MCPB
Item No. 6
Date: 7-9-2020

Cedar Ridge Community Solar, Site Plan No. 820200040

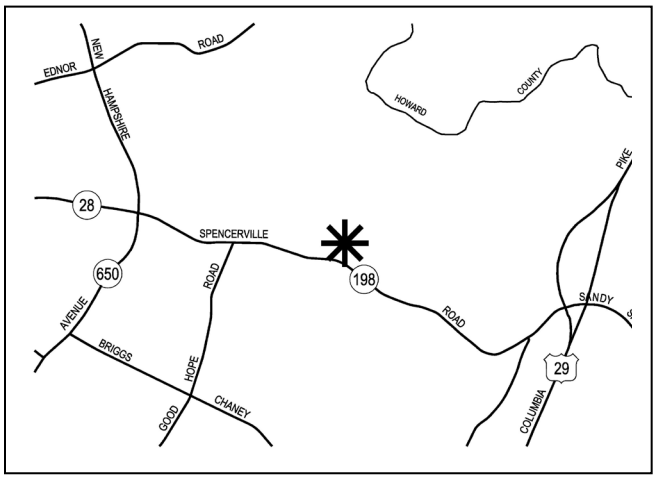
☐ Jonathan Casey, Senior Planner, Area 3, Jonathan.Casey@montgomeryplanning.org, 301-495-2162
☐ Sandra Pereira, Supervisor, Area 3, Sandra.Pereira@montgomeryplanning.org, (301) 495-2186
☐ Richard Weaver, Chief, Area 3, Richard.Weaver@montgomeryplanning.org, (301) 495-4544

Completed: 6/26/2020

Description

Cedar Ridge Community Solar, Site Plan No. 820200040. Request to install a solar collection system, 2420 Spencerville Road, on the north side of Spencerville Road (MD 198), opposite of Thompson Road, RC zone, RE-1 zone, and Upper Paint Branch Overlay one, 62.71 acres, 1997 *Cloverly Master* Plan.

Applicant: TurningPoint Energy
Owner: Bryan Peterson (Cedar Ridge Community Church)
Accepted Date: December 9, 2019



Summary

- The staff recommends **approval with conditions**.
- The Application meets the limited use standards of Section 3.7.2, Solar Collection System.
- The Application proposes a total impervious surface area of approximately 6.17%, which is below 10% impervious restrictions in the Patuxent River Watershed Primary Management Area.
- The Application does not propose and new additional impervious surface area in the Upper Paint Branch Overlay zone, which has a 10% impervious cap.
- The Application meets the Screening requirements in Division 6.5.
- Staff has not received any community correspondence regarding the Application.

TABLE OF CONTENTS

SECTION 1 – RECOMMENDATIONS AND CONDITIONS

SITE PLAN NO. 820200040: Staff recommends approval of the Site Plan subject to the following conditions:

All site development elements shown on the latest electronic version as of the date of this Staff Report submitted via ePlans to the M-NCPPC are required except as modified by the following conditions.[1]

Density, Height & Housing

1. Land Use
   a) The Site Plan is limited to a Solar Collection System designed to produce no more than 2 megawatts (AC) of electricity, or a maximum electric generation level specified in Section 59.3.7.2.

   b) The Solar Collection System must be removed by the Applicant within 12 months of the date when the use is discontinued or abandoned by the system owner or operator, or upon termination of the useful life of the system. The Solar Collection System will be presumed to be discontinued or abandoned if no electricity is generated by the system for a period of 12 continuous months.

Site Plan

2. Solar Panel Design and Height
   a) The solar panels are limited to a maximum height of 10-feet, as measured from the finished grade to the top of the panel.
   b) The Applicant must install only solar thermal or photovoltaic panels.
   c) The Applicant must install solar panels with textured glass or an anti-reflective coating.
   d) The Applicant must install a 7-foot-tall fence (without barbed wire) around the solar arrays, as shown on the Certified Site Plan.

Environment

3. Forest Conservation & Tree Save
   The Applicant must comply with the conditions of approval for the Final Forest Conservation Plan Amendment ("FFCP") No. 820200040, approved as part of this Site Plan, including:
   a) Prior to the start of any demolition, clearing, grading or construction for this development Application, the Applicant must install permanent conservation easement signage along the perimeter of the conservation easements as shown on the FFCP, or as directed by the M-NCPPC Forest Conservation Inspection Staff.
   b) The Limits of Disturbance ("LOD") shown on the Final Sediment and Erosion Control Plan must be consistent with the LOD shown on the approved Final Forest Conservation Plan.

[1] For the purposes of these conditions, the term "Applicant" shall also mean the developer, the owner or any successor (s) in interest to the terms of this approval.

c) The Applicant must comply with all tree protection and tree save measures shown on the approved FFCP. Tree save measures not specified on the FFCP may be required by the M-NCPPC forest conservation inspector at the pre-construction meeting.
d) Prior to certification of the Site Plan, the Applicant must revise the FFCP to address staff comments dated May 18, 2020.

4. Stormwater Management
The Planning Board accepts the recommendations of the Montgomery County Department of Permitting Service ("MCDPS") – Water Resources Section in its Stormwater Management Concept letter dated September 4, 2019 and hereby incorporates them as conditions of the Site Plan approval. The Applicant must comply with each of the recommendations as set forth in the letter, which may be amended by MCDPS – Water Resources Section provided that the amendments do not conflict with other conditions of the Site Plan approval.

5. Patuxent River Watershed Primary Management Area
The Applicant must comply with the Patuxent Management Area ("PMA") requirements as stated in the Environmental Guidelines including:

a) Prior to the start of any clearing, grading or demolition on the Subject Property, the owner of the Subject Property must enter into an agreement with the Planning Board to limit impervious surfaces to no more than 10% of the Subject Property within the PMA and as shown on the Impervious Surface Plan submitted with the certified plan set. The agreement must be in a form approved by the M-NCPPC Office of General Counsel and recorded by deed in the Montgomery County Office of Land Records.
b) Prior to certification of the Site Plan, the Applicant must revise the Impervious Surface Plan to address staff comments dated May 18, 2020.
c) Impervious surfaces are limited to no more than 10.0% of the Subject Property within the Patuxent River Watershed Primary Management Area as shown on the Impervious Surface Plan submitted with the Final Water Quality Plan, and as part of the Certified Site Plan.

Transportation & Circulation/ Adequate Public Facilities (APF)

6. Validity
The Adequate Public Facility Review ("APF") will remain valid for sixty (60) months from the date of mailing of the Planning Board Resolution for the Site Plan.

7. Fire Department Access and Water Supply
The Planning Board has reviewed and accepts the recommendations of the MCDPS, Fire Department Access and Water Supply Section in its letter dated June 6, 2020, and hereby incorporates them as conditions of approval. The Applicant must comply with each of the recommendations as set forth in the letter, which MCDPS may amend if the amendments do not conflict with other conditions of Site Plan approval.

8. Historic Preservation
The Planning Board has reviewed and accepts the recommendations of the Historic Preservation Commission ("HPC") in its letter dated April 22, 2020 and incorporates them as conditions of approval. The Applicant must comply with each of the recommendations as set forth in the letter.

9. Site Plan Surety and Maintenance Agreement

   Prior to issuance of any building permit or sediment control permit, the Applicant must enter into a Site Plan Surety and Maintenance Agreement with the Planning Board in a form approved by the M-NCPPC Office of General Counsel that outlines the responsibilities of the Applicant. The Agreement must include a performance bond(s) or other form of surety in accordance with Section 59.7.3.4.K.4 of the Montgomery County Zoning Ordinance, with the following provisions:

   a) A cost estimate of the materials and facilities, which, upon Staff approval, will establish the surety amount.
   b) The cost estimate must include applicable Site Plan elements, including, but not limited to plant material, fences, underground electrical utilities and associated improvements of development. The surety must be posted before issuance of the any building permit or sediment control permit for development and will be tied to the development program.
   c) The bond or surety must be tied to the development program, and completion of all improvements covered by the surety for each phase of development will be followed by a site plan completion inspection. The surety may be reduced based upon inspector recommendation and provided that the remaining surety is sufficient to cover completion of the remaining work.

10. Development Program

    The Applicant must construct the development in accordance with a development program table that will be reviewed and approved prior to the approval of the Certified Site Plan.

11. Certified Site Plan

    Before approval of the Certified Site Plan, the following revisions must be made and/or information provided subject to Staff review and approval:
    a) Include the stormwater management concept approval letter, development program, and Site Plan resolution (and other applicable resolutions) on the approval or cover sheet(s).
    b) Add a note to the Site Plan stating that "M-NCPPC Staff must inspect all tree-save areas and protection devices before clearing and grading."
    c) Add a note stating that "Minor modifications to the limits of disturbance shown on the site plan within the public right-of-way for utility connections may be done during the review of the right-of-way permit drawings by the Department of Permitting Services."
    d) Modify data table to reflect development standards approved by the Planning Board.
    e) Ensure consistency of all details and layout between Site and Landscape plans.

SECTION 2 – SITE LOCATION AND DESCRIPTION

Site Analysis

The Subject Property is located on the north side of Spencerville Road (MD 198), at the intersection of MD 198 and Peach Orchard Road, and consists of 62.71 acres of land identified as Parcel A on Record Plat 20746 (Attachment A) zoned RE-1 and RC and within the Upper Paint Branch Overlay zone; part of the 1997 *Cloverly Master* Plan ("Property" or "Subject Property"). The Property is split zoned, RE-1 along the frontage of Spencerville Road, and RC Zone for the remainder of the property. The existing and proposed uses both lie within the area zoned RC (Figure 1).

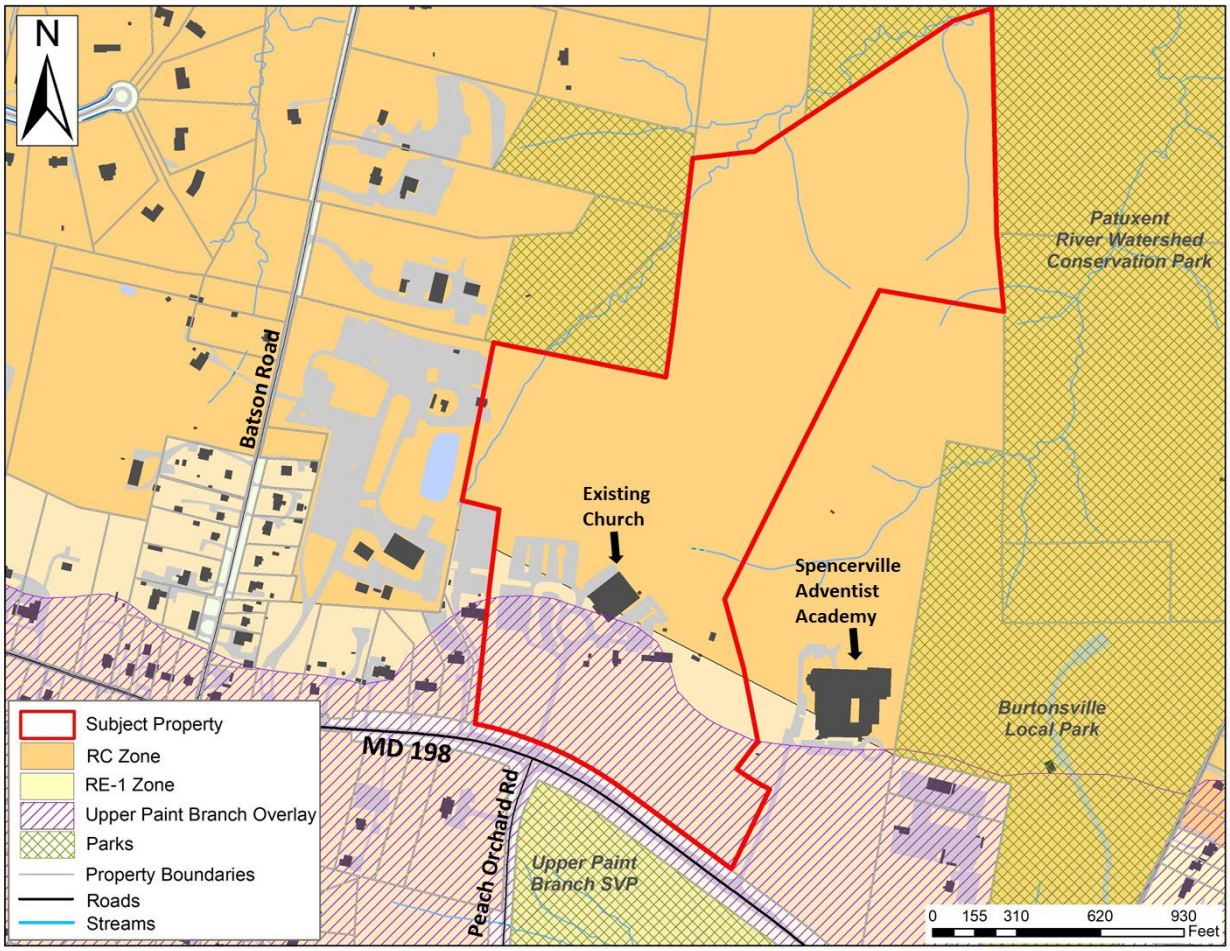


Figure 1 – Vicinity and Zoning

The existing driveway that serves Cedar Ridge Community Church will remain in place in its current orientation. The Property is bound on the east by a school property (Spencerville Adventist Academy) and bound by parkland owned by the M-NCPPC to the north and east, all of which is zoned RC. West of the Property, abutting MD 198 is a single-family detached dwelling, which is split zoned RE-1 and RC. North of the aforementioned, also abutting the Subject Property is an RC zoned property with a registered non-conforming use (landscape contractor) as well as additional parkland to the west, also zoned RC.

The Property is currently improved with a church, silo, barn, parking lot, picnic area, beehives and a small play area. The Property also contains the Spenser-Carr House - #15/55, an individually listed Master Plan site, built in 1855 and an historic accessory structure. The portion of the Subject Property directly north of the church is undeveloped and currently maintained in lawn (Figures 2).

The Subject Property is located within two watersheds. The southern portion (12.3 acres) of the Property that abuts Spencerville Road is within the Upper Paint Branch watershed; classified by the State of Maryland as Use Class III-P waters. This part of the Subject Property is also in the Upper Paint Branch SPA and Upper Paint Branch Overlay Zone. The remaining 50.9 acres of the Subject Property are located within the Lower Patuxent River Watershed; Use Class I-P waters and is within the Patuxent Watershed Primary Management Area. This portion of the Subject Property contains three streams. An additional stream is located just off the Property.

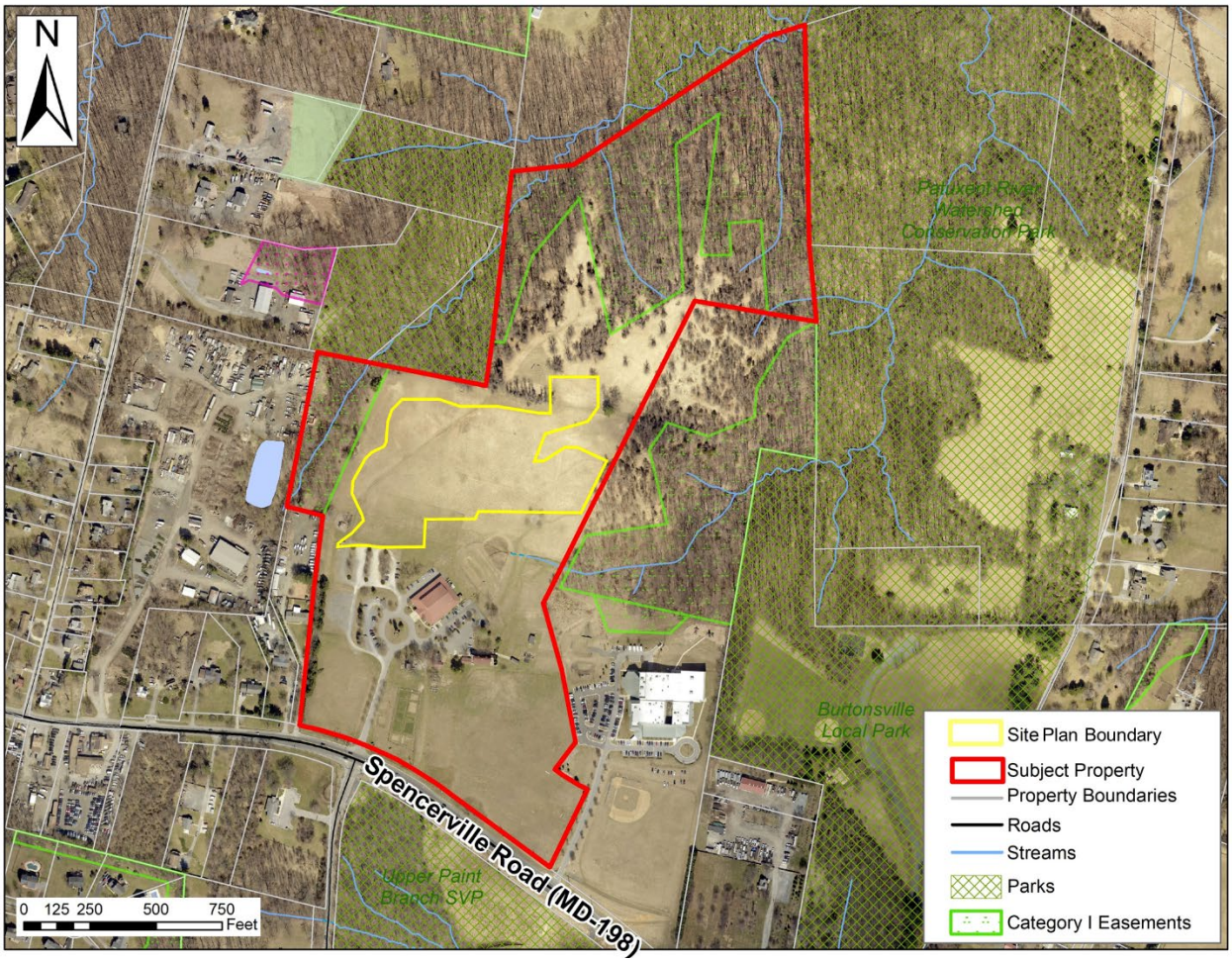


Figure 2 – Aerial View

SECTION 3 –APPLICATIONS & PROPOSAL

Preliminary Plan No. 119970530

Preliminary Plan No. 119970530, Cedar Ridge Community Church was approved by Planning Board Opinion, mailed on July 22, 1997, to create one 62.60 acre lot for one house of worship and a child-care/pre-school for a maximum of 53 children, subject to a 10% impervious cap (Attachment B).

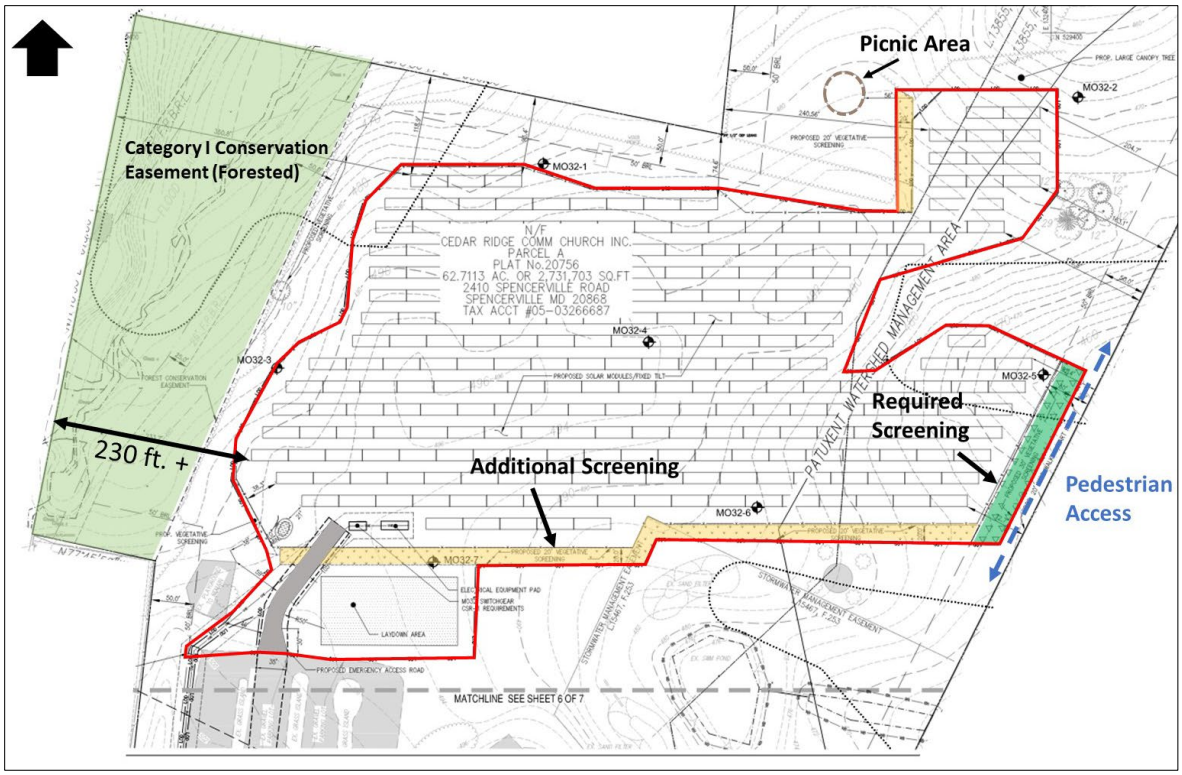


Figure 3 – Site Plan

Proposal

Site Plan No. 820200140 was submitted on December 9, 2019, by TurningPoint Energy, to allow for the construction of a freestanding Solar Collection System capable of generating no more than 2 megawatts of electricity, on 8.62 acres of the overall 62.71 acre Property ("Site"), and is limited to the 8.62 acres (375,47 sq. ft.) area of land in the RC zone and within the Patuxent Primary Management Area. No improvements are proposed on the portion of the Subject Property zoned RC or within the Upper Paint Branch Overlay Zone.

Structures

No habitable buildings will be erected on the Subject Property or Site as part of this Application. Improvements are limited to the fixed solar panels (which have a surface dimension of approximately 3'x6') supported by horizontally crossmembers which are attached to I-beams or piles driven into the

ground. In addition to the solar panels, two concrete pads inside the fenced area will house electrical cabinets containing recombiners, inverters, transformers and switchgear needed to convert direct current (DC) electricity to alternating current (AC). This conversion to AC power is necessary in order to return electricity to the electrical grid because the solar panels produce DC power. The perimeter of the Site will be landscaped as described in Section 5, Site Plan Findings, of this report. A 6-foot-tall chain-link fence (without barbed wire) will surround the solar array.

Circulation

The existing church driveway will be utilized to access the solar field. At the entrance to the solar field a new paved driveway and turnaround pad will be installed to provide an area for maintenance vehicles and fire department apparatus to turnaround.

Historic Preservation

The Subject Property is an individually listed site in the County's Master Plan for Historic Preservation (*Spencer-Carr House #15/55*). Any visual or material change to the site requires an approved Historic Area Work Permit (HAWP).

Figure 4 – Photo taken in 1973 of the Spencer-Carr Farmhouse

The Spencer-Carr House is a 2 ½ story wood farmhouse constructed in 1855 in the "Spencerville Style," a unique local building form. The house suffers from years of deferred maintenance and is an unoccupied shell with no remaining interior features. Because of the deferred maintenance, last year the Historic Preservation Commission (HPC) approved a HAWP to demolish a portion of the house and undertake additional stabilization work to mothball the building. The Property includes other historic structures including agricultural accessory structures from the 18th and 19th centuries.

The Applicant proposes to install the solar array to the north of the church and nearly 400 feet to the north of the historic Spencer-Carr House (Figure 5). The 'switchgear' and 'electrical equipment pad' location within the fenced solar field was selected because the church building blocks the view of these features from the Spencer-Carr house. Additionally, all conduit will be buried to eliminate visual impact on the historic feature.

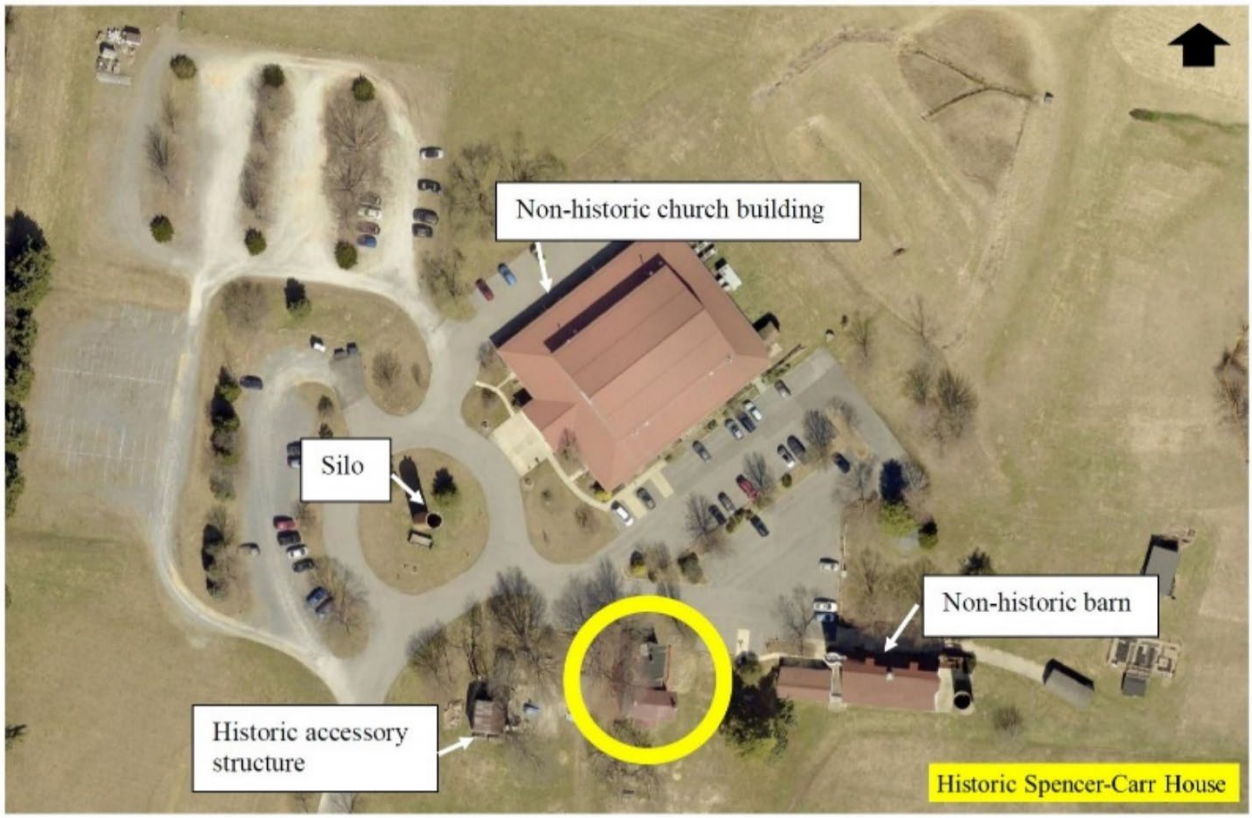


Figure 5 – Spencer-Carr House

Outside of the fence (south), the Applicant is installing a 20' (twenty-foot) vegetative screen that exceeds screening requirements set forth by the Zoning Ordinance to benefit the existing church. This screening is not required to comply with Chapter 59 and is being proffered by the Applicant as part of an agreement with the church. The screening will be made up of a variety of shrubs, evergreen trees, and canopy trees which will help soften the view of the solar array from the existing church.

On April 22, 2020, the Historic Preservation Commission reviewed a preliminary consultation for the proposed solar collection system. HPC feedback regarding the proposal was overall strongly supportive of the proposal. The HPC generally agreed with the Historic Preservation Staff Report, finding that the solar

array and additional equipment were located a sufficient distance from the historic resources so they would not negatively impact the site's historic character (Attachment C).

While not directly impacted by the proposed solar collection system, many of the Commissioners expressed their ongoing concern for the long-term survival of the Spencer-Carr House. Many Commissioners indicated they would be more supportive of the Application if some of the revenue raised by this project could be dedicated to the rehabilitation and continued upkeep of the historic house. The Applicant has been working with Historic Preservation Staff to develop a solution that will satisfy the concerns raised by HPC and is scheduled for a HAWP review at the July 15, 2020 HPC meeting.

SECTION 4 – COMMUNITY CORRESPONDENCE

The Applicant has met all proper signage, noticing and pre-submission meeting requirements for the submitted Applications. A pre-submission meeting for the Site Plan was held on July 17, 2019 at the Cedar Ridge Community Church Meeting Hall (2410 Spencerville Road). Nine community members attended the meeting, where the Applicant's representative presented the Application and answered questions regarding the Application, including factors determining the location of the field, stormwater management practices and other general questions about how the installation will function. Based on the meeting minutes provided by the Applicant, all questions were adequately and accurately answered. As of the date of this report, Staff has not received any opposition from the community regarding this Application.

SECTION 5 – ANALYSIS AND FINDINGS - Site Plan No. 820160010

Findings – Chapter 59.7.3.4.E

1. *When reviewing an application, the approval findings apply only to the site covered by the application.*

   The Approval of the Site Plan findings will only apply to the Subject Property being reviewed as part of this Application.

2. *To approve a site plan, the Planning Board must find that the proposed development:*

   a. *satisfies any previous approval that applies to the site;*

      The Site Plan satisfies the conditions of Preliminary Plan No. 119970530 and the associated Water Quality Plan. The Preliminary Plan and Water Quality Plan for the Cedar Ridge Community Church, required the Applicant to enter in an agreement with the Planning Board to limit impervious surfaces to no more than 10 percent on the portion of the Subject Property in the Paint Branch Special Protection and no more than 10 percent on the portion within the Patuxent Primary Management Area. As discussed on page 17 of this Staff Report, currently 10.3% imperviousness exists within the Paint Branch SPA. The Applicant is removing 0.04 acres (1,724.40 sq. ft.) of imperviousness to reduce the overall impervious area within the UPB SPA to 10% which satisfies

the conditions of approval. No new impervious surfaces are proposed within the UPB SPA with this Application.

Preliminary Plan No. 119970530 also limited development to a house of worship and child day-care/pre-school for a maximum of 53 children. This Site Plan does not included changes to the existing church of school that occupy the Property.

b. satisfies under Section 7.7.1.B.5 the binding elements of any development plan or schematic development plan in effect on October 29, 2014;

This section is not applicable as there are no binding elements of an associated development plan or schematic development plan in effect on October 29, 2014.

c. satisfies under Section 7.7.1.B.5 any green area requirement in effect on October 29, 2014 for a property where the zoning classification on October 29, 2014 was the result of a Local Map Amendment;

This section is not applicable as the Site's zoning classification on October 29, 2014, was not the result of a Local Map Amendment.

d. satisfies applicable use standards, development standards, and general requirements under this Chapter;

Division 4.3.4. Rural Cluster Zone (RC)

Use and Development Standards

This Site Plan does not include any improvements in the portion of the Subject Property zoned RE-1 and in the Upper Paint Branch Overlay Zone. The Site is approximately 8.62 acres and zoned RC. A Solar Collection System use is allowed as a limited use in the RC zone, subject to the requirements of Section 59.3.7.2.B.2. The following table, Table 1, shows the Application's conformance to the development standards of the zone.

Table 1 – RC Zone, Standard Method Development Standards

Development Standard	**Permitted/Required**	**Proposed**
Min. Tract Area	5 AC	No new lots are proposed as part of this Application. See Limited Use Standards
Maximum Density	1 DU/ 5 AC	N/A
Minimum Building Setbacks	No habitable buildings are proposed. See Limited Use Standards	See Limited Use
Front		
Side		
Rear		
Maximum Building Coverage	10%	N/A
Parking Spaces	0	0

Use Standards 59.3.7.2 – Solar Collection System

Solar Collection System is defined as "an arrangement of panels or other solar energy devices that provide for the collection, inversion, storage, and distribution of solar energy for electricity generation, space heating, space cooling, or water heating. A Solar Collection System includes freestanding or mounted devices".

B. Use Standards

Where a Solar Collection System is allowed as a limited use, it must satisfy the following standards:

2. In Rural Residential, Residential, Commercial/Residential, Employment, and Industrial zones, where a Solar Collection System is allowed as a limited use, and must satisfy the following standards:

Table 2 – Solar Collection System Limited Use Standards

Required	**Proposed**
a. Site plan approval is required under Section 7.3.4.	The Subject Application meets this requirement.
b. The site must be a minimum of 3 acres in size.	The Site Plan area is approximately 8.62 acres in size.
c. The system may produce a maximum of 2 megawatts (AC).	As conditioned, the proposed system must produce no more than 2 megawatts.
d. All structures must be: i. 20 feet in height or less; ii. located at least 50 feet from any property line; and iii. surrounded by a minimum 6-foot-tall fence.	No building structures are proposed on the Site. The Solar Components are not taller than 10 feet and located a minimum of 50 feet from any property line. The Applicant is providing a 7-foot-tall chain-link fence around each pod of Solar modules. Typically, the fencing around solar fields includes an angle arm mounted at the top with barbed wire, however, the Applicant has agreed to forgo barbed wire in this case to enhance compatibility and improve the facility aesthetically.
e. If a structure for a Solar Collection System is located in an area visible to an abutting residential use or a road: i. only solar thermal or photovoltaic panels or shingles may be used; ii. the panels or shingles must use textured glass or an anti-reflective coating; and	As conditioned, the Applicant will install only solar thermal or photovoltaic panels and use panels or shingles with textured glass or an anti-reflective coating. As discussed In Section 5 of this report, screening is being provided according to Section 59.6.5.3.C.8 (Option A).

iii. screening that satisfies Section 59.6.5.3.C.8 (Option A) on the sides of the facility visible from the residential use or road is required.	
f. The Solar Collection System must be removed within 12 months of the date when the use is discontinued or abandoned by the system owner or operator, or upon termination of the useful life of the system. The Solar Collection System will be presumed to be discontinued or abandoned if no electricity is generated by the system for a period of 12 continuous months.	As conditioned, the Applicant is responsible for removing the Solar Collection System within 12 months if the use is discontinued of abandoned by the operator.
g. A system designed to produce more than 2 megawatts (AC) may be allowed as a public utility use under Section 3.6.7.E.	This standard does not apply to this Application.

