

REQUEST FOR COMMITTEE ACTION

HENDERSON COUNTY TECHINICAL REVIEW COMMITTEE

MEETING DATE: November 16, 2021

SUBJECT: Combined Master and Phase I Development Plan for Rich Mountain Major Subdivision (2021-M09)

STAFF CONTACT: Matt Champion, Zoning Administrator

ATTACHMENTS: 1. Staff Report
2. Combined Master & Phase I Development Plan

SUMMARY OF REQUEST:

A subdivision application was submitted on behalf of property owners Robert T. Love, Karen Michelle Maynor, and Tracy Millar on November 1, 2021 by Ripple Falls, LLC. The application is for a Combined Master and Phase I Development Plan for Rich Mountain Major Subdivision, consisting of a total of 60 lots for single family dwellings and a total of 12,799 linear feet of new private roadway. The subject area is located off Locust Grove Road (SR 1528) and contains 245.86 acres. Phase I is approximately 82.78 acres and contains 22 single-family lots. The subject area contains all or portions of PINs: 9672-71-2573, 9672-51-2885, 9672-42-0371, 9672-41-0864, 9671-48-5404, and 9672-40-5853.

TECHNICAL REVIEW COMMITTEE ACTION REQUESTED:

Staff has found that the Combined Master and Phase I Development Plan meets the standards of the subdivision regulations of Chapter 42, Henderson County Land Development Code (LDC). Staff recommends the Combined Master Plan and Phase I Development Plan be subject to the developer addressing any issues raised by the TRC and addressing the comments listed in the Staff Report.

Suggested Motion:

I move that the TRC forward the Combined Master and Phase I Development Plan on to the Planning Board for further review as long as they meet all technical requirements based on the Henderson County Land Development Code and recommendations of the Henderson County Comprehensive Plan and any conditions in the staff report or as discussed by the TRC.

Henderson County Planning Department Staff Report
Combined Master and Phase 1 Development Plan
Rich Mountain Major Residential Subdivision (2021-M09)

Property Owner(s): Love, Maynor, & Millar
Applicant/Developer: Andy Baker
PINs: 9672-71-2573, 9672-51-2885, 9672-40-5853, 9672-42-0371 & 9672-41-0864

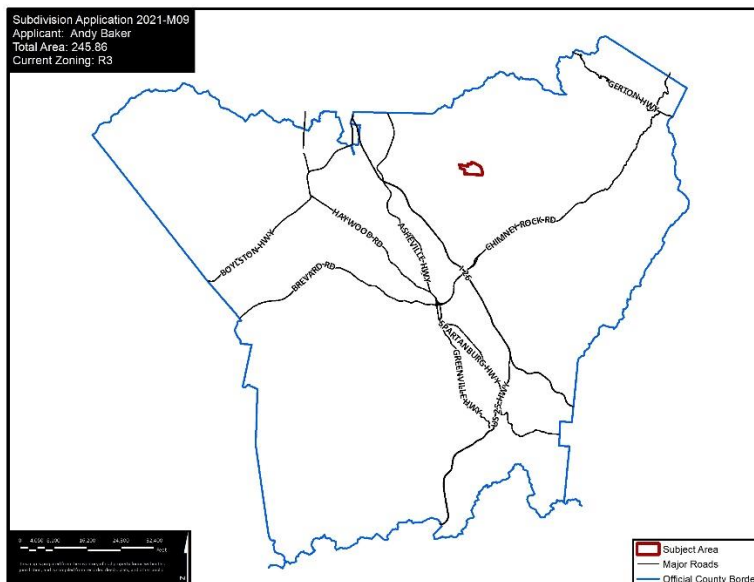
Master & Development Plan Comments:

According to Chapter 42, Henderson County Land Development Code (LDC) §42-341), the purpose of a Master Plan is to provide general information about the proposed development to allow for an assessment of its impact on the orderly growth and development of the County, environmental quality, land values, natural features identified on the site analysis sketch and the County’s roads and governmental services. During the review of the Combined the Master and Development Plan, the Technical Review Committee should take into consideration: applicable recommendations of the *Henderson County Comprehensive Plan*, the potential use of the land to be subdivided, and the impact of the subdivision and proposed use whether residential, commercial, or industrial.

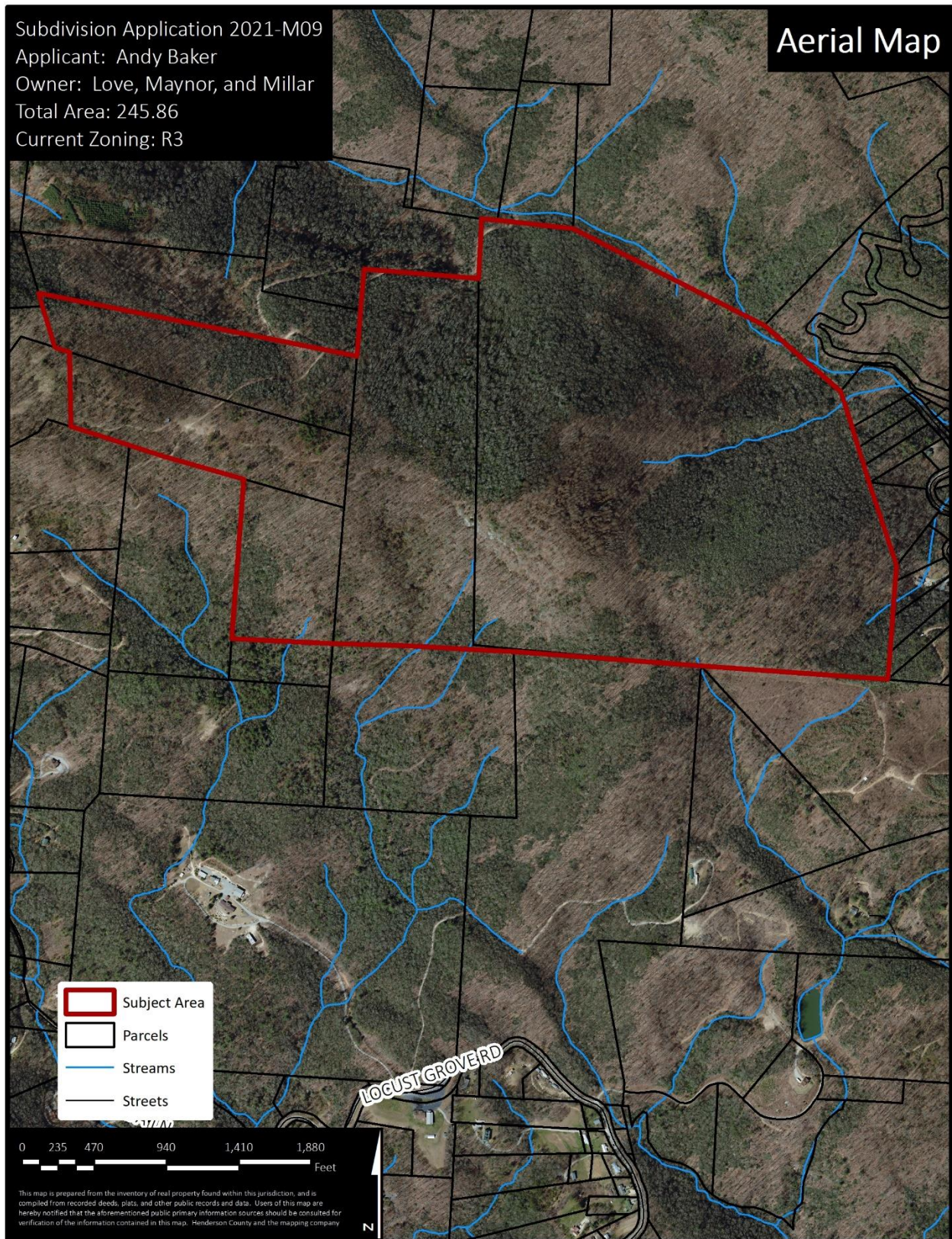
When reviewing the Combined Master and Development Plan it is important to consider that, due to severe topographic conditions, inadequate road access, distance from services, unique natural areas, soils that do not easily support soil drainage systems and/or the proximity to existing and incompatible land uses/zoning, all land may not be suitable to be subdivided for the purpose of dense development (LDC §42-75).

Staff has reviewed the submitted Combined Master and Phase 1 Development Plan for the Rich Mountain Major Subdivision, taking into consideration the recommendations of the *Henderson County Comprehensive Plan* and reviewing the plan for conformance with Henderson County Land Development Code. Staff offers the following comments:

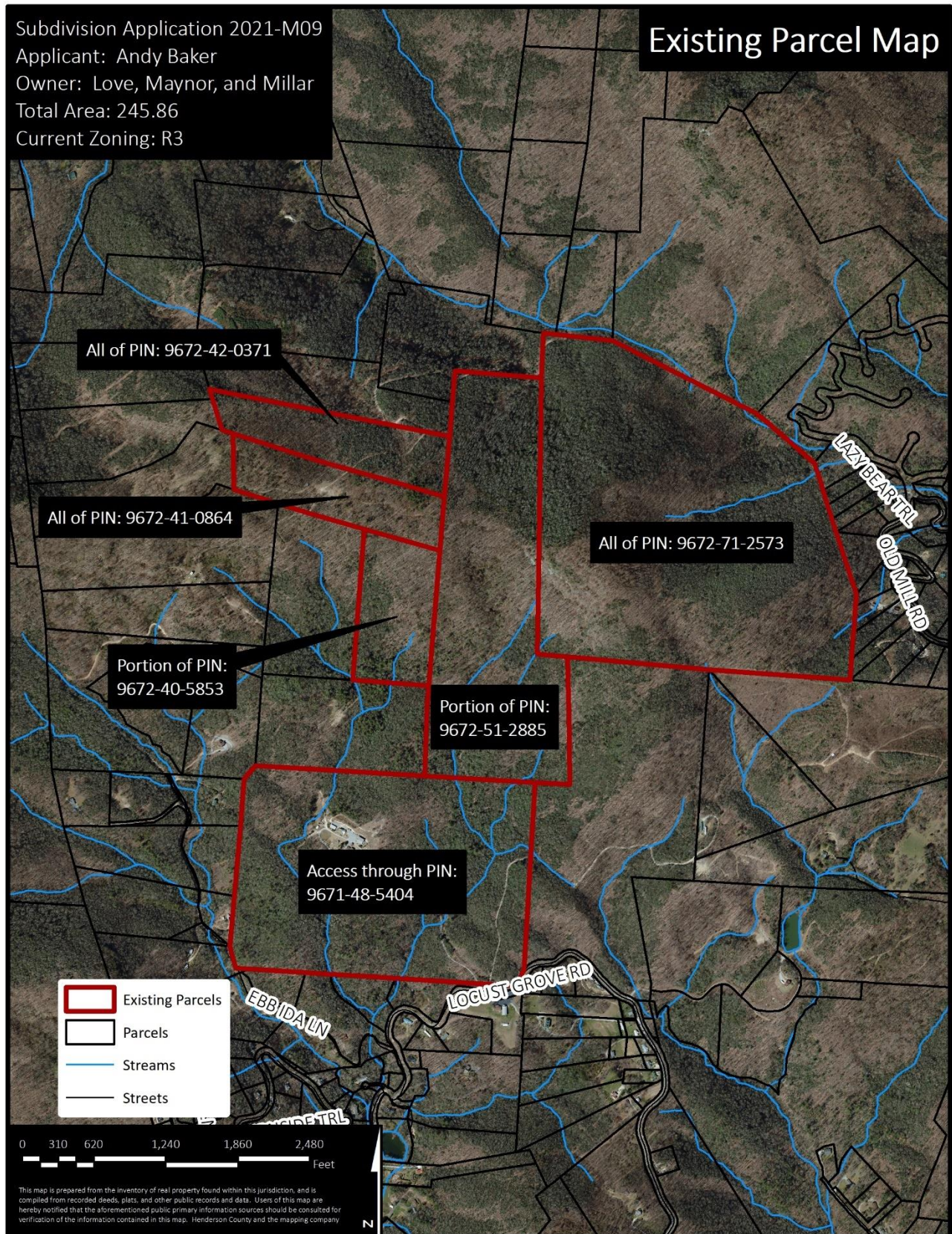
Map A: County Context



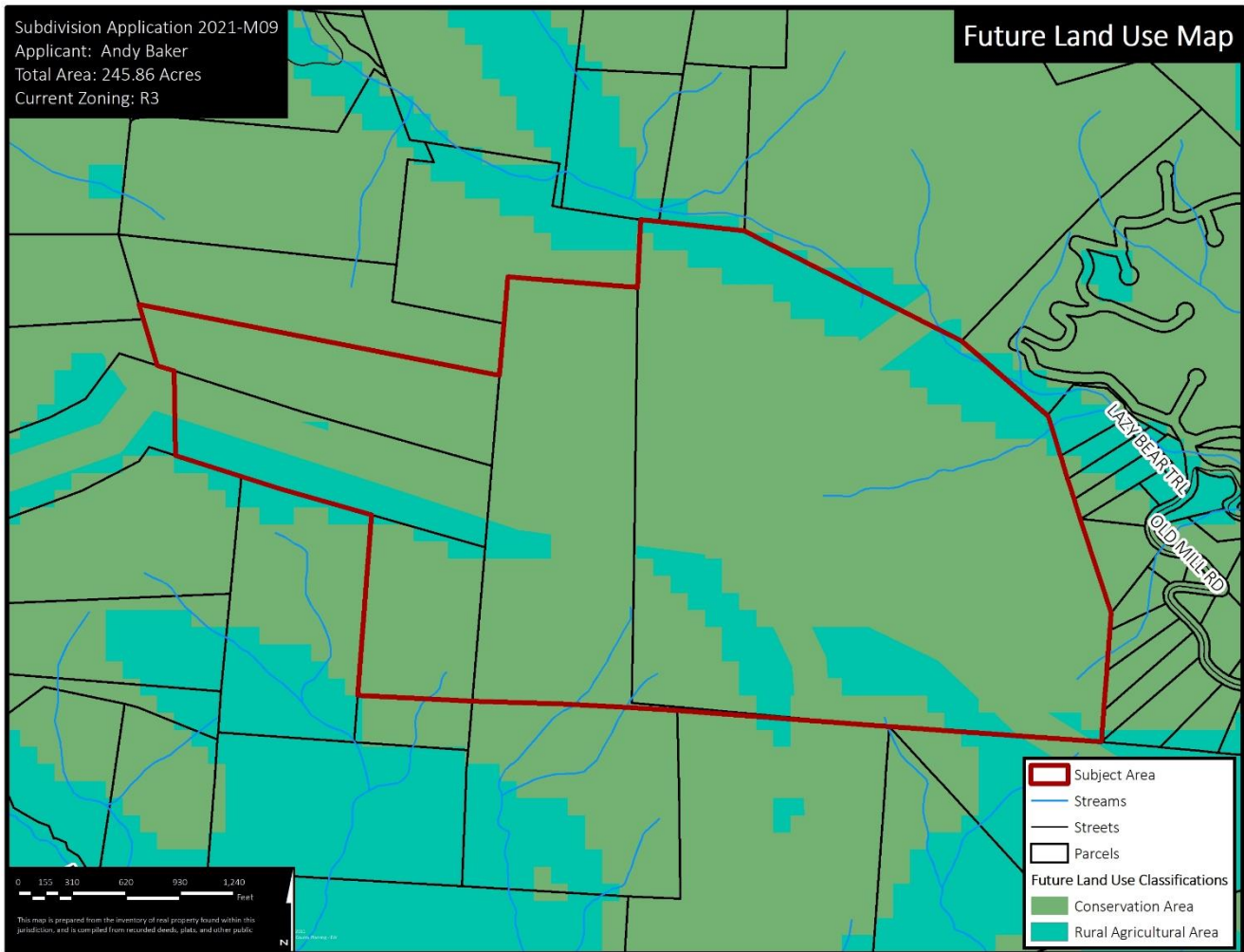
Map B: Aerial Imagery



Map C: Existing Parcel Map

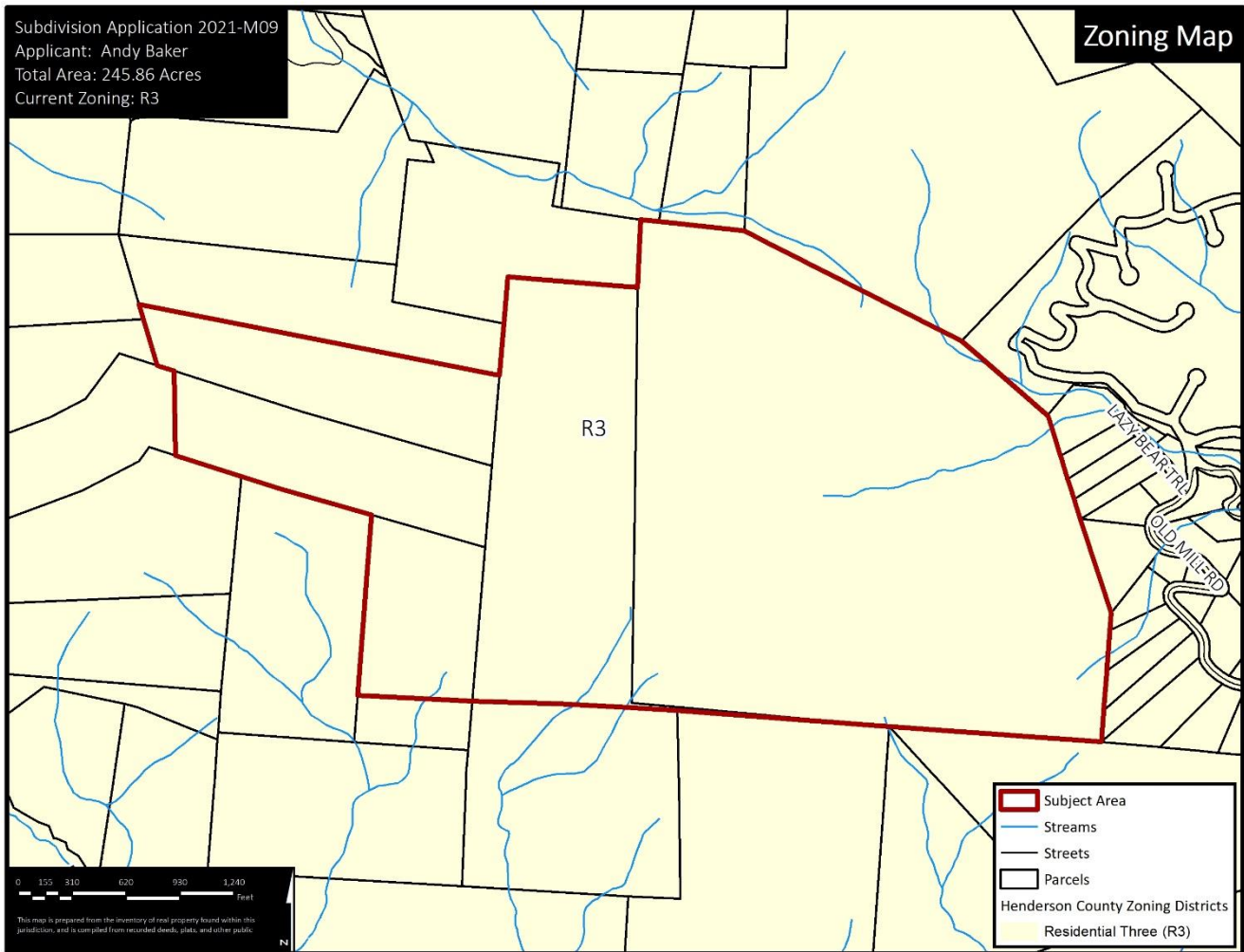


Map D: County Comprehensive Plan Future Land Use Map



1. **Henderson County Comprehensive Plan (CCP).** The Future Land Use Map of the CCP shows the Subject Area as being located within an area of Conservation and a portion within the Rural Agriculture Area classification.
 - a. **Conservation Area:** “This category includes land areas that are intended to remain largely in their natural state, with only limited development. Such areas should be targeted for protection through regulations and incentives.”
 - b. **Rural Agriculture Area:** “The RAA covers those portions of the county that are predominantly rural and are characterized by low-density residential development with substantial land areas devoted to agriculture and undeveloped lands. Land use policies will seek to retain that character.”

Map E: Official Zoning Map



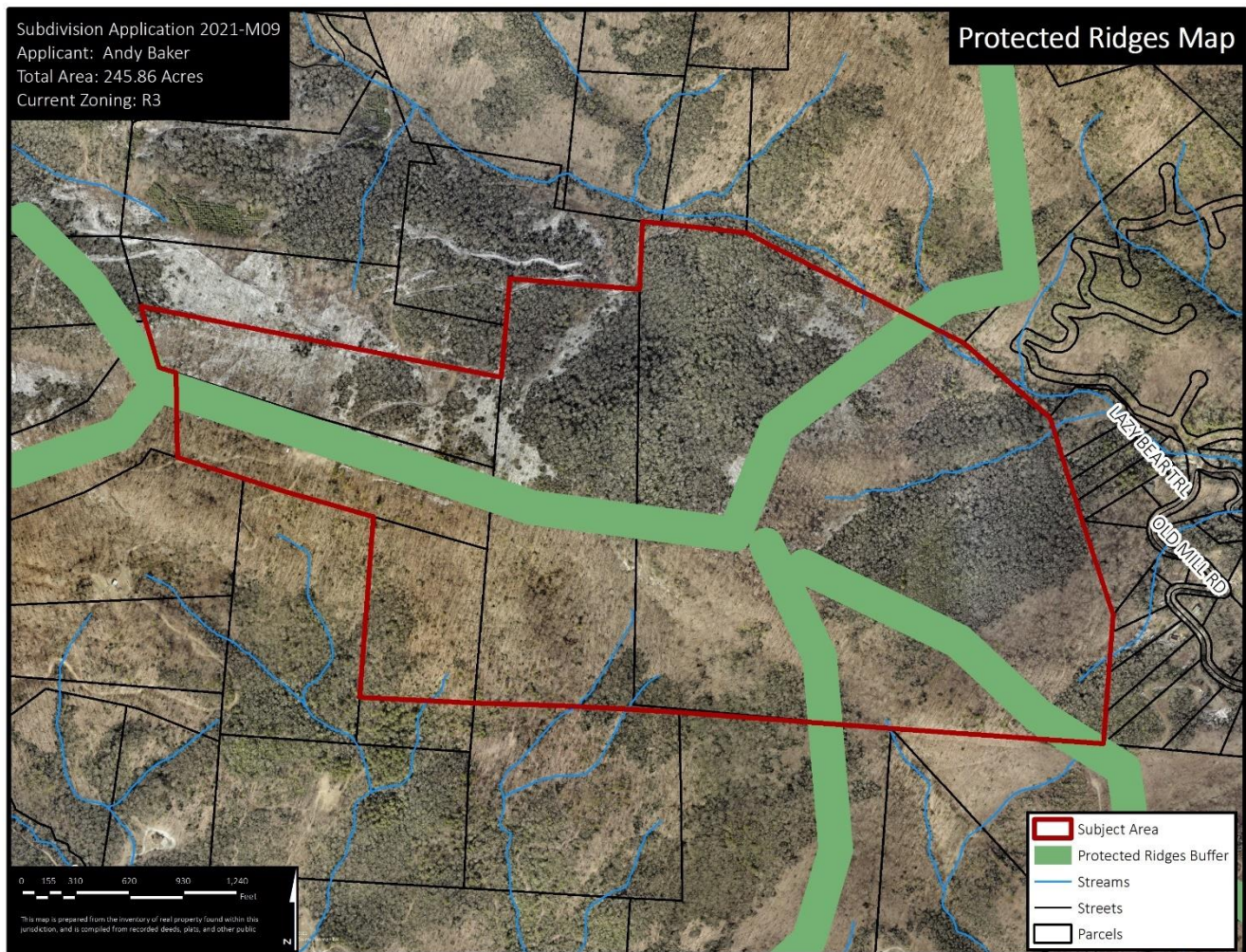
2. **Chapter 42, Henderson County Land Development Code (LDC).** According to Chapter 42, Henderson County Land Development Code (LDC) and its Official Zoning Map adopted September 19, 2007 (as amended); the proposed project site is located within the Residential Three (R3) Zoning District.

- a. **Residential Three (R3):** “The purpose of Residential District Three (R3) is to foster orderly growth where the *principal use* of land is low density residential. The intent of this district is to allow for *residential development* consistent with the recommendations of the *Comprehensive Plan*. This general *use district* is typically meant to be utilized in areas designated as Rural (RAA) in the *Comprehensive Plan*.
 - i. R3 allows for a standard density of 0.66 units per acre. For tracts of land with slopes of 60% or greater that account for 10% or more of the tract, the density shall be ½ the eligible density. The total area of property with slopes of 60% or greater is 16.76 acres or 6.82%.
 - i. The overall density for the proposed Rich Mountain Major Subdivision is 0.244 units per acre. The proposed density for Phase 1 is 0.26 units per acre.

3. **Water and Sewer Availability.** The applicant proposes the use of individual water and septic systems for each lot in the subdivision. The applicant has hired a licensed soil scientist to perform a soil evaluation.

4. **Road System:** The subdivision will be served by private roads built in accordance with the Subdivision Local Road standards required in the LDC. The total linear footage of new roads proposed within the subdivision is 9,856 linear feet and 2,934 linear feet off-site to access the property. Road profiles on the attached plan specify that the maximum grade does not exceed 18% on any of the proposed roads. The primary access will be a private 50’ right-of-way with a paved 20’ wide road and 4’ shoulders. The subdivision collector road will access Locust Grove Road (SR 1528). Phase 1 consists of 3,654 linear feet of private roads within the subdivision to access 22 lots. The applicant will be required to submit a list of proposed road names to the Property Addressing Coordinator for all proposed new roads.

Map F: Streams and Protected Ridges



5. **Protected Ridges:** The project site is encumbered by the protected ridges buffer. Section §42-252 of the LDC regulates the construction and permitting of “tall buildings” within the protected ridge buffer.

- a. "Tall buildings or structures" include any building, structure or unit within a multiunit building with a vertical height of more than 40 feet measured from the top of the foundation of said building, structure or unit and the uppermost point of said building, structure or unit; provided, however, that where such foundation measured from the natural finished grade of the crest or the natural finished grade of the high side of the slope of a ridge exceeds 3 feet, then such measurement in excess of 3 feet shall be included in the 40-foot limitation described herein; provided, further, that no such building, structure or unit shall protrude at its uppermost point above the crest of the ridge by more than 35 feet.
- b. The site is partially encumbered by several perennial streams. The applicant is required to setback 30' from the edge of surface water.

6. Total Project Proposal Summary:

- 60 single-family lots (22 Lots in Phase 1)
- Total subject area is 245.86 acres (82.78 acres in Phase 1)
- Overall density of 0.244 units/acre (0.26 units/acre in Phase 1)
- Smallest lot is 1.86 acres
- Property Steeper than 60% is 6.82% (16.76 acres)
- Proposed common open space is 79.63 acres (16.89 acres in Phase 1)
- 4,271LF of private roadway
- Individual well and septic systems
- Gated Entrance

Master & Development Plan Comments:

1. **Soil Erosion and Sedimentation Control Plan.** The Applicant shall submit written notice from the appropriate local agencies verifying that an Erosion and Sedimentation Control Plan has been received or a written notice from a professional land surveyor, engineer, landscape architect, architect, or professional planner certifying that no plan is required (LDC §42-95B).
2. **Water Quality.** The Applicant shall submit written notice from the appropriate local agencies verifying that a Stormwater Management Permit has been received (LDC §42-95E).
3. **Private Roads.** Private roads shall be constructed in accordance with the Private Subdivision Local Road standards stated in Chapter 42 (LDC§42-109). Additionally, subdivisions of 35 or more lots shall provide a minimum of two entrance roads. The second entrance road may be specifically waived by the approving authority where unique circumstances exist (LDC §42-95A (1)).
4. **Street Tree Requirements.** According to the street tree requirements of Chapter 42 (LDC §42-95H) the applicant must provide one tree per 50 linear feet of property abutting an internal road. Trees may be placed in groups with a minimum spacing of no less than 15 feet and a maximum spacing of no more than 65 feet. The trees may be placed within the right-of-way or within 20 feet of the edge of the right-of-way. The applicant may use existing trees in accordance with LDC §42-185 instead of planting new trees. These existing trees must also be located within the right-of-way or 20 feet off the edge of the right-of-way as required by LDC §42-185.

5. **Shoulder Stabilization.** All areas disturbed by the construction of a public road, including cut and fill slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42-102).
6. **Road Drainage, Culverts and Shoulder Stabilization.** Road or drainage structures shall be constructed in accordance with state roads standards. Road drainage side ditches shall be constructed with sufficient depth and width to carry the expected volume of storm water runoff (LDC §42-100). All areas disturbed by the construction of a public road, including cut and fill slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42-105).
7. **Dead Ends, Cul-de-sacs and Turnarounds.** The Applicant proposes two (2) cul-de-sacs or turnarounds located at the ends of both local roads. All turnarounds must meet of the LDC §42-105 C(8).
8. **Road Name Approval.** Proposed road names for a private and/or public road shall be preapproved by Henderson County in accordance with Chapter 42 of the Henderson County Code, Property Addressing (LDC §42-103). The names of the proposed roads and easements should be confirmed with the development plan approval.
9. **Road Name Signs and Regulatory Signs.** Road name signs and regulatory signs shall be provided in accordance with Chapter 142 of the Henderson County Code. Road name signs and regulatory signs must be acquired and installed prior to final plat approval (LDC §42-104).
10. **Perennial and Intermittent Surface Water Buffer.** All built-upon area shall be a minimum of 30 feet landward of all perennial and intermittent surface water, as defined in LDC §42-251.
11. **Miscellaneous Advisory Provisions.** The Applicant should become familiar with the Miscellaneous Advisory Provisions of Chapter 42 (LDC §42-87).
12. **Final Plat Requirements.** The Final Plat(s) must meet the requirements provided by the Planning Department whenever a subdivision of land occurs (LDC §42-343).
13. **NCDOT Driveway Permit.** An NCDOT Driveway Permit is required for the proposed private, paved road, to access the site. Design should meet requirements of NCDOT.

MASTER PLAN LEGEND

	EXIST. BOUNDARY
	EXIST. ADJOINER
	EXIST. STREAM
	EXIST. STREAM BUFFER
	EXIST. WETLAND
	EXIST. FEMA NON-ENCROACHMENT
	FEMA FLOOD HAZARD AREA (1%)
	FEMA FLOOD HAZARD AREA (0.2%)
	EXIST. RIGHT OF WAY
	EXIST. BUILDING SETBACK
	EXIST. BUILDING
	EXISTING SIDEWALK
	EXISTING PAVEMENT
	EXIST. CURB
	NEW PROPERTY LINES
	NEW RIGHT OF WAY
	NEW EASEMENT
	BUILDING SETBACK LINE
	NEW LANDSCAPE BUFFER
	NEW COMMON OPEN SPACE
	NEW BUILDING
	NEW PAVEMENT
	NEW HD PAVEMENT
	NEW CONCRETE SIDEWALK
	NEW GRAVEL
	NEW CURB & GUTTER
	NEW WALL (BY OTHERS)

SITE AND ZONING NOTES

PROPERTY ZONING: R3
 PROPERTY SIZE: PH1: 82.78 - TOTAL: 245.86 AC.
 PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
 MINIMUM LOT SIZE: 1.50 AC / 35,640 SQ.FT.
 SMALLEST PROPOSED LOT: 1.86 ACRES / 80,936 SQ.FT.
 MINIMUM LOT WIDTH: 30' @ R.O.W.
 MAXIMUM BUILDING HEIGHT: 40'
 SETBACKS:
 FRONT: 15' (LOCAL)
 REAR: 15'
 SIDE: 15'
 PROPOSED LINEAR FEET OF ROAD:
 PHASE 1: 2,394 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF PROPERTY EASEMENT: 3,452 LF

*ALL DIMENSIONS ARE FROM EDGE OF ASPHALT, FACE OF CURB, FACE OF WALL, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD
 HENDERSONVILLE NC
 PIN NUMBER: 9672712573, 9672512885, 967240371
 9672410864, 9671485404, 967240583
 PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
 ZONING REVIEW: HENDERSON COUNTY
 EROSION CONTROL REVIEW: HENDERSON COUNTY
 STORMWATER REVIEW: HENDERSON COUNTY
 ZONING CLASSIFICATION: R3
 PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
 PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC

PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF-PROPERTY EASEMENT: 2,934 LF

LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS 52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION DISTRICT

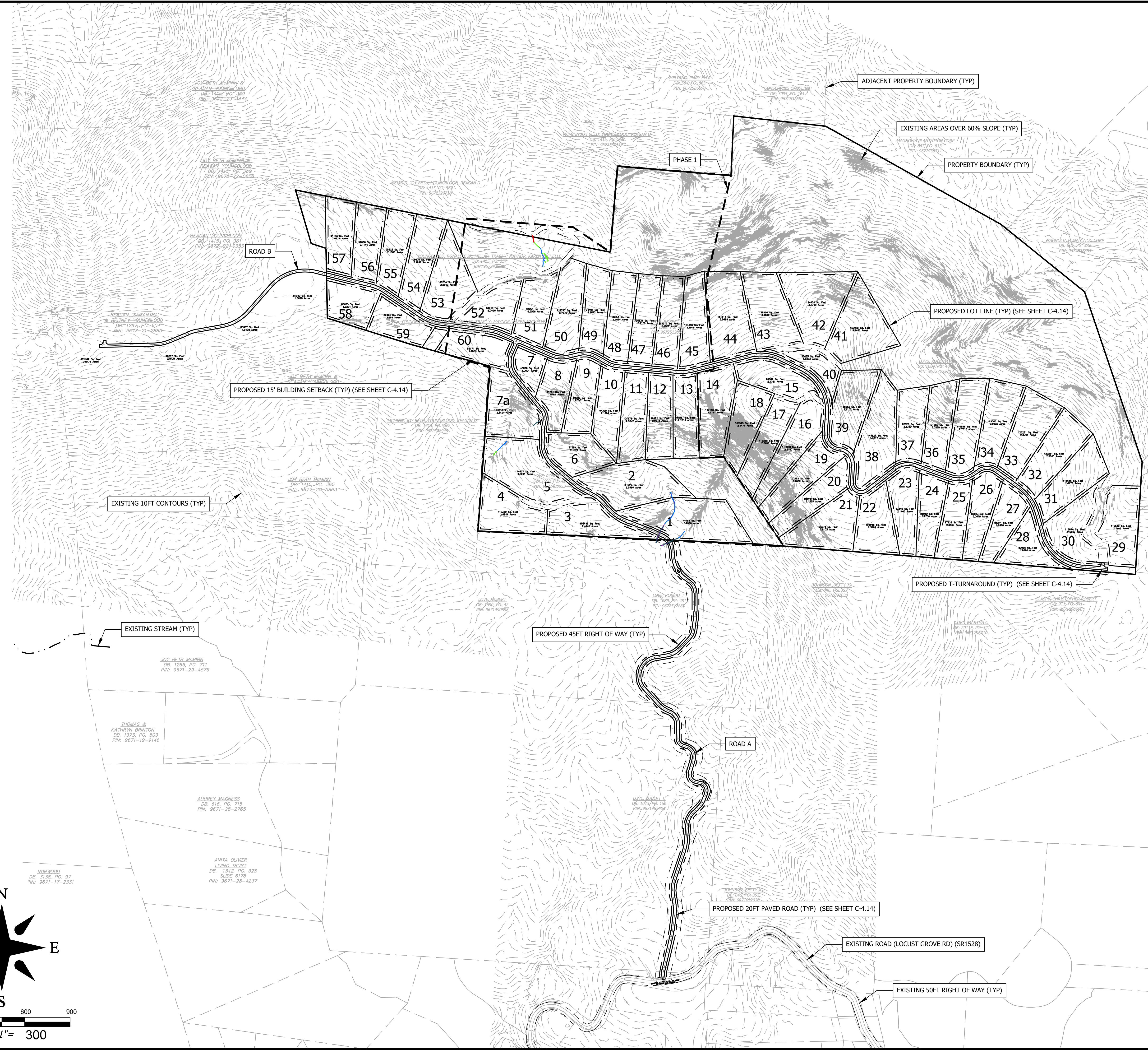
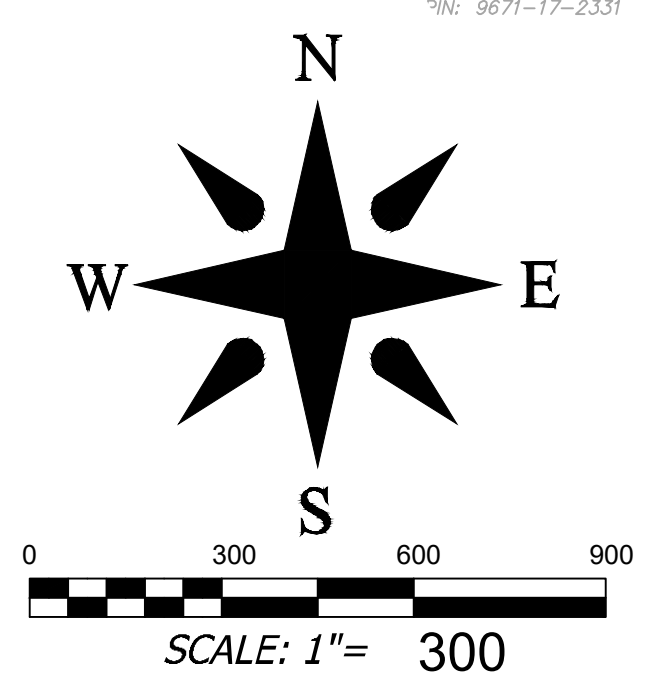
WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC SYSTEMS

PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
 DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE ENTRANCE TO THE SITE

PROPERTY OWNER: MULTIPLE OWNERS - SEE SHEET C-0 FOR CONTACT INFORMATION

DEVELOPER: RIPPLE FALLS LLC
 CONTACT: ANDY BAKER
 ADDRESS: 69 CLARK GAP ROAD
 FLETCHER NC
 EMAIL: ANDY@TFMNCAROLINA.COM
 PHONE: (616) 402-0367

ENGINEER: BROOKS ENGINEERING
 CONTACT: WYATT EDSSEL PE
 ADDRESS: 15 ARLINGTON ST
 ASHEVILLE, NC 28801
 EMAIL: WEDSEL@BROOKSEA.COM
 PHONE: 828-232-4700



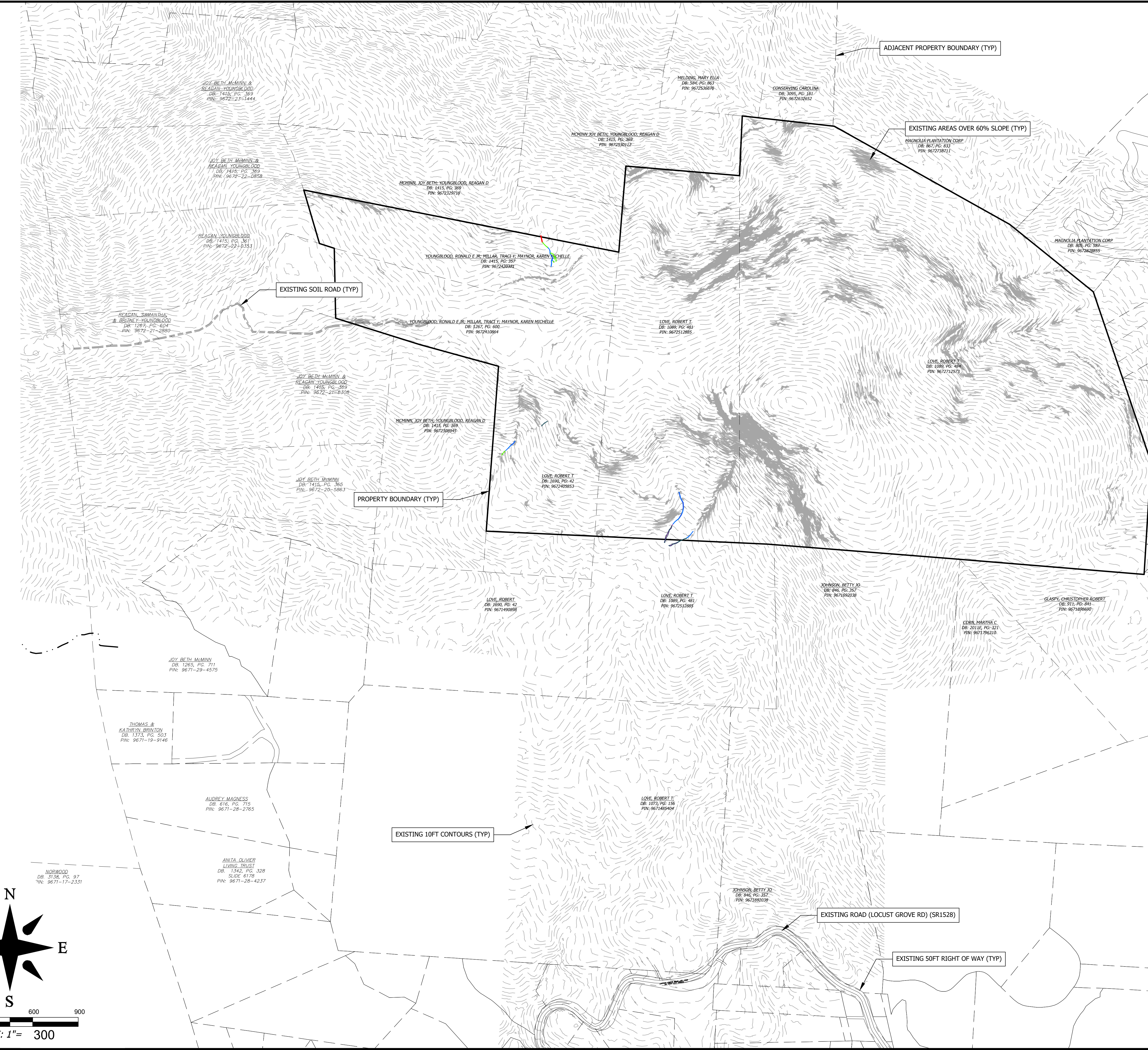
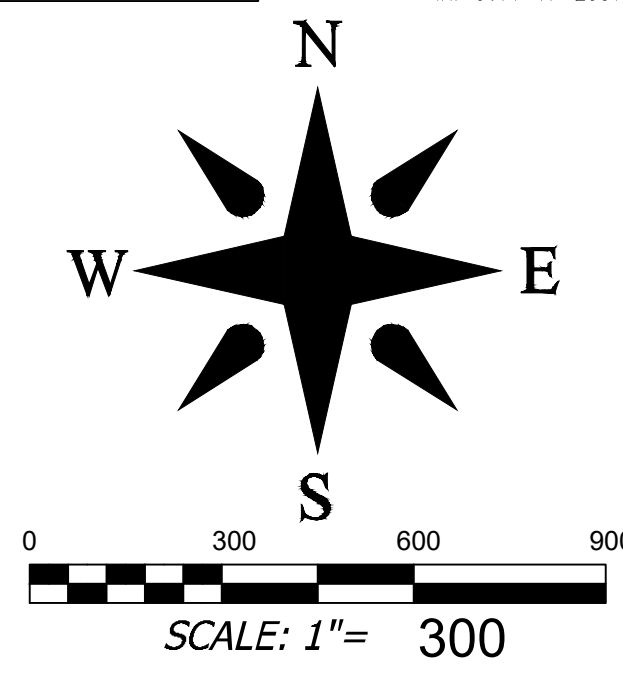
Project No: 543521	C-1.0	Drawing Title: MASTER PLAN	RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION NORTH CAROLINA HENDERSON COUNTY	 BROOKS ENGINEERING ASSOCIATES Planning • Engineering • Surveying • Environmental Services •	Designated: WBE Drawn: WBE Checked: WBE	Reviewer: WBE Scale: AS NOTED Date: 2021-11-02	15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		PRELIMINARY - NOT FOR CONSTRUCTION
					No. 1 REVISIONS/SUBMISSIONS HENDERSON COUNTY TRC	Date 11-02-2021	Revision/Submission number with a triangle indicates changes made on this sheet.		

EXIST. CONDITIONS LEGEND

- EXIST. BOUNDARY
- EXIST. ADJOINER
- MONUMENT FOUND
- REBAR FOUND
- IRON PIPE FOUND
- NAIL FOUND
- CORNER TREE FOUND
- EXIST. STREAM
- EXIST. STREAM BUFFER
- EXIST. WETLAND
- EXIST. FEMA NON-ENCROACHMENT
- FEMA FLOOD HAZARD AREA (1%)
- FEMA FLOOD HAZARD AREA (0.2%)
- EXIST. RIGHT OF WAY
- EXIST. EASEMENT
- EXIST. BUILDING SETBACK
- EXISTING BUILDING
- EXISTING SIDEWALK
- EXISTING PAVEMENT
- EXISTING GRAVEL
- EXIST. CURB
- EXIST. MANHOLE
- EXIST. SANITARY SEWER
- EXIST. SEWER CLEAN OUT
- EXIST. WATER LINE
- EXIST. WATER METER
- EXIST. FIRE HYDRANT
- EXIST. WATER VALVE
- EXIST. OVERHEAD UTILITIES
- EXIST. POWER POLE
- EXIST. UNDRGRND UTILITIES
- EXIST. STORM DRAIN
- EXIST. CURB INLET
- EXIST. JUNCTION BOX
- EXIST. DROP INLET
- EXIST. TELE MANHOLE
- EXIST. DROP INLET
- EXIST. TRANSFORMER
- EXIST. LIGHT POLE
- EXIST. MINOR CONTOUR
- EXIST. MAJOR CONTOUR

DEVELOPMENT DATA

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 EROSION CONTROL REVIEW: HENDERSON COUNTY
 STORMWATER REVIEW: HENDERSON COUNTY
 ZONING CLASSIFICATION: R3
 PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
 PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC
 PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF-PROPERTY EASEMENT: 2,934 LF
 LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS
 52-60 ARE WITHIN 1/2 MILE OF A FARMLAND PRESERVATION
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 WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC
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 SEE SHEET C-0
 FOR CONTACT INFORMATION
 DEVELOPER: RIPPLE FALLS LLC
 CONTACT: ANDY BAKER
 ADDRESS: 69 CLARK GAP ROAD
 FLETCHER NC
 EMAIL: ANDY@TFMNCAROLINA.COM
 PHONE: (616) 402-0367
 ENGINEER: BROOKS ENGINEERING
 CONTACT: WYATT EDSSEL PE
 ADDRESS: 15 ARLINGTON ST
 ASHEVILLE, NC 28801
 EMAIL: WEDSEL@BROOKSEA.COM
 PHONE: 828-232-4700



No.	REVISIONS/SUBMISSIONS	Date
1	HENDERSON COUNTY TRC	11-02-2021

Professional Engineer Seal for North Carolina, License No. 045408, Engineer Name: WYATT BENTLEY EDSSEL.

Professional Engineer Seal for North Carolina, License No. 3725, Engineer Name: BROOKS ENGINEERING ASSOCIATES.

Review: WBE
 Scale: AS NOTED
 Date: 2021-11-02
 Design: WBE
 Drawn: WBE
 Checked: WBE
 15 Arlington Street
 Asheville, N.C. 28801
 Phone: 1-828-232-4700
 Fax: 1-828-232-1331
 www.brooksea.com

BROOKS
 ENGINEERING ASSOCIATES
 Planning • Engineering • Surveying
 • Environmental Services •

Project No: 543521
 RICH MOUNTAIN SUBDIVISION PHASE 1
 RESIDENTIAL SUBDIVISION
 HENDERSON COUNTY
 NORTH CAROLINA
 Drawing Title:
EXISTING CONDITIONS & DEMO PLAN

File Location: L:\2021 Projects\543521 Ripple Falls_Rich Mtn_Due Diligence\Draw\4-Base-543521.dwg

CLEARING AND GRUBBING LEGEND

- EXIST. BOUNDARY
EXIST. ADJOINER
EXIST. STREAM
EXIST. STREAM BUFFER
EXIST. WETLAND
EXIST. FEMA NON-ENCROACHMENT
EXIST. FEMA FLOOD HAZARD AREA (1%)
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EXIST. OVERHEAD UTILITIES
EXIST. STORM DRAIN
EXIST. MINOR CONTOUR
EXIST. MAJOR CONTOUR
EXIST. DROP INLET
EXIST. CURB INLET
EXIST. JUNCTION BOX
TEMP. SILT FENCE
TEMP. TREE PROTECTION FENCE
TEMP. CONSTRUCTION ENTRANCE
LIMITS OF DISTURBANCE
TEMP. REINFORCED STABILIZED OUTLET
TEMP. SEDIMENT BASIN BAFFLES
TEMP. SEDIMENT BASIN
TEMPORARY DIVERSION DITCH
TEMP. SLOPE MATTING
DEMO BUILDING
DEMO CONCRETE
DEMO PAVEMENT
DEMO GRAVEL
DEMO CURB
DEMO SANITARY SEWER
DEMO WATER LINE
DEMO OTHER UTILITIES
DEMO STORM DRAIN

EROSION CONTROL NOTES

- 1. ALL EROSION MEASURES AND PRACTICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE JURISDICTION'S DETAILS AND SPECIFICATIONS.
2. IN ACCORDANCE WITH THE NPDES GENERAL STORMWATER PERMIT, THE FOLLOWING CONDITIONS MUST BE MET.
2. THE EROSION CONTROL PLAN MUST BE IMPLEMENTED - DEVIATIONS ARE A VIOLATION OF THE PERMIT
2. A COPY OF ALL PLANS MUST BE RETAINED BY THE PERMIT DEPOSITION OF SEDIMENT OFF-SITE OR IN A STREAM OR WETLAND ARE CONSIDERED A VIOLATION OF THE PERMIT.
2. VISIBLE DEPOSITION OF SEDIMENT SHALL BE REPORTED TO NCDEQ WITHIN 24 HOURS OF INSPECTION.
2. A RAIN GAUGE SHALL BE MAINTAINED ON SITE.
2. A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE RETAINED.
2. AT LEAST ONCE PER WEEK, EACH EROSION CONTROL MEASURE SHALL BE INSPECTED TO ENSURE THAT IT IS OPERATING CORRECTLY AND RECORDS MAINTAINED.
2. INSPECTIONS SHALL ALSO BE MADE WITHIN 24 HOURS OF RAIN EVENTS OVER 1/2 INCH.
2. THE QUALITY OF ALL STORMWATER DISCHARGES SHALL BE OBSERVED AND RECORDED.
2. IF ANY VISIBLE SEDIMENTATION IS LEAVING THE SITE OR ENTERING WATERS OF THE STATE, CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY TO CONTROL THE DISCHARGE OF SEDIMENTS.
3. AN APPROVED COPY OF THE EASC PLAN WITH PLACARD AND APPROVAL LETTER AND A COPY OF THE NPDES PERMIT, WITH A MINIMUM OF 30 DAYS OF SELF-INSPECTION REPORTS, ARE TO BE KEPT ON SITE UNTIL PROJECT CLOSURE BY NCDEQ. THEY MUST BE MADE AVAILABLE TO THE EROSION CONTROL INSPECTOR UPON REQUEST.
4. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL USE THE INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT N0010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
5. ALL DRAINAGE EASEMENTS MUST BE GRASSED AND/OR RIP-RAPPED PER THE PLANS TO CONTROL EROSION.
6. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
7. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES.
8. A RAIN GAUGE WILL BE INSTALLED ON THE SITE.
9. THE SITE SHALL RECEIVE TEMPORARY/PERMANENT SEEDING WHEN CONSTRUCTION IS COMPLETE OR DELAYED FOR ANY REASON. SEE SHEET C-5.7 FOR A DETAILED TIME FRAME.
10. CONTRACTOR TO PROVIDE INLET PROTECTION AT EACH STRUCTURE AS STORM SYSTEM IS CONSTRUCTED.
11. PROVIDE WATERTIGHT JOINTS ON ANY STORM DRAINS WHERE VELOCITIES EXCEED 15 FT/SEC (SEE PIPE CHART).
12. STOCKPILE, STAGING, AND LAYDOWN AREAS ARE TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHOULD BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAIN OUTLETS AND SURFACE WATERS.

DEVELOPMENT DATA

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DEVELOPER: RIPPLE FALLS LLC
CONTACT: ANDY BAKER
ADDRESS: 69 CLARK GAP ROAD FLETCHER NC
EMAIL: ANDY@TFM-CAROLINA.COM
PHONE: (616) 402-0367
ENGINEER: BROOKS ENGINEERING
CONTACT: WYATT EDSSEL PE
ADDRESS: 15 ARLINGTON ST ASHEVILLE, NC 28801
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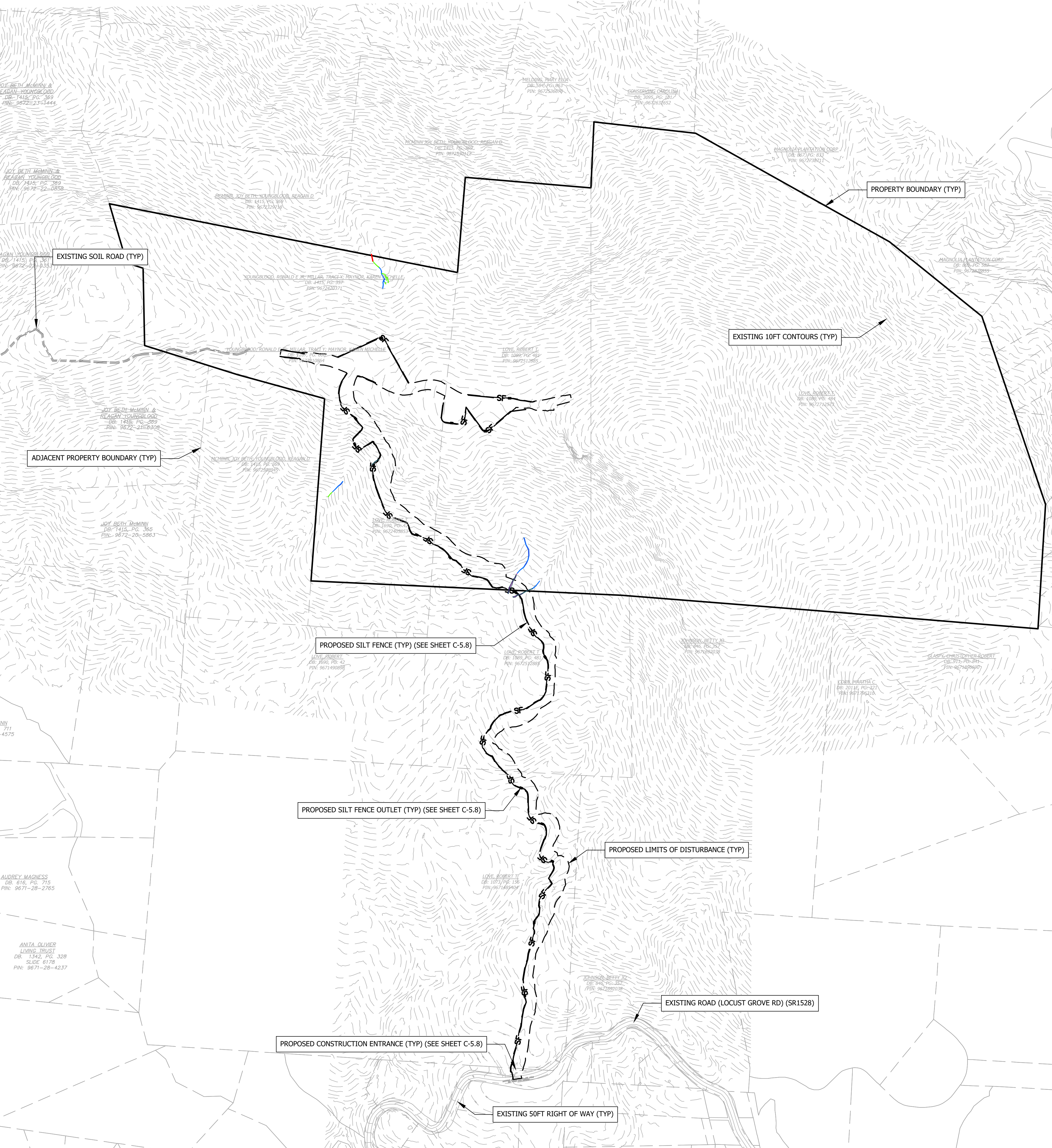
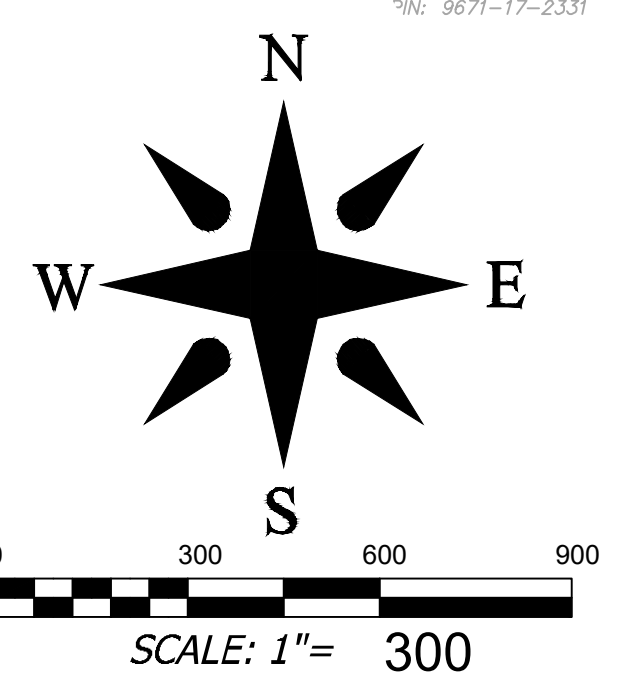
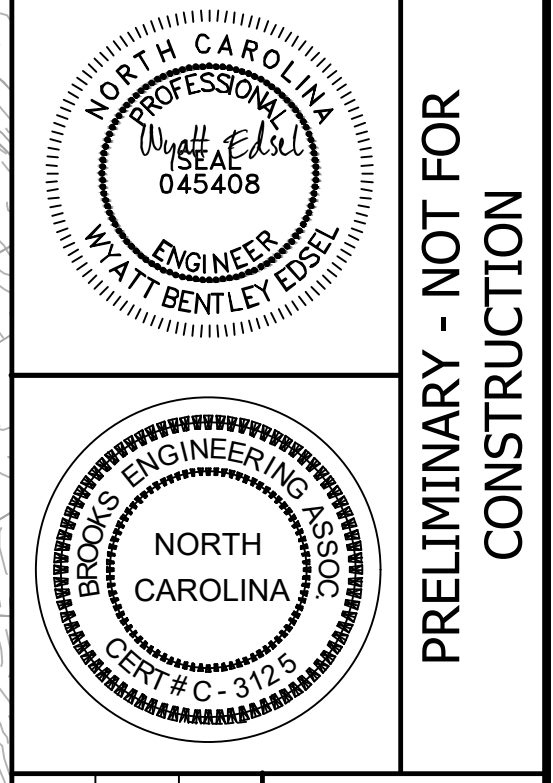
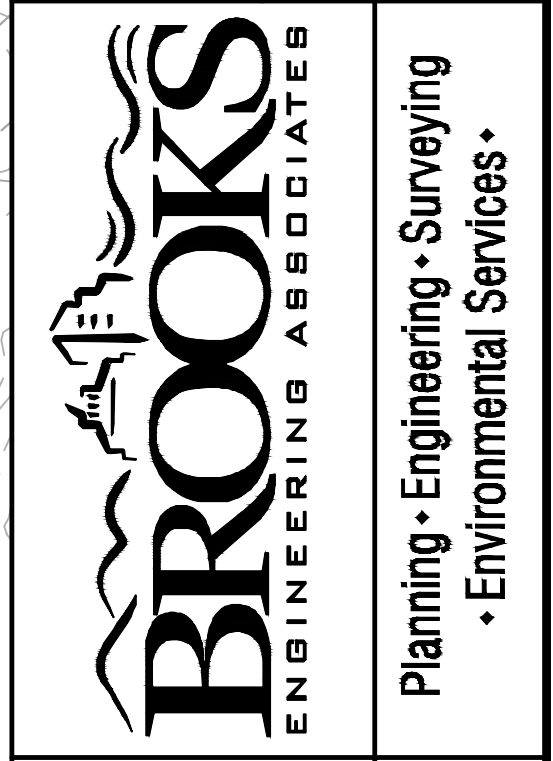


Table with columns: No., REVISIONS/SUBMISSIONS, Date. Row 1: 1, HENDERSON COUNTY TRC, 11-02-2021



Designated: WBE, WBE, WBE
Scale: AS NOTED
Date: 2021-11-02
15 Arlington Street
Asheville, N.C. 28801
Phone: 1-828-232-4700
Fax: 1-828-232-1331
www.brooksea.com



Project No: 543521
Drawing Title: CLEARING & GRUBBING PLAN
RICH MOUNTAIN SUBDIVISION PHASE 1
RESIDENTIAL SUBDIVISION
HENDERSON COUNTY
NORTH CAROLINA
C-3.0

SITE PLAN LEGEND

- EXIST. BOUNDARY
- - - EXIST. ADJOINER
- - - EXIST. STREAM
- - - EXIST. STREAM BUFFER
- - - EXIST. WETLAND
- - - EXIST. FEMA NON-ENCROACHMENT
- - - FEMA FLOOD HAZARD AREA (1%)
- - - FEMA FLOOD HAZARD AREA (0.2%)
- - - EXIST. RIGHT OF WAY
- - - EXIST. BUILDING SETBACK
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- - - EXISTING SIDEWALK
- - - EXISTING PAVEMENT
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- - - NEW PROPERTY LINES
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SITE AND ZONING NOTES

PROPERTY ZONING: R3
 PROPERTY SIZE: PH1: 82.78 - TOTAL: 245.86 AC.
 PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
 MINIMUM LOT SIZE: 1.50 AC / 35,640 SQ.FT.
 SMALLEST PROPOSED LOT: 1.86 ACRES / 80,936 SQ.FT.
 MINIMUM LOT WIDTH: 30' @ R.O.W.
 MAXIMUM BUILDING HEIGHT: 40'
 SETBACKS:
 FRONT: 15' (LOCAL)
 REAR: 15'
 SIDE: 15'
 PROPOSED LINEAR FEET OF ROAD:
 PHASE 1: 2,394 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF PROPERTY EASEMENT: 3,452 LF

*ALL DIMENSIONS ARE FROM EDGE OF ASPHALT, FACE OF CURB, FACE OF WALL, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

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 9672410864, 9671485404, 967240583
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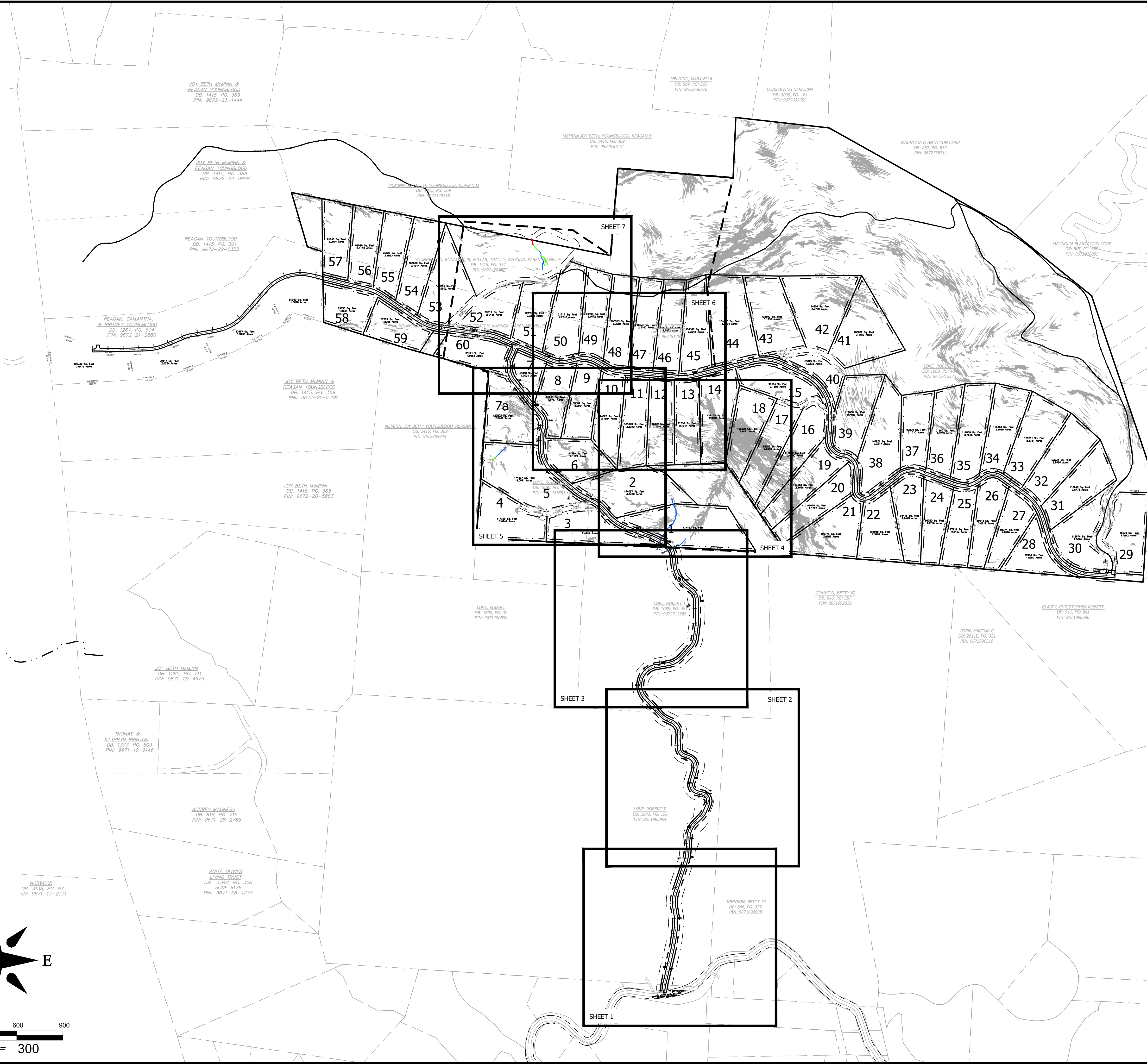
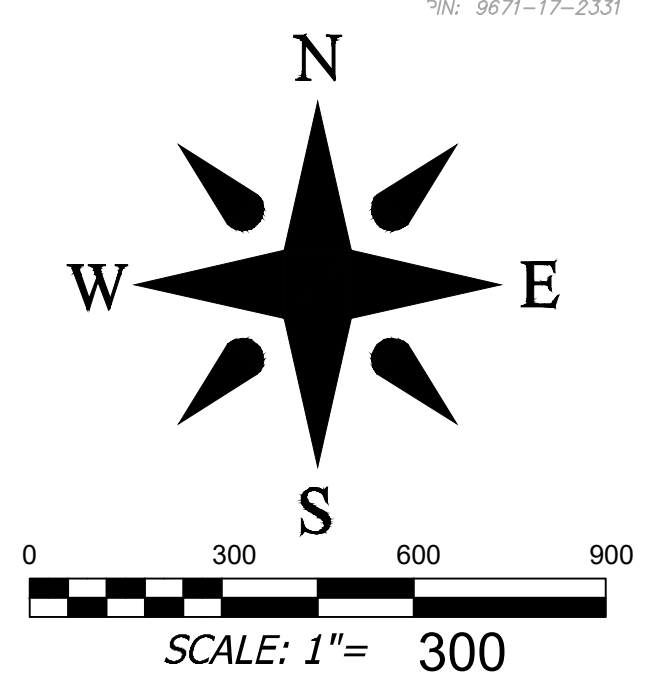
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Project No: 543521	Rich Mountain Subdivision Phase 1	Date: 11-02-2021	REVISIONS/SUBMISSIONS	REVISIONS/SUBMISSIONS 1 HENDERSON COUNTY TRC
C-4.0	RESIDENTIAL SUBDIVISION			
OVERALL SITE PLAN				
		PRELIMINARY - NOT FOR CONSTRUCTION		
Planning • Engineering • Surveying • Environmental Services •		15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		
Rich Mountain Subdivision Phase 1 HENDERSON COUNTY NORTH CAROLINA		DESIGNED: WBE DRAWN: WBE CHECKED: WBE SCALE: AS NOTED DATE: 2021-11-02		

SITE PLAN LEGEND

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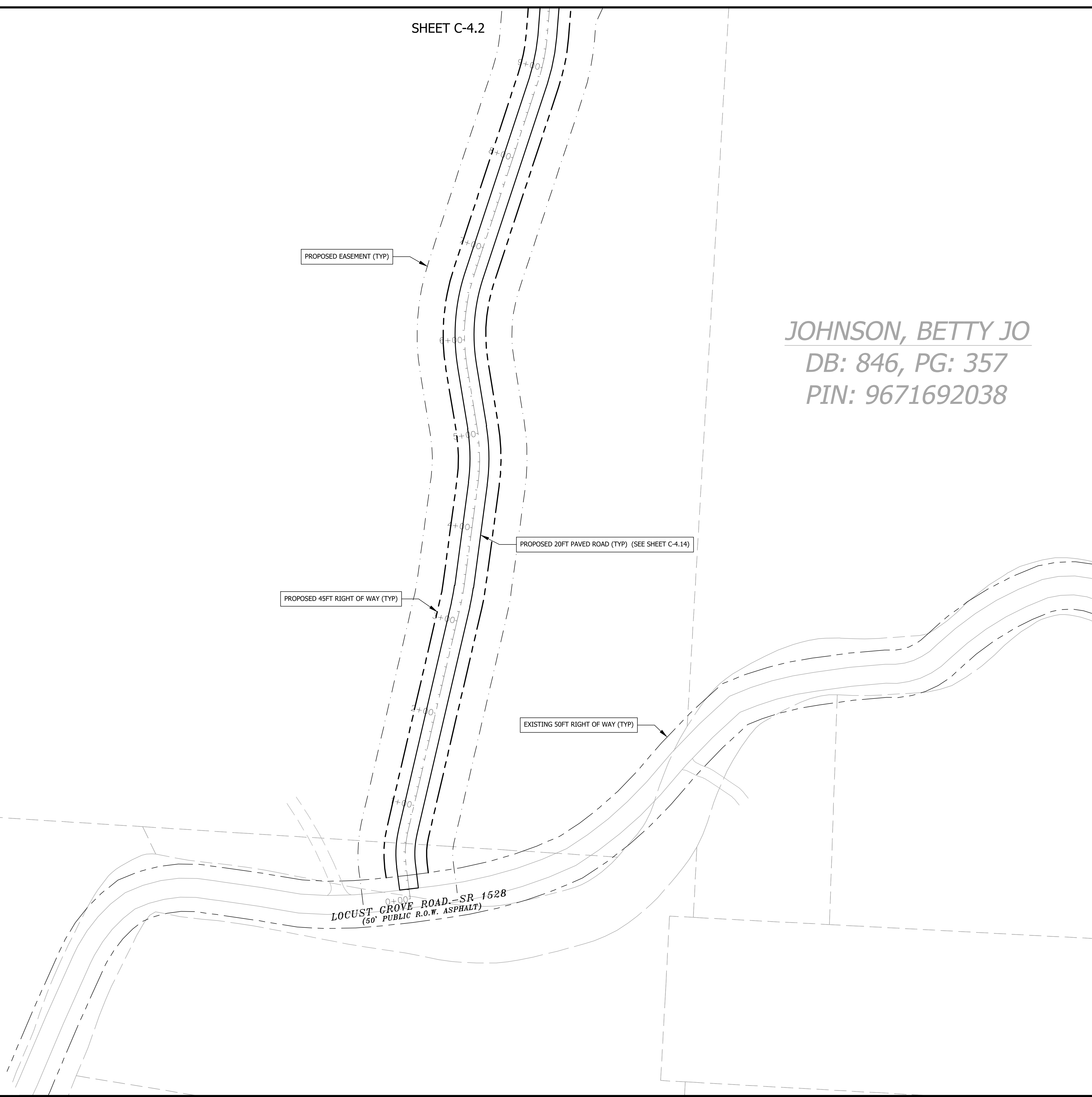
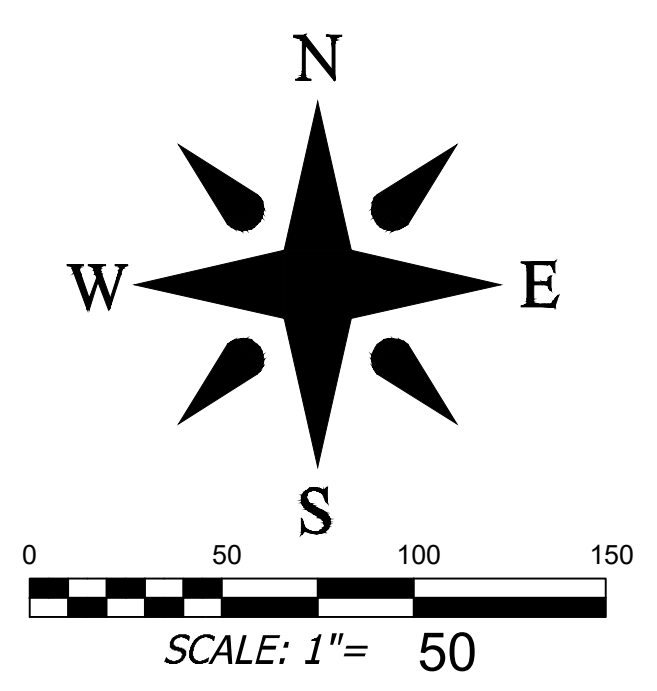
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 PHONE: 828-232-4700



