Planning and Development Department
156 CHURCH STREET, HENDERSON, NC 27536
(252) 738-2080 / FAX 738-2089

Staff Report 06/11/2015

Owner: Sallie Ann Hildenbrand, Charles Davis, Virginia Craven, and Frederick Smith

Applicant: Kelly Solar, LLC

Parcel ID: 0381 01001

Location: 3335 Glebe Road; northeast corner of intersection at Kelly Road and Glebe Road

Current Zoning: (A-R) Agricultural Residential

Quasi-Judicial Hearing: 06/11/2015

Prepared by: David Robinson

Description of Conditional Use Permit Request:

The applicant is requesting a conditional use permit to allow construction of a 5 MW solar farm under the use category of "Solar Energy System, Large Scale".

Exhibits as follows:

Exhibit 1. Application & signature pages
Exhibit 2. Statement of justification
Exhibit 3. NCDOT driveway permit
Exhibit 4. Stormwater permit
Exhibit 5. NC DENR Permit (*submitted since 5/14/2015*)
Exhibit 6. Driveway detail
Exhibit 7. Aerial photography/surrounding Zoning map
Exhibit 8. Topography map
Exhibit 9. Boundary survey
Exhibit 10. Shade study (*submitted since 5/14/2015*)
Exhibit 11. Site plan
Exhibit 12. Solar Farm regulations (as per zoning ordinance)
Exhibit 13. Conditional Use Permit Check List

DRAFT Findings of Fact

1. The request is for a conditional use permit to allow a 5 MW solar farm on a parcel zoned (A-R) Agricultural Residential.
2. The property is owned by Sallie Ann Hildenbrand, Charles Davis, Virginia Craven, and Frederick Smith.
3. The property is located at 3335 Glebe Road, on the northeast corner of Kelly Road and Glebe Road.
4. The property consists of 60.4 acres of which approximately 31 acres will be the array footprint.
5. The majority of the property is wooded and the applicant plans to clear 41 acres.
6. The application requesting a conditional use permit was filed on April 1, 2015.
7. The adjoining property owners were notified on May 5, 2015.
8. The property was posted on May 5, 2015.
9. The Board of Adjustment opened the hearing and heard testimony from staff, the applicant, and affected individuals at the May 14, 2015 hearing. The Board voted to table the hearing to allow the applicant to revise the site plan for consideration of screening and buffering concerns.

Staff Comments

The applicant is requesting a conditional use permit to construct a 5 MW solar farm. As proposed, the solar farm project area would be leased from the current property owner and would cover approximately 60.4 acres, of which 31 acres would be the array footprint. The site plan calls for an 8 ft. fence with 3 strands of barbed wire.

A planted buffer is proposed along Glebe Road, west of the driveway entrance as well as along Kelly Road from the intersection of Kelly and Glebe Road to the point where the array footprint ends. The buffer planting consists of a staggered, double row of evergreen understory trees (Nellie Stevens Holly and Yaupon Holly) planted at a height of 6'. For every 100' there are three staggered crapemyrtles grouped together among the evergreen understory trees. The landscaping plan also shows a row of small evergreen shrubs fronting the road, planted at a height of 30". The applicant plans to plant a mixture of North Carolina upland meadow seed all throughout the planted buffer within the 50' setback area. A minimum of 50' of existing vegetation along Glebe Road, to the east of

	the driveway entrance, is proposed to serve as screening in front of the Reavis' property. A minimum of 35' of existing vegetation is proposed to serve as screening along the eastern property boundary. Existing vegetation will also serve as screening along the northern property boundary. According to the applicant, there are constraints in the rear of the site that prevents them from shifting the entire project north. Leaving the large pines that are along the road will throw significant shadows into the array. To provide evidence for this claim, the applicant conducted a shady study examining the throw of shadows from October through March with existing vegetation in place. It is believed these shadows will make a significant portion of the buildable area unproductive. Additionally, the understory trees along the road frontages are mostly deciduous and would lose their leaves throughout the colder months of the year. The majority of the area surrounding this property is zoned A-R (Agricultural Residential). However, there are a few residentially-zoned and occupied properties to the north of the project site on Kelly Road. Additionally, there are two occupied properties across the street from the project site on Kelly Road and several across the street on Glebe Road. A NCDOT driveway permit, E-911 address, and NC DENR Erosion and Sedimentation Control permit have all been obtained and submitted to staff. The applicant has applied for the interconnection agreement with Duke Energy Progress. The point of interconnection to electric grid is shown on the site plan, which is just north of 2711 Kelly Road. The site plan notes that interconnection to existing transmission grid will be with overhead connections and service poles. The location of the services poles have changed since the May 14 hearing. The site plan now shows the service poles to the north of the creek – no longer directly in front of James Gardner's home at 2711Kelly Road. A stream runs across the northwestern corner of the property, requiring a 100 ft. buffer (50 ft. each side), which the applicant has shown on the site plan. Running south from the stream is a jurisdictional wetland. The applicant proposes to clear some vegetation surrounding this wetland for a shade buffer. This clearing is not considered a discharge of dredge material as defined in the Clean Water Act and therefore clearing as allowed as long as no grubbing of root structures take place. The temporary construction entrance and permanent site access will be located off Glebe Road, approximately 780 feet east of the intersection of Kelly Road and Glebe Road. The applicant's site plan states that construction parking will be contained inside the property in the construction staging area and outside of the Glebe Road right of way. There is an abandoned barn and outhouse on the site, which the applicant states will be removed. The solar panels will have no moving parts and will have a relatively low profile with a height of 9-10 feet (ordinance requires less than 25 feet). In the May 14 hearing, the applicant stated that the groundcover within the site will consist of a mix of bahiagrass, buckwheat, and clover. Staff would like to put it on record during this hearing that the applicant will plant this mix within the site as a means of erosion control. The applicant states that solar components will have a UL listing and will be designed with anti-reflective coatings. No permanent lighting is proposed for this site.

	Staff Review Items - Staff would like assurance from the applicant that the proposed planted buffer allows enough space for all of the planted species to grow healthy without ill effects. - The executed pages of the interconnection agreement with Duke Energy Progress need to be submitted prior to releasing conditional use permit – could be condition of approval.

Vance COUNTY
NORTH CAROLINA

Conditional Use Permit Application

Vance County Planning & Development Department

156 Church Street, Suite 3
Henderson, NC 27536
Ph: (252) 738-2080
Fax: (252) 738-2089

For Administrative Use Only:

Case #	20150514-1
Fee Paid	$260.00 # 2520
BOA Date	5/14/15

Property Owner Information

Property Owner: Sallie Ann Hildenbrand, Charles Davis, Virginia Craven and Frederick Smith
Mailing Address: c/o Sallie Ann Hildenbrand, 17822 Woodlode Road
City: Spring State: TX Zip Code: 77379
Phone #: ( ) - Fax #: ( ) -
E-mail Address:

Applicant Information

Applicant: Kelly Solar, LLC
Mailing Address: c/o Beth Trahos, Smith Moore Leatherwood, LLC, P.O. Box 27525
City: Raleigh State: NC Zip Code: 27611
Phone #: (919) 755 - 8760 Fax #: (919) 838 - 3167
E-mail Address: beth.trahos@smithmoorelaw.com

Property Information *For multiple properties please attach an additional sheet.*

Property Address: Intersection of Kelly and Glebe Roads
Tax Map Number: 0381 01001 PIN (parcel identification #):
Type of Petition: Conditional Use Permit
Existing Zoning: A-R Proposed Zoning: n/a
Acreage: 60± acres Road Frontage:
Existing Use: vacant

Deed Reference

- ☐ Metes and bounds description attached
- ☒ Site plan/sketch of proposal attached

Statement of Justification

1. Application is hereby made for the following use: *Please explain below:*

Solar Energy Systems, Large Scale

2. The intent is to : *Check all that apply:*
   - ☒ Construct a new structure for a conditional use;
   - ☐ Repair the existing structure for the conditional use;
   - ☐ Alter and/or expand the existing structure for the conditional use;
   - ☐ Other

3. The following requirements have been provided: *Check all that apply:*
   - ☒ Site plan;
   - ☒ Property description;
   - ☒ NC DOT entrance permit (if applicable);

4. Additional information:

In order to issue a Conditional Use Permit, the Board shall consider each of the following conditions, and based on the evidence presented at the hearing(s) make findings in regards to each and must find that the issuance of the Conditional Use Permit is in the best interest of the county.

A. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

Yes ☑ No ☐

Please see the attached brief.

B. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety;

Yes ☑ No ☐

Please see the attached brief.

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;
Yes [✓] No [ ]

Please see the attached brief.

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;
Yes [✓] No [ ]

Please see the attached brief.

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.
Yes [✓] No [ ]

Please see the attached brief.

