



TOWN OF BLACK MOUNTAIN

160 Midland Avenue ♦ Black Mountain ♦ N.C. ♦ 28711

Phone: (828) 419-9300 ♦ Fax: (828) 669-2030

MEMORANDUM

To: Town of Black Mountain Planning Board
From: Jennifer Tipton, Zoning Administrator
Re: Agenda Packet for April 22, 2019
Date: April 12, 2019

The **Town of Black Mountain Planning Board** will meet on **Monday, April 22, 2019 at 6:00 p.m.** in Town Hall at 160 Midland Avenue.

Please find the following items for your information and use at the meeting:

1. The proposed agenda;
2. Draft minutes from March 25, 2019;
3. Text Amendment – Duplex Definitions;
4. Padgettstown Road Subdivision Preliminary Plan;
5. Text Amendment – Minor Subdivisions; and
6. Text Amendment – Traffic Impact Analysis.

Please let Jennifer Tipton know if you are **unable** to attend this meeting.
jennifer.tipton@townofblackmountain.org or (828) 419-9373.

The Town of Black Mountain is committed to providing accessible facilities, programs and services for all people in compliance with the American with Disabilities Act. Should you need assistance or a particular accommodation for this meeting, please inform Jennifer Tipton at (828) 419-9373 or by email at jennifer.tipton@townofblackmountain.org.

CC: Jessica Trotman, Planning Director
Ron Sneed, Town Attorney



PUBLIC NOTICE

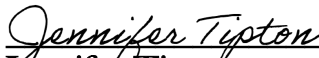
BLACK MOUNTAIN PLANNING BOARD

REGULAR MEETING

Monday, April 22, 2019 at 6:00 p.m.

The Black Mountain Planning Board will meet for their monthly meeting on **Monday, April 22, 2019 at 6:00 p.m.** at Town Hall, 160 Midland Avenue, Black Mountain, N.C. The purpose of this meeting is to consider text amendments to duplex definitions, consider text amendments to minor subdivisions, consider text amendments to traffic impact analysis requirements and to consider a preliminary plat for a major subdivision on Padgett Road for forty lots.

The meeting is open to the public.



Jennifer Tipton
Zoning Administrator

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Posted to the Town Bulletin Board 04/12/19

www.townofblackmountain.org



**Planning Board Regular Meeting
April 22, 2019**

PROPOSED AGENDA

I. CALL TO ORDER

- **Welcome**
- **Determination of Quorum**

II. ADOPTION OF AGENDA

- **Motion:** To adopt the agenda as presented [or as amended]

III. ADOPTION OF MINUTES

- **Motion:** To adopt the minutes of March 25, 2019 as written [or as amended]

IV. OLD BUSINESS

- Text Amendment for Duplex Definition

V. NEW BUSINESS

- Preliminary Plat for Padgettown Road Subdivision
- Text Amendment for Minor Subdivisions
- Text Amendment for Traffic Impact Analysis Requirements

VI. COMMUNICATION FROM PLANNING BOARD

VII. COMMUNICATION FROM STAFF

VIII. ADJOURNMENT

**TOWN OF BLACK MOUNTAIN
PLANNING BOARD**

The Black Mountain Planning Board held its regular meeting on Monday, March 25, 2019 at 6:00 p.m. in Town Hall at 160 Midland Avenue, Black Mountain, North Carolina.

I. CALL TO ORDER

The meeting was called to order with the following members present:

Peter Vazquez, Chair
Pam Norton, Vice Chair
Jennifer Willet
Lisa Milton
Jesse Gardner
Michael Raines
Scott Reed

Staff:

Jennifer Tipton, Zoning Administrator
Jessica Trotman, Planning Director
Ron Sneed, Town Attorney

The meeting was called to order at 5:59 p.m. and duly constituted and opened for business with a quorum of seven (7) regular members.

II. ADOPTION OF AGENDA

Lisa Milton made a motion to adopt the agenda as presented. The motion was approved by consensus with a vote of 7-0.

III. ADOPTION OF MINUTES

Lisa Milton made a change to the February 25, 2019 minutes regarding the number of rooms in bed and breakfast inns so that it would be seven instead of nine. Ms. Milton had a question regarding the project sheet for the Blue Ridge Road and that the zoning is shown wrong and that some of the lots are shown in different colors. Jessica Trotman said that her understanding is that some of the lots were shown as pre-existing non-conforming uses and some lots that might be more susceptible to change.

Pam Norton made a motion to adopt the minutes of February 21, 2019 and February 25, 2019 as amended. The motion was approved by consensus with a vote of 7-0.

IV. OLD BUSINESS

1. Right-of-Way Closure for Remainder of Campbell Street

Ms. Tipton presented the petition of the Planning Board to close the remainder of Campbell Street after the recommendation to close the original petitioner's request to close the upper portion of Campbell Street. Ms. Tipton said that all property owners had been notified and that only one phone call was received and they were in favor of the closure. The public hearings will be synced to be done at one time so all notification will be done at the same time. Lisa Milton made a motion to recommend the closure to the Board of Aldermen. The motion was approved by consensus with a vote of 7-0.

V. NEW BUSINESS

1. Presentation of Greenway Master Plan Update

Jessica Trotman introduced Leslee Temple, member of the Greenways Commission, and thanked her for all of her hard work in updating the Greenway Master Plan. Leslee Temple gave a brief overview of the update and that one of the major reasons for the update is for a funding tool and to make sure all state and regional trails are incorporated. The update will also include prioritization of the trails and highlight the six existing trails and to make the document more professional.

Jesse Gardner asked about the Riverwalk Greenway and Ms. Temple explained where the greenway will go and that the project is listed as funded. The categories include funded, high priority, medium priority and low priority. There is a map showing all the trails and their rankings. The Ridgecrest Trail will feed into the Riverwalk Trail and will follow the railroad tracks to the town boundary. The Hemphill property is not identified on the plan as the town does not yet own the property. The Swannanoa River Trail will follow the river and the proposed trails are not exact as the planning process has not started. Some discussion was held about the type of material to use on the trail and it was determined that asphalt is looking to be the best material for various reasons including accessibility and low sedimentation runoff. The rankings were done based on probability of funding. There are no new greenways proposed in the plan. There will be a public hearing with the Board of Aldermen and the plan will be made available to the public.

Jesse Gardner made a motion to recommend the Greenways Master Plan update to the Board of Aldermen. The motion was approved by consensus with a vote of 7-0.

2. Padgettown Road Major Subdivision Sketch Plan Review

Town Attorney Ron Sneed explained that the review is only for the sketch plan and shows what it is required on the checklist. Ms. Tipton presented the board the sketch plan for a major subdivision on Padgettown Road for 40 lots. Ms. Tipton went over the sketch plan and noted that there were a couple of items missing, including topography and use of the property. Ms. Tipton then introduced developers Todd Chambers and Jamey McConnell, and engineers Mark Brooks and Eric Hutchinson. Ms. Tipton noted that the sidewalk is shown only on areas where the slope is less than five percent and anything greater than five percent will be a mulched path for safety. All road dimensions are in compliance with Appendix D of the Fire Code and the secondary ingress and egress will be gated off of Belle Grove Road. The main entrance will be off of Padgettown Road. Stormwater plans have been submitted for review. Lisa Milton asked about the three lots that were done as a minor subdivision and why they were not incorporated into the major subdivision. Ms. Tipton said that in regards to MSD, the three lots were looked at separately but the allocation had expired and for some reason were included in the allocation for the forty lots. The first lots were not included as at the time the developers were not sure about the back half of the lot. Ms. Trotman said that staff is hesitant to place financial burdens or expectations on developers if they are not ready in particular if the outcome will not change such as density would not be greater and infrastructure demands would not be greater. Attorney Sneed mentioned that minor subdivisions typically have access and utilities and therefore have fewer requirements. Mr. Gardner asked about stormwater and the upper three lots and Ms. Trotman said that staff had talked to the developer and they will be managing water on those three lots. Todd Chambers thanked the board for looking at the sketch plan and said that he feels they have met all requirements and are coming in at less density than allowed and providing more greenspace than required.

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Frank Jordan, 388 Avena Road, asked about the access onto Belle Grove Road and that he had been asked at one time by the former owner for forty feet of his property. Ms. Tipton explained that Belle Grove Road will be for emergency vehicles only and will not be used for general traffic and that there is twenty feet available for access. Ms. Milton asked about the twenty feet because the plat only shows ten point seven-two feet and is wondering where the twenty feet comes from.

Mark Brooks, Brooks Engineering, said that the twenty feet comes from a deeded easement that grants access onto Belle Grove Road and a portion of the property is in the deeded easement. Ms. Milton said that one of the notes shows that the plat was done without a title search and said that there was no information about the easement available for the board to look at. Mr. Brooks said that they had talked to an attorney about the easement. Mr. Gardner asked if all homes would be modular and Mr. Chambers said that they would all be modular. Mr. Gardner asked about the sidewalk and the reason for the mulch paths and it was explained that it would be for safety and traction on the steeper parts of the property. Ms. Milton asked about documentation from the Fire Department regarding pressure on the fire hydrants. Ms. Trotman explained that they were involved in the tech review and water capacity was determined but staff does not know if hydrant tests have been done. Proposed hydrants are shown on the civil plans which typically do not get shown to the board. An easement from the neighbor has not yet been obtained for sewer but there are other plans in place should an easement not be granted. Ms. Tipton confirmed that Padgettown Road is a town maintained road. All turnarounds are in compliance with Appendix D in terms of measurements. Mr. Gardner suggested a turnaround be considered at the dead-end where the emergency gate will be located.

Sam Webber, 663 Padgettown Road, spoke about the conditions of Padgettown Road and provided some photos of the conditions of the road.

Attorney Sneed reminded everyone that the board has no control over the conditions of the road and that the board is just to make sure the plan meets the checklist. The zoning district allows lots of the size requested and a major subdivision is permitted by right if all the technical requirements are met which is what the board is doing at this time. Most of the concerns are not the purview of the board. Chair Vazquez asked that comments be made to the technical review and not to personal taste.

Elaine Loutzenheiser, 410 Avena Road, said that since the board is a recommending body that the board consider recommending the Board of Aldermen consider the condition of the road in light of this development. Ms. Loutzenheiser encouraged everyone to go to the Board of Aldermen.

Amy Hoffman, Arrow Point Trail, expressed concerns about flooding and the roads. Ms. Milton said she thinks the concerns go back to stormwater and Ms. Trotman said that the plans have been submitted but are not the purview of the board and are not a qualifier of the subdivision checklist. Ms. Trotman said the board cannot determine adequacy of the stormwater and also cannot deny the application based on stormwater.

Chair Vazquez asked about a traffic impact analysis and referenced a section in the ordinance and Attorney Sneed said that the section references an ordinance that no longer exists. Ms. Trotman said that because the density is lower than allowed it becomes harder to require a traffic impact analysis because then you would have to start requiring one for every project.

Emily Sampson, 701 Padgettown Road, asked if there any tree ordinances or a tree board and she was referred to the Urban Forestry Commission but the town would not have been able to do

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anything about the tree as it is private property and we do not prohibit the cutting of trees on private property.

Phil Holderman, 532 Padgettown Road, asked about emergency vehicles and when the emergency access would be used and it was explained that it would only be used when the primary access is blocked. Mr. Holderman expressed his concerns about the conditions of the road and the amount of traffic that would be added. Mr. Holderman asked about the backup plan for sewer if Ms. Taylor does not grant an easement.

Greg Juckett, 564 Brandon Road, said his concern is the topography of the traffic and if it would be passable in the wintertime and that the property is being clear cut and could cause erosion and flooding.

Terry Dalton, 351 Avena Road, expressed concerns about the creeks and flooding and a buffer area.

Erik Iverson, 385 Avena Road, asked about the condition of the culvert on Belle Grove Road and if it would support the weight of all of the trucks and if the culvert were to collapse how would people get out of Belle Grove Road.

Mark Brooks, Brooks Engineering, stated that they could not do anything about the condition of the road but did say that the additional homes would add additional tax base which might help with funding. A stormwater management has been designed and most of the management systems will be underground and was designed more towards Buncombe County's design standards. All of the home sites are above the creeks and the culvert towards Padgettown Road will be replaced and the culvert off of Belle Grove Road was replaced several years ago by MSD so should not be too old and looks to be in decent shape. The emergency access will use primary access at all times unless there is an issue. Erosion control plans will go to Buncombe County for review and approval and enforcement will be done by Buncombe County. The original road was around fifteen percent slope but with the culvert replacement the road is now about ten percent or less. The developers were told at the beginning that they did not need a traffic impact analysis as forty-two homes is typically a small development that would not need an analysis and the analysis would not factor in the conditions of the road. The sewer easement needed is not the only provision for sewer and there are other methods but they are more costly and time consuming. The timeframe is estimated at twenty-four months for completion. The developer does plan to turn the roads over to the town upon completion of the project. Ms. Milton talked about the toll that the equipment will take on the road and that the road will probably deteriorate further and suggested that the road should be paved after the completion of the project.

Charles Tan, 14 Painted Trillium Trail, asked about provisions for impact such as the cranes and if there was a way to get fees from the developer before the project starts. Ms. Milton explained that heavy equipment operators pay a use tax to the State to be able to have a permit to drive the heavy equipment on the roads.

Erik Iverson, 385 Avena Road, asked how many pieces are each of the homes. Most of them will be two pieces but some may be up to four depending on the style of home. Mr. Iverson said that means that there will be eighty to one hundred and twenty trailers taking up most of the road. Mr. Iverson said that his concern is the traffic plan for when the homes are brought in. The developer said that at most the road would be blocked for about ten minutes and the plan is to not have any deliveries during morning and evening commutes or on Sundays and will try to minimize the impact as much as possible. The developer may use the Belle Grove Road access for construction equipment if needed and they do have the legal access to use that road and the final intent is for emergency access only and not thru-traffic. Ms. Tipton stated that the items needed

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are topography, use and phone number of owner, sidewalks shown, suggest a turnaround at the emergency gate, provide letter from attorney on easement and a full set of civil plans. Mr. Gardner suggested more sidewalk than trail. The postmaster is not requiring a mail kiosk for this development. Ms. Tipton explained that the next step will be for the developer to submit a preliminary plan, staff will review and then it will be submitted to the Planning Board. Notice will be posted on the property and on the website. Any citizen can sign-up on the website to receive notices and updates of meetings. Mr. Gardner thanked the developer for coming to the meeting.

VI. COMMUNICATION FROM PLANNING BOARD

Ms. Milton asked about a property on Blue Ridge Road that was done as a minor subdivision even though the residual lot has enough acreage to subdivide. Ms. Milton is concerned about people skirting the ordinance. Ms. Trotman did say that most of the property on the residual lot is in floodway but Ms. Milton said that the land is still counted. Ms. Trotman said that the idea of a major subdivision is to add infrastructure. Density will be dictated by the zoning district and stormwater will be dictated by the amount of disturbed land. Attorney Sneed said that the County has a rule that you cannot come back within three years of approval of a minor subdivision and said that adding a timeframe might be a solution to the concerns being raised. Ms. Milton said that people were not aware that DOT was going to be at the March Board of Aldermen meeting and could the approved plan be mailed to everyone along Blue Ridge Road. Ms. Trotman explained that nothing had been decided and DOT was just asking for input and the Board decided to support option number two and the final decision will be made by DOT. Ms. Trotman recommended contacting Mike Clark at DOT to ask about when a decision will be made.

VII. COMMUNICATION FROM STAFF

Ms. Trotman thanked everyone for participating in the Blue Ridge Road Small Area Plan public input meeting.

VIII. ADJOURNMENT

Jesse Gardner made a motion to adjourn the meeting at 8:16 p.m. The motion was approved by consensus with a vote of 7-0.

Prepared by:

Peter Vazquez, Chair

Jennifer Tipton, Zoning Administrator



**Town of Black Mountain
Building, Planning and Zoning**

160 Midland Avenue ♦ Black Mountain ♦ North Carolina ♦ 28711
Phone: 828-419-9300 ♦ Fax: 828-669-2030 ♦ TDD: 1-800-735-2962

MEMORANDUM

To: Black Mountain Planning Board

From: Jennifer Tipton, Zoning Administrator

Date: April 22, 2019

RE: Text Amendment – Duplex Definition

Please find pertinent information attached.

Summary:

There has been an instance where someone built two structures and then connected them with a covered breezeway with fire separation and called it a duplex. The current definition of a duplex is somewhat ambiguous so staff wishes to amend the definition to clarify that a duplex is one single structure and how the structure is to be connected. Staff does not wish to change how a duplex can be subdivided.

Below are some potential definitions. All wording is subject to change.

Current Definition:

Duplex or two-family residence: A detached building which includes two individual dwelling units. A duplex may be held in single ownership or may be subdivided as a town home or condominium.

Condominium: A building or group of buildings in which dwelling units, offices, or floor area are owned individually, and the structure, common areas and facilities are owned by all owners on a proportional, undivided basis. (as distinct from a town home).

Townhome: A one-family dwelling in a row of at least three such units in which each unit has its own front and rear access to the outside, no unit is located over another unit, and each unit is separated from any other unit by one or more vertical common fire-resistant walls. Additionally, ownership of a townhome includes the footprint of the unit itself as well as any common areas established as part of the development plan.

Example Definitions:

Duplex: A building designed as a single structure, containing two separate living units, each of which is designed to be occupied as a separate permanent residence for one family. (Planners Dictionary)

Duplex: A structure on a single lot containing two apartment units, each of which is totally separated from the other by an unpierced wall extending from ground to roof or an unpierced ceiling and floor extending from exterior wall to exterior wall, except for a common stairwell exterior to both dwelling units. (Planners Dictionary)

Townhome: A single dwelling unit in a townhouse group, located or capable of being located on a separate lot, and being separated from the adjoining dwelling unit by an approved wall extending from the foundation through the roof and structurally independent of the corresponding wall of the adjoining unit. (Planners Dictionary)

Townhome: A building on its own lot containing one dwelling unit that occupies space from the ground to the roof, and is attached to one or more other townhouse dwelling units by at least one common wall. (Planners Dictionary)

Court Cases re: Ownership:

Ownership. One thing is clear. Ownership status may not be used to define a land use. In Graham Court Associates v. Town Council of Town of Chapel Hill, the property owner sought to convert a multifamily building from tenant-occupied apartments to owner-occupied condominiums. The court found that “[t]here would be absolutely no change in the use of the land” and stated clearly that the change in ownership to condominiums does not constitute a change in use which the town can regulate by its zoning ordinance. 53 N.C. App. 543, 281 S.E.2d 418 (1981).

That decision was re-affirmed in City of Wilmington v. Hill in which the court rejected a city zoning ordinance that required an owner to occupy one of the residences in the case of an accessory dwelling unit. The court quoted from Graham, stating that “it is ‘beyond the power of the municipality to regulate the manner of ownership of the legal estate.’” 189 N.C. App. 173, 178, 657 S.E.2d 670, 673 (2008)

Emails from Doug Brock re: Duplex Definition:

Jessica,

Please leave the definition of duplex intact where a duplex can be converted into two townhomes. There are cost savings in construction where a single foundation, a single roof, and other shared components make the cost less per square foot.

Please investigate my duplex's on Tree Canopy Lane for an example. I have four duplex's there on four different lots. What would serve the community housing needs better? For me to keep them as rental inventory or sell them as individual units to the tenants?

I request you to investigate this and get back to me. I will be glad to give you a tour of the property as an example.

