

Director of  
Planning and Inspections  
MEREDITH GUNS

Building Inspector  
MARTY SHAW  
CHARLES THUMAN

Code Enforcement Officer  
JORDAN BLYTHE



Assistant Director of  
Planning and Inspections  
CAMERON RAY

Senior Planner  
RYAN LANG

Zoning Administrator  
DONNA ELLIOTT

**THE TOWN OF KILL DEVIL HILLS**  
NORTH CAROLINA

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**PLANNING DEPARTMENT**

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October 17, 2023

Memorandum

To: Planning Board

From: Ryan Lang, Senior Planner *RL*

Subject: SITE PLAN REVIEW – 1208 Swan Street in the Light Industrial 2 Zone Proposed 5 Unit Multi-Family Townhouse and Associated Site Improvements

Enclosed is a site plan submitted by Group Holdings, LLC, proposes the construction of a (5) unit multi-family townhome building, consisting of (5) three bedroom units, and associated site improvements with 15 parking spaces. The proposed multifamily development is a permitted use in the Light Industrial 2 Zone (C) *Multi-family*. Attached you will find the commercial site plan application, proposed site plan, proposed architectural and floor plan layouts, lighting plan, site narrative, and applicants response to Staff's Tech 1 comments.

The applicant has addressed most of staffs initial technical review comments; however the following conditions remain to be addressed:

Planning  
Sheet 1

1. Note 13: Remove (1 ADA Spaces Required)
2. Revise Side Street Setback from "10 ft." to "15 ft."
3. Proposed Ornamental Grasses along Western Buffer do not meet Landscaping Requirements.
4. Label the individual units (A-E) and show units on walls.

Sheet 5 SESC Plan

1. Extend silt fence along Northern property line to edge of construction entrance on Swan Street.

2. Construction entrance depth of 50' is required.
3. Add construction entrance from Boundary Street or connect silt fencing.

#### Lighting Plan

1. Lower mounting height for proposed wall pack lighting elevations on rear of building.
2. Wall packs on front shall provide lighting for ingress/egress. Proposed mounting height will have roofing blocking ingress/egress.

#### Public Services

##### Streets:

1. Show storm pipes in the Boundary Street Right-of-Way and crossing Swan Street just north of the existing Swan Street driveway.
2. Provide existing property line, EOP, swale, pipe inverts and structure rim grades in the Right-of-Way to verify that existing drainage is sufficient.
3. Plan references a 16" CPI pipe under the existing driveway. There is an existing 12" HDPE pipe under the existing driveway. The condition of the pipe is unknown and may likely need to be replaced and flared end sections will be required on any pipe under the new driveway in Swan Street. Approximately 10 feet of the existing pipe will need to be removed/shortened from the north and the road side swale reestablished.

Applicant has acknowledged items 1-3 and advises that they are waiting on additional survey to complete the requirements.

Staff recommends that the Planning Board forward the plan to the Board of Commissioners with a favorable recommendation after the above listed conditions have been addressed.

October 3, 2023

Ryan Lang  
County of Dare  
Town of Kill Devil Hills Planning and Inspections  
102 Town Hall Drive  
Kill Devil Hills, NC 27948

Town of Kill Devil Hills

OCT 03 2023

Re: **Commercial Site Plan Transmittal Response**  
1208 Swan Street  
Kill Devil Hills, Dare County, NC

Planning & Inspections Department

Mr. Lang,

Thank you for the TRC review comments for the Commercial Site Plan submittal of the above referenced project dated September 26, 2023. On behalf of Group Holdings, LLC, Quible & Associates, P.C., hereby submits, for your review and approval, the following documentation:

1. Fifteen (15) full size (24"x36") copies of the revised Plan Set;
2. Fifteen (15) copies of the revised lighting plan;
3. Fifteen (15) full size copies of the Architectural Plans;

Please find our responses listed below in *italics* to your review comments.

**Planning—Ryan Lang (252-449-5315)**

General:

1. ✓ Detail how parking spaces under proposed town homes will be marked or ensured that vehicles will not be blocked in. As proposed, the stacked parking spaces under structure do not have proper circulation. *Parking spaces under and in front of each unit will be painted with the unit number to delineate the parking spaces associated with that unit.*
2. ✓ Dare County Environmental Health Department approval required. *Acknowledged. Please note an onsite evaluation has been completed and DCHD permitting is ongoing.*
3. ✓ One entrance/exit from Boundary Street with two way traffic recommended as Swan Street had high volume of traffic. *Acknowledged. Please note the width of the site does not allow for two way at this entrance. There is only 38' separation between the one-way entrance and the right-of-way at the intersection.*
4. ✓ Dumpster location will likely lead to noise issues. It is recommended to relocate. *Acknowledged, per our meeting the dumpster has been relocated adjacent to the Swan St. entrance.*

Sheet 1 Site Plan:

1. ✓ Notes:
  - a. #3: Add Site Address: 1208 Swan Street Added to note #3

- b. #9: In Shaded X and X zones west of NC 12, the RFPE (Regulatory Flood Protection Elevation) is eight feet NAVD 1988 or the natural grade elevation if the natural grade is greater than eight feet NAVD 1988. *Added to note #9*
  - c. #10: Provide break down of pervious area, including depth of gravel base. Provide lot coverage reduction percentages if applicable. Provide total built upon area. *See note 10 on Sheet 1*
  - d. #12: Add "Permitted Use: © Multi-family dwellings" *Added to note #12*
  - e. #13: ADA Space not required. If provided site shall meet all accessibility requirements. *Acknowledged. The HC space has been removed from the plan set.*
  - f. Add Density Calculation, floor area ratio shall not exceed .50. *See note 10 on Sheet 1*
  - g. Add Max Building Height. *See note 20 on Sheet 1*
  - h. Add Note: Recombination Plat or Legal Agreement combining existing lots required to be completed prior to issuance of Building Permit. *See note 21 on Sheet 1*
  - i. Add Note: No Structure shall exceed a total height of 50 feet. *See note 20 on Sheet 1*
2. Side Street Setback from Boundary Street is 15'. Revise on all corresponding sheets. *Acknowledged. The building has been shifted to comply with this setback.*
3. Landscaping: *revise label*
- a. Proposed Landscaping Types shall meet requirements in 153.073 and Appendix A: Landscaping Guide of the Town Code. Ornamental Grasses do not meet the requirement as proposed. *Acknowledged. The pink Muhly grass previously provided has been revised to a Bayberry bush. grasses can be used*
  - b. Northern Property line, consider removing proposed fence and add dense vegetative screen because of existing neighboring fence. *Acknowledged. Fence removed and buffer updated to shrubs, 2.5' on center.*
4. Add site triangles for all drive aisles at right of way intersections. *Acknowledged. Site triangles have been reduced to 10'x20' and shifted to the right-of-way line.*
5. Dimension radiuses for all curbs on drive aisles entrances and exits. *Added throughout plan set.*
6. Dimension driveway width at property line on entrance/exits from Boundary and Swan Streets. *Acknowledged and noted on Sheet 1.*
7. Dimension driveway distance on Boundary Street from point of intersection of right of way lines of Swan and Boundary Street. *Acknowledged and noted on Sheet 1.*
8. Provide proposed first floor elevation. *Added to building label.*
9. Detail how units are to be identified. *Units will be identified as A-E added to plan*
10. Add note if Gutters will be installed on building. *Note about roof drains is shown on Sheet 4.*
11. Identify proposed "X" areas on site plan. *These are septic repair areas. They are called out on Sheet 3.*
12. Extend proposed fence along western property line to 10' from south west property corner. *Acknowledged dimension added to clarify the fence is to end 10' from southwest property corner.*

#### Sheet 2: Existing Conditions & Demolition Plan

- 1. Detail where overhead power pole will be relocated to. *This has been shown on Sheet 2.*

#### Sheet 3: Utility Plan

- 1. Detail connection from existing Dominion Power source. All new electrical, communication services and TV distribution lines and all conduits used for the distribution of such signals located within the town shall be placed underground from the

point of separation from the distribution line to the structure of the ultimate user. Existing distribution lines that are in place overhead on the effective date of this regulation may be extended only if such extensions are placed underground. Transformers and enclosures containing switches, meters, capacitors and the like may be pad mounted as an exception to the above. Per 153.080.

*Acknowledged. Please see note 14 on Sheet 1 and new note 12 on Sheet 3. Relocated pole placement has been shown. The electrical layout will be under a separate cover and designed by others.*

2. Add note: Dare County Environmental Health Department Approval Required.  
*Added as note 11 on Sheet 3.*

#### Sheet 5: SESC Plan

1. Dimension construction entrance.  
*Acknowledged, dimensions have been added.*
2. Silt fence cannot be placed in right of way. Revise placement to be placed within existing property lines.  
*Acknowledged and updated.*
3. Add Note: All disturbance in Town Right of Way shall be stabilized immediately.  
*Acknowledged.*

*Actual silt fence N line  
50' depth construct  
-add construct  
fence  
on boundary  
ST*

#### Lighting Plan:

1. Lighting shall be provided on all sides of building for security. Consider low wall packs for each unit.  
*Acknowledged. Wall packs have been added in between each unit.*
2. Clarify if units will include lights on front of building.  
*Lights are now shown on the front and rear of the building.*

*lower rear lights*

#### Architectural and Floor Plan:

1. Note proposed Building Height.  
*Proposed building height was indicated on Sheet 2 of the provided architectural plans.*

#### **Public Services —Derek Dail (252-480-4085)**

#### Solid Waste:

1. The site proposes five, three-bedroom units and will require one dumpster. One dumpster is provided on the plan. *Acknowledged and confirmed.*
2. Recommend installing the curb in front of the dumpster pad and installing the pad at the same grade as the back of curb & behind the curb so that the dumpster site is at the same grade inside the enclosure. *Dumpster pad has been shifted from the previous location per coordination with planning staff.*

#### Streets:

1. Recommend making the driveway on Boundary Street two-way. *See response to planning comment above and reference to not being able to meet the min. 35' separation to the Swan St. right-of-way with a two-way entrance on Boundary Street.*
2. Show storm pipes in the Boundary Street Right-of-Way and crossing Swan Street just north of the existing Swan Street driveway. *Acknowledged. We will need to perform additional survey to show these items correctly.*

3. Provide existing property line, EOP, swale, pipe inverts and structure rim grades in the Right-of-Way to verify that existing drainage is sufficient *Acknowledged. We will need to perform additional survey to show these items correctly..*
4. Plan references a 16" CPI pipe under the existing driveway. There is an existing 12" HDPE pipe under the existing driveway. The condition of the pipe is unknown and may likely need to be replaced and flared end sections will be required on any pipe under the new driveway in Swan Street. Approximately 10 feet of the existing pipe will need to be removed/shortened from the north and the road side swale reestablished. *It is acknowledged that based on the pipe condition it may need to be removed/replaced.*
5. Curbs tying into Boundary Street will need to have a gutter pan between the curb and the asphalt and valley gutter should be along the asphalt across the driveway draining water away from the asphalt. *As requested, curb and gutter have been provided along the entrance and a valley gutter has been added where the entrance meets the existing asphalt.*
6. Swan Street driveway should have curb and gutter with valley gutter across the driveway. *As requested, curb and gutter have been provided along the entrance and a valley gutter has been added where the entrance meets the existing asphalt.*
7. No fill is allowed in the Right-of-Way except to accommodate driveways. Plan currently shows fill within the Boundary Street Right-of-Way. *Please note the site has been regraded due to the relocation of the site dumpster pad.*
8. The Swan Street driveway appears to be shedding onsite stormwater onto the right-of-way. Design needs to capture and retain this water on-site. *Please note the site has been regraded due to the relocation of the site dumpster pad.*
9. The Swan Street Driveway entrance should be shifted to the south or the radii shortened as to not extend past the northern adjoiner's property corner as extended perpendicular to the EOP. *Acknowledged and updated.*

**Water System:**

1. Fees associated with the proposed services with individual meters are provided below based on the current fee schedule:
  - o Proposed three-bedroom unit with 5/8"x 3/4" meter:
 

System Development Fee	= \$ 6,000.00
Tap Fee	= \$ 1,275.00
Surety	= \$ 100.00
<u>Total Each Unit</u>	<u>= \$ 7,375.00</u>

**Five (5) Proposed Units x \$7,375.00 = \$36,875.00**

*Acknowledged.*

**Building Inspector— Marty Shaw (252-449-5313)**

1. While ADA parking spaces are not a requirement of townhomes, if they are provided, they need to meet the code requirements of ICC A117.1 Sheet 1 of 8 does not provide dimensions for the access aisle adjacent to the 8' wide parking space but it appears to be smaller than the 8' space shown. A single accessible space shall either be an 11' wide van space with a 5' access aisle, OR, an 8' wide space with an 8' wide access aisle. It doesn't appear the access aisle shown is 8' wide as it is smaller than the 8' parking space. *Acknowledged. This ADA space has been removed per Planning Sheet 1, comment #1*

**Fire Marshal — John Risoldi (252-449-5227)**

1. Water test shall be done to determine available water for fire suppression  
*Acknowledged.*
2. A added hydrant may be necessary depending on how much water that is required and what the existing hydrant will flow  
*Acknowledged.*
3. Profile for fire separation between units shall be submitted and approved  
*Acknowledged.*
4. The fire lane shall be able to support the weight of the fire apparatus  
*Acknowledged.*
5. Pavers shall be marked fire lane and may need to use signs to accomplish that  
*Acknowledged. "NO PARKING FIRE LANE" paint is shown on Sheet 1.*

**Police — Dana Harris (252-449-5324)**

1. Boundary Street entrance
  - a. Appears to be one-way, if so, signage to designate same (No Exit/One-Way with Arrow/Etc.)  
*Acknowledged. Signage is called out on Sheet 1.*

Sincerely,  
**Quible & Associates, P.C.**



Nadeen Dashti, E.I.

Encl.: As stated

Cc: Group Holdings, LLC

# Town of Kill Devil Hills Planning and Inspections Commercial Site Plan Review Application\*



Planning & Inspections Department

**Applicant**

Name: Group Holdings, LLC C/O Jim Rose  
 Address: 353 Soundview Drive  
Kill Devil Hills, NC 27948  
 Phone: 252-202-1292  
 Fax: \_\_\_\_\_  
 Cell: \_\_\_\_\_

**Property Owner**

Name: Same as Applicant  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 Cell: \_\_\_\_\_

**Property Location**

Address: 1208 Swan Court Lot, Block: Lot 5 & Pt 4 & Adj Land, Block 36  
 Subdivision: Kill Devil Hills Realty Corp. Pin#: 988312852675  
 Zoning District:  Commercial  LI-1  LI-2  OIR  
 Total Lot Size: 23,178 Sq. Ft. Disturbed Area: 25,497 Sq. Ft.