Division 6 – General Development Standards

i. Division 6.1. Site Access

The Site is accessed from an existing signalized intersection at Spencerville Road via the existing driveway that serves the church. The Applicant has acquired an access easement that coincides with the driveway which is adequate for access to the Site without interfering with the existing uses on-site.

ii. Division 6.2. Parking, Queuing, and Loading

Parking, queuing and loading spaces are not required for the proposed use.

iii. Division 6.3. Open Space and Recreation

Open Space and Recreation are not required as part of this Application.

iv. Division 6.4. General Landscaping and Outdoor Lighting

Landscaping is not required as part of this Application, except for screening, which is discussed below. The Site Plan meets the standards for the provision of landscaping as required by Division 6.4. Except for screening, the only landscaping provided as part of this Site Plan is outside of the fence (south), where the Applicant is installing a 20' (twenty-foot) vegetative screen to benefit the existing church. The optional screening is not required to comply with Chapter 59 but is being proffered by the Applicant as part of an agreement with the church. The screening will be made up of a variety of shrubs, evergreen trees, and canopy trees which will help soften the view of the solar array from the existing church.

No lighting is being provided as part of this Application. Generally lighting is reviewed for pedestrian and vehicular safety, adequacy of illumination (proper coverage) and comparability (light pollution/spillage). However, due to the nature of solar collection system as a primary use on the Site, lighting is not required or necessary. Any maintenance requiring illumination can be accommodated on a temporary (mobile) basis or maintenance can be accommodated during the daytime. In this case, not to provide lighting on-site furthers the compatibility with the adjacent residential properties, eliminating the potential for light spillage and glare that could adversely affect the existing residences.

v. Division 6.5. Screening Requirements

Solar Collection System is a limited use in the RC zone, and one of the limited use standards requires perimeter screening under Section 59.6.5.3.C.8, Option A, where the solar panels are visible from existing residential development or roads. With the proposed screening (Figure 6) the solar panels will not be visible from any of the existing uses on the abutting properties. While not a residence, screening according to Option A has been provided between the existing school to the east and the proposed array. The existing Category I Conservation Easement (230 feet wide min.) west of the panels provides a buffer between the panels and the landscape contractor business and Optional screening provided by the Applicant provides screening between the panels and existing church, as well as the picnic area in the rear (north) of the Property.

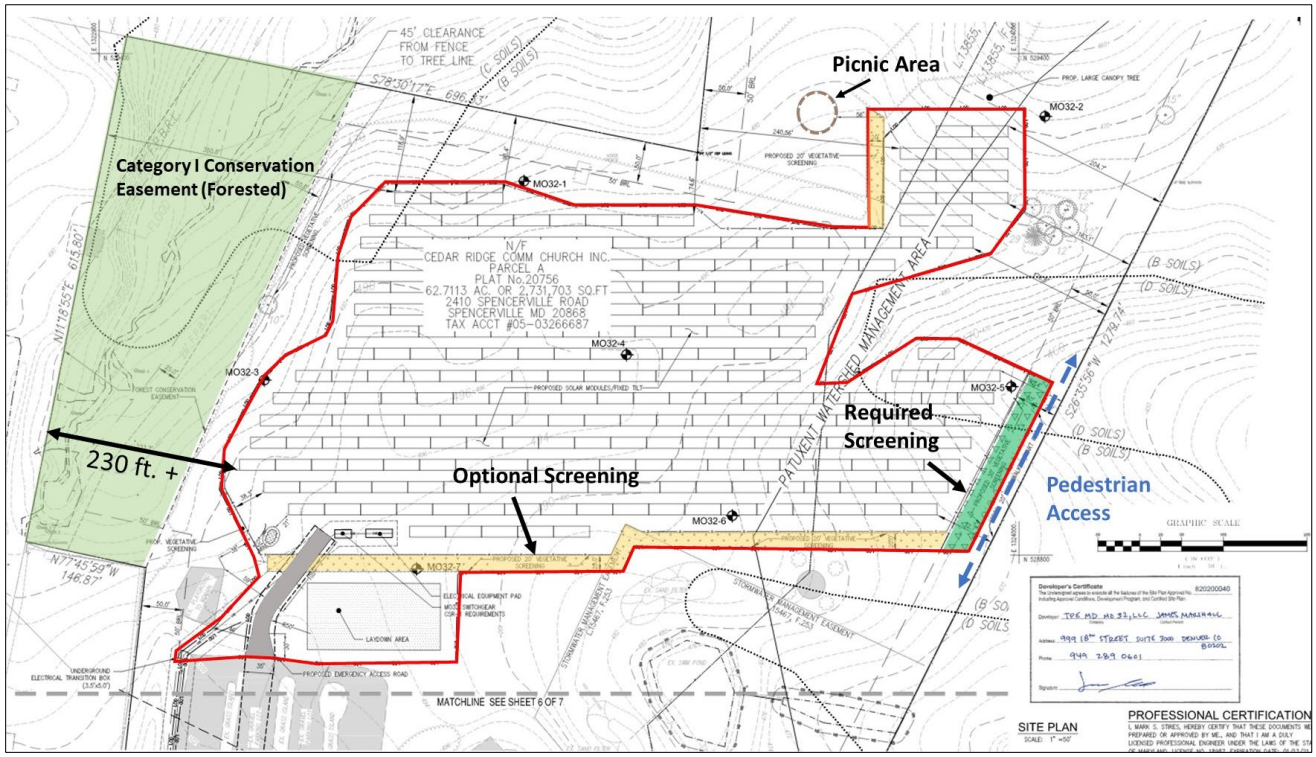


Figure 6 – Screening

e. satisfies the applicable requirements of:

i. Chapter 19, Erosion, Sediment Control, and Stormwater Management; and

The Site Plan meets the requirements of Chapter 19, Water Resource Protection, Sediment Control and Stormwater Management.

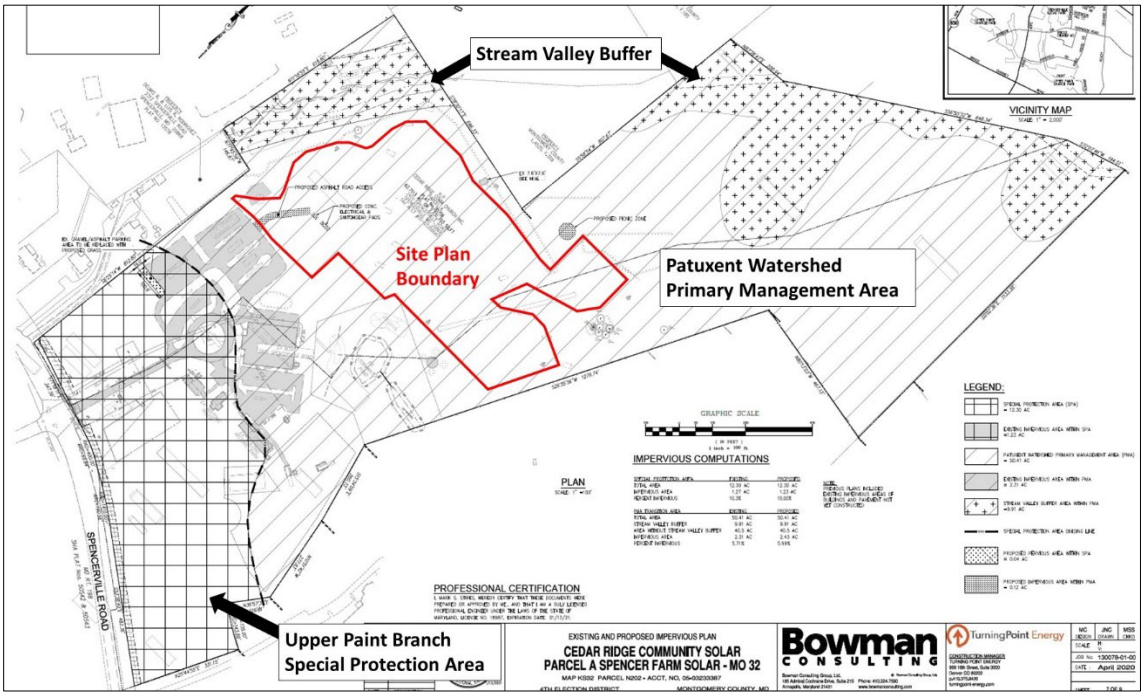


Figure 7 – Watersheds and Stream Valley Buffer

Upper Paint Branch SPA and Overlay Zone

The Upper Paint Branch ("UPB") SPA and Overlay Zone has a current specific numerical limit of 8% on impervious surfaces. However, at the time of approval of the Preliminary Plan and Water Quality Plan for the Cedar Ridge Community Church, Preliminary Plan No. 119970530, the impervious surface limit for the UPB SPA was set at 10%. This 10% limit is applied to this Application since no new construction of impervious surfaces is proposed within the UPB SPA. All construction associated with the installation of the solar panels is outside of the UPB SPA. If any new construction of new impervious surfaces were proposed within the SPA, then the current impervious surface limit of 8% would be applied.

The Applicant has demonstrated that this Site Plan Application is in compliance with the impervious surface restrictions of the UPB SPA Overlay Zone by submitting an Impervious Surface Plan dated May 6, 2020 (Attachment D) and summarized in Table 3. During the review and approval of the original Preliminary Plan, Plan No. 119970530, the Cedar Ridge Community Church had proposed the construction of a new church outbuildings, a parking lot, access drives, a bikeway and widening of Spencerville Road. These new impervious surfaces combined with the existing historic buildings on the Property resulting in an

impervious surface of 9.4% for the church construction. Over the years, the church had added a small amount of impervious surface to the approved parking lot which increased the impervious surface to 10.3%. The current Applicant is proposing to remove 0.04 acres (1,724.40 sq. ft.) of this imperviousness to reduce the overall impervious area within the UPB SPA to 10%. No new impervious surfaces within the Upper Paint Branch SPA are proposed with this Application.

Table 3 – Impervious Surfaces Calculations in UPB SPA

Net Tract Area in UPB SPA	12.30 acres (535,826.14 sq. ft.)
Existing Impervious Surface in UPB SPA	1.23 acres (53,578.80 sq. ft.)
Impervious Surfaces removed	0.04 acres (1,724.40 sq. ft.)
Net Impervious Surface in UPB SPA	1.19 acres (51,836.40 sq. ft.)
Percent Imperviousness	**10%**

Patuxent River Watershed Primary Management Area ("PMA")

As outlined above, 12.30 acres of the Subject Property lies within the Upper Paint Branch Overlay Zone. The remaining 50.90 acres of the property lies within the PMA which has a 10.0% impervious cap within the Transition Areas of the PMA as outlined on page 50 of the Environmental Guidelines, "*Overall imperviousness within the transition area of each new project development site should not exceed 10 percent.*" The transition area is defined as "*The land remaining in the PMA that does not fall into the designated stream buffers will be managed as a transition area.*" The Transition Area on the Subject Property is approximately 40.99 acres of the total 50.90 acres within the PMA.

The originally approved Preliminary Plan showed an impervious surface amount of 10.0% within the Transition Area of the PMA. This impervious surface was comprised of a new church, Phase II and III buildings, Phase II and Phase III parking lots, access drives and sidewalks accounting for a total of 4.4 acres of impervious surface. This resulted in the approval of an overall impervious surface amount of 10% for the Cedar Ridge Church. The Church did not build out to the approved limits of 10% imperviousness. What was actually constructed resulted in an impervious surface amount of approximately 2.31 acres or 5.7% as shown in the Impervious Surface Plan dated May 6, 2020 submitted with this Application and verified with current aerial photographs and field investigations.

The current Application proposes increases of impervious surfaces amount of approximately 0.15 acres. These impervious surfaces are comprised of the one emergency access road, concrete mounting pad for the electrical equipment pads, a 20-ft X 60-ft Montgomery County Fire and Rescue Service ("MCFRS") apparatus operational pad, concrete footers for the security fence posts and a picnic area as shown on the Impervious Surface Plan dated May 6, 2020. The MCFRS apparatus operation pad and small shed was inadvertently left off of the Impervious Surface Plan dated May 6, 2020, but as conditioned, will be shown on the Certified Site Plan and the calculations in Table 3 account for the additional imperviousness There were also several other minor comments pertaining to the imperviousness within the PMA. These comments will be addressed prior to submittal of the Certified Site Plan. The total proposed impervious surface amounts are summarized in Table 4. This results in an overall

impervious surface amount of approximately 6.17% The solar panels themselves are not considered impervious under Maryland State law. In addition, the mounting posts/piles for the solar panels are driven into the ground and do not require concrete footers.

Table 4 – Impervious Surfaces Calculations in PMA

Net Tract Area in PMA	50.41 acres (2,195,859.60 sq. ft.)
Net Area of Stream Buffers in PMA	9.91 acres (431,679.60 sq. ft.)
Net Transition Area in PMA	40.50 acres (1,764,180.00 sq. ft.)
Total Amount of Existing and Proposed Impervious Surface in Transition Area	2.50 acres (108,9000.00 sq. ft.)
Percent Imperviousness	**6.17%**

The Site Plan Application meets the stormwater management requirements of Chapter 19 of the County Code. The Applicant received a stormwater concept approval from MCDPS Water Resources Section on September 4, 2019 (Attachment E). The Application will meet stormwater management goals through via non-rooftop disconnects and rain gardens.

Forest Conservation Plan

Natural Resources Inventory/Forest Stand Delineation

The Natural Resources Inventory/Forest Stand Delineation ("NRI/FSD") #419960080 for the Subject Property was approved on August 3, 1995. The NRI/FSD identifies the environmental features and forest resources on the Subject Property. The Subject Property is located within two watersheds. The front 12.30 acres of the site are located within the Paint Branch watershed a Use Class III-P stream. This area of the Subject Property is also in the Upper Paint Branch SPA and Upper Paint Branch Overlay Zone.

The remaining 50.90 acres of the Subject Property are located within the Lower Patuxent River watershed, a Use Class I-P stream, and is within the Patuxent River Watershed Primary Management Area as defined in the Environmental Guidelines. There are three streams located on this portion of the Subject Property and one stream located just off the Property. One stream flows through a small portion of the Subject Property on the western side. Two streams are located in the northern portion of the Subject Property and flow to the north into a stream that is located just off the northern property line. Each of these streams has a 100-foot stream buffer on each side of the stream as specified in the Environmental Guidelines resulting in 9.91 acres of stream buffer.

Forest Conservation Plan

A Forest Conservation Plan was approved for the Subject Property on January 29, 1998 for the construction of a church, access drives, parking and associated outbuildings. This Application and amendment to the Final Forest Conservation Plan does not alter the church buildings, access or parking, but is only for the installation of the Solar Collection System.

The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law. As required by Chapter 22A, an FFCP was submitted with the project

application. The total net tract area for forest conservation purposes is 61.80 acres which includes the Subject Property of 63.20 acres and a deduction of 1.40 acres for floodplains. The property is zoned RE-1 and the Land Use Category is classified as Institutional Development Area ("IDA") as specified in the Trees Technical Manual and Section 22A-3 of the Forest Conservation Law. The Subject Property contains 16.10 acres of forest. The Applicant proposes to remove 0.00 acres of forest. This results in a total reforestation requirement of 0.00 acres. The environmental buffers and retained forest have been placed into Category I Conservation Easements. All FFCP requirements have been met by the Cedar Ridge Community Church under plan no. 119970530.

The Final Forest Conservation Plan Amendment meets all applicable requirements of Chapter 22A of the Montgomery County Forest Conservation Law. Therefore, Staff recommends approval of the Final Forest Conservation Plan subject to the conditions of this staff report.

f. provides safe, well-integrated parking, circulation patterns, building massing and, where required, open spaces and site amenities;

This finding does not apply based on the proposed use.

g. substantially conforms with the recommendations of the applicable master plan and any guidelines approved by the Planning Board that implement the applicable plan;

The Property is within the area of the 1997 *Cloverly Master Plan* ("Master Plan"). The community map of the Master Plan (p. 11) shows the Property to be in two of the Master Plan's defined communities: the part zoned RC is within the "Agricultural Wedge" and the part zoned RE-1 is in the "Residential Wedge." The entire solar project is within the Agricultural Wedge except for minor land disturbing activities in the Residential Wedge to install an underground electrical line to the solar array.

The Master Plan's vision as it relates to this Property is to protect watersheds and provide public and private open space areas "for recreation and public use as well as conservation areas where public use is limited" (p. 13). To protect the Patuxent River watershed, the Master Plan limits development to relatively low densities and recommends additional parkland appropriate to protect the watersheds.

The objective within the Agricultural Wedge is to:

> *Maintain the existing mix of low-density residential neighborhoods and open space that preserves the valleys of Patuxent River tributaries, creates this community's rural character and keeps the built and natural environments in balance.* (p. 20)

The Master Plan recommended retaining the RC zone for the part of the Property in the Agricultural Wedge to meet this objective.

The objective within the Residential Wedge is to:

> *Retain land use and environmental policies that minimize impacts on the upper Northwest Branch and upper Paint Branch watersheds and underscore the large-lot character of this community as now-vacant properties develop.* (p. 22)

To support this objective, the Master Plan recommended retaining the existing RE-1 zone for the part of the Property in the Residential Wedge.

The Master Plan did not make any specific recommendations for the Property, but the Proposed Land Use map (p. 19) shows a recommendation for single-family residential uses on most of the Property, including the parts containing the church and the proposed solar array. This map shows the northern part of the Property as "Park/Open Space." Indeed, most of the northern part of the Property is included in a Category I Forest Conservation Easement that was a requirement of the earlier Preliminary Plan for the Property. The solar project will not impact this part of the Property.

As can be seen from the Master Plan vision and objectives above, low-density development, the provision of open space areas and protection of the natural environment are its focus. Although the proposed use is not for a single-family residence per the Proposed Land Use map, this recommendation relates more to the density of development than the type of development. The Property is already developed with a single use—a church—and the solar project is accessory to this use and does not increase the density.

The only recommendations the Master Plan makes regarding this Property other than those regarding the environment are to retain the existing low-density zones on the property. Because the Application does not propose additional density, the proposed solar project substantially conforms with these recommendations. The environmental recommendations of the Master Plan will be discussed in a separate section of this report.

h. will be served by adequate public services and facilities including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public facilities. If an approved adequate public facilities test is currently valid and the impact of the development is equal to or less than what was approved, a new adequate public facilities test is not required. If an adequate public facilities test is required the Planning Board must find that the proposed development will be served by adequate public services and facilities, including, police and fire protection, water, sanitary sewer, public roads, and storm drainage;

This Application does not propose occupancy of the Site and therefore requires neither water supply nor wastewater disposal systems.

Transportation

Access to the Subject Property will occur via an existing driveway to be shared with the Cedar Ridge Community Church from Spencerville Road (MD 108). The Applicant provided a Transportation Statement to explain the solar operation will be unmanned, with trips to the Subject Property made only infrequently for maintenance; there be no net increase in trips in the AM or PM peak periods and the Application is exempt from additional LATR review. Similarly, there will be no circulation internal to the Subject Property as access will be infrequent; all area not covered by solar panel footings is to remain unpaved natural surface. An access easement will be provided to formalize movement to and from the solar field using the church driveway. Circulation throughout the church property will continue to be adequate and the addition of infrequent maintenance will have minimal impact. The Subject Property has no frontage along a public road and no improvements are requested.

The Site Plan has been reviewed by the MCDPS, Fire Access and Water Supply Sections, which determined that the Property has adequate access for fire and rescue vehicles as shown on their approved Fire Department Access Plan dated June 6, 2020 (Attachment F).

Transportation access is safe and adequate for the proposed use. This application is consistent with the 2018 *Master Plan of Highways and Transitways*, the 2018 *Bicycle Master Plan* and the 1997 *Cloverly Master Plan*.

i. on a property in a Rural Residential or Residential zone, is compatible with the character of the residential neighborhood; and

The Site is in the RC zone, a Residential zone and while solar is not a residential use, it is an allowed use in the zone. With the unique location of the Site, the provided setbacks, existing forest and screening, and Site layout, as conditioned the Site Plan is compatible with the character of the adjacent residential neighborhood.

The only residential development in proximity to the Site abuts the western Property line which will be substantially buffered, both by the existing forest conservation easement and the proposed 30-foot-wide landscape buffer. Additionally, lighting is not being provided on site because it is not required and is unnecessary given the proposed use. Since no lighting is provided, there is no possibility of light pollution/spillage onto the adjacent residential lots creating comparability issues. As conditioned, the development of the Site with solar is compatible with the adjacent residential neighborhood.

j. on a property in all other zones, is compatible with existing and approved or pending adjacent development.

The finding does not apply because the Subject Property is in a Residential zone.

3. To approve a site plan for a Restaurant with a Drive-Thru, the Planning Board must also find that a need exists for the proposed use due to an insufficient number of similar uses presently serving existing population concentrations in the County, and the uses at the location proposed will not result in a multiplicity or saturation of similar uses in the same general neighborhood.

This finding is not applicable because the Site Plan does not include a restaurant with a drive-thru.

4. For a property zoned C-1 or C-2 on October 29, 2014 that has not been rezoned by Sectional Map Amendment or Local Map Amendment after October 30, 2014, if the proposed development includes less gross floor area for Retail/Service Establishment uses than the existing development, the Planning Board must consider if the decrease in gross floor area will have an adverse impact on the surrounding area.

This finding is not applicable because the Subject Property is not zoned C-1 or C-2

SECTION 6 – CONCLUSION

The Application meets all development standards and findings established in the Zoning Ordinance. Access and public facilities will be adequate to serve the proposed use, the use conforms with the Master Plan and the general requirements of Chapter 59. The Applications have been reviewed by other applicable county agencies, all of whom have recommended approval of the plan. Staff recommends approval of the Site Plan, with the conditions as enumerated in the Staff Report.

ATTACHMENTS

Attachment A – Record Plat 20746
Attachment B – Preliminary Plan No. 119970530
Attachment C – Historic Preservation Commission
Attachment D – Impervious Exhibit
Attachment E – Stormwater Management Concept
Attachment F – Fire Access and Water Supply

ATTACHMENT A

PLAT No 20756

PARCEL A

2,731,703 SQ. FT. or
62.71128 ACRES

SPENCERVILLE ROAD
MARYLAND ROUTE No. 198
SHA PLAT Nos. 50542 & 50543

PEACH ORCHARD ROAD

LOT 4, BLOCK A
SPENCERVILLE KNOLLS
P.B. 114, P. No. 13578

CHARLES S. STEPHENS, JR.
L. 4520, F. 359

LOT 6, BLOCK A
KELLBRODEAN ESTATES
P.B. 159, P. No. 18008

MONTGOMERY COUNTY, MARYLAND
L. 4520, F. 359

MONTGOMERY COUNTY, MARYLAND
L. 4520, F. 368

MONTGOMERY COUNTY, MARYLAND
L. 6484, F. 185

CARL S. & JANICE S. PALMER
L. 9392, F. 558

PEACH ORCHARD HEIGHTS
PARCEL 'K', BLOCK M
P.B. 183, P. No. 20302

WILLARD H. MARLOW, ET AL
L. 9392, F. 558

L. 13855, F. 007
L. 13855, F. 012

MONTGOMERY COUNTY, MARYLAND
L. 5333, F. 686

MNCP&PC
L. 3256, F. 001

MONTGOMERY COUNTY,
MARYLAND
L. 4028, F. 275

E. 1,322,500'

E. 1,324,000'

N. 529,500'

N. 527,500'

WOOD FENCE POST FOUND- HELD

P.F. FOUND ON LINE - HELD

P.P.F. FOUND ON LINE- HELD

FLAT QUARTZ STONE FOUND- HELD

STONE FOUND- HELD

P.F. FOUND - HELD

R/C FOUND- HELD

P.P.F. FOUND ON LINE- HELD

F.C.E.

N. 11°18'55" E. 615.802'

N. 77°45'59" W. 146.867'

N. 06°25'14" E. 829.805'

812.798'

S. 23°29'16" W. 631.47'

S. 78°30'17" E. 696.328'

N. 05°58'54" E. 807.669'

S. 08°00'00" W. 335.00'

S. 47°00'00" W. 280.00'

N. 84°01'06" W. 46.00'

N. 13°01'23" W. 529.16'

N. 74°59'31" W. 114.516'

N. 53°38'40" W. 482.359'

N. 36°26'25" E. 20.000'

N. 53°33'35" W. 229.260'

N. 53°33'35" W. 242.220'

N. 36°26'25" E. 36.845'

S. 25°44'55" W. 369.993'

S. 10°51'42" E. 277.830'

S. 15°34'09" E. 260.730'

S. 26°35'56" W. 1,279.743'

N. 56°50'32" E. 648.337'

N. 72°07'46" E. 194.510'

N. 80°13'03" W. 467.132'

S. 00°02'36" E. 1,133.380'

N. 527,819.134'
E. 1,323,827.030'

N. 529,591.179'
E. 1,324,355.735'

S. 59°00'00" W. 320.00'

S. 03°00'00" E. 550.00'

S. 55°00'00" W. 200.00'

N. 07°03'10" E. 534.26'

N. 90°00'00" W. 112.00'

S. 86°00'00" W. 120.00'

S. 04°00'00" E. 120.00'

N. 04°00'00" W. 350.00'

Modified F.C.E.

897.52'

235.86'

191.10'

331.148'

DEDICATED TO PUBLIC USE 15,645 ±

DEDICATED TO PUBLIC USE 4,407 ±

17.007'

175'

120'

VEHICLE ACCESS DENIED

STORMWATER MANAGEMENT EASEMENT L.15467, F. 253

STORMWATER MANAGEMENT ESMT. L.15467, F. 253

RE-1 ZONE
RC ZONE

10' P.U.E.

PATUXENT RIVER WATERSHED MANAGEMENT AREA

UPPER PAINT BRANCH SPECIAL PROTECTION AREA

SEPTIC AREA FOR CHURCH

10,000 SQ. FT. SEPTIC AREA FOR SPENCER HOUSE

P.T. STA. 85+93.15

P.T. STA. 20.000'

P.F. OFF LINE

FLOOD PLAIN

25' F.P.B.R.L.

195'

204.83'

170.00'

637.67'

310.00'

305.80'

25.55'

125'

180.00'

151'

25'

(H) (D) RAD.= 1,410.000' ARC= 348.633'

(G) (C) RAD.= 400.000' ARC= 69.659'

(F) (B) RAD.= 1,410.000' ARC= 190.557'

(A) RAD.= 735.000' ARC= 143.804'

(E)

1 2 3 4 5 6 7 8 9 10

RADIUS POINT COORDINATES

	NORTH	EAST
A.	528,406.452'	1,324,268.939'
B.	526,596.550'	1,322,581.473'
C.	527,495.840'	1,323,043.613'
D.	SAME AS "B"	
E.	526,522.816'	1,322,546.907'
F.	SAME AS "C"	
G.	SAME AS "C"	
H.	SAME AS "E"	

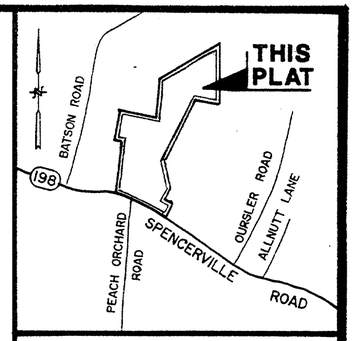
PLAT LINE DATA "(2)"

1.	N. 83°38'47" E.	200.939'
2.	N. 56°33'12" E.	224.692'
3.	S. 36°57'31" W.	129.813'

FLOOD PLAIN LINE DATA: "3"

1.	S. 33° 18'04" W.	333.89'
2.	S. 36°00'00" W.	100.00'
3.	S. 24°30'00" W.	170.00'
4.	S. 31° 15'00" W.	135.00'
5.	S. 38°00'00" W.	135.00'
6.	S. 25° 19'00" W.	114.95'
7.	N. 39° 10'24" E.	99.91'
8.	N. 43°00'00" E.	185.00'
9.	N. 82° 12'00" E.	147.57'
10.	N. 50°00'00" E.	100.00'

MARYLAND (NAD 83/ 91) STATE PLANE DATUM



VICINITY MAP
SCALE: 1 in.= 2000 ft.

GENERAL NOTES:

1. All terms, conditions, agreements, limitations, and requirements associated with any Preliminary Plan, Site Plan, Project Plan, or other plan allowing development of this property, approved by the Montgomery County Planning Board, are intended to survive and not be extinguised by the recordation of this plat unless expressly contemplated by the approved plan. The official public files for any such plan are maintained by the Planning Board and are available for public review during normal business hours.
2. Development is subject to an agreement with the Montgomery County Planning Board regarding adequate public facilities.
3. The approval of this plat is predicated on the adequacy and availability of public water
4. This plat was prepared without the benefit of a title report.
5. Maryland State Plane Datum (NAD 83/ 91) is established from the Washington Suburban Sanitary Commission Station No. 17082 and 20744 with values of N. 527,824.446' & E. 1,323,312.291' and of N. 528,016.519' & E. 1,322,150.555', respectively. Coordinates shown have surface values from Sta. 20744. No coordinates have been adjusted.
6. The property shown hereon is subject to the requirements of the Montgomery County Forest Conservation Law of 1992, including approval of a Forest Conservation Plan and appropriate agreements prior to issuance of a sediment control permit. A copy of the approved plan may be reviewed at 8787 Georgia Avenue, Silver Spring, Maryland. The Forest Conservation Easement is recorded in Liber 13178 , folio 412 as modified.
7. A Stormwater Management Agreement/Covenant and the Easement are recorded in Liber 15467 , folio 258 , and Liber 15467 , folio 253 , respectively.
8. This property is zoned RE-1 and RC.
9. The source of the 100-Year floodplain shown hereon was taken from a floodplain study by FEMA per the data in Community-Panel No. 240049 0200 C, map date revised August 05,1991, and the elevations shown thereon were plotted on M-NCP&PC 200-scale Topographic Map M-199 for a more accurate location of the flood limits.
10. The interim septic system for Phase I development is available for public review during normal business hours at the Montgomery County Department of Permitting Services, Well and Septic Division.
11. Septic area of church is designed for a 400 seat building with the initial trench of 1,104 L.F. The Spencer House is designed for a 6 bedroom house with an initial trench of 217 L.F. See detailed septic design plan by Oyster, Imus & Petzold.. This initial interim septic system will provide service for Phase I (400 seat sanctuary) pending the extension of public sewer service.

SEE "GENERAL NOTES CONTINUED"

OWNERS' DEDICATION

We, Cedar Ridge Community Church, Incorporated, a Maryland Corporation, by Fran Veihmeyer, President, and Kirsten Sitnick, Secretary, owners of the property shown hereon, hereby adopts this plan of subdivision; establish the minimum building restriction lines; dedicate the street as shown to public use; establish and grant to Montgomery County, Maryland, or other appropriate agency, temporary slope easements twenty (20) feet wide, over the parcel shown hereon, adjacent, contiguous, and parallel to MD. Rte. 198, the slope easement shall be extinguised after all required public improvements in the adjacent roarway has been accepted for maintenance by Montgomery County, Maryland, or other appropriate agency; hereby grant a ten (10) foot Public Utility Easement (P.U.E.) as shown hereon to Cable TV Montgomery and to the parties named in a document entitled "Terms and Provisions of Public Utility Easements" as recorded among the Land Records of Montgomery County, Maryland, in Liber 3834 at folio 457, subject to all current and applicable regulations of all federal, state, and local governmental agencies; and as owners of this subdivision, we, our successors or assigns, will cause all property corner markers and other required monumentation to be set by a registered Maryland Surveyor in accordance with the provisions of Section 50-24(e) of the Montgomery County Code.

There are no suits of law, leases, liens, mortgages or trusts affecting this plat of subdivision except a certain deed of trust and the parties of interest have affixed their signatures below indicating their approval of this plan of subdivision.

CEDAR RIDGE COMMUNITY CHURCH, INC.

BY: Fran Veihmeyer 10/8/97
FRAN VEIHMEYER, PRESIDENT DATE

ATTEST: Kirsten Sitnick
KIRSTEN SITNICK, SECRETARY

We hereby assent to this plan of subdivision as the Estate Note Holders.

Ruth Carr Solbach 10/15/97
Ruth Carr Solbach Date

Doris Carr Bullock 10/14/97
Doris Carr Bullock Date

SURVEYOR'S CERTIFICATION:

We hereby certify that the plat shown hereon is correct; that it is a subdivision of all of the land conveyed by Ruth Annette Carr Solbach and Doris Lee Carr Bullock, Personal Representatives of the Estate of Gilbert Carr, deceased, and of the Estate of Clara A. Carr, deceased, to the Cedar Ridge Community Church, Inc. by the following two deeds: Liber 13855, folio 007 and dated December 22,1995 and Liber 13855, folio 012, dated December 22,1995, both recorded among the Land Records of Montgomery County, Maryland.

We also certify that once engaged as described in the Owners' Dedication hereon, all monuments shown thus " ▫ " and all property markers and other boundary markers shown thus " o " will be set as delineated hereon in accordance with the provisions of Section 50-24(e) of the Montgomery County Code.

We also certify that there is 2,752,155 square feet or 63.18079 acres of land included on this plat; that there is 20,452 square feet or 0.46951 acres of land dedicated to public use; and that there is 18.81 acres of land included in the areas designated as Forest Conservation Easement (F.C.E.), inclusive of th e floodplain areas.

OYSTER, IMUS & PETZOLD, INC.