Doug Brock

~~~~~  
Jessica, I read the meeting notes and the discussion on duplex's. The remaining question tabled until the next meeting dealt with lot size. It is my suggestion that the lot size be tied to the density of the zoning district. For example in R-4 the density is 4 units per acre. Thus, the density calculated limit would be 4 units per acre.

Doug Brock

**Attachments:**

Visual Aids



**Town of Black Mountain  
Building, Planning and Zoning**

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**MEMORANDUM**

To: Black Mountain Planning Board  
From: Jennifer Tipton, Zoning Administrator  
Date: April 22, 2019  
RE: Padgettown Road Preliminary Plat

Please find pertinent information attached.

**Summary:**

Black Mountain BP 1, LLC is proposing a forty lot subdivision on Padgettown Road. Attached is the preliminary plat as well as the checklist for preliminary plats. Staff has gone through the preliminary plat checklist and all items are shown and has all items discussed at the March 25, 2019 meeting have been added to the plat. The engineer has provided a memo answering the questions proposed both by neighbors and by board members.

The engineer has also provided the deeds for the property, the opinion letter from the developer's attorney regarding access to Belle Grove Road as well as two separate plats showing access to Belle Grove Road.

The submitted stormwater plans are attached.

**Attachments:**

Memo from Engineer

Preliminary plat

Deed

Opinion from Attorney

Civil Plans



April 9, 2018

Town of Black Mountain  
Building, Planning & Zoning  
160 Midland Avenue  
Black Mountain, NC 28711

Attention: Jennifer Tipton

Regarding: Padgettown Road Subdivision  
Planning Department Review  
Response to Comments  
BEA Project No. 480918

Dear Ms. Tipton:

On behalf of the owner of the Padgettown Road Subdivision, BP Black Mountain 1 LLC, we are submitting the following responses to your April 3, 2019 letter regarding our Planning & Zoning application submittal by Brooks Engineering Associates ("BEA") which was reviewed by the Planning and Zoning Board on March 25, 2019. Below in *italics* are the comments/requests in your letter and our responses are following in plain font.

- *Add topography at 5' intervals on preliminary plat*

This information has been added to the enclosed revised preliminary plat.

- *Add use of land and address and phone number of owner on preliminary plat*

This information has been added to the enclosed revised preliminary plat.

- *Planning Board would like to see the easement for access to Belle Grove Road or interpretation of easement access.*

Enclosed are two 11x17 drawings depicting the access to Belle Grove Road. One drawing depicts the easements prescribed by the deed. The other depicts our detailed survey of the existing conditions at the entrance to Belle Grove Road off of Avena Road. The intent is to utilize the entrance and access as it exists as that is what is interpreted as the legal access based upon our professional reading of the deed. This is also supported by a legal opinion rendered by Peter Henry regarding the site's legal access. A copy of deed with the applicable easement language highlighted is enclosed as well as copy of that opinion letter.

- *Planning Board would like to see turnaround at bottom of Blueview Drive*

It was our understanding from the March 25<sup>th</sup> meeting that the proposed parking lot for the greenspace at the end of Blueview Drive could also serve the dual purpose of a turnaround. We have amended the enclosed plans for a turnaround instead of the parking area per your letter's comment, but kindly request that the Town and Board reconsider this request based upon the discussion at the March 25<sup>th</sup> meeting. Both BEA and the owner would like to retain the previously submitted plan utilizing the gravel parking area for a turnaround to reduce impervious area and preserve more open space and soften the contrast of the development against the natural background.

Owner will post signs designating acceptable parking areas and banning parking in the drive aisle used for turnarounds. We have attached a rough sketch of proposed sign locations for your consideration.

- *It was asked to consider having all sidewalks instead of a combination of sidewalk and mulched paths.*

Plans have been revised to reflect all sidewalks along Padgett Place.

- *Evaluate conditions of culvert on Belle Grove Road side and if it would support heavy equipment.*

BEA has inspected the culvert and measured the road cover over the culvert. The culvert has an average approximate depth of 40" of cover over dual 36" corrugated metal pipes. Typical corrugated metal piping with a minimum one foot of cover has an ASHAATO H-20 (Heavy Duty) traffic load rating. This allows for 32,000 lb. live load per axle. Concrete trucks and cranes traveling to the site must already meet H-20 loading criteria for highway travel, therefore the design of the existing entrance should be suitable for construction truck traffic.

The condition of the culvert does show some rust and wear and the timber tie headwalls have also deteriorated. However, it is our professional opinion that the culvert does not show enough degradation to fail under the anticipated H-20 loading. The owner will take additional care by utilizing steel plates to cover the culvert crossing during concrete truck and crane crossings. The steel plates shall effectively transfer the axle loading off of the culverts.

This response should not be construed as a complete structural evaluation of the culvert's existing condition but rather an opinion based on prior construction experience and recommendation based typical measures taken for similar conditions on other projects.

Additionally, the site owner is willing to be responsible for any damage to the culvert during construction.

- *Planning Board would like to see stormwater plans*

Stormwater engineering plans were submitted to the Town for review prior to the March 25<sup>th</sup> meeting. While BEA has received some minor comments to those plans that are still being addressed, enclosed are previously submitted plans for the Board's reference.

We appreciate your time and the review of our submission and hope that these are sufficient for an approval of the project on April 22<sup>nd</sup>. Please call or email to discuss any of these responses so that we may work with you and the Board to receive this approval at the next meeting. We look forward to working with you on this project.

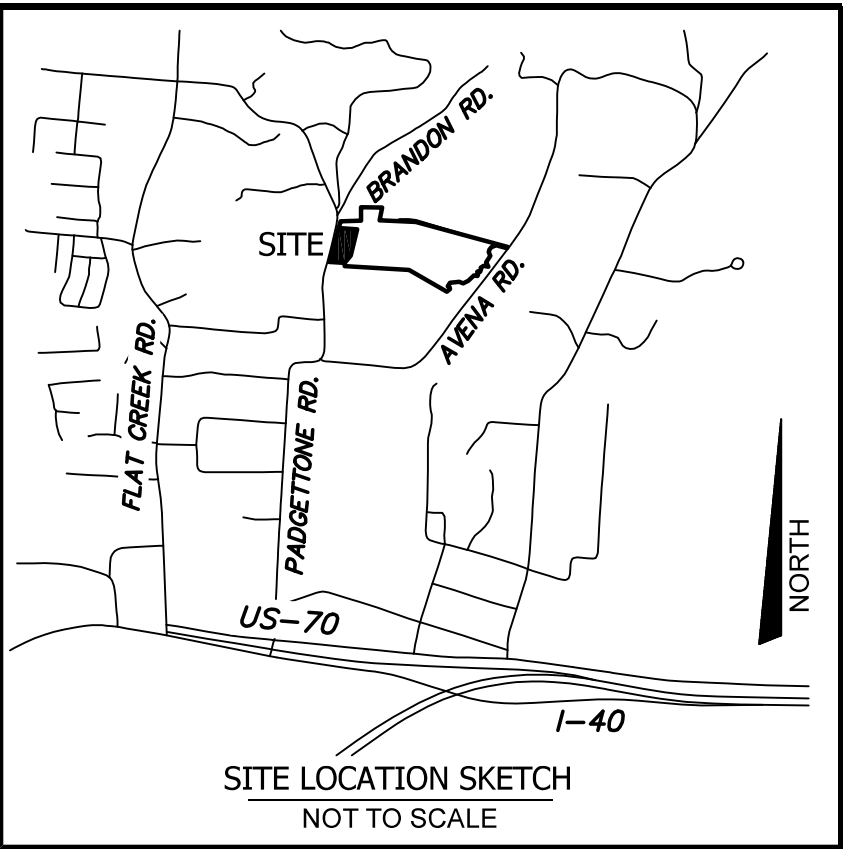
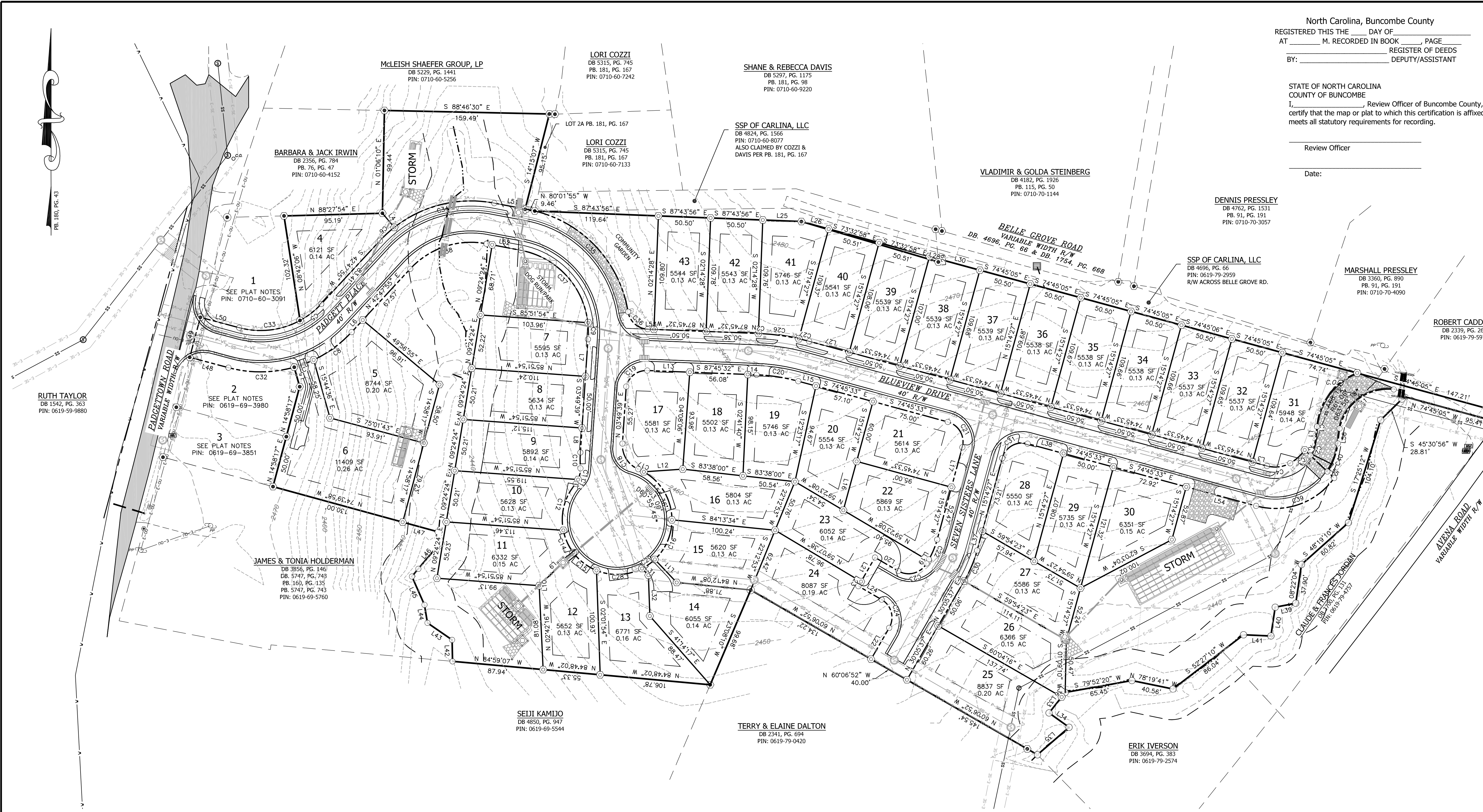
Sincerely,  
**Brooks Engineering Associates, P.A.**

A handwritten signature in black ink, appearing to read "Mark Brooks", written in a cursive style.

Mark C. Brooks, P.E.

Enclosures:      Revised Preliminary Plat  
                         Property Deed  
                         Legal Opinion Letter  
                         Exhibit Drawings 1 and 2 – Belle Grove Road Easement Access  
                         Exhibit Drawing 3 – Turnaround Signage Proposal  
                         Stormwater Plans





North Carolina, Buncombe County  
REGISTERED THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_  
AT \_\_\_\_\_ M. RECORDED IN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_  
BY: \_\_\_\_\_ REGISTER OF DEEDS  
DEPUTY/ASSISTANT

STATE OF NORTH CAROLINA  
COUNTY OF BUNCOMBE  
I, \_\_\_\_\_, Review Officer of Buncombe County,  
certify that the map or plat to which this certification is affixed  
meets all statutory requirements for recording.

Review Officer  
Date: \_\_\_\_\_

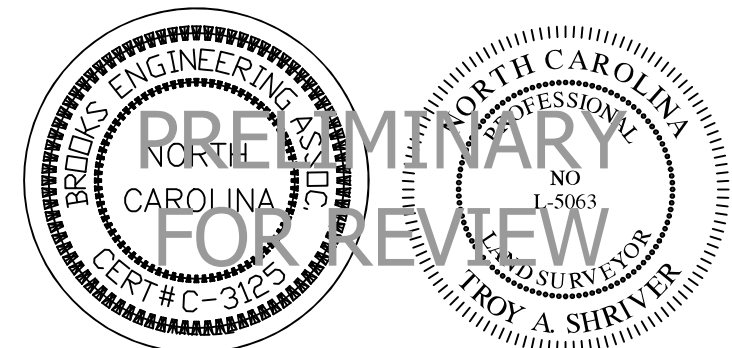
I, Troy A. Shriver, Professional Land Surveyor certify to one or more of the following as indicated (G.S. 47-30(f)(11)):

☒ A. That this plat is of a survey that creates a subdivision of land within a county or municipality that has an ordinance that regulates parcels of land;

I, Troy A. Shriver, certify that this plat was drawn by me from an actual survey made under my supervision (deed description recorded in Deed Book 5692, Page 1611); that the boundaries not surveyed are clearly indicated as drawn from information found in Book n/a, Page n/a; that the ratio of precision as calculated is 1:10000; that this plat was prepared in accordance with G.S. 47-30 as amended.

Witness my hand and seal this \_\_\_\_\_ day of \_\_\_\_\_ A.D. 2019.

Signature \_\_\_\_\_  
Professional Land Surveyor  
Certificate Number L-5063



- PLAT NOTES:
- The bearings on this plat are NC Grid (NAD 83) bearings, and distances shown are horizontal ground distances unless otherwise noted.
  - Total area of Tract to be subdivided: 9.291 Acres or 404,698 square feet (determined by coordinate computation method). See plat for individual lot sizes.
  - Lots 1 - 3 as shown hereon, previously platted in Plat Book 180, Page 43 and Plat Book 193, Page 91. These lots owner by BP Black Mountain 1, LLC per Deed Book 5692, Page 1611.
  - Reference Plats: Plat Book 76, Page 47 and Plat Book 196, Page 13.
  - Total New Lots: 40
  - Tract Zoning: Town of Black Mountain zoning: UR-8
  - Setbacks
  - Front: 20'
  - Sides: 10'
  - Back: 15'
  - Minimum Lot Size: 5,446 sq.ft.
  - All proposed utilities and associated easements as shown hereon are subject to change.
  - By graphic determination, the Subject Parcels are located in "Zone X" per FIRM map number 3700619003 dated January 6, 2010.
  - There are no NCGS Control Monuments within 2,000' of the subject parcels.
  - Buncombe County GIS was used to determine adjoining owner information.
  - Property subject to all easements, rights-of-way and restrictions of record.
  - This plat was prepared without the benefit of a title report which may reveal additional conveyances, easements, rights-of-way or building restrictions. A North Carolina licensed attorney-at-law should be consulted.

| CURVE | RADIUS  | ARC LENGTH | CHORD LENGTH | CHORD BEARING |
|-------|---------|------------|--------------|---------------|
| C1    | 39.00'  | 1.33'      | 1.33'        | S 05°44'37" W |
| C2    | 39.00'  | 15.03'     | 14.94'       | S 17°45'44" W |
| C3    | 46.89'  | 19.18'     | 19.04'       | S 47°48'46" W |
| C4    | 30.00'  | 23.11'     | 22.54'       | S 83°10'16" W |
| C5    | 80.00'  | 26.14'     | 26.03'       | S 52°09'36" W |
| C6    | 120.00' | 19.02'     | 19.00'       | S 47°20'21" W |
| C7    | 120.00' | 20.09'     | 20.07'       | N 69°27'35" E |
| C8    | 120.00' | 45.79'     | 45.51'       | N 53°43'50" E |
| C9    | 80.00'  | 16.08'     | 16.03'       | S 00°28'29" E |
| C10   | 110.00' | 15.36'     | 15.34'       | S 00°10'19" E |
| C11   | 25.00'  | 11.23'     | 11.13'       | S 11°40'09" W |
| C12   | 53.00'  | 48.17'     | 46.53'       | S 14°49'43" W |
| C13   | 25.00'  | 4.76'      | 4.75'        | S 29°59'26" W |
| C14   | 53.00'  | 23.74'     | 23.55'       | S 24°02'39" E |
| C15   | 53.00'  | 28.69'     | 28.34'       | S 52°23'06" E |
| C16   | 53.00'  | 42.91'     | 41.74'       | N 23°18'41" E |
| C17   | 53.00'  | 6.00'      | 5.99'        | N 64°03'05" W |
| C18   | 25.00'  | 31.03'     | 29.08'       | N 31°43'59" W |
| C19   | 20.00'  | 27.66'     | 25.51'       | N 52°37'41" E |
| C20   | 180.00' | 40.84'     | 40.75'       | S 81°15'33" E |
| C21   | 20.00'  | 31.42'     | 28.28'       | S 29°45'33" E |
| C22   | 80.00'  | 20.74'     | 20.68'       | S 22°40'02" W |
| C23   | 20.00'  | 31.42'     | 28.28'       | S 14°54'23" E |
| C24   | 20.00'  | 0.12'      | 0.12'        | N 87°44'36" W |
| C25   | 220.00' | 39.43'     | 39.38'       | S 82°35'33" W |
| C26   | 220.00' | 10.36'     | 10.36'       | N 76°06'30" W |
| C27   | 220.00' | 45.48'     | 44.10'       | N 87°31'34" E |
| C28   | 53.00'  | 15.21'     | 15.16'       | N 54°43'24" E |
| C29   | 30.00'  | 32.24'     | 32.14'       | N 22°55'58" E |
| C30   | 120.00' | 31.42'     | 28.28'       | S 14°54'23" E |
| C31   | 20.00'  | 64.33'     | 63.56'       | S 89°36'51" W |
| C32   | 120.00' | 60.67'     | 59.22'       | N 83°14'47" E |
| C33   | 120.00' | 102.46'    | 99.38'       | N 76°20'28" E |
| C34   | 120.00' | 146.62'    | 137.67'      | N 44°11'41" E |
| C35   | 20.00'  | 27.42'     | 25.33'       | S 48°28'32" E |
| C36   | 20.00'  | 102.04'    | 95.42'       | N 42°50'03" W |
| C37   | 80.00'  | 80.99'     | 77.57'       | S 71°48'03" W |
| C38   | 70.00'  | 85.27'     | 80.10'       | N 70°20'35" E |
| C39   | 40.00'  | 29.28'     | 29.00'       | N 20°28'23" E |
| C40   | 47.65'  | 72.87'     | 65.97'       | N 52°53'41" E |

| LINE | BEARING       | DISTANCE |
|------|---------------|----------|
| L1   | S 06°43'23" W | 12.53'   |
| L2   | N 48°20'30" W | 7.70'    |
| L3   | N 74°45'33" E | 14.57'   |
| L4   | S 40°08'32" E | 17.86'   |
| L5   | N 15°44'36" W | 19.58'   |
| L6   | N 42°47'55" E | 15.84'   |
| L7   | S 03°49'39" W | 36.03'   |
| L8   | S 03°49'39" W | 23.66'   |
| L9   | S 45°50'43" W | 45.87'   |
| L10  | N 02°42'16" W | 0.20'    |
| L11  | N 43°29'48" W | 30.70'   |
| L12  | N 86°00'15" E | 37.74'   |
| L13  | S 87°45'32" E | 41.18'   |
| L14  | S 87°45'32" E | 8.59'    |
| L15  | S 74°45'33" E | 17.69'   |
| L16  | S 15°14'27" W | 48.96'   |
| L17  | S 15°14'27" W | 40.00'   |
| L18  | S 30°05'37" W | 1.32'    |
| L19  | S 30°05'37" W | 3.51'    |
| L20  | N 59°54'23" W | 26.00'   |
| L21  | S 30°05'37" W | 26.93'   |
| L22  | S 30°05'37" W | 34.96'   |
| L23  | S 30°05'37" W | 5.07'    |
| L24  | S 59°54'23" W | 26.00'   |
| L25  | S 87°45'32" E | 37.30'   |
| L26  | S 73°32'58" E | 27.36'   |
| L27  | N 74°45'33" E | 40.14'   |
| L28  | S 73°32'58" E | 9.60'    |
| L29  | N 04°37'22" W | 3.08'    |
| L30  | S 74°45'32" E | 41.95'   |
| L31  | N 43°29'48" W | 8.92'    |
| L32  | S 02°01'54" E | 39.47'   |
| L33  | S 38°17'43" W | 19.70'   |
| L34  | S 54°19'39" W | 23.83'   |
| L35  | S 48°59'33" W | 40.49'   |
| L36  | S 38°17'43" W | 5.55'    |
| L37  | N 15°14'27" E | 19.25'   |
| L38  | S 74°45'33" E | 36.00'   |
| L39  | S 79°03'13" W | 20.23'   |
| L40  | S 08°30'58" W | 28.10'   |
| L41  | N 87°32'12" W | 26.49'   |
| L42  | N 01°15'43" W | 20.77'   |

| LINE | BEARING       | DISTANCE |
|------|---------------|----------|
| L43  | N 55°17'48" W | 28.92'   |
| L44  | N 09°27'05" W | 17.68'   |
| L45  | N 23°40'53" W | 29.92'   |
| L46  | N 40°01'59" E | 28.16'   |
| L47  | N 74°39'58" W | 35.95'   |
| L48  | N 75°01'43" W | 38.81'   |
| L49  | N 14°58'17" E | 40.00'   |
| L50  | S 75°01'43" E | 38.81'   |
| L51  | S 79°11'50" E | 34.02'   |
| L52  | N 79°11'50" W | 34.02'   |
| L53  | S 87°45'32" E | 6.10'    |
| L54  | S 74°45'33" E | 70.00'   |
| L55  | N 48°20'30" W | 9.11'    |
| L56  | N 06°43'23" E | 12.53'   |

CERTIFICATE OF OWNERSHIP

I hereby certify that I am the owner of the property shown and described hereon, which is located in the subdivision jurisdiction of the Town of Black Mountain and that I hereby adopt this plan of subdivision with my free consent, establish minimum building setback lines, and dedicate all walks, parks, and other sites and easements to public or private use as noted. Furthermore, I hereby dedicate all storm sewer, waterlines, and streets to the Town of Black Mountain.

Property Owner \_\_\_\_\_

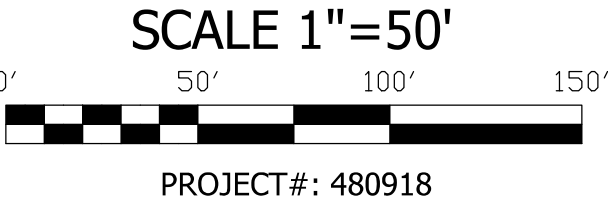
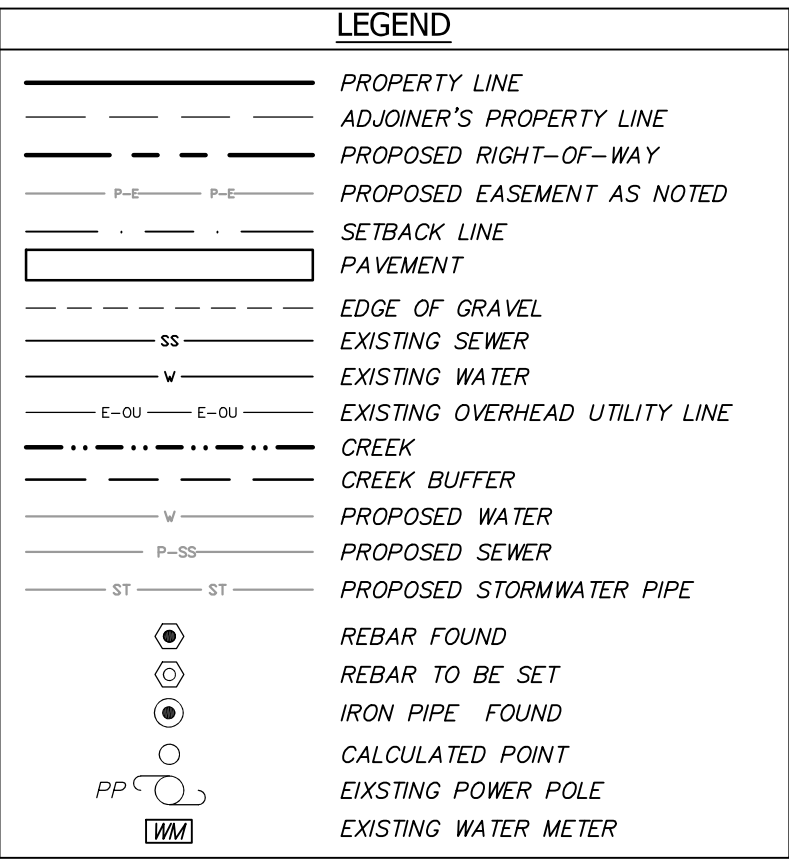
Date \_\_\_\_\_

CERTIFICATE OF APPROVAL FOR FINAL PLAT

I hereby certify that the final subdivision plat shown hereon has been found to comply with the Subdivision Regulations of the Town of Black Mountain, North Carolina and that this plat has been approved by the Subdivision Administrator for recording in the office of the County Register of Deeds.

Subdivision Administrator \_\_\_\_\_

Date \_\_\_\_\_



Major Subdivision:  
**PADGETTOWN ROAD SUBDIVISION**  
Owner:  
**BP BLACK MOUNTAIN 1, LLC**

Owner: BP Black Mountain 1, LLC  
PO Box 3180, Asheville, NC 28802  
828-738-8871  
Deed Book 5692 Page 1611 &  
Deed Book 5747 Page 746  
Plat Book 76, Page 47 & Plat Book 196, Page 13  
Tax PIN: 0619-69-9826  
Town of Black Mountain Buncombe County, NC  
March 1, 2019 Scale: 1" = 50'



DRAWN BY:TAS CHECKED BY:PES



BK 1754 PG 668

REGISTERED

'93 JUL 22 P4:19

Excise Tax \$190.00

Tax Lot No. \_\_\_\_\_ Parcel Identifier No. DEEDS  
Verified by \_\_\_\_\_ County on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_  
by \_\_\_\_\_

Mail after recording to William Larry Biddix  
395 Avena RD, Black Mountain, NC 28711

This instrument was prepared by RONALD E. SNEED

Brief description for the Index

**NORTH CAROLINA GENERAL WARRANTY DEED**

THIS DEED made this 22 day of July, 1993, by and between

**GRANTOR**

Ronnie Pressley and wife,  
Patricia Elaine Pressley

**GRANTEE**

William Larry Biddix, unmarried

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the city of , Black Mountain Township, Buncombe County, North Carolina and more particularly described as follows:

BEGINNING at an iron pin, said pin being the southwest corner of that property described in Deed Book 806 at Page 292, Buncombe County Registry; thence running with said property North 73 deg. 55' 00" East 340.72 feet to a point; thence South 05 deg. 37' 55" East 292.90 feet to a point in the south margin of a gravel road; thence running with said gravel road, North 74 deg. 42' 22" West 140.41 feet to a point; thence leaving said gravel road and running South 88 deg. 25' 00" West 89.77 feet to a point; thence South 88 deg. 25' 00" West 164.23 feet to a point; thence North 10 deg. 52' 00" East 123.70 feet to a point; thence North 05 deg. 43' 00" East 73 feet to the point of BEGINNING, containing 1.98 acres, more or less, as shown on that survey for William Larry Biddix prepared by J. Glenn Haynes, R.L.S.

The above-described property is conveyed together with an easement for ingress, egress and regress to and from Avena Road, said easement containing an existing gravel road and being more particularly described as follows: BEGINNING at the southeast corner of the above-described property and running North 05 deg. 37' 55" West 19.12 feet to a point; thence South 74 deg. 42' 22" East 199.67 feet to an iron pin; thence south 72 deg. 50' 15" East 223.61 feet to a point; thence South 70 deg. 39' 55" East 31.71 feet to an iron pin; thence South 34 deg. 15' 01" West 8.81 feet to a point; thence North 74 deg. 42' 22" West 445.11 feet to the BEGINNING.

The above-described property is also conveyed with an easement in that existing drive which extends from the eastern end of the above-described easement to Avena Road.

7-22-93

BUNCOMBE

87-22-93

STATE OF  
**NORTH  
CAROLINA**



\$190.00  
Real Estate  
Excise Tax



The property hereinabove described was acquired by Grantor by instrument recorded in Deed Book 1188 at Page 9.

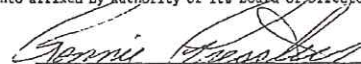
A map showing the above described property is recorded in Plat Book page .

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

Subject to easements and restrictions of record and 1993 ad valorem taxes which are not yet due and payable.

IN WITNESS WHEREOF, the Grantor set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

 (SEAL)  
Ronnie Pressley

By: \_\_\_\_\_  
\_\_\_\_\_  
President

 (SEAL)  
Patricia Elaine Pressley

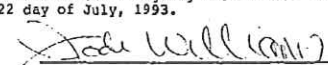
ATTEST: \_\_\_\_\_  
\_\_\_\_\_  
Secretary

\_\_\_\_\_  
\_\_\_\_\_  
(SEAL)



NORTH CAROLINA, Buncombe COUNTY.

I, a Notary Public of the County and State aforesaid, certify that Ronnie Pressley and wife, Patricia Elaine Pressley, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 22 day of July, 1993.

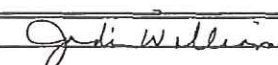
 Notary Public  
My commission expires: 10-25-97

SEAL-STAMP

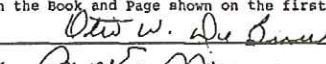
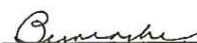
NORTH CAROLINA, COUNTY.

I, a Notary Public of the County and State aforesaid, certify that, personally came before me this day and acknowledged that he is \_\_\_\_\_ Secretary of a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its \_\_\_\_\_ President, sealed with its corporate seal and attested by as its \_\_\_\_\_ Secretary. Witness my hand and official stamp or seal, this \_\_\_\_\_ day of \_\_\_\_\_, 19.

\_\_\_\_\_  
\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

The foregoing Certificate(s) of 

is/are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

By  REGISTER OF DEEDS FOR  COUNTY  
DEPUTY/ASSISTANT - REGISTER OF DEEDS

# THE LAW OFFICE OF PETER R HENRY, PLLC

Attorney at Law  
2133 Hendersonville Road  
Arden, N.C. 28704  
(828) 254-3223  
pete@thehenrylawfirm.net

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February 6, 2019

BP Black Mountain 1, LLC

Re: Opinion as to access from Belle Grove Road  
to Padgett Place subdivision

Dear Todd:

As per our conversation, I wanted to provide you with a letter concerning my opinion as to the access of BP Black Mountain 1, LLC from Avena Road through Belle Grove Road to the Padgett Place subdivision. After examining the deeds, maps and descriptions, I have come to the conclusion that there is a viable access from Belle Grove Road to the Padgett Place subdivision.

Belle Grove Road is not a public road. It is owned by SSP of Carolina, LLC, as shown by that deed recorded in Book 4696 at Page 66. Per the deed, it is unclear if Belle Grove Road connects to Avena Road. My analysis leads me to believe that Belle Grove Road does not, in fact, connect to Avena Road. Near its junction with Avena Road, Belle Grove road crosses the land owned by Robert Caddell, described in Book 2339 at Page 267. Belle Grove also crosses the BP Black Mountain 1, LLC land, and terminates into Avena Road, as it crosses the land of Claude Jordan and Frances Jordan, described in Book 3700 at Page 131. Under most circumstances, it would be problematic that Belle Grove Road, as described in the deed above, does not reach Avena Road. However, as the conditions currently exist, it will not present a problem.

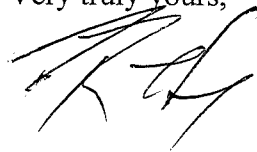
The primary reason that leads me to conclude that Belle Grove Road is a viable access point for BP Black Mountain 1, LLC, comes from the description of the land owned by BP Black Mountain 1, LLC. It is absolutely clear that the lands owned by BP Black Mountain 1, LLC do connect to Avena Road. The connection occurs at the Southeastern corner of the Robert Caddell property, where it intersects with Avena Road. The BP Black Mountain 1, LLC property, and the property of Caddell reach a mutual point, marked by a PK nail located in the western margin of Avena Road. From that intersection, the line of BP Black Mountain 1, LLC travels with the western margin of

Avena Road Southwest approximately 10 feet. It is therefore beyond any doubt that BP Black Mountain 1, LLC has access from Avena Road to the Padgett Place subdivision.

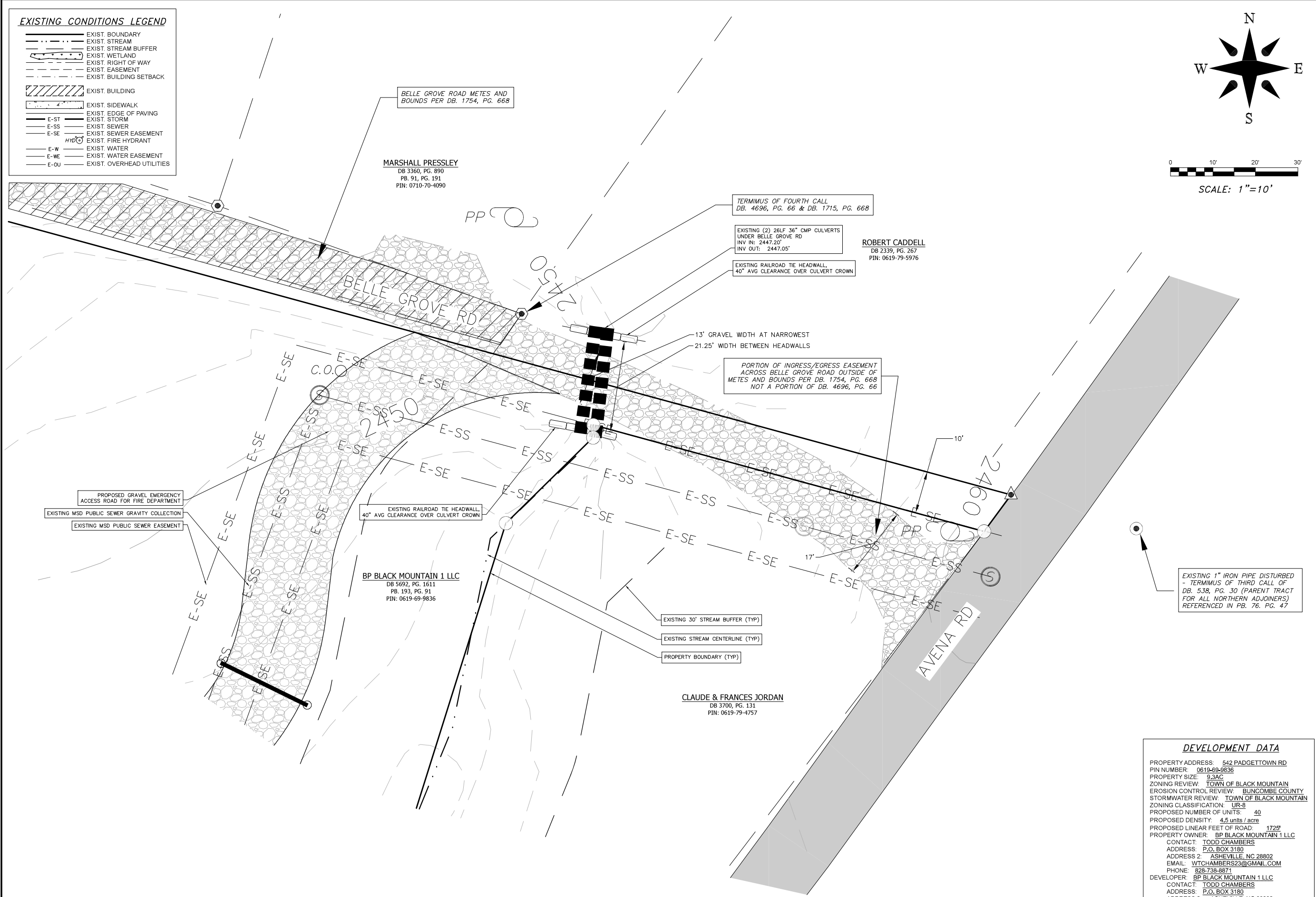