JOHNSON, BETTY JO
 DB: 846, PG: 357
 PIN: 9671692038

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		Date 11-02-2021
	RESIDENTIAL SUBDIVISION		
Drawing Title: SITE PLAN 1	HENDERSON COUNTY		REVISIONS/SUBMISSIONS
	NORTH CAROLINA		1 HENDERSON COUNTY TRC
	NO. 1		
	Reviewer: WBE Scale: AS NOTED Date: 2021-11-02 Designer: WBE Drawn: WBE Checked: WBE		
	15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		
	Planning • Engineering • Surveying • Environmental Services •		
	PRELIMINARY - NOT FOR CONSTRUCTION		
	File Location: L:\2021 Projects\543521 Ripple Falls_Rch Mtn_Due Diligence\DWG\City-Base-543521.dwg		

2.4437 Acres

SHEET C-4.4

SHEET C-4.2

SITE PLAN LEGEND

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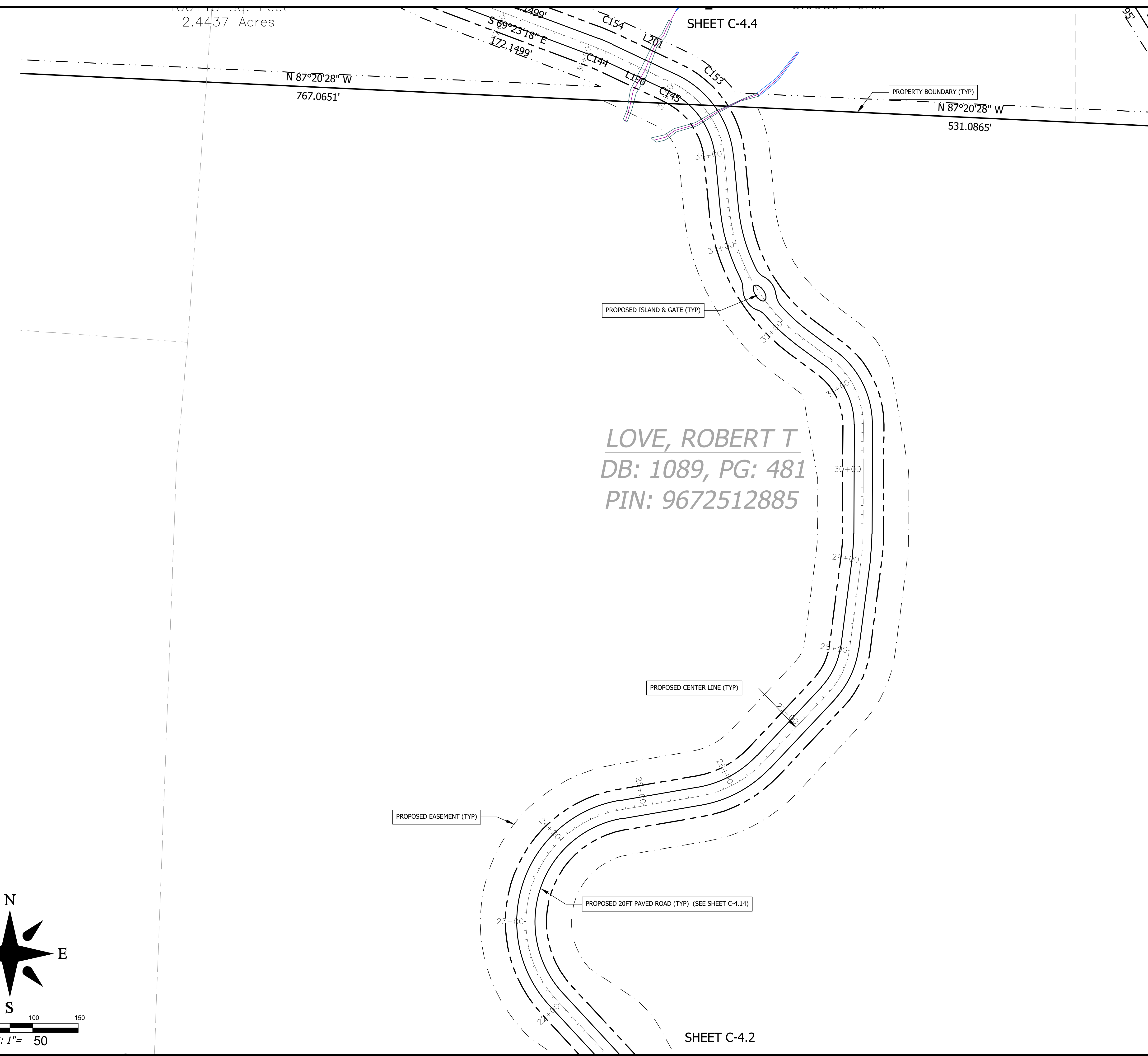
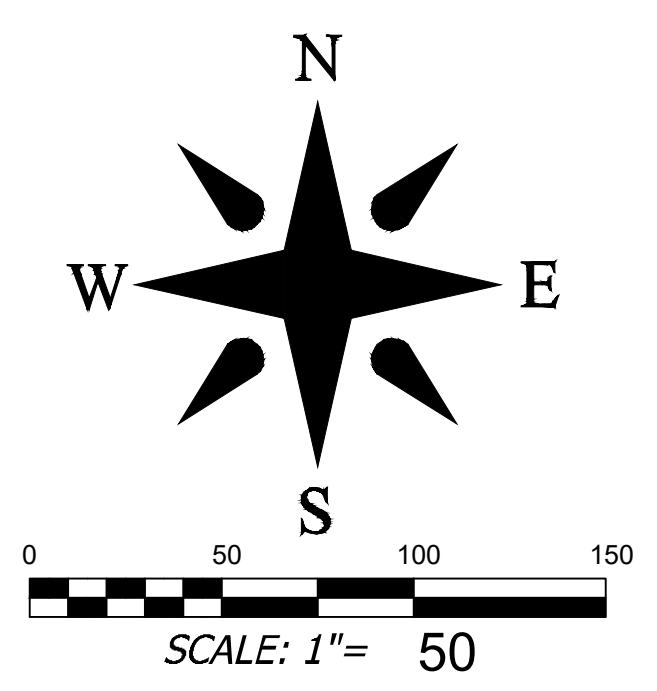
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 EMAIL: WEDSEL@BROOKSEA.COM
 PHONE: 828-232-4700



LOVE, ROBERT T
 DB: 1089, PG: 481
 PIN: 9672512885

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		Date 11-02-2021
	RESIDENTIAL SUBDIVISION		
Drawing Title: SITE PLAN 3	HENDERSON COUNTY		REVISIONS/SUBMISSIONS 1 HENDERSON COUNTY TRC
	NORTH CAROLINA		
Planning • Engineering • Surveying • Environmental Services •		PRELIMINARY - NOT FOR CONSTRUCTION	
Designated: WBE Drawn: WBE Checked: WBE		Reviewed: WBE Scale: AS NOTED Date: 2021-11-02	
15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com			

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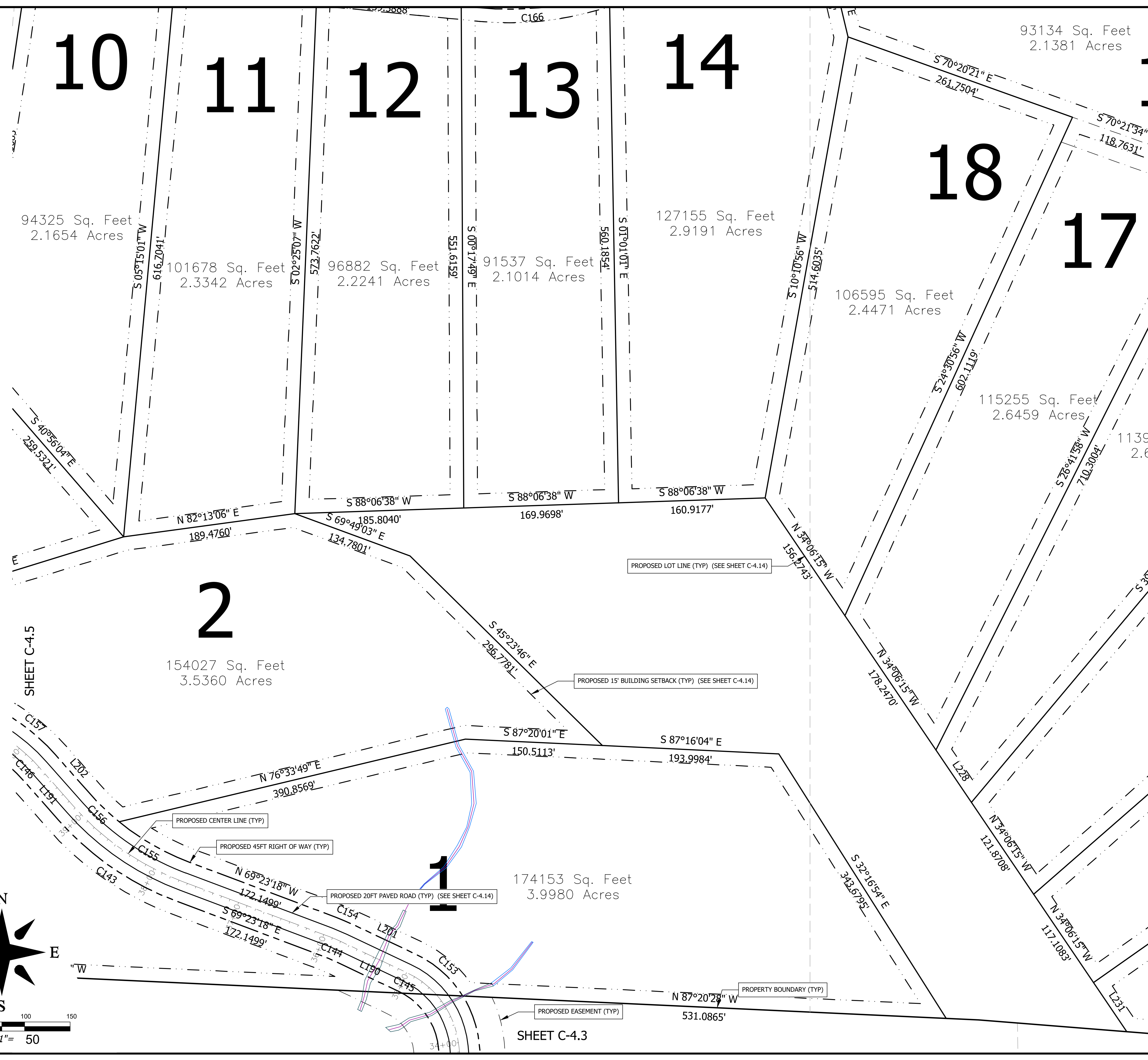
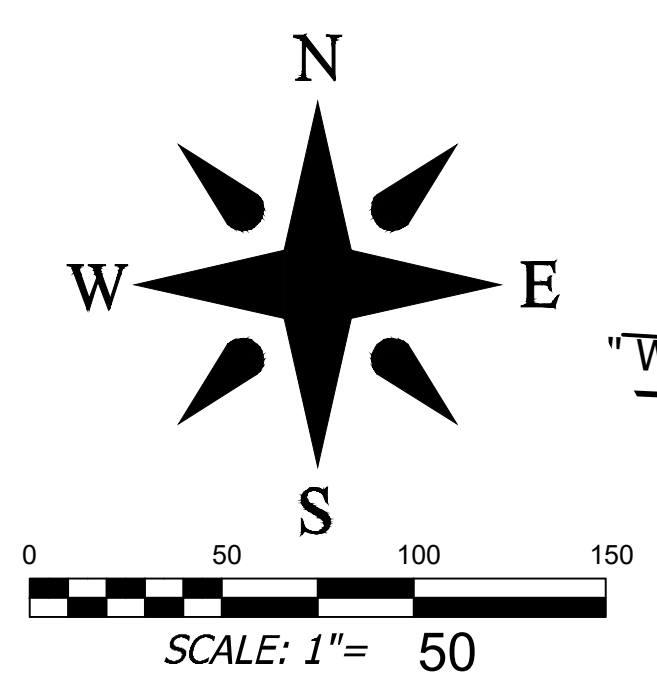
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Date: 11-02-2021	
REVISIONS/SUBMISSIONS: HENDERSON COUNTY TRC	
No. 1	
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Reviewer: WBE Scale: AS NOTED Date: 2021-11-02	Designer: WBE Drawn: WBE Checked: WBE
15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com	
Planning • Engineering • Surveying • Environmental Services •	
RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION NORTH CAROLINA HENDERSON COUNTY	
Project No: 543521	Drawing Title: C-4.4
SHEET C-4.4 SITE PLAN 4	

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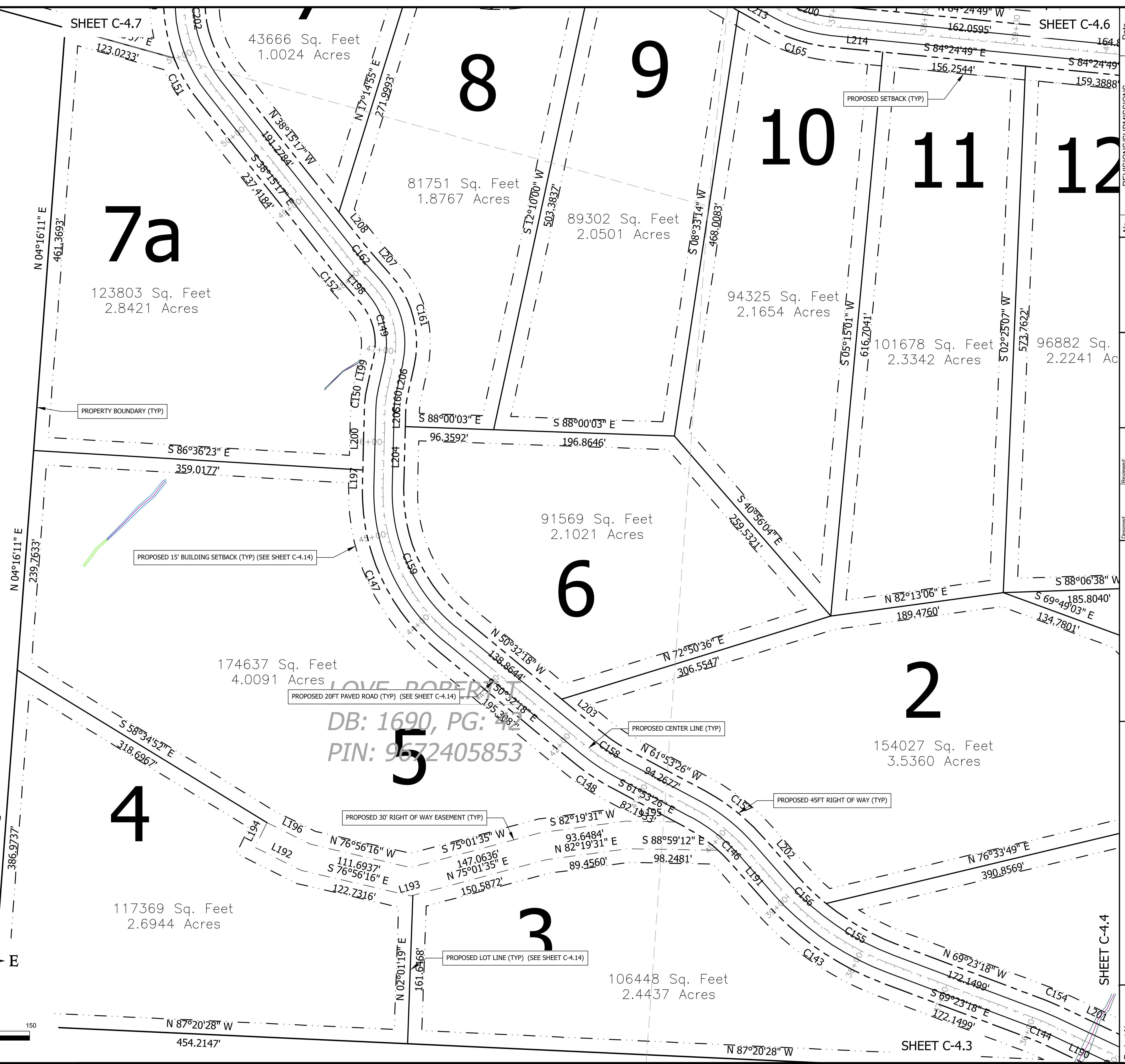
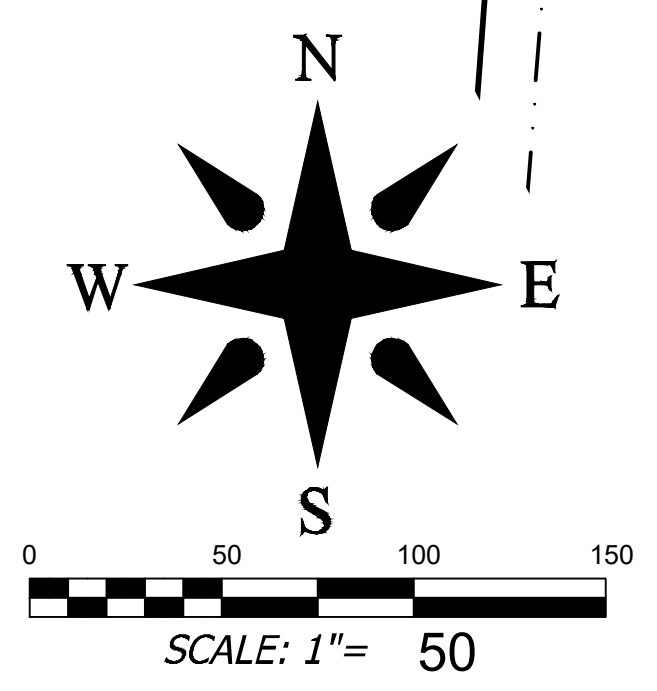
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		PRELIMINARY - NOT FOR CONSTRUCTION
Revisions/Submissions No. 1 HENDERSON COUNTY TRC Date 11-02-2021	Reviewer: WBE Scale: AS NOTED Designer: WBE Drawn: WBE Checked: WBE Date: 2021-11-02	15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com
BROOKS ENGINEERING ASSOCIATES Planning • Engineering • Surveying • Environmental Services •		NORTH CAROLINA HENDERSON COUNTY RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION SHEET C-4.5
Project No: 543521	Drawing Title: SITE PLAN 5	File Location: L:\2021 Projects\543521 Ripple Falls, Rich Mtn. Dev\RichMtn-Base-543521.dwg

SITE PLAN LEGEND

- EXIST. BOUNDARY
- EXIST. ADJOINER
- EXIST. STREAM
- EXIST. STREAM BUFFER
- EXIST. WETLAND
- EXIST. FEMA NON-ENCROACHMENT
- EXIST. FEMA FLOOD HAZARD AREA (1%)
- EXIST. FEMA FLOOD HAZARD AREA (0.2%)
- EXIST. RIGHT OF WAY
- EXIST. BUILDING SETBACK
- EXIST. BUILDING
- EXISTING SIDEWALK
- EXISTING PAVEMENT
- EXIST. CURB
- NEW PROPERTY LINES
- NEW RIGHT OF WAY
- NEW EASEMENT
- BUILDING SETBACK LINE
- NEW LANDSCAPE BUFFER
- NEW COMMON OPEN SPACE
- NEW BUILDING
- NEW PAVEMENT
- NEW HD PAVEMENT
- NEW CONCRETE SIDEWALK
- NEW GRAVEL
- NEW CURB & GUTTER
- NEW WALL (BY OTHERS)

SITE AND ZONING NOTES

PROPERTY ZONING: R3
 PROPERTY SIZE: PH1: 82.78 - TOTAL: 245.86 AC.
 PROPERTY STEEPER THAN 30%: 16.76 AC (6.82%)
 MINIMUM LOT SIZE: 1.50 AC / 35,640 SQ.FT.
 SMALLEST PROPOSED LOT: 1.86 ACRES / 80,936 SQ.FT.
 MINIMUM LOT WIDTH: 30' @ R.O.W.
 MAXIMUM BUILDING HEIGHT: 40'
 SETBACKS:
 FRONT: 15' (LOCAL)
 REAR: 15'
 SIDE: 15'
 PROPOSED LINEAR FEET OF ROAD:
 PHASE 1: 2,394 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF PROPERTY EASEMENT: 3,452 LF

*ALL DIMENSIONS ARE FROM EDGE OF ASPHALT, FACE OF CURB, FACE OF WALL, OR FACE OF BUILDING UNLESS OTHERWISE NOTED.

*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD
 HENDERSONVILLE NC
 PIN NUMBER: 9672712573, 9672512885, 967240371
 9672410864, 9671485404, 967240583
 PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
 ZONING REVIEW: HENDERSON COUNTY
 EROSION CONTROL REVIEW: HENDERSON COUNTY
 STORMWATER REVIEW: HENDERSON COUNTY
 ZONING CLASSIFICATION: R3
 PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
 PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC

PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF-PROPERTY EASEMENT: 2,934 LF

LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS 52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION DISTRICT

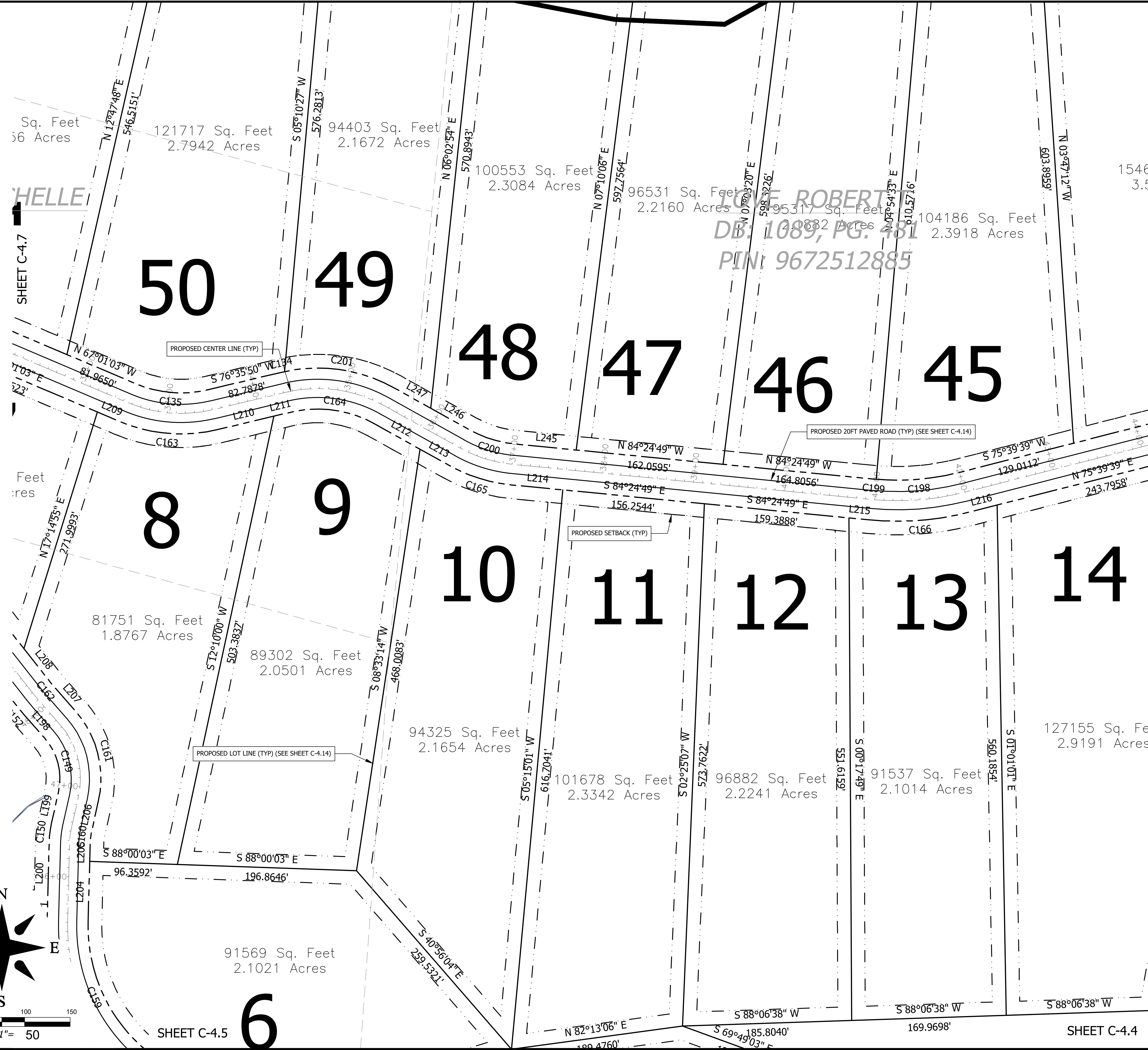
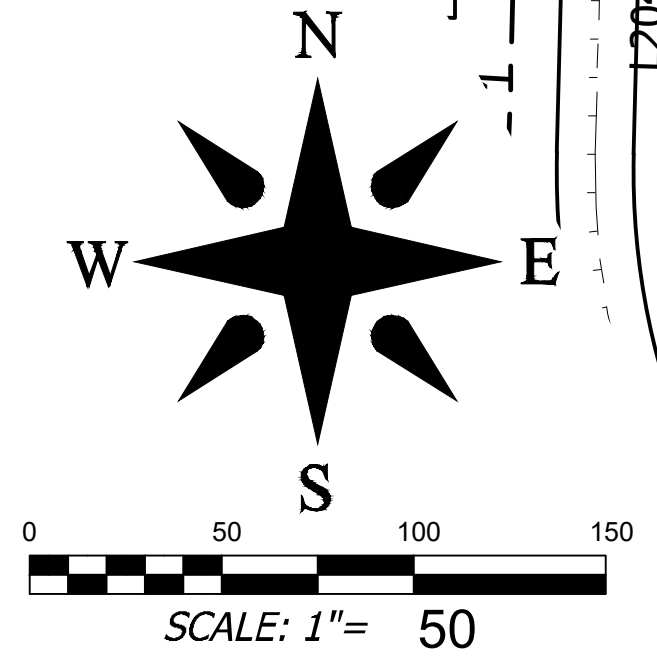
WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC SYSTEMS

PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
 DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE ENTRANCE TO THE SITE

PROPERTY OWNER: MULTIPLE OWNERS-
 SEE SHEET C-0
 FOR CONTACT INFORMATION

DEVELOPER: RIPPLE FALLS LLC
 CONTACT: ANDY BAKER
 ADDRESS: 69 CLARK GAP ROAD
 FLETCHER NC
 EMAIL: ANDY@TFMNCAROLINA.COM
 PHONE: (616) 402-0367

ENGINEER: BROOKS ENGINEERING
 CONTACT: WYATT EDSSEL PE
 ADDRESS: 15 ARLINGTON ST
 ASHEVILLE, NC 28801
 EMAIL: WEDSEL@BROOKSEA.COM
 PHONE: 828-232-4700



Date	11-02-2021
REVISIONS/SUBMISSIONS	HENDERSON COUNTY TRC
No.	1
1546	3.5

Professional Engineer Seal for Wyatt Edsel, License No. 045408, State of North Carolina.

Professional Engineer Seal for North Carolina, License No. 3725.

PRELIMINARY - NOT FOR CONSTRUCTION

Designed: WBE
 Drawn: WBE
 Checked: WBE
 Scale: AS NOTED
 Date: 2021-11-02

15 Arlington Street
 Asheville, N.C. 28801
 Phone: 1-828-232-4700
 Fax: 1-828-232-1331
 www.brooksea.com

BROOKS ENGINEERING ASSOCIATES

Planning • Engineering • Surveying
 • Environmental Services •

Project No:	543521
C-4.6	
RICH MOUNTAIN SUBDIVISION PHASE 1	
RESIDENTIAL SUBDIVISION	
HENDERSON COUNTY	
NORTH CAROLINA	
Drawing Title:	SITE PLAN 6

File Location: L:\2021 Projects\543521 Ripple Falls_Rich Mtn_Due Diligence\DWG\Civil-Base-543521.dwg

SITE PLAN LEGEND

- EXIST. BOUNDARY
- EXIST. ADJOINER
- EXIST. STREAM
- EXIST. STREAM BUFFER
- EXIST. WETLAND
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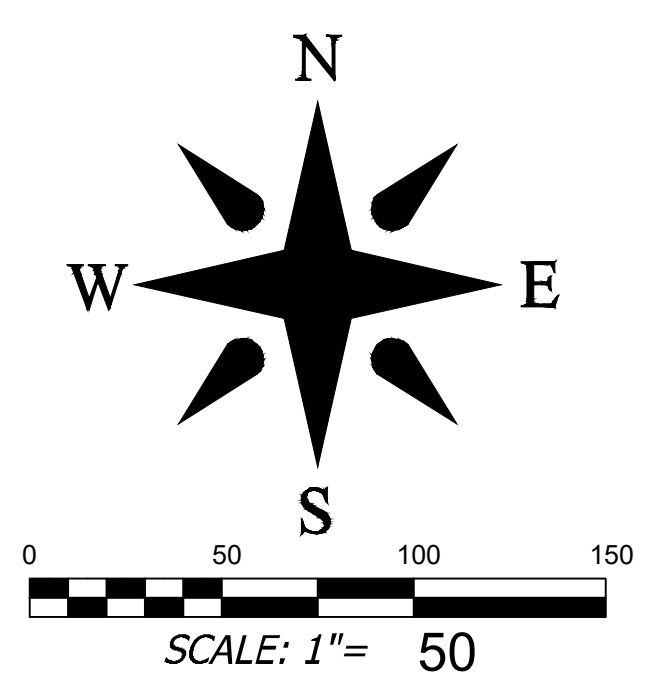
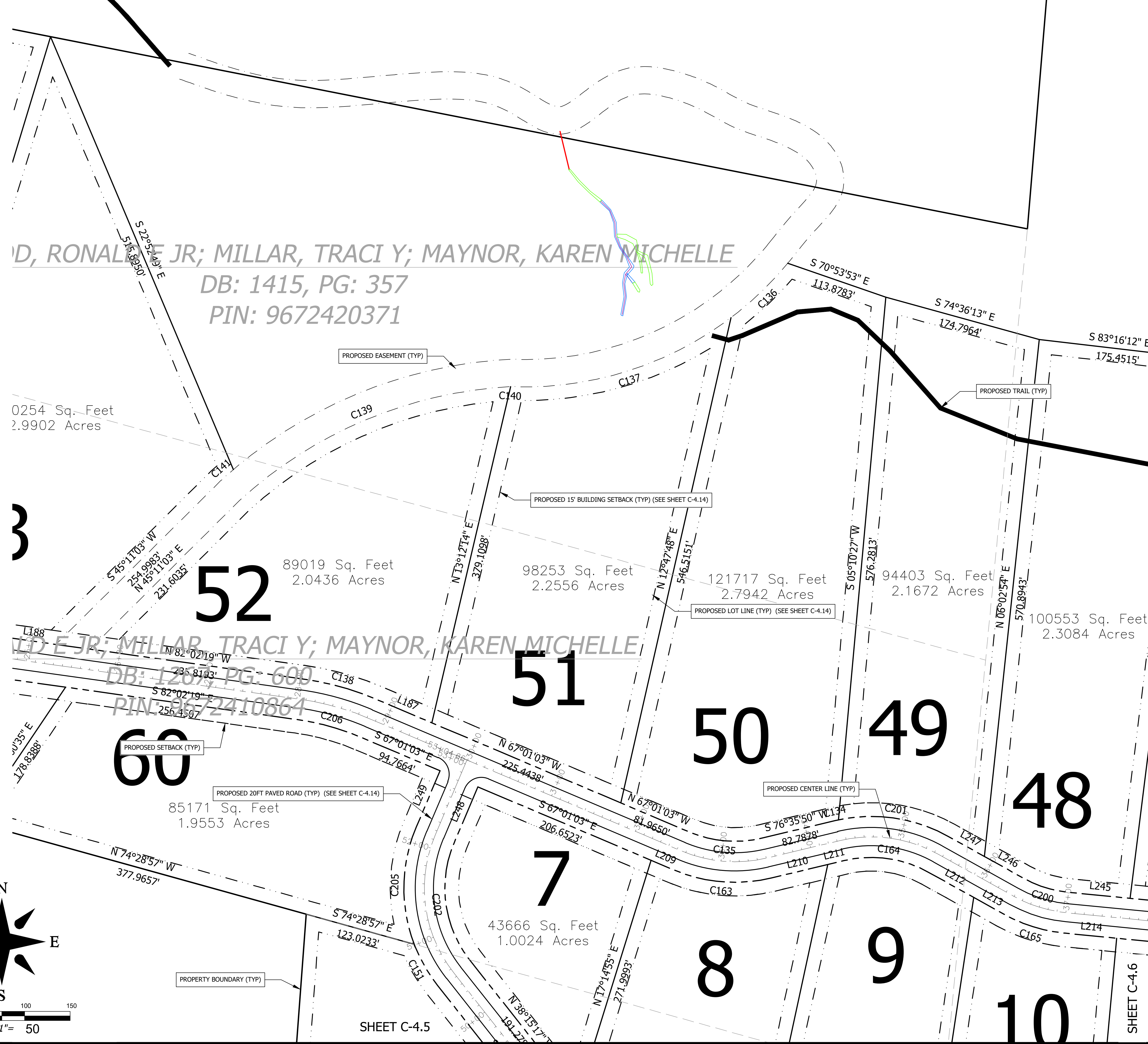
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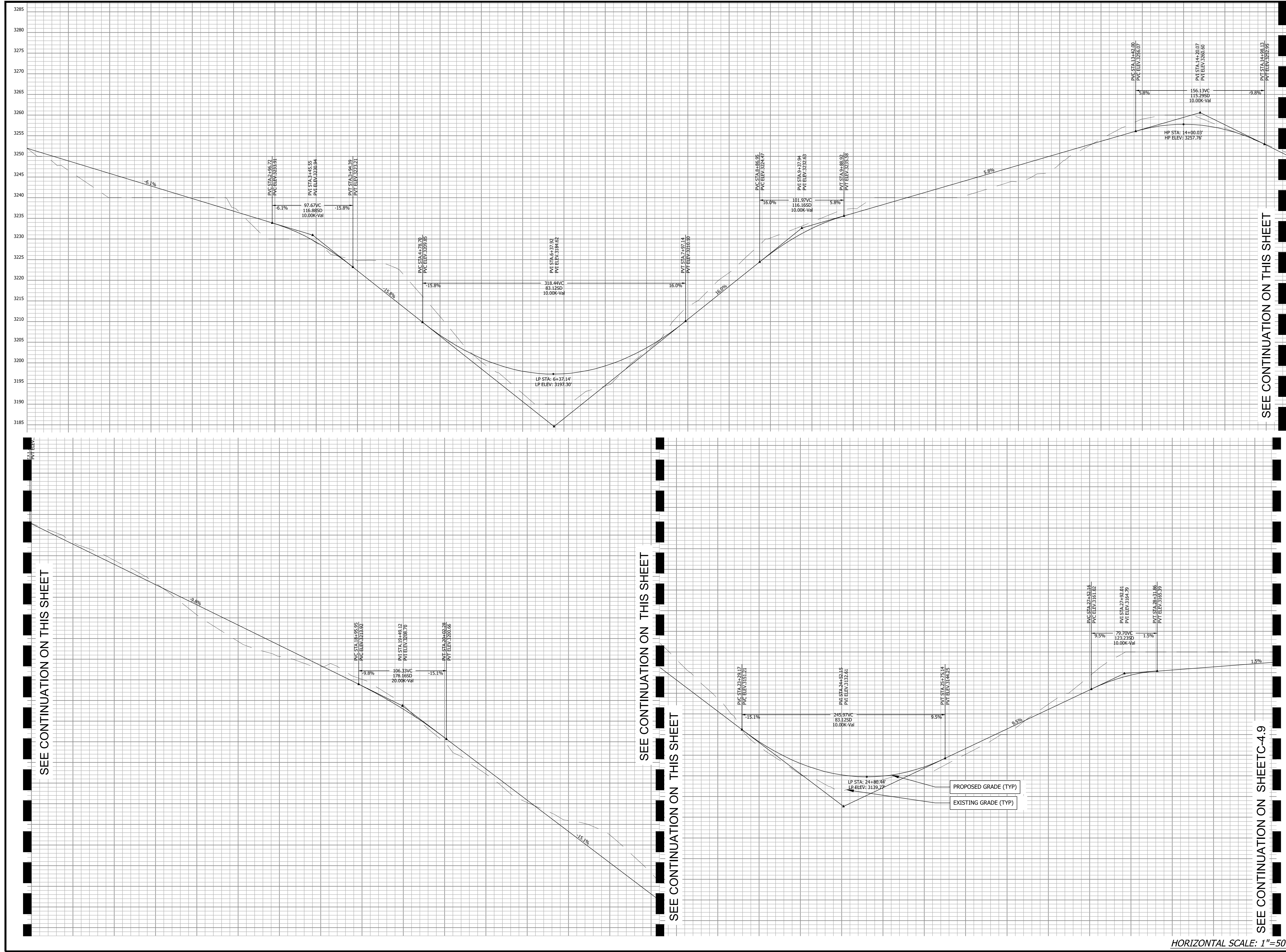
ENGINEER: BROOKS ENGINEERING
 CONTACT: WYATT EDSSEL PE
 ADDRESS: 15 ARLINGTON ST
 ASHEVILLE, NC 28801
 EMAIL: WEDSEL@BROOKSEA.COM
 PHONE: 828-232-4700