SEPT. 26, 1997
BY: Philip A. Wilk, RLS
Philip A. Wilk
Professional Land Surveyor
Maryland Reg. No. 10797

LEGEND:

F.C.E. =	CATEGORY I FOREST CONSERVATION EASEMENT
F.P.B.R.L. =	FLOOD PLAIN BUILDING RESTRICTION LINE
L. F. =	LIBER/ FOLIO
P.B. P. No. =	PLAT BOOK/ PLAT No.
P.F. =	PIPE FOUND
P.P.F. =	PINCHED PIPE FOUND
R/C =	REBAR & CAP

PLAT TABULATION:

No. of parcels =	1
No. of lots =	0
No. of outlots =	0
Area of parcels =	2,731,703 sq. ft.
Area of street dedication =	20,452 sq. ft.
TOTAL AREA OF PLAT =	2,752,155 SQ. FT. or 63.18079 ACRES

CURVE TABLE

LETTER	RADIUS	ARC	DELTA	TANGENT	CHORD BRG. & DIST.
A	735.000'	143.804'	11° 12'36"	72.132'	S. 58°38'47" E. 143.575'
B	1,410.000'	190.557'	07°44'36"	95.424'	N. 57°30'59" W. 190.412'
C	400.000'	69.659'	09°58'40"	34.912'	N. 62°48'06" W. 69.751'
D	1,410.000'	348.633'	14°10' 00"	175.210'	N. 71° 17' 55" W. 347.746'
E	1,472.390'	96.139'	03°44'28"	48.087'	N. 55°25'49" W. 96.122'
F	400.000'	112.582'	16° 07'34"	56.666'	N. 49°44'58" W. 112.211'
G	400.000'	55.529'	07°57'14"	27.809'	N. 71°46'05" W. 55.485'
H	1,472.390'	174.690'	06°47'52"	87.448'	N. 74°11' 00" W. 174.588'

THE MARYLAND-NATIONAL CAPITAL PARK and PLANNING COMMISSION
MONTGOMERY COUNTY PLANNING BOARD

APPROVED: November 6, 1997

CHAIRMAN ASST. SECRETARY- TREASURER

M-NCP&PC RECORD FILE NO. 606-62

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES

APPROVED: MAY 22, 1998

FOR DIRECTOR:

GENERAL NOTES CONTINUED

12. Septic Building Restriction Lines are subject to change upon approval by Montgomery County Department of Permitting Services (Well and Septic Section).

FOR PUBLIC WATER SYSTEMS ONLY

RECORDED:
PLAT BOOK:
PLAT No.:

FILED
JUN 16 1998

SUBDIVISION RECORD PLAT

PARCEL A

SPENCER FARM

4th. ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND
SCALE: 1 in.= 200 ft. SEPTEMBER, 1997

OYSTER, IMUS & PETZOLD, INC.
CIVIL ENGINEERS ▪ LAND PLANNERS ▪ LAND SURVEYORS
11230-B GRANDVIEW AVENUE SUITE 4
WHEATON, MARYLAND 20902
301-949-2011 Fax: 301-949-2013
O.I.P. Job No. 2557.A.1

298076197053REZ/RC082200.WP

606-62

Date Mailed: July 22. 1997

M-NCPPC

MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

Approved Staff Recommendation (Motion of Comm. Baptiste, seconded by Comm. Holmes with a vote of 3-0; Comms. Holmes, Baptiste and Hussmann voting in favor; Comm. Richardson and Aron absent).

255/A-1

MONTGOMERY COUNTY PLANNING BOARD

OPINION

Preliminary Plan 1-97053
NAME OF PLAN: SPENCER FARM

On 01-15-97, CEDAR RIDGE COMM CHURCH , submitted an application for the approval of a preliminary plan of subdivision of property in the RE1 zone. The application proposed to create 1 lots on 62.60 ACRES of land. The application was designated Preliminary Plan 1-97053. On 07-17-97, Preliminary Plan 1-97053 was brought before the Montgomery County Planning Board for a public hearing. At the public hearing , the Montgomery County Planning Board heard testimony and received evidence submitted in the record on the application. Based upon the testimony and evidence presented by staff and on the information on the Preliminary Subdivision Plan Application Form attached hereto and made a part hereof, the Montgomery County Planning Board finds Preliminary Plan 1-97053 to be in accordance with the purposes and requirements of the Subdivision Regulations (Chapter 50, Montgomery County Code,as amended) and approves Preliminary Plan 1-97053, subject to the following conditions:

(1) Applicant to enter into an agreement with the Planning Board to limit impervious surfaces to no more than ten (10) percent on the portion of the site within the Paint Branch Special Protection Area and also on the portion within the Patuxent Primary Management Area. Any further development will require Planning Board review and approval

(2) Agreement with the Planning Board to limit development to a house of worship and child day-care/pre-school for a maximum of 53 children. Any modification to the use may require further Planning Board review

(3) Compliance with the conditions of approval of the preliminary forest conservation plan. The applicant must meet all conditions prior to recording of plat or MCDPS issuance of sediment and erosion control permit, as appropriate

(4) Prior to MCPB release of building permit, applicant to demonstrate conformance with all conditions of MCDPS memo, dated 6-30-97, associated with approval of the final water quality plan

(5) Prior to MCPB release of building permit, Historic Preservation Commission to review and approve proposed construction plans

(6) Record plat to reflect delineation of the 100-year flood-plain, stream valley buffer, Patuxent Watershed Primary Management Area and Upper Paint Branch Special Protection Area

(7) Access and improvements, including pavement widening and deceleration lane, as required and approved by MDSHA

(8) Prior to MCPB release of building permit, submit for technical staff approval a final landscape, parking and lighting plan

(9) Necessary easements

(10) This preliminary plan will remain valid until August 22, 2000 (37 months from the date of mailing, which is July 22, 1997). Prior to the expiration of this validity period, a final record plat for all property delineated on the approved preliminary plan must be recorded or a request for an extension must be filed.

Preliminary Consultation
MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	2410 Spencerville Rd., Spencerville	**Meeting Date:**	4/22/2020
Resource:	Individually Listed Master Plan Site *Spencer-Carr House*	**Report Date:**	4/15/2020
Applicant:	Cedar Ridge Community Church **(**Bryan Peterson, Agent)	**Public Notice:**	4/8/2020
Review:	Preliminary Consultation	**Staff:**	Dan Bruechert
PROPOSAL:	Solar array		

STAFF RECOMMENDATION

Staff recommends that the applicant make any revisions based on the HPC's recommendations and return for a Historic Area Work Permit.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Individually Listed Master Plan Site (*Spencer-Carr House - #15/55*)
STYLE: Spencerville Style/Folk Victorian
DATE: c.1855 and c.1871

From *Places from the Past:*
A distinctive three-story, three bay house, the Spencer-Carr House was built c.1855 with a rear addition dating from the 1870s. An illusion of added height is achieved through the incremental decrease in spacing between windows from the bottom level to the top together with decrease of window size. The center passage house is constructed of brick and covered with weatherboard siding. Reputedly building by William Spencer, founder of Spencerville, the house has a strong historical association with the early development of the community and is a significant example of rural antebellum building traditions in the county.

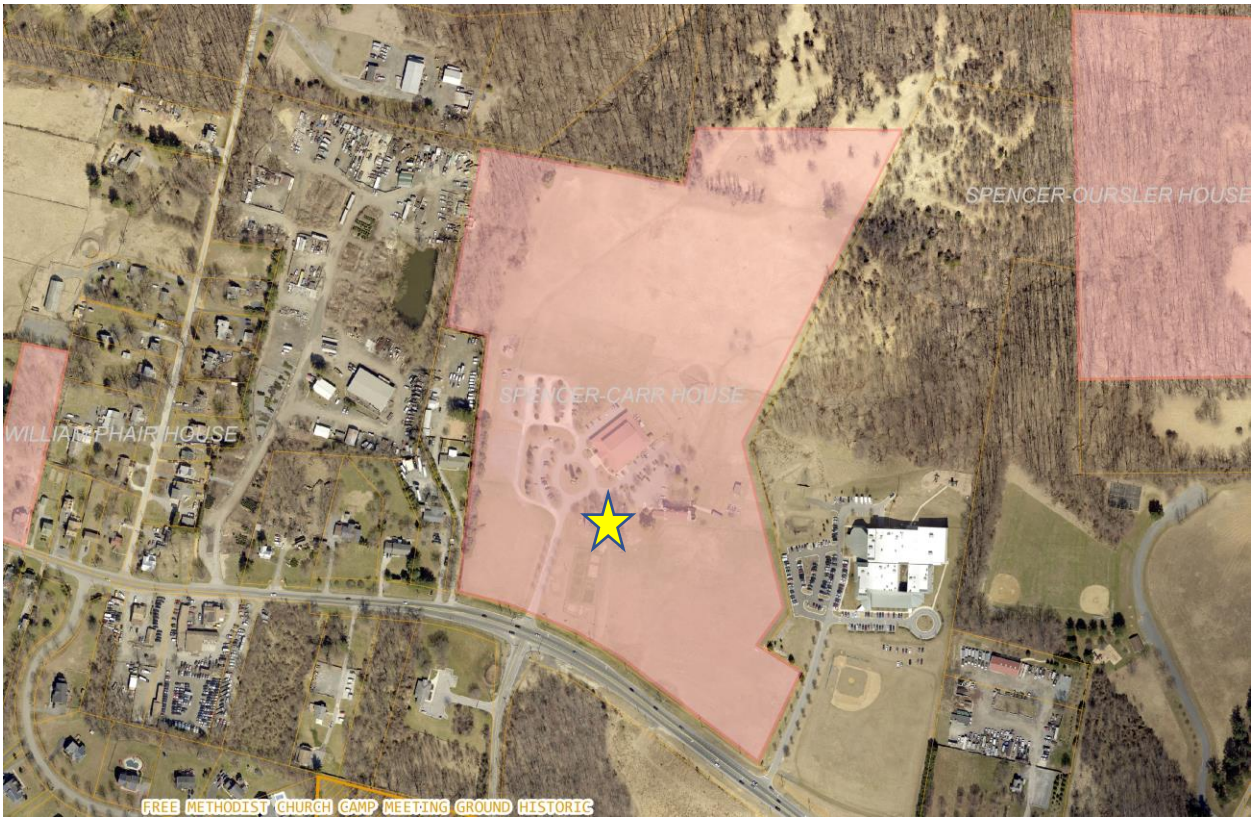


Figure 1: The designated parcel for the Spencer-Carr House. The star marks the location of the historic house.

BACKGROUND

In late 2018, the HPC evaluated a preliminary consultation and HAWP for the partial demolition of the rear addition of the Spencer-Carr House.[1] The addition had degraded due to substantially deferred maintenance and could not be saved. One of the concerns raised at the hearings for the proposed demolition was: what is being done to ensure there are sufficient revenue streams to ensure the rest of the historic building does not suffer the same fate? The proposal under consideration in this preliminary consultation is one of the ways the property owner will be able to maintain the historic resources on the property.

PROPOSAL

The applicant proposes to install a commercial-scale solar array at the north end of the site.

APPLICABLE GUIDELINES

Proposed alterations to individual Master Plan Sites are reviewed under Montgomery County Code Chapter 24A (*Chapter 24A*) and the *Secretary of the Interior's Standards for Rehabilitation*. Rehabilitation is defined as the act or process of making possible a compatible use for a property through

[1] The Preliminary Consultation for the partial demolition was considered at the October 18, 2018 HPC meeting. The Staff Report for that meeting is here: https://montgomeryplanning.org/wp-content/uploads/2018/10/II.A-2420-Spencerville-Road-Spencerville.pdf with the recording of the meeting here: http://mncppc.granicus.com/MediaPlayer.php?publish_id=af96f600-d92e-11e8-9302-0050569183fa. The HAWP was approved on December 5, 2018. The HAWP Staff Report can be found here: https://montgomeryplanning.org/wp-content/uploads/2018/11/I.K-2420-Spencerville-Rd.-Demo-Staff-Report.pdf. The audio recording of that hearing can be found here: http://mncppc.granicus.com/MediaPlayer.php?publish_id=c26b7271-f98c-11e8-9afa-0050569183fa.

repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.

Montgomery County Code; Chapter 24A-8

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:
   (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
   (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
   (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
   (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
   (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship.

Secretary of Interior's Standards for Rehabilitation

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

The Spencer-Carr House (c.1855) was the home to the founder of Spencerville, William Spencer. It consists of the original, side-gable, three-bay wide massing of the house. The site also contains a historic wood accessory structure, tile silo, 20th-century barn building, and a contemporary church. There is an open field between Spencerville Rd. and the buildings. To the north of the church building, there is an open meadow.

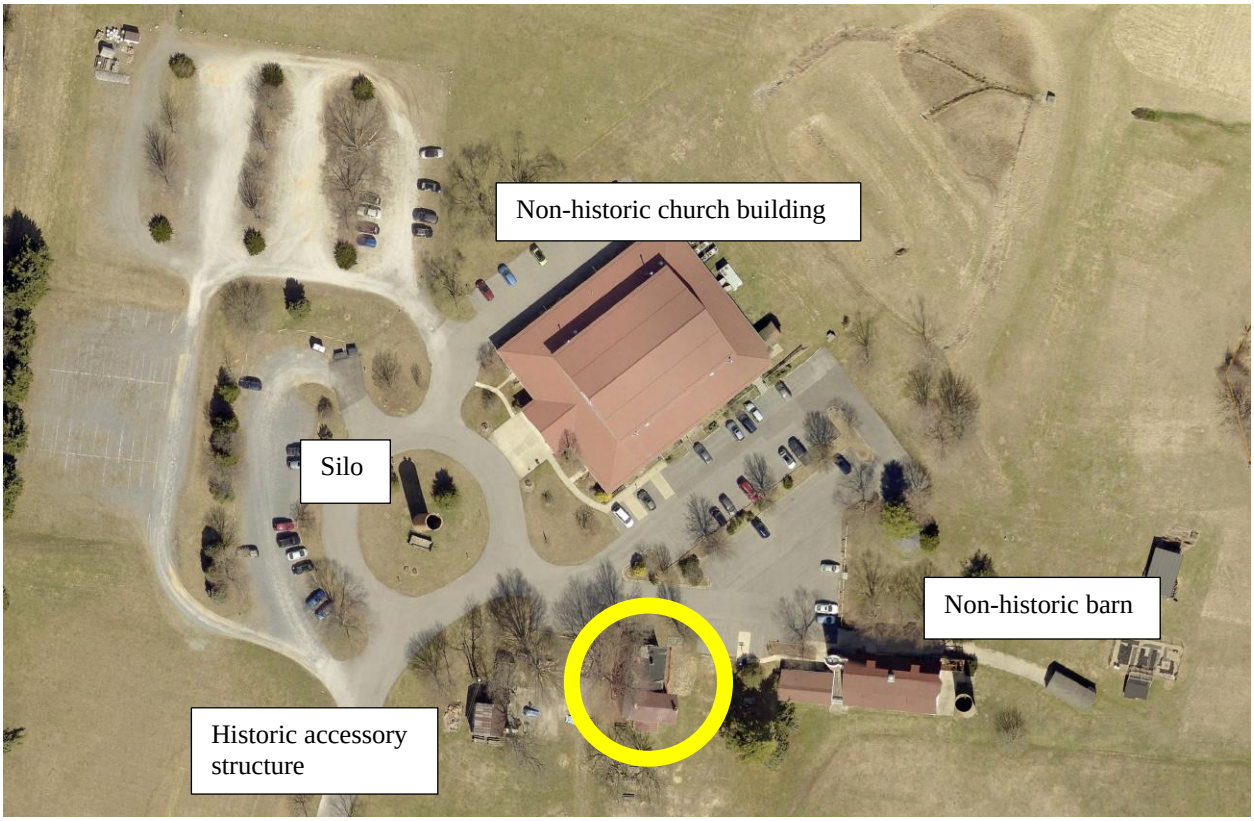


Figure 2: Detail aerial of the Spencer-Carr House site (historic house circled in yellow).

The applicant proposes installing an 8.62-acre commercial solar array to the north of the contemporary church and nearly 400' (four hundred feet) to the north of the historic Spencer-Carr House. Aside from the solar panels themselves, there will be two above-ground features to the northeast of the church building: the 'switchgear' and 'electrical equipment pad.' This location was selected because the church building blocks the view of these features from the Spencer-Carr house. All other conduit will be buried and will not have a visual impact on the site.

The solar panels will be installed in south-facing rows. The panels will be installed on metal posts at a fixed angle to maximize collection. Each panel will be approximately 3' × 6'. Because of the dimensions of the support posts, the orientation of the panel, and the angle of the panel installation, Staff is unsure of the overall dimensions of the collectors. Drawings with the dimensions of a solar collector need to be included with the HAWP.

Surrounding the solar collector, the applicant proposes to construct a 6' (six-foot) tall chain-link fence. Staff finds that a fence in this location should be as transparent as possible or should maintain an agricultural character. Because of the desired height for the fence for safety, Staff finds that chain link is an appropriate material.

Outside of the fence, the applicant proposes installing a 20' (twenty-foot) vegetative screen. The screen will be made up of a variety of shrubs, evergreen trees, and canopy trees. Landscape plans are attached. While the HPC is supposed to exclude vegetation when evaluating a HAWP, this space will limit views of the solar collector from within the site.

Staff request HPC feedback regarding:

- The appropriateness of installing a commercial-scale solar collector on the historic site;
- Concerns regarding material specifications.
- Any other comments regarding the proposal.

Additional information is required for a complete HAWP application including:

- An accounting of the total number of solar panels;
- Annotated elevation drawings of one solar array (one from the south and an east/west view);
- Dimensions and other details of above-ground features;
- Total number of tree removals proposed (a HAWP is required for any tree removal in excess 6" d.b.h.);
- Any additional request from the HPC.

STAFF RECOMMENDATION

Staff recommends the applicant make revisions based on the guidance and feedback provided by the HPC and return for a second preliminary consultation or HAWP as recommend.

DPS - #8

HISTORIC PRESERVATION COMMISSION
301/563-3400

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Email: fyuhas@tpoint-e.com
Contact Person: Franny Yuhas
Daytime Phone No.: (410)375-9420

Tax Account No.: 38-4108909

Name of Property Owner: Cedar Ridge Community Church Daytime Phone No.: (301) 241-5949

Address: 2410 , Spencerville, Spencerville Road 20868
Street Number City Street Zip Code

Contractor: N/A - TBD Phone No.: N/A

Contractor Registration No.: N/AW

Agent for Owner: Mark Stires Daytime Phone No.: (703)850-9982

LOCATION OF BUILDING/PREMISE

House Number: 2410 Street: Spencerville Road

Town/City: Spencerville Nearest Cross Street: Peach Orchard Road

Lot: 20756 Block: _____ Subdivision: _____

Liber: _____ Folio: _____ Parcel: N202

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

☒ Construct ☐ Extend ☐ Alter/Renovate
☐ Move ☐ Install ☐ Wreck/Raze
☐ Revision ☐ Repair ☐ Revocable

CHECK ALL APPLICABLE:

☐ A/C ☐ Slab ☐ Room Addition ☐ Porch ☐ Deck ☐ Shed
☒ Solar ☐ Fireplace ☐ Woodburning Stove ☐ Single Family
☒ Fence/Wall (complete Section 4) ☐ Other: _____

1B. Construction cost estimate: $ TBD

1C. If this is a revision of a previously approved active permit, see Permit # N/A

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☐ WSSC 02 ☒ Septic 03 ☐ Other: _____

2B. Type of water supply: 01 ☐ WSSC 02 ☒ Well 03 ☐ Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height 6 feet 0 inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

☐ On party line/property line ☒ Entirely on land of owner ☐ On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Mark S. Stires
Signature of owner or authorized agent

04-03-2020
Date

Approved: _____ *For Chairperson, Historic Preservation Commission*

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: _____ Date Filed: _____ Date Issued: _____

Edit 6/21/99

SEE REVERSE SIDE FOR INSTRUCTIONS

THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.

1. **WRITTEN DESCRIPTION OF PROJECT**

   a. Description of existing structure(s) and environmental setting, including their historical features and significance:

   ATTACHED

   b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

   ATTACHED

2. **SITE PLAN**

   Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

   a. the scale, north arrow, and date;

   b. dimensions of all existing and proposed structures; and

   c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. **PLANS AND ELEVATIONS**

   You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

   a. ***Schematic construction plans***, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.

   b. Elevations (facades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. **MATERIALS SPECIFICATIONS**

   General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. **PHOTOGRAPHS**

   a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.

   b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. **TREE SURVEY**

   If you are proposing construction adjacent to or within the dripline of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree of at least that dimension.

7. **ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS**

   For **ALL** projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question.

PLEASE PRINT (IN BLUE OR BLACK INK) OR TYPE THIS INFORMATION ON THE FOLLOWING PAGE.
PLEASE STAY WITHIN THE GUIDES OF THE TEMPLATE, AS THIS WILL BE PHOTOCOPIED DIRECTLY ONTO MAILING LABELS.

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address	**Owner's Agent's** mailing address
CEDAR RIDGE COMMUNITY CHURCH ATTN:BRYAN PETERSON 2410 SPENCERVILLE ROAD SPENCERVILLE,MD 20868	
Adjacent and confronting Property Owners mailing addresses	
DELMIS R. & LUIS R. RODRIGUEZ 2312 SPENCERVILLE ROAD SPENCERVILLE, MD 20868	CHARLES S. STEPHENS, JR. 2214 SPENCERVILLE ROAD SPENCERVILLE, MD 20868
DENIS S. & C. E. IBBOTT 16505 BATSON ROAD SPENCERVILLE, MD 20868	MARYLAND NATIONAL CAPITAL AND PLANNING COMMISSION 6611 KENILWORTH AVE RIVERDALE, MD 20737
CHESAPEAKE CONFERENCE ASSOCIATION OF SEVENTH-DAY ADVENTISTS PARCEL B SPENCER FARM 6600 MARTIN ROAD COLUMBIA, MD 20868	

Existing Property Condition Photographs (duplicate as needed)

Detail: AERIAL SHOT OF 2410 SPENCERVILLE ROAD (GOOGLE EARTH)

Detail: AERIAL SHOT OF PROPOSED SOLAR ARRAY LOCATION (GOOGLE EARTH)

Existing Property Condition Photographs (duplicate as needed)

Detail: PROPOSED SOLAR ARRAY LOCATION (FACING NORTH-WEST)

Detail: PROPOSED SOLAR ARRAY LOCATION (FACING NORTH)

Existing Property Condition Photographs (duplicate as needed)

Detail: PROPOSED SOLAR ARRAY LOCATION (FACING NORTH-EAST)

Detail: PROPOSED SOLAR ARRAY LOCATION (FACING EAST)

Existing Property Condition Photographs (duplicate as needed)

Detail: PROPOSED AREA FOR SOLAR ARRAYS (BEHIND CHURCH)

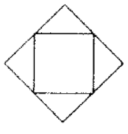
Detail: STREET-VIEW OF CEDAR RIDGE COMMUNITY CHURCH(TAKEN FROM SPENCERVILLE ROAD)

Existing Property Condition Photographs (duplicate as needed)

Detail: EXISITING PLAYGROUND OFF GRAVEL DRIVEWAY ON WEST SIDE OF PROPOSED SOLAR ARRAYS

Detail: EXISTING BUILDING LOCATED IN FRONT OF COMMUNITY CHURCH

Site Plan



Shade portion to indicate North

Applicant:_____

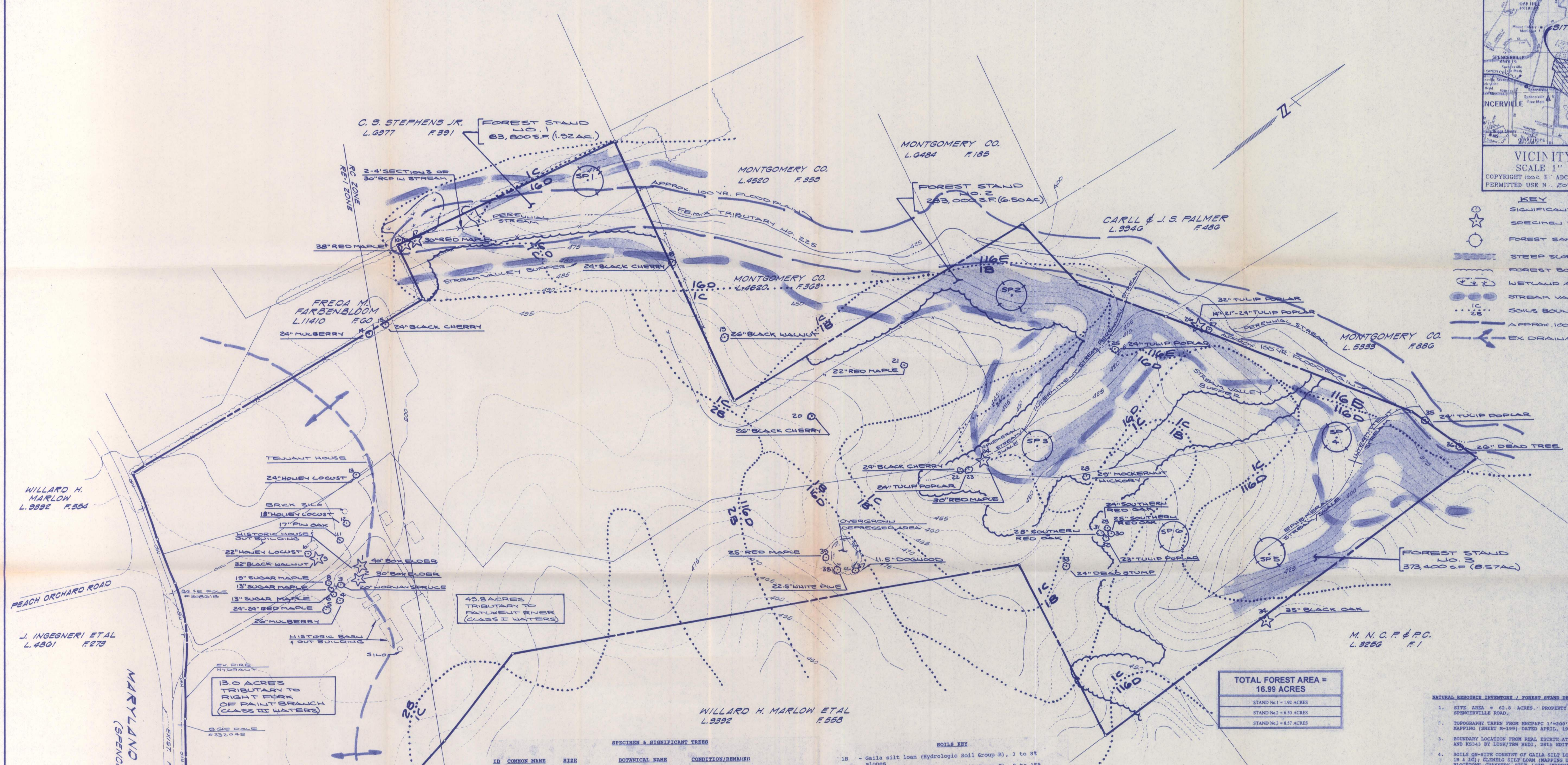
a. Description of Existing Structure Environmental Setting and Historical Features at:

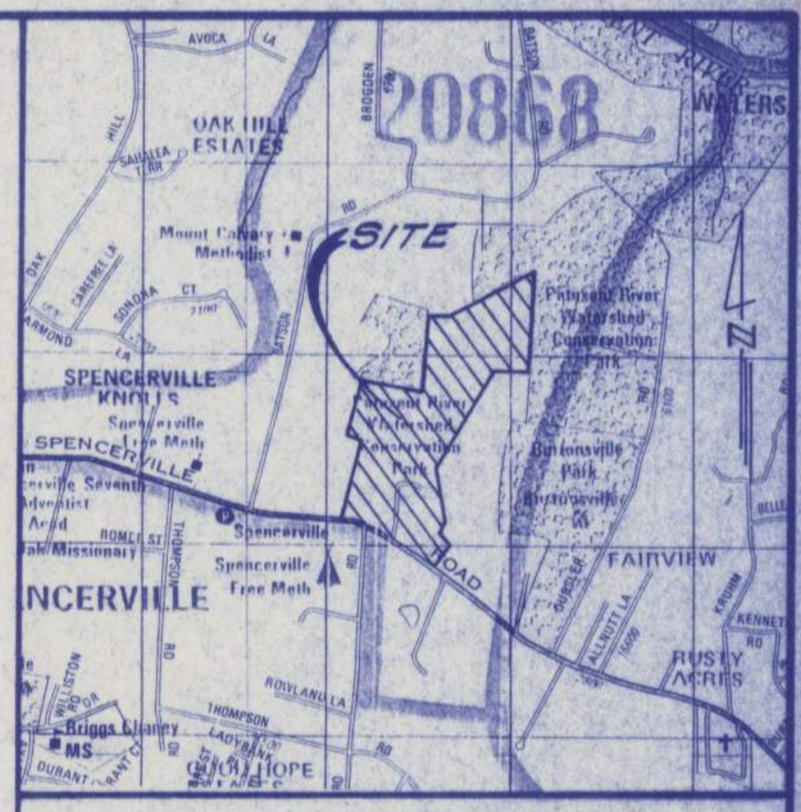
2410 Spencerville Road, Spencerville 20868

The Spencer-Carr Farmhouse was originally constructed circa 1855 on the north side of Spencerville Road (MD 198) in Spencerville, Montgomery County. The farmhouse resides in the Spencerville Historic District containing late nineteenth and early twentieth century properties. The property was deemed eligible for the National Register of Historic Places under meeting the criteria for embodying distinctive characteristics associated with the mid-nineteenth century vernacular farmhouse representing the "Spencerville style." The Spencer-Carr property was purchased by the Cedar Ridge Community Church in 1999 and has been updated with a non-contributing building, gravel roads, and parking lots for the Community Church.

b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district.

The intended project, owned by Turning Point Energy (TPE MD MO32,LLC) ,includes the addition of solar arrays in an undeveloped area located to the rear of the existing church. The solar arrays will be constructed along with land developments behind the Cedar Ridge Community Church. The solar arrays will not impact the buildings on the Spencer-Carr property and will have minimal impact to the property and its surroundings. The Project is for solar generation and will be able to operation without any interruptions to the Community Church.





VICINITY MAP
SCALE 1" = 2,000'
COPYRIGHT 1992 BY ADC OF ALEXANDRIA, INC.
PERMITTED USE No. 20192193

KEY
- SIGNIFICANT TREE
- SPECIMEN TREE
- FOREST SAMPLE POINT
- STEEP SLOPES
- FOREST BOUNDARY
- WETLAND AREA
- STREAM VALLEY BUFFER
- SOILS BOUNDARY (1C / 2B)
- APPROX. 100 YR. FLOODPLAIN
- EX. DRAINAGE DIVIDE

TOTAL FOREST AREA = 16.99 ACRES

STAND No.1 = 1.92 ACRES
STAND No.2 = 6.50 ACRES
STAND No.3 = 8.57 ACRES

SPECIMEN & SIGNIFICANT TREES

ID	COMMON NAME	SIZE	BOTANICAL NAME	CONDITION/REMARKS
1.	*Box Elder	40"	Acer negundo	Fair - Measured at 2' above ground; 5 main trunks; Bark at base loose; 1 major trunk dying.
2.	*Box Elder	30"	Acer negundo	Good
3.	Norway Spruce	20"	Picea abies	Good
4.	Mulberry	26"	Morus sp.	Fair - Very fruitful but ragged appearance with many minor dead branches.
5.	Red Maple	24"-24"	Acer rubrum	Good
6.	Sugar Maple	13"	Acer saccharum	Good
7.	Sugar Maple	13"	Acer saccharum	Good
8.	Sugar Maple	19"	Acer saccharum	Good
9.	*Black Walnut	32"	Juglans nigra	Good
10.	Honey Locust	22"	Gleditsia tricanthos	Good
11.	Pin Oak	17"	Quercus palustris	Good
12.	Honey Locust	18"	Gleditsia tricanthos	Good
13.	Honey Locust	24"	Gleditsia tricanthos	Good
14.	Mulberry	24"	Morus sp.	Good
15.	Black Cherry	24"	Prunus serotina	Good
16.	*Red Maple	38"	Acer rubrum	Good
17.	*Red Maple	30"	Acer rubrum	Good
18.	Black Cherry	24"	Prunus serotina	Fair
19.	Black Walnut	26"	Juglans nigra	Fair
20.	Black Cherry	26"	Prunus serotina	Fair
21.	Red Maple	22"	Acer rubrum	Good
22.	Black Cherry	24"	Prunus serotina	Poor - Leaning heavily & mostly dead.
23.	Tulip Poplar	24"	Liriodendron tulipifera	Good
24.	*Red Maple	30"	Acer rubrum	Good
25.	Tulip Poplar	24"	Liriodendron tulipifera	Good
26.	*Tulip Poplar	32"	Liriodendron tulipifera	Good
27.	Tulip Poplar	14"-21"-24"	Liriodendron tulipifera	Good
28.	Mockernut Hickory	29"	Carya tomentosa	Excellent
29.	Southern Red Oak	24"	Quercus falcata	Good
30.	Southern Red Oak	25"	Quercus falcata	Poor - Small canopy; Dead branches.
31.	Tulip Poplar	23"	Liriodendron tulipifera	Good
32.	Southern Red Oak	28"	Quercus falcata	Good
33.	Dead Stump	24"	Unknown	Dead - 6' height.
34.	*Black Oak	35"	Quercus velutina	Good
35.	Tulip Poplar	24"	Liriodendron tulipifera	Good
36.	Dead Tree	26"	Unknown	Dead - 50' height.
37.	Dogwood	11.5"	Cornus florida	Fair - Scarred base.
38.	White Pine	22.5"	Pinus alba	Fair - Roots exposed & bound; Lopsided canopy.
39.	Red Maple	25"	Acer rubrum	Good

Notes: Diameters are given for each trunk of multiple truncate trees when truncation occurs below 4.5 feet. If major truncation occurs above 4.5 feet only the trunk diameter at 4.5 feet is given. * indicates specimen trees. Tree ID Numbers correspond to those assigned on Natural Resource Inventory/Forest Stand Delineation Map.