The inquiry goes further than just having legal access to Avena Road. As it currently exists, Belle Grove does, in fact, connect to Avena Road. The connection is made just to the southwest of the point where the BP Black Mountain 1, LLC property connects to Avena Road. Belle Grove Road is currently being utilized to service at least eight (8) parcels, and at least seven (7) residences. From the records of Buncombe County, it is clear that Belle Grove Road has been in place for at least the last twenty (20) years. In examining the maps and plats, it was noted that there is a plat recorded in Plat Book 109 at Page 68, which shows the location of Belle Grove Road. The plat was recorded on or about May 4, 2005. However, in examining the plat, it becomes apparent that the survey was actually conducted on or about October 2, 1995. If Belle Grove Road has been in use since 1995, then any rights that others, particularly Caddell or Jordan may claim would be extinguished by adverse possession.

Even though Belle Grove Road does not connect to Avena Road on the property owned by BP Black Mountain 1, LLC, the combination of continuous use in excess of twenty years, and the fact that the BP Black Mountain 1, LLC property does, in fact, connect to Avena Road assures that BP Black Mountain 1, LLC, its successors and assigns will be able to utilize the entrance from Avena Road to Belle Grove Road to Padgett Place, for the purposes of construction and as an emergency vehicle access.

Very truly yours,

A handwritten signature in black ink, appearing to be 'P. R. Henry', written in a cursive style.

Peter R. Henry



| REVISIONS/SUBMISSIONS |                                   | No. | Date    |
|-----------------------|-----------------------------------|-----|---------|
| 1                     | PRELIMINARY PLANS                 | 1   | 2/21/19 |
| 2                     | PRELIMINARY SITE PLAN             | 2   | 2/22/19 |
| 3                     | NC DOT DRIVEWAY PERMIT            | 3   | 2/25/19 |
| 4                     | TOBM PLANNING AND ZONING          | 4   | 3/8/19  |
| 5                     | MSD SUBMITTAL - PH1 AND PH2 SEWER | 5   | 3/14/19 |
| 6                     | TOBM STORMWATER                   | 6   | 3/15/19 |
| 7                     | WATER SUBMITTAL                   | 7   | 3/18/19 |
| 8                     | PLANNING AND ZONING RESUBMITTAL   | 8   | 4/10/19 |



**BROOKS ENGINEERING ASSOCIATES**  
NORTH CAROLINA  
CERT #C-5125

**PERMIT SET**

Designed: TMM  
Drawn: E-JH  
Checked: TMM

Reviewed: MCB  
Scale: AS NOTED  
Date: 4-10-19

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

PADGETTOWN ROAD SUBDIVISION

SINGLE-FAMILY RESIDENTIAL

TOWN OF BLACK MOUNTAIN

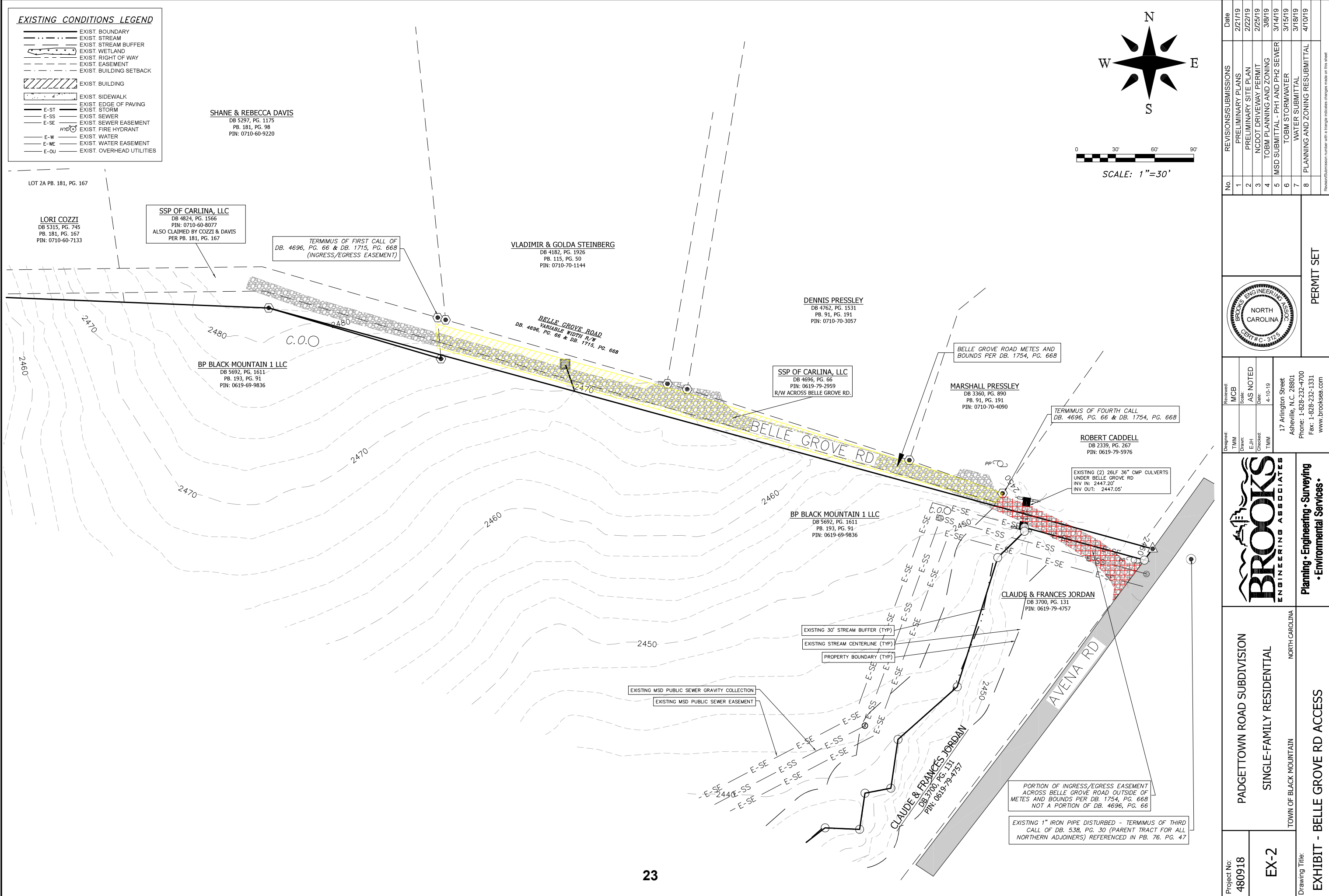
NORTH CAROLINA

Project No:  
**480918**

**EX-1**

Drawing Title:  
**EXHIBIT - BELLE GROVE RD ACCESS**

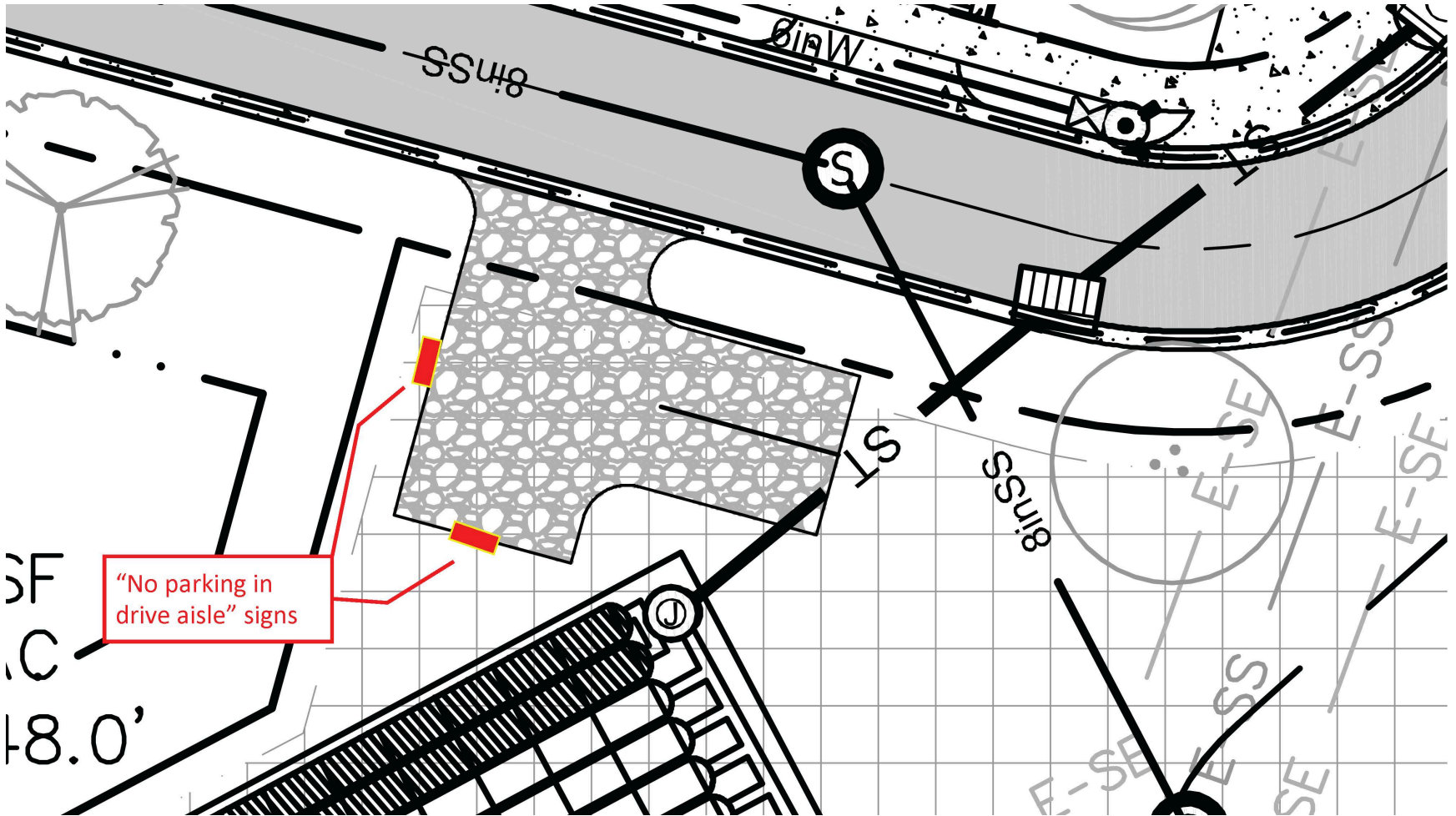
Planning • Engineering • Surveying  
• Environmental Services •



|                                                                                       |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
|---------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------|------------------------|--|-------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------|---------|------|
| Project No:<br>480918                                                                 |                                   | PADGETTOWN ROAD SUBDIVISION                                                                                                      |         | NORTH CAROLINA         |  |                                                                                                                   |                   |                       |         |      |
| EX-2                                                                                  |                                   | SINGLE-FAMILY RESIDENTIAL                                                                                                        |         | TOWN OF BLACK MOUNTAIN |  |                                                                                                                   |                   |                       |         |      |
| Drawing Title:<br>EXHIBIT - BELLE GROVE RD ACCESS                                     |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
|  |                                   | <b>Planning • Engineering • Surveying<br/>• Environmental Services •</b>                                                         |         |                        |  |                                                                                                                   |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
| Designed: TMM MCB                                                                     |                                   | <div>17 Arlington Street<br/>Asheville, N.C. 28801<br/>Phone: 1-828-232-4700<br/>Fax: 1-828-232-1331<br/>www.brookssea.com</div> |         |                        |  |                                                                                                                   |                   |                       |         |      |
| Drawn: E JH                                                                           |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
| AS NOTED                                                                              |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
| Checked: TMM                                                                          |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
| Date: 4-10-19                                                                         |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |
|    |                                   | PERMIT SET                                                                                                                       |         |                        |  |                                                                                                                   |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | Reviewed: MCB                                                                                                     |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | Scale:                                                                                                            |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | Date:                                                                                                             |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | TMM                                                                                                               |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | 4-10-19                                                                                                           |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brookssea.com |                   |                       |         |      |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | No.                                                                                                               |                   | REVISIONS/SUBMISSIONS |         | Date |
|                                                                                       |                                   |                                                                                                                                  |         |                        |  | 1                                                                                                                 | PRELIMINARY PLANS |                       | 2/21/19 |      |
| 2                                                                                     | PRELIMINARY SITE PLAN             |                                                                                                                                  | 2/22/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| 3                                                                                     | NCDOT DRIVEWAY PERMIT             |                                                                                                                                  | 2/25/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| 4                                                                                     | TOBM PLANNING AND ZONING          |                                                                                                                                  | 3/8/19  |                        |  |                                                                                                                   |                   |                       |         |      |
| 5                                                                                     | MSD SUBMITTAL - PH1 AND PH2 SEWER |                                                                                                                                  | 3/14/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| 6                                                                                     | TOBM STORMWATER                   |                                                                                                                                  | 3/15/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| 7                                                                                     | WATER SUBMITTAL                   |                                                                                                                                  | 3/18/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| 8                                                                                     | PLANNING AND ZONING RESUBMITTAL   |                                                                                                                                  | 4/10/19 |                        |  |                                                                                                                   |                   |                       |         |      |
| Revised/Submitted per with a triangle indicates change made on this sheet.            |                                   |                                                                                                                                  |         |                        |  |                                                                                                                   |                   |                       |         |      |



### Exhibit 3: Proposed signage for turnaround area



# PADGETTOWN ROAD SUBDIVISION

SINGLE-FAMILY RESIDENTIAL

TOWN OF BLACK MOUNTAIN

MSD PROJECT # 2019003

## NOTES

### SITE NOTES:

- PROJECT ADDRESS: 542 PADGETTOWN RD
- TOTAL ACREAGE: 9.3AC
- ZONING: TOWN OF BLACK MOUNTAIN
- PROJECT PIN NUMBER(S): 0619-69-9826
- EXISTING TOPO INFO SHOWN WAS PROVIDED BY: BROOKS ENGINEERING ASSOCIATES
- EXISTING BOUNDARY INFO PROVIDED BY: BROOKS ENGINEERING ASSOCIATES
- FEMA FLOOD PANEL: 371006190J, 371007100J
- RECEIVING STREAM: SWANNANOVA RIVER - TRIBUTARY 35
- SOIL TYPE(S): Urb, Bkd2, DrB, FaC2, FnB, FrA
- DEED BOOK / PAGE: 5692/1611, 5747/746; 0076/0047, 196/13
- LATITUDE / LONGITUDE: 35.62782/-82.31066
- DISTURBED ACREAGE: 7.5AC
- EROSION CONTROL REVIEW: BUNCOMBE COUNTY
- STORMWATER MANAGEMENT REVIEW: TOWN OF BLACK MOUNTAIN

### GENERAL NOTES:

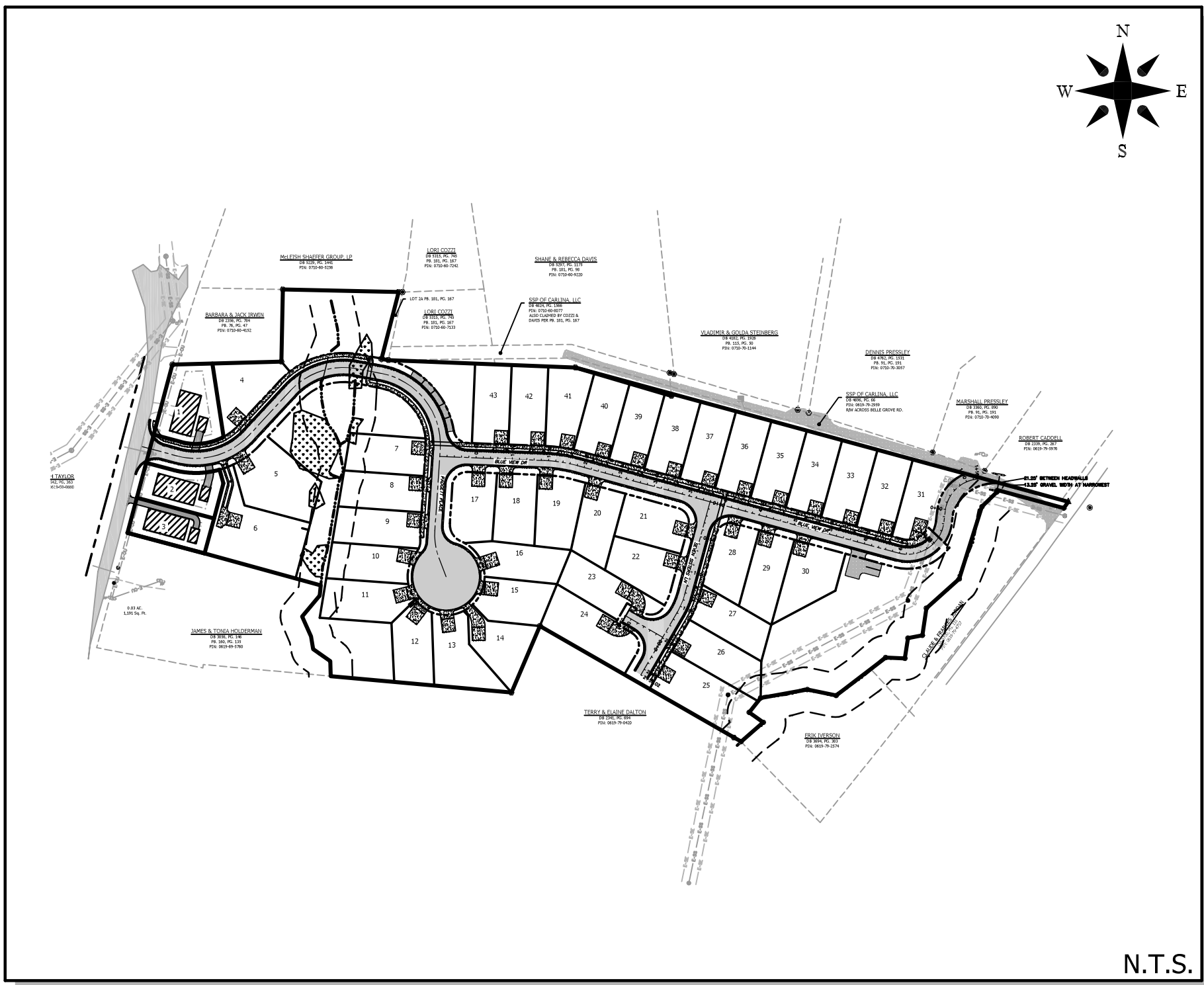
- CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL DAMAGES WHICH OCCUR DURING CONSTRUCTION.
- LOCATION OF ALL EXISTING UTILITIES, AS SHOWN HEREON, ARE APPROXIMATE ONLY. NO GUARANTEE IS MADE OR IMPLIED BY THE LOCATION REFLECTED IN THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE TYPE, SIZE AND LOCATION OF ALL UTILITIES AND OTHER FEATURES WHICH MAY AFFECT CONSTRUCTION OR THE INTENDED FUNCTION OF THE DESIGN. CONTRACTOR SHALL NOTIFY DESIGNER PRIOR TO CONSTRUCTION IF EXISTING CONDITIONS DIFFER FROM THAT INDICATED IN THE PLANS.
- NO STREAM OR WETLAND DISTURBANCE SHALL OCCUR WITHOUT A ARMY CORPS OF ENGINEERS PERMIT.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
- ANY EXCESS CUT MATERIAL DEVELOPED IN THE CONSTRUCTION OF THIS SITE SHALL BE DISPOSED OF IN AN APPROPRIATELY PERMITTED SPOIL SITE. CONTRACTOR TO PROVIDE PROOF OF PERMITS PRIOR TO CONSTRUCTION.
- ANY ALTERATION TO THE PLANS MUST BE APPROVED BY THE PROJECT ENGINEER, OR APPROPRIATE AGENCY PRIOR TO THE COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL OBTAIN, AND PAY FOR, PRIOR TO BEGINNING ANY WORK, ALL PERMITS AND LICENSES NECESSARY TO ACCOMPLISH THE WORK.
- CONTRACTOR(S) SHALL BE RESPONSIBLE FOR ADEQUATE SUPERVISION TO PREVENT DAMAGE AND MOVEMENT FROM EQUIPMENT WORKING AROUND CONSTRUCTION STAKES. THESE CONSTRUCTION STAKES SHALL REMAIN IN PLACE AND BE PROTECTED UNTIL OWNER APPROVES THEIR REMOVAL. ANY STAKES THAT HAVE BEEN DISPLACED AS A RESULT OF CONSTRUCTION ACTIVITY ARE TO BE REPLACED BY A LICENSED LAND SURVEYOR ENGAGED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE ENGINEER WILL NOT BE CONTINUOUSLY PRESENT IN THE FIELD, IT IS SPECIFICALLY UNDERSTOOD THAT HE DOES NOT UNDERTAKE NOR ASSUME ANY OBLIGATION FOR SUPERVISION OF CONSTRUCTION, SAFETY MEASURES TAKEN DURING THE COURSE OF CONSTRUCTION, RESPONSIBILITY FOR SCHEDULING THE WORK FOR INSURING COMPLETE COMPLIANCE WITH THE CONTRACT DOCUMENTS AND/OR ALL CODE REQUIREMENTS, RULES AND REGULATION OF ANY PUBLIC OR PRIVATE AUTHORITY HAVING JURISDICTION OVER THE WHOLE OR ANY PART OF THE WORK. IN ADDITION, THE ENGINEER NEITHER UNDERTAKES, ASSUMES, NOR GUARANTEES THE WORK AND/OR PERFORMANCE OF THE CONTRACTOR.

### INSPECTION SCHEDULE:

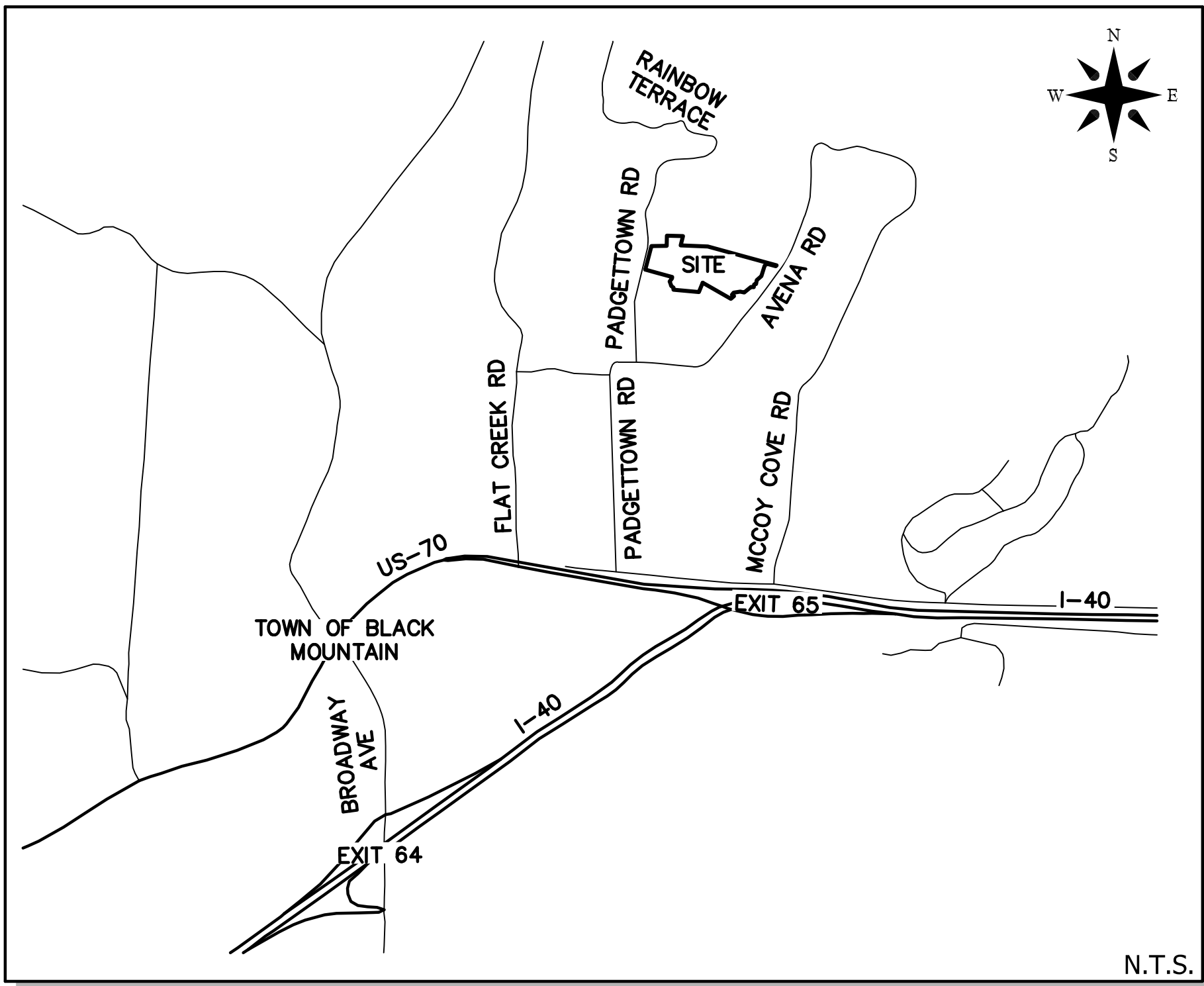
- NO CONSTRUCTION SHALL COMMENCE PRIOR TO A PRECONSTRUCTION MEETING WITH THE OWNER, THE CONTRACTOR, THE ENGINEER, AND A REPRESENTATIVE OF TOWN OF BLACK MOUNTAIN
- ALL SHOP DRAWINGS SHALL BE SUBMITTED AT OR PRIOR TO THE PRECONSTRUCTION MEETING.
- ENGINEER TO BE CALLED FOR PERIODIC INSPECTIONS.
- CALL ENGINEERING PRIOR TO COVERING UNDERGROUND STRUCTURES FOR FINAL INSPECTIONS.
- REFER TO MANUFACTURER'S SPECIFICATION MANUAL AND STATE AND LOCAL STANDARDS FOR ADDITIONAL REQUIREMENTS AND STANDARDS.



## PROJECT MAP



## VICINITY MAP



## CONTACTS

### DEVELOPER:

TODD CHAMBERS

### CONTACT INFO:

TODD CHAMBERS  
P.O. BOX 3180  
ASHEVILLE, NC 28802  
828-738-8871  
wtchambers23@gmail.com

### OWNER:

BP BLACK MOUNTAIN 1 LLC

### CONTACT INFO:

TODD CHAMBERS  
P.O. BOX 3180  
ASHEVILLE, NC 28802  
828-738-8871  
wtchambers23@gmail.com

### ENGINEER:

BROOKS ENGINEERING ASSOCIATES, PA

### CONTACT INFO:

TRAVIS MAXWELL, PE  
17 ARLINGTON STREET  
ASHEVILLE, NC 28801  
828-232-4700  
tmaxwell@brooksea.com

### SURVEYOR:

BROOKS ENGINEERING ASSOCIATES

### CONTACT INFO:

TROY SHRIVER, PLS  
828-232-4700  
tshriv@brooksea.com

## SHEET INDEX

### NO.: TITLE:

|        |                                 |
|--------|---------------------------------|
| C-0    | COVER SHEET                     |
| C-1.0  | MASTER PLAN                     |
| C-2.0  | EXISTING CONDITIONS / DEMO PLAN |
| C-3.0  | CLEARING AND GRUBBING PLAN      |
| C-3.1  | EROSION CONTROL PLAN            |
| C-3.2  | SKIMMER-BASIN DETAILS           |
| C-3.3  | SKIMMER-BASIN DETAILS           |
| C-3.4  | SKIMMER-BASIN DETAILS           |
| C-3.5  | CULVERT REPLACEMENT PUMP-AROUND |
| C-3.6  | EROSION CONTROL DETAILS         |
| C-3.7  | EROSION CONTROL DETAILS         |
| C-3.8  | EROSION CONTROL DETAILS         |
| C-4.0  | SITE PLAN                       |
| C-4.1  | SITE DETAILS                    |
| C-5.0  | GRADING PLAN                    |
| C-5.1  | STORMWATER PLAN                 |
| C-5.2  | STORMWATER PROFILES             |
| C-5.3  | STORMWATER BMP DETAILS          |
| C-5.4  | STORMWATER BMP DETAILS          |
| C-5.5  | STORMWATER BMP DETAILS          |
| C-5.6  | STORMWATER BMP DETAILS          |
| C-5.7  | STORMWATER DETAILS              |
| C-5.8  | STORMWATER DETAILS              |
| C-5.9  | ROAD PROFILES                   |
| C-5.10 | ROAD PROFILES                   |
| C-5.11 | ROAD PROFILES                   |
| C-6.0  | OVERALL WATER-EXTENSION PLAN    |

### NO.: TITLE:

|       |                                     |
|-------|-------------------------------------|
| C-6.1 | WATER PLAN AND PROFILE              |
| C-6.2 | WATER PLAN AND PROFILE              |
| C-6.3 | WATER PLAN AND PROFILE              |
| C-6.4 | WATER PLAN AND PROFILE              |
| C-6.5 | WATER DETAILS                       |
| C-6.6 | WATER DETAILS                       |
| C-7.0 | OVERALL SANITARY SEWER PLAN         |
| C-7.1 | SANITARY SEWER PLAN AND PROFILE-PH1 |
| C-7.2 | SANITARY SEWER PLAN AND PROFILE-PH2 |
| C-7.3 | SANITARY SEWER PLAN AND PROFILE-PH2 |
| C-7.4 | SANITARY SEWER DETAILS              |
| L-1.0 | LANDSCAPE PLAN                      |
| L-1.1 | LANDSCAPE DETAILS                   |

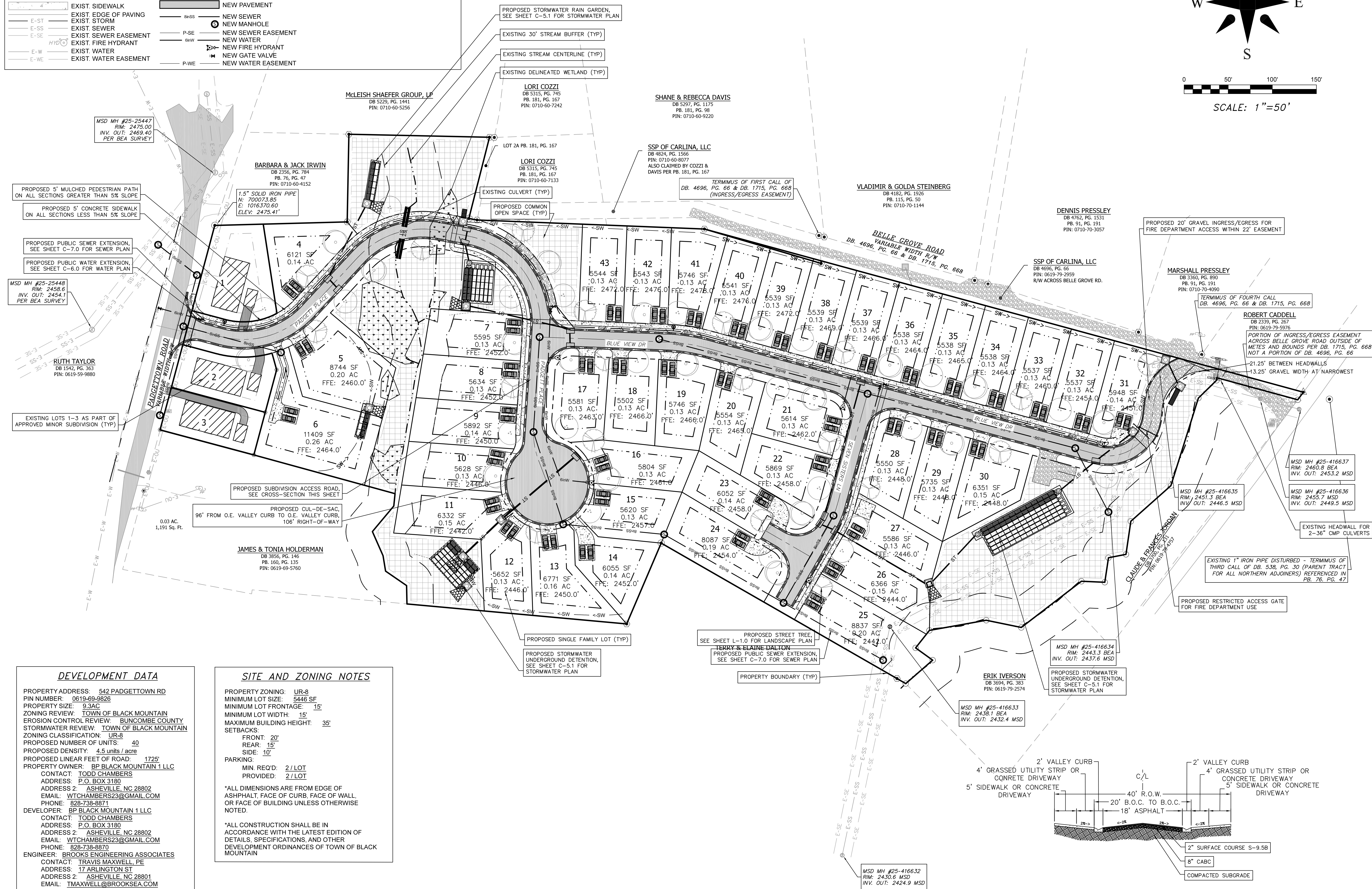
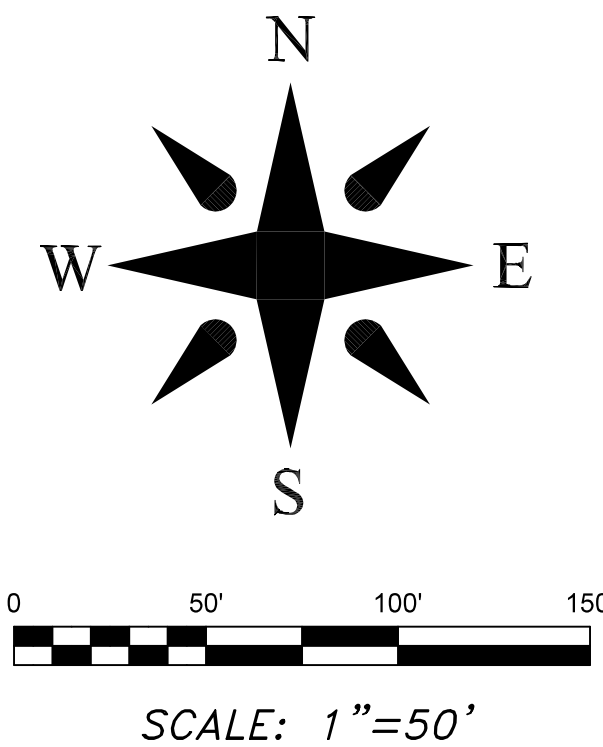
| No. | REVISIONS/SUBMISSIONS             | Date    |
|-----|-----------------------------------|---------|
| 1   | PRELIMINARY PLANS                 | 2/21/19 |
| 2   | PRELIMINARY SITE PLAN             | 2/22/19 |
| 3   | NCDOT DRIVEWAY PERMIT             | 2/25/19 |
| 4   | TODM PLANNING AND ZONING          | 3/8/19  |
| 5   | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19 |
| 6   | TODM STORMWATER                   | 3/15/19 |
| 7   | WATER SUBMITTAL                   | 3/18/19 |

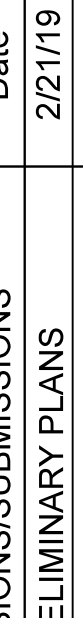
|                                                                                                                  |                 |               |
|------------------------------------------------------------------------------------------------------------------|-----------------|---------------|
|                                                                                                                  |                 | PERMIT SET    |
| Designed: TMM                                                                                                    | Drawn: E.J.H.   | Checked: TMM  |
| Reviewed: MCB                                                                                                    | Scale: AS NOTED | Date: 3-15-19 |
| 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brooksea.com |                 |               |
|                                                                                                                  |                 |               |
| Planning • Engineering • Surveying<br>• Environmental Services •                                                 |                 |               |

|                               |                             |                        |
|-------------------------------|-----------------------------|------------------------|
| Project No:<br>480918         | PADGETTOWN ROAD SUBDIVISION | NORTH CAROLINA         |
| C-0                           | SINGLE-FAMILY RESIDENTIAL   | TOWN OF BLACK MOUNTAIN |
| Drawing Title:<br>COVER SHEET | COVER SHEET                 |                        |

File Location: L:\2018 Projects\480918 Chambers\_Padgettown Rd Development\Drawings\480918 Padgettown CIVIL BASE CURRENT.dwg

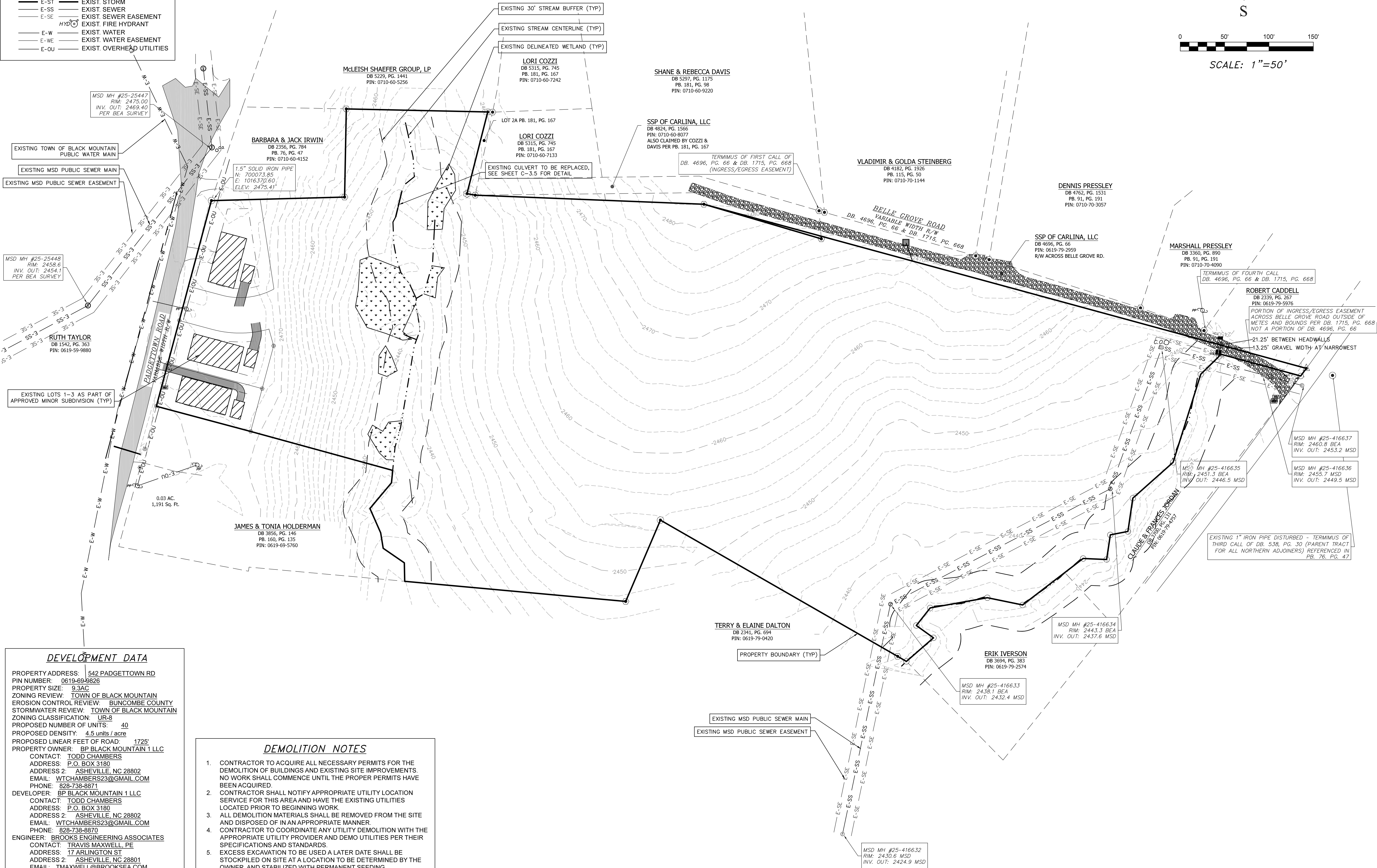
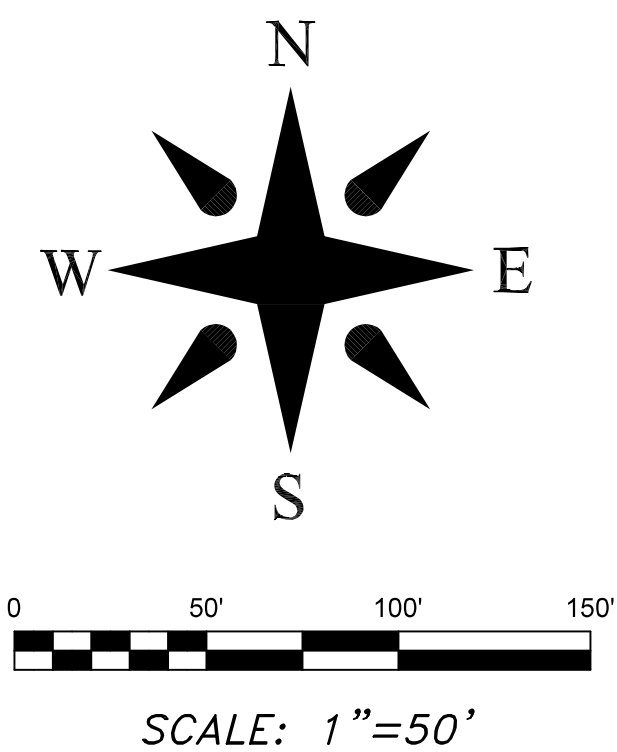




|                                                                                                                  |  |                                                                                                              |  |                                                                                      |  |                                                                                                                     |  |                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                         |  |
|------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Project No:<br>480918                                                                                            |  | PADGETTOWN ROAD SUBDIVISION<br><br>SINGLE-FAMILY RESIDENTIAL<br><br>TOWN OF BLACK MOUNTAIN<br>NORTH CAROLINA |  |  |  | Designed:<br>TMM<br>Drawn:<br>E/JH<br>Checked:<br>TMM<br>Reviewed:<br>MCB<br>Scale:<br>AS NOTED<br>Date:<br>3-15-19 |  |   |  | No.      REVISIONS/SUBMISSIONS<br>1      PRELIMINARY PLANS      2/21/19<br>2      PRELIMINARY SITE PLAN      2/22/19<br>3      NCDOT DRIVEWAY PERMIT      2/25/19<br>4      TOBM PLANNING AND ZONING      3/8/19<br>5      MSD SUBMITTAL - PH1 AND PH2 SEWER      3/14/19<br>6      TOBM STORMWATER      3/15/19<br>7      WATER SUBMITTAL      3/18/19 |  |
| Drawing Title:<br>MASTER PLAN                                                                                    |  |                                                                                                              |  | Planning • Engineering • Surveying<br>• Environmental Services •                     |  |                                                                                                                     |  | PERMIT SET                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                         |  |
| 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brooksea.com |  |                                                                                                              |  |                                                                                      |  |                                                                                                                     |  |                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                         |  |
| Revision/Submission number with a triangle indicates changes made on this sheet                                  |  |                                                                                                              |  |                                                                                      |  |                                                                                                                     |  |                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                         |  |



|  |                           |
|--|---------------------------|
|  | EXIST. BOUNDARY           |
|  | EXIST. STREAM             |
|  | EXIST. STREAM BUFFER      |
|  | EXIST. WETLAND            |
|  | EXIST. RIGHT OF WAY       |
|  | EXIST. EASEMENT           |
|  | EXIST. BUILDING SETBACK   |
|  | EXIST. BUILDING           |
|  | EXIST. SIDEWALK           |
|  | EXIST. EDGE OF PAVING     |
|  | EXIST. STORM              |
|  | EXIST. SEWER              |
|  | EXIST. SEWER EASEMENT     |
|  | EXIST. FIRE HYDRANT       |
|  | EXIST. WATER              |
|  | EXIST. WATER EASEMENT     |
|  | EXIST. OVERHEAD UTILITIES |



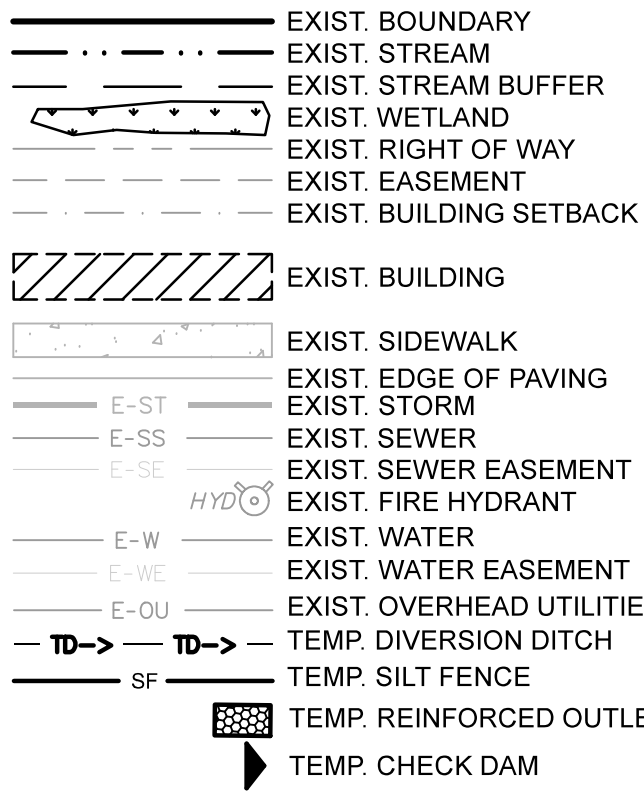
PROPERTY ADDRESS: 542 PADGETTOWN RD  
PIN NUMBER: 0619-69-9826  
PROPERTY SIZE: 9.3AC  
ZONING REVIEW: TOWN OF BLACK MOUNTAIN  
EROSION CONTROL REVIEW: BUNCOMBE COUNTY  
STORMWATER REVIEW: TOWN OF BLACK MOUNTAIN  
ZONING CLASSIFICATION: UR-8  
PROPOSED NUMBER OF UNITS: 40  
PROPOSED DENSITY: 4.5 units / acre  
PROPOSED LINEAR FEET OF ROAD: 1725'  
PROPERTY OWNED BY: BLACK MOUNTAIN 1 LLC  
CONTACT: TODD CHAMBERS  
ADDRESS: P.O. BOX 3180  
ADDRESS 2: ASHEVILLE, NC 28802  
EMAIL: WTCHAMBERS23@GMAIL.COM  
PHONE: 828-738-8871  
DEVELOPER: BP BLACK MOUNTAIN 1 LLC  
CONTACT: TODD CHAMBERS  
ADDRESS: P.O. BOX 3180  
ADDRESS 2: ASHEVILLE, NC 28802  