**Contractor**

Company Name: Godfrey Construction Company License Number: #66982  
 Name: Rick Godfrey Phone: 252-261-8600  
 Address: P.O. Box 694 Cell: \_\_\_\_\_  
Kill Devil Hills, NC 27948 Fax: \_\_\_\_\_  
 Town Privilege License Number: 21542

**Construction Information**

Type of Construction: Residential  
 Assembly  Business  Educational  Factory/Industrial  High Hazard  
 Institutional  Mercantile  Residential  Storage  Utility/Misc.  
 New Construction  Addition  Repair/Replace  Remodel  Other: \_\_\_\_\_

**Square Footage Proposed:**

Interior Space: 7,433 Sq. Ft. Covered Deck(s): 320 Sq. Ft. Storage: N/A Sq. Ft.  
 Garage: 3,773 Sq. Ft. # of Bedrooms: 15 # of Open Deck(s): N/A  
 Proposed Square Footage: 4,093 + Existing Square Footage: 0 = 4,093 Total Sq. Ft.  
 % Impervious Coverage: 24.7 + % Pervious Coverage: 23.3 = 24.9 Total % Coverage  
 # of Parking Spaces: Existing: 0 Proposed: 15 Total: 15 *Does not match plan*  
 Septic Tank Permit #: Pending *if required* Construction Type: LPP with TS-2 Pretreatment

Estimated Construction Cost (including labor and materials): \_\_\_\_\_

**Flood Information**

Flood Zone:  VE  AE  X Base Flood Elevation: n/a  
 Proposed First Floor Elevation: 13.0' Sq. Ft Below Base Flood Elevation: n/a  
*# show on plan*

\*This form is designed as a guide for Commercial Site Plan Review.  
 Additional plans and information will be required prior to building permits.

## Project Description

Permitting and Construction of a three (3) story, 5-unit, multi-family townhouse with associated parking and utilities.

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### Required Site Plan Information Checklist:

- Permit Application (Completed)
- Site Plan Including the following
  - Submittal Requirements:
    - Vicinity Map
    - 15 Copies of Site Plan & Building Plan Elevations – Front, Side, and Rear
    - Tentative Health Department Approval
    - Site Plan Development Review Fee Paid in Full
  - Existing Conditions:
    - Boundary of Entire Lot
    - Width and Location of Existing Right of Ways
    - Nature, Purpose, Locations, and Size of Existing Easements
    - Iron Pins and Concrete Monuments
    - Scale (1" = 50" Minimum)
    - North Arrow
    - Streets Including Width of Pavement
    - All Underground Utilities, Gas/Propane Below or Above Grade
    - Dare Co. Register of Deeds Map Book/Subdivision Ref.
    - Street Address
    - Present Recorded Owner, Developer, Engineer contacts
    - Adjacent Property Owners, Adj. Use & Zone
    - Corp. of Engineers Report / Wetland Study
    - NFIP Flood Zone (ref: Elevation Datum (NAVD 1988))
    - Minimum, Lot Size indicated
  - Proposed Improvements:
    - Zoning Use Compliance/Setbacks labeled
    - Landscaping Plan / Buffers / Screening (per section 153.073)
    - Lighting Plan - photometric showing point output (section 153.074)
    - Sedimentation & Erosion Control Plan including details
    - Disturbed Areas delineated & areas calculated
    - Location of Sidewalks on the Croatan Highway and Curbs
    - Location of Sewer Facilities and Drain field
    - Proposed Building Type, # of Floors and dimensions, floor area ratio, Height
    - Existing and Finished Grades of Entire Site
    - Storm Water Management Plan including calculations
    - Total Units and Density per Acre (Multi-Family) or floor area ratio (in OIR)
    - Lot Size and Lot Coverage Calculation
    - Utility Plan indicating location & sizes of proposed improvements
    - Water Service Sizing Checklist
    - Layout, Size and Number of Parking Spaces including handicap w/ setbacks (Each Space Numbered)
    - Fire Lane and Driveways
    - Loading Zone (Commercial Sites)
    - Mail Delivery Cluster Sites (Multi-Family)

- Proposed First Floor Elevation
- Dumpster Pad Location
- Proposed Sign Location
- Sight triangle shown
- Commercial Building Plans showing architectural compliance
- Plans to N.C.D.O.T. ( if required)
- NC Engineer/Land Surveyor Seal on Site Plan

\*\*\* The items listed in the Site Plan portion of the above checklist represent information that must be indicated on any site plan submitted for review by the Kill Devil Hills Planning Department, Planning Board, and Board of Commissioners. All of the above required documents shall be submitted on or before the 3rd Tuesday of each month. Upon completion of review, the Planning Board shall transmit its recommendations to the Board of Commissioners. The Board of Commissioners shall review site plans on the second Monday of each month.

Signature of Applicant: \_\_\_\_\_



(Date)

9/18/23

October 3, 2023

Ryan Lang  
County of Dare  
Town of Kill Devil Hills Planning and Inspections  
102 Town Hall Drive  
Kill Devil Hills, NC 27948

Re: **Commercial Site Plan Transmittal Response**  
1208 Swan Street  
Kill Devil Hills, Dare County, NC

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#### Sheet 2: Existing Conditions & Demolition Plan

1. Detail where overhead power pole will be relocated to. *This has been shown on Sheet 2.*

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point of separation from the distribution line to the structure of the ultimate user. Existing distribution lines that are in place overhead on the effective date of this regulation may be extended only if such extensions are placed underground. Transformers and enclosures containing switches, meters, capacitors and the like may be pad mounted as an exception to the above. Per 153.080.

*Acknowledged. Please see note 14 on Sheet 1 and new note 12 on Sheet 3. Relocated pole placement has been shown. The electrical layout will be under a separate cover and designed by others.*

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1. Dimension construction entrance.  
*Acknowledged, dimensions have been added.*
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*Acknowledged and updated.*
3. Add Note: All disturbance in Town Right of Way shall be stabilized immediately.  
*Acknowledged.*

#### Lighting Plan:

1. Lighting shall be provided on all sides of building for security. Consider low wall packs for each unit.  
*Acknowledged. Wall packs have been added in between each unit.*
2. Clarify if units will include lights on front of building.  
*Lights are now shown on the front and rear of the building.*

#### Architectural and Floor Plan:

1. Note proposed Building Height.  
*Proposed building height was indicated on Sheet 2 of the provided architectural plans.*

#### **Public Services —Derek Dail (252-480-4085)**

#### Solid Waste:

1. The site proposes five, three-bedroom units and will require one dumpster. One dumpster is provided on the plan. *Acknowledged and confirmed.*
2. Recommend installing the curb in front of the dumpster pad and installing the pad at the same grade as the back of curb & behind the curb so that the dumpster site is at the same grade inside the enclosure. *Dumpster pad has been shifted from the previous location per coordination with planning staff.*

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Water System:

1. Fees associated with the proposed services with individual meters are provided below based on the current fee schedule:
  - o Proposed three-bedroom unit with 5/8"x 3/4" meter:
 

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Tap Fee	=	\$ 1,275.00
Surety	=	\$ 100.00
<u>Total Each Unit</u>	=	<u>\$ 7,375.00</u>

**Five (5) Proposed Units x \$7,375.00 = \$36,875.00**  
*Acknowledged.*

**Building Inspector— Marty Shaw (252-449-5313)**

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**Fire Marshal — John Risoldi (252-449-5227)**

1. Water test shall be done to determine available water for fire suppression  
*Acknowledged.*
2. A added hydrant may be necessary depending on how much water that is required and what the existing hydrant will flow  
*Acknowledged.*
3. Profile for fire separation between units shall be submitted and approved  
*Acknowledged.*
4. The fire lane shall be able to support the weight of the fire apparatus  
*Acknowledged.*
5. Pavers shall be marked fire lane and may need to use signs to accomplish that  
*Acknowledged. "NO PARKING FIRE LANE" paint is shown on Sheet 1.*

**Police — Dana Harris (252-449-5324)**

1. Boundary Street entrance
  - a. Appears to be one-way, if so, signage to designate same (No Exit/One-Way with Arrow/Etc.)  
*Acknowledged. Signage is called out on Sheet 1.*

Sincerely,  
**Quible & Associates, P.C.**



Nadeen Dashti, E.I.

Encl.: As stated

Cc: Group Holdings, LLC

**NOTES**

- OWNER/APPLICANT: GROUP HOLDINGS, LLC.  
353 SOUNDVIEW DR.  
KILL DEVIL HILLS, NC 27848
- ENGINEER: QUILBE & ASSOCIATES, P.C.  
P.O. DRAWER 870  
KITTY HAWK, NC  
TEL: (252) 491-8147
- PROPERTY INFO: 1208 SWAN STREET  
LOT 5 & PT LOT 4 & ADJ  
PID: 004496000  
PIN: 988312852675
- RECORDED REFERENCE: PL. 2, SL. 18  
D.B. 1920, PG. 0203
- ZONE: LIGHT INDUSTRIAL ZONE 2 (LI-2)
- PARCEL AREA: 23,178 SQ.FT. - 0.53 ACRES
- TOPOGRAPHIC INFORMATION BASED ON FIELD DATA COLLECTED BY QUILBE & ASSOCIATES, P.C. 7/11/23 AND SURVEY BY GLORIA J. ROGERS.
- BOUNDARY INFORMATION BASED ON P.L. 2, S.L. 18; D.B. 1920, PG. 0203 AND REFERENCES NAVD 88.
- PROPERTY IS LOCATED IN NFIP FLOOD ZONE "X" AND SUBJECT TO CHANGES BASED ON COMMUNITY CD NO. 375353; PANEL 9883; SUFFIX K. (MAP NUMBER 3720988300K)  
EFFECTIVE DATE: 06/19/2020. IN SHADDED X AND X ZONES WEST OF NC 12, THE RFFE (REGULATORY FLOOD PROTECTION ELEVATION) IS EIGHT FEET NAVD 1988 OR THE NATURAL GRADE ELEVATION IF THE NATURAL GRADE IS GREATER THAN EIGHT FEET NAVD 1988.
- PROPOSED COVERAGE:  
PERVIOUS PARKING AREA (6" STONE BASE) = 4,930 S.F. (40% REDUCTION)  
BUILDING = 4,933 S.F.  
CONCRETE = 1,005 S.F.  
TOTAL (NO REDUCTION TAKEN) = 10,028 S.F. (43.3%)  
TOTAL (W/ 40% PERMEABLE REDUCTION) = 6,096 S.F. (34.7%)  
MAXIMUM ALLOWABLE LOT COVERAGE = 14,950 S.F. (65%)  
FLOOR AREA RATIO = 7,433 SQ. FT./23,178 SQ. FT. = 0.32 FAR (MAX. 0.5)
- THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A THREE (3) STORY, 5-UNIT, MULTI-FAMILY TOWNHOUSE WITH ASSOCIATED PARKING AND UTILITIES. MULTIFAMILY DWELLINGS ARE A PERMITTED USE FOR ZONING LI-2.
- PARKING  
REQUIRED: (3 SPACES/UNIT @ 3BR) AT 5 UNITS = 15 PARKING SPACES REQUIRED  
PROVIDED: 15 SPACES (1 ADA SPACES PROVIDED)
- ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- BUILDING CONSTRUCTION SHALL COMPLY WITH ALL ASPECTS OF THE NORTH CAROLINA BUILDING AND FIRE CODE.
- EXISTING VEGETATION TO BE PRESERVED WHERE POSSIBLE.
- THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.
- ALL LIGHTING SHALL BE CONTAINED ON SITE PER TOWN CODE 153.074 (E)3.
- MAX BUILDING HEIGHT = 36.52'  
NO STRUCTURE SHALL EXCEED A TOTAL HEIGHT OF 50 FEET.
- RECOMBINATION PLAT OR LEGAL AGREEMENT COMBINING EXISTING LOTS REQUIRED PRIOR TO ISSUANCE OF BUILDING PERMIT.

**NOTE: THIS DOCUMENT IS PRELIMINARY - NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES - THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.**

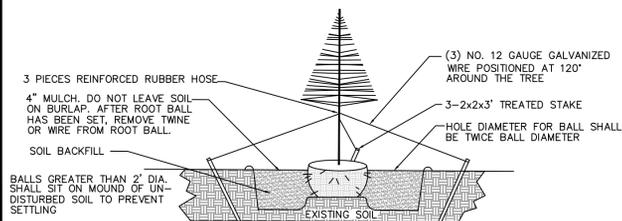
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**TREE PLANTING SUMMARY**

REQUIRED		PROVIDED	
NORTHERN BUFFER (5' WIDE BUFFER):	59 SHRUBS	NORTHERN BUFFER (5' WIDE BUFFER):	59 SHRUBS
BOUNDARY ST. BUFFER (10' WIDE PARKING BUFFER):	15 TREES	BOUNDARY ST. BUFFER (10' WIDE PARKING BUFFER):	15 TREES
SWAN ST. BUFFER (10' WIDE BUFFER):	5 SHRUBS	SWAN ST. BUFFER (10' WIDE BUFFER):	5 SHRUBS
WESTERN BUFFER (5' WIDE BUFFER):	4 SHRUBS	WESTERN BUFFER (5' WIDE BUFFER):	4 SHRUBS
	6" TALL FENCE WITH SHRUBS		6" TALL FENCE WITH ORNAMENTAL GRASSES

SYMBOL	QUANTITY	COMMON NAME	HEIGHT	SPREAD	MIN. SIZE @ PLANTING
	10	BALD CYPRESS	50' - 100'	20' - 30'	2" CAL, 8' HT.
	14	GRAPE MYRTLE	15' - 30'	6' - 15'	1.5" CAL, 6' HT.
	57	GLOSSY ABELIA	3' - 6'	3' - 6'	3 GALLON
	52	BAYBERRY	2' - 2.5'	3'	3 GALLON

\* ORNAMENTAL GRASS/SHRUB SPECIES MAY BE SUBSTITUTED WITH APPROVED SPECIES IDENTIFIED BY THE TOWN OF KILL DEVIL HILLS.