RD, RONALD E JR; MILLAR, TRACI Y; MAYNOR, KAREN MICHELLE
 DB: 1415, PG: 357
 PIN: 9672420371

RD E JR; MILLAR, TRACI Y; MAYNOR, KAREN MICHELLE
 DB: 1207, PG: 600
 PIN: 9672410864

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		Project No: 543521
	RESIDENTIAL SUBDIVISION		
Drawing Title: SITE PLAN 7	HENDERSON COUNTY		Drawing Title: SITE PLAN 7
	NORTH CAROLINA		
SHEET C-4.6		SHEET C-4.7	
REVISIONS/SUBMISSIONS		REVISIONS/SUBMISSIONS	
1 HENDERSON COUNTY TRC		1 HENDERSON COUNTY TRC	
Date: 11-02-2021		Date: 11-02-2021	
Designated: WBE Drawn: WBE Checked: WBE		Reviewed: WBE Scale: AS NOTED Date: 2021-11-02	
15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		PRELIMINARY - NOT FOR CONSTRUCTION	



SEE CONTINUATION ON THIS SHEET

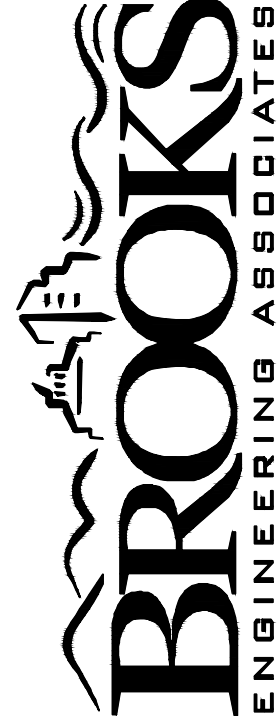

SEE CONTINUATION ON THIS SHEET

SEE CONTINUATION ON THIS SHEET

SEE CONTINUATION ON SHEET C-4.9
VERTICAL SCALE: 1"=20'

SEE CONTINUATION ON THIS SHEET

HORIZONTAL SCALE: 1"=50'

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		North Carolina
	RESIDENTIAL SUBDIVISION		
C-4.8	HENDERSON COUNTY		
Drawing Title: ROAD PROFILES			
 Planning • Engineering • Surveying • Environmental Services •			
Reviewed: WBE Scale: AS NOTED Date: 2021-11-02		15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com	
No. 1 REVISIONS/SUBMISSIONS HENDERSON COUNTY TRC		Date 11-02-2021	
 W. Bentley Edsel ENGINEER 045408		PRELIMINARY - NOT FOR CONSTRUCTION	
File Location: L:\2021 Projects\543521_Rople Falls_Rich Mtn_Dist Diligence\Draw\Civil-Base-543521.dwg			

SEE CONTINUATION ON SHEET C-4.8

SEE CONTINUATION ON THIS SHEET

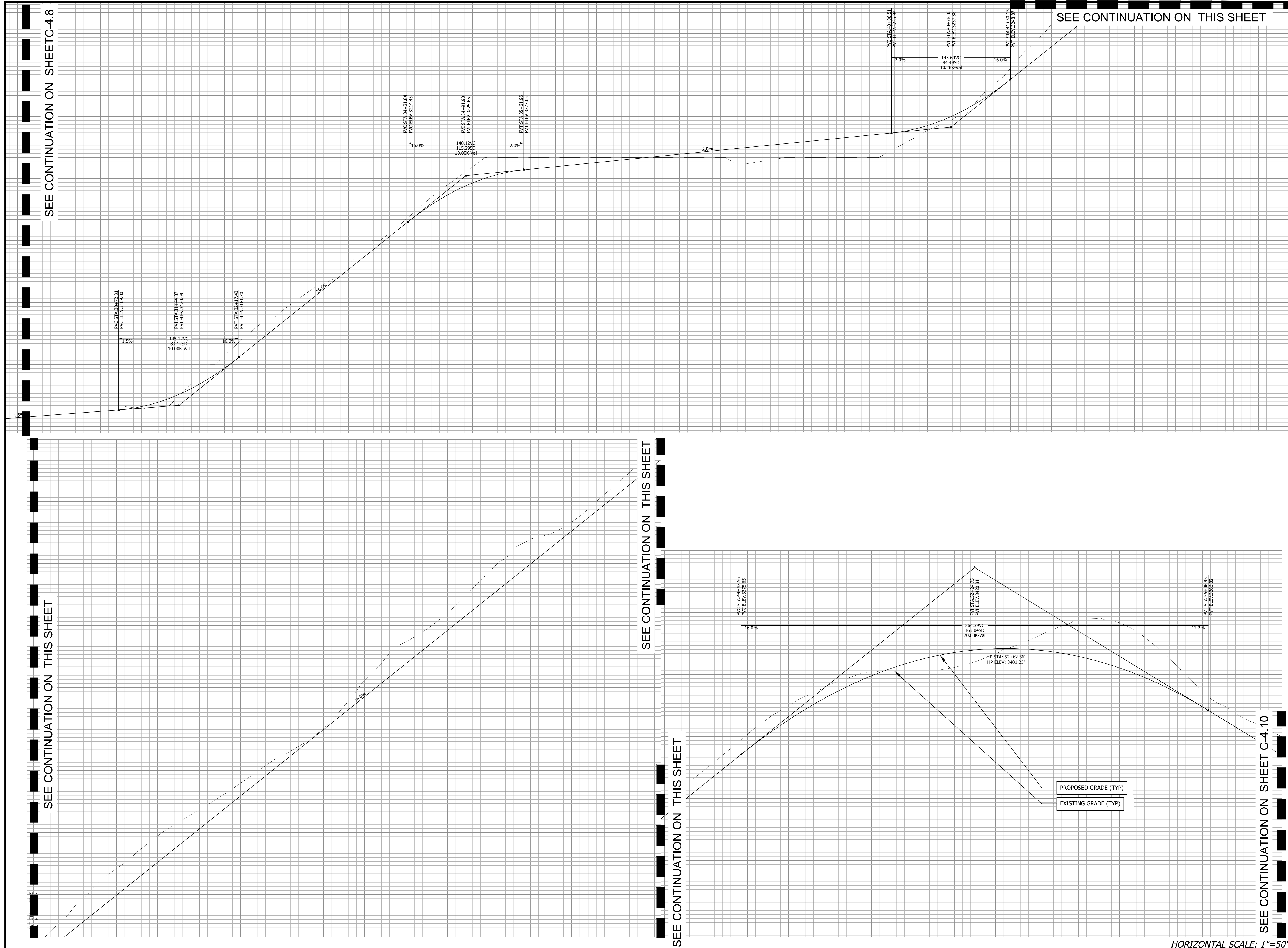
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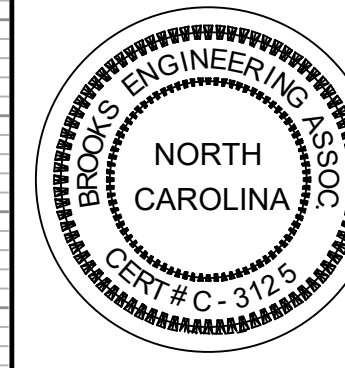
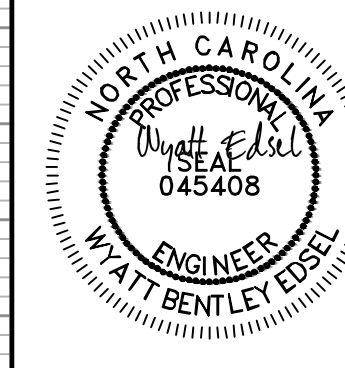
SEE CONTINUATION ON THIS SHEET

SEE CONTINUATION ON SHEET C-4.10
VERTICAL SCALE: 1"=20'

HORIZONTAL SCALE: 1"=50'



Project No: 543521	Rich Mountain Subdivision Phase 1		Date 11-02-2021
	Residential Subdivision		
Drawing Title: ROAD PROFILES	HENDERSON COUNTY		REVISIONS/SUBMISSIONS
	NORTH CAROLINA		
Drawing Title: ROAD PROFILES		HENDERSON COUNTY TRC	
Project No: C-4.9		No. 1	
Drawing Title: ROAD PROFILES		Date 11-02-2021	
Drawing Title: ROAD PROFILES		REVISIONS/SUBMISSIONS	
Drawing Title: ROAD PROFILES		HENDERSON COUNTY TRC	
Drawing Title: ROAD PROFILES		Date 11-02-2021	
Drawing Title: ROAD PROFILES		No. 1	
Drawing Title: ROAD PROFILES		Date 11-02-2021	

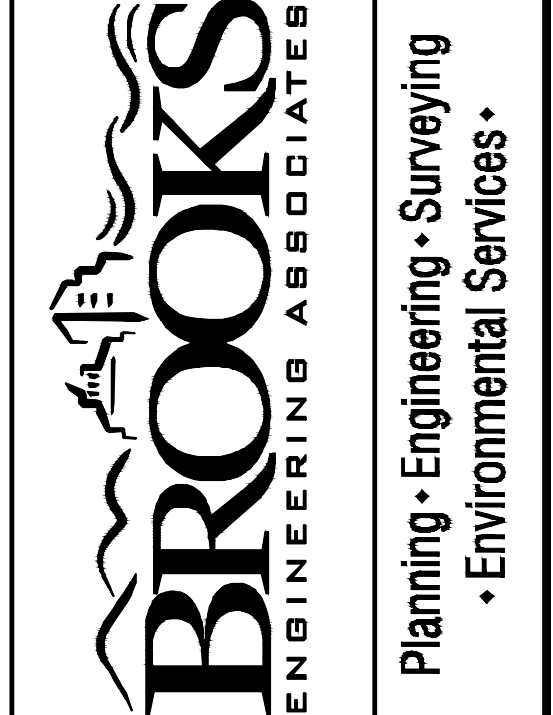


PRELIMINARY - NOT FOR CONSTRUCTION

Reviewed: WBE
Scale: AS NOTED
Date: 2021-11-02

Designed: WBE
Drawn: WBE
Checked: WBE

15 Arlington Street
Asheville, N.C. 28801
Phone: 1-828-232-4700
Fax: 1-828-232-1331
www.brooksea.com



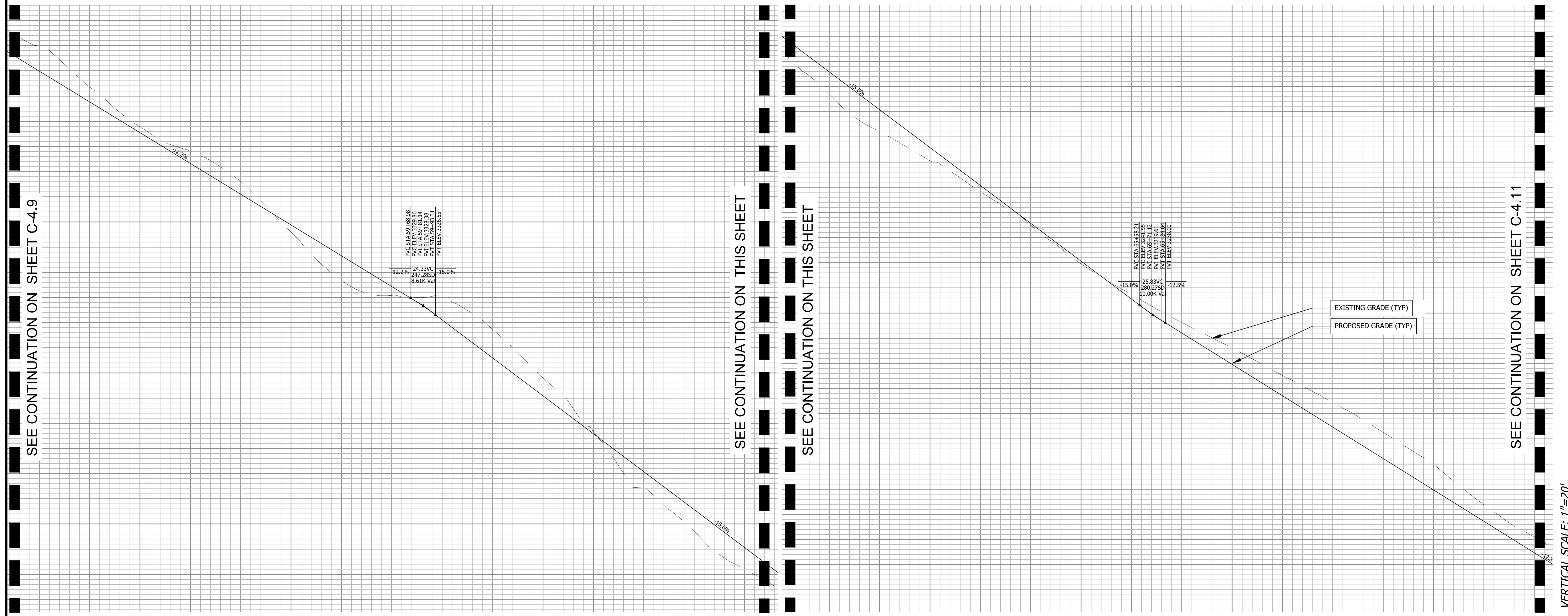
Project No:
543521


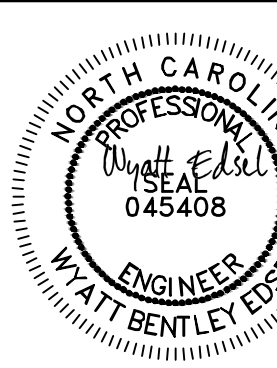
Rich Mountain Subdivision Phase 1
Residential Subdivision

HENDERSON COUNTY
NORTH CAROLINA

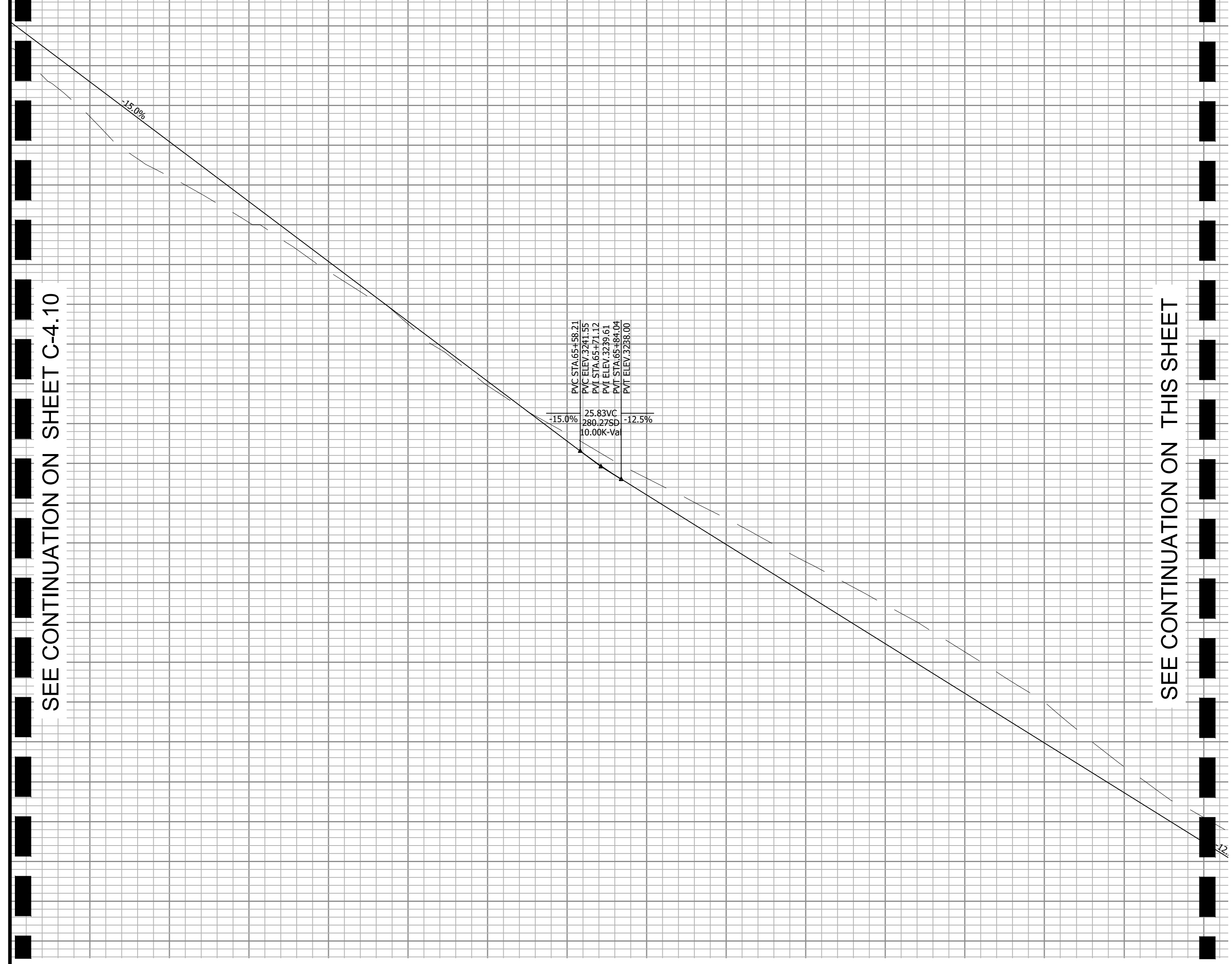
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C-4.9

Drawing Title:
ROAD PROFILES



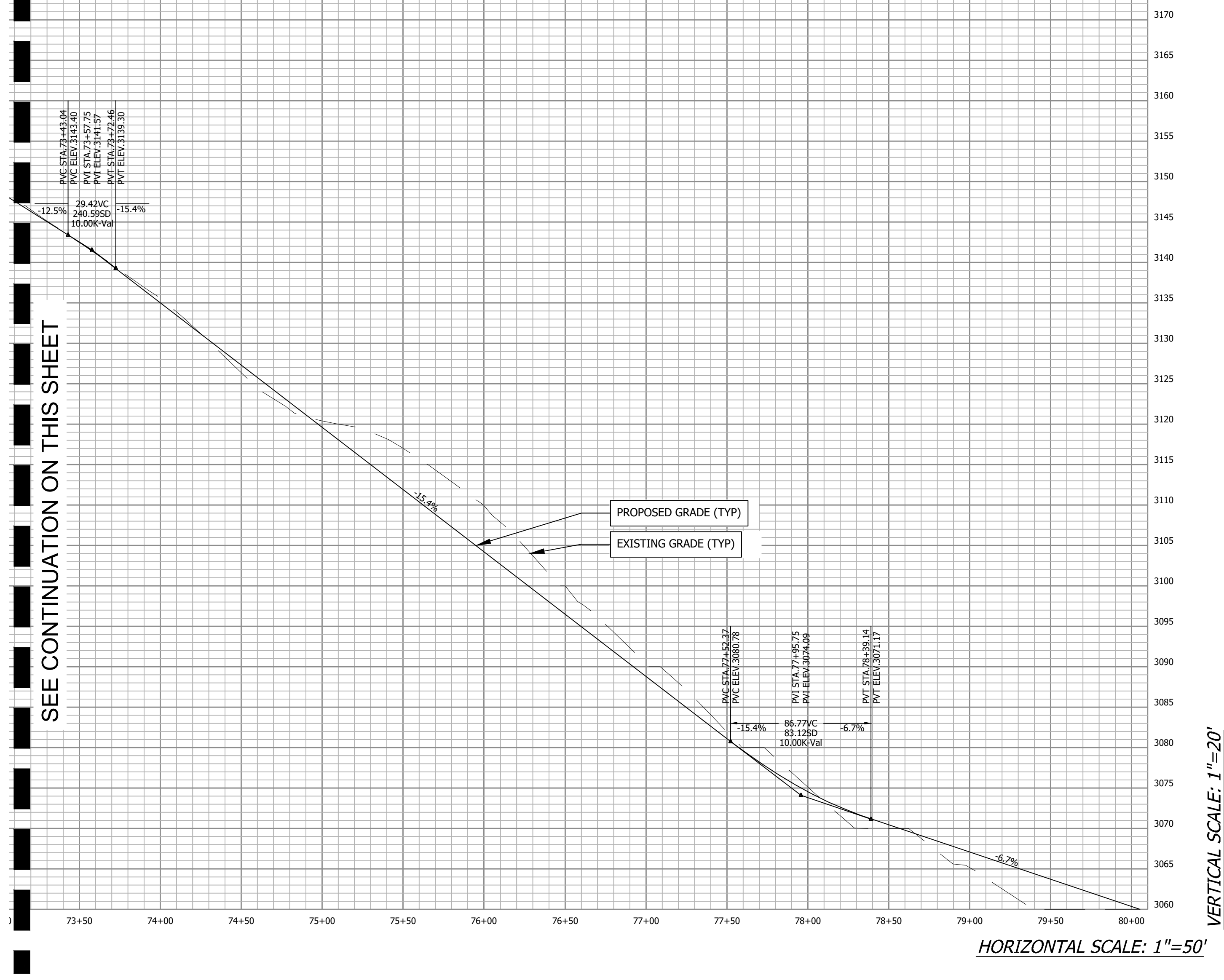
Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		Date 11-02-2021
	RESIDENTIAL SUBDIVISION		
Drawing Title: C-4.10	HENDERSON COUNTY		REVISIONS/SUBMISSIONS
ROAD PROFILES		1 HENDERSON COUNTY TRC	
Drawing Title: ROAD PROFILES		Revision/Submission number with a triangle indicates changes made on this sheet	
			
Planning • Engineering • Surveying • Environmental Services •		PRELIMINARY - NOT FOR CONSTRUCTION	
NORTH CAROLINA HENDERSON COUNTY		WATT BENTLEY ENGINEERS 045408	
Design: WBE Drawn: WBE Checked: WBE		Review: WBE Scale: AS NOTED Date: 2021-11-02	
15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com			

SEE CONTINUATION ON SHEET C-4.10



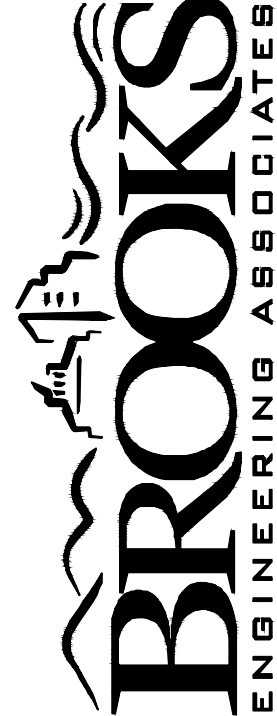
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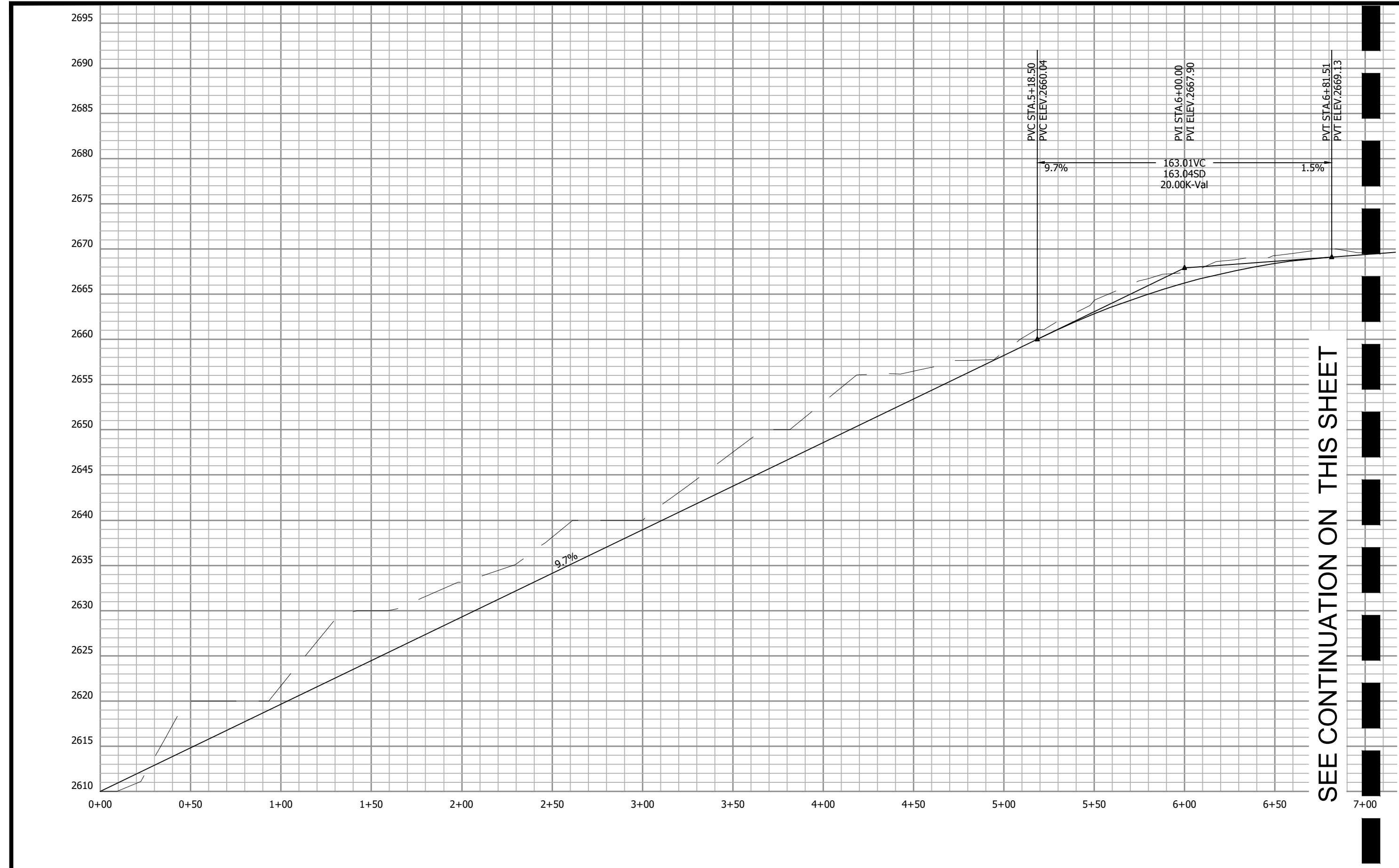


VERTICAL SCALE: 1"=20'

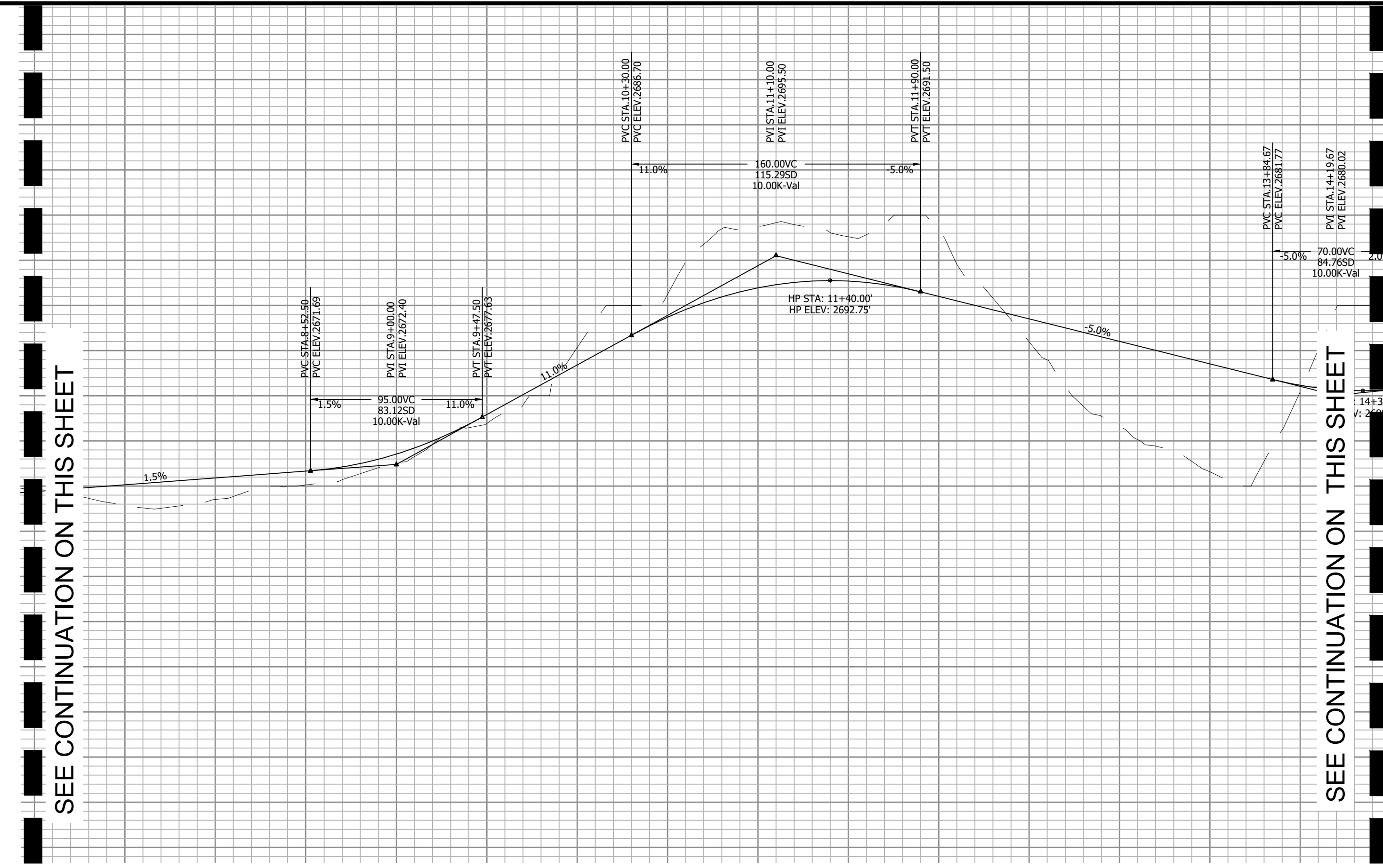
HORIZONTAL SCALE: 1"=50'

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION HENDERSON COUNTY NORTH CAROLINA	Design: WBE Drawn: WBE Checked: WBE	Review: WBE Scale: AS NOTED Date: 2021-11-02	No. 1 REVISIONS/SUBMISSIONS HENDERSON COUNTY TRC	Date 11-02-2021
Drawing Title: ROAD PROFILES	PRELIMINARY - NOT FOR CONSTRUCTION	 <p>BROOKS ENGINEERING ASSOCIATES</p> <p>Planning • Engineering • Surveying • Environmental Services •</p>			
File Location: L:\2021 Projects\543521 Ripple Falls_Rch Mtn Dev Diligence\Draw\Civil-Base-543521.dwg					

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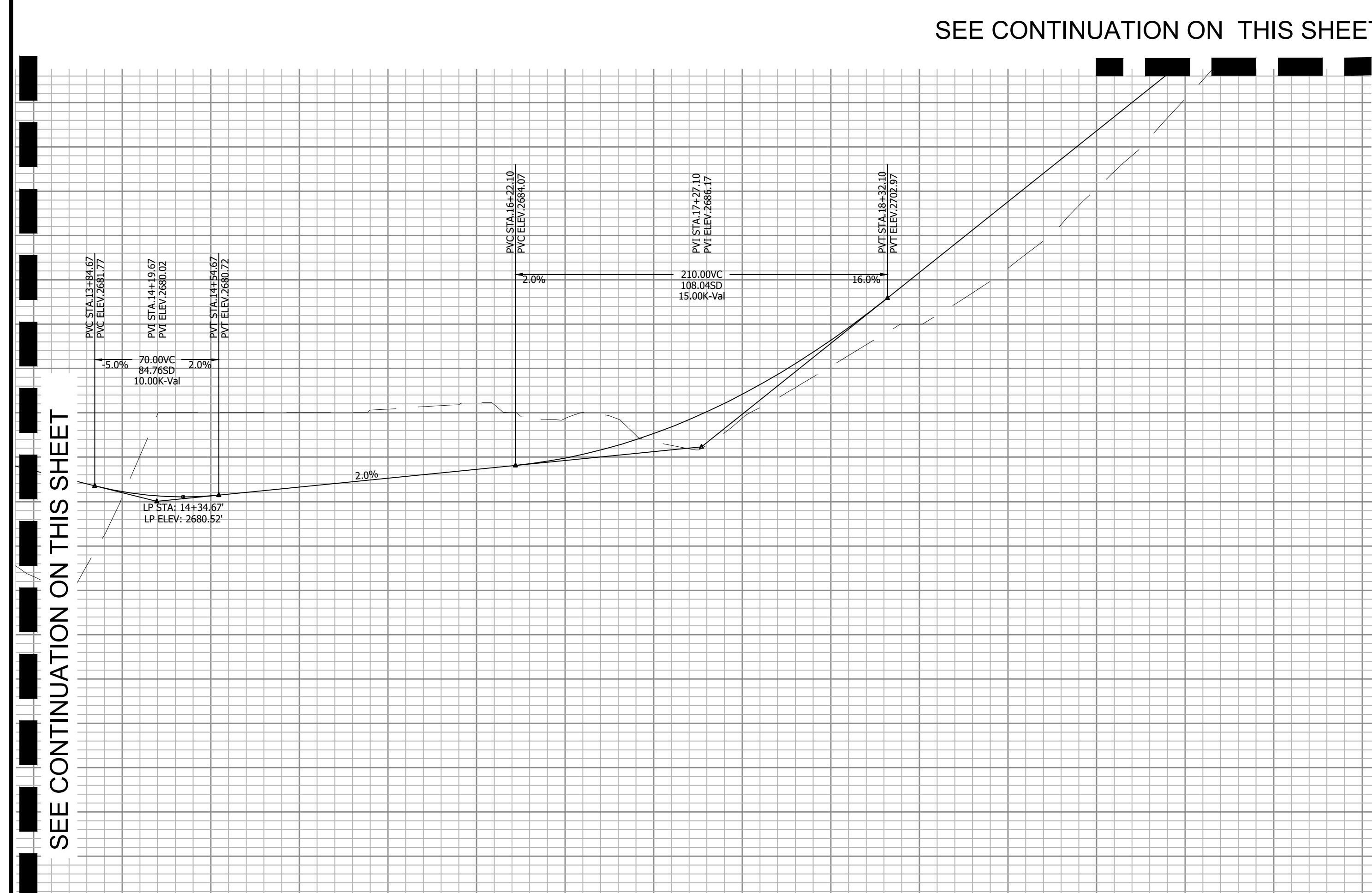