SOILS KEY

- 1B - Gaila silt loam (Hydrologic Soil Group B), 3 to 8% slopes
- 1C - Gaila silt loam (Hydrologic Soil Group B), 8 to 15% slopes
- 2B - Glenelg silt loam (Hydrologic Soil Group B), 3 to 8% slopes
- 16D - Brinklow - Blocktown silt loam (Hydrologic Soil Group B/C/D), 15 to 25% slopes
- 116D - Blocktown silt loam (Hydrologic Soil Group B/C/D), 15 to 25% slopes
- 116E - Blocktown silt loam (Hydrologic Soil Group C/D), 25 to 45% slopes, very rocky

NATURAL RESOURCE INVENTORY / FOREST STAND DELINEATION NOTES

1. SITE AREA = 62.8 ACRES. PROPERTY ADDRESS IS 2420 SPENCERVILLE ROAD.
2. TOPOGRAPHY TAKEN FROM MNCP&PC 1'=200' SCALE TOPOGRAPHIC MAPPING (SHEET M-199) DATED APRIL, 1978.
3. BOUNDARY LOCATION FROM REAL ESTATE ATLAS TAX MAPS KS342 AND KS343 BY LUSK/TRW REDI, 26th EDITION, 1994.
4. SOILS ON-SITE CONSIST OF GAILA SILT LOAMS (MAPPING UNITS 1B & 1C); GLENELG SILT LOAM (MAPPING UNIT 2B); BRINKLOW-BLOCKTOWN CHANNERY SILT LOAM (MAPPING UNIT 16D); AND BLOCKTOWN CHANNERY SILT LOAM (MAPPING UNIT 116D & 116E) ACCORDING TO SHEET 21 OF THE SOIL SURVEY FOR MONTGOMERY COUNTY, MARYLAND (INTERIM REPORT DATED APRIL 1990).
5. 15.7 ACRES OF PROPERTY IS ZONED RE-1C (RURAL ESTATE-15,000 S.F. MIN. LOT). 47.1 ACRES OF SITE IS ZONED RC (RURAL CLUSTER - MIN. 40,000 S.F. LOTS; 5 ACRE MIN. / BUILDING).
6. 49.8 ACRES OF THE SITE DRAIN TO AN UNNAMED TRIBUTARY OF PATUXENT RIVER. 13 ACRES OF THE SITE DRAIN TO THE RIGHT FORK OF PAINT BRANCH. THE STATE OF MARYLAND H A S DESIGNATED THE PORTION OF LAND DRAINING TO THE PATUXENT RIVER WATERSHED AS CLASS I WATERS. THE PORTION OF THE SITE DRAINING TO THE PAINT BRANCH WATERSHED IS CLASS III WATERS.
7. ALL ON-SITE WETLANDS AND 100-YEAR FLOODPLAINS ARE CONTAINED WITHIN THE STREAM VALLEY BUFFER. 100 YEAR FLOODPLAIN SHOWN FROM FEMA PANEL 0200C DATED AUGUST 5, 1991. FLOODPLAIN ADJUSTED BY THIS OFFICE.
8. FOREST AREA ON-SITE = 16.99 ACRES. STAND No.1 (1.92 AC) IS A PIONEER TULIP POPLAR WOODLAND. STAND No.2 (6.50 AC) IS A TULIP POPLAR FOREST ASSOCIATION OF PIONEER AND EARLY SERAL MIXED HARDWOODS. STAND No.3 (8.57 AC) IS A TULIP POPLAR FOREST ASSOCIATION SIMILAR TO STAND No.2. FOR SPECIFIC INFORMATION AND SAMPLING DATA SEE SITE NARRATIVE.
9. THE PROPERTY IS LISTED AS HISTORIC SITE No. 15/55 (SPENCER-CARR HOUSE) BY THE MNCP&PC IN THE MASTER PLAN FOR HISTORIC PRESERVATION.
10. ALL INDIVIDUAL TREE LOCATIONS ARE APPROXIMATE. INDIVIDUAL TREES TO BE SAVED SHOULD BE LOCATED BY SURVEYORS WHERE GRADING IS TO OCCUR WITHIN 100 FEET OF LOCATION SHOWN.
11. FIELD WORK FOR THIS INVENTORY WAS CONDUCTED 6/14/95.
12. A 20% AFFORESTATION THRESHOLD AND 25% CONSERVATION THRESHOLD WILL APPLY TO THIS SITE.
13. THIS PLAN EXPIRES 2 YEARS FROM THE DATE OF MNCP&PC APPROVAL.

THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION
NRI/FSD PLAN
APPROVED
NRI/FSD No. 4-96008
SIGNATURE [signature] DATE 8/3/95

NATURAL RESOURCE INVENTORY/FOREST STAND DELINEATION CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF EXISTING STATE AND COUNTY FOREST CONSERVATION LEGISLATION.

JUNE 20, 1995
DATE

J.D. Sievers
JOHN DOUGLAS SIEVERS
RECOGNIZED AS QUALIFIED PROFESSIONAL BY MD DEPT. OF NATURAL RESOURCES

APPLICANT
MR. STEVE CARSTENS
3032 CASTLELEIGH ROAD
SILVER SPRING, MD. 20904
(301) 459-4024

TAX MAP KS 342 & KS 343 W.S.S.C. 3NE221 & 3NE222

NATURAL RESOURCE INVENTORY / FOREST STAND DELINEATION PLAN
SPENCER FARM
PARCEL 149 & PARCEL 309

MHG
JUN 21 1995

5TH ELECTION DISTRICT
MONTGOMERY COUNTY MARYLAND

Macris, Hendricks and Glascock, P.A.
Engineers • Planners • Surveyors
Suite 120
9220 Wightman Road
Gaithersburg, Maryland
20879
(301)670-0840

Designed	Drawn
JDS	Greg
Date 6/10/95	Scale 1"=100'
Job No. 95-323	Sheet 1 of 1

CEDAR RIDGE COMMUNITY SOLAR
PARCEL-A SPENCER FARM
SOLAR - MO 32

LEGEND

EXISTING	DESCRIPTION	PROPOSED
350	INDEX CONTOUR	350
352	INTERMEDIATE CONTOUR	352
EX. E.P.	EDGE OF PAVEMENT	PROP. E.P.
EX. C & G	CURB AND GUTTER	
	PROPOSED HEADER CURB	
	PROPERTY LINE	
	DEPARTING PROPERTY LINE	
	LOT LINE	
	RIGHT-OF-WAY	
	CENTERLINE	
	FLOOD PLAIN	
	(LIMITS OF DISTURBANCE)	
	TREE LINE	
	FLOW LINE OF SWALE	
	STREAM	
	OVERLAND RELIEF PATHWAY	
x x	FENCE LINE	x x
	EASEMENT	
EX 8" W/M	WATER LINE	8" DIP W/M
EX. W/V	WATER VALVE	
	REDUCER	
EX 8" SAN	SANITARY SEWER	8" SAN
EX 18" RCP	STORM SEWER	18" RCP
	CABLE TV	CATV
	ELECTRIC SERVICE	
	TELEPHONE SERVICE	
	GAS LINE	
+ 25.32	SPOT ELEVATION	25.32
ø	UTILITY POLE	ø
	SIGN	
EX MH	SANITARY SEWER IDENTIFIER	EX MH
2	STORM DRAIN IDENTIFIER	2
W	EASEMENT IDENTIFIER	W
	WATER METER	
	FIRE HYDRANT	
	PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES	25
	STREET LIGHT	
	VEHICLES PER DAY (TRAFFIC COUNT)	25VPD
	TEST PIT LOCATION RECOMMENDED/REQUIRED	TP
	DENOTES CLEAR SIGHT TRIANGLE	
EX 15" OAK	TREE	
	BENCHMARK	BM # TRV # ELEV=
	PAVERS	
	CONCRETE SIDEWALK	
	CONCRETE SIDEWALK	
	END WALLS	
	END SECTIONS	
	STOP SIGN	
	STREET SIGN	
OHE	OVERHEAD ELECTRIC	OHE
OHT	OVERHEAD TELEPHONE	OHT
VAN	HANDICAP PARKING SPACE (VAN)	VAN
	RIP RAP	

CONTACT INFORMATION

REFERENCES

- ALTA/ACSM LAND TITLE SURVEY
  BOWMAN CONSULTING, INC.
  TITLED: PARCEL-A SPENCER FARM SOLAR-MO 32
  PROJECT NO.: 130078-01-001
  DATED: JULY 2019
- NRI/FSD APPROVAL #_____
  BOWMAN CONSULTING, INC.
  TITLED: NATURAL RESOURCES INVENTORY/FOREST STAND DELINEATION
  "PARCEL-A SPENCER FARM SOLAR-MO 32"
  2420 SPENCERVILLE ROAD, SPENCERVILLE,
  MONTGOMERY COUNTY, MARYLAND 20868
  PROJECT NO.: 130078-01-001
  DATED:
  APPROVED:
- STORMWATER MANAGEMENT CONCEPT APPROVAL #284912
  BOWMAN CONSULTING INC.
  TITLED: STORMWATER MANAGEMENT CONCEPT PLAN
  "PARCEL-A SPENCER FARM SOLAR-MO 32"
  2420 SPENCERVILLE ROAD, SPENCERVILLE,
  MONTGOMERY COUNTY, MARYLAND 20868
  PROJECT NO: 130078-01-001
  DATED: SEPTEMBER 4, 2019
  APPROVED: SEPTEMBER 4, 2019

OWNER
CEDAR RIDGE COMMUNITY CHURCH INC.
ATTN: BRYAN PETERSON
ADDRESS: 2410 SPENCERVILLE ROAD
SPENCERVILLE, MARYLAND 20868
EMAIL: BRYANP@CRCC.ORG
PHONE: (301) 421-5949 EXT. 220

DEVELOPER/APPLICANT
TPE MD MO32, LLC
ATTN: FRANNY YUHAS
ADDRESS: 999 18TH STREET, SUITE 3000
DENVER, CO 80202
EMAIL: FYUHAS@TPOINT-E.COM
PHONE: 410-375-9420

CIVIL ENGINEER
BOWMAN CONSULTING GROUP
ADDRESS: 185 ADMIRAL COCHRANE DRIVE, SUITE 215
ANNAPOLIS, MARYLAND 21401
PHONE: 401.224.7590

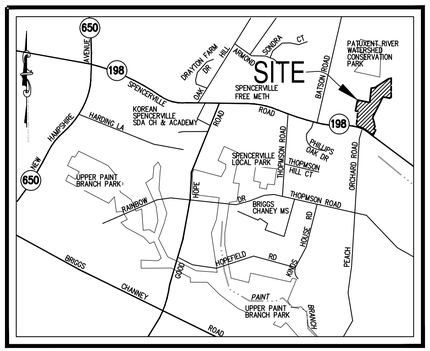
NOTES:

1. M-NCPPC STAFF MUST INSPECT ALL TREE-SAVE AREAS AND PROTECTION DEVICES BEFORE CLEARING AND GRADING.
2. UNLESS SPECIFICALLY NOTED ON THIS PLAN DRAWING OR IN THE PLANNING BOARD CONDITIONS OF APPROVAL, THE BUILDING FOOTPRINTS, BUILDING HEIGHTS, ON-SITE PARKING, SITE CIRCULATION, AND SIDEWALKS SHOWN ON THE PRELIMINARY PLAN ARE ILLUSTRATIVE. THE FINAL LOCATIONS OF BUILDINGS, STRUCTURES, AND HARDSCAPE WILL BE DETERMINED AT THE TIME OF SITE PLAN APPROVAL. PLEASE REFER TO THE ZONING DATA TABLE FOR DEVELOPMENT STANDARDS SUCH AS SETBACKS, BUILDING RESTRICTION LINES, BUILDING HEIGHT, AND LOT COVERAGE FOR EACH LOT. OTHER LIMITATIONS FOR SITE DEVELOPMENT MAY ALSO BE INCLUDED IN THE CONDITIONS OF THE PLANNING BOARD'S APPROVAL.

SITE PLAN
MNCPPC # 820200040

LOCATION OF SITE

2420 SPENCERVILLE ROAD
SPENCERVILLE,
MONTGOMERY COUNTY, MARYLAND 20868



LOCATION PLAN
SCALE: 1" = 2000'

Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MO 32, LLC JAMES MARSHALL
Company Contact Person

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANSPORTATION OFFICIALS
AC	ACRE
ADJ	ADJACENT
AGGR	AGGREGATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BASEMENT FLOOR
BLDG	BUILDING
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICES
BOV	BLOW OFF VALVE
BRL	BUILDING RESTRICTION LINE
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
BW	BOTTOM OF WALL
c,e	CENTER CORRECTION ON VERTICAL CURVE
C	RUNOFF COEFFICIENT
CATV	CABLE TELEVISION
C&G	CURB AND GUTTER
CB	CATCH BASIN
CBR	CALIFORNIA BEARING RATIO
CC	CENTER TO CENTER
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CH	CHORD
CIP	CAST IRON PIPE
℄ OR CL	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMS	CUBIC METERS PER SECOND
CN	RUNOFF CURVE NUMBER
CONT	CONTINUOUS
CO	CLEAN OUT
CONC	CONCRETE
CS	CURB STOP
CT	COURT
CTR	CENTERLINE
CY	CUBIC YARD
D	DEPTH
DA	DRAINAGE AREA
DB	DEED BOOK
MDE	MD. DEPARTMENT OF THE ENVIRONMENT
DET	DETAIL
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DI	DROP INLET
DIST	DISTANCE
DL	DOMESTIC LINE
DM	DROP MANHOLE
DOM	DOMESTIC
DR	DRIVE
DRN	DRAINAGE AREA
DS	DOWN SPOUT
DU	DWELLING UNITS
DWG	DRAWING
D/W	DRIVEWAY
Δ	DELTA
EA	EACH
EBL	EAST BOUND LANE
EC	EROSION CONTROL
EG	EDGE OF GUTTER
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATION
ENGR	ENGINEER
ENT	ENTRANCE
EP	EDGE OF PAVEMENT
ES	END SECTION
ESMT	EASEMENT
ETD	EXISTING TO BE DEMOLISHED
ETR	EXISTING TO REMAIN
ETRL	EXISTING TO BE RELOCATED
ETRP	EXISTING TO BE REPLACED
EVCE	ENDING VERTICAL CURVE ELEVATION
EVCS	ENDING VERTICAL CURVE STATION
EW	END WALL
EX	EXISTING
EQC	ENVIRONMENTAL QUALITY CORRIDOR
F	FIRE LINE
FAR	FLOOR AREA RATIO
FC	FACE OF CURB
FD	FLOOR DRAIN
FF	FIRST FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FND	FOUNDATION
FP	FLOOD PLAIN
FPS	FEET PER SECOND
FS	FIRE SERVICE OR FACTOR OF SAFETY
FT	FOOT / FEET
G	GAS
GFA	GROSS FLOOR AREA
GR	GUARD RAIL OR GRATE INLET
H	HEAD
HC	HANDICAP
HB	HORIZONTAL BEND
HGL	HYDRAULIC GRADE LINE
HORZ	HORIZONTAL
HP	HIGH POINT
HR	HAND RAIL
HT	HEIGHT
HW	HEADWATER
I	RAINFALL INTENSITY
ID	INSIDE DIAMETER OR IDENTIFICATION
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
IP	IRON PIPE
IPF	IRON PIPE FOUND
IPS	IRON PIPE SET
JB	JUNCTION BOX
JNT	JOINT
K	SIGHT DISTANCE COEFFICIENT
Ke	CULVERT ENTRANCE LOSS COEFFICIENT
L	LENGTH
LAT	LATERAL
LCG	LIMITS OF CLEARING & GRADING
LF	LINEAR FEET
LOS	LINE OF SIGHT
LP	LOW POINT
LS	LOADING SPACE
LT	LEFT
M	MONUMENT FOUND
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MS	MEDIAN STRIP
MSL	MEAN SEA LEVEL
NA OR N/A	NOT APPLICABLE
NBL	NORTH BOUND LANE
NFA	NET FLOOR AREA
NO. OR #	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHANG
O/H	OVERHEAD
OHC	OVERHEAD CABLE
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
P	PERIMETER
P&P	PLAN AND PROFILE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCTC	POINT OF CURVATURE TOP OF CURB
PCEP	POINT OF CURVE EDGE OF PAVEMENT
PG	PAGE
PGL	POINT OF GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVE
PRELIM	PRELIMINARY
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVRC	POINT OF VERTICAL REVERSE CURVE
PVT	POINT OF VERTICAL TANGENT
Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RDCR	REDUCER
RD	ROAD OR ROOF DRAIN
REINF	REINFORCED
REQD	REQUIRED
RET	RETAINING
REV	REVISION
RMA	RESOURCE MANAGEMENT AREA
RPA	RESOURCE PROTECTION AREA
RR	RAILROAD
RT	RIGHT
RTE	ROUTE
R/W	RIGHT OF WAY
S	SPEED OR SLOPE
SAN	SANITARY
SBL	SOUTH BOUND LANE
SCH	SCHEDULE
SD	SIGHT DISTANCE
SEC	SECTION
SEW	SEWER
SF	SQUARE FEET
SH	SHOULDER
SP	SPACE OR SITE PLAN
SPEC	SPECIFICATIONS
STA	STATION
STD	STANDARD
STM	STORM
STR	STRUCTURE
SVC	SERVICE
S/W	SIDEWALK
SWM	STORM WATER MANAGEMENT
Sx	CROSS SLOPE
SY	SQUARE YARD
T	TANGENT
TB	TOP OF BANK OR TEST BORING
TBR	TO BE REMOVED
TC	TOP OF CURB
Tc	TIME OF CONCENTRATION
TEL	TELEPHONE
TEMP	TEMPORARY
TH	TEST HOLE
TP	TEST PIT OR TREE PROTECTION
TW	TOP OF WALL OR TAILWATER
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UGC	UNDERGROUND CABLE
UD	UNDERDRAIN
UP	UTILITY POLE
USGS	US GEOLOGICAL SURVEY
V OR VOL	VOLUME
V OR VEL	VELOCITY
VAN	HANDICAPPED VAN PARKING SPACE
VC	VERTICAL CURVE
MSHA	MD STATE HIGHWAY ADMINISTRATION
VF	VERTICAL FOOT
W	WEIGHT OR WIDTH
WBL	WEST BOUND LANE
WL	WATER LINE
WM	WATER METER
W/M (WM)	WATER MAIN
WV	WATER VALVE
XING	CROSSING
XF	TRANSFORMER
YI	YARD INLET
YR	YEAR
Z	SIDE SLOPES

SHEET INDEX

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

Phone: 410.224.7590
www.bowmanconsulting.com

COVER SHEET
CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32
MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND · MARK S. STIRES · NO. 18987 · REGISTERED PROFESSIONAL ENGINEER · 1/13/2021

PLAN STATUS

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: AS SHOWN V:
JOB No. 130078-01-001
DATE : FEBRUARY 2020
FILE No. 130078-D-CP-001
SHEET 1 OF 9

Cad file name: :\A\130078 - MO32 Spencerville Rd\130078-01-001 (DNC)\Engineering\Engineering Plans\Cds\Site Plan\01-SITE-820200040-001.dwg

Developer's Certificate 820200040

The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MO 32, LLC (Company) JAMES MARSHALL (Contact Person)

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

Phone: 410.224.7590
www.bowmanconsulting.com

APPROVALS AND ABBREVIATIONS

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED PROFESSIONAL ENGINEER
01/13/2020

PLAN STATUS

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: NONE V:

JOB No. 130078-01-001

DATE : FEBRUARY 2020

FILE No. 130078-D-CP-001

SHEET 2 OF 9

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (Dkt)\Engineering\Engineering Plans\CDs\Site Plan\07-SITE-820200040-002.dwg

Developer's Certificate 820200040

The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MO 32, LLC (Company) JAMES MARSHALL (Contact Person)

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

© Bowman Consulting Group, Ltd.
Phone: 410.224.7590
www.bowmanconsulting.com

APPROVALS AND ABBREVIATIONS

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED PROFESSIONAL ENGINEER
01/13/2020

PLAN STATUS

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: NONE V:

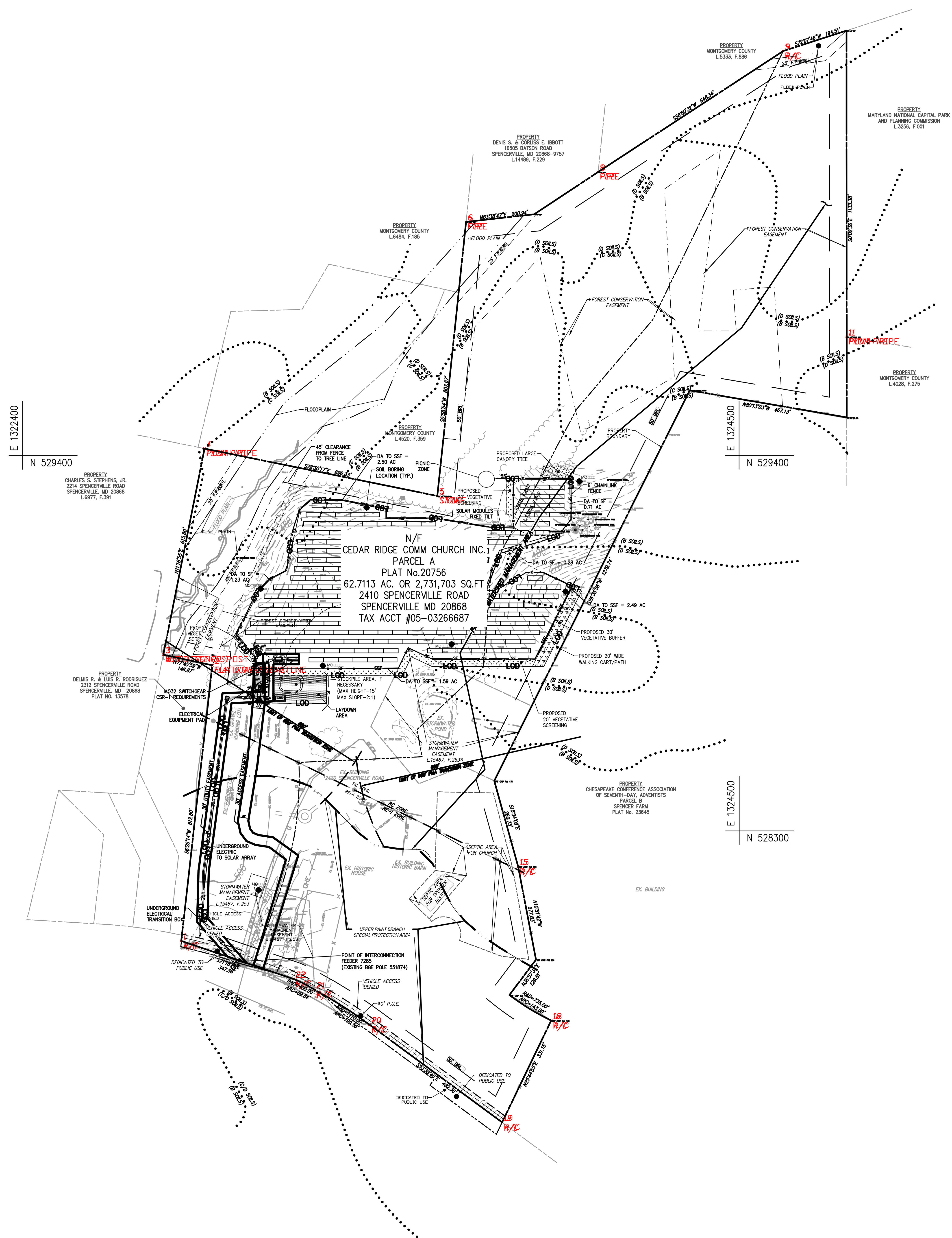
JOB No. 130078-01-001

DATE : FEBRUARY 2020

FILE No. 130078-D-CP-001

SHEET 3 OF 9

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (Dkt)\Engineering\Engineering Plans\CDs\Site Plan\07-SITE-820200040-002.dwg



OVERALL SITE PLAN

SCALE: 1" =200'

LEGEND:

- PROP. ACCESS ROAD
- PROPOSED FENCE
- UNDERGROUND ELECTRIC
- ELECTRIC LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- SOIL BORING
- TPE SOLAR MODULE
- 30 FT LANDSCAPE BUFFER
- LARGE CANOPY TREE
- VEGETATIVE SCREENING
- TEMPORARY LAYDOWN ARE
- CONCRETE PAD
- 50 FT BLDG. RESTRICTION
- REINFORCED SILT FENCE
- SILT FENCE

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MD 32, LLC (Company) JAMES MARSHALL (Contact Person)

Address: 999 18th STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature: [signature]

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

OVERALL SITE PLAN

CEDAR RIDGE COMMUNITY SOLAR PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED PROFESSIONAL ENGINEER
1/13/2021

PLAN STATUS

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: 1"=200 V: N/A

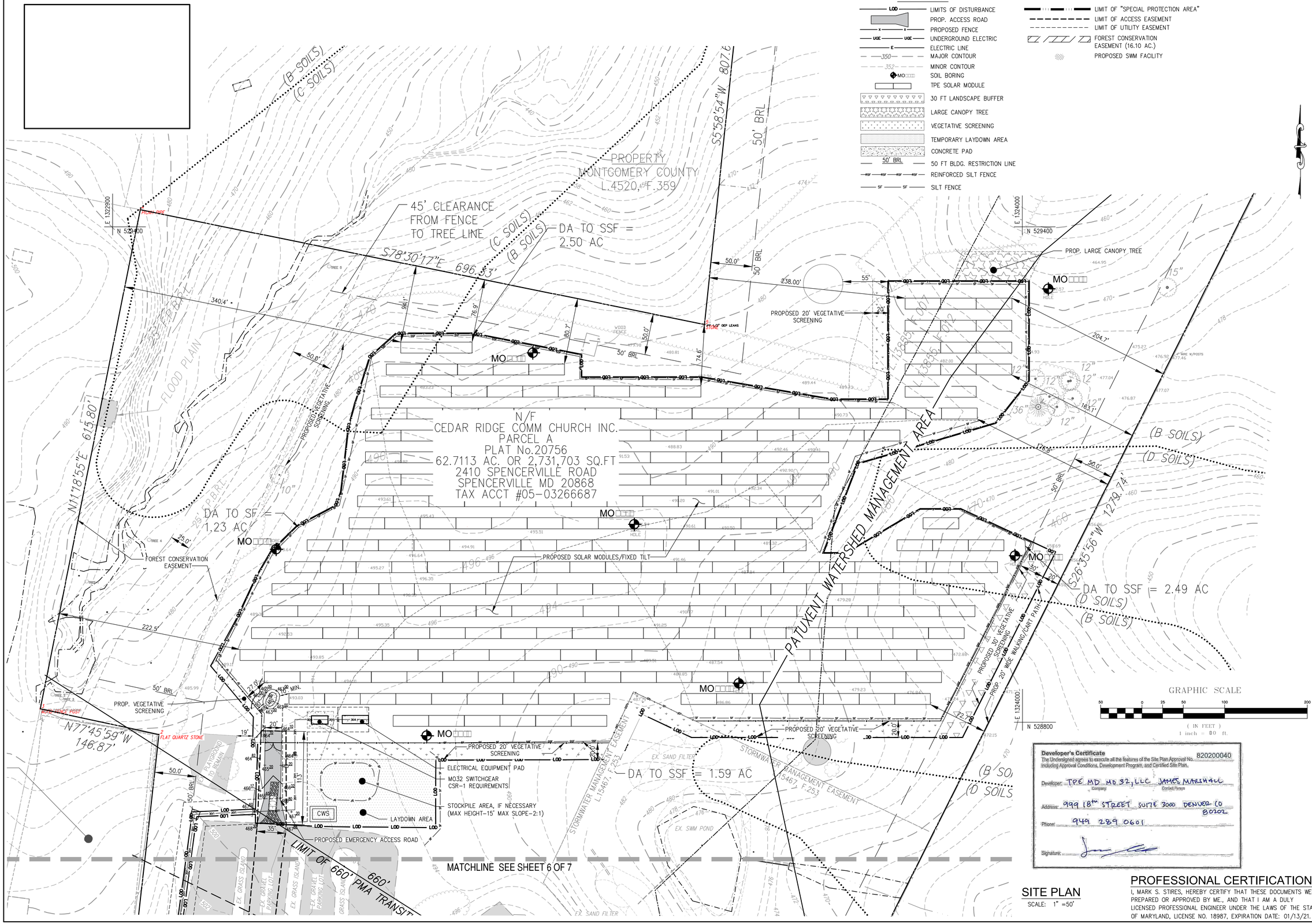
JOB No. 130078-01-001

DATE : FEBRUARY 2020

FILE No. 130078-D-CP-001

SHEET 4 OF 9

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Engineering Plans\CDs\Site Plan\07-SITE-820200040-004.dwg



Developer's Certificate 820200040

The Undersigned agrees to execute all the features of the Site Plan Approval No. including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD HO 32, LLC JAMES MARSHALL (Company / Contact Person)

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

SITE PLAN

SCALE: 1" =50'

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
P: 949.289.0601
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

SITE PLAN, SITE DATA, NOTES AND TABLES

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233367

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED PROFESSIONAL ENGINEER
1/13/2020

PLAN STATUS

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: 1"=50' V: N/A

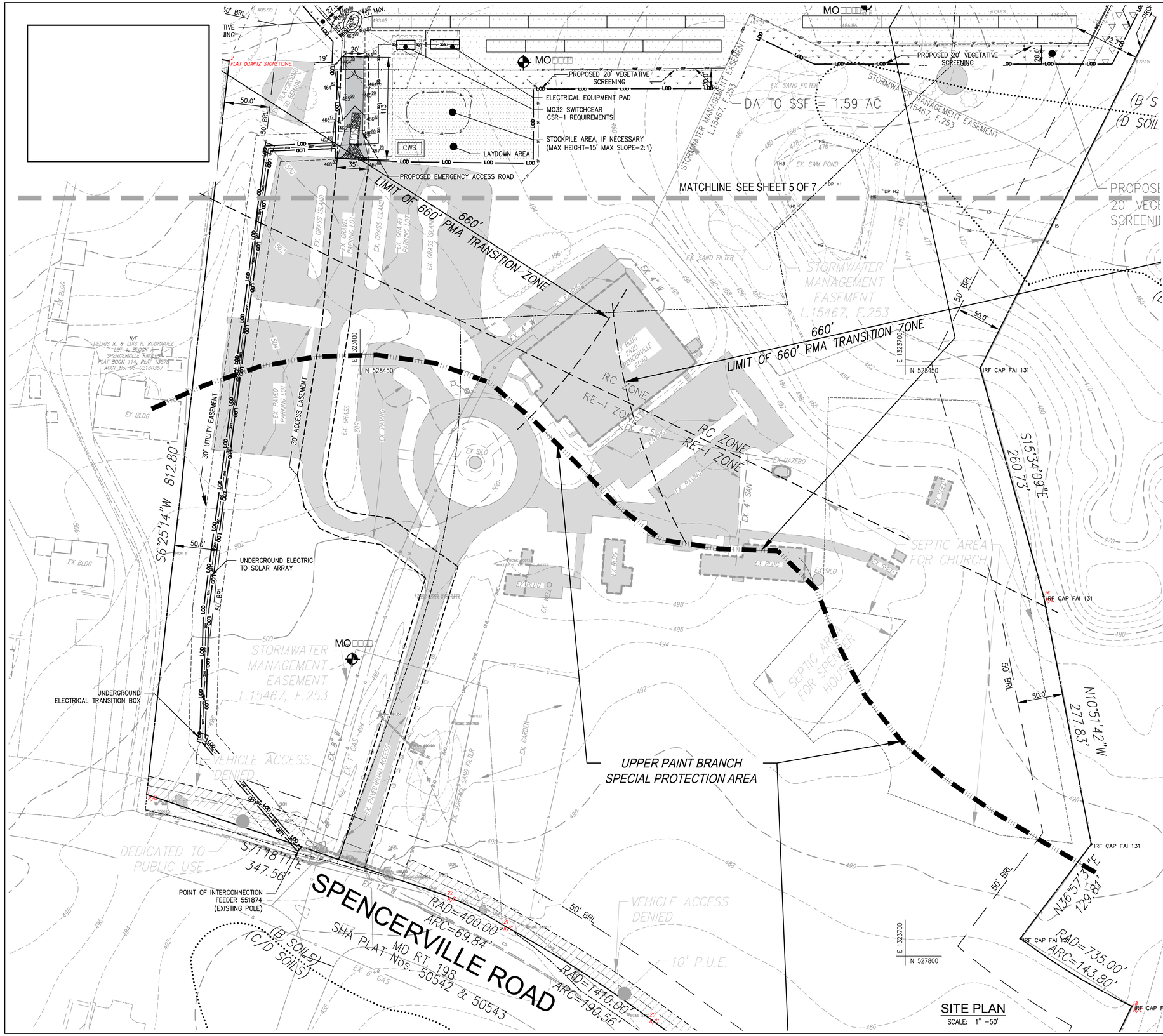
JOB No. 130078-01-001

DATE : FEBRUARY 2020

FILE No. 130078-D-CP-001

SHEET 5 OF 9

Cad file name: J:\130078 - M032 Spencerville ROI\130078-01-001 (DNC)\Engineering\Engineering Plans\Cds\Site Plan\01-SITE - B202000040-1005.dwg



Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No.. 820200040 including Approval Conditions, Development Program, and Certified Site Plan..