Property Owners Signature

_____ Date _____
Please sign in blue or black ink

Applicants' Signature

Kelly Solar, LLC
_____ Acting Manager Date 3/25/15
Please sign in blue or black ink

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Yes _____ No _____

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

Yes _____ No _____

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

Yes _____ No _____

Property Owners Signature

Sallie M. Hildenbrand Date February 22, 2015

Please sign in blue or black ink

Applicants' Signature

_____ Date _____

Please sign in blue or black ink

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Yes _____ No _____

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

Yes _____ No _____

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

Yes _____ No _____

Property Owners Signature

* Charles F Davis Date 2/22/15

Please sign in blue or black ink

Applicants' Signature

_____ Date _____

Please sign in blue or black ink

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Yes _____ No _____

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

Yes _____ No _____

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

Yes _____ No _____

Property Owners Signature

Virginia Ann Crawford Date 2-25-15

Please sign in blue or black ink

Applicants' Signature

_____ Date _____

Please sign in blue or black ink

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Yes _____ No _____

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

Yes _____ No _____

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

Yes _____ No _____

Property Owners Signature

Frederick L Smith Date 2/25/15

Please sign in blue or black ink

Applicants' Signature

_____ Date _____

Please sign in blue or black ink

STATE OF NORTH CAROLINA

BEFORE THE VANCE COUNTY BOARD OF ADJUSTMENT

COUNTY OF VANCE

IN RE: Kelly Solar, LLC and Sallie Ann Hildenbrand, Charles Davis, Virginia Craven and Frederick Smith
Proposed Solar Farm
Vance County Parcel Number: 0381 01001

Address: Kelly and Glebe Road, Henderson, North Carolina

STATEMENT OF JUSTIFICATION IN SUPPORT OF THE CONDITIONAL USE PERMIT APPLICATION

NOW COMES THE PETITIONER, by and through counsel of record, and respectfully requests approval of their application for a conditional use permit to operate a Solar Farm at Kelly and Glebe Road, Henderson, North Carolina. In support of this request, Petitioner provides the following information:

I. Introduction

Kelly Solar, LLC proposes to construct a solar farm on 60± acres owned by Sallie Ann Hildenbrand, Charles Davis, Virginia Craven and Frederick Smith. The property is currently zoned Agricultural Residential ("AR"). Adjacent and nearby properties are developed as homes and farms.

A solar farm is permitted in the AR district with a conditional use permit approved by the Board of Adjustment. Section 6.10(N) of the Vance County Zoning Ordinance ("Code") includes standards for the development of a solar farm. The application, including site plan and this brief, is complete and complies with all requirements of the Code.

The solar farm will contain rows of Photovoltaic (PV) cells mounted on posts set in the ground individually. The posts are set individually in an effort to minimize the amount of grading on site. These rows of PV cells are referred to as "solar arrays." The solar arrays will be fixed in place facing south in order to receive the maximum amount of solar energy. This configuration contains no moving parts. The power generated from the solar farm will be connected to the power grid for use by consumers.

Solar energy is a public necessity. Demand for electricity has increased in recent years, and our society is dependent upon conventional sources of power such as coal, gas, and nuclear energy. Conventional sources of electricity are expensive, finite resources that require significant environmental disruption and public safety risk to maintain or extract. Solar energy is a clean, cheap, unlimited resource with little environmental impact.

The proposed solar farm will consume practically no county services: no seats in county schools or on school buses, virtually no refuse or recycling needs, no special sheriff protection, no light pollution, no emissions of any kind, no demand for water from depleted aquifers and no sewage disposal.

II. Statement in Support of Application

Pursuant to Code Section 6.3, to issue a conditional use permit, the Board of Adjustment shall find the following:

A. That the use will not materially endanger the public health or safety if located according to the plan submitted and approved.

The proposed solar farm will not materially endanger the public health or safety. The site will generate almost no traffic. The solar facility will not be staffed daily; employees are expected to visit the property weekly or less frequently to check and maintain the equipment, mow the grass and make repairs. The site will have access from Glebe Road.

The proposed solar farm will protect against soil erosion and sedimentation. Care is taken to minimize grading on the site by individually setting poles to support the solar cells. The areas beneath the solar panels will be planted with grass or other suitable cover to stabilize the site. During construction, erosion control measures will be maintained in accordance with the County regulations. The site will comply with State of North Carolina and Vance County stormwater regulations.

The proposed solar farm will protect the public, community or private water supplies and avoid adverse impacts on surface water or ground water. As there will be no employees on site, there is no need for utilities. State environmental buffers will be maintained and respected.

B. That the use meets all required conditions and specifications.

Pursuant to Zoning Ordinance Section 6.10(N), the proposal must comply with the following use-specific requirements:

> 1. Height: Systems, equipment and structures shall not exceed twenty-five (25) feet in height when ground mounted. Excluded from this height requirement, however, are electric transmission lines and utility poles. Roof mounted systems shall not exceed the maximum height for the applicable zoning district.
>
> No system, equipment or structure (excluding possibly electric transmission lines and utility poles) will exceed 25' in height when measured as the ordinance specifies.
>
> 2. Setback: Active solar system structures must meet the following setbacks:

a. Ground mounted– Ground mounted solar energy systems as part of a solar farm shall meet the minimum zoning setback for the zoning district in which it is located.

The minimum zoning setbacks for the AR district are: front 50 feet, side 25 feet, rear 35 feet. As shown on the accompanying site plan, the ground mounted solar systems meet or exceed these setbacks.

3. Screening and Fencing: Adequate fencing shall be provided along the perimeter of the area (with all entrances gated) to prevent trespassing on the property.

The active area of the solar farm will be enclosed by a six foot (6') high fence

4. Lighting: All lighting shall be arranged and shaded so as to reflect the light away from adjoining properties and streets.

Lighting, if any, will be arranged and shaded away from adjoining properties and streets.

5. Noise: Noise levels measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.

Solar farms are quiet. The solar arrays have no moving parts. The only sound occurs during daylight hours with the quiet hum of electrical transformers, invertors and substation delivering solar power to the power grid. Similar facilities are located in neighborhoods to deliver power to homes. At night, when the sun is not available, there is no energy being created and no noise on the site.

6. Power Transmission Lines: To the extent practical, all new power transmissions lines to any building, structure or utility connection shall be located underground. Existing above ground utility lines shall be allowed to remain in their current location.

But for the point of interconnection, all new power transmission lines will be located underground.

7. Approved Solar Components: Electric solar system components must have a UL listing.

All solar system components to be located on the property have a UL listing.

8. Compliance with Building and Electrical Codes: All solar farms shall be in conformance with the requirements of the State Building and Electrical Codes (current addition), the State of North Carolina and Vance County. All active solar systems shall be inspected by a Vance County building inspector.

The solar farm will be in conformance with the requirements of the current editions of the State Building and Electrical Codes.

9. Utility Notification: No grid tied photovoltaic system shall be installed until evidence has been given to the Planning and Development Department that the owner has been approved by the utility company to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

Noted. Applicant has applied for the interconnection agreement with Duke Energy Progress. Applicant is pursuing same with great diligence and an agreement with Duke Energy Progress is anticipated.

10. Abandonment: It is the responsibility of the owner to notify the County and to remove all obsolete or unused systems within twelve (12) months of cessation of operations. Reusable components are to be recycled whenever possible.

Noted.

C. That the use will not substantially injure the value of adjoining or abutting property, or that the use is a public necessity.

The proposed use will not injure the value of adjoining or abutting properties. Solar farms are quiet. The solar arrays have no moving parts. The only sound occurs during daylight hours with the quiet hum of electrical transformers, invertors and substation delivering solar power to the power grid. Similar facilities are located in neighborhoods to deliver power to homes. At night, when the sun is not available, there is no energy being created and no noise on the site. Solar farms generate fewer vehicles trips than the average home. Employees visit the site once a week or even less frequently. Solar panels are designed to absorb light, rather than reflect it.

D. That the location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located and in general conformity with the Vance County Land Use Plan.

The proposed solar farm is consistent with the residential and agricultural land use pattern that exists in the area today. Solar farms make good neighbors: they are quiet and they do not create dust or odor as farming can. Solar farms generate fewer vehicle trips than the average home. Solar panels are shorter in height than a typical home or barn. When mounted on racks, the panels will be less than 10' in height. A landscaped buffer yard will provide a transition between the solar farm and the adjacent home to the west.

Use of the property as a solar farm allows owners to maintain large tracts of land that would otherwise have to be sold for development as yet another subdivision. Allowing the property to develop as a solar farm maintains the rural character of the area while providing a sustainable benefit to the community.

The proposed solar farm is consistent with the Vance County Land Use Plan ("Plan"). The Property is located in the Williamsboro Township. The Plan recommends future development around the community of Williamsboro to the advantage of Vance County, stating that:

> Although crops have been reduced in the county, it is important to protect the very productive prime soils due to their potential for productivity. Because there are productive soils in close proximity to these development communities, it is important for these development communities to exist in order that conflicts can be minimized between development and the agricultural community.

