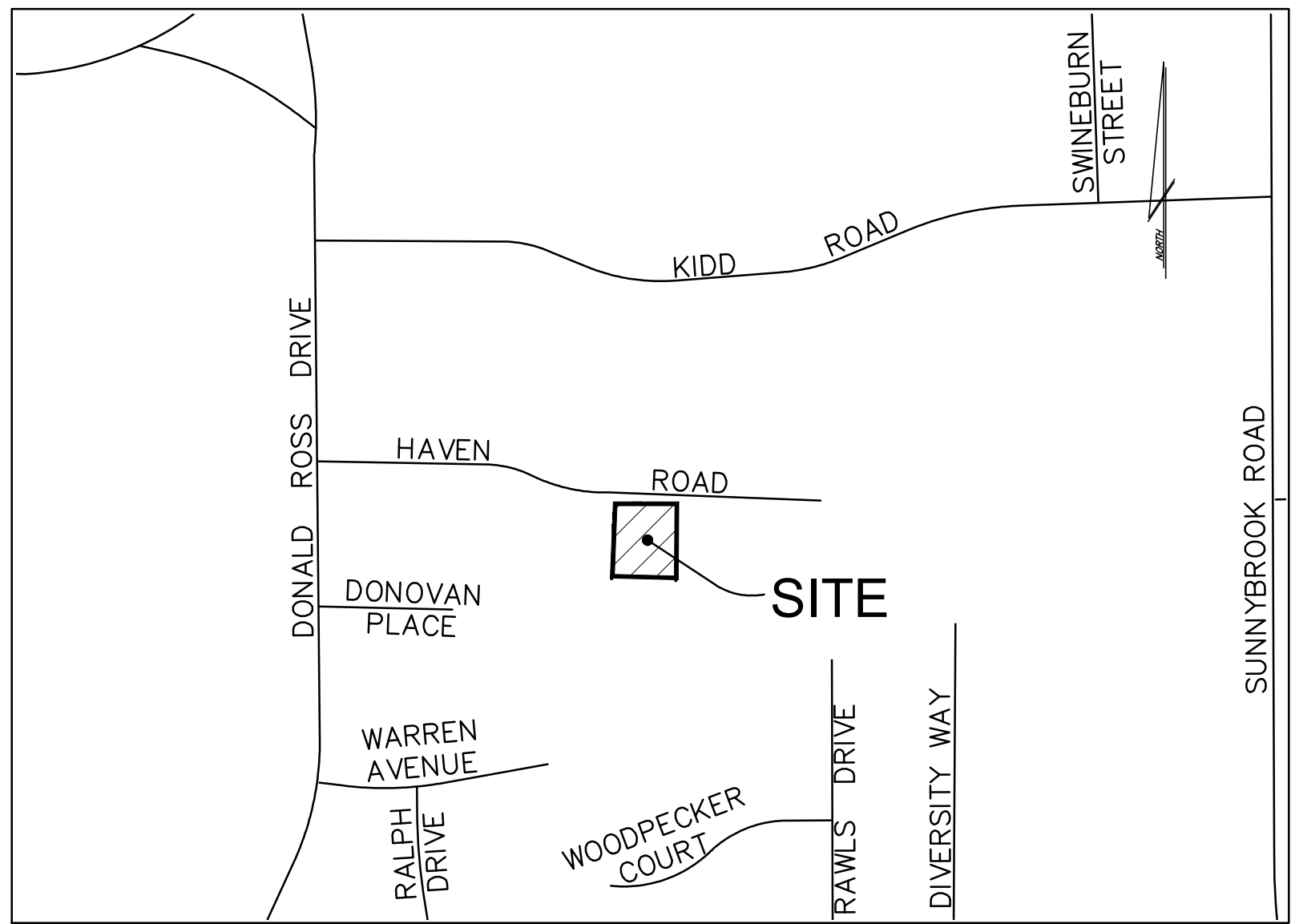


# Townes of Haven

## Preliminary Subdivision

### SUB-0012-2024



VICINITY MAP  
SCALE: 1"=400'

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**PLAN SUMMARY**

Address 2918 Haven Road  
0 Haven Road

Wake Co. PINs 1723-17-9648  
1723-17-9548

Reference DB 19609 PG 1959  
DB 18672 PG 477  
BM 2025 Page 860

OWNER/DEVELOPER SOUTHERN PURCHASING GROUP, LLC  
PHELLCO CORPORATION  
P.O. BOX 37086  
RALEIGH, NC 27627  
nathan@bigrealtyco.com  
(978) 807-4403

**PROPOSED TOWNHOME SITE DATA**

Zoning **R-6/R-10/RX-4-CU**

R/W Dedication 0.0 ac

Other Dedications 0.0 ac

R-6 Site Area 0.461 ac/20,073 sf

R-10 Site Area 0.221 ac/9,613 sf

RX-4-CU Site Area **0.044 ac/1,920 sf**

Gross Site Area **0.726 ac/31,606 sf**

Proposed Use - Multi Unit Townhomes **UDO 2.2.3**

Maximum Site Density 31,606/4500 = 7.02 UNITS

*Per UDO based on R-6 Zoning for portion of property where townhomes are located*

Total Units Proposed 7 Units

**TOWNHOME DEVELOPMENT REQUIREMENTS**

**SITE DIMENSIONS - UDO 2.2.3.A**

Outdoor Amenity Area Required UDO 2.2.3.A3 10% of 31,606 sf = 3,160.6 sf

Outdoor Amenity Area Provided UDO 2.2.3.A3 6,440 sf = 20.4%

Min. Lot Area UDO 2.2.3.B1 N/A

Min. Lot Width UDO 2.2.3.B2 16 feet

**PRINCIPLE BUILDING/STRUCTURE SETBACK - UDO 2.2.3.C**

From Primary Street UDO 2.2.3.C1 10 feet

From Side Site Boundary Line UDO 2.2.3.C3 10 feet

From Rear Site Boundary Line UDO 2.2.3.C4 20 feet

Building Separation UDO 2.2.3.C6 10 feet

**PARKING SETBACKS - UDO 2.2.3.D**

From Primary Street UDO 2.2.3.D1 20 feet

From Side Lot Line UDO 2.2.3.D3 0 feet

From Rear Lot Line UDO 2.2.3.D4 3 feet (min.)

**HEIGHT - UDO 2.2.3.E**

Maximum Building Height UDO 2.2.3.E1 45 feet/3 stories

**PARKING - UDO 7.1.2**

Minimum Parking Required UDO 7.1.2.C No minimum

Maximum Parking Allowed UDO 7.1.2.C No maximum

Parking Provided - 7 driveway spaces, 7 surface spaces, 6 guest spaces = 20 spaces

**NOTES:**

- BOUNDARY & TOPOGRAPHIC SURVEY BY PENNONI RECOMBINATION MAP BY ESP ASSOCIATES, INC. BM 2025 PG 860.
- ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE CITY OF RALEIGH DEVELOPMENT STANDARDS AND SPECIFICATIONS.
- A FEE-IN-LIEU WILL BE PAID FOR WIDENING STREET TO 1/2 OF 27'B-B AND 6' WIDE CONCRETE SIDEWALK ALONG FRONTAGE.
- RESIDENTIAL INFILL RULES APPLY (SEC.2.2.7) AND PROPOSED SETBACKS AND BUILDING HEIGHTS ARE BASED ON SAID RULES.
- HAVEN ROAD IS CATEGORIZED AS NEIGHBORHOOD YIELD. THIS STREET TYPOLOGY HAS A REQUIRED ROW WIDTH OF 55', 27' BOC-BOC, 6'SW, 6'PS, 5'UPE AND 2'MS. A FEE-IN-LIEU WILL BE REQUIRED FOR ADDITIONAL ROADWAY WIDENING, CURB AND GUTTER AND 6' SIDEWALK.
- RETAINING WALLS AND SOLID WASTE APPROVAL TO BE OBTAINED WITH SITE PERMIT REVIEW. IF REQUIRED A LIGHTING PLAN WILL BE SUBMITTED WITH SITE PERMIT REVIEW.
- THE EXISTING ZONING LINES WILL REMAIN.**
- BUILDING FOOTPRINTS ARE SHOWN FOR REFERENCE ONLY.
- THE COMMON AREA LOT WILL NOT BE OCCUPIED IN THE FUTURE AND IS DESIGNATED ACCORDINGLY AS A NON-BUILDABLE LOT ON THE PRELIMINARY PLAN AND WILL BE RECORDED AS SUCH ON THE FINAL SUBDIVISION PLAT.

**SOLID WASTE SERVICES**

- DEVELOPERS HAVE REVIEWED AND ARE IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN THE SOLID WASTE DESIGN MANUAL.
- SOLID WASTE SERVICE WILL BE PROVIDED AT PUBLIC STREET BY INDIVIDUAL 96-GAL. STANDARD CITY OF RALEIGH RESIDENTIAL SOLID WASTE CART PER CITY OF RALEIGH WASTE DESIGN MANUAL.

**BLOCK PERIMETER EXEMPTION**

UDO 8.3.2.A.2.b  
MINIMUM SITE AREA APPLICABLE IS 5 ACRES, THIS SITE IS EXEMPT

**FREQUENT TRANSIT DEVELOPMENT OPTION**

NOT USED FOR THIS PROJECT

**TREE CONSERVATION**

THIS SITE IS LESS THAN 2 ACRES AND THEREFORE IS EXEMPT FROM TREE CONSERVATION REQUIREMENTS.

**LIGHTING PLAN**

A LIGHTING PLAN, IF REQUIRED, WILL PROVIDED WITH SITE PERMIT REVIEW.

**PUBLIC IMPROVEMENT QUANTITIES**

Phase Number(s)	1
Number of Lot(s)	7
Lot Number(s) by Phase	1-8
Number of Units	7
Livable Buildings	7
Common Area?	Yes
Number of Common Area Lots	1
Public Water (LF)	0
Public Sewer (LF)	0
Public Street (LF) - FULL	0
Public Street (LF) - PARTIAL	0
Public Sidewalk (LF)	0
Street Signs (LF)	0
Water Service Stubs	7
Sewer Service Stubs	7

**LEGEND:**

- IFF - IRON PIPE FOUND
- RF - REBAR FOUND
- RAW - RIGHT-OF-WAY
- CONC. - CONCRETE
- TRF - ELECTRICAL TRANSFORMER
- AC - HVAC UNIT
- WM - WATER METER
- CO - SEWER CLEANOUT
- SSMH - SANITARY SEWER MANHOLE
- SS- - UNDERGROUND SANITARY SEWER PIPE
- DI - STORM DROP INLET
- AI - STORM AREA INLET WITH CONCRETE LID
- RCP - REINFORCED CONC. PIPE
- SD- - UNDERGROUND STORM PIPE (SIZE UNKNOWN)
- FES - FLARED END SECTION
- SW - SIDEWALK
- FFE - FINISHED FLOOR ELEVATION
- PP - POWER/UTILITY POLE
- OW- - OVERHEAD UTILITY LINES

Design Envelope ID: 9AF9CB11-A835-43BC-80C8-B1C448A18DF0

**Preliminary Subdivision Application**  
Site Review  
Planning and Development Customer Service Center • One Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2500

**INSTRUCTIONS:** This form is used when submitting a Preliminary Subdivision (UDO Section 10.2.5). Please check the appropriate review type and include the plan checklist document.

**DEVELOPMENT OPTIONS (UDO Chapter 2)**

Conventional Subdivision  Compact Development  Conservation Development  
 Cottage Court  Flag lot  Frequent Transit Development Option

NOTE: Subdivisions may require City Council approval if located in a Historic Overlay District.

**GENERAL INFORMATION**

Scoping/sketch plan case number(s):  
Development name (subject to approval): Townes of Haven  
Property Address(es): 2918 Haven Road  
Recorded Deed PIN(s): 1723-17-9648

**Building type(s):**  Detached House  Attached House  Townhouse  Apartment  
 General Building  Mixed Use Building  Civic Building  Open Lot  Tiny House

**CURRENT PROPERTY OWNER/APPLICANT/DEVELOPER INFORMATION**

Current Property Owner(s) Names: Nathan Becker  
Company: Southern Purchasing Group, LLC Title: Manager  
Address: P.O. Box 37086, Raleigh, NC 27627  
Phone #: (978) 807-4403 Email: nathan@bigrealty.com

Applicant Name (if different from owner. See "who can apply" in instructions):  
Relationship to owner:  Lessee or contract purchaser  Owner's authorized agent  Easement holder

Company: Southern Purchasing Group, Address: P.O. Box 37086, Raleigh, NC 27627  
Phone #: (978) 807-4403 Email: nathan@bigrealty.com

NOTE: please attach purchase agreement or contract, lease or easement when submitting this form.

Developer Contact Names: Patricia Hildreth  
Company: CMS Engineering PLLC Title: Manager  
Address: 9320 St. Johns Church Road, Zebulon, NC 27597  
Phone #: (919) 210-5899 Email: patti.cmseng@gmail.com

Revision 05.20.25  
raleighnc.gov

Design Envelope ID: 9AF9CB11-A835-43BC-80C8-B1C448A18DF0

**DEVELOPMENT TYPE + SITE DATA TABLE - ZONING INFORMATION**

Gross site acreage: 0.726 ac/31,606 sf  
Zoning districts (if more than one, provide acreage of each):  
R-6, 0.461 ac; R-10, 0.221 ac; RX-4-CU, 0.044 ac

Overlay district(s): n/a Inside City Limits?  Yes  No Historic District/Landmark: N/A

Conditional Use District (CUD) Board of Adjustment Case # Design Alternate Case #  
Case # Z- n/a BOA- n/a DA- n/a

**STORMWATER INFORMATION**

Impervious Area on Parcel(s):  
Existing (sf) 2,289 Proposed total (sf) 14,203 Impervious Area for Compliance (includes right-of-way):  
Existing (sf) 2,480 Proposed total (sf) 14,700

**NUMBER OF LOTS AND DENSITY**

# of Detached House Lots: n/a # of Attached House Lots: n/a # of Townhouse Lots: 7  
# of Tiny House Lots: n/a # of Open Lots: 1 # of Other Lots (Apartment, General, Mixed Use, Civic): n/a  
Total # of Lots: 8 Total # Dwelling Units: 7  
# of bedroom units (if known): 1br 2br 3br 4br  
Proposed density for each zoning district (UDO 1.5.2.F): Per email from J. Gaslin on 12/30/24, underlying zoning district R-6 applies. Therefore density is 31,606/4,500 = 7.02 units allowed 7 units approved.