Developer: TPE MD MO 32, LLC (Company) JAMES MARSHALL (Contact Person)

Address: 999 18th STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

SITE PLAN
SCALE: 1" =50'

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
16S Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7360
© Bowman Consulting Group, Ltd.
www.bowmanconsulting.com

SITE PLAN DETAILS

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

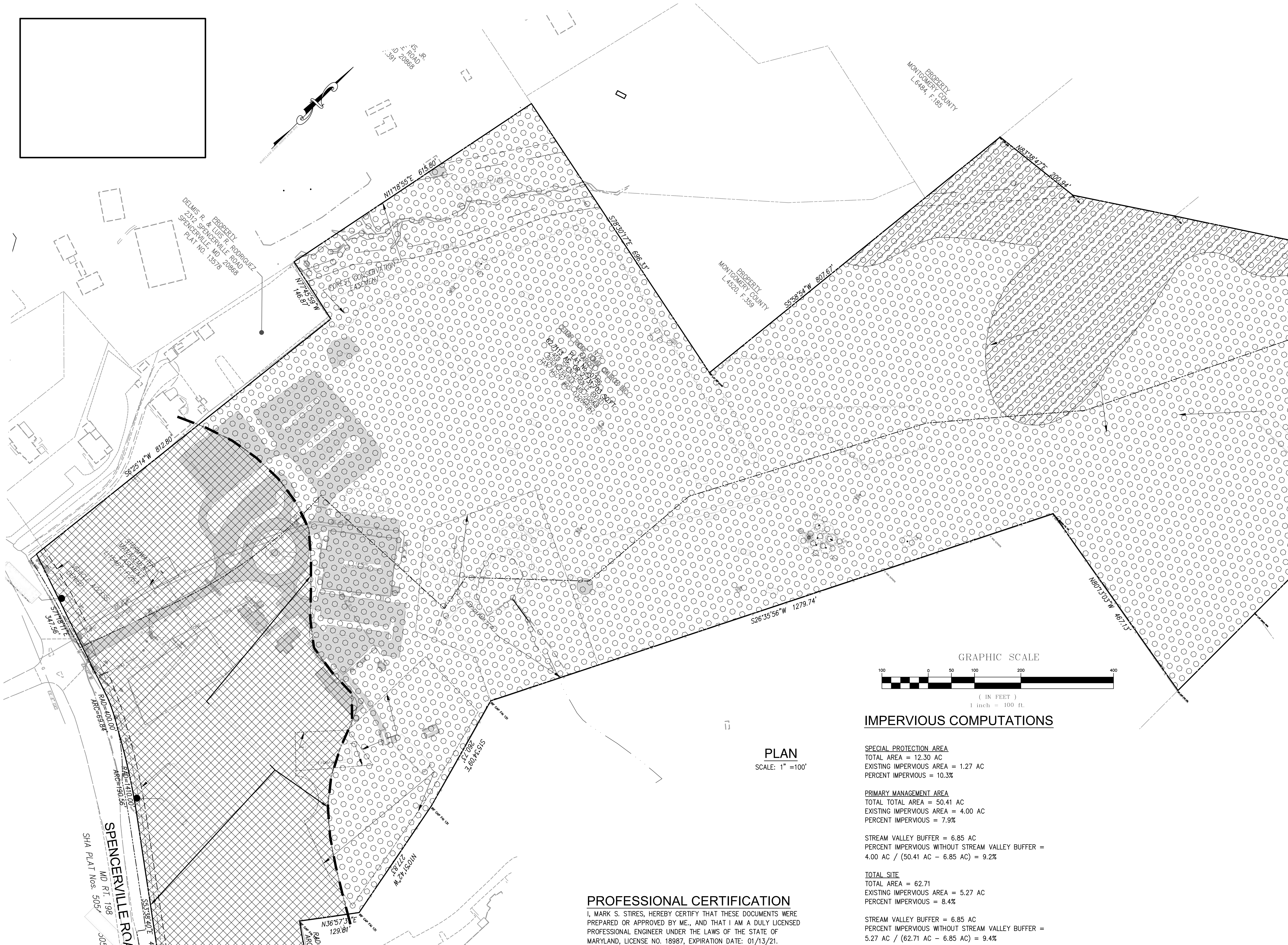
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND — MARK S. STIRES — NO. 18987 — REGISTERED PROFESSIONAL ENGINEER — 1/13/2021

PLAN STATUS	

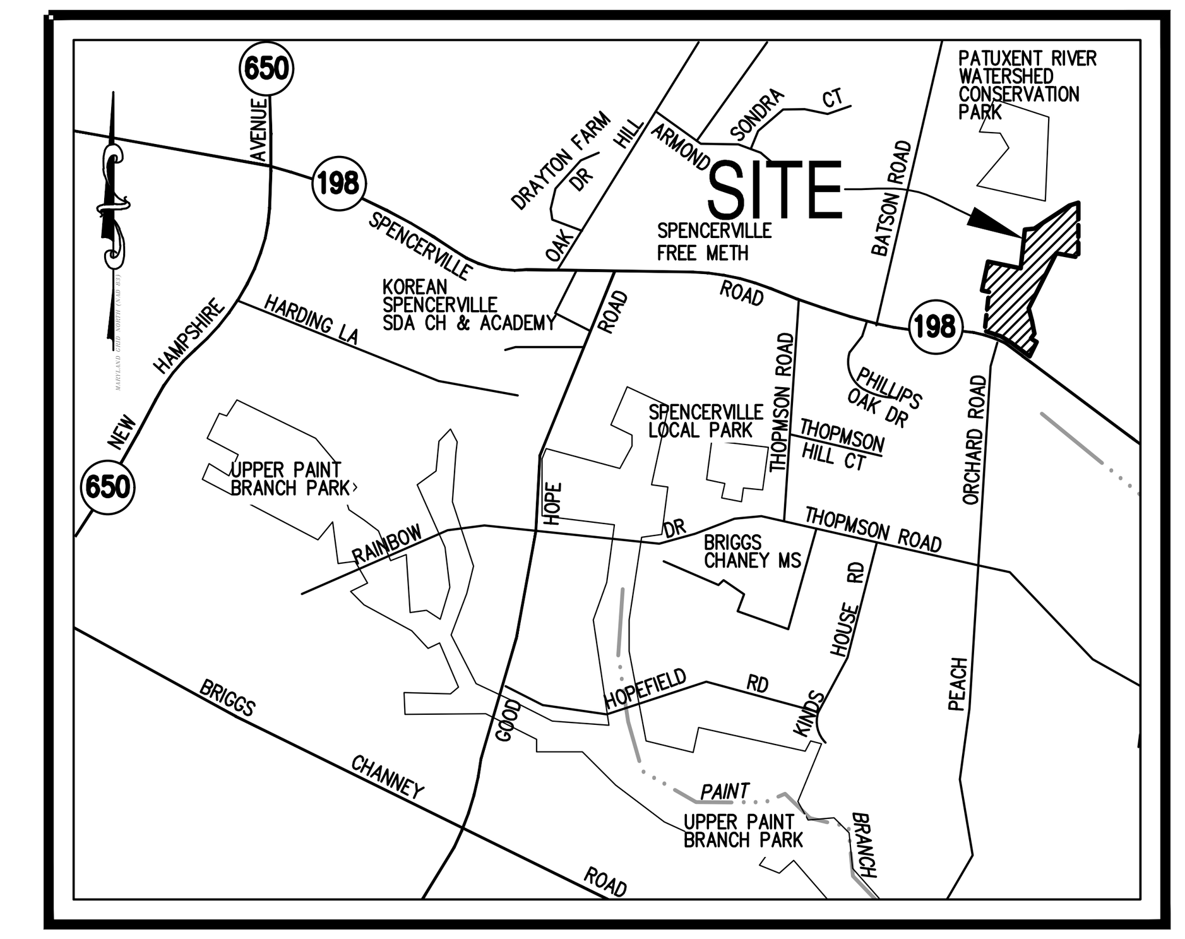
DATE	DESCRIPTION	
MC DESIGN	JNC DRAWN	MSS CHKD
SCALE	H: 1"=50 V: N/A	
JOB No.	130078-01-001	
DATE :	FEBRUARY 2020	
FILE No.	130078-D-CP-001	
SHEET	6 OF 9	

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Engineering Plans\Civil\Site Plan\07-SITE-820200040-005.dwg



PLAN

SCALE: 1" =100'



VICINITY MAP

SCALE: 1" = 2,000'

LEGEND:

- SPECIAL PROTECTION AREA (SPA) = 12.30 AC
- EXISTING IMPERVIOUS AREA WITHIN SPA = 1.27 AC
- PATUXENT WATERSHED PRIMARY MANAGEMENT AREA (PMA) = 50.41 AC
- EXISTING IMPERVIOUS AREA WITHIN PMA = 4.00 AC
- STREAM VALLEY BUFFER AREA WITHIN PMA = 6.85 AC
- SPECIAL PROTECTION AREA DIVIDING LINE

IMPERVIOUS COMPUTATIONS

SPECIAL PROTECTION AREA
TOTAL AREA = 12.30 AC
EXISTING IMPERVIOUS AREA = 1.27 AC
PERCENT IMPERVIOUS = 10.3%

PRIMARY MANAGEMENT AREA
TOTAL TOTAL AREA = 50.41 AC
EXISTING IMPERVIOUS AREA = 4.00 AC
PERCENT IMPERVIOUS = 7.9%

STREAM VALLEY BUFFER = 6.85 AC
PERCENT IMPERVIOUS WITHOUT STREAM VALLEY BUFFER =
4.00 AC / (50.41 AC – 6.85 AC) = 9.2%

TOTAL SITE
TOTAL AREA = 62.71
EXISTING IMPERVIOUS AREA = 5.27 AC
PERCENT IMPERVIOUS = 8.4%

STREAM VALLEY BUFFER = 6.85 AC
PERCENT IMPERVIOUS WITHOUT STREAM VALLEY BUFFER =
5.27 AC / (62.71 AC – 6.85 AC) = 9.4%

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

PLAN STATUS	
DATE	DESCRIPTION

STATE OF MARYLAND — MARK S. STIRES — NO. 18987 — REGISTERED PROFESSIONAL ENGINEER — 1/13/2021

EXISTING IMPERVIOUS PLAN

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT — MONTGOMERY COUNTY, MD

Bowman CONSULTING

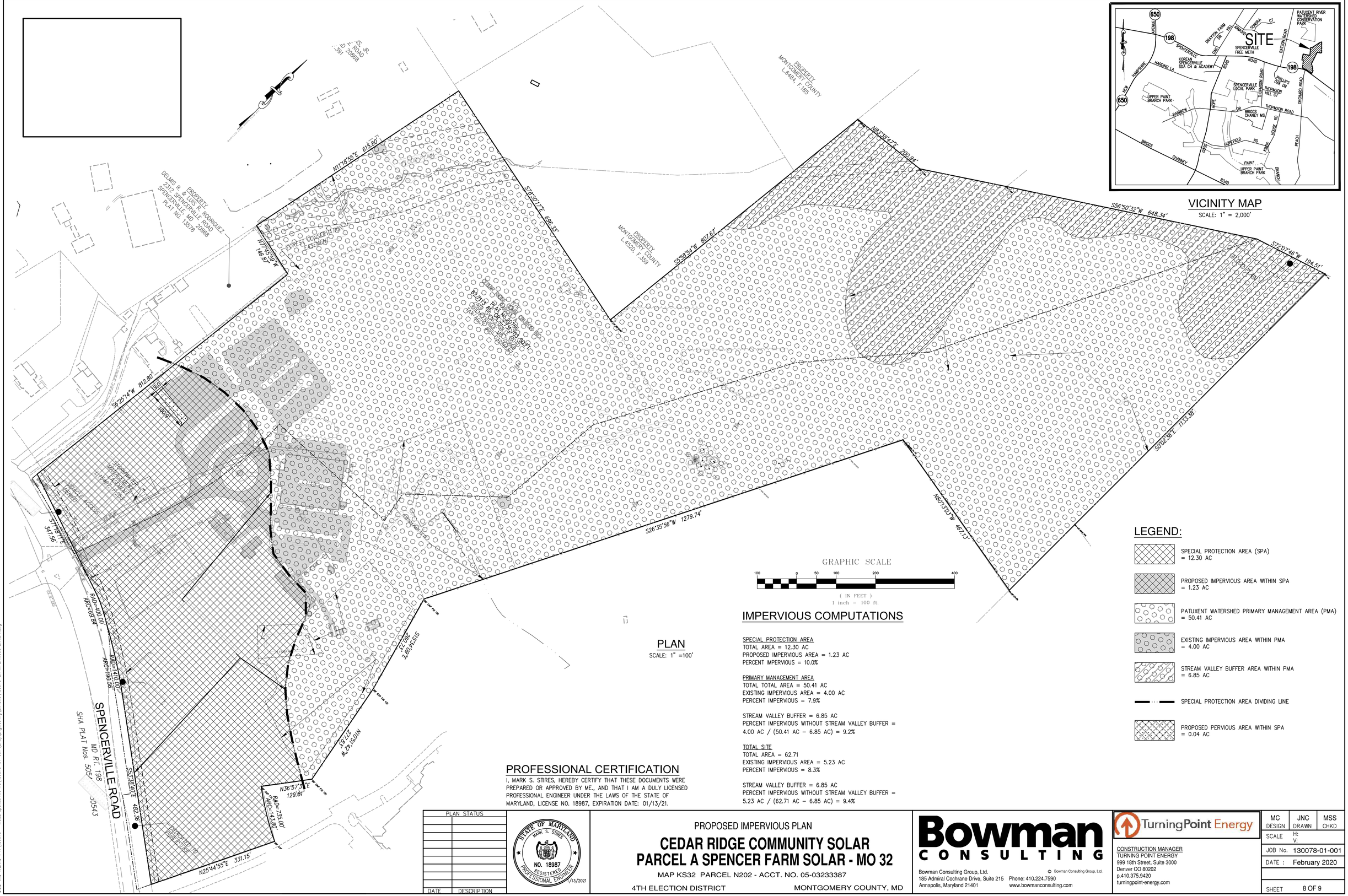
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.410.375.9420
turningpoint-energy.com

MC	JNC	MSS
DESIGN	DRAWN	CHKD
SCALE	H: V:	
JOB No.	130078-01-001	
DATE :	February 2020	
SHEET	7 OF 9	

Cad file name : V:\130078 – M032 Spencerville Rd\130078-01-001 (ENG)\Engineering\Exhibits\130078-EX IMPERVIOUS EXHIBIT.dwg



VICINITY MAP

SCALE: 1" = 2,000'

LEGEND:

- SPECIAL PROTECTION AREA (SPA) = 12.30 AC
- PROPOSED IMPERVIOUS AREA WITHIN SPA = 1.23 AC
- PATUXENT WATERSHED PRIMARY MANAGEMENT AREA (PMA) = 50.41 AC
- EXISTING IMPERVIOUS AREA WITHIN PMA = 4.00 AC
- STREAM VALLEY BUFFER AREA WITHIN PMA = 6.85 AC
- SPECIAL PROTECTION AREA DIVIDING LINE
- PROPOSED PERVIOUS AREA WITHIN SPA = 0.04 AC

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

PLAN

SCALE: 1" =100'

IMPERVIOUS COMPUTATIONS

SPECIAL PROTECTION AREA
TOTAL AREA = 12.30 AC
PROPOSED IMPERVIOUS AREA = 1.23 AC
PERCENT IMPERVIOUS = 10.0%

PRIMARY MANAGEMENT AREA
TOTAL TOTAL AREA = 50.41 AC
EXISTING IMPERVIOUS AREA = 4.00 AC
PERCENT IMPERVIOUS = 7.9%

STREAM VALLEY BUFFER = 6.85 AC
PERCENT IMPERVIOUS WITHOUT STREAM VALLEY BUFFER = 4.00 AC / (50.41 AC – 6.85 AC) = 9.2%

TOTAL SITE
TOTAL AREA = 62.71
EXISTING IMPERVIOUS AREA = 5.23 AC
PERCENT IMPERVIOUS = 8.3%

STREAM VALLEY BUFFER = 6.85 AC
PERCENT IMPERVIOUS WITHOUT STREAM VALLEY BUFFER = 5.23 AC / (62.71 AC – 6.85 AC) = 9.4%

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

PLAN STATUS	
DATE	DESCRIPTION

STATE OF MARYLAND · MARK S. STIRES · NO. 18987 · REGISTERED PROFESSIONAL ENGINEER · 7/13/2021

PROPOSED IMPERVIOUS PLAN

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.410.375.9420
turningpoint-energy.com

MC	JNC	MSS
DESIGN	DRAWN	CHKD
SCALE	H: V:	
JOB No.	130078-01-001	
DATE :	February 2020	
SHEET	8 OF 9	

Cad file name : V:\130078 – MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Exhibits\130078-EX IMPERVIOUS EXHIBIT.dwg

Mono Multi Solutions

THE

TALLMAX™ PLUS

FRAMED 72 LAYOUT MODULE

PRODUCTS	COLOR OF FRAME	POWER RANGE
TSM-DE14H(II)	Silver	345-395W
TSM-DE14H.08(II)	Black	345-395W

72 LAYOUT
MONOCRYSTALLINE MODULE

345-395W
POWER OUTPUT RANGE

19.9%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy, we believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse gases Emissions Verification
OHSAS 18001: Occupation Health and Safety Management System

Trinasolar

Ideal for large scale installations

- Reduce BOS cost with higher power bin and 1500V system voltage

Half-cell design brings higher efficiency

- New cell string layout and split J-box location to reduce the energy loss caused by shading between modules
- LRF(Light Redirecting Film) integrated to gain more power
- Low thermal coefficients for greater energy production at high operating temperatures
- Low cell connection power losses due to half-cell layout(144 monocrystalline)

Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF etc)
- Internal test requirement of Trina more stringent than certification authority
- PID resistant
- 100% EL double inspection

Certified to withstand the most challenging environmental conditions

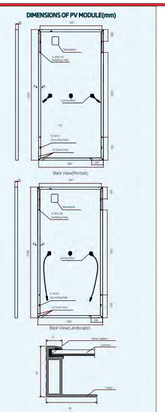
- 2400 Pa negative load
- 5400 Pa positive load

LINEAR PERFORMANCE WARRANTY

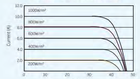
10 Year Product Warranty - 25 Year Linear Power Warranty

TALLMAX™ PLUS — FRAMED 72 LAYOUT MODULE

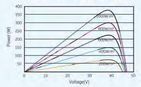
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(375W)



P-V CURVES OF PV MODULE(375W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	345	350	355	360	365	370	375	380	385	390	395
Power Output Tolerance-P_{MAX} (W)						0 ~ +5					
Maximum Power Voltage-V_{MPP} (V)	38.2	38.4	38.6	38.8	39.0	39.2	39.4	39.6	40.1	40.5	40.8
Maximum Power Current-I_{MPP} (A)	9.04	9.13	9.21	9.28	9.37	9.44	9.52	9.60	9.61	9.64	9.69
Open Circuit Voltage-V_{OC} (V)	46.3	46.5	46.9	47.2	47.4	47.6	47.8	48.0	48.5	49.7	50.1
Short Circuit Current-I_{SC} (A)	9.55	9.60	9.68	9.73	9.83	9.88	9.93	9.99	9.99	10.03	10.08	10.13
Module Efficiency η_m (%)	17.4	17.6	17.9	18.1	18.4	18.6	18.9	19.2	19.4	19.7	19.9

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power-P_{MAX} (Wp)	257	261	265	268	272	276	280	284	287	291	295
Maximum Power Voltage-V_{MPP} (V)	35.4	35.7	35.9	36.2	36.3	36.6	36.9	37.1	37.4	37.9	38.3
Maximum Power Current-I_{MPP} (A)	7.26	7.32	7.38	7.42	7.49	7.54	7.59	7.64	7.67	7.68	7.74
Open Circuit Voltage-V_{OC} (V)	43.2	43.3	43.7	44.0	44.2	44.4	44.5	44.7	45.2	46.3	46.5
Short Circuit Current-I_{SC} (A)	7.71	7.75	7.82	7.86	7.94	7.98	8.02	8.07	8.10	8.14	8.17

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 78.375 mm (6.17× 3.09 inches)
Cell Orientation	144 cells (6 × 24)
Module Dimensions	2000 × 992 × 40 mm (78.74 × 39.06 × 1.57 inches)
Weight	23 kg (50.7 lb) with 3.2 mm glass; 26.5 kg (58.4 lb) with 4.0 mm glass
Glass	3.2 mm (0.13 inches) for Std Mono; 4.0mm(0.16 inches) for Perc Mono
Encapsulant Material	EVA(White/Transparent)
Backsheet	White
Frame	40 mm (1.57 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²). Portrait: N 140mm/P 285mm(5.51/11.22inches) Landscape: N 1400 mm /P 1400 mm (55.12/55.12 inches)
Connector	TS4

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of P_{MAX}	- 0.37%/°C
Temperature Coefficient of V_{OC}	- 0.29%/°C
Temperature Coefficient of I_{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	20A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

10 year Product Workmanship Warranty
25 year Linear Power Warranty
(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 27 pieces
Modules per 40' container: 594 pieces

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_EN_2018_ www.trinasolar.com

GAMECHANGE SOLAR
REPOWERING THE PLANET

First Solar

Leader in Tracker and Fixed Tilt Racking for First Solar® Modules

Max-Span™ Plus

- Best Durability, Test & Certifications in Solar Trackers Domain Expertise
- Industry's most flexible racking system handles undulating ground conditions
- Telescoping post pierced with 1 inch universal adjustment for fast rep of pile levelling
- Multiple foundation options: I-Beam, PilePile™ and MonsterPile™
- Standard 4V module mode changed to 8 or 12 inches wide facing south, and specifically designed for large sites

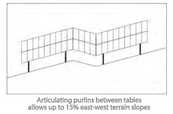
Genius Tracker™

Changing the Game for Single Axis Solar Trackers

- Fewest rough terrain piers, cables, trenches and highest reliability tracker with fastest install and lowest O&M cost
- Pulse linear actuator drive system has 40 year operating life and is IP 66 rated for operation in harsh environmental conditions
- Highest power density of any single axis tracker, 99.5% panel density on rows versus 97.0% best competitor
- Self-powered row controllers communicate wirelessly to enable unique backtracking and level working

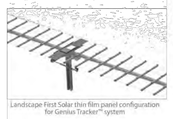
Technical Data

GAMECHANGE SOLAR
REPOWERING THE PLANET



Articulating purlins between tables allows up to 15% east-west terrain slopes

Articulating purlin connections combine with telescoping post bracket to navigate up to 15% terrain slopes



Landscape First Solar thin film panel configuration for Genius Tracker™ system

linear actuator drive system has 40 year operating life and is IP 66 rated for operation in harsh environmental conditions

Tel: 212 388 5160
info@gamechangesolar.com
gamechangesolar.com

Max-Span™ Plus POST SYSTEM

Features

Supports all double-sided glass thin film & other modules

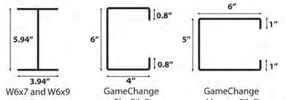
Up to 4 ft. ground clearance eliminates snow & vegetation shading issues

Galvanized Z purlins have integrated trays for easy wire management

5 to 35° tilt with multiple inter-row spacing options

Stamped layout & engineering analysis for every project

GameChange thin film system has 60% fewer foundations than other First Solar racking, enables faster install (typically 300 piles per MW vs over 500 piles per MW for other vendors)



Foundation	Strip Width		Lateral Resistance Width	
I-Beam (W6x7 and W6x9)	13.82"	100%	3.94"	100%
PilePile™	15.6"	113%	4"	102%
MonsterPile™	19"	137%	6"	152%

Genius Tracker™ SINGLE AXIS SOLAR TRACKER

Features

Rotational Range (East/West): 90° standard, 100° and 120° available

Tracking Method: Time and location based algorithm (based on NREL)

Panel Configuration: Poly modules - portrait 1 up, thin film First Solar Series 4 modules- landscape 3 up

Slope Tolerance: Handles maximum slopes north-south 5% and east-west 13%

Remote Communication: Secure monitoring and control tracker array in real-time via an encrypted cloud portal; SCADA solution available

System Power Density: Highest power density of any single axis tracker, 99.5% panel density on rows versus 97.0% best competitor

Test & Certification for GameChange Solar Systems

Wind tunnel tested by industry leader CPP

Meets IBC and ASME standards for structural loading

ETL / UL 2703 tested

Independent assessment by Black & Veatch

Warranty 20 years

Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MD 32, LLC (Company) JAMES MARSHALL (Contact Person)
Address: 999 18TH STREET SUITE 3000 DENVER CO 80202
Phone: 949 289 0601
Signature:

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
1801 California Street Suite 3000
Denver CO 80202
P.
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7560
© Bowman Consulting Group, Ltd.
www.bowmanconsulting.com

SITE PLAN DETAILS
CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32
MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED
PROFESSIONAL ENGINEER
1/13/2021

PLAN STATUS

DATE	DESCRIPTION

MC DESIGN	JNC DRAWN	MSS CHKD

SCALE H: AS SHOWN V: NONE
JOB No. 130078-01-001
DATE : FEBRUARY 2020
FILE No. 130078-D-CP-001
SHEET 9 OF 9

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Engineering Plans\CDs\Site Plan\07 - SITE - 820200040-005.dwg

M–NCPPC
APPROVAL STAMP
PLACEHOLDER

CEDAR RIDGE COMMUNITY SOLAR PARCEL-A
SPENCER FARM
SOLAR - MO 32

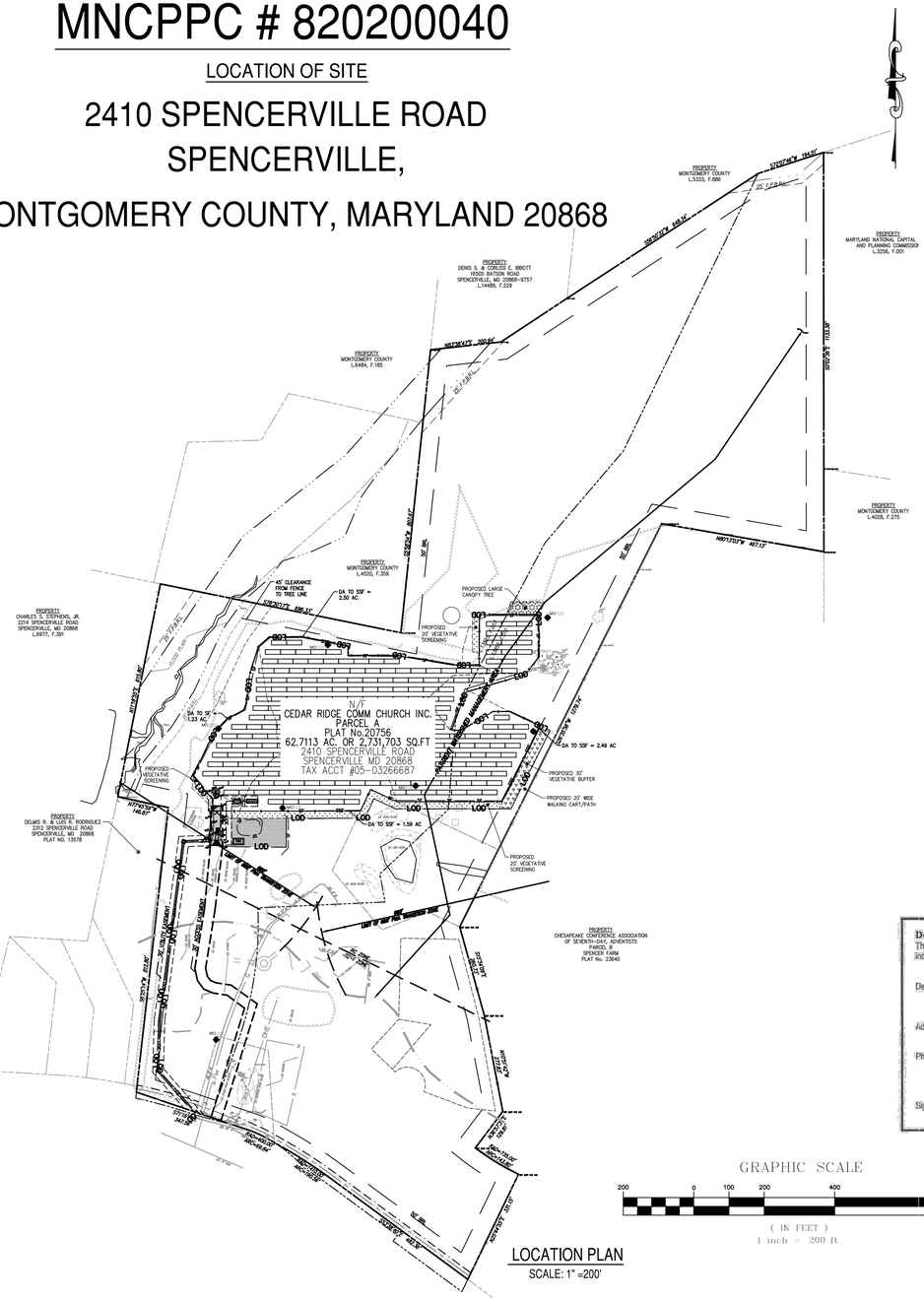
LANDSCAPE PLAN

IMPROVEMENT PLAN

MNCPPC # 820200040

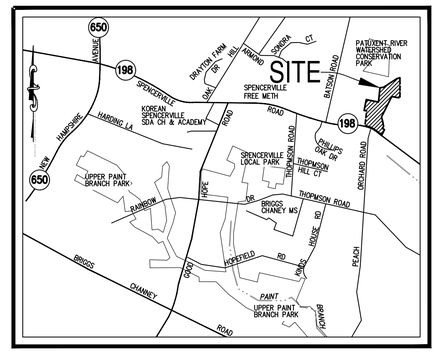
LOCATION OF SITE

2410 SPENCERVILLE ROAD
SPENCERVILLE,
MONTGOMERY COUNTY, MARYLAND 20868



LOCATION PLAN
SCALE: 1" =200'

GRAPHIC SCALE
200 0 100 200 400 400
(IN FEET)
1 inch = 200 ft.



VICINITY MAP
SCALE: 1" = 2000'

SHEET INDEX

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	OVERALL LANDSCAPE PLAN (1 OF 2)
3	OVERALL LANDSCAPE PLAN (2 OF 2)
4	LANDSCAPE PLAN ENLARGEMENTS
5	LANDSCAPE SCHEDULES & DETAILS
6	LANDSCAPE NOTES

Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD NO 32, LLC JAMES MARSHALL
(Company) (Contact Person)

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

PROFESSIONAL CERTIFICATION

I, GREGG D. EBERLYH, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3609, EXPIRATION DATE: 01/26/21.