Permitting the non-obtrusive, environmentally friendly, renewable electricity facility proposed demonstrates the County's commitment to sustainable growth and minimizes conflict between development and the agricultural community. The proposed solar farm has no need of public utilities. While solar farms are good neighbors to residential and agricultural land uses. Permitting the proposed solar farm protects the current surrounding land uses while introducing those non-residential uses recommended in the Plan.

COPY

E-MAILED
3-26-15
clf

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

DIVISION OF HIGHWAYS
Division Five

ANTHONY J. TATA
SECRETARY

321 Gillburg Road
Henderson, North Carolina 27537
Telephone (252) 492-0111
Fax (252) 492-0123
3/20/2015

DRIVEWAY PERMIT: D53-91-15-005

COUNTY: Vance

Sallie M. Hildenbrand
17822 Woodlode Lane
Spring, TX 77379

SUBJECT: Driveway Permit Onto SR1308(682' from the intersection of SR1326 and SR1308 toward NC39)

Attached for your file is a copy of the Driveway Permit which you requested.

This permit is approved with the understanding the owner/agent is responsible for the proper construction of the above drive and subject to the attached Special Provisions.

Please refer to Permit D53-91-15-005 in all future correspondance with this office concerning this drive. Should you have any questions, please contact this office at (252) 492-0111.

Sincerely,

Stephen D. Winstead, P.E.
District Engineer

cc: J. R. Hopkins, P. E., Division Engineer
County Maintenance Engineer

D53-91-15-005

Driveway Permit Special Provisions

1 Two-way traffic shall be maintained at all times on SR1308 .

2 Owner/Agent shall have site inspected and approved by the County Maintenance Engineer/ District Office prior to seeding the entrances. Failure to do so will jeopardize the acceptance of this project.

3 Lane closures shall be restricted to between 9:00 am and 4:00 p.m. NCDOT reserves the right to further limit, restrict, or suspend operations within the right of way if, in the opinion of NCDOT, safety or traffic conditions warrant such action. All traffic control shall be in accordance with the current MUTCD guidelines. No work shall be performed during holidays, special events, or any other time that traffic is unusually heavy.

4 The driveway entrances shall be located in the field as indicated on the plans, no additional driveways shall be constructed under this permit. At no time shall any vehicles be parked within the NCDOT Right of Way.

5 A $1,000.00 Performance and Indemnity Bond shall be executed and posted with the Division of Highways. The Division of Highways reserves the right to retain this bond until one calendar year after the satisfactory completion of work. A copy of this bond will be present at the construction site at all times during construction. The Division of Highways reserves the right to stop all work unless evidence of approval can be shown.

6 If encroacher is within 5' of the travel lane(s) of an undivided highway and within 10' of a divided highway with any part of his operation including but not limited to vehicles, equipment, etc., encroacher shall install a lane closure for each lane in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD).

7 Sight distance shall be free and clear of any debris, foliage, vegetation, buildings, structures, fence(s), obstructions and or earth material for a minimal sight distance of 550 feet from the proposed entrances at all times on SR1308. There will be no signage allowed on the NCDOT Right of Way unless approved by NCDOT.

8 Recommended Road Connection (Fig. 4), Driveway Turnout Grades (Fig.6), as found attached with this driveway permit SHALL be followed for entrance to be approved to eliminate drainage onto the NCDOT highway system.

9 Mr. Frank Carpenter, Vance County Maintenance Engineer, at (252) 438-8410, shall be notified 48 hours prior to beginning work and/or to schedule pipe installation inspection.

10 The minimum driveway design within NCDOT right-of-way shall be as follows for driveway: the driveway shall have 8" CABC for a minimum of 30' from edge of pavement next to SR1308 back into the subject proposed driveway access.

11 During installation of driveway additional grading may be required by applicant to provide positive drainage within the ditch line of SR1308.

12 HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

1. For unexpected occurrence that creates unusually high traffic volumes, as directed by the Engineer.
2. For New Year's Day, between the hours of 6:00 a.m. December 31st and 7:00 p.m. January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until 7:00 p.m. the following Tuesday.
3. For Easter, between the hours of 6:00 a.m. Thursday and 7:00 p.m. Monday.
4. For Memorial Day, between the hours of 6:00 a.m. Friday and 7:00p.m. Tuesday.
5. For Independence Day, between the hours of 6:00 a.m. the day before Independence Day and 7:00 p.m. the day after Independence Day.
If Independence Day is on a Friday, Saturday, Sunday or Monday, then between the hours of 6:00 a.m. the Thursday before Independence Day and 7:00 p.m. the Tuesday after Independence Day.
6. For Labor Day, between the hours of 6:00 a.m. Friday and 7:00 p.m. Tuesday.
7. For Thanksgiving Day, between the hours of 6:00 a.m. Tuesday and 7:00 p.m. Monday.
8. For Christmas, between the hours of 6:00 a.m. the Friday before the week of Christmas Day and 7:00 p.m. the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures are not required during these periods, unless otherwise directed by the Engineer.

Driveway Permit Standard Provisions

1 A copy of the permit and an approved plan(s) stamped by NCDOT will be on the site and available for inspection by DOT personnel while construction is in progress.

2 The Department of Transportation does not guarantee the right of way on this road, nor will it be responsible for any claim for damages brought by any property owner by reason of the installation.

3 If there are any existing traffic signals, signal equipment, or NCDOT signs in the area of proposed work, you shall contact Alfred Grandy at (919) 220-4600, in Durham, prior to beginning any work on State right of way. Cost to repair, relocate, or any damage to NCDOT signs, signals, or associated equipment shall be the responsibility of the Encroacher.

4 The traveling public will be warned of the construction with signing that is in accordance with the latest manual on Uniform Traffic Control Devices. Further, for construction involving lane closures, either Part VI of the MUTCD or an approved traffic control plan must accompany this agreement.

5 All materials and construction shall meet NCDOT Standards and Specifications.

6 At the end of each working day, equipment shall be parked a minimum of 30 feet from the edge of any travel lane.

7 Any drainage structure and/or curb and gutter disturbed or damaged shall be replaced to its original condition at the discretion of the District Engineer.

8 All erosion control devices and measures shall be constructed, installed, maintained, and removed by the Encroacher in accordance with all applicable Federal, State, and Local laws, regulations, ordinances, and policies. All earth areas shall be regraded and seeded in accordance with NCDOT Standards and Specifications.

9 When surface area in excess of one acre will be disturbed, the Encroacher shall submit a Sediment and Erosion Control Plan which has been approved by the appropriate regulatory agency or authority prior to beginning any work on the right of way. Failure to provide this information shall be grounds for suspension of operations.

10 All earth areas disturbed shall be regraded and reseeded in accordance with Division of Highways Standards and Specifications as follows (per acre);Year Round Mixture: 50# Pensacola Bahia Grass, 50# KY 31 Tall Fescue, 5# Centipede, 500# 10-20-20 Fertilizer, 4,000# Limestone; 2:1 Slopes Standard Mix: use year round mixture (delete centipede) add 25# Sericea Lespedeza; Crown Vetch on 2:1 Slope (Sept.- May) use year round mixture, add Crown Vetch @ 15 lb. Per acre (delete Centipede and Bahia).

11 Excavated areas adjacent to pavement having more than a 2" drop shall be safed up at a 6:1 or flatter slope and designated by appropriate delineation during periods of inactivity, including, but not limited to, night and weekend hours.

12 Excavated material shall not be placed on the roadway at anytime.

13 Please note that approval of the driveway permit does not constitute review or approval of utilities or sidewalk by NCDOT. Plans and a completed encroachment agreement shall be submitted to the District Engineer's office for review and approval.

14 It is the responsibility of the owner/agent to secure any construction easements (temporary or permanent) from property owners affected by the construction limits.

15 All right of way and easements necessary for construction and maintenance shall be dedicated to NCDOT with proof of dedication furnished to the District Engineer prior to beginning work.

16 The Applicant is responsible for identifying project impacts to waters of the United States (wetland, intermittent streams, perennial streams and ponds) located within the NCDOT right-of-way. The discharge of dredged or fill material into waters of the United States requires authorization from the United States Army Corps of Engineers (USACE) and certification from the North Carolina Division of Water Quality (NCDWQ). The Applicant is required to obtain pertinent permits or certification from these regulatory agencies if construction of the project impacts waters of the United States within the NCDOT right-of-way. Additional information can be obtained by contacting the USACE or NCDWQ.

17 The Applicant is responsible for avoiding impacts to federally protected species during project construction. Bald Eagle, Michaux's Sumac, smooth coneflower, dwarf wedgemussel, harperella, red-cockaded woodpecker and tar spinymussel are federally funded species that have been identified within NCDOT right-of-way in Durham, Person, Granville, Wake, Franklin, Vance and Warren Counties. Additional information can be obtained by contacting the North Carolina Natural Heritage Program or the United States Fish and Wildlife Service.