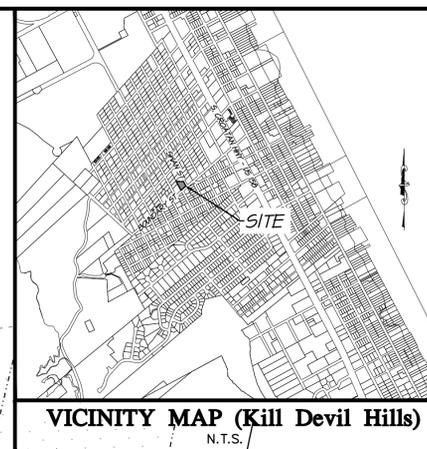
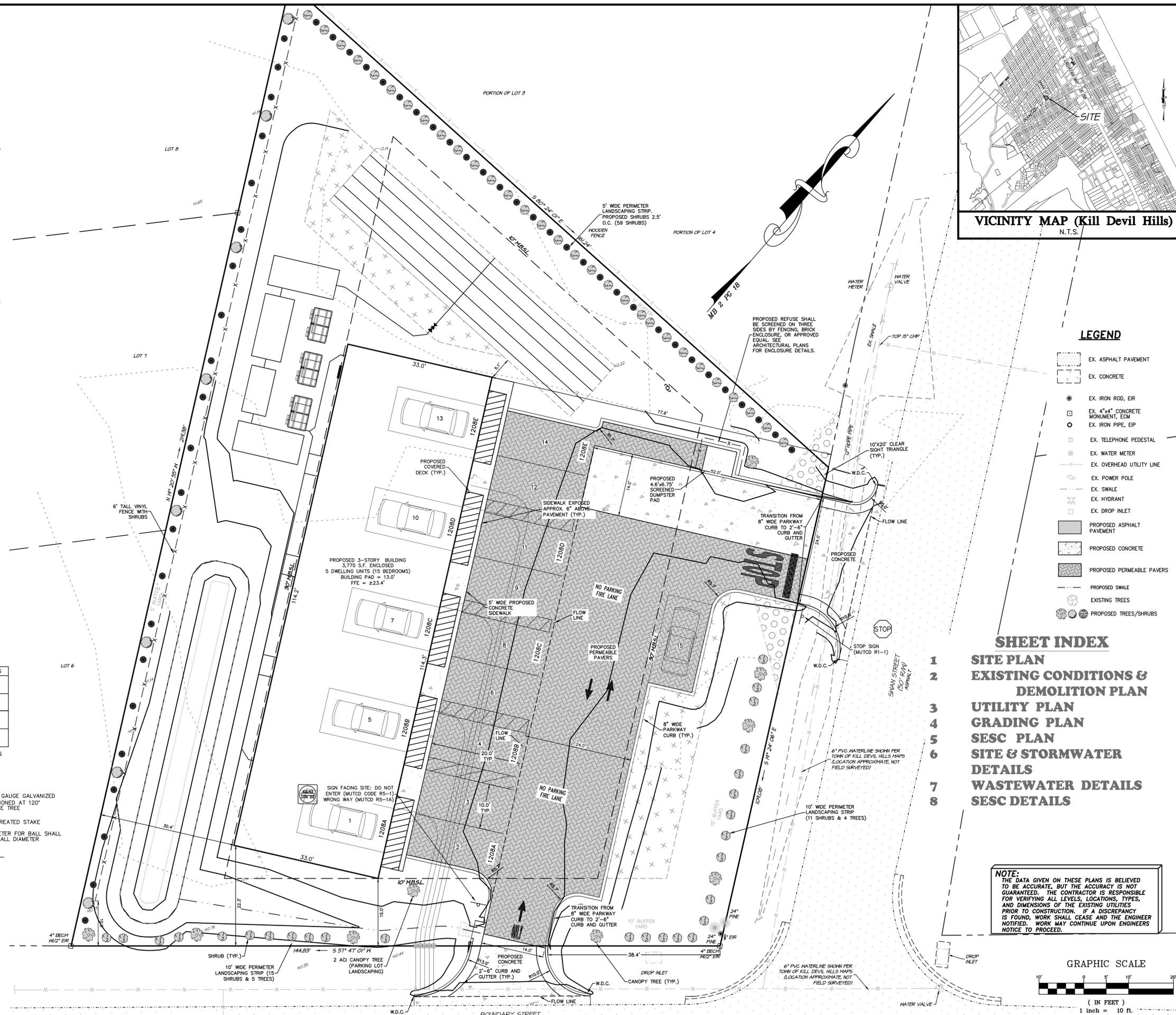


**TREE PLANTING DETAIL**

N.T.S.



Know what's below.  
Call before you dig.



VICINITY MAP (Kill Devil Hills)  
N.T.S.

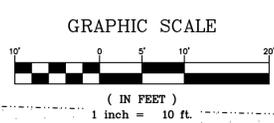
**LEGEND**

- EX. ASPHALT PAVEMENT
- EX. CONCRETE
- EX. IRON ROD, EIR
- EX. 4"x4" CONCRETE MONUMENT, ECM
- EX. IRON PIPE, EIP
- EX. TELEPHONE PEDESTAL
- EX. WATER METER
- EX. OVERHEAD UTILITY LINE
- EX. POWER POLE
- EX. SWALE
- EX. HYDRANT
- EX. DROP INLET
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE
- PROPOSED PERMEABLE PAVERS
- PROPOSED SWALE
- EXISTING TREES
- PROPOSED TREES/SHRUBS

**SHEET INDEX**

- SITE PLAN
- EXISTING CONDITIONS & DEMOLITION PLAN
- UTILITY PLAN
- GRADING PLAN
- SESC PLAN
- SITE & STORMWATER DETAILS
- WASTEWATER DETAILS
- SESC DETAILS

**NOTE:** THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



NC License # C-028  
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**Quilbe & Associates, P.C.**  
ENGINEERING & SURVEYING  
ENVIRONMENTAL SCIENCES & SURVEYING  
4846 GARATON HWY.  
POWELL POINT, NC 27868  
Phone: (252) 891-8147  
Fax: (252) 891-8148  
www.quilbe.com

PROFESSIONAL SEAL  
Gloria J. Rogers  
Professional Engineer  
No. 12345  
State of North Carolina

NO.	DATE	REVISIONS
1	10/7/23	REVISED PER TOWN COMMENTS

**SITE PLAN**  
**1208 SWAN STREET**  
**KILL DEVIL HILLS REALTY CORP**  
KILL DEVIL HILLS TOWNSHIP  
DARE COUNTY  
NORTH CAROLINA

PROJECT NO.	P22062
DESIGNED BY	CMS/ND
DRAWN BY	CMS/ND
CHECKED BY	MWS
ISSUE DATE	08/31/23

SHEET NO.  
**1**  
OF 8 SHEETS

**NOTES**

- OWNER/APPLICANT: GROUP HOLDINGS, LLC.  
353 SOUNDVIEW DR.  
KILL DEVIL HILLS, NC 27848
- ENGINEER: QUILBE & ASSOCIATES, P.C.  
P.O. DRAWER 870  
KITTY HAWK, NC  
TEL: (252) 491-8147
- PROPERTY INFO: LOT 5 & PT LOT 4 & ADJ  
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PIN: 988312852675
- RECORDED REFERENCE: PL 2, SL 18  
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- ZONE: LIGHT INDUSTRIAL ZONE 2 (LI-2)
- PARCEL AREA: 23,000 SQ.FT. - 0.53 ACRES
- TOPOGRAPHIC INFORMATION BASED ON FIELD DATA COLLECTED BY QUILBE & ASSOCIATES,  
PG. 7/11/23 AND SURVEY BY GLORIA J. ROGERS.
- BOUNDARY INFORMATION BASED ON P.L. 2, S.L. 18, D.B. 1920, PG. 0203 AND REFERENCES  
NAVD 88.
- PROPERTY IS LOCATED IN NFIP FLOOD ZONE "X" AND SUBJECT TO CHANGES BASED ON  
COMMUNITY CDD NO. 375353; PANEL 9883; SUFFIX K. (MAP NUMBER 3720988300K)  
EFFECTIVE DATE: 06/19/2020.
- A DEMOLITION PERMIT SHALL BE OBTAINED FROM THE TOWN OF KILL DEVIL HILLS

**DEMOLITION NOTES:**

- CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES - TO INCLUDE BUT NOT LIMITED TO  
ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER - AND SHALL COORDINATE PROPER  
PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.
- CONTRACTOR SHALL MARK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL  
DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE  
CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.
- DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL  
OF CONCRETE, CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR  
VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW  
IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE  
DRAWINGS.
- THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY  
NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE  
REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM  
PROJECT AREA.
- EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED  
FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION.  
CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND  
GUTTER WITH THE SITE PLAN.
- SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS TO BE DEMOLISHED SHALL  
BE PROVIDED.
- ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS  
AS WELL AS OSHA REGULATIONS.
- CONTRACTOR'S ACTIVITIES SHALL NOT IMPEDE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES.  
COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.
- MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.
- DEMOLITION SHALL NOT BEGIN UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE OWNER AND  
CONTRACTOR HAS OBTAINED THE REQUIRED PERMITS FROM ALL LOCAL, STATE, AND FEDERAL AGENCIES  
HAVING JURISDICTION TO AUTHORIZE DEMOLITION WORK.
- DEMOLITION PLAN DOES NOT PURPORT TO SHOW ALL OBJECTS OR UTILITIES EXISTING ON THE SITE. IT  
SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL  
UTILITIES AND IMPROVEMENTS WITHIN THE LIMITS OF WORK. CONTRACTOR SHALL COORDINATE ALL UTILITY  
DISCONNECTION, (I.E. SANITARY SEWER, WATER, GAS, TELEPHONE, ELECTRIC, ETC.) TO BUILDINGS,  
STRUCTURES AND OTHER CONNECTIONS AS NECESSARY FOR DEMOLITION WITH THEIR RESPECTIVE UTILITY  
PROVIDER. ALL UTILITIES ABOVE, ON OR BELOW GROUND SHALL BE REMOVED AS DENOTED ON THE PLAN  
AND SHALL MEET ALL REQUIREMENTS OF UTILITY OWNERS. THE CONTRACTOR IS RESPONSIBLE FOR  
CONTACTING EACH UTILITY COMPANY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF  
ALL UTILITIES PRIOR TO BEGINNING OF WORK. BEFORE ANY DEMOLITION, THE CONTRACTOR SHALL CALL  
NORTH CAROLINA ONE-CALL 1-800-632-4949 TO HAVE ALL UNDERGROUND UTILITIES LOCATED ON AND  
NEAR THE VICINITY OF THE SITE.
- EXISTING WATER METERS, ELECTRICAL TRANSFORMERS, TELECOMMUNICATION TERMINALS, ETC. ARE THE  
PROPERTY OF THE UTILITY COMPANIES SERVING THE SITE AND CONTRACTOR SHALL BE RESPONSIBLE TO  
COORDINATE WITH UTILITY OWNERS THE REMOVAL, TRANSPORTATION, AND STORAGE OF THE SAME.
- WHERE BUILDING FOUNDATION WALLS, FOOTINGS, CONCRETE SLABS, STOODS, PAVEMENTS, SIDEWALKS,  
CURB, OR CURB AND GUTTER ARE INDICATED TO BE REMOVED CONTRACTOR SHALL INCLUDE THE  
REMOVAL OF BASE MATERIAL DOWN TO SUB-GRADE.
- DEMOLITION PLAN DOES NOT GUARANTEE THE ACCURACY OR QUANTITIES OF THE DEMOLITION  
STRUCTURES AND MATERIALS. IT WAS DEVELOPED TO ASSIST THE CONTRACTOR. IT IS EXPRESSLY STATED  
HEREIN THAT THE OWNER OR ENGINEER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR  
CONCLUSIONS DRAWN THEREFROM BY THE CONTRACTOR.
- ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE DAILY IN A MANNER WHICH PREVENTS INJURY  
OR DAMAGE TO PERSONS, PRIVATE PROPERTY, AND/OR PUBLIC RIGHTS-OF-WAY. CONTRACTOR SHALL  
LEASLY DISPOSE OF ALL DESIGNATED DEMOLITION DEBRIS FROM THE PROJECT SITE TO A DISPOSAL SITE  
APPROVED BY ALL AUTHORITIES HAVING JURISDICTION.

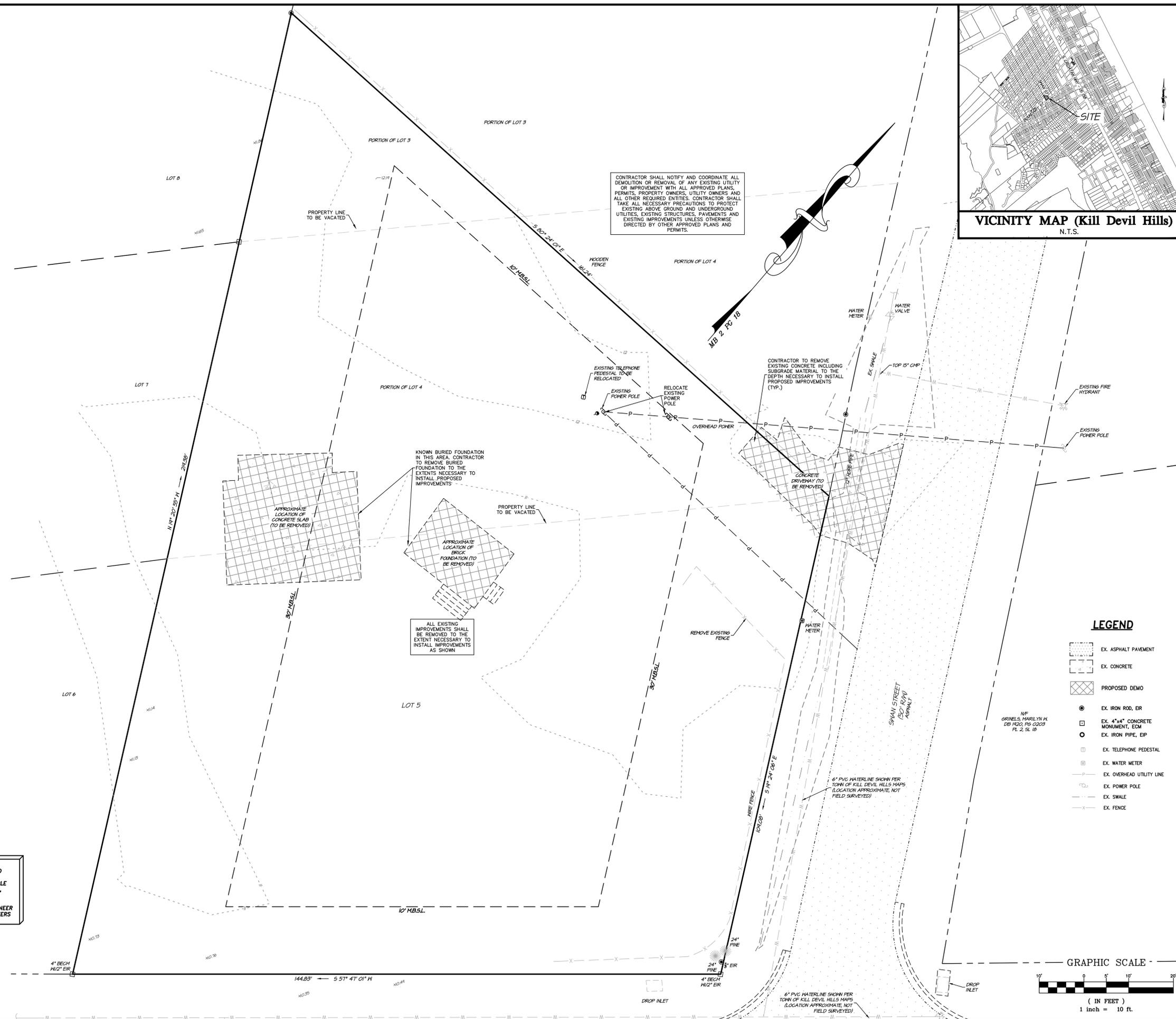
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PRIOR TO CONSTRUCTION. IF A DISCREPANCY  
IS FOUND, WORK SHALL CEASE AND THE ENGINEER  
NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS  
NOTICE TO PROCEED.



Know what's below.  
Call before you dig.

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FOR ANY ERROR OR OMISSION OR ANY LOSSES OR DAMAGES RESULTING FROM THE  
USE OF THIS INFORMATION.



CONTRACTOR SHALL NOTIFY AND COORDINATE ALL  
DEMOLITION OR REMOVAL OF ANY EXISTING UTILITY  
OR IMPROVEMENT WITH ALL APPROVED PLANS,  
PERMITS, PROPERTY OWNERS, UTILITY OWNERS AND  
ALL OTHER REQUIRED ENTITIES. CONTRACTOR SHALL  
TAKE ALL NECESSARY PRECAUTIONS TO PROTECT  
EXISTING ABOVE GROUND AND UNDERGROUND  
UTILITIES, EXISTING STRUCTURES, PAVEMENTS AND  
EXISTING IMPROVEMENTS UNLESS OTHERWISE  
DIRECTED BY OTHER APPROVED PLANS AND  
PERMITS.