TurningPoint Energy
CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

COVER SHEET
CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32
MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
GREGG D. EBERLYH
MD 3609
REGISTERED
LANDSCAPE ARCHITECT
04/01/2020

PLAN STATUS	
04/01/2020	SUB. TO HPC

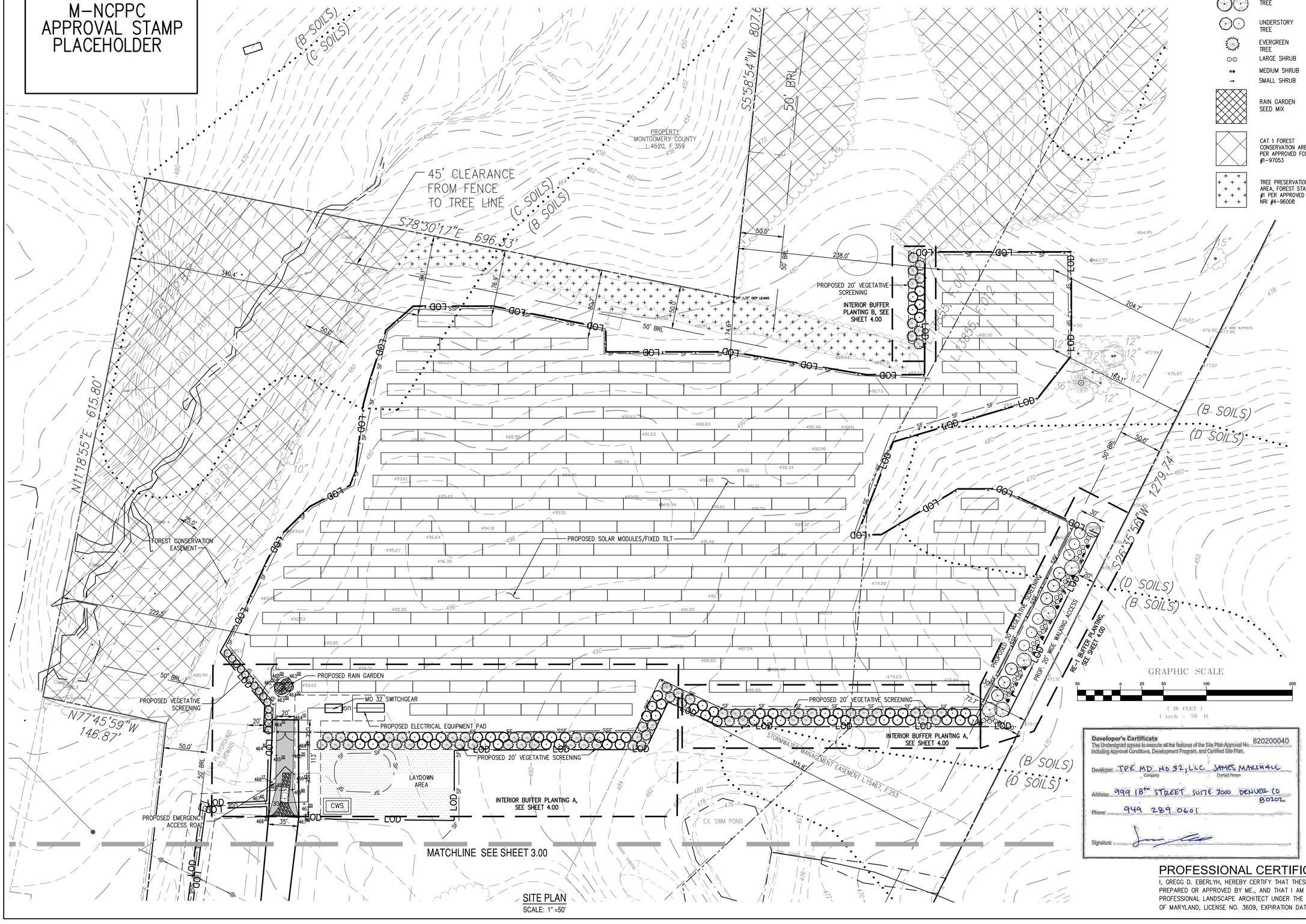
DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: AS SHOWN V:
JOB No. 130078-01-001
DATE : FEBRUARY, 2020
FILE No. 130078-D-CP-001
SHEET 1.00 OF 6

Cad file name : W:\130078 - MO32 Spencerville Rd\130078-01-001 (DNC)\Engineering\Plans\12x3\Landscape and Lighting Plan\130078-01-001-COV.dwg

M-NCPPC
APPROVAL STAMP
PLACEHOLDER



SITE PLAN
SCALE: 1" =50'

Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MO 32, LLC (Company) JAMES MARSHALL (Contact Person)
Address: 999 18TH STREET SUITE 3000 DENVER CO 80202
Phone: 949 289 0601
Signature:

PROFESSIONAL CERTIFICATION

I, GREGG D. EBERLYH, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3609, EXPIRATION DATE: 01/26/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

Phone: 410.224.7590
www.bowmanconsulting.com

LANDSCAPE PLAN OVERALL (1 OF 2)

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
GREGG D. EBERLYH
3609
REGISTERED
LANDSCAPE ARCHITECT
04/01/2020

PLAN STATUS	
04/01/2020	SUB. TO HPC

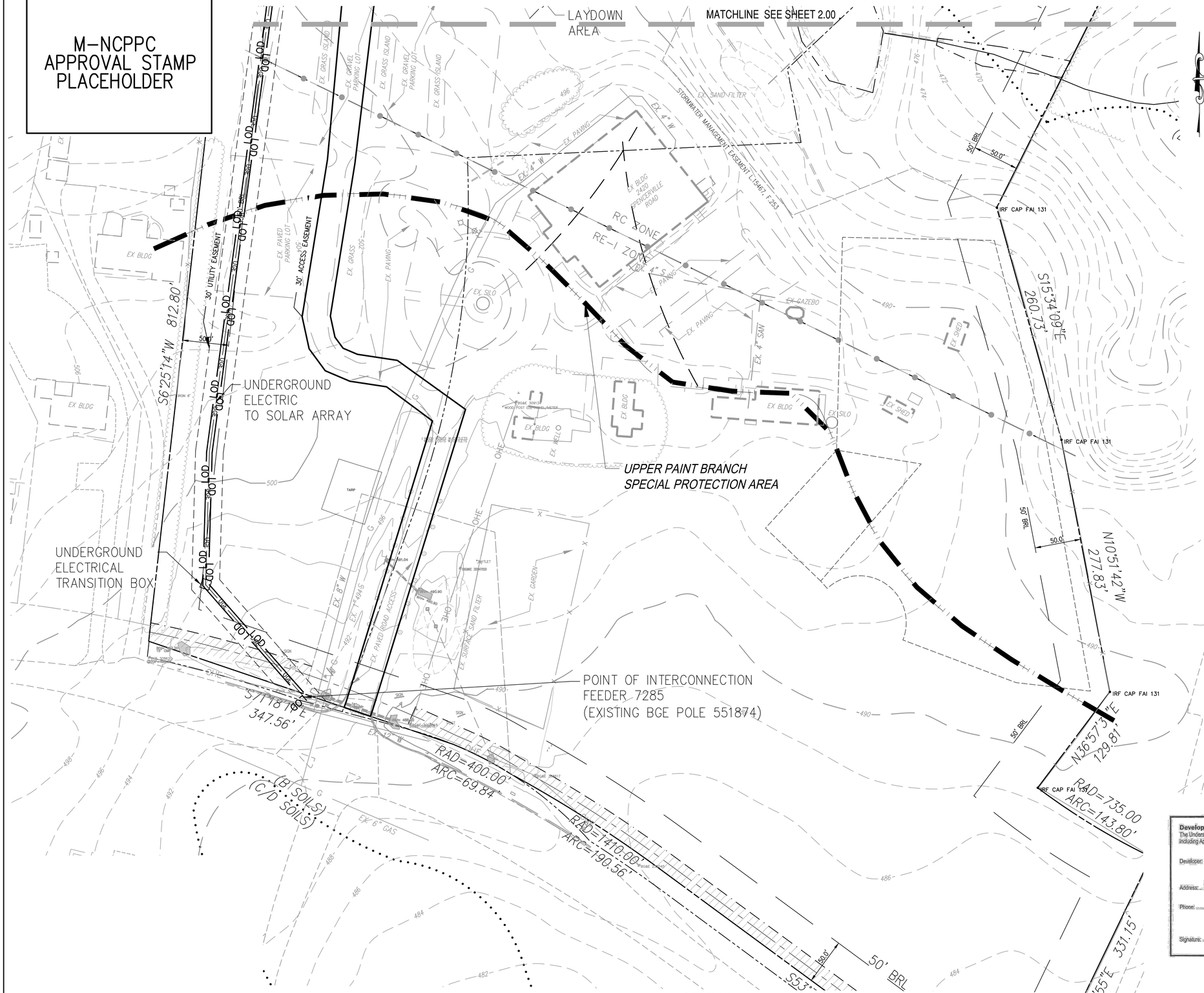
DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE	H: 1"=50 V: N/A
JOB No.	130078-01-001
DATE :	FEBRUARY, 2020
FILE No.	130078-D-CP-001
SHEET	2.00 OF 6

Cad file name : X:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering Plans\Cds\Landscape and Lighting Plan\130078-01-001-LSC.dwg

M-NCPPC
APPROVAL STAMP
PLACEHOLDER



SITE PLAN
SCALE: 1" =50'

PLANT LEGEND

- LARGE CANOPY TREE
- UNDERSTORY TREE
- EVERGREEN TREE
- LARGE SHRUB
- MEDIUM SHRUB
- SMALL SHRUB

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

Developer's Certificate 820200040
The Undersigned agrees to execute all the features of the Site Plan Approval No. including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MD 32, LLC (Company) JAMES MARSHALL (Contact Person)
Address: 999 18TH STREET SUITE 3000 DENVER CO 80202
Phone: 949 289 0601
Signature:

PROFESSIONAL CERTIFICATION

I, GREGG D. EBERLYH, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3609, EXPIRATION DATE: 01/26/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
1801 Wewatta Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215 Annapolis, Maryland 21401
Phone: 410.224.7560
www.bowmanconsulting.com

LANDSCAPE PLAN (2 OF 2)

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
GREGG D. EBERLY
MD 3609
REGISTERED
LANDSCAPE ARCHITECT

04/01/2020

PLAN STATUS	
04/01/2020	SUB. TO HPC

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: 1"=50
V: N/A

JOB No. 130078-01-001

DATE : FEBRUARY, 2020

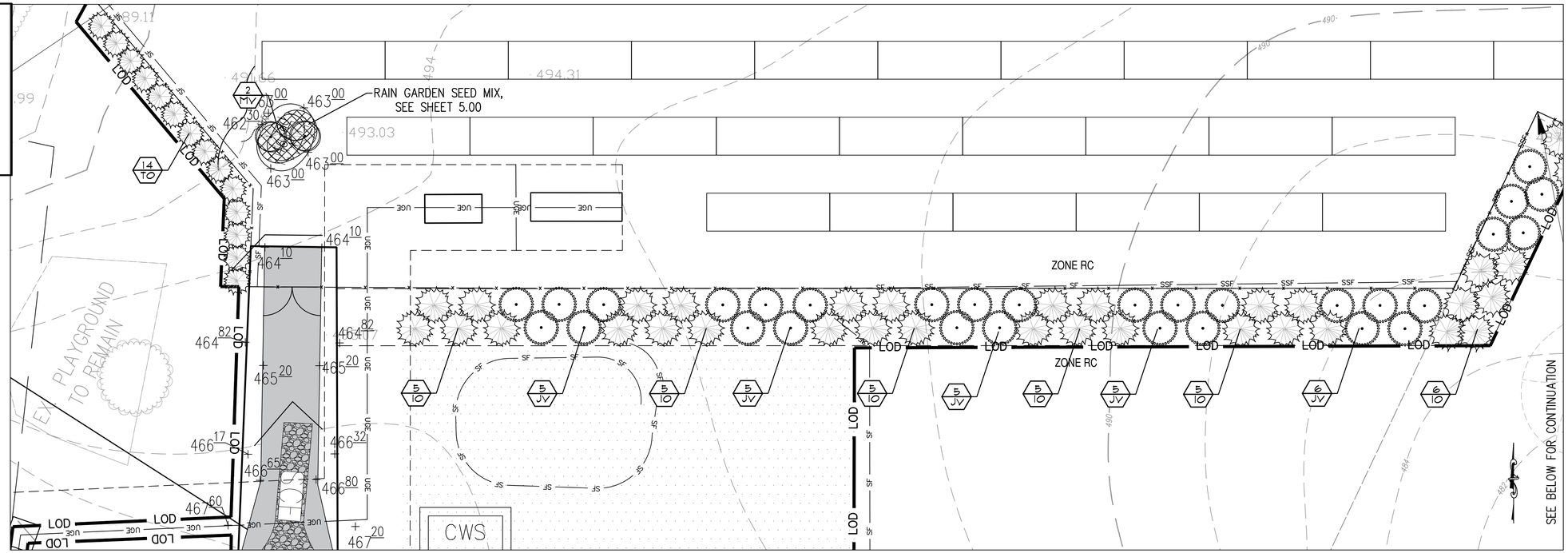
FILE No. 130078-D-CP-001

SHEET 3.00 OF 6

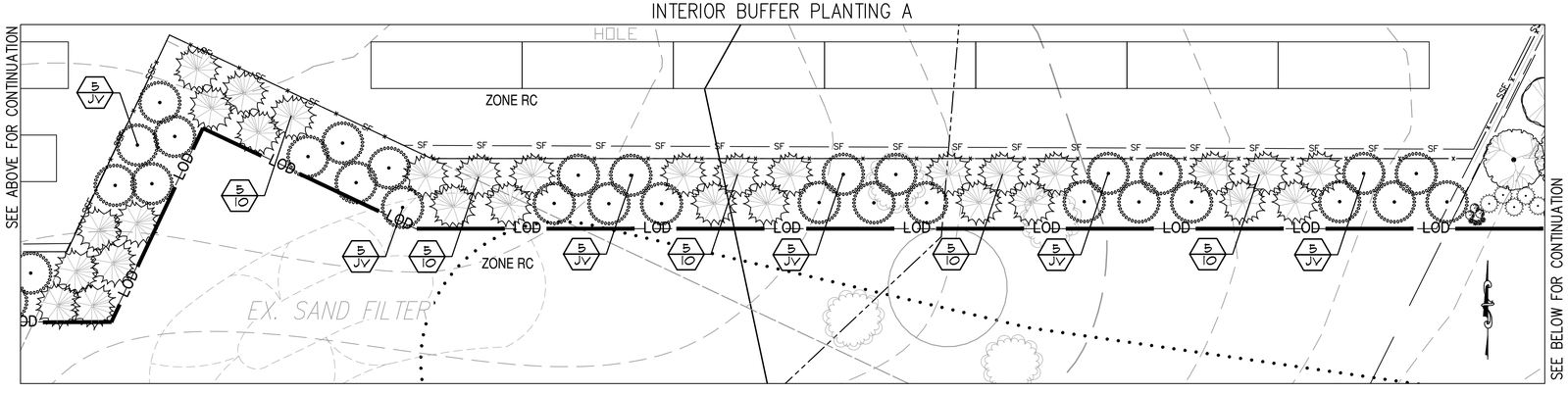
Cad file name : W:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering Plans\12x3\Landscape and Lighting Plan\130078-01-001-LSC.dwg

M-NCPPC
APPROVAL STAMP
PLACEHOLDER

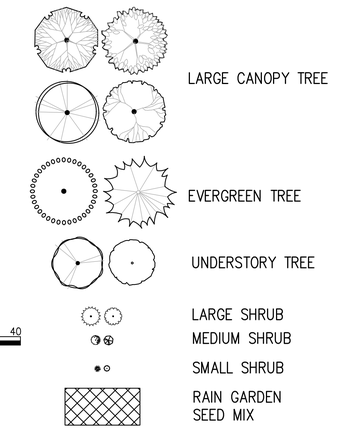
INTERIOR BUFFER PLANTING A



INTERIOR BUFFER PLANTING A



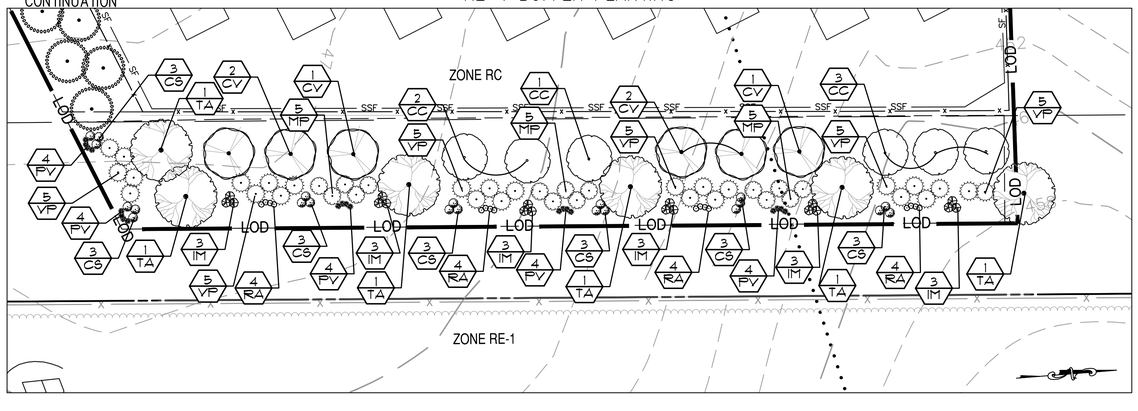
PLANT LEGEND



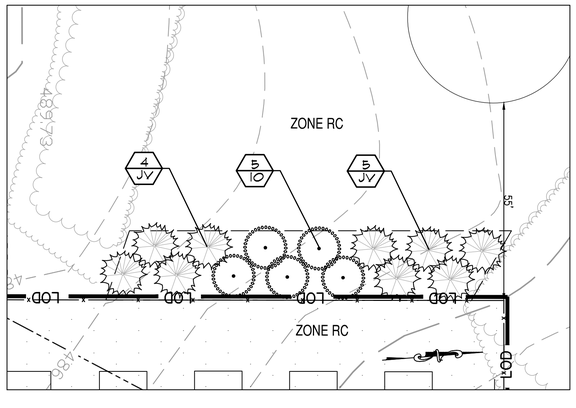
GRAPHIC SCALE
1" = 20'

SEE ABOVE FOR CONTINUATION

RE-1 BUFFER PLANTING



INTERIOR BUFFER PLANTING B



Developer's Certificate
The Undersigned agrees to execute all the features of the Site Plan Approval No. 820200040 including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD MO 32, LLC JAMES MARSHALL
Company Contact Person

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

PROFESSIONAL CERTIFICATION

I, GREGG D. EBERLYH, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3609, EXPIRATION DATE: 01/26/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

Phone: 410.224.7590
www.bowmanconsulting.com

© Bowman Consulting Group, Ltd.

LANDSCAPE ENLARGEMENTS (1 OF 2)

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
GREGG D. EBERLYH
REG. NO. 3609
LANDSCAPE ARCHITECT

04/01/2020

PLAN STATUS	
04/01/2020	SUB. TO HPC

DATE	DESCRIPTION

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V: N/A

JOB No. 130078-01-001

DATE : FEBRUARY, 2020

FILE No. 130078-D-CP-001

SHEET 4.00 OF 6

Cad file name : I:\130078 - MO32 Spencerville Rd\130078-01-001 (DNC)\Engineering\Engineering Plans\02s\Landscape and Lighting Plan\130078-01-001-LSC.dwg

M-NCPPC
APPROVAL STAMP
PLACEHOLDER

Developer's Certificate 820200040

The Undersigned agrees to execute all the features of the Site Plan Approval No. including Approval Conditions, Development Program, and Certified Site Plan.

Developer: TPE MD NO 32, LLC (Company) JAMES MARSHALL (Contact Person)

Address: 999 18TH STREET SUITE 3000 DENVER CO 80202

Phone: 949 289 0601

Signature:

BUFFER PLANT SCHEDULE

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT/ SPREAD	CONDITION
LARGE DECIDUOUS TREES						
TA	6	Tilia americana	American Linden	2-2.5" CAL	-	B&B
EVERGREEN TREES						
JV	64	Juniperus virginiana	Eastern Redcedar	-	8' HT	B&B
IO	61	Ilex opaca	American Holly	-	8' HT	B&B
TO	14	Thuja occidentalis	American Arborvitae	-	5-6' HT	B&B
ORNAMENTAL TREES						
CC	6	Cercis cadensis	Eastern Redbud	2-2.5" CAL	-	B&B
CV	6	Cornus florida	Flowering Dogwood	2-2.5" CAL	-	B&B
SHRUBS						
MP	15	Myrica pensylvanica	Northern Bayberry	5 GAL.	24"-30"	CONT.
VP	27	Viburnum pragense	Prague Viburnum	5 GAL.	24"-30"	CONT.
CS	21	Cornus sericea	Redtwig Dogwood	3 GAL.	24"-30"	CONT.
IM	18	Ilex x meserveae	Blue Holly	3 GAL.	18"-24"	CONT.
RA	16	Rhus aromatica 'Gro-Low'	Fragrant Sumac	1 GAL.	12"-18"	CONT.
PV	20	Panicum virgatum	Switchgrass	1 GAL.	12"-18"	CONT.

RAIN GARDEN PLANT SCHEDULE

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT/ SPREAD	CONDITION
ORNAMENTAL TREES						
MV	2	Magnolia virginiana	Sweetbay Magnolia	2-2.5" CAL	-	B&B
SEED						
ERNMCX-180			Rain Garden Mix	268 S.F.		

INTERIOR BUFFER PLANTING A

(MODIFICATION OF BUFFER REQUIREMENT: ZONING CODE- CHAPTER 59 6-31(8) PER AGREEMENT WITH LAND LEASE)

PLANTING & SCREENING- PROVIDED: 826 L.F.
TREES:
UNDERSTORY/ EVERGREEN: 111

INTERIOR BUFFER PLANTING B

(MODIFICATION OF BUFFER REQUIREMENT: ZONING CODE- CHAPTER 59 6-31(8) PER AGREEMENT WITH LAND LEASE)

PLANTING & SCREENING- PROVIDED: 100 L.F.
TREES:
UNDERSTORY/ EVERGREEN: 14

RE-1 BUFFER PLANTING

(SEE PROPOSED LANDSCAPE BUFFER - OPTION 'A' BELOW)

PLANTING & SCREENING REQUIRED/PROVIDED: 300L.F.

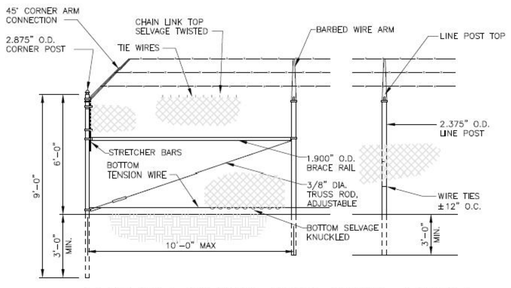
TREES	
CANOPY:	6/6
UNDERSTORY/ EVERGREEN:	12/12
SHRUBS	
LARGE:	42/40
MEDIUM:	36/39
SMALL:	36/36

TREE CANOPY COVERAGE (CH. 55: TREE CANOPY)

LIMITS OF DISTURBANCE AREA:	424,700 S.F.
TOTAL TREES REQUIRED:	15 PER 40,000 S.F. OR 159 TREES
TOTAL TREES PROVIDED:	159 TREES

PROPOSED LANDSCAPE BUFFER OPTION "A"

DIMENSIONS (MIN.)	"A"
DEPTH FOR ALL ZONES EXCEPT IH ZONE	30'
DEPTH FOR IH ZONE	50'
PLANTING AND SCREENING REQUIREMENTS	
TREES (MINIMUM PER 100')	
CANOPY	2
UNDERSTORY OR EVERGREEN	4
SHRUBS (MINIMUM PER 100')	
LARGE	14
MEDIUM	12
SMALL	12
WALL, FENCE OR BERM (MIN.)	6' FENCE OR WALL



ELEVATION (VIEWED FROM INSIDE FENCE)

CHAIN LINK FENCE DETAIL

NOT TO SCALE

NOTES:
1. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. FINISH SHALL BE BLACK VINYL CLAD OR MATTE BLACK FINISH.
3. POST TOPS SHALL BE AS SELECTED BY OWNER.
4. REFER TO MANUFACTURER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LANDSCAPE NOTES

1. PLANTS SHALL CONFORM TO CURRENT "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA), PARTICULARLY WITH REGARDS TO SITE, AND SIZE OF BALL AND DENSITY OF BRANCH STRUCTURE. CONTRACTOR TO INSURE CONFORMANCE TO NATIONAL AND LOCAL BUILDINGS CODES AND ORDINANCES.
2. ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHERPROOF LABELS SECURELY ATTACHED HERETO BEFORE DELIVERY TO PROJECT SITE. LABELS SHALL IDENTIFY PLANTS BY NAME, SPECIES AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL THE FINAL INSPECTION BY THE OWNERS REPRESENTATIVE.
3. ANY MATERIAL AND/OR WORK MAY BE REJECTED BY THE OWNERS REPRESENTATIVE IF IT DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. THE CONTRACTOR SHALL REMOVE ALL REJECTED MATERIALS FROM THE SITE.
4. THE CONTRACTOR SHALL FURNISH ALL PLANTS IN QUANTITIES AND SIZES TO COMPLETE THE WORK AS SPECIFIED THE PLANT SCHEDULE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL PLANT QUANTITIES ON THE PLANS PRIOR TO COMMENCEMENT OF WORK. QUANTITIES IN THE PLANT SCHEDULE ARE FOR THE CONTRACTORS CONVENIENCE ONLY AND DO NOT CONSTITUTE A FINAL COUNT.
5. SUBSTITUTIONS IN PLANT SPECIES OR SIZE SHALL NOT BE PERMITTED EXCEPT WITH THE WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE. SEE TABLE FOR PERMITTED AND EXCLUDED SPECIES.
6. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS AND BY SCALING OR AS DESIGNATED IN THE FIELD BY THE OWNERS REPRESENTATIVE. ALL LOCATIONS ARE TO BE APPROVED BY THE OWNERS REPRESENTATIVE BEFORE EXCAVATION.
7. CONTRACTOR SHALL LOCATE AND MARK ALL UNDERGROUND UTILITY LINES AND IRRIGATION SYSTEMS PRIOR TO EXCAVATING PLANT BEDS OR PITS. ALL UTILITY EASEMENT AREAS WHERE NO PLANTING SHALL TAKE PLACE SHALL ALSO BE MARKED ON THE SITE PRIOR TO LOCATING AND DIGGING THE TREE PITS. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF THE TREE PITS, OTHER LOCATIONS FOR THE TREE SHALL BE SELECTED BY THE OWNERS REPRESENTATIVE. SUCH CHANGES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT THE APPROVAL OF THE OWNERS REPRESENTATIVE.
8. ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
9. DURING PLANTING OPERATIONS, EXCESS AND WASTE MATERIALS SHALL BE PROMPTLY AND FREQUENTLY REMOVED FROM THE SITE.
10. ALL PLANT SHRUB BEDS ARE TO BE DUG TO A MINIMUM OF 24" DEEP AND ALL EXISTING SOIL, CONSTRUCTION DEBRIS, ROOTS AND OTHER FOREIGN MATERIAL ARE TO BE REMOVED AND DISCARDED OFF SITE. ALL PLANT AND SHRUB BEDS ARE TO BE EXCAVATED TO THE WIDTH SHOWN ON THE PLANS.
11. ALL TREE PITS ARE TO BE EXCAVATED TO A MINIMUM DEPTH TO ALLOW THE TREE ROOT BALL TO BE A MINIMUM OF 4" HIGHER THAN FINISH GRADE. THE TREE ROOT BALL IS TO REST ON UNDISTURBED SOIL, OR A COMPACTED BED MUST BE PREPARED FOR THE TREE ROOT BALL TO REST ON AND WHICH WILL NOT SUBSIDE CAUSING THE TREE TO SINK BELOW FINISH GRADE. ALL TREE PITS ARE TO BE A MINIMUM OF 12" LARGER ON EVERY SIDE OF THE TREES ROOT BALL.
12. THE PLANTER BEDS ARE TO BE ENTIRELY CLEANED OUT TO THE UNDISTURBED SOIL LEVEL. ALL EXISTING SOIL, CONSTRUCTION DEBRIS, ROOTS AND OTHER FOREIGN MATERIAL ARE TO BE REMOVED AND DISCARDED OFF SITE.
13. THE TOPSOIL TO BE USED TO FILL THE TREE PITS, SHRUB BEDS AND PLANTERS IS TO BE PLANT SPECIFIC. THE TOPSOIL FOR THE TREES, SHRUBS AND PLANTER SHALL CONSIST OF A MAXIMUM 2/3 EXISTING TOPSOIL FROM THE SITE, WHICH IS CLEANED AND FREE OF CLAY, A MINIMUM 1/3 PEAT MOSS, OR OTHER APPROVED ORGANIC MATERIAL OR IMPORTED NEW LOAMY TOPSOIL AND 10% COW MANURE. ALL OF THESE MATERIALS ARE TO BE MIXED PRIOR TO PLACING IN THE PLANTER OR BACKFILLING WHEN PLANTING.
14. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL TREE PITS, SHRUB BEDS AND PLANTERS ARE WELL DRAINED. THE LANDSCAPE CONTRACTOR WITHOUT COST TO THE OWNER WILL REPLACE ALL PLANT MATERIAL, WHICH IS AFFECTED BY POOR DRAINAGE.
15. ALL LAWN AREAS ARE TO BE SEEDED WITH GRASS SEED APPROPRIATE FOR EACH OF THE SUNLIGHT CONDITIONS, WHICH EXIST ON THE SITE.
16. ALL LAWN AREAS ARE TO BE TILLED TO A DEPTH OF 6" AND ALL FOREIGN MATERIAL REMOVED WHICH WILL INHIBIT THE HEALTHY GROWTH OF THE LAWN. ALL OLD GRASS ROOTS ARE TO BE REMOVED FROM THE SITE. NEW TOPSOIL OF A MINIMUM DEPTH OF 4" IS TO BE PLACED OVER THE AREAS TO BE SODDED. THE GRASS AREAS ARE TO BE FINE GRADED TO ENSURE THAT NO UNDULATIONS OCCUR IN THE LAWN. THE LAWNS ARE TO BE GRADED IN SUCH A WAY AS TO APPEAR PERFECTLY WELL TAILORED AND EVEN. THE LAWN TOPSOIL IS TO BE ROLLED AND LIGHTLY IRRIGATED PRIOR TO PLACING OF THE SEED. THE SEED IS NOT TO BE LAID ON FROZEN OR SOAKED SOIL.
17. THE EXISTING TREES ARE TO BE PROTECTED DURING THE PREPARATION OF THE LAWN AREAS. THE ROOTS OF THE TREES ARE TO BE UNDISTURBED DURING THE CLEANING OF THE TOPSOIL.
18. THE TREES AND SHRUBS ARE TO BE HANDLED WITH THE BEST CARE AND ATTENTION TO ENSURE THAT THE PLANTS ARE NOT BRUISED, BROKEN, TORN, DAMAGED IN ANY WAY WHICH WILL AFFECT THE PLANTS GENERAL APPEARANCE AND WELL BEING.
19. THE TREES AND SHRUBS ARE TO BE PLANTED WITH THE ACCEPTED STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN. THE PLANTS ARE TO BE PROPERLY WATERED AND BACKFILLED DURING THE PLANTING. ALL CARE MUST BE TAKEN TO ENSURE THAT PLANTS ARE UPRIGHT. A PLANTS BEST SIDE IS EXPOSED TO THE POINT OF THE PLANTS GREATEST VISIBILITY.
20. THE TREES MUST BE STAKED IN ACCORDANCE WITH ACCEPTABLE NURSERY PRACTICE TO ENSURE THAT THEY ARE SECURE IN THE GROUND AND WILL GROW STRAIGHT AND UNIFORM. THE TREES ARE TO BE WRAPPED IF THE CONTRACTOR DEEMS IT NECESSARY TO PROTECT THE TREES FROM SUN SCALD OR INSECT ATTACK.
21. THE LANDSCAPE CONTRACTOR IS TO PROVIDE A 1-YEAR GUARANTEE FOR ALL PLANT MATERIAL AND OTHER WORK DON ON SITE.
22. LARGE GROWING PLANTS ARE NOT TO BE PLANTED IN FRONT OF WINDOWS, UNDER BUILDING OVERHANGS, OR IN THE DRAINAGE SWALES. SHRUBS PLANTED NEAR H.V.A.C. UNITS TO BE LOCATED SO THAT SHRUBS AT MATURITY WILL NOT MAINTAIN 1 FOOT DISTANCE BETWEEN UNIT AND PLANT.
23. CONTRACTOR TO SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL GRADED SO AS NOT TO IMPEDE DRAINAGE AWAY FROM BUILDINGS.
24. TREES SHALL BE LOCATED A MINIMUM OF 3 FEET FROM WALLS AND WALKS.
25. QUANTITIES AS SHOWN ON THE PLAN SHALL GOVERN OVER PLANT LIST QUANTITIES. CONTRACTOR TO VERIFY PLANT LIST TOTALS WITH QUANTITIES SHOWN ON THE PLAN.
26. GROUPS OF SHRUBS SHALL BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES SHALL BE CURVILINEAR IN SHAPE FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN 4 FEET OF SHRUB BEDS SHALL SHARE SAME MULCH BED.
27. TREES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY WATER AND SEWER LINE OR CONNECTION.

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: November 25, 2019

Rain Garden Mix - ERNMX-180

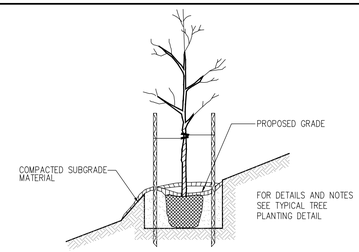
	Botanical Name	Common Name	Price/lb
39.50 %	*Schizachyrium scoparium, 'Camper'*	Little Bluestem, 'Camper'	11.46
15.00 %	*Elymus virginicus, PA Ecotype*	Virginia Wildrye, PA Ecotype	6.32
9.30 %	*Panicum sphaeroncarpon*	Roundseed Panicgrass	31.72
6.40 %	*Panicum rigidulum, Coastal Plain NC Ecotype*	Redtop Panicgrass, Coastal Plain NC Ecotype	52.80
4.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	6.60
4.00 %	*Echinacea purpurea*	Purple Coneflower	39.60
3.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	26.40
3.00 %	*Rudbeckia hirta, Coastal Plain NC Ecotype*	Blackeyed Susan, Coastal Plain NC Ecotype	22.00
2.50 %	*Asclepias incarnata, PA Ecotype*	Swamp Milkweed, PA Ecotype	176.00
2.50 %	*Verbena hastata, PA Ecotype*	Blue Vervain, PA Ecotype	35.20
2.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	26.40
2.00 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	39.60
1.40 %	*Monarda fistulosa, Fort Indiantown Gap-PA Ecotype*	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	132.00
1.00 %	*Juncus effusus*	Soft Rush	44.00
1.00 %	*Liatris spicata, PA Ecotype*	Marsh Blazing Star, PA Ecotype	231.00
0.80 %	*Zizia aurea*	Golden Alexanders	264.00
0.50 %	*Baptisia australis, Southern WV Ecotype*	Blue False Indigo, Southern WV Ecotype	88.00
0.50 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	79.20
0.40 %	*Geum canadense, PA Ecotype*	White Avens, PA Ecotype	176.00
0.30 %	*Aster laevis, MN Ecotype*	Smooth Blue Aster, MN Ecotype	396.00
0.30 %	*Helenium autumnale, PA Ecotype*	Common Sneezeweed, PA Ecotype	198.00
0.20 %	*Aster umbellatus, PA Ecotype*	Flat Topped White Aster, PA Ecotype	396.00
0.20 %	*Solidago patula, PA Ecotype*	Roughleaf Goldenrod, PA Ecotype	396.00
0.10 %	*Asclepias syriaca*	Common Milkweed	215.60
0.10 %	*Veronicastrum virginicum, PA Ecotype*	Culver's Root, PA Ecotype	704.00
100.00 %		**Mix Price/lb Bulk:**	**$34.24**

Seeding Rate: 20 lb per acre with a cover crop of grain rye at 30 lb per acre

Stormwater Management; Uplands & Meadows

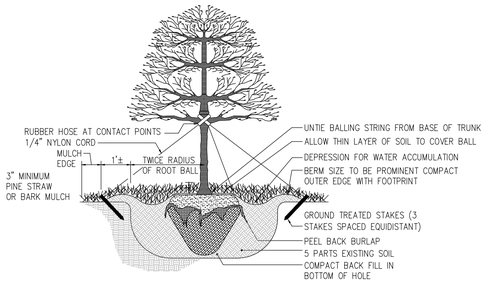
The native perennial forbs and grasses provide food and cover for rain garden biodiversity. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com for current pricing when placing orders.