**APPLICANT SIGNATURE BLOCK**

Pursuant to state law (N.C. Gen. Stat. § 160D-403(a)), applications for development approvals may be made by the landowner, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner. An easement holder may also apply for development approval for such development as is authorized by the easement.

Acting as an authorized agent requires written permission from the property owner for the purposes of making this development approval and/or permit application. Written permission from the property owner to act as an authorized agent must be made available to the City of Raleigh upon request.

By submitting this application, the undersigned applicant acknowledges that they are either the property owner or one of the persons authorized by state law (N.C.G.S. 160D-403(a)) to make this application, as specified in the application. The undersigned also acknowledges that the information and statements made in the application are correct and the undersigned understands that development approvals are subject to revocation for false statements or misrepresentations made in securing the development approval, pursuant to N.C. Gen. Stat. § 160D-403(f).

The undersigned indicates that the property owner(s) is aware of this application and that the proposed project described in this application will be maintained in all respects in accordance with the plans and specifications submitted herewith, and in accordance with the provisions and regulations of the City of Raleigh Unified Development Ordinance.

The undersigned hereby acknowledges that, pursuant to state law (N.C.G.S. 143-755(b1)), if this permit application is placed on hold at the request of the applicant for a period of six consecutive months or more, or if the applicant fails to respond to comments or provide additional information requested by the City for a period of six consecutive months or more, then the application review is discontinued, and a new application is required to proceed and the development regulations in effect at the time permit processing is resumed shall apply to the new application.

Signature: *Nathan Becker* Date: 7/24/2025  
Printed Name: nathan becker  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Printed Name: \_\_\_\_\_

NOT RELEASED FOR CONSTRUCTION

CMS Engineering, PLLC  
9320 St. John's Church Road  
Zebulon, NC 27597  
PHONE: (919) 210-5899  
EMAIL: patti.cmseng@gmail.com



TOWNES OF HAVEN  
SOUTHERN PURCHASING GROUP, LLC  
PRELIMINARY SUBDIVISION  
RALEIGH, NC

**REVISIONS**

5/28/24 PER REVIEW COMMENTS
9/17/24 PER REVIEW COMMENTS
07/28/25 REV LOT AREA

**TITLE SHEET**

DWG NAME:  
2918 PSD4

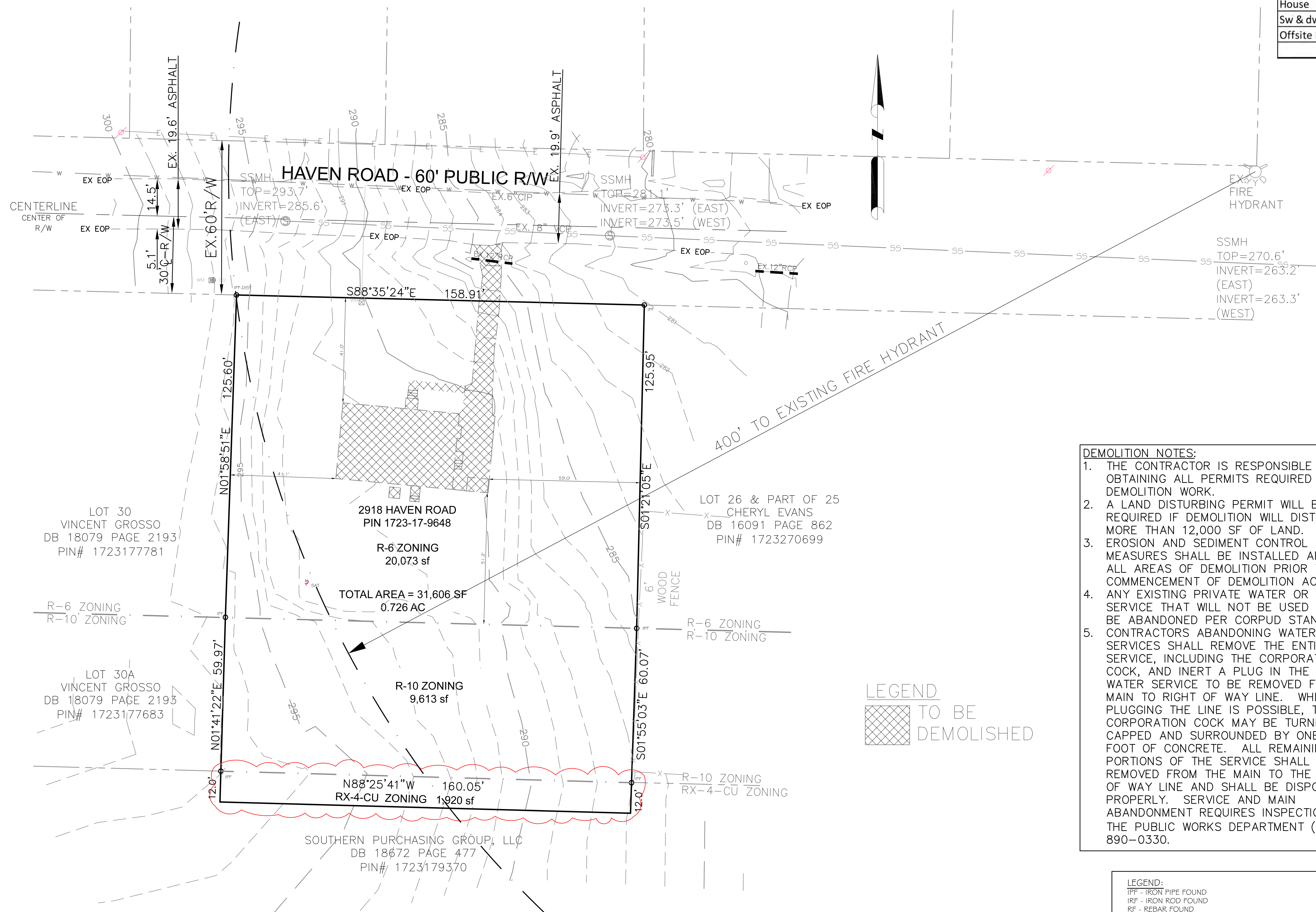
PLAN DATE:  
03/18/24

DATE ISSUED:  
07/28/25

SCALE: NTS

PS-1

Existing Impervious	
House	1769
Sw & dw	498
Offsite DW	181
<b>Total</b>	<b>2448</b>

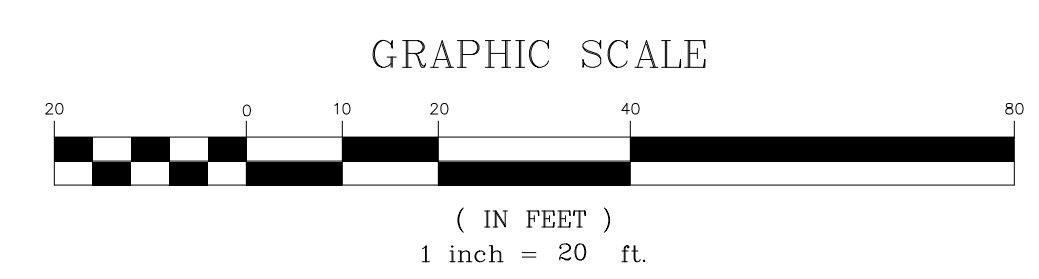


- DEMOLITION NOTES:**
1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION WORK.
  2. A LAND DISTURBING PERMIT WILL BE REQUIRED IF DEMOLITION WILL DISTURB MORE THAN 12,000 SF OF LAND.
  3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AROUND ALL AREAS OF DEMOLITION PRIOR TO THE COMMENCEMENT OF DEMOLITION ACTIVITIES.
  4. ANY EXISTING PRIVATE WATER OR SEWER SERVICE THAT WILL NOT BE USED SHALL BE ABANDONED PER CORPUD STANDARDS.
  5. CONTRACTORS ABANDONING WATER SERVICES SHALL REMOVE THE ENTIRE SERVICE, INCLUDING THE CORPORATION COCK, AND INERT A PLUG IN THE MAIN. WATER SERVICE TO BE REMOVED FROM MAIN TO RIGHT OF WAY LINE. WHEN PLUGGING THE LINE IS POSSIBLE, THE CORPORATION COCK MAY BE TURNED OFF, CAPPED AND SURROUNDED BY ONE CUBIC FOOT OF CONCRETE. ALL REMAINING PORTIONS OF THE SERVICE SHALL BE REMOVED FROM THE MAIN TO THE RIGHT OF WAY LINE AND SHALL BE DISPOSED OF PROPERLY. SERVICE AND MAIN ABANDONMENT REQUIRES INSPECTION BY THE PUBLIC WORKS DEPARTMENT (919) 890-0330.

**LEGEND**  
 TO BE DEMOLISHED

**LEGEND:**  
 IFF - IRON PIPE FOUND  
 IRF - IRON ROD FOUND  
 RF - REBAR FOUND  
 R/W - RIGHT-OF-WAY  
 CONC. - CONCRETE  
 TRF - ELECTRICAL TRANSFORMER  
 AC - HVAC UNIT  
 WM - WATER METER  
 CO - SEWER CLEANOUT  
 SSMH - SANITARY SEWER MANHOLE  
 -SS- - UNDERGROUND SANITARY SEWER PIPE  
 DI - STORM DRAIN INLET  
 DI - STORM AREA INLET WITH CONCRETE LID  
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 -SD- - UNDERGROUND STORM PIPE (SIZE UNKNOWN)  
 FES - FLARED END SECTION  
 SW - SIDEWALK  
 FFE - FINISHED FLOOR ELEVATION  
 PP - POWER/UTILITY POLE  
 -OW- - OVERHEAD UTILITY LINES

**BOUNDARY SURVEY BY PENNONI,  
 KEVIN C. PIVER, PLS.**



**NOT RELEASED FOR CONSTRUCTION**

**CMS Engineering, PLLC**  
 9320 St. John's Church Road  
 Zebulon, NC 27597  
 PHONE: (919) 210-5899  
 EMAIL: patti.cmseng@gmail.com

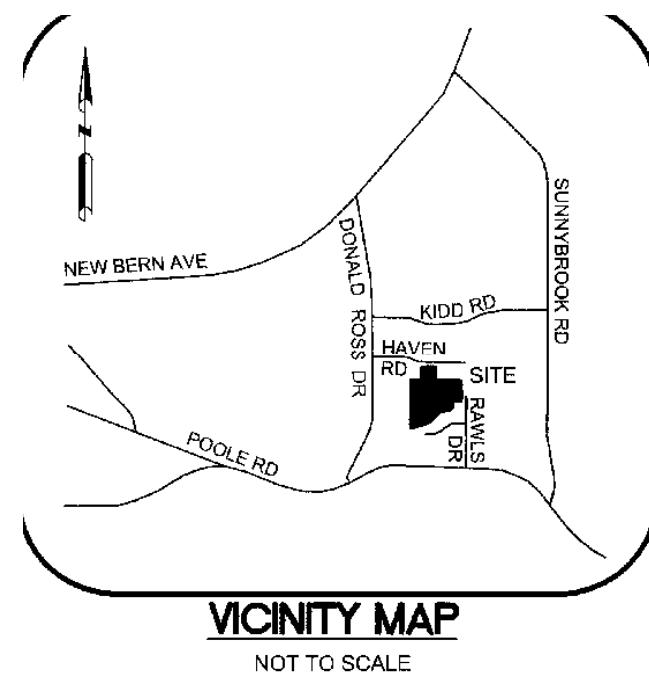


**TOWNES OF HAVEN  
 SOUTHERN PURCHASING GROUP, LLC  
 PRELIMINARY SUBDIVISION  
 RALEIGH, NC**

REVISIONS
5/28/24 PER REVIEW COMMENTS
9/17/24 PER REVIEW COMMENTS
07/28/25 REV LOT AREA

**EXISTING CONDITIONS & DEMOLITION PLAN**

DWG NAME:  
 2918 PSD#4  
 PLAN DATE:  
 03/18/24  
 DATE ISSUED:  
 07/28/25  
 SCALE: 1"=20'



- NOTES:
1. ALL DISTANCES ARE U.S. SURVEY FOOT HORIZONTAL GROUND DISTANCES.
  2. ALL AREAS AND DISTANCES ARE COMPUTED BY COORDINATE COMPUTATION METHOD UNLESS OTHERWISE NOTED.
  3. THE SUBJECT PARCELS ARE NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEMA MAP NUMBER 5720172300K FIRM PANEL 1723 HAVING AN EFFECTIVE DATE OF JULY 19, 2022.
  4. THIS SURVEY WAS PERFORMED USING CONVENTIONAL AND GNSS SURVEY METHODS. THE CONTROL, TRAVERSE, PROPERTY LOCATION, AND ALL PLANIMETRIC LOCATION WAS PERFORMED USING CONVENTIONAL SURVEYING EQUIPMENT. THE SITE WAS TIED TO THE NC STATE PLANE COORDINATE SYSTEM UTILIZING GNSS EQUIPMENT.
  5. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ALL FACTS AND ENCUMBRANCES WHICH MAY BE DISCLOSED WITHIN AN ACCURATE AND COMPLETE TITLE REPORT.
  6. THE CLIENT IS REQUIRED BY STATE LAW TO CONTACT NC 811 PRIOR TO ANY EXCAVATION WORK BEING PERFORMED ON SITE.
  7. RECOMBINED PROPERTIES ARE SUBJECT TO UDO 9.2 STORMWATER MANAGEMENT REGULATIONS.
  8. SUBJECT PARCELS ARE LOCATED IN THE FREQUENT TRANSIT AREA.