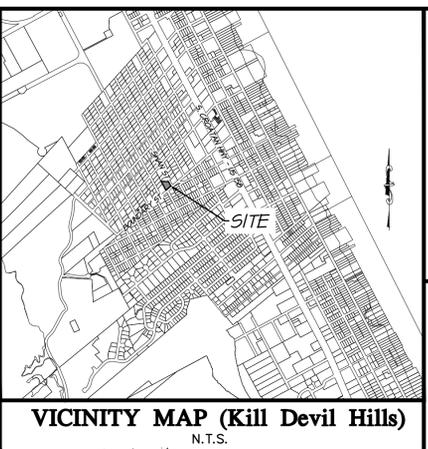
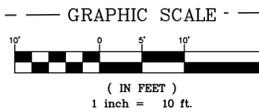
ALL EXISTING  
IMPROVEMENTS SHALL  
BE REMOVED TO THE  
EXTENT NECESSARY TO  
INSTALL IMPROVEMENTS  
AS SHOWN

CONTRACTOR TO REMOVE  
EXISTING CONCRETE INCLUDING  
SUBGRADE MATERIAL TO THE  
DEPTH NECESSARY TO INSTALL  
PROPOSED IMPROVEMENTS  
(TYP.)

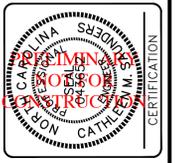
**LEGEND**

- EX. ASPHALT PAVEMENT
- EX. CONCRETE
- PROPOSED DEMO
- EX. IRON ROD, ER
- EX. 4"x4" CONCRETE MONUMENT, ECM
- EX. IRON PIPE, EIP
- EX. TELEPHONE PEDESTAL
- EX. WATER METER
- EX. OVERHEAD UTILITY LINE
- EX. POWER POLE
- EX. SWALE
- EX. FENCE

NF  
GRINELS, MARILYN M.  
DB 1420, PG 0203  
PL 2, SL 18



NC License # C-028  
SINCE 1959  
**Quilbe & Associates, P.C.**  
CONSTRUCTION SURVEYING  
ENVIRONMENTAL SCIENCES SURVEYING  
ENGINEERING/SURVEYING NOT OFFERED AT BLACK Mtn. OFFICE  
8446 CAROLINA HWY. 90 CHURCH STREET  
POWELL'S POINT, NC 27868 BLACK MOUNTAIN, NC 28711  
Phone: (252) 891-8147 Fax: (252) 891-8147  
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IT SHALL BE CONSIDERED PRELIMINARY.  
IT SHALL NOT BE USED FOR ANY  
CONTRACT OR CONVEYANCE UNLESS  
OTHERWISE NOTED.

NO.	DATE	REVISIONS
1	10/3/23	REVISED PER TOWN COMMENTS

**EXISTING CONDITIONS & DEMOLITION PLAN**  
**1208 SWAN STREET**  
**KILL DEVIL HILLS REALTY CORP**  
NORTH CAROLINA  
DARE COUNTY  
KILL DEVIL HILLS TOWNSHIP

PROJECT NO.	P22062
DESIGNED BY	CMS/ND
DRAWN BY	CMS/ND
CHECKED BY	MWS
ISSUE DATE	08/31/23
SHEET NO.	2
OF 8 SHEETS	

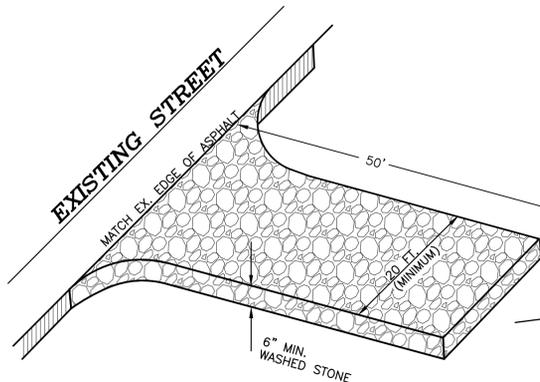


**NOTES**

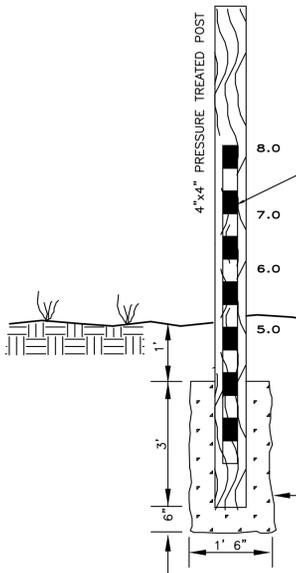
- OWNER/APPLICANT: GROUP HOLDINGS, LLC, 353 SOUNDVIEW DR., KILL DEVIL HILLS, NC 27848
- ENGINEER: QUILBE & ASSOCIATES, P.C., P.O. DRAWER 870, KITTY HAWK, NC, TEL: (252) 491-8147
- PROPERTY INFO: LOT 5 & PT LOT 4 & ADJ, PIG: 004496000, PIN: 988312852675
- RECORDED REFERENCE: PL. 2, SL. 18, D.B. 1920, PG. 0203
- ZONE: LIGHT INDUSTRIAL ZONE 2 (L-2)
- PARCEL AREA: 23,178 SQ.FT. - 0.53 ACRES
- BOUNDARY INFORMATION BASED ON P.L. 2, S.L. 18, D.B. 1920, PG. 0203 AND REFERENCES NAVD 88.
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- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A THREE (3) STORY, 5-UNIT, MULTI-FAMILY TOWNHOUSE WITH ASSOCIATED PARKING AND UTILITIES.
- CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION BETWEEN SPOT ELEVATION GRADES AND MAINTAIN POSITIVE DRAINAGE.
- AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.

**LEGEND**

- EX. ASPHALT PAVEMENT
- EX. CONCRETE
- EX. IRON ROD, EIR
- EX. 4"x4" CONCRETE MONUMENT, EOM
- EX. IRON PIPE, EIP
- EX. TELEPHONE PEDESTAL
- EX. WATER METER
- EX. OVERHEAD UTILITY LINE
- EX. POWER POLE
- EXISTING CONTOUR
- EXISTING SPOT GRADE
- EX. SWALE
- PROPOSED PERMEABLE PAVERS
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SWALE
- PROPOSED DRAINAGE FLOW
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT/EOP) (UNLESS OTHERWISE NOTED)



**GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL**  
N.T.S.



**DEPTH BENCHMARK**  
N.T.S.

BOTTOM ELEVATION	SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES:	TOP ELEVATION
8.5'		10.0'

GRADE PROPOSED INFILTRATION BASIN TO ELEVATION 8.5' WITH 3:1 SIDE SLOPES AS SHOWN. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND).

INFILTRATION BASIN TOP = 10.0' BOTTOM = 8.5'

PROVIDE 4"x4" RIP-RAP PROTECTION.

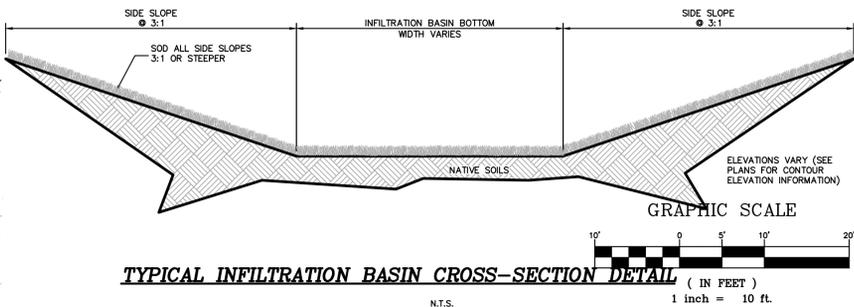
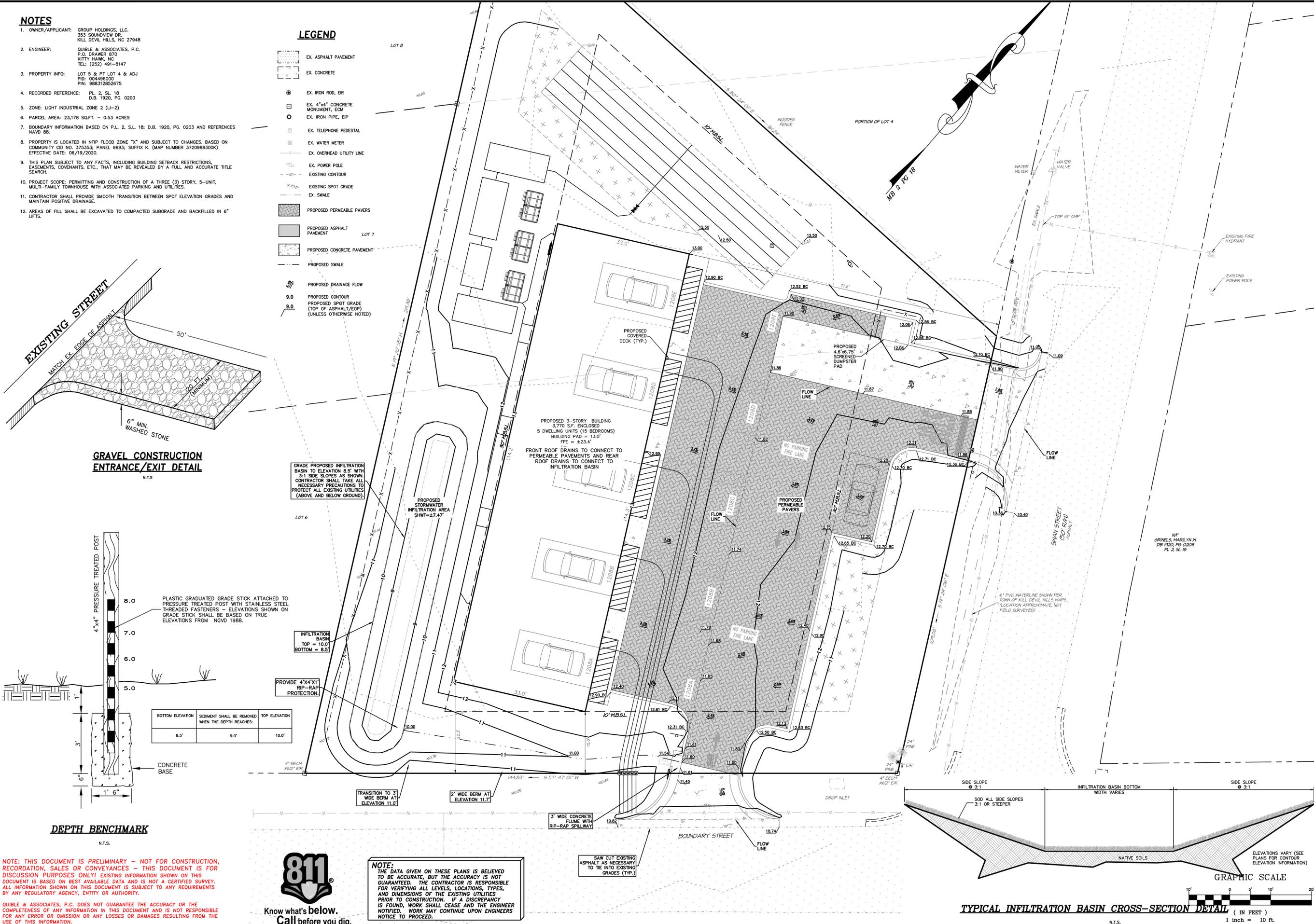
TRANSITION TO 3' WIDE BERM AT ELEVATION 11.0'

2' WIDE BERM AT ELEVATION 11.7'

3' WIDE CONCRETE FLUME WITH RIP-RAP SPILLWAY

SAW CUT EXISTING ASPHALT AS NECESSARY TO FIT INTO EXISTING GRADES (TYP.)

**NOTE:** THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEER'S NOTICE TO PROCEED.



**TYPICAL INFILTRATION BASIN CROSS-SECTION DETAIL** ( IN FEET )  
N.T.S. 1 inch = 10 ft.

NC License # C-0208  
**Quible & Associates, P.C.**  
 SINCE 1959  
 CIVIL ENGINEERING & SURVEYING  
 ENVIRONMENTAL SCIENCES & SURVEYING  
 8446 GARATON HWY. 90 CHURCH STREET  
 BLACK MOUNTAIN, NC 28711  
 Phone: (252) 891-8147 Fax: (252) 891-8148  
 WWW.QUIBLEANDASSOCIATES.COM

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NO.	DATE	REVISIONS
1	10/7/23	REVISED PER TOWN COMMENTS

**GRADING PLAN**  
**1208 SWAN STREET**  
**KILL DEVIL HILLS REALTY CORP**  
 NORTH CAROLINA  
 KILL DEVIL HILLS TOWNSHIP DARE COUNTY

PROJECT NO. P22062  
 DESIGNED BY CMS/ND  
 DRAWN BY CMS/ND  
 CHECKED BY MWS  
 ISSUE DATE 08/31/23

SHEET NO. **4**  
 OF 8 SHEETS

**NOTES**

- OWNER/APPLICANT: GROUP HOLDINGS, LLC.  
353 SOUNDVIEW DR.  
KILL DEVIL HILLS, NC 27948
- ENGINEER: QUILBE & ASSOCIATES, P.C.  
P.O. DRAWER 870  
KITTY HAWK, NC  
TEL: (252) 491-8147
- PROPERTY INFO: LOT 5 & PT LOT 4 & ADJ  
PG: 904496000  
PIN: 988312852675
- RECORDED REFERENCE: PL. 2, SL. 18  
D.B. 1920, PG. 0203
- ZONE: LIGHT INDUSTRIAL ZONE 2 (LJ-2)
- PARCEL AREA: 23,178 SQ.FT. - 0.53 ACRES
- BOUNDARY INFORMATION BASED ON P.L. 2, S.L. 18, D.B. 1920, PG. 0203 AND REFERENCES NAVD 88.
- PROPERTY IS LOCATED IN NP1 FLOOD ZONE "X" AND SUBJECT TO CHANGES BASED ON COMMUNITY CID NO. 375353; PANEL 9883; SUFFIX K. (MAP NUMBER 3720988300K) EFFECTIVE DATE: 06/19/2020.
- THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.
- PROJECT SCOPE: PERMITTING AND CONSTRUCTION OF A THREE (3) STORY, 5-UNIT, MULTI-FAMILY TOWNHOUSE WITH ASSOCIATED PARKING AND UTILITIES.

**SOIL EROSION & SEDIMENTATION CONTROL NOTES:**

- AREA TO BE DISTURBED: ± 25,497.3 SF (± 0.58 AC.)
- PROVIDE A GROUND COVER STABILIZATION (TEMPORARY OR PERMANENT) ON ALL DENUDED DOWNSTREAM SURFACES FOLLOWING THE COMPLETION OF LAND DISTURBING ACTIVITIES PER TH CRITERIA LISTED BELOW:
  - PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 (SEVEN) DAYS.
  - HIGH QUALITY WATER (HOW) ZONES SHALL BE STABILIZED IN 7 DAYS.
  - DOWNSLOPE SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPE 10:1 OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
  - DOWNSLOPE SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
  - ALL OTHER DOWNSTREAM AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.
- IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1 - SEP. 30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).
- IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.
- SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
  - A RAIN GAUGE MUST BE KEPT ON SITE.
  - DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
  - ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD), IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
  - INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
  - MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
- EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCEQ LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCEQ LAND QUALITY SECTION APPROVED SITE.

