Planning Commission

Official Public Notice

city of greenville

PUBLIC NOTICE

. .

To: Property Owners, Owners of property located within 500 feet of the following Applications, and Neighborhood Association Representatives.
From: Planning and Development Staff
Subject: Upcoming Applications for January 16, 2020, Planning Commission Meeting
Date mailed: December 31, 2019

The City of Greenville Planning Commission will hold a Public Hearing on Thursday, January 16, 2020, at 4:00 PM in the 10th Floor Council Chambers at City Hall, for the purpose of considering the following Applications:

OLD BUSINESS
No Old Business

NEW BUSINESS

. . A. MD 19-004
Application by Aspens Senior Living LLC for a MULTI-FAMILY DEVELOPMENT of 159 units on 7.95 acres located at VERDAE BLVD and SALTERS RD (TM# 0261000101200, SE corner)

Documents:

MD 19-004 BINDER2.PDF

. . . B. MD 19-005
Application by Richard Lynch for a MULTI-FAMILY DEVELOPMENT of 8 units on 1.7 acres located at CHESTNUT ST and E NORTH ST (TM#s 0190000207900; 0190000207000; 0190000207100; 0190000207200)

Documents:

MD 19-005 BINDER1.PDF

. . . C. SD 18-009MM
Application by Phillip Day for a SUBDIVISION MODIFICATION of 21.1 acres located at 3590 LAURENS RD from 1 LOT to 88 LOTS (TM# M010040100600) (SD 18-009 approved by PC 06/21/18; SD 18-009M approved by PC 11/15/18)

Documents:

SD 18-009MM BINDER1.PDF

. . . D. SD 19-017
Application by Robert Julian for a COTTAGE SUBDIVISION on 1.04 acres located at HALL ST from 2 LOTS to 9 LOTS (TM#s 0201000102701, 0201000102702)

Documents:

SD 19-017 BINDER1.PDF

. . . E. SD 19-019
Application by Jennings Lyon (c/o LyonJay) for a SUBDIVISION of 25.73 acres located at FAIRFOREST WAY and UNITED WAY from 1 LOT to 129 LOTS (TM# M011010100315)

Documents:

SD 19-019 BINDER1.PDF

. . . . F. SD 19-020
Application by Jay Martin for a CLUSTER SUBDIVISION of 4.81 acres located on FISHER DR from 7 LOTS to 29 LOTS (TM# 0280000203400; 0280000203500; 0280000203600; 0280000203601; 0280000203700; 0280000203800; 0280000203801)

Documents:

SD 19-020 BINDER1.PDF

. . . . G. Z-26-2018M

Application by Joe Bryant for a PD MAJOR MODIFICATION of the ADAMS HILL PLANNED DEVELOPMENT on 19.4 acres located at HAYWOOD RD and PELHAM RD (TM#s 0278000200300, 0278000200301) (Original PD zoning approved 08/12/19)

Documents:

Z-26-2018M BINDER1.PDF

. . . . ..

You are invited to review documents relating to these applications before the public hearing. Application materials are posted online at http://www.greenvillesc.gov/pc and available for inspection in the Planning and Development Office on the 6th floor of City Hall, 206 South Main Street, Greenville, between 8:00 AM and 5:00 PM, Monday through Friday. You may contact the Planning Office at (864) 467-4476 for more information. Application materials are subject to change.

You will have the opportunity to voice your comments at the public hearing. Each speaker is limited to 3 minutes. Repetitive statements should be avoided; individuals sharing similar concerns are encouraged to appoint a spokesperson to represent their group. Alternatively, you may submit written comments to: Planning & Development Office, PO Box 2207, Greenville, SC 29602, by fax at (864) 467-4510, or by email at planning@greenvillesc.gov.

Written comments must be received by 2PM Monday before the hearing in order to be given adequate time for consideration by the commission before the hearing. Comments received after 2PM Monday will be provided to the commission at the hearing. Please reference the application number and include your name and address on all correspondence. All comments will be made part of the public record.

In some cases the applicant may be required, as part of the application process, to hold a neighborhood meeting before the application is heard by the Commission. Property owners within 500' of the application site would then be notified by mail. A property owner that directly abuts the proposed project or owners of 20% of parcels within 500' may also request a meeting. Contact the Planning and Development Office for further instructions.

Following the public hearing, the Planning Commission will act upon the applications. The Commission's actions for the following types of applications constitute a Recommendation to the City Council:

- Matters pertaining to the Comprehensive Plan
- Amendments to the text of the Land Management Ordinance (Zoning/Land Development Regulations)
- Amendments to the Zoning District Map (including 'Planned Developments' and 'Flexible Review Districts') – Item(s) G (New Business)
- Variances to the Stormwater Management Ordinance
- Planning-related studies and plans

The City Council will consider these items at scheduled, public Meetings (two readings of an ordinance to either approve, or disapprove, a proposal are required). You will not receive a separate notice of those meetings, but you are invited to attend and register with the City Clerk if you wish to comment upon an Application at the Meeting(s). You may contact the City Clerk's Office at (864) 467-4441 to verify the date of the City Council Meeting or refer to the meeting schedule reflected on the City's web site (www.greenvillesc.gov).

The Commission's action for the following types of applications constitutes a Decision of the Planning Commission (i.e., no further actions are required):

- Matters pertaining to the Design and Specifications Manual
- Approval of Land Development Permits (Major Subdivisions and Multifamily Residential Development proposals) – Item(s) A, B, C, D, E, and F (New Business)
- Approval of Final Development Plans for 'Planned Developments'
- Street name changes
- Appeals from the Decisions of the Administrator relative to the Design and Specifications Manual, or sections 19-6.7 through 19-6.10 of the Land Management Ordinance

city of greenville

APPLICATION FOR MULTIFAMILY DEVELOPMENT

Contact Planning & Development (864) 467-4476

Office Use Only: MD 19-004
Application# (PZ 19-841) Fees Paid $550
Date Received 12/18/19 Accepted By MF
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Gilbert CCF, LLC	Verdae Properties Inc.
*Title:	Barry Metcalf	Debbie Wallace
*Address:	505 Pecan Street, Suite 202	340 Rocky Slope Road, Suite 300
*State:	Fort Worth,TX	Greenville, SC
*Zip:	76102	29607
*Phone:	817-632-6307	864-627-8383
*Email:	bmetcalf@aspenssseniorliving.com	dwallace@verdae.com

PROPERTY INFORMATION

*STREET ADDRESS Intersection of Salters Road and Verdae Boulevard

*TAX MAP # Pt. 0261000101200

*CURRENT ZONING DESIGNATION S-1

*TOTAL ACREAGE 7.95

PROPOSED DEVELOPMENT INFORMATION

*TYPE OF APPLICATION: x New _____Modification – Major _____Modification – Minor

*ORIGINAL APPLICATION # (put N/A if new application) N/A

*NUMBER OF UNITS 159

*MULTIFAMILY DEVELOPMENT TYPE Independent Living Apartments

*AGE RESTRICTED HOUSING (Y / N) Yes

NUMBER OF UNITS AND/OR PERCENTAGE OF AGE RESTRICTED UNITS (If applicable) 159

INSTRUCTIONS

1. The applicant is **required** to schedule a pre-application meeting according to the dates outlined on the Board calendar. Call (864) 467-4476 to schedule an appointment.

   *PREAPPLICATION MEETING DATE 10/01/2019

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
3. All applications and fees (made payable to the City of Greenville) for designation as a Multifamily Development must be received by **no later than 2:00 pm** of the date reflected on the Board schedule.

A. Multifamily development - New — $550.00 – *public hearing required*

B. Multifamily development – Major Modification — $275.00 – *public hearing required*

C. Multifamily development – Minor Modification — $150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will go back into the queue for review. Please refer to ***section 19-2.3.13 (D), Multifamily residential development*** for additional information.

5. **Public Notice Requirements.** Multifamily development applications require a Planning Commission public hearing. There is also an informal review from the Design Review Board required prior to the planning commission hearing.

6. The applicant is responsible for sign posting the subject property. Instructions will be provided at the time of submission.

7. Multifamily development applications also require a developer-led neighborhood meeting which is to be held <u>at least eight (8) days prior</u> to the scheduled Planning Commission hearing (Sec. 19-2.2.4, Neighborhood meetings). Information will be emailed within a few days of submittal to the listed applicant email provided on page one of this application.

8. Upon planning commission recommendation, the application item will be scheduled for city council hearing.

<u>To be filled out at time of application submittal</u>

_____ Public Hearing signs are acknowledged as received by the applicant

_____ Posting sign instructions and affidavit are acknowledged as received by the applicant

*APPLICANT SIGNATURE _____

9. Please verify that all required information is reflected on the plan(s), and <u>**submit one (1) paper copy and one (1) electronic version**</u> of the application submittal package.

10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

_____ *APPLICANT ACKNOWLEDGEMENT SIGNATURE

12/16/19 _____ *DATE

11. Per acknowledgement and understanding of item #8, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ___ or **is not** x___ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

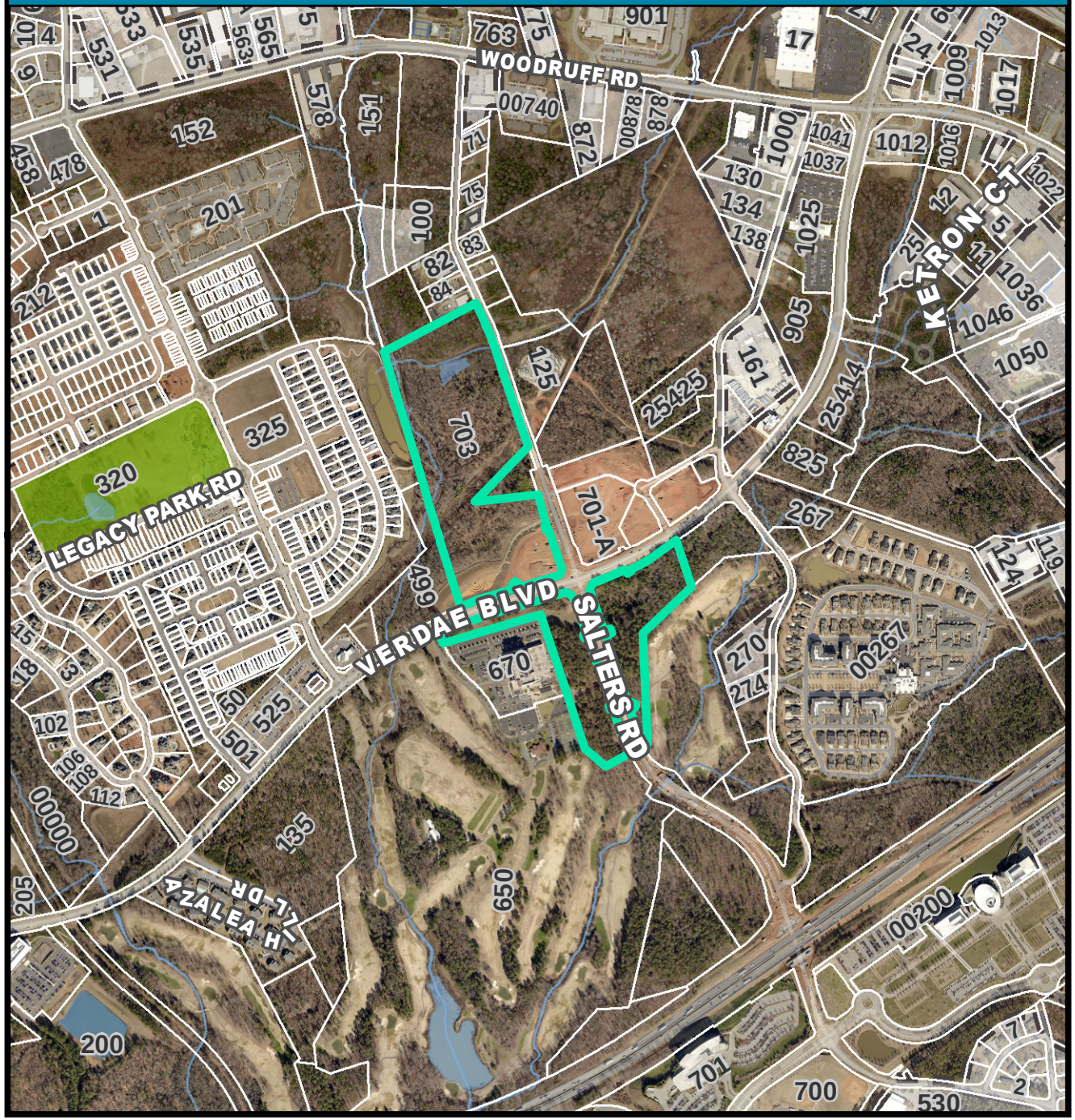
*Signatures	
*Applicant	
*Date	12/16/19
*Property Owner/Authorized Agent	W. Kent Hunt III For Vanche Properties LLC
*Date	

APPLICATION REQUIREMENTS

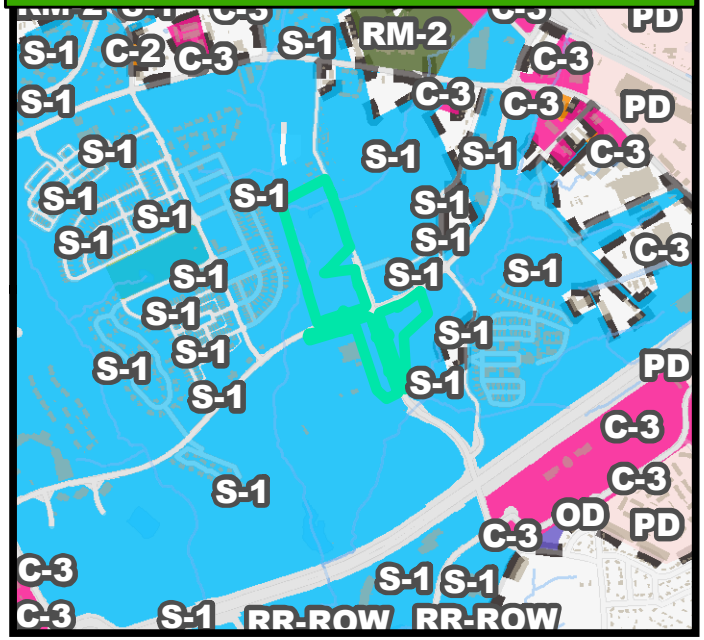
1. Multifamily development format and content requirements are reflected in the City of Greenville Administrative Manual at Appendix 'H'.
2. The submitted information shall include at a minimum:
   - *a.* Completed application for Multifamily development;
   - *b.* Context map, showing relationship of proposed development to the surrounding neighborhood;
   - *c.* Photographs of surrounding area;
   - *d.* Site plan, showing building(s) footprint, parking lot layout, pedestrian and vehicular access, internal walkways, amenities (i.e. pool, playground, picnic area, etc.), and service areas (i.e. dumpster pad/trash collection area, HVAC units, car wash area, etc.);
   - *e.* Grading plan, showing existing and proposed topographic contours, storm drainage collection facilities, existing and proposed retaining walls (with top-of-wall and bottom-of-wall elevations for at least the ends of the walls and the high point of the walls);
   - *f.* Building elevations, of all sides of the building(s), with exterior materials and colors indicated;
   - *g.* Plan showing elevation of proposed buildings in relation to adjoining structures;
   - *h.* Building floor plans;
   - *i.* Landscape plan, showing existing vegetation that will remain and the new plants to be added;
   - *j.* Lighting plan, showing location of light fixtures (on the site and on the building), cut sheets of the proposed light fixtures, and wattage; and
   - *k.* Materials board.
3. Please refer to ***Section 19-6.8, Design standards for multifamily residential development*** for additional information.

MFD 19-004 • SALTERS RD AND VERDAE BLVD

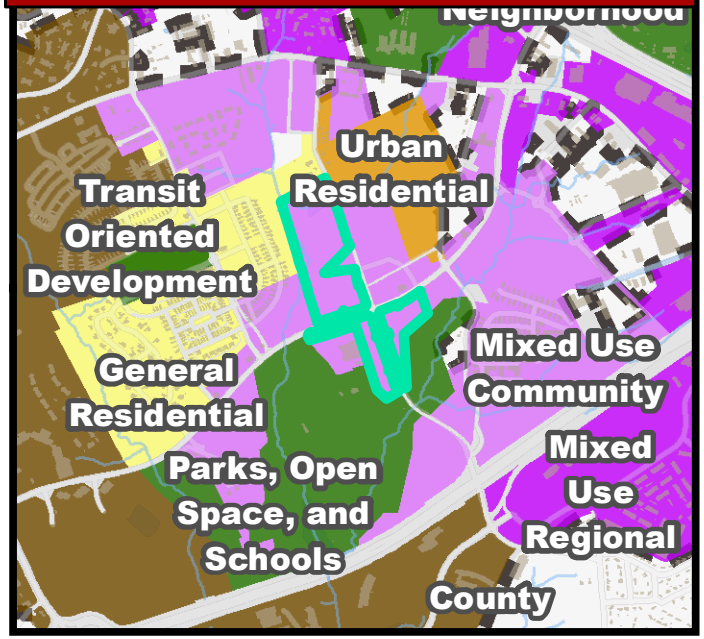
AERIAL VIEW



CURRENT ZONING

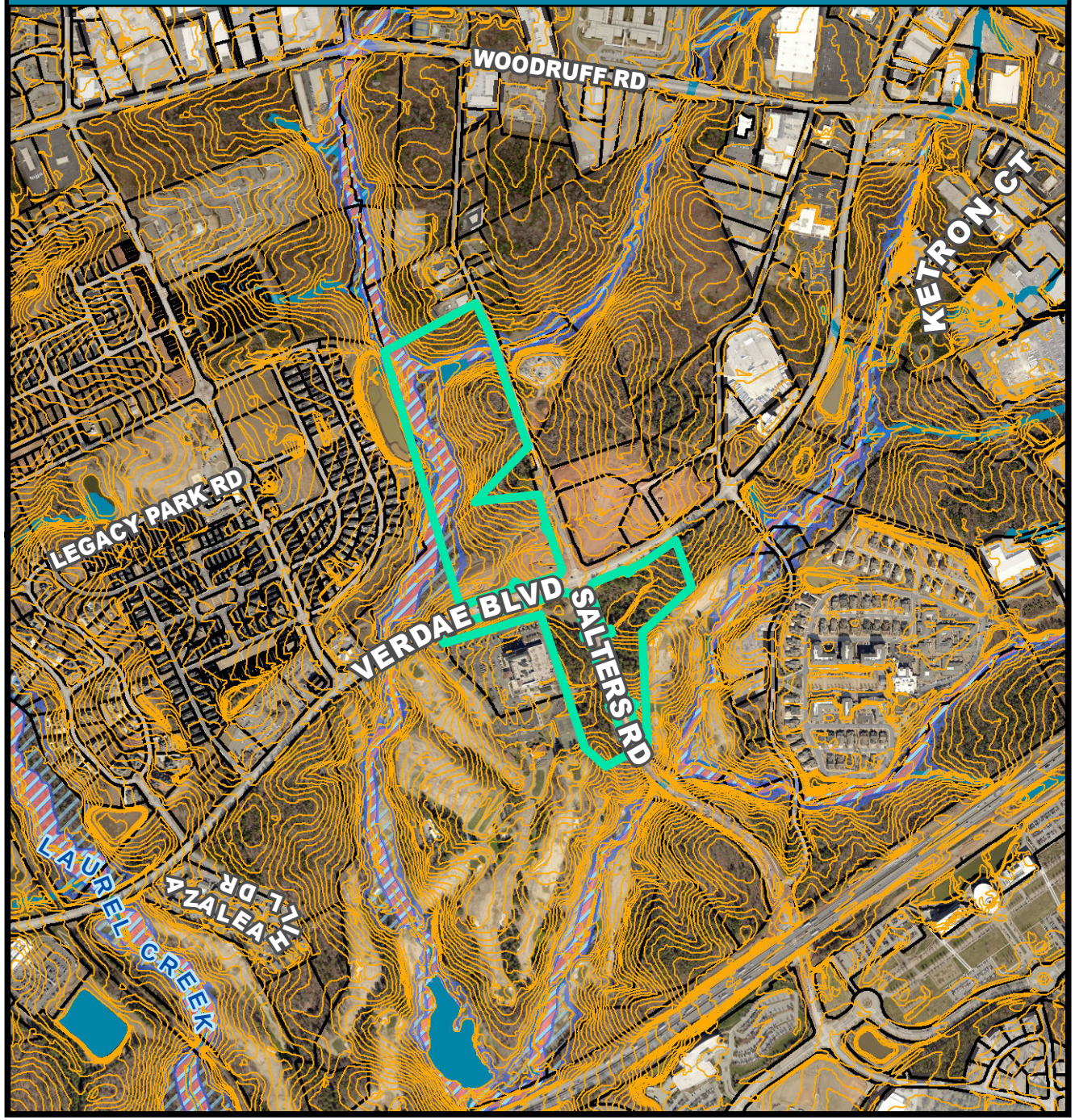


FUTURE LAND USE

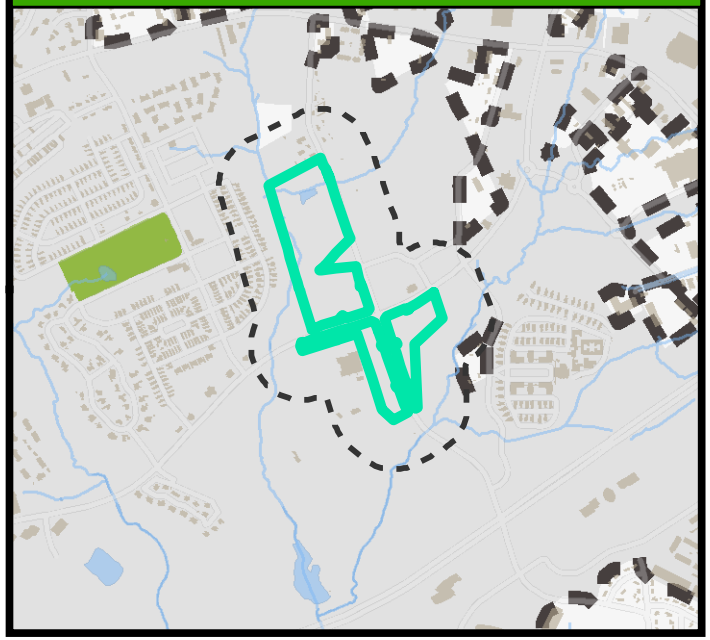


MFD 19-004 • SALTERS RD AND VERDAE BLVD

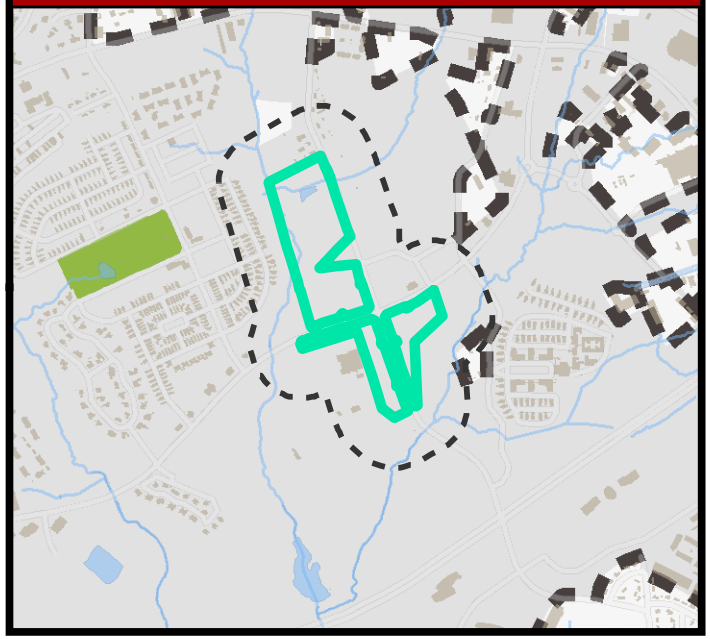
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



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PLAT/12 Book: PL 1355 Page: 0056 - 0056
December 16, 2019 12:28:13 PM
Rec: $25.00
FILED IN GREENVILLE COUNTY, SC

SUMMARY PLAT

CERTIFICATE OF OWNERSHIP AND DEDICATION

THE UNDERSIGNED HEREBY ACKNOWLEDGE THAT I AM (WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) FREE CONSENT AND THAT I (WE) ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND HEREBY DEDICATE TO PUBLIC USE AS ROADS, STREETS, AND EASEMENTS FOREVER ALL AREAS AS SHOWN OR INDICATED ON SAID PLAT.

12 / 11 / 2019 SIGNED

__ / __ / __ SIGNED

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAN SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS FOR THE CITY OF GREENVILLE, WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY AS NOTED IN THE MINUTES OF THE CITY OF GREENVILLE PLANNING COMMISSION OF GREENVILLE COUNTY, SOUTH CAROLINA, AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE GREENVILLE COUNTY REGISTER OF DEEDS.

APPROVAL BY THE CITY OF GREENVILLE

12 / 16 / 19

CITY ENGINEER-CITY OF GREENVILLE
OR AUTHORIZED REPRESENTATIVE

CERTIFICATE OF ACCURACY

I HEREBY STATE THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THE SURVEY SHOWN HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN; ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN.

12-10-19

DATE
S.C. REGISTRATION NO. 4781

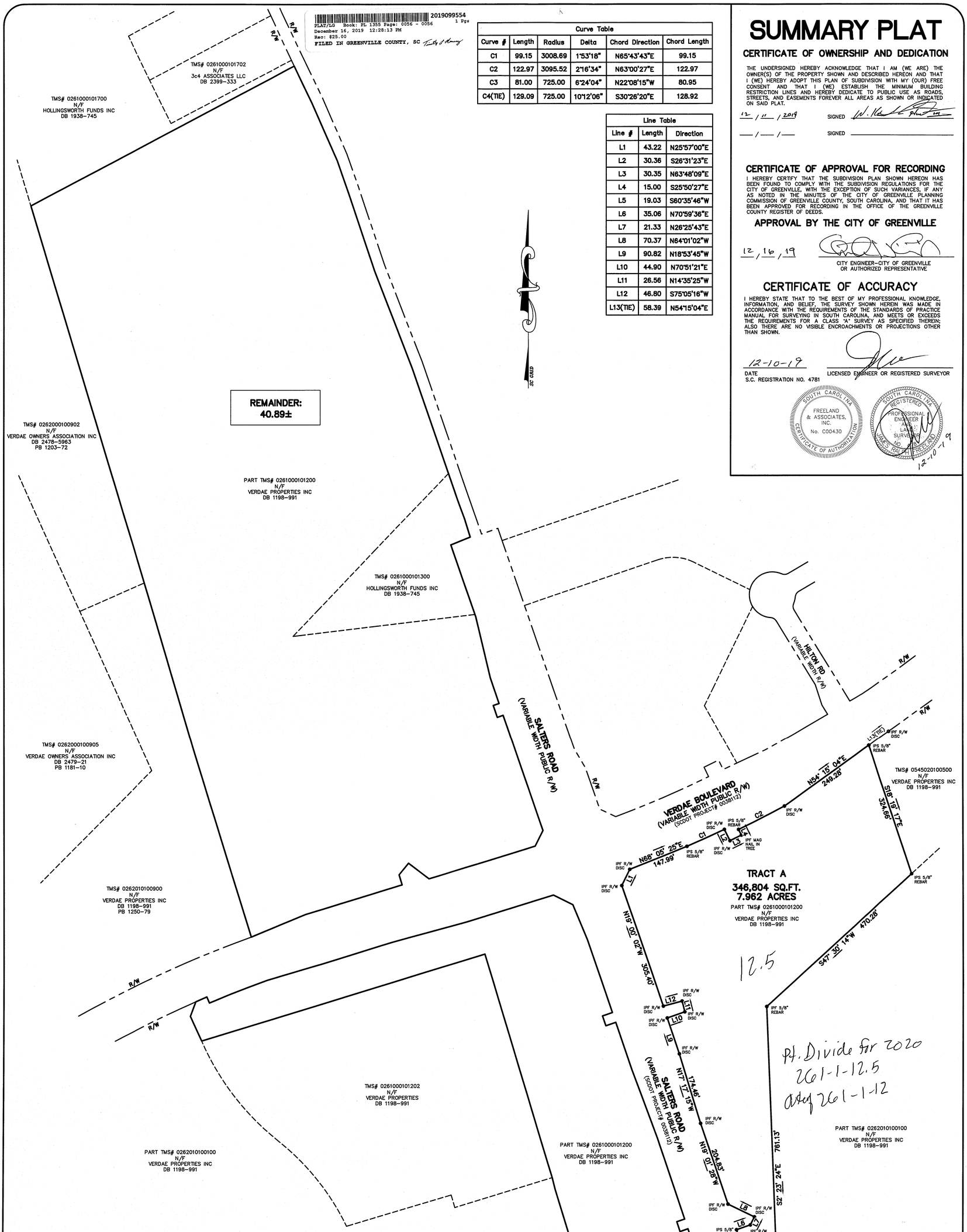
LICENSED ENGINEER OR REGISTERED SURVEYOR

SOUTH CAROLINA FREELAND & ASSOCIATES, INC. No. C00430 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR JAMES SCOTT FREELAND 12-10-19

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	99.15	3008.69	1°53'18"	N65°43'43"E	99.15
C2	122.97	3095.52	2°16'34"	N63°00'27"E	122.97
C3	81.00	725.00	6°24'04"	N22°08'15"W	80.95
C4(TIE)	129.09	725.00	10°12'06"	S30°26'20"E	128.92

Line Table		
Line #	Length	Direction
L1	43.22	N25°57'00"E
L2	30.36	S26°31'23"E
L3	30.35	N63°48'09"E
L4	15.00	S25°50'27"E
L5	19.03	S60°35'46"W
L6	35.06	N70°59'36"E
L7	21.33	N26°25'43"E
L8	70.37	N64°01'02"W
L9	90.82	N18°53'45"W
L10	44.90	N70°51'21"E
L11	26.56	N14°35'25"W
L12	46.80	S75°05'16"W
L13(TIE)	58.39	N54°15'04"E



SUBDIVISION AT SALTERS AND VERDAE

FILE NO. SSD 19-861

OWNER	SURVEYOR
VERDAE PROPERTIES INC 124 VERDAE BLVD SUITE 502 GREENVILLE, SC 29607 (864) 329-9292	FREELAND AND ASSOCIATES, INC. 323 WEST STONE AVE. GREENVILLE, S.C. 29609 (864) 271-4924

ZONED: S-1 NO. OF LOTS: 2

NO. OF ACRES: 7.962 DATE: 11-21-19

100' 0' 50' 100' 200' 400'

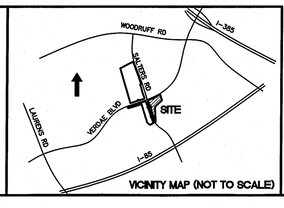
1 inch = 100 ft. (IN FEET)

SURVEYOR'S NOTES:

1) THIS PROPERTY IS SUBJECT TO ANY AND ALL EXISTING RIGHT-OF-WAYS FOR ROADS, UTILITIES AND ANY OTHER EASEMENTS THAT MAY APPEAR OF RECORD.

2) THE WORDS "CERTIFY", "CERTIFIES" OR "CERTIFICATION" AS USED HEREIN ARE UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE SURVEYOR, BASED UPON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF, AS SUCH, DO NOT CONSTITUTE A GUARANTEE NOR A WARRANTY, EXPRESSED OR IMPLIED.

3) BEARINGS BASED ON GPS "RTK" OBSERVATION OF SCDS MONUMENTS "23-039," "GVL 006" AND GVL-004". NAD 83



VICINITY MAP (NOT TO SCALE)

LEGEND

IPS	IRON PIN SET
IPF	IRON PIN FOUND
R/W	RIGHT-OF-WAY

NOTICE:
PURSUANT TO THE PROVISIONS OF SC CODE OF LAWS, SECTION 40-22-270(3), THIS PLAN, SPECIFICATION, OR PLAT SHALL NOT BE FILED WITH PUBLIC AUTHORITIES WITHOUT THE SEAL, SIGNATURE AND DATE AFFIXED. FURTHERMORE, IF THIS PLAN, SPECIFICATION OR PLAT DOES NOT HAVE A SEAL THAT IS SIGNED AND DATED, IT SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN A PRELIMINARY STUDY DRAWING AND WILL BE CONSIDERED A WORK IN PROGRESS.

DRAWING NO: 71414-SUB OVERALL

LAND PROJECTS\71414\Underworld\Site 14 Tops\71414\71414-SUB OVERALL.dwg, 12/10/2019 2:22:47 PM

Aspen Senior Living Surrounding Area Photos

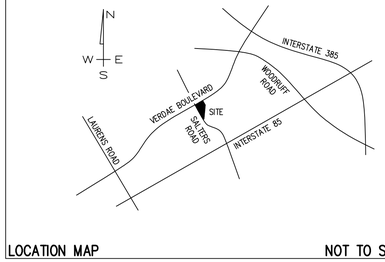
Southern Property Boundary along Salters Road Looking Towards Salters/Verdae Intersection

Southern Property Boundary along Salters Road Looking South Towards Verdae Golf Course

Intersection of Verdae/Salters Looking South Down Salters Road

Intersection of Verdae/Salters Looking East Down Verdae Blvd.

Eastern Property Boundary along Verdae Blvd. Looking West Towards Salters/Verdae Intersection



LOCATION MAP NOT TO SCALE

S.C.GRID

LEGEND

SYMBOLS

CB	CATCH BASIN
DI	DROP INLET
	ELEC TRANSFORMER
x 90.0	ELEVATION (EXIST. GRADE)
x 90.00	ELEVATION (FINISH GRADE)
	FIRE HYDRANT
	GAS METER
GV	GAS VALVE
IP	IRON PIN
LP	LIGHT POLE
MHBS	MANHOLE (BELLSOUTH)
MHSD	MANHOLE (SD)
MHSS	MANHOLE (SS)
PP	POWER POLE
TEL	TELEPHONE
	WATER METER
WV	WATER VALVE
	STORMWATER FLOW
	TRAFFIC FLOW

ABBREVIATIONS

BL	BUILDING LINE
CL	CENTERLINE
CT	CRIMP TOP
DE	DRAINAGE EASEMENT
EP	EDGE OF PAVEMENT
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
IE	INVERT ELEVATION
IPS	IRON PIN SET
IPO	IRON PIN OLD
N&C	NAIL & CAP
OT	OPEN TOP
RB	REBAR
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
SSE	SANITARY SEWER EASEMENT
SL	SETBACK LINE
VCP	VITRIFIED CLAY PIPE

LINETYPES

CTV	CABLE TV
x	CHAIN LINK FENCE (PROPOSED)
x	CHAIN LINK FENCE (EXISTING)
680	CONTOURS – EXIST. GRADE
(678)	CONTOURS – FINISHED GRADE
FOC	FIBER OPTIC
FM	FORCE MAIN
GAS	GAS LINE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
RD	ROOF DRAIN – NEW
SS	SANITARY SEWER – EXIST.
SS	SANITARY SEWER – NEW
SF	SILT FENCE
SD	STORM SEWER – EXIST.
	STORM SEWER – NEW
UGP	UNDERGROUND POWER
UGT	UNDERGROUND TEL
W	WATER LINE – EXIST.
W	WATER – NEW
	WOOD FENCE
NPDES	LIMITS OF DISTURBANCE

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

SITE DESIGN, INC.
CIVIL ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
www.sitedesign-inc.com
300 E. WASHINGTON ST, STE B
GREENVILLE, SC 29601
PH: (864)271-0496
FAX: (864)271-0402

NO.	DATE
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THIS DRAWING IS THE PROPERTY OF SITE DESIGN, INC. AND IS FURNISHED WITH THE CONDITION THAT IT IS NOT TO BE CHANGED WITHOUT THE WRITTEN AUTHORIZATION OF SITE DESIGN, INC. FURTHERMORE, THIS DRAWING IS NOT TO BE COPIED, REPRODUCED, OR USED BY OTHERS EXCEPT AS REQUIRED FOR THE WORK OF THIS SPECIFIC PROJECT.

SOUTH CAROLINA SITE DESIGN INC. No. C00122 CERTIFICATE OF AUTHORIZATION

S.C. REG NO 12314

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 200'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	CSW
DATE:	10/25/2019

S190634_BASE-GIS.dwg

CONTEXT MAP

SHEET 1 OF 1

MAP

CAUTION

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

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CITY ENGINEERING NOTES:

1. ALL RETAINING WALLS FOUR (4) FEET AND GREATER IN HEIGHT, WHEN MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL AT ANY POINT, AND ALL RETAINING WALLS SUPPORTING A SURCHARGE OR IMPOUNDING CLASS I, II, OR IIIA LIQUIDS MUST BE ENGINEERED. THE DESIGN AND CALCULATIONS MUST BE PREPARED BY A REGISTERED SOUTH CAROLINA PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

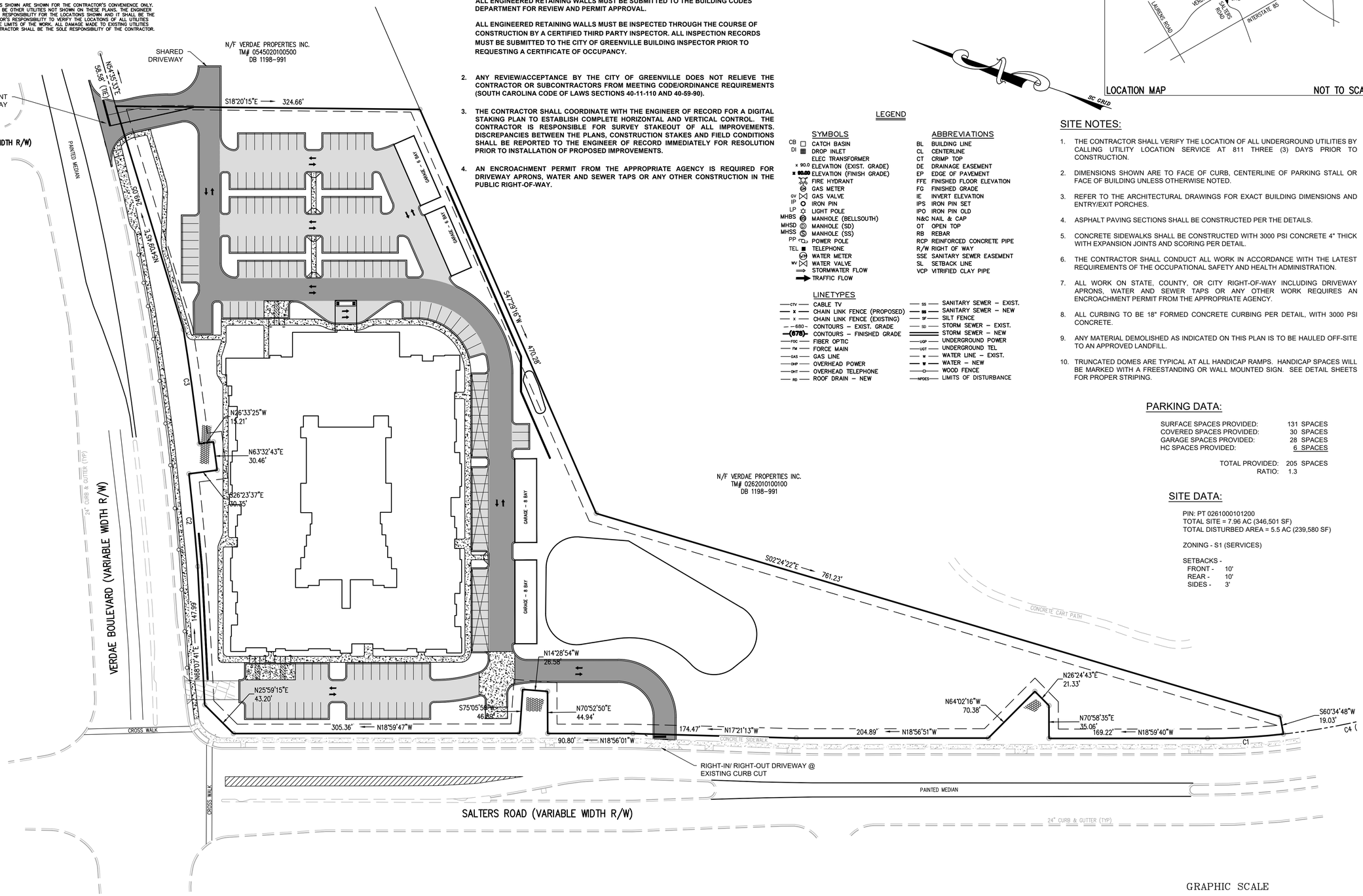
   ALL ENGINEERED RETAINING WALLS MUST BE SUBMITTED TO THE BUILDING CODES DEPARTMENT FOR REVIEW AND PERMIT APPROVAL.

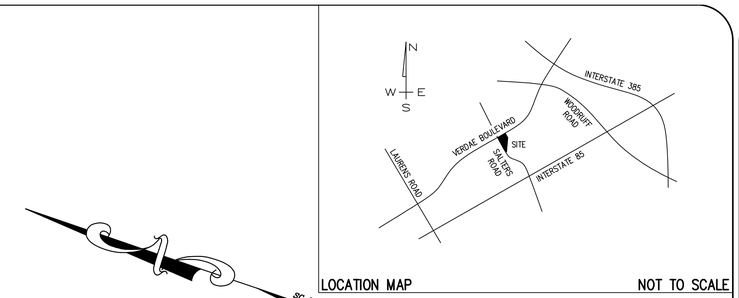
   ALL ENGINEERED RETAINING WALLS MUST BE INSPECTED THROUGH THE COURSE OF CONSTRUCTION BY A CERTIFIED THIRD PARTY INSPECTOR. ALL INSPECTION RECORDS MUST BE SUBMITTED TO THE CITY OF GREENVILLE BUILDING INSPECTOR PRIOR TO REQUESTING A CERTIFICATE OF OCCUPANCY.

2. ANY REVIEW/ACCEPTANCE BY THE CITY OF GREENVILLE DOES NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTORS FROM MEETING CODE/ORDINANCE REQUIREMENTS (SOUTH CAROLINA CODE OF LAWS SECTIONS 40-11-110 AND 40-59-90).

3. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OF RECORD FOR A DIGITAL STAKING PLAN TO ESTABLISH COMPLETE HORIZONTAL AND VERTICAL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR SURVEY STAKEOUT OF ALL IMPROVEMENTS. DISCREPANCIES BETWEEN THE PLANS, CONSTRUCTION STAKES AND FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION PRIOR TO INSTALLATION OF PROPOSED IMPROVEMENTS.

4. AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY IS REQUIRED FOR DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY.





LOCATION MAP NOT TO SCALE

LEGEND

SYMBOLS

- CB CATCH BASIN
- DI DROP INLET
- ELEC TRANSFORMER
- x 90.0 ELEVATION (EXIST. GRADE)
- ■ 90.00 ELEVATION (FINISH GRADE)
- FIRE HYDRANT
- GM GAS METER
- GV GAS VALVE
- IP IRON PIN
- LP LIGHT POLE
- MHBS MANHOLE (BELLSOUTH)
- MHSD MANHOLE (SD)
- MHSS MANHOLE (SS)
- PP POWER POLE
- TEL TELEPHONE
- WM WATER METER
- WV WATER VALVE
- STORMWATER FLOW
- TRAFFIC FLOW

ABBREVIATIONS

- BL BUILDING LINE
- CL CENTERLINE
- CT CRIMP TOP
- DE DRAINAGE EASEMENT
- EP EDGE OF PAVEMENT
- FFE FINISHED FLOOR ELEVATION
- FG FINISHED GRADE
- IE INVERT ELEVATION
- IPS IRON PIN SET
- IPO IRON PIN OLD
- N&C NAIL & CAP
- OT OPEN TOP
- RB REBAR
- RCP REINFORCED CONCRETE PIPE
- R/W RIGHT OF WAY
- SSE SANITARY SEWER EASEMENT
- SL SETBACK LINE
- VCP VITRIFIED CLAY PIPE

LINETYPES

- CTV CABLE TV
- CHAIN LINK FENCE (PROPOSED)
- CHAIN LINK FENCE (EXISTING)
- 680 CONTOURS – EXIST. GRADE
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- FOC FIBER OPTIC
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- GAS GAS LINE
- OHP OVERHEAD POWER
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- RD ROOF DRAIN – NEW
- SS SANITARY SEWER – EXIST.
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- SF SILT FENCE
- SD STORM SEWER – EXIST.
- STORM SEWER – NEW
- UGP UNDERGROUND POWER
- UGT UNDERGROUND TEL
- W WATER LINE – EXIST.
- W WATER – NEW
- WOOD FENCE
- NPDES LIMITS OF DISTURBANCE

SITE NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BY CALLING UTILITY LOCATION SERVICE AT 811 THREE (3) DAYS PRIOR TO CONSTRUCTION.
2. DIMENSIONS SHOWN ARE TO FACE OF CURB, CENTERLINE OF PARKING STALL OR FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND ENTRY/EXIT PORCHES.
4. ASPHALT PAVING SECTIONS SHALL BE CONSTRUCTED PER THE DETAILS.
5. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITH 3000 PSI CONCRETE 4" THICK WITH EXPANSION JOINTS AND SCORING PER DETAIL.
6. THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
7. ALL WORK ON STATE, COUNTY, OR CITY RIGHT-OF-WAY INCLUDING DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER WORK REQUIRES AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY.
8. ALL CURBING TO BE 18" FORMED CONCRETE CURBING PER DETAIL, WITH 3000 PSI CONCRETE.
9. ANY MATERIAL DEMOLISHED AS INDICATED ON THIS PLAN IS TO BE HAULED OFF-SITE TO AN APPROVED LANDFILL.
10. TRUNCATED DOMES ARE TYPICAL AT ALL HANDICAP RAMPS. HANDICAP SPACES WILL BE MARKED WITH A FREESTANDING OR WALL MOUNTED SIGN. SEE DETAIL SHEETS FOR PROPER STRIPING.

PARKING DATA:

SURFACE SPACES PROVIDED:	131 SPACES
COVERED SPACES PROVIDED:	30 SPACES
GARAGE SPACES PROVIDED:	28 SPACES
HC SPACES PROVIDED:	6 SPACES
TOTAL PROVIDED:	205 SPACES
RATIO:	1.3

SITE DATA:

PIN: PT 0261000101200
TOTAL SITE = 7.96 AC (346,501 SF)
TOTAL DISTURBED AREA = 5.5 AC (239,580 SF)

ZONING - S1 (SERVICES)

SETBACKS -
FRONT - 10'
REAR - 10'
SIDES - 3'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SITE DESIGN, INC.
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800 E. WASHINGTON ST. STE B
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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 030392 — SITE DESIGN INC. No. C00122 — CERTIFICATE OF AUTHORIZATION — SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 30392 — 12/18/2019

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 50'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019
S190634.00	

OVERALL SITE PLAN

SHEET 2 OF 8

C200

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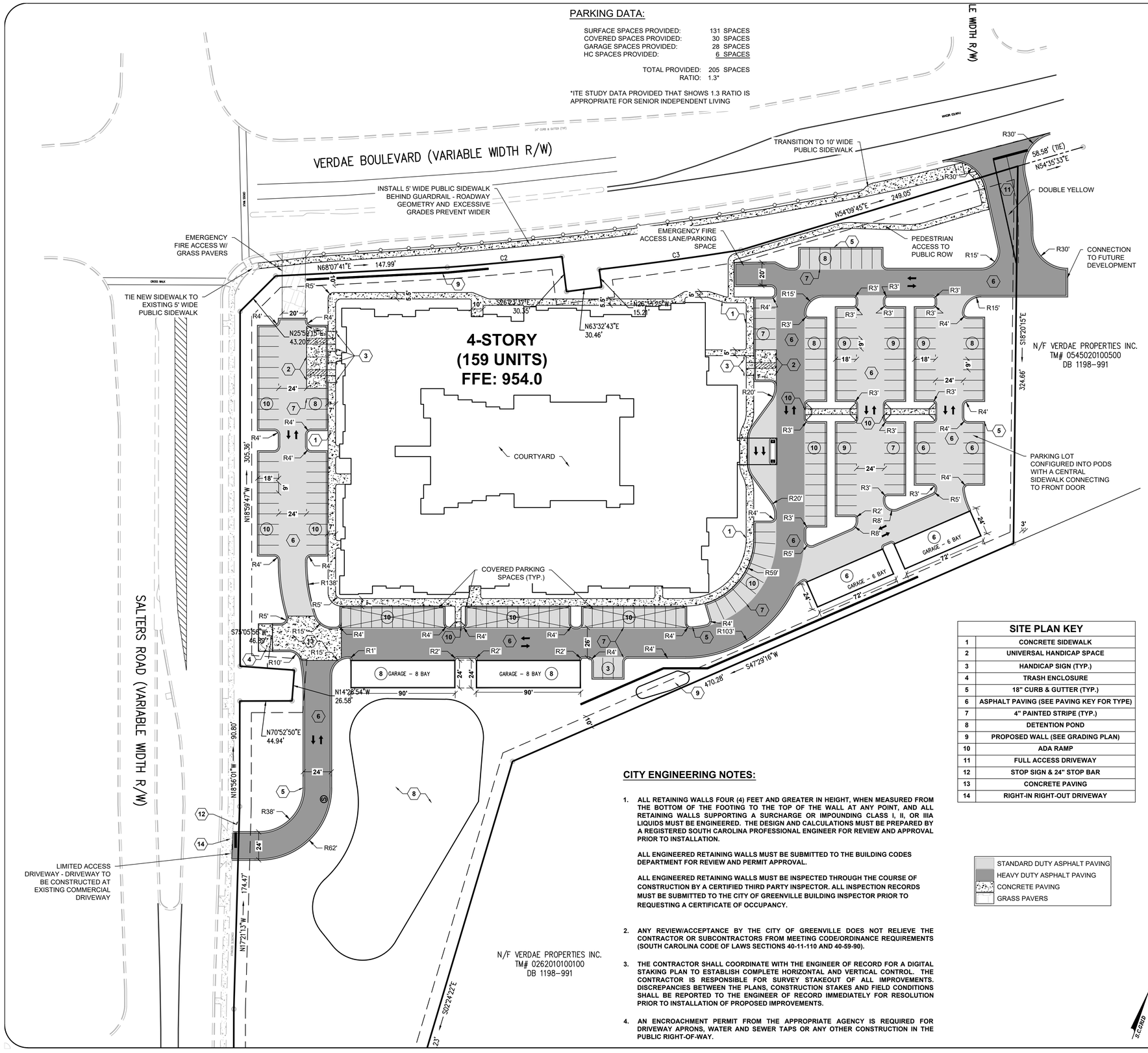
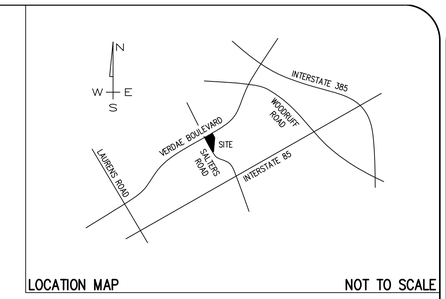
RATIO:	1.3*

*ITE STUDY DATA PROVIDED THAT SHOWS 1.3 RATIO IS APPROPRIATE FOR SENIOR INDEPENDENT LIVING





LOCATION MAP NOT TO SCALE

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PIN: PT 0261000101200
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TOTAL DISTURBED AREA = 5.5 AC (239,580 SF)

ZONING - S1 (SERVICES)
MULTI-FAMILY DENSITY 20 UNITS/AC = 159 UNITS
BUILDING PROVIDES 159 UNITS
OPEN SPACE REQUIREMENT 200 SF/UNIT = 31,800 SF
SITE PROVIDES IN EXCESS OF 45,000 SF

SETBACKS -
FRONT - 10'
REAR - 10'
SIDES - 3'

CAUTION

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SITE PLAN KEY

1	CONCRETE SIDEWALK
2	UNIVERSAL HANDICAP SPACE
3	HANDICAP SIGN (TYP.)
4	TRASH ENCLOSURE
5	18" CURB & GUTTER (TYP.)
6	ASPHALT PAVING (SEE PAVING KEY FOR TYPE)
7	4" PAINTED STRIPE (TYP.)
8	DETENTION POND
9	PROPOSED WALL (SEE GRADING PLAN)
10	ADA RAMP
11	FULL ACCESS DRIVEWAY
12	STOP SIGN & 24" STOP BAR
13	CONCRETE PAVING
14	RIGHT-IN RIGHT-OUT DRIVEWAY

STANDARD DUTY ASPHALT PAVING
HEAVY DUTY ASPHALT PAVING
CONCRETE PAVING
GRASS PAVERS

CITY ENGINEERING NOTES:

1. ALL RETAINING WALLS FOUR (4) FEET AND GREATER IN HEIGHT, WHEN MEASURED FROM THE BOTTOM OF THE FOOTING TO THE TOP OF THE WALL AT ANY POINT, AND ALL RETAINING WALLS SUPPORTING A SURCHARGE OR IMPOUNDING CLASS I, II, OR IIIA LIQUIDS MUST BE ENGINEERED. THE DESIGN AND CALCULATIONS MUST BE PREPARED BY A REGISTERED SOUTH CAROLINA PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

   ALL ENGINEERED RETAINING WALLS MUST BE SUBMITTED TO THE BUILDING CODES DEPARTMENT FOR REVIEW AND PERMIT APPROVAL.

   ALL ENGINEERED RETAINING WALLS MUST BE INSPECTED THROUGH THE COURSE OF CONSTRUCTION BY A CERTIFIED THIRD PARTY INSPECTOR. ALL INSPECTION RECORDS MUST BE SUBMITTED TO THE CITY OF GREENVILLE BUILDING INSPECTOR PRIOR TO REQUESTING A CERTIFICATE OF OCCUPANCY.

2. ANY REVIEW/ACCEPTANCE BY THE CITY OF GREENVILLE DOES NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTORS FROM MEETING CODE/ORDINANCE REQUIREMENTS (SOUTH CAROLINA CODE OF LAWS SECTIONS 40-11-110 AND 40-59-90).

3. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OF RECORD FOR A DIGITAL STAKING PLAN TO ESTABLISH COMPLETE HORIZONTAL AND VERTICAL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR SURVEY STAKEOUT OF ALL IMPROVEMENTS. DISCREPANCIES BETWEEN THE PLANS, CONSTRUCTION STAKES AND FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION PRIOR TO INSTALLATION OF PROPOSED IMPROVEMENTS.

4. AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY IS REQUIRED FOR DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY.

LEGEND

SYMBOLS

- CB — CATCH BASIN
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- WOOD FENCE
- NPDES — LIMITS OF DISTURBANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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SITE DESIGN INC. No. C00122 CERTIFICATE OF AUTHORIZATION NORTH CAROLINA

MARK W. CRAWFORD No. 21820 REGISTERED PROFESSIONAL ENGINEER NORTH CAROLINA 00/XX/2019

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

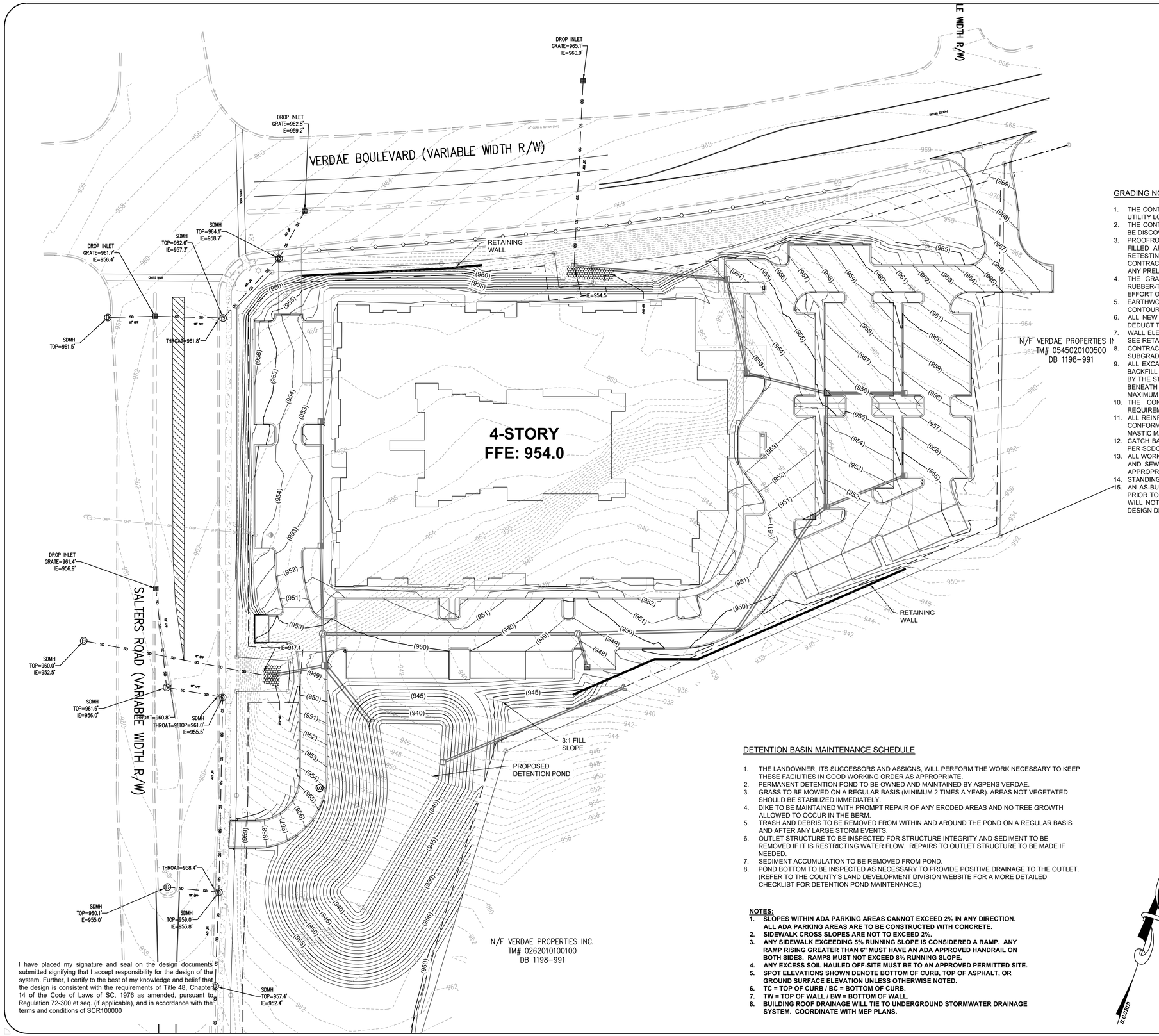
HORZ. SCALE:	1" = 40'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019

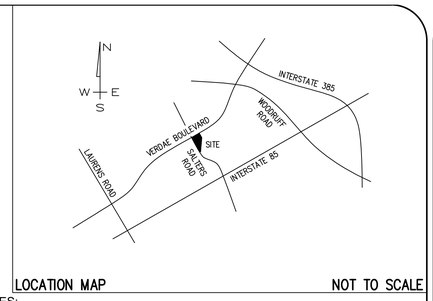
S190634.00

ENLARGED SITE PLAN

SHEET 3 OF 8

C201





LOCATION MAP NOT TO SCALE

GRADING NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BY CALLING UTILITY LOCATION SERVICE AT 811 THREE (3) DAYS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR A REVIEW SHOULD ANY DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
3. PROOFROLLING AND COMPACTION TESTS SHALL BE ACCOMPLISHED IN THE FIELD TO TEST FILLED AREAS. INITIAL COMPACTION TESTS WILL BE CONDUCTED AT OWNER'S EXPENSE. RETESTING REQUIRED BECAUSE OF POOR COMPACTION SHALL BE CONDUCTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL SUPPLY RESULTS TO THE ENGINEER BEFORE ANY PRELIMINARY AND/OR FINAL APPROVALS.
4. THE GRADING CONTRACTOR SHALL PROOFROLL THE CONSTRUCTION AREA WITH HEAVY RUBBER-TIRED EQUIPMENT. ALL SOFT SPOTS SHALL BE STABILIZED BY FURTHER COMPACTIVE EFFORT OR UNDERCUT AND BACKFILLED WITH COMPACTED STRUCTURAL FILL MATERIAL.
5. EARTHWORK SHALL BE TO THE GRADES AND LINES SHOWN. EXISTING AND PROPOSED CONTOUR INTERVALS ARE AT 1'.
6. ALL NEW ELEVATIONS SHOWN ARE FINISH ELEVATIONS. THE GRADING CONTRACTOR SHALL DEDUCT THE APPROPRIATE AMOUNT TO ESTABLISH SUBGRADE ELEVATION.
7. WALL ELEVATIONS WHERE NOTED ARE TOP OF WALL AND FINISH GRADE AT BOTTOM OF WALL. SEE RETAINING WALL PLANS FOR DETAILED CONSTRUCTION INFORMATION.
8. CONTRACTOR SHALL REMOVE TOPSOIL AS NECESSARY (MINIMUM OF 4") TO PROVIDE ADEQUATE SUBGRADE FOR ROADWAYS.
9. ALL EXCAVATION SHALL BE "UNCLASSIFIED EXCAVATION". ALL NEW FILL AND UTILITY TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698). IN ADDITION, THE UPPER 18" OF ALL FILL MATERIALS BENEATH FLOOR SLABS AND PAVEMENTS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DRY DENSITY (ASTM D-698).
10. THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
11. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED, AND SHALL CONFORM TO SCDOT SPECIFICATIONS. ALL JOINTS SHALL BE TONGUE AND GROOVE WITH MASTIC MATERIAL.
12. CATCH BASINS SHALL BE PRECAST R.EINFORCED CONCRETE DRAINAGE BOX WITH SOLID WALL PER SCDOT STANDARD DRAWING 719-17A OR APPROVED EQUAL.
13. ALL WORK ON STATE, COUNTY, OR CITY RIGHT-OF-WAYS, INCLUDING DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER WORK REQUIRES AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY.
14. STANDING GRASS MUST BE EVIDENT IN AREAS THAT WERE SEEDED.
15. AN AS-BUILT CERTIFICATION OF THE STORMWATER MANAGEMENT SYSTEM WILL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE SITE. THE DESIGN ENGINEER WILL NOT BE RESPONSIBLE FOR THE DELAYS RESULTING FROM NON-COMPLIANCE WITH THE DESIGN DRAWINGS.

DETENTION BASIN MAINTENANCE SCHEDULE

1. THE LANDOWNER, ITS SUCCESSORS AND ASSIGNS, WILL PERFORM THE WORK NECESSARY TO KEEP THESE FACILITIES IN GOOD WORKING ORDER AS APPROPRIATE.
2. PERMANENT DETENTION POND TO BE OWNED AND MAINTAINED BY ASPENS VERDAE.
3. GRASS TO BE MOWED ON A REGULAR BASIS (MINIMUM 2 TIMES A YEAR). AREAS NOT VEGETATED SHOULD BE STABILIZED IMMEDIATELY.
4. DIKE TO BE MAINTAINED WITH PROMPT REPAIR OF ANY ERODED AREAS AND NO TREE GROWTH ALLOWED TO OCCUR IN THE BERM.
5. TRASH AND DEBRIS TO BE REMOVED FROM WITHIN AND AROUND THE POND ON A REGULAR BASIS AND AFTER ANY LARGE STORM EVENTS.
6. OUTLET STRUCTURE TO BE INSPECTED FOR STRUCTURE INTEGRITY AND SEDIMENT TO BE REMOVED IF IT IS RESTRICTING WATER FLOW. REPAIRS TO OUTLET STRUCTURE TO BE MADE IF NEEDED.
7. SEDIMENT ACCUMULATION TO BE REMOVED FROM POND.
8. POND BOTTOM TO BE INSPECTED AS NECESSARY TO PROVIDE POSITIVE DRAINAGE TO THE OUTLET. (REFER TO THE COUNTY'S LAND DEVELOPMENT DIVISION WEBSITE FOR A MORE DETAILED CHECKLIST FOR DETENTION POND MAINTENANCE.)

NOTES:

1. **SLOPES WITHIN ADA PARKING AREAS CANNOT EXCEED 2% IN ANY DIRECTION. ALL ADA PARKING AREAS ARE TO BE CONSTRUCTED WITH CONCRETE.**
2. **SIDEWALK CROSS SLOPES ARE NOT TO EXCEED 2%.**
3. **ANY SIDEWALK EXCEEDING 5% RUNNING SLOPE IS CONSIDERED A RAMP. ANY RAMP RISING GREATER THAN 6" MUST HAVE AN ADA APPROVED HANDRAIL ON BOTH SIDES. RAMPS MUST NOT EXCEED 8% RUNNING SLOPE.**
4. **ANY EXCESS SOIL HAULED OFF-SITE MUST BE TO AN APPROVED PERMITTED SITE.**
5. **SPOT ELEVATIONS SHOWN DENOTE BOTTOM OF CURB, TOP OF ASPHALT, OR GROUND SURFACE ELEVATION UNLESS OTHERWISE NOTED.**
6. **TC = TOP OF CURB / BC = BOTTOM OF CURB.**
7. **TW = TOP OF WALL / BW = BOTTOM OF WALL.**
8. **BUILDING ROOF DRAINAGE WILL TIE TO UNDERGROUND STORMWATER DRAINAGE SYSTEM. COORDINATE WITH MEP PLANS.**

I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000

*****CAUTION*****

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(IN FEET)
1 inch = 40 ft.

S.CGRID

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SITE DESIGN INC. No. C00122 CERTICATE OF AUTHORIZATION NORTH CAROLINA

XX/XX/2019 SOUTH CAROLINA PROFESSIONAL ENGINEER No. 29920 WINNALL CRAIG BROOKS

S.C. REG NO 21620

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 40'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019

S190634.00

GRADING PLAN

SHEET 4 OF 8

C400

CAUTION

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

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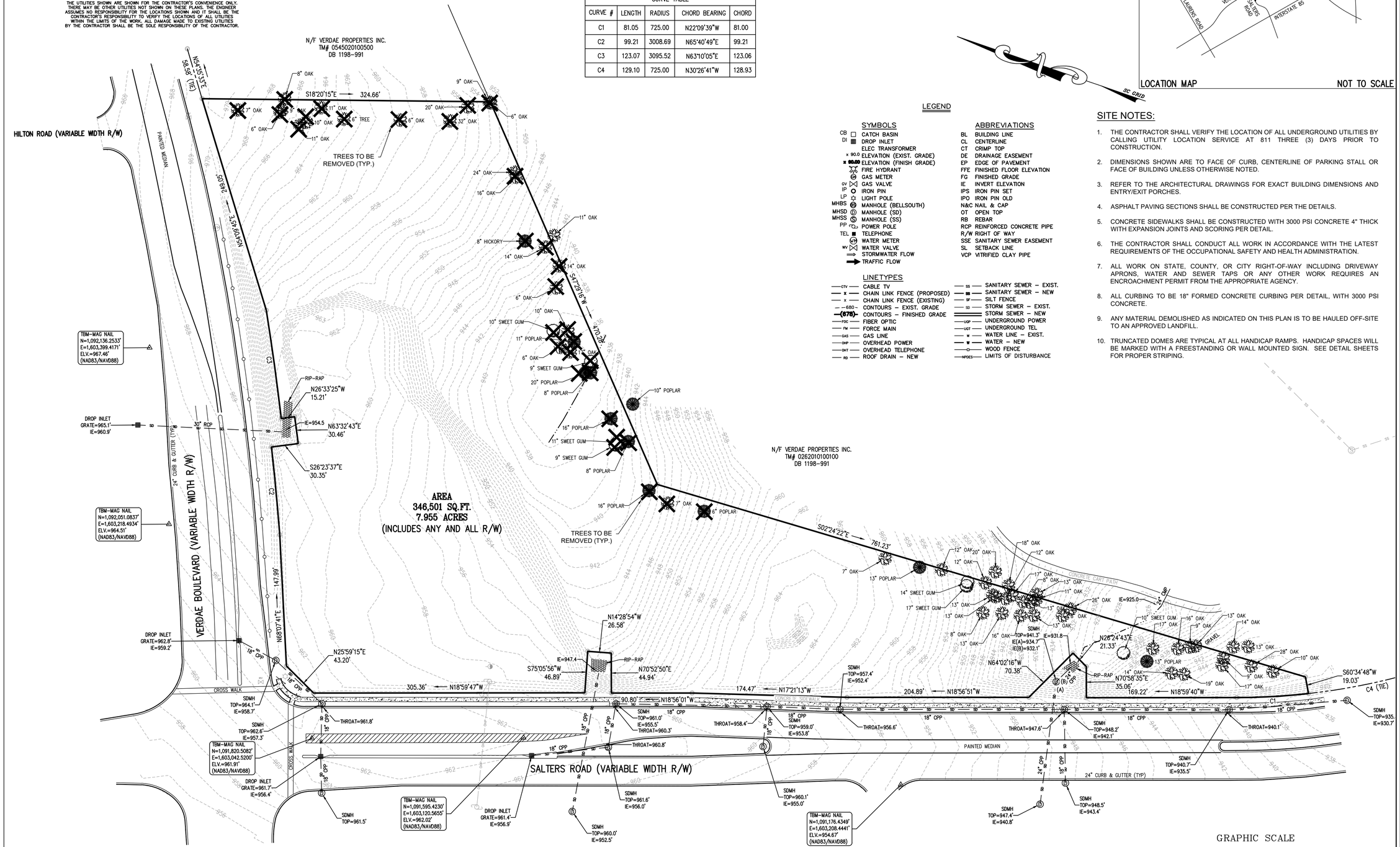
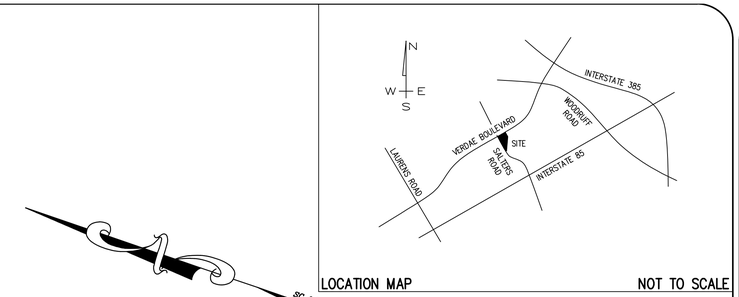
CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD
C1	81.05	725.00	N22°09'39"W	81.00
C2	99.21	3008.69	N65°40'49"E	99.21
C3	123.07	3095.52	N63°10'05"E	123.06
C4	129.10	725.00	N30°26'41"W	128.93





LOCATION MAP NOT TO SCALE

LEGEND

SYMBOLS

- CB — CATCH BASIN
- DI — DROP INLET
- ELEC TRANSFORMER
- × 90.0 — ELEVATION (EXIST. GRADE)
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ABBREVIATIONS

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LINETYPES

- CTV — CABLE TV
- X — CHAIN LINK FENCE (PROPOSED)
- X — CHAIN LINK FENCE (EXISTING)
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- NPDES — LIMITS OF DISTURBANCE

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GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SITE DESIGN, INC.
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www.sitedesign-inc.com
800 E. WASHINGTON ST. STE B
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NO.	DATE
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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 030736 SITE DESIGN INC. No. C00122 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL No. 27903 XX/XX/2019 CERTIFICATE OF AUTHORIZATION

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 50'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019

S190634.00

EXISTING CONDITIONS

SHEET 1 OF 8

C100

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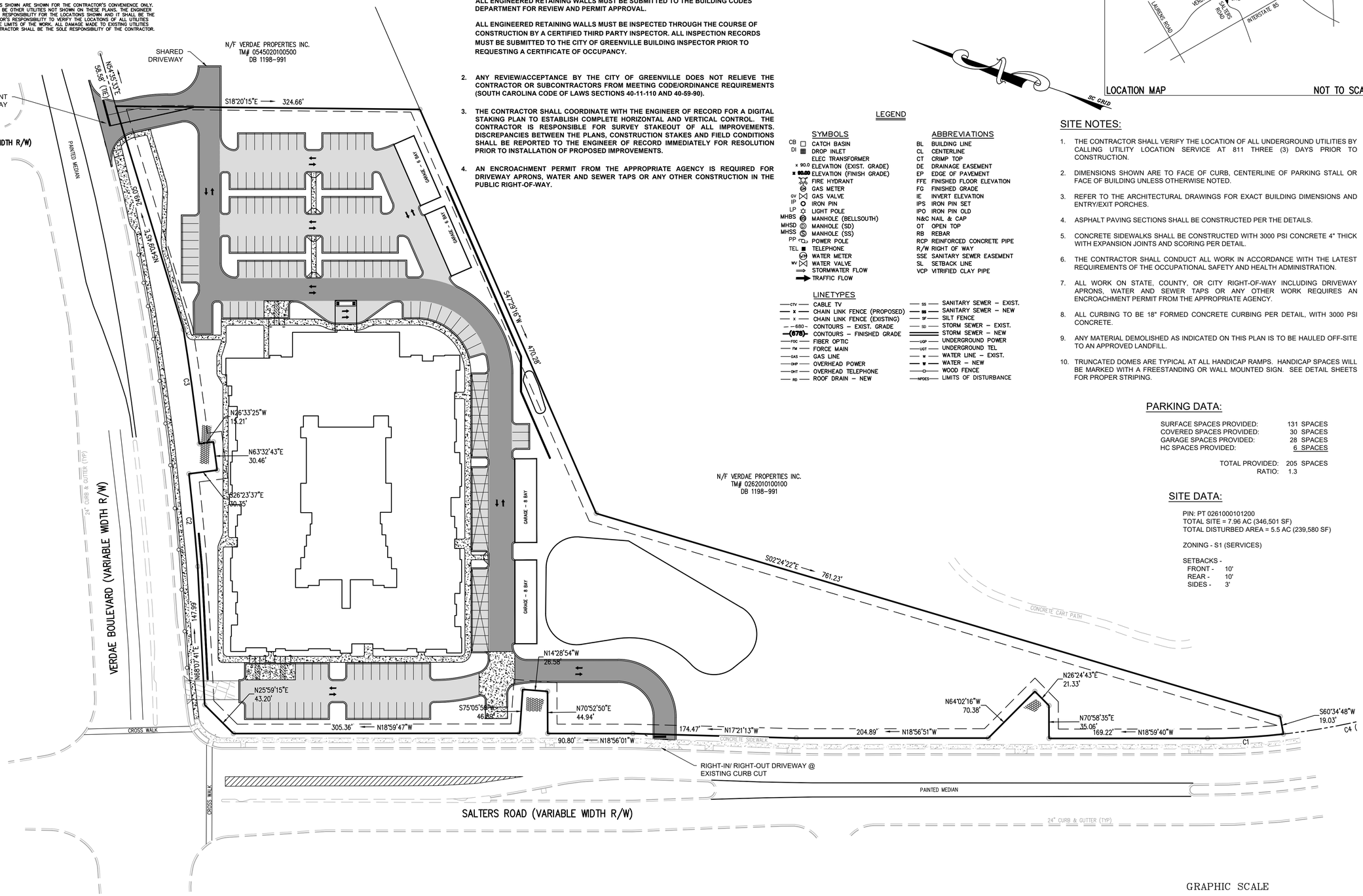

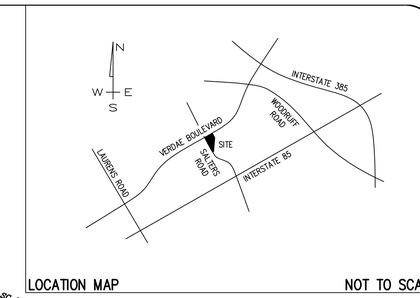

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PARKING DATA:

SURFACE SPACES PROVIDED:	131 SPACES
COVERED SPACES PROVIDED:	30 SPACES
GARAGE SPACES PROVIDED:	28 SPACES
HC SPACES PROVIDED:	6 SPACES
TOTAL PROVIDED:	205 SPACES
RATIO:	1.3

SITE DATA:

PIN: PT 0261000101200
TOTAL SITE = 7.96 AC (346,501 SF)
TOTAL DISTURBED AREA = 5.5 AC (239,580 SF)

ZONING - S1 (SERVICES)

SETBACKS -
FRONT - 10'
REAR - 10'
SIDES - 3'

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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SITE DESIGN INC. No. C00122 CERTIFICATE OF AUTHORIZATION SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER SEAL 30332 12/18/2019 MICHAEL R. BRAND

S.C. REG NO 20820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 50'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019
S190634.00	

OVERALL SITE PLAN

SHEET 2 OF 8

C200

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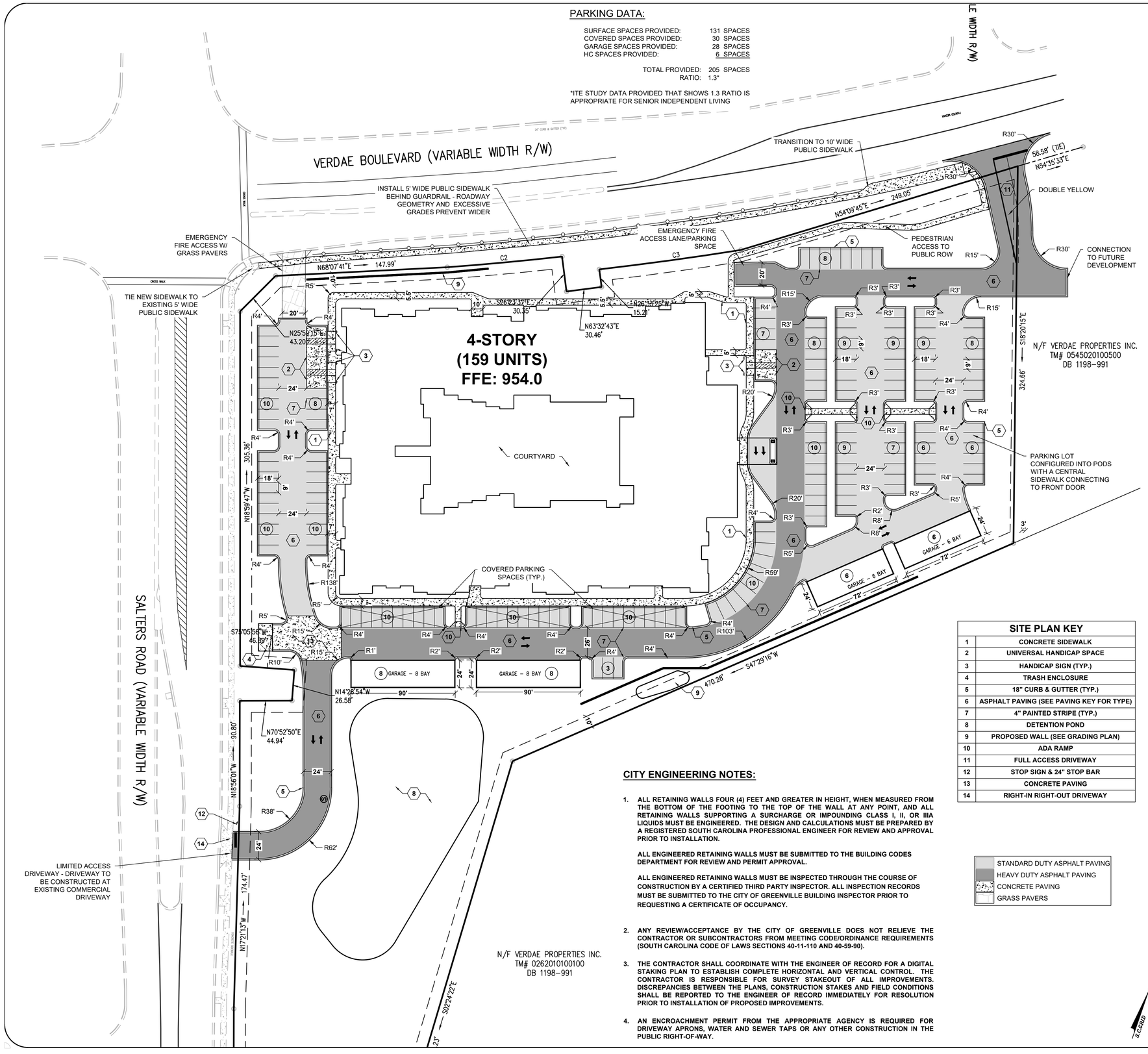
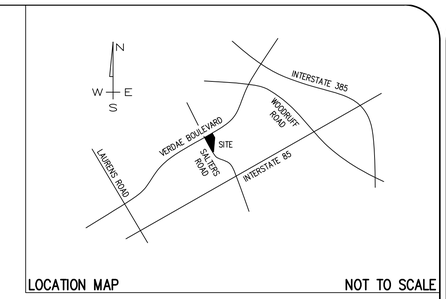
*ITE STUDY DATA PROVIDED THAT SHOWS 1.3 RATIO IS APPROPRIATE FOR SENIOR INDEPENDENT LIVING





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TOTAL DISTURBED AREA = 5.5 AC (239,580 SF)

ZONING - S1 (SERVICES)
MULTI-FAMILY DENSITY 20 UNITS/AC = 159 UNITS
BUILDING PROVIDES 159 UNITS
OPEN SPACE REQUIREMENT 200 SF/UNIT = 31,800 SF
SITE PROVIDES IN EXCESS OF 45,000 SF

SETBACKS -
FRONT - 10'
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SITE PLAN KEY

1	CONCRETE SIDEWALK
2	UNIVERSAL HANDICAP SPACE
3	HANDICAP SIGN (TYP.)
4	TRASH ENCLOSURE
5	18" CURB & GUTTER (TYP.)
6	ASPHALT PAVING (SEE PAVING KEY FOR TYPE)
7	4" PAINTED STRIPE (TYP.)
8	DETENTION POND
9	PROPOSED WALL (SEE GRADING PLAN)
10	ADA RAMP
11	FULL ACCESS DRIVEWAY
12	STOP SIGN & 24" STOP BAR
13	CONCRETE PAVING
14	RIGHT-IN RIGHT-OUT DRIVEWAY

STANDARD DUTY ASPHALT PAVING
HEAVY DUTY ASPHALT PAVING
CONCRETE PAVING
GRASS PAVERS

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40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

S.C.GRID

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NOTARY PUBLIC WILLIAM CRAIG WHALEY SOUTH CAROLINA
SITE DESIGN INC. No. C00122 CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA PROFESSIONAL ENGINEER SEAL 25XXX2018 No. 25XXX SITE DESIGN INC.