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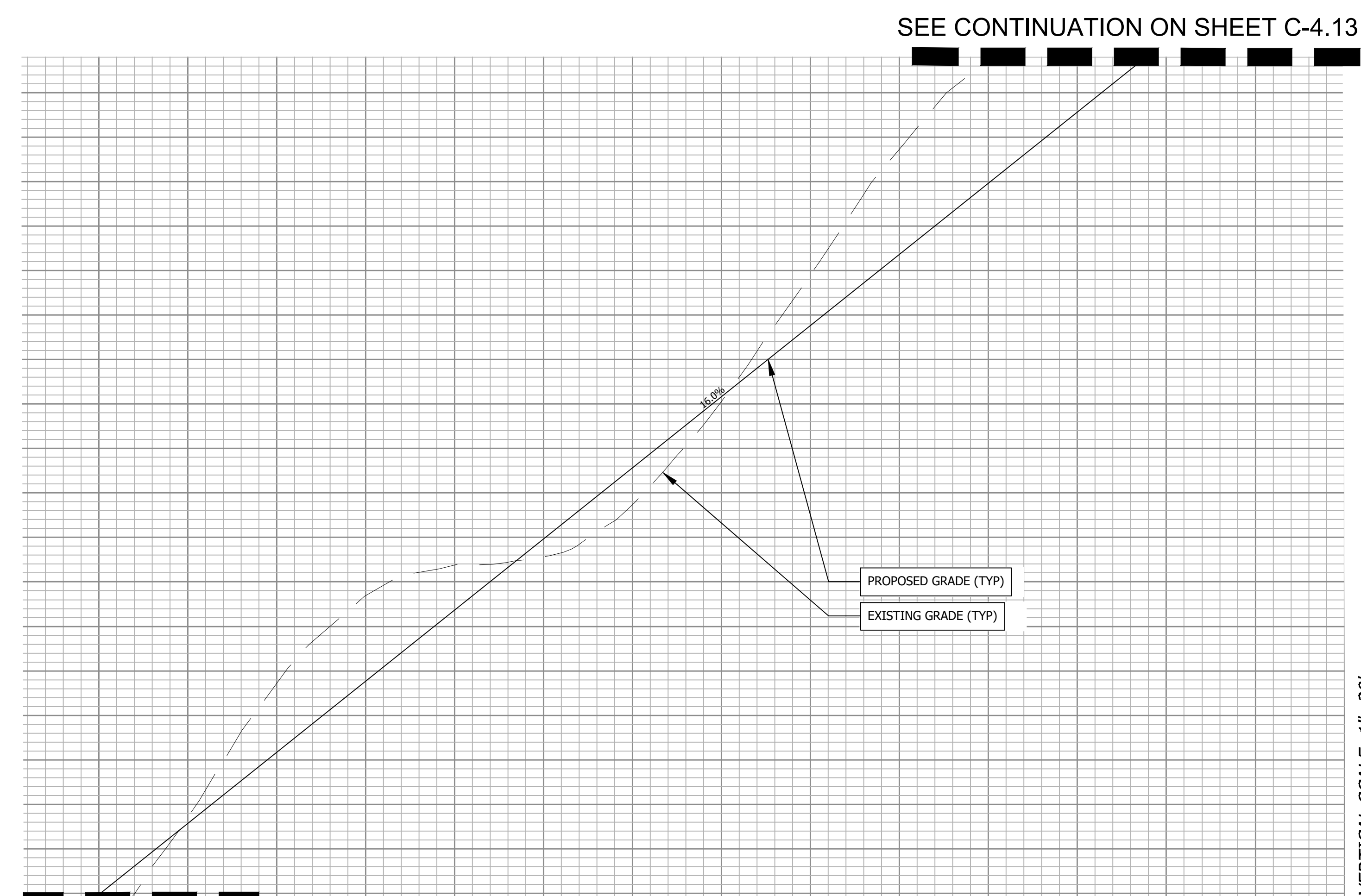
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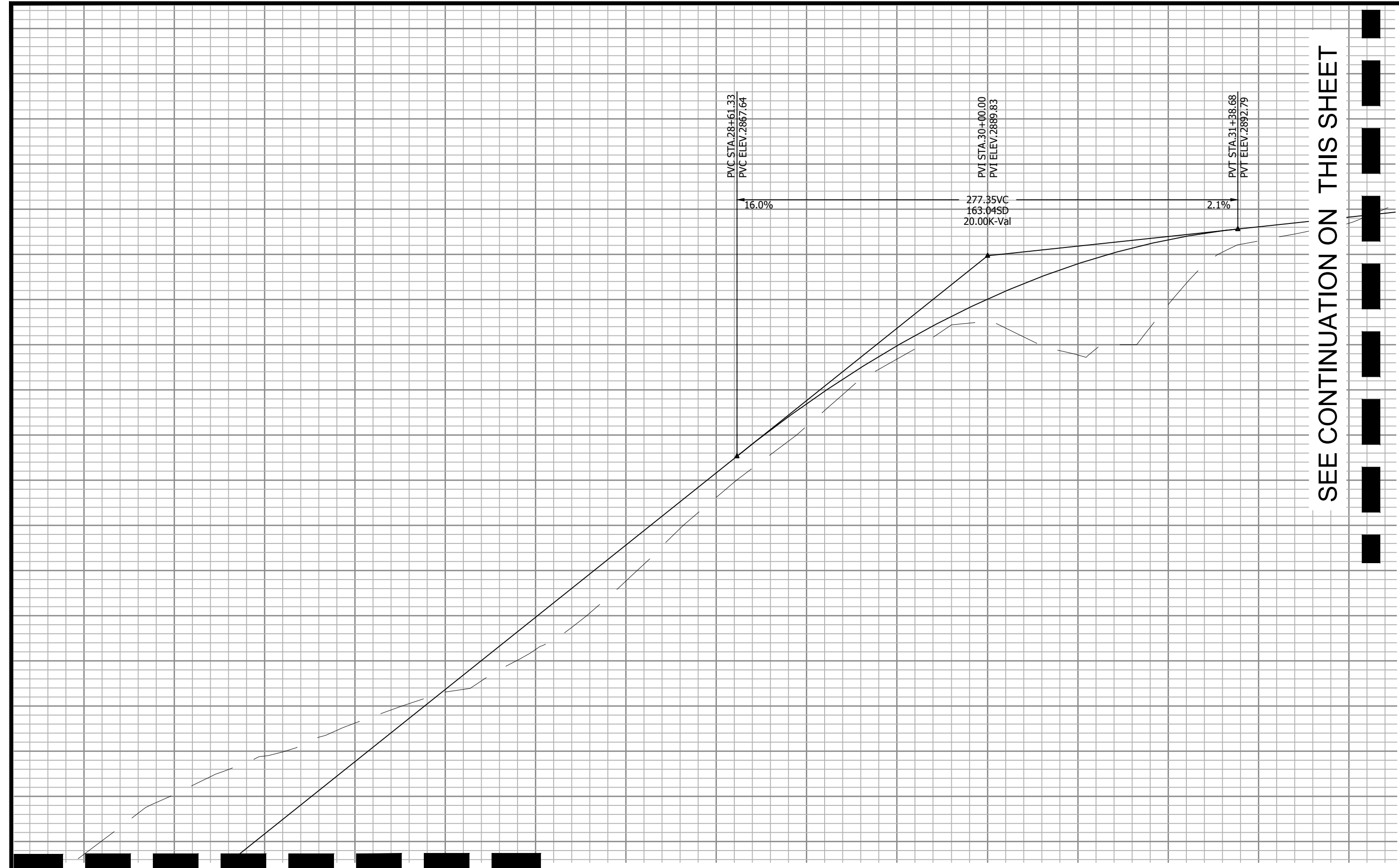
SEE CONTINUATION ON THIS SHEET

SEE CONTINUATION ON SHEET C-4.13

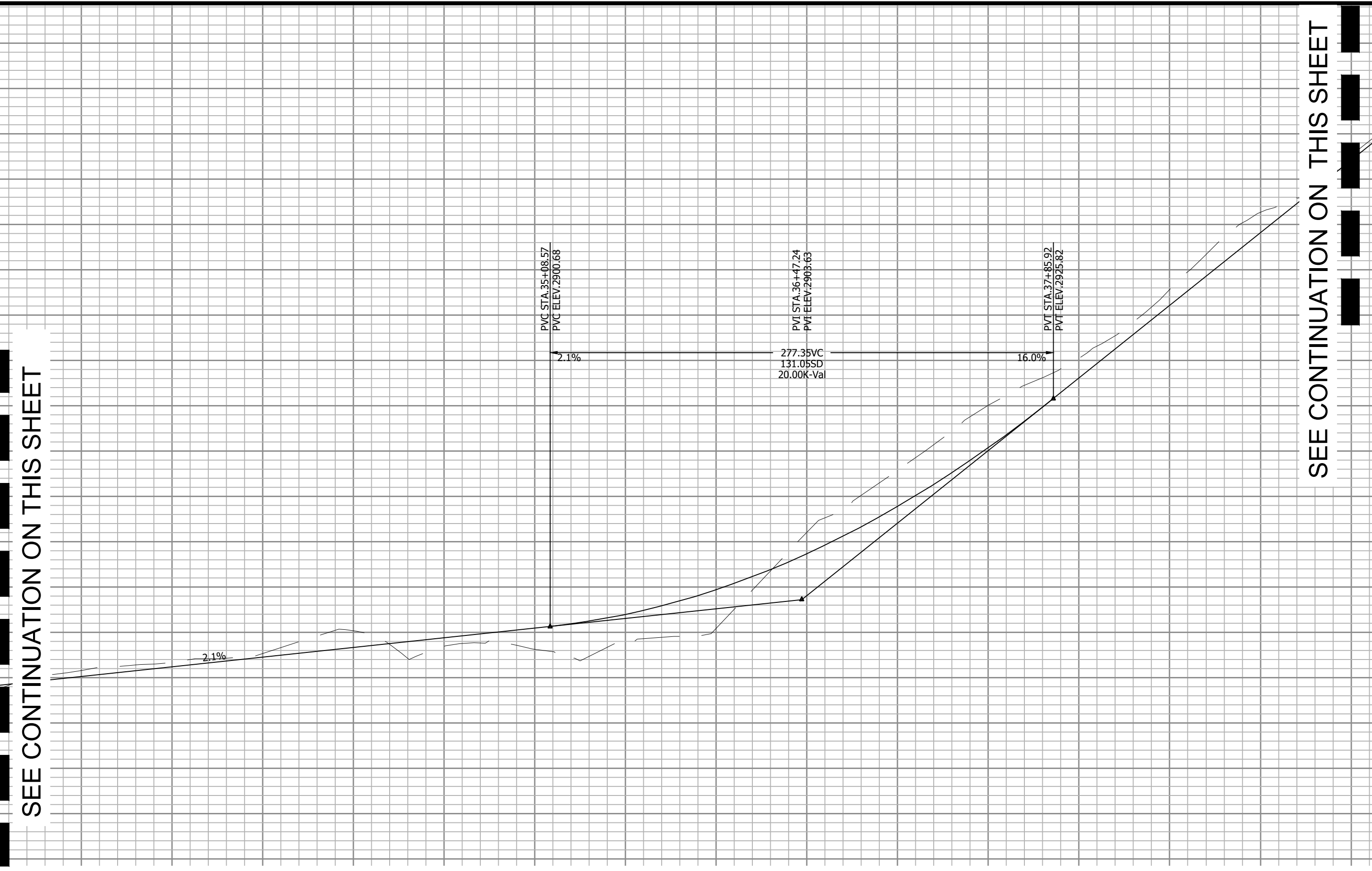
HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=20'

Project No: 543521	Rich Mountain Subdivision Phase 1		Date 11-02-2021
	Residential Subdivision		
Drawing Title: C-4.12	HENDERSON COUNTY		REVISIONS/SUBMISSIONS No. 1 HENDERSON COUNTY TRC
	NORTH CAROLINA		
Road Profiles		PRELIMINARY - NOT FOR CONSTRUCTION	
			
Planning • Engineering • Surveying • Environmental Services •		15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com	
File Location: L:\2021 Projects\543521\Profile Falls_Rich Mtn_Due Diligence\Draw\Civil-Base-543521.dwg			

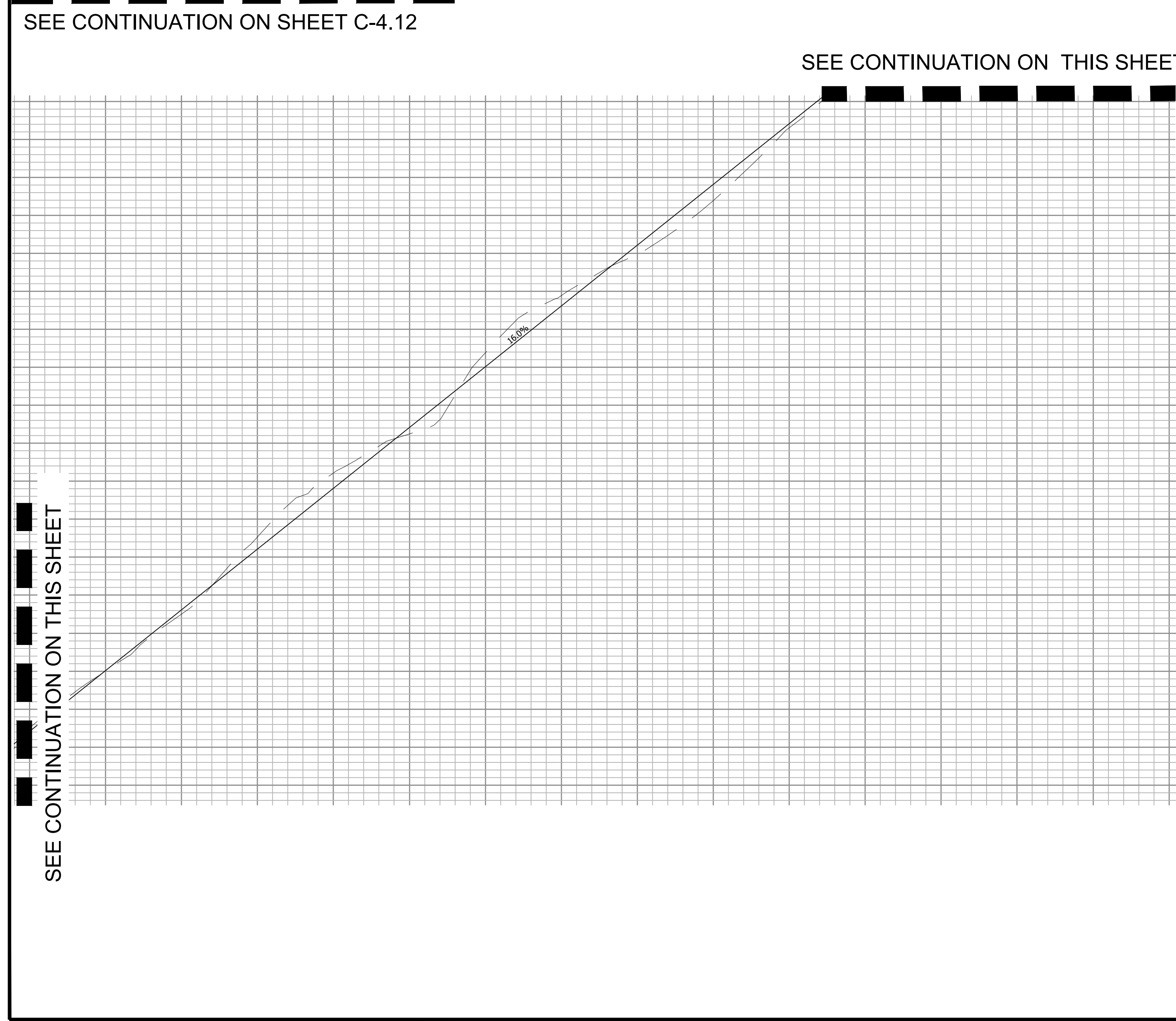


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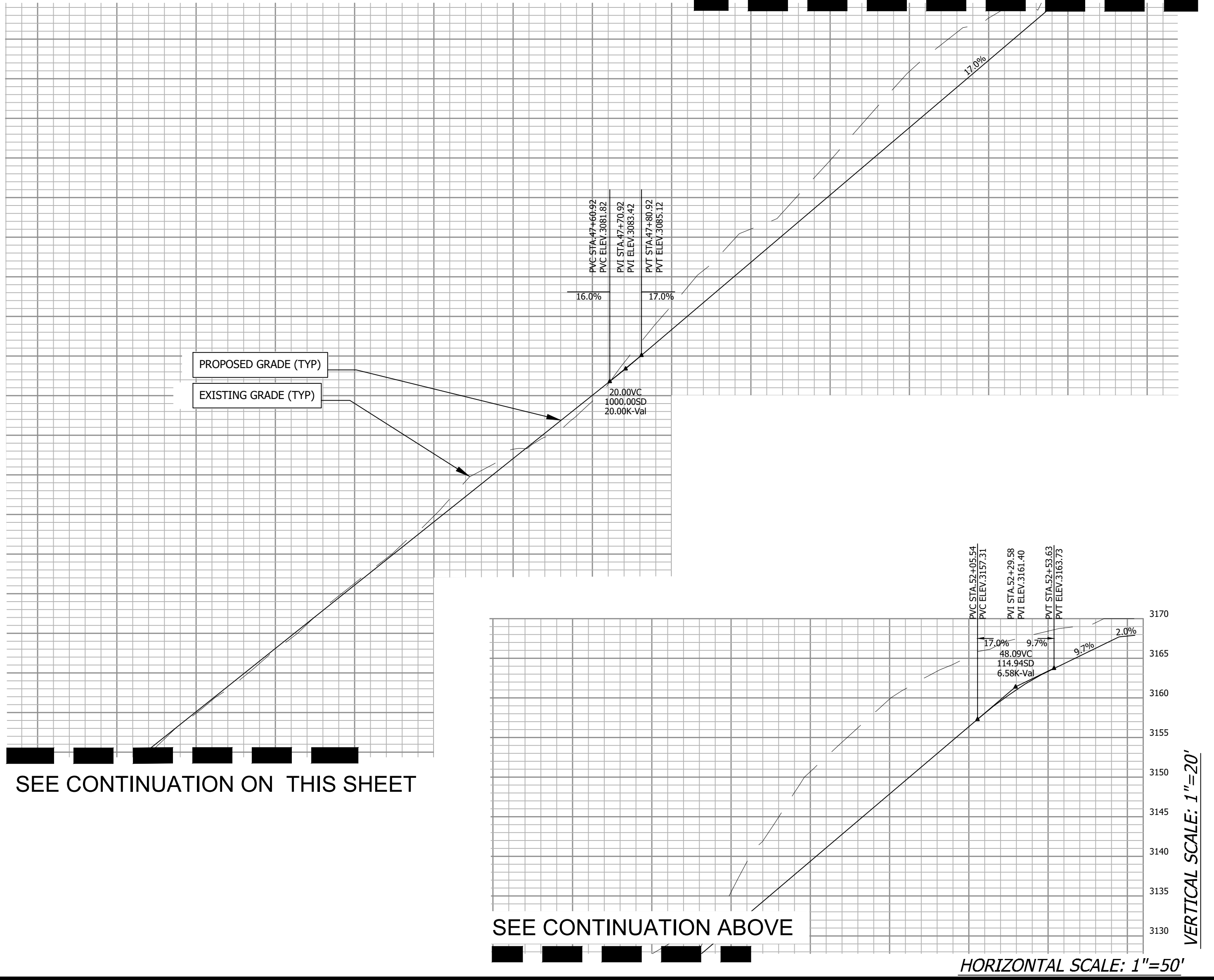
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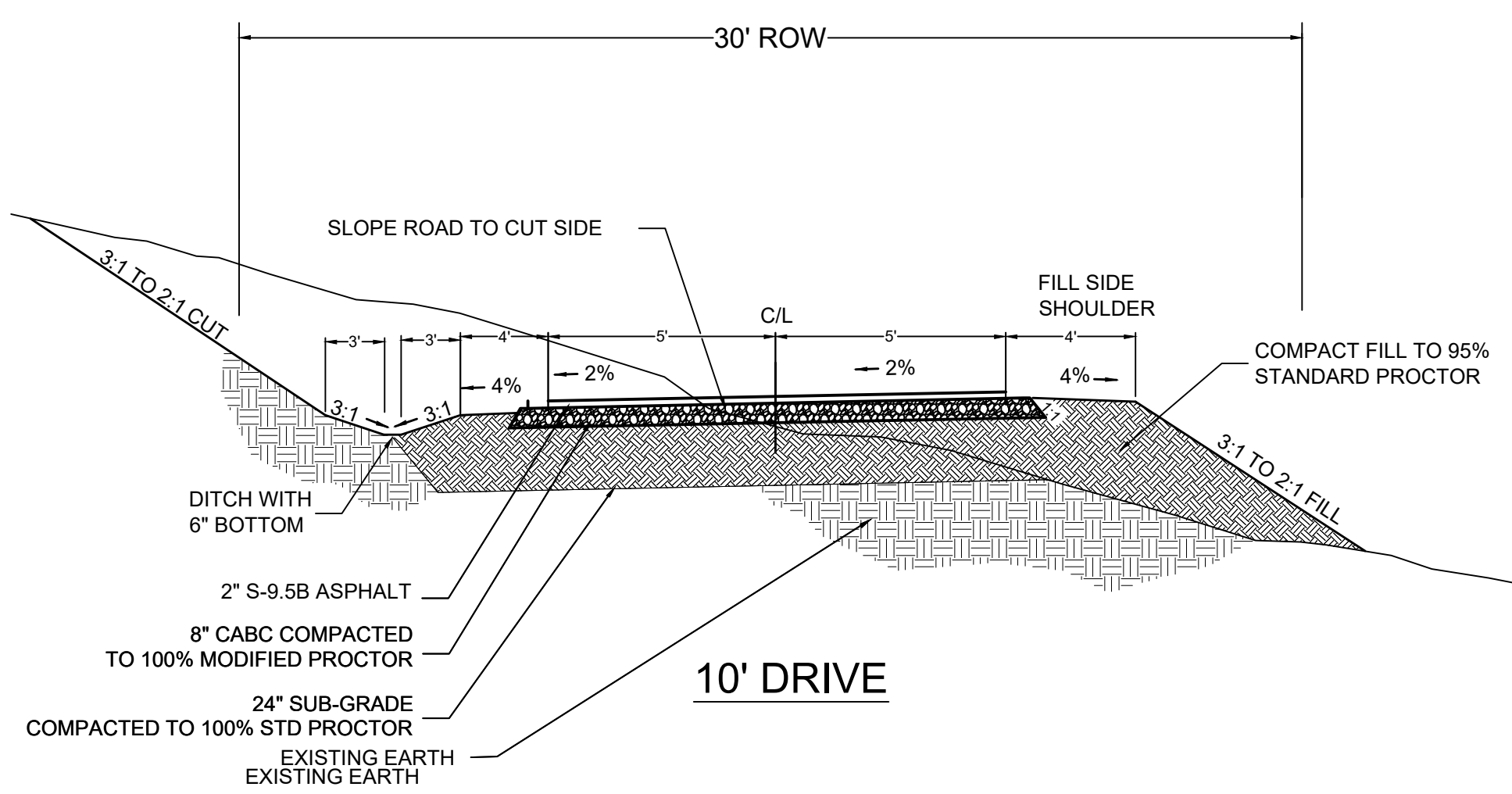
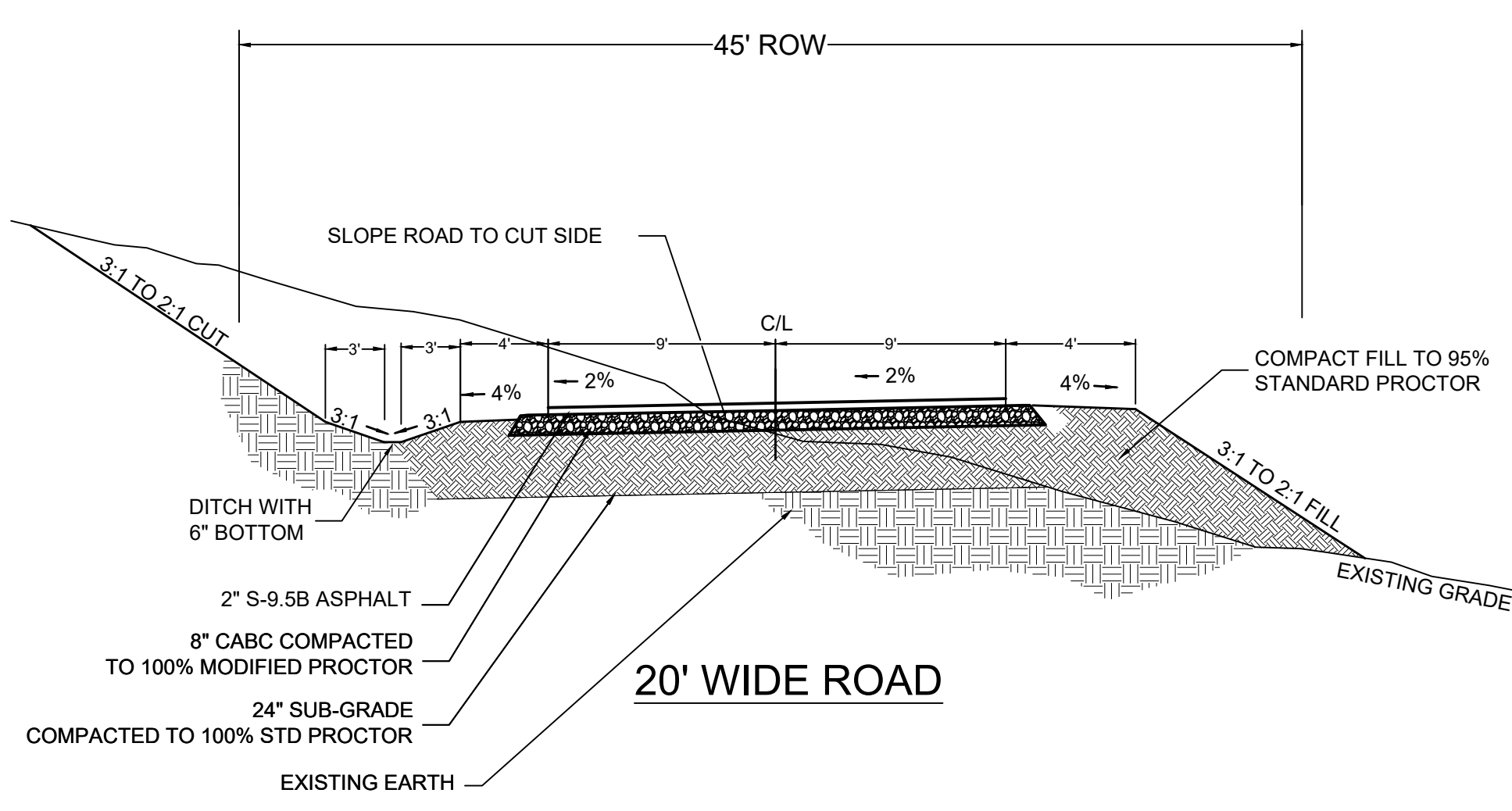
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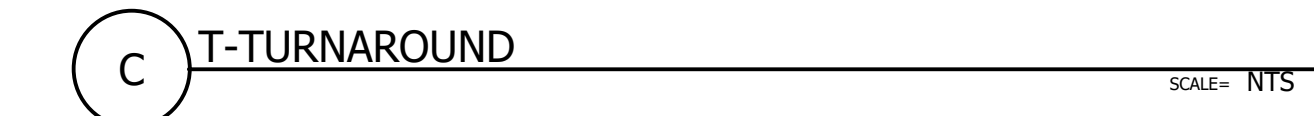
Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1		REVISIONS/SUBMISSIONS	No.	Date
	RESIDENTIAL SUBDIVISION			1	11-02-2021
Drawing Title: ROAD PROFILES	HENDERSON COUNTY		HENDERSON COUNTY TRC		
	NORTH CAROLINA				
Brooks Engineering Associates Planning • Engineering • Surveying • Environmental Services •			PRELIMINARY - NOT FOR CONSTRUCTION		
15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brookssea.com					

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C127	322.50	335.50	320.57	N 34°24'47" W	59°36'17"
C128	322.50	53.77	53.31	N 68°59'31" W	9°33'11"
C129	238.72	228.46	219.85	S 72°31'17" E	54°50'01"
C130	268.72	66.97	66.80	N 52°14'39" W	14°16'44"
C131	268.72	145.35	143.58	N 74°52'44" W	39°59'27"
C132	268.72	45.30	45.24	S 84°47'48" W	9°39'28"
C133	322.50	29.93	29.92	S 87°55'32" W	3°19'01"
C134	172.50	172.50	172.50	S 77°12'42" W	1°13'45"
C135	127.50	80.97	79.61	N 85°12'33" W	36°23'07"
C136	374.97	86.98	86.19	N 46°14'31" E	13°11'58"
C137	374.97	258.71	253.61	N 72°36'08" E	39°35'51"
C138	322.50	84.55	84.31	N 74°51'41" W	15°01'16"
C139	479.30	329.04	322.61	N 67°11'46" E	39°19'59"
C140	374.97	0.22	0.22	S 87°36'57" E	0°00'07"
C141	509.30	18.45	18.45	S 48°59'51" W	2°04'34"
C142	172.50	127.29	126.18	N 68°53'51" W	26°16'55"
C143	322.50	156.67	156.10	S 52°22'52" E	28°00'02"
C144	172.50	14.49	14.49	S 67°02'57" E	4°40'43"
C145	172.50	11.57	11.57	S 63°01'11" W	3°24'48"
C146	172.50	19.80	19.39	S 44°44'33" E	6°33'30"
C147	222.50	201.79	194.95	S 24°33'24" E	51°57'50"
C148	222.50	44.80	44.41	S 56°15'52" W	11°21'32"
C149	67.50	63.48	61.16	S 14°24'16" E	3°52'55"
C150	112.50	21.82	21.78	S 06°58'52" W	11°06'41"
C151	172.50	52.26	52.06	S 29°34'11" E	17°21'32"
C152	222.50	14.00	14.00	S 39°48'00" E	3°05'26"
C153	122.50	69.95	69.01	N 48°31'03" W	32°43'05"
C154	222.50	88.17	88.16	N 60°02'57" W	4°48'43"
C155	277.50	88.82	88.43	N 60°06'58" W	18°32'42"
C156	277.50	45.85	45.80	N 46°06'37" W	9°38'00"
C157	222.50	70.56	70.34	N 51°28'01" W	11°21'08"
C158	172.50	35.17	35.11	N 56°12'52" W	11°21'08"
C159	172.50	160.98	155.52	N 24°33'24" W	51°57'50"
C160	67.50	13.07	13.07	N 06°58'52" E	11°06'41"
C161	112.50	105.80	101.94	N 19°24'16" W	53°52'55"
C162	172.50	9.57	9.57	N 39°48'00" W	3°05'26"
C163	172.50	108.71	109.54	S 85°13'39" E	36°33'07"
C164	127.50	94.56	92.41	S 82°09'19" E	42°29'41"
C165	172.50	70.77	70.27	S 72°39'39" E	23°30'20"
C166	322.50	111.15	111.59	N 85°37'23" E	19°21'13"
C167	277.50	42.62	42.58	S 09°41'09" E	8°47'59"
C168	277.50	44.57	44.52	S 00°41'05" E	9°12'07"
C169	122.50	176.84	176.84	S 23°02'36" E	82°42'42"
C170	77.50	40.55	40.09	S 63°48'27" E	29°58'34"
C171	82.50	35.47	35.20	S 09°31'00" E	24°37'57"
C172	77.50	68.82	67.48	S 23°00'36" E	51°37'08"
C173	82.50	88.59	84.39	S 52°35'41" E	61°31'25"
C174	82.50	63.26	61.72	N 74°40'36" E	43°56'00"
C175	127.50	127.10	127.10	N 81°16'07" E	59°07'02"
C176	172.50	159.07	153.49	N 83°24'35" E	52°50'07"
C177	172.50	1.80	1.80	N 56°41'34" E	9°35'55"
C178	172.50	93.84	88.31	S 88°53'06" E	69°22'53"
C179	277.50	136.37	135.00	S 40°09'06" E	28°09'24"
C180	322.50	390.72	367.26	S 50°37'33" E	69°24'54"
C181	277.50	48.18	47.17	S 20°09'45" E	10°09'18"
C182	277.50	336.20	316.01	N 50°37'33" W	69°24'54"
C183	322.50	85.25	85.00	N 23°29'22" W	15°08'43"
C184	322.50	130.40	129.51	N 42°38'49" W	23°09'59"
C185	122.50	7.14	7.14	N 55°54'00" W	3°20'23"
C186	122.50	141.19	133.50	S 89°24'43" W	66°07'27"
C187	122.50	86.14	86.00	N 64°14'42" W	13°05'22"
C188	172.50	146.57	142.20	S 85°29'08" W	48°41'00"
C189	172.50	25.39	25.37	S 56°55'37" W	8°26'07"
C190	37.50	37.50	37.50	N 64°14'42" W	13°05'22"
C191	122.50	79.70	78.30	N 15°50'23" W	37°16'44"
C192	172.50	94.75	92.40	N 36°38'15" W	44°18'58"
C193	172.50	111.88	109.41	N 37°26'33" W	82°42'42"
C194	322.50	48.00	47.95	N 00°20'50" W	8°31'37"
C195	277.50	282.79	235.12	S 39°09'02" E	50°07'47"
C196	277.50	194.33	190.36	S 84°16'28" E	40°07'52"
C197	322.50	54.07	54.01	S 80°27'51" W	9°36'23"
C198	277.50	92.77	91.85	S 85°11'11" W	19°03'64"
C199	277.50	4.23	4.23	N 84°51'03" W	0°52'28"
C200	127.50	52.31	51.94	N 72°39'39" W	23°30'20"
C201	172.50	124.24	121.57	N 81°32'27" W	41°15'57"
C202	127.50	136.27	129.86	N 07°38'10" W	61°14'14"
C203	322.50	33.07	33.06	N 73°11'15" W	3°56'23"
C204	322.50	61.58	61.85	N 63°00'11" W	14°29'35"
C205	172.50	132.10	128.90	S 01°02'36" W	43°52'42"
C206	277.50	72.75	72.54	S 74°31'41" E	15°01'16"
C207	277.50	19.86	19.85	S 57°48'24" E	4°08'07"
C208	322.50	122.53	121.80	S 66°38'28" E	21°46'08"
C209	277.50	78.79	78.53	S 67°49'27" E	16°16'07"
C210	277.50	301.56	286.94	N 72°44'35" E	62°15'49"
C211	322.50	212.93	209.08	N 60°31'53" E	37°48'45"
C212	322.50	120.77	120.06	N 77°54'34" E	21°27'20"
C213	277.50	59.37	59.26	N 72°38'40" E	12°15'32"

