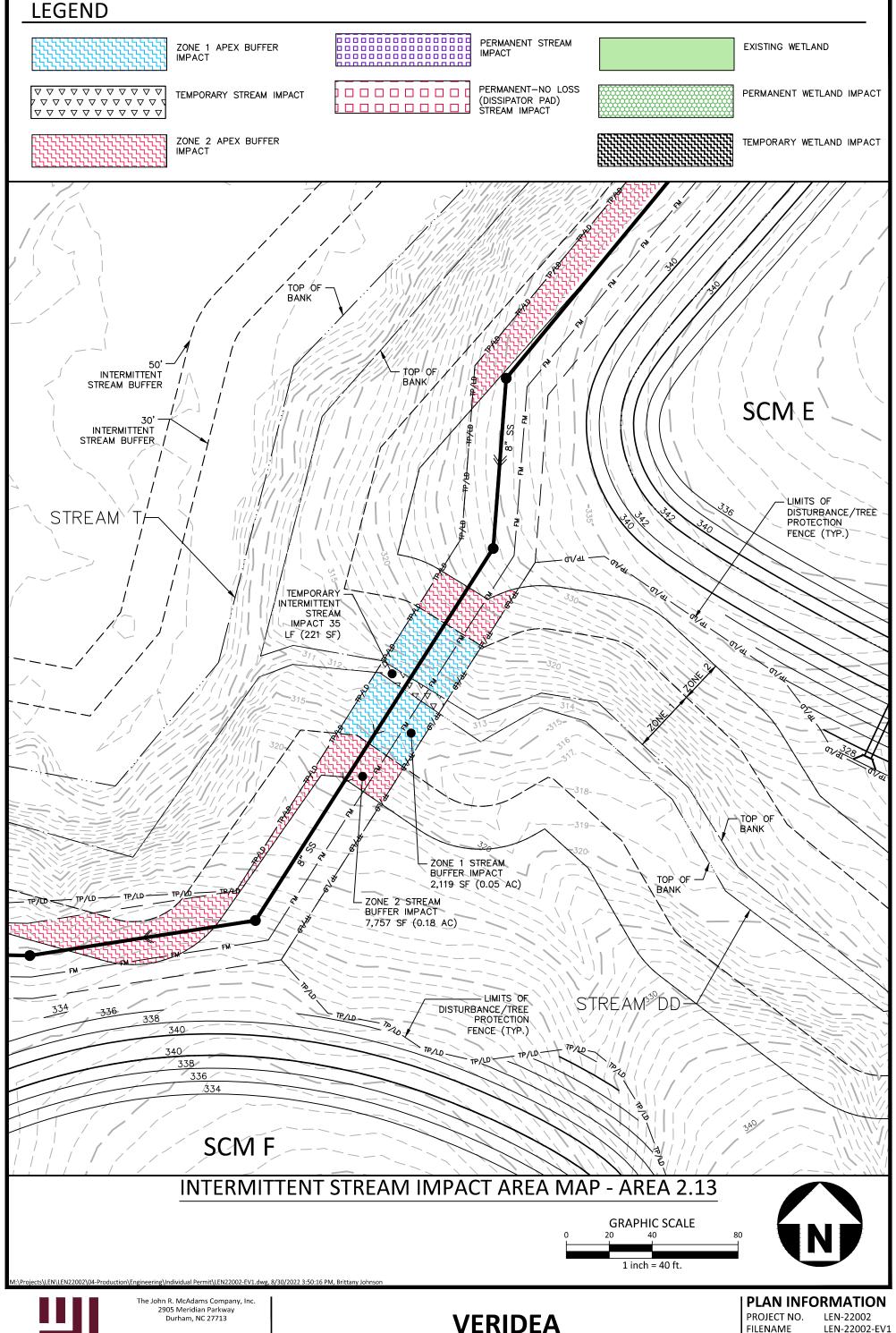
# VERIDEA

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO.
FILENAME
CHECKED BY
DRAWN BY
SCALE

DATE





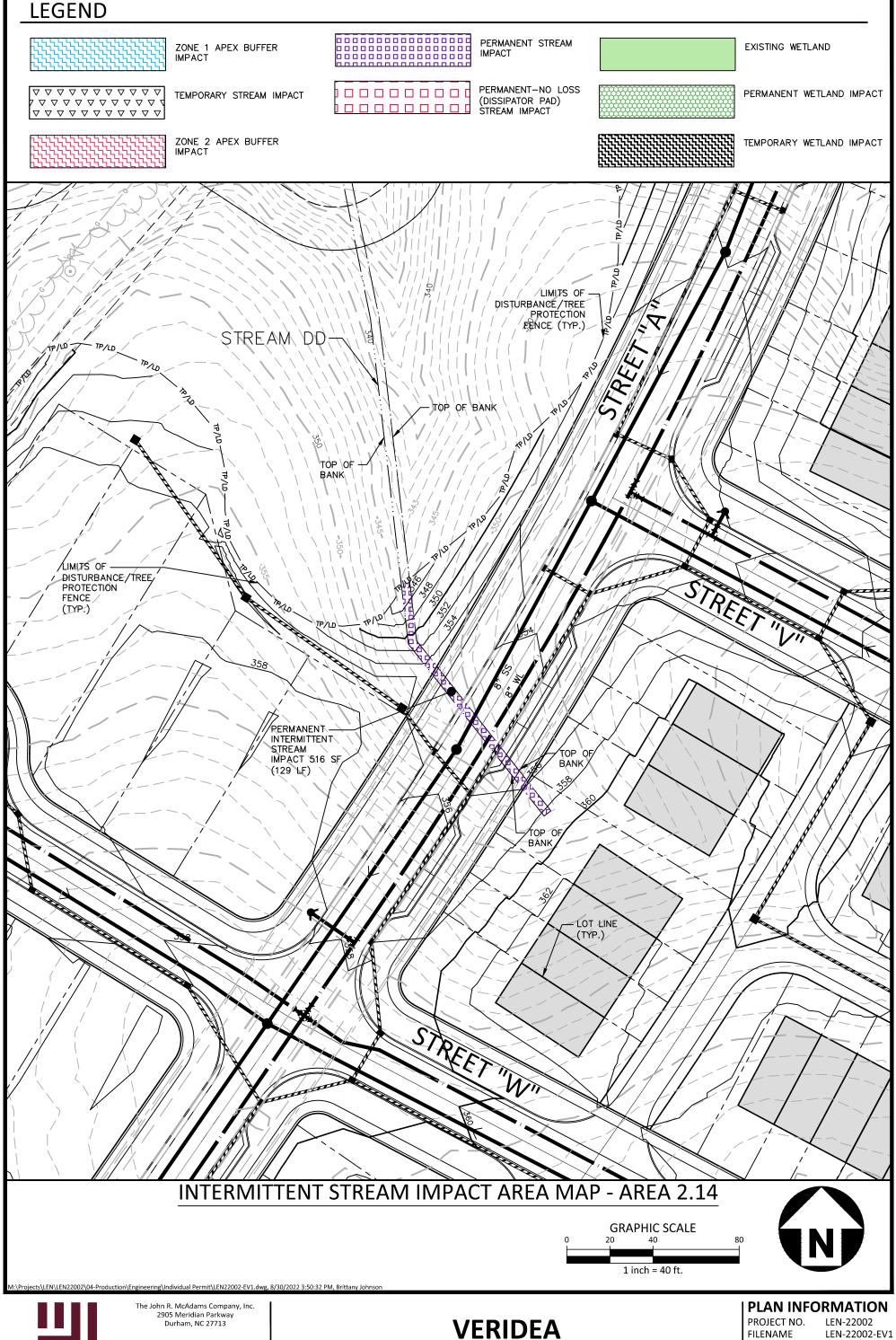
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE



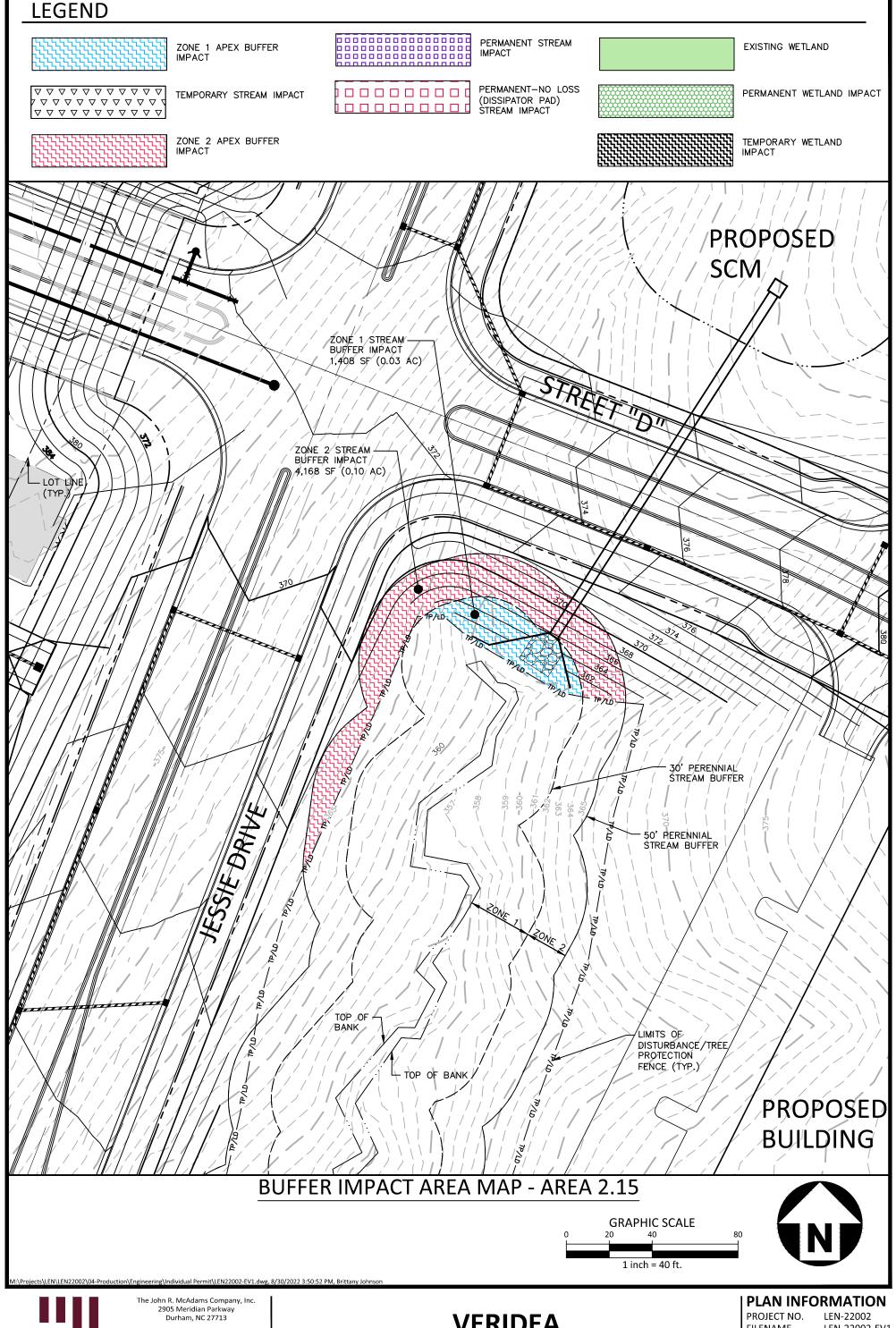


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





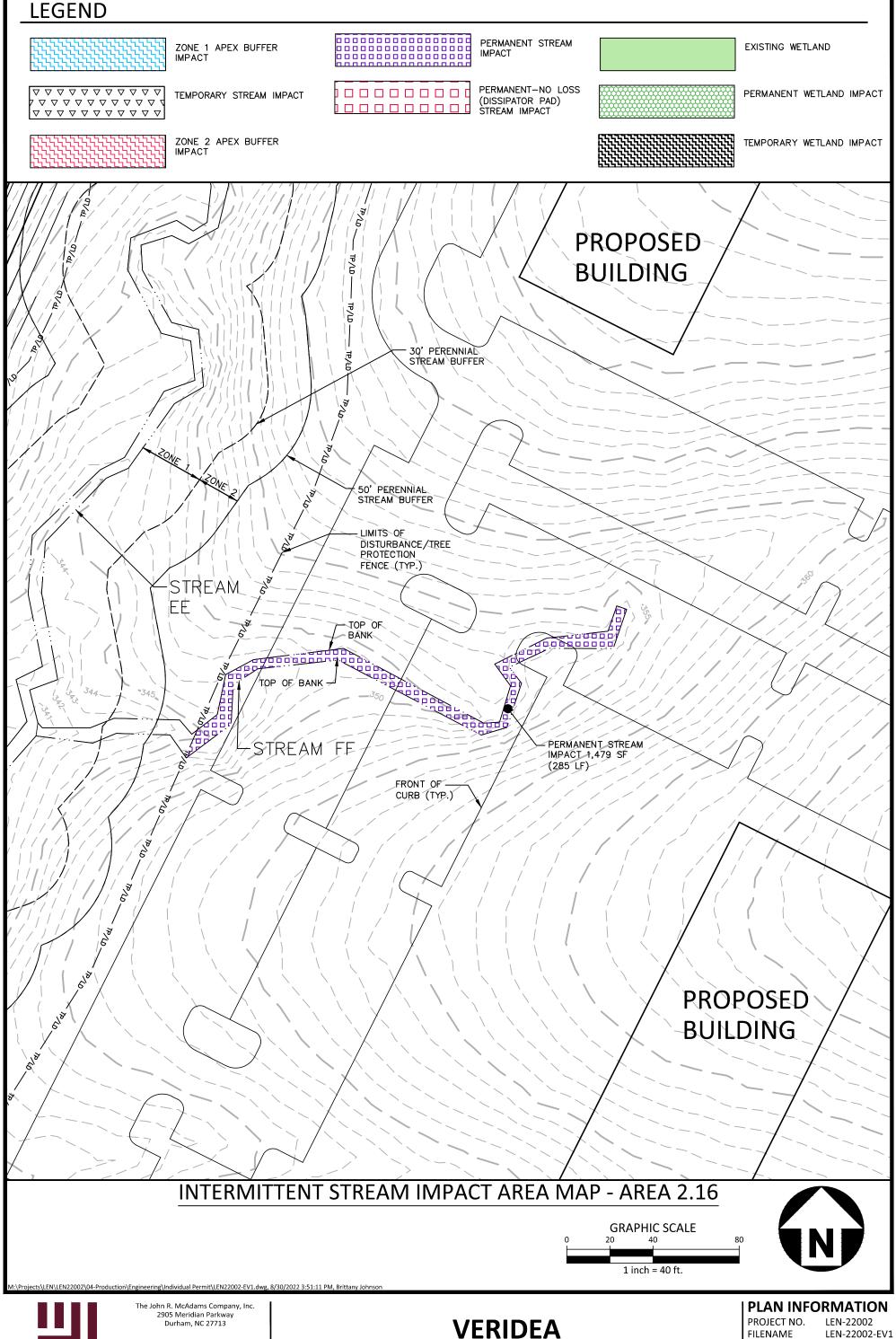
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