18 The Applicant is responsible for complying with the Neuse and Tar-Pamlico Riparian Buffer Rule as regulated by the NCDWQ. The rule regulates activity within a 50-foot buffer along perennial streams, intermittent streams and ponds. Additional information can be obtained by contacting the NCDWQ.

19 It is the responsibility of the Owner/Developer to comply with all applicable federal, state and local environmental regulations, and shall obtain all necessary federal, state and local environmental permits, including but not limited to, those related to sediment control, stormwater, wetland, streams, endangered species, archaeological and historical sites.

20 The party of the second part (developer and /or contractor) shall provide traffic control devises, lane closures, road closures, positive protection and/or any other warning or positive protection devices necessary for the safety of the motorist and workers during construction and any subsequent maintenance. This shall be performed in conformance with the latest NCDOT Roadway Standard Drawings and Standard Specifications for Roads and Structures and Amendments or Supplements thereto. When there is no guidance provided in the Roadway Standard Drawings or Specifications, comply with the Manual on Uniform Traffic Control Devices for Streets and Highways and Amendment or Supplement thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part (NCDOT).

21 Effective July 1, 2010, all flagging operations within NCDOT Right of Way require qualified and trained Work Zone Flaggers.

22 Effective July 1, 2011, qualified and trained Work Zone Traffic Control Supervisors will be required on Significant Projects

23 Training for this certification is provided by NCDOT approved training sources and by private entities that have been pre-approved to train themselves. If you have questions, contact our web site at http://www.ncdot.org/doh/preconstruct/wztc/WZTCTrainingProgram/default.html, or contact Stuart Bourne, P.E. with NCDOT Work Zone Traffic Control Unit at (919) 662-4338 or sbourne@ncdot.gov.

RECEIVED
MAR 16 2015
DIVISION OF HIGHWAYS
DIV 5 - DIST 3

National Pollutant Discharge Elimination System (NPDES)
Stormwater Permit Compliance Certification

I, KEVIN GORMAN, a duly authorized representative of KELLY SOLAR LLC, an industrial/commercial/residential facility requesting attachment to a North Carolina Department of Transportation (NCDOT) highway drainage system at 3332 GLEBE RD address, in VANCE County, do hereby certify the following:

Check appropriate box and circle type of facility

☐ The Industrial / Commercial / Residential facility does not require an NPDES stormwater permit.

☒ The Industrial / Commercial / Residential facility does require an NPDES stormwater permit. The permit has been obtained and a Stormwater Pollution Prevention Plan (SPPP) is in place. Appropriate structural stormwater best management practices (BMPs) are designed and will be in place as required by the North Carolina Department of Environment and Natural Resources (NCDENR) and/or the local governing agency. All structural stormwater BMPs are located outside of NCDOT right-of-way.

I understand if the NCDOT determines the facility is not in compliance with NPDES stormwater requirements, the Department will report the noncompliance to the NCDENR Division of Energy, Mineral and Land Resources. I also understand that falsification of this certification may result in penalty of law against the facility and me as prescribed in the North Carolina General Statutes.

Signature: _____

Date: 3/11/2015

Note: If the applicant has a question as to whether an NPDES stormwater permit is required, he or she may contact the NCDENR Division of Energy, Mineral and Land Resources in Raleigh at (919) 707-9200 (ask for Stormwater and General Permits Unit).

RECEIVED
MAR 16 2015
DIVISION OF HIGHWAYS
DIV 5 - DIST 3

VERIFICATION OF COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

(Check Appropriate Box)

☒ Permits from the N.C. Department of Environment and Natural Resources and the U.S. Army Corp of Engineers are not required for this project. However, all applicable federal and state regulations have been followed.

☐ The required permits from the N.C. Department of Environment and Natural Resources and the U.S. Army Corp of Engineers have been obtained for this project. Copies of permits and Completion Certificates are attached.

☒ All applicable NPDES Stormwater Permit requirements have been met for this project. (The applicant should contact the N.C. Division of Water Quality in Raleigh to determine if a stormwater permit is required.)
NCDENR LAND QUALITY PERMIT WILL BE OBTAINED FOR THE PROJECT.

☒ The project is in compliance with all applicable sedimentation and erosion control laws and regulations.

Project Name: KELLY SOLAR LLC

Township: WILLIAMSBORO County: VANCE

Project Engineer: DAVID KLAUSMAN Phone No.: 704-574-7631

Project Contact: KEVIN GORMAN

Applicant's Name: SALLIE M. HILDENBRAND

Date Submitted: 3/12/2015

NORTH CAROLINA PROFESSIONAL SEAL 35711 ENGINEER DAVID S. KLAUSMAN

Form VCER-1
June 1, 2006

North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

May 12, 2015

LETTER OF APPROVAL

Paul Brucke
3250 Ocean Park Boulevard, Suite 355
Santa Monica, California 90405

RE: Project Name: KELLY SOLAR
Acres Approved: 41.80
Project ID: VANCE-2015-013
County: Vance, City: Williamsboro
Address: Glebe Rd.
River Basin: Roanoke
Stream Classification: Other
Submitted By: BLOC Design
Date Received by LQS: May 21, 2015
Plan Type: Utilities

Dear Sir or Madam:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

Please be aware that your project will be covered by the enclosed NPDES Construction Stormwater General Permit NCG010000. Please become familiar with all the requirements and conditions of this permit in order to achieve compliance.

Title 15A NCAC 4B .0118(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

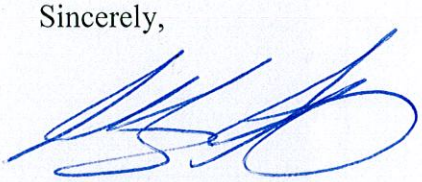
North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project. Please notify us if you plan to have a preconstruction conference.

Your cooperation is appreciated.

Sincerely,



Scott Sink
Assistant Regional Engineer
Land Quality Section

Enclosures: Certificate of Approval
NPDES Permit

cc: Bloc Design
1310 South Tryon St. Suite 111
Charlotte, NC 28203

CERTIFICATE OF PLAN APPROVAL

The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environment and Natural Resources in accordance with North Carolina General Statute 113A – 57 (4) and 113A – 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b).

KELLY SOLAR Vance Co.

Project Name and Location

VANCE-2015-013

5/12/15

Date of Plan Approval

X

NCDENR

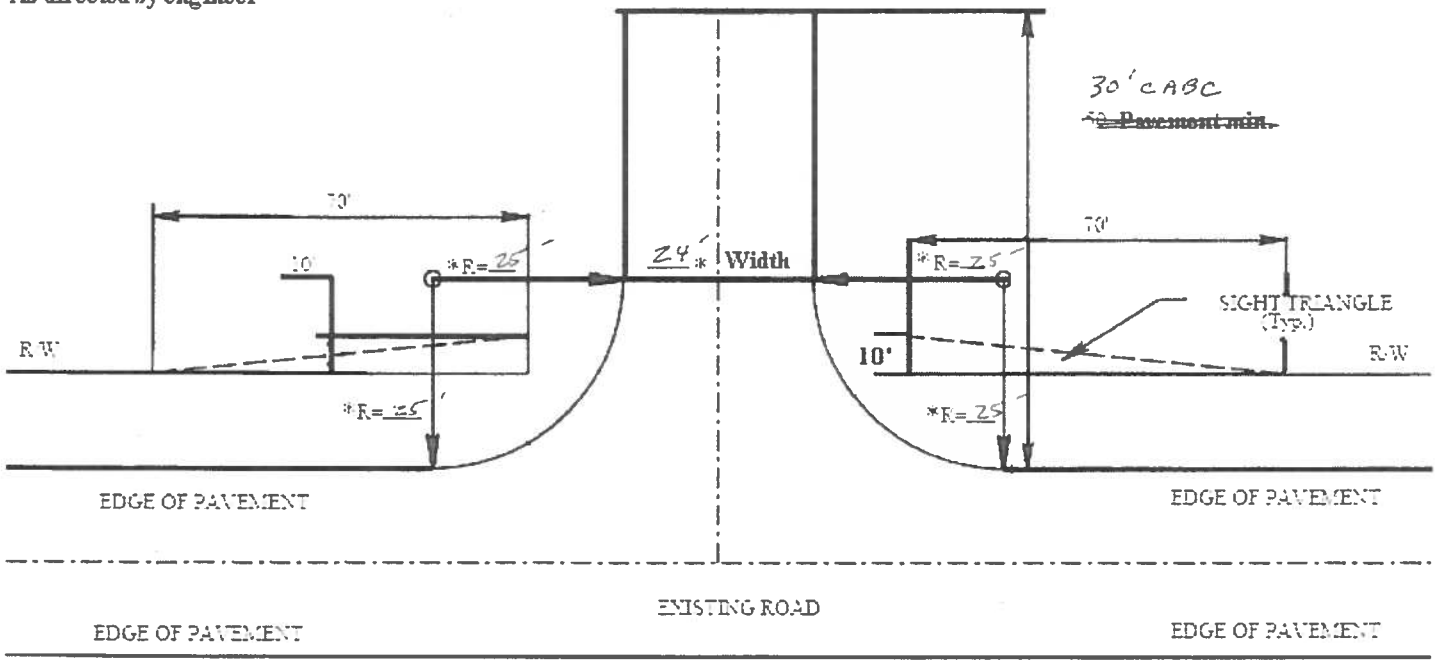
Asst.

