REGULAR TOWN COUNCIL MEETING

Monday, October 28, 2019 @ 7:00pm
Warren County Community Center

1. Pledge of Allegiance
2. Moment of Silence
3. Roll Call
4. Approval of the Regular Council Meeting minutes of October 15, 2019
5. Receipt of Petitions and/or Correspondence from the Public
6. Reports:
    a. Report of special committees or Town Officials and Town Manager
    b. Requests and inquiries of Council members.
    c. Report of the Interim Mayor
        *** Recognition of Service to AireServ of the Shenandoah Valley**
    d. Proposals for addition/deletion of items to the Agenda.

7. **<u>CONSENT AGENDA ITEMS</u>** – (**ROLL CALL VOTE REQUIRED)**
    A. COUNCIL APPROVAL – Recognition of Service for AireServ of the Shenandoah Valley
    B. COUNCIL APPROVAL – Letter of Support requesting funding from the State for Stormwater Local Assistance Fund (SLAF)
    C. COUNCIL APPROVAL – Budget Amendment to Accept Funds for Civil War Trail Program
    D. COUNCIL APPROVAL – Bid for Road Salt
    E. COUNCIL APPROVAL – Re-appointment to BAR - Toler

8. **<u>COUNCIL RECEIVE PUBLIC INPUT</u>** for Special Events and Parking in the Downtown Area

9. **<u>COUNCIL APPROVAL</u>** – An Ordinance to Adopt and Re-enact Section 180-181 to Grant A Franchise Agreement for Cable Television to Comcast of California/Maryland / Pennsylvania / Virginia/West Virginia, LLC *(2nd Reading)*

10. **<u>COUNCIL APPROVAL</u>** – An Ordinance to Adopt and Enact 180-182 to Grant A Franchise Agreement for Cable Television to Shenandoah Cable Television, LLC *(2nd Reading)*

11. **<u>COUNCIL APPROVAL</u>** – Subdivision Plan, Final Plats and Agreement for Happy Creek Knolls Section 4 – Chris Ramsey

12. **<u>COUNCIL APPROVAL</u>** – Budget Amendment for Fairground Water Tank Rehabilitation

13. **<u>COUNCIL APPROVAL</u>** – Fairground Water Tank Rehab. Administration/Inspection Award

14. **<u>COUNCIL APPROVAL</u>** – Fairground Water Tank Rehabilitation Project Award

15. **<u>COUNCIL APPROVAL</u>** – Formal Request to the Warren County Board of Supervisors to Consider a Boundary Adjustment for Property on Guard Hill Road Owned by Chris Ramsey

16. **<u>CLOSED MEETING</u>** - EDA Lawsuit, Disposition of Town Property, Personnel

7A

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(A)

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Recognition of Service for AireServ of the Shenandoah Valley

Summary: Council is requested to formally recognize AireServ of the Shenandoah Valley for their outstanding dedication to their Front Royal business, their employees and community, as presented.

Budget/Funding: None

Attachments: Recognition of Service

Meetings: None

Staff Recommendation: Approval_______ Denial_______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council to approve a Recognition of Service to AireServ of the Shenandoah Valley for their outstanding dedication to their Front Royal business, their employees and community, as presented.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: __________

Recognition of Service

Whereas, Neighborly® is the world's largest franchisor of home service brands, and Aire Serv® has over 200 locations throughout the United States and Canada;

Whereas, Raymond, Tina, and Ryan Bramble, owners of Aire Serv of The Shenandoah Valley, a Neighborly company, earned the Aire Serv Franchisee of the Year award at the Neighborly International Reunion held August 4-7, 2019 in San Antonio, Texas;

Whereas, the Brambles have operated Aire Serve of the Shenandoah Valley since February 2009, and have received multiple awards over the years, including 2014 Franchisee of the Year, a Personal Achievement Award in 2012, and the Builders Award in 2015;

Whereas, the employment of heating, air conditioning, and refrigeration mechanics and installers is projected to grow 13 percent from 2019 to 2028, much faster than the average for all other occupations, and Aire Serv provides many local jobs for our community;

Whereas, HVAC technicians work mostly in homes, schools, hospitals, office buildings, or factories, their worksites may be very hot or cold because the heating and cooling systems they must repair may not be working properly; and because some parts of these systems are located outdoors, and they typically work in cramped spaces and during irregular hours;

Whereas, the Town of Front Royal truly values and appreciates the importance of Aire Serv of the Shenandoah Valley and the tremendous skillset of all Aire Serv employees;

Whereas, the Town of Front Royal acknowledges the contributions made to our community by the Bramble Family and Aire Serv of the Shenandoah Valley;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of Front Royal, Virginia that Aire Serve of the Shenandoah Valley is hereby formally recognized for their outstanding dedication to their Front Royal business, their employees, and our community.

Jennifer E. Berry, MMC
Clerk of Council

Matthew A. Tederick
Interim Mayor

THIS RESOLUTION was approved at the Regular Meeting of the Town of Front Royal, Virginia, Town Council conducted on October 28, 2019.

7B

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(B)

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Letter of Support Requesting Funding from the State for Stormwater Local Assistance Fun (SLAF)

Summary: Council has received a request from the Alliance for the Shenandoah Valley requesting a Letter of Support from the Town Council addressed to Governor Northam requesting his commitment of $80 million in FY20 for the Stormwater Local Assistance Fund (SLAF). If approved in the State's budget, they can be applied for through matching fund programs by localities to help treat run off water and keep the waterways healthy.

Budget/Funding: None

Attachments: Email Request and Letter of Support

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council approve a Letter of Support requesting Governor Northam's commitment of $80 million in FY20 for the Stormwater Local Assistance Fund (SLAF). I further move that Council direct the Clerk of Council to email the Letter of Support once executed by the Interim Mayor to the Alliance for the Shenandoah Valley as requested and presented.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

-----Original Message-----
From: Kim Woodwell <kwoodwell@shenandoahalliance.org>
Sent: Thursday, September 12, 2019 9:47 AM
To: Tina Presley <tpresley@frontroyalva.com>
Subject: request for agenda

Tina,

As I mentioned on the phone, I am with Alliance for the Shenandoah Valley and we are working with our conservation partners across the Commonwealth to get letters from localities showing support for these cost-share programs. These letters will be packaged by our partner, Virginia Conservation Network, and presented all at once to the Governor and state legislators

So, I am asking for your help in requesting a letter of support from the Town of Front Royal for state cost-share funding for stormwater and agricultural best management practices. Our campaign was so successful last year with record setting levels of funding for cost-share we are hoping to get more letters and success this time!

Given the rainfall from recent years, I am sure stormwater management improvements have been discussed in Front Royal! And, I am sure you understand the benefits of agricultural BMP cost-share for both farmers and water quality. These programs would bring money to our region, address local challenges, and help Virginia meet its Chesapeake Bay clean-up commitment.

All we need from you is a simple letter of support. Attached is a draft letter for your consideration. Please changes as needed and then return a signed copy to me at kwoodwell@shenandoahalliance.org.

Don’t hesitate to contact me with questions at kwoodwell@shenandoahalliance.org or 540-333-3681.

Thanks for the consideration and I hope Front Royal will join other Valley localities in supporting this effort! And, if you have questions, give a call.

Thanks Kim.

Kim Woodwell

Alliance for the Shenandoah Valley
9386 South Congress Street
PO Box 674
New Market VA 22844
c: 540.333.3681
o: 540.740.4500
www.shenandoahalliance.org
kwoodwell@shenandoahalliance.org

October 28, 2019

The Honorable Ralph Northam
Governor of Virginia
P.O. Box 1475
Richmond, VA 23218

Dear Governor Northam:

On behalf of the Town of Front Royal, we write to request that your Administration commit to working with the General Assembly to provide sufficient state funding to assist local governments, farmers and other landowners in improving water quality and meeting Virginia's commitment under the Chesapeake Bay.

Specifically, we respectfully request inclusion of the following in your biennial budget.

- **$80 million per year for the Stormwater Local Assistance Fund (SLAF).** We rely on these SLAF grant matching funds to install the projects that reduce polluted runoff within our localities. Consistent and adequate funding for stormwater assistance programs results in stormwater projects that have broad ranging benefits including clean and healthy local waterways, increased tourism, beautified community parks and reduced flooding.

Stormwater management is one of Front Royal's most pressing infrastructure challenges. These programs provide critical funding to help treat and mitigate stormwater within our community and allow us to leverage our limited funding to tackle these most difficult improvements.

The benefits of investing in these stormwater and agricultural programs—decreased drinking water treatment costs, reduced local flooding and growth of our regional tourism — far exceed the public investment. The programs improve Virginia's economy, communities, ecology, and quality of life. Consistent and adequate year-to-year funding for these programs is needed to ensure we can get this work done and maximize benefits to our local waterways and Virginia communities.

We look forward to working with you and the General Assembly to ensure Virginia achieves its 2025 Bay clean-up goals while furthering the health and well-being of our citizens.

Sincerely,

Matthew A. Tederick, Interim Mayor
Town of Front Royal

7C

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(C)

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Budget Amendment to Accept Funds for Civil War Trail Program

Summary: Council has received a contribution in the amount of $250.00 from Frank and Anita Lagasse, 1500 N. Royal Avenue to be used to help offset the Town's membership dues in the Civil War Trails Program. Mr. & Mrs. Lagasse have recently contributed to the Civil War Trails organization by sponsoring two (2) Civil War Trail signs located in front of their home. Council is requested to approve the acceptance of the $250.00.

Budget/Funding: 1000-3189913 – General Fund Donations - $250
1205-45801 – Tourism Dues & Memberships - $250

Attachments: None

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council approve a budget amendment to accept a contribution in the amount of $250.00 from Frank and Anita Lagasse, 1500 N. Royal Avenue to be used to help offset the Town's membership dues in the Civil War Trails Program.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
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Approved By: JW

7D

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(D)

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Bid for Bulk Road Salt

Summary: Council is requested to approve a bid for bulk road salt from Mid-Atlantic Salt in the amount of $69.90 per ton for FY20.

Budget/Funding: Streets FY20 budget line item 4500-45478

Attachments: Memorandum from Purchasing Manager and Vendor Spreadsheet

Meetings: None

Staff Recommendation: Approval JW Denial_______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council approve a bid for bulk road salt from Mid-Atlantic Salt in the amount of $69.90 per ton for FY20.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

Town of Front Royal, Virginia

Purchasing, Department of Finance

MEMORANDUM

Date: October 23, 2019

To: Tina Presley, Senior Executive Assistant

From: Alisa Scott, Purchasing Manager

RE: Request to add action item to Town Council Agenda

Purchasing received a request from the Department of Public Works, Streets Division to purchase bulk road salt for firm fixed pricing through April 2020. On Tuesday, October 22, 2019, I held a public bid opening and received four (4) quotes. Enclosed is the bid tabulation with the lowest responsible and responsive bid going to Mid-Atlantic Salt, Gladwyne, PA.

Due to the historical demand and spending of bulk road salt, Staff recommends Council approve the bid for $69.90 per ton for FY20 be awarded to Mid-Atlantic Salt.

Funding for this purchase is available in the Streets FY20 budget line item 4500-45478.

Purchasing, Department of Finance
102 E Main Street
Front Royal, VA 22630
Website: www.frontroyalva.com
Phone 540-636-6889

Town of Front Royal, VA

BID TABULATION SUMMARY
BID: RFQ #36-2019 ROAD SALT
BID/PROPOSAL OPENING DATE: 10/22/2019
BID/PROPOSAL OPENING TIME: 2:00 PM

	MID-ATLANTIC SALT GLADWYNE, PA	CARGILL, INC. NORTH OLMSTED, OH	MORTON SALT, INC. CHICAGO, IL	DEICING DEPOT DEERFIELD BEACH, FL
DESCRIPTION	**UNIT PRICE**	**UNIT PRICE**	**UNIT PRICE**	**UNIT PRICE**
BULK DEICING ROAD SALT PER TECHNICAL SPECIFICATIONS	$69.90	$72.47	$73.24	$88.20

The VENDOR SPREAD SHEET is generated from the initial, raw information collected. No award decision has been made.

Alisa Scott

Prepared by: Alisa Scott, PMP, MBA, VCA, VCO

Department of Purchasing
102 E Main Street
Front Royal, VA 22630
Website: www.frontroyalva.com
Phone 540-636-6889

7E

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(E)

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Re-appointment to BAR - Toler

Summary: Council is requested to make a re-appointment to the Board of Architectural Review (BAR). Said term to expire November 13, 2024.

Budget/Funding: None

Attachments: None

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council re-appoint Angela Toler to the Board of Architectural Review (BAR) to a four-year term ending November 13, 2024.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 8

Meeting Date: October 28, 2019

Agenda Item:	COUNCIL TO RECEIVE PUBLIC INPUT for Special Events and Parking in the Downtown Area
Summary:	Council is requested to receive comments and concerns from citizens and business owners regarding special events and parking in the downtown area.
Budget/Funding:	None
Attachments:	Town Code Chapter 72 - Special Events, List of Events for 2019, Application
Meetings:	Business Forum held September 25, 2019
Staff Recommendation:	Approval JW Denial_______
Proposed Motion:	Council takes desired action

*Note: Motions are the formal & final proposal of Council,
proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

Chapter 72

SPECIAL EVENTS

Adopted by the Town Council of the Town of Front Royal 3-11-85 *(formerly adopted 11-26-73. Section 72-8 added at time of adoption of Code.* Entire Chapter was amended by Ord. 4-12 on 1-23-12 *(formerly Entertainment Festival).*; Revised/Reorganized Content and Added Subsections 1-14-19. Other amendments noted where applicable.

72-1 PURPOSE OF CHAPTER

A. The Town Council enacts this Chapter for the purpose of regulating the time, place and manner of special events and demonstrations within the Town and to accommodate competing demands for the public use of streets, sidewalks and public places. Regulation is necessary to preserve the public peace and safety, to permit free expression on issues of public concerns, to protect persons and property, to maintain acceptable conditions of traffic flow upon the streets and sidewalks and to prevent, control or eliminate any illegal, injurious or dangerous effects of this lawful activity.

B. The Town Council does not enact this Chapter or seek through its enforcement, to deny or abridge any person's rights of assembly and free speech or the opportunity for communication of thought and discussion of public questions in public places.

(Amended 3-13-06-Effective Upon Passage ; Amended 8-27-07-Effective Upon Passage)
(Amended 7-11-11-Effective Upon Passage ; Amended 1-23-12-Effective Upon Passage)

72-2 PERMIT REQUIRED

No person(s) or entity shall conduct any of the following special events or activities unless a permit has been granted by the Town:

1. Any gathering of individuals or groups for the purpose of listening to or participating in entertainment and/or commemorative festivals or parades with or without music and with or without the use of microphones and amplifiers conducted in open spaces not within an enclosed structure.

(Amended 1-14-10 – Removed the number of persons constituting a gathering-Effective Upon Passage)

2. Any planned gathering that results in the closing of any part of any public street or sidewalk to accommodate persons attending the gathering.

3. Parades, processions, marathons, bicycle races and other events utilizing the sidewalks or vehicular travel portion of Town streets.

4. Motion picture, video or broadcast television productions, other than news media, involving the staging of vehicles, equipment, props or personnel on public property, including buildings, streets and sidewalks, or requiring the use of Town equipment or services.

72-3 PERMIT APPLICATION

A. An application for any permit required by this Chapter shall be made to the Town Manager or the Manager's designee. The application shall be submitted not less than thirty (30) days nor more than six (6) months prior to the date of the proposed activity. An application for a major event (one involving the closure of more than three (3) blocks or which will last more than two (2) days) shall be filed not less than sixty (60) days nor more than six (6) months before the first date of the proposed activity. The application shall contain the following information, utilizing a form provided by the Town Manager.

If an application is submitted after the filing deadline set forth in Subsection A. the Town Manager or the Manager's designee may waive the filing deadline requirement of Subsection A upon a demonstration by the applicant in writing, that circumstances giving rise to the proposed event did not reasonably allow the applicant to apply for a permit within the time prescribed.

The application shall contain the following information, utilizing a form provided by the Town Manager's Office:

1. Description of the proposed activity;

2. Date, time and location/route of proposed activity and the anticipated number of participants and spectators;

3. Provisions for restroom facilities; security including but not limited to crowd, noise, parking, and traffic control; emergency services, fire protection, waste and refuse disposal, ADA compliance, and loud speaker placement. Plans for control shall meet all state and local requirements, ordinances and regulations.

(Amended 1-14-19-Effective Upon Passage)

4. Food and beverages to be sold or distributed. Plans for sale or distribution shall meet all state and local requirements, ordinances and regulations;

5. The designation of an individual or individuals who shall be responsible for ensuring compliance with the provisions of this Chapter and the conditions of the permit;

6. Proposed equipment, including but not limited to, vehicles, staging, bleachers, shelters, lighting and electricity requirements;

7. If revenue is anticipated to be generated by the activity, the individuals or entity that will benefit therefrom, and a list of anticipated vendors. Vendors associated with special events permitted through this Chapter shall not be subject to Town business license requirements, however, the approved permit does not eliminate any requirement for any business license, permit(s) which may be prescribed by any other federal, state or local statues, ordinances, rules or regulations or compliances with any other federal, state or local statues, ordinances or rules or regulations;

8. If animals such as horses are to be included in the event, provision of waste collection shall be provided by the Event Coordinator.

9. If pets are to be excluded from the event and how this shall be communicated to attendees;

10. Such additional information or assurances as the Town Manager may require.

(Amended 1-4-19 – Removed reference to "temporary signage"-Effective Upon Passage)

B. A completed application shall be processed and either granted or denied within a reasonable time of receipt, but not more than thirty (30) days from the receipt of any application requiring sixty (60) days' advance filing or fifteen (15) days from the receipt of any application requiring thirty (30) days' advance filing. Such decision shall be in writing, setting forth the conditions of the permit, if granted, or the reasons for denial. The decision shall be provided to the applicant at the address stated in the application.

Prior to the final denial of any application, the applicant shall be apprised of the reason therefore and shall be able to appeal to the Town Council.

72-4 PERMIT APPROVAL PROCESS

A. The Town Manager or the Manager's designee may impose, as conditions to granting a permit, such further requirements and restrictions as will reasonably protect the public health, safety, welfare, peace and order. Such conditions may include, but are not limited to the following:

1. Any proposed use of public property, right-of-way, or facilities will have a public benefit and not unreasonably interfere with the normal use of property, right-of-way or facility by the Town or the general public;

2. The proposed activity does not present a safety or health risk to participants, spectators or the public, or an environmental hazard;

3. The proposed activity is compatible with the surrounding area or neighborhood, in consideration of anticipated noise, traffic, crowd capacity and other identifiable factors;

4. Should the proposed activity include music or entertainment, provision of such entertainment shall not exceed twelve (12) hours in any twenty-four (24) hour period from the first gathering of participants;

5. Race events shall be responsible to provide traffic cones along affected routes to keep participants within coned boundaries, place race marshals at the start/finish and at every intersection along the coned route;

6. The applicant has provided proof of liability insurance underwritten by insurers acceptable to the Town, indemnifying the Town against any perils, suits, claims and losses which may arise in connection with the proposed activity. Such coverage shall be in amounts consistent with a standard schedule approved by the Town Manager, based upon risks associated with each type of event, in consideration of anticipated attendance. The Certificate of Liability Insurance to cover the event shall name the Town as an "Additional Insurer";

7. Should the proposed activity take place within the Historic Downtown area the following restrictions shall be met;

a. Full and/or partial closure of Main Street, shall be permitted two (2) times a month with a maximum of twelve (12) closures a calendar year; and,

b. Full closure of the Gazebo Parking Lot shall be permitted only when the full or partial closure of Main Street has been requested/permitted.

c. Partial closure of the Gazebo Parking Lot shall be permitted, but the East Main Street entrance to the Parking Lot will remain open to accommodate parking for the Visitor's Center and local businesses. Bollards will be placed in the parking lot, by the Town, to allow such parking.

(Amended "a" and Added "b-c" 1-14-19-Effective Upon Passage)

d. Town or County sponsored events shall have priority in use of any downtown public property or right-of-way. For events not sponsored by the Town or County, applicants who have held a quality event in the previous year and remain in good standing with the Town shall have priority for the same time and location the following year. All other applications are processed in order of receipt.

8. The payment of a reasonable fee for the use of Town utilities in connection with the proposed activity shall be as follows:

Service	Fee
Electric Service	$25.00 per day
Water Service	Current metered rate

(Amended 1-14-19 – Removed all reference to other service fees-Effective Upon Passage)

9. By acceptance of the issuance of the permit, the applicant provides the Town Manager, the Manager's designee, and/or duly constituted law enforcement officers full access to the event for the purpose of determining compliance with the provisions of this Chapter.

10. Event Coordinators shall make every effort to promote the following and communicate to all organizers, vendors, entertainers or participants other than attendees the following suggested actions:

a. Event organizer, vendor, entertainer and participant parking should be in locations other than the Peyton Street Parking Lot. The Event Coordinators shall seek permission from off-site property owners for participant parking;

b. Participants in events associated with road closures shall confine exhibits, equipment and supplies to road area only. Blocking of sidewalks is prohibited;

i. Event Coordinators shall provide first right of refusal for one space adjacent to each merchants' business up to six (6) weeks in advance of the event. Event Coordinators are encouraged to provide reduced rates for this space;

ii. Event Coordinators shall place vendor booths on alternating sides of the road or shall alternate side of the road each year for successive events; and,

iii. Pedestrian access paths shall be provided to the sidewalk at a rate of one ten (10) foot space every forty (40) feet of vendor booths. All sidewalk access points shall be free from vendor booths.

11. Any permit granted under the provisions of this Chapter shall remain in effect for the duration of the proposed activity.

(Amended 1-14-19 – Removed reference to "conforming to Zoning Ordinance"-Effective Upon Passage)

72-5 PERMIT EXCEPTIONS

This Chapter shall not apply to:

1. Gatherings on residentially-zoned property for the celebration of birthdays, anniversaries or family reunions;

2. Sporting events on any publicly-owned property;

3. Gatherings or events on Warren County or school-owned property with the permission of the County or School Board; or,

4. Gatherings or events on Randolph Macon Academy or school-owned property.

72-6 PERMIT REVOCATIONS/SUSPENSION

The Town Manager or the Manager's designee shall be authorized to revoke or suspend any permit previously granted:

1. For violation of any provisions of this Chapter or of any condition of the permit;

2. For any material misrepresentation, intentional or otherwise, made in connection with the application;

3. When weather conditions render the subject activity unsafe; and,

4. When otherwise required in the interest of public health, safety and welfare or environmental considerations.

In the event a permit is revoked or suspended, the permittee shall immediately discontinue, or cause to be discontinued, the activity for which the permit was granted, but shall thereafter, be entitled to a hearing concerning the revocation or suspension decision as provided by Subsection 72-3.B.

72-7 PROVISIONS OF THIS CHAPTER

A. The Town Manger may designate one (1) or more officers or employees of the Town to administer the provisions of this Chapter.

B. Any person who shall violate any provision of this Chapter shall be guilty of a Class 3 misdemeanor.

(Amended 3-13-06-Effective Upon Passage ; Amended 8-27-07-Effective Upon Passage)
(Amended 1-23-12-Effective Upon Passage)
(Amended 1-14-19 – Removed Subsection "PERMIT PROCESSING FEE"-Effective Upon Passage)

SPECIAL EVENT PERMIT
APPLICATION

A Special Events Permit is required to regulate the time, place and manner of special events and demonstrations within the Town and to accommodate competing demands for the public use of streets, sidewalks and public places. Regulation is necessary to preserve the public peace and safety, to permit free expression on issues of public concerns, to protect persons and property, to maintain acceptable conditions of traffic flow upon the streets and sidewalks and to prevent, control or eliminate any illegal, injurious or dangerous effects of this lawful activity. The Town does not seek to deny or abridge any person's rights of assembly and free speech or the opportunity for communication of thought and discussion of public questions in public places. Refer to Chapter 72 of the Front Royal Municipal Town Code for more information.

APPLICANT INFORMATION
(PLEASE PRINT)

APPLICANT NAME: ____________________

MAILING ADDRESS: ____________________

____

PHONE#: ____________________

E-MAIL: ____________________

GROUP/ORGANIZATION *(if applicable)* ____________________

EVENT INFORMATION

EVENT NAME ***(if applicable)*** ____________________

DATE: ____________________

LOCATION: ____________________

☐ PRIVATE PROPERTY

☐ PUBLIC PROPERTY *(please check all that apply)*

☐Historic Downtown Area *(Gazebo, Village Commons)* ☐Various Town Streets *(Check for Parades/Races)*

☐Bowman Park ☐Other *(please specify)* ____________________

TIME: Begin ____________________ **End** ____________________

Public Property: If you need extra time for setup and cleanup, please indicate how much time is needed in hours:
Setup: ____________________ **Clean Up:** ____________________

CONTACT PERSON ON DAY OF EVENT IF DIFFERENT FROM APPLICANT

____
Name *Phone #*

TYPE OF EVENT

☐ Stationary Organized Event/Gathering
☐ Stationary Organized Event/Gathering resulting in closing of a public street or parking lot
☐ Parade/Procession in conjunction with a Stationary Organized Event/Gathering
☐ Parade or Procession Only
☐ Run and/or Walk Event or Race in conjunction with a Stationary Organized Event/Gathering
☐ Run and/or Walk Event or Race Only
☐ Closure of a Town Right-of-Way for a Private Event
☐ Other *(please specify)* ____________________

BRIEF DESCRIPTION OF THE EVENT

____
____
____
____
____
____
____
____
____

HAVE THE FOLLOWING PROVISIONS BEEN MET FOR YOUR EVENT? ***(please check all that apply)***

□ Restroom Facilities *(please arrange for porta-johns for large crowds or serving food/drinks)*
□ Security for crowd, noise, parking and traffic control
□ Emergency Services/Fire Protection
□ Food and Beverages Sold or Distributed *(please check with the local Warren County Health Department for any regulations)*
□ Waste/Refuse Disposal
□ ADA Compliance
□ Proposed Equipment *(vehicles, staging, shelters, lighting, loud speakers, inflatables, tents etc)*
(please check with the County of Warren Building Inspector Office for any required permits for structures and inflatables)
□ Revenue Anticipated □ Yes *(see page 4)* □ No
□ Animals Included/Excluded during Event *(circle one)*
□ Music
□ Closure of Public Streets and/or Parking Lots *(list closures on page 3)*

CLOSURE OF TOWN RIGHTS-OF-WAYS (STREETS AND/OR PROPERTY) NEEDED FOR EVENT

Full and/or partial closure of Main Street shall be permitted two (2) times a month with a maximum of twelve (12) closures a calendar year. Full closure of the Gazebo Parking Lot shall be permitted only when the full or partial closure of Main Street has been requested/permitted. Partial closure of the Gazebo Parking Lot shall be permitted, but the East Main Street entrance to the Parking Lot will remain open to accommodate parking for the Visitor's Center and local businesses. Bollards will be placed in the parking lot, by the Town, to allow such parking.

List ALL requested closures:

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☐ **Route/Map Attached.** Required for Parades, Procession, Walk, Runs, Races. It shall show/list the cross streets or landmarks for the starting/ending locations including staging areas. Race Marshalls must be provided by the organization and placed at the start/finish and at every intersection along the coned route. Race event organizers shall be responsible for providing traffic cones along affected routes to keep participants within coned boundaries. Routes are reviewed by local law enforcement to ensure safety for participants and accommodate competing demands for the public use of streets.

ANTICIPATED REVENUE

If revenue is anticipated to be generated by the event, the individuals or entity that will benefit therefrom is required. Vendors associated with special events permitted through this application shall not be subject to Town business license requirements; however, the approved permit does not eliminate any requirement for any business license/permit which may be prescribed by any other federal, state or local statutes, ordinances, rules or regulations or compliances with any other federal, state or local statues, ordinances or rules or regulations.

Individual/Entity that will benefit from the event ____

____

FEES/INSURANCE

The payment of reasonable fees for the use of Town utilities are as follows. Please indicate if the event will need electricity by checking below:

☐ **Electric Service - $25.00 non-refundable per day paid in advance. The key to the electric box must be picked up at the Visitor Center between the hours of 9:00am – 5:00pm before the event.**

☐ **Water Service – a meter will be placed and the event coordinator/applicant will be billed accordingly**

All checks are made payable to the *Town of Front Royal*. The Town accepts cash and all major credit cards.

Proof of liability insurance (Certificate of Liability Insurance) underwritten by insurers acceptable to the Town, indemnifying the Town against any perils, suits, claims and losses which may arise in connection with the event. Such coverage shall be in amounts based upon risks associated with each type of event in consideration of anticipated attendance. The Certificate of Liability Insurance shall name the Town of Front Royal as an "Additional Insurer" and specifically state the name, date and location of the event. Please indicate if Certificate is attached.

☐ **Certificate of Liability Insurance Attached**

Applications shall be submitted not less than thirty (30) days nor more than six (6) months prior to the date of the proposed activity.

All applications shall be COMPLETED at least thirty (30) days before the date of the proposed activity or the application shall be null and void.

A COMPLETED application shall be processed and either granted or denied within a reasonable time of receipt, but not more than fifteen (15) days from the receipt of any application.

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Signature of Applicant ***Date***

Once completed send to Tina Presley at tpresley@frontroyalva.com, Town Hall 102 E Main Street, (540) 635-8007

SPECIAL EVENT in DOWNTOWN AREA

2019

	Date	Time	Location	Comment
JANUARY				
Vigil for Democracy	Wednesdays	12 - 1	Gazebo	
FEBRUARY				
Vigil for Democracy	Wednesdays	12 - 1	Gazebo	
MARCH				
Vigil for Democracy	Wednesdays	12-1	Gazebo	
APRIL				
Vigil for Democracy	Wednesdays	12 - 1	Gazebo Area	
2nd Annual Sexual Assault Awareness Month Candlelight Vigil (The Laurel Center)	13	6 – 8	Gazebo Ribbons placed on Main Street and Gazebo 4/1 – 4/30	Electric Needed Speeches, Choir, Open Mic
Humanity Day (Stevi Hubbard) Habitat for Humanity	20	10-5	Gazebo Area Partial Parking Lot	Live music, food, Kids corner, local vendors
Taste of Town (FRIBA – C. Laird) CANCELLED	26	6-9	*** Gazebo Area *** Close Main from Crescent to Blue Ridge & Chester from LV Hale to Main	Electric Needed Band and Vendors
Community Outreach/Concert Dynamic Life Ministries	27	12-6	Gazebo	Electric Needed Music, face painting, balloon art, corn hole
MAY				
Vigil for Democracy	Wednesdays	5-6 Beginning 28 12-1	Gazebo	
National Day of Prayer	2	6 – 7:30	Gazebo	Electric
Building Safety Event (County)	10	10 – 2	Gazebo Parking Lot (partial)	Electric
Family Fun Day/Parade (Huck)	11	10 – 6	***Gazebo Area ***	Electric Parade at 10

33rd Annual VA Wine/Craft Festival (Chamber)	18	10 – 6	*** Gazebo Area/Main St ***	Electric
Community Outreach/Concert Dynamic Life Ministries	25	12-6	Gazebo	Electric Needed Music, face painting, balloon art, corn hole
Great Commission Church Promotion	26	1-2	Gazebo	Stand and promote the new church
Memorial Day Ceremony and Salute to the Dogs of War (Malcolm Barr, Jr.)	27	12-1:30	Gazebo	Electric Needed Town AMP Needed Brief Parade of Dogs Band and Speech
JUNE				
Vigil for Democracy	Wednesdays	12-1	Gazebo	
Helltown Cruisers Cruise-In	1	4-9	***Gazebo Parking Lot***	Partial Closure of Lot DJ Music
Gazebo Gatherings (BRAC)	14, 21, 28	7 - 9	Gazebo	Electric
Greater Joy Gospel Fest (Sharon Howard)	15	9-3	Gazebo	Electric Needed Gospel singing/dance Food
Bike Virginia 2019 Bikeorama	22	10:30-3:30	***Outside Visitor Center***	water/partial park. lot
Corpus Christi Procession	23	6-7	*** Bowman Park/Main St ****	Procession
JULY				
Vigil for Democracy	Wednesdays	12-1/5-6	Gazebo	
Helltown Cruisers Cruise-In	6	4-9	***Gazebo Parking Lot***	Partial Closure of Lot DJ Music
Gazebo Gatherings (BRAC)	12, 19, 26	7 - 9	Gazebo	Electric
Community Meet/Greet SaVida Health	12	11-2	Gazebo	Electric/Water
Car Show (Steven Stratton)	27	9-4	***Gazebo Parking Lot***	Partial closing of lot
Proclaim 2019 (Discipleship Community Church)	28	11-1	Gazebo	Ministry, crafts, music, preaching

AUGUST				
Helltown Cruisers Cruise-In	3	4-9	***Gazebo Parking Lot***	Partial Closure of Lot DJ Music
Gazebo Gatherings (BRAC)	2, 9, 16, 23	7 - 9	Gazebo	Electric
Vigil for Democracy	Wednesdays	12-1	Gazebo	
National Night Out (FRPD)	6	6-9	***Gazebo***	Electric
Dr. Sherman Comm Celebration	10	3:30-5:30	***Gazebo***	Partial Closure of Lot electric
Gazebo Outreach-Dynamic Life	17	2-6	Gazebo	Electric
BRAC Event	24	7-9	Gazebo	Electric
BRAC Event	30	7-9	Gazebo	Electric
SEPTEMBER				
Vigil for Democracy	Wednesdays	5-6 Beginning 25th 12-1	Gazebo Area	
Gazebo Gatherings (BRAC)	6 (last one)	7 - 9	Gazebo	Electric
Helltown Cruisers Cruise-In	7	4-9	***Gazebo Parking Lot***	Partial Closure of Lot DJ Music
Gear Swap	14	10-5	***Gazebo Area***	Electric Partial Closure of lot
Discipleship Community Event	15	9-1	Gazebo Area	electric
River/Brew Festival (Chamber)	21	12-6	Gazebo Area Close Chester to Crescent and LV Hale	Electric Close all of Lot
Taste of Town (FRIBA – C. Laird)	27	6-9 Set up at 4 Out by 10	Gazebo Area Close Main from Crescent to Blue Ridge Close Chester from Main to Parking Lot	Electric Needed Band and Vendors
Dynamic Life Ministries Outreach	28	3-7	Gazebo Area	Electric
OCTOBER				
Vigil for Democracy	Wednesdays	12-1	Gazebo Area	
Helltown Cruisers Cruise-In	5	2:30-7	***Gazebo Parking Lot***	Partial Closure of Lot DJ Music/Trunk or Treat

Mashtoberfest 2019	5	11-6	Front Royal Brewing Co	Some parking spaces closed and partial Kidd Lane
Rosary Procession (Knights of Columbus)	6	4:30-5:30	*** Gazebo ***	Procession
Festival of Leaves (Warren Heritage)	12	10-6	*** Gazebo ***	Electric
Proclaim – Discp Comm Church	13	10:30-1:00	Gazebo	Electric
Zombie Walk	19	6-8	From Bing Crosby to Gazebo	Electric/band
Halloween Costume Party	26	12-6	block partial parking lot	Electric
Hometown Halloween	31	6-8	***Gazebo/Main Street***	Electric
NOVEMBER				
Vigil for Democracy	Wednesdays	12-1	Gazebo Area	Protesters
Veterans Day Gathering	11	11-12	Courthouse	Main/Crescent block
DECEMBER				
Vigil for Democracy	Wednesdays	12-1	Gazebo Area	Protesters
Christmas Parade/Festivities (Chamber of Commerce)	7	10-6	***Gazebo***	Close Main/Chester Streets for Parade and Gazebo Area for Festivities

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 9

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – An Ordinance to Adopt and Re-enact Section 180-181 to Grant a Franchise Agreement for Cable Television to Comcast of California / Maryland/Pennsylvania/Virginia/West Virginia, LLC *(2nd Reading)*

Summary: Council is requested to adopt on its second and final reading an ordinance to adopt and re-enact Section 180-181 of the Town Code to grant a Franchise Agreement for Cable Television to Comcast of California/Maryland/ Pennsylvania/ Virginia / West Virginia, LLC as presented.

Budget/Funding: 1000-3120401 – General Fund Franchise Tax

Attachments: Ordinance, Agreement and Work Session Minutes of April 15

Meetings: Work Session held April 15, 2019. Public Hearing held October 15, 2019

Staff Recommendation: Approval JW Denial______

Proposed Motion: **I move that Council adopt on its second and final reading an ordinance to adopt and re-enact Section 180-181 of the Town Code to grant a Franchise Agreement for Cable Television to Comcast of California/Maryland/ Pennsylvania/ Virginia / West Virginia, LLC as presented.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

AN ORDIANCE TO ADOPT AND RE-ENACT SECTION 180-181 OF THE FRONT ROYAL TOWN CODE TO GRANT A FRANCHISE AGREEMENT FOR CABLE TELEVISION TO COMCAST OF CALIFORNIA / MARYLAND / PENNSYLVANIA / VIRGINIA /WEST VIRGINIA, LLC FOR THE TOWN OF FRONT ROYAL

WHEREAS, the Town of Front Royal has determined that the financial, legal and technical ability of Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community; and,

NOW, THEREFORE, BE IT ENACTED by the Town Council of the Town of Front Royal, Virginia that Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC is hereby granted a franchise to operate a cable television system within the Town of Front Royal, under the terms and conditions of a Franchise Agreement as follows:

CABLE TELEVISION

180-181 CABLE FRANCHISE AGREEMENT (Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia LLC)

This nonexclusive Cable Franchise Agreement (hereinafter, the "Agreement" or "Franchise Agreement") is made between the Town of Front Royal, VA, a political subdivision of the Commonwealth of Virginia (hereinafter, "Town") and Comcast of California/Maryland/Pennsylvania/ Virginia/West Virginia, LLC (hereinafter, "Franchisee").

The Town, having determined that the financial, legal and technical ability of the Franchisee is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community, desires to enter into this negotiated Franchise Agreement with the Franchisee for the construction, operation and maintenance of a Cable System on the terms and conditions set forth herein. In furtherance thereof, at its Regular Meeting of October 28, 2019, the Town, after proper notice and public hearing, enacted an ordinance authorizing this Franchise Agreement.

SECTION 1 – DEFINITION OF TERMS

For the purpose of this Franchise Agreement, capitalized terms, phrases, words, and abbreviations shall have the following meanings:

"ACT" means the Communications Act of 1934.

"AFFILIATE", in relation to any Person, means another Person who owns or controls, is owned or controlled by, or is under common ownership or control with, such Person, but, in relation to Franchisee, does not include affiliated entities that are not involved with the use, management, operation, construction, repair and/or maintenance of Cable Systems.

"BASIC SERVICE TIER" means the service tier that includes (i) the retransmission of local television broadcast channels and (ii) public, educational, and governmental channels as required by applicable law to be carried in the basic tier.

"CABLE ACT" shall mean the Cable Communications Policy Act of 1984, as amended from time to time, 47 U.S.C. §§ 521 *et seq*,

"CABLE OPERATOR" means any Person or group of Persons that (A) provides Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such Cable System or (B) otherwise controls or is responsible for, through any arrangement, the management and operation of a Cable System. Cable Operator does not include a provider of wireless or direct-to-home satellite transmission service, unless that provider otherwise qualifies as a Cable Operator.

"CABLE SERVICE" means the one-way transmission to Subscribers of (i) video programming or (ii) other programming service, and Subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service. Cable service does not include any video programming provided by a commercial mobile service provider defined in 47 U.S.C.§ 332(d).

"CABLE SYSTEM" or "SYSTEM" means any facility consisting of a set of closed transmission paths and associated signal generation, reception and control equipment that is designed to provide Cable Service that includes video programming and that is provided to multiple Subscribers within a community, except that such definition shall not include (i) a system that serves fewer than 20 Subscribers; (ii) a facility that serves only to retransmit the television signals of one or more television broadcast stations; (iii) a facility that serves only Subscribers without using any public right-of-way; (iv) a facility of a common carrier that is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, 47 USC§ 201 et seq., except that such facility shall be considered a Cable System to the extent such facility is used in the transmission of video programming directly to Subscribers, unless the extent of such use is solely to provide interactive on-demand services; (v) any facilities of any electric utility used solely for operating its electric systems; (vi) or any portion of a System that serves fewer than 50 Subscribers in any locality, where such portion is part of a larger System franchised in an adjacent locality; or (vii) an open video system that complies with§ 653 of Title VI of the Communications Act of 1934, as amended, 47 U.S.C. § 573.

"CUSTOMER" or "SUBSCRIBER" means a Person or user of the Cable System who lawfully receives Cable Service therefrom with the Franchisee's express permission.

"EFFECTIVE DATE" means May 13th, 2018.

"FCC" means the Federal Communications Commission or successor governmental entity thereto.

"FORCE MAJEURE" means an event or events reasonably beyond the ability of Franchisee to anticipate and control. "Force majeure" includes, but is not limited to, acts of God, incidences of terrorism, war or riots, labor strikes or civil disturbances, floods, earthquakes, fire, explosions, epidemics, hurricanes, tornadoes, governmental actions and restrictions, work delays caused by waiting for utility providers to service or monitor or provide access to utility poles to which Franchisee's facilities are attached or to be attached or conduits in which Franchisee's facilities are located or to be located, and unavailability of materials or qualified labor to perform the work necessary.

"FRANCHISE" means the initial, nonexclusive, authorization, or renewal thereof, issued by the Franchising Authority, whether such authorization is designated as a franchise, agreement, permit, license, resolution, contract, certificate, ordinance or otherwise, which authorizes the construction and operation of the Cable System in the public rights-of-way and compatible easements, pursuant to 47 U.S.C. § 541.

"FRANCHISE AGREEMENT" or "AGREEMENT" shall mean this nonexclusive Cable Franchise Agreement and any amendments or modifications hereto.

"FRANCHISE AREA" means the present legal boundaries of the Town as of the Effective Date, and shall also include any additions thereto, by annexation or other legal means, as per the requirements set forth herein.

"FRANCHISEE" shall mean Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC.

"FRANCHISING AUTHORITY" means the Town or the lawful successor, transferee, designee, or assignee thereof.

"GROSS REVENUE" means all revenue, as determined in accordance with generally accepted accounting principles (GAAP), that is actually received by the cable operator and derived from the operation of the Cable System to provide Cable Services in the Franchise Area; however, "gross revenue" shall not include: (i) refunds or rebates made to Subscribers or other third parties; (ii) any revenue which is received from the sale of merchandise over home shopping channels carried on the Cable System, but not including revenue received from home shopping channels for the use of the Cable Service to sell merchandise; (iii) any tax, fee, or charge collected by the Cable Operator and remitted to a governmental entity or its agent or designee, including without limitation a local public access or education group; (iv) program launch fees; (v) directory or advertising revenue including, but not limited to, yellow page, white page, banner advertisement, and electronic publishing; (vi) refundable deposits; (vii) late fees; (viii) investment income; (ix) a sale of Cable Service for resale or for use as a component part of or for the integration into Cable Services to be resold in the ordinary course of business, when the reseller is required to pay or collect franchise fees or similar fees on the resale of the Cable Service; (x) revenues received by any Affiliate or any other person in exchange for supplying goods or services used by the Cable Operator to provide Cable Service; and (xi) revenue, or the pro-rata portion of multi-service fees, derived from services classified as non-Cable Services under federal law, including, without limitation, revenue derived from telecommunications services and information services, and any other revenues attributed by the Cable Operator to non-Cable services in accordance with GAAP rules, regulations, standards, or orders of the Federal Communications Commission. Gross Revenues shall not include actual bad debt that is written off, consistent with generally accepted accounting principles, provided however, that all or any part of any such actual bad debt that is written off, but subsequently collected, shall be included in the Gross Revenues in the period so collected.

"INTERACTIVE ON-DEMAND SERVICE" means a service providing video programming to Subscribers over switched networks on an on-demand, point-to-point basis, but does not include services providing video programming the programming provider preschedules.

"ORDINANCE" includes a resolution.

“PEG” means public, educational and/or governmental access to the Cable System to provide video programming.

"PERSON" means any natural person or any association, firm, partnership, joint venture, corporation, or other legally recognized entity, whether for-profit or not-for profit, but shall not mean the Franchising Authority.

"PUBLIC RIGHT-OF-WAY" (PROW or Public Way) means the surface, the air space above the surface, and the area below the surface of any public street, highway, lane, path, alley, sidewalk, boulevard, drive, bridge, tunnel, park, parkway, waterway, easement, or similar property in which the Town now or hereafter holds any property interest, which, consistent with the purposes for which it was dedicated, may be used for the purpose of installing and maintaining a Cable System. No reference herein, or in any franchise, to a "public right-of-way" shall be deemed to be a representation or guarantee by the Town that its interest or other right to control the use of such property is sufficient to permit its use for such purposes, and Franchisee shall be deemed to gain only those rights to use as are properly in the Town and as the Town may have the undisputed right and power to give. For purposes of this Franchise, the term "public right-of-way" shall also include any other parcels of property that the Town owns.

“SERVICE INTERRUPTION" means a Service Outage affecting less than five subscribers, or a loss of either video or audio for one or more channels for one or more subscribers.

"SERVICE OUTAGE" means the complete loss of Cable Service to five or more subscribers served by the same trunk, node, or feeder line for a period of fifteen (15) minutes or more.

"TRANSFER" means any transaction in which (i) an ownership or other interest in the Franchisee is transferred, directly or indirectly, from one Person or group of Persons to another Person or group of Persons, so that majority control of the Franchisee is transferred; or (ii) the rights and obligations the Franchisee holds under the Franchise granted under this Franchise Agreement are transferred or assigned to another Person or group of Persons. However, notwithstanding clauses (i) and (ii) of the preceding sentence, a transfer of the Franchise shall not include (a) transfer of an ownership or other interest in the Franchisee to the parent of the Franchisee or to another Affiliate of the Franchisee; (b) transfer of an interest in the Franchise granted under this Franchise Agreement or the rights held by the Franchisee under the Franchise granted under this Franchise Agreement to the parent of the Franchisee or to another Affiliate of the Franchisee; (c) any action that is the result of a merger of the Franchisee’s parent; (d) any action that is the result of a merger of another Affiliate of the Franchisee; (e) a transfer in trust, by mortgage, or by assignment of any rights, title, or interest of the Franchisee in the Franchise or the System used to provide Cable Service in order to secure indebtedness; or (f) the sale, conveyance, transfer, exchange, or release of fifty percent (50%) or less of its equitable ownership.

"VIDEO PROGRAMMING" means programming provided by, or generally considered comparable to, programming provided by a television broadcast station.

All terms used herein, unless otherwise defined, shall have the same meaning as set forth in Sections 15.2-2108.19 *et seq.* of the Code of Virginia; and if not defined therein, then as set forth in Title VI of the Communications Act of 1934, 47 U.S.C. § 521 *et seq.*; and if not defined therein, their common and ordinary meaning. In addition, references in this Ordinance to any federal or state law shall include amendments thereto as are enacted from time-to-time.

SECTION 2 – GRANT OF AUTHORITY

2.1 The Franchising Authority hereby grants to the Franchisee under the Code of Virginia and the Cable Act a nonexclusive Franchise authorizing the Franchisee to construct and operate a Cable System in the Public Ways within the Franchise Area, and for that purpose to erect, install, construct, repair, replace, reconstruct, maintain, or retain in any Public Way such poles, wires, cables, conductors, ducts, conduits, vaults, manholes, pedestals, amplifiers, appliances, attachments, and other related property or equipment as may be necessary or appurtenant to the Cable System and to provide such Cable Services over the Cable System as may be lawfully allowed. This agreement neither authorizes the Franchisee to use the PROW for purposes of providing any service other than Cable Service, nor prohibits the Franchisee from doing so. The Franchisee's authority to provide non-Cable Services shall be subject to applicable law.

2.2 Term of Franchise. The term of the Franchise granted hereunder shall be fifteen (15) years, beginning on the Effective Date, unless the Franchise is renewed or is lawfully terminated in accordance with the terms of this Franchise Agreement and the Code of Virginia, and the Cable Act.

2.3 Renewal. Any Franchise renewal shall be governed by and comply with the provisions of Article 1.2 of Chapter 21 of Title 15.2 of the Code of Virginia and the Cable Act, as amended.

2.4 Reservation of Authority. Nothing in this Franchise Agreement shall be construed as a waiver of any codes or ordinances of general applicability promulgated by the Franchising Authority.

SECTION 3- CONSTRUCTION AND MAINTENANCE OF THE CABLE SYSTEM

3.1 Permits and General Obligations. The Franchisee shall be responsible for obtaining, at its own cost and expense, all generally applicable permits, licenses, or other forms of approval or authorization necessary to construct, operate, maintain or repair the Cable System, or any part thereof, prior to the commencement of any such activity. The issuance of such permits shall not be unreasonably withheld, conditioned, or delayed. Construction, installation, and maintenance of the Cable System shall be performed in a safe, thorough and reliable manner using materials of good and durable quality. Notwithstanding the requirements herein, Franchisee shall not be required to obtain a permit for individual drop connections to Subscribers, servicing or installing pedestals or other similar facilities, or other instances of routine maintenance or repair to its Cable System. All transmission and distribution structures, poles, other lines, and equipment the Franchisee installs for use in the Cable System in accordance with the terms and conditions of this Franchise Agreement shall be located so as to minimize the interference with the proper use of the Public Ways and the rights and reasonable convenience of property owners who own property that adjoins any such Public Way.

3.2 Conditions of Street Occupancy.

(A) Relocation at request of Third Party. The Franchisee shall, upon reasonable prior written request of any Person holding a permit issued by the Franchising Authority to move any structure, temporarily move its wires to permit the moving of such structure; provided (i) the Franchisee may impose a reasonable charge on any Person for the movement of its wires, and such charge may be required to be paid in advance of the movement of its wires; and (ii) the Franchisee is given not less than thirty (30) business days advance written notice to arrange for such temporary relocation. Any service disruption provisions of this Franchise shall not apply in the event that the removal of

Franchisee's wires, cables, poles or other facilities pursuant to the above results in temporary service disruptions.

(B) Restoration of Public Ways. If in connection with the construction, operation, maintenance, or repair of the Cable System, the Franchisee disturbs, alters, or damages any Public Way, the Franchisee agrees that it shall at its own cost and expense replace and restore any such Public Way to a condition reasonably comparable to the condition of the Public Way existing immediately prior to the disturbance. The Town may make the final determination as to the reasonable acceptability of repair and/or replacement of damaged facilities.

(C) Safety Requirements. The Franchisee shall, at its own cost and expense, undertake all necessary and appropriate efforts to maintain its work sites in a safe manner in order to prevent failures and accidents that may cause damage, injuries or nuisances. All work undertaken on the Cable System shall be performed in substantial accordance with applicable FCC or other federal and state regulations and with applicable provisions of the National Electrical Safety Code and the National Electrical Code. The Cable System shall not endanger or interfere with the safety of Persons or property in the Franchise Area.

(D) Trimming of Trees and Shrubbery. The Franchisee shall have the authority to trim trees or other natural growth overhanging any of its Cable System in the Franchise Area so as to prevent contact with the Franchisee's wires, cables, or other equipment. All such trimming shall be done at the Franchisee's sole cost and expense. For all planned trimming, the Franchisee shall provide the Town at least five (5) business days' notice of the work to be performed and a description of such work. For trimming of an emergency nature, including responding to storm damage, advance notice is not required. The Franchisee shall be responsible for any damage and all clean up of debris the trimming causes. The foregoing notwithstanding, any tree trimming by Franchisee must comply with any separately negotiated pole attachment agreement in effect between the Town and the Franchisee.

(E) Aerial and Underground Construction. At the time of Cable System construction, if all of the transmission and distribution facilities of all of the respective public or Town utilities in any area of the Franchise Area are underground, the Franchisee shall place its Cable System's transmission and distribution facilities underground; provided that such underground locations are actually capable of accommodating the Franchisee's cable and other equipment without technical degradation of the Cable System's signal quality. In any region(s) of the Franchise Area where the transmission or distribution facilities of the respective public or Town utilities are both aerial and underground, the Franchisee shall have the discretion to construct, operate, and maintain all of its transmission and distribution facilities, or any part thereof, aerially or underground. Nothing in this Section shall be construed to require the Franchisee to construct, operate, or maintain underground any ground-mounted appurtenances such as customer taps, line extenders, system passive devices, amplifiers, power supplies, pedestals, or other related equipment. To avoid overburdening the Public Way, and in furtherance of the health, safety and welfare of the public, Franchisee will use commercially reasonable efforts to utilize existing utility poles and conduits when and where available for the construction, repairs and maintenance of the Cable System pursuant to separately negotiated pole attachment and conduit utilization agreements. Franchisee shall not erect, for any reason, any pole on or along any Public Right-of-Way or on public property without the advance written approval of the Town. The foregoing notwithstanding, the terms of any separately negotiated pole attachment agreement in effect between the Town and the Franchisee shall govern.

(F) All excavation and reconstruction work by Franchisee in the Public Rights-of-Way must be in compliance with the generally applicable requirements of Town Code, including all of the standards referenced therein, and all applicable VDOT standards. It shall be the Franchisee's responsibility to obtain any required permits, to review all applicable excavation, reconstruction, restoration, repair and permitting requirements, and to become familiar with such requirements before beginning any excavation, reconstruction, restoration or repair work in the Public Rights-of-Way or private property.

(G) Any equipment or facilities the Franchisee installs in the Public Rights-of-Way shall be installed, located, erected, constructed, reconstructed, replaced, restored, removed, repaired, maintained and operated in accordance with good engineering practices, performed by experienced maintenance and construction personnel so as not (1) to endanger or interfere in any manner with improvements the Town or VDOT may deem appropriate to make; or (2) to interfere with the rights of any private property owner; or (3) to hinder or obstruct pedestrian or vehicular traffic.

(H) Whenever the Town shall determine that it is necessary in connection with the repair, relocation, or improvement of the Public Rights-of-Way, the Town may require by written notification that any properties or facilities of the Franchisee be removed or relocated. Within sixty (60) days after receipt of notification, unless the Town extends such period for good cause shown, the Franchisee shall remove or relocate its facilities to such place and under such terms and conditions as the Town specifies. The Franchisee shall bear all expenses associated with the removal and relocation except that the Town will issue, without charge to the Franchisee, whatever local permits are required for the relocation of Franchisee's facilities. If the Franchisee does not complete its removal or relocation within sixty (60) days or such other period as authorized by the Town, the Town may take such actions as necessary to effectuate such removal or relocation at the Franchisee's expense. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any removal or relocation. Franchisee shall follow all applicable VDOT standards and regulations in connection with the repair, relocation, or improvement of the Public Rights-of-Way. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds, if any, raised for the project and made available to other users of the Public Way.

(i) Nothing in this Franchise Agreement shall be construed to prevent the Town from constructing, maintaining, repairing, improving, grading, paving, relocating and/or altering any Public Right-of-Way; constructing, installing, repairing, maintaining, or relocating any water or sewer mains; or constructing, maintaining, relocating or repairing any sidewalk or other public work. All such work shall be done, to the extent possible, in such a manner as not to obstruct, injure or prevent the free use and operation of the poles, wires, conduits, conductors, pipes or appurtenances of the Franchisee.

(ii) Nothing contained in this Franchise Agreement shall relieve any Person from liability arising out of the failure to exercise reasonable care to avoid injuring Franchisee's facilities while performing any work in any Public Right-of-Way or on public property.

(I) Undergrounding and Beautification Projects. In the event all users of the Public Way relocate aerial facilities underground as part of an undergrounding or neighborhood beautification project, Franchisee shall participate in the planning for relocation of its aerial facilities contemporaneously with other utilities. Franchisee's relocation costs shall be included in any computation of necessary project funding by the Town or private parties. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds raised for the project and made available to other users of the Public Way. It is understood that the Franchising Authority does not guarantee that any public or private funds will be available to help defray the cost of such undergrounding or beautification projects. In the event that public and/or private funds are not available or do not cover the entire cost of the relocation, Franchisee reserves the right to pass its costs, or in the case of partial reimbursement from public and/or private funds its incremental cost, through to its Subscribers in accordance with applicable law.

SECTION 4 – SERVICE OBLIGATIONS

4.1 General Service Obligations.

(A) The Franchisee shall make Cable Service available to every residential dwelling unit within the Franchise Area where the minimum density is at least (30) thirty dwelling units per mile when measured in strand footage from the nearest point of the existing Cable System from which a usable signal can be obtained. For purposes of this section, a home shall only be counted as a "dwelling unit" if such home is within two hundred seventy-five (275) feet of the public right-of-way. Subject to the density requirement, Franchisee shall offer Cable Service to all new homes or previously unserved homes located within two hundred fifty (250) feet of the Franchisee's distribution cable. Should an area within the Franchise Area meet the density requirements, Franchisee shall provide Cable Service to such area within six (6) months after it confirms that the density requirements have been met through actual knowledge or following notice from the Franchising Authority that one or more residents has requested service.

(B) The Franchisee may elect to provide Cable Service to areas not meeting the above density and distance standards. The Franchisee may impose an additional charge in excess of its regular installation charge for any service installation requiring a drop or line extension in excess of the above standards. Any such additional charge related to an extended drop shall be computed on a time plus materials basis to be calculated on that portion of the installation that exceeds the standards set forth above. Such additional charge shall be paid in advance by the developer, landowner, or customer requesting Cable Service in an area that does not meet the density and distance standards.

4.2 New Developments. Franchisee agrees to use commercially reasonable efforts to inform itself of all newly planned developments within the Town and to work with developers to cooperate in pre-installation of facilities to support Cable Service.

4.3 Programming. The Franchisee shall offer to all Customers a diversity of video programming services.

4.4 No Discrimination. The Franchisee shall not discriminate or permit discrimination between or among any Persons in the availability of Cable Services or other services provided in connection with the Cable System in the Franchise Area. It shall be the right of all Persons to receive all available services provided on the Cable System so long as such Person's financial or other obligations to the Franchisee are satisfied; unless such Person has engaged in inappropriate activity including, but not limited to, theft of Franchisee's cable services, vandalism of its property, or abuse or harassment of its representatives. Nothing contained herein shall prohibit the Franchisee from offering bulk discounts, promotional discounts, package discounts, or other such pricing strategies as part of its business practice.

(A) Franchisee shall assure that access to Cable Services is not denied to any group of potential residential cable subscribers because of the residents' income.

4.5 Availability of Maps to the Town. Upon the Town giving two (2) weeks written request, but no more often than annually, the Franchisee shall make available for the Town's viewing, at the Franchisee's nearest business office, updated maps of the Franchise Area which shall clearly delineate all areas within the Franchise Area where Cable Service is available to Subscribers.

4.6 Changes in Service. Franchisee agrees to give the Town Manager thirty (30) days prior written notice of changes in rates, programming services or channel positions, provided that such changes are within the control of Franchisee.

SECTION 5 – PUBLIC, EDUCATIONAL AND GOVERNMENT ACCESS CHANNELS

5.1 Franchisee shall make available one (1) Standard Definition (SD) channel for Public, Educational and/or Governmental ("PEG") Access video programming provided by the Franchising Authority or its designee, such as a public access organization or educational institution. All PEG Access Programming shall be modulated, then transmitted from the origination site location at 220 North Commerce Avenue, Front Royal, VA 22630 to Franchisee's headend or hub site on a Franchisee owned upstream ("return line"). Any construction or upgrades of return lines or origination sites shall be paid for by the Franchising Authority. Said payment shall be made in advance to the Franchisee subject to the Franchisee providing the Franchising Authority with a detailed estimate of said construction cost. Use of a channel position for PEG access shall be provided on the most basic tier of service offered by the Franchisee and in accordance with the Cable Act and the Code of Virginia, and as further set forth below. "Channel position" means a number designation on the Franchisee's channel lineup regardless of the transmission format (analog or digital). Franchisee does not relinquish its ownership of or ultimate right of control over a channel by designating it for PEG use. In the event any access channel is reassigned, the Franchisee shall provide the Town with at least thirty (30) days' notice before reassigning the channel. A PEG access user- whether an individual, educational or governmental user- acquires no property or other interest by virtue of the use of a channel so designated, and may not rely on the continued use of a particular channel number, no matter how long the same channel may have been designated for such use. Franchisee shall not exercise editorial control over any public, educational, or governmental use of a channel position, except Franchisee may refuse to transmit any public access program or portion of a public access program that contains obscenity, indecency, or nudity. The Franchising Authority shall be responsible for developing, implementing, interpreting and enforcing rules for PEG Access Channel use.

(A) Franchisee shall continue to make available to Subscribers the Warren County Public Schools PEG Channel within the Town subject to the authorization of Warren County and so long as Warren County, VA continues to produce said PEG programming and Franchisee continues to carry said programming in Warren County, VA.

5.2 Public Access. A "Public Access Channel" is a channel position designated for noncommercial use by the public on a first-come, first-served, nondiscriminatory basis. A Public Access Channel may not be used to cablecast programs for profit, or for political or commercial fundraising in any fashion.

5.3 Educational Access. An "Educational Access Channel" is a channel position designated for noncommercial use by educational institutions such as public or private schools (but not "home schools"), community colleges, and universities.

5.4 Government Access. A "Governmental Access Channel" is a channel position designated for noncommercial use by the Franchising Authority for the purpose of showing the public local government at work.

5.5 Franchisee shall ensure that all PEG access channel signals carried on its system, regardless of the method used to acquire the PEG channels, comply with all applicable FCC signal quality and technical standards except that Franchisee shall not be responsible for the technical signal quality of programming produced by any PEG Channel programmer. The technical and signal quality of all PEG access channel signals shall be preserved and shall be of comparable quality as other channels.

5.6 High Definition (HD) PEG Access Channel. Within one hundred and eighty (180) days of receipt of the Town’s written request, which is deemed received by Franchisee upon execution hereof, Franchisee shall make the PEG Access Channel discussed in Section 5.1 available in HD format. Franchisee shall continue to carry the SD PEG Access Channel simultaneously until SD channels are no longer provided over the Cable System. The Franchisee shall be responsible for providing the PEG Access signal to Subscribers over its Cable System in a SD format until no longer required. The Franchising Authority shall be responsible for providing the PEG Access signal in a HD format acceptable to Franchisee to the PEG Access origination location demarcation point, at 220 North Commerce Avenue, Front Royal, VA 22630. The Franchising Authority acknowledges that the HD PEG Access Channel may require Subscribers to buy or lease special equipment, available to all Subscribers, and subscribe to those tiers of Cable Service upon which HD channels are made available. Franchisee is not required to provide free HD equipment to Subscribers or the Town.

5.7 Capital Support for PEG Access.

(A) Franchisee shall pay to Town an initial lump sum capital grant of thirty-one thousand dollars ($31,000) as capital support for PEG access equipment, payable within ninety (90) days from the execution of this Franchise Agreement. If the capital support grant payment is not made within one hundred twenty (120) days from the date of execution of this Franchise Agreement, this Franchise Agreement shall become null and void, ab initio, without notice. The Franchising Authority will distribute these funds for capital purposes and/or procure equipment in support of the PEG access programming needs of the community.

(B) At the Town’s option, Franchisee shall collect a monthly fee from each Subscriber to provide additional capital support for PEG access. The maximum fee that shall be imposed is 0.5% of Franchisee’s gross revenues, and the fee collected shall be remitted to the Town no later than thirty (30) days following the end of each calendar quarter. Comcast shall not impose a fee to provide capital support for PEG access unless and until the Town directs Franchisee to impose a fee. The Town shall give Franchisee at least ninety (90) days’ written notice before Franchisee shall begin collecting the fee. The Town shall allocate such amount to PEG capital uses exclusively. If such fee is imposed and used exclusively for PEG capital purposes, it shall not be deemed to be "franchise fees" within the meaning of 47 U.S.C. Section 542 and such payments shall not be deemed to be (i) "payments-in-kind" or any involuntary payments chargeable against the compensation the Franchisee is to pay the Town pursuant to Section 6 hereof, or (ii) part of the compensation the Franchisee is to pay to the Town pursuant to Section 6 hereof.

5.8 Indemnification. The Franchising Authority shall indemnify Franchisee, to the extent authorized by the Virginia Constitution and general laws, for any liability, loss, or damage it may suffer due to violation of the intellectual property rights of third parties or arising out of the content of programming shown on any PEG channel and from claims arising out of the Franchising Authority's rules for or administration of PEG Access.

SECTION 6 – COMMUNICATION TAX AND FRANCHISE FEES

6.1 Communications Tax. Franchisee shall comply with the provisions of Sections 58.1-645 et seq. of the Code of Virginia, pertaining to the Virginia Communications Sales and Use Tax, as amended (the "Communications Tax"), and Sections 6.2 through 6.6 of the Agreement shall not have any effect, for so long as the Communications Tax or a successor state or local tax that would constitute a franchise fee for purposes of 47 U.S.C. § 542 is imposed on the sale of Cable Services by the Franchisee to the Town's Subscribers.

6.2 Payment of Franchise Fee to Town. In the event that the Communications Tax is repealed, and no successor state or local tax is enacted that would constitute a franchise fee for purposes of 47 U.S.C. § 542, Franchisee shall pay to the Town a Franchise fee of five percent (5%) of annual Gross Revenue, beginning thirty (30) days from the effective date of the repeal of such tax (the "Repeal Date"). Beginning on the Repeal Date, the terms of Section 6.2 through 6.6 of this Agreement shall take effect. In accordance with the Cable Act, the twelve (12) month period applicable under the Franchise for the computation of the Franchise fee shall be a calendar year. Such payments shall be made no later than thirty (30) days following the end of each calendar quarter. Should Franchisee submit an incorrect amount, Franchisee shall be allowed to add or subtract that amount in a subsequent quarter, but no later than ninety (90) days following the close of the calendar year for which such amounts were applicable; such correction shall be documented in the supporting information required under Section 6.3 below.

6.3 Supporting Information. Each Franchise fee payment shall be accompanied by a brief report prepared by a representative of Franchisee showing the basis for the computation and a breakdown by major revenue categories (such as Basic Service, premium service, etc.). The Town shall have the right to reasonably request further supporting information for each Franchise fee payment, subject to the proprietary information provisions of Section 8.7.

6.4 Bundled Services. If Cable Services subject to a franchise fee, or any other fee determined by a percentage of the Cable Operator's gross revenues in a locality, are provided to Subscribers in conjunction with other services: the fee shall be applied only to the value of the Cable Services, as reflected on the books and records of the Cable Operator in accordance with rules, regulations, standards, or orders of the Federal Communications Commission, the State Corporation Commission, or generally accepted accounting principles. Any discounts resulting from purchasing the services as a bundle shall be reasonably allocated between the respective services that constitute the bundled transaction.

6.5 Books and Records Regarding Franchise Fees. In the event that the Communications Tax is repealed, and subject to the confidentiality requirements of Section 8.7 of this Agreement, the Town, or such Person or Persons the Town designates, shall have the right to inspect and copy records and the right to audit and to re-compute any amounts determined to be payable under this Franchise, regardless of who holds the records. If an audit discloses an overpayment or underpayment of franchise fees, the Town shall notify the Franchisee in writing of such overpayment or underpayment within ninety (90) days of the date the audit was completed. The Franchisee shall have thirty (30) days from receipt of such notice to provide the Town with a written response agreeing to or refuting the results of the audit, including any substantiating documentation. Based on these notices, the parties shall agree upon a final settled amount. The Town, in its sole discretion, shall determine the completion date for any audit conducted hereunder. Audit completion is not to be unreasonably delayed by either party. Subject to the confidentiality requirements of Section 8.7 of this Franchise, the Franchisee shall be responsible for providing to the Town, within forty-five (45) days of a written request, all records necessary to confirm the accurate payment of franchise fees. The Franchisee shall maintain such records for the current year plus three (3) years. The Town shall bear its audit expenses. If re-computation results in additional revenue to be paid by Franchisee to the Town, such amount shall be subject to an interest charge in accordance with the prime rate of interest charged by the Town's primary depository bank.

(A) Any final settled amounts due to the Franchising Authority as a result of such audit shall be paid to the Franchising Authority within forty-five (45) days from the date the parties agree upon the final settled amount. Once the parties agree upon a final settled amount and such amount is paid by the Franchisee, the Franchising Authority shall have no further rights to audit or challenge the payment for that period.

(B) The period of limitation for recovery of any Franchise fee payable hereunder shall be three (3) years from the date on which payment by Franchisee is due.

SECTION 7 - CUSTOMER SERVICE STANDARDS; CUSTOMER BILLS AND PRIVACY PROTECTION

7.1 Customer Service Standards. The Franchisee shall comply in all respects with the customer service requirements established by the FCC (47 CFR §76.309). Franchisee shall be subject to the following customer service standards consistent with federal law:

(A) Franchisee will maintain a local or toll-free telephone access line which will be available to its Subscribers twenty-four (24) hours a day, seven (7) days a week. Additionally, for at least the first twenty-four (24) months from the Effective Date, Franchisee will maintain at least one customer service center within the Town for Subscribers to make payments and exchange equipment. In addition, Franchisee may, when a Subscriber consents, provide for an employee to pick up or drop off equipment in either of the following ways: (i) by having a Franchise representative to go to the Subscriber's residence, or (ii) by using a prepaid mailer. Franchisee also has the option to provide alternative payment drop off locations within the Franchise Area.

(B) Under Normal Operating Conditions, telephone answer time by a customer representative or automated answering device, including wait time, shall not exceed thirty (30) seconds when the connection is made. If the call needs to be transferred, transfer time shall not exceed thirty (30) seconds. These standards shall be met no less than ninety (90) percent of the time under Normal Operating Conditions as measured on a quarterly basis.

(C) Under Normal Operating Conditions, the customer will receive a busy signal less than three percent (3%) of the time.

(D) Franchisee shall accurately collect and maintain data to measure its compliance with the telephone answering standards in paragraphs 7.1(B) and 7.1(C).

(E) Local customer service centers and bill payment locations will be open for sales, service complaints and scheduling, equipment exchange, and bill payment with customer account history access at no cost to customers, including assisting walk-in customers, at least during normal business hours, which are understood as approximately 8:00am to 5:00pm Monday through Friday.

(F) Installations, Outages, and Service Calls. Under normal operating conditions, each of the following standards will be met no less than ninety five percent (95%) of the time as measured on a quarterly basis.

(i) Standard installations will be performed within seven (7) business days after an order has been placed, unless the customer requests a longer period. "Standard" installations are those that are within one hundred seventy-five (175) feet of the existing distribution system.

(ii) Excluding conditions beyond the control of the Franchisee, the Franchisee will begin repairs on Service Outages and Service Interruptions promptly and in no event later than twelve (12) hours after the outage or interruption becomes known.

(iii) The Franchisee must begin working to correct Service Interruptions within 8 hours, including weekends, of receiving a subscriber call for a Service Interruption. "Service Interruption" shall mean the loss of any service provided to customer by Franchisee.

(G) Franchisee shall accurately collect and maintain data to measure its compliance with subparagraph 7.1.(F).

(H) The "appointment window" alternatives for installations, service calls and other installation activities will either be at a specific time or, at maximum, a four-hour time block during Normal Business Hours. Franchisee may schedule service calls and other installation activities outside of Normal Business Hours for the express convenience of the customer.

(I) Franchisee may not cancel an appointment with a customer after the close of business on the business day prior to the scheduled appointment. If Franchisee representative is running late for an appointment with a customer and will not be able to keep the appointment as scheduled, the customer will be contacted. The appointment will be rescheduled as necessary, at a time which is convenient for the customer.

(J) Franchisee shall provide information, in accordance with applicable law, on each of the following areas at the time of installation of service, at least annually to all Subscribers, and at any time upon request:

(i) Products and services offered;

(ii) Prices and options for programming services and conditions of subscription to programming and other services;

(iii) Installation and service maintenance policies;

(iv) Instructions on how to use the Cable Service;

(v) Channel positions of programming carried on the System; and

(vi) Billing and complaint procedures, including where to locate the Franchisee's office hours, telephone number, and address of the local cable office.

7.2 Customer Bills. Customer bills shall be designed in such a way as to present the information contained therein clearly and comprehensibly to Customers, and in a way that (i) is not misleading and (ii) does not omit material information. The Franchisee may, in its sole discretion, consolidate costs on Customer bills as may otherwise be permitted by the Cable Act.

7.3 Notification. Franchisee shall notify Subscribers of any changes in rates, programming services or channel positions as soon as possible in writing. Notice must be given to Subscribers a minimum of thirty (30) days in advance of such changes if the change is within the control of the Franchisee. In addition, Franchisee shall notify subscribers thirty (30) days in advance of any significant changes in the other information that paragraph 7.1(J) requires.

7.4 Billing Disputes. In case of a billing dispute, Franchisee must respond to a Subscriber's written complaint within thirty (30) days.

7.5 Refunds. Refund checks will be issued promptly, and no later than thirty (30) days from the date of the good faith determination that a refund is warranted.

7.6 Credits. Credits for service will be issued promptly, and no later than the Subscribers next available billing statement after a good faith determination that a credit is warranted.

7.7 Parental Control. Franchisee shall make available parental control devices to all Subscribers who wish to be able to block out any objectionable channel(s) of programming from the Cable Service.

7.8 Privacy Protection. The Franchisee shall comply with all applicable federal and state privacy laws.

SECTION 8 – OVERSIGHT AND REGULATION BY FRANCHISING AUTHORITY

8.1 Oversight of Franchise. In accordance with applicable law, the Franchising Authority at its sole cost and expense, shall have the right to oversee, regulate and, on reasonable prior written notice and in the presence of Franchisee's employee, periodically inspect the construction, operation and maintenance of the Cable System in the Franchise Area, and all parts thereof, as necessary to monitor Franchisee's compliance with the provisions of this Franchise Agreement.

(A) The Franchisee shall perform all required tests necessary to demonstrate compliance with applicable FCC standards.

(B) Upon a showing of a pattern of unresolved Subscriber complaints regarding signal quality, upon written request, the Franchisee shall conduct applicable tests to determine compliance with applicable FCC standards., Franchisee shall make the results of such test available to the Town to verify compliance. If any such test indicates that any part or component of the System fails to meet applicable requirements, the Franchisee shall take corrective action, retest locations, and advise the Town of the action taken and results achieved.

8.2 Technical Standards. The Franchisee shall comply with all applicable technical standards of the FCC. The Franchising Authority shall have, upon written request, the right to obtain a copy records required to be maintained pursuant to the FCC's rules.

8.3 Operational Records. Upon no less than thirty (30) business days' written notice to the Franchisee, the Town shall have the right to inspect Franchisee's books and records, including electronic books and records, pertaining to Franchisee's provision of Cable Service in the franchise area at any time during normal business hours and on a nondisruptive basis, as are reasonably necessary to ensure compliance with the terms of this Franchise Agreement. Such notice shall specifically reference the Franchisee's section or subsection which is under review, so that Franchisee may organize the necessary books and records for appropriate access by the Town. Franchisee shall not be required to maintain any books and records for franchise compliance purposes longer than the current year plus three (3) years. The Franchisee shall maintain the records required to compute all operational and customer service compliance measures outlined in this Franchise to demonstrate that the measures are being met for at least four (4) consecutive quarters.

8.4 Records Required. Franchisee shall at all times maintain:

(A) Records of all written complaints for a period of one (1) year after receipt by Franchisee. The term "complaint" as used herein refers to complaints about any aspect of the Cable System or Franchisee's cable operations, including, without limitation, complaints about employee courtesy. Complaints recorded will not be limited to complaints requiring an employee service call.

(B) Records of Service Outages and Service Interruptions for a period of one (1) year after occurrence, or until the applicable compliance measures described in this Franchise are met for four (4) consecutive quarters, indicating date, duration, area, and the number of Subscribers affected, type of outage, and cause.

(C) Records of service calls for repair and maintenance for a period of one (1) year after resolution by Franchisee, indicating the date and time service was required, the date and time service was provided, and (if different) the date and time the problem was resolved.

(D) Records of installation/reconnection for a period of one (1) year after the request was fulfilled by Franchisee, or until the applicable compliance measures described in this Franchise are met for four (4) consecutive quarters, indicating the date of request and the date and time service was extended.

8.5 Federal Communications Commission (FCC) Testing. Within fourteen (14) days of the Town's written request, a written report of test results of required FCC performance testing will be provided to the Town Manager or his designee.

8.6 File for Public Inspection. Throughout the term of this Franchise Agreement, the Franchisee shall maintain for public, those documents required pursuant to the FCC's Public Inspection File rules and regulations.

8.7 Proprietary Information.

(A) Notwithstanding anything to the contrary set forth herein, Franchisee shall not be required to submit information to the Town that it reasonably deems to be proprietary or confidential in nature, nor submit to the Town any of its or an Affiliate's books and records not relating to the provision of Cable Service in the Franchise Area, except as provided herein. Such confidential information shall be made available to the Town subject to terms of a nondisclosure agreement that is reasonably acceptable to the parties and to the following, to be applied as is most practicable for the purposes of this Agreement:

i. To the extent an exemption under the Virginia Freedom of Information Act permits the Town to maintain the confidentiality of submitted information and the Franchisee submits such information to the Town, the Town shall maintain the confidentiality of such information and not disclose it to any public request;

ii. To the extent the information provided to an accountant, attorney, consultant, or any other agent of the Town ("Town Consultant") would not be subject to public disclosure under the Virginia Freedom of Information Act, and the Town instructs the Franchisee to provide such information to the Town Consultant as may be required by this Agreement, the Franchisee shall provide such information to the Town Consultant and the Town shall not take possession of the information nor engage in any act that would jeopardize the information's confidentiality.

(B) At all times, the Town shall take reasonable steps to protect the proprietary and confidential nature of any books, records, maps, plans, or other Town requested documents that are provided pursuant to the Agreement to the extent they are designated as such by the Franchisee. Nothing in this Section shall be read to require the Franchisee to violate federal or state law protecting Subscriber privacy.

8.8 Reports.

(A) No later than ninety (90) days from the end of the calendar year, within ninety (90) days after receipt of the Town's written request, Franchisee shall submit a written year-end report to the Town. Such report may address, if the Town so desires: major cable-related projects undertaken in the past year and planned for the current year, including construction and upgrade schedules for any new, relocated, or upgraded aerial or underground facilities.

(B) Upon written request of the Town, no later than thirty (30) days after the end of each calendar quarter, the Franchisee shall submit a written report to the Town regarding complaints the Franchisee received from Customers in the Franchise Area concerning Franchisee's customer service performance.

SECTION 9 – TRANSFER OR CHANGE OF CONTROL OF CABLE SYSTEM OR FRANCHISE

9.1 No Transfer of this Franchise shall occur without the prior written consent of the Franchising Authority, which consent shall not be unreasonably withheld, delayed or conditioned. No Transfer shall be made to a Person, group of Persons or Affiliate that is not legally, technically and financially qualified to operate the Cable System and satisfy the obligations hereunder.

SECTION 10 – INSURANCE AND INDEMNITY

10.1 The Franchisee shall indemnify hold harmless and defend the Town, its officers, employees, and agents (hereinafter referred to as "indemnitees"), from and against:

(A) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which may be imposed upon, incurred by or asserted against the indemnitees by reason of any act or omission of the Franchisee, its personnel, employees, agents, contractors or subcontractors, resulting in personal injury, bodily injury, sickness, disease or death to any person or damage to, loss of or destruction of tangible or intangible property, libel, slander, invasion of privacy and unauthorized use of any trademark, trade name, copyright, patent, service mark or any other right of any person, firm or corporation, which may arise out of or be in any way connected with the construction, installation, operation, maintenance, use or condition of the Franchisee's Cable System caused by Franchisee, its contractors, subcontractors or agents or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation.

(B) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which are imposed upon, incurred by or asserted against the indemnitees by reason of any claim or lien arising out of work, labor, materials or supplies provided or supplied to the Franchisee, its contractors or subcontractors, for the installation, construction, operation or maintenance of the Franchisee's Cable System in the Town.

10.2 Damages shall include, but not be limited to, penalties arising out of copyright infringements and damages arising out of any failure by the Franchisee to secure consents from the owners, authorized distributors or licensees, or programs to be delivered by the Franchisee's Cable System.

10.3 The Franchisee undertakes and assumes for its officers, agents, contractors, subcontractors, and employees all risk of dangerous conditions, if any, on or about any Town owned or controlled property, including streets and public rights-of-ways, except for any claim asserted or liability imposed that arises or is related to gross negligence or intentional misconduct by such indemnitees or any loss or claims related to PEG access Channels in which the Franchising Authority or its designee participates.

10.4 In the event any action or proceeding shall be brought against the indemnitees by reason of any matter for which the indemnitees are indemnified hereunder, the Franchisee shall, upon notice from any of the indemnitees, and at the Franchisee's sole cost and expense, resist and defend the same; provided further, however, that the Franchisee shall not admit liability in any such matter on behalf of the indemnitees without the written consent of the Town Attorney or his designee. If the Town determines that it is necessary for it to employ separate counsel, the costs for such separate counsel shall be the responsibility of the Town.

10.5 The Town shall give the Franchisee timely written notice within twenty (20) business days of the Town receiving notice of a written claim, or the commencement of any action, suit or other proceeding covered by the provisions of this section. The Town will cooperate with the Franchisee while the Franchisee defends any claim or action under this section.

10.6 Nothing in this Franchise Agreement is intended to, or shall be construed or applied to, express or imply the Town's waiver of statutory provisions, privileges or immunities of any kind or nature as set forth in the Code of Virginia, including the Town's limits of liability as exists presently or as the legislature may increase from time to time. Nothing in a franchise or this ordinance shall constitute a waiver of the Town's statutory provisions, privileges or immunities, including the Town's sovereign immunity, of any kind or nature.

10.7 The Franchisee shall maintain, and by its acceptance of a franchise hereunder specifically agrees that it will maintain throughout the term of the Franchise Agreement, general commercial liability insurance insuring the Franchisee. All liability insurance shall include an endorsement in a specific form which names as joint and several insured's the Town and the Town's officials, and employees, under such commercial liability policy, with respect to all claims arising out of the operation and maintenance of the Franchisee's Cable System in the Town. Such policy shall be in the minimum amounts of Five Million Dollars ($5,000,000) combined single limit per occurrence for bodily injury, property damage, or personal & advertising injury, which limit may be met through any combination of primary and excess liability policies.

(A) The Franchisee shall provide Workers Compensation Insurance as required by the Commonwealth of Virginia;

(B) Franchisee shall carry and maintain in its own name automobile liability insurance with a limit of $1,000,000 for each person and $1,000,000 combined single limit per occurrence for each accident for property damage with respect to owned and non-owned automobiles for the operation of which the Franchisee is responsible; and

10.8 The inclusion of more than one (1) insured shall not operate to increase the limit of the Franchisee's liability, and the insurer waives any right on contribution with insurance which the Town may have.

10.9 All policies of insurance this section requires shall be placed with companies which are qualified to write insurance in the Commonwealth of Virginia and which maintain throughout the policy term a General Rating of "A- " as determined by Best Insurance Rating Services.

10.10 Upon the Town's written request, the Franchisee shall provide the Town with Certificates of Insurance for the coverages this section mandates.

10.11 Should the Town find an insurance document to be non-compliant, then it shall notify the Franchisee; and the Franchisee shall promptly cure the defect in accordance with this Agreement.

10.12 Neither this section's provisions, nor any damages recovered by the Town thereunder, shall be construed to nor limit the Franchisee's liability under this Franchise Agreement or for damages, except that nothing herein shall be interpreted to permit the Town to exercise rights and remedies in a manner that permits duplicative recovery from or payments by the Franchisee or its surety.

10.13 The commercial general liability insurance policy provided for herein shall name the Town, its officers, and employees as additional insureds, and shall be primary to any insurance or self-insurance the Town carries, but only with respect to the losses for which the Franchisee is responsible hereunder. The insurance policies this section requires shall be carried and maintained by the Franchisee throughout the term of the Franchise Agreement and such other period of time during which the Franchisee operates or is engaged in the removal of its Cable System. Each policy shall provide for notice of cancellation in accordance with policy provisions

10.14 Nothing in this section shall require Franchisee to indemnify, hold harmless or defend the Town, its officials, employees or agents, from any claims or lawsuits arising out of the Town's award of a franchise to another person.

SECTION 11 – SYSTEM DESCRIPTION AND SERVICE

11.1 System Characteristics. Franchisee's Cable System shall meet or exceed the following requirements:

(A) The System shall be capable of providing Video Programming to its Customers in the Franchise Area in accordance with the Cable Act.

(B) The System shall be designed to be an active two-way plant for Subscriber interaction, if any, required for selection or use of Cable Service.

(C) The Cable Service shall be operated in a manner such that it is in compliance with FCC standards and requirements with respect to interference. The Cable System shall be operated in such a manner as to minimize interference with a Subscriber's reception of off-the-air signals. The Franchisee shall insure that signals carried by the Cable System, or originating outside the Cable System wires, cable, fibers, electronics and facilities, do not ingress or egress into or out of the Cable System in excess of FCC standards. In particular, the Franchise shall not operate the Cable System in such a manner as to pose unwarranted interference with emergency radio services, aeronautical navigational frequencies or an airborne navigational reception in normal flight patterns, or any other type of wireless communications, pursuant to FCC regulations.

11.2 Interconnection. The Franchise shall design its Cable System so that it may be interconnected with other cable systems and open video systems in the Franchise Area.

11.3 Standby Power. The Franchisee shall provide standby power generating capacity at the headend and at all hubs. The Franchisee shall maintain standby power capable of at least twenty-four (24) hours duration at the headend and all hubs, with automatic response systems to alert the local management center when commercial power is interrupted.

11.4 Technical Standards. The Cable System shall meet or exceed the applicable FCC technical performance standards.

11.5 Leased Access Channels. The Franchisee shall provide Leased Access Channels in accordance with federal law.

11.6 Emergency Powers. In the event of an emergency, or where Franchisee's Cable System creates or is contributing to an imminent danger to health, safety, or property, or an unauthorized use of property, the Franchisee shall remove or relocate any or all parts of Franchisee's Cable System at the Town's request. If the Franchisee fails to comply with the Town's request, the Town may remove or relocate any or all parts of the Franchisee's Cable System upon reasonable notice to the Franchisee. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any emergency removal or relocation. Franchisee shall be entitled to compensation for expenses incurred for removal or relocation in the event of an emergency to the extent other users of the Public Way are compensated. It is understood that the Franchising Authority does not guarantee that funds will be available to compensate users of the Public Ways for emergency removal or relocation.

11.7 Emergency Alert System. Franchisee shall install and thereafter maintain an Emergency Alert System (EAS) that shall at all times be operated in accordance with FCC rules and the Virginia EAS Plan.

SECTION 12 – ENFORCMENT OF FRANCHISE

12.1 Performance Bond. Within thirty (30) days after the award of a Franchise Agreement, the Franchisee shall deposit with the Town a performance bond from a financial institution running to the Town in the amount of one hundred thousand dollars ($100,000.00). The bond shall be used to insure the Franchisee's faithful performance of all its franchise provisions or defaults under this Franchise Agreement or the payment by Franchisee of any penalties, liquidated damages, claims, liens, and taxes due the Town which arise by reason of the construction, operation, or maintenance of Franchisee's Cable System in the Town, including restoration of the public rights-of-way and the cost of removal or abandonment of any property of Franchisee. Following notice and opportunity to cure in accordance with Section 12.2, the Franchising Authority shall give Franchisee twenty (20) business days' notice of its intent to draw from the performance bond. The Franchising Authority may not draw from the performance bond while any action, appeal or other process has been instituted by Franchisee to challenge the amount owed.

(A) Any bond obtained by Franchisee must be placed with a company which is qualified to write bonds in the Commonwealth of Virginia. The bond may not be cancelled, and not renewed or replaced, without the Town's consent until thirty (30) days after the Town's receipt by registered mail, return receipt requested, of Franchisee's written notice of intent to cancel.

(B) Any bond shall be recoverable by the Town for all damages and costs, whether direct or indirect, resulting from the Franchisee's failure to well and faithfully observe and perform any provision of this Agreement.

(C) The bond shall be maintained at the amount established herein for the entire term of the Franchise Agreement, even if amounts have to be withdrawn pursuant to this Agreement. The Franchisee shall promptly replace any amounts withdrawn from the bond unless an action, appeal or other process has been instituted by Franchisee to challenge the amount withdrawn, and no replacement of funds shall be required until any such action, appeal or other process has been resolved.

12.2 Non-compliance procedures.

(A) Should the Franchising Authority believe that the Franchisee has not complied with any of the provisions of this Franchise Agreement, it shall: (i) informally discuss the matter with the Franchisee and (ii) notify the Franchisee in writing of the exact nature of the alleged noncompliance if the discussions described in the foregoing clause (i) do not lead to resolution of the alleged noncompliance. The Franchisee shall have thirty (30) days from receipt of this written notice to: (a) respond to the Franchising Authority, if the Franchisee contests, in whole or in part, the assertion of noncompliance; (b) cure such default; or (c) in the event that, by the nature of default, such default cannot be cured within the 30-day period, initiate reasonable steps to remedy such default and notify the Franchising Authority of the steps being taken and the projected date that they will be completed. The Franchising Authority shall schedule a public hearing in the event that the Franchisee fails to respond to the written notice pursuant to these procedures or in the event that the alleged default is not remedied within thirty (30) days of the date projected above if the Franchising Authority intends to continue its investigation into the default. The Franchising Authority shall provide the Franchisee at least thirty (30) business days prior written notice of such hearing, which will specify the time, place, and purpose. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

(B) The Town shall, within a reasonable time after the closure of the public hearing, issue findings and conclusions in writing, setting forth the basis for the findings; the proposed cure plan; and the time line for curing the violation if the violation can be cured; and the penalties, damages and applicable interest owed, if any.

(C) Subject to applicable federal and Virginia law and the provisions of this Agreement, if the Town determines pursuant to a public hearing that Franchisee is in violation of any provision of this Agreement the Town may apply one or a combination of the following remedies: (i) seek specific performance or other equitable relief; (ii) commence an action at law; (iii) apply liquidated damages in accordance with Section 12.3, if applicable; or (iv) in the case of substantial default of material provisions of the Agreement, initiate revocation proceedings in accordance with Section 12.4.

(D) The Town may designate its cable administrator or other person to conduct the hearings and issue findings and conclusions under this subsection, in which case Franchisee may appeal the determination of the cable administrator or other Town designee to the Town Council. Such an appeal shall be heard at a lawfully noticed public hearing. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

12.3 Penalties and Liquidated Damages. Because it may be difficult to calculate the harm to the Franchising Authority in the event of Franchisee's breach of this Franchise Agreement, the parties agree to liquidated damages as a reasonable estimation of the actual damages. To the extent that the Franchising Authority elects to assess liquidated damages as provided in this Agreement and such liquidated damages have been paid, such damages shall be the Franchising Authority's sole and exclusive remedy. Nothing in this Section shall preclude the Franchising Authority from exercising any other right or remedy with respect to a breach that continues past the time the Franchising Authority stops assessing liquidated damages for such breach. Liquidated damages shall not be assessed until the Franchising Authority has completed the procedures set forth in Section 12.2 hereof, including holding a public hearing, and notifying the Franchisee by certified or registered mail of the proposed liquidated damages, specifying the violation. The Franchisee shall have thirty (30) days from the date of receipt of the written notice to submit payment. If the Franchisee does not make payment within that period, the Franchising Authority may obtain the amount assessed from the Franchisee's performance bond.

(A) The first day for which liquidated damages may be assessed, if there has been no cure, shall be the day after the end of the applicable cure period, including any extension of the cure period the Franchising Authority has granted.

(B) Franchisee may appeal (by pursuing judicial relief) any assessment of liquidated damages within thirty (30) days of receiving written notice of the assessment. Franchisee's obligation to pay the liquidated damages assessed shall be stayed pending resolution of the appeal.

(C) The Franchising Authority may assess liquidated damages for the following violations of this Franchise Agreement, in the following amounts:

(i) Failure to comply with PEG access requirements: $100 per violation for each day the violation continues.

(ii) Failure to render payments due to the Franchising Authority: $100 per violation for each day the violation continues, in addition to any monetary payment due.

(iii) Failure to supply information, reports, or filings lawfully required: $100 per violation for each day the violation continues.

(iv) Failure to comply with customer service standards: $100 per each violation for each day the violation continues, except where compliance is measured quarterly, in which case damages shall be as specified in Section 12.4(C)(v) below.

(v) Failure to comply with customer service standards with which compliance is measured on a quarterly basis: $300 for the first violation in which such standards were not met; $500 for any violation within 18 months after the first; and $750 for any violation within 18 months after the second or any subsequent violation.

(D) The Franchisee shall not be charged with multiple violations for a single act or event affecting a single subscriber or for a single act or event affecting multiple subscribers on the same day.

(E) The parties agree that such liquidated damages are reasonable.

(F) The Town may reduce or waive any of the above liquidated damages if it determines, in its sole discretion that such waiver is in the public interest.

(G) The amount of all liquidated damages assessed per annum shall not exceed twenty thousand dollars ($20,000) in the aggregate.

(H) If after 120 days the Franchisee has not cured or commenced to cure the alleged breach to the satisfaction of the Franchising Authority, the Franchising Authority may pursue all other remedies aside from liquidated damages.

12.4 <u>Revocation.</u>

(A) Subject to applicable federal and state law, in the event the Franchising Authority, after a public hearing pursuant to Section 12.3 of this Agreement, determines that the Franchisee is in default of material provisions of the Franchise Agreement, the Franchising Authority may initiate revocation proceedings in accordance with the following:

(i) The Franchising Authority shall give written notice to the Franchisee of its intent to revoke the Franchise Agreement on the basis of a pattern of non-compliance by the Franchisee, including two or more instances of substantial non-compliance with a material provision of the Agreement. The notice shall set forth with specificity the exact nature of the non-compliance. The Franchisee shall have ninety (90) business days from the receipt of such notice to object in writing and to state its reasons for such objection. In the event the Franchising Authority has not received a response from the Franchisee or upon receipt of the response does not agree that the allegations of non-compliance have been or will be resolved, it may then seek revocation of the Franchise at a public hearing. The Franchising Authority shall cause to be served upon the Franchisee, at least thirty (30) days prior to such public hearing, a written notice specifying the time and place of such hearing and stating its intent to request revocation of the Franchise Agreement.

(ii) At the designated public hearing, the Franchising Authority shall give the Franchisee an opportunity to state its position on the matter, present evidence and question witnesses, in accordance with the standards of a fair hearing applicable to administrative hearings in the Commonwealth of Virginia, after which it shall determine whether or not the Franchise shall be terminated. The public hearing shall be on the record and a written transcript shall be made available to the Franchisee within ten (10) business days. The decision of the Franchising Authority shall be in writing and shall be delivered to the Franchisee by certified mail. The Franchisee may appeal such determination to an appropriate court.

12.5 Technical Violation. The Franchising Authority agrees that it is not its intention to subject the Franchisee to penalties, fines, forfeitures or revocation of the Franchise Agreement for so-called "technical" breach(es) or violation(s) of the Franchise Agreement, which shall include, but not be limited to, the following:

(A) In instances or for matters in which the Franchisee's violation or breach of the Franchise Agreement was a good faith error that resulted in no or minimal negative impact on the Customers within the Franchise Area; or

(B) Where there existed circumstances reasonably beyond the Franchisee's control and which precipitated the Franchisee's violation of the Franchise Agreement, or which prevented the Franchisee from complying with a term or condition of the Franchise Agreement.

12.6 Removal of System. Franchisee shall remove its Cable System within six (6) months as a result of termination, revocation, denial of renewal, or any other lawful action to forbid or disallow Franchisee from providing Cable Service unless Franchisee has obtained other authority to occupy the rights-of-way in the Franchise Area.

SECTION 13 – INSPECTION OF FACILITIES

13.1 Franchisee shall comply with all applicable federal, state, and generally applicable local construction and engineering codes and regulations, currently in force or hereafter applicable, to the construction, operation or maintenance of its Cable System within the Town. After construction has been completed, the Town shall have the right to inspect all construction or installation work performed pursuant to the Franchise Agreement and all applicable federal, state and generally applicable local building and engineering codes. However, the Town shall not be required to review or approve construction plans and specifications or to make any inspections. The Franchisee shall be solely responsible for taking all steps necessary to assure compliance with applicable standards and to ensure that its Cable System is installed in a safe manner and pursuant to the terms of the Franchise Agreement and applicable law.

SECTION 14 – MISCELLANEOUS PROVISIONS

14.1 Force Majeure. The Franchisee shall not be held in default under, or in noncompliance with, the provisions of the Franchise, nor suffer any enforcement or penalty relating to noncompliance or default (including termination, cancellation or revocation of the Franchise), where such noncompliance or alleged defaults occurred or were caused by events which constitute a Force Majeure, as defined in this Agreement.

14.2 Notice. All notices shall be in writing and shall be served upon the other party by hand delivery; first class mail; registered or certified mail, return receipt requested, postage prepaid; or by reputable overnight courier service and addressed as follows:

To the Franchising Authority:

Town Manager
Town of Front Royal
P.O. Box 1560
102 E. Main Street
Front Royal, Virginia 22630

To the Franchisee:

Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC
600 Hays Street
Staunton, VA 24401
Attn: Government Affairs Department/Paul Comes

With copies to:

Comcast Cable
7850 Walker Drive, 2nd Floor
Greenbelt, MD 20770
Attn.: Government Affairs Department

And to:

Comcast Cable Northeast Division
676 Island Pond Rd.
Manchester, NH 03109
Attention: Government Affairs Department

14.3 Entire Agreement. This Franchise Agreement embodies the entire understanding and agreement of the Franchising Authority and the Franchisee with respect to the subject matter hereof and supersedes all prior understandings, agreements and communications, whether written or oral. All ordinances or parts of ordinances that are in conflict with or otherwise impose obligations different from the provisions of this Franchise Agreement are superseded by the Franchise Agreement.

14.4 Severability. If any section, subsection, sentence, clause, phrase, or other portion of this Franchise Agreement is, for any reason, declared invalid in whole or in part by any court, agency, commission, legislative body, or other authority of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent portion. Such declaration shall not affect the validity of the remaining portion, which shall continue in full force and effect.

14.5 Governing Law. This Franchise Agreement shall be deemed to be executed in the Commonwealth of Virginia and shall be governed in all respects, including validity, interpretation and effect, and construed in accordance with, the laws of the Commonwealth of Virginia.

14.6 Modification. No provision of this Franchise Agreement shall be amended or otherwise modified, in whole or in part, except by an instrument in writing duly executed by the Franchising Authority and the Franchisee, which amendment shall be authorized on behalf of the Franchising Authority through the adoption of an appropriate resolution or order by the Franchising Authority, as required by applicable law.

14.7 No Third-Party Beneficiaries. Nothing in this Franchise Agreement shall confer third-party beneficiary status on any member of the public to enforce the terms of this Franchise Agreement.

14.8 No Waiver of Rights. Nothing in this Franchise Agreement shall be construed as a waiver of any rights, substantive or procedural, Franchisee may have under federal or state law unless such waiver is expressly stated herein.

14.9 Incorporation by Reference. Should the State, the federal government or the FCC require Franchisee to perform or refrain from performing any act the performance or non-performance of which is inconsistent with any provisions herein, the Franchising Authority and Franchisee will thereupon, if they determine that a material provision herein is affected, modify any of the provisions herein to reflect such government action.

14.10 Annexation. Upon ninety (90) days written notice, any additions of territory to the Franchise Area, by annexation or other legal means, contiguous to the Franchise Area, shall thereafter be subject to all the terms of this Agreement as though it were an extension made hereunder related to the Cable System located or operated within said territory.

This ordinance shall become effective upon passage.

APPROVED:

____
Matthew A. Tederick, Interim Mayor

ATTEST:

____
Jennifer E. Berry, MMC, Clerk of Council

THIS ORDINANCE was approved at the Regular Meeting of the Town of Front Royal, Virginia on its second reading, conducted _____________________2019, upon the following recorded vote:

Eugene R. Tewalt	Yes/No	Jacob L. Meza	Yes/No
William A. Sealock	Yes/No	Chris W. Holloway	Yes/No
Letasha Thompson	Yes/No	Gary Gillispie	Yes/No

A public hearing on the above was held on ____________________________ having been advertised in the Northern Virginia Daily on September 28, 2019, and October 5, 2019. The Ordinance was enacted at the Regular Meeting of the Town Council held ____2019, to become effective immediately.

Approved as to form and legality:

____
Douglas W. Napier, Town Attorney

Date: ____/____/_____

CABLE FRANCHISE AGREEMENT

BETWEEN

THE TOWN OF FRONT ROYAL, VIRGINIA

AND

COMCAST OF CALIFORNIA/MARYLAND/PENNSYLVANIA/VIRGINIA/WEST VIRGINIA, LLC

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CABLE FRANCHISE AGREEMENT

This nonexclusive Cable Franchise Agreement (hereinafter, the "Agreement" or "Franchise Agreement") is made between the Town of Front Royal, VA, a political subdivision of the Commonwealth of Virginia (hereinafter, "Town") and Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC (hereinafter, "Franchisee").

The Town, having determined that the financial, legal and technical ability of the Franchisee is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community, desires to enter into this negotiated Franchise Agreement with the Franchisee for the construction, operation and maintenance of a Cable System on the terms and conditions set forth herein. In furtherance thereof, at its Regular Meeting of ________________, the Town, after proper notice and public hearing, enacted an ordinance authorizing this Franchise Agreement.

SECTION 1 -Definition of Terms

For the purpose of this Franchise Agreement, capitalized terms, phrases, words, and abbreviations shall have the following meanings:

"ACT" means the Communications Act of 1934.

"AFFILIATE", in relation to any Person, means another Person who owns or controls, is owned or controlled by, or is under common ownership or control with, such Person, but, in relation to Franchisee, does not include affiliated entities that are not involved with the use, management, operation, construction, repair and/or maintenance of Cable Systems.

"BASIC SERVICE TIER" means the service tier that includes (i) the retransmission of local television broadcast channels and (ii) public, educational, and governmental channels as required by applicable law to be carried in the basic tier.

“CABLE ACT” shall mean the Cable Communications Policy Act of 1984, as amended from time to time, 47 U.S.C. §§ 521 *et seq*,

"CABLE OPERATOR" means any Person or group of Persons that (A) provides Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such Cable System or (B) otherwise controls or is responsible for, through any arrangement, the management and operation of a Cable System. Cable Operator does not include a provider of wireless or direct-to-home satellite transmission service, unless that provider otherwise qualifies as a Cable Operator.

"CABLE SERVICE" means the one-way transmission to Subscribers of (i) video programming or (ii) other programming service, and Subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service. Cable service does not include any video programming provided by a commercial mobile service provider defined in 47 U.S.C.§ 332(d).

"CABLE SYSTEM" or "SYSTEM” means any facility consisting of a set of closed transmission paths and associated signal generation, reception and control equipment that is designed to provide Cable Service that includes video programming and that is provided to multiple Subscribers within a community, except that such definition shall not include (i) a system that serves fewer than 20 Subscribers; (ii) a facility that serves only to retransmit the television signals of one or more television broadcast stations; (iii) a facility that serves only Subscribers without using any public right-of-way; (iv) a facility of a common carrier that is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, 47 USC§ 201 et seq., except that such facility shall be considered a Cable System to the extent such facility is used in the transmission of video programming directly to Subscribers, unless the extent of such use is solely to provide interactive on-demand services; (v) any facilities of any electric utility used solely for operating its electric systems; (vi) or any portion of a System that serves fewer than 50 Subscribers in any locality, where such portion is part of a larger System franchised in an adjacent locality; or (vii) an open video system that complies with§ 653 of Title VI of the Communications Act of 1934, as amended, 47 U.S.C. § 573.

"CUSTOMER" or "SUBSCRIBER" means a Person or user of the Cable System who lawfully receives Cable Service therefrom with the Franchisee's express permission.

"EFFECTIVE DATE" means May 13th, 2018.

"FCC" means the Federal Communications Commission or successor governmental entity thereto.

"FORCE MAJEURE" means an event or events reasonably beyond the ability of Franchisee to anticipate and control. "Force majeure" includes, but is not limited to, acts of God, incidences of terrorism, war or riots, labor strikes or civil disturbances, floods, earthquakes, fire, explosions, epidemics, hurricanes, tornadoes, governmental actions and restrictions, work delays caused by waiting for utility providers to service or monitor or provide access to utility poles to which Franchisee's facilities are attached or to be attached or conduits in which Franchisee's facilities are located or to be located, and unavailability of materials or qualified labor to perform the work necessary.

"FRANCHISE" means the initial, nonexclusive, authorization, or renewal thereof, issued by the Franchising Authority, whether such authorization is designated as a franchise, agreement, permit, license, resolution, contract, certificate, ordinance or otherwise, which authorizes the construction and operation of the Cable System in the public rights-of-way and compatible easements, pursuant to 47 U.S.C. § 541.

"FRANCHISE AGREEMENT" or "AGREEMENT" shall mean this nonexclusive Cable Franchise Agreement and any amendments or modifications hereto.

"FRANCHISE AREA" means the present legal boundaries of the Town as of the Effective Date, and shall also include any additions thereto, by annexation or other legal means, as per the requirements set forth herein.

"FRANCHISEE" shall mean Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC.

"FRANCHISING AUTHORITY" means the Town or the lawful successor, transferee, designee, or assignee thereof.

"GROSS REVENUE" means all revenue, as determined in accordance with generally accepted accounting principles (GAAP), that is actually received by the cable operator and derived from the operation of the Cable System to provide Cable Services in the Franchise Area; however, "gross revenue" shall not include: (i) refunds or rebates made to Subscribers or other third parties; (ii) any revenue which is received from the sale of merchandise over home shopping channels carried on the

Cable System, but not including revenue received from home shopping channels for the use of the Cable Service to sell merchandise; (iii) any tax, fee, or charge collected by the Cable Operator and remitted to a governmental entity or its agent or designee, including without limitation a local public access or education group; (iv) program launch fees; (v) directory or advertising revenue including, but not limited to, yellow page, white page, banner advertisement, and electronic publishing; (vi) refundable deposits; (vii) late fees; (viii) investment income; (ix) a sale of Cable Service for resale or for use as a component part of or for the integration into Cable Services to be resold in the ordinary course of business, when the reseller is required to pay or collect franchise fees or similar fees on the resale of the Cable Service; (x) revenues received by any Affiliate or any other person in exchange for supplying goods or services used by the Cable Operator to provide Cable Service; and (xi) revenue, or the pro-rata portion of multi-service fees, derived from services classified as non-Cable Services under federal law, including, without limitation, revenue derived from telecommunications services and information services, and any other revenues attributed by the Cable Operator to non-Cable services in accordance with GAAP rules, regulations, standards, or orders of the Federal Communications Commission. Gross Revenues shall not include actual bad debt that is written off, consistent with generally accepted accounting principles, provided however, that all or any part of any such actual bad debt that is written off, but subsequently collected, shall be included in the Gross Revenues in the period so collected.

"INTERACTIVE ON-DEMAND SERVICE" means a service providing video programming to Subscribers over switched networks on an on-demand, point-to-point basis, but does not include services providing video programming the programming provider preschedules.

"ORDINANCE" includes a resolution.

“PEG” means public, educational and/or governmental access to the Cable System to provide video programming.

"PERSON" means any natural person or any association, firm, partnership, joint venture, corporation, or other legally recognized entity, whether for-profit or not-for profit, but shall not mean the Franchising Authority.

"PUBLIC RIGHT-OF-WAY" (PROW or Public Way) means the surface, the air space above the surface, and the area below the surface of any public street, highway, lane, path, alley, sidewalk, boulevard, drive, bridge, tunnel, park, parkway, waterway, easement, or similar property in which the Town now or hereafter holds any property interest, which, consistent with the purposes for which it was dedicated, may be used for the purpose of installing and maintaining a Cable System. No reference herein, or in any franchise, to a "public right-of-way" shall be deemed to be a representation or guarantee by the Town that its interest or other right to control the use of such property is sufficient to permit its use for such purposes, and Franchisee shall be deemed to gain only those rights to use as are properly in the Town and as the Town may have the undisputed right and power to give. For purposes of this Franchise, the term "public right-of-way" shall also include any other parcels of property that the Town owns.

“SERVICE INTERRUPTION" means a Service Outage affecting less than five subscribers, or a loss of either video or audio for one or more channels for one or more subscribers.

"SERVICE OUTAGE" means the complete loss of Cable Service to five or more subscribers served by the same trunk, node, or feeder line for a period of fifteen (15) minutes or more.

"TRANSFER" means any transaction in which (i) an ownership or other interest in the Franchisee is transferred, directly or indirectly, from one Person or group of Persons to another Person or group of Persons, so that majority control of the Franchisee is transferred; or (ii) the rights and obligations the Franchisee holds under the Franchise granted under this Franchise Agreement are transferred or assigned to another Person or group of Persons. However, notwithstanding clauses (i) and (ii) of the preceding sentence, a transfer of the Franchise shall not include (a) transfer of an ownership or other interest in the Franchisee to the parent of the Franchisee or to another Affiliate of the Franchisee; (b) transfer of an interest in the Franchise granted under this Franchise Agreement or the rights held by the Franchisee under the Franchise granted under this Franchise Agreement to the parent of the Franchisee or to another Affiliate of the Franchisee; (c) any action that is the result of a merger of the Franchisee's parent; (d) any action that is the result of a merger of another Affiliate of the Franchisee; (e) a transfer in trust, by mortgage, or by assignment of any rights, title, or interest of the Franchisee in the Franchise or the System used to provide Cable Service in order to secure indebtedness; or (f) the sale, conveyance, transfer, exchange, or release of fifty percent (50%) or less of its equitable ownership.

"VIDEO PROGRAMMING" means programming provided by, or generally considered comparable to, programming provided by a television broadcast station.

All terms used herein, unless otherwise defined, shall have the same meaning as set forth in Sections 15.2-2108.19 *et seq.* of the Code of Virginia; and if not defined therein, then as set forth in Title VI of the Communications Act of 1934, 47 U.S.C. § 521 *et seq.*; and if not defined therein, their common and ordinary meaning. In addition, references in this Ordinance to any federal or state law shall include amendments thereto as are enacted from time-to-time.

SECTION 2 - Grant of Authority

2.1 The Franchising Authority hereby grants to the Franchisee under the Code of Virginia and the Cable Act a nonexclusive Franchise authorizing the Franchisee to construct and operate a Cable System in the Public Ways within the Franchise Area, and for that purpose to erect, install, construct, repair, replace, reconstruct, maintain, or retain in any Public Way such poles, wires, cables, conductors, ducts, conduits, vaults, manholes, pedestals, amplifiers, appliances, attachments, and other related property or equipment as may be necessary or appurtenant to the Cable System and to provide such Cable Services over the Cable System as may be lawfully allowed. This agreement neither authorizes the Franchisee to use the PROW for purposes of providing any service other than Cable Service, nor prohibits the Franchisee from doing so. The Franchisee's authority to provide non-Cable Services shall be subject to applicable law.

2.2 Term of Franchise. The term of the Franchise granted hereunder shall be fifteen (15) years, beginning on the Effective Date, unless the Franchise is renewed or is lawfully terminated in accordance with the terms of this Franchise Agreement and the Code of Virginia, and the Cable Act.

2.3 Renewal. Any Franchise renewal shall be governed by and comply with the provisions of Article 1.2 of Chapter 21 of Title 15.2 of the Code of Virginia and the Cable Act, as amended.

2.4 Reservation of Authority. Nothing in this Franchise Agreement shall be construed as a waiver of any codes or ordinances of general applicability promulgated by the Franchising Authority.

SECTION 3- Construction and Maintenance of the Cable System

3.1 Permits and General Obligations. The Franchisee shall be responsible for obtaining, at its own cost and expense, all generally applicable permits, licenses, or other forms of approval or authorization necessary to construct, operate, maintain or repair the Cable System, or any part thereof, prior to the commencement of any such activity. The issuance of such permits shall not be unreasonably withheld, conditioned, or delayed. Construction, installation, and maintenance of the Cable System shall be performed in a safe, thorough and reliable manner using materials of good and durable quality. Notwithstanding the requirements herein, Franchisee shall not be required to obtain a permit for individual drop connections to Subscribers, servicing or installing pedestals or other similar facilities, or other instances of routine maintenance or repair to its Cable System. All transmission and distribution structures, poles, other lines, and equipment the Franchisee installs for use in the Cable System in accordance with the terms and conditions of this Franchise Agreement shall be located so as to minimize the interference with the proper use of the Public Ways and the rights and reasonable convenience of property owners who own property that adjoins any such Public Way.

3.2 Conditions of Street Occupancy.

(A) Relocation at request of Third Party. The Franchisee shall, upon reasonable prior written request of any Person holding a permit issued by the Franchising Authority to move any structure, temporarily move its wires to permit the moving of such structure; provided (i) the Franchisee may impose a reasonable charge on any Person for the movement of its wires, and such charge may be required to be paid in advance of the movement of its wires; and (ii) the Franchisee is given not less than thirty (30) business days advance written notice to arrange for such temporary relocation. Any service disruption provisions of this Franchise shall not apply in the event that the removal of Franchisee's wires, cables, poles or other facilities pursuant to the above results in temporary service disruptions.

(B) Restoration of Public Ways. If in connection with the construction, operation, maintenance, or repair of the Cable System, the Franchisee disturbs, alters, or damages any Public Way, the Franchisee agrees that it shall at its own cost and expense replace and restore any such Public Way to a condition reasonably comparable to the condition of the Public Way existing immediately prior to the disturbance. The Town may make the final determination as to the reasonable acceptability of repair and/or replacement of damaged facilities.

(C) Safety Requirements. The Franchisee shall, at its own cost and expense, undertake all necessary and appropriate efforts to maintain its work sites in a safe manner in order to prevent failures and accidents that may cause damage, injuries or nuisances. All work undertaken on the Cable System shall be performed in substantial accordance with applicable FCC or other federal and state regulations and with applicable provisions of the National Electrical Safety Code and the National Electrical Code. The Cable System shall not endanger or interfere with the safety of Persons or property in the Franchise Area.

(D) Trimming of Trees and Shrubbery. The Franchisee shall have the authority to trim trees or other natural growth overhanging any of its Cable System in the Franchise Area so as to prevent contact with the Franchisee's wires, cables, or other equipment. All such trimming shall be done at the Franchisee's sole cost and expense. For all planned trimming, the Franchisee shall provide the Town at least five (5) business days' notice of the work to be performed and a description of such work. For trimming of an emergency nature, including responding to storm damage, advance notice is not required. The Franchisee shall be responsible for any damage and all clean up of debris the trimming causes. The foregoing notwithstanding, any tree trimming by Franchisee must comply with any separately negotiated pole attachment agreement in effect between the Town and the Franchisee.

(E) Aerial and Underground Construction. At the time of Cable System construction, if all of the transmission and distribution facilities of all of the respective public or Town utilities in any area of the Franchise Area are underground, the Franchisee shall place its Cable System's transmission and distribution facilities underground; provided that such underground locations are actually capable of accommodating the Franchisee's cable and other equipment without technical degradation of the Cable System's signal quality. In any region(s) of the Franchise Area where the transmission or distribution facilities of the respective public or Town utilities are both aerial and underground, the Franchisee shall have the discretion to construct, operate, and maintain all of its transmission and distribution facilities, or any part thereof, aerially or underground. Nothing in this Section shall be construed to require the Franchisee to construct, operate, or maintain underground any ground-mounted appurtenances such as customer taps, line extenders, system passive devices, amplifiers, power supplies, pedestals, or other related equipment. To avoid overburdening the Public Way, and in furtherance of the health, safety and welfare of the public, Franchisee will use commercially reasonable efforts to utilize existing utility poles and conduits when and where available for the construction, repairs and maintenance of the Cable System pursuant to separately negotiated pole attachment and conduit utilization agreements. Franchisee shall not erect, for any reason, any pole on or along any Public Right-of-Way or on public property without the advance written approval of the Town. The foregoing notwithstanding, the terms of any separately negotiated pole attachment agreement in effect between the Town and the Franchisee shall govern.

(F) All excavation and reconstruction work by Franchisee in the Public Rights-of-Way must be in compliance with the generally applicable requirements of Town Code, including all of the standards referenced therein, and all applicable VDOT standards. It shall be the Franchisee's responsibility to obtain any required permits, to review all applicable excavation, reconstruction, restoration, repair and permitting requirements, and to become familiar with such requirements before beginning any excavation, reconstruction, restoration or repair work in the Public Rights-of-Way or private property.

(G) Any equipment or facilities the Franchisee installs in the Public Rights-of-Way shall be installed, located, erected, constructed, reconstructed, replaced, restored, removed, repaired, maintained and operated in accordance with good engineering practices, performed by experienced maintenance and construction personnel so as not (1) to endanger or interfere in any manner with improvements the Town or VDOT may deem appropriate to make; or (2) to interfere with the rights of any private property owner; or (3) to hinder or obstruct pedestrian or vehicular traffic.

(H) Whenever the Town shall determine that it is necessary in connection with the repair, relocation, or improvement of the Public Rights-of-Way, the Town may require by written notification that any properties or facilities of the Franchisee be removed or relocated. Within sixty (60) days after receipt of notification, unless the Town extends such period for good cause shown, the Franchisee shall remove or relocate its facilities to such place and under such terms and conditions as the Town specifies. The Franchisee shall bear all expenses associated with the removal and relocation except that the Town will issue, without charge to the Franchisee, whatever local permits are required for the relocation of Franchisee's facilities. If the Franchisee does not complete its removal or relocation within sixty (60) days or such other period as authorized by the Town, the Town may take such actions as necessary to effectuate such removal or relocation at the Franchisee's expense. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any removal or relocation. Franchisee shall follow all applicable VDOT standards and regulations in connection with the repair, relocation, or improvement of the Public Rights-of-Way. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds, if any, raised for the project and made available to other users of the Public Way.

(i) Nothing in this Franchise Agreement shall be construed to prevent the Town from constructing, maintaining, repairing, improving, grading, paving, relocating and/or altering any Public Right-of-Way; constructing, installing, repairing, maintaining, or relocating any water or sewer mains; or constructing, maintaining, relocating or repairing any sidewalk or other public work. All such work shall be done, to the extent possible, in such a manner as not to obstruct, injure or prevent the free use and operation of the poles, wires, conduits, conductors, pipes or appurtenances of the Franchisee.

(ii) Nothing contained in this Franchise Agreement shall relieve any Person from liability arising out of the failure to exercise reasonable care to avoid injuring Franchisee’s facilities while performing any work in any Public Right-of-Way or on public property.

(I) Undergrounding and Beautification Projects. In the event all users of the Public Way relocate aerial facilities underground as part of an undergrounding or neighborhood beautification project, Franchisee shall participate in the planning for relocation of its aerial facilities contemporaneously with other utilities. Franchisee's relocation costs shall be included in any computation of necessary project funding by the Town or private parties. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds raised for the project and made available to other users of the Public Way. It is understood that the Franchising Authority does not guarantee that any public or private funds will be available to help defray the cost of such undergrounding or beautification projects. In the event that public and/or private funds are not available or do not cover the entire cost of the relocation, Franchisee reserves the right to pass its costs, or in the case of partial reimbursement from public and/or private funds its incremental cost, through to its Subscribers in accordance with applicable law.

SECTION 4 - Service Obligations

4.1 General Service Obligations.

(A) The Franchisee shall make Cable Service available to every residential dwelling unit within the Franchise Area where the minimum density is at least (30) thirty dwelling units per mile when measured in strand footage from the nearest point of the existing Cable System from which a usable signal can be obtained. For purposes of this section, a home shall only be counted as a “dwelling unit” if such home is within two hundred seventy-five (275) feet of the public right-of-way. Subject to the density requirement, Franchisee shall offer Cable Service to all new homes or previously unserved homes located within two hundred fifty (250) feet of the Franchisee's distribution cable. Should an area within the Franchise Area meet the density requirements, Franchisee shall provide Cable Service to such area within six (6) months after it confirms that the density requirements have been met through actual knowledge or following notice from the Franchising Authority that one or more residents has requested service.

(B) The Franchisee may elect to provide Cable Service to areas not meeting the above density and distance standards. The Franchisee may impose an additional charge in excess of its regular installation charge for any service installation requiring a drop or line extension in excess of the above standards. Any such additional charge related to an extended drop shall be computed on a time plus materials basis to be calculated on that portion of the installation that exceeds the standards set forth above. Such additional charge shall be paid in advance by the developer, landowner, or customer requesting Cable Service in an area that does not meet the density and distance standards.

4.2 New Developments. Franchisee agrees to use commercially reasonable efforts to inform itself of all newly planned developments within the Town and to work with developers to cooperate in pre-installation of facilities to support Cable Service.