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

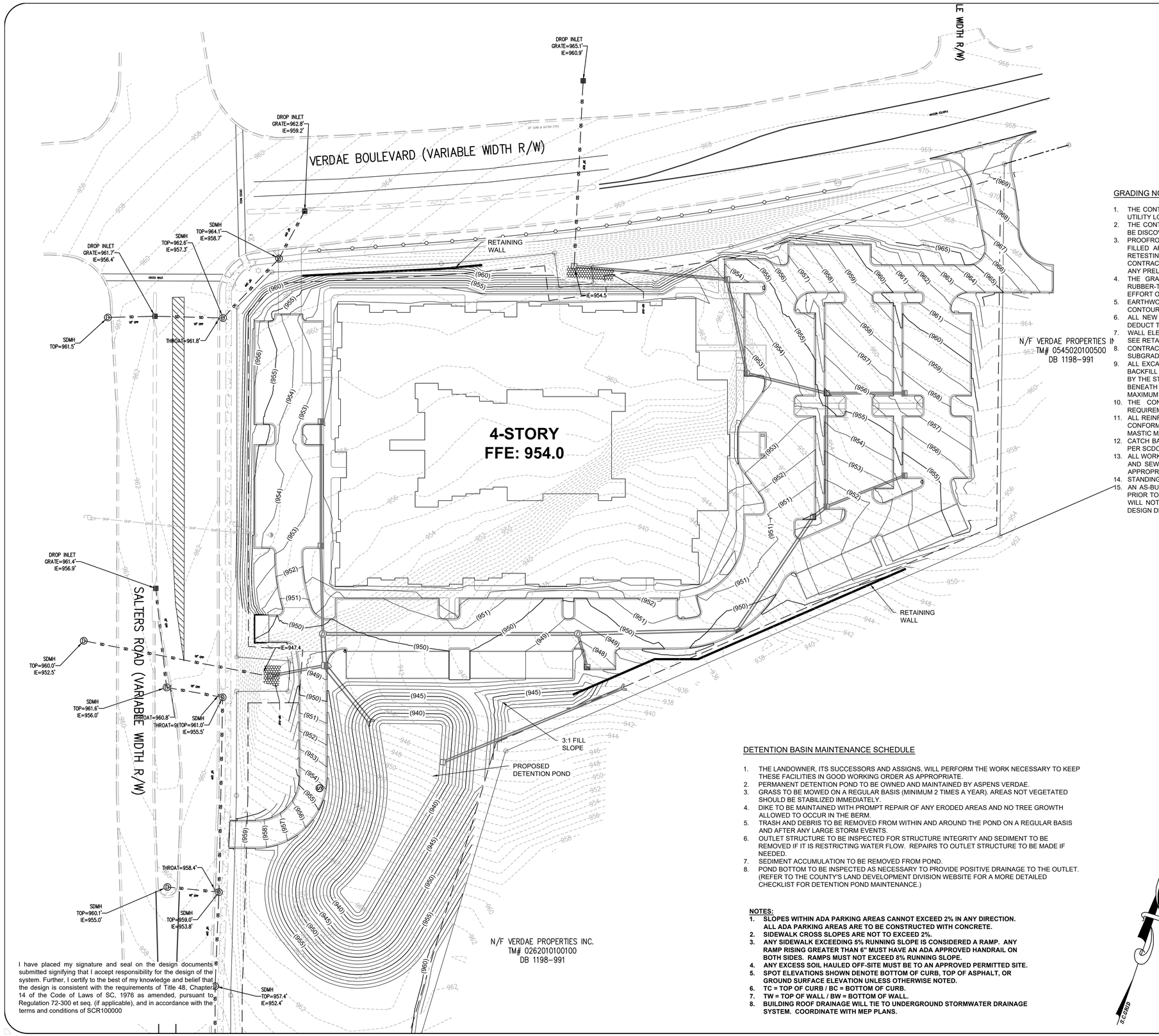
HORZ. SCALE:	1" = 40'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019

S190634.00

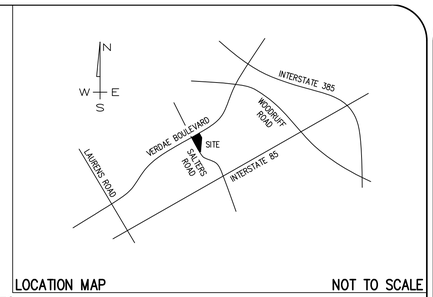
ENLARGED SITE PLAN

SHEET 3 OF 8

C201



I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000



LOCATION MAP NOT TO SCALE

GRADING NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BY CALLING UTILITY LOCATION SERVICE AT 811 THREE (3) DAYS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR A REVIEW SHOULD ANY DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
3. PROOFROLLING AND COMPACTION TESTS SHALL BE ACCOMPLISHED IN THE FIELD TO TEST FILLED AREAS. INITIAL COMPACTION TESTS WILL BE CONDUCTED AT OWNER'S EXPENSE. RETESTING REQUIRED BECAUSE OF POOR COMPACTION SHALL BE CONDUCTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL SUPPLY RESULTS TO THE ENGINEER BEFORE ANY PRELIMINARY AND/OR FINAL APPROVALS.
4. THE GRADING CONTRACTOR SHALL PROOFROLL THE CONSTRUCTION AREA WITH HEAVY RUBBER-TIRED EQUIPMENT. ALL SOFT SPOTS SHALL BE STABILIZED BY FURTHER COMPACTIVE EFFORT OR UNDERCUT AND BACKFILLED WITH COMPACTED STRUCTURAL FILL MATERIAL.
5. EARTHWORK SHALL BE TO THE GRADES AND LINES SHOWN. EXISTING AND PROPOSED CONTOUR INTERVALS ARE AT 1'.
6. ALL NEW ELEVATIONS SHOWN ARE FINISH ELEVATIONS. THE GRADING CONTRACTOR SHALL DEDUCT THE APPROPRIATE AMOUNT TO ESTABLISH SUBGRADE ELEVATION.
7. WALL ELEVATIONS WHERE NOTED ARE TOP OF WALL AND FINISH GRADE AT BOTTOM OF WALL. SEE RETAINING WALL PLANS FOR DETAILED CONSTRUCTION INFORMATION.
8. CONTRACTOR SHALL REMOVE TOPSOIL AS NECESSARY (MINIMUM OF 4") TO PROVIDE ADEQUATE SUBGRADE FOR ROADWAYS.
9. ALL EXCAVATION SHALL BE "UNCLASSIFIED EXCAVATION". ALL NEW FILL AND UTILITY TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698). IN ADDITION, THE UPPER 18" OF ALL FILL MATERIALS BENEATH FLOOR SLABS AND PAVEMENTS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DRY DENSITY (ASTM D-698).
10. THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
11. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED, AND SHALL CONFORM TO SCDOT SPECIFICATIONS. ALL JOINTS SHALL BE TONGUE AND GROOVE WITH MASTIC MATERIAL.
12. CATCH BASINS SHALL BE PRECAST R.EINFORCED CONCRETE DRAINAGE BOX WITH SOLID WALL PER SCDOT STANDARD DRAWING 719-17A OR APPROVED EQUAL.
13. ALL WORK ON STATE, COUNTY, OR CITY RIGHT-OF-WAYS, INCLUDING DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER WORK REQUIRES AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY.
14. STANDING GRASS MUST BE EVIDENT IN AREAS THAT WERE SEEDED.
15. AN AS-BUILT CERTIFICATION OF THE STORMWATER MANAGEMENT SYSTEM WILL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE SITE. THE DESIGN ENGINEER WILL NOT BE RESPONSIBLE FOR THE DELAYS RESULTING FROM NON-COMPLIANCE WITH THE DESIGN DRAWINGS.

DETENTION BASIN MAINTENANCE SCHEDULE

1. THE LANDOWNER, ITS SUCCESSORS AND ASSIGNS, WILL PERFORM THE WORK NECESSARY TO KEEP THESE FACILITIES IN GOOD WORKING ORDER AS APPROPRIATE.
2. PERMANENT DETENTION POND TO BE OWNED AND MAINTAINED BY ASPENS VERDAE.
3. GRASS TO BE MOWED ON A REGULAR BASIS (MINIMUM 2 TIMES A YEAR). AREAS NOT VEGETATED SHOULD BE STABILIZED IMMEDIATELY.
4. DIKE TO BE MAINTAINED WITH PROMPT REPAIR OF ANY ERODED AREAS AND NO TREE GROWTH ALLOWED TO OCCUR IN THE BERM.
5. TRASH AND DEBRIS TO BE REMOVED FROM WITHIN AND AROUND THE POND ON A REGULAR BASIS AND AFTER ANY LARGE STORM EVENTS.
6. OUTLET STRUCTURE TO BE INSPECTED FOR STRUCTURE INTEGRITY AND SEDIMENT TO BE REMOVED IF IT IS RESTRICTING WATER FLOW. REPAIRS TO OUTLET STRUCTURE TO BE MADE IF NEEDED.
7. SEDIMENT ACCUMULATION TO BE REMOVED FROM POND.
8. POND BOTTOM TO BE INSPECTED AS NECESSARY TO PROVIDE POSITIVE DRAINAGE TO THE OUTLET. (REFER TO THE COUNTY'S LAND DEVELOPMENT DIVISION WEBSITE FOR A MORE DETAILED CHECKLIST FOR DETENTION POND MAINTENANCE.)

NOTES:

1. **SLOPES WITHIN ADA PARKING AREAS CANNOT EXCEED 2% IN ANY DIRECTION. ALL ADA PARKING AREAS ARE TO BE CONSTRUCTED WITH CONCRETE.**
2. **SIDEWALK CROSS SLOPES ARE NOT TO EXCEED 2%.**
3. **ANY SIDEWALK EXCEEDING 5% RUNNING SLOPE IS CONSIDERED A RAMP. ANY RAMP RISING GREATER THAN 6" MUST HAVE AN ADA APPROVED HANDRAIL ON BOTH SIDES. RAMPS MUST NOT EXCEED 8% RUNNING SLOPE.**
4. **ANY EXCESS SOIL HAULED OFF-SITE MUST BE TO AN APPROVED PERMITTED SITE.**
5. **SPOT ELEVATIONS SHOWN DENOTE BOTTOM OF CURB, TOP OF ASPHALT, OR GROUND SURFACE ELEVATION UNLESS OTHERWISE NOTED.**
6. **TC = TOP OF CURB / BC = BOTTOM OF CURB.**
7. **TW = TOP OF WALL / BW = BOTTOM OF WALL.**
8. **BUILDING ROOF DRAINAGE WILL TIE TO UNDERGROUND STORMWATER DRAINAGE SYSTEM. COORDINATE WITH MEP PLANS.**

*****CAUTION*****

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LEGEND

SYMBOLS

- CB — CATCH BASIN
- DI — DROP INLET
- ELEC TRANSFORMER
- × 90.0 — ELEVATION (EXIST. GRADE)
- ■ 90.00 — ELEVATION (FINISH GRADE)
- FIRE HYDRANT
- GM — GAS METER
- GV — GAS VALVE
- IP — IRON PIN
- LP — LIGHT POLE
- MHBS — MANHOLE (BELLSOUTH)
- MHSD — MANHOLE (SD)
- MHSS — MANHOLE (SS)
- PP — POWER POLE
- TEL — TELEPHONE
- WM — WATER METER
- WV — WATER VALVE
- STORMWATER FLOW
- TRAFFIC FLOW

ABBREVIATIONS

BL	BUILDING LINE
CL	CENTERLINE
CT	CRIMP TOP
DE	DRAINAGE EASEMENT
EP	EDGE OF PAVEMENT
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
IE	INVERT ELEVATION
IPS	IRON PIN SET
IPO	IRON PIN OLD
N&C	NAIL & CAP
OT	OPEN TOP
RB	REBAR
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT OF WAY
SSE	SANITARY SEWER EASEMENT
SL	SETBACK LINE
VCP	VITRIFIED CLAY PIPE

LINETYPES

- CTV — CABLE TV
- X — CHAIN LINK FENCE (PROPOSED)
- X — CHAIN LINK FENCE (EXISTING)
- 680 — CONTOURS – EXIST. GRADE
- (678) — CONTOURS – FINISHED GRADE
- FOC — FIBER OPTIC
- FM — FORCE MAIN
- GAS — GAS LINE
- OHP — OVERHEAD POWER
- OHT — OVERHEAD TELEPHONE
- RD — ROOF DRAIN – NEW
- SS — SANITARY SEWER – EXIST.
- SS — SANITARY SEWER – NEW
- SF — SILT FENCE
- SD — STORM SEWER – EXIST.
- STORM SEWER – NEW
- UGP — UNDERGROUND POWER
- UGT — UNDERGROUND TEL
- W — WATER LINE – EXIST.
- W — WATER – NEW
- WOOD FENCE
- NPDES — LIMITS OF DISTURBANCE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

S.C. GRID

SITE DESIGN, INC.
CIVIL ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
www.sitedesign-inc.com
800 E. WASHINGTON ST. STE B
GREENVILLE, SC 29601
PH: (864)271-0496
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SITE DESIGN INC. No. C00122 CERTICATE OF AUTHORIZATION NORTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21820 XX/XX/2019 WINNALL CRAIG BROOKS

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 40'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019

S190634.00

GRADING PLAN

SHEET 4 OF 8

C400

CAUTION

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CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD
C1	81.05	725.00	N22°09'39"W	81.00
C2	99.21	3008.69	N65°40'49"E	99.21
C3	123.07	3095.52	N63°10'05"E	123.06
C4	129.10	725.00	N30°26'41"W	128.93

LEGEND

SYMBOLS

- CB — CATCH BASIN
- DI — DROP INLET
- ELEC TRANSFORMER
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- WV — WATER VALVE
- STORMWATER FLOW
- TRAFFIC FLOW

ABBREVIATIONS

- BL — BUILDING LINE
- CL — CENTERLINE
- CT — CRIMP TOP
- DE — DRAINAGE EASEMENT
- EP — EDGE OF PAVEMENT
- FFE — FINISHED FLOOR ELEVATION
- FG — FINISHED GRADE
- IE — INVERT ELEVATION
- IPS — IRON PIN SET
- IPO — IRON PIN OLD
- N&C — NAIL & CAP
- OT — OPEN TOP
- RB — REBAR
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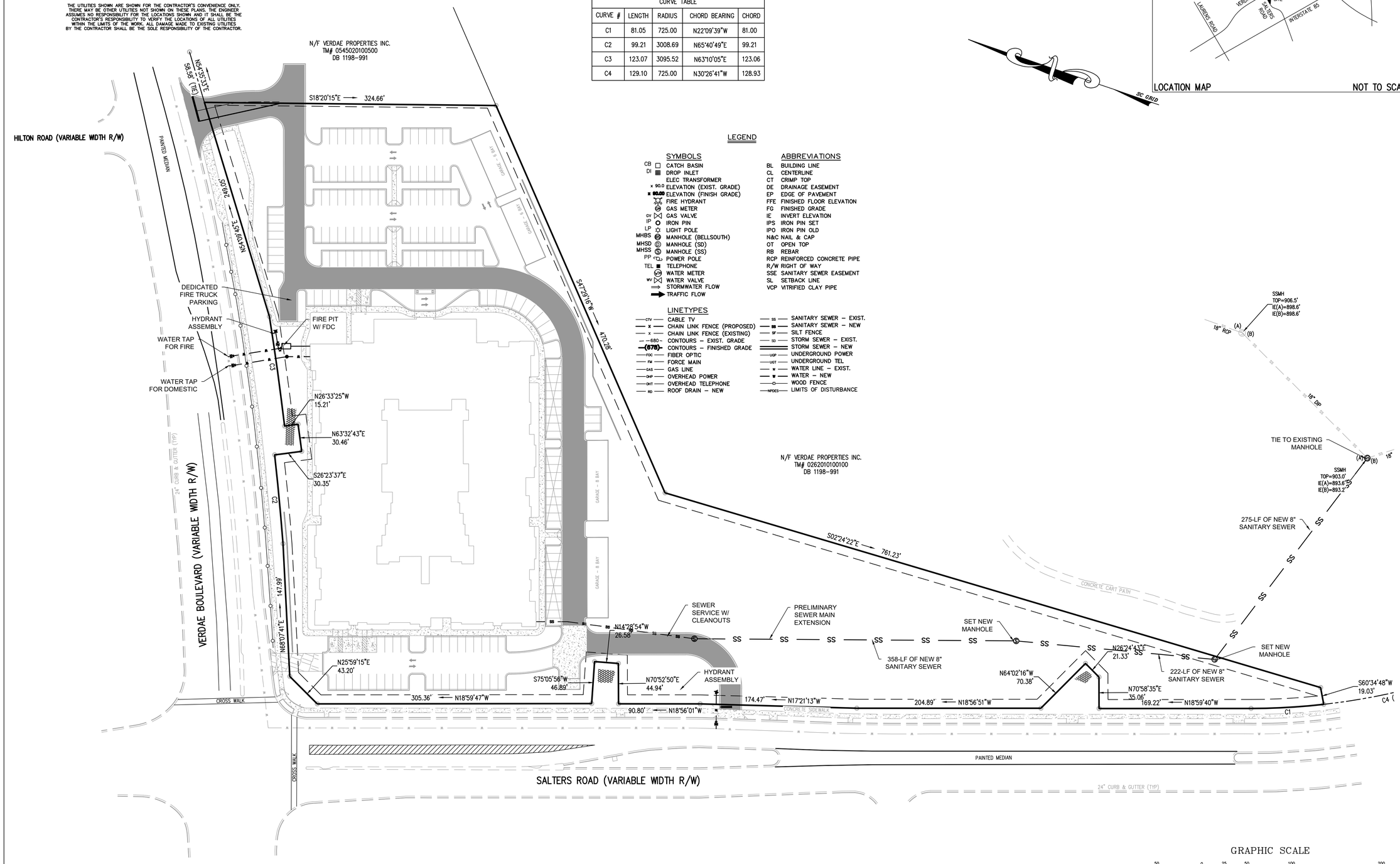

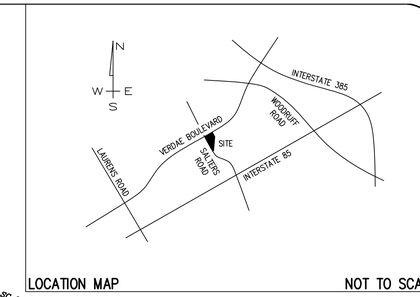

LOCATION MAP NOT TO SCALE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21820 MICHAEL RAYMOND BOWLES XXXX/2019

S.C. REG NO 21820

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE:	1" = 50'
VERT. SCALE:	N/A
DESIGNED BY:	CSW
DRAWN BY:	CSW
CHECKED BY:	MRB
DATE:	12/18/2019
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UTILITY PLAN

SHEET 5 OF 8

C500

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD
C1	81.05	725.00	N22°09'39"W	81.00
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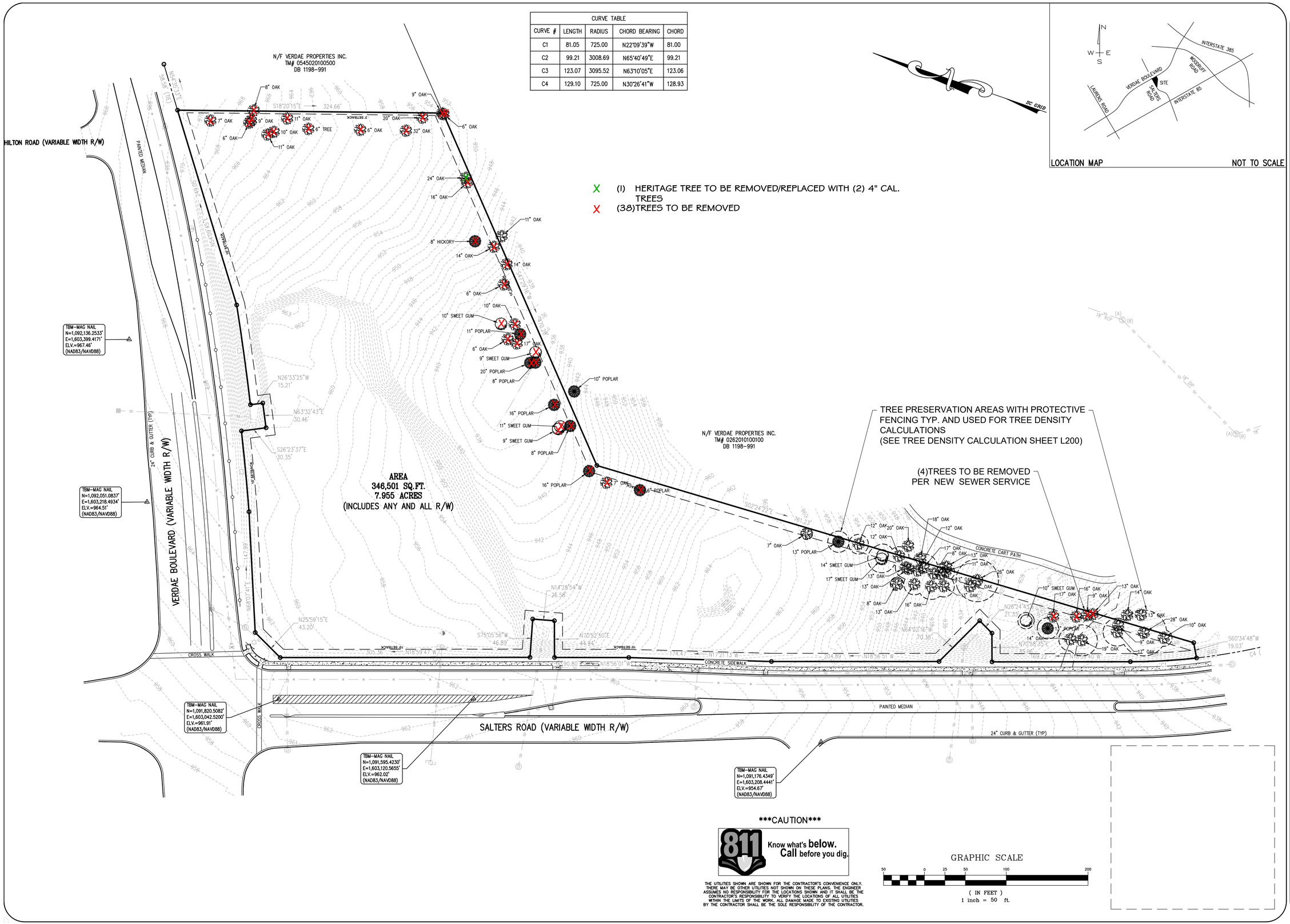

X (1) HERITAGE TREE TO BE REMOVED/REPLACED WITH (2) 4" CAL. TREES

X (38)TREES TO BE REMOVED

LOCATION MAP NOT TO SCALE

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State of South Carolina Landscape Architect No. 552 Jason G. Brandt

S.C. REG NO 552

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

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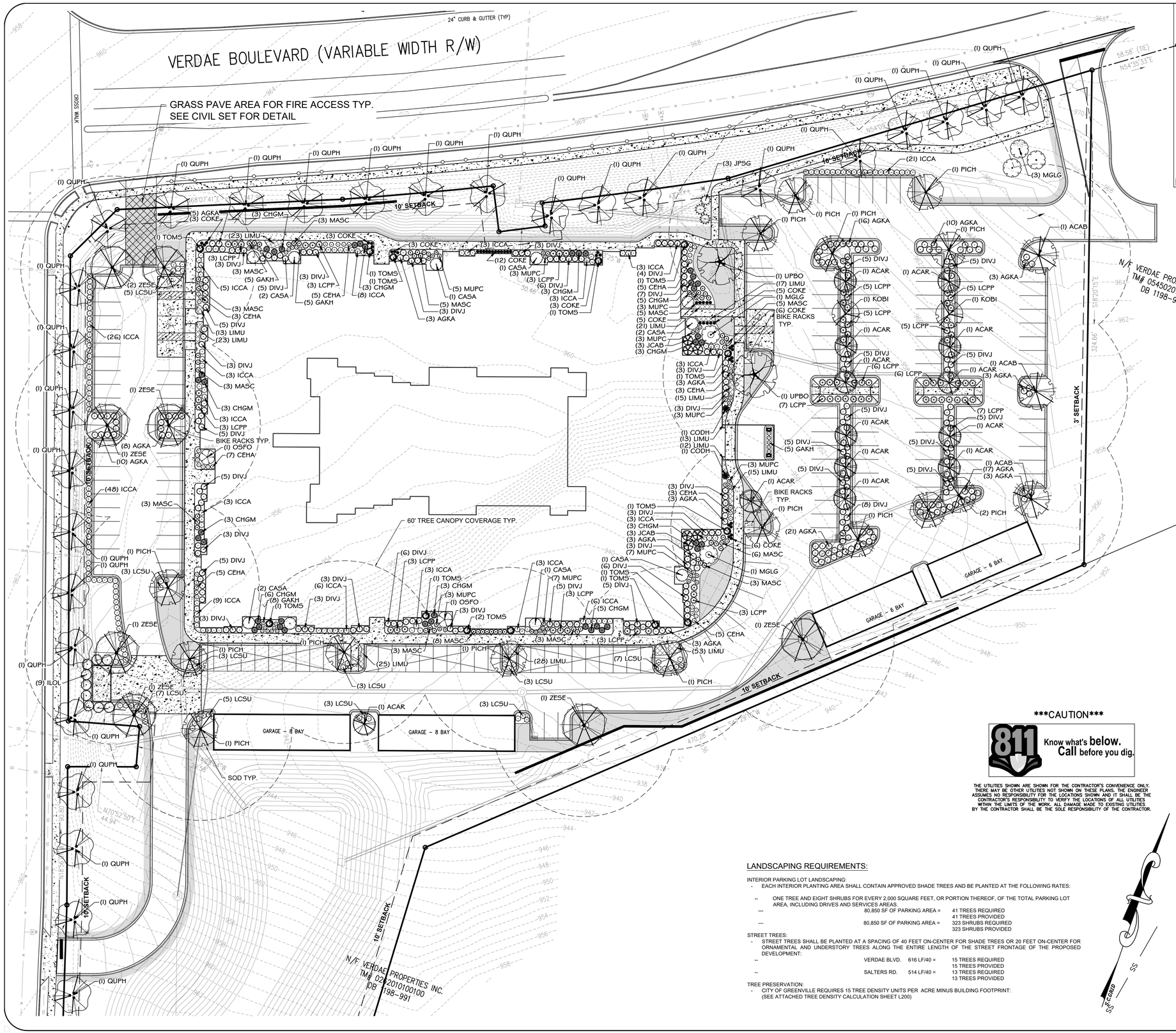
VERT. SCALE:	N/A
DESIGNED BY:	JAW
DRAWN BY:	JAW
CHECKED BY:	AGB
DATE:	12/18/2019

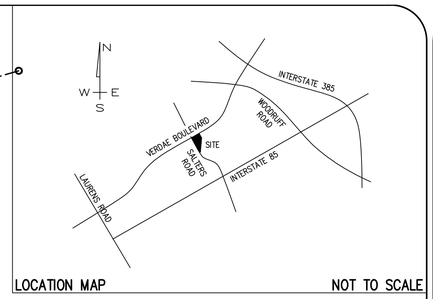
S190634_LANDSCAPE.DWG

EXISTING CONDITIONS AND TREE PROTECTION PLAN

SHEET 6 OF 8

L100





LOCATION MAP NOT TO SCALE

SITE DATA:

PIN: PT 0261000101200
TOTAL SITE = 7.96 AC (346,501 SF)
TOTAL DISTURBED AREA = 5.5 AC (239,580 SF)

ZONING - S1 (SERVICES)
MULTI-FAMILY DENSITY 20 UNITS/AC = 159 UNITS
BUILDING PROVIDES 159 UNITS
OPEN SPACE REQUIREMENT 200 SF/UNIT = 31,800 SF
SITE PROVIDES IN EXCESS OF 45,000 SF

SETBACKS -
FRONT - 10'
REAR - 10'
SIDES - 3'

PARKING DATA:

SURFACE SPACES PROVIDED:	131 SPACES
COVERED SPACES PROVIDED:	30 SPACES
GARAGE SPACES PROVIDED:	28 SPACES
HC SPACES PROVIDED:	6 SPACES
TOTAL PROVIDED:	205 SPACES
RATIO:	1.3*

*ITE STUDY DATA PROVIDED THAT SHOWS 1.3 RATIO IS APPROPRIATE FOR SENIOR INDEPENDENT LIVING

LEGEND

SYMBOLS

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- SF SILT FENCE
- SD STORM SEWER – EXIST.
- STORM SEWER – NEW
- UGP UNDERGROUND POWER
- UGT UNDERGROUND TEL
- W WATER LINE – EXIST.
- W WATER – NEW
- WOOD FENCE
- NPDES LIMITS OF DISTURBANCE

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LANDSCAPING REQUIREMENTS:

INTERIOR PARKING LOT LANDSCAPING:
- EACH INTERIOR PLANTING AREA SHALL CONTAIN APPROVED SHADE TREES AND BE PLANTED AT THE FOLLOWING RATES:

-- ONE TREE AND EIGHT SHRUBS FOR EVERY 2,000 SQUARE FEET, OR PORTION THEREOF, OF THE TOTAL PARKING LOT AREA, INCLUDING DRIVES AND SERVICES AREAS.

---	80,850 SF OF PARKING AREA =	41 TREES REQUIRED
		41 TREES PROVIDED
---	80,850 SF OF PARKING AREA =	323 SHRUBS REQUIRED
		323 SHRUBS PROVIDED

STREET TREES:
- STREET TREES SHALL BE PLANTED AT A SPACING OF 40 FEET ON-CENTER FOR SHADE TREES OR 20 FEET ON-CENTER FOR ORNAMENTAL AND UNDERSTORY TREES ALONG THE ENTIRE LENGTH OF THE STREET FRONTAGE OF THE PROPOSED DEVELOPMENT:

--	VERDAE BLVD. 616 LF/40 =	15 TREES REQUIRED
		15 TREES PROVIDED
--	SALTERS RD. 514 LF/40 =	13 TREES REQUIRED
		13 TREES PROVIDED

TREE PRESERVATION:
- CITY OF GREENVILLE REQUIRES 15 TREE DENSITY UNITS PER ACRE MINUS BUILDING FOOTPRINT: (SEE ATTACHED TREE DENSITY CALCULATION SHEET L200)

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South Carolina LANDSCAPE ARCHITECT No. 552 JASON G. BRAGG

S.C. REG NO 552

ASPENS SENIOR LIVING

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

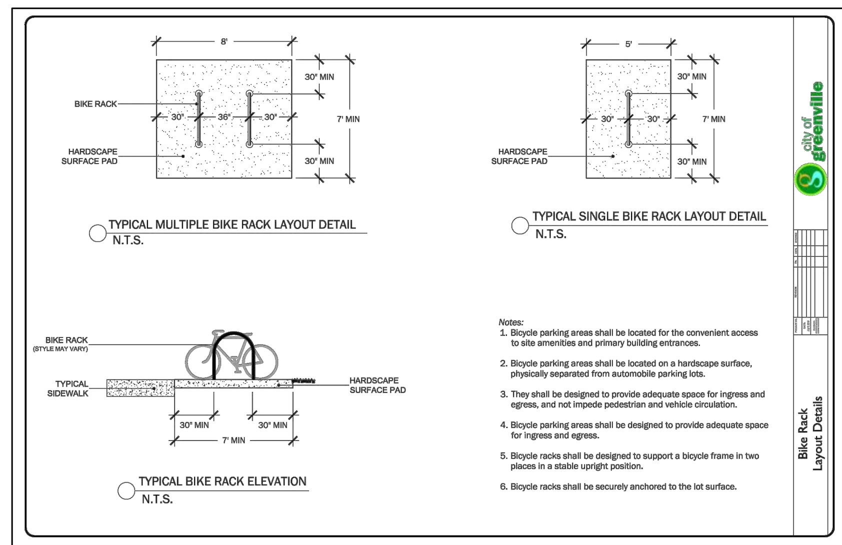
HORZ. SCALE:	1" = 30'
VERT. SCALE:	N/A
DESIGNED BY:	JAW
DRAWN BY:	JAW
CHECKED BY:	AGB
DATE:	12/18/2019

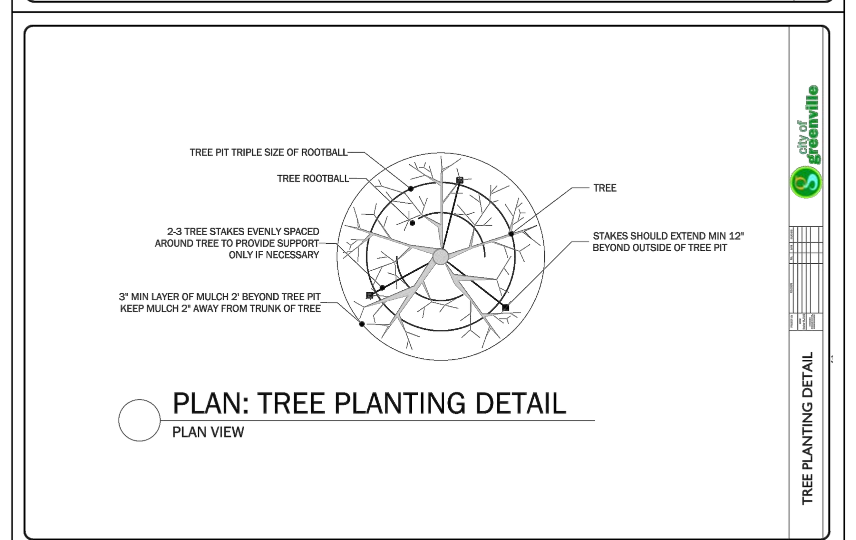
S190634_LANDSCAPE.DWG

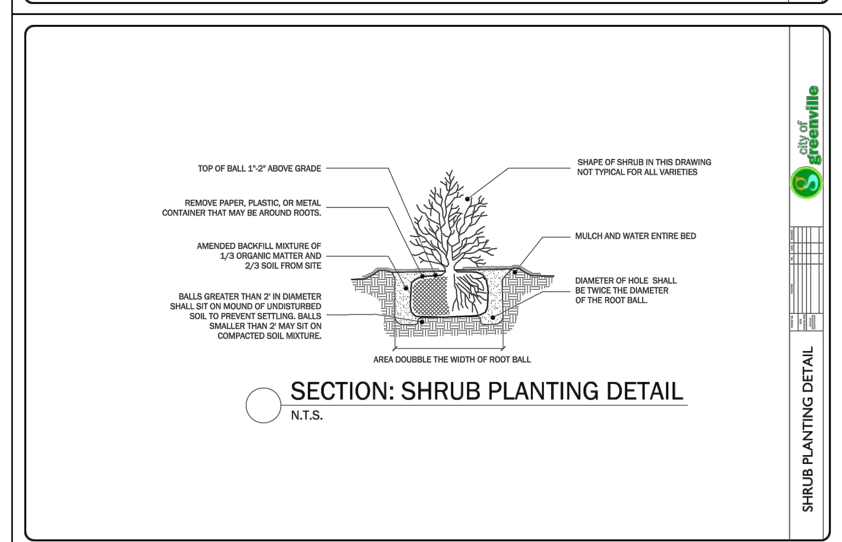
ENLARGED CODE COMPLIANT LANDSCAPE PLAN

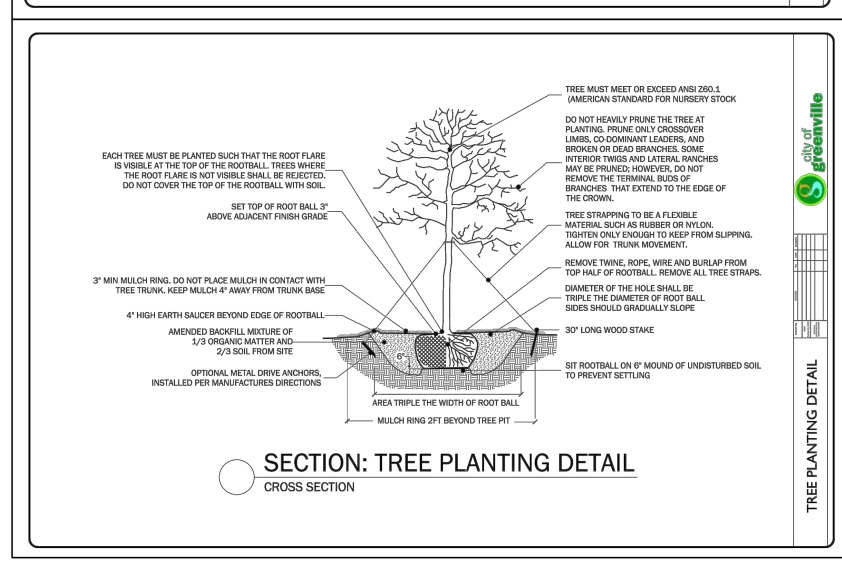
SHEET 7 OF 8

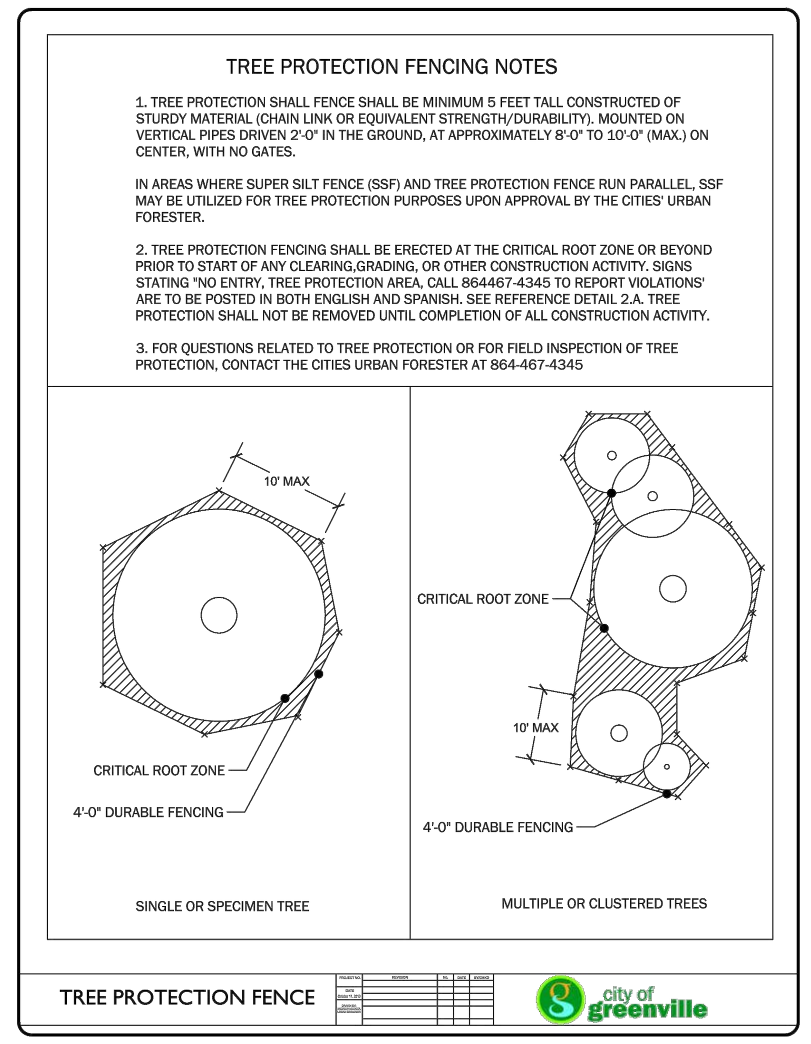
L101

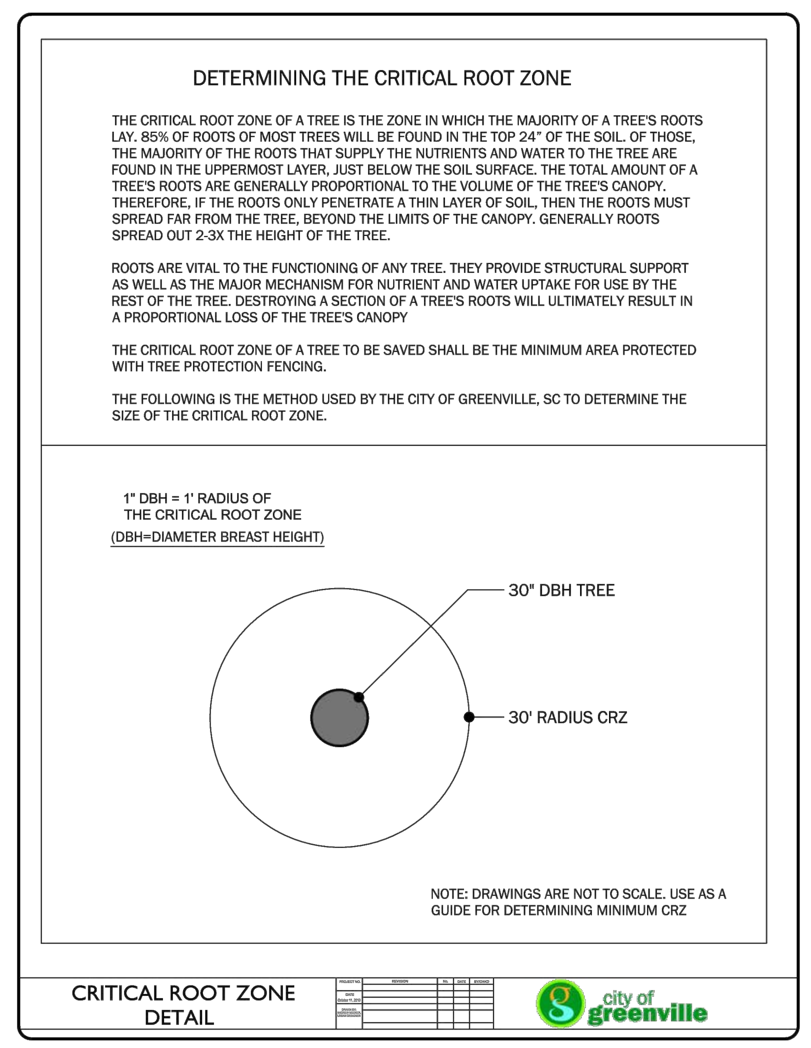


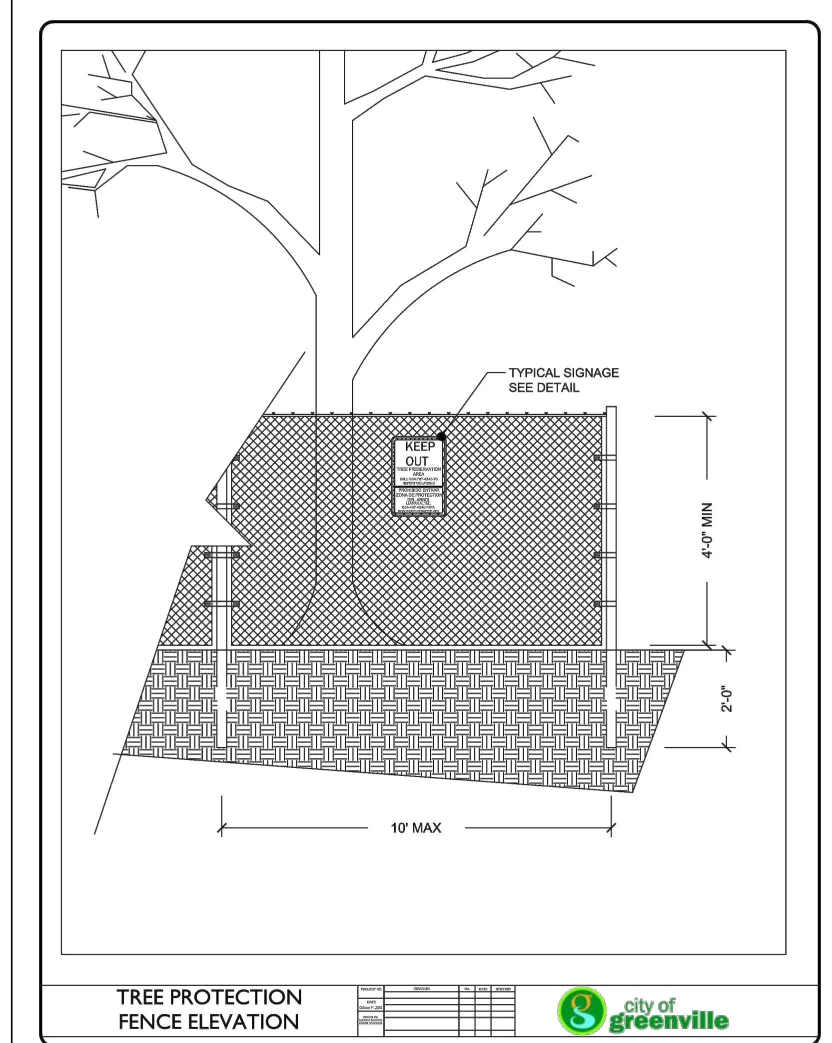












CITY OF GREENVILLE				
City of Greenville requires 15 tree credits per acre minus building footprint				
ASPENS SENIOR LIVING				
TOTAL SITE		7.955	ACRES	
BUILDING FOOTPRINT		1.67	ACRES	
AREA SUBJECT TO CALCULATIONS		6.285	ACRES	
CREDITS/ ACRE		15	CREDITS/ACRE	
REQUIRED CREDITS		94.275	TOTAL CREDITS	
TREES SAVED				
Quantity	Tree Species	Tree Caliper	Credit Units	Credits
1	OAK	7 in	1.8	1.8
2	OAK	8 in	2	4
1	OAK	9 in	2	2
1	OAK	10 in	2.4	2.4
1	OAK	11 in	2.8	2.8
3	OAK	12 in	3.2	9.6
5	OAK	13 in	3.3	16.5
1	OAK	14 in	3.4	3.4
1	OAK	16 in	3.6	3.6
2	OAK	17 in	3.7	7.4
1	OAK	19 in	3.9	3.9
1	OAK	26 in	11.1	11.1
1	OAK	28 in	12.9	12.9
2	POPLAR	13 in	3.3	6.6
1	SWEETGUM	10 in	2.4	2.4
1	SWEETGUM	14 in	3.4	3.4
1	SWEETGUM	17 in	3.7	3.7
			Total Credits	97.5
Existing Credits	97.5			
Required Credits	**94.275**			
Post Development Credits	**3.23 TREE CREDITS**			

General Landscape Notes

The following notes, conditions, including landscape plan and specifications are to be strictly followed in order to receive a final Certificate of Occupancy or Final Inspection. Any changes in species, quantity, or size must be approved prior to installation by the city's Senior Landscape Architect. The plant materials and sizes are specified as minimums and will be measured for compliance at time of final inspection.

1. (City Code Section 19-6.2.1 E) Maintenance. The owner of the property where landscaping is required shall be responsible for the maintenance and protection of all plant and screening material for the duration of the premises.
   (A) All landscape material, maintenance, and management shall conform to the minimum standards of the American National Standards Institute (ANSI) A300 Standards for Tree Care Operations.
   (B) Landscaped areas shall be maintained in good condition and kept free of dead plants, weeds, or debris. Failure to maintain or replace dead, damaged or diseased plant material or to repair a broken wall or fence within 30 days of notification shall constitute a violation. Replaced plant material must be in compliance with the minimum size, spacing, and quantity standards of Section 19-6.2.
   (C) Trees may not be severely trimmed beyond the standards of ANSI A300 Standards for Tree Care Operations. If aggressive trimming occurs, the property will be considered nonconforming and required to replace the trees with trees meeting the minimum size, spacing, and quantity standards of Section 19-6.2. "Crape Murder" will be considered a violation and replacements will be enforced.
   (D) Buffer and screening material shall be maintained to meet the minimum size, spacing, and quantity standards of table 19-6.2-1 of this section.
2. (City Code Section 19-6.2.2 A7) General. The entire planting area must be scarified and contain amended on-site soil or a soil mix to a depth of 18 inches.
3. (City Code Section 19-6.2.2 B) Minimum planting size/height requirements. All landscape planting materials shall conform to the minimum size or height standards in table 19-6.2-1 at the time of planting as well as meet the standards of ANSI Z60.1 American Standard for Nursery Stock.
   (A) For newly planted trees the caliper measurement of the trunk shall be taken six inches above the top of the root flare up to and including four-inch caliper size. If the caliper at six inches above the top of the root flare exceeds four inches, the caliper should be measured at 12 inches above the top of the root flare.
   (B) For existing trees, the diameter measurement of the trunk shall be taken at DBH (diameter at breast height) four and one-half feet above the average ground level.
4. (City Code Section 19-6.3.2B6) Tree protection and replacement. If the minimum protection standards are not met, or if trees are observed by the city to be injured or threatened, they may be deemed ineligible for meeting these requirements and additional trees will be required.
5. (City Code Section 19-6.3.2C3) Protection and replacement of heritage and historic trees. No construction, grading, equipment, or material storage, or any other activity shall be allowed within the critical root zone of a heritage or historic tree unless the steps taken to adequately ensure the health of the tree are submitted in writing to the city's Senior Landscape Architect for approval.
6. (City Code Section 19-6.3.2C4) Protection and replacement of heritage and historic trees. Heritage or historic trees shall not be cut, removed, pushed over, killed, harmed, trimmed, sprayed, or destroyed without written approval by the city's Senior Landscape Architect.
7. (City Code Section 19-6.3.3A) Tree protection during construction.
   (A) Before grading begins, fencing shall be required, at a minimum, around the critical root zone of all trees that are to be preserved. Additional fencing shall be required around the critical root zone of trees on adjacent properties or located in a right-of-way.
   (B) Type of fencing. All fencing required by this section shall be a minimum of four feet high and of durable construction; such as wood or metal fencing.
   (C) Signs. Signs shall be installed on the protective fence visible on all sides of the fenced-in area (minimum one on each side and/or every 300 linear feet). The size of each sign must be a minimum of one foot × one and one-half feet and shall contain the following: "TREE PROTECTION ZONE: KEEP OUT."
   (D) Activity within a fenced tree protection zone. No construction, grading, parking, equipment, or material storage, or any other activity shall be allowed within the fenced area.
   (E) Maintenance of fencing. For existing trees to be counted toward required tree credits, they must be protected during the entire development period, beginning prior to the commencement of site work. Encroachment within the tree protection zone is permitted to allow the landscape contractor access to complete site work.
   (F) Critical root zone. The minimum area beneath a tree that must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The critical root zone is typically represented by a concentric circle centering on the tree trunk with a radius equal in feet to one (1) times the number of inches of the trunk diameter: (CRZ in ft = 1 x Diameter inches)
8. (City Code Section 19-6.3.3B) Tree protection during construction. Encroachments within the critical root zones of any tree being preserved to comply with required tree credits, or within designated tree protection zones, shall occur only in rare instances. If such an encroachment is anticipated, a written request must be made to the city's Senior Landscape Architect for allowance of encroachment. Requests must detail preventative measures taken. If approved the following preventative measures shall be employed:
   (A) Clearing activities. The removal of trees adjacent to a tree protection zone can cause inadvertent damage to the protected trees. Wherever possible, it is advisable to cut minimum two-foot trenches along the limits of land disturbance, so as to cut, rather than tear, Trenching is required for the protection of historic and heritage trees.
   (B) Soil compaction. Where compaction might occur due to traffic or materials through the tree protection zone, the area must first be mulched with a minimum four-inch layer of processed pine bark or wood chips or a six-inch layer of pine straw. Equipment or materials storage shall not be allowed within tree protection areas.
9. (City Code Section 19-6.4) Irrigation. If irrigation is provided, a rain sensor must be installed such that it shuts off irrigation system when up to of rain has fallen.
10. The bicycle rack specification and detail is to be installed as shown on plan unless written approval is granted by the city's Senior Landscape Architect prior to installation.
11. For landscape or bicycle parking questions, contact Jeff Waters 864-467-4350 jwaters@greenvillesc.gov

PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY	REMARKS
	ACAR	Acer rubrum `Armstrong`	Armstrong Red Maple	3" Cal. 14` Ht.		13	10` Clear Trunk
	ACAB	Acer rubrum `Autumn Blaze`	Autumn Blaze Red Maple	2-1/2" Cal. 10` Min. Ht.		3	
	KOBI	Koelreuteria bipinnata	Chinese Flame Tree	2-1/2" Cal. 10` Min. Ht.		2	
	PICH	Pistacia chinensis	Chinese Pistache	2-1/2" Cal. 10` Min. Ht.		15	
	QUPH	Quercus phellos `Hightower`	Hightower Willow Oak	3" Cal. 14` Ht.		28	10` Clear Trunk
	UPBO	Ulmus parvifolia `Bosque`	Bosque Lacebark Elm	4" Cal. 14` Ht.		2	10` Clear Trunk
	ZESE	Zelkova serrata `Village Green`	Sawleaf Zelkova	3" Cal. 14` Ht.		8	10` Clear Trunk
1`-4` EVERGREEN SHRUB	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		**QTY**	**REMARKS**
	AGKA	Abelia x grandiflora `Kaleidoscope`	Glossy Abelia	3 gal		111	18" Ht. Min.
	CEHA	Cephalotaxus harringtonia `Prostrata`	Prostrate Plum Yew	3 gal		36	18" Ht. Min.
	CHGM	Chamaecyparis pisifera `Golden Mop`	Golden Mop Threadleaf False Cypress	3 gal		40	18" Ht. Min.
	DIVJ	Distylium x `Vintage Jade`	Vintage Jade Distylium	3 gal		167	18" Ht. Min.
	GAKH	Gardenia jasminoides `Kleim`s Hardy`	Kleim`s Hardy Gardenia	3 gal		23	18" Ht. Min.
	ICCA	Ilex cornuta `Carissa`	Carissa Holly	3 gal		159	18" Ht. Min.
	JCAB	Juniperus chinensis `Angelica Blue`	Angelica Blue Juniper	3 gal		6	18" Ht. Min.
	JPSG	Juniperus x pfitzeriana `Sea Green`	Sea Green Juniper	3 gal		3	18" Ht. Min.
	LCSU	Loropetalum chinense `Suzanne`	Suzanne Fringe Flower	3 gal		42	18" Ht. Min.
	LCPP	Loropetalum chinense Purple Pixie	Purple Pixie Loropetalum	3 gal		70	18" Ht. Min.
	MASC	Mahonia x `Soft Caress`	Soft Caress Mahonia	3 gal		53	
6` + EVERGREEN SHRUB	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		**QTY**	**REMARKS**
	CASA	Camellia sasanqua `Setsugekka`	White Camellia	6` Ht		10	
	OSFO	Osmanthus x fortunei	Fortunei Osmanthus	6` Ht		2	
	TOMS	Thuja occidentalis `Smaragd`	Emerald Green Arborvitae	6` Ht		13	
DECIDUOUS SHRUB	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		**QTY**	**REMARKS**
	COKE	Cornus sericea `Kelseyi`	Kelseyi Dogwood	3 gal		46	24" Ht. Min
NATIVE GRASSES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		**QTY**	**REMARKS**
	MUPC	Muhlenbergia capillaris `Pink Cloud`	Pink Muhly	3 gal		37	18" Ht. Min.
SMALL EVERGREEN TREE	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**		**QTY**	**REMARKS**
	CODH	Chamaecyparis obtusa `Dwarf Hinoki`	Dwarf Hinoki False Cypress	7 gal.		2	
	ILOL	Ilex x `Oak Leaf`	Oak Leaf Holly	4` Ht.		9	
	MGLG	Magnolia grandiflora `Little Gem`	Dwarf Southern Magnolia	6` Ht		5	
GROUND COVERS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**SPACING**	**QTY**	**REMARKS**
	LIMU	Liriope muscari	Lily Turf	1 gal.	18" o.c.	258	
			Bermuda Sod		+/-12,000 SF		

LANDSCAPING REQUIREMENTS:

INTERIOR PARKING LOT LANDSCAPING:
- EACH INTERIOR PLANTING AREA SHALL CONTAIN APPROVED SHADE TREES AND BE PLANTED AT THE FOLLOWING RATES:

-- ONE TREE AND EIGHT SHRUBS FOR EVERY 2,000 SQUARE FEET, OR PORTION THEREOF, OF THE TOTAL PARKING LOT AREA, INCLUDING DRIVES AND SERVICES AREAS.

---	80,850 SF OF PARKING AREA =	41 TREES REQUIRED 41 TREES PROVIDED	
---	80,850 SF OF PARKING AREA =	323 SHRUBS REQUIRED 323 SHRUBS PROVIDED	

STREET TREES:
- STREET TREES SHALL BE PLANTED AT A SPACING OF 40 FEET ON-CENTER FOR SHADE TREES OR 20 FEET ON-CENTER FOR ORNAMENTAL AND UNDERSTORY TREES ALONG THE ENTIRE LENGTH OF THE STREET FRONTAGE OF THE PROPOSED DEVELOPMENT:

--	VERDAE BLVD.	616 LF/40 =	15 TREES REQUIRED 15 TREES PROVIDED
--	SALTERS RD.	514 LF/40 =	13 TREES REQUIRED 13 TREES PROVIDED

TREE PRESERVATION:
- CITY OF GREENVILLE REQUIRES 15 TREE DENSITY UNITS PER ACRE MINUS BUILDING FOOTPRINT: (SEE ATTACHED TREE DENSITY CALCULATION SHEET L200)

SITE DESIGN, INC.
CIVIL ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
www.sitedesign-inc.com
300 E. WASHINGTON ST, STE B
GREENVILLE, SC 29601
PH: (864)271-0496
FAX: (864)271-0402

NO.	DATE
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION SITE DESIGN INC. No. C00122
State of South Carolina REGISTERED LANDSCAPE ARCHITECT No. 552 ALLISON G. BRADY

S.C. REG NO 552

ASPENS SENIOR LIVING

**CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA**

HORZ. SCALE:	N/A
VERT. SCALE:	N/A
DESIGNED BY:	JAW
DRAWN BY:	JAW
CHECKED BY:	AGB
DATE:	12/18/2019

S190634_LANDSCAPE.DWG

LANDSCAPE DETAILS AND CALCULATIONS

SHEET 8 **OF** 8

L200

1 SITE PLAN - ELECTRICAL
SCALE:1"=30'-0"

Schedule

Symbol	Label	QTY	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage
	WP	28		LWP-FC-MN-25-DB-ST-1-NW-X-X-X-X		1	2493	0.9	25.15
	B	14	VAP 4000LM FST WD 35K 90CRI	VAP LED with BLT Gen 2 Boards	LED	1	3277	0.9	32.9
	PL	15	DSX1 LED P13 40K T1S MVOLT R90	DSX1 LED P13 40K T1S MVOLT with optics rotated 90 degrees right	LED	1	27362	0.9	231
	WS	14	OVWP LED 40K 120 PE DDB HP17 M4	LED Wallpack - OPP Home Center		1	1266	1	14.1
	A	4	OLCFM 15 WH	GENERAL PURPOSE LED CAST FLUSH MOUNT WITH WHITE FINISH	LED	1	1099	1	16.6

Aspens Senior Living

Alexander Road
Mecklenburg County, North Carolina

JOHN MARC TOLSON ARCHITECTURE
Architecture
Planning
Project Management
2344 Highway 121 · Suite 100 · Bedford, Texas 76021 · www.ArriveAG.com
Ph 817.514.0584 · Fx 817.514.0694

SEAL

REVISION

DRAWN BY: PHA	CHECKED BY: PHA
PLOT DATE:	REV. DATE:
SUBMITTAL DATE: 11-05-19	PROJECT NUMBER
ISSUED FOR: SD SET	SHEET NO. E1.01
SCALE: AS NOTED	SITE PLANS ELECTRICAL

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EAST ELEVATION

SCALE: 1/16" = 1'-0"

NORTH ELEVATION - VERDAE

SCALE: 1/16" = 1'-0"

Aspens Senior Living

Verdae Blvd.
Greenville, South Carolina

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SEAL

REVISION

DRAWN BY: AAG	CHECKED BY: AAG
PLOT DATE:	REV. DATE:
SUBMITTAL DATE: 2019	PROJECT NUMBER
ISSUED FOR: CONCEPTUAL	SHEET NO.
SCALE: AS NOTED	

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WEST ELEVATION - SALTERS

SCALE: 1/16" = 1'-0"

SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

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Greenville, South Carolina

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SUBMITTAL DATE: 2019	PROJECT NUMBER
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SCALE: AS NOTED	

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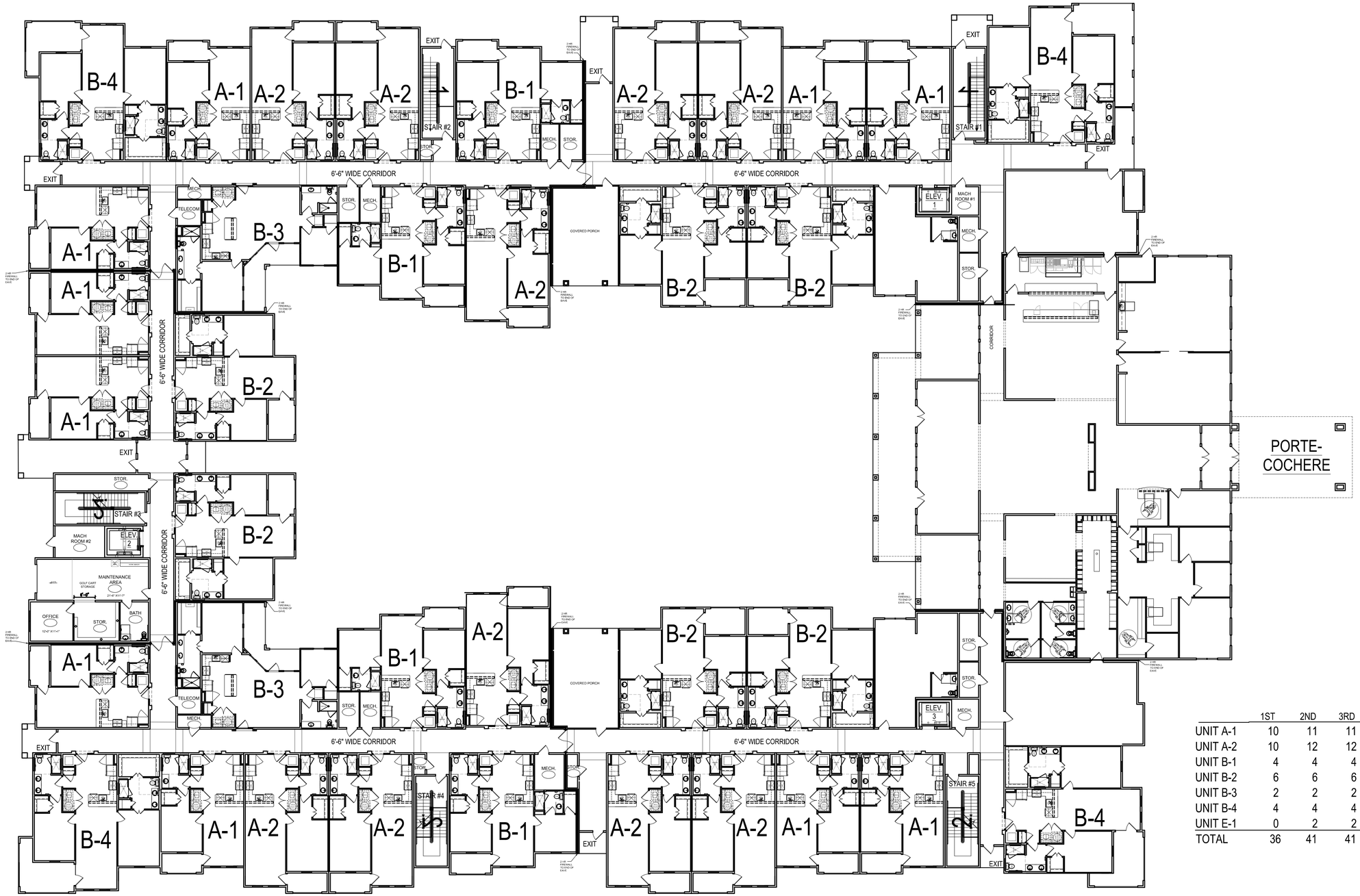
LAYOUT1



	1ST	2ND	3RD	4TH	
UNIT A-1	10	11	11	11	
UNIT A-2	10	12	12	12	
UNIT B-1	4	4	4	4	
UNIT B-2	6	6	6	6	
UNIT B-3	2	2	2	2	
UNIT B-4	4	4	4	4	
UNIT E-1	0	2	2	2	
TOTAL	36	41	41	41	= 159

FIRST FLOOR

GRAPHIC SCALE: 0 FT 5 FT 15 FT 25 FT 50 FT

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Greenville, South Carolina

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SEAL

REVISION

DRAWN BY: AAG	CHECKED BY: AAG
PLOT DATE:	REV. DATE:
SUBMITTAL DATE: 2019	PROJECT NUMBER
ISSUED FOR: CONCEPTUAL	SHEET NO.
SCALE: AS NOTED	

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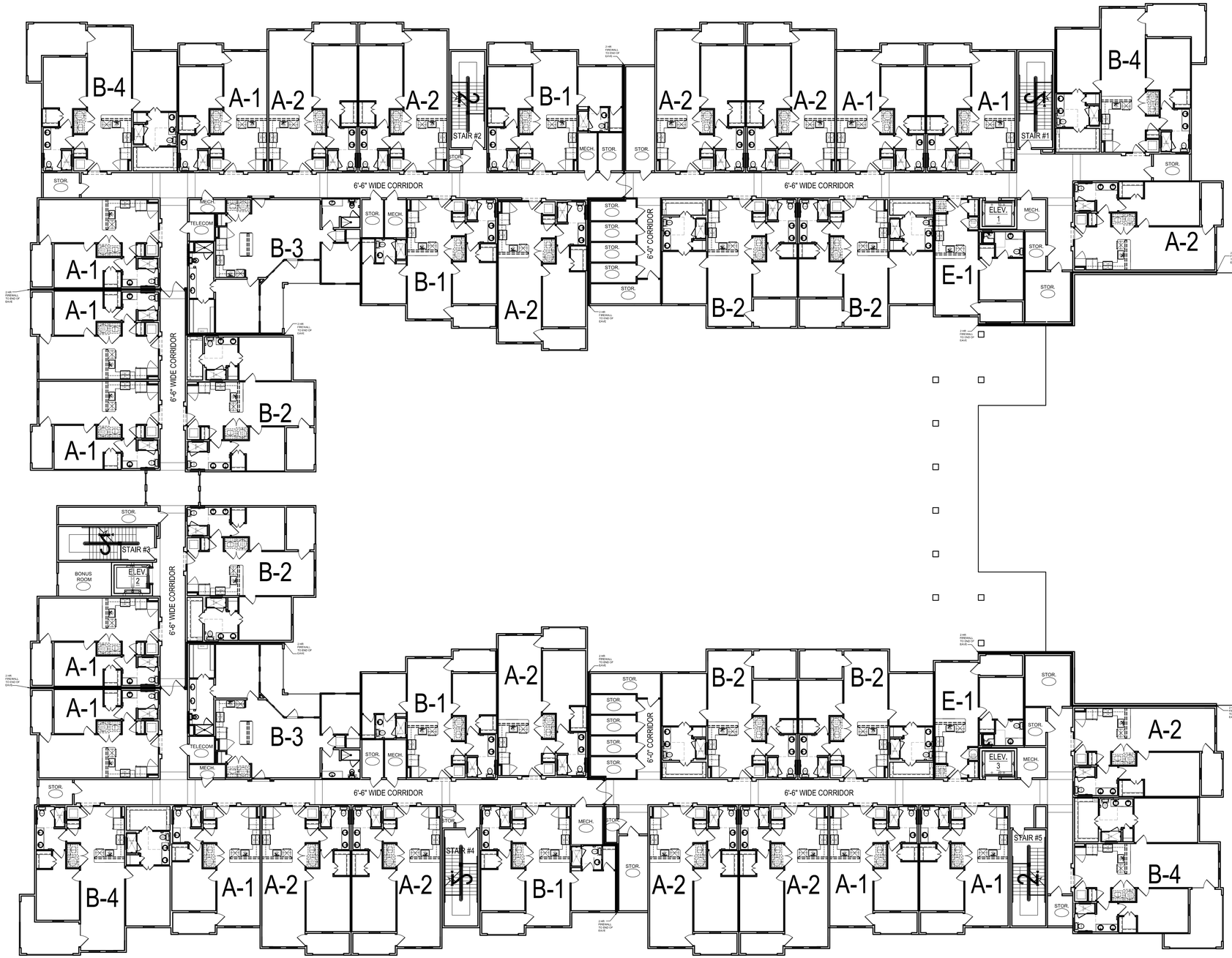
LAYOUT1



	1ST	2ND	3RD	4TH	
UNIT A-1	10	11	11	11	
UNIT A-2	10	12	12	12	
UNIT B-1	4	4	4	4	
UNIT B-2	6	6	6	6	
UNIT B-3	2	2	2	2	
UNIT B-4	4	4	4	4	
UNIT E-1	0	2	2	2	
TOTAL	36	41	41	41	= 159

SECOND/ THIRD AND FOURTH FLOOR

GRAPHIC SCALE: 0 FT 5 FT 15 FT 25 FT 50 FT

Aspens Senior Living

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Greenville, South Carolina

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SEAL

REVISION

DRAWN BY: AAG	CHECKED BY: AAG
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SUBMITTAL DATE: 2019	PROJECT NUMBER
ISSUED FOR: CONCEPTUAL	SHEET NO.
SCALE: AS NOTED	

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LAYOUT1

city of greenville

APPLICATION FOR MULTIFAMILY DEVELOPMENT

Contact Planning & Development (864) 467-4476

Office Use Only: MD 19 - 005
Application# MD 19 - 897 Fees Paid
Date Received 12/16/19 Accepted By MEW BW
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Richard Lynch	1503 Overbrook, LLC &1507 Overbrook, LLC
*Title:	Managing Member	
*Address:	309 East Stone Avenue	309 East Stone Avenue
*State:	SC	SC
*Zip:	29609	29609
*Phone:	(864) 242-0656	(864) 242-0656
*Email:	rlynch@psbkcpas.com	rlynch@psbkcpas.com

cc Neal Fogleman

PROPERTY INFORMATION

*STREET ADDRESS 1503 - 1507 East North Street

*TAX MAP # 0190000207000, 0190000207100, & 0190000207200, 0190000207900, & Bruce St. (to be Abandoned)

*CURRENT ZONING DESIGNATION C-1 & R-M1

*TOTAL ACREAGE 1.7 Ac.

PROPOSED DEVELOPMENT INFORMATION

*TYPE OF APPLICATION: x New ____Modification – Major ____Modification – Minor

*ORIGINAL APPLICATION # (put N/A if new application) N/A

*NUMBER OF UNITS 8 units

*MULTIFAMILY DEVELOPMENT TYPE Condominium

*AGE RESTRICTED HOUSING (Y / N) No

NUMBER OF UNITS AND/OR PERCENTAGE OF AGE RESTRICTED UNITS (If applicable) None

INSTRUCTIONS

1. The applicant is **required** to schedule a pre-application meeting according to the dates outlined on the Board calendar. Call (864) 467-4476 to schedule an appointment.

   *PREAPPLICATION MEETING DATE 11/21/2019

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
3. All applications and fees (made payable to the City of Greenville) for designation as a Multifamily Development must be received by **no later than 2:00 pm** of the date reflected on the Board schedule.

A. Multifamily development - New $550.00 – *public hearing required*

B. Multifamily development – Major Modification $275.00 – *public hearing required*

C. Multifamily development – Minor Modification $150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will go back into the queue for review. Please refer to ***section 19-2.3.13 (D), Multifamily residential development*** for additional information.

5. **Public Notice Requirements.** Multifamily development applications require a Planning Commission public hearing. There is also an informal review from the Design Review Board required prior to the planning commission hearing.

6. The applicant is responsible for sign posting the subject property. Instructions will be provided at the time of submission.

7. Multifamily development applications also **require** a developer-led neighborhood meeting which is to be held at least eight (8) days prior to the scheduled Planning Commission hearing (Sec. 19-2.2.4, Neighborhood meetings). Information will be emailed within a few days of submittal to the listed applicant email provided on page one of this application.

8. Upon planning commission recommendation, the application item will be scheduled for city council hearing.

To be filled out at time of application submittal

_____ Public Hearing signs are acknowledged as received by the applicant

_____ Posting sign instructions and affidavit are acknowledged as received by the applicant

*APPLICANT SIGNATURE _____

9. Please verify that all required information is reflected on the plan(s), and **submit one (1) paper copy and one (1) electronic version** of the application submittal package.

10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

    In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

    If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

_____ *APPLICANT ACKNOWLEDGEMENT SIGNATURE

12-11-19 *DATE

11. Per acknowledgement and understanding of item #8, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** X restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

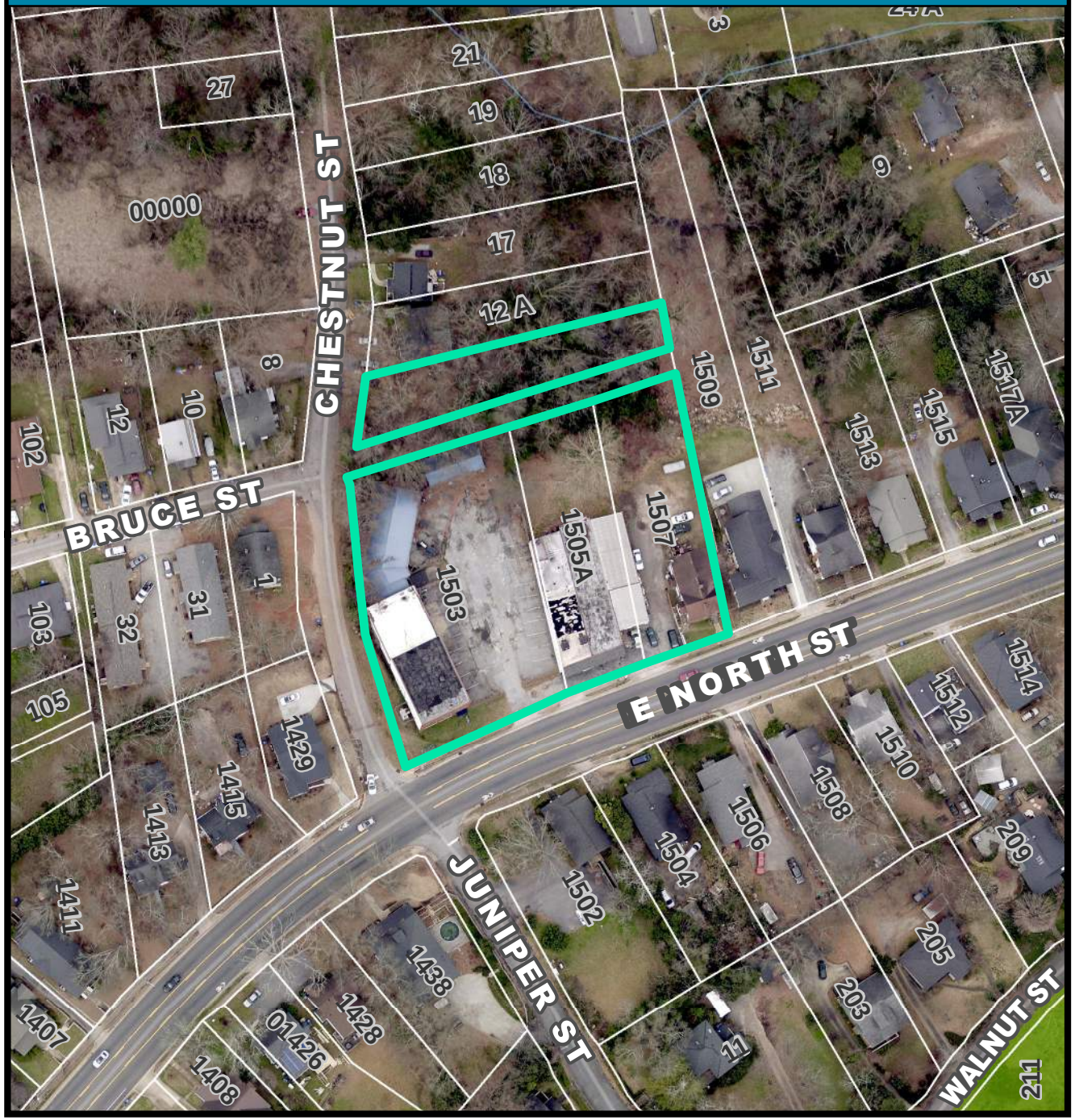
*Signatures	
*Applicant	Richard Lynch - 1503 Overbrook, LLC
*Date	12-11-19
*Property Owner/Authorized Agent	Richard Lynch - 1503 Overbrook, LLC
*Date	12-11-19

APPLICATION REQUIREMENTS

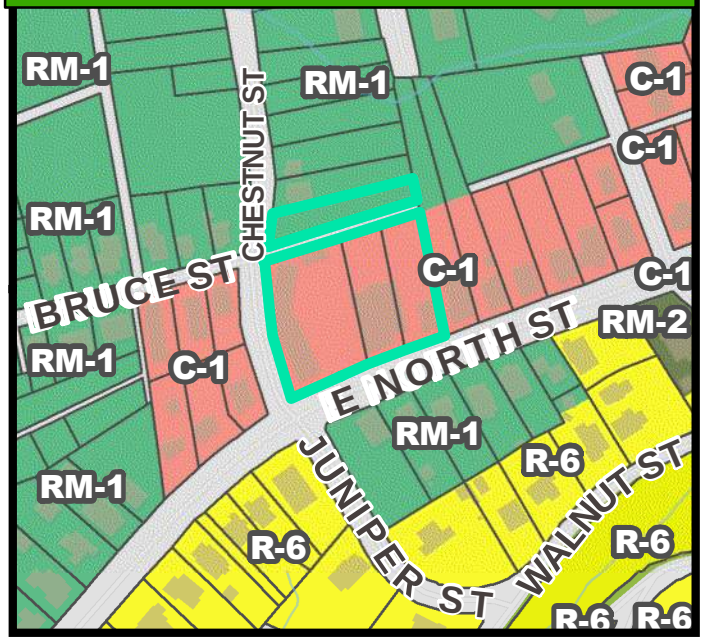
1. Multifamily development format and content requirements are reflected in the City of Greenville Administrative Manual at Appendix 'H'.
2. The submitted information shall include at a minimum:
   - *a.* Completed application for Multifamily development;
   - *b.* Context map, showing relationship of proposed development to the surrounding neighborhood;
   - *c.* Photographs of surrounding area;
   - *d.* Site plan, showing building(s) footprint, parking lot layout, pedestrian and vehicular access, internal walkways, amenities (i.e. pool, playground, picnic area, etc.), and service areas (i.e. dumpster pad/trash collection area, HVAC units, car wash area, etc.);
   - *e.* Grading plan, showing existing and proposed topographic contours, storm drainage collection facilities, existing and proposed retaining walls (with top-of-wall and bottom-of-wall elevations for at least the ends of the walls and the high point of the walls);
   - *f.* Building elevations, of all sides of the building(s), with exterior materials and colors indicated;
   - *g.* Plan showing elevation of proposed buildings in relation to adjoining structures;
   - *h.* Building floor plans;
   - *i.* Landscape plan, showing existing vegetation that will remain and the new plants to be added;
   - *j.* Lighting plan, showing location of light fixtures (on the site and on the building), cut sheets of the proposed light fixtures, and wattage; and
   - *k.* Materials board.
3. Please refer to ***Section 19-6.8, Design standards for multifamily residential development*** for additional information.