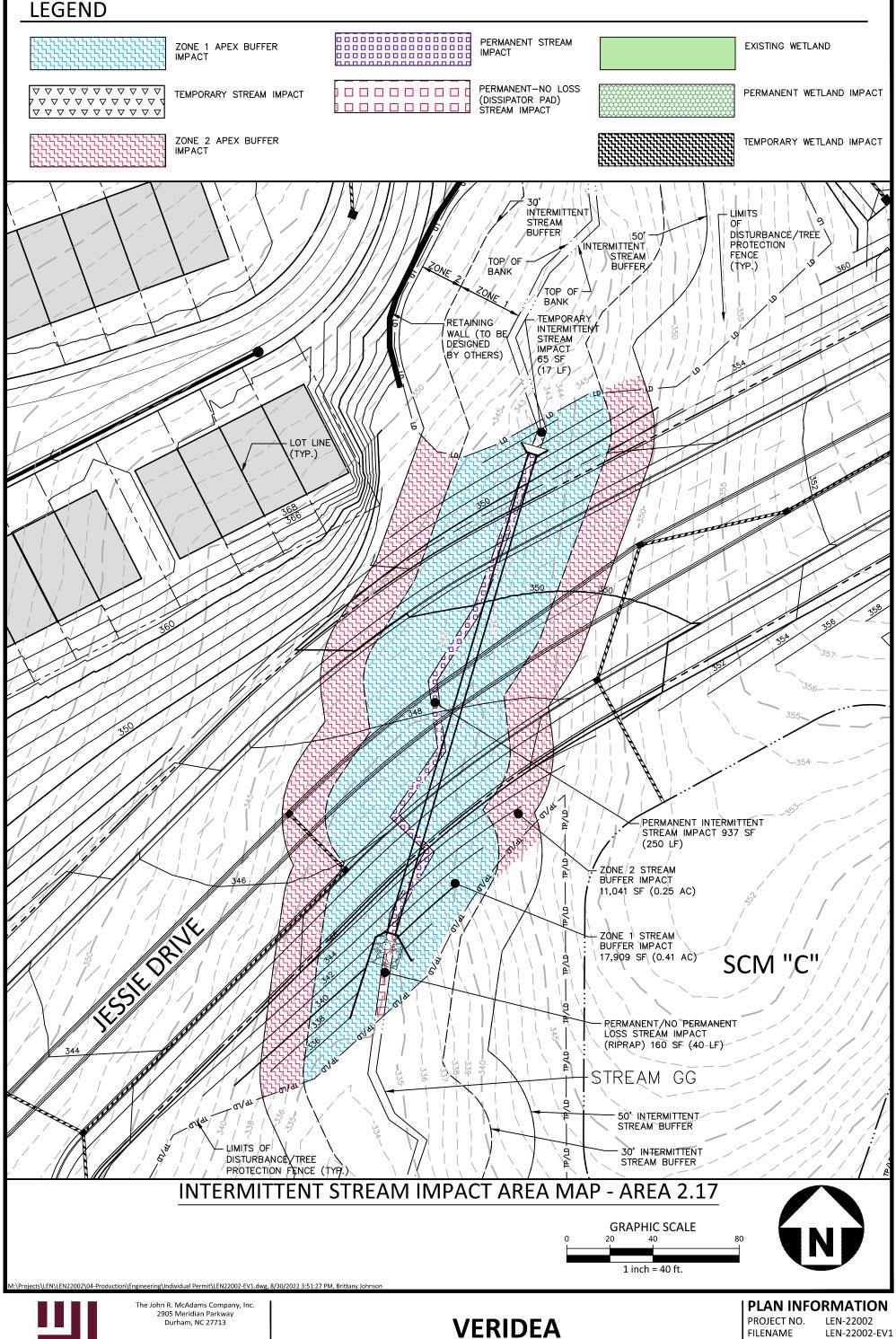
www.mcadamsco.com

# **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





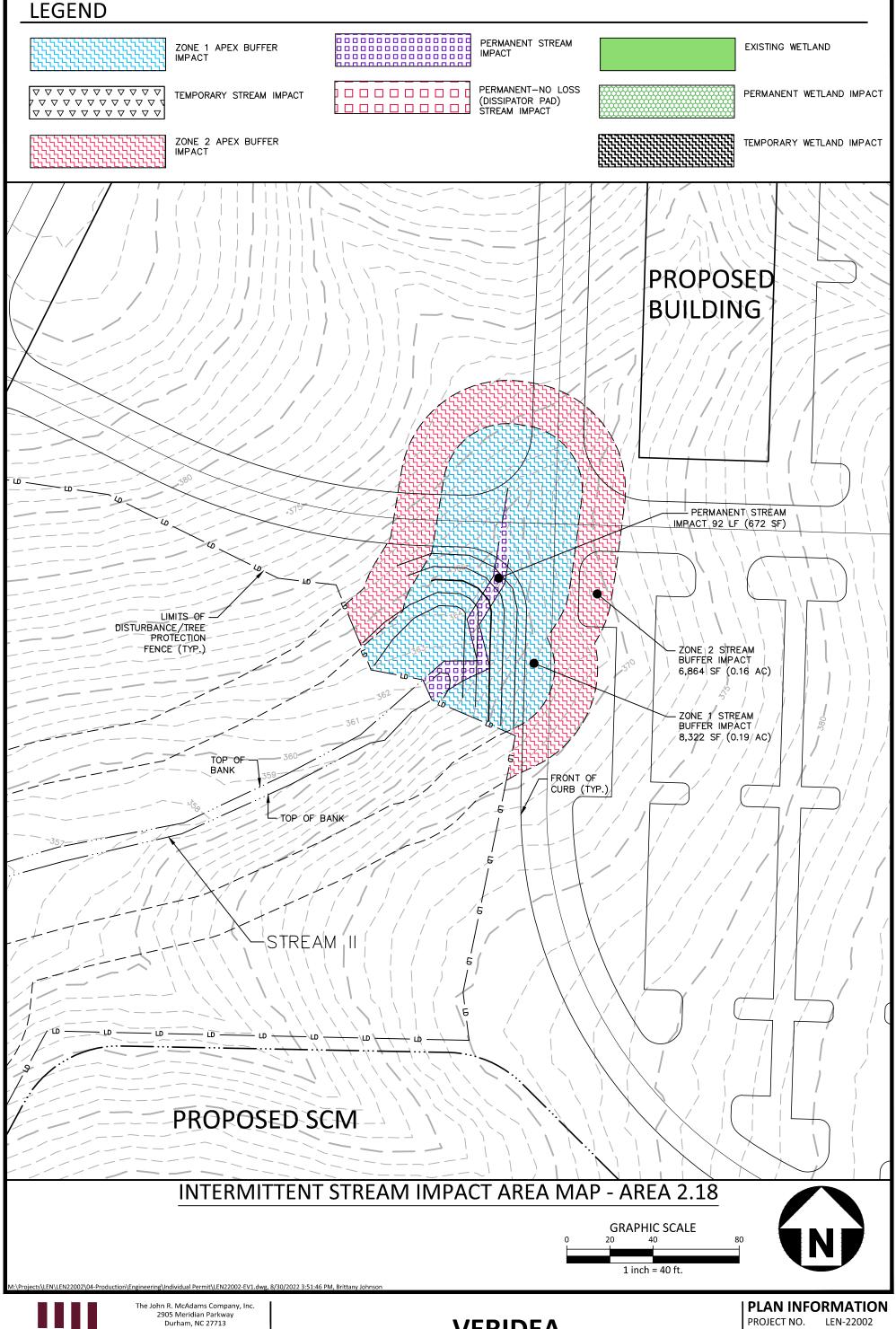
www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

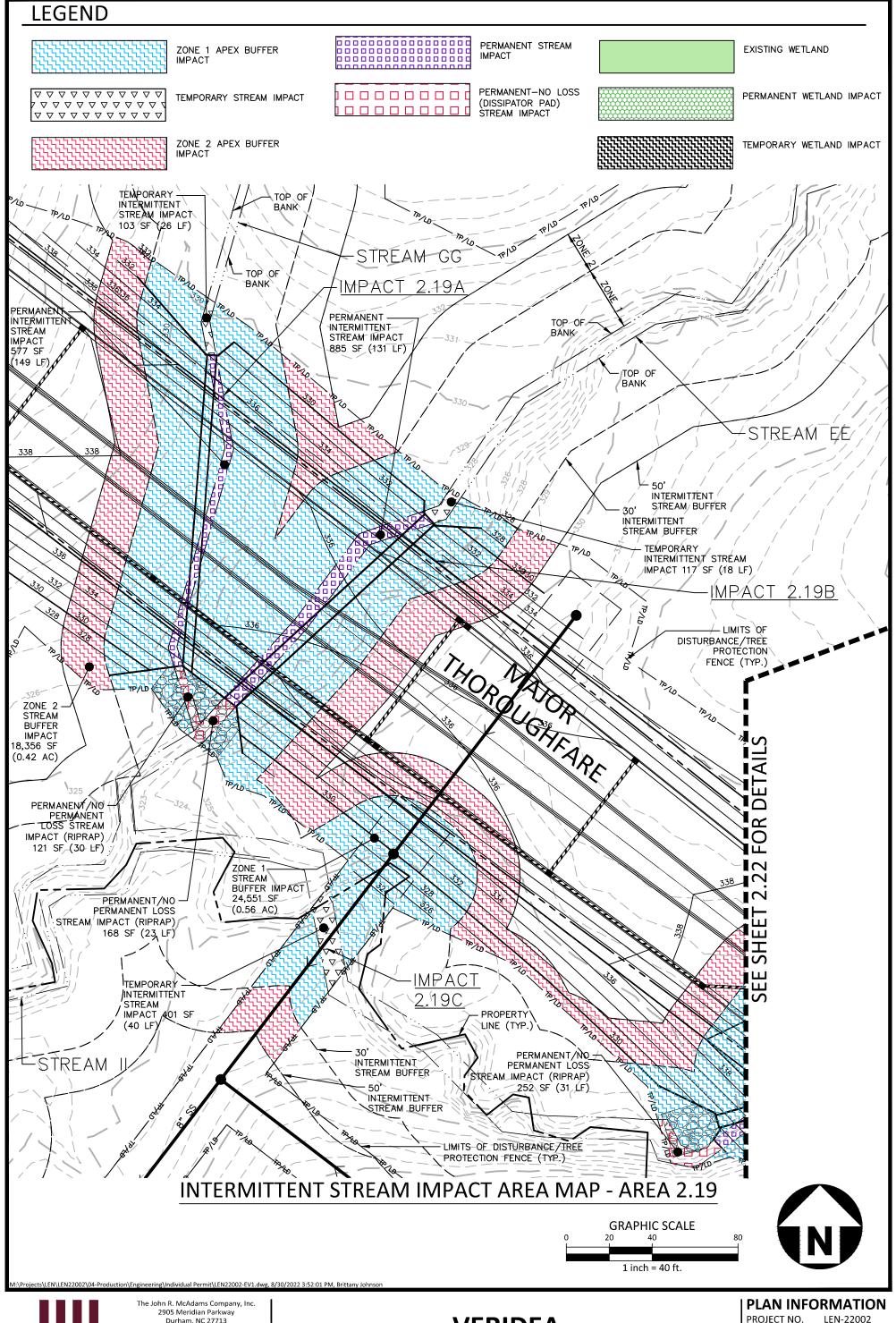
### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE





Durham, NC 27713

phone 919, 361, 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

#### **VERIDEA**

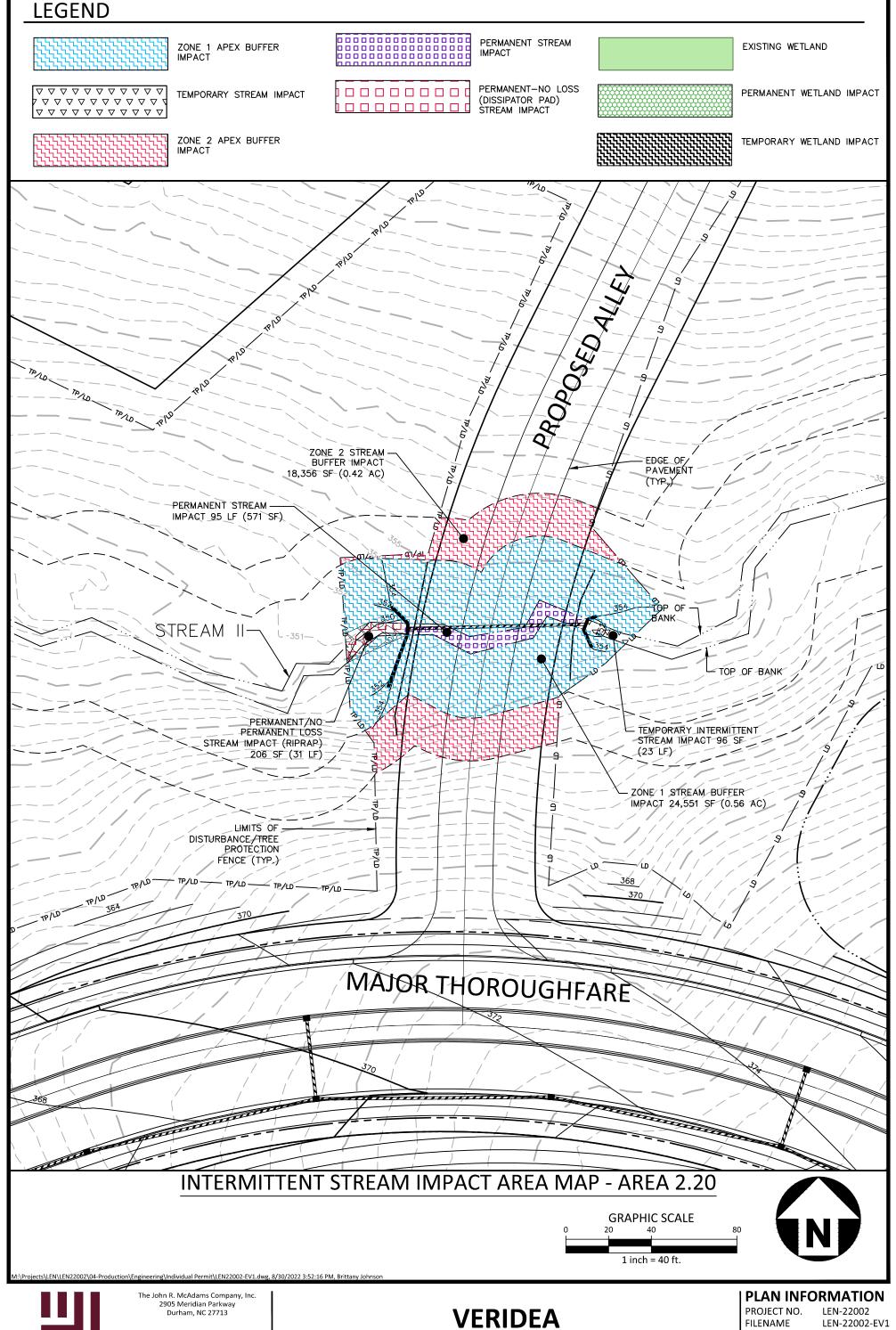
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. **FILENAME CHECKED BY** DRAWN BY SCALE