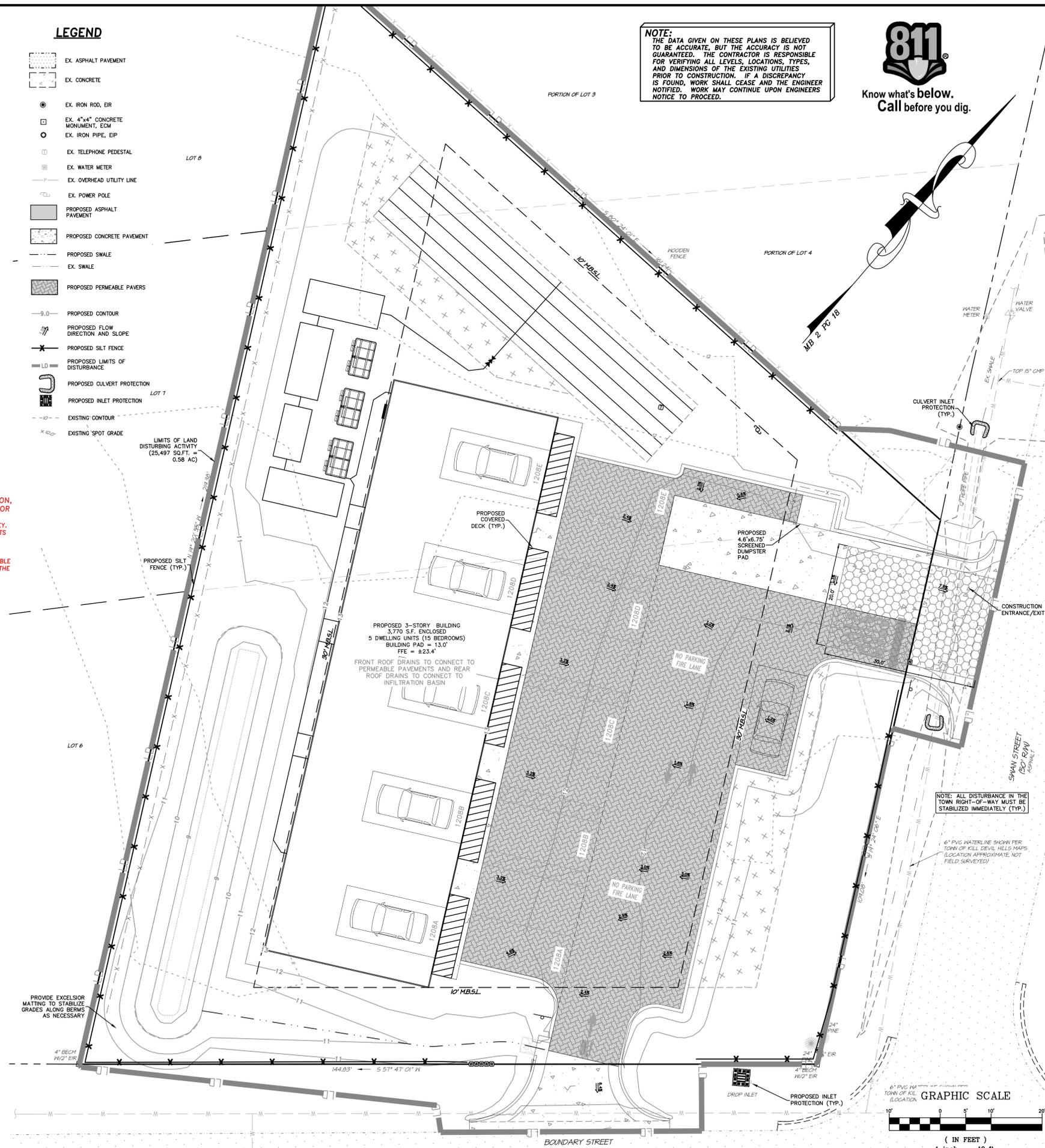
**SOIL EROSION & SEDIMENTATION CONTROL SEQUENCE OF CONSTRUCTION:**

- PRECONSTRUCTION:**
- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
  - FLAG AND/OR ROUGH STAKE WORK LIMITS.
  - HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.
- CONSTRUCTION:**
- INSTALL CONSTRUCTION ENTRANCE & SILT FENCING AT LOCATIONS SHOWN ON PLAN.
  - ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY DEMOLITION.
  - COMPLETE CLEARING AND GRUBBING PROCEDURES.
  - GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS.
  - INSTALL CONTRIBUTING STORM CONVEYANCES INCLUDING RIP-RAP APRONS, MATING AND ASSOCIATED EROSION CONTROLS.
  - COMPLETE FINAL GRADING OF THE GROUNDS, TOPSOIL, PERMANENTLY SEED, LANDSCAPE, AND MULCH.
  - ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
  - ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENUDED SURFACES ARE FULLY STABILIZED, ALL STORMWATER CONVEYANCES, STRUCTURES, PIPING AND BASINS SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES INCLUDING THE BASIN AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
  - UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.

**LEGEND**

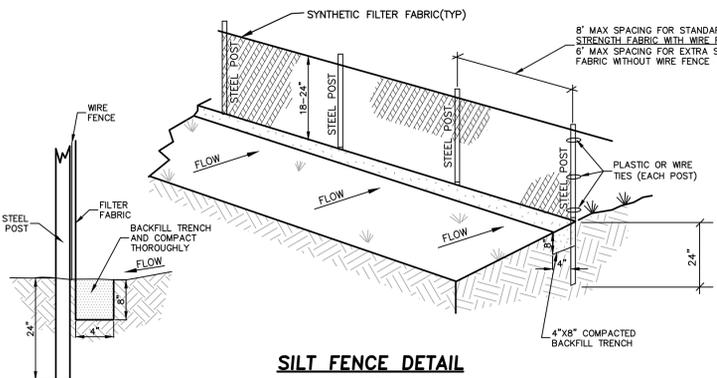
- EX. ASPHALT PAVEMENT
- EX. CONCRETE
- EX. IRON ROD, EIR
- EX. 4"x4" CONCRETE MONUMENT, ECM
- EX. IRON PIPE, EIP
- EX. TELEPHONE PEDESTAL
- EX. WATER METER
- EX. OVERHEAD UTILITY LINE
- EX. POWER POLE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SWALE
- EX. SWALE
- PROPOSED PERMEABLE PAVERS
- PROPOSED CONTOUR
- PROPOSED FLOW DIRECTION AND SLOPE
- PROPOSED SILT FENCE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED CULVERT PROTECTION
- PROPOSED INLET PROTECTION
- EXISTING CONTOUR
- EXISTING SPOT GRADE

**NOTE:** THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.



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**PERMANENT VEGETATION**

SEEDING DATES: APRIL 1 - AUGUST 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	130 LBS.
COMMON BERMUDA "SAHARA" (HULLED)	215 LBS.

SEEDING DATES: SEPT. 1 - MARCH 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	250 LBS.
COMMON BERMUDA "SAHARA" (UNHULLED)	215 LBS.

**TEMPORARY VEGETATION**

SEEDING DATES: AUG. 16 - APRIL 15:

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRASS	120 LBS.

SEEDING DATES: APRIL 16 - AUG. 15:

SEED MIXTURE	APPLICATION RATES/ACRE
GERMAN MILLET	40 LBS.

**SOIL AMENDMENTS:** OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

**MULCHING:** APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

**MAINTENANCE:** SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

**MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE.** (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF CONSTRUCTION ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.) WEAK OR DAMAGED SPOTS MUST BE RELIEM, FERTILIZED, MULCHED, AND RESEED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

**SEEDING SPECIFICATIONS**

NO. 10/2/23  
DATE 10/2/23  
REVISIONS PER TOWN COMMENTS

**SESC PLAN**

**1208 SWAN STREET**

**KILL DEVIL HILLS REALTY CORP**

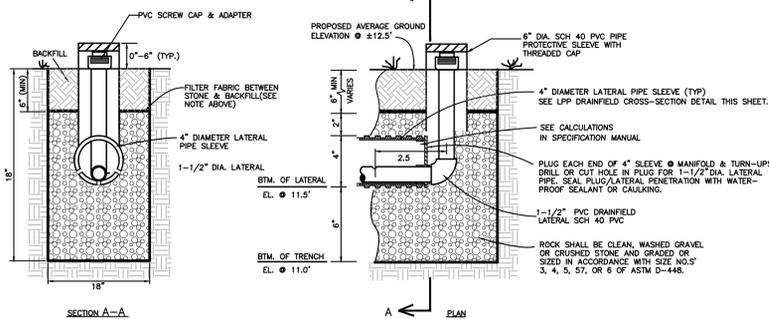
PROJECT NO. P22062  
DESIGNED BY CMS/ND  
DRAWN BY CMS/ND  
CHECKED BY MWS  
ISSUE DATE 08/31/23

SHEET NO. 5 OF 8 SHEETS

QUILBE & ASSOCIATES, P.C.  
1000 W. HARRIS STREET  
KILL DEVIL HILLS, NC 27948  
TEL: (252) 491-8147  
WWW.QUILBE.COM

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

GRAPHIC SCALE  
(IN FEET)  
1 inch = 10 ft.



**DRAINFIELD**

**LATERAL TURN-UP & TRENCH X-SECTION**

- NOTES:
- ACTIVE DRAINFIELD AREA SHALL BE GRADED SO THAT STORMWATER RUNOFF DOES NOT POND ON DRAINFIELD AREA.
  - VEGETATE DRAINFIELD AND REPAIR AREAS AS PER SEEDING SPECIFICATION SHOWN BELOW.
  - FILTER FABRIC SHALL BE TREVIRA SPUNBOND TYPE 1112 ENGINEERING FABRIC OR EQUAL AS APPROVED BY ENGINEER.
  - ALL TRENCHES, LATERALS, AND MANIFOLDS SHALL BE INSTALLED LEVEL.

NOTE: HOLE SPACING IS 5 FT. ON CENTERS

SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT  
 ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)  
 ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)  
 A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT  
 ALL CONCRETE SHALL BE 4000 PSI FIBER MESH UNLESS OTHERWISE NOTED

**TYPICAL SPECIFICATIONS**

**TESTING AND INSPECTION**

- LATERAL LINES & MANIFOLDS TO BE STAKED-OUT AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
- INDIVIDUAL LATERALS TO BE INSPECTED BY ENGINEER IMMEDIATELY PRIOR TO PLACEMENT IN RESPECTIVE TRENCH LINES AND CONNECTION TO MANIFOLD. ENGINEER WILL INSPECT LATERAL ORIFICE HOLE SIZES AND LOCATIONS. CONTRACTOR TO DRILL ORIFICES IN A STRAIGHT LINE PERPENDICULAR TO PIPE. ALL BURS LEFT AROUND THE HOLES INSIDE THE PIPE SHALL BE REMOVED. THIS CAN BE DONE BY SLIDING A SMALLER DIAMETER PIPE OR ROD DOWN THE PIPE TO KNOCK OUT THE BURS.
- ENGINEER MUST APPROVE DRAINFIELD TRENCH CONSTRUCTION PRIOR TO BACKFILLING TRENCH.

**COMPACTION NOTES:**

- PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
- COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES (SP, SM, SW, GP, GW) HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

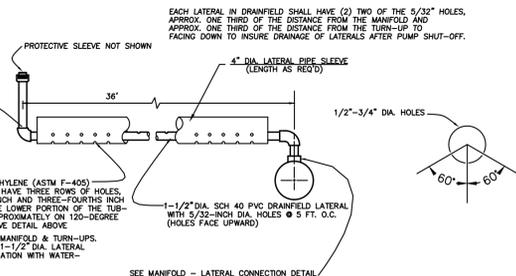
**COMPACTION NOTES**

**MANIFOLD-LATERAL CONNECTION**

NOTE: 1-1/2" DIA. SCH 40 PVC LATERAL SIZE  
 NOTE: HOLE SPACING IS 5 FT. ON CENTERS

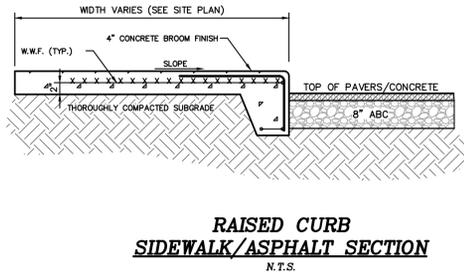
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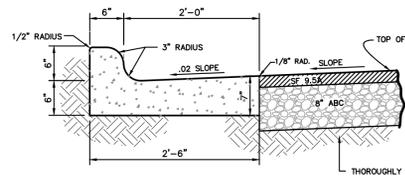
**LOW-PRESSURE PIPE DRAINFIELD CROSS SECTION**

NOTE: HOLE SPACING IS 5 FT. ON CENTERS



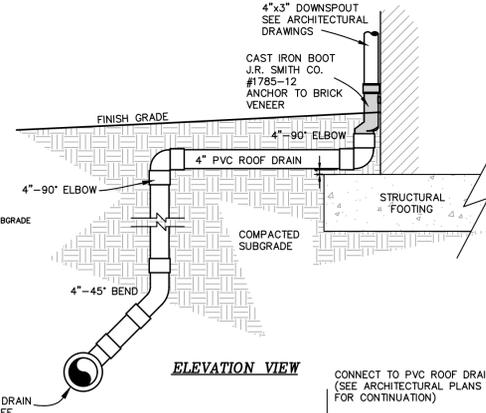
**RAISED CURB SIDEWALK/ASPHALT SECTION**

N.T.S.



**2'-6" CURB and GUTTER**

REF. NCDOT STD. 846.01  
 N.T.S.

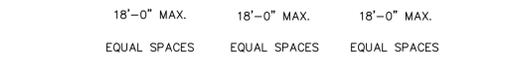


**ELEVATION VIEW**

**PLAN VIEW**

**ROOF DRAIN COLLECTION LATERAL**

N.T.S.



FOR "W" = 6'-0" OR LESS

FOR "W" = MORE THAN 6'-0"

E = EXPANSION JOINT  
 D = DUMMY JOINT

NOTES:  
 -EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.  
 -AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.  
 -SEE ALSO ARCHITECTURAL PLANS

TRAFFIC RATED JOINT SEALANT

SAWCUT

DUMMY JOINT

EXPANSION JOINT

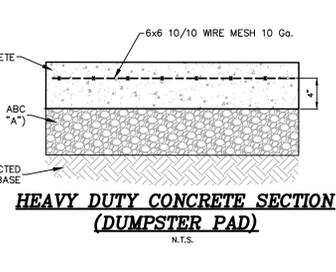
JOINT PATTERN

JOINT DETAIL

SIDEWALK JOINTS

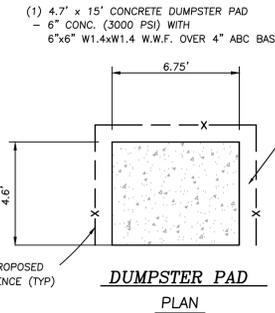
**SIDEWALK JOINTS**

N.T.S.



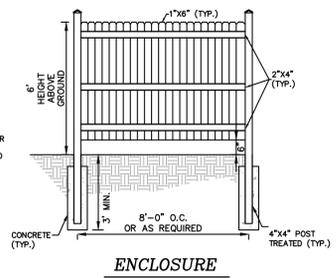
**HEAVY DUTY CONCRETE SECTION (DUMPSTER PAD)**

N.T.S.



**DUMPSTER PAD**

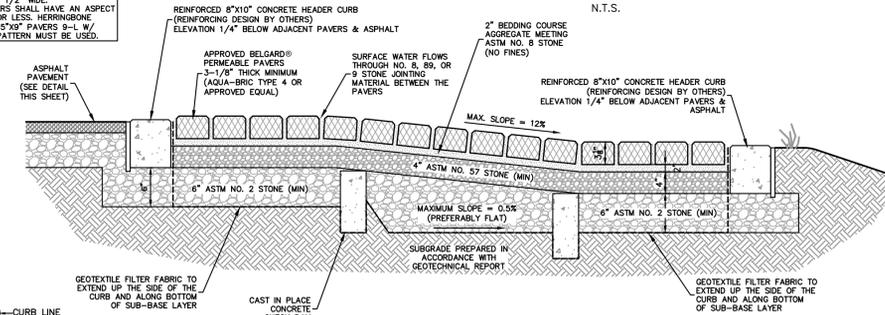
PLAN



**ENCLOSURE**

N.T.S.