4.3 Programming. The Franchisee shall offer to all Customers a diversity of video programming services.

4.4 No Discrimination. The Franchisee shall not discriminate or permit discrimination between or among any Persons in the availability of Cable Services or other services provided in connection with the Cable System in the Franchise Area. It shall be the right of all Persons to receive all available services provided on the Cable System so long as such Person's financial or other obligations to the Franchisee are satisfied; unless such Person has engaged in inappropriate activity including, but not limited to, theft of Franchisee's cable services, vandalism of its property, or abuse or harassment of its representatives. Nothing contained herein shall prohibit the Franchisee from offering bulk discounts, promotional discounts, package discounts, or other such pricing strategies as part of its business practice.

(A) Franchisee shall assure that access to Cable Services is not denied to any group of potential residential cable subscribers because of the residents' income.

4.5 Availability of Maps to the Town. Upon the Town giving two (2) weeks written request, but no more often than annually, the Franchisee shall make available for the Town's viewing, at the Franchisee's nearest business office, updated maps of the Franchise Area which shall clearly delineate all areas within the Franchise Area where Cable Service is available to Subscribers.

4.6 Changes in Service. Franchisee agrees to give the Town Manager thirty (30) days prior written notice of changes in rates, programming services or channel positions, provided that such changes are within the control of Franchisee.

SECTION 5 -Public, Educational and Governmental Access Channels

5.1 Franchisee shall make available one (1) Standard Definition (SD) channel for Public, Educational and/or Governmental ("PEG") Access video programming provided by the Franchising Authority or its designee, such as a public access organization or educational institution. All PEG Access Programming shall be modulated, then transmitted from the origination site location at 220 North Commerce Avenue, Front Royal, VA 22630 to Franchisee's headend or hub site on a Franchisee owned upstream ("return line"). Any construction or upgrades of return lines or origination sites shall be paid for by the Franchising Authority. Said payment shall be made in advance to the Franchisee subject to the Franchisee providing the Franchising Authority with a detailed estimate of said construction cost. Use of a channel position for PEG access shall be provided on the most basic tier of service offered by the Franchisee and in accordance with the Cable Act and the Code of Virginia, and as further set forth below. "Channel position" means a number designation on the Franchisee's channel lineup regardless of the transmission format (analog or digital). Franchisee does not relinquish its ownership of or ultimate right of control over a channel by designating it for PEG use. In the event any access channel is reassigned, the Franchisee shall provide the Town with at least thirty (30) days' notice before reassigning the channel. A PEG access user- whether an individual, educational or governmental user- acquires no property or other interest by virtue of the use of a channel so designated, and may not rely on the continued use of a particular channel number, no matter how long the same channel may have been designated for such use. Franchisee shall not exercise editorial control over any public, educational, or governmental use of a channel position, except Franchisee may refuse to transmit any public access program or portion of a public access program that contains obscenity, indecency, or nudity. The Franchising Authority shall be responsible for developing, implementing, interpreting and enforcing rules for PEG Access Channel use.

(A) Franchisee shall continue to make available to Subscribers the Warren County Public Schools PEG Channel within the Town subject to the authorization of Warren County and so long as Warren County, VA continues to produce said PEG programming and Franchisee continues to carry said programming in Warren County, VA.

5.2 Public Access. A "Public Access Channel" is a channel position designated for noncommercial use by the public on a first-come, first-served, nondiscriminatory basis. A Public Access Channel may not be used to cablecast programs for profit, or for political or commercial fundraising in any fashion.

5.3 Educational Access. An "Educational Access Channel" is a channel position designated for noncommercial use by educational institutions such as public or private schools (but not "home schools"), community colleges, and universities.

5.4 Government Access. A "Governmental Access Channel" is a channel position designated for noncommercial use by the Franchising Authority for the purpose of showing the public local government at work.

5.5 Franchisee shall ensure that all PEG access channel signals carried on its system, regardless of the method used to acquire the PEG channels, comply with all applicable FCC signal quality and technical standards except that Franchisee shall not be responsible for the technical signal quality of programming produced by any PEG Channel programmer. The technical and signal quality of all PEG access channel signals shall be preserved and shall be of comparable quality as other channels.

5.6 High Definition (HD) PEG Access Channel. Within one hundred and eighty (180) days of receipt of the Town's written request, which is deemed received by Franchisee upon execution hereof, Franchisee shall make the PEG Access Channel discussed in Section 5.1 available in HD format. Franchisee shall continue to carry the SD PEG Access Channel simultaneously until SD channels are no longer provided over the Cable System. The Franchisee shall be responsible for providing the PEG Access signal to Subscribers over its Cable System in a SD format until no longer required. The Franchising Authority shall be responsible for providing the PEG Access signal in a HD format acceptable to Franchisee to the PEG Access origination location demarcation point, at 220 North Commerce Avenue, Front Royal, VA 22630. The Franchising Authority acknowledges that the HD PEG Access Channel may require Subscribers to buy or lease special equipment, available to all Subscribers, and subscribe to those tiers of Cable Service upon which HD channels are made available. Franchisee is not required to provide free HD equipment to Subscribers or the Town.

5.7 Capital Support for PEG Access.

(A) Franchisee shall pay to Town an initial lump sum capital grant of thirty-one thousand dollars ($31,000) as capital support for PEG access equipment, payable within ninety (90) days from the execution of this Franchise Agreement. If the capital support grant payment is not made within one hundred twenty (120) days from the date of execution of this Franchise Agreement, this

Franchise Agreement shall become null and void, ab initio, without notice. The Franchising Authority will distribute these funds for capital purposes and/or procure equipment in support of the PEG access programming needs of the community.

(B) At the Town's option, Franchisee shall collect a monthly fee from each Subscriber to provide additional capital support for PEG access. The maximum fee that shall be imposed is 0.5% of Franchisee's gross revenues, and the fee collected shall be remitted to the Town no later than thirty (30) days following the end of each calendar quarter. Comcast shall not impose a fee to provide capital support for PEG access unless and until the Town directs Franchisee to impose a fee. The Town shall give Franchisee at least ninety (90) days' written notice before Franchisee shall begin collecting the fee. The Town shall allocate such amount to PEG capital uses exclusively. If such fee is imposed and used exclusively for PEG capital purposes, it shall not be deemed to be "franchise fees" within the meaning of 47 U.S.C. Section 542 and such payments shall not be deemed to be (i) "payments-in-kind" or any involuntary payments chargeable against the compensation the Franchisee is to pay the Town pursuant to Section 6 hereof, or (ii) part of the compensation the Franchisee is to pay to the Town pursuant to Section 6 hereof.

5.8 Indemnification. The Franchising Authority shall indemnify Franchisee, to the extent authorized by the Virginia Constitution and general laws, for any liability, loss, or damage it may suffer due to violation of the intellectual property rights of third parties or arising out of the content of programming shown on any PEG channel and from claims arising out of the Franchising Authority's rules for or administration of PEG Access.

SECTION 6 - Communications Tax and Franchise Fees

6.1 Communications Tax. Franchisee shall comply with the provisions of Sections 58.1-645 et seq. of the Code of Virginia, pertaining to the Virginia Communications Sales and Use Tax, as amended (the "Communications Tax"), and Sections 6.2 through 6.6 of the Agreement shall not have any effect, for so long as the Communications Tax or a successor state or local tax that would constitute a franchise fee for purposes of 47 U.S.C. § 542 is imposed on the sale of Cable Services by the Franchisee to the Town's Subscribers.

6.2 Payment of Franchise Fee to Town. In the event that the Communications Tax is repealed, and no successor state or local tax is enacted that would constitute a franchise fee for purposes of 47 U.S.C. § 542, Franchisee shall pay to the Town a Franchise fee of five percent (5%) of annual Gross Revenue, beginning thirty (30) days from the effective date of the repeal of such tax (the "Repeal Date"). Beginning on the Repeal Date, the terms of Section 6.2 through 6.6 of this Agreement shall take effect. In accordance with the Cable Act, the twelve (12) month period applicable under the Franchise for the computation of the Franchise fee shall be a calendar year. Such payments shall be made no later than thirty (30) days following the end of each calendar quarter. Should Franchisee submit an incorrect amount, Franchisee shall be allowed to add or subtract that amount in a subsequent quarter, but no later than ninety (90) days following the close of the calendar year for which such amounts were applicable; such correction shall be documented in the supporting information required under Section 6.3 below.

6.3 Supporting Information. Each Franchise fee payment shall be accompanied by a brief report prepared by a representative of Franchisee showing the basis for the computation and a breakdown by major revenue categories (such as Basic Service, premium service, etc.). The Town shall have the right to reasonably request further supporting information for each Franchise fee payment, subject to the proprietary information provisions of Section 8.7.

6.4 Bundled Services. If Cable Services subject to a franchise fee, or any other fee determined by a percentage of the Cable Operator's gross revenues in a locality, are provided to Subscribers in conjunction with other services: the fee shall be applied only to the value of the Cable Services, as reflected on the books and records of the Cable Operator in accordance with rules, regulations, standards, or orders of the Federal Communications Commission, the State Corporation Commission, or generally accepted accounting principles. Any discounts resulting from purchasing the services as a bundle shall be reasonably allocated between the respective services that constitute the bundled transaction.

6.5 Books and Records Regarding Franchise Fees. In the event that the Communications Tax is repealed, and subject to the confidentiality requirements of Section 8.7 of this Agreement, the Town, or such Person or Persons the Town designates, shall have the right to inspect and copy records and the right to audit and to re-compute any amounts determined to be payable under this Franchise, regardless of who holds the records. If an audit discloses an overpayment or underpayment of franchise fees, the Town shall notify the Franchisee in writing of such overpayment or underpayment within ninety (90) days of the date the audit was completed. The Franchisee shall have thirty (30) days from receipt of such notice to provide the Town with a written response agreeing to or refuting the results of the audit, including any substantiating documentation. Based on these notices, the parties shall agree upon a final settled amount. The Town, in its sole discretion, shall determine the completion date for any audit conducted hereunder. Audit completion is not to be unreasonably delayed by either party. Subject to the confidentiality requirements of Section 8.7 of this Franchise, the Franchisee shall be responsible for providing to the Town, within forty-five (45) days of a written request, all records necessary to confirm the accurate payment of franchise fees. The Franchisee shall maintain such records for the current year plus three (3) years. The Town shall bear its audit expenses. If re-computation results in additional revenue to be paid by Franchisee to the Town, such amount shall be subject to an interest charge in accordance with the prime rate of interest charged by the Town's primary depository bank.

(A) Any final settled amounts due to the Franchising Authority as a result of such audit shall be paid to the Franchising Authority within forty-five (45) days from the date the parties agree upon the final settled amount. Once the parties agree upon a final settled amount and such amount is paid by the Franchisee, the Franchising Authority shall have no further rights to audit or challenge the payment for that period.

(B) The period of limitation for recovery of any Franchise fee payable hereunder shall be three (3) years from the date on which payment by Franchisee is due.

SECTION 7- Customer Service Standards; Customer Bills; and Privacy Protection

7.1 Customer Service Standards. The Franchisee shall comply in all respects with the customer service requirements established by the FCC (47 CFR §76.309). Franchisee shall be subject to the following customer service standards consistent with federal law:

(A) Franchisee will maintain a local or toll-free telephone access line which will be available to its Subscribers twenty-four (24) hours a day, seven (7) days a week. Additionally, for at least the first twenty-four (24) months from the Effective Date, Franchisee will maintain at least one customer service center within the Town for Subscribers to make payments and exchange equipment. In addition, Franchisee may, when a Subscriber consents, provide for an employee to pick up or drop off equipment in either of the following ways: (i) by having a Franchise representative to go to the Subscriber’s residence, or (ii) by using a prepaid mailer. Franchisee also has the option to provide alternative payment drop off locations within the Franchise Area.

(B) Under Normal Operating Conditions, telephone answer time by a customer representative or automated answering device, including wait time, shall not exceed thirty (30) seconds when the connection is made. If the call needs to be transferred, transfer time shall not exceed thirty (30) seconds. These standards shall be met no less than ninety (90) percent of the time under Normal Operating Conditions as measured on a quarterly basis.

(C) Under Normal Operating Conditions, the customer will receive a busy signal less than three percent (3%) of the time.

(D) Franchisee shall accurately collect and maintain data to measure its compliance with the telephone answering standards in paragraphs 7.1(B) and 7.1(C).

(E) Local customer service centers and bill payment locations will be open for sales, service complaints and scheduling, equipment exchange, and bill payment with customer account history access at no cost to customers, including assisting walk-in customers, at least during normal business hours, which are understood as approximately 8:00am to 5:00pm Monday through Friday.

(F) Installations, Outages, and Service Calls. Under normal operating conditions, each of the following standards will be met no less than ninety five percent (95%) of the time as measured on a quarterly basis.

(i) Standard installations will be performed within seven (7) business days after an order has been placed, unless the customer requests a longer period. "Standard" installations are those that are within one hundred seventy-five (175) feet of the existing distribution system.

(ii) Excluding conditions beyond the control of the Franchisee, the Franchisee will begin repairs on Service Outages and Service Interruptions promptly and in no event later than twelve (12) hours after the outage or interruption becomes known.

(iii) The Franchisee must begin working to correct Service Interruptions within 8 hours, including weekends, of receiving a subscriber call for a Service Interruption. “Service Interruption” shall mean the loss of any service provided to customer by Franchisee.

(G) Franchisee shall accurately collect and maintain data to measure its compliance with subparagraph 7.1.(F).

(H) The "appointment window" alternatives for installations, service calls and other installation activities will either be at a specific time or, at maximum, a four-hour time block during Normal Business Hours. Franchisee may schedule service calls and other installation activities outside of Normal Business Hours for the express convenience of the customer.

(I) Franchisee may not cancel an appointment with a customer after the close of business on the business day prior to the scheduled appointment. If Franchisee representative is running late for an appointment with a customer and will not be able to keep the appointment as scheduled, the customer will be contacted. The appointment will be rescheduled as necessary, at a time which is convenient for the customer.

(J) Franchisee shall provide information, in accordance with applicable law, on each of the following areas at the time of installation of service, at least annually to all Subscribers, and at any time upon request:

(i) Products and services offered;

(ii) Prices and options for programming services and conditions of subscription to programming and other services;

(iii) Installation and service maintenance policies;

(iv) Instructions on how to use the Cable Service;

(v) Channel positions of programming carried on the System; and

(vi) Billing and complaint procedures, including where to locate the Franchisee's office hours, telephone number, and address of the local cable office.

7.2 Customer Bills. Customer bills shall be designed in such a way as to present the information contained therein clearly and comprehensibly to Customers, and in a way that (i) is not misleading and (ii) does not omit material information. The Franchisee may, in its sole discretion, consolidate costs on Customer bills as may otherwise be permitted by the Cable Act.

7.3 Notification. Franchisee shall notify Subscribers of any changes in rates, programming services or channel positions as soon as possible in writing. Notice must be given to Subscribers a minimum of thirty (30) days in advance of such changes if the change is within the control of the Franchisee. In addition, Franchisee shall notify subscribers thirty (30) days in advance of any significant changes in the other information that paragraph 7.1(J) requires.

7.4 Billing Disputes. In case of a billing dispute, Franchisee must respond to a Subscriber's written complaint within thirty (30) days.

7.5 Refunds. Refund checks will be issued promptly, and no later than thirty (30) days from the date of the good faith determination that a refund is warranted.

7.6 Credits. Credits for service will be issued promptly, and no later than the Subscribers next available billing statement after a good faith determination that a credit is warranted.

7.7 Parental Control. Franchisee shall make available parental control devices to all Subscribers who wish to be able to block out any objectionable channel(s) of programming from the Cable Service.

7.8 Privacy Protection. The Franchisee shall comply with all applicable federal and state privacy laws.

SECTION 8- Oversight and Regulation by Franchising Authority

8.1 Oversight of Franchise. In accordance with applicable law, the Franchising Authority at its sole cost and expense, shall have the right to oversee, regulate and, on reasonable prior written notice and in the presence of Franchisee's employee, periodically inspect the construction, operation and maintenance of the Cable System in the Franchise Area, and all parts thereof, as necessary to monitor Franchisee's compliance with the provisions of this Franchise Agreement.

(A) The Franchisee shall perform all required tests necessary to demonstrate compliance with applicable FCC standards.

(B) Upon a showing of a pattern of unresolved Subscriber complaints regarding signal quality, upon written request, the Franchisee shall conduct applicable tests to determine compliance with applicable FCC standards., Franchisee shall make the results of such test available to the Town to verify compliance. If any such test indicates that any part or component of the System fails to meet applicable requirements, the Franchisee shall take corrective action, retest locations, and advise the Town of the action taken and results achieved.

8.2 Technical Standards. The Franchisee shall comply with all applicable technical standards of the FCC. The Franchising Authority shall have, upon written request, the right to obtain a copy records required to be maintained pursuant to the FCC's rules.

8.3 Operational Records. Upon no less than thirty (30) business days' written notice to the Franchisee, the Town shall have the right to inspect Franchisee's books and records, including electronic books and records, pertaining to Franchisee's provision of Cable Service in the franchise area at any time during normal business hours and on a nondisruptive basis, as are reasonably necessary to ensure compliance with the terms of this Franchise Agreement. Such notice shall specifically reference the Franchisee’s section or subsection which is under review, so that Franchisee may organize the necessary books and records for appropriate access by the Town. Franchisee shall not be required to maintain any books and records for franchise compliance purposes longer than the current year plus three (3) years. The Franchisee shall maintain the records required to compute all operational and customer service compliance measures outlined in this Franchise to demonstrate that the measures are being met for at least four (4) consecutive quarters.

8.4 Records Required. Franchisee shall at all times maintain:

(A) Records of all written complaints for a period of one (1) year after receipt by Franchisee. The term "complaint" as used herein refers to complaints about any aspect of the Cable System or Franchisee's cable operations, including, without limitation, complaints about employee courtesy. Complaints recorded will not be limited to complaints requiring an employee service call.

(B) Records of Service Outages and Service Interruptions for a period of one (1) year after occurrence, or until the applicable compliance measures described in this Franchise are met for four (4) consecutive quarters, indicating date, duration, area, and the number of Subscribers affected, type of outage, and cause.

(C) Records of service calls for repair and maintenance for a period of one (1) year after resolution by Franchisee, indicating the date and time service was required, the date and time service was provided, and (if different) the date and time the problem was resolved.

(D) Records of installation/reconnection for a period of one (1) year after the request was fulfilled by Franchisee, or until the applicable compliance measures described in this Franchise are met for four (4) consecutive quarters, indicating the date of request and the date and time service was extended.

8.5 Federal Communications Commission (FCC) Testing. Within fourteen (14) days of the Town's written request, a written report of test results of required FCC performance testing will be provided to the Town Manager or his designee.

8.6 File for Public Inspection. Throughout the term of this Franchise Agreement, the Franchisee shall maintain for public, those documents required pursuant to the FCC's Public Inspection File rules and regulations.

8.7 Proprietary Information.

(A) Notwithstanding anything to the contrary set forth herein, Franchisee shall not be required to submit information to the Town that it reasonably deems to be proprietary or confidential in nature, nor submit to the Town any of its or an Affiliate's books and records not relating to the provision of Cable Service in the Franchise Area, except as provided herein. Such confidential information shall be made available to the Town subject to terms of a nondisclosure agreement that is reasonably acceptable to the parties and to the following, to be applied as is most practicable for the purposes of this Agreement:

i. To the extent an exemption under the Virginia Freedom of Information Act permits the Town to maintain the confidentiality of submitted information and the Franchisee submits such information to the Town, the Town shall maintain the confidentiality of such information and not disclose it to any public request;

ii. To the extent the information provided to an accountant, attorney, consultant, or any other agent of the Town ("Town Consultant") would not be subject to public disclosure under the Virginia Freedom of Information Act, and the Town instructs the Franchisee to provide such information to the Town Consultant as may be required by this Agreement, the Franchisee shall provide such information to the Town Consultant and the Town shall not take possession of the information nor engage in any act that would jeopardize the information's confidentiality.

(B) At all times, the Town shall take reasonable steps to protect the proprietary and confidential nature of any books, records, maps, plans, or other Town requested documents that are provided pursuant to the Agreement to the extent they are designated as such by the Franchisee. Nothing in this Section shall be read to require the Franchisee to violate federal or state law protecting Subscriber privacy.

8.8 Reports.

(A) No later than ninety (90) days from the end of the calendar year, within ninety (90) days after receipt of the Town's written request, Franchisee shall submit a written year-end report to the Town. Such report may address, if the Town so desires: major cable-related projects undertaken in the past year and planned for the current year, including construction and upgrade schedules for any new, relocated, or upgraded aerial or underground facilities.

(B) Upon written request of the Town, no later than thirty (30) days after the end of each calendar quarter, the Franchisee shall submit a written report to the Town regarding complaints the Franchisee received from Customers in the Franchise Area concerning Franchisee's customer service performance.

SECTION 9- Transfer or Change of Control of Cable System or Franchise

9.1 No Transfer of this Franchise shall occur without the prior written consent of the Franchising Authority, which consent shall not be unreasonably withheld, delayed or conditioned. No Transfer shall be made to a Person, group of Persons or Affiliate that is not legally, technically and financially qualified to operate the Cable System and satisfy the obligations hereunder.

SECTION 10- Insurance and Indemnity

10.1 The Franchisee shall indemnify hold harmless and defend the Town, its officers, employees, and agents (hereinafter referred to as "indemnitees"), from and against:

(A) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which may be imposed upon, incurred by or asserted against the indemnitees by reason of any act or omission of the Franchisee, its personnel, employees, agents, contractors or subcontractors, resulting in personal injury, bodily injury, sickness, disease or death to any person or damage to, loss of or destruction of tangible or intangible property, libel, slander, invasion of privacy and unauthorized use of any trademark, trade name, copyright, patent, service mark or any other right of any person, firm or corporation, which may arise out of or be in any way connected with the construction, installation, operation, maintenance, use or condition of the Franchisee's Cable System caused by Franchisee, its contractors, subcontractors or agents or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation.

(B) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which are imposed upon, incurred by or asserted against the indemnitees by reason of any claim or lien arising out of work, labor, materials or supplies provided or supplied to the Franchisee, its contractors or subcontractors, for the installation, construction, operation or maintenance of the Franchisee's Cable System in the Town.

10.2 Damages shall include, but not be limited to, penalties arising out of copyright infringements and damages arising out of any failure by the Franchisee to secure consents from the owners, authorized distributors or licensees, or programs to be delivered by the Franchisee's Cable System.

10.3 The Franchisee undertakes and assumes for its officers, agents, contractors, subcontractors, and employees all risk of dangerous conditions, if any, on or about any Town owned or controlled property, including streets and public rights-of-ways, except for any claim asserted or liability imposed that arises or is related to gross negligence or intentional misconduct by such indemnitees or any loss or claims related to PEG access Channels in which the Franchising Authority or its designee participates.

10.4 In the event any action or proceeding shall be brought against the indemnitees by reason of any matter for which the indemnitees are indemnified hereunder, the Franchisee shall, upon notice from any of the indemnitees, and at the Franchisee's sole cost and expense, resist and defend the same; provided further, however, that the Franchisee shall not admit liability in any such matter on behalf of the indemnitees without the written consent of the Town Attorney or his designee. If the Town determines that it is necessary for it to employ separate counsel, the costs for such separate counsel shall be the responsibility of the Town.

10.5 The Town shall give the Franchisee timely written notice within twenty (20) business days of the Town receiving notice of a written claim, or the commencement of any action, suit or other proceeding covered by the provisions of this section. The Town will cooperate with the Franchisee while the Franchisee defends any claim or action under this section.

10.6 Nothing in this Franchise Agreement is intended to, or shall be construed or applied to, express or imply the Town's waiver of statutory provisions, privileges or immunities of any kind or nature as set forth in the Code of Virginia, including the Town's limits of liability as exists presently or as the legislature may increase from time to time. Nothing in a franchise or this ordinance shall constitute a waiver of the Town's statutory provisions, privileges or immunities, including the Town's sovereign immunity, of any kind or nature.

10.7 The Franchisee shall maintain, and by its acceptance of a franchise hereunder specifically agrees that it will maintain throughout the term of the Franchise Agreement, general commercial liability insurance insuring the Franchisee. All liability insurance shall include an endorsement in a specific form which names as joint and several insured's the Town and the Town's officials, and employees, under such commercial liability policy, with respect to all claims arising out of the operation and maintenance of the Franchisee's Cable System in the Town. Such policy shall be in the minimum amounts of Five Million Dollars ($5,000,000) combined single limit per occurrence for bodily injury, property damage, or personal & advertising injury, which limit may be met through any combination of primary and excess liability policies.

(A) The Franchisee shall provide Workers Compensation Insurance as required by the Commonwealth of Virginia;

(B) Franchisee shall carry and maintain in its own name automobile liability insurance with a limit of $1,000,000 for each person and $1,000,000 combined single limit per occurrence for each accident for property damage with respect to owned and non-owned automobiles for the operation of which the Franchisee is responsible; and

10.8 The inclusion of more than one (1) insured shall not operate to increase the limit of the Franchisee's liability, and the insurer waives any right on contribution with insurance which the Town may have.

10.9 All policies of insurance this section requires shall be placed with companies which are qualified to write insurance in the Commonwealth of Virginia and which maintain throughout the policy term a General Rating of "A- " as determined by Best Insurance Rating Services.

10.10 Upon the Town's written request, the Franchisee shall provide the Town with Certificates of Insurance for the coverages this section mandates.

10.11 Should the Town find an insurance document to be non-compliant, then it shall notify the Franchisee; and the Franchisee shall promptly cure the defect in accordance with this Agreement.

10.12 Neither this section's provisions, nor any damages recovered by the Town thereunder, shall be construed to nor limit the Franchisee's liability under this Franchise Agreement or for damages, except that nothing herein shall be interpreted to permit the Town to exercise rights and remedies in a manner that permits duplicative recovery from or payments by the Franchisee or its surety.

10.13 The commercial general liability insurance policy provided for herein shall name the Town, its officers, and employees as additional insureds, and shall be primary to any insurance or self-insurance the Town carries, but only with respect to the losses for which the Franchisee is responsible hereunder. The insurance policies this section requires shall be carried and maintained by the Franchisee throughout the term of the Franchise Agreement and such other period of time during which the Franchisee operates or is engaged in the removal of its Cable System. Each policy shall provide for notice of cancellation in accordance with policy provisions

10.14 Nothing in this section shall require Franchisee to indemnify, hold harmless or defend the Town, its officials, employees or agents, from any claims or lawsuits arising out of the Town's award of a franchise to another person.

SECTION 11 - System Description and Service

11.1 System Characteristics. Franchisee's Cable System shall meet or exceed the following requirements:

(A) The System shall be capable of providing Video Programming to its Customers in the Franchise Area in accordance with the Cable Act.

(B) The System shall be designed to be an active two-way plant for Subscriber interaction, if any, required for selection or use of Cable Service.

(C) The Cable Service shall be operated in a manner such that it is in compliance with FCC standards and requirements with respect to interference. The Cable System shall be operated in such a manner as to minimize interference with a Subscriber's reception of off-the-air signals. The Franchisee shall insure that signals carried by the Cable System, or originating outside the Cable System wires, cable, fibers, electronics and facilities, do not ingress or egress into or out of the Cable System in excess of FCC standards. In particular, the Franchise shall not operate the Cable System in such a manner as to pose unwarranted interference with emergency radio services, aeronautical navigational frequencies or an airborne navigational reception in normal flight patterns, or any other type of wireless communications, pursuant to FCC regulations.

11.2 Interconnection. The Franchise shall design its Cable System so that it may be interconnected with other cable systems and open video systems in the Franchise Area.

11.3 Standby Power. The Franchisee shall provide standby power generating capacity at the headend and at all hubs. The Franchisee shall maintain standby power capable of at least twenty-four (24) hours duration at the headend and all hubs, with automatic response systems to alert the local management center when commercial power is interrupted.

11.4 Technical Standards. The Cable System shall meet or exceed the applicable FCC technical performance standards.

11.5 Leased Access Channels. The Franchisee shall provide Leased Access Channels in accordance with federal law.

11.6 Emergency Powers. In the event of an emergency, or where Franchisee's Cable System creates or is contributing to an imminent danger to health, safety, or property, or an unauthorized use of property, the Franchisee shall remove or relocate any or all parts of Franchisee's Cable System at the Town's request. If the Franchisee fails to comply with the Town's request, the Town may remove or relocate any or all parts of the Franchisee's Cable System upon reasonable notice to the Franchisee. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any emergency removal or relocation. Franchisee shall be entitled to compensation for expenses incurred for removal or relocation in the event of an emergency to the extent other users of the Public Way are compensated. It is understood that the Franchising Authority does not guarantee that funds will be available to compensate users of the Public Ways for emergency removal or relocation.

11.7 Emergency Alert System. Franchisee shall install and thereafter maintain an Emergency Alert System (EAS) that shall at all times be operated in accordance with FCC rules and the Virginia EAS Plan.

SECTION 12 -Enforcement of Franchise

12.1 Performance Bond. Within thirty (30) days after the award of a Franchise Agreement, the Franchisee shall deposit with the Town a performance bond from a financial institution running to the Town in the amount of one hundred thousand dollars ($100,000.00). The bond shall be used to insure the Franchisee's faithful performance of all its franchise provisions or defaults under this Franchise Agreement or the payment by Franchisee of any penalties, liquidated damages, claims, liens, and taxes due the Town which arise by reason of the construction, operation, or maintenance of Franchisee's Cable System in the Town, including restoration of the public rights-of-way and the cost of removal or abandonment of any property of Franchisee. Following notice and opportunity to cure in accordance with Section 12.2, the Franchising Authority shall give Franchisee twenty (20) business days' notice of its intent to draw from the performance bond. The Franchising Authority may not draw from the performance bond while any action, appeal or other process has been instituted by Franchisee to challenge the amount owed.

(A) Any bond obtained by Franchisee must be placed with a company which is qualified to write bonds in the Commonwealth of Virginia. The bond may not be cancelled, and not renewed or replaced, without the Town's consent until thirty (30) days after the Town's receipt by registered mail, return receipt requested, of Franchisee's written notice of intent to cancel.

(B) Any bond shall be recoverable by the Town for all damages and costs, whether direct or indirect, resulting from the Franchisee's failure to well and faithfully observe and perform any provision of this Agreement.

(C) The bond shall be maintained at the amount established herein for the entire term of the Franchise Agreement, even if amounts have to be withdrawn pursuant to this Agreement. The Franchisee shall promptly replace any amounts withdrawn from the bond unless an action, appeal or other process has been instituted by Franchisee to challenge the amount withdrawn, and no replacement of funds shall be required until any such action, appeal or other process has been resolved.

12.2 Non-compliance procedures.

(A) Should the Franchising Authority believe that the Franchisee has not complied with any of the provisions of this Franchise Agreement, it shall: (i) informally discuss the matter with the Franchisee and (ii) notify the Franchisee in writing of the exact nature of the alleged noncompliance if the discussions described in the foregoing clause (i) do not lead to resolution of the alleged noncompliance. The Franchisee shall have thirty (30) days from receipt of this written notice to: (a) respond to the Franchising Authority, if the Franchisee contests, in whole or in part, the assertion of noncompliance; (b) cure such default; or (c) in the event that, by the nature of default, such default cannot be cured within the 30-day period, initiate reasonable steps to remedy such default and notify the Franchising Authority of the steps being taken and the projected date that they will be completed. The Franchising Authority shall schedule a public hearing in the event that the Franchisee fails to respond to the written notice pursuant to these procedures or in the event that the alleged default is not remedied within thirty (30) days of the date projected above if the Franchising Authority intends to continue its investigation into the default. The Franchising Authority shall provide the Franchisee at least thirty (30) business days prior written notice of such hearing, which will specify the time, place, and purpose. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

(B) The Town shall, within a reasonable time after the closure of the public hearing, issue findings and conclusions in writing, setting forth the basis for the findings; the proposed cure plan; and the time line for curing the violation if the violation can be cured; and the penalties, damages and applicable interest owed, if any.

(C) Subject to applicable federal and Virginia law and the provisions of this Agreement, if the Town determines pursuant to a public hearing that Franchisee is in violation of any provision of this Agreement the Town may apply one or a combination of the following remedies: (i) seek specific performance or other equitable relief; (ii) commence an action at law; (iii) apply liquidated damages in accordance with Section 12.3, if applicable; or (iv) in the case of substantial default of material provisions of the Agreement, initiate revocation proceedings in accordance with Section 12.4.

(D) The Town may designate its cable administrator or other person to conduct the hearings and issue findings and conclusions under this subsection, in which case Franchisee may appeal the determination of the cable administrator or other Town designee to the Town Council. Such an appeal shall be heard at a lawfully noticed public hearing. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

12.3 Penalties and Liquidated Damages. Because it may be difficult to calculate the harm to the Franchising Authority in the event of Franchisee's breach of this Franchise Agreement, the parties agree to liquidated damages as a reasonable estimation of the actual damages. To the extent that the Franchising Authority elects to assess liquidated damages as provided in this Agreement and such liquidated damages have been paid, such damages shall be the Franchising Authority's sole and exclusive remedy. Nothing in this Section shall preclude the Franchising Authority from exercising any other right or remedy with respect to a breach that continues past the time the Franchising Authority stops assessing liquidated damages for such breach. Liquidated damages shall not be assessed until the Franchising Authority has completed the procedures set forth in Section 12.2 hereof, including holding a public hearing, and notifying the Franchisee by certified or registered mail of the proposed liquidated damages, specifying the violation. The Franchisee shall have thirty (30) days from the date of receipt of the written notice to submit payment. If the Franchisee does not make payment within that period, the Franchising Authority may obtain the amount assessed from the Franchisee's performance bond.

(A) The first day for which liquidated damages may be assessed, if there has been no cure, shall be the day after the end of the applicable cure period, including any extension of the cure period the Franchising Authority has granted.

(B) Franchisee may appeal (by pursuing judicial relief) any assessment of liquidated damages within thirty (30) days of receiving written notice of the assessment. Franchisee's obligation to pay the liquidated damages assessed shall be stayed pending resolution of the appeal.

(C) The Franchising Authority may assess liquidated damages for the following violations of this Franchise Agreement, in the following amounts:

(i) Failure to comply with PEG access requirements: $100 per violation for each day the violation continues.

(ii) Failure to render payments due to the Franchising Authority: $100 per violation for each day the violation continues, in addition to any monetary payment due.

(iii) Failure to supply information, reports, or filings lawfully required: $100 per violation for each day the violation continues.

(iv) Failure to comply with customer service standards: $100 per each violation for each day the violation continues, except where compliance is measured quarterly, in which case damages shall be as specified in Section 12.4(C)(v) below.

(v) Failure to comply with customer service standards with which compliance is measured on a quarterly basis: $300 for the first violation in which such standards were not met; $500 for any violation within 18 months after the first; and $750 for any violation within 18 months after the second or any subsequent violation.

(D) The Franchisee shall not be charged with multiple violations for a single act or event affecting a single subscriber or for a single act or event affecting multiple subscribers on the same day.

(E) The parties agree that such liquidated damages are reasonable.

(F) The Town may reduce or waive any of the above liquidated damages if it determines, in its sole discretion that such waiver is in the public interest.

(G) The amount of all liquidated damages assessed per annum shall not exceed twenty thousand dollars ($20,000) in the aggregate.

(H) If after 120 days the Franchisee has not cured or commenced to cure the alleged breach to the satisfaction of the Franchising Authority, the Franchising Authority may pursue all other remedies aside from liquidated damages.

12.4 Revocation.

(A) Subject to applicable federal and state law, in the event the Franchising Authority, after a public hearing pursuant to Section 12.3 of this Agreement, determines that the Franchisee is in default of material provisions of the Franchise Agreement, the Franchising Authority may initiate revocation proceedings in accordance with the following:

(i) The Franchising Authority shall give written notice to the Franchisee of its intent to revoke the Franchise Agreement on the basis of a pattern of non-compliance by the

Franchisee, including two or more instances of substantial non-compliance with a material provision of the Agreement. The notice shall set forth with specificity the exact nature of the non-compliance. The Franchisee shall have ninety (90) business days from the receipt of such notice to object in writing and to state its reasons for such objection. In the event the Franchising Authority has not received a response from the Franchisee or upon receipt of the response does not agree that the allegations of non-compliance have been or will be resolved, it may then seek revocation of the Franchise at a public hearing. The Franchising Authority shall cause to be served upon the Franchisee, at least thirty (30) days prior to such public hearing, a written notice specifying the time and place of such hearing and stating its intent to request revocation of the Franchise Agreement.

(ii) At the designated public hearing, the Franchising Authority shall give the Franchisee an opportunity to state its position on the matter, present evidence and question witnesses, in accordance with the standards of a fair hearing applicable to administrative hearings in the Commonwealth of Virginia, after which it shall determine whether or not the Franchise shall be terminated. The public hearing shall be on the record and a written transcript shall be made available to the Franchisee within ten (10) business days. The decision of the Franchising Authority shall be in writing and shall be delivered to the Franchisee by certified mail. The Franchisee may appeal such determination to an appropriate court.

12.5 Technical Violation. The Franchising Authority agrees that it is not its intention to subject the Franchisee to penalties, fines, forfeitures or revocation of the Franchise Agreement for so-called "technical" breach(es) or violation(s) of the Franchise Agreement, which shall include, but not be limited to, the following:

(A) In instances or for matters in which the Franchisee’s violation or breach of the Franchise Agreement was a good faith error that resulted in no or minimal negative impact on the Customers within the Franchise Area; or

(B) Where there existed circumstances reasonably beyond the Franchisee’s control and which precipitated the Franchisee’s violation of the Franchise Agreement, or which prevented the Franchisee from complying with a term or condition of the Franchise Agreement.

12.6 Removal of System. Franchisee shall remove its Cable System within six (6) months as a result of termination, revocation, denial of renewal, or any other lawful action to forbid or disallow Franchisee from providing Cable Service unless Franchisee has obtained other authority to occupy the rights-of-way in the Franchise Area.

SECTION 13 - Inspection of Facilities

13.1 Franchisee shall comply with all applicable federal, state, and generally applicable local construction and engineering codes and regulations, currently in force or hereafter applicable, to the construction, operation or maintenance of its Cable System within the Town. After construction has been completed, the Town shall have the right to inspect all construction or installation work performed pursuant to the Franchise Agreement and all applicable federal, state and generally applicable local building and engineering codes. However, the Town shall not be required to review or approve construction plans and specifications or to make any inspections. The Franchisee shall be solely responsible for taking all steps necessary to assure compliance with applicable standards and to ensure that its Cable System is installed in a safe manner and pursuant to the terms of the Franchise Agreement and applicable law.

SECTION 14- Miscellaneous Provisions

14.1 Force Majeure. The Franchisee shall not be held in default under, or in noncompliance with, the provisions of the Franchise, nor suffer any enforcement or penalty relating to noncompliance or default (including termination, cancellation or revocation of the Franchise), where such noncompliance or alleged defaults occurred or were caused by events which constitute a Force Majeure, as defined in this Agreement.

14.2 Notice. All notices shall be in writing and shall be served upon the other party by hand delivery; first class mail; registered or certified mail, return receipt requested, postage prepaid; or by reputable overnight courier service and addressed as follows:

To the Franchising Authority:

Town Manager
Town of Front Royal
P.O. Box 1560
102 E. Main Street
Front Royal, Virginia 22630

To the Franchisee:

Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC
600 Hays Street
Staunton, VA 24401
Attn: Government Affairs Department/Paul Comes

With copies to:

Comcast Cable
7850 Walker Drive, 2nd Floor
Greenbelt, MD 20770
Attn.: Government Affairs Department

And to:

Comcast Cable Northeast Division
676 Island Pond Rd.
Manchester, NH 03109
Attention: Government Affairs Department

14.3 Entire Agreement. This Franchise Agreement embodies the entire understanding and agreement of the Franchising Authority and the Franchisee with respect to the subject matter hereof and supersedes all prior understandings, agreements and communications, whether written or oral. All ordinances or parts of ordinances that are in conflict with or otherwise impose obligations different from the provisions of this Franchise Agreement are superseded by the Franchise Agreement.

14.4 Severability. If any section, subsection, sentence, clause, phrase, or other portion of this Franchise Agreement is, for any reason, declared invalid in whole or in part by any court, agency, commission, legislative body, or other authority of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent portion. Such declaration shall not affect the validity of the remaining portion, which shall continue in full force and effect.

14.5 Governing Law. This Franchise Agreement shall be deemed to be executed in the Commonwealth of Virginia and shall be governed in all respects, including validity, interpretation and effect, and construed in accordance with, the laws of the Commonwealth of Virginia.

14.6 Modification. No provision of this Franchise Agreement shall be amended or otherwise modified, in whole or in part, except by an instrument in writing duly executed by the Franchising Authority and the Franchisee, which amendment shall be authorized on behalf of the Franchising Authority through the adoption of an appropriate resolution or order by the Franchising Authority, as required by applicable law.

14.7 No Third-Party Beneficiaries. Nothing in this Franchise Agreement shall confer third-party beneficiary status on any member of the public to enforce the terms of this Franchise Agreement.

14.8 No Waiver of Rights. Nothing in this Franchise Agreement shall be construed as a waiver of any rights, substantive or procedural, Franchisee may have under federal or state law unless such waiver is expressly stated herein.

14.9 Incorporation by Reference. Should the State, the federal government or the FCC require Franchisee to perform or refrain from performing any act the performance or non-performance of which is inconsistent with any provisions herein, the Franchising Authority and Franchisee will thereupon, if they determine that a material provision herein is affected, modify any of the provisions herein to reflect such government action.

14.10 Annexation. Upon ninety (90) days written notice, any additions of territory to the Franchise Area, by annexation or other legal means, contiguous to the Franchise Area, shall thereafter be subject to all the terms of this Agreement as though it were an extension made hereunder related to the Cable System located or operated within said territory.

IN WITNESS WHEREOF, this Franchise Agreement has been executed by the duly authorized representatives of the parties as set forth below, as of the date set forth below:

The Town of Front Royal, Virginia

By: ________________________________ __________

Name: Joseph E. Waltz Date

Title: Town Manager

Approved as to form:

____

Douglas W. Napier

Town Attorney

Attested by:

____
Jennifer Berry
Town Clerk

COMMONWEALTH OF VIRGINIA,
COUNTY OF WARREN, to-wit:

The foregoing was acknowledged before me this ____ day of ________________, 2019, by Joseph E. Waltz, Town Manager, on behalf of the Town of Front Royal, Virginia.

My commission expires: ___________ __________________________________
Notary Public

Comcast of California/Maryland/Pennsylvania/Virginia/
West Virginia, LLC

By: __________________________________ ___________
Name: Mary McLaughlin Date
Title: Regional Senior Vice President

Attested by:

____
Name: ____________________________
Title: _____________________________

COMMONWEALTH OF VIRGINIA,
COUNTY OF WARREN, to-wit:

The foregoing was acknowledged before me this ____ day of __________________, 2019 by

_________________________, ___________________ of _______________, on behalf

of Comcast of California/Maryland/Pennsylvania/Virginia/ West Virginia, LLC.

My commission expires: ____________ _________________________________
Notary Public

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 10

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – An Ordinance to Adopt and Re-enact Section 180-182 to Grant a Franchise Agreement for Cable Television to Shenandoah Cable Television, LLC *(2nd Reading)*

Summary: Council is requested to adopt on its second and final reading an ordinance to adopt and enact Section 180-182 of the Town code to Grant a Franchise Agreement for Cable Television to Shenandoah Cable Television, Inc., as presented.

Budget/Funding: 1000-3120401 – General Fund Franchise Tax

Attachments: Ordinance and Agreement

Meetings: Public Hearing held October 15, 2019

Staff Recommendation: Approval JW Denial______

Proposed Motion: **I move that Council adopt on its second and final reading an ordinance to adopt and enact Section 180-182 of the Town code to Grant a Franchise Agreement for Cable Television to Shenandoah Cable Television, Inc., as presented.**

*Note: Motions are the formal & final proposal of Council,
proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

AN ORDIANCE TO ADOPT AND ENACT SECTION 180-182 OF THE FRONT ROYAL TOWN CODE TO GRANT A FRANCHISE AGREEMENT FOR CABLE TELEVISION TO SHENANDOAH CABLE TELEVISION, LLC FOR THE TOWN OF FRONT ROYAL

WHEREAS, the Town of Front Royal has determined that the financial, legal and technical ability of Shenandoah Cable Television, LLC is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community; and,

NOW, THEREFORE, BE IT ENACTED by the Town Council of the Town of Front Royal, Virginia that Shenandoah Cable Television, LLC is hereby granted a franchise to operate a cable television system within the Town of Front Royal, under the terms and conditions of a Franchise Agreement as follows:

CABLE TELEVISION

180-182 CABLE FRANCHISE AGREEMENT (Shenandoah Cable Television, LLC)

This nonexclusive Cable Franchise Agreement (hereinafter, the "Agreement" or "Franchise Agreement") is made between the Town of Front Royal, VA, a political subdivision of the Commonwealth of Virginia (hereinafter, "Town") and Shenandoah Cable Television, LLC (hereinafter, "Franchisee").

The Town, having determined that the financial, legal and technical ability of the Franchisee is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community, desires to enter into this negotiated Franchise Agreement with the Franchisee for the construction, operation and maintenance of a Cable System on the terms and conditions set forth herein. In furtherance thereof, at its Regular Meeting of October 28, 2019, the Town, after proper notice and public hearing, enacted an ordinance authorizing this Franchise Agreement.

SECTION 1 – DEFINITION OF TERMS

For the purpose of this Franchise Agreement, capitalized terms, phrases, words, and abbreviations shall have the following meanings:

"ACT" means the Communications Act of 1934 as amended.

"AFFILIATE", in relation to any Person, means another Person who owns or controls, is owned or controlled by, or is under common ownership or control with, such Person.

"BASIC SERVICE TIER" means the service tier that includes (i) the retransmission of local television broadcast channels and (ii) public, educational, and governmental channels required to be carried in the basic tier.

"CABLE ACT" shall mean the Cable Communications Policy Act of 1934, as amended from time to time, 47 U.S.C. §§ 521 *et seq*,

"CABLE OPERATOR" means any Person or group of Persons that (A) provides Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such Cable System or (B) otherwise controls or is responsible for, through any arrangement, the management and operation of a Cable System. Cable Operator does not include a provider of wireless or direct-to-home satellite transmission service.

"CABLE SERVICE" means the one-way transmission to Subscribers of (i) video programming or (ii) other programming service, and Subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service. Cable service does not include any video programming provided by a commercial mobile service provider defined in 47 U.S.C.§ 332(d).

"CABLE SYSTEM" or "SYSTEM" means any facility consisting of a set of closed transmission paths and associated signal generation, reception and control equipment that is designed to provide Cable Service that includes video programming and that is provided to multiple Subscribers within a community, except that such definition shall not include (i) a system that serves fewer than 20 Subscribers; (ii) a facility that serves only to retransmit the television signals of one or more television broadcast stations; (iii) a facility that serves only Subscribers without using any public right-of-way; (iv) a facility of a common carrier that is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, 47 USC§ 201 et seq., except that such facility shall be considered a Cable System to the extent such facility is used in the transmission of video programming directly to Subscribers, unless the extent of such use is solely to provide interactive on-demand services; (v) any facilities of any electric utility used solely for operating its electric systems; (vi) or any portion of a System that serves fewer than 50 Subscribers in any locality, where such portion is part of a larger System franchised in an adjacent locality; or (vii) an open video system that complies with§ 653 of Title VI of the Communications Act of 1934, as amended, 47 U.S.C. § 573, as amended.

"CUSTOMER" or "SUBSCRIBER" means a Person or user of the Cable System who lawfully receives Cable Service therefrom with the Franchisee's express permission.

"EFFECTIVE DATE" means the specific date on which this negotiated Franchise Agreement was approved by a duly enacted ordinance.

"FCC" means the Federal Communications Commission or successor governmental entity thereto.

"FORCE MAJEURE" means an event or events reasonably beyond the ability of Franchisee to anticipate and control. "Force majeure" includes, but is not limited to, acts of God, incidences of terrorism, war or riots, labor strikes or civil disturbances, floods, earthquakes, fire, explosions, epidemics, hurricanes, tornadoes, governmental actions and restrictions, work delays caused by waiting for utility providers to service or monitor or provide access to utility poles to which Franchisee's facilities are attached or to be attached or conduits in which Franchisee's facilities are located or to be located, and unavailability of materials or qualified labor to perform the work necessary.

"FRANCHISE" means the initial, nonexclusive, authorization, or renewal thereof, issued by the Franchising Authority, whether such authorization is designated as a franchise, agreement, permit, license, resolution, contract, certificate, ordinance or otherwise, which authorizes the construction and operation of the Cable System in the public rights-of- way.

"FRANCHISE AGREEMENT" or "AGREEMENT" shall mean this nonexclusive Cable Franchise Agreement and any amendments or modifications hereto.

"FRANCHISE AREA" means the present legal boundaries of the Town as of the Effective Date, and shall also include any additions thereto, by annexation or other legal means.

"FRANCHISEE" shall mean Shenandoah Cable Television, LLC.

"FRANCHISING AUTHORITY" means the Town or the lawful successor, transferee, designee, or assignee thereof.

"GROSS REVENUE" means all revenue, as determined in accordance with generally accepted accounting principles, that is actually received by the cable operator and derived from the operation of the cable system to provide cable services in the franchise area; however, "gross revenue" shall not include: (i) refunds or rebates made to subscribers or other third parties; (ii) any revenue which is received from the sale of merchandise over home shopping channels carried on the cable system, but not including revenue received from home shopping channels for the use of the cable service to sell merchandise; (iii) any tax, fee, or charge collected by the cable operator and remitted to a governmental entity or its agent or designee, including without limitation a local public access or education group; (iv) program launch fees; (v) directory or Internet advertising revenue including, but not limited to, yellow page, white page, banner advertisement, and electronic publishing; (vi) a sale of cable service for resale or for use as a component part of or for the integration into cable services to be resold in the ordinary course of business, when the reseller is required to pay or collect franchise fees or similar fees on the resale of the cable service; (vii) revenues received by any affiliate or any other person in exchange for supplying goods or services used by the cable operator to provide cable service; and (viii) revenue derived from services classified as noncable services under federal law, including, without limitation, revenue derived from telecommunications services and information services, and any other revenues attributed by the cable operator to noncable services in accordance with rules, regulations, standards, or orders of the Federal Communications Commission.

“INSTITUTION NETWORK” means the Town’s communication network.

"INTERACTIVE ON-DEMAND SERVICE" means a service providing video programming to Subscribers over switched networks on an on-demand, point-to-point basis, but does not include services providing video programming the programming provider preschedules.

"ORDINANCE" includes a resolution.

“PEG” means public, educational and/or governmental access to the Cable System to provide video programming.

"PERSON" means any natural person or any association, firm, partnership, joint venture, corporation, or other legally recognized entity, whether for-profit or not-for profit, but shall not mean the Franchising Authority.

"PUBLIC RIGHT-OF-WAY" (PROW or Public Way) means the surface, the air space above the surface, and the area below the surface of any public street, highway, lane, path, alley, sidewalk, boulevard, drive, bridge, tunnel, park, parkway, waterway, easement, or similar property in which the Town now or hereafter holds any property interest, which, consistent with the purposes for which it was dedicated, may be used for the purpose of installing and maintaining a cable system. No reference herein, or in any franchise, to a "public right-of-way" shall be deemed to be a representation or guarantee by the Town that its interest or other right to control the use of such property is sufficient to permit its use for such purposes, and Franchisee shall be deemed to gain only those rights to use as are properly in the Town and as the Town may have the undisputed right and power to give. For purposes of this Franchise, the term "public right-of-way" shall also include any other parcels of property that the Town owns.

"SERVICE INTERRUPTION" means a service outage affecting less than five subscribers, or a loss or degradation of either video or audio for one or more channels for one or more subscribers.

"SERVICE OUTAGE" means the complete loss of cable service to five or more subscribers served by the same trunk, node, or feeder line for a period of 24 hours or more.

"TRANSFER" means any transaction in which (i) an ownership or other interest in the Franchisee is transferred, directly or indirectly, from one Person or group of Persons to another Person or group of Persons, so that majority control of the Franchisee is transferred; or (ii) the rights and obligations the Franchisee holds under the Franchise granted under this Franchise Agreement are transferred or assigned to another Person or group of Persons. However, notwithstanding clauses (i) and (ii) of the preceding sentence, a transfer of the Franchise shall not include (a) transfer of an ownership or other interest in the Franchisee to the parent of the Franchisee or to another Affiliate of the Franchisee; (b) transfer of an interest in the Franchise granted under this Franchise Agreement or the rights held by the Franchisee under the Franchise granted under this Franchise Agreement to the parent of the Franchisee or to another Affiliate of the Franchisee; (c) any action that is the result of a merger of the Franchisee's parent; (d) any action that is the result of a merger of another Affiliate of the Franchisee; (e) a transfer in trust, by mortgage, or by assignment of any rights, title, or interest of the Franchisee in the Franchise or the System used to provide Cable Service in order to secure indebtedness.

"VIDEO PROGRAMMING" means programming provided by, or generally considered comparable to, programming a television broadcast station provides.

All terms used herein, unless otherwise defined, shall have the same meaning as set forth in Sections 15.2-2108.19 *et seq.* of the Code of Virginia; and if not defined therein, then as set forth in Title VI of the Communications Act of 1934, 47 U.S.C. § 521 *et seq.*; and if not defined therein, their common and ordinary meaning. In addition, references in this Ordinance to any federal or state law shall include amendments thereto as are enacted from time-to-time.

SECTION 2 – GRANT OF AUTHORITY

2.1 The Franchising Authority hereby grants to the Franchisee under the Code of Virginia and the Cable Act a nonexclusive Franchise authorizing the Franchisee to construct and operate a Cable System in the Public Ways within the Franchise Area, and for that purpose to erect, install, construct, repair, replace, reconstruct, maintain, or retain in any Public Way such poles, wires, cables, conductors, ducts, conduits, vaults, manholes, pedestals, amplifiers, appliances, attachments, and other related property or equipment as may be necessary or appurtenant to the Cable System and to provide such Cable Services over the Cable System as may be lawfully allowed. This agreement neither authorizes the Franchisee to use the PROW for purposes of providing any service other than Cable Service, nor prohibits the Franchisee from doing so. The Franchisee's authority to provide non-Cable Services shall be subject to applicable law.

2.2 Term of Franchise. The term of the Franchise granted hereunder shall be fifteen (15) years, beginning on the Effective Date, unless the Franchise is renewed or is lawfully terminated in accordance with the terms of this Franchise Agreement and the Code of Virginia, and the Cable Act.

2.3 Renewal. Any Franchise renewal shall be governed by and comply with the provisions of Article 1.2 of Chapter 21 of Title 15.2 of the Code of Virginia and the Cable Act, as amended.

2.4 Reservation of Authority. Nothing in this Franchise Agreement shall be construed as a waiver of any codes or ordinances of general applicability promulgated by the Franchising Authority.

SECTION 3 – CONSTRUCTION AND MAINTENANCE OF CABLE SYSTEM

3.1 Permits and General Obligations. The Franchisee shall be responsible for obtaining, at its own cost and expense, all generally applicable permits, licenses, or other forms of approval or authorization necessary to construct, operate, maintain or repair the Cable System, or any part thereof, prior to the commencement of any such activity. Construction, installation, and maintenance of the Cable System shall be performed in a safe, thorough and reliable manner using materials of good and durable quality. Notwithstanding the requirements herein, Franchisee shall not be required to obtain a permit for individual drop connections to Subscribers, servicing or installing pedestals or other similar facilities, or other instances of routine maintenance or repair to its Cable System. All transmission and distribution structures, poles, other lines, and equipment the Franchisee installs for use in the Cable System in accordance with the terms and conditions of this Franchise Agreement shall be located so as to minimize the interference with the proper use of the Public Ways and the rights and reasonable convenience of property owners who own property that adjoins any such Public Way.

3.2 Conditions of Street Occupancy.

(A) New Grades or Lines. If the grades or lines of any Public Way within the Franchise Area are lawfully changed at any time during the term of this Franchise Agreement, then the Franchisee shall, upon reasonable advance written notice from the Franchising Authority (which shall not be less than ten (10) business days) and at its own cost and expense, protect or promptly alter or relocate the Cable System, or any part thereof, so as to conform with any such new grades or lines. If public funds are available to any other user of the Public Way for the purpose of defraying the cost of any of the foregoing, the Franchising Authority shall notify the Franchisee of the availability of such funding and make such funds available to the Franchisee. It is understood that the Franchising Authority does not guarantee that any public funds will be available to help defray the cost of altering or relocating the Cable System to conform to new grades or lines.

(B) Relocation at request of Third Party. The Franchisee shall, upon reasonable prior written request of any Person holding a permit issued by the Franchising Authority to move any structure, temporarily move its wires to permit the moving of such structure; provided (i) the Franchisee may impose a reasonable charge on any Person for the movement of its wires, and such charge may be required to be paid in advance of the movement of its wires; and (ii) the Franchisee is given not less than thirty (30) business days advance written notice to arrange for such temporary relocation.

(C) Restoration of Public Ways. If in connection with the construction, operation, maintenance, or repair of the Cable System, the Franchisee disturbs, alters, or damages any Public Way, the Franchisee agrees that it shall at its own cost and expense replace and restore any such Public Way to a condition reasonably comparable to the condition of the Public Way existing immediately prior to the disturbance. The Town may make the final determination as to acceptability of repair and/or replacement of damaged facilities. In performing any excavation work in the public rights-of-way, the Franchisee will comply with all of the requirements of Town Code applicable to all users of the Public Rights of Way.

(D) Safety Requirements. The Franchisee shall, at its own cost and expense, undertake all necessary and appropriate efforts to maintain its work sites in a safe manner in order to prevent failures and accidents that may cause damage, injuries or nuisances. All work undertaken on the Cable System shall be performed in substantial accordance with applicable FCC or other federal and state regulations and with the National Electrical Safety Code (National Bureau of Standards) and the National Electrical Code (National Bureau of Fire Underwriters). The Cable System shall not endanger or interfere with the safety of Persons or property in the Franchise Area.

(E) Trimming of Trees and Shrubbery. The Franchisee shall have the authority to trim trees or other natural growth overhanging any of its Cable System in the Franchise Area so as to prevent contact with the Franchisee's wires, cables, or other equipment. All such trimming shall be done at the Franchisee's sole cost and expense. For all planned trimming, the Franchisee shall provide the Town at least five (5) business days' notice of the work to be performed and a description of such work. For trimming of an emergency nature, including responding to storm damage, advance notice is not required. The Franchisee shall be responsible for any damage and all clean up of debris the trimming causes. The foregoing notwithstanding, any tree trimming by Franchisee must at all times comply with any tree trimming provision contained in any separately negotiated pole attachment agreement in effect between the Town and the Franchisee.

(F) Aerial and Underground Construction. At the time of Cable System construction, if all of the transmission and distribution facilities of all of the respective Town utilities in any area of the Franchise Area are underground, the Franchisee shall place its Cable System's transmission and distribution facilities underground; provided that such underground locations are actually capable of accommodating the Franchisee's cable and other equipment without technical degradation of the Cable System's signal quality. In any region(s) of the Franchise Area where the transmission or distribution facilities of the respective Town utilities are both aerial and underground, the Franchisee shall have the discretion to construct, operate, and maintain all of its transmission and distribution facilities, or any part thereof, aerially or underground. Nothing in this Section shall be construed to require the Franchisee to construct, operate, or maintain underground any ground-mounted appurtenances such as customer taps, line extenders, system passive devices, amplifiers, power supplies, pedestals, or other related equipment. To avoid overburdening the Public Way, and in furtherance of the health, safety and welfare of the public, Franchisee will at all times utilize Town owned utility poles and conduit when and where available for the construction, repairs and maintenance of the Cable System pursuant to separately negotiated pole attachment and conduit utilization agreements in effect with the Town. The Cable System will be constructed and maintained in such a way as to maximize the use of Town poles and conduit.

(G) All excavation and reconstruction work by Franchisee in the Public Rights-of-Way must be in compliance with the requirements of Town Code applicable to users of the Public Rights of Way, including all of the standards referenced therein, and all applicable VDOT standards. It shall be the Franchisee's responsibility to obtain any required permits, to review all applicable excavation, reconstruction, restoration, repair and permitting requirements, and to become familiar with such requirements before beginning any excavation, reconstruction, restoration or repair work in the Public Rights-of-Way or private property.

(H) Any equipment or facilities the Franchisee installs in the Public Rights-of-Way shall be installed, located, erected, constructed, reconstructed, replaced, restored, removed, repaired, maintained and operated in accordance with good engineering practices, performed by experienced maintenance and construction personnel so as not (1) to endanger or interfere in any manner with improvements the Town or VDOT may deem appropriate to make; or (2) to interfere with the rights of any private property owner; or (3) to hinder or obstruct pedestrian or vehicular traffic. Franchisee shall not erect, for any reason, any pole on or along any Public Right-of-Way or on public property without the advance written approval of the Town.

(I) Whenever the Town shall determine that it is necessary in connection with the repair, relocation, or improvement of the Public Rights-of-Way, the Town may require by written notification that any properties or facilities of the Franchisee be removed or relocated. Within sixty (60) days after receipt of notification, unless the Town extends such period for good cause shown, the Franchisee shall remove or relocate its facilities to such place and under such terms and conditions as the Town specifies. The Franchisee shall bear all expenses associated with the removal and relocation except that the Town will issue, without charge to the Franchisee, whatever local permits are required for the relocation of Franchisee's facilities. If the Franchisee does not complete its removal or relocation within 60 days or such other period as authorized by the Town, the Town may take such actions as necessary to effectuate such removal or relocation at the Franchisee's expense. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any removal or relocation. Franchisee shall follow all applicable VDOT standards and regulations in connection with the repair, relocation, or improvement of the Public Rights-of-Way. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds, if any, raised for the project and made available to other users of the Public Way.

Nothing in this Franchise Agreement shall be construed to prevent the Town from constructing, maintaining, repairing, improving, grading, paving, relocating and/or altering any Public Right-of-Way; constructing, installing, repairing, maintaining, or relocating any water or sewer mains; or constructing, maintaining, relocating or repairing any sidewalk or other public work. All such work shall be done, to the extent possible, in such a manner as not to obstruct, injure or prevent the free use and operation of the poles, wires, conduits, conductors, pipes or appurtenances of the Franchisee.

Nothing contained in this Franchise Agreement shall relieve any Person from liability arising out of the failure to exercise reasonable care to avoid injuring Franchisee's facilities while performing any work in any Public Right-of-Way or on public property.

(J) Movement of Facilities. In the event it is necessary to move or remove any of Franchisee's wires, cables, poles or other facilities placed pursuant to this Franchise, in order to lawfully move a large object, vehicle, building or other structure over the Public Right-of-Ways or public property of the Town, upon 30-day notice by the Town to Franchisee, Franchisee shall move at the expense, which may be required to paid in advance, of the Person requesting the temporary removal such of its facilities as may be required to facilitate such movements.

Any service disruption provisions of this Franchise shall not apply in the event that the removal of Franchisee's wires, cables, poles or other facilities pursuant to the preceding paragraph results in temporary service disruptions.

(K) Undergrounding and Beautification Projects. In the event all users of the Public Way relocate aerial facilities underground as part of an undergrounding or neighborhood beautification project, Franchisee shall participate in the planning for relocation of its aerial facilities contemporaneously with other utilities. Franchisee's relocation costs shall be included in any computation of necessary project funding by the Town or private parties. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds raised for the project and made available to other users of the Public Way. It is understood that the Franchising Authority does not guarantee that any public or private funds will be available to help defray the cost of such undergrounding or beautification projects. In the event that public and/or private funds are not available or do not cover the entire cost of the relocation, Franchisee reserves the right to pass its costs, or in the case of partial reimbursement from public and/or private funds its incremental cost, through to its Subscribers in accordance with applicable law.

(L) Inspection. The Town shall have the right to inspect all construction or installation work performed pursuant to the provisions of this Franchise to ensure compliance with the terms of the Franchise and applicable laws.

(M) Quality Control. Upon request, the Franchisee will provide information to the Town regarding items of quality control for installation and maintenance activities performed by the Franchisee or its authorized subcontractors.

SECTION 4 - SERVICE OBLIGATIONS

4.1 General Service Obligations. The Franchisee shall make Cable Service generally available to businesses and residential dwelling units within the Franchise Area. The Franchisee initially shall build out its Cable System to make Cable Service generally available to those business and residential units located within the red ovals shown on the map attached to this Franchise Agreement as Exhibit A. The Franchisee shall use commercially reasonable efforts (considering build out costs, geographical and geological conditions, and business conditions) to complete such initial build out by January 1, 2022. Franchisee shall complete its Cable System within the remainder of the Franchise area within a commercially reasonable time (considering build out costs, geographical and geological conditions, and business conditions). In addition to the obligations and considerations set forth above, Franchisee shall offer Cable Service to all new or previously unserved business and residential units within 150 feet of the Franchisee's distribution cable.

(A) The Franchisee may elect to provide Cable Service to areas not meeting the above distance standards. The Franchisee may impose an additional charge in excess of its regular installation charge for any service installation requiring a drop in or line extension in excess of the above standards. Any such additional charge shall be computed on a time plus materials basis to be calculated on that portion of the installation that exceeds the standards set forth above. Such additional charge shall be paid in advance by the developer, landowner, or customer requesting Cable Service in an area that does not meet the density and distance standards.

4.2 New Developments. Franchisee agrees to use commercially reasonable efforts to inform itself of all newly planned developments within the Town and to work with developers to cooperate in pre-installation of facilities to support Cable Service.

4.3 Programming. The Franchisee shall offer to all Customers a diversity of video programming services.

4.4 No Discrimination. The Franchisee shall not discriminate or permit discrimination between or among any Persons in the availability of Cable Services or other services provided in connection with the Cable System in the Franchise Area. It shall be the right of all Persons to receive all available services provided on the Cable System so long as such Person's financial or other obligations to the Franchisee are satisfied; unless such Person has engaged in inappropriate activity including, but not limited to, theft of Franchisee's cable services, vandalism of its property, or harassment of its representatives. Nothing contained herein shall prohibit the Franchisee from offering bulk discounts, promotional discounts, package discounts, or other such pricing strategies as part of its business practice.

Franchisee shall assure that access to Cable Services is not denied to any group of potential residential cable subscribers because of the residents' income.

4.5 Availability of Maps to the Town: Upon the Town giving two (2) weeks written request, but no more often than annually, the Franchisee shall make available for the Town's viewing, at the Franchisee's nearest business office, or at Town Hall updated maps of the Franchise Area which shall clearly delineate all areas within the Franchise Area where Cable Service is available to Subscribers.

4.6 Changes in Service: Franchisee agrees to give the Town Manager thirty (30) days prior written notice of changes in the mix or nature of the Cable Services.

SECTION 5 – PUBLIC, EDUCATIONAL AND GOVERNMENTAL ACCESS CHANNELS

5.1 Franchisee shall designate capacity on up to five (5) channels for public, educational and/or governmental ("PEG") access video programming provided by the Franchising Authority or its designee, such as a public access organization or educational institution. Within one hundred and twenty (120) days of receipt of a written request from the Town to activate an access channel, Franchisee will make such channel(s) available for the Town's use or its designee's use; and such channel(s) shall be carried in HD digital format. Use of a channel position for PEG access shall be provided on the most basic tier of service offered by the Franchisee and in accordance with the Cable Act and the Code of Virginia, and as further set forth below. "Channel position" means a number designation on the Franchisee's channel lineup regardless of the transmission format (analog or digital). Franchisee does not relinquish its ownership of or ultimate right of control over a channel by designating it for PEG use. In the event any access channel is reassigned, the Franchisee shall provide the Town with at least thirty (30) days' notice before reassigning the channel and shall pay the verified reasonable costs of any advertising and promotional materials required due to the channel reassignment, not to exceed $5,000. A PEG access user- whether an individual, educational or governmental user- acquires no property or other interest by virtue of the use of a channel so designated, and may not rely on the continued use of a particular channel number, no matter how long the same channel may have been designated for such use. Franchisee shall not exercise editorial control over any public, educational, or governmental use of a channel position, except Franchisee may refuse to transmit any public access program or portion of a public access program that contains obscenity, indecency, or nudity. The Franchising Authority shall be responsible for developing, implementing, interpreting and enforcing rules for Educational and Governmental Access Channel use.

5.2 Public Access. A "Public Access Channel" is a channel position designated for noncommercial use by the public on a first-come, first-served, nondiscriminatory basis. A Public Access Channel may not be used to cablecast programs for profit, or for political or commercial fundraising in any fashion.

5.3 Educational Access. An "Educational Access Channel" is a channel position designated for noncommercial use by educational institutions such as public or private schools (but not "home schools"), community colleges, and universities.

5.4 Government Access. A "Governmental Access Channel" is a channel position designated for noncommercial use by the Franchising Authority for the purpose of showing the public local government at work.

5.5 Franchisee shall ensure that all PEG access channel signals carried on its system, regardless of the method used to acquire the PEG channels, comply with all applicable FCC signal quality and technical standards. The technical and signal quality of all PEG access channel signals shall be preserved and shall be of comparable quality as other channels.

Within one hundred and twenty (120) days of receipt of the Town's written request to activate an access channel discussed in Section 5.1**,** Franchisee will provide a connection between a location the Town designates and Franchisee's headend for each new channel to be activated for PEG use, at no charge to the Town if the connection between the new location and the nearest usable signal insertion point in Franchisee's cable system is five hundred (500) feet or less.

5.6 Capital support for PEG access. At the Town's option, Franchisee shall collect a monthly fee from each subscriber to provide additional capital support for PEG access. The maximum fee that shall be imposed is 0.5% of Franchisee's revenues from basic and expanded cable service, and the fee collected shall be remitted to the Town no later than thirty (30) days following the end of each calendar quarter. Franchisee shall not impose a fee to provide capital support for PEG access unless and until the Town directs Franchisee to impose a fee. The Town shall give Franchisee at least ninety (90) days' notice before Franchisee shall begin collecting the fee. The Town shall allocate such amount to PEG capital uses exclusively. If such fee is imposed, it shall not be deemed to be "franchise fees" within the meaning of 47 U.S.C. Section 542 and such payments shall not be deemed to be (i) "payments-in-kind" or any involuntary payments chargeable against the compensation the Franchisee is to pay the Town pursuant to Section 6 hereof, or (ii) part of the compensation the Franchisee is to pay to the Town pursuant to Section 6 hereof.

SECTION 6 – COMMUNICATIONS TAX AND FRANCHISE FEES

6.1 Communications Tax: Franchisee shall comply with the provisions of Sections 58.1-645 et seq. of the Code of Virginia, pertaining to the Virginia Communications Sales and Use Tax, as amended (the "Communications Tax"), and Sections 6.2 through 6.6 of the Agreement shall not have any effect, for so long as the Communications Tax or a successor state or local tax that would constitute a franchise fee for purposes of 47 U.S.C. § 542 is imposed on the sale of cable services by the Franchisee to the Town's subscribers.

6.2 Payment of Franchise Fee to Town: In the event that the Communications Tax is repealed and no successor state or local tax is enacted that would constitute a franchise fee for purposes of 47 U.S.C. § 542 Franchisee shall pay to the Town a Franchise fee of five percent (5%) of annual Gross Revenue, beginning 30 days from the effective date of the repeal of such tax (the "Repeal Date"). Beginning on the Repeal Date, the terms of Section 6.2 through 6.6 of this Agreement shall take effect. In accordance with the Cable Act, the twelve (12) month period applicable under the Franchise for the computation of the Franchise fee shall be a calendar year. Such payments shall be made no later than thirty (30) days following the end of each calendar quarter. Should Franchisee submit an incorrect amount, Franchisee shall be allowed to add or subtract that amount in a subsequent quarter, but no later than ninety (90) days following the close of the calendar year for which such amounts were applicable; such correction shall be documented in the supporting information required under Section 6.3 below.

6.3 Supporting Information: Each Franchise fee payment shall be accompanied by a brief report prepared by a representative of Franchisee showing the basis for the computation and a breakdown by major revenue categories (such as Basic Service, premium service, etc.). The Town shall have the right to reasonably request further supporting information for each Franchise fee payment, subject to the proprietary information provisions of Section 8.7.

6.4 Limitation on Franchise Fee Actions: The period of limitation for recovery of any Franchise fee payable hereunder shall be three (3) years from the date on which payment by Franchisee is due.

6.5 Bundled Services: If cable services subject to a franchise fee, or any other fee determined by a percentage of the cable operator's gross revenues in a locality, are provided to subscribers in conjunction with other services: the fee shall be applied only to the value of these cable services, as reflected on the books and records of the cable operator in accordance with rules, regulations, standards, or orders of the Federal Communications Commission, the State Corporation Commission, or generally accepted accounting principles. Any discounts resulting from purchasing the services as a bundle shall be reasonably allocated between the respective services that constitute the bundled transaction.

6.6 Books and Records Regarding Franchise Fees. Subject to the confidentiality requirements of Section 8.7 of this Agreement, the Town, or such Person or Persons the Town designates, shall have the right to inspect and copy records and the right to audit and to re-compute any amounts determined to be payable under this Franchise, regardless of who holds the records. If an audit discloses an overpayment or underpayment of franchise fees, the Town shall notify the Franchisee in writing of such overpayment or underpayment within ninety (90) days of the date the audit was completed. The Franchisee shall have thirty (30) days from receipt of such notice to provide the Town with a written response agreeing to or refuting the results of the audit, including any substantiating documentation. Based on these notices, the parties shall agree upon a final settled amount. The Town, in its sole discretion, shall determine the completion date for any audit conducted hereunder. Audit completion is not to be unreasonably delayed by either party. Subject to the confidentiality requirements of Section 8.7 of this Franchise, the Franchisee shall be responsible for providing to the Town all records necessary to confirm the accurate payment of franchise fees. The Franchisee shall maintain such records for the current year plus three (3) years. The Town shall bear its audit expenses unless the audit determines the payment to the Town should be increased by more than five percent (5%) in the audited period, in which case the Franchisee shall pay reasonable and verifiable costs of the audit, but in no event more than $20,000, to the Town within thirty (30) days following the Town's written notice to the Franchisee of the underpayment, which notice shall include a copy of the audit report. If re-computation results in additional revenue to be paid by Franchisee to the Town, such amount shall be subject to an interest charge in accordance with the prime rate of interest charged by the Town's primary depository bank.

SECTION 7 – CUSTOMER SERVICE STANDARDS; CUSTOMER BILLS; AND PRIVACY PROTECTION

7.1 Customer Service Standards. The Franchisee shall comply in all respects with the customer service requirements established by the FCC (47 CFR §76.309) unless modified herein. Franchisee shall be subject to the following customer service standards consistent with federal law:

(A) Franchisee will maintain a local or toll-free telephone access line which will be available to its subscribers 24 hours a day, seven days a week. Additionally, Franchisee and the Town agree that it is appropriate that Franchisee will also maintain at least one bill payment location and equipment return location within the Town. In addition, Franchisee will provide for an employee to pick up or drop off equipment free of charge in either of the following ways: (i) by having a Franchise representative to go to the subscriber's residence, or (ii) by using a prepaid mailer. Franchisee also has the option to provide alternative payment drop off locations within the Franchise Area.

(B) Under normal operating conditions, telephone answer time by a customer representative or automated answering device, including wait time, shall not exceed thirty (30) seconds when the connection is made. If the call needs to be transferred, transfer time shall not exceed thirty (30) seconds. These standards shall be met no less than ninety-five (95) percent of the time under normal operating conditions as measured on a quarterly basis.

(C) Under normal operating conditions, the customer will receive a busy signal less than three percent (3%) of the time.

(D) Franchisee shall accurately collect and maintain data to measure its compliance with the telephone answering standards in paragraphs 7.1(B) and 7.1(C).

(E) Local bill payment location will be open to customers, including assisting walk-in customers, at least during the hours of 8:30 a.m. – 5:30 p.m. Monday through Friday.

(F) Installations, Outages, and Service Calls. Under normal operating conditions, each of the following standards will be met no less than ninety five percent (95%) of the time as measured on a quarterly basis.

i. Standard installations will be performed within seven business days after an order has been placed, unless the customer requests a longer period. "Standard" installations are those that are within 150 feet of the existing distribution system.

ii Excluding conditions beyond the control of the Franchisee, the Franchisee will begin repairs on Service Outages promptly and in no event later than eight (8) hours after the outage becomes known.

iii The Franchisee must begin working to correct Service Interruptions within 8 hours, including weekends, of receiving a subscriber call for a Service Interruption. "Service Interruption" shall mean the loss of any service provided to customer by Franchisee.

(G) Franchisee shall accurately collect and maintain data to measure its compliance with subparagraph 7.1.(F).

(H) The "appointment window" alternatives for installations, service calls and other installation activities will either be at a specific time or, at maximum, a two-hour time block during normal business hours. Franchisee may schedule service calls and other installation activities outside of normal business hours for the express convenience of the customer.

(I) Franchisee may not cancel an appointment with a customer after the close of business on the business day prior to the scheduled appointment. If Franchisee representative is running late for an appointment with a customer and will not be able to keep the appointment as scheduled, the customer will be contacted. The appointment will be rescheduled as necessary, at a time which is convenient for the customer.

(J) Franchisee shall provide written information on each of the following areas at the time of installation of service, at least annually to all subscribers, and at any time upon request:

i. Products and services offered;

ii. Prices and options for programming services and conditions of subscription to programming and other services;

iii. Installation and service maintenance policies;

iv. Instructions on how to use the cable service;

v. Channel positions of programming carried on the system;

vi. Refund policy; and

vii. Billing and complaint procedures, including the Franchisee's office hours, telephone number, and address of the local cable office.

7.2 Customer Bills. Customer bills shall be designed in such a way as to present the information contained therein clearly and comprehensibly to Customers, and in a way that (i) is not misleading and (ii) does not omit material information. Notwithstanding anything to the contrary in Section 7.1 above, the Franchisee may, in its sole discretion, consolidate costs on Customer bills as may otherwise be permitted by the Cable Act.

7.3 Franchisee shall notify subscribers of any changes in rates, programming services or channel positions as soon as possible in writing. Notice must be given to subscribers a minimum of thirty (30) days in advance of such changes if the change is within the control of the Franchisee. In addition, Franchisee shall notify subscribers thirty (30) days in advance of any significant changes in the other information that paragraph 7.1.(J) requires.

7.4 In case of a billing dispute, Franchisee must respond to a subscriber's written complaint within fifteen (15) days.

7.5 Refund checks will be issued promptly by the customer's next billing cycle following resolution of the request, or thirty (30) days, whichever is earlier.

7.6 Credits for service will be issued promptly by the customer's next billing cycle following the determination that a credit is warranted.)

7.7 Franchisee shall make available parental control devices to all subscribers who wish to be able to block out any objectionable channel(s) of programming from the cable service entering the subscriber's home.

7.8 Privacy Protection. The Franchisee shall comply with all applicable federal and state privacy laws.

SECTION 8 – OVERSIGHT AND REGULATION BY FRANCHISING AUTHORITY

8.1 Oversight of Franchise. In accordance with applicable law, the Franchising Authority at its sole cost and expense, shall have the right to oversee, regulate and, on reasonable prior written notice and in the presence of Franchisee's employee, periodically inspect the construction, operation and maintenance of the Cable System in the Franchise Area, and all parts thereof, as necessary to monitor Franchisee's compliance with the provisions of this Franchise Agreement.

(A) The Franchisee shall perform all tests necessary to demonstrate compliance with the requirements of the Franchise and other performance standards established by law or regulation, and to ensure that the Cable System components are operating as expected.

(B) Upon pertinent and valid evidence demonstrating a probability of non-compliance, the Franchisee shall conduct additional FCC tests upon the Town's requests to ensure that its Cable System is functioning in compliance with applicable laws and regulations and make the results of such test available to the Town to verify compliance. If any such test indicates that any part or component of the System fails to meet applicable requirements, the Franchisee shall take corrective action, retest locations, and advise the Town of the action taken and results achieved.

8.2 <u>Technical Standards.</u> The Franchisee shall comply with all applicable technical standards of the FCC as published in Subpart K of 47 C.F.R. § 76. To the extent those standards are altered, modified, or amended during the term of this Franchise, the Franchisee shall comply with such altered, modified or amended standards within a reasonable period after such standards become effective. The Franchising Authority shall have, upon written request, the right to obtain a copy of tests and records required to be performed pursuant to the FCC's rules.

8.3 <u>Operational Records.</u> The Franchisee shall maintain the records required to compute all operational and customer service compliance measures outlined in this Franchise to demonstrate that the measures are being met for at least four consecutive quarters. Failure to maintain the records as required herein shall subject the Franchisee to the liquidated damages established in this Franchise Agreement

8.4 <u>Records Required</u>: Franchisee shall at all times maintain:

(A) Records of all written complaints for a period of one year after receipt by Franchisee or until the applicable compliance measures described in this Franchise are met for four consecutive quarters. The term "complaint" as used herein refers to complaints about any aspect of the Cable System or Franchisee's cable operations, including, without limitation, complaints about employee courtesy. Complaints recorded will not be limited to complaints requiring an employee service call.

(B) Records of Outages and Service Interruptions for a period of one year after occurrence, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating date, duration, area, and the number of Subscribers affected, type of outage, and cause.

(C) Records of service calls for repair and maintenance for a period of one year after resolution by Franchisee, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating the date and time service was required, the date of acknowledgment and date and time service was scheduled (if it was scheduled), and the date and time service was provided, and (if different) the date and time the problem was resolved.

(D) Records of installation/reconnection and requests for service extension for a period of one year after the request was fulfilled by Franchisee, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating the date of request, date of acknowledgment, and the date and time service was extended.

8.5 Federal Communications (FCC) Testing: Within fourteen (14) days of the Town's written request, a written report of test results of FCC performance testing will be provided to the Town Manager or his designee.

8.6 File for Public Inspection. Throughout the term of this Franchise Agreement, the Franchisee shall maintain, at a nearby business office or on-line, in a file available for public inspection during normal business hours, those documents required pursuant to the FCC's rules and regulations. Upon no less than thirty (30) business days' written notice to the Franchisee, the Town shall have the right to inspect Franchisee's books and records, including electronic books and records, pertaining to Franchisee's provision of Cable Service in the franchise area at any time during normal business hours and on a nondisruptive basis, as are reasonably necessary to ensure compliance with the terms of this franchise. Such notice shall specifically reference the Franchisee's section or subsection which is under review, so that Franchisee may organize the necessary books and records for appropriate access by the Town. Franchisee shall not be required to maintain any books and records for franchise compliance purposes longer than the current year plus three (3) years.

8.7 Proprietary Information:

(A) Notwithstanding anything to the contrary set forth herein, Franchisee shall not be required to submit information to the Town that it reasonably deems to be proprietary or confidential in nature, nor submit to the Town any of its or an affiliate's books and records not relating to the provision of Cable Service in the franchise area, except as provided herein. Such confidential information shall be subject to terms of a nondisclosure agreement that is acceptable to the parties and to the following, to be applied as is most practicable for the purposes of this Agreement:

i. To the extent an exemption under the Virginia Freedom of Information Act permits the Town to maintain the confidentiality of submitted information and the Franchisee submits such information to the Town, the Town shall maintain the confidentiality of such information and not disclose it to any public request;

ii. To the extent the information provided to an accountant, attorney, consultant, or any other agent of the Town ("Town Consultant") would not be subject to public disclosure under the Virginia Freedom of Information Act, and the Town instructs the Franchisee to provide such information to the Town Consultant as may be required by this Agreement, the Franchisee shall provide such information to the Town Consultant and the Town shall not take possession of the information nor engage in any act that would jeopardize the information's confidentiality; or,

iii. Franchisee must provide the following documentation to the Town:

(a) specific identification of the information;

(b) statement attesting to the reason(s) the Franchisee believes the information is confidential; and

(c) statement that the documents are available at the Franchisee's designated offices for the Town's inspection.

(B) At all times, the Town shall take reasonable steps to protect the proprietary and confidential nature of any books, records, maps, plans, or other Town requested documents that are provided pursuant to the Agreement to the extent they are designated as such by the Franchisee. Nothing in this Section shall be read to require the Franchisee to violate federal or state law protecting Subscriber privacy.

8.8 Reports. Within ninety (90) days after receipt of the Town's written request, Franchisee shall submit a written year-end report to the Town. Such report may address, if the Town so desires: (I) major cable-related projects undertaken in the past year and planned for the current year, including construction and upgrade schedules for any new, relocated, or upgraded aerial or underground facilities. Upon written request of the Town, no later than thirty (30) days after the end of each quarter, the Franchisee shall submit a written report to the Town regarding complaints and service requests the Franchisee received from customers in the Franchise Area concerning Franchisee's customer service performance.

SECTION 9 – TRANSFER OR CHANGE OF CONTROL OF CABLE SYSTEM OR FRANCHISE

9.1 No transfer of this Franchise shall occur without the prior written consent of the Franchising Authority, which consent shall not be unreasonably withheld, delayed or conditioned. No transfer shall be made to a Person, group of Persons or Affiliate that is not legally, technically and financially qualified to operate the Cable System and satisfy the obligations hereunder.

SECTION 10 – INSURANCE AND INDEMNITY

10.1 The Franchisee shall indemnify hold harmless and defend the Town, its officers, employees, and agents (hereinafter referred to as "indemnitees"), from and against:

(A) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which may be imposed upon, incurred by or asserted against the indemnitees by reason of any act or omission of the Franchisee, its personnel, employees, agents, contractors or subcontractors, resulting in personal injury, bodily injury, sickness, disease or death to any person or damage to, loss of or destruction of tangible or intangible property, libel, slander, invasion of privacy and unauthorized use of any trademark, trade name, copyright, patent, service mark or

any other right of any person, firm or corporation, which may arise out of or be in any way connected with the construction, installation, operation, maintenance, use or condition of the Franchisee's cable system caused by Franchisee, its contractors, subcontractors or agents or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation.

(B) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which are imposed upon, incurred by or asserted against the indemnitees by reason of any claim or lien arising out of work, labor, materials or supplies provided or supplied to the Franchisee, its contractors or subcontractors, for the installation, construction, operation or maintenance of the Franchisee's cable system in the Town.

10.2 Damages shall include, but not be limited to, penalties arising out of copyright infringements and damages arising out of any failure by the Franchisee to secure consents from the owners, authorized distributors or licensees, or programs to be delivered by the Franchisee's cable system.

10.3 The Franchisee undertakes and assumes for its officers, agents, contractors, subcontractors, and employees all risk of dangerous conditions, if any, on or about any Town owned or controlled property, including streets and public rights-of-ways, except for any claim asserted or liability imposed that arises or is related to gross negligence or intentional misconduct by the indemnities; and the Franchisee hereby agrees to indemnify and hold harmless the indemnitees against and from any claim asserted or liability imposed upon the indemnitees for personal injury or property damage to any person arising out of the installation, operation, maintenance or condition of the Franchisee's cable system or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation, except for any claim asserted or liability imposed upon the indemnitees that arises or is related to gross negligence or intentional misconduct by the indemnitees.

10.4 In the event any action or proceeding shall be brought against the indemnitees by reason of any matter for which the indemnitees are indemnified hereunder, the Franchisee shall, upon notice from any of the indemnitees, and at the Franchisee's sole cost and expense, resist and defend the same; provided further, however, that the Franchisee shall not admit liability in any such matter on behalf of the indemnitees without the written consent of the Town Attorney or his designee. If the Town determines that it is necessary for it to employ separate counsel, the costs for such separate counsel shall be the responsibility of the Town.

10.5 The Town shall give the Franchisee notice within 10 business days of the Town receiving notice of a written claim, or the commencement of any action, suit or other proceeding covered by the provisions of this section. The Town will cooperate with the Franchisee while the Franchisee defends any claim or action under this section.

10.6 Nothing in this Franchise Agreement is intended to, or shall be construed or applied to, express or imply the Town’s waiver of statutory provisions, privileges or immunities of any kind or nature as set forth in the Code of Virginia, including the Town’s limits of liability as exists presently or as the legislature may increase from time to time. Nothing in a franchise or this ordinance shall constitute a waiver of the Town's statutory provisions, privileges or immunities, including the Town's sovereign immunity, of any kind or nature.

10.7 The Franchisee shall maintain, and by its acceptance of a franchise hereunder specifically agrees that it will maintain throughout the term of the franchise, general commercial liability insurance insuring the Franchisee. All liability insurance shall include an endorsement in a specific form which names as joint and several insured's the Town and the Town's officials, employees and agents, under such commercial liability policy, with respect to all claims arising out of the operation and maintenance of the Franchisee's cable system in the Town. Such policy shall be in the minimum amounts of Ten Million Dollars ($10,000,000) combined single limit per occurrence for bodily injury, property damage, or personal & advertising injury, which limit may be met through any combination of primary and excess liability policies.

(A) The Franchisee shall provide Workers Compensation Insurance as required by the Commonwealth of Virginia;

(B) Franchisee shall carry and maintain in its own name automobile liability insurance with a limit of $1,000,000 for each person and $1,000,000 for each accident for property damage with respect to owned and non-owned automobiles for the operation of which the Franchisee is responsible; and

10.8 The inclusion of more than one (1) insured shall not operate to increase the limit of the Franchisee's liability, and the insurer waives any right on contribution with insurance which the Town may have.

10.9 All policies of insurance this section requires shall be placed with companies which are qualified to write insurance in the Commonwealth of Virginia and which maintain throughout the policy term a General Rating of "A- " and a Financial Size Category of "VII " as determined by Best Insurance Rating Services.

10.10 Upon the Town’s written request, the Franchisee shall provide the Town with Certificates of Insurance for the coverages this section mandates. The Franchisee shall immediately advise the Town Attorney of any litigation that may develop that would affect the Town.

10.11 Should the Town find an insurance document to be non-compliant, then it shall notify the Franchisee; and the Franchisee shall promptly cure the defect in accordance with the requirements of this section 10.

10.12 Neither this section’s provisions, nor any damages recovered by the Town thereunder, shall be construed to nor limit the Franchisee’s liability under any franchise issued hereunder or for damages, except that nothing herein shall be interpreted to permit the Town to exercise rights and remedies in a manner that permits duplicative recovery from or payments by the Franchisee.

10.13 The commercial general liability insurance policy provided for herein shall name the Town, its officers, employees and agents as additional insureds, and shall be primary to any insurance or self-insurance the Town carries, but only with respect to the losses for which the Franchisee is responsible hereunder. The insurance policies this section requires shall be carried and maintained by the Franchisee throughout the term of the franchise and such other period of time during which the Franchisee operates or is engaged in the removal of its cable system. Each policy shall provide for notice of cancellation in accordance with policy provisions

10.14 Nothing in this section shall require Franchisee to indemnify, hold harmless or defend the Town, its officials, employees or agents, from any claims or lawsuits arising out of the Town's award of a franchise to another person.

SECTION 11 – SYSTEM DESCRIPTION AND SERVICE

11.1 System Characteristics: Franchisee's Cable System shall meet or exceed the following requirements:

(A) The System shall be capable of providing Video Programming reception available to its customers in the Franchise Area in accordance with the Cable Act.

(B) The System shall be designed to be an active two-way plant for subscriber interaction, if any, required for selection or use of Cable Service.

(C) The Cable Service shall be operated in a manner such that it is in compliance with FCC standards and requirements with respect to interference. The Cable System shall be operated in such a manner as to minimize interference with a Subscriber's reception of off-the-air signals. The Franchisee shall insure that signals carried by the Cable System, or originating outside the Cable System wires, cable, fibers, electronics and facilities, do not ingress or egress into or out of the Cable System in excess of FCC standards. In particular, the Franchise shall not operate the Cable System in such a manner as to pose unwarranted interference with emergency radio services, aeronautical navigational frequencies or an airborne navigational reception in normal flight patterns, or any other type of wireless communications, pursuant to FCC regulations.

11.2 Interconnection: The Franchise shall design its Cable System so that it may be interconnected with other cable systems and open video systems in the Franchise Area.

11.3 Standby Power: The Franchisee shall provide standby power generating capacity at the headend and at all hubs. The Franchisee shall maintain standby power capable of at least twenty-four (24) hours duration at the headend and all hubs, with automatic response systems to alert the local management center when commercial power is interrupted.

11.4 Technical Standards: The Cable System shall meet or exceed the applicable technical standards set forth in 47 C.F.R. § 76.601.

11.5 Leased Access Channels: The Franchisee shall provide Leased Access Channels that federal law requires.

11.6 Cable Service to School and Government Facilities.

Franchisee shall provide, without charge, at least one cable service outlet activated for basic cable service to each facility owned by Town government, and by the Warren County Public Schools located within the Town, as well as other such municipal buildings where service is requested in the future that are located within the Franchise Area within 150 feet of the Franchisee's distribution cable. The excess cost for extending service to buildings not within 150 feet of the Franchisee's distribution cable shall be paid by the entity requesting service.

11.7 Emergency Powers. In the event of an emergency, or where Franchisee's Cable System creates or is contributing to an imminent danger to health, safety, or property, or an unauthorized use of property, the Franchisee shall remove or relocate any or all parts of Franchisee's C a b l e System at the Town's request. If the Franchisee fails to comply with the Town's request, the Town may remove or relocate any or all parts of the Franchisee's cable system upon reasonable notice to the Franchisee. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any emergency removal or relocation. Franchisee shall be entitled to compensation for expenses incurred for removal or relocation in the event of an emergency to the extent other users of the Public Way are compensated. It is understood that the Franchising Authority does not guarantee that funds will be available to compensate users of the Public Ways for emergency removal or relocation.

11.8 Emergency Alert System. Franchisee shall install and thereafter maintain an Emergency Alert System (EAS) that shall at all times be operated in accordance with FCC rules and the Virginia EAS Plan.

SECTION 12 – ENFORCEMENT OF FRANCHISE

12.1 If, pursuant to any required public hearing, the Town determines that the Franchisee has failed to materially comply with this franchise the Town may impose any penalty hereunder, including, without limitation, revocation of the franchise.

12.2 Within thirty (30) days after the award of a franchise, the Franchisee shall deposit with the Town a performance bond from a financial institution running to the Town in the amount of one hundred thousand dollars ($100,000.00.). The bond shall be used to insure the Franchisee's faithful performance of all its franchise provisions or defaults under a franchise or the payment by Franchisee of any penalties, liquidated damages, claims, liens, and taxes due the Town which arise by reason of the construction, operation, or maintenance of Franchisee's Cable System in the Town, including restoration of the public rights-of-way and the cost of removal or abandonment of any property of a cable operator.

12.3 Any bond obtained by Franchisee must be placed with a company which is qualified to write bonds in the Commonwealth of Virginia, and shall contain the following endorsement (or the substantive equivalent of such language as agreed upon by the Town):

"It is hereby understood and agreed that this bond may not be cancelled without the Town's consent until sixty (60) days after the Town's receipt by registered mail, return receipt requested, of a written notice of intent to cancel or not renew."

12.4 Any bond shall be recoverable by the Town for all damages and costs, whether direct or indirect, resulting from the Franchisee's failure to well and faithfully observe and perform any provision of this Agreement.

12.5 The bond shall be maintained at the amount established herein for the entire term of the franchise, even if amounts have to be withdrawn pursuant to this ordinance. The Franchisee shall promptly replace any amounts withdrawn from the bond.

12.6 Non-compliance procedures.

(A) Should the Franchising Authority believe that the Franchisee has not complied with any of the provisions of this Franchise Agreement, it shall: (i) informally discuss the matter with the Franchisee and (ii) notify the Franchisee in writing of the exact nature of the alleged noncompliance if the discussions described in the foregoing clause (i) do not lead to resolution of the alleged noncompliance. The Franchisee shall have thirty (30) days from receipt of this written notice to: (a) respond to the Franchising Authority, if the Franchisee contests, in whole or in part, the assertion of noncompliance; (b) cure such default; or (c) in the event that, by the nature of default, such default cannot be cured within the 30-day period, initiate reasonable steps to remedy such default and notify the Franchising Authority of the steps being taken and the projected date that they will be completed. The Franchising Authority shall schedule a public hearing in the event that the Franchisee fails to respond to the written notice pursuant to these procedures or in the event that the alleged default is not remedied within thirty (30) days of the date projected above if the Franchising Authority intends to continue its investigation into the default. The Franchising Authority shall provide the Franchisee at least thirty (30) business days prior written notice of such hearing, which will specify the time, place, and purpose. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

(B) The Town shall, within a reasonable time after the closure of the public hearing, issue findings and conclusions in writing, setting forth the basis for the findings; the proposed cure plan; and the time line for curing the violation if the violation can be cured; and the penalties, damages and applicable interest owed, if any.

(C) Subject to applicable federal and Virginia law and the provisions of this Agreement, if the Town determines pursuant to a public hearing that Franchisee is in violation of any provision of this Agreement the Town may apply one or a combination of the following remedies: (i) seek specific performance or other equitable relief; (ii) commence an action at law; (iii) apply penalties in accordance with Section 12.8, if applicable; or (iv) apply liquidated damages in accordance with Section 12.8, if applicable.

(D) The Town may designate its cable administrator or other person to conduct the hearings and issue findings and conclusions under this subsection in which case the Franchisee may appeal the determination of the cable administrator or other Town designee to the Town Council. Such an appeal shall be heard at a lawfully noticed public hearing. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

12.7 <u>Penalties and Liquidated Damages.</u> Because it may be difficult to calculate the harm to the Franchising Authority in the event of Franchisee's breach of this Franchise Agreement, the parties agree to liquidated damages as a reasonable estimation of the actual damages. To the extent that the Franchising Authority elects to assess liquidated damages as provided in this Agreement and such liquidated damages have been paid, such damages shall be the Franchising Authority's sole and exclusive remedy. Nothing in this Section shall preclude the Franchising Authority from exercising any other right or remedy with respect to a breach that continues past the time the Franchising Authority stops assessing liquidated damages for such breach. Liquidated damages shall not be assessed until the Franchising Authority has completed the procedures set forth in Section 12.7 hereof, including holding a public hearing, and notifying the Franchisee by certified or registered mail of the proposed liquidated damages, specifying the violation. The Franchisee shall have thirty (30) days from the date of receipt of the written notice to submit payment. If the Franchisee does not make payment within that period, the Franchising Authority may obtain the amount assessed from the Franchisee's performance bond.

(A) The first day for which liquidated damages may be assessed, if there has been no cure, shall be the day after the end of the applicable cure period, including any extension of the cure period the Franchising Authority has granted.

(B) Franchisee may appeal (by pursuing judicial relief) any assessment of liquidated damages within thirty (30) days of receiving written notice of the assessment. Franchisee's obligation to pay the liquidated damages assessed shall be stayed pending resolution of the appeal.

(C) The Franchising Authority may assess liquidated damages for the following violations of this Franchise Agreement, in the following amounts:

i. Failure to comply with PEG access requirements: $200 per violation for each day the violation continues.

ii. Failure to render payments due to the Franchising Authority: Three-tenths of one percent (0.3%) of the unpaid amount for each day the violation continues, in addition to any monetary payment due and interest, computed at the Town's prime rate of interest charged by the Town's primary depository bank.

iii. Failure to supply information, reports, or filings lawfully required: $100 per violation for each day the violation continues.

iv. Failure to comply with customer service standards: $100 per each violation for each day the violation continues, except where compliance is measured quarterly, in which case damages shall be as specified in Section 12.8(C)v below.

v. Failure to comply with customer service standards with which compliance is measured on a quarterly basis: $300 for the first violation in which such standards were not met; $750 for any violation within 18 months after the first; and $1,500 for any violation within 18 months after the second or any subsequent violation.

vi. The Franchisee shall not be charged with multiple violations for a single act or event affecting a single subscriber or for a single act or event affecting multiple subscribers on the same day.

vii. The parties agree that such liquidated damages are reasonable.

viii. The Town may reduce or waive any of the above liquidated damages if it determines, in its sole discretion that such waiver is in the public interest.

ix. If a court of competent and binding jurisdiction determines that liquidated damages cannot be imposed by this Agreement, the foregoing liquidated damages shall be construed to be penalties to the full extent allowed and contemplated by paragraph 6 of Section 15.2-2108.22 of the Code of Virginia and shall apply via the liquidated damages procedures and limitations under this section.

(D) The amount of all liquidated damages assessed per annum shall not exceed twenty housand dollars ($20,000) in the aggregate.

(E) If after 120 days the Franchisee has not cured or commenced to cure the alleged breach to the satisfaction of the Franchising Authority, the Franchising Authority may pursue all other remedies aside from liquidated damages.

12.8 Technical Violation. The Franchising Authority agrees that it is not its intention to subject the Franchisee to penalties, fines, forfeitures or revocation of the Franchise for so-called "technical" breach(es) or violation(s) of the Franchise, which shall include, but not be limited to, the following:

(A) In instances or for matters in which the Franchisee’s violation or breach of the Franchise was a good faith error that resulted in no or minimal negative impact on the Customers within the Franchise Area; or

(B) Where there existed circumstances reasonably beyond the Franchisee’s control and which precipitated the Franchisee’s violation of the Franchise, or which prevented the Franchisee from complying with a term or condition of the Franchise.

SECTION 13 – INSPCTION OF FACILITIES

13.1 Franchisee shall comply with all applicable federal, state, and local construction and engineering codes and regulations, currently in force or hereafter applicable, to the construction, operation or maintenance of its Cable System within the Town. The Town shall have the right to review Franchisee's construction plans and specifications to assure compliance with the required standards. After construction has been completed, the Town shall have the right to inspect all construction or installation work performed pursuant to the franchise and all applicable federal, state and local building and engineering codes. However, the Town shall not be required to review or approve construction plans and specifications or to make any inspections. The Franchisee shall be solely responsible for taking all steps necessary to assure compliance with applicable standards and to ensure that its Cable System is installed in a safe manner and pursuant to the terms of the franchise and applicable law.

SECTION 14- MISCELLANEOUS PROVISIONS

14.1 Force Majeure. The Franchisee shall not be held in default under, or in noncompliance with, the provisions of the Franchise, nor suffer any enforcement or penalty relating to noncompliance or default (including termination, cancellation or revocation of the Franchise), where such noncompliance or alleged defaults occurred or were caused by events which constitute a Force Majeure, as defined in this Agreement.

14.2 Notice. All notices shall be in writing and shall be served upon the other party by hand delivery; first class mail; registered or certified mail, return receipt requested; or by reputable overnight courier service and addressed as follows:

To the Franchising Authority:

Town Manager
Town of Front Royal
P.O. Box 1560
102 E. Main Street

Front Royal, Virginia 22630

And to:

Town Attorney
Town of Front Royal
P.O. Box 1560
102 E. Main Street
Front Royal, Virginia 23834

To the Franchisee:

Chris Kyle
500 Shentel Way
Edinburg, VA 22824

14.3 Entire Agreement. This Franchise Agreement embodies the entire understanding and agreement of the Franchising Authority and the Franchisee with respect to the subject matter hereof and supersedes all prior understandings, agreements and communications, whether written or oral. All ordinances or parts of ordinances that are in conflict with or otherwise impose obligations different from the provisions of this Franchise Agreement are superseded by the Franchise Agreement.

14.4 Severability. If any section, subsection, sentence, clause, phrase, or other portion of this Franchise Agreement is, for any reason, declared invalid in whole or in part by any court, agency, commission, legislative body, or other authority of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent portion. Such declaration shall not affect the validity of the remaining portion, which shall continue in full force and effect.

14.5 Governing Law. This Franchise Agreement shall be deemed to be executed in the Commonwealth of Virginia and shall be governed in all respects, including validity, interpretation and effect, and construed in accordance with, the laws of the Commonwealth of Virginia.

14.6 Modification. No provision of this Franchise Agreement shall be amended or otherwise modified, in whole or in part, except by an instrument in writing duly executed by the Franchising Authority and the Franchisee, which amendment shall be authorized on behalf of the Franchising Authority through the adoption of an appropriate resolution or order by the Franchising Authority, as required by applicable law.

14.7 No Third-Party Beneficiaries. Nothing in this Franchise Agreement shall confer third-party beneficiary status on any member of the public to enforce the terms of this Franchise Agreement.

14.8 No Waiver of Rights. Nothing in this Franchise Agreement shall be construed as a waiver of any rights, substantive or procedural, Franchisee may have under federal or state law unless such waiver is expressly stated herein.

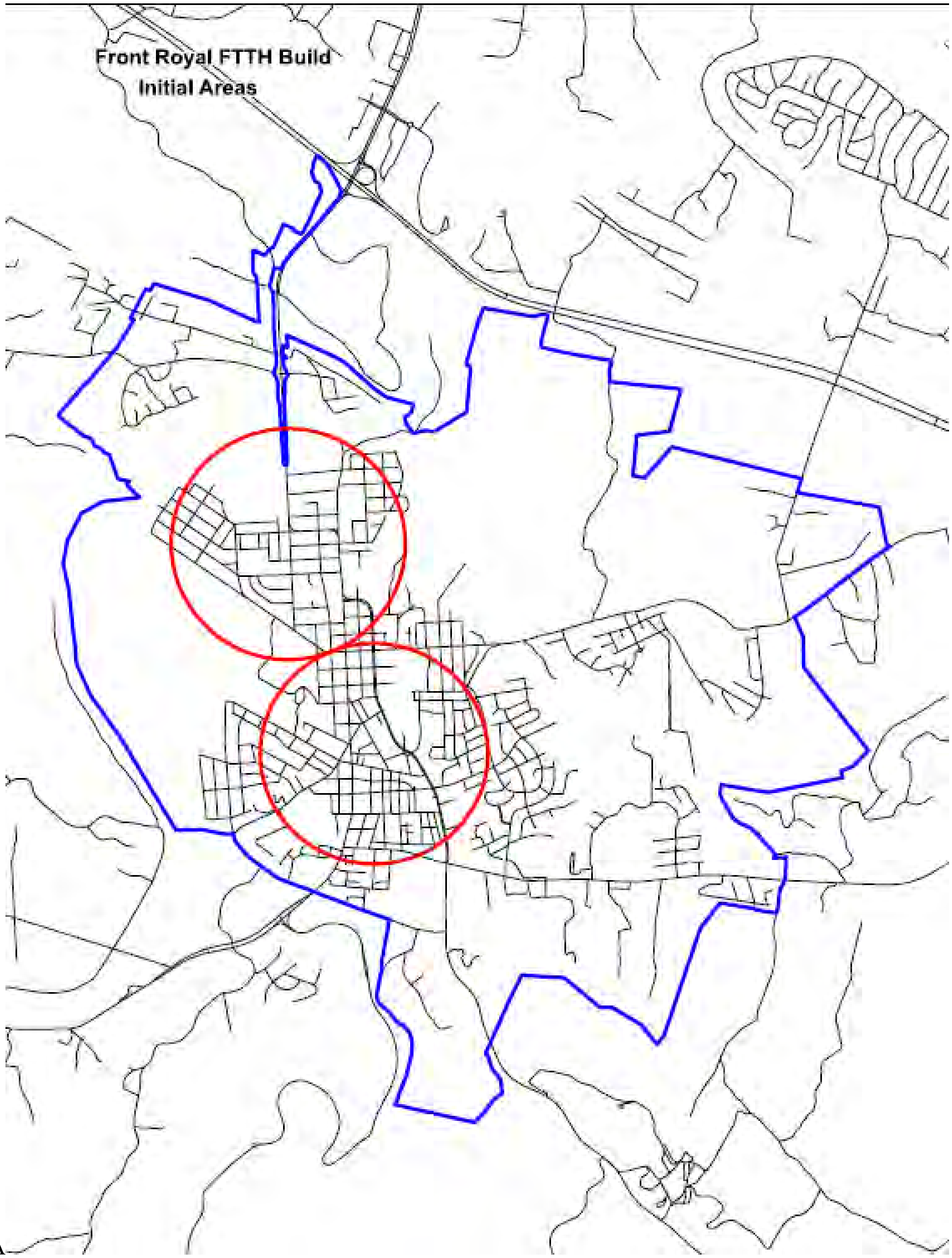

Exhibit A

This ordinance shall become effective upon passage.

APPROVED:

____
Matthew A. Tederick, Interim Mayor

ATTEST:

____
Jennifer E. Berry, MMC, Clerk of Council

THIS ORDINANCE was approved at the Regular Meeting of the Town of Front Royal, Virginia on its second reading, conducted ___________________2019, upon the following recorded vote:

Eugene R. Tewalt	Yes/No	Jacob L. Meza	Yes/No
William A. Sealock	Yes/No	Chris W. Holloway	Yes/No
Letasha Thompson	Yes/No	Gary Gillispie	Yes/No

A public hearing on the above was held on __________________________________, 2019, having been advertised in the Northern Virginia Daily on September 28 and October 5, 2019. The Ordinance was enacted at the Regular Meeting of the Town Council held ________________________2019, to become effective immediately.

Approved as to form and legality:

____
Douglas W. Napier, Town Attorney

Date: ____/____/_____

CABLE FRANCHISE AGREEMENT

BETWEEN

THE TOWN OF FRONT ROYAL, VIRGINIA

AND

SHENANDOAH CABLE TELEVISION, LLC

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CABLE FRANCHISE AGREEMENT

This nonexclusive Cable Franchise Agreement (hereinafter, the "Agreement" or "Franchise Agreement") is made between the Town of Front Royal, VA, a political subdivision of the Commonwealth of Virginia (hereinafter, "Town") and Shenandoah Cable Television, LLC (hereinafter, "Franchisee").

The Town, having determined that the financial, legal and technical ability of the Franchisee is reasonably sufficient to provide the services, facilities and equipment necessary to meet the future cable-related needs of the community, desires to enter into this negotiated Franchise Agreement with the Franchisee for the construction, operation and maintenance of a Cable System on the terms and conditions set forth herein. In furtherance thereof, at its Regular Meeting of ________________, the Town, after proper notice and public hearing, enacted an ordinance authorizing this Franchise Agreement.

SECTION 1 -Definition of Terms

For the purpose of this Franchise Agreement, capitalized terms, phrases, words, and abbreviations shall have the following meanings:

"ACT" means the Communications Act of 1934 as amended.

"AFFILIATE", in relation to any Person, means another Person who owns or controls, is owned or controlled by, or is under common ownership or control with, such Person.

"BASIC SERVICE TIER" means the service tier that includes (i) the retransmission of local television broadcast channels and (ii) public, educational, and governmental channels required to be carried in the basic tier.

“CABLE ACT” shall mean the Cable Communications Policy Act of 1934, as amended from time to time, 47 U.S.C. §§ 521 *et seq*,

"CABLE OPERATOR" means any Person or group of Persons that (A) provides Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such Cable System or (B) otherwise controls or is responsible for, through any arrangement, the management and operation of a Cable System. Cable Operator does not include a provider of wireless or direct-to-home satellite transmission service.

"CABLE SERVICE" means the one-way transmission to Subscribers of (i) video programming or (ii) other programming service, and Subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service. Cable service does not include any video programming provided by a commercial mobile service provider defined in 47 U.S.C.§ 332(d).

"CABLE SYSTEM" or "SYSTEM" means any facility consisting of a set of closed transmission paths and associated signal generation, reception and control equipment that is designed to provide Cable Service that includes video programming and that is provided to multiple Subscribers within a community, except that such definition shall not include (i) a system that serves fewer than 20 Subscribers; (ii) a facility that serves only to retransmit the television signals of one or more television broadcast stations; (iii) a facility that serves only Subscribers without using any public right-of-way; (iv) a facility of a common carrier that is subject, in whole or in part, to the provisions of Title II of the Communications Act of 1934, 47 USC§ 201 et seq., except that such facility shall be considered a Cable System to the extent such facility is used in the transmission of video programming directly to Subscribers, unless the extent of such use is solely to provide interactive on-demand services; (v) any facilities of any electric utility used solely for operating its electric systems; (vi) or any portion of a System that serves fewer than 50 Subscribers in any locality, where such portion is part of a larger System franchised in an adjacent locality; or (vii) an open video system that complies with§ 653 of Title VI of the Communications Act of 1934, as amended, 47 U.S.C. § 573, as amended.

"CUSTOMER" or "SUBSCRIBER" means a Person or user of the Cable System who lawfully receives Cable Service therefrom with the Franchisee's express permission.

"EFFECTIVE DATE" means the specific date on which this negotiated Franchise Agreement was approved by a duly enacted ordinance.

"FCC" means the Federal Communications Commission or successor governmental entity thereto.

"FORCE MAJEURE" means an event or events reasonably beyond the ability of Franchisee to anticipate and control. "Force majeure" includes, but is not limited to, acts of God, incidences of terrorism, war or riots, labor strikes or civil disturbances, floods, earthquakes, fire, explosions, epidemics, hurricanes, tornadoes, governmental actions and restrictions, work delays caused by waiting for utility providers to service or monitor or provide access to utility poles to which Franchisee's facilities are attached or to be attached or conduits in which Franchisee's facilities are located or to be located, and unavailability of materials or qualified labor to perform the work necessary.

"FRANCHISE" means the initial, nonexclusive, authorization, or renewal thereof, issued by the Franchising Authority, whether such authorization is designated as a franchise, agreement, permit, license, resolution, contract, certificate, ordinance or otherwise, which authorizes the construction and operation of the Cable System in the public rights-of- way.

"FRANCHISE AGREEMENT" or "AGREEMENT" shall mean this nonexclusive Cable Franchise Agreement and any amendments or modifications hereto.

"FRANCHISE AREA" means the present legal boundaries of the Town as of the Effective Date, and shall also include any additions thereto, by annexation or other legal means.

"FRANCHISEE" shall mean Shenandoah Cable Television, LLC.

"FRANCHISING AUTHORITY" means the Town or the lawful successor, transferee, designee, or assignee thereof.

"GROSS REVENUE" means all revenue, as determined in accordance with generally accepted accounting principles, that is actually received by the cable operator and derived from the operation of the cable system to provide cable services in the franchise area; however, "gross revenue" shall not include: (i) refunds or rebates made to subscribers or other third parties; (ii) any revenue which is received from the sale of merchandise over home shopping channels carried on the cable system, but not including revenue received from home shopping channels for the use of the cable service to sell merchandise; (iii) any tax, fee, or charge collected by the cable operator and remitted to a governmental entity or its agent or designee, including without limitation a local public access or education group; (iv) program launch fees; (v) directory or Internet advertising revenue including, but not limited to, yellow page, white page, banner advertisement, and electronic publishing; (vi) a sale of cable service for resale or for use as a component part of or for the integration into cable services to be resold in the ordinary course of business, when the reseller is required to pay or collect franchise fees or similar fees on the resale of the cable service; (vii) revenues received by any affiliate or any other person in exchange for supplying goods or services used by the cable operator to provide cable service; and (viii) revenue derived from services classified as noncable services under federal law, including, without limitation, revenue derived from telecommunications services and information services, and any other revenues attributed by the cable operator to noncable services in accordance with rules, regulations, standards, or orders of the Federal Communications Commission.

“INSTITUTION NETWORK” means the Town’s communication network.

"INTERACTIVE ON-DEMAND SERVICE" means a service providing video programming to Subscribers over switched networks on an on-demand, point-to-point basis, but does not include services providing video programming the programming provider preschedules.

"ORDINANCE" includes a resolution.

“PEG” means public, educational and/or governmental access to the Cable System to provide video programming.

"PERSON" means any natural person or any association, firm, partnership, joint venture, corporation, or other legally recognized entity, whether for-profit or not-for profit, but shall not mean the Franchising Authority.

"PUBLIC RIGHT-OF-WAY" (PROW or Public Way) means the surface, the air space above the surface, and the area below the surface of any public street, highway, lane, path, alley, sidewalk, boulevard, drive, bridge, tunnel, park, parkway, waterway, easement, or similar property in which the Town now or hereafter holds any property interest, which, consistent with the purposes for which it was dedicated, may be used for the purpose of installing and maintaining a cable system. No reference herein, or in any franchise, to a "public right-of-way" shall be deemed to be a representation or guarantee by the Town that its interest or other right to control the use of such property is sufficient to permit its use for such purposes, and Franchisee shall be deemed to gain only those rights to use as are properly in the Town and as the Town may have the undisputed right and power to give. For purposes of this Franchise, the term "public right-of-way" shall also include any other parcels of property that the Town owns.

“SERVICE INTERRUPTION" means a service outage affecting less than five subscribers, or a loss or degradation of either video or audio for one or more channels for one or more subscribers.

"SERVICE OUTAGE" means the complete loss of cable service to five or more subscribers served by the same trunk, node, or feeder line for a period of 24 hours or more.

"TRANSFER" means any transaction in which (i) an ownership or other interest in the Franchisee is transferred, directly or indirectly, from one Person or group of Persons to another Person or group of Persons, so that majority control of the Franchisee is transferred; or (ii) the rights and obligations the Franchisee holds under the Franchise granted under this Franchise Agreement are transferred or assigned to another Person or group of Persons. However, notwithstanding clauses (i) and (ii) of the preceding sentence, a transfer of the Franchise shall not include (a) transfer of an ownership or other interest in the Franchisee to the parent of the Franchisee or to another Affiliate of the Franchisee; (b) transfer of an interest in the Franchise granted under this Franchise Agreement or the rights held by the Franchisee under the Franchise granted under this Franchise Agreement to the parent of the Franchisee or to another Affiliate of the Franchisee; (c) any action that is the result of a merger of the Franchisee’s parent; (d) any action that is the result of a merger of another Affiliate of the Franchisee; (e) a transfer in trust, by mortgage, or by assignment of any rights, title, or interest of the Franchisee in the Franchise or the System used to provide Cable Service in order to secure indebtedness.

"VIDEO PROGRAMMING" means programming provided by, or generally considered comparable to, programming a television broadcast station provides.

All terms used herein, unless otherwise defined, shall have the same meaning as set forth in Sections 15.2-2108.19 *et seq.* of the Code of Virginia; and if not defined therein, then as set forth in Title VI of the Communications Act of 1934, 47 U.S.C. § 521 *et seq.*; and if not defined therein, their common and ordinary meaning. In addition, references in this Ordinance to any federal or state law shall include amendments thereto as are enacted from time-to-time.

SECTION 2 - Grant of Authority

2.1 The Franchising Authority hereby grants to the Franchisee under the Code of Virginia and the Cable Act a nonexclusive Franchise authorizing the Franchisee to construct and operate a Cable System in the Public Ways within the Franchise Area, and for that purpose to erect, install, construct, repair, replace, reconstruct, maintain, or retain in any Public Way such poles, wires, cables, conductors, ducts, conduits, vaults, manholes, pedestals, amplifiers, appliances, attachments, and other related property or equipment as may be necessary or appurtenant to the Cable System and to provide such Cable Services over the Cable System as may be lawfully allowed. This agreement neither authorizes the Franchisee to use the PROW for purposes of providing any service other than Cable Service, nor prohibits the Franchisee from doing so. The Franchisee's authority to provide non-Cable Services shall be subject to applicable law.

2.2 Term of Franchise. The term of the Franchise granted hereunder shall be fifteen (15) years, beginning on the Effective Date, unless the Franchise is renewed or is lawfully terminated in accordance with the terms of this Franchise Agreement and the Code of Virginia, and the Cable Act.

2.3 Renewal. Any Franchise renewal shall be governed by and comply with the provisions of Article 1.2 of Chapter 21 of Title 15.2 of the Code of Virginia and the Cable Act, as amended.

2.4 Reservation of Authority. Nothing in this Franchise Agreement shall be construed as a waiver of any codes or ordinances of general applicability promulgated by the Franchising Authority.

SECTION 3- Construction and Maintenance of the Cable System

3.1 Permits and General Obligations. The Franchisee shall be responsible for obtaining, at its own cost and expense, all generally applicable permits, licenses, or other forms of approval or authorization necessary to construct, operate, maintain or repair the Cable System, or any part thereof, prior to the commencement of any such activity. Construction, installation, and maintenance of the Cable System shall be performed in a safe, thorough and reliable manner using materials of good and durable quality. Notwithstanding the requirements herein, Franchisee shall not be required to obtain a permit for individual drop connections to Subscribers, servicing or installing pedestals or other similar facilities, or other instances of routine maintenance or repair to its Cable System. All transmission and distribution structures, poles, other lines, and equipment the Franchisee installs for use in the Cable System in accordance with the terms and conditions of this Franchise Agreement shall be located so as to minimize the interference with the proper use of the Public Ways and the rights and reasonable convenience of property owners who own property that adjoins any such Public Way.

3.2 Conditions of Street Occupancy.

(A) New Grades or Lines. If the grades or lines of any Public Way within the Franchise Area are lawfully changed at any time during the term of this Franchise Agreement, then the Franchisee shall, upon reasonable advance written notice from the Franchising Authority (which shall not be less than ten (10) business days) and at its own cost and expense, protect or promptly alter or relocate the Cable System, or any part thereof, so as to conform with any such new grades or lines. If public funds are available to any other user of the Public Way for the purpose of defraying the cost of any of the foregoing, the Franchising Authority shall notify the Franchisee of the availability of such funding and make such funds available to the Franchisee. It is understood that the Franchising Authority does not guarantee that any public funds will be available to help defray the cost of altering or relocating the Cable System to conform to new grades or lines.