THIS PLAT NOT TO BE RECORDED AFTER 22nd DAY OF May 2025  
ONE (1) COPY TO BE RETAINED FOR THE CITY. THIS PLAT IS X'IN FOOT OF THE CITY LIMITS.

OWNER (500 RAWLS DRIVE):  
SOUTHERN PURCHASING GROUP, LLC  
PO BOX 37086  
RALEIGH NC 27627

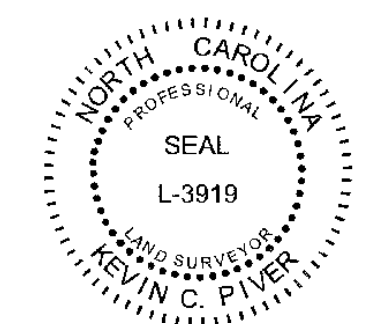
OWNERS (2906 & 2918 HAVEN ROAD):  
SOUTHERN PURCHASING GROUP, LLC &  
PHELCO CORPORATION  
PO BOX 37086  
RALEIGH NC 27627

I, KEVIN C. PIVER, PLS HEREBY CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEEDS AND MAPS OF RECORD AS SHOWN. THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DASHED LINES DRAWN FROM DEEDS AND MAPS OF RECORD AS SHOWN. THAT THE RATIO OF PRECISION IS 1:39,630; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH G.S. 47-30, AS AMENDED.

FURTHERMORE, I CERTIFY THAT THIS PLAT IS OF THE FOLLOWING TYPE: G.S. 47-30 (01/11/99). THIS SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

THAT THE GRID TIE WAS DETERMINED FROM AN ACTUAL GNSS SURVEY AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:  
CLASS OF SURVEY: CLASS A  
POSITIONAL ACCURACY: 0.03"  
TYPE OF GPS FIELD PROCEDURE: NC REAL TIME KINEMATIC NETWORK  
DATE OF SURVEY: JULY 9, 13, & 17, 2018  
DATUM/EPOCH: NAD 83(2011) EPOCH 2010.00  
GEOID MODEL: GEOID 12B  
COMBINED GRID FACTOR: 0.999994516  
UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 28TH DAY OF APRIL, 2025.



PROPERTY OWNERS CERTIFICATE:  
THIS CERTIFIES AND WARRANTS THAT THE UNDERSIGNED IS (ARE) THE SOLE OWNER(S) OF THE PROPERTY SHOWN ON THE MAP OR PLAT AND ANY ACCOMPANYING SHEETS HAVING ACQUIRED THE PROPERTY IN FEE SIMPLE BY DEED(S) RECORDED IN THE COUNTY REGISTER OF DEEDS OFFICE WHERE THE PROPERTY IS LOCATED AND AS SUCH HAS (HAVE) THE RIGHT TO CONVEY THE PROPERTY IN FEE SIMPLE.

SOUTHERN PURCHASING GROUP, LLC  
DEED BOOK 18672, PAGE 477

SOUTHERN PURCHASING GROUP, LLC by *[Signature]*  
SIGNATURE(S) OF PROPERTY OWNER(S)

AUTHORIZED SIGNATORY  
TITLE(S) OF PROPERTY OWNER(S)

NOTARY STATEMENT:  
I CERTIFY THAT THE FOLLOWING PERSON(S) PERSONALLY APPEARED BEFORE ME THIS DAY, EACH ACKNOWLEDGING TO ME THAT HE OR SHE VOLUNTARILY SIGNED THE FOREGOING DOCUMENT FOR THE PURPOSE STATED THEREIN AND IN THE CAPACITY INDICATED:

*Nathan Becker*  
DATE: April 28, 2025

*[Signature]*  
NOTARY SIGNATURE

DELINDA K. WHEELER  
NOTARY PUBLIC  
WAKE COUNTY, NC  
MY COMMISSION EXPIRES: 02-15-28

PROPERTY OWNERS CERTIFICATE:  
THIS CERTIFIES AND WARRANTS THAT THE UNDERSIGNED IS (ARE) THE SOLE OWNER(S) OF THE PROPERTY SHOWN ON THE MAP OR PLAT AND ANY ACCOMPANYING SHEETS HAVING ACQUIRED THE PROPERTY IN FEE SIMPLE BY DEED(S) RECORDED IN THE COUNTY REGISTER OF DEEDS OFFICE WHERE THE PROPERTY IS LOCATED AND AS SUCH HAS (HAVE) THE RIGHT TO CONVEY THE PROPERTY IN FEE SIMPLE.

SOUTHERN PURCHASING GROUP, LLC  
PHELCO CORPORATION  
DEED BOOK 18639, PAGE 1859

SOUTHERN PURCHASING GROUP, LLC by *[Signature]*  
SIGNATURE(S) OF PROPERTY OWNER(S) - SOUTHERN PURCHASING GROUP, LLC

AUTHORIZED SIGNATORY  
TITLE(S) OF PROPERTY OWNER(S) - SOUTHERN PURCHASING GROUP, LLC

*[Signature]*  
SIGNATURE(S) OF PROPERTY OWNER(S) - PHELCO CORPORATION

President  
TITLE(S) OF PROPERTY OWNER(S) - PHELCO CORPORATION

NOTARY STATEMENT:  
I CERTIFY THAT THE FOLLOWING PERSON(S) PERSONALLY APPEARED BEFORE ME THIS DAY, EACH ACKNOWLEDGING TO ME THAT HE OR SHE VOLUNTARILY SIGNED THE FOREGOING DOCUMENT FOR THE PURPOSE STATED THEREIN AND IN THE CAPACITY INDICATED:

*Nathan Becker*  
SOUTHERN PURCHASING GROUP, LLC

DATE: April 28, 2025

*[Signature]*  
NOTARY SIGNATURE

DELINDA K. WHEELER  
NOTARY PUBLIC  
WAKE COUNTY, NC  
MY COMMISSION EXPIRES: 02-15-28

NOTARY STATEMENT:  
I CERTIFY THAT THE FOLLOWING PERSON(S) PERSONALLY APPEARED BEFORE ME THIS DAY, EACH ACKNOWLEDGING TO ME THAT HE OR SHE VOLUNTARILY SIGNED THE FOREGOING DOCUMENT FOR THE PURPOSE STATED THEREIN AND IN THE CAPACITY INDICATED:

*Philip S. Wheeler*  
PHELCO CORPORATION

DATE: 04/30/25

*[Signature]*  
NOTARY SIGNATURE

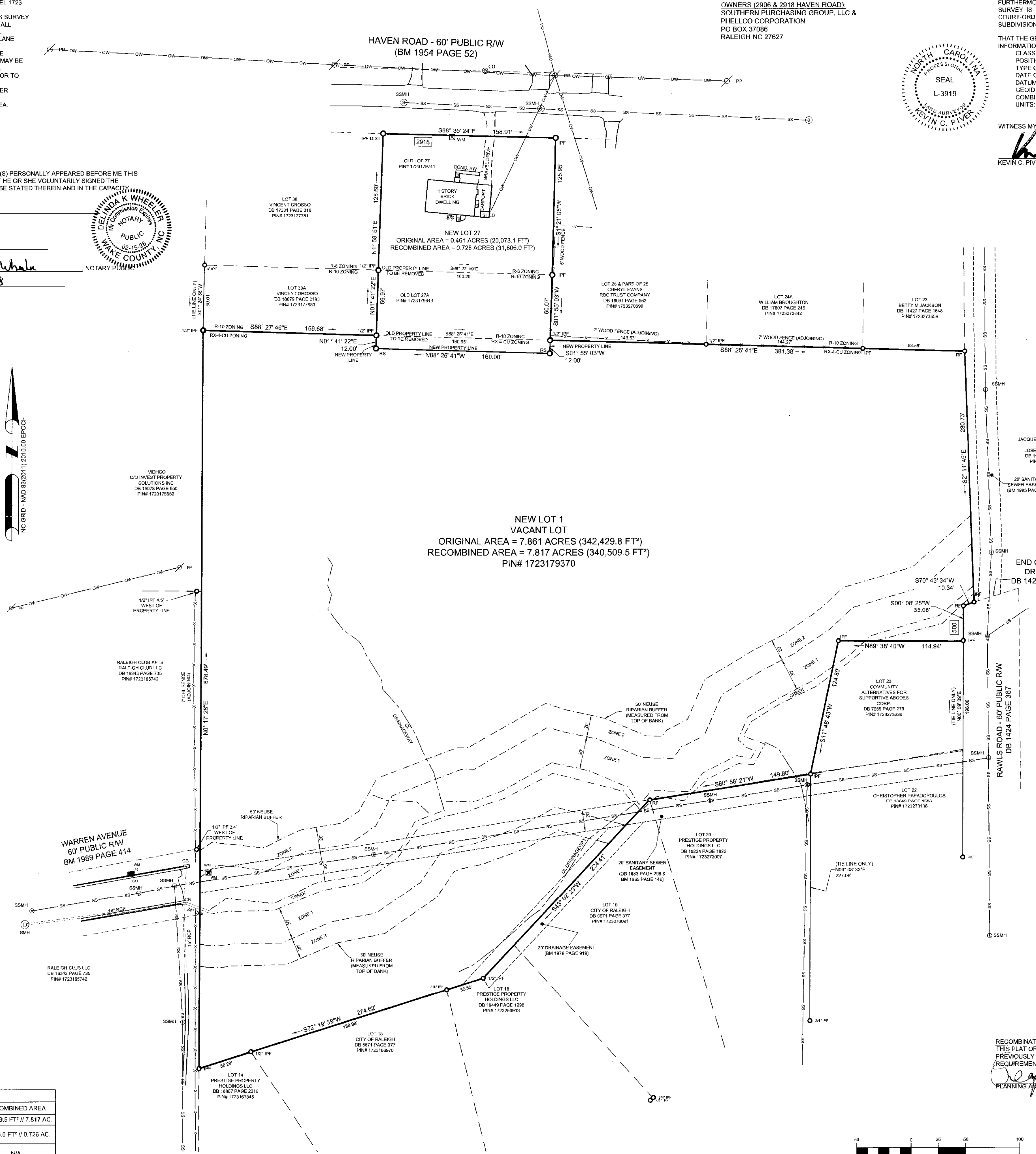
Denise Allison  
Notary Public  
Transylvania County, NC  
My Commission Expires: 02/01/2029

NOTARY PRINTED NAME: Denise Allison, NOTARY PUBLIC

MY COMMISSION EXPIRES: 02/01/2029

IMPERVIOUS SURFACE DATA TABLE FOR NEW LOT 27				
LOTS	ZONING	MAX. ALLOWABLE %	TOTAL LOT AREA	MAX. ALLOWABLE AREA
OLD LOT 27	R-6	51%	20,073.1 FT <sup>2</sup> // 0.461 AC.	10,237.3 FT <sup>2</sup> // 0.235 AC.
OLD LOT 27A	R-10	65%	9,612.6 FT <sup>2</sup> // 0.221 AC.	6,248.2 FT <sup>2</sup> // 0.143 AC.
PORTION OF NEW LOT 1	RX-4-CU	65%	1,920.3 FT <sup>2</sup> // 0.044 AC.	1,248.2 FT <sup>2</sup> // 0.029 AC.
WEIGHTED MAX. ALLOWABLE AREA:			17,733.7 FT <sup>2</sup> // 0.407 AC.	