- NOTE:
- TO BE ADA COMPLIANT, JOINTS SHALL BE SET LESS THAN 1/2" WIDE.
  - AQUALINE PAVERS SHALL HAVE AN ASPECT RATIO OF 3:1 OR LESS. HERRINGBONE PATTERN W/ 4.5"x9" PAVERS 8-L/W/ INTERLOCKING PATTERN MUST BE USED.

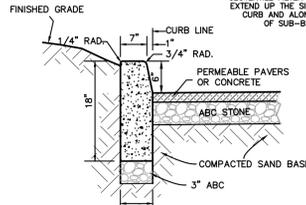


**CONCRETE DUMPSTER PAD AND ENCLOSURE**

N.T.S.

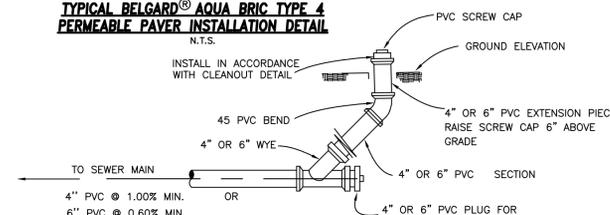
**TYPICAL BELGARD® AQUA BRIC TYPE 4 PERMEABLE PAVEMENT INSTALLATION DETAIL**

N.T.S.



**PARKWAY CURB**

N.T.S.

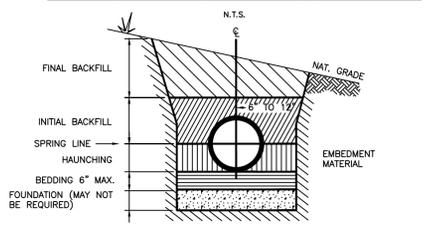


**SECTION A**

PLAN VIEW

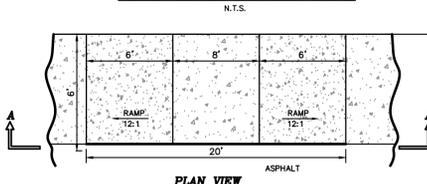
**SINGLE SERVICE LATERAL CONNECTION**

N.T.S.



**GRAVITY SEWER EMBEDMENT CONDITIONS FOR FLEXIBLE AND SEMI-RIGID SEWER PIPE**

N.T.S.



**WHEELCHAIR RAMP**

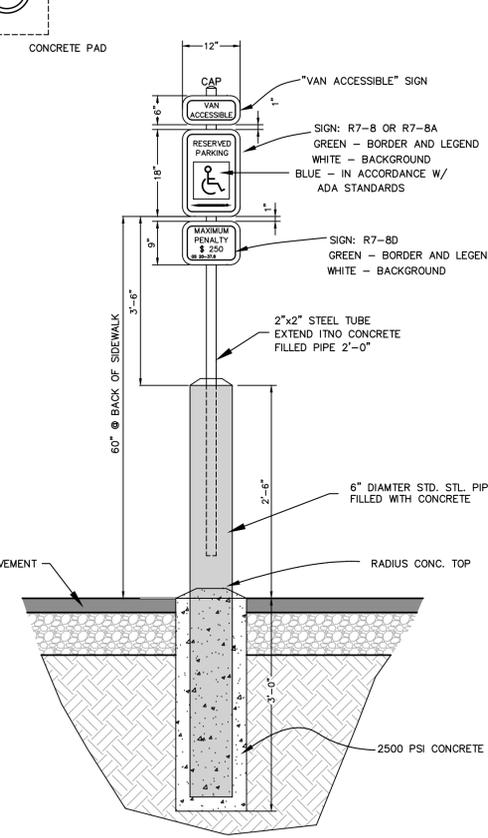
N.T.S.



**SECTION A-A**

N.T.S.

- USE ADJUNCT TO ALL HANDICAPPED SPACES
- DETECTABLE WARNING MUST BE INSTALLED AT ACCESS TO VEHICULAR TRAFFIC AREAS AND PEDESTRIAN CROSSINGS.



**ADA RESERVED PARKING SIGN DETAIL**

N.T.S.

NC License # C-0208  
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 8446 CAROLINE HWY  
 POWELL POINT, NC 27968  
 Phone: (252) 891-8127  
 Fax: (252) 891-8128  
 WWW.QUIBLEPC.COM

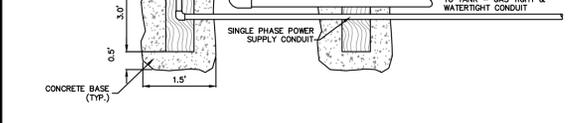
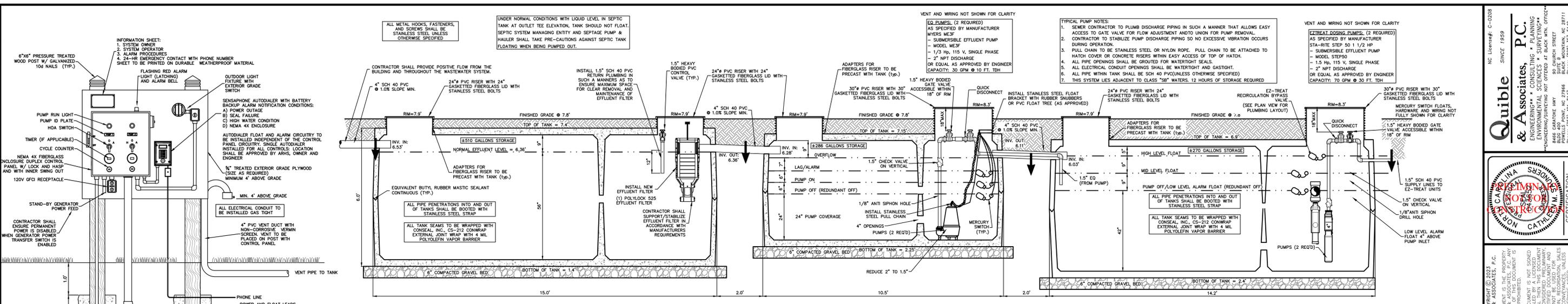
REVISIONS

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1	10/2/23	REVISED PER TOWN COMMENTS

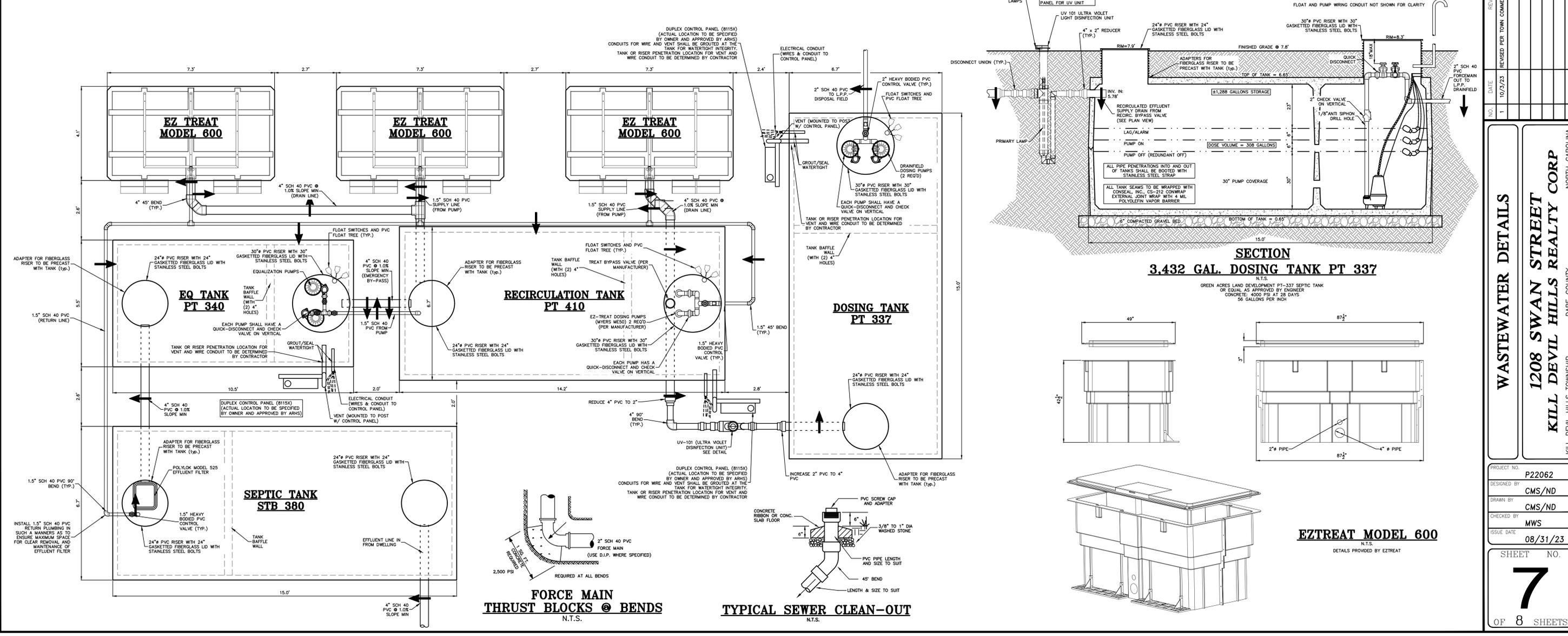
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 KILL DEVIL HILLS TOWNSHIP



**DUPLEX CONTROL PANEL (8115X) & VENT MOUNTING DETAIL**  
 N.T.S.



**DUPLEX CONTROL PANEL (8115X) & VENT MOUNTING DETAIL**  
 N.T.S.

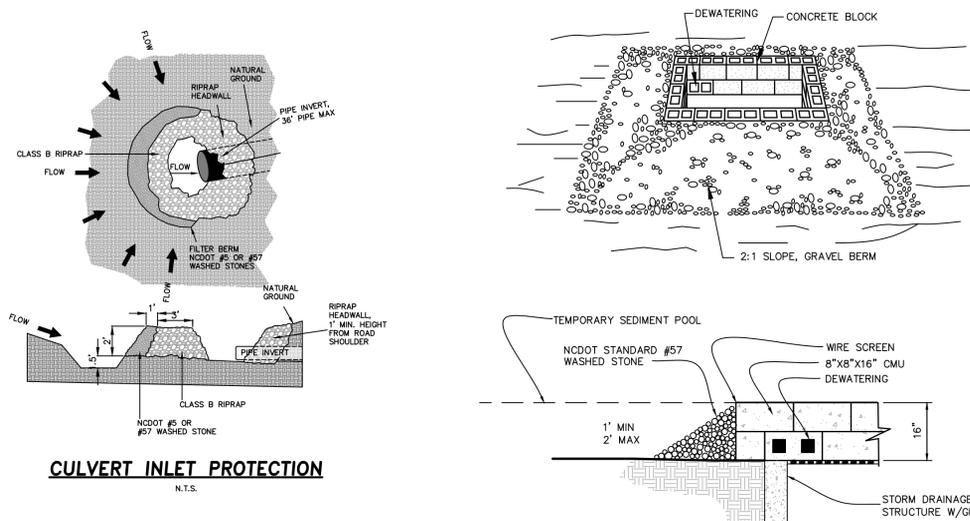
**Quible & Associates, P.C.**  
 CIVIL ENGINEERING & SURVEYING  
 ENVIRONMENTAL SCIENCES SURVEYING  
 8486 GARATON HWY. BLACK MOUNTAIN, NC 28711  
 PHONE: (828) 689-9427 FAX: (828) 689-9428  
 NC License # C-0208 SWCE 1959

**WASTEWATER DETAILS**  
**1208 SWAN STREET**  
**KILL DEVIL HILLS REALTY CORP**  
 NORTH CAROLINA  
 DARE COUNTY  
 KILL DEVIL HILLS TOWNSHIP

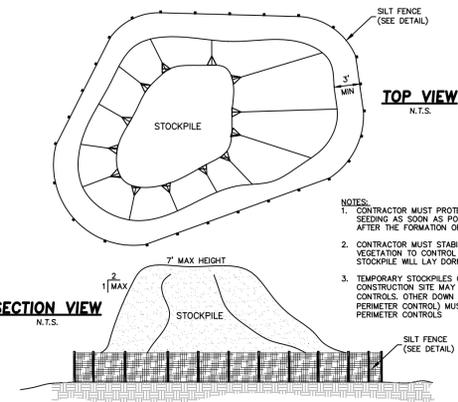
NO. DATE REVISIONS  
 1 10/7/23

REVISIONS REUSED PER TOWN COMMENTS

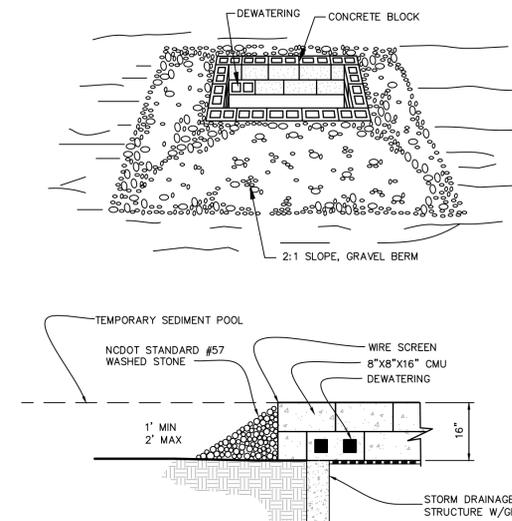
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**CULVERT INLET PROTECTION**  
N.T.S.



**STOCKPILE DETAIL**  
N.T.S.



**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**

Site Area Description	Required Ground Stabilization Timeframes	
	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 -7 days for slopes greater than 50' in length and with slopes steeper than 4:1
(d) Slopes 3:1 to 4:1	14	-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"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Roller erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Roller erosion control products with grass seed</li> </ul>

**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**

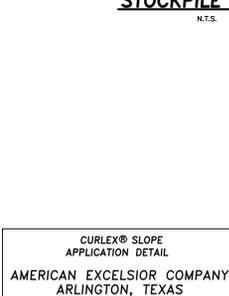
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, 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**

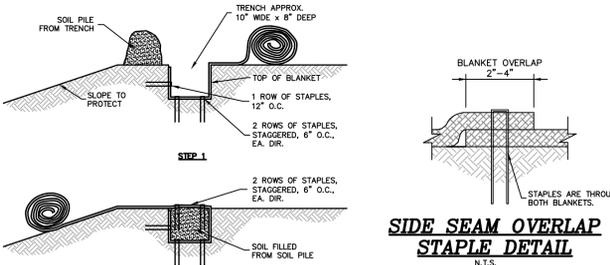
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or 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 equipped 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.