(B) Relocation at request of Third Party. The Franchisee shall, upon reasonable prior written request of any Person holding a permit issued by the Franchising Authority to move any structure, temporarily move its wires to permit the moving of such structure; provided (i) the Franchisee may impose a reasonable charge on any Person for the movement of its wires, and such charge may be required to be paid in advance of the movement of its wires; and (ii) the Franchisee is given not less than thirty (30) business days advance written notice to arrange for such temporary relocation.

(C) Restoration of Public Ways. If in connection with the construction, operation, maintenance, or repair of the Cable System, the Franchisee disturbs, alters, or damages any Public Way, the Franchisee agrees that it shall at its own cost and expense replace and restore any such Public Way to a condition reasonably comparable to the condition of the Public Way existing immediately prior to the disturbance. The Town may make the final determination as to acceptability of repair and/or replacement of damaged facilities. In performing any excavation work in the public rights-of-way, the Franchisee will comply with all of the requirements of Town Code applicable to all users of the Public Rights of Way.

(D) Safety Requirements. The Franchisee shall, at its own cost and expense, undertake all necessary and appropriate efforts to maintain its work sites in a safe manner in order to prevent failures and accidents that may cause damage, injuries or nuisances. All work undertaken on the Cable System shall be performed in substantial accordance with applicable FCC or other federal and state regulations and with the National Electrical Safety Code (National Bureau of Standards) and the National Electrical Code (National Bureau of Fire Underwriters). The Cable System shall not endanger or interfere with the safety of Persons or property in the Franchise Area.

(E) Trimming of Trees and Shrubbery. The Franchisee shall have the authority to trim trees or other natural growth overhanging any of its Cable System in the Franchise Area so as to prevent contact with the Franchisee's wires, cables, or other equipment. All such trimming shall be done at the Franchisee's sole cost and expense. For all planned trimming, the Franchisee shall provide the Town at least five (5) business days' notice of the work to be performed and a description of such work. For trimming of an emergency nature, including responding to storm damage, advance notice is not required. The Franchisee shall be responsible for any damage and all clean up of debris the trimming causes. The foregoing notwithstanding, any tree trimming by Franchisee must at all times comply with any tree trimming provision contained in any separately negotiated pole attachment agreement in effect between the Town and the Franchisee.

(F) Aerial and Underground Construction. At the time of Cable System construction, if all of the transmission and distribution facilities of all of the respective Town utilities in any area of the Franchise Area are underground, the Franchisee shall place its Cable System's transmission and distribution facilities underground; provided that such underground locations are actually capable of accommodating the Franchisee's cable and other equipment without technical degradation of the Cable System's signal quality. In any region(s) of the Franchise Area where the transmission or distribution facilities of the respective Town utilities are both aerial and underground, the Franchisee shall have the discretion to construct, operate, and maintain all of its transmission and distribution facilities, or any part thereof, aerially or underground. Nothing in this Section shall be construed to require the Franchisee to construct, operate, or maintain underground any ground-mounted appurtenances such as customer taps, line extenders, system passive devices, amplifiers, power supplies, pedestals, or other related equipment. To avoid overburdening the Public Way, and in furtherance of the health, safety and welfare of the public, Franchisee will at all times utilize Town owned utility poles and conduit when and where available for the construction, repairs and maintenance of the Cable System pursuant to separately negotiated pole attachment and conduit utilization agreements in effect with the Town. The Cable System will be constructed and maintained in such a way as to maximize the use of Town poles and conduit.

(G) All excavation and reconstruction work by Franchisee in the Public Rights-of-Way must be in compliance with the requirements of Town Code applicable to users of the Public Rights of Way, including all of the standards referenced therein, and all applicable VDOT standards. It shall be the Franchisee's responsibility to obtain any required permits, to review all applicable excavation, reconstruction, restoration, repair and permitting requirements, and to become familiar with such requirements before beginning any excavation, reconstruction, restoration or repair work in the Public Rights-of-Way or private property.

(H) Any equipment or facilities the Franchisee installs in the Public Rights-of-Way shall be installed, located, erected, constructed, reconstructed, replaced, restored, removed, repaired, maintained and operated in accordance with good engineering practices, performed by experienced maintenance and construction personnel so as not (1) to endanger or interfere in any manner with improvements the Town or VDOT may deem appropriate to make; or (2) to interfere with the rights of any private property owner; or (3) to hinder or obstruct pedestrian or vehicular traffic. Franchisee shall not erect, for any reason, any pole on or along any Public Right-of-Way or on public property without the advance written approval of the Town.

(I) Whenever the Town shall determine that it is necessary in connection with the repair, relocation, or improvement of the Public Rights-of-Way, the Town may require by written notification that any properties or facilities of the Franchisee be removed or relocated. Within sixty (60) days after receipt of notification, unless the Town extends such period for good cause shown, the Franchisee shall remove or relocate its facilities to such place and under such terms and conditions as the Town specifies. The Franchisee shall bear all expenses associated with the removal and relocation except that the Town will issue, without charge to the Franchisee, whatever local permits are required for the relocation of Franchisee's facilities. If the Franchisee does not complete its removal or relocation within 60 days or such other period as authorized by the Town, the Town may take such actions as necessary to effectuate such removal or relocation at the Franchisee's expense. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any removal or relocation. Franchisee shall follow all applicable VDOT standards and regulations in connection with the repair, relocation, or improvement of the Public Rights-of-Way. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds, if any, raised for the project and made available to other users of the Public Way.

Nothing in this Franchise Agreement shall be construed to prevent the Town from constructing, maintaining, repairing, improving, grading, paving, relocating and/or altering any Public Right-of-Way; constructing, installing, repairing, maintaining, or relocating any water or sewer mains; or constructing, maintaining, relocating or repairing any sidewalk or other public work. All such work shall be done, to the extent possible, in such a manner as not to obstruct, injure or prevent the free use and operation of the poles, wires, conduits, conductors, pipes or appurtenances of the Franchisee.

Nothing contained in this Franchise Agreement shall relieve any Person from liability arising out of the failure to exercise reasonable care to avoid injuring Franchisee's facilities while performing any work in any Public Right-of-Way or on public property.

(J) Movement of Facilities. In the event it is necessary to move or remove any of Franchisee's wires, cables, poles or other facilities placed pursuant to this Franchise, in order to lawfully move a large object, vehicle, building or other structure over the Public Right-of-Ways or public property of the Town, upon 30-day notice by the Town to Franchisee, Franchisee shall move at the expense, which may be required to paid in advance, of the Person requesting the temporary removal such of its facilities as may be required to facilitate such movements.

Any service disruption provisions of this Franchise shall not apply in the event that the removal of Franchisee's wires, cables, poles or other facilities pursuant to the preceding paragraph results in temporary service disruptions.

(K) Undergrounding and Beautification Projects. In the event all users of the Public Way relocate aerial facilities underground as part of an undergrounding or neighborhood beautification project, Franchisee shall participate in the planning for relocation of its aerial facilities contemporaneously with other utilities. Franchisee's relocation costs shall be included in any computation of necessary project funding by the Town or private parties. Franchisee shall be entitled to reimbursement of its relocation costs from public or private funds raised for the project and made available to other users of the Public Way. It is understood that the Franchising Authority does not guarantee that any public or private funds will be available to help defray the cost of such undergrounding or beautification projects. In the event that public and/or private funds are not available or do not cover the entire cost of the relocation, Franchisee reserves the right to pass its costs, or in the case of partial reimbursement from public and/or private funds its incremental cost, through to its Subscribers in accordance with applicable law.

(L) Inspection. The Town shall have the right to inspect all construction or installation work performed pursuant to the provisions of this Franchise to ensure compliance with the terms of the Franchise and applicable laws.

Quality Control. Upon request, the Franchisee will provide information to the Town regarding items of quality control for installation and maintenance activities performed by the Franchisee or its authorized subcontractors.

SECTION 4 - Service Obligations

4.1 General Service Obligations. The Franchisee shall make Cable Service generally available to businesses and residential dwelling units within the Franchise Area. The Franchisee initially shall build out its Cable System to make Cable Service generally available to those business and residential units located within the red ovals shown on the map attached to this Franchise Agreement as Exhibit A. The Franchisee shall use commercially reasonable efforts (considering build out costs, geographical and geological conditions, and business conditions) to complete such initial build out by January 1, 2022. Franchisee shall complete its Cable System within the remainder of the Franchise area within a commercially reasonable time (considering build out costs, geographical and geological conditions, and business conditions). In addition to the obligations and considerations set forth above, Franchisee shall offer Cable Service to all new or previously unserved business and residential units within 150 feet of the Franchisee's distribution cable.

(A) The Franchisee may elect to provide Cable Service to areas not meeting the above distance standards. The Franchisee may impose an additional charge in excess of its regular installation charge for any service installation requiring a drop in or line extension in excess of the above standards. Any such additional charge shall be computed on a time plus materials basis to be calculated on that portion of the installation that exceeds the standards set forth above. Such additional charge shall be paid in advance by the developer, landowner, or customer requesting Cable Service in an area that does not meet the density and distance standards.

4.2 New Developments. Franchisee agrees to use commercially reasonable efforts to inform itself of all newly planned developments within the Town and to work with developers to cooperate in pre-installation of facilities to support Cable Service.

4.3 Programming. The Franchisee shall offer to all Customers a diversity of video programming services.

4.4 No Discrimination. The Franchisee shall not discriminate or permit discrimination between or among any Persons in the availability of Cable Services or other services provided in connection with the Cable System in the Franchise Area. It shall be the right of all Persons to receive all available services provided on the Cable System so long as such Person's financial or other obligations to the Franchisee are satisfied; unless such Person has engaged in inappropriate activity including, but not limited to, theft of Franchisee's cable services, vandalism of its property, or harassment of its representatives. Nothing contained herein shall prohibit the Franchisee from offering bulk discounts, promotional discounts, package discounts, or other such pricing strategies as part of its business practice.

Franchisee shall assure that access to Cable Services is not denied to any group of potential residential cable subscribers because of the residents' income.

4.5 Availability of Maps to the Town: Upon the Town giving two (2) weeks written request, but no more often than annually, the Franchisee shall make available for the Town's viewing, at the Franchisee's nearest business office, or at Town Hall updated maps of the Franchise Area which shall clearly delineate all areas within the Franchise Area where Cable Service is available to Subscribers.

4.6 Changes in Service: Franchisee agrees to give the Town Manager thirty (30) days prior written notice of changes in the mix or nature of the Cable Services.

SECTION 5 -Public, Educational and Governmental Access Channels

5.1 Franchisee shall designate capacity on up to five (5) channels for public, educational and/or governmental ("PEG") access video programming provided by the Franchising Authority or its designee, such as a public access organization or educational institution. Within one hundred and twenty (120) days of receipt of a written request from the Town to activate an access channel, Franchisee will make such channel(s) available for the Town's use or its designee's use; and such channel(s) shall be carried in HD digital format. Use of a channel position for PEG access shall be provided on the most basic tier of service offered by the Franchisee and in accordance with the Cable Act and the Code of Virginia, and as further set forth below. "Channel position" means a number designation on the Franchisee's channel lineup regardless of the transmission format (analog or digital). Franchisee does not relinquish its ownership of or ultimate right of control over a channel by designating it for PEG use. In the event any access channel is reassigned, the Franchisee shall provide the Town with at least thirty (30) days' notice before reassigning the channel, and shall pay the verified reasonable costs of any advertising and promotional materials required due to the channel reassignment, not to exceed $5,000. A PEG access user- whether an individual, educational or governmental user- acquires no property or other interest by virtue of the use of a channel so designated, and may not rely on the continued use of a particular channel number, no matter how long the same channel may have been designated for such use. Franchisee shall not exercise editorial control over any public, educational, or governmental use of a channel position, except Franchisee may refuse to transmit any public access program or portion of a public access program that contains obscenity, indecency, or nudity. The Franchising Authority shall be responsible for developing, implementing, interpreting and enforcing rules for Educational and Governmental Access Channel use.

5.2 Public Access. A "Public Access Channel" is a channel position designated for noncommercial use by the public on a first-come, first-served, nondiscriminatory basis. A Public Access Channel may not be used to cablecast programs for profit, or for political or commercial fundraising in any fashion.

5.3 Educational Access. An "Educational Access Channel" is a channel position designated for noncommercial use by educational institutions such as public or private schools (but not "home schools"), community colleges, and universities.

5.4 Government Access. A "Governmental Access Channel" is a channel position designated for noncommercial use by the Franchising Authority for the purpose of showing the public local government at work.

5.5 Franchisee shall ensure that all PEG access channel signals carried on its system, regardless of the method used to acquire the PEG channels, comply with all applicable FCC signal quality and technical standards. The technical and signal quality of all PEG access channel signals shall be preserved and shall be of comparable quality as other channels.

Within one hundred and twenty (120) days of receipt of the Town's written request to activate an access channel discussed in Section 5.1**,** Franchisee will provide a connection between a location the Town designates and Franchisee's headend for each new channel to be activated for PEG use, at no charge to the Town if the connection between the new location and the nearest usable signal insertion point in Franchisee's cable system is five hundred (500) feet or less.

5.6 Capital support for PEG access. At the Town's option, Franchisee shall collect a monthly fee from each subscriber to provide additional capital support for PEG access. The maximum fee that shall be imposed is 0.5% of Franchisee's revenues from basic and expanded cable service, and the fee collected shall be remitted to the Town no later than thirty (30) days following the end of each calendar quarter. Franchisee shall not impose a fee to provide capital support for PEG access unless and until the Town directs Franchisee to impose a fee. The Town shall give Franchisee at least ninety (90) days' notice before Franchisee shall begin collecting the fee. The Town shall allocate such amount to PEG capital uses exclusively. If such fee is imposed, it shall not be deemed to be "franchise fees" within the meaning of 47 U.S.C. Section 542 and such payments shall not be deemed to be (i) "payments-in-kind" or any involuntary payments chargeable against the compensation the Franchisee is to pay the Town pursuant to Section 6 hereof, or (ii) part of the compensation the Franchisee is to pay to the Town pursuant to Section 6 hereof.

SECTION 6 - Communications Tax and Franchise Fees

6.1 Communications Tax: Franchisee shall comply with the provisions of Sections 58.1-645 et seq. of the Code of Virginia, pertaining to the Virginia Communications Sales and Use Tax, as amended (the "Communications Tax"), and Sections 6.2 through 6.6 of the Agreement shall not have any effect, for so long as the Communications Tax or a successor state or local tax that would constitute a franchise fee for purposes of 47 U.S.C. § 542 is imposed on the sale of cable services by the Franchisee to the Town's subscribers.

6.2 Payment of Franchise Fee to Town: In the event that the Communications Tax is repealed and no successor state or local tax is enacted that would constitute a franchise fee for purposes of 47 U.S.C. § 542 Franchisee shall pay to the Town a Franchise fee of five percent (5%) of annual Gross Revenue, beginning 30 days from the effective date of the repeal of such tax (the "Repeal Date"). Beginning on the Repeal Date, the terms of Section 6.2 through 6.6 of this Agreement shall take effect. In accordance with the Cable Act, the twelve (12) month period applicable under the Franchise for the computation of the Franchise fee shall be a calendar year. Such payments shall be made no later than thirty (30) days following the end of each calendar quarter. Should Franchisee submit an incorrect amount, Franchisee shall be allowed to add or subtract that amount in a subsequent quarter, but no later than ninety (90) days following the close of the calendar year for which such amounts were applicable; such correction shall be documented in the supporting information required under Section 6.3 below.

6.3 Supporting Information: Each Franchise fee payment shall be accompanied by a brief report prepared by a representative of Franchisee showing the basis for the computation and a breakdown by major revenue categories (such as Basic Service, premium service, etc.). The Town shall have the right to reasonably request further supporting information for each Franchise fee payment, subject to the proprietary information provisions of Section 8.7.

6.4 Limitation on Franchise Fee Actions: The period of limitation for recovery of any Franchise fee payable hereunder shall be three (3) years from the date on which payment by Franchisee is due.

6.5 Bundled Services: If cable services subject to a franchise fee, or any other fee determined by a percentage of the cable operator's gross revenues in a locality, are provided to subscribers in conjunction with other services: the fee shall be applied only to the value of these cable services, as reflected on the books and records of the cable operator in accordance with rules, regulations, standards, or orders of the Federal Communications Commission, the State Corporation Commission, or generally accepted accounting principles. Any discounts resulting from purchasing the services as a bundle shall be reasonably allocated between the respective services that constitute the bundled transaction.

6.6 Books and Records Regarding Franchise Fees. Subject to the confidentiality requirements of Section 8.7 of this Agreement, the Town, or such Person or Persons the Town designates, shall have the right to inspect and copy records and the right to audit and to re-compute any amounts determined to be payable under this Franchise, regardless of who holds the records. If an audit discloses an overpayment or underpayment of franchise fees, the Town shall notify the Franchisee in writing of such overpayment or underpayment within ninety (90) days of the date the audit was completed. The Franchisee shall have thirty (30) days from receipt of such notice to provide the Town with a written response agreeing to or refuting the results of the audit, including any substantiating documentation. Based on these notices, the parties shall agree upon a final settled amount. The Town, in its sole discretion, shall determine the completion date for any audit conducted hereunder. Audit completion is not to be unreasonably delayed by either party. Subject to the confidentiality requirements of Section 8.7 of this Franchise, the Franchisee shall be responsible for providing to the Town all records necessary to confirm the accurate payment of franchise fees. The Franchisee shall maintain such records for the current year plus three (3) years. The Town shall bear its audit expenses unless the audit determines the payment to the Town should be increased by more than five percent (5%) in the audited period, in which case the Franchisee shall pay reasonable and verifiable costs of the audit, but in no event more than $20,000, to the Town within thirty (30) days following the Town’s written notice to the Franchisee of the underpayment, which notice shall include a copy of the audit report. If re-computation results in additional revenue to be paid by Franchisee to the Town, such amount shall be subject to an interest charge in accordance with the prime rate of interest charged by the Town's primary depository bank.

SECTION 7- Customer Service Standards; Customer Bills; and Privacy Protection

7.1 Customer Service Standards. The Franchisee shall comply in all respects with the customer service requirements established by the FCC (47 CFR §76.309) unless modified herein. Franchisee shall be subject to the following customer service standards consistent with federal law:

(A) Franchisee will maintain a local or toll-free telephone access line which will be available to its subscribers 24 hours a day, seven days a week. Additionally, Franchisee and the Town agree that it is appropriate that Franchisee will also maintain at least one bill payment location and equipment return location within the Town. In addition, Franchisee will provide for an employee to pick up or drop off equipment free of charge in either of the following ways: (i) by having a Franchise representative to go to the subscriber’s residence, or (ii) by using a prepaid mailer. Franchisee also has the option to provide alternative payment drop off locations within the Franchise Area.

(B) Under normal operating conditions, telephone answer time by a customer representative or automated answering device, including wait time, shall not exceed thirty (30) seconds when the connection is made. If the call needs to be transferred, transfer time shall not exceed thirty (30) seconds. These standards shall be met no less than ninety-five (95) percent of the time under normal operating conditions as measured on a quarterly basis.

(C) Under normal operating conditions, the customer will receive a busy signal less than three percent (3%) of the time.

(D) Franchisee shall accurately collect and maintain data to measure its compliance with the telephone answering standards in paragraphs 7.1(B) and 7.1(C).

(E) Local bill payment location will be open to customers, including assisting walk-in customers, at least during the hours of 8:30 a.m. – 5:30 p.m. Monday through Friday.

(F) Installations, Outages, and Service Calls. Under normal operating conditions, each of the following standards will be met no less than ninety five percent (95%) of the time as measured on a quarterly basis.

i. Standard installations will be performed within seven business days after an order has been placed, unless the customer requests a longer period. "Standard" installations are those that are within 150 feet of the existing distribution system.

ii Excluding conditions beyond the control of the Franchisee, the Franchisee will begin repairs on Service Outages promptly and in no event later than eight (8) hours after the outage becomes known.

iii The Franchisee must begin working to correct Service Interruptions within 8 hours, including weekends, of receiving a subscriber call for a Service Interruption. “Service Interruption” shall mean the loss of any service provided to customer by Franchisee.

(G) Franchisee shall accurately collect and maintain data to measure its compliance with subparagraph 7.1.(F).

(H) The "appointment window" alternatives for installations, service calls and other installation activities will either be at a specific time or, at maximum, a two-hour time block during normal business hours. Franchisee may schedule service calls and other installation activities outside of normal business hours for the express convenience of the customer.

(I) Franchisee may not cancel an appointment with a customer after the close of business on the business day prior to the scheduled appointment. If Franchisee representative is running late for an appointment with a customer and will not be able to keep the appointment as scheduled, the customer will be contacted. The appointment will be rescheduled as necessary, at a time which is convenient for the customer.

(J) Franchisee shall provide written information on each of the following areas at the time of installation of service, at least annually to all subscribers, and at any time upon request:

i. Products and services offered;

ii. Prices and options for programming services and conditions of subscription to programming and other services;

iii. Installation and service maintenance policies;

iv. Instructions on how to use the cable service;

v. Channel positions of programming carried on the system;

vi. Refund policy; and

vii. Billing and complaint procedures, including the Franchisee's office hours, telephone number, and address of the local cable office.

7.2 Customer Bills. Customer bills shall be designed in such a way as to present the information contained therein clearly and comprehensibly to Customers, and in a way that (i) is not misleading and (ii) does not omit material information. Notwithstanding anything to the contrary in Section 7.1 above, the Franchisee may, in its sole discretion, consolidate costs on Customer bills as may otherwise be permitted by the Cable Act.

7.3 Franchisee shall notify subscribers of any changes in rates, programming services or channel positions as soon as possible in writing. Notice must be given to subscribers a minimum of thirty (30) days in advance of such changes if the change is within the control of the Franchisee. In addition, Franchisee shall notify subscribers thirty (30) days in advance of any significant changes in the other information that paragraph 7.1.(J) requires.

7.4 In case of a billing dispute, Franchisee must respond to a subscriber's written complaint within fifteen (15) days.

7.5 Refund checks will be issued promptly,by the customer's next billing cycle following resolution of the request, or thirty (30) days, whichever is earlier.

7.6 Credits for service will be issued promptly, by the customer's next billing cycle following the determination that a credit is warranted.)

7.7 Franchisee shall make available parental control devices to all subscribers who wish to be able to block out any objectionable channel(s) of programming from the cable service entering the subscriber's home.

7.8 Privacy Protection. The Franchisee shall comply with all applicable federal and state privacy laws.

SECTION 8- Oversight and Regulation by Franchising Authority

8.1 Oversight of Franchise. In accordance with applicable law, the Franchising Authority at its sole cost and expense, shall have the right to oversee, regulate and, on reasonable prior written notice and in the presence of Franchisee's employee, periodically inspect the construction, operation and maintenance of the Cable System in the Franchise Area, and all parts thereof, as necessary to monitor Franchisee's compliance with the provisions of this Franchise Agreement.

(A) The Franchisee shall perform all tests necessary to demonstrate compliance with the requirements of the Franchise and other performance standards established by law or regulation, and to ensure that the Cable System components are operating as expected.

(B) Upon pertinent and valid evidence demonstrating a probability of non-compliance, the Franchisee shall conduct additional FCC tests upon the Town's requests to ensure that its Cable System is functioning in compliance with applicable laws and regulations, and make the results of such test available to the Town to verify compliance. If any such test indicates that any part or component of the System fails to meet applicable requirements, the Franchisee shall take corrective action, retest locations, and advise the Town of the action taken and results achieved.

8.2 Technical Standards. The Franchisee shall comply with all applicable technical standards of the FCC as published in Subpart K of 47 C.F.R. § 76. To the extent those standards are altered, modified, or amended during the term of this Franchise, the Franchisee shall comply with such altered, modified or amended standards within a reasonable period after such standards become effective. The Franchising Authority shall have, upon written request, the right to obtain a copy of tests and records required to be performed pursuant to the FCC's rules.

8.3 Operational Records. The Franchisee shall maintain the records required to compute all operational and customer service compliance measures outlined in this Franchise to demonstrate that the measures are being met for at least four consecutive quarters. Failure to maintain the records as required herein shall subject the Franchisee to the liquidated damages established in this Franchise Agreement

8.4 Records Required: Franchisee shall at all times maintain:

(A) Records of all written complaints for a period of one year after receipt by Franchisee or until the applicable compliance measures described in this Franchise are met for four consecutive quarters. The term "complaint" as used herein refers to complaints about any aspect of the Cable System or Franchisee's cable operations, including, without limitation, complaints about employee courtesy. Complaints recorded will not be limited to complaints requiring an employee service call.

(B) Records of Outages and Service Interruptions for a period of one year after occurrence, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating date, duration, area, and the number of Subscribers affected, type of outage, and cause.

(C) Records of service calls for repair and maintenance for a period of one year after resolution by Franchisee, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating the date and time service was required, the date of acknowledgment and date and time service was scheduled (if it was scheduled), and the date and time service was provided, and (if different) the date and time the problem was resolved.

(D) Records of installation/reconnection and requests for service extension for a period of one year after the request was fulfilled by Franchisee, or until the applicable compliance measures described in this Franchise are met for four consecutive quarters, indicating the date of request, date of acknowledgment, and the date and time service was extended.

8.5 Federal Communications (FCC) Testing: Within fourteen (14) days of the Town's written request, a written report of test results of FCC performance testing will be provided to the Town Manager or his designee.

8.6 File for Public Inspection. Throughout the term of this Franchise Agreement, the Franchisee shall maintain: at a nearby business office or on-line, in a file available for public inspection during normal business hours, those documents required pursuant to the FCC's rules and regulations. Upon no less than thirty (30) business days' written notice to the Franchisee, the Town shall have the right to inspect Franchisee's books and records, including electronic books and records, pertaining to Franchisee's provision of Cable Service in the franchise area at any time during normal business hours and on a nondisruptive basis, as are reasonably necessary to ensure compliance with the terms of this franchise. Such notice shall specifically reference the Franchisee's section or subsection which is under review, so that Franchisee may organize the necessary books and records for appropriate access by the Town. Franchisee shall not be required to maintain any books and records for franchise compliance purposes longer than the current year plus three (3) years.

8.7 Proprietary Information:

(A) Notwithstanding anything to the contrary set forth herein, Franchisee shall not be required to submit information to the Town that it reasonably deems to be proprietary or confidential in nature, nor submit to the Town any of its or an affiliate's books and records not relating to the provision of Cable Service in the franchise area, except as provided herein. Such confidential information shall be subject to terms of a nondisclosure agreement that is acceptable to the parties and to the following, to be applied as is most practicable for the purposes of this Agreement:

i. To the extent an exemption under the Virginia Freedom of Information Act permits the Town to maintain the confidentiality of submitted information and the Franchisee submits such information to the Town, the Town shall maintain the confidentiality of such information and not disclose it to any public request;

ii. To the extent the information provided to an accountant, attorney, consultant, or any other agent of the Town ("Town Consultant") would not be subject to public disclosure under the Virginia Freedom of Information Act, and the Town instructs the Franchisee to provide such information to the Town Consultant as may be required by this Agreement, the Franchisee shall provide such information to the Town Consultant and the Town shall not take possession of the information nor engage in any act that would jeopardize the information's confidentiality; or,

iii. Franchisee must provide the following documentation to the Town:

(a) specific identification of the information;
(b) statement attesting to the reason(s) the Franchisee believes the information is confidential; and
(c) statement that the documents are available at the Franchisee's designated offices for the Town's inspection.

(B) At all times, the Town shall take reasonable steps to protect the proprietary and confidential nature of any books, records, maps, plans, or other Town requested documents that are provided pursuant to the Agreement to the extent they are designated as such by the Franchisee. Nothing in this Section shall be read to require the Franchisee to violate federal or state law protecting Subscriber privacy.

8.8 Reports. Within ninety (90) days after receipt of the Town's written request, Franchisee shall submit a written year-end report to the Town. Such report may address, if the Town so desires: (I) major cable-related projects undertaken in the past year and planned for the current year, including construction and upgrade schedules for any new, relocated, or upgraded aerial or underground facilities. Upon written request of the Town, no later than thirty (30) days after the end of each quarter, the Franchisee shall submit a written report to the Town regarding complaints and service requests the Franchisee received from customers in the Franchise Area concerning Franchisee's customer service performance.

SECTION 9- Transfer or Change of Control of Cable System or Franchise

9.1 No transfer of this Franchise shall occur without the prior written consent of the Franchising Authority, which consent shall not be unreasonably withheld, delayed or conditioned. No transfer shall be made to a Person, group of Persons or Affiliate that is not legally, technically and financially qualified to operate the Cable System and satisfy the obligations hereunder.

SECTION 10- Insurance and Indemnity

10.1 The Franchisee shall indemnify hold harmless and defend the Town, its officers, employees, and agents (hereinafter referred to as "indemnitees"), from and against:

(A) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which may be imposed upon, incurred by or asserted against the indemnitees by reason of any act or omission of the Franchisee, its personnel, employees, agents, contractors or subcontractors, resulting in personal injury, bodily injury, sickness, disease or death to any person or damage to, loss of or destruction of tangible or intangible property, libel, slander, invasion of privacy and unauthorized use of any trademark, trade name, copyright, patent, service mark or any other right of any person, firm or corporation, which may arise out of or be in any way connected with the construction, installation, operation, maintenance, use or condition of the Franchisee's cable system caused by Franchisee, its contractors, subcontractors or agents or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation.

(B) Any and all third-party claims for liabilities, obligations, damages, penalties, liens, costs, charges, losses and expenses (including, without limitation, fees and expenses of attorneys, expert witnesses and consultants), which are imposed upon, incurred by or asserted against the indemnitees by reason of any claim or lien arising out of work, labor, materials or supplies provided or supplied to the Franchisee, its contractors or subcontractors, for the installation, construction, operation or maintenance of the Franchisee's cable system in the Town.

10.2 Damages shall include, but not be limited to, penalties arising out of copyright infringements and damages arising out of any failure by the Franchisee to secure consents from the owners, authorized distributors or licensees, or programs to be delivered by the Franchisee's cable system.

10.3 The Franchisee undertakes and assumes for its officers, agents, contractors, subcontractors, and employees all risk of dangerous conditions, if any, on or about any Town owned or controlled property, including streets and public rights-of-ways, except for any claim asserted or liability imposed that arises or is related to gross negligence or intentional misconduct by the indemnities; and the Franchisee hereby agrees to indemnify and hold harmless the indemnitees against and from any claim asserted or liability imposed upon the indemnitees for personal injury or property damage to any person arising out of the installation, operation, maintenance or condition of the Franchisee's cable system or the Franchisee's failure to comply with any federal, state or local statute, ordinance or regulation, except for any claim asserted or liability imposed upon the indemnitees that arises or is related to gross negligence or intentional misconduct by the indemnitees.

10.4 In the event any action or proceeding shall be brought against the indemnitees by reason of any matter for which the indemnitees are indemnified hereunder, the Franchisee shall, upon notice from any of the indemnitees, and at the Franchisee's sole cost and expense, resist and defend the same; provided further, however, that the Franchisee shall not admit liability in any such matter on behalf of the indemnitees without the written consent of the Town Attorney or his designee. If the Town determines that it is necessary for it to employ separate counsel, the costs for such separate counsel shall be the responsibility of the Town.

10.5 The Town shall give the Franchisee notice within 10 business days of the Town receiving notice of a written claim, or the commencement of any action, suit or other proceeding covered by the provisions of this section. The Town will cooperate with the Franchisee while the Franchisee defends any claim or action under this section.

10.6 Nothing in this Franchise Agreement is intended to, or shall be construed or applied to, express or imply the Town's waiver of statutory provisions, privileges or immunities of any kind or nature as set forth in the Code of Virginia, including the Town's limits of liability as exists presently or as the legislature may increase from time to time. Nothing in a franchise or this ordinance shall constitute a waiver of the Town's statutory provisions, privileges or immunities, including the Town's sovereign immunity, of any kind or nature.

10.7The Franchisee shall maintain, and by its acceptance of a franchise hereunder specifically agrees that it will maintain throughout the term of the franchise, general commercial liability insurance insuring the Franchisee. All liability insurance shall include an endorsement in a specific form which names as joint and several insured's the Town and the Town's officials, employees and agents, under such commercial liability policy, with respect to all claims arising out of the operation and maintenance of the Franchisee's cable system in the Town. Such policy shall be in the minimum amounts of Ten Million Dollars ($10,000,000) combined single limit per occurrence for bodily injury, property damage, or personal & advertising injury, which limit may be met through any combination of primary and excess liability policies.

(A) The Franchisee shall provide Workers Compensation Insurance as required by the Commonwealth of Virginia;

(B) Franchisee shall carry and maintain in its own name automobile liability insurance with a limit of $1,000,000 for each person and $1,000,000 for each accident for property damage with respect to owned and non-owned automobiles for the operation of which the Franchisee is responsible; and

10.8 The inclusion of more than one (1) insured shall not operate to increase the limit of the Franchisee's liability, and the insurer waives any right on contribution with insurance which the Town may have.

10.9 All policies of insurance this section requires shall be placed with companies which are qualified to write insurance in the Commonwealth of Virginia and which maintain throughout the policy term a General Rating of "A- " and a Financial Size Category of "VII " as determined by Best Insurance Rating Services.

10.10 Upon the Town's written request, the Franchisee shall provide the Town with Certificates of Insurance for the coverages this section mandates. The Franchisee shall immediately advise the Town Attorney of any litigation that may develop that would affect the Town.

10.11 Should the Town find an insurance document to be non-compliant, then it shall notify the Franchisee; and the Franchisee shall promptly cure the defect in accordance with the requirements of this section 10.

10.12 Neither this section's provisions, nor any damages recovered by the Town thereunder, shall be construed to nor limit the Franchisee's liability under any franchise issued hereunder or for damages, except that nothing herein shall be interpreted to permit the Town to exercise rights and remedies in a manner that permits duplicative recovery from or payments by the Franchisee.

10.13 The commercial general liability insurance policy provided for herein shall name the Town, its officers, employees and agents as additional insureds, and shall be primary to any insurance or self-insurance the Town carries, but only with respect to the losses for which the Franchisee is responsible hereunder. The insurance policies this section requires shall be carried and maintained by the Franchisee throughout the term of the franchise and such other period of time during which the Franchisee operates or is engaged in the removal of its cable system. Each policy shall provide for notice of cancellation in accordance with policy provisions

10.14 Nothing in this section shall require Franchisee to indemnify, hold harmless or defend the Town, its officials, employees or agents, from any claims or lawsuits arising out of the Town's award of a franchise to another person.

SECTION 11 - System Description and Service

11.1 System Characteristics: Franchisee's Cable System shall meet or exceed the following requirements:

(A) The System shall be capable of providing Video Programming reception available to its customers in the Franchise Area in accordance with the Cable Act.

(B) The System shall be designed to be an active two-way plant for subscriber interaction, if any, required for selection or use of Cable Service.

(A) The Cable Service shall be operated in a manner such that it is in compliance with FCC standards and requirements with respect to interference. The Cable System shall be operated in such a manner as to minimize interference with a Subscriber's reception of off-the-air signals. The Franchisee shall insure that signals carried by the Cable System, or originating outside the Cable System wires, cable, fibers, electronics and facilities, do not ingress or egress into or out of the Cable System in excess of FCC standards. In particular, the Franchise shall not operate the Cable System in such a manner as to pose unwarranted interference with emergency radio services, aeronautical navigational frequencies or an airborne navigational reception in normal flight patterns, or any other type of wireless communications, pursuant to FCC regulations.

11.2 Interconnection: The Franchise shall design its Cable System so that it may be interconnected with other cable systems and open video systems in the Franchise Area.

11.3 Standby Power: The Franchisee shall provide standby power generating capacity at the headend and at all hubs. The Franchisee shall maintain standby power capable of at least twenty-four (24) hours duration at the headend and all hubs, with automatic response systems to alert the local management center when commercial power is interrupted.

11.4 Technical Standards: The Cable System shall meet or exceed the applicable technical standards set forth in 47 C.F.R. § 76.601.

11.5 Leased Access Channels: The Franchisee shall provide Leased Access Channels that federal law requires.

11.6 Cable Service to School and Government Facilities.

Franchisee shall provide, without charge, at least one cable service outlet activated for basic cable service to each facility owned by Town government, and by the Warren County Public Schools located within the Town, as well as other such municipal buildings where service is requested in the future that are located within the Franchise Area within 150 feet of the Franchisee's distribution cable. The excess cost for extending service to buildings not within 150 feet of the Franchisee's distribution cable shall be paid by the entity requesting service.

11.7 Emergency Powers. In the event of an emergency, or where Franchisee's Cable System creates or is contributing to an imminent danger to health, safety, or property, or an unauthorized use of property, the Franchisee shall remove or relocate any or all parts of Franchisee's C a b l e System at the Town's request. If the Franchisee fails to comply with the Town's request, the Town may remove or relocate any or all parts of the Franchisee's cable system upon reasonable notice to the Franchisee. The Town shall use reasonable efforts to minimize the impact on Franchisee's facilities related to any emergency removal or relocation. Franchisee shall be entitled to compensation for expenses incurred for removal or relocation in the event of an emergency to the extent other users of the Public Way are compensated. It is understood that the Franchising Authority does not guarantee that funds will be available to compensate users of the Public Ways for emergency removal or relocation.

11.8 Emergency Alert System. Franchisee shall install and thereafter maintain an Emergency Alert System (EAS) that shall at all times be operated in accordance with FCC rules and the Virginia EAS Plan.

SECTION 12 -Enforcement of Franchise

12.1 If, pursuant to any required public hearing, the Town determines that the Franchisee has failed to materially comply with this franchise the Town may impose any penalty hereunder, including, without limitation, revocation of the franchise.

12.2 Within thirty (30) days after the award of a franchise, the Franchisee shall deposit with the Town a performance bond from a financial institution running to the Town in the amount of one hundred thousand dollars ($100,000.00.). The bond shall be used to insure the Franchisee's faithful performance of all its franchise provisions or defaults under a franchise or the payment by Franchisee of any penalties, liquidated damages, claims, liens, and taxes due the Town which arise by reason of the construction, operation, or maintenance of Franchisee's Cable System in the Town, including restoration of the public rights-of-way and the cost of removal or abandonment of any property of a cable operator.

12.3 Any bond obtained by Franchisee must be placed with a company which is qualified to write bonds in the Commonwealth of Virginia, and shall contain the following endorsement (or the substantive equivalent of such language as agreed upon by the Town):

> "It is hereby understood and agreed that this bond may not be cancelled without the Town's consent until sixty (60) days after the Town's receipt by registered mail, return receipt requested, of a written notice of intent to cancel or not renew."

12.4 Any bond shall be recoverable by the Town for all damages and costs, whether direct or indirect, resulting from the Franchisee's failure to well and faithfully observe and perform any provision of this Agreement.

12.5 The bond shall be maintained at the amount established herein for the entire term of the franchise, even if amounts have to be withdrawn pursuant to this ordinance. The Franchisee shall promptly replace any amounts withdrawn from the bond.

12.6 Non-compliance procedures.

(A) Should the Franchising Authority believe that the Franchisee has not complied with any of the provisions of this Franchise Agreement, it shall: (i) informally discuss the matter with the Franchisee and (ii) notify the Franchisee in writing of the exact nature of the alleged noncompliance if the discussions described in the foregoing clause (i) do not lead to resolution of the alleged noncompliance. The Franchisee shall have thirty (30) days from receipt of this written notice to: (a) respond to the Franchising Authority, if the Franchisee contests, in whole or in part, the assertion of noncompliance; (b) cure such default; or (c) in the event that, by the nature of default, such default cannot be cured within the 30-day period, initiate reasonable steps to remedy such default and notify the Franchising Authority of the steps being taken and the projected date that they will be completed. The Franchising Authority shall schedule a public hearing in the event that the Franchisee fails to respond to the written notice pursuant to these procedures or in the event that the alleged default is not remedied within thirty (30) days of the date projected above if the Franchising Authority intends to continue its investigation into the default. The Franchising Authority shall provide the Franchisee at least thirty (30) business days prior written notice of such hearing, which will specify the time, place, and purpose. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

(B) The Town shall, within a reasonable time after the closure of the public hearing, issue findings and conclusions in writing, setting forth the basis for the findings; the proposed cure plan; and the time line for curing the violation if the violation can be cured; and the penalties, damages and applicable interest owed, if any.

(C) Subject to applicable federal and Virginia law and the provisions of this Agreement, if the Town determines pursuant to a public hearing that Franchisee is in violation of any provision of this Agreement the Town may apply one or a combination of the following remedies: (i) seek specific performance or other equitable relief; (ii) commence an action at law; (iii) apply penalties in accordance with Section 12.8, if applicable; or (iv) apply liquidated damages in accordance with Section 12.8, if applicable.

(D) The Town may designate its cable administrator or other person to conduct the hearings and issue findings and conclusions under this subsection, i n w h i c h c a s e the Franchisee may appeal the determination of the cable administrator or other Town designee to the Town Council. Such an appeal shall be heard at a lawfully noticed public hearing. The Franchising Authority shall provide the Franchisee with a reasonable opportunity to be heard at any such hearing.

12.7 Penalties and Liquidated Damages. Because it may be difficult to calculate the harm to the Franchising Authority in the event of Franchisee's breach of this Franchise Agreement, the parties agree to liquidated damages as a reasonable estimation of the actual damages. To the extent that the Franchising Authority elects to assess liquidated damages as provided in this Agreement and such liquidated damages have been paid, such damages shall be the Franchising Authority's sole and exclusive remedy. Nothing in this Section shall preclude the Franchising Authority from exercising any other right or remedy with respect to a breach that continues past the time the Franchising Authority stops assessing liquidated damages for such breach. Liquidated damages shall not be assessed until the Franchising Authority has completed the procedures set forth in Section 12.7 hereof, including holding a public hearing, and notifying the Franchisee by certified or registered mail of the proposed liquidated damages, specifying the violation. The Franchisee shall have thirty (30) days from the date of receipt of the written notice to submit payment. If the

Franchisee does not make payment within that period, the Franchising Authority may obtain the amount assessed from the Franchisee's performance bond.

(A) The first day for which liquidated damages may be assessed, if there has been no cure, shall be the day after the end of the applicable cure period, including any extension of the cure period the Franchising Authority has granted.

(B) Franchisee may appeal (by pursuing judicial relief) any assessment of liquidated damages within thirty (30) days of receiving written notice of the assessment. Franchisee's obligation to pay the liquidated damages assessed shall be stayed pending resolution of the appeal.

(C) The Franchising Authority may assess liquidated damages for the following violations of this Franchise Agreement, in the following amounts:

i. Failure to comply with PEG access requirements: $200 per violation for each day the violation continues.

ii. Failure to render payments due to the Franchising Authority: Three-tenths of one percent (0.3%) of the unpaid amount for each day the violation continues, in addition to any monetary payment due and interest, computed at the Town's prime rate of interest charged by the Town's primary depository bank.

iii. Failure to supply information, reports, or filings lawfully required: $100 per violation for each day the violation continues.

iv. Failure to comply with customer service standards: $100 per each violation for each day the violation continues, except where compliance is measured quarterly, in which case damages shall be as specified in Section 12.8(C)v below.

v. Failure to comply with customer service standards with which compliance is measured on a quarterly basis: $300 for the first violation in which such standards were not met; $750 for any violation within 18 months after the first; and $1,500 for any violation within 18 months after the second or any subsequent violation.

vi. The Franchisee shall not be charged with multiple violations for a single act or event affecting a single subscriber or for a single act or event affecting multiple subscribers on the same day.

vii. The parties agree that such liquidated damages are reasonable.

viii. The Town may reduce or waive any of the above liquidated damages if it determines, in its sole discretion that such waiver is in the public interest.

ix. If a court of competent and binding jurisdiction determines that liquidated damages cannot be imposed by this Agreement, the foregoing liquidated damages shall be construed to be penalties to the full extent allowed and contemplated by paragraph 6 of Section 15.2-2108.22 of the Code of Virginia and shall apply via the liquidated damages procedures and limitations under this section.

(A) The amount of all liquidated damages assessed per annum shall not exceed twenty thousand dollars ($20,000) in the aggregate.

(B) If after 120 days the Franchisee has not cured or commenced to cure the alleged breach to the satisfaction of the Franchising Authority, the Franchising Authority may pursue all other remedies aside from liquidated damages.

12.8 Technical Violation. The Franchising Authority agrees that it is not its intention to subject the Franchisee to penalties, fines, forfeitures or revocation of the Franchise for so-called "technical" breach(es) or violation(s) of the Franchise, which shall include, but not be limited to, the following:

(A) In instances or for matters in which the Franchisee's violation or breach of the Franchise was a good faith error that resulted in no or minimal negative impact on the Customers within the Franchise Area; or

(B) Where there existed circumstances reasonably beyond the Franchisee's control and which precipitated the Franchisee's violation of the Franchise, or which prevented the Franchisee from complying with a term or condition of the Franchise.

SECTION 13 - Inspection of Facilities

13.1 Franchisee shall comply with all applicable federal, state, and local construction and engineering codes and regulations, currently in force or hereafter applicable, to the construction, operation or maintenance of its Cable System within the Town. The Town shall have the right to review Franchisee's construction plans and specifications to assure compliance with the required standards. After construction has been completed, the Town shall have the right to inspect all construction or installation work performed pursuant to the franchise and all applicable federal, state and local building and engineering codes. However, the Town shall not be required to review or approve construction plans and specifications or to make any inspections. The Franchisee shall be solely responsible for taking all steps necessary to assure compliance with applicable standards and to ensure that its Cable System is installed in a safe manner and pursuant to the terms of the franchise and applicable law.

SECTION 14- Miscellaneous Provisions

14.1 Force Majeure. The Franchisee shall not be held in default under, or in noncompliance with, the provisions of the Franchise, nor suffer any enforcement or penalty relating to noncompliance or default (including termination, cancellation or revocation of the Franchise), where such noncompliance or alleged defaults occurred or were caused by events which constitute a Force Majeure, as defined in this Agreement.

14.2 Notice. All notices shall be in writing and shall be served upon the other party by hand delivery; first class mail; registered or certified mail, return receipt requested; or by reputable overnight courier service and addressed as follows:

To the Franchising Authority:

Town Manager
Town of Front Royal
P.O. Box 1560
102 E. Main Street

Front Royal, Virginia 22630

And to:

Town Attorney
Town of Front Royal
P.O. Box 1560
102 E. Main Street
Front Royal, Virginia 23834

To the Franchisee:

Chris Kyle
500 Shentel Way
Edinburg, VA 22824

14.3 Entire Agreement. This Franchise Agreement embodies the entire understanding and agreement of the Franchising Authority and the Franchisee with respect to the subject matter hereof and supersedes all prior understandings, agreements and communications, whether written or oral. All ordinances or parts of ordinances that are in conflict with or otherwise impose obligations different from the provisions of this Franchise Agreement are superseded by the Franchise Agreement.

14.4 Severability. If any section, subsection, sentence, clause, phrase, or other portion of this Franchise Agreement is, for any reason, declared invalid in whole or in part by any court, agency, commission, legislative body, or other authority of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent portion. Such declaration shall not affect the validity of the remaining portion, which shall continue in full force and effect.

14.5 Governing Law. This Franchise Agreement shall be deemed to be executed in the Commonwealth of Virginia and shall be governed in all respects, including validity, interpretation and effect, and construed in accordance with, the laws of the Commonwealth of Virginia.

14.6 Modification. No provision of this Franchise Agreement shall be amended or otherwise modified, in whole or in part, except by an instrument in writing duly executed by the Franchising Authority and the Franchisee, which amendment shall be authorized on behalf of the Franchising Authority through the adoption of an appropriate resolution or order by the Franchising Authority, as required by applicable law.

14.7 No Third-Party Beneficiaries. Nothing in this Franchise Agreement shall confer third-party beneficiary status on any member of the public to enforce the terms of this Franchise Agreement.

14.8 No Waiver of Rights. Nothing in this Franchise Agreement shall be construed as a waiver of any rights, substantive or procedural, Franchisee may have under federal or state law unless such waiver is expressly stated herein.

IN WITNESS WHEREOF, this Franchise Agreement has been executed by the duly authorized representatives of the parties as set forth below, as of the date set forth below:

The Town of Front Royal, Virginia

By: ______________________________ __________

Name: Joseph E. Waltz Date

Title: Town Manager

Approved as to form:

____

Douglas W. Napier

Town Attorney

Attested by:

____

Jennifer Berry

Town Clerk

COMMONWEALTH OF VIRGINIA,
COUNTY OF WARREN, to-wit:

The foregoing was acknowledged before me this ____ day of ________________, 2019, by Joseph E. Waltz, Town Manager, on behalf of the Town of Front Royal, Virginia.

My commission expires: ___________ _________________________________
Notary Public

COMMONWEALTH OF VIRGINIA,
COUNTY OF WARREN, to-wit:

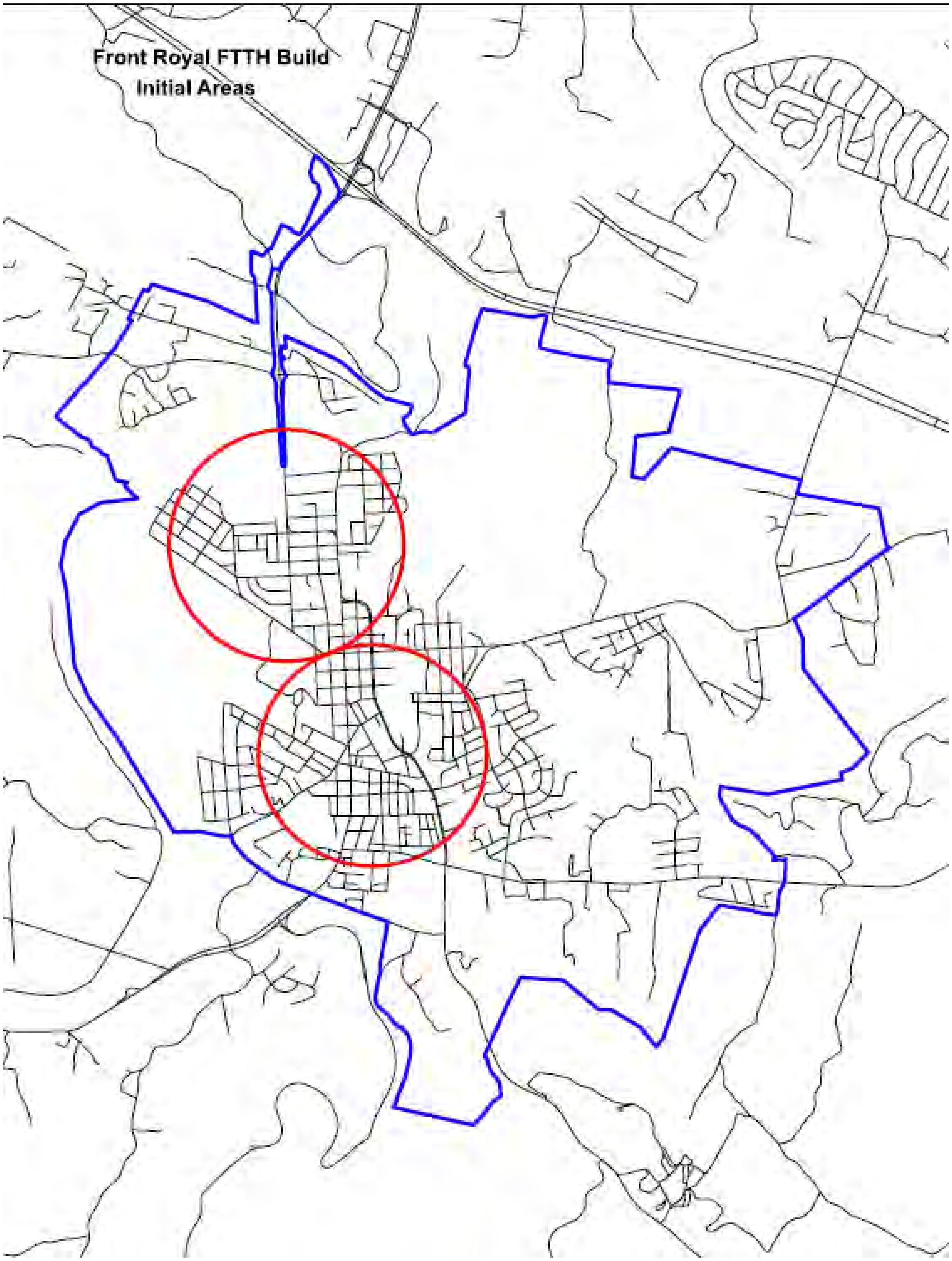
The foregoing was acknowledged before me this ____ day of __________________, 2019 by

__________________________, ____________________ of _______________, on behalf

of the company.

My commission expires: ____________ ________________________________
Notary Public

Exhibit A



11

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 11

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Subdivision Plan, Final Plats and Agreement for Happy Creek Knolls Section 4 – Chris Ramsey

Summary: Council is requested to approve a Subdivision Plan (Major), Final Plats and a Bond & Maintenance Agreement (required by Town Code) for 33 single-family detached residential building lots within the R-1 Zoning District, titled as Happy Creek Knolls, Section 4, located at the end of Ewell Street and the end of Happy Ridge Drive and an open space lot with a stormwater management pond and pump station. The Front Royal Planning Commission recommends approval.

Budget/Funding: None

Attachments: Staff Report; Application; Subdivision Plan; Final Plats; Applicant response letter

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial_______

Proposed Motion: **I move that Council approve a Subdivision Plan, Final Plats and a Bond & Maintenance Agreement for 33 single-family detached residential building lots within the R-1 Zoning District, titled as Happy Creek Knolls, Section 4, located at the end of Ewell Street and the end of Happy Ridge Drive and an open space lot with a stormwater management pond and pump station.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

TOWN OF FRONT ROYAL
DEPARTMENT OF PLANNING & ZONING

STAFF REPORT FOR THE SEPTEMBER 18, 2019 PLANNING COMMISSION MEETING

APPLICATION #:
FRSUB-001521-2019

APPLICANT:
Ramsey Inc.

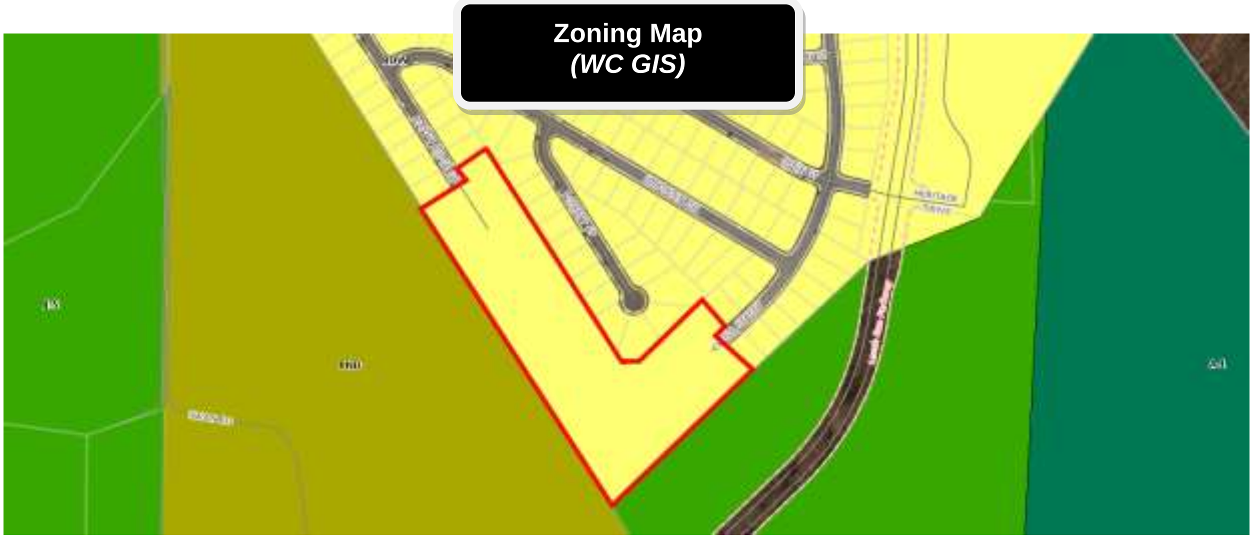
APPLICATION SUMMARY:
The application is a Subdivision Plan (Major) and Final Plats for 33 lots within the R-1 Zoning District, titled as Happy Creek Knolls, Section 4. The project also includes an open space parcel that will include a stormwater management pond and pump station on it.

GENERAL INFORMATION:

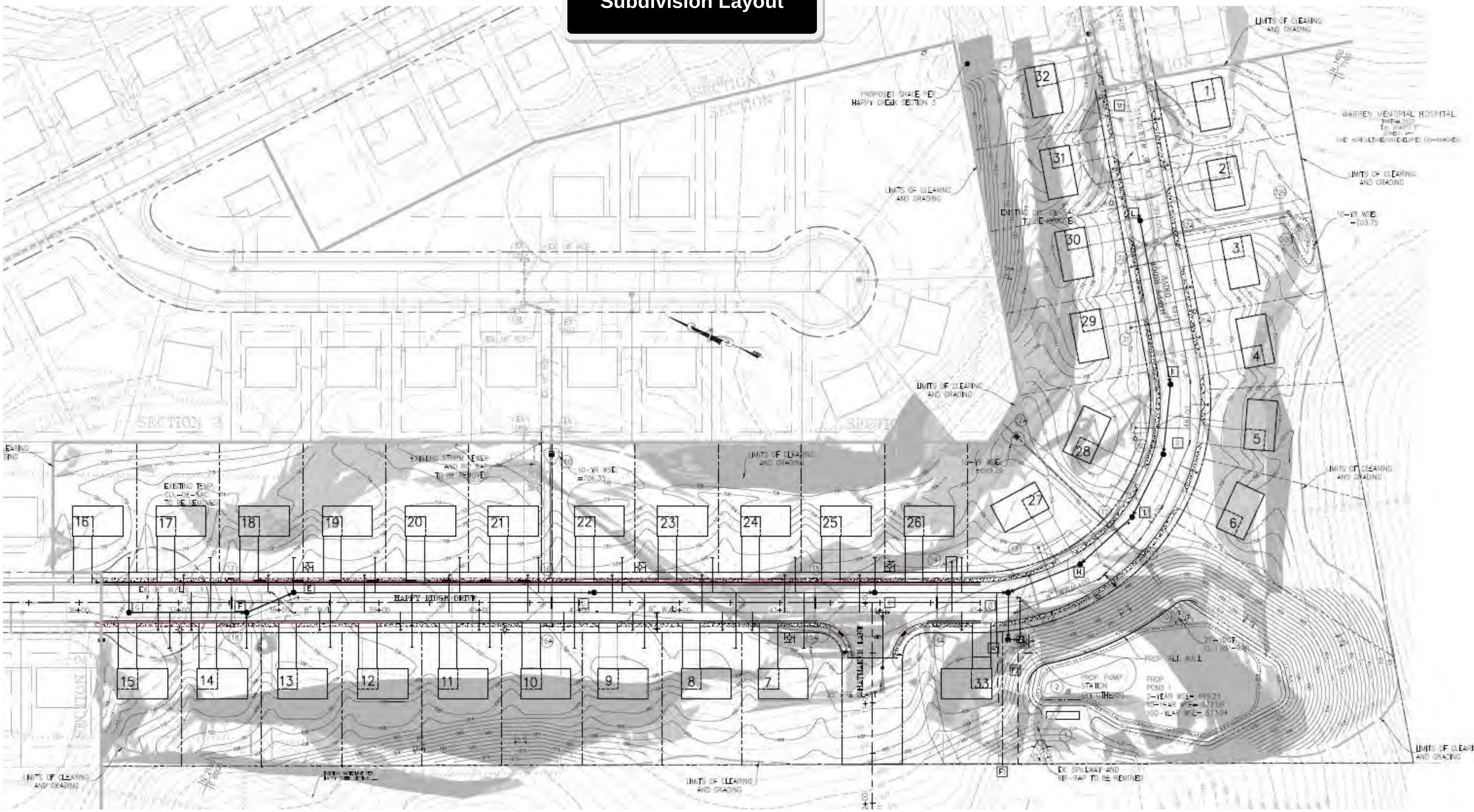
Site Address	No address currently.		
Zoning District	R-1, Residential District		
Overlay Districts	Historic Area – NO	Floodway - NO	Entrance Corridor – NO
Tax IDs	20A21-3-G		
Location	The subject property is located at the end of Ewell Street and the end of Happy Ridge Drive.		
Existing Use	Vacant lot		
Proposed Use	33 single-family detached residential building lots and an open space lot with a SWM facility.		

AERIAL MAP
(WC GIS)

Zoning Map
(WC GIS)



Subdivision Layout



ADDITIONAL INFORMATION

Summary	This application is for final approval of a subdivision that would include 33 lots on 12.43 acres within the R-1 Zoning District. Happy Ridge Drive will be extended to access the proposed lots and be built to Town specifications. There will also be a stub street included that will be extended to the HEPTAD property upon its development. Streets shall include lighting, hydrants, curb and gutter, utility lines, sidewalks and landscaping. A preliminary plan of this subdivision was approved by the Planning Commission on May 15, 2019, with certain conditions. A handrail was added along the sidewalk that is adjacent to the stormwater management pond for public safety purposes. A landscaping plan was added, as required by Town Code. The applicant also revised the grading of the stormwater management pond to eliminate 2:1 slopes. This was achieved by adding a retaining wall. Details for the proposed pump station were also included on the plans. However, the applicant is pursuing a gravity line through the properties to the south. If he obtains approval for this from these property owners, he will need to submit a revised plan with the gravity line for review and approval by the Town.
Preliminary Plan	Town Code, Chapter 148, Section 310, specifies that "(a) Preliminary Plan is required for all proposed major subdivisions. The Preliminary Plan review process includes review and approval of the subdivision design before submission of a Subdivision Plan and Final Plats. The Planning Commission has approval authority for Preliminary Plans. A preliminary plan for this project was approved on May 15, 2019.
Subdivision Plan	Town Code 148-315 of the Town Code requires major subdivisions to obtain approval of a subdivision plan and final plats within thirty-six (36) months of approval of the preliminary plan. This will be the current step in the process for approval of this subdivision prior to recordation of the lots and development. Unlike Preliminary Plans, Subdivision Plans and Final Plats require approval by Town Council. In addition, bonding is required.
Review Comments	A. <u>PLANNING & ZONING REVIEW COMMENTS.</u> 1. Street Name. The portion of Ewell Street that is south of Imboden Drive, from the centerline intersection, will need to be renamed to Happy Ridge Drive based on the proposed street extension layout. Please include new street signage at this intersection as part of the plans. 2. Final Plats. You will need to submit signed and stamped final plats prior to final approval. Thank you for submitting the advanced copies for review.

3. Development Surety. After consultation with the Town Engineer and Public Works Department, a development guarantee, such as a performance bond, letter of credit or cash escrow, is required in the amount of $1,024,397.00. This will need to be submitted to the Town before final approvals are granted.

• **Domestic Water**	
8” Class 52 Ductile Iron Water Main	$164, 500.00
3/4” Water Services	$76,800.00
Fire Hydrant Assembly	$3,500.00
• **Sanitary Sewer**	
8” SDR, 35 PVC Sewer Main	$127,500.00
4” Sch. 40 PVC Sewer Laterals	$44,800.00
2” Sewer pump Line	$26, 250.00
Sewer Pump Station	$50,000.00
Sanitary Sewer Manholes with Frames & Covers	$28,600.00
• **Storm Sewer**	
Reinforced Concrete Pipe	$95,535.00
Storm Inlet Structures	$34,000.00
• **Public Street Improvements**	
Asphalt	$202,860.00
Curb & Gutter	$13,800.00
Sidewalk	$12,960.00
Driveway Aprons	$23,165.00
Handrail	$21,000.00
Street Trees	$6,000.00
• **Public Infrastructure Bond Amount**	$931,270.00
• *Contingency (10%)*	*$93,127.00*
TOTAL BOND AMOUNT REQUIRED	***$1,024,397.00***

(revised)

4. Maintenance of nondedicated open space. Please submit for review by the Town Attorney all covenants or other documents governing the reservation and maintenance of undedicated open space, including the proposed stormwater management facility. A maintenance agreement with the Town is required. Town Staff can provide you with a template document.

5. Subdivision Name Error. Correct the name of the subdivision under the Owner’s Certificate on page 1 of 33 and provide the owner’s signature here on the final plan sets for approval. It currently states that the subdivision name is Happy Hills.

B. TOWN ENERGY SERVICES DEPARTMENT.

- The plans must have a sheet with underground electrical conduit drawings shown as to where contractor will be installing primary conduit to feed distribution transformers for the community and where it is being fed from.

C. TOWN PUBLIC WORKS DEPARTMENT

- There needs to be three (3) valves at every MJ tee.
- The Applicant will need a Right-of-Way utilization permit and bond.
- Landscaping. Please modify the landscaping plan to address the following review comments from the Town's arborist/horticulturalist.
  - Diversify the White Pine species with other evergreen species to avoid creating a monoculture. Other species that may be used include: Japanese Cedar, Norway Spruce, White Spruce, Serbian Spruce and Virginia Pine. Leyland Cypress trees are NOT appropriate species.
  - Pin Oaks should not be planted next to sidewalks due to downward growing branches and the need for constant pruning. Include other oak varieties, or other shade trees, like London Plane Tree, Blackgum, Hybrid Elms and/or Hackberry.
  - Use mixed cultivars for Red Maples. You may also use Sugar Maples and Freeman Maples.

D. TOWN ENGINEER

- The subdivision plans do not show the future continuation of the gravity sewer line, so the Applicant would have to submit a new plan and profile of the sewer extension before making the off-site connection.

- A maintenance agreement for the pond will have to be recorded as part of DEQ's permitting process. I don't think the Town will need a separate agreement since it will be maintained by the POA.

E. WARREN COUNTY BUILDING OFFICIAL

- Evidence of an existing (current) Stormwater Management (SWM) plan and permit with Department of Environmental Quality (DEQ). If that does not exist, DEQ must be contacted to determine what is required.

- Evidence of an existing (current) Erosion and Sediment Control (ESC) plan and permit with Warren County. If that does not exist, a new plan and permit would be required

Planning Commission Action	The Front Royal Planning Commission recommended approval in September of this subdivision application with the following conditions: 1) The Applicant shall be responsible for all costs associated with the design, bonding, and construction of the proposed improvements. 2) All of the review comments shall be adequately addressed prior to Town Council approval. A public hearing is not required. Approval by Town Council is required.

ATTACHMENTS:
Attachment A - Application
Attachment B – Subdivision Plan
Attachment C – Advanced Copy of Final Plats

FRSUB 1521-2019

TOWN OF FRONT ROYAL

DEPARTMENT OF PLANNING & ZONING
102 EAST MAIN STREET
P.O. BOX 1560
FRONT ROYAL, VA 22630

Main: 540.635.4236
Fax: 540.631.2727
Internet: www.frontroyalva.com

APPLICATION FOR FINAL PLAT APPROVAL

(involving new streets, utilities or more than 8 lots)

MAJOR SUBDIVISIONS

Application is hereby made for approval of a final plat of a major subdivision as shown on the accompanying documents.

1. Applicant's name Chris Ramsey Phone 540-635-5637

   Applicant's Address 508 Commerce Avenue Front Royal, VA 22630

2. Subdivision name Happy Creek Knolls

3. Present owner (if other than #1) Ewell & Happy Ridge Dr.

4. Location of Subdivision The subject site is located ~~off of Rail Road~~

5. Tax Map Number 20A213 Parcel Number Parcel G

6. Total Acreage 12.43 Zoning Classification R-1

   Number of Existing Lots/Parcels 1

   Total Number of Lots 33

7. Acreage of adjoining land in same ownership (if any) N/A

8. Date of Preliminary Plat Approval by Planning Commission May 15, 2019

9. List any changes made in this plat since preliminary plat approval N/A

   (attach additional sheets if needed)

10. Number of lots proposed for final approval 33

RECEIVED
JUL 25 2019
TOWN OF FRONT ROYAL
PLANNING & ZONING DEPARTMENT

PLEASE COMPLETE REVERSE SIDE

2-12-13

11. Attach: (A) Eight copies of Final Plat, along with a *digital copy*

(B) Street Cross - Sectional Drawings showing existing & proposed grades (Section 148-14)

(C) Land Disturbing Permit (obtained through Building Inspector's office)

(D) Surface Drainage/Erosion & Sediment Control Information

(E) Landscaping Plan (Section 148-46)

(F) Performance Bond in amount determined by Town Engineer and approved by Town Attorney

(G) Additional documents required by Sections 148-14 and 148-15 of the Subdivision and Land Development Ordinance

The above information is correct and the proposed subdivision will conform with the regulations of the Town of Front Royal Subdivision and Land Development Ordinance and the Standards and Specifications for Water & Sewer, adopted January 11, 1988, as amended.

7-24-2019

Date

Signature of Applicant

By submitting this application, the applicant grants permission to Town officials and employees to enter upon the property, which is the subject of this application, during reasonable hours and for purposes related to the application process.

Designated contact for applicant: N/A

Fee 4,300.00 *

Date Paid 7-25-2019

pd 4300.- Check# 4031

*Final plat fee is $1,000.00 per plat, plus $100.00 per lot.

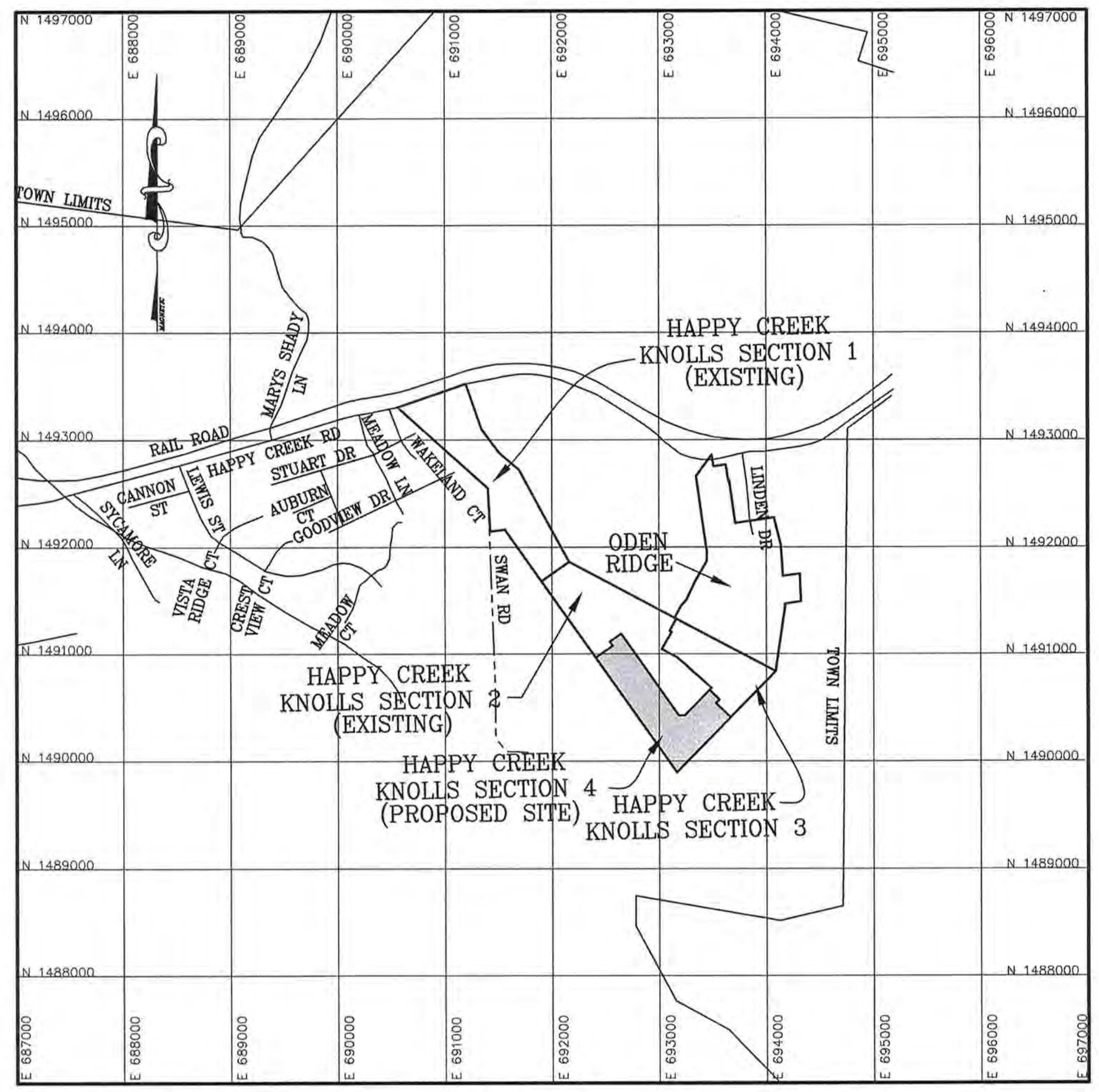
FINAL SUBDIVISION PLAN
FOR
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY. VIRGINIA

GENERAL NOTES:

1. BOUNDARY AND NORTH MERIDIAN INFORMATION AS SHOWN HEREON ARE BASED ON A RECORD PLAT OF HAPPY CREEK KNOLLS, SECTION 1 AS RECORDED IN INSTRUMENT 01-0009421 AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.
2. THESE PLANS HAVE BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DO NOT NECESSARILY INDICATE ALL ENCUMBRANCES.
3. TOPOGRAPHIC DATA AS CONTAINED HEREIN WAS OBTAINED FROM FIELD RUN SURVEY PREPARED BY BOWMAN CONSULTING GROUP LTD. SAID SURVEY BEING DATED OCT. 12, 2017. DATUM BASED ON ASSUMED DATUM PER EXISTING FACILITIES. THE CONTOUR INTERVAL IS 2 FOOT. STEEP AND VERY STEEP SLOPES HAVE BEEN IDENTIFIED ON THE SUBJECT PROPERTY BASED ON FIELD RUN TOPO BY BOWMAN CONSULTING.
4. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 1-800-257-7777, UTILITY COMPANY REPRESENTATIVES, PERFORM TEST PITS, REVIEW CURRENT TEST PIT DATA, AND WHATEVER OTHER OPERATIONS AVAILABLE TO INSURE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY BOWMAN CONSULTING GROUP OF ANY POTENTIAL CONFLICTS PRIOR TO COMMENCING CONSTRUCTION.
5. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFORMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING PROSECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
6. IN ORDER TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF A GIVEN UTILITY AND TO ASSIST THE CONTRACTOR AND/OR OWNER IN DETERMINING AREAS OF SPECIAL CONCERN, BOWMAN CONSULTING GROUP HAS INDICATED HEREIN CERTAIN LOCATIONS WHERE TEST PITS SHOULD BE EXCAVATED PRIOR TO COMMENCING CONSTRUCTION. THESE INDICATIONS ARE NOT INTENDED TO BE ALL INCLUSIVE AND WILL NOT RELIEVE THE CONTRACTOR AND/OR OWNER OF THE RESPONSIBLITY OF DIGGING ADDITIONAL TEST PITS, AS MIGHT BE REQUIRED BY ACTUAL SITE CONDITIONS, ANY DECREPANCIES FOUND BETWEEN ACTUAL AND ASSUMED CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF BOWMAN CONSULTING GROUP.
7. UNLESS OTHERWISE NOTED, ALL PROPOSED ELEVATIONS AS SHOWN HEREIN ARE FINISHED GRADE.
8. UNLESS OTHERWISE NOTED HEREIN ALL PROPOSED UTILITIES ARE TO BE INSTALLED UNDERGROUND.
9. FOR THE PURPOSE OF DESIGN COORDINATION, CERTAIN FUTURE CONSTRUCTION IMPROVEMENTS ARE SHOWN HEREIN AS EXISTING. THESE FEATURES MAY INCLUDE BUT ARE NOT NECESSARILY LIMITED TO THE HORIZONTAL & VERTICAL LOCATION OF CURBS, SIDEWALKS, PAVEMENTS AND UTILITIES.
10. ALL UNDERGROUND UTILITIES WITHIN THE STREET RIGHT-OF-WAY SHALL BE INSTALLED TO THE REQUIRED DISTANCE BEYOND THE RIGHT-OF-WAY LINE PRIOR TO THE INSTALLATION OF ANY SUBBASE MATERIAL, CURB AND GUTTER OR SIDEWALK.
11. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITIES LINE OR STRUCTURES. BLASTING TO BE EXTENDED TO 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
12. THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO EXISTING RIGHT-OF-WAY.
13. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION BY THE COUNTY FOR THE DEVELOPER TO TRESPASS ON OFF-SITE PROPERTIES.
14. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
15. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
16. IN RESPONSE TO THE TOWN OF FRONT ROYAL'S DEPARTMENT OF BUILDING AND DEVELOPMENT'S REQUEST FOR FIELD ASSISTANCE, WHEN REQUIRED TO IDENTIFY SPECIFICATIONS OF PROPOSED DEVELOPMENT, AS RELATED TO SPECIFIC SITE CONDITIONS, PLEASE CONTACT JERRY DOVE AT BOWMAN CONSULTING GROUP (703) 443-2400.
17. EMERGENCY VEHICLE ACCESS SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION.
18. WHERE IMPROVEMENTS ARE PROPOSED WITHIN EXISTING EASEMENTS OF RECORD, THE DEVELOPER SHALL OBTAIN WRITTEN PERMISSION FROM THE AUTHORITIES THAT ARE DOMINANT TENEMENTS OF THESE EASEMENTS FOR PERMIT FOR ANY DISTURBANCES WITHIN THESE AREAS PRIOR TO CONSTRUCTION.
19. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER
20. ALL EXISTING ON-SITE WELLS AND DRAINFIELDS WHICH ARE NOT REQUIRED TO SUPPORT THIS PROJECT WILL BE ABANDONED BY THE CONTRACTOR ACCORDING TO LAW.
21. NO KNOWN GRAVE SITES EXIST ON THIS SITE, IN THE EVENT GRAVE SITES ARE DISCOVERED DURING CONSTRICTION, THE OWNER AND ENGINEER MUST BE NOTIFIED IMMEDIATELY. SHOULD GRAVE SITES BE FOUND THEY WILL BE PROTECTED IN ACCORDANCE WITH THE STATE LAW.
22. MAINTENANCE OF ALL STORM WATER MANAGEMENT FACILITIES SHALL BE THE RESPONSIBILITY OF THE HAPPY CREEK POA.
23. MAINTENANCE OF THE PROPOSED SANITARY PUMP STATION SHALL BE THE RESPONSIBILITY OF THE HAPPY CREEK POA.
24. FINAL DESIGN OF THIS DEVELOPMENT HAS BEEN DONE IN CONFORMANCE TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY ECS MID-ATLANTIC, LLC, DATED 10/05/2018.
25. STORMWATER MANAGEMENT FOR THE SITE HAS BEEN GRANDFATHERED UNDER THE COMMON PLAN OF SUBDIVISION UNDER 9VAC25-870-48 (GRANDFATHERING) AND SUBJECT TO THE PART IIC (99VAC25-870-93 et seq.) TECHNICAL CRITERIA OF THIS CHAPTER. STORMWATER MANAGEMENT HAS BEEN PROVIDED/DESIGNED IN ACCORDANCE WITH THE "VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) FIRST EDITION 1999" BY UTILIZING SWM/BMP POND 1 AND ADEQUATE OUTFALLS.

GENERAL SPECIFICATIONS:

1. UNLESS OTHERWISE NOTED OR SHOWN HEREIN, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE SUPPLIED AND INSTALLED IN STRICT CONFORMANCE WITH THE RULES, SPECIFICATIONS AND/OR REGULATIONS CONTAINED IN:
   A. THE VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD & BRIDGE SPECIFICATIONS AS AMENDED TO DATE.
   B. THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
   C. THE TOWN OF FRONT ROYAL MUNICIPAL CODE.
   D. THE TOWN OF FRONT ROYAL SANITATION AUTHORITY STANDARDS.
   E. THE DEPARTMENT OF JUSTICE FEDERAL REGISTER IMPLEMENTING TITLE III OF THE AMERICANS WITH DISABILITIES ACT, PUBLIC LAW 101-336 FOR NONDISCRIMINATION ON THE BASIS OF DISABILITY BY PUBLIC ACCOMMODATION.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
4. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
5. ALL UTILITIES NOTED TO BE RELOCATED OR REMOVED SHALL BE AT THE DEVELOPERS EXPENSE, TO INCLUDE ALL POLES AND STRUCTURES AS REQUIRED. ALL POLES REQUIRED TO BE RELOCATED MUST BE MOVED PRIOR TO CONSTRUCTION.
6. CONTROLLED FILLS SHALL BE COMPACTED TO MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT PER STANDARD PROCTOR AASHTO-T99, ASTM-D698 OR VTM-1 AS APPLICABLE. DENSITY SHALL BE CONFIRMED AND CERTIFIED BY A QUALIFIED AND REGISTERED PROFESSIONAL ENGINEER.
7. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. AN ENTRANCE PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ANY WORK WITHIN DEDICATED RIGHT-OF-WAYS OR FOR ANY TEMPORARY AND/OR PERMANENT ENTRANCE OFF OF A STATE MAINTAINED ROADWAY.
8. THE CONTRACTOR AND/OR OWNER SHALL OBTAIN A GRADING PERMIT FROM THE WARREN COUNTY BUILDING AND INSPECTIONS DEPARTMENT PRIOR TO COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES.
9. THE CONTRACTOR SHALL NOTIFY THE VIRGINIA DEPARTMENT OF TRANSPORTATION, THE TOWN OF FRONT ROYAL AND THE WATER AND SEWER AUTHORITY A MINIMUM OF THREE DAYS PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS SUBJECT TO INSPECTION AND/OR MAINTENANCE BY SAID AGENCIES.
10. STORM SEWER AND CULVERT PIPE SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO THE LATEST EDITION OF A.A.S.H.T.O. DESIGNATION M170. UNLESS OTHERWISE NOTED AND/OR SPECIFIED HEREIN ALL STORM SEWER AND CULVERT PIPE SHALL BE CLASS THREE, WALL B
11. REFER TO THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS FOR CONSTRUCTION DETAILS NOT SHOWN OR CONTAINED HEREIN.
12. UNLESS OTHERWISE NOTED HEREIN V.D.O.T. STANDARD IS-1 SHAPING SHALL BE APPLIED TO THE INVERTS OF ALL DRAINAGE STRUCTURES.
13. UNLESS OTHERWISE NOTED OR SHOWN HEREIN ALL COMMERCIAL/RESIDENTIAL STREET ENTRANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH V.D.O.T. STANDARD CG-11.
14. ALL STRIPING AND SIGNAGE SHOWN HEREIN IS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS (M.U.T.C.D.) AND THE VIRGINIA SUPPLEMENTS THERE TO.
15. STRIPING AND SIGNAGE PLANS (AS REQUIRED) SHALL BE SUBMITTED AND APPROVED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO SUBMISSION OF AN ENTRANCE PERMIT APPLICATION.



VICINITY MAP
SCALE: 1"=1000'

OWNER:
RAMSEY INC.
508 COMMERCE AVENUE
FRONT ROYAL, VIRGINIA 22630
(540) 635-5637

DEVELOPER
RAMSEY INC.
508 COMMERCE AVENUE
FRONT ROYAL, VIRGINIA 22630
(540)635-5637

MISS UTILITY
CALL "MISS UTILITY" AT 1-800-552-7001, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDER GROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF TOWN OF FRONT ROYAL, VIRGINIA CODES AND REGULATIONS.

NOTICE REQUIRED
CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES APPEAR BELOW. THESE NUMBERS SHALL ALSO BE USED TO SERVE IN AN EMERGENCY CONDITION.

WATER/SEWER: TOWN OF FRONT ROYAL – DEPARTMENT OF PUBLIC UTILITIES
800 CROSBY ROAD
FRONT ROYAL, VIRGINIA 22630
(540) 635-7819

PHONE: SPRINT
450 REMOUNT ROAD
FRONT ROYAL, VIRGINIA 22630
(540) 635-3197

POWER: TOWN OF FRONT ROYAL – ELECTRIC DEPARTMENT
1101 MANASSAS AVENUE
FRONT ROYAL, VIRGINIA 22630
(540) 635-3027

MISS UTILITY: (800) 552-7001

SITE AND ZONING DATA

1. THE PROPERTY DELINEATED HEREON IS LOCATED ON WARREN COUNTY TAX ASSESSMENT MAP 20A2 ((13)) PARCEL G.
2. THE SUBJECT PROPERTY CONTAINS 541.330 SQUARE FEET OR 12.4272 ACRES OF LAND BE THE SAME MORE OR LESS.
3. THE SITE IS CURRENTLY ZONED R-1 AND IS BEING ADMINISTERED UNDER THE TOWN OF FRONT ROYAL ZONING ORDINANCE.
   - MINIMUM LOT SIZE: 10,000 SF
   - REQUIRED YARD SETBCKS:
     - FRONT: 35'
     - SIDE: 15'/10' (25' TOTAL)
     - REAR: 30'
   - LOT COVERAGE: 30% MAX
   - MAX BUILDING HT: 35'
   - REQ. PARKING: 2 SPACES/DWELLING UNIT
4. THE FOLLOWING "APPROVED LAND DEVELOPMENT APPLICATIONS" WHICH PRECEDE THIS APPLICATION ARE ASSOCIATED WITH THIS PROJECT:
   A. HAPPY CREEK KNOLLS – SECTION II APPROVED
   B. HAPPY CREEK KNOLLS – SECTION III APPROVED
5. THE PROPERTY SHOWN HEREON IS NOT IN A 100-YEAR FLOODPLAIN. IT LIES IN ZONE "X" (UN-SHADED)(AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR TOWN OF FRONT ROYAL VIRGINIA, WARREN COUNTY, COMMUNITY-PANEL NUMBER 51067 0003 B, EFFECTIVE DATE JULY 15, 1988.
6. COMMON OPEN SPACE AREAS ARE TO BE DEDICATED TO AND MAINTAINED BY A HOME OWNERS' ASSOCIATION.
7. WATER AND SEWER SERVICES ARE TO BE PROVIDED BY THE TOWN OF FRONT ROYAL DEPARTMENT OF PUBLIC UTILITIES.

CONTINUED ON SHEET 2

SHEET INDEX

SURVEYOR'S CERTIFICATE:
I HEREBY CERTIFY THAT THE LAND SHOWN IN THIS FINAL SUBDIVISION PLAN IS A PORTION OF THE LAND CONVEYED TO RAMSEY INC., BY DEEDS DATED MAY 29, 2001 AND NOVEMBER 6, 2001 OF RECORD IN THE WARREN COUNTY CIRCUIT COURT CLERK'S OFFICE IN INSTRUMENT # 010004122 AND 010008722.

PAUL SWARTZ, L.S. #002701

OWNER'S CERTIFICATE:
THE PLATTING OR DEDICATION OF THE FOLLOWING FINAL SUBDIVISION PLAN FOR THE RESUBDIVISION OF A PORTION OF HAPPY CREEK KNOLLS SUBDIVISION IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNERS, PROPRIETORS AND TRUSTEES, IF ANY.

REVISION BLOCK

NO.	REVISION	DATE
1	SHEETS 1, 3-4A, 6-8, & 27-29 – COUNTY COMMENTS	10/01/2019

APPROVAL BLOCK
ALL TOWN REAL ESTATE TAXES HAVE BEEN PAID IN FULL

DIRECTOR OF FINANCE — DATE
REVIEWED AND APPROVED BY THE TOWN OF FRONT ROYAL

DIRECTOR OF PLANNING AND ZONING — DATE

TOWN COUNCIL — DATE

DIRECTOR OF ENVIRONMENTAL SERVICES — DATE

DIRECTOR OF ENERGY SERVICES — DATE

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
101 South Street, S.E.
Leesburg, Virginia 20175
Phone: (703) 443-2400
Fax: (703) 443-2425
www.bowmanconsulting.com

COVER SHEET
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS

DESIGN	DRAWN	CHKD
GC	MCW	

SCALE H: AS SHOWN V:
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005

SHEET 1 OF 33

STANDARD LEGEND

EXISTING	DESCRIPTION	PROPOSED
350	INDEX CONTOUR	350
352	INTERMEDIATE CONTOUR	352
EX. E.P.	EDGE OF PAVEMENT	PROP. E.P.
EX. C. & G.	CURB AND GUTTER	CG-6
	TRANSITION FROM CG-6R TO CG-6	CG-6R / CG-6
	PROPOSED HEADER CURB	
	PROPERTY LINE	
	DEPARTING PROPERTY LINE	
	LOT LINE	
	RIGHT-OF-WAY	
	CENTERLINE	
	FLOOD PLAIN	
	CLEARING AND GRADING	
	TREE LINE	
	FLOW LINE OF SWALE	
	STREAM	
	OVERLAND RELIEF PATHWAY	
	FENCE LINE	
	EASEMENT	
EX 6" W/M	WATER LINE	8" DIP W/M
EX. W/V	WATER VALVE	
	REDUCER	
EX 8" SAN	SANITARY SEWER	8" SAN
EX 15" RCP	STORM SEWER	18" RCP
	CABLE TV	CATV
	ELECTRIC SERVICE	
	TELEPHONE SERVICE	
	GAS LINE	
+ 25.32	SPOT ELEVATION	
	UTILITY POLE	
	SIGN	
	SANITARY SEWER IDENTIFIER	
	STORM DRAIN IDENTIFIER	
	EASEMENT IDENTIFIER	
	WATER METER	
	FIRE HYDRANT	
	PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES	
	STREET LIGHT	
	VEHICLES PER DAY (TRAFFIC COUNT)	200 VPD
	TEST PIT LOCATION RECOMMENDED/REQUIRED	
	CRITICAL SLOPE SLOPES TO BE STABILIZED PURSUANT TO VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK	
	HANDICAP RAMP (CG-12) DENOTES LOCATION OF STD VDOT CG-12 AND/OR JURISDICTIONAL STANDARD RAMP CONSTRUCTION	
	DENOTES CLEAR SIGHT TRIANGLE	
EX 15" OAK	TREE	
	BENCHMARK	BM #1 TRV #1 ELEV=101.62
	ASPHALT TRAIL	
	CONCRETE SIDEWALK	
	END WALLS	
	END SECTIONS	
	STOP SIGN	
	STREET SIGN	
OHE	OVERHEAD ELECTRIC	OHE
OHT	OVERHEAD TELEPHONE	OHT
	HANDICAP PARKING SPACE (VAN)	VAN
	RIP RAP	

EASEMENT LEGEND

- (IE) DENOTES INGRESS/EGRESS EASEMENT
- (SS) DENOTES SANITARY SEWER EASEMENT
- (SD) DENOTES STORM DRAIN EASEMENT
- (SW) DENOTES SIDEWALK EASEMENT
- (PA) DENOTES PRIVATE ACCESS EASEMENT
- (W) DENOTES WATER MAIN EASEMENT
- (SI) DENOTES SIGHT DISTANCE EASEMENT
- (TR) DENOTES TRAIL EASEMENT
- (LS) DENOTES LANDSCAPE EASEMENT

NOTE: ALL EASEMENTS ARE PERMANENT UNLESS SPECIFICALLY NOTED AS TEMPORARY.

VDOT GENERAL NOTES

Revised 1/31/19

1. These plans were prepared in accordance with the requirements of (select one):
   ☒ VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manual Appendix B1). Schematic street layout and computations of Connectivity Index are provided with these plans per 24VAC30-92-60.
   ☐ VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manuel Appendix B1). Schematic street layout with phasing diagram for street acceptance are provided with these plans per 24VAC30-92-60.
   ☐ VDOT Secondary Street Acceptance Requirements (SSAR 24VAC-30-92 effective December 31, 2014 and VDOT Road Design Manual Appendix B2 as approved for use in designated high density development areas). Schematic street layout with phasing diagram for street acceptance are provided with these plans per 24VAC30-92-60.
2. Methods and materials used shall conform to the current county/town and VDOT standards and specifications.
3. All utilities, including all poles, are to be relocated at the developer's expense, prior to construction.
4. Open cutting of paved or surface treated roads is not permitted. All utilities which will be placed under existing streets are to be bored or jacked. Any exceptions, due to extenuating circumstances, are to be addressed at the permit stage.
5. Any type of reverse curb (spill curb, CG-6 with a revered slope, etc.) and transition to these curbs shall not be used with the public right of way.
6. The developer is responsible for eny damage to existing roads and utilities which occur as a result of project construction within or contiguous to the existing right of way.
7. A smooth grade shall be maintained from the centerline of the existing road to the proposed edge of pavement to preclude the forming of false gutters and/or the ponding of any water in the roadway.
8. Standard guardrails and/or handrails shall be installed at hazardous locations as designated during the field review by the county/town inspector or VDOT.
9. The developer is responsible for all traffic control. The developer shall submit a signing, striping and/or signalization plan to the VDOT Land Development Section a minimum of thirty days prior to permit application. The developer shall not commence construction of any pavement course without an approved striping plan.
10. The pavement design is based on an assumed CBR value of 10 (use a CBR value of 6 in Loudoun Co.). Soil tests of subgrade must be submitted for the actual determination of the required thickness of the pavement including layers of asphalt and subbase prior to subbase placement.
11. All untreated aggregate used in base or subbase courses shall be 21B, except on roads with an ADT of 1000 vpd or less, where 21A aggregate may be used. When 21B aggregate is used, UD-4 underdrains must be provided.
12. A 4" (min.) layer of stone is required beneath curb and gutter (may be shown on typical section in lieu of a note).
13. Additional ditch linings or siltation and erosion control measures shall be provided, at the developer's expense, as determined necessary by VDOT and/or the county/town during field review. All costs shall be assumed by the developer.
14. The entire surface of the roadway (old and new portions) shall be overlaid and re-striped as required by VDOT personnel. Overlay of existing pavement shall be a minimum of 1.25" depth; any costs associated with pavement overlay, or the milling of existing pavement to obtain required depth, shall be assumed by the developer.
15. The developer is responsible for the design and construction of any traffic signal installation or modification which will be necessary as a result of the development of this site.
16. All right of way dedicated to public use shall be clear and unencumbered.
17. The county/town shall obtain a permit for all sidewalks within the right of way that do not qualify for VDOT maintenance.
18. Traffic control devices or advisory signs, such as multiway stops, speed limits, Watch for Children, Pedestrian Traffic etc., shall not be installed unless specifically shown on these plans or a VDOT approved plan revision. A speed study certified by a professional engineer should be submitted for VDOT approval prior to the street acceptance for any road to be posted other than the statutory speed limit. Should unapproved signs be noted at the time of VDOT inspection, the road acceptance process shall be terminated immediately and not recommenced until a determination is made regarding the approval of any additional signs. Immediate removal of such signs shall not negate the need for the submission of a revision.
19. Landscaping and irrigation systems shall not be installed within the public right of way except as shown on these plans or a VDOT approved revision.
20. Beginning July 1, 2009 all Land Use Permit applications are required to provide at least one (1) person who, at a minimum, is verified by VDOT in Basic Work Zone Traffic Control for all permitted activities within state maintained right of way which involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of all work zone traffic control devices.

HAPPY CREEK KNOLLS SECTION 4 ENVIRONMENTAL IMPACT STATEMENT

HAPPY CREEK KNOLLS SECTION 4 IS THE FINAL PHASE OF THE HAPPY CREEK KNOLLS SUBDIVISION AS PLATTED IN 2002. CONTAINING APPROXIMATELY 12.4272 ACRES, HAPPY CREEK KNOLLS SECTION 4 IS THE FINAL PARCEL TO BE DEVELOPED IN AN OVERALL DEVELOPMENT OF 96 ACRES. THE HAPPY CREEK KNOLLS SUBDIVISION AND ODEN RIDGE SUBDIVISION AS DEVELOPED BY RAMSEY INC. HAS INCLUDED THE CONSTRUCTION AND PLANNED CONSTRUCTION OF 235 SINGLE FAMILY HOMES. A PORTION OF THE OVERALL DEVELOPMENT IS PART OF THE WARREN COUNTY INTERMEDIATE SCHOOL SITE, THE LEACH RUN PARKWAY AND ADJACENT TO THE IMMANENT DEVELOPMENT AND CONSTRUCTION OF THE NEW WARREN MEMORIAL HOSPITAL, AND ADJACENT TO A 90 ACRE SITE ZONED FOR PLANNED NEIGHBORHOOD DEVELOPMENT.

THE TOPOGRAPHY IS ROLLING WITH A VARIETY OF SOILS AS DEPICTED ON THE SOILS MAP. HAPPY CREEK KNOLLS SECTION 4 SLOPES RANGE FROM BEING FLAT TO 2:1 EXISTING GRADES. PROPOSED GRADES DO NOT EXCEED 2:1 SLOPES. OVER LOT GRADING IS MINIMIZED IN THE PROPOSED DEVELOPMENT OF HAPPY CREEK KNOLLS DEVELOPMENT PLANS THROUGH THE USE OF SITE SPECIFIC ADAPTIVE HOUSING. FURTHER EXPLAINED BY PROPOSING FINAL GRADES IN CONJUNCTION WITH EXISTING GRADES THAT ARE MINIMALLY ADJUSTED TO ACCOMMODATE HOUSE CONSTRUCTION AS OPPOSED TO GRADING THE LOT TO FIT A HOUSE THAT WOULD REQUIRE EXTENSIVE GRADING, EXCESSIVELY STEEP DRIVEWAYS AND/OR RETAINING WALLS. AN EXAMPLE OF ADAPTIVE HOUSE CONSTRUCTION WOULD BE THE CONSTRUCTION OF A SPLIT FOYER HOUSE ON A LOT THAT HAS A POSITIVE GRADE FROM THE STREET, WHEREBY THE MAIN ENTRANCE IS ON THE FIRST LEVEL WITH STEPS TO THE SECOND LEVEL AND THE SECOND LEVEL (MAIN LIVING LEVEL) EXITING ON GRADE TO THE REAR (BACK YARD) OF THE HOUSE.

HAPPY CREEK KNOLLS SECTION 4 HAS BEEN ALTERED TOPOGRAPHICALLY DURING THE CONSTRUCTION OF VARIOUS PUBLIC PROJECTS. SUITABLE STRUCTURAL FILL WAS NEEDED FOR THE CONSTRUCTION OF SAMUELS PUBLIC LIBRARY AND WAS OBTAINED FROM HAPPY CREEK KNOLLS SECTION 4 WITH PROPER TESTING AND PERMITS. OVERBURDEN WAS GENERATED FROM THE HAPPY CREEK ROAD IMPROVEMENT PROJECT. WITH PROPER TESTING AND PERMITS THE EXCESS ROCK, DIRT, AND APPROVABLE FILL COMPONENTS WERE PLACED ON THE PROPERTY AND CERTIFIED FOR BOTH APPROPRIATE USE AND COMPACTION FOR RESIDENTIAL HOUSE CONSTRUCTION.

DURING THE PREVIOUSLY PERMITTED LAND DISTURBING ACTIVITIES ON HAPPY CREEK KNOLLS SECTION 4 THERE WERE NO PHYSICAL OR GEOLOGIC FEATURES OBSERVED THAT WOULD QUALIFY AS RESTRICTING FACTORS IN THE FINAL DEVELOPMENT OF THE PROPERTY FOR SINGLE FAMILY RESIDENTIAL USE. FACTORS LACKING PRESENCE INCLUDE BUT ARE NOT LIMITED TO: WET LANDS, RARE SPECIES OF ANIMALS OR FAUNA, PROTECTED SIGNIFICANT VEGETATIVE GROWTH, SINKHOLES, UNUSUAL GEOLOGIC ROCK OR SOIL FORMATIONS.

THE SINGLE MOST INVASIVE ACTIVITY PROPOSED IN THE DEVELOPMENT OF HAPPY CREEK KNOLLS SECTION 4 IS THE REDESIGN AND RECONSTRUCTION OF THE EXISTING STORM WATER MANAGEMENT POND. THE STORM WATER MANAGEMENT POND WAS DESIGNED AND CONSTRUCTED AS A STORM WATER MANAGEMENT DEVICE IN CONJUNCTION WITH THE DEVELOPMENT HAPPY CREEK KNOLLS SECTION 3 IN 2006. IT WAS LATER RECALCULATED AND ADJUSTED TO RECEIVE A PORTION OF THE STORM WATER RUN-OFF FROM HAPPY CREEK KNOLLS SECTION 2 TO FACILITATE THE PLACEMENT OF THE ABOVE REFERENCE OVERBURDEN FROM THE HAPPY CREEK ROAD IMPROVEMENT PROJECT. THE FACT THAT THE POND ALREADY EXISTS AND IS BEING MODIFIED CREATES THE LEAST INVASIVE IMPACT POSSIBLE TO SITE AS WELL AS THE ENVIRONMENT. THE STORM WATER MANAGEMENT AREA AS REQUIRED BY THE TOWN OF FRONT ROYAL WILL BE MAINTAINED BY THE NOW EXISTING HAPPY CREEK KNOLLS PROPERTY OWNERS ASSOCIATION.

IN THAT HAPPY CREEK KNOLLS SECTION 4 IS PRIMARILY AN OPEN GRASSED AREA THERE WILL BE A MINIMAL IMPACT ON THE EXISTING TREE CANOPY. THROUGH THE PROPOSED LANDSCAPING PORTION OF THE FINAL DEVELOPMENT PLAN THE NET CHANGE WILL LIKELY RESULT IN A GREATER NUMBER OF TREES ON THE SITE THAN CURRENTLY EXISTS.

AIR QUALITY WILL BE MINIMALLY IMPACTED THROUGH THE USE OF ENERGY EFFICIENT HEAT PUMPS AND LP (LIQUEFIED PROPANE) GAS FURNACES. AS DICTATED BY EXISTING BUILDING CODES AND CONSTRUCTION STANDARDS, THE CURRENT HOME CONSTRUCTION ENERGY PACKAGE RESULTS IS LOWER ENERGY CONSUMPTION AND THEREFORE LESS DEMAND ON ENERGY SERVICES AND LESS MEASURABLE POLLUTION.

ALL HOUSES WILL BE CONNECTED TO THE PUBLIC SERVICES AS PROVIDED BY THE TOWN OF FRONT ROYAL, THEREFORE RESULTING IN MINIMAL IMPACT ON THE GROUND WATER TABLE, AS IMPACTED BY THE DRILLING OF PRIVATE WELLS, OR THE INSTALLATION AND MAINTENANCE OF PRIVATE INDIVIDUAL SEPTIC DISPOSAL SYSTEMS.

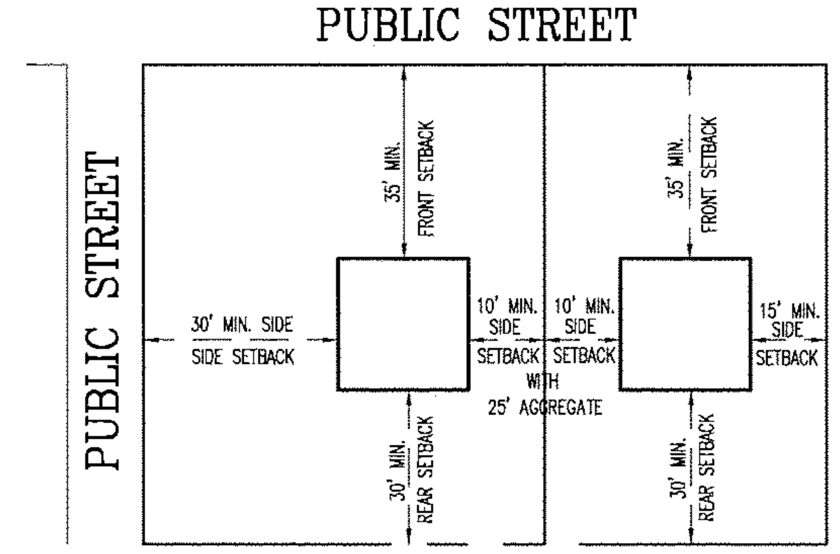
AS, IDENTIFIED ON USGS MAPPING, HAPPY CREEK KNOLLS SECTION 4 IS NOT CONTAINED IN, OR ABOUT TO ANY 100 YEAR FLOOD WAYS, FLOODPLAIN, OR FLOOD ZONES.

TOWN OF FRONT ROYAL GENERAL NOTES

1. FOR TECHNICAL SPECIFICATIONS AND DETAILS REFER TO THE TOWN OF FRONT ROYAL WATER AND SEWER STANDARDS AND SPECIFICATIONS, LATEST EDITION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THESE SPECIFICATIONS. ANY DEVIATIONS OR CHANGES SHALL BE SUBMITTED IN WRITING TO THE TOWN FOR SUPPLEMENTAL APPROVAL. INSPECTIONS SHALL BE PERFORMED BY THE DEPARTMENT OF PUBLIC WORKS. CONTACT:DIRECTOR OF PUBLICWORKS AT (540) 635-7819 OR FAX (540) 635-8973.
2. LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, VERTICALLY AND HORIZONTALLY, OF THE UTILITIES PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AND ALL APPLICABLE UTILITY COMPANIES FOR CLEARANCE PRIOR TO EXCAVATION. CONTRACTOR WILL BE RESPONSIBLE FOR ADHERING TO THE COMMONWEALTH OF VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT, CHAPTER 10, TITLE 56 OF THE CODE OF VIRGINIA.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY DURING CONSTRUCTION IN ACCORDANCE WITH CURRENT STATE AND LOCAL REGULATIONS. DISTURBED AREA SHALL NOT REMAIN DENUDED FOR MORE THAN (7) CALENDAR DAYS. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY INLET PROTECTION, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROCESS. CONTRACTOR SHALL CONTACT THE COUNTY BUILDING INSPECTION OFFICE AT (540) 636-9973 PRIOR TO SCHEDULE INSPECTIONS.
4. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT THE STREETS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
5. ANY STREET OR UTILITIES DAMAGED BY CONTRACTOR OR SUB-CONTRACTOR SHALL BE SOLE RESPONSIBILITY OF THE PRIMARY CONTRACTOR AND PROPERLY AND IMMEDIATELY REPAIRED BYTHE CONTRACTOR. SUCH REPAIRS SHALL BE TO THE ORIGINALCONDITION AND SHALL BE TO THE SATISFACTION OF THE TOWN INSPECTOR.
6. ALL PLASTIC SANITARY SEWER PIPE SHALL BE 8" DIAMETER S.D.R. 35, UNLESS OTHERWISE NOTED. PIPE BEDDING SHALL BE DETERMINED BY FIELD CONDITIONS AND TOWN SPECIFICATIONS.
7. SANITARY SEWER STRUCTURES SHALL BE PRE-CAST CONCRETE OR ACCEPTABLE EQUIVALENT APPROVED BY THE TOWN OF FRONT ROYAL'S PUBLIC WORKS DEPARTMENT.
8. ALL PROPOSED WATER MAINS, HYDRANT BRANCHES AND FIRE SUPPRESSION LINES SHALL BE CLASS 52 DUCTILE IRON PIPE WITH A MINIMUM OF 42" COVER UNLESS OTHERWISE NOTED.
9. ALL 2" AND SMALLER WATER SERVICES SHALL BE TYPE "K" COPPER PIPE. SOLDERED JOINTS ON BURIED LINES ARE NOT ACCEPTABLE.
10. ALL PRECAST CONCRETE STRUCTURES SHALL BE MINIMUM 4D00 PSI AND 28 DAYS WITH BITUMINOUS COATING.
11. THE UNAUTHORIZED USE OF WATER WITHOUT DUE COMPENSATION IS ILLEGAL. NO PERSON SHALL CONNECT TO OR DO ANY WORK ON THAT PORTION OF THE SYSTEM OWNED BY THE TOWN UNLESS WRITTEN AUTHORIZATION IS RECEIVED PRIOR TO COMMENCING WORK.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS BEFORE ANY CONSTRUCTION BEGINS.
13. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENT OF ALL UTILITY BOXES, VAULTS OR OTHER APPURTENANCES TO NEW FINISHED GRADE ELEVATIONS.
14. CONTRACTOR TO RELOCATE ALL SIGNS AND UTILITIES REQUIRED FOR THIS WORK.
15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE TRUE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR CONSTRUCTION.
16. SANITARY SERVICE LATERALS AND CLEAN OUTS SHALL BE CONSTRUCTED AS SPECIFIED IN NOTE #1.
17. ALL CONSTRUCTION SHALL CONFORM TO ZONING AND CONSTRUCTION REQUIREMENTS OF THE TOWN OF FRONT ROYAL. ALL WATER AND SANITARY SEWER INSTALLATIONS SHALL BE INSPECTED BY THE TOWN OF FRONT ROYAL.
18. CONSTRUCTION SHALL CONFORM TO THE AMERICAN WITH DISABILITIES ACT (ADA) REOUIREMENTS. CURB RAMPS SHALL BE PLACED WHERE ALL SIDEWALKS MEET CURBS.
19. CONSTRUCTION LIMITS SHALL BE PROPERTY LINES OR AS INDICATED BY PLAN REQUIREMENTS.
20. ANY PLANNED DISRUPTIONS OF OR TIE INS TO EXISTING UTILITIES SHALL BE APPROVED AND . COORDINATEDWITH THE APPROPRIATE UTILITY OWNER. WITH EXCEPTION OF EMERGENCIES, THERE SHALL BE A MINIMUM NOTIFICATION OF 24 HOURS NOTICE GIVEN BY THE CONTRACTOR TO ALL RESIDENTIAL, COMMERCIAL AND INDUSTRIAL UTILITY USERS AFFECTED BY UTILITY INTERRUPTIONS.
21. ELECTRIC SERVICE TO BE IN COMPLIANCE WITH ENERGY SERVICES CONDUIT POLICY, TFR CODE 12-1 TFR CODE 70-50.1

NOTE: FRONT SHALL BE THE SHORTEST SIDE PER TOWN OF FRONT ROYAL MUNICIPAL CODE SECTION 175-18.

A. OF THE TWO (2) SIDES OF A CORNER LOT, THE FRONT SHALL BE DEEMED TO BE THE SHOREST OF THE TWO (2) SIDES FRONTING ON STREETS.
B. THE SIDE YARD ON THE SIDE FACING THE SIDE OF THE STREET SHALL BE THIRTY (30) FEET OR MORE FOR BOTH MAIN ACCESSORY BUILDINGS.
C. EACH CORNER LOT SHALL HAVE A MINIUM WIDTH AT THE SETBACK LINE OF ONE HUNDRED (100) FEET.



SINGLE FAMILY DETACHED TYPICAL SET BACKS

(NOT TO SCALE)

ROADWAY NOTES:

1.) SUBBASE DEPTH IS BASED ON A C.B.R. VALUE OF 6, BASED ON AN ACTUAL DETERMINATION PER SOILS TESTS (OR) AN ESTIMATE WHICH WILL BE REVISED ONCE THE SOIL TESTS OF SUBGRADE ARE PREFORMED.

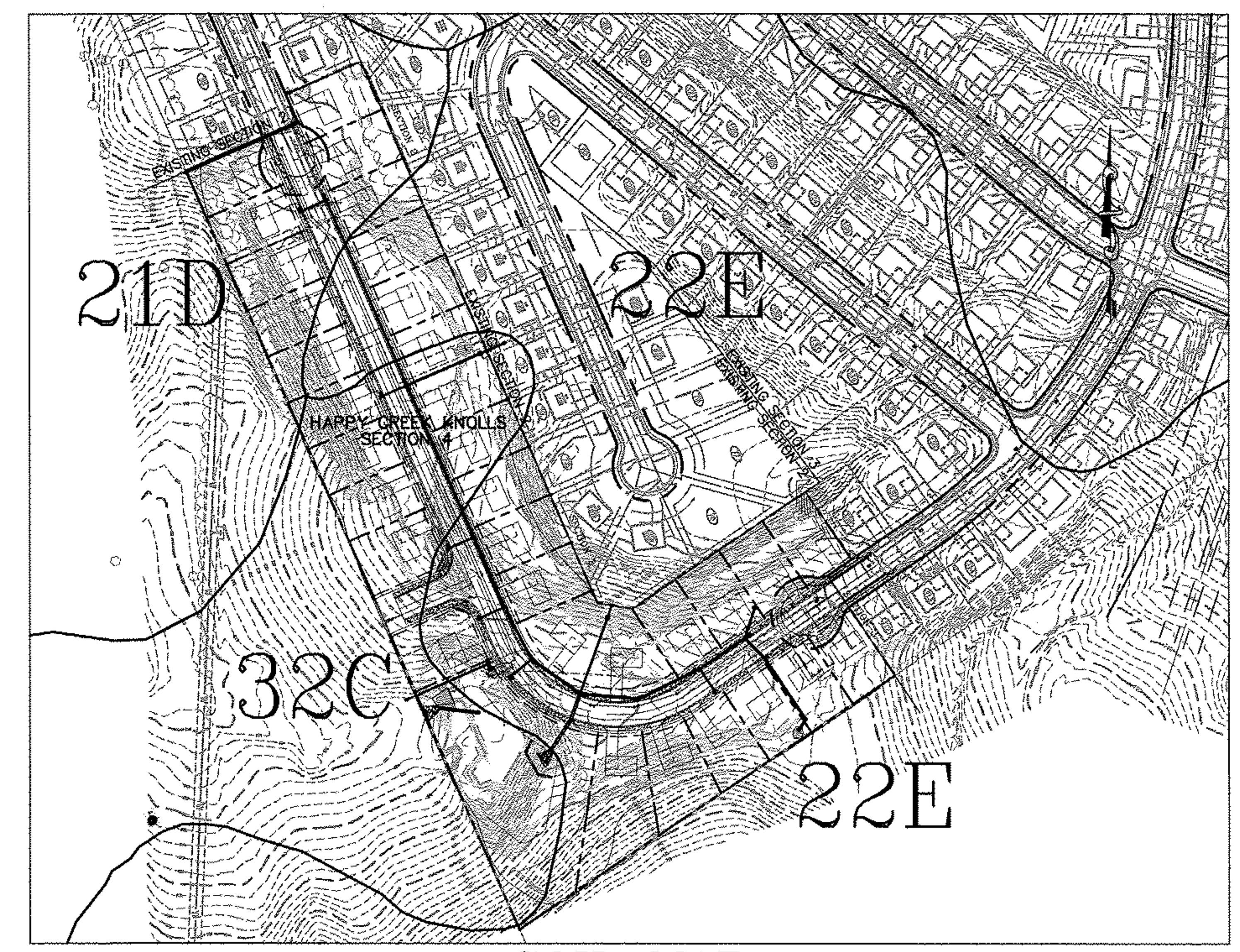
2.) A SMOOTHING GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED CURB AND GUTTER, TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER ON THE ROADWAY.

3.) STANDARD GUARDRAIL AND HANDRAIL SHALL BE INSTALLED AT HAZARDOUS LOCATIONS AS DESIGNATED DURING FINAL FIELD INSPECTIONS.

4.) * SHOULDER TO BE WIDENED WHERE GUARD RAIL IS REQUIRED.

5.) SIDEWALKS AND TRAILS SHALL BE CONSTRUCTED ON A 4" THICK LAYER OF NUMBER 57 STONE.

6.) FOR DITCH & SHOULDER ROADWAY SECTIONS THE BACK SLOPE OF THE DITCH SHALL EXTEND UP AT A SLOPE OF 3:1 FOR A DISTANCE EOUAL TO THE DEPTH OF THE DITCH ASSOCIATED WITH THE FRONT SLOPE.