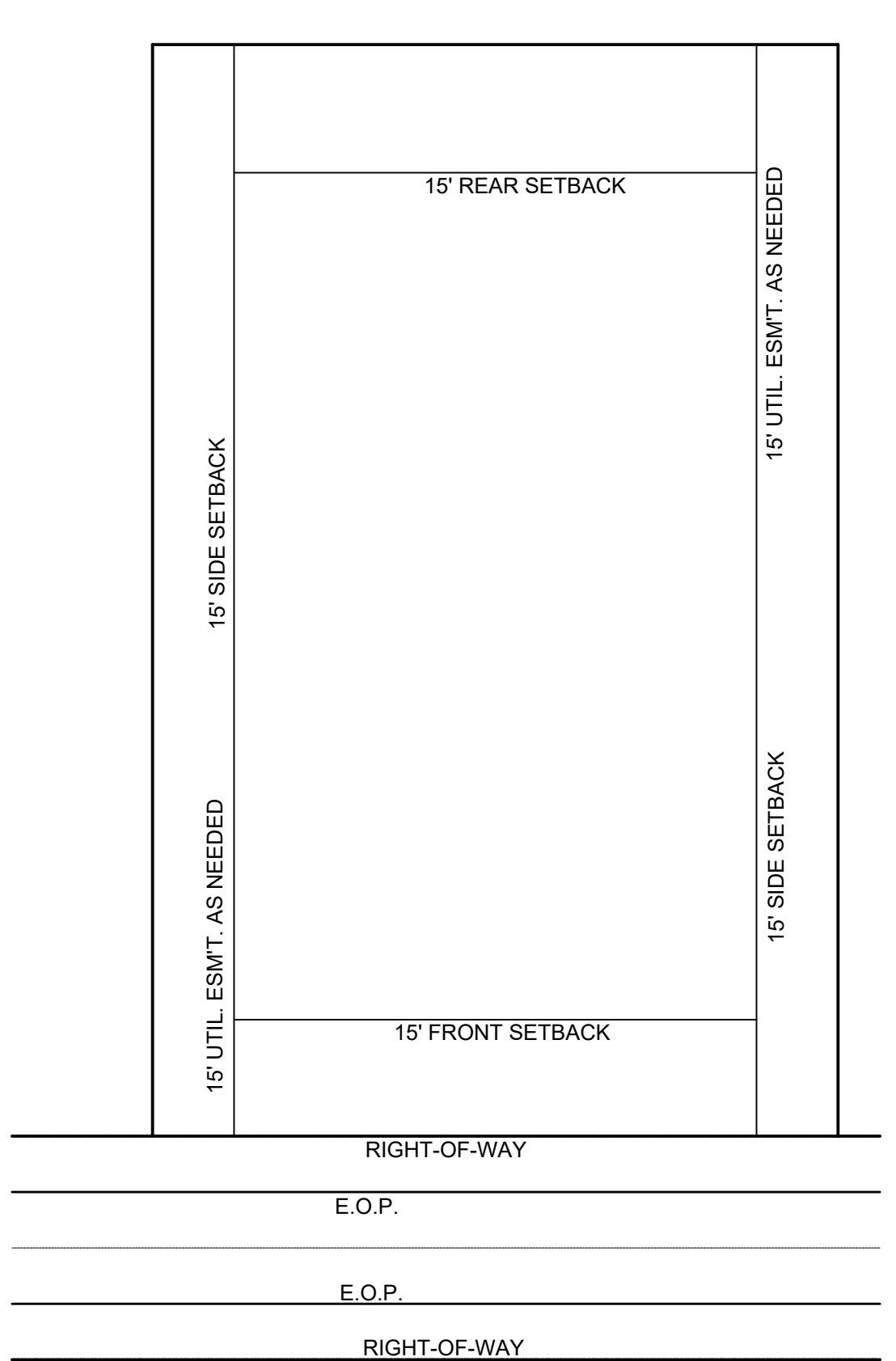
LINE	BEARING	DISTANCE
L186	N 45°04'20" W	76.97
L187	N 67°01'03" W	65.73
L188	N 82°04'19" W	51.95
L189	N 55°49'24" W	24.08
L190	S 64°42'35" E	77.83
L191	S 41°22'37" E	55.83
L192	S 63°26'52" E	56.48
L193	N 75°01'35" E	2.05
L194	S 26°33'08" W	30.00
L195	N 88°59'12" W	53.67
L196	S 14°31'12" W	33.08
L197	S 01°25'31" W	18.69
L198	S 41°20'43" E	33.08
L199	S 14°31'12" W	33.08
L200	S 01°25'31" W	67.58
L201	N 64°42'35" W	77.83
L202	N 41°22'37" W	55.83
L203	N 50°38'18" W	56.44
L204	N 01°25'31" E	67.03
L205	N 01°25'31" E	19.23
L206	N 12°32'12" E	35.08
L207	N 41°20'43" W	33.08
L208	N 38°15'17" W	46.14
L209	S 67°01'03" E	26.72
L210	N 76°35'50" E	63.26
L211	N 76°35'50" E	63.03
L212	S 60°54'29" E	57.46
L213	S 60°54'29" E	57.49
L214	S 54°24'49" E	57.29
L215	S 84°24'49" E	21.59
L216	N 73°29'29" E	31.01
L217	S 61°34'25" W	15.93
L218	S 84°48'34" E	28.42
L219	N 61°34'25" E	31.59
L220	N 58°35'24" E	50.16
L221	N 81°19'12" E	42.53
L222	S 50°41'23" E	37.05
L223	S 54°28'55" E	26.21
L224	N 54°28'55" W	57.42
L225	N 50°41'23" W	38.69
L226	S 81°19'12" W	23.14
L227	S 58°35'24" W	44.91
L228	N 34°06'15" W	69.47
L229	S 03°54'58" W	13.90
L230	S 78°47'44" E	18.74
L231	N 34°06'15" W	65.07
L232	S 70°10'22" E	30.54
L233	N 85°28'19" W	46.98
L234	S 70°10'22" E	6.41
L235	N 56°23'37" E	60.40
L236	S 54°13'48" E	75.21
L237	N 35°12'50" E	78.59
L238	N 15°55'06" W	63.81
L239	N 54°13'48" W	44.57
L240	S 56°23'37" W	26.86
L241	S 56°23'37" W	33.54
L242	N 70°10'22" W	47.68
L243	N 70°10'22" W	23.88
L244	N 78°47'44" W	18.74
L245	N 84°24'49" W	67.66
L246	N 60°54'29" W	49.68
L247	N 60°54'29" W	45.88
L248	N 42°38'52" E	66.83
L249	S 24°38'52" W	66.83
L250	N 74°28'52" W	70.87
L251	N 41°38'40" E	20.24
L252	S 75°07'31" E	16.99
L253	N 79°26'26" E	59.85
L254	S 01°21'47" E	45.00



- NOTES:
1. USE SAME PAVING SECTION AS ROADS UNLESS DIRECTED BY GEOTECHNICAL ENGINEER.
 2. NO BASE COURSE SHALL BE PLACED ON MUCK, PIPE CLAY, ORGANIC MATTER, OR OTHER UNSUITABLE MATERIAL.
 3. DITCHES SHALL HAVE A MAXIMUM 3:1 SIDE SLOPE ON EACH SIDE FOR 1 VERTICAL FROM THE BOTTOM OF DITCH.



A LINE AND CURVE TABLES SCALE= NTS



D TYPICAL LOT LAYOUT SCALE= NTS

- NOTES:
1. NO BASE COURSE SHALL BE PLACED ON MUCK, PIPE CLAY, ORGANIC MATTER, OR OTHER UNSUITABLE MATERIAL.
 2. DITCHES SHALL HAVE A MAXIMUM 3:1 SIDE SLOPE ON EACH SIDE FOR 1 VERTICAL FROM THE BOTTOM OF DITCH.
 3. ROADS SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH "PRIVATE SUBDIVISION LOCAL ROAD" STANDARDS PER THE HENDERSON COUNTY SUBDIVISION REGULATIONS, LATEST EDITION.

B ROAD CROSS SECTIONS SCALE= NTS

Project No: 543521	Rich Mountain Subdivision Phase 1 Residential Subdivision HENDERSON COUNTY NORTH CAROLINA	Drawing Title: SITE DETAILS	Date 11-02-2021	REVISIONS/SUBMISSIONS
				HENDERSON COUNTY TRC
No.: 1				PRELIMINARY - NOT FOR CONSTRUCTION
Designed: WBE Drawn: WBE Checked: WBE	Reviewed: WBE Scale: AS NOTED Date: 2021-11-02	15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brookssea.com		
BROOKS ENGINEERING ASSOCIATES		Planning • Engineering • Surveying • Environmental Services •		

GRADING AND STORMWATER LEGEND

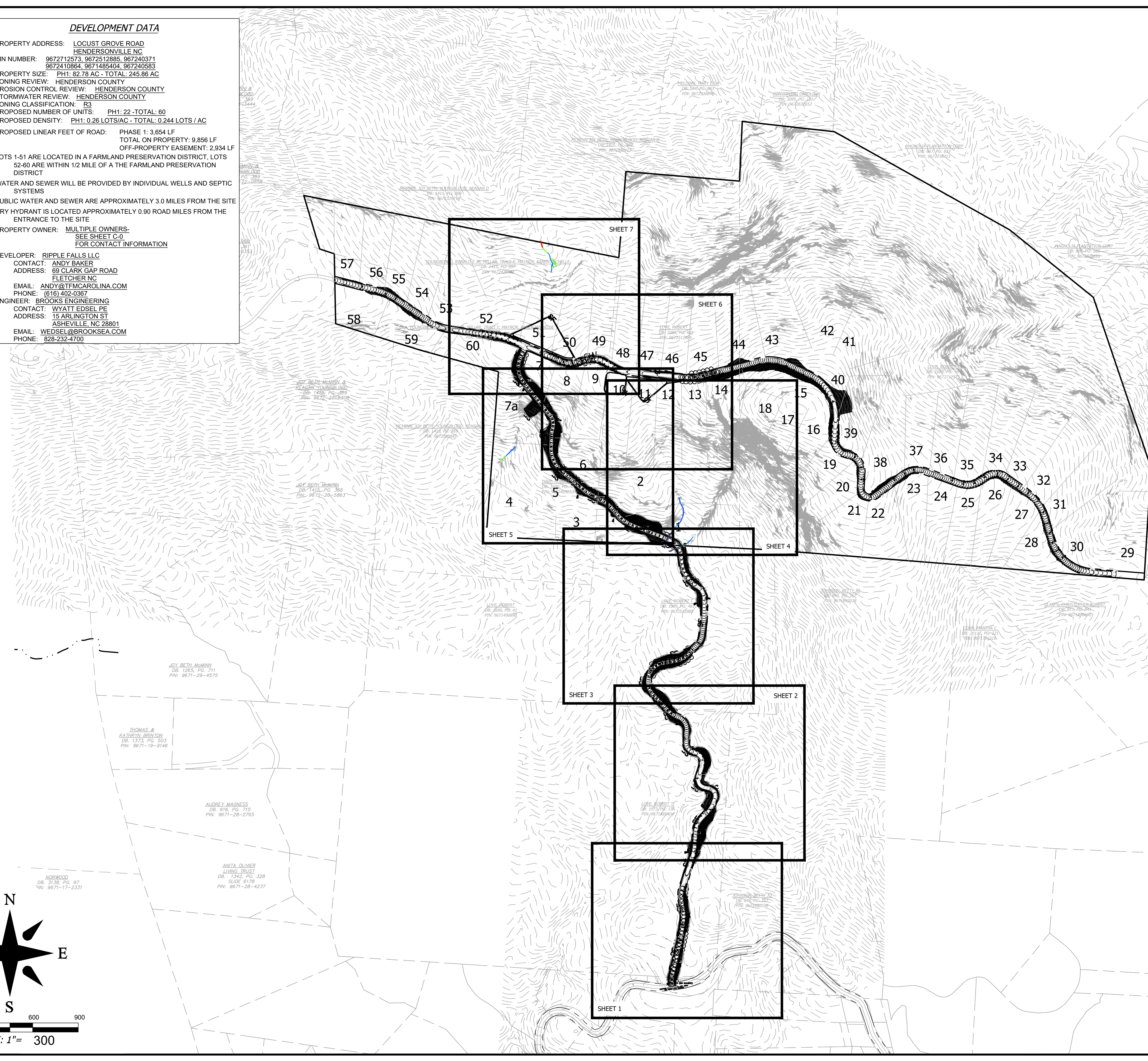
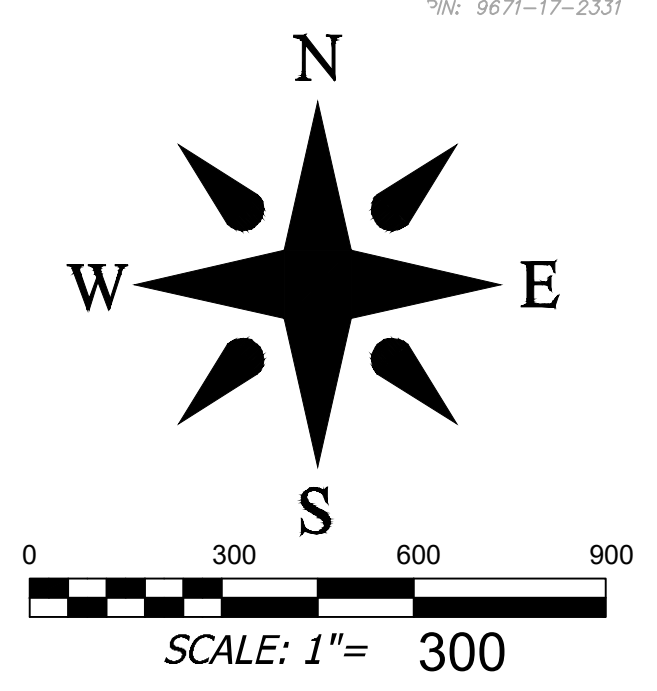
- EXIST. BOUNDARY
- EXIST. ADJOINER
- EXIST. STREAM
- EXIST. STREAM BUFFER
- EXIST. RIGHT OF WAY
- EXIST. EASEMENT
- EXIST. BUILDING SETBACK
- - - EXISTING BUILDING
- - - EXISTING SIDEWALK
- - - EXISTING PAVEMENT
- EXIST. CURB
- EXIST. MANHOLE
- EXIST. SANITARY SEWER
- EXIST. SEWER CLEAN OUT
- E-SS EXIST. WATER LINE
- E-W EXIST. WATER METER
- HYD EXIST. FIRE HYDRANT
- WV EXIST. WATER VALVE
- E-OU EXIST. OVERHEAD UTILITIES
- PP EXIST. POWER POLE
- E-U EXIST. UNDERGRND UTILITIES
- E-ST EXIST. STORM DRAIN
- EXIST. CURB INLET
- EXIST. JUNCTION BOX
- EXIST. DROP INLET
- EXIST. TELE MANHOLE
- EXIST. DROP INLET
- EXIST. TRANSFORMER
- EXIST. LIGHT POLE
- EXIST. MINOR CONTOUR
- EXIST. MAJOR CONTOUR
- NEW BUILDING
- NEW PAVEMENT
- NEW HEADWALL
- NEW FLARED END SECTION
- ST NEW STORM PIPE
- RIP RAP LINED DITCH
- NEW MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW SPOT GRADE
- NEW PROPERTY LINES
- NEW RIGHT OF WAY
- LIMITS OF DISTURBANCE
- NEW WALL (BY OTHERS)

DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD
 HENDERSONVILLE NC
 PIN NUMBER: 9672712573, 9672512885, 967240371
 9672410864, 9671485404, 967240583
 PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
 ZONING REVIEW: HENDERSON COUNTY
 EROSION CONTROL REVIEW: HENDERSON COUNTY
 STORMWATER REVIEW: HENDERSON COUNTY
 ZONING CLASSIFICATION: R3
 PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
 PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC
 PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
 TOTAL ON PROPERTY: 9,856 LF
 OFF-PROPERTY EASEMENT: 2,934 LF
 LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS
 52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION
 DISTRICT
 WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC
 SYSTEMS
 PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
 DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE
 ENTRANCE TO THE SITE
 PROPERTY OWNER: MULTIPLE OWNERS-
 SEE SHEET C-0
 FOR CONTACT INFORMATION
 DEVELOPER: RIPPLE FALLS LLC
 CONTACT: ANDY BAKER
 ADDRESS: 68 CLARK GAP ROAD
 FLETCHER NC
 EMAIL: ANDY@TFMNCAROLINA.COM
 PHONE: (616) 402-0367
 ENGINEER: BROOKS ENGINEERING
 CONTACT: WYATT EDSSEL PE
 ADDRESS: 15 ARLINGTON ST
 ASHEVILLE, NC 28801
 EMAIL: WEDEL@BROOKSEA.COM
 PHONE: 828-232-4700

STORM AND EROSION NOTES

PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
 PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
 PROJECT DENSITY: PH1: 0.26 LOTS/AC - TOTAL 0.244 LOTS/AC
 IMPERVIOUS SUMMARY:
 ROADS: PH1: 3.27 AC - TOTAL: 6.14 AC
 HOUSES & DRIVES (15,000 SF / LOT): 7.58 AC - 20.66 AC
 TOTAL: 10.85 AC (13.11%) - 26.80 AC (10.90%)
 EROSION CONTROL NOTES:
 1. SEE SHEET C-5.10 FOR STABILIZATION TIME
 FRAMES.
 2. EROSION CONTROL MEASURES WILL BE
 MAINTAINED AT ALL TIMES. IF FULL
 IMPLEMENTATION OF THE APPROVED PLAN DOES
 NOT PROVIDE FOR EFFECTIVE EROSION
 CONTROL, ADDITIONAL EROSION AND SEDIMENT
 CONTROL MEASURES SHALL BE IMPLEMENTED
 TO CONTROL OR TREAT THE SEDIMENT SOURCE
 AND AN AMENDED PLAN BE SUBMITTED AND
 APPROVED SHOWING MODIFIED EROSION
 CONTROL DEVICES.
 STORMWATER NOTES:
 1. ALL STREAMS SHALL HAVE A 30' SETBACK FOR
 NEW BUILT-UPON AREAS.
 2. ALL PIPE SHALL BE DOUBLE-WALL HDPE WITH
 PROPER STONE BEDDING AND SHALL HAVE A
 MINIMUM COVER OF 30".
 3. ALL FILL SLOPES SHALL BE COMPACTED FULL
 DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM
 DENSITY (STANDARD PROCTOR), SHALL BE
 PLACED ON A SURFACE CLEAR OF GROWTH AND
 DEBRIS AND BE PROPERLY BENCHED AND
 DRAINED.
 4. ALL SLOPES GREATER THAN 3:1 AND TALLER THAN
 10 FEET SHALL BE SEEDED AND COVERED WITH
 MATTING AS SHOWN IN THE PLANS.
 5. AN APPROVED GRADING PERMIT IS REQUIRED FOR
 ANY BORROW OR WASTE SITE PRIOR TO
 INITIATION OF ANY LAND DISTURBING ACTIVITY.
 *ALL CONSTRUCTION SHALL BE IN
 ACCORDANCE WITH THE LATEST EDITION OF
 DETAILS, SPECIFICATIONS, AND OTHER
 DEVELOPMENT ORDINANCES OF HENDERSON CO.



Date	11-02-2021
REVISIONS/SUBMISSIONS	HENDERSON C COUNTY TRC
No.	1

Professional Engineer Seal for Wyatt Bentley Eddsel, North Carolina License # 045408.

Professional Engineer Seal for Brooks Engineering Associates, North Carolina License # 3725.

PRELIMINARY - NOT FOR CONSTRUCTION

Review: WBE
 Scale: AS NOTED
 Design: WBE
 Drawn: WBE
 Checked: WBE
 Date: 2021-11-02
 15 Arlington Street
 Asheville, N.C. 28801
 Phone: 1-828-232-4700
 Fax: 1-828-232-1331
 www.brooksea.com

BROOKS ENGINEERING ASSOCIATES
 Planning • Engineering • Surveying • Environmental Services •

Project No: 543521	RICH MOUNTAIN SUBDIVISION PHASE 1	NORTH CAROLINA
C-5.0	RESIDENTIAL SUBDIVISION	HENDERSON COUNTY
Drawing Title:	OVERALL EC, GRADING, & STORMWATER PLAN	

File Location: L:\2021 Projects\543521 Ripple Falls_Rich Mtn_Due Diligence\Draw\4-Base-543521.dwg

GRADING AND STORMWATER LEGEND

- EXIST. BOUNDARY
EXIST. ADJOINER
EXIST. STREAM
EXIST. STREAM BUFFER
EXIST. RIGHT OF WAY
EXIST. EASEMENT
EXIST. BUILDING SETBACK
EXISTING BUILDING
EXISTING SIDEWALK
EXISTING PAVEMENT
EXIST. CURB
EXIST. MANHOLE
EXIST. SANITARY SEWER
EXIST. SEWER CLEAN OUT
EXIST. WATER LINE
EXIST. WATER METER
EXIST. FIRE HYDRANT
EXIST. WATER VALVE
EXIST. OVERHEAD UTILITIES
EXIST. POWER POLE
EXIST. UNDERGRND UTILITIES
EXIST. STORM DRAIN
EXIST. CURB INLET
EXIST. JUNCTION BOX
EXIST. DROP INLET
EXIST. TELE MANHOLE
EXIST. DROP INLET
EXIST. TRANSFORMER
EXIST. LIGHT POLE
EXIST. MINOR CONTOUR
EXIST. MAJOR CONTOUR
NEW BUILDING
NEW PAVEMENT
NEW HEADWALL
NEW FLARED END SECTION
NEW STORM PIPE
RIP RAP LINED DITCH
NEW MINOR CONTOUR
NEW MAJOR CONTOUR
NEW SPOT GRADE
NEW PROPERTY LINES
NEW RIGHT OF WAY
LIMITS OF DISTURBANCE
NEW WALL (BY OTHERS)

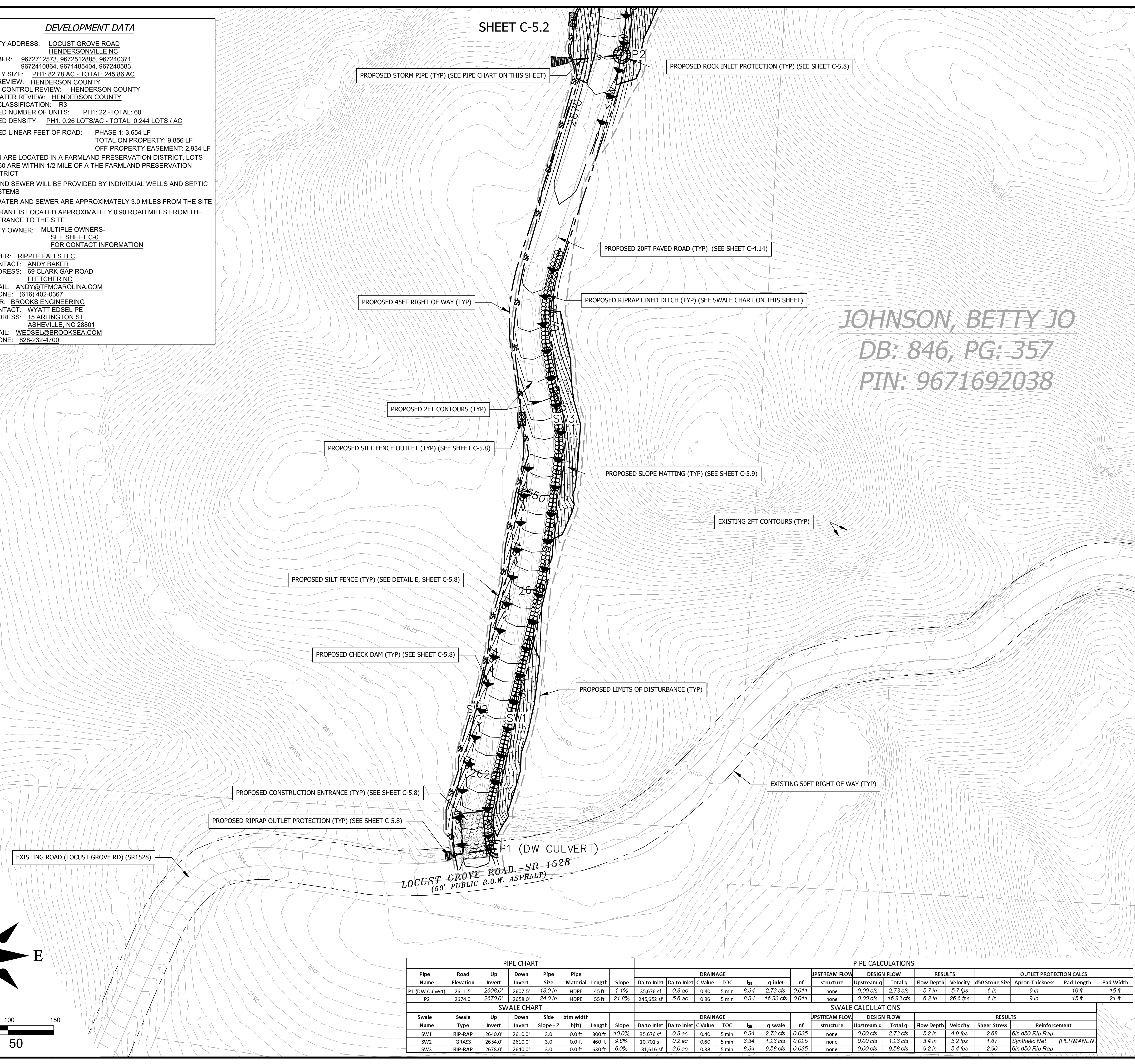
DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD HENDERSONVILLE NC
PIN NUMBER: 9672712573, 9672512885, 967240371, 9672410864, 9671485404, 967240583
PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
ZONING REVIEW: HENDERSON COUNTY
EROSION CONTROL REVIEW: HENDERSON COUNTY
STORMWATER REVIEW: HENDERSON COUNTY
ZONING CLASSIFICATION: R3
PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC
PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
TOTAL ON PROPERTY: 9,856 LF
OFF-PROPERTY EASEMENT: 2,934 LF
LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS 52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION DISTRICT
WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC SYSTEMS
PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE ENTRANCE TO THE SITE
PROPERTY OWNER: MULTIPLE OWNERS- SEE SHEET C-0 FOR CONTACT INFORMATION
DEVELOPER: RIPPLE FALLS LLC
CONTACT: ANDY BAKER
ADDRESS: 69 CLARK GAP ROAD FLETCHER NC
EMAIL: ANDY@TFMCAROLINA.COM
PHONE: (616) 402-0367
ENGINEER: BROOKS ENGINEERING
CONTACT: WYATT EDSSEL PE
ADDRESS: 15 ARLINGTON ST ASHEVILLE, NC 28801
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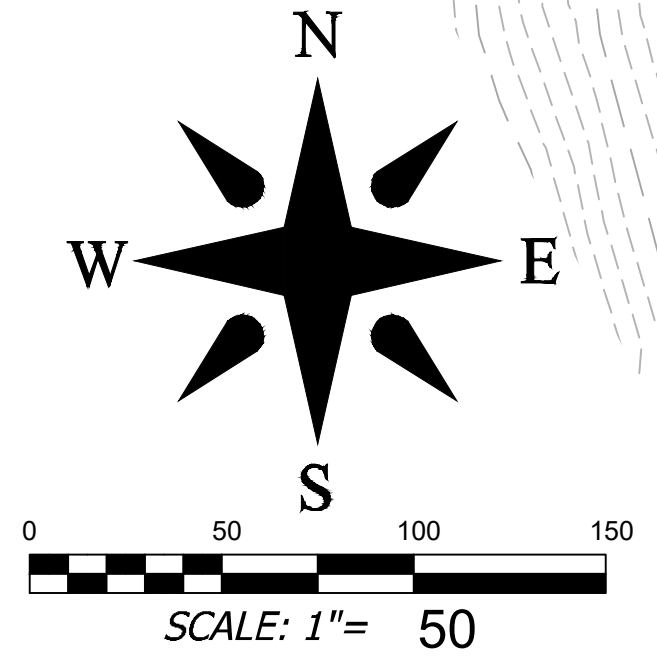
STORM AND EROSION NOTES

- PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
PROJECT DENSITY: PH1: 0.26 LOTS/AC - TOTAL 0.244 LOTS/AC
IMPERVIOUS SUMMARY:
ROADS: PH1: 3.27 AC - TOTAL: 6.14 AC
HOUSES & DRIVES (15,000 SF / LOT): 7.58 AC - 20.66 AC
TOTAL: 10.85 AC (13.11%) - 26.80 AC (10.90%)
EROSION CONTROL NOTES:
1. SEE SHEET C-5.10 FOR STABILIZATION TIME FRAMES.
2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES.
STORMWATER NOTES:
1. ALL STREAMS SHALL HAVE A 30' SETBACK FOR NEW BUILT-UPON AREAS.
2. ALL PIPE SHALL BE DOUBLE-WALL HDPE WITH PROPER STONE BEDDING AND SHALL HAVE A MINIMUM COVER OF 30".
3. ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM DENSITY (STANDARD PROCTOR), SHALL BE PLACED ON A SURFACE CLEAR OF GROWTH AND DEBRIS AND BE PROPERLY BENCHED AND DRAINED.
4. ALL SLOPES GREATER THAN 3:1 AND TALLER THAN 10 FEET SHALL BE SEEDED AND COVERED WITH MATTING AS SHOWN IN THE PLANS.
5. AN APPROVED GRADING PERMIT IS REQUIRED FOR ANY BORROW OR WASTE SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.
*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

SHEET C-5.2



JOHNSON, BETTY JO
DB: 846, PG: 357
PIN: 9671692038



PIPE CHART, SWALE CHART, PIPE CALCULATIONS, SWALE CALCULATIONS tables with columns for Pipe Name, Road Elevation, Invert, Slope, Length, Drainage, and various flow and velocity parameters.

Project No: 543521, RICH MOUNTAIN SUBDIVISION PHASE 1, RESIDENTIAL SUBDIVISION, HENDERSON COUNTY, NORTH CAROLINA, C-5.1, EC, GRADING, & STORMWATER PLAN 1, BROOKS ENGINEERING ASSOCIATES, PRELIMINARY - NOT FOR CONSTRUCTION, Date: 11-02-2021, REVISIONS/SUBMISSIONS: HENDERSON COUNTY TRC, No: 1.

GRADING AND STORMWATER LEGEND

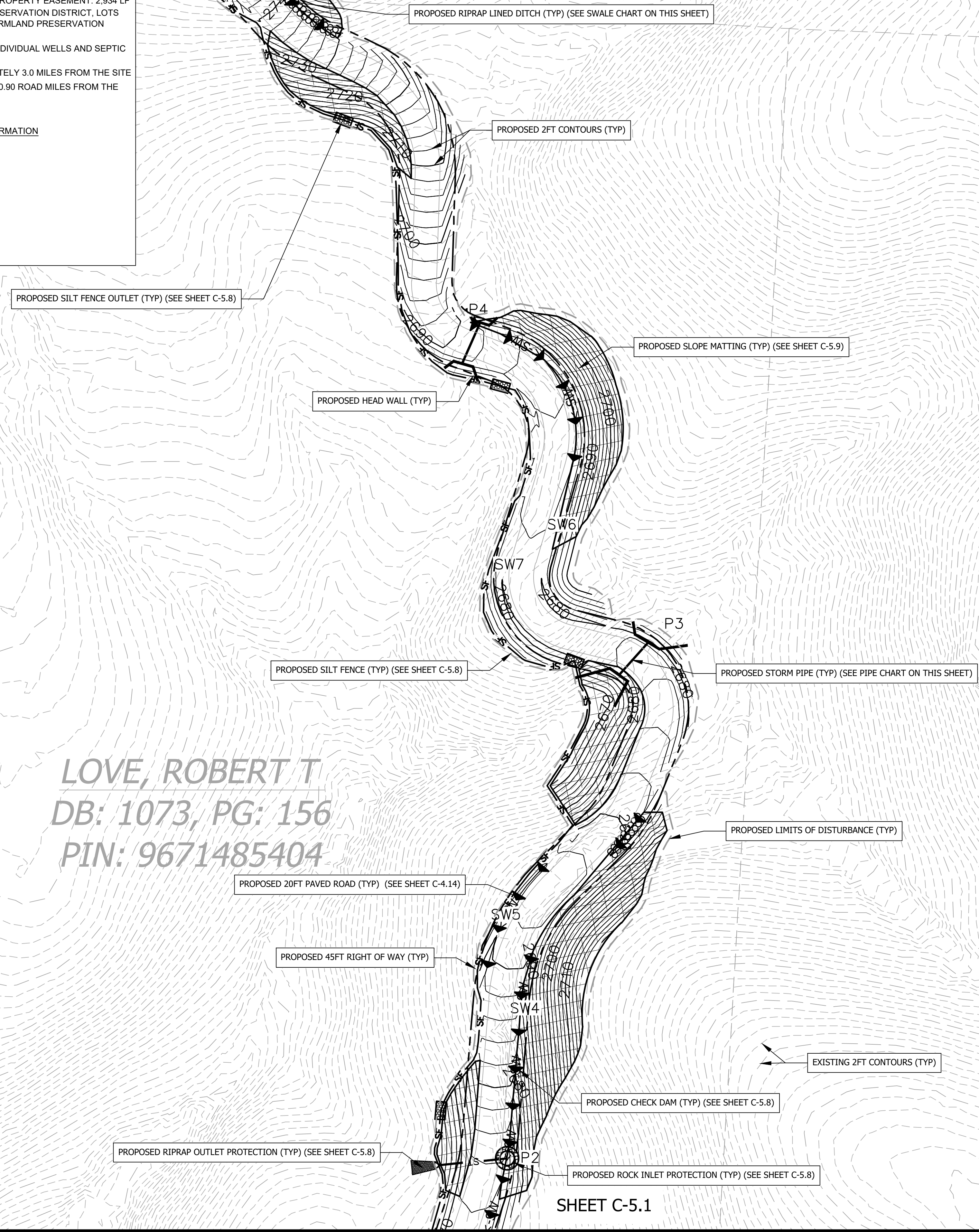
- EXIST. BOUNDARY
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RIP RAP LINED DITCH
NEW MINOR CONTOUR
NEW MAJOR CONTOUR
NEW SPOT GRADE
NEW PROPERTY LINES
NEW RIGHT OF WAY
LIMITS OF DISTURBANCE
NEW WALL (BY OTHERS)

DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD
HENDERSONVILLE NC
PIN NUMBER: 9672712573, 9672512885, 967240371
9672410864, 9671485404, 967240583
PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
ZONING REVIEW: HENDERSON COUNTY
EROSION CONTROL REVIEW: HENDERSON COUNTY
STORMWATER REVIEW: HENDERSON COUNTY
PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC
PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
TOTAL ON PROPERTY: 9,856 LF
OFF-PROPERTY EASEMENT: 2,934 LF
LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS 52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION DISTRICT
WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC SYSTEMS
PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE ENTRANCE TO THE SITE
PROPERTY OWNER: MULTIPLE OWNERS- SEE SHEET C-0 FOR CONTACT INFORMATION
DEVELOPER: RIPPLE FALLS LLC
CONTACT: ANDY BAKER
ADDRESS: 69 CLARK GAP ROAD
FLETCHER NC
EMAIL: ANDY@TFMCAROLINA.COM
PHONE: (616) 402-0367
ENGINEER: BROOKS ENGINEERING
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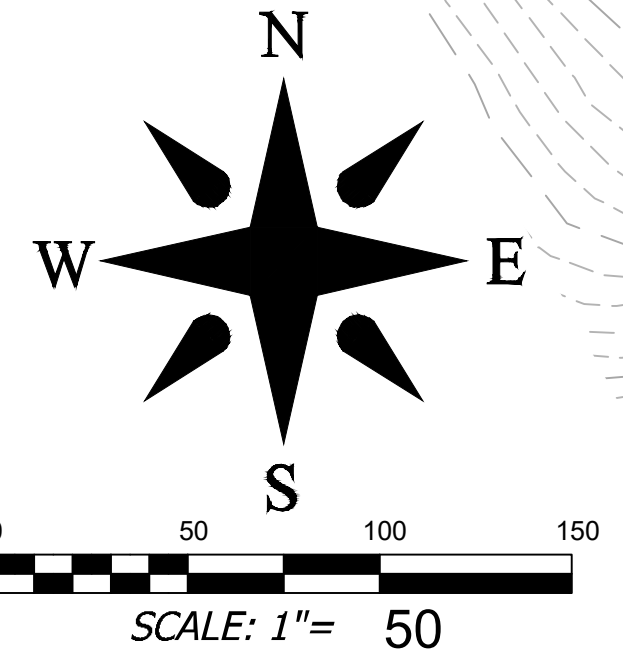
SHEET C-5.3

SWALE CHART, SWALE CALCULATIONS, DRAINAGE, PIPE CHART, PIPE CALCULATIONS tables with columns for Name, Type, Invert, Slope, Length, etc.