MD 19-005 • CHESTNUT ST & E NORTH ST

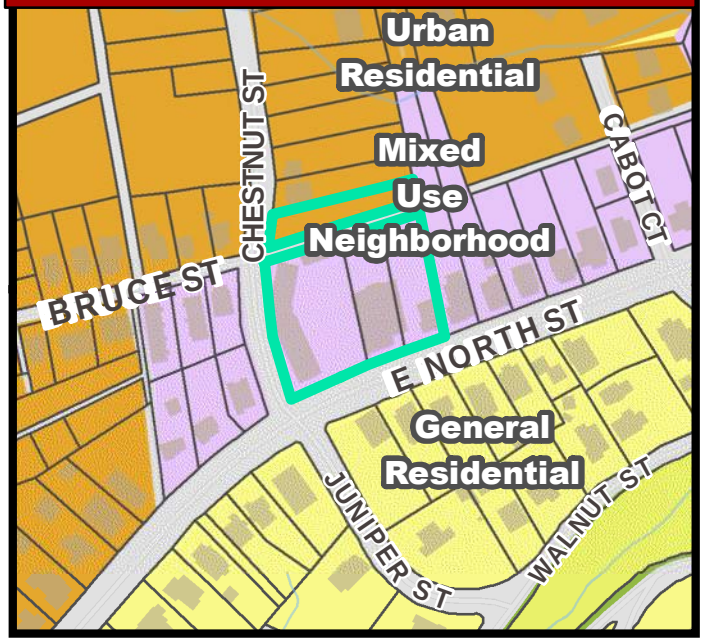
AERIAL VIEW



CURRENT ZONING

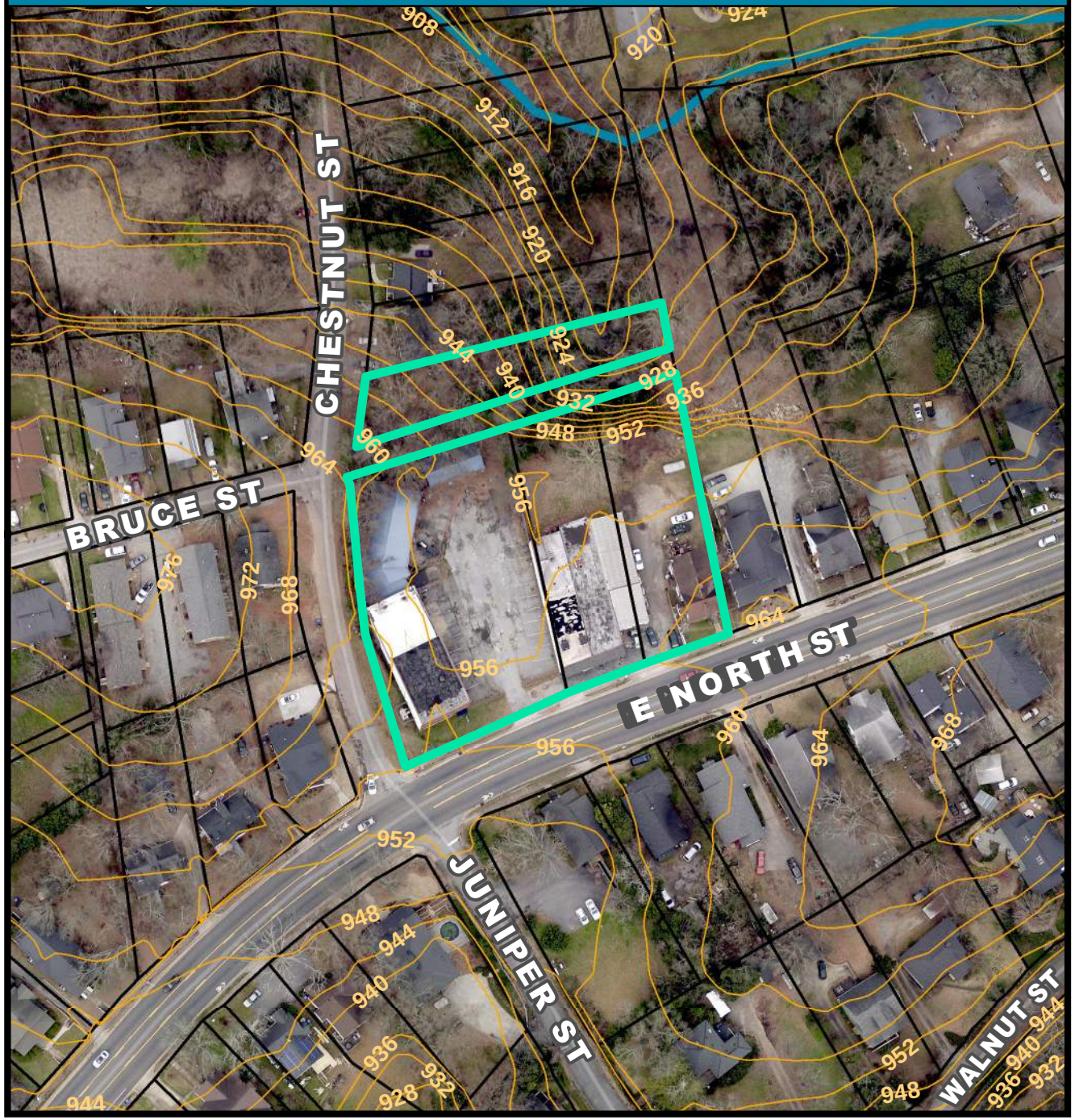


FUTURE LAND USE

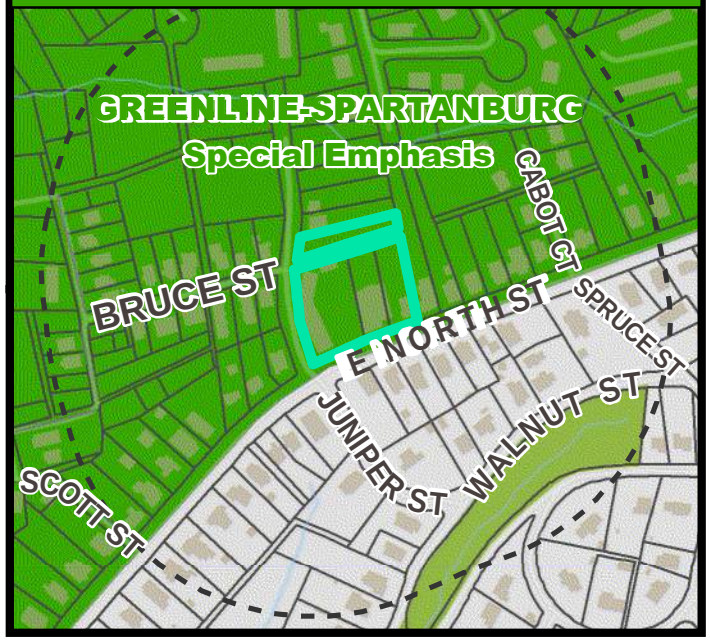


MD 19-005 • CHESTNUT ST & E NORTH ST

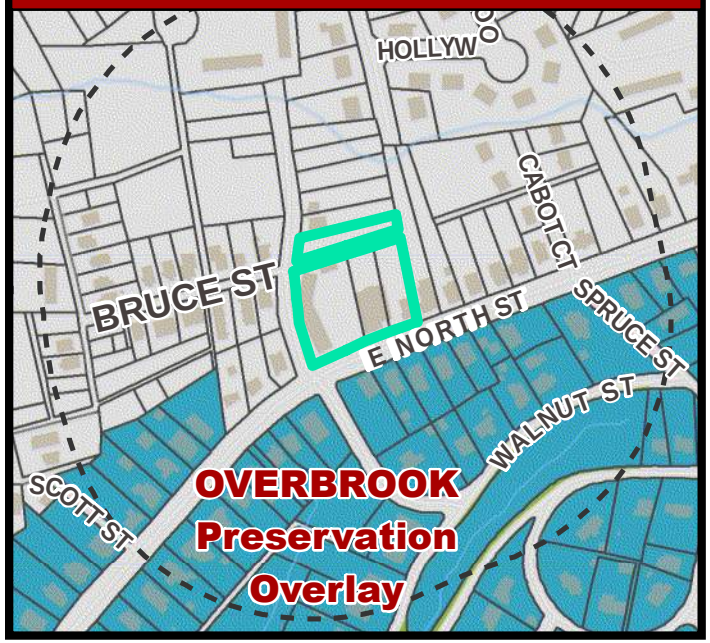
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



GRADING PLANS GENERAL NOTES:

1. All sitework development to conform to the latest edition of the City of Greenville "Stormwater Management and Sediment Control Ordinance".
2. The entire area within the limits of grading shall be excavated to a depth sufficient to remove all vegetable matter, sod, muck, rubbish, and other unsuitable material.
3. All fill material shall be free from roots, other organic material, and trash. Stones shall have a maximum dimension of 6 inches.
4. All fill material to be compacted to 95% maximum dry density by the Standard Proctor Method, ASTM D-698.
5. All fill material in areas under buildings slabs (to included 5' beyond building walls) shall be compacted to 98% maximum dry density by the Standard Proctor Method, ASTM D-698.
6. Backfill of all utility trenches shall be compacted to 95% maximum dry density by the Standard Proctor Method, ASTM D-698.
7. The grading contractor shall conform to the elevations shown on the plans within a tolerance of plus or minus 0.10 feet.
8. Asphalt pavement to be the following:
   Light Duty: 6" of macadam aggregate base course, SCDOT Section 305 and 2" compacted thickness of hot laid asphaltic concrete surface course Type C, SCDOT Section 403. Compaction requirements for Section 305 to conform to ASTM D-698.
   Heavy Duty: 8" of macadam aggregate base course, SCDOT Section 305, 2" HMA intermediate course Type B, SCDOT Section 402, 2" compacted thickness of hot laid asphaltic concrete surface course Type C, SCDOT Section 403. Compaction requirements for Section 305 to conform to ASTM D-698.
9. Concrete shall obtain a compressive strength of 3000 psi at 28 days. Concrete shall be poured with a slump of 2-4" and shall contain 5-7% air entrainment.
10. Moisten subgrade prior to placing concrete. Concrete shall be screeded, machine troweled, and finished to the elevation as shown on plan. Finished pavement shall receive a light broom finish. Concrete shall be properly cured using moisture or a membrane curing compound.
11. Control joints should be sawed as soon as concrete has hardened to permit sawing without excessive raveling. Control joints to be placed so maximum area with no joints is 15' x 15'. Fill all joints with an approved joint filler for exterior use after concrete has cured.
12. Concrete shall be allowed to cure 3 days before automobile traffic is permitted and 7 days before truck traffic is permitted.
13. Construction joints are to be installed whenever a concrete pour is interrupted for a period of time such that bonding between the concrete cannot be achieved.
14. All concrete work shall be done in accordance with ACI 318.
15. All storm drain pipe to be either reinforced concrete pipe (RCP) conforming to ASTM C-76 Class III or High Density Polyethylene meeting AASHTO M252 for 4" - 10" and AASHTO M294 for 12"-48".
16. Roof downspout to be piped to splashblock except where indicated on the grading plans.
17. Storm drain headwalls to be precast concrete headwalls or approved equal.
18. The Contractor is responsible for the verification and the location of all existing underground utilities prior to commencing work.
19. The Contractor is responsible for conducting his work in accordance with the latest requirements and regulations of the Occupational Safety and Health Administration (OSHA).
20. All work on a State right-of-way requires an encroachment permit. Contractor to obtain a copy of the approved permit from the design engineer prior to any work in right-of-way. Contractor is required to obtain City and/or County encroachment permit for all work shown on Dallas Road.
21. Rock will be defined as follows:
    General Excavation - any material which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a minimum draw bar pull rated at not less than 56,000 lbs. (Cat. D-8 or equivalent), and occupying an original volume of at least one cubic yard or more.
    Trench Excavation - any material which cannot be excavated with a track mounted backhoe with a bucket curling force of not less than 25,000 lbs. and occupying an original volume of at least 1/2 cubic yard or more.
    The contractor shall notify the engineer when rock is encountered to verify rock excavation.
22. As-built plans for the detention system will be certified by the design engineer.
23. If necessary slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
24. Any review/acceptance by the City of Greenville does not relieve the contractor or relieve the contractor or subcontractor from meeting codes/ordinace requirements (South Carolina Codes of Laws Section 40-11-110 and 40-59-90).

CITY OF GREENVILLE STANDARD NOTES

1. All retaining walls four (4) feet and greater in height must be engineered.The design and calculations must be prepared by a Registered South Carolina Professional Engineer and submitted to the City of Greenville's Engineering Division for review and approval prior to installation.
2. any review/accceptance by the City of Greenville does not relieve the contractor or subcontractors from meeting code/ordinance requirements (South Carolina Code of Laws Sections 40-11-110 and 40-59-90).
3. The contractor must notify the City of Greenville's Construction Inspection Bureau (864) 467-8890 a minimum of 72 hours prior to beginning demolition and construction.
4. An Encroachment Permit from the SCDOT for State roads or from the City of Greenville for City roads (contact the Construction Inspection Bureau, (864)467-8890) is required for any work in the public right-of-way.
5. The contractor shall coordinate with the engineer of record for a digital staking plan to establish complete horizontal and vertical control. The contractor is responsible for survey stakeout of all improvements. Discrepancies between the plans, construction stakes, and field conditions shall be reported to the engineer of record immediately for resolution prior to installation of proposed improvements.

EROSION CONTROL NOTES:

1. Total area: 1.7 acres — Tax Map # 0190000207000, 0190000207100, 0190000207100, and 0190000207900 and Abandoned Alley

   Disturbed area: 1.3 acres
2. Contractor to install erosion control measures as shown on the plans at the beginning of construction and maintain as such for the duration of the project.
3. At the completion of construction all disturbed areas are to be grassed or landscaped after removal of accumulated silt. Upon stabilization, erosion control measures are to be removed.
4. City of Greenville to be notified prior to beginning construction.
5. Grassing stabilization to conform to the following:

PERMANENT SEEDING

Owner may use sod and landscaping of his choice in lieu of these minimums. (See Landscape Plans)

PERMANENT SEEDING FOR EROSION AND SEDIMENT PREVENTION

SPECIES	RATES (lbs/acres)	OPTIMUM DATES TO PLANT	REMARKS
BAHIA GRASS (ALONE)	40	MARCH 20 - JUNE 15	SLOW TO BECOME ESTABLISHED
BAHIA GRASS (MIX)*	30	MARCH 20 - JUNE 15	SLOW TO BECOME ESTABLISHED
BERMUDA GRASS (HULLED) (ALONE)	8-12	APRIL - JULY 15	QUICK COVER, SOD FORMING, PARTIAL WINTERKILL
BERMUDA GRASS (HULLED) (MIX)*	4-6	APRIL - JULY 15	QUICK COVER, SOD FORMING, PARTIAL WINTERKILL
FESCUE, TALL (KY31) ALONE	40	AUGUST 15 - OCTOBER	SELDOM SEEDED ALONE, NOT FOR DRY OR WET SITES
FESCUE, TALL (KY31) MIX*	20	AUGUST 15 - OCTOBER	SELDOM SEEDED ALONE, NOT FOR DRY OR WET SITES
SERICEA LESPEDEZA (SCARIFIED)	40	APRIL - JUNE	GOOD FOR SLOPES, CUTS, AND FILLS THAT REQUIRE LOW MAINTENANCE
ALONE OR MIX*	2	AUGUST 20 - OCTOBER	NATURALLY ADDS NITROGEN

Prior to permanent grassing respread ±4" of top soil.
If temporary vegetation is required to assist in siltation control the following is to be used:

TEMPORARY SEEDING

The surface of the soil should be loosened just before broadcasting the seed. Seed should be applied evenly by the most convenient method available for he type of seed to be used and the location of the temporary seeding. Typical application methods include but are not limited to cyclone seeder, rotary spreaders, drop spreader, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain, then lightly firm the area with a roller or cult.

MULCH

Mulch should be used in seeded areas to retain moisture and reduce erosion during establishment of vegetation. The most commonly accepted mulch used in conjunction with temporary seeding is small grain straw. This straw should be dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or emulsions to prevent it from being blown or washed away. The straw mulch may be applied by hand or machine at the rate 1.5-2 tons per acre (90 pounds per 1000 square feet) Frequent inspections are necessary to check that conditions for growth are good.

IRRIGATION

Seeding areas should be kept adequately moist. Irrigate the seeded area if normal rainfall is not adequate for germination and growth of seedlings. Water seeded areas at controlled rates are that less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

RE-SEEDING

Areas where the plants do not grow quickly, thick enough, or adequately to prevent erosion should be re-seeded with temporary grasses as soon as such areas are identified.

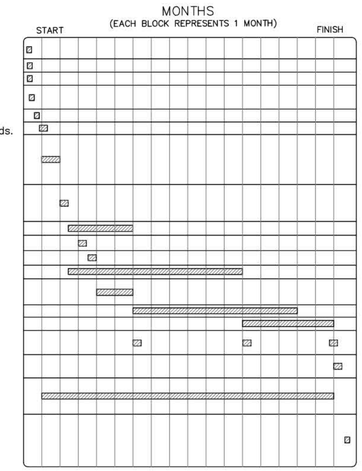
TEMPORARY SEEDING FOR EROSION AND SEDIMENT PREVENTION

SPECIES	RATES (lbs/acres)	OPTIMUM DATES TO PLANT	REMARKS
BROWNTOP MILLET (ALONE)	40	APRIL 20 - AUGUST 15	QUICK, DENSE COVER
BROWNTOP MILLET (MIX)*	10	APRIL 20 - AUGUST 15	QUICK, DENSE COVER
RYE GRAIN (ALONE)	56	FEBRUARY - MARCH AUGUST 15 - NOVEMBER 20	QUICK COVER
RYE GRAIN (MIX)*	10	FEBRUARY - MARCH AUGUST 15 - NOVEMBER 20	QUICK COVER
BROWNTOP MILLET (ALONE)	50	AUGUST 10 - OCTOBER 10	COMPETITIVE, DENSE
BROWNTOP MILLET (MIX)*	8	AUGUST 10 - OCTOBER 10	COMPETITIVE, DENSE

TEMPORARY SEEDING FOR EROSION AND SEDIMENT PREVENTION FOR STEEP SLOPES/CUT SLOPES

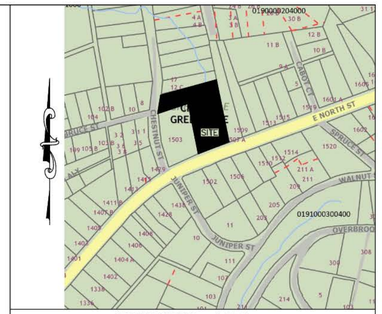
SPECIES	RATES (lbs/acres)	OPTIMUM DATE TO PLANT	REMARKS
WEEPING LOVEGRASS (ALONE)	4	APRIL - JULY 20	QUICK COVER, DEEP ROOTS, LIKES DRY SITES, SELDOM USED ALONE, CLUMPS
WEEPING LOVEGRASS (MIX)*	2	APRIL - JULY 20	QUICK COVER, DEEP ROOTS, LIKES DRY SITES, SELDOM USED ALONE, CLUMPS

6. Construction Sequence:
   A. Receive NPDES coverage from DHEC.
   B. Pre-construction meeting on site with City of Greenville.
   C. Installation of construction entrance(s).
   D. Clearing and grubbing only as necessary for installation of perimeter controls.
   E. Installation of perimeter controls (e.g. silt fence)
   F. Clearing and grubbing only in areas of basin, retaining walls, and ponds.
   G. Installation of basins, walls, detention (outlet structures must be completely installed as shown on the details before proceeding to next steps; areas draining to these structures cannot be disturbed until the structure is completely installed.)
   H. Clearing and grubbing of remainder of site (sediment and erosion control measures for these areas must already be installed). Existing building demolition).
   I. Rough grading.
   J. Construct temporary swales, diversions and slope drains.
   K. Installation of ECB's, ditch checks, and riprap pads.
   L. Initiate temporary stabilization.
   M. Installation of utilities and placement of inlet protection as each inlet is installed.
   N. Fine grading, paving, and building, (Condos), construction.
   O. Initiate Permanent/ final stabilization.
   P. Clean-out of detention basins that were used as sediment contro,l re-grading of pond bottoms.
   Q. Removal of temporary sediment and erosion control measures after area draining to the structure is finally stabilized.
   R. Maintenance of sediment and erosion control measures must continue until the site is permanently stabilized and the controls are removed.
   S. Installation of permanent water quality measures should occur after site is stabilized. Cleanout of other water quality devices that were used during construction should occur after site stabilization.



SCDHEC STANDARD NOTES

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below.
   - Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
   - Where construction activity on a portion of the Site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the Site.
3. All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been inappropriately, or incorrectly installed, the Permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification.
4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove sediment before being pumped back into any waters of the State.
5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required.
7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C Reg. 72-300 et seq. and SCR100000.
8. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upslope runoff and/or to divert sediment-laden water to appropriate traps or stable outlets.
9. All waters of the State (WoS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WoS. A 10-foot buffer should be maintained between the last row of silt fence and all WoS.
10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
11. A copy of the SWPPP, inspections records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is reached.
12. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days.
13. Minimize soil compaction and, unless infeasible, preserve topsoil.
14. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
15. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.).
16. The following discharges from sites are prohibited:
    - Wastewater from washout of concrete, unless managed by an appropriate control;
    - Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
    - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
    - Soaps or solvents used in vehicle and equipment washing.
17. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site.
18. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SCs Water Quality Standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as reasonably possible.
19. A Pre-Construction Conference must be held for each construction site with an approved On-Site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the Department has approved otherwise.



VICINITY MAP

MAINTENANCE SCHEDULE/RESPONSIBILITY FOR DETENTION BASIN

1. Detention basin to be owned and maintained by 1503 Overbrook, LLC.
2. Grass to be mowed from top near outlet structure (Monthly).
3. External walls to be maintained with prompt repair of any damaged area or any sinking area.
4. Trash to be removed from within and around the pond, and outlet structure on a regular basis and after large storm events.
5. Outlet structure to be inspected and sediment to be removed on a regular basis during construction. The inlet protection should limit sediment transport into system. Repairs to outlet structure to be made if needed.
6. Sediment accumulation to be removed from pond at end of construction by contractor and isolator rows flushed every 6 months..
7. Outlet discharge and emergency spillway to be inspected on a regular basis and after large storm events, and repaired if necessary.
8. Outlet to be kept clear of plant material, trash and debris.
9. Since decomposing vegetation captured in the underground detention can release pollutants, especially nutrients, it may be necessary flush isolator rows bi-annually. Otherwise the decaying vegetation can export pollutants out of the pond and also can cause nuisance condition to occur.

MAINTENANCE SCHEDULE/RESPONSIBILITY FOR WATER QUALITY DEVICES

(A) WATER QUALITY DEVICES

1. ADS - Stormtech MC-4500 underground detention system and isolator rows are to be flushed at a minimum of every year or bi-annually after installation based on the conditions found at the time of inspection and cleaning. coordination of maintenance to be with P.O.A for 1503 Overbrook, LLC.

OWNERS CONTACT INFORMATION:

1503 OVERBROOK DRIVE, LLC
309 East Stone Ave.
Greenville, SC, 29609

CONTACT: Richard Lynch
(864) 242-0656
rlynch@psbkcpas.com

DRAWING INDEX

SHEET NO.	TITLE	DATE	REVISION
1	COVER SHEET		
2	EXISTING SITE CONDITIONS		
3	DEMOLITION PLAN		
4	SITE PLAN		
5	EROSION AND SEDIMENTATION CONTROL PLAN		
6	EROSION AND SEDIMENTATION CONTROL PLAN		
7	GRADING & DRAINAGE PLAN		
8	UTILITY PLAN		
9	SANITARY SEWER PLAN & PROFILE - LINE 'A' AND 'B'		
10	EROSION CONTROL AND STORM DRAIN DETAILS		
11	MISCELLANEOUS DETAILS		
12	MISCELLANEOUS DETAILS		
13	WATER DETAILS		
14	SANITARY SEWER DETAILS		
15	MISCELLANEOUS DETAILS		
16	DETENTIONS BASIN DETAILS		
17	DETENTIONS BASIN DETAILS		

CAUTION

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL SC
811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA
FANT, REICHERT & FOGLEMAN INC.
NO. C03069
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. ORCHO

OVERBROOK VILLAGE

COVER SHEET

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20'	DATE: 12-4-19	PROJECT NO.
DWG. #: 1 OF 17	DWN: EKN DES: MLO	19095

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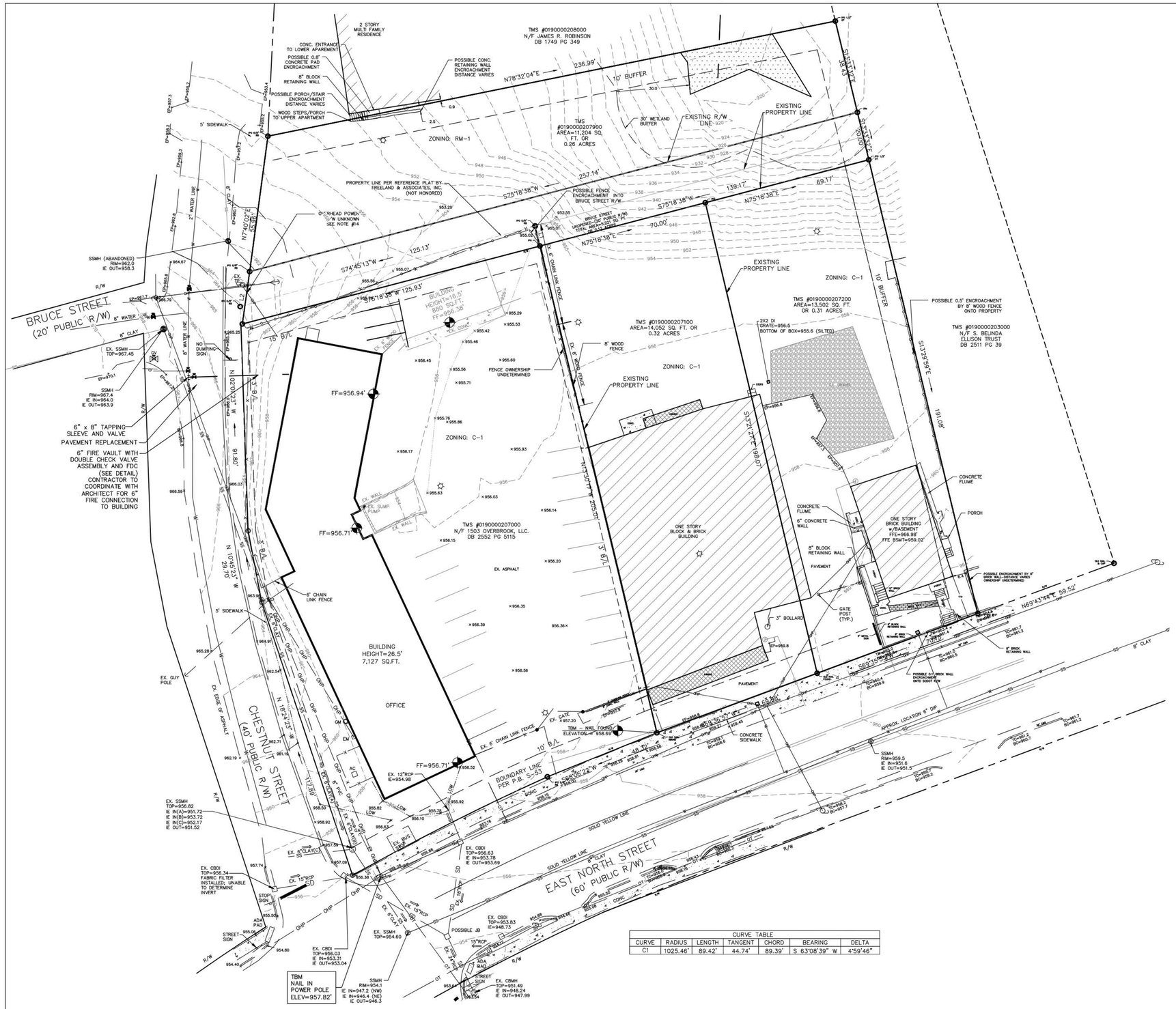

VICINITY MAP

NOTES:

1.) BRUCE STREET
UNOPENED-20' PUBLIC RIGHT-OF-WAY
TOTAL AREA=5,221 SQ. FT. OR 0.12 ACRES

TRACT A
PORTION OF BRUCE STREET RIGHT-OF-WAY TO BE QUITCLAIMED TO TMS #0190000207000
AREA=2,439 SQ. FT. OR 0.06 ACRES

TRACT B
PORTION OF BRUCE STREET RIGHT-OF-WAY TO BE QUITCLAIMED TO TMS #0190000207100
AREA=1,400 SQ. FT. OR 0.03 ACRES

TRACT C
PORTION OF BRUCE STREET RIGHT--OF-WAY TO BE QUITCLAIMED TO TMS #0190000207200
AREA=1,382 SQ. FT. OR 0.03 ACRES

2.) TMS #0190000207000
SITE ADDRESS:1503 EAST NORTH STREET
CITY OF GREENVILLE
GREENVILLE COUNTY, SOUTH CAROLINA

TMS #0190000207100
SITE ADDRESS:1505 EAST NORTH STREET
CITY OF GREENVILLE
GREENVILLE COUNTY, SOUTH CAROLINA

TMS #0190000207200
SITE ADDRESS:1507 EAST NORTH STREET
CITY OF GREENVILLE
GREENVILLE COUNTY, SOUTH CAROLINA

3.) TMS #0190000207900
LOT 13 W. B. MCDOWELL
AREA=11,204 SQ. FT. OR 0.26 ACRES

4.) TMS #0190000207900
SITE ADDRESS:CHESNUT STREET
CITY OF GREENVILLE
GREENVILLE COUNTY, SOUTH CAROLINA

ZONING: RM-1
SETBACKS: PER CITY OF GREENVILLE CODE OF ORDINANCES
FRONT: 20'
SIDE: 5'-SINGLE FAMILY OR DUPLEX OR COMMON WALL IS ALLOWED
15'- OTHER USES
REAR: 15'
Max. DENSITY 10 UNITS PER ACRE.

5.) REFERENCES: DB 2552 PG 5494
PB S PG 53
DB 2552 PG 5115
DB 2511 PG 39
PB F PG 76
PB 1123 PG 42
SCDOT DOCKET #23.416 SHEET 11
PLAT TITLED "ALTA/NSPS LAND TITLE SURVEY FOR 1503 EAST NORTH STREET, LLC." BY FREELAND AND ASSOCIATES, INC. DATED 2-5-2018
DB 2123 PG 584
DB 1740 PG 349

6.) PROPERTY SUBJECT TO ANY AND ALL EASEMENTS AND R/W OF RECORD AND NOT OF RECORD

7.) FIELD WORK COMPLETED: 4-22-19, and 5-3-19

8.) HORIZONTAL DATUM IS S.C.S.P.C. (NAD 83). DATUM WAS ESTABLISHED USING STATIC GPS SURVEYING AND "NGS OPUS"

9.) ALL IPN ARE 5/8" REBAR UNLESS OTHERWISE NOTED.

10.) PER THE NATIONAL WETLAND INVENTORY ONLINE WETLAND MAPPER, THERE ARE NO WETLANDS LOCATED ONSITE. THE WETLANDS SHONW ON PLAN HAVE BEEN DELINEATED BY ENVIRONMENTAL PERMITTING CONSULTANTS. WATER OF THE U.S. SURVEY FOR WETLAND PLAT PROVIDED BY FRF, INC. FOR 1503 OVERBROOK LLS, DATED 7-16-19. WETLANDS HAVE NOT BEEN FIELD VERIFIED OR DELINEATED BY A WETLAND CONSULTANT.

11.) SAID DESCRIBED PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION 'X' BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO. 45045C0382E, WITH A DATE OF IDENTIFICATION OF 8-18-14, FOR COMMUNITY NUMBER 450091, IN THE CITY OF GREENVILLE IN GREENVILLE COUNTY, STATE OF SOUTH CAROLINA, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

12.) ZONING: C-1
SETBACKS: PER CITY OF GREENVILLE CODE OF ORDINANCES
FRONT: 10'
SIDE: 3'-ZERO LOT LINE OR COMMON WALL IS ALLOWED
10'-IF ADJACENT TO A RESIDENTIAL DISTRICT
REAR: 15'

13.) UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND BASED UPON OBSERVED STRUCTURE LOCATIONS AND REFERENCES.

14.) TYPICAL DUKE ENERGY DISTRIBUTION RIGHT-OF-WAY IS 30', 15' EACH SIDE OF OVERHEAD LINE.

15.) NO TITLE INFORMATION PROVIDED FOR THIS SURVEY.

LEGEND

	PROPERTY LINE
	PROPERTY LINE TO BE ABANDONED
	RIGHT OF WAY
	SETBACK LINE
	ADJACENT PROPERTY LINE
W	UNDERGROUND WATER LINE
OHP	OVERHEAD POWER LINE
SS	SANITARY SEWER LINE
•	BOLLARD
	MONUMENT
	GAS METER
	GAS VALVE
	POWER POLE
	WATER METER
EP	EDGE OF PAVEMENT
R/W	RIGHT OF WAY
DIP	DUCTILE IRON PIPE
IPO	IRON OLD (FOUND)
IPN	IRON PIN NEW (SET)
OT	OPEN TOP
RB	REBAR
C&G	CURB AND GUTTER
YI	YARD INLET

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1025.46'	89.42'	44.74'	89.39'	S 63°08'39" W	4°59'46"

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

CAUTION

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3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL SC
811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21945 12/4/19 MICHAEL L. BROOKS

OVERBROOK VILLAGE

EXISTING SITE CONDITIONS

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633
ENGINEERING & SURVEYING

SCALE: 1" = 20' | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 2 OF 17 | DWN: EKN | DES: MLO

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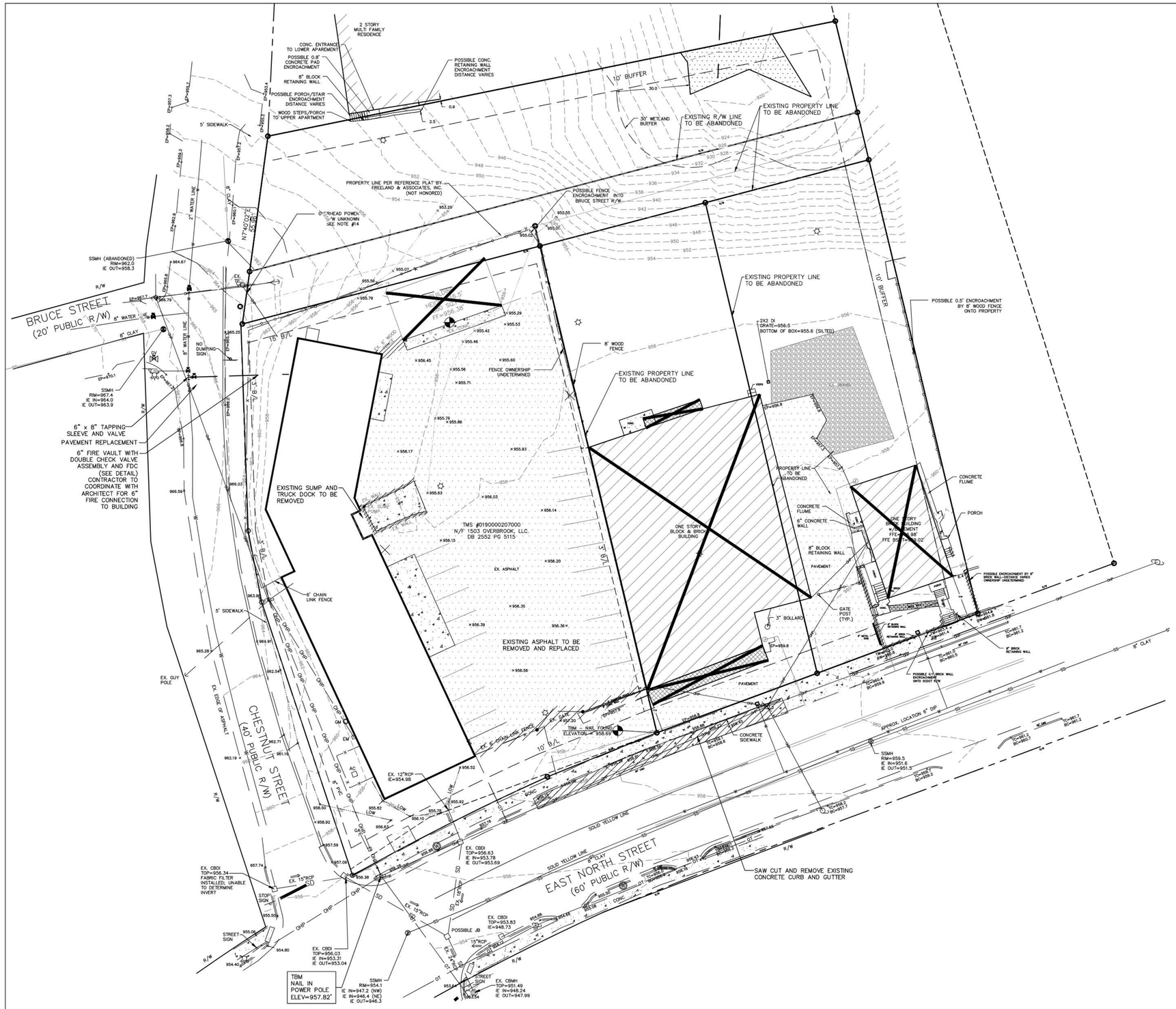

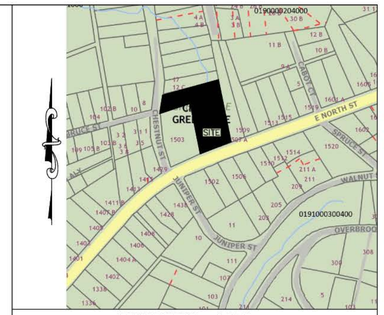

VICINITY MAP

LEGEND

- Indicates existing curb & gutter to be removed.
- Indicates existing sanitary sewer service to be removed.
- Indicates existing storm drain to be removed.
- Indicates existing wall to be removed.
- Indicates existing fence to be removed.
- Indicates existing concrete walk to be removed.
- Indicates approximate limits of pavement to be removed. Exact limits to be determined in the field to make a smooth transition between existing and proposed pavement grades.
- Indicates existing tree to be removed.
- Indicates existing catch basin to be removed.
- Indicates existing sanitary manhole to be removed.
- Indicates existing sign to be removed.
- Indicates existing light to be removed.
- Indicates existing utility pole tob be removed or relocated.

DEMOLITION NOTES

1. All demolition work shall be performed with due care and diligence so as to prevent the arbitrary destruction or interruption of concealed utilities which are intended to remain in use and the routing of which could not be predetermined until demolition was started. All such discoveries of utilities during the demolition process which are in a location different from that indicated or are unidentified shall be reported to the engineer prior to any demolition.
2. All interruption in utility services shall be coordinated with the owner. The owner shall be notified a minimum of 48 hours prior to any interruption of utility service.
3. Any portion of the work indicated to remain that becomes damaged by demolition shall be repaired or replaced by the contractor at no additional cost to the owner.
4. Existing utilities are shown based on available information. The contractor is to verify the location of all utilites prior to any demolition. There may be utilities that are not shown. Any utilities that are discovered that are not shown are to be brought to the attention of the engineer prior to any demolition.
5. This plan cannot show all of the existing features that are to be removed or abandoned. The contractor is to become familiar with the site and the construction documents.
6. Existing utilities that are removed shall have the trenches compacted in accordance with the compaction requirements on the Grading, Drainage & Erosion Control Plan.
7. Contractor to coordinate demolition schedule with the engineer.

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
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CALL SC
811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA
FANT, REICHERT & FOGLEMAN INC.
NO. C03069
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. CROSS

OVERBROOK VILLAGE

DEMOLITION PLAN

NO.	DATE	REVISIONS	CKD BY
1			
2			
3			
4			
5			
6			

FRF
FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20'	DATE: 12-4-19	PROJECT NO.
DWG. #: 3 OF 17	DWN: EKN DES: MLO	19095

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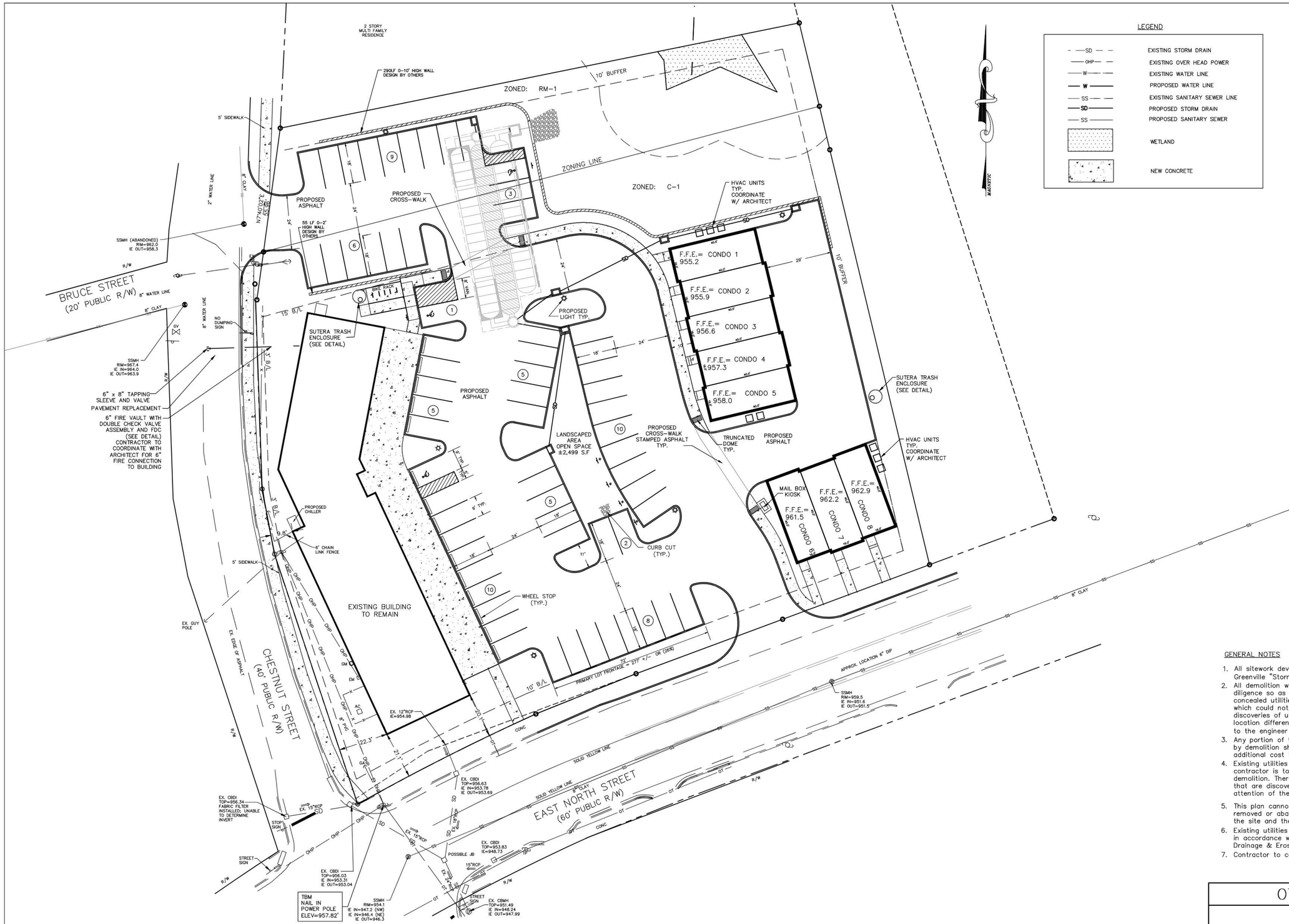
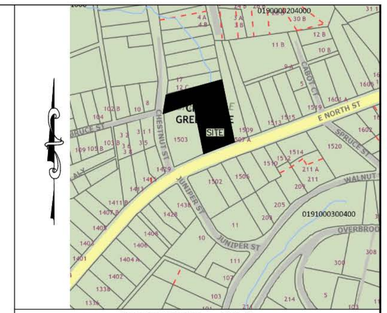


LEGEND

SD	EXISTING STORM DRAIN
OHP	EXISTING OVER HEAD POWER
W	EXISTING WATER LINE
W	PROPOSED WATER LINE
SS	EXISTING SANITARY SEWER LINE
SD	PROPOSED STORM DRAIN
SS	PROPOSED SANITARY SEWER
	WETLAND
	NEW CONCRETE



VICINITY MAP

GENERAL NOTES

ZONED: C-1

SETBACKS: FRONT = 10'
SIDE = 3' OR 10'
REAR = 15'
MAX. BUILDING HEIGHT = 40'
RM-1

SETBACKS: FRONT = 20'
SIDE = 5' OR 15'
REAR = 15'
MAX. BUILDING HEIGHT = 40'

PARKING SHOWN: 64 SPACES *4 DESIGNATED AS RESIDENCE OVERFLOW.
8 GARAGE SPACES IN UNITS
72 TOTAL (3 H.C.)

REQUIRED PARKING: MIN: 50 SPACES
MAX: 64 SPACES

1. ALL DIMENSIONS ARE FROM FACE OF CURB TO FACE OF CURB OR TO EDGE OF PAVEMENT.
2. BOUNDARY AND TOPOGRAPHIC SURVEY WAS DONE BY FANT, REICHERT AND FOGLEMAN, INC. DATED 4-22-19

IMPERVIOUS AREAS:

TOTAL AREA:	1.7 AC. +/-
EXISTING IMPERVIOUS: EX. BUILDINGS, ASPHALT AND SIDEWALKS:	36,223 SQ. FT. +/- 50%
PROPOSED IMPERVIOUS: BUILDINGS, ASPHALT AND SIDEWALKS:	47,325 SQ. FT. (1.08 AC.)+/-
IMPERVIOUS RATIO:	64% (IMPERVIOUS)

GENERAL NOTES

1. All sitework development to conform to the latest edition of the City of Greenville "Stormwater Management and Sediment Control Ordinance".
2. All demolition work shall be performed by others and with due care and diligence so as to prevent the arbitrary destruction or interruption of concealed utilities which are intended to remain in use and the routing of which could not be predetermined until demolition was started. All such discoveries of utilities during the demolition process which are in a location different from that indicated or are unidentified shall be reported to the engineer prior to any construction.(See Sheets 3 and 8)
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6. Existing utilities that are removed shall have the trenches compacted in accordance with the compaction requirements on the Grading, Drainage & Erosion Control Plan and notes on sheet 1.
7. Contractor to coordinate demolition schedule with the owner and engineer.

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

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3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL SC 811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21945 12/4/19 CHRISTOPHER MICHAEL L. CROSS

OVERBROOK VILLAGE

SITE PLAN

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20' | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 4 OF 17 | DWN: EKN | DES: MLO

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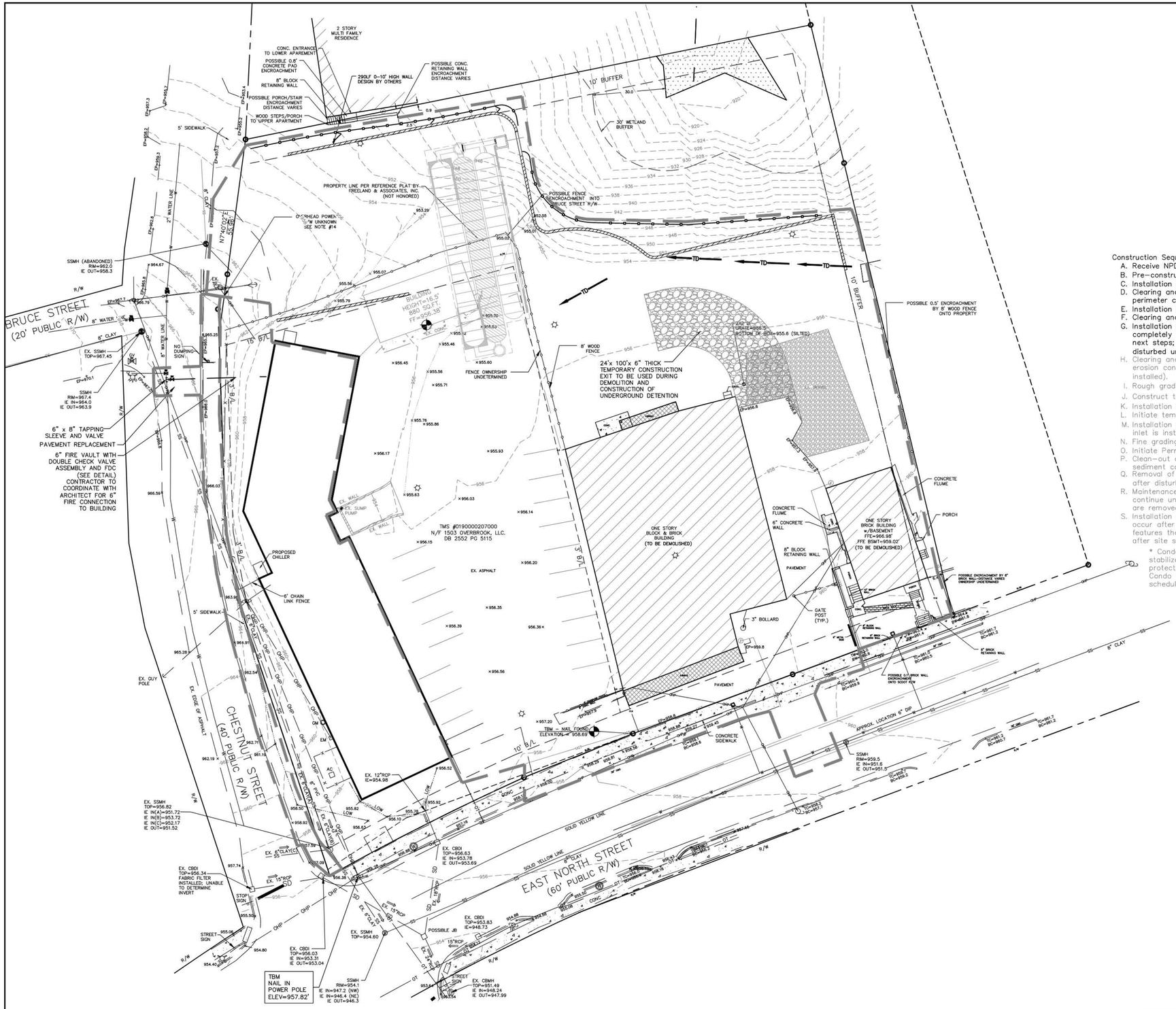
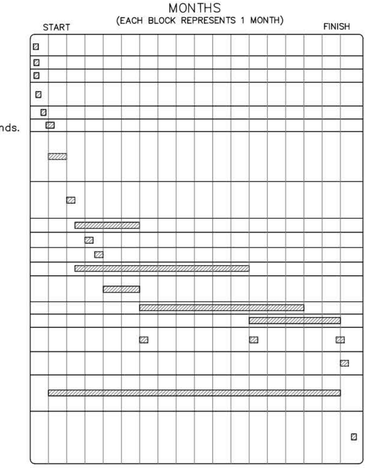


VICINITY MAP

Construction Sequence:

A. Receive NPDES coverage from DHEC.
B. Pre-construction meeting on site with City of Greenville.
C. Installation of construction entrance(s).
D. Clearing and grubbing only as necessary for installation of perimeter controls and proposed detention system.
E. Installation of perimeter controls (e.g. silt fence)
F. Clearing and grubbing only in areas of basin, retaining walls, and ponds.
G. Installation of detention, walls, (outlet structures must be completely installed as shown on the details before proceeding to next steps; areas draining to these structures cannot be disturbed until the structures are completely installed and verified.)
H. Clearing and grubbing of remainder of site (sediment and erosion control measures for these areas must already be installed).
I. Rough grading and demolition and Condo Site preparation.
J. Construct temporary swales, diversions to proposed inlets.
K. Installation of ECB's, ditch checks, and riprap pads.
L. Initiate temporary stabilization.
M. Installation of utilities and placement of inlet protection as each inlet is installed, to remain until paving operations.
N. Fine grading, paving, and building construction.
O. Initiate Permanent/ final stabilization. *(see note).
P. Clean-out of underground detention, and any areas that were used sediment control above the system, (inlet protection areas).
Q. Removal of temporary sediment and erosion control measures after disturbed areas draining to the structure is finally stabilized.
R. Maintenance of sediment and erosion control measures must continue until the site is permanently stabilized and the controls are removed.
S. Installation of permanent water quality measures should occur after site is stabilized. Cleanout of other water quality features that were used during construction should occur after site stabilization.

* Condo construction may follow initial construction and primary stabilization, If this occurs, The individual unit construction is to be protected with silt fence, to ensure keeping sediment contained. Once Condo construction is complete, contractor to inform owner and schedule to have underground system flushed and cleaned.



EROSION CONTROL LEGEND

- CATCH BASIN PROTECTION
- SILT FENCE
- BAFFLE
- TEMPORARY DIVERSION
- RIPRAP
- STONE SEDIMENT CONTROL DIKE
- PET WASTE STATION (PWS)
- RETAINING WALL
- LIMITS OF DISTURBANCE
- FLOOD PLAIN
- EROSION CONTROL BLANKETS (ECB)
- SILT SOCK

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

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3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL SC
811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21945 12/4/19 MICHAEL L. CROSS

OVERBROOK VILLAGE

EROSION CONTROL PLAN
PHASE I – INITIAL LAND DISTURBANCE

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF
FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20' | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 5 OF 17 | DWN: EKN | DES: MLO

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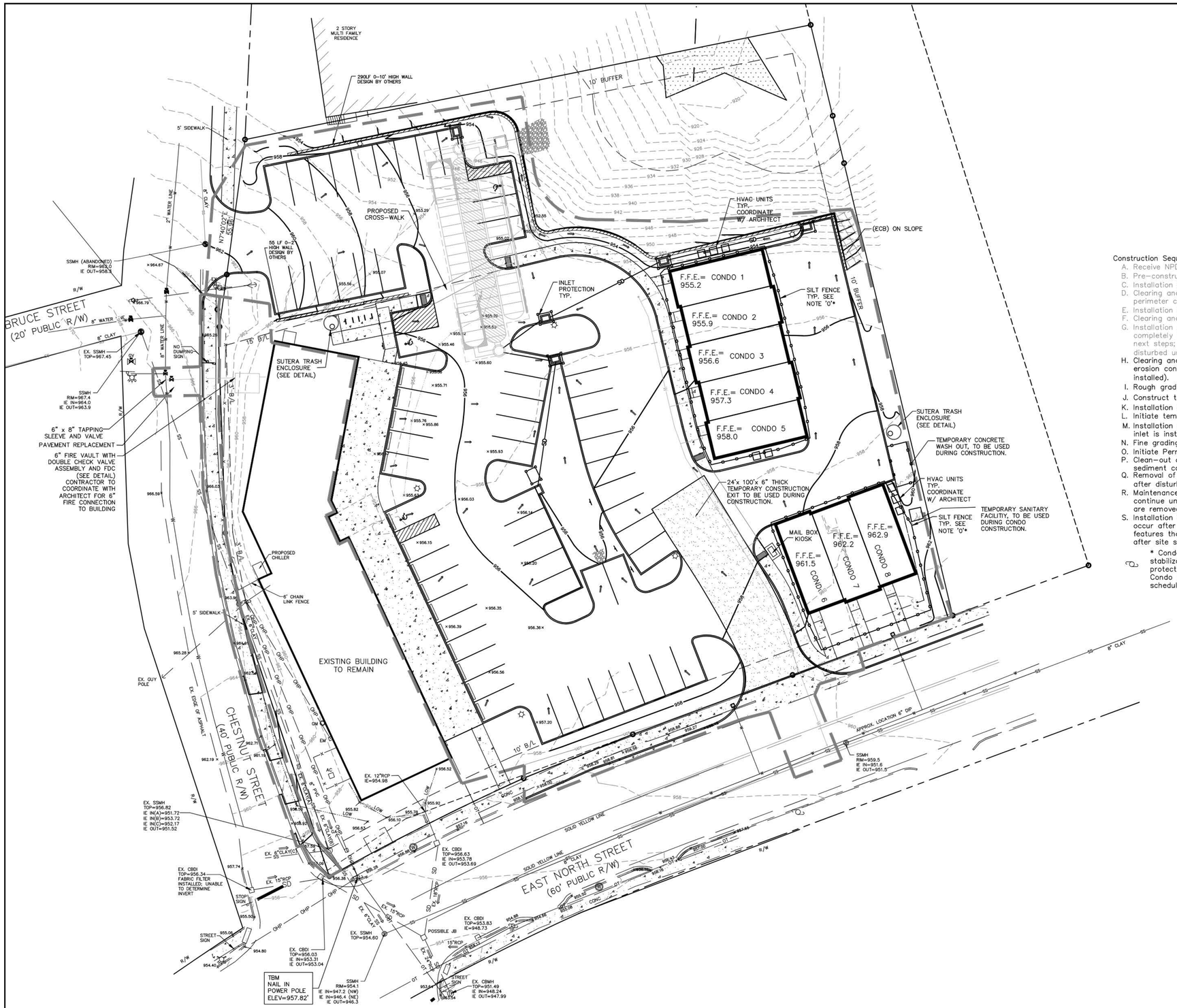

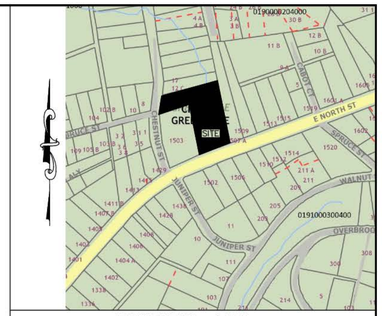

VICINITY MAP

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I. Rough grading and demolition and Condo Site preparation.
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K. Installation of ECB's, ditch checks, and riprap pads.
L. Initiate temporary stabilization.
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N. Fine grading, paving, and building construction.
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P. Clean-out of underground detention, and any areas that were used sediment control above the system, (inlet protection areas).
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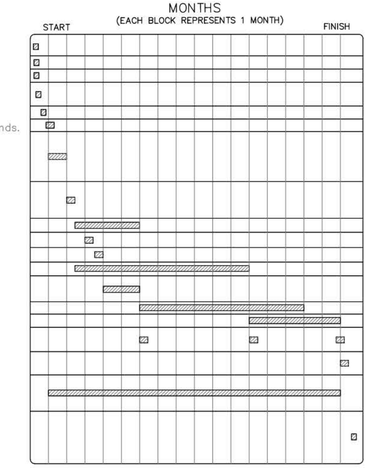

EROSION CONTROL LEGEND

- CATCH BASIN PROTECTION
- SILT FENCE
- BAFFLE
- TEMPORARY DIVERSION
- RIPRAP
- STONE SEDIMENT CONTROL DIKE
- PET WASTE STATION (PWS)
- RETAINING WALL
- LIMITS OF DISTURBANCE
- FLOOD PLAIN
- EROSION CONTROL BLANKETS (ECB)
- SILT SOCK

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(IN FEET)
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811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA
FANT, REICHERT & FOGLEMAN INC.
NO. C03069
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. ORCUTT

OVERBROOK VILLAGE

EROSION CONTROL PLAN
PHASE II – CONSTRUCTION & STABILIZATION

NO.	DATE	REVISIONS	CKD BY
1			
2			
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5			
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FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20' | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 6 OF 17 | DWN: EKN | DES: MLO

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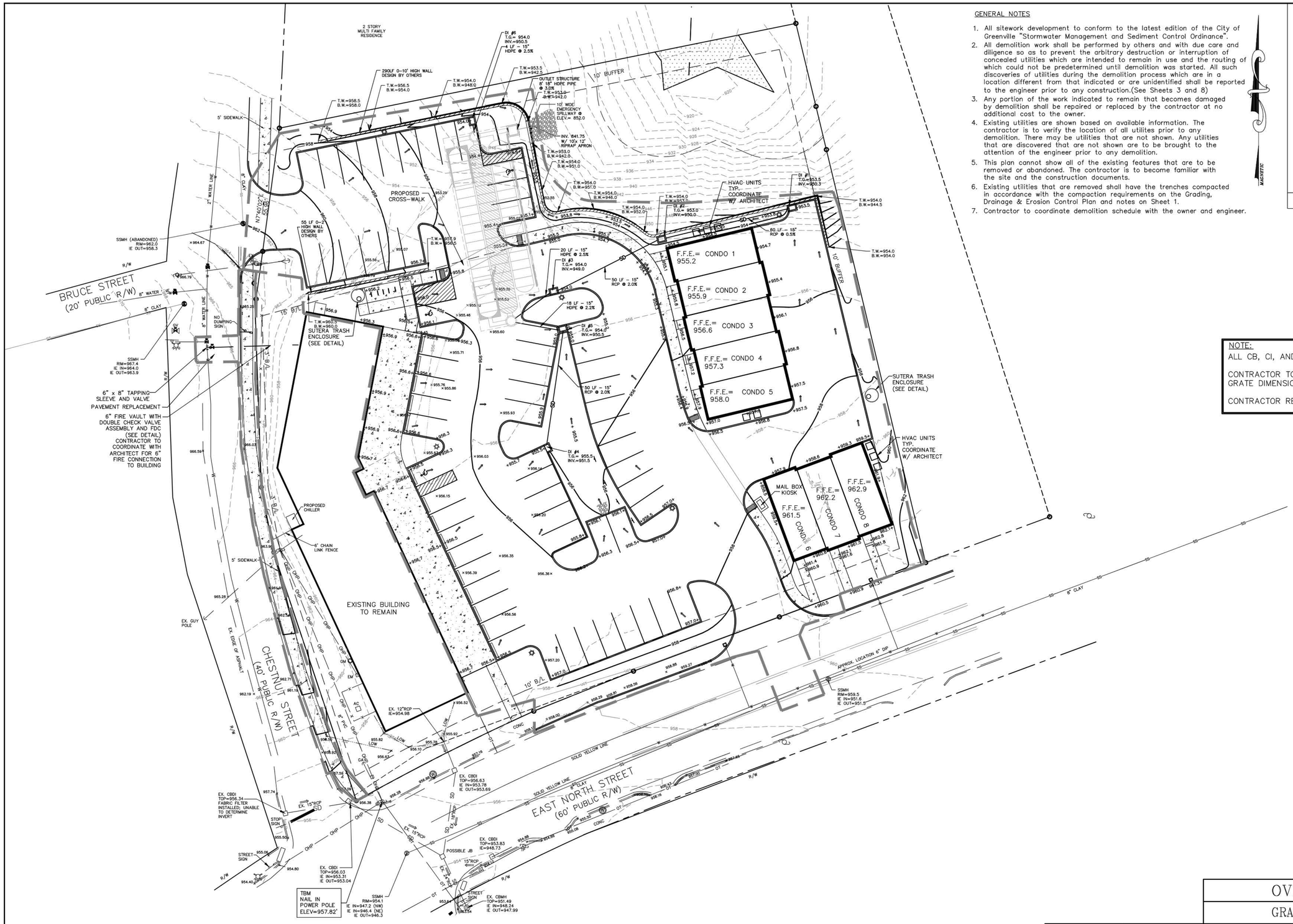

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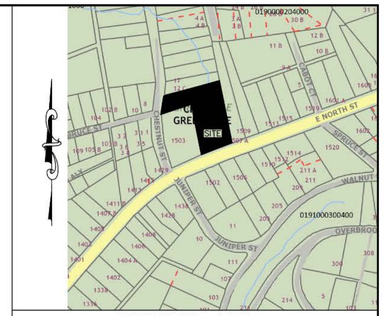

VICINITY MAP

GRADING LEGEND

	LIMITS OF DISTURBANCE
	PROPOSED DRAINAGE DIRECTION
+904.5	PROPOSED SPOT ELEVATIONS
+904.5	EXISTING SPOT ELEVATIONS
SD	EXISTING STORM DRAIN
SD	PROPOSED STORM DRAIN

NOTE:
ALL CB, CI, AND DI SHOWN ARE SCHEMATIC SYMBOLS ONLY.

CONTRACTOR TO REFERENCE DETAIL SHEET FOR BOX AND GRATE DIMENSIONS.

CONTRACTOR RESPONSIBLE FOR CORRECT BOX LAYOUT.

GRAPHIC SCALE

(IN FEET)
1 inch = 20' ft.

CAUTION

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3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL SC
811
PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA
FANT, REICHERT & FOGLEMAN INC.
NO. C03069
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. CROCK

OVERBROOK VILLAGE

GRADING AND DRAINAGE PLAN

NO.	DATE	REVISIONS	CKD BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: 1" = 20' | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 7 OF 17 | DWN: EKN | DES: MLO

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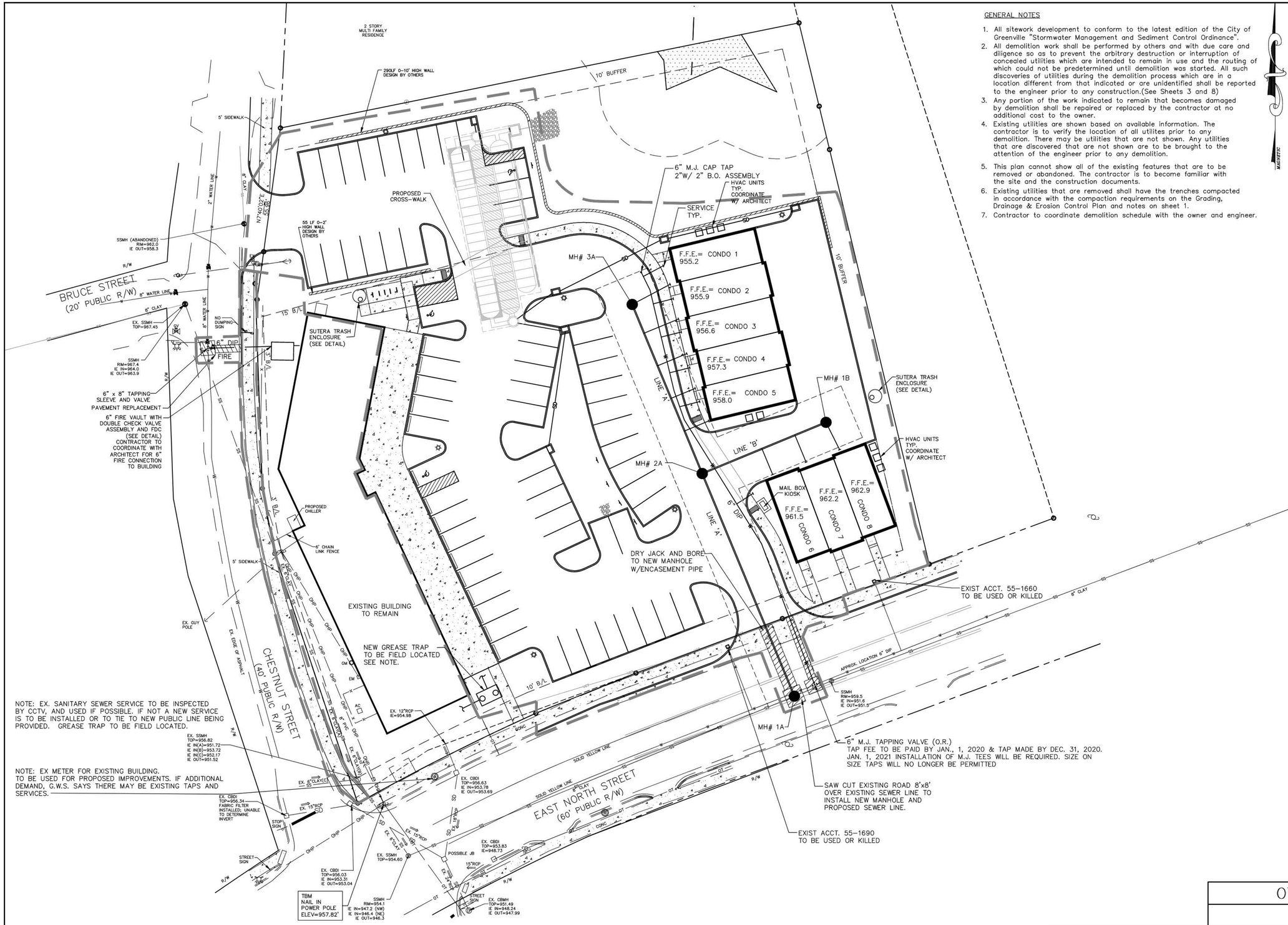
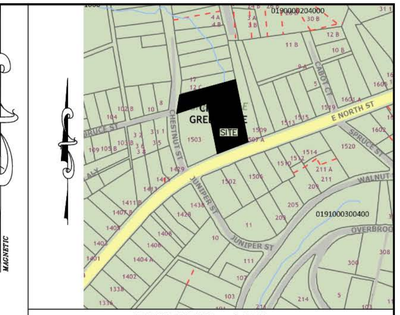


GENERAL NOTES

1. All sitework development to conform to the latest edition of the City of Greenville "Stormwater Management and Sediment Control Ordinance".
2. All demolition work shall be performed by others and with due care and diligence so as to prevent the arbitrary destruction or interruption of concealed utilities which are intended to remain in use and the routing of which could not be predetermined until demolition was started. All such discoveries of utilities during the demolition process which are in a location different from that indicated or are unidentified shall be reported to the engineer prior to any construction.(See Sheets 3 and 8)
3. Any portion of the work indicated to remain that becomes damaged by demolition shall be repaired or replaced by the contractor at no additional cost to the owner.
4. Existing utilities are shown based on available information. The contractor is to verify the location of all utilites prior to any demolition. There may be utilities that are not shown. Any utilities that are discovered that are not shown are to be brought to the attention of the engineer prior to any demolition.
5. This plan cannot show all of the existing features that are to be removed or abandoned. The contractor is to become familiar with the site and the construction documents.
6. Existing utilities that are removed shall have the trenches compacted in accordance with the compaction requirements on the Grading, Drainage & Erosion Control Plan and notes on sheet 1.
7. Contractor to coordinate demolition schedule with the owner and engineer.



VICINITY MAP

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

CAUTION

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CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. CROSS

OVERBROOK VILLAGE

UTILITY PLAN

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
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DWG. #: 8 OF 17 | DWN: EKN | DES: MLO

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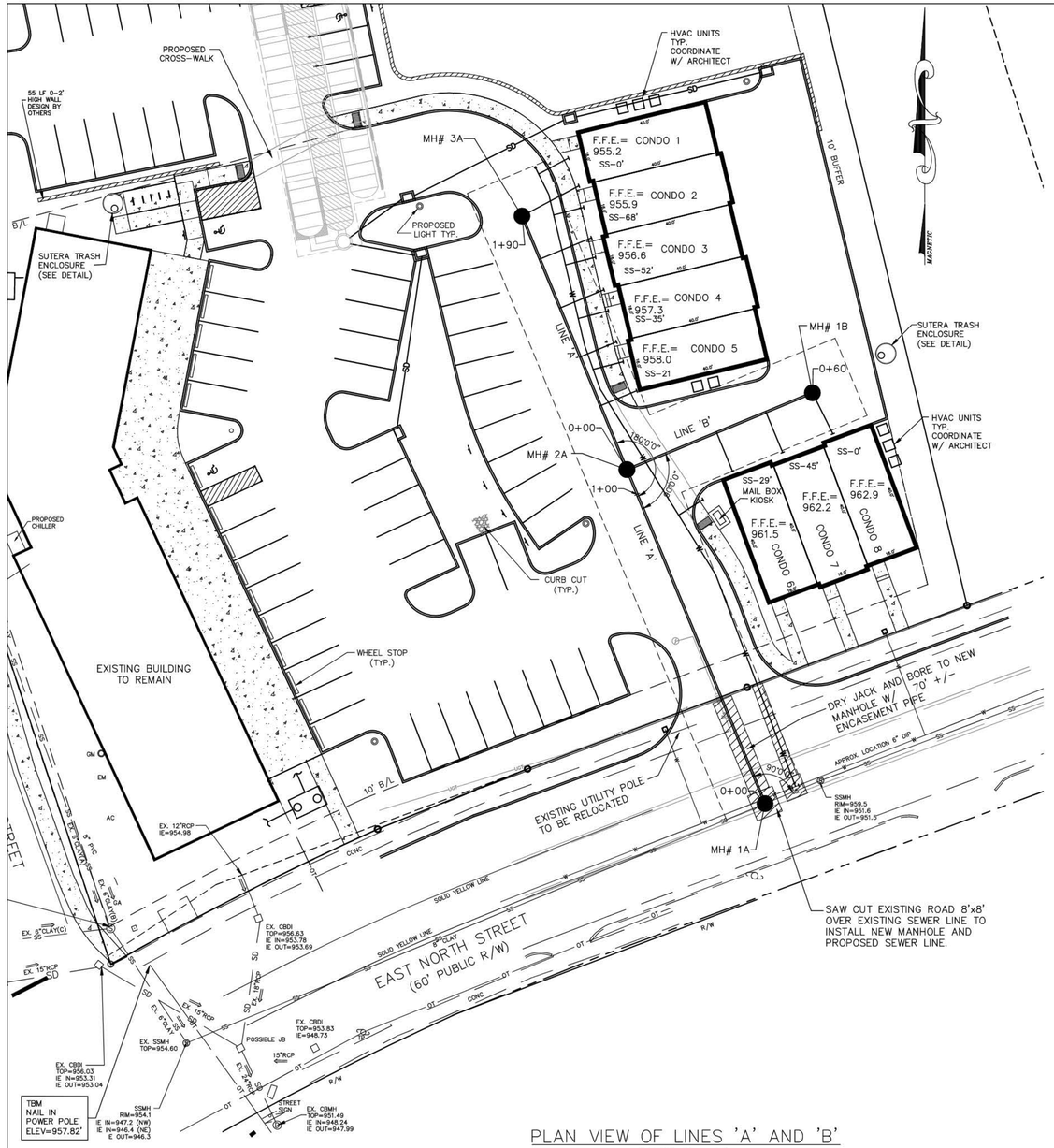
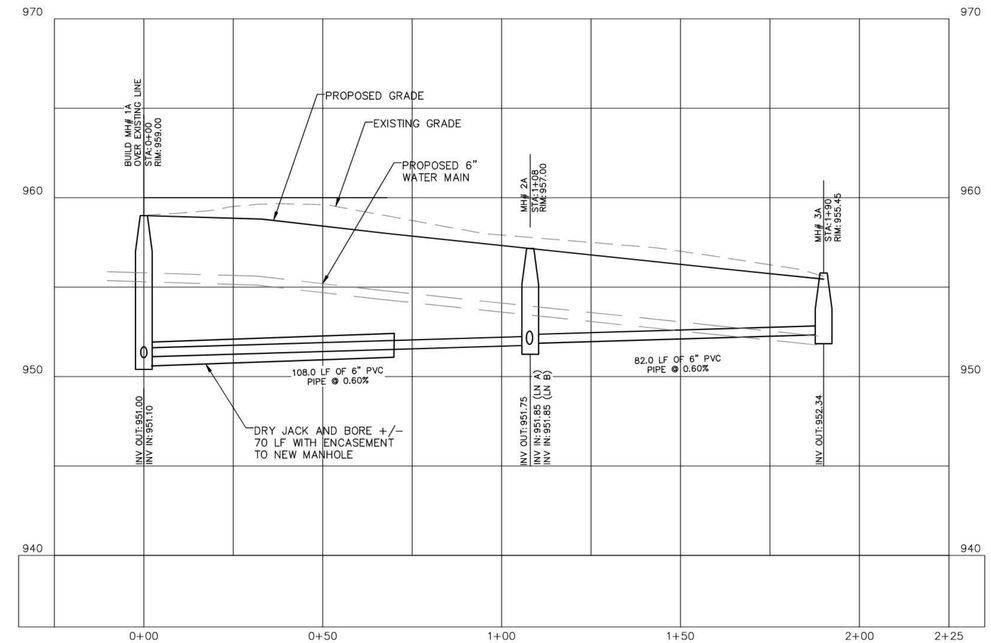


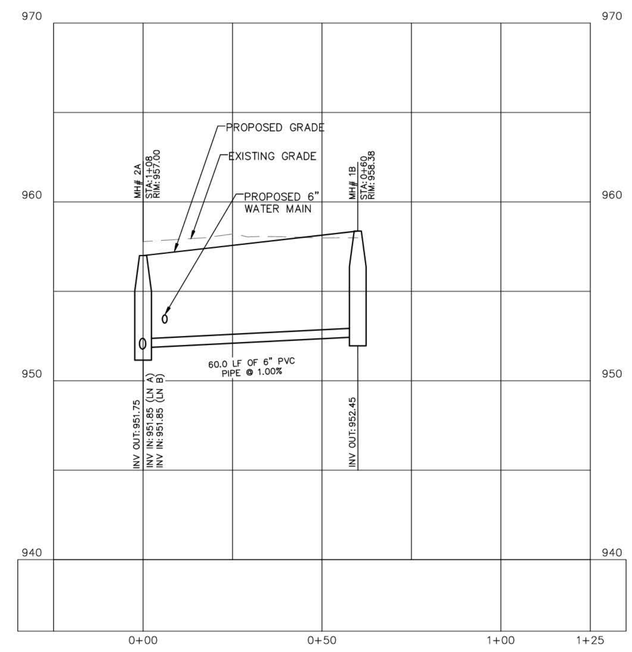
PLAN VIEW OF LINES 'A' AND 'B'

SCALE: 1" = 20'



PROFILE VIEW OF LINE 'A'

SCALE: HORZ. 1" = 20'
VERT. 1"= 10'



PROFILE VIEW OF LINE 'B'

SCALE: HORZ. 1" = 20'
VERT. 1"= 10'

LEGEND

—— SD ——	EXISTING STORM DRAIN
—— W ——	EXISTING WATER LINE
(S)—— SS ——(S)	EXISTING SANITARY SEWER LINE
—SD—	PROPOSED STORM DRAIN
—W—	PROPOSED WATER LINE
●——●	PROPOSED SANITARY SEWER LINE

NOTE:

1. SS-178' INDICATES A SANITARY SERVICE 178' FROM THE LOWER MANHOLE.
2. UTILITY CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS REQUIRED FOR BEST MANAGEMENT PRACTICES.
3. STORM DRAINAGE AND WATER SHOWN ON PLAN AND PROFILE ARE BASED ON DESIGN AND ARE NOT AS-BUILT LOCATIONS.

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20' ft.

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PALMETTO UTILITY LOCATION SERVICE

SOUTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 21945 12/4/19 MICHAEL L. CROSS

OVERBROOK VILLAGE

SANITARY SEWER PLAN & PROFILE – LINE 'A' AND 'B'

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
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HORIZ.: 1"= 20' | VERT.: 1"= 10' | DWG.#: 9 OF 17 | PROJECT NO. 19095
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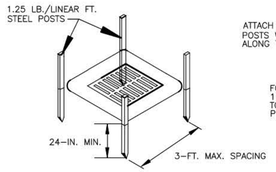
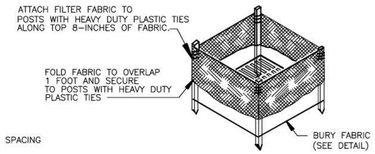
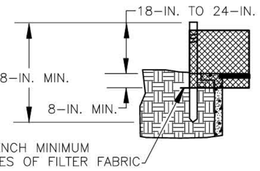


POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



BURY & TRENCH MINIMUM
OF 12-INCHES OF FILTER FABRIC

FILTER FABRIC BURIAL DETAIL

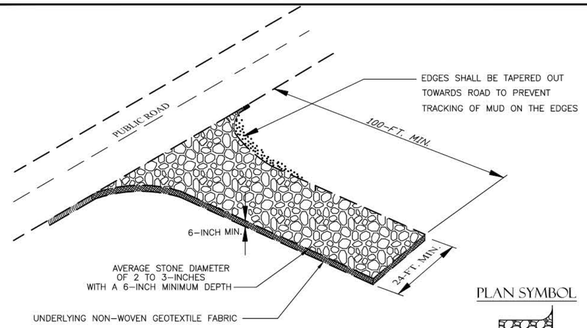
PLAN SYMBOL

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

TYPE A
FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

PLAN SYMBOL

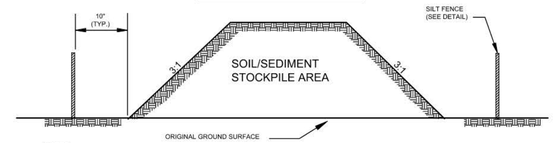
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

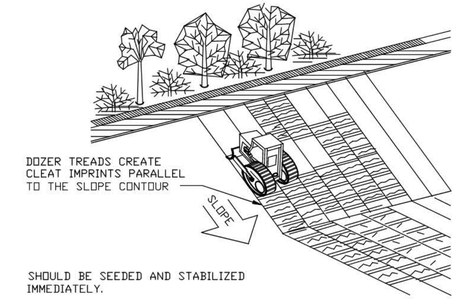
TEMPORARY STOCKPILE AREA



NOTES:

1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN-GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. **THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.**

TEMPORARY STOCKPILE DETAIL



TRACKING

TYPE A - FILTER FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

TYPE A - POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Install posts to a minimum of 24-inches. A minimum height of 1- to 2- inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 3-feet on center.

TYPE A - INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
7. Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
8. Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

TYPE A
FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE - GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non-woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
5. Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
6. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE - INSPECTION & MAINTENANCE

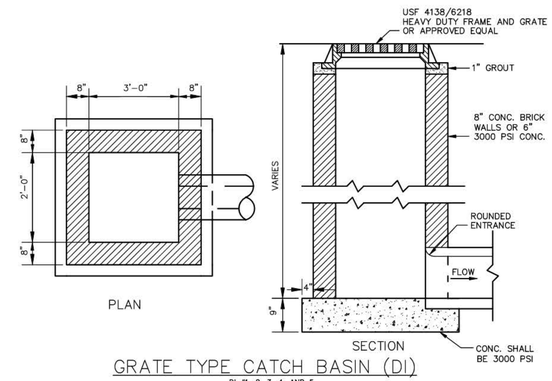
1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post-construction.

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

CONSTRUCTION ENTRANCE

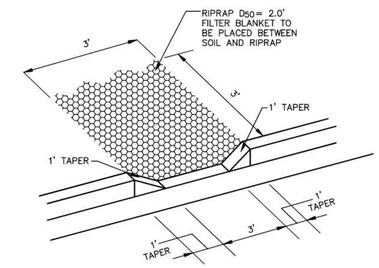
STANDARD DRAWING NO. SC-06 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

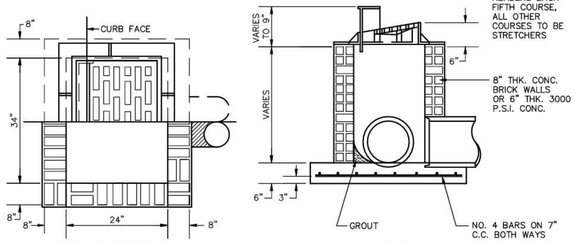


GRATE TYPE CATCH BASIN (DI)

DI #1, 2, 3, 4, AND 5



CURB CUT DETAIL

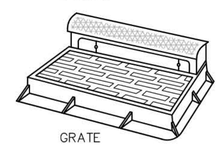


PLAN & SECTION
(CONTRACTOR RESPONSIBLE FOR ACTUAL BOX DIMENSIONS)

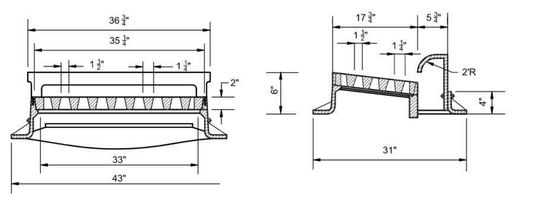
SECTION

NOTES:

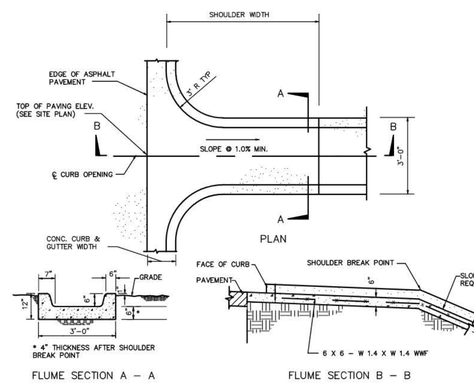
1. WHERE STRUCTURE DEPTH EXCEEDS 5'-0" FROM INVERT TO FINISHED GRADE, STEPS ARE TO BE PLACED IN STRUCTURE.
2. CONCRETE SHALL BE 3000 PSI
3. CASTING FOR THE FRAME AND GRATE TO BE NEENAH R-3067 TYPE C OR EQUAL.



GRATE

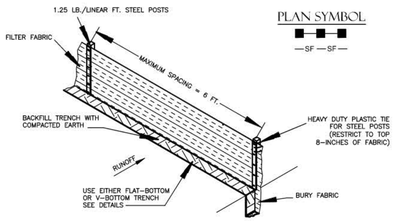


HOOD AND GRATE CATCH BASIN (CI)



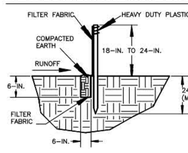
CURB TYPE FLUME

SILT FENCE INSTALLATION

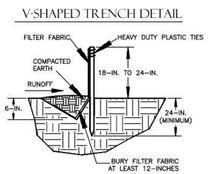


PLAN SYMBOL

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



SILT FENCE - GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
   - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

SILT FENCE - POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6-feet on center.

SILT FENCE - FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

SILT FENCE - INSPECTION & MAINTENANCE

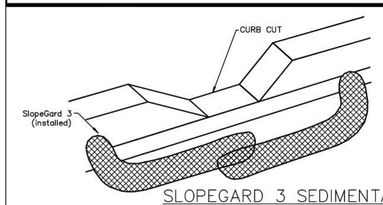
1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

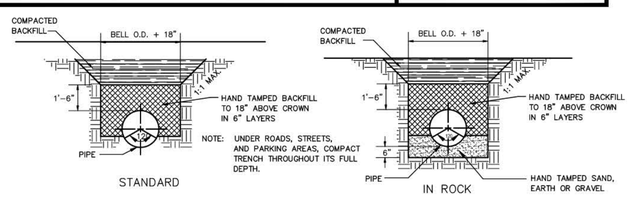


SLOPEGARD 3 SEDIMENTATION CONTROL DEVICE

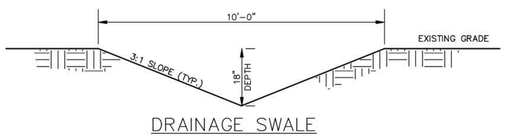
(USE AT CURB CUTS AND CURB INLETS (AFTER PAVEMENT IS INSTALLED, UNTIL DISTURBED AREAS ARE STABILIZED))

NOTES:

1. SlopeGard 3 rolls to be placed at inlets after paving of roads.
2. Place an adequate number of SlopeGard 3 rolls around an inlet to provide complete protection. Leave approximately 3'-6" between the SlopeGard 3 rolls and the inlet. Ends should overlap about 12 inches.
3. Inspect inlet protection device before and after rain events, and weekly throughout the rainy season. During extended rain events, inspect at least once every 24 hours.
4. Remove and properly dispose of accumulated silt and debris to allow for proper function of device. Silt shall be removed when it reaches one half the height of the device.