Regional Engineer

Driveway Entrance Typical

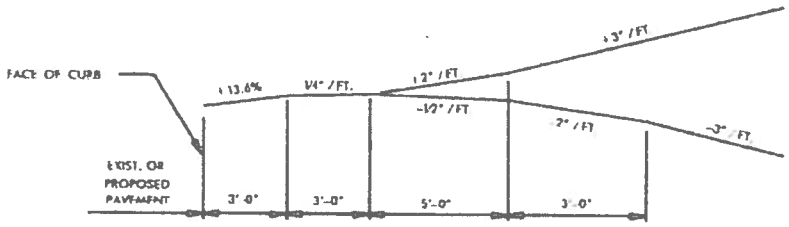
NOTE:
ADDITIONAL R/W MAY BE REQUIRED TO ACCOMODATE TAPERS. TURN LANES, AND MEDIAN ISLANDS.

* **As directed by engineer**

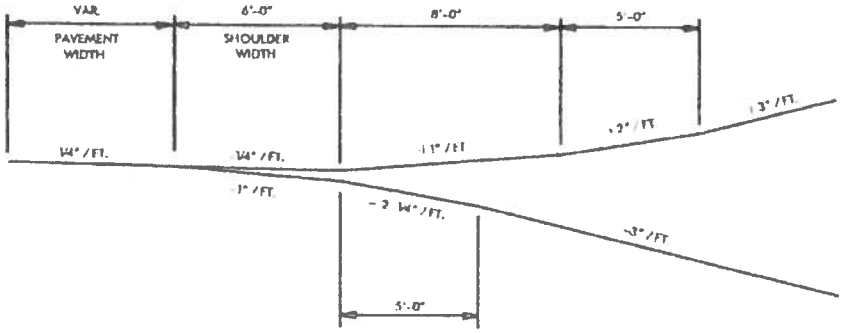


*R= 25' Radius
*W= ~~28'~~ 24' Driveway

Figure 4



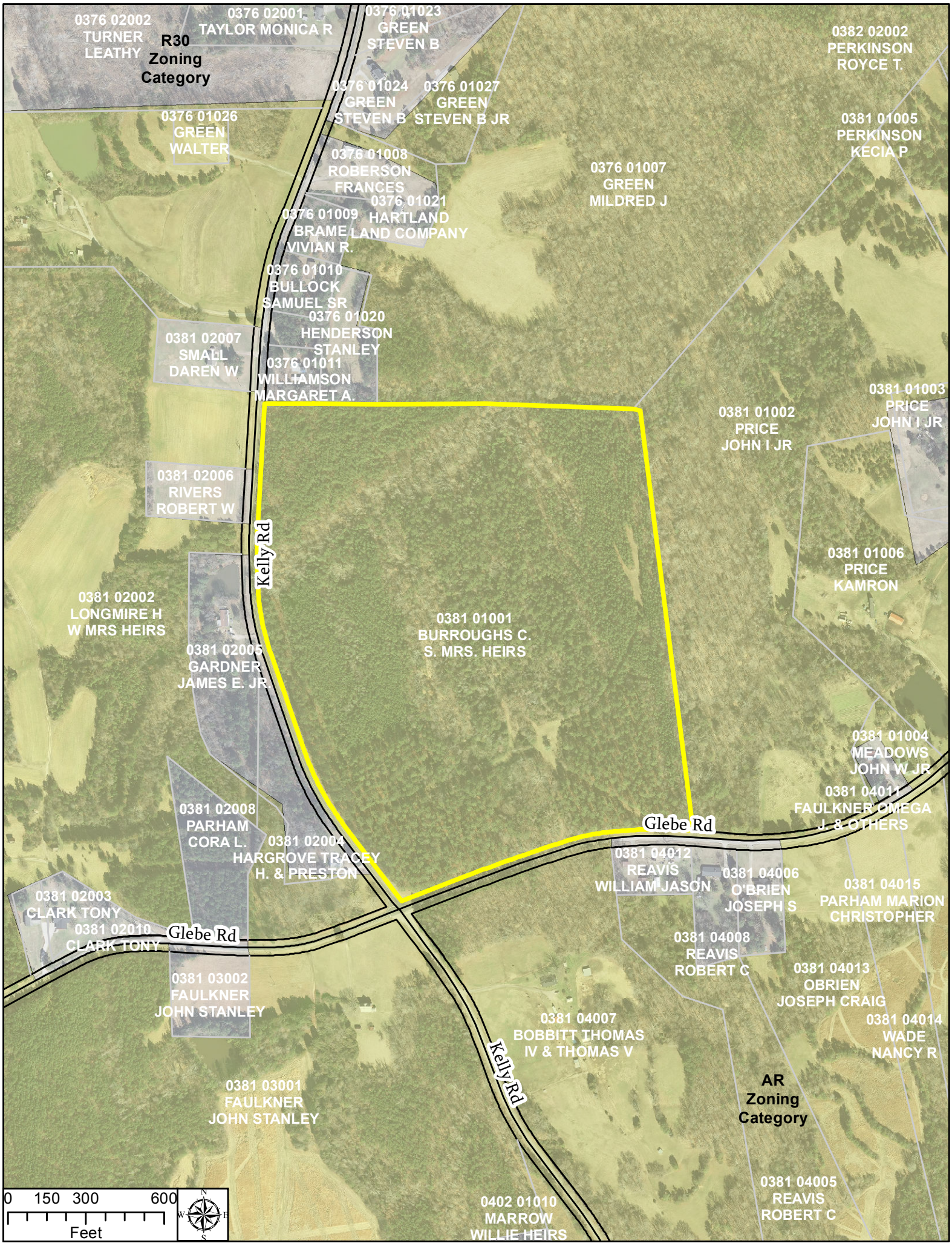
A. CURB & GUTTER SECTION



B. SHOULDER SECTION

FIGURE 6

DRIVEWAY TURNOUT GRADES


0376 02002
TURNER
LEATHY
R30
Zoning
Category
0376 02001
TAYLOR MONICA R
0376 01023
GREEN
STEVEN B
0382 02002
PERKINSON
ROYCE T.
0376 01024
GREEN
STEVEN B
0376 01027
GREEN
STEVEN B JR
0376 01026
GREEN
WALTER
0381 01005
PERKINSON
KECIA P
0376 01008
ROBERSON
FRANCES
0376 01007
GREEN
MILDRED J
0376 01021
HARTLAND
LAND COMPANY
0376 01009
BRAME
VIVIAN R.
0376 01010
BULLOCK
SAMUEL SR
0376 01020
HENDERSON
STANLEY
0381 02007
SMALL
DAREN W
0376 01011
WILLIAMSON
MARGARET A.
0381 01003
PRICE
JOHN I JR
0381 01002
PRICE
JOHN I JR
0381 02006
RIVERS
ROBERT W
Kelly Rd
0381 01006
PRICE
KAMRON
0381 02002
LONGMIRE H
W MRS HEIRS
0381 01001
BURROUGHS C.
S. MRS. HEIRS
0381 02005
GARDNER
JAMES E. JR.
0381 01004
MEADOWS
JOHN W JR
0381 04011
FAULKNER OMEGA
J. & OTHERS
0381 02008
PARHAM
CORA L.
0381 02004
HARGROVE TRACEY
H. & PRESTON
Glebe Rd
0381 04012
REAVIS
WILLIAM JASON
0381 04006
O'BRIEN
JOSEPH S
0381 04015
PARHAM MARION
CHRISTOPHER
0381 02003
CLARK TONY
0381 02010
CLARK TONY
Glebe Rd
0381 04008
REAVIS
ROBERT C
0381 04013
OBRIEN
JOSEPH CRAIG
0381 03002
FAULKNER
JOHN STANLEY
0381 04007
BOBBITT THOMAS
IV & THOMAS V
0381 04014
WADE
NANCY R
Kelly Rd
AR
Zoning
Category
0381 03001
FAULKNER
JOHN STANLEY
0381 04005
REAVIS
ROBERT C
0402 01010
MARROW
WILLIE HEIRS
0 150 300 600
Feet
N
W
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S