STORM AND EROSION NOTES

- PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
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IMPervIOUS SUMMARY:
ROADS: PH1: 3.27 AC - TOTAL: 6.14 AC
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4. ALL SLOPES GREATER THAN 3:1 AND TALLER THAN 10 FEET SHALL BE SEEDED AND COVERED WITH MATTING AS SHOWN IN THE PLANS.
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LOVE, ROBERT T
DB: 1073, PG: 156
PIN: 9671485404

Project No: 543521, C-5.2, RICH MOUNTAIN SUBDIVISION PHASE 1, RESIDENTIAL SUBDIVISION, HENDERSON COUNTY, NORTH CAROLINA. Includes logos for Brooks Engineering Associates and North Carolina Professional Engineer.

GRADING AND STORMWATER LEGEND

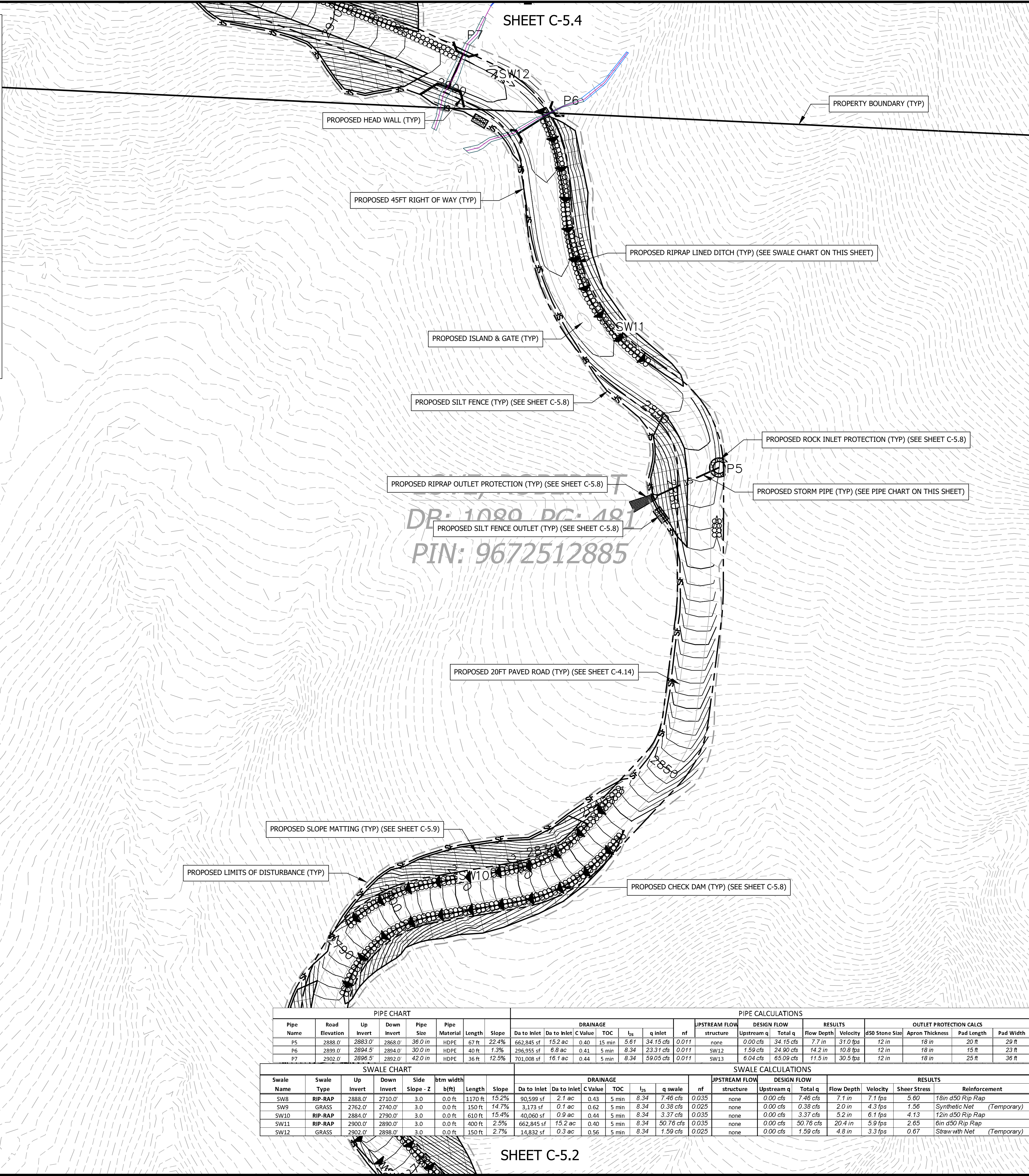
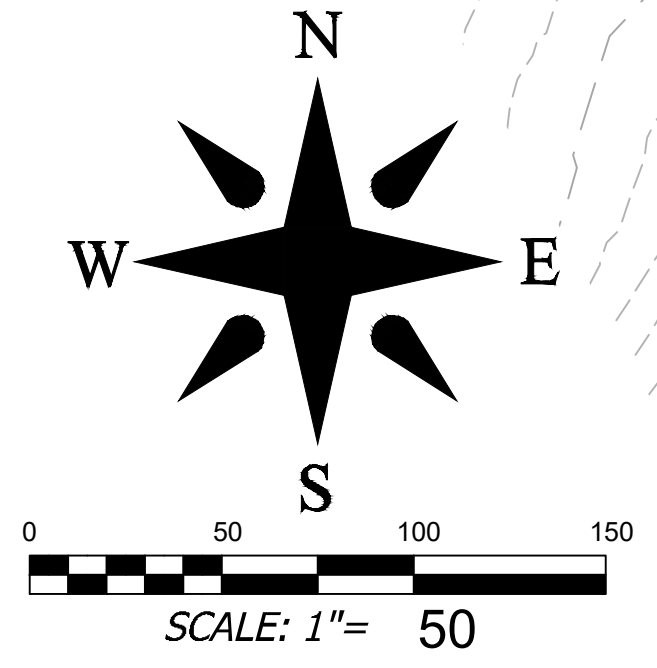
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PIPE CHART										PIPE CALCULATIONS													
Pipe Name	Road Elevation	Up Invert	Down Invert	Pipe Size	Pipe Material	Length	Slope	Da to Inlet	Da to Outlet	C Value	TOC	I _{ss}	q inlet	nf	structure	Upstream q	Total q	Flow Depth	Velocity	d50 Stone Size	Apron Thickness	Pad Length	Pad Width
P5	2888.0	2883.0	2888.0	36.0 in	HDPE	67 ft	22.4%	662,845 sf	15.2 ac	0.40	15 min	5.67	34.15 cfs	0.011	none	0.00 cfs	34.15 cfs	7.7 in	31.0 fps	12 in	18 in	20 ft	29 ft
P6	2890.0	2894.0	2894.0	30.0 in	HDPE	40 ft	1.3%	296,955 sf	6.8 ac	0.41	5 min	8.34	23.31 cfs	0.011	SW12	1.59 cfs	24.90 cfs	14.2 in	10.8 fps	12 in	18 in	15 ft	23 ft
P7	2902.0	2896.0	2892.0	42.0 in	HDPE	36 ft	12.5%	701,008 sf	16.1 ac	0.44	5 min	8.34	59.05 cfs	0.011	SW13	6.04 cfs	65.09 cfs	11.5 in	30.5 fps	12 in	18 in	25 ft	36 ft

SWALE CHART										SWALE CALCULATIONS											
Swale Name	Swale Type	Up Invert	Down Invert	Side Slope - Z	btm width	Length	Slope	Da to Inlet	Da to Outlet	C Value	TOC	I _{ss}	q swale	nf	structure	Upstream q	Total q	Flow Depth	Velocity	Sheer Stress	Reinforcement
SW8	RIP-RAP	2888.0	2710.0	3.0	0.0 ft	1170 ft	15.2%	90,599 sf	2.1 ac	0.43	5 min	8.34	7.46 cfs	0.035	none	0.00 cfs	7.46 cfs	7.1 in	7.1 fps	5.60	18in d50 Rip Rap
SW9	GRASS	2762.0	2740.0	3.0	0.0 ft	150 ft	14.7%	3,173 sf	0.1 ac	0.62	5 min	8.34	0.36 cfs	0.025	none	0.00 cfs	0.36 cfs	2.0 in	4.3 fps	1.56	Synthetic Net (Temporary)
SW10	RIP-RAP	2884.0	2790.0	3.0	0.0 ft	610 ft	15.4%	40,060 sf	0.9 ac	0.44	5 min	8.34	3.37 cfs	0.035	none	0.00 cfs	3.37 cfs	5.2 in	6.1 fps	4.13	12in d50 Rip Rap
SW11	RIP-RAP	2900.0	2890.0	3.0	0.0 ft	1400 ft	2.5%	662,845 sf	15.2 ac	0.40	5 min	8.34	50.76 cfs	0.035	none	0.00 cfs	50.76 cfs	20.4 in	5.9 fps	2.65	6in d50 Rip Rap
SW12	GRASS	2902.0	2898.0	3.0	0.0 ft	150 ft	2.7%	14,832 sf	0.3 ac	0.56	5 min	8.34	1.59 cfs	0.025	none	0.00 cfs	1.59 cfs	4.8 in	3.3 fps	0.67	Straw with Net (Temporary)

SHEET C-5.2

SHEET C-5.4

Date	11-02-2021	REVISIONS/SUBMISSIONS	HENDERSON COUNTY TRC	No.	1			Reviewer: WBE Scale: AS NOTED Designer: WBE Drawn: WBE Checked: WBE Date: 2021-11-02	15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com		RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION HENDERSON COUNTY NORTH CAROLINA	Project No: 543521	Drawing Title: C-5.3 EC, GRADING, & STORMWATER PLAN 3	PRELIMINARY - NOT FOR CONSTRUCTION
	543521		C-5.3											

GRADING AND STORMWATER LEGEND

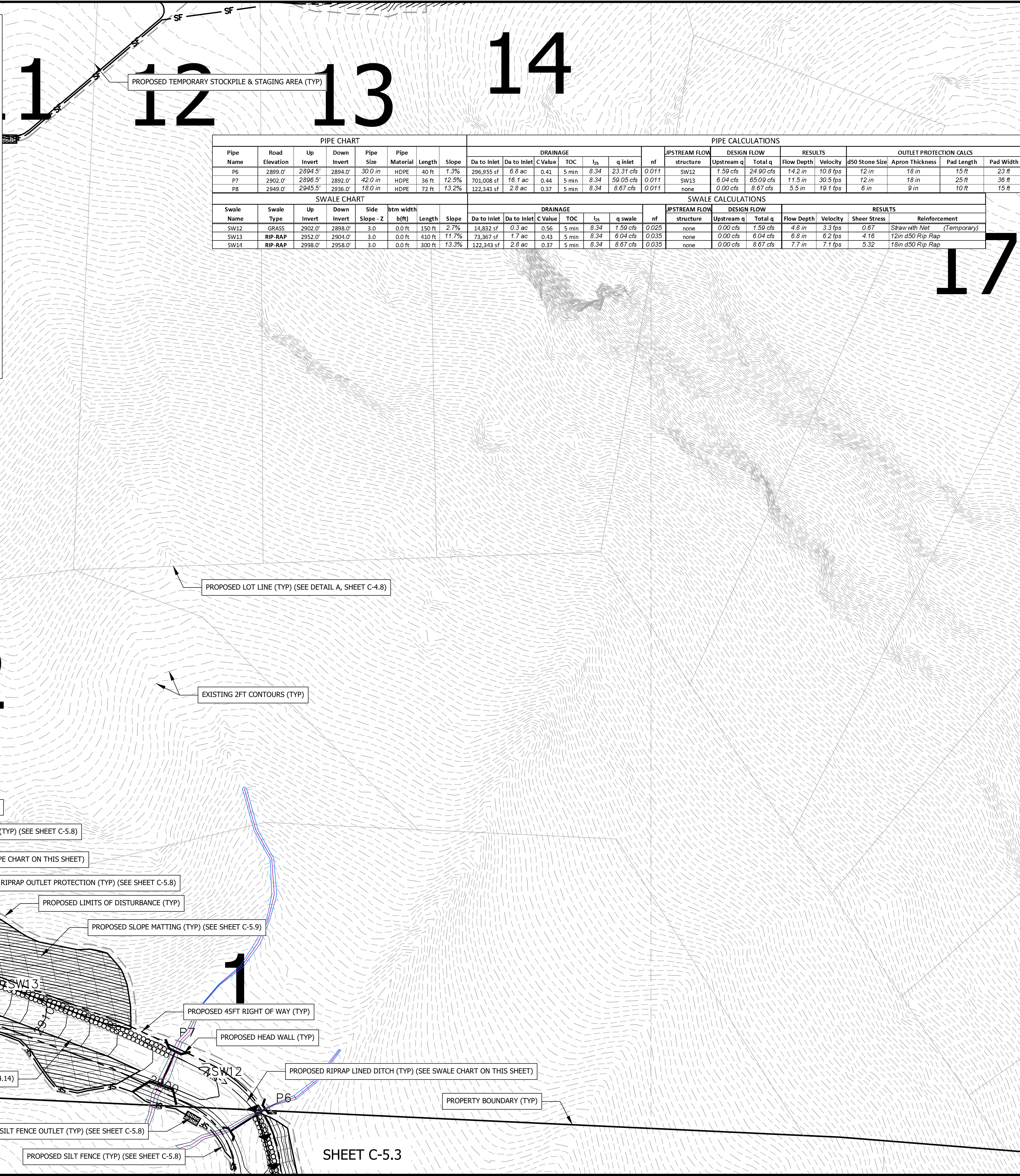
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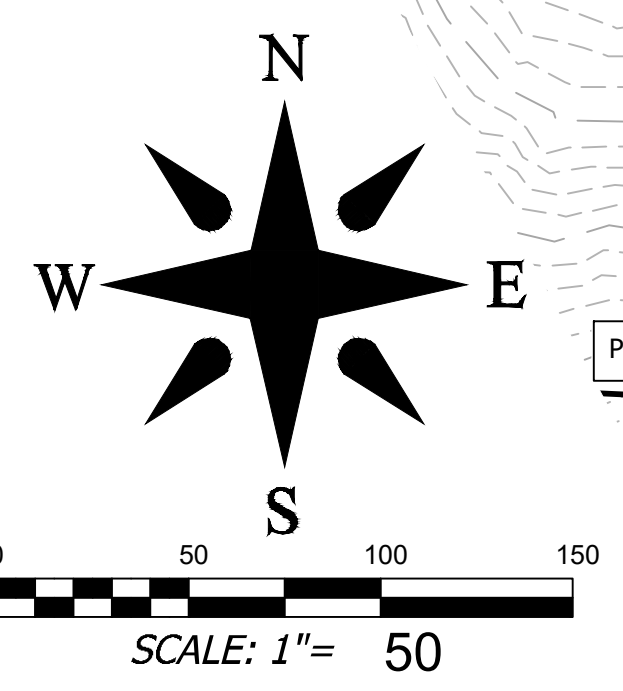


PIPE CHART table with columns: Pipe Name, Road Elevation, Up Invert, Down Invert, Pipe Size, Pipe Material, Length, Slope, Da to Inlet, Da to Inlet, C Value, TOC, Is, q inlet, nf, structure, Upstream q, Total q, Flow Depth, Velocity, d50 Stone Size, Apron Thickness, Pad Length, Pad Width.

PIPE CALCULATIONS table with columns: DESIGN FLOW, RESULTS, OUTLET PROTECTION CALCS.

SWALE CHART table with columns: Swale Name, Swale Type, Up Invert, Down Invert, Side Slope - Z, b(ft), Length, Slope, Da to Inlet, Da to Inlet, C Value, TOC, Is, q swale, nf, structure, Upstream q, Total q, Flow Depth, Velocity, Shear Stress, Reinforcement.

SWALE CALCULATIONS table with columns: DESIGN FLOW, RESULTS.



Project information and title block. Includes: Project No: 543521, Drawing Title: EC, GRADING, & STORMWATER PLAN 4, Project Name: RICH MOUNTAIN SUBDIVISION PHASE 1, RESIDENTIAL SUBDIVISION, HENDERSON COUNTY, NORTH CAROLINA. Includes logos for Brooks Engineering Associates and North Carolina Professional Engineer Wyatt Edsel. Includes a 'REVISIONS/SUBMISSIONS' table and a 'PRELIMINARY - NOT FOR CONSTRUCTION' warning.

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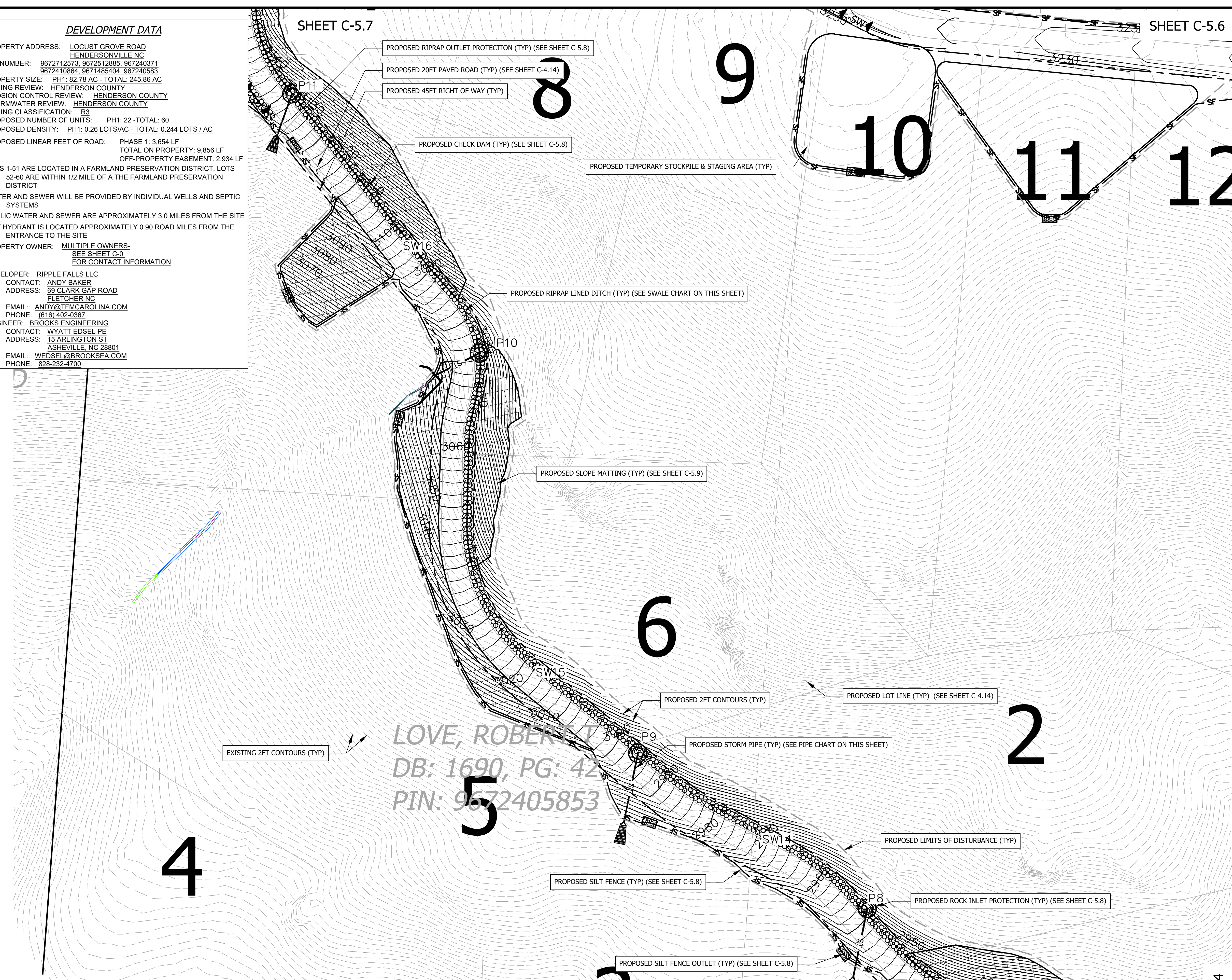
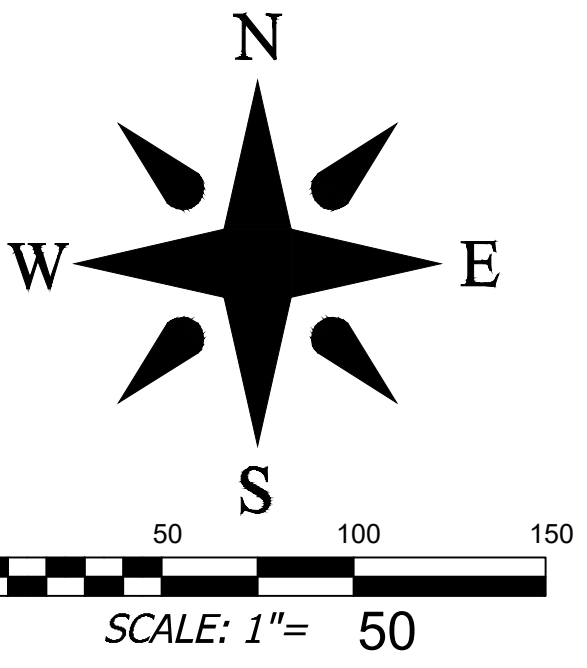
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*ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF DETAILS, SPECIFICATIONS, AND OTHER DEVELOPMENT ORDINANCES OF HENDERSON CO.

SHEET C-5.7

SHEET C-5.6

PIPE CHART table with columns: Pipe Name, Road Elevation, Up Invert, Down Invert, Pipe Size, Pipe Material, Length, Slope, Da to Inlet, Da to Inlet, C Value, TOC, Is, q Inlet, nf, structure, Upstream q, Total q, Flow Depth, Velocity, d50 Stone Size, Apron Thickness, Pad Length, Pad Width

SWALE CHART table with columns: Swale Name, Swale Type, Up Invert, Down Invert, Side Slope - z, btm width b(ft), Length, Slope, Da to Inlet, Da to Inlet, C Value, TOC, Is, q swale, nf, structure, Upstream Flow, DESIGN FLOW, RESULTS, OUTLET PROTECTION CALCS



Project information including: Project No: 543521, SHEET C-5.5, RICH MOUNTAIN SUBDIVISION PHASE 1, RESIDENTIAL SUBDIVISION, HENDERSON COUNTY, NORTH CAROLINA, EC, GRADING, & STORMWATER PLAN 5, Drawing Title: EC, GRADING, & STORMWATER PLAN 5, Reviewers: WBE, AS NOTED, Date: 2021-11-02, Design: WBE, Drawn: WBE, Checked: WBE, 15 Arlington Street, Asheville, N.C. 28801, Phone: 1-828-232-4700, Fax: 1-828-232-1331, www.brooksea.com, BROOKS ENGINEERING ASSOCIATES, Planning • Engineering • Surveying • Environmental Services •, PRELIMINARY - NOT FOR CONSTRUCTION, REVISIONS/SUBMISSIONS: 1, HENDERSON COUNTY TRC, Date: 11-02-2021

GRADING AND STORMWATER LEGEND

- EXIST. BOUNDARY
- EXIST. ADJOINER
- EXIST. STREAM
- EXIST. STREAM BUFFER
- EXIST. RIGHT OF WAY
- EXIST. EASEMENT
- EXIST. BUILDING SETBACK
- EXISTING BUILDING
- EXISTING SIDEWALK
- EXISTING PAVEMENT
- EXIST. CURB
- EXIST. MANHOLE
- EXIST. SANITARY SEWER
- EXIST. SEWER CLEAN OUT
- EXIST. WATER LINE
- EXIST. WATER METER
- EXIST. FIRE HYDRANT
- EXIST. WATER VALVE
- EXIST. OVERHEAD UTILITIES
- EXIST. POWER POLE
- EXIST. UNDERGRND UTILITIES
- EXIST. STORM DRAIN
- EXIST. CURB INLET
- EXIST. JUNCTION BOX
- EXIST. DROP INLET
- EXIST. TELE MANHOLE
- EXIST. DROP INLET
- EXIST. TRANSFORMER
- EXIST. LIGHT POLE
- EXIST. MINOR CONTOUR
- EXIST. MAJOR CONTOUR
- NEW BUILDING
- NEW PAVEMENT
- NEW HEADWALL
- NEW FLARED END SECTION
- NEW STORM PIPE
- RIP RAP LINED DITCH
- NEW MINOR CONTOUR
- NEW MAJOR CONTOUR
- NEW SPOT GRADE
- NEW PROPERTY LINES
- NEW RIGHT OF WAY
- LIMITS OF DISTURBANCE
- NEW WALL (BY OTHERS)

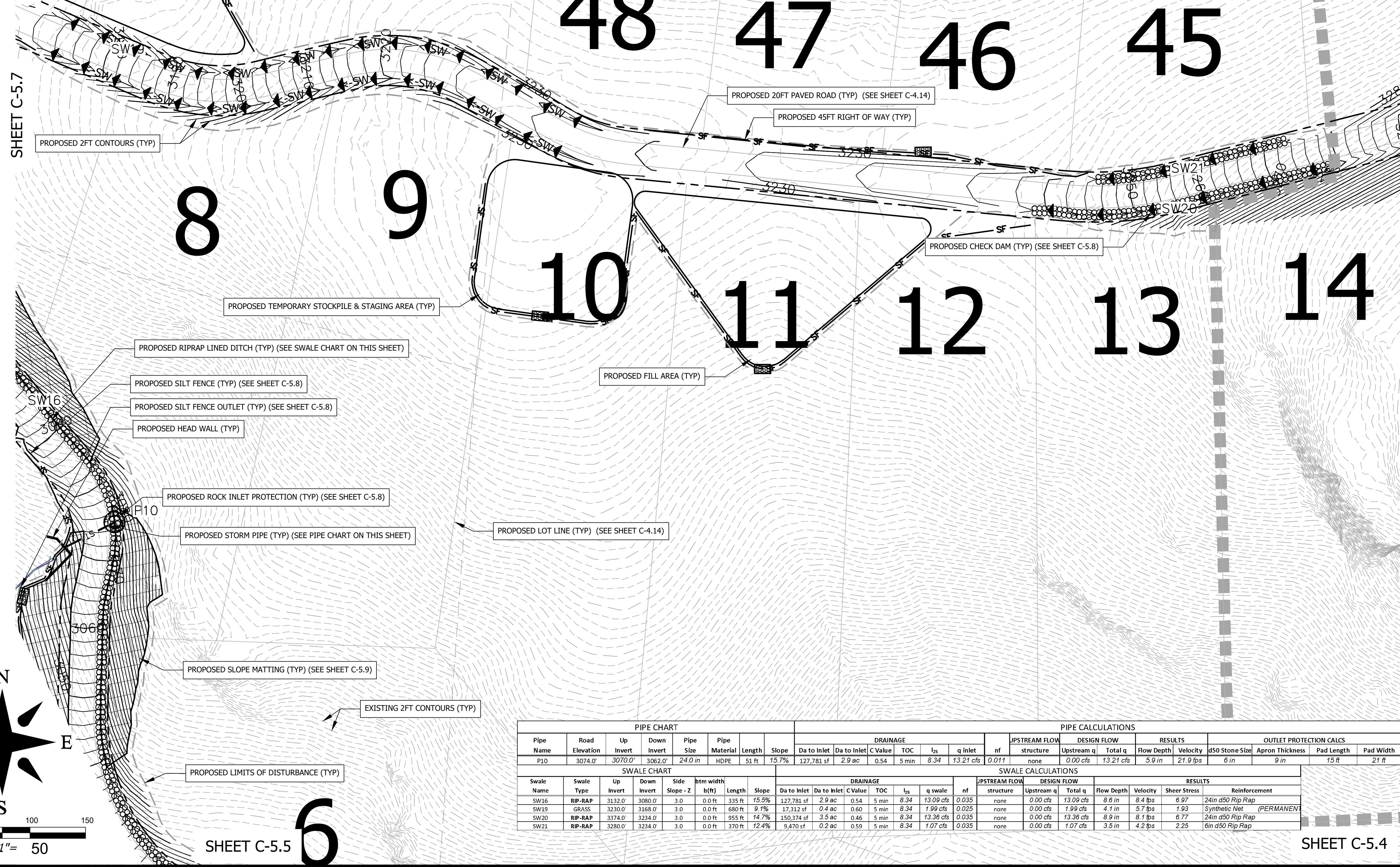
DEVELOPMENT DATA

PROPERTY ADDRESS: LOCUST GROVE ROAD
HENDERSONVILLE NC
PIN NUMBER: 9672712573, 9672512885, 967240371
9672410864, 9671485404, 967240583
PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
ZONING REVIEW: HENDERSON COUNTY
EROSION CONTROL REVIEW: HENDERSON COUNTY
STORMWATER REVIEW: HENDERSON COUNTY
ZONING CLASSIFICATION: R3
PROPOSED NUMBER OF UNITS: PH1: 22 - TOTAL: 60
PROPOSED DENSITY: PH1: 0.26 LOTS/AC - TOTAL: 0.244 LOTS / AC
PROPOSED LINEAR FEET OF ROAD: PHASE 1: 3,654 LF
TOTAL ON PROPERTY: 9,856 LF
OFF-PROPERTY EASEMENT: 2,934 LF
LOTS 1-51 ARE LOCATED IN A FARMLAND PRESERVATION DISTRICT, LOTS
52-60 ARE WITHIN 1/2 MILE OF A THE FARMLAND PRESERVATION
DISTRICT
WATER AND SEWER WILL BE PROVIDED BY INDIVIDUAL WELLS AND SEPTIC
SYSTEMS
PUBLIC WATER AND SEWER ARE APPROXIMATELY 3.0 MILES FROM THE SITE
DRY HYDRANT IS LOCATED APPROXIMATELY 0.90 ROAD MILES FROM THE
ENTRANCE TO THE SITE
PROPERTY OWNER: MULTIPLE OWNERS-
SEE SHEET C-0
FOR CONTACT INFORMATION
DEVELOPER: RIPPLE FALLS LLC
CONTACT: ANDY BAKER
ADDRESS: 69 CLARK GAP ROAD
FLETCHER NC
EMAIL: ANDY@TFMCAROLINA.COM
PHONE: (616) 402-0367
ENGINEER: BROOKS ENGINEERING
CONTACT: WYATT EDSSEL PE
ADDRESS: 15 ARLINGTON ST
ASHEVILLE, NC 28801
EMAIL: WEDESEL@BROOKSEA.COM
PHONE: 828-232-4700

LOVE, ROBERT T
DB: 1089, PG: 481
PIN: 9672512885

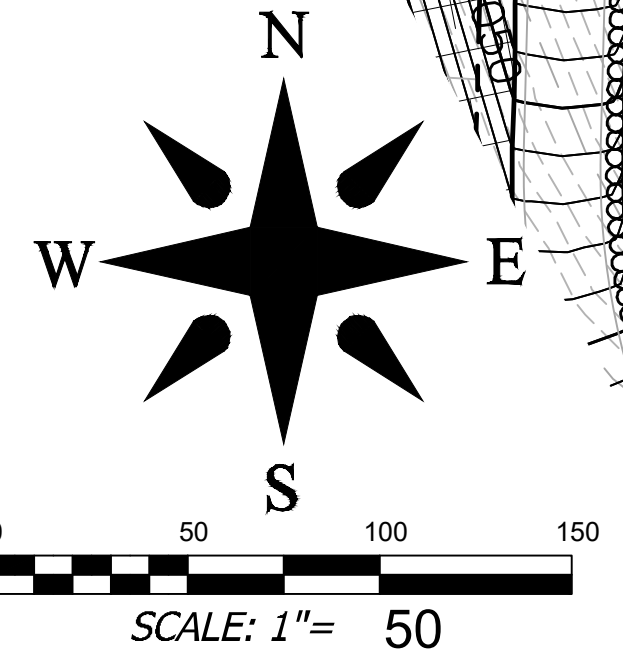
PROPOSED PHASE LINE (TYP)

SHEET C-5.7



STORM AND EROSION NOTES

- PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
PROPERTY STEEPER THAN 60%: 16.76 AC (6.82%)
PROJECT DENSITY: PH1: 0.26 LOTS/AC - TOTAL 0.244 LOTS/AC
IMPERVIOUS SUMMARY:
ROADS: PH1: 3.27 AC - TOTAL: 6.14 AC
HOUSES & DRIVES (15,000 SF / LOT): 7.58 AC - 20.66 AC
TOTAL: 10.85 AC (13.11%) - 26.80 AC (10.90%)
- EROSION CONTROL NOTES:
1. SEE SHEET C-5.10 FOR STABILIZATION TIME FRAMES.
2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES.
- STORMWATER NOTES:
1. ALL STREAMS SHALL HAVE A 30' SETBACK FOR NEW BUILT-UPON AREAS.
2. ALL PIPE SHALL BE DOUBLE-WALL HDPE WITH PROPER STONE BEDDING AND SHALL HAVE A MINIMUM COVER OF 30".
3. ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM DENSITY (STANDARD PROCTOR), SHALL BE PLACED ON A SURFACE CLEAR OF GROWTH AND DEBRIS AND BE PROPERLY BENCHED AND DRAINED.
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PIPE CHART										PIPE CALCULATIONS													
Pipe Name	Road	Up Elevation	Down Invert	Pipe Size	Pipe Material	Length	Slope	Da to Inlet	Da to Inlet	C Value	TOC	ls	q inlet	nf	UPSTREAM FLOW	DESIGN FLOW	RESULTS	OUTLET PROTECTION CALCS					
P10		3074.0'	3070.0'	24.0 in	HDPE	51 ft	15.7%	127,781 sf	2.9 ac	0.54	5 min	8.34	13.21 cfs	0.011	structure	Upstream q	Total q	Flow Depth	Velocity	d50 Stone Size	Apron Thickness	Pad Length	Pad Width
															none	0.00 cfs	13.21 cfs	5.9 in	21.9 fps	6 in	9 in	15 ft	21 ft

SWALE CHART										SWALE CALCULATIONS														
Swale Name	Swale Type	Up Invert	Down Invert	Slope - Z	b(h) ft	Length	Slope	Da to Inlet	Da to Inlet	C Value	TOC	ls	q swale	nf	UPSTREAM FLOW	DESIGN FLOW	RESULTS	REINFORCEMENT						
SW16	RIP-RAP	3132.0	3080.0	3.0	0.0 ft	335 ft	15.6%	127,781 sf	2.9 ac	0.54	5 min	8.34	13.09 cfs	0.035	none	0.00 cfs	13.09 cfs	8.6 in	8.4 fps	6.97	24in d50 Rip Rap			
SW19	GRASS	3230.0	3168.0	3.0	0.0 ft	680 ft	9.1%	17,312 sf	0.4 ac	0.60	5 min	8.34	1.99 cfs	0.025	none	0.00 cfs	1.99 cfs	4.1 in	5.7 fps	1.93	Synthetic Mat (PERMANENT)			
SW20	RIP-RAP	3374.0	3234.0	3.0	0.0 ft	955 ft	14.7%	150,374 sf	3.5 ac	0.46	5 min	8.34	13.36 cfs	0.035	none	0.00 cfs	13.36 cfs	8.9 in	8.1 fps	6.77	24in d50 Rip Rap			
SW21	RIP-RAP	3280.0	3234.0	3.0	0.0 ft	370 ft	12.4%	9,470 sf	0.2 ac	0.59	5 min	8.34	1.07 cfs	0.035	none	0.00 cfs	1.07 cfs	3.5 in	4.2 fps	2.25	6in d50 Rip Rap			

SHEET C-5.5

SHEET C-5.4

Project No: 543521
Project Name: RICH MOUNTAIN SUBDIVISION PHASE 1
RESIDENTIAL SUBDIVISION
HENDERSON COUNTY, NORTH CAROLINA
Drawing Title: EC, GRADING, & STORMWATER PLAN 6
Date: 11-02-2021
REVISIONS/SUBMISSIONS: HENDERSON COUNTY TRC
No. 1
Design: WBE
Drawn: WBE
Checked: WBE
Scale: AS NOTED
Date: 2021-11-02
15 Arlington Street
Asheville, N.C. 28801
Phone: 1-828-232-4700
Fax: 1-828-232-1331
www.brooksea.com
BROOKS ENGINEERING ASSOCIATES
Planning • Engineering • Surveying • Environmental Services •
PRELIMINARY - NOT FOR CONSTRUCTION
Revision/Submission number with a triangle indicates changes made on this sheet.