EMAIL: WTCHAMBERS23@GMAIL.COM  
PHONE: 828-738-8871  
ENGINEER: BROOKS ENGINEERING ASSOCIATES  
CONTACT: TRAVIS MAXWELL, PE  
ADDRESS: 17 ARLINGTON ST  
ADDRESS 2: ASHEVILLE, NC 28801  
EMAIL: TMAXWELL@BROOKSEA.COM  
PHONE: 828-232-4700

1. CONTRACTOR TO ACQUIRE ALL NECESSARY PERMITS FOR THE DEMOLITION OF BUILDINGS AND EXISTING SITE IMPROVEMENTS. NO WORK SHALL COMMENCE UNTIL THE PROPER PERMITS HAVE BEEN ACQUIRED.
2. CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY LOCATION SERVICE FOR THIS AREA AND HAVE THE EXISTING UTILITIES LOCATED PRIOR TO BEGINNING WORK.
3. ALL DEMOLITION MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROPRIATE MANNER.
4. CONTRACTOR TO COORDINATE ANY UTILITY DEMOLITION WITH THE APPROPRIATE UTILITY PROVIDER AND DEMO UTILITIES PER THEIR SPECIFICATIONS AND STANDARDS.
5. EXCESS EXCAVATION TO BE USED A LATER DATE SHALL BE STOCKPILED ON SITE AT A LOCATION TO BE DETERMINED BY THE OWNER, AND STABILIZED WITH PERMANENT SEEDING.

|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|-------------------------------------------------|--|-----------------------------|--|---------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------|--|----------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|-----------------------------------|--|-----------------------|--|------|--|
| Project No:<br>480918                           |  | PADGETTOWN ROAD SUBDIVISION |  | <br><b>BROOKS</b><br>ENGINEERING ASSOCIATES |  | Designed: TMM<br>Drawn: EJJH<br>Checked: TMM                                                                      |  | Reviewed: MCB<br>Scale: AS NOTED<br>Date: 3-15-19 |  | <br><b>PERMIT SET</b> |  |  |  | No.                               |  | REVISIONS/SUBMISSIONS |  | Date |  |
| C-2.0                                           |  | SINGLE-FAMILY RESIDENTIAL   |  |                                                                                                                                 |  | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brookssea.com |  | 1                                                 |  |                                                                                                          |  |                                                                                     |  | PRELIMINARY PLANS                 |  | 2/21/19               |  |      |  |
| Drawing Title:<br>EXISTING CONDITIONS/DEMO PLAN |  | TOWN OF BLACK MOUNTAIN      |  | NORTH CAROLINA                                                                                                                  |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 2                                                                                   |  | PRELIMINARY SITE PLAN             |  | 2/22/19               |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 3                                                                                   |  | NCDOT DRIVEWAY PERMIT             |  | 2/25/19               |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 4                                                                                   |  | TOBM PLANNING AND ZONING          |  | 3/8/19                |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 5                                                                                   |  | MSD SUBMITTAL - PH1 AND PH2 SEWER |  | 3/14/19               |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 6                                                                                   |  | TOBM STORMWATER                   |  | 3/15/19               |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  | 7                                                                                   |  | WATER SUBMITTAL                   |  | 3/18/19               |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
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|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
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|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
|                                                 |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |
| </                                              |  |                             |  |                                                                                                                                 |  |                                                                                                                   |  |                                                   |  |                                                                                                          |  |                                                                                     |  |                                   |  |                       |  |      |  |



CLEARING AND GRUBBING LEGEND

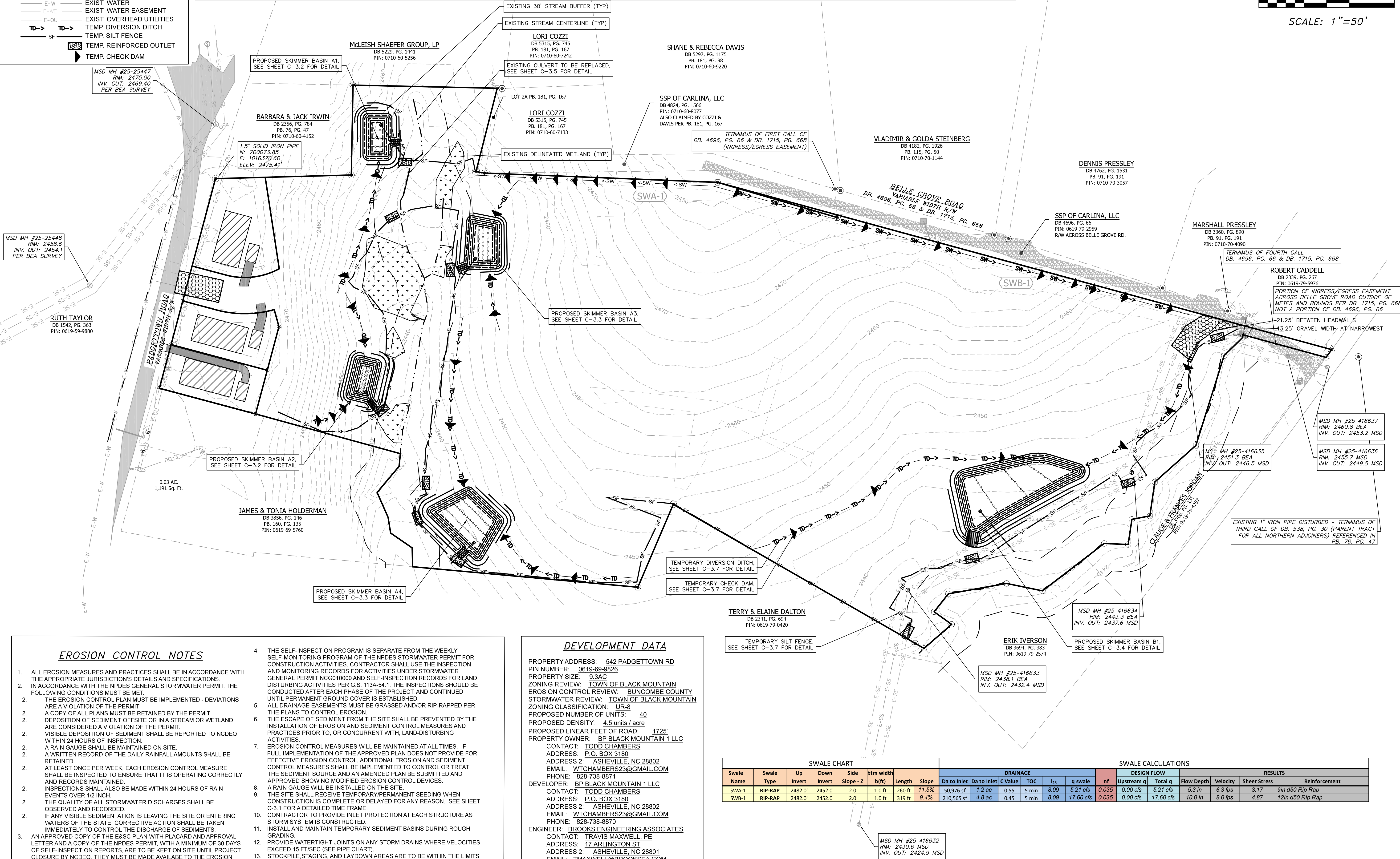
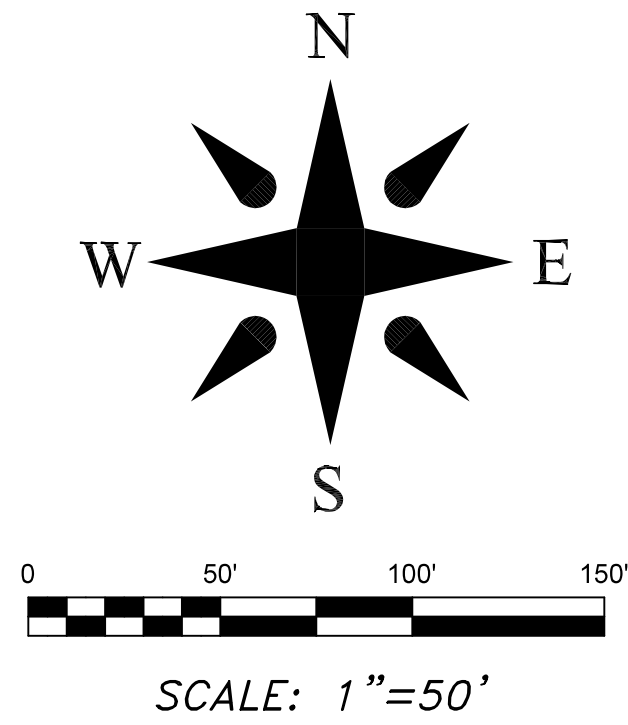


| PADGETTOWN RD SUBDIVISION<br>SKIMMER SEDIMENT BASIN SIZING CHART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |            |             |                |                 |                       |                        |                                       |                                 |                           |             |         |               |         |                          |                  |                            |                         |                     |               |                       |                    |                         |                          |                                         |                   |                  |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|-------------|----------------|-----------------|-----------------------|------------------------|---------------------------------------|---------------------------------|---------------------------|-------------|---------|---------------|---------|--------------------------|------------------|----------------------------|-------------------------|---------------------|---------------|-----------------------|--------------------|-------------------------|--------------------------|-----------------------------------------|-------------------|------------------|-----------------|
| Basin #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Drainage Area / Flow Calcs.: |            |             |                |                 |                       | Min. Size Calcs.:      |                                       |                                 | Basin Storage Dimensions: |             |         |               |         |                          | Spillway Calcs.: |                            |                         |                     |               |                       |                    |                         |                          |                                         |                   |                  |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Total:                       | Disturbed: | Weighted C: | 2yr Intensity: | 25yr Intensity: | Q <sub>2</sub> (cfs): | Q <sub>25</sub> (cfs): | Min. Surface Area (ft <sup>2</sup> ): | Min. Volume (ft <sup>3</sup> ): | Bottom Elevation:         | Width (ft): |         | Length (ft.): |         | Area (ft <sup>2</sup> ): | Depth (ft.):     | Volume (ft <sup>3</sup> ): | Dewatering Time (hrs.): | Number of Skimmers: | Skimmer Size: | Skimmer Orifice Size: | Ponding Elevation: | Emergency Spillway El.: | Emergency Spillway Dim.: | Emergency Spillway V(ft <sup>3</sup> ): | Water Depth (ft): | Free-board (ft): | Top of Dam El.: |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                              |            |             |                |                 |                       |                        |                                       |                                 |                           | Top:        | Bottom: | Top:          | Bottom: |                          |                  |                            |                         |                     |               |                       |                    |                         |                          |                                         |                   |                  |                 |
| A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.50                         | 0.40       | 4.76        | 7.43           | 1.43            | 2.23                  | 124.4                  | 720.0                                 | 2443.0                          | 40.0                      | 32.0        | 20.0    | 12.0          | 300.0   | 2.0                      | 1,184.0          | 48 hours                   | 1                       | 1.5 in              | 2.0 in        | 2451.0                | 2451.5             | 2'0" X 2'0"             | 1.11                     | 0.56                                    | 1.44              | 2445.0           |                 |
| A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.54                         | 0.54       | 0.50        | 4.76           | 7.43            | 1.29                  | 2.01                   | 652.0                                 | 972.0                           | 2439.0                    | 35.0        | 30.0    | 19.0          | 11.0    | 722.0                    | 2.0              | 1,052.0                    | 48 hours                | 1                   | 1.5 in        | 8 in                  | 2441.0             | 2441.5                  | 2'0" X 2'0"              | 1.00                                    | 0.52              | 1.48             | 2443.5          |
| A3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.77                         | 0.77       | 0.60        | 4.76           | 7.43            | 2.20                  | 3.43                   | 1,115.6                               | 1,386.0                         | 2443.0                    | 45.0        | 37.0    | 28.0          | 20.0    | 1,260.0                  | 2.0              | 2,000.0                    | 48 hours                | 1                   | 1.5 in        | 1.0 in                | 2445.0             | 2445.5                  | 2'0" X 2'0"              | 1.72                                    | 0.74              | 1.76             | 2448.0          |
| A4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.67                         | 1.67       | 0.60        | 4.76           | 7.43            | 4.77                  | 7.44                   | 2,419.6                               | 3,006.0                         | 2435.0                    | 70.0        | 62.0    | 35.0          | 27.0    | 2,450.0                  | 2.0              | 4,124.0                    | 48 hours                | 1                   | 1.5 in        | 1.4 in                | 2437.0             | 2437.5                  | 4'0" X 2'0"              | 1.86                                    | 0.78              | 1.72             | 2440.0          |
| B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3.72                         | 3.72       | 0.60        | 4.76           | 7.43            | 10.62                 | 16.58                  | 5,389.7                               | 6,696.0                         | 2439.0                    | 104.0       | 96.0    | 52.0          | 44.0    | 5,408.0                  | 2.0              | 9,632.0                    | 48 hours                | 1                   | 2.5 in        | 2.0 in                | 2441.0             | 2441.5                  | 9'0" X 2'0"              | 1.84                                    | 0.78              | 1.72             | 2444.0          |
| <div>Skimmer Sediment Basin Design Notes:</div> <div><div>1. Sediment Basins have been designed in accordance with the North Carolina Erosion and Sediment Control Planning and Design Manual Standard (Revision number 6/06) Standard number 6.64</div><div>2. Maximum Drainage Area = 10 Acres</div><div>3. Minimum Volume = 1800 ft<sup>3</sup> per Acre of Disturbed Area</div><div>4. Minimum Surface Area = 325 ft<sup>2</sup> per Q<sub>10</sub> (cfs) of peak inflow.</div><div>5. Dewatering time is from 24 to 72 hours</div><div>6. Each basin requires 3 baffles</div></div> |                              |            |             |                |                 |                       |                        |                                       |                                 |                           |             |         |               |         |                          |                  |                            |                         |                     |               |                       |                    |                         |                          |                                         |                   |                  |                 |
| <div>General Notes:</div> <div><div>3/12/2019</div><div>Calculations By: trm</div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |            |             |                |                 |                       |                        |                                       |                                 |                           |             |         |               |         |                          |                  |                            |                         |                     |               |                       |                    |                         |                          |                                         |                   |                  |                 |

Skimmer Sediment Basin Design Notes:

- Sediment Basins have been designed in accordance with the North Carolina Erosion and Sediment Control Planning and Design Manual Standard (Revision number 6/06) Standard number 6.64
- Maximum Drainage Area = 10 Acres
- Minimum Volume = 1800 ft<sup>3</sup> per Acre of Disturbed Area
- Minimum Surface Area = 325 ft<sup>2</sup> per Q<sub>2</sub> (cfs) of peak inflow
- Dewatering time is from 24 to 72 hours
- Each basin requires 3 baffles

General Notes:  
3/12/2019  
Calculations By: tmm



EROSION CONTROL NOTES

- ALL EROSION MEASURES AND PRACTICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE JURISDICTION'S DETAILS AND SPECIFICATIONS.
- IN ACCORDANCE WITH THE NPDES GENERAL STORMWATER PERMIT, THE FOLLOWING CONDITIONS MUST BE MET:
  - THE EROSION CONTROL PLAN MUST BE IMPLEMENTED - DEVIATIONS ARE A VIOLATION OF THE PERMIT.
  - A COPY OF ALL PLANS MUST BE RETAINED BY THE PERMIT DEPOSITION OF SEDIMENT OFFSITE OR IN A STREAM OR WETLAND ARE CONSIDERED A VIOLATION OF THE PERMIT.
  - VISIBLE DEPOSITION OF SEDIMENT SHALL BE REPORTED TO NCDEQ WITHIN 24 HOURS OF INSPECTION.
  - A RAIN GAUGE SHALL BE MAINTAINED ON SITE.
  - A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE RETAINED.
  - AT LEAST ONCE PER WEEK, EACH EROSION CONTROL MEASURE SHALL BE INSPECTED TO ENSURE THAT IT IS OPERATING CORRECTLY AND RECORDS MAINTAINED.
  - INSPECTIONS SHALL ALSO BE MADE WITHIN 24 HOURS OF RAIN EVENTS OVER 1/2 INCH.
  - THE QUALITY OF ALL STORMWATER DISCHARGES SHALL BE OBSERVED AND RECORDED.
  - IF ANY VISIBLE SEDIMENTATION IS LEAVING THE SITE OR ENTERING WATERS OF THE STATE, CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY TO CONTROL THE DISCHARGE OF SEDIMENTS.
- AN APPROVED COPY OF THE E&SC PLAN WITH PLACARD AND APPROVAL LETTER AND A COPY OF THE NPDES PERMIT, WITH A MINIMUM OF 30 DAYS OF SELF-INSPECTION REPORTS, ARE TO BE KEPT ON SITE UNTIL PROJECT CLOSURE BY NCDEQ. THEY MUST BE MADE AVAILABLE TO THE EROSION CONTROL INSPECTOR UPON REQUEST.

- THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL USE THE INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- ALL DRAINAGE EASEMENTS MUST BE GRASSED AND/OR RIP-RAPPED PER THE PLANS TO CONTROL EROSION.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES.
- A RAIN GAUGE WILL BE INSTALLED ON THE SITE.
- THE SITE SHALL RECEIVE TEMPORARY/PERMANENT SEEDING WHEN CONSTRUCTION IS COMPLETE OR DELAYED FOR ANY REASON. SEE SHEET C-3.1 FOR A DETAILED TIME FRAME.
- CONTRACTOR TO PROVIDE INLET PROTECTION AT EACH STRUCTURE AS STORM SYSTEM IS CONSTRUCTED.
- INSTALL AND MAINTAIN TEMPORARY SEDIMENT BASINS DURING ROUGH GRADING.
- PROVIDE WATER-TIGHT JOINTS ON ANY STORM DRAINS WHERE VELOCITIES EXCEED 15 FT/SEC (SEE PIPE CHART).
- STOCKPILE STAGING AND LAYDOWN AREAS ARE TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHOULD BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAIN OUTLETS AND SURFACE WATERS.

DEVELOPMENT DATA

PROPERTY ADDRESS: 542 PADGETTOWN RD  
PIN NUMBER: 0619-69-9826  
PROPERTY SIZE: 9.3 AC  
ZONING REVIEW: TOWN OF BLACK MOUNTAIN  
EROSION CONTROL REVIEW: BUNCOMBE COUNTY  
STORMWATER REVIEW: TOWN OF BLACK MOUNTAIN  
ZONING CLASSIFICATION: UR-B  
PROPOSED NUMBER OF UNITS: 40  
PROPOSED DENSITY: 4.5 units / acre  
PROPOSED LINEAR FEET OF ROAD: 1725'  
PROPERTY OWNER: BP BLACK MOUNTAIN 1 LLC  
CONTACT: TODD CHAMBERS  
ADDRESS: P.O. BOX 3180  
ADDRESS 2: ASHEVILLE, NC 28802  
EMAIL: WTCHAMBERS23@GMAIL.COM  
PHONE: 828-738-8871  
DEVELOPER: BP BLACK MOUNTAIN 1 LLC  
CONTACT: TODD CHAMBERS  
ADDRESS: P.O. BOX 3180  
ADDRESS 2: ASHEVILLE, NC 28802  
EMAIL: WTCHAMBERS23@GMAIL.COM  
PHONE: 828-738-8870  
ENGINEER: BROOKS ENGINEERING ASSOCIATES  
CONTACT: TRAVIS MAXWELL, PE  
ADDRESS: 17 ARLINGTON ST  
ADDRESS 2: ASHEVILLE, NC 28801  
EMAIL: TMAXWELL@BROOKSEA.COM  
PHONE: 828-232-4700

| SWALE CHART |            |           |             |                |                    |        |       |             |                     |  |
|-------------|------------|-----------|-------------|----------------|--------------------|--------|-------|-------------|---------------------|--|
| Swale Name  | Swale Type | Up Invert | Down Invert | Side Slope - Z | btm width (b) (ft) | Length | Slope | Da to Inlet | Da to Inlet C Value |  |
| SWA-1       | RIP-RAP    | 2482.0'   | 2452.0'     | 2:0            | 1.0 ft             | 260 ft | 11.5% | 50,976 sf   | 1.2 ac              |  |
| SWB-1       | RIP-RAP    | 2482.0'   | 2452.0'     | 2:0            | 1.0 ft             | 319 ft | 9.4%  | 210,565 sf  | 4.8 ac              |  |

MSD MH #25-4166.32  
RIM: 2430.6 MSD  
INV. OUT: 2424.9 MSD

REVISIONS/SUBMISSIONS

| Date    | REVISIONS/SUBMISSIONS             |
|---------|-----------------------------------|
| 2/21/19 | PRELIMINARY PLANS                 |
| 2/22/19 | PRELIMINARY SITE PLAN             |
| 2/25/19 | NCOT DRIVEWAY PERMIT              |
| 3/8/19  | TOMB PLANNING AND ZONING          |
| 3/14/19 | MSD SUBMITTAL - PH1 AND PH2 SEWER |
| 3/15/19 | TOMB STORMWATER                   |
| 3/18/19 | WATER SUBMITTAL                   |

PERMIT SET

DESIGNED: TMM

DRAWN: ECH

CHECKED: TMM

REVIEWED: MCB

SCALE: AS NOTED

DATE: 3-15-19

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

PADGETTOWN ROAD SUBDIVISION

SINGLE-FAMILY RESIDENTIAL

TOWN OF BLACK MOUNTAIN

NORTH CAROLINA

Project No: 480918

C-3.0

Drawing Title: CLEARING AND GRUBBING PLAN



**PUMP AROUND PUMP SCHEMATIC**

- 4" SUCTION HOSE KIT  
25' IN LENGTH WITH ALUMINUM CAMLOCK CONNECTORS. SUCTION END TO BE INSTALLED IN 5 GAL. BUCKET WITH 1" PERFORATION
- TEMPORARY PUMP AROUND AMT TRASH PUMP MODEL 4513XHR OR EQUAL. DETAIL THIS SHEET. EL. 2452.0'
- 4" DISCHARGE HOSE WITH 3 PLY POLYESTER YARNS
- 3" SUCTION HOSE KIT WITH ALUMINUM CAMLOCK CONNECTORS
- TRENCH DE-WATERING PUMP. POWERHORSE MODEL#D530W
- 3" DISCHARGE HOSE WITH 3 PLY POLYESTER YARNS
- FILTREXX CONCRETE WASHOUT BASIN TO FILTER TRENCH WATER. DETAIL THIS SHEET. FILTER SOCKS TO BE KEYS TO GROUND
- 5 GALLON BUCKET WITH 10 POUNDS OF STONE. TOP OF BUCKET EL. = 2447.0'
- 2' SANDBAG DIKE CREEK
- PROPOSED 2-36" HDPE CULVERTS, SPACED 6' APART AND BURIED 6"
- EXISTING INVERT IN (24" CMP) = ??? (COMPROMISED)  
PROPOSED INVERT IN (2-36" HDPE)=2444.5'
- EXISTING 20 LF 24" CMP STORM PIPE TO BE REPLACED WITH (2) 60 LF 36" HDPE PIPE SLOPE TO BE 1.7%
- EXISTING INVERT OUT (24" CMP) = 2444.0'  
PROPOSED INVERT OUT (2-36" HDPE) = 2443.5'
- ANCHOR DISCHARGE END OF HOSE WITH 60LB SAND BAGS
- 2' SANDBAG DIKE
- ANCHOR DISCHARGE END OF HOSE WITH 100 LBS OF SAND BAG S
- 10 LF 4" PERFORATED PVC PIPE WITH (60) 1.5" DIAMETER HOLES SPACED EQUALLY WITH END CAP
- STREAM TO BE LINED WITH 10 LF OF 140N MIRAFI FILTER FABRIC ANCHORED WITH RIVER STONE. NO EQUIPMENT IS ALLOWED WITHIN STREAM.
- 15'

**CULVERT REPLACEMENT**

**CONSTRUCTION ALL WORK TO BE DONE IN ACCORDANCE WITH THE FOLLOWING:**

1. INSTALL
2. INSTALL
3. INSTALL
4. INSTALL
5. ONCE TH
6. RE-STAB
7. CURLEX
8. REMOVI
9. REMOVE

1. INSTALL FILTREX FILTER RING
2. INSTALL PUMP AROUND AND DEWATERING PUMP, DO NOT TURN ON
3. INSTALL ALL REQUIRED PUMPING PIPING
4. INSTALL UPSTREAM AND DOWNSTREAM DIKES AND BEGIN DEWATERING
5. ONCE TRENCH IS DRY, REMOVE EXISTING CULVERT AND INSTALL NEW ONE
6. RE-STABILIZE BANK IF NECESSARY. USE BIO-DEGRADABLE EXCELISOIR CURLEX III 100% SEED FREE ASPEN FIBERS.
7. REMOVE ANY COLLECTED SEDIMENT IN TRENCH OR FILTREXX FILTER RING
8. REMOVING PUMPS AND PIPING EQUIPMENT
9. REMOVE DIKES

"A" PROFILE ST SPLIT COUPLER  
10" - 60" DIAMETER

| PART #  | PIPE SIZE          | A                   |
|---------|--------------------|---------------------|
| 0665AA  | 6 in<br>(152 mm)   | 4.7 in<br>(119 mm)  |
| 1011AA  | 10 in<br>(254 mm)  | 5.0 in<br>(127 mm)  |
| 1211AA* | 12 in<br>(305 mm)  | 7.7 in<br>(195 mm)  |
| 1265AA  | 12 in<br>(305 mm)  | 7.7 in<br>(195 mm)  |
| 1555AA  | 15 in<br>(381 mm)  | 10.4 in<br>(265 mm) |
| 1565AA  | 18 in<br>(457 mm)  | 10.7 in<br>(272 mm) |
| 1865AA  | 18 in<br>(457 mm)  | 12.8 in<br>(325 mm) |
| 2465AA  | 24 in<br>(609 mm)  | 12.8 in<br>(325 mm) |
| 2466AA  | 30 in<br>(762 mm)  | 15.5 in<br>(393 mm) |
| 3065AA  | 30 in<br>(762 mm)  | 15.5 in<br>(393 mm) |
| 3066AA  | 36 in<br>(914 mm)  | 21.0 in<br>(533 mm) |
| 4265AA* | 42 in<br>(1067 mm) | 20.8 in<br>(528 mm) |
| 4266AA* | 48 in<br>(1219 mm) | 21.0 in<br>(533 mm) |
| 6065AA* | 60 in<br>(1524 mm) | 24.0 in<br>(610 mm) |

NOTES:

PARTS ENDING WITH "65" OR "61" DO NOT HAVE A GASKET.

PARTS ENDING WITH "66" OR "62" ARE THE PREMIUM COUPLING SUPPLIED WITH A GASKET.

\* PART 1211-11 FOR TWO STAGE SINGLE WALL PIPE ONLY

\*\* REPRESENTS A TWO-PIECE COUPLING SUPPLIED WITH SIX CABLES

NOTE: ALL FITTINGS DIMENSIONS ARE FOR REFERENCE ONLY

|             |             |
|-------------|-------------|
| DRAWING #   | 20001       |
| REVISED     | 001 03/2000 |
| APPROVED BY | 001 03/2000 |
| DATE        | 03/2000     |

4" SCHEDULE 40 PVC PIPE CAP

10', 4" SCHEDULE 40 PVC PIPE WITH (60) 1.5" HOLES

4" SCHEDULE 40 FEMALE GLUE ON JOINT TO MALE PIPE THREAD ADAPTER (SEE IMAGE)

4" ALUMINUM CAMLOCK FITTING MALE COUPLER TO MALE PIPE THREAD ADAPTER (SEE IMAGE)

4" CAMLOCK FITTING MALE BARB X FEMALE COUPLER THREAD

### 4" Trash Pumps

| Model   | HP Class * | Curve | Port   | Driver                  | Seal           | Run Time (Hours) | Tank Size (Gal./U.S.) | Ship Wt. (Lbs.) |
|---------|------------|-------|--------|-------------------------|----------------|------------------|-----------------------|-----------------|
| 4510XTR | 10 HP      | D     | 4" NPT | Yanmar L1001**          | Viton® SIC-SIC | 2.7              | 1,435/4.5             | 220             |