SOIL MAP

SCALE: 1"=200'

SITE AND ZONING DATA (CONTINUED)

HAPPY CREEK KNOLLS SECTION 4		
LOT TABULATION		
LOT #	LOT AREA (FT^2)	LOT AREA (ACRES)
1	10,374.97	0.238
2	10,371.85	0.238
3	10,368.73	0.238
4	10,921.77	0.251
5	13,409.14	0.308
6	20,632.84	0.474
7	13,026.39	0.299
8	10,545.86	0.242
9	10,563.41	0.243
10	10,580.96	0.243
11	10,598.51	0.243
12	10,616.06	0.244
13	10,633.61	0.244
14	10,651.16	0.245
15	10,668.71	0.245
16	10,795.67	0.248
17	10,795.42	0.248
18	10,794.86	0.248
19	10,794.29	0.248
20	10,793.73	0.248
21	10,793.17	0.248
22	10,792.60	0.248
23	10,792.04	0.248
24	10,791.47	0.248
25	10,790.91	0.248
26	10,790.35	0.248
27	12,859.23	0.295
28	13,073.76	0.300
29	10,790.24	0.248
30	10,790.00	0.248
31	10,790.00	0.248
32	10,790.00	0.248
33	12,987.73	0.298
Total	374,769.43	**8.604**

TABULATION

TOTAL SITE AREA	12.43 Acres
TOTAL DEVELOPED AREA	12.43 Acres
TOTAL DISTURBED AREA	11.90 Acres
TOTAL LOT AREA	8.60 Acres
TOTAL ON-SITE STREET AREA	2.28 Acres
TOTAL ON-SITE OPEN SPACE	0.00 Acres
STORMWATER MANAGEMENT FACILITY	1.55 Acres
TOTAL ON-SITE RESIDUE	0.00 Acres

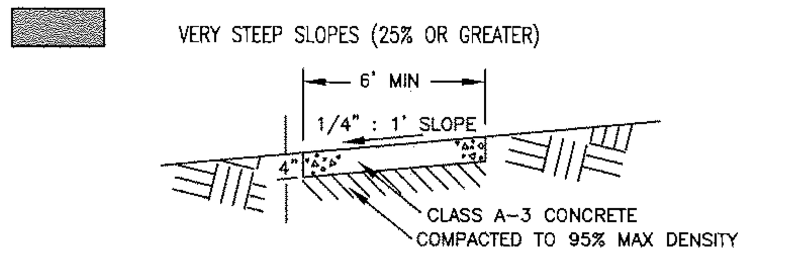
SOILS DESCRIPTIONS

TYPE	NAME	GROUP	SLOPE	CLASS	K-FACTOR
32C	MYERSVILLE AND MONTALTA	C	7-15%	VI	0.43
22E	LEW VERY STONY LOAM	B	25-65%	VII	0.32
21D	LEW CHANNERY LOAM	B	7-25%	VI	0.32

(78B) DENOTES SOIL TYPE

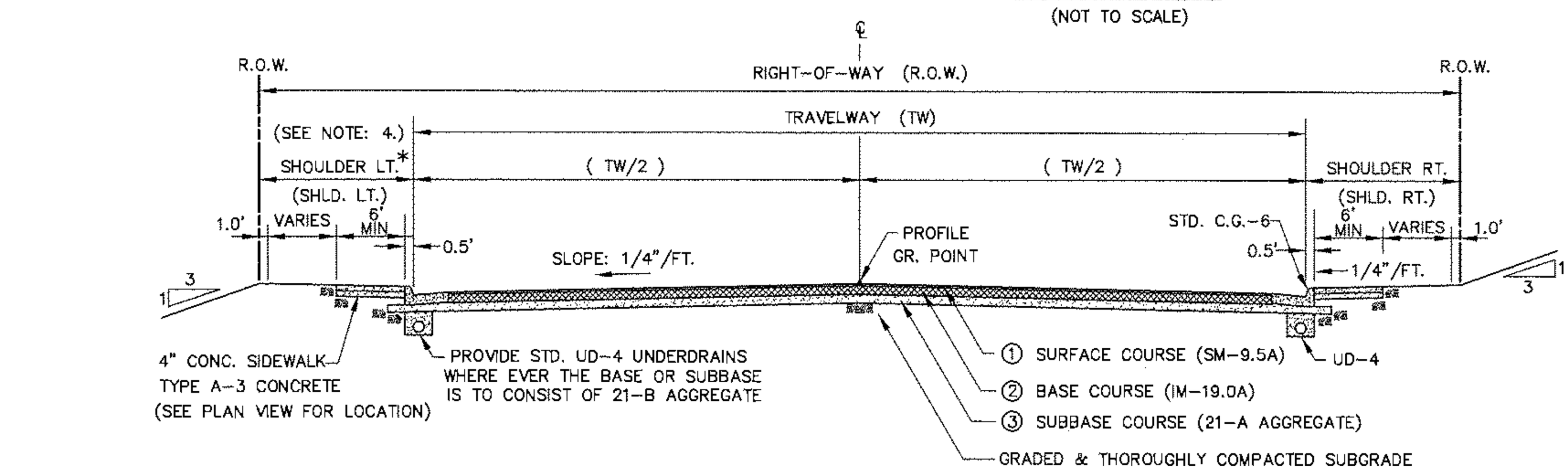
MODERATELY STEEP SLOPES (15%-25% SLOPE)

VERY STEEP SLOPES (25% OR GREATER)



TYPICAL SECTION SIDEWALK

(NOT TO SCALE)



TYPICAL CURB AND GUTTER PUBLIC STREET SECTION

NOT TO SCALE

STREET NAME	CLASSIFICATION/TERRAIN	ADT (10x#LOTS)	DESIGN SPEED	①	②	③	④	R.O.W.	TW.	MEDIAN	SHLD. (LT.)	SHLD. (RT.)
HAPPY RIDGE DRIVE	URBAN COLLECTOR/ROLLING	330	25	1 1/2"	3"	8"	N/A	60'	40'	N.A.	10.0'	10.0'
HAYMAKER LANE	STUB/SLOPE	N/A	25	1 1/2"	3"	8"	N/A	60'	40'	N.A.	10.0'	10.D'

NOTE: NO TIA WAS PREFORMED FOR THIS SUBDIVISION

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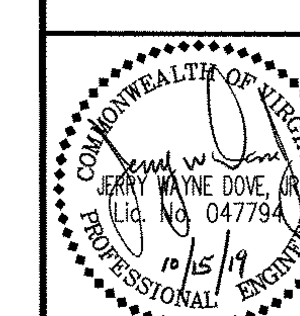
DETAILS, TYPICAL SECTIONS, & SOILS MAP

HAPPY CREEK KNOLLS SECTION 4

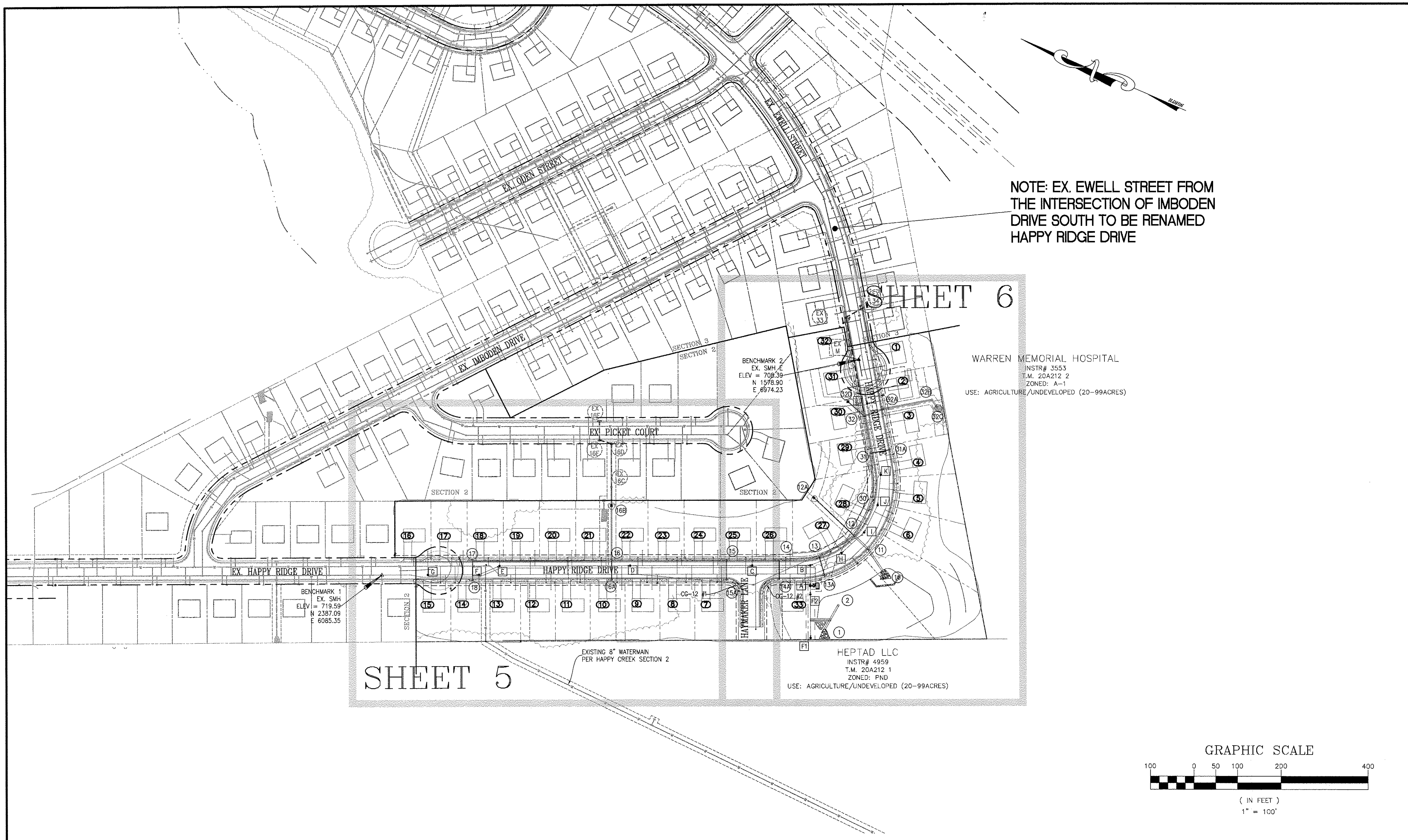
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA



PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: AS SHOWN V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		



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SCHEMATIC PLAN

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

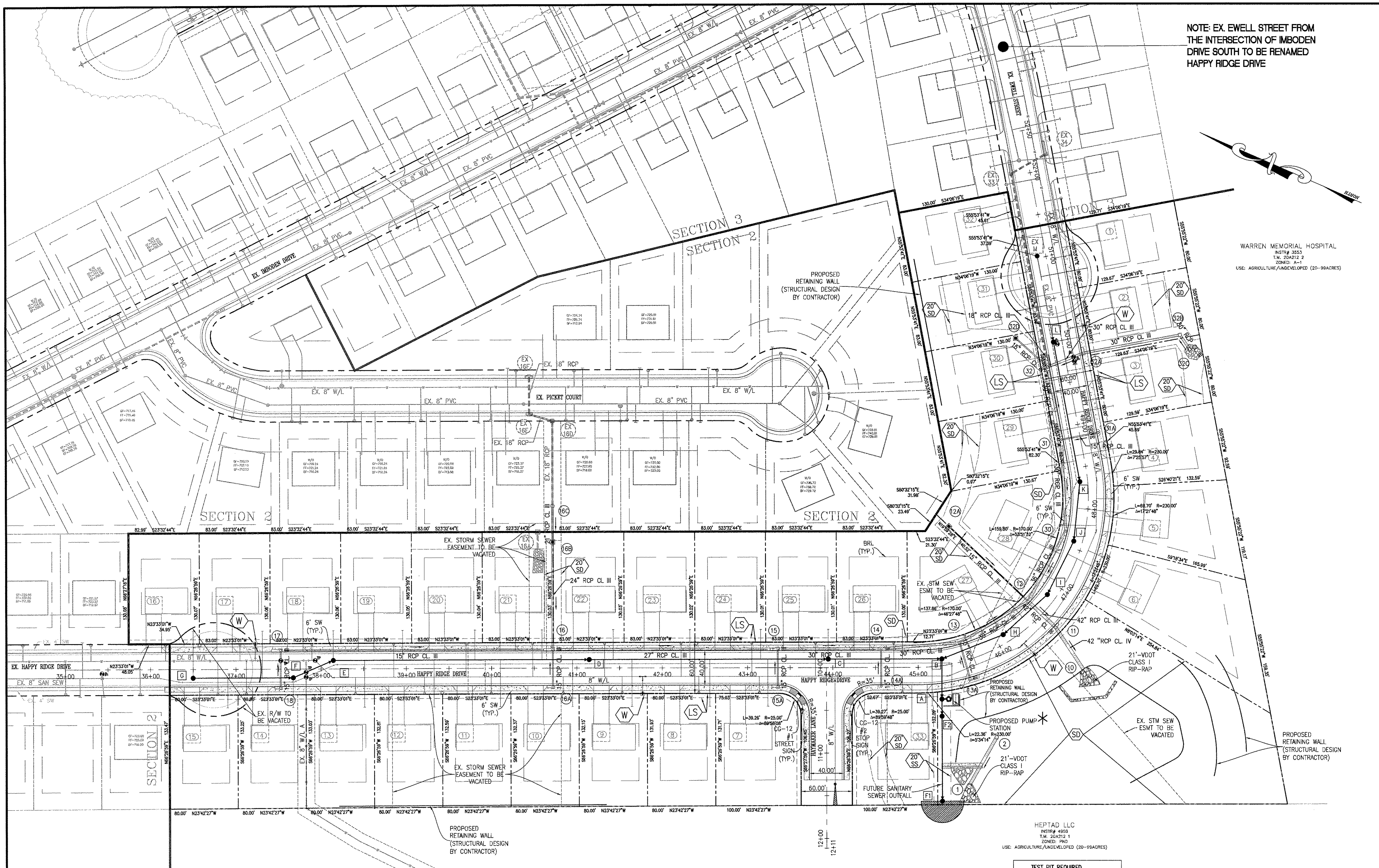
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047754
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=100' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

SHEET 3 OF 33



TEST PIT REQUIRED

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*NOTE: PUMP STATION MAY BE ELIMINATED IF AN ON GRADE ALTERNATIVE ROUTE IS APPROVED.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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GEOMETRIC PLAN

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

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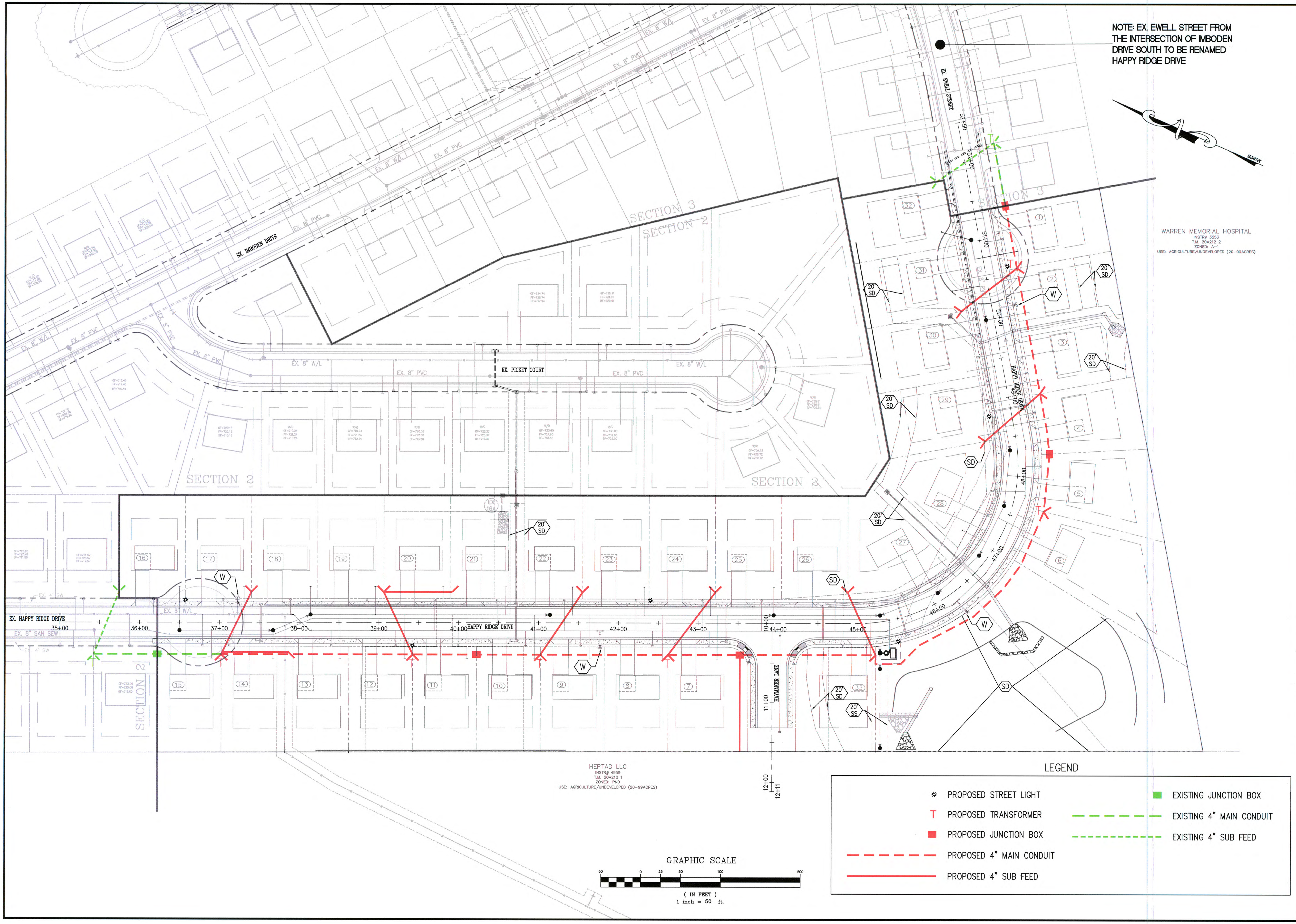
SCALE	H: 1"=50' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		
SHEET 4 OF 33		



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UTILITY PLAN

HAPPY CREEK KNOLLS
SECTION 4
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PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC	MCW	
DESIGN	DRAWN	CHKD

SCALE H: 1"=50' V:

JOB No. 1602-02-016

DATE JULY 19, 2019

FILE No. 1602-D-CP-005

SHEET 4A OF 33

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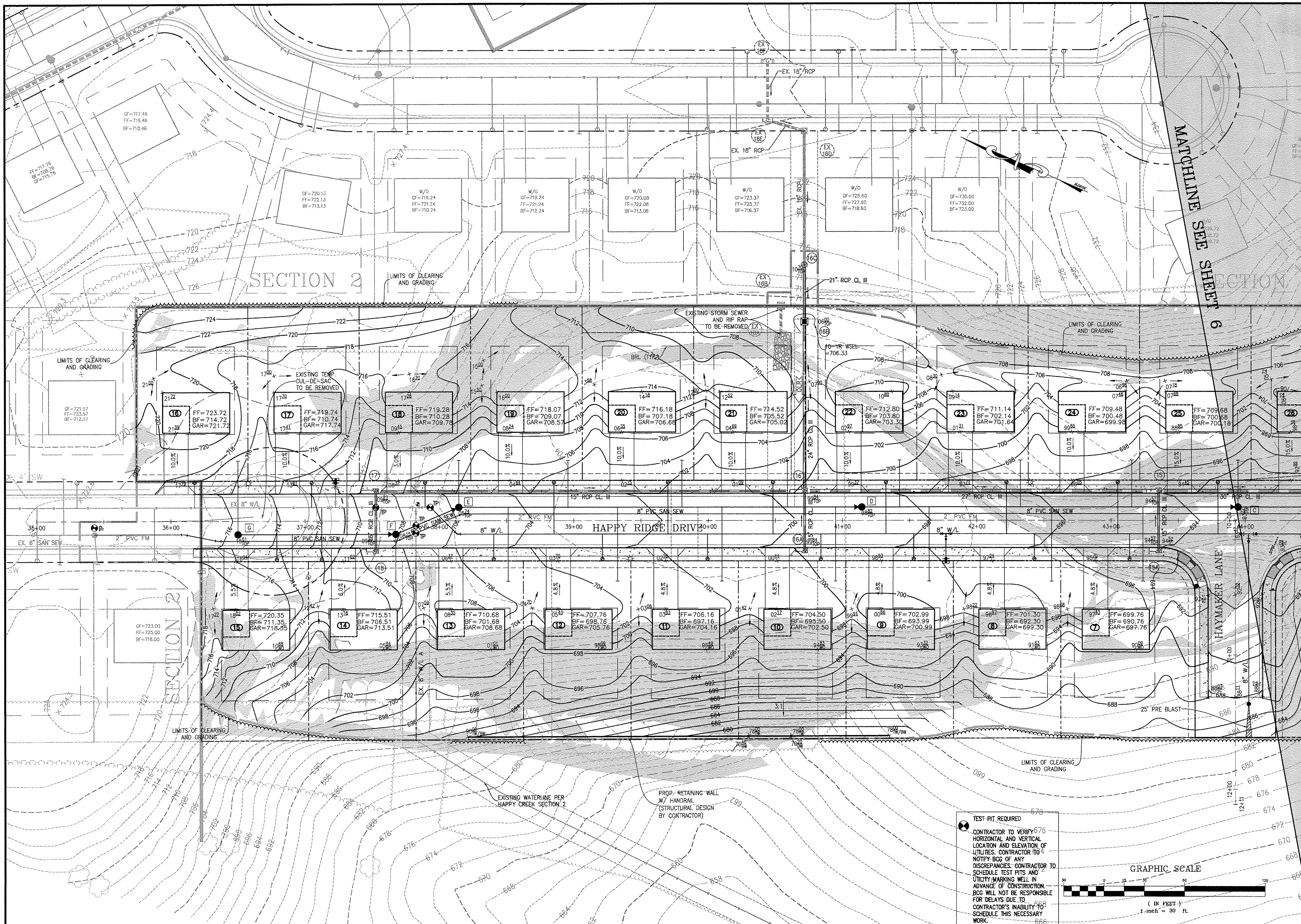

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GRADING PLAN

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
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PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=30' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

SHEET 5 OF 33

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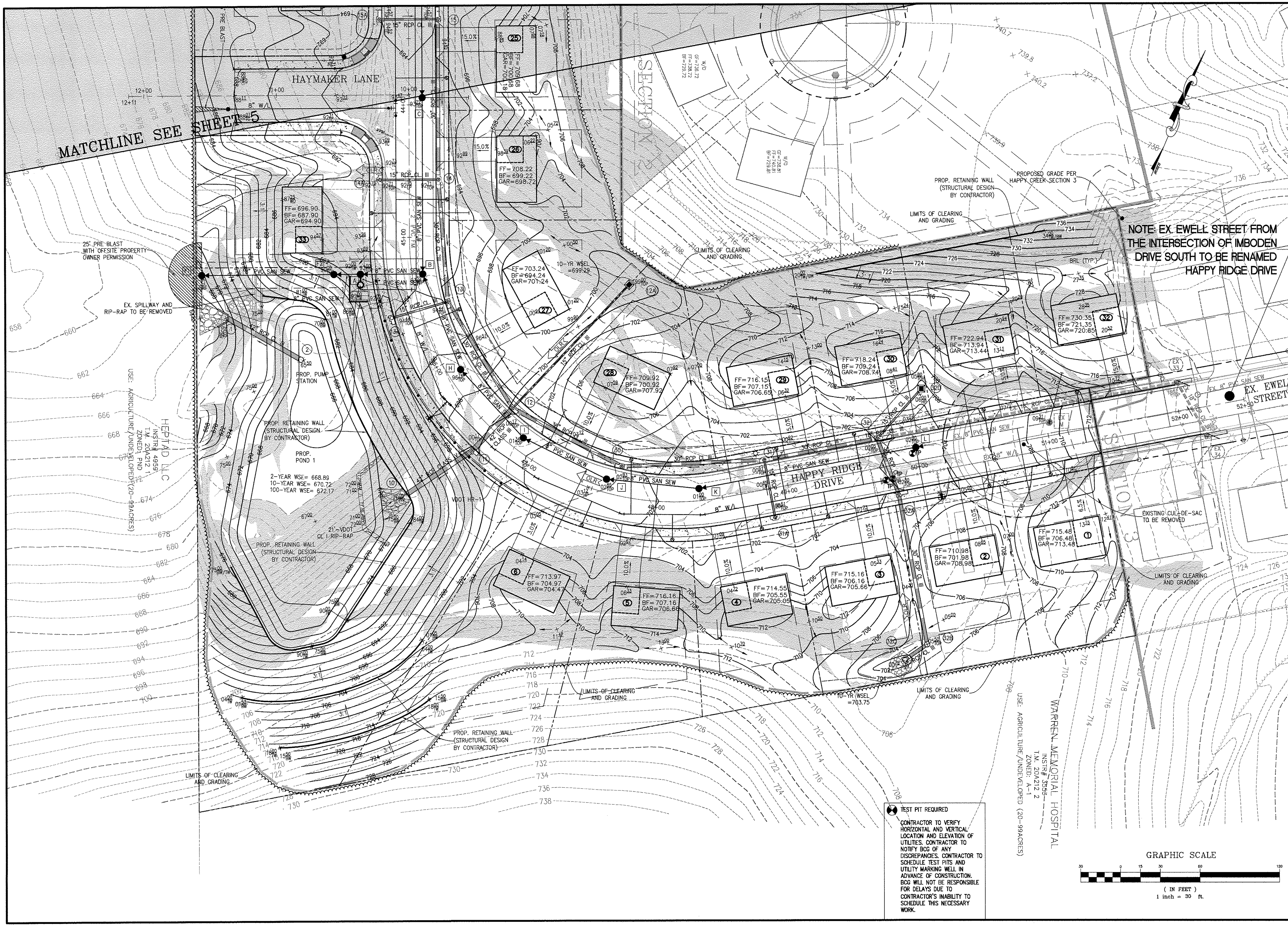

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GRADING PLAN

HAPPY CREEK KNOLLS SECTION 4

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DESIGN	DRAWN	CHKD

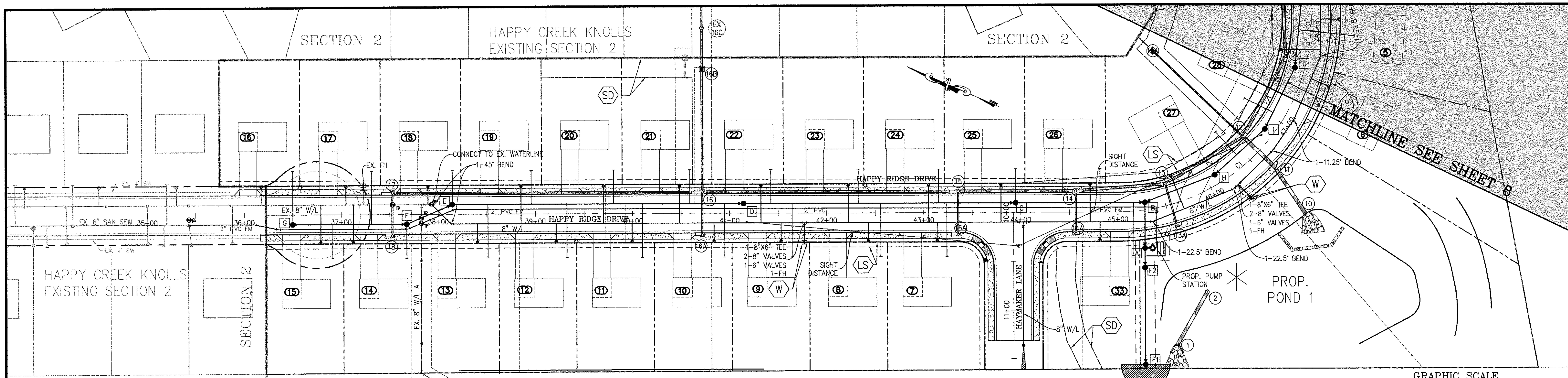
SCALE H: 1"=30' V:

JOB No. 1602-02-016

DATE JULY 19, 2019

FILE No. 1602-D-CP-005

SHEET 6 of 33



HAPPY RIDGE DRIVE

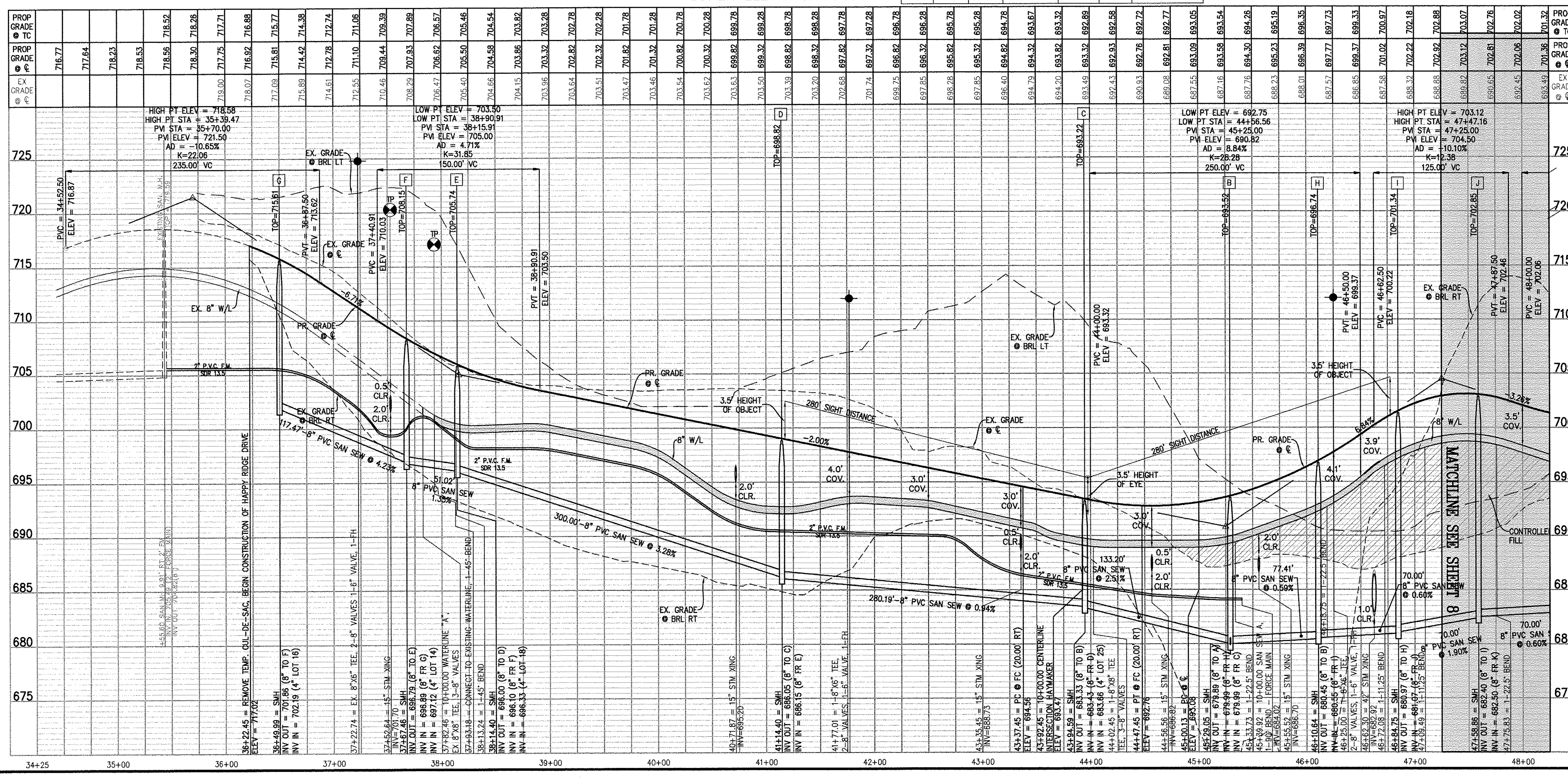
RIGHT-OF-WAY WIDTH 60'
DESIGN SPEED 25 MPH
SUPER ELEVATION: NA

ROADWAY CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIRECTION
C1	351.00'	200'	100° 33' 77"	240.71	307.66	S 73° 49' 40" E

NOTE: PROPOSED PUMP STATION MAY BE ELIMINATED IF AN ON GRADE ALTERNATIVE ROUTE IS APPROVED

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.



TP TEST PIT REQUIRED

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PLAN AND PROFILE - HAPPY RIDGE DRIVE
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

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SCALE	H: 1"=50' V: 1"=5'	
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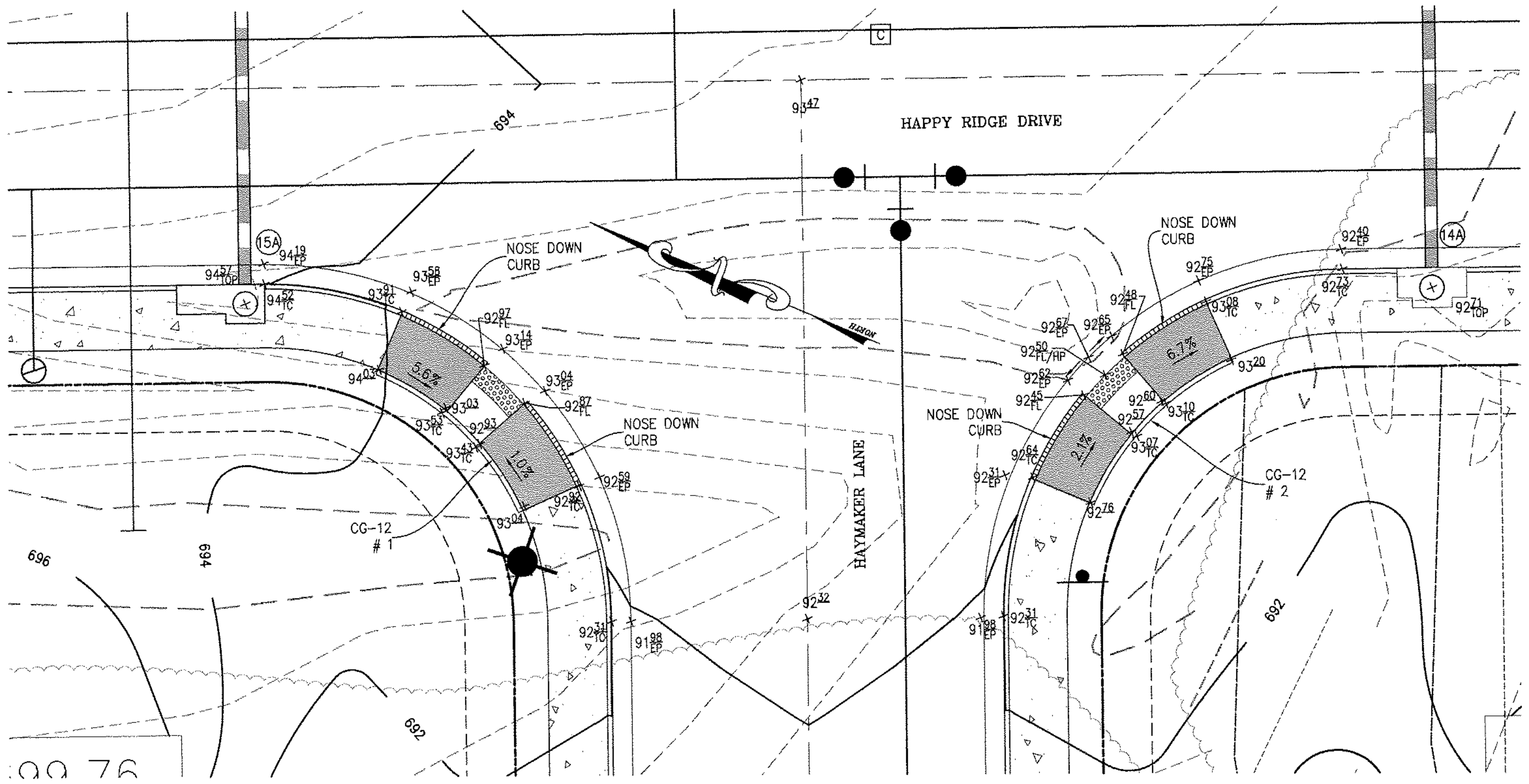

GRAPHIC SCALE

(IN FEET)
1 inch = 1 ft.

DETAILED CG-12 GRADING

TEST PIT REQUIRED

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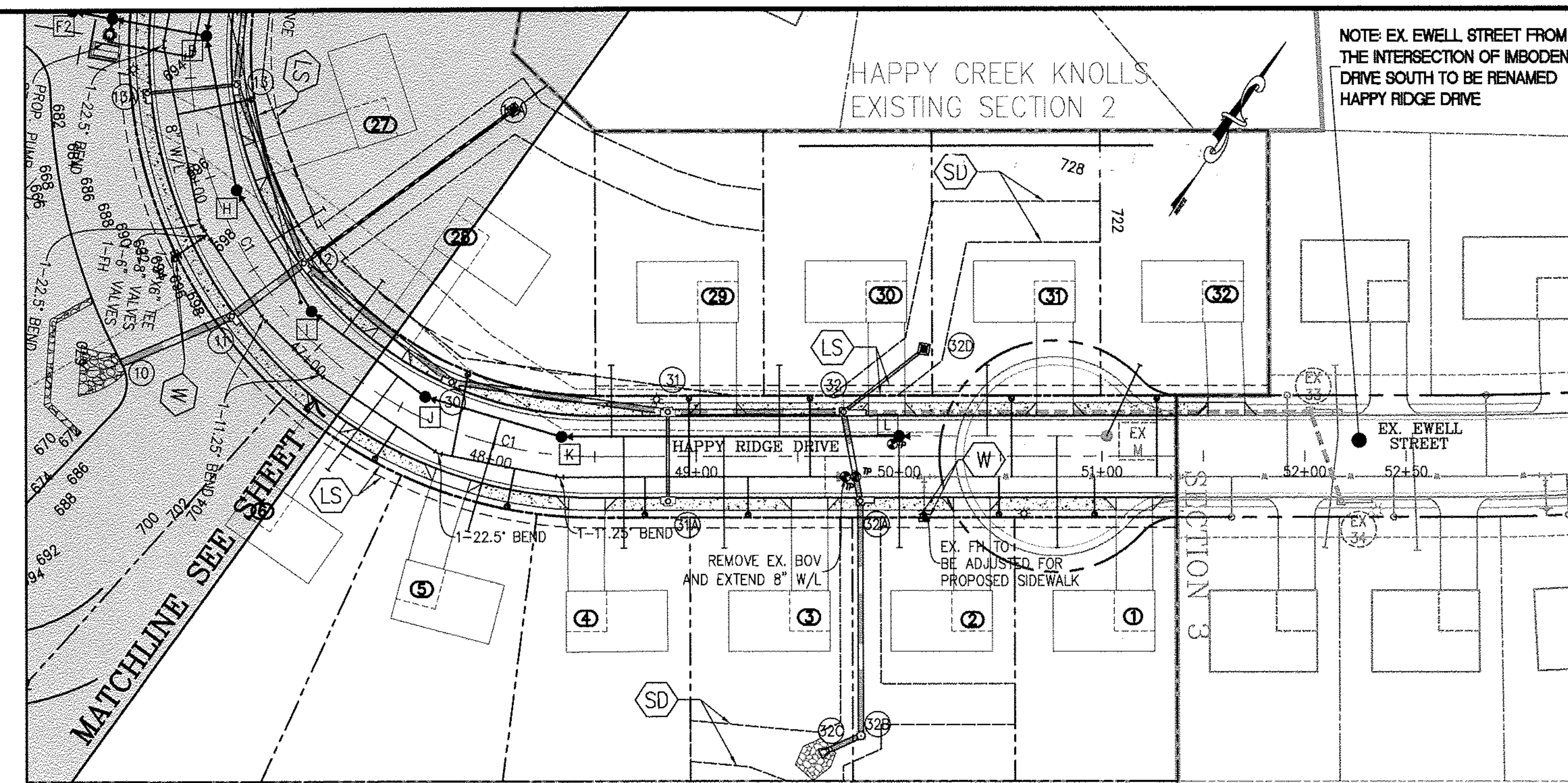


NOTE: EX. EWELL STREET FROM THE INTERSECTION OF IMBODEN DRIVE SOUTH TO BE RENAMED HAPPY RIDGE DRIVE

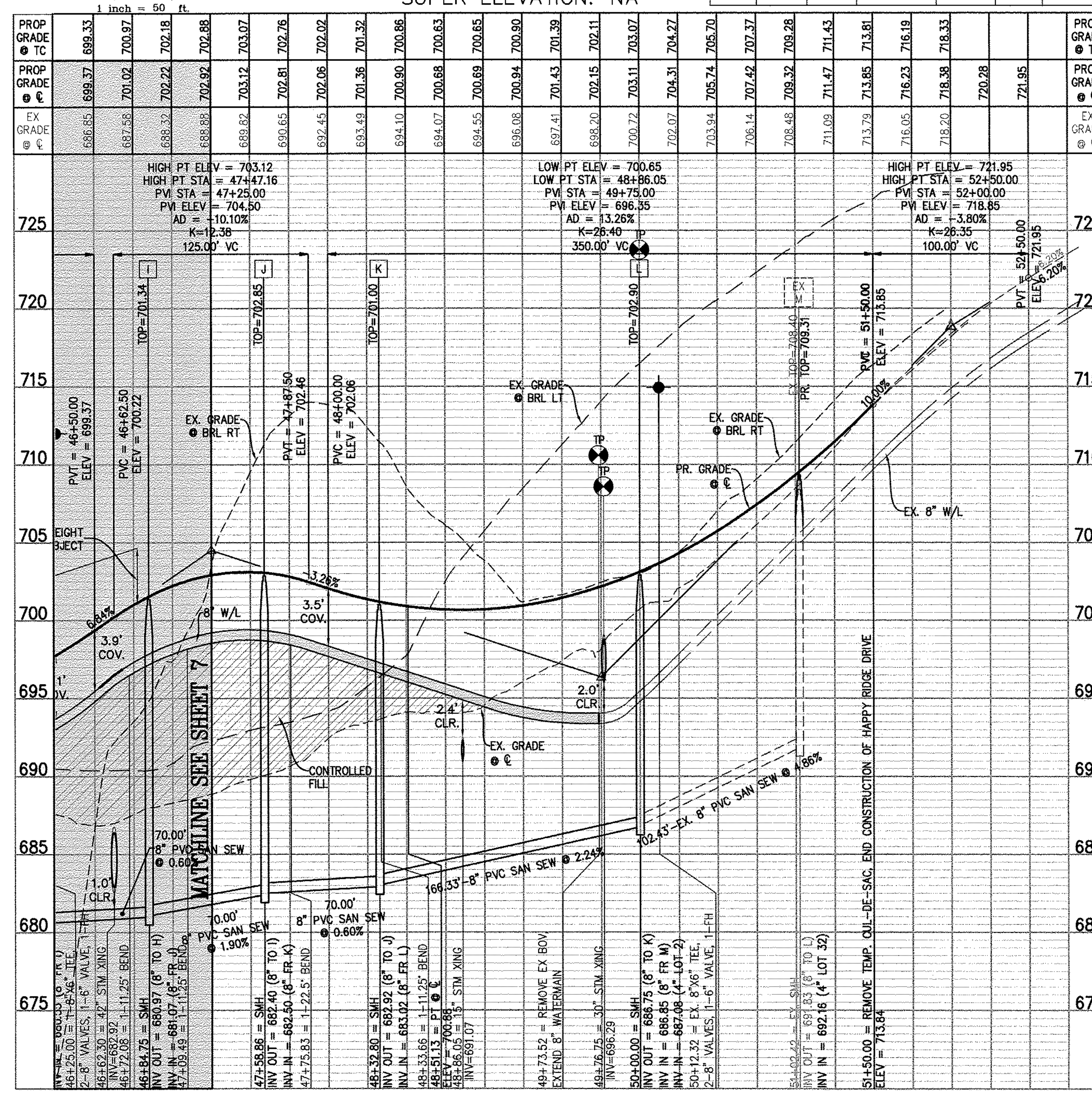
GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

HAPPY RIDGE DRIVE

RIGHT- OF- WAY WIDTH 60'
DESIGN SPEED 25 MPH
SUPER ELEVATION: NA

ROADWAY CENTERLINE CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIRECTION
C1	351.00'	200'	100° 33' 77"	240.71	307.66	S 73° 49' 40" E



PLAN AND PROFILE – HAPPY RIDGE DRIVE

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

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PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=50' V: 1"=5'	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		
SHEET 8 OF 33		

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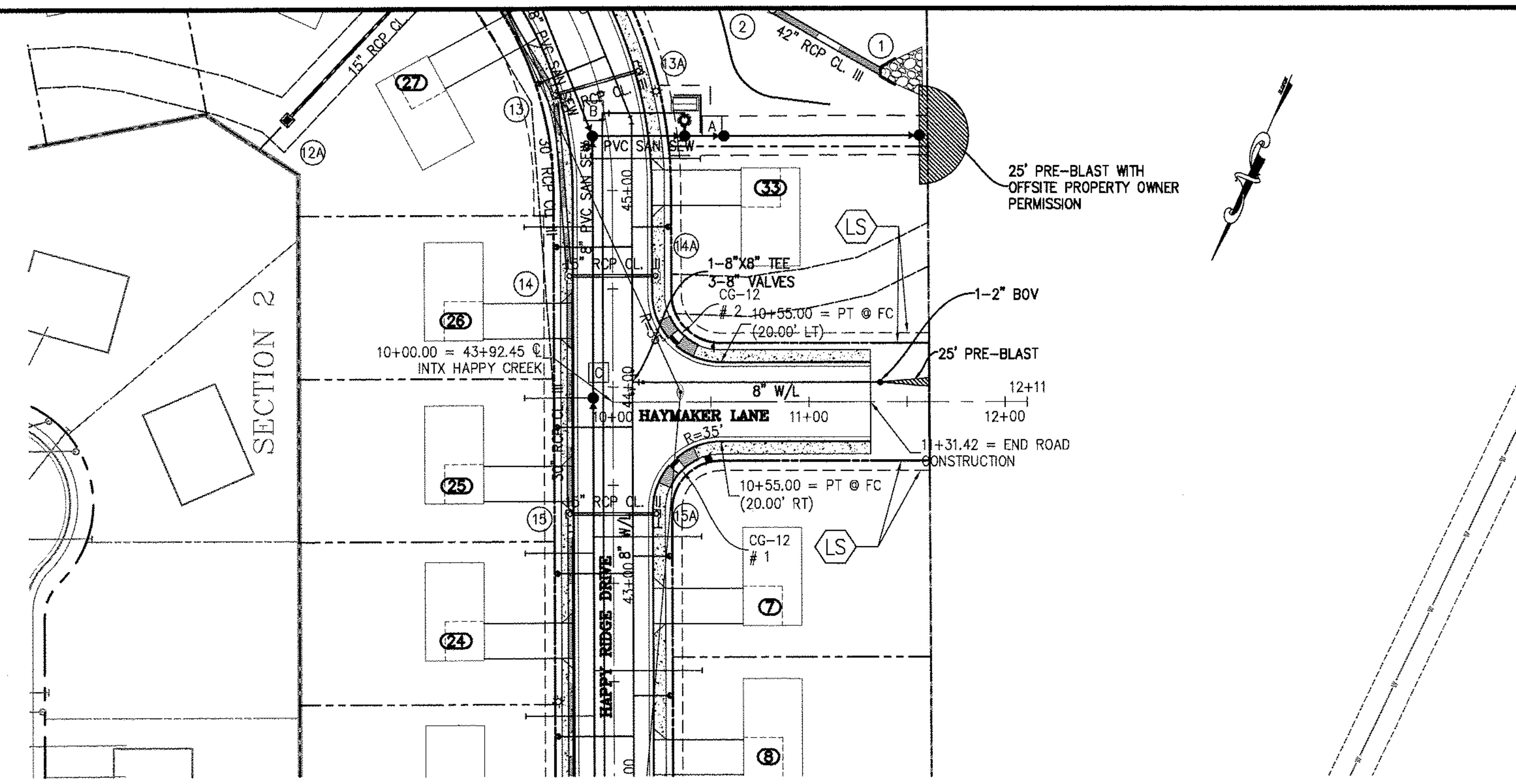

HAYMAKER LANE

RIGHT- OF- WAY WIDTH 60'
DESIGN SPEED 25 MPH
SUPER ELEVATION: NA

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

TP TEST PIT REQUIRED

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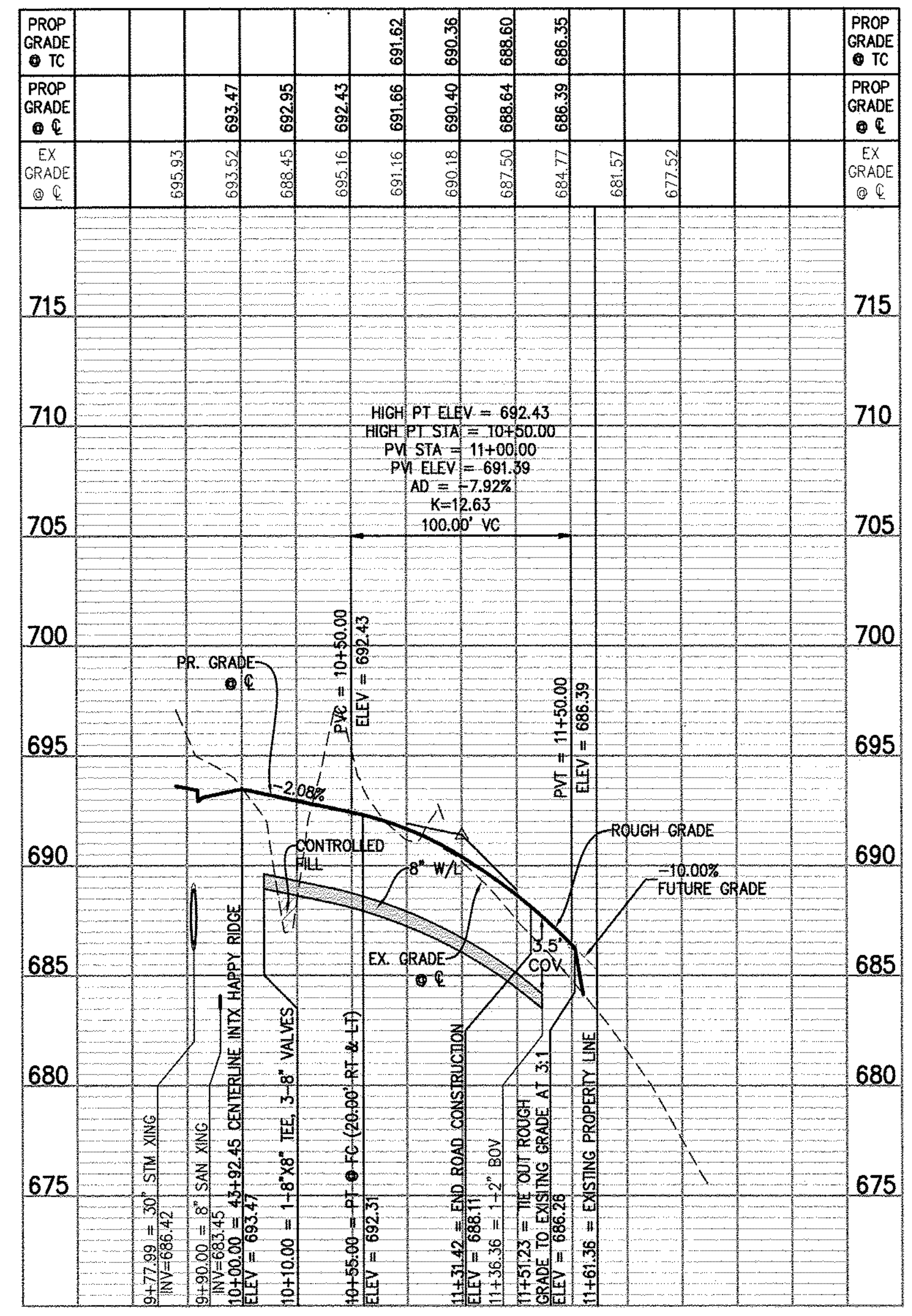

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PLAN AND PROFILE - HAYMAKER LANE
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

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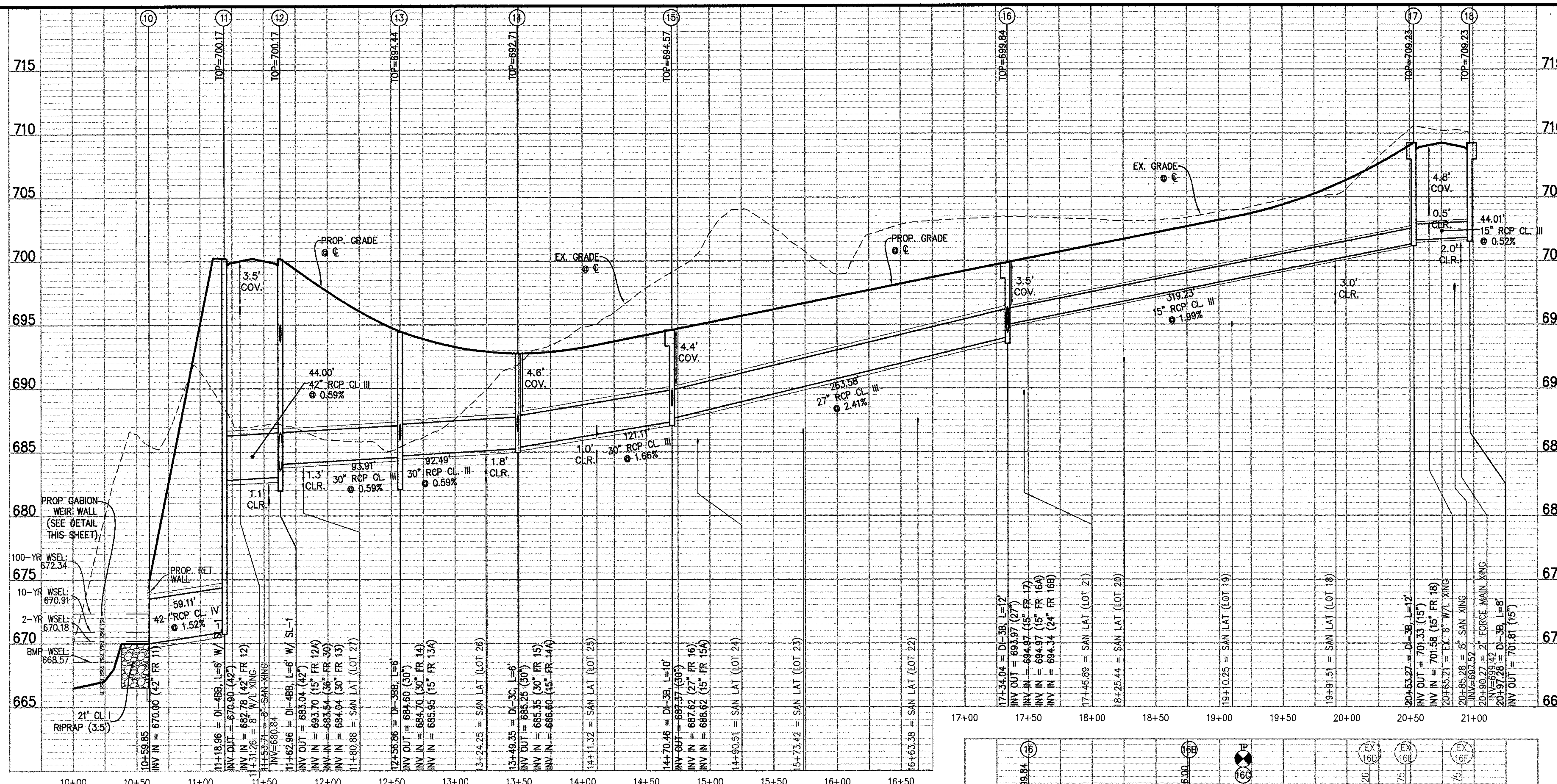
PLAN STATUS

DATE	DESCRIPTION
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS

GC DESIGN	MCW DRAWN	CHKD

SCALE H: 1"=50' V: 1"=5'
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005
SHEET 9 OF 33



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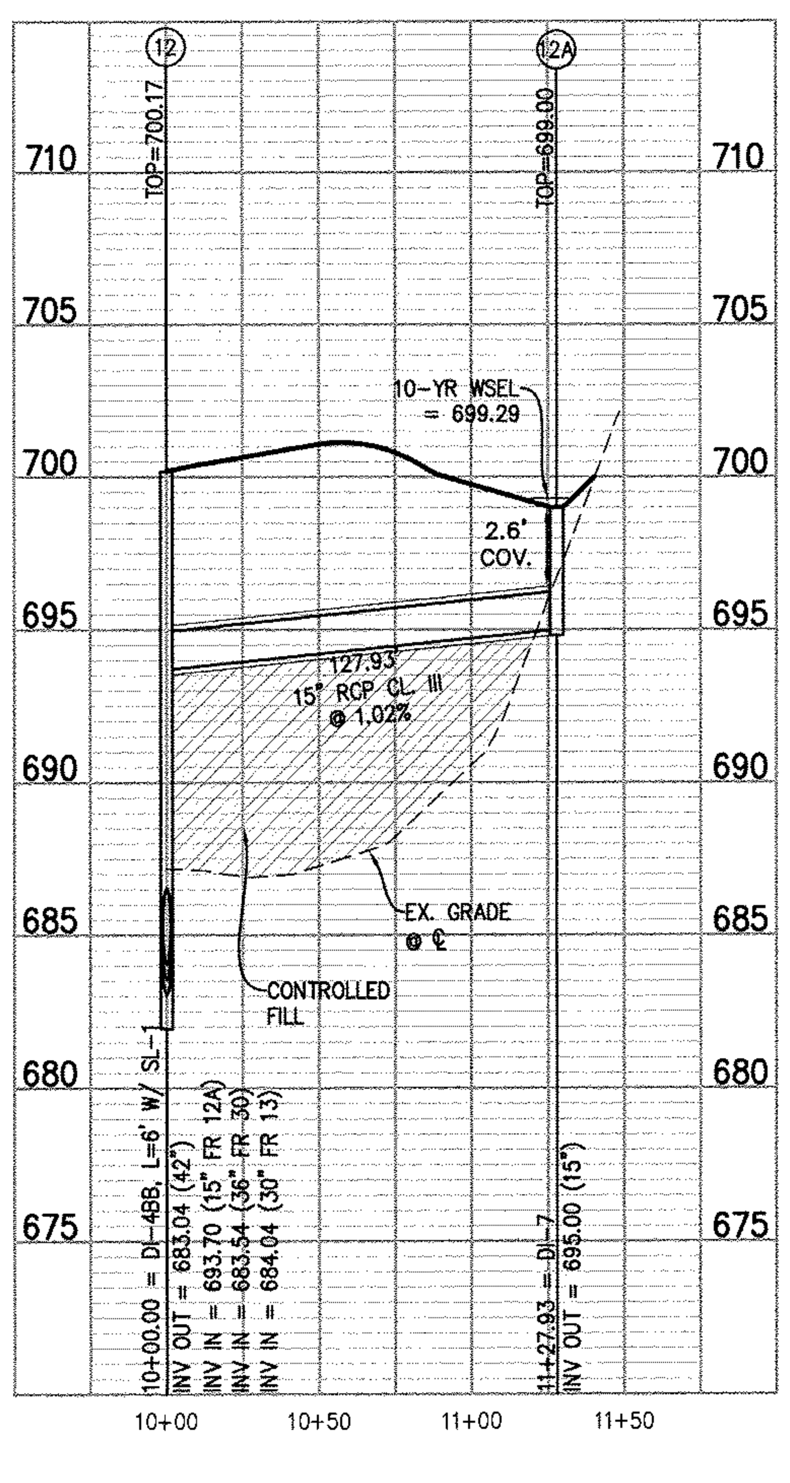

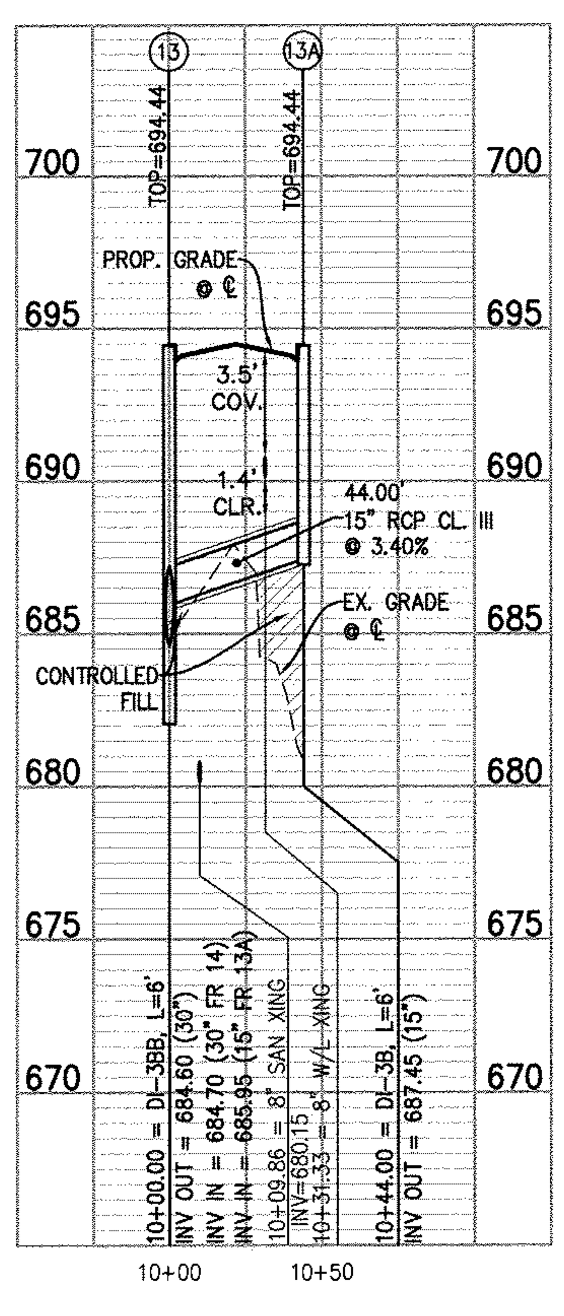

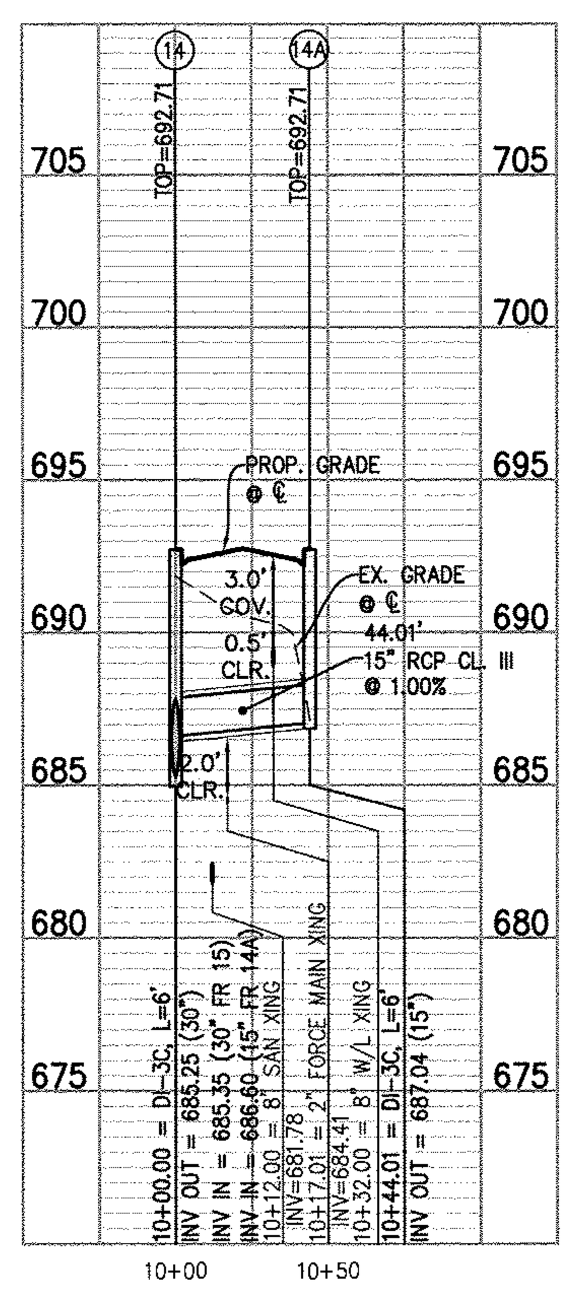

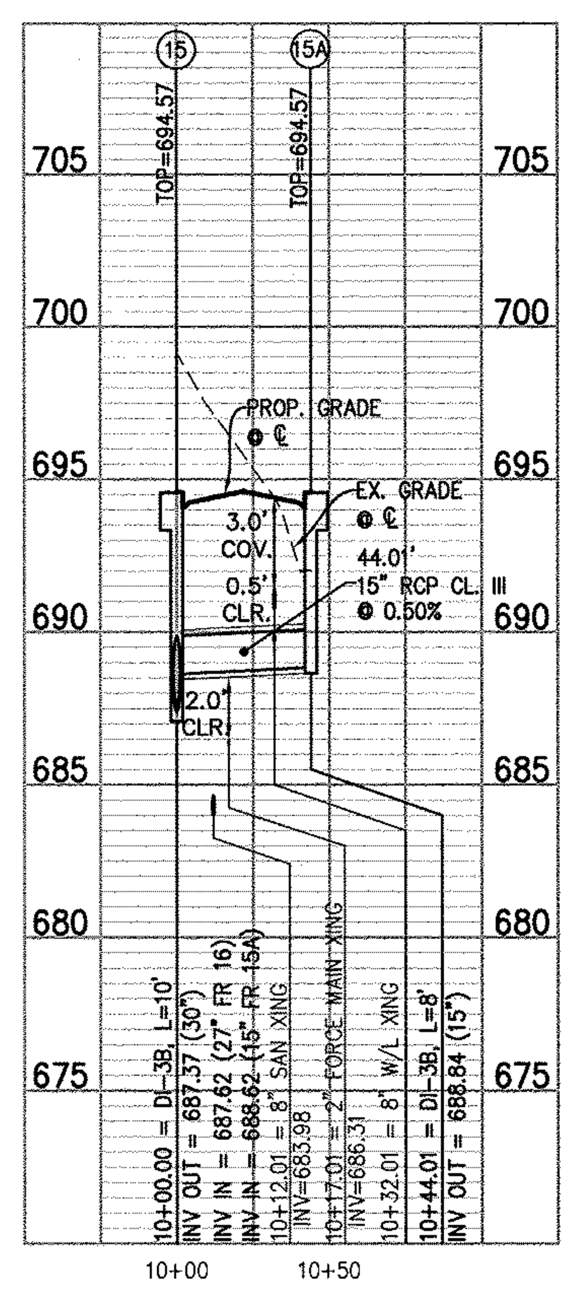

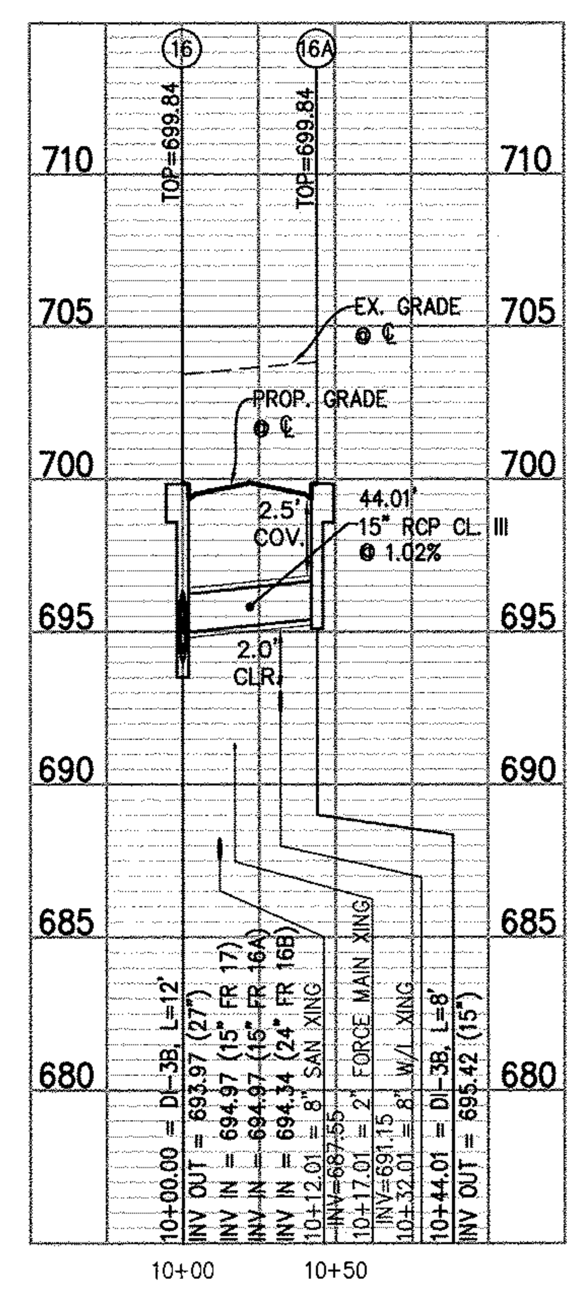

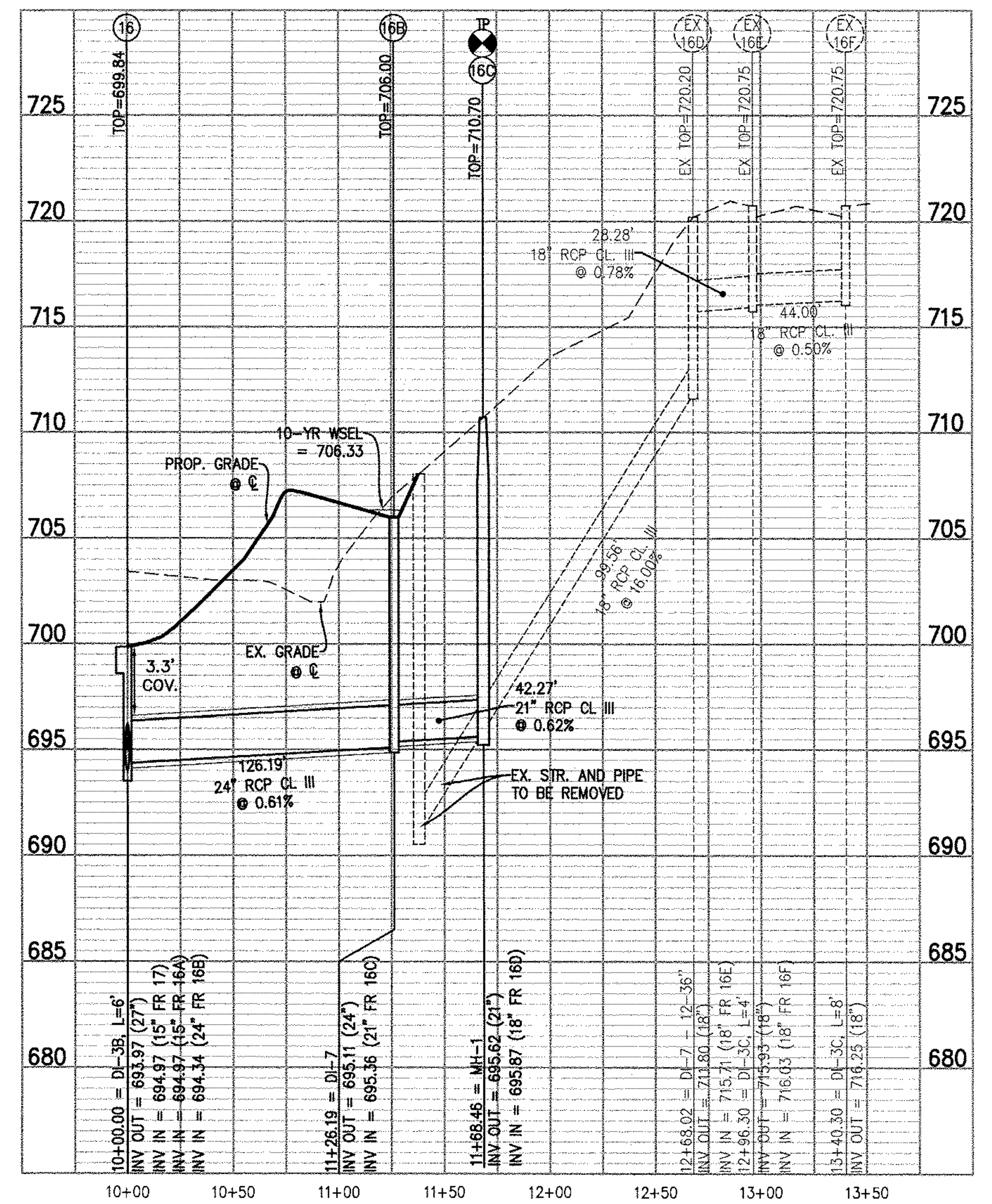

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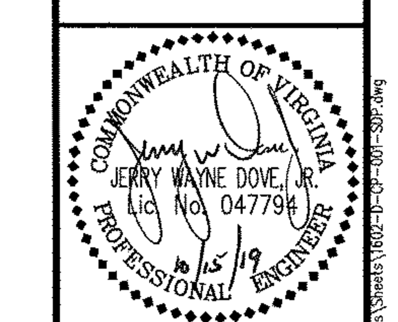
STORM SEWER PROFILES

HAPPY CREEK KNOLLS SECTION 4 FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA



PLAN STATUS

DATE	DESCRIPTION
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS

GC DESIGN	MCW DRAWN	CHKD

SCALE H: 1"=50' V: 1"=5'

JOB No. 1602-02-016

DATE JULY 19, 2019

FILE No. 1602-D-CP-005

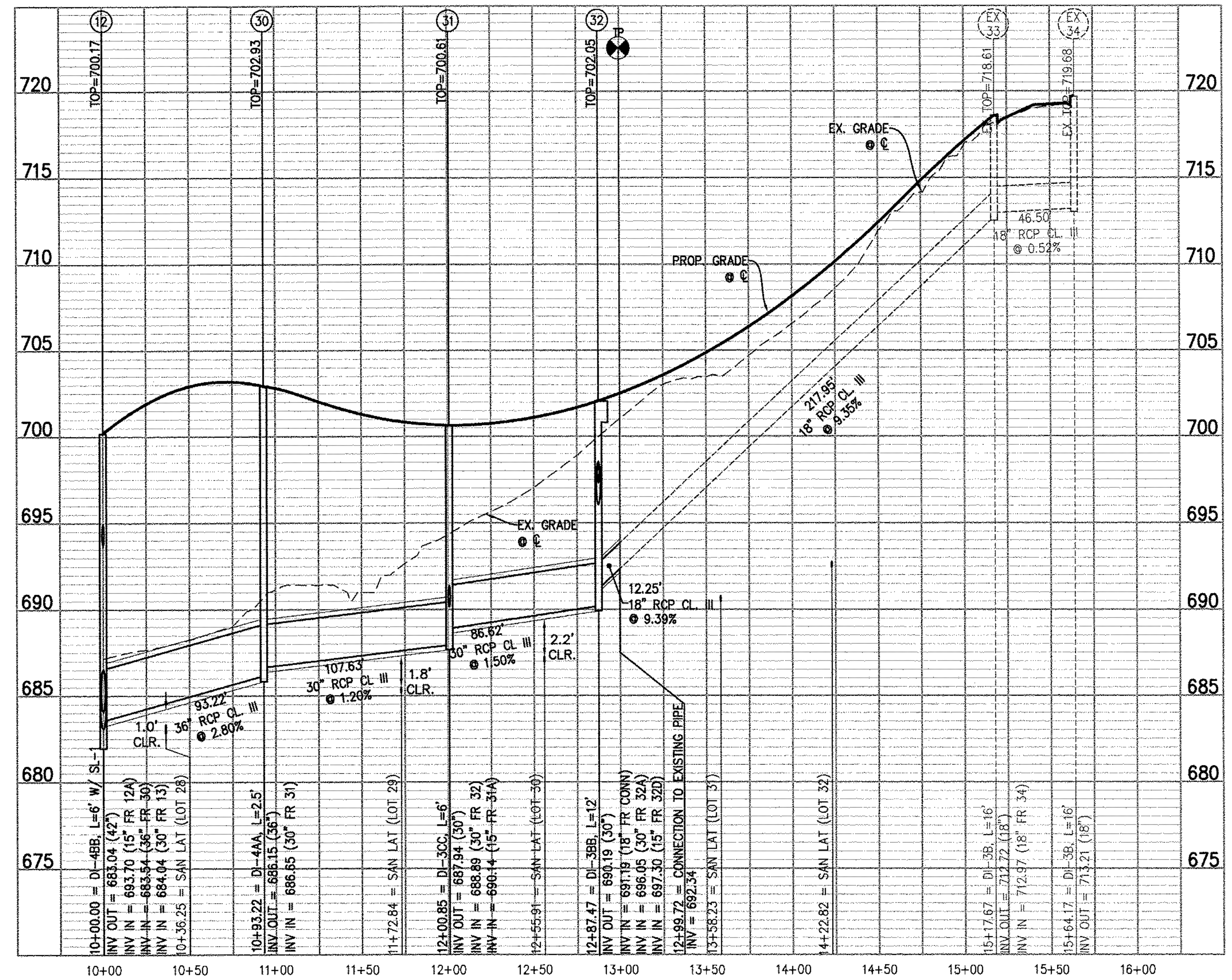
STORM INLET COMPUTATIONS

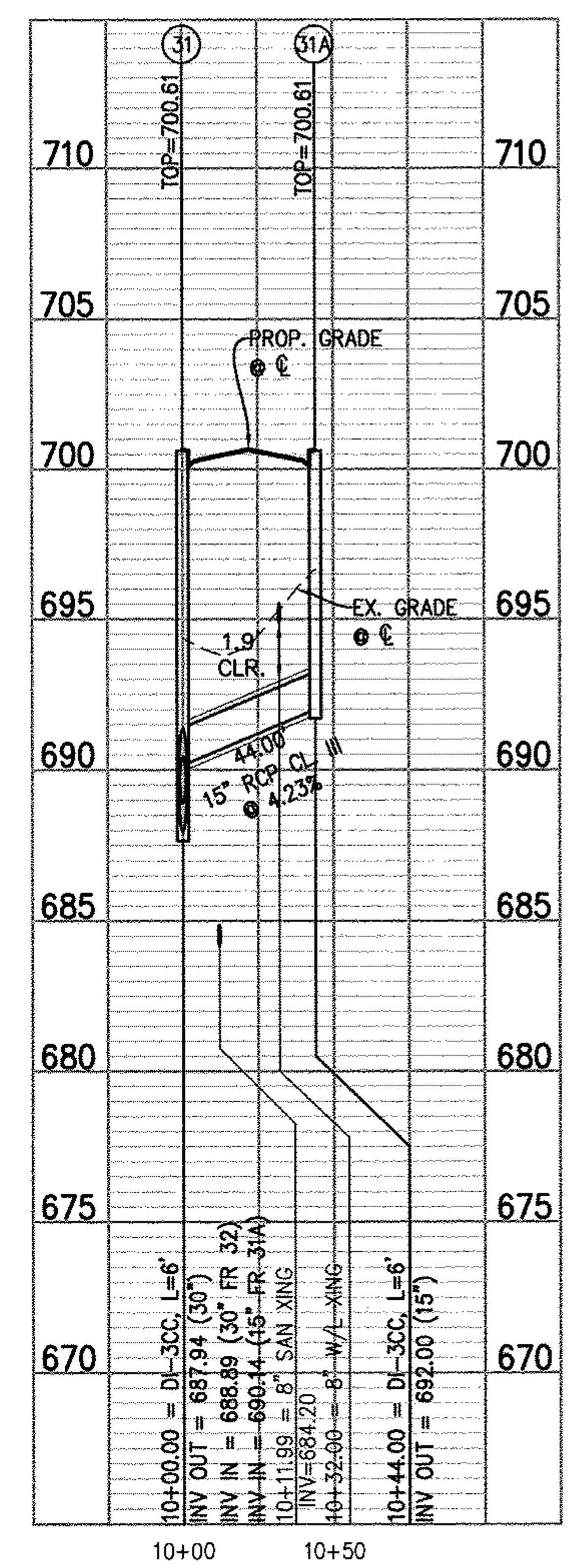
Inlet Structure No.	Inlet Type	Length (ft)	Drainage Area (ac)	C	CA	Sum CA	I (in/hr)	Q, increm (cfs)	Q, carryover (cfs)	Qt, gutter (cfs)	S, gutter (ft/ft)	Sx, cross slope (ft/ft)	T, spread (ft)	W (ft)	W/T	Sw (ft/ft)	Sw/Sx	Eo	a (in)	S'w = a/(12W)	Se (ft/f) = Sx + S'wEo	Lt (ft)	P, eff length (ft)	L/Lt	d (ft)	E	h (ft)	Q intercepted	d/h	Qb, carryover (cfs)	d, sump (ft)	T, spread at sag (ft)	Remarks
Inlet No.			Runoff to Inlet								Curb / Sump Inlet Computations																	Runoff Intercepted					
14	DI-3C	6	0.83	0.48	0.40		4.00	1.59	0.00	1.59	0.00	0.0208	–	2.00	–	0.08	4.00	–	–	–	–	–	9.60	–	0.00	–	0.46	1.59	0.00	0.00	0.20	3.51	Sag
14	DI-3C	6	0.40	0.48	0.19		4.00	0.77	0.00	0.77	0.02	0.0208	3.15	2.00	0.63	0.08	4.00	–	–	–	–	–	–	–	0.19	–	–	–	–	–	–	–	Left
14	DI-3C	6	0.43	0.48	0.21		4.00	0.83	0.00	0.83	0.07	0.0208	1.88	2.00	1.07	0.08	4.00	–	–	–	–	–	–	–	0.16	–	–	–	–	–	–	–	Right
14A	DI-3C	6	0.10	0.84	0.08		4.00	0.34	0.00	0.34	0.00	0.0208	–	2.00	–	0.08	4.00	–	–	–	–	–	9.60	–	0.00	–	0.46	0.34	0.00	0.00	0.07	0.84	Sag
14A	DI-3C	6	0.02	0.84	0.02		4.00	0.07	0.00	0.07	0.02	0.0208	0.93	2.00	2.16	0.08	4.00	–	–	–	–	–	–	–	0.08	–	–	–	–	–	–	–	Left
14A	DI-3C	6	0.08	0.84	0.07		4.00	0.27	0.00	0.27	0.07	0.0208	1.23	2.00	1.62	0.08	4.00	–	–	–	–	–	–	–	0.10	–	–	–	–	–	–	–	Right
31	DI-3CC	6	0.40	0.54	0.22		4.00	0.86	0.00	0.86	0.00	0.0208	–	2.00	–	0.08	4.00	–	–	–	–	–	9.60	–	0.00	–	0.46	0.86	0.00	0.00	0.13	1.58	Sag
31	DI-3CC	6	0.20	0.54	0.11		4.00	0.43	0.00	0.43	0.03	0.0208	1.69	2.00	1.18	0.08	4.00	–	–	–	–	–	–	–	0.14	–	–	–	–	–	–	–	Left
31	DI-3CC	6	0.20	0.54	0.11		4.00	0.43	0.00	0.43	0.10	0.0208	1.37	2.00	1.46	0.08	4.00	–	–	–	–	–	–	–	0.11	–	–	–	–	–	–	–	Right
31A	DI-3CC	6	1.09	0.54	0.59		4.00	2.35	0.00	2.35	0.00	0.0208	–	2.00	–	0.08	4.00	–	–	–	–	–	9.60	–	0.00	–	0.46	2.35	0.00	0.00	0.26	6.34	Sag
31A	DI-3CC	6	1.00	0.54	0.54		4.00	2.16	0.00	2.16	0.03	0.0208	5.76	2.00	0.35	0.08	4.00	–	–	–	–	–	–	–	0.24	–	–	–	–	–	–	–	Left
31A	DI-3CC	6	0.09	0.54	0.05		4.00	0.19	0.00	0.19	0.10	0.0208	1.02	2.00	1.97	0.08	4.00	–	–	–	–	–	–	–	0.08	–	–	–	–	–	–	–	Right
18	DI-3B	8	0.26	0.66	0.17	–	4.00	0.69	0.00	0.69	0.06	0.0208	1.78	2.00	1.12	0.08	4.00	1.00	3.50	0.15	0.17	8.09	–	0.99	0.15	1.00	0.46	0.69	0.32	0.00	–	–	
17	DI-3B	12	0.59	0.60	0.35	–	4.00	1.42	0.00	1.42	0.06	0.0208	3.30	2.00	0.61	0.08	4.00	0.98	3.50	0.15	0.16	11.09	–	1.08	0.19	1.00	0.46	1.42	0.42	0.00	–	–	
16A	DI-3B	8	0.50	0.66	0.33	–	4.00	1.32	0.00	1.32	0.02	0.0208	4.91	2.00	0.41	0.08	4.00	0.89	3.50	0.15	0.15	8.06	–	0.99	0.23	1.00	0.46	1.32	0.49	0.00	–	–	
16	DI-3B	12	0.92	0.66	0.61	–	4.00	2.43	0.00	2.43	0.02	0.0208	7.06	2.00	0.28	0.08	4.00	0.74	3.50	0.15	0.13	11.43	–	1.05	0.27	1.00	0.46	2.43	0.59	0.00	–	–	
15A	DI-3B	8	0.39	0.66	0.26	–	4.00	1.03	0.00	1.03	0.02	0.0208	4.09	2.00	0.49	0.08	4.00	0.94	3.50	0.15	0.16	7.05	–	1.13	0.21	1.00	0.46	1.03	0.46	0.00	–	–	
15	DI-3B	10	0.87	0.54	0.47	–	4.00	1.88	0.00	1.88	0.02	0.0208	6.13	2.00	0.33	0.08	4.00	0.81	3.50	0.15	0.14	9.84	–	1.02	0.25	1.00	0.46	1.88	0.55	0.00	–	–	
12	DI-4BB	6	0.10	0.72	0.07	–	4.00	0.29	0.00	0.29	0.03	0.0208	1.46	2.00	1.37	0.08	4.00	1.00	3.50	0.15	0.17	4.60	–	1.30	0.12	1.00	0.46	0.29	0.26	0.00	–	–	
11	DI-4BB	6	0.12	0.72	0.09	–	4.00	0.35	0.00	0.35	0.03	0.0208	1.56	2.00	1.28	0.08	4.00	1.00	3.50	0.15	0.17	4.97	–	1.21	0.13	1.00	0.46	0.35	0.28	0.00	–	–	
13A	DI-3B	6	0.08	0.84	0.07	–	4.00	0.27	0.00	0.27	0.04	0.0208	1.37	2.00	1.46	0.08	4.00	1.00	3.50	0.15	0.17	4.75	–	1.26	0.11	1.00	0.46	0.27	0.25	0.00	–	–	
13	DI-3BB	6	0.20	0.60	0.12	–	4.00	0.48	0.00	0.48	0.04	0.0208	1.70	2.00	1.18	0.08	4.00	1.00	3.50	0.15	0.17	6.06	–	0.99	0.14	1.00	0.46	0.48	0.31	0.00	–	–	
30	DI-4AA (sump)	2.5	0.02	0.72	0.01	–	4.00	0.06	0.00	0.06	0.01	0.0208	0.99	2.00	2.02	0.08	–	–	–	–	–	–	6.10	–	0.08	–	0.46	0.06	0.18	0.00	0.04	0.47	
32	DI-3BB	12	0.82	0.60	0.49	–	4.00	1.97	0.00	1.97	0.02	0.0208	7.93	2.00	0.25	0.08	4.00	0.69	3.50	0.15	0.12	10.36	–	1.16	0.29	1.00	0.46	1.97	0.63	0.00	–	–	
32A	DI-3B	8	0.43	0.60	0.26	–	4.00	1.03	0.00	1.03	0.02	0.0208	4.37	2.00	0.46	0.08	4.00	0.93	3.50	0.15	0.16	6.78	–	1.18	0.22	1.00	0.46	1.03	0.47	0.00	–	–	

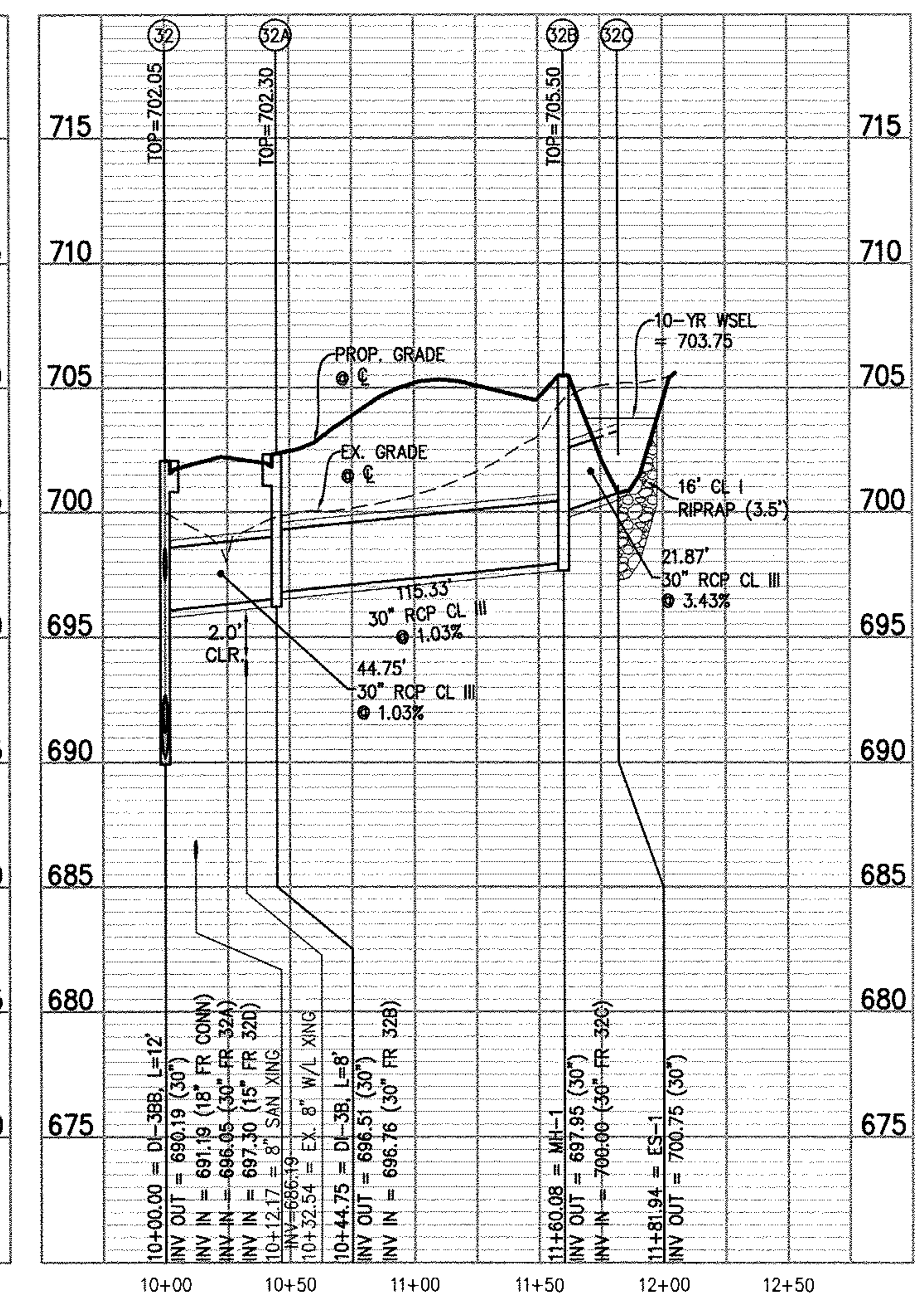
STORM SEWER CALCULATIONS

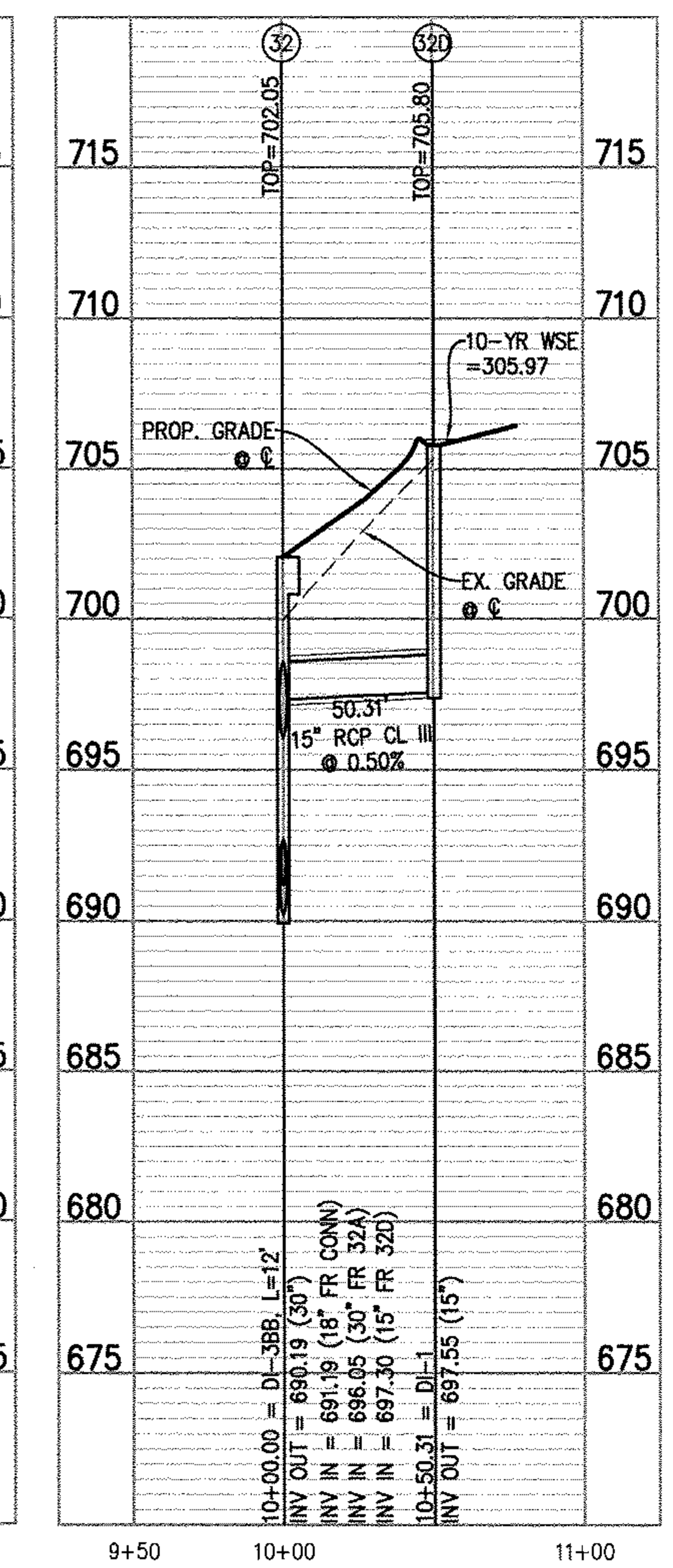
From Point (1)	To Point (2)	Drain Area "A" (acres) (3)	Runoff Coeff., C (4)	CA Increment (5)	CA Accumulated (6)	Inlet Time (min) (7)	Rainfall (in/hr) (8)	Runoff, Q (cfs) (9)	Upper End Inv (10)	Lower End Inv (11)	Pipe Length (ft) (12)	Slope (ft/ft) (13)	Dia (in) (14)	Capacity (cfs) (15)	Velocity Full Flow (fps) (16)	Velocity Partial Flow (fps) (16)	Flow Time (sec.) (17)	Remarks (18)
18	17	0.26	0.66	0.17	0.17	5.0	6.70	1.14	701.81	701.58	44.01	0.0052	15	4.66	3.8	3.1	14.0	
17	16	0.59	0.60	0.35	0.52	5.2	6.61	3.44	701.33	694.97	319.23	0.0199	15	9.11	7.5	6.9	46.1	
EX16F	EX16E	1.08	0.54	0.58	0.58	5.0	6.70	3.89	716.25	716.03	44.00	0.0050	18	7.42	4.2	4.3	10.3	EXISTING STORM SEWER
EX16E	EX16D	0.84	0.54	0.45	1.03	5.2	6.64	6.84	715.93	715.71	28.28	0.0078	18	9.26	5.3	5.7	4.9	EXISTING STORM SEWER
EX16D	16C	0.00	0.00	0.00	1.03	5.3	6.61	6.81	711.80	695.87	99.56	0.1600	18	41.99	23.9	17.5	5.7	EXISTING STORM SEWER
16C	16B	0.00	0.00	0.00	1.03	5.3	6.57	6.77	695.62	695.36	42.27	0.0062	21	12.43	5.2	5.3	8.0	
16B	16	1.81	0.45	0.81	1.84	5.5	6.53	12.01	695.11	694.34	126.19	0.0061	24	17.68	5.6	6.1	20.8	
16A	16	0.50	0.66	0.33	0.33	5.0	6.70	2.21	695.42	694.97	44.01	0.0102	15	6.52	5.3	4.8	9.1	
15A	15	0.39	0.66	0.26	0.26	5.0	6.70	1.74	688.84	688.62	44.01	0.0050	15	4.56	3.7	3.5	12.7	
14A	14	0.10	0.84	0.08	0.08	5.0	6.70	0.54	687.04	686.60	44.01	0.0100	15	6.45	5.3	3.2	13.8	
13A	13	0.08	0.84	0.07	0.07	5.0	6.70	0.47	687.45	685.95	44.00	0.0341	15	11.91	5.3	3.1	14.2	
12A	12	1.34	0.48	0.64	0.64	5.0	6.70	4.29	695.00	693.70	127.93	0.0102	15	6.50	5.3	5.7	22.5	
16	15	0.92	0.66	0.61	3.30	5.8	6.41	21.14	693.97	687.62	263.58	0.0241	27	48.11	12.1	11.7	22.5	
15	14	0.87	0.54	0.47	4.03	6.2	6.28	25.32	687.37	685.35	121.11	0.0167	30	53.03	10.8	10.7	11.3	
14	13	0.83	0.48	0.40	4.51	6.4	6.22	28.07	685.25	684.70	92.49	0.0059	30	31.67	6.5	7.3	12.7	
13	12	0.20	0.60	0.12	4.70	6.6	6.16	28.94	684.60	684.04	93.91	0.0060	30	31.71	6.5	7.3	12.8	
32D	32	0.35	0.60	0.21	0.21	5.0	6.70	1.41	697.55	697.30	50.31	0.0050	15	4.55	3.7	3.3	15.4	
32C	32B	16.17	0.36	5.82	5.82	10.0	5.28	30.75	700.75	700.00	21.87	0.0343	30	76.04	15.5	14.7	1.5	
32B	32A	0.00	0.00	0.00	5.82	10.0	5.28	30.72	697.95	696.76	115.33	0.0103	30	41.71	8.5	9.3	12.4	
32A	32	0.43	0.60	0.26	6.08	10.2	5.23	31.82	696.51	696.05	44.75	0.0103	30	41.63	8.5	9.4	4.8	
32	31	0.82	0.60	0.49	7.47	10.3	5.22	38.97	690.19	688.89	86.62	0.0150	30	50.31	10.3	11.3	7.6	
31A	31	1.09	0.54	0.59	0.59	5.0	6.70	3.95	692.00	690.14	44.00	0.0423	15	13.27	8.7	8.1	5.5	
EX34	EX33	0.73	0.57	0.42	0.42	5.0	6.70	2.81	713.21	712.97	46.50	0.0052	18	7.54	4.3	4.0	11.7	Existing Storm Sewer
EX33	CONN	0.47	0.57	0.27	0.69	5.2	6.63	4.57	712.72	692.34	217.95	0.0935	18	32.10	18.2	12.9	16.9	Existing Storm Sewer
CONN	32	0.00	0.00	0.00	0.69	5.5	6.53	4.50	692.34	691.19	12.25	0.0939	18	32.17	18.3	12.9	1.0	
31	30	0.40	0.54	0.22	8.28	10.4	5.19	42.98	687.94	686.65	107.63	0.0120	30	44.96	9.2	8.7	12.3	
30	12	0.02	0.72	0.01	8.29	10.6	5.15	42.68	686.15	683.54	93.22	0.0280	36	111.80	8.5	9.2	10.1	
12	11	0.10	0.72	0.07	13.70	10.8	5.11	70.07	683.04	682.78	44.00	0.0059	42	77.51	8.1	9.1	4.8	
11	10	0.12	0.72	0.09	13.79	10.9	5.10	70.31	670.90	670.00	59.11	0.0152	42	124.42	12.9	13.3	4.4	

NOTE: 1. ALL INLETS TO EMPLOY IS-1 INLET SHAPING









TP

TEST PIT REQUIRED

CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION AND ELEVATION OF UTILITIES. CONTRACTOR TO NOTIFY BCG OF ANY DISCREPANCIES. CONTRACTOR TO SCHEDULE TEST PITS AND UTILITY MARKING WELL IN ADVANCE OF CONSTRUCTION. BCG WILL NOT BE RESPONSIBLE FOR DELAYS DUE TO CONTRACTOR'S INABILITY TO SCHEDULE THIS NECESSARY WORK.

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STORM SEWER PROFILES & COMPUTATIONS

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=50' V: 1"=5'	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

GRATE INLET DESIGN COMPUTATIONS

STRUCTURE #	TYPE	AREA (Ac.)	"C"	"I" (in/hr)	GRATE DESIGN FLOW (cfs)	AREA$_{50}$ (sf)	PERIM$_{50}$ (ft)	DEPTH (ft)	REMARKS
12A	DI-7 TYPE 2	1.34	0.48	6.70	4.31	2.00	9.42	0.29	
16B	DI-7 TYPE 2	1.81	0.45	6.70	5.46	2.00	9.42	0.33	
32D	DI-1	0.35	0.60	6.70	1.41	1.17	6.75	0.17	

NOTE: GRATE COMPUTATIONS ASSUME 50% CLOGGING

PIPE OUTLET PROTECTION

Outfall	10-Year Discharge (cfs)	10-Year Velocity (fps)	Outlet Pipe D_o (in)	Required as per VESCH Std. & Spec. 3.18 L_a (ft)	W (ft)	Provided 3*D_o (ft)	L_a (ft)	W (ft)	Remarks
* 10	70.31	12.95	42	21	24.5	10.5	21	26	CL I RIPRAP
* 1	45.96	6.89	42	21	24.5	10.5	21	26	CL I RIPRAP

NOTE: 1) Flows and Velocities are calculated using the Rational Method and Mannings Formula.
*A minimum tailwater condition was used to calculate apron lengths.
**A maximum tailwater condition was used to calculate apron lengths.

HYDRAULIC GRADE LINE COMPUTATIONS

INLET NUMBER	OUTLET WATER SURFACE ELEV.	D_o	Q_o	L_o	S_{fo} (%)	H_f	JUNCTION LOSS V_o	H_o	Q_i	V_i	Q_iV_i	$V_i^2/2g$	H_i	ANGLE	H_Δ	H_t	1.3H_t	0.5H_t	FINAL H	INLET WATER SURFACE ELEVATION	RIM ELEV.
11	672.80	42	70.3	59	0.49	0.29	13.3	0.690	70.1	9.1	639.6	1.29	0.45	0	0.00	1.14	–	0.57	0.86	673.66	700.17
12	685.58	42	70.1	44	0.48	0.21	9.1	0.323	–	–	–	–	0.00	0	0.00	0.32	–	0.16	0.37	685.95	700.17
13	686.04	30	28.9	94	0.50	0.47	7.3	0.209	28.1	7.3	204.8	0.83	0.29	0	0.00	0.50	–	0.25	0.71	686.75	694.44
14	686.75	30	28.1	92	0.47	0.43	7.3	0.207	25.3	10.7	270.8	1.78	0.62	0	0.00	0.83	–	0.41	0.84	687.60	692.71
15	687.60	30	25.3	121	0.38	0.46	10.7	0.444	21.1	11.7	247.9	2.14	0.75	0	0.00	1.19	–	0.60	1.05	688.65	694.57
16	689.42	27	21.1	264	0.46	1.22	11.7	0.534	3.4	6.9	23.8	0.74	0.26	0	0.00	0.79	–	0.40	1.62	695.01	699.84
17	695.97	15	3.4	319	0.28	0.90	6.9	0.186	1.1	3.1	3.6	0.15	0.05	0	0.00	0.24	0.31	0.16	1.06	701.86	709.23
18	702.58	15	1.1	44	0.03	0.01	3.1	0.038	–	–	–	–	0.00	0	0.00	0.04	0.05	0.03	0.04	702.62	709.23
12A	694.70	15	4.3	128	0.44	0.56	5.7	0.125	–	–	–	–	0.00	0	0.00	0.13	0.16	0.08	0.64	695.74	699.00
13A	686.95	15	0.5	44	0.01	0.00	3.1	0.037	–	–	–	–	0.00	0	0.00	0.04	0.05	0.02	0.03	687.68	694.44
14A	687.60	15	0.5	44	0.01	0.00	3.2	0.040	–	–	–	–	0.00	0	0.00	0.04	0.05	0.03	0.03	687.63	692.71
15A	689.62	15	1.7	44	0.07	0.03	3.5	0.047	–	–	–	–	0.00	0	0.00	0.05	0.06	0.03	0.06	689.68	694.57
16A	695.97	15	2.2	44	0.12	0.05	4.8	0.090	–	–	–	–	0.00	0	0.00	0.09	0.12	0.06	0.11	696.08	699.84
16B	695.94	24	12.0	126	0.28	0.35	6.1	0.143	6.8	5.3	35.8	0.43	0.15	0	0.00	0.29	0.38	0.19	0.55	696.49	706.00
EX16D	697.73	18	6.8	100	0.42	0.42	17.5	1.191	6.8	5.7	39.3	0.51	0.18	0	0.00	1.37	–	0.69	1.10	712.21	720.20
EX16E	716.91	18	6.8	28	0.42	0.12	5.7	0.128	3.9	4.3	16.6	0.28	0.10	0	0.00	0.23	0.29	0.15	0.27	717.18	720.75
EX16F	717.23	18	3.9	44	0.14	0.06	4.3	0.070	–	–	–	–	0.00	0	0.00	0.07	0.09	0.05	0.11	717.34	720.75
30	687.80	36	42.7	93	0.41	0.38	9.2	0.330	43.0	8.7	375.1	1.18	0.41	0	0.00	0.74	–	0.37	0.75	688.55	702.93
31	688.65	30	43.0	108	1.09	1.18	8.7	0.296	39.0	11.3	441.7	1.99	0.70	0	0.00	0.99	–	0.50	1.67	690.40	700.61
32	690.89	30	39.0	87	0.90	0.78	11.3	0.499	4.5	12.9	58.0	2.57	0.90	0	0.00	1.40	–	0.70	1.48	692.37	702.05
CONN	692.39	18	4.5	12	0.18	0.02	12.9	0.643	4.6	12.9	59.0	2.59	0.91	0	0.00	1.55	–	0.77	0.80	693.19	0.00
EX33	693.54	18	4.6	218	0.19	0.41	12.9	0.647	2.8	4.0	11.2	0.24	0.09	0	0.00	0.73	0.95	0.48	0.89	713.10	718.61
EX34	714.17	18	2.8	47	0.07	0.03	4.0	0.061	–	–	–	–	0.00	0	0.00	0.06	0.08	0.04	0.07	714.24	719.68
31A	691.14	15	4.0	44	0.37	0.16	8.1	0.252	–	–	–	–	0.00	0	0.00	0.25	0.33	0.16	0.33	692.53	700.61
32A	698.05	30	31.8	45	0.60	0.27	9.4	0.340	30.7	9.3	285.8	1.34	0.47	0	0.00	0.81	–	0.41	0.67	698.72	702.30
32B	698.76	30	30.7	115	0.56	0.64	9.3	0.336	30.8	14.7	451.7	3.35	1.17	0	0.00	1.51	–	0.75	1.40	700.16	709.41
32C	702.00	30	30.8	22	0.56	0.12	14.7	0.838	–	–	–	–	0.00	0	0.00	0.84	1.09	0.54	0.67	703.75	0.00

Culvert Calculator Report
End Section 32C

Solve For: Headwater Elevation

Culvert Summary

Allowable HW Elevation	0.00 ft	Headwater Depth/Height	1.20
Computed Headwater Elev	703.75 ft	Discharge	30.75 cfs
Inlet Control HW Elev.	703.68 ft	Tailwater Elevation	0.00 ft
Outlet Control HW Elev.	703.75 ft	Control Type	Entrance Control

Grades

Upstream Invert	700.75 ft	Downstream Invert	700.00 ft
Length	21.87 ft	Constructed Slope	0.034294 ft/ft

Hydraulic Profile

Profile	S2	Depth, Downstream	1.38 ft
Slope Type	Steep	Normal Depth	1.11 ft
Flow Regime	Supercritical	Critical Depth	1.89 ft
Velocity Downstream	11.11 ft/s	Critical Slope	0.006636 ft/ft

Section

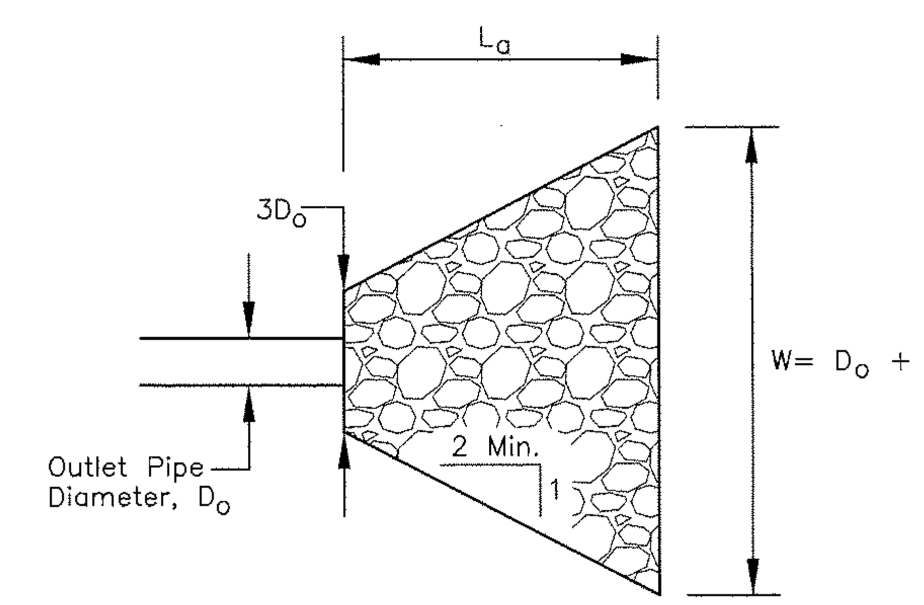
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	2.50 ft
Section Size	30 inch	Rise	2.50 ft
Number Sections	1		

Outlet Control Properties

Outlet Control HW Elev.	703.75 ft	Upstream Velocity Head	0.93 ft
Ke	0.20	Entrance Loss	0.19 ft

Inlet Control Properties

Inlet Control HW Elev.	703.68 ft	Flow Control	Transition
Inlet Type	Groove end projecting	Area Full	4.9 ft²
K	0.00450	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	3
C	0.03170	Equation Form	1
Y	0.69000		



TYPICAL RIP RAP DESIGN
(NOT TO SCALE)

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STORM SEWER DETAILS & COMPUTATIONS
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

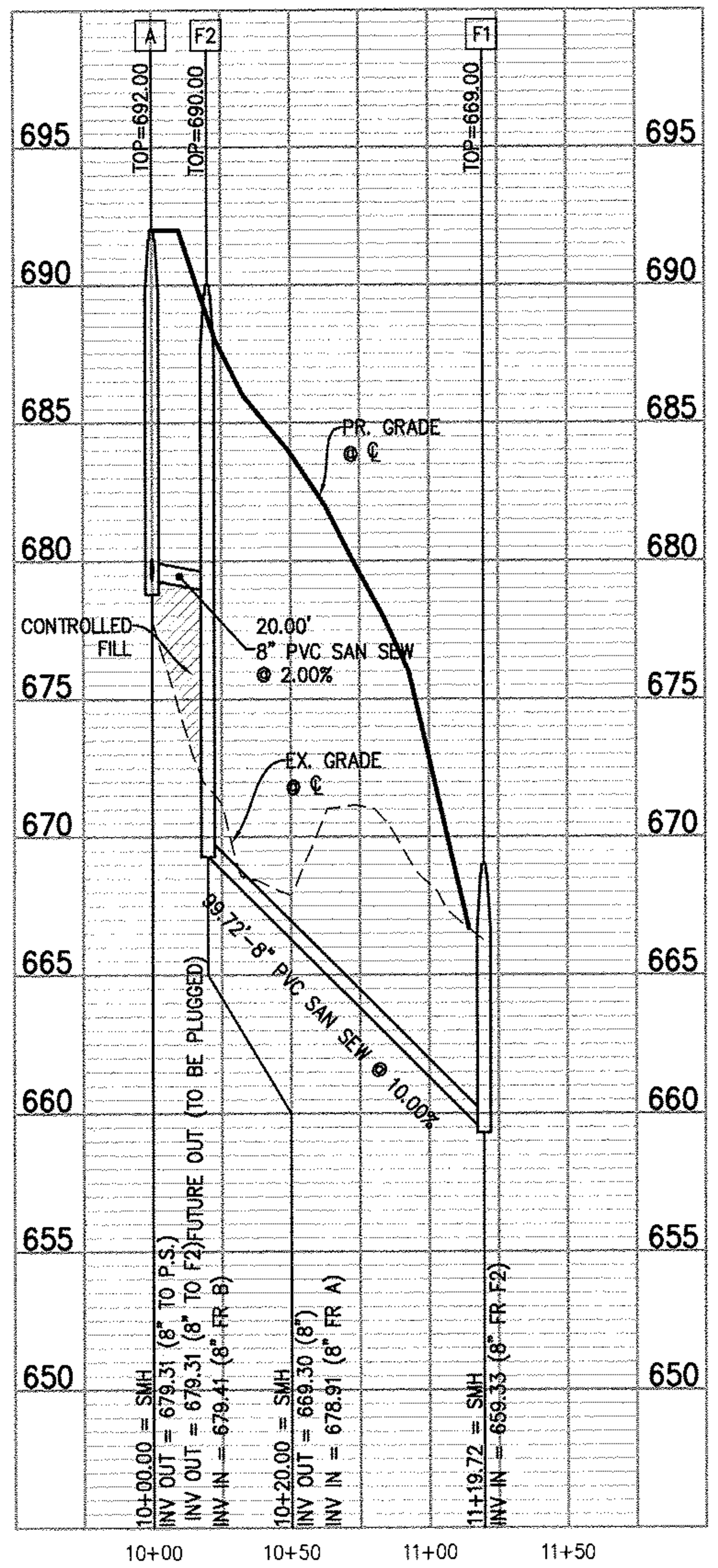
COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

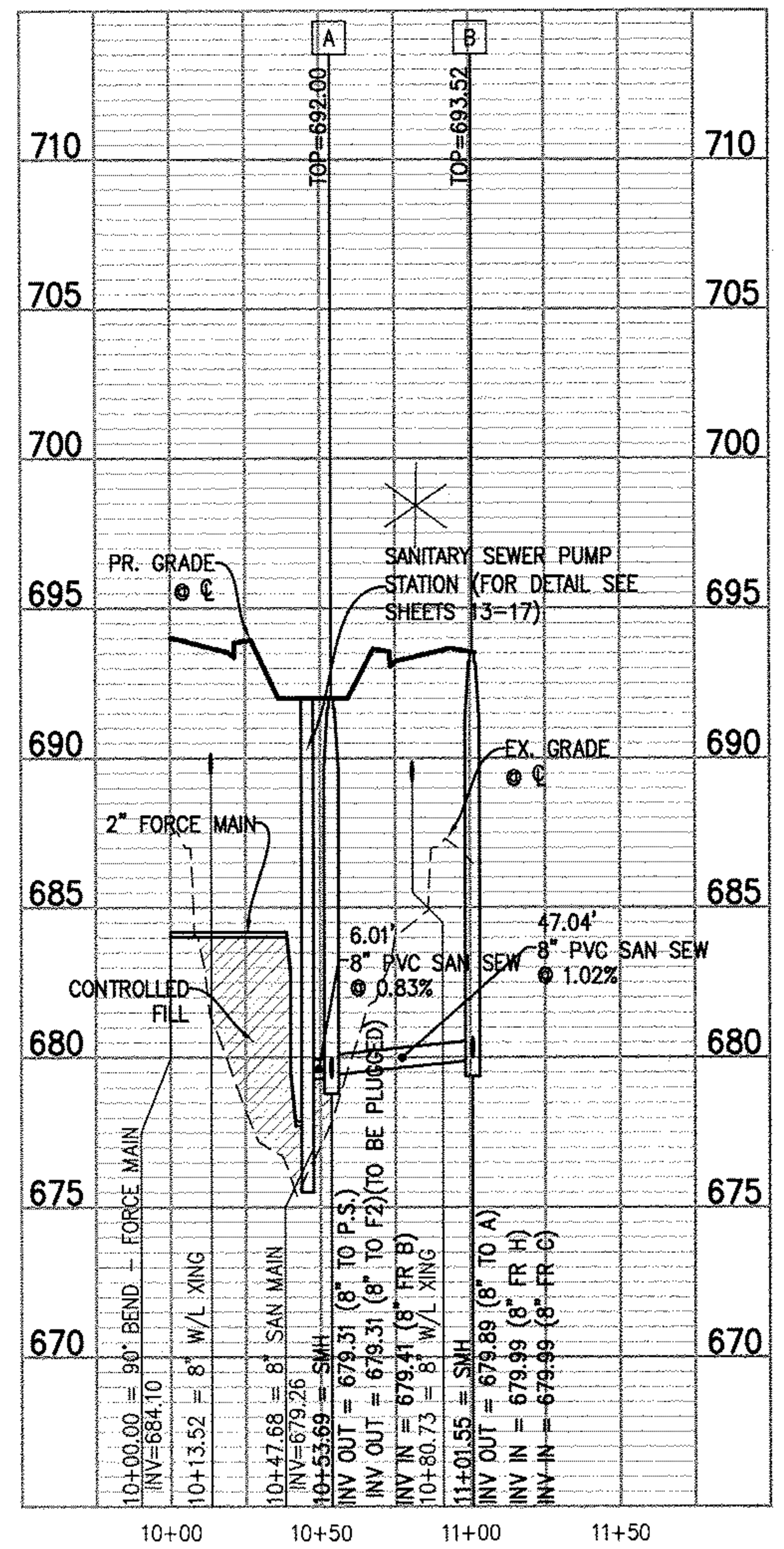
GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=50' V: 1"=5'	

JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-SDP.dwg



San Sew B PROFILE VIEW

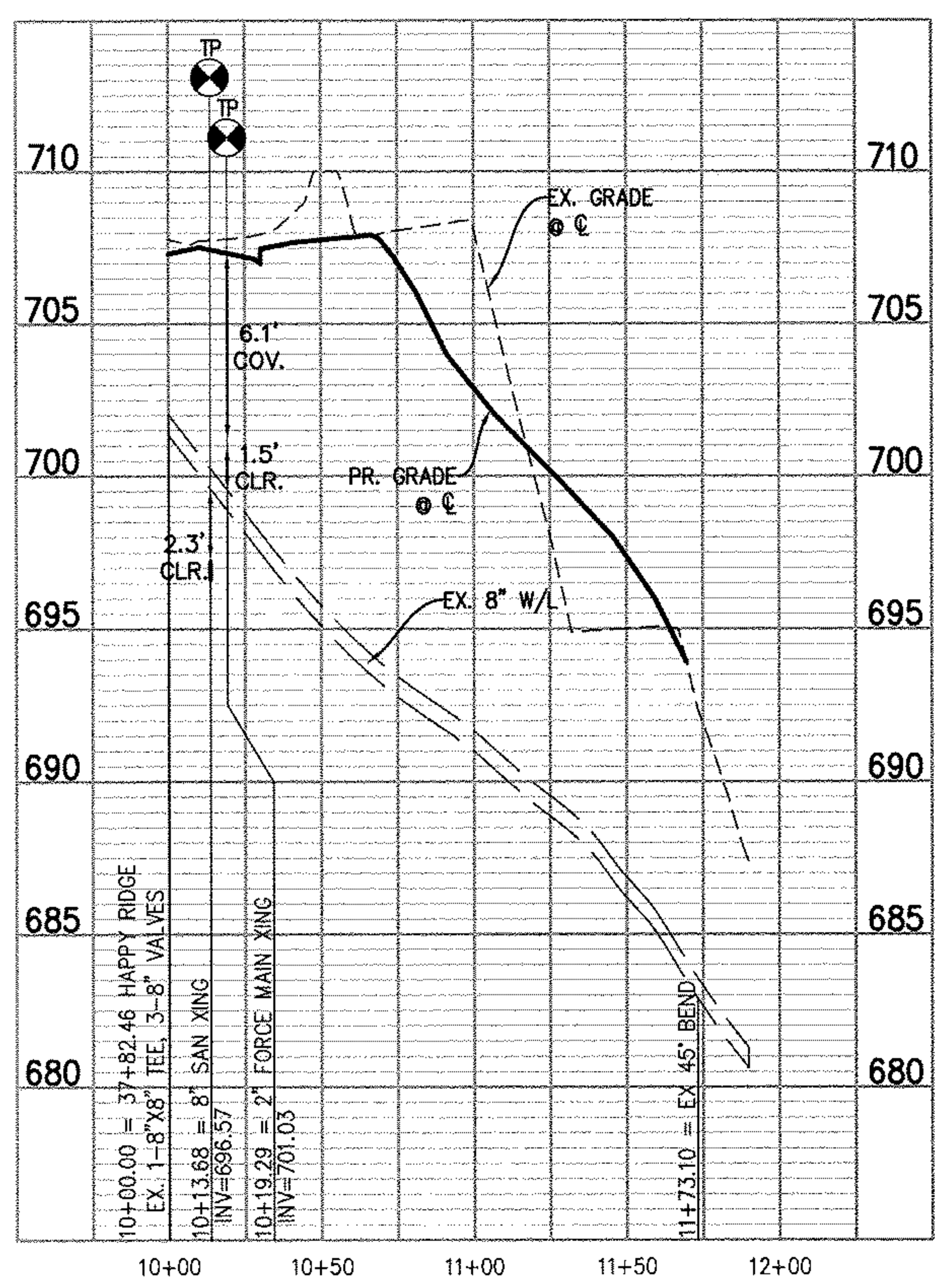


San Sew A PROFILE VIEW

NOTE: PROPOSED PUMP STATION MAY BE ELIMINATED IF AN ON GRADE ALTERNATIVE ROUTE IS APPROVED

TP TEST PIT REQUIRED

CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION AND ELEVATION OF UTILITIES. CONTRACTOR TO NOTIFY BCG OF ANY DISCREPANCIES. CONTRACTOR TO SCHEDULE TEST PITS AND UTILITY MARKING WELL IN ADVANCE OF CONSTRUCTION. BCG WILL NOT BE RESPONSIBLE FOR DELAYS DUE TO CONTRACTOR'S INABILITY TO SCHEDULE THIS NECESSARY WORK.