SITE DATA TABLE						
LOT #	PARCEL OWNER	PIN	ZONING	LAND USE	ORIGINAL AREA	RECOMBINED AREA
1	SOUTHERN PURCHASING GROUP, LLC	1723179370	RX-4-CU	VACANT	342,429.8 FT <sup>2</sup> // 7.861 AC.	340,509.5 FT <sup>2</sup> // 7.817 AC.
27	SOUTHERN PURCHASING GROUP, LLC & PHELCO CORPORATION	1723179741	R-6	RESIDENTIAL	20,073.1 FT <sup>2</sup> // 0.461 AC.	31,606.0 FT <sup>2</sup> // 0.726 AC.
27A	SOUTHERN PURCHASING GROUP, LLC & PHELCO CORPORATION	1723179843	R-10	VACANT	9,612.6 FT <sup>2</sup> // 0.221 AC.	N/A

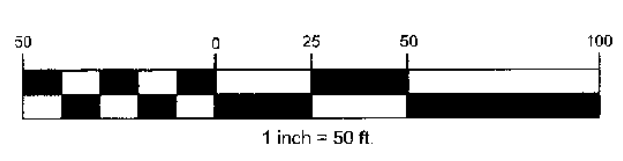


Register of Deeds  
Tammey L. Brunner  
Wake County, NC  
05/09/2025 11:47:09 AM  
B: BM2025 P: 00860 Pages: 1  
MAP Fee: \$21.00  
DOCUMENT #2025008655

REFERENCES:  
DB 18672 PAGE 477  
DB 19609 PAGE 1959  
DB 1863 PAGE 298  
DB 1424 PAGE 367  
BM 1965 PAGE 148  
BM 1954 PAGE 52

RECOMBINATION CERTIFICATE (RCMP-0057-2025):  
THIS PLAT OR MAP IS NOT A SUBDIVISION, BUT A RECOMBINATION OF PREVIOUSLY PLATTED PROPERTY, AND MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

*[Signature]*  
PLANNING AND DEVELOPMENT OFFICER/WAKE COUNTY REVIEW OFFICER  
5/8/2025



RECORDED IN BM 2025, PAGE WAKE COUNTY REGISTRY

RCMP-0057-2025  
Z-07-24

ESP Associates, Inc.  
2200 Cameron Centre Blvd.  
Morrisville, NC 27560  
919-675-1070  
www.espsurveyors.com

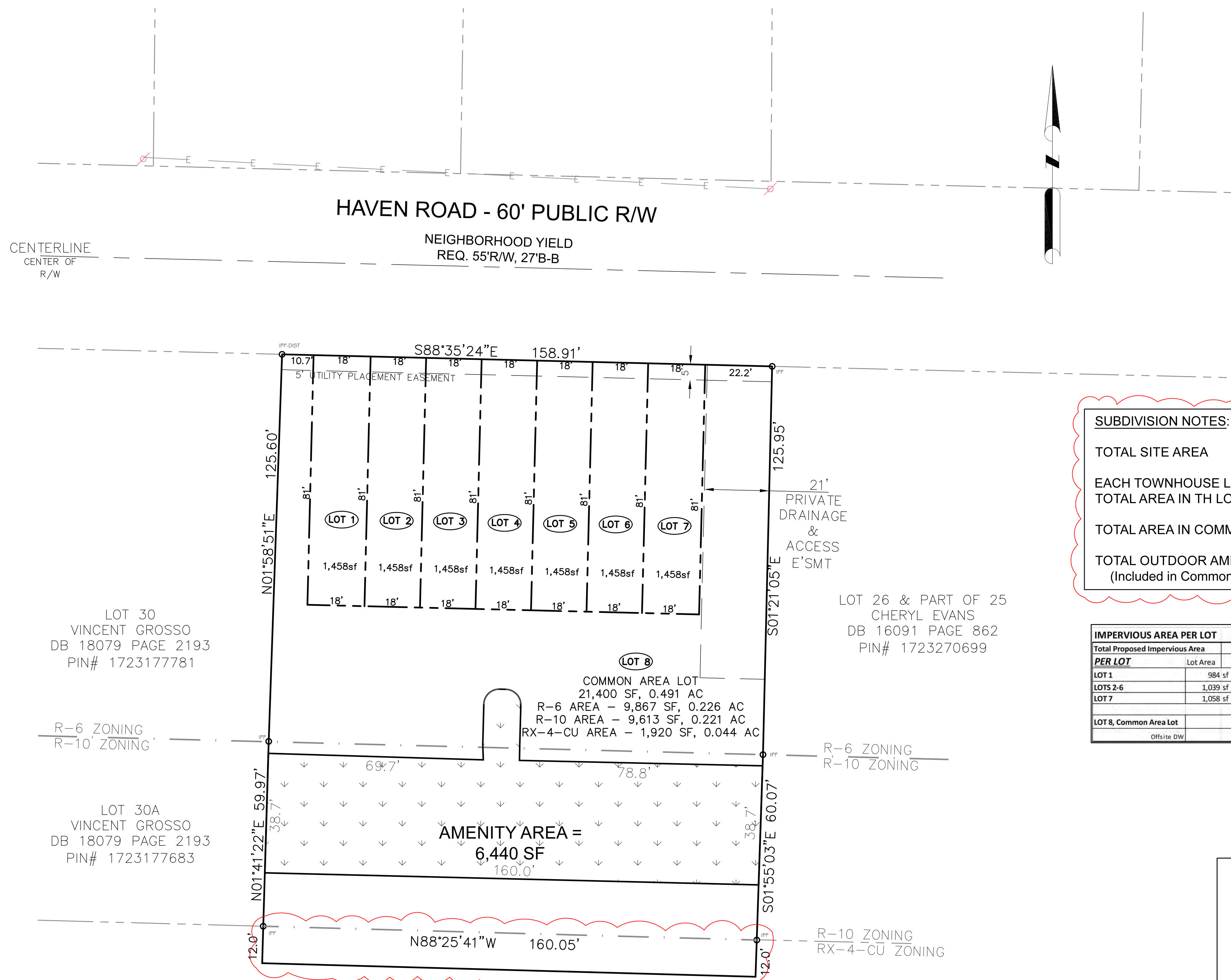
DATE: \_\_\_\_\_

REVISIONS: \_\_\_\_\_

TOWNSHIP: RALEIGH  
COUNTY: WAKE  
WAKE TAX ID  
SEE PARCELS ZONING: R6 & R-10 & RX-4-CU  
DATE OF SURVEY: FEBRUARY 10, 2025  
PROJECT NUMBER: 25-00251  
SURVEYED BY: BB  
DRAWN BY: JC  
CHECKED BY: KCP  
SHEET NO: 1 OF 1

FINAL PLAT OF  
RECOMBINATION FOR 2906 & 2918 HAVEN ROAD & 500 RAWLS DRIVE  
FOR  
SOUTHERN PURCHASING GROUP, LLC  
OWNER INFORMATION  
SOUTHERN PURCHASING GROUP, LLC & PHELCO CORPORATION  
DB 18672 PG 477 & DB 19609 PG 1959

PS-24 RO INDIARY MAP



**SUBDIVISION NOTES:**

TOTAL SITE AREA = 31,606 sf

EACH TOWNHOUSE LOT TO BE 18'x81'.  
TOTAL AREA IN TH LOTS = 10,206 sf

TOTAL AREA IN COMMON AREA LOT = 21,400 sf

TOTAL OUTDOOR AMENITY AREA = 6,440 sf  
(Included in Common Area Lot) 20.4%

IMPERVIOUS AREA PER LOT			
Total Proposed Impervious Area	14,792 sf		
PER LOT	Lot Area	1,458 sf	% Impervious
LOT 1	984 sf	984 sf	67.5%
LOTS 2-6	1,039 sf per lot	5,195 sf	71.3%
LOT 7	1,058 sf	1,058 sf	72.6%
LOT 8, Common Area Lot		7,058 sf	69.2%
Offsite DW		497 sf	

**LEGEND:**

- IPF - IRON PIPE FOUND
- IRF - IRON ROD FOUND
- RF - REBAR FOUND
- RAW - RIGHT-OF-WAY
- CONC. - CONCRETE
- TRF - ELECTRICAL TRANSFORMER
- AC - HVAC UNIT
- WM - WATER METER
- CO - SEWER CLEANOUT
- SSMH - SANITARY SEWER MANHOLE
- SS - UNDERGROUND SANITARY SEWER PIPE
- DI - STORM DROP INLET
- AI - STORM AREA INLET WITH CONCRETE LID
- RCP - REINFORCED CONC. PIPE
- SD- - UNDERGROUND STORM PIPE (SIZE UNKNOWN)
- FES - FLARED END SECTION
- SW - SIDEWALK
- FPE - FINISHED FLOOR ELEVATION
- PP - POWER/UTILITY POLE
- OW- - OVERHEAD UTILITY LINES

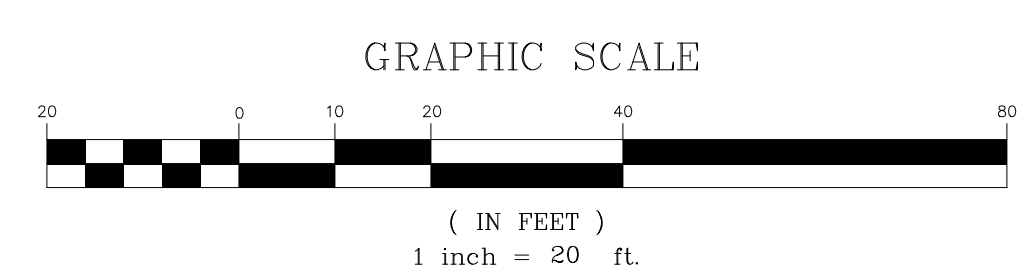
**N.C. UNDERGROUND UTILITIES**

3 DAYS BEFORE DIGGING CALL  
811

A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

**NOTE:**  
THE COMMON AREA LOT WILL NOT BE OCCUPIED IN THE FUTURE AND IS DESIGNATED ACCORDINGLY AS A NON-BUILDABLE LOT ON THE PRELIMINARY PLAN AND WILL BE RECORDED AS SUCH ON THE FINAL SUBDIVISION PLAT.



**NOT RELEASED FOR CONSTRUCTION**



**TOWNES OF HAVEN  
SOUTHERN PURCHASING GROUP, LLC  
PRELIMINARY SUBDIVISION  
RALEIGH, NC**

**REVISIONS**

5/28/24 PER REVIEW COMMENTS

9/17/24 PER REVIEW COMMENTS

07/28/25 REV LOT AREA

**SUBDIVISION LOTS & EASEMENTS**

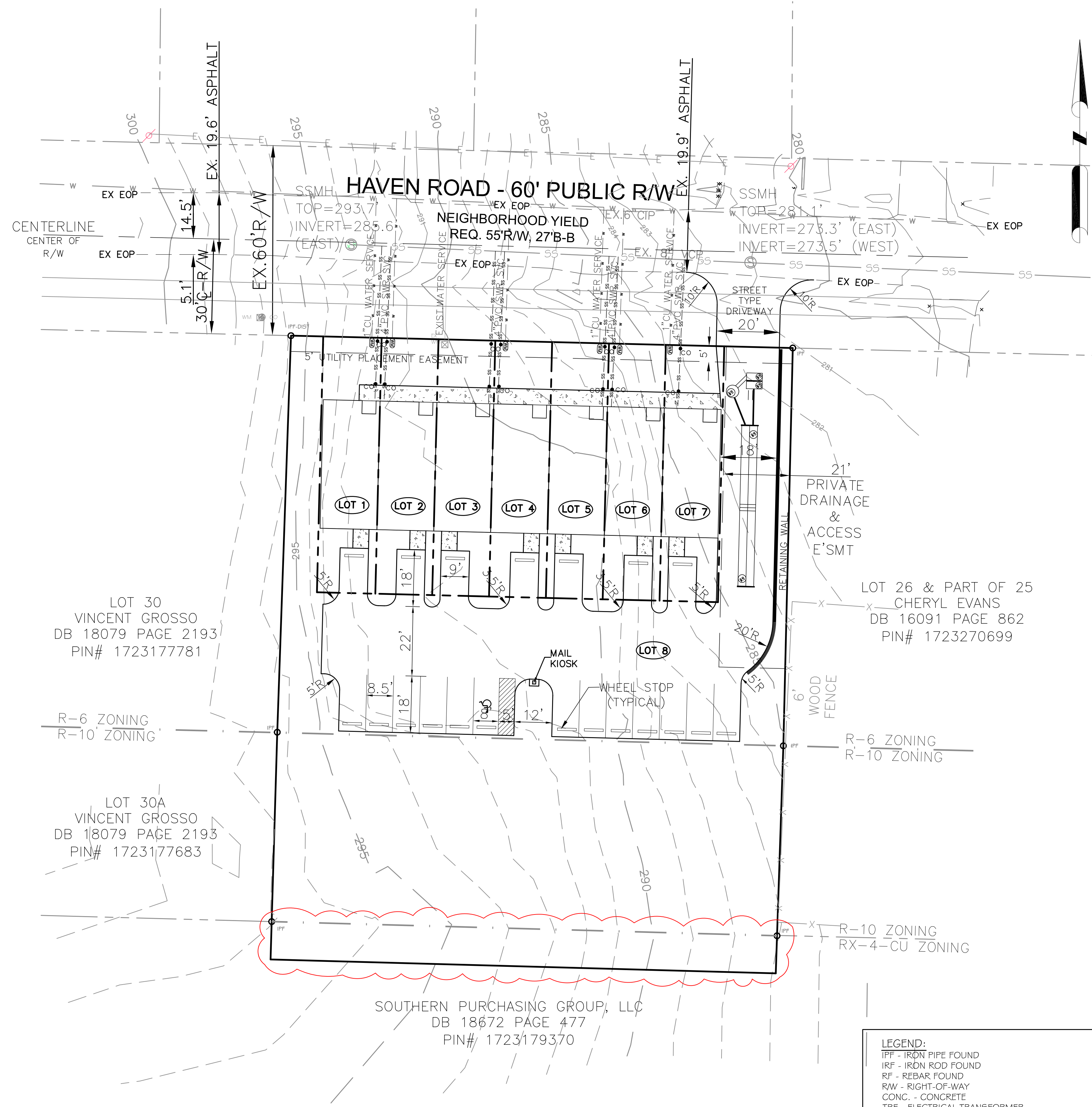
DWG NAME:  
2918 PSD#

PLAN DATE:  
05/10/24

DATE ISSUED:  
07/28/25

SCALE: 1"=20'

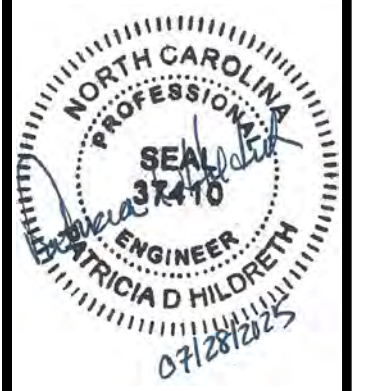
**CMS Engineering, PLLC**  
9320 St. John's Church Road  
Zebulon, NC 27597  
PHONE: (919) 210-5899  
EMAIL: pat@cmseng.com



- STANDARD UTILITY NOTES:**
- All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
  - Utility separation requirements:
    - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
    - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
    - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
    - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
    - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W41 & S-49).
    - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required. 3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
  - Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.
  - Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24-hour advance notice to the City of Raleigh Public Utilities Department
  - 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
  - It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
  - Install 3/4" copper\* water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure
  - Install 4" PVC\* sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum.
  - Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
  - All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
  - NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
  - Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC and/or Building Permit. Contact (919) 996-4516 or fog@raleighnc.gov for more information.
  - Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina.
  - The devices shall meet American Society of Sanitary Engineering (ASSE) standards and be on the University of Southern California approval list.
  - The device and installation shall meet the guidelines of Appendix A - Guidelines and Requirements for the Cross Connection Program in Raleigh's Service Area.
  - The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact cross.connection@raleighnc.gov for more information.
  - NOTICE for projects with replaced or oversized mains: If the City's reimbursement for an oversized main or urban main replacement project is \$250,000 or greater, the project must be publicly bid.