| 4513XAR | 13 HP      | E     | 4" NPT | B & S Vanguard V-Twin** | Viton® SIC-SIC | 1.8              | 2,258/5.5             | 195             |
| 4513XHR | 13 HP      | E     | 4" NPT | Honda GX390             | Viton® SIC-SIC | 2.5              | 1,606/1.1             | 200             |

**Construction:** Cast Aluminum with Cast Iron Components

\* HP Class represents market category and is not intended to define actual horsepower.

\*\* 12V DC Electric Start (Battery Not Included)

▲ Oil Alert Included

The diagram shows a side view of the machine's internal components. Callout 1 points to the top of the pump housing. Callout 2 points to the discharge hose connection. Callout 3 points to the pump housing. Callout 4 points to the suction hose connection. Callout 5 points to the engine block. Callout 6 points to the engine's cooling fan.

1. **Prime Port:** Fill the priming port to prime the pump.
2. **Discharge Fitting:** Connect the discharge hose to the discharge fitting.
3. **Pump:** The pump moves the liquid.
4. **Suction Fitting:** Connect the suction hose to the suction fitting.
5. **Drain Port:** Drain the liquid in the pump through the drain port.
6. **Engine:** The air-cooled engine powers the pump.

---

29

**SECTION NTS**

2" X 2" X 36" WOODEN STAKES PLACED 5' O.C.

MAXIMUM DEPTH OF CONTAMINATED WATER IS 50% OF CONCRETE WASHOUT HEIGHT

18" DIAMETER FILTREXX® SOXX™ (ALSO AVAILABLE IN 8", 12" AND 24" DIAMETERS)

INSTALL 60LB OF SAND BAGS ON TOP OF DISCHARGE PIPE

12" MIN

6" EXCAVATION TO KEY FILTER SOCK TO GROUND

PUMP CONTAMINATED WATER INTO WASHOUT

2" X 2" X 36" WOODEN STAKES PLACED 5' O.C.

18" DIAMETER FILTREXX® SOXX™

15'

**PLAN NTS**

**NOTES:**

1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. WASHOUT MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY
3. WASHOUT MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION

|                               |          |                         |
|-------------------------------|----------|-------------------------|
| Pump Nozzle Energy Dissipator |          |                         |
| Pump Discharge=               | 520.00   | gpm                     |
|                               | 1.144000 | cfs                     |
| Diameter of perforation       | 1.50     | inch                    |
| Area of perforation           | 0.012266 | sf                      |
| Number of perforations        | 60       |                         |
| Length of pipe                | 10.00    |                         |
| Perforations per ft           | 6.00     |                         |
|                               | 0.735938 | sf total discharge area |
|                               | 1.554480 | fps                     |

---

approved dewatering device

discharge hoses

stream diversion pumps

intake hose

P

dewatering pump

intake hose

sediment dike

clean water dike

work area

length not to exceed that which can be completed in one day

sump-hole or pool (12" to 18" deep, 2' dia.)

flow

flow

pumps should discharge onto a stable velocity dissipator made of rip rap or sandbags

**STREAM DE-WATERING DETAIL**

**NO WORK SHALL BE PERFORMED DURING ELEVATED STREAM BASE FLOWS**

File Location: L:\2018 Projects\480918 Chambers\_Padgettown Rd Development\Dwg\480918 Padgettown CIVIL BASE CURRENT.dwg







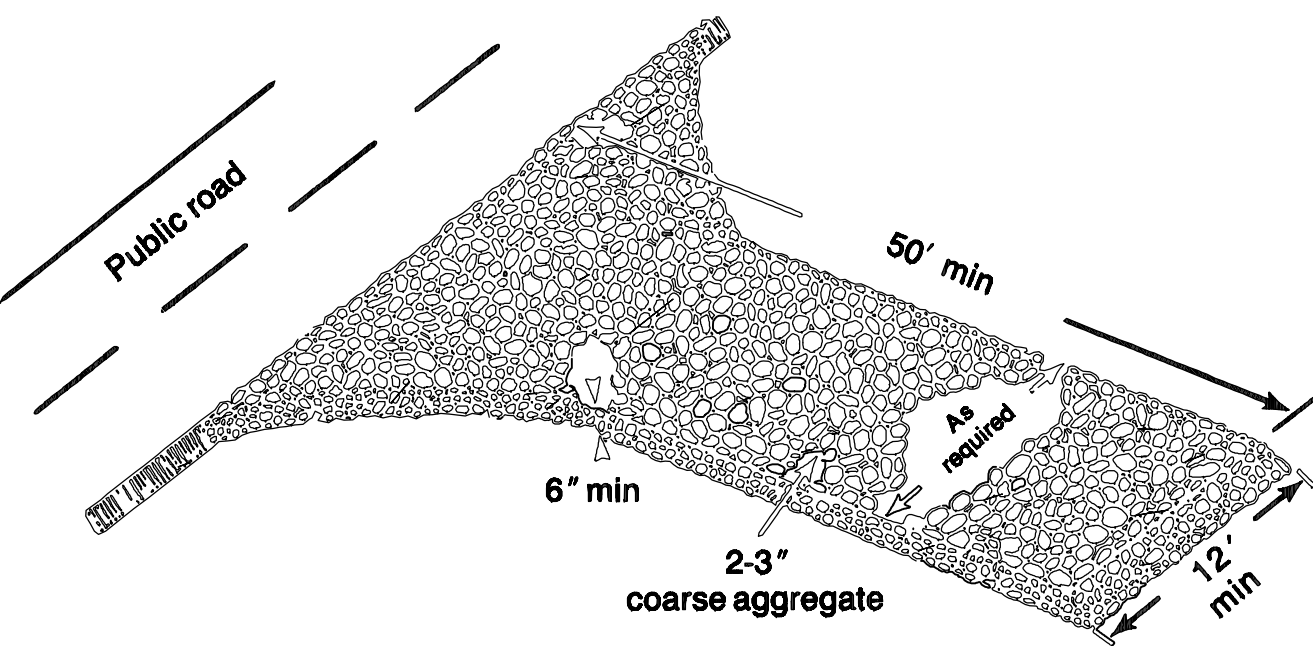
6.06 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

**Definition** A graveled area or pad located at points where vehicles enter and leave a construction site.

**Purpose** To provide a buffer area where vehicles can drop their mud and sediment to avoid transporting it onto public roads, to control erosion from surface runoff, and to help control dust.

**Construction Specifications** **Design Criteria** Aggregate Size—Use 2-3 inch washed stone.  
Dimensions of gravel pad—Thickness 6 inches minimum  
Width: 12-foot minimum or full width at all points of the vehicular entrance and exit area, whichever is greater  
  
Length: 50-foot minimum  
Location—Locate construction entrances and exits to limit sediment from leaving the site and to provide for maximum utility by all construction vehicles (Figure 6.06a). Avoid steep grades, and entrances at curves in public roads.

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



A CONSTRUCTION ENTRANCE/EXIT SCALE= NTS

6.20 TEMPORARY DIVERSIONS

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

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

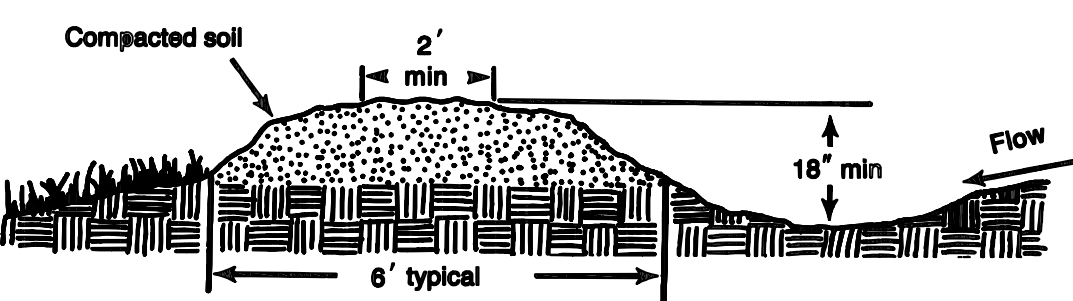
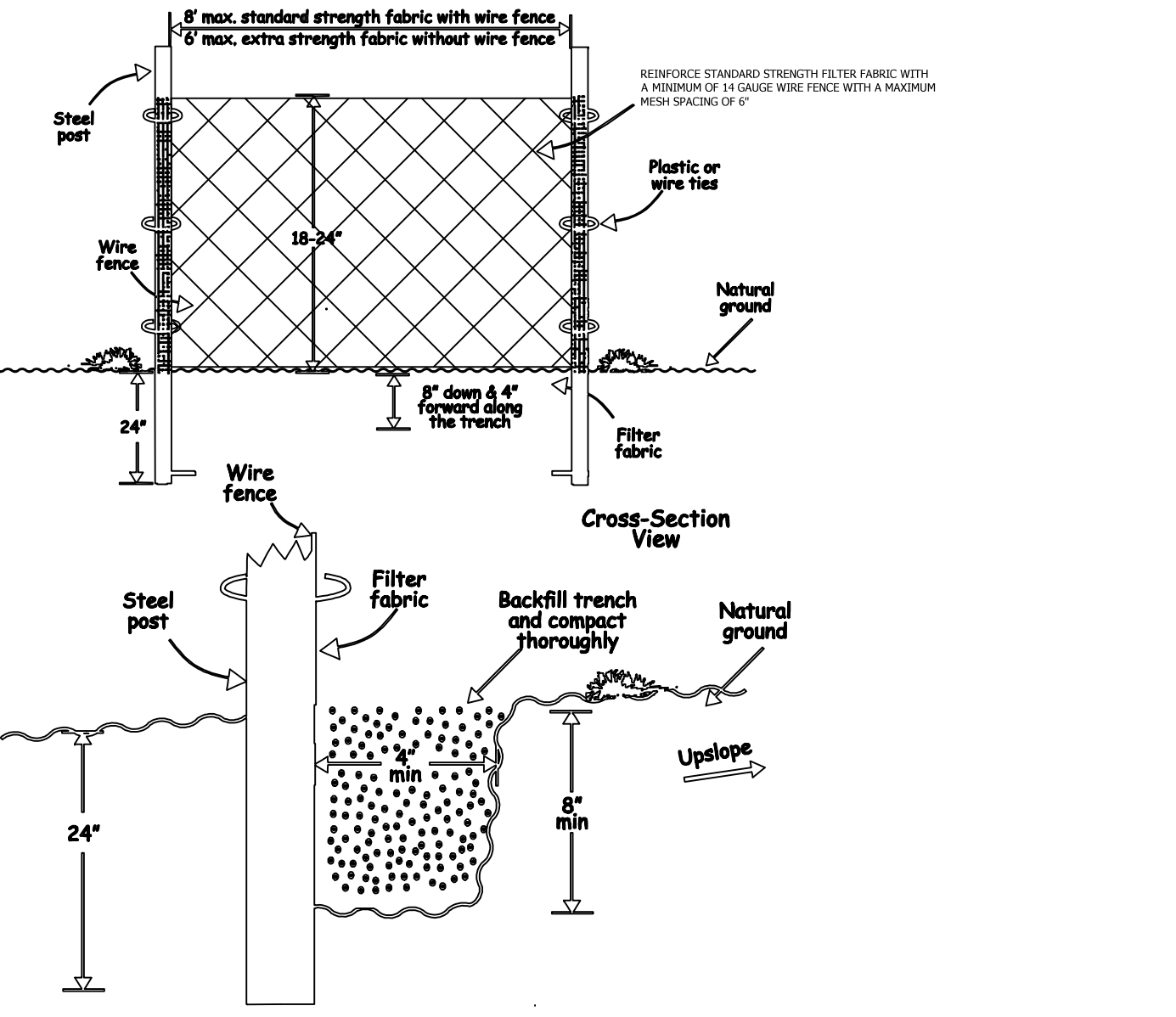


Figure 6.20a Temporary earthen diversion dike. 6.20.1 D TEMPORARY DIVERSION SWALE SCALE= NTS

6.62 SEDIMENT FENCE

**Definition** A temporary sediment control measure consisting of fabric buried at the bottom, stretched, and supported by posts.

**Purpose** To retain sediment from small disturbed areas by reducing the velocity of sheet flows to allow sediment deposition.



B SILT FENCE SCALE= NTS

Table 6.62b Specifications For Sediment Fence Fabric

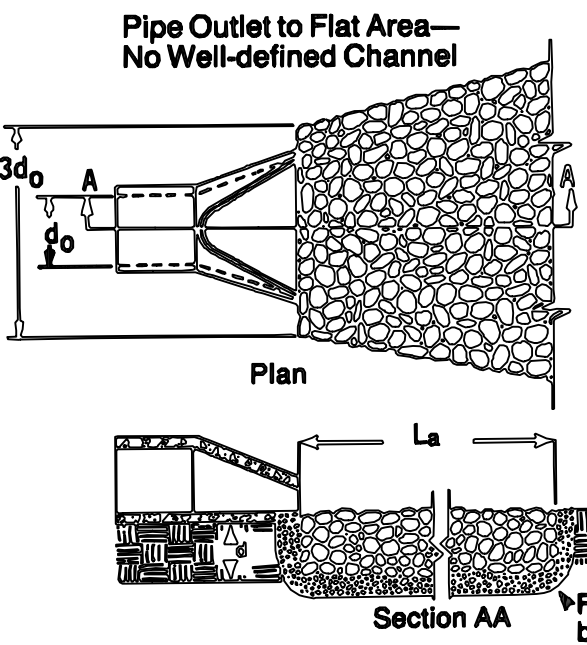
| Temporary Silt Fence Material Property Requirements |              |                                   |                                      |                            |
|-----------------------------------------------------|--------------|-----------------------------------|--------------------------------------|----------------------------|
| Test Material                                       | Units        | Supported <sup>1</sup> Silt Fence | Un-Supported <sup>1</sup> Silt Fence | Type of Value              |
| Grab Strength                                       | ASTM D 4852  | N (lbs)                           |                                      |                            |
| Machine Direction                                   |              | 400                               | 550                                  | MARV                       |
|                                                     |              | (90)                              | (90)                                 |                            |
| X-Machine Direction                                 |              | 400                               | 450                                  | MARV                       |
|                                                     |              | (90)                              | (90)                                 |                            |
| Permeability <sup>2</sup>                           | ASTM D 4491  | sec-1                             | 0.05                                 | MARV                       |
| Apparent Opening Size <sup>3</sup>                  | ASTM D 4751  | mm                                | 0.80                                 | Max. ARV <sup>4</sup>      |
|                                                     | (US Sieve #) | (20)                              |                                      |                            |
| Ultraviolet Stability                               | ASTM D 4365  | % Retained Strength               | 70% after 600h of exposure           | 70% after 600h of exposure |
|                                                     |              |                                   |                                      | Typical                    |

<sup>1</sup> Silt Fence support shall consist of 14 gauge steel wire with a mesh spacing of 150 mm (6 inches), or prefabricated polymer mesh of equivalent strength.  
<sup>2</sup> These default values are based on empirical evidence with a variety of sediment. For environmentally sensitive areas, a review of previous experience and/or site or regionally specific geotextile tests in accordance with Test Method D 5141 should be performed by the agency to confirm suitability of these requirements.  
<sup>3</sup> As measured in accordance with Test Method D 4852.

**Construction Specifications** **MATERIALS**  
1. Use a synthetic filter fabric of at least 95% by weight of polyolefins or polyester, which is certified by the manufacturer or supplier as conforming to the requirements in ASTM D 6461, which is shown in part in Table 6.62b.  
Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120° F.  
2. Ensure that posts for sediment fences are 1.25 lb/linear ft minimum steel with a minimum length of 5 feet. Make sure that steel posts have projections to facilitate fastening the fabric.  
3. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

**Maintenance** Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.  
Should the fabric of a sediment fence collapse, tear, decompose or become ineffective, replace it promptly.  
Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanup.  
Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

F OUTLET PROTECTION SCALE= NTS



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

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

F OUTLET PROTECTION SCALE= NTS

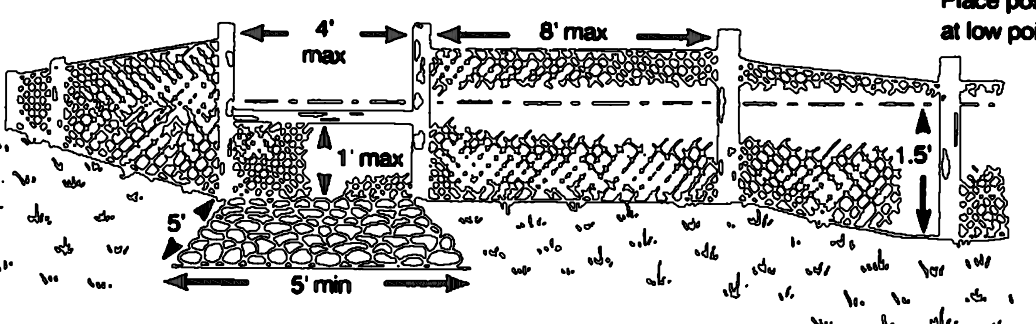


Figure 6.62c Perspective of reinforced, stabilized outlet for sediment fence.

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

**MAINTENANCE** Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion ridge. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, remove the ridge and the channel.  
  
Inspect rock pipe inlet protection at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Remove sediment and restore the sediment storage area to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. Place the sediment that is removed in the designated disposal area and replace the contaminated part of the gravel facing.  
  
Check the structural for damage. Any riprap displaced from the stone horseshoe must be replaced immediately. After all the sediment-producing areas have been permanently stabilized, remove the structure and all the unstable sediment. Smooth the area to blend with the adjoining areas and provide permanent ground cover (Surface Stabilization).

C SILT FENCE REINFORCED OUTLET SCALE= NTS

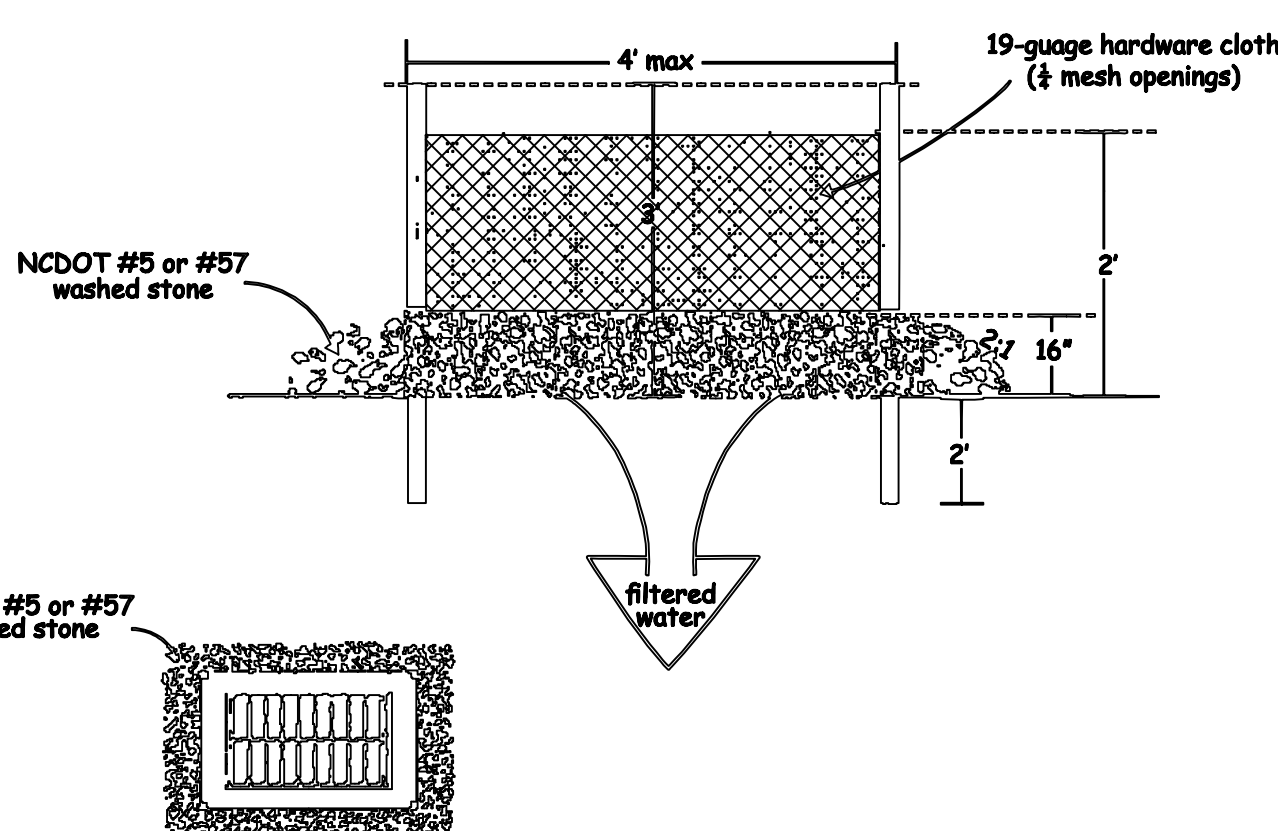


Figure 6.51a Hardware cloth and gravel inlet protection

**Design Criteria** 1. Uniformly grade a shallow depression approaching the inlet.  
2. Drive 5-foot steel posts 2 feet into the ground surrounding the inlet. Space posts evenly around the perimeter of the inlet, a maximum of 4 feet apart.  
3. Surround the post with wire mesh hardware cloth. Secure the wire mesh to the steel posts at the top, middle, and bottom. Placing a 2-foot flap of the wire mesh under the gravel for anchoring is recommended.  
4. Place clean gravel (NC DOT #5 or #57 stone) on a 2:1 slope with a height of 16 inches around the wire, and smooth to an even grade.  
5. Once the contributing drainage area has been stabilized, remove accumulated sediment, and establish final grading elevations.  
6. Compact the area properly and stabilized it with groundcover.

**Maintenance** Inspect at weekly and after each significant (1/2 inch or greater) rainfall event. Clear mesh wire of any debris or other objects to provide adequate flow for subsequent rains. Take care not to damage or undercut the wire mesh during sediment removal. Replace stone as needed.

G INLET PROTECTION SCALE= NTS

REVISIONS/SUBMISSIONS

| No. | REVISIONS/SUBMISSIONS             | Date    |
|-----|-----------------------------------|---------|
| 1   | PRELIMINARY PLANS                 | 2/21/19 |
| 2   | PRELIMINARY SITE PLAN             | 2/22/19 |
| 3   | NCDOT DRIVEWAY PERMIT             | 2/25/19 |
| 4   | TOBM PLANNING AND ZONING          | 3/8/19  |
| 5   | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19 |
| 6   | TOBM STORMWATER                   | 3/15/19 |
| 7   | WATER SUBMITTAL                   | 3/18/19 |

SEAL

025514

TRAVERS, M. MAJEWski

REGISTERED PROFESSIONAL ENGINEER

NORTH CAROLINA

PERMIT SET

DESIGNED: TMM

DRAWN: E.J.H.

CHECKED: TMM

REVIEWED: MCB

SCALE: AS NOTED

DATE: 3-15-19

17 Arlington Street

Asheville, N.C. 28801

Phone: 1-828-232-4700

Fax: 1-828-232-1331

www.brookseaa.com

BROOKS ENGINEERING ASSOCIATES

Planning • Engineering • Surveying

• Environmental Services •

PROJECT NO: 480918

C-3.7

PADGETTOWN ROAD SUBDIVISION

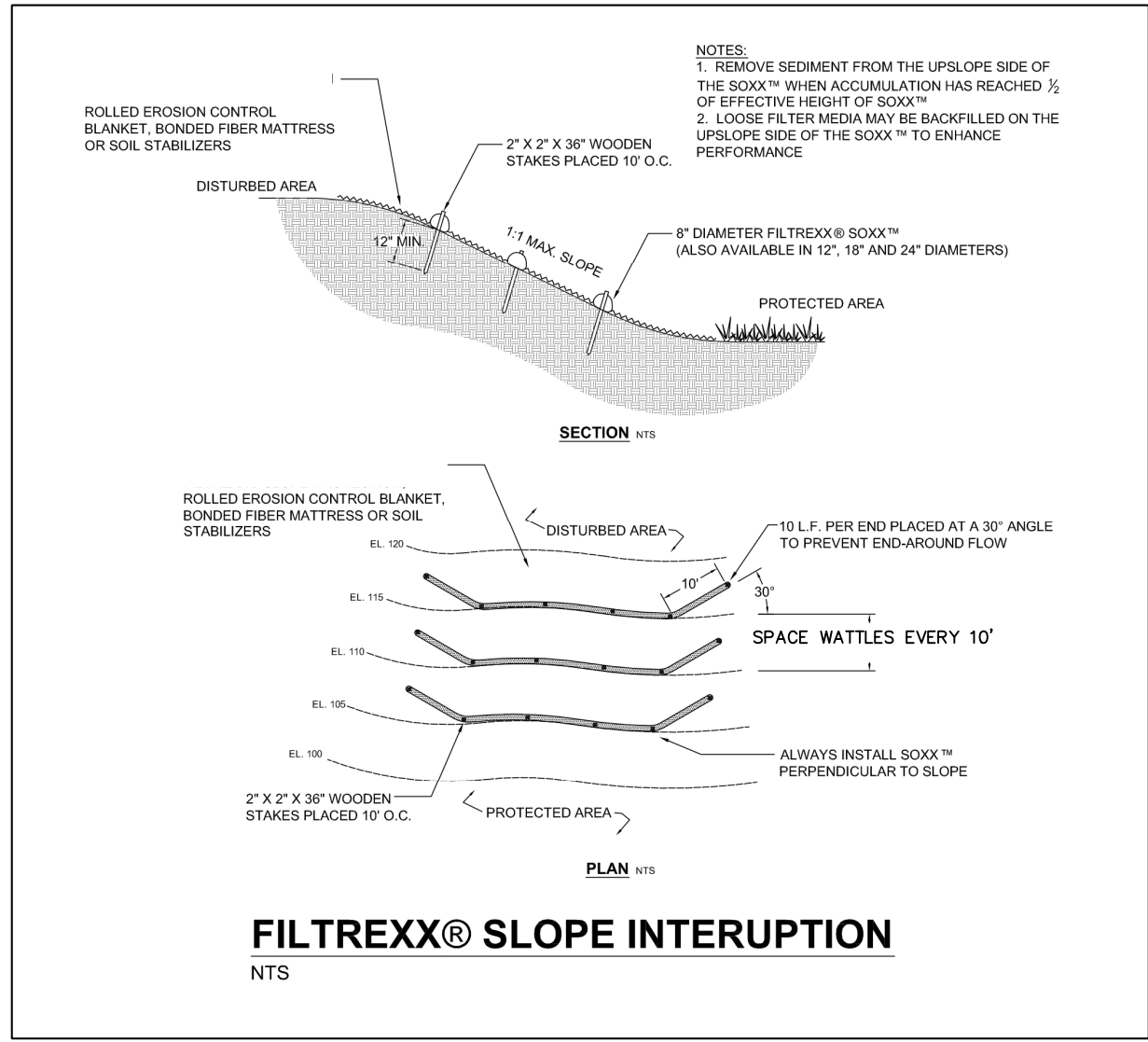
SINGLE-FAMILY RESIDENTIAL

TOWN OF BLACK MOUNTAIN

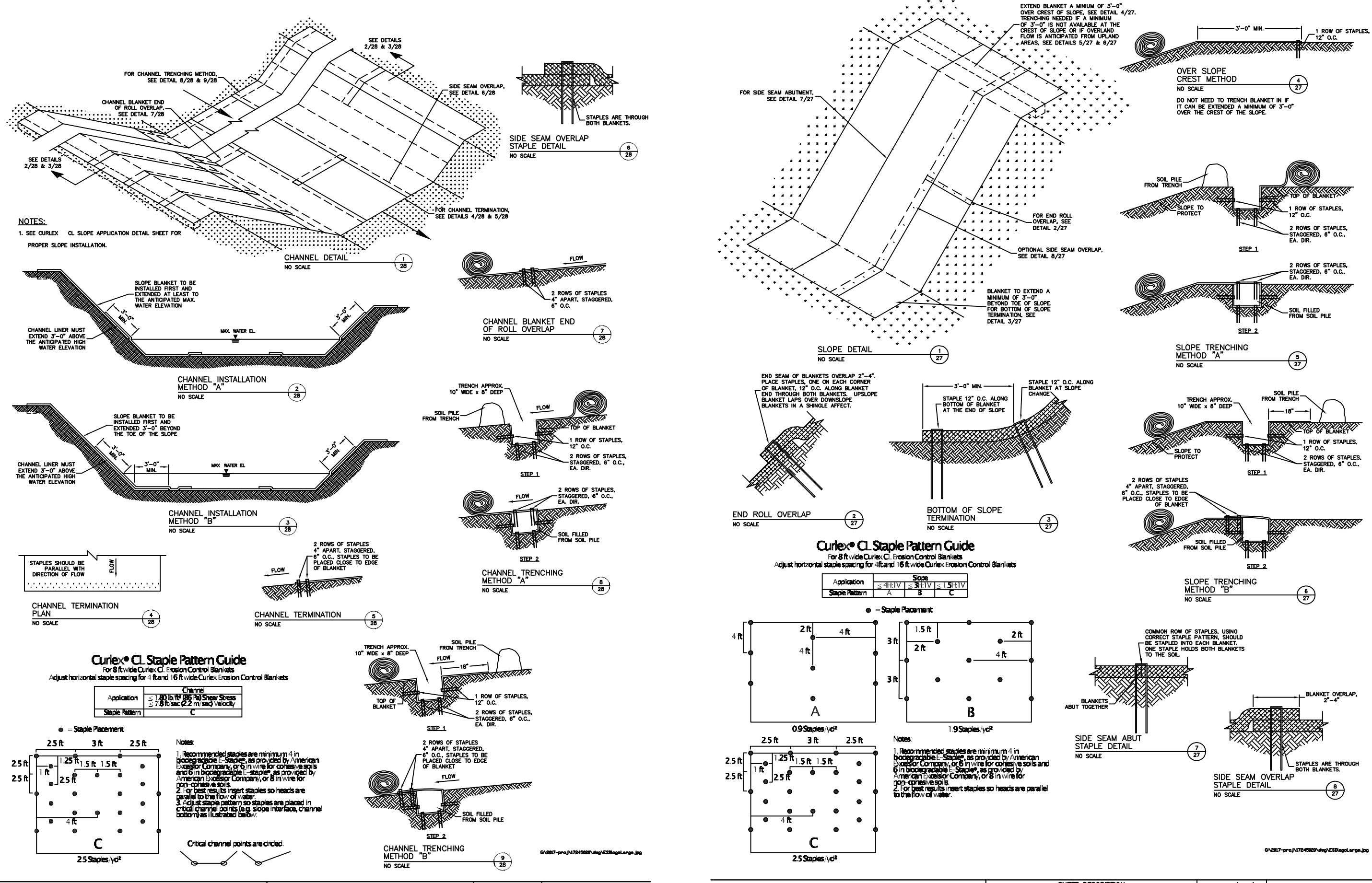
NORTH CAROLINA

DRAWING TITLE: EROSION CONTROL DETAILS

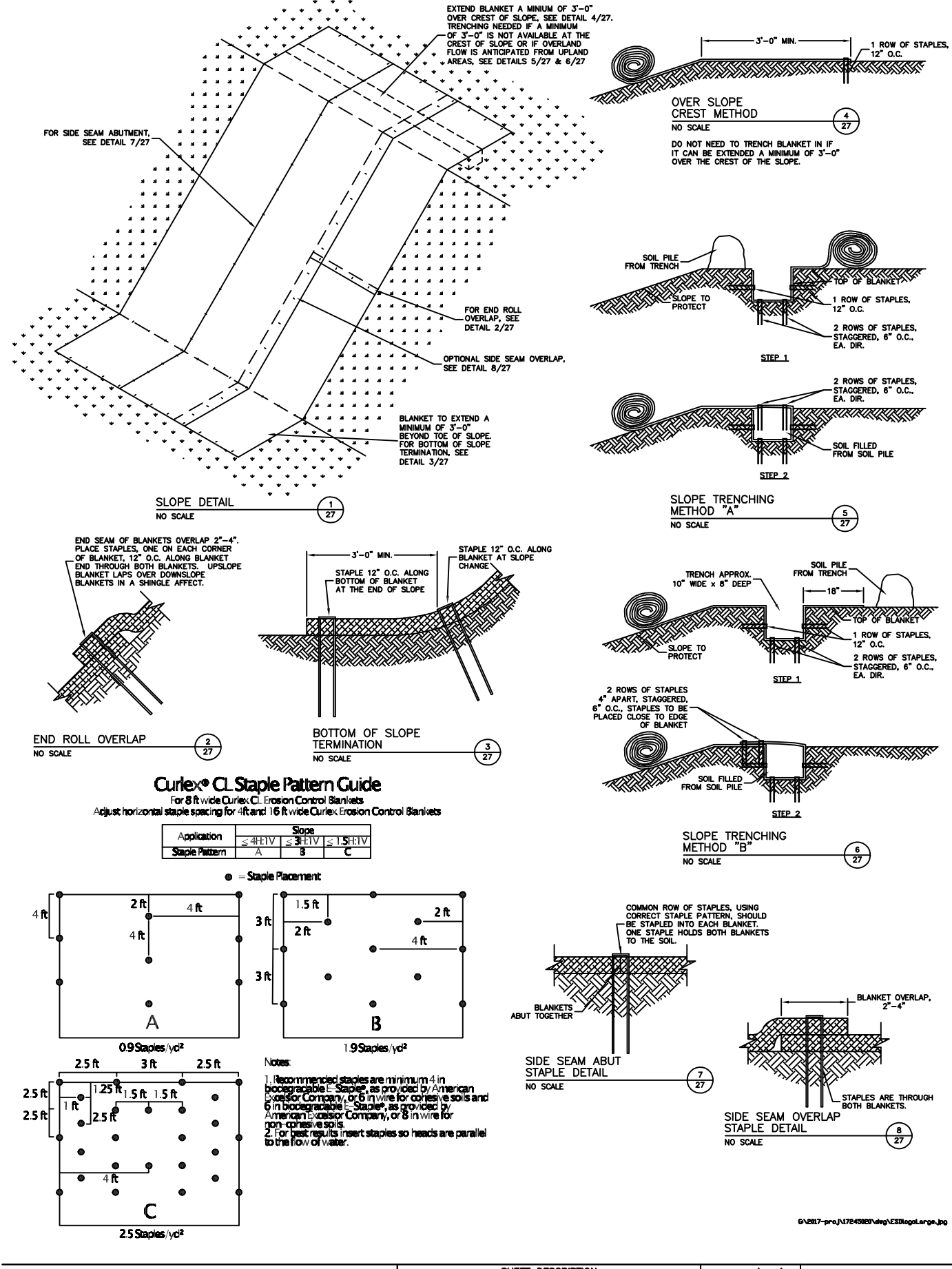




**A SLOPE INTERRUPTION WATTLES** SCALE= NTS



**B DOUBLE KNIT EXCELSIOR SWALE MATTING** SCALE= NTS



**C DOUBLE KNIT EXCELSIOR SLOPE MATTING** SCALE= NTS

|                                                 |   |                                         |               |
|-------------------------------------------------|---|-----------------------------------------|---------------|
| Project Name                                    |   | Land Quality or Local Program Project # |               |
| Financially Responsible Party (FRP) / Permittee |   | County                                  |               |
| INSPECTOR                                       |   | Name                                    | Employer      |
| Inspector Type (Mark)                           |   | Address                                 |               |
| FRP/Permittee                                   | X |                                         |               |
| Agent/Designee                                  |   | Phone Number                            | Email Address |

| PART 1A: Rainfall Data |                                                                                              | PART 1B: Current Phase of Project                                          |   |
|------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---|
| Day / Date             | Rain Amt (inches)                                                                            | Phase of Grading                                                           |   |
|                        | Daily Rainfall Required, except for Holidays or Weekends. If no rain, indicate with a "zero" | check the applicable box(es)                                               | X |
| M                      |                                                                                              | Installation of perimeter erosion and sediment control measures            |   |
| T                      |                                                                                              | Clearing and grubbing of existing ground cover                             |   |
| W                      |                                                                                              | Completion of any phase of grading of slopes or fills                      |   |
| Th                     |                                                                                              | Installation of storm drainage facilities                                  |   |
| F                      |                                                                                              | Completion of all land-disturbing activity, construction or development    |   |
| Sat (Optional)         |                                                                                              | Permanent ground cover sufficient to restrain erosion has been established |   |
| Sun (Optional)         |                                                                                              |                                                                            |   |

PART 1C: Signature of Inspector  
By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.

|                                                               |      |
|---------------------------------------------------------------|------|
| Financially Responsible Party / Permittee or Agent / Designee | Date |
|---------------------------------------------------------------|------|

| GROUND STABILIZATION TIMEFRAMES              |               |                                                                                       |  |
|----------------------------------------------|---------------|---------------------------------------------------------------------------------------|--|
| Site Area Description                        | Stabilization | Timeframe Exceptions                                                                  |  |
| Perimeter dikes, swales and slopes           | 7 Days        | None                                                                                  |  |
| High Quality Water (HQP) Zones               | 7 Days        | None                                                                                  |  |
| Slopes Steeper than 3:1                      | 7 Days        | If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed |  |
| Slopes 3:1 or flatter                        | 14 Days       | 7 days for slopes greater than 50' in length                                          |  |
| All other areas with slopes flatter than 4:1 | 14 Days       | None, except for perimeters and HQW Zones                                             |  |

\*For an editable copy of this form as a Word doc and other information, see <http://portal.ncdenr.org/web/it/erosion>

PART 2A: EROSION AND SEDIMENTATION CONTROL MEASURES: Measures must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.  
Erosion and Sedimentation Control Measures Inspected

| Measure ID or Location and Description | Operating Properly? (Y/N) | Any Repair or Maintenance Needed? (Y/N) | New Measures Installed * Proposed Dimensions (ft.) | Actual Dimensions (ft.) | Significant Deviation from Plan? (Y/N) | Inspection Date | Describe Actions Needed | Date Corrected |
|----------------------------------------|---------------------------|-----------------------------------------|----------------------------------------------------|-------------------------|----------------------------------------|-----------------|-------------------------|----------------|
|                                        |                           |                                         |                                                    |                         |                                        |                 |                         |                |
|                                        |                           |                                         |                                                    |                         |                                        |                 |                         |                |
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|                                        |                           |                                         |                                                    |                         |                                        |                 |                         |                |
|                                        |                           |                                         |                                                    |                         |                                        |                 |                         |                |

\*New erosion and sedimentation control measures installed since the last inspection should be documented here or by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan. List Dimensions of Measures such as Sediment Basins and Riprap Aprons

PART 2B: STORMWATER DISCHARGE OUTFALLS (SDOs): SDOs must be inspected at least ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT GREATER THAN 0.5 INCH PER 24 HOUR PERIOD.  
Stormwater Discharge Outfalls Inspected

| Stormwater Discharge Outfall ID or Location | Any Visible Sedimentation in Streams, Wetlands or Outside Site Limits? (Y/N) | Any Increase in Stream Turbidity from Discharge? (Y/N) | Any Visible Erosion below SDO? (Y/N) | Any visible oil sheen, floating or suspended solids or discoloration? (Y/N) | Inspection Date | Report Visible Sedimentation to streams or wetlands to Land Quality within 24 Hours                         | Describe Actions Needed                                                                    | Date Corrected |
|---------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------|
|                                             |                                                                              |                                                        |                                      |                                                                             |                 | <a href="http://portal.ncdenr.org/web/division-contacts">http://portal.ncdenr.org/web/division-contacts</a> | Corrective actions should be performed as soon as possible and before the next storm event |                |
|                                             |                                                                              |                                                        |                                      |                                                                             |                 |                                                                                                             |                                                                                            |                |
|                                             |                                                                              |                                                        |                                      |                                                                             |                 |                                                                                                             |                                                                                            |                |
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|                                             |                                                                              |                                                        |                                      |                                                                             |                 |                                                                                                             |                                                                                            |                |
|                                             |                                                                              |                                                        |                                      |                                                                             |                 |                                                                                                             |                                                                                            |                |
|                                             |                                                                              |                                                        |                                      |                                                                             |                 |                                                                                                             |                                                                                            |                |