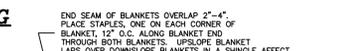
**CURLEX® SLOPE APPLICATION DETAIL**  
AMERICAN EXCELSIOR COMPANY ARLINGTON, TEXAS



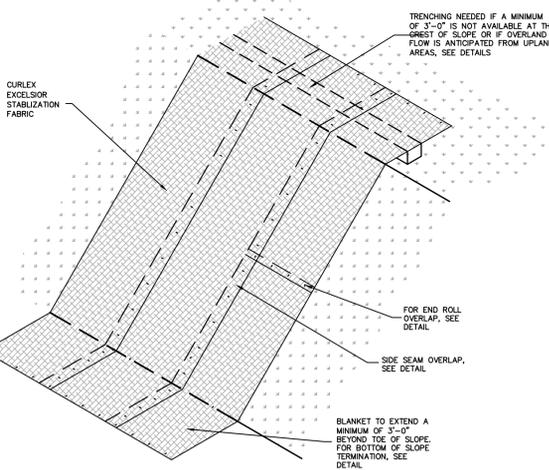
**SIDE SEAM OVERLAP STAPLE DETAIL**  
N.T.S.



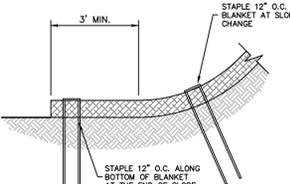
**SLOPE TRENCHING METHOD 'B'**  
N.T.S.



**END ROLL OVERLAP**  
N.T.S.



**SLOPE DETAIL**  
N.T.S.



**BOTTOM OF SLOPE TERMINATION**  
N.T.S.

**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.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfall inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC stabilization, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover), 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

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

**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 documented in the manner described:

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.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. **Additional Documentation**  
In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency 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:

- This general permit as well as the certificate of coverage, after it is received.
- Records of inspections made during the previous 30 days. 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.
- All data used to complete the Notice of Intent and older 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:

- Visible sediment deposition in a stream or wetland.
- 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).
- 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 (Ref. 413-215.85).
- Anticipated bypasses and unanticipated bypasses.
- 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 Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is named on the <b>NC 303(g) list</b> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and releases of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> <li><b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)].</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)].</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

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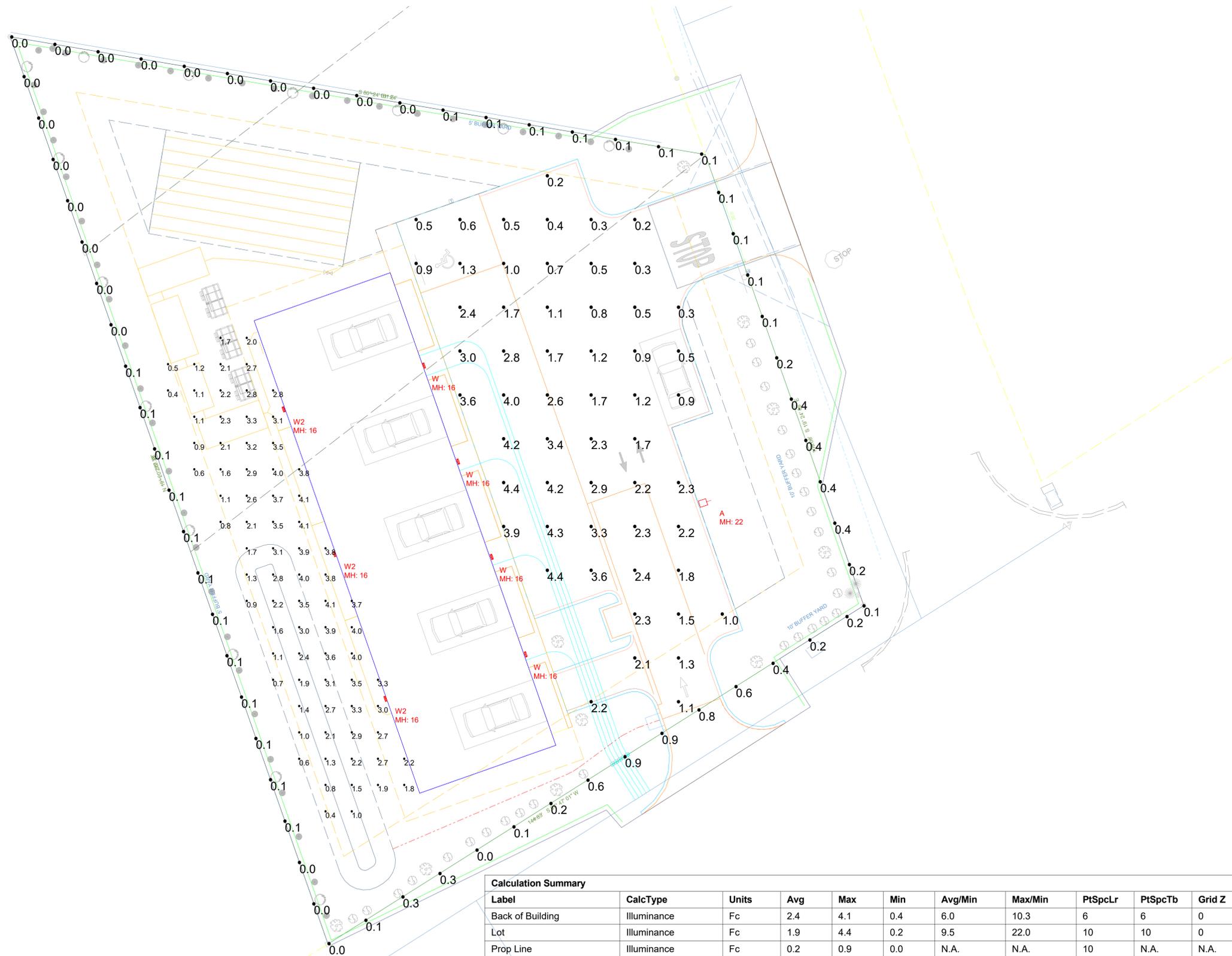
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NO.	DATE	REVISIONS	PER TOWN COMMENTS
1	10/7/23		

10/7/23

**SESC DETAILS**  
**1208 SWAN STREET**  
**KILL DEVIL HILLS REALTY CORP**  
NORTH CAROLINA  
DARE COUNTY  
KILL DEVIL HILLS TOWNSHIP

PROJECT NO.	P22062
DESIGNED BY	CMS/ND
DRAWN BY	CMS/ND
CHECKED BY	MWS
ISSUE DATE	08/31/23



Calculation Summary										
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpcLr	PtSpcTb	Grid Z
Back of Building	Illuminance	Fc	2.4	4.1	0.4	6.0	10.3	6	6	0
Lot	Illuminance	Fc	1.9	4.4	0.2	9.5	22.0	10	10	0
Prop Line	Illuminance	Fc	0.2	0.9	0.0	N.A.	N.A.	10	N.A.	N.A.

Luminaire Schedule									
Symbol	Label	Qty	Description	Arrangement	LLF	Lum. Watts	Lum. Lumens	Mounting Height	
	A	1	MRM-LED-07L-SIL-FT-40-70CRI	Single	0.890	48	7562	22	
	W	4	XWM-FT-LED-04L-40	Single	0.890	30	4458	16	
	W2	3	XWM-2-LED-04L-40	Single	0.890	30	4483	16	



MRM



XWM

**DISCLAIMER: --- CALCULATED VALUES:**  
 Calculations have been performed according to IESNA & CIE standards and good practice. Some differences between measured values and calculated results may occur due to changes in site conditions, weather, or other factors. The lighting design is based on typical component performance, measuring techniques and field conditions such as voltage and temperature variations. The attached calculations such as room calculations, reflections, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data provided, the calculated values may differ from the actual values. The lighting design is based on typical component performance, measuring techniques and field conditions such as voltage and temperature variations. Differences will occur between measured values and calculated values. Item used in typical.

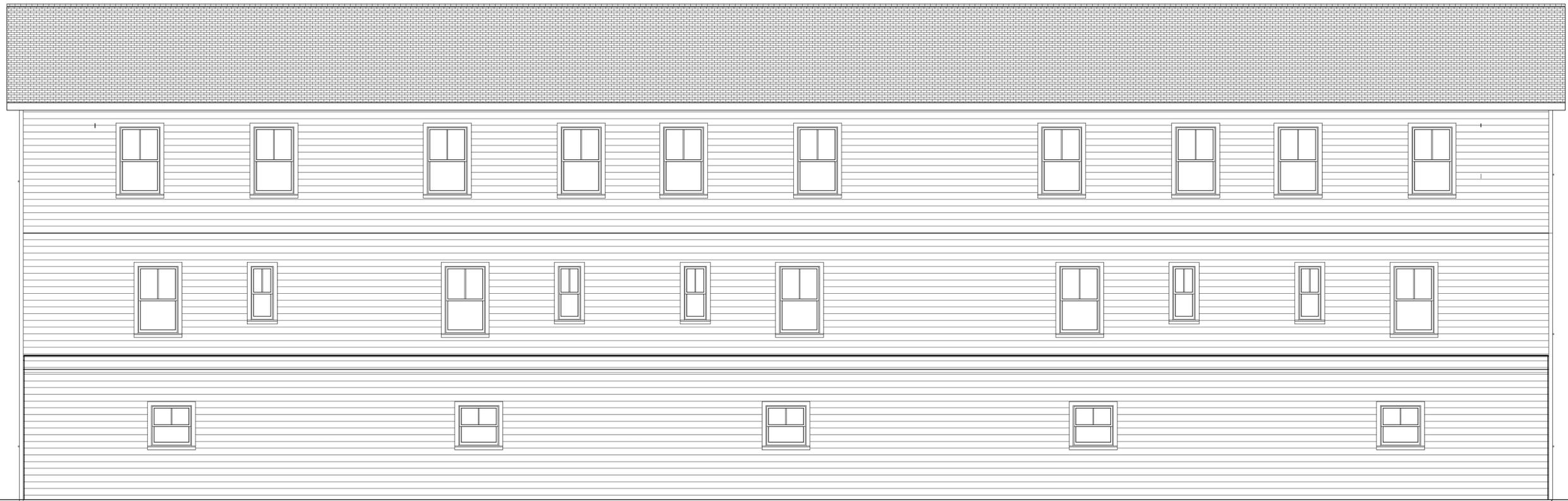
Rev #	Date:	Comments:
Rev A	09/18/23	
Rev B	10/02/23	



**1208 Swan Street  
Kill Devil Hills, NC**



FRONT  
SCALE: 1/4" = 1'



REAR  
SCALE: 1/4" = 1'

These drawings and the accompanying specifications are instruments of service and as such are and shall remain the property of Linda Ihle Design & Drafting LLC and Linda Ihle. They shall not be used either in their present form or in any altered form for any work not authorized by the above.

JIM ROSE  
5 Unit Townhouse  
1208 Swan St., Kill Devil Hills, NC

PROJECT FOR:

DRAWINGS PROVIDED BY:  
Linda Ihle Design & Drafting LLC  
Kill Devil Hills NC 27948  
252-449-8422

DATE:

7/11/23

SCALE:

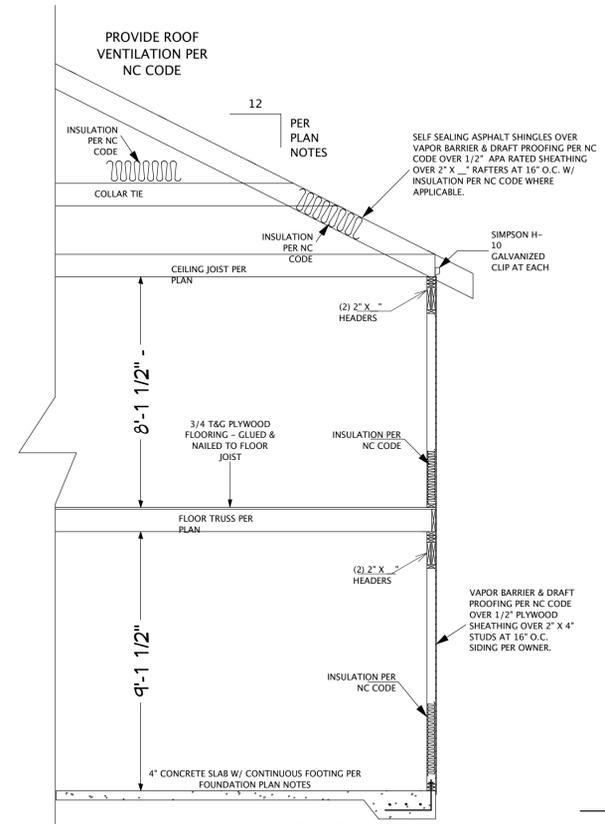
1/4"  
U.N.O.

SHEET:

1 OF 5



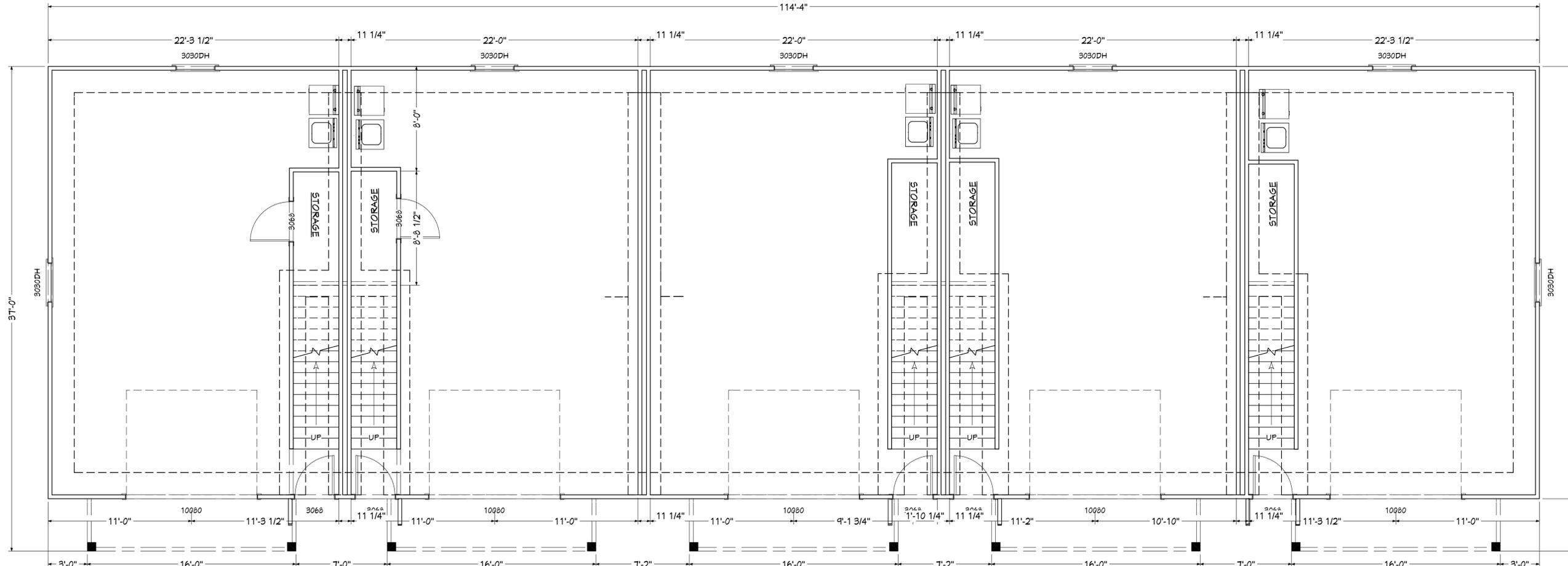
LEFT  
SCALE: 1/4" = 1'



TYPICAL WALL SECTION  
NO SCALE



RIGHT  
SCALE: 1/4" = 1'



FOUNDATION & GROUND LEVEL PLAN

SCALE: 1/4" = 1'

UNIT 1

UNIT 2

UNIT 3

UNIT 4

UNIT 5

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1208 Swan St., Kill Devil Hills, NC

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252-449-8422

DATE:

7/11/23

SCALE:

1/4"  
U.N.O.