Kelly Rd
Glebe Rd
Glebe Rd
Kelly Rd
0 100 200 400
Feet
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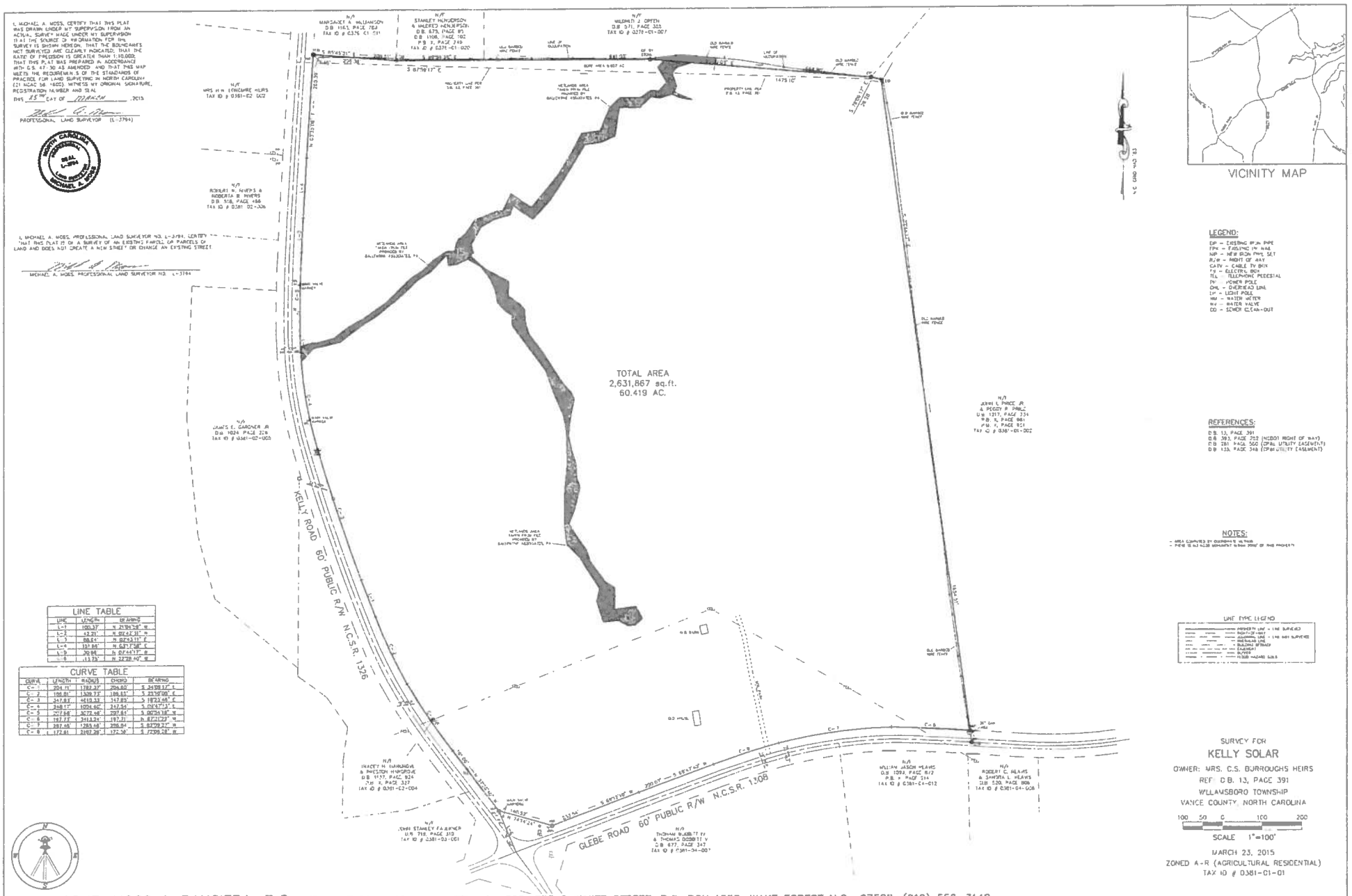
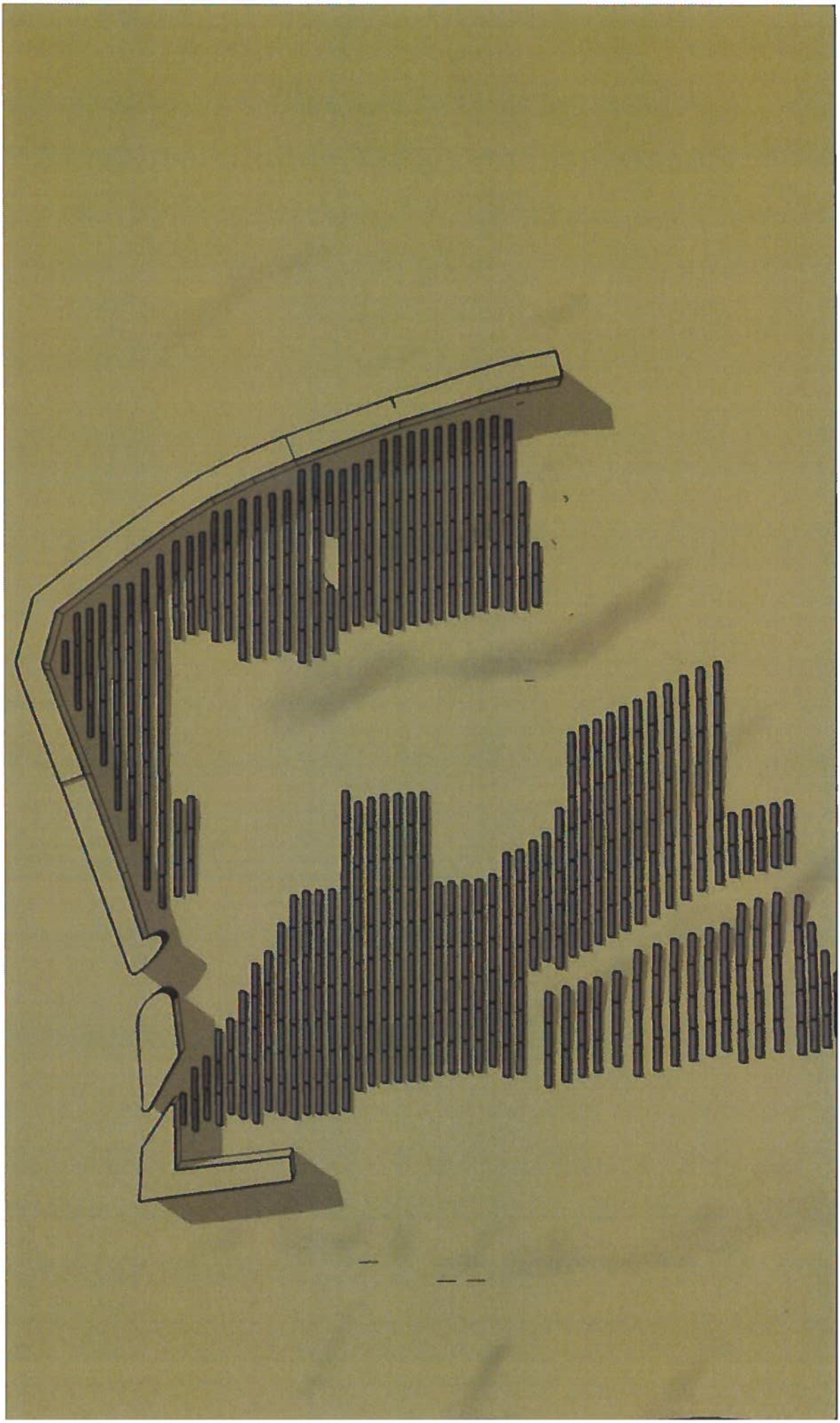
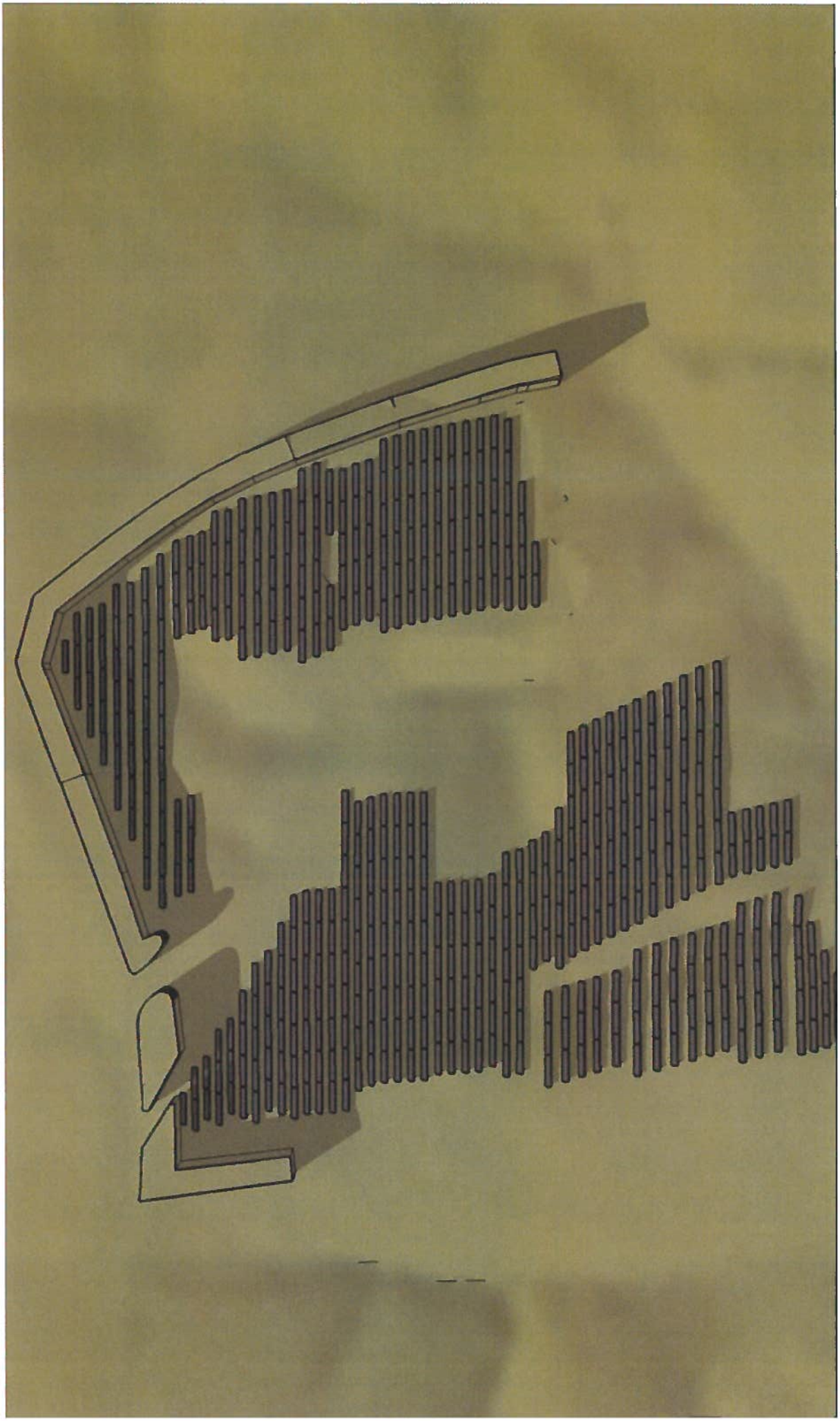
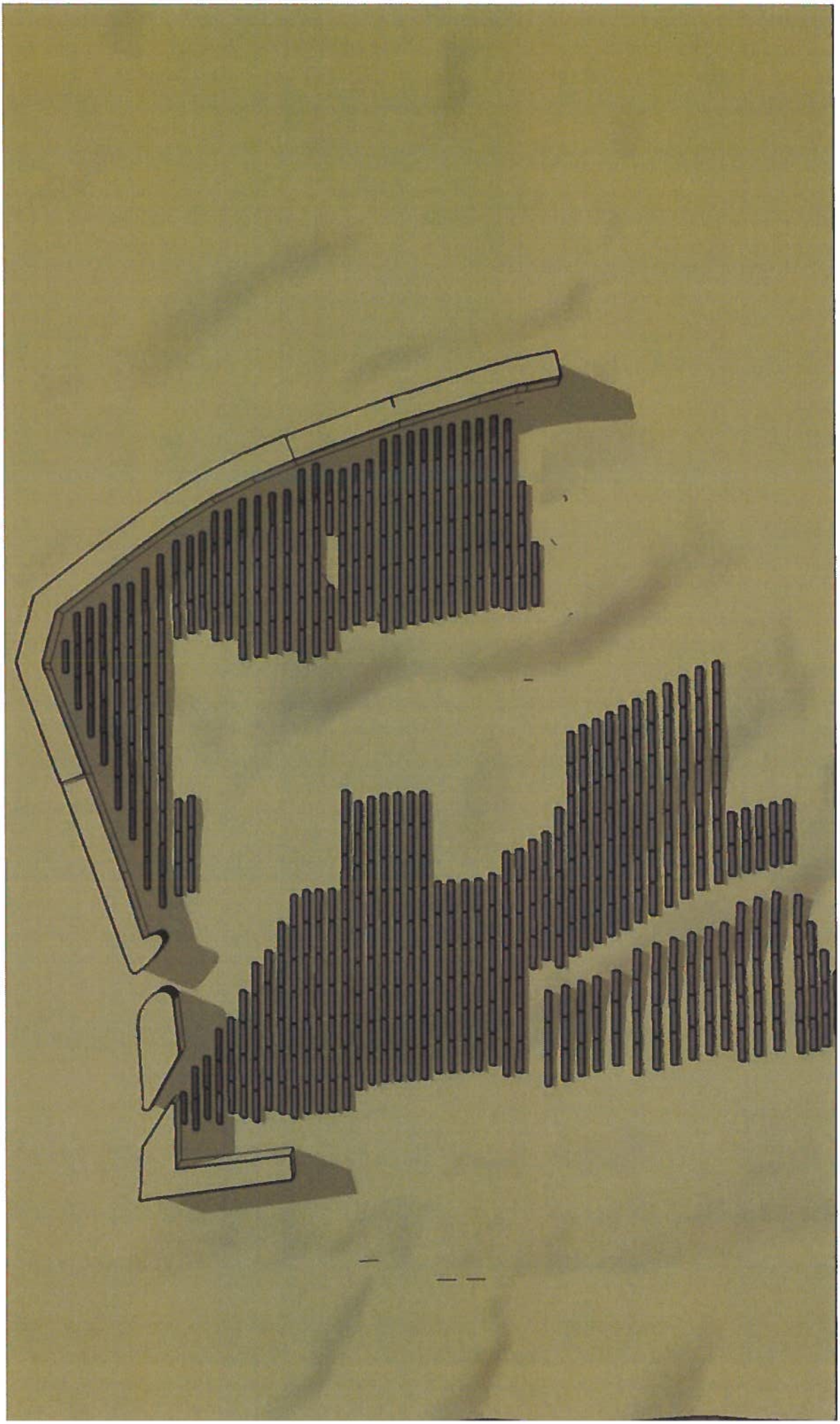
Streams
2 ft Contours