DATE

XXXBIJ 1"=40' 06. 21. 2022

LEN-22002-EV1



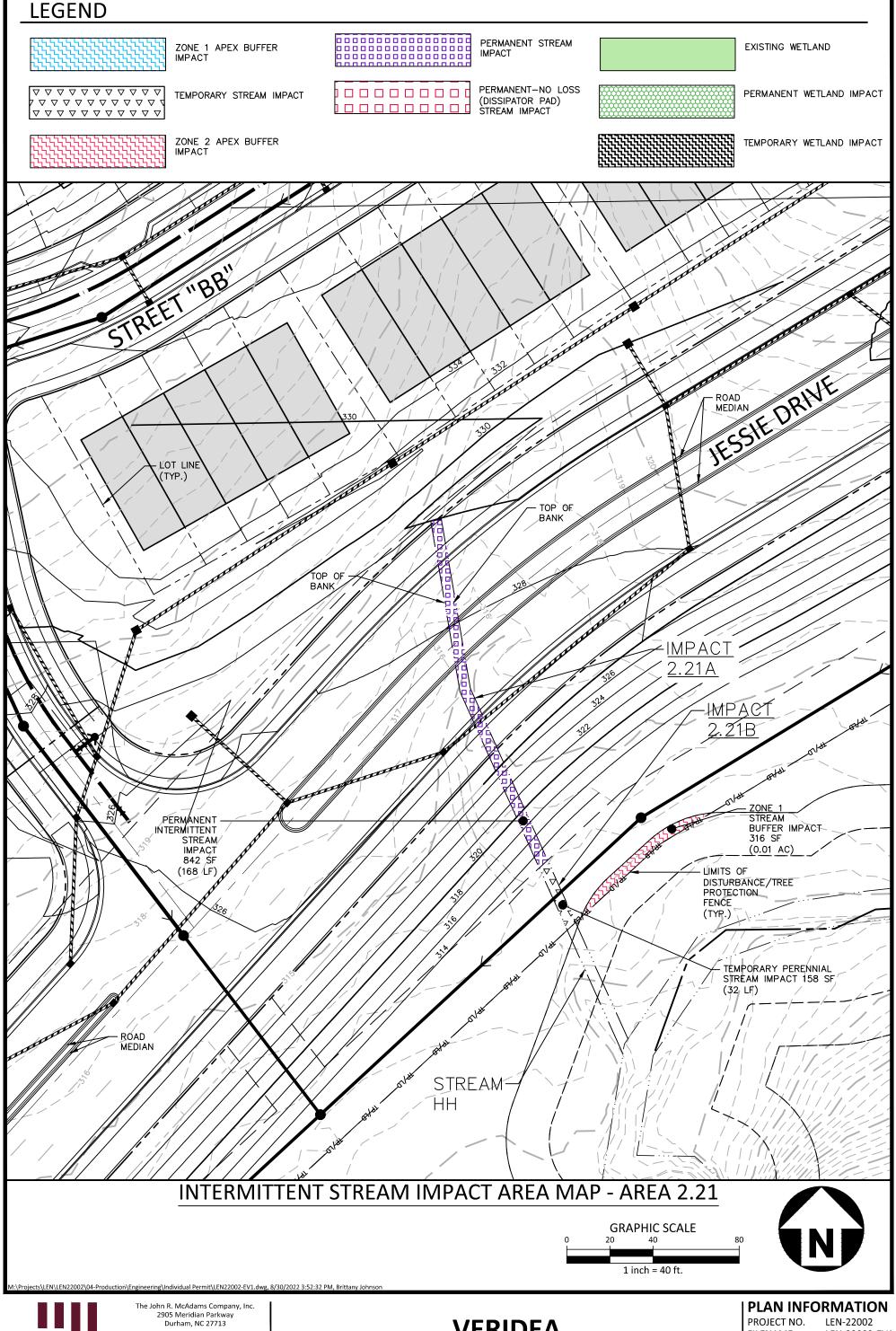


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





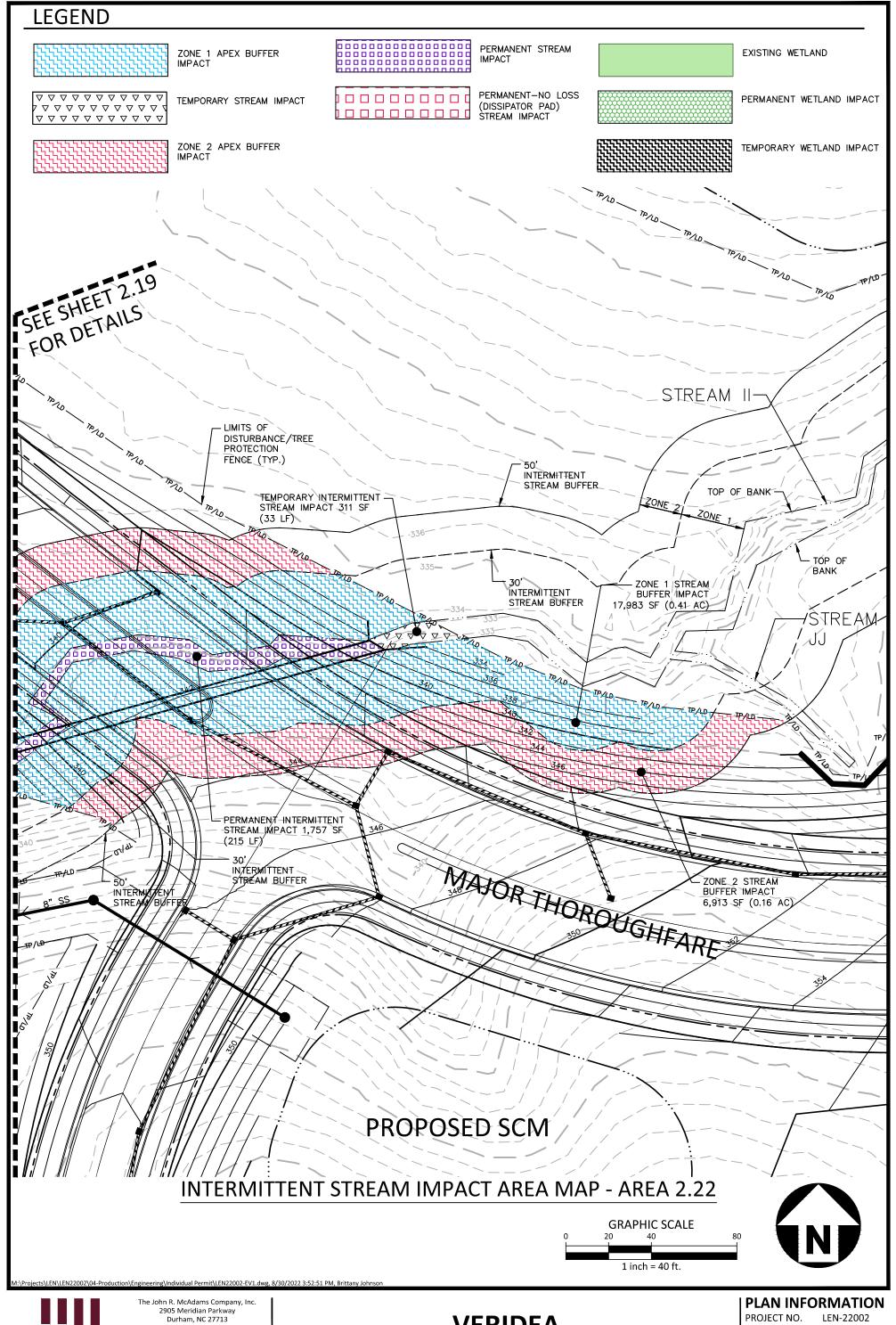
www.mcadamsco.com

**VERIDEA** 

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





www.mcadamsco.com

#### **VERIDEA**

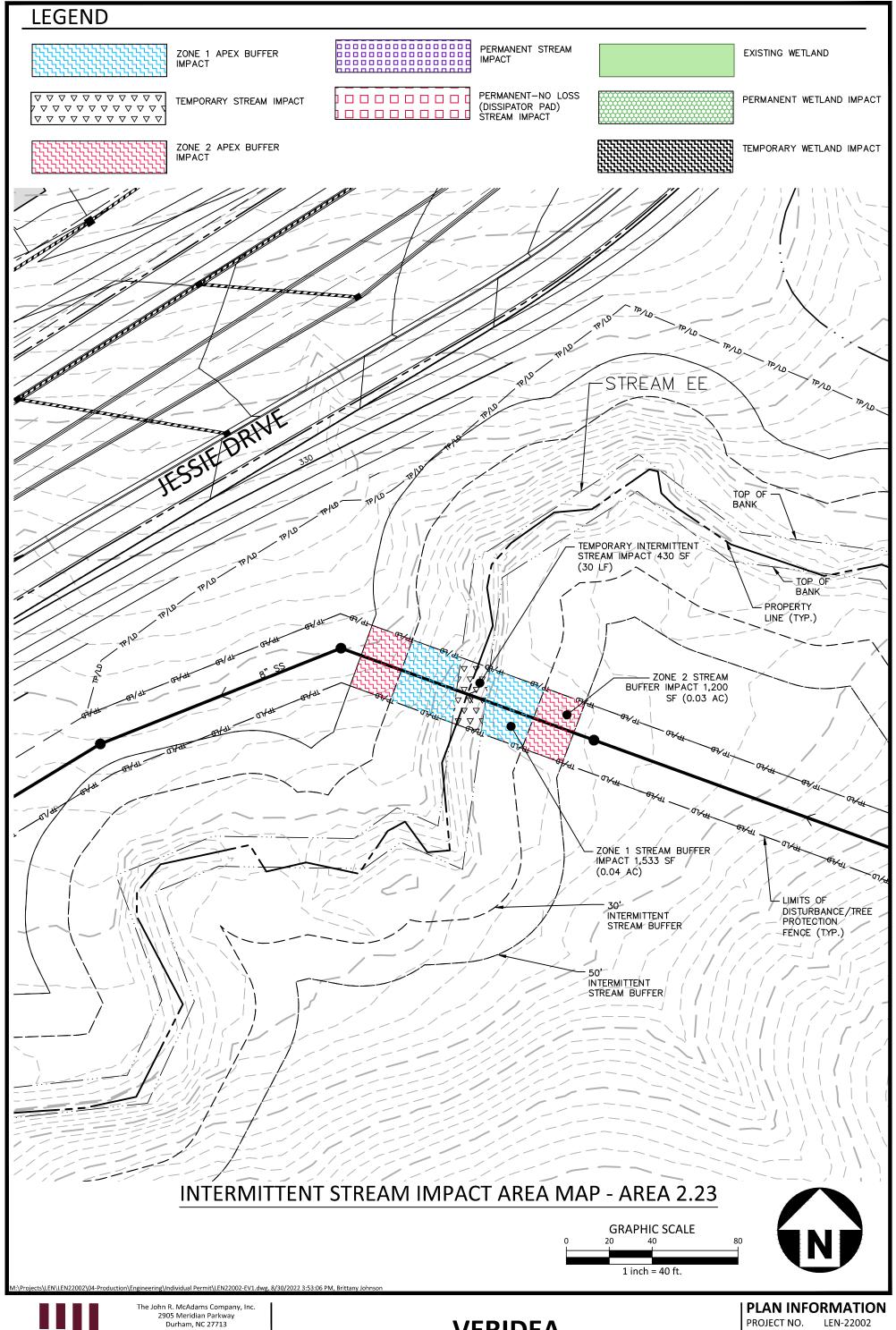
WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE

E LEN-22002-EV1 BY XXX BY BIJ 1"=40' 06. 21. 2022





www.mcadamsco.com

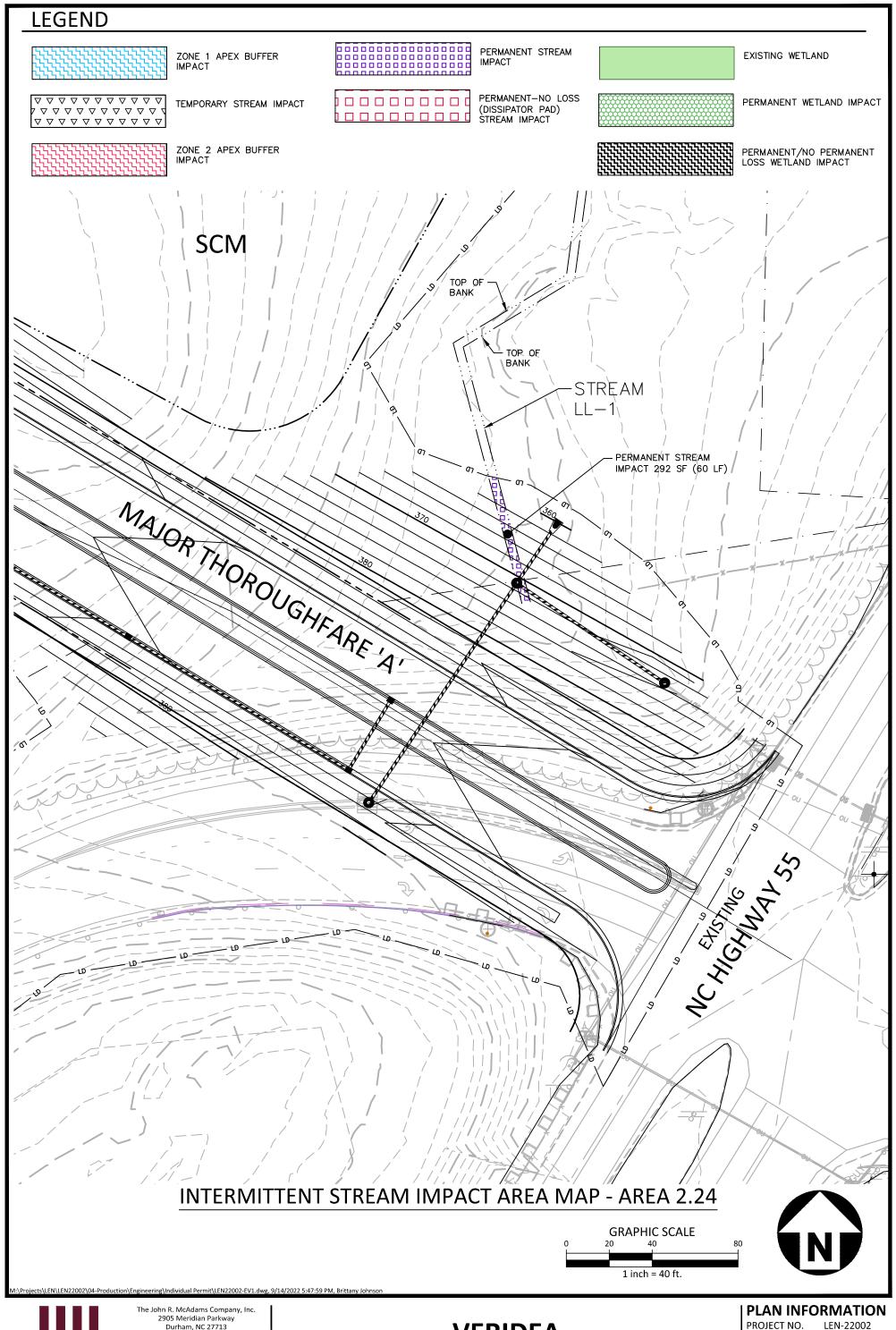
### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO.
FILENAME
CHECKED BY
DRAWN BY
SCALE