STORM SEWER PIPE BEDDING DETAIL



DRAINAGE SWALE

SOUTH CAROLINA
FANT, REICHERT & FOGLEMAN INC.
NO. C03069
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 21945
12/4/19
MICHAEL L. CROSS

OVERBROOK VILLAGE

EROSION AND STORM DRAINAGE DETAILS

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

ENGINEERING & SURVEYING

SCALE: NTS	DATE: 12-4-19	PROJECT NO.
DWG. #: 10 OF 17	DWN: EKN DES: MLO	19095

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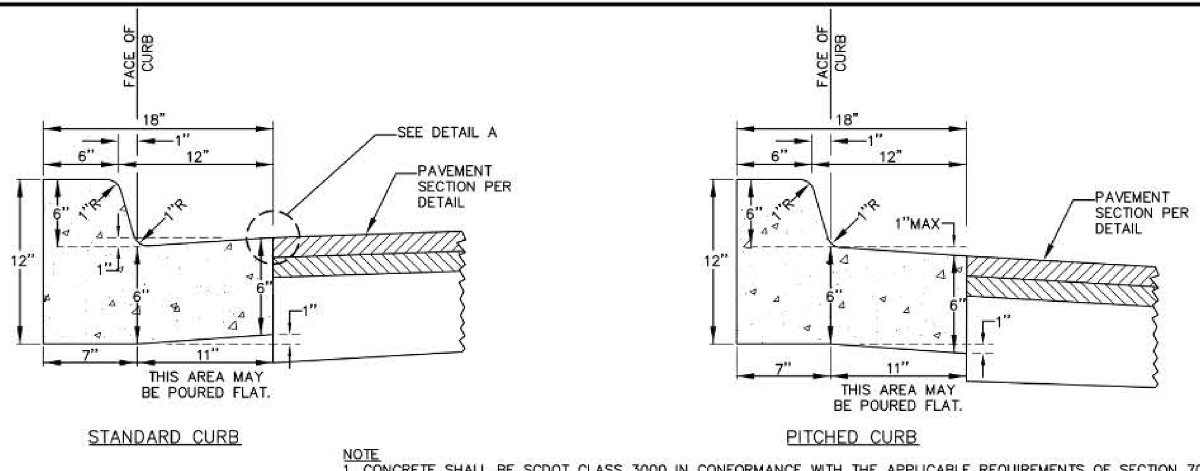
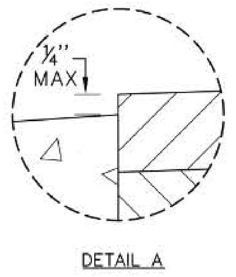




NOTE
1. CONCRETE SHALL BE SCDOT CLASS 3000 IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 701 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. CONCRETE SHALL BE "READY MIX" HAVING A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND BE AIR ENTRAINED.

2. CURB AND GUTTER TO HAVE CONSTRUCTION JOINTS AND EXPANSION JOINTS PER THE CITY OF GREENVILLE STANDARD DETAIL.

3. CURB AND GUTTER SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 720.4 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. SURFACE SHALL RECEIVE A MEDIUM BROOM FINISH.

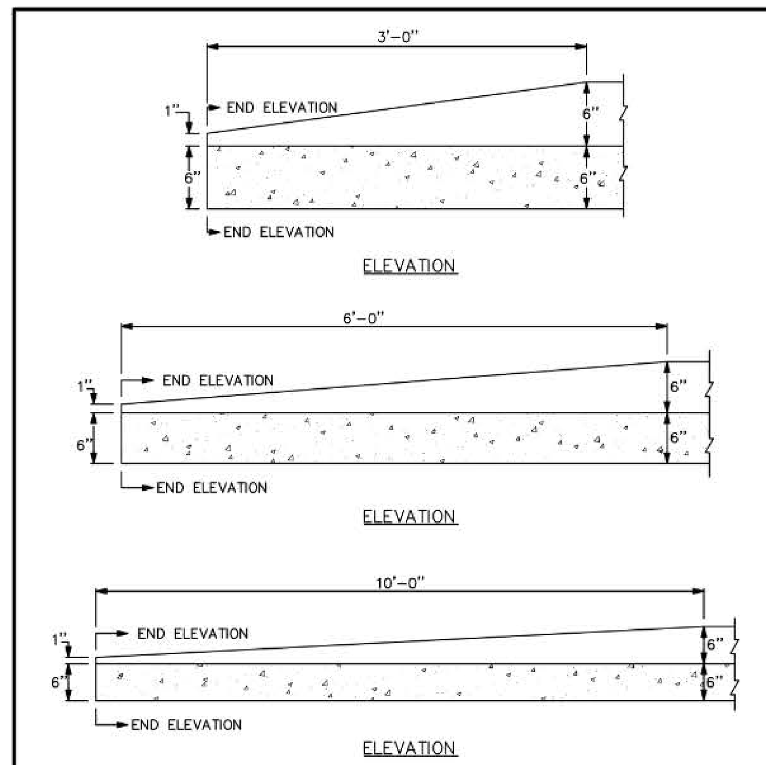
4. THE SUBGRADE SHALL BE THOROUGHLY COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY AND FINISHED TO A SMOOTH, FIRM SURFACE AND SHALL BE MOIST AT THE TIME THE CONCRETE IS PLACED.

4. GUTTER SLOPE ON HIGH SIDE OF SUPERELEVATION TO BE DEVELOPED AS SHOWN ON SCDOT STANDARD DRAWING 150-205-00. 1" MAX DROP ACROSS THE GUTTER AT MAX SUPERELEVATION.

5. THERE SHALL BE NO GREATER THAN A ¼" SEPARATION BETWEEN THE TOP OF THE FINAL TRAVEL SURFACE AND THE TOP OF GUTTER.

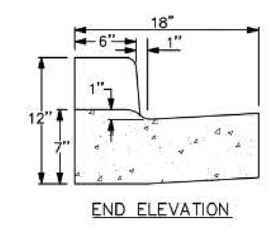
city of greenville ENGINEERING DIVISION	CONCRETE CURB & GUTTER	SCALE: NO SCALE
	DATE APPROVED: AUG. 2013 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 11:00

THIS DOCUMENT AND ANY ILLUSTRATIONS HEREON ARE PROVIDED AS STANDARD CONSTRUCTION DETAILS WITHIN THE CITY OF GREENVILLE, SC. DEVIATION FROM, OR MODIFICATION OF, THIS DOCUMENT REQUIRES APPROVAL OF THE CITY OF GREENVILLE. THE CITY OF GREENVILLE SHALL NOT BE HELD LIABLE FOR DAMAGES AS A RESULT OF MISUSE OR CHANGES TO THIS DOCUMENT. THE APPROVAL SIGNATURE AND LOGO SHALL BE REMOVED IF ANY PORTION OF THIS DOCUMENT IS MODIFIED.



NOTE
1. USE 3.0' CURB END TAPER AT END OF RADII ON INTERSECTING STREETS AND WHERE CURB IS 6 FEET OR GREATER FROM MAINLINE TRAVEL LANE.

2. USE 10.0' CURB END TAPER AT END OF CURB WHERE CURB IS LESS THAN 6 FEET FROM MAINLINE TRAVEL LANE.



city of greenville ENGINEERING DIVISION	CURB END TAPER	SCALE: NO SCALE
	DATE APPROVED: AUG. 2013 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 11:01

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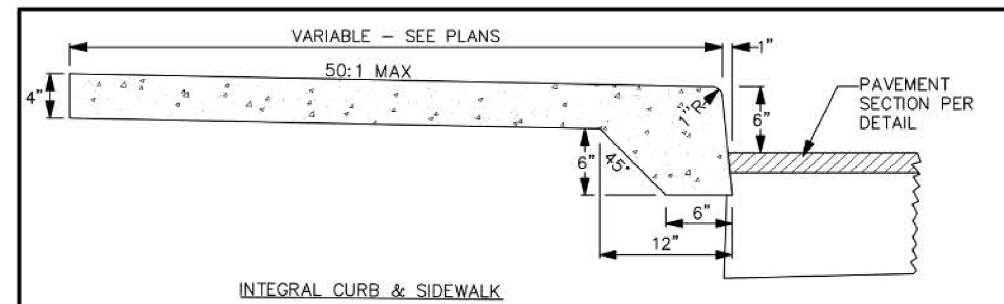

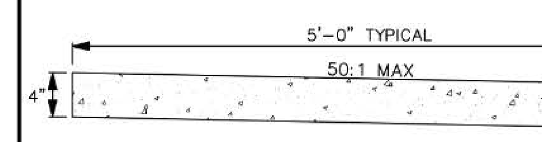

NOTE
1. CONCRETE SHALL BE SCDOT CLASS 3000 IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 701 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. CONCRETE SHALL BE "READY MIX" HAVING A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND BE AIR ENTRAINED.

2. SIDEWALK TO HAVE SCORING LINES (CONTRACTION JOINTS) AND EXPANSION JOINTS PER THE CITY OF GREENVILLE STANDARD DETAIL.

3. SIDEWALK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 720.4 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. SURFACE SHALL RECEIVE A MEDIUM BROOM FINISH.

4. THE SUBGRADE SHALL BE THOROUGHLY COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY AND FINISHED TO A SMOOTH, FIRM SURFACE AND SHALL BE MOIST AT THE TIME THE CONCRETE IS PLACED.

5. SIDEWALKS SHALL NOT CROSS DRIVEWAYS WITHOUT EXPRESS WRITTEN CONSENT OF THE CITY ENGINEER. TYPICALLY, THE CONTRACTOR SHALL INSTALL THE DRIVEWAY BEFORE THE SIDEWALK. IF INSTALLING THE DRIVEWAY AFTER THE SIDEWALK IS IN PLACE, THE CONTRACTOR SHALL SAW CUT AND REMOVE THE SIDEWALK FOR THE FULL WIDTH OF THE DRIVEWAY SECTION. SEE CITY OF GREENVILLE STANDARD DETAIL FOR DRIVEWAY CONSTRUCTION.

6. INTEGRAL CURB AND SIDEWALK IS NOT PERMISSIBLE FOR PUBLIC INFRASTRUCTURE.

city of greenville ENGINEERING DIVISION	CONCRETE SIDEWALK	SCALE: NO SCALE
	DATE APPROVED: AUG. 2013 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 11:02

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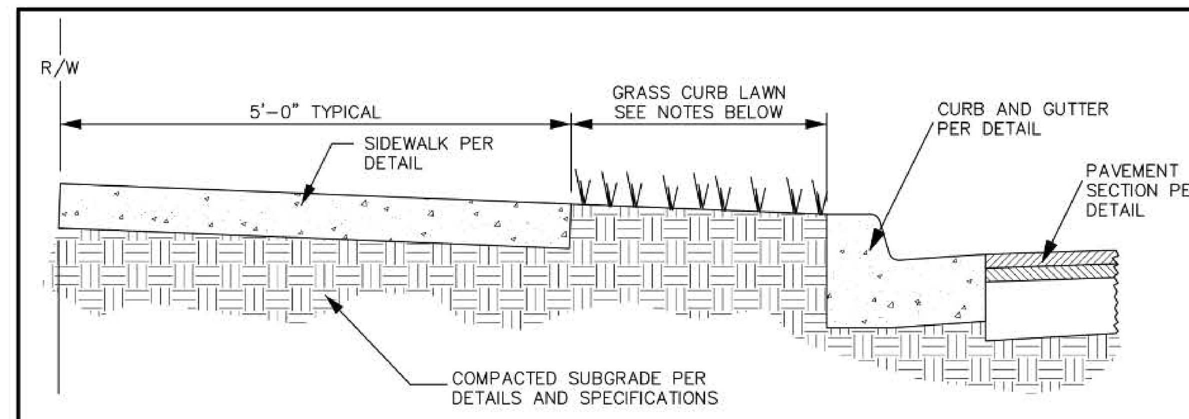

NOTE
1. ALL SIDEWALK, CURB & GUTTER, GRASS CURB LAWN AND PAVEMENT SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF GREENVILLE DETAILS AND SPECIFICATIONS.

2. ALL NEW SIDEWALK SHALL BE CONSTRUCTED WITH A CURB LAWN. ALL EXISTING SIDEWALK SHALL BE BROUGHT INTO CONFORMANCE WITH THIS DETAIL.

3. ON NEW STREETS, THE MINIMUM CURB LAWN WIDTH SHALL BE IN ACCORDANCE WITH THE APPLICABLE STREET SECTION.

4. ALONG THE FRONTAGE OF EXISTING STREETS, THE MINIMUM CURB LAWN WIDTH SHALL BE IN ACCORDANCE WITH THE PREVAILING LAWN WIDTH OR THE WIDTH ASSOCIATED WITH THE STREET CLASSIFICATION, AT THE DISCRETION OF THE CITY ENGINEER. IN RESTRICTED CONDITIONS, THE MINIMUM CURB LAWN WIDTH SHALL BE 2'-0".

city of greenville ENGINEERING DIVISION	SIDEWALK WITH CURB LAWN	SCALE: NO SCALE
	DATE APPROVED: AUG. 2013 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 11:04

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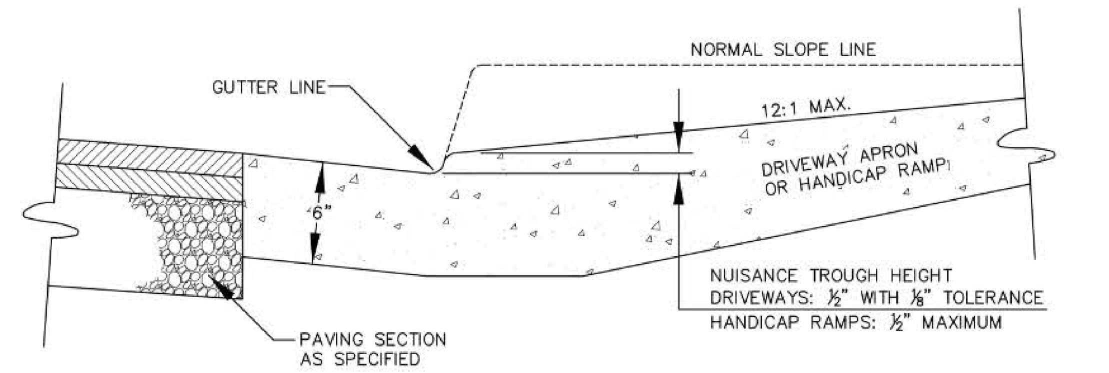


NOTE
1. INSTALLATION OF NUISANCE TROUGH ONLY WHEN DIRECTED BY CITY ENGINEER.

2. ON HANDICAP RAMPS, VERTICAL DISCONTINUITIES BETWEEN ¼" AND ½" MAXIMUM SHALL BE BEVELED AT 2:1 MINIMUM. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE LEVEL CHANGE.

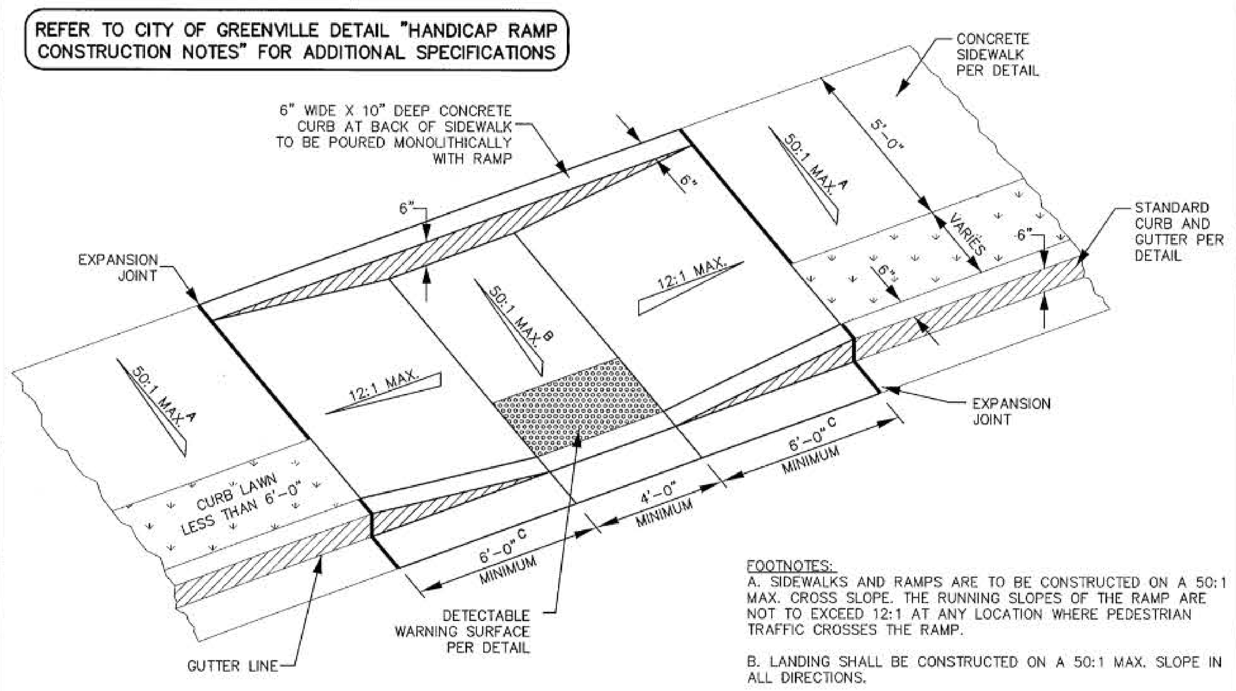
3. DRIVEWAY APRON AND HANDICAP RAMP PER CITY OF GREENVILLE DETAIL.

4. CONCRETE SHALL BE SCDOT CLASS 3000 IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 701 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. CONCRETE SHALL BE "READY MIX" HAVING A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND BE AIR ENTRAINED.

city of greenville ENGINEERING DIVISION	NUISANCE TROUGH	SCALE: NO SCALE
	DATE APPROVED: AUG. 2013 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 12:03

THIS DOCUMENT AND ANY ILLUSTRATIONS HEREON ARE PROVIDED AS STANDARD CONSTRUCTION DETAILS WITHIN THE CITY OF GREENVILLE, SC. DEVIATION FROM, OR MODIFICATION OF, THIS DOCUMENT REQUIRES APPROVAL OF THE CITY OF GREENVILLE. THE CITY OF GREENVILLE SHALL NOT BE HELD LIABLE FOR DAMAGES AS A RESULT OF MISUSE OR CHANGES TO THIS DOCUMENT. THE APPROVAL SIGNATURE AND LOGO SHALL BE REMOVED IF ANY PORTION OF THIS DOCUMENT IS MODIFIED.

REFER TO CITY OF GREENVILLE DETAIL "HANDICAP RAMP CONSTRUCTION NOTES" FOR ADDITIONAL SPECIFICATIONS



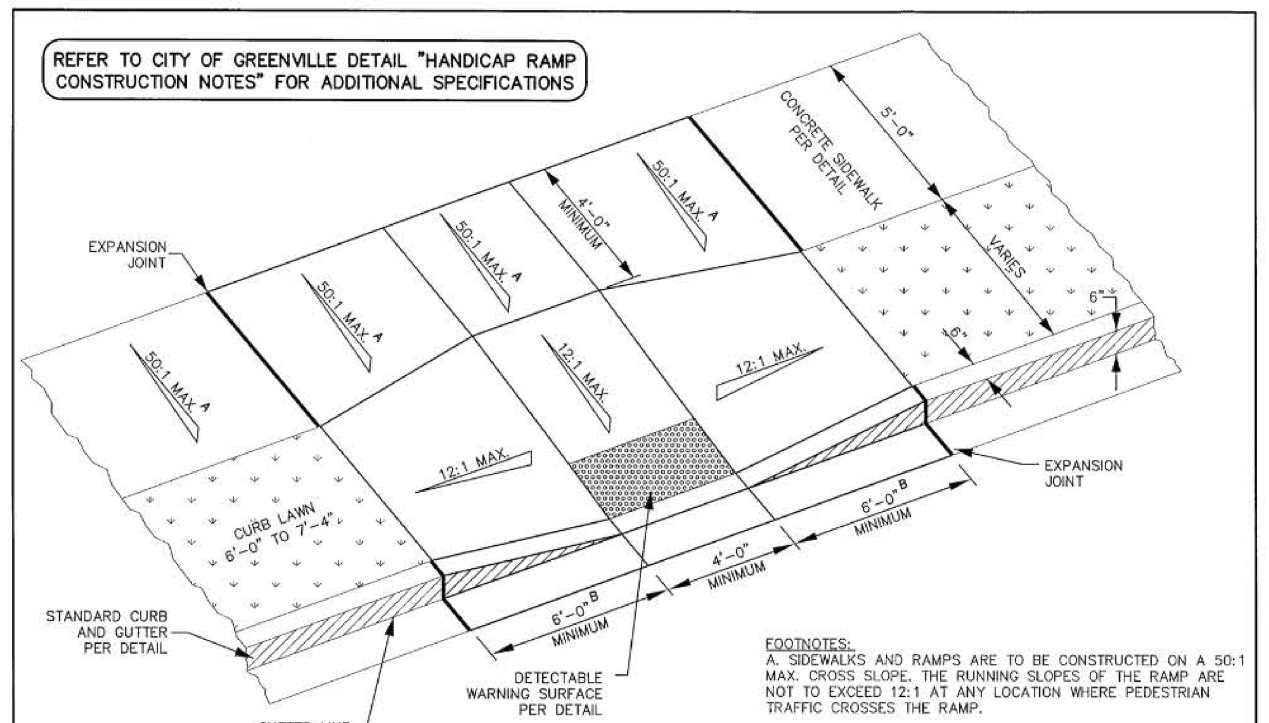
FOOTNOTES:
A. SIDEWALKS AND RAMPS ARE TO BE CONSTRUCTED ON A 50:1 MAX. CROSS SLOPE. THE RUNNING SLOPES OF THE RAMP ARE NOT TO EXCEED 12:1 AT ANY LOCATION WHERE PEDESTRIAN TRAFFIC CROSSES THE RAMP.

B. LANDING SHALL BE CONSTRUCTED ON A 50:1 MAX. SLOPE IN ALL DIRECTIONS.

C. 6' MINIMUM LENGTH ONLY APPLIES IF THE CURB LINE IS ON A 0% GRADE. LENGTH OF TAPER WILL VARY BY THE SLOPE OF THE ROADWAY. MAXIMUM SLOPE OF CURB TAPER SHALL BE 12:1.

city of greenville ENGINEERING DIVISION	HANDICAP RAMP I CURB LAWN LESS THAN 6'-0"	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:00

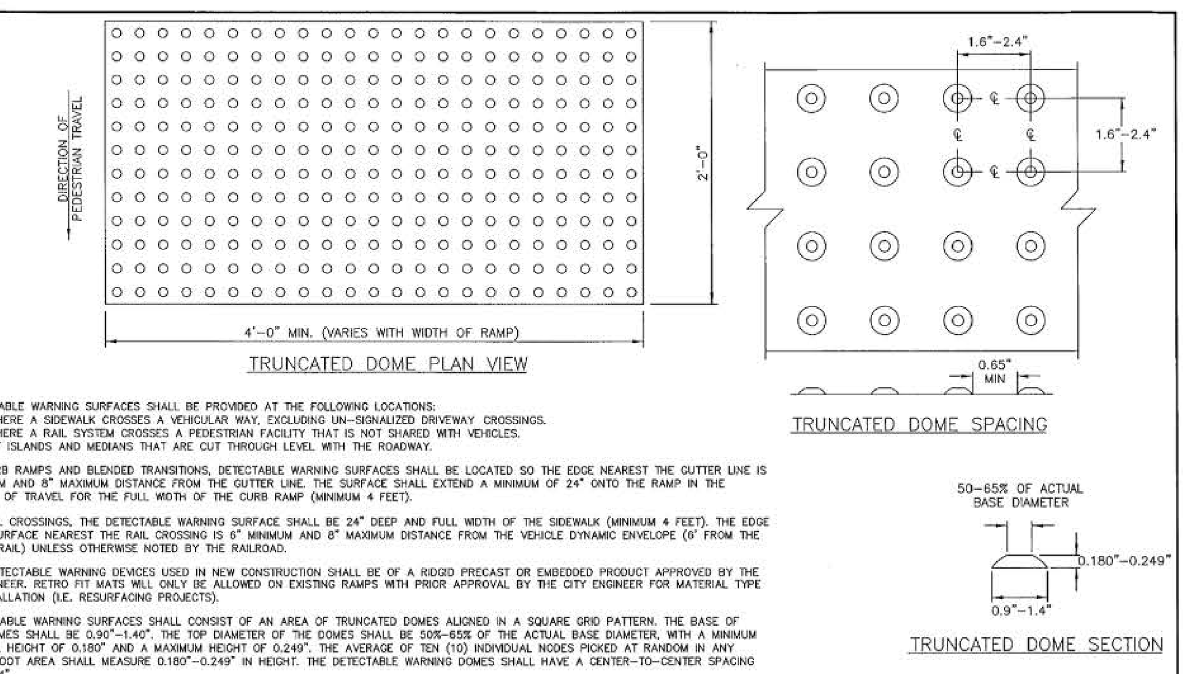
REFER TO CITY OF GREENVILLE DETAIL "HANDICAP RAMP CONSTRUCTION NOTES" FOR ADDITIONAL SPECIFICATIONS



FOOTNOTES:
A. SIDEWALKS AND RAMPS ARE TO BE CONSTRUCTED ON A 50:1 MAX. CROSS SLOPE. THE RUNNING SLOPES OF THE RAMP ARE NOT TO EXCEED 12:1 AT ANY LOCATION WHERE PEDESTRIAN TRAFFIC CROSSES THE RAMP.

B. 6' MINIMUM LENGTH ONLY APPLIES IF THE CURB LINE IS ON A 0% GRADE. LENGTH OF TAPER WILL VARY BY THE SLOPE OF THE ROADWAY. MAXIMUM SLOPE OF CURB TAPER SHALL BE 12:1.

city of greenville ENGINEERING DIVISION	HANDICAP RAMP II CURB LAWN 6'-0" TO 7'-4"	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:01



NOTE
1. DETECTABLE WARNING SURFACES SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
(A) WHERE A SIDEWALK CROSSES A VEHICULAR WAY, EXCLUDING UN-SIGNALIZED DRIVEWAY CROSSINGS.
(B) WHERE A RAIL SYSTEM CROSSES A PEDESTRIAN FACILITY THAT IS NOT SHARED WITH VEHICLES.
(C) AT ISLANDS AND MEDIANS THAT ARE CUT THROUGH LEVEL WITH THE ROADWAY.

2. AT CURB RAMPS AND BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THE EDGE NEAREST THE GUTTER LINE IS 6" MINIMUM AND 8" MAXIMUM DISTANCE FROM THE GUTTER LINE. THE SURFACE SHALL EXTEND A MINIMUM OF 24" ONTO THE RAMP IN THE DIRECTION OF TRAVEL FOR THE FULL WIDTH OF THE CURB RAMP (MINIMUM 4 FEET).

3. AT RAIL CROSSINGS, THE DETECTABLE WARNING SURFACE SHALL BE 24" DEEP AND FULL WIDTH OF THE SIDEWALK (MINIMUM 4 FEET). THE EDGE OF THE SURFACE NEAREST THE RAIL CROSSING IS 6" MINIMUM AND 8" MAXIMUM DISTANCE FROM THE VEHICLE DYNAMIC ENVELOPE (6' FROM THE NEAREST RAIL) UNLESS OTHERWISE NOTED BY THE RAILROAD.

4. ALL DETECTABLE WARNING DEVICES USED IN NEW CONSTRUCTION SHALL BE OF A RIDGID PRECAST OR EMBEDDED PRODUCT APPROVED BY THE CITY ENGINEER. RETRO FIT MATS WILL ONLY BE ALLOWED ON EXISTING RAMPS WITH PRIOR APPROVAL BY THE CITY ENGINEER FOR MATERIAL TYPE AND INSTALLATION (I.E. RESURFACING PROJECTS).

5. DETECTABLE WARNING SURFACES SHALL CONSIST OF AN AREA OF TRUNCATED DOMES ALIGNED IN A SQUARE GRID PATTERN. THE BASE OF THESE DOMES SHALL BE 0.90"-1.40". THE TOP DIAMETER OF THE DOMES SHALL BE 50%-65% OF THE ACTUAL BASE DIAMETER, WITH A MINIMUM INDIVIDUAL HEIGHT OF 0.180" AND A MAXIMUM HEIGHT OF 0.249". THE AVERAGE OF TEN (10) INDIVIDUAL NODES PICKED AT RANDOM IN ANY SQUARE FOOT AREA SHALL MEASURE 0.180"-0.249" IN HEIGHT. THE DETECTABLE WARNING DOMES SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6-2.4".

7. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

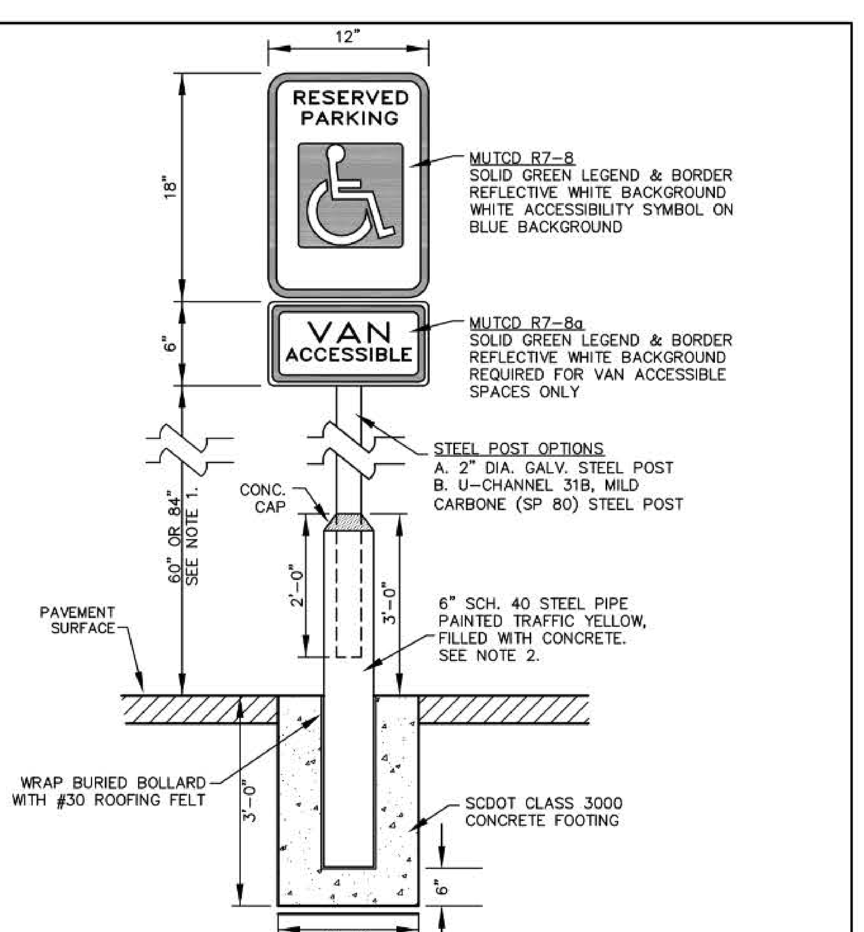
8. IF PAVERS ARE TO BE USED, PAVERS SHALL BE 6" THICK AND CAST FROM 5000 PSI CONCRETE.

9. IF PANELS ARE TO BE USED, PANELS SHALL BE RIGID WITH TURN DOWN EDGES EMBEDDED IN CONCRETE TO REDUCE TRIP HAZARD.

10. FOR ALL DETECTABLE WARNING SURFACES, THE CITY OF GREENVILLE'S DEFAULT COLOR IS BRICK RED UNLESS A SPECIFIC PROJECT REQUIRES ANOTHER COLOR. WHEN A COLOR OTHER THAN BRICK RED IS SELECTED FOR A PROJECT, IT MUST MEET THE APPROVAL OF ALL APPLICABLE DEPARTMENTS. THE COLOR SELECTED SHALL CONTRAST EITHER LIGHT-ON-DARK OR DARK-ON LIGHT. THE MANUFACTURER MUST CERTIFY TO THE CITY ENGINEER THAT THE COLOR SELECTED MEETS THE 70% CONTRAST SPECIFICATIONS OF THE ADAAG.

*ADAPTED FROM SCDOT STANDARD DRAWING 720-905-02

city of greenville ENGINEERING DIVISION	DETECTABLE WARNING SURFACE	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:05



NOTE
1. 12"x18" ACCESSIBILITY SIGN (R7-8) SHALL BE MOUNTED 7' FROM FINISH GRADE TO BOTTOM EDGE OF SIGN FACE. MOUNTING HEIGHT MAY BE REDUCED TO 5' IF PLACED IN A LANDSCAPE AREA IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.

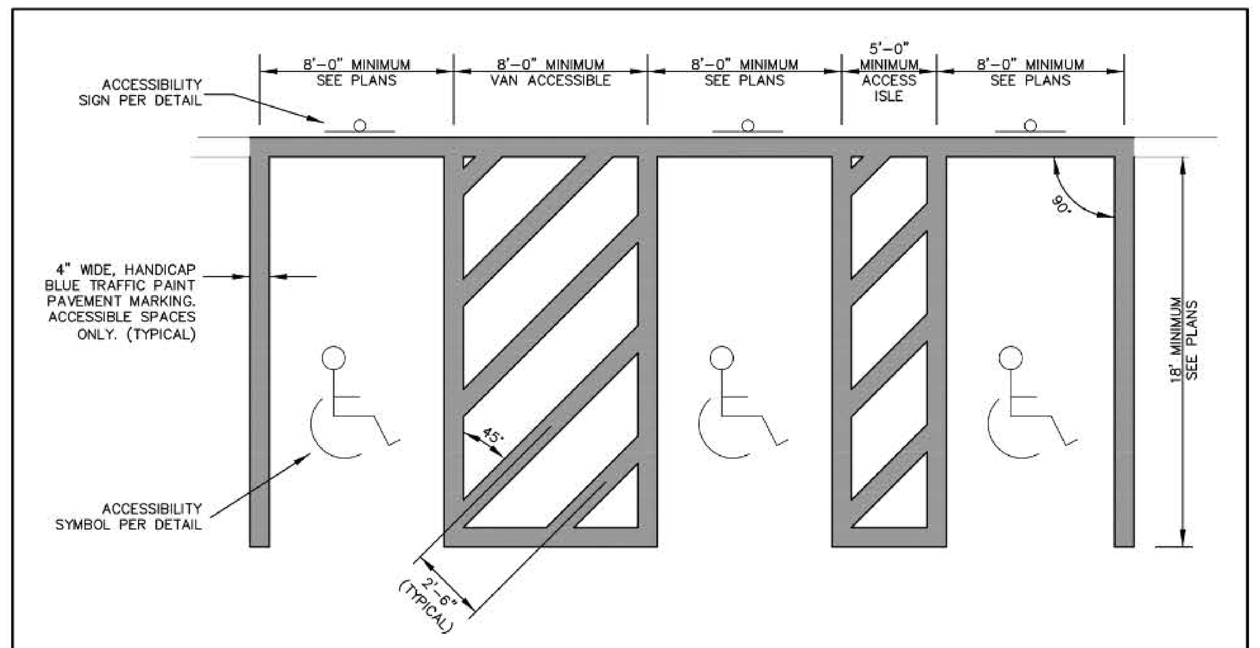
2. BOLLARD MAY BE OMITTED IF INSTALLED IN LANDSCAPE AREAS. WHEN INSTALLED IN LANDSCAPE AREAS, MOUNTING POST SHALL BE DRIVEN A MINIMUM OF 3' BELOW FINISH GRADE. ALTERNATE MOUNTING POSTS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.

3. SIGNAGE SHALL BE INSTALLED IN FRONT OF EACH ACCESSIBLE SPACE, CENTERED ON THE WIDTH OF THE SPACE.

4. REFER TO AMERICANS WITH DISABILITIES ACT AND ARCHITECTURAL BARRIERS ACT ACCESSIBILITY GUIDELINES (ADAAG), LATEST EDITION, FOR REQUIRED NUMBER OF ACCESSIBLE SPACES. PER ADAAG, ONE VAN ACCESSIBLE SPACE SHALL BE PROVIDED, MINIMUM, WITH ADDITIONAL VAN ACCESSIBLE SPACES PER ADAAG REQUIREMENTS.

5. ALL SIGNAGE SHALL BE ENGINEER GRADE .080 ALUMINUM REFLECTIVE SIGN MEETING THE REQUIREMENTS OF THE MUTCD AND ADAAG.

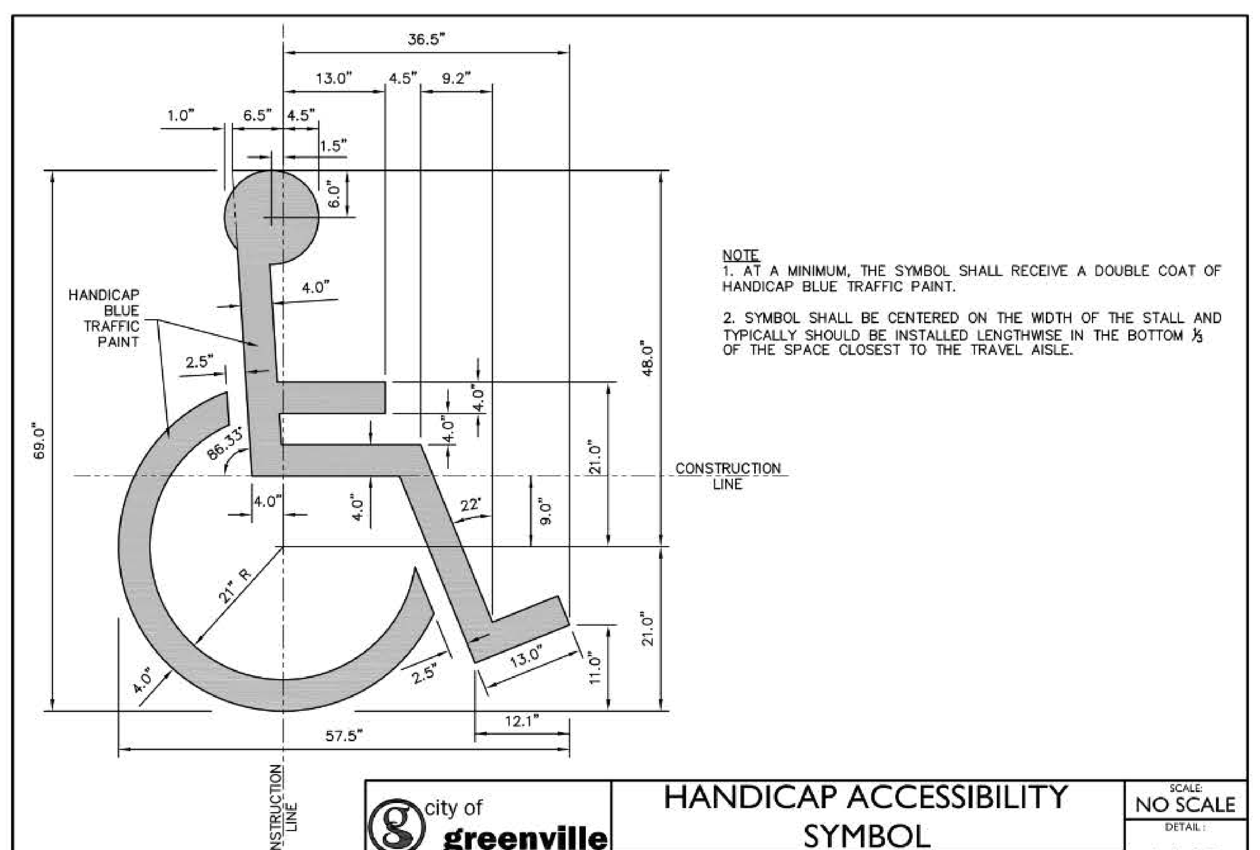
city of greenville ENGINEERING DIVISION	HANDICAP ACCESSIBILITY SIGN	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:08



NOTE
1. FINISH GRADE ACROSS HANDICAP ACCESSIBLE SPACES AND AISLES SHALL NOT EXCEED 2% (50:1) IN ANY DIRECTION.

2. 90° PARKING LAYOUT SHOWN. STRIPING ORIENTATION AND DIMENSIONS SIMILARLY SHALL APPLY TO ANGLED PARKING ALIGNMENT.

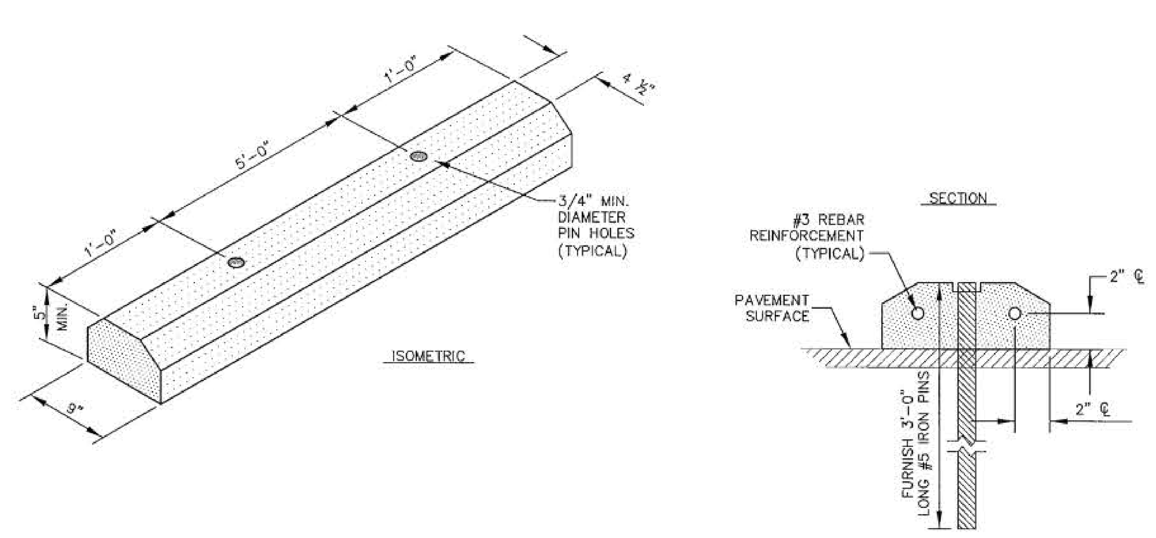
city of greenville ENGINEERING DIVISION	HANDICAP ACCESSIBILITY STRIPING	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:06



NOTE
1. AT A MINIMUM, THE SYMBOL SHALL RECEIVE A DOUBLE COAT OF HANDICAP BLUE TRAFFIC PAINT.

2. SYMBOL SHALL BE CENTERED ON THE WIDTH OF THE STALL AND TYPICALLY SHOULD BE INSTALLED LENGTHWISE IN THE BOTTOM ⅓ OF THE SPACE CLOSEST TO THE TRAVEL AISLE.

city of greenville ENGINEERING DIVISION	HANDICAP ACCESSIBILITY SYMBOL	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 14:07



NOTE
1. WHEEL STOPS SHALL BE STEEL REINFORCED PRECAST UNITS CONSISTING OF SCDOT CLASS 3000 CONCRETE, MINIMUM. ALTERNATE MATERIAL COMPOSITION MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.

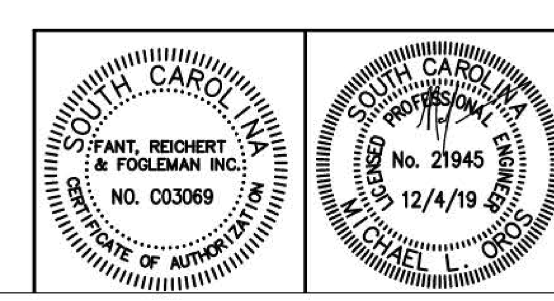
2. WHEEL STOPS SHALL BE INSTALLED PERPENDICULAR TO PARKING STALL AND SHALL BE PLACED A MINIMUM OF 24" FROM END OF PARKING STALL OR OBSTRUCTION.

3. ANCHORING PINS SHALL BE DRIVEN FLUSH TO THE TOP OF THE WHEEL STOP AND PIN HOLES SHALL BE GROUTED UPON INSTALLATION.

city of greenville ENGINEERING DIVISION	PRECAST WHEEL STOP	SCALE: NO SCALE
	DATE APPROVED: AUG. 2008 — OFFICE OF THE CITY ENGINEER: [signature]	DETAIL: 15:02

OVERBROOK VILLAGE

MISCELLANEOUS DETAILS



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FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: NTS	DATE: 12-4-19	PROJECT NO. 19095
DWG. #: 11 OF 17	DWN: EKN DES: MLO	

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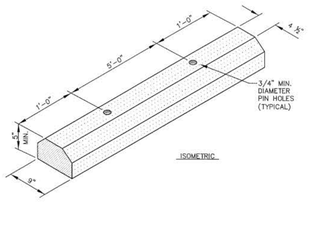

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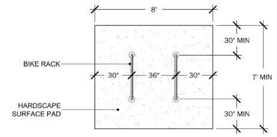
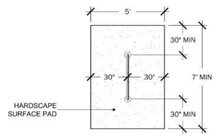
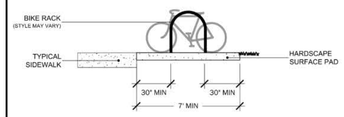
city of greenville ENGINEERING DIVISION	PRECAST WHEEL STOP		SCALE NO SCALE DETAIL 15:02
	DATE APPROVED: AUG. 2008	OFFICE OF THE CITY ENGINEER	



TYPICAL MULTIPLE BIKE RACK LAYOUT DETAIL
N.T.S.



TYPICAL SINGLE BIKE RACK LAYOUT DETAIL
N.T.S.

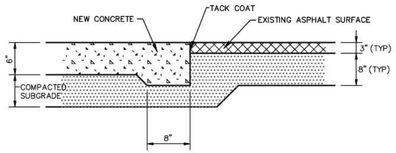


TYPICAL BIKE RACK ELEVATION
N.T.S.

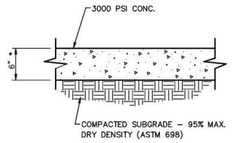
Notes:
1. Bicycle parking areas shall be located for the convenient access to site amenities and primary building entrances.
2. Bicycle parking areas shall be located on a hardscape surface, physically separated from automobile parking lots.
3. They shall be designed to provide adequate space for ingress and egress, and not impede pedestrian and vehicle circulation.
4. Bicycle parking areas shall be designed to provide adequate space for ingress and egress.
5. Bicycle racks shall be designed to support a bicycle frame in two places in a stable upright position.
6. Bicycle racks shall be securely anchored to the lot surface.

city of greenville

Bike Rack Layout Details



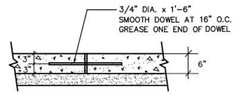
NEW CONCRETE AT ASPHALT



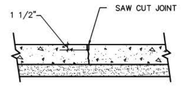
NOTE: PLACE CONTRACTION CONTROL JOINTS 15' O.C. MAXIMUM

* NOTE: CONCRETE TO BE 8" THICK OVER UNDERGROUND STORAGE TANKS

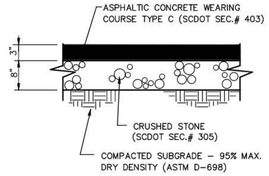
CONCRETE PAVEMENT



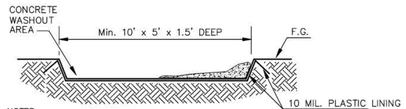
CONSTRUCTION JOINT DETAIL



CONTROL JOINT DETAIL



ASPHALT PAVEMENT



NOTES:
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. AREA IS TO BE INSPECTED WEEKLY.
3. HARDENED CONCRETE TO BE REMOVED AND DISPOSED OF WHEN WASH OUT AREA IS 75% FULL.

CONCRETE WASH OUT AREA DETAIL
CONTRACTOR TO FIELD LOCATE

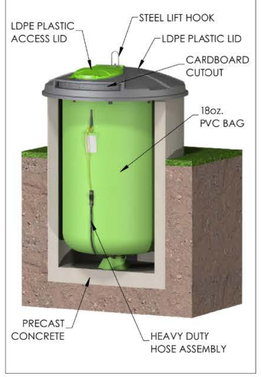
PRODUCT SPECIFICATIONS SHEET

SUTERA
in-ground waste containment

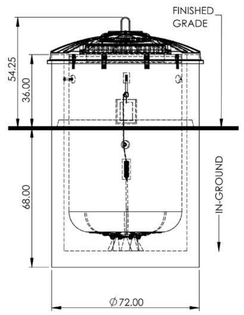
PRODUCT DESCRIPTION:

SP-6: SEMI IN-GROUND WASTE CONTAINMENT SYSTEM
UTILIZING STEEL & CONCRETE CONSTRUCTION, THIS UNIT WILL NOT FLOAT OUT OF THE GOUND AND CAN CONTAIN 5.82 cu.yds. (4445 liters) OF WASTE.

ISOMETRIC VIEW



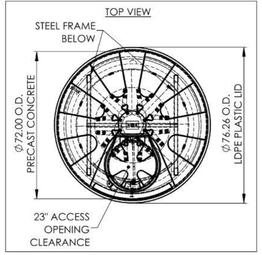
FRONT VIEW



SPECIFICATIONS:

MANUFACTURER: SUTERA USA, LLC
MODEL NO.: SP-6
SIGNAGE: "WASTE" or "RECYCLING"
PRECAST CONCRETE WRAP: OPTIONAL
CARDBOARD SLOT CUTOUT: OPTIONAL
LDPE PLASTIC ACCESS LID:
CONSTRUCTION: LDPE PLASTIC
FINISH: PREFIN. COLOR: GRANITE GREY
HINGED ACCESS TO CONTAINMENT WELL
LDPE PLASTIC LID:
CONSTRUCTION: LDPE PLASTIC
FINISH: PREFIN. COLOR: GRANITE GREY
STEEL FRAME:
CONSTRUCTION: MILD STEEL
FINISH: EXPOSED STEEL
WEIGHT: 150 lbs (68 kg)
LOCK TAB:
FITS SMALL PAD LOCK (SUPPLIED BY OTHERS)
LINER BAG:
18oz. POLESTER COATED PVC BAG, COLOR: GREEN c/w: 8 quick links, 1 security rope loop, 1 rope pouch, 1 rope, 1 clamcleat, 1 heavy duty hose assembly, 8 rope loops
BUYOANCY:
WILL NOT FLOAT OUT OF THE GROUND, SEE SEPARATE BUYOANCY CALCULATION SHEET, AVAILABLE UPON REQUEST.
CONTAINMENT CAPACITY:
5.82 cu.yds (4445 liters)
MAINTENANCE:
KEEP CLEAN BY SPRAYING DOWN WITH CLEAN WATER.
SERVICE REQUIREMENTS:
CONTENTS TO BE REMOVED BY VERTICAL LIFT

TOP VIEW



SUTERA USA, LLC
Tel. 1-866-524-9082
fax. 864-627-0804
UNITED STATES:
55 Commerce Center
Greenville, SC. 29615
CANADA:
700 Rupert Street
Waterloo, ON. N2V 2B5

SUTERA

OVERBROOK VILLAGE

MISCELLANEOUS DETAILS

SOUTH CAROLINA — FANT, REICHERT & FOGLEMAN INC. — NO. C03069 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 21945 — 12/4/19 — MICHAEL L. DRIGGS

NO.	DATE	REVISIONS	CKD. BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: NTS	DATE: 12-4-19	PROJECT NO. 19095
DWG. #: 12 OF 17	DWN: EKN DES: MLO	

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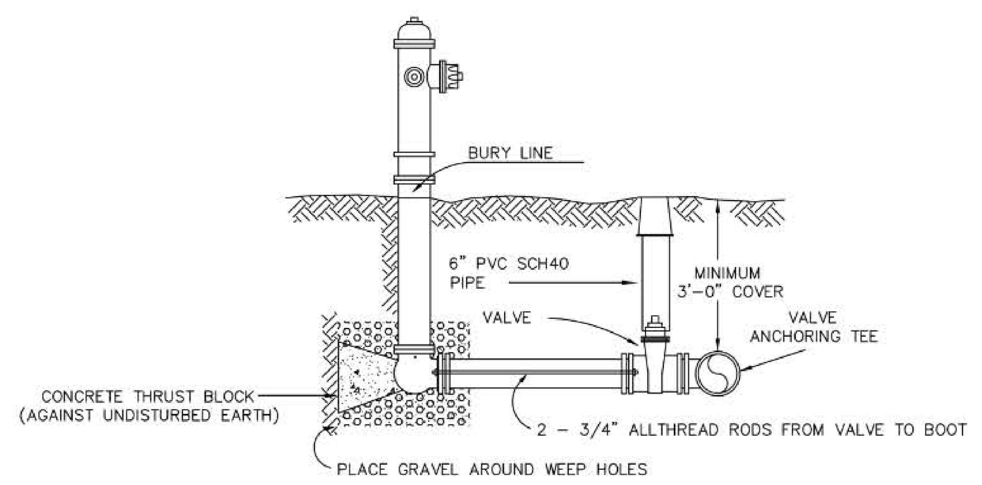

NOTES:
1) FIRE HYDRANT TO BE INSTALLED PLUMB.
2) FIRE HYDRANT TO BE 3–WAY WITH DEPTH OF BURY TO BE DETERMINED BY FIELD CONDITIONS.
3) HYDRANT LEAD TO BE PRESSURE CLASS 350 DUCTILE IRON.
4) WHEN FIRE HYDRANT RESTRAINT BY RODDING NECESSARY, TWO 3/4" ø ALLTHREAD RODS REQUIRED AS A MINIMUM.

GreenvilleWater

TYPICAL HYDRANT INSTALLATION

REVISED: 9/1/2015

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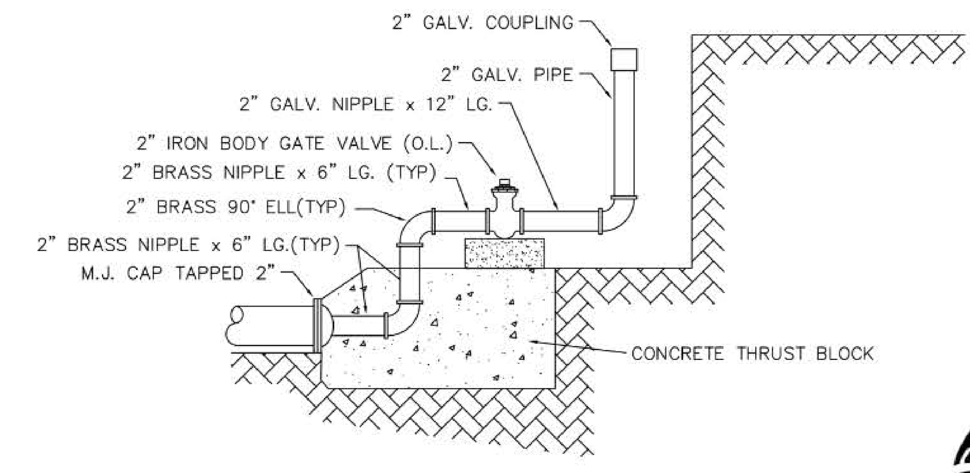

NOTE: PRIOR TO BACKFILL, 6" C.I. SOIL PIPE AND VALVE BOX WILL BE PLACED OVER VALVE AND VERTICAL 2" PIPING (BOX ONLY).

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2" BLOW–OFF

REVISED: 08/30/2013
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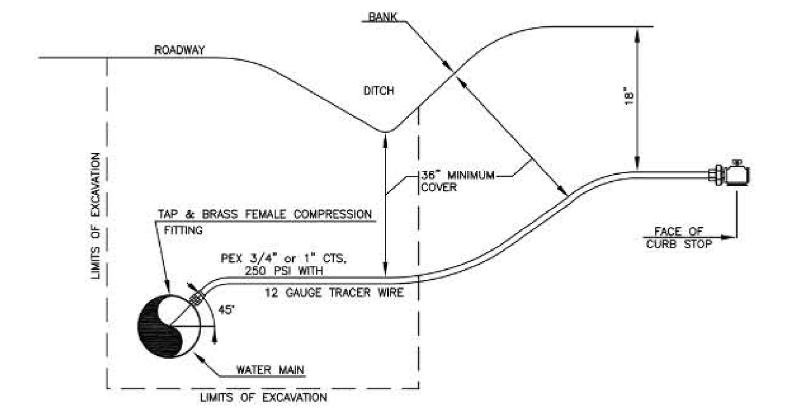

1. ALL WORK TO BE DONE BY CONTRACTOR UNLESS OTHERWISE SHOWN.
2. MINIMUM TRENCH WIDTH 12". COMPACTION REQUIRED.
3. SERVICE LINE MUST HAVE 36" COVER (MIN.) UNDER ROADSIDE DITCH. – METER NOT TO BE PLACED IN DRIVEWAY. SERVICE LINE TO BE INSTALLED NEAR THE CENTER OF THE LOT.
4. OUTLET PIPING CONSISTING OF THREADED BRASS FEMALE COUPLING, 4' OF OUTLET SERVICE PIPE, AND BALL VALVE TO BE ASSEMBLED AND READY FOR INSTALLATION PRIOR TO GW ARRIVAL TO SITE FOR METER SETTER INSTALLATION.
5. CORPORATION STOPS – FORD F1000–_–G OR MUELLER H15008–N.
6. CURB STOPS – FORD 241–___–G–NL OR MUELLER H15175–N.
7. USE FORD OR MUELLER BRASS COMPRESSION FITTINGS FOR PEX.
8. CONTRACTOR TO BLOW OFF SERVICE LINE AND CLOSE CURB STOP.
9. CALL GW ENGINEERING (241–6100) TO REPORT WHEN READY FOR INSPECTION OR FOR ASSISTANCE IF UNUSUAL CONDITIONS EXIST.

GreenvilleWater

TYPICAL TAP TO CURB INSTALLATION

NEW SUBDIVISIONS
DEVELOPER INSTALLED TAP TO CURB

DATE: MARCH 23, 2017

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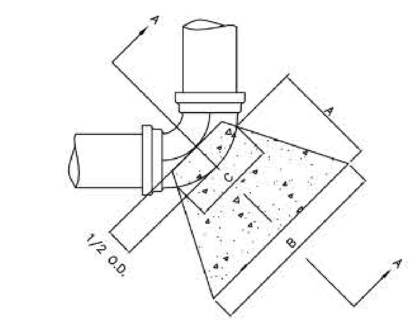
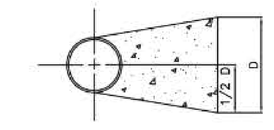
MINIMUM DIMENSIONS FOR CONCRETE BLOCKING

BEND	SIZE	A	B	C	D
11 1/4°	6"	1'-0"	2'-0"	4"	1'-0"
	8"	1'-0"	2'-0"	5"	1'-0"
	10"	1'-0"	2'-0"	6"	1'-0"
	12"	1'-0"	2'-0"	7"	1'-0"
	14"	2'-0"	2'-0"	11"	1'-6"
	16"	1'-0"	2'-0"	1'-0"	2'-0"
	20"	2'-0"	3'-0"	1'-3"	2'-0"
	24"	2'-0"	3'-0"	1'-6"	3'-0"
22 1/2°	6"	1'-0"	2'-0"	6"	1'-0"
	8"	1'-0"	2'-0"	7"	1'-0"
	10"	1'-0"	2'-0"	8"	1'-6"
	12"	1'-0"	2'-0"	10"	2'-0"
	14"	2'-0"	3'-0"	11"	2'-0"
	16"	2'-0"	4'-0"	1'-0"	2'-0"
	20"	2'-0"	4'-0"	1'-3"	3'-0"
	24"	3'-0"	4'-6"	1'-6"	4'-0"
45°	6"	1'-0"	2'-0"	6"	1'-0"
	8"	1'-0"	2'-0"	7"	2'-0"
	10"	2'-0"	3'-0"	9"	2'-0"
	12"	2'-0"	3'-0"	11"	3'-0"
	14"	2'-0"	4'-0"	11"	3'-0"
	16"	3'-0"	5'-0"	1'-0"	3'-0"
	20"	4'-0"	6'-0"	1'-3"	4'-0"
	24"	4'-0"	7'-0"	1'-6"	5'-0"
90°	6"	1'-0"	2'-0"	1'-0"	2'-0"
	8"	2'-0"	3'-0"	1'-2"	2'-6"
	10"	2'-6"	3'-9"	1'-6"	3'-0"
	12"	2'-0"	4'-0"	2'-0"	4'-0"
	14"	3'-0"	5'-0"	2'-0"	4'-6"
	16"	4'-0"	6'-0"	2'-2"	4'-9"
	20"	4'-0"	7'-0"	2'-8"	6'-4"
	24"	5'-0"	8'-0"	3'-4"	8'-0"
TEES & PLUGS	6"	1'-0"	2'-0"	10"	1'-6"
	8"	1'-9"	2'-6"	1'-1"	2'-0"
	10"	2'-0"	4'-0"	1'-3"	2'-0"
	12"	2'-6"	3'-9"	1'-7"	3'-0"
	14"	3'-0"	5'-0"	2'-0"	3'-0"
	16"	3'-0"	5'-0"	2'-2"	4'-0"
	20"	4'-0"	6'-0"	2'-8"	5'-0"
	24"	6'-0"	9'-0"	3'-4"	5'-0"





SECTION A–A

NOTE

SOIL CONDITIONS SHALL BE VERIFIED BY G. W. FIELD ENGINEER PRIOR TO DESIGN.

DESIGN DATA:
- DIMENSIONS OF THRUST BLOCK IN FEET BASED ON 2000 POUNDS PER SQUARE FOOT SOIL BEARING PRESSURE AND 200 POUNDS PER SQUARE INCH TEST PRESSURE
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. HIGH EARLY CONCRETE SHALL BE USED.

GreenvilleWater

TYPICAL HORIZONTAL THRUST BLOCK

REVISED: 08/02/2013
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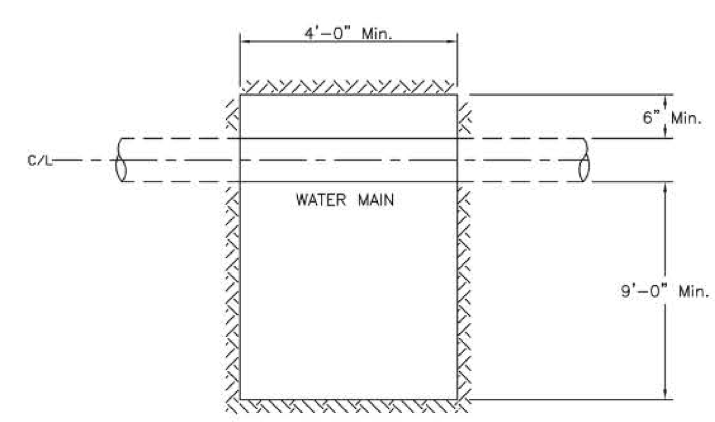
PLAN VIEW



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EXCAVATION REQUIRED FOR LARGE TAPS

(1 1/2" TAPS AND LARGER)

DATE DRAWN: 8/23/2016

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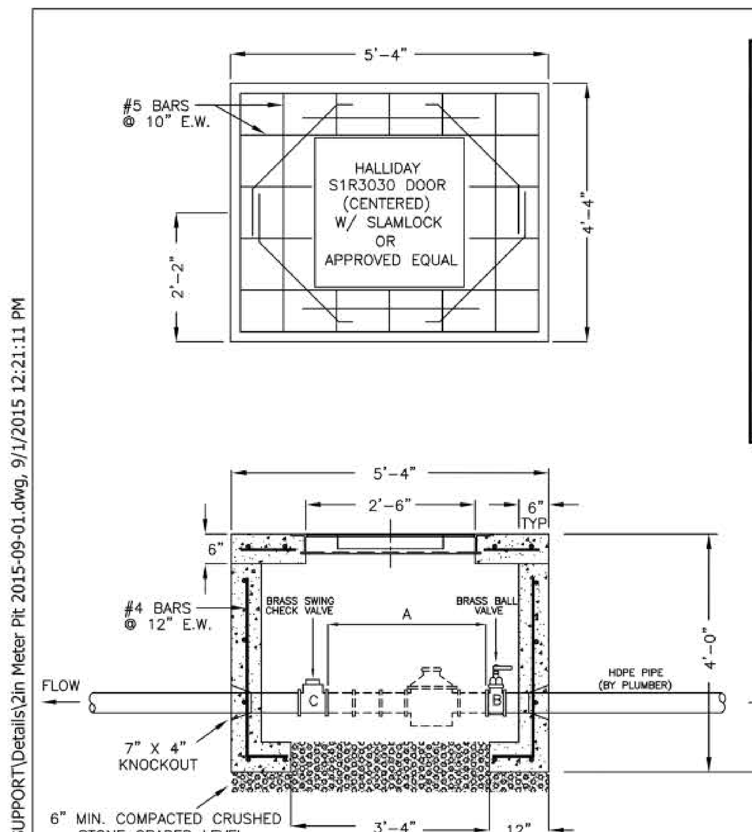

METER INSTALLATION PROCEDURE

1. A CONTRACT FOR WATER SERVICE MUST BE SIGNED AND ALL APPLICABLE FEES PAID AT THE ENGINEERING OFFICE.
2. THE PLUMBING CONTRACTOR OR APPLICANT IS RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS FOR EXCAVATION.
3. THE METER PIT IS TO BE INSTALLED AND INSPECTED BEFORE THE EXCAVATION IS MADE FOR THE TAP.
4. THE TAP AND METER INSTALLATION IS TO BE SCHEDULED WITH GREENVILLE WATER FOR COORDINATING THIS WORK. FOR OTHER INFORMATION, CALL G.W., TELEPHONE No. 241–6100.
5. PRECAST METER PIT BY APPROVED MANUFACTURERS (CURRENTLY: MST CONCRETE OR RINKER MATERIALS).

	METER SIZE	1–1/2"	2"
A	SPACE FOR METER	2'–4"	2'–8"
B	BRASS BALL VALVE, F.I.P. x F.I.P.	MUELLER B–20 200 FORD B11–666W	MUELLER B–20 200 FORD B11–777W
C	BRASS SWING CHECK VALVE (1–1/2" OR 2") F.I.P. x F.I.P., 200 P.S.I. W.O.G.		

GreenvilleWater

1–1/2" & 2" WATER METER PIT

REVISED: 9/1/2015

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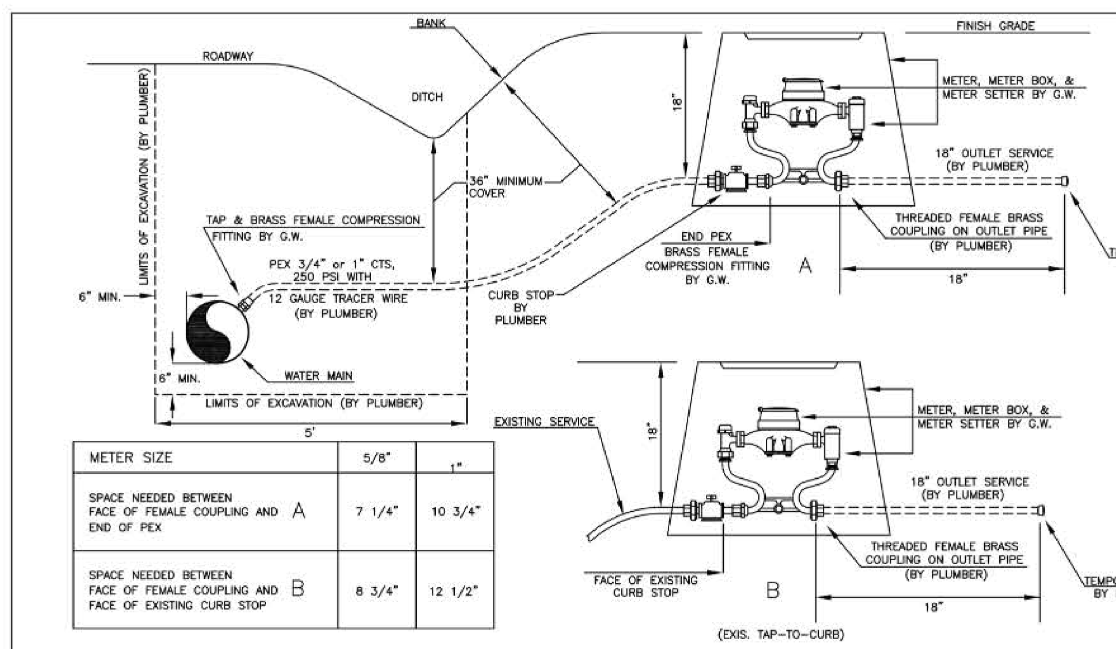

METER SIZE	5/8"	1"
SPACE NEEDED BETWEEN FACE OF FEMALE COUPLING AND END OF PEX (A)	7 1/4"	10 3/4"
SPACE NEEDED BETWEEN FACE OF FEMALE COUPLING AND FACE OF EXISTING CURB STOP (B)	8 3/4"	12 1/2"

1. ALL EXCAVATION TO BE DONE BY PLUMBER.
2. APPROXIMATE SIZE OF HOLE WHERE TAP IS MADE IS 5' X 5' (6" BEHIND AND UNDER MAIN). HOLE TO BE WIDER AND SHORED WHEN MAIN IS DEEPER THAN 5'. – HOLE FOR 5/8" METER BOX TO BE 3' X 3' X 21" DEEP, 1" METER BOX 30" WIDE X 42" LONG X 18" DEEP.
3. SERVICE LINE MUST HAVE 36" COVER (MIN.) UNDER ROADSIDE DITCH. – METER NOT TO BE PLACED IN DRIVEWAY.
4. OSHA APPROVED LADDER TO BE PROVIDED BY CONTRACTOR IN EXCAVATION DEEPER THAN 5'.
5. PLUMBER SHOULD CALL G.W. ENGINEERING (241–6100) TO REPORT WHEN READY FOR METER TO BE SET OR FOR ASSISTANCE IF UNUSUAL CONDITIONS EXIST.
6. OUTLET PIPING CONSISTING OF THREADED BRASS FEMALE COUPLING, 18" OF OUTLET SERVICE PIPE, AND CAP TO BE ASSEMBLED BY PLUMBER AND READY FOR INSTALLATION PRIOR TO G.W. ARRIVAL TO SITE.
7. USE FORD OR MUELLER BRASS COMPRESSION FITTINGS FOR PEX.
8. CURB STOPS – FORD Z21–XXX–NL, Z41–XXX–G–NL OR MUELLER H15172N.

GreenvilleWater

TYPICAL METER INSTALLATION

TAPS BY GREENVILLE WATER

DATE: JUNE, 2018

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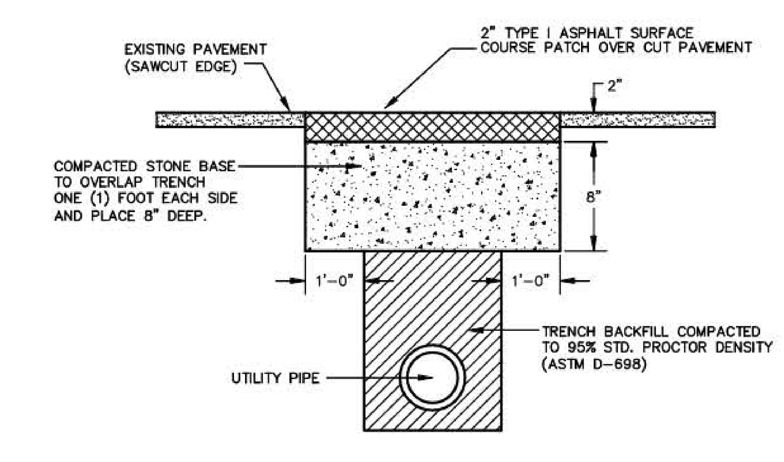
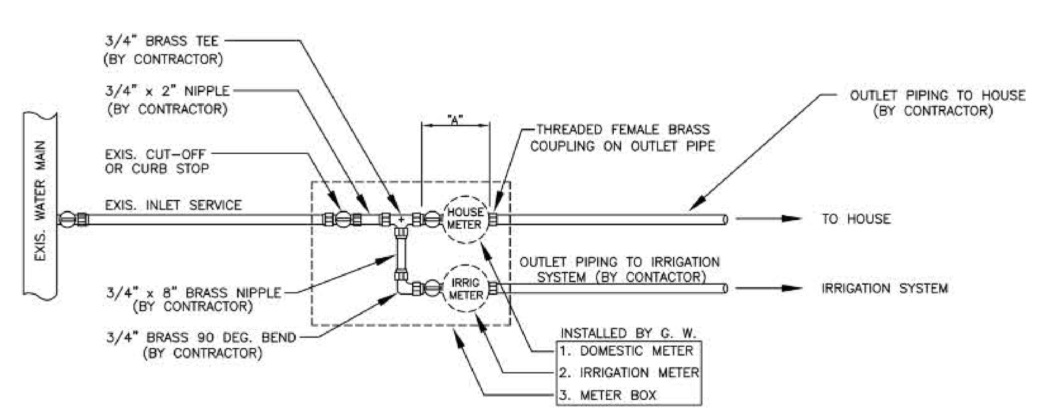


TYPICAL PAVEMENT REPLACEMENT



USE FORD OR MUELLER BRASS CTS COMPRESSION FITTINGS FOR PEX

METER SIZE	5/8"
SPACE NEEDED BETWEEN FACE OF FEMALE COUPLING AND "A" END OF BRASS FITTINGS	9"

GENERAL NOTES:
1. CONTRACTOR TO REMOVE EXISTING METER BOX FOR G.W. TO RECLAIM AND EXCAVATE 30" WIDE X 42" LONG X 18" DEEP FOR INSTALLATION OF TANDEM METER BOX.
2. FOR EXISTING INLET SERVICES WITH NO CUT–OFF OR CURB STOP, IT IS THE CONTRACTOR'S RESPONSIBILITY TO EITHER CRIMP OR FREEZE THE EXISTING INLET SERVICE & CUT IN BRASS CURB STOP AND BRASS TEE. CONTRACTOR TO LEAVE OPEN FOR INSPECTION WITH BACKFLILL TO OCCUR AFTER INSTALLATION.
3. ALL FITTINGS ARE TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR (PRIOR TO G.W. ARRIVAL) WITH THE EXCEPTION OF METER(S) & METER BOX.
4. NEW INLET PIPING & FITTINGS MUST BE EXPOSED FOR INSPECTION WHEN METERS ARE SET.
5. THE CONTRACTOR MAY PROVIDE & INSTALL METER SETTERS MEETING G.W. SPECIFICATIONS. (CONTACT G.W. ENGINEERING DEPT. FOR APPROVED LIST).
6. FOR IRRIGATION METER INSTALLATIONS WHICH VARY FROM THAT SHOWN, CONTACT G.W. PRIOR TO EXCAVATING.

GreenvilleWater

TYPICAL RESIDENTIAL TANDEM 5/8" DOMESTIC AND IRRIGATION METER INSTALLATION BY CONTRACTOR

REVISED DATE: JUNE, 2018
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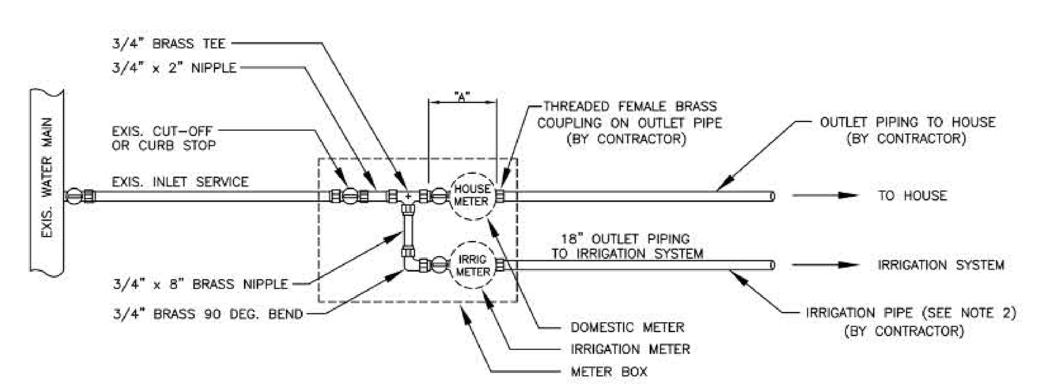

USE FORD OR MUELLER BRASS CTS COMPRESSION FITTINGS FOR PEX

METER SIZE	5/8"
SPACE NEEDED BETWEEN FACE OF FEMALE COUPLING AND "A" END OF BRASS FITTINGS	9"

GENERAL NOTES:
1. FOR IRRIGATION METER INSTALLATIONS WHICH VARY FROM THAT SHOWN, CONTACT G.W. PRIOR TO EXCAVATING.
2. IRRIGATION SYSTEM PIPING TO BE STUBBED TO WITHIN 18" OF PROPOSED METER BOX LOCATION (BY CONTRACTOR) FOR G.W. TO CONNECT TO.
3. IF EXISTING METER IS IN SIDEWALK, DRIVEWAY OR TREE, IT MUST BE RELOCATED INTO UNENCUMBERED AREA BY PROPERTY OWNER, PRIOR TO IRRIGATION METER INSTALLATION BY G.W.

GreenvilleWater

TYPICAL RESIDENTIAL TANDEM 5/8" DOMESTIC AND IRRIGATION METER INSTALLATION BY GW

REVISED DATE: JUNE, 2018
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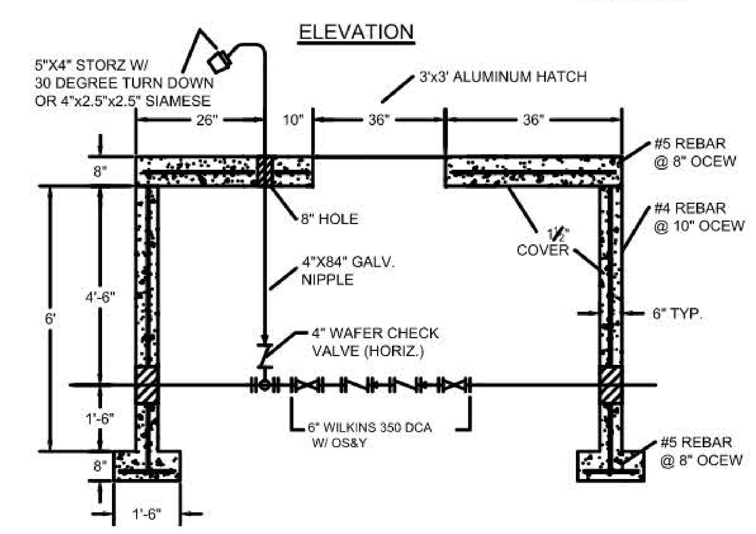
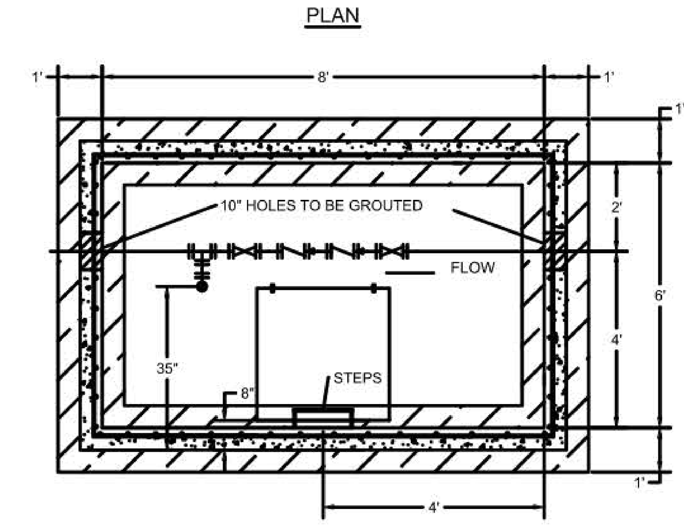
ADDITIONAL NOTES:

1. FIRE MARSHALL TO DETERMINE TYPE OF FD CONNECTION TO BE USED.
2. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH MANUFACTURE FOR FINAL VAULT AND PIPING DIMENSIONS.