WATERLINE A PROFILE VIEW

SANITARY SEWER COMPUTATIONS

Manhole Number		Average Daily Flow By Residential Units			Flow Million Gallons Per Day				Pipe Run Manning's "N" Value .012					Capacity of Pipe (Full)			Proportional Pipe Flow			Remarks
From	To	Inc. Units	Total Units	Flow (gpd)	Incr.	Total Ave. Daily Flow	Peak Flow Factor	Peak Flow	Length (ft)	Dia. (in)	Slope (%)	Upper Invert	Lower Invert	MGD	CFS	Velocity (fps)	Flow (gpd)	Depth (ft)	Vel. (fps)	
EX M	L	3	3	1050	0.0011	0.0011	13.70	0.014	102.43	8	4.86%	691.83	686.85	1.7165	2.66	7.61	0.01	0.04	2.45	
L	K	5	8	2800	0.0018	0.0028	11.41	0.032	166.33	8	2.24%	686.75	683.02	1.1657	1.80	5.17	0.03	0.07	2.38	
K	J	1	9	3150	0.0004	0.0032	11.16	0.035	70.00	8	0.60%	682.92	682.50	0.6030	0.93	2.67	0.06	0.10	1.55	
J	I	2	11	3850	0.0007	0.0039	10.75	0.041	70.00	8	1.90%	682.40	681.07	1.0730	1.66	4.76	0.04	0.09	2.43	
I	H	1	12	4200	0.0004	0.0042	10.57	0.044	70.00	8	0.60%	680.97	680.55	0.6030	0.93	2.67	0.07	0.12	1.65	
H	B	0	12	4200	0.0000	0.0042	10.57	0.044	77.41	8	0.59%	680.45	679.99	0.6001	0.93	2.66	0.07	0.12	1.64	
G	F	3	3	1050	0.0011	0.0011	13.70	0.014	117.47	8	4.23%	701.86	696.89	1.6012	2.48	7.10	0.01	0.04	2.33	
F	E	1	4	1400	0.0004	0.0014	12.99	0.018	51.02	8	1.35%	696.79	696.10	0.9053	1.40	4.01	0.02	0.06	1.69	
E	D	8	12	4200	0.0028	0.0042	10.57	0.044	300.00	8	3.28%	696.00	686.15	1.4106	2.18	6.25	0.03	0.08	3.01	
D	C	6	18	6300	0.0021	0.0063	9.80	0.062	280.19	8	0.94%	686.05	683.43	0.7528	1.16	3.34	0.08	0.12	2.12	
C	B	3	21	7350	0.0011	0.0074	9.52	0.070	133.20	8	2.51%	683.33	679.99	1.2327	1.91	5.46	0.06	0.10	3.13	
B	A	0	33	11550	0.0000	0.0116	8.75	0.101	47.04	8	1.02%	679.89	679.41	0.7864	1.22	3.49	0.13	0.16	2.54	
A	PUMP STATION	0	33	11550	0.0000	0.0116	8.75	0.101	6.01	8	0.83%	679.31	679.26	0.7100	1.10	3.15	0.14	0.16	2.36	
A	F2	0	33	11550	0.0000	0.0116	8.75	0.101	20.00	8	2.00%	679.31	678.91	1.1009	1.70	4.88	0.09	0.13	3.23	
F2	F1	0	33	11550	0.0000	0.0116	8.75	0.101	99.72	8	10.00%	669.30	659.33	2.4614	3.81	10.91	0.04	0.09	5.68	

SANITARY LATERAL TABLE

Lot Number	Station	Manhole From	Manhole To	Slope ft/ft	Length ft.	Inv @ Main	Inv @ Conn.	Riser Sta	Risers Ft.	Inv @ Begin Riser	Inv @ End Riser	Inv @ End Of Lateral	Lat To Back Of House ft.	Inv @ House	BF Elev Ft.	Δ Ft.	Remarks
32	1+02.43	L	EX M	0.0208	38.58	691.83	692.16	0+21.81	11.00	692.61	703.84	703.96	73.0	705.48	721.35	15.87	
1	0+77.81	L	EX M	0.0208	55.00	690.63	691.88	0+40.00	9.00	692.72	701.90	702.03	70.0	703.48	706.48	3.00	
31	0+43.43	L	EX M	0.0208	35.00	688.96	690.21	0+20.00	9.00	690.63	699.81	699.94	67.0	701.33	713.94	12.61	
2	1+66.33	K	L	0.0208	55.00	686.75	687.08	0+40.00	9.00	687.91	697.10	697.22	76.0	698.80	701.98	3.18	
30	1+07.45	K	L	0.0208	35.00	685.43	686.68	0+20.00	9.00	687.10	696.28	696.41	81.0	698.09	709.24	11.15	
3	0+80.06	K	L	0.0208	55.00	684.82	686.07	0+40.00	9.00	686.90	696.08	696.21	73.0	697.73	706.16	8.44	
4	0+30.54	K	L	0.0208	55.00	683.70	684.95	0+40.00	9.00	685.79	694.97	695.10	60.0	696.35	705.55	9.21	
29	0+24.65	K	L	0.0208	35.00	683.57	684.82	0+20.00	9.00	685.24	694.43	694.55	81.0	696.24	707.15	10.92	
5	0+38.73	J	K	0.0208	57.78	682.73	683.98	0+43.00	9.00	684.88	694.06	694.18	60.0	695.43	707.16	11.73	
6	0+53.18	I	J	0.0208	57.58	682.08	683.33	0+43.00	9.00	684.22	693.41	693.53	60.0	694.78	704.97	10.20	
28	0+19.05	I	J	0.0208	33.00	681.43	682.68	0+20.00	10.00	683.10	693.31	693.37	85.0	695.14	700.92	5.79	
16	1+17.47	F	G	0.0208	55.00	701.86	702.19	0+40.00	6.00	703.02	709.15	709.33	76.0	710.91	714.72	3.81	
15	0+77.00	F	G	0.0208	35.00	700.15	701.40	0+20.00	4.00	701.81	705.90	706.13	73.0	707.64	711.35	3.71	
17	0+36.32	F	G	0.0208	55.00	698.43	699.68	0+40.00	5.00	700.51	705.61	705.82	75.0	707.38	710.74	3.36	
14	0+51.02	E	F	0.0208	35.00	696.79	697.12	0+20.00	4.00	697.54	701.62	701.85	71.0	703.32	706.51	3.19	
18	3+00.00	D	E	0.0208	35.00	696.00	696.33	0+20.00	6.00	696.75	702.87	703.06	75.0	704.62	710.28	5.67	
13	2+63.26	D	E	0.0208	55.00	694.79	696.04			0.00	0.00	697.19	74.0	698.73	701.68	2.96	
19	2+18.74	D	E	0.0208	35.00	693.33	694.58	0+20.00	5.00	695.00	700.10	700.31	74.0	701.85	709.07	7.22	
12	1+81.87	D	E	0.0208	55.00	692.12	693.37			0.00	0.00	694.52	75.0	696.08	698.76	2.69	
20	1+33.93	D	E	0.0208	35.00	690.55	691.80	0+20.00	7.00	692.21	699.36	699.53	75.0	701.09	707.18	6.10	
11	1+04.10	D	E	0.0208	55.00	689.57	690.82			0.00	0.00	691.96	73.0	693.48	697.16	3.68	
21	0+55.38	D	E	0.0208	35.00	687.97	689.22	0+20.00	8.00	689.63	697.80	697.95	72.0	699.44	705.52	6.08	
10	0+19.51	D	E	0.0208	55.00	686.79	688.04			0.00	0.00	689.18	74.0	690.72	695.50	4.78	
22	2+52.06	C	D	0.0208	35.00	685.79	687.04	0+20.00	8.00	687.45	695.62	695.76	70.0	697.22	703.80	6.58	
9	2+30.14	C	D	0.0208	55.00	685.58	686.83	0+40.00		0.00	0.00	687.98	70.0	689.43	693.99	4.56	
23	1+62.10	C	D	0.0208	35.00	684.95	686.20	0+20.00	7.00	686.61	693.76	693.92	75.0	695.48	702.14	6.66	
8	1+38.91	C	D	0.0208	55.00	684.73	685.98			0.00	0.00	687.12	75.0	688.68	692.30	3.62	
24	0+79.19	C	D	0.0208	35.00	684.17	685.42	0+20.00	6.00	685.84	691.96	692.15	75.0	693.71	700.48	6.77	
7	0+71.00	C	D	0.0208	55.00	684.09	685.34			0.00	0.00	686.49	71.0	687.96	690.76	2.80	
25	1+33.20	B	C	0.0208	35.00	683.33	683.66	0+20.00	6.00	684.08	690.20	690.39	75.0	691.95	700.68	8.74	
26	0+46.20	B	C	0.0208	35.00	681.15	682.40	0+26.00	4.00	682.94	687.02	687.13	77.0	688.73	699.22	10.50	
33	0+11.49	B	C	0.0208	55.00	680.28	681.53			0.00	0.00	682.67	76.0	684.25	687.90	3.65	
27	0+30.39	H	I	0.0208	32.00	680.73	681.98		6.00	681.98	688.11	688.65	92.0	690.56	694.24	3.68	
	ALL LATERALS ARE 4" PVC DR25																

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COMMONWEALTH OF VIRGINIA
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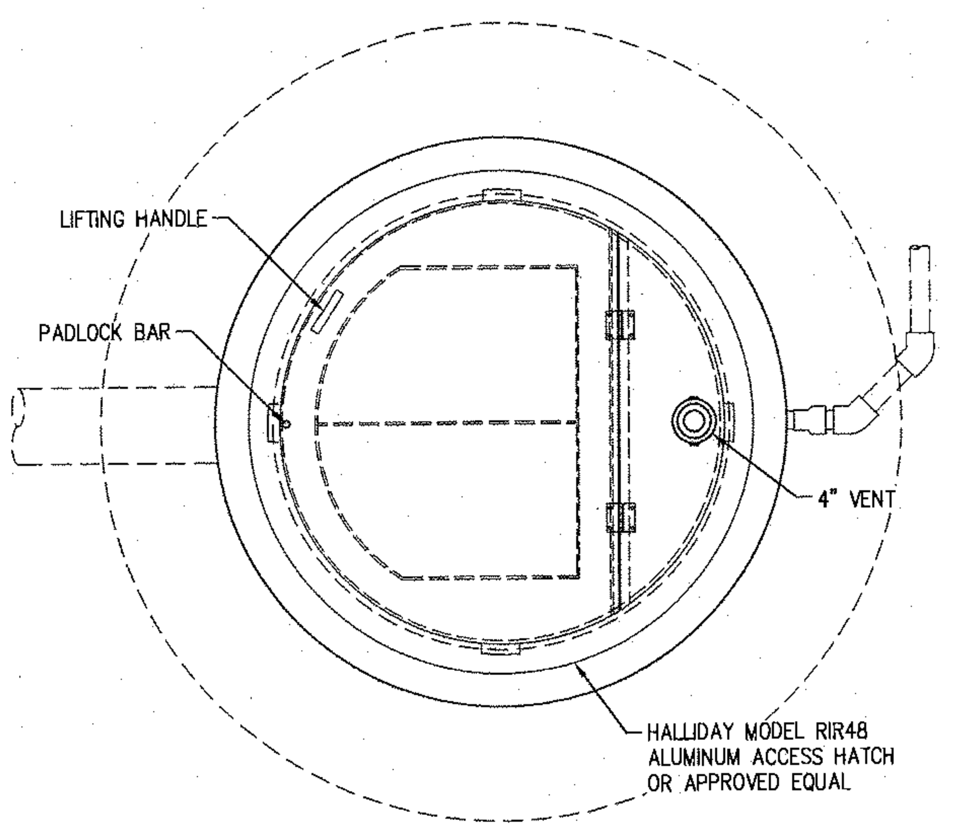
10/6/19
PROFESSIONAL ENGINEER

PLAN STATUS
07/24/19 COUNTY SUBMISSION
10/01/19 COUNTY COMMENTS

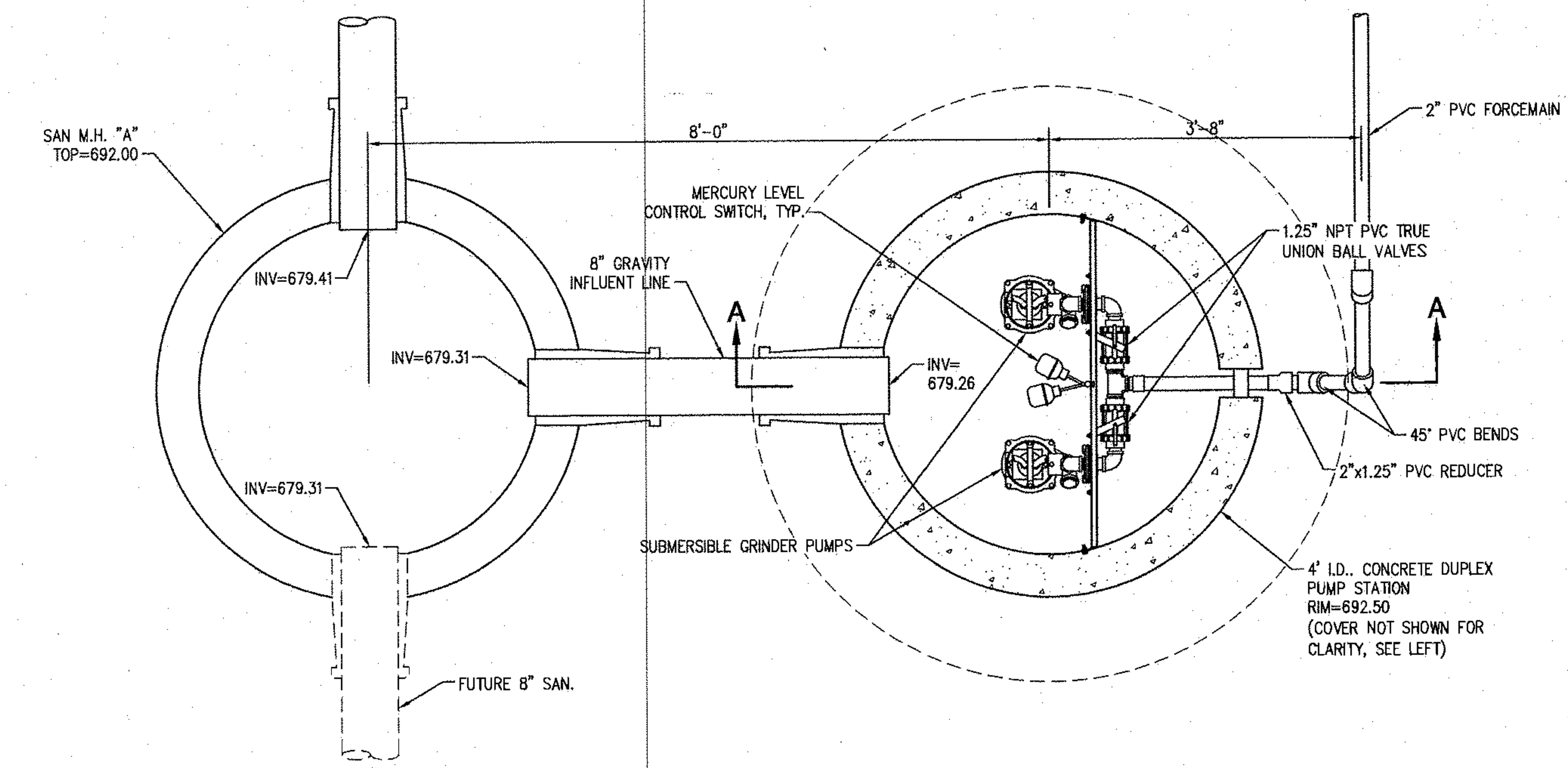
DATE DESCRIPTION
GC DESIGN | MCW DRAWN | CHKD
SCALE H: 1"=50' V: 1"=5'
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005

✱ NOTE: PUMP STATION MAY BE ELIMINATED IF AN ON GRADE ALTERNATIVE ROUTE IS APPROVED.



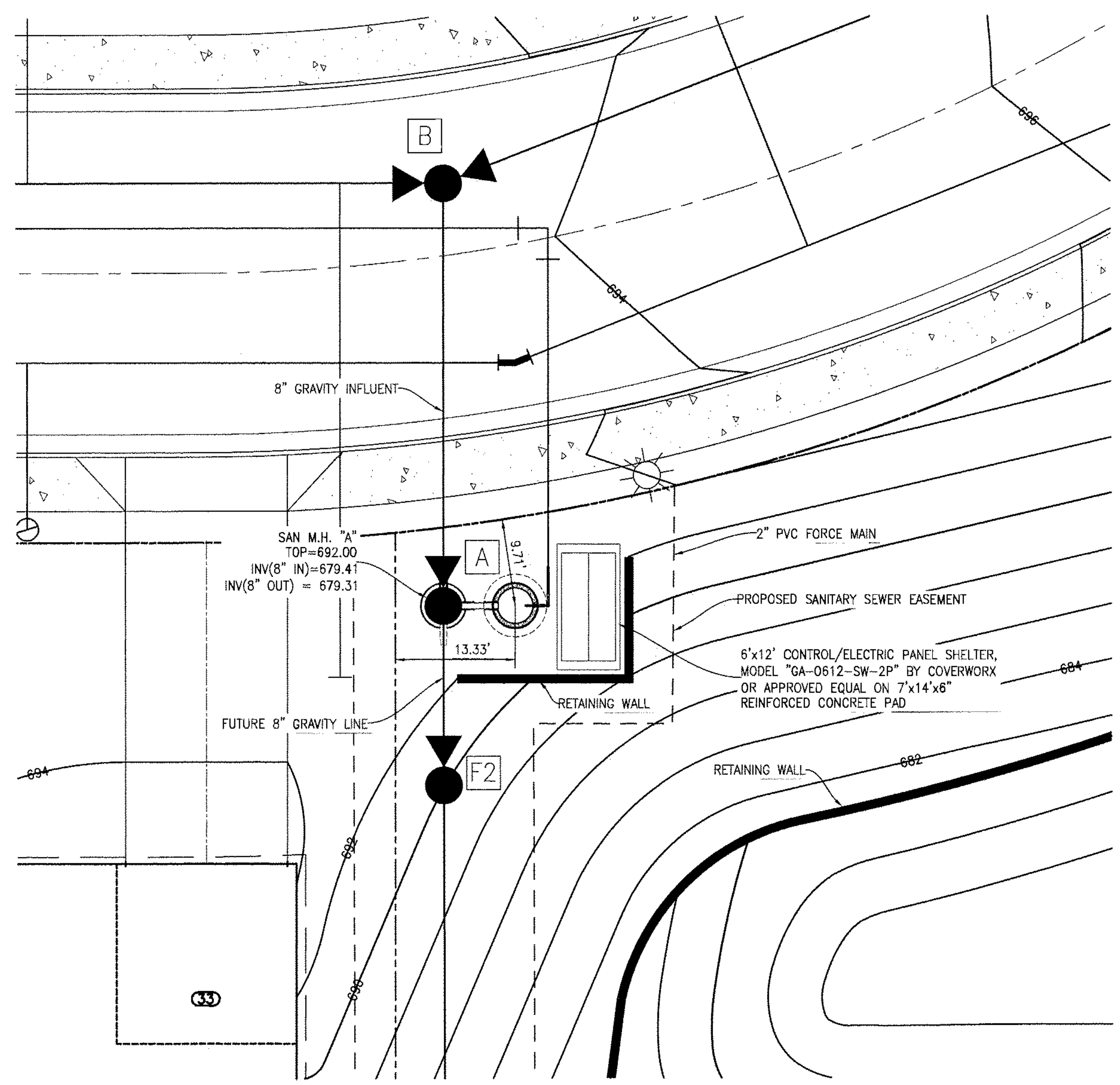
PUMP STATION COVER PLAN

SCALE: 3/4"=1'



PUMP STATION PLAN

SCALE: 3/4"=1'



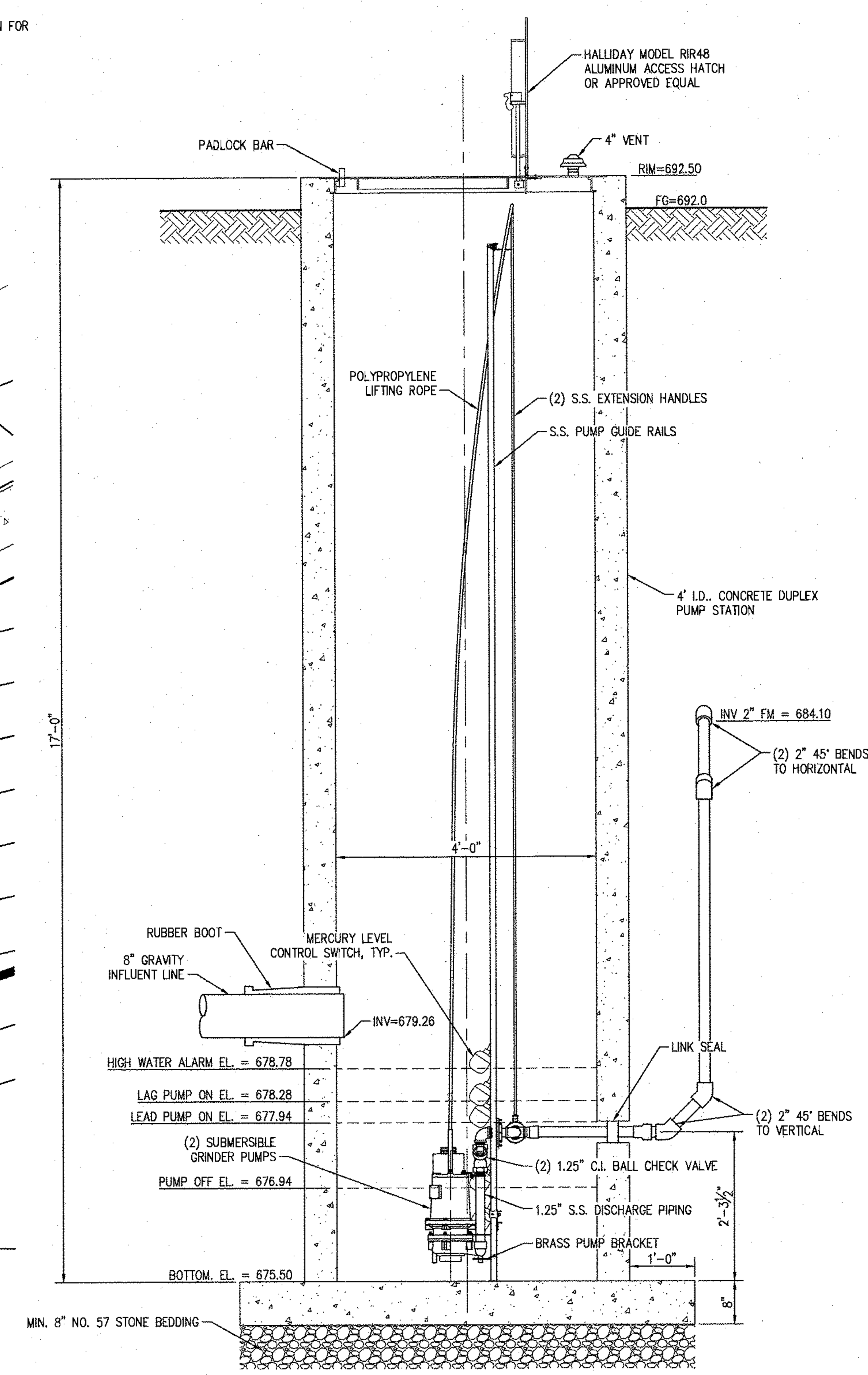
PUMP STATION SITE PLAN

SCALE: 1"=10'

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.



SECTION A-A

SCALE: 3/4"=1'

Model: Steelworx Two Post Gable Shelter, 6' x 12'
Model # GA-0612-SW-2P

Manufacturing Mission: To provide all prefabricated components and installation instructions for a 6' wide (measured from eave to eave) by 12' long free standing bolt together, tubular steel constructed shelter kit.

Design Criteria: Structure shall be designed for a 20 lb live load and a 100 mph wind load capacity, but can be designed based on specific site requirements upon request . All structural members are ASTM A-500 U.S. grade B steel. Welded connection plates shall be ASTM A-36 hot rolled steel. All welding performed to latest AWS standards by ASTM Certified welders and provided in accordance to same.

Tubular Steel Columns and Beams: Standard columns shall be 6" x 6" tubular steel welded to base plate (footing design provided separately). Main support beams are 6" x 4" and purlins are 6" x 3". All framing connections are done using A325 grade bolts within concealed access openings from above and will later be concealed by the roofing. All roof framing shall be flush against the roof decking to eliminate the possibility of bird nesting. Steel sizes are preliminary and may change upon final engineering based on actual site conditions and load requirements (site specific engineering shall be an additional cost).

Roofing: 24 Ga. pre-cut steel panels with Kynar 500 finish in a variety of colors with white underside. Standard roof slope is a 4/12 pitch with a eave height of 7'-2". Also available with 6/12 or 8/12 pitch roof. Attached to decking with exposed fasteners painted to match roof.

Frame Finish: All steel framework will receive a corrosion protective TGIC Polyester powder coat, electro-statically applied and cured at 400°F. A large selection of standard colors are available.

Foundation: All columns need to be anchored to concrete footings. Columns can be surface mounted with anchor bolts at or below finish slab elevation or they can be embedded directly into the footing. Optional base plate covers are available at an additional cost.

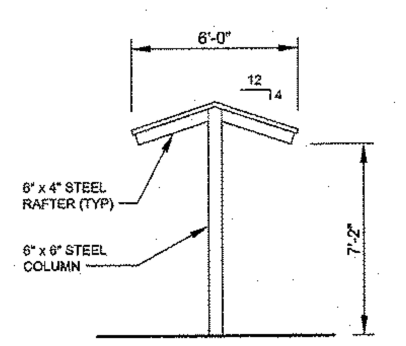
Hardware: All structural hardware and roofing fasteners shall be provided.

Warranty: 10 years against manufacturer defects.

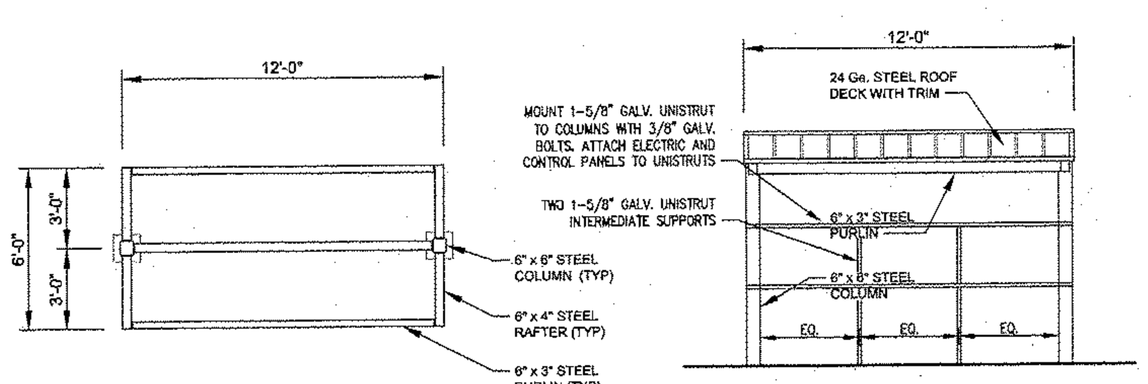
Not Included: Concrete work of any kind, unloading of product and installation.

Additional Options:

- Flexibility of Design Such as: Height and Pitch
- Additional Engineering
- Variety of Colors
- Decorative Railings, Lattice, Braces, Trim, etc.
- Cupolas and Rooftop Accs.
- Column Style Variations
- Lexan Wind Screens
- Tongue & Groove Roof Decking
- Asphalt Shingles, Standing Seam, Cedar Shake, or Clay Tile Roofing
- Composite Finished Ceiling
- Solar Panels & Solar Lighting
- Site Furnishings and Accs.



SIDE ELEVATION
SCALE: NTS



FRAMING PLAN
SCALE: NTS

FRONT ELEVATION
SCALE: NTS

COVERWORX
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Steelworx Two Post Gable Shelter - 6' x 12'
Model: GA-0612-SW-2P
DESIGN SPECIFICATIONS

SHELTER SPEC. & DETAIL

NOT TO SCALE

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
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PUMP STATION PLAN & DETAILS
HAPPY CREEK KNOLLS
SECTION 4

TOWN OF FRONT ROYAL   WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JESSICA M. KWIATKOWSKI
Lic. No. 036766
4/18/18
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION	
TCW DESIGN	DWD DRAWN	JMK CHKD
SCALE	H: AS NOTED V: N/A	
JOB No. 1602-04-001		
DATE APRIL, 2018		
FILE No. 1602-D-CP-04-001		

SECTION 01010-SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. PROJECT SUMMARY.
B. PROJECT LOCATION AND GENERAL INFORMATION.
C. CONTRACTOR USE OF SITE.

1.02 PROJECT SUMMARY

A. ABBREVIATED WRITTEN SUMMARY: BRIEFLY, AND WITHOUT FORCE AND EFFECT UPON CONTRACT DOCUMENTS, THE WORK OF CONTRACT CAN BE SUMMARIZED AS FOLLOWS:
1. THE PROJECT INCLUDES THE INSTALLATION OF ONE WASTEWATER PUMP STATION FOR A SUBDIVISION IN THE TOWN OF FRONT ROYAL, IN WARREN COUNTY, VIRGINIA. THE PUMP STATION INCLUDES A WET WELL, DUPLEX SUBMERSIBLE PUMPS, DISCHARGE PIPING, FORCE MAIN PIPING, AND ALL ASSOCIATED EQUIPMENT, PIPING, VALVES AND ELECTRICS.

1.03 LOCATION

A. THE HAPPY CREEK KNOLLS, SECTION 3 SUB-DIVISION WILL BE LOCATED TO THE WEST SIDE OF HAPPY CREEK ROAD, BETWEEN HAPPY RIDGE DRIVE, AND EWELL STREET. THE PUMP STATION WILL BE LOCATED WITHIN THE TOWN OF FRONT ROYAL.
B. EXTENT OF THE SITE IS SHOWN ON THE DRAWINGS.

1.04 TIME OF COMPLETION

THE PROJECT SHALL BE COMPLETED WITHIN THE SCHEDULE SPECIFIED IN THE BID FORM.

1.05 SURVEYING

PROVIDE FIELD STAKEOUT OF STRUCTURES AND CUT SHEETS FOR UTILITIES. THE OWNER WILL PROVIDE HORIZONTAL AND VERTICAL CONTROL.

1.06 CONTRACTOR USE OF SITE

A. THE CONTRACTOR SHALL LIMIT THE USE OF PREMISES FOR WORK AND STORAGE. THE CONTRACTOR SHALL LIMIT THE STAGING AREA WITHIN THE LIMITS OF DISTURBANCE, AS INDICATED ON FORMAL SITE PLAN DRAWINGS BY BOWMAN CONSULTING GROUP, LTD.
B. THE CONTRACTOR SHALL COORDINATE THE USE OF PREMISES UNDER DIRECTION OF ENGINEER.
C. THE CONTRACTOR SHALL PROVIDE SITE SAFETY AND SECURITY FDR PROJECT SITE, INCLUDING OWNER-FURNISHED EQUIPMENT THAT MAY BE STORED AT SITE.
D. THE CONTRACTOR SHALL OBTAIN ANO PAY FOR USE OF ANY ADDITIONAL STORAGE OR WORK AREAS REQUIRED.

END OF SECTION

SECTION 02560-PIPING SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

THIS SECTION SPECIFIES THE REQUIREMENTS FOR ALL PIPING SYSTEMS TO BE INSTALLED AS PART OF THIS PROJECT.

1.02 GENERAL REQUIREMENTS

THE DRAWINGS SHOW THE GENERAL LAYOUT AND DO NDT NECESSARILY REFLECT THE EXACT LOCATION OF THE VARIOUS ITEMS. ACCORDINGLY, THE CONTRACTOR SHALL NOT SCALE THE PLANS, BUT SHALL ACQUAINT HIMSELF WITH THE EXTENT AND CHARACTER OF THE WORK REQUIRED AND ITS RELATION TO THE WORK UNDER OTHER ITEMS. IT IS THE INTENTION OF THE DRAWINGS AND SPECIFICATIONS TO PROVIDE COMPLETE AND WORKABLE PIPING SYSTEMS; ANY MISCELLANEOUS VALVES AND FITTINGS REQUIRED FOR PROPER COMPLETION OF THE WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

PART 2- PRODUCTS

2.01 ALL MATERIAL SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED ON THE DRAWINGS

A. ALL FORCEMAIN PIPING TO THE TERMINAL MANHOLE SHALL BE PVC-C9DO SDR 21.
B. ALL YARD PIPING NOT SPECIFIED SHALL BE DUCTILE IRON.

2.02 GRAVITY SEWERAGE LINES

A. PIPING SHALL BE POLYVINYL CHLORIDE PVC PLASTIC GRAVITY SEWER PIPE WITH INTEGRAL WALL BELL ANO SPIGOT JOINTS. PIPE SHALL BE MANUFACTURED FROM AN APPROVED PVC COMPOUND CONFORMING TO ASTM F679 AND WALL THICKNESS T-1.
B. JOINTS, FITTINGS, AND GASKETS
1. INTEGRAL BELL WITH ELASTIC GASKETED JOINT THAT FORMS A WATERTIGHT SEAL WHEN COMPRESSED RAOIALLY ON THE PIPE SPIGOT INSIDE THE BELL.
2. JOINTS SHALL CONFORM TO ASTM D3212.
3. FITTINGS SHALL BE PVC COMPONENTS CONFORMING TO ASTM D1784.
4. GASKETS SHALL CONFORM TO ASTM F477.

2.03 FORCE MAIN PIPING AND APPURTENANCES

ALL FORCE MAIN PIPING SHALL BE AS SPECIFIED BELOW.

A. PVC C-900
1. SHALL BE AWWA C-9D0 SDR21 CONFORMING TO ASTM D1784.
2. JOINTS SHALL BE PUSH ON TYPE IN COMPLIANCES WITH ASTM D3139 WITH ELASTOMERIC GASKET JOINTS MEETING ASTM F477.
3. FITTINGS SHALL BE MECHANICAL JOINT CLASS 350 DUCTILE IRON FITTINGS CONFORMING TO ANSI 21.20, COATED TO MATCH DUCTILE IRON PIPE.
B. SLEEVE TYPE COUPLINGS: MECHANICAL JOINT CAST IRON SOLID SLEEVES SHALL BE USED FOR BELOW GRADE RESTRAINED COUPLING.
C. HARDWARE: ALL HARDWARE, SUCH AS NUTS AND BOLTS, NOT SPECIFIED ABOVE SHALL BE STAINLESS STEEL.

2.04 VALVES

A. PLUG VALVES
PLUG VALVES SHALL BE CAST IRON ECCENTRIC PLUG VALVES AS MANUFACTURED BY DEZURIK FIGURE 10D OR APPROVED EQUAL. PLUGS SHALL BE OF ASTM A126 CLASS B CAST IRON IN COMPLIANCE WITH AWWA C504, SECTION 2.2. VALVES SHALL HAVE HEAVY-DUTY STAINLESS-STEEL BEARINGS, RESILIENT PLUG FACINGS WITH NEOPRENE OR HYCAR, NON-RISING STEM HAND-WHEEL OPERATOR, AND WELDED-IN CORROSION RESISTANT NICKEL SEAT. VALVES SHALL BE CAPABLE OF HANDLING WASTEWATER.
B. CHECK VALVES
CHECK VALVES 4" AND LARGER SHALL MEET THE REQUIREMENTS OF C508 AND SHALL BE CUSHIONED SWING TYPE VALVES CONSTRUCTED OF CAST IRON OR STEEL BODY WITH A STAINLESS STEEL RESILIENT SEAT RING, NON-CORROSIVE SHAFT THAT EXTENDS THROUGH THE BODY FOR ATTACHING WEIGHT AND LEVER, AND COMPLETELY NON-CORROSIVE CUSHION CHAMBER. VALVES SHALL BE FLANGED WITH 125# RATED FLANGES. VALVES SHALL BE GOLDEN-ANDERSON FIGURE 250-D. THEY SHALL HAVE A PRESSURE RATING OF 200 PSI WITH CLASS 125 FLANGES.
C. AIR RELEASE VALVES
AIR RELEASE VALVES SHALL BE 2" MODEL VM-301 AS, VALMATIC AIR RELEASE VALVE, WITH STAINLESS STEEL BACKWASH KIT. ALL HARDWARE SHALL BE STAINLESS STEEL.

2.05 RESTRAINED JOINTS AND COUPLINGS

A. DUCTILE IRON RESTRAINED JOINT RETAINER GLANDS SHALL BE AS MANUFACTURED BY EBAA IRON SALES, INC., "MEGALUG" SERIES 1100 OR APPROVED EQUAL.
B. DUCTILE IRON RESTRAINED COUPLINGS SHALL BE AS MANUFACTURED BY EBAA IRON SALES, INC., MEGA-CQUPLING SERIES 3800 OR APPROVED EQUAL.
C. RESTRAINTS FOR C90D PVC PIPES AT DUCTILE IRON FITTINGS SHALL BE SERIES 15PF0D AS MANUFACTURED BY EBAA IRON, INC.

2.06 PIPE SUPPORTS

A. PIPE SUPPORTS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS; WHERE SPECIFIED OR INDICATED; ANO AS REQUIRED TO SUPPORT THE WEIGHT OF PIPE, LIQUID, AND ANY ANTICIPATEO THRUST.
B. THE MAXIMUM DISTANCE BETWEEN SUPPORTS SHALL BE 8 FEET UNLESS INDICATED OTHERWISE, EXCEPT THE MAXIMUM DISTANCE BETWEEN SUPPORTS SHALL NOT EXCEED THAT RECOMMENDED BY THE PIPE MANUFACTURER.
C. PIPE SUPPORTS SHALL BE STAINLESS STEEL SADDLE STANDON MODEL S92 AS MANUFACTURED BY MATERIAL RESOURCES, INC. OR AN APPROVED EQUAL.
D. THE CONTRACTOR SHALL PROVIDE METAL PIPE HANGERS, INSERTS, STRUTS, STRUCTURAL MEMBERS, BRACKETS, PLATES, ANCHORS, AND OTHER SUPPORTS AS REQUIREO.

2.07 PIPE SLEEVES, WALL PIPES

A. PIPE SLEEVES SHALL BE INSTALLED WHERE PIPING PASSES THROUGH WALLS OR SLABS.
B. SLEEVES FOR PIPES THREE INCHES AND LARGER, SLEEVES BELOW GRADE, AND SLEEVES INTO TANKS CONTAINING LIQUID SHALL BE HDPE SLEEVES WITH A COMPRESSIBLE RUBBER GASKET. NO SLEEVES SHALL BE INSTALLED THROUGH STRUCTURAL BEAMS OR JOINTS UNLESS THE INSTALLATION IS SPECIFICALLY SHOWN OR APPROVED.
C. SLEEVES SHALL BE FASTENED SECURELY IN FLOORS AND WALLS SO THEY WILL NOT BE DISPLACED WHEN CONCRETE IS POURED OR WHEN OTHER CONSTRUCTION IS BUILT AROUND THEM, AND SHALL BE PROTECTED TO PREVENT CONCRETE, PLASTER, OR OTHER MATERIALS FROM BEING FORCED INTO THE SPACE BETWEEN THE PIPE AND SLEEVE. WALL SLEEVES SHALL FINISH FLUSH WITH FINISH LINE. THE BOTTOM OF FLOOR SLEEVES SHALL BE SET FLUSH WITH THE UNOERSIDE OF THE SLAB BELOW, THE TOP EXTENOING 3/4 INCH ABOVE THE FINISHED FLODR.

2.08 PIPE SEALS

A. CONTRACTOR SHALL DETERMINE THE REQUIRED INSIDE DIAMETER OF EACH INOIVIDUAL WALL OPENING OR SLEEVE BEFORE ORDERING, FABRICATING OR INSTALLING. THE INSIDE DIAMETER OF EACH WALL OPENING SHALL BE SIZED AS RECOMMENDED BY THE MANUFACTURER TO FIT THE PIPE AND TO ASSURE A WATERTIGHT JOINT.
B. CONTRACTOR SHALL FAMILIARIZE HIS INSTALLING PERSONNEL WITH MANUFACTURER'S INSTRUCTION BULLETIN FOR THE PROPER PROCEDURE FOR INSTALLING AND TIGHTENING THE SEAL TO PROVIDE A WATERTIGHT PIPE PENETRATION.
C. UNLESS OTHERWISE NOTED, SEALS SHALL BE LINK-SEAL MODULAR EPDM SEAL ASSEMBLIES AS MANUFACTURED BY PSI-THUNDERLINE/LINK-SEAL.
D. SEAL ASSEMBLIES SHALL BE PROVIDED WITH STAINLESS STEEL NUTS AND BOLTS.

PART 3 - EXECUTION

3.01 GENERAL

A. HANDLING AND STORING MATERIALS
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE AND PROPER DELIVERY, UNLOADING, STORAGE AND HANDLING OF MATERIALS FURNISHED BY HIM AND INTENDED FOR THE WORK UNTIL IT HAS BEEN INCORPORATED IN THE COMPLETE PROJECT.
2. PROPER CARE AND PROTECTION SHALL BE EXERCISED IN HANDLING PIPE, FITTINGS AND OTHER ACCESSORIES IN UNLOADING FROM DELIVERY TRUCKS. THE PIPE SHALL BE LIFTED BY HOISTS AND SLID OR ROLLED ON SKIDWAYS IN SUCH A MANNER AS TO AVOID SHOCK. UNDER NO CIRCUMSTANCES SHALL THE PIPE BE DROPPED. PIPE MUST NOT BE SKIDDED OR ROLLED AGAINST PIPE ALREADY ON THE GROUND.
3. MATERIALS SHALL BE STORED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

B. EXCAVATING AND BACKFILLING
1. CONTRACTOR SHALL REMOVE EXCAVATING OF ANY AND ALL MATERIALS ENCOUNTERED IN THE COURSE OF EXCAVATING FOR ALL UNDERGROUND UTILITY SYSTEMS. AFTER THE WORK IS IN PLACE, BACKFILL WITH SATISFACTORY MATERIALS AS SPECIFIED IN SECTION 022D0. ALL PIPING SHALL BE ENTIRELY BACKFILLED WITH SUITABLE MATERIAL.
   a. PROVIDE ALL NECESSARY PUMPING REOUIRED TO KEEP EXCAVATION RELATIVELY FREE FROM WATER FROM ANY SOURCE AT ALL TIMES. PROVIDE ALL NECESSARY SHORING REQUIRED FOR THE PROTECTION OF EXCAVATIONS, EXISTING UTILITIES AND WORKMEN.
   b. PROVIOE SUFFICIENT BARRICADES, ETC., ADJACENT TO EXCAVATIONS TO SAFEGUARD AGAINST INJURY TO WORKMEN AND THE PUBLIC. PROVIDE AND MAINTAIN SUFFICIENT WARNING LANTERNS AT WALKS, ROADWAYS, AND PARKING AREAS TO PROVIDE SAFETY AT NIGHT.
   c. AFTER INSTALLATION AND INSPECTION OF PIPING AND EQUIPMENT HAVE BEEN COMPLETE, BACK FILL ALL EXCAVATIONS CAREFULLY. PLACE BACKFILL IN 6-INCH LAYERS AND COMPACT TO NOT LESS THAN 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE + 2%. COMPACTION UNDER PAVED AREAS SHALL BE NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE + 2%. MAXIMUM DENSITY SHALL BE DETERMINED BY COMPACTION TEST ASTM D698 (STANDARD PROCTOR). BACKFILL MATERIALS SHALL MEET REQUIREMENTS OF SECTION 02200.
   d. EXERCISE SPECIAL CARE IN BACKFILLING TRENCHES IN WHICH SEWERS ARE LAID TO GUARD AGAINST OISTURBING THE JOINTS. SUCH BACKFILLING SHALL BE PLACED EVENLY IN 6-INCH LAYERS AND CAREFULLY COMPACTED.
   e. REMOVE AND DISPOSE OF ANY MATERIAL NOT USED FOR BACKFILL.
   f. PLASTIC MARKING TAPE SHALL BE OF PLASTIC MATERIAL WITH INTEGRAL WIRES, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN THE TAPE IS BURIED UP TO THREE FEET (3') OEEP. THE TAPE SHALL HAVE THE WORDS "SEWER LINE BELOW" IN CONTRASTING LETTERS REPEATED CONTINUOUSLY. THE TAPE SHALL BE OF A TYPE SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORRDSION.
   g. PLASTIC MARKING TAPE SHALL BE PLACED OIRECTLY ABOVE THE FORCE MAIN AT A DEPTH OF TWO (2.D) FEET BELOW THE NORMAL GROUND ELEVATION. THE TAPE SHALL BE LAID FLAT IN A CONTINUOUS MANNER WITHOUT KINKS, KNOTS OR OTHER IRREGULARITIES WHICH MAY INTERFERE WITH THE PROPER PERFORMANCE OF THE TAPE.
2. REMOVAL OF SUBSURFACE OBSTRUCTIONS, WHICH ARE UNCOVERED DURING EXCAVATION FOR INSTALLATION OF THE UTILITY SYSTEMS, SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE. THIS SHALL INCLUDE REMOVAL OR ROCK, EXISTING CONCRETE OR BRICK OF EXISTING BUILDING FOUNDATION, FOOTINGS, ABANDONED UTILITY PIPING, WIRES, STRUCTURES, ETC., WHICH MAY NOT BE VISIBLE FROM SURFACE INVESTIGATIONS BEFORE CONSTRUCTION, BUT WILL INTERFERE WITH NEW INSTALLATIONS. IF SUCH OBSTRUCTIONS ARE ENCOUNTERED THEY SHALL BE REMOVED 2 FEET FROM AROUND THE AREA OF NEW MANHOLES, CATCH BASINS, AND SEWER PIPING AND BACKFILLED WITH A SUITABLE MATERIAL AS SPECIFIED.

C. SEPARATION OF WATER AND SEWER LINES
1. PARALLEL INSTALLATION:
   a. NORMAL CONDITIONS: WATER LINES SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM A SEWER OR SEWER MANHOLE WHENEVER POSSIBLE, AND THE DISTANCE SHALL BE MEASURED EDGE-TO-EDGE.
   b. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF AT LEAST 10 FEET, THE WATER LINE MAY BE CLOSER TO A SEWER OR SEWER MANHOLE PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH LOCATED ON ONE SIDE OF THE SEWER, AND:
   c. THE BOTTOM OF THE WATER LINE IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
2. WHERE THIS VERTICAL SEPARATION CANNOT BE OBTAINED, THE SEWER SHALL BE CONSTRUCTED OF AWWA C9DD OR C905 APPROVED WATER PIPE PRESSURE-TESTED IN PLACE TO A MINIMUM 3D PSI WITHOUT LEAKAGE PRIOR TO BACKFILLING. THE SEWER MANHOLE SHALL BE OF WATERTIGHT CONSTRUCTION AND TESTED IN PLACE WITHOUT LEAKAGE.
3. CROSSING:
   a. NORMAL CONDITIONS: WATER LINES CROSSING OVER SEWERS SHALL BE AT LEAST 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE SEWER.
   b. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A VERTICAL SEPARATION DESCRIBED IN CROSSING, NORMAL CONDITIONS, PARAGRAPH ABOVE, THE FOLLOWING CONSTRUCTION SHALL BE USED:
      1) SEWERS PASSING OVER OR UNDER WATER LINES SHALL BE CONSTRUCTED OF THE MATERIALS DESCRIBEO IN PARALLEL INSTALLATION, UNUSUAL CONDITIONS, PARAGRAPH 3.01.C.2 ABOVE.
      2) WATER LINES PASSING UNDER SEWERS SHALL, IN ADDITION, BE PROTECTED BY PROVIDING:
         a) A VERTICAL SEPARATION OF AT LEAST 18 INCHES BETWEEN THE BOTTOM OF THE SEWER AND THE TOP OF THE WATER LINE.
         b) ADEQUATE STRUCTURE SUPPORT FOR THE SEWERS TO PREVENT EXCESSIVE DEFLECTION OF THE JOINTS AND SETTLING ON THE BREAKING WATER LINE.
         c) THAT THE LENGTH OF THE WATER LINE BE CENTERED AT THE POINT OF THE CROSSING SO THAT JOINTS SHALL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
4. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLATION OF ANY WATER LINE CROSSING UNDER A SEWER LINE.

D. THRUST RESTRAINT OF PRESSURE PIPING SYSTEMS
ALL MECHANICAL JOINTS SHALL BE RESTRAINED WITH MEGA LUG RESTRAINING GLANDS OR EQUAL. RESTRAINED JOINTS SHALL ALSO BE USED ON ONE PIPE JOINT IN BOTH DIRECTIONS OF EACH FITTING. SEE VIRGINIA'S DEPARTMENT OF ENVIRONMENTAL QUALITY: SEWAGE COLLECTION AND TREATMENT REGULATIONS FOR DETAILS.

3.02 GRAVITY SEWERAGE PIPING

A. LAYING OF SEWER PIPE SHALL BE ACCOMPLISHED TO LINE AND GRADE IN THE TRENCH ONLY AFTER IT HAS BEEN DEWATERED AND THE FOUNDATION AND/OR BEDDING HAS BEEN PREPARED. MUD, SILT, GRAVEL, AND OTHER FOREIGN MATERIALS SHALL BE KEPT OUT OF THE PIPE AND OFF THE JOINTING SURFACES.
B. BEDDING SHALL BE SHAPED SO THAT THE ENTIRE LENGTH OF PIPE WILL HAVE FULL BEARING. NO BLOCKING OF ANY KIND SHALL BE USED TO ADJUST THE PIPE TO GRADE.
C. ALL PIPE AND FITTINGS SHALL BE CAREFULLY LOWERED INTO THE TRENCH IN SUCH A MANNER AS TO PREVENT DAMAGE TO PIPE OR COATINGS. UNDER NO CIRCUMSTANCES SHALL PIPE MATERIALS BE DROPPED OR DUMPED INTO THE TRENCH.
D. ALL PIPE LAID SHALL BE RETAINED IN POSITION SO AS TO MAINTAIN ALIGNMENT AND JOINT CLOSURE UNTIL SUFFICIENT BACKFILL HAS BEEN COMPLETED TO ADEQUATELY HOLD THE PIPE IN PLACE. ALL PIPES SHALL BE LAID TO CONFORM TO THE PRESCRIBED LINE AND GRADE SHOWN ON THE DRAWINGS, WITHIN THE LIMITS THAT FOLLOW. AT LEAST THREE BATTERBOARDS SHALL BE MAINTAINED IN POSITION DURING ALL PIPE LAYING OPERATIONS, UNLESS A LASER BEAM IS USED.
E. VARIANCE FROM ESTABLISHED LINE AND GRADE SHALL NOT BE GREATER THAN 1/32 OF AN INCH PER INCH OF PIPE DIAMETER AND NOT TO EXCEED ½ INCH, PROVIDED THAT ANY SUCH VARIATION DOES NOT RESULT IN A LEVEL OR REVERSE SLOPING INVERT; PROVIDED ALSO, THAT VARIATION IN THE INVERT ELEVATION BETWEEN ADJOINING ENDS OF PIPE, DUE TO NONCONCENTRICITY OF JOINT SURFACE AND PIPE INTERIOR SURFACES, DOES NOT EXCEED 1/64 INCH PER INCH OF PIPE DIAMETER, OR ½ INCH MAXIMUM.
F. THE SEWER PIPE, UNLESS OTHERWISE APPROVED BY THE ENGINEER, SHALL BE LAID UP GRADE FROM POINT OF CONNECTION OF THE EXISTING SEWER OR FROM A DESIGNATED STARTING POINT. THE SEWER PIPE SHALL BE INSTALLED WITH THE BELL END FORWARD OR UPGRADE. WHEN PIPE LAYING IS NOT IN PROGRESS THE FORWARD END OF THE PIPE SHALL BE KEPT TIGHTLY CLOSED WITH TEMPORARY PLUG.
G. THE PIPE SHALL BE FITTED AND MATCHED SO THAT UNITS WILL FORM A SMOOTH, UNIFORM INVERT.
H. PRIOR TO JOINING THE PIPE, ALL SURFACES OF THE PIPE TO BE JOINED AND SURFACES OF FACTORY MADE JOINTING MATERIALS SHALL BE CLEAN AND DRY. LUBRICANTS, PRIMERS, ADHESIVES, ETC., SHALL BE APPLIED AND THE PIPES JOINED AS RECOMMENDED BY THE MANUFACTURER'S SPECIFICATIONS. SUFFICIENT PRESSURE SHALL BE APPLIED IN MAKING THE JOINT TO ASSURE THAT THE PIPE IS "HOME." THE INTERIOR OF THE PIPE SHALL BE CLEANED OF ALL FOREIGN MATERIALS AS THE WORK PROGRESSES. AT THE END OF THE WORKDAY, THE LAST PIPE LAID SHALL BE BLOCKED TO PREVENT CREEP, AND CLOSED WITH TIGHT FITTING COVER.
I. TRENCHES SHALL BE CAREFULLY FILLED USING SELECT BACKFILL MATERIALS IN SIX-INCH LAYERS TO A DEPTH OF 12-INCHES ABOVE THE TOP OF THE PIPE. EACH LAYER SHALL BE EVENLY SPREAD; THE MOISTURE CONTENT BROUGHT TO NEARLY OPTIMUM CONDITIONS; AND THEN COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
J. THE REMAINDER OF THE TRENCH SHALL BE FILLED USING CONTROLLED FILL, PLACED IN LAYERS NOT EXCEEDING SIX-INCHES, AND COMPACTED WHILE AT A MOISTURE CONTENT NEAR THE OPTIMUM AND TO A DENSITY THAT IS NOT LESS THAN 90% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
K. ALL SANITARY SEWER MAINS ARE REQUIRED TO PASS THE FOLLOWING TESTS TO INSURE THERE WILL BE NEITHER EXFILTRATION NOR INFILTRATION:
1. GRAVITY MAINS
   a. EXFILTRATION AND LAMPING TESTS: ALL GRAVITY MAINS.
   b. DEFLECTION TESTING: PVC GRAVITY MAINS ONLY.
2. FORCE MAINS:
   a. EXFILTRATION: ALL FORCE MAINS.
3. NO TESTING BY THE ENGINEER SHALL BE CONDUCTED UNTIL THE REQUIREMENTS PROVIDED IN THE RECORD PLAN SECTION ARE MET.
4. ALL SANITARY SEWER MAINS SHALL BE COLOR TELEVISED (AFTER HAVING BEEN FLUSHED WITH WATER) PRIOR TO ACCEPTANCE BY THE OWNER.

3.03 FORCE MAIN PIPING AND APPURTENANCES

A. LAYING OF FORCE MAIN SHALL BE ACCOMPLISHED IN THE TRENCH ONLY AFTER IT HAS BEEN DEWATERED AND THE FOUNOATION AND/OR BEDDING HAS BEEN PREPARED. MUD, SILT, GRAVEL AND OTHER FOREIGN MATERIAL SHALL BE KEPT OUT OF THE PIPE AND OFF THE JOINTING SURFACES.
B. BEDDING SHALL BE SHAPED SO THAT THE ENTIRE LENGTH OF PIPE WILL HAVE FULL BEARING. NO BLOCKING OF ANY KIND SHALL BE USED TO ADJUST THE PIPE TO GRADE.
C. ALL PIPE AND FITTINGS SHALL BE CAREFULLY LOWERED INTO THE TRENCH IN SUCH A MANNER AS TO PREVENT DAMAGE TO PIPE OR COATINGS. UNDER NO CIRCUMSTANCES SHALL PIPE MATERIALS BE DROPPED OR DUMPED INTO THE TRENCH.
D. ALL PIPE LAID SHALL BE RETAINED IN POSITION SO AS TO MAINTAIN ALIGNMENT AND JOINT CLOSURE UNTIL SUFFICIENT BACKFILL HAS BEEN COMPLETED TO ADEQUATELY HOLD THE PIPE IN PLACE. ALL PIPES SHALL BE LAID TO CONFORM TO THE PRESCRIBED LINE AND GRADE SHOWN ON THE DRAWINGS.
E. THE PIPE SHALL BE FITTED AND MATCHED SO THAT WHEN LAID IN THE WORK, UNITS WILL FORM A SMOOTH, UNIFORM INVERT.
F. PRIOR TO JDINING THE PIPE, ALL SURFACES OF THE PIPE TO BE JOINED AND THE SURFACES TO FACTORY MADE JOINTING MATERIALS SHALL BE CLEAN AND DRY. LUBRICANTS, PRIMERS, ADHESIVES, ETC., SHALL BE APPLIED AND THE PIPES JOINED AS RECOMMENDED BY THE MANUFACTURER'S SPECIFICATIONS. SUFFICIENT PRESSURE SHALL BE APPLIED IN MAKING THE JOINT TO ASSURE THAT THE PIPE IS "HOME." THE INTERIOR OF THE PIPE SHALL BE CLEANEO OF ALL FOREIGN MATERIAL AS THE WORK PROGRESSES. AT THE END OF THE WORKDAY, THE LAST PIPE LAID SHALL BE BLOCKED TO PREVENT CREEP, AND CLOSED WITH TIGHT FITTING COVER.

3.04 YARD PIPING AND APPURTENANCES

A. SERVICE LINE AND YARD PIPING SHALL BE TESTED AT NOT LESS THAN 1-1/2 TIMES WORKING PRESSURE FOR 2 HOURS. PRESSURE SHALL BE INCREASED IN 5D-PSI INCREMENTS AND EACH JOINT INSPECTED BETWEEN INCREMENTS. TEST PRESSURE SHALL BE HELD FOR ONE HOUR; DECREASE TO D PSI. TEST PRESSURE SHALL BE SLOWLY ACHIEVED AGAIN AND HELD FOR ONE MORE HOUR. NO LEAKAGE IS ALLOWED. REMAKE LEAKING JOINTS WITH NEW MATERIALS AND REPEAT TEST UNTIL LEAKAGE IS WITHIN ABOVE LIMITS. TESTING PROCEDURES SHOULD CONFORM TO THE SCAT REGULATIONS.
B. SERVICE LINE PIPING SHALL BE CLEANED AND DISINFECTED AS FOLLOWS:
- NEW WATER PIPING SHALL BE PURGED AND DISINFECTEO IN ACCORDANCE WITH AWWA C600 ANO C651.
- PIPING SHALL BE FILLED WITH A WATER/CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE. ISOLATE (VALVE OFF) THE SYSTEM OR PART THEREOF AND ALLOW TO STAND FOR 24 HOURS.
- PIPING SHALL BE DRAINED ANO REFILLED WITH A WATER/CHLORINE SOLUTION CONTAINING AT LEAST 2D0 PARTS PER MILLION OF CHLORINE AND ISOLATE AND ALLOWED TO STAND FOR 3 HOURS.
- FOLLOWING THE ALLOWED STANDING TIME, THE PIPING SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL CHLORINE RESIDUAL IS AT AN ACCEPTABLE LEVEL.

3.05 REMOVAL OF ALL AIR

CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL AIR AFTER TESTING AND TIE IN OF ALL PIPELINES.

END OF SECTION

SECTION 03400-PRE-CAST CONCRETE STRUCTURES

PART 1 - GENERAL

1.01 SUMMARY

THIS SECTION SPECIFIES THE REQUIREMENTS FOR THE PRE-CAST CONCRETE MANHOLES, AND WET WELL TO BE PROVIDED AS PART OF THIS PROJECT. PRE-CAST CONCRETE STRUCTURES ARE TO BE DELIVERED AND PLACED ON PREPARED STONE FOUNDATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE STRUCTURES ARE TO BE PROVIDED WILL ALL NECESSARY OPENINGS AS SPECIFIED IN CONFORMANCE WITH MANUFACTURER'S STRUCTURAL REQUIREMENTS.

1.D2 QUALITY CONTROL

A. MANUFACTURER SHALL PROVIDE CERTIFIED CALCULATIONS THAT THE CONCRETE STRUCTURES AND REINFORCEMENT IS ADEQUATELY DESIGNED FOR THE STRUCTURE DIMENSIONS AND DEPTHS SPECIFIED.
B. PRE-CAST STRUCTURES SHALL CONFORM TO ACI AND PCI STANDARDS. MANUFACTURER SHALL BE A MEMBER OF PCI.
C. PRE-CAST STRUCTURES SHALL CONFORM TO ALL APPLICABLE BUILDING CODES.

1.03 SUBMITTALS

A. SHOP DRAWINGS OF THE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO DELIVERY PER SECTION 01300 SHOP DRAWINGS AND PRODUCT DATA SUBMITTALS.
B. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING:
1. DETAILED DRAWINGS
2. DESIGN CRITERIA
3. DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN NEW JERSEY.
4. LIFTING AND INSTALLATION PROCEDURES

PART 2 - PRODUCTS

2.01 GENERAL

A. PUMP STATION WET WELL SHALL BE A PRE-CAST CONCRETE STRUCTURE AS MANUFACTURED BY AMERICAST, ROTONDO PRECAST, CONTRACTORS PRECAST CORPORATION, HANSON PIPE AND PRODUCTS, OR APPROVED EQUAL.
B. PRE-CAST CONCRETE STRUCTURES SHALL MEET REQUIREMENTS OF ASTM C913 EXCEPT THAT THE MINIMUM COMPRESSIVE STRENGTH OF 50DD PSI USING TYPE II OR III CEMENT.
C. THE STRUCTURES SHALL HAVE AN EXTENDED BASE CONFORMING TO ASTM C913 EXCEPT THAT THE MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI USING TYPE II OR III CEMENT.
D. EXTERIOR SHALL BE COATED WITH A BITUMASTIC SEALER APPLIED WITH TWO COATS, WITH A MINIMUM OF 7 MILS PER DRY COAT.
E. STRUCTURES SHALL BE ADEQUATE TO WITHSTAND HYDROSTATIC AND SOIL BEARING PRESSURE LOADINGS AS INDICATED ON DESIGN DRAWINGS.
F. STRUCTURES SHALL BE FURNISHED WITH PRE-CAST FLAT SLAB TOPS CONFORMING TO ASTM C913 WITH ALUMINUM ACCESS DOORS AND APPURTENANCES IN ACCORDANCE WITH DESIGN DRAWINGS. THE ACCESS DOORS SHALL BE INTEGRALLY CAST INTO THE TOP AT THE PLACE OF MANUFACTURER. THE ACCESS DOORS SHALL BE AASHTO H2D RATED AS MANUFACTURED BY BILCO OR APPROVED EQUAL. A PADLOCK HASP FOR OWNER-SUPPLIED PADLOCK SHALL BE PROVIDED.
G. TONGUE AND GROOVE JOINTS OF THE PRE-CAST SECTIONS SHALL BE SEALEO WITH A RUBBER GASKET CONFORMING TO ASTM C913 AND A MINIMUM OF TWO CONTINUOUS BEADS OF PRE-FORMED BUTYL MASTIC.
H. PIPE CONNECTORS SHALL BE LINK SEAL FLEXIBLE PIPE CONNECTORS MEETING ASTM C923 AND INSTALLED BY THE STRUCTURE MANUFACTURER.

PART 3 - EXECUTION

3.01 STRUCTURES SHALL BE SET LEVEL TO PREVENT SETTLEMENT.

3.02 THE PUMP STATION WET WELL SHALL BE LEAK TESTED FOR A MINIMUM OF 48 HOURS PRIDR TO BACKFILLING. LEAK TESTING SHALL INCLUDE FILLING TANK WITH CLEAN WATER ANO MEASURING WATER LEVELS. THERE SHALL BE NO LEAKAGE FROM TANK. CONTRACTOR SHALL PROVIDE THE WATER NECESSARY TO COMPLETE THE LEAK TEST.

END OF SECTION

SECTION 11200-PUMP STATION

PART 1 - GENERAL

1.D1 SUMMARY

THIS SECTION SPECIFIES THE REQUIREMENTS FOR THE PUMP STATION.

1.02 QUALITY CONTROL

PUMPS AND CONTROL PANEL SHALL BE SUPPLIED BY A SOLE SOURCE.

1.03 SUBMITTALS

TWO (2) COPY OF SHOP DRAWINGS OF ALL STRUCTURES AND EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, AS WELL AS ONE (1) ELECTRONIC COPY. INFORMATION SHALL INCLUDE DIMENSIONS, CAPACITY, MATERIAL, FINISH, GUARANTEE, ETC.

A. CONTROL PANEL SUBMITTAL SHALL INCLUDE A LIST OF EQUIPMENT, PRODUCT LITERATURE ON THE EQUIPMENT, FORMAL LADDER DIAGRAMS WITH PROPER ANNOTATIONS, AND PANEL ELEVATIONS SHOWING FRONT MOUNTED (OR INNER DOOR) EQUIPMENT LAYOUT.
B. TWO (2) COPIES OF A COMPLETE OPERATIONS MANUAL FOR ALL EQUIPMENT, INCLUDING DETAIL DRAWINGS, MAINTENANCE INSTRUCTIONS AND OTHER PERTINENT DATA SHALL BE COMPILED AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE ACCEPTANCE OF THE FACILITY.

1.D4 CONTROL SUMMARY

THE FOLLOWING IS THE OPERATING SEQUENCE FOR THE PUMP STATION:

A. THE PUMPS SHALL BE CDNTROLLED BY A CONTROL SYSTEM AS MANUFACTURED BY BARNES, LIBERTY, OR APPROVED EQUAL. PUMP OPERATION IS BASED ON WET WELL LEVELS. THE CONTROLLER OPERATES FROM FOUR (4) FLOAT SWITCHES AND GENERATES THE HIGH LEVEL ALARM. LOCAL ALARMS ARE DISPLAYED ON AN ANNUNCIATION SYSTEM LOCATED ON THE CONTROL PANEL INNER DOOR. PUMP STATUS AND ALARMS ARE SENT TO THE OPERATOR VIA AN AUTODIALER LOCATED AT THE PUMP CONTROL PANEL. STARTING OF THE PUMPS SHALL BE DELAYED BY 3D SECONDS FOR THE LEAD PUMP AND 60 SECONDS FOR THE LAG PUMP TO REDUCE STARTING CURRENT ON THE GENERATOR.
B. PUMPS ARE TO OPERATE IN A LEAD- LAG MODE, WHERE PUMPS ALTERNATE AS LEAD PUMP AND LAG PUMP WHEN CONTROLLED BY THE CONTROL PANEL. UPON THE RISE OF WASTEWATER IN THE BASIN TO THE "LEAD PUMP ON" LEVEL, THE LEAD PUMP SHALL ENERGIZE. WHEN THE LEVEL FALLS TO THE "PUMPS OFF" LEVEL, THE PUMP SHALL STOP. IF THE LEAD PUMP CANNOT HANDLE THE FLOW OR FAILS TO OPERATE, THE LEVEL WILL RISE TO THE "LAG PUMP ON" LEVEL, AT WHICH TIME THE LAG PUMP SHALL BE ENERGIZED. THE PUMPS SHALL ALTERNATE BETWEEN LEAD AND LAG AFTER EACH PUMP CYCLE. IF THE LEAD AND LAG PUMPS CANNOT HANDLE THE FLOW, OR FAIL TO OPERATE, THE LEVEL WILL RAISE TO THE "HIGH" LEVEL, AT WHICH TIME THE ALARM LIGHT AND HORN WILL BE ENERGIZED.
SHOULD A POWER FAILURE OCCUR, THE PUMP CONTROL LOGIC SHALL STAGGER PUMP STARTING TO PREVENT MULTIPLE PUMPS FROM STARTING AT ONCE. THE LEAD PUMP STARTING SHALL BE DELAYED BY 30 SECONDS AND THE LAG PUMP STARTING SHALL BE DELAYED BY 60 SECONDS OR AS DETERMINED BY THE GENERATOR MANUFACTURER TO REDUCE INRUSH CURRENT TO ACCEPTABLE LEVELS.

C. FOUR FLOAT SWITCHES ARE INSTALLED IN THE WET WELL TO OPERATE THE CONTROLLER. THE FLOAT SWITCHES PROVIDE HIGH LEVEL ALARM, (AUDITABLE/VISUAL ALARMS/ALARM TO AUTODIALER); LAG PUMP ON; LEAD PUMP ON; AND PUMP OFF.

PART 2 - PRODUCTS

2.01 PUMPS

A. CONTRACTOR SHALL PROVIDE AND INSTALL TWO BARNES SUBMERSIBLE GRINDER XP - 3C PUMPS OR APPROVED EQUAL.
B. HAPPY CREEK WASTEWATER PUMPS
1. PUMPS SHALL BE BARNES GRINDER XP - 3C PUMPS, MODEL XSGV2022L, OR APPROVED EQUAL.
2. PUMPS SHALL BE PROVIDED WITH 2 HP, 230 V, 3 PHASE, 60 HZ, 3450 RPM MOTORS, WITH AN IMPELLER DIAMETER OF 4.75 INCHES.
3. OPERATING POINTS:
   a. DESIGN POINT: 23 GPM @ 59.84' TDH
   b. OPERATING POINT: 23 GPM @ 59.9' TDH
   c. SHUT OFF HEAD: 76.4 FEET (MINIMUM)

C. SEALS
TYPE 21, DUAL MECHANICAL SEAL CONSTRUCTION MOUNTED IN TANDEM, SHALL PROTECT THE MOTOR. PRIMARY SEAL SHALL BE SILICON / CARBIDE. SECONDARY SEAL SHALL BE SILICON / CARBIDE. THE SEAL FACE SHALL BE LAPPED TO A FLATNESS OF ONE LIGHT BAND. A DOUBLE ELECTROOE SHALL BE MOUNTED IN THE SEAL CHAMBER TO DETECT WATER ENTERING THE CHAMBER THROUGH THE LOWER SEAL. WATER IN THE CHAMBER SHALL CAUSE A REO LIGHT TO TURN ON AT THE CONTROL BOX. THIS SIGNAL SHALL NOT STOP THE MOTOR, BUT SHALL ACT AS A WARNING ONLY, INDICATING SERVICE IS REQUIRED.

D. POWER CHORD
THE MOTOR POWER CHORD SHALL BE 10 GA. SOW/SOWA OR SOOW. THE CABLE SHALL BE SEALED AT THE MOTOR ENTRANCE BY MEANS OF A RUBBER COMPRESSION WASHER AND COMPRESSION NUT. AN EPOXY FILLED TUBE SHALL SEAL THE OUTER CABLE JACKET AND INDIVIDUAL LEADS TO PREVENT WATER FROM ENTERING THE MOTOR HOUSING. INDIVIDUAL CONDUCTOR STRANDS SHALL BE SOLDERED WITHIN THE EPOXY SEAL. CORDS SHALL WITHSTAND A PULL OF 300 POUNDS.

E. PUMP REMOVAL SYSTEM
1. THE PUMP'S DESIGN SHALL ALLOW FOR REMOVAL AND REINSTALLATION OF THE PUMP WITHOUT THE NEED FOR PERSONNEL TO ENTER THE CONFINED SPACE OF THE WET WELL AND WITHOUT THE REMOVAL OF BOLTS, NUTS OR OTHER FASTENERS.
2. THE ENTIRE WEIGHT OF THE PUMPING UNITS SHALL BE CARRIED BY THE DISCHARGE ASSEMBLY AND THE DISCHARGE CONNECTION ELBOW WITH METAL-TD-METAL CONTACT BETWEEN THE PUMP AND DISCHARGE FLANGE AND THE DISCHARGE CONNECTION ELBOW.
3. PUMPS SHALL BE PROVIDED WITH QUICK DISCONNECT/AUTO-COUPLING ASSEMBLY, REQUIRED DISCHARGE FITTINGS TO MATE-UP TO THE DISCHARGE ELBOW, LIFTING BRACKET, AND ALL HARDWARE NECESSARY FOR LIFTING OF THE PUMP USING AN EXISTING BOOM TRUCK.
4. SEALING OF THE DISCHARGE INTERFACE BY MEANS OF A DIAPHRAGM, O-RING, OR OTHER DEVICES SHALL NOT BE PERMITTED
5. EACH PUMP SHALL BE PROVIDED WITH AN OVERSIZED STAINLESS-STEEL LIFTING BRACKET MOUNTED BY THE MANUFACTURER.

F. PUMP CONSTRUCTION
1. MAJOR STATIC COMPONENTS (PUMP CASING, INTERMEDIATE HOUSING AND MOTOR HOUSING) SHALL BE OF AT MINIMUM ASTM A48 CLASS 30 GRAY CAST IRON WITH SMOOTH SURFACES DEVOID OF BLOW HOLES AND OTHER IRREGULARITIES.
2. THE SYSTEM SHALL CONSIST OF STATIONARY CUTTER RING AND ROTARY IMPELLER, EACH MANUFACTURED IN ACCORDANCE WITH THE MANUFACTURE SPECIFICATIONS.
3. THE IMPELLER, WHICH IS THE ROTATING EXPOSED PIECE, SHALL BE OF 85-5-5-5 BRONZE. THE IMPELLER DESIGN SHALL BE A RECESSED, SEMI-VORTEX, MULTI-VANE DESIGN, WITH PUMP OUT VANES.
4. ALL EXPOSED FASTENERS SHALL BE ASTM A 276 TYPE 304 STAINLESS STEEL. ALL EXPDSED BOLTS AND NUTS SHALL BE 304 STAINLESS STEEL.
5. THE PUMP'S CAST IRON COMPONENTS SHALL BE COATED WITH AT MINIMUM A TWO-COMPONENT EPOXY FINISH HAVING AT MINIMUM 83% SOLIDS BY VOLUME. THIS COATING SHALL BE NON-TOXIC AND APPROVED FOR WASTEWATER APPLICATIONS.
6. MATING SURFACES BETWEEN COMPONENTS WHERE WATERTIGHT INTEGRITY IS CRITICAL SHALL BE MACHINED AND FITTED WITH NITRILE RUBBER OR VITON O-RINGS. BECAUSE THESE ARE CRITICAL PASSAGES AND FLAME PATHS, NO SECONDARY SEALING COMPOUNDS, GREASES, OR OTHER DEVICES SHALL BE USED.

2.02 SUBMERSIBLE PUMP CABLES

A. PUMP CABLES SHALL BE STW-A, WATER RESISTANT 600V, 60°C, CABLES SUPPLIED BY THE PUMP SYSTEM SUPPLIER.
B. THE POWER CORD ASSEMBLIES SHALL BE CONNECTED TO THE PUMP CONTROLLER MOTOR LEADS UTILIZING ISCO TERMINAL BLOCKS.

2.03 HOIST

A HALLIDAY PORTABLE HOIST, MODEL D2B36D CAPABLE OF 1,000 LBS, OR APPROVED EQUAL SHALL BE PROVIDED.

2.04 FLOAT SWITCHES

FLOATS SHALL BE BARNES MERCURY LEVEL CONTROL SWITCHES, WITH MINIMUM OF 25 FEET OF CABLE, EACH, OR APPROVED EOUAL. FOUR (4) FLOATS SHALL BE PROVIDED. THE FLOAT SWITCH WIRING EXTERNAL OF THE CONTROL PANEL SHALL BE INTRINSICALLY SAFE.

2.05 AUTODIALER

AUTODIALER SHALL BE A RACO VERBATIM AUTODIALER, OR APPROVED EQUAL. SEE SHEE 17 FOR REOUIRED INPUTS, PER SECTION 16483.

PART 3 - EXECUTION

3.01 WARRANTY

THE EQUIPMENT SUPPLIER SHALL WARRANTY THE EQUIPMENT FOR A PERIOD OF TWO (2) YEARS FROM THE DATE OF START-UP.

3.02 TESTING, START-UP, AND OPERATOR TRAINING

A. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND TESTED UNDER OPERATING CONDITIONS TO ENSURE THAT THE EQUIPMENT IS WDRKING PROPERLY.
B. REPRESENTATIVES OF THE PUMPING EQUIPMENT AND CONTROL PANEL MANUFACTURERS SHALL SUBMIT WRITTEN VERIFICATION THAT THE EQUIPMENT IS INSTALLED PROPERLY AND IS WORKING CORRECTLY PRIOR TO INSPECTIONS. THE ENGINEER AND THE CONTROL PANEL SUPPLIER SHALL BE PRESENT WHEN EQUIPMENT IS TESTED. CONTRACTOR IS RESPONSIBLE FOR SCHEOULING AND NOTIFYING ALL PARTIES FOR TESTING.
C. ALL PIPES SHALL BE PRESSURE AND LEAK TESTED IN PER SECTION 0256D PIPING SYSTEMS.
D. THE MANUFACTURER SHALL PROVIDE TWO (2) DAYS OF OPERATOR TRAINING ON-SITE, FOR UP TO TWO (2) OPERATORS. ALL TRAVEL EXPENSES AND LODGING ARE TO BE PROVIDED BY THE MANUFACTURER.

END OF SECTION

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PUMP STATION SPECIFICATIONS
HAPPY CREEK KNOLLS
SECTION 4
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JESSICA M. KWIATKOWSKI
Lic. No. 038766
4/18/18
PROFESSIONAL ENGINEER

PLAN STATUS

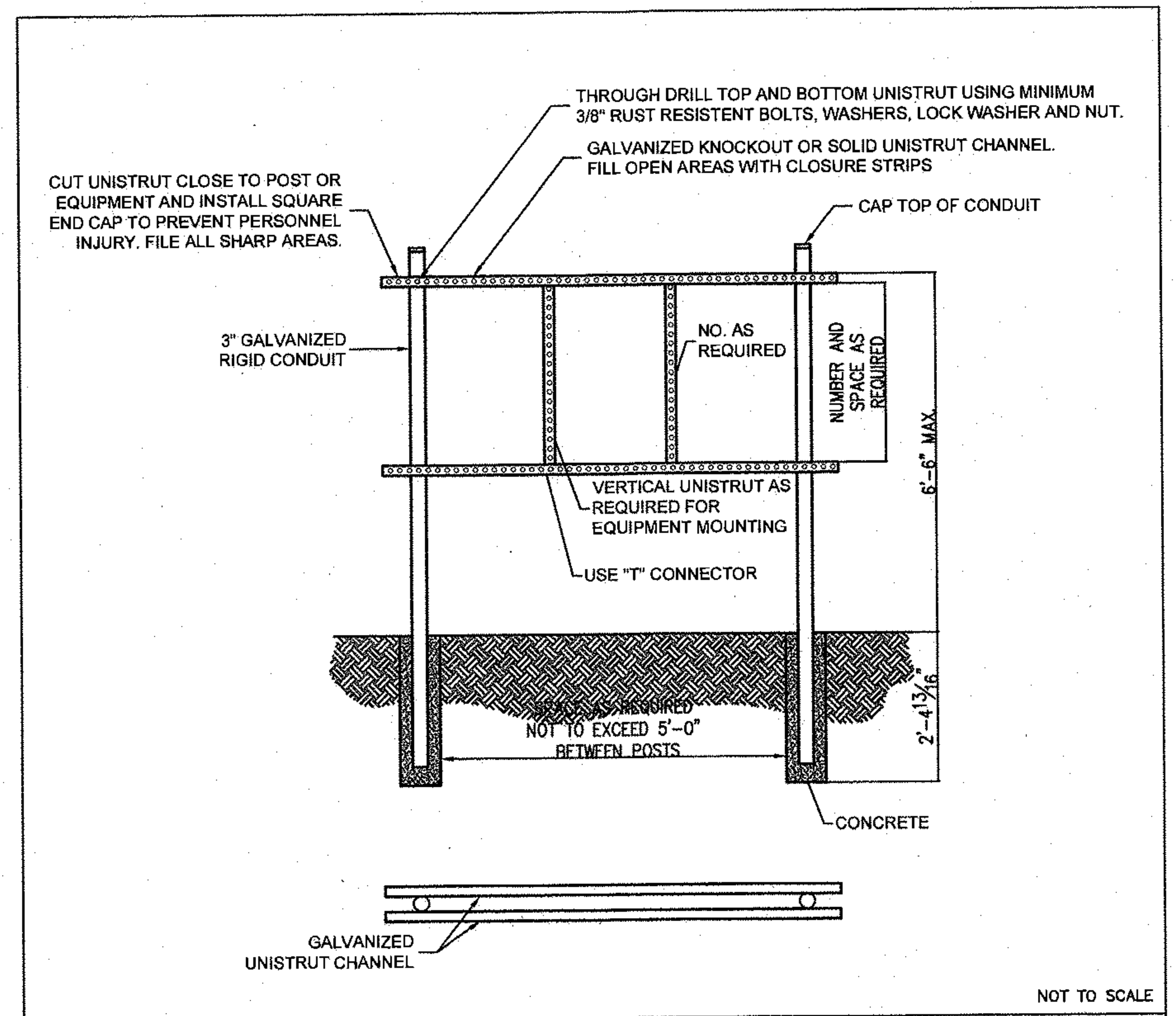
DATE	DESCRIPTION	
TCW DESIGN	DWD DRAWN	JMK CHKD
SCALE	H: N/A V: N/A	
JOB No. 1602-04-001		
DATE APRIL, 2018		
FILE No. 1602-D-CP-04-001		

NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE, CONSTRUCTION AND PROFESSIONAL SERVICES MANUAL 2013 REVISION 0, AND THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE 2012 INCLUDING VIRGINIA CONSTRUCTION CODE.
2. COORDINATE LOCATION OF EQUIPMENT WITH CIVIL AND MECHANICAL DRAWINGS.
3. WIRE SIZES AND CONDUIT SIZES SHOWN ARE BASED ON COPPER.
4. PROVIDE CONDUIT AND WIRE FROM CONTROL AND COMMUNICATIONS DEVICES AS REQUIRED FOR SYSTEM OPERATION.
5. REVIEW DRAWINGS AND SPECIFICATIONS BEFORE BIDDING. SUBMIT QUESTIONS REGARDING ANY DEFICIENCIES OR DISCREPANCIES BEFORE BIDS. FAILURE TO ASK FOR CLARIFICATION WILL NOT BE CONSIDERED AS JUSTIFICATION FOR A CHANGE ORDER.
6. ITEMS LISTED IN THE SYMBOL TABLE ARE PROPOSED. COORDINATE EXACT REQUIREMENTS FOR WIRING AND OVERCURRENT PROTECTION DEVICES WITH REQUIREMENTS FOR EQUIPMENT ACTUALLY PROVIDED AND APPROVED.
7. PROVIDE A GROUND CONDUCTOR IN ALL BRANCH CIRCUITS SIZED ACCORDING TO THE OVERCURRENT PROTECTION DEVICE.
8. LIGHT EQUIPMENT MOUNTED OUTDOORS SHALL BE MOUNTED ON STAINLESS STEEL, KINDORF OR UNISTRUT. HEAVY EQUIPMENT MOUNTED OUTDOORS SHALL BE MOUNTED ON A WELDED STEEL FRAME CONSTRUCTED OF A-36, 6" x 2" x 1/4" CHANNEL STEEL. HOT DIP GALVANIZE THE FABRICATED FRAME PRIOR TO INSTALLATION. INSTALL THE FRAME EMBEDDED IN 18" DIA. x 3' DEEP BORED POST HOLES FILLED WITH CONCRETE.
9. CONDUIT, WIRE AND CABLE SIZES SHOWN FOR CONTROL AND COMMUNICATIONS EQUIPMENT ARE FOR BIDDING PURPOSES ONLY. PROVIDE WIRE SIZES AND TYPES AS REQUIRED BY EQUIPMENT MANUFACTURERS. COORDINATE CONDUIT SIZES WITH WIRE NUMBER AND SIZE REQUIREMENTS.
10. MAIN CIRCUIT BREAKER/MAIN FUSED DISCONNECT SWITCH SHALL BE SERVICE ENTRANCE LABELED WITH A PERMANENT LABEL.
11. LABEL ALL MEANS OF DISCONNECT INDICATING THE SOURCE CIRCUIT AND EQUIPMENT THEY SERVE. INCLUDE THIS INFORMATION ON LABELS FOR ENCLOSED CIRCUIT BREAKERS, PANELBOARDS, CONTROLLERS, MOTOR CONTROLLERS AND AUTOMATIC TRANSFER SWITCHES.
12. ITEMS LISTED IN SCHEDULES ARE RATED BASED ON TYPICAL UNITS. COORDINATE EXACT CIRCUIT BREAKER RATINGS (MOP OR MOCP) AND BRANCH CIRCUIT REQUIREMENTS (MCA) WITH EQUIPMENT ACTUALLY PROVIDED AND APPROVED.
13. SEAL ALL PENETRATIONS THROUGH TANK WALLS.
14. PROVIDE ELECTRICAL SHOCK AND ARC FLASH WARNING LABELS ON ALL NEW ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 110.16. ON EQUIPMENT MOUNTED OUTDOORS, LABELS SHALL BE APPLIED INSIDE THE OUTER DOOR ON THE PROTECTIVE OUTER COVER OF ENCLOSED CIRCUIT BREAKERS, DISCONNECT SWITCHES, ETC.
15. IDENTIFY GROUND CABLES USING GREEN TAPE OR GREEN COLORED INSULATION.
16. PROVIDE CONDUIT AND WIRE FROM CONTROL AND COMMUNICATIONS DEVICES AS REQUIRED FOR SYSTEM OPERATION.
17. PROVIDE A TVSS AT THE MAIN CIRCUIT BREAKER.

ABBREVIATIONS:

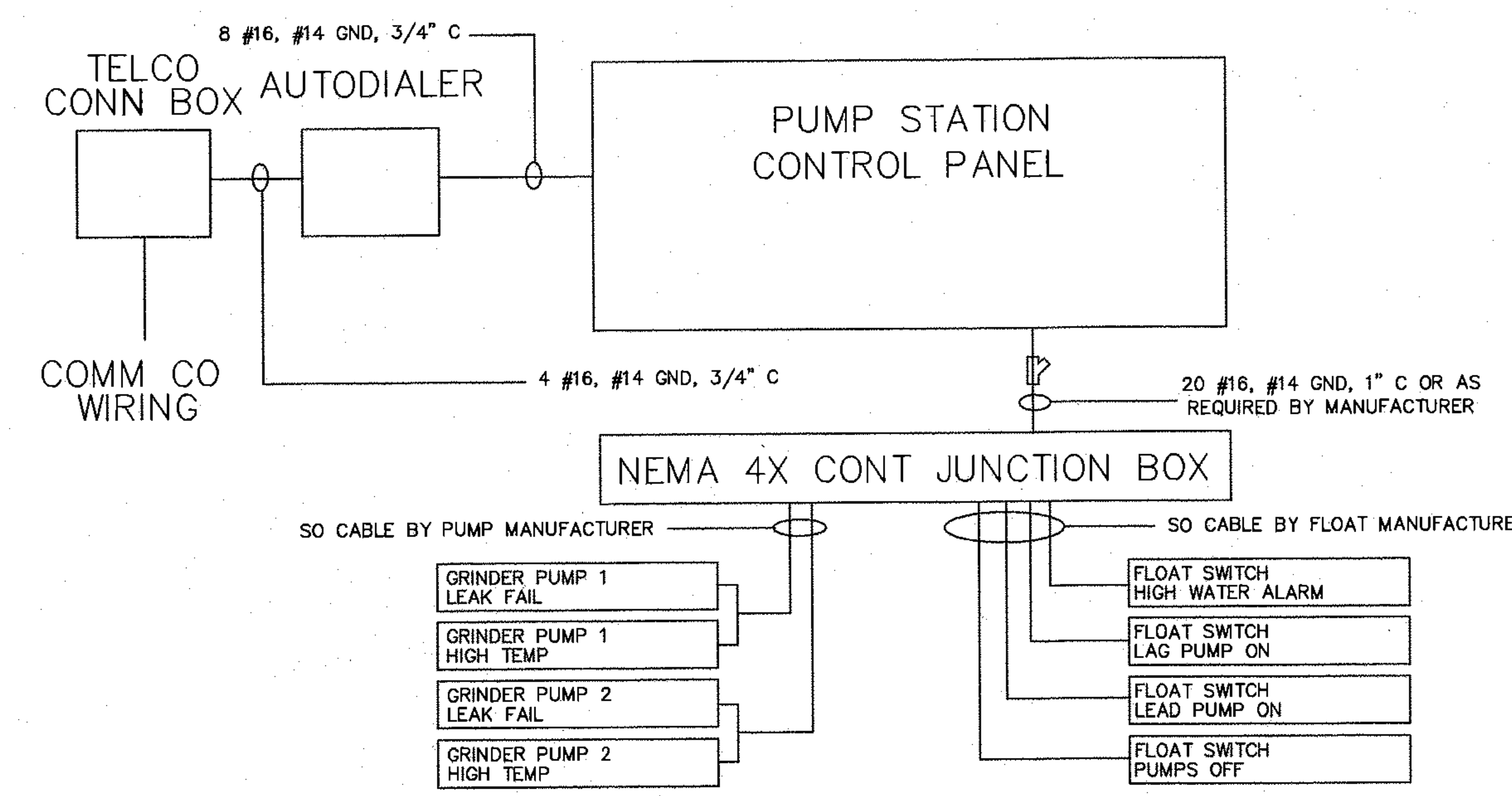
A	AMPS
AFG	ABOVE FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CLWL	CLEARWELL
CONT	CONTROL, CONTROLLER, CONTROL PANEL
DISC SW	DISCONNECT SWITCH
DIST	DISTRIBUTION
(E)	EXISTING TO REMAIN
ECB	ENCLOSED CIRCUIT BREAKER
EG	EQUIPMENT GROUND
EQPT	EQUIPMENT
EXST	EXISTING – MODIFY AS REQUIRED
GEC	GROUND ELECTRODE CONDUCTOR
GFCI	GROUND FAULT CURRENT INTERRUPTING
GND	GROUND
MCB	MAIN ENCLOSED CIRCUIT BREAKER
MIN	MINIMUM
PNL	PANEL
PNLBD	PANELBOARD
SE	SERVICE ENTRANCE
TK	TANK
TYP	TYPICAL
WCR	WITHSTAND AND CLOSE RATING
WP	WEATHERPROOF
XFMR	TRANSFORMER



TYPICAL OUTDOOR EQUIPMENT MOUNTING FRAME

SYMBOLS

- JUNCTION BOX
- RECEPTACLE, NEMA 5-20R. MOUNT 16" AFF. PROVIDE A GFCI TYPE RECEPTACLE WITH A WEATHERPROOF, IN-USE COVER WHEN MOUNTED OUTDOORS. DUPLEX.
- BRANCH CIRCUIT WIRING. 2 #12 THHN, #12 GROUND, 3/4" CONDUIT UNLESS OTHERWISE NOTED. TICK MARKS, WHEN USED, INDICATE NUMBER OF GROUNDED AND UNGROUNDED CONDUCTORS IF OTHER THAN 2 #12.
- GROUND CONNECTION
- M X — MOTOR. HORSEPOWER, "X," AS INDICATED. SEE DETAIL THIS SHEET
- 200 A/2P 150 A — FUSED DISCONNECT SWITCH – ONE-LINE DIAGRAM EXAMPLE SWITCH RATING AND FUSE RATING AS INDICATED.
- XP YY/ZZ 3R — DISCONNECT SWITCH – PLAN VIEW EXAMPLE "XP" INDICATES NUMBER OF POLES, "ZZ" INDICATES SWITCH RATING AND "YY" INDICATES FUSE RATING AS INDICATED. "NF" INDICATES NON-FUSED.
- 150/2 — CIRCUIT BREAKER. ONE-LINE DIAGRAM EXAMPLE CIRCUIT BREAKER CURRENT RATING AND NUMBER OF POLES AS INDICATED.
- N E — MANUAL TRANSFER SWITCH – ONE-LINE DIAGRAM EXAMPLE. NUMBER OF POLES, SWITCH AMP RATING AND VOLTAGE RATING AS INDICATED. "N" INDICATES CONNECTION TO NORMAL SOURCE. "E" INDICATES CONNECTION TO GENERATOR SOURCE.
- PANELBOARD – PLAN VIEW EXAMPLE. SEE PANELBOARD SCHEDULE FOR DETAILS. 240/120 V. CURRENT RATING AS INDICATED.
- HORN, NEMA 4X, PROVIDE WITH PUMP CONTROL PANEL
- FLASHING ALARM, NEMA 4X, PROVIDE WITH PUMP CONTROL PANEL
- E1 — DUPLEX GRINDER PUMP CONTROLLER, 240/120 V.
- M 2 — SUBMERSIBLE GRINDER PUMP, 230 V, FLA= 15, SINGLE PHASE, 2 HP, TYP OF 2.
- S — SWITCH, 120 V, 15 A, SPST BROWN.
- EXPLOSION-PROOF INTRINSICALLY SAFE SEALING FITTING
- RECEPTACLE, NEMA 5-20 R. PROVIDE CAST WEATHERPROOF BOX AND WEATHERPROOF, HEAVY DUTY, IN-USE, COVER.



PUMP STATION CONTROL DIAGRAM

NOT TO SCALE

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PUMP STATION ELECTRICAL NOTES & CONTROL DIAGRAM

HAPPY CREEK KNOLLS SECTION 4

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

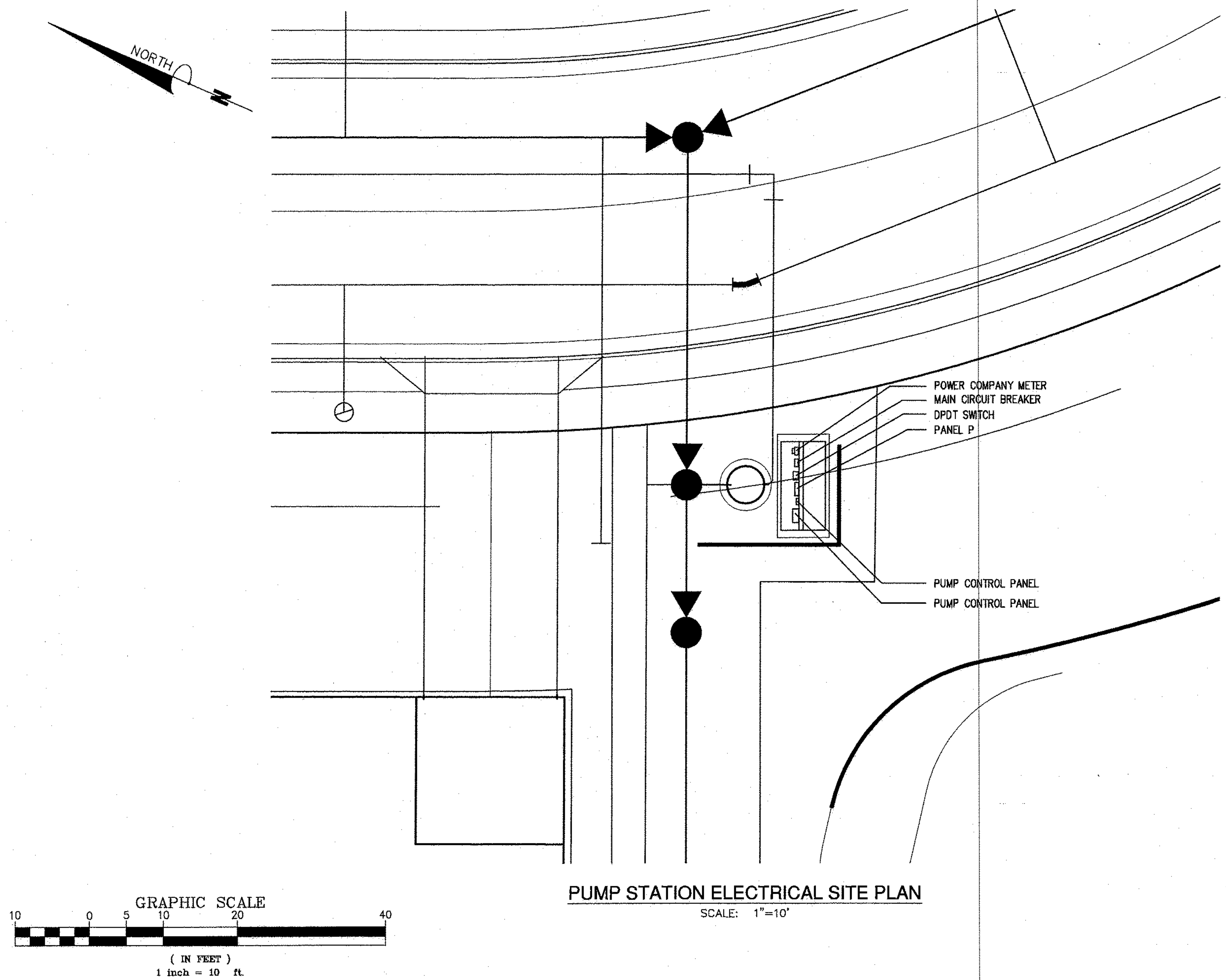
COMMONWEALTH OF VIRGINIA PAUL L. POWERS Lic. No. 20620 4/18/18 PROFESSIONAL ENGINEER

PLAN STATUS	
DATE	DESCRIPTION
PLP DESIGN	PLP DRAWN / PLP CHKD
SCALE	H: AS NOTED V: N/A
JOB No.	1602-04-001
DATE	APRIL, 2018
FILE No.	1602-D-CP-04-001

PANEL	VOLTAGE	240/120			SN		YES			MAIN BRKR SIZE	
P	PHASE	1			GND BUS		YES			MAIL LUG ONLY	200
	WIRE	3			MOUNTING		SURFACE			BRKR MIN KAIC	22 SEE NOTE 5

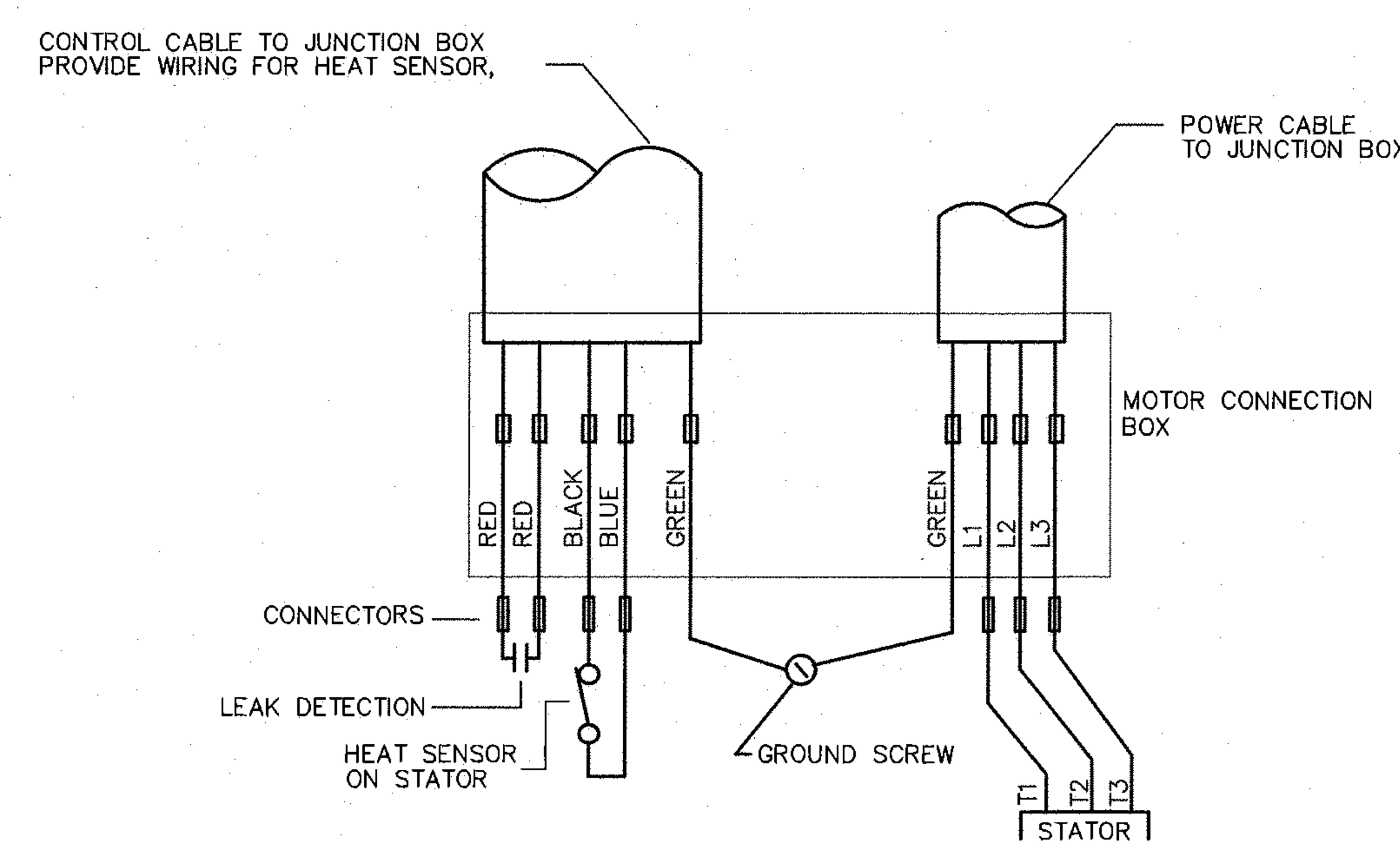
LOAD DESCRIPTION	LOAD AMPS A	LOAD AMPS B	CB TRIP	CKT NO.	PH	CKT NO.	CB TRIP	LOAD AMPS A	LOAD AMPS B	LOAD DESCRIPTION
AUTODIALER	2		20	1	A	2	70	30	30	PUMP CONTROL PANEL
RECEPTACLE		2	20	3	B	4				
SPARE		3	20	5	A	6	15			SPARE
SPARE	1		20	7	B	8	30			SPARE
SPARE	0	0	40	9	A	10	30			SPARE
				11	B	12	30			SPARE
CONNECTED LOAD LEFT SIDE AMPS	3	5						30	30	RIGHT SIDE AMPS
RIGHT SIDE AMPS	30	30								
TOTAL AMPS	**33**	**35**								

1. PROVIDE BREAKERS IN SPACES AS INDICATED.
2. PROVIDE BOLT-IN STYLE BREAKERS.
3. PROVIDE NEMA 3R ENCLOSURE
4. PROVIDE GFCI TYPE CIRCUIT BREAKERS FOR ALL CONVENIENCE RECEPTACLES.
5. COORDINATE FAULT CURRENT RATING WITH POWER UTILITY.



PUMP STATION ELECTRICAL SITE PLAN

SCALE: 1"=10'



SUBMERSIBLE PUMP WIRING DETAIL

SCALE: NONE

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PUMP STATION ELECTRICAL SITE PLAN
HAPPY CREEK KNOLLS
SECTION 4
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
PAUL L. POWERS
Lic. No. 20620
4/18/18
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION

PLP DESIGN	PLP DRAWN	PLP CHKD
SCALE	H: AS NOTED V: N/A	
JOB No.	1602-04-001	
DATE	APRIL, 2018	
FILE No.	1602-0-CP-04-001	

SHEET 16 OF 31

ELECTRICAL SPECIFICATIONS

SECTION 16100

1. PROVIDE NECESSARY LABOR, EQUIPMENT, ETC. FOR WORK INDICATED AND REQUIRED FOR A COMPLETE INSTALLATION. MATERIALS SHALL BE NEW, APPROVED & LABELED BY U.L. WHEREVER STANDARDS HAVE BEEN ESTABLISHED BY THAT AGENCY.
2. WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, APPLICABLE LOCAL CODES AND ORDINANCES.
3. VISIT THE SITE PRIOR TO BID TO DETERMINE THE EXTENT OF WORK. LACK OF KNOWLEDGE OF EXISTING CONDITIONS WILL NOT BE CONSIDERED A BASIS FOR CHANGE OR RELIEVE THE CONTRACTOR OF ANY OBLIGATION TO FULFILL THE CONTRACT.
4. COORDINATE WORK UNDER THIS SECTION WITH OTHER TRADES INVOLVED. COORDINATE ALL REQUIRED CONNECTIONS AND CIRCUITS WITH EQUIPMENT REQUIREMENTS. FAILURE TO INCLUDE REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WILL NOT BE CONSIDERED AS JUSTIFICATION FOR A CHANGE ORDER. WHERE ITEMS OR COMPONENTS REQUIREMENTS ARE NOT CLEAR, ASK FOR CLARIFICATION BEFORE SUBMITTING BID. FAILURE TO SEEK CLARIFICATION WILL NOT BE CONSIDERED AS JUSTIFICATION FOR CONTRACT PRICE ADJUSTMENT.
5. SUBMIT PRODUCT DATA, SHOP DRAWINGS AND SCALED EQUIPMENT LAYOUT DRAWINGS FOR APPROVAL BEFORE ORDERING EQUIPMENT OR ROUGHING IN CONDUIT.
6. PROVIDE EQUIPMENT FROM MANUFACTURERS AS INDICATED ON DRAWINGS. WHERE EQUIPMENT IS NOT SPECIFICALLY IDENTIFIED, CONTRACTOR MAY SUBMIT SUITABLE EQUIPMENT FROM A MANUFACTURER THAT MEETS THE FUNCTION AND IS RATED FOR THE APPLICATION AND LOCATION.

SECTION 16110

1. WORK SHALL BE IN CONDUIT, RUN CONDUIT EXPOSED.
2. CONDUIT SHALL BE GALVANIZED RIGID CONDUIT. MINIMUM SIZE CONDUIT SHALL BE 1/2" WITH LARGER SIZES AS REQUIRED BY THE N.E.C. CONDUITS UNDERGROUND SHALL BE PVC COATED GALVANIZED RIGID STEEL. RUN EXPOSED CONDUITS PARALLEL & PREPENDICULAR TO THE STRUCTURE & PROVIDE ADEQUATE SUPPORTS. FITTINGS SHALL BE THREADED TYPE.

SECTION 16120

1. WIRE AND CABLE SHALL BE 600 VOLT, MINIMUM AWG NO. 12 , WIRE SHALL BE COPPER TYPE "THWN". TERMINATIONS AND CONNECTIONS SHALL BE RATED FOR THE TYPE WIRE USED. WHERE ALUMINUM CONDUCTORS ARE PERMITTED TO BE SUBSTITUTED FOR COPPER CONDUCTORS, INCREASE SIZE OF CONDUIT IN ACCORDANCE WITH NEC.

SECTION 16142

1. EQUIPMENT CONNECTIONS:
   A. PROVIDE WIRING & CONNECTIONS FOR POWER AND CONTROL CIRCUITS REQUIRED FOR EQUIPMENT INSTALLED AS PART OF THIS SUBCONTRACT.
   B. PROVIDE FLEXIBLE CONDUIT FOR FINAL CONNECTIONS TO MOTORS, TRANSFORMERS OR OTHER VIBRATING EQUIPMENT.

SECTION 16143

1. WIRING DEVICES SHALL BE SPECIFICATION GRADE. COLORS AS SPECIFIED BY ARCHITECT. CHARACTERISTICS SHALL BE AS INDICATED ON THE DRAWINGS. PROVIDE STAINLESS STEEL PLATES SERIES 93000 FOR TYPE DEVICES INDICATED. TAG EACH RECEPTACLE, JUNCTION BOX, LIGHTING FIXTURE, ETC. WITH SELF STICK PLASTIC, RAISED WHITE LETTER LABEL. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER AND SHALL BE ON INSIDE OF PLATE.

SECTION 16470

1. PANELBOARDS SHALL BE AS INDICATED ON DRAWINGS. MOUNT TO EQUIPMENT FRAME. COVERS AND HINGED DOOR OVER BREAKERS WITH LOCKS KEYED ALIKE. BREAKERS SHALL BE BOLT-TO-BUS TYPE. ENCLOSURES SHALL BE MINIMUM 20" WIDE. PROVIDE IN EACH PANELBOARD A TYPED WRITTEN DIRECTORY INDICATING LOAD SERVED. PROVIDE NEMA 3R ENCLOSURES. PANELBOARD AND CIRCUIT BREAKERS SHALL BE RATED ACCORDING TO AVAILABLE FAULT CURRENT FROM THE ELECTRICAL UTILITY. SUBMIT FAULT CURRENT FROM UTILITY ALONG WITH PRODUCT DATA AND SHOP DRAWINGS.

SECTION 16170

1. ENCLOSED CIRCUIT BREAKERS SHALL BE NEMA 3R AND SHALL BE RATED ACCORDING TO AVAILABLE FAULT CURRENT FROM THE ELECTRICAL UTILITY. SUBMIT FAULT CURRENT FROM UTILITY ALONG WITH PRODUCT DATA AND SHOP DRAWINGS.
2. MANUAL TRANSFER SWITCH SHALL BE NEMA 3R AND SHALL BE 3 POLES. WIRE SUCH THAT ALL CONNECTIONS (GROUNDED AND UNGROUNDED CONDUCTORS) ARE BROKEN. PROVIDE PROVISIONS (CONDUIT, JUNCTION BOX, ETC.) FOR FUTURE CONNECTIONS OF TEMPORARY GENERATOR.

SECTION 16452

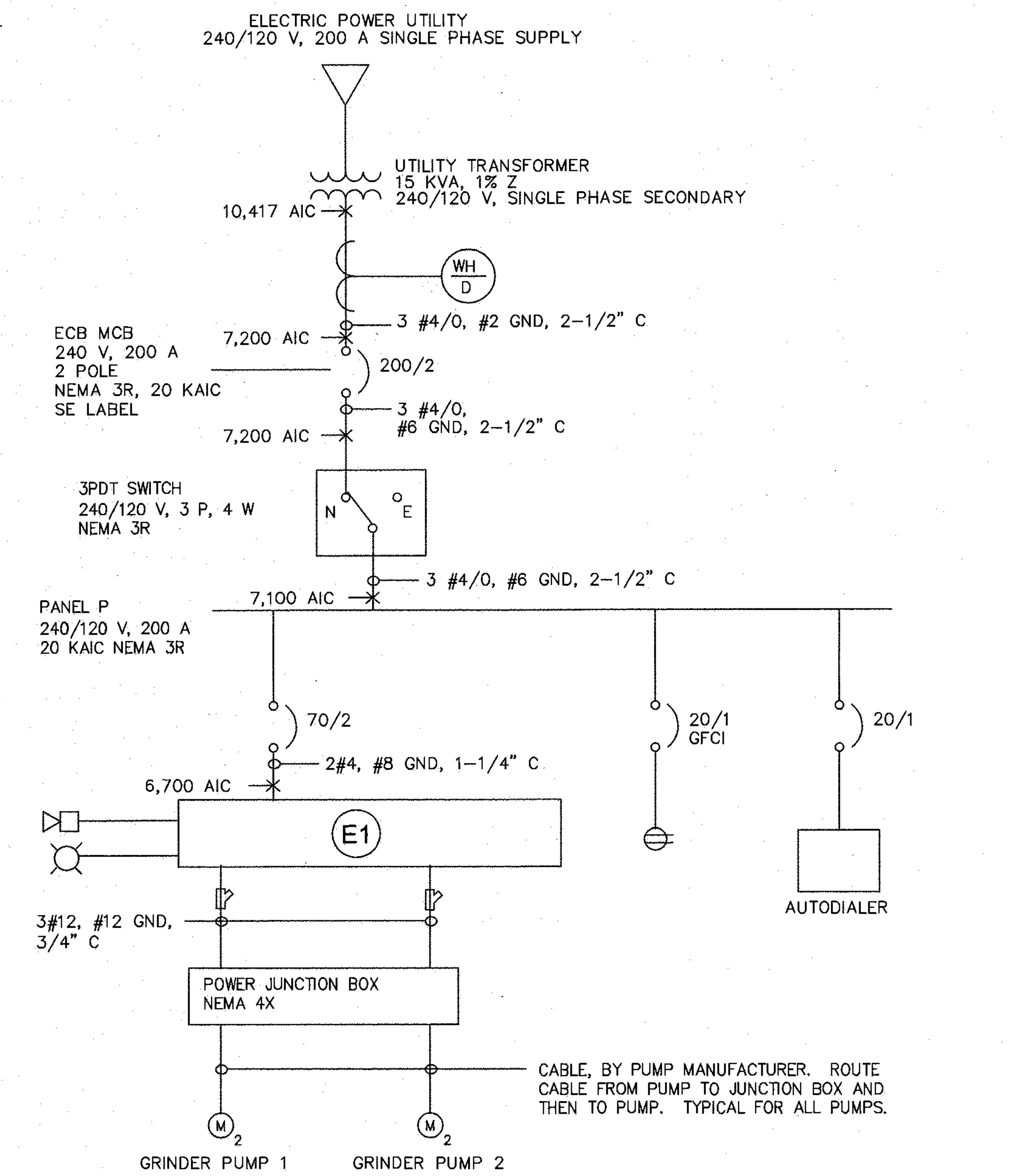
1. PROVIDE GROUNDING AND GROUND CONDUCTORS FOR ALL CIRCUITS AND EQUIPMENT. PROVIDE SEPARATE GREEN GROUNDING CONDUCTOR IN ALL CIRCUITS (WHETHER SHOWN OR NOT) FOR NEW WORK.
2. PAINT EXPOSED METAL ENCLOSURES, CONDUIT, ETC. TO MATCH ADJACENT SURROUNDING SURFACES.

SECTION 16482

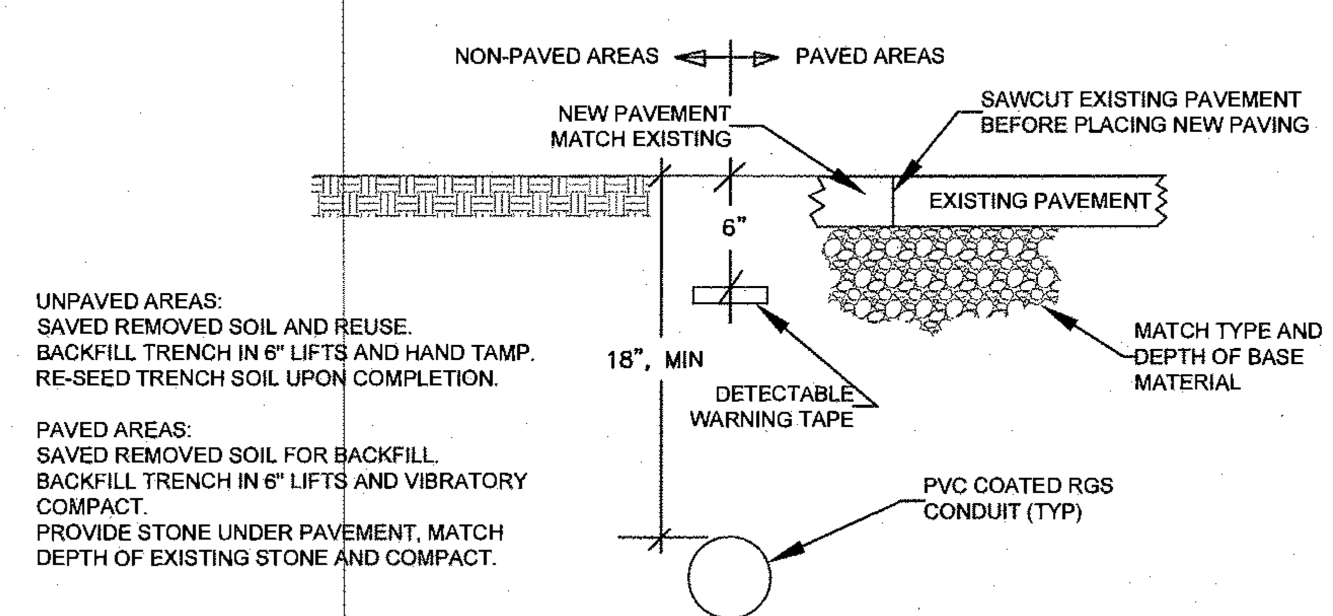
1. PROVIDE A DUPLEX PUMP CONTROL PANEL, LIBERTY AE SERIES, BARNES STEALTH OR APPROVED EQUAL. PUMP CONTROL PANEL SHALL BE RATED TO OPERATE TWO, 2 HP, SINGLE PHASE GRINDER PUMPS. CONTROL PANEL SHALL INCLUDE AN ALTERNATOR TO ALTERNATE LEAD/LAG FUNCTION OF PUMPS WITH EACH START FROM THE LOW LIQUID LEVEL/PUMPS OFF. PROVIDE FOUR FLOAT SWITCHES WITH CABLE AS REQUIRED. FLOAT SWITCHES AND CONTROLS SHALL BE CONFIGURED AS FOLLOWS: CONTROL PANEL SUMMARY IS REFERENCED IN SECTION 11200 1.04
   A. HIGH WATER ALARM
   B. LAG PUMP ON
   C. LEAD PUMP ON
   D. LOW WATER – ALL PUMPS OFF
2. PROVIDE ALARM RELAYS/CONTACTS, POWER AND WIRING FOR THE FOLLOWING EQUIPMENT/FUNCTIONS:
   A. HIGH WATER ALARM – TO CONTROL PANEL STROBE
   B. HIGH WATER ALARM – TO CONTROL PANEL HORN
   C. HIGH WATER ALARM – TO AUTODIALER
   D. PUMP SEAL FAILURE – TO AUTODIALER
   E. PUMP HIGH TEMPERATURE – TO AUTODIALER
3. PROVIDE THE FOLLOWING EQUIPMENT WITHIN THE CONTROL PANEL ENCLOSURE:
   A. SINGLE PHASE, CAPACITOR START, STARTERS RATED FOR THE PUMPS
   B. THERMAL MAGNETIC CIRCUIT BREAKER FOR EACH STARTER RATED FOR THE MOTOR
   C. OVERLOAD RELAYS FOR EACH STARTER
   D. ELECTRO-MECHANICAL ALTERNATOR
   E. PUMP RUN INDICATORS
   F. ELAPSED TIME METERS
   G. HOA SWITCHES FOR EACH PUMP
   H. HIGH PUMP TEMPERATURE PROTECTION
   I. PUMP LEAK SEAL PROTECTION
4. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PUMP CONTROL PANEL SHALL BE RATED TO OPERATE TWO, 2 HP, SINGLE PHASE GRINDER PUMPS. CONTROL PANEL SHALL INCLUDE AN ALTERNATOR TO ALTERNATE LEAD/LAG FUNCTION OF PUMPS WITH EACH START FROM THE LOW LIQUID LEVEL. INSTALLATION FROM THE WET WELL TO THE CONTROL PANEL SHALL BE INTRINSICALLY SAFE.

SECTION 16483

1. PROVIDE AN AUTODIALER TO REPORT ALARMS FROM THE PUMP CONTROL PANEL. THE AUTODIALER SHALL BE RATED FOR 120 VAC INPUT. THE AUTODIALER SHALL INCLUDE AN INTERNAL BATTERY TO REPORT ALARMS IN EVENT OF A SYSTEM POWER FAILURE. THE AUTODIALER SHALL REPORT THE FOLLOWING ALARMS:
   A. HIGH WATER ALARM
   B. PUMP SEAL FAILURE
   C. PUMP OVER TEMPERATURE

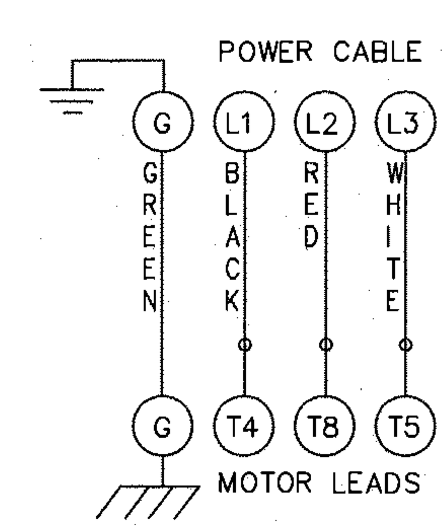


ONE-LINE DIAGRAM



TYPICAL CONDUIT TRENCHING DETAIL

NOT TO SCALE



POWER CABLE	MOTOR LEAD NUMBER
GREEN (GROUND)	GREEN
WHITE	5 (COMMON)
BLACK	4 (RUN)
RED	8 (START)

PUMP WIRING DIAGRAM FOR BARNES SUBMERSIBLE SINGLE PHASE GRINDER PUMPS. MODIFY WIRING AS REQUIRED FOR OTHER MANUFACTURERS.