DATE





Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

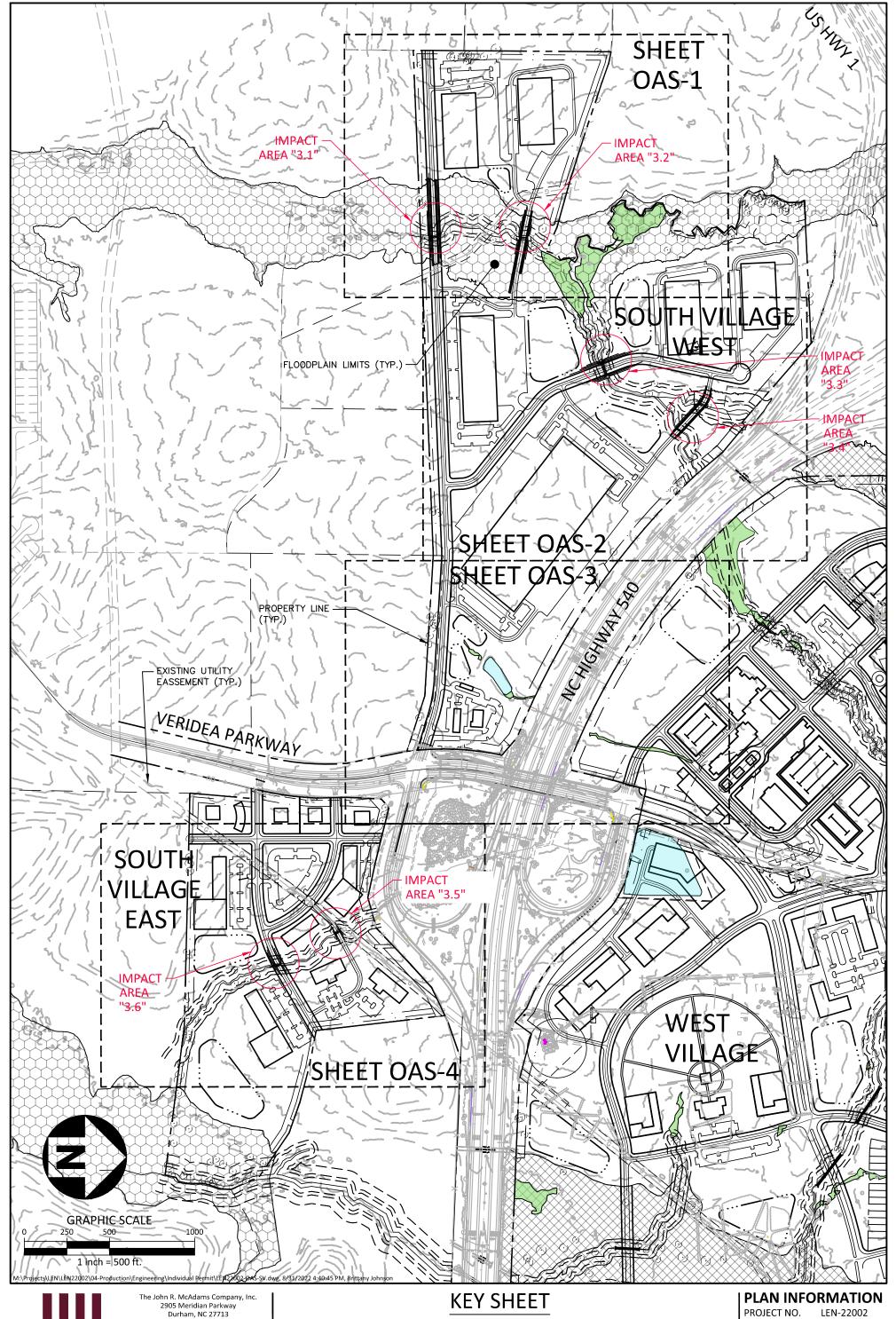
www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





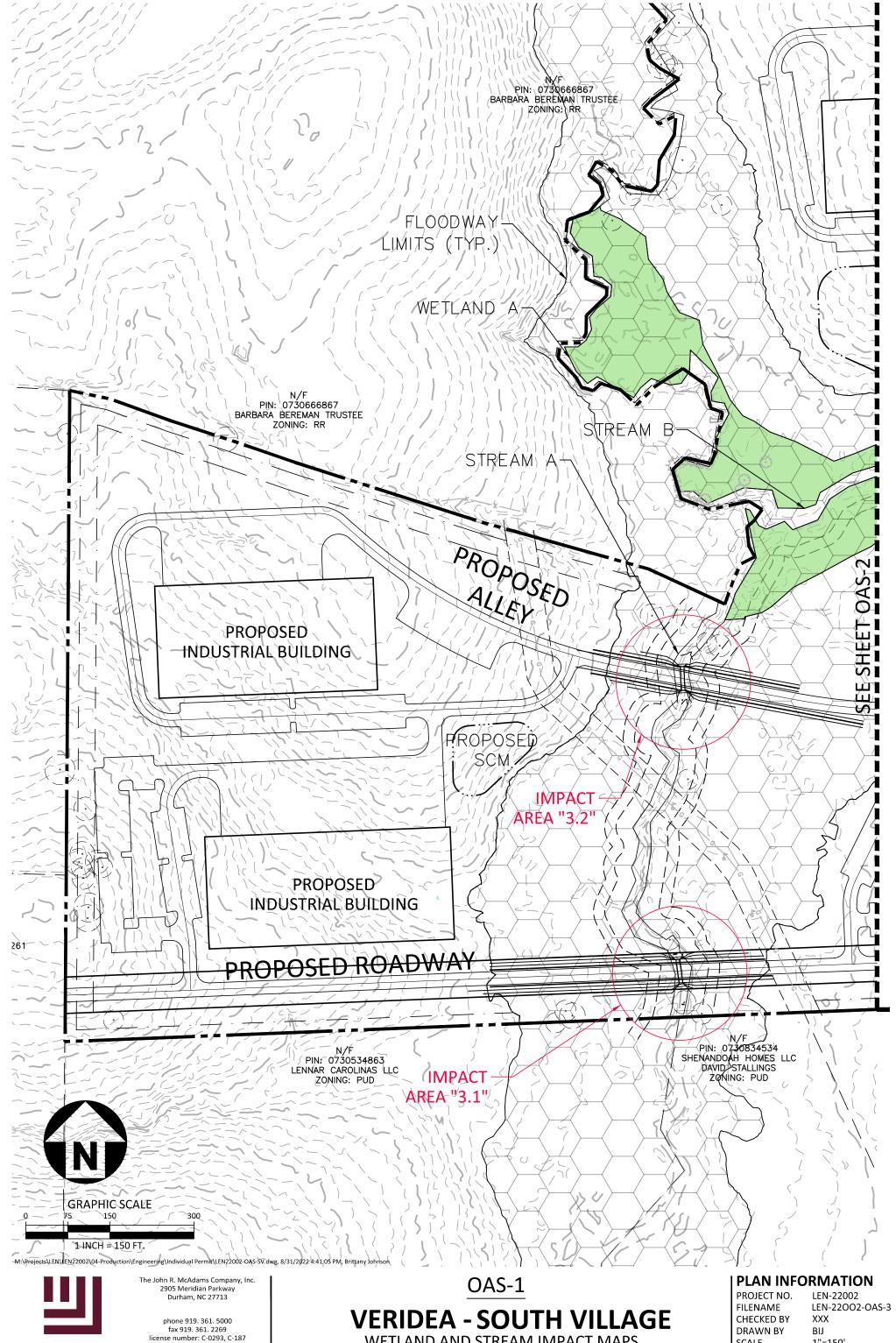
www.mcadamsco.com

## **VERIDEA - SOUTH VILLAGE**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME CHECKED BY DRAWN BY

1"=500' SCALE DATE 06. 21. 2022





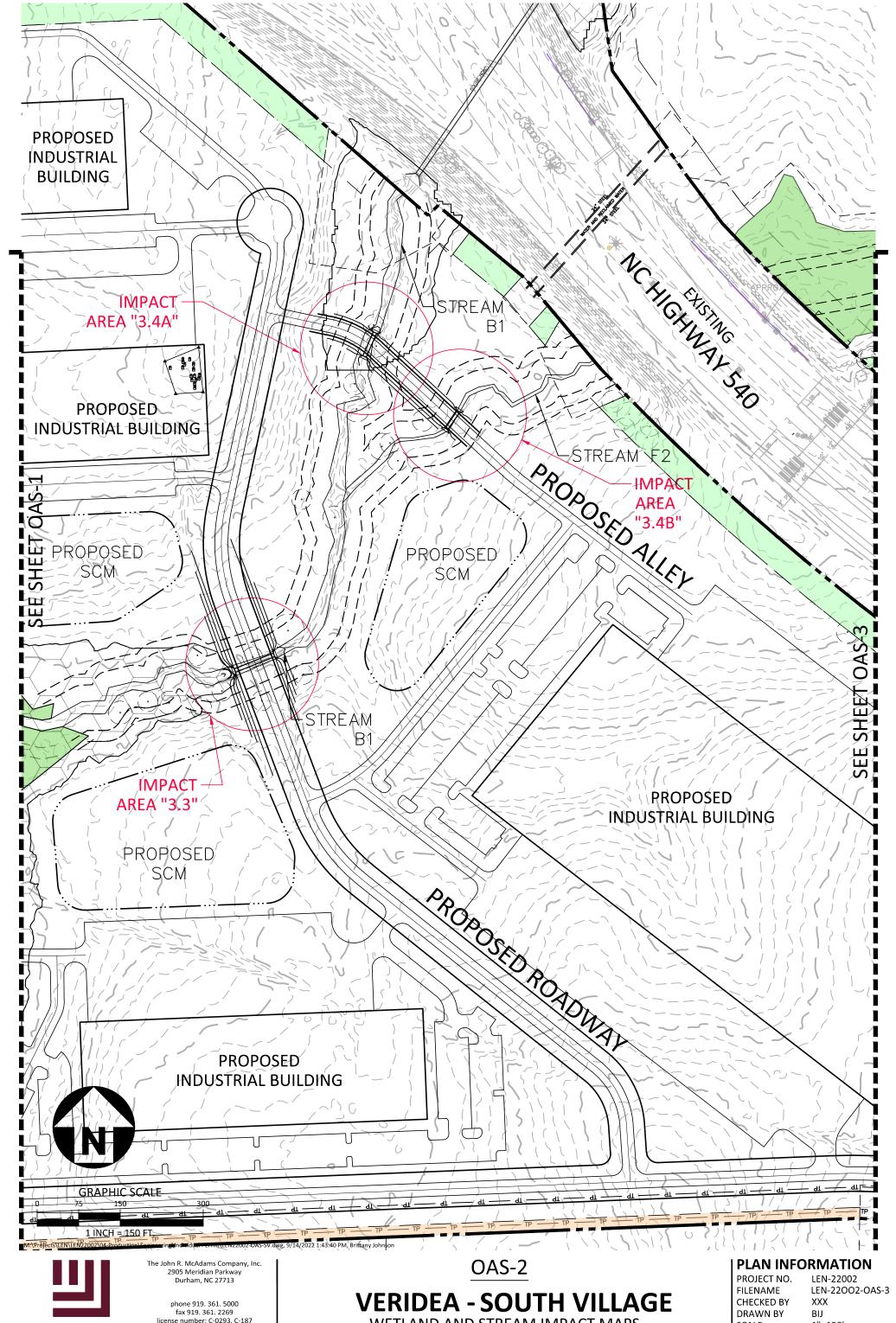
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