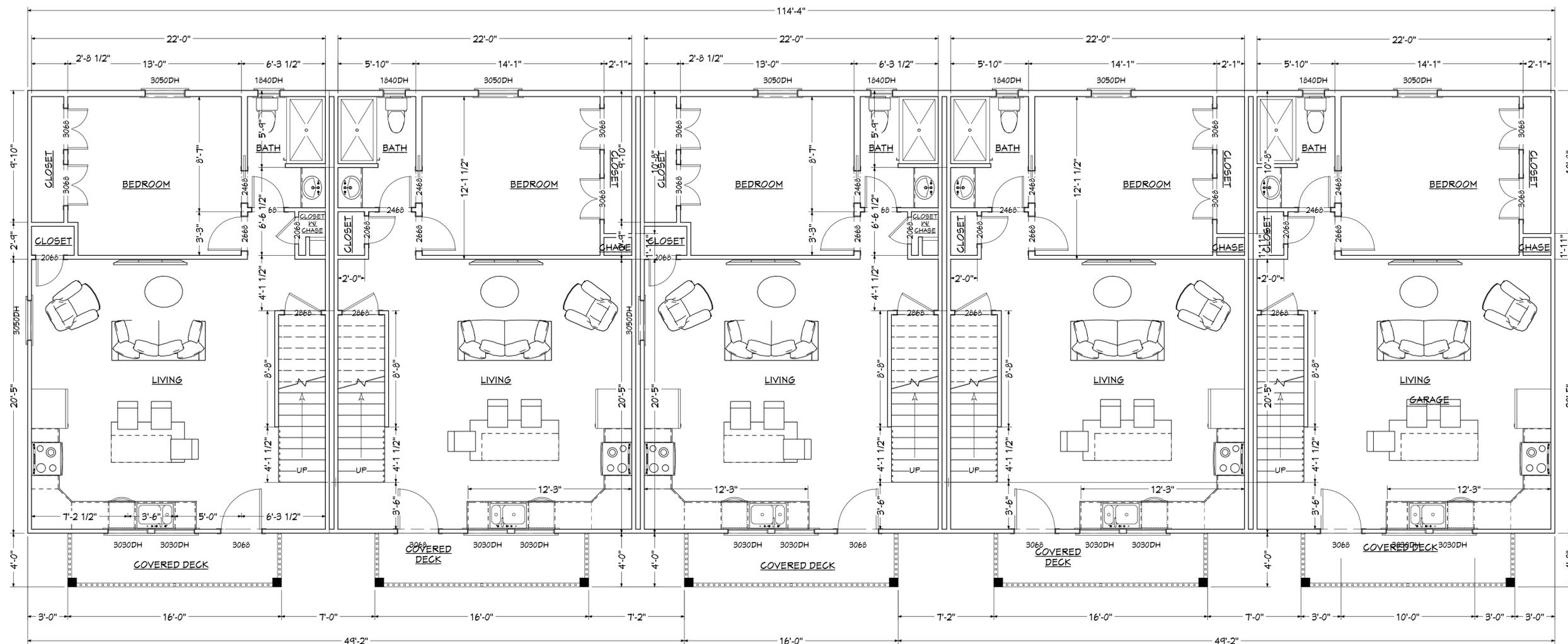
SHEET:

2 OF 5

WINDOW & DOOR SCHEDULES FOR ALL FLOORS:

DOOR SCHEDULE			
QTY	TYPE	FLOOR	SIZE
5	HINGED	3	2668 L IN
2	HINGED	1	3068 R EX
6	HINGED	3	2468 R IN
4	HINGED	3	2068 L IN
2	HINGED	2	2068 L IN
3	HINGED	1	3068 L EX
10	4 DR. BIFOLD	3	4068 L/R
2	HINGED	2	2868 R IN
2	HINGED	2	2468 R IN
1	HINGED	2	2068 L EX
2	HINGED	2	2668 L IN
2	HINGED	2	2468 L IN
1	HINGED	2	2468 R EX
3	HINGED	2	3068 L EX
4	HINGED	2	2068 R IN
2	HINGED	2	3068 R EX
2	HINGED	3	2468 L IN
6	HINGED	3	2068 R IN
10	DOUBLE HINGED	2	3068 L/R IN
3	POCKET	2	2468 R
2	HINGED	2	2668 R IN
5	GARAGE	1	10080
2	POCKET	2	2468 L
3	HINGED	2	2868 L IN
1	HINGED	1	3068 L IN
1	HINGED	1	3068 R IN
1	HINGED	2	2668 R EX
5	HINGED	3	2668 R IN

WINDOW SCHEDULE			
QTY	TYPE	FLOOR	SIZE
5	DOUBLE HUNG	2	1840DH
2	DOUBLE HUNG	3	2040DH
7	DOUBLE HUNG	2	3050DH
18	DOUBLE HUNG	3	3050DH
10	DOUBLE HUNG	2	3030DH
4	DOUBLE HUNG	3	2036DH
7	DOUBLE HUNG	1	3030DH



UNIT 1

UNIT 2

UNIT 3

UNIT 4

UNIT 5

FIRST FLOOR PLAN  
 SCALE: 1/4" = 1'  
 9' CEILING  
 HEATED AREA PER UNIT = 746 SQ. FT.  
 COVERED DECK AREA = 64 SQ. FT.  
 TOTAL ENCLOSED AREA = 3777 SQ. FT.

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JIM ROSE  
 5 Unit Townhouse  
 1208 Swan St., Kill Devil Hills, NC

PROJECT FOR:

Linda Ihle Design & Drafting LLC  
 Kill Devil Hills NC 27948  
 252-449-8422

DATE:

7/11/23

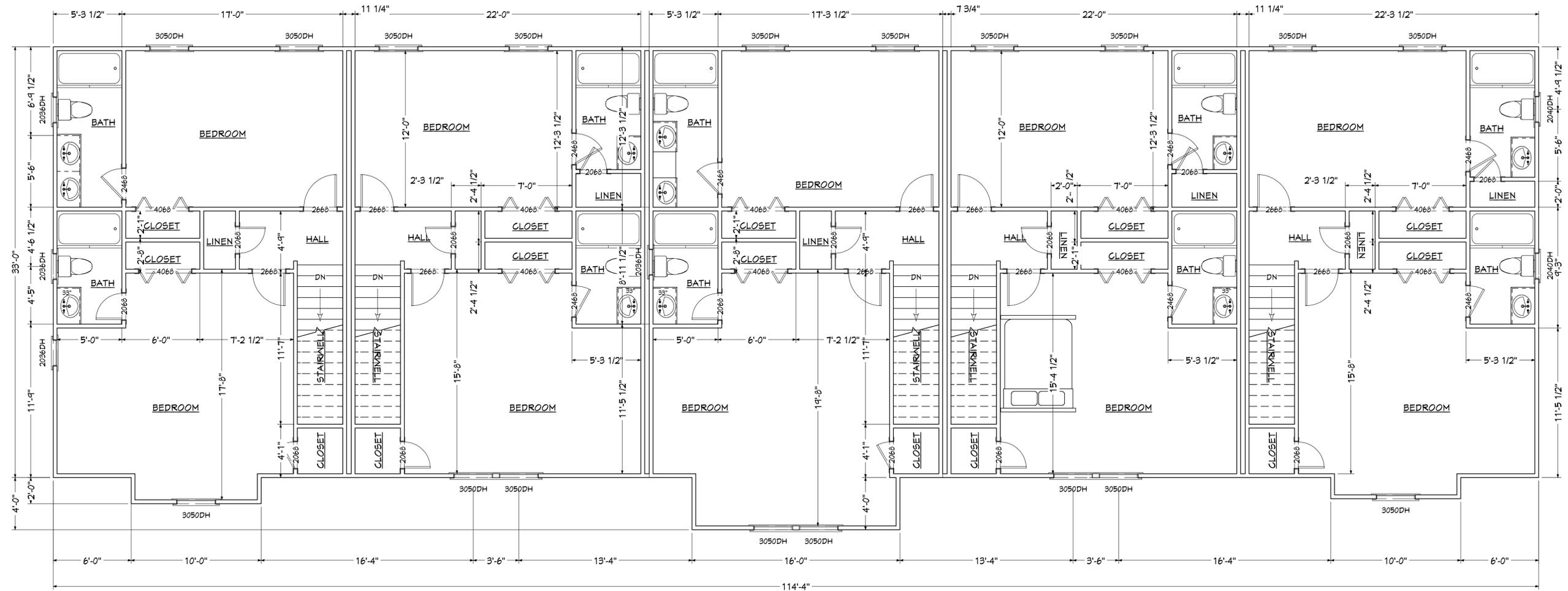
SCALE:

1/4" U.N.O.

SHEET:

3 OF 5

PROOF COPY NOT FOR CONSTRUCTION



**UNIT 1**  
HEATED AREA  
= 715 SQ. FT.

**UNIT 2**  
HEATED AREA  
= 693 SQ. FT.

**UNIT 3**  
HEATED AREA  
= 809 SQ. FT.

**UNIT 4**  
HEATED AREA  
= 693 SQ. FT.

**UNIT 5**  
HEATED AREA  
= 715 SQ. FT.

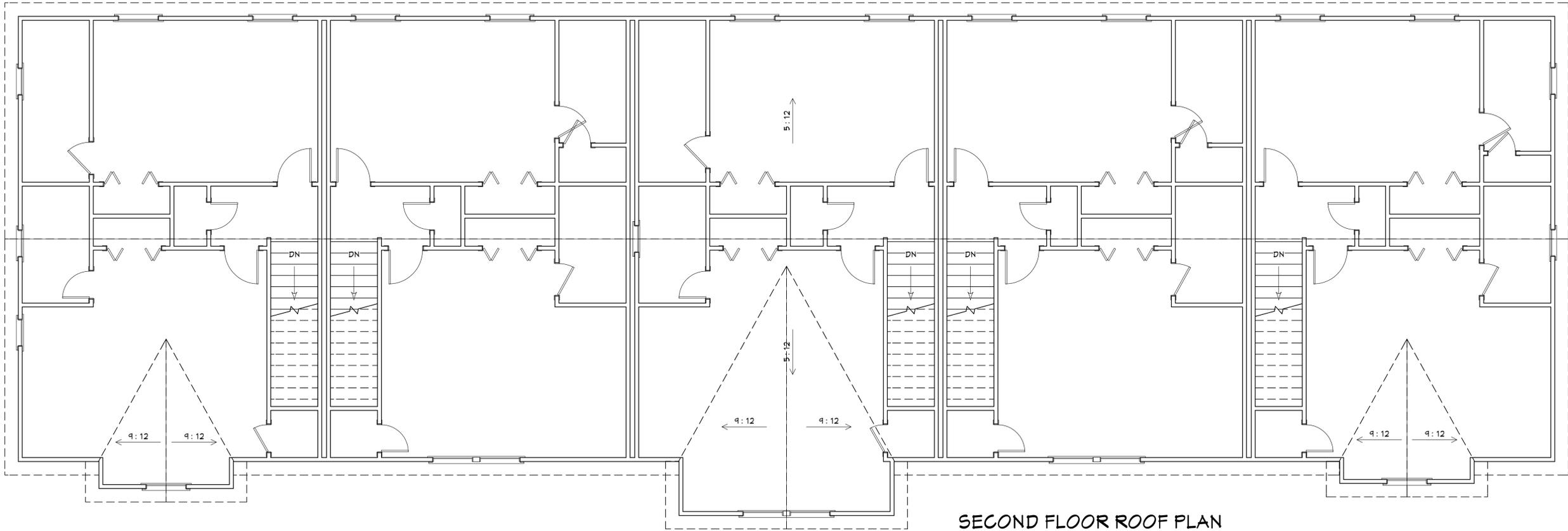
**SECOND FLOOR PLAN**  
SCALE: 1/4" = 1'  
8' CEILING  
TOTAL ENCLOSED AREA = 3656 SQ. FT.

These drawings and the accompanying specifications are instruments of service and as such are and shall remain the property of Linda Ihle Design & Drafting LLC and Linda Ihle. They shall not be used either in their present form or in any altered form for any work not authorized by the above.

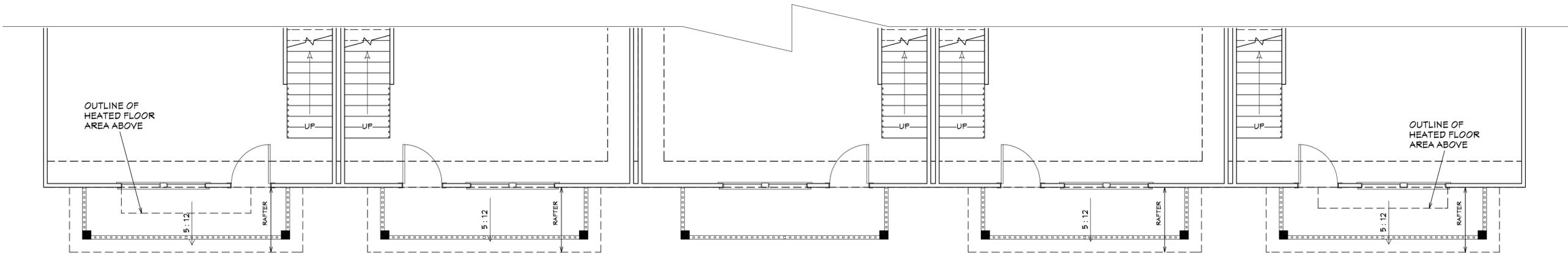
PROJECT FOR:  
**JIM ROSE**  
5 Unit Townhouse  
1208 Swan St., Kill Devil Hills, NC

DRAWINGS PROVIDED BY:  
Linda Ihle Design & Drafting LLC  
Kill Devil Hills NC 27948  
252-449-8422

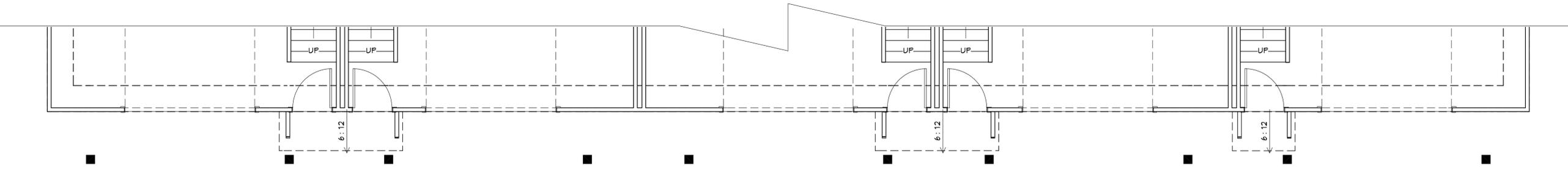
DATE:  
7/11/23  
SCALE:  
1/4"  
U.N.O.  
SHEET:  
**4 OF 5**



SECOND FLOOR ROOF PLAN  
SCALE: 1/4" = 1'



FIRST FLOOR ROOF PLAN  
SCALE: 1/4" = 1'



GROUND LEVEL ROOF PLAN  
SCALE: 1/4" = 1'

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**JIM ROSE**  
5 Unit Townhouse  
1208 Swan St., Kill Devil Hills, NC

PROJECT FOR:

DRAWINGS PROVIDED BY:  
Linda Ihle Design & Drafting LLC  
Kill Devil Hills NC 27948  
252-449-8422

DATE:

7/11/23

SCALE:

1/4"  
U.N.O.

SHEET:

5 OF 5