**NOT RELEASED FOR CONSTRUCTION**

**CMS Engineering, PLLC**  
 9320 St. John's Church Road  
 Zebulon, NC 27597  
 PHONE: (919) 210-5899  
 EMAIL: patti.cmseng@gmail.com



**TOWNES OF HAVEN**  
**SOUTHERN PURCHASING GROUP, LLC**  
 PRELIMINARY SUBDIVISION  
 2918 HAVEN ROAD, RALEIGH, NC

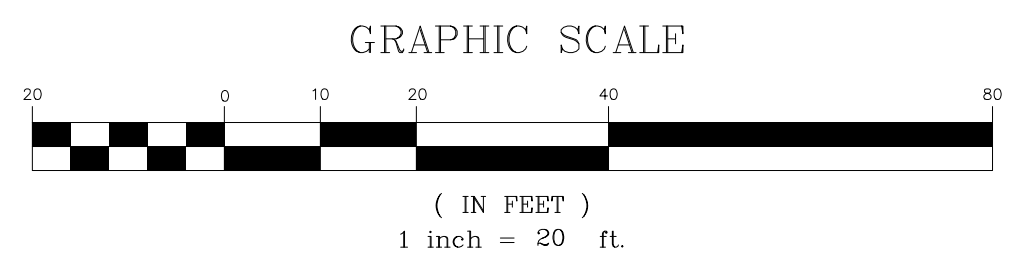
LOT 30  
 VINCENT GROSSO  
 DB 18079 PAGE 2193  
 PIN# 1723177781

LOT 30A  
 VINCENT GROSSO  
 DB 18079 PAGE 2193  
 PIN# 1723177683

LOT 26 & PART OF 25  
 CHERYL EVANS  
 DB 16091 PAGE 862  
 PIN# 1723270699

SOUTHERN PURCHASING GROUP, LLC  
 DB 18672 PAGE 477  
 PIN# 1723179370

- LEGEND:**
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  - IRFP - IRON ROD FOUND
  - RF - REBAR FOUND
  - RAW - RIGHT-OF-WAY
  - CONC. - CONCRETE
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  - OW- OVERHEAD UTILITY LINES



**NOTE:**  
 BUILDING FOOTPRINTS ARE SHOW FOR REFERENCE ONLY.

**ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.**

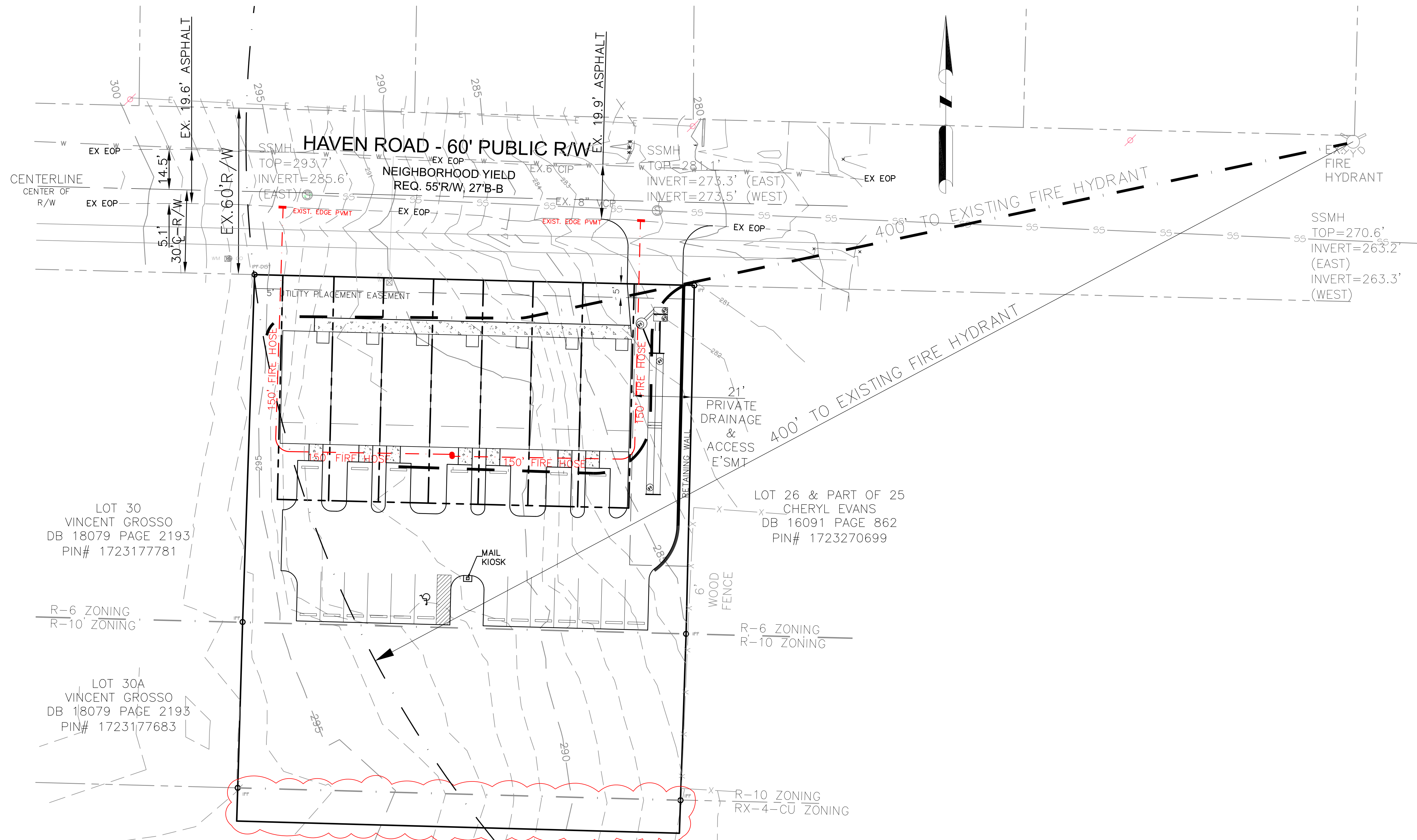
**N.C. UNDERGROUND UTILITIES**  
 3 DAYS BEFORE DIGGING CALL 811  
 A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY

**NOTE:** IF EXISTING WATER AND SEWER SERVICES ARE NOT USED THEY WILL BE ABANDONED PER CITY OF RALEIGH STANDARDS.

REVISIONS
5/28/24 PER REVIEW COMMENTS
9/17/24 PER REVIEW COMMENTS
07/28/25 REV LOT AREA

**PRELIMINARY SITE & UTILITY PLAN**

DWG NAME:  
 2918 PSD#4  
 PLAN DATE:  
 03/18/24  
 DATE ISSUED:  
 07/28/25  
 SCALE: 1"=20'



LOT 30  
VINCENT GROSSO  
DB 18079 PAGE 2193  
PIN# 1723177781

R-6 ZONING  
R-10 ZONING

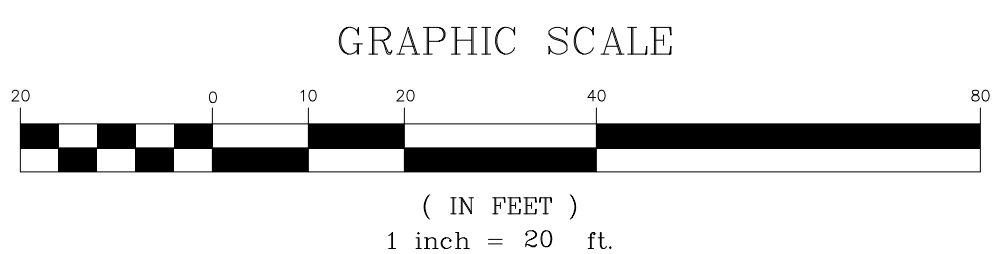
LOT 30A  
VINCENT GROSSO  
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LOT 26 & PART OF 25  
CHERYL EVANS  
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PIN# 1723270699

R-6 ZONING  
R-10 ZONING

R-10 ZONING  
RX-4-CU ZONING

SOUTHERN PURCHASING GROUP, LLC  
DB 18672 PAGE 477  
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**ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.**

**N.C. UNDERGROUND UTILITIES**

**3 DAYS BEFORE DIGGING CALL 811**

A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY

**NOT RELEASED FOR CONSTRUCTION**

**TOWNES OF HAVEN  
SOUTHERN PURCHASING GROUP, LLC  
PRELIMINARY SUBDIVISION  
2918 HAVEN ROAD, RALEIGH, NC**

REVISIONS
5/28/24 PER REVIEW COMMENTS
9/17/24 PER REVIEW COMMENTS
07/28/25 REV LOT AREA

**FIRE APPARATUS ACCESS PLAN**

DWG NAME:  
2918 PSD04  
PLAN DATE:  
03/18/24  
DATE ISSUED:  
07/28/25  
SCALE: 1"=20'

PS-5

**CMS Engineering, PLLC**  
9320 St. John's Church Road  
Zebulon, NC 27597  
PHONE: (919) 210-5899  
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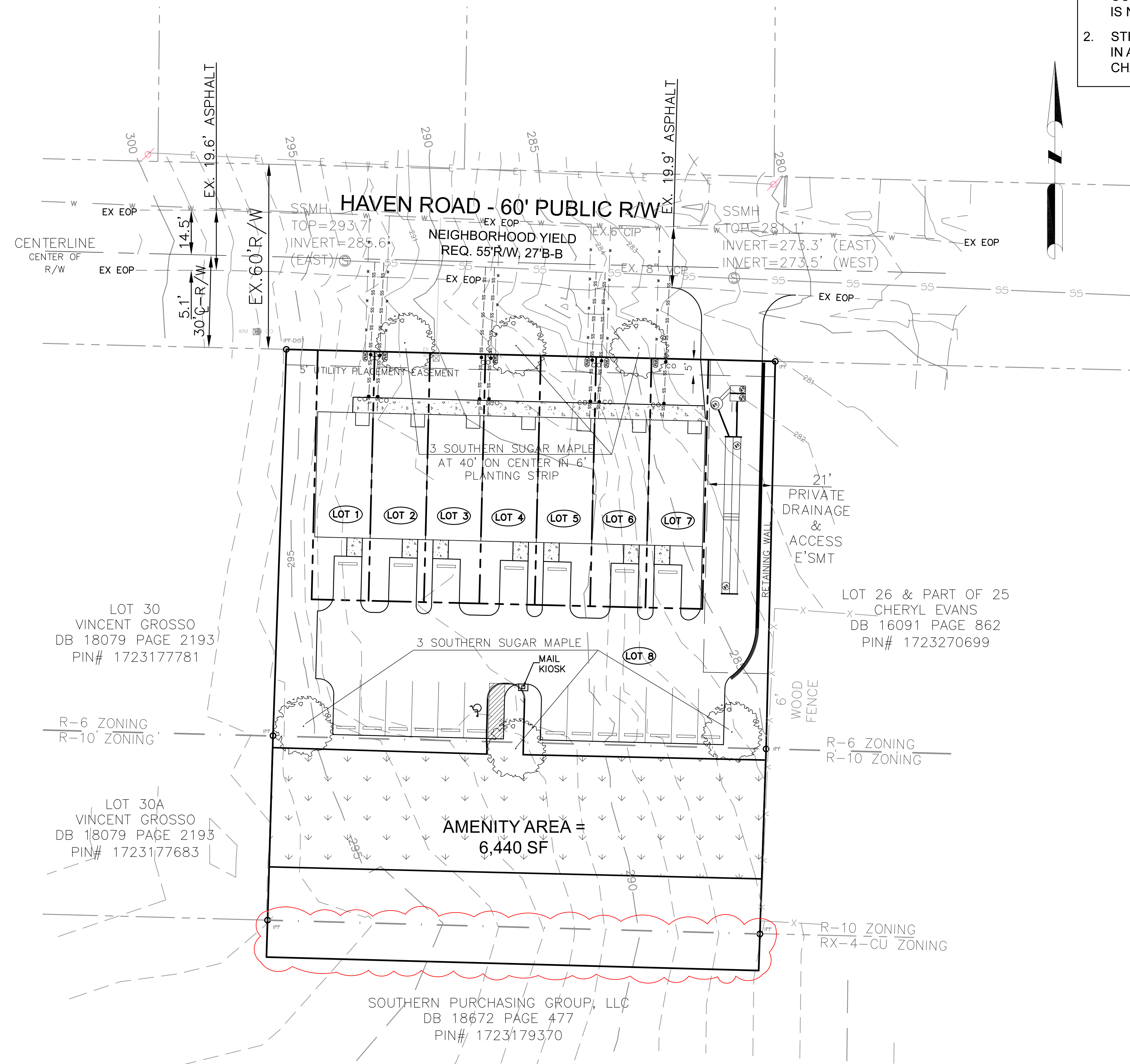
P-1867





NOTES:

- THIS PARCEL IS LESS THAN 2 ACRES THEREFORE COMPLIANCE WITH ARTICLE 9.1 TREE CONSERVATION IS NOT REQUIRED.
- STREET TREES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 2 OF THE CITY TREE MANUAL.