SCALE

DATE

1"=150' 06. 21. 2022





fax 919. 361. 2269 license number: C-0293, C-187

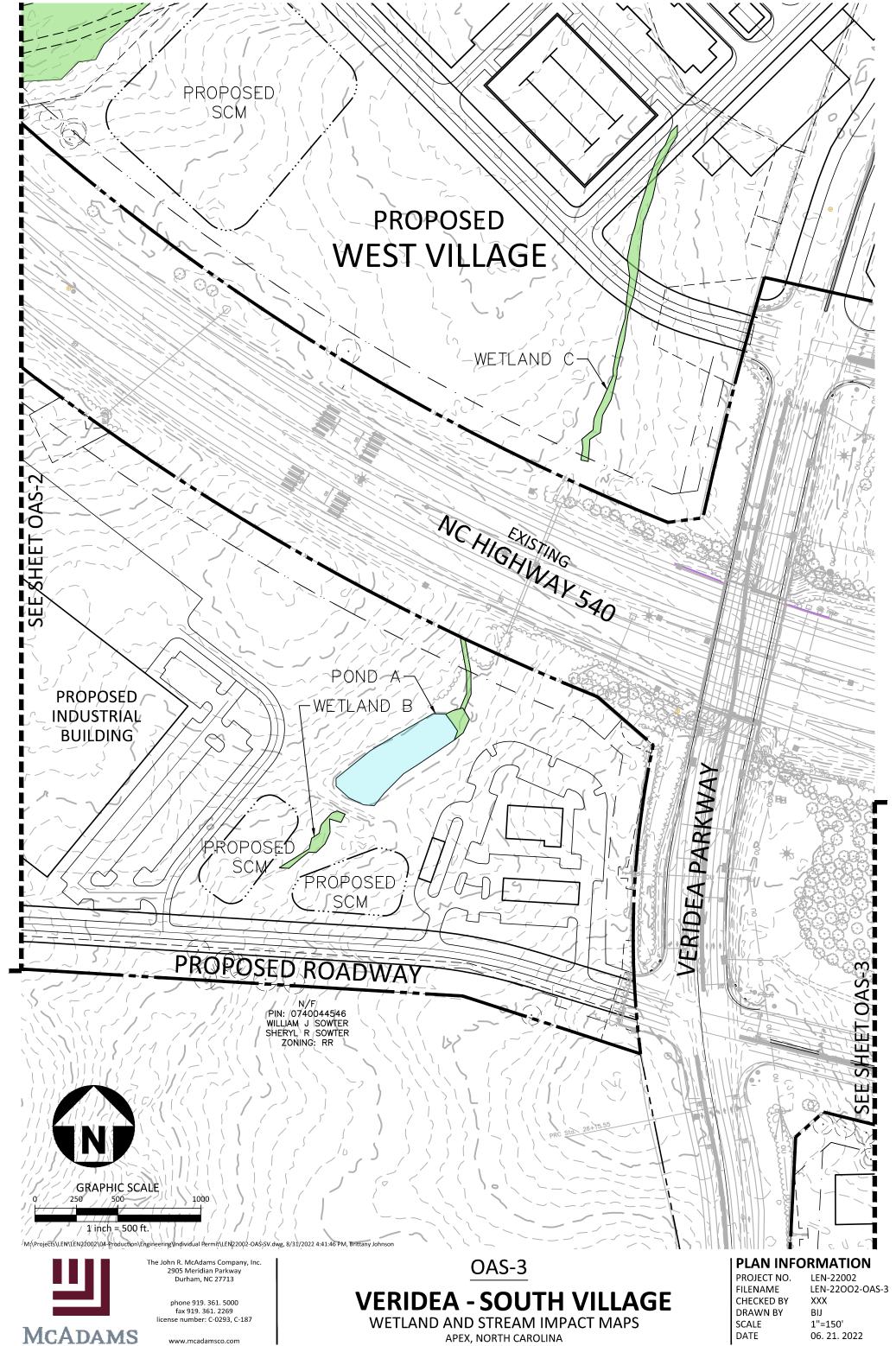
www.mcadamsco.com

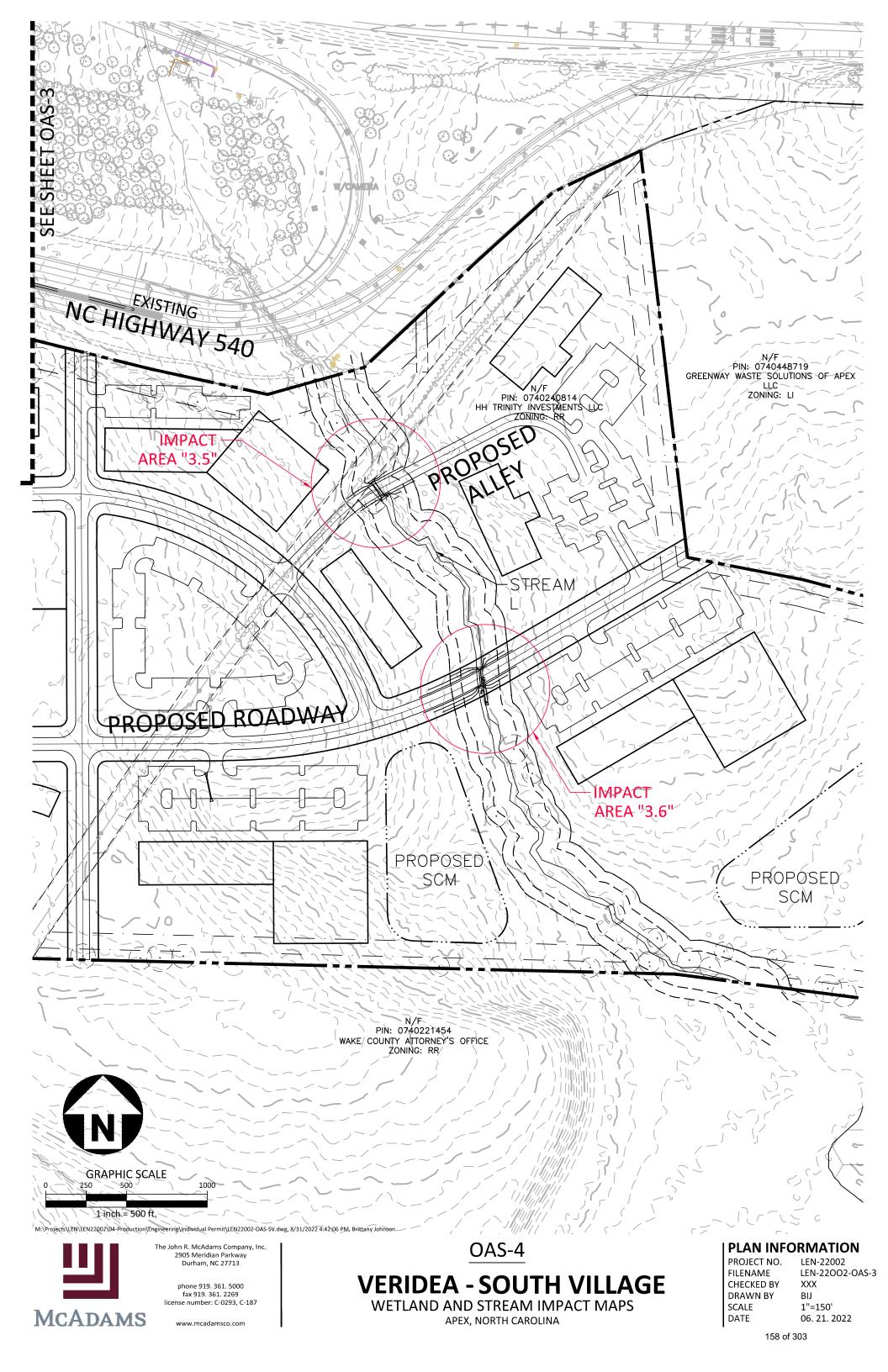
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

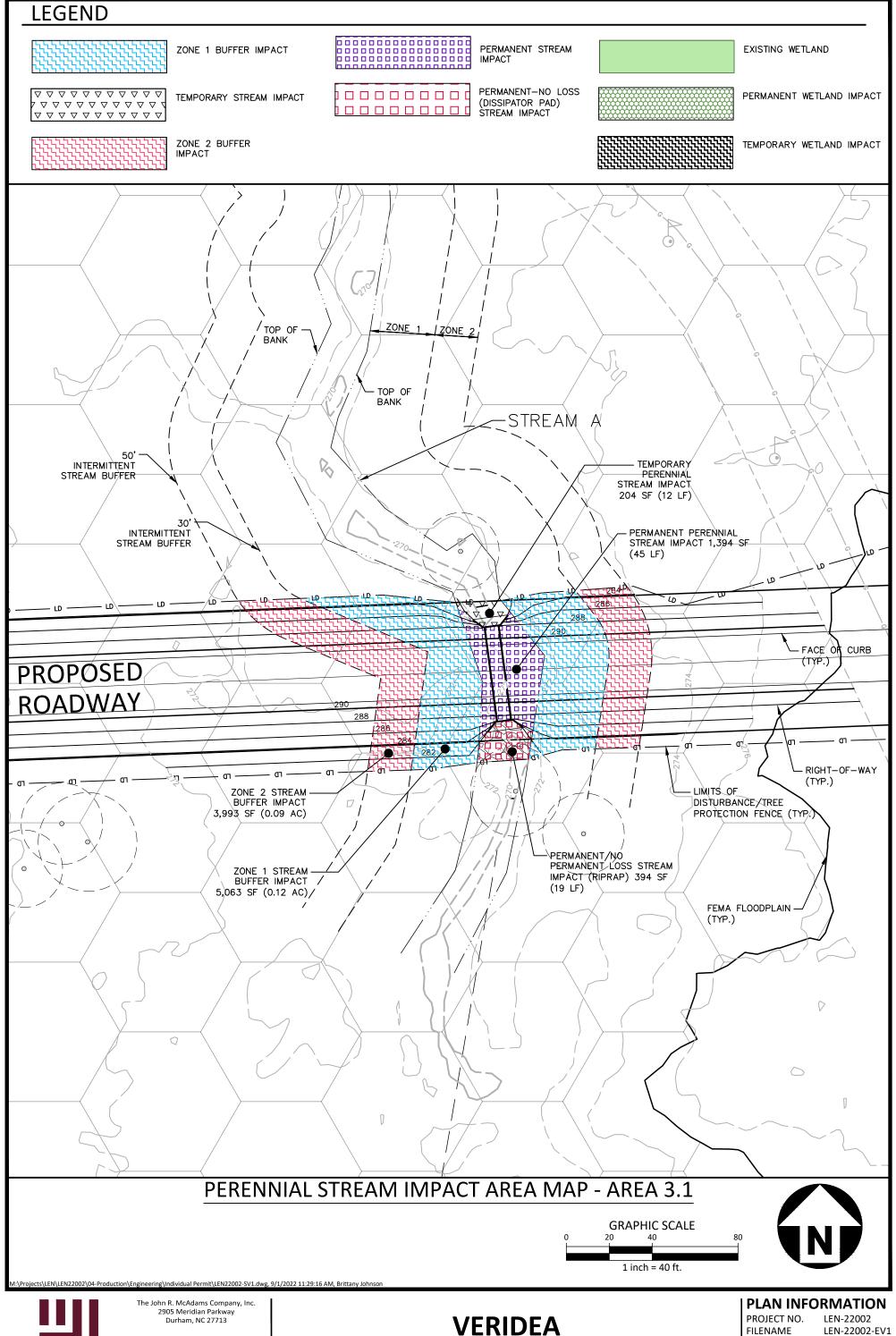
SCALE

DATE

1"=150' 06. 21. 2022









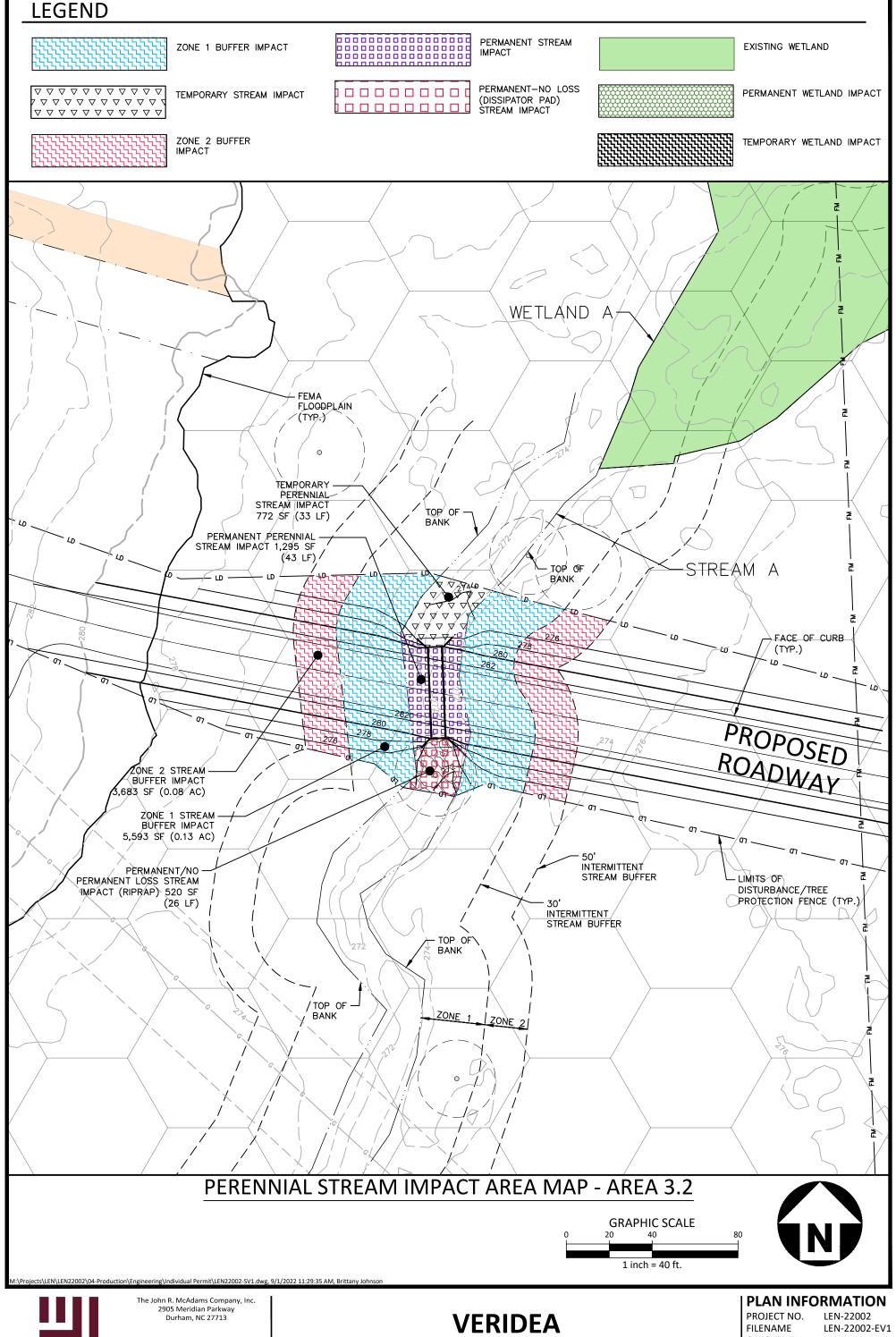
www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE





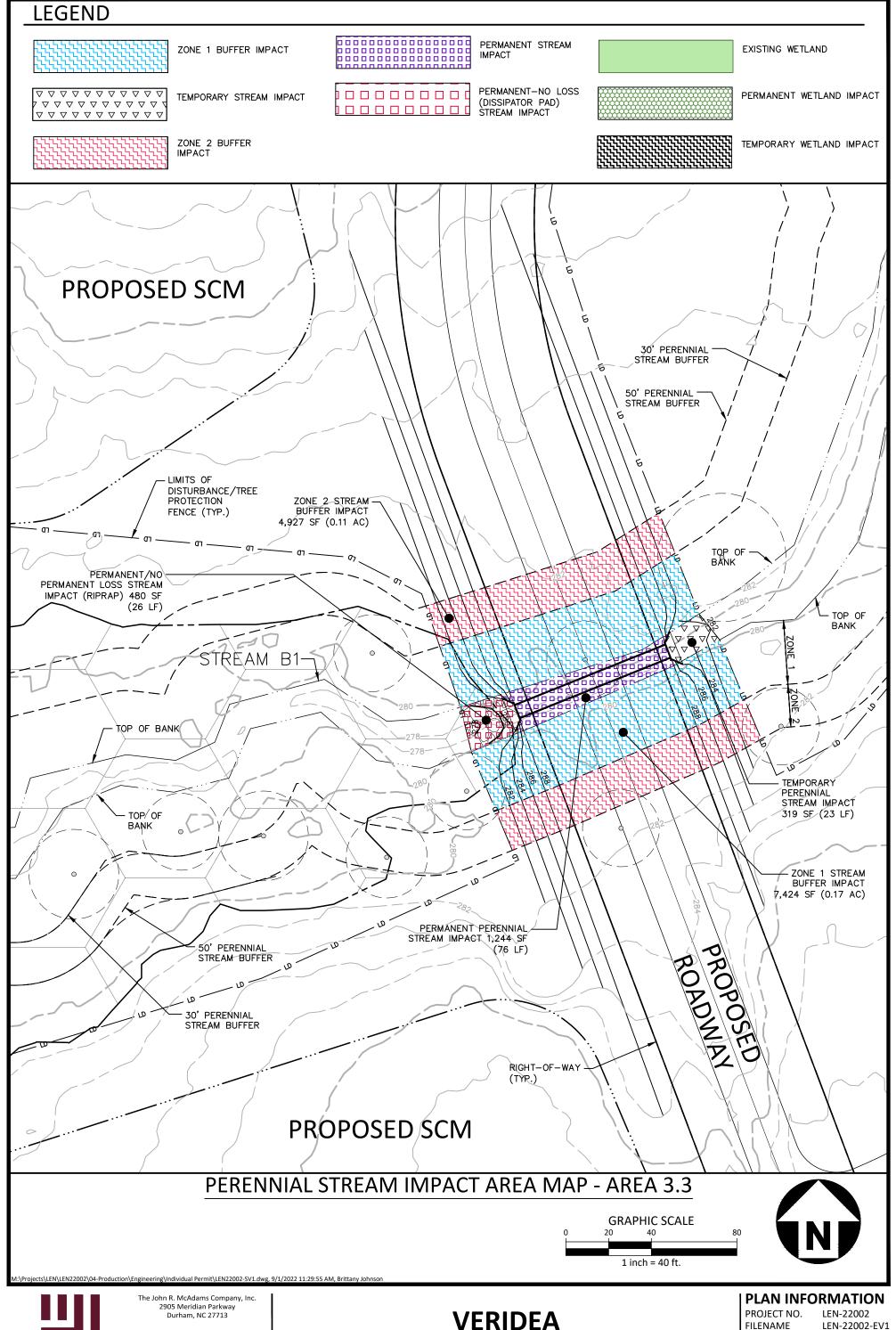
www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE





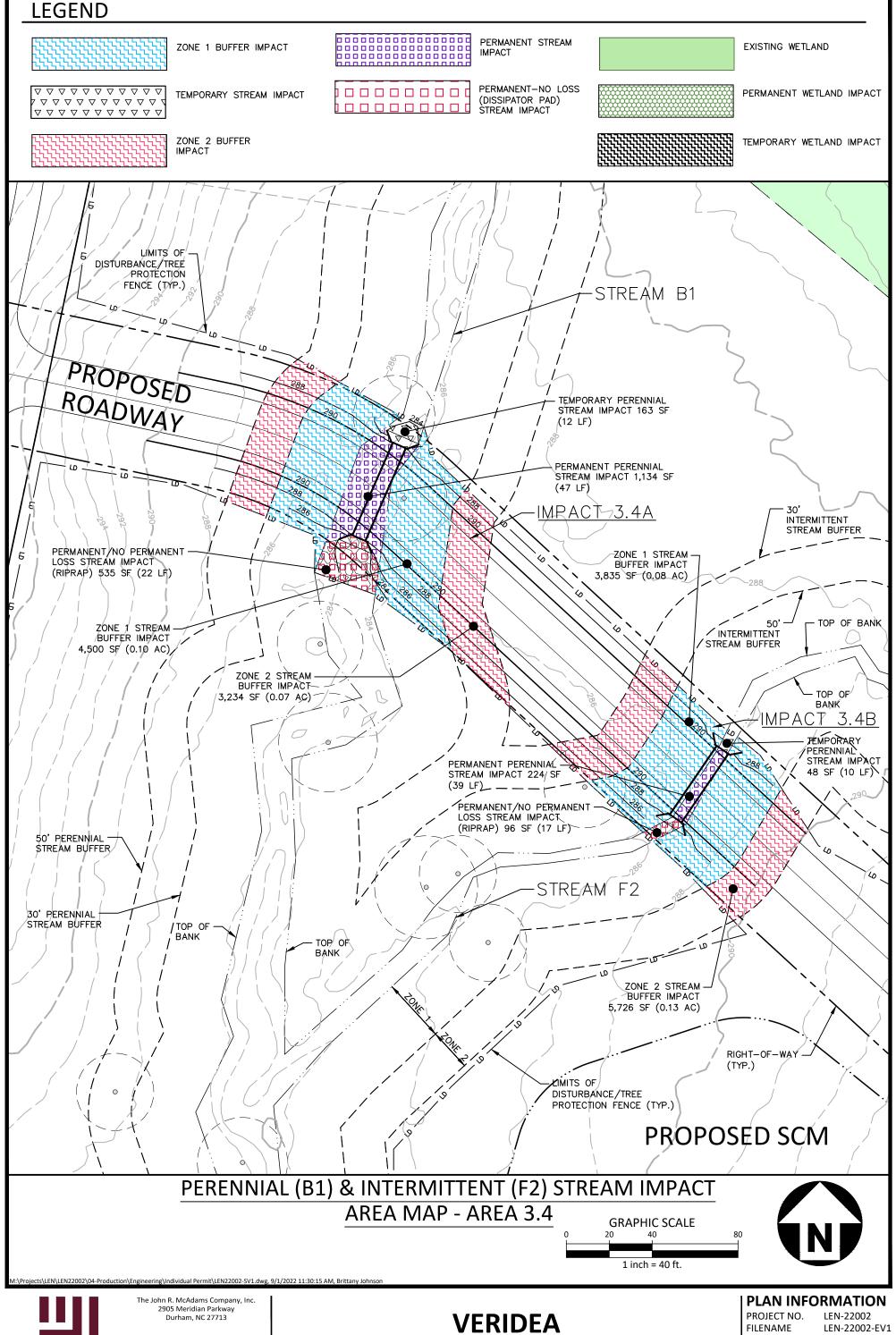
www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME **CHECKED BY** DRAWN BY SCALE