ELEVATION



PLAN



6" FIRE PROTECTION VAULT W/ FDC
GREENVILLE WATER SYSTEM

MST -INC- CONCRETE PRODUCTS

REINFORCEMENT:
WALLS: #4 GRADE 60 BAR @ 10" OCEW
FOOTER & TOP: #5 GRADE 60 BAR @ 8" OCEW

OVERBROOK VILLAGE

WATER DETAILS

SOUTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 21945 12/4/19 MICHAEL L. OROS

NO.	DATE	REVISIONS	CKD BY
1			
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FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD SUITE 705 GREENVILLE, SC 29607 PH: (864) 271–8633

SCALE: NTS	DATE: 12–4–19		PROJECT NO.
DWG. #: 13 OF 17	DWN: EKN	DES: MLO	19095

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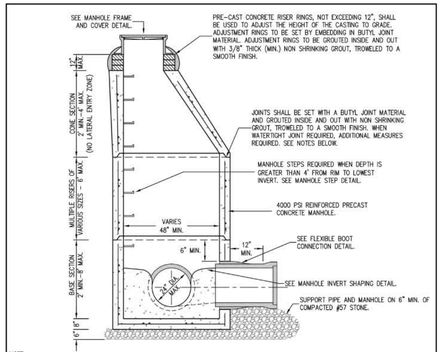
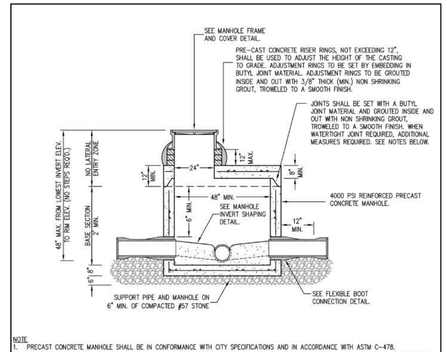


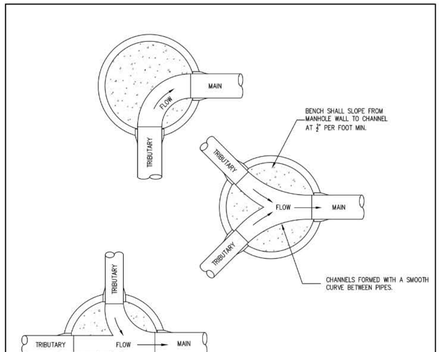
NOTE
1. PRECAST CONCRETE MANHOLE SHALL BE IN CONFORMANCE WITH CITY SPECIFICATIONS AND IN ACCORDANCE WITH ASTM C-478.
2. ECCENTRIC CONE SECTION SHALL BE USED. CONCENTRIC CONE SECTION IS NOT PERMITTED.
3. DOG HOUSE TYPE MANHOLES ARE NOT PERMITTED.
4. WHEN MANHOLE DEPTH IS GREATER THAN 12' FROM RIM TO LOWEST INVERT, 60" DIA. SHALL BE REQUIRED. FOR MANHOLE DEPTHS GREATER THAN 20', PRIOR APPROVAL FROM THE CITY ENGINEER IS REQUIRED.
5. MANHOLE WALLS SHALL BE 5" THICK MINIMUM FOR 48" INSIDE DIAMETER MANHOLES AND 6" MINIMUM FOR 60" DIAMETER MANHOLES.
6. PROVIDE A MAXIMUM OF TWO LIFT HOLES PER SECTION. PLUG HOLES WITH RUBBER PLUG AND GROUT INSIDE AND OUT WITH NON SHRINKING GROUT FOR A WATERTIGHT SEAL.
7. MAXIMUM OF THREE INLET TRIBUTARIES PERMITTED PER MANHOLE WITHOUT PRIOR APPROVAL OF CITY ENGINEER.
8. MINIMUM 0.1' DROP IN ELEVATION FROM THE LOWEST TRIBUTARY INLET TO THE INVERT OF THE OUTLET.
9. CONNECTIONS TO A PRECAST MANHOLE MUST BE CORED AND REQUIRE A FLEXIBLE BOOT CONNECTION, KOR-N-SEAL OR APPROVED EQUAL. CORING NOT PERMITTED WITHIN 6" OF BARREL SECTION JOINT. CONNECTIONS TO EXISTING MANHOLES SUBJECT TO ADDITIONAL REQUIREMENTS. SEE CITY SPECIFICATIONS, FLEXIBLE BOOT CONNECTION DETAIL, AND MANHOLE INVERT SHAPING DETAILS FOR ADDITIONAL INFORMATION.
10. RE-CORING OR OVER CORING IS NOT PERMITTED ON NEW MANHOLES THAT WERE FABRICATED OR INSTALLED INCORRECTLY.
11. BUTYL JOINT MATERIAL SHALL COMPLY WITH ASTM C990.
12. NON SHRINKING GROUT SHALL BE IN CONFORMANCE WITH ASTM C1107, ASTM C827, CRD C621 SUCH AS 1107 ADVANTAGE GROUT BY DAYTON SUPERIOR, OR APPROVED EQUAL.
13. IN CORROSIVE CONDITIONS AS DIRECTED BY THE CITY ENGINEER (E.G. RECEIVING FORCE MAIN DISCHARGE), MANHOLE INTERIOR WALLS SHALL RECEIVE A 10 MIL MINIMUM THICKNESS ACID RESISTANT COATING, NOVOCOAT SP2000, OR APPROVED EQUAL.
14. WHEN A WATERTIGHT MANHOLE IS REQUIRED AS DIRECTED BY THE CITY ENGINEER, JOINTS SHALL BE SEALED WITH O-RING GASKETS IN CONFORMANCE WITH ASTM C443 AND NON SHRINKING GROUT. ADDITIONALLY THE MANHOLE SHALL RECEIVE WATERPROOFING BY ONE OF THE FOLLOWING METHODS: (A.) EXTERIOR OF THE MANHOLE SHALL RECEIVE A 40 MIL COATING BITUMINOUS COAL TAR EPOXY CONFORMING TO AWWA C210 PER CITY SPECIFICATIONS. (B.) MANHOLES SHALL BE PRECAST WITH WATERPROOFING ADMIXTURE IPANEX BY IPA SYSTEMS IN ACCORDANCE WITH THE MANUFACTURER'S DOSAGE AND MIXING INSTRUCTIONS.

city of greenville ENGINEERING DIVISION | PRECAST CONCRETE MANHOLE | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 21:00



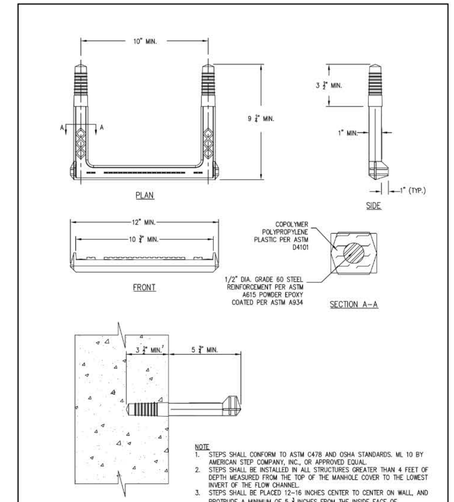
NOTE
1. PRECAST CONCRETE MANHOLE SHALL BE IN CONFORMANCE WITH CITY SPECIFICATIONS AND IN ACCORDANCE WITH ASTM C-478.
2. FLAT SLAB TOP SHALL BE AASHTO H-20 TRAFFIC RATED. 24" CLEAR MANHOLE OPENING SHALL BE CAST ECCENTRICALLY INTO FLAT SLAB TOP AS SHOWN. MST INC. CONCRETE PRODUCTS OR APPROVED EQUAL.
3. ECCENTRIC SHALLOW CONE SECTION MAY BE USED IN LIEU OF FLAT SLAB TOP. CONCENTRIC CONE SECTION IS NOT PERMITTED.
4. DOG HOUSE TYPE MANHOLES ARE NOT PERMITTED.
5. MANHOLE WALLS SHALL BE 5" THICK MINIMUM FOR 48" INSIDE DIAMETER MANHOLES AND 6" MINIMUM FOR 60" DIAMETER MANHOLES.
6. PROVIDE A MAXIMUM OF TWO LIFT HOLES PER SECTION. PLUG HOLES WITH RUBBER PLUG AND GROUT INSIDE AND OUT WITH NON SHRINKING GROUT FOR A WATERTIGHT SEAL.
7. MAXIMUM OF THREE INLET TRIBUTARIES PERMITTED PER MANHOLE WITHOUT PRIOR APPROVAL OF CITY ENGINEER.
8. MINIMUM 0.1' DROP IN ELEVATION FROM THE LOWEST TRIBUTARY INLET TO THE INVERT OF THE OUTLET.
9. CONNECTIONS TO A PRECAST MANHOLE MUST BE CORED AND REQUIRE A FLEXIBLE BOOT CONNECTION, KOR-N-SEAL OR APPROVED EQUAL. CORING NOT PERMITTED WITHIN 6" OF BARREL SECTION JOINT. CONNECTIONS TO EXISTING MANHOLES SUBJECT TO ADDITIONAL REQUIREMENTS. SEE CITY SPECIFICATIONS, FLEXIBLE BOOT CONNECTION DETAIL, AND MANHOLE INVERT SHAPING DETAILS FOR ADDITIONAL INFORMATION.
10. RE-CORING OR OVER CORING IS NOT PERMITTED ON NEW MANHOLES THAT WERE FABRICATED OR INSTALLED INCORRECTLY.
11. BUTYL JOINT MATERIAL SHALL COMPLY WITH ASTM C990.
12. NON SHRINKING GROUT SHALL BE IN CONFORMANCE WITH ASTM C1107, ASTM C827, CRD C621 SUCH AS 1107 ADVANTAGE GROUT BY DAYTON SUPERIOR, OR APPROVED EQUAL.
13. IN CORROSIVE CONDITIONS AS DIRECTED BY THE CITY ENGINEER (E.G. RECEIVING FORCE MAIN DISCHARGE), MANHOLE INTERIOR WALLS SHALL RECEIVE A 10 MIL MINIMUM THICKNESS ACID RESISTANT COATING, NOVOCOAT SP2000, OR APPROVED EQUAL.
14. WHEN A WATERTIGHT MANHOLE IS REQUIRED AS DIRECTED BY THE CITY ENGINEER, JOINTS SHALL BE SEALED WITH O-RING GASKETS IN CONFORMANCE WITH ASTM C443 AND NON SHRINKING GROUT. ADDITIONALLY THE MANHOLE SHALL RECEIVE WATERPROOFING BY ONE OF THE FOLLOWING METHODS: (A.) EXTERIOR OF THE MANHOLE SHALL RECEIVE A 40 MIL COATING BITUMINOUS COAL TAR EPOXY CONFORMING TO AWWA C210 PER CITY SPECIFICATIONS. (B.) MANHOLES SHALL BE PRECAST WITH WATERPROOFING ADMIXTURE IPANEX BY IPA SYSTEMS IN ACCORDANCE WITH THE MANUFACTURER'S DOSAGE AND MIXING INSTRUCTIONS.

city of greenville ENGINEERING DIVISION | PRECAST CONCRETE SHALLOW MANHOLE | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 21:01



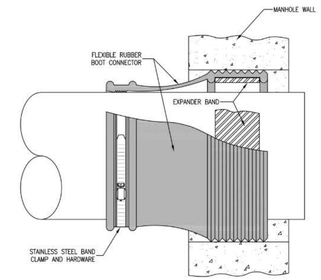
NOTE
1. THE FLOW CHANNEL STRAIGHT THROUGH A MANHOLE SHALL CONFORM AS CLOSELY AS POSSIBLE IN SHAPE TO THAT OF THE CONNECTING SEWERS AND BE A SMOOTH CONNECTION BETWEEN THE INLET TRIBUTARY AND THE OUTLET PIPE.
2. FLOW CHANNELS BETWEEN AN INLET TRIBUTARY PIPE AND THE OUTLET PIPE MAY BE FIELD CONSTRUCTED OR PRECAST.
3. THE INVERT OF THE PIPE SHALL BE EQUAL TO THE INVERT OF THE FLOW CHANNEL AT THE CONNECTION.
4. THE CHANNEL WALLS SHALL BE FORMED OR SHAPED TO THE FULL HEIGHT OF THE CROWN OF THE OUTLET SEWER IN SUCH A MANNER TO NOT OBSTRUCT MAINTENANCE, INSPECTION OR FLOW IN THE SEWERS AND TO PREVENT SOLIDS DEPOSITION.
5. CURVED FLOW CHANNELS MAY REQUIRE INCREASED CHANNEL SLOPE TO MAINTAIN ACCEPTABLE FLOW VELOCITY.
6. MAXIMUM DIFFERENCE IN ELEVATION BETWEEN THE INVERT OF THE TRIBUTARY INLET AND THE MANHOLE INVERT SHALL BE 18 INCHES. ELEVATION DIFFERENCES GREATER THAN 18 INCHES REQUIRE A DROP MANHOLE.
7. NO TRIBUTARY INLET, INCLUDING SERVICE CONNECTIONS, NOR DROP MANHOLE PIPES SHALL DISCHARGE ONTO THE SURFACE OF THE BENCH.
8. BENCH AND CHANNELS TO BE FORMED USING CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
9. CONCRETE SHALL BE TROWELED TO A SMOOTH FINISH.

city of greenville ENGINEERING DIVISION | MANHOLE INVERT SHAPING | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 21:03



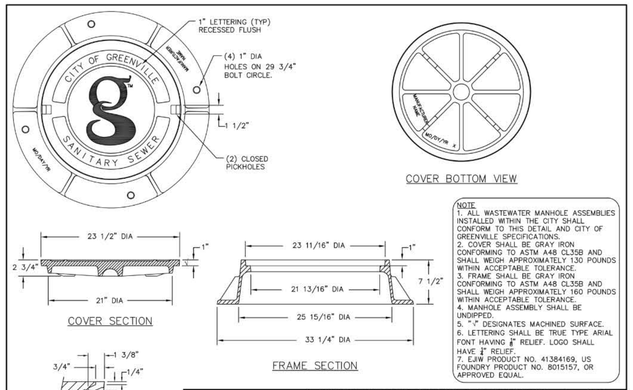
NOTE
1. STEPS SHALL CONFORM TO ASTM C478 AND OSHA STANDARDS. ML 10 BY AMERICAN STEP COMPANY, INC., OR APPROVED EQUAL.
2. STEPS SHALL BE INSTALLED IN ALL STRUCTURES GREATER THAN 4 FEET OF DEPTH MEASURED FROM THE TOP OF THE MANHOLE COVER TO THE LOWEST INVERT OF THE FLOW CHANNEL.
3. STEPS SHALL BE PLACED 12-16 INCHES CENTER TO CENTER ON WALL, AND PROTRUDE A MINIMUM OF 5 $\frac{1}{2}$ INCHES FROM THE INSIDE FACE OF STRUCTURE WALL. STEP SPACING WITHIN A SINGLE STRUCTURE SHALL BE MAINTAINED WITHIN 1" OF THE AVERAGE STEP SPACING FOR THAT STRUCTURE.
4. STEPS SHALL BE LOCATED TO ALLOW DIRECT ACCESS FROM THE SURFACE TO THE TABLE.

city of greenville ENGINEERING DIVISION | MANHOLE STEP | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 21:04



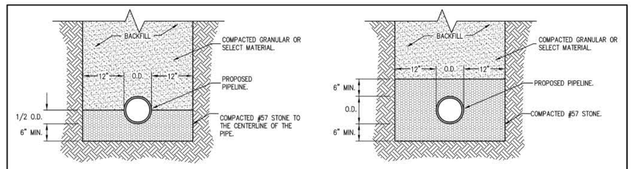
NOTE
1. ALL PIPE CONNECTIONS INTO PRECAST MANHOLES SHALL BE INSTALLED BY CORING AND UTILIZE A FLEXIBLE BOOT SUCH AS KOR-N-SEAL® OR APPROVED EQUAL.
2. THE FLEXIBLE BOOT SHALL BE IN CONFORMANCE WITH THE LATEST CITY STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH ASTM C923, ASTM A666, AND ASTM A240.
3. THE INSTALLED PIPE SHALL HAVE A SMOOTH, FORMED INVERT; BORING OR CHIPPING OF THE EXISTING TABLE TO THE FLOW CHANNEL IS REQUIRED.
4. CORINGS FOR BOOT CONNECTIONS SHALL NOT BE MADE WITHIN SIX INCHES OF A MANHOLE BARREL SECTION JOINT.
5. OTHER THAN PRECAST CONCRETE MANHOLES AND WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER, EXISTING MANHOLES MAY NOT BE CORED.
6. RE-CORING OR OVER CORING AN EXISTING CONNECTION MAY NOT BE ACCEPTED BY THE CITY AND SHOULD BE AVOIDED.

city of greenville ENGINEERING DIVISION | FLEXIBLE BOOT CONNECTION | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 21:05



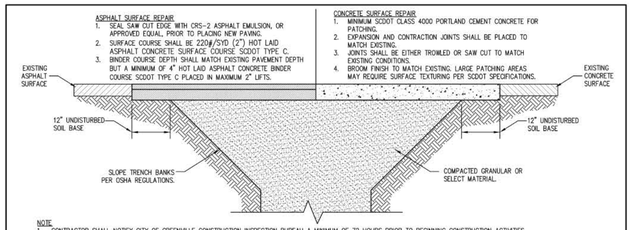
NOTE
1. ALL WASTEWATER MANHOLE ASSEMBLIES INSTALLED WITHIN THE CITY SHALL CONFORM TO THIS DETAIL AND CITY OF GREENVILLE SPECIFICATIONS.
2. COVER SHALL BE GRAY IRON CONFORMING TO ASTM A48 CL35B AND SHALL WEIGH APPROXIMATELY 130 POUNDS WITHIN ACCEPTABLE TOLERANCE.
3. FRAME SHALL BE GRAY IRON CONFORMING TO ASTM A48 CL35B AND SHALL WEIGH APPROXIMATELY 160 POUNDS WITHIN ACCEPTABLE TOLERANCE.
4. MANHOLE ASSEMBLY SHALL BE UNDIPPED.
5. "." DESIGNATES MACHINED SURFACE.
6. LETTERING SHALL BE TRUE TYPE ARIAL FONT HAVING $\frac{1}{8}$" RELIEF. LOGO SHALL HAVE $\frac{1}{8}$" RELIEF.
7. EJW PRODUCT NO. 41384169, US FOUNDRY PRODUCT NO. 8015157, OR APPROVED EQUAL.

city of greenville ENGINEERING DIVISION | HEAVY DUTY RING & COVER WASTEWATER UTILITY | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 20:00



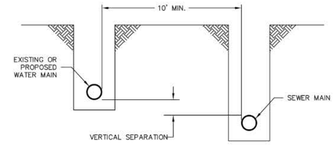
NOTE
1. CONTRACTOR SHALL NOTIFY CITY OF GREENVILLE CONSTRUCTION INSPECTION BUREAU A MINIMUM OF 72 HOURS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
2. PVC PIPE SHALL BE INSTALLED AS SHOWN AND IN CONFORMANCE WITH THE LATEST CITY SPECIFICATIONS AND IN ACCORDANCE WITH ASTM D2321.
3. DUCTILE IRON PIPE SHALL BE INSTALLED AS SHOWN AND IN CONFORMANCE WITH THE LATEST CITY SPECIFICATIONS AND IN ACCORDANCE WITH SECTIONS 4.3.1 THROUGH 4.3.5 (EXCEPT 4.3.3.5, 4.3.4.4, AND 4.3.5.1.1), 5.1.1, AND 6.1 OF ANSI/AWWA C600 AS WELL AS THE APPLICABLE PORTIONS ASTM D2321 FOR NON-RIGID PIPE INSTALLATION.
4. EACH SECTION OF SEWER PIPE SHALL BE LAID TO THE APPROPRIATE LINE AND GRADE, AS DESIGNED AND PERMITTED, WORKING IN THE UPSTREAM DIRECTION WITH THE BELL END LAID UPGRADE.
5. TRENCH BOTTOM, PIPE BEDDING, AND ALL OTHER PLACEMENT AND COMPACTION OPERATIONS SHALL BE INSPECTED BY THE CITY OF GREENVILLE CONSTRUCTION INSPECTION BUREAU IN ACCORDANCE WITH CITY SPECIFICATIONS.
6. AS REQUESTED, THE CONTRACTOR SHALL SUPPLY RELIABLE TESTING DATA CONFIRMING THE MINIMUM STANDARDS ARE MET. THE CITY MAY NOT ACCEPT WORK IF THE CONTRACTOR FAILS TO PRODUCE SUFFICIENT TESTING RESULTS.
7. ALL TRENCH WORK SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF OSHA PART 1926 SUBPART P APPENDIX B OF THE CODE OF FEDERAL REGULATIONS.
8. TRENCH WIDTHS SHALL BE WIDER TO PERMIT THE PLACEMENT OF TIMBER SUPPORTS, SHEETING, BRACING, AND APPURTENANCES AS REQUIRED BY OSHA REGULATIONS.
9. TRENCH BOTTOM SHALL BE FREE OF WATER BEFORE PLACEMENT OF BEDDING.
10. UNSUITABLE SOIL SHALL BE REMOVED & BACKFILLED WITH APPROVED STONE AS DIRECTED BY THE CITY OF GREENVILLE CONSTRUCTION INSPECTION BUREAU.
11. CONTRACTOR SHALL SHAPE RECESSES BY HAND FOR PIPE BELL.
12. WHEN PLACED WITHIN THE R/W AND ALL TRAVELED SURFACES, BACKFILL MATERIAL SHALL BE CLEAN, SELECT MATERIAL PLACED IN 6" LIFTS & COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D698.
13. WHEN PLACED OUTSIDE THE R/W, BACKFILL MATERIAL SHALL BE CLEAN, SELECT MATERIAL COMPACTED TO 90% STANDARD PROCTOR DENSITY PER ASTM D698.
14. COMPACTION TESTING SHALL BE PERFORMED PER CITY OF GREENVILLE SPECIFICATIONS.
15. SELECT BACKFILL MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. UNSUITABLE NATIVE SOIL SHALL NOT BE USED.
16. PIPE SHALL RECEIVE A MINIMUM 36" OF COVER BEFORE ALLOWING VEHICLES OR CONSTRUCTION EQUIPMENT TO TRAFFIC THE TRENCH SURFACE AND AT LEAST 48" OF COVER BEFORE USING A HYDROHAMMER FOR COMPACTION.

city of greenville ENGINEERING DIVISION | PIPE BEDDING | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 23:00



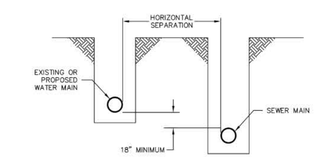
NOTE
1. CONTRACTOR SHALL NOTIFY CITY OF GREENVILLE CONSTRUCTION INSPECTION BUREAU A MINIMUM OF 72 HOURS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
2. AS REQUESTED, THE CONTRACTOR SHALL SUPPLY RELIABLE TESTING DATA CONFIRMING THE MINIMUM STANDARDS ARE MET. THE CITY MAY NOT ACCEPT WORK IF THE CONTRACTOR FAILS TO PRODUCE SUFFICIENT TESTING RESULTS.
3. TRENCHES SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE CITY TO VERIFY COMPACTION PRIOR TO PLACING PAVEMENT.
4. ALL TRENCH WORK SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF OSHA PART 1926 SUBPART P APPENDIX B OF THE CODE OF FEDERAL REGULATIONS.
5. WITHIN THE R/W AND ALL TRAVELED SURFACES, BACKFILL MATERIAL SHALL BE CLEAN, SELECT MATERIAL PLACED IN 6" LIFTS & COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D698. COMPACTION TESTING SHALL BE PERFORMED PER CITY OF GREENVILLE SPECIFICATIONS.
6. SELECT BACKFILL MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. UNSUITABLE NATIVE SOIL SHALL NOT BE USED.
7. UNSUITABLE SOIL SHALL BE REMOVED & BACKFILLED WITH APPROVED STONE AS DIRECTED BY THE CITY OF GREENVILLE CONSTRUCTION INSPECTION BUREAU.
8. ALL EDGES IN PAVED AREAS SHALL BE FULL DEPTH SAW CUT. ALL CUTS SHALL BE NEAT, CLEAN & STRAIGHT.
9. IF TOP WIDTH OF TRENCH(S) EXCEEDS 50% OF THE TOTAL ROAD WIDTH, FULL DEPTH REPLACEMENT OF THE ENTIRE ROADWAY SHALL BE REQUIRED FOR THE LENGTH OF THE TRENCH(S).
10. IF TOP WIDTH OF TRENCH(S) EXCEEDS 50% OF THE WIDTH OF ANY TRAVEL LANE, FULL DEPTH REPLACEMENT OF THE ENTIRE IMPACTED TRAVEL LANE SHALL BE REQUIRED.
11. IF DISTANCE BETWEEN EDGE OF PATCH & EXISTING EDGE OF PAVEMENT IS LESS THAN ONE FOOT, ROAD PATCH SHALL BE EXTENDED TO EDGE OF EXISTING PAVEMENT.
12. ALL PATCHES SHALL BE SMOOTH AND LEVEL (+/- $\frac{1}{4}$") WITH EXISTING SURFACE.
13. CONCRETE SHALL BE A MINIMUM DESIGN OF SCDOT CL4000. CONTRACTOR SHALL MAINTAIN STREET UNTIL CONCRETE HAS SUFFICIENT STRENGTH TO SUPPORT FINAL PAVING INSTALLATION. HIGH EARLY STRENGTH CONCRETE MAY BE USED.
14. TRAFFIC CONTROL SHALL BE PROVIDED PER THE LATEST EDITION OF THE MUTCD. SUBMITTAL AND APPROVAL OF A TRAFFIC CONTROL PLAN BY THE CONSTRUCTION INSPECTION BUREAU IS REQUIRED FOR STREETS WITH MORE THAN 400 VEHICLES PER DAY.
15. EXISTING PAVEMENT SECTION INCLUDES ALL PAVEMENT LAYERS FROM FINISH GRADE TO EXISTING SUBGRADE.
16. ALL WORK SHALL COMPLY WITH CITY OF GREENVILLE AND SCDOT SPECIFICATIONS.

city of greenville ENGINEERING DIVISION | PAVEMENT REPAIR FOR UTILITY CUTS | DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER: Rhett B. Gridley | SCALE: NO SCALE | DETAIL: 23:01



TYPICAL INSTALLATION
(MINIMUM 10' HORIZONTAL SEPARATION)

NOTE
1. THERE ARE NO VERTICAL SEPARATION REQUIREMENTS WHEN HORIZONTAL SEPARATION IS 10' OR GREATER.



INSTALLATION WHERE HORIZONTAL SEPARATION IS LESS THAN 10'
(USED ONLY WHEN LOCAL CONDITIONS PREVENT TYPICAL INSTALLATION)

NOTE
1. THE SEWER MUST BE LAID IN A SEPARATE TRENCH FROM THE WATER.
2. THE TOP OF THE SEWER MAIN MUST BE A MINIMUM OF 18" BELOW THE BOTTOM OF THE WATER MAIN.
3. WHERE THE MINIMUM 18" SEPARATION CANNOT BE OBTAINED, THE FOLLOWING SPECIFICATIONS APPLY:
   A. ALL REASONABLE EFFORT MUST BE MADE FOR THE SEWER LINE TO BE LOCATED UNDER THE WATER MAIN.
   B. SEWER MAIN SHALL BE CONSTRUCTED OF SLIP TYPE OR MECHANICAL JOINT PIPE COMPLYING WITH ANSI/AWWA C900 OR ANSI/AWWA C600, PUBLIC WATER SUPPLY STANDARDS FROM NEAREST UPSTREAM MANHOLE TO THE NEAREST DOWNSTREAM MANHOLE.
   C. ENTIRE LINE SHALL BE TESTED AT A HIGHER PRESSURE AS SPECIFIED IN THE HORIZONTAL/VERTICAL SEPARATION SECTION OF CHAPTER 8 IN THE DESIGN SPECIFICATION MANUAL TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.

city of greenville ENGINEERING DIVISION | SEWER & WATER MAIN SEPARATION | DATE APPROVED: MAR. 2017 | OFFICE OF THE CITY ENGINEER: | SCALE: NO SCALE | DETAIL: 22:01

OVERBROOK VILLAGE

SANITARY SEWER DETAILS

NORTH CAROLINA FANT, REICHERT & FOGLEMAN INC. NO. C03069 CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL No. 21945 12/4/19 MICHAEL L. ORMOND

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FRF FANT REICHERT & FOGLEMAN, INC. ENGINEERING & SURVEYING
25 WOODS LAKE ROAD SUITE 705 GREENVILLE, SC 29607 PH: (864) 271-8633

SCALE: NTS | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 14 OF 17 | DWN: EKN | DES: MLO

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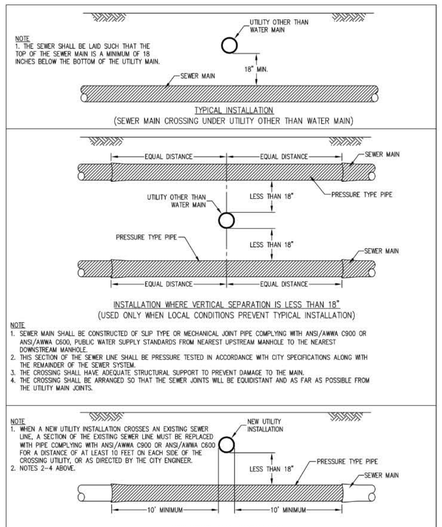


NOTE
1. THE SEWER SHALL BE LAID SUCH THAT THE TOP OF THE SEWER MAIN IS A MINIMUM OF 18 INCHES BELOW THE BOTTOM OF THE UTILITY MAIN.

TYPICAL INSTALLATION
(SEWER MAIN CROSSING UNDER UTILITY OTHER THAN WATER MAIN)

INSTALLATION WHERE VERTICAL SEPARATION IS LESS THAN 18"
(USED ONLY WHEN LOCAL CONDITIONS PREVENT TYPICAL INSTALLATION)

NOTE
1. SEWER MAIN SHALL BE CONSTRUCTED OF SLIP TYPE OR MECHANICAL JOINT PIPE COMPLYING WITH ANSI/AWWA C900 OR ANSI/AWWA C600, PUBLIC WATER SUPPLY STANDARDS FROM NEAREST UPSTREAM MANHOLE TO THE NEAREST DOWNSTREAM MANHOLE.
2. THIS SECTION OF THE SEWER LINE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH CITY SPECIFICATIONS ALONG WITH THE REMAINDER OF THE SEWER SYSTEM.
3. THE CROSSING SHALL HAVE ADEQUATE STRUCTURAL SUPPORT TO PREVENT DAMAGE TO THE MAIN.
4. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE UTILITY MAIN JOINTS.

NOTE
1. WHEN A NEW UTILITY INSTALLATION CROSSES AN EXISTING SEWER LINE, A SECTION OF THE EXISTING SEWER LINE MUST BE REPLACED WITH PIPE COMPLYING WITH ANSI/AWWA C900 OR ANSI/AWWA C600 FOR A DISTANCE OF AT LEAST 10 FEET ON EACH SIDE OF THE CROSSING UTILITY, OR AS DIRECTED BY THE CITY ENGINEER.
2. NOTES 2-4 ABOVE.

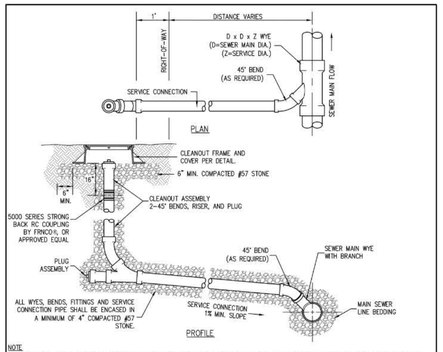
NEW UTILITY MAIN INSTALLATION
(USED ONLY WHEN LOCAL CONDITIONS PREVENT 18" MINIMUM CLEARANCE)

city of greenville
ENGINEERING DIVISION

SEWER & OTHER UTILITY CROSSING SEPARATION

DATE APPROVED: MAR. 2017 | OFFICE OF THE CITY ENGINEER:

SCALE: NO SCALE | DETAIL: 22:03



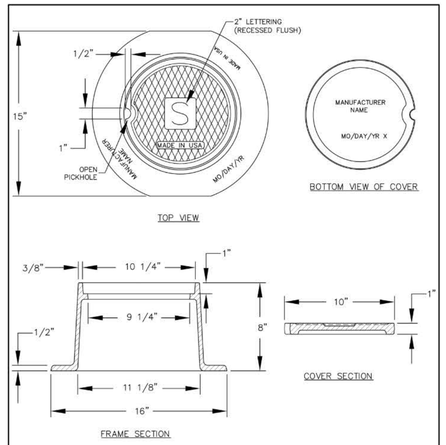
NOTE
1. SERVICE CONNECTION DETAIL IS FOR THE INSTALLATION OF A NEW SERVICE CONNECTION STUB OUT AS PART OF A NEW MAIN SEWER LINE INSTALLATION. CONNECTIONS TO EXISTING SEWER LINES OR CONNECTION OF THE BUILDING DRAIN TO THE SERVICE CONNECTION STUB OUT SHALL BE INSTALLED PER THE INTERNATIONAL PLUMBING CODE (IPC) OR INTERNATIONAL RESIDENTIAL CODE (IRC) AS APPROPRIATE.
2. WHEN THE BUILDING SEWER IS EXTENDED FROM THE STUB OUT TO THE BUILDING DRAIN, THE BUILDING SEWER AND ITS APPURTENANCES SHALL BE PERMITTED THROUGH AND INSPECTED BY THE CITY OF GREENVILLE BUILDING CODES DIVISION.
3. WITHOUT PRIOR KNOWLEDGE OF THE VARIABLES REQUIRED TO SIZE THE SERVICE CONNECTION PER THE IPC OR IRC, THE MINIMUM DIAMETER OF THE SERVICE CONNECTION STUB OUT SHALL BE MINIMUM FOUR (4) INCH DIA. FOR SINGLE FAMILY RESIDENTIAL AND MINIMUM SIX (6) INCH DIA. FOR COMMERCIAL AND MULTI-FAMILY DEVELOPMENT.
4. MINIMUM SLOPE OF THE SERVICE LATERAL IS 1.0% OR ¼" PER FOOT.
5. THE SERVICE CONNECTION STUB OUT AND ITS APPURTENANCES SHALL BE OF THE SAME MATERIAL AS THE MAIN SEWER LINE.
6. SERVICE CONNECTION SHALL BE MADE WITH ONE (1) WYE FITTING. THE LONG BRANCH OF THE WYE SHALL HAVE THE SAME INSIDE DIAMETER AS THE WASTEWATER MAIN. TEE FITTINGS ARE NOT PERMITTED.
7. THE WYE FITTING SHALL BE SET BETWEEN THE 10 AND 2 O'CLOCK POSITIONS ALONG THE MAIN SEWER LINE PIPE CIRCUMFERENCE.
8. NO BENDS GREATER THAN 45° SHALL BE USED IN SERVICE CONNECTION INSTALLATION.
9. SERVICE CONNECTIONS SHALL BE A MINIMUM OF THREE (3) FEET FROM PIPE JOINT OR MANHOLE, MEASURED FROM THE NEAREST EDGE OF THE WYE FITTING.
10. CONNECTIONS SHALL BE POSITIONED ALONG THE MAIN SEWER LINE TO PROVIDE AN INDIVIDUAL, SEPARATE AND DIRECT CONNECTION FROM THE STRUCTURE TO THE WASTEWATER MAIN. CONNECTIONS SHALL NOT CROSS ADJACENT LOT PROPERTY LINES.
11. A SERVICE CONNECTION CLEANOUT SHALL BE INSTALLED ONE (1) FOOT FROM THE RIGHT-OF-WAY LINE OR EASEMENT BOUNDARY WITH A CLEANOUT FRAME AND COVER PER DETAIL.
12. SERVICE CONNECTION SHALL BE PLUGGED TO PREVENT INFILTRATION AND SEDIMENTATION OF THE LINE.
13. SERVICE CONNECTIONS SHALL NOT BE CONNECTED TO A NEWLY CONSTRUCTED MAIN SEWER LINE UNTIL A PERMIT TO OPERATE (PTO) HAS BEEN OFFICIALLY ISSUED BY SCDHEC. CONTACT CITY OF GREENVILLE ENGINEERING (467-4400) WITH ANY QUESTIONS.

city of greenville
ENGINEERING DIVISION

SERVICE CONNECTION

DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER:

SCALE: NO SCALE | DETAIL: 25:01



NOTE
1. ALL GRAY IRON CASTINGS SHALL CONFORM TO ASTM A48 CL35B AND SHALL BE OF UNIFORM QUALITY.
2. ALL CASTINGS SHALL BE UNDIPPED.
3. ALL CASTINGS SHALL HAVE THE FOLLOWING AVERAGE WEIGHTS:
   FRAME: 39 LBS.
   COVER: 14 LBS.
   TOTAL: 53 LBS.
4. ALL CASTINGS SHALL BE H-20 TRAFFIC RATED.
5. CASTINGS SHALL BE EJIW UNIT NO. 1566, OR APPROVED EQUAL.

city of greenville
ENGINEERING DIVISION

CLEANOUT FRAME AND COVER

DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER:

SCALE: NO SCALE | DETAIL: 25:02

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BY CALLING PALMETTO UTILITY PROTECTION SERVICE AT 811 THREE (3) DAYS PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR SHALL CONTACT THE CITY OF GREENVILLE, CONSTRUCTION INSPECTION BUREAU, (864) 467-8890, A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.

3. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION INSPECTION BUREAU AND THE ENVIRONMENTAL ENGINEERING BUREAU WITH A CURRENT CONSTRUCTION SCHEDULE PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION.

5. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS AND SPECIFICATIONS OF THE CITY OF GREENVILLE, SOUTH CAROLINA AND ALL OTHER APPLICABLE GOVERNING AUTHORITIES. BELOW ARE WASTEWATER GENERAL NOTES BUT IN ALL CASES THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND DETAILS FOR ADDITIONAL MORE DETAILED CONSIDERATIONS.

6. ALL TRENCHES WITHIN THE RIGHT-OF-WAY SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AND ALL OTHER TRENCHES SHALL BE COMPACTED TO 90% OF STANDARD PROCTOR DENSITY TO PREVENT SETTLEMENT AND DAMAGE TO PAVING AND PIPELINE. STANDARD PROCTOR TESTING SHALL BE IN CONFORMANCE WITH ASTM D698. ALL FILL IS TO BE FREE OF ROOTS, TRASH, AND ORGANIC MATTER AND SHALL BE PLACED IN 6" LIFTS. NO STONE LARGER THAN SIX (6) INCHES SHALL BE USED AS BACKFILL. FOR TRENCHES OUTSIDE OF A PAVED SURFACE, THE TOP 6" LIFT SHALL BE SCREENED ORGANIC TOPSOIL AND BE PERMANENTLY STABILIZED WITH VEGETATIVE COVER.

7. ALL PVC PIPE SHALL BE SDR 26, SDR 35, OR C900 MEETING ASTM STANDARDS. ALL DIP SEWER PIPE SHALL BE ASPHALT COATED CEMENT MORTAR LINED CLASS 50 DUCTILE IRON PIPE MEETING ANSI/AWWA STANDARDS WITH SPECIAL CONSIDERATION GIVEN TO CORROSIVE AND SEPTIC CONDITIONS. ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF ASTM D2321 (PVC AND DIP) AND APPLICABLE ANSI/AWWA C600 STANDARDS (DIP) AND IN CONFORMANCE WITH THE STANDARD DETAIL, LATEST REVISION.

8. MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF FOUR (4) FEET AND BE PRECAST 4000 PSI REINFORCED CONCRETE CONFORMING TO ASTM C-478 WITH PREFORMED OPENINGS. THE MANHOLE SHALL BE CONSTRUCTED WITH A FLOW CHANNEL TO PROVIDE A SMOOTH CONNECTION BETWEEN THE INLET TRIBUTARY AND THE OUTLET PIPE.

9. CONNECTIONS MADE AT MANHOLES SHALL BE NO HIGHER THAN 18" ABOVE MANHOLE INVERT. CONNECTIONS HIGHER THAN 18" ABOVE THE MANHOLE INVERT MUST HAVE AN EXTERNAL DROP CONSTRUCTED PER CITY OF GREENVILLE DETAILS AND SPECIFICATIONS.

10. EACH INDIVIDUALLY OWNED PARCEL AND EACH BUILDING HAVING PLUMBING FIXTURES INSTALLED, WHICHEVER IS APPLICABLE, SHALL HAVE AT LEAST ONE DIRECT AND INDIVIDUAL CONNECTION TO A CITY WASTEWATER MAIN WITHOUT CROSSING ADJACENT PROPERTY LINES.
   (A.) NEW CONNECTIONS TO AN EXISTING WASTEWATER MAIN THAT IS ACTIVELY CARRYING FLOW SHALL BE ACCOMPLISHED WITH A TAPPING SADDLE – ROMAC INDUSTRIES TYPE CB, OR APPROVED EQUAL.
   (B.) NEW CONNECTIONS CONSTRUCTED AS PART OF A NEW MAIN INSTALLATION SHALL BE ACCOMPLISHED WITH A WYE FITTING AND SET BETWEEN THE 10 AND 2 O'CLOCK POSITIONS. THE LONG BRANCH OF THE WYE SHALL HAVE THE SAME INSIDE DIAMETER AS THE MAIN. STRAIGHT TEE CONNECTIONS WILL NOT BE ACCEPTED. SERVICE CONNECTION LATERALS SHALL TERMINATE ONE (1) FOOT BEYOND THE RIGHT-OF-WAY OR EASEMENT BOUNDARY WITH A CLEANOUT AND AN AIR/WATER TIGHT PLUG PER THE STANDARD DETAILS.

11. SERVICE CONNECTIONS SHALL BE A MINIMUM OF THREE (3) FEET FROM PIPE JOINTS OR MANHOLES MEASURED FROM THE NEAREST EDGE OF THE WYE FITTING.

12. THE CONTRACTOR SHALL NOT CONNECT SERVICE LATERALS TO EXISTING OR NEW MANHOLES WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER.

13. THE LOCATION OF THE TERMINUS OF THE SERVICE LATERAL AND CLEANOUT SHALL BE MARKED BY A 2" X 4" TREATED POST PAINTED GREEN DRIVEN A MINIMUM OF THREE (3) FEET AND PROTRUDING APPROXIMATELY THREE (3) FEET ABOVE FINAL GRADE.

14. SANITARY SEWER SERVICE LATERALS SHALL NOT BE CONNECTED TO A NEWLY CONSTRUCTED SANITARY SEWER MAIN UNTIL A PERMIT TO OPERATE HAS BEEN OFFICIALLY ISSUED BY SCDHEC AND RECEIVED BY THE CITY ENGINEER. CONTACT THE CITY OF GREENVILLE ENVIRONMENTAL ENGINEERING BUREAU AT (864) 467-4400 WITH ANY QUESTIONS.

15. PRESSURE AND DEFLECTION TEST TO BE PERFORMED ON ALL LINES AND VACUUM TEST ON ALL MANHOLES IN THE PRESENCE OF A CITY OF GREENVILLE REPRESENTATIVE AND A REPRESENTATIVE OF THE ENGINEER. ALL TESTS SHALL BE IN CONFORMANCE WITH CITY OF GREENVILLE AND SCDHEC SPECIFICATIONS.

16. THE CONTRACTOR SHALL PROVIDE TO THE DESIGN ENGINEER A RECORD DRAWING OF THE SANITARY SEWER SYSTEM. THE DRAWINGS SHALL AT A MINIMUM, INCLUDE THE SANITARY SEWER MAIN AND MANHOLE LOCATIONS, PIPE MATERIAL FOR THE MAIN AND THE SERVICE LATERALS, THE DISTANCE OF EACH SERVICE CONNECTION TO THE DOWNSTREAM MANHOLE, LENGTH OF EACH SERVICE LATERAL, AND THE LOCATION AND DEPTH OF EACH SERVICE LATERAL TERMINUS. THE ENGINEER SHALL USE THIS DOCUMENTATION AS WELL AS INFORMATION OBTAINED BY A SURVEYOR TO PREPARE RECORD DRAWINGS. THE ENGINEER CANNOT APPLY FOR FINAL APPROVAL UNTIL THIS INFORMATION IS OBTAINED FROM THE CONTRACTOR.

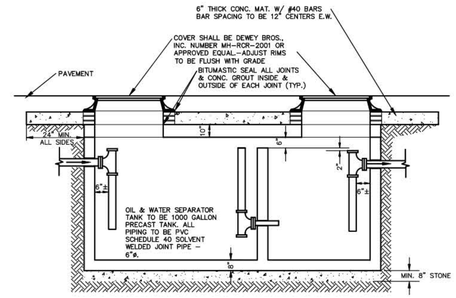
17. THERE SHALL BE A 25-FOOT EASEMENT (12.5' EACH SIDE OF CENTERLINE) ESTABLISHED ON ALL WASTEWATER MAINS.

city of greenville
ENGINEERING DIVISION

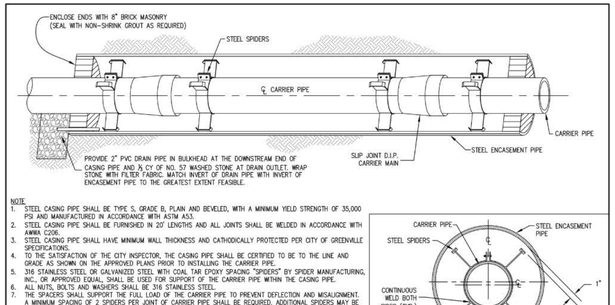
WASTEWATER GENERAL NOTES

DATE APPROVED: MAR. 2017 | OFFICE OF THE CITY ENGINEER:

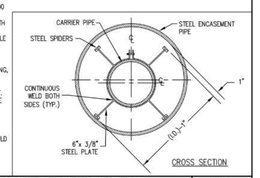
SCALE: NO SCALE | DETAIL: 29:00



OIL & WATER SEPARATOR



NOTE
1. STEEL CASING PIPE SHALL BE TYPE S, GRADE B, PLAIN AND BEVELED, WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI AND MANUFACTURED IN ACCORDANCE WITH ASTM A53.
2. STEEL CASING PIPE SHALL BE FURNISHED IN 20' LENGTHS AND ALL JOINTS SHALL BE WELDED IN ACCORDANCE WITH AWWA C206.
3. STEEL CASING PIPE SHALL HAVE MINIMUM WALL THICKNESS AND CATHODICALLY PROTECTED PER CITY OF GREENVILLE SPECIFICATIONS.
4. TO THE SATISFACTION OF THE CITY INSPECTOR, THE CASING PIPE SHALL BE CERTIFIED TO BE TO THE LINE AND GRADE AS SHOWN ON THE APPROVED PLANS PRIOR TO INSTALLING THE CARRIER PIPE.
5. 316 STAINLESS STEEL OR GALVANIZED STEEL WITH COAL TAR EPOXY SPACING "SPIDERS" BY SPIDER MANUFACTURING, INC., OR APPROVED EQUAL, SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
6. ALL NUTS, BOLTS AND WASHERS SHALL BE 316 STAINLESS STEEL.
7. THE SPACERS SHALL SUPPORT THE FULL LOAD OF THE CARRIER PIPE TO PREVENT DEFLECTION AND MISALIGNMENT. A MINIMUM SPACING OF 2 SPIDERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED. ADDITIONAL SPIDERS MAY BE REQUIRED TO SUPPORT THE PIPE AND WASTEWATER.
8. THE SPIDERS SHALL BE SPACED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPIDER SUPPORTS APPROXIMATELY THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
9. THE HEIGHT OF EACH SPIDER SHALL BE DESIGNED AND ADJUSTED TO MAINTAIN THE SPECIFIED SLOPE.
10. FOR CROSSINGS UNDER STREAMS, ALL VOID SPACES SHALL BE FILLED BY PRESSURE. THE GROUT MATERIAL SHOULD BE SAND CEMENT SLURRY.
11. SHOULD IT BE NECESSARY TO PROVIDE VARIABLE HEIGHT SKIDS TO ACHIEVE THE LINE AND GRADE AS SHOWN ON THE APPROVED PLANS, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE SPIDER DESIGN SHOWING EACH SPACER, INCLUDING ITS HEIGHT, TO THE CITY INSPECTOR PRIOR TO INSTALLING THE CARRIER PIPE.



CROSS SECTION

STEEL CASING PIPE SELECTION CHART						
DUCTILE IRON PIPE SIZE	4"	6"	8"	10"	12"	14"
STEEL CASING PIPE SIZE	12"	14"	16"	18"	20"	24"

city of greenville
ENGINEERING DIVISION

STEEL ENCASEMENT AND CARRIER PIPE

DATE APPROVED: JUNE 2010 | OFFICE OF THE CITY ENGINEER:

SCALE: NO SCALE | DETAIL: 24:01

OVERBROOK VILLAGE

MISCELLANEOUS DETAILS

SOUTH CAROLINA – FANT, REICHERT & FOGLEMAN INC. – NO. C03069 – CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER – No. 21945 – 12/4/19 – MICHAEL L. ORTIG

NO.	DATE	REVISIONS	CKD BY
1			
2			
3			
4			
5			
6			

FRF FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: NTS | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 15 OF 17 | DWN: EKN | DES: MLO

P:\Land Projects\19095\Drawings\19095-B-CIVIL-9-30-19.dwg, 12/5/2019 7:51:38 AM, _DWG To PDF.pc3

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	EPM NAME EPM NUMBER EPM EMAIL
ADS SALES REP	SALES NAME SALES NUMBER SALES EMAIL
PROJECT NO.	

ADVANCED DRAINAGE SYSTEMS, INC.

SiteASSIST by StormTech
FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

1503-1507 EAST NORTH STREET

GREENVILLE, SC

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-4500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

1. STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
12. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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PROPOSED LAYOUT

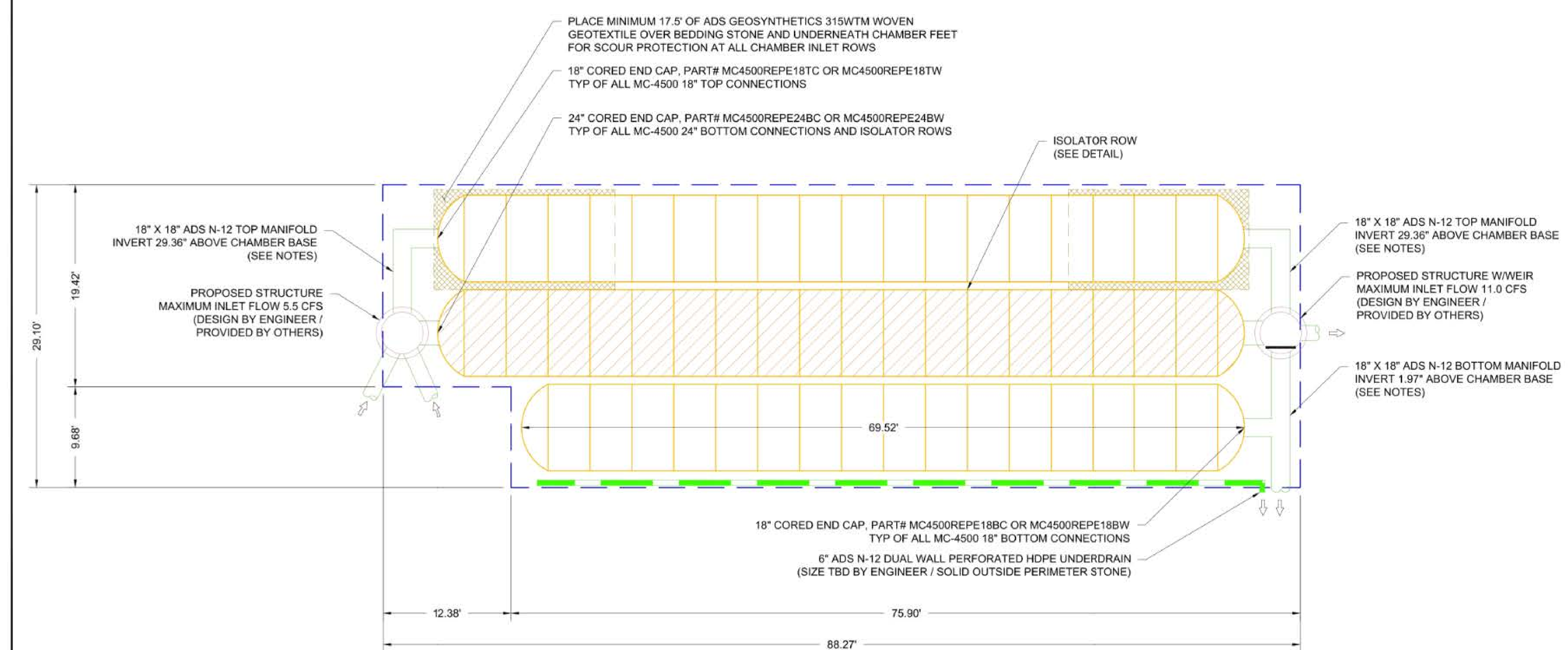
52	STORMTECH MC-4500 CHAMBERS
6	STORMTECH MC-4500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	% STONE VOID
10059	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
2447	SYSTEM AREA (ft²)
233	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

955.75	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
951.25	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
950.75	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
950.75	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
950.75	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
949.75	TOP OF STONE
948.75	TOP OF MC-4500 CHAMBER
946.20	18" TOP MANIFOLD INVERT
943.94	24" ISOLATOR ROW CONNECTION INVERT
943.91	18" BOTTOM MANIFOLD INVERT
943.75	BOTTOM OF MC-4500 CHAMBER
943.00	UNDERDRAIN INVERT
943.00	BOTTOM OF STONE

NOTES

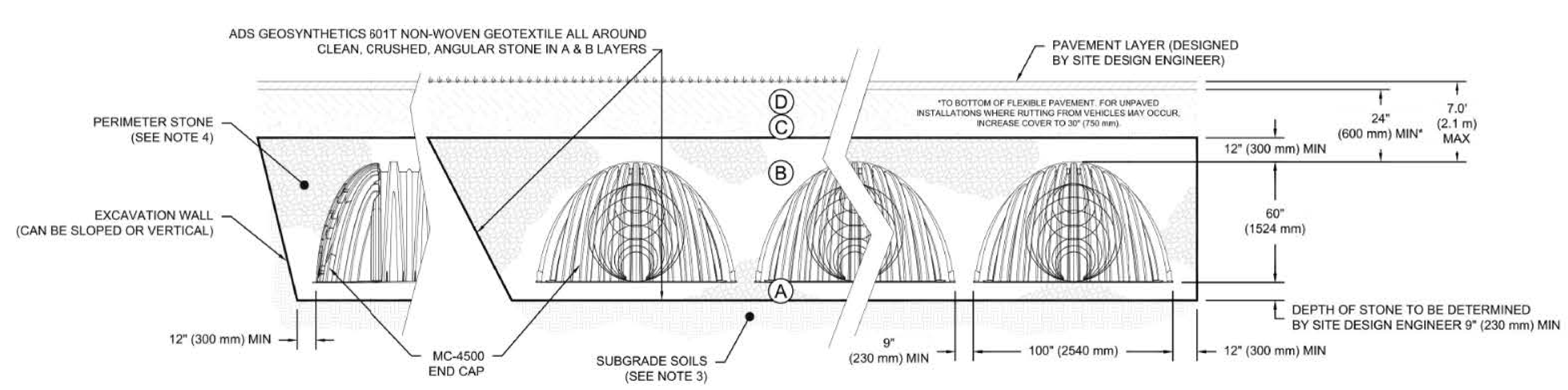
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- THE SITE DESIGN ENGINEER MUST REVIEW THE PROXIMITY OF THE CHAMBERS TO THE RETAINING WALL AND CONSIDER EFFECTS OF POSSIBLE SATURATED SOILS ON THE RETAINING WALL'S INTEGRITY.
- THE SITE DESIGN ENGINEER MUST REVIEW THE PROXIMITY OF THE CHAMBERS TO THE SLOPE AND CONSIDER EFFECTS OF POSSIBLE SATURATED SOILS ON THE SLOPE'S INTEGRITY.



ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1503-1507 NORTH EAST STREET
GREENVILLE, SC
DATE: 11/11/19 | DRAWN: GDL
PROJECT #: S157390 | CHECKED: ALI
DATE | DRWN | CHKD | DESCRIPTION

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4640 TRUEMAN BLVD
HILLIARD, OH 43026

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SHEET 2 OF 5

SHEET 3 OF 5

OVERBROOK VILLAGE

UNDERGROUND DETENTION DETAILS

SOUTH CAROLINA — FANT, REICHERT & FOGLEMAN INC. — NO. C03069 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 21945 — 12/4/19 — MICHAEL L. OROS

NO.	DATE	REVISIONS	CKD BY
1			
2			
3			
4			
5			
6			

FRF — FANT REICHERT & FOGLEMAN, INC.
ENGINEERING & SURVEYING
25 WOODS LAKE ROAD
SUITE 705
GREENVILLE, SC 29607
PH: (864) 271-8633

SCALE: NTS | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 16 OF 17 | DWN: EKN | DES: MLO

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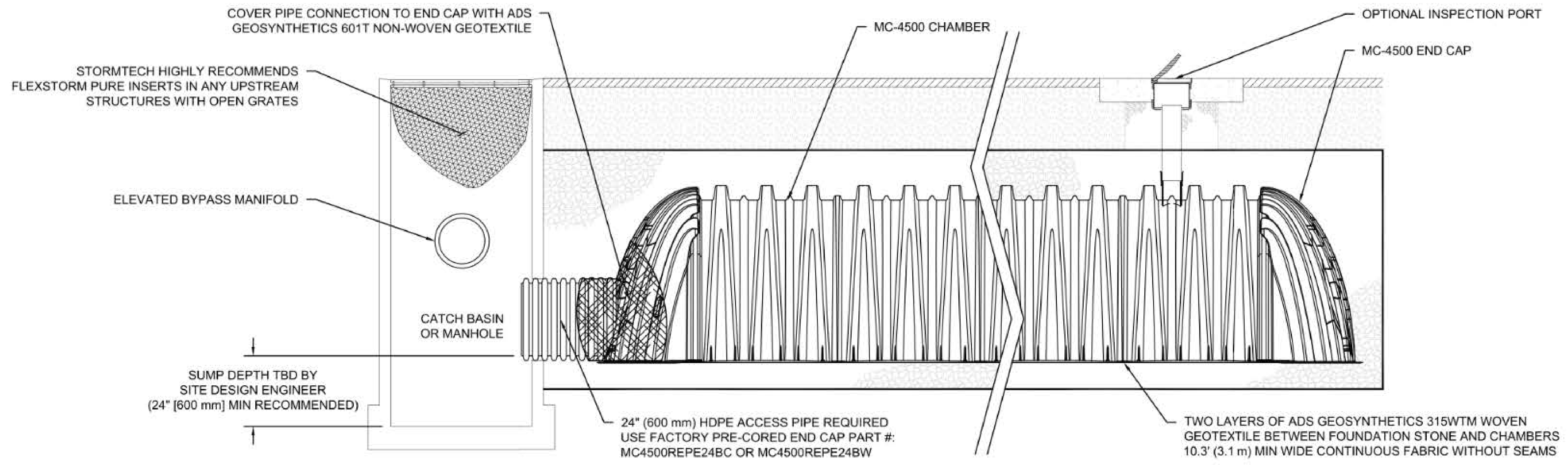

MC-4500 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

1503-1507 NORTH EAST STREET
GREENVILLE, SC
DATE: 11/11/19 DRAWN: GDL
PROJECT #: S157390 CHECKED: ALI
DATE | DRWN | CHKD | DESCRIPTION

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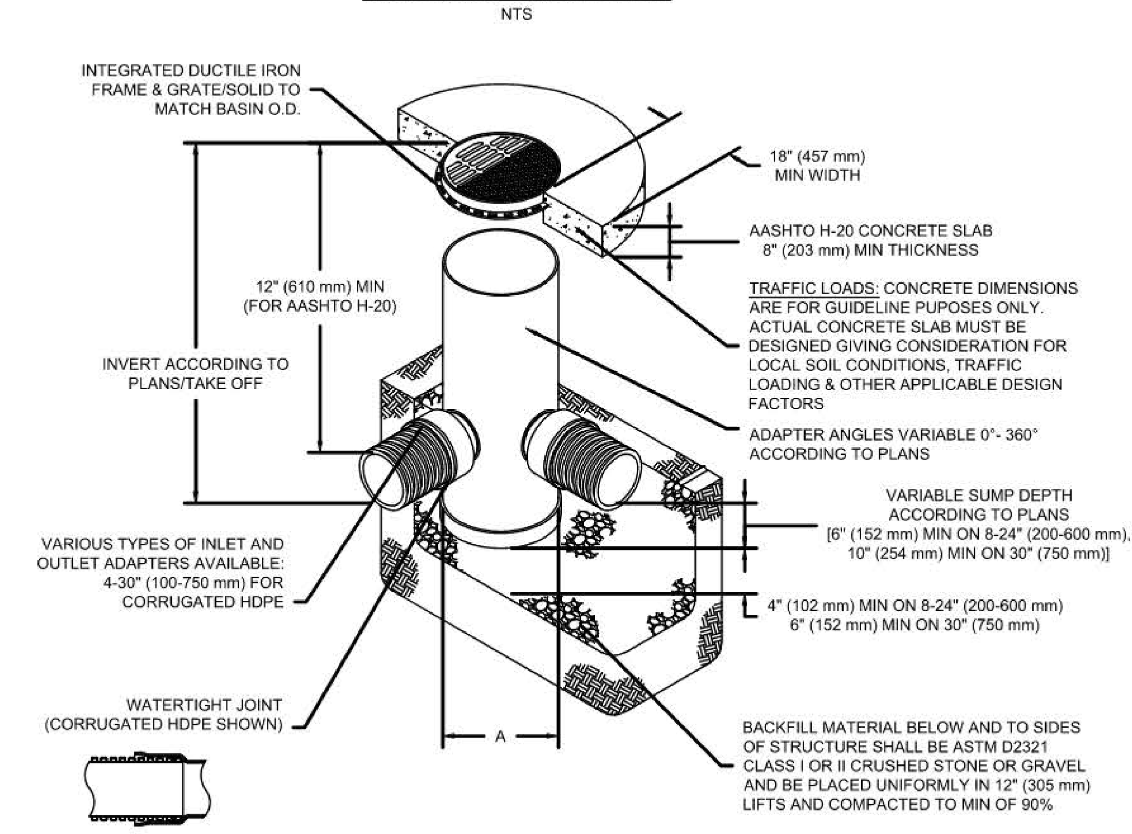
SHEET 4 OF 5

NYLOPLAST DRAIN BASIN

NTS



NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
6. TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

1503-1507 E NORTH STREET
CITY OF GREENVILLE, SC
DATE: 11-11-19 DRAWN: CA
PROJECT #: S157390 CHECKED: KAP
REV | DRW | CHK | DESCRIPTION

Nyloplast® 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com

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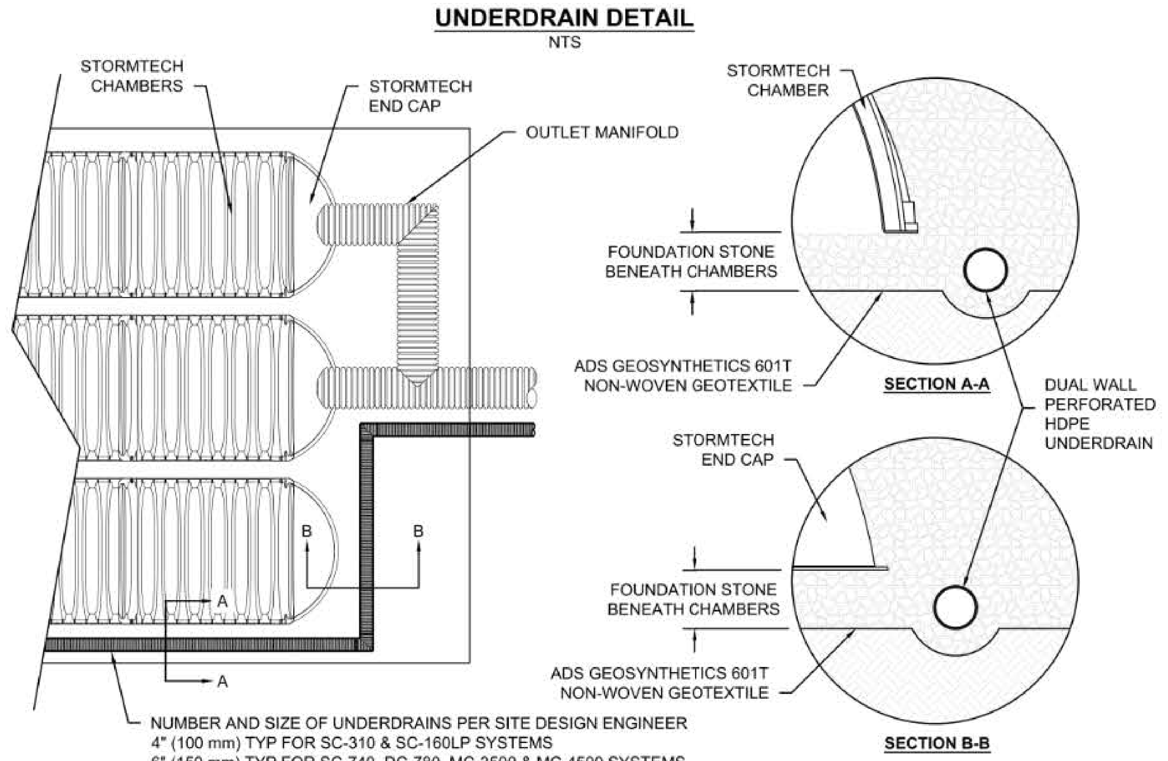
SHEET 6 OF 6

UNDERDRAIN DETAIL

NTS



MC-SERIES END CAP INSERTION DETAIL

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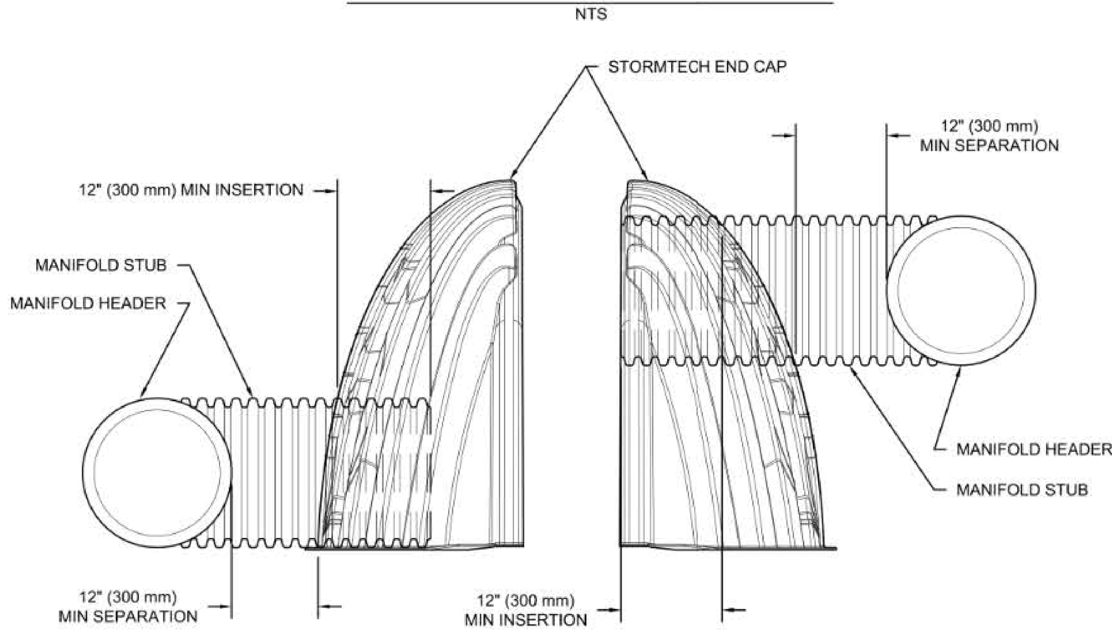
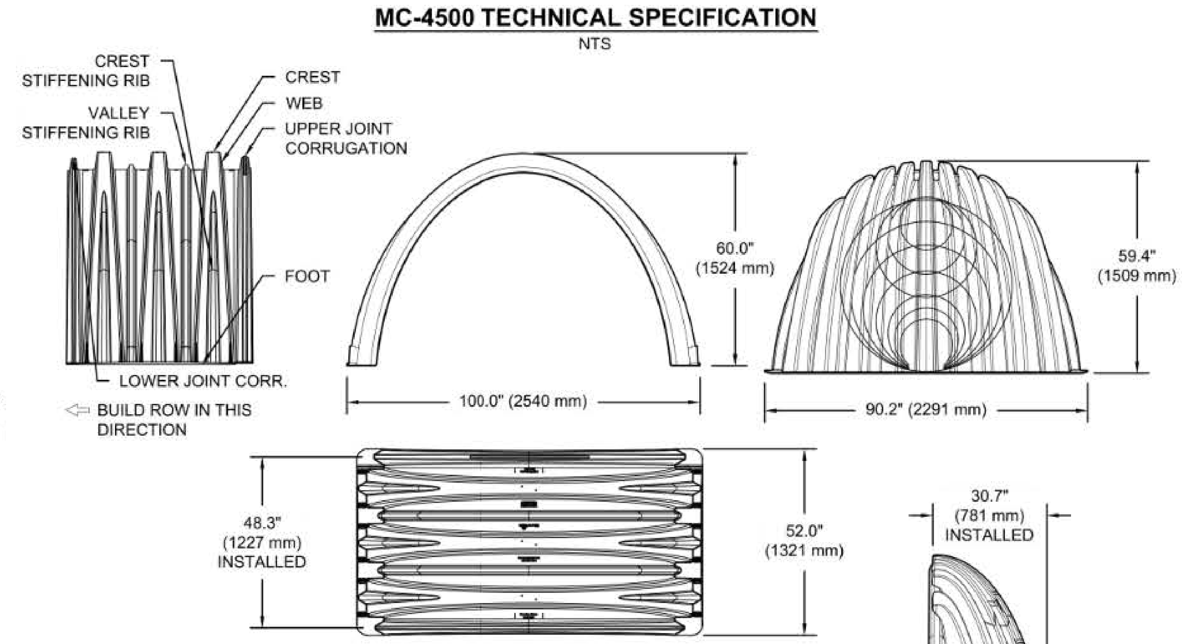


NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-4500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m³)
WEIGHT	130.0 lbs.	(59.0 kg)

NOMINAL END CAP SPECIFICATIONS

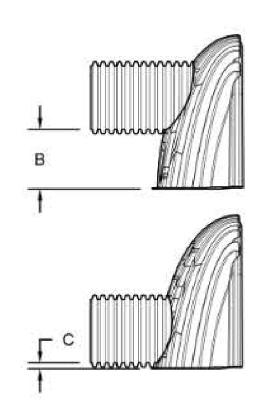
SIZE (W X H X INSTALLED LENGTH)	90.2" X 59.4" X 30.7"	(2291 mm X 1509 mm X 781 mm)
END CAP STORAGE	35.7 CUBIC FEET	(1.01 m³)
MINIMUM INSTALLED STORAGE*	108.7 CUBIC FEET	(3.08 m³)
WEIGHT	135.0 lbs.	(61.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500REPE06T	6" (150 mm)	42.54" (1.081 m)	---
MC4500REPE06B		---	0.86" (22 mm)
MC4500REPE08T	8" (200 mm)	40.50" (1.029 m)	---
MC4500REPE08B		---	1.01" (26 mm)
MC4500REPE10T	10" (250 mm)	38.37" (975 mm)	---
MC4500REPE10B		---	1.33" (34 mm)
MC4500REPE12T	12" (300 mm)	35.69" (907 mm)	---
MC4500REPE12B		---	1.55" (39 mm)
MC4500REPE15T	15" (375 mm)	32.72" (831 mm)	---
MC4500REPE15B		---	1.70" (43 mm)
MC4500REPE18TC	18" (450 mm)	29.36" (746 mm)	---
MC4500REPE18TW			
MC4500REPE18BC		---	1.97" (50 mm)
MC4500REPE18BW			
MC4500REPE24TC	24" (600 mm)	23.05" (585 mm)	---
MC4500REPE24TW			
MC4500REPE24BC		---	2.26" (57 mm)
MC4500REPE24BW			
MC4500REPE30BC	30" (750 mm)	---	2.95" (75 mm)
MC4500REPE36BC	36" (900 mm)	---	3.25" (83 mm)
MC4500REPE42BC	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

1503-1507 NORTH EAST STREET
GREENVILLE, SC
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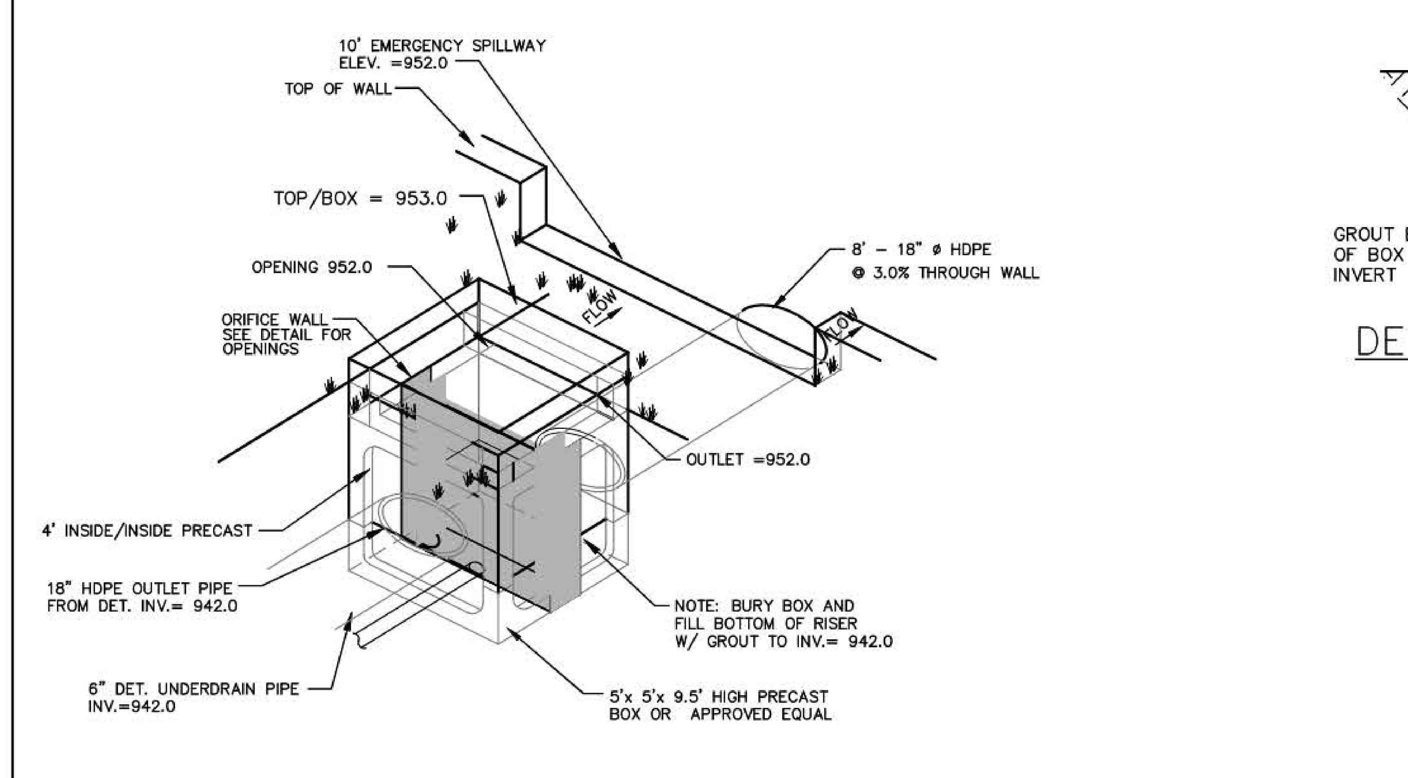
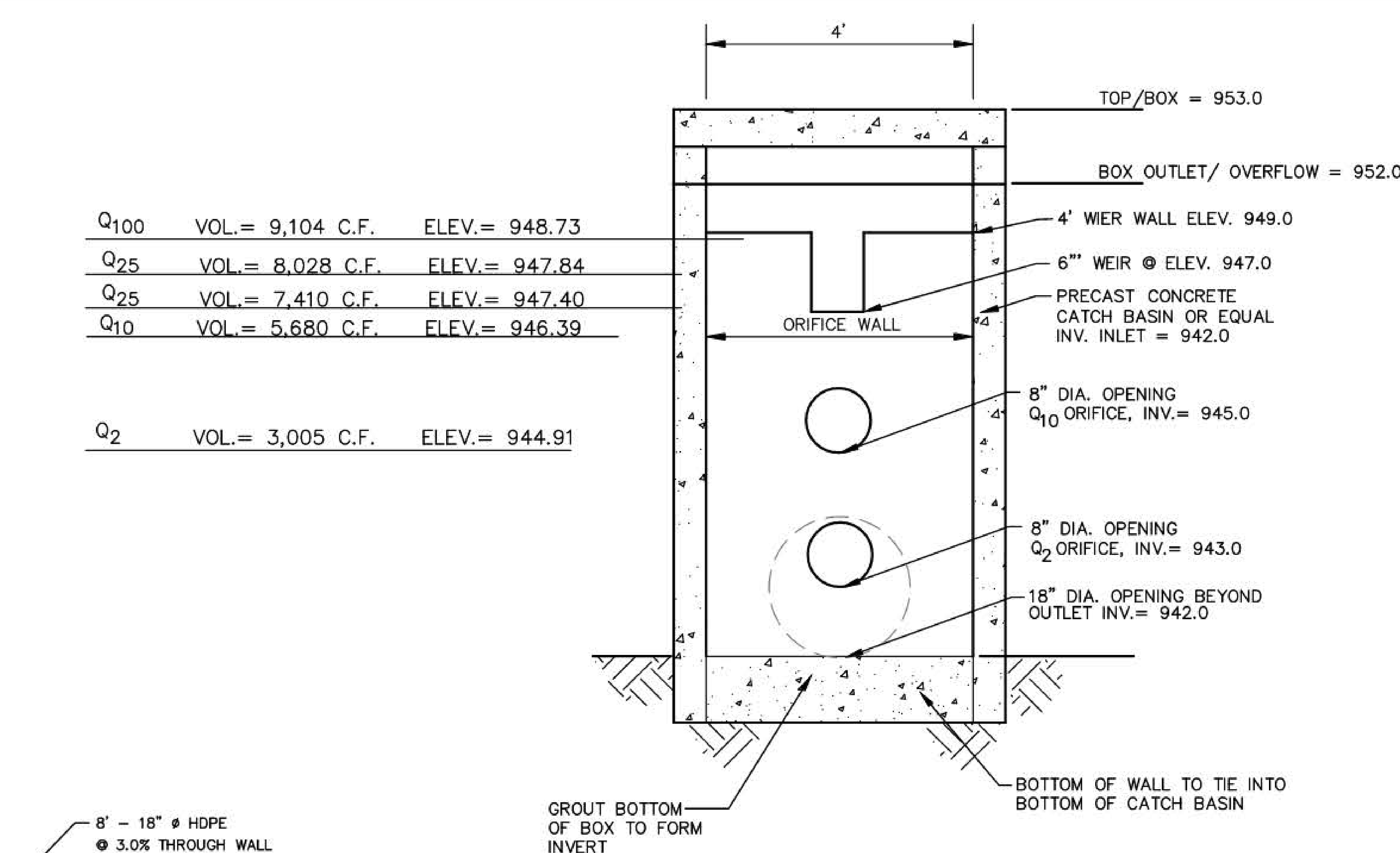
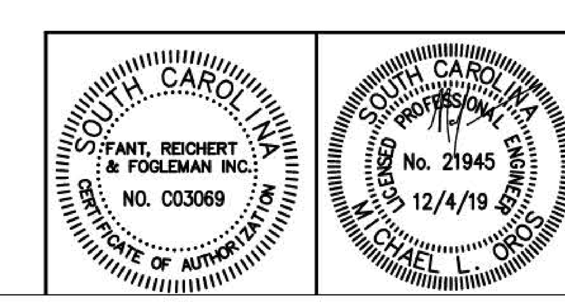
SHEET 5 OF 5



DETENTION BASIN OUTLET STRUCTURE
N.T.S.



DETENTION BASIN ORIFICE WALL



OVERBROOK VILLAGE

UNDERGROUND DETENTION DETAILS

NO.	DATE	REVISIONS	CKD BY
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ENGINEERING & SURVEYING
25 WOODS LAKE ROAD SUITE 705 GREENVILLE, SC 29607 PH: (864) 271-8633

SCALE: NTS | DATE: 12-4-19 | PROJECT NO. 19095
DWG. #: 17 OF 17 | DWN: EKN | DES: MLO

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General Landscape Notes

City of Greenville SC
Department of Parks and Recreation

The following notes, conditions, including landscape plan and specifications are to be strictly followed in order to receive a final Certificate of Occupancy or Final Inspection. Any changes in the species, quantity, or size must be approved prior to installation by the city's Senior Landscape Architect. The plant material and sizes are minimums and will be measured for compliance at the time of Final Inspection.

1. (City Code Section 19-6.2.1 E) Maintenance . The owner of the property where the landscaping is required shall be responsible for maintenance and protection of all plant and screening material for the duration of the premises.

(A) All landscape material, maintenance, and management shall conform to the minimum standards of the American National Standards Institute (ANSI) A300 Standards for Tree Care Operations.

(B) Landscaped areas shall be maintained in good condition and kept free of all dead plants, weeds, or debris. Failure to maintain or replace dead, damaged or diseased plant material or to repair broken wall or fence within 30 days of notification shall constitute a violation. Replaced plant material must be in compliance with the minimum size, spacing, and quality standards Section 19-6-2.

(C) Trees may not be trimmed severely beyond the standards of ANSI A300 Standards for Tree Care Operations. If aggressive trimming occurs, the property will be considered nonconforming and required to replace the trees with trees meeting the minimum size, spacing and quality standards of Section 19-6-2. " Crape Murder" shall be considered a violation and replacements will be enforced

(D) Buffer and screening material shall be maintained to meet the minimum size, spacing and quantity standards of table 19-6.2.1 of this section.

2. (City Code Section 19-6.2.2 A7) General . The entire planting area must be scarified and contain amended on-site soil or a soil mix to a depth of 18 inches.

3. (Code Section 19-6.2.2 B) Minimum planting size/height requirements . All landscaping plant material shall conform to the minimum size or height standards in table 19-6.2-1 at the time of planting as well as meet the standards of ANSIZ60.1 American Standards for Nursery Stock.

(A) For newly planted trees the caliper measurement of the trunk shall be taken six inches above the top of the root flare up to and including four inch caliper size. If the caliper at six inches above the top of the root flare exceeds four inches, the caliper should be measured at 12 inches above the top of the root flare.

(B) For existing trees the diameter measurement of the trunk shall be taken at DBH (diameter breast height) four and one -half feet above the average ground level.

4. (City Code Section 19-6.3.2 B6) Tree protection and replacement. If the minimum protection standards are not met, or if trees are observed by the city to be injured or threatened, they may be deemed ineligible for meeting these requirements and additional trees will be required.

5. (City Code Section 19-6.3.2. C3) Protection and replacement of heritage and historic trees . No construction, grading, equipment or material storage, or any other activity shall be allowed within the critical rootzone of a heritage or historic tree unless the steps taken to adequately ensure the health of the tree are submitted in writing to the city's Senior Landscape Architect for approval.

6. (City Code Section 19-6.3.2 C4) Protection and replacement of heritage and historical trees. Heritage or historical trees shall not be cut, removed, pushed over, killed, harmed,trimmed, sprayed, or destroyed without written approval from the city's Senior Landscape Architect.

7. (City Code Section 19-6.3.3 A) Tree protections during construction

(A) Before grading begins, fencing shall be required, at a minimum, around the critical root zone of all trees that are to be preserved. Additional fencing shall be required around the critical root zone of trees on adjacent properties or located in the right-of-way.

(B) Type of fencing: All fencing required by this section shall be a minimum of four feet high and of durable construction; such as wood or metal fencing.

(C) Signs. Signs shall be installed on the protective fence visible on all sides of the fenced in area (minimum on each side and/or every 300 linear feet) The size of each sign must be at a minimum of one foot x one and one-half feet and shall contain the following: " TREE PROTECTION ZONE: KEEP OUT"

(D) Activity within a fenced protection zone. No construction, grading, parking, equipment, or material storage, or any other activity shall be allowed within the fenced area.

(E) Maintenance of fencing. For existing trees to be counted towards tree credits, they must be protected during the entire development period, beginning prior to commencement of site work. Encroachment within the tree protection zone is permitted too allow the landscape contractor access to complete the site work.

(F) Critical root zone. The minimum area beneath a tree that must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The critical root zone is typically represented by a concentric circle centering on the tree trunk with a radius equal in feet to one (1) times the number of inches of the trunk diameter; (CRZ in ft = 1 x Diameter inches)

8. (City Code Section 19-6.3.3 B) Tree protection during construction . Encroachment within the critical root zones of any tree being preserved to comply with required tree credits, or within designated tree protection zones, shall occur only in rare instances. If such an encroachment is anticipated , a written request must be made to the city's Senior Landscape Architect for allowance of encroachment. Request must detail preventative measures taken. If approved the following preventative measures shall be employed:

(1) Clearing activities. The removal of trees adjacent to a tree protection zone can cause inadvertent damage to the protected trees. Whenever possible, it is advisable to cut minimum two foot trenches along the limits of land disturbance, so as to cut, rather than tear, root. Trenching is required for the protection of historic and heritage trees.

(2) Soil compaction. Where compaction might occur due to traffic or materials through the tree protection zone, the area must first be mulched with a minimum four inch layer of processed bark or wood chips or a six inch layer of pinestraw. Equipment or materials storage shall not be allowed within tree protection areas.

9. (City Code Section 19-6.4) Irrigation .If irrigation is provided, a rain sensor must be installed such that it shuts of irrigation system when up to $\frac{1}{4}$" of rain has fallen.