PARKING TREE REQUIREMENT

AREA IN PARKING	5,947 SF
TREES REQUIRED	1/2,000 SF = 3 TREES
TREES PROVIDED	3 TREES

RESIDENTIAL STREET FRONTAGE: 159'  
 TREES REQUIRED 1/40' = 3.975  
 TREES PROVIDED = 3

STREETSCAPE WIDTH = 6' STREETSCAPE

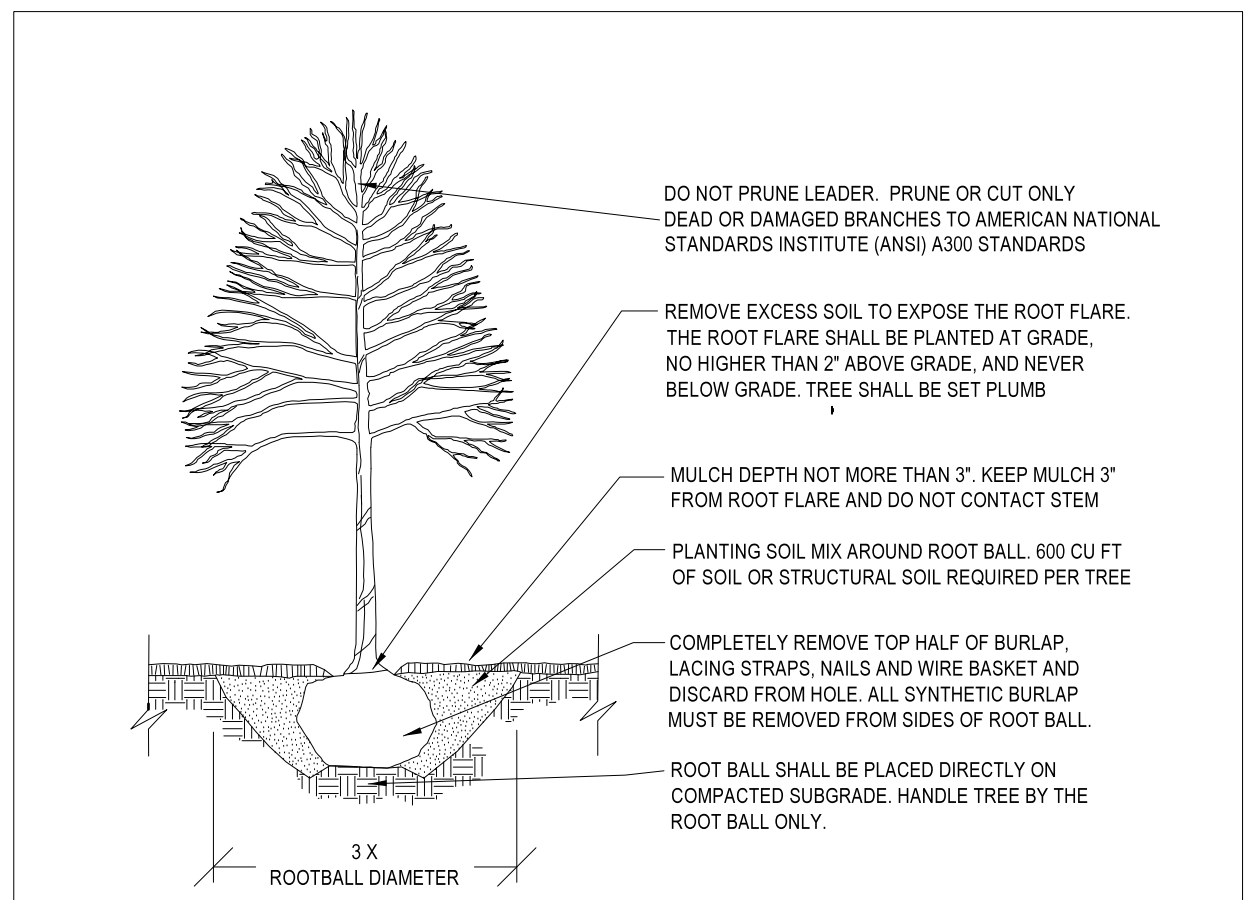
PLANT LARGE MATURING TREES AT 40' ON CENTER.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

N.C. UNDERGROUND UTILITIES  
 3 DAYS BEFORE DIGGING CALL 811  
 A ONE CALL SYSTEM FOR COMMUNITY AND JOB SAFETY

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NOTE:  
 BUILDING FOOTPRINTS ARE SHOW FOR REFERENCE ONLY.



- NOTES:
- TREES MUST MEET THE TREE QUALITY STANDARDS IN CH. 2 OF THE CITY TREE MANUAL.
  - CONTRACTOR IS RESPONSIBLE FOR ADEQUATE DRAINAGE OF ALL PLANTING PITS. (POSITIVE DRAINAGE AWAY FROM PIT)
  - TREES SHALL BE PLANTED BETWEEN OCTOBER 1ST AND APRIL 30TH.
  - A TREE IMPACT PERMIT IS REQUIRED.
  - ELECTRICAL OUTLETS AND OTHER UTILITIES ARE PROHIBITED IN THE PLANTING AREA IMMEDIATELY SURROUNDING THE TREE.
  - IF STAKING IN ACCORDANCE WITH THE CITY TREE MANUAL, THE STAKING MUST BE REMOVED WITHIN ONE YEAR.
  - TREES WILL HAVE A MINIMUM 1 YEAR WARRANTY AFTER THE INITIAL PLANTING IS APPROVED BY THE CITY.

CITY OF RALEIGH STANDARD DETAIL

REVISIONS	DATE	BY	NOT TO SCALE

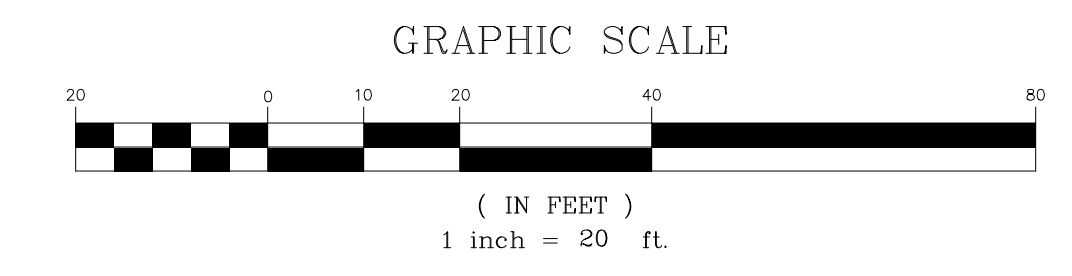
TREE PLANTING DETAIL

TPP-03

LANDSCAPE PLANTING SCHEDULE

QTY	COMMON	SCIENTIFIC	SIZE @ PLANTING	MATURE HT/CROWN SPREAD
6	SOUTHERN SUGAR MAPLE	ACER FLORIDANUM	3" CAL, 10' HT	50-75' / 30-40'

- PLANTING STANDARDS:
- ALL PLANT MATERIAL AND INSTALLATION WORK SHALL CONFORM TO THE STANDARDS DETAILED IN THE FOLLOWING DOCUMENTS:
    - AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI A300, AMERICAN NATIONAL STANDARDS INSTITUTE, 11 WEST 42nd STREET, NEW YORK, N.Y. 10036
    - AMERICAN NATIONAL STANDARD FOR NURSERY STOCK, ANSI Z60.1, AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, 1250 EYE STREET, NW, SUITE 500, WASHINGTON, DC 20005
    - HORTUS THIRTD, THE STAFF OF THE L.H.BAILEY HORTORIUM, 1976. MacMILLAN PUBLISHING CO., NEW YORK



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 Zebulon, NC 27597  
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TOWNES OF HAVEN  
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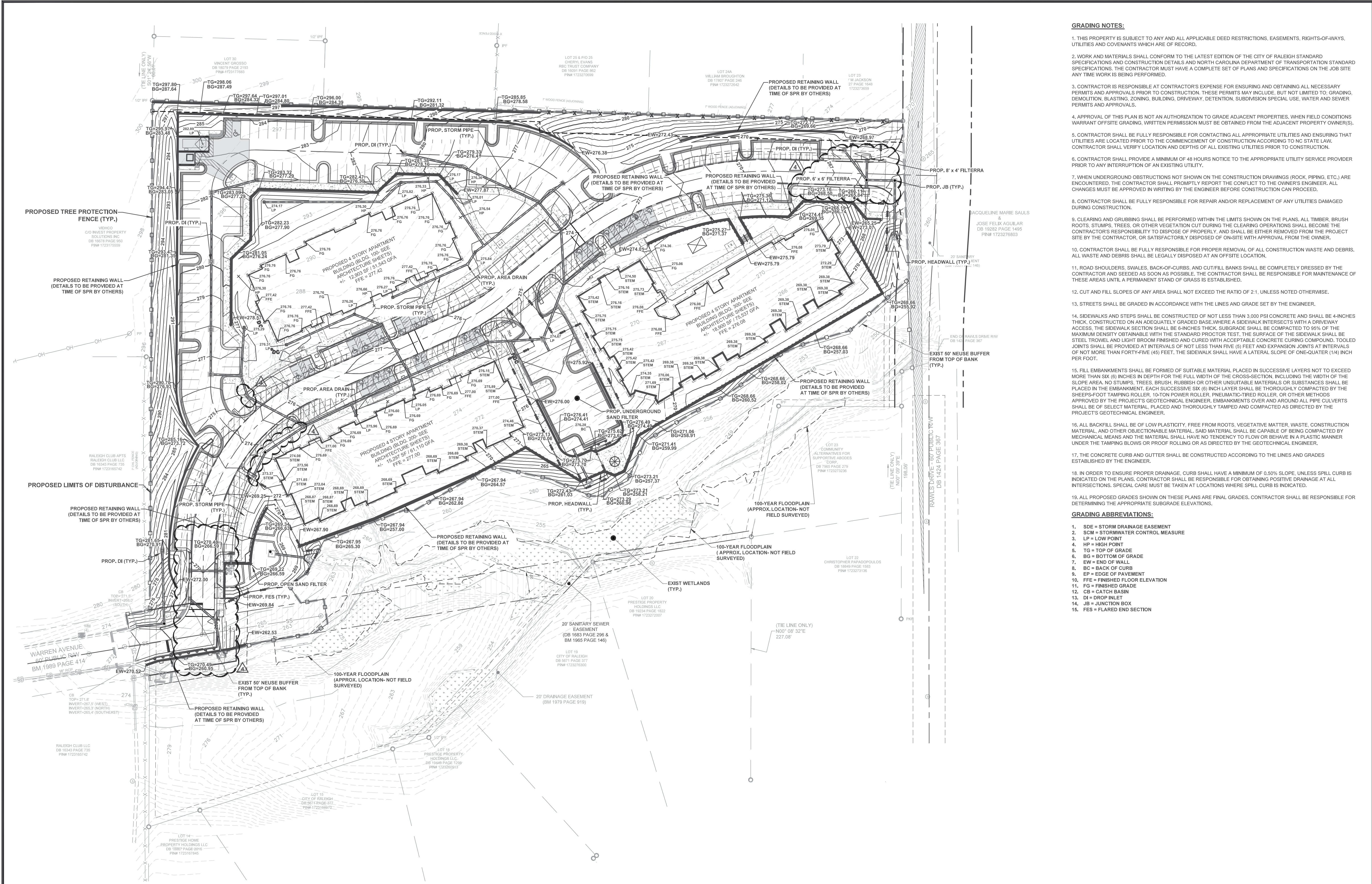
REVISIONS

5/28/24	PER REVIEW COMMENTS
07/28/25	REV LOT AREA

PRELIMINARY LANDSCAPE PLAN

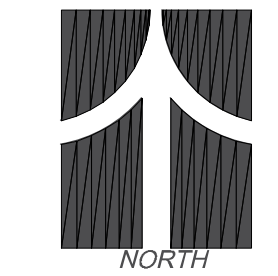
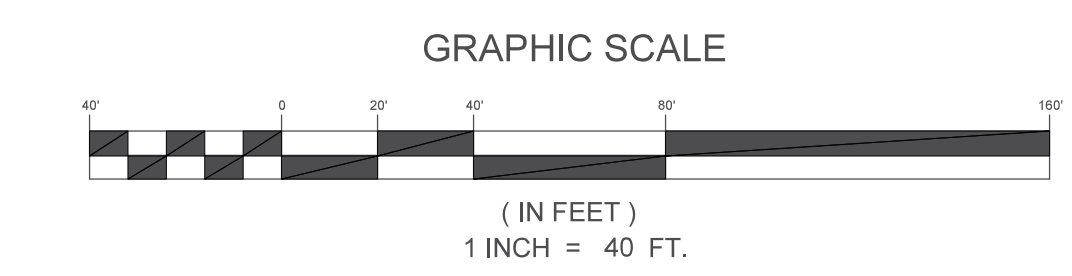
DWG NAME:  
 2918 PSD#4  
 PLAN DATE:  
 03/18/24  
 DATE ISSUED:  
 07/28/25  
 SCALE: 1"=20'

8:RP1-1023-Project(23-01561) - Maple Ridge Apartments (South Creek Development) (3-01561) (Sheet) 3-01561-C3.0 PRELIMINARY GRADING & DRAINAGE PLAN, sheets