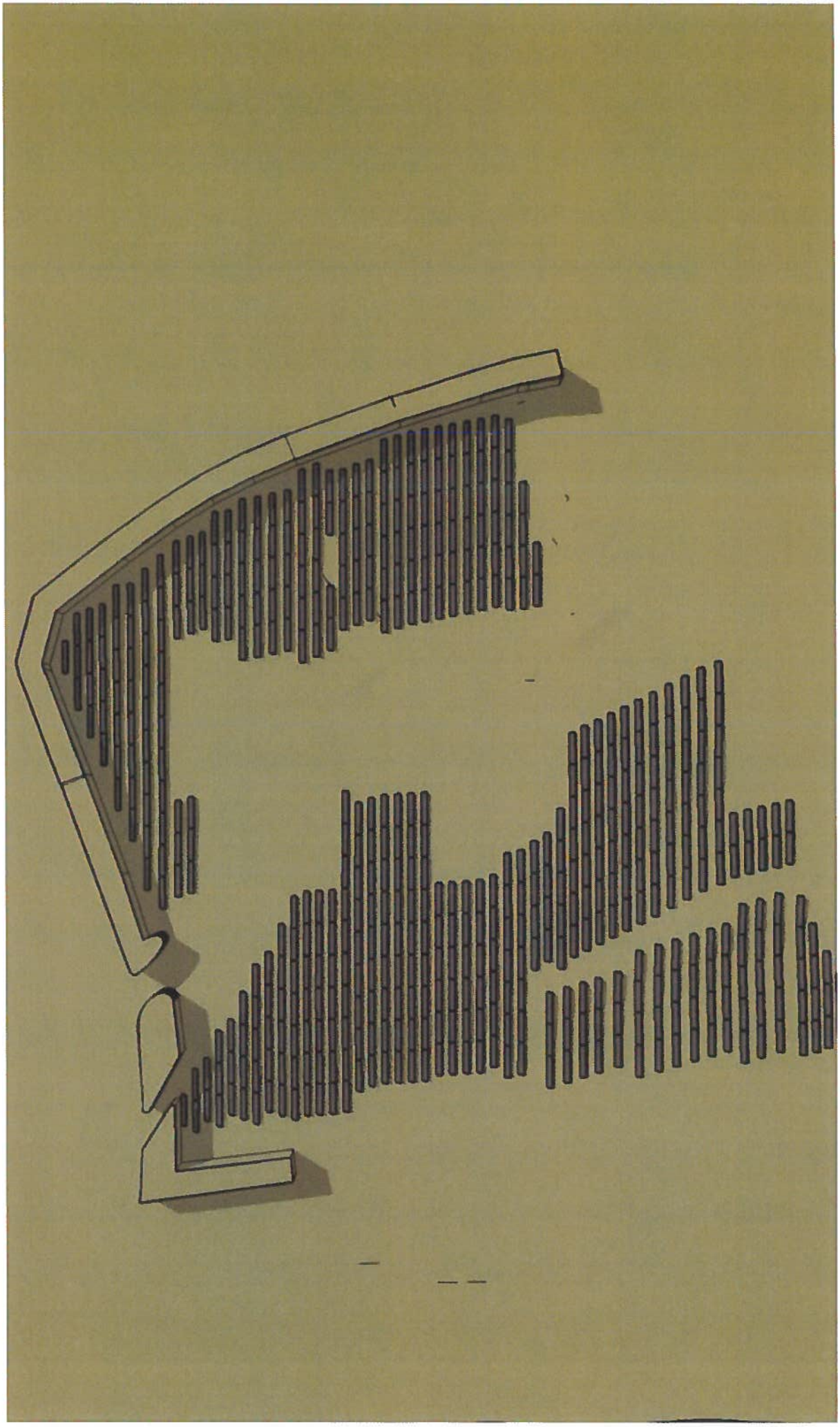


CAWTHORNE, MOSS & PANCIERA, P.C. PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148