10. The bicycle rack specification and detail is to be installed as shown on plan unless written approval is granted by the city's Senior Landscape Architect. prior to installation

11. For landscape or bicycle parking questions, contact Jeff Waters 864-467-4350 jwater@greenvillesc.gov

LANDSCAPE ORDINANCE REQUIREMENTS

STREET TREE PLANTING:

CITY OF GREENVILLE REQUIRES:
1 SHADE TREE PER 40 LF OF STREET FRONTAGE

CHESTNUT ST. = 285LF / 40 = 7 SHADE TREES REQUIRED
PROVIDED: 8 UNDERSTORY TREES (DUE TO OVERHEAD POWER) AND 3 SHADE TREES

EAST NORTH STREET = 242 LF / 40 = 6 SHADE TREES REQUIRED
PROVIDED: 12 UNDERSTORY TREES (DUE TO OVERHEAD POWER)

INTERIOR PARKING LOT LANDSCAPING:

PARKING LOT SIZE:	29,420
1 SHADE TREE PER 2000 SQ. FT	15 TREES
8 SHRUBS PER 2000 SQ. FT	118 SHRUBS

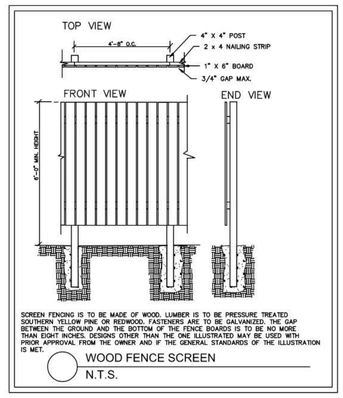
STREET BUFFER YARD :

A PROPERTY SHALL HAVE A CONTINUOUS EVERGREEN LANDSCAPE BUFFER ALONG THE ENTIRE STREET FRONTAGE.

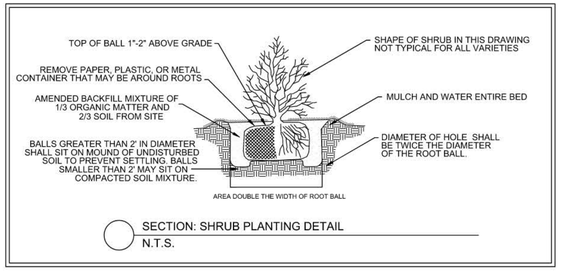
DESIGN STANDARDS FOR MULTI-FAMILY :

BUILDING FOUNDATIONS SHALL BE LANDSCAPED ALONG THE FULL LENGTH AND REAR FACADE

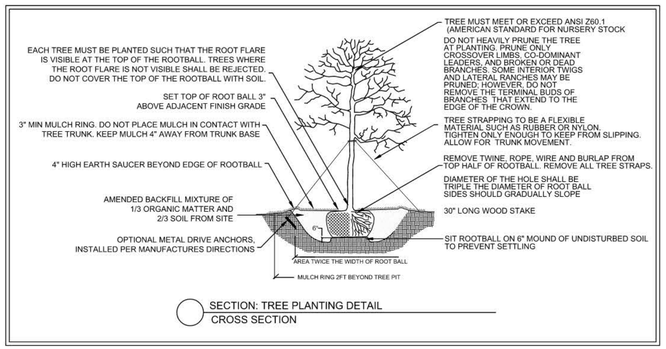
A BUFFER YARD WITH A MINIMUM WIDTH OF FIVE FEET TO INCLUDE A SOLID FENCE MEASURING AT LEAST 6' IN HEIGHT, AND CANOPY TREES WITH A MAXIMUM ON-CENTER SPACING OF 20'



WOOD FENCE SCREEN
N.T.S.



SECTION: SHRUB PLANTING DETAIL
N.T.S.

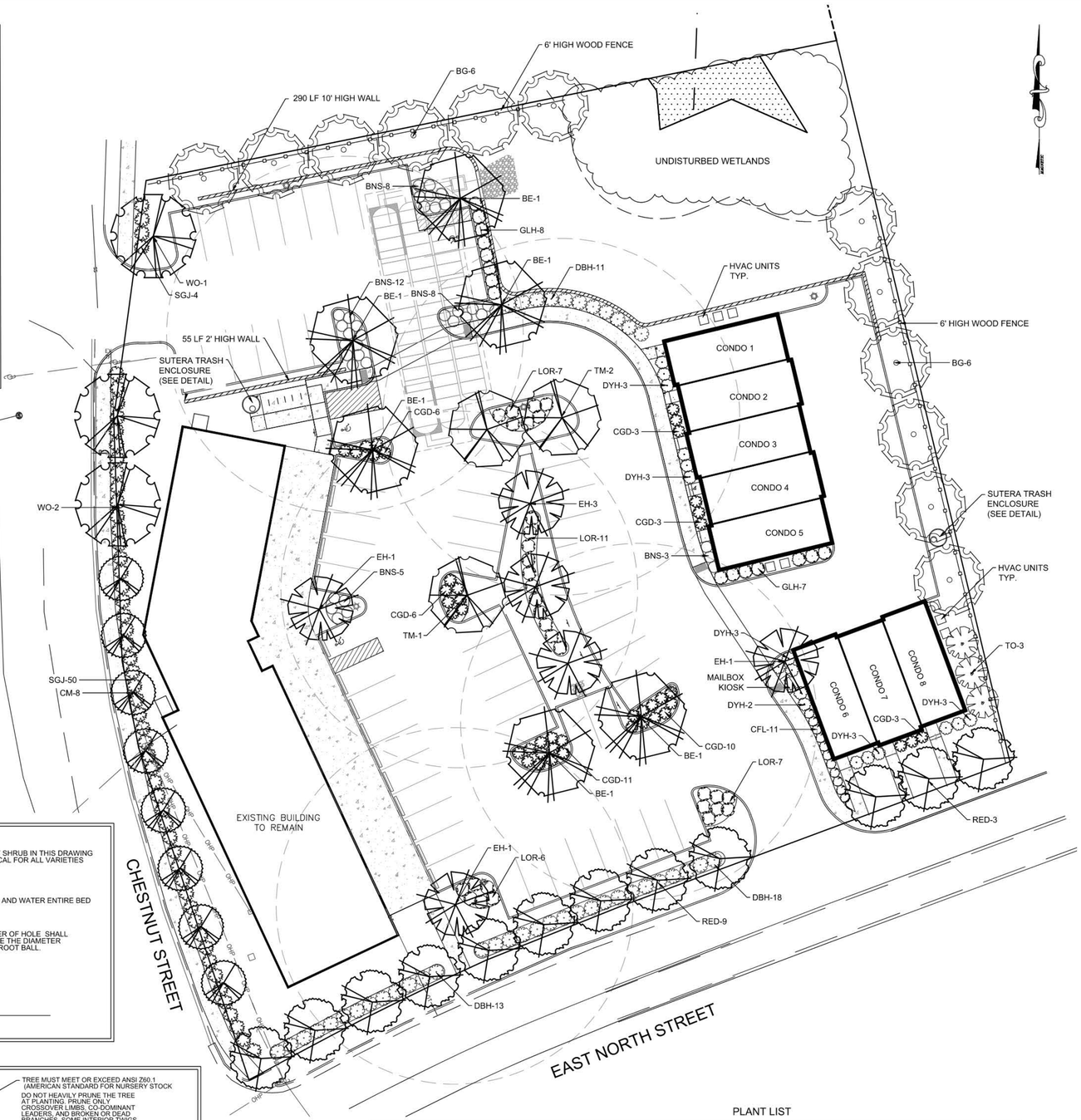


SECTION: TREE PLANTING DETAIL
CROSS SECTION

CITY OF GREENVILLE TREE CREDITS

THE CITY OF GREENVILLE REQUIRES 15 TREE CREDITS PER ACRE, EXCLUDING BUILDING FOOTPRINTS

TOTAL SITE				
ACRES	1.7 ACRES			
BUILDING ACRES	0.27 ACRES			
SUBJECT CREDIT AREA	1.43 ACRES			
REQUIRED CREDITS	21.45 TREE CREDITS			
TREES SAVED				
Quantity	Tree Species	Tree Caliper	Credit Units	Credits
0		Choose Caliper	0	0
			Total Credits	0
TREES PLANTED				
Quantity	Tree Species	Tree Caliper	Credit Units	Credits
5	Elm	3 in	0.9	4.5
12	Blackgum	3 in	0.9	10.8
6	Hornbeam	3 in	0.9	5.4
3	Maple	3 in	0.9	2.7
3	Oak	3 in	0.9	2.7
12	Redbud	3 in	0.9	10.8
			Total Credits	36.9
Existing Credits	0			
Planted Credits	36.9			
Required Credits	21.45			
Post Development Credits	15.45 TREE CREDITS			



PLANT LIST

KEY		COMMON NAME	BOTANICAL NAME	MINIMUM SIZE AT TIME OF PLANTING
BE	5	BOSQUE ELM	ULMUS PARVIFOLIA 'UPMTF'	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
BG	12	BLACK GUM	NYSSA SYLVATICA	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
CM	8	CRAPE MYRTLE	LAGERSTROEMIA INDICA	2" CALIPER, 3 CANE MIN,. 10' HEIGHT, 5' CLEAR TRUNK
EH	6	EUROPEAN HORNBEAM	CARPINUS BETULA 'FASTIGATA'	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
RED	12	REDBUD	CERCIS CANADENSIS	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
TM	3	TRIDENT MAPLE	ACER BUERGERIANUM	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
WO	3	WILLOW OAK	QUERCUS PHELLOS	3" CALIPER x 14' HEIGHT, 6' CLEAR TRUNK
BNS	36	BIRD'S NEST SPRUCE	PICEA ABIES 'NIDIFORMIS'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
CFL	11	CRIMSON FIRE LOROPETALUM	LOROPETALUM CHINENSE 'CRIMSON FIRE'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
CGD	42	CINNAMON GIRL DISTYLIUM	DISTYLIUM CINNAMON GIRL pp#27631	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
DBH	42	DWARF BURFORD HOLLY	ILEX CORNUTA 'BURFORDII NANA'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
DYH	17	DWARF YAUPON HOLLY	ILEX VOMITORIA 'NANA'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
GLH	15	GREEN LUSTRE HOLLY	ILEX CRENATA 'GREEN LUSTRE'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
LOR	31	LOROPETALUM	LOROPETALUM CHINENSE 'RUBY'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
SGJ	54	SEA GREEN JUNIPER	JUNIPERUS CHINENSIS 'SEA GREEN'	3 GALLON / MINIMUM 18" HEIGHT AT INSTALLATION
TO	3	TEA OLIVE	OSMANTHUS x 'FORTUNEI'	6' HEIGHT, PLANT SPACING 5' ON-CENTER

MULCH HARDWOOD- 4" DEPTH

NOTES:
**PLANT QUANTITES SHOWN ARE FOR CONTRACTOR'S CONVENIENCE ONLY.
CONTRACTOR IS TO VERIFY ALL QUANTITIES PRIOR TO BIDDING AND INSTALLATION

McLeod
Landscape Architects, LLC
100 W. Washington Street
Suite 400
Greenville, SC 29601
(864) 370-3635

SEAL

REVISED PER SITE CHANGE
GMA 12/04/2019
SUBMITTED FOR APPROVAL
GMA 11/15/2019
REVISIONS

OVERBROOK VILLAGE
GREENVILLE, SOUTH CAROLINA
LANDSCAPE COMPLIANCE PLAN

THIS DOCUMENT IS THE PROPERTY OF McLEOD LANDSCAPE ARCHITECTS,LLC. THE UNAUTHORIZED USE, REPRODUCTION, OR COPYING OF THIS DOCUMENT IS STRICTLY PROHIBITED AND IS TO BE RETURNED UPON REQUEST.

DRAWN
GMA
CHECKED
JPMc
DATE
NOVEMBER, 2019
SCALE
1"=20
JOB. NO.
19052
SHEET
L-1

ELECTRICAL SPECIFICATIONS

1. DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW APPROXIMATE LOCATIONS. ELECTRICAL WORK SHALL NOT INTERFERE WITH CLEARANCES REQUIRED FOR GENERAL AND MECHANICAL CONSTRUCTION. ANY CORRECTIONS WILL BE MADE BY THE ELECTRICAL CONTRACTOR AT NO COST TO THE OWNER.
2. ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE IBC AND THE NATIONAL ELECTRICAL CODE, LATEST EDITIONS, AND ALL APPLICABLE STATE AND LOCAL CODES. ALL WORK SHALL BE ACCOMPLISHED IN A NEAT AND PROFESSIONAL MANNER.
3. ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE U/L LABEL.
4. ALL TERMINALS SHALL BE RATED FOR 75 DEGREES CELSIUS COPPER OR ALUMINUM WIRE.
5. LIGHTING FIXTURES SHALL BE FURNISHED COMPLETE IN ALL RESPECTS PER FIXTURE SCHEDULE. INSTALL ALL LIGHT FIXTURES WITH LAMPS AS REQUIRED.
6. ALL WIRING SHALL BE CONCEALED WHERE POSSIBLE AND INSTALLED IN SUITABLE RACEWAYS. SCHEDULE 40 PVC SHALL BE USED UNDERGROUND.
7. ALL WIRE SHALL BE SINGLE CONDUCTOR STRANDED, COPPER SIZED AS INDICATED ON THE DRAWINGS.
8. INSULATION OF WIRE SHALL BE 75 DEGREES CELSIUS (THHN, THWN), 600 VOLT.
9. CONTRACTOR SHALL CONFIRM AND ROUTE THE PROPER QUANTITY OF WIRES AND SIZE OF CONDUIT TO FIT THE APPLICATION AND THE CIRCUITRY INDICATED.
10. PROVIDE UPDATED TYPEWRITTEN CIRCUIT DIRECTORIES FOR ALL PANELS MODIFIED DURING CONSTRUCTION.

ELECTRICAL SYMBOLS LEGEND

- ⊠ SINGLE HEAD PARKING LIGHT FIXTURE.
- ▬ ELECTRICAL PANEL, 208/120V, MOUNTING AS INDICATED. COORDINATE EXACT LOCATION IN FIELD.
- ⌒ BRANCH CIRCUIT WIRING CONCEALED UNDERGROUND.

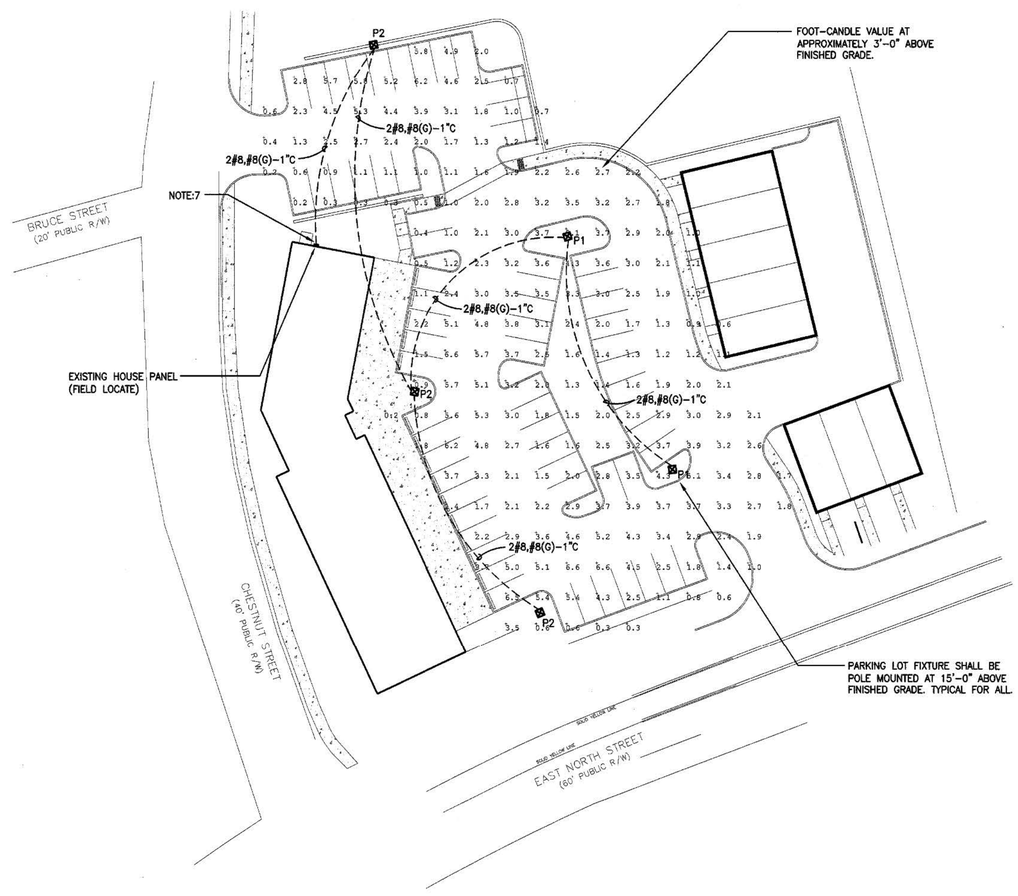
GENERAL LIGHTING SCHEDULE NOTES:

1. ALL FIXTURES TO BE U.L. LISTED. ALL EXTERIOR FIXTURES SHALL HAVE U.L. WET LABEL OR DAMP LABEL AS REQUIRED BY LOCATION. CONTRACTOR SHALL VERIFY BEFORE INSTALLING FIXTURE.
2. CONTRACTOR SHALL PROVIDE ALL MOUNTING ACCESSORIES & HARDWARE REQUIRED FOR A COMPLETE SYSTEM.

PARKING LOT LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	FIXTURE DESCRIPTION	MANUFACTURER	LAMPS	FIXTURE WATTAGE	VOLTAGE
P1	PARKING LOT LIGHT FIXTURE, LED, BRONZE FINISH, TYPE V DISTRIBUTION, UL WET LOCATION, INTEGRAL PHOTOCELL. FURNISH AND INSTALL WITH LIGHT POLE PER DETAIL BELOW.	US ARCH: RZR-PT2-PLED-VAQ-M-40LED-1050mA-NW-PC208V	LED	134	208
P2	PARKING LOT LIGHT FIXTURE, LED, BRONZE FINISH, TYPE IV DISTRIBUTION, HOUSE SIDE SHIELD, UL WET LOCATION, INTEGRAL PHOTOCELL. FURNISH AND INSTALL WITH LIGHT POLE PER DETAIL BELOW.	US ARCH: RZR-PT2-PLED-IV-40LED-1050mA-NW-HS-PLED-PC-208V	LED	134	208

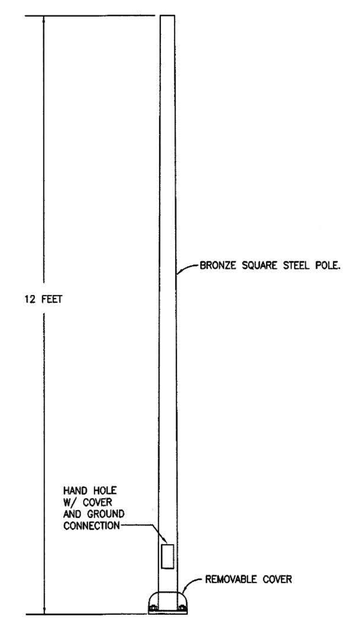
Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT	Illuminance	FC	2.64	6.6	0.2	13.20	33.00



1/E1 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

PLAN NOTES:

1. CONTRACTOR SHALL VERIFY SITE LAYOUT WITH ARCHITECTURAL, CIVIL, AND LANDSCAPE PLANS AND MAKE MINOR ADJUSTMENTS TO FIXTURE PLACEMENT TO ACCOMMODATE DRAINAGE, PLANTINGS, ETC.
2. INSTALL ALL CONDUIT AT DEPTHS AS SPECIFIED IN N.E.C. 300.5.
3. ALL EXPOSED CONDUITS SHALL BE RGC.
4. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITY LINES PRIOR TO ANY UNDERGROUND DIGGING OR TRENCHING.
5. CONTRACTOR SHALL COORDINATE HEAVILY WITH ALL OTHER DISCIPLINES DURING SITE EXCAVATION TO INSURE THERE ARE NO CONFLICTS WITH UTILITY CONDUIT ROUTING.
6. INSTALL POLES A MINIMUM OF 3'-0" BACK FROM CURBS. POLES SHALL BE INSTALLED COMPLETE PER MANUFACTURERS RECOMMENDATIONS.
7. CONTRACTOR SHALL POWER NEW LIGHTING FIXTURES FROM EXISTING HOUSE PANEL. FURNISH AND INSTALL A NEW 2P-20A CIRCUIT BREAKER. BREAKER SHALL MATCH EXISTING MANUFACTURE TYPE. INSTALL NEW 2P-20A CIRCUIT BREAKER IN AN EXISTING BREAKER SPACE IN EXISTING HOUSE PANEL, FIELD VERIFY.



3/E1 PARKING LOT POLE DETAIL
SCALE: N.T.S.

CAROLINA ENGINEERING SOLUTIONS, LLC
8 WEST MCBEE AVE. SUITE 203
GREENVILLE, SOUTH CAROLINA 29601
PH: (864) 370-9355 FAX: (864) 370-9505
WWW.CAROLINAENGR.COM

SOUTH CAROLINA CAROLINA ENGINEERING SOLUTIONS LLC C02825 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 21651 11/19/19 JAMES D. JOYE

A NEW PARKING LOT LIGHTING FOR:
1503-1507 E. NORTH STREET SITE
GREENVILLE, SOUTH CAROLINA

JOB. NO. 19240

© COPYRIGHT 2019 CAROLINA ENG. SOLUTION

DATE: 11/20/2019
REV.:

E1

DWN. BY: REA

METAL CAP FLASHING, DARK BRONZE

ARRISCRAFT RENAISSANCE CAFE
CORNICE AND ACCENT PIECES

MODULAR BRICK. MERIDIAN BRICK 421 BROWN WIRECUT FLASHED

FIBER CEMENT PANELING
PAINT SW 2808 ROOKWOOD DARK BROWN

PAINT SW 2802 ROOKWOOD RED

ARRISCRAFT RENAISSANCE
MASONRY UNITS, CAFE

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

THREE UNIT BUILDING
FRONT ELEVATION
16 DEC 2019

METAL CAP FLASHING, DARK BRONZE

MODULAR BRICK. MERIDIAN BRICK 421 BROWN WIRECUT FLASHED

ARRISCRAFT RENAISSANCE CAFE
CORNICE AND ACCENT PIECES

FIBER CEMENT PANELING
PAINT SW 2808 ROOKWOOD DARK BROWN

ARRISCRAFT RENAISSANCE
MASONRY UNITS, CAFE

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

THREE UNIT BUILDING
LEFT ELEVATION
16 DEC 2019

METAL CAP FLASHING, DARK BRONZE

ARRISCRAFT RENAISSANCE CAFE
CORNICE AND ACCENT PIECES

MODULAR BRICK. MERIDIAN BRICK 421 BROWN WIRECUT FLASHED

FIBER CEMENT PANELING
PAINT SW 2808 ROOKWOOD DARK BROWN

ARRISCRAFT RENAISSANCE
MASONRY UNITS, CAFE

PAINT SW 2802 ROOKWOOD RED

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

THREE UNIT BUILDING
REAR ELEVATION
16 DEC 2019

METAL CAP FLASHING, DARK BRONZE

ARRISCRAFT RENAISSANCE CAFE
CORNICE AND ACCENT PIECES

MODULAR BRICK. MERIDIAN BRICK 421 BROWN WIRECUT FLASHED

FIBER CEMENT PANELING
PAINT SW 2808 ROOKWOOD DARK BROWN

ARRISCRAFT RENAISSANCE
MASONRY UNITS, CAFE

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

THREE UNIT BUILDING
RIGHT ELEVATION
16 DEC 2019

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

FIVE UNIT BUILDING
FRONT ELEVATION
16 DEC 2019

KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

FIVE UNIT BUILDING
REAR ELEVATION
16 DEC 2019

METAL CAP FLASHING, DARK BRONZE

MODULAR BRICK. MERIDIAN BRICK 421 BROWN WIRECUT FLASHED

ARRISCRAFT RENAISSANCE CAFE
CORNICE AND ACCENT PIECES

FIBER CEMENT PANELING
PAINT SW 2808 ROOKWOOD DARK BROWN

37'-4" A.F.F.

PAINT SW 2808 ROOKWOOD DARK BROWN

ARRISCRAFT RENAISSANCE MASONRY UNITS, CAFE

KEEL concepts

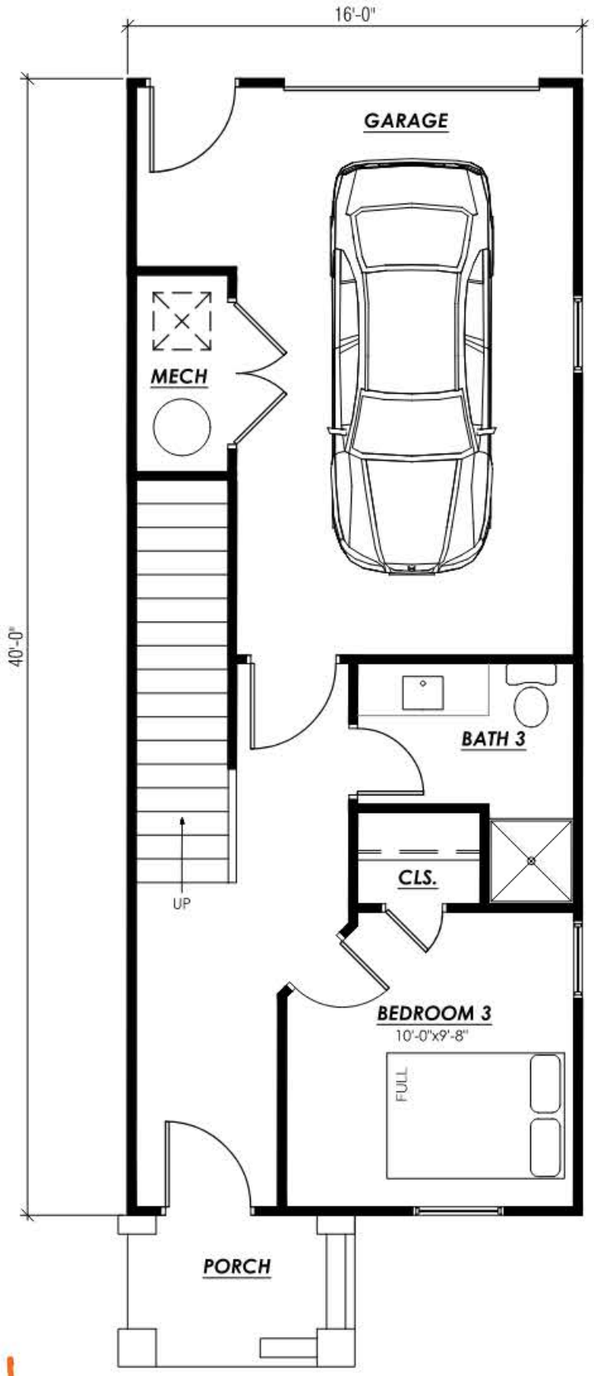
PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

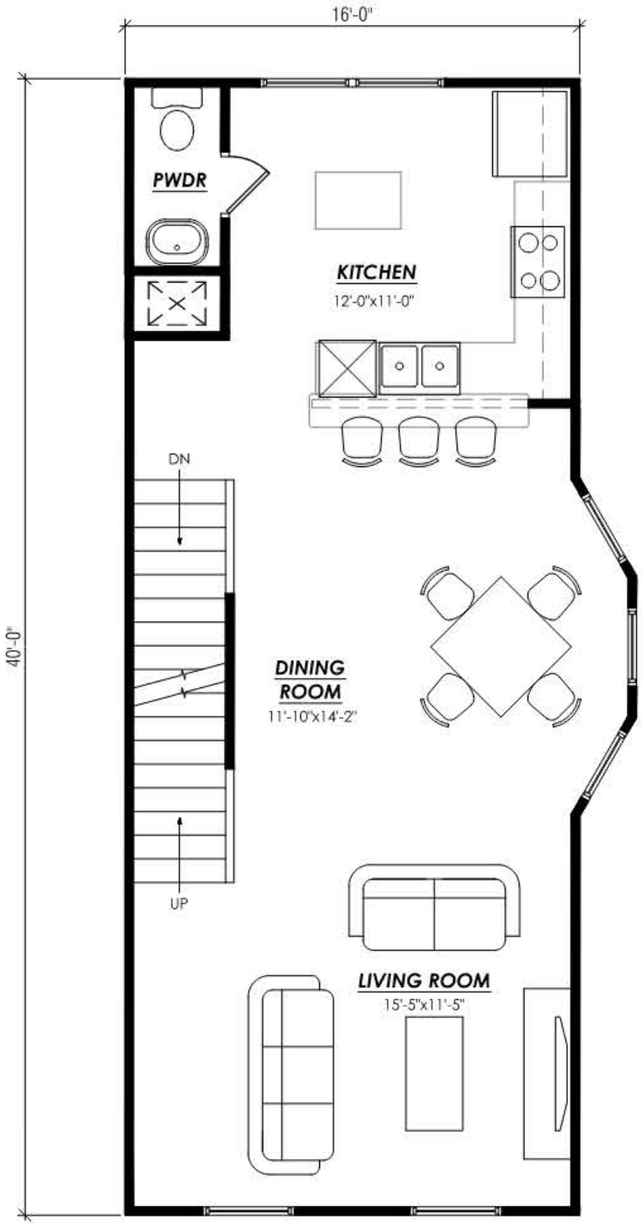
FIVE UNIT BUILDING
SIDE ELEVATION
16 DEC 2019

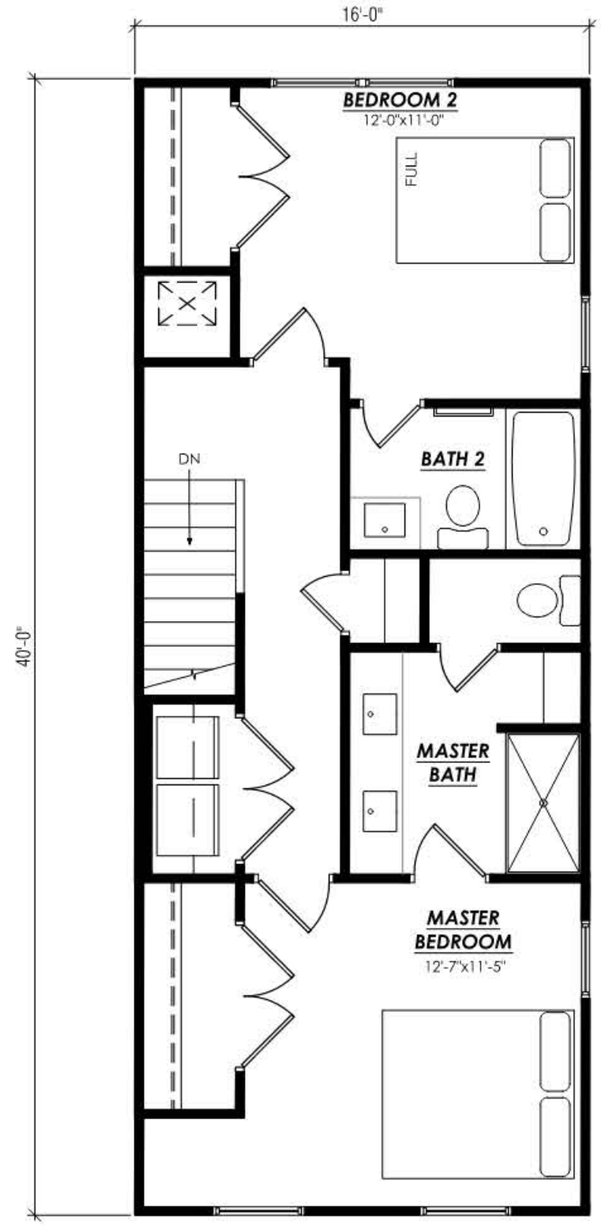
KEEL concepts

PROPOSED TOWNHOUSES
EAST NORTH STREET
GREENVILLE, SC

SCHEME A
PERSPECTIVE
19 NOV 2019



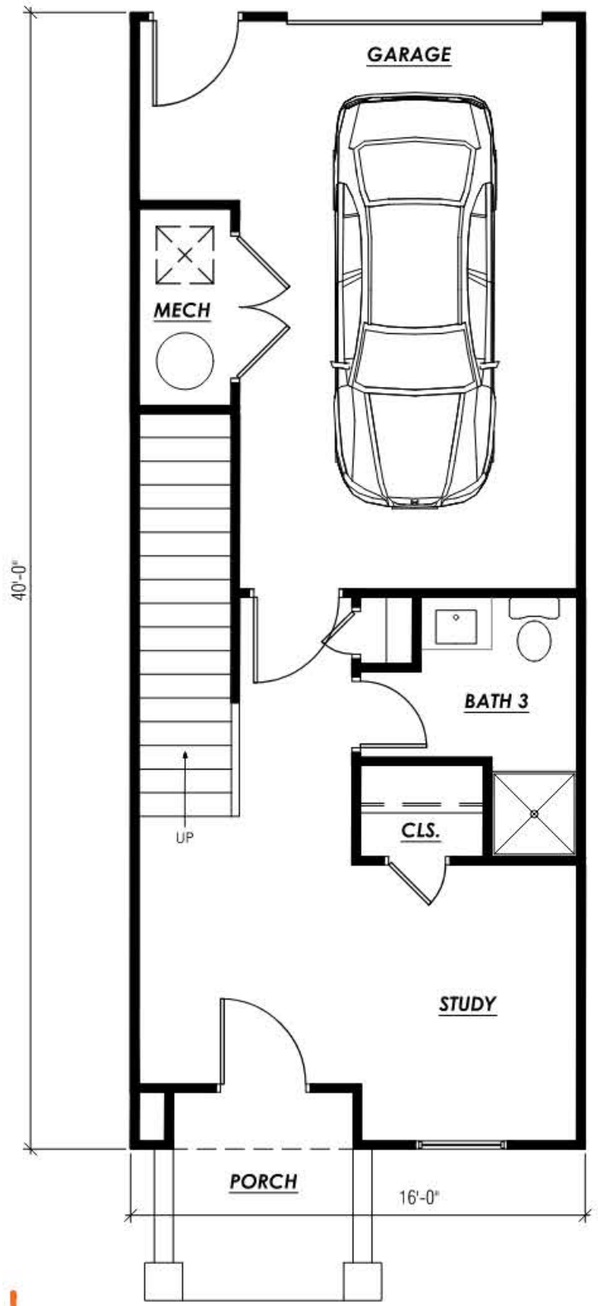


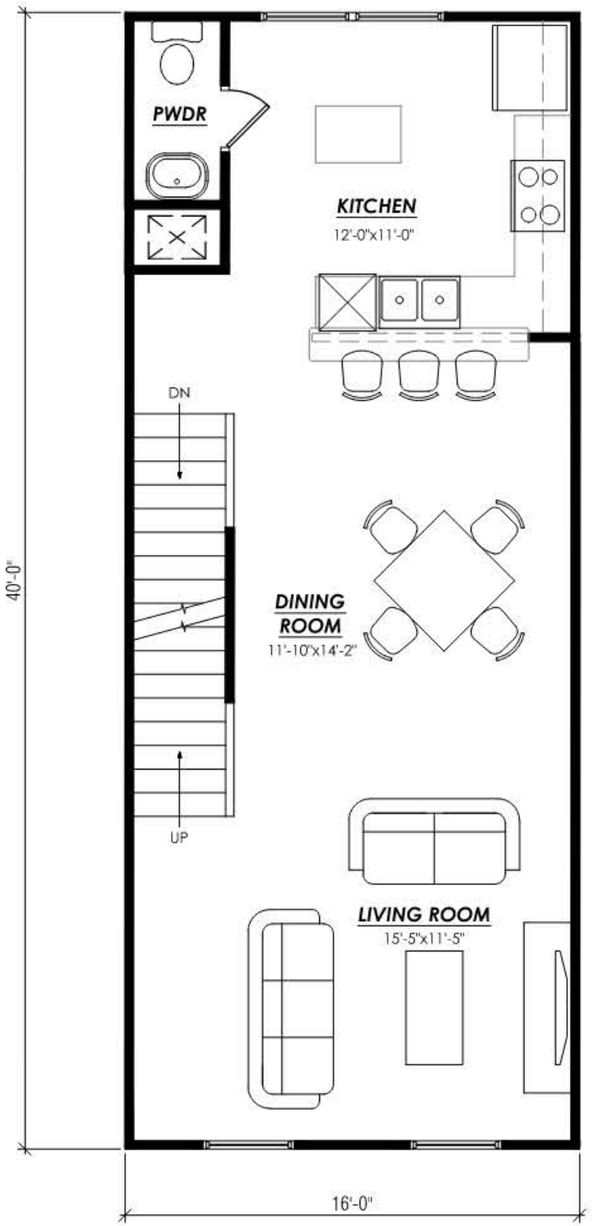


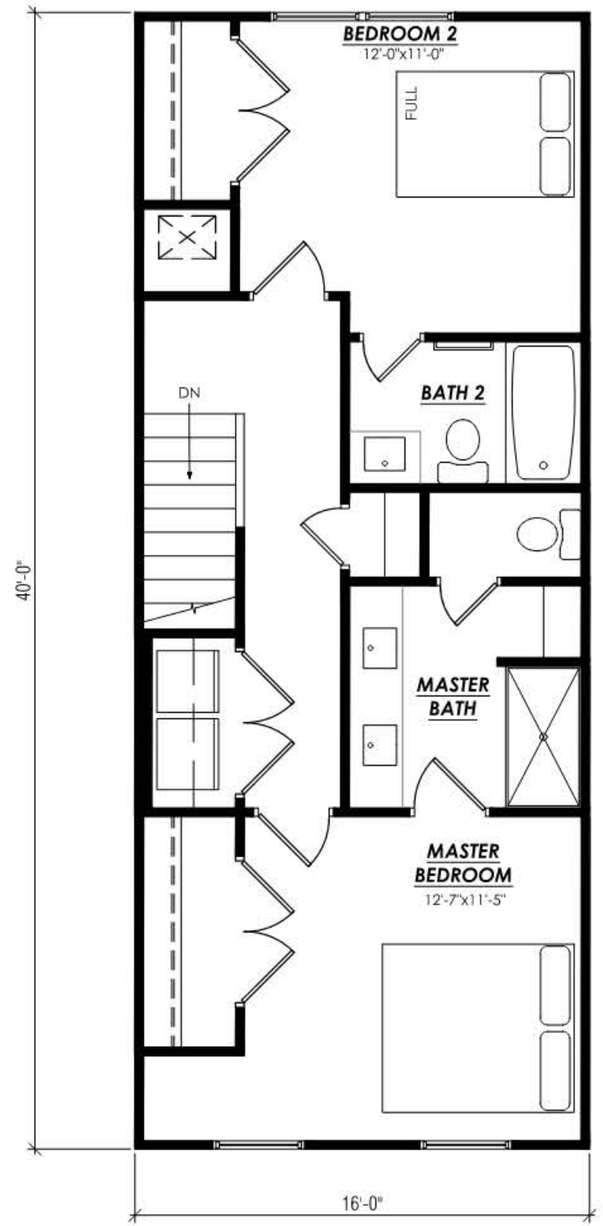
KEEL concepts

EAST NORTH STREET
TOWNHOUSE

END UNITS
3/16" = 1'-0"







KEEL concepts

EAST NORTH STREET
TOWNHOUSE

INTERIOR UNITS
3/16" = 1'-0"

city of greenville

APPLICATION FOR SUBDIVISION

Contact Planning & Development (864) 467-4476

Office Use Only: SD 18-009 M/M
Application# (SD 18-497) Fees Paid $275.00
Date Received 12/16/18 Accepted by MF
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Phillip Day, Chapel Green Venture, LLC	Chapel Green Venture, LLC
*Title:	Member	
*Address:	7 Hindman Drive, Greenville	7 Hindman Drive, Greenville
*State:	SC	SC
*Zip:	29609	29609
*Phone:	864-907-6509	864-907-6509
*Email:	phillip@falconsouthcarolina.com	phillip@falconsouthcarolina.com

PROPERTY INFORMATION

*SELECT SUBDIVISION TYPE: ___Major Preliminary (3-10 lots) ___Major Preliminary (11+ lots) ___Minor (2 lots)

___Major Final (3-10 lots) ___Major Final (11+ lots)

_X_Modification (Major 3+ lots) ___Modification (Minor 2 lots)

*STREET ADDRESS 3896 Laurens Road, Greenville, SC 29607

*TAX MAP #(S) M010040100600

*CURRENT ZONING DESIGNATION S-1

*ORIGINAL APPLICATION # SD 18-497 M, SD 18-009 M

*SUBDIVISION PLAT #_____

*SUBDIVISION NAME Chapel Green Townhomes

*TOTAL ACREAGE 21.1+/-

*# ORIGINAL LOTS 1 into 88 (83 townhome units) *# PROPOSED LOTS 87 (83 townhome units)

INSTRUCTIONS

1. The applicant is encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

   PREAPPLICATION MEETING DATE _____

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.

3. All applications and fees (made payable to the City of Greenville) for designation as a Major Subdivision Preliminary Plat must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A.	Major Subdivision – New (3-10 lots)	$300.00 – Preliminary Plat review, *public hearing required*
		$300.00 – Final Plat review, *administrative review*
B.	Major Subdivision – New (11+ lots)	$550.00 – Preliminary Plat review, *public hearing required*
		$550.00 – Final Plat review, *administrative review*
C.	Major Subdivision – Modification	$150.00 / $275.00 – *public hearing may be required*
D.	Minor Subdivision – New (2 lots)	$300.00 – Summary Plat review, *administrative review*
E.	Minor Subdivision – Modification	$150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

5. Subdivision Plat format and content requirements are reflected in the Administrative Manual at Appendix 'F'. Please refer to ***Section 19-2.3.13, Land Development***, for additional information.

6. **Public Notice Requirements.** Major Subdivision applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

   Major Subdivision applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

   Upon planning commission recommendation, the application item will be scheduled for city council hearing.

   (*To be filled out at time of application submittal*)

   _____ Public Hearing signs are acknowledged as received by the applicant

   _____ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

*APPLICANT SIGNATURE _____

7. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy and one (1) electronic version of the application submittal package.**

8. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

   In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

   If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

_____ *APPLICANT SIGNATURE

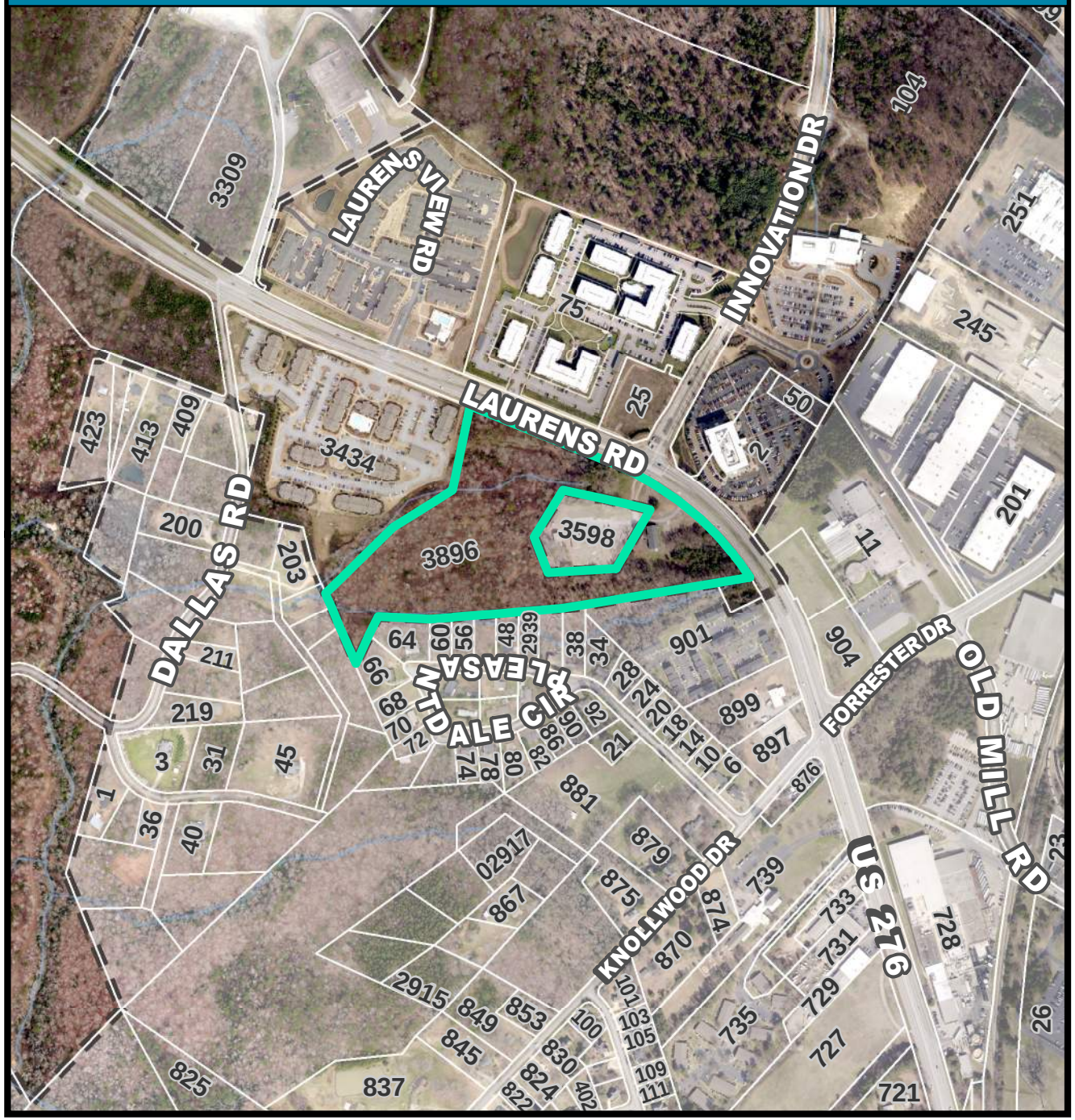
12-16-19 DATE

9. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** X restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

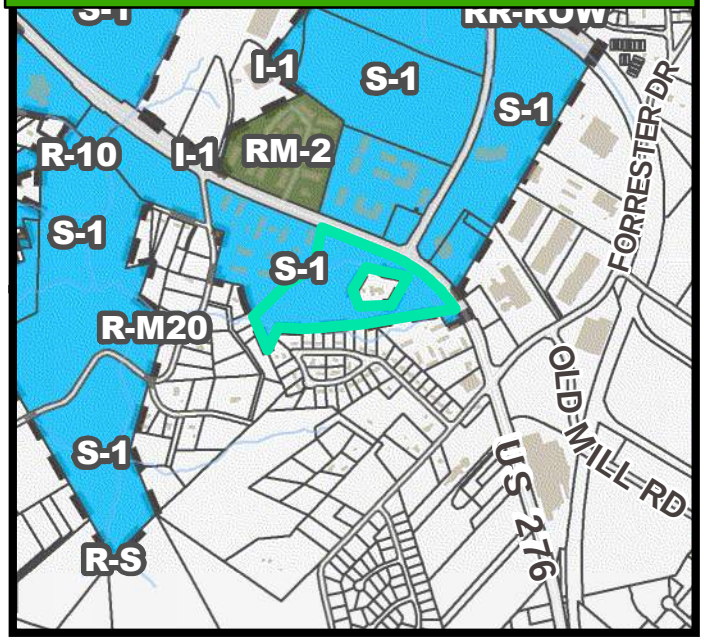
*Signatures	
Applicant	
Date	12-16-19
Property Owner/Authorized Agent	
Date	12-16-19

SD 18-009MM • 3590 LAURENS RD

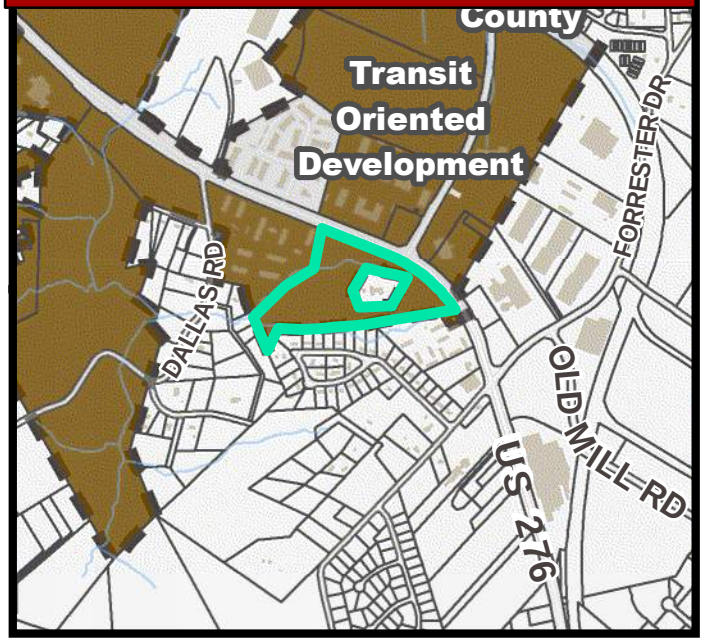
AERIAL VIEW



CURRENT ZONING

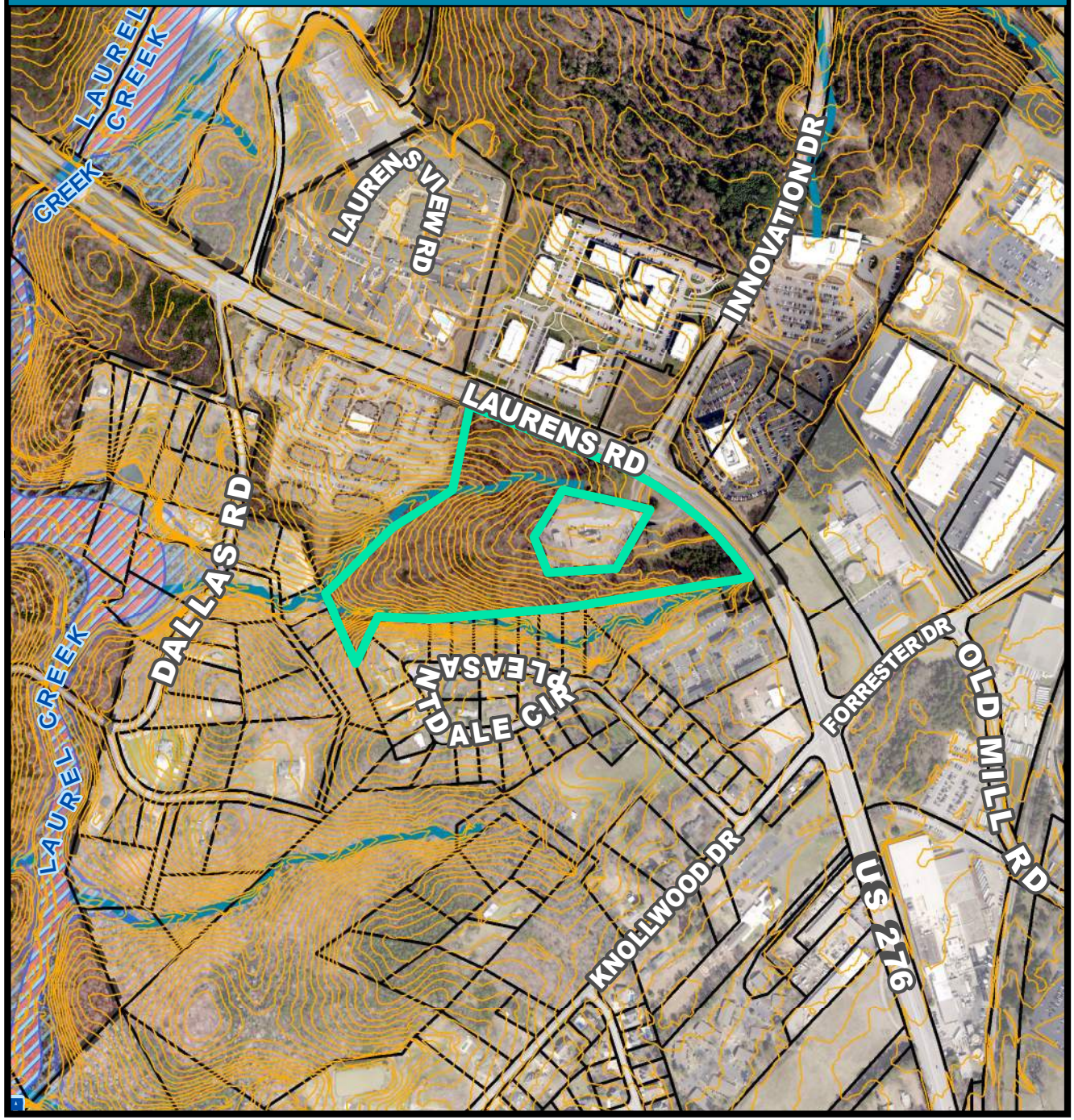


FUTURE LAND USE

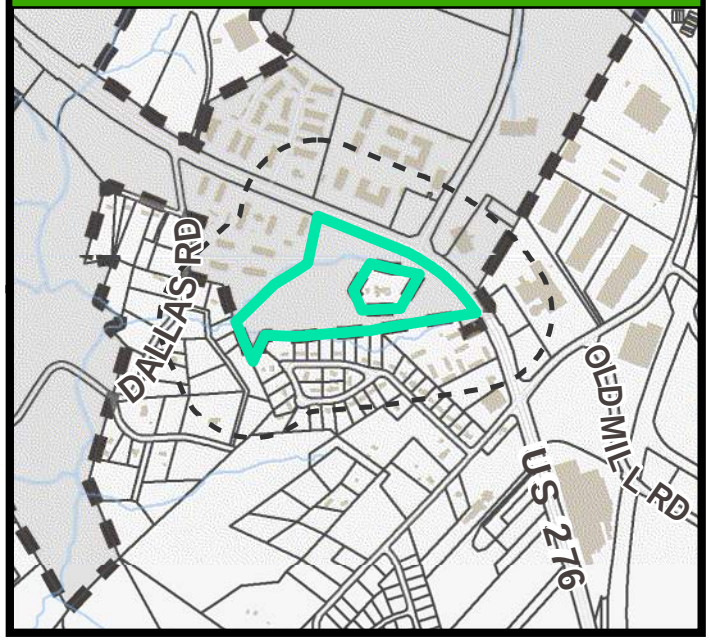


SD 18-009MM • 3590 LAURENS RD

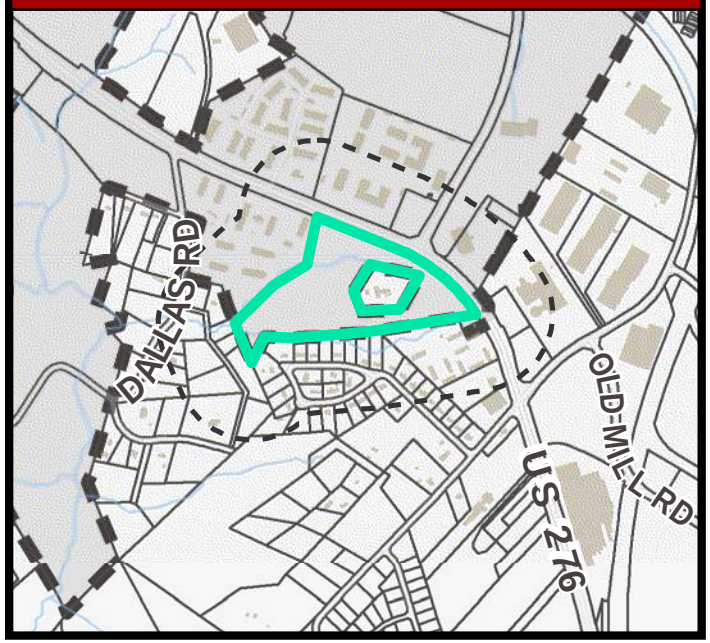
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



SITE DATA:	
TAX MAP #s:	M010040100600
COUNTY / MUNICIPALITY:	CITY OF GREENVILLE
TOTAL SITE ACREAGE:	21.11± ACRES
ZONING:	S-1
TOWNHOME DEVELOPMENT DATA:	
TOTAL BUILD OUT	21.11 ± AC
No. UNITS	83 Units
MAX UNITS PER ACRE	20 UNITS/AC
PROVIDED UNITS PER ACRE	3.93 UNITS/AC
LINEAR FEET OF NEW PRIVATE ROAD	2,632 L.F.
PRIVATE ROAD RIGHT OF WAY	2.69 AC
TOTAL COMMON AREA	12.48 AC

CITY OPEN SPACE REQUIREMENTS:

A MIMINUM OF 200 SQUARE FEET OF OPEN SPACE PER DWELLING SHALL BE PROVIDED, ONE-HALF OF WHICH MAY BE PRIVATE. PRIVATE OPEN SPACE IS DEFINED AS PATIO, PORCH, DECK, BALCONY OR YARD WITH BOUNDARIES SUCH AS LOW WALLS OR LANDSCAPING SEPARATING PRIVATE FROM COMMON OPEN SPACE.

OPEN SPACE CALCULATIONS:	
OPEN SPACE REQUIRED PER CITY (200 SF x 83 = 16,600 SF)	16,600 S.F.
PRIVATE OPEN SPACE PROVIDED	0 S.F.
PUBLIC OPEN SPACE PROVIDED	19,638 S.F.
TOTAL OPEN SPACE PROVIDED	19,638 S.F.
AMOUNT EXCEEDING REQUIRED	3,038 S.F.

ACREAGE SUMMARY
IN ACRES

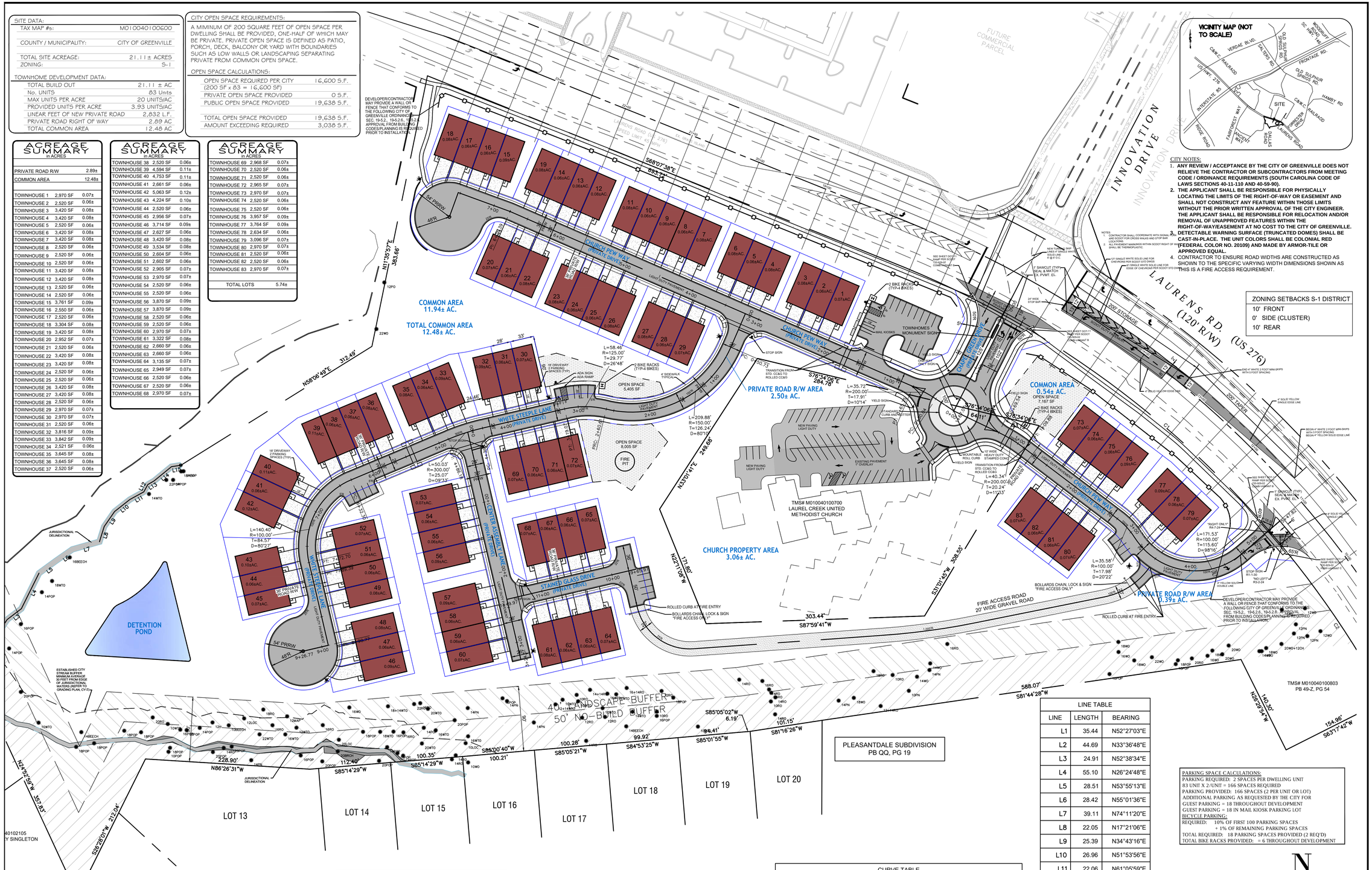
PRIVATE ROAD R/W	2.89±
COMMON AREA	12.48±
TOWNHOUSE 1 2,970 SF	0.07±
TOWNHOUSE 2 2,520 SF	0.06±
TOWNHOUSE 3 3,420 SF	0.08±
TOWNHOUSE 4 3,420 SF	0.08±
TOWNHOUSE 5 2,520 SF	0.06±
TOWNHOUSE 6 3,420 SF	0.08±
TOWNHOUSE 7 3,420 SF	0.08±
TOWNHOUSE 8 2,520 SF	0.06±
TOWNHOUSE 9 2,520 SF	0.06±
TOWNHOUSE 10 2,520 SF	0.06±
TOWNHOUSE 11 3,420 SF	0.08±
TOWNHOUSE 12 3,420 SF	0.08±
TOWNHOUSE 13 2,520 SF	0.06±
TOWNHOUSE 14 2,520 SF	0.06±
TOWNHOUSE 15 3,761 SF	0.09±
TOWNHOUSE 16 2,550 SF	0.06±
TOWNHOUSE 17 2,520 SF	0.06±
TOWNHOUSE 18 3,304 SF	0.08±
TOWNHOUSE 19 3,420 SF	0.08±
TOWNHOUSE 20 2,952 SF	0.07±
TOWNHOUSE 21 2,520 SF	0.06±
TOWNHOUSE 22 3,420 SF	0.08±
TOWNHOUSE 23 3,420 SF	0.08±
TOWNHOUSE 24 2,520 SF	0.06±
TOWNHOUSE 25 2,520 SF	0.06±
TOWNHOUSE 26 3,420 SF	0.08±
TOWNHOUSE 27 3,420 SF	0.08±
TOWNHOUSE 28 2,520 SF	0.06±
TOWNHOUSE 29 2,970 SF	0.07±
TOWNHOUSE 30 2,970 SF	0.07±
TOWNHOUSE 31 2,520 SF	0.06±
TOWNHOUSE 32 3,816 SF	0.09±
TOWNHOUSE 33 3,842 SF	0.09±
TOWNHOUSE 34 2,521 SF	0.06±
TOWNHOUSE 35 3,645 SF	0.08±
TOWNHOUSE 36 3,645 SF	0.08±
TOWNHOUSE 37 2,520 SF	0.06±

ACREAGE SUMMARY
IN ACRES

TOWNHOUSE 38 2,520 SF	0.06±
TOWNHOUSE 39 4,594 SF	0.11±
TOWNHOUSE 40 4,753 SF	0.11±
TOWNHOUSE 41 2,661 SF	0.06±
TOWNHOUSE 42 5,063 SF	0.12±
TOWNHOUSE 43 4,224 SF	0.10±
TOWNHOUSE 44 2,520 SF	0.06±
TOWNHOUSE 45 2,956 SF	0.07±
TOWNHOUSE 46 3,714 SF	0.09±
TOWNHOUSE 47 2,627 SF	0.06±
TOWNHOUSE 48 3,420 SF	0.08±
TOWNHOUSE 49 3,534 SF	0.08±
TOWNHOUSE 50 2,604 SF	0.06±
TOWNHOUSE 51 2,602 SF	0.06±
TOWNHOUSE 52 2,905 SF	0.07±
TOWNHOUSE 53 2,970 SF	0.07±
TOWNHOUSE 54 2,520 SF	0.06±
TOWNHOUSE 55 2,520 SF	0.06±
TOWNHOUSE 56 3,870 SF	0.09±
TOWNHOUSE 57 3,870 SF	0.09±
TOWNHOUSE 58 2,520 SF	0.06±
TOWNHOUSE 59 2,520 SF	0.06±
TOWNHOUSE 60 2,970 SF	0.07±
TOWNHOUSE 61 3,322 SF	0.08±
TOWNHOUSE 62 2,660 SF	0.06±
TOWNHOUSE 63 2,660 SF	0.06±
TOWNHOUSE 64 3,135 SF	0.07±
TOWNHOUSE 65 2,949 SF	0.07±
TOWNHOUSE 66 2,520 SF	0.06±
TOWNHOUSE 67 2,520 SF	0.06±
TOWNHOUSE 68 2,970 SF	0.07±

ACREAGE SUMMARY
IN ACRES

TOWNHOUSE 69 2,968 SF	0.07±
TOWNHOUSE 70 2,520 SF	0.06±
TOWNHOUSE 71 2,520 SF	0.06±
TOWNHOUSE 72 2,965 SF	0.07±
TOWNHOUSE 73 2,970 SF	0.07±
TOWNHOUSE 74 2,520 SF	0.06±
TOWNHOUSE 75 2,520 SF	0.06±
TOWNHOUSE 76 3,957 SF	0.09±
TOWNHOUSE 77 3,764 SF	0.09±
TOWNHOUSE 78 2,634 SF	0.06±
TOWNHOUSE 79 3,096 SF	0.07±
TOWNHOUSE 80 2,970 SF	0.07±
TOWNHOUSE 81 2,520 SF	0.06±
TOWNHOUSE 82 2,520 SF	0.06±
TOWNHOUSE 83 2,970 SF	0.07±
TOTAL LOTS	5.74±



NOTES:
1. CONTRACTOR SHALL COORDINATE WITH SIGNAL POLE LOCATIONS FOR CROSS WALKS AND STOP BAR LOCATIONS
2. ALL PAVEMENT MARKINGS WITHIN SCDOT RIGHT OF WAY SHALL BE THERMOPLASTIC.

CITY NOTES:
1. ANY REVIEW / ACCEPTANCE BY THE CITY OF GREENVILLE DOES NOT RELIEVE THE CONTRACTOR OR SUBCONTRACTORS FROM MEETING CODE / ORDINANCE REQUIREMENTS (SOUTH CAROLINA CODE OF LAWS SECTIONS 40-11-110 AND 40-59-90).
2. THE APPLICANT SHALL BE RESPONSIBLE FOR PHYSICALLY LOCATING THE LIMITS OF THE RIGHT-OF-WAY OR EASEMENT AND SHALL NOT CONSTRUCT ANY FEATURE WITHIN THOSE LIMITS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER. THE APPLICANT SHALL BE RESPONSIBLE FOR RELOCATION AND/OR REMOVAL OF UNAPPROVED FEATURES WITHIN THE RIGHT-OF-WAY/EASEMENT AT NO COST TO THE CITY OF GREENVILLE.
3. DETECTABLE WARNING SURFACE (TRUNCATED DOMES) SHALL BE CAST-IN-PLACE. THE UNIT COLORS SHALL BE COLONIAL RED (FEDERAL COLOR NO. 20109) AND MADE BY ARMOR-TILE OR APPROVED EQUAL.
4. CONTRACTOR TO ENSURE ROAD WIDTHS ARE CONSTRUCTED AS SHOWN TO THE SPECIFIC VARYING WIDTH DIMENSIONS SHOWN AS THIS IS A FIRE ACCESS REQUIREMENT.

ZONING SETBACKS S-1 DISTRICT
10' FRONT
0' SIDE (CLUSTER)
10' REAR

LINE TABLE		
LINE	LENGTH	BEARING
L1	35.44	N52°27'03"E
L2	44.69	N33°36'48"E
L3	24.91	N52°38'34"E
L4	55.10	N26°24'48"E
L5	28.51	N53°55'13"E
L6	28.42	N55°01'36"E
L7	39.11	N74°11'20"E
L8	22.05	N17°21'06"E
L9	25.39	N34°43'16"E
L10	26.96	N51°53'56"E
L11	22.06	N61°05'59"E
L12	11.64	N28°54'23"E
L13	9.94	N59°46'00"E
L14	31.26	N50°40'42"E
L15	13.34	N81°19'32"E
L16	48.91	S27°30'59"W
L17	53.13	S27°30'59"W
L18	20.52	S07°13'30"E

PARKING SPACE CALCULATIONS:
PARKING REQUIRED: 2 SPACES PER DWELLING UNIT
83 UNIT X 2/UNIT = 166 SPACES REQUIRED
PARKING PROVIDED: 166 SPACES (2 PER UNIT OR LOT)
ADDITIONAL PARKING AS REQUESTED BY THE CITY FOR
GUEST PARKING = 18 THROUGHOUT DEVELOPMENT
GUEST PARKING = 18 IN MAIL KIOSK PARKING LOT
BICYCLE PARKING:
REQUIRED: 10% OF FIRST 100 PARKING SPACES
+ 1% OF REMAINING PARKING SPACES
TOTAL REQUIRED: 18 PARKING SPACES PROVIDED (2 REQ'D)
TOTAL BIKE RACKS PROVIDED: = 6 THROUGHOUT DEVELOPMENT

NOTES:
1. THIS PLAT REPRESENTS A TOPOGRAPHIC SURVEY ONLY AND IS NOT THE RESULT OF A BOUNDARY SURVEY. BOUNDARIES SHOWN HEREON WERE COMPILED PER THE REFERENCE PLATS NOTED.
2. IT IS EXPRESSLY UNDERSTOOD THAT HBU SURVEYING & PLANNING, LLC DOES NOT CERTIFY THE PRESENCE OR ABSENCE OF ENVIRONMENTAL CONDITIONS SUCH AS FRESH WATER WETLANDS.
3. AREA CALCULATION DETERMINED BY COORDINATE METHOD.
4. TOPOGRAPHIC SURVEY PREPARED IN CONJUNCTION WITH THIS SURVEY. CONTOUR INTERVAL = 2 FT.
5. ELEVATION DATUM IS NAVD 88 AS DERIVED FROM SCVRS GPS OBSERVATIONS (GEOID 2012).
6. SUBSURFACE UTILITY LOCATIONS SHOWN AS PER SURFACE INDICATIONS AND MARKS BY OTHERS.

PAVEMENT-LEGEND
- LIGHT DUTY SITE PAVEMENT STRUCTURE (2" SURFACE, 6" ABC)
- NORMAL 3,000 PSI BRUSHED CONCRETE 4" SIDEWALK
- HEAVY DUTY 4,000 PSI CONCRETE 6" DRIVEWAY
- SCDOT PAVEMENT STRUCTURE (2" SURFACE, 4" BINDER, 6" BASE)

LEGEND:
- BOUNDARY POINT
- BOUNDARY LINE
- ADJACENT BOUNDARY
- EDGE OF EXISTING PAVEMENT
- EDGE OF EXISTING CONCRETE
- STREET SIGN

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	CH	CB	TAN
C1	487.88'	1342.91'	020°48'57"	485.21'	S49°26'23"E	246.66'
C2	246.49'	1342.91'	010°30'59"	246.14'	S33°46'25"E	123.59'
C3	142.41'	1342.91'	006°04'34"	142.35'	S65°26'47"E	71.27'
C4	60.02'	1342.91'	002°33'39"	60.02'	S61°07'41"E	30.02'
C5	96.46'	189.12'	029°13'24"	95.42'	S08°01'27"W	49.30'
C6	64.98'	129.12'	028°50'02"	64.29'	S07°11'31"W	33.19'

N

0 60' 120'
SCALE: 1" = 60'

NO.	DATE	BY	REVISION
J	04-02-19	DJG	UPDATED PER CITY AND GW REVIEW COMMENTS
K	05-14-19	DJG	UPDATED PER CITY FINAL REVIEW
L	08-21-19	DJG	UPDATED FINAL PLANS TO OWNER-GC-CITY
1	09-24-19	DJG	ADDED WATER-SEWER SERVICES TO UNITS
2	10-24-19	DJG	MINOR DRIVEWAY REVISIONS PER SCDOT
3	12-16-19	DJG	MAJOR SUBDIVISION MODIFICATION TO CITY
H	01-23-19	DJG	REVISED PLANS TO OWNER AND CITY PERMIT/BID

GRAY
ENGINEERING CONSULTANTS
132 PILGRIM ROAD · GREENVILLE, SC 29607
PH: (864) 297-3027 · FAX: (864) 297-5187
WWW.GRAYENGINEERING.COM
· SC C.O.A.# Condo0 · NC C.O.A.# C-1217 · GA C.O.A.# PE0000341 · TN C.O.A.# 0410819 ·

SOUTH CAROLINA PROFESSIONAL ENGINEER CERTIFICATE OF AUTHORIZATION
GRAY ENGINEERING CONSULTANTS, INC. No. C00080

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 19812 RODNEY C. GRAY

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND THE PROPERTY OF GRAY ENGINEERING CONSULTANTS, INC. AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT AUTHORIZATION OF GRAY ENGINEERING CONSULTANTS, INC. IN WRITING.

SITE LAYOUT PLAN

CHAPEL GREEN TOWNHOME COMMUNITY

INNOVATION DRIVE AND LAURENS ROAD
GREENVILLE, SC

PROJECT MANAGER:	REG
DRAWN BY:	DJG
PROJECT DATE:	04-23-18
SCALE:	1"=60'
JOB No.:	2018021
PLOT DATE:	12/16/19

SHEET
CV-1

2018021-D17 DJG.dwg

SITE DATA:

TAX MAP #s:	M010040100600
COUNTY / MUNICIPALITY:	CITY OF GREENVILLE
TOTAL SITE ACREAGE:	21.11± ACRES
ZONING:	S-1

TOWNHOME DEVELOPMENT DATA:

TOTAL BUILD OUT	21.11 ± AC
No. UNITS	83 Units
MAX UNITS PER ACRE	20 UNITS/AC
PROVIDED UNITS PER ACRE	3.93 UNITS/AC
LINEAR FEET OF NEW PRIVATE ROAD	2,832 L.F.
PRIVATE ROAD RIGHT OF WAY	2.89 AC
TOTAL COMMON AREA	12.48 AC

CITY OPEN SPACE REQUIREMENTS:

A MIMINUM OF 200 SQUARE FEET OF OPEN SPACE PER DWELLING SHALL BE PROVIDED, ONE-HALF OF WHICH MAY BE PRIVATE. PRIVATE OPEN SPACE IS DEFINED AS PATIO, PORCH, DECK, BALCONY OR YARD WITH BOUNDARIES SUCH AS LOW WALLS OR LANDSCAPING SEPARATING PRIVATE FROM COMMON OPEN SPACE.

OPEN SPACE CALCULATIONS:

OPEN SPACE REQUIRED PER CITY (200 SF x 83 = 16,600 SF)	16,600 S.F.
PRIVATE OPEN SPACE PROVIDED	0 S.F.
PUBLIC OPEN SPACE PROVIDED	19,638 S.F.
TOTAL OPEN SPACE PROVIDED	19,638 S.F.
AMOUNT EXCEEDING REQUIRED	3,038 S.F.

ACREAGE SUMMARY in ACRES

PRIVATE ROAD R/W		2.89±
COMMON AREA		12.48±
TOWNHOUSE 1	2,970 SF	0.07±
TOWNHOUSE 2	2,520 SF	0.06±
TOWNHOUSE 3	3,420 SF	0.08±
TOWNHOUSE 4	3,420 SF	0.08±
TOWNHOUSE 5	2,520 SF	0.06±
TOWNHOUSE 6	3,420 SF	0.08±
TOWNHOUSE 7	3,420 SF	0.08±
TOWNHOUSE 8	2,520 SF	0.06±
TOWNHOUSE 9	2,520 SF	0.06±
TOWNHOUSE 10	2,520 SF	0.06±
TOWNHOUSE 11	3,420 SF	0.08±
TOWNHOUSE 12	3,420 SF	0.08±
TOWNHOUSE 13	2,520 SF	0.06±
TOWNHOUSE 14	2,520 SF	0.06±
TOWNHOUSE 15	3,761 SF	0.09±
TOWNHOUSE 16	2,550 SF	0.06±
TOWNHOUSE 17	2,520 SF	0.06±
TOWNHOUSE 18	3,304 SF	0.08±
TOWNHOUSE 19	3,420 SF	0.08±
TOWNHOUSE 20	2,952 SF	0.07±
TOWNHOUSE 21	2,520 SF	0.06±
TOWNHOUSE 22	3,420 SF	0.08±
TOWNHOUSE 23	3,420 SF	0.08±
TOWNHOUSE 24	2,520 SF	0.06±
TOWNHOUSE 25	2,520 SF	0.06±
TOWNHOUSE 26	3,420 SF	0.08±
TOWNHOUSE 27	3,420 SF	0.08±
TOWNHOUSE 28	2,520 SF	0.06±
TOWNHOUSE 29	2,970 SF	0.07±
TOWNHOUSE 30	2,970 SF	0.07±
TOWNHOUSE 31	2,520 SF	0.06±
TOWNHOUSE 32	3,816 SF	0.09±
TOWNHOUSE 33	3,842 SF	0.09±
TOWNHOUSE 34	2,521 SF	0.06±
TOWNHOUSE 35	3,645 SF	0.08±
TOWNHOUSE 36	3,645 SF	0.08±
TOWNHOUSE 37	2,520 SF	0.06±

ACREAGE SUMMARY in ACRES

TOWNHOUSE 38	2,520 SF	0.06±
TOWNHOUSE 39	4,594 SF	0.11±
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TOWNHOUSE 41	2,661 SF	0.06±
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TOWNHOUSE 43	4,224 SF	0.10±
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TOWNHOUSE 45	2,956 SF	0.07±
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TOWNHOUSE 48	3,420 SF	0.08±
TOWNHOUSE 49	3,534 SF	0.08±
TOWNHOUSE 50	2,604 SF	0.06±
TOWNHOUSE 51	2,602 SF	0.06±
TOWNHOUSE 52	2,905 SF	0.07±
TOWNHOUSE 53	2,970 SF	0.07±
TOWNHOUSE 54	2,520 SF	0.06±
TOWNHOUSE 55	2,520 SF	0.06±
TOWNHOUSE 56	3,870 SF	0.09±
TOWNHOUSE 57	3,870 SF	0.09±
TOWNHOUSE 58	2,520 SF	0.06±
TOWNHOUSE 59	2,520 SF	0.06±
TOWNHOUSE 60	2,970 SF	0.07±
TOWNHOUSE 61	3,322 SF	0.08±
TOWNHOUSE 62	2,660 SF	0.06±
TOWNHOUSE 63	2,660 SF	0.06±
TOWNHOUSE 64	3,135 SF	0.07±
TOWNHOUSE 65	2,949 SF	0.07±
TOWNHOUSE 66	2,520 SF	0.06±
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ACREAGE SUMMARY in ACRES

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TOWNHOUSE 78	2,634 SF	0.06±
TOWNHOUSE 79	3,096 SF	0.07±
TOWNHOUSE 80	2,970 SF	0.07±
TOWNHOUSE 81	2,520 SF	0.06±
TOWNHOUSE 82	2,520 SF	0.06±
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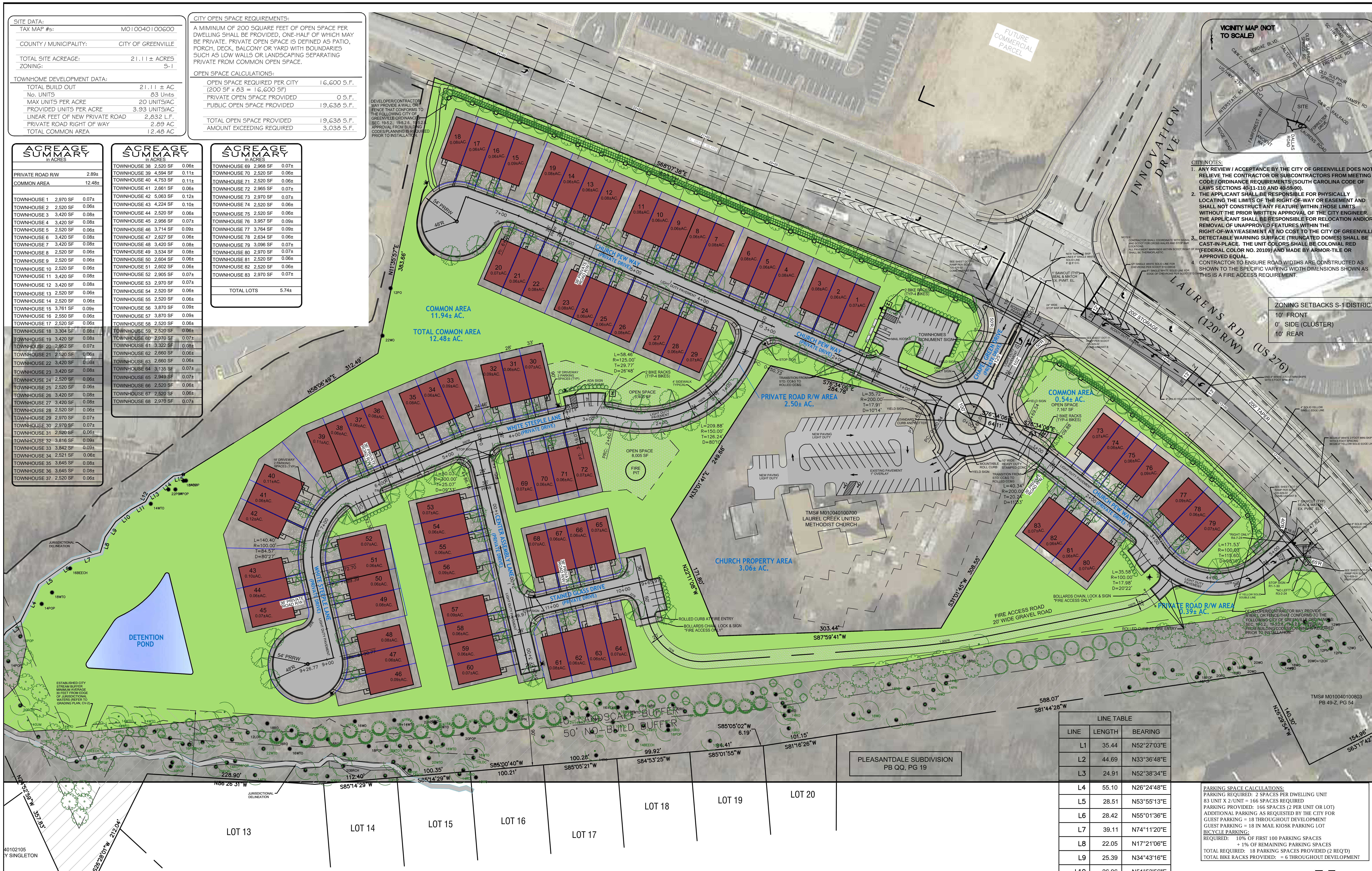
TOTAL LOTS		5.74±



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ZONING SETBACKS S-1 DISTRICT
10' FRONT
0' SIDE (CLUSTER)
10' REAR

LINE TABLE

LINE	LENGTH	BEARING
L1	35.44	N52°27'03"E
L2	44.69	N33°36'48"E
L3	24.91	N52°38'34"E
L4	55.10	N26°24'48"E
L5	28.51	N53°55'13"E
L6	28.42	N55°01'36"E
L7	39.11	N74°11'20"E
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L9	25.39	N34°43'16"E
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L11	22.06	N61°05'59"E
L12	11.64	N28°54'23"E
L13	9.94	N59°46'00"E
L14	31.26	N50°40'42"E
L15	13.34	N81°19'32"E
L16	48.91	S27°30'59"W
L17	53.13	S27°30'59"W
L18	20.52	S07°13'30"E

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CH	CB	TAN
C1	487.88'	1342.91'	020°48'57"	485.21'	S49°26'23"E	246.66'
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C3	142.41'	1342.91'	006°04'34"	142.35'	S65°26'47"E	71.27'
C4	60.02'	1342.91'	002°33'39"	60.02'	S61°07'41"E	30.02'
C5	96.46'	189.12'	029°13'24"	95.42'	S08°01'27"W	49.30'
C6	64.98'	129.12'	028°50'02"	64.29'	S07°11'31"W	33.19'

PARKING SPACE CALCULATIONS:
PARKING REQUIRED: 2 SPACES PER DWELLING UNIT
83 UNIT X 2/UNIT = 166 SPACES REQUIRED
PARKING PROVIDED: 166 SPACES (2 PER UNIT OR LOT)
ADDITIONAL PARKING AS REQUESTED BY THE CITY FOR
GUEST PARKING = 18 THROUGHOUT DEVELOPMENT
GUEST PARKING = 18 IN MAIL KIOSK PARKING LOT
BICYCLE PARKING:
REQUIRED: 10% OF FIRST 100 PARKING SPACES
+ 1% OF REMAINING PARKING SPACES
TOTAL REQUIRED: 18 PARKING SPACES PROVIDED (2 REQ'D)
TOTAL BIKE RACKS PROVIDED: = 6 THROUGHOUT DEVELOPMENT

NOTES:

1. THIS PLAT REPRESENTS A TOPOGRAPHIC SURVEY ONLY AND IS NOT THE RESULT OF A BOUNDARY SURVEY. BOUNDARIES SHOWN HEREON WERE COMPILED PER THE REFERENCE PLATS NOTED.
2. IT IS EXPRESSLY UNDERSTOOD THAT HBU SURVEYING & PLANNING, LLC DOES NOT CERTIFY THE PRESENCE OR ABSENCE OF ENVIRONMENTAL CONDITIONS SUCH AS FRESH WATER WETLANDS.
3. AREA CALCULATION DETERMINED BY COORDINATE METHOD.
4. TOPOGRAPHIC SURVEY PREPARED IN CONJUNCTION WITH THIS SURVEY. CONTOUR INTERVAL = 2 FT.
5. ELEVATION DATUM IS NAVD 88 AS DERIVED FROM SCVRS GPS OBSERVATIONS (GEOID 2012).
6. SUBSURFACE UTILITY LOCATIONS SHOWN AS PER SURFACE INDICATIONS AND MARKS BY OTHERS.