GRADING AND STORMWATER LEGEND

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NEW SPOT GRADE
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LIMITS OF DISTURBANCE
NEW WALL (BY OTHERS)

DEVELOPMENT DATA

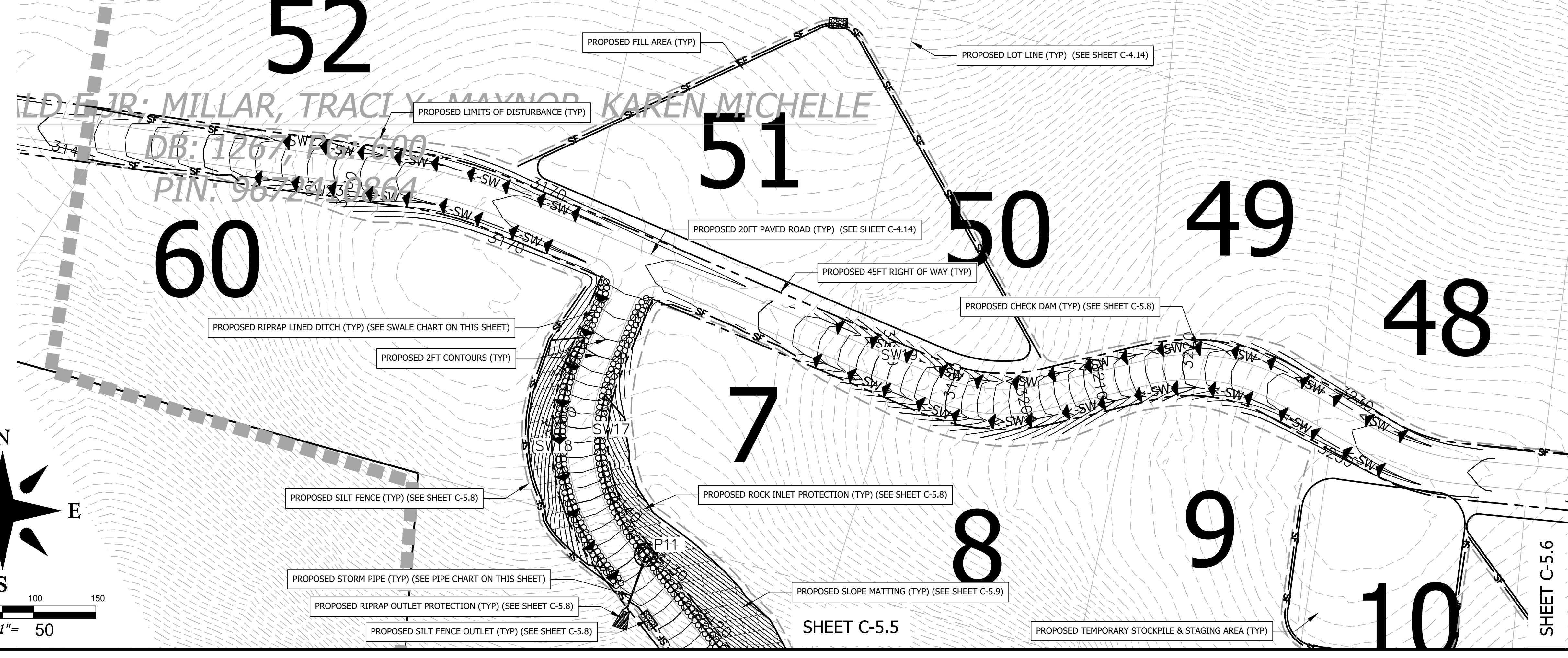
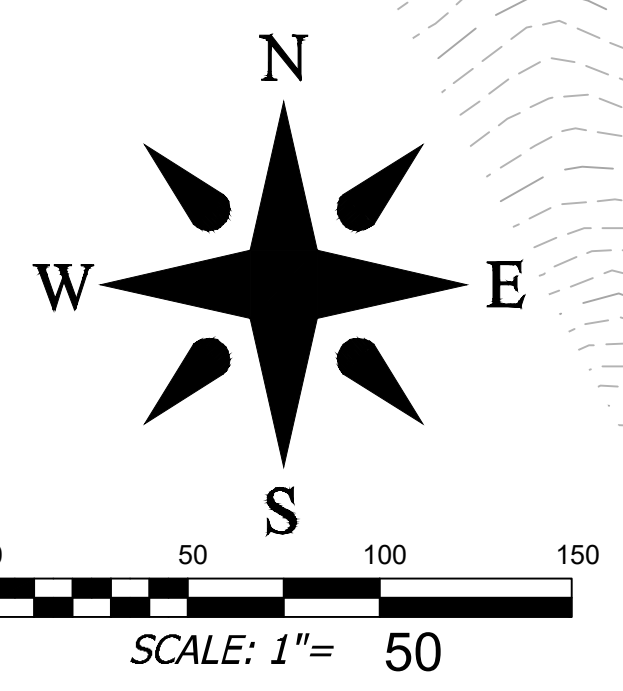
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EMAIL: WEDESSEL@BROOKSEA.COM
PHONE: 828-232-4700

MILLAR, TRACI Y; MAYNOR, KAREN MICHELLE
: 1415, PG: 357
N: 9672420371

PIPE CHART and SWALE CHART tables with columns for Pipe Name, Road Elevation, Up Invert, Down Invert, Pipe Size, Pipe Material, Length, Slope, Drainage, and Results.

STORM AND EROSION NOTES

- PROPERTY SIZE: PH1: 82.78 AC - TOTAL: 245.86 AC
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Project information including date (11-02-2021), revision history, design and review signatures, project title (RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION), and sheet title (EC, GRADING, & STORMWATER PLAN 7).

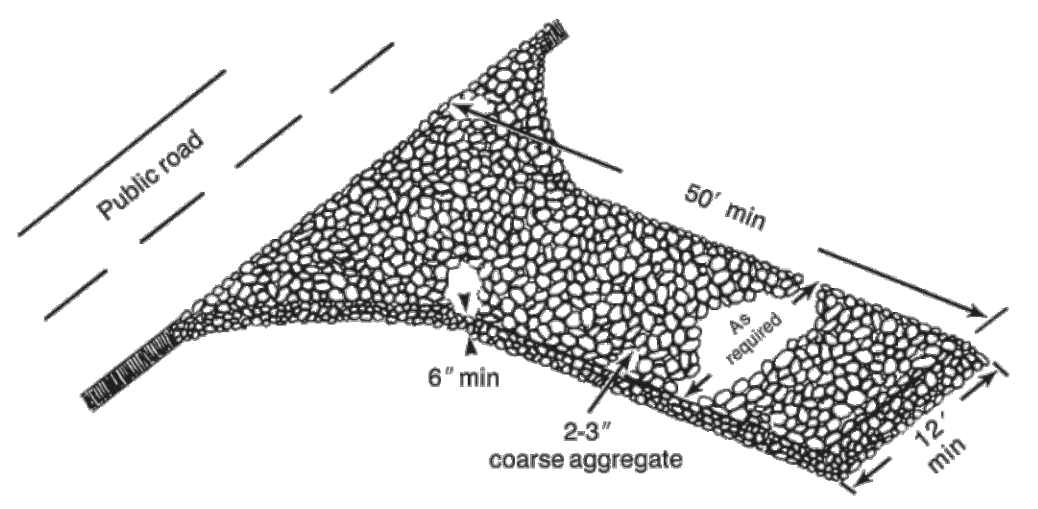


Figure 6.69a Gravel entrance/exist keeps sediment from leaving the construction site (modified from Va SWCD).

Washing—If conditions at the site are such that most of the mud and sediment are not removed by vehicles traveling over the gravel, the tires should be washed. Washing should be done on an area stabilized with crushed stone that drains into a sediment trap or other suitable disposal area. A wash rack may also be used to make washing more convenient and effective.

- Construction Specifications**
1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.
 2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.
 3. Provide drainage to carry water to a sediment trap or other suitable outlet.
 4. Use geotextile fabrics because they improve stability of the foundation in locations subject to seepage or high water table.

Maintenance Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways.

A CONSTRUCTION ENTRANCE/EXIT - NCDEQ 6.06
SCALE= NTS

Construction Specifications

- MATERIALS**
1. Use a synthetic filter fabric of at least 95% by weight of polyolefins or polyester, which is certified by the manufacturer or supplier as conforming to the requirements in ASTM D 6461, which is shown in part in Table 6.62b.
 2. Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120° F.
 3. Ensure that posts for sediment fences are 1.25 lb/linear ft minimum steel with a minimum length of 3 feet. Make sure that steel posts have projections to facilitate fastening the fabric.
 4. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

Table 6.62b Specifications For Sediment Fence Fabric

Temporary Silt Fence Material Property Requirements				
Test Method	Units	Supported ¹ Silt Fence	Un-Supported ² Silt Fence	Type of Value
Grab Strength	ASTM D 4632	N (lbs)		
Machine Direction		400 (90)	550 (90)	MARV
X-Machine Direction		400 (90)	450 (90)	MARV
Permeability ³	ASTM D 4491	sec-1	0.05 (90)	MARV
Apparent Opening Size ⁴	ASTM D 4751	mm (US Sieve #)	0.60 (30)	Max. ARV ⁵
Ultraviolet Stability	ASTM D 4355	% Retained Strength	70% after 500h of exposure	70% after 500h of exposure

¹ Silt Fence support shall consist of 14 gauge steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated polymer mesh of equivalent strength.
² These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotechnical tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.
³ As measured in accordance with Test Method D 4632.

- CONSTRUCTION**
1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
 2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure.)
 3. Construct the filter fabric on a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
 4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have minimum 50 pound tensile strength.
 5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Support posts should be driven securely into the ground a minimum of 24 inches.
 6. Extra strength filter fabric with 6 feet post spacing does not require wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have minimum 50 pound tensile strength.
 7. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier (Figure 6.62a).
 8. Place 12 inches of the fabric along the bottom and side of the trench.
 9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
 10. Do not attach filter fabric to existing trees.

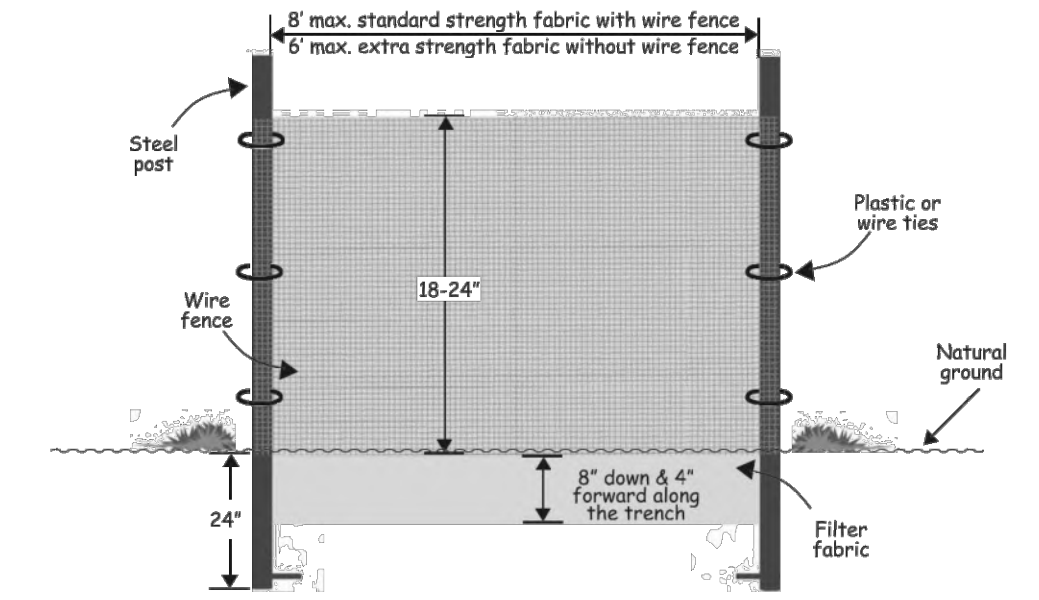


Figure 6.62a Installation detail of a sediment fence.

Maintenance Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.

Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly.

Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanout.

Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

B SILT FENCE - NCDEQ 6.62
SCALE= NTS

- Construction Specifications**
1. Place stone to the lines and dimensions shown in the plan on a filter fabric foundation.
 2. Keep the center stone section at least 9 inches below natural ground level where the dam abuts the channel banks.
 3. Extend stone at least 1.5 feet beyond the ditch bank (Figure 6.83b) to keep water from cutting around the ends of the check dam.
 4. Set spacing between dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper dam.
 5. Protect the channel after the lowest check dam from heavy flow that could cause erosion.
 6. Make sure that the channel reach above the most upstream dam is stable.
 7. Ensure that other areas of the channel, such as culvert entrances below the check dams, are not subject to damage or blockage from displaced stones.

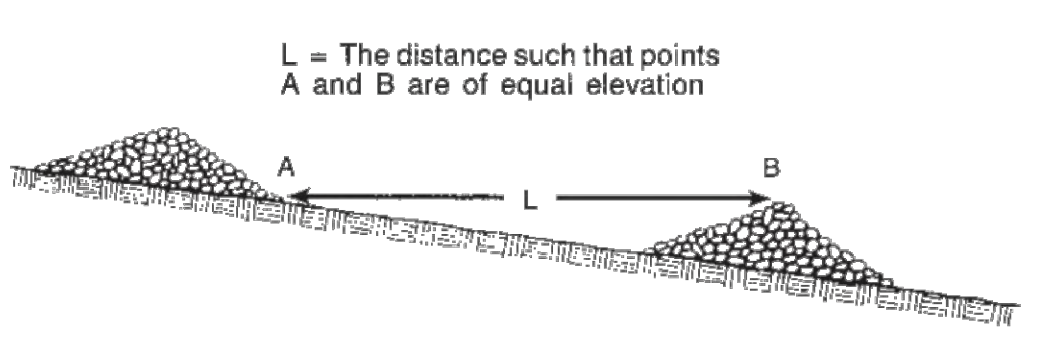
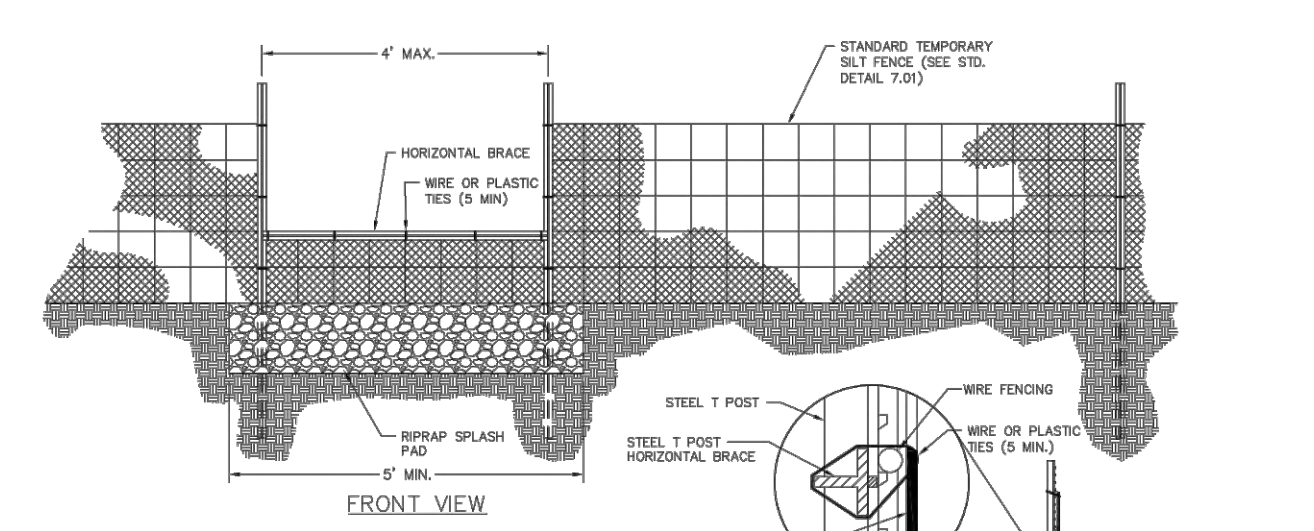


Figure 6.83a Space check dams in a channel so that the crest of downstream dam is at elevation of the toe of upstream dam.

D TEMPORARY CHECK DAM SPACING SPECIFICATION
SCALE= NTS



NOTES:

1. SET FABRIC HEIGHT AT 1 FT MAXIMUM BETWEEN SUPPORT POSTS SPACED NO MORE THAN 4 FT APART.
2. SET OUTLET ELEVATION SO THAT WATER DEPTH CANNOT EXCEED 1.5 FT AT THE LOWEST POINT ALONG THE FENCELINE.
3. INSTALL A HORIZONTAL BRACE BETWEEN THE SUPPORT POSTS TO SERVE AS AN OVERFLOW WEIR AND TO SUPPORT TOP OF FABRIC.
4. PROVIDE A RIPRAP SPLASH PAD AS SHOWN ABOVE. EXCAVATE FOUNDATION FOR THE SPLASH PAD A MINIMUM 3 FT WIDE, 1 FT DEEP, AND 9 FT LONG ON LEVEL GROUND. THE FINISHED SURFACE OF THE RIPRAP SHOULD BLEND WITH SURROUNDING AREA, ALLOWING NO OVERALL AREA AROUND THE PAD MUST BE STABLE.
5. USE A V-TRENCH IN THE LINE OF THE FENCE AS SHOWN ABOVE.
6. AVOID JOINTS, PARTICULARLY AT LOW POINTS IN THE FENCE LINE, WHERE JOINTS ARE NECESSARY, FASTEN FABRIC SECURELY TO SUPPORT POSTS AND OVERLAP TO THE NEXT POST.
7. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA ON UPSLOPE SIDE OF FENCE WHERE SEDIMENTATION IS EXPECTED. PROVIDE GOOD ACCESS TO DEPOSITION AREAS FOR CLEANOUT AND MAINTENANCE.

E SILT FENCE REINFORCED OUTLET - NCDEQ 6.62
SCALE= NTS

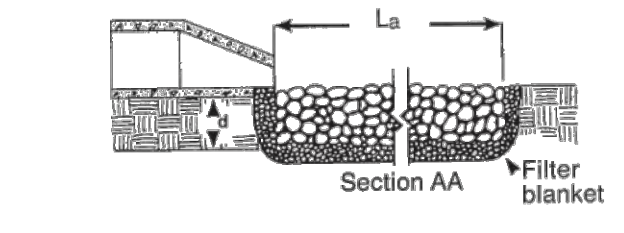
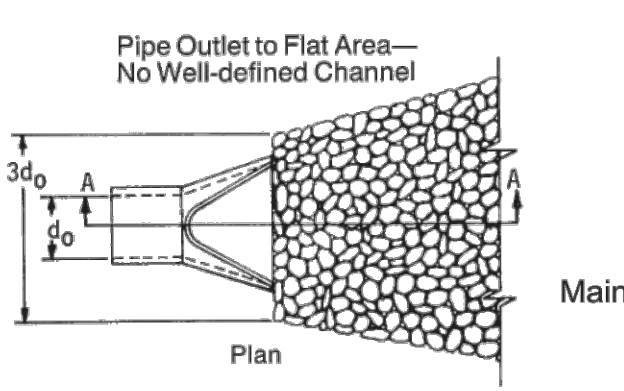


Figure 6.41c Riprap outlet protection (modified from Va SWCD).

F OUTLET PROTECTION - NCDEQ 6.41
SCALE= NTS

- Construction Specifications**
1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
 2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
 3. Filter cloth, when used, must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of filter cloth over the damaged area. All connecting joints should overlap so the top layer is above the downstream layer a minimum of 1 foot. If the damage is extensive, replace the entire filter cloth.
 4. Riprap may be placed by equipment, but take care to avoid damaging the filter.
 5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter.
 6. Riprap may be field stone or rough quarry stone. It should be hard, angular, highly weather-resistant and well graded.
 7. Construct the apron on zero grade with no overflow at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
 8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
 9. Immediately after construction, stabilize all disturbed areas with vegetation (Practices 6.10, Temporary Seeding, and 6.11, Permanent Seeding).

Maintenance Inspect riprap outlet structures weekly and after significant (1/2 inch or greater) rainfall events to see if any erosion around or below the riprap has taken place, or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

- Notes**
1. L_r is the length of the riprap apron.
 2. d = 1.5 times the maximum stone diameter but not less than 6".
 3. In a well-defined channel extend the apron up the channel banks to an elevation of 6" above the maximum tailwater depth or to the top of the bank, whichever is less.
 4. A filter blanket or filter fabric should be installed between the riprap and soil foundation.
- OUTLET PROTECTION DIMENSIONS ON SHEET C-5.1.

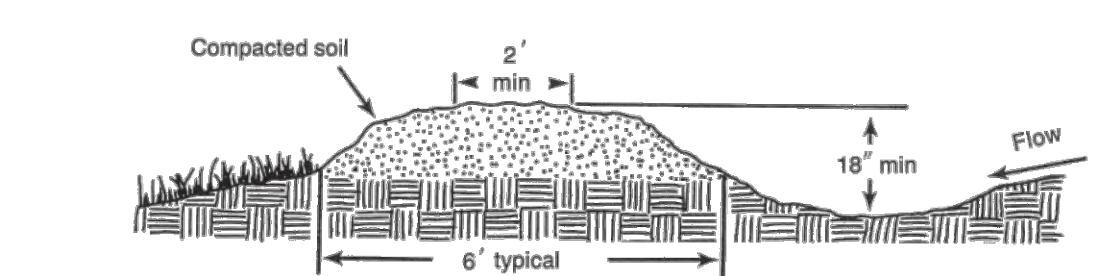


Figure 6.20a Temporary earthen diversion dike.

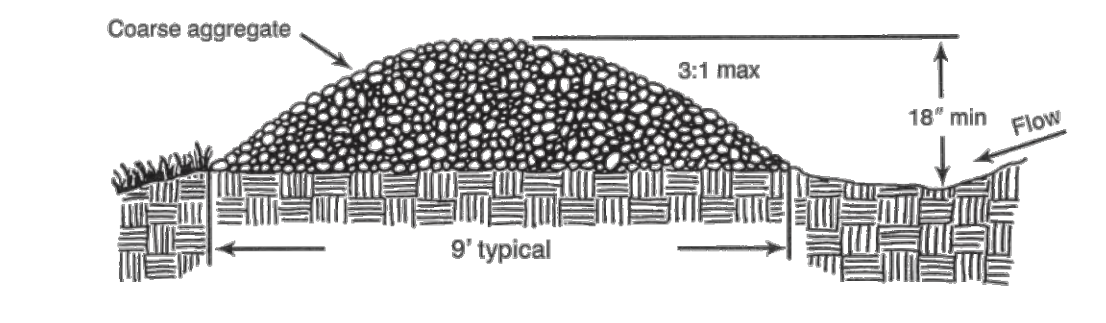
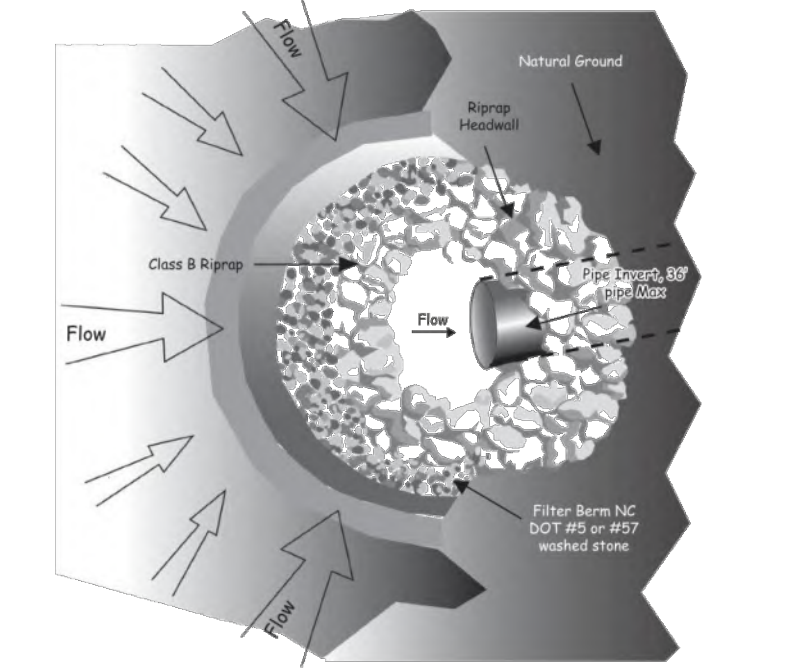


Figure 6.20b Temporary gravel diversion dike for vehicle crossing (modified from Va SWCD).

- Construction Specifications**
1. Remove and properly dispose of all trees, brush, stumps, and other objectionable material.
 2. Ensure that the minimum constructed cross section meets all design requirements.
 3. Ensure that the top of the dike is not lower at any point than the design elevation plus the specified settlement.
 4. Provide sufficient room around diversions to permit machine regrading and cleanout.
 5. Vegetate the ridge immediately after construction, unless it will remain in place less than 30 working days.

Maintenance Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion ridge. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, remove the ridge and the channel to blend with the natural ground level and appropriately stabilize it.

C TEMPORARY CHECK DAM - NCDEQ 6.83
SCALE= NTS



- Construction Specifications**
1. Clear the area of all debris that might hinder excavation and disposal of apron.
 2. Install the Class B or Class I riprap in a semi-circle around the pipe inlet. The stones should be built up higher on each end where it ties into the embankment. The minimum crest width of the riprap should be 3 feet, with a minimum bottom width of 11 feet. The minimum height should be 2 feet, but also 1 foot lower than the shoulder of the embankment or diversion.
 3. A 1 foot thick layer of NC DOT #5 or #57 stone should be placed on the outside slope of the riprap.
 4. The sediment storage area should be excavated around the outside of the stone horseshoe 18 inches below natural grade.
 5. When the contributing drainage area has been stabilized, fill depression and establish final grading elevations, compact area properly, and stabilize with ground cover.

Maintenance Inspect rock pipe inlet protection at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Remove sediment and restore the sediment storage area to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. Place the sediment that is removed in the designated disposal area and replace the contaminated part of the gravel facing.

Check the structure for damage. Any riprap displaced from the stone horseshoe must be replaced immediately.

After all the sediment-producing areas have been permanently stabilized, remove the structure and all the unstable sediment. Smooth the area to blend with the adjoining areas and provide permanent ground cover (Surface Stabilization).

G ROCK PIPE INLET PROTECTION - NCDEQ 6.55
SCALE= NTS

Date	11-02-2021
REVISIONS/SUBMISSIONS	HENDERSON COUNTY TRC
No.	1

Professional Engineer Seal: WATT BENTLEY ESSEL, NORTH CAROLINA PROFESSIONAL ENGINEER, No. 045408.

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Reviewed: WBE, WBE, AS NOTED, 2021-11-02

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BROOKS ENGINEERING ASSOCIATES

Planning • Engineering • Surveying • Environmental Services •

Project No: 543521

RICH MOUNTAIN SUBDIVISION PHASE 1

RESIDENTIAL SUBDIVISION

HENDERSON COUNTY

C-5.8

Drawing Title: EROSION CONTROL DETAILS

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

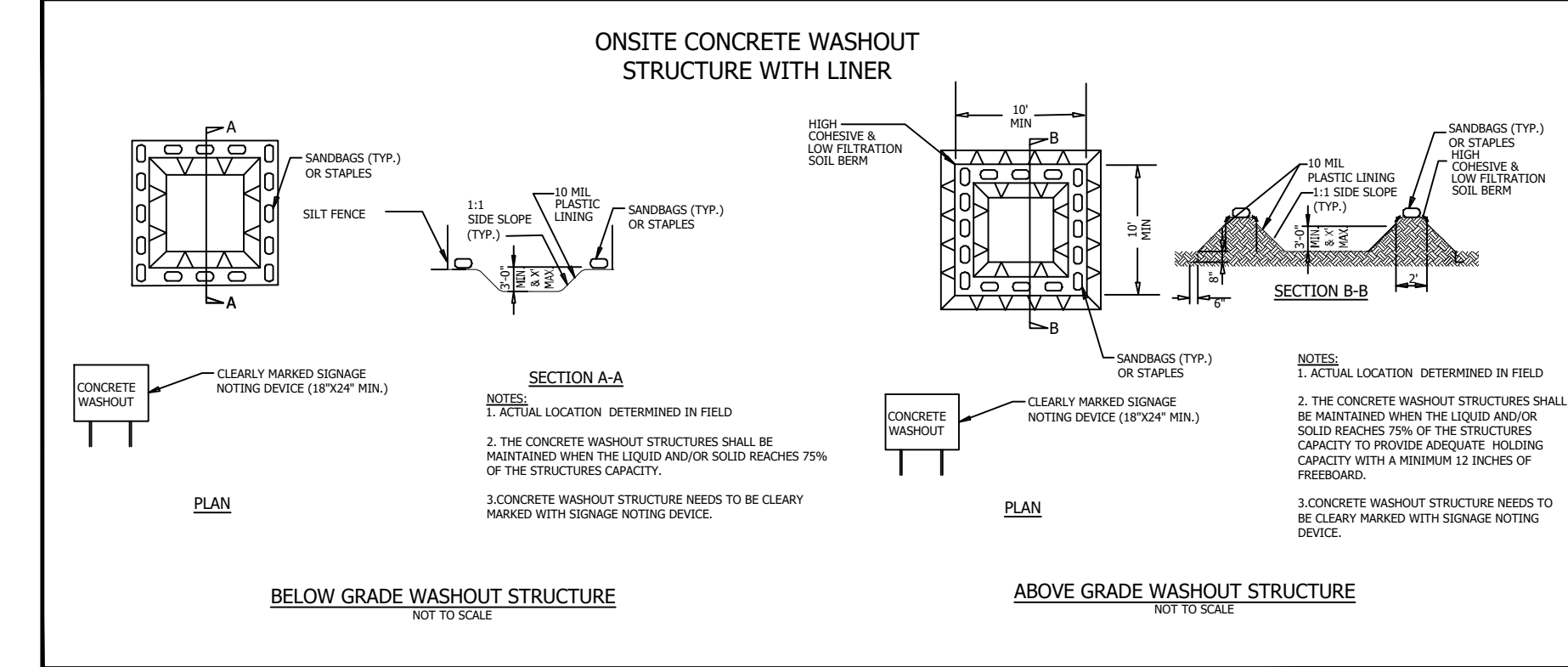
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

Project No: 543521	C-5.10	Drawing Title: NCG01 DETAILS 1	RICH MOUNTAIN SUBDIVISION PHASE 1 RESIDENTIAL SUBDIVISION NORTH CAROLINA HENDERSON COUNTY		PRELIMINARY - NOT FOR CONSTRUCTION
Revisions/Submissions: 1. HENDERSON COUNTY TRC	Date: 11-02-2021	Reviewer: WBE Designer: WBE Scale: AS NOTED Drawn: WBE Checked: WBE Date: 2021-11-02 15 Arlington Street Asheville, N.C. 28801 Phone: 1-828-232-4700 Fax: 1-828-232-1331 www.brooksea.com			

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Table with 3 columns: Inspect, Frequency (during normal business hours), and Inspection records must include: (1) Rain gauge maintained in good working order, (2) E&SC Measures and within 24 hours of a rain event > 1.0 inch in 24 hours, (3) Stormwater discharge outfalls (SDCs), (4) Perimeter of site, (5) Streams or wetlands onsite or offsite (where accessible), (6) Ground stabilization measures.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Table with 2 columns: Item to Document, Documentation Requirements. (a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan. (b) A phase of grading has been completed. (c) Ground cover is located and installed in accordance with the approved E&SC plan. (d) The maintenance and repair requirements for all E&SC measures have been performed. (e) Corrective actions have been taken to E&SC measures.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).
(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

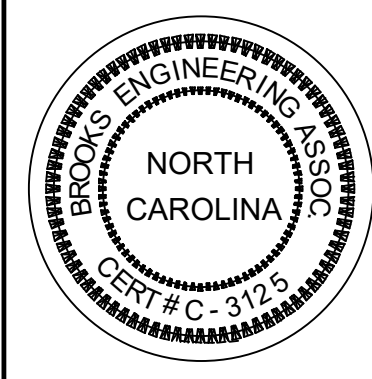
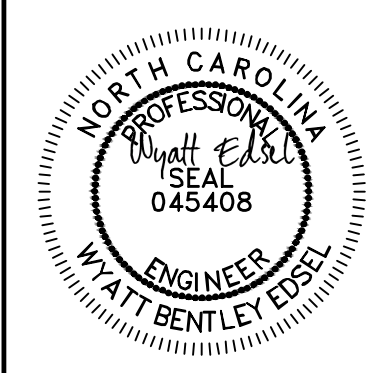
Table with 2 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements. (a) Visible sediment deposition in a stream or wetland, (b) Oil spills and release of hazardous substances per Item 1(b)-(c) above, (c) Anticipated bypasses [40 CFR 122.41(m)(3)], (d) Unanticipated bypasses [40 CFR 122.41(m)(3)], (e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(1)(7)1].

NORTH CAROLINA
Environmental Quality

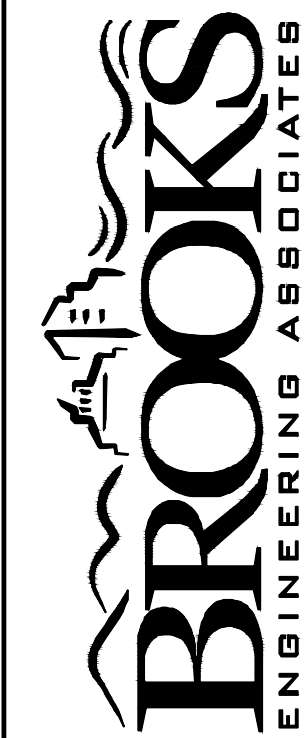
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

Table with 2 columns: No., REVISIONS/SUBMISSIONS. HENDERSON COUNTY TRC, 11-02-2021



Reviewed: WBE, Scale: AS NOTED, Date: 2021-11-02, 15 Arlington Street, Asheville, N.C. 28801, Phone: 1-828-232-4700, Fax: 1-828-232-1331, www.brookssea.com



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RICH MOUNTAIN SUBDIVISION PHASE 1, RESIDENTIAL SUBDIVISION, HENDERSON COUNTY, NORTH CAROLINA

Project No: 543521

C-5.11

Drawing Title: NCG01 DETAILS 2