DATE



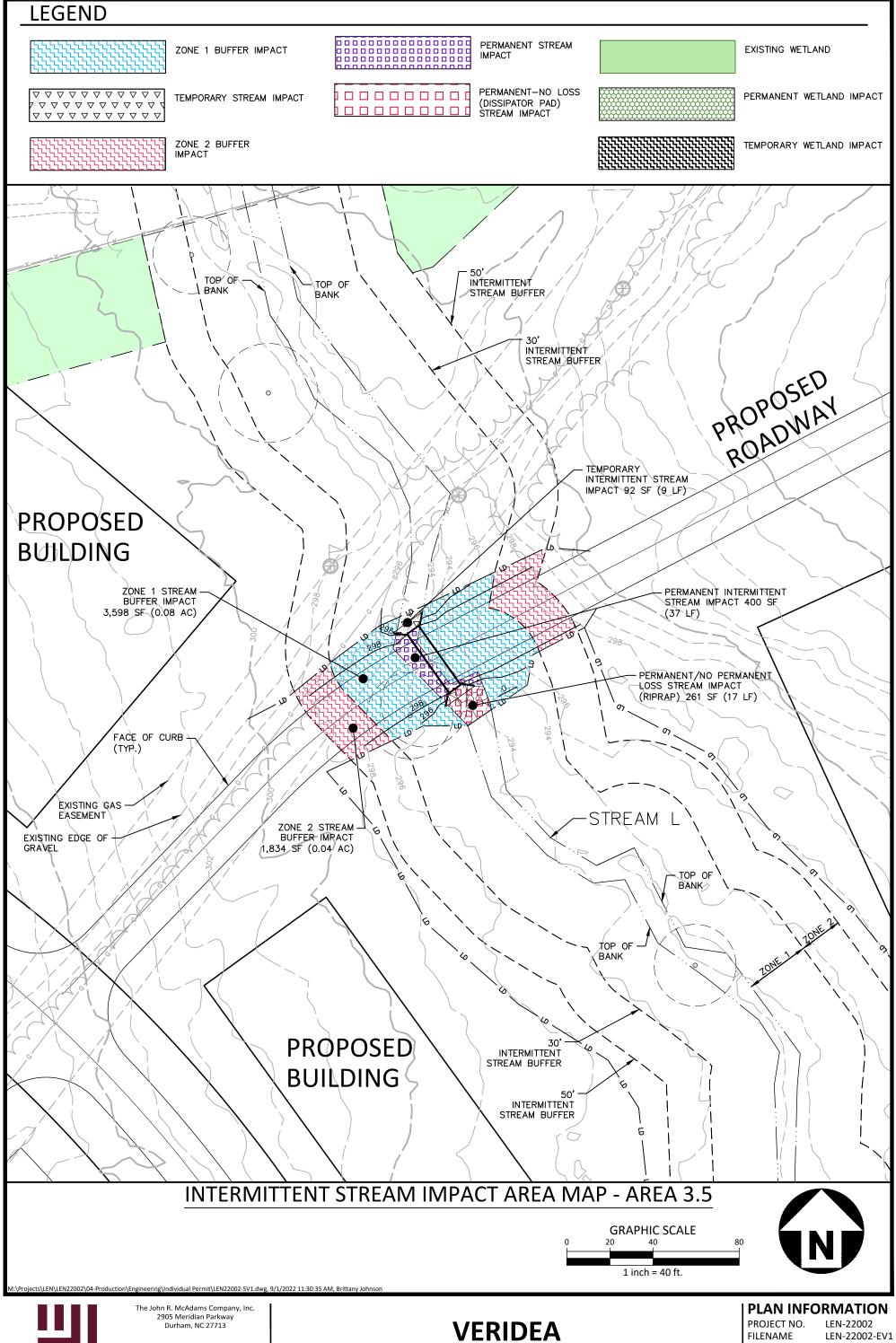


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE





phone 919. 361. 5000

fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS

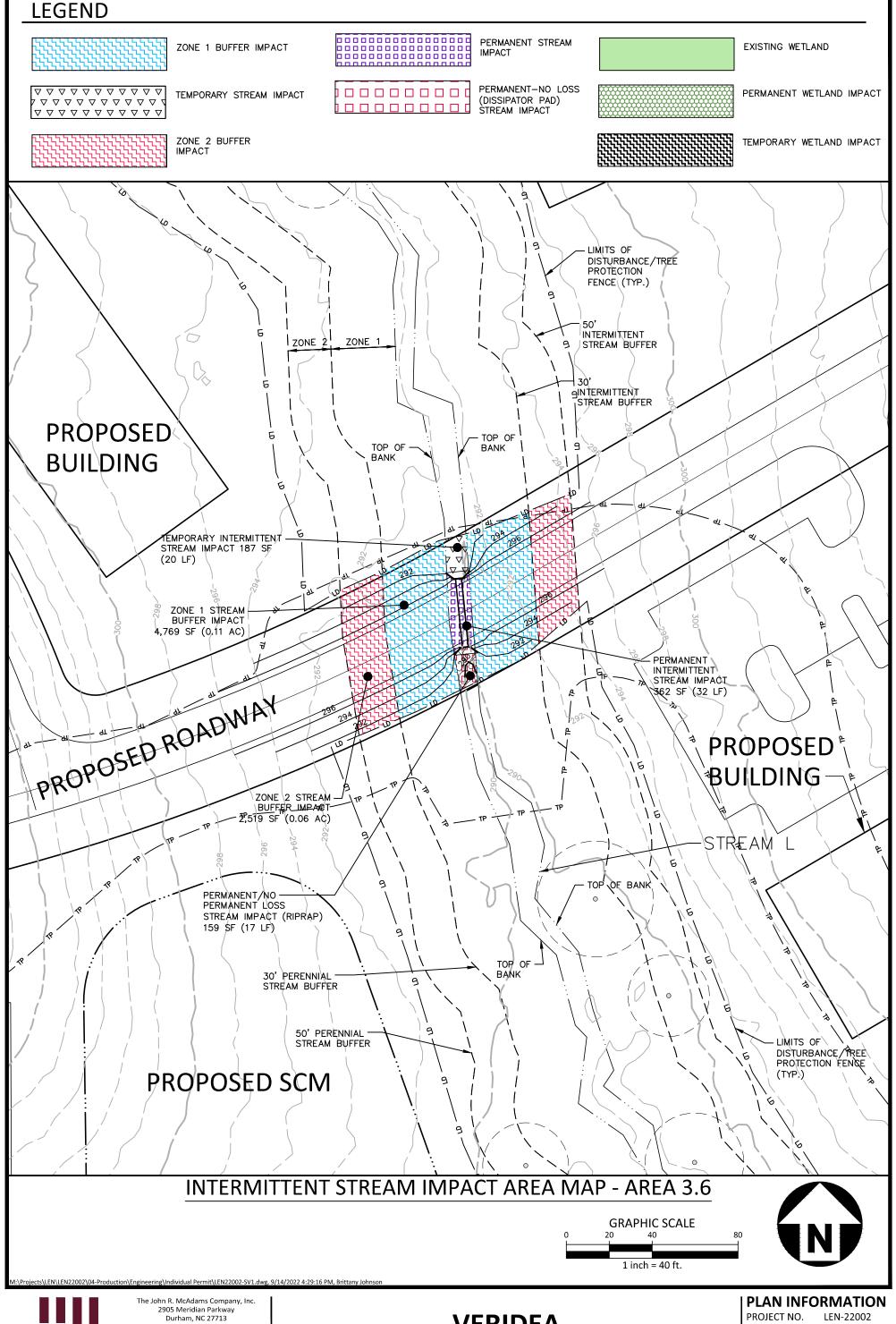
APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE

LEN-22002 LEN-22002-EV1 XXX BIJ 1"=40'