SINGLE PHASE 200/230 VOLT AC PUMP WIRING

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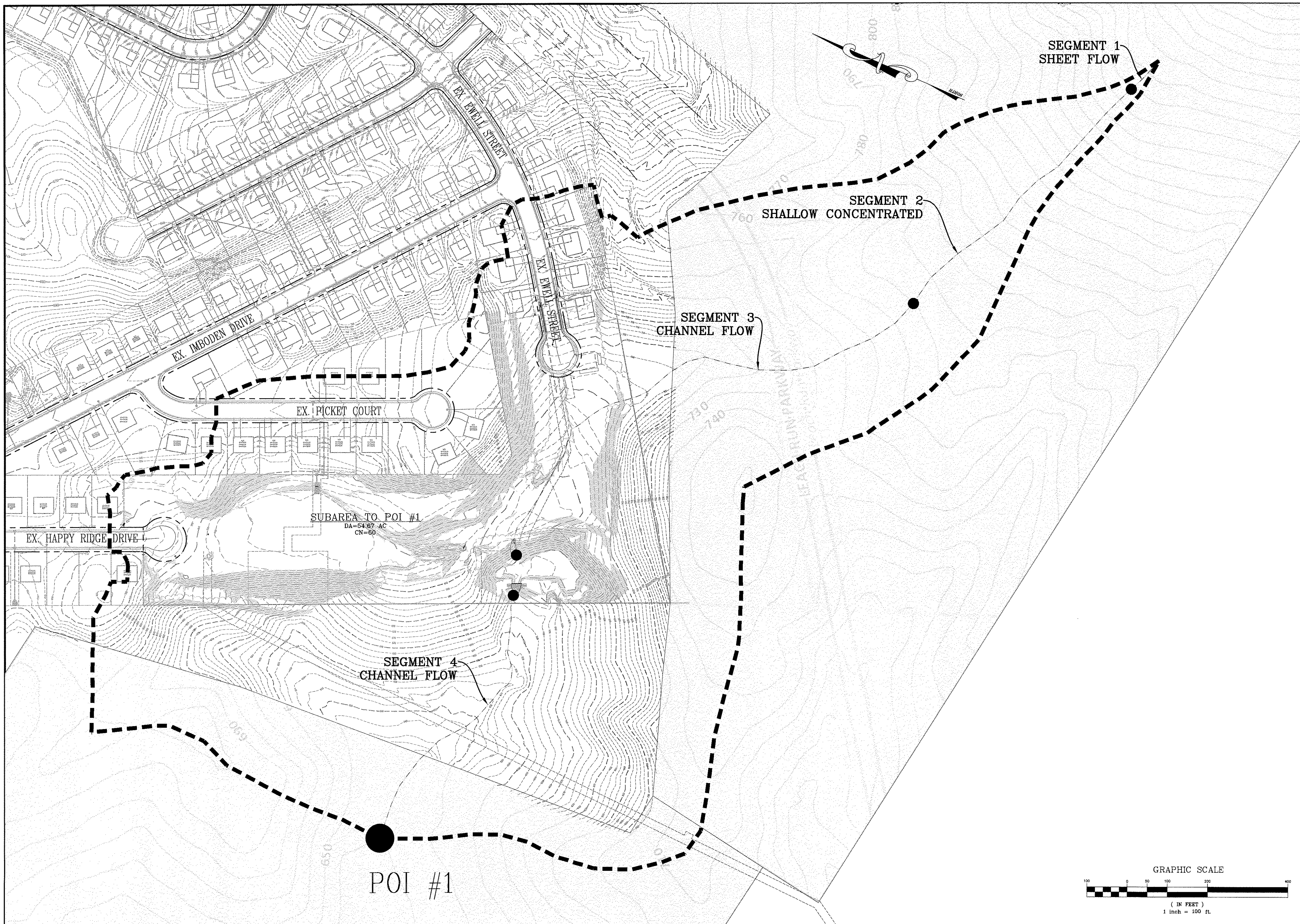

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PRE-DEVELOPMENT DRAINAGE DIVIDES

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

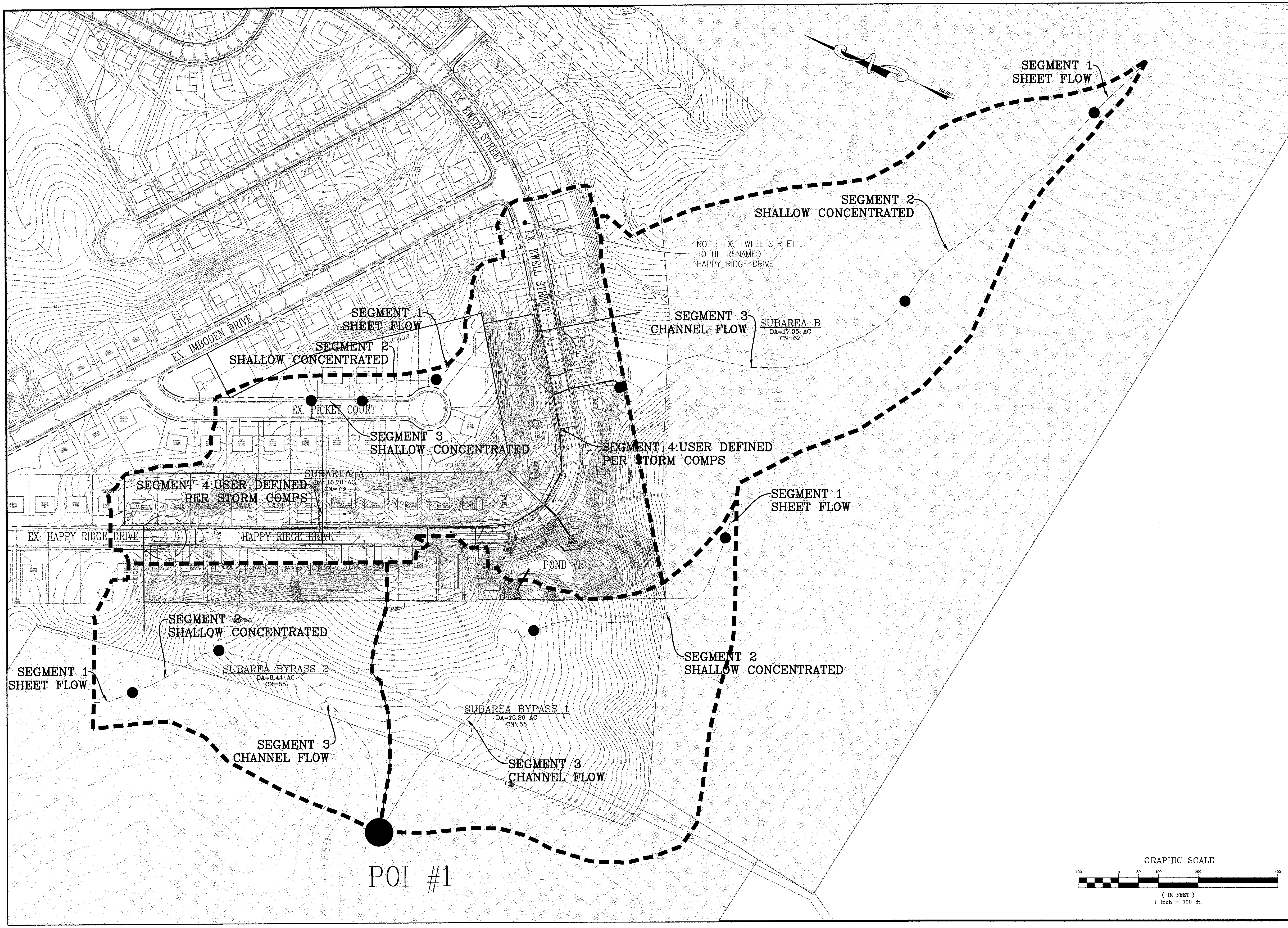
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=100' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		
SHEET 18 OF 33		

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-00X.dwg



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POST-DEVELOPMENT DRAINAGE DIVIDES

HAPPY CREEK KNOLLS SECTION 4

FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

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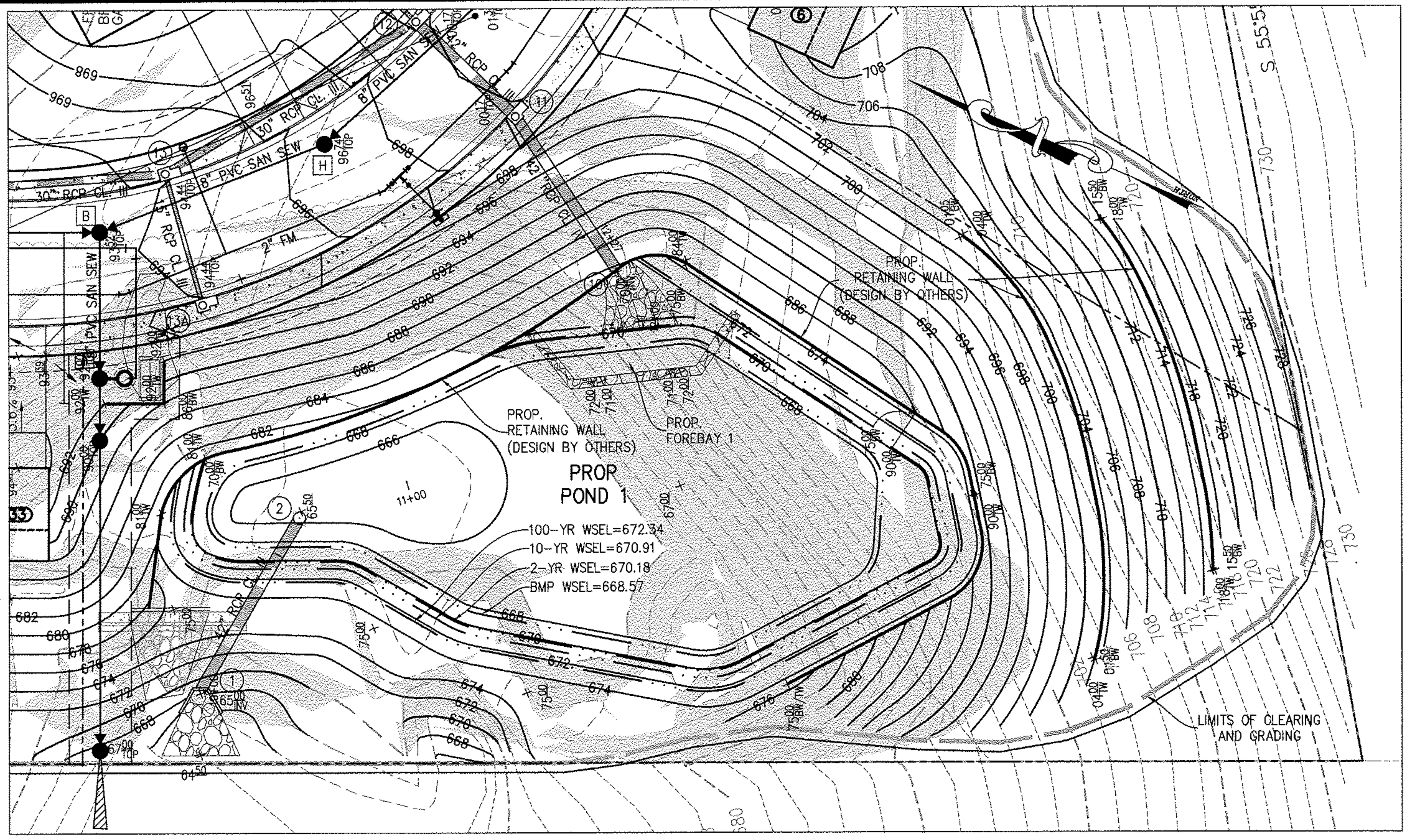
SHEET 19 OF 33		



SWM POND #1 PLAN VIEW
(SCALE: 1"=30')

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

GENERAL SPECIFICATIONS FOR S.W.M. DAM AND FACILITY

1. AREAS UNDER THE EMBANKMENT AND ANY STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL, ROOTS OR OTHER OBJECTIONAL MATERIAL.
2. THE SUITABILITY AND ACCEPTABILITY OF ALL FILL MATERIAL WILL BE DETERMINED BY REGULAR PERIODIC SOIL ANALYSIS AND COMPACTION TESTS, WHICH SHALL BE MADE BY A QUALIFIED GEOTECHNICAL ENGINEER
3. TESTS FOR SOIL ANALYSIS, MOISTURE CONTENT, AND COMPACTION ARE TO BE CONDUCTED IN ACCORDANCE WITH THE LATEST APPLICABLE ASTM STANDARDS AND SPECIFICATIONS.
4. MATERIALS USED FOR THE IMPERVIOUS CORE AND CUT-OFF TRENCH, IF REQUIRED, SHALL BE COMPRISED OF ONE OF THE FOLLOWING SOILS AS DESIGNATED BY THE UNIFIED SOIL SYSTEM: SC, CL, OR ML, HAVING A MINIMUM PLASTICITY INDEX OF 8 WITH A MINIMUM OF 45% PASSING THE NO. 200 SIEVE AND A MAX. OF 5 % RETAINED ON THE NO. 4 SIEVE.
5. THE EMBANKMENT MAY BE CONSTRUCTED AS A HOMOGENOUS EMBANKMENT DAM USING ACCEPTABLE MATERIAL CLASSIFIED ML, CL, SC, OR GC SOILS PER ASTM D-2487. IN ADDITION TO THESE MATERIALS, SOILS CLASSIFIED CH AND MH MAY BE USED AS COMPACTED EMBANKMENT FILL BELOW THE UPPER 5 FEET OF THE SLOPES. SOILS CLASSIFIED AS SM OR GM PER ASTM D-2487 OR SUITABLE FILL MAY BE USED FOR EMBANKMENT IN THE DOWNSTREAM HALF OF THE EMBANKMENT.
6. COMPACTION SHALL BE NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY FOR THE GIVEN EMBANKMENT MATERIAL AS DETERMINED BY USE OF THE STANDARD PROCTOR METHOD PER ASTM T-99 OR ASTM D-698.
7. THE FILL SHALL BE CONSTRUCTED IN 8" LOOSE LIFTS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL SO THAT SMOOTH HORIZONTAL PLANES ARE NOT BUILT INTO THE FILL STRUCTURE. SMOOTH HORIZONTAL PLANES CAN BE AVOIDED BY SCARIFYING OR USE OF SHEEPS-FOOT ROLLERS.
8. THE EMBANKMENT SHALL BE CONSTRUCTED TO A MINIMUM ELEVATION 5% HIGHER THAN THE DESIGNED HEIGHT TO ALLOW FOR SETTLEMENT WHEN MECHANICAL COMPACTORS ARE USED FOR CONSTRUCTION.
9. IF SUFFICIENT ACCEPTABLE MATERIAL IS NOT AVAILABLE ON THE SITE TO PROPERLY COMPLETE THE FILL, THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ACCEPTABLE BORROW MATERIAL.
10. THE STORM WATER MANAGEMENT FACILITY IS TO BE MAINTAINED AS FOLLOWS:
    (A) THE STORM WATER MANAGEMENT FACILITY SHALL BE INSPECTED ON A SEMI-ANNUAL BASIS AND AFTER ANY STORM WHICH CAUSES THE CAPACITY OF THE FACILITY TO BE EXCEEDED. ANY TRASH AND/OR DEBRIS WITHIN THE FACILITY SHALL BE REMOVED AND PROPERLY DISPOSED OF. INSPECTION REPORTS ARE TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.
    (B) THE STORM WATER MANAGEMENT FACILITY SHALL BE PERIODICALLY CLEANED OUT (EVERY 5-10 YEARS) DEPENDING ON SEDIMENT LOADING, SO AS TO REESTABLISH THE ORIGINAL CONTOURS WITHIN THE EXISTING WET POND AND OTHER AREAS. ALL EXCAVATED AND/OR DREDGED MATERIAL SHALL BE PLACED IN COMMON OPEN SPACE AS DESIGNATED BY THE HAPPY CREEK KNOLLS SEC II HOME OWNERS ASSOCIATION. THE DISPOSAL AREA SHALL HAVE APPROPRIATE E & S CONTROLS AND SHALL BE IMMEDIATELY SEEDED AND STABILIZED.

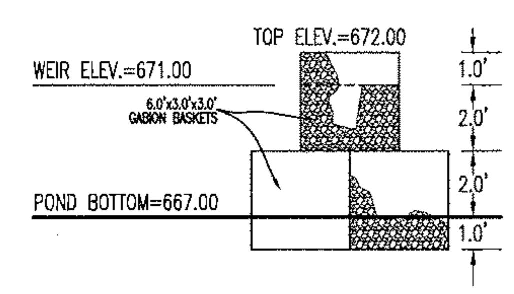
DETAIL NOTES:

THE PURPOSE OF THESE PLANS IS TO PROVIDE THE BASIC DIMENSIONS REQUIRED TO CONTROL THE CONSTRUCTION OF THE COMBINATION PRINCIPAL & EMERGENCY SPILLWAY.

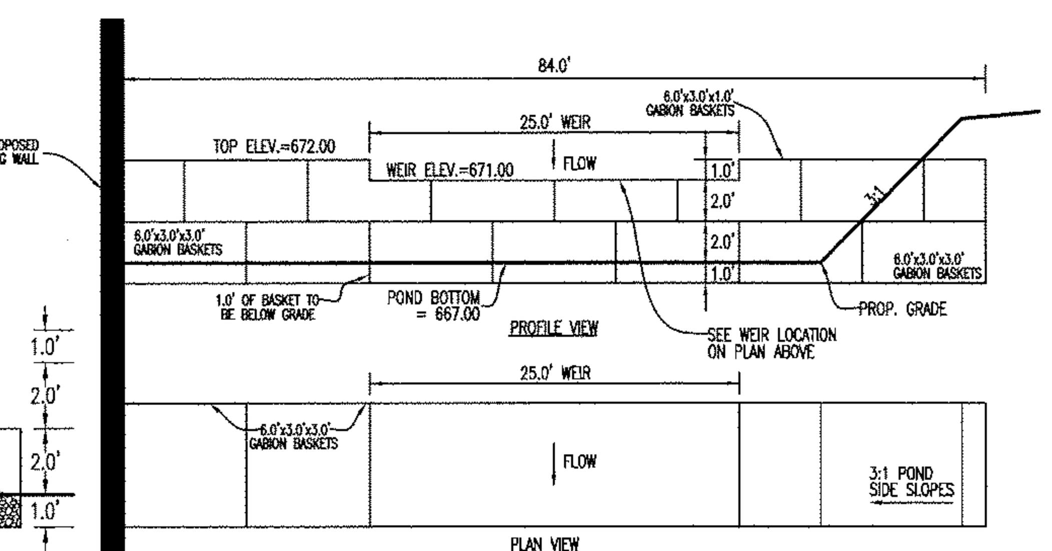
1. ALL OTHER WALL, SPILLWAY AND FOOTING DIMENSIONS AND/OR THICKNESS, AS WELL AS REINFORCEMENT, BUOYANCY CALCULATIONS AND THE METHOD OF JOINING THE VARIOUS STRUCTURAL ELEMENTS ARE SUBJECT TO DESIGN BY A PROFESSIONAL STRUCTURAL ENGINEER.
2. CONSTRUCTION AND CONTRACTION JOINTS ARE TO BE PROVIDED AS REQUIRED BY THE LATEST EDITION OF THE ACI CODE.
3. SUBGRADE PREPARATION AND BEDDING REQUIREMENTS FOR ALL STRUCTURAL ELEMENTS ARE SUBJECT TO DESIGN BY A PROFESSIONAL GEOTECHNICAL ENGINEER.
4. PRECAST CONCRETE IS TO ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. CAST IN PLACE CONCRETE IS TO BE VDOT CLASS A3.
5. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A-615 (REINFORCING BARS).
6. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
7. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN STRICT CONFORMANCE TO THE LATEST VDOT STANDARDS AND SPECIFICATIONS.
8. FOOTING DEPTHS SHOWN ARE MINIMUMS. ALL FOOTINGS ARE TO EXTEND DOWN TO SUITABLE BEARING MATERIAL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

GENERAL NOTES:

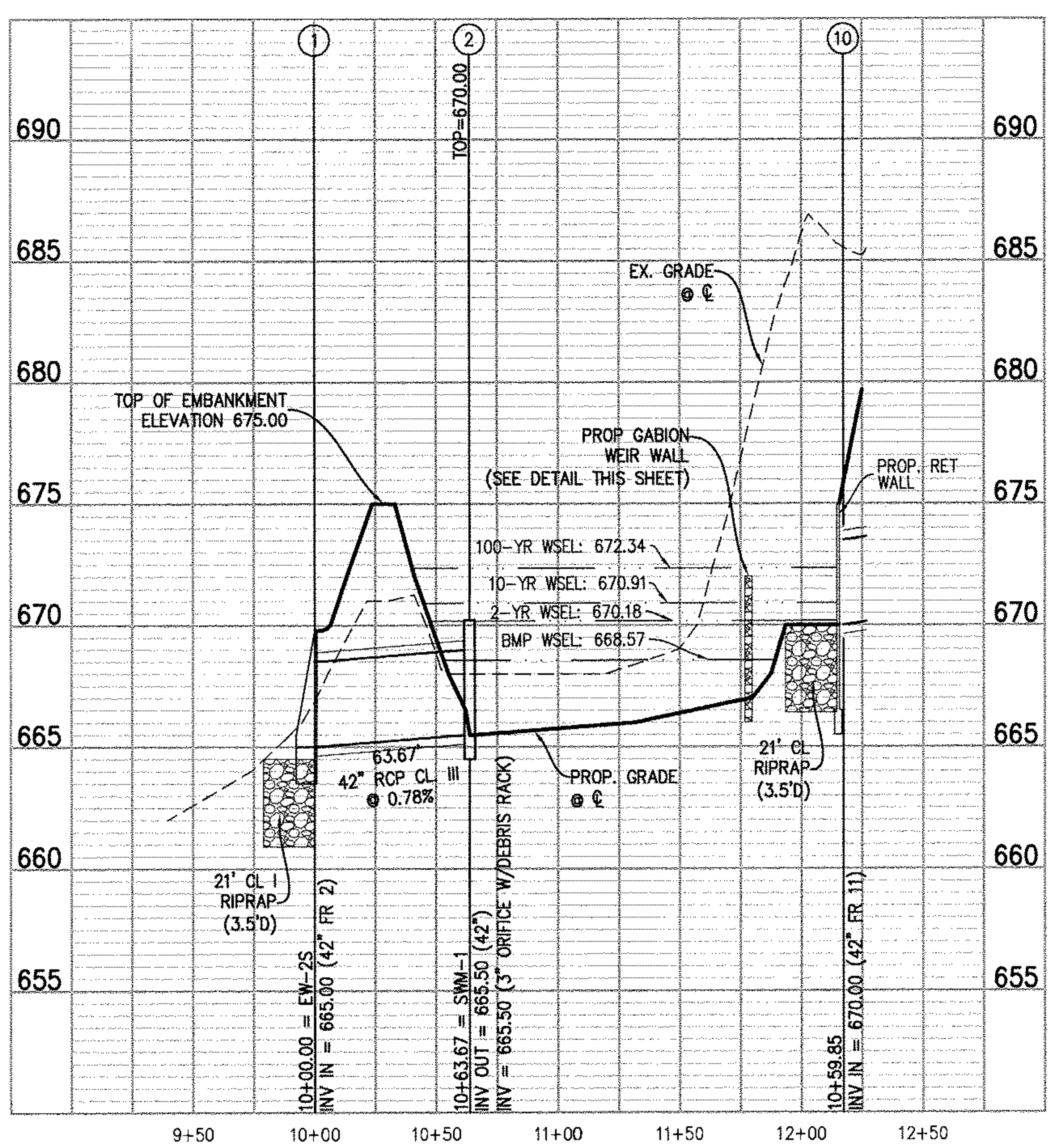
1. IMPERVIOUS CORE IS TO BE CONSTRUCTED FROM SOILS CLASSIFIED AS ML, CL, OR SC PER ASTM D-2487 COMPACTED TO 95% PER ASTM D-698.
2. THE CUT OFF TRENCH (IF REQUIRED) SHALL EXTEND A MINIMUM OF 5' BELOW SUBGRADE OR TO REFUSAL.
3. DESIGN AND CONSTRUCTION OF THE PROPOSED DAM IS SUBJECT TO RECOMMENDATIONS AND INSPECTION BY A QUALIFIED GEOTECHNICAL ENGINEER.



GABION BASKET DETAIL
NTS



GABION BASKET DETAIL FOREBAY #1
NTS

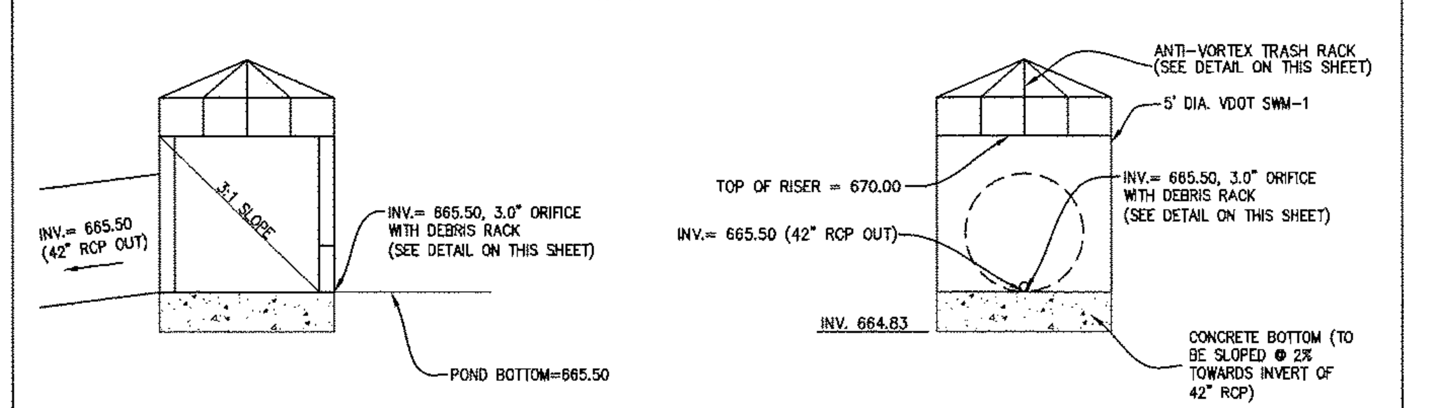


SWM POND #1 PROFILE VIEW
SCALE: HORZ 1"=50' VERT 1"=5'

POND: BUOYANCY CALCULATIONS - SWM POND 1				
			Equation Variables	VDOT Dim.
Riser Inside Dia=	5	FT	(Rd)	D
Riser Wall Thick=	0.50	FT	(Rw)	X
Riser Outside Dia=	6.00	FT	(RD)	D+2X
Riser Height=	4.5	FT	(Rh)	
Base Diameter=	6.00	FT	(Bd)	D+2X
Base Thickness=	0.67	FT	(Bt)	Y
Volume of Soil	0	CF	(Vs)	
VOLUME OF CONCRETE IN BASE (Vb) =				
		18.94	CF	
VOLUME OF CONCRETE IN RISER (Vr)				
		38.88	CF	
WEIGHT OF CONCRETE RISER & BASE =				
		12721	lbs.	
WATER VOLUME DISPLACED BY RISER (Vd)				
		127.23	CF	
BUOYANT FORCE (BF) = Vd * 62.4 lb/CF =				
		7939	lbs	
FACTOR OF SAFETY =		1.60		
VSMH Page 3.02-23	Must be Greater than 1.25			

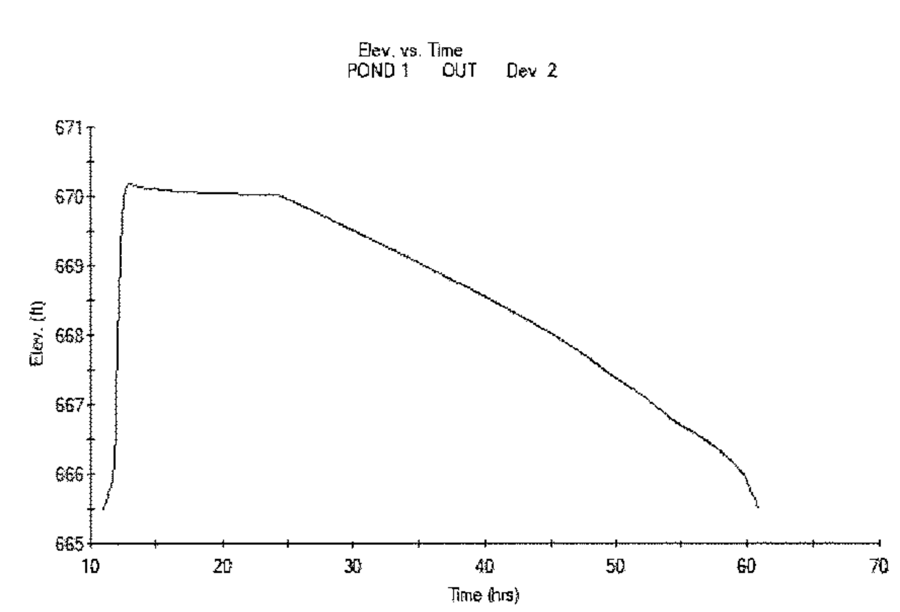
POND 1 OUTFALL STRUCTURE DETAIL
NOT TO SCALE

STORM	Q(cfs)	WSEL
BMP:	0.41	668.57
2 YEAR:	4.21	670.18
10 YEAR:	45.96	670.91
100 YEAR:	116.30	672.34

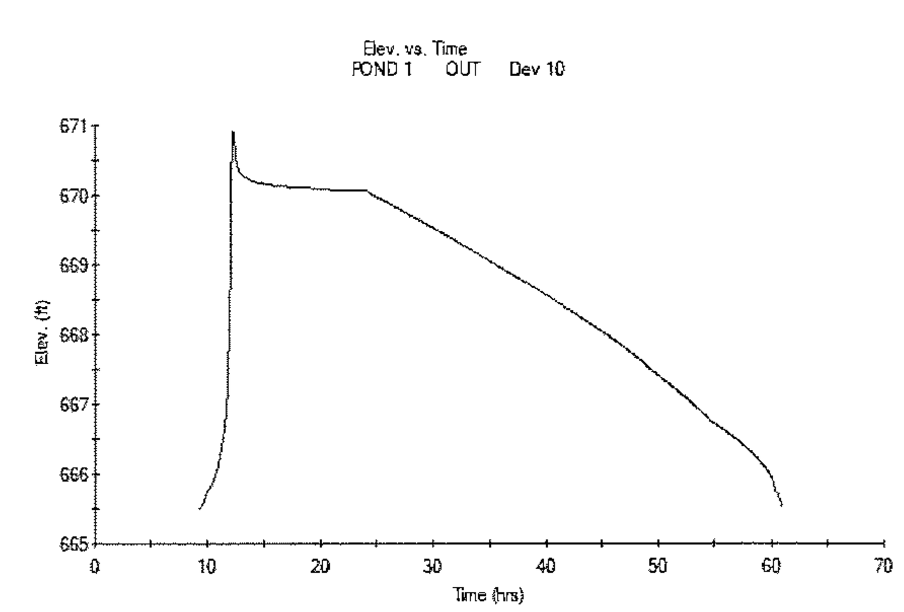


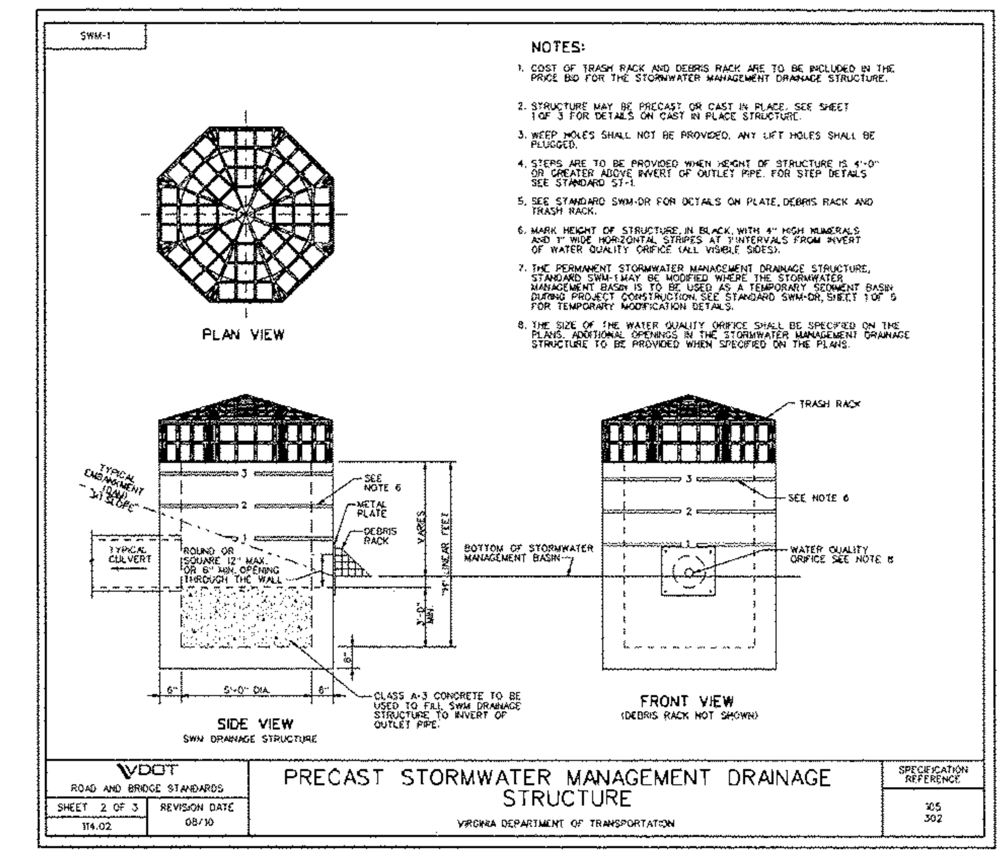
POND #1 OUTFLOW HYDROGRAPH

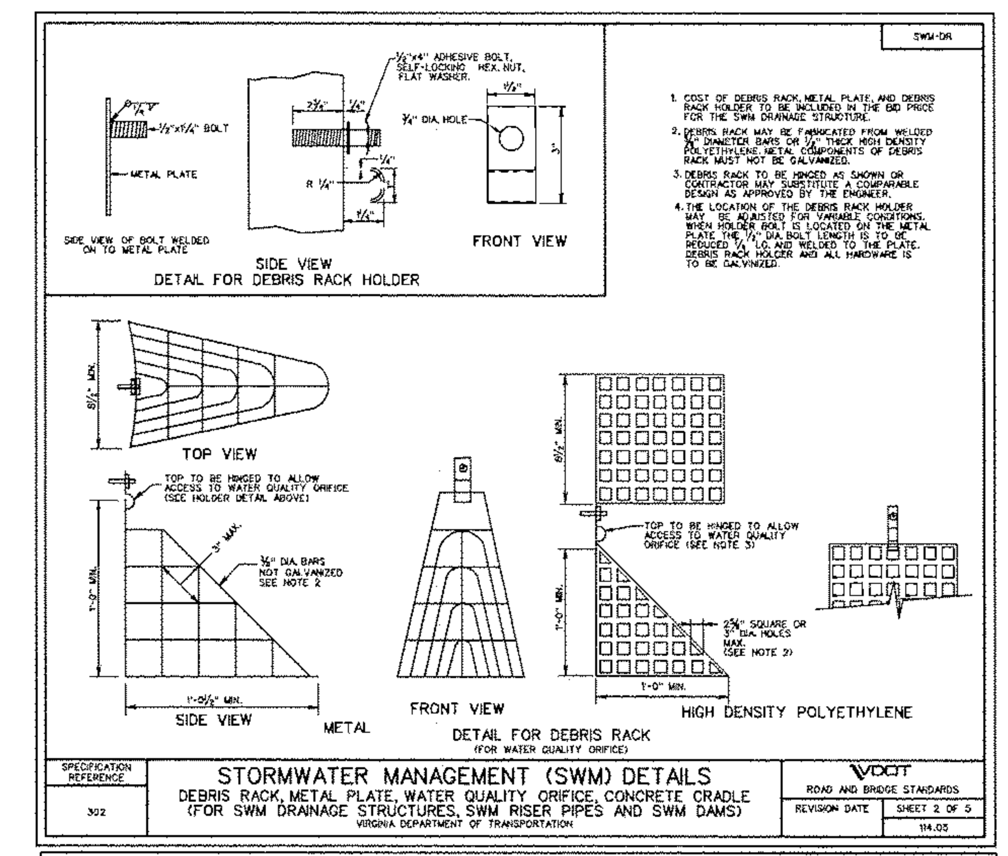
2-YR HYDROGRAPH

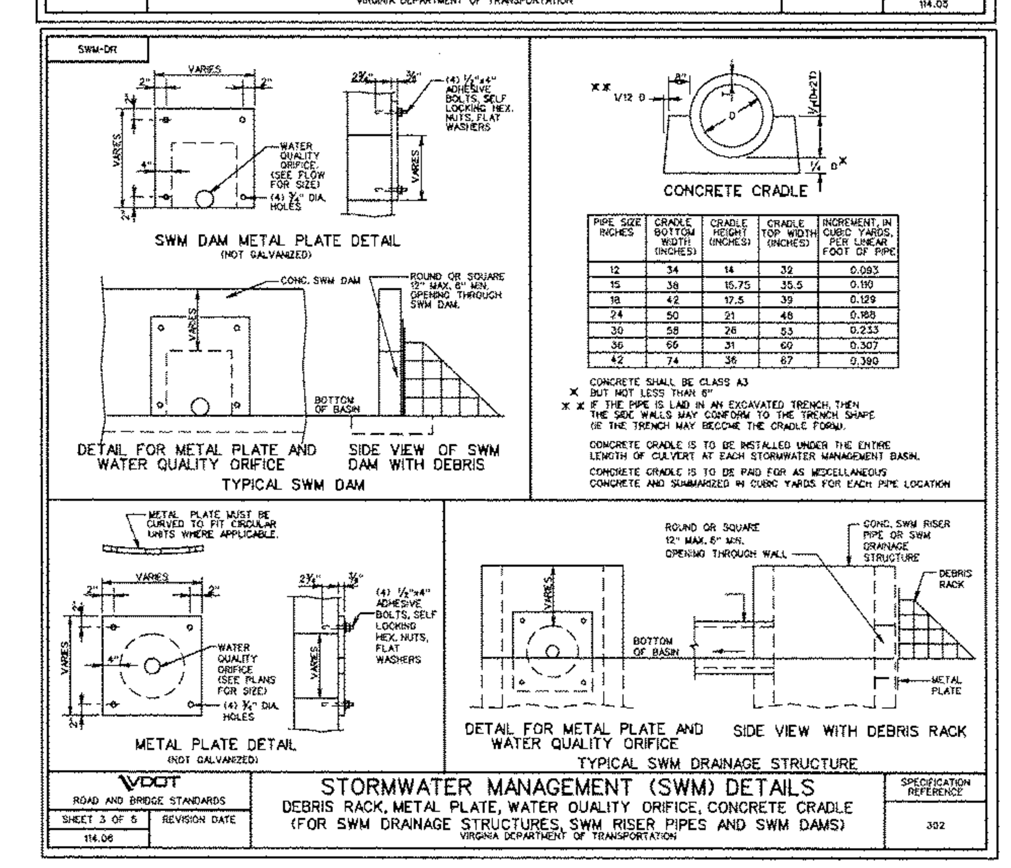


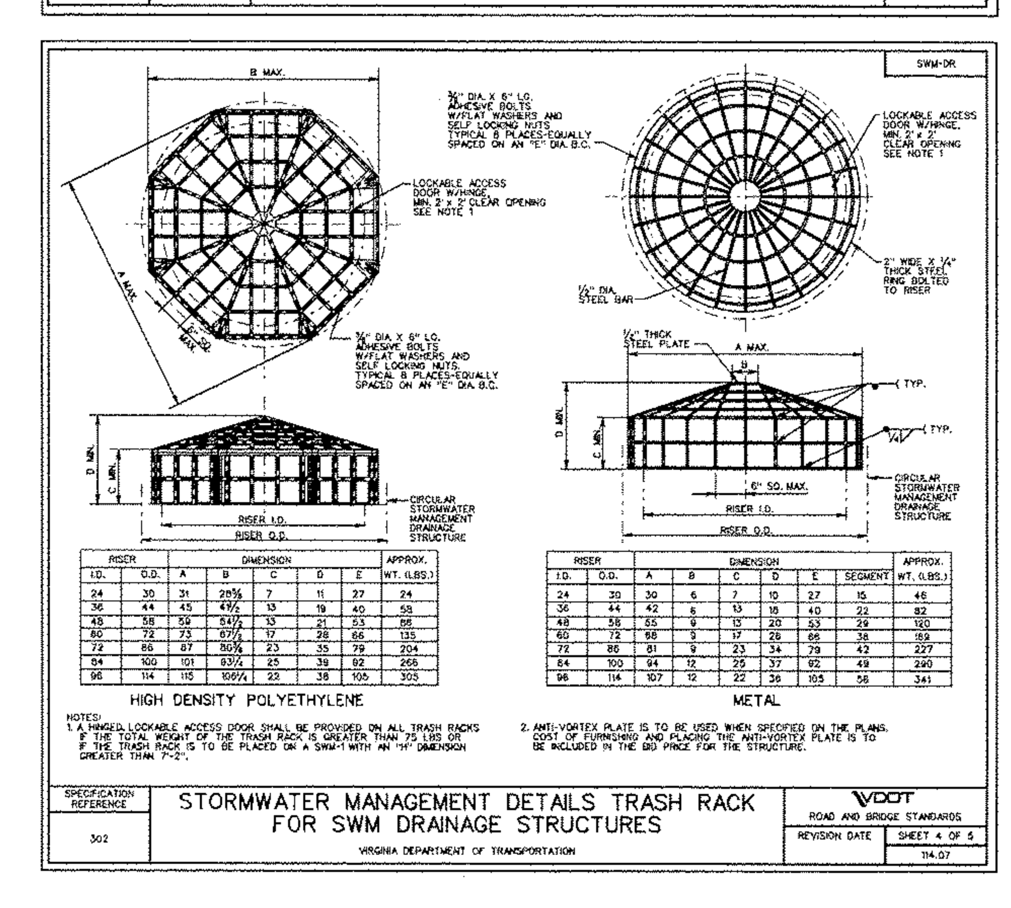
10-YR HYDROGRAPH











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POND 1 DETAILS AND COMPUTATIONS

HAPPY CREEK KNOLLS SECTION 4
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10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC	MCW	
DESIGN	DRAWN	CHKD

SCALE H: AS SHOWN V:
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005

SHEET 20 OF 33

PRE-DEVELOPMENT

Type.... Master Network Summary
Name.... Watershed
File.... P:\1602 - Happy Creek Knolls Sec 3\1602-04-001 (ENG)\Engineering\Design Documents\POND PACK.PPW

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Front Royal

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev 10	5.1000	Synthetic Curve	TypeII 24hr
Dev 2	3.5000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
PRE DEV	AREA	100	15.186		12.1000	186.40		
PRE DEV	AREA	10	6.196		12.1000	69.41		
PRE DEV	AREA	2	2.422		12.1500	21.51		
*PRE POI 1	JCT	100	15.186		12.1000	186.40		
*PRE POI 1	JCT	10	6.196		12.1000	69.41		
*PRE POI 1	JCT	2	2.422		12.1500	21.51		

Type.... Tc Calcs
Name.... PRE DEV

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.0500 in
Slope .200000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .1459 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 766.00 ft
Slope .169000 ft/ft
Unpaved

Avg.Velocity 6.63 ft/sec

Segment #2 Time: .0321 hrs

Segment #3: Tc: Kirpich (PA)

Hydraulic Length 1308.00 ft
Slope .930500 ft/ft
Multiplier 1.000 (Tc Adjustment)

Avg.Velocity 64.42 ft/sec

Segment #3 Time: .0056 hrs

Segment #4: Tc: TR-55 Channel

Flow Area 40.7000 sq.ft
Wetted Perimeter 37.30 ft
Hydraulic Radius 1.09 ft
Slope .102000 ft/ft
Mannings n .4000
Hydraulic Length 740.00 ft

Avg.Velocity 1.26 ft/sec

Segment #4 Time: .1630 hrs

Total Tc: .3467 hrs

Type.... Runoff CN-Area
Name.... PRE DEV

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Existing Area to POI 1	60	54.670			60.00
COMPOSITE AREA & WEIGHTED CN --->		54.670			60.00 (60)

POST-DEVELOPMENT

File.... P:\1602 - Happy Creek Knolls Sec 3\1602-04-001 (ENG)\Engineering\Design Documents\POND PACK.PPW

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Front Royal

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev 10	5.1000	Synthetic Curve	TypeII 24hr
Dev 2	3.5000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
BYPASS AREA 1	AREA	100	3.077		12.1000	39.24		
BYPASS AREA 1	AREA	10	1.138		12.1000	12.53		
BYPASS AREA 1	AREA	2	.382		12.1500	2.62		
BYPASS AREA 2	AREA	100	1.958		12.0000	31.61		
BYPASS AREA 2	AREA	10	.725		12.0500	10.40		
BYPASS AREA 2	AREA	2	.243		12.0500	2.41		
POND 1 IN	POND	100	11.682		12.0500	147.83		
POND 1 IN	POND	10	5.339		12.0500	64.72		
POND 1 IN	POND	2	2.451		12.1000	26.79		
POND 1 OUT	POND	100	11.683		12.1500	116.30	672.34	2.038
POND 1 OUT	POND	10	5.339		12.2000	45.96	670.91	1.394
POND 1 OUT	POND	2	2.451		13.0000	4.21	670.18	1.092
*POST POI 1	JCT	100	16.717		12.0500	178.69		
*POST POI 1	JCT	10	7.202		12.2000	60.43		
*POST POI 1	JCT	2	3.077		12.9500	5.39		
POST SUBAREA A	AREA	100	6.539		12.1000	75.05		
POST SUBAREA A	AREA	10	3.169		12.1500	36.03		
POST SUBAREA A	AREA	2	1.561		12.1500	16.95		
POST SUBAREA B	AREA	100	5.144		12.0000	80.51		
POST SUBAREA B	AREA	10	2.170		12.0500	32.51		
POST SUBAREA B	AREA	2	.890		12.0500	11.77		

Type.... Tc Calcs
Name.... BYPASS AREA 1

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .200000 ft/ft

Avg.Velocity .20 ft/sec

Segment #1 Time: .1362 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 594.16 ft
Slope .117800 ft/ft
Unpaved

Avg.Velocity 5.54 ft/sec

Segment #2 Time: .0298 hrs

Segment #3: Tc: TR-55 Channel

Flow Area 40.7000 sq.ft
Wetted Perimeter 37.30 ft
Hydraulic Radius 1.09 ft
Slope .102000 ft/ft
Mannings n .4000
Hydraulic Length 651.12 ft

Avg.Velocity 1.26 ft/sec

Segment #3 Time: .1434 hrs

Total Tc: .3095 hrs

Type.... Tc Calcs
Name.... BYPASS AREA 2

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .200000 ft/ft

Avg.Velocity .20 ft/sec

Segment #1 Time: .1362 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 244.00 ft
Slope .081960 ft/ft
Unpaved

Avg.Velocity 4.62 ft/sec

Segment #2 Time: .0147 hrs

Segment #3: Tc: Kirpich (PA)

Hydraulic Length 683.00 ft
Slope .043900 ft/ft
Multiplier 1.000 (Tc Adjustment)

Avg.Velocity 12.05 ft/sec

Segment #3 Time: .0157 hrs

Total Tc: .1667 hrs

Type.... Tc Calcs
Name.... POST SUBAREA A

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .020000 ft/ft

Avg.Velocity .08 ft/sec

Segment #1 Time: .3422 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 205.00 ft
Slope .039000 ft/ft
Unpaved

Avg.Velocity 3.19 ft/sec

Segment #2 Time: .0179 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 129.00 ft
Slope .031000 ft/ft
Paved

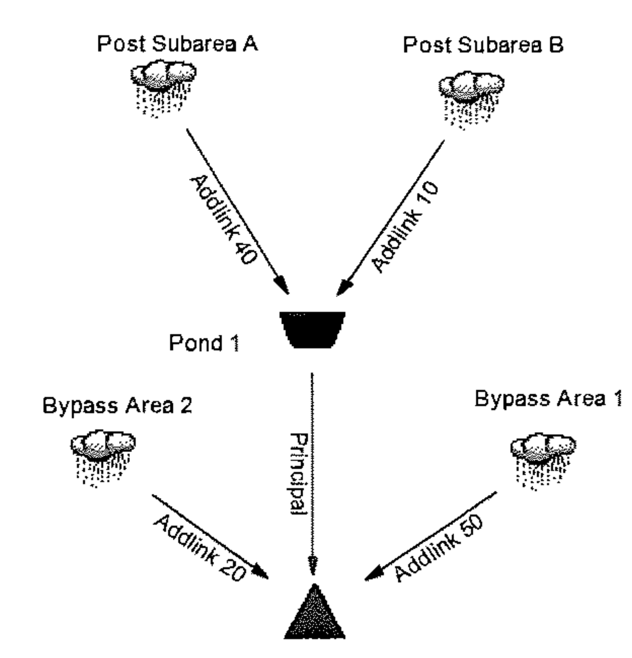
Avg.Velocity 3.58 ft/sec

Segment #3 Time: .0100 hrs

Segment #4: Tc: User Defined

Segment #4 Time: .0333 hrs

Total Tc: .4034 hrs



Type.... Tc Calcs
Name.... POST SUBAREA B

TIME OF CONCENTRATION CALCULATOR

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .200000 ft/ft

Avg.Velocity .20 ft/sec

Segment #1 Time: .1362 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 766.00 ft
Slope .169000 ft/ft
Unpaved

Avg.Velocity 6.63 ft/sec

Segment #2 Time: .0321 hrs

Segment #3: Tc: Kirpich (PA)

Hydraulic Length 806.00 ft
Slope .093050 ft/ft
Multiplier 1.000 (Tc Adjustment)

Avg.Velocity 18.22 ft/sec

Segment #3 Time: .0123 hrs

Segment #4: Tc: User Defined

Segment #4 Time: .0133 hrs

Total Tc: .1939 hrs

Type.... Runoff CN-Area
Name.... BYPASS AREA 1

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Area 2	55	13.260			55.00
COMPOSITE AREA & WEIGHTED CN --->		13.260			55.00 (55)

Type.... Runoff CN-Area
Name.... BYPASS AREA 2

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Area 2	55	8.440			55.00
COMPOSITE AREA & WEIGHTED CN --->		8.440			55.00 (55)

Type.... Runoff CN-Area
Name.... POST SUBAREA A

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Single Family 1/4 Acre	72	16.700			72.00
COMPOSITE AREA & WEIGHTED CN --->		16.700			72.00 (72)

Type.... Runoff CN-Area
Name.... POST SUBAREA B

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Area A Offsite	62	17.350			62.00
COMPOSITE AREA & WEIGHTED CN --->		17.350			62.00 (62)

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OUTFALL HYDROLOGY
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: N/A V: N/A	
JOB No.	1602-02-016	
DATE	JULY 19, 2019	
FILE No.	1602-D-CP-005	

SHEET 21 OF 33

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-POND.dwg

ORIFICE DESIGN: DRAWDOWN COMPUTATIONS

VSMH METHOD #1

Retention Basin II BMP Volume Provided	=	22922.71	ft^3
Retention Basin BMP Elevation	=	668.57	ft
BMP Orifice Elevation	=	665.50	ft
Hmax =	=	3.07	ft
Q_{avg} = BMP Volume/(30 * 3,600)	=	0.21	cfs
Qmax = 2 x Q_{avg}	=	0.42	cfs
a = Q_{avg}/(0.6 * (2*32.2 * H)^0.5)	=	0.05	ft^2
Qmax = 2 x Q_{avg}	=	0.10	cfs
a = Q_{avg}/(0.6 * (2*32.2 * H)^0.5)	=	0.03	ft^2
a = Q_{avg}/(0.6 * (2*32.2 * H)^0.5)	=	0.03	ft^2
d = 12 * ((4 * a)/π))^0.5	=	3.04	in

Use 3.00" Orifice with 8" Perforated HDPE Pipe
to prevent clogging - estimated orifice size

SEDIMENT FOREBAY COMPUTATIONS

(0.25 / 12) (3.14) (43560) = 2850 CU-FT (TARGET)

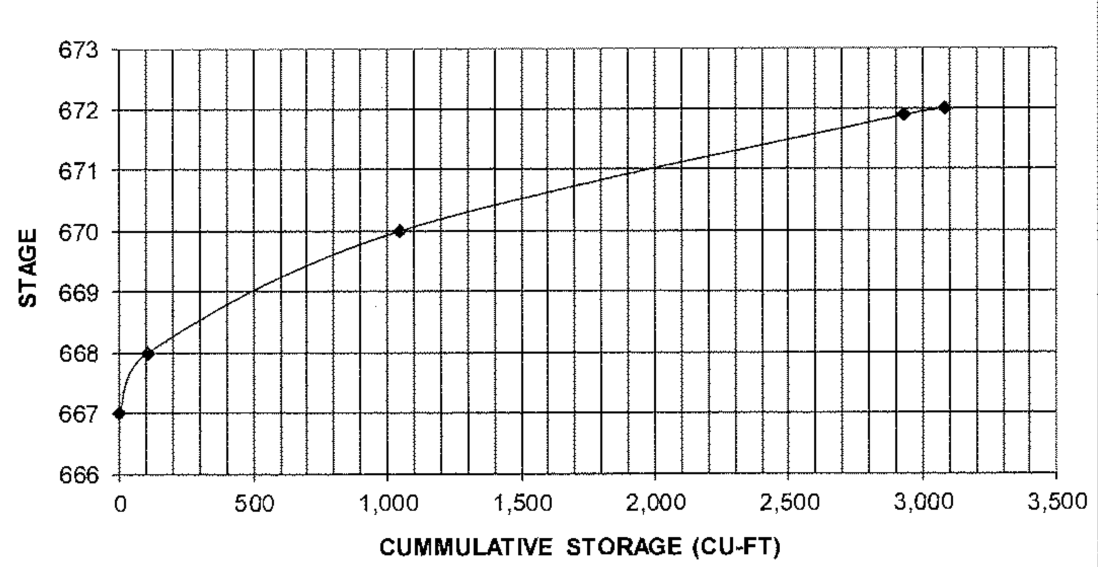
(0.1 / 0.25) (Target) = 1140 CU-FT (MINIMUM)

PROVIDED V0LUME = 2927 CU-FT

FOREBAY STAGE STORAGE (POND 1)

Elevation (ft)	Area (SQ FT)	Incremental Vol (CU-FT)	Cumulative Vol(CU-FT)
667.00	0.00	0	0
668.00	322.81	108	108
670.00	636.52	942	1049
671.89	1399.64	1877	2927
672.00	1424.09	155	3082

FOREBAY (POND 1) STAGE-STORAGE CURVE



ADEQUATE OUTFALL NARRATIVE

PROJECT DESCRIPTION

HAPPY CREEK KNOLLS, SECTION 4 CONSIST OF CONSTRUCTION OF 33 SINGLE FAMILY DETACHED UNITS AND THEIR ASSOCIATED INFRASTRUCTURE ON APPROXIMATELY 12.43 ACRES. THE ENTIRE SECTION DRAINS APPROXIMATELY 2,200 FT TO THE WEST TOWARDS A TRIBUTARY OF LEACH RUN.

ADEQUATE OUTFALL (POI #1)

HAPPY CREEK KNOLLS, SECTION 4 OUTFALLS TO THE WEST INTO AN EXISTING NATURAL STREAM CHANNEL THAT MEANDERS APPROXIMATELY 2,200 FEET TOWARDS A TRIBUTARY OF LEACH RUN. ADEQUATE OUTFALL FOR THE SITE HAS BEEN PROVIDED BY DETAINING THE POST-DEVELOPMENT 2-YEAR (5.39 CFS) AND 10-YEAR (60.43 CFS) STORM EVENT SUCH THAT IT IS EQUAL TO OR LESS THAN THE PRE-DEVELOPMENT 2-YEAR (21.51 CFS) AND 10-YEAR (69.41 CFS) STORM EVENT. FOR DETAILED COMPUTATIONS, SEE "MASTER NETWORK SUMMARY" ON SHEET 21.

```
Type.... Outlet Input Data
Name.... Outlet 1

              REQUESTED POND WS ELEVATIONS:

               Min. Elev.=    665.50 ft
               Increment =       .10 ft
               Max. Elev.=    675.00 ft

          ************************************************
                       OUTLET CONNECTIVITY
          ************************************************

           ---> Forward Flow Only (UpStream to DnStream)
           ---> Reverse Flow Only (DnStream to UpStream)
          <---> Forward and Reverse Both Allowed

       Structure        No.       Outfall    E1, ft     E2, ft
----------    ------   ----     -------  ---------  ---------
   Stand Pipe          R0    --->    C0      670.000    675.000
   Orifice-Circular    00    --->    C0      665.500    675.000
   Culvert-Circular    C0    --->    TW      665.500    675.000
   Weir-XY Points      W0    --->    TW      672.800    675.000
   TW SETUP, DS Channel


Type.... Outlet Input Data
Name.... Outlet 1

           OUTLET STRUCTURE INPUT DATA


           Structure ID      = R0
           Structure Type    = Stand Pipe
           ------------------------------------
           # of Openings     =         1
           Invert Elev.      =    670.00 ft
           Diameter          =    5.0000 ft
           Orifice Area      =   19.6350 sq.ft
           Orifice Coeff.    =      .600
           Weir Length       =     15.71 ft
           Weir Coeff.       =     3.330
           K, Reverse        =     1.000
           Mannings n        =     .0130
           Kev,Charged Riser =      .000
           Weir Submergence  = No


           Structure ID      = 00
           Structure Type    = Orifice-Circular
           ------------------------------------
           # of Openings     =         1
           Invert Elev.      =    665.50 ft
           Diameter          =     .2500 ft
           Orifice Coeff.    =      .600


           Structure ID      = C0
           Structure Type    = Culvert-Circular
           ------------------------------------
           No. Barrels       =         1
           Barrel Diameter   =    3.5000 ft
           Upstream Invert   =    665.50 ft
           Dnstream Invert   =    665.00 ft
           Horiz. Length     =     63.67 ft
           Barrel Length     =     63.67 ft
           Barrel Slope      =    .00785 ft/ft

           OUTLET CONTROL DATA...
           Mannings n        =     .0130
           Ke                =     .2000  (forward entrance loss)
           Kb                =   .005885  (per ft of full flow)
           Kr                =     .2000  (reverse entrance loss)
           HW Convergence    =      .001  +/- ft

           INLET CONTROL DATA...
           Equation form     =         1
           Inlet Control K   =     .0018
           Inlet Control M   =    2.0000
           Inlet Control c   =    .02920
           Inlet Control Y   =     .7400
           T1 ratio (HW/D)   =     1.058
           T2 ratio (HW/D)   =     1.203
           Slope Factor      =     -.500

   Use unsubmerged inlet control Form 1 equ. below T1 elev.
   Use   submerged inlet control Form 1 equ. above T2 elev.

   In transition zone between unsubmerged and submerged inlet control,
   interpolate between flows at T1 & T2...
   At T1 Elev =    669.20 ft  --->  Flow =     63.00 cfs
   At T2 Elev =    669.71 ft  --->  Flow =     72.00 cfs


           Structure ID      = TW
           Structure Type    = TW SETUP, DS Channel
           ------------------------------------
           FREE OUTFALL CONDITIONS SPECIFIED

           CONVERGENCE TOLERANCES...
           Maximum Iterations=    30
           Min. TW tolerance =    .01 ft
           Max. TW tolerance =    .01 ft
           Min. HW tolerance =    .01 ft
           Max. HW tolerance =    .01 ft
           Min.  Q tolerance =    .10 cfs
           Max.  Q tolerance =    .10 cfs
```

Type.... Vol: Elev-Area
Name.... POND 1

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (ac-ft)	Volume Sum (ac-ft)
665.50	-----	10	0	.000	.000
666.00	-----	2153	2310	.009	.009
668.00	-----	13353	20868	.319	.328
670.00	-----	16986	45399	.695	1.023
672.00	-----	20228	55750	.853	1.876
674.00	-----	23032	64845	.992	2.869
675.00	-----	24054	70623	.540	3.409

Type.... Composite Rating Curve
Name.... Outlet 1

*****COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Elev. ft	Total Q, Q cfs	Converge: TW Elev ft	Converge: Error +/-ft	Notes: Contributing Structures
665.50	.00	Free Outfall		(no Q: R0,00,C0)
665.60	.03	Free Outfall		00,C0 (no Q: R0)
665.70	.03	Free Outfall		00,C0 (no Q: R0)
665.80	.14	Free Outfall		00,C0 (no Q: R0)
665.90	.20	Free Outfall		00,C0 (no Q: R0)
666.00	.14	Free Outfall		00,C0 (no Q: R0)
666.10	.14	Free Outfall		00,C0 (no Q: R0)
666.20	.14	Free Outfall		00,C0 (no Q: R0)
666.30	.14	Free Outfall		00,C0 (no Q: R0)
666.40	.14	Free Outfall		00,C0 (no Q: R0)
666.50	.14	Free Outfall		00,C0 (no Q: R0)
666.60	.14	Free Outfall		00,C0 (no Q: R0)
666.70	.14	Free Outfall		00,C0 (no Q: R0)
666.80	.24	Free Outfall		00,C0 (no Q: R0)
666.90	.26	Free Outfall		00,C0 (no Q: R0)
667.00	.27	Free Outfall		00,C0 (no Q: R0)
667.10	.28	Free Outfall		00,C0 (no Q: R0)
667.20	.29	Free Outfall		00,C0 (no Q: R0)
667.30	.30	Free Outfall		00,C0 (no Q: R0)
667.40	.31	Free Outfall		00,C0 (no Q: R0)
667.50	.41	Free Outfall		00,C0 (no Q: R0)
667.60	.41	Free Outfall		00,C0 (no Q: R0)
667.70	.41	Free Outfall		00,C0 (no Q: R0)
667.80	.41	Free Outfall		00,C0 (no Q: R0)
667.90	.41	Free Outfall		00,C0 (no Q: R0)
668.00	.41	Free Outfall		00,C0 (no Q: R0)
668.10	.41	Free Outfall		00,C0 (no Q: R0)
668.20	.41	Free Outfall		00,C0 (no Q: R0)
668.30	.41	Free Outfall		00,C0 (no Q: R0)
668.40	.41	Free Outfall		00,C0 (no Q: R0)
668.50	.41	Free Outfall		00,C0 (no Q: R0)
668.60	.41	Free Outfall		00,C0 (no Q: R0)
668.70	.41	Free Outfall		00,C0 (no Q: R0)
668.80	.41	Free Outfall		00,C0 (no Q: R0)
668.90	.41	Free Outfall		00,C0 (no Q: R0)
669.00	.41	Free Outfall		00,C0 (no Q: R0)
669.10	.41	Free Outfall		00,C0 (no Q: R0)
669.20	.41	Free Outfall		00,C0 (no Q: R0)
669.30	.41	Free Outfall		00,C0 (no Q: R0)
669.40	.41	Free Outfall		00,C0 (no Q: R0)
669.50	.41	Free Outfall		00,C0 (no Q: R0)
669.60	.41	Free Outfall		00,C0 (no Q: R0)
669.70	.41	Free Outfall		00,C0 (no Q: R0)
669.80	.41	Free Outfall		00,C0 (no Q: R0)
669.90	.41	Free Outfall		00,C0 (no Q: R0)
670.00	.41	Free Outfall		00,C0 (no Q: R0)
670.10	2.01	Free Outfall		R0,00,C0
670.20	4.91	Free Outfall		R0,00,C0
670.30	8.99	Free Outfall		R0,00,C0
670.40	13.49	Free Outfall		R0,00,C0
670.50	18.86	Free Outfall		R0,00,C0
670.60	24.70	Free Outfall		R0,00,C0
670.70	32.55	Free Outfall		R0,00,C0
670.80	37.62	Free Outfall		R0,00,C0
670.90	44.97	Free Outfall		R0,00,C0
671.00	52.57	Free Outfall		R0,00,C0
671.10	60.51	Free Outfall		R0,00,C0
671.20	68.97	Free Outfall		R0,00,C0
671.30	77.75	Free Outfall		R0,D0,C0
671.40	91.05	Free Outfall		R0,00,C0
671.50	91.93	Free Outfall		R0,00,C0
671.60	105.69	Free Outfall		R0,C0 (no Q: 00)
671.70	107.19	Free Outfall		R0,00,C0
671.80	108.65	Free Outfall		R0,00,C0
671.90	110.10	Free Outfall		R0,C0 (no Q: 00)
672.00	111.53	Free Outfall		R0,C0 (no Q: 00)
672.10	112.94	Free Outfall		R0,C0 (no Q: 00)
672.20	114.35	Free Outfall		R0,00,C0
672.30	115.70	Free Outfall		R0,00,C0
672.40	117.06	Free Outfall		R0,C0 (no Q: 00)
672.50	118.42	Free Outfall		R0,C0 (no Q: 00)
672.60	119.76	Free Outfall		R0,C0 (no Q: 00)
672.70	121.07	Free Outfall		R0,00,C0
672.80	122.38	Free Outfall		R0,00,C0
672.90	123.67	Free Outfall		R0,C0 (no Q: 00)
673.00	124.93	Free Outfall		R0,C0 (no Q: 00)
673.10	126.20	Free Outfall		R0,C0 (no Q: 00)
673.20	127.43	Free Outfall		R0,00,C0
673.30	128.67	Free Outfall		R0,00,C0
673.40	129.91	Free Outfall		R0,C0 (no Q: 00)
673.50	131.13	Free Outfall		R0,C0 (no Q: 00)
673.60	132.32	Free Outfall		R0,C0 (no Q: 00)
673.70	133.51	Free Outfall		R0,00,C0
673.80	134.71	Free Outfall		R0,00,C0
673.90	135.87	Free Outfall		R0,C0 (no Q: 00)
674.00	137.04	Free Outfall		R0,C0 (no Q: 00)
674.10	138.19	Free Outfall		R0,C0 (no Q: 00)
674.20	139.33	Free Outfall		R0,00,C0
674.30	140.45	Free Outfall		R0,00,C0
674.40	141.60	Free Outfall		R0,C0 (no Q: 00)
674.50	142.69	Free Outfall		R0,C0 (no Q: 00)
674.60	143.81	Free Outfall		R0,C0 (no Q: 00)
674.70	144.91	Free Outfall		R0,00,C0
674.80	146.00	Free Outfall		R0,00,C0
674.90	147.08	Free Outfall		R0,C0 (no Q: 00)
675.00	148.15	Free Outfall		R0,C0 (no Q: 00)

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HAPPY CREEK KNOLLS
SECTION 4
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COMMONWEALTH OF VIRGINIA
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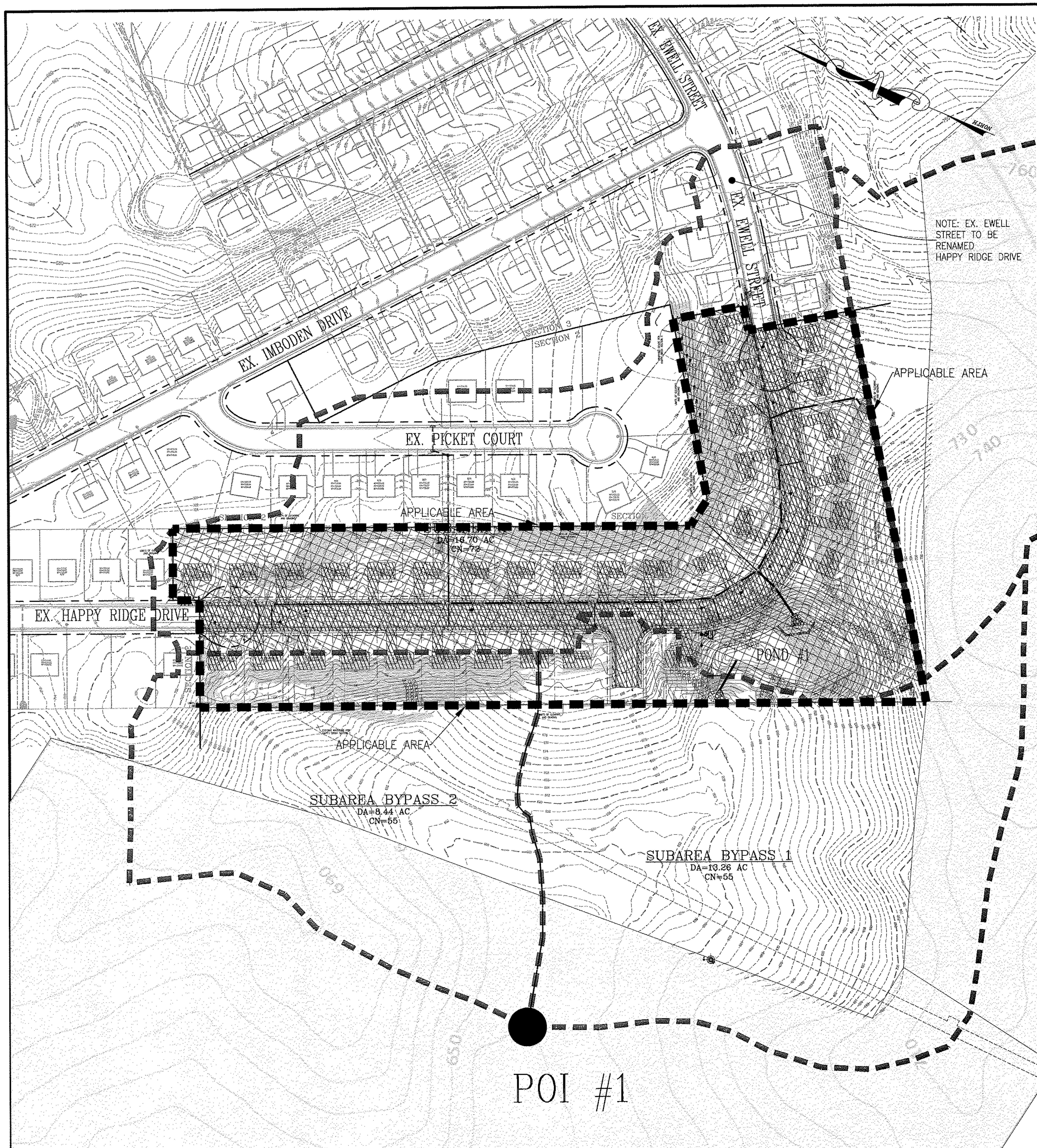
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS

DATE	DESCRIPTION
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS

GC	MCW	
DESIGN	DRAWN	CHKD

SCALE H: N/A V: N/A
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005



GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

BMP COVERAGE MAP

(SACLE: 1" = 100')

IMPERVIOUS AREA

AREA TO POND

Performance Based Water Quality Calculations - Happy Creek Knolls Section 4

STEP 1 **Determine the applicable area (A) and the post-developed impervious cover (I_{post}).**

Applicable area (A)= 12.43 Acres

Pre-development impervious cover:	Roads	0.34
	Bldgs & Driveways	
	Sidewalk/Trail	
Total Ex Impervious Area =		**0.34**

$I_{existing}$ = (total pre-development impervious cover ÷ A) × 100 = 16.0% utilized average land cover condition

Post-development impervious cover:	Roads	1.54
	Bldgs & Driveways	1.68
	Sidewalk/Trail	0.45
Total Proposed Impervious Area =		**3.67**

I_{post} = (total post-development impervious cover ÷ A) × 100 = 29.5%

STEP 2 **Determine the average land cover conditions ($I_{watershed}$) or the existing impervious cover ($I_{existing}$).**

$I_{existing}$ = 16.0%

STEP 3 **Determine the appropriate Development Situation.**

I_{post} 29.5% > $I_{existing}$ 16.0%

Situation 2 exists. The existing percent impervious cover is less than the average land cover condition.

STEP 4 **Determine the relative pre-development pollutant load (L_{pre}).**

$L_{pre(watershed)} = [0.05 + 0.009 \times I_{watershed})] \times A \times 2.28$ **VSMH (Equation 5-16)**

= 5.50 pounds per year

STEP 5 **Determine the relative post-development pollutant load (L_{post}).**

$L_{post} = [0.05 + 0.009 \times I_{post})] \times A \times 2.28$ **VSMH (Equation 5-21)**

= 8.95 pounds per year

STEP 6 **Determine the relative pollutant removal requirement (RR).**

RR = $L_{post} - L_{pre(watershed)}$

=3.45 pounds per year

STEP 7 **Identify the best management practice (BMP) for the site.**

1 Determine the required pollutant removal efficiency for the site:

EFF = (RR ÷ Lpost) × 100

= 39%

2 Select BMP(s)

Area	I_{BMP}	Eff_{BMP}	Description	Impervious Area	WQV	Required Volume	
10.03	31%	50%	Retention Basin II (4x WQV)	3.14	0.13 AC-FT	0.52 AC-FT	= 22,796 CU-FT

3 Determine the pollutant load entering the proposed BMP(s).

$L_{post} = [0.05 + 0.009 \times I_{BMP})] \times A \times 2.28$ **VSMH (Equation 5-24)**

L_{BMP1} = 7.59 pounds per year

4 Calculate the pollutant load removed by the proposed BMP(s).

$L_{removed} = Eff_{BMP} \times L_{BMP}$ **VSMH (Equation 5-24)**

$L_{removed/BMP1}$ = 3.79 pounds per year

5 Calculate the total pollutant load removed by the BMP(s)

$L_{removed/total} = L_{removed/BMP1} + L_{removed/BMP2} + L_{removed\ BMP3} + \ldots$ **VSMH (Equation 5-25)**

$L_{removed/total}$ = 3.79 pounds per year

6 Verify compliance:

$L_{removed/total}$ 3.79 > 3.45 **OKAY**

SWM/BMP NARRATIVE

PROJECT DESCRIPTION

HAPPY CREEK KNOLLS, SECTION 4 CONSIST OF CONSTRUCTION OF 33 SINGLE FAMILY DETACHED UNITS AND THEIR ASSOCIATED INFRASTRUCTURE ON APPROXIMATELY 12.43 ACRES. THE ENTIRE SECTION DRAINS APPROXIMATELY 2,200 FT TO THE WEST TOWARDS A TRIBUTARY OF LEACH RUN.

STORMWATER MANAGEMENT

STORMWATER MANAGEMENT FOR THE SITE HAS BEEN GRANDFATHERED UNDER THE COMMON PLAN OF SUBDIVISION UNDER 9VAC25-870-48 (GRANDFATHERING) AND SUBJECT TO THE PART IIC (99VAC25-870-93 et seq.) TECHNICAL CRITERIA OF THIS CHAPTER. STORMWATER MANAGEMENT HAS BEEN PROVIDED/DESIGNED IN ACCORDANCE WITH THE "VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) FIRST EDITION 1999" BY UTILIZING SWM/BMP POND 1 AND ADEOUATE OUTFALLS.

POND 1 IS LOCATED ON-SITE ADJACENT TO HAPPY RIDGE DRIVE BETWEEN LOTS 6 AND 33, APPROXIMATELY 2,200' EAST OF LEACH RUN. POND 1 WAS DESIGNED TO TREAT AND DETAIN THE 2, AND 10-YEAR POST-DEVELOPMENT STORM RUNOFF FOR THE MAJORITY OF SECTION 4. PRE-DEVELOPMENT RUNOFF AT OUTFALL "POI-1" ARE AS FOLLOWS: 2-YEAR IS 21.51 CFS, AND 10-YEAR IS 69.41 CFS. POST-DEVELOPMENT RUNOFF ARE AS FOLLOWS: 2-YEAR IS 5.39 CFS, AND 10-YEAR IS 60.43 CFS RESPECTIVELY. FOR DETAILED STORMWATER MANAGEMENT COMPUTATIONS, PLEASE REFER TO SHEETS 21 AND 22.

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES HAS BEEN PROVIDED BY WAY OF SWM/BMP POND 1. THE SWM/BMP FACILITY WAS DESIGNED IN ACCORDANCE TO THE "VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) FIRST EDITION 1999" BY UTILIZING THE PERFORMANCE BASED WATER OUALITY CALCULATIONS AS OUTLINED IN THE VSMH. THE BMP FACILITY, WHICH CONSIST OF AN RETENTION BASIN II (4xWOV) (TARGET POLLUTANT REMOVAL EFFICIENCY OF 50%) OF THE POST-DEVELOPMENT POLLUTANT RUNOFF, PROVIDES MORE THAN WHAT'S REQUIRED FOR SECTION 4. THE APPLICABLE AREA FOR SECTION 4 IS APPROXIMATELY 12.43 ACRES WITH A TOTAL POST-DEVELOPMENT IMPERVIOUS COVER OF 29.5%, WHICH IS HIGHER THAN THAN THE AVERAGE LAND COVER CONDITION IMPERVIOUSNESS OF 16%. THE 29.5% OF IMPERVIOUS COVER CONSIST OF ROAD PAVEMENTS, SIDEWALKS, DRIVEWAYS, AND ROOF TOPS. AS SHOWN IN THE PERFORMANCE BASED WATER QUALITY CALCULATION SHOWN ABOVE, THE PROPOSED BEST MANAGEMENT PRACTICES RESULTS IN A REDUCTION IN POST-DEVELOPMENT POLLUTANT DISCHARGE TO WELL BELOW PRE-DEVELOPMENT LEVELS.

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BMP MAP, COMPUTATIONS AND NARRATIVE

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD

SCALE H: 1"=100' V:

JOB No. 1602-02-016

DATE JULY 19, 2019

FILE No. 1602-D-CP-005

SHEET 22A OF 33

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-BMP.dwg

EROSION AND SEDIMENT CONTROL - PHASE I

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

Bowman CONSULTING

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COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047791
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC	MCW	
DESIGN	DRAWN	CHKD

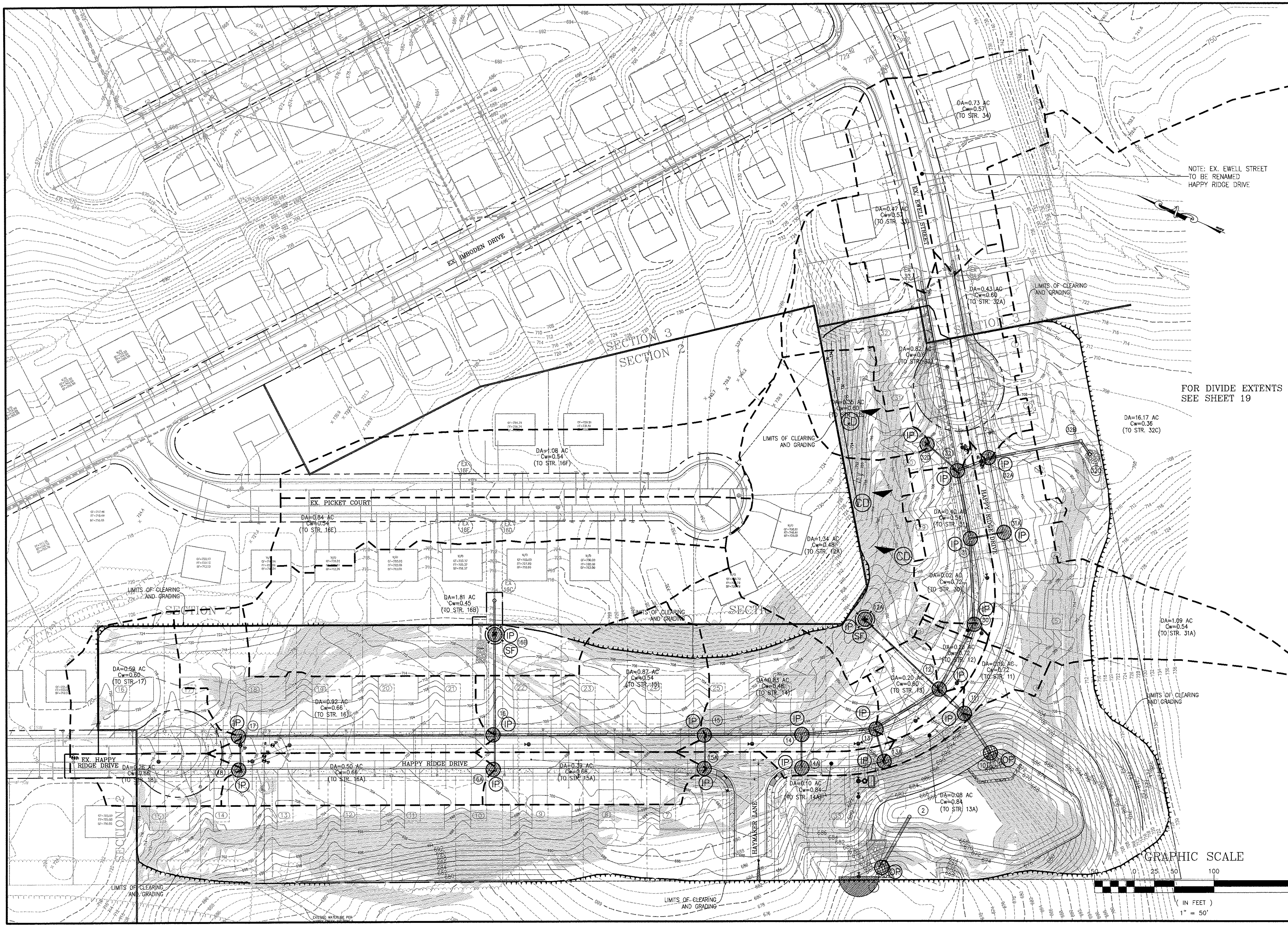
SCALE H: 1"=50' V:

JOB No. 1602-02-016

DATE JULY 19, 2019

FILE No. 1602-D-CP-005

SHEET 23 OF 33



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EROSION AND SEDIMENT CONTROL - PHASE II

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC	MCW	
DESIGN	DRAWN	CHKD
SCALE	H: 1"=50' V:	

JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005
SHEET 24 OF 33

MINIMUM CONSTRUCTION STANDARDS

AN EROSION AND SEDIMENT CONTROL PROGRAM ADOPTED WITH THIS PLAN MUST BE CONSISTENT WITH THE VSECH FOR 4VAC50-30-40 MINIMUM STANDARDS:

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

   A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.

   B. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A TWENTY-FIVE YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRICTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BQTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME
   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY
   D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
   F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. NO EROSION CONTROL MEASURE CAN BE CHANGED OR REMOVED WITHOUT THE PERMISSION OF THE LOUDOUN COUNTY INSPECTOR.

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF.

20. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS QF THE STATE.

Project Description:
This project consists of the creation of 33 single family detached lots. The construction of street improvements, storm sewer, water and sanitary sewer improvements within Section 4 is on approximately 12.43 acres. Land disturbance due to this construction is approximately **11.90** acres. Sediment control for the proposed construction activities will be in accordance with the policies and requirements of the Virginia Erosion & Sediment Control Handbook. As required, this plan proposes erosion and sediment control in two separote phases. The first phase will establish the controls related to initial clearing and rough grading operations. The second phase is tailored to control sediment during the final development stage.

Existing Site Conditions:
The proposed site is covered with grass and woods. The existing slope ranges from 0% to +25%. The site drains southeast towards an exiting pond that outfalls into a stream.

Critical Areas:
Special care shall be taken to protect the existing trees, vegetation, steep slopes, existing wetlands, and the existing streams that run through the site.

Adjacent Property:
To the North is existing Happy Creek Section 3. To the east is Future Leach Run Parkway. To the west is existing Happy Creek Section 2. To the south is undeveloped farm land.

Off-site areas:
There will be no off site activities such as dump sites or borrow pits.

Soils Data:
Soils, Slopes, Class and Permeability (K Factor) see Soils Map on Sheet 2.

Erosion Control Program:
Erosion Control shall be maximized through rapid stabilization of the disturbed areas and by diverting clean water and erosive flows around or through disturbed areas in a non- erosive manner. Not more than 7 calendar days will elapse with any disturbed area remaining denuded. Temporary cover, by seeding and/or mulching, shall be applied to areas that will be exposed for a period of greater than 7 days, before permanent stabilization. Permanent cover should be provided over all disturbed areas as soon as possible upon achieving final grade, by means of seeding and mulching, sodding and pegging, paving, or as otherwise directed by the plan. Likewise, all stockpiles shall be stabilized within 7 days of achieving final grades. Utility trenches shall be seeded and mulched within 7 days after back filling to the proposed grade. All temporary diversion dikes shall be seeded and mulched immediately after construction.

Sediment Control Program:
Sediment Control shall be accomplished through rapid stabilization and by the installation of mechanical devices, as shown on the Phase I E&S Plan:

Structural Practices:
1. Temporary Construction Entrance with wash rack (CE) (STD & SPEC 3.02) and settling area. The Contractor to supply water source by connecting to existing waterline or by providing a water truck/water tank on-site for washing vehicles before entering the public road.
2. Tree Protection (TP) (STD & SPEC 3.38). A wire welded mesh fence barrier or super silt fence are to be placed around the trees and vegetated areas which will not be disturbed to protect the trees and other vegetation from construction equipment and soil compaction.
3. Silt Fence (SF) (STD & SPEC 3.05) & Super Silt Fence (SSF). Silt fence and super silt fence barriers are to be place at the indicated locations to intercept and detain small amounts of sediment laden runoff from disturbed areas from leaving the site.
4. Temporary Diversion Dikes (DD) (STD & SPEC 3.04). A system of diversion dikes to direct flow into sediment traps or basins will be installed below major graded areas. Additionally, diversion dikes will be utilized to divert clean water from entering disturbed areas.
5. Check Dams (CD) (STD & SPEC 3.20). Protection of storm channels will be provided as shown on the Erosion and Sediment Control Plans.
6. Outlet Protection (OP) (STD & SPEC 3.18). Protection of all sediment trap and basin outlets will be provided as shown on the Erosion and Sediment Control Plans.
7. Inlet Protection (IP) (STD & SPEC 3.07) & Culvert Inlet Protection (CIP) (STD & SPEC 3.08). All existing and proposed storm sewer inlets shall be protected during construction as shown on the Phase I and II Erosion and Sediment Control Plans. Sediment laden water shall be filtered before entering the storm sewer inlets.
8. Temporary Sediment Basin (SB) (STD & SPEC 3.14). A series of temporary sediment basins will be utilized to capture and treat sediment laden runoff prior to releasing from the site. See Erosion and Sediment Detail Sheets for specific design information.

Vegetative Practices:
1. Surface Roughening –Areas to be seeded shall be lightly roughened & loose to a depth of 2" to 4" prior to seeding. Areas, which have been graded and will not be stabilized immediately, may be roughened to reduce velocity until seeding takes place.
2. Top soiling (Stockpiles) –Topsoil will be stripped from areas to be graded and stockpiled for later use. Stockpile locations shall be located on-site in open space areas and to be stabilized with temporary vegetation. Silt Fences shall be included around all stockpile areas.
3. Temporary Seeding –All denuded areas that will be left dormant for extended periods of time shall be seeded with fast germinating temporary vegetation immediately following grading. Selection of the seed mixture will depend on the time of the year it is applied.
4. Erosion Control Blankets or Mulch –Erosion control blankets will be installed over fill slopes which have been brought to final grade and seeded to protect the slopes from rill and gully erosion and allow the seed to germinate properly. Mulch (straw or fiber) will be used on relatively flat areas and will be applied as a second step in the seeding operation.
5. All siltation control measures are intended to prevent sediment from encroaching into environmentally sensitive areas or onto adjacent properties and roadways. The Loudoun County Inspector has the authority to add or delete erosion and sediment controls in the field as site conditions warrant. In addition, no sediment traps or sediment basins may be removed without the prior approval of the County inspector. Sediment Control "Maintenance Program" described below.
6. Obtain County Inspector's approval prior to the removal of the remaining mechanical sediment controls.

Permanent Stabilization:
All areas disturbed by construction shall be stabilized with permanent seeding immediately following finish grading. Seeding shall be done with Kentucky 31 Tall Fescue according to Std. & Spec. 3.32, Permanent Seeding, of the Virginia Erosion and Sediment Control Handbook. Erosion control blankets will be installed over fill slopes which have been brought to final grade and have been seeded. This will protect the slopes from rill and gully erosion and allow the seed to germinate properly. Mulch (straw or fiber) will be used on relatively flat areas. In all seeding operations, seed, fertilizer and lime will be applied prior to mulching.

Streambank Stabilization:
Disturbed areas along the banks of the Floodplain shall be stobilized with vegetative streambank stabilization. Vegetation shall be done in accordance with Std. & Spec 3.22, Vegetative Streambank Stabilization of the Virginia Erosion and Sediment Control Handbook.

Stormwater Management:
Stormwater Management is to be handled by storm sewers that will collect and drain the storm water to adequate channels for ultimate conveyance to the mojor floodplain.

Maintenance Program:
In general all erosion and sediment control measures will be checked daily and after each significant rainfall event. The following measures will be checked in particular:
Construction Entrance: (STD & SPEC 3.02) Inspections shall be made daily for entrance integrity; required repairs shall be made immediately.
Silt Fence: (STD & SPEC 3.05) Inspections shall be made daily for fence integrity; required repairs shall be made immediately. Sediment is to be removed when deposits reach one-half the fence height.
Diversion Dikes: (STD & SPEC 3.09) Dikes shall be checked for sediment accumulation after each significant rainfall; Repair as needed.
Culvert Inlet Protection: (STD & SPEC 3.08) Inlets shall be checked for sediment accumulation as needed.
Outlet Protection: (STD & SPEC 3.18) Culvert outlets shall be checked for sediment accumulation and debris as needed.
Tree Protection: (STD & SPEC 3.38) Inspections shall be made daily for fence integrity; required repair shall be made immediately.
Sediment Basins: (STD & SPEC 3.14) Inspections shall be made regularly to the embankment to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant. The basin should be checked after each runoff-producing rainfall for sediment cleanout. When the sediment reaches the clean-out level, it shall be removed and properly disposed of.
Permanent Seeding: (STD & SPEC 3.32) Seeded areas shall be checked regularly to assure a good stand of grass is being maintained. Areas that fail to establish vegetative cover adequate to prevent rill erosion shall be re-seeded as soon as they are identified.
Mulching: (STD & SPEC 3.35) All mulched areas shall be inspected periodically, particularly after rainstorms, to check for rill erosion; Repair as needed.
Check Dams: (STD & SPEC 3.20) Check dams shall be checked for sediment accumulation after each significant rainfall. Sediment should be removed when it reaches one-half of the original height or before. Regular inspection shall be made to ensure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam shall be corrected immediately.
Right-of-Way Diversion: (STD & SPEC 3.11) Inspections shall be made daily for right-of-way diversion integrity; required repairs shall be made immediately.
Utility Stream Crossing: (STD & SPEC 3.25) Inspections shall be made daily for utility stream crossing integrity; required repairs shall be made immediately.

Phasing of Land Disturbing Activities:
As-required, Sediment Control is provided through a two-phased approach.

PHASE I:
Phase I operations will include the construction needed to divert major off-site clean water and on-site drainage flows around the work area and control erosion and siltation associated with initial clearing and grading operations. As required, Phase I controls shall be established in a one (1) step process:

1. Owner to obtain a Grading Permit and a VPDES permit. Owner, Contractor, Responsible Land Disturber and Project Engineer shall attend a pre-construction meeting with the County Inspector prior to starting any land disturbing activities.
2. A wetlands permit by the US Army Corps of Engineers will be required for any wetland disturbance.
3. Install Construction Entrances (CE) as shown on phase I plan. Provide the Construction Entrances with wash rack as shown on the Phase I Plan, and establish a protected staging and equipment parking area.
4. Tree Protection will consist of either Super Silt Fence (TP/SSF) or Welded Wire Fence (TP/WWM) as shown on the Phase I Plan.
5. Install the remaining mechanical controls such as, Diversion Dikes (DD), Silt Fence (SF), Super Silt Fence (SSF) and sediment basin (SB) as shown on the Phase I Plan.
6. Install storm water bypass along with the appropriate controls, as shown on the plan.
7. Contact the County Field Manager for an E&S perimeter inspection prior to starting the clearing and grubbing of remaining site.
8. Clearing and grubbing or removal of existing vegetotion must be limited within the limits of clearing, as shown on the Phase I Plan.

PHASE II:
The Phase II Sediment Control measures are intended for the final stages of site development. Phase I control measures, which are not in conflict with final construction and provide effective control, shall remain in place for final development. The Contractor and the Responsible Land Disturber shall follow the County Inspector's direction in providing additional control measures needed during the development process, to insure that sediment is prevented from polluting off-site areas, streams and/or protected on-site areas.

The following sequence of construction is suggested:

1. Rough grade the streets.
2. Install watermain and sanitary sewer. The construction of the sanitary sewer crossing a perennial stream shall be completed on a dry day. Measures shall be taken to protect the stream bed at all times.
3. Install the storm sewer system. (Conversion of sediment basins to BMP facilities must comply with the requirements listed in section 3.06 of the Virginia Stormwater Management Handbook.)
4. Construct the base pavement for the streets and permanently stabilize site by surface roughening followed by planting and seeding.
5. Install final pavement.
6. After grading is completed, remove Diversion Dikes and replace with Silt Fence only as shown on the Phase II Plan, and after obtaining County Field Manager approval.

Devices shown are to be considered as minimum erosion and sedimentation controls. Additional controls may be necessary due to contractor's phasing or other unanticipated conditions. The Erosion and Sediment Control Inspector has the right to add or remove controls as deemed necessary in the field. It is the contractor's responsibility to provide additional devices as necessary in order to control erosion and sedimentation. Erosion and sedimentation measures shall be installed and maintained in accordance with the standards and specifications in the Virginia Erosion and Sediment Control Handbook, Third Edition. The contractor is to provide adequate means of cleaning and removing all laying dust as necessary by applying either moisture, calcium chloride, or other approved materials along those sections of the project adjacent to existing dwellings or public access. Controls may be removed after the areas above them have been stabilized and with the approval of the County Inspector.

Special Care Notes:
It is the intent of this plan to preclude sediment pollution from leaving the delineated construction zones.

The Contractor and the Responsible Land Disturber shall take special care to prevent construction debris and mud from being tracked onto surrounding public and private roads. Construction traffic shall only enter and exit the construction site via designated locations, which have working construction traffic wash racks.

The Contractor and Responsible Land Disturber shall take special care to protect the existing vegetation and streams outside of the designated limits of work shown on the plans.

Additional Notes:
1. When Sediment Basins and Traps are to be used as perimeter controls:

   a. Sediment Basin Embankments – shall be constructed of proper material that will contain the appropriate moisture content to ensure that 95% compaction will be achieved. (VESCH Std. & Spec. 3.14)

   b. Sediment Basin Outfall Pipes – Fill material placed around the outfall pipe shall be accomplished in 4 inch lifts and compacted until 95% compaction is achieved. (VESCH Std. & Spec. 3.14)
   Third party geotechnical verification may be required to ensure that both of these standards and specifications are met.

   c. Sediment Traps – Fill material used for construction of sediment trap embankments shall be free of roots or other woody vegetation, organic material, large stones and other objectionable material. Sediment Trap embankments should be compacted in 6 inch layers by traversing with construction equipment. (VESCH Std. & Spec 3.13)

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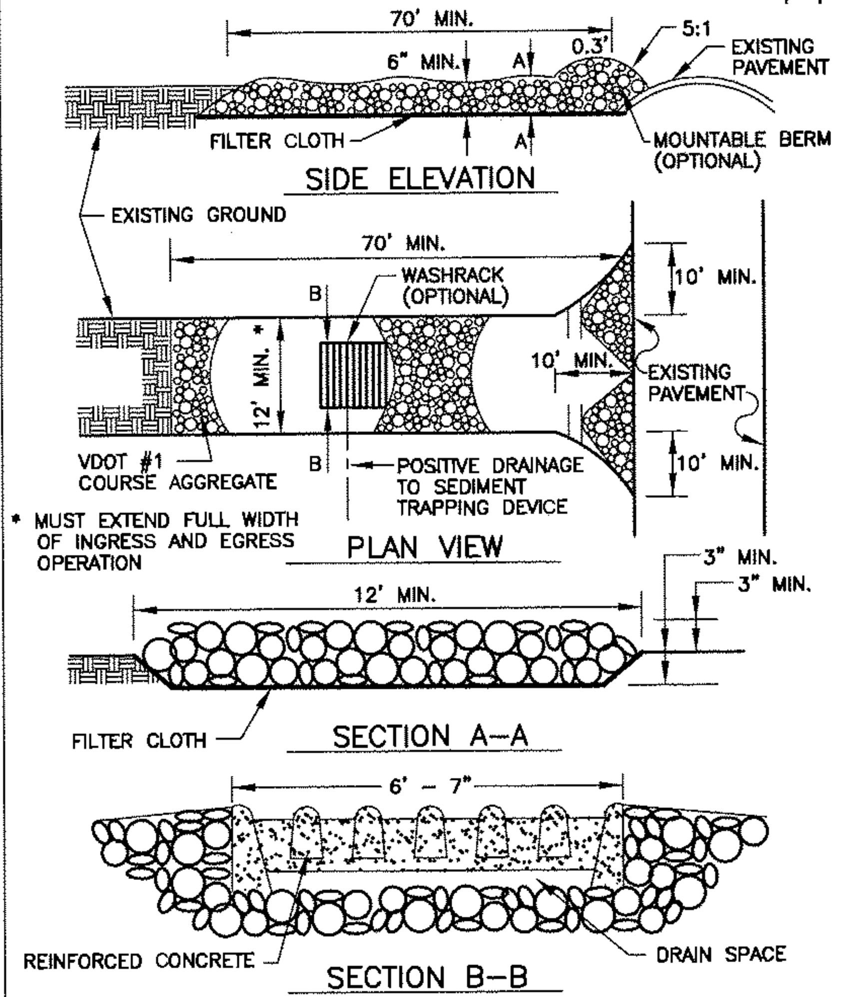
EROSION AND SEDIMENT CONTROL NARRATIVE
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=50' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

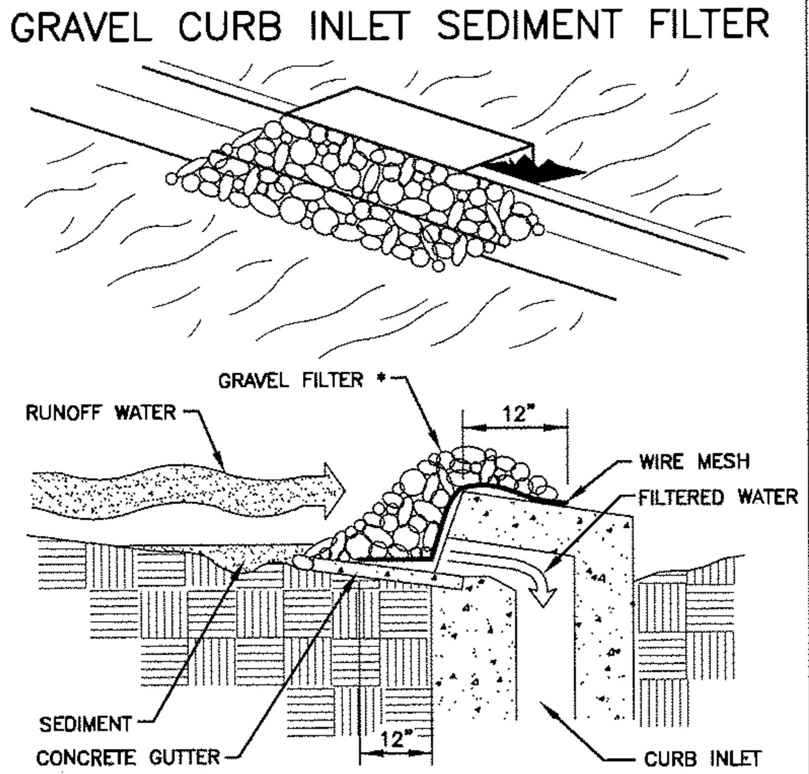
TEMPORARY STONE CONSTRUCTION ENTRANCE 3.02-1 (CE)



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

STORM DRAIN INLET PROTECTION 3.07-6 (IP)

GRAVEL CURB INLET SEDIMENT FILTER



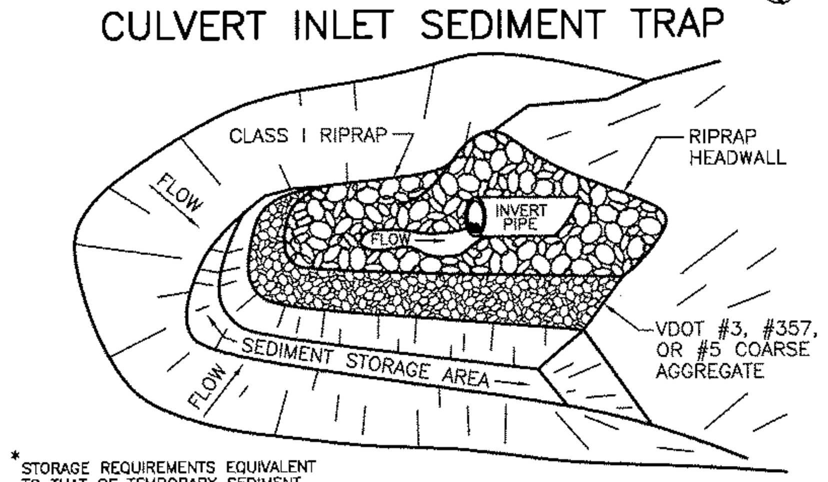
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

CULVERT INLET PROTECTION 3.08-2 (CIP)

CULVERT INLET SEDIMENT TRAP

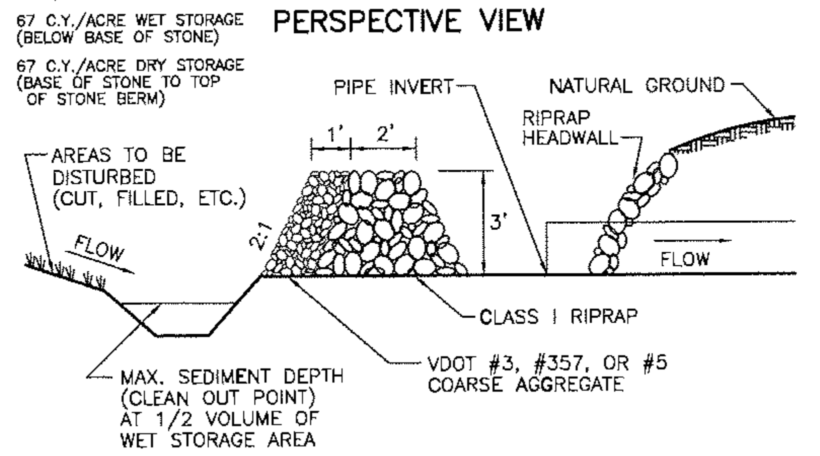


*STORAGE REQUIREMENTS EQUIVALENT TO THAT OF TEMPORARY SEDIMENT TRAP, STD. & SPEC. 3.13

67 C.Y./ACRE WET STORAGE (BELOW BASE OF STONE)

67 C.Y./ACRE DRY STORAGE (BASE OF STONE TO TOP OF STONE BERM)

PERSPECTIVE VIEW



ELEVATION

PROJECT: HAPPY CREEK SECTION 4
BASIN # : 1 **LOCATION:**
TOTAL AREA DRAINING TO BASIN: 33.56 acres

BASIN VOLUME DESIGN
WET STORAGE:

1 MINIMUM REQUIRED VOLUME = 67 cu. yds. x TOTAL DRAINAGE AREA (ACRES)
67 cu. yds. X 33.56 acres = 2249 cu. yds.
2 AVAILABLE BASIN VOLUME = 2264.5 cu. yds. AT ELEVATION 668.80
(FROM STORAGE - ELEVATION CURVE)
3 EXCAVATE 2264.5 cu. yds. To obtain required volume
(ELEVATION CORRESPONDING TO REQUIRED VOLUME = INVERT OF DEWATERING ORIFICE)
4 AVAILABLE VOLUME BEFORE CLEANOUT REQUIRED.
33 cu. yds. X 33.56 Acres = 1107 cu. yds.
5 ELEVATION CORRESPONDING TO CLEANOUT LEVEL = 666.40
(FROM STORAGE - ELEVATION CURVE)
6 DISTANCE FROM INVERT OF THE DEWATERING ORIFICE TO CLEANOUT LEVEL = 2.40 Ft.
(MIN. = 1.0 Ft.)

DRY STORAGE:

7 MINIMUM REQUIRED VOLUME = 67 cu. yds. x TOTAL DRAINAGE AREA (ACRES).
67 cu. yds. X 33.56 Acres = 2249 cu. yds.
8 TOTAL AVAILABLE BASIN VOLUME AT CREST OF RISER = 4497.0 cu. yds.
(FROM STORAGE - ELEVATION CURVE) AT ELEVATION 672.60
S= 121,420 cu. ft.
O= 5.62 cfs
h (avg)= 1.10 Ft.
A= 1.6521 SF
d= 1.45 Ft.
9 DIAMETER OF DEWATERING ORIFICE = 18.0 IN.
10 DIAMETER OF OF FLEXIBLE TUBING = 20.0 IN.
(DIAMETER OF DEWATERING ORIFICE PLUS 2 INCHES).

PRELIMINARY DESIGN ELEVATIONS

11 CREST OF RISER = 672.60
TOP OF DAM = 675.60
DESIGN HIGH WATER = 673.36
UPSTREAM TOE OF DAM = 662.00

AA LENGTH OF FLOW (L) = 136 / EFFECTIVE WIDTH (W_e) = 52.5 = 2.6
IF > 2, BAFFLES ARE NOT REQUIRED 'X'
IF < 2, BAFFLES ARE REQUIRED

RUNOFF

		AREA		"C"		I			
13	Q_2 =	**33.56**	X	**0.40**	X	**5.01**	=	**67.25**	cfs
14	Q_{25} =	**33.56**	X	**0.40**	X	**7.74**	=	**103.90**	cfs

(FROM CHAPTER 5)

PRINCIPAL SPILLWAY DESIGN

15 WITH EMERGENCY SPILLWAY, REQUIRED SPILLWAY CAPACITY $Q_p = Q_2$ = **N/A** cfs
(RISER & BARREL)
WITHOUT EMERGENCY SPILLWAY, REQUIRED SPILLWAY CAPACITY $Q_p = Q_{25}$ = **103.90** cfs
(RISER & BARREL)
16 WITH EMERGENCY SPILLWAY:
ASSUMED AVAILABLE HEAD (h) = **N/A** ft. (USING Q_2)
h = CREST OF EMERGENCY SPILLWAY ELEVATION - CREST OF RISER ELEVATION
WITHOUT EMERGENCY SPILLWAY:
ASSUMED AVAILABLE HEAD (h) = **0.8** ft. (USING Q_{25})
h = DESIGN HIGH WATER ELEVATION - CREST OF RISER ELEVATION
17 RISER DIAMETER (D_r) = 72 in. ACTUAL HEAD (h) = 0.8 ft.
(FROM PLATE 3.14-8)
NOTE: AVOID ORIFICE FLOW CONDITIONS.
18 BARREL LENGTH (l) = 71 ft.
HEAD (H) ON BARREL THROUGH EMBANKMENT = 6.86 ft.
(FROM PLATE 3.14-7) H = Design High Water - Center of barrel elevation
19 BARREL DIAMETER = 36 in. CMP
(PLATE 3.14-A [CORRUGATED PIPE])
20 BARREL UPSTREAM INVERT = 665.50
BARREL DOWNSTREAM INVERT = 665.00
21 TRASH RACK ANTI-VORTEX DEVICE
DIAMETER = 102 INCHES
HEIGHT = 36 INCHES
(FROM TABLE 3.14-D)

EMERGENCY SPILLWAY DESIGN

22 REQUIRED SPILLWAY CAPACITY $Q_e = Q_{25} - Q_p$ = N/A cfs
23 BOTTOM WIDTH (b) = N/A ft.
THE SLOPE OF THE EXIT CHANNEL (s) = N/A ft./foot
AND THE MINIMUM LENGTH OF THE EXIT CHANNEL (X) = N/A ft.
(FROM TABLE 3.14-C).

ANTI-SEEP COLLAR DESIGN

24 DEPTH OF WATER AT PRINCIPAL SPILLWAY CREST (Y) = 11.36 ft.
SLOPE OF UPSTREAM FACE OF EMBANKMENT (Z) = 3 :1
SLOPE OF PRINCIPAL SPILLWAY BARREL (S) = 0.007 ft./foot
LENGTH OF BARREL IN SATURATED ZONED (Ls) = 81.85 ft.
25 NUMBER OF COLLARS REQUIRED = 1
DIMENSIONS = 6.2X6.2
(FROM PLATE 3.14-12)

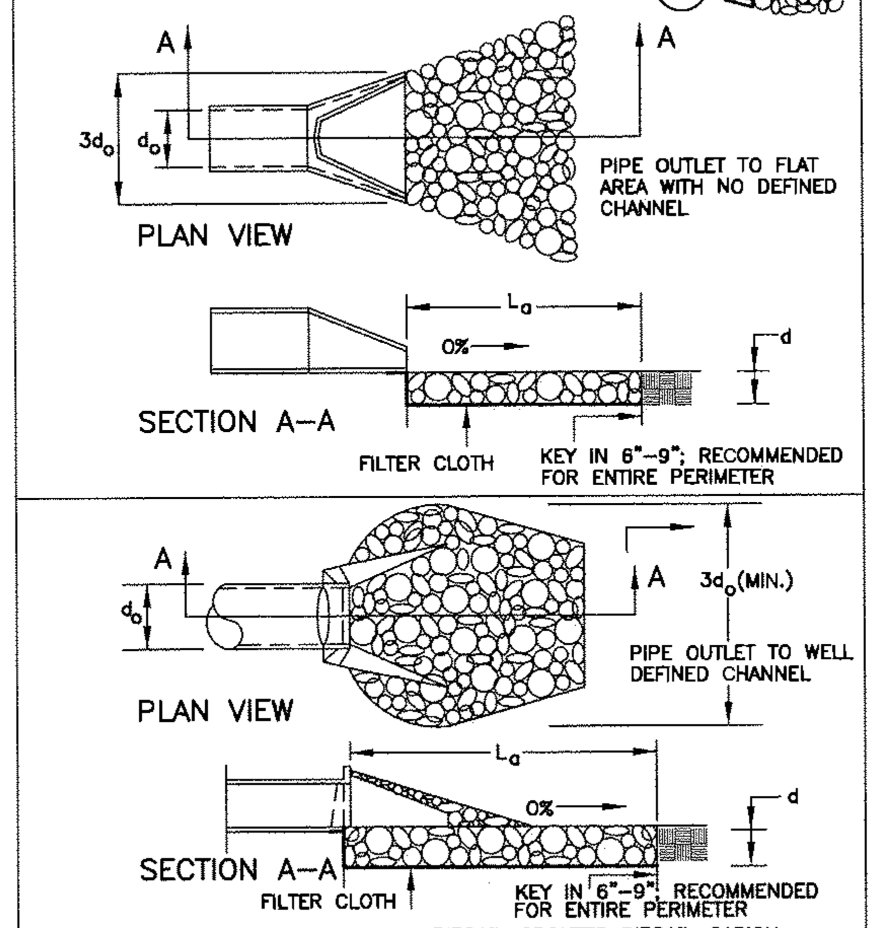
FINAL DESIGN ELEVATIONS

26 TOP OF DAM = 675.60
MIN. TOP of DAM WIDTH 8 ft.
EMBANKMENT SIDE SLOPE (H:V) 2:1
DESIGN HIGH WATER = 673.36
EMERGENCY SPILLWAY CREST = N/A
PRINCIPAL SPILLWAY CREST = 672.60
DEWATERING ORIFICE INVERT = 668.80
CLEANOUT ELEVATION = 666.40
ELEVATION OF UPSTREAM TOE OF DAM
OR EXCAVATED BOTTOM OF "WET STORAGE
AREA" (IF EXCAVATION WAS PERFORMED) = 662.00

Stage - Storage Curve (SB-#1)

Elevation (ft)	*Surface Area (ft^2)*	*Incremental Vol. (ft^3)*	*Cummulative Vol. (Yds^3)*
662	5,112	0	0
664	7,137	12,192.82	451.59
666	9,355	16,442.06	1,060.55
668	12,178	21,471.05	1,855.77
670	15,479	27,591.10	2,877.67
672	18,317	33,756.21	4,127.90
673	20,295	19,297.55	4,842.62

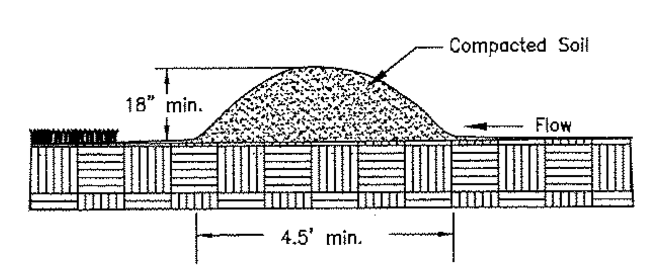
OUTLET PROTECTION 3.18-1 (OP)



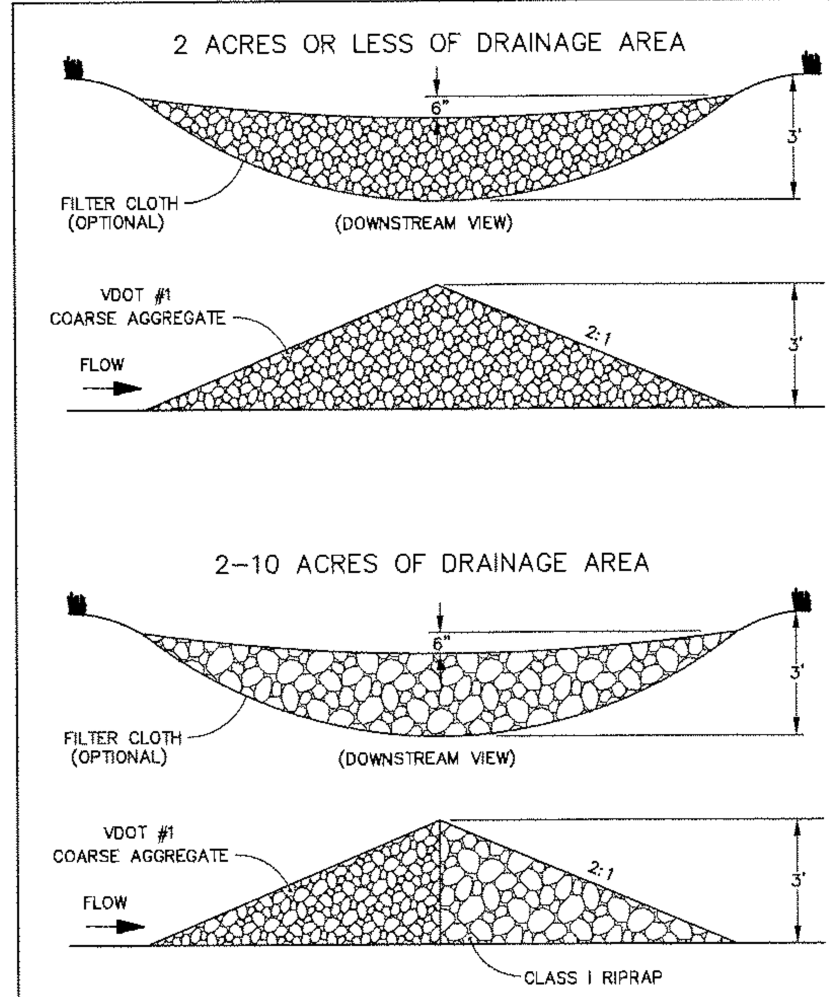
NOTES:
1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

1992 3.09

TEMPORARY DIVERSION DIKE (DD)



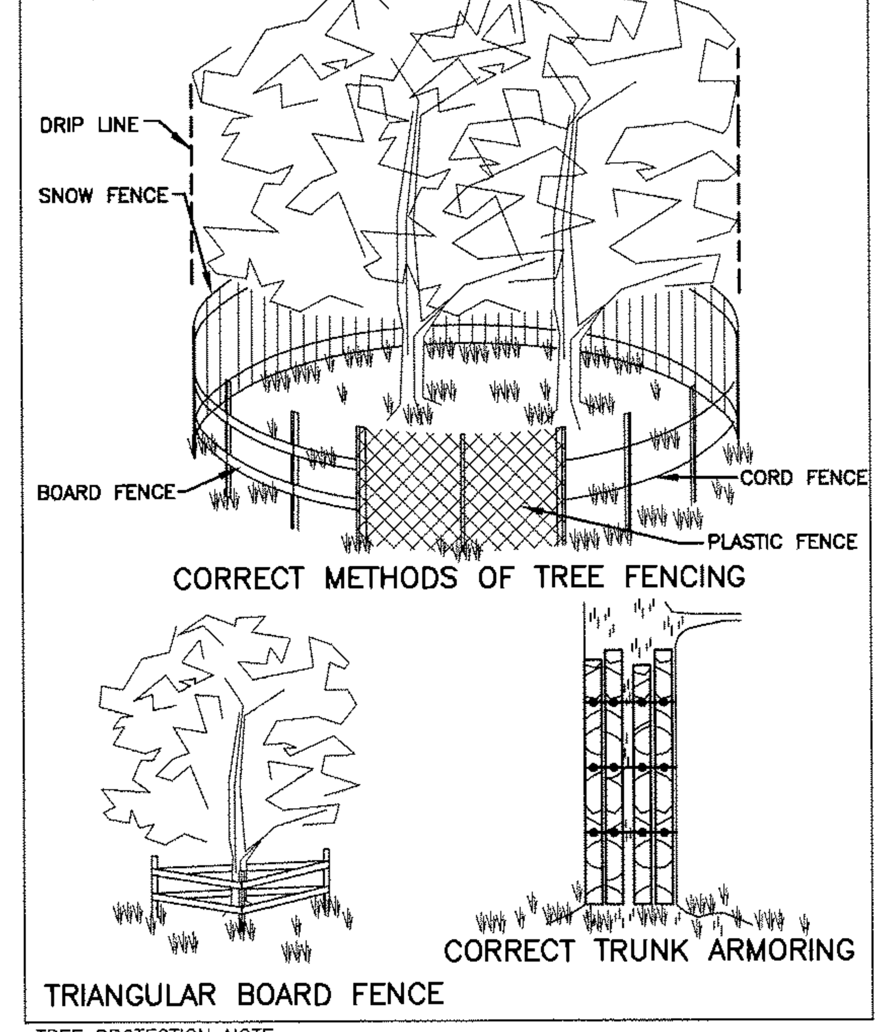
Source: Va. DSWC Plate 3.09-1



ROCK CHECK DAM (CD)

STD. & SPEC. 3.20-1

TREE PRESERVATION & PROTECTION 3.38-2 (TP)



TREE PROTECTION NOTE:

CONTRACTOR MAY ELECT TO UTILIZE SILT FENCE OR SAFETY FENCE IN LIEU OF SNOW FENCE TO PROTECT TREES.