- GRADING NOTES:**
- THIS PROPERTY IS SUBJECT TO ANY AND ALL APPLICABLE DEED RESTRICTIONS, EASEMENTS, RIGHTS-OF-WAYS, UTILITIES AND COVENANTS WHICH ARE OF RECORD.
  - WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF RALEIGH STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. THE CONTRACTOR MUST HAVE A COMPLETE SET OF PLANS AND SPECIFICATIONS ON THE JOB SITE ANY TIME WORK IS BEING PERFORMED.
  - CONTRACTOR IS RESPONSIBLE AT CONTRACTOR'S EXPENSE FOR ENSURING AND OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. THESE PERMITS MAY INCLUDE, BUT NOT LIMITED TO, GRADING, DEMOLITION, BLASTING, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION SPECIAL USE, WATER AND SEWER PERMITS AND APPROVALS.
  - APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, WRITTEN PERMISSION MUST BE OBTAINED FROM THE ADJACENT PROPERTY OWNER(S).
  - CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR CONTACTING ALL APPROPRIATE UTILITIES AND ENSURING THAT UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACCORDING TO NO STATE LAW. CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE APPROPRIATE UTILITY SERVICE PROVIDER PRIOR TO ANY INTERRUPTION OF AN EXISTING UTILITY.
  - WHEN UNDERGROUND OBSTRUCTIONS NOT SHOWN ON THE CONSTRUCTION DRAWINGS (ROCK, PIPING, ETC.) ARE ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY REPORT THE CONFLICT TO THE OWNER'S ENGINEER. ALL CHANGES MUST BE APPROVED IN WRITING BY THE ENGINEER BEFORE CONSTRUCTION CAN PROCEED.
  - CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION.
  - CLEARING AND GRUBBING SHALL BE PERFORMED WITHIN THE LIMITS SHOWN ON THE PLANS. ALL TIMBER, BRUSH ROOTS, STUMPS, TREES, OR OTHER VEGETATION CUT DURING THE CLEARING OPERATIONS SHALL BECOME THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF PROPERLY, AND SHALL BE EITHER REMOVED FROM THE PROJECT SITE BY THE CONTRACTOR, OR SATISFACTORILY DISPOSED OF ON-SITE WITH APPROVAL FROM THE OWNER.
  - CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROPER REMOVAL OF ALL CONSTRUCTION WASTE AND DEBRIS. ALL WASTE AND DEBRIS SHALL BE LEGALLY DISPOSED AT AN OFFSITE LOCATION.
  - ROAD SHOULDERS, SWALES, BACK-OF-CURBS, AND CUT/FILL BANKS SHALL BE COMPLETELY DRESSED BY THE CONTRACTOR AND SEEDED AS SOON AS POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE AREAS UNTIL A PERMANENT STAND OF GRASS IS ESTABLISHED.
  - CUT AND FILL SLOPES OF ANY AREA SHALL NOT EXCEED THE RATIO OF 2:1, UNLESS NOTED OTHERWISE.
  - STREETS SHALL BE GRADED IN ACCORDANCE WITH THE LINES AND GRADE SET BY THE ENGINEER.
  - SIDEWALKS AND STEPS SHALL BE CONSTRUCTED OF NOT LESS THAN 3,000 PSI CONCRETE AND SHALL BE 4-INCHES THICK, CONSTRUCTED ON AN ADEQUATELY GRADED BASE. WHERE A SIDEWALK INTERSECTS WITH A DRIVEWAY ACCESS, THE SIDEWALK SECTION SHALL BE 6-INCHES THICK. SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE SURFACE OF THE SIDEWALK SHALL BE STEEL TROWEL AND LIGHT BROOM FINISHED AND CURED WITH ACCEPTABLE CONCRETE CURING COMPOUND. TOELED JOINTS SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN FIVE (5) FEET AND EXPANSION JOINTS AT INTERVALS OF NOT MORE THAN FORTY-FIVE (45) FEET. THE SIDEWALK SHALL HAVE A LATERAL SLOPE OF ONE-QUARTER (1/4) INCH PER FOOT.
  - FILL EMBANKMENTS SHALL BE FORMED OF SUITABLE MATERIAL PLACED IN SUCCESSIVE LAYERS NOT TO EXCEED MORE THAN SIX (6) INCHES IN DEPTH FOR THE FULL WIDTH OF THE CROSS-SECTION, INCLUDING THE WIDTH OF THE SLOPE AREA, NO STUMPS, TREES, BRUSH, RUBBISH OR OTHER UNSUITABLE MATERIALS OR SUBSTANCES SHALL BE PLACED IN THE EMBANKMENT. EACH SUCCESSIVE SIX (6) INCH LAYER SHALL BE THOROUGHLY COMPACTED BY THE SHEEPS-FOOT TAMPING ROLLER, 10-TON POWER ROLLER, PNEUMATIC-TIRED ROLLER, OR OTHER METHODS APPROVED BY THE PROJECT'S GEOTECHNICAL ENGINEER. EMBANKMENTS OVER AND AROUND ALL PIPE CULVERTS SHALL BE OF SELECT MATERIAL, PLACED AND THOROUGHLY TAMPED AND COMPACTED AS DIRECTED BY THE PROJECT'S GEOTECHNICAL ENGINEER.
  - ALL BACKFILL SHALL BE OF LOW PLASTICITY, FREE FROM ROOTS, VEGETATIVE MATTER, WASTE, CONSTRUCTION MATERIAL, AND OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND THE MATERIAL SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
  - THE CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED ACCORDING TO THE LINES AND GRADES ESTABLISHED BY THE ENGINEER.
  - IN ORDER TO ENSURE PROPER DRAINAGE, CURB SHALL HAVE A MINIMUM OF 0.50% SLOPE. UNLESS SPILL CURB IS INDICATED ON THE PLANS, CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING POSITIVE DRAINAGE AT ALL INTERSECTIONS. SPECIAL CARE MUST BE TAKEN AT LOCATIONS WHERE SPILL CURB IS INDICATED.
  - ALL PROPOSED GRADES SHOWN ON THESE PLANS ARE FINAL GRADES. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SUBGRADE ELEVATIONS.

- GRADING ABBREVIATIONS:**
- SDE = STORM DRAINAGE EASEMENT
  - SCM = STORMWATER CONTROL MEASURE
  - LP = LOW POINT
  - HP = HIGH POINT
  - TG = TOP OF GRADE
  - BG = BOTTOM OF GRADE
  - EW = END OF WALL
  - BC = BACK OF CURB
  - EP = EDGE OF PAVEMENT
  - FFE = FINISHED FLOOR ELEVATION
  - FG = FINISHED GRADE
  - CB = CATCH BASIN
  - DI = DROP INLET
  - JB = JUNCTION BOX
  - FES = FLARED END SECTION



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**ESP**

PROFESSIONAL ENGINEER  
 LICENSE NO. 107  
 STATE OF NORTH CAROLINA

BY: CALTRK  
 CALTRK  
 CALTRK  
 CALTRK

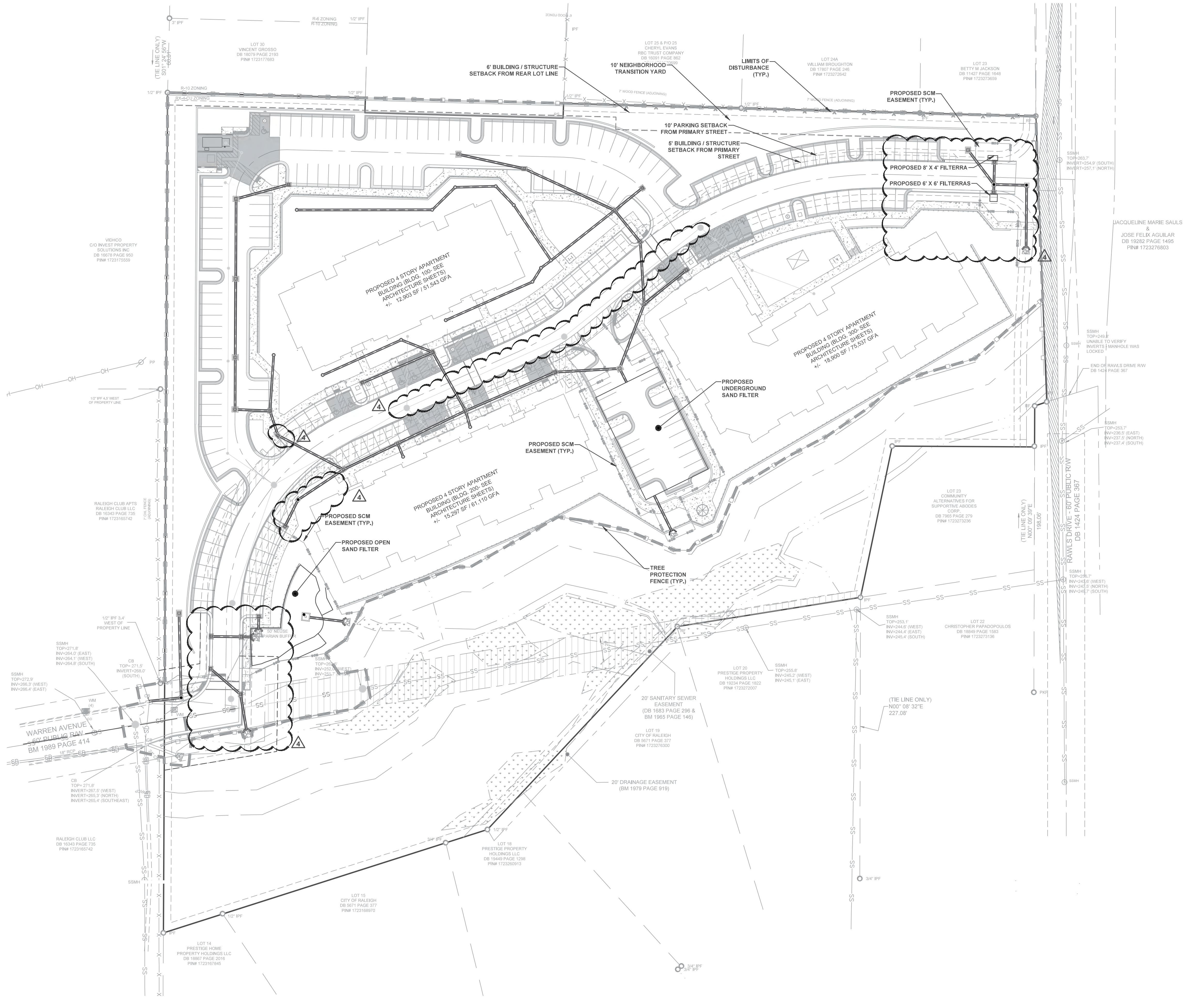
NO.	DATE	REVISION
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4.	07/11/2025	REVISED TO ADDRESS ASR SUBMITTAL #4 REVIEW COMMENTS

**PRELIMINARY GRADING & DRAINAGE PLAN**  
**MAPLE RIDGE (AFFORDABLE HOUSING)**  
**ADMINISTRATIVE SITE REVIEW PLAN**  
 SOUTH CREEK DEVELOPMENT  
 RALEIGH, NORTH CAROLINA

**PROJECT INFORMATION**

PROJECT MANAGER:	ER
DESIGNED BY:	ER
DRAWN BY:	BA
PROJECT NUMBER:	23-01561
ORIGINAL DATE:	10/29/2024
SHEET:	C3.0

**811**  
 Know what's below.  
 Call before you dig.



**SCM NOTES:**

**EMBANKMENT FILL MATERIALS**

- BORROW MATERIAL SHALL BE CLASSIFIED AS ML, MH, CL OR CH SOILS ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) OR ANY MIXTURE OF THESE SOILS.
- BORROW MATERIALS SHALL HAVE A LIQUID LIMIT (LL) BETWEEN 40 AND 60 AND A PLASTICITY INDEX (PI) BETWEEN 15 AND 30 (ASTM D4318).
- MATERIAL SHALL BE FREE OF TOPSOIL, ORGANIC MATERIAL, ROOTS, STUMPS, BRUSH, ROCKS LARGER THAN 3 INCHES, SUBSOIL, DEBRIS, VEGETATION AND OTHER FOREIGN MATERIAL.
- ALL MATERIAL CLOUDS SHALL BE BROKEN DOWN WITH TILLERS AND/OR DISCS TO PROVIDE HOMOGENEOUS SOIL THAT IS FREE OF CLAY CLOUDS GREATER THAN 3 INCHES IN DIAMETER.

**EMBANKMENT CONSTRUCTION**

- STEP 1: SUBGRADE PREPARATION**
- COMPACT SUBGRADE TO DENSITY REQUIREMENTS FOR SUBSEQUENT FILL MATERIALS.
  - CUT OUT SOFT AREAS OF SUBGRADE NOT CAPABLE OF COMPACTION IN PLACE.
  - SCARIFY SUBGRADE SURFACE TO A DEPTH OF 6 INCHES.
  - PROOF ROLL SUBGRADE TO IDENTIFY SOFT SPOTS; FILL AND COMPACT TO DENSITY EQUAL TO OR GREATER THAN REQUIREMENTS FOR SUBSEQUENT FILL MATERIAL.
- STEP 2: SEEPAGE KEY PLACEMENT**
- SEEPAGE KEY TRENCH WILL BE LOCATED BETWEEN EMBANKMENT ABUTMENTS.
  - SEEPAGE KEY SHALL EXTEND TO A MINIMUM DEPTH OF 4 FEET OR AS REQUIRED THROUGH GEOTECHNICAL SEEPAGE ANALYSIS. A MINIMUM BOTTOM TRENCH WIDTH SHALL BE 10 FEET AND THE TRENCH SIDEWALLS SHALL BE SLOPED OR BENCHED TO PROMOTE STABILITY AND BONDING BETWEEN THE SIDEWALL SOILS AND SEEPAGE KEY FILL.