06. 21. 2022





www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE





www.mcadamsco.com

## **VERIDEA - OFFSITE AREAS**

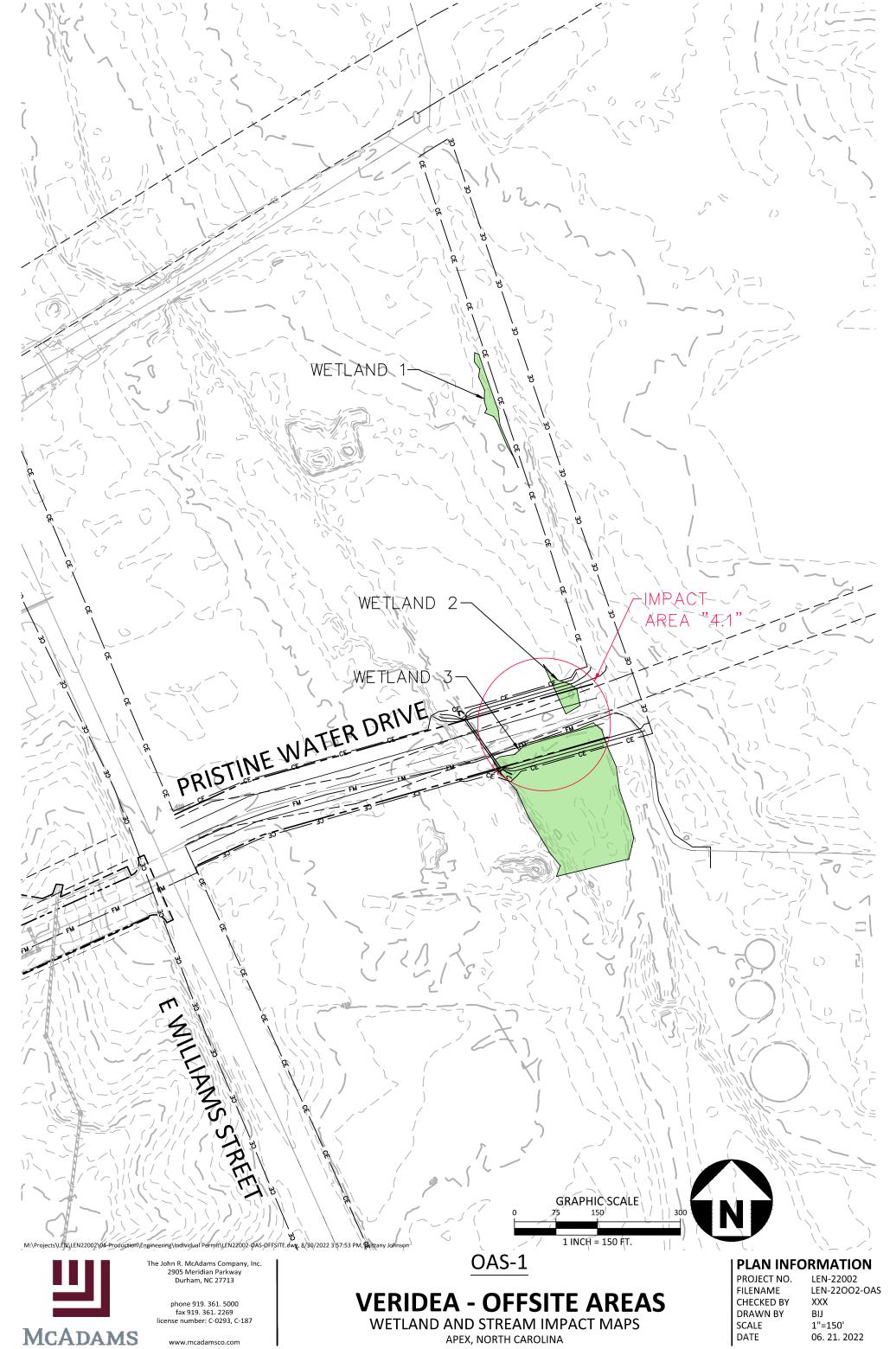
WETLAND AND STREAM IMPACT MAPS

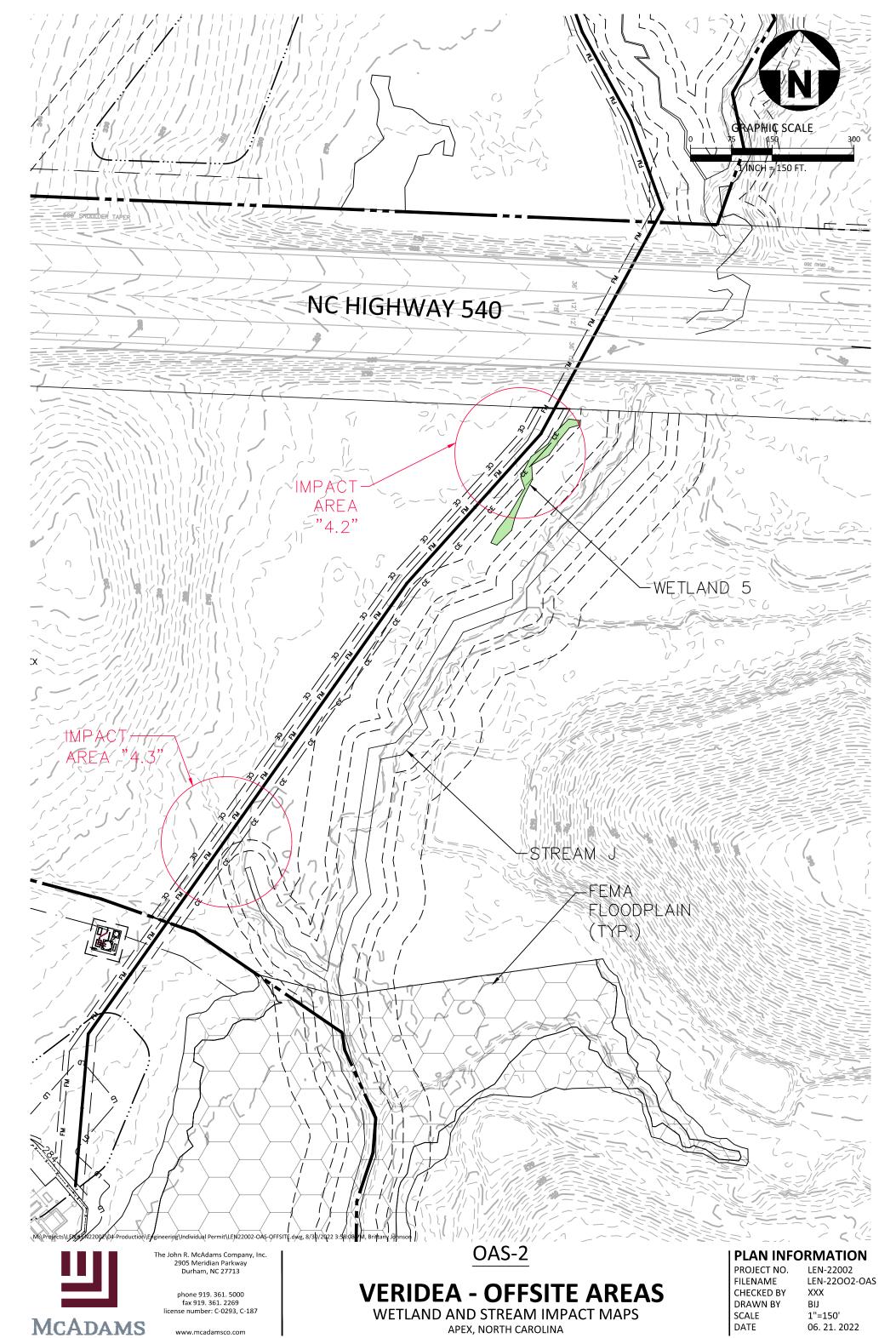
APEX, NORTH CAROLINA

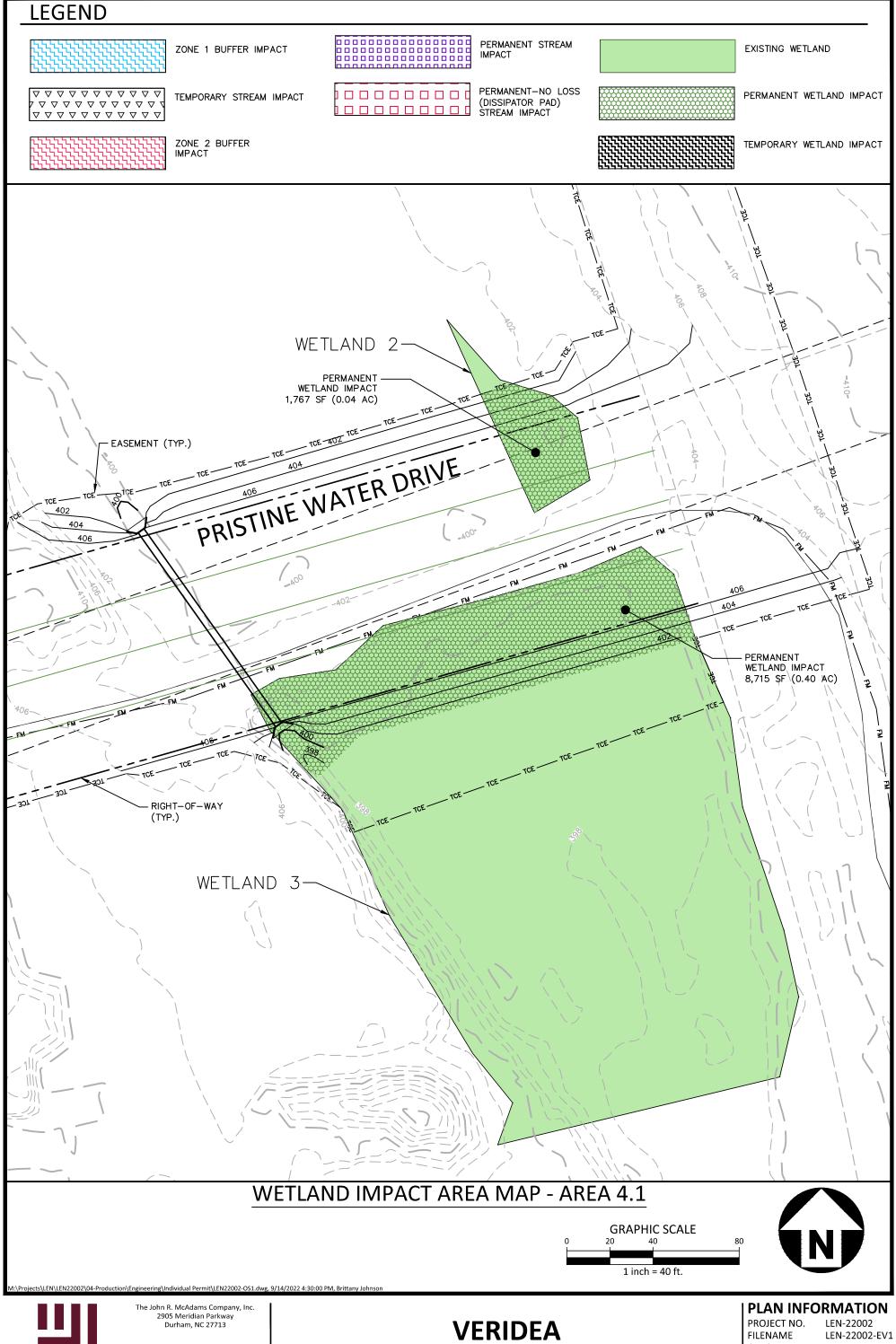
PROJECT NO.
FILENAME
CHECKED BY
DRAWN BY
SCALE
DATE

LEN-22002 LEN-22002-OAS XXX BIJ 1"=500'

06. 21. 2022







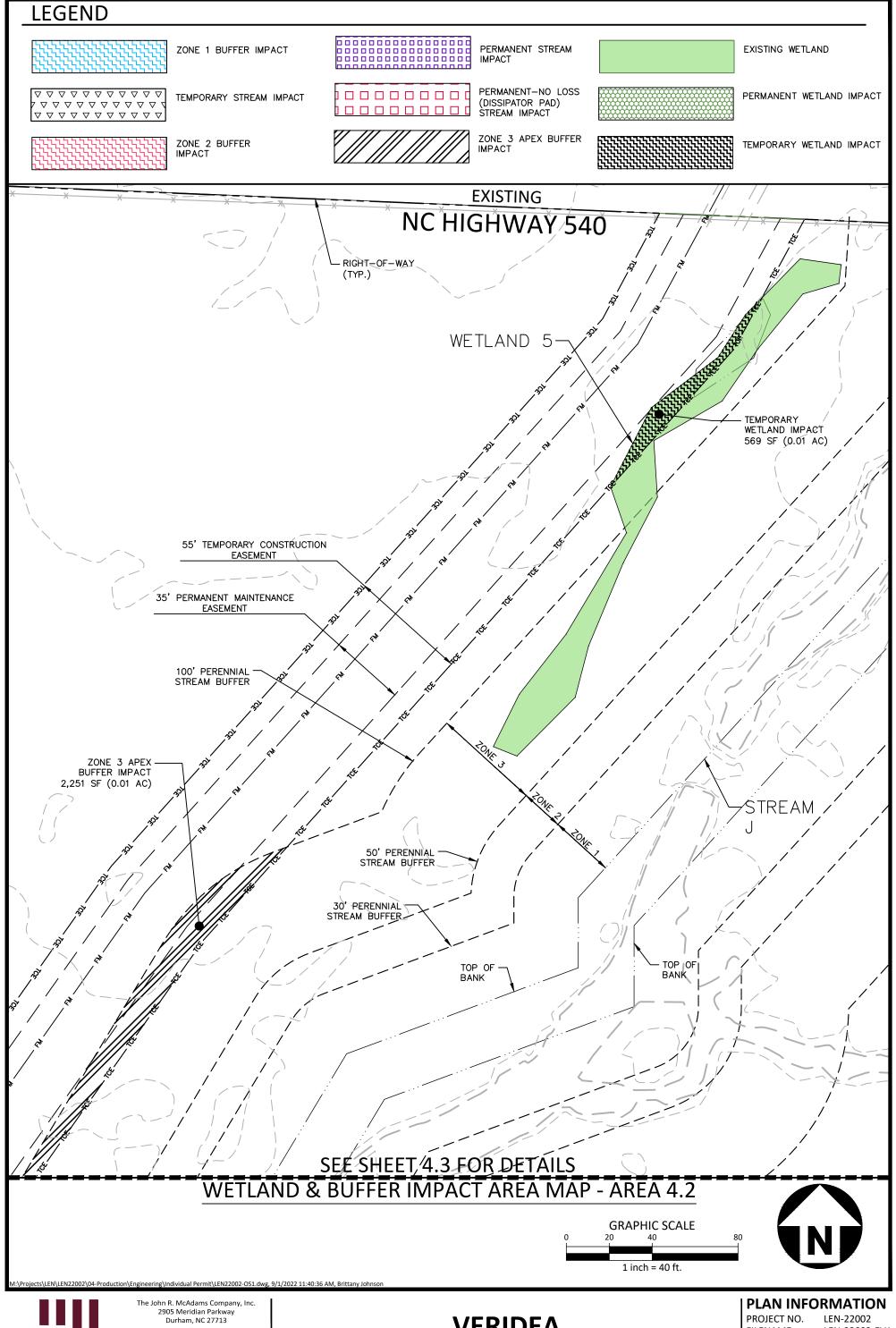


www.mcadamsco.com

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

**CHECKED BY** DRAWN BY SCALE

DATE





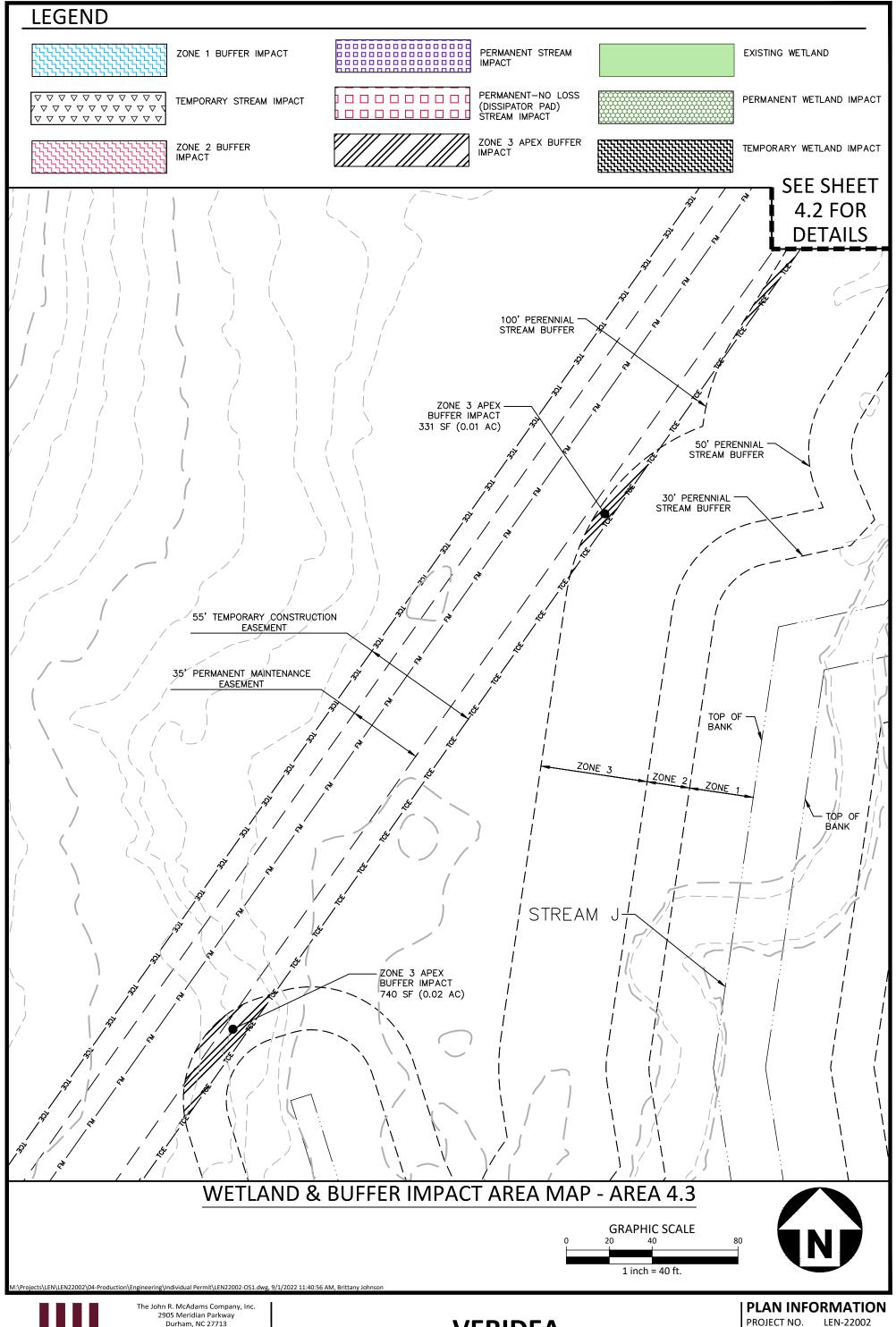
www.mcadamsco.com

#### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

FILENAME CHECKED BY DRAWN BY

LEN-22002-EV1 XXXBIJ 1"=40' SCALE DATE 06. 21. 2022





Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

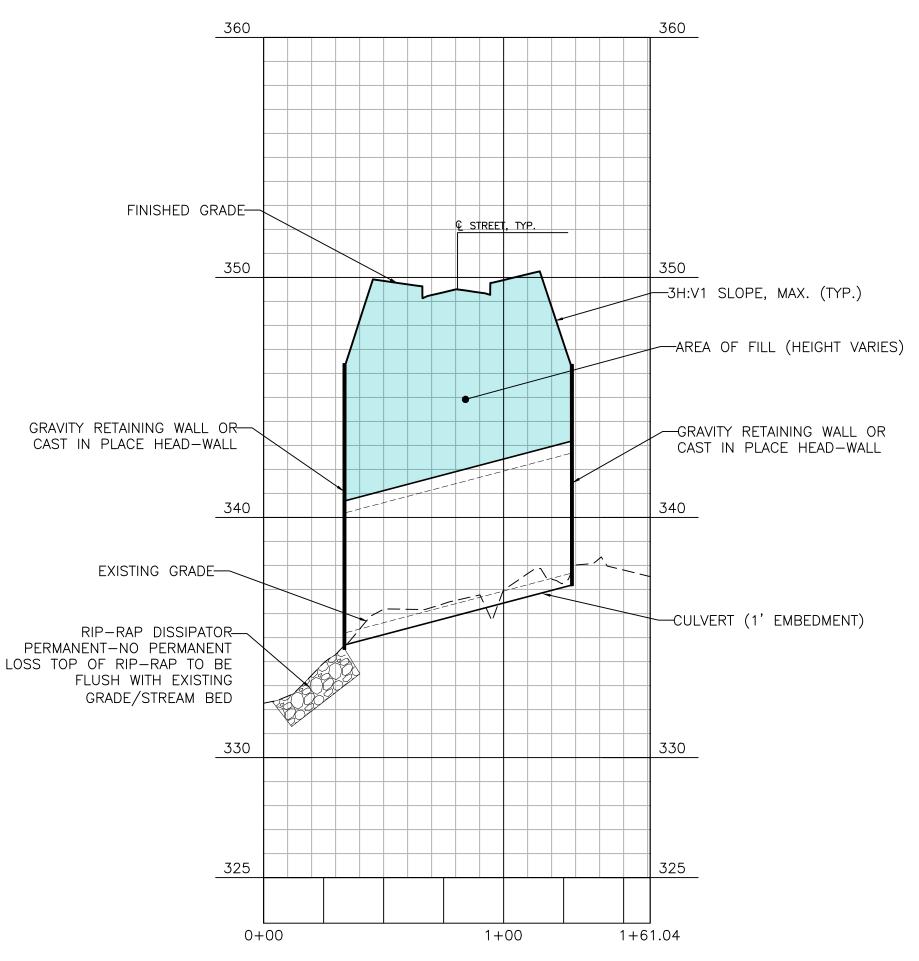
## **VERIDEA**

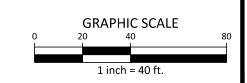
WETLAND AND STREAM IMPACT MAPS APEX, NORTH CAROLINA

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

DATE

## STREAM CROSSING - TYPICAL SECTION







The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

ojects\LEN\LEN22002\04-Production\Engineering\Individual Permit\LEN22002-XS1.dwg, 8/16/2022 1:17:44 PM, Brittany Johnsor