Use Type	AR	R30	R20	R10	RMHC	HC	GC1	LI	IM	EIA	OI	OS	WOZ	Parking-Loading
Adult Establishments	X	X	X	X	X	CU	CU	CU	X	X	X	X	X	Parking: 4 per 1,000 SF Loading: N/A
Airports	CU	X	X	X	X	X	CU	CU	CU	CU	CU	X	X	Special Study Required***
Commercial Communications Towers (Cell Towers)	CU	X	X	X	X	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 2 per tower Loading: 1
Cemetery (Church, Family)	P	P	P	CU	X	X	X	X	X	X	X	P	CU	N/A
Cemetery (Commercial)	P	CU	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 6 per 1,000 SF of office-building Loading: 1
Shooting Ranges	CU	X	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 1.5 per shooting station Loading: 1
Solar Collector (Accessory)	P	P	P	P	P	P	P	P	P	P	P	P	P	N/A
Solar Energy Systems, Large Scale (Solar Farms)	CU	X	X	X	X	X	X	CU	CU	CU	CU	X	X	Parking: 1/every 2 employees on shift of greatest employment
TEMPORARY USES														
Commercial (temporary-see Definitions) Outdoor Sales	P	P	X	X	X	P	P	P	P	P	P	P	P	Parking: staff review Loading: N/A
Concrete/Asphalt Operations	X	X	X	X	X	X	X	CU	P	X	X	X	X	Parking: staff review Loading: 1 per vehicle
Contractor's Office (located at project site for duration of project)	CU	CU	X	X	X	CU	CU	CU	P	CU	CU	X	CU	Parking: 1 per 200 SF Loading: N/A
Farmstand	P	P	X	X	X	P	P	P	X	X	X	P	P	Parking: 8 spaces Loading: N/A
Manufactured Housing Unit for Office and/or Exhibition	CU	CU	CU	CU	P	P	P	P	X	X	CU	CU	CU	Parking: 1 per vehicle Loading: N/A
Manufactured Home for Hardship	CU	CU	CU	CU	P	X	X	X	X	X	X	X	CU	Parking: 2 per dwelling unit Loading: N/A
Public Interest Event and/or Special Event	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1/patron Loading: 1 per vehicle
Temporary Miscellaneous Sales (see Definitions)	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1 per vehicle Loading: N/A

*****See Section 6.10.L**

c. *Warning signs.* Warning signs meeting National Rifle Association (NRA) guidelines for shooting ranges shall be posted at one hundred-foot intervals along the entire perimeter of the shooting range facility and along the entire perimeter of the property lines in the same intervals.
d. *Distance from occupied dwelling.* All shooting stations, targets, and firing lines shall be located at least one-half (1/2) mile from any existing, occupied dwelling.
e. *Access to facility.* Access to the facility and shooting range shall be secured and controlled, with ingress and egress permitted only during operating hours as established below. Prior to issuance of a permit, a valid driveway permit must be obtained from North Carolina Department of Transportation.
f. *Written variance.* The distance requirements of this section may be varied with written permission in the form of an affidavit from all adjoining property owners and all rightful leaseholders of dwellings located within the ½ mile surrounding area affected thereby, except that written approval is not needed for any adjoining land owned by the State of North Carolina.

5. Operational Requirements:
   a. *Maintenance.* Where not otherwise specified within this ordinance, shooting range facilities shall be operated and maintained in a manner that shall meet or exceed the guidelines as specified by the Range Technical Team Advisor upon inspection going by the guidelines in the NRA's Range Source Book: A Guide to Planning and Construction, current edition.
   b. *Best Management Practices.* Outdoor Shooting Ranges shall provide a plan outlining its Best Management Practices (BMPs) relating to lead management. Said plan shall meet or exceed the guidelines as specified by the Environmental Protection Agency's (EPA) Best Management Practices for Lead at Outdoor Shooting Ranges, current edition.
   c. *Hours of operation.* Shooting Ranges shall be allowed to operate between sunrise and sunset Monday through Saturday, except that the hours may be extended after sunset for purposes of subdued-lighting certification of law enforcement officers, or may be extended for other purposes only when a permit allowing such activity is issued in advance by the Sherriff's Office.
   d. *Liability insurance.* The permittee shall be required to carry a minimum of three million dollars ($3,000,000.00) per occurrence of liability insurance. Such insurance shall name Vance County as an additional insured party and shall save and hold Vance County, its elected and appointed officials, and employees acting within the scope of their duties harmless from and against all claims, demands, and causes of action of any kind or character, including the cost of defense thereof, arising in favor of a person or group's members or employees or third parties on account of any property damage arising out of the acts or omissions of the permittee, his/her group, club, or its agents or representatives. The County shall be notified of any policy changes or lapses in coverage.

N. Solar Energy Systems, Large Scale (Solar Farms)

1. Height: Systems, equipment and structures shall not exceed twenty-five (25) feet in height when ground mounted. Excluded from this height requirement, however, are

electric transmission lines and utility poles. Roof mounted systems shall not exceed the maximum height for the applicable zoning district.

2. Setback: Active solar system structures must meet the following setbacks:
    a. Ground mounted– Ground mounted solar energy systems as part of a solar farm shall meet the minimum zoning setback for the zoning district in which it is located.
3. Screening and Fencing: Adequate fencing shall be provided along the perimeter of the area (with all entrances gated) to prevent trespassing on the property.
4. Lighting: All lighting shall be arranged and shaded so as to reflect the light away from adjoining properties and streets.
5. Noise: Noise levels measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.
6. Power Transmission Lines: To the extent practical, all new power transmissions lines to any building, structure or utility connection shall be located underground. Existing above ground utility lines shall be allowed to remain in their current location.
7. Approved Solar Components: Electric solar system components must have a UL listing.
8. Compliance with Building and Electrical Codes: All solar farms shall be in conformance with the requirements of the State Building and Electrical Codes (current addition), the State of North Carolina and Vance County. All active solar systems shall be inspected by a Vance County building inspector.
9. Utility Notification: No grid tied photovoltaic system shall be installed until evidence has been given to the Planning and Development Department that the owner has been approved by the utility company to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
10. Abandonment: It is the responsibility of the owner to notify the County and to remove all obsolete or unused systems within twelve (12) months of cessation of operations. Reusable components are to be recycled whenever possible.

O. WIRELESS COMMUNICATIONS TOWERS ("CELL TOWERS")

1. The purpose of the following requirements is to promote and to protect the public health, welfare, and safety by regulating existing and proposed communication towers. The requirements are intended to protect property values, create a more attractive economic and business climate, and enhance and protect the scenic and natural beauty of designated areas.
2. *General Requirements.* When allowed, such towers and associated equipment shall be subject to the following additional requirements:
    a. Towers shall not interfere with normal radio and television reception in the vicinity. Commercial messages shall not be displayed on any tower. Violations shall be considered zoning violations and shall be corrected under the enforcement provisions.
    b. Lighting shall not exceed the Federal Aviation Administration (FAA) minimum if lighting is required by the FAA. The lights shall be oriented so as not to project directly onto surrounding residential property, consistent with FAA requirements. Prior to issuance of a building permit, the applicant shall be required to submit documentation from the FAA that the lighting is the minimum lighting required by the FAA.
    c. Towers shall be constructed and maintained in conformance with all applicable building code requirements.
    d. In order to protect the public from unnecessary exposure to electromagnetic radiation, the tower owner shall provide appropriate

Conditional Use Permit Check Sheet

1. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

2. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

3. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

4. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that the use is a public necessity;

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	

5. The use or development will be in harmony with the area in which it is to be located and will be in general conformity with the plan of development of the County.

	True	False		True	False		True	False	TOTAL
Alston:	☐	☐	Harvin:	☐	☐	Stainback:	☐	☐	
Brummitt:	☐	☐	Johnson:	☐	☐	Alternate 1:	☐	☐	
Haley:	☐	☐	Shaw:	☐	☐	Alternate 2:	☐	☐	