PART 2C: GROUND STABILIZATION Must be recorded after each Phase of Grading

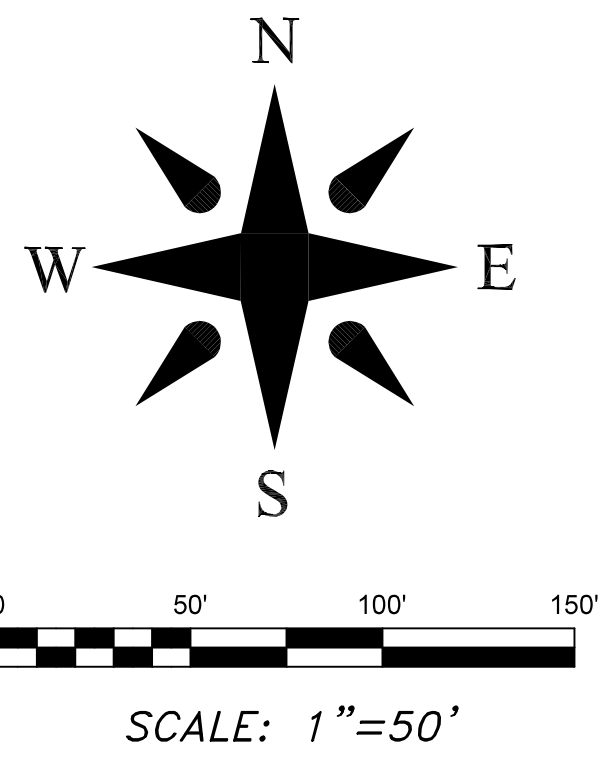
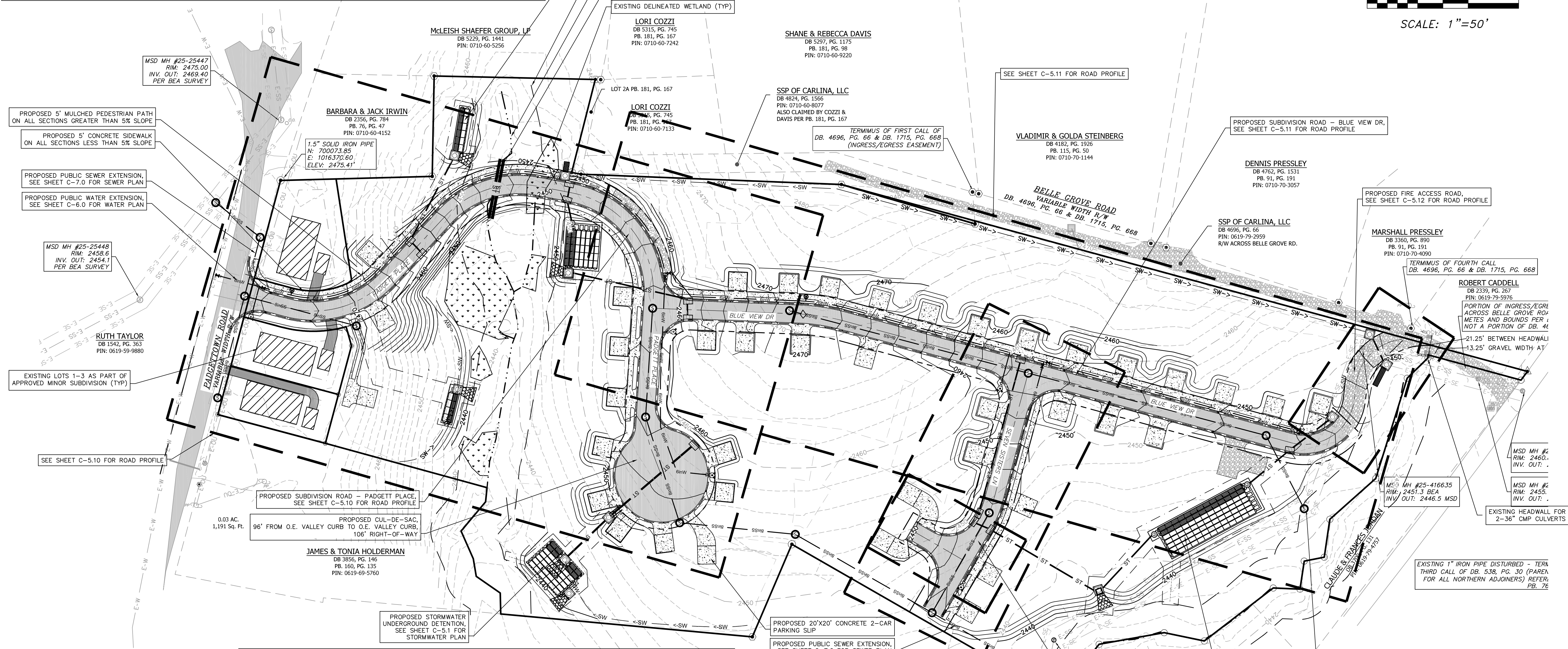
| Areas Where Land Disturbance Has Been Completed or Temporarily Stopped | Time Limit for Ground Cover 7 days or 14 days | Is Ground Cover Sufficient to Restrain Erosion? (Y/N) | Inspection Date | Describe Actions Needed | Date Corrected |
|------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|-----------------|-------------------------|----------------|
|                                                                        |                                               |                                                       |                 |                         |                |
|                                                                        |                                               |                                                       |                 |                         |                |
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**D DEMLR MONITORING FORM** SCALE= NTS

|                                                                                                                                                    |                                                  |                                                                                                      |                                                                                                                                                                                                                   |                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Project No:<br><b>480918</b>                                                                                                                       | Drawing Title:<br><b>EROSION CONTROL DETAILS</b> | PADGETTOWN ROAD SUBDIVISION<br>SINGLE-FAMILY RESIDENTIAL<br>NORTH CAROLINA<br>TOWN OF BLACK MOUNTAIN | REVISIONS/SUBMISSIONS<br>1 PRELIMINARY PLANS<br>2 PRELIMINARY SITE PLAN<br>3 NCDOT DRIVEWAY PERMIT<br>4 TOBM PLANNING AND ZONING<br>5 MSD SUBMITTAL - PH1 AND PH2 SEWER<br>6 TOBM STORMWATER<br>7 WATER SUBMITTAL | Date<br>2/21/19<br>2/22/19<br>2/25/19<br>3/8/19<br>3/14/19<br>3/15/19<br>3/18/19 |
|                                                                                                                                                    |                                                  |                                                                                                      |                                                                                                                                                                                                                   |                                                                                  |
| PADGETTOWN ROAD SUBDIVISION<br>SINGLE-FAMILY RESIDENTIAL<br>NORTH CAROLINA<br>TOWN OF BLACK MOUNTAIN                                               |                                                  |                                                                                                      | PERMIT SET                                                                                                                                                                                                        |                                                                                  |
| BROOKS ENGINEERING ASSOCIATES<br>17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brookseas.com |                                                  |                                                                                                      | Planning • Engineering • Surveying<br>• Environmental Services •                                                                                                                                                  |                                                                                  |

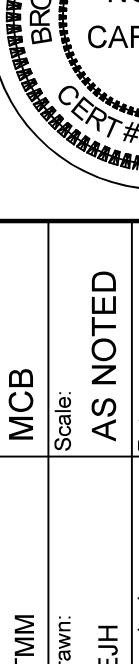


| GRADING/STORMWATER PLAN LEGEND |                           |                       |
|--------------------------------|---------------------------|-----------------------|
| EXIST. BOUNDARY                | EXIST. OVERHEAD UTILITIES | NEW AIR RELEASE VALVE |
| EXIST. STREAM                  | NEW PROPERTY LINES        | WM3 NEW WATER SERVICE |
| EXIST. STREAM BUFFER           | NEW RIGHT OF WAY          | NEW WATER EASEMENT    |
| EXIST. WETLAND                 | NEW EASEMENT              | ST NEW STORM PIPE     |
| EXIST. RIGHT OF WAY            | BUILDING SETBACK LINE     | SW-> NEW STORM SWALE  |
| EXIST. EASEMENT                | NEW BUILDING              | NEW CATCH BASIN       |
| EXIST. BUILDING SETBACK        | NEW 24" VALLEY CURB       | NEW DROP INLET        |
| EXIST. BUILDING                | NEW SIDEWALK              | NEW JUNCTION BOX      |
| EXIST. SIDEWALK                | NEW PAVEMENT              |                       |
| EXIST. EDGE OF PAVING          | NEW SEWER                 |                       |
| EXIST. STORM                   | NEW SEWER MANHOLE         |                       |
| EXIST. SEWER                   | NEW SEWER SERVICE         |                       |
| EXIST. SEWER EASEMENT          | NEW SEWER EASEMENT        |                       |
| EXIST. FIRE HYDRANT            | NEW WATER                 |                       |
| EXIST. WATER                   | NEW FIRE HYDRANT          |                       |
| EXIST. WATER EASEMENT          | NEW GATE VALVE            |                       |

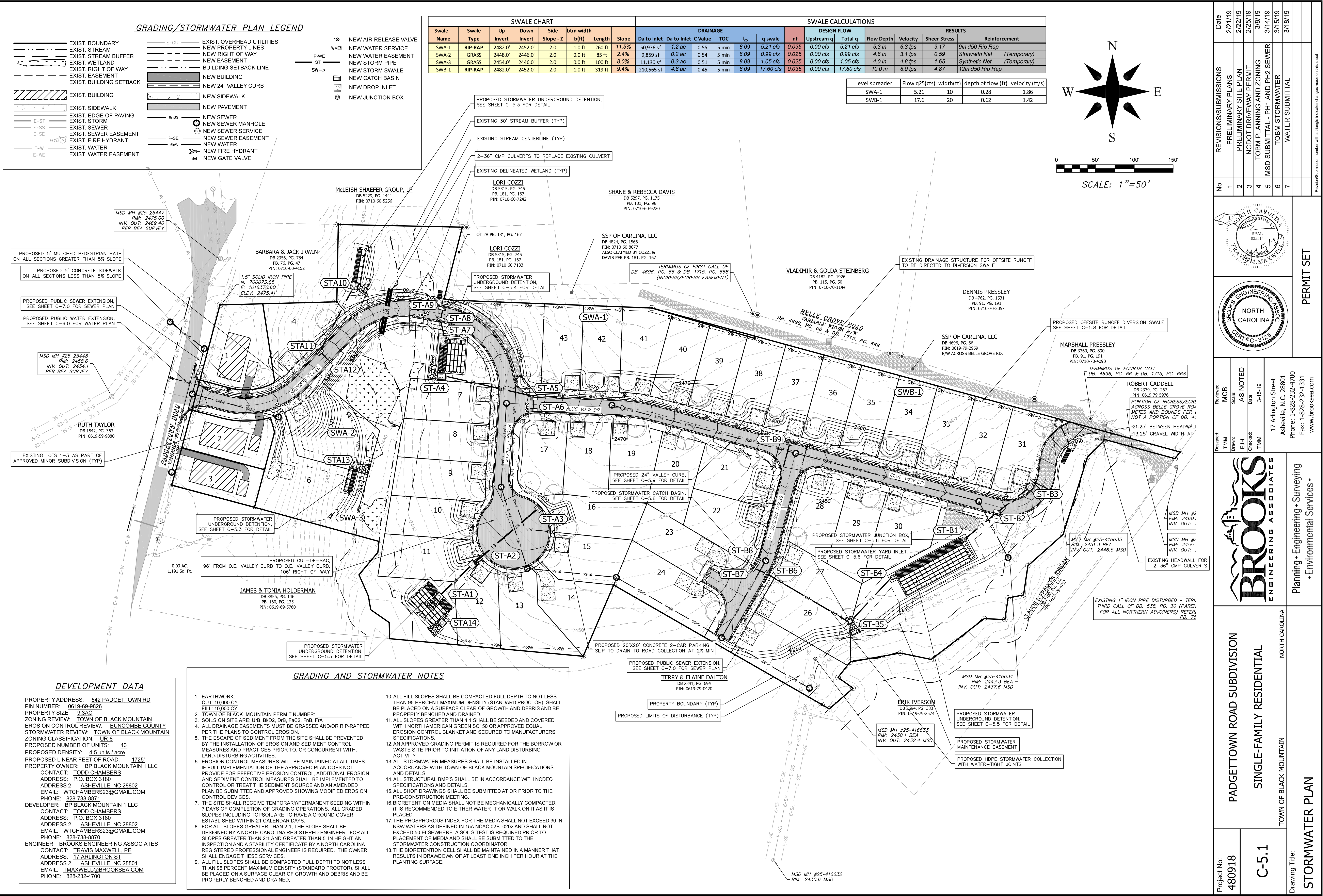


| DEVELOPMENT DATA              |                               |
|-------------------------------|-------------------------------|
| PROPERTY ADDRESS:             | 542 PADGETTOWN RD             |
| PIN NUMBER:                   | 0619-69-9826                  |
| PROPERTY SIZE:                | 9.3AC                         |
| ZONING REVIEW:                | TOWN OF BLACK MOUNTAIN        |
| EROSION CONTROL REVIEW:       | BUNCOMBE COUNTY               |
| STORMWATER REVIEW:            | TOWN OF BLACK MOUNTAIN        |
| ZONING CLASSIFICATION:        | UR-S                          |
| PROPOSED NUMBER OF UNITS:     | 40                            |
| PROPOSED DENSITY:             | 4.5 units / acre              |
| PROPOSED LINEAR FEET OF ROAD: | 1725'                         |
| PROPERTY OWNER:               | BP BLACK MOUNTAIN 1 LLC       |
| CONTACT:                      | TODD CHAMBERS                 |
| ADDRESS:                      | P.O. BOX 3180                 |
| ADDRESS 2:                    | ASHEVILLE, NC 28802           |
| EMAIL:                        | WTCHAMBERS23@GMAIL.COM        |
| PHONE:                        | 828-738-9871                  |
| DEVELOPER:                    | BP BLACK MOUNTAIN 1 LLC       |
| CONTACT:                      | TODD CHAMBERS                 |
| ADDRESS:                      | P.O. BOX 3180                 |
| ADDRESS 2:                    | ASHEVILLE, NC 28802           |
| EMAIL:                        | WTCHAMBERS23@GMAIL.COM        |
| PHONE:                        | 828-738-9870                  |
| ENGINEER:                     | BROOKS ENGINEERING ASSOCIATES |
| CONTACT:                      | TRAVIS MAXWELL, PE            |
| ADDRESS:                      | 127 ARLINGTON ST              |
| ADDRESS 2:                    | ASHEVILLE, NC 28801           |
| EMAIL:                        | TMAXWELL@BROOKSEA.COM         |
| PHONE:                        | 828-232-4700                  |

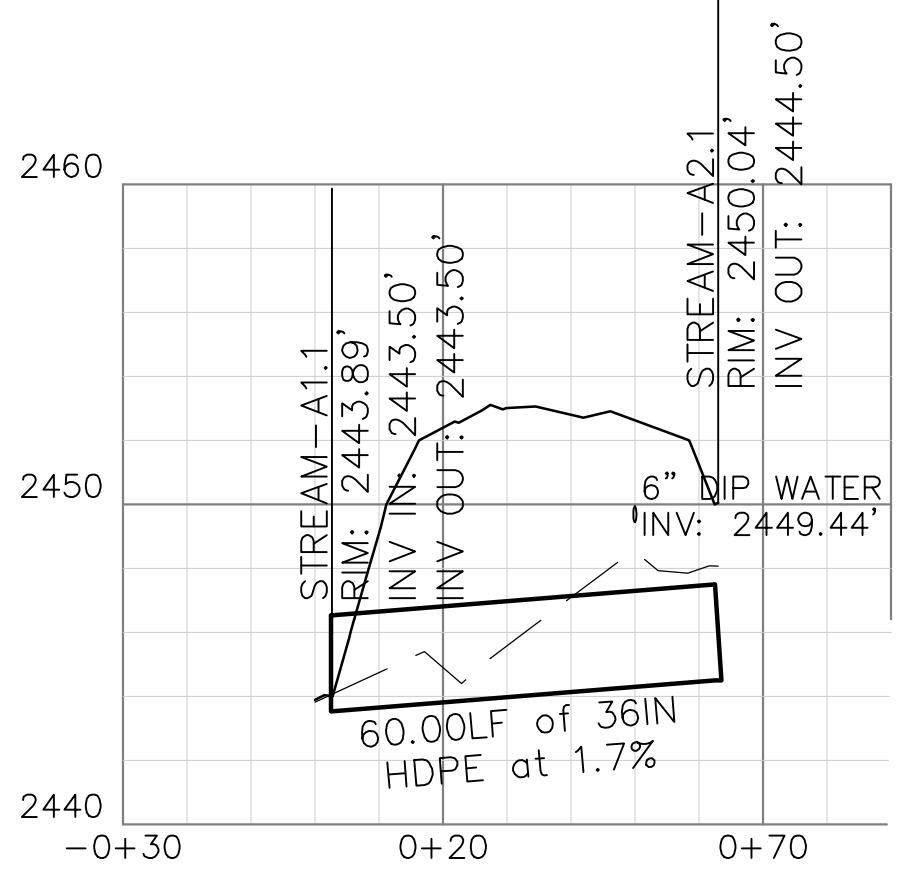
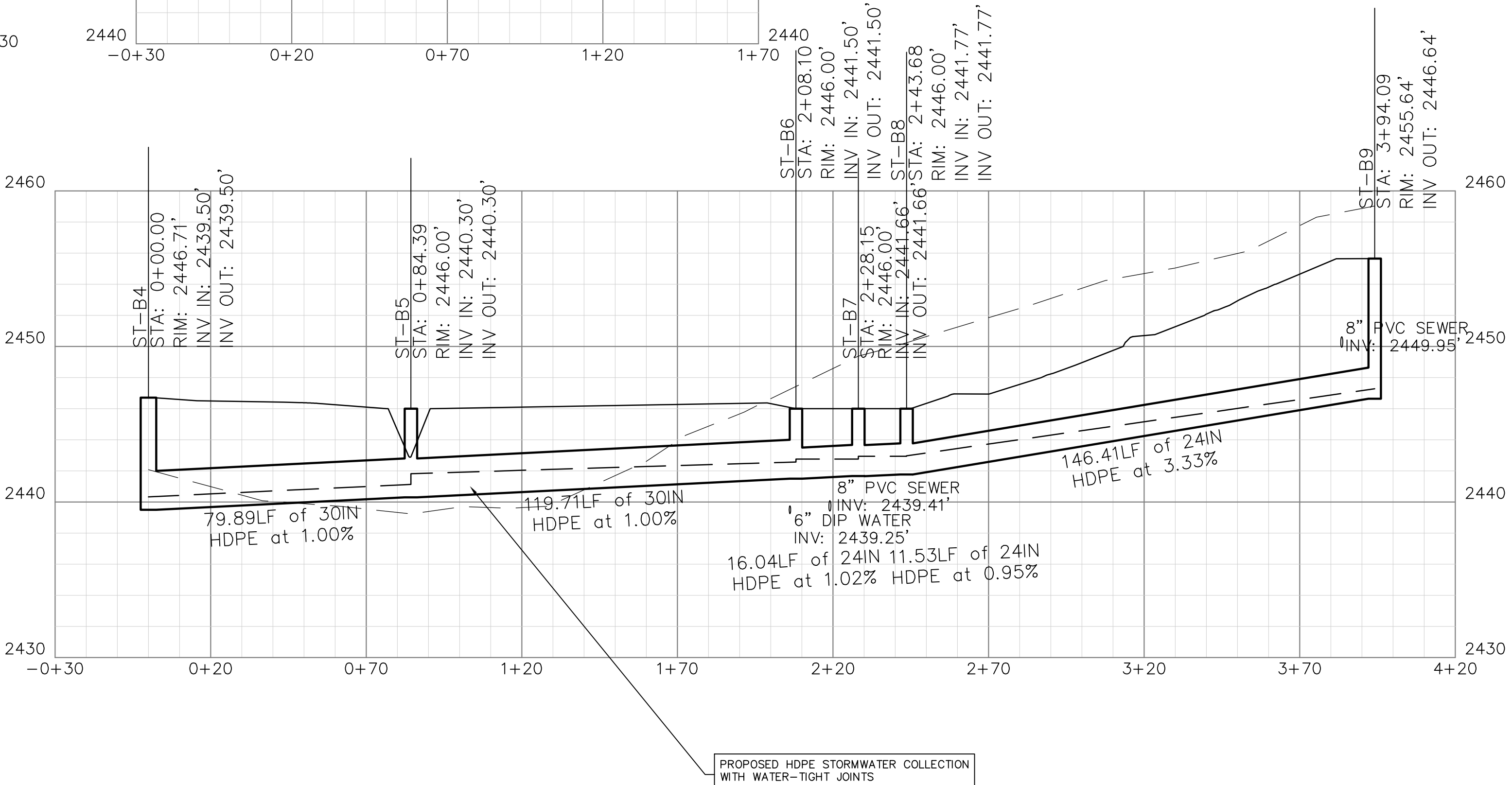
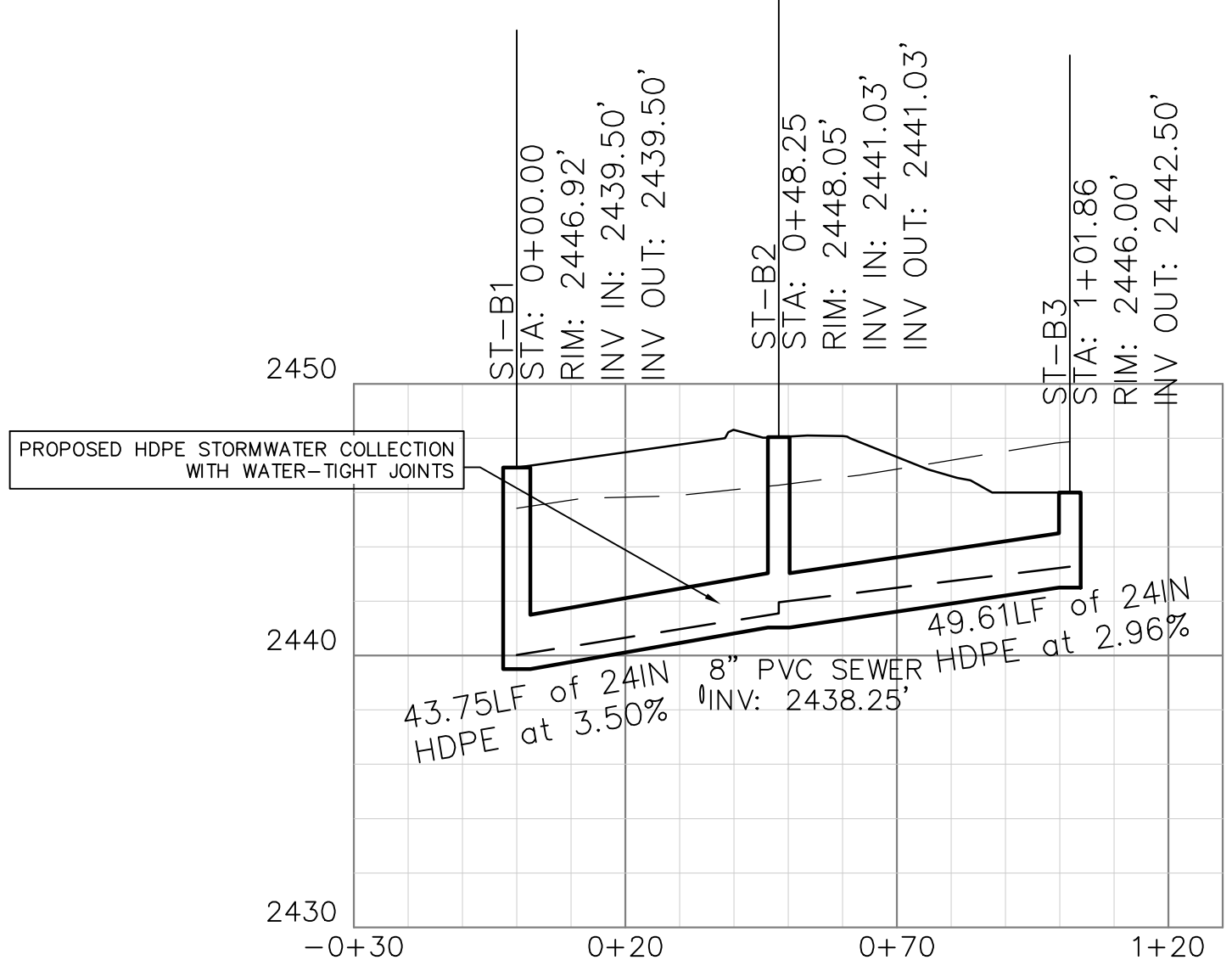
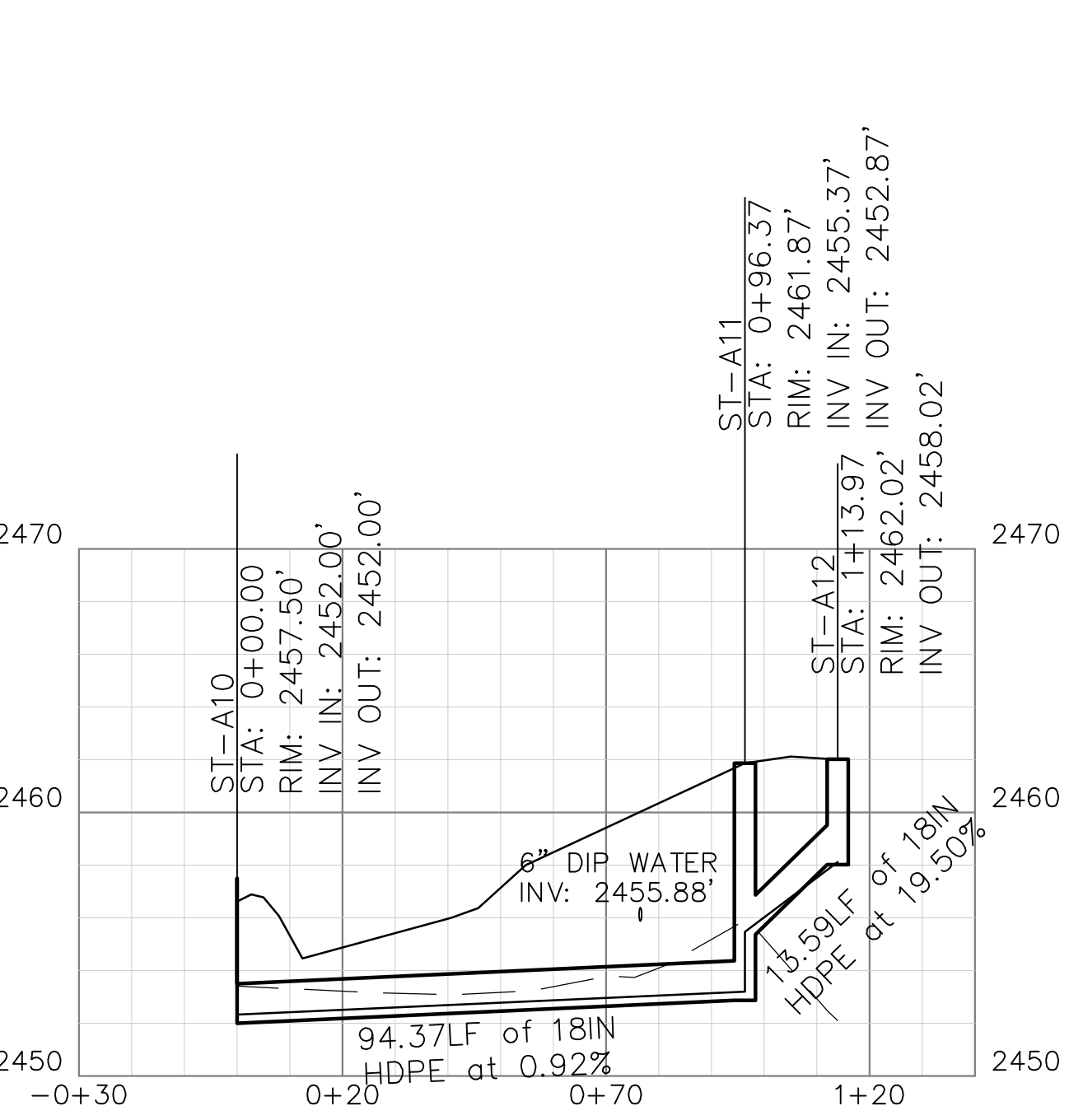
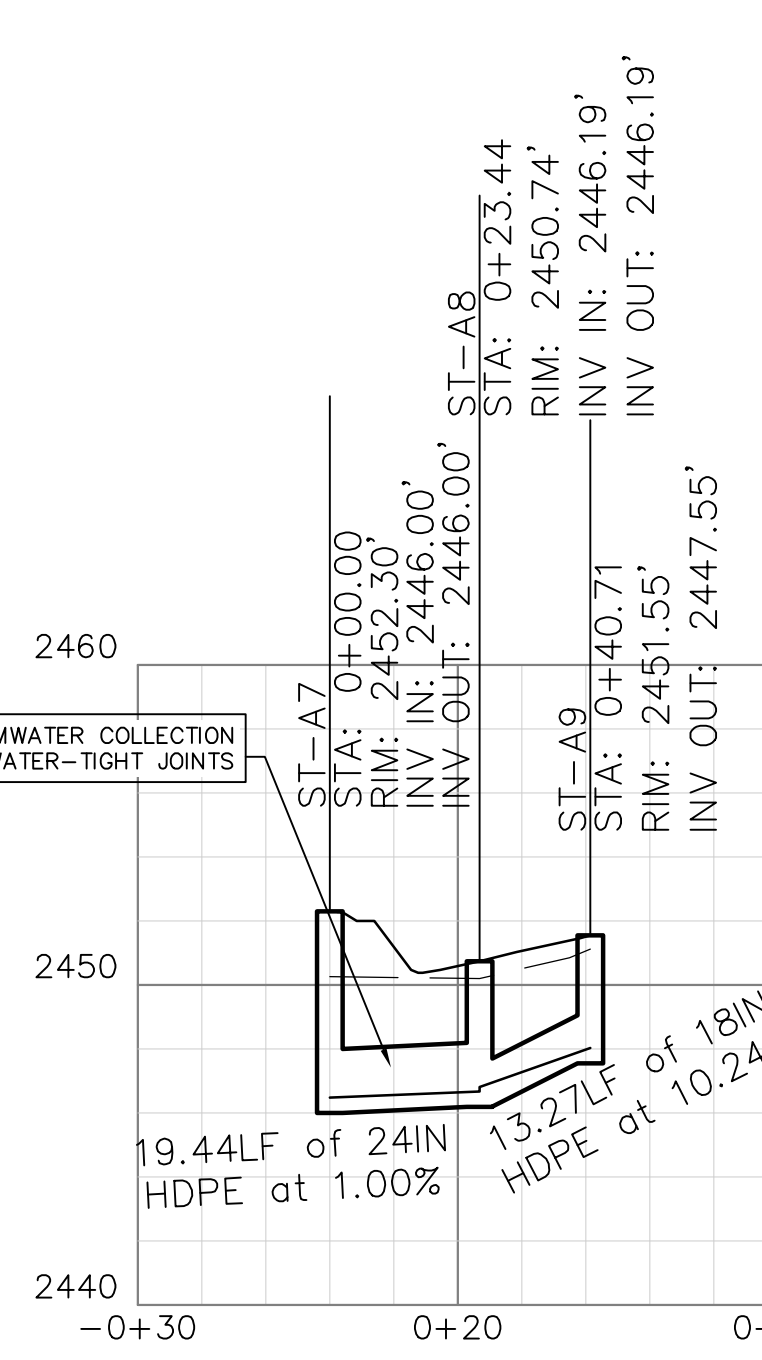
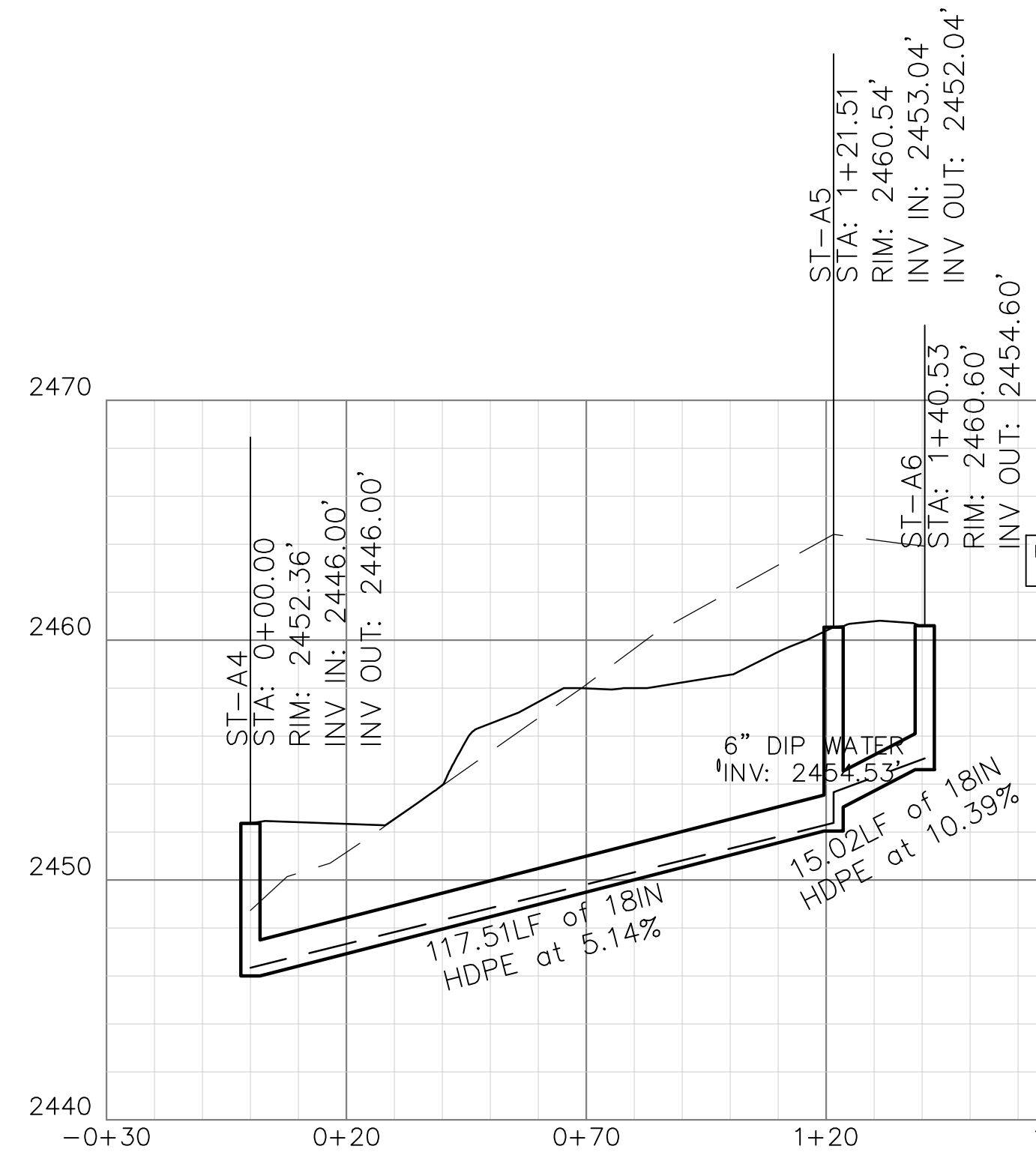
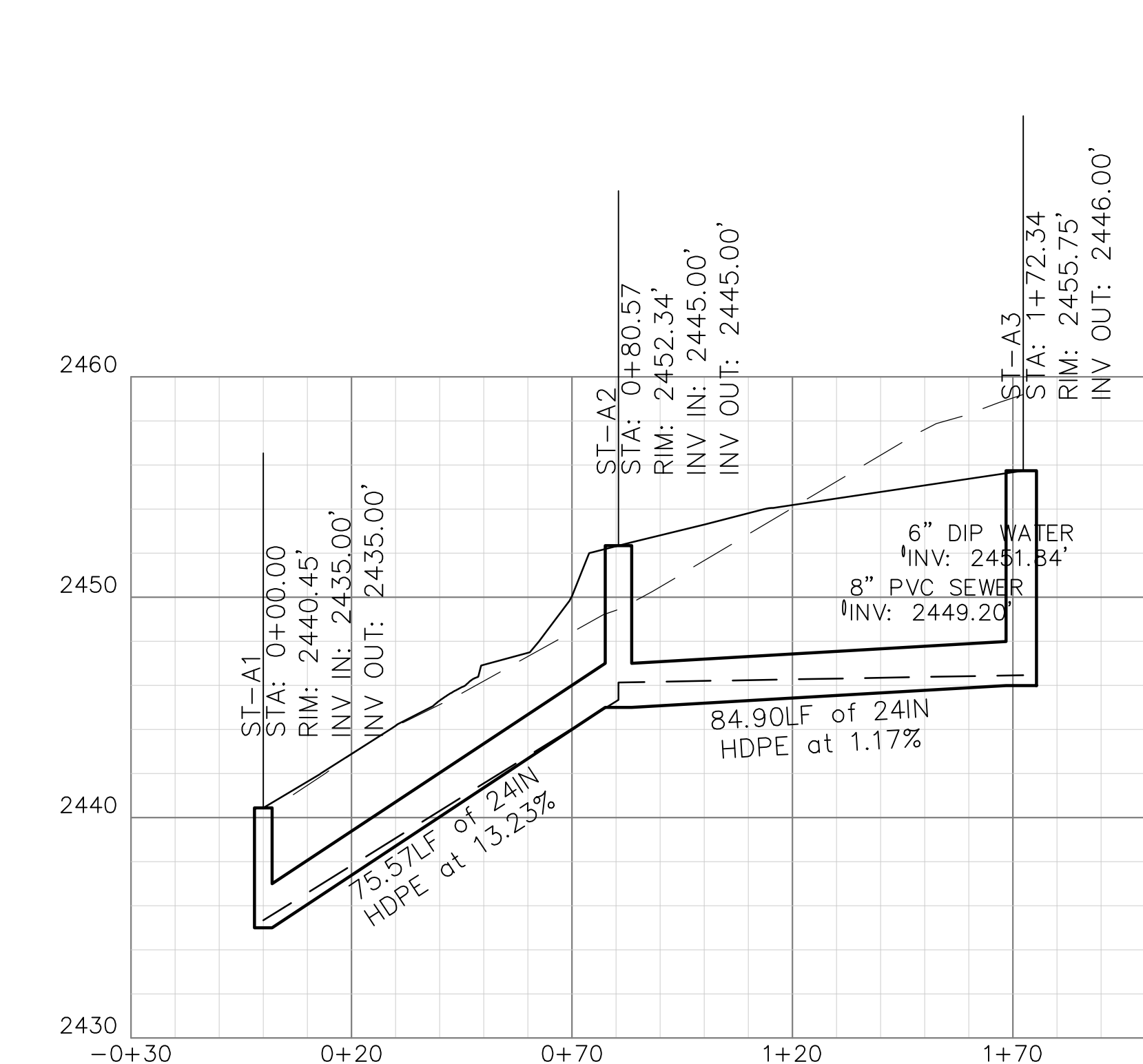
| GRADING AND STORMWATER NOTES                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. EARTHWORK:<br>CUT: 10,000 CY<br>FILL: 10,000 CY                                                                                                                                                                                                                                                                                                             | 10. ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM DENSITY (STANDARD PROCTOR), SHALL BE PLACED ON A SURFACE CLEAR OF GROWTH AND DEBRIS AND BE PROPERLY BENCHED AND DRAINED.                                                        |
| 2. TOWN OF BLACK MOUNTAIN PERMIT NUMBER:                                                                                                                                                                                                                                                                                                                       | 11. ALL SLOPES GREATER THAN 4:1 SHALL BE SEEDED AND COVERED WITH NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL EROSION CONTROL BLANKET AND SECURED TO MANUFACTURERS SPECIFICATIONS.                                                                                    |
| 3. SOILS ON SITE: UH9, BkD, D9, FaC2, FbB, FfA                                                                                                                                                                                                                                                                                                                 | 12. AN APPROVED GRADING PERMIT IS REQUIRED FOR THE BORROW OR WASTE SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.                                                                                                                                          |
| 4. ALL DRAINAGE EASEMENTS MUST BE GRASSED AND/OR RIP-RAPPED PER THE PLANS TO CONTROL EROSION.                                                                                                                                                                                                                                                                  | 13. ALL STORMWATER MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH TOWN OF BLACK MOUNTAIN SPECIFICATIONS AND DETAILS.                                                                                                                                                  |
| 5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.                                                                                                                                                                | 14. ALL STRUCTURAL BMP'S SHALL BE IN ACCORDANCE WITH NCDEQ SPECIFICATIONS AND DETAILS.                                                                                                                                                                                |
| 6. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE AND AN AMENDED PLAN BE SUBMITTED AND APPROVED SHOWING MODIFIED EROSION CONTROL DEVICES. | 15. ALL SHOP DRAWINGS SHALL BE SUBMITTED AT OR PRIOR TO THE PRE-CONSTRUCTION MEETING.                                                                                                                                                                                 |
| 7. THE SITE SHALL RECEIVE TEMPORARY/PERMANENT SEEDING WITHIN 7 DAYS OF COMPLETION OF GRADING OPERATIONS. ALL GRADED SLOPES INCLUDING TOPSOIL ARE TO HAVE A GROUND COVER ESTABLISHED WITHIN 21 CALENDAR DAYS.                                                                                                                                                   | 16. BIORETENTION MEDIA SHALL NOT BE MECHANICALLY COMPACTED. IT IS RECOMMENDED TO EITHER WATER IT OR WALK ON IT AS IT IS PLACED.                                                                                                                                       |
| 8. FOR ALL SLOPES GREATER THAN 2:1, THE SLOPE SHALL BE DESIGNED BY A NORTH CAROLINA REGISTERED ENGINEER. FOR ALL SLOPES GREATER THAN 2:1 AND GREATER THAN 5' IN HEIGHT, AN INSPECTION AND A STABILITY CERTIFICATE BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER IS REQUIRED. THE OWNER SHALL ENGAGE THESE SERVICES.                                     | 17. THE PHOSPHOROUS INDEX FOR THE MEDIA SHALL NOT EXCEED 30 IN NSW WATERS AS DEFINED IN 15A NCAC 02B .0202 AND SHALL NOT EXCEED 50 ELSEWHERE. A SOILS TEST IS REQUIRED PRIOR TO PLACEMENT OF MEDIA AND SHALL BE SUBMITTED TO THE STORMWATER CONSTRUCTION COORDINATOR. |
| 9. ALL FILL SLOPES SHALL BE COMPACTED FULL DEPTH TO NOT LESS THAN 95 PERCENT MAXIMUM DENSITY (STANDARD PROCTOR), SHALL BE PLACED ON A SURFACE CLEAR OF GROWTH AND DEBRIS AND BE PROPERLY BENCHED AND DRAINED.                                                                                                                                                  | 18. THE BIORETENTION CELL SHALL BE MAINTAINED IN A MANNER THAT RESULTS IN DRAWDOWN OF AT LEAST ONE INCH PER HOUR AT THE PLANTING SURFACE.                                                                                                                             |

|                                                                                                 |                                   |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
|-------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|-----|---|-------------------|---------|---|-----------------------|---------|---|-----------------------|---------|---|--------------------------|--------|---|-----------------------------------|---------|---|-----------------|---------|---|-----------------|---------|
| Project No:<br>480918                                                                           |                                   | PADGETTOWN ROAD SUBDIVISION |         | NORTH CAROLINA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | TOWN OF BLACK MOUNTAIN |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| C-5.0                                                                                           |                                   | SINGLE-FAMILY RESIDENTIAL   |         | NORTH CAROLINA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| Drawing Title:<br>GRADING PLAN                                                                  |                                   |                             |         | Planning • Engineering • Surveying<br>• Environmental Services •                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| Designed:<br>TMM                                                                                |                                   | Reviewed:<br>MCB            |         | <div>17 Arlington Street<br/>Asheville, N.C. 28801<br/>Phone: 1-828-232-4700<br/>Fax: 1-828-232-1331<br/>www.brooksea.com</div>                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| Drawn:<br>EJH                                                                                   |                                   | Scale:<br>AS NOTED          |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| Checked:<br>TMM                                                                                 |                                   | Date:<br>3-15-19            |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
|                                                                                                 |                                   |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
|                                                                                                 |                                   |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| <div></div> |                                   |                             |         | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| <div></div> |                                   |                             |         | PERMIT SET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
|                                                                                                 |                                   |                             |         | <div>REVISIONS/SUBMISSIONS</div> <table><tr><td>No.</td><td>1</td><td>PRELIMINARY PLANS</td><td>2/21/19</td></tr><tr><td>2</td><td>PRELIMINARY SITE PLAN</td><td>2/22/19</td></tr><tr><td>3</td><td>NCDOT DRIVEWAY PERMIT</td><td>2/25/19</td></tr><tr><td>4</td><td>TOBM PLANNING AND ZONING</td><td>3/8/19</td></tr><tr><td>5</td><td>MSD SUBMITTAL - PH1 AND PH2 SEWER</td><td>3/14/19</td></tr><tr><td>6</td><td>TOBM STORMWATER</td><td>3/15/19</td></tr><tr><td>7</td><td>WATER SUBMITTAL</td><td>3/18/19</td></tr></table> |  |                        |  | No. | 1 | PRELIMINARY PLANS | 2/21/19 | 2 | PRELIMINARY SITE PLAN | 2/22/19 | 3 | NCDOT DRIVEWAY PERMIT | 2/25/19 | 4 | TOBM PLANNING AND ZONING | 3/8/19 | 5 | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19 | 6 | TOBM STORMWATER | 3/15/19 | 7 | WATER SUBMITTAL | 3/18/19 |
| No.                                                                                             | 1                                 | PRELIMINARY PLANS           | 2/21/19 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 2                                                                                               | PRELIMINARY SITE PLAN             | 2/22/19                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 3                                                                                               | NCDOT DRIVEWAY PERMIT             | 2/25/19                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 4                                                                                               | TOBM PLANNING AND ZONING          | 3/8/19                      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 5                                                                                               | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 6                                                                                               | TOBM STORMWATER                   | 3/15/19                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 7                                                                                               | WATER SUBMITTAL                   | 3/18/19                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
|                                                                                                 |                                   |                             |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                        |  |     |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |









VERTICAL SCALE: 1"=6'

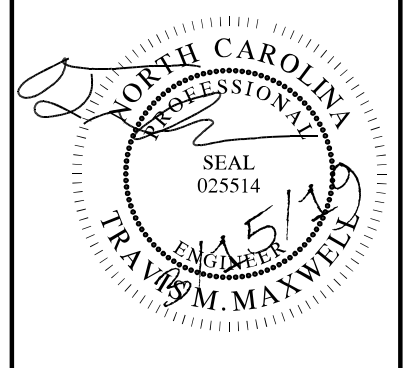
HORIZONTAL SCALE: 1"=30'

|                                              |                             |                        |                                                                              |                       |                                   |   |                   |
|----------------------------------------------|-----------------------------|------------------------|------------------------------------------------------------------------------|-----------------------|-----------------------------------|---|-------------------|
| Project No:<br><b>480918</b>                 | PADGETTOWN ROAD SUBDIVISION | NORTH CAROLINA         | Date<br>2/21/19                                                              | REVISIONS/SUBMISSIONS | No.                               | 1 | PRELIMINARY PLANS |
|                                              |                             |                        |                                                                              |                       |                                   |   |                   |
| C-5.2                                        | SINGLE-FAMILY RESIDENTIAL   | TOWN OF BLACK MOUNTAIN | 2/22/19                                                                      | 2                     | PRELIMINARY SITE PLAN             |   |                   |
|                                              |                             |                        | 2/25/19                                                                      | 3                     | NCDOT DRIVEWAY PERMIT             |   |                   |
|                                              |                             |                        | 3/8/19                                                                       | 4                     | TOBM PLANNING AND ZONING          |   |                   |
|                                              |                             |                        | 3/14/19                                                                      | 5                     | MSD SUBMITTAL - PH1 AND PH2 SEWER |   |                   |
|                                              |                             |                        | 3/15/19                                                                      | 6                     | TOBM STORMWATER                   |   |                   |
| Drawing Title:<br><b>STORMWATER PROFILES</b> | TOWN OF BLACK MOUNTAIN      | NORTH CAROLINA         | 3/18/19                                                                      | 7                     | WATER SUBMITTAL                   |   |                   |
|                                              |                             |                        |                                                                              |                       |                                   |   |                   |
| PERMIT SET                                   |                             |                        | Revision/Submission number with a large indicates changes made on this sheet |                       |                                   |   |                   |

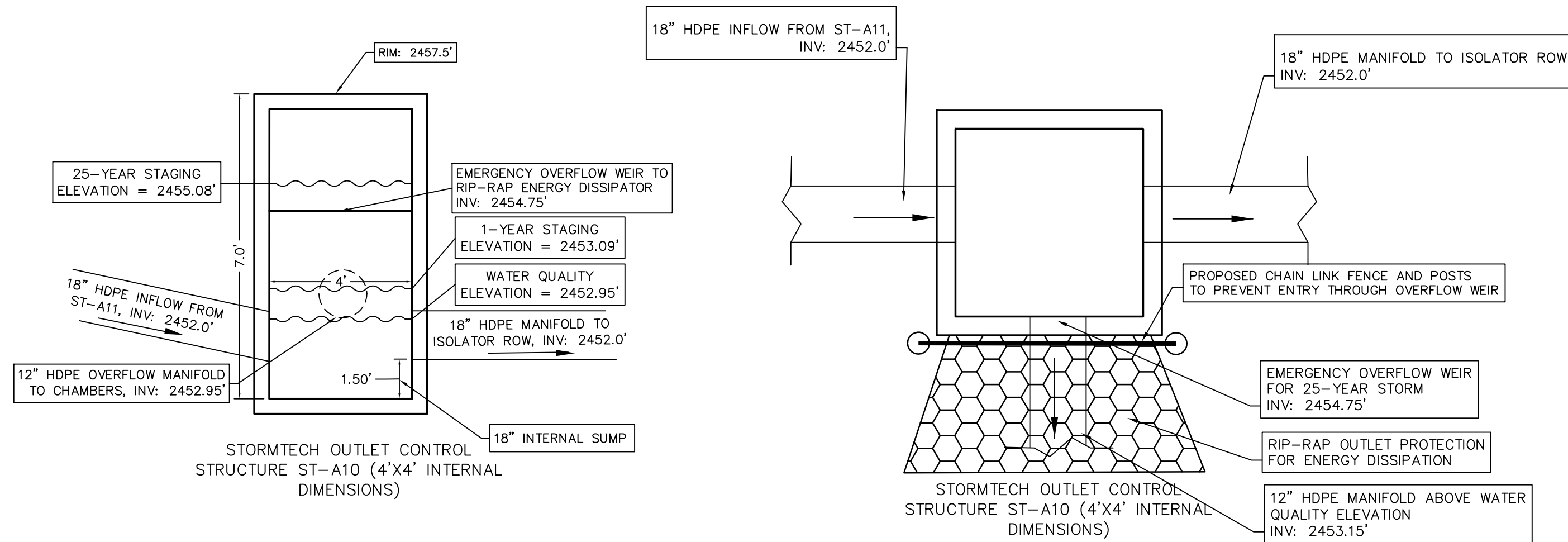
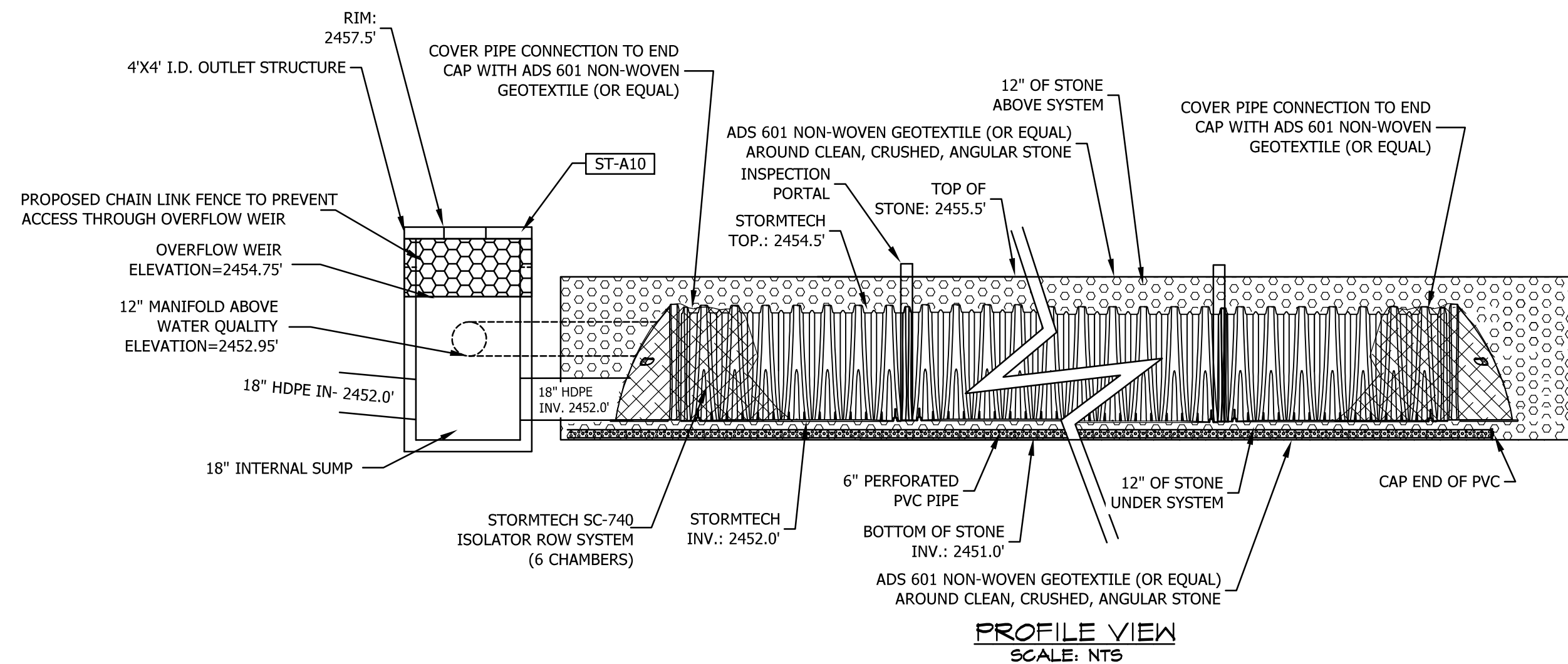
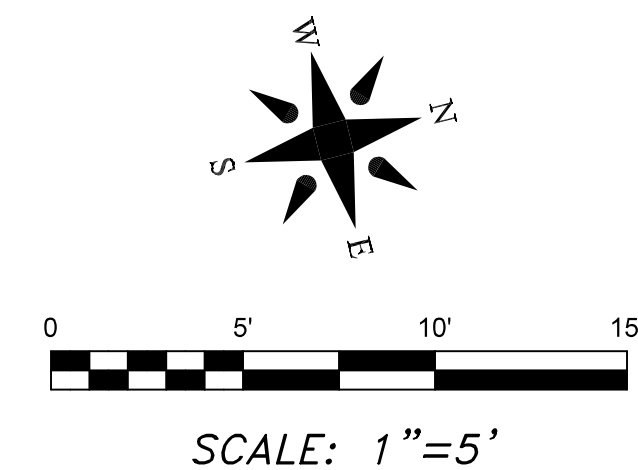
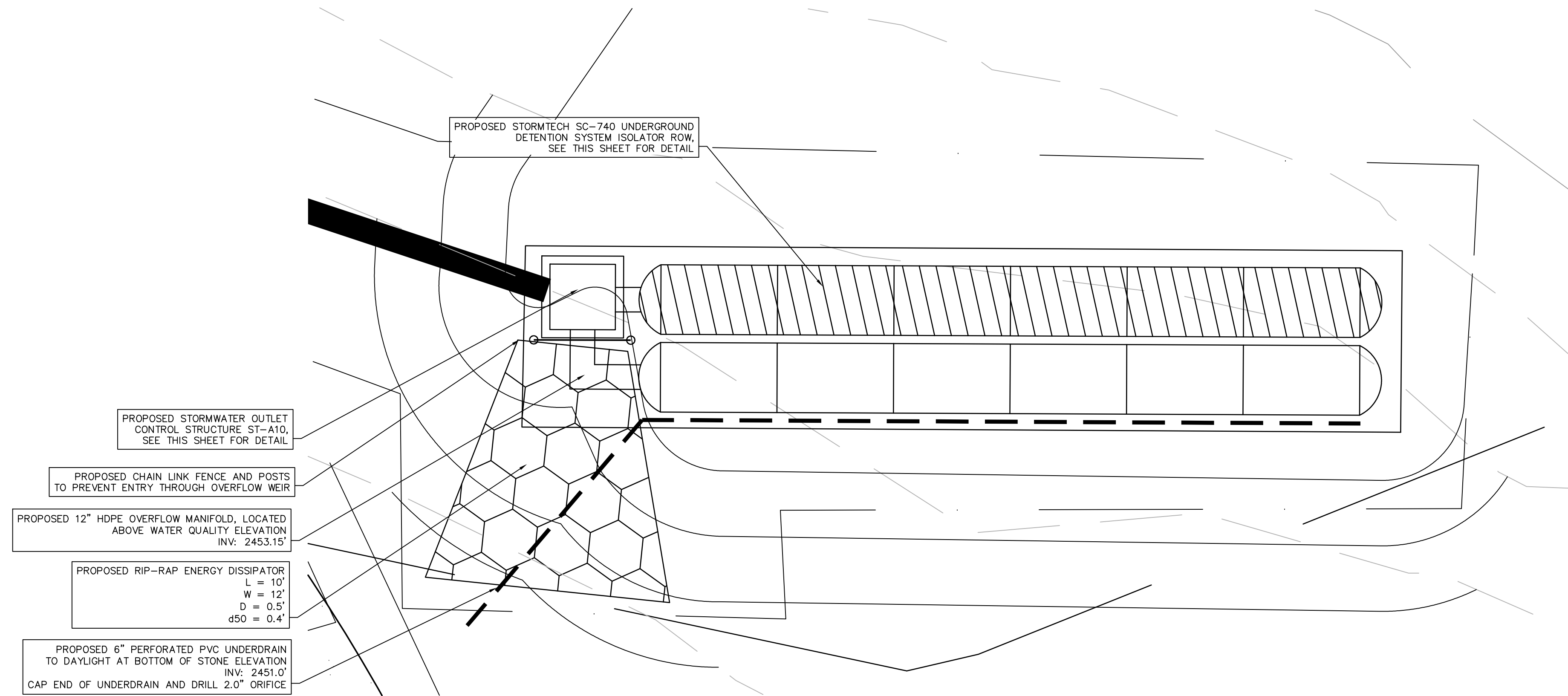
**BROOKS**  
ENGINEERING ASSOCIATES

Planning • Engineering • Surveying  
• Environmental Services •

Designed: TMM  
Drawn: EJJH  
Checked: TMM  
Reviewed: MCB  
Scale: AS NOTED  
Date: 3-15-19  
17 Arlington Street  
Asheville, N.C. 28801  
Phone: 1-828-232-4700  
Fax: 1-828-232-1331  
www.brookseaa.com



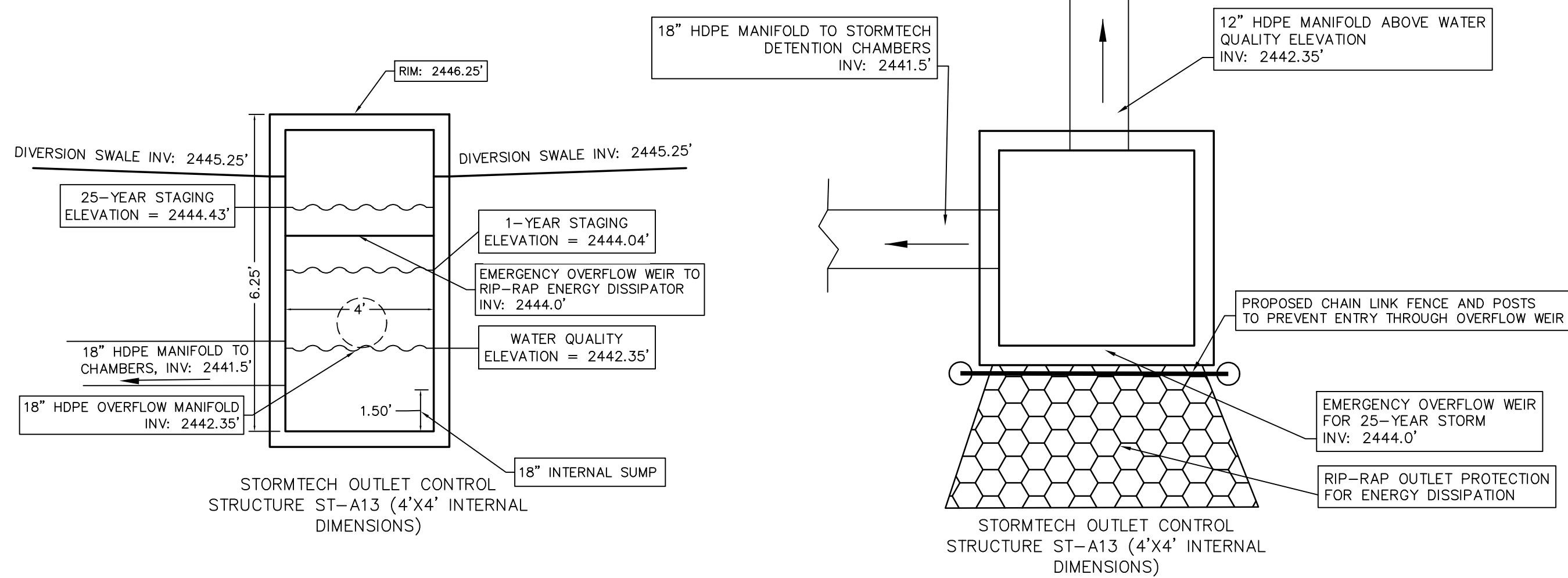
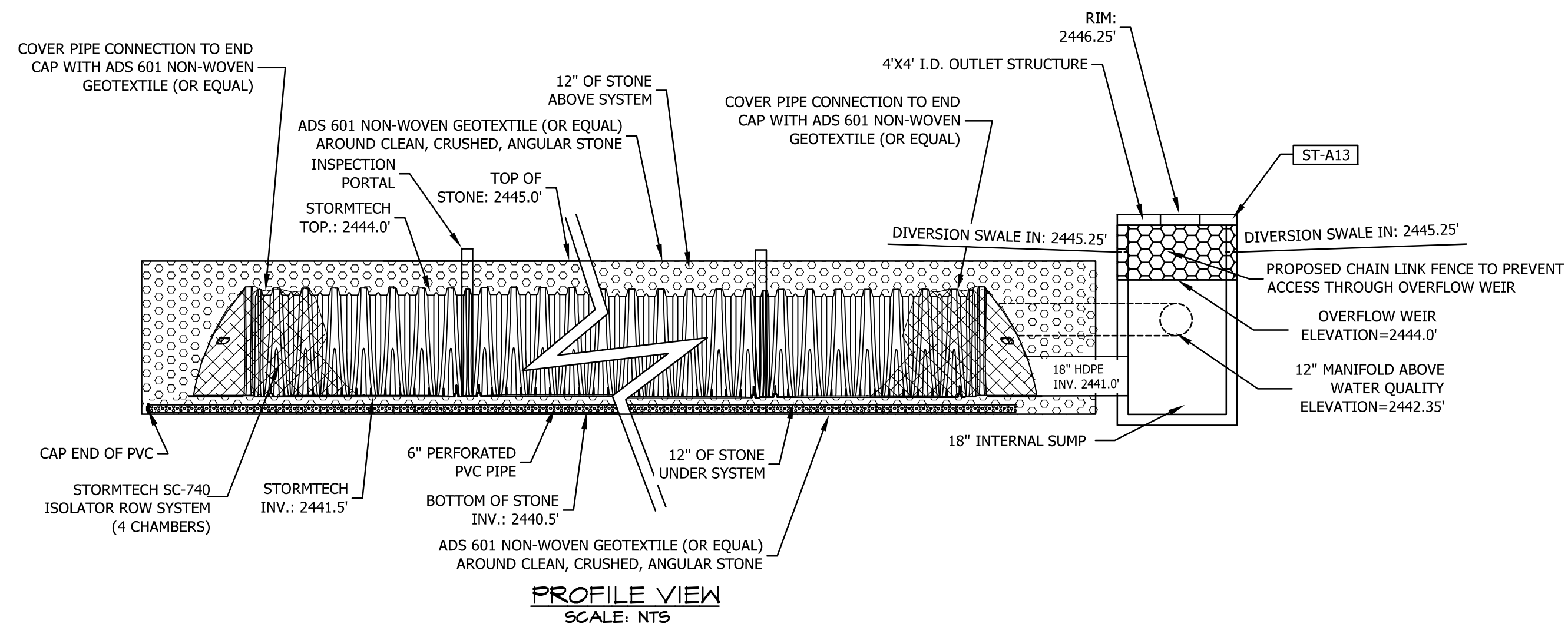
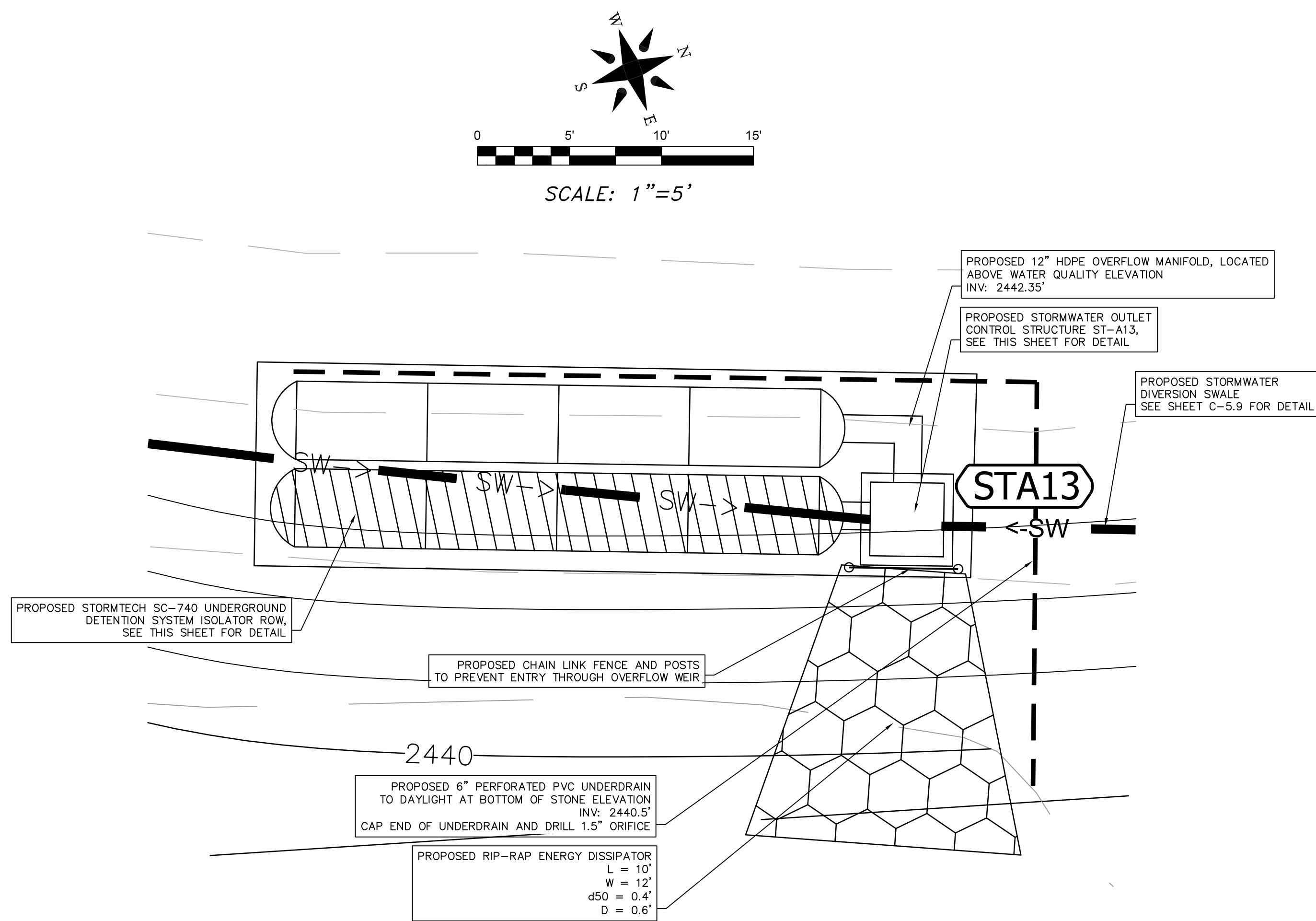




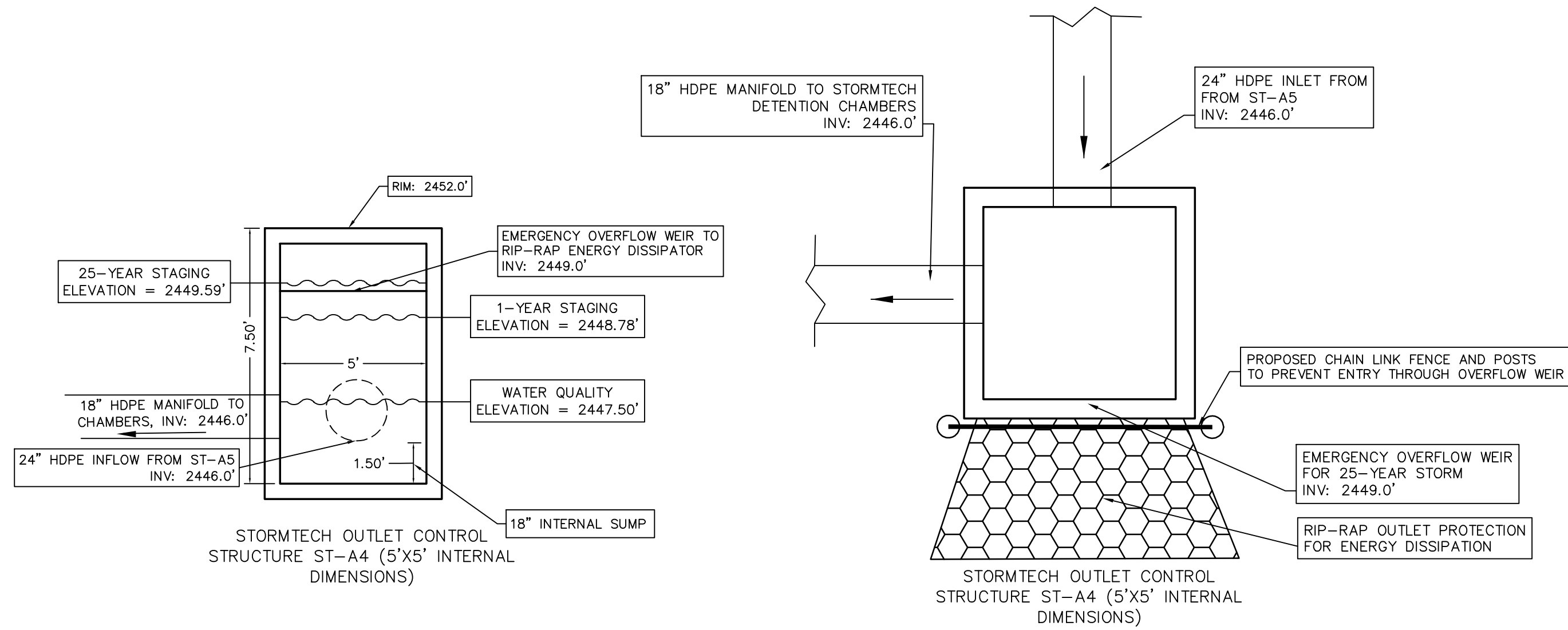
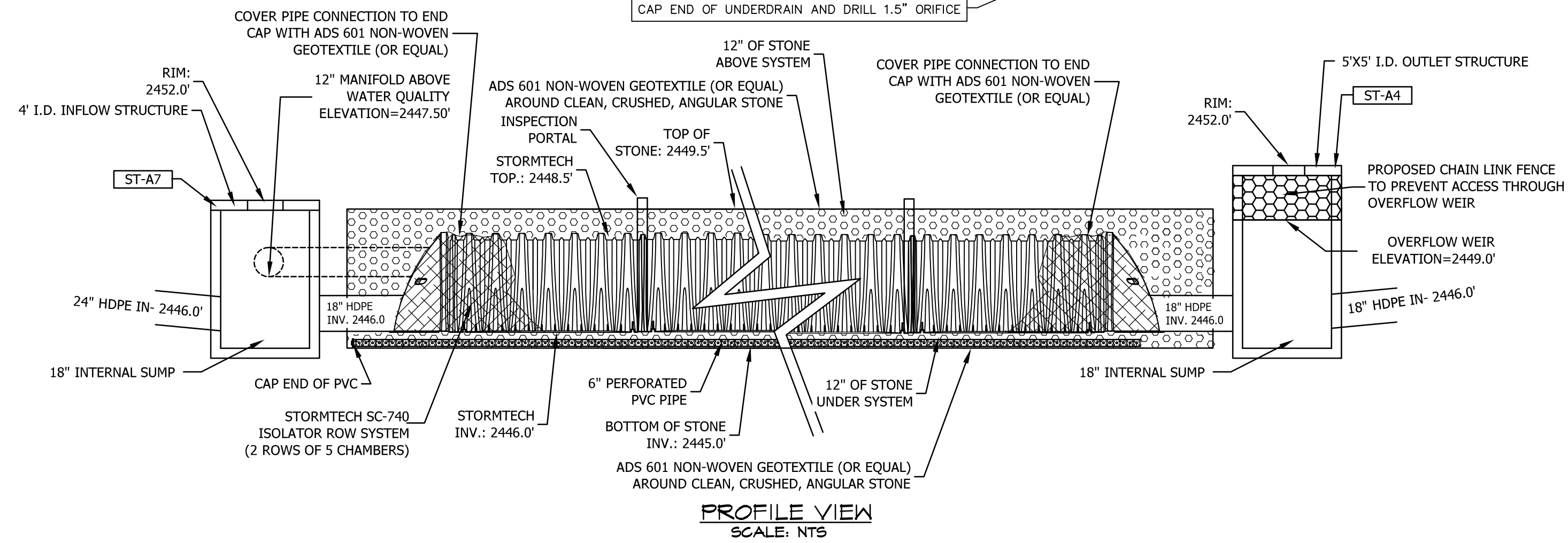
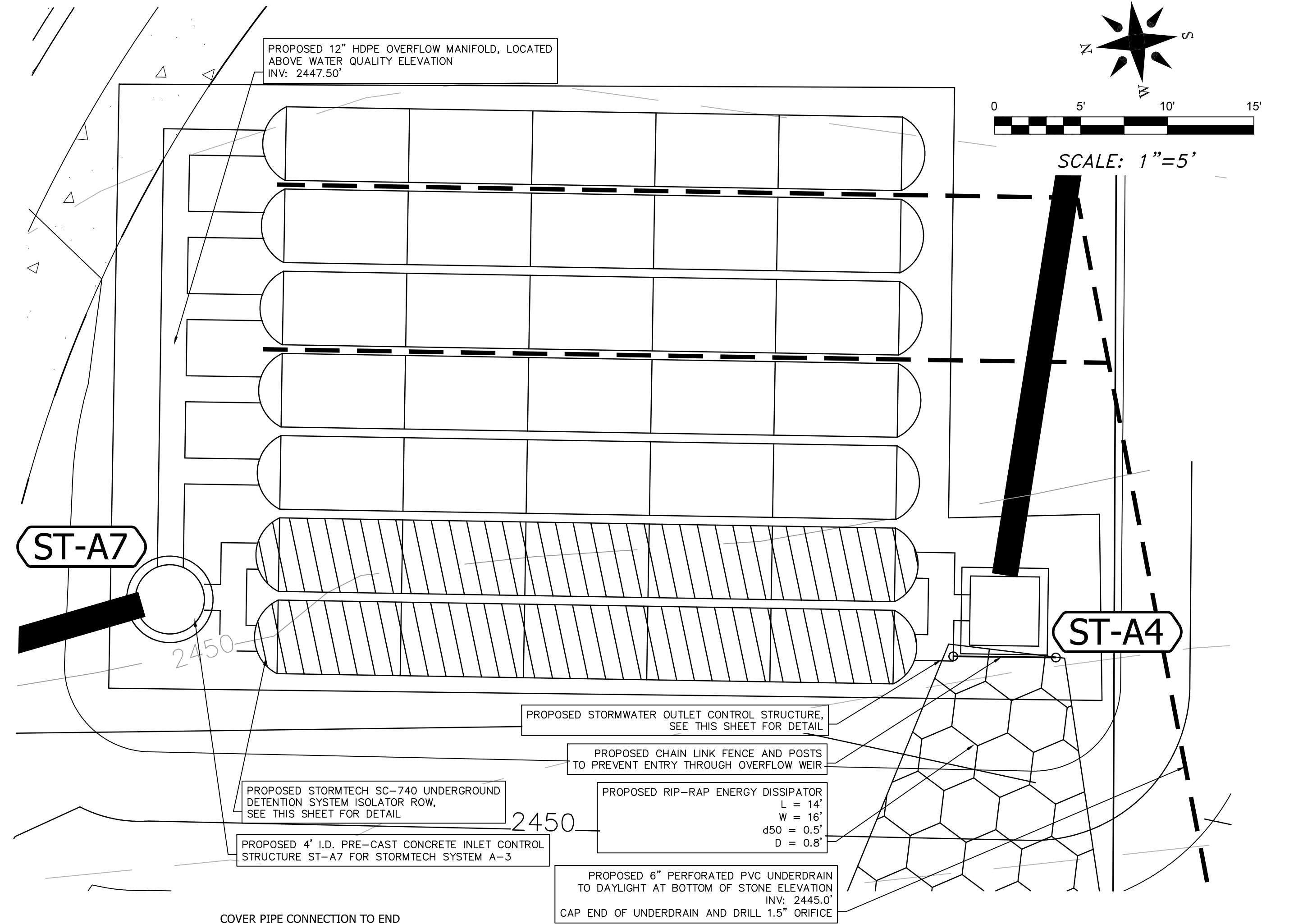
BMP A-1: SC-740 STORMTECH UNDERGROUND  
DETENTION SYSTEM (1240CF TOTAL STORAGE)