- STEP 3: EMBANKMENT FILL PLACEMENT**
- EMBANKMENT FILL SHALL BE CONSTRUCTED AT 3 (HORIZONTAL) TO 1 (VERTICAL) OR AS SHOWN ON THE CONSTRUCTION DRAWINGS. DEMONSTRATION OF APPROPRIATE SAFETY FACTORS AGAINST FAILURE THROUGH GEOTECHNICAL ANALYSIS SHALL BE REQUIRED FOR SLOPES STEEPER THAN 3:1.
  - FILL SOILS SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE SOIL'S STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY, OR AS SPECIFIED ON THE CONSTRUCTION DRAWINGS.
  - COMPACTED MOISTURE CONTENT SHALL BE BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT FOR ALL FILL PLACED, OR AS OTHERWISE APPROVED BY THE ENGINEER.
  - FILL SOILS SHOULD BE PLACED IN CONTINUOUS, HORIZONTAL LAYERS FROM ABUTMENT TO ABUTMENT. EXISTING SLOPES GREATER THAN HORIZONTAL (VERTICAL) SHALL BE BENCHED TO PROMOTE BONDING OF NEWLY PLACED FILL WITH EXISTING SOILS. BENCHING SHALL BE PERFORMED AT MAXIMUM OF 2 FEET VERTICAL INTERVALS AND SHALL EXTEND A MINIMUM OF 4 FEET HORIZONTALLY OR AS SPECIFIED ON DRAWINGS.
  - WITHIN THE UPPER 12 INCHES OF EMBANKMENT, FILL SOILS SHOULD BE COMPACTED TO 100% OF ITS STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY.
  - FILL AGAINST SUPPORTED STRUCTURES. DO NOT FILL AGAINST UNSUPPORTED STRUCTURES.
  - PLACE FILL SIMULTANEOUSLY ON EACH SIDE OF UNSUPPORTED STRUCTURES UNTIL SUPPORTS ARE IN PLACE.
  - PLACE A MINIMUM OF 6 INCHES OF TOPSOIL ACROSS DAM EMBANKMENT TO PROMOTE VEGETATIVE GROWTH.

- STEP 4: OUTLET PIPE FILL PLACEMENT**
- FILL OF THE CULVERTS SHALL BE PLACED AND COMPACTED IN 6-INCH THICK LOOSE LIFTS AROUND THE OUTLET STRUCTURE AND ABOVE THE CULVERTS.
  - COMPACTION SHALL BE PERFORMED BY HAND TAMPERS OR SMALL HAND OPERATED COMPACTORS.
  - COMPACTION SHALL BE AT A MINIMUM 95 PERCENT OF THE STANDARD PROCTOR (ASTM D698) MAXIMUM DRY DENSITY. COMPACTED MOISTURE CONTENT SHALL BE BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT FOR ALL FILL PLACED OR AS OTHERWISE APPROVED BY THE ENGINEER.
  - ADDITIONAL COMPACTION OF LIFTS 2 FEET OR GREATER ABOVE CULVERTS SHALL CONFORM TO THE EMBANKMENT FILL PLACEMENT SECTION OF THIS SPECIFICATION.
  - DRAINAGE AREA MUST BE STABILIZED BEFORE FILTRATION CONTROLS AND FILTER MEDIA ARE INSTALLED.

- FIELD QUALITY CONTROL**
- PERFORM LABORATORY MATERIAL TESTS IN ACCORDANCE WITH ASTM D422, ASTM D698, ASTM D2216 AND ASTM D4318.
  - TEST AT A FREQUENCY OF EVERY 500 CUBIC YARDS OF EMBANKMENT FILL MATERIAL PLACED, WHEN MATERIALS USED FOR EMBANKMENT FILL CHANGE, AND/OR AS DIRECTED BY THE ENGINEER.
  - SAMPLE SIZE SHALL BE 50 LB.
  - PERFORM IN PLACE COMPACTION TESTS IN ACCORDANCE WITH ASTM D1556 OR ASTM D2937 AND NATURAL MOISTURE CONTENT TEST IN ACCORDANCE WITH ASTM D2216.
  - FREQUENCY OF COMPACTION/NATURAL MOISTURE CONTENT TESTS:  
EMBANKMENT FILL:  
EACH LIFT SHALL BE TESTED AT A MINIMUM FREQUENCY OF 1 PER 2,500 SQ. FT.  
PIPE INSTALLATION:  
EACH LIFT SHALL BE TESTED AT A MINIMUM FREQUENCY OF 1 PER 30 LF OF PIPE
  - WHEN TESTS INDICATE WORK DOES NOT MEET SPECIFIED REQUIREMENTS, REMOVE WORK, REPLACE AND RETEST.

**LEGEND**

EXIST. SANITARY SEWER MANHOLE	
EXIST. SANITARY SEWER CLEANOUT	
PROP. SANITARY SEWER CLEANOUT	
EXIST. WATER SERVICE PIPE	
PROP. WATER SERVICE PIPE	
EXIST. WATER SERVICE METER	
EXIST. WATER SERVICE RPZ	
EXIST. FIRE HYDRANT	
PROP. SANITARY SEWER LATERAL PIPE	
EXIST. SANITARY SEWER PIPE	
EXIST. SANITARY SEWER LATERAL	
EXIST. STORM PIPE	
PROP. STORM PIPE	
EXIST. STORM DRAINAGE EASEMENT (SDE)	
EXIST. YARD INLET & CATCH BASIN	
PROP. DRAIN INLET & CATCH BASIN	
PROP. AREA DRAINS	

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PRELIMINARY NORTH CAROLINA PROFESSIONAL ENGINEERING SEAL NO. 132

BY CALTRK  
REVISION 1/28/2025  
DATE 4/11/2025  
NO. 1.

REVIEWED TO ADDRESS ASR SUBMITTAL #1 REVIEW COMMENTS

REVIEWED TO ADDRESS ASR SUBMITTAL #2 REVIEW COMMENTS

REVIEWED TO ADDRESS ASR SUBMITTAL #3 REVIEW COMMENTS

REVIEWED TO ADDRESS ASR SUBMITTAL #4 REVIEW COMMENTS

PRELIMINARY SCM PLAN

MAPLE RIDGE (AFFORDABLE HOUSING)

ADMINISTRATIVE SITE REVIEW PLAN

SOUTH CREEK DEVELOPMENT

RALEIGH, NORTH CAROLINA

PROJECT INFORMATION

PROJECT MANAGER: ER

DESIGNED BY: ER

DRAWN BY: BA

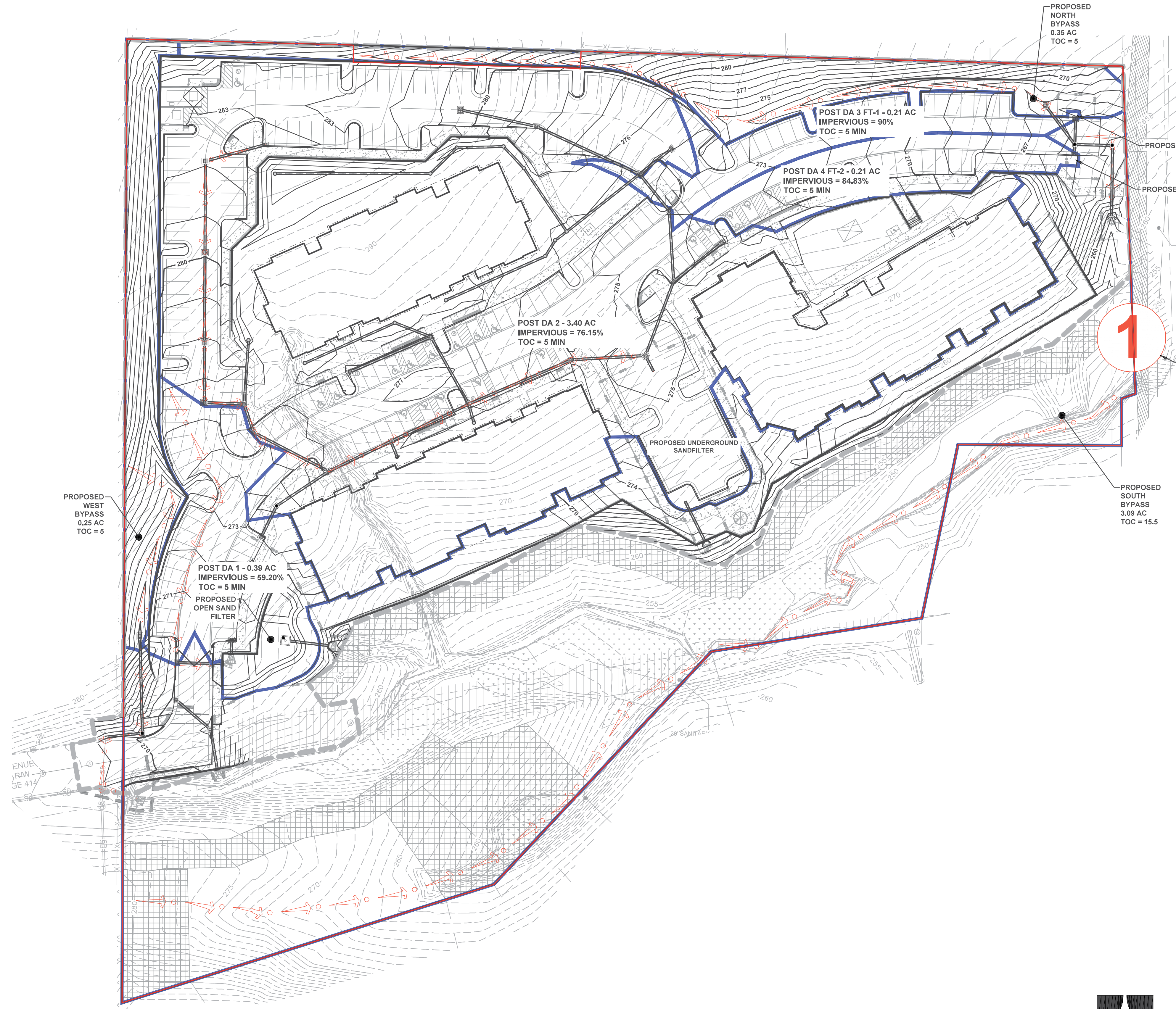
PROJECT NUMBER: 23-01561

ORIGINAL DATE: 10/29/2024

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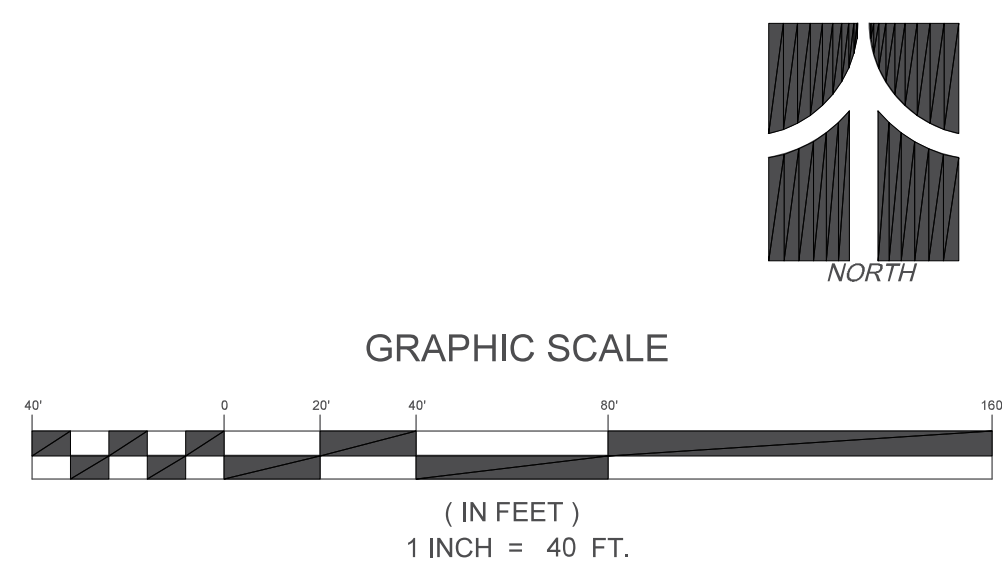
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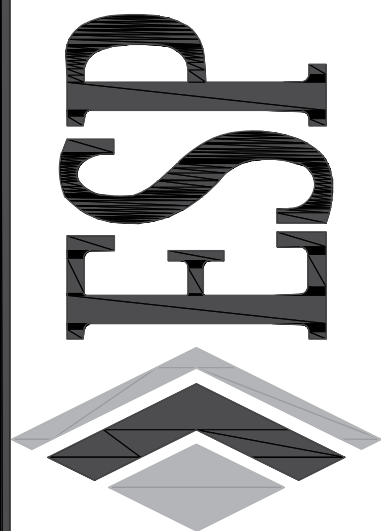


**LEGEND**

- MAJOR PROPOSED CONTOUR
- MINOR PROPOSED CONTOUR
- MAJOR EXISTING CONTOUR
- MINOR EXISTING CONTOUR
- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- PROPERTY LINE
- POINT OF ANALYSIS



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PRELIMINARY  
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CONSTRUCTION

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**POST DEVELOPMENT  
DRAINAGE AREAS**  
**MAPLE RIDGE (AFFORDABLE HOUSING)  
ADMINISTRATIVE SITE REVIEW PLAN**  
RALEIGH, NORTH CAROLINA  
SOUTH CREEK DEVELOPMENT

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**POST-DA**