PAVEMENT-LEGEND

- LIGHT DUTY SITE PAVEMENT STRUCTURE (2" SURFACE, 6" ABC)
- NORMAL 3,000 PSI BRUSHED CONCRETE 4" SIDEWALK
- HEAVY DUTY 4,000 PSI CONCRETE 6" DRIVEWAY
- SCDOT PAVEMENT STRUCTURE (2" SURFACE, 4" BINDER, 6" BASE)

LEGEND:

- BOUNDARY POINT
- BOUNDARY LINE
- ADJACENT BOUNDARY
- EDGE OF EXISTING PAVEMENT
- EDGE OF EXISTING CONCRETE
- STREET SIGN

N

0 60' 120'
SCALE: 1" = 60'

NO.	DATE	BY	REVISION
J	04-02-19	DJG	UPDATED PER CITY AND GW REVIEW COMMENTS
K	05-14-19	DJG	UPDATED PER CITY FINAL REVIEW
L	08-21-19	DJG	UPDATED FINAL PLANS TO OWNER-GC-CITY
1	09-24-19	DJG	ADDED WATER-SEWER SERVICES TO UNITS
2	10-24-19	DJG	MINOR DRIVEWAY REVISIONS PER SCDOT
3	12-16-19	DJG	MAJOR SUBDIVISION MODIFICATION TO CITY
H	01-23-19	DJG	REVISED PLANS TO OWNER AND CITY PERMIT/BID

GRAY
ENGINEERING CONSULTANTS
132 PILGRIM ROAD · GREENVILLE, SC 29607
PH: (864) 297-3027 · FAX: (864) 297-5187
WWW.GRAYENGINEERING.COM
· SC C.O.A.# C00060 · NC C.O.A.# C-1217 · GA C.O.A.# PEF001941 · TN C.O.A.# 0410819 ·

SOUTH CAROLINA GRAY ENGINEERING CONSULTANTS, INC. No. C00060 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 19812 RODNEY E. GRAY REGISTERED

THIS DRAWING AND ASSOCIATED CAD FILES ARE AN INSTRUMENT OF SERVICE AND THE PROPERTY OF GRAY ENGINEERING CONSULTANTS, INC. AND SHALL NOT BE USED OR REPRODUCED IN ANY WAY OTHER THAN AUTHORIZED BY GRAY ENGINEERING CONSULTANTS, INC. IN WRITING.

SITE LAYOUT PLAN

CHAPEL GREEN TOWNHOME COMMUNITY

INNOVATION DRIVE AND LAURENS ROAD
GREENVILLE, SC

PROJECT MANAGER:	REG
DRAWN BY:	DJG
PROJECT DATE:	04-23-18
SCALE:	1"=60'
JOB No.:	2018021
PLOT DATE:	12/16/19

SHEET
CV-1

2018021-D17 DJG.dwg

SUMMIT
ENGINEERING • LABORATORY • TESTING

December 11, 2019

Mr. Phillip Day
Falcon Real Estate Development, LLC
7 Hindman Drive
Greenville, SC 29609

Subject: **Fire Lane Recommendations**
Chapel Green Townhomes
Greenville, South Carolina
SUMMIT Project No. 4758.513

Dear Mr. Day:

Based on a request from David Graffius of Gray Engineering, SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) is providing this letter regarding recommendations for the unpaved fire lane access road at the above referenced project.

It is our understanding that an unpaved gravel road will be utilized for the fire lane access road to the rear of the site. The fire trucks will have a typical weight of 70,000 pounds. Based on AASHTO design methodology and the soil conditions at the site, it is recommended that a minimum of 6 inches of crushed stone base be used for the unpaved fire lane access road. The crushed stone base should be compacted to a minimum of 100% of the standard Proctor maximum dry density.

Prior to placement of the stone base, the subgrade soils should be proof-rolled with a loaded tandem axle dump truck or other similar heavy construction equipment to confirm the stability of the subgrade soils and detect the presence of soft or unstable areas. Our geotechnical engineer or his representative should observe the proof-rolling operations. If proof-rolling reveals unstable conditions, the method of repair should be as directed by the project geotechnical engineer, but will likely consist of several options, such as undercutting the unsuitable soils and replacement with adequately compacted structural fill, scarifying and reconditioning, or the use of geotextiles or geogrids for ground stabilization.

Periodic maintenance and placement of additional stone base over time should be anticipated on the unpaved fire lane following any periods of emergency usage. The long-term performance of the unpaved fire lane is directly related to drainage of the base and subgrade. We emphasize that good base course and subgrade drainage is absolutely essential for successful pavement performance. Water buildup in the base course will result in premature pavement failures. The subgrade and pavement should be graded to provide rapid runoff to either the outer limits of the paved area or to catch basins so that standing water will not accumulate on the subgrade or gravel surfaces. Any areas that allow water or groundwater to enter the pavement system will require sub drains (i.e. French drains) installed to prevent water entry into the gravel base and subgrade.

SUMMIT appreciates the opportunity to provide the materials testing services for this project. If you have any questions or need any additional information, please do not hesitate to contact us.

Sincerely,
SUMMIT ENGINEERING LABORATORY & TESTING, P.C.

Austin Medeiros, E.I.T.
Engineering Staff Professional

J. Jason Sims, P.E.
Upstate SC Branch Manager

State of South Carolina	**)**	**Permanent Fire Apparatus Access Road**
	)	**Inspection, Maintenance and Responsibility**
County of Greenville		**Agreement (Tax Map. No. M010040100600)**

This Agreement is entered into this _____ day of _____, 20___, by and between Chapel Green Venture, LLC, (hereinafter referred to as Landowner) and the City of Greenville, a Municipal Corporation and political subdivision of the State of South Carolina (hereinafter referred to as City).

It is agreed as follows:

Landowner Responsible for Fire Road Maintenance:

Appendix D (Section D107.1) of the South Carolina Fire Code (the "Fire Code") provides that developments of one- or two-family dwellings where the number of dwelling units exceeds thirty (30) shall be provided with two (2) separate and approved fire apparatus access roads. Appendix D (Section D102.1) of the Code provides that an approved fire apparatus access road shall be either asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (34050 kg). Landowner has submitted construction plans that include one (1) asphalt fire apparatus access road (the "Asphalt Road") and one (1) gravel fire apparatus access road. (the "Gravel Road"). Landowner has also submitted a letter from Summit Engineering certifying that the design and construction of the Gravel Road satisfies the Fire Code. The City has approved the submitted design of the Asphalt Road and the Gravel Road.

The City's approval of the Gravel Road is expressly conditioned upon the agreement of the Landowner to adequately construct, inspect and maintain the Gravel Road (the "Gravel Road Maintenance Agreement"). The Gravel Road Maintenance Agreement applies to the Landowner and to all subsequent owners of the property. The obligation requires the regular inspection and adequate maintenance of the Gravel Road. Adequate maintenance is herein defined as keeping the Gravel Road in proper working condition so that the Gravel Road is suitable to perform its fire access road functions in accordance with the purposes for which it is designed.

Inspection and Maintenance Required:

The Landowner, its successors and assigns, shall regularly and periodically cause the Gravel Road to be inspected by a third-party road contractor. Attached hereto is an agreement between the Landowner and Palmetto Grading & Drainage, Inc. for the annual inspection and maintenance of the Gravel Road (the "Inspection Agreement"). The City hereby approves the Inspection Agreement. The Landowner agrees that it will not terminate the Inspection Agreement unless and until the City has approved in writing the appointment of a new third-party inspector to fulfill the duties described herein. Such approval shall not be unreasonably withheld.

The purpose of each inspection shall be to assure safe and proper functioning of the Gravel Road for fire apparatus access. Each inspection shall cover all parts of the Gravel Road including, but not limited to, the elimination of potholes, erosion, drainage issues and any other item that would negatively impact the proper functioning of the Gravel Road. The first inspection shall be completed on or before December 31, 2021 and a subsequent inspection shall be completed on or before the same date for each year thereafter. Upon receipt of each inspection report, the Landowner will within thirty (30) days of receipt of such inspection report perform or cause to be performed any maintenance, repair, and replacement set forth in the inspection report to keep the Gravel Road in good working order. Records shall be kept by the Landowner of each inspection Report as well as the dates and maintenance performed and shall be made

available to the City upon the City's request. The Landowner's failure to inspect and/or to properly maintain the Gravel Road shall be treated as a breach of this Agreement.

No Duty on the City:

This Agreement creates no affirmative duty on the City to inspect, and it imposes no liability of any kind whatsoever on the City for omissions in inspecting. The Landowner agrees to hold the City harmless from any liability in the event the Gravel Road fails to operate properly due to the Landowner's failure to abide by the terms of this Agreement.

Landowner Covenants:

The Landowner accepts responsibility for ownership and proper maintenance of the Gravel Road on the site located at 3590 Laurens Road, Greenville, South Carolina, per the approved inspection and maintenance plan. Landowner will complete any necessary repairs and/or preventive maintenance procedures in a timely manner to ensure proper functioning of the Gravel Road as a fire apparatus access road.

Landowner understands that the maintenance plan may be amended or revised at any time by the City in order to address changed conditions or to assure that the Gravel Road is functioning properly as a fire apparatus access road.

This covenant to maintain the Facility shall run with the land. Landowner will continue to own and maintain the Facility until the City is notified in writing of a transfer in ownership and maintenance responsibility. The notification will include a date for the transfer of responsibility which will become effective upon the City's receipt of a letter of acceptance from the new owner. Notwithstanding the provision for a letter of acceptance, any new Landowner shall be responsible for all duties and obligations created by this Fire Apparatus Access Road Maintenance Responsibility Agreement upon it being executed and filed in the Register of Deeds Office for Greenville County.

Landowner understands that failure to adhere to the signed Maintenance Agreement may result in fines of up to One Thousand and 00/100 Dollars ($1,000.00) per day, per violation and /or the institution of a court action, or such other and additional penalties, fines, or assessments as shall be enacted and provided for by the general law of the state or by local regulation lawfully enacted.

(Signatures contained on the next page)

IN WITNESS our hand and seal this ____ day of _____, 20___.

WITNESSES:

_____

_____

CHAPEL GREEN VENTURE, LLC:

_____
By: Phillip Day
Its: Manager
7 Hindman Drive, Greenville, SC 29609
(864) 907-6509

WITNESSES:

_____

_____

CITY OF GREENVILLE

_____
By: _____
Its: City Manager

STATE OF SOUTH CAROLINA)
) ACKNOWLEDGEMENT
COUNTY OF GREENVILLE)

The foregoing instrument was acknowledged before me this _____ day of _____, 20___ by _____, Manager of Chapel Green Venture, LLC.

Notary Public for South Carolina
My Commission Expires: _____

STATE OF SOUTH CAROLINA)
) ACKNOWLEDGEMENT
COUNTY OF GREENVILLE)

The foregoing instrument was acknowledged before me this _____ day of _____, 20___ by _____, City Manager for the City of Greenville.

Notary Public for South Carolina
My Commission Expires: _____

ROAD MAINTENANCE CONTRACT

THIS CONTRACT is made and entered into on the date shown below, by and between Palmetto Grading & Drainage, Inc. (the "Palmetto"), whose address is 223 Northeast Drive, Spartanburg, South Carolina 29303 and Chapel Green Venture, LLC (the "Chapel Green"), whose address is 7 Hindman Drive, Greenville, South Carolina 29609.

WHEREAS Palmetto is a company engaged in the business of building, servicing and maintaining gravel roads and is willing to provide such services to Customer as per the terms herein.

WHEREAS Chapel Green will construct a gravel fire access road as part of its development located at 3590 Laurens Road, Greenville, South Carolina (the “Fire Road”) and desires to have Palmetto furnish certain of such services.

NOW, THEREFORE, in consideration of the mutual covenants and promises hereinafter described, the parties hereto agree as follows:

1. **Inspections**: Palmetto will annually inspect the Fire Road commencing on January 15, 2021 and each year thereafter on the same date. Upon completion of each inspection, Palmetto will provide to Chapel Green a written report detailing the current condition of the Fire Road (the “Annual Inspection Report”).

2. **Maintenance and Repairs**: In the event any Annual Inspection Report reveals maintenance or repair needs, Palmetto will simultaneously provide a written estimate to Chapel Green detailing the reasonable costs required to complete the needed maintenance and repairs (an “Estimate”). Upon receipt of any Annual Inspection Report indicating needed maintenance and repair and an associated Estimate, Chapel Green agrees that it will notify Palmetto in writing on or before fourteen (14) days from receipt of the Annual Inspection Report if it has secured services from a third party to complete the needed maintenance and repairs. In the event Chapel Green fails to timely provide such written notice to Palmetto, Palmetto shall immediately undertake the maintenance and repairs detailed in the associated Estimate. Upon completion of such maintenance and repairs, Palmetto shall deliver to Chapel Green written confirmation that the Fire Road has been fully repaired.

3. **Inspection Fee**: Upon the completion of each annual inspection and the delivery of the Annual Inspection Report to Chapel Green, Chapel Green shall pay to Palmetto the sum of Three Hundred Dollars ($300.00) (the “Inspection Fee”). The Inspection Fee shall increase annually by an amount equal to three percent (3%).

4. **Maintenance and Repair Fee**: Upon the completion of any maintenance or repair services on the Fire Road, Chapel Green shall pay to Palmetto the amounts detailed in the associated Estimate.

5. **Trained Employees:** Trained personnel directly supervised by Palmetto will perform all services required by the terms of this Contract. Palmetto agrees that each of its employees will be properly qualified and will use reasonable care in the performance of his or her duties.

6. **Term of Contract**: The term of this Contract shall commence on January 15, 2021 and shall continue in full force and effect for a period of twenty-one (21) years unless it is earlier terminated.

7. **Termination of the Contract:** Either party, by giving thirty (30) days' written notice to the other party, may terminate this Contract. In the event Palmetto provides notice of termination of the Contract to Chapel Green, Chapel Green agrees that it will secure a qualified successor to provide the same services on or before the expiration of Palmetto's 30-day notice period as well as the written approval of the City of Greenville Fire Department of such replacement. In the event Chapel Green terminates this Contract, Chapel Green agrees that it will secure the written approval of such termination from the City of Greenville Fire Department on or before providing written notice of termination to Palmetto.

8. **Miscellaneous Provisions**:

(a) **Applicable Law:** This Contract shall be construed under and in accordance with the laws of the South Carolina, and all obligations of the parties created under this Contract are performable in Greenville County, South Carolina.

(b) **Parties Bound:** This Contract shall be binding on and inure to the benefit of the parties to this Contract and their respective heirs, executors, administrators, legal representatives, successors and assigns as permitted by this Contract.

(c) **Legal Construction:** In the event any one or more of the provisions contained in this Contract shall for any reason be held invalid, illegal, or unenforceable in any respect, that invalidity, illegality, or unenforceability shall not affect any other provision. This Contract shall be construed as if the invalid, illegal, or unenforceable provision had never been contained in it.

(d) **Prior Contracts Superseded:** This Contract constitutes the sole and only Contract of the parties and supersedes any prior understandings or written or oral Contracts between the parties respecting the subject matter of this Contract.

(e) **Amendments.** This Contract may be amended by the parties only by a written Contract.

(f) **Attorneys' Fees:** If any action at law or in equity is brought to enforce or interpret the provisions of this Contract, the prevailing party will be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled.

8. Signatures: This Contract shall be signed on behalf of Palmetto Grading & Drainage, Inc. by Ashley Haddock, its President, and on behalf of Chapel Green Venture, LLC by Phillip Day, its Manager.

Palmetto Grading & Drainage, Inc.

_____
By: Ashley Haddock, its President
Dated: _____

Chapel Green Venture, LLC

_____
By: Phillip Day, its Manager
Dated: _____

city of greenville

APPLICATION FOR SUBDIVISION

Contact Planning & Development (864) 467-4476

Office Use Only: SD 19-017
Application# SD 19-894 Fees Paid $300
Date Received 12/16/19 Accepted By MF
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Robert Julian	Hall Cluster LLC
*Title:		
*Address:		1 Big Oak Ct., Simpsonville
*State:		SC
*Zip:		29681
*Phone:	772-473-9699	
*Email:	rjmasonry2000@yahoo.com	

PROPERTY INFORMATION

*SELECT SUBDIVISION TYPE: X Major Preliminary (3-10 lots) ___Major Preliminary (11+ lots) ___Minor (2 lots)

___Major Final (3-10 lots) ___Major Final (11+ lots)

___Modification (Major 3+ lots) ___Modification (Minor 2 lots)

*STREET ADDRESS 34 Hall Street

*TAX MAP #(S) 0201000102701, 0201000102702

*CURRENT ZONING DESIGNATION R-M1

*ORIGINAL APPLICATION #_____

*SUBDIVISION PLAT #_____

*SUBDIVISION NAME Reedy River Trail Cottages (aka 34 Hall Street)

*TOTAL ACREAGE 1.04 Acres

*# ORIGINAL LOTS 2 *# PROPOSED LOTS 9 Cottage Lots

INSTRUCTIONS

1. The applicant is encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

   PREAPPLICATION MEETING DATE 10.28.2019

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.

3. All applications and fees (made payable to the City of Greenville) for designation as a Major Subdivision Preliminary Plat must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A. Major Subdivision – New (3-10 lots)	$300.00 – Preliminary Plat review, *public hearing required*
	$300.00 – Final Plat review, *administrative review*
B. Major Subdivision – New (11+ lots)	$550.00 – Preliminary Plat review, *public hearing required*
	$550.00 – Final Plat review, *administrative review*
C. Major Subdivision – Modification	$150.00 / $275.00 – *public hearing may be required*
D. Minor Subdivision – New (2 lots)	$300.00 – Summary Plat review, *administrative review*
E. Minor Subdivision – Modification	$150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

5. Subdivision Plat format and content requirements are reflected in the Administrative Manual at Appendix 'F'. Please refer to ***Section 19-2.3.13, Land Development***, for additional information.

6. **Public Notice Requirements.** Major Subdivision applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

   Major Subdivision applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

   Upon planning commission recommendation, the application item will be scheduled for city council hearing.

   (*To be filled out at time of application submittal*)

   _____ Public Hearing signs are acknowledged as received by the applicant

   _____ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

   *APPLICANT SIGNATURE _____

7. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy and one (1) electronic version of the application submittal package.**

8. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

   In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

   If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

   _____ *APPLICANT SIGNATURE

   12/10/2019 _____ DATE

9. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** X restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

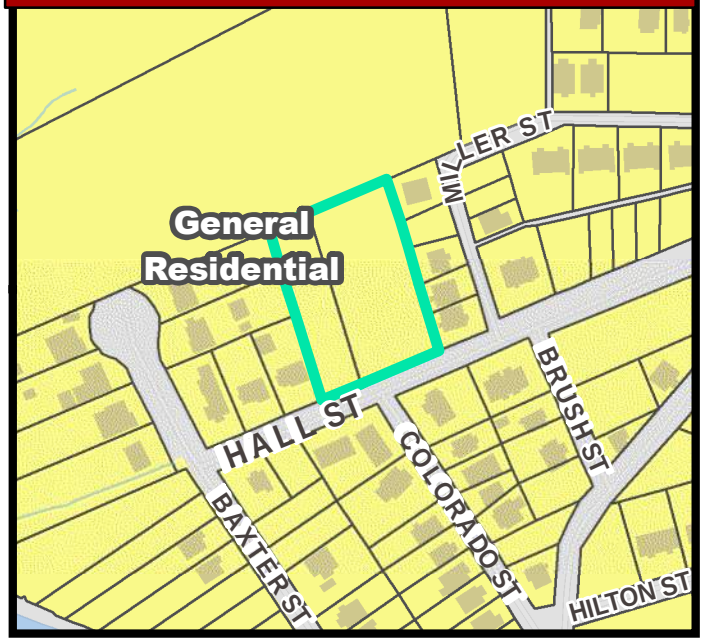
*Signatures	
Applicant Robert Julian	
Date 12/10/2019	
Property Owner/Authorized Agent	
Date 12/10/2019	

SD 19-017 • HALL ST

AERIAL VIEW

CURRENT ZONING

FUTURE LAND USE

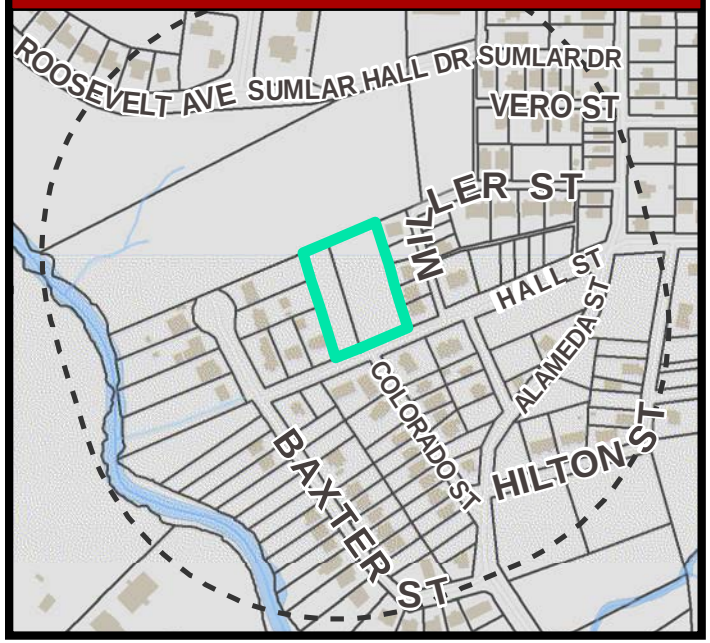


SD 19-017 • HALL ST

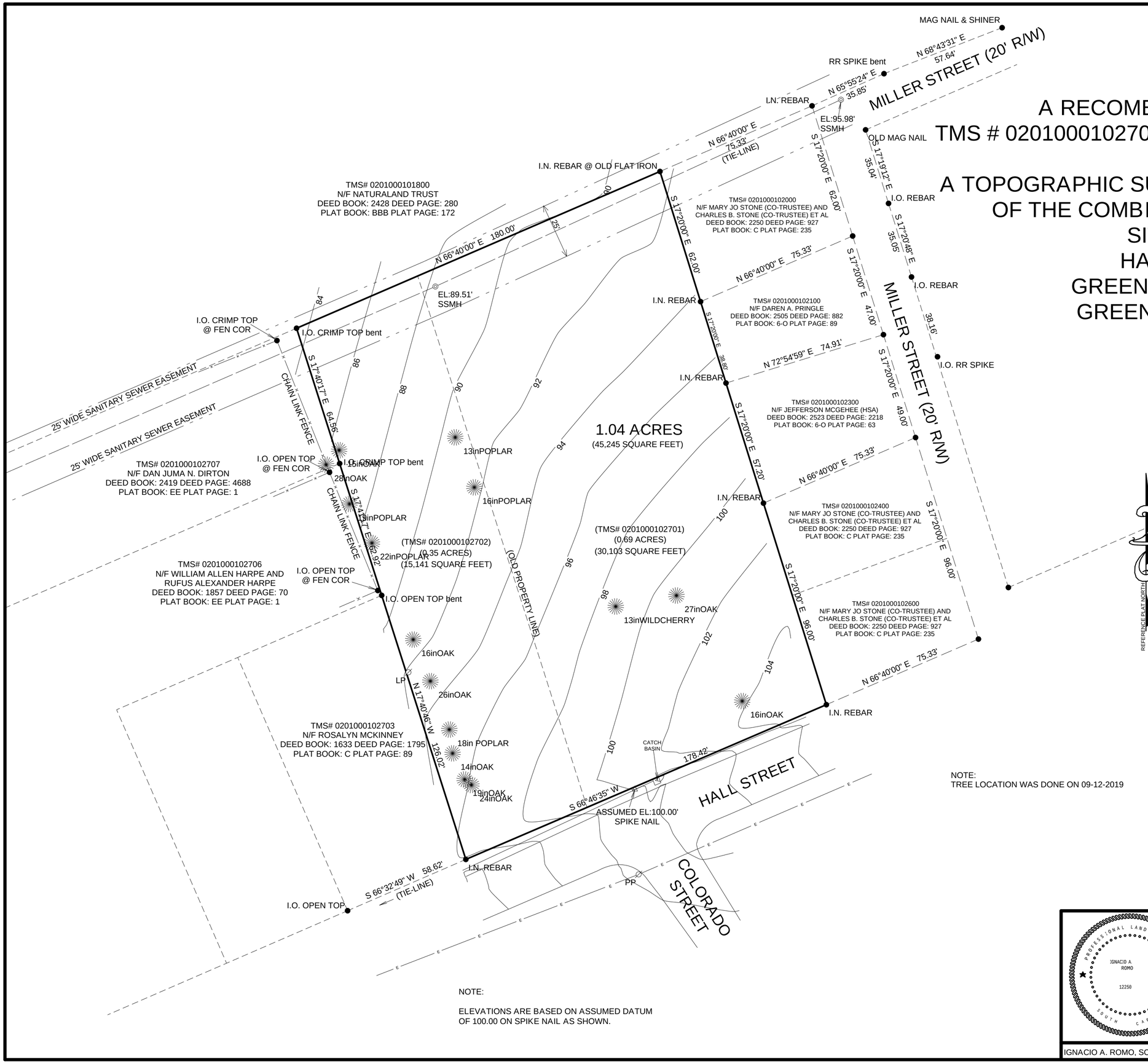
NATURAL / ENVIRONMENTAL FEATURES

SPECIAL EMPHASIS NEIGHBORHOODS

PRESERVATION OVERLAYS



A RECOMBINATION PLAT OF TMS # 0201000102702 AND TMS # 0201000102701 AND A TOPOGRAPHIC SURVEY AND TREE LOCATION OF THE COMBINED 1.04 ACRE TRACT SITUATED @ HALL STREET GREENVILLE, SC 29607 GREENVILLE COUNTY



NOTE:
TREE LOCATION WAS DONE ON 09-12-2019

NOTE:

ELEVATIONS ARE BASED ON ASSUMED DATUM OF 100.00 ON SPIKE NAIL AS SHOWN.

NOTES

"I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS B SURVEY AS SPECIFIED THEREIN; ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN."

THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS AND/OR RIGHTS-OF WAY OF RECORD OR NOT OF RECORD.

ACCORDING TO FEMA FLOODWAY DATA, THIS PROPERTY IS NOT LOCATED WITHIN AN ESTABLISHED FLOOD HAZARD AREA.

EXCEPT AS SPECIFICALLY STATED OR SHOWN HEREON THIS PLAT, THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE; EASEMENTS, OTHER THAN POSSIBLE EASEMENTS THAT WERE VISIBLE AT THE TIME OF MAKING OF THIS SURVEY; BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS; ZONING OR OTHER LAND USE REGULATIONS AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE LAND SURVEYOR AND REFLECTS ONLY THE REFERENCES RECORDED HEREON UNLESS NOTED.

IRON PINS FOUND AT ALL PROPERTY CORNERS UNLESS NOTED.

IGNACIO A. ROMO, PLS DOES NOT WARRANT THE EXISTENCE OR NON-EXISTENCE OF JURISDICTIONAL WETLANDS OR HAZARDOUS MATERIALS ON THE SURVEY SITE.

SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL LAND SURVEYOR.

REFERENCES

BB 0201000102702	DB 2531-406	PB C-89	ROBERT JULIAN, ET AL
BB 0201000102701	DB "	PB "	"
BB	DB	PB	
BB	DB	PB	
BB	DB	PB	

PROPERTY SURVEY FOR

ROBERT JULIAN

SCALE

30 0 30 60

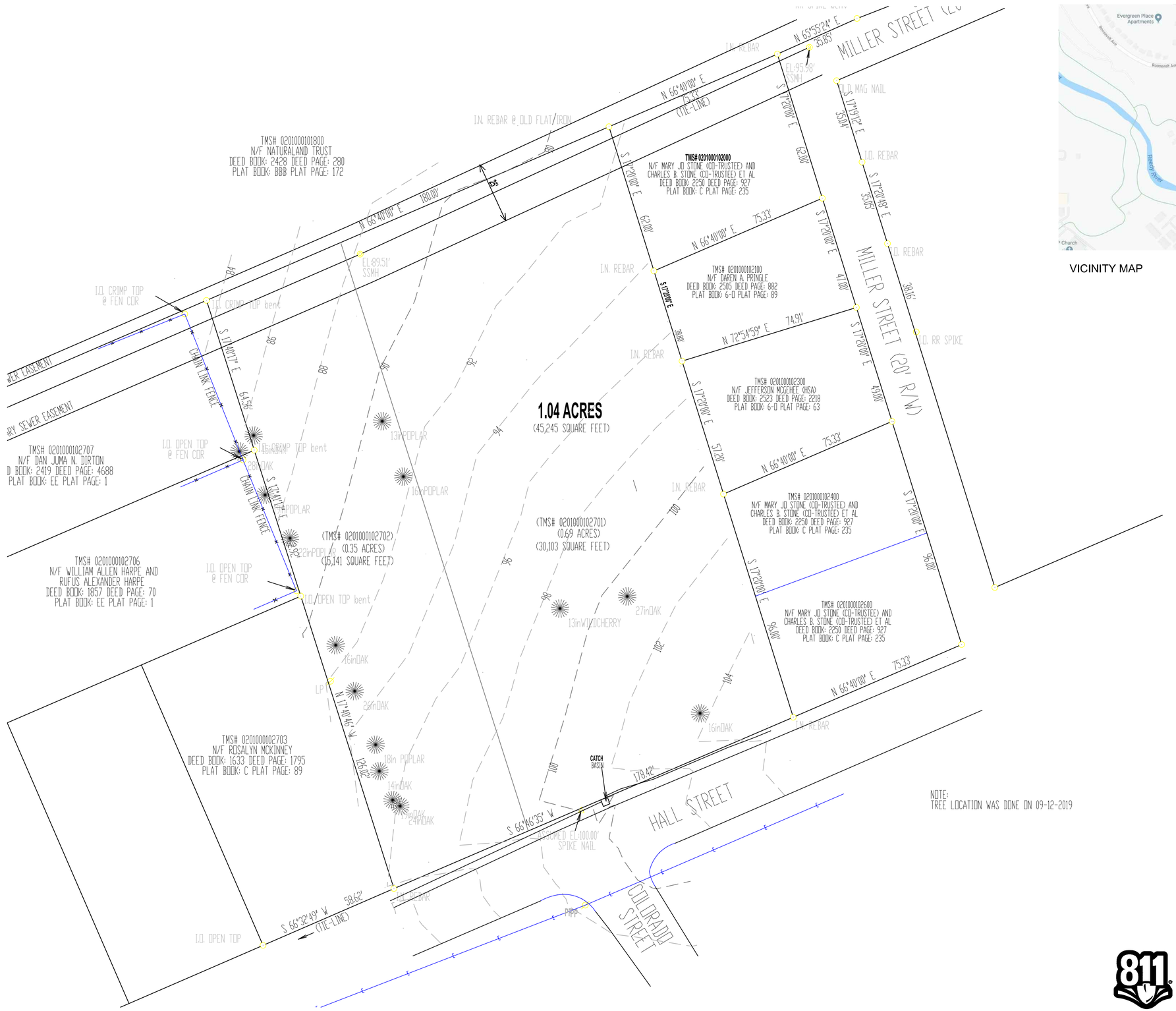
RESEARCH	CAD	CHECK	DATE
BW	TR & BW	TR	04-07-2018
1"=30'	FIELD WORK TR&JR		JOB NO. 18083

PROFESSIONAL LAND SURVEYOR
IGNACIO A. ROMO
12250
SOUTH CAROLINA

IGNACIO A. ROMO, SCPLS 12250

I.A. ROMO, PLS
PO BOX 8327
GREENVILLE, SC 29604-8327
TEL OR TEXT: 864-905-6052

COPYRIGHT © SEAMON, WHITESIDE & ASSOCIATES, INC. 501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29464 | 508 RHETT STREET, SUITE 101 | GREENVILLE, SC 29601 THIS DRAWING SHALL NOT BE REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WITHOUT WRITTEN PERMISSION.



VICINITY MAP

Know what's below. Call before you dig.

0 10 20 40
SCALE: 1" = 20'

N
W E
S

SEAMON WHITESIDE
MOUNT PLEASANT, SC 843.884.1667
GREENVILLE, SC 864.298.0534
SUMMERVILLE, SC 843.884.1667
SPARTANBURG, SC 864.298.0534
CHARLOTTE, NC 980.312.5450
WWW.SEAMONWHITESIDE.COM

SOUTH CAROLINA
SEAMON, WHITESIDE & ASSOCIATES, INC.
No. C00472
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 20155
12/16/19
JOSEPH W. BRIANT, JR.

HALL STREET COTTAGES

CITY OF GREENVILLE, SOUTH CAROLINA

SW+ PROJECT:	GR2911
DATE:	12/16/19
DRAWN BY:	WDM
CHECKED BY:	CW

REVISION HISTORY

EXISTING CONDITIONS

C1.0

PLOTTED:12/16/2019 10:40 AM, BY Daniel Merritt S:\GR2911\CD\MD\GR2911 Preliminary Plat.dwg

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VICINITY MAP

DEVELOPMENT SUMMARY:

SITE AREA:	1.04 Acres
TMS:	0201000102701 0201000102702
ZONING:	RM-1
UNITS/AC:	10 ALLOWED
MIN LOT WIDTH:	0'
SETBACKS:	
FRONT:	10 FROM COMMON SPACE, 20 FROM ROAD
SIDE:	0' ONE SIDE 15' OTHER SIDE
REAR:	0'

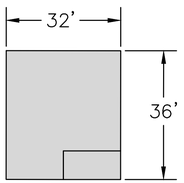
12 PARKING SPACES REQ'D
(1 per unit + 1 per 4 for guests)

OPEN SPACE: 30% PROVIDED
CENTRAL GREEN @ 375 SF PER DWELLING

* CENTRAL MAIL FACILITY WILL BE PROVIDED.

PARCEL LINE TABLE		
Line #	Bearing	Length
L1	S17°20'00"E	10.00

PARCEL CURVE TABLE					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	23.56	15.00	090.0000	N62°20'00"W	21.21



TYPICAL UNIT

(DIMENSIONS ARE APPROXIMATE AND MAY VARY)

Know what's below. Call before you dig.

0 10 20 40
SCALE: 1" = 20'

N
W E
S

SEAMON WHITESIDE
MOUNT PLEASANT, SC 843.884.1667
GREENVILLE, SC 864.298.0534
SUMMERVILLE, SC 843.884.1667
SPARTANBURG, SC 864.298.0534
CHARLOTTE, NC 980.312.5450
WWW.SEAMONWHITESIDE.COM

SOUTH CAROLINA SEAMON, WHITESIDE & ASSOCIATES, INC. No. C00472 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 28155 JOSEPH W. BRIANT, JR. 12/16/19

HALL STREET COTTAGES

CITY OF GREENVILLE, SOUTH CAROLINA

SW+ PROJECT:	GR2911
DATE:	12/16/19
DRAWN BY:	WDM
CHECKED BY:	CW

REVISION HISTORY

PRELIMINARY PLAT

C2.0

PLOTTED:12/16/2019 10:59 AM, BY Daniel Merritt S:\GR2911\CD\MD\GR2911 Preliminary Plat.dwg

DEVELOPMENT SUMMARY
1.04 ACRES
TMS# 0201000102701
0201000102702
R-M1 ZONING
10 U/A
0' MIN.LOT WIDTH
*MAX COVERAGE 60%
SETBACKS
20' FRONT
0' SIDE
15' REAR
*35' HEIGHT
15 PARKING SPACES PROVIDED
@1.66 PER UNIT

(*) SINGLE-FAMILY DETACHED

TYPICAL PLAN
nts

SEAMONWHITESIDE

HALL STREET COTTAGES
CONCEPTUAL MASTERPLAN

0 40 80 120

DEVELOPMENT SUMMARY
1.04 ACRES
TMS# 0201000102701
0201000102702
R-M1 ZONING
10 U/A
0' MIN.LOT WIDTH
*MAX COVERAGE 60%
SETBACKS
20' FRONT
0' SIDE
15' REAR
*35' HEIGHT
15 PARKING SPACES PROVIDED
@1.66 PER UNIT

(*) SINGLE-FAMILY DETACHED

TYPICAL PLAN
nts

SEAMONWHITESIDE

HALL STREET COTTAGES
CONCEPTUAL MASTERPLAN

0 40 80 120

city of greenville

APPLICATION FOR SUBDIVISION

Contact Planning & Development (864) 467-4476

Office Use Only: SD 19-019
Application# SD 19-896 Fees Paid $550
Date Received 12/16/19 Accepted By MF
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	LyonJay (Jennings Lyon)	Ligon Properties, LLC
*Title:		
*Address:	1427 Laurens Road - Suite H, Greenville	P.O. Box 5578, Greenville
*State:	South Carolina	South Carolina
*Zip:	29607	29606
*Phone:	864-238-5512	
*Email:	jlyon@lmlconst.com	

PROPERTY INFORMATION

*SELECT SUBDIVISION TYPE: ___Major Preliminary (3-10 lots) X Major Preliminary (11+ lots) ___Minor (2 lots)

___Major Final (3-10 lots) ___Major Final (11+ lots)

___Modification (Major 3+ lots) ___Modification (Minor 2 lots)

*STREET ADDRESS 215 Fairforest Way, Greenville, SC 29607

*TAX MAP #(S) M011010100315

*CURRENT ZONING DESIGNATION R-M3

*ORIGINAL APPLICATION # N/A

*SUBDIVISION PLAT # N/A

*SUBDIVISION NAME Fairforest Creekside

*TOTAL ACREAGE +/-25.73 AC

*# ORIGINAL LOTS 1 *# PROPOSED LOTS 129

INSTRUCTIONS

1. The applicant is encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

   PREAPPLICATION MEETING DATE 12/09/2019

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.

3. All applications and fees (made payable to the City of Greenville) for designation as a Major Subdivision Preliminary Plat must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A.	Major Subdivision – New (3-10 lots)	$300.00 – Preliminary Plat review, *public hearing required*
		$300.00 – Final Plat review, *administrative review*
B.	Major Subdivision – New (11+ lots)	$550.00 – Preliminary Plat review, *public hearing required*
		$550.00 – Final Plat review, *administrative review*
C.	Major Subdivision – Modification	$150.00 / $275.00 – *public hearing may be required*
D.	Minor Subdivision – New (2 lots)	$300.00 – Summary Plat review, *administrative review*
E.	Minor Subdivision – Modification	$150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

5. Subdivision Plat format and content requirements are reflected in the Administrative Manual at Appendix 'F'. Please refer to ***Section 19-2.3.13, Land Development***, for additional information.

6. **Public Notice Requirements.** Major Subdivision applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

   Major Subdivision applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

   Upon planning commission recommendation, the application item will be scheduled for city council hearing.

   (*To be filled out at time of application submittal*)

   AE Public Hearing signs are acknowledged as received by the applicant

   AE Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

   *APPLICANT SIGNATURE _____

7. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy and one (1) electronic version of the application submittal package.**

8. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

   In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

   If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

   _____ *APPLICANT SIGNATURE

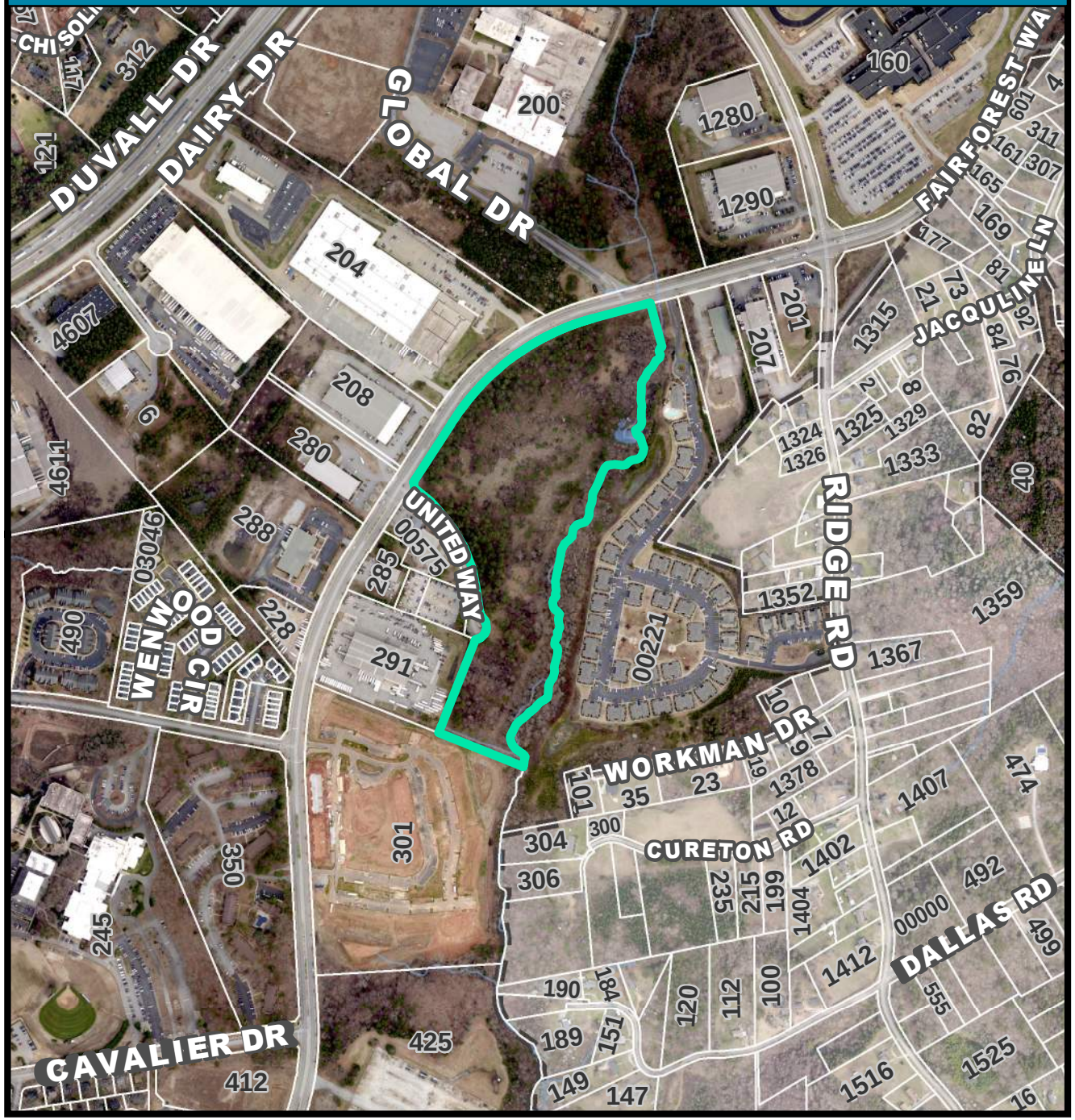
   12/16/19 DATE

9. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** _X_ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

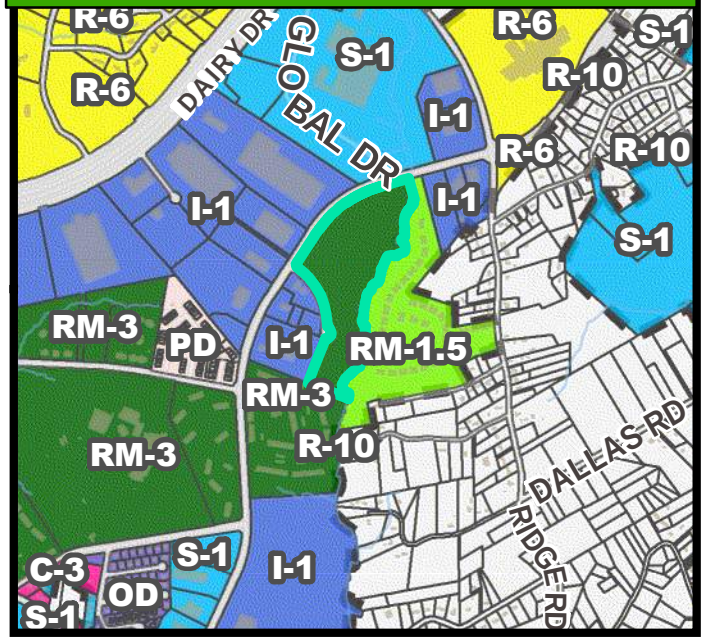
*Signatures	
Applicant	Jennings Lyon for LyonJay
Date	12/16/2019
Property Owner/Authorized Agent	
Date	12/16/2019

SD 19-019 • FAIRFORST WAY & UNITED WAY

AERIAL VIEW



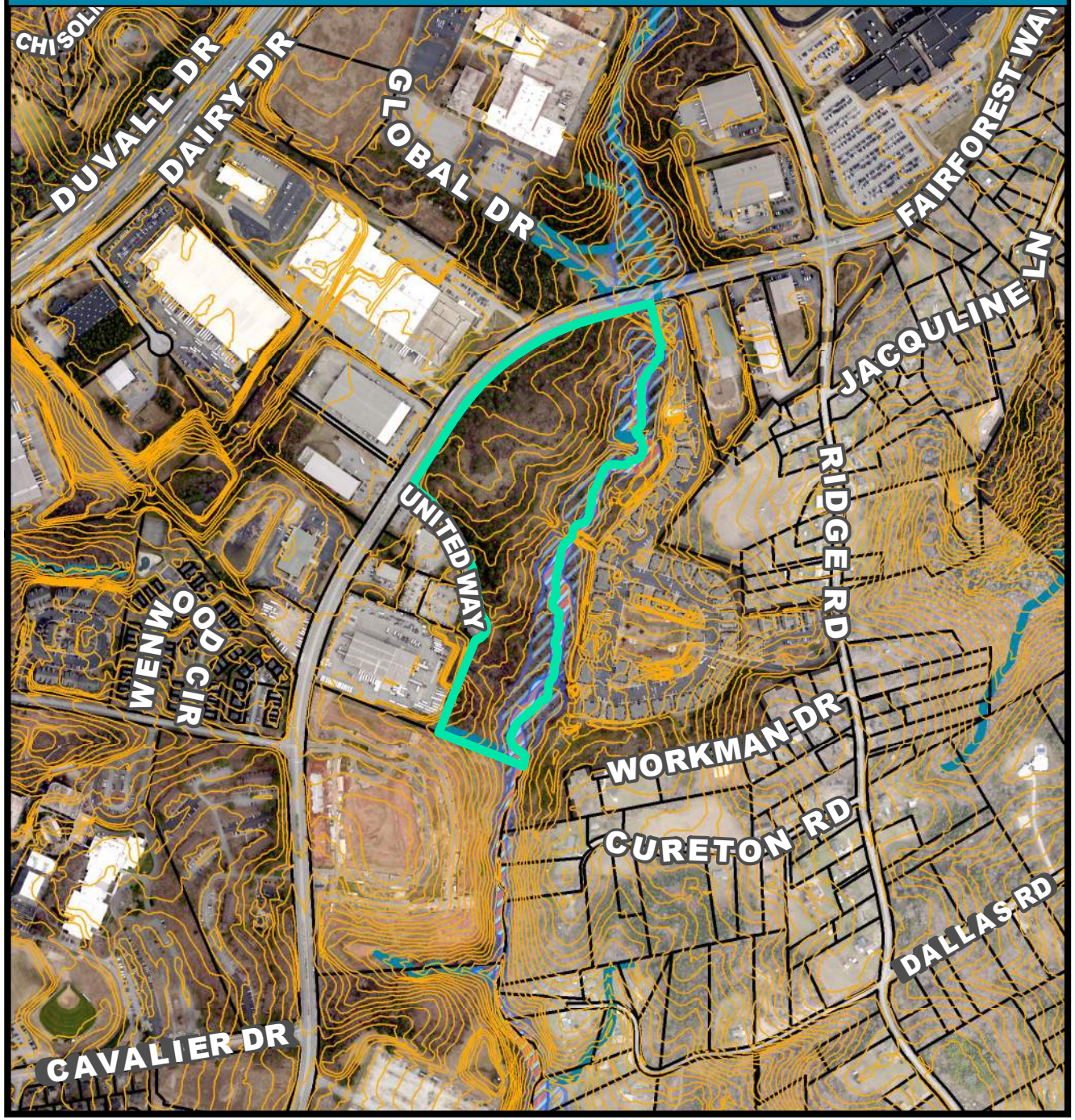
CURRENT ZONING



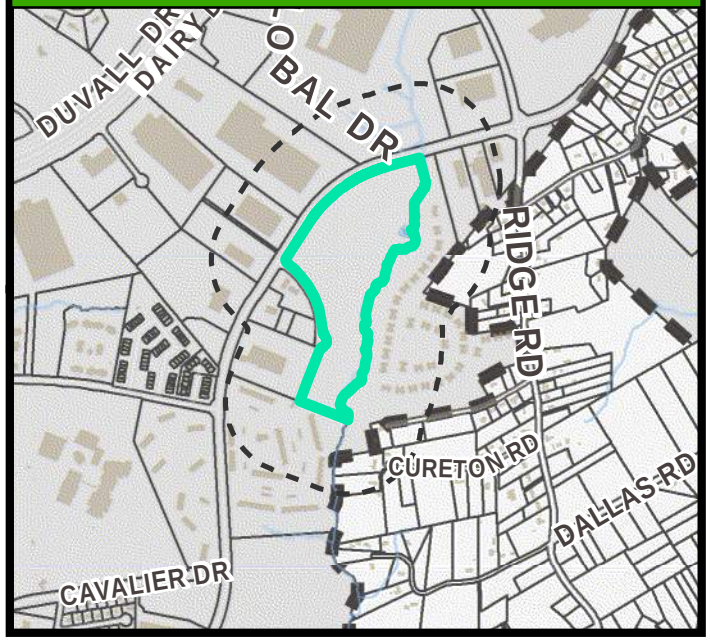
FUTURE LAND USE

SD 19-019 • FAIRFORST WAY & UNITED WAY

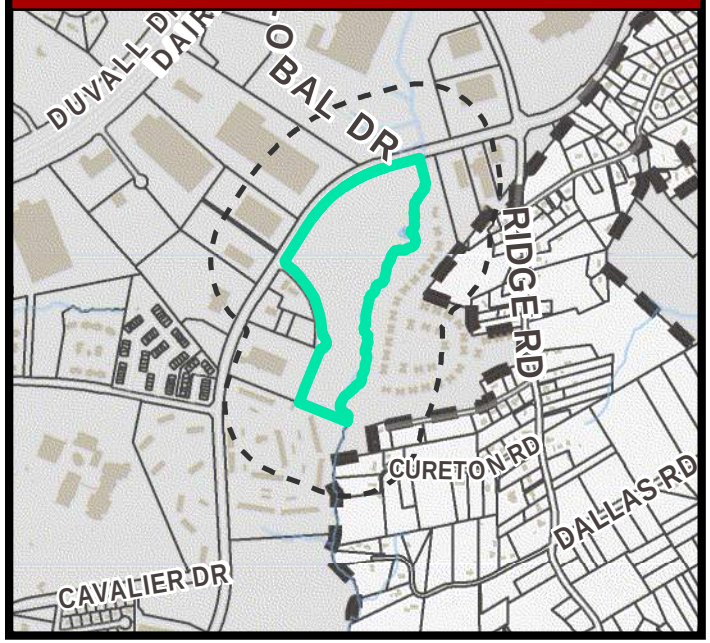
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS

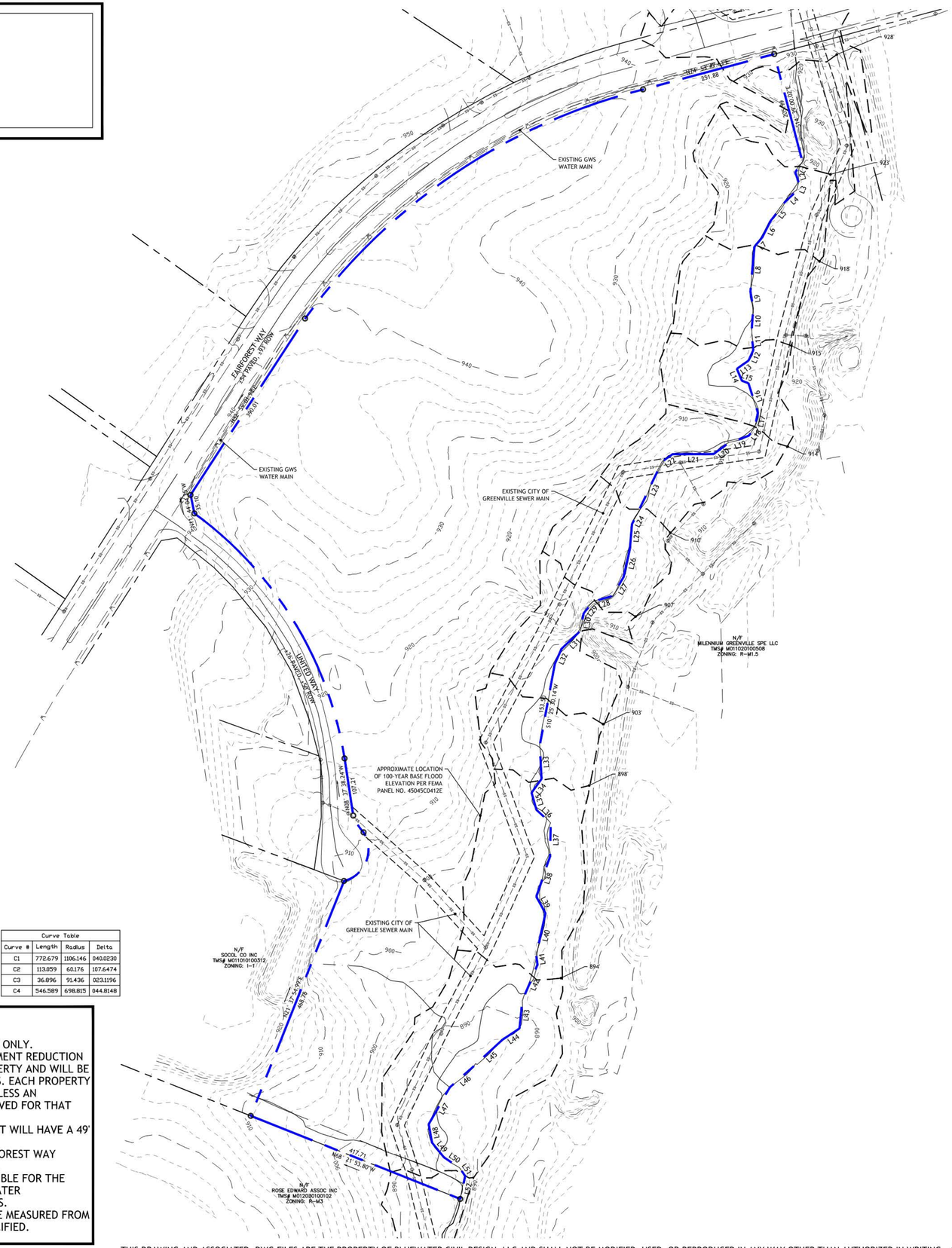


SITE DATA

TAX MAP NO.:	M011010100315
TOTAL AREA:	±25.73 ACRES
ZONING:	R-M3

EXISTING LEGEND

- EXISTING IRON PIN
- ADJACENT PROPERTY LINE
- PROPERTY LINE/R.O.W.
- EDGE OF PAVEMENT
- POWER POLE
- OVERHEAD ELECTRIC
- EXISTING STORM DRAINAGE
- EXISTING SEWER MANHOLE
- 840 EXISTING CONTOURS



Line Table		
Line #	Length	Direction
L1	24.005	S33° 15' 54.63"W
L2	22.462	S19° 09' 25.36"E
L3	15.202	S21° 35' 05.38"W
L4	28.019	S46° 42' 37.46"W
L5	44.944	S37° 15' 12.71"W
L6	33.277	S26° 44' 23.88"W
L7	23.678	S39° 20' 42.94"W
L8	83.281	S05° 04' 40.94"W
L9	29.355	S10° 15' 46.60"E
L10	49.534	S03° 49' 07.39"W
L11	29.970	S06° 36' 27.89"E
L12	21.336	S23° 54' 07.17"W
L13	26.893	S54° 27' 34.38"W
L14	24.248	S23° 24' 36.50"E
L15	12.453	S70° 15' 56.04"E
L16	57.140	S17° 58' 46.46"E
L17	28.956	S11° 20' 32.06"W
L18	18.149	S36° 53' 46.15"W
L19	42.531	S68° 55' 41.82"W
L20	31.598	S53° 34' 17.88"W
L21	76.791	S89° 36' 13.40"W
L22	23.888	S53° 48' 18.14"W
L23	106.235	S25° 29' 30.64"W
L24	22.361	S26° 33' 56.00"W
L25	43.641	S04° 36' 00.20"W
L26	55.049	S12° 24' 52.52"W

Line Table		
Line #	Length	Direction
L27	40.841	S29° 53' 01.84"W
L28	38.114	S73° 30' 23.10"W
L29	27.670	S38° 44' 49.44"W
L30	32.596	S09° 52' 16.23"W
L31	49.230	S46° 17' 07.91"W
L32	30.958	S23° 35' 23.21"W
L33	61.483	S03° 10' 42.92"E
L34	31.982	S35° 24' 02.66"W
L35	33.065	S15° 56' 43.33"E
L36	35.450	S47° 35' 25.89"E
L37	61.727	S00° 48' 44.68"W
L38	79.572	S18° 48' 50.28"W
L39	34.818	S29° 06' 00.01"E
L40	80.680	S12° 16' 33.82"W
L41	16.750	S08° 34' 42.78"E
L42	72.992	S22° 47' 42.74"W
L43	51.395	S05° 41' 45.89"W
L44	39.588	S56° 12' 14.36"W
L45	69.821	S47° 14' 51.26"W
L46	60.517	S48° 28' 03.27"W
L47	78.739	S29° 37' 58.43"W
L48	34.694	S10° 32' 01.28"E
L49	35.047	S39° 13' 51.88"E
L50	33.987	S56° 21' 40.27"E
L51	19.090	S34° 51' 36.72"E
L52	43.531	S12° 12' 34.74"W

Curve Table			
Curve #	Length	Radius	Delta
C1	772.679	1106.146	040.0230
C2	113.059	60.176	107.6474
C3	36.896	91.436	023.1196
C4	546.589	698.815	044.8148

GENERAL NOTES:

1. ALL NEW LOTS TO HAVE INTERNAL ACCESS ONLY.
2. A "STORM WATER MANAGEMENT AND SEDIMENT REDUCTION PLAN HAS BEEN PREPARED FOR THIS PROPERTY AND WILL BE APPLIED FOR LAND DISTURBING ACTIVITIES. EACH PROPERTY OWNER WILL COMPLY WITH THIS PLAN UNLESS AN INDIVIDUAL PLAN IS PREPARED AND APPROVED FOR THAT PROPERTY."
3. ALL NEW ROADWAYS WITHIN DEVELOPMENT WILL HAVE A 49' (PRIVATE) R.O.W.
4. PUBLIC WATER IS AVAILABLE ALONG FAIRFOREST WAY PROVIDED BY GREENVILLE WATER SYSTEM.
5. THE CITY OF GREENVILLE IS NOT RESPONSIBLE FOR THE OWNERSHIP & MAINTENANCE OF STORMWATER MANAGEMENT/QUALITY PONDS OR DEVICES.
6. ALL DIMENSIONS SHOWN ON ROADWAY ARE MEASURED FROM E.O.P. TO E.O.P. UNLESS OTHERWISE SPECIFIED.

VICINITY MAP - N.T.S.

Know what's below. Call before you dig.

PRELIMINARY

Fairforest Creekside Subdivision

Developer	Engineer
LyonJay	Bluewater Civil Design, LLC
Jennings Lyon	Paul J. Harrison, P.E.
1427 Laurens Road, Suite H	718 Lowndes Hill Road
Greenville, SC 29607	Greenville, SC 29607
864-238-5512	864-735-5068

Total Acreage: 25.73 AC Existing Zoning: R-M3

Number of Lots: 129 Lots New Roadway: 3,215 LF

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

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Project Number: 2019-127
DWG Name: Fairforest Creekside PP-1.dwg
Drawing Scale: as noted
Date of Project: 12/2019
Engineer of Record:

Paul J. Harrison, P.E.
South Carolina PE# 24224
North Carolina PE# 038371

bluewater civil design
bluewater civil design, llc
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com

Certificates of Authorization:
SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

SOUTH CAROLINA BLUEWATER CIVIL DESIGN, LLC No. C04212 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24224 12/16/19 PAUL J. HARRISON

FAIRFOREST CREEKSIDE
Single-Family Subdivision
Fairforest Way & Ridge Road
Greenville, SC 29607

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	12/16/2019	Issued Preliminary Plat

Preliminary Plat - Existing Conditions Plan

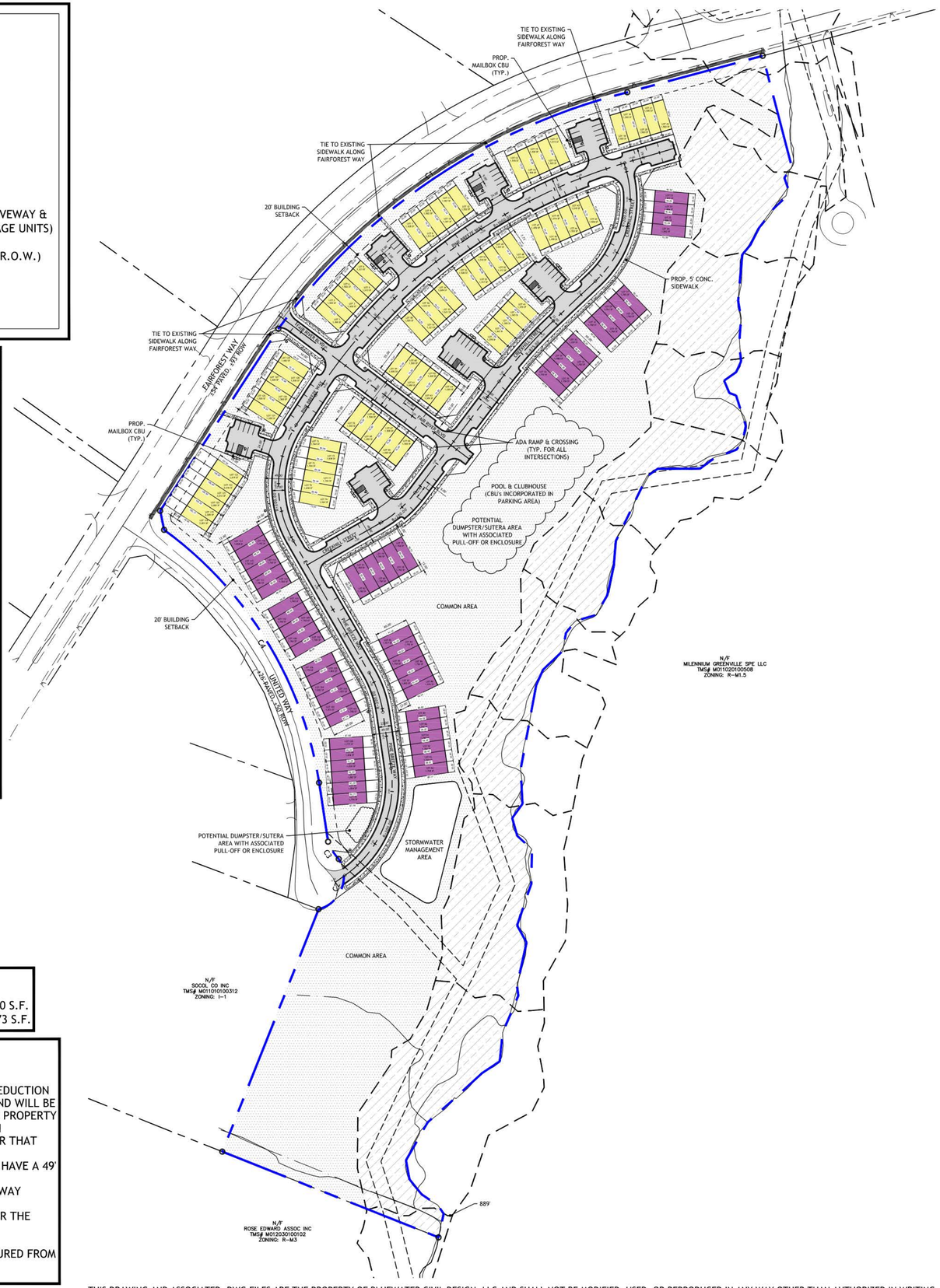
PP-1

SITE DATA

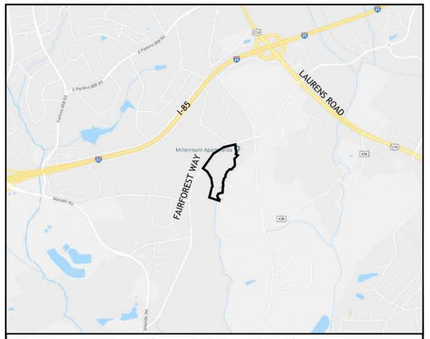
TAX MAP NO.:	M011010100315
TOTAL AREA:	±25.73-ACRES
ZONING:	R-M3
TOTAL UNITS:	74 UNITS (20' X 75' TYP.) 55 UNITS (20' X 95' TYP.) 129 TOTAL UNITS
REQUIRED PARKING:	258 SPACES (2 PER UNIT)
PROPOSED PARKING:	262 SPACES (INCLUDES DRIVEWAY & GARAGE SPACES FOR GARAGE UNITS)
PROPOSED ROADWAY:	±3,215 LF (22' PAVED, 49' R.O.W.)
SETBACKS	
FAIRFOREST WAY:	20'
UNITED WAY:	20'

SITE LEGEND

- ASPHALT PAVEMENT SECTION
- OPEN SPACE
- PROPERTY LINE/R.O.W.
- PROPOSED BUILDING SETBACK LINE
- PROPOSED LOT LINE
- PROPOSED E.O.P./CURB LINE
- EXISTING E.O.P.
- PROPOSED C/L ROAD
- FRONT LOADED GARAGE UNIT
- SURFACE PARKING UNIT



N W E S



VICINITY MAP - N.T.S.

OPEN SPACE NOTE:

OPEN SPACE REQUIRED:	200 S.F./DWELLING UNIT
	200 S.F. * 129 UNITS = 25,800 S.F.
OPEN SPACE PROVIDED:	±703,773 S.F.

GENERAL NOTES:

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PRELIMINARY

Fairforest Creekside Subdivision

Owner	Engineer
LyonJay Jennings Lyon 1427 Laurens Road, Suite H Greenville, SC 29607 864-238-5512	Bluewater Civil Design, LLC Paul J. Harrison, P.E. 718 Lowndes Hill Road Greenville, SC 29607 864-735-5068

Total Acreage:	25.73 AC	Existing Zoning:	R-M3
Number of Lots:	129 Lots	New Roadway:	3,215 LF

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

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Project Number: 2019-127
DWG Name: Fairforest Creekside PP-1.dwg
Drawing Scale: as noted
Date of Project: 12/2019
Engineer of Record:

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bluewATER civil design
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24224 12/16/19 PAUL J. HARRISON

FAIRFOREST CREEKSIDE
Single-Family Subdivision
Fairforest Way & Ridge Road
Greenville, SC 29607

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	12/16/2019	Issued Preliminary Plat

Preliminary Plat - Site Plan

PP-2

SITE DATA

TAX MAP NO.:	M011010100315
TOTAL AREA:	±25.73-ACRES
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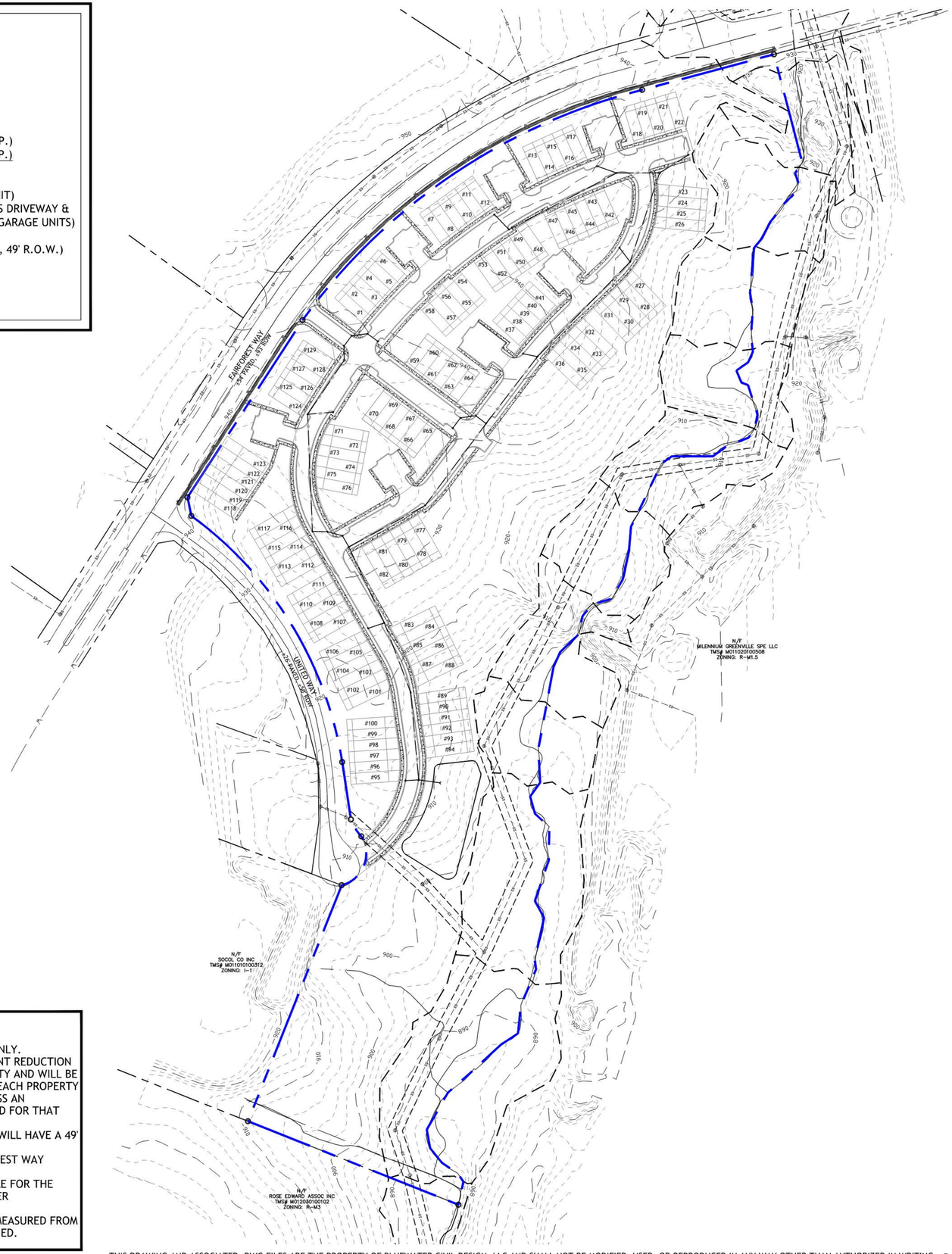
PROPOSED ROADWAY:	±3,215 LF (22' PAVED, 49' R.O.W.)
SETBACKS	
FAIRFOREST WAY:	20'
UNITED WAY:	20'

GRADING PLAN LEGEND

789 -AND- 790	EXISTING CONTOURS
SD	PROPOSED STORM DRAINAGE
SD	PROPOSED STORM STRUCTURES
SD	PROPOSED F.E.S.,O.S., & H.W.



VICINITY MAP - N.T.S.

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FAIRFOREST CREEKSIDE
Single-Family Subdivision
Fairforest Way & Ridge Road
Greenville, SC 29607

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	12/16/2019	Issued Preliminary Plat

Preliminary Plat - Storm Drainage Plan

PP-3

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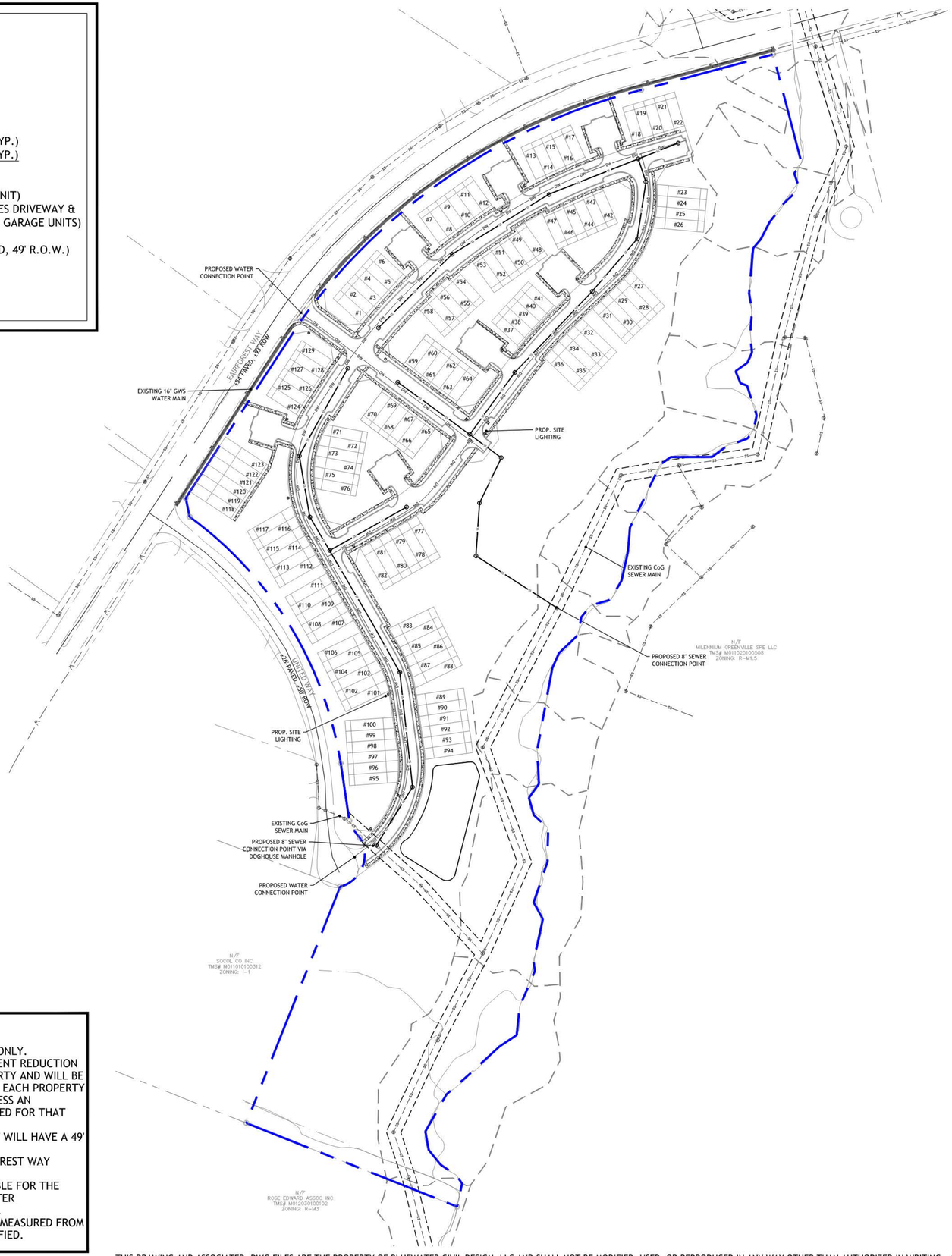
SETBACKS	
FAIRFOREST WAY:	20'
UNITED WAY:	20'

UTILITY PLAN LEGEND

- EXISTING SANITARY SEWER & SERVICES
- EXISTING MANHOLE
- PROPOSED SANITARY SEWER
- PROPOSED MANHOLE
- PROPOSED WATER MAIN W/ HYDRANTS, TEES, & VALVES



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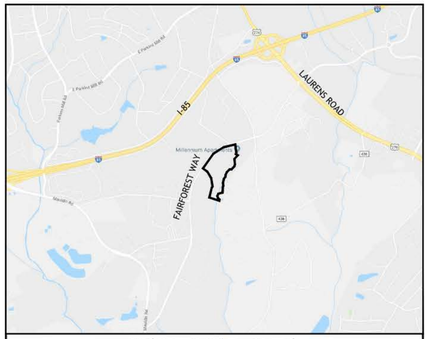

VICINITY MAP - N.T.S.

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4. PUBLIC WATER IS AVAILABLE ALONG FAIRFOREST WAY PROVIDED BY GREENVILLE WATER SYSTEM.
5. THE CITY OF GREENVILLE IS NOT RESPONSIBLE FOR THE OWNERSHIP & MAINTENANCE OF STORMWATER MANAGEMENT/QUALITY PONDS OR DEVICES.
6. ALL DIMENSIONS SHOWN ON ROADWAY ARE MEASURED FROM E.O.P. TO E.O.P. UNLESS OTHERWISE SPECIFIED.

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

PRELIMINARY

Fairforest Creekside Subdivision

Owner	Engineer
LyonJay Jennings Lyon 1427 Laurens Road, Suite H Greenville, SC 29607 864-238-5512	Bluewater Civil Design, LLC Paul J. Harrison, P.E. 718 Lowndes Hill Road Greenville, SC 29607 864-735-5068

Total Acreage:	25.73 AC	Existing Zoning:	R-M3
Number of Lots:	129 Lots	New Roadway:	3,215 LF

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

Project Number: 2019-127
DWG Name: Fairforest Creekside PP-1.dwg
Drawing Scale: as noted
Date of Project: 12/2019
Engineer of Record:

Paul J. Harrison, P.E.
South Carolina PE# 24224
North Carolina PE# 038371

bluewater civil design
bluewater civil design, llc
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com

Certificates of Authorization:
SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

SOUTH CAROLINA BLUEWATER CIVIL DESIGN, LLC No. C04212 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24224 12/16/19 PAUL J. HARRISON

FAIRFOREST CREEKSIDE
Single-Family Subdivision
Fairforest Way & Ridge Road
Greenville, SC 29607

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	12/16/2019	Issued Preliminary Plat

Preliminary Plat - Utility Plan

PP-4

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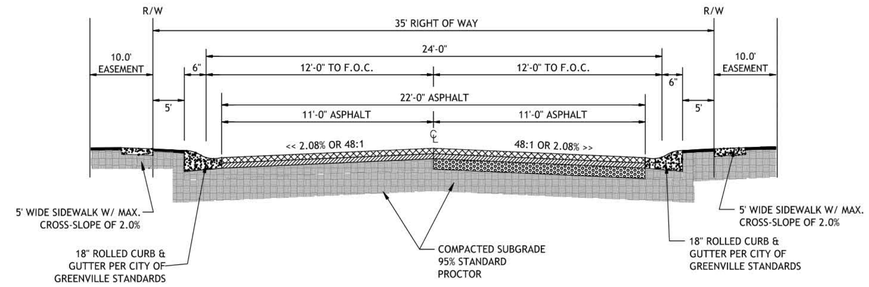
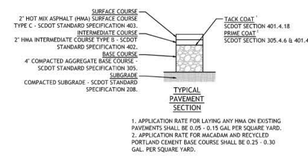


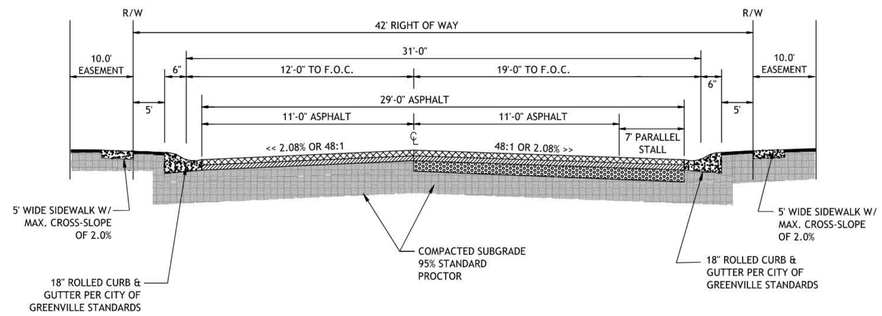


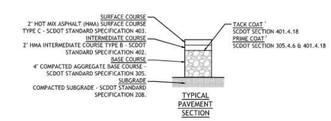
1. APPLICATION RATE FOR LAYING ANY HMA ON EXISTING PAVEMENTS SHALL BE 0.05 - 0.15 GAL PER SQUARE YARD.
2. APPLICATION RATE FOR MACADAM AND RECYCLED PORTLAND CEMENT BASE COURSE SHALL BE 0.25 - 0.30 GAL. PER SQUARE YARD.