|                                                 |                                                                                                                  |                                                                                                                             |                                                                                                                                                                                                                  |  |  |            |                                                  |                                                |                                                                                                                  |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------|--------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Project No:<br><b>480918</b>                    | PADGETTOWN ROAD SUBDIVISION<br><br>SINGLE-FAMILY RESIDENTIAL<br><br>NORTH CAROLINA<br><br>TOWN OF BLACK MOUNTAIN | Date<br>2/21/19<br>2/22/19<br>2/25/19<br>3/8/19<br>3/14/19<br>3/15/19<br>3/18/19                                            | REVISIONS/SUBMISSIONS<br>1 PRELIMINARY PLANS<br>2 PRELIMINARY SITE PLAN<br>3 NCOT DRIVEWAY PERMIT<br>4 TOBM PLANNING AND ZONING<br>5 MSD SUBMITTAL - PH1 AND PH2 SEWER<br>6 TOBM STORMWATER<br>7 WATER SUBMITTAL |  |  | PERMIT SET | Revised: MCB<br>Scale: AS NOTED<br>Date: 3-15-19 | Designed: TMM<br>Drawn: E.J.H.<br>Checked: TMM | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brooksea.com |
|                                                 |                                                                                                                  |                                                                                                                             |                                                                                                                                                                                                                  |  |  |            |                                                  |                                                |                                                                                                                  |
| Drawing Title:<br><b>STORMWATER BMP DETAILS</b> |                                                                                                                  | File Location: L:\2018 Projects\480918 Chambers_Padgettown Rd Development\Drawings\480918 Padgettown CIVIL BASE CURRENT.dwg |                                                                                                                                                                                                                  |  |  |            |                                                  |                                                |                                                                                                                  |

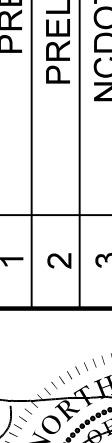




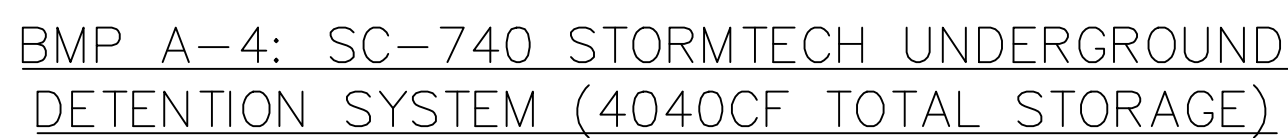
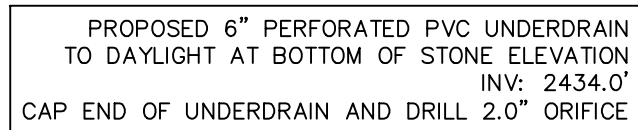
BMP A-2: SC-740 STORMTECH UNDERGROUND  
DETENTION SYSTEM (850CF TOTAL STORAGE)



BMP A-3: SC-740 STORMTECH UNDERGROUND  
DETENTION SYSTEM (3400 CF TOTAL STORAGE)

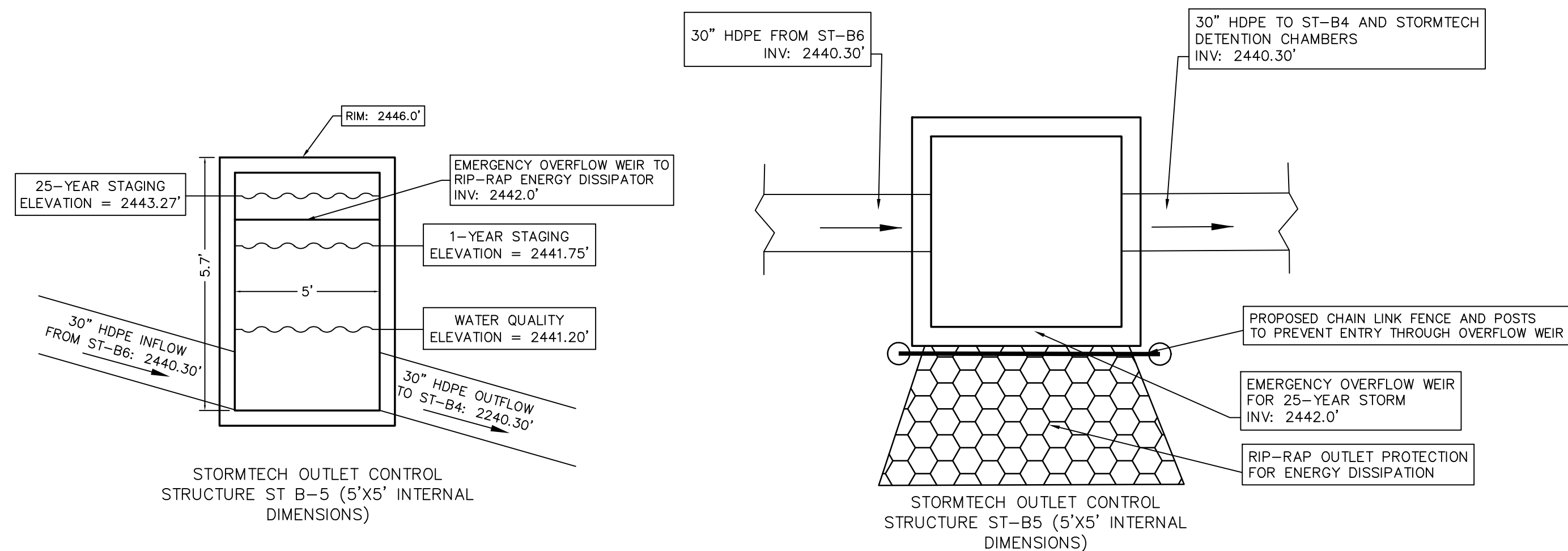
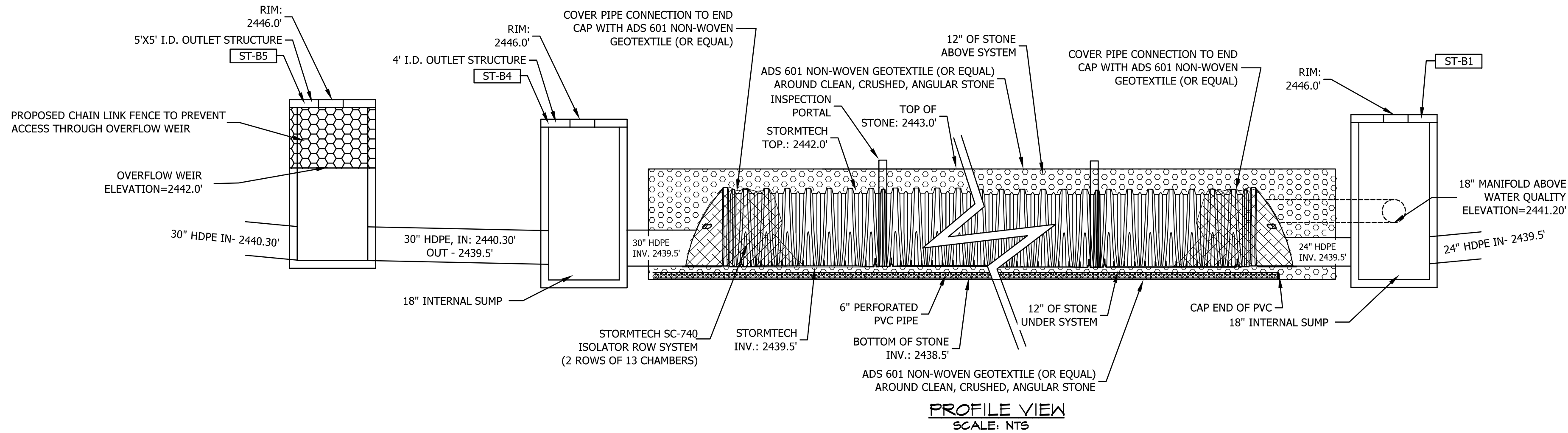
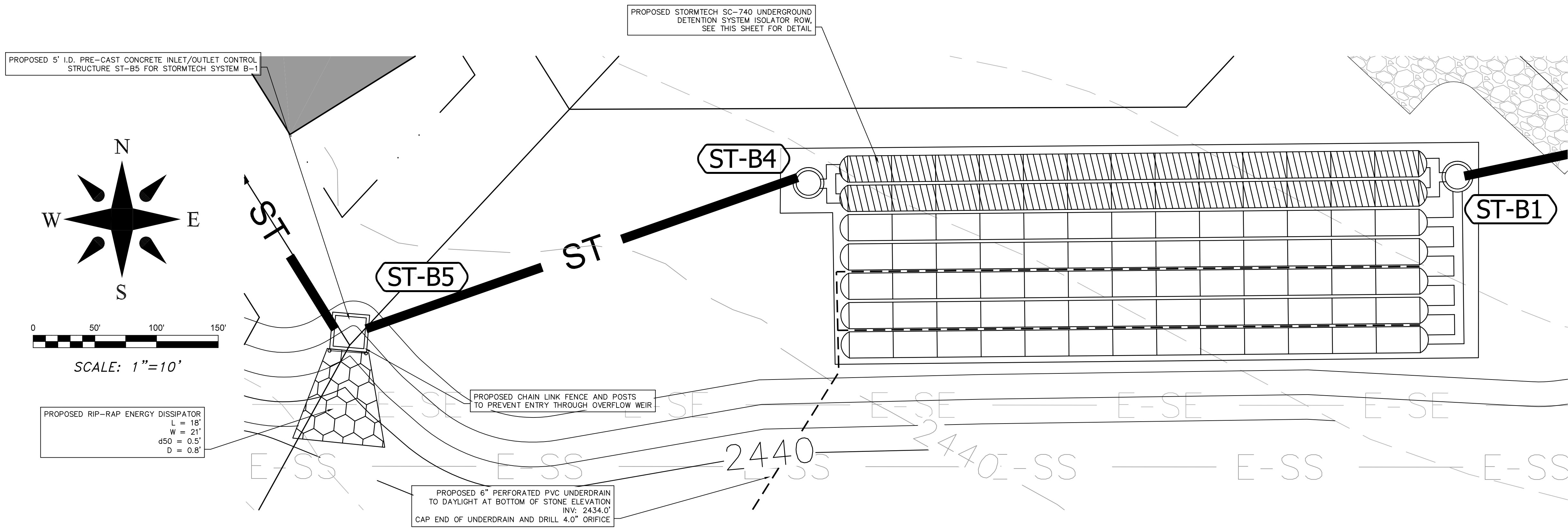
|                                              |  |                             |  |                                                                                      |  |                  |  |                  |  |                                                                                                                                                                         |  |                 |  |                                                                                     |  |                                                                                     |  |                                          |  |
|----------------------------------------------|--|-----------------------------|--|--------------------------------------------------------------------------------------|--|------------------|--|------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|--|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|------------------------------------------|--|
| Project No:<br>480918                        |  | PADGETTOWN ROAD SUBDIVISION |  |  |  | Designed:<br>TMM |  | Reviewed:<br>MCB |  |   |  | PERMIT SET      |  |  |  |  |  | No.      REVISIONS/SUBMISSIONS      Date |  |
| C-5.4                                        |  | SINGLE-FAMILY RESIDENTIAL   |  |                                                                                      |  | EJH              |  | AS NOTED         |  |                                                                                                                                                                         |  |                 |  |                                                                                     |  |                                                                                     |  |                                          |  |
| Drawing Title:<br><br>STORMWATER BMP DETAILS |  | TOWN OF BLACK MOUNTAIN      |  | NORTH CAROLINA                                                                       |  | Checked:<br>TMM  |  | 3-15-19          |  | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brookseas.com                                                       |  | 2               |  | PRELIMINARY SITE PLAN                                                               |  | 2/22/19                                                                             |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  | EJH              |  | AS NOTED         |  |                                                                                                                                                                         |  | 3               |  | NCDOT DRIVEWAY PERMIT                                                               |  | 2/25/19                                                                             |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  | Date             |  | 3-15-19          |  |                                                                                                                                                                         |  | 4               |  | TOMB PLANNING AND ZONING                                                            |  | 3/8/19                                                                              |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  | TMM              |  | 3-15-19          |  |                                                                                                                                                                         |  | 5               |  | MSD SUBMITTAL - PH1 AND PH2 SEWER                                                   |  | 3/14/19                                                                             |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  | TMM              |  | 3-15-19          |  |                                                                                                                                                                         |  | 6               |  | TOMB STORMWATER                                                                     |  | 3/15/19                                                                             |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  |                  |  |                  |  | 7                                                                                                                                                                       |  | WATER SUBMITTAL |  | 3/18/19                                                                             |  |                                                                                     |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  |                  |  |                  |  |                                                                                                                                                                         |  |                 |  |                                                                                     |  |                                                                                     |  |                                          |  |
|                                              |  |                             |  |                                                                                      |  |                  |  |                  |  |                                                                                                                                                                         |  |                 |  |                                                                                     |  |                                                                                     |  |                                          |  |
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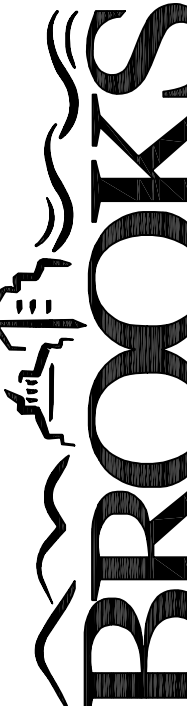


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**BMP B1: SC-740 STORMTECH  
UNDERGROUND DETENTION SYSTEM (8505CF  
TOTAL STORAGE)**

|                                          |  |                             |  |                                                                                                                                                           |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  |                                                                                     |  |                                                                                  |  |                       |  |      |  |                         |  |         |  |
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| Project No:<br>480918                    |  | PADGETTOWN ROAD SUBDIVISION |  | <br>Planning • Engineering • Surveying<br>• Environmental Services • |  | Designed: TMM<br>Drawn: EJJH<br>Checked: TMM                                                                     |  | Reviewed: MCB<br>Scale: AS NOTED<br>Date: 3-15-19 |  | <br>PERMIT SET |  |  |  | No.                                                                              |  | REVISIONS/SUBMISSIONS |  | Date |  |                         |  |         |  |
| C-5.6                                    |  | SINGLE-FAMILY RESIDENTIAL   |  |                                                                                                                                                           |  | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brooksea.com |  | 1                                                 |  |                                                                                                   |  |                                                                                     |  | PRELIMINARY PLANS                                                                |  | 2/21/19               |  | 2    |  | PRELIMINARY SITE PLAN   |  | 2/22/19 |  |
| Drawing Title:<br>STORMWATER BMP DETAILS |  | TOWN OF BLACK MOUNTAIN      |  | NORTH CAROLINA                                                                                                                                            |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  | 3                                                                                   |  | NCOT DRIVEWAY PERMIT                                                             |  | 2/25/19               |  | 4    |  | TBM PLANNING AND ZONING |  | 3/8/19  |  |
|                                          |  |                             |  |                                                                                                                                                           |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  | 5                                                                                   |  | MSD SUBMITTAL - PH1 AND PH2 SEWER                                                |  | 3/14/19               |  | 6    |  | TBM STORMWATER          |  | 3/15/19 |  |
|                                          |  |                             |  |                                                                                                                                                           |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  | 7                                                                                   |  | WATER SUBMITTAL                                                                  |  | 3/18/19               |  |      |  |                         |  |         |  |
|                                          |  |                             |  |                                                                                                                                                           |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  |                                                                                     |  |                                                                                  |  |                       |  |      |  |                         |  |         |  |
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|                                          |  |                             |  |                                                                                                                                                           |  |                                                                                                                  |  |                                                   |  |                                                                                                   |  |                                                                                     |  | Revision/Submission number with a triangle indicates changes made on this sheet. |  |                       |  |      |  |                         |  |         |  |





STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT

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

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

- A. FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

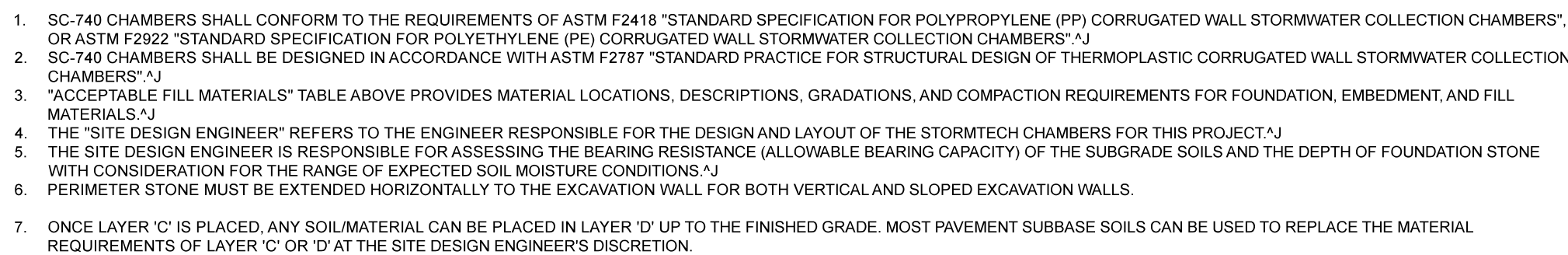
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

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

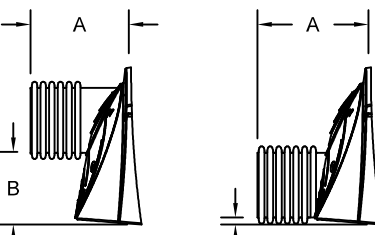
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. <sup>1J</sup>
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



| MATERIAL LOCATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                 | DESCRIPTION                                                                                                                                                | AASHTO MATERIAL CLASSIFICATIONS    | COMPACTION / DENSITY REQUIREMENT                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.                                            | N/A                                | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDED STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.    | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.<br><br>MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).           |
| PLEASE SEE ANGLES 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, |                                                                                                                                                                                                                 |                                                                                                                                                            |                                    |                                                                                                                         |



\*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



| STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" |              |                |                |              |
|-------------------------------------------------------------|--------------|----------------|----------------|--------------|
| STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"    |              |                |                |              |
| PART #                                                      | STUB         | A              | B              | C            |
| SC740EPE06T / SC740EPE06GTPC                                | 6" (150 mm)  | 10.9" (277 mm) | 18.5" (470 mm) | ---          |
| SC740EPE08B / SC740EPE08BPC                                 | ---          | ---            | ---            | 0.5" (13 mm) |
| SC740EPE08T / SC740EPE08TPC                                 | 8" (200 mm)  | 12.2" (310 mm) | 16.5" (419 mm) | ---          |
| SC740EPE08B / SC740EPE08BPC                                 | ---          | ---            | ---            | 0.6" (15 mm) |
| SC740EPE10T / SC740EPE10GTPC                                | 10" (250 mm) | 13.4" (340 mm) | 14.5" (368 mm) | ---          |
| SC740EPE10B / SC740EPE10BPC                                 | ---          | ---            | ---            | 0.7" (18 mm) |
| SC740EPE12T / SC740EPE12TPC                                 | 12" (300 mm) | 14.7" (373 mm) | 15.2" (318 mm) | ---          |
| SC740EPE12B / SC740EPE12BPC                                 | ---          | ---            | ---            | 1.2" (30 mm) |
| SC740EPE15T / SC740EPE15TPC                                 | 15" (375 mm) | 18.4" (467 mm) | 9.0" (229 mm)  | ---          |
| SC740EPE15B / SC740EPE15BPC                                 | ---          | ---            | ---            | 1.3" (33 mm) |
| SC740EPE18T / SC740EPE18TPC                                 | 18" (450 mm) | 19.7" (500 mm) | 5.0" (127 mm)  | ---          |
| SC740EPE18B / SC740EPE18BPC                                 | ---          | ---            | ---            | 1.6" (41 mm) |

ALL SUBS ENDING WITH THE SC740EPE PART NUMBER ARE PLACED AS PQ7060 END CAP SUCH THAT THE OUTSIDE OF THE CAP IS ON THE TOP OF THE SUB.

|                                                                                                                                                                                                                              |              |    |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----|-------------|
| SC740PEF1887                                                                                                                                                                                                                 | SC740PEF168P | 22 | 1.0 (41 mm) |
| <p>ALL STUBS SC740PEF1887 AND THE SC740PEF168P MUST BE FLUSH WITH THE END CAP SUCH THAT THE OUTSIDE OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.</p> |              |    |             |

\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

The technical drawings illustrate the ADS-310 stormwater management system. The plan view on the left shows three parallel stormtech chambers, each containing vertical TYP (Trenchable Y-type) systems. An outlet manifold connects the chambers, leading to a stormtech end cap. Section A-A is a cross-section through the stormtech chamber, showing the foundation stone beneath the chambers, the ADS geosynthetic 601T non-woven geotextile, and the stormtech end cap. Section B-B is a cross-section through the outlet manifold, showing the foundation stone beneath the chambers, the ADS geosynthetic 601T non-woven geotextile, and the stormtech end cap. The drawings are labeled with 'STORMTECH CHAMBERS', 'STORMTECH END CAP', 'OUTLET MANIFOLD', 'FOUNDATION STONE BENEATH CHAMBERS', 'ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE', 'SECTION A-A', and 'SECTION B-B'.

STORMTECH CHAMBERS

STORMTECH END CAP

OUTLET MANIFOLD

FOUNDATION STONE BENEATH CHAMBERS

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE

SECTION A-A

STORMTECH CHAMBER

STORMTECH END CAP

FOUNDATION STONE BENEATH CHAMBERS

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE

SECTION B-B

NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER

4" 1100 mm TYP FOR SC-310 SYSTEMS

6" 1150 mm TYP FOR SC-740, DC-780, MC-3500 & MC-4500 SYSTEMS

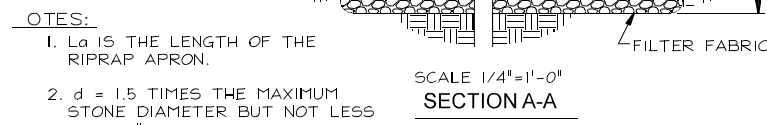
| CHAMBER | MAX DIAMETER OF INSERTA TEE | HEIGHT FROM BASE OF CHAMBER (X) |
|---------|-----------------------------|---------------------------------|
| SC-310  | 6" (150 mm)                 | 4" (100 mm)                     |
| SC-740  | 10" (250 mm)                | 4" (100 mm)                     |
| DC-780  | 10" (250 mm)                | 4" (100 mm)                     |
| MC-3500 | 12" (300 mm)                | 6" (150 mm)                     |
| MC-4500 | 12" (300 mm)                | 6" (200 mm)                     |

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SVENTED WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

**NOTE:**  
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS.  
CONTACT STORMTECH FOR MORE INFORMATION.

|                                      |  |                             |  |                |  |                                                                                       |  |                                                                   |  |                                                     |  |                                                                                     |  |                                                                                     |  |                                                                                                                                                                                                |  |                                                                                  |  |
|--------------------------------------|--|-----------------------------|--|----------------|--|---------------------------------------------------------------------------------------|--|-------------------------------------------------------------------|--|-----------------------------------------------------|--|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------|--|
| Project No:<br>480918                |  | PADGETTOWN ROAD SUBDIVISION |  | NORTH CAROLINA |  |  |  | Designed: TMM<br>Drawn: Scale<br>EJJH<br>Checked: AS NOTED<br>TMM |  | Reviewed: MCB<br>Scale<br>AS NOTED<br>Date: 3-15-19 |  |  |  |  |  | No. 1<br>PRELIMINARY PLANS<br>PRELIMINARY SITE PLAN<br>3 NC DOT DRIVEWAY PERMIT<br>4 TOBM PLANNING AND ZONING<br>5 MSD SUBMITTAL - PH1 AND PH2 SEWER<br>6 TOBM STORMWATER<br>7 WATER SUBMITTAL |  | Date<br>2/21/19<br>2/22/19<br>2/25/19<br>3/8/19<br>3/14/19<br>3/15/19<br>3/18/19 |  |
| Drawing Title:<br>STORMWATER DETAILS |  | TOWN OF BLACK MOUNTAIN      |  | NORTH CAROLINA |  | Planning • Engineering • Surveying<br>• Environmental Services •                      |  |                                                                   |  |                                                     |  | PERMIT SET                                                                          |  |                                                                                     |  | Revision/Scale number with a triangle indicates changes made on this sheet                                                                                                                     |  |                                                                                  |  |