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

### **VERIDEA**

WETLAND AND STREAM IMPACT MAPS

APEX, NORTH CAROLINA

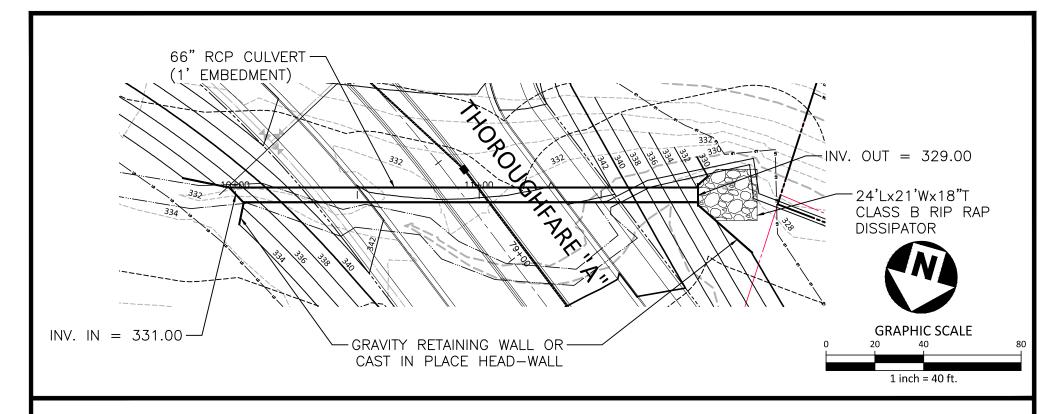
#### | PLAN INFORMATION

PROJECT NO. FILENAME CHECKED BY DRAWN BY SCALE

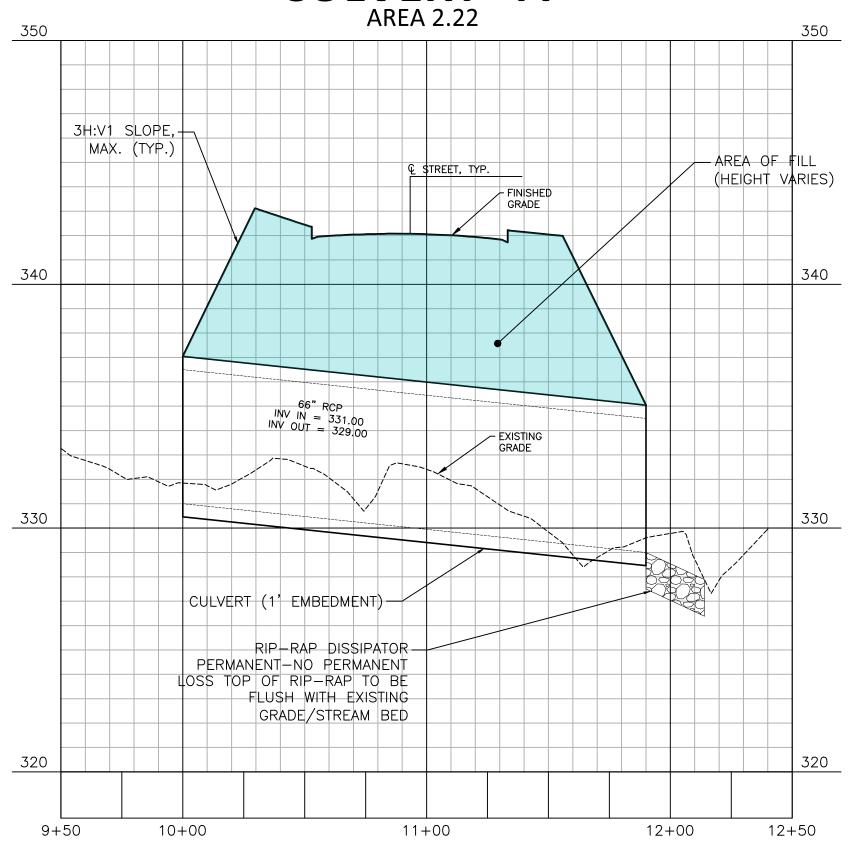
DATE

LEN-22002-EV1 XXX BIJ 1"=40' 06. 21. 2022

LEN-22002



# **CULVERT "A"**



M:\Projects\RXR\RXR22001\04-Production\Engineering\Exhibits\2022-08-08 Impact Maps\RXR22001-IM1.dwg, 8/19/2022 12:56:27 PM, Laura Wild



The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

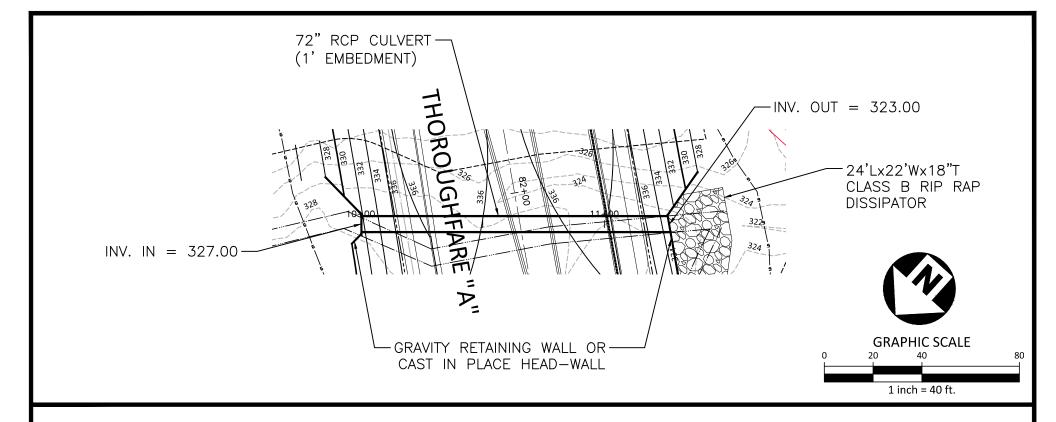
phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

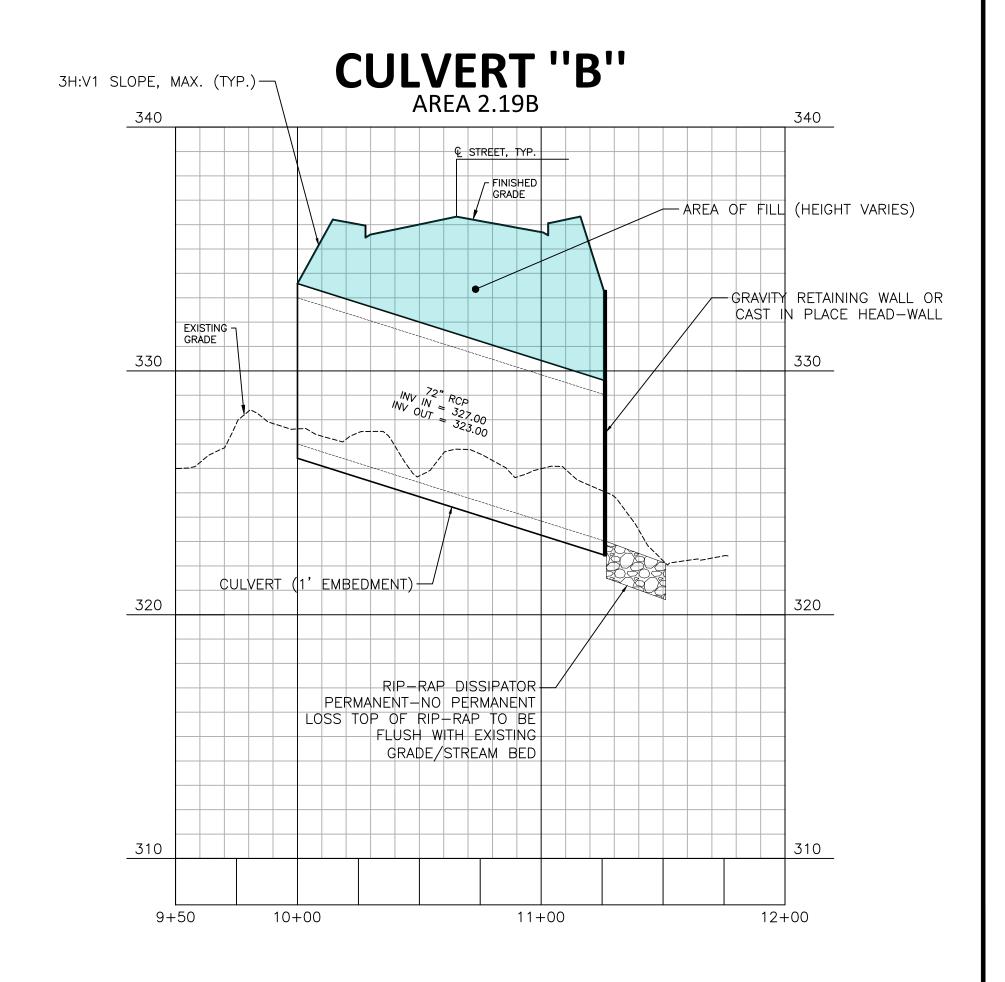
www.mcadamsco.com

VERIDEA
IMPACT MAPS
0 HIGHWAY 55
APEX, NORTH CAROLINA

#### **PLAN INFORMATION**

PROJECT NO. FILENAME CHECKED BY DRAWN BY DATE RXR-22001 RXR22001-IM1 LAW RAD 08. 19. 2022







The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

Exhibits\2022-08-08 Impact Maps\RXR22001-IM1.dwg, 8/19/2022 12:56:53 PM, Laura Wild

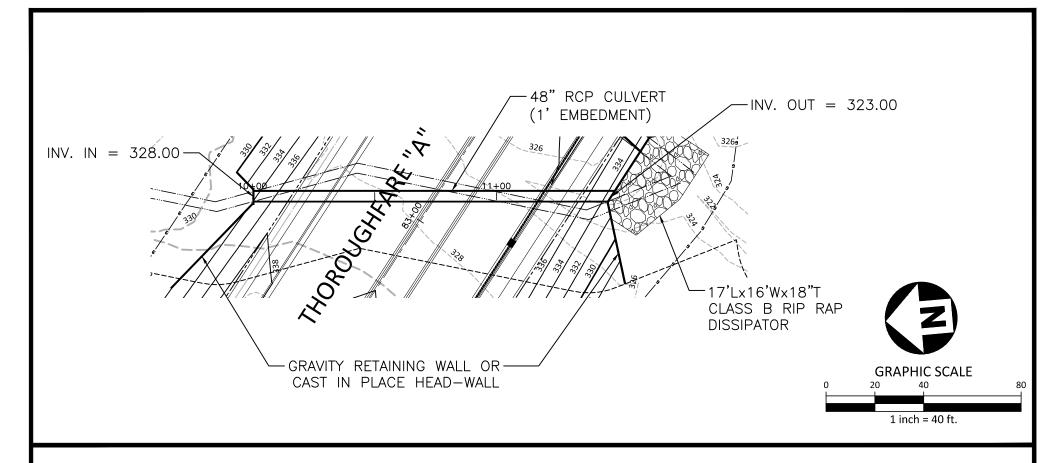
phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

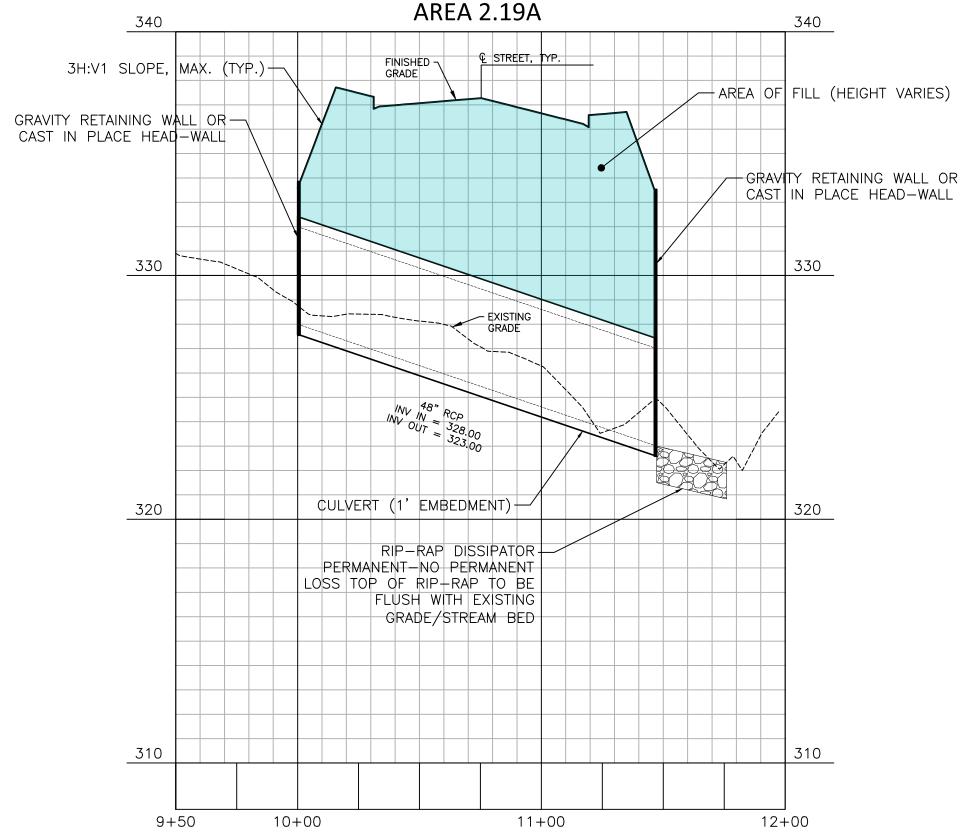
VERIDEA
IMPACT MAPS
0 HIGHWAY 55
APEX, NORTH CAROLINA

#### **PLAN INFORMATION**

PROJECT NO. FILENAME CHECKED BY DRAWN BY DATE RXR-22001 RXR22001-IM1 LAW RAD 08. 19. 2022







M:\Projects\RXR\RXR22001\04-Production\Engineering\Exhibits\2022-08-08 Impact Maps\RXR22001-IM1.dwg, 8/19/2022 12:57:18 PM, Laura Wild



The John R. McAdams Company, Inc. 2905 Meridian Parkway Durham, NC 27713

phone 919. 361. 5000 fax 919. 361. 2269 license number: C-0293, C-187

www.mcadamsco.com

VERIDEA
IMPACT MAPS
0 HIGHWAY 55
APEX, NORTH CAROLINA

#### **PLAN INFORMATION**

PROJECT NO. RXR-22001 FILENAME RXR22001-IM1 CHECKED BY XXX

CHECKED BY XXX
DRAWN BY RAD
DATE 08. 08. 2022