- TYPICAL SECTION -

MODIFIED LOCAL 35' ROW (PRIVATE) RESIDENTIAL STREET CROSS-SECTION

NTS



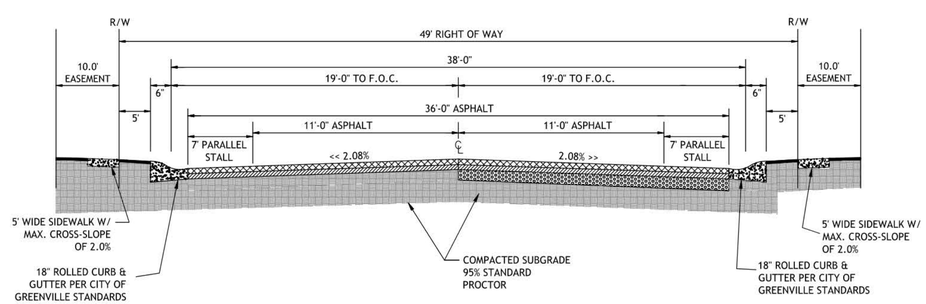


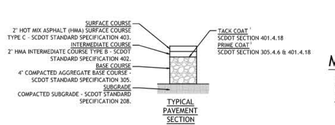
1. APPLICATION RATE FOR LAYING ANY HMA ON EXISTING PAVEMENTS SHALL BE 0.05 - 0.15 GAL PER SQUARE YARD.
2. APPLICATION RATE FOR MACADAM AND RECYCLED PORTLAND CEMENT BASE COURSE SHALL BE 0.25 - 0.30 GAL. PER SQUARE YARD.

- TYPICAL SECTION -

MODIFIED LOCAL 42' ROW (PRIVATE) RESIDENTIAL STREET CROSS-SECTION W/ SINGLE-SIDED PARALLEL PARKING

NTS





1. APPLICATION RATE FOR LAYING ANY HMA ON EXISTING PAVEMENTS SHALL BE 0.05 - 0.15 GAL PER SQUARE YARD.
2. APPLICATION RATE FOR MACADAM AND RECYCLED PORTLAND CEMENT BASE COURSE SHALL BE 0.25 - 0.30 GAL. PER SQUARE YARD.

- TYPICAL SECTION -

MODIFIED LOCAL 49' ROW (PRIVATE) RESIDENTIAL STREET CROSS-SECTION W/ DOUBLE-SIDED PARALLEL PARKING

NTS

South Carolina 811 Call 811 Before You Dig

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Project Number: 2019-127
DWG Name: Fairforest Creekside PP-1.dwg
Drawing Scale: as noted
Date of Project: 12/2019
Engineer of Record:

Paul J. Harrison, P.E.
South Carolina PE# 24224
North Carolina PE# 038371

bluewater civil design
718 Lowndes Hill Road • Greenville, SC 29607
www.bluewatercivil.com • info@bluewatercivil.com

Certificates of Authorization:
SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

SOUTH CAROLINA BLUEWATER CIVIL DESIGN, LLC No. C04212 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 24224 12/16/19 PAUL J. HARRISON

FAIRFOREST CREEKSIDE
Single-Family Subdivision
Fairforest Way & Ridge Road
Greenville, SC 29607

PLAN REVISION	ISSUE DATE	ISSUE COMMENT
A	12/16/2019	Issued Preliminary Plat

Preliminary Plat - Road Cross Sections

PP-5

city of greenville

APPLICATION FOR SUBDIVISION

Contact Planning & Development (864) 467-4476

Office Use Only: SD 19-020
Application# SD 19-895 Fees Paid 350
Date Received 12/16/19 Accepted By MF
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	JAY MARTIN	JACK E SHAW
*Title:	LANDSCAPE ARCHITECT	Owner
*Address:	18 WILLIAMS ST., GREENVILLE	P.O. BOX 5835, GREENVILLE
*State:	SOUTH CAROLINA	SOUTH Carolina
*Zip:	29601	29601
*Phone:	864-235-3589	864-233-6391
*Email:	jaymartin@arbarengineering.com	ronshaw@shawresourcesinc.com

PROPERTY INFORMATION

*SELECT SUBDIVISION TYPE: ___Major Preliminary (3-10 lots) ✓ Major Preliminary (11+ lots) ___Minor (2 lots)

___Major Final (3-10 lots) ___Major Final (11+ lots)

___Modification (Major 3+ lots) ___Modification (Minor 2 lots)

*STREET ADDRESS 12 Fisher Dr.

*TAX MAP #(S) 0280000203400, 0280000203500, 0280000203600, 0280000203601, 0280000203700, 0280000203800, 0280000203801

*CURRENT ZONING DESIGNATION R-6

*ORIGINAL APPLICATION # N/A

*SUBDIVISION PLAT # PB-P Pa-S

*SUBDIVISION NAME Seminary Commons

*TOTAL ACREAGE 4.81

*# ORIGINAL LOTS 7 *# PROPOSED LOTS 29

INSTRUCTIONS

1. The applicant is encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

   PREAPPLICATION MEETING DATE 12/12/19

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.

3. All applications and fees (made payable to the City of Greenville) for designation as a Major Subdivision Preliminary Plat must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A.	Major Subdivision – New (3-10 lots)	$300.00 – Preliminary Plat review, *public hearing required*
		$300.00 – Final Plat review, *administrative review*
B.	Major Subdivision – New (11+ lots)	$550.00 – Preliminary Plat review, *public hearing required*
		$550.00 – Final Plat review, *administrative review*
C.	Major Subdivision – Modification	$150.00 / $275.00 – *public hearing may be required*
D.	Minor Subdivision – New (2 lots)	$300.00 – Summary Plat review, *administrative review*
E.	Minor Subdivision – Modification	$150.00 – *administrative review*

4. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

5. Subdivision Plat format and content requirements are reflected in the Administrative Manual at Appendix 'F'. Please refer to ***Section 19-2.3.13, Land Development***, for additional information.

6. **Public Notice Requirements.** Major Subdivision applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

   Major Subdivision applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

   Upon planning commission recommendation, the application item will be scheduled for city council hearing.

   (*To be filled out at time of application submittal*)

   AA Public Hearing signs are acknowledged as received by the applicant

   AA Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

   *APPLICANT SIGNATURE Austin Allen

7. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy and one (1) electronic version of the application submittal package.**

8. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

   In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

   If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

   Austin Allen *APPLICANT SIGNATURE

   12/16/19 DATE

9. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** ✓ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

*Signatures	
Applicant	
Date	12/16/19
Property Owner/Authorized Agent	
Date	12/16/19

ARBOR

Seminary Commons Existing Lot Property Owners

0280000203400
Jack E Shaw Builders Inc
DB 0935 PG 9

0280000203500
Jack E Shaw
DB 0964 PG 677

0280000203600
Jack E Shaw
DB 0935 PG 8

0280000203601
Jack E Shaw
DB 0964 PG 20

0280000203700
Jack E Shaw
DB 0935 PG 8

0280000203800
Jack E Shaw
DB 0963 PG 593

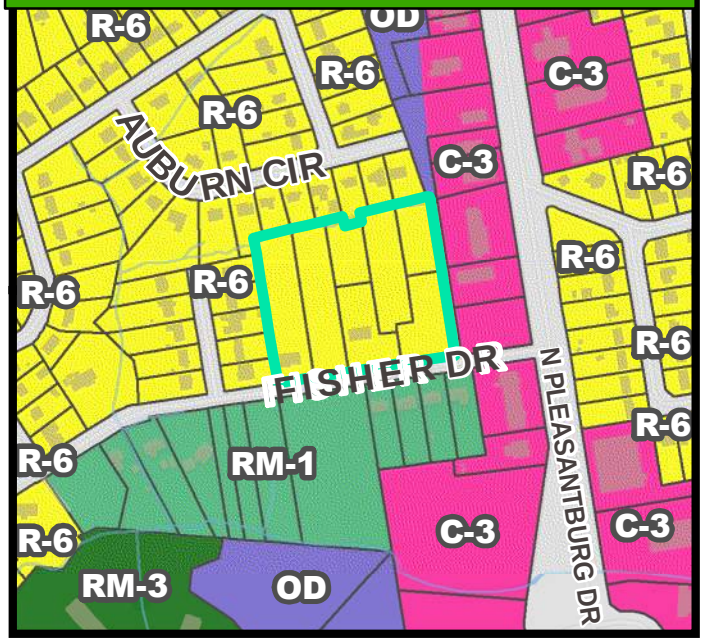
0280000203801
Jack E Shaw
DB 0963 PG 593

ARBOR ENGINEERING
[box 263 greenville sc 29602 • telephone 864 235 3589 • facsimile 864 233 6274 • arborengineering.com]

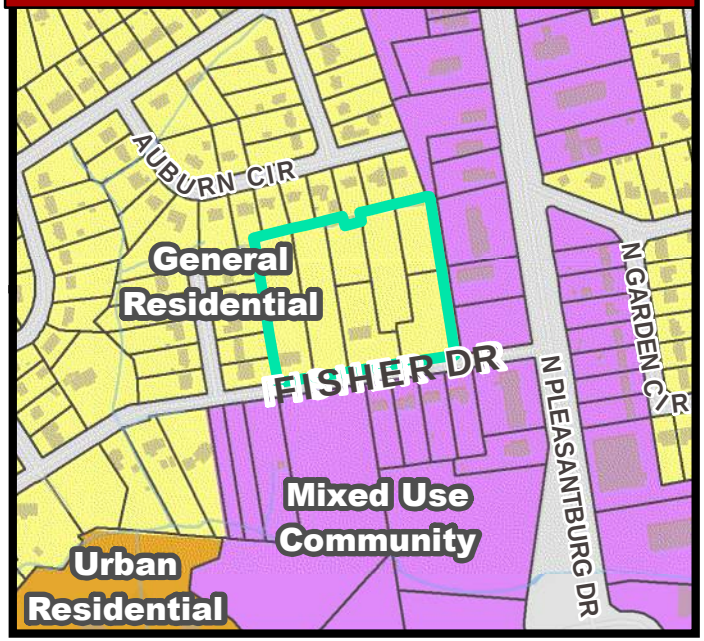
SD 19-020 • FISHER DR

AERIAL VIEW

CURRENT ZONING

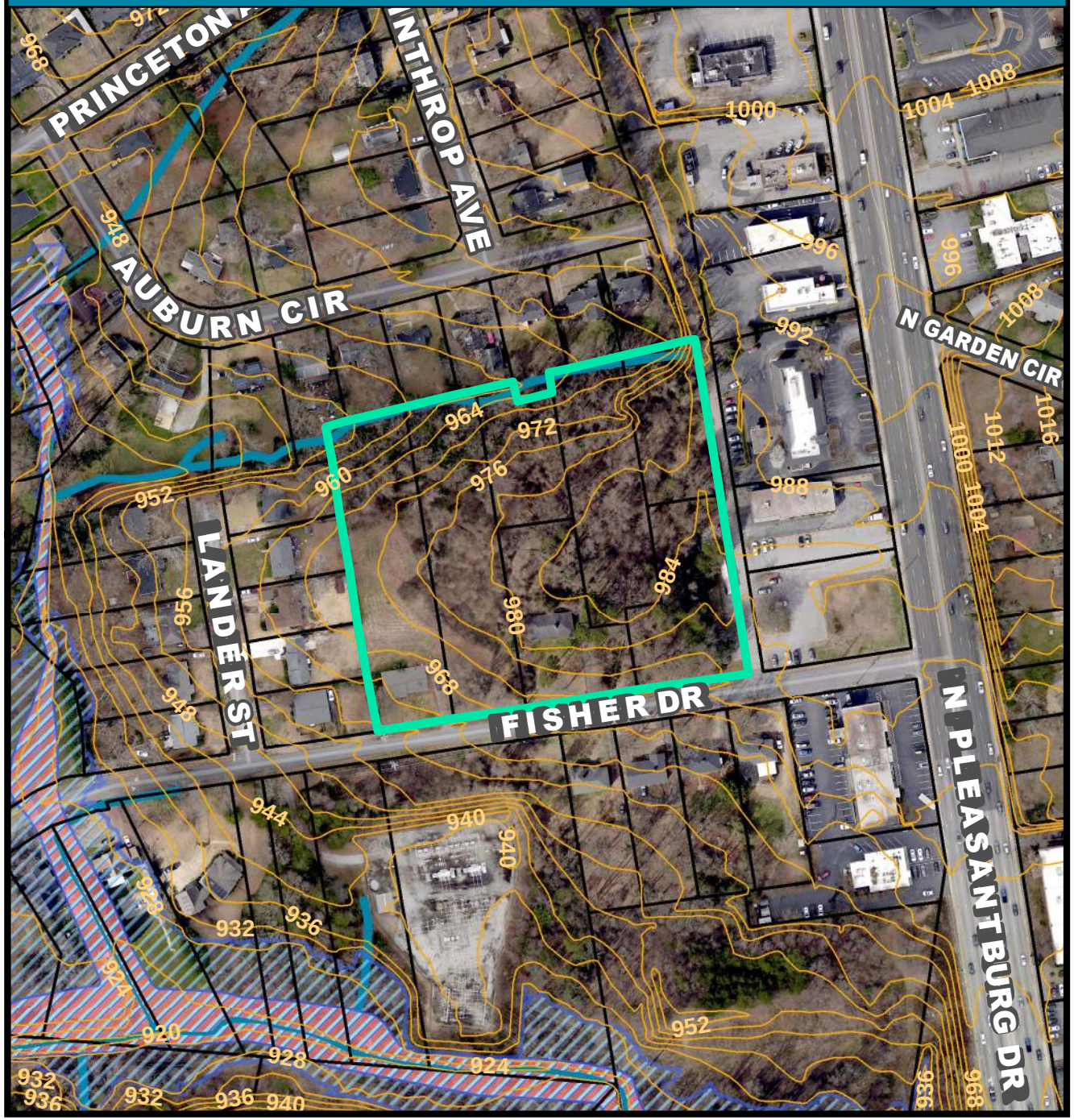


FUTURE LAND USE



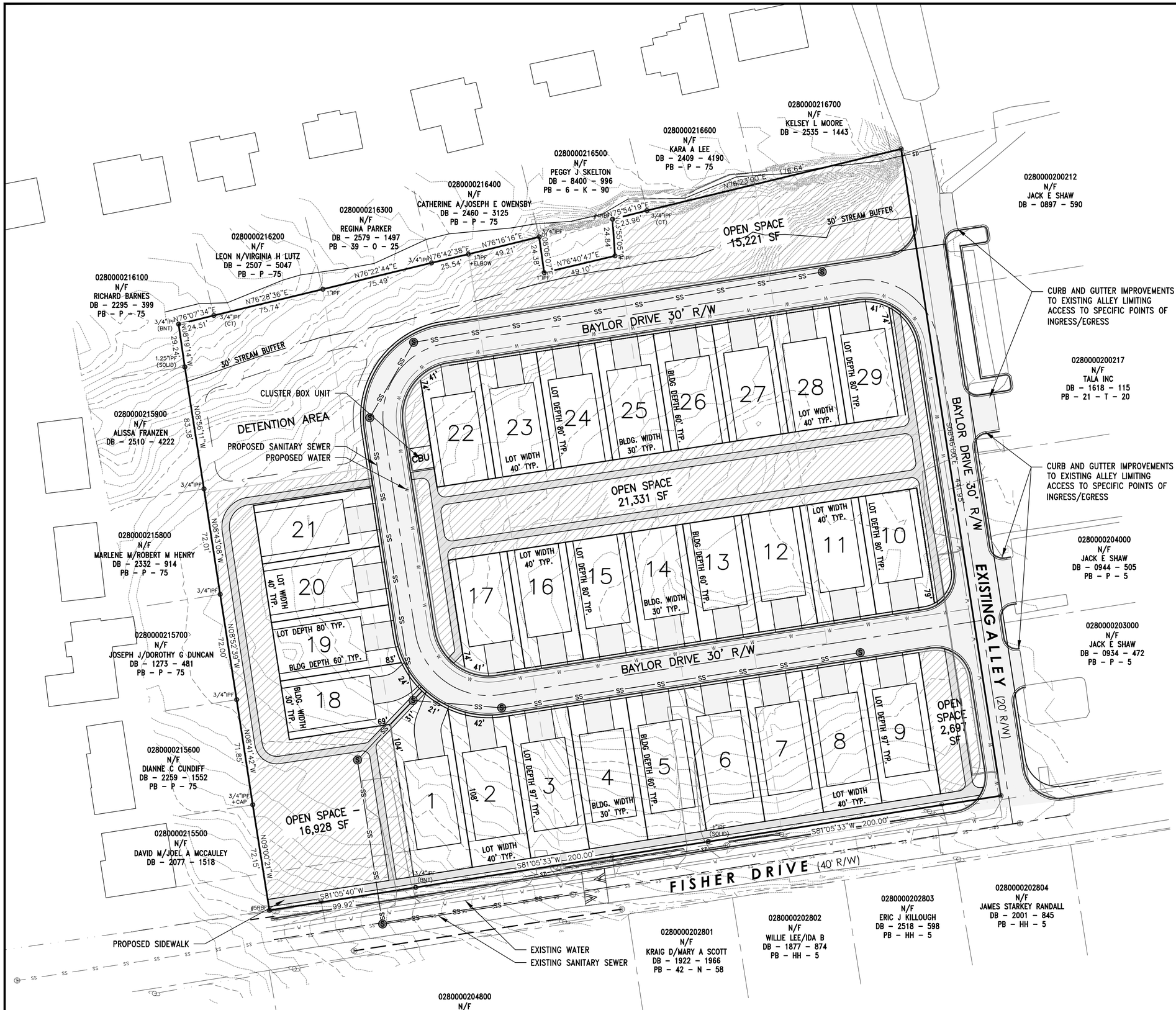
SD 19-020 • FISHER DR

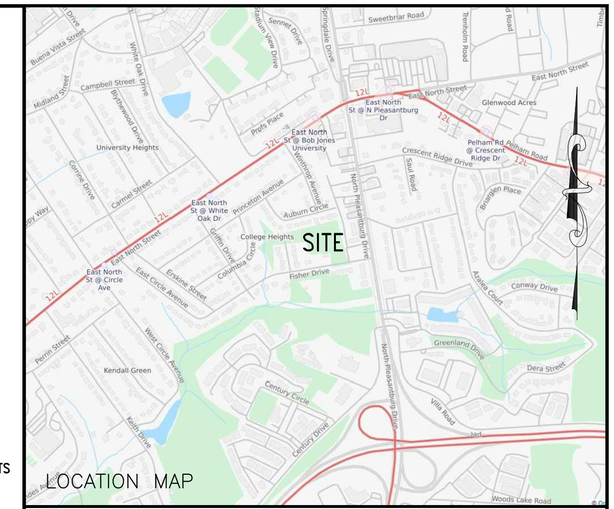
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS

PRESERVATION OVERLAYS





40' 0' 40' 80'
SCALE: 1"=40'

PRELIMINARY PLAN

SEMINARY COMMONS SUBDIVISION

SHAW RESOURCES, INC
126 MILLPORT CIRCLE #200
GREENVILLE, SC 29607
(864) 233-6391
DEVELOPER

ARBOR ENGINEERING, INC.
P.O. BOX 263
GREENVILLE, SC 29602
(864) 235-3589
ENGINEER

NO. OF ACRES 4.81 MILES NEW ROAD 0.0 NO OF LOTS 29

Arbor Engineering, Inc.
Box 263 • Greenville, S.C. 29602
Land Surveyors • Civil Engineers • Recreational Planners
Landscape Architects • Land Planners

DRAWN	DESIGN	CHECK	DATE:
AMA	JM3	JM3	DEC. 16, 2019

FILE	JOB NUMBER
16044-PLM.DWG	16044

DENSITY NOTES:

SITE: 4.81 AC +/-
ZONING: R-6
DENSITY ALLOWED: 34 LOTS (34.92)
CLUSTER:
OPEN SPACE REQUIRED: 52,381 SQ. FT.
OPEN SPACE SHOWN: 56,177 SQ. FT.
DENSITY AREA:
GROSS AREA: 209,502 SQ. FT.
AREA OF R/W: 31,990 SQ. FT.
TOTAL:
DENSITY ALLOWED: 29 LOTS (29.58)

PRELIMINARY PLAN NOTES:

1. TAX MAP NUMBER 0280000203400, 0280000203500, 0280000203600, 0280000203601, 0280000203700, 0280000203800, 0280000203801. THE PROPERTY IS ZONED R-6.
2. AS A MINIMUM, 5 FOOT DRAINAGE AND UTILITY EASEMENTS ESTABLISHED ALONG ALL SIDE PROPERTY LINES. 10 FOOT EASEMENTS ESTABLISHED ALONG EXTERIOR BOUNDARY OF SUBDIVISION UNLESS ADJOINING OWNERS HAVE ESTABLISHED EASEMENTS.
3. IRON PINS AT ALL PROPERTY CORNERS, UNLESS OTHERWISE NOTED.
4. REFERENCE PLAT BY BRIAN PATE (HBU SURVEYING), TITLED "FISHER DRIVE" DATED APRIL 17, 2019.
5. POTABLE WATER BY GREENVILLE WATER SYSTEM. (AS SHOWN)
6. ELECTRICAL POWER BY DUKE ENERGY. (OVERHEAD LINES ALONG FISHER DRIVE)
7. NATURAL GAS BY PIEDMONT NATURAL GAS.
8. SANITARY SEWER COLLECTION BY CITY OF GREENVILLE.
9. FIRE PROTECTION BY THE CITY OF GREENVILLE FIRE DEPARTMENT.
10. SANITATION SERVICES BY GREENVILLE PUBLIC WORKS.
11. ALL STORM WATER SYSTEMS ON-SITE WILL BE LOCATED WITHIN COMMON OPEN SPACE.
12. TOPOGRAPHY INTERVALS ARE ONE FOOT CONTOURS PROVIDED BY HBU SURVEYING.
13. A STORMWATER AND EROSION CONTROL PLAN WILL BE SUBMITTED AND APPROVED BY THE CITY OF GREENVILLE PRIOR TO CONSTRUCTION.
14. CURRENT PROPERTY OWNER IS LISTED AS JACK E SHAW.
15. THIS PLAT HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY.
16. ACCORDING TO THE FEMA MAP, NO FLOOD ZONE EXISTS ON SITE.
17. DRAINAGE PATH TO THE NORTH IS NOT A BLUE LINE STREAM ACCORDING TO USGS.
18. CITY FLOOD STUDY IS TAKEN INTO ACCOUNT WITH THIS LAYOUT.
19. 50' TURNING RADIUS IS PROVIDED FOR PRIVATE DRIVES.
20. ALL EXISTING BUILDINGS AND DRIVEWAYS ON SITE ARE TO BE REMOVED.
21. LOTS 1-9 WILL NOT HAVE DIRECT ACCESS TO FISHER DRIVE, ALL PROPERTIES WILL BE ADDRESSED OFF OF BAYLOR COURT.
22. BUILDING SETBACKS FOR LOTS ADJACENT TO FISHER DRIVE ARE CONSISTENT WITH THOSE ON FISHER DRIVE.
23. A 20' REAR SETBACK IS PROVIDED TO ALLOW FOR 20' DRIVEWAYS.

city of greenville

Office Use Only: Z-26-2018 M	
Application# (PZ 18-980)	Fees Paid $275
Date Received 12/16/18	Accepted By MKF
Date Complete_____	App Deny Conditions

APPLICATION FOR REZONE – PLANNED DEVELOPMENT DISTRICT (PD)

Contact Planning & Development (864) 467-4476

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Joe Bryant, PE, LEED AP	Dan Bruce
*Title:	Seamon Whiteside and Associates	Beacon Hill Development
*Address:	508 Rhett Street, Suite 101 Greenville	P.O. Box 8716 Greenville
*State:	South Carolina	South Carolina
*Zip:	29601	29604
*Phone:	(864) 298-0534 x 513	(864) 271-4600 x2015
*Email:	JBryant@SeamonWhiteside.com	Dbruce@chartercapital.org

PROPERTY INFORMATION

*STREET ADDRESS 409 Pelham Road

*TAX MAP #(S) 0278000200300, 0278000200301

*CURRENT ZONING DESIGNATION PD

*PROPOSED ZONING DESIGNATION PD

*TOTAL ACREAGE 19.4

*PROPOSED PD NAME Adams Hill

INSTRUCTIONS

1. The applicant is strongly encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

   PREAPPLICATION MEETING DATE Adams Hill

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
3. If the application is to designate a portion of a property as Planned Development (PD), otherwise described by deed, a survey of the parcel reflecting the requested designation(s) by courses and distances must be included in the submittal package.
4. In addition to the Planned Development (PD) required documents, as set forth in ***Sections 19-2.3.3, Planned development district***, and ***19-3.2 (N), PD: Planned development district***, the applicant/owner must respond to the "Standards" questions on page 4 of this application. A separate sheet may be attached to address these questions.

city of greenville

5. All applications and fees (made payable to the City of Greenville) for designation as a Planned Development (PD) must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A. Planned Development (PD) - New	$550.00 – Zoning Map Amendment, *public hearing required*
B. Major Deviations	$275.00 – Planned Development (PD), *public hearing required*
C. Minor Deviations	$150.00 – Planned Development (PD), *administrative review*

6. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

7. Please refer to ***Sections 19-2.3.3, Planned development district***, and ***19-3.2 (N), PD: Planned development district*** for additional information.

8. **Public Notice Requirements.** Planned Development (PD) applications require a planning commission public hearing. Additionally, informal review from the design review board is required prior to the planning commission hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

   Planned Development (PD) applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

   Upon planning commission recommendation, the application item will be scheduled for city council hearing.

   (*To be filled out at time of application submittal*)

   _____Public Hearing signs are acknowledged as received by the applicant

   _____Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

   ***APPLICANT SIGNATURE**_____

9. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy, one (1) binder and one (1) electronic version of the application submittal package.**

   Binder Requirements:

   - Three-ring binder
   - PD Name on front cover and spine of binder
   - Five (5) Tabs with the following labels: Location / Existing Zoning; Submitted Application; Public Notice and Comments; Planning Commission / Staff Report; City Council / Ordinance

10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

    In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

    If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

city of greenville

Furthermore, my signature (applicant) indicates that I understand and consent that this matter will appear before the Planning Commission for consideration and that any recommendation, for approval or denial, by the Planning Commission will be presented to the City Council at their next regularly scheduled meeting to be held on the fourth Monday of the month following the Planning Commission meeting in which the matter was heard.

_____ *APPLICANT SIGNATURE

_____ DATE

11. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** X__ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

*Signatures	
Applicant	DAN E Bruce
Date	
Property Owner/Authorized Agent	
Date	

APPLICATION REQUIREMENTS

1. Planned Development (PD) format and content requirements are reflected in the City of Greenville code under ***Sections 19-2.3.3, Planned development district***, and ***19-3.2 (N), PD: Planned development district***
2. Plan and information requirements:
   a. PD Regulating Plan – *submit a regulating master plan for the proposed planned development, which includes the following elements:*
      a. Contextual site information
      b. Total acreage of overall site
      c. Location and number of acres of various areas by type of use (*Sec. 19-4.3, Use-specific standards*)
      d. Location, orientation, height and number of stories of existing and proposed buildings
      e. Location of open space, landscaping and site features (*Sec. 19-6.2, Landscaping, buffering, and screening*)
      f. Number of dwelling units and density of various residential types and approximate number of bedrooms in each residential unit
      g. Square footage of non-residential use
      h. Building elevations to depict mass, form, roofline, and fenestration patterns
      i. Building and hardscape materials
      j. Primary traffic circulation pattern
      k. Location of parking areas and approximate number of spaces dedicated to each use type (*Sec. 19-6.1, Off-street parking and loading*)
   b. Statement of Intent – *submit a descriptive statement setting forth the characteristics and purpose of the proposed PD, which includes the following information:*
      a. Unique aspects of design and development

b. Procedures of any proposed homeowners' association or other group maintenance agreement
c. Proposed development schedule
d. Public improvements both on and off-site and estimate time schedule for providing such improvements
e. Impact on public facilities and letters from the appropriate agencies or districts verifying service availability
f. Architectural style, appearance and orientation of proposed buildings

c. Sign Plan – *submit a comprehensive sign plan for the PD (Sec. 19-6.6, Sign regulations)*

d. Final Development Plan – *upon public hearing approval, submit a final development plan for administrative review and approval*

SUPPORTING INFORMATION – STANDARDS QUESTIONS
Applicant response to Section 19-3.2(N) General Development Parameters

(Please attach separate sheet if additional space is need)

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT PROVIDES A MIX OF USES.
   See attachment.

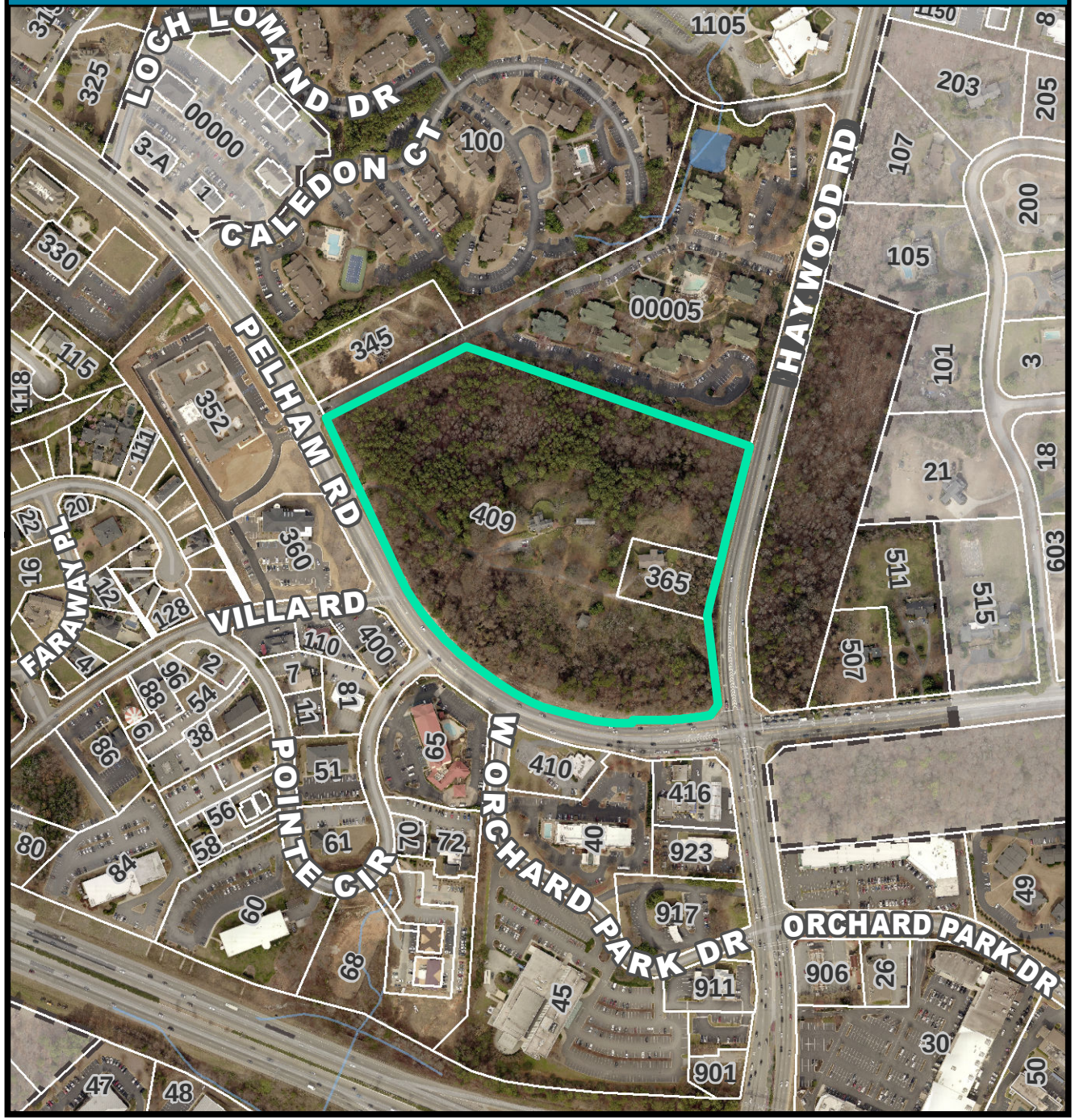
2. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT UTILIZES CLUSTER OR TRADITIONAL NEIGHBORHOOD DEVELOPMENT PRINICIPLES TO THE GREATEST EXTENT POSSIBLE THAT IS INTERRELATED AND LINKED BY PEDESTRIAN WAYS, BIKE WAYS, AND TRANSPORTATION SYSTEMS.
   See attachment.

3. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT RESULTS IN LAND USE PATTERNS THAT PROMOTE AND EXPAND OPPORTUNITIES FOR PUBLIC TRANSPORTATION AND AN EFFICIENT AND COMPACT NETWORK OR STREETS, ETC.
   See attachment.

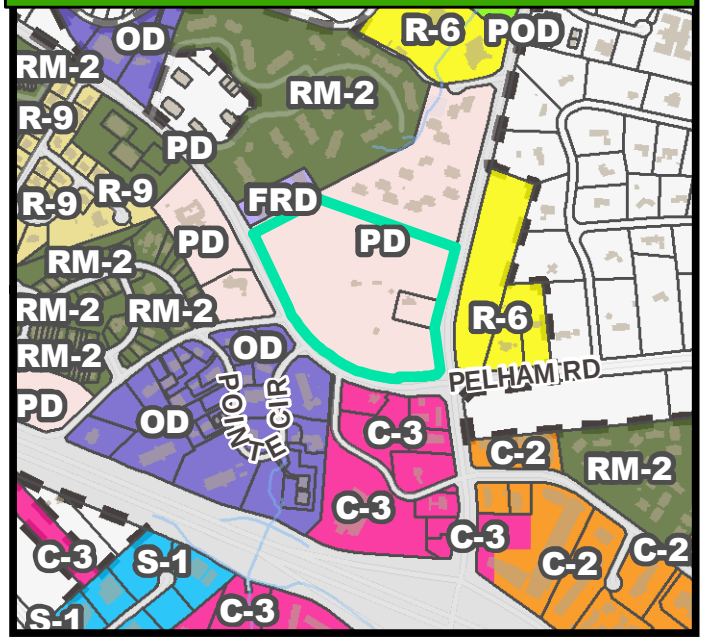
4. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT WILL BE COMPATIBILE WITH THE CHARACTER OF SURROUNDING LAND USES AND MAINTAIN AND ENHANCE THE VALUE OF SURROUNDING PROPERTIES.
   See attachment.

SD 19-015 • HAYWOOD RD AND PELHAM RD

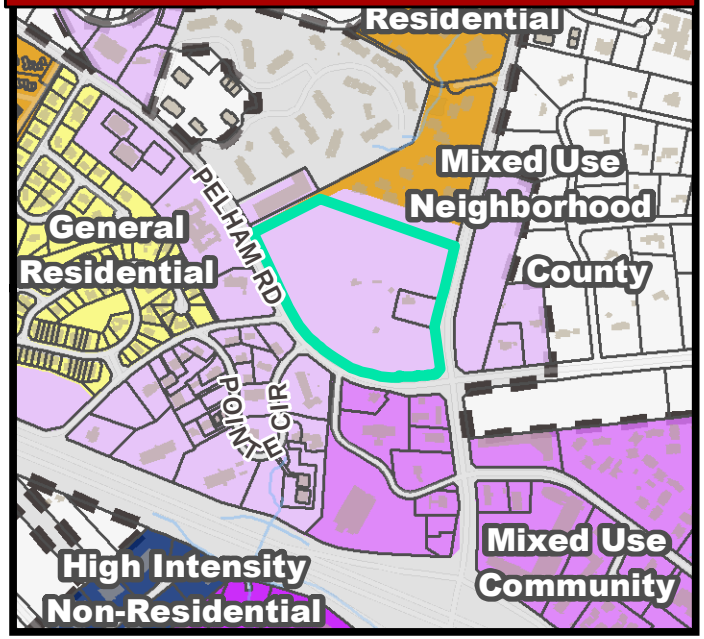
AERIAL VIEW



CURRENT ZONING

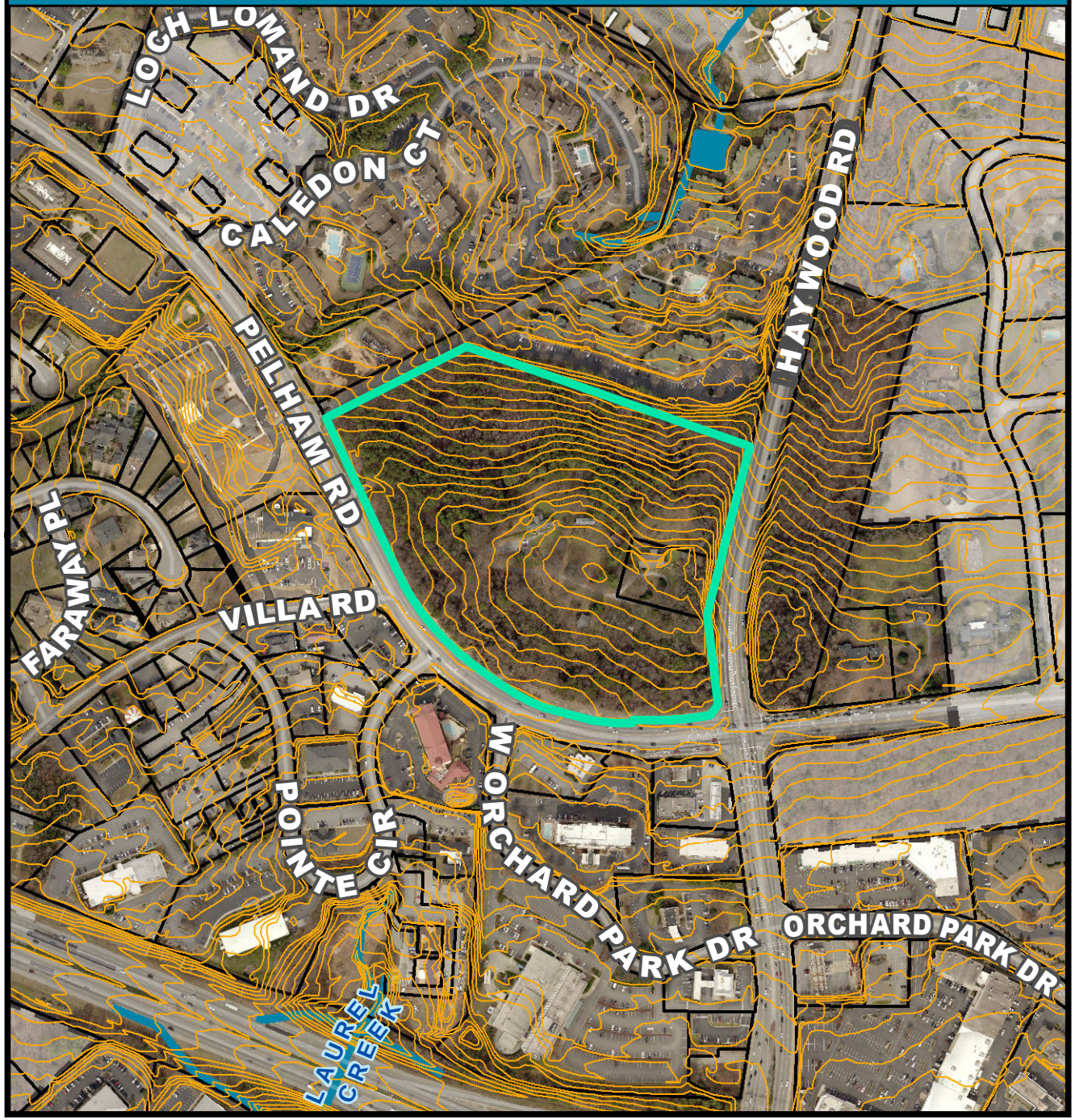


FUTURE LAND USE

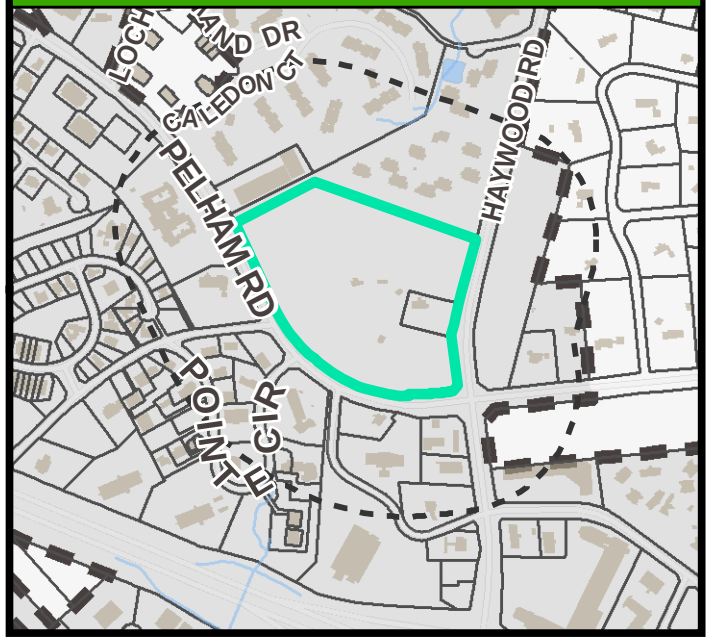


SD 19-015 • HAYWOOD RD AND PELHAM RD

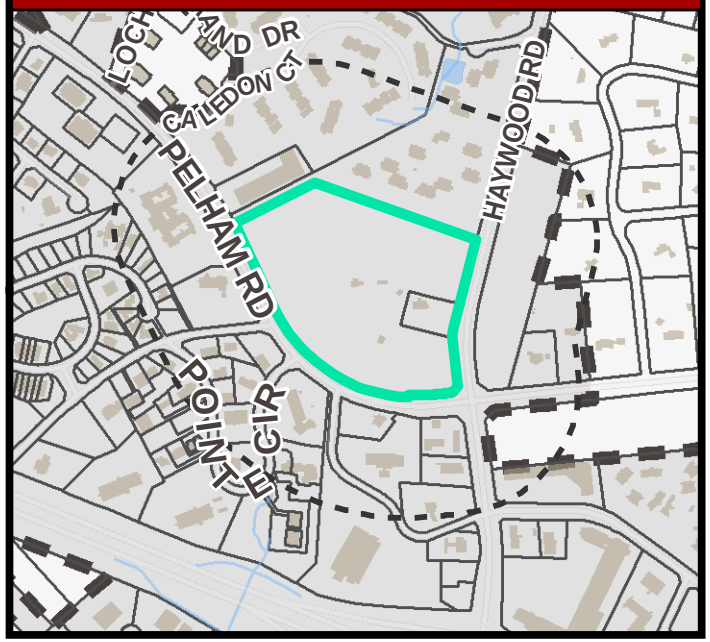
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



ADAMS HILL DEVELOPMENT

(MAJOR MODIFICATION)

Pelham Road at Haywood Road
City of Greenville
TMS#0278000200301 and 0278000200300

Phoenix Property Company
5950 Sherry Lane, Suite 320
Dallas, TX 75225

PHOENIX
PROPERTY COMPANY

1. INTRODUCTION:

This Statement of Intent ("**SOI**") is to describe in detail the proposed planned development of a +/- 19.4-acre site located at the northwest corner of Pelham Road ("**Pelham**") and Haywood Road ("**Haywood**") (the "**Adams Hill Planned Development**" or the "**Site**"). The Site consists of two parcels with the following tax sheets:

- 0278000200300 (existing R-6 zoning)
- 0278000200301 (existing R-6 zoning)

The Site is currently owned by Beacon Hill Development, LLC (the "**Master Developer**"), which is a real estate development, investment, and management company and is leading the efforts for development of the Site. The Master Developer is comprised of principals that have extensive experience in developing real estate properties in the Greenville area and the Southeastern United States. Mr. Dan Bruce, president of the Master Developer, has owned and assembled numerous properties surrounding the Site; including assembling the land for Haywood Mall and developing Orchard Park. His relationship to the site and the previous owners (Adams family) date back to the 1970's. It was at that time Mr. Bruce arranged the donation of 18 acres that was restricted and designated as a buffer for future development including Orchard Park and the Adams property.

The Master Developer will be partnering with developers of the multifamily (market rate and age restricted) ~~and senior living components~~. Together, the "**Adams Hill Developers**" are excited to bring a modern, mixed-use development to this prominent Site, which sits at the highest point within the City of Greenville. The site is bordered by multifamily residential to the northeast, self-storage to the northwest, Haywood to the east, and Pelham to the south.

The Site will be subdivided into 4 parcels, each with its own unique use:

- Lot A (~~+/- 10.0 acres~~ +/-15.7 acres): Multifamily.
- ~~Lot B (+/- 5.7 acres): Senior Living.~~
- Lot C (+/- 1.4 acres): Medical / Dental Office and/or Sit Down Restaurant
- Lot D (+/- 2.3 acres): Medical / Dental Office and/or Sit Down Restaurant.

The intent of the Adams Hill Developers is to put forth a master-planned, mixed-use development that would otherwise not be possible under standalone zoning for each of the ~~four~~ uses. Please refer to bold, underlined green text throughout this document to review the Adams Hill Developers plan to achieve this intent.

2. EXISTING ZONING & SITE CONDITIONS

The Site has the following zoning-related attributes:

- Existing zoning: R-6 (single-family residential)
- Existing use: two single-family residences in a wooded setting
- Neighboring zoning:
  - North & west: PD
  - South (across Pelham & Haywood intersection): C-3
  - South (along Pelham): O-D & PD
  - East (across Haywood): R-6 separated by a buffer with permanent, restrictive covenants
  - School district: Greenville County School District
  - Schools: East North Street Elementary; Greenville Middle Academy, and Eastside High

- The Greenville County School District has confirmed these assignments & service for the Adams Hill Planned Development

3. TRANSPORTATION, DRAINAGE, & UTILITIES

3.1 Transportation

The Site currently has the following transportation-related attributes:

- Existing road frontage: ~750' along Haywood Road & ~1,545' along Pelham
- Existing curb-cuts: 1 on Pelham. None on Haywood
- Existing sidewalk: None along property; however, there is sidewalk along the southside of Pelham

The Master Developer proposes the following transportation-related improvements:

- Proposed curb-cuts: 4 points of ingress / egress in total.
  - Driveway 1 (northern driveway on Haywood): Full access
  - Driveway 2 (southern driveway on Haywood): Right-in & right-out
  - Driveway 3: (eastern driveway on Pelham): Right-in & right-out
  - Driveway 4: (western driveway on Pelham): Full access, signalized. Located at the existing T-intersection with Villa Road
- Proposed, external sidewalk: Along Pelham & Haywood ROWs connecting to crosswalks at the intersection of Pelham & Haywood
- Proposed crosswalk: Across Pelham, connecting pedestrian traffic from Pelham and Villa Road
- Deceleration lane on Pelham Road for new ingress/egress points.
- Improvements and signalization to maintain a comparable level of service
- Restriping for additional turn lane at Pelham and Haywood south bound
- Concrete median divider on Haywood Road from the Haywood Rd / Pelham Rd intersection to the northern driveway (Driveway 1).
- Concrete median divider on Pelham Road across from eastern driveway on Pelham (Driveway 3) to prevent left turn movement at the Driveway 3 encroachment.

3.2 Drainage

A new stormwater drainage system will be designed to meet and exceed local, state, and federal regulations involving stormwater flow/discharge, siltation, and erosion control. The Site does not lie within designated flood zones or delineated wetlands. Stormwater peak runoff will be addressed with stormwater detention ponds and underground detention. Existing stormwater flow from the Site is conveyed to two discharge locations: (i) a portion of the Site discharges to the north and enters the existing stormwater system of Beacon Ridge Apartments and (ii) the remaining portion of the Site discharges to the SCDOT right of way of Pelham and Haywood. The discharge points will remain unchanged.

3.3 Utilities

The Master Developer proposes the following utility-related improvements:

- Proposed Sanitary sewer: New extension will be constructed to serve the Site. The sanitary sewer system will be owned & maintained by Metro Connects
- Water: To be provided by the Greenville Water System
- Electricity: To be provided by Duke Energy
- Natural Gas: To be provided by Piedmont Natural Gas

4. DEVELOPMENT SCHEDULE

The Adams Hill Developers propose the following:

- Site-wide infrastructure: to be constructed in one phase beginning in 2019 when permits have been approved (to include sanitary sewer, domestic water, data, and electricity)
- Lot A – Multifamily: Beginning construction in ~~2019~~ 2020 with a +/- 20-month construction schedule
- ~~Lot B – Senior: Beginning construction in 2019 with a +/- 20-month construction schedule~~
- Lot C – Medical / Dental Office and/or Sit Down Restaurant: Schedule unknown at this time
- Lot D – Medical / Dental Office and/or Sit Down Restaurant: Schedule unknown at this time

5. DEVELOPMENT CONCEPT

5.1 Landscape Architecture

The intent of landscape guidelines within the PD is to provide an aesthetically pleasing environment for property owners and residents of the PD that meet or exceed the minimum requirements of The City of Greenville. These guidelines are intended to maintain and enhance property values, enhance the appearance of all development, provide adequate buffers between different land uses, improve the character, appearance, and micro-climate of the city, address heat and noise abatement, and reduce erosion and stormwater runoff.

The following area general requirements for landscaping within the PD:

- All planting areas shall be protected from vehicle damage by the installation of curbing or other methods.
- The plant materials used in and around parking lots and adjacent to street rights-of-way and pedestrian ways shall be designed to ensure visibility at intersections and safety of pedestrians.
- All planting areas shall be stabilized with ground covers, mulches, or other approved materials to prevent soil erosion and to allow rainwater infiltration.
- All plants shall be placed in such a manner as to ensure maintenance access, to maintain unobstructed sight distances, and shall be a species suitable for proposed location, including conflicts with all utility easements and rights-of-way.
- All planting areas shall be automatically irrigated, rain sensors shall be required on all automatic irrigation systems that will receive city water.
- Canopy trees shall have a minimum size at planting of 3” caliper, 14’ height and 5’ of clear trunk. Ornamental/understory trees shall have a minimum size at planting of 2” caliper, 10’ height and 5’ clear trunk.
- All trees shall be native or naturalized species.
- Seasonal plantings may be used to provide color and enhanced appearance around signage and at intersections.
- Enhanced foundation plantings and ornamental plantings around the ~~senior living~~ and multifamily parcels.

The public road frontage streetscape will incorporate improvements along Pelham Road which will include a min. 5' wide sidewalk with a 5' wide lawn strip. The public road frontage streetscape along Haywood Road will include a 5' lawn strip and 5 sidewalk to help activate the streetscape. With the exception of the area contained within the sight distance triangle (as shown on site plans) along Pelham Road, street trees shall be planted at a spacing of 40 feet on-center for shade trees or 20 feet on-center for ornamental and understory trees along the entire length of the street frontage along Pelham Road and Haywood Road. Ornamental and understory trees shall be used as street trees only when there is an overhead obstacle which would preclude the use of taller-growing shade trees.

Parking areas will be landscaped to exceed City of Greenville requirements by requiring a minimum of 1.2 trees and 10 shrubs per 2,000 sf, or portion thereof, vehicular use area. Emphasis will be placed on locating canopy trees to break up parking areas and reduce the urban heat island effect. No more than ten continuous parking spaces shall be allowed without an island (minimum 180 sf) containing a canopy tree. Canopy trees shall be diverse in nature and a mixture of naturalized species shall be used. Parking areas visible from any public right of way shall be screened with a 2'-3' high evergreen hedge or berm. Lighting in parking areas shall be provided to meet the functional needs of safe circulation of vehicles and pedestrians, and provide protection of people and property. Poles shall be no taller than 18' above grade. Fixtures shall of the cut off variety to minimize glare off site. Light selection, including bollards and other site lighting, shall be of a uniform selection and design to create a cohesive appearance. Pedestrian paths and walkways shall be illuminated for safety.

The primary Pelham entrance to the site will consist of a median divided drive and will include street trees and outdoor lighting to enhance the entrance. Crosswalk areas will be enhanced with specialty paving. An art form and monument sign for the development will be located at the corner of Pelham and Haywood outside of the sight triangle. The entrance drive will provide access to the multifamily units, ~~senior living facility~~, medical / dental office, and sit-down restaurant. ~~This junction will be enhanced with specialty paving, detailed landscaping, an art element and lighting.~~ In addition interior roads will feature 5'-wide sidewalks, which will encourage pedestrian connectivity throughout the Site, which is a key component of the Planned Development proposal that would not be possible with standalone zoning. Please refer to the PD regulating plan depicting these internal sidewalks.

Each of the components of the Site will be heavily-amenitized with the inclusion of:

- Lot A – Multifamily (Market-rate and age-restricted):
  - Both shared and separate amenities will be provided for the enjoyment of the market-rate and age-restricted multifamily residents.
  - Shared amenities will include a centrally located leasing office, private garages, and activated greenspace including pet areas and exercise paths.
  - Amenities exclusive to the market-rate residents will include the following:
    - ~5,500 ft^2 of activated, external lawn and amenity deck for residents including a resort-style pool, outdoor grills with seating, fire pits, and greenspace for outdoor games including cornhole, bocce ball, etc.
    - ~6,000 ft^2 of interior amenity space for residents distributed through multiple residential buildings. Potential amenities may include a club room, mail room, fitness center, and business center.
  - Amenities exclusive to the age-restricted residents will include the following:
    - ~5,500 ft^2 of activated, external lawn and amenity deck for residents including a resort-style pool, outdoor grills with seating, fire pits, and greenspace for outdoor games including cornhole, bocce ball, etc.

        - ~6,000 ft² of interior amenity space for residents distributed through multiple residential buildings. Potential amenities may include a club room, mail room, fitness center, and business center.
    - ~~~17,000 ft² of activated, external courtyard & amenity deck space for multifamily residents. Amenities to include the following:~~
        - ~~Resort-style pool with sunshelf and semi-private cabanas~~
        - ~~Outdoor, community dining area with grills & family seating~~
        - ~~Greenspace for outdoor games including cornhole, bocce ball, etc.~~
        - ~~Pet areas with exercise paths~~
    - ~~~2,000 ft² interior space for a cooperative working space available to not only multifamily residents, but also the wider community~~
    - ~~~8,000 ft² of interior space for the use of multifamily residents including:~~
        - ~~24-hour, state-of-the-art fitness center~~
        - ~~Standalone separate yoga / cross training room~~
        - ~~Indoor, tiled pet spa area~~
        - ~~Multiple gathering areas with community seating and automated mail & package access~~
- ~~Lot B – Senior living:~~
    - ~~~10,000 ft² of motor-court space to serve as an outdoor amenity directly access from the shared round-a-bout~~
    - ~~~30,000 ft² of activated, external courtyard & amenity deck space for senior living residents. Amenities to include:~~
        - ~~Outdoor, community dining area with grills & family seating~~
        - ~~Play area for children and outdoor games~~
        - ~~Secure Memory Care courtyard with outdoor space for residents and their family members~~
    - ~~~25,000 ft² of interior space for the senior living residents. Amenities to include:~~
        - ~~Multiple dining venues and a café~~
        - ~~Spa/salon~~
        - ~~Fitness and exercise~~
        - ~~Onsite rehab services~~
        - ~~Multipurpose room for movies, speakers, church and other activities~~
        - ~~Arts & crafts~~
    - ~~Various social and entertainment engagement areas~~
- Lot C – Medical / Dental Office and/or Sit Down Restaurant:
- Lot D – Medical / Dental Office and/or Sit Down Restaurant:
    - Art form at the corner of Pelham & Haywood. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning
    - Outdoor benches and/or tables
- Other amenities shared between Lots:
    - Activated greenspace to serve as an outdoor amenity between the market-rate and age-restricted multifamily ~~& senior~~ uses for enjoyment of the public. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning
    - Master-developed entrance road lined by ~~parallel~~ angled parking creating a feeling of organic, mixed-use development leading to ~~a shared round-a-bout via internal,~~ interconnected roadways to each of the 4 Lots. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning

- The site's family history originated with settlers from Beacon Hill of Boston, which is also the highest point in Boston, Massachusetts. Art Pieces will be chosen to reflect "Adams Hill" as the highest point in the City of Greenville. The Art Pieces will be placed ~~in the Round-a-bout and~~ at the corner of Pelham and Haywood.

Please refer to each subsection below for additional detail above on these amenity spaces. Additionally, this application includes an exhibit on the open spaces proposed within the Site.

Foundation landscaping shall be provided along all sides of buildings. These plantings shall have a minimum depth of 6 feet. Foundation planting shall compliment the building's architecture, emphasizing vertical elements while not blocking views from windows.

Screening shall be provided for all exterior equipment, service and/or delivery areas, trash storage, and accessory uses and structures that may produce noise, odors, glare, vibration, etc.. This screening shall comprise of evergreen plant material, fencing or a combination there of.

Total open space will be comprised of common open space and private open space. Total open space will exceed City of Greenville requirements by requiring a minimum of 240 sf per dwelling unit, of which private open space may be provided at a rate of 100 sf per dwelling unit. The remaining difference of the open space must be common open space. The common open space may be comprised of green space, hardscape, and/or canopy trees for usable areas of walking or gathering. Connectivity shall be provided between these spaces and the buildings and parking areas to provide easy accessibility and to form an uninterrupted network of "vehicle free areas". Sidewalks shall be a minimum of 4' wide. Entry points and intersections of pedestrian walkways should be framed by enhanced landscaping, lighting, and hardscape materials scaled to the pedestrian context. Art elements are encouraged at strategic points throughout the development. Access to public transportation shall be provided as necessary. Additionally, the landscape architecture for all lots will complement one another. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.

5.2 Lot A – Multifamily

The multifamily portion of the Site will be primarily accessed from Driveway #4 (the signalized intersection at Pelham); however, the multifamily residents will also enjoy use of the interconnected, internal roads from each of the four points of ingress & egress across the larger Site. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.

The multifamily project is comprised of larger, 3/4-story residential buildings, smaller 3-story residential buildings (up to 55' in height as defined by 19-5.2.9) throughout Lot A. One-story accessory garages and amenity pavilions are located at the rear of the site. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.

The multifamily project will feature ~280 units with a mix of one, two, and three bedroom units. The clubhouse and leasing facility will be approximately ~10,000 ft² and is integrated into the courtyard building. ~~Of the 10,000 ft² of internal, amenity space, the multifamily project will dedicate ~2,000 ft² of this space for a cooperative & collaborative workspace with semi-private offices and community working spaces.~~

Regarding construction, the ~~courtyard~~ larger 3/4-story buildings will be stepped to work with the natural topography of the Site and positioned to frame the outdoor amenity areas and screen parking ~~the courtyard~~

~~will also have a level change which will create an interesting landscape and hardscape design for the pool area.~~ Entering this project from Pelham residents will drive uphill with the front of the ~~Clubhouse/~~Leasing office in view at the top of the hill. A cluster of smaller 3-story residential buildings at the top of the hill will surround a central outdoor amenity area for the market-rate multifamily residents. This portion of the development will recall the pattern of the former family homes that occupied the site, and also transition the building scale from the larger residential buildings to the smaller commercial parcels at the perimeter of the site. There will be a parallel angled parking street wrapping the hill top ~~between the courtyard building and the angled building~~ creating the feel of an urban streetscape. This main street will provide access to other portions of the site. ~~At the end of that streetscape there will be a round-a-bout that will access the parking areas for both buildings as well as giving a connection to the adjacent Senior housing project. The large residential buildings will provide "tuck-under" garages on the parking lot sides of the building that will have direct access to the corridors leading to the units.~~

The architectural style for the multifamily project will have consistent finishes consisting of a masonry base, complimenting fiber cement fields, warm wood tone accents (on fiber cement materials), and dark soffits, windows, and balcony details similar to current transitional design trends ~~is "mountain rustic" meets "industrial" and mixes elements like wood brackets, stone columns, steep peaked roof elements and earth tones along with red brick, larger window elements and flat roofed areas found in both mountain and industrial styles. The multifamily elevations shall be comprised of at least 15% non-siding materials. None of the siding will be vinyl~~.

*Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the non-residential development standards set forth in Section 19-6.5 of the City's Code of Ordinances. Additionally, the architecture for Lot A will complement the architecture featured in Lots ~~B,~~ C~~,~~ and D. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.

*All signage shall conform to the signage standards set forth in 19-6.6 of the City of Greenville Ordinances. Additionally, the signage design for Lot A will complement the signage featured in Lots ~~B,~~ C~~,~~ and D. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.

~~*5.3 – Lot B – Senior Living*~~

~~The senior living portion of the Site will be primarily accessed from Driveway #1 (the full access intersection on Haywood); however, the senior living residents will also enjoy use of the interconnected, internal roads from each of the four points of ingress & egress across the larger Site. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~The senior living project will feature independent living ("**IL**") units will be generally on the northern portion of the senior site, primarily facing the northern property line and the internal streets to the west. The tallest portion of IL units will be four stories, the bottom level accommodating private garages. The majority of the building will be three stories. The IL units will create a common use amenity courtyard with two levels of amenity and open spaces abutting the central, two story commons building. The courtyard will open to Haywood on the East, reducing the presence of the structure along the street front. The central commons building will serve as the center of hospitality for all residents, housing functions such as main entry/lobby, dining, living rooms, fitness centers, back of house, etc. The main entry faces a hospitality style motor court for resident drop off and short term visitor parking.~~

~~The senior living project will feature its main motor court connecting to the central round-a-bout, creating a focal element for the primary entrance to the development. The southern portion of the building will house assisted living (“**AL**”) and memory care (“**MC**”) units. The AL and MC unit portion of the building will be three stories and create an internal courtyard for AL residents that faces the commons building and dining rooms. MC will be on the ground level and AL will occupy the second and third levels. MC will have its own courtyard at the southeast corner of the facility which serves outdoor space requirements for MC residents. It will be a fenced courtyard, compatible with the architecture, and continuously monitored by staff. The facility will have consistent finishes consisting of a masonry base, complimenting fiber cement fields, warm wood tone accents (on fiber cement materials), and dark soffits, windows, and balcony details similar to current transitional design trends. The commons building at the center of the facility will be primarily warm wood finishes (on fiber cement materials) to better identify the entry and hospitality portion of the facility.~~

~~*Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the non-residential development standards set forth in Section 19-6.5 of the City’s Code of Ordinances. Additionally, the architecture for Lot B will complement the architecture featured in Lots A, C, and D. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*All signage shall conform to the signage standards set forth in 19-6.6 of the City of Greenville Ordinances. Additionally, the signage design for Lot B will complement the signage featured in Lots A, C, and D. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*5.4 – Lot C – Medical / Dental*~~

~~The Medical / Dental Office portion of the Site will be primarily accessed from Driveways #2 & #3 (the right-in, right-out on Haywood & the right-in, right-out on Pelham); however, the medical / dental customers will also enjoy use of the interconnected, internal roads from each of the four points of ingress & egress across the larger Site. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the non-residential development standards set forth in Section 19-6.5 of the City’s Code of Ordinances. Additionally, the architecture for Lot C will complement the architecture featured in Lots A, B, and D. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*All signage shall conform to the signage standards set forth in 19-6.6 of the City of Greenville Ordinances. Additionally, the signage design for Lot C will complement the signage featured in Lots A, B, and D. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*5.5 – Lot D – Sit Down Restaurant (drive thru prohibited)*~~

~~Lot D is restricted to a sit-down type restaurant, which drive-through order and pick-up windows are prohibited. The sit down restaurant portion of the Site will be primarily accessed from Driveways #2 & #3 (the right-in, right-out on Haywood & the right-in, right-out on Pelham); however, the restaurant customers will also enjoy use of the interconnected, internal roads from each of the four points of ingress & egress across the larger Site. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~Additionally, the southeast corner of Lot D will feature an art feature that faces the intersection of Pelham & Haywood and ties into the art feature in the central round-a-bout. The Adams Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the non-residential development standards set forth in Section 19-6.5 of the City's Code of Ordinances. Additionally, the architecture for Lot D will complement the architecture featured in Lots A, B, and C. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

~~*All signage shall conform to the signage standards set forth in 19-6.6 of the City of Greenville Ordinances. Additionally, the signage design for Lot D will complement the signage featured in Lots A, B, and C. The Beacon Hill Developers believe this is a key component of the Planned Development Proposal that would not be possible with standalone zoning.~~

5.6 ***Lots C and D – Medical / Dental Offices and or Sit Down Restaurant (drive thru prohibited)***

Lots C and D of the Site will be primarily accessed from Driveways #2 & #3 (the right-in, right-out on Haywood & the right-in, right-out on Pelham); however, customers for both Lots will also enjoy use of the interconnected, internal roads from each of the four points of ingress & egress across the larger Site. The Adams Hill Developers believe this is a key component to the existing Planned Development Zoning.

The sit-down restaurant and the medical / dental offices approved traffic impacts shall remain limited to a combined customer and employee capacity not to generate more than 868 daily vehicle trips, 23 total new AM peak hour trips, and 54 total new PM peak hour trips.

Additionally, the southeast corner of Lot D will feature an art feature that faces the intersection of Pelham & Haywood and ties into an additional art feature located within the Residential portion of the Development. The Adams Hill Developers believe this is a key component to the existing Planned Development Zoning

*Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the non-residential development standards set forth in Section 19-6.5 of the City's Code of Ordinances. Additionally, the architecture for Lots C and D will complement the architecture featured in Lots A and B.

*All signage shall conform to the signage standards set forth in 19-6.6 of the City of Greenville Ordinances. Additionally, the signage design for Lots C and D will complement the signage featured in Lots A and B.

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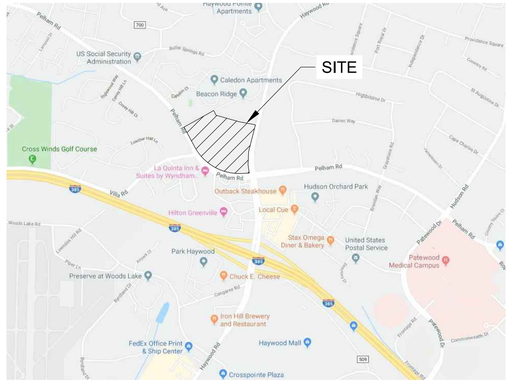

VICINITY MAP (NTS)

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SOUTH CAROLINA
SEAMON, WHITESIDE & ASSOCIATES, INC.
No. C00472
CERTIFICATE OF AUTHORIZATION

ADAM'S HILL PLANNED DEVELOPMENT

CITY OF GREENVILLE, SOUTH CAROLINA

SW+ PROJECT:	GR3308
DATE:	2019-12-12
DRAWN BY:	WDM
CHECKED BY:	JB/CW

REVISION HISTORY

EXISTING CONDITIONS

C1.0

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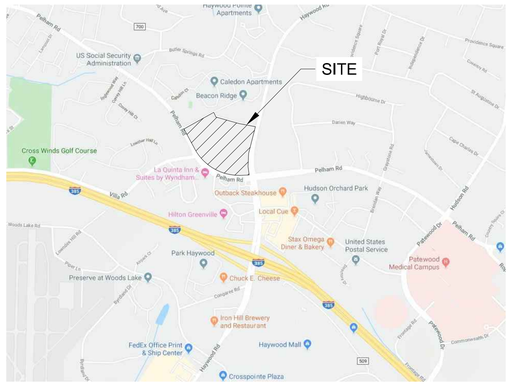
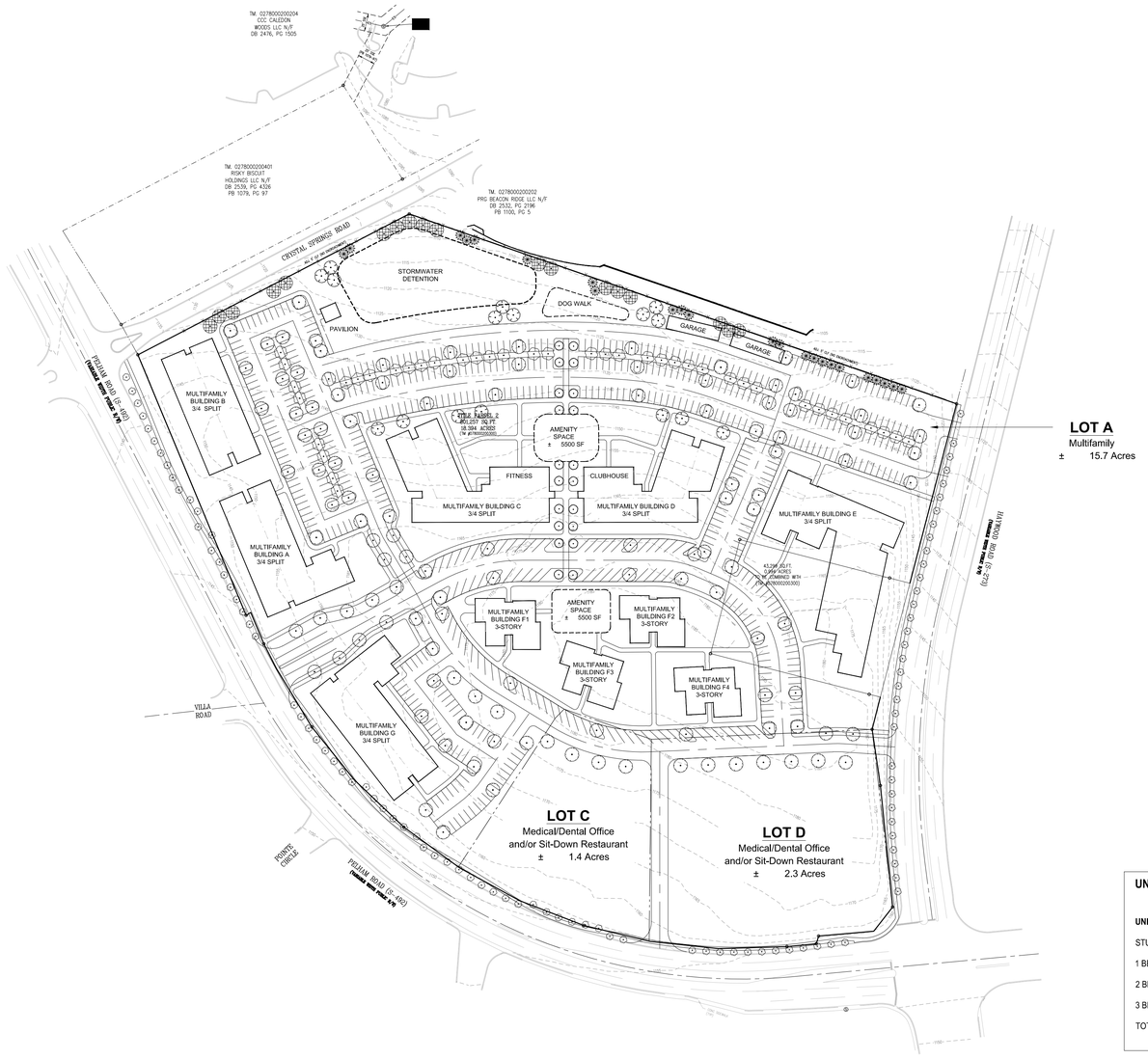


VICINITY MAP (NTS)

TREE DENSITY DATA:



SITE DATA:

Acreage:	19.4 Ac.		EX. ZONING
TMS#'s:	0278000200300	(18.39 Ac.)	PD
	0278000200301	(0.99 Ac.)	PD

Proposed Land Use: Planned Development (PD)

BUILDING SETBACKS:

USE	FRONT	SIDE	REAR
MULTI-FAMILY	20	20	40
SENIOR LIVING	20	20	40
COMMERCIAL	10	10	15

MAX. BUILDING HEIGHTS:

USE	HEIGHT
MULTI-FAMILY	55'
SENIOR LIVING	55'
COMMERCIAL	40'

OPEN SPACE:

91,600 SF Required (240 SF per unit)
263,391 SF Provided On site

% IMPERVIOUS AREAS:

Total Impervious Area: 12.0 Ac. (61.8%)
Total Site: 19.4 Ac

PARKING REQUIRED:

USE	PARKING REQUIRED (MIN PER ORDINANCE):
MULTI-FAMILY (± 382 UNITS)	MIN. 1.3 PER UNIT
COMMERCIAL	BY USE PER TABLE 19-6.1.1-1 CITY OF GREENVILLE ORDINANCE

PARKING PROVIDED:

TOTAL PARKING PROVIDED: 585 Spaces (including 12 ADA Spaces)

Surface Parking:	*573 Spaces*
Garage Parking	*12 Spaces (6 per building)*
Bicycle Parking:	*Per City of Greenville Ordinance*

UNIT TABULATION

BUILDING A:	55 Units
BUILDING B:	49 Units
BUILDING C:	55 Units
BUILDING D:	51 Units
BUILDING E:	71 Units
BUILDING F:	42 Units x 4 Bldgs
BUILDING G:	59 Units
TOTAL:	382 UNITS

UNIT MATRIX

UNITS		
STUDIO	54	14%
1 BEDROOM	190	50%
2 BEDROOM	121	31%
3 BEDROOM	17	5%
TOTAL	382	

STREET TREES:

PELHAM ROAD: 1490 LF of road frontage (75 understory trees required-Ex. Overhead Lines)
65 street tress provided (SCDOT sight distance prevents additional trees)

HAYWOOD ROAD: 730' LF of road frontage (37 understory trees required-Ex. Overhead Lines)
33 street tress provided *(understory will be used if overhead power remains)*

Know what's below. Call before you dig.

0 50 100 200
SCALE: 1" = 100'

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GREENVILLE, SC
864.298.0534
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PD REGULATING PLAN

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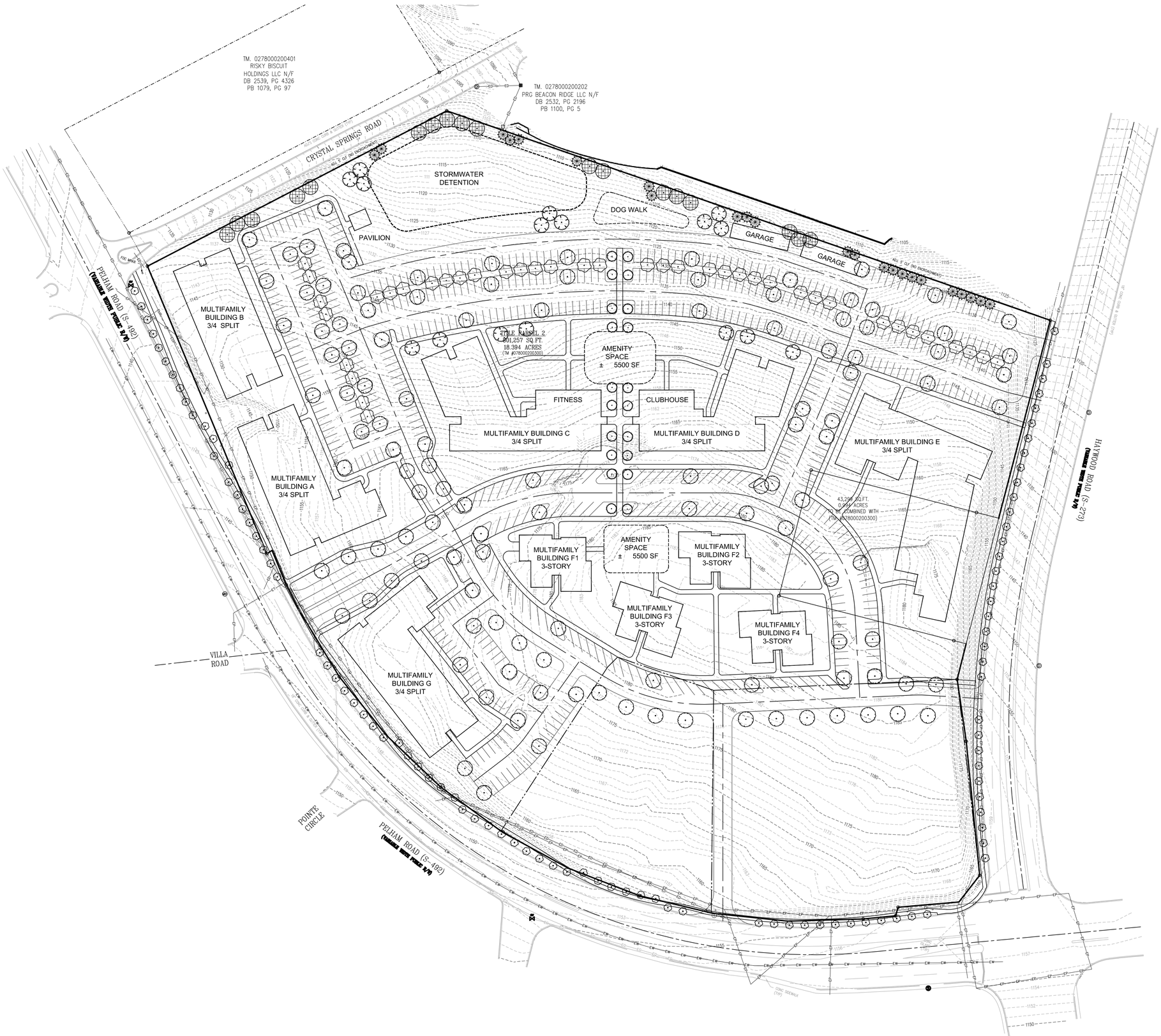

0 30 60 120
SCALE: 1" = 60'

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ENLARGED PLAN

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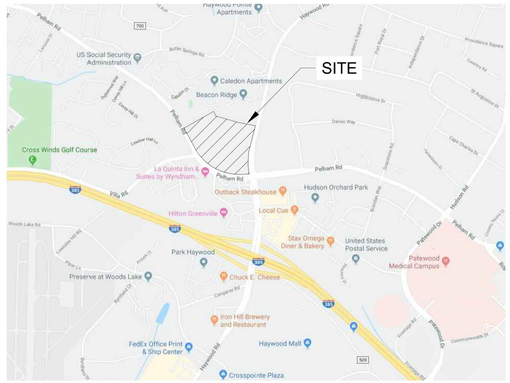

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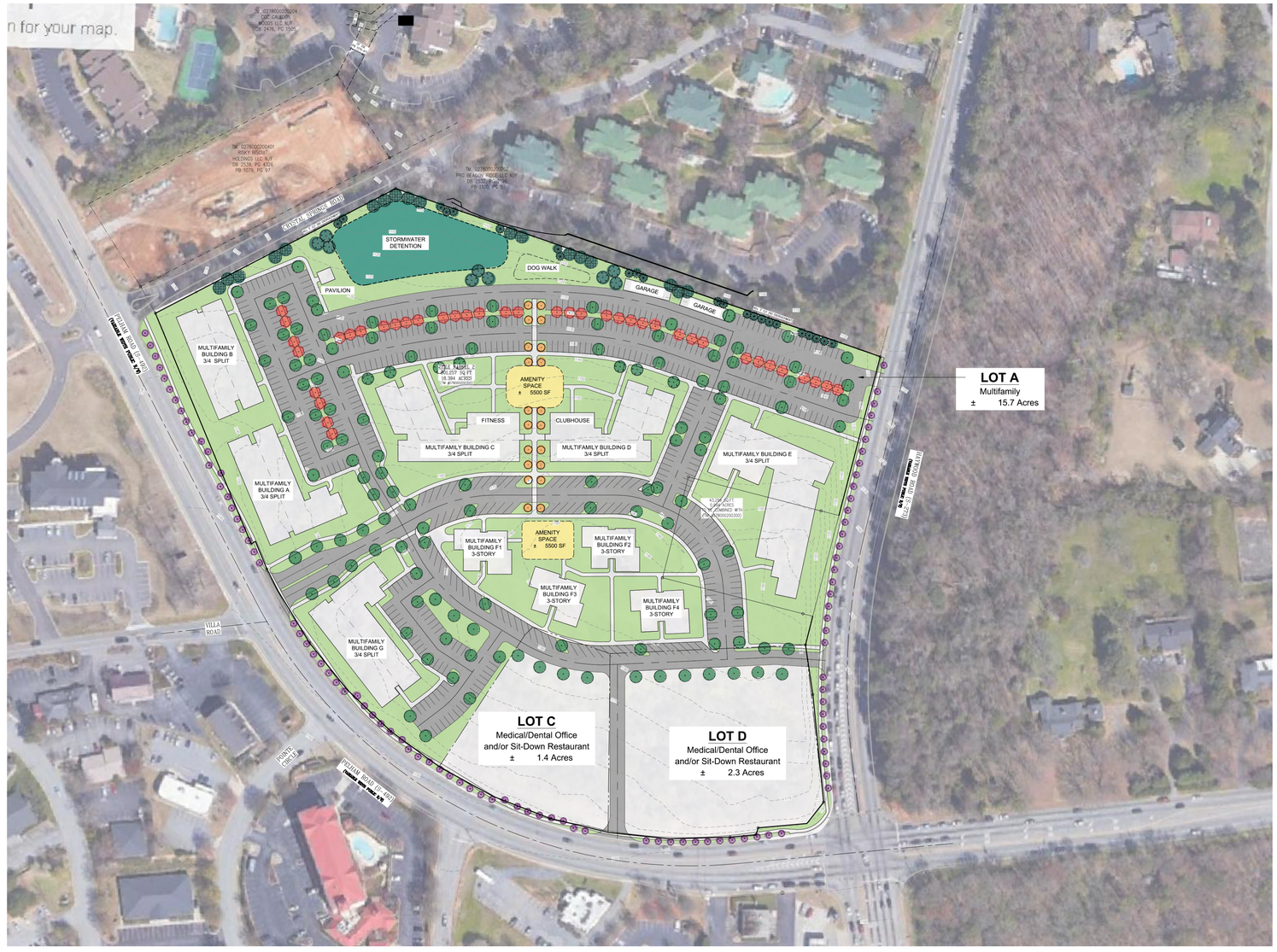

TREE DENSITY DATA:

CITY OF GREENVILLE TREE CREDITS
THE CITY OF GREENVILLE REQUIRES 15 TREE CREDITS PER ACRE, EXCLUDING BUILDING FOOTPRINTS

TOTAL SITE

ACRES	19.4 ACRES
BUILDING ACRES	3.25 ACRES
SUBJECT CREDIT AREA	16.15 ACRES
REQUIRED CREDITS	242.25 TREE CREDITS

TREES SAVED

Quantity	Tree Species	Tree Caliper	Credit Units	Credits
			Total Credits	

TREES PLANTED

Quantity	Tree Species	Tree Caliper	Credit Units	Credits
195	SHADE TREE	4 in	1.1	214.5
41	EVERGREEN TREE	3 in	0.9	36.9
			Total Credits	251.4

Existing Credits	0
Planted Credits	251.4
Post Development Credits	251.4 TREE CREDITS
Required Credits	242.25 TREE CREDITS

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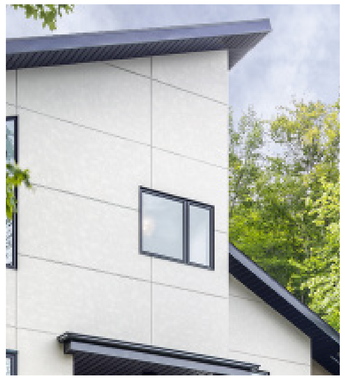

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mcmillan pazdan smith ARCHITECTURE

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