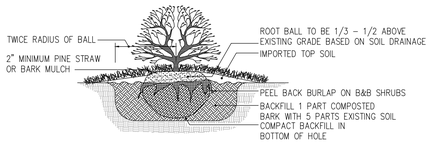
SLOPE PLANTIN DETAIL

NOT TO SCALE



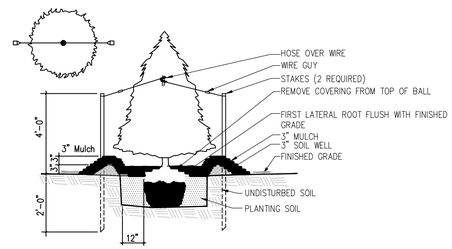
STA IN AND PLANTIN TREE DETAIL

NOT TO SCALE



S RU DETAIL FOR CONTAINER OR

NOT TO SCALE



EVER REEN PLANTIN

NOT TO SCALE

ER ACEOUS DETAIL FOR CONTAINER PLANTS

NOT TO SCALE

PROFESSIONAL CERTIFICATION

I, GREGG D. EBERLYH, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3609, EXPIRATION DATE: 01/26/21.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
1801 Broadway Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401

© Bowman Consulting Group, Ltd.
Phone: 410.224.7560
www.bowmanconsulting.com

LANDSCAPE SCHEDULES & DETAILS

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
GREGG D. EBERLYH
NO. 3609
REGISTERED
LANDSCAPE ARCHITECT
04/01/2020

PLAN STATUS

DATE	DESCRIPTION
04/01/2020	SUB. TO HPC

MC DESIGN	JNC DRAWN	MSS CHKD

SCALE H:
V:

JOB No. 130078-01-001

DATE : FEBRUARY, 2020

FILE No. 130078-D-CP-001

SHEET 5.00 OF 6

Cad file name : V:\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Engineering Plans\CDs\Landscape and Lighting Plan\130078-01-001-D15.dwg

M-NCPPC
APPROVAL STAMP
PLACEHOLDER

□ENERAL LANDSCAPIN□ NOTES□

1. THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, UTILITIES, LAYOUT, ETC.
2. PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
3. CONTRACTOR SHALL CONTACT "MISS UTILITY" AND SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT PRIOR TO THE INSTALLATION OF PLANT MATERIALS.
4. IF NECESSARY, THE CONTRACTOR MAY SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL BE GRADED SO AS TO NOT IMPEDE DRAINAGE AWAY FROM BUILDINGS.
5. LANDSCAPE CONTRACTOR SHALL MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON SITE DURING LANDSCAPE INSTALLATION PROCEDURES.
6. A PRE-INSTALLATION CONFERENCE TO BE HELD ON SITE PRIOR TO ANY INSTALLATION ACTIVITIES. CONTRACTOR, LANDSCAPE CONTRACTOR, AND ENGINEER TO ATTEND.
7. PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOXERS, INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. PLANTS SHALL BE FRESHLY DUG; NO HEELED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
8. UNLESS OTHERWISE SPECIFIED, GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, LATEST EDITION, INCLUDING ADDENDA.
9. PLANTS SHALL CONFORM TO CURRENT "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA), PARTICULARLY WITH REGARDS TO SITE, AND SIZE OF BALL AND DENSITY OF BRANCH STRUCTURE. CONTRACTOR TO INSURE CONFORMANCE TO NATIONAL AND LOCAL BUILDINGS CODES AND ORDINANCES.
10. ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHERPROOF LABELS SECURELY ATTACHED HERETO BEFORE DELIVERY TO PROJECT SITE. LABELS SHALL IDENTIFY PLANTS BY NAME, SPECIES AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL THE FINAL INSPECTION BY THE OWNERS REPRESENTATIVE.
11. ANY MATERIAL AND/OR WORK MAY BE REJECTED BY THE OWNERS REPRESENTATIVE IF IT DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. THE CONTRACTOR SHALL REMOVE ALL REJECTED MATERIALS FROM THE SITE.
12. THE CONTRACTOR SHALL FURNISH ALL PLANTS IN QUANTITIES AND SIZES TO COMPLETE THE WORK AS SPECIFIED IN THE PLANT SCHEDULE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL PLANT QUANTITIES ON THE PLANS PRIOR TO COMMENCEMENT OF WORK. QUANTITIES IN THE PLANT SCHEDULE ARE FOR THE CONTRACTORS CONVENIENCE ONLY AND DO NOT CONSTITUTE A FINAL COUNT.
13. SUBSTITUTIONS IN PLANT SPECIES OR SIZE SHALL NOT BE PERMITTED EXCEPT WITH THE WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE. PLANTS DEEMED INVASIVE BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES ARE UNACCEPTABLE.
14. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS AND BY SCALING OR AS DESIGNATED IN THE FIELD BY THE OWNERS REPRESENTATIVE. ALL LOCATIONS ARE TO BE APPROVED BY THE OWNERS REPRESENTATIVE BEFORE EXCAVATION.
15. CONTRACTOR SHALL LOCATE AND MARK ALL UNDERGROUND UTILITY LINES AND IRRIGATION SYSTEMS PRIOR TO EXCAVATING PLANT BEDS OR PITS. ALL UTILITY EASEMENT AREAS WHERE NO PLANTING SHALL TAKE PLACE SHALL ALSO BE MARKED ON THE SITE PRIOR TO LOCATING AND DIGGING THE TREE PITS. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF THE TREE PITS, OTHER LOCATIONS FOR THE TREE SHALL BE SELECTED BY THE OWNERS REPRESENTATIVE. SUCH CHANGES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT THE APPROVAL OF THE OWNERS REPRESENTATIVE.
16. ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
17. DURING PLANTING OPERATIONS, EXCESS AND WASTE MATERIALS SHALL BE PROMPTLY AND FREQUENTLY REMOVED FROM THE SITE.
18. ALL PLANT SHRUB BEDS ARE TO BE DUG TO A MINIMUM OF 24" DEEP AND ALL EXISTING SOIL, CONSTRUCTION DEBRIS, ROOTS AND OTHER FOREIGN MATERIAL ARE TO BE REMOVED AND DISCARDED OFF SITE. ALL PLANT AND SHRUB BEDS ARE TO BE EXCAVATED TO THE WIDTH SHOWN ON THE PLANS.
19. ALL TREE PITS ARE TO BE EXCAVATED TO A MINIMUM DEPTH TO ALLOW THE TREE ROOT BALL TO BE A MINIMUM OF 4" HIGHER THAN FINISH GRADE. THE TREE ROOT BALL IS TO REST ON UNDISTURBED SOIL, OR A COMPACTED BED MUST BE PREPARED FOR THE TREE ROOT BALL TO REST ON AND WHICH WILL NOT SUBSIDE CAUSING THE TREE TO SINK BELOW FINISH GRADE. ALL TREE PITS ARE TO BE A MINIMUM OF 12" LARGER ON EVERY SIDE OF THE TREES ROOT BALL.
20. THE PLANTER BEDS ARE TO BE ENTIRELY CLEANED OUT TO THE UNDISTURBED SOIL LEVEL. ALL EXISTING SOIL, CONSTRUCTION DEBRIS, ROOTS AND OTHER FOREIGN MATERIAL ARE TO BE REMOVED AND DISCARDED OFF SITE.
21. THE TOPSOIL TO BE USED TO FILL THE TREE PITS, SHRUB BEDS AND PLANTERS IS TO BE PLANT SPECIFIC. THE TOPSOIL FOR THE TREES, SHRUBS AND PLANTER SHALL CONSIST OF A MAXIMUM 2/3 EXISTING TOPSOIL FROM THE SITE, WHICH IS CLEANED AND FREE OF CLAY, A MINIMUM 1/3 PEAT MOSS, OR OTHER APPROVED ORGANIC MATERIAL OR IMPORTED NEW LOAMY TOPSOIL AND 10% COW MANURE. ALL OF THESE MATERIALS ARE TO BE MIXED PRIOR TO PLACING IN THE PLANTER OR BACKFILLING WHEN PLANTING.
22. TOPSOIL TO BE DEPOSITED AND SPREAD USING METHODS THAT WILL PREVENT EXCESSIVE COMPACTION OF TOPSOIL.
23. PROVIDE A SMOOTH FINISH GRADE BY BLADING, DRAGGING OR OTHER METHODS ACCEPTABLE TO THE ENGINEER. REMOVE HIGH SPOTS AND FILL DEPRESSIONS. PLACE GRADES, SLOPES AND MOUNDS TO DRAIN AS SHOWN ON THE CONTRACT DRAWINGS.
    A. FINELY FINISH SURFACES BY RAKING SMOOTHLY AND EVENLY, REMOVING ALL EXPOSED, EXTRANEOUS MATTER ONE INCH OR LARGER IN SIZE TO FACILITATE NATURAL RUNOFF. DRAG AREAS FOR SMOOTH SURFACE.
    B. SLOPE FINISH GRADES TO DRAIN WITHOUT WATER POCKETS OR IRREGULARITIES (BUMPS OR HOLLOWS). FINISH GRADES SHALL MEET ALL EXISTING CONTROLS AND SHALL BE 3 INCHES BELOW ADJACENT TOP OF PAVING, CURBS OR SIDEWALKS TO ALLOW FOR TOP DRESSING MULCH OR 5 INCHES BELOW TOP OF PAVING, CURBS OR SIDEWALKS TO ALLOW FOR ROCK MULCH. GRADES SHALL BE OF UNIFORM SLOPE BETWEEN POINTS OF FIXED ELEVATION. ESTABLISH VERTICAL CURVES OR ROUNDINGS AT ABRUPT CHANGES IN SLOPE.
    C. LANDSCAPE ARCHITECT / ENGINEER TO APPROVE FINAL GRADES PRIOR TO PLANTING OPERATIONS.
23. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL TREE PITS, SHRUB BEDS AND PLANTERS ARE WELL DRAINED. THE LANDSCAPE CONTRACTOR WITHOUT COST TO THE OWNER WILL REPLACE ALL PLANT MATERIAL WHICH IS AFFECTED BY POOR DRAINAGE.
24. ALL LAWN AREAS ARE TO BE SODDED WITH SOD APPROPRIATE FOR EACH OF THE SUNLIGHT CONDITIONS WHICH EXIST ON THE SITE.
25. ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
26. THE EXISTING TREES ARE TO BE PROTECTED DURING THE PREPARATION OF THE LAWN AREAS. THE ROOTS OF THE EXISTING TREES ARE TO BE UNDISTURBED DURING THE CLEANING OF THE TOPSOIL.

□ENERAL LANDSCAPIN□ NOTES □CONTINUED□□

27. THE TREES AND SHRUBS ARE TO BE HANDLED WITH THE BEST CARE AND ATTENTION TO ENSURE THAT THE PLANTS ARE NOT BRUISED, BROKEN, TORN, DAMAGED IN ANY WAY WHICH WILL AFFECT THE PLANTS GENERAL APPEARANCE AND WELL BEING.
28. THE TREES AND SHRUBS ARE TO BE PLANTED WITH THE ACCEPTED STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN. THE PLANTS ARE TO BE PROPERLY WATERED AND BACKFILLED DURING THE PLANTING. ALL CARE MUST BE TAKEN TO ENSURE THAT PLANTS ARE UPRIGHT. A PLANTS BEST SIDE IS EXPOSED TO THE POINT OF THE PLANTS GREATEST VISIBILITY.
29. THE TREES MUST BE STAKED IN ACCORDANCE WITH ACCEPTABLE NURSERY PRACTICE TO ENSURE THAT THEY ARE SECURE IN THE GROUND AND WILL GROW STRAIGHT AND UNIFORM. THE TREES ARE TO BE WRAPPED IF THE CONTRACTOR DEEMS IT NECESSARY TO PROTECT THE TREES FROM SUN SCALD OR INSECT ATTACK.
30. THE LANDSCAPE CONTRACTOR IS TO PROVIDE A 1-YEAR GUARANTEE FOR ALL PLANT MATERIAL AND OTHER WORK DONE ON SITE.
31. LARGE GROWING PLANTS ARE NOT TO BE PLANTED IN FRONT OF WINDOWS, UNDER BUILDING OVERHANGS, OR IN THE DRAINAGE SWALES. SHRUBS PLANTED NEAR H.V.A.C. UNITS TO BE LOCATED SO THAT SHRUBS AT MATURITY WILL MAINTAIN 1 FOOT DISTANCE BETWEEN UNIT AND PLANT.
32. CONTRACTOR TO SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. FINISHED PLANTING BEDS SHALL GRADED SO AS NOT TO IMPEDE DRAINAGE AWAY FROM BUILDINGS.
33. TREES SHALL BE LOCATED A MINIMUM OF 3 FEET FROM WALLS AND WALKS.
34. TREES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY WATER AND SEWER LINE OR CONNECTION.
35. AT MATURE GROWTH SHRUBS ARE TO BE LOCATED A MINIMUM OF 18" FROM BUILDING WALLS.
36. QUANTITIES AS SHOWN ON THE PLAN SHALL GOVERN OVER PLANT LIST QUANTITIES. CONTRACTOR TO VERIFY PLANT LIST TOTALS WITH QUANTITIES SHOWN ON THE PLAN.
37. GROUPS OF SHRUBS SHALL BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES SHALL BE CURVILINEAR IN SHAPE FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN 4 FEET OF SHRUB BEDS SHALL SHARE SAME MULCH BED.
38. MULCH TO BE ORGANIC SHREDDED HARDWOOD MULCH. MULCH TO BE FREE OF DELETERIOUS MATERIAL AND SUITABLE AS A TOP DRESSING OF PLANTING BEDS AND TREE PITS.
39. PLANT MATERIAL SHALL BE MAINTAINED SUCH AS TO NOT INTERFERE WITH SIGHT DISTANCE.
40. WATER FOR LANDSCAPE OPERATIONS TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL VERIFY WATER IS SUITABLE FOR IRRIGATION AND FREE FROM INGREDIENTS HARMFUL TO VEGETATION.

PLANT □UARANTEE

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) FULL YEAR AFTER THE DATE OF INSTALLATION IN EACH SECTION OR PHASE OF PROJECT AGAINST DEFECTS, UNSATISFACTORY GROWTH, DISEASE OR DEATH. UNSATISFACTORY, UNHEALTHY, DYING OR DEAD PLANT MATERIAL (IN THE OPINION OF THE LANDSCAPE ARCHITECT) SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES. IN NO INSTANCE SHALL THE GUARANTEE PERIOD BE LESS THAN 1 YEAR AFTER LANDSCAPE INSTALLATION.
2. DURING WARRANTY PERIOD PLANTS ARE TO BE MAINTAINED PER THE MAINTENANCE SPECIFICATIONS.
3. DEAD PLANTS ARE TO BE REMOVED IMMEDIATELY AND REPLACED UNLESS THE PERIOD FOR THE REPLACEMENT PLANT HAS PASSED. IN SUCH A CASE, REPLACEMENT PLANT IS TO BE INSTALLED DURING THE SUCCEEDING PLANTING SEASON.
4. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPED AREAS, WHICH SHALL INCLUDE WATERING, CLEARING OF WEEDS AND DEBRIS, PRUNING, AND TRIMMING, REPLACEMENT OF DEAD OR DISEASED PLANTINGS, AND FERTILIZING TO MAINTAIN HEALTHY GROWTH FOR THE GUARANTEE PERIOD.
5. AT THE END OF THE WARRANTY PERIOD PLANTS ARE TO BE INSPECTED BY THE LANDSCAPE CONTRACTOR AND ANY PLANTS THAT ARE MORE THEN 25% DEAD OR ARE IN AN UNHEALTHY CONDITION ARE TO BE REPLACED.

PLANT MATERIAL

1. ALL PLANT MATERIAL AND ROOT BALLS SHALL CONFORM TO THE STANDARDS OF NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. TREES AND SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS, FIBROUS ROOT SYSTEMS.
3. TREES AND SHRUBS SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATE CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF THE LOCALITY OF THE PROJECT.
4. TREES AND SHRUBS SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE OF DISEASE AND INSECT INFESTATIONS.
5. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
6. 48 HOURS PRIOR TO PLANTS BEING SELECTED, LANDSCAPE CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO WITNESS SELECTION OF PLANTS. PLANTS TO BE SELECTED ARE TO BE TAGGED AT TIME OF SELECTION.
7. TREES TO BE SELECTED ARE TO BE MEASURED ACCORDING TO THE AFORE MENTIONED LANDSCAPE GUIDELINES. DO NOT PRUNE TREES OR SHRUBS TO MEET DESIRED INSTALLATION SIZES.
8. LANDSCAPE CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT 7 DAYS PRIOR TO DELIVERY OF SELECTED PLANT MATERIAL.
9. CONTRACTOR TO PROVIDE REQUIRED NATURAL, FRIABLE, FERTILE, FINE SANDY LOAM POSSESSING THE CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VICINITY WHICH PRODUCES HEAVY GROWTH OF VEGETATION. TOPSOIL TO BE FREE FROM SUBSOIL, NOXIOUS WEEDS, STONES, LIME CEMENT, ASHES, SLAG, OR OTHER DELETERIOUS MATTER. TOPSOIL SHALL BE WELL DRAINED IN ITS ORIGINAL CONDITION AND FERRET FROM TOXIC QUANTITIES OF ACID OR ALKALINE ELEMENTS. TOPSOIL TO CONTAIN SAND AND CLAY IN APPROXIMATELY EQUAL PROPORTIONS, AND SHALL HAVE AN ORGANIC CONTENT BY WEIGHT OF NOT LESS THAN 2% NOR MORE THAN 20% AS DETERMINED BY LABORATORY TESTS. TOPSOIL pH SHALL BE BETWEEN 6 AND 7.
10. CONTRACTOR TO PROVIDE TOPSOIL ANALYSIS BY A QUALIFIED SOIL-TESTING LABORATORY STATING THE PERCENTAGES OF ORGANIC MATTER, GRADATION OF SILT, SAND, AND CLAY CONTENT, CARBON EXCHANGE CAPACITY, DELETERIOUS MATERIAL, AND MINERAL AND PLANT-NUTRIENT CONTENT OF TOPSOIL.
11. TOPSOIL ANALYSIS TO INCLUDE SUITABILITY FOR PLANT GROWTH AND TO RECOMMEND QUANTITIES OF NITROGEN, PHOSPHORUS, POTASH NUTRIENT, AND SOIL AMENDMENTS TO BE ADDED TO PRODUCE SATISFACTORY TOPSOIL.

OR□ANIC SOIL AMENDMENTS □FERTILI□ER

1. COMPOST SOIL AMENDMENT
    A. TO BE WELL COMPOSTED, STABLE, AND WEED FREE ORGANIC MATTER. AMENDMENT TO HAVE A PH RANGE OF 5.5 TO 8, A MOISTURE CONTENT OF 5 TO 10 DECISIEMENS/M, A MAXIMUM OF 0.5% INERT CONTAMINANTS AND TO BE FREE OF SUBSTANCES TOXIC TO PLANTINGS.
        1. ORGANIC MATER CONTENT: 50 TO 60% DRY WEIGHT.
        2. FEEDSTOCK: AGRICULTURAL, FOOD, OR INDUSTRIAL RESIDUALS, BIOSOLIDS, YARD TRIMMINGS; OR SOURCE-SEPARATED OR COMPOSTABLE MIXED SOLID WASTE.
2. PEAT SOIL AMENDMENT
    A. SPHAGNUM PEAT MOSS, PARTIALLY DECOMPOSED, FINELY DIVIDED OR GRANULAR TEXTURE, WITH A PH RANGE OF 3.4 TO 4.8.
3. MANURE SOIL AMENDMENT
    A. WELL-ROTTED, UNLEACHED, STABLE OR CATTLE MANURE CONTAINING NOT MORE THAN 25 PERCENT BY VOLUME OF STRAW, SAWDUST, OR OTHER BEDDING MATERIALS; FREE OF TOXIC SUBSTANCES, STONES, STICKS, SOIL, WEED SEED AND MATERIAL HARMFUL TO PLANT GROWTH.
4. COMMERCIAL FERTILIZER
    A. NITROGEN, PHOSPHOROUS AND POTASSIUM IN AMOUNTS RECOMMENDED IN SOIL REPORTS FROM A QUALIFIED SOIL-TESTING AGENCY.
5. SLOW RELEASE FERTILIZER
    A. STANDARD 10-6-4, NITROGEN 10%, PHOSPHORIC ACID 6%, POTASH 4%, AND SHALL CONTAIN MINOR TRACE ELEMENTS. THE FORMULA SHALL BE IN CONFORMITY TO APPLICABLE STATE FERTILIZER LAWS. FERTILIZER SHALL BE UNIFORM IN COMPOSITION, DRY AND FREE FLOWING, AND SHALL BE DELIVERED TO THE PROJECT SITE IN THE ORIGINAL UNOPENED CONTAINERS, EACH BEARING THE MANUFACTURER'S GUARANTEED ANALYSIS. ANY FERTILIZER WHICH BECOMES WET, CAKED, OR OTHERWISE DAMAGED WILL NOT BE ACCEPTED.
6. IF ANY CONFLICTS ARISE BETWEEN THESE SPECIFICATIONS AND THE EROSION SEDIMENT CONTROL SPECIFICATIONS REGARDING SOIL AMENDMENTS THE EROSION CONTROL SPECIFICATIONS SECTION B-4-2-C GOVERNS.

PLANTIN□

1. DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED. PLANTS ARE TO BE INSTALLED IMMEDIATELY. IF PLANTING IS DELAYED BY MORE THAN 6 HOURS AFTER DELIVERY, PLANTS ARE TO BE PLACED IN A LOCATION PROTECTED FROM ANY DETRIMENTAL WEATHER.
2. PROTECT ANY STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY PLANTING OPERATIONS.
3. INSTALLATION OF PLANT MATERIAL SHALL NOT PROCEED UNTIL THE RETAINING WALL, PRIVACY FENCE AND GRADING OPERATIONS ARE COMPLETE.
4. THE LANDSCAPE CONTRACTOR SHALL STAKEOUT PLANT LOCATIONS IN THE FIELD. THE LANDSCAPE ARCHITECT OR OWNER SHALL OBSERVE THESE LOCATIONS PRIOR TO COMMENCING PLANT PIT EXCAVATION. THE LANDSCAPE CONTRACTOR SHALL MAKE ANY ADJUSTMENTS AS REQUESTED BY THE LANDSCAPE ARCHITECT OR THE OWNER.
5. PLANTS THAT HAVE NOT INSTALLED IMMEDIATELY ARE TO BE WATERED USING A FINE MIST SPRAY AS OFTEN AS NEEDED BASED ON PLANT SPECIES.
6. ALL PLANT MATERIAL TO BE HANDLED BY EITHER ROOT BALL OR CONTAINER. IN NO CASE IS A PLANT TO BE HANDLED BY TRUNK OR LIMBS/BRANCHES. CONTAINER GROWN STOCK IS TO REMAIN IN CONTAINER UNTIL JUST PRIOR TO PLANTING.
7. INSTALL PLANTS ONLY WHEN WEATHER CONDITIONS PERMIT AND DURING ACCEPTABLE PLANTING SEASONS..
8. TREES AND SHRUBS SHALL BE PLANTED DURING ACCEPTABLE PLANTING SEASONS: BETWEEN MARCH 15 AND MAY 15 AND BETWEEN AUGUST 15 AND NOVEMBER 15 OR AS APPROVED BY OWNER'S REPRESENTATIVE.
9. HERBACEOUS PLANTS TO BE PLANTED DURING ACCEPTABLE PLANTING SEASONS: BETWEEN APRIL 15 AND JUNE 15 AND BETWEEN SEPTEMBER 15 AND OCTOBER 30, OR AS APPROVED BY OWNERS REPRESENTATIVE.
10. ALL TREE PITS AND SHRUB BEDS ARE TO BE COMPLETELY EXCAVATED IN COMPLETE ACCORDANCE WITH THE PLANTING DETAILS. REMOVE STONES LARGER THAN ONE INCH IN ANY DIMENSION, STICKS, ROOTS,RUBBISH, AND ANY OTHER EXTRANEOUS MATERIAL.
11. LANDSCAPE ARCHITECT TO BE NOTIFIED OF ANY UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS WHICH ARE ENCOUNTERED IN TREE PIT EXCAVATION. ADJUSTMENTS ARE TO BE MADE IN CONSULTATION WITH LANDSCAPE ARCHITECT.
12. TREE STAKING AND GUYING SHALL BE DONE PER DETAILS. CONTRACTOR SHALL ENSURE THAT TREES REMAIN PLUMB AND UPRIGHT FOR THE DURATION OF THE GUARANTEE PERIOD. STAKING AND GUY WIRES SHALL BE REMOVED BY LANDSCAPE CONTRACTOR NO MORE THAN 18 MONTHS AFTER INSTALLATION OF STAKES AND GUY WIRES.
13. TREE STAKES ARE TO BE COMMON LUMBER OR THE SIZE LISTED BELOW.
    A. TREE SIZE 1"-2" CAL OR < 8' HT, STAKE SIZE 2"X2"X96"
    B. TREE SIZE 2"-3" CAL OR > 8' HT, STAKE SIZE: 2"X2"X24", 2"X2"X30" FOR CONIFERS
14. WIRE GUYS TO BE GOOD COMMERCIAL QUALITY GALVANIZED WIRE. WIRE USED TO STAKE TREES TO BE NO. 12 GAUGE.
15. HOSE COLLARS TO BE NEW 2-PLY FABRIC BEARING GARDEN WITH A MIN. INSIDE DIAMETER OF TWO INCHES.
16. TREE/SHRUB PLANTING SOIL: HOLLY PLANTING SOIL TO BE EX. SOIL 20 PERCENT PEAT MOSS BY VOLUME. BASED ON THE SOIL TEST, CORRECT SOIL pH TO A 4.0 TO 5.0 RANGE. OTHER TREES AND SHRUBS: EX. SOIL WITH 20 PERCENT ORGANIC SOIL AMENDMENT.
17. FERTILIZER FOR TREES AND SHRUBS TO BE ADDED TO THE PLANTING SOIL PRIOR TO MIXING. FERTILIZER SHALL BE SLOW RELEASE PACKETS OR TABLETS TO BE ADDED DEPENDING ON THE PLANT SIZE AND GROWER'S RECOMMENDATION. THOROUGHLY MIX ALL AMENDMENTS AND EXISTING SOIL PRIOR TO PLACEMENT.
18. PACK THE SOIL MIX FIRMLY AROUND THE ROOTS TO ELIMINATE AIR POCKETS. WHEN HOLE IS 3/4 FULL WITH SOIL MIX, FLOOD THE HOLE WITH WATER. AFTER DRAINING, FILL HOLE TO THE SURFACE. INSTALL SHREDDED HARDWOOD MULCH TO A DEPTH OF 3" UNDER AND SURROUNDING ALL NEW PLANTINGS. PROVIDE A CONTINUOUS SURFACE BETWEEN AND AROUND PLANT MATERIAL, WALL, AND SIDEWALK.
19. HERBACEOUS PLANTING SOIL SHALL HAVE 2 INCHES COMPOSTED BIOSOLIDS, 15 LB/1000 FT OF 5-10-10 FERTILIZER AND DOLOMITIC AGRICULTURAL LIMESTONE AS DETERMINED BY SOIL TEST. SPREAD SOIL AMENDMENTS EVENLY, ROTOTILL PLANT BED TO 6", RAKE SURFACE SMOOTH, FREE OF DEBRIS/STONES.
20. HERBACEOUS PLANTING: REMOVE PLANTS FROM POTS WITHOUT DAMAGING PLANT OR ROOTS. PREMULCH CULTIVATED BEDS WITH 2" SHREDDED HARDWOOD BARK. PLANTS SHALL BE PLANTED THROUGH MULCH, WITH MULCH CAREFULLY PULLED BACK AND REPLACED TO AVOID MIXING PLANTING SOIL AND MULCH. WHEN PLANTED, THE TOP OF THE ROOT MASS SHALL BE AT GROUND LEVEL AND IN VERTICAL POSITION. WATER PLANTS IMMEDIATELY AFTER PLANTING AND PROVIDE FULL AND THOROUGH SATURATION OF THE PLANT BED. USE A SPRINKLER OR BREAKER HOSE TO PREVENT PLANT DAMAGE AND MULCH DISTURBANCE.
21. SEE SEDIMENT CONTROL NOTES AND DETAILS SHEET FOR PERMANENT STABILIZATION SPECIFICATIONS AND SODDING SPECIFICATIONS FOR TURFGRASS ESTABLISHMENT AREAS.
22. SODDED AREAS THAT WASH OUT MUST BE FILLED AND GRADED AS NECESSARY AND THEN RESODDED. ANCHORING METHOD SHOULD BE USED TO HOLD SOD AND MULCH IN PLACE, FOR EXAMPLE IN SWALES.
23. DEBRIS, RUBBISH, AND SUBSOIL, SHALL BE CLEANED AND REMOVED FROM THE SITE UPON COMPLETION OF PLANTING.
24. FINAL INSPECTION SHALL OCCUR DURING GROWING SEASON, AFTER ONE YEAR. CONTRACTOR MUST CONTACT OWNER OR OWNER'S REPRESENTATIVE TEN WORKING DAYS IN ADVANCE TO SCHEDULE INSPECTION. CONTRACTOR MUST REPLACE ALL DEAD OR UNACCEPTABLE PLANTS IMMEDIATELY
25. DO NOT TOP OR SEVERELY PRUNE ANY TREES. TREES TO BE NEATLY PRUNED AFTER PLANTING IN ACCORDANCE WITH THE BEST STANDARD PRACTICE AND AS DIRECTED BY THE LANDSCAPE ARCHITECT. THE TREE'S NATURAL FORM AND CHARACTER TO BE PRESERVED. ALL PRUNING TO BE DONE WITH SHARP, CLEAN TOOLS.
26. DO NOT PRUNE SHRUBS INTO BALLS OR SEPARATE SHAPES. ALLOW SHRUBS TO GROW TOGETHER TO FORM CONTINUOUS MASS.
27. DO NOT FORM MULCH MOUNDS AROUND ANY TREES. ENSURE THAT MULCH RINGS AROUND TREES ARE CONSISTENT THROUGHOUT PROJECT SITE.
28. DURING PLANTING OPERATIONS ADJACENT PAVING AND CONSTRUCTION IS TO BE KEPT CLEAN AND WORK AREAS ARE TO BE ORDERLY. PLANTS ARE TO BE PROTECTED FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY CONTRACTORS AND TRADES, AND ANY OTHER ADJACENT WORK. MAINTAIN SUCH PROTECTION DURING INSTALLATION AND WARRANTY PERIODS. ANY PLANTS DAMAGED ARE TO BE TREATED, REPAIRED, OR REPLACED.

PLANT MAINTENANCE

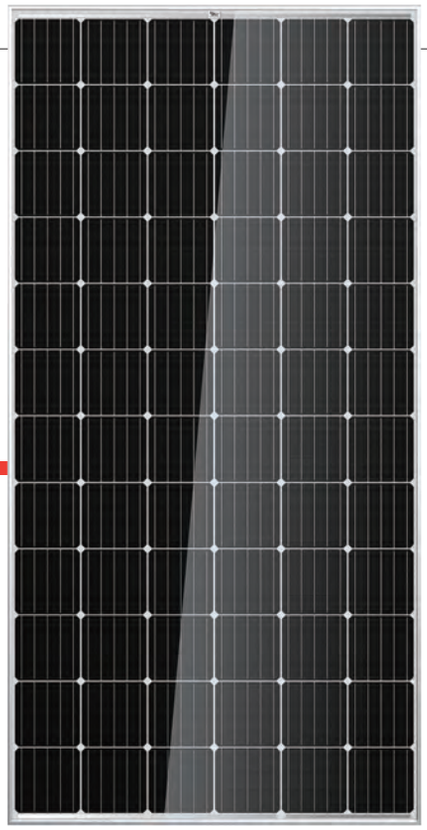
1. PLANTS ARE TO BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION FREE OF DISEASE DURING THE WARRANTY PERIOD.
2. TREES AND SHRUBS: MAINTENANCE TO INCLUDE PRUNING, WATERING, WEEDING, FERTILIZING, TIGHTENING AND REPAIRING STAKES, OR ANY OTHER METHOD TO ENSURE PLANT REMAINS HEALTHY AND VIABLE. AS NEEDED, APPLY PESTICIDE.
3. HERBACEOUS PLANTS: MAINTENANCE TO INCLUDE WATERING, WEEDING, FERTILIZING AND ANY OTHER METHOD TO ENSURE PLANT REMAINS HEALTHY AND VIABLE. AS NEEDED, APPLY PESTICIDE.