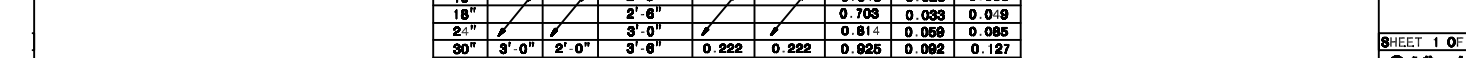
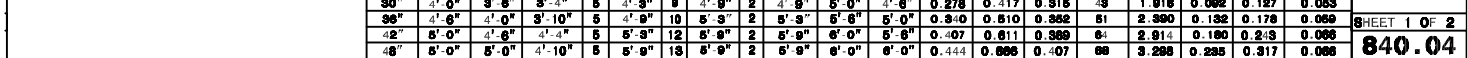
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
9. Immediately after construction, stabilize all disturbed areas with vegetation (Practices 6.10, Temporary Seeding, and 6.11, Permanent Seeding).



**Figure 8.41c Riprap outlet protection (modified from Va SWCC)**

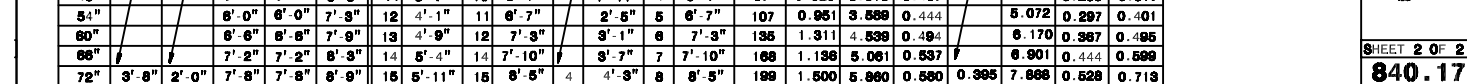
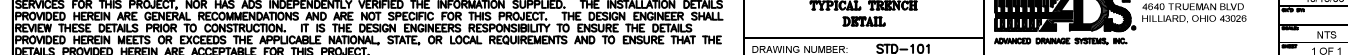
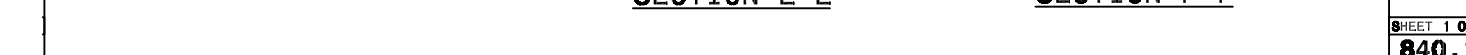
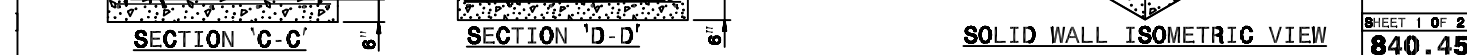
## Maintenance

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



B GRASSED SWALE

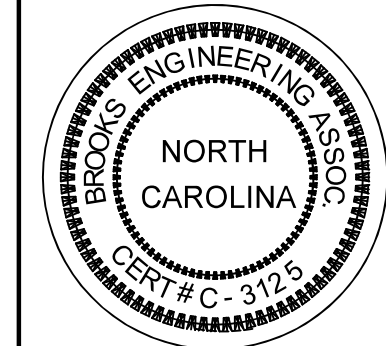
SCALE= NTS



## PIPE BEDDING

SCALE= NTS

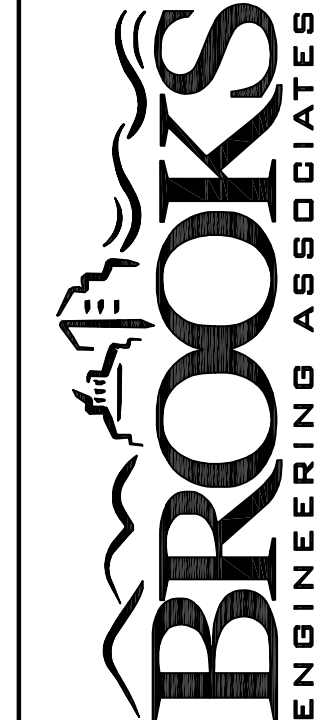
| No. | REVISIONS/SUBMISSIONS             | Date    |
|-----|-----------------------------------|---------|
| 1   | PRELIMINARY PLANS                 | 2/21/19 |
| 2   | PRELIMINARY SITE PLAN             | 2/22/19 |
| 3   | NCDOT DRIVEWAY PERMIT             | 2/25/19 |
| 4   | TORM PLANNING AND ZONING          | 3/8/19  |
| 5   | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19 |
| 6   | TORM STORMWATER                   | 3/15/19 |
| 7   | WATER SUBMITTAL                   | 3/18/19 |
|     |                                   |         |
|     |                                   |         |



# PERMIT SET

|           |           |
|-----------|-----------|
| Designed: | Reviewed: |
| TMM       | MCB       |
| Drawn:    | Scale:    |
| EJH       | AS NOTED  |
| Checked:  | Date:     |
| TMM       | 3-15-19   |

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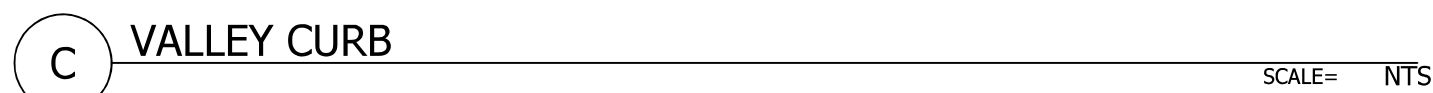
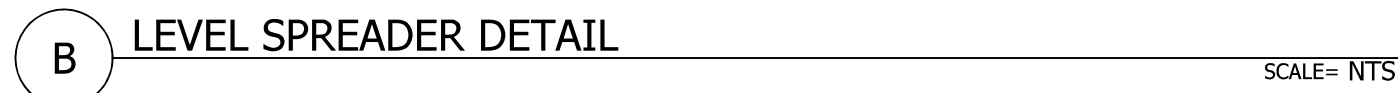
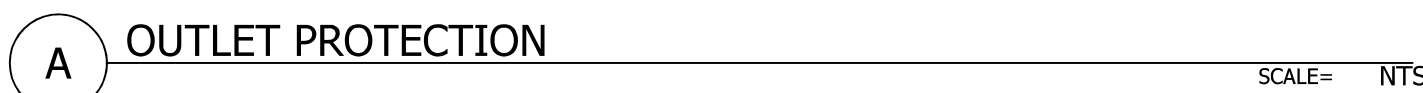
PADGETTOWN ROAD SUBDIVISION  
SINGLE-FAMILY RESIDENTIAL

## ATER DETAILS

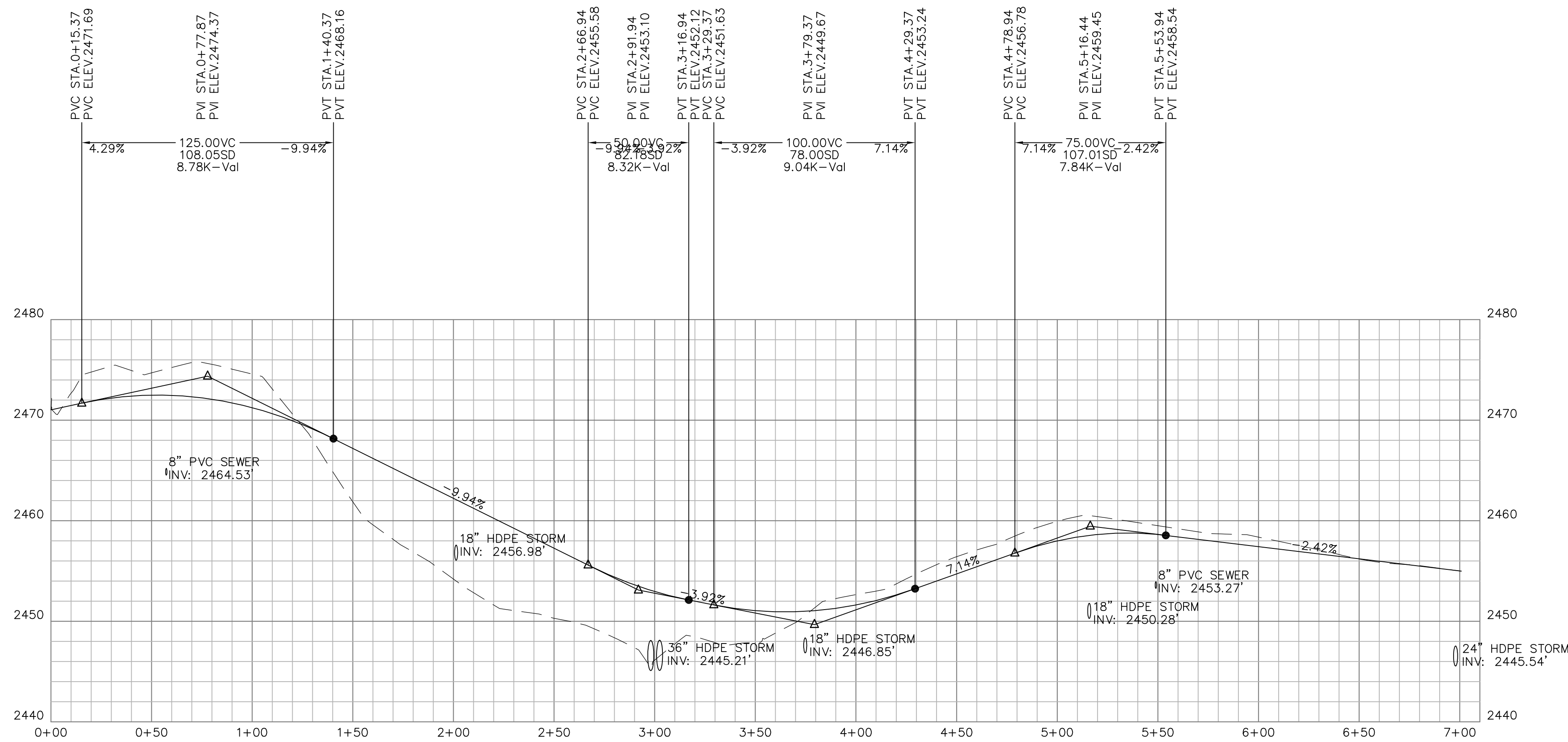
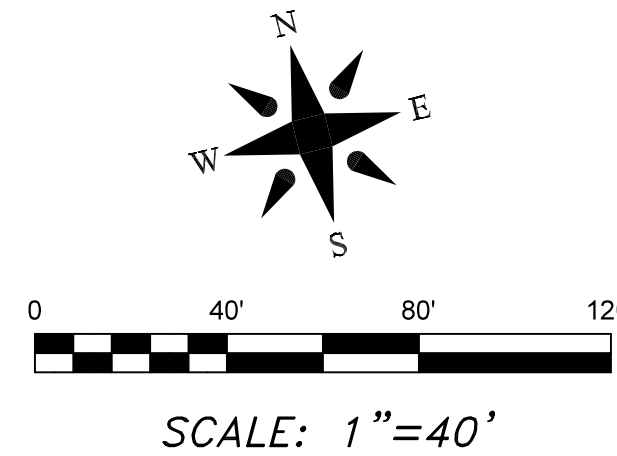
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|-----------------------|-------|
| Project No:<br>480918 | C-5.8 |
|-----------------------|-------|

Drawing Title: **STORMWATER DETAILS**



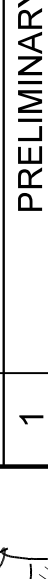
42



A diagram of a complex, irregular polygon. A dashed rectangle is drawn around the left portion of the polygon, enclosing a specific area. A thick gray line traces a path that starts on the left edge of the dashed box, moves right, then curves down and right, ending on the right edge of the polygon. The path is composed of several segments connected by smooth curves.

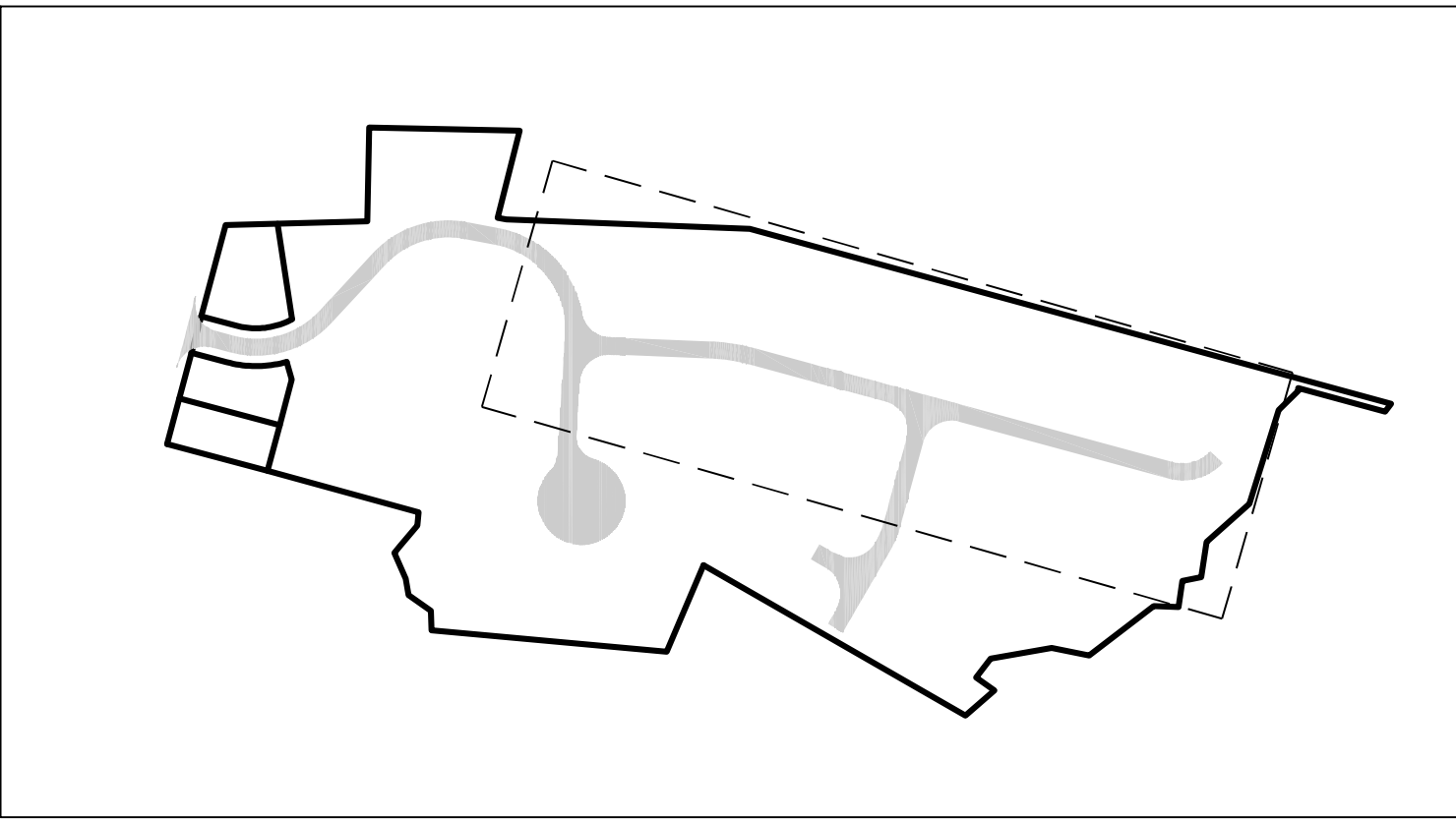
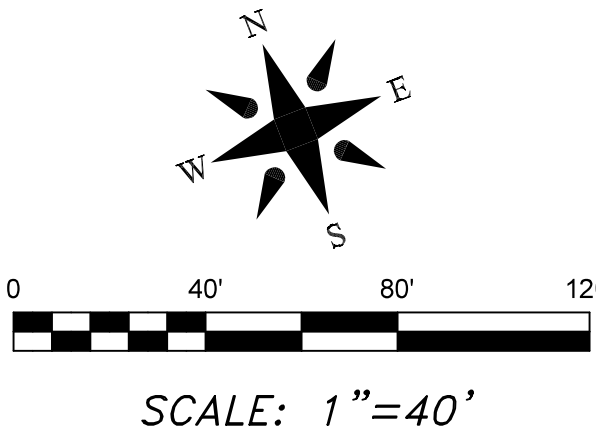
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HORIZONTAL SCALE: 1"=40'

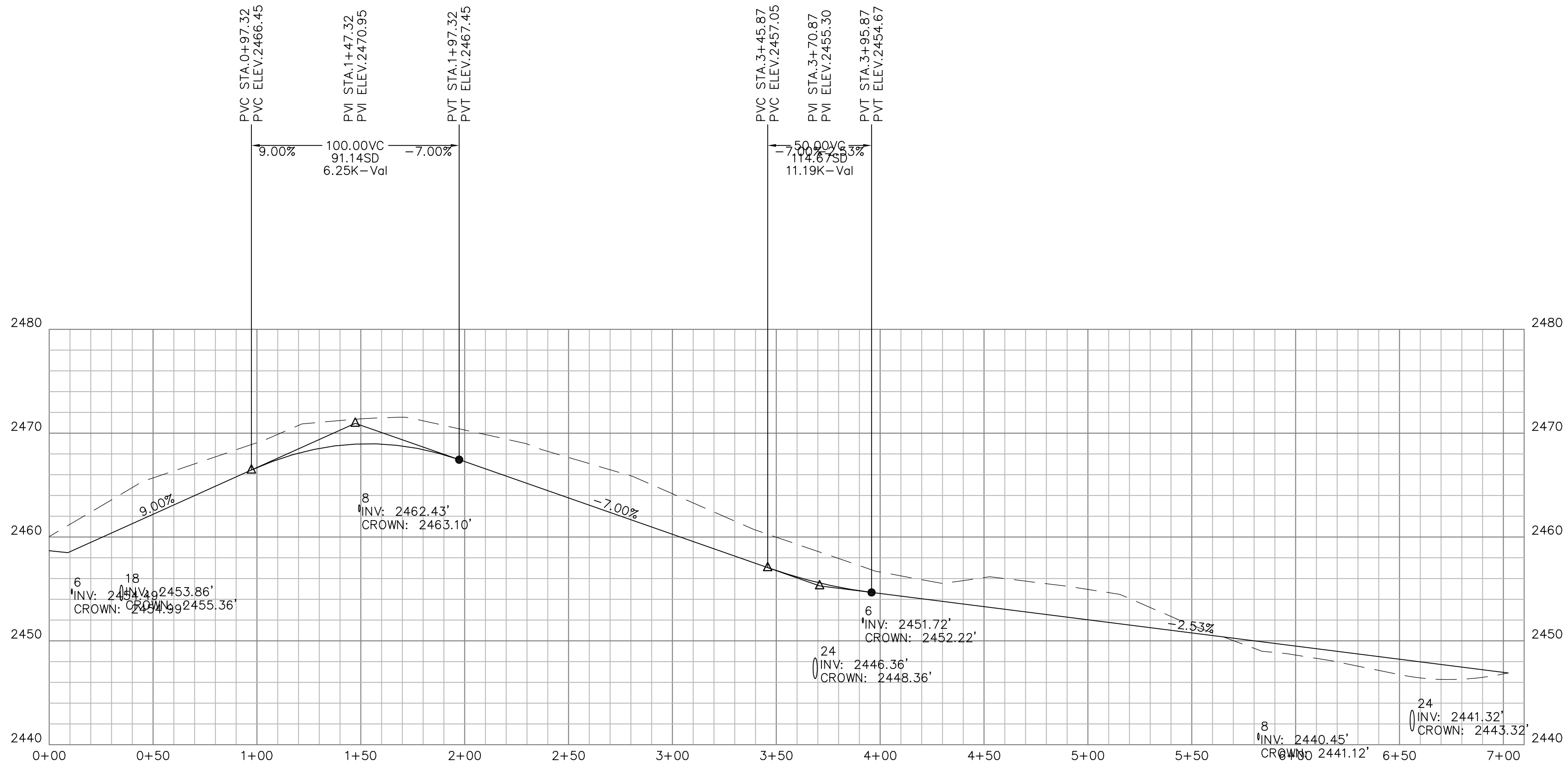
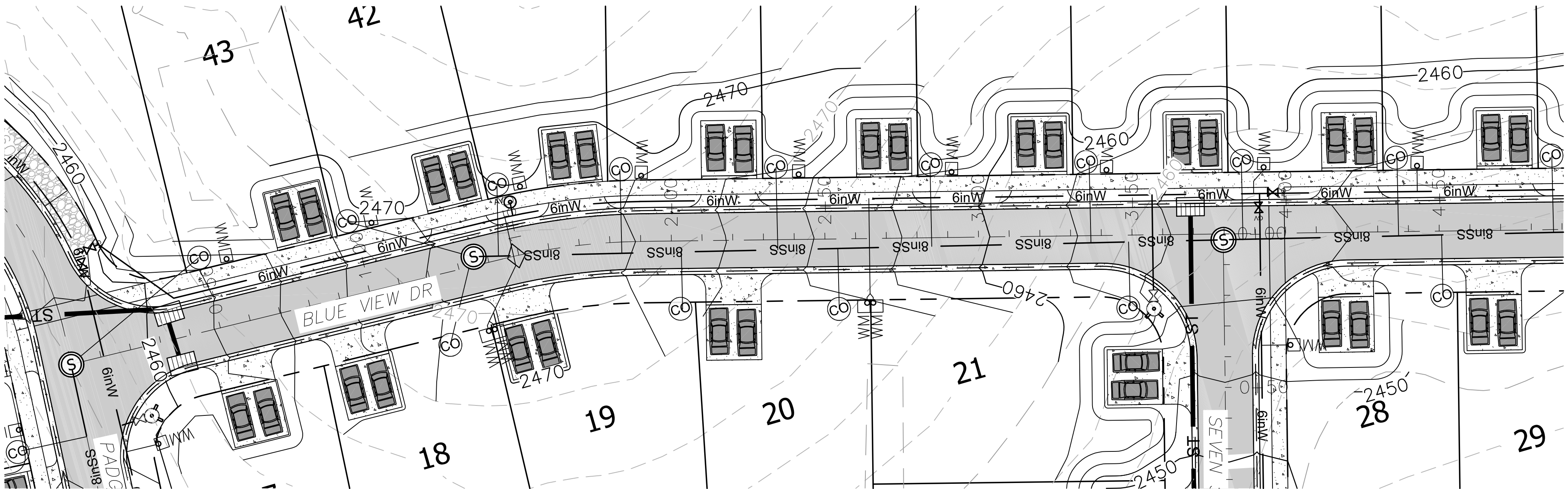
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| Project No:<br>480918                    | PADGETTOWN ROAD SUBDIVISION<br><br>SINGLE-FAMILY RESIDENTIAL |  | Designed: TMM<br>Drawn: TMM<br>Checked: TMM<br>Date: 3-15-19 | Reviewed: MCB<br>Scale: AS NOTED<br>Date: 3-15-19 |  |  | No. 1<br>2<br>3<br>4<br>5<br>6<br>7 | REVISIONS/SUBMISSIONS<br>PRELIMINARY PLANS<br>PRELIMINARY SITE PLAN<br>NCDOT DRIVEWAY PERMIT<br>TOBM PLANNING AND ZONING<br>MSD SUBMITTAL - PH1 AND PH2 SEWER<br>TOBM STORMWATER<br>WATER SUBMITTAL | Date<br>2/21/19<br>2/22/19<br>2/25/19<br>3/8/19<br>3/14/19<br>3/15/19<br>3/18/19 |
|                                          |                                                              |                                                                                       |                                                              |                                                   |                                                                                     |                                                                                     |                                     |                                                                                                                                                                                                     |                                                                                  |
| TOWN OF BLACK MOUNTAIN<br>NORTH CAROLINA |                                                              | Planning • Engineering • Surveying<br>• Environmental Services •                      |                                                              | PERMIT SET                                        |                                                                                     | Revisions/Submission number with a triangle indicates changes made on this sheet.   |                                     |                                                                                                                                                                                                     |                                                                                  |



| GRADING/STORMWATER PLAN LEGEND |                         |  |                           |
|--------------------------------|-------------------------|--|---------------------------|
|                                | EXIST. BOUNDARY         |  | EXIST. OVERHEAD UTILITIES |
|                                | EXIST. STREAM           |  | NEW PROPERTY LINES        |
|                                | EXIST. STREAM BUFFER    |  | NEW RIGHT OF WAY          |
|                                | EXIST. WETLAND          |  | NEW EASEMENT              |
|                                | EXIST. RIGHT OF WAY     |  | BUILDING SETBACK LINE     |
|                                | EXIST. EASEMENT         |  | NEW BUILDING              |
|                                | EXIST. BUILDING SETBACK |  | NEW 24" VALLEY CURB       |
|                                | EXIST. BUILDING         |  | NEW SIDEWALK              |
|                                | EXIST. SIDEWALK         |  | NEW PAVEMENT              |
|                                | EXIST. EDGE OF PAVING   |  | NEW SEWER MANHOLE         |
|                                | EXIST. STORM            |  | NEW SEWER SERVICE         |
|                                | EXIST. SEWER            |  | NEW SEWER EASEMENT        |
|                                | EXIST. SEWER EASEMENT   |  | NEW WATER                 |
|                                | EXIST. FIRE HYDRANT     |  | NEW FIRE HYDRANT          |
|                                | EXIST. WATER            |  | NEW GATE VALVE            |
|                                | EXIST. WATER EASEMENT   |  |                           |
|                                |                         |  | NEW AIR RELEASE VALVE     |
|                                |                         |  | NEW WATER SERVICE         |
|                                |                         |  | NEW WATER EASEMENT        |
|                                |                         |  | NEW STORM PIPE            |
|                                |                         |  | NEW STORM SWALE           |
|                                |                         |  | NEW CATCH BASIN           |
|                                |                         |  | NEW DROP INLET            |
|                                |                         |  | NEW JUNCTION BOX          |



MAP KEY



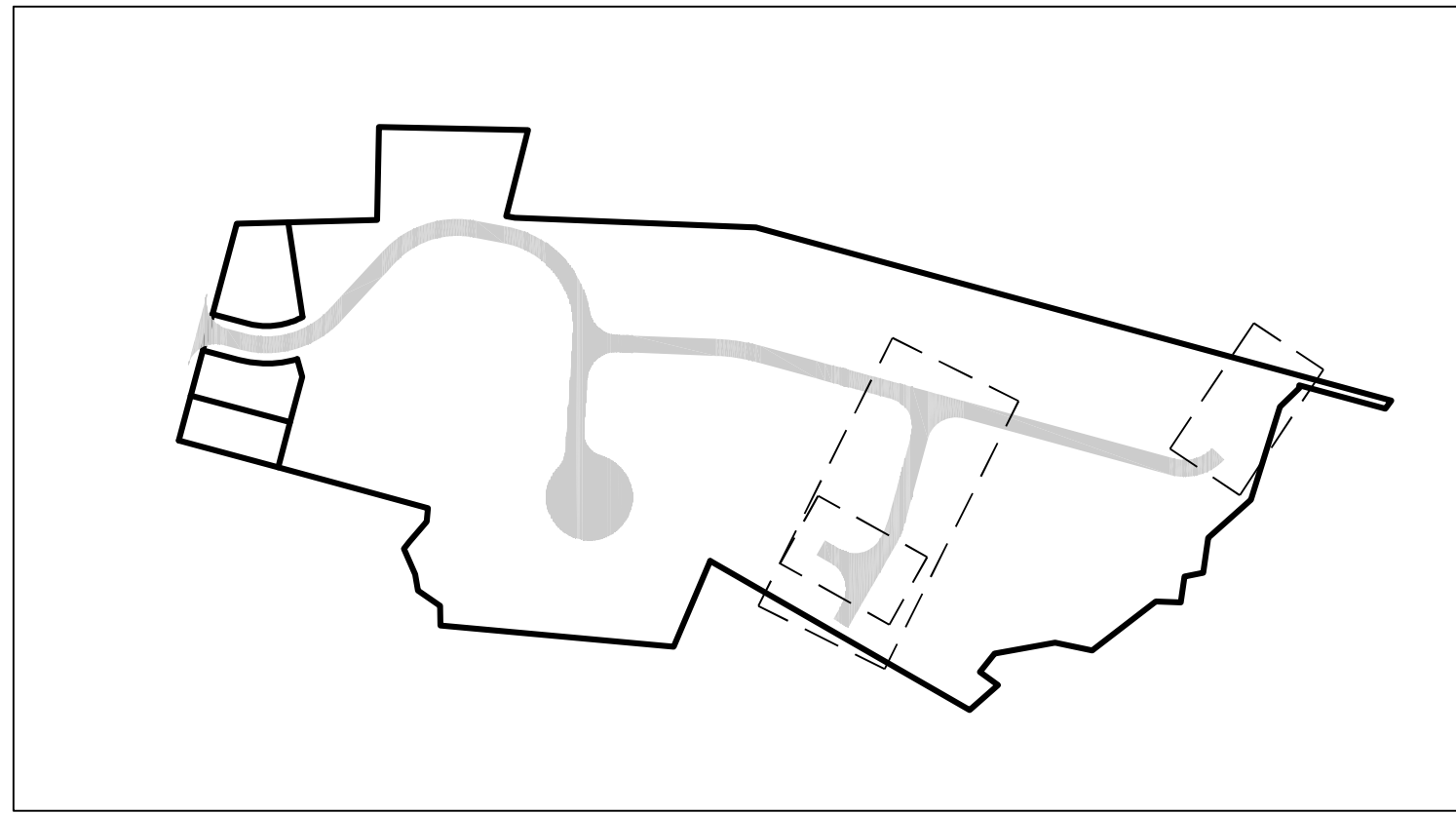
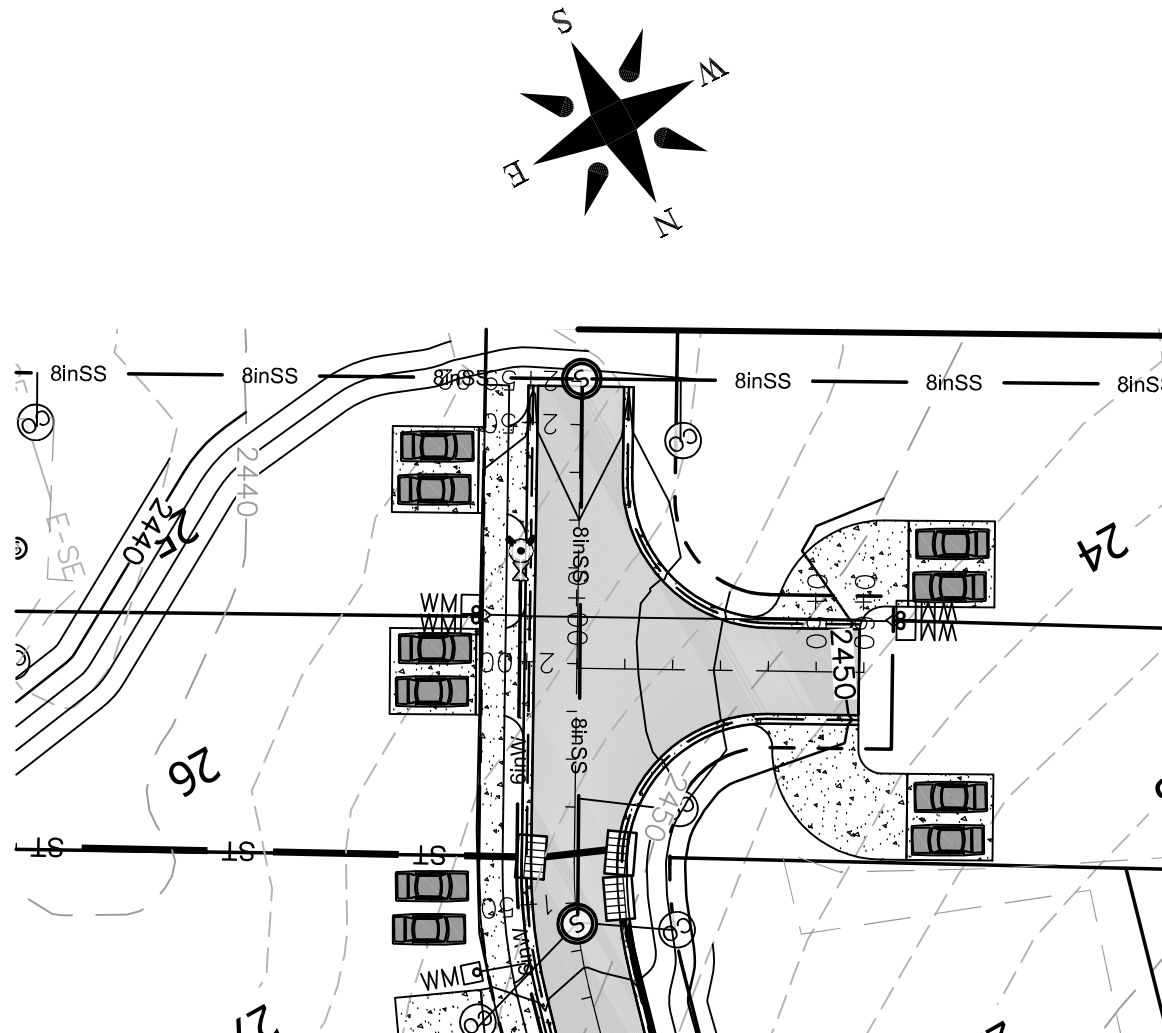
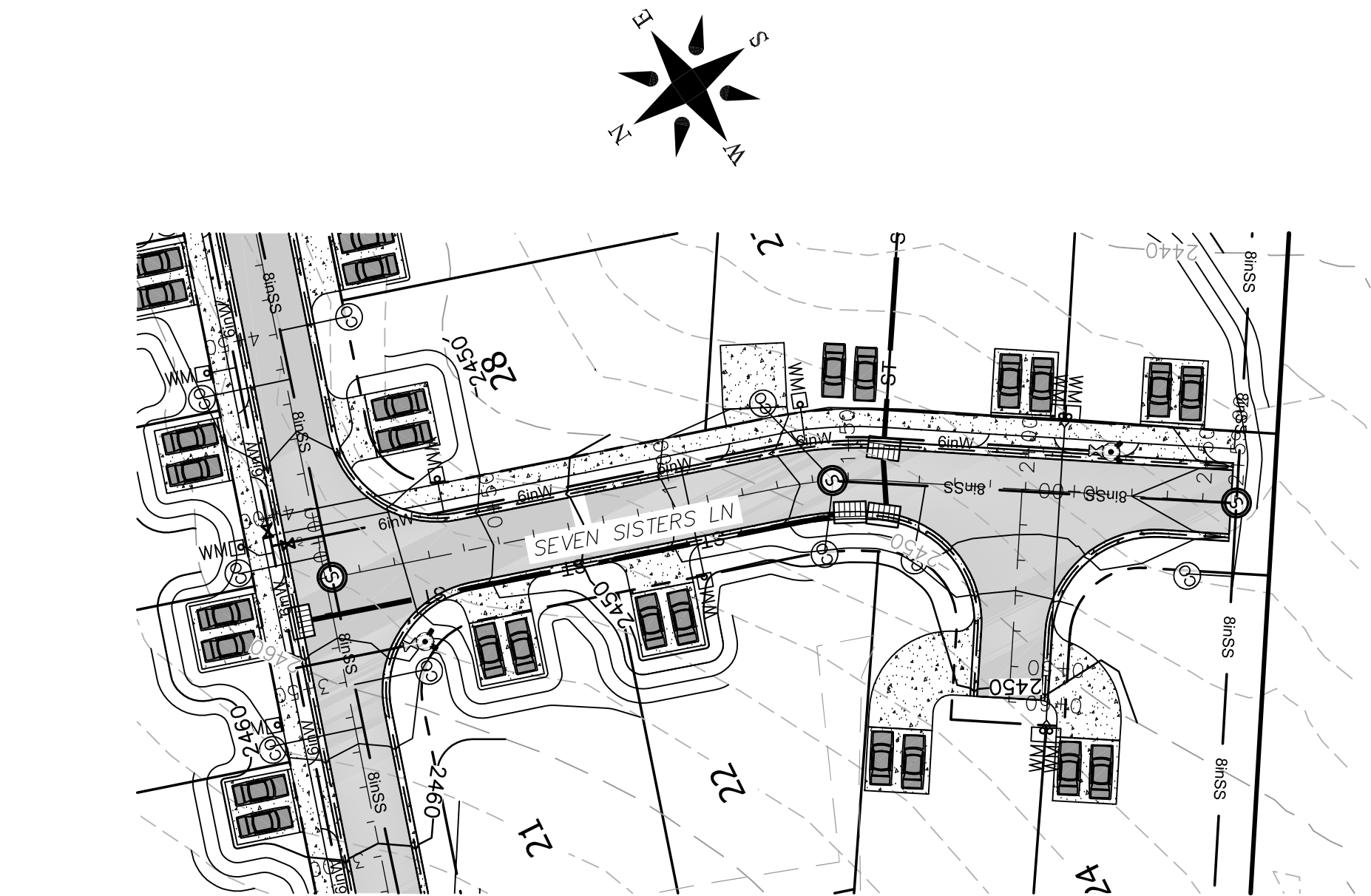
VERTICAL SCALE: 1"=8'

HORIZONTAL SCALE: 1"=40'

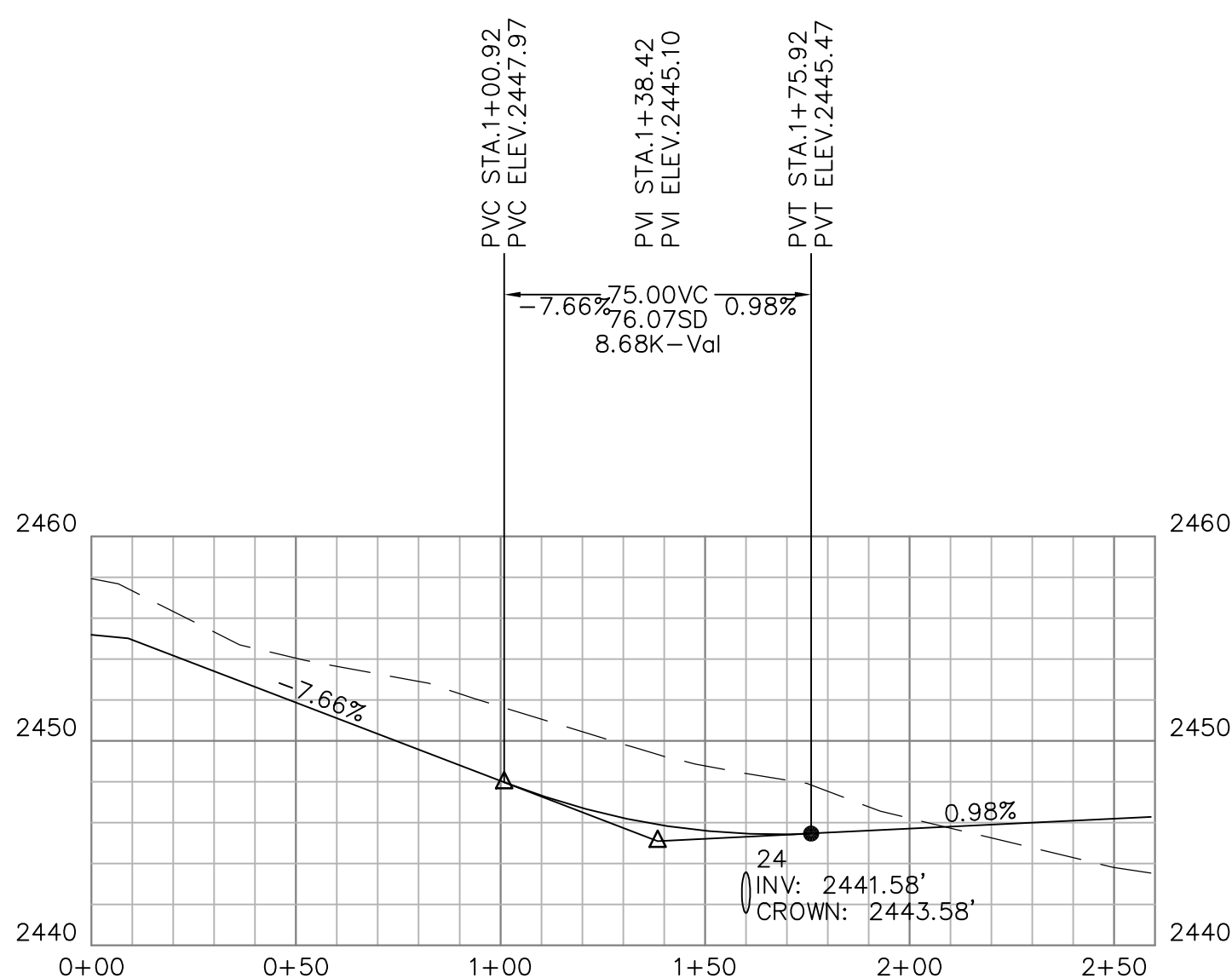
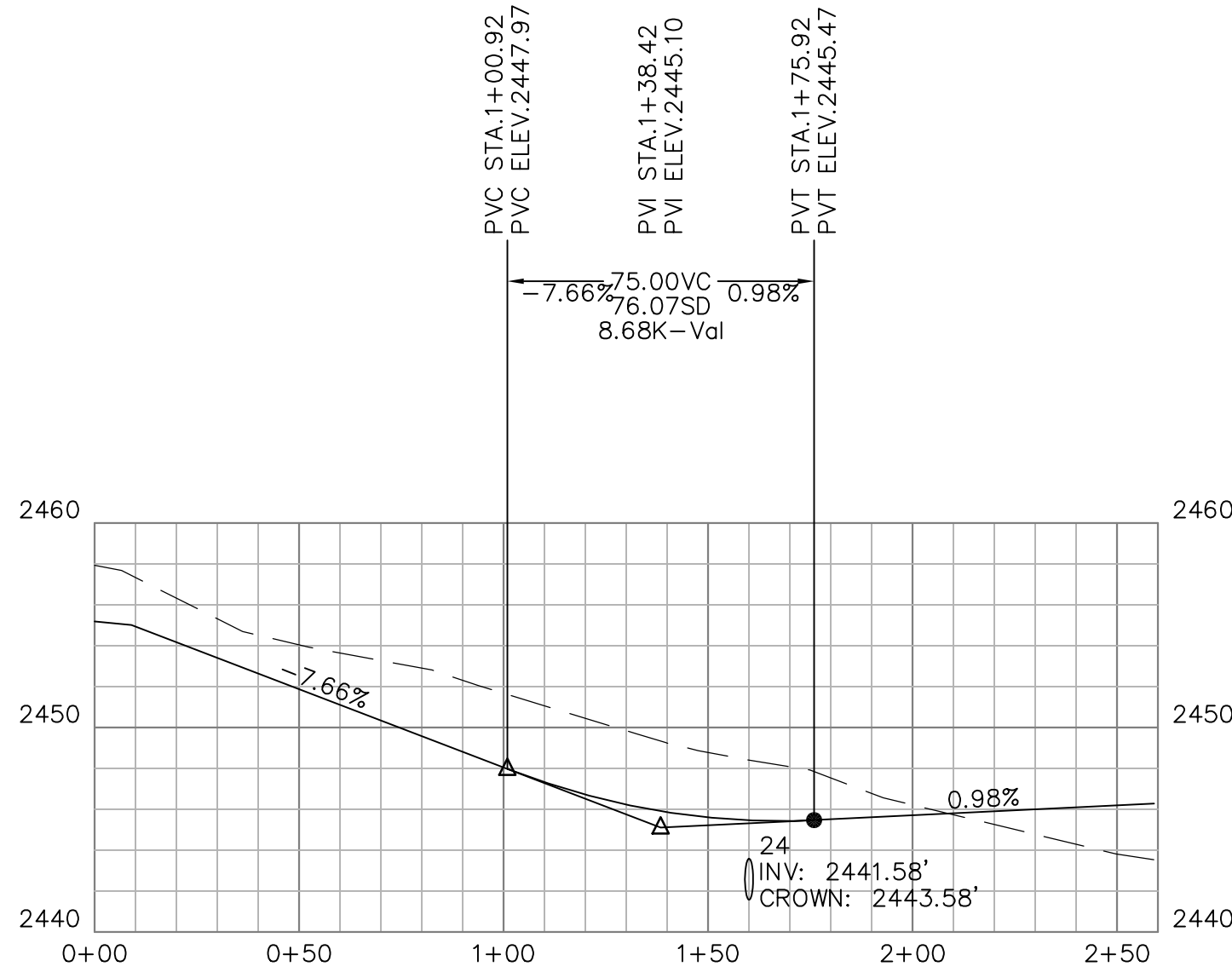
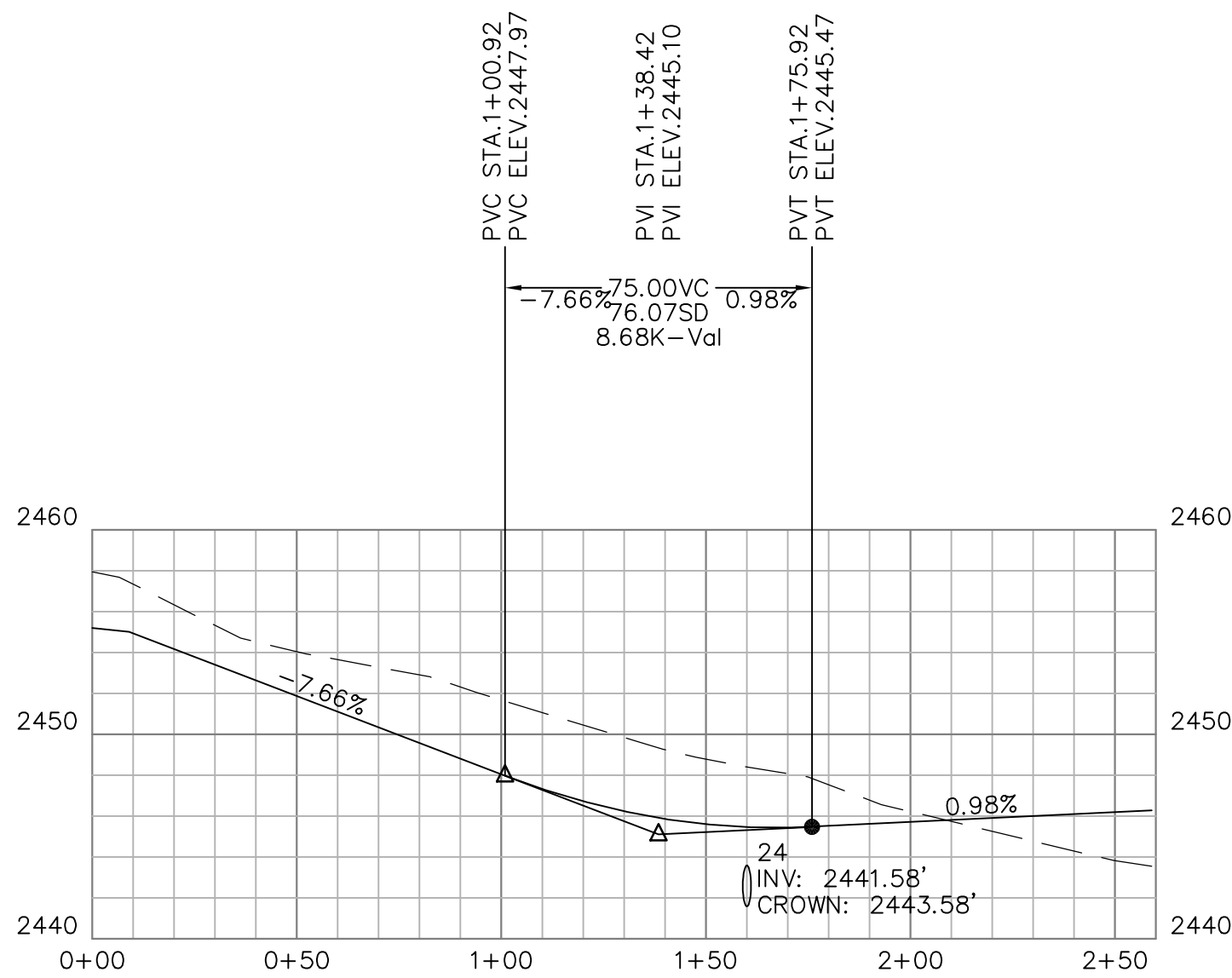
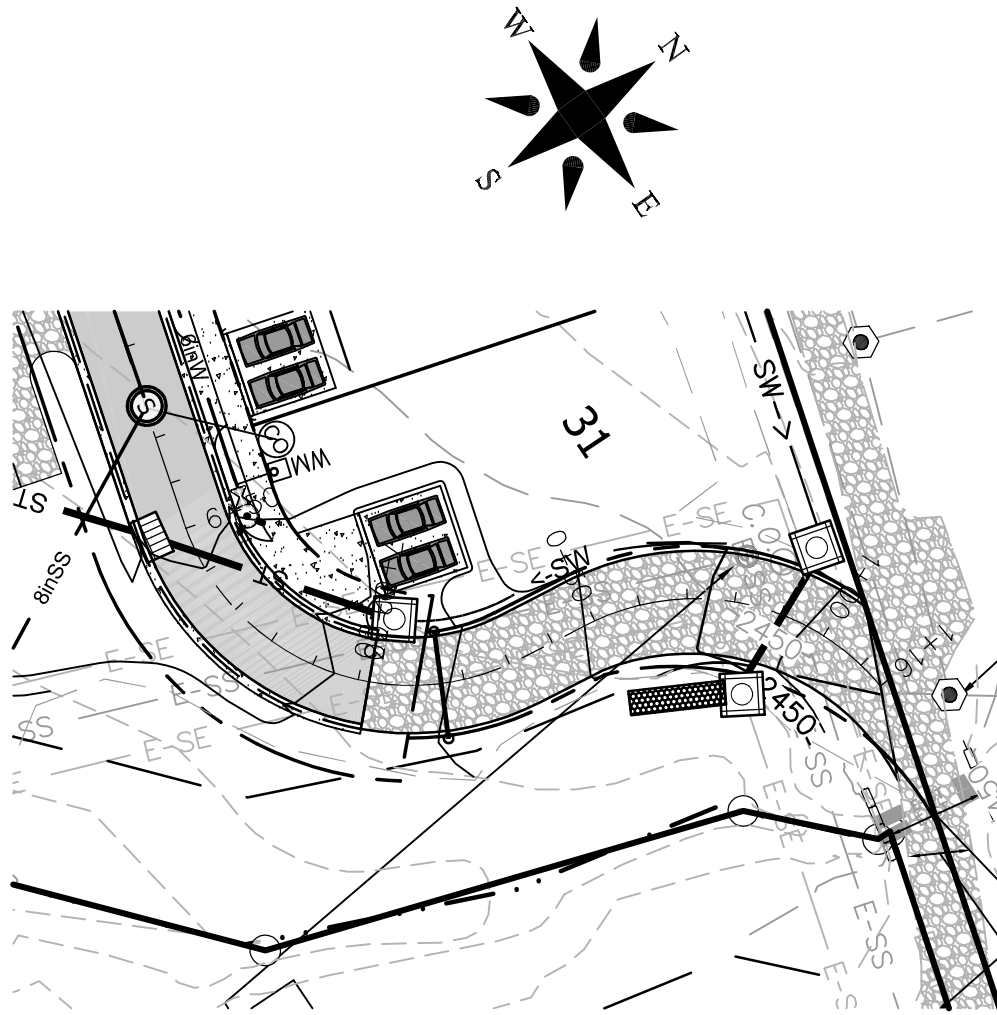
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|---------------------------------|--|-----------------------------|--|----------------|--|------------------------------------------------------------------|--|---------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------|--|
| Project No:<br>480918           |  | PADGETTOWN ROAD SUBDIVISION |  | NORTH CAROLINA |  | DESIGNED: TMM<br>DRAWN: E/JH<br>CHECKED: TMM                     |  | REVIEWED: MCB<br>SCALE: AS NOTED<br>DATE: 3-15-19 |  | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brooksea.com |  | NORTH CAROLINA PROFESSIONAL SEAL 025514                                        |  | NO. 1 PRELIMINARY PLANS<br>2 PRELIMINARY SITE PLAN<br>3 NCDOT DRIVEWAY PERMIT<br>4 TOBAM PLANNING AND ZONING<br>5 MSD SUBMITTAL - PH1 AND PH2 SEWER<br>6 TOBAM STORMWATER<br>7 WATER SUBMITTAL |  | DATE 2/21/19<br>2/22/19<br>2/25/19<br>3/8/19<br>3/14/19<br>3/15/19<br>3/18/19 |  |
| Drawing Title:<br>ROAD PROFILES |  | TOWN OF BLACK MOUNTAIN      |  | NORTH CAROLINA |  | BROOKS ENGINEERING ASSOCIATES<br>NORTH CAROLINA<br>CERT # C-3125 |  | PERMIT SET                                        |  |                                                                                                                  |  | Revision/Submittal number with a triangle indicates changes made on this sheet |  |                                                                                                                                                                                                |  |                                                                               |  |



| GRADING/STORMWATER PLAN LEGEND |                         |  |                           |
|--------------------------------|-------------------------|--|---------------------------|
|                                | EXIST. BOUNDARY         |  | EXIST. OVERHEAD UTILITIES |
|                                | EXIST. STREAM           |  | NEW PROPERTY LINES        |
|                                | EXIST. STREAM BUFFER    |  | NEW RIGHT OF WAY          |
|                                | EXIST. WETLAND          |  | NEW EASEMENT              |
|                                | EXIST. RIGHT OF WAY     |  | BUILDING SETBACK LINE     |
|                                | EXIST. EASEMENT         |  | NEW BUILDING              |
|                                | EXIST. BUILDING SETBACK |  | NEW 24" VALLEY CURB       |
|                                | EXIST. BUILDING         |  | NEW SIDEWALK              |
|                                | EXIST. SIDEWALK         |  | NEW PAVEMENT              |
|                                | EXIST. EDGE OF PAVING   |  | NEW SEWER                 |
|                                | EXIST. STORM            |  | NEW SEWER MANHOLE         |
|                                | EXIST. SEWER            |  | NEW SEWER SERVICE         |
|                                | EXIST. SEWER EASEMENT   |  | NEW SEWER EASEMENT        |
|                                | EXIST. FIRE HYDRANT     |  | NEW WATER                 |
|                                | EXIST. WATER            |  | NEW FIRE HYDRANT          |
|                                | EXIST. WATER EASEMENT   |  | NEW GATE VALVE            |
|                                |                         |  | NEW AIR RELEASE VALVE     |
|                                |                         |  | NEW WATER SERVICE         |
|                                |                         |  | NEW WATER EASEMENT        |
|                                |                         |  | NEW STORM PIPE            |
|                                |                         |  | NEW STORM SWALE           |
|                                |                         |  | NEW CATCH BASIN           |
|                                |                         |  | NEW DROP INLET            |
|                                |                         |  | NEW JUNCTION BOX          |

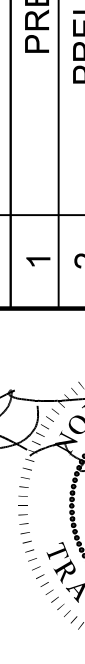


MAP KEY



HORIZONTAL SCALE: 1"=40'

VERTICAL SCALE: 1"=8'

| Project No:<br>480918           |                                   | PADGETTOWN ROAD SUBDIVISION                                              |  | NORTH CAROLINA         |  |  | Designed:<br>TMM<br>EJH |                                                                                                                   | Reviewed:<br>MCB<br>Scale:<br>AS NOTED |            |  |  | <table><tr><th>No.</th><th>REVISIONS/SUBMISSIONS</th><th>Date</th></tr><tr><td>1</td><td>PRELIMINARY PLANS</td><td>2/21/19</td></tr><tr><td>2</td><td>PRELIMINARY SITE PLAN</td><td>2/22/19</td></tr><tr><td>3</td><td>NCDOT DRIVEWAY PERMIT</td><td>2/25/19</td></tr><tr><td>4</td><td>TOBM PLANNING AND ZONING</td><td>3/8/19</td></tr><tr><td>5</td><td>MSD SUBMITTAL - PH1 AND PH2 SEWER</td><td>3/14/19</td></tr><tr><td>6</td><td>TOBM STORMWATER</td><td>3/15/19</td></tr><tr><td>7</td><td>WATER SUBMITTAL</td><td>3/18/19</td></tr></table> | No. | REVISIONS/SUBMISSIONS | Date | 1 | PRELIMINARY PLANS | 2/21/19 | 2 | PRELIMINARY SITE PLAN | 2/22/19 | 3 | NCDOT DRIVEWAY PERMIT | 2/25/19 | 4 | TOBM PLANNING AND ZONING | 3/8/19 | 5 | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19 | 6 | TOBM STORMWATER | 3/15/19 | 7 | WATER SUBMITTAL | 3/18/19 |
|---------------------------------|-----------------------------------|--------------------------------------------------------------------------|--|------------------------|--|--------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------|------|---|-------------------|---------|---|-----------------------|---------|---|-----------------------|---------|---|--------------------------|--------|---|-----------------------------------|---------|---|-----------------|---------|---|-----------------|---------|
| No.                             | REVISIONS/SUBMISSIONS             | Date                                                                     |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 1                               | PRELIMINARY PLANS                 | 2/21/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 2                               | PRELIMINARY SITE PLAN             | 2/22/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 3                               | NCDOT DRIVEWAY PERMIT             | 2/25/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 4                               | TOBM PLANNING AND ZONING          | 3/8/19                                                                   |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 5                               | MSD SUBMITTAL - PH1 AND PH2 SEWER | 3/14/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 6                               | TOBM STORMWATER                   | 3/15/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| 7                               | WATER SUBMITTAL                   | 3/18/19                                                                  |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| C-5.12                          |                                   | SINGLE-FAMILY RESIDENTIAL                                                |  | TOWN OF BLACK MOUNTAIN |  | Planning • Engineering • Surveying<br>• Environmental Services •                     |                         | 17 Arlington Street<br>Asheville, N.C. 28801<br>Phone: 1-828-232-4700<br>Fax: 1-828-232-1331<br>www.brookseaa.com |                                        | PERMIT SET |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |
| Drawing Title:<br>ROAD PROFILES |                                   | Reviews/Signatures with a triangle indicates changes made on this sheet. |  |                        |  |                                                                                      |                         |                                                                                                                   |                                        |            |                                                                                     |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                       |      |   |                   |         |   |                       |         |   |                       |         |   |                          |        |   |                                   |         |   |                 |         |   |                 |         |





**Town of Black Mountain  
Building, Planning and Zoning**

160 Midland Avenue ♦ Black Mountain ♦ North Carolina ♦ 28711  
Phone: 828-419-9300 ♦ Fax: 828-669-2030 ♦ TDD: 1-800-735-2962

**MEMORANDUM**

To: Black Mountain Planning Board  
From: Jennifer Tipton, Zoning Administrator  
Date: April 22, 2019  
RE: Text Amendment – Minor Subdivisions

Please find pertinent information attached.

### **Summary:**

There have been concerns about minor subdivisions taking place while leaving larger residual lots that could potentially be subdivided again therefore not requiring all of the development standards for a major subdivision. The proposed language would allow a “cooling-off” period between minor subdivisions to ensure that the ordinance is not being circumvented. This also stems from discussions at the March Planning Board meeting.

Below is some potential language. All wording is subject to change.

#### **3.3.1 - Minor subdivision.**

- A. A minor subdivision is defined as a subdivision where:
  - 1. No new public streets or roads are proposed (except for private driveway easements with each driveway easement serving no more than three lots; and
  - 2. Where four or fewer lots will result after the subdivision is complete.
- B. The minor subdivision process shall be used only where the subdivision includes all contiguous land under the ownership of the applicant.
- C. The applicant must demonstrate to the acting subdivision administrator that such division is in fact a minor subdivision. **Any subsequent minor subdivision application shall not be approved until two years after the original minor subdivision plat is filed with the Register of Deeds.** ~~If the developable area of the remaining parcel (residual lot) is greater than three times the size of the proposed lot or lots and the residual lot containing such area has the potential for redivision, then the applicant may be required to reapply under the major subdivision procedure.~~
- D. The following procedures shall be followed for minor subdivisions. The numbers in the boxes below correspond with a detailed description of each step of the process on the following:

##### Step 1. Pre-application meeting with sketch plan and submittal of preliminary plat

- A. The applicant shall schedule a pre-application meeting with the subdivision administrator. The applicant shall bring a sketch plan of the proposed development to the meeting that meets the requirements set forth in the land use code.
- B. The subdivision administrator shall review a sketch plan with the applicant for general compliance with requirements, the zoning and eligible uses, and other needs. The public works, fire chief or police chief, ~~local NCDOT district representative or other representative may be invited to review the sketch plan depending on the determination of the staff reviewer.~~ Additional information concerning the proposed subdivision may be required at the request of the administering staff.
- C. One copy of the preliminary plat shall be retained as a part of the record of the subdivision administrator with one copy being returned to the subdivider or his authorized agent along with comments made by the subdivision administrator concerning the plat as generated during the sketch plan review. No improvements shall be made until the preliminary plat is filed with the subdivision administrator.

##### Step 2. Applicant submits final plat

The subdivider shall submit the final plat in accordance with the requirements of section



3.4 and based on consultation and sketch plan comments and any improvements made since the preliminary plat was filed.

**Step 3. Review of final plat by subdivision administrator**

The subdivision administrator shall review the final plat in accordance with the requirements of this ordinance any other applicable ordinances. Any revisions to the approved final plat shall be considered in accordance with section 1.8.1 (vested rights) of the land use code.

**Step 4. Applicant revision period (if necessary)**

The applicant shall revise the plan in accordance with the comments provided by the subdivision administrator and other applicable agencies. All necessary revisions shall be made prior to approval by the subdivision administrator.

**Step 5. Subdivision administrator approval of final plat**

- A. The subdivision administrator shall decide approval, disapproval, or approval subject to minor modifications within 15 days of submission of the plat for minor subdivisions.
- B. Approval shall be null and void unless the final plat is offered for filing and recording in the office of the register of deeds of Buncombe County within 90 days from the date of approval.
- C. The subdivider shall bring a recorded copy to the subdivision administrator for the file.

No permits shall be issued for individual lots until a recorded copy is provided.

**Attachments:**

Visual Aids



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**MEMORANDUM**

To: Black Mountain Planning Board  
From: Jennifer Tipton, Zoning Administrator  
Date: April 22, 2019  
RE: Text Amendment – Traffic Impact Analysis

Please find pertinent information attached.



**Summary:**

When the new land use code was adopted in 2010 there was reference to a section for a traffic impact analysis that did not get carried over therefore it does not exist. The language below provides for specific standards where a traffic impact analysis would be required. This is also stems from the discussion at the March Planning Board meeting.

Below is some potential language. All wording is subject to change.

**(1 & 2)Special Use and Conditional Use Language to review:**

For developments of more than 75 residential units, a traffic impact study meeting the guidelines for traffic impact studies provided in the North Carolina Department of Transportation's "Policy on Street and Driveway Access to North Carolina Highways." No development of more than 75 units or more shall be approved that would generate a decrease in service to a level D or lower as defined by the Highway Capacity Manual (HCM) and the AASHTO Geometric Design of Highways and Streets.

**(3) And this is in the subdivision ordinance:**

Traffic impact study. A traffic impact study shall be submitted for subdivisions with 100 lots or more. The study shall meet the guidelines for traffic impact studies provided in the North Carolina Department of Transportation's "Policy on Street and Driveway Access to North Carolina Highways." No major subdivision of 100 lots or more shall be approved that would generate a decrease in service to a level D or lower as defined by the Highway Capacity Manual (HCM) and the AASHTO Geometric Design of Highways and Streets.

**Attachments:**

Visual Aids