SOD INSTALLATION AND MAINTENANCE

1. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO JOB FOREMEN AND INSPECTOR.
2. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
3. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
4. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
5. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
6. ALL LAWN AREAS ARE TO BE TILLED TO A DEPTH OF 6" AND ALL FOREIGN MATERIAL REMOVED WHICH WILL INHIBIT THE HEALTHY GROWTH OF THE LAWN. ALL OLD GRASS ROOTS ARE TO BE REMOVED FROM THE SITE.
7. NEW TOPSOIL OF A MINIMUM DEPTH OF 4" IS TO BE PLACED OVER THE AREAS TO BE SODDED. THE LAWN TOPSOIL IS TO BE ROLLED AND LIGHTLY IRRIGATED PRIOR TO PLACING OF THE SOD. THE SOD IS NOT TO BE LAID ON FROZEN OR SOAKED SOIL.
8. LAWN AREAS TO BE FINE GRADED TO ENSURE THAT NO UNDULATIONS OCCUR IN THE LAWN. LAWNS TO BE GRADED IN SUCH A WAY AS TO APPEAR PERFECTLY WELL TAILORED AND EVEN.
9. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PR

THE TALLMAX M PLUS

FRAMED 72-CELL MODULE (1500V)



72 CELL
MONOCRYSTALLINE MODULE

340-380W
POWER OUTPUT RANGE

19.5%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

Founded Founded in 1997, Trina Solar is the world's leading total solutions provider for solar energy. With local presence around the globe, Trina Solar is able toprovide exceptional service to each customer in each market and deliver our innovative, reliable products with thebacking of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse gases Emissions Verification
OHSAS 18001: Occupation Health and Safety Management System

Trinasolar

Ideal for large scale installations

- Reduce BOS cost by connecting more modules in a string
- 1500V UL/1500V IEC certified

Maximize limited space with top-end efficiency

- Up to 193 W/m² power density
- Low thermal coefficients for greater energy production at high operating temperatures

Highly reliable due to stringent quality control

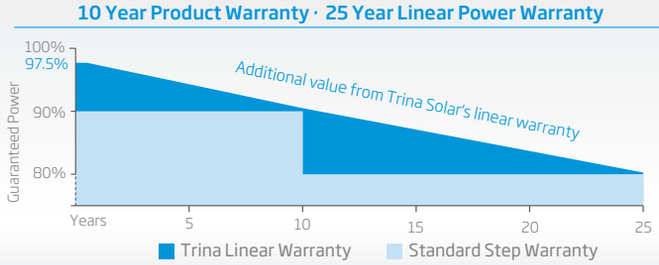
- Over 30 in-house tests (UV, TC, HF etc)
- Increased module robustness to minimize micro-cracks
- PID resistant and free of snail trails
- Internal test requirement of Trina more stringent than certification authority

Certified to withstand the most challenging environmental conditions

- 2400 Pa negative load
- 5400 Pa positive load

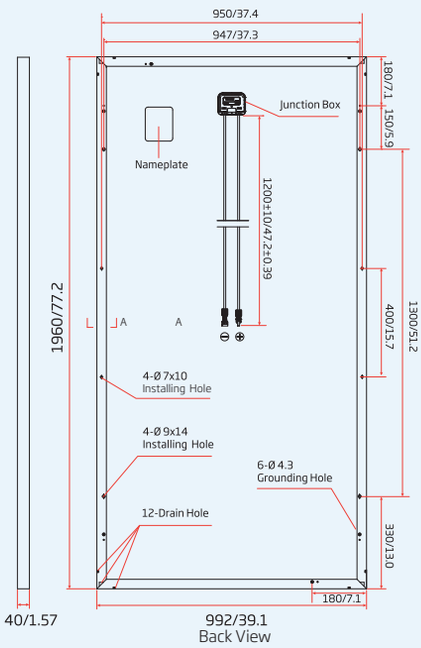
LINEAR PERFORMANCE WARRANTY

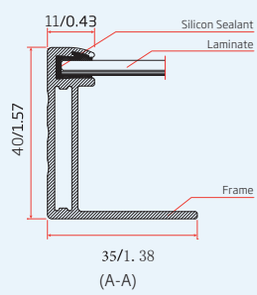
10 Year Product Warranty · 25 Year Linear Power Warranty



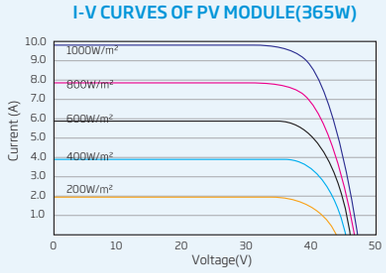
PRODUCTS	POWER RANGE
TSM-DE14A(II) STD MONO	340 - 365W
TSM-DE14A(II) PERC MONO	370 - 380W

DIMENSIONS OF PV MODULE(mm/inches)

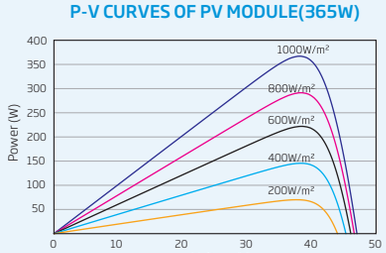




I-V CURVES OF PV MODULE(365W)



P-V CURVES OF PV MODULE(365W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	340	345	350	355	360	365	370	375	380
Power Output Tolerance-P_{MAX} (W)	0 ~ +5								
Maximum Power Voltage-V_{MPP} (V)	38.2	38.5	38.7	38.8	39.0	39.3	39.7	40.0	40.3
Maximum Power Current-I_{MPP} (A)	8.90	8.96	9.04	9.14	9.24	9.30	9.33	9.37	9.43
Open Circuit Voltage-V_{OC} (V)	46.2	46.7	47.0	47.4	47.7	48.0	48.3	48.5	48.8
Short Circuit Current-I_{SC} (A)	9.50	9.55	9.60	9.65	9.70	9.77	9.83	9.88	9.94
Module Efficiency η_m (%)	17.5	17.7	18.0	18.3	18.5	18.8	19.0	19.3	19.5

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power-P_{MAX} (Wp)	253	257	261	264	268	272	276	279	283
Maximum Power Voltage-V_{MPP} (V)	35.4	35.7	35.9	36.0	36.2	36.4	36.8	37.1	37.2
Maximum Power Current-I_{MPP} (A)	7.15	7.20	7.26	7.34	7.42	7.47	7.50	7.53	7.60
Open Circuit Voltage-V_{OC} (V)	42.9	43.4	43.7	44.1	44.3	44.6	44.9	45.1	45.3
Short Circuit Current-I_{SC} (A)	7.67	7.71	7.75	7.79	7.83	7.89	7.94	7.98	8.03

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation Module	72 cells (6 × 12)
Dimensions	1960 × 992 × 40 mm (77.2 × 39.1 × 1.57 inches)
Weight	22.5 kg (49.6 lb)
Glass	3.2 mm (0.13 inches) , High Transmission, AR Coated Tempered Glass
Encapsulant Material	EVA (White/Transparent)
Backsheet	White
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²)
	1200 mm (47.2 inches)
Connector	Trina TS4
Fire Type	Type 1 or Type 2

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of P_{MAX}	- 0.39%/°C
Temperature Coefficient of V_{OC}	- 0.29%/°C
Temperature Coefficient of I_{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	15A (Power ≤ 350W)
	20A (Power ≥ 355W)

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

10 year Product Workmanship Warranty
25 year Linear Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

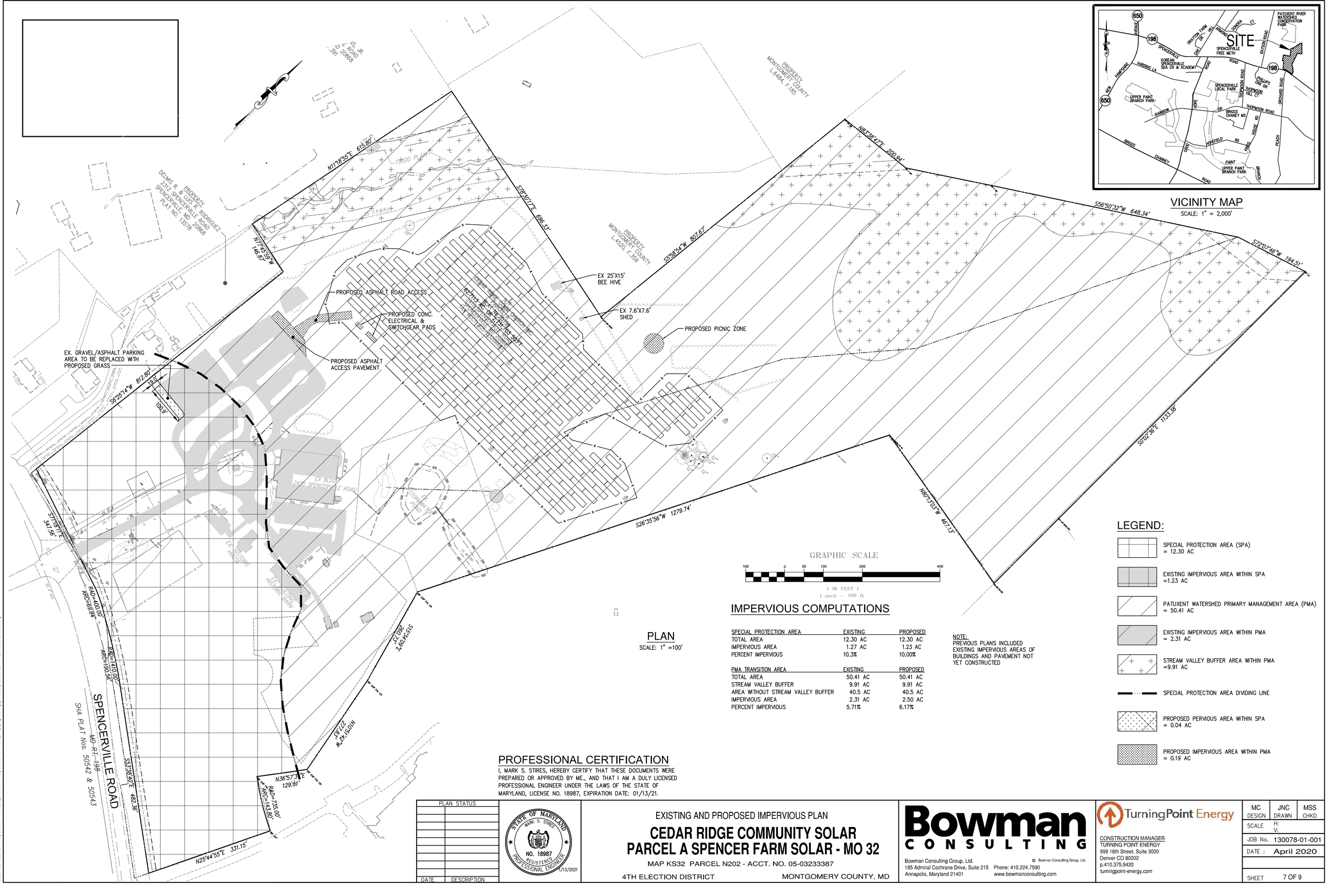
Modules per box: 27 pieces
Modules per 40' container: 648 pieces

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_EN_2019_MAY

www.trinasolar.com



VICINITY MAP

SCALE: 1" = 2,000'

PLAN

SCALE: 1" =100'

LEGEND:

- SPECIAL PROTECTION AREA (SPA) = 12.30 AC
- EXISTING IMPERVIOUS AREA WITHIN SPA =1.23 AC
- PATUXENT WATERSHED PRIMARY MANAGEMENT AREA (PMA) = 50.41 AC
- EXISTING IMPERVIOUS AREA WITHIN PMA = 2.31 AC
- STREAM VALLEY BUFFER AREA WITHIN PMA =9.91 AC
- SPECIAL PROTECTION AREA DIVIDING LINE
- PROPOSED PERVIOUS AREA WITHIN SPA = 0.04 AC
- PROPOSED IMPERVIOUS AREA WITHIN PMA = 0.19 AC

IMPERVIOUS COMPUTATIONS

SPECIAL PROTECTION AREA	EXISTING	PROPOSED
TOTAL AREA	12.30 AC	12.30 AC
IMPERVIOUS AREA	1.27 AC	1.23 AC
PERCENT IMPERVIOUS	10.3%	10.00%

PMA TRANSITION AREA	EXISTING	PROPOSED
TOTAL AREA	50.41 AC	50.41 AC
STREAM VALLEY BUFFER	9.91 AC	9.91 AC
AREA WITHOUT STREAM VALLEY BUFFER	40.5 AC	40.5 AC
IMPERVIOUS AREA	2.31 AC	2.50 AC
PERCENT IMPERVIOUS	5.71%	6.17%

NOTE:
PREVIOUS PLANS INCLUDED EXISTING IMPERVIOUS AREAS OF BUILDINGS AND PAVEMENT NOT YET CONSTRUCTED

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME., AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 01/13/21.

PLAN STATUS	
DATE	DESCRIPTION

STATE OF MARYLAND
MARK S. STIRES
NO. 18987
REGISTERED
PROFESSIONAL ENGINEER
1/13/2021

EXISTING AND PROPOSED IMPERVIOUS PLAN

CEDAR RIDGE COMMUNITY SOLAR
PARCEL A SPENCER FARM SOLAR - MO 32

MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387

4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

Bowman CONSULTING
Bowman Consulting Group, Ltd.
185 Admiral Cochrane Drive, Suite 215
Annapolis, Maryland 21401
Phone: 410.224.7590
www.bowmanconsulting.com

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.410.375.9420
turningpoint-energy.com

MC	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE H:
V:

JOB No. 130078-01-001

DATE : April 2020

SHEET 7 OF 9

Cad file name : \\130078 - MO32 Spencerville Rd\130078-01-001 (ENG)\Engineering\Exhibits\130078-EX IMPERVIOUS EXHIBIT.dwg

DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Hadi Mansouri
Acting Director

September 4, 2019

Mr. Jeff Smith
Bowman Engineering
185 Admiral Cochrane Dr., Suite 215,
Annapolis, MD 21401

Re: **COMBINED STORMWATER MANAGEMENT CONCEPT/*SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN*** for
Spencerville Solar MO32
Preliminary Plan #: NA
SM File #: 284912
Tract Size/Zone: 62.71 ac.
Total Concept Area: 9.33
Lots/Block: NA
Parcel(s): N 202
Watershed: Upper Paint Branch

Dear Mr. Smith:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via Non-Rooftop Disconnect (N-2) and Rain Garden (M-7).

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. The concept plan indicates the reuse and modification of an existing overhead electrical line that passes through an existing storm water management facility and easement. Unless there is no other practical means of service, this connection will be relocated outside the bounds of stormwater management easement during detailed plan review.

2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.

3. An engineered sediment control plan must be submitted for this development.

4. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.

This list may not be all-inclusive and may change based on available information at the time.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this

office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Bill Musico at 240-777-6340.

Sincerely,

Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

MCE: WJM

cc: N. Braunstein
SM File # 284912

ESD: Required/Provided 308 cf / 310 cf
PE: Target/Achieved: 1.0" / 1.0"
STRUCTURAL: 0.00 cf
WAIVED: 0.00 ac.

Department of Permitting Services
Fire Department Access and Water Supply Comments

DATE: 06-Jun-20

TO: Mark Stires - mstires@bowmanconsulting.com
Bowman Consulting

FROM: Marie LaBaw

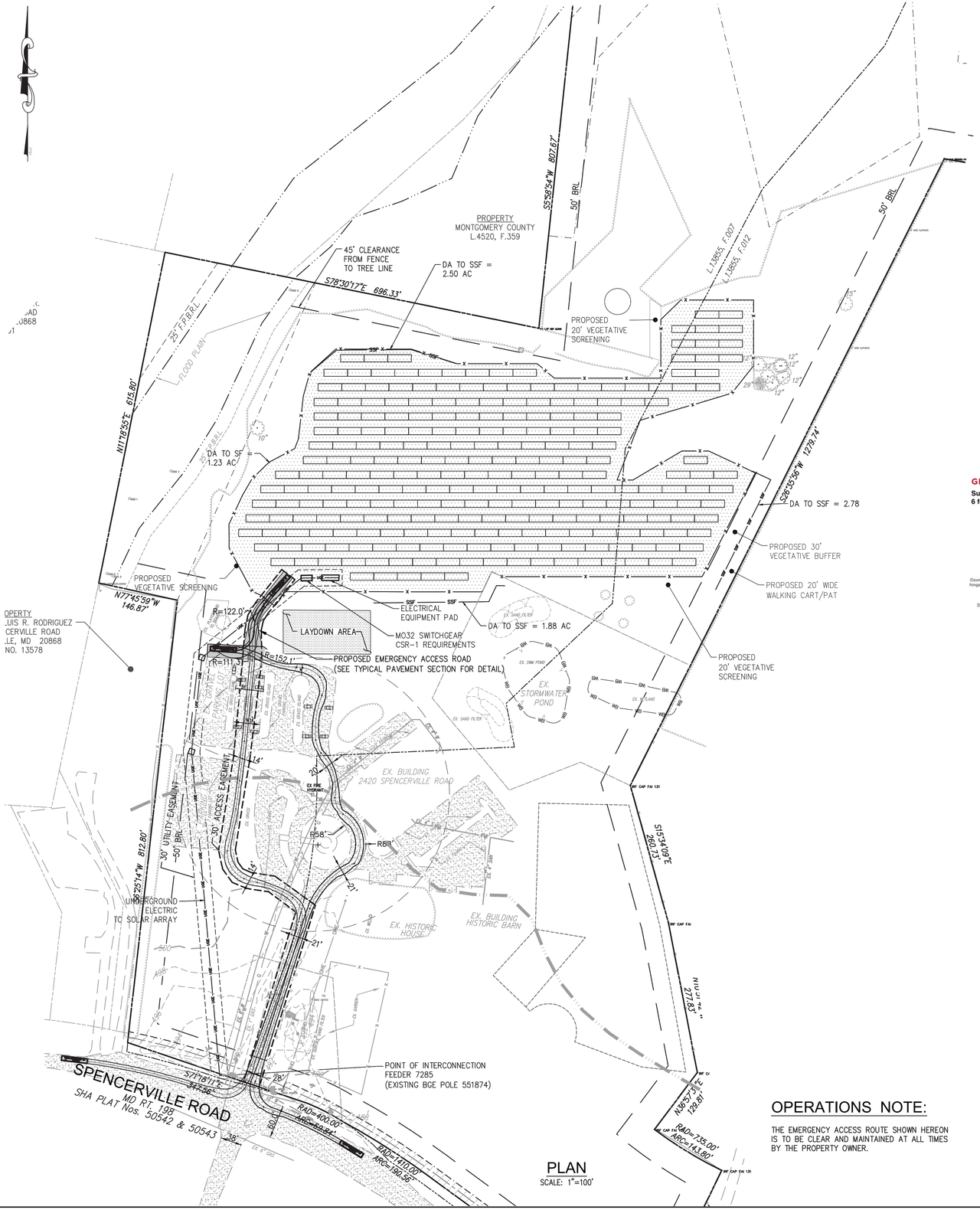
RE: Cedar Ridge Solar (Parcel A Spencer Farm Solar - MO 32)
820200040

PLAN APPROVED

1. Review based only upon information contained on the plan submitted **05-Jun-20** .Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.

2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.

***** Adding solar array to existing site *****



PLAN
SCALE: 1"=100'

OPERATIONS NOTE:

THE EMERGENCY ACCESS ROUTE SHOWN HEREON IS TO BE CLEAR AND MAINTAINED AT ALL TIMES BY THE PROPERTY OWNER.

KNOX
When seconds matter™

KNOXBOX® 3200

The KnoxBox 3200 is the number one high-security key lock box trusted by first responders and property owners. Store up to 10 keys to quickly gain rapid access to commercial properties.

WEIGHT:
Surface Mount - 6 lbs
Recessed Mount - 9 lbs

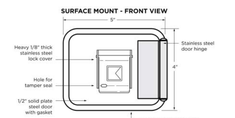
DIMENSIONS:
Surface Mount Body - 4"H x 5"W x 3-7/8"D
Recessed Mount Flange - 7"H x 7"W

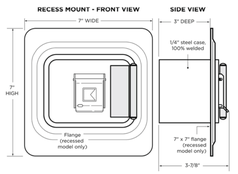
FEATURES
- Stores maximum 10 keys. Access cards and small entry items may also fit in interior compartment but will reduce max key quantity.
- Built Knox-Rugged and secure: UL 1037, UL 1610, UL 1332, UL 437
- Finished with Knox-Coat® to protect four times better than standard powder coat
- Weather-resistant door gasket
- Hinged door

BENEFITS
- Allows rapid property access
- Reduces property damage
- Prevents forced entry into buildings
- Minimizes first responder injury
- Compliant to National Fire Code (NFPA, IFC, IBC)

OPTIONS
- Knox Tamper Alert connects to building's alarm system for extra security
- Mount types: Recessed and Surface
- 3 color options: Black, Aluminum, Dark Bronze

ACCESSORIES
- Multi-Purpose Switch for use on electrical doors, gates and other electrical equipment
- Recess Mounting Kit for new concrete or masonry construction
- Public Safety Labels
- Tag-Out Tamper Seals
- Key Tags
- Key Rings





ORDERING SPECIFICATIONS

To insure procurement and delivery of the KnoxBox 3200, it is suggested that following specification paragraph is used:

KnoxBox surface/recessed mount with hinged door, with/without UL Listed Knox "amper Alert. 1/4" plate steel housing, 1/2" thick steel door with interior gasket seal and stainless stee door hinge. Box and lock UL Listed. Lock has 1/8" thick stainless steel dust cover with tamper seal mounting capability.

Exterior Dimensions: Surface Mount Body - 4"H x 5"W x 3-7/8"D
Recessed Mount Flange - 7"H x 7"W

Lock: UL Listed. Double-action rotating tumblers and harcened steel pins accessed by a biased cut key.

Finish: Knox-Coat proprietary finishing process

Color: Black, Dark Bronze or Aluminum

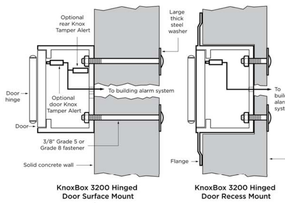
P/N: KnoxBox 3200 (mfr's cat. ID)

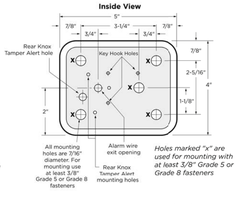
Mfr's Name: KNOX COMPANY

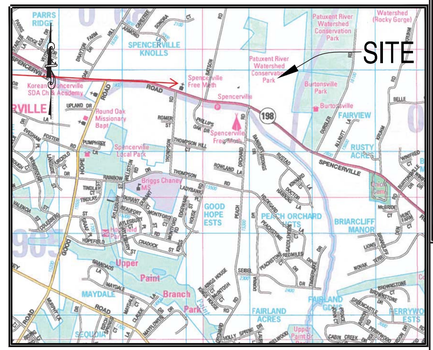
GENERAL MOUNTING INSTRUCTIONS

Suggested minimum mounting height, 6 feet above ground.

ATTENTION: KnoxBox is a very strong device that MUST be mounted properly to ensure maximum security and resist physical attack.







VICINITY MAP
SCALE: 1" = 2,000'

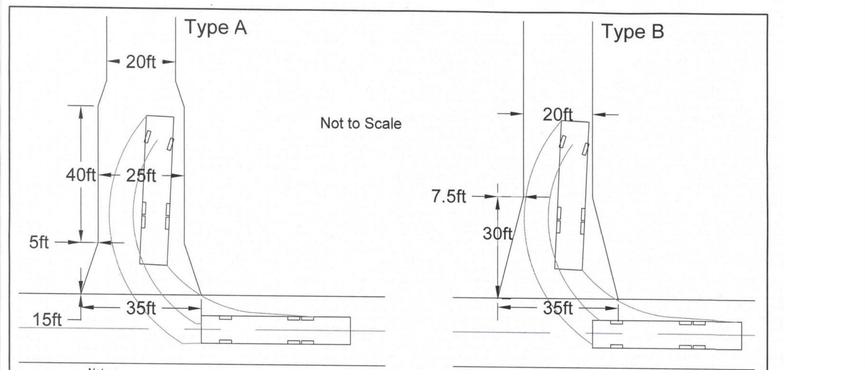
NOTE:
KNOXBOX LOCATION SHOWN ON SHEET 2

FIRE CODE ENFORCEMENT

Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from ommisions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SML* FM: 43 DATE: 6/6/2020



Notes:
1. These types of modified driveway aprons may possibly be approved when the existing roadway width and a standard apron would not accommodate the acceptable turning radius required for DFRS equipment.
2. These modified residential driveways are NOT ALWAYS permittable and will be reviewed on a case by case basis.
3. The modified driveway will need DFRS approval. Contact DFRS on 240-777-2457
4. Pavement section should be in accordance with MCDOT standard residential driveways.

MONTGOMERY COUNTY MARYLAND

DFRS MODIFIED
RESIDENTIAL DRIVEWAY
GUIDELINE

Approved 3/22/2016
Office of the Montgomery County Fire Marshal

GRAPHIC SCALE

100 0 50 100 200 100
(IN FEET)
1 inch = 100 ft.

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 1/13/2021.

TurningPoint Energy

CONSTRUCTION MANAGER:
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
15 Worthington Street, Suite 215
Annapolis, Maryland 21401

© Bowman Consulting Group, Ltd.
Phone: 410.224.7560
www.bowmanconsulting.com

EMERGENCY ACCESS PLAN
PARCEL A SPENCER FARM SOLAR - MO 32
2410 SPENCERVILLE RD, SPENCERVILLE MD 20868
MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

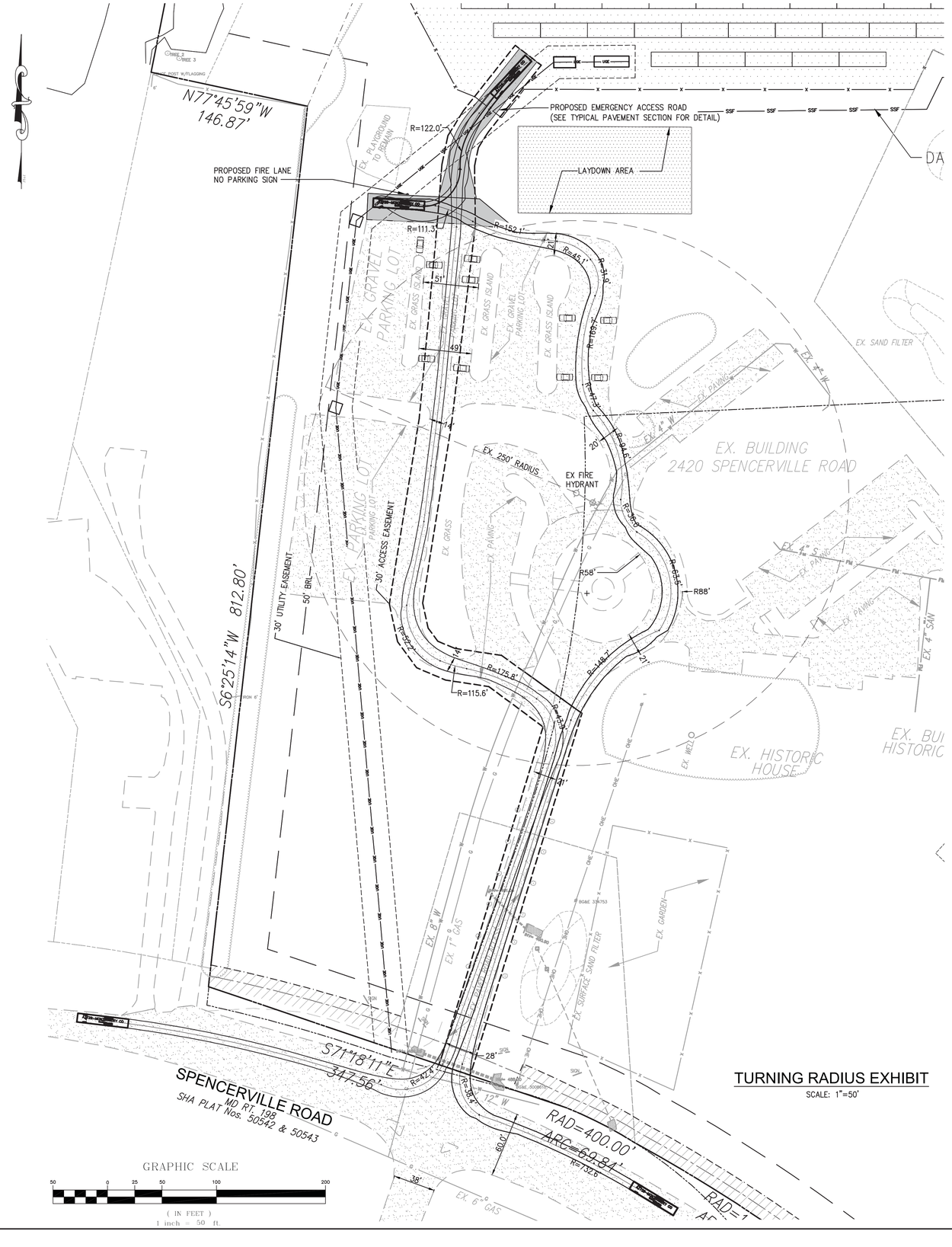
STATE OF MARYLAND
MARK S. STIRES
No. 18987
REGISTERED PROFESSIONAL ENGINEER
06/04/20

PLAN STATUS	
DATE	DESCRIPTION

MCS	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE	H: AS SHOWN V:
JOB No.	130078-01-001
DATE :	March 2020
FILE No.	130078-01-001
SHEET	1 OF 2

Cad file name : C:\Temp\AcPublish_2892x\130078-01-DP-001-SHT-FAP.dwg



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

TURNING RADIUS EXHIBIT

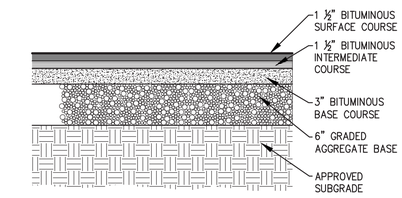
SCALE: 1"=50'

GENERAL NOTES:

THE PURPOSE OF THIS EXHIBIT IS TO DEMONSTRATE ADEQUATE SPACE FOR THE TURNING MOVEMENT OF A FIRE TRUCK WITHIN THE EXISTING PARKING LOT AND THE PROPOSED DRIVEWAY ACCESS FROM THE EXISTING PARKING LOT.

TURNING RADIUS NOTES:

THE AUTO-TURN LAYOUT SHOWN ON THIS PLAN ALLOWS FOR TRUCK TURNING WITHOUT CROSSING INTO PARKING SPACES.

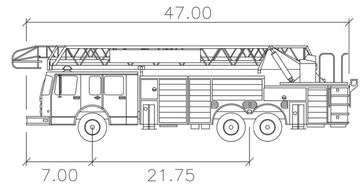


TYPICAL PAVEMENT SECTION

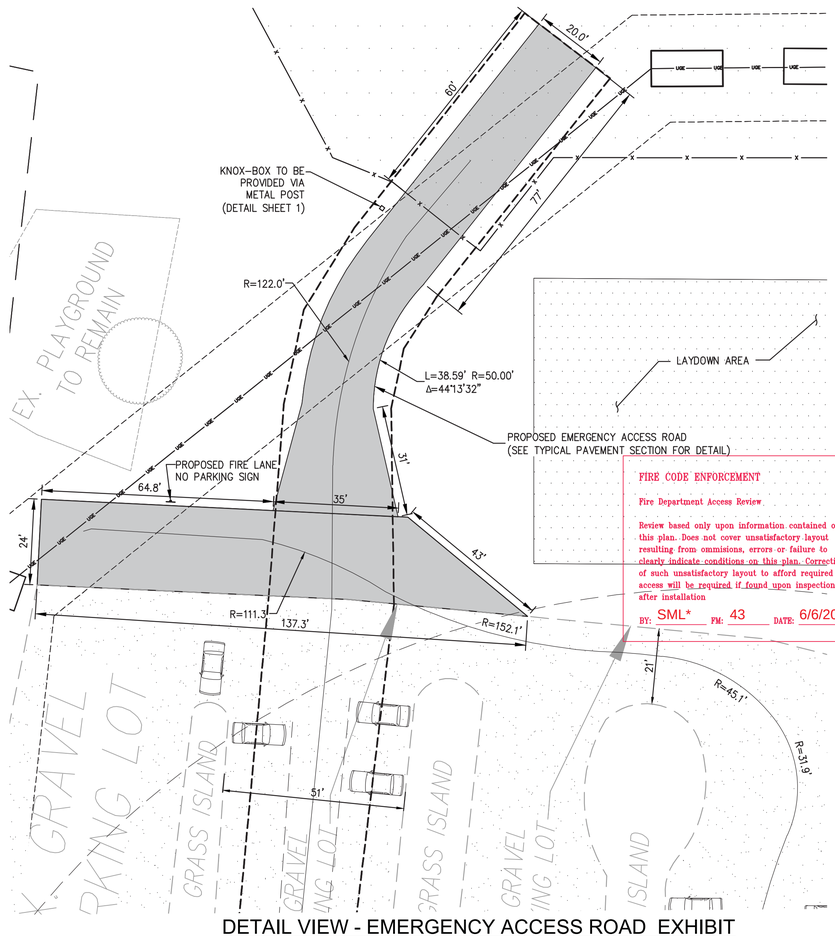
SCALE: NOT TO SCALE

PAVEMENT SECTION TO BE CERTIFIED BY GEOTECHNICAL ENGINEER SEE GEOTECHNICAL REPORT

NOTE: SURFACE AND SUBGRADE SHALL BE CERTIFIED TO MEET MINIMUM MONTGOMERY COUNTY DOT TERTIARY ROAD LOAD BEARING CAPACITY.



AT729	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.00
Steering Angle	: 33.20



FIRE CODE ENFORCEMENT

Fire Department Access Review

Review based only upon information contained on this plan. Does not cover unsatisfactory layout resulting from ommissions, errors or failure to clearly indicate conditions on this plan. Correction of such unsatisfactory layout to afford required access will be required if found upon inspection after installation

BY: SML* FM: 43 DATE: 6/6/2020

DETAIL VIEW - EMERGENCY ACCESS ROAD EXHIBIT

SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PROFESSIONAL CERTIFICATION

I, MARK S. STIRES, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18987, EXPIRATION DATE: 1/13/2021.

TurningPoint Energy

CONSTRUCTION MANAGER
TURNING POINT ENERGY
999 18th Street, Suite 3000
Denver CO 80202
p.
turningpoint-energy.com

Bowman CONSULTING

Bowman Consulting Group, Ltd.
16701 Melford Blvd., Suite 215
Annapolis, Maryland 21401

Phone: 410.224.7560
www.bowmanconsulting.com

© Bowman Consulting Group, Ltd.

EMERGENCY ACCESS PLAN

PARCEL A SPENCER FARM
SOLAR - MO 32

2410 SPENCERVILLE RD. SPENCERVILLE MD 20868
MAP KS32 PARCEL N202 - ACCT. NO. 05-03233387
4TH ELECTION DISTRICT MONTGOMERY COUNTY, MD

STATE OF MARYLAND
MARK S. STIRES
No. 18987
REGISTERED PROFESSIONAL ENGINEER
06/04/20

PLAN STATUS

DATE	DESCRIPTION

MCS	JNC	MSS
DESIGN	DRAWN	CHKD

SCALE	H: AS SHOWN V:
JOB No.	130078-01-001
DATE :	March 2020
FILE No.	130078-01-001
SHEET	2 OF 2

Cad file name : C:\Temp\AcPublish_28924\130078-0-CP-001-SH1-FAP.dwg