Figure 3 - Super Silt Fence

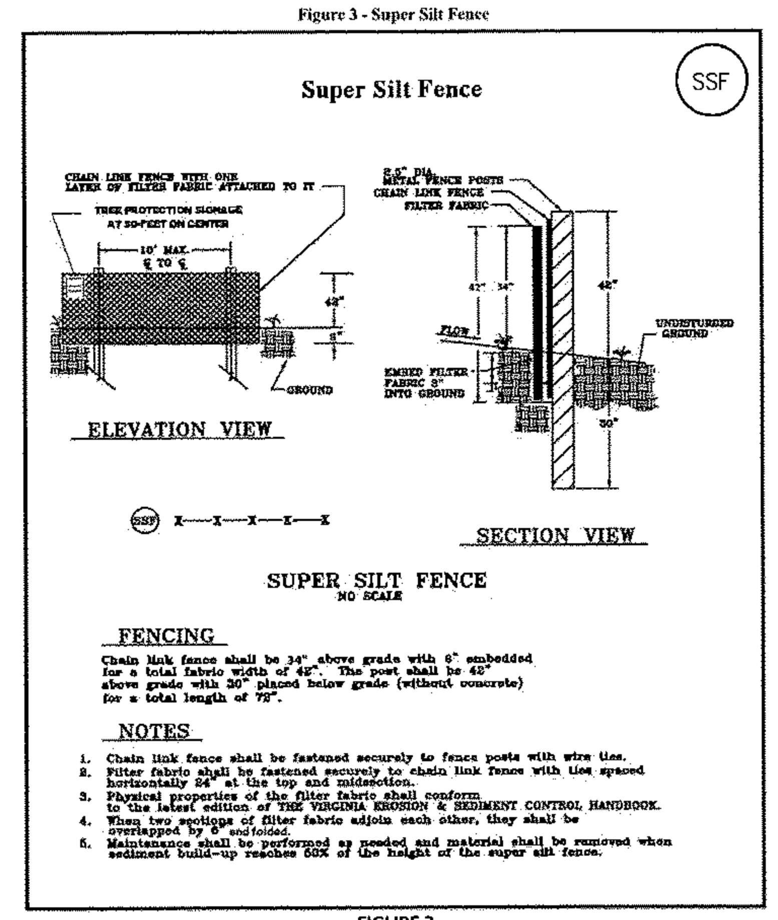
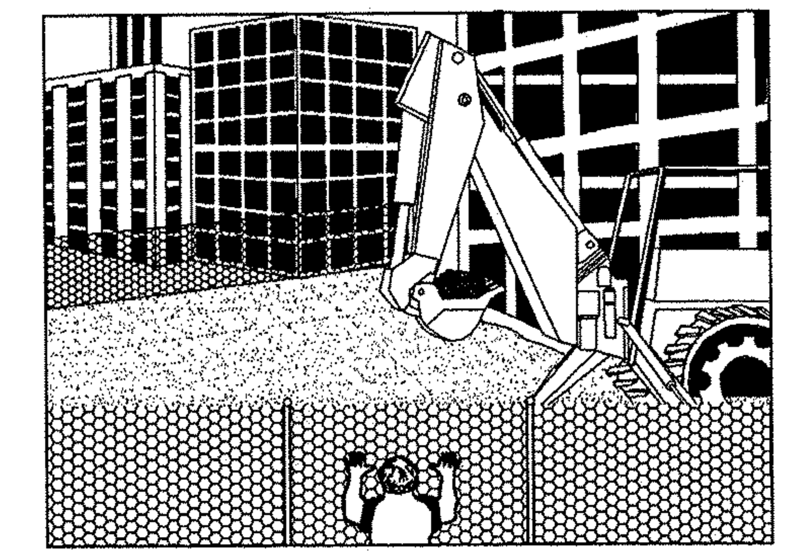
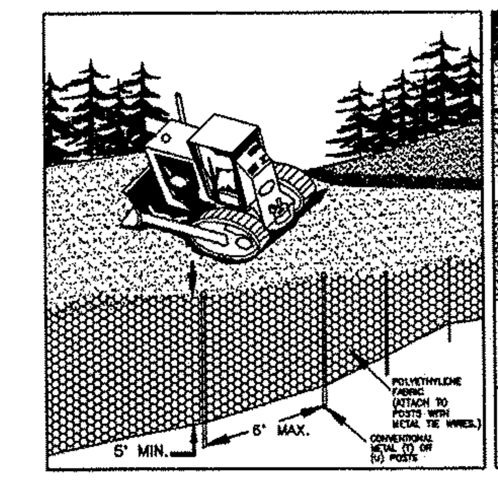


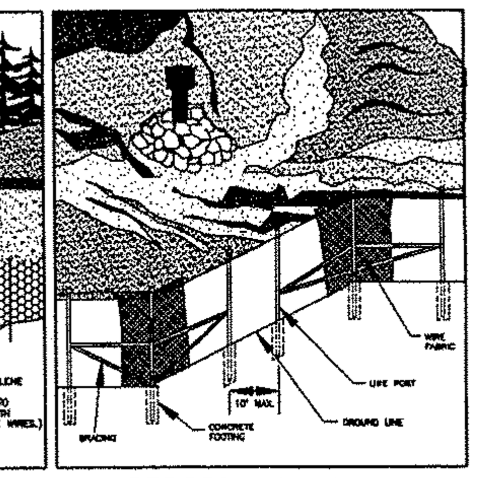
FIGURE 3
Section 7.600 Section 7.600 - Erosion and Sediment Control
Effective Date: 03/15/2018

SAFETY FENCE (SAF)



PERSPECTIVE VIEW



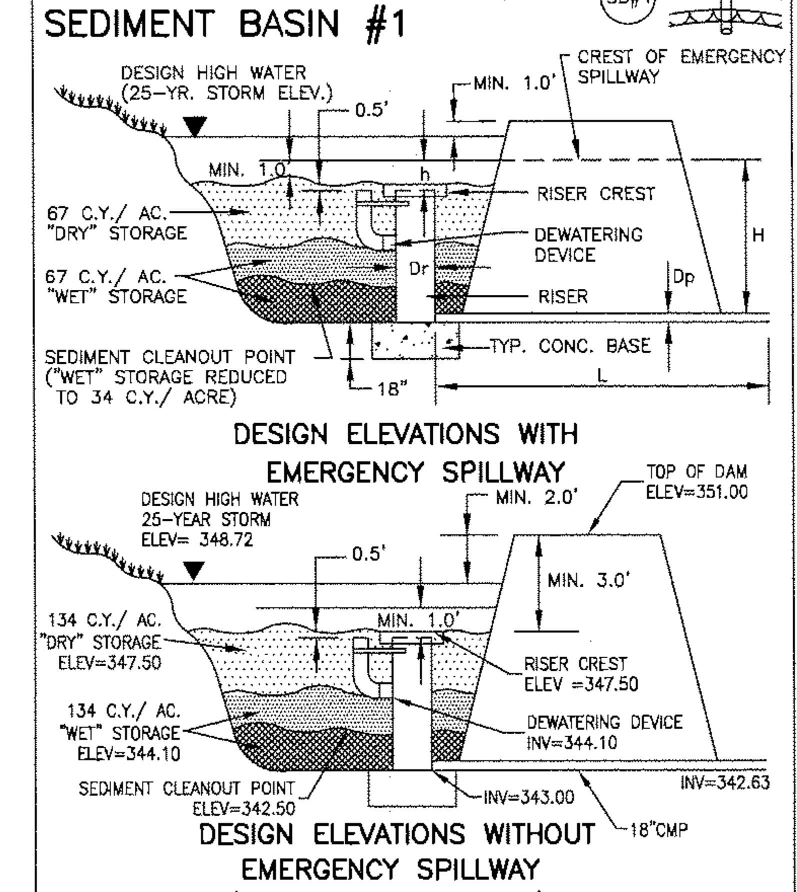


PERSPECTIVE VIEW PLASTIC FENCE

PERSPECTIVE VIEW METAL FENCE

SOILS OVERLAY INFORMATION	
MAPPING UNIT NUMBER, NAME, SCOPE AND HYDROLOGIC GROUP	SOILS CARACTERISTICS
21D-LEW CHANNERY LOAM, (7-25%) (B)	DEEP, STRONGLY SLOPING, WELL DRAINED, VERY DARK GRAYISH-BROWN CHANNERY LOAM SOIL ON SIDE SLOPES IN THE BLUE RIDGE STREAMS; K=0.17
22E-LEW VERY STONY LOAM, (25-65%) (B)	DEEP, STEEP TO VERY STEEP, WELL DRAINED, VERY DARK GRAYISH-BROWN VERY STONY LOAM SOIL ON THE SIDE SLOPES OF THE BLUE RIDGE; K=0.17
32C-LEW VERY STONY LOAM, (25-65%) (B)	DEEP, STRONGLY SLOPING, WELL DRAINED SOILS, DARK BROWN VERY STONY SILT LOAM SOIL ON THE SIDE SLOPES AND RIDGETOPS OF THE BLUE RIDGE; K=0.32

TEMPORARY SEDIMENT BASIN #1 3.14-2 (SB#1)



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EROSION AND SEDIMENT CONTROL COMPUTATIONS AND DETAILS

HAPPY CREEK KNOLLS SECTION 4

FINAL SUBDIVISION PLAN

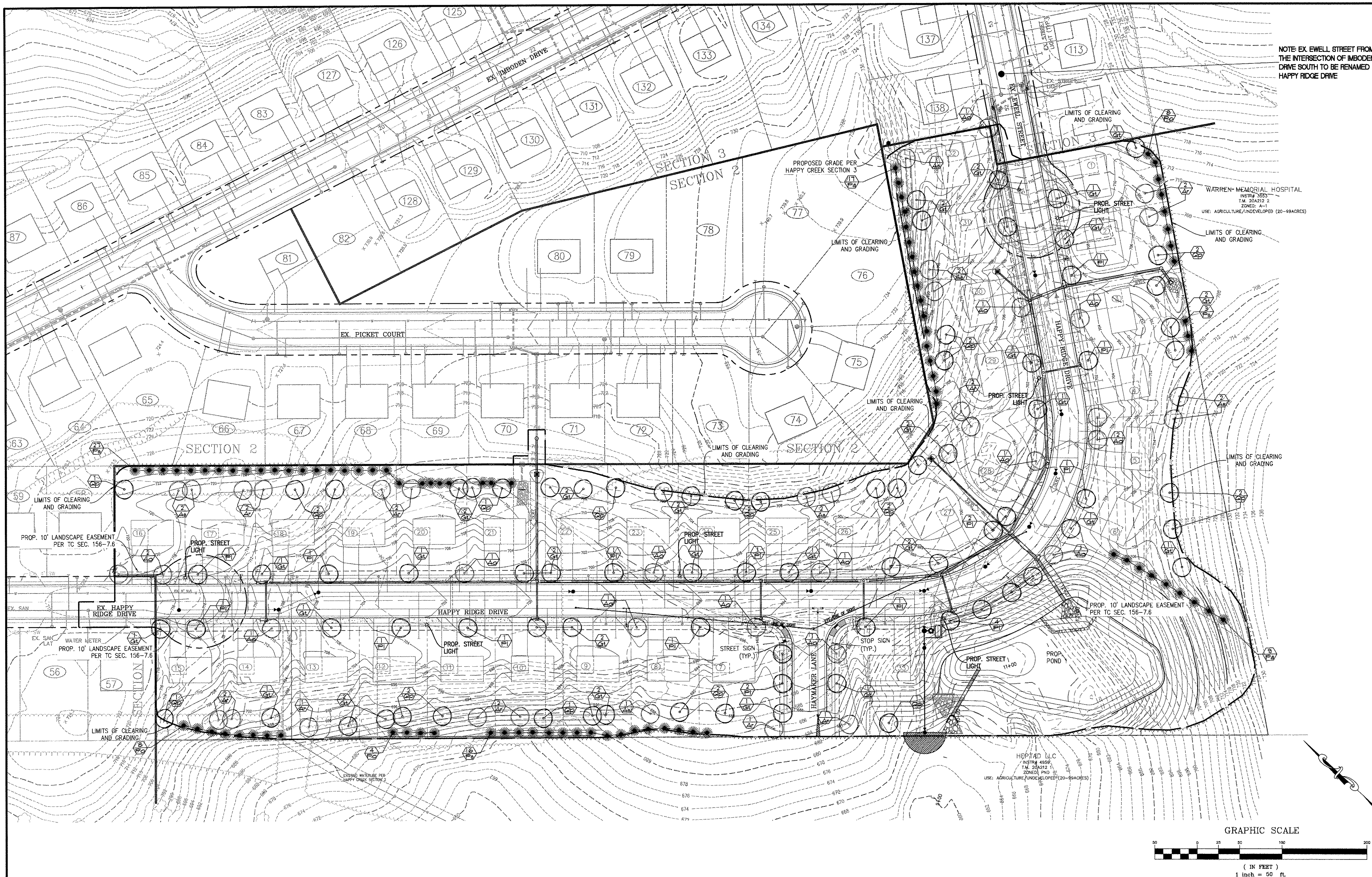
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=50' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-D05		

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-ESD.dwg



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LANDSCAPE AND LIGHTING PLAN

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
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JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

SHEET 27 OF 33

PLANTING SPECIFICATIONS

PLANTING NOTES:

1. QUALITY ASSURANCE:

A. APPLICABLE SPECIFICATIONS AND STANDARDS:

AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION.
AMERICAN ASSOCIATION OF NURSERYMEN
LANDSCAPE CONTRACTORS ASSOCIATION.
TOWN OF FRONT ROYAL / WARREN COUNTY PREFERRED SPECIES LIST

2. SUBMITTALS: SUBMIT THE FOLLOWING TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK:

COPIES OF MANUFACTURER'S DATA FOR ALL MATERIALS REQUIRED.
SAMPLES OF REQUIRED MULCH MATERIAL.
CHEMICAL AND MECHANICAL ANALYSIS AND SAMPLES OF ALL EXISTING SOIL, TOPSOIL, ORGANIC MATTER AND SOIL MIX TO BE USED.
PLANTING SCHEDULE SHOWING THE DATES (EARLIEST AND LATEST) PROPOSED FOR EACH TYPE OF PLANT SPECIFIED, SCHEDULE EACH TYPE OF PLANTING WITHIN THE NORMAL PLANTING SEASONS FOR SUCH WORK. INCLUDE REQUESTS FOR ANY PROPOSED CHANGES IN THE APPROVED PLANTING SEASON AND A LIST OF PROPOSED SOURCES FOR ALL PLANT MATERIALS.
LIST OF PROPOSED SOURCES FOR ALL PLANT MATERIAL.

3. DELIVERY, STORAGE AND HANDLING:

A. DELIVER PACKAGED MATERIALS IN MANUFACTURER'S UNOPENED CONTAINERS OR BUNDLES, FULLY IDENTIFIED WITH NAME, BRAND, TYPE, WEIGHT, AND ANALYSIS. STORE PACKAGED MATERIALS IN SUCH A MANNER AS TO PREVENT DAMAGE OR INTRUSION OF FOREIGN MATTER.

B. DIG BALLED AND BURLAPPED (B& B) PLANTS WITH FIRM, NATURAL BALLS OF EARTH, OF A DIAMETER NOT LESS THAN THAT SHOWN ON THE PLANT LIST NOR LESS THAN RECOMMENDED BY THE AMERICAN STANDARD FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. B&B PLANTS WILL NOT BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.

C. DELIVER TREES AND SHRUBS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED. DO NOT BEND, BIND, OR TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES OR DESTROY NATURAL SHAPE. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY HEELING-IN BARE ROOT STOCK AND COVERING PLANT BALLS WITH SOIL, PEAT MOSS OR OTHER ACCEPTABLE MATERIAL FOR BALLED STOCK. PLANTS SHALL BE KEPT WELL WATERED AND SHALL NOT REMAIN UNPLANTED FOR LONGER THAN TEN (10) DAYS AFTER DELIVERY.

D. PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE BALL ONLY.

E. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.

4. BEFORE PLANTING, DETERMINE THAT AREAS TO RECEIVE PLANT MATERIAL HAVE ADEQUATE SUBDRAINAGE.

A. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DRAINAGE TESTS AS NECESSARY TO IDENTIFY ANY PROBLEMS PRIOR TO BEGINNING PLANTING OPERATIONS. UPON COMMENCEMENT OF PLANTING OPERATIONS THE LANDSCAPE CONTRACTOR ASSUMES RESPONSIBILITY FOR SOIL CONDITIONS.

B. DIG PLANTING PITS TO FULL DEPTH AND DIMENSIONS INDICATED ON DRAWINGS.

C. AT BOTTOM OF PLANTING PIT, EXCAVATE RECTANGULAR PIT 12 INCHES BY 12 INCHES BY 18 INCHES DEEP. QUICKLY POUR WATER INTO SMALL PIT TO A DEPTH OF 6 INCHES (APPROXIMATELY 3-3 3/4 GALLON). NOTE TIME REQUIRED FOR WATER TO BE COMPLETELY ABSORBED. DIVIDE TIME NOTED BY 6 TO ACHIEVE AVERAGE RATE OF ABSORPTION FOR 1 INCH OF WATER. WHERE RATE OF ABSORPTION EXCEEDS 60 MINUTES PER INCH, NOTIFY OWNER IMMEDIATELY FOR DIRECTIONS ON HOW TO PROCEED.

5. PLANTING SHALL BE DONE ONLY WITHIN THE FOLLOWING DATES EXCEPT AS APPROVED BY OWNER.

A. DECIDUOUS TREES AND SHRUBS: MARCH 1 TO MAY 31 AND OCTOBER 15 TO DECEMBER 15.

B. EVERGREEN TREES, SHRUBS AND VINES: MARCH 1 TO MAY 31 AND SEPTEMBER 1 TO NOVEMBER 15.

6. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF 1 YEAR FROM THE DATE FINAL ACCEPTANCE TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION.

7. MATERIALS FOR PLANTING:

A. MULCH SHALL BE DOUBLE SHREDDED HARDWOOD BARK. SUBMIT SAMPLE FOR APPROVAL. MATERIAL SHALL BE MULCHING GRADE, UNIFORM IN SIZE AND FREE FROM FOREIGN MATTER.

B. LEAF COMPOST SHALL BE SCREENED AND FREE OF TRASH.

C. COIR MESH (GEO-TEXTILE BLANKET) SHALL BE NATURAL FIBER GEO-TEXTILE WOVEN MESH COMPOSED OF 100% COIR (SPUN FROM COCONUT FIBER) YARN, CONTAINING 45% LIGNIN AND 55% CELLULOSE. OPENING IN THE MESH SHALL BE 1 INCH SQUARE (NOMINAL) BY .3 INCHES THICK. YARN COUNT PER YARD SHALL BE 42 WARP X 37 WEFT. FABRIC TENSILE STRENGTH SHALL BE 432 LB/FT X 138LB/FT

D. TWELVE-INCH HARDWOOD STAKES SHALL BE ECO-STAKES BY NORTH AMERICAN GREEN OR EQUAL.

E. FERTILIZER SHALL BE COMMERCIAL FERTILIZER FOR ORNAMENTAL TREES, SHRUBS AND GROUND COVER. FERTILIZER SHALL BE PROVIDED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOIL TESTS. AS A BASIS FOR BIDDING, CONTRACTORS SHALL ASSUME A FERTILIZER WITH AN ANALYSIS OF 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM. THIS FERTILIZER SHALL BE GRANULAR WITH A MINIMUM OF 50% OF THE TOTAL NITROGEN IN ORGANIC FORM.

F. TOPSOIL: IF REQUIRED; SHALL BE A FERTILE, FRIABLE NATURAL LOAM, UNIFORM IN COMPOSITION, FREE OF STONES, LUMPS, PLANTS AND THEIR ROOT DEBRIS AND OTHER EXTRANEOUS MATTER OF 1" IN DIAMETER, AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. TOPSOIL SHALL HAVE A PH RANGE OF 6.0 TO 6.5, WITH A PH RANGE OF 5.0 TO 5.5 FOR PLANTS REQUIRING ACID SOILS. CONTRACTOR SHALL HAVE SOIL TESTED AT AN APPROVED AGRICULTURAL LABORATORY, AND SUBMIT RESULTS AND RECOMMENDATIONS FOR ACCEPTANCE BY THE OWNER BEFORE PROVIDING TOPSOIL FOR USE.

G. COMPOSTED PINE BARK FINES SHALL BE APPROVED COMPOSTED GROUND PINE BARK, HAVING NO PARTICLE WITH A DIMENSION GREATER THAN 3/4 INCH.

H. SOIL MIX SHALL CONSIST OF 3/4 EXISTING SOIL AND 1/4 COMPOSTED PINE BARK FINES OR OTHER APPROVED ORGANIC MATTER, BY VOLUME.

8. PLANT MATERIALS (REFER TO THE PLANT LIST ON THE DRAWINGS FOR SPECIFIC TYPES AND QUANTITIES OF PLANTS):

A. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES. PLANTS SHALL EITHER BE OBTAINED FROM LOCAL NURSERIES AND/OR OTHERS, WHICH HAVE SOIL (HEAVY CLAY) AND CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANT MATERIAL GROWN IN SANDY, WELL-DRAINED SOIL WILL NOT BE APPROVED FOR THIS PROJECT.

B. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY AND UNLESS SPECIFICALLY NOTED OTHERWISE, ALL PLANTS SHALL BE OF SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, SYMMETRICAL, TIGHTLY-KNIT PLANTS, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY AND OUTSTANDINGLY SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY.

C. PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE AND SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR ANY CONDITIONS THAT WOULD PREVENT THRIVING HEALTH AND THE DESIRED APPEARANCE.

D. TREES, WHICH HAVE A DAMAGED OR CROOKED LEADER, OR MULTIPLE LEADERS, UNLESS SPECIFIED IN THE PLANT LIST, WILL BE REJECTED. TREES WITH ABRASION OF THE BARK, SUN SCALD, DISFIGURING KNOTS, OR PRUNING CUTS MORE THAN 1 1/4 INCH DIAMETER WHICH HAVE NOT COMPLETELY CALLUSED, WILL BE REJECTED.

9. PLANTS SHALL CONFORM TO MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULES EXCEPT THAT PLANTS LARGER THAN SPECIFIED MAY BE USED IF ACCEPTABLE TO THE LANDSCAPE ARCHITECT. USE OF SUCH PLANTS SHALL NOT INCREASE THE CONTRACT PRICE. IF LARGER PLANTS ARE ACCEPTED, THE ROOT BALL SHALL BE SIZED FOR THE LARGER PLANT.

B. CALIPER MEASUREMENT: SHALL BE TAKEN AT A POINT ON THE TRUNK 6 INCHES ABOVE NATURAL GROUND LINE FOR TREES UP TO 4 INCHES DIAMETER, AND AT A POINT 12 INCHES ABOVE THE NATURAL GROUND LINE FOR TREES OVER 4 INCHES DIAMETER.

C. PLANTS SHALL BE MEASURED WHEN BRANCHES ARE IN THE NORMAL POSITION. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO TIP.

10. PREPARATION OF AREAS FOR PLANTING:

A. STAKE OUT ALL PLANT MATERIAL BEDS AND TREE LOCATIONS FOR APPROVAL OF LANDSCAPE ARCHITECT PRIOR TO ANY BED PREPARATION.

B. SHRUBS, SHRUB BEDS AND HEDGES ON SLOPES OF 1:3 OR LESS: LOOSEN SOIL IN THE AREA OF ENTIRE PLANT BED OR HEDGEROW TO A DEPTH OF 6 INCHES MINIMUM WITH A ROTOTILLER. ADD SOIL AMENDMENTS AND ROTOTILL AGAIN TO A DEPTH OF 6 INCHES. EXCAVATE PLANT PIT AND HEDGE TRENCHES A MINIMUM OF 12 INCHES WIDER THAN THE ROOT BALL OR BARE ROOT ON ALL SIDES. THE DEPTH SHALL BE SUFFICIENT TO ALLOW SHRUB TO SIT 2 INCHES ABOVE FINISHED GRADE.

C. SHRUB BEDS ON SLOPES OF GREATER THAN 3:1: AMEND SOIL AS ABOVE. SPREAD COIR MESH ACROSS ENTIRE AREA OF SHRUB BED IN STEEP SLOPE AREA PER MANUFACTURER'S SPECIFICATIONS. EXCAVATE PLANT PIT THROUGH COIR MESH A MINIMUM OF 12 INCHES WIDER THAN THE ROOT BALL OR BARE ROOT ON ALL SIDES. THE DEPTH SHALL BE SUFFICIENT TO ALLOW SHRUB TO SIT 2 INCHES ABOVE FINISHED GRADE.

D. GROUND COVERS AND SEASONAL PLANTINGS: LOOSEN SOIL TO A DEPTH OF 6 INCHES MINIMUM WITH A ROTOTILLER. ADD AMENDMENTS TO THE SOIL AND/OR SPECIFIED PLANTING SOIL MIX AND ROTOTILL AGAIN TO A DEPTH OF 6". INSTALL PLANTS DIRECTLY INTO PREPARED BED, AND FIRM THE SOIL MIX AROUND THEM.

E. GROUNDCOVER ON SLOPES OF GREATER THAN 3:1: AMEND SOIL AS ABOVE OR BY HAND AS REQUIRED. SPREAD LEAF COMPOST TO 2 INCHES IN DEPTH IMMEDIATELY PRIOR TO PLACING COIR MESH. SPREAD COIR MESH ACROSS ENTIRE AREA OF GROUNDCOVER BED IN STEEP SLOPE AREA PER MANUFACTURER'S SPECIFICATIONS. EACH GROUND COVER SHALL BE PLACED IN AN INDIVIDUAL PLANTING PIT PLANTED THROUGH THE BIODEGRADABLE NETTING.

F. TREES: EXCAVATE PLANT PIT WALLS VERTICAL AND SCARIFY SIDES. PLANT PIT DEPTH SHALL BE SUFFICIENT TO ALLOW 2 INCH MAXIMUM OF ROOT BALL TO BE ABOVE FINISHED GRADE. TREE PIT SHALL BE 12 INCHES WIDER THAN THE BALL ON ALL SIDES.

11. EROSION CONTROL MATERIAL AND PLANTING ON STEEP SLOPES

A. MATERIAL MEETING THE REQUIREMENTS OF THE SPECIFICATION SHALL BE INSTALLED AND MAINTAINED ON THE DESIGNATED AREAS AS SHOWN AND SPECIFIED. THE AREAS TO BE COVERED SHALL BE PREPARED AND FERTILIZED AS SPECIFIED BEFORE THE EROSION MATERIAL IS PLACED. IMMEDIATELY PRIOR TO THE PLANTING OPERATIONS, THE MATERIAL SHALL BE LAID EVENLY, SMOOTHLY AND IN CONTACT WITH THE SOIL THROUGHOUT.

B. LAY EROSION CONTROL MATERIALS WITH ONE INCH NOMINAL OPENINGS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNROLL IN DIRECTION OF WATER FLOW. OVERLAP SHEETS BY AT LEAST 6 INCHES. WHERE STRIPS ARE TO BE SPLICED LENGTHWISE, OVERLAP STRIPS BY 8 INCHES. UPGRADE SECTION SHALL BE ON TOP OF ALL SPLICES.

C. THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE EROSION CONTROL MATERIAL UNTIL THE FINAL INSPECTION. MAINTENANCE SHALL CONSIST OF REPAIRS MADE NECESSARY BY EROSION, WIND OR ANY OTHER CAUSE. FOLLOWING THE RESTORATION OF DAMAGED AREAS UNDER PLANT AND TURF GUARANTEE AND ESTABLISHMENT REQUIREMENTS FOR APPLICABLE UNDERLYING ITEMS; THE EROSION CONTROL MATERIAL SHALL BE REPAIRED OR REPLACED TO MEET THE ORIGINAL REQUIREMENTS AND MAINTAINED UNTIL THE FINAL INSPECTION.

12. GENERAL PLANT INSTALLATION:

A. EXCAVATION: EXCAVATE ALL TREE PITS AND PLANTING AREAS TO THE WIDTH AND DEPTH SHOWN IN THE PLANTING DETAILS.

B. CENTER PLANT IN PIT AND ORIENT FOR THE BEST VISUAL EFFECT. SET PLANTS PLUMB AND HOLD RIGIDLY IN POSITION UNTIL SOIL HAS BEEN TAMPED FIRMLY AROUND ROOT BALL.

C. MIX SOIL AMENDMENTS AND FERTILIZERS WITH EXISTING SOIL IN ACCORDANCE WITH SOIL RECOMMENDATIONS FOR PLANT TYPE, BASED UPON SOIL TEST RESULTS AS APPROVED BY OWNER. DELAY MIXING OF FERTILIZER IF PLANTING WILL NOT OCCUR WITHIN A FEW DAYS.

D. BACKFILL PIT WITH PLANTING SOIL MIX AND FERTILIZER, UNTIL TWO-THIRDS FULL. TAMP AND WATER EACH LAYER THOROUGHLY TO SETTLE SOIL. AFTER SOIL SETTLES, FILL PIT WITH REMAINING PLANTING SOIL MIX, WATER AND SHAPE SURFACE SO THAT IT SLOPES TO DRAIN FROM TRUNK AND MATCHES GROUND AT EDGE OF PLANTING PIT.

E. MULCH WITHIN 48 HOURS AFTER PLANTING AND AFTER APPLYING THE PRE-EMERGENT HERBICIDE, EXCEPT GROUND COVER AREAS (WHICH SHALL HAVE ORGANIC MATERIAL PLACED BEFORE PLANTING) WITH A 2" LAYER OF MULCH IMMEDIATELY AFTER PLANTING. ALL BED LINES SHALL BE CUT WITH A SMOOTH CONSISTENT EDGE TO A MINIMUM DEPTH OF 3 INCHES. KEEP MULCH OUT OF THE CROWNS OF SHRUBS AND OFF BUILDINGS, SIDEWALKS, LIGHT STANDARDS, AND OTHER STRUCTURES.

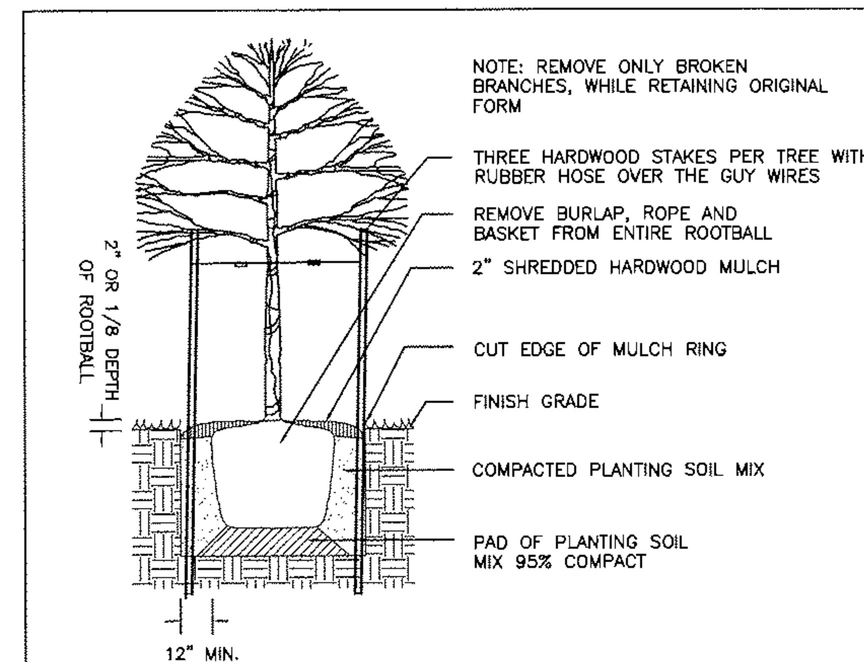
F. ALL PLANTING AREAS TO CONFORM TO SPECIFIED GRADES AFTER FULL SETTLEMENT HAS OCCURRED AND MULCH HAS BEEN APPLIED. PROVIDE SAUCERS AROUND TREE PITS AS SHOWN ON PLANTING DETAILS. REMOVE ALL TAGS, LABELS, STRINGS, ETC. FROM ALL PLANTS.

13. PERMANENT SEEDING OR SODDING FOR GRASS AREAS:

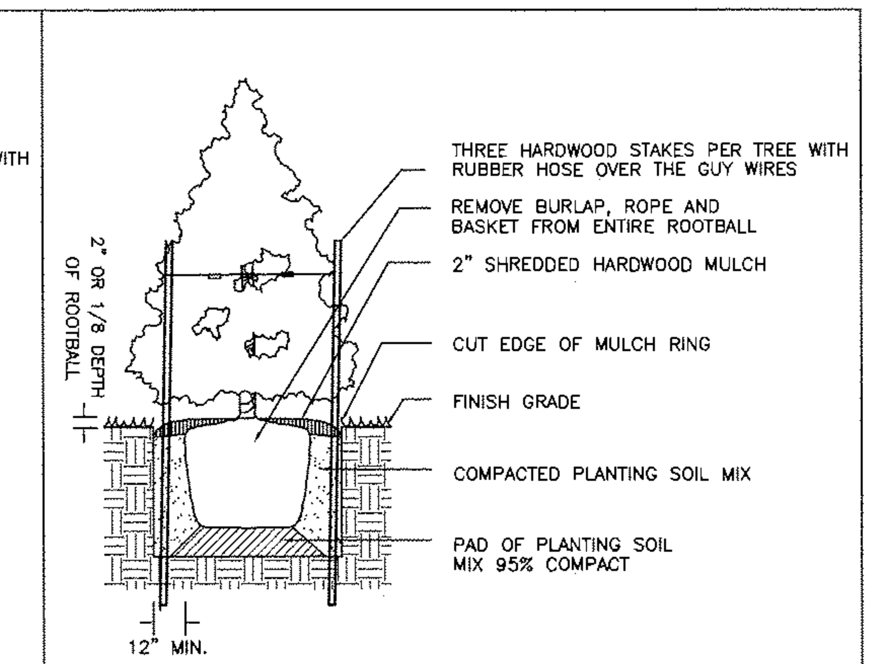
A. LAWN SEED OR SOD VARIETIES SHALL BE AN IMPROVED VARIETY TURF-TYPE TALL FESCUE BLEND. THE LANDSCAPE CONTRACTOR SHALL SELECT FROM VARIETIES APPROVED BY THE MARYLAND OR VIRGINIA DEPARTMENT OF AGRICULTURE.

B. REFER TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION EROSION AND SEDIMENT CONTROL GUIDELINES, FOR GUIDELINES, SPECIFICATIONS AND INSTALLATION TECHNIQUES OF SEED AND SOD.

14. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT AND LAWN AREA IS INSTALLED AND SHALL CONTINUE UNTIL 90 DAYS AFTER FINAL ACCEPTANCE OF THE LAST SECTION.



TYPICAL DECIDUOUS TREE PLANTING DETAIL



TYPICAL EVERGREEN TREE PLANTING DETAIL

TREE CANOPY CALCULATIONS (TOWN CODE SEC. 156-6.A)

GROSS SITE AREA	12.43 AC
	541,451 SF
REQUIRED CANOPY COVERAGE	2.49 AC
(20% X 541,451)	108,290 SF
EXCESS CANOPY COVERAGE	36,287.00 SF
FROM SECT. 2 AND 3	
CANOPY COVERAGE PROVIDED THROUGH	
EVERGREEN TREES	31,650 SF
(92 TREES W/ MIN. 3" CAL.)	29.23% of Required
CANOPY COVERAGE PROVIDED THROUGH (TOWN CODE SEC. 156-7A.2)	
STREET TREE PLANTINGS	19,380 SF
(57 TREES W/ MIN. 2" CAL.)	17.90% of Required
CANOPY COVERAGE PROVIDED THROUGH	
TYPICAL LOT LANDSCAPING(SEE DETAIL)	22,440 SF
(33 LOTS x 2 TREES W/ MIN. 2" CALIPER REQ. PER LOT)	20.72% of Required
TOTAL PROPOSED CANOPY COVERAGE	109,757 SF
	101.35% of Required

*EXCESS CANOPY MAY BE UTILIZED IN FUTURE SECTIONS

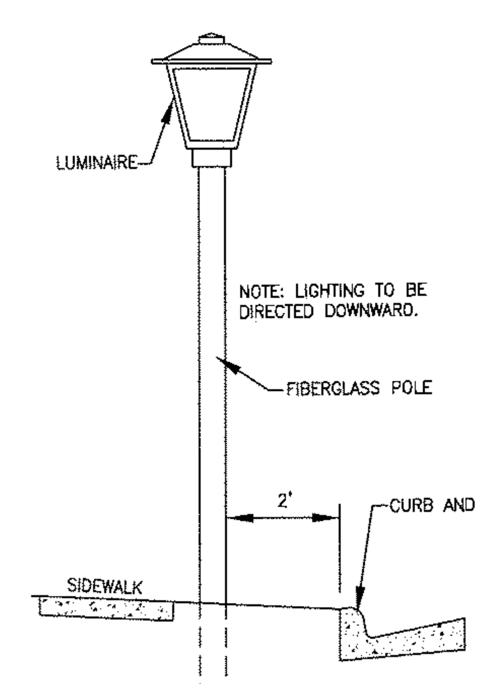
STREET TREES REQUIRED (PER TOWN CODE SEC. 156-7.2)

STREET	LINEAR FEET	LARGE TREES REQUIRED	TREES PROVIDED
HAPPY RIDGE DR	2828 LF.	1 TREE PER 50' (57)	57

PLANT SCHEDULE

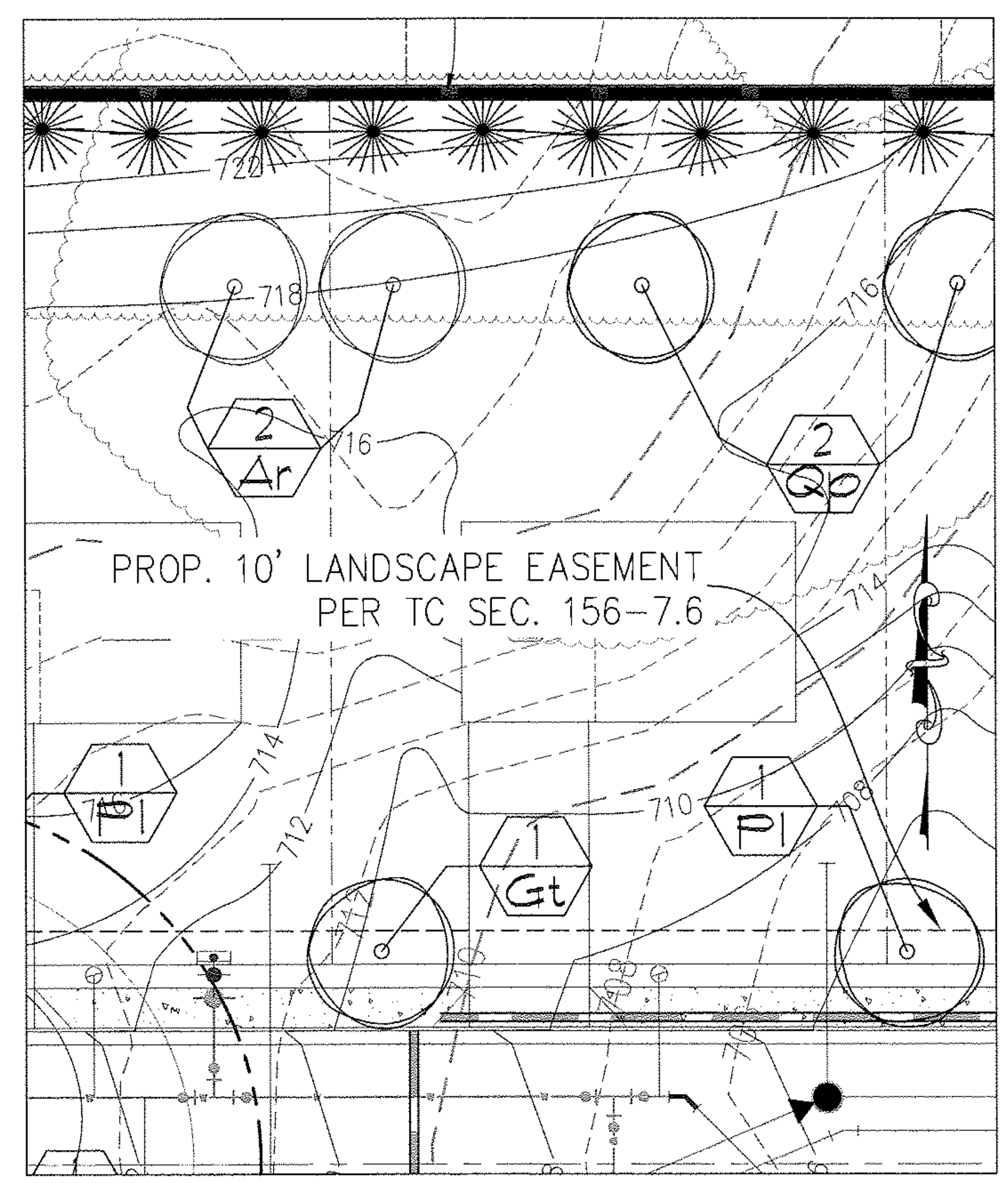
SYMBOL	KEY	Location	QNTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	20 YR SQ. FT.	TOTAL
	Ar	Lot	15	Acer rubrum 'Red Sunset'	Red Maple "Red Sunset"	2" cal.	B & B	340	5,100
	As	Lot	10	Acer saccharum	Sugar Maple	2" cal.	B & B	340	3,400
	Gt	Lot	19	Gleditsia triacanthos 'Inermis/Imperial'	Thronless Honey Locust	2" cal.	B & B	340	6,460
	Qp	Lot	22	Quercus palustrus	Pin Oak	2" cal.	B & B	340	7,480
	Ao	Street	16	Acer rubrum 'Bowhall'	Red Maple 'Bowhall'	2" cal.	B & B	340	5,440
	Gt	Street	21	Gleditsia triacanthos 'Inermis/Imperial'	Thronless Honey Locust	2" cal.	B & B	340	7,140
	Pl	Street	20	Platanus acerifolia	London Planetree	2" cal.	B & B	340	6,800
	Ps	-	46	Pinus sylvestris	Scotch Pine	3" cal.	B & B	425	19,550
	Pa	-	26	Picea abies	Norway Spruce	3" cal.	B & B	300	7,800
	Po	-	20	Picea omorika	Serbian Spruce	3" cal.	B & B	215	4,300
									73,470

NOTE:
1. 20 YEAR CANOPY IS FROM THE LANDSCAPE PRESERVATION AND PLANTING GUIDE FOR THE TOWN OF FRONT ROYAL.



LUMINARE (MIN.)	MOUNTING HEIGHT (FEET)
5000 LUMENS	14
TYPE III REFLECTOR	COLONIAL FIXTURE

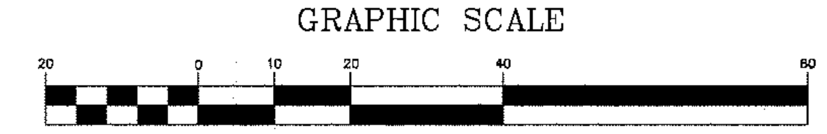
STREET LIGHT DETAIL
(NOT TO SCALE)



TYPICAL LOT LANDSCAPING

SCALE 1"=20'

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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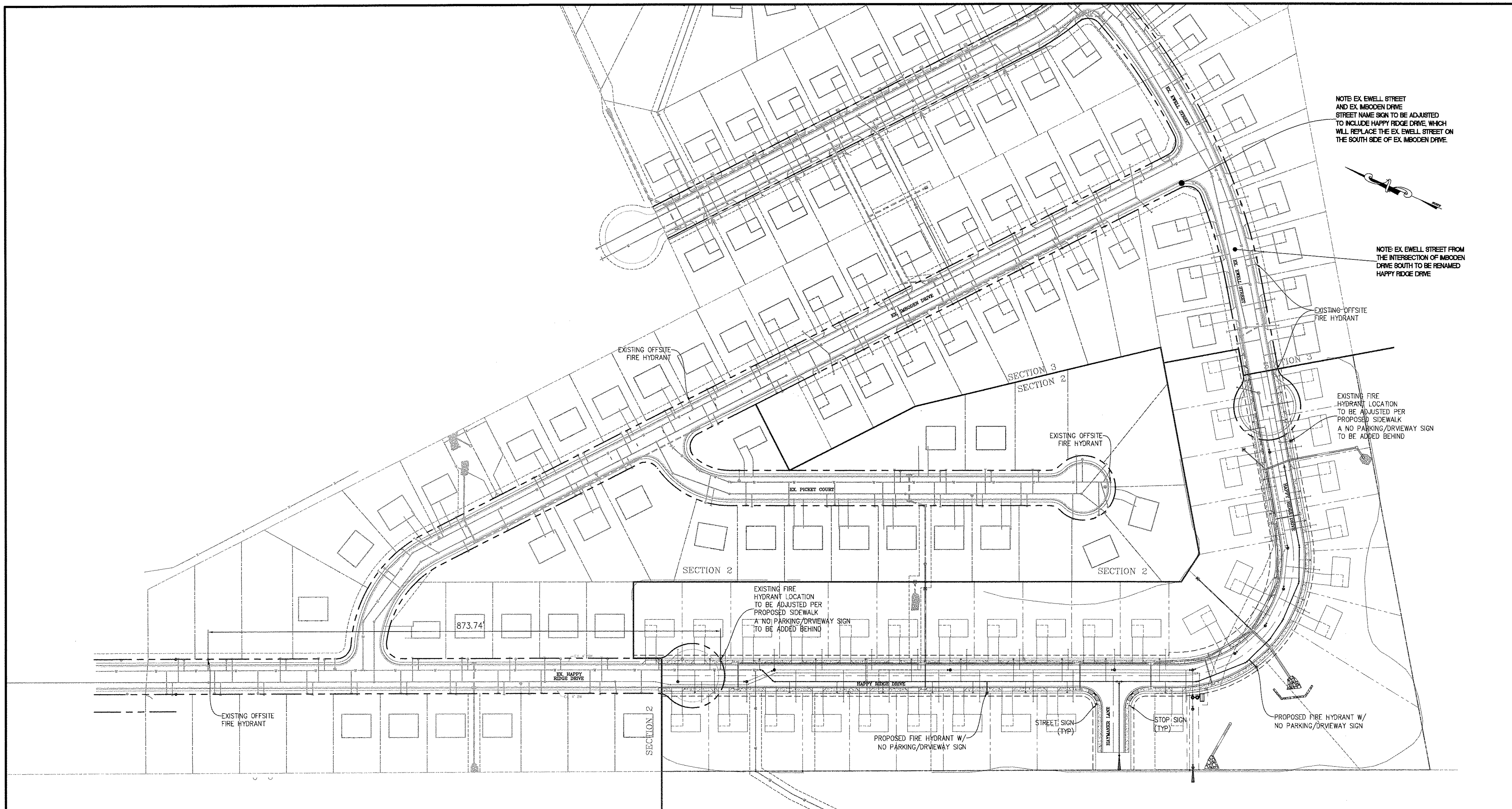
LANDSCAPE DETAILS
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

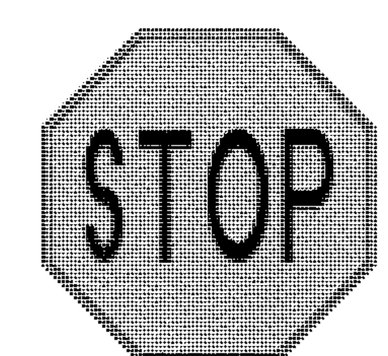
COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: AS NOTED V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-LSP.dwg

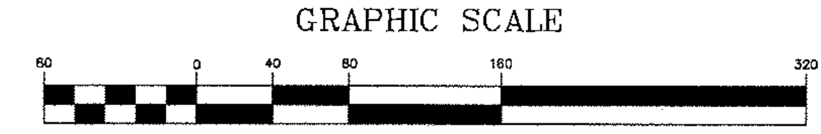




R1-1
REGULATORY SIGN DETAIL
N.T.S

FIRE LANE SIGN DETAIL

GRAPHIC SCALE



(IN FEET)
1 inch = 80 ft.

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FIRE HYDRANT LOCATION AND SIGNAGE PLAN

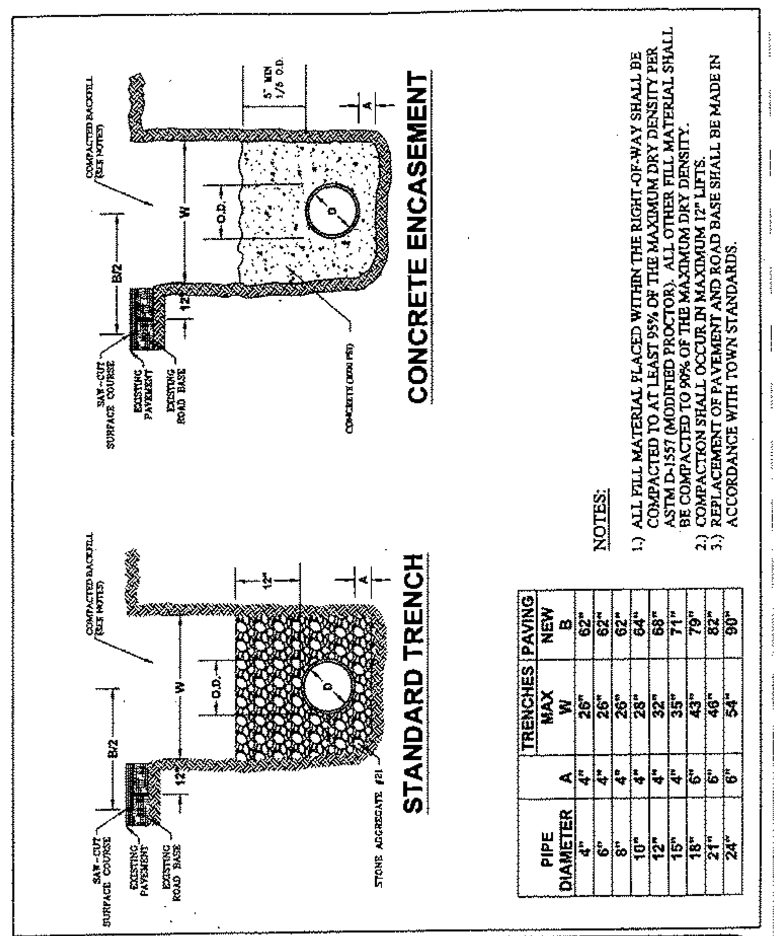
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

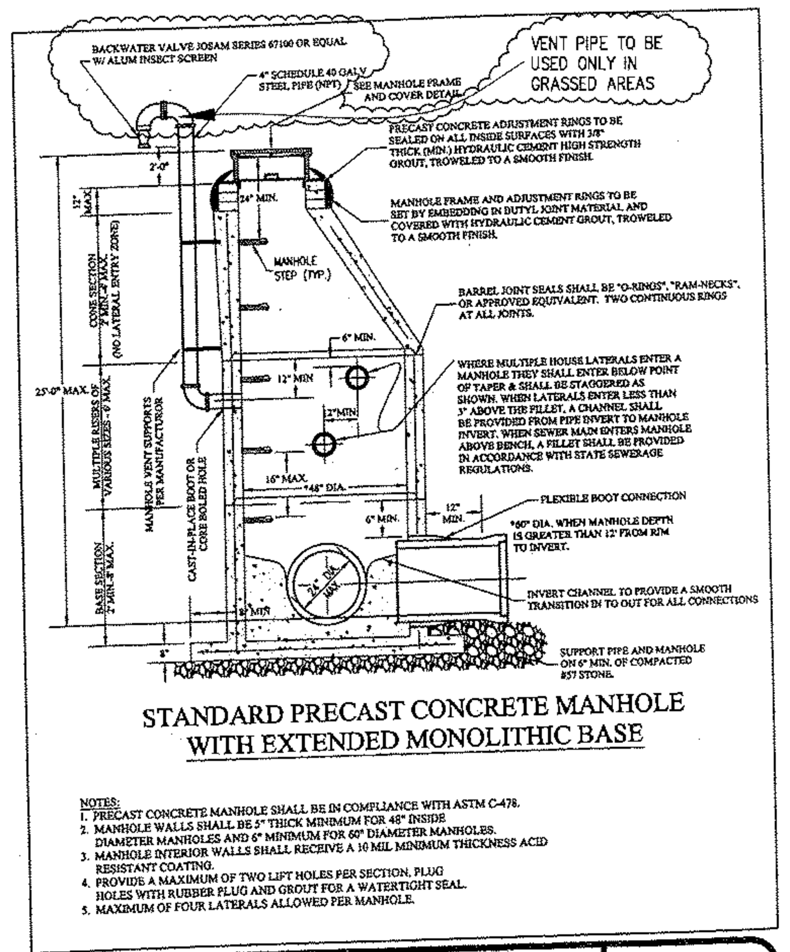
COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
LIC. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

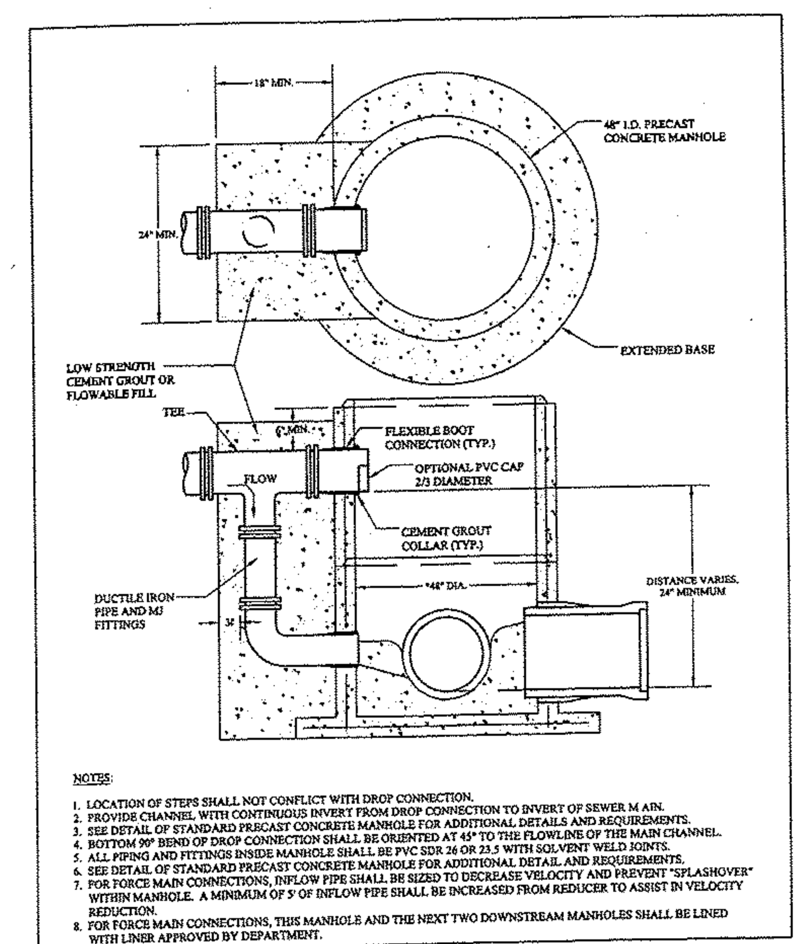
GC DESIGN	MCW DRAWN	CHKD
SCALE	H: 1"=80' V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-D-CP-005		



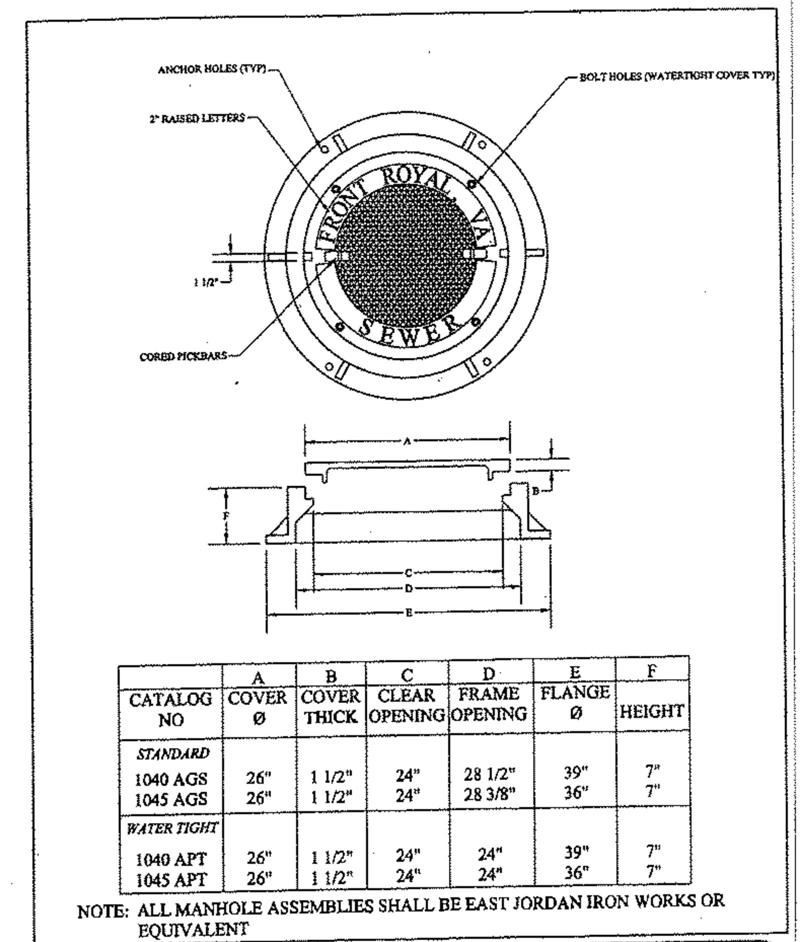
TOWN OF FRONT ROYAL
STANDARD SEWER DETAILS
TRENCH AND BEDDING DETAILS
S-1
DATE: MAY 2004
REVISION:



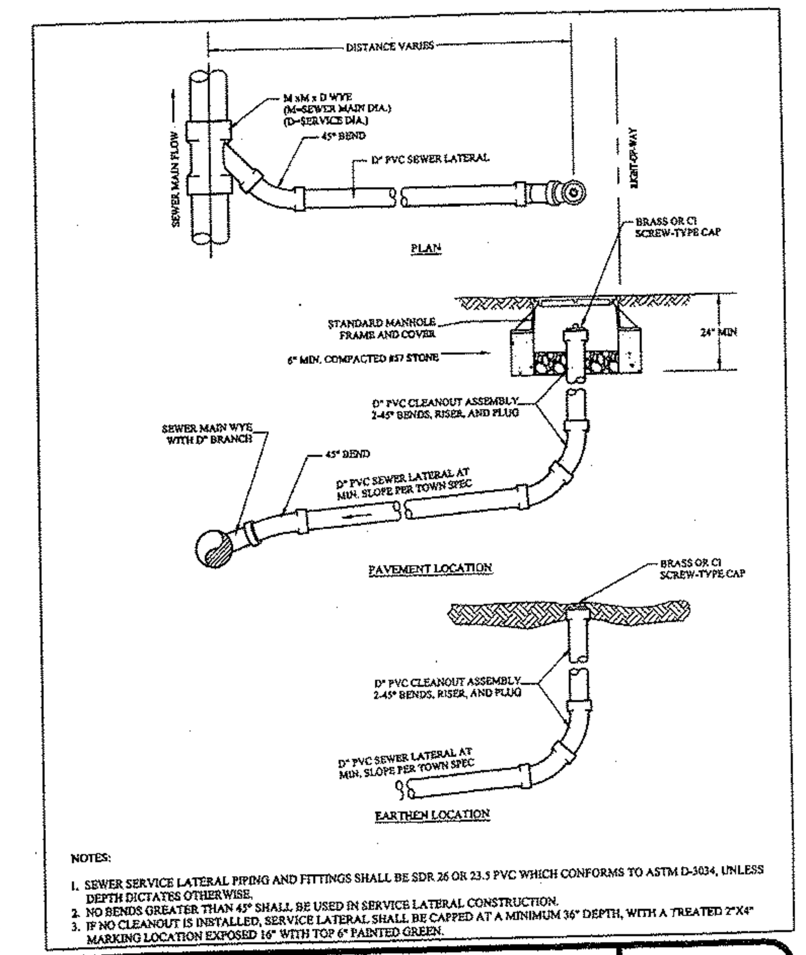
TOWN OF FRONT ROYAL
STANDARD SEWER DETAILS
PRE-CAST MANHOLE STANDARD DETAIL
S-5
DATE: MAY 2004
REVISION:



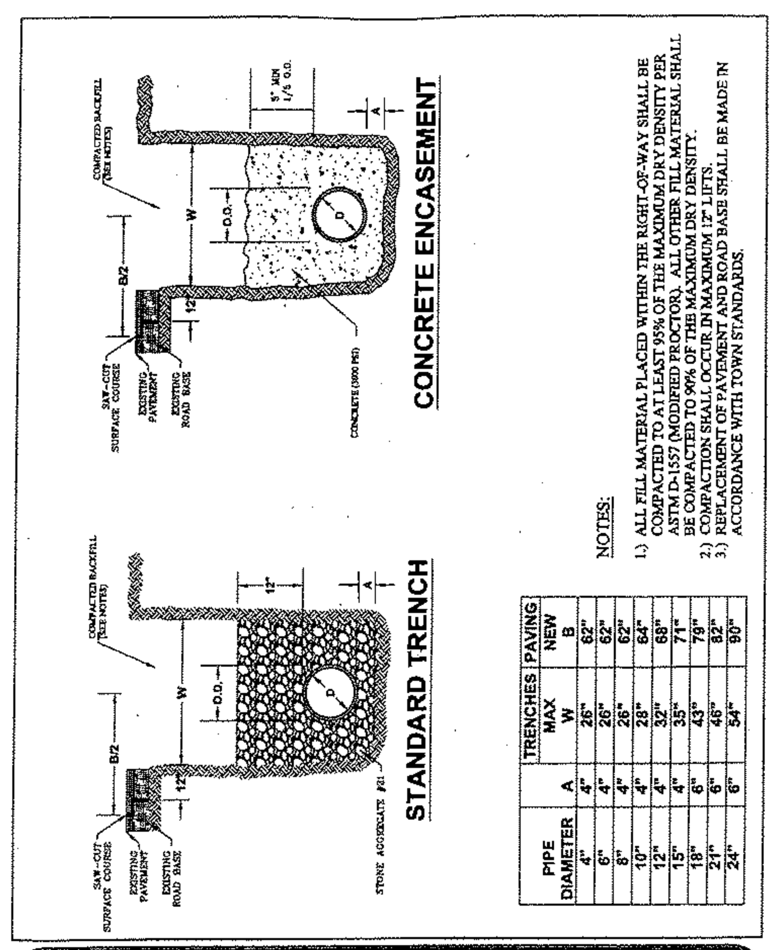
TOWN OF FRONT ROYAL
STANDARD SEWER DETAILS
EXTERIOR DROP MANHOLE STANDARD DETAIL
S-8
DATE: MAY 2004
REVISION:



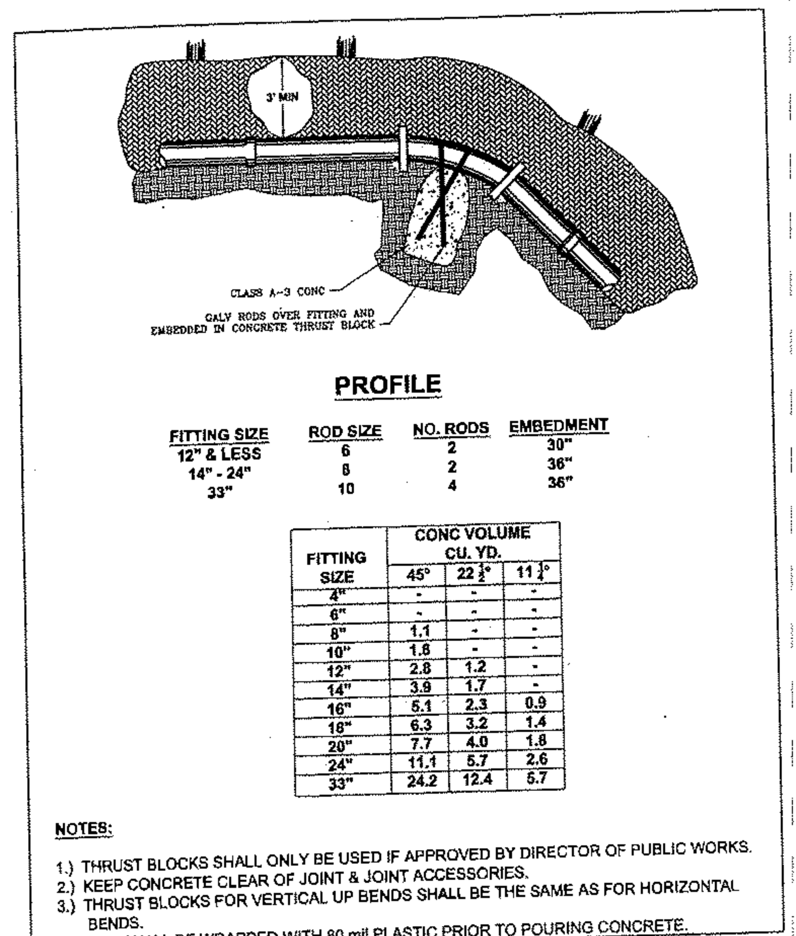
TOWN OF FRONT ROYAL
STANDARD SEWER DETAILS
MANHOLE FRAME & COVER STANDARD DETAIL
S-10
DATE: MAY 2004
REVISION:



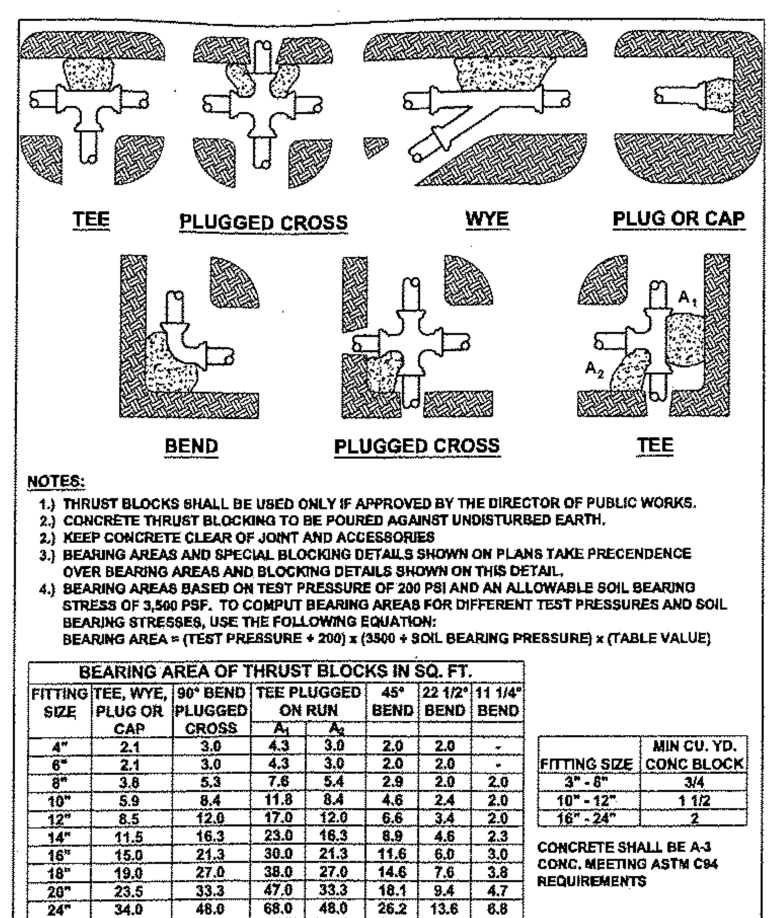
TOWN OF FRONT ROYAL
STANDARD SEWER DETAILS
SERVICE LATERAL/CLEANOUT STANDARD DETAIL
S-11
DATE: MAY 2004
REVISION:



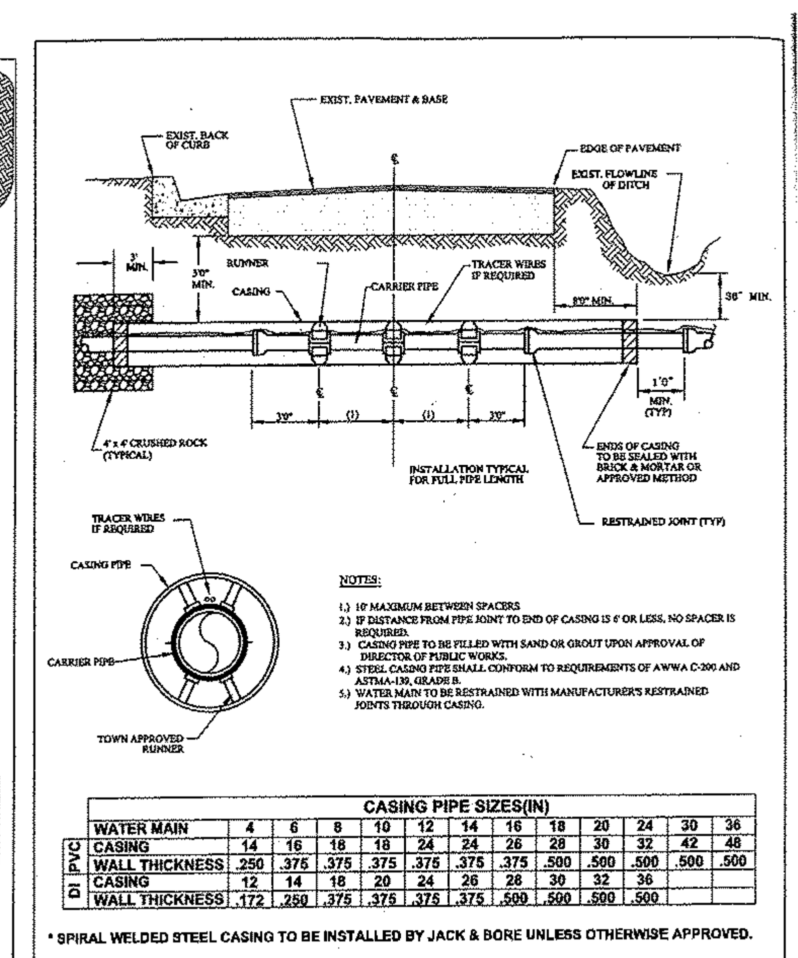
TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
TRENCH AND BEDDING DETAILS
W-1
DATE: MAY 2004
REVISION:



TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
VERTICAL THRUST BLOCK DETAILS
W-3A
DATE: MAY 2004
REVISION:



TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
HORIZONTAL THRUST BLOCK DETAILS
W-3B
DATE: MAY 2004
REVISION:



TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
PIPE ENCASEMENT DETAIL HIGHWAY CROSSING
W-4
DATE: MAY 2004
REVISION:

DEPARTMENT OF PLANNING & ZONING
T: (540) 635-4236
F: (540) 631-2727
Town Hall 102 E. Main Street
P.O. Box 1560, Front Royal, VA 22630-1560

July 18, 2019

Ramsey Inc
Attn: Chris S. Ramsey

Re: FRSUB-000830-2018
Preliminary Plan for Happy Creek Knolls, Section 4

Dear Mr. Ramsey,

On May 15, 2019, the Front Royal Planning Commission APPROVED the above-referenced Preliminary Plan. The approval was conditional of the following:

1) The Final Subdivision Plan shall be submitted within three years from the date of approval of the Preliminary Plan and shall meet all Town requirements prior to recordation.

2) All information not provided on the Preliminary Plan, shall be included on the Final Subdivision Plan, including, but not limited to, the following: 1) landscaping plan, 2) design of the pump station, and 3) regrading plan to address the recommendations of the geotechnical report prepared by ECS Mid-Atlantic, LLC.

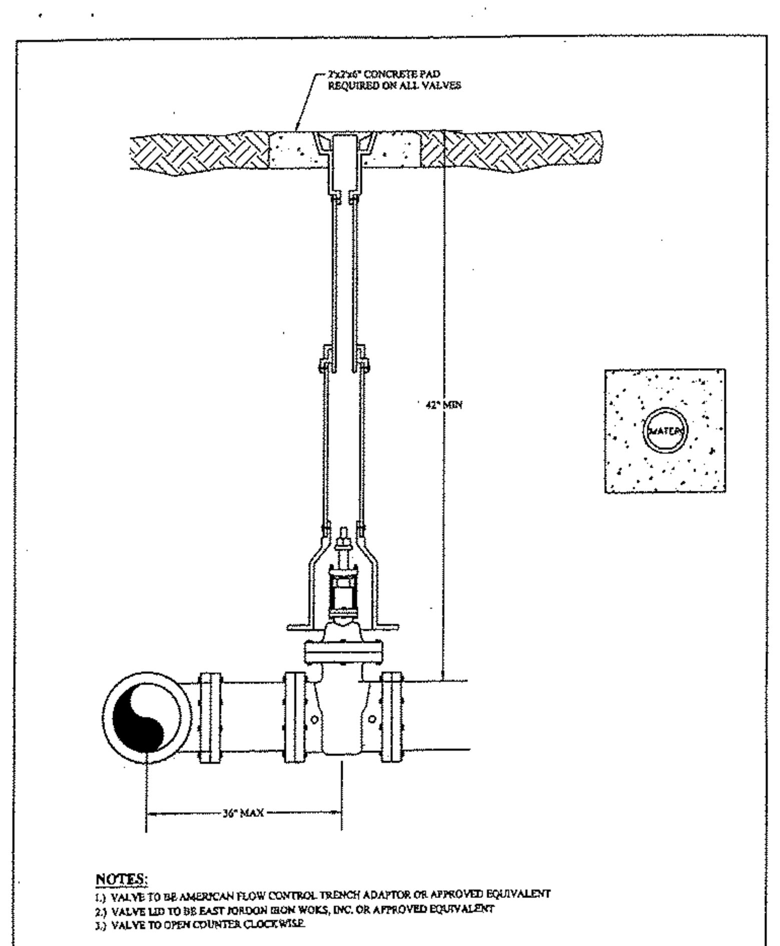
3) A handrail, fence or other suitable barrier shall be provided between the public sidewalk and slopes of the stormwater management facility.

4) The Applicant shall be responsible for all costs associated with the design, bonding, and construction of the proposed improvements.

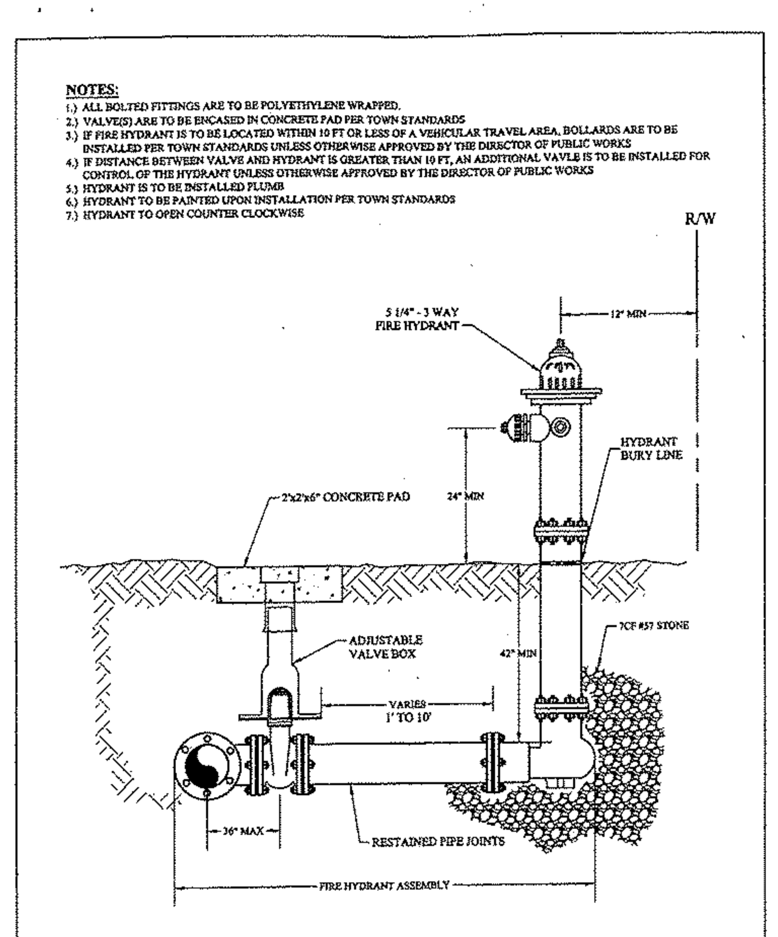
Please feel free to contact me if you have any questions.

Sincerely,

Jeremy F. Camp, Director of Planning & Zoning
Town of Front Royal, VA

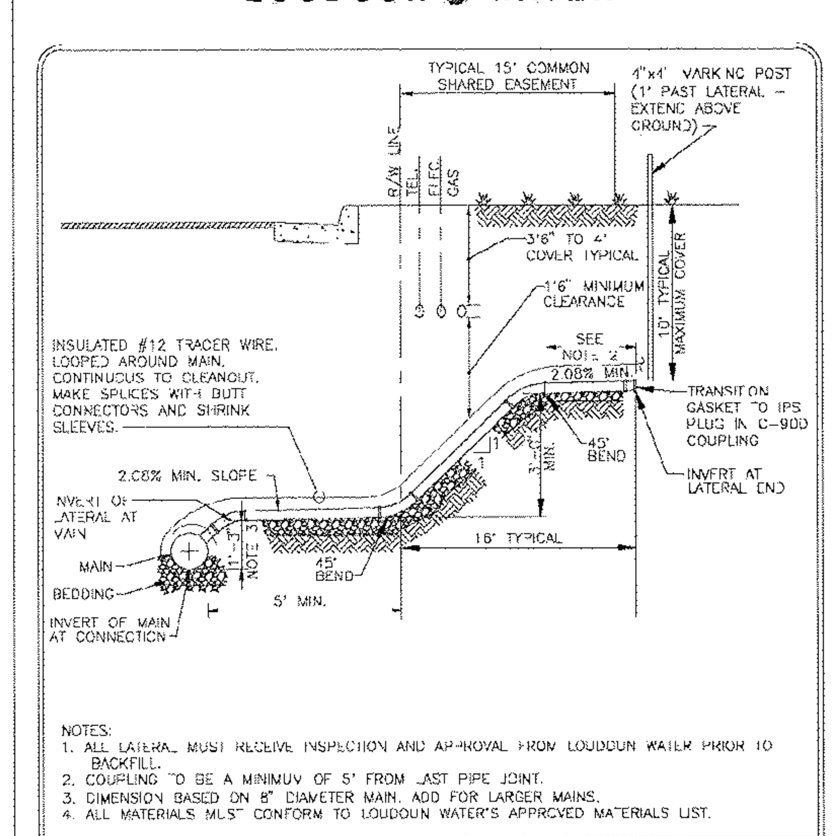


TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
VALVE SETTING STANDARD DETAIL
W-12
DATE: MAY 2004
REVISION:

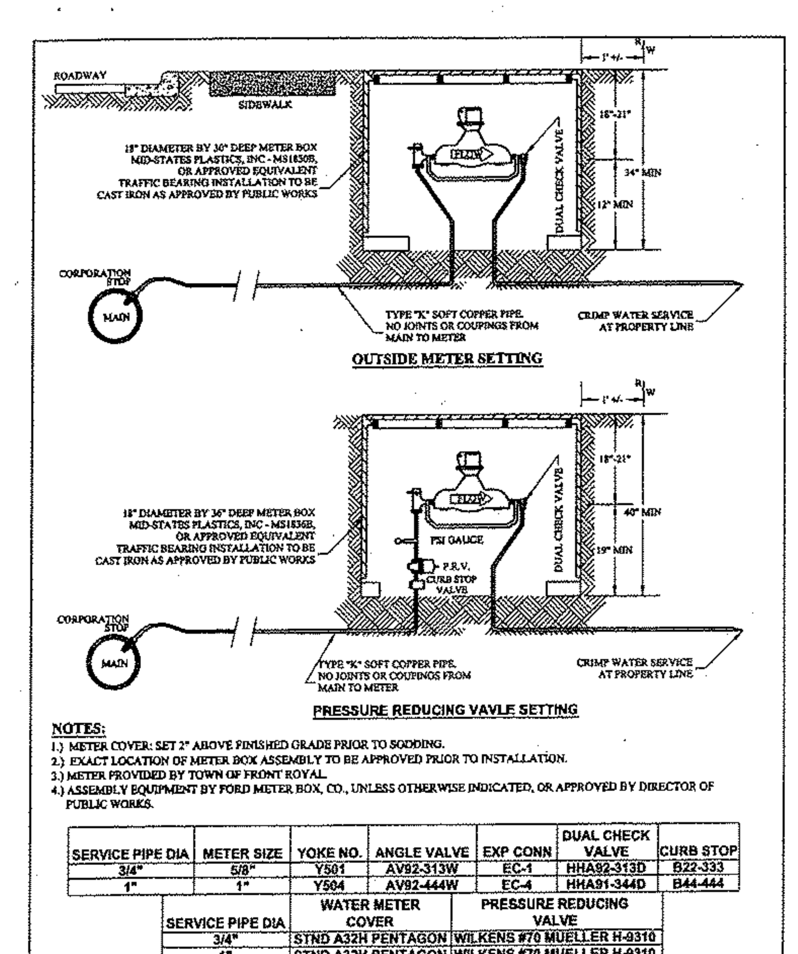


TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
FIRE HYDRANT ASSEMBLY STANDARD DETAIL
W-13
DATE: MAY 2004
REVISION:

LOUDOUN WATER



OCT. 2016 LATERAL WITH VERTICAL BENDS S-1?



TOWN OF FRONT ROYAL
STANDARD WATER DETAILS
TYPICAL 3/4" & 1" SERVICE CONNECTION DETAIL
W-6
DATE: MAY 2004
REVISION:

Bowman CONSULTING

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TOWN OF FRONT ROYAL WATER AND SEWER DETAILS
HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN
TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN | MCW DRAWN | CHKD
SCALE H: V:
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005
SHEET 30 OF 33

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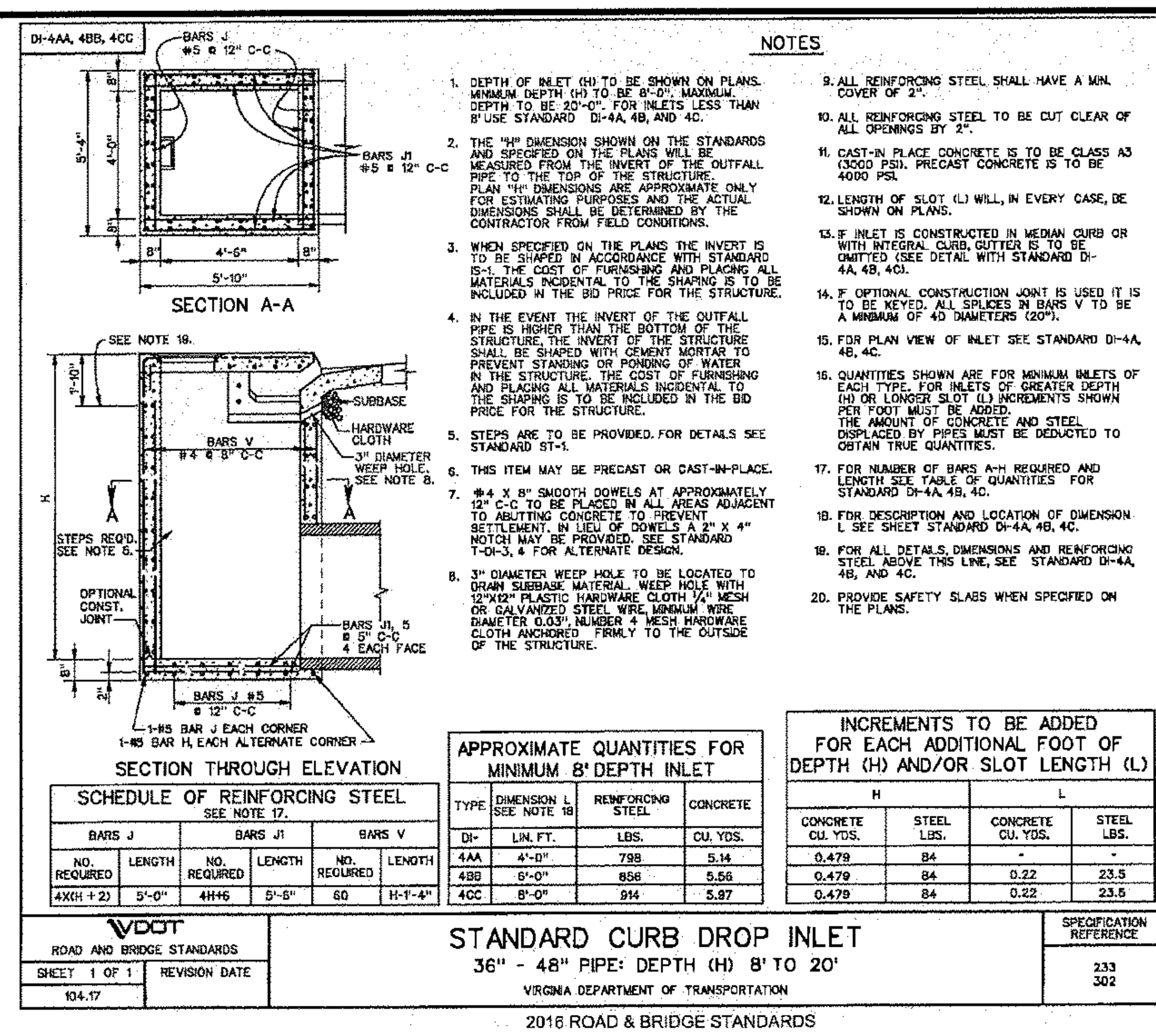

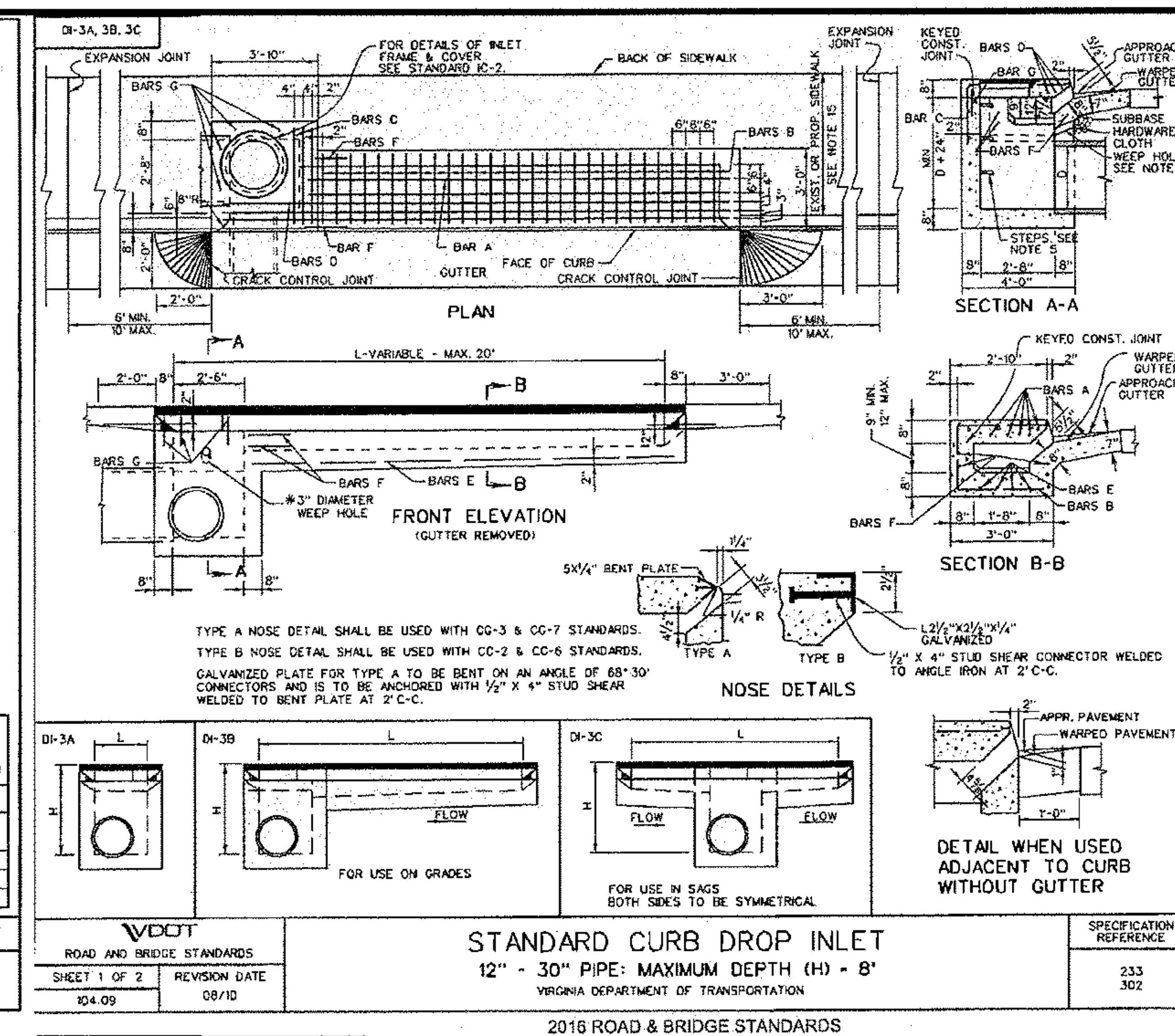

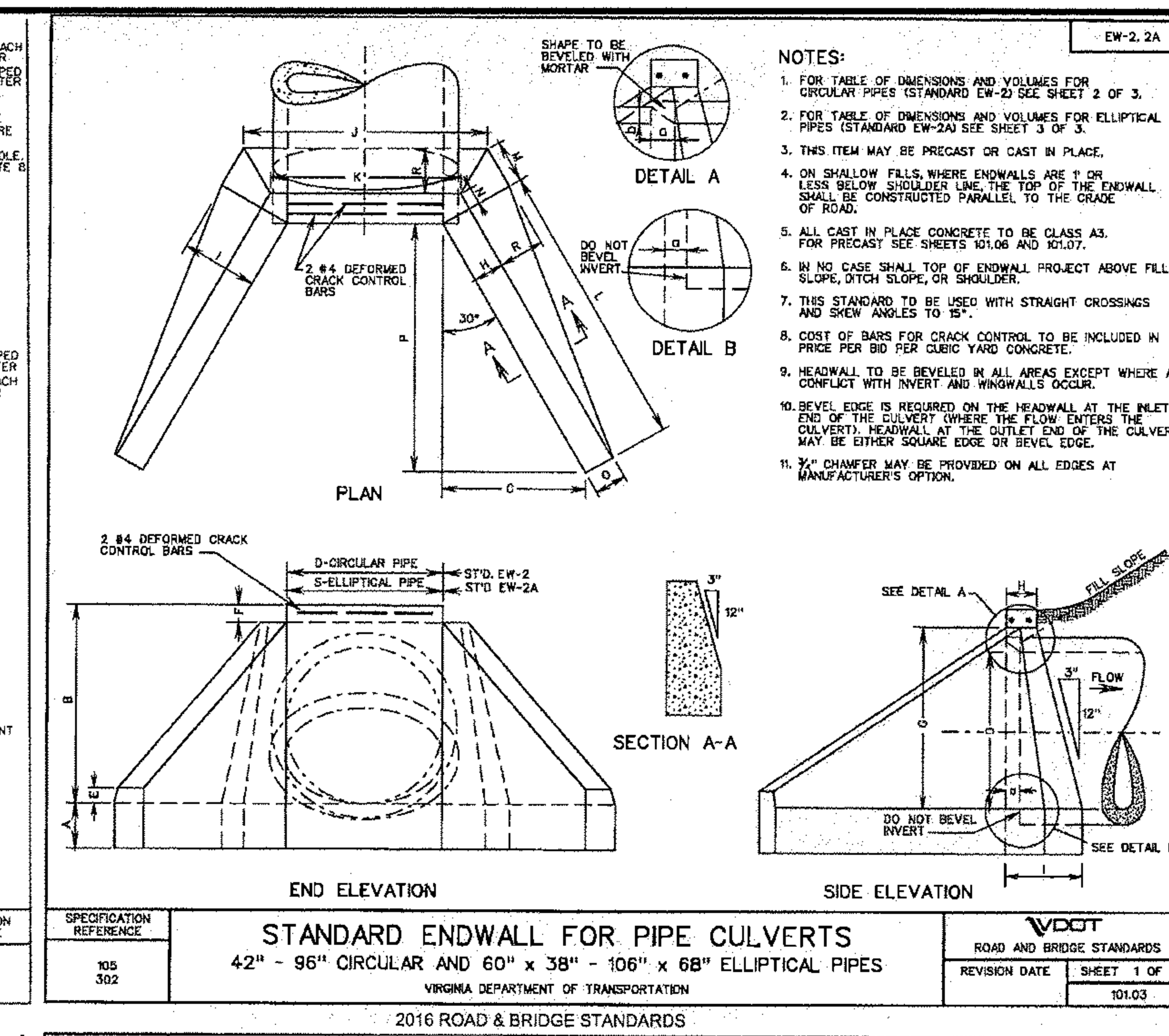

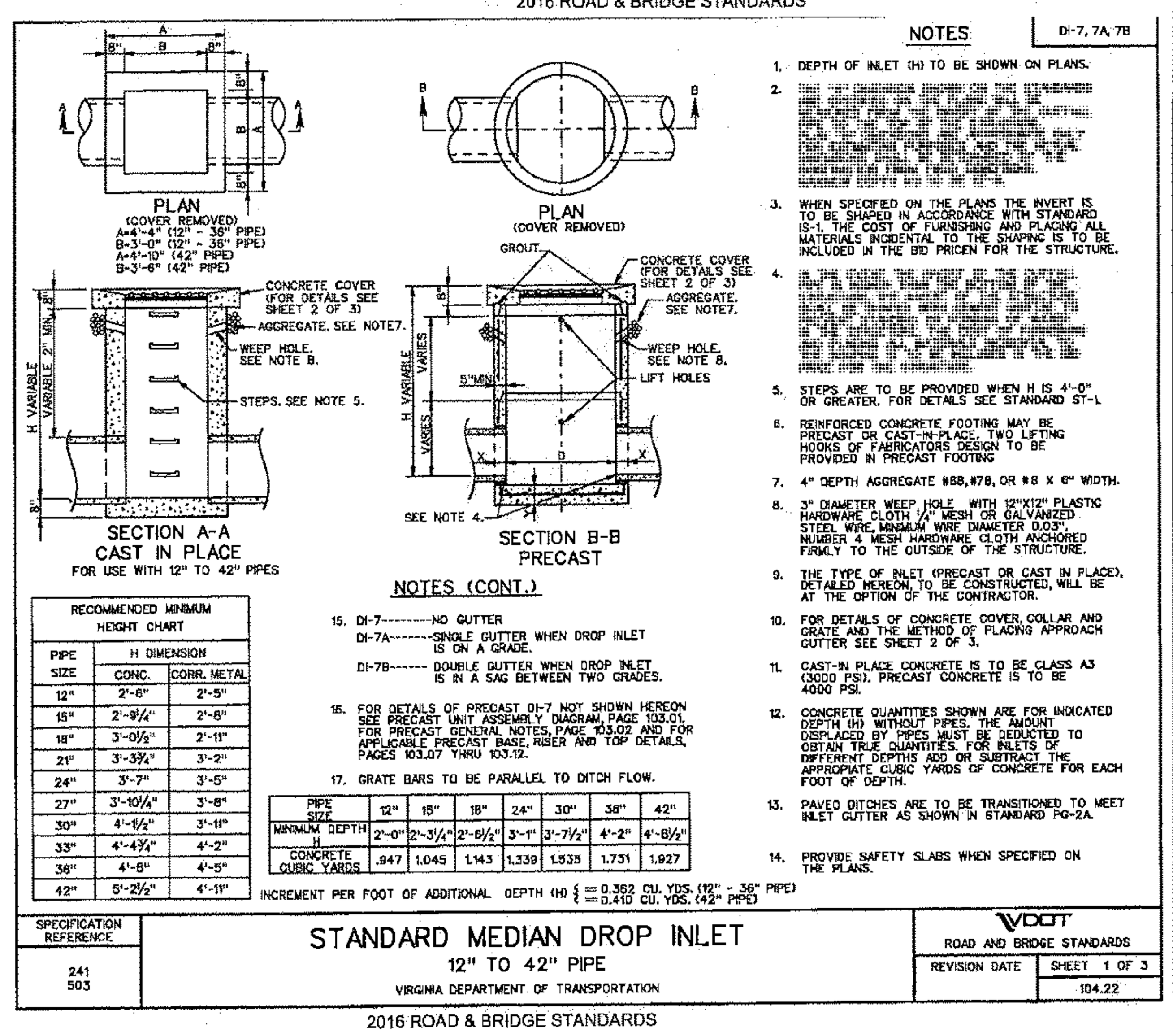

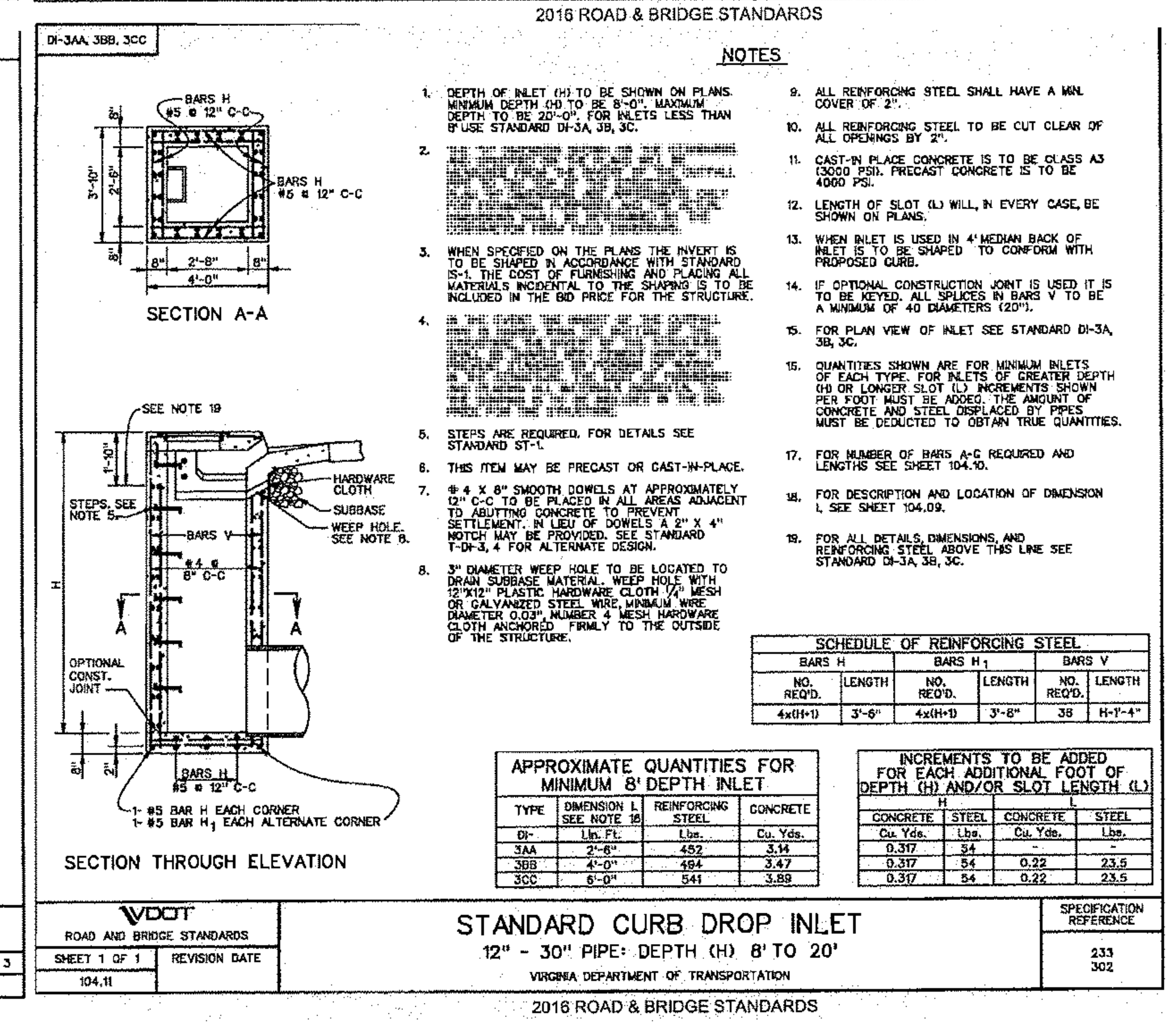

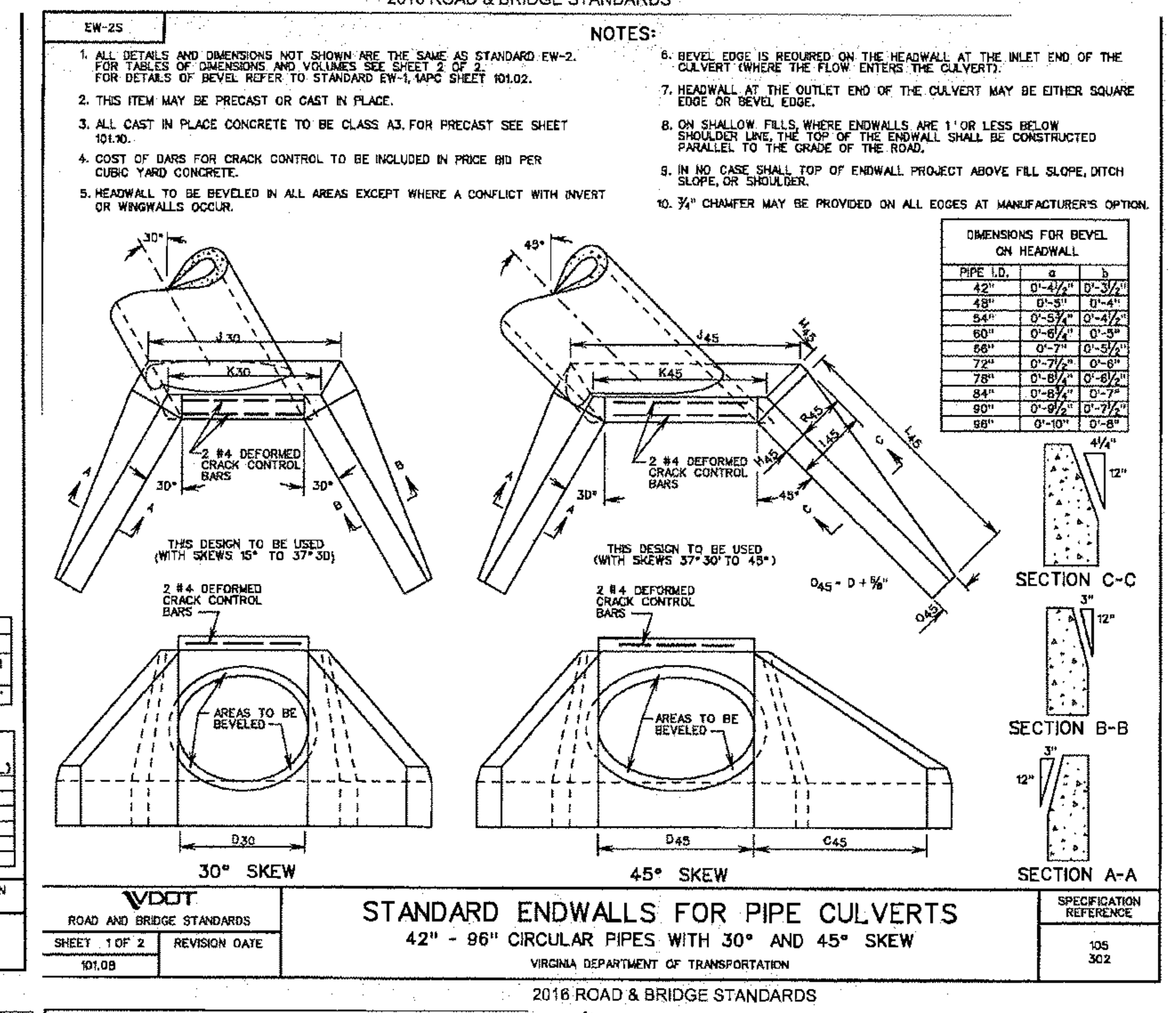

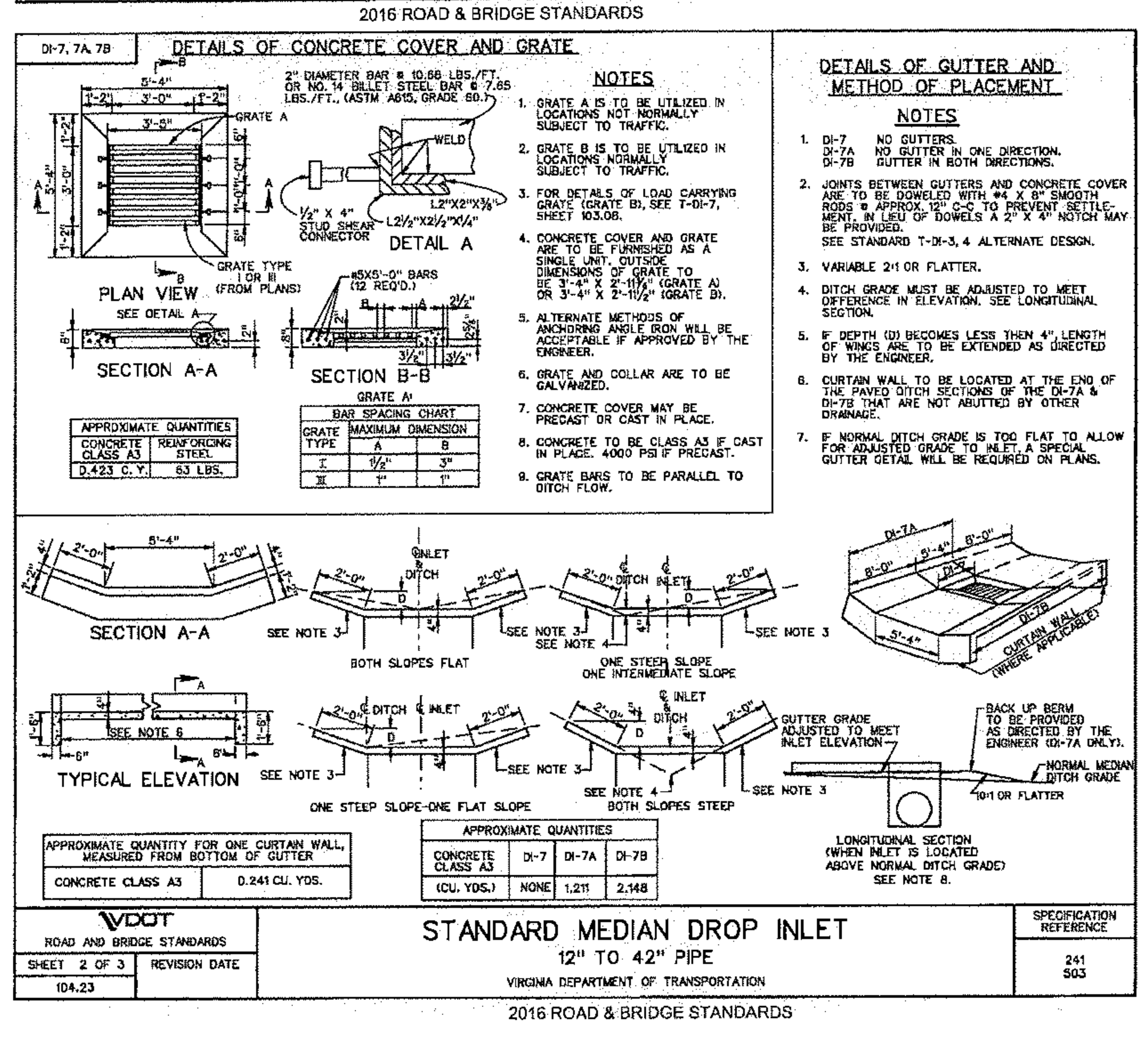

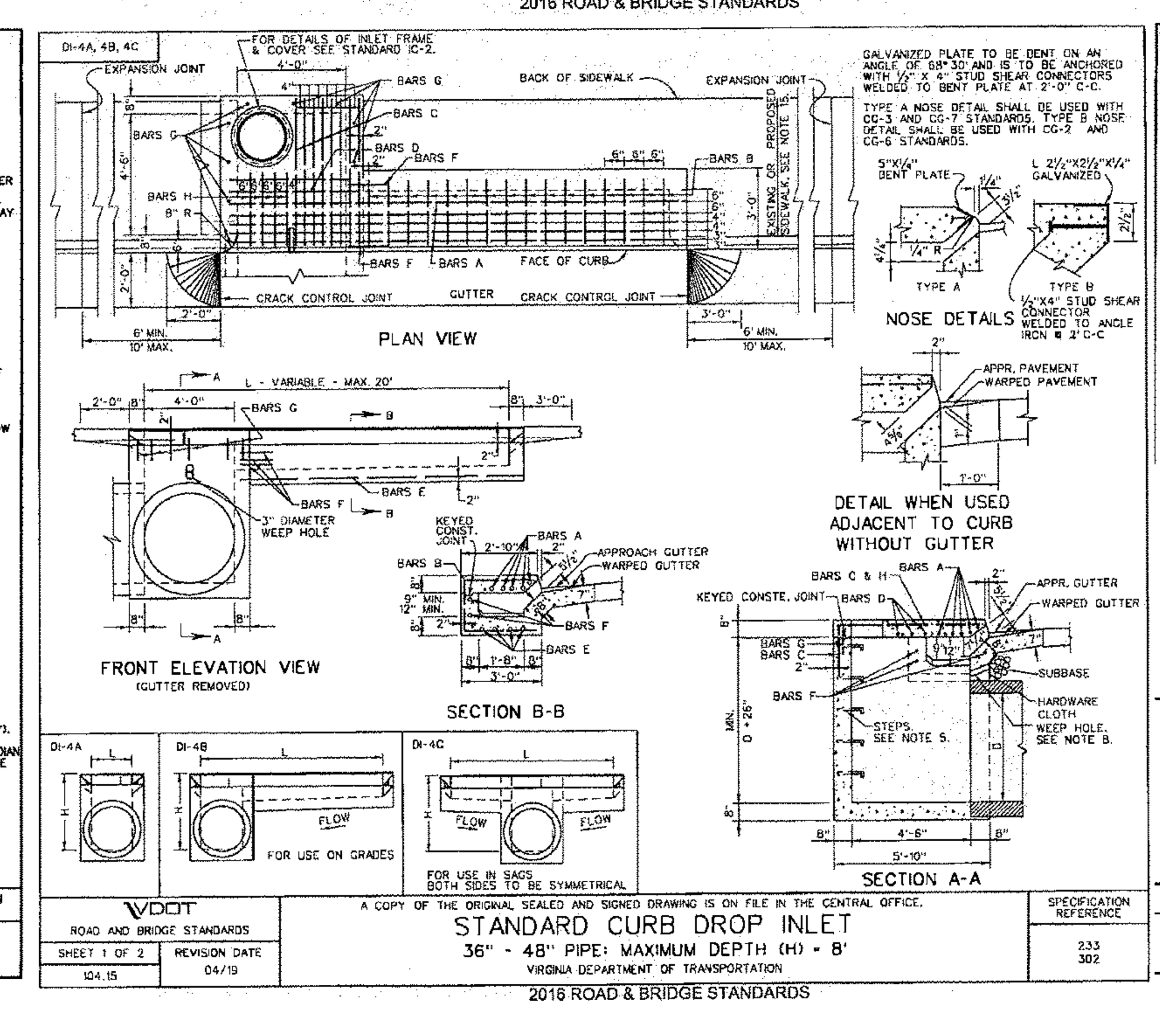

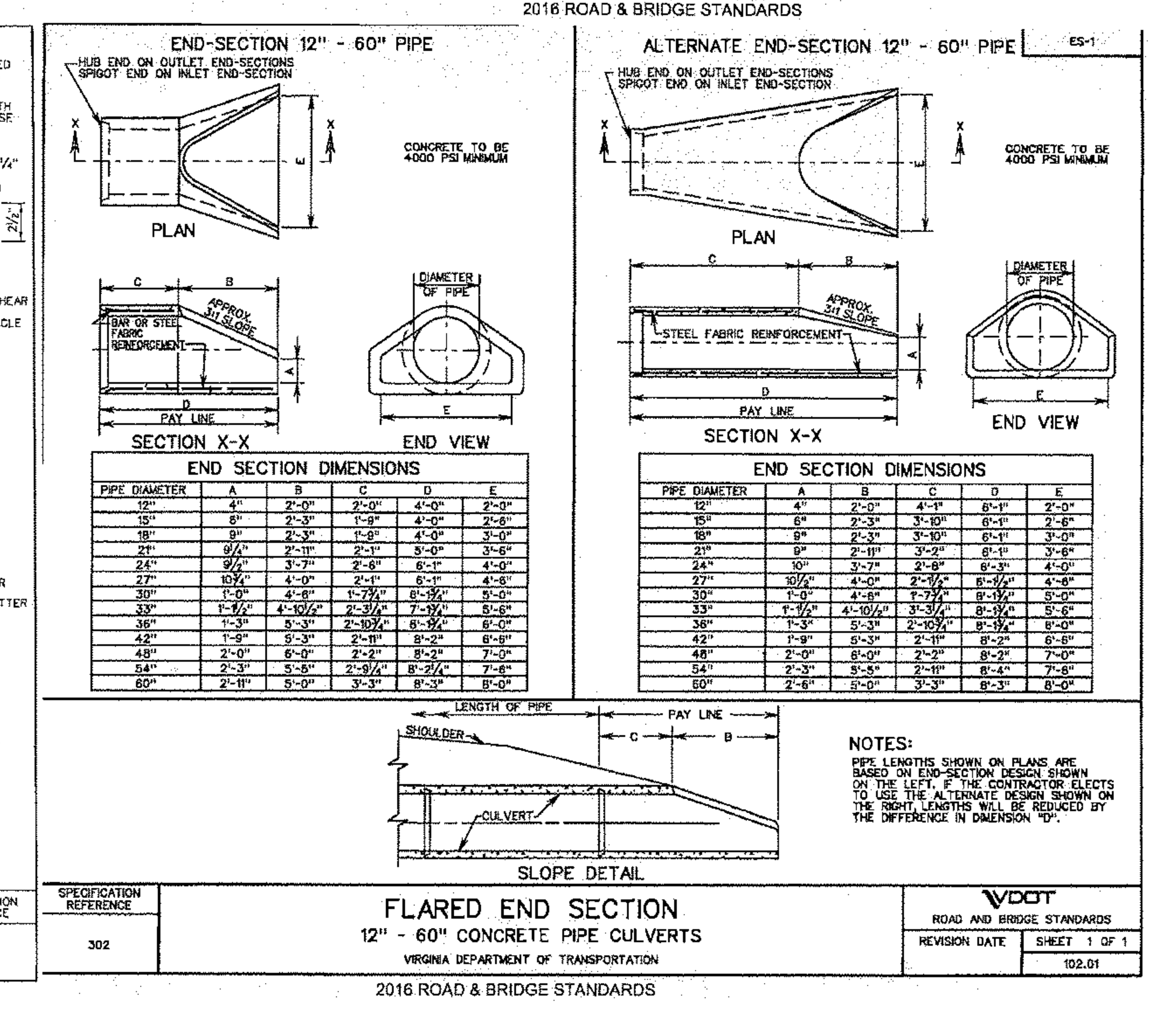

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VDOT STORM AND PAVEMENT DETAILS

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC	MCW	
DESIGN	DRAWN	CHKD

SCALE H: V:

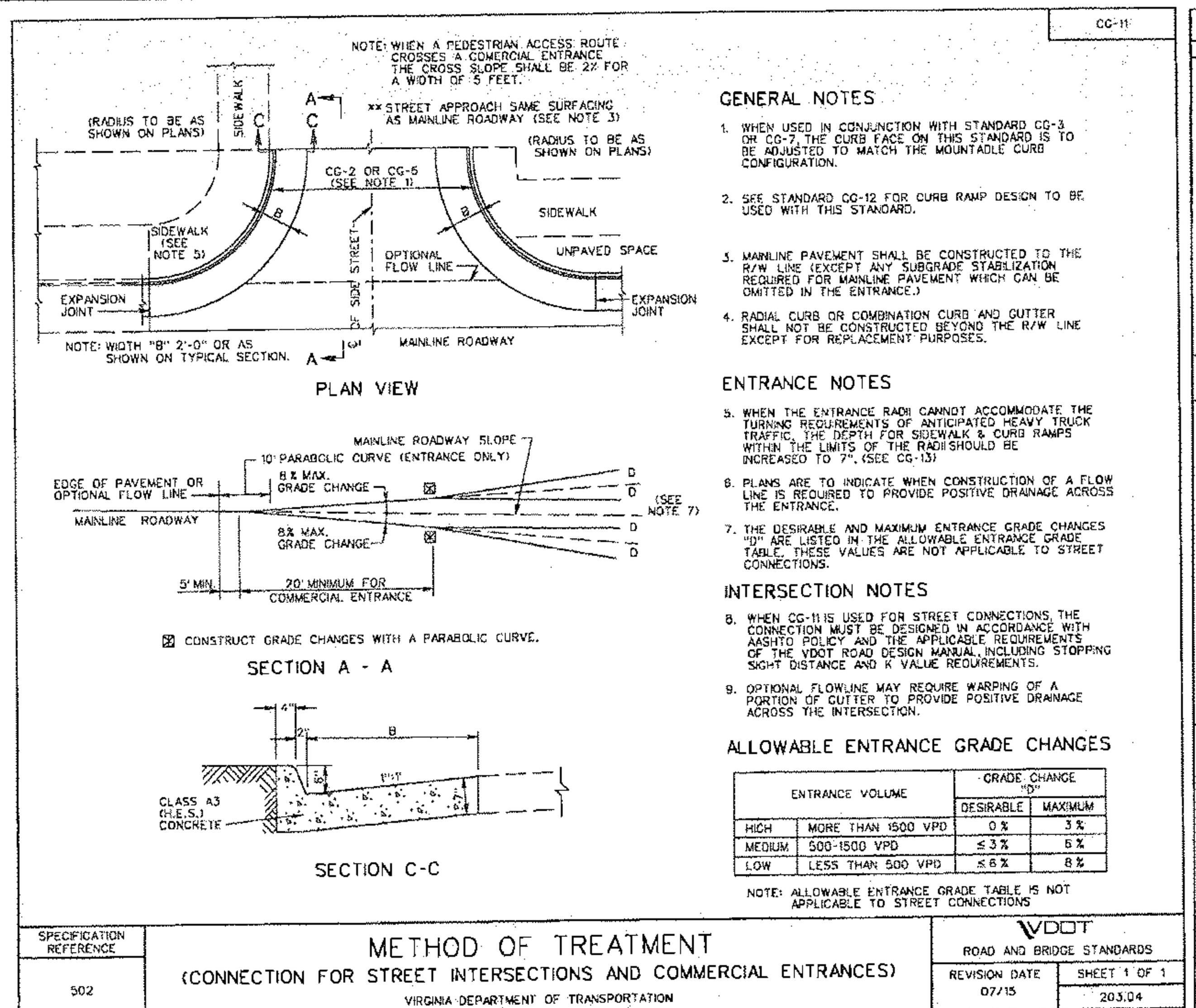
JOB No. 1602-02-016

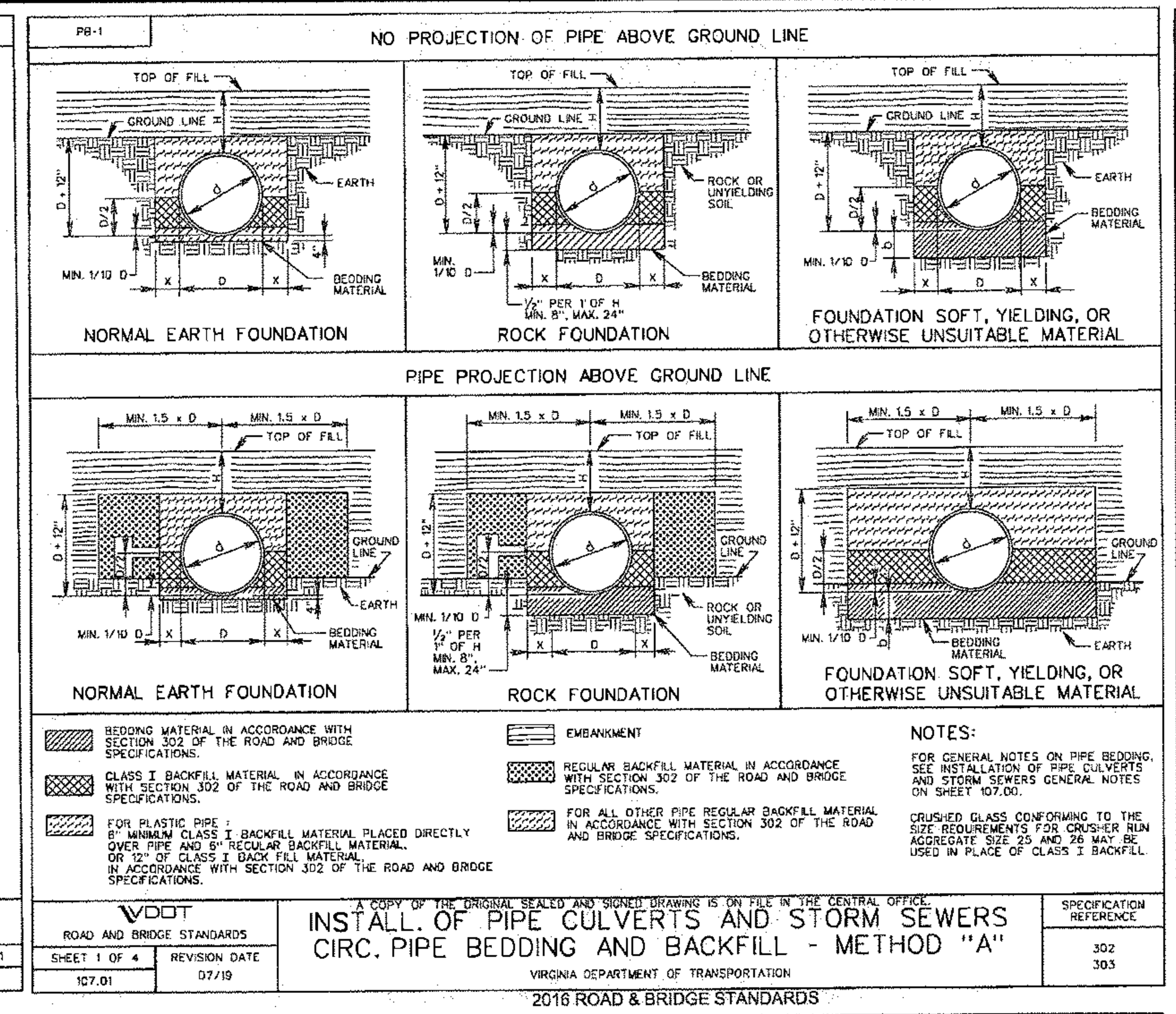
DATE JULY 19, 2019

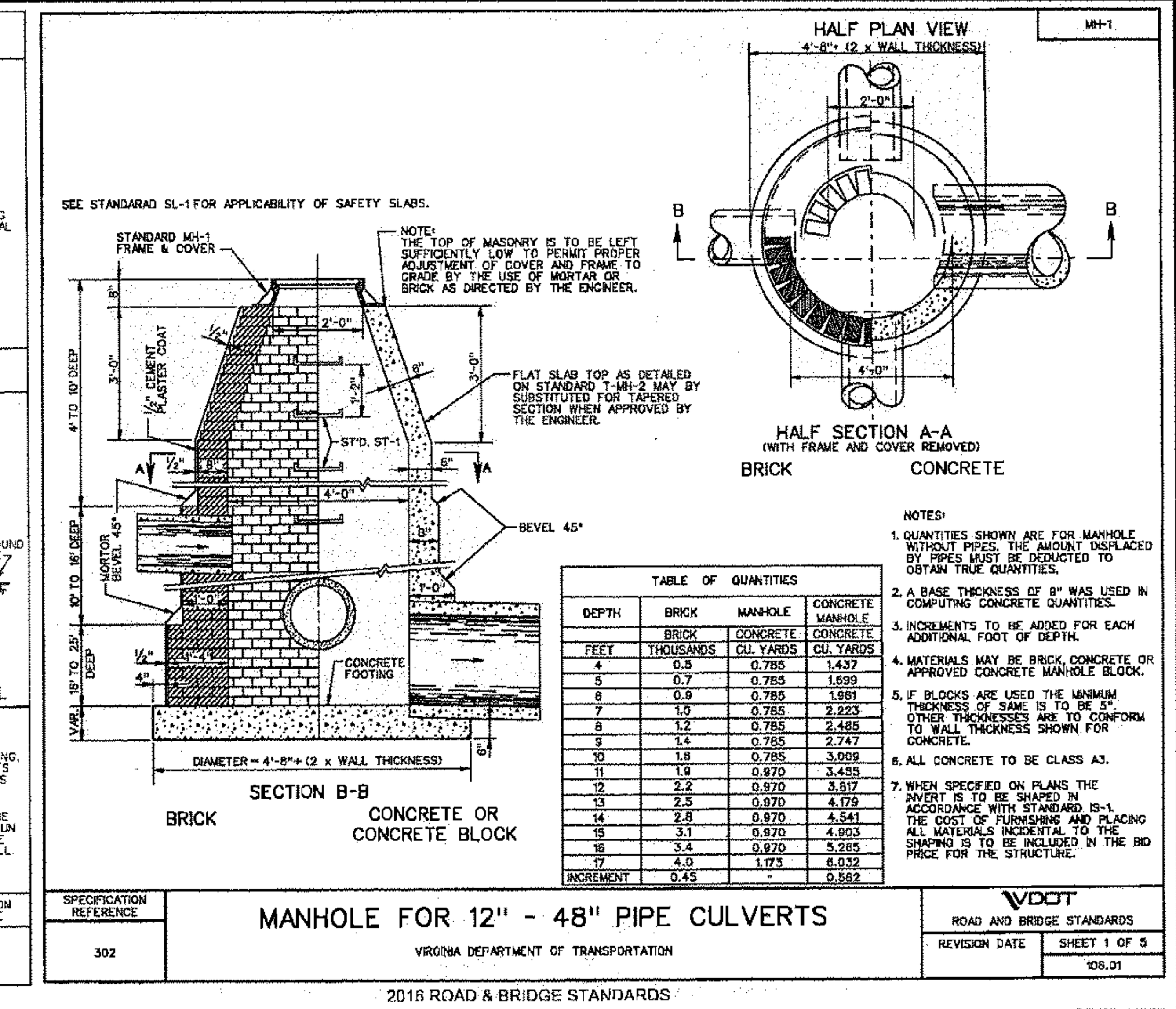
FILE No. 1602-D-CP-005

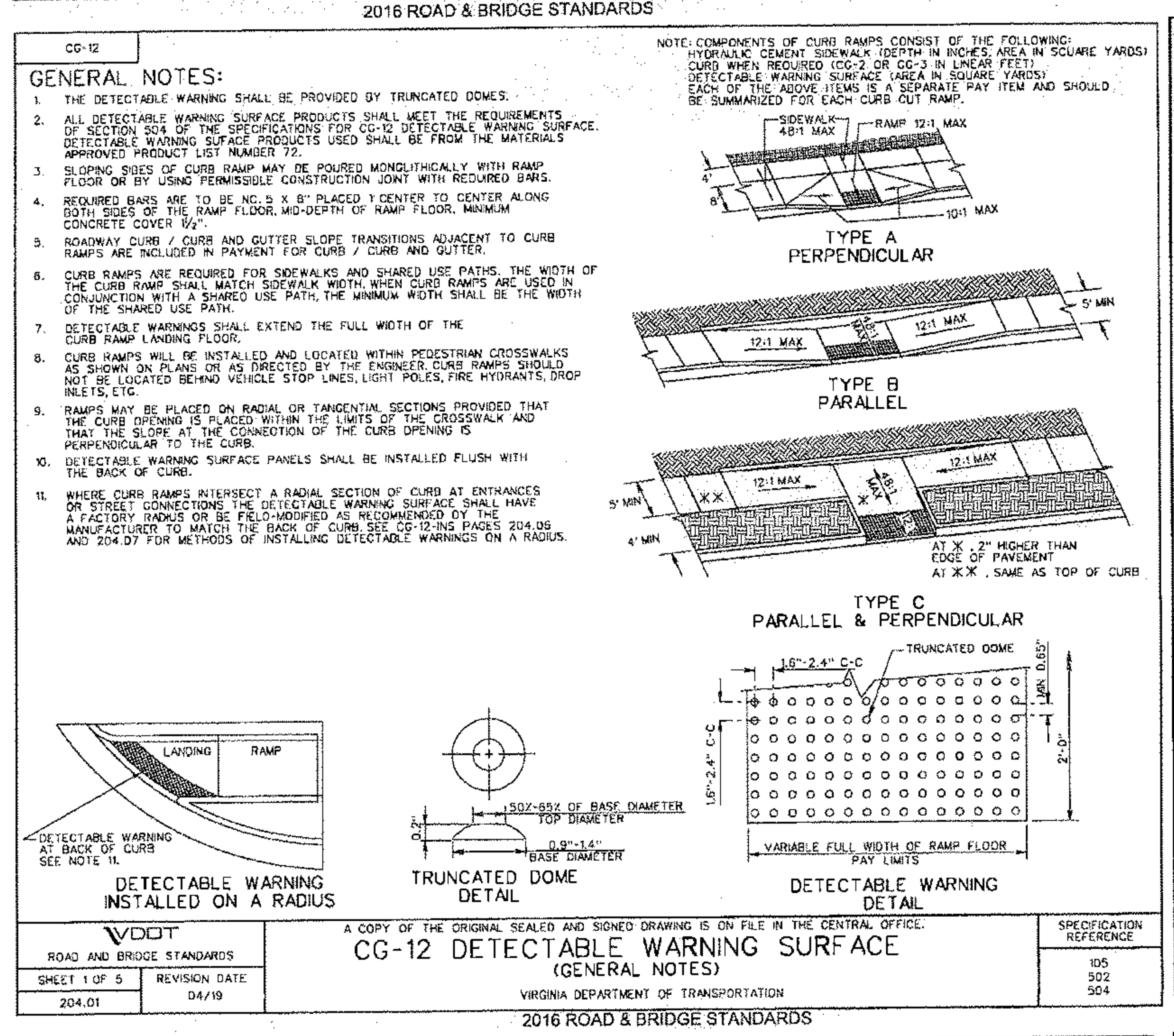
SHEET 31 OF 33

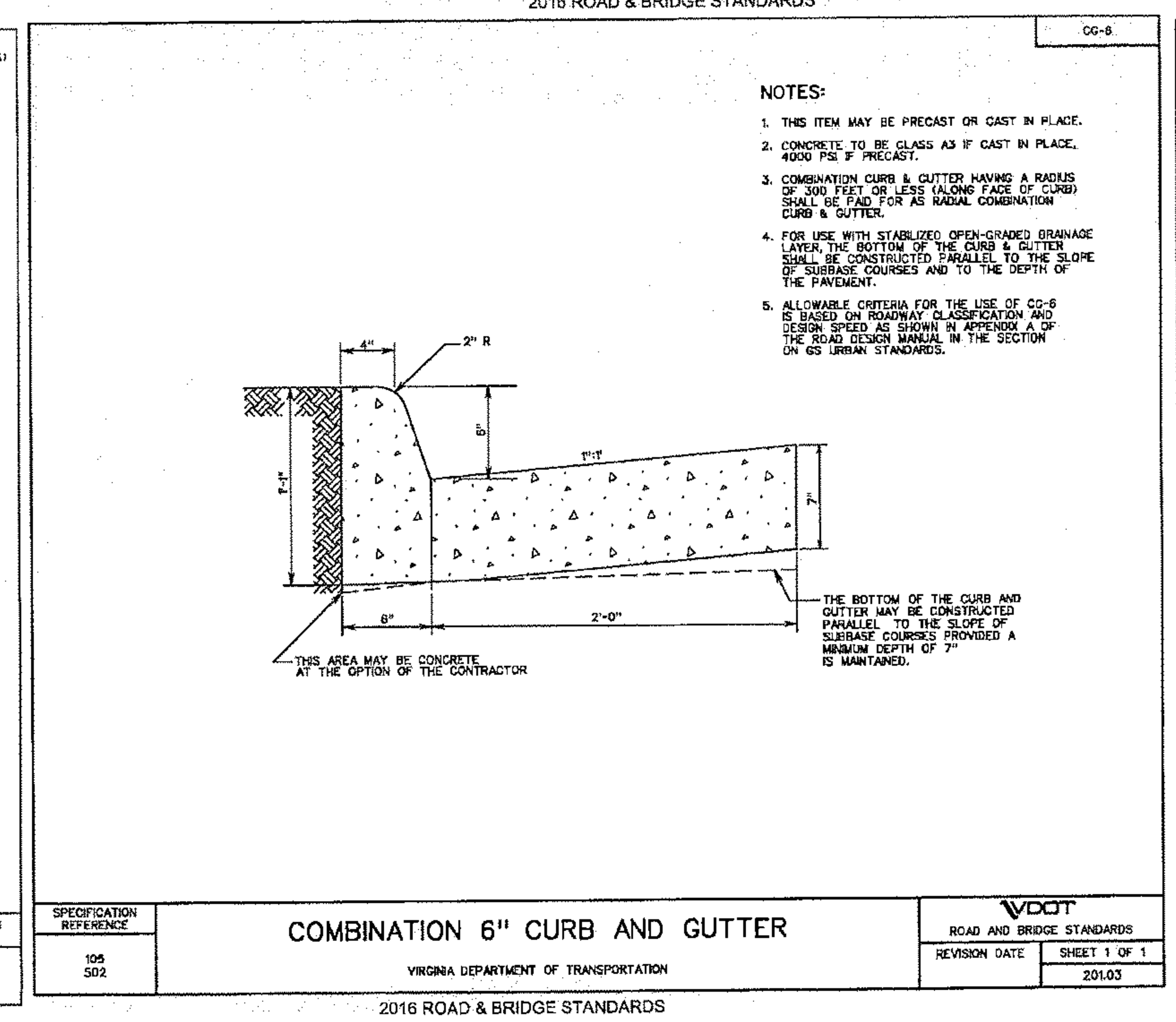
Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-MISC-DET.dwg

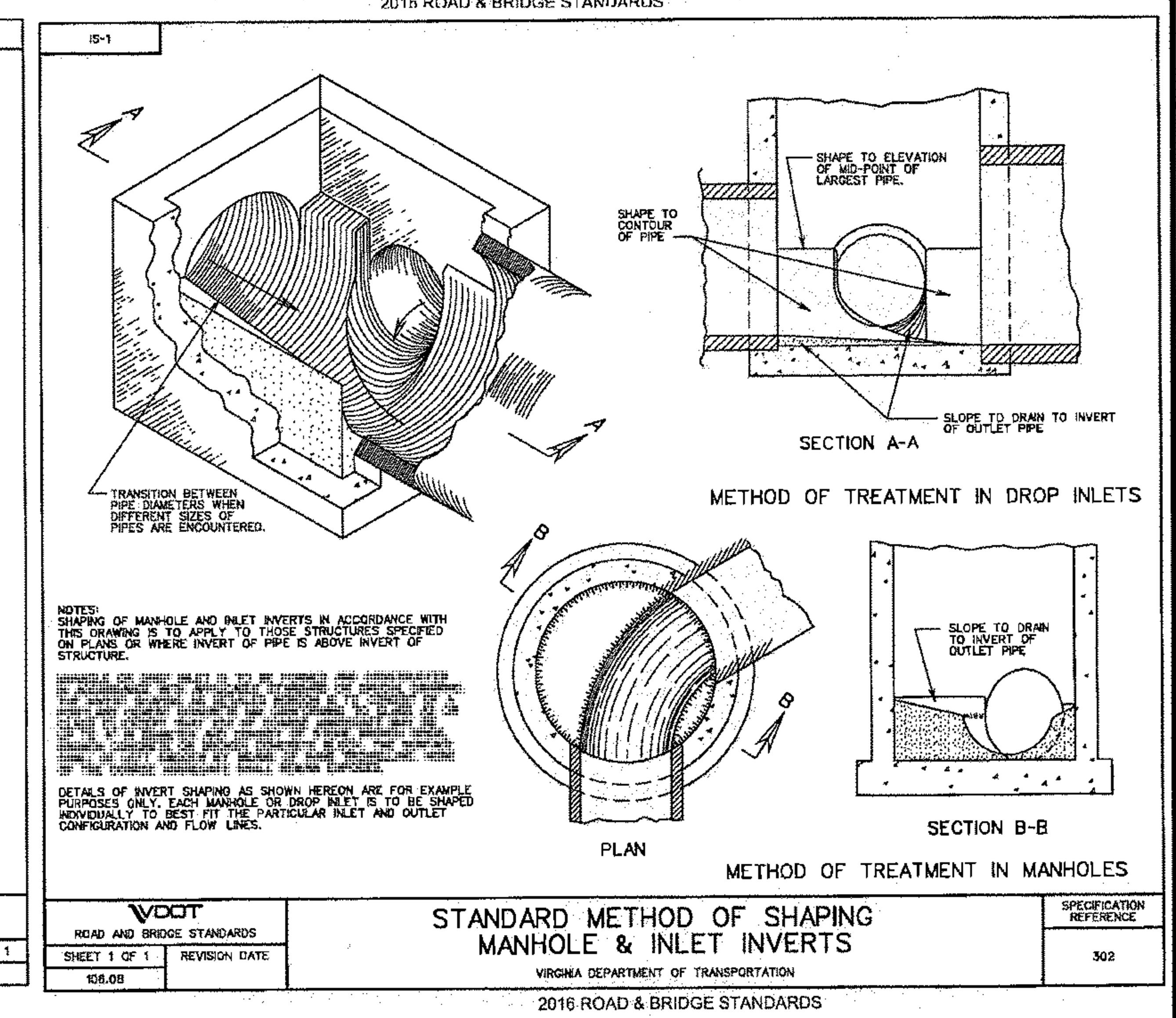


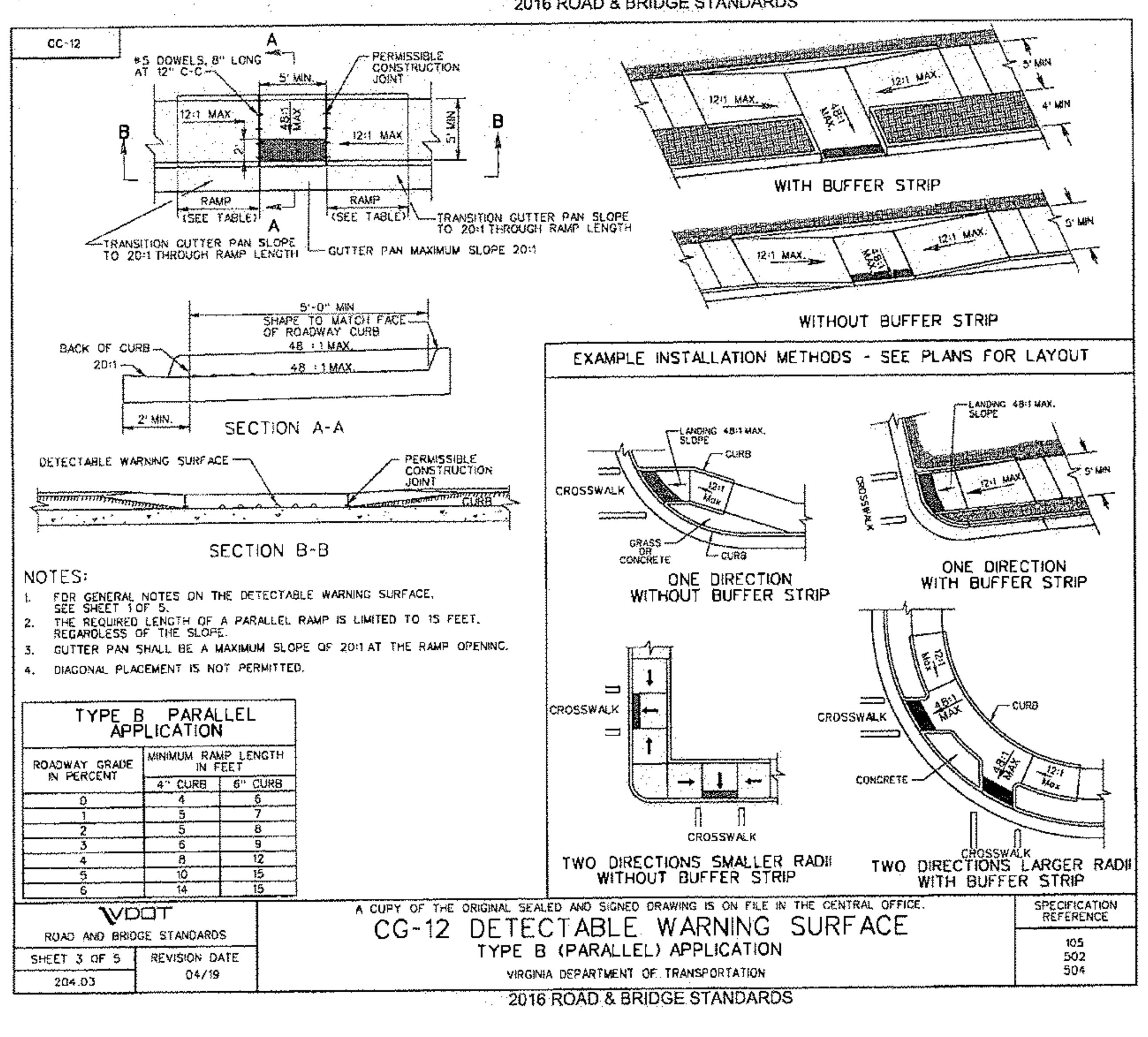


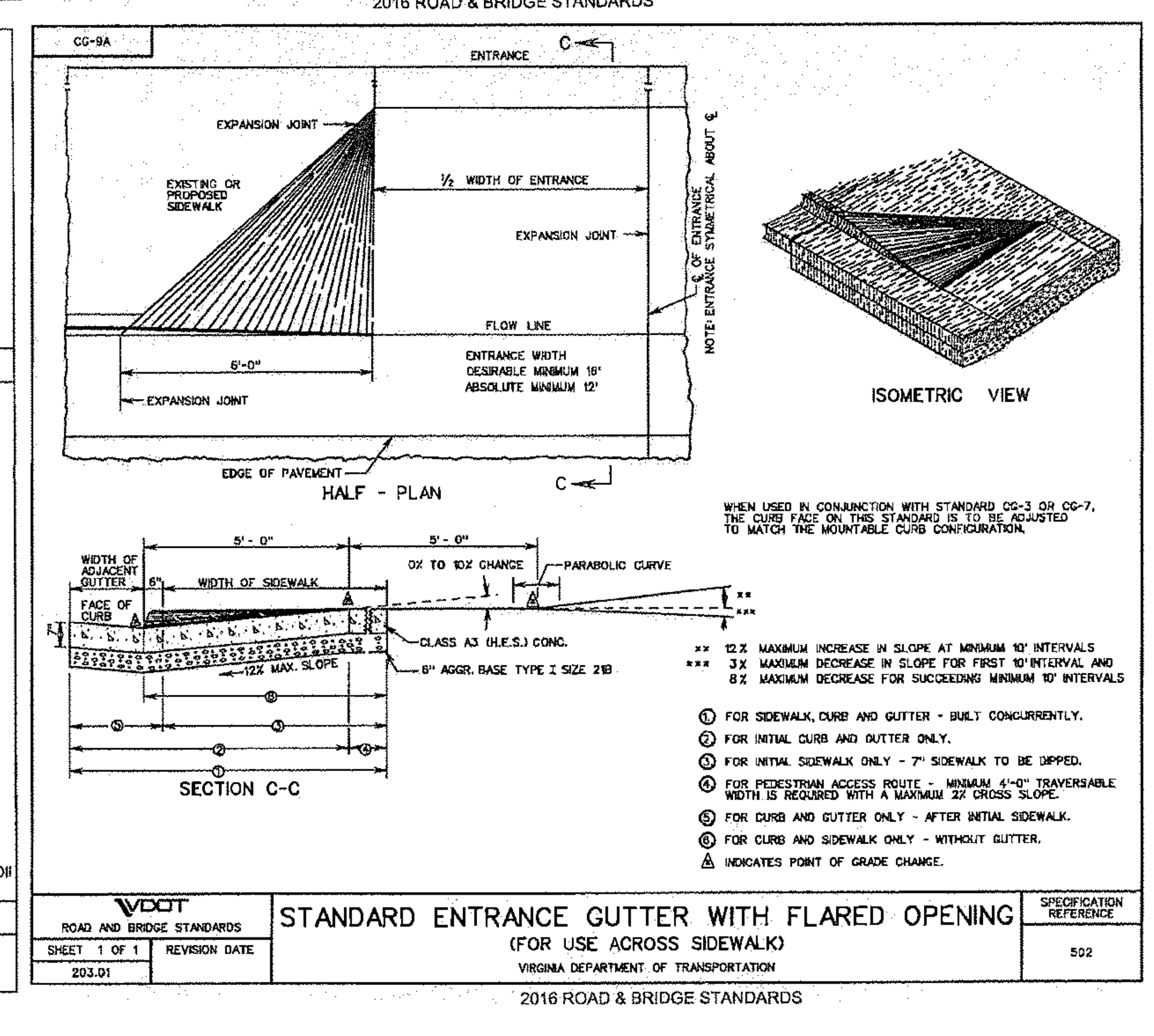


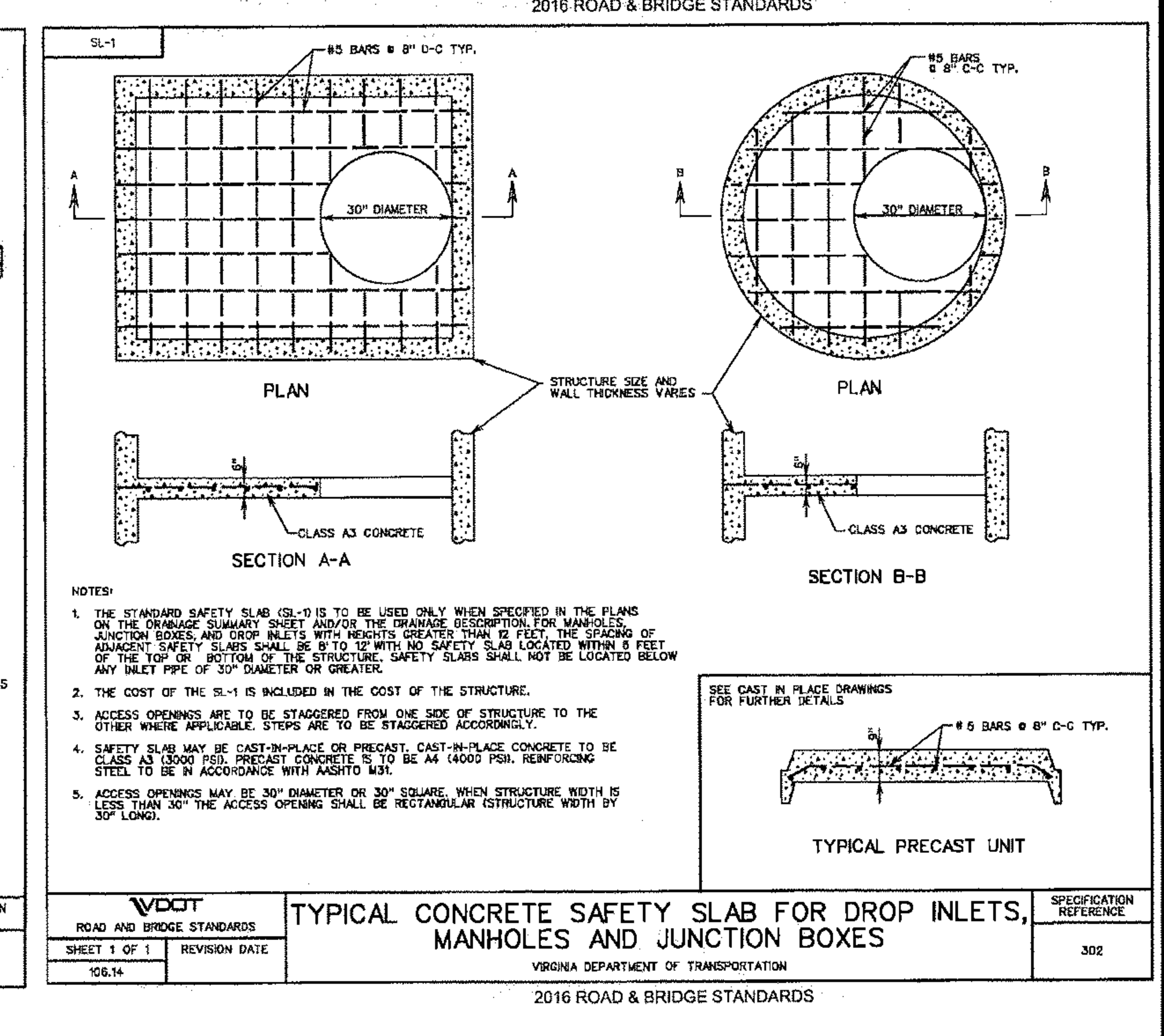












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VDOT STORM AND PAVEMENT DETAILS

HAPPY CREEK KNOLLS
SECTION 4
FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

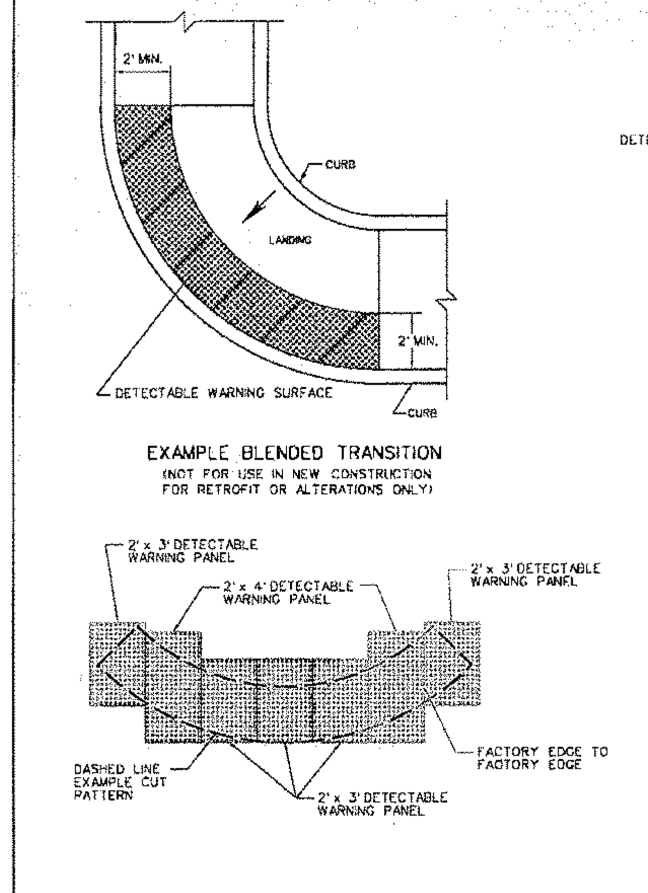
PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: V:	

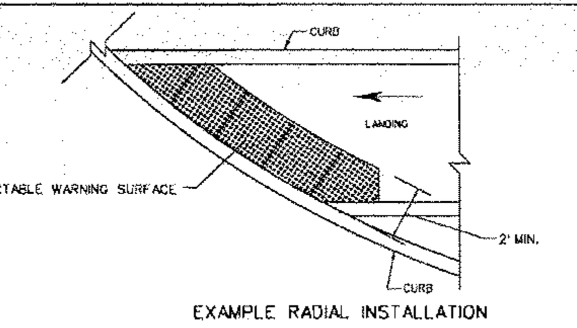
JOB No. 1602-02-016
DATE JULY 19, 2019
FILE No. 1602-D-CP-005
SHEET 32 of 33

Cad file name: P:\1602 - happy creek knolls sec 3\1602-04-001 (eng)\engineering\engineering plans\Sheets\1602-D-CP-001-MSC-DET.dwg

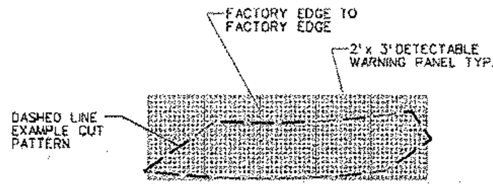
CG-12-INS



EXAMPLE BLENDED TRANSITION
(NOT FOR USE IN NEW CONSTRUCTION FOR RETROFIT OR ALTERATIONS ONLY)



EXAMPLE RADIAL INSTALLATION



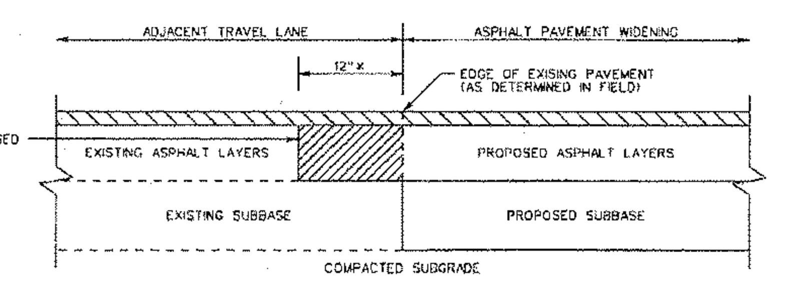
NOTES

1. LOCATIONS WHERE THE DETECTABLE WARNING CANNOT BE INSTALLED WITH A MAXIMUM 2" OFFSET FROM THE BACK OF CURB SHALL HAVE A RADIUS TO MATCH RADIUS OF THE CURB. DETECTABLE WARNING PANELS SHALL HAVE A FACTORY RADIUS OR IF APPROVED BY THE ENGINEER MAY BE FIELD MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.
2. JOINTS BETWEEN DETECTABLE WARNING PANELS SHALL BE FACTORY EDGES. CUT SIDES OF PANELS ARE NOT PERMITTED TO ABUT ADJACENT PANELS.
3. ALIGNMENT OF DOMES ON ADJACENT PANELS THAT WILL BE MODIFIED TO FIT A RADIUS SHALL BE MAINTAINED WHEN FIELD MODIFYING DETECTABLE WARNING PANELS.
4. DETECTABLE WARNING PANEL SIZES SHOWN ARE FOR EXAMPLE PURPOSES. OTHER PANEL SIZES MAY BE USED IN ORDER TO MAINTAIN CONSISTENT ALIGNMENT OF THE DOMES FOR EACH CURB RAMP LOCATION.
5. BLENDED TRANSITION CURB RAMPS ARE FOR ALTERATION SITUATIONS WHERE STANDARD DIRECTIONAL CURB RAMPS ARE NOT FEASIBLE DUE TO SITE CONSTRAINTS. BLENDED TRANSITION CURB RAMPS ARE NOT PERMITTED FOR NEW CONSTRUCTION.
6. PARTIAL DETECTABLE WARNING DOMES THAT ARE THE RESULT OF CUTTING PANELS SHOULD BE GROUND FLUSH WITH THE PANEL SURFACE.
7. GAPS BETWEEN ADJACENT DETECTABLE WARNING PANELS ARE NOT PERMITTED.
8. SEE PLANS FOR CROSSWALK MARKINGS, TURNING AREAS, ROUTE WIDTHS, GRADE CHANGES, AND RAMP CONFIGURATIONS.

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE METHOD OF INSTALLING DETECTABLE WARNINGS ON A RADIUS VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 2 OF 2	REVISION DATE		105
204.07	NEW 04/19		502 504

2016 ROAD & BRIDGE STANDARDS

WP-2



CONSTRUCTION JOINT DETAIL

REMOVE EXISTING ASPHALT LAYERS TO EXISTING SUBBASE AND REPLACE WITH PROPOSED ASPHALT WIDENING LAYERS
PROPOSED MINIMUM 1½ INCH THICK ASPHALT SURFACE COURSE (SEE NOTE 5)
* MINIMUM 12 INCHES, OR GREATER AS NECESSARY TO ABUT THE FULL THICKNESS OF EXISTING ASPHALT LAYERS AS DETERMINED BY CORES (SEE NOTE 3)

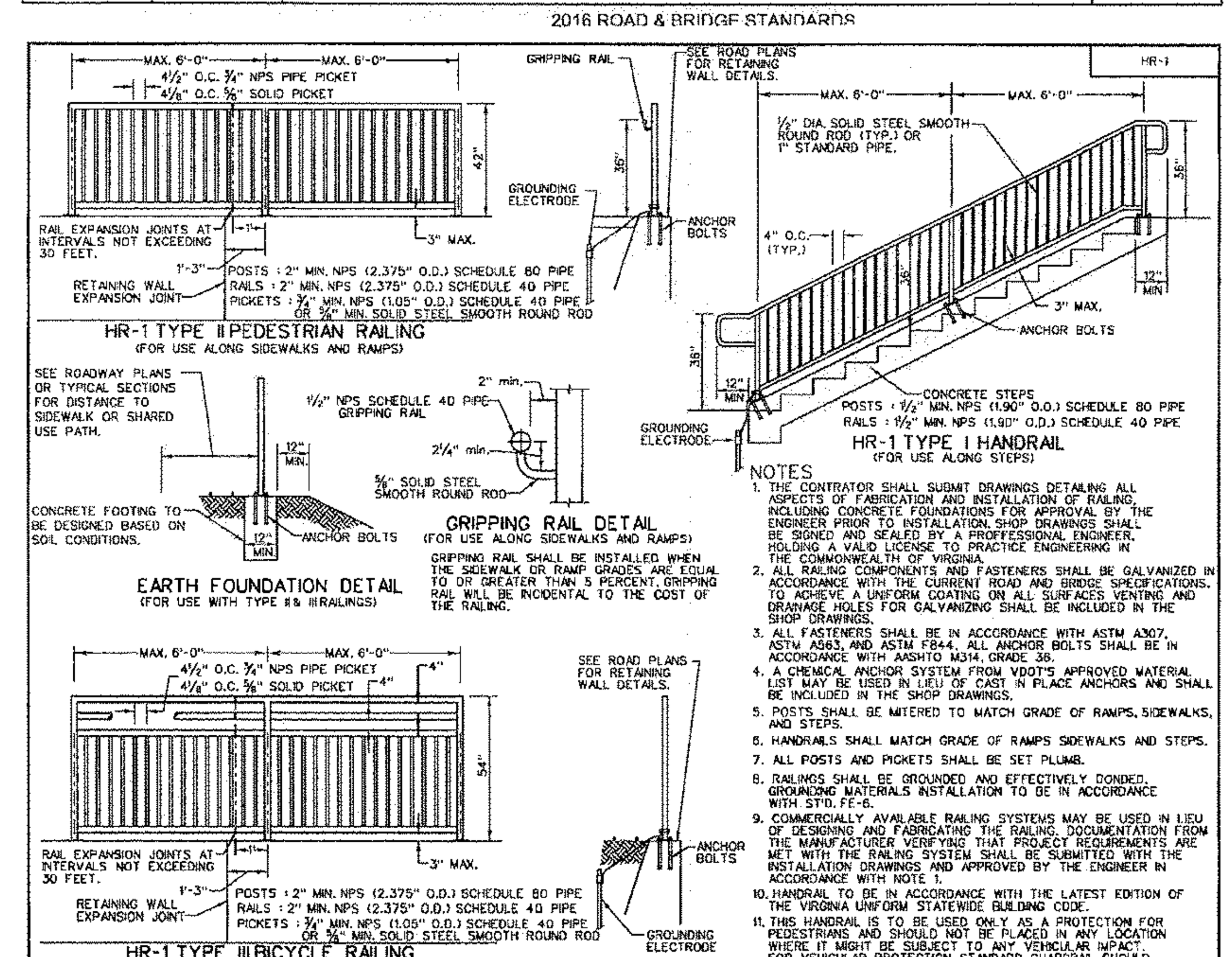
NOTES:

1. ASPHALT PAVEMENT WIDENING SHALL HAVE A PAVEMENT DESIGN IN ACCORDANCE WITH CURRENT VDOT PROCEDURES AND BE APPROVED BY THE ENGINEER.
2. THE PAVEMENT DESIGN FOR ASPHALT PAVEMENT WIDENING SHALL MEET OR EXCEED THE DEPTHS AND TYPES OF THE LAYERS OF EXISTING PAVEMENT. SUBSURFACE DRAINAGE OF THE EXISTING AND PROPOSED PAVEMENT SHALL BE ADDRESSED IN THE PAVEMENT DESIGN.
3. A MINIMUM OF THREE CORES SHALL BE TAKEN ALONG THE CENTER OF THE ADJACENT TRAVEL LANE TO DETERMINE THE TYPE AND THICKNESS OF EXISTING PAVEMENT LAYERS. THESE CORES SHALL BE SPACED NO MORE THAN 500 FEET APART.
4. THE ADJACENT TRAVEL LANE SHALL BE MILLED A MINIMUM DEPTH OF 1½ INCHES AND REPLACED WITH AN ASPHALT SURFACE COURSE TO MATCH THE PROPOSED PAVEMENT WIDENING SURFACE COURSE, UNLESS WAIVED BY THE ENGINEER.
5. THE ENGINEER MAY REQUIRE THE MILLING DEPTH OF THE EXISTING PAVEMENT TO BE ADJUSTED TO ACHIEVE AN ACCEPTABLE PAVEMENT CROSS-SLOPE AND EFFECTIVE SURFACE DRAINAGE.
6. EXISTING PAVEMENT MARKINGS AND MARKERS WITHIN THE PROJECT LIMITS SHALL BE RESTORED SUBJECT TO THE APPROVAL OF THE ENGINEER.
7. FINAL TRANSVERSE PAVEMENT TIE-IN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS EXCEPT THAT ALL JOINTS AT TIE-IN LOCATIONS SHALL BE TESTED USING A 10 FOOT STRAIGHTEDGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 315 OF THE SPECIFICATIONS.

VDOT ROAD AND BRIDGE STANDARDS		ASPHALT PAVEMENT WIDENING FOR WIDENING SUBJECT TO TRAFFIC VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE		315
303.02			

2016 ROAD & BRIDGE STANDARDS

HR-1



NOTES

1. THE CONTRATOR SHALL SUBMIT DRAWINGS DETAILING ALL ASPECTS OF FABRICATION AND INSTALLATION OF RAILING, INCLUDING CONCRETE FOUNDATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFFESSIONAL ENGINEER, HOLDING A VALID LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA.
2. ALL RAILING COMPONENTS AND FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE CURRENT ROAD AND BRIDGE SPECIFICATIONS. TO ACHIEVE A UNIFORM COATING ON ALL SURFACES VENTING AND DRAINAGE HOLES FOR GALVANIZING SHALL BE INCLUDED IN THE SHOP DRAWINGS.
3. ALL FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A307, ASTM A563, AND ASTM F844. ALL ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH AASHTO M314, GRADE 36.
4. A CHEMICAL ANCHOR SYSTEM FROM VDOT'S APPROVED MATERIAL LIST MAY BE USED IN LIEU OF CAST IN PLACE ANCHORS AND SHALL BE INCLUDED IN THE SHOP DRAWINGS.
5. POSTS SHALL BE MITERED TO MATCH GRADE OF RAMPS, SIDEWALKS, AND STEPS.
6. HANDRAILS SHALL MATCH GRADE OF RAMPS SIDEWALKS AND STEPS.
7. ALL POSTS AND PICKETS SHALL BE SET PLUMB.
8. RAILINGS SHALL BE GROUNDED AND EFFECTIVELY BONDED. GROUNDING MATERIALS INSTALLATION TO BE IN ACCORDANCE WITH ST'D. FE-6.
9. COMMERCIALLY AVAILABLE RAILING SYSTEMS MAY BE USED IN LIEU OF DESIGNING AND FABRICATING THE RAILING. DOCUMENTATION FROM THE MANUFACTURER VERIFYING THAT PROJECT REQUIREMENTS ARE MET WITH THE RAILING SYSTEM SHALL BE SUBMITTED WITH THE INSTALLATION DRAWINGS AND APPROVED BY THE ENGINEER IN ACCORDANCE WITH NOTE 1.
10. HANDRAIL TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
11. THIS HANDRAIL IS TO BE USED ONLY AS A PROTECTION FOR PEDESTRIANS AND SHOULD NOT BE PLACED IN ANY LOCATION WHERE IT MIGHT BE SUBJECT TO ANY VEHICULAR IMPACT. FOR VEHICULAR PROTECTION STANDARD GUARDRAIL SHOULD BE USED.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. STANDARD HANDRAIL METHOD OF LOCATING AND ERECTING VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS	
105 238 504		REVISION DATE	SHEET 1 OF 1
		7/11	601.05

2016 ROAD & BRIDGE STANDARDS

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VDOT STORM AND PAVEMENT DETAILS

HAPPY CREEK KNOLLS SECTION 4

FINAL SUBDIVISION PLAN

TOWN OF FRONT ROYAL WARREN COUNTY, VIRGINIA

COMMONWEALTH OF VIRGINIA
JERRY WAYNE DOVE, JR.
Lic. No. 047794
10/15/19
PROFESSIONAL ENGINEER

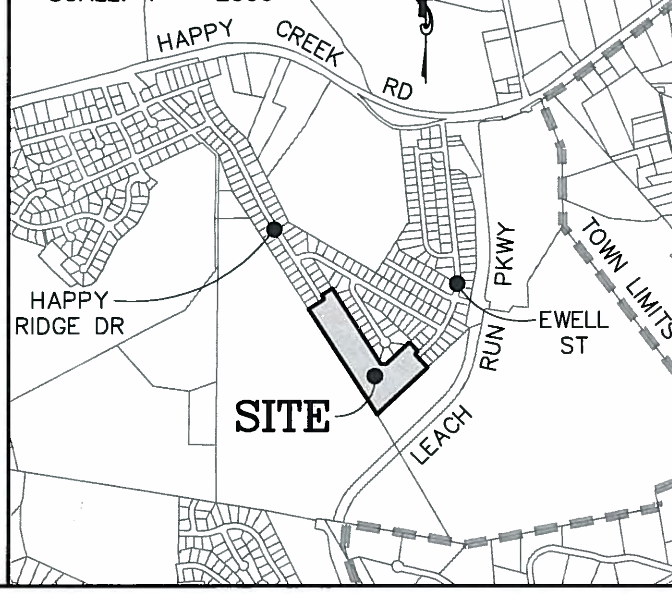
PLAN STATUS	
07/24/19	COUNTY SUBMISSION
10/01/19	COUNTY COMMENTS
DATE	DESCRIPTION

GC DESIGN	MCW DRAWN	CHKD
SCALE	H: V:	
JOB No. 1602-02-016		
DATE JULY 19, 2019		
FILE No. 1602-0-CP-005		

APPROVALS

TOWN OF FRONT ROYAL PLANNING COMMISSION	DATE
TOWN COUNCIL	DATE
DIRECTOR OF FINANCE	DATE

VICINITY MAP
SCALE: 1" = 2000'



OWNER'S CONSENT AND DEDICATION

I, CHRIS S. RAMSEY, PRESIDENT OF RAMSEY, INC., A VIRGINIA CORPORATION, THE OWNER AND DEVELOPER OF THE SUBDIVISION SHOWN HEREON, DO HEREBY CERTIFY THAT THE SUBDIVSION AND EASEMENTS DEPICTED HEREIN ARE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRE OF THE UNDERSIGNED OWNER.

PRESIDENT OF RAMSEY, INC. ______________________________ DATE ______________

NOTARY'S CERTIFICATE

I, ______________________, A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF VIRGINIA, AT LARGE, DO HERBY CERTIFY THAT ______________________, WHOSE NAME(S) IS(ARE) SIGNED TO THE FOREGOING OWNER'S CONSENT AND DEDICATION, HAS(HAVE) ACKNOWLEDGED THE SAME BEFORE ME IN MY STATE.

GIVEN UNDER MY HAND THIS ________ DAY OF ______________, 2019

MY COMMISSION EXPIRES ______________________

AREA TABULATION

33 LOTS	374,768 S.F.	OR 8.60346 ACRES
LOT 900	67,551 S.F.	OR 1.55077 ACRES
STREET	99,011 S.F.	OR 2.27299 ACRES
TOTAL AREA	541,330 S.F.	OR 12.42722 ACRES

SURVEYOR'S CERTIFICATE

I, PAUL SWARTZ, A DULY LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA, DO HEREBY CERTIFY THAT THE PROPERTY SHOWN HEREON IS NOW IN THE NAME OF RAMSEY, INC., A VIRGINIA CORPORATION, AS RECORDED IN INSTRUMENT 010008722, LAST MODIFIED BY INSTRUMENT 070005283; ALL AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.

I FURTHER CERTIFY THAT THIS SUBDIVISION LIES WITHIN THE BOUNDS OF THE ORIGINAL TRACT AND THAT THIS SURVEY COMPLIES WITH THE MINIMUM STANDARDS ESTABLISHED BY THE VIRGINIA BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS.

Paul Swartz

PAUL SWARTZ
L.S. 002701

FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

1602-A-RP-003

DWG: P:\1602 – Happy Creek Knolls Sec 3\1602-02-015 (SUR) – Happy Creek Knolls Sec 4\Survey\Plats\1602-A-RP-003.dwg

DATE: AUGUST 5, 2019

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REVISION

COMMONWEALTH OF VIRGINIA
PAUL SWARTZ
Lic. No. 002701
8-5-19
LAND SURVEYOR

BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 1 OF 11	BY: SKS
COUNTY REF NO:	SCALE: NONE	CHK:

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	170.00'	298.37'	N 73°49'31" W	261.52'	100°33'34"	204.62'
C2	230.00'	403.65'	N 73°49'40" W	353.81'	100°33'17"	276.81'
C3	25.00'	39.27'	S 68°33'01" E	35.36'	90°00'00"	25.00'
C4	25.00'	39.27'	S 21°26'59" W	35.36'	90°00'00"	25.00'
C5	200.00'	351.00'	N 73°49'40" W	307.66'	100°33'17"	240.71'

EASEMENT LEGEND

- (E) 10' ELECTRIC EASEMENT
- (SD) STORM DRAINAGE EASEMENT
- (SS) SANITARY SEWER EASEMENT
- (W) WATERLINE EASEMENT
- (E) EX. 10' ELECTRIC EASEMENT INSTR. 070005283
- (SD1) EX. STORM DRAIN EASEMENT INSTR. 030014359 **HATCHED PORTION HEREBY VACATED**
- (SD2) EX. TEMPORARY STORM DRAIN EASEMENT INSTR. 070005283 **HATCHED PORTION HEREBY VACATED**
- (SS) EX. TEMPORARY SANITARY SEWER EASEMENT INSTR. 070005283 **HATCHED PORTION HEREBY VACATED**
- (TT) EX. TEMPORARY TURNAROUND EASEMENT INSTR. 070005283 **HATCHED PORTION HEREBY VACATED**
- (W) EX. TEMPORARY WATER EASEMENT INSTR. 070005283 **HATCHED PORTION HEREBY VACATED**

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 66°26'59" E	120.03'
L2	S 68°46'27" W	39.07'
L3	S 58°12'45" W	30.86'
L4	S 54°22'00" W	29.42'
L5	S 40°25'36" W	36.48'
L6	S 70°00'32" E	7.09'
L7	N 86°59'15" E	27.59'
L8	N 80°30'55" E	50.77'
L9	N 73°28'00" E	24.14'
L10	N 63°32'18" E	23.63'
L11	N 22°16'49" W	63.91'
L12	N 55°53'41" E	74.04'
L13	S 34°06'19" E	107.41'
L14	S 32°37'17" W	21.26'
L15	S 61°09'36" W	64.74'
L16	N 55°53'41" E	76.00'
L17	S 85°11'21" E	76.02'
L18	N 63°56'12" E	135.46'
L19	N 54°42'52" W	77.12'
L20	N 27°45'25" W	150.38'
L21	N 76°25'01" E	20.07'
L22	N 34°04'38" W	7.58'
L23	S 66°59'13" W	26.45'
L24	N 18°04'36" E	37.10'

NOTES

1. THE PROPERTY DELINEATED HEREON IS LOCATED ON WARREN COUNTY TAX ASSESSMENT MAP 20A2 ((13)) PARCEL G AND IS ZONED R-1.
2. THE PROPERTY IS NOW IN THE NAME OF RAMSEY, INC AS RECORDED IN INSTRUMENT 01-0008722 AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA.
3. BOUNDARY AND NORTH MERIDIAN INFORMATION AS SHOWN HEREON ARE BASED ON A RECORD PLAT OF HAPPY CREEK KNOLLS, SECTION 1 AS RECORDED IN INSTRUMENT 010009421 AMONG THE LAND RECORDS OF WARREN COUNTY, VIRGINIA AND DOES NOT REPRESENT A CURRENT FIELD RUN SURVEY.
4. THE PROPERTY AS SHOWN HEREON IS SUBJECT TO ALL COVENANTS AND RESTRICTIONS OF RECORD AND THOSE RECORDED HEREWITH. BOWMAN CONSULTING GROUP, LTD. HAS NOT BEEN PROVIDED A TITLE REPORT AND THEREFORE THIS PLAT DOES NOT NECESSARILY INDICATE THE EXISTENCE OF ANY COVENANTS AND RESTRICTIONS ON THE PROPERTY.
5. CORNER MARKERS TO BE SET PURSUANT TO WARREN COUNTY SUBDIVISION ORDINANCE AS MANDATED BY SUBSECTION 15.2-2240 OF THE CODE OF VIRGINIA.
6. THE PROPERTY SHOWN HEREON IS NOT IN A 100-YEAR FLOODPLAIN. IT LIES IN ZONE "X" (UN-SHADED)(AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP FOR TOWN OF FRONT ROYAL VIRGINIA, WARREN COUNTY, COMMUNITY-PANEL NUMBER 51187C0116C, EFFECTIVE DATE JUNE 3, 2008.
7. BULDING RESTRICTION LINES AS FOLLOWS:
   FRONT: 35 FEET
   SIDE: 10 FEET
   REAR: 25 FEET

FINAL PLAT

HAPPY CREEK KNOLLS

SECTION 4

HAPPY CREEK MAGISTERIAL DISTRICT

WARREN COUNTY, VIRGINIA

1602-A-RP-003

DWG: P:\1602 - Happy Creek Knolls Sec 3\1602-02-015 (SUR) - Happy Creek Knolls Sec 4\Survey\Plats\1602-A-RP-003.dwg

DATE: AUGUST 5, 2019

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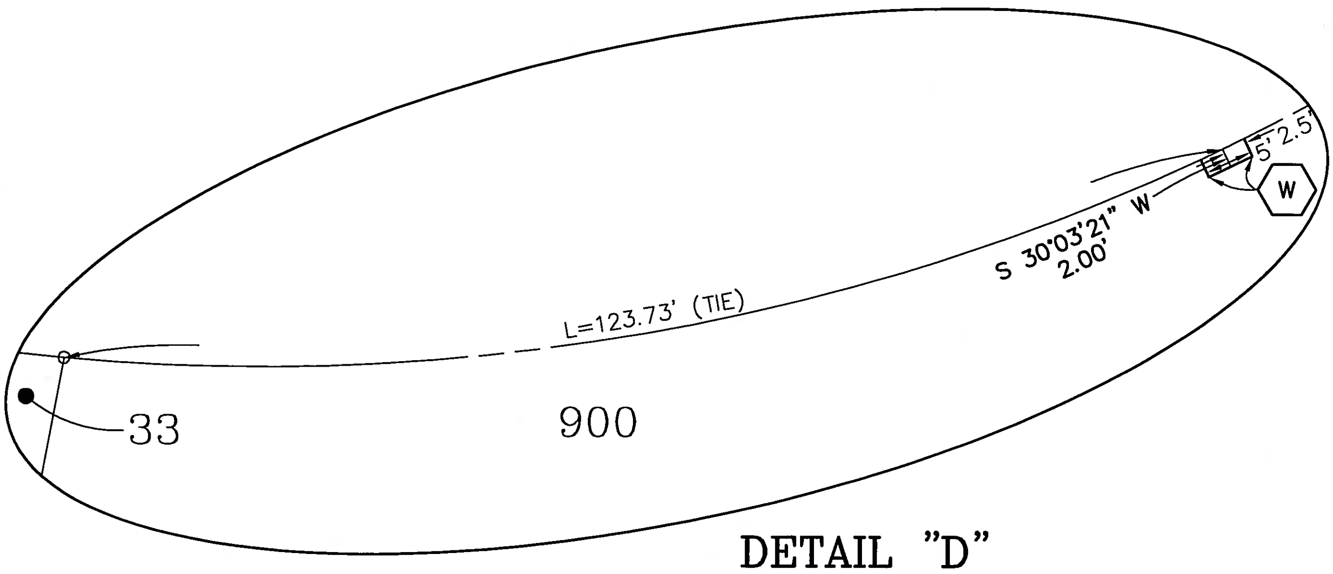
Lic. No. 002701
8-5-19
LAND SURVEYOR

BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 2 OF 11	BY: SKS
COUNTY REF NO:	SCALE: NONE	CHK:

ADJACENT OWNER INFORMATION

LOT IDENTIFICATION	TAX MAP #	OWNERS NAME	DEED REFERENCE
LOT 57 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-57	ELI THOMAS JOHNSON	INSTR. 160006592
LOT 58 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-58	KAREN FLICK-TOMLINSON	INSTR. 090002897
LOT 64 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-64	KEVIN T. JENKINS	INSTR. 060003463
LOT 65 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-65	JOHN B. & MARIE P. MAVRETICH	INSTR. 180002557
LOT 66 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-66	JAMES L. & VALERIE S. CLARK	INSTR. 170005635
LOT 67 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-67	MARY ELIZABETH BOCKRATH	INSTR. 080000003
LOT 68 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-68	ERIC J. & SARAH T. JENISLAWSKI	INSTR. 060004592
LOT 69 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-69	KENNETH TERRY LECKIE	INSTR. 180004020
LOT 70 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-70	KEITH W. & MICHELLE L. FAUVER	INSTR. 180001002
LOT 71 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-71	DAVID EDWARD FISHER	INSTR. 130004722
LOT 72 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-72	JOHN M. KELLY	INSTR. 110000102
LOT 73 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-73	KRISTI N. COONS	INSTR. 160005012
LOT 74 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-74	PETER KOZHENEVSKY	INSTR. 050016309
LOT 75 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-75	MICHAEL R. KELLY	INSTR. 120000401
LOT 76 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-76	TIMOTHY J. TAYLOR	INSTR. 170002441
LOT 77 SECTION 2 HAPPY CREEK KNOLLS	T.M. 20A213-2-77	JAMES M. & BETSY A. SHANLEY	INSTR. 170001877
LOT 112 SECTION 3 HAPPY CREEK KNOLLS	T.M. 20A213-3-16	JERRY L. HAMMAN	INSTR. 090004905
LOT 135 SECTION 3 HAPPY CREEK KNOLLS	T.M. 20A213-3-17	JERRY L. HAMMAN	INSTR. 090004905
LOT 138 SECTION 3 HAPPY CREEK KNOLLS	T.M. 20A213-3-20	JOHN WESLEY EVANS IV	INSTR. 190001619



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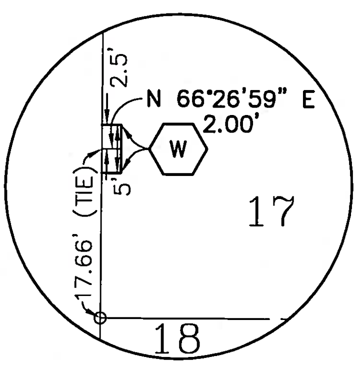

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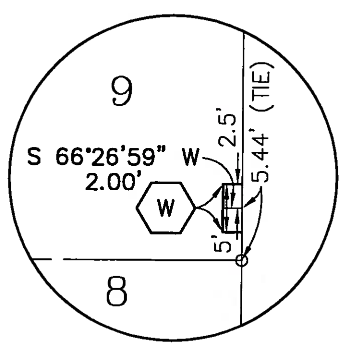

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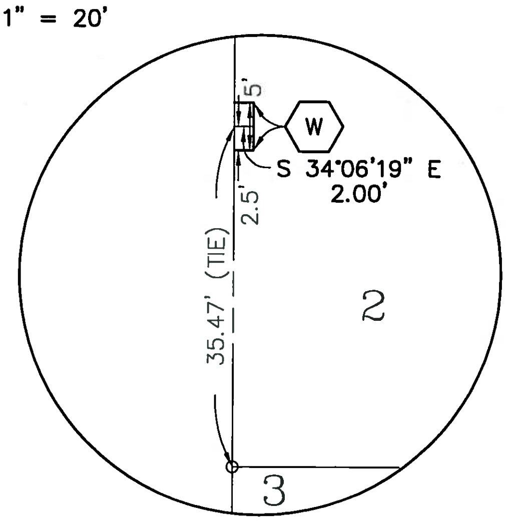

DETAIL "D"
SCALE: 1" = 20'

FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

20 0 10 20
GRAPHIC SCALE

1602-A-RP-003

DWG: P:\1602 - Happy Creek Knolls Sec 3\1602-02-015 (SUR) - Happy Creek Knolls Sec 4\Survey\Plats\1602-A-RP-003.dwg

DATE: AUGUST 5, 2019

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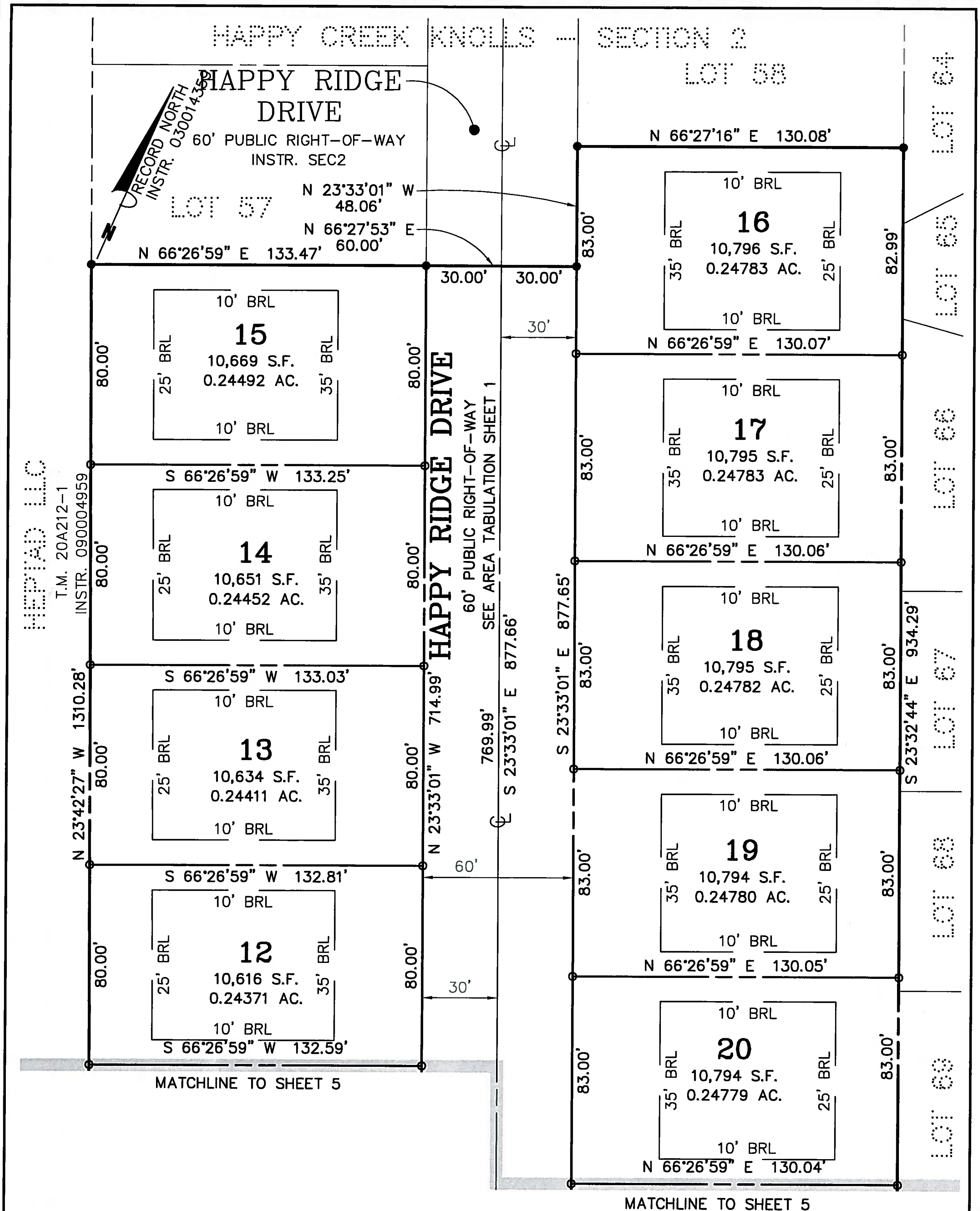
REVISION

COMMONWEALTH OF VIRGINIA
PAUL SWARTZ
Lic. No. 002701
8-5-19
LAND SURVEYOR

BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 3 OF 11	BY: SKS
COUNTY REF NO:	SCALE: 1" = 20'	CHK:



* = BRL MERGED AROUND PROPOSED EASEMENT SEE SHEETS 9 & 11

FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

50 0 25 50
GRAPHIC SCALE

1602-A-RP-003

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LAND SURVEYOR
8-5-19

BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 4 OF 11	BY: SKS
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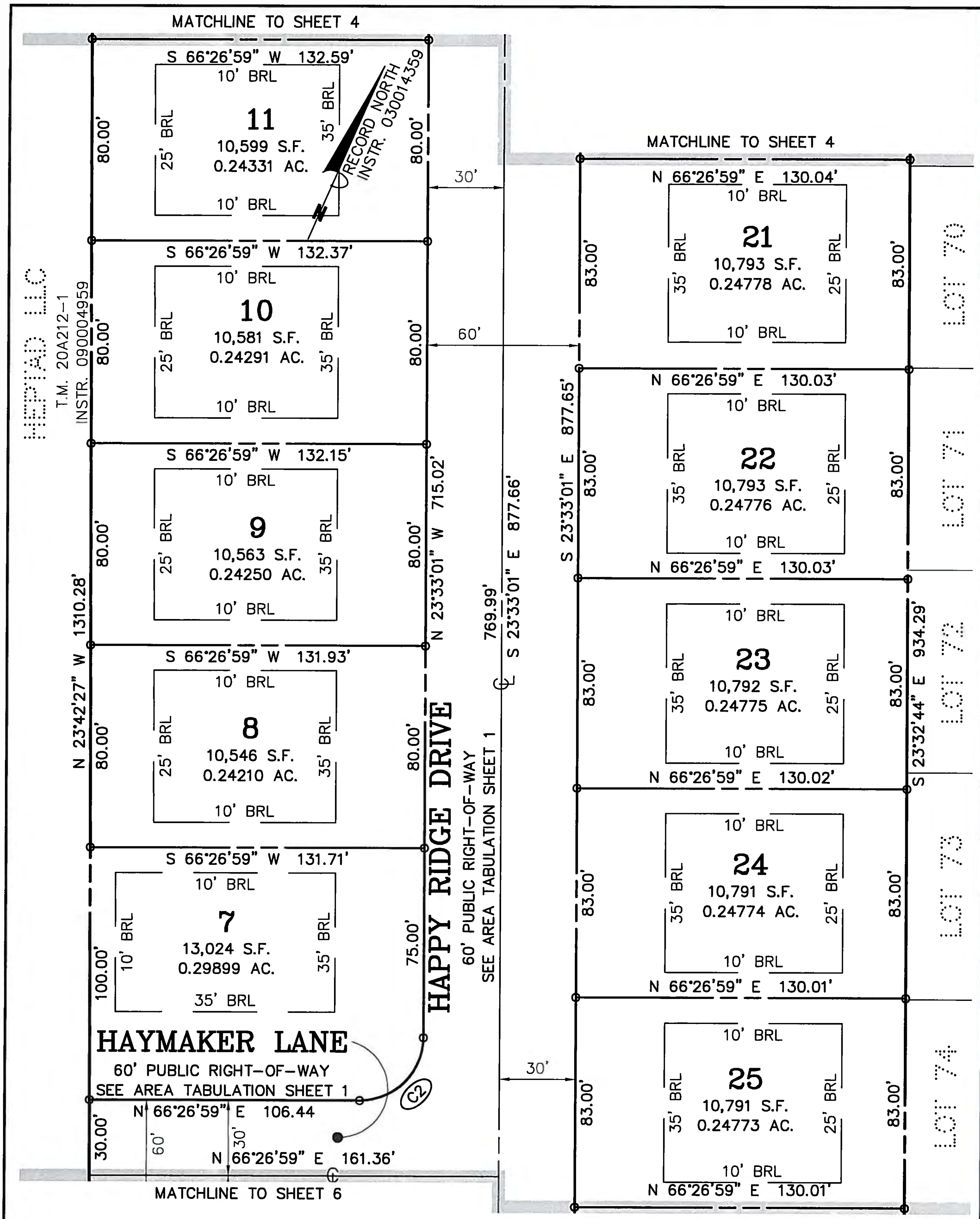

BRL MERGED AROUND
* = PROPOSED EASEMENT
SEE SHEETS 9 & 11

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GRAPHIC SCALE

FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
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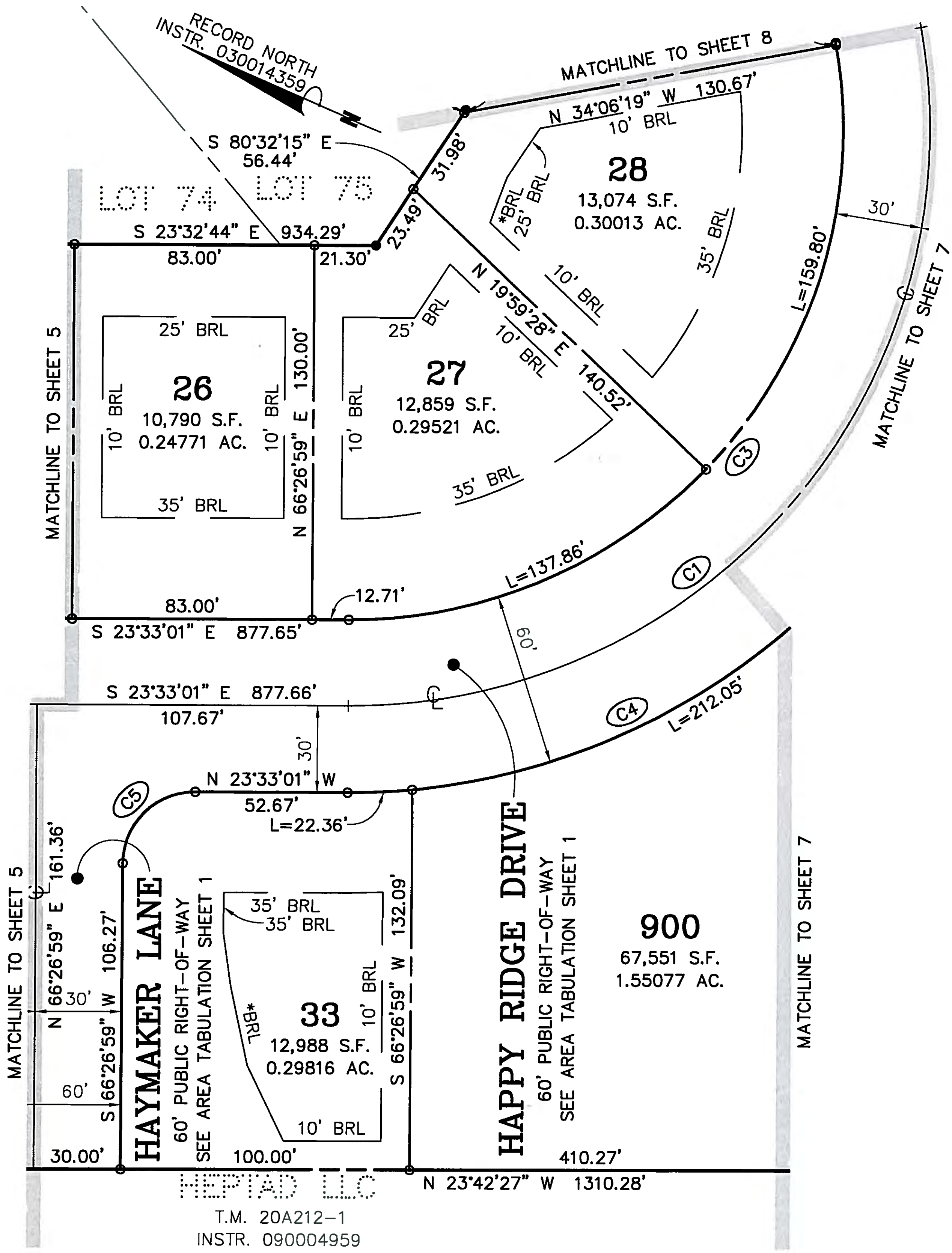
COUNTY REF NO:	SCALE: 1" = 50'	CHK:



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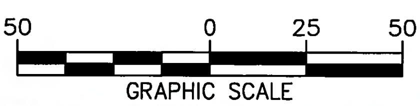

FINAL PLAT

HAPPY CREEK KNOLLS

SECTION 4

HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

1602-A-RP-003

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REVISION

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PAUL SWARTZ
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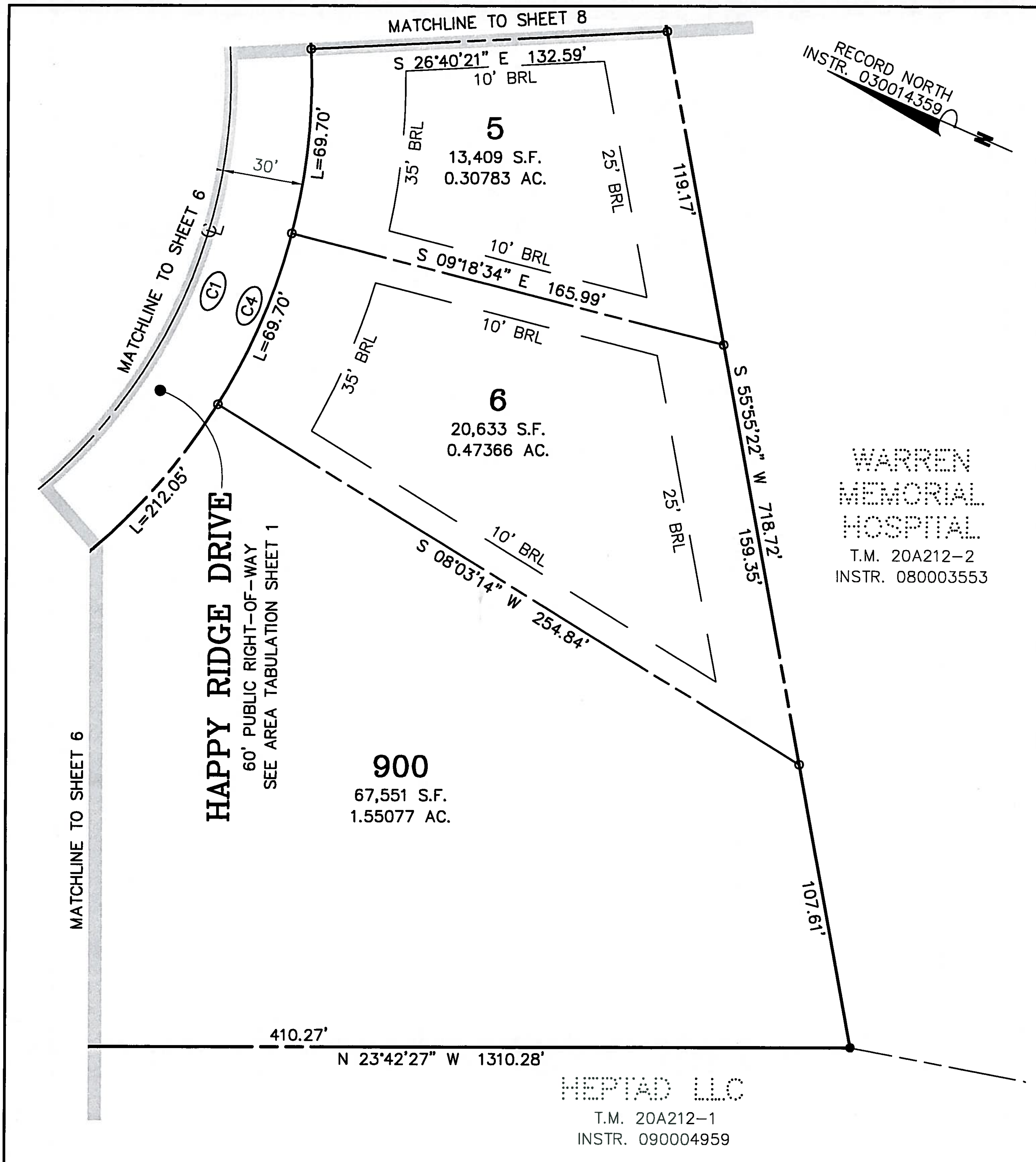
LAND SURVEYOR
8-5-19

BCG PROJECT NO: 1602-02-016	TASK: 00010	SHEET 6 OF 11	BY: SKS
COUNTY REF NO:		SCALE: 1" = 50'	CHK:



* = BRL MERGED AROUND PROPOSED EASEMENT SEE SHEETS 9 & 11

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GRAPHIC SCALE

FINAL PLAT

HAPPY CREEK KNOLLS

SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

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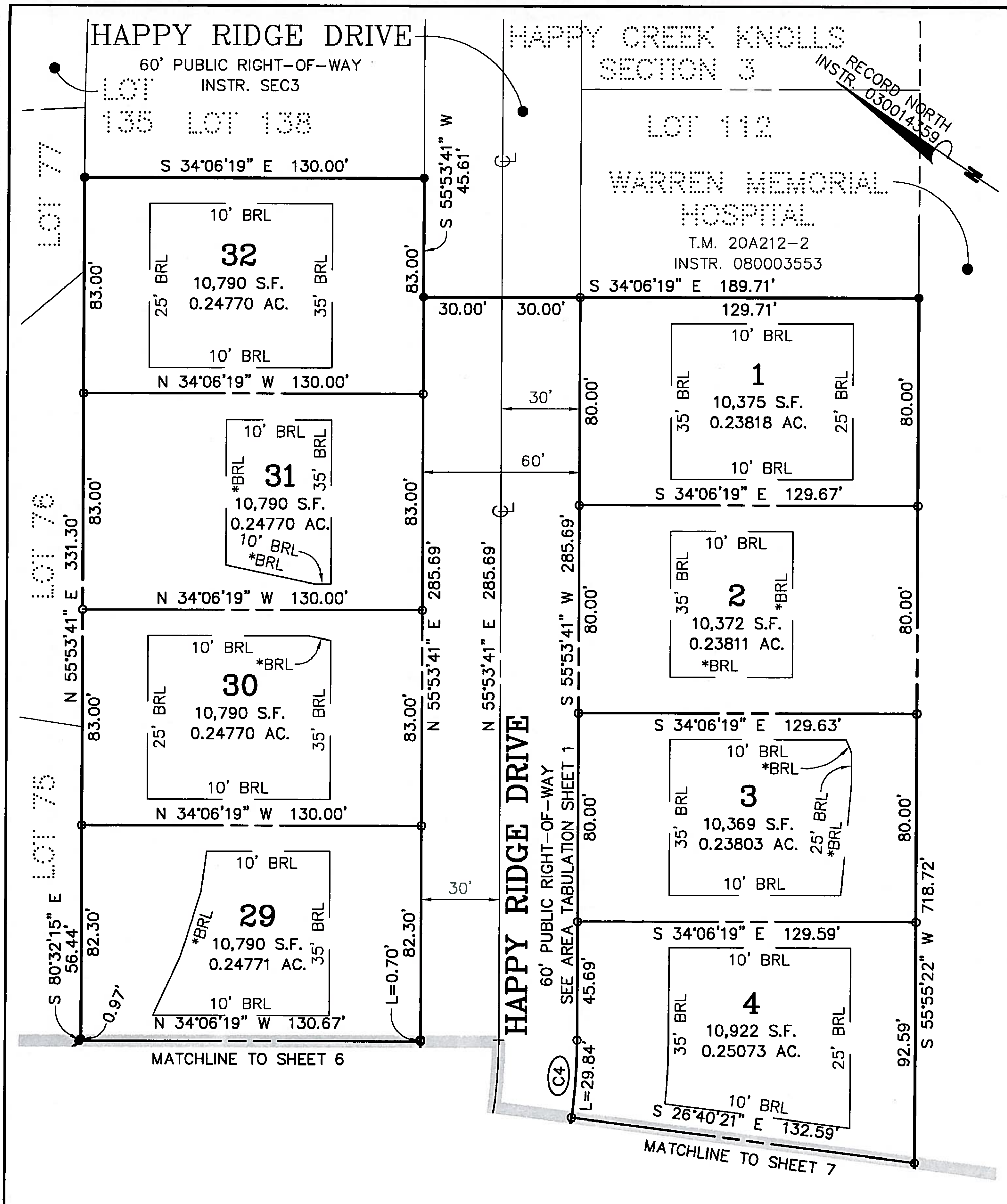
LAND SURVEYOR

BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 7 OF 11	BY: SKS
COUNTY REF NO:	SCALE: 1" = 50'	CHK:



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GRAPHIC SCALE

FINAL PLAT

HAPPY CREEK KNOLLS

SECTION 4

HAPPY CREEK MAGISTERIAL DISTRICT

WARREN COUNTY, VIRGINIA

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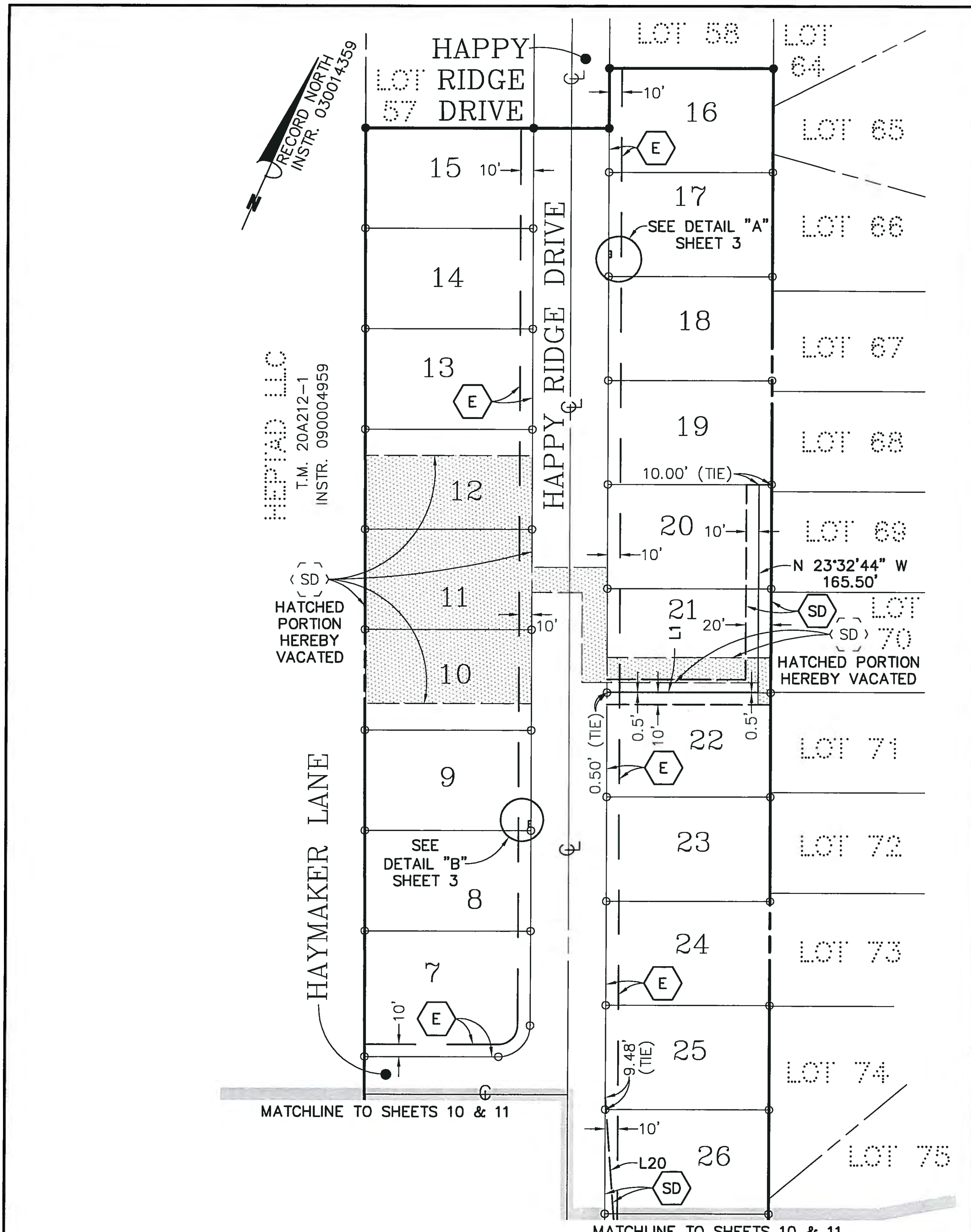
BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 8 OF 11	BY: SKS
COUNTY REF NO:	SCALE: 1" = 50'	CHK:



FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

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GRAPHIC SCALE

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BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 9 OF 11	BY: SKS
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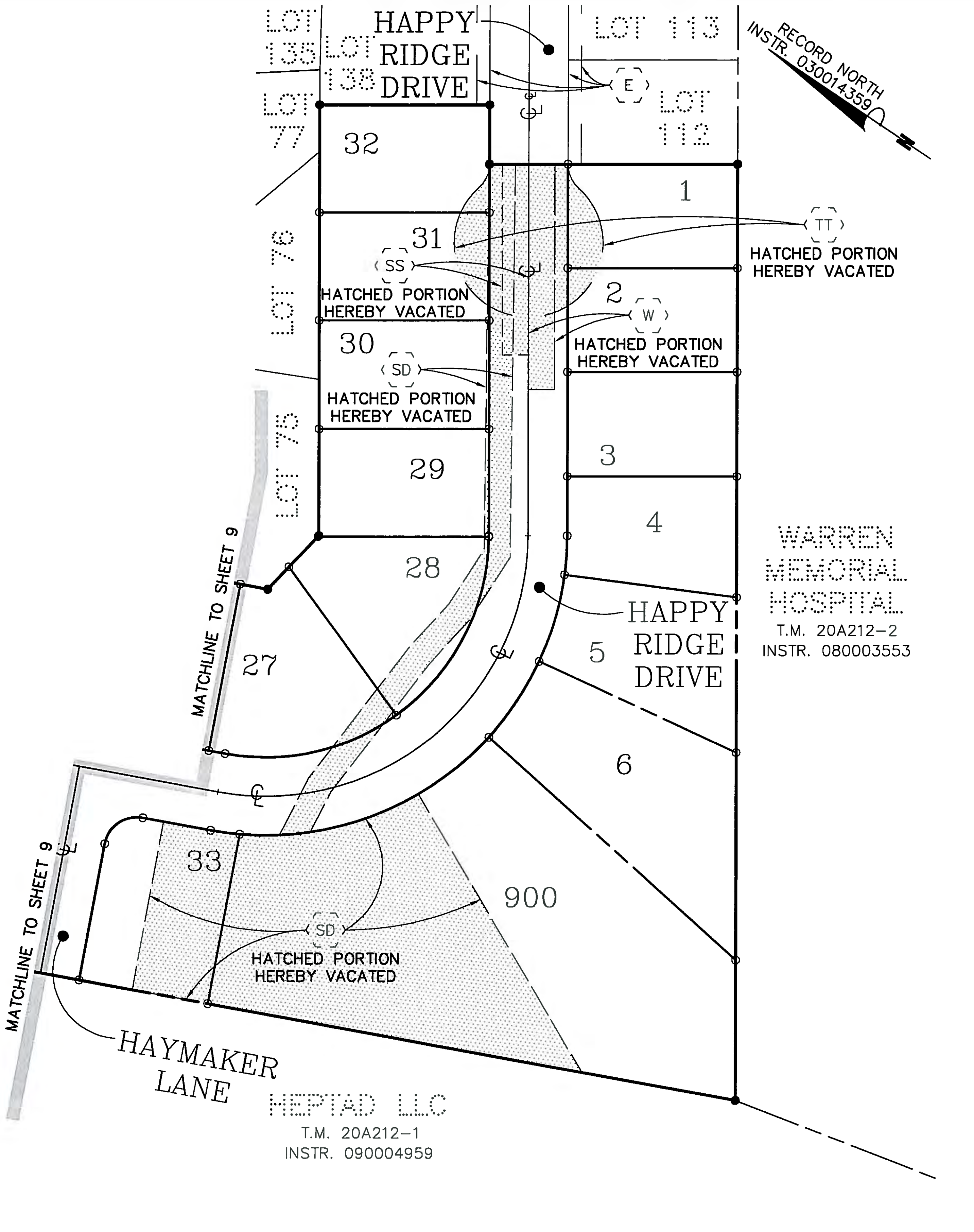

FINAL PLAT
HAPPY CREEK KNOLLS
SECTION 4
HAPPY CREEK MAGISTERIAL DISTRICT
WARREN COUNTY, VIRGINIA

SEE SHEET 11 FOR PROPOSED EASEMENTS

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GRAPHIC SCALE

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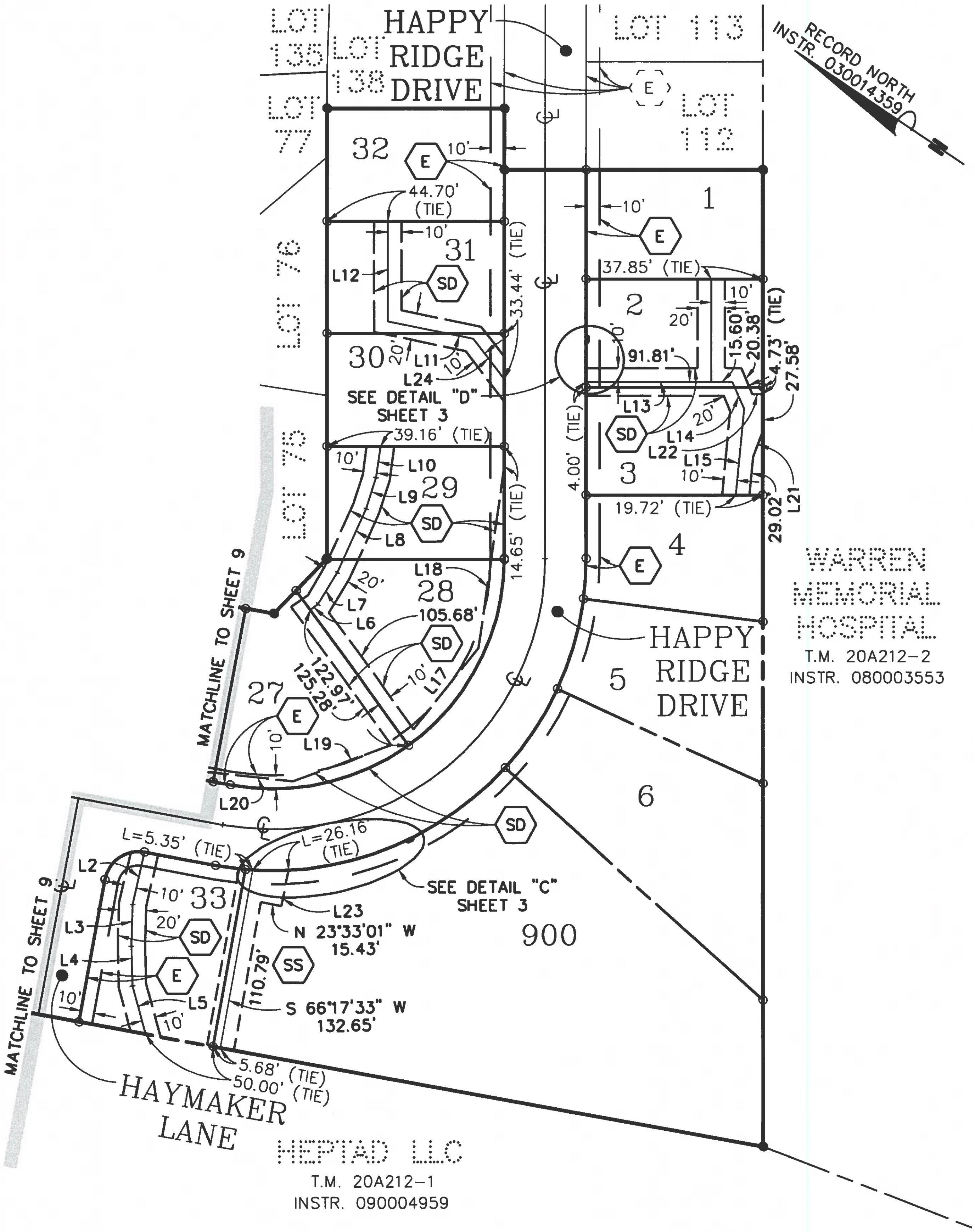

FINAL PLAT

HAPPY CREEK KNOLLS

SECTION 4

HAPPY CREEK MAGISTERIAL DISTRICT

WARREN COUNTY, VIRGINIA

100 0 50 100

GRAPHIC SCALE

SEE SHEET 10 FOR EXISTING EASEMENTS BEING VACATED

1602-A-RP-003

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8-5-19
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BCG PROJECT NO: 1602-02-016 TASK: 00010	SHEET 11 OF 11	BY: SKS
COUNTY REF NO:	SCALE: 1" = 100'	CHK:

Bowman
CONSULTING

October 15, 2019

Mr. Jeremy F. Camp, Director
Department of Planning & Zoning
Town Administration Building
102 East Main Street
Front Royal, VA 22630-1560

RE: **Happy Creek Knolls Section 4**
FRSUB-000830-2018, Major Subdivision Plan and Final Record Plats
BCG Project #1602-02-016

Dear Mr. Camp:

We have received your comments from the staff report for the September 18, 2019 Planning Commission Meetings and offer the following in response.

A. **PLANNING AND ZONING REVIEW COMMENTS**

l. *Street Name. The portion of Ewell Street that is south of Imboden Drive, from the centerline intersection, will need to be renamed to Happy Ridge Drive based on the proposed street extension layout. Please include new street signage at this intersection as part of the plans.*

Response: The street has been revised as requested. See Sheets 3-4A, 6, 8, 27, & 29.

2. *Final Plats. You will need to submit signed and stamped final plats prior to final approval. Thank you for submitting the advanced copies for review.*

Response: Comment acknowledged. Plats have been provided as requested. See Attached.

3. *Development Surety. After consultation with the Town Engineer and Public Works Department, a development guarantee, such as a performance bond, letter of credit or cash escrow, is required in the amount of $1,242,859.20. This will need to be submitted to the Town before final approvals are granted.*

Domestic Water Total -	*$ 443,400.00*
Sanitary Sewer Total -	*$ 277,150.00*
Storm water System and Asphalt -	*$ 382,322.00*
Handrail	*$ 21,000.00*
Landscaping (public)	*$ 6,000.00*
SUBTOTAL	*$1,129,872.00*
10% Contingency	*$ 112,987.20*
TOTAL BOND AMOUNT	*$1,242,859.20*

101 South Street, SE, Leesburg, Virginia 20175
p: 703.443.2400 | f: 703.443.2425
www.bowmanconsulting.com

Response: Comment acknowledged. Bond documents will be submitted under separate cover.

4. *Maintenance of nondedicated open space. Please submit for review by the Town Attorney all covenants or other documents governing the reservation and maintenance of undedicated open space, including the proposed stormwater management facility. A maintenance agreement with the Town is required. Town Staff can provide you with a template document.*

Response: Comment acknowledged. The requested documentation will be provided under separate cover.

5. *Subdivision Name Error. Correct the name of the subdivision under the Owner's Certificate on page 1 of 33 and provide the owner's signature here on the final plan sets for approval. It currently states that the subdivision name is Happy Hills.*

Response: The subdivision name has been corrected as requested. See Sheet 1.

B. <u>TOWN ENERGY SERVICES DEPARTMENT</u>

1. *The plans must have a sheet with underground electrical conduit drawings shown as to where contractor will be installing primary conduit to feed distribution transformers for the community and where it is being fed from.*

Response: As additional "Utility Plan" sheet (Sheet 4A) has been provided as requested. See Sheet 4A.

C. <u>TOWN PUBLIC WORKS DEPARTMENT</u>

1. *There needs to be three (3) valves at every MJ tee.*

Response: Additional valves have been added as requested. See Sheets 4-9.

2. *The Applicant will need a Right-of-Way utilization permit and bond.*

Response: Comment acknowledged. Permit and bond will be provided under separate cover.

3. *Landscaping. Please modify the landscaping plan to address the following review comments from the Town's arborist/horticulturalist.*

   a. *Diversify the White Pine species with other evergreen species to avoid creating a monoculture. Other species that may be used include: Japanese Cedar, Norway Spruce, White Spruce, Serbian Spruce and Virginia Pine. Leyland Cypress trees are NOT appropriate species.*

   Response: White Pines have been removed and substituted with Norway Spruce, Serbian Spruce, and Scotch Pine as requested. See Sheets 27 & 28.

   b. *Pin Oaks should not be planted next to sidewalks due to downward growing branches and the need for constant pruning. Include other oak varieties, or other shade trees, like London Plane Tree, Blackgum, Hybrid Elms and/or Hackberry.*

Response: All Pin Oaks have been removed as a street tree and substituted with London Plan Tree as requested. See Sheets 27 & 28.

c. *Use Mixed cultivars for Red Maples. You may also use Sugar Maples and Freeman Maples.*

Response: A second Red Maple cultivar has been added as well as additional Sugar Maples. See Sheets 27 & 28.

D. TOWN ENGINEER

1. *The subdivision plans do not show the future continuation of the gravity sewer line, so the Applicant would have to submit a new plan and profile of the sewer extension before making the off-site connection.*

Response: Comment acknowledged.

2. *A maintenance agreement for the pond will have to be recorded as part of DEQ's permitting process. I don't think the Town will need a separate agreement since it will be maintained by the POA.*

Response: Comment acknowledged.

E. WARREN COUNTY BUILDING OFFICIAL

1. *Evidence of an existing (current) Stormwater Management (SWM) plan and permit with Department of Environmental Quality (DEQ). If that does not exist, DEQ must be contacted to determine what is required.*

Response: Comment acknowledged.

2. *Evidence of an existing (current) Erosion and Sediment Control (ESC) plan and permit with Warren County. If that does not exist, a new plan and permit would be required.*

Response: Comment acknowledged.

If you have further questions please contact me at the office.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Jerry W. Dove, Jr.

Jerry W. Dove, Jr., P.E.
Sr. Project Manager

cc: Chris Ramsey (Ramsey, Inc.)

12

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 12

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Budget Amendment for Fairground Water Tank Rehabilitation Project

Summary: Council is requested to approve a budget amendment in the amount of $532,625 to utilize funds from the water fund balance reserve to allow for completion of the Fairground Road Water Tank Rehabilitation.

CHA Consulting	-	$146,500.00
Utility Services Inc	-	$887,700.00
Total Project Cost	-	$1,034,200.00

Budget/Funding: 9601-3510110-Water Treatment Plant – Appropriated Funds Forward - $532,625
9601-47009-Water Treatment Plant – Building & Structures - $532,625

Attachments: None

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial_______

Proposed Motion: **I move that Council approve a budget amendment in the amount of $532,625 to utilize funds from the water fund balance reserve to allow for completion of the Fairground Road Water Tank Rehabilitation.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

13

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 13

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Fairground Water Tank Rehabilitation Project Administration and Inspection

Summary: Council is requested to approve the award of $105,000 to CHA Consulting for the interior ($40,000) and exterior ($65,000) administration and inspection of the Fairground Road Water Tank Rehabilitation Project.

Council approved $41,500 to CHA Consulting on February 25, 2019 for Phase I of this project and $105,000 is needed to complete the project for a total cost to CHA Consulting of $146,500.

Budget/Funding: Water Treatment Plant budget line 9601-R47009 – Water Treatment Plant Building & Structures

Attachments: Memorandums from Purchasing Manager and Director of Public Works; Cover Sheet from October 21 Work Session; Council Approval from February 24, 2019

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial______

Proposed Motion: **I move that Council approve the award of $105,000 to CHA Consulting for the interior ($40,000) and exterior ($65,000) administration and inspection of the Fairground Road Water Tank Rehabilitation Project.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

Town of Front Royal, Virginia

Purchasing, Department of Finance

MEMORANDUM

Date: October 23, 2019

To: Tina Presley, Senior Executive Assistant

From: Alisa Scott, Purchasing Manager

RE: Request to add action item to Town Council Agenda

Purchasing received a request from the Public Works Department, Water Treatment Plant to continue to Phase 2 within the scope of work for RFQ #24 Fairgrounds Road Water Tank Rehabilitation. This second phase is the final stage and requires that CHA Consulting perform the construction administration and inspection professional services required to complete this tank rehabilitation.

Council approved the first phase of this project to CHA in the amount of $41,500.00 on February 25, 2019. This award was for Hydraulic Evaluation / Tank Offline Development, Tank Evaluation, and Bidding Documents / Bidding Phase Services. This second phase is for the interior construction administration and inspection of $40,000.00 and exterior construction administration and inspection of $65,000.00. The total professional services for the Fairgrounds water tank rehabilitation is not to exceed $146,500.00.

Staff recommends Council approve $105,000 to CHA Consulting to complete the project. Supporting this recommendation is the February 25, 2019 Council Approval with corresponding information.

Funding for this award is available in the Water Treatment Plant's budget line 9601-R47009 – Water Treatment Plant Building & Structures.

Purchasing, Department of Finance
102 E Main Street
Front Royal, VA 22630
Website: www.frontroyalva.com
Phone 540-636-6889

Work Session Agenda Form Item # 7

DATE: 10/21/19

AGENDA ITEM: Project Costs for Fairgrounds Road Water Tank Rehabilitation

SUMMARY: The Town has encumbered a total of $460,000 from previous budget cycles for phase one of the Fairground Road Water Tank Rehabilitation Project and recently received bids for the project.. Bid results show that the total amount to complete phase one of the project is estimated to be $227,125 and the estimated cost to complete the entire project is $892,625-$992,625.

If the Town were to elect to complete the entire project the total additional funds needed to complete the project is estimated to be $432,625-$532,625.

The Fairgrounds Road Water Tank will need to be temporarily taken out of service to perform the rehabilitation. If the Town elects to perform rehabilitation in multiple phases the water tank will need to be taken out of service for each phase and the Town will incur additional mobilization costs. Taking the water tank out of service requires preparation, planning, and coordination, especially with large industries located in the 522 corridor.

Council may elect to utilize water fund balance reserves to complete the project or may elect to proceed only with phase 1 at this time.

BUDGET/FUNDING: 9601-3510110 – Water Treatment Plant – Appropriated Funds Forward
9601-47009 – Water Treatment Plant Building & Structures

STAFF RECOMMENDATION:

Staff recommends for Council to approve the use of water fund balance reserves and award the entire project. Completion of the entire project will save the Town funds on mobilization costs and will help minimalize the impact to users of water. Staff feels that there are adequate reserve levels of water fund balance to allow for completion of this project.

Work Session

Town of Front Royal
Public Works

MEMORANDUM

TO: **BJ Wilson, Finance Director**
Joe Waltz, Town Manager

FROM: **Robert B Boyer, Public Works Director**

DATE: **October 8, 2019**

SUBJECT: **Project Cost for Fairgrounds Road Water Tank Rehab**

Phase 1 – Interior Work Only (Base Bid)
Total Construction - $187, 125.00
Total Engineering - $40,000.00
Phase 1 Total Cost - $227,125.00

Phase 2 – Exterior Work (Alternate Bid)
Total Construction - $700,500.00
Total Engineering - $65,000.00
Phase 2 Total Cost - $765,500.00

Total project cost for Phase 1 & Phase 2 -	$992.625.00
Funding budgeted in FY19/20 budget -	$460,000.00
Project cost left with current funding -	**$532,625.00**
Deduction for antenna removal if in current contract -	$100,000.00
Total project cost once the deduction is applied to cost -	**$432,625.00**

If you have any questions or need any further information, please contact me at 540-692-4789.

Thank You.

Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 7(C)

Meeting Date: February 25, 2019

Agenda Item: COUNCIL APPROVAL – Project Costs for Fairground Water Tank Rehabilitation Project

Summary: The Town's Fairground Water Tank was constructed in 1996 and has not been inspected or rehabilitated since that time. Council is requested to approve project costs from CHA Engineering for Task 1: Hydraulic Evaluation/Tank Offline Development; Task 2: Tank Evaluation and Task 3: Preparation of Rehabilitation Bidding Documents/Bidding Phase in the amount of $41,500

Budget/Funding: Funding from 9601-R7009 – Buildings and Structures

Attachments: Memo from Director of Public Works and Proposal and Exhibits

Meetings: Work Session held February 19, 2019

Staff Recommendation: Approval ✓ Denial______

Should Council wish to remove this item from the consent agenda, the following motion would allow approval of this request:

Proposed Motion: **I move that Council approve Fairground Water Tank Rehabilitation project costs from CHA Engineering for Task 1: Hydraulic Evaluation/Tank Offline Development; Task 2: Tank Evaluation and Task 3: Preparation of Rehabilitation Bidding Documents/Bidding Phase in the amount of $41,500**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 14

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Fairground Water Tank Rehabilitation Project

Summary: Town Council is requested to approve the award of $887,700.00 to Utility Service Company Inc for the Fairgrounds Road Water Tank Rehabilitation Project. This will allow for total completion of the rehabilitation project and eliminate having the project completed in phases.

Budget/Funding:

9601-R47009	Water Treatment Plant Building & Structures	$547,900.00
9601-47009	Water Treatment Building & Structures	$339,800.00
	Total	**$887,700.00**

Attachments: Memorandums from Purchasing Manager, Director of Public Works, letter from CHA Consulting, and Bid Tabulation Sheet

Meetings: Work Session held October 21, 2019

Staff Recommendation: Approval JW Denial_______

Proposed Motion: **I move that Council approve the award of $887,700.00 to Utility Service Company Inc for the Fairgrounds Road Water Tank Rehabilitation Project.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

Town of Front Royal, Virginia

Purchasing, Department of Finance

MEMORANDUM

Date: **October 23, 2019**

To: **Tina Presley, Senior Executive Assistant**

From: **Alisa Scott, Purchasing Manager**

RE: **Request to add action item to Town Council Agenda**

Purchasing received a request from the Public Works Department, Water Treatment Plant to rehabilitate the Fairgrounds Road water tank with options to perform work on either the inside of the tank or both the inside and outside. On September 26, 2019 I held a public bid opening for IFB #30-2019 and received five (5) bids. Utility Service Company, Inc. was the lowest responsive and responsible bidder. Their bid to complete both the inside and outside rehabilitation is $887,700.00. There is a possible $100,000 cost deduction if antenna and all cables can be removed prior to painting the tank's exterior.

Staff recommends Council approve the award of $887,700.00 to Utility Service Company, Inc. Supporting this recommendation is an enclosed memo from Robbie Boyer, Public Works Director, a recommendation letter from CHA Consulting, and bid tabulation.

Funding for this project is available in the Water Treatment Plant's budget line 9601-R7009.

Purchasing, Department of Finance
102 E Main Street
Front Royal, VA 22630
Website: www.frontroyalva.com
Phone 540-636-6889

Town of Front Royal
Public Works

MEMORANDUM

TO: **Alisa Scott, Manager of Purchasing**

BJ Wilson, Finance Director

FROM: **Robert B Boyer, Public Works Director**

DATE: **October 22, 2019**

SUBJECT: **Recommendation of approval for Utility Services Inc.**

The Public Works Department would like to recommend the approval of the Fairgrounds Road Water Tank rehab project to Utility Services Company, Inc. Utility Services has performed inspections on the Town's water tanks several years and has just completed projects on the 4H Center and Route 55 water tank. Their work has been of good quality and they have done a good job keeping to the work schedule so the projects would be completed on time.

I would recommend the Town move forward awarding the $887,700.00 to Utility Services Company, Inc to complete the total project at one time, this will allow the 522N water tank to only be taken out of service one time limiting liability concerns and by performing the whole project at once will reduce the mobilization cost and we believe allow for a better final project.

If you have any questions or need any further information, please contact me at 540-692-4789.

Thank You.

October 1, 2019

Mr. Mike Kisner
Superintendent
Water Treatment Plant
Town of Front Royal
102 East Main Street
Front Royal, VA 22630

Re: Town of Front Royal Fairgrounds Tank Rehabilitation–Award Recommendation; CHA Project No. 36123

Dear Mike:

On Thursday, September 26, 2019, bids were received for the rebidding of the Town of Front Royal Fairgrounds Tank Rehabilitation. This project includes a Base Bid and Alternative A Bid for the rehabilitation of a 1.0 million gallon elevated water storage tank.

Five bids were received for the Fairgrounds Tank Rehabilitation. A summary of the bids is listed below, and a detailed bid tabulation is enclosed.

Bidder Name	Total Base Bid	Alternate A	Deduct
Utility Service Company, Inc.	$187,200.00	$700,500.00	-$100,000.00
D&M Painting Corporation	$207,400.00	$863,300.00	-$15,000.00
Worldwide Industries Corporation	$238,950.00	$624,377.00	-$40,000.00
Manolis Painting, Inc.	$313,900.00	$871,600.00	-$2,500.00
Nostos SS Contractors, LLC	$333,915.00	$689, 292.00	-$4,200.00

Utility Service Company, Inc. (USC) was the lowest responsive and responsible bidder. CHA has worked with USC in the past and have had success with their work and have no issue with awarding the total bid to USC.

The Total Base bid of $187,200.00 reflects a portion of the project cost associated with fully rehabilitating the interior of the Fairgrounds Tank. The Alternate A bid of $700,00.00 reflects a portion of the project cost associated with fully rehabilitating the exterior of the Fairgrounds Tank. The total construction rehabilitation cost for completing the work is $887,700.00.

1341 Research Center Dr., Suite 2100, Blacksburg, VA 24060-5548
T 540.552.5548 • F 540.552.5577 • www.chacompanies.com

CHA's costs associated with the Phase 1 Base bid for construction administration and inspection is $40,000.00. CHA's costs associated with Phase 2 Alternate A for construction administration and inspection is $65,000. Costs for professional services to complete these two phases shall not be more than $105,000.

We appreciate the opportunity to work with the Town on this project. If you should have any question with respect to this recommendation, please do not hesitate to contact me.

Sincerely,

Stephen M. Steele

Stephen M. Steele, P.E.
Associate Vice President

SMS\egl
Enclosure
cc: Alisa Scott, Manager of Purchasing, Town of Front Royal (w/enclosures)

CHA

Town of Front Royal Fairgrounds Tank Rehabilitation

September 26, 2019, 2:00 p.m. EST

CHA Project Number: 36123 - Base Bid Tabulation				*Utility Service Company, Inc.*		*D&M Painting Corporation*		*Worldwide Industries Corporation*		*Manolis Painting, Inc.*		*Nostos SS Contractors, LLC*	
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Total Price**	**Unit Price**	**Extended Total Price**	**Unit Price**	**Extended Total Price**	**Unit Price**	**Extended Total Price**	**Unit Price**	**Extended Total Price**
Base Bid - Interior Wet													
1	Bonds, Mobilization, and Insurance	LS	1	$5,000.00	$5,000.00	$12,000.00	$12,000.00	$7,000.00	$7,000.00	$20,000.00	$20,000.00	$29,000.00	$29,000.00
2	All interior wet work identified in the project specification, except work encountered per Section 3.04 - Unscheduled Repairs	LS	1	$180,500.00	$180,500.00	$189,650.00	$189,650.00	$228,100.00	$228,100.00	$289,000.00	$289,000.00	$299,500.00	$299,500.00
3	Epoxy compound to repair Metal Surfaces	Per gallon	2	$300.00	$600.00	$2,000.00	$4,000.00	$800.00	$1,600.00	$500.00	$1,000.00	$900.00	$1,800.00
4	Pit Welding	Per pit	50	$18.00	$900.00	$20.00	$1,000.00	$30.00	$1,500.00	$60.00	$3,000.00	$60.00	$3,000.00
5	Seam Welding	LF	4	$25.00	$100.00	$150.00	$600.00	$150.00	$600.00	$150.00	$600.00	$85.00	$340.00
6	Chiping, grinding, and cutting metal surfaces	Per hour	1	$100.00	$100.00	$150.00	$150.00	$150.00	$150.00	$300.00	$300.00	$275.00	$275.00
				BASE BID TOTAL	**$187,200.00**		**$207,400.00**		**$238,950.00**		**$313,900.00**		**$333,915.00**
Alternate A - Exterior Dry, Interior Dry, and Interior Vault/Logo													
1	**Bonds, Mobilization, and Insurance**	**LS**	**1**	**$25,000.00**	$25,000.00	$12,000.00	$12,000.00	$6,000.00	$6,000.00	$20,000.00	$20,000.00	$32,000.00	$32,000.00
2	**All exterior work, interior work, and interior valve vault work identified in the project specification, except work encountered per Section 3.04 - Unscheduled Repairs**	**LS**	**1**	**$672,390.00**	$672,390.00	$836,050.00	$836,050.00	$612,410.00	$612,410.00	$833,000.00	$833,000.00	$648,000.00	$648,000.00
3	**Epoxy compound to repair Metal Surfaces**	**Per gallon**	**2**	**$300.00**	$600.00	$2,000.00	$4,000.00	$800.00	$1,600.00	$500.00	$1,000.00	$900.00	$1,800.00
4	**Pit Welding**	**Per pit**	**50**	**$18.00**	$900.00	$20.00	$1,000.00	$30.00	$1,500.00	$60.00	$3,000.00	$60.00	$3,000.00
5	**Seam Welding**	**LF**	**4**	**$25.00**	$100.00	$150.00	$600.00	$150.00	$600.00	$150.00	$600.00	$85.00	$340.00
6	**Chiping, grinding, and cutting metal surfaces**	**Per hour**	**15**	**$100.00**	$1,500.00	$150.00	$2,250.00	$150.00	$2,250.00	$100.00	$1,500.00	$275.00	$4,125.00
7	**Tank Logo**	**SF**	**1**	**$10.00**	$10.00	$7,400.00	$7,400.00	$17.00	$17.00	$12,500.00	$12,500.00	$27.00	$27.00
				ALTERNATE A BASE BID TOTAL	**$700,500.00**		**$863,300.00**		**$624,377.00**		**$871,600.00**		**$689,292.00**
Deduct for Removal of Telecommunication Antennae and Cables													
1	**Deduct for Removal of Telecommunication Antennae and Cables**	**LS**	**1**	**($100,000.00)**	$100,000.00	-$15,000.00	$15,000.00	-$40,000.00	$40,000.00	-$2,500.00	$2,500.00	-$4,200.00	$4,200.00
				DEDUCTION FROM ALTERNATE A BASE BID TOTAL	**$600,500.00**		**$848,300.00**		**$584,377.00**		**$869,100.00**		**$685,092.00**

Note: Nostos' extended total price for Item 7 in Alternate A is incorrect. The difference in total Alternate A Base Bid is -$10,773.

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 15

Meeting Date: October 28, 2019

Agenda Item: COUNCIL APPROVAL – Formal Request to the Warren County Board of Supervisors for a Corporate Boundary Line Adjustment of 3853 Guard Hill Road Chris Ramsey/Ramsey Inc.

Summary: Council has received a formal request from Chris Ramsey/Ramsey, Inc. for a Town/County Corporate Boundary Line Adjustment of 20.2206 acres to facilitate the construction of approximately 150 rental apartments to be located at 3853 Guard Hill Road. Council is requested to direct the Town Manager to send a letter of formal request on behalf of the Town Council, for a Town of Front Royal/Warren County Corporate Boundary Line Adjustment of 20.2206 acres to facilitate Mr. Ramsey request as presented.

Budget/Funding: None

Attachments: Letter of Request from Chris Ramsey, Plat, BOS 2016 Resolution, 2016 Liaison Minutes

Meetings: Work Sessions held September 9 and October 21, 2019

Staff Recommendation: Approval JW Denial______

Proposed Motion: **I move that Council direct the Town Manager to send a letter of formal request on behalf of the Town Council, for a Town of Front Royal/Warren County Corporate Boundary Line Adjustment of 20.2206 acres to facilitate Mr. Ramsey's request as presented.**

*Note: Motions are the formal & final proposal of Council, proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW

CHRIS RAMSEY

Ramsey Inc.

508 Commerce Avenue
Front Royal, Virginia 22630

Phone (540) 635-5637
Fax (540) 635-8392

October 22, 2019

Joseph E. Waltz
Town Manager
Town of Front Royal, Virginia 22630
540-635-8007
jwaltz@frontroyalva.com

RE: **Proposed Boundary Line Adjustment at 3853 Guard Hill Road**

Dear Mr Waltz

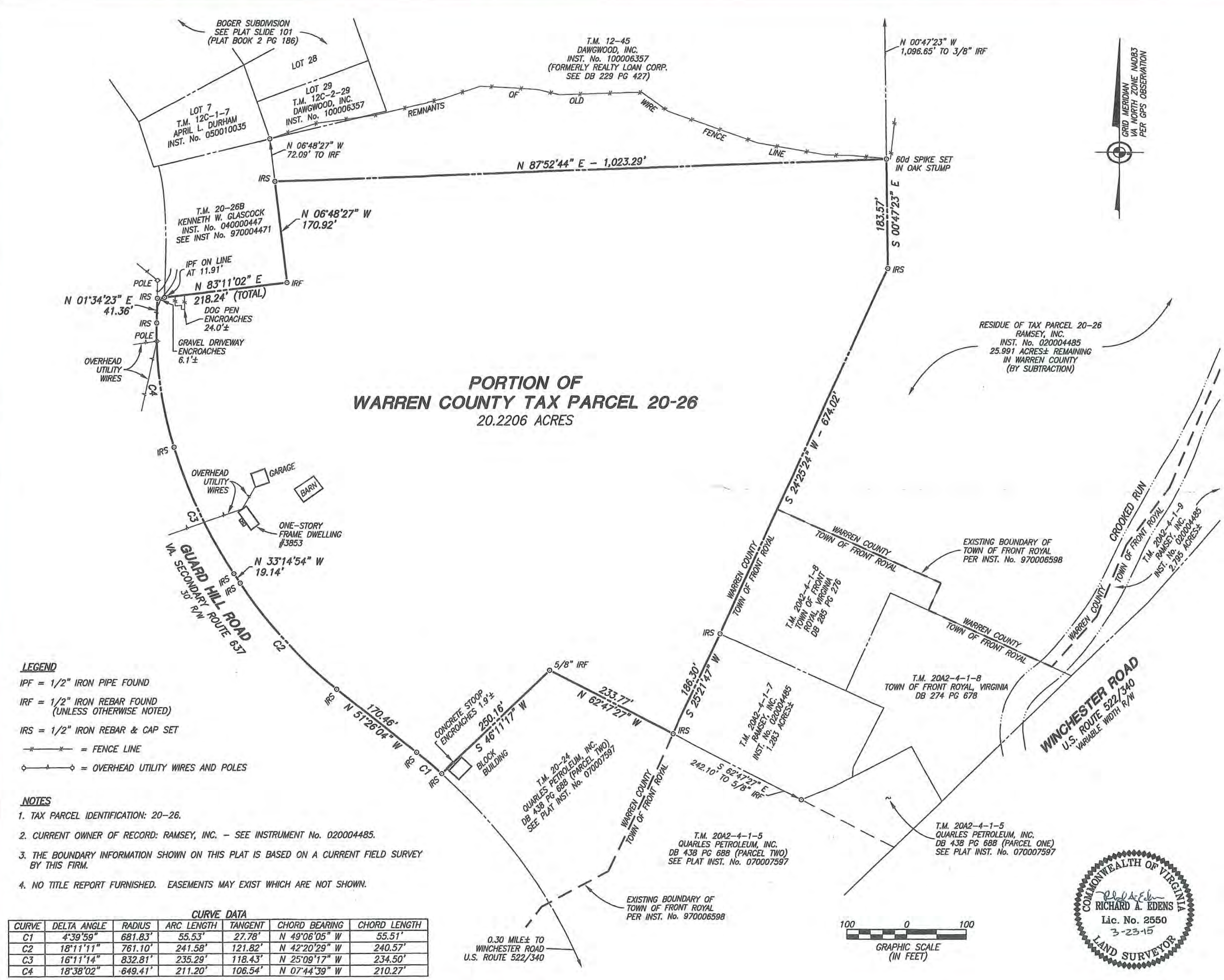
Please accept this letter as my formal request for a **Town of Front Royal and Warren County, Corporate Boundary Line Adjustment**. The purpose of the Proposed Boundary Line Adjustment is to facilitate the construction of approximately 150 fair market value rental apartments, to be located at **3853 Guard Hill Road, Front Royal, Virginia.** The total land per this request is 20.2206 acres.

The proposed area to be boundary line adjusted abuts the current Town of Front Royal/ Warren County corporate line. The property as a whole currently has Town of Front Royal water and sewer lines physically on the property and across Guard Hill Road from the property. There would be no new infrastructure extensions required of/by the Town to service this request.

The proposed fair market value rental apartments are intended to address the current and future needs as documented for work force housing in Front Royal / Warren County and Senior citizens, who choose to maintain independent living without single family residential property responsibilities.. My proposed commencement of construction is predicated on the timeframe in which proper permits can be obtained through the Town of Front Royal and Warren County. My goal is to begin construction in the late Spring of 2020.

Respectfully Submitted

Chris Ramsey



LEGEND

IPF = 1/2" IRON PIPE FOUND

IRF = 1/2" IRON REBAR FOUND (UNLESS OTHERWISE NOTED)

IRS = 1/2" IRON REBAR & CAP SET

—x—x— = FENCE LINE

◇—+—◇ = OVERHEAD UTILITY WIRES AND POLES

NOTES

1. TAX PARCEL IDENTIFICATION: 20-26.
2. CURRENT OWNER OF RECORD: RAMSEY, INC. – SEE INSTRUMENT No. 020004485.
3. THE BOUNDARY INFORMATION SHOWN ON THIS PLAT IS BASED ON A CURRENT FIELD SURVEY BY THIS FIRM.
4. NO TITLE REPORT FURNISHED. EASEMENTS MAY EXIST WHICH ARE NOT SHOWN.

CURVE DATA

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	TANGENT	CHORD BEARING	CHORD LENGTH
C1	4°39'59"	681.83'	55.53'	27.78'	N 49°06'05" W	55.51'
C2	18°11'11"	761.10'	241.58'	121.82'	N 42°20'29" W	240.57'
C3	16°11'14"	832.81'	235.29'	118.43'	N 25°09'17" W	234.50'
C4	18°38'02"	649.41'	211.20'	106.54'	N 07°44'39" W	210.27'

GREENWAY ENGINEERING, INC.
151 Windy Hill Lane
Winchester, Virginia 22602
Telephone: (540) 662-4185
FAX: (540) 722-9528
www.greenwayeng.com

GREENWAY ENGINEERING
FND 1971

2015 BOUNDARY ADJUSTMENT
BETWEEN THE TOWN OF FRONT ROYAL AND THE COUNTY OF WARREN
NORTH RIVER MAGISTERIAL DISTRICT, WARREN COUNTY, VIRGINIA

DATE:	MARCH 23, 2015
SCALE:	1" = 100'
DRAWN BY:	RAE
FILE NO.	5910R
SHEET	1 OF 1
DWG No.	15-01

COUNTY OF WARREN

County Administrator's Office
Warren County Government Center
220 North Commerce Avenue, Suite 100
Front Royal, Virginia 22630
Phone: (540) 636-4600
FAX: (540) 636-6066
Email: dstanley@warrencountyva.net

Douglas P. Stanley
County Administrator

September 22, 2016

Mr. Chris Ramsey
Ramsey, Inc.
508 Commerce Avenue
Front Royal, Virginia 22630

RECEIVED
SEP 29 2016
TOWN OF FRONT ROYAL
TOWN MANAGER'S OFFICE

Dear Chris:

The Warren County Board of Supervisors, at its regular meeting of September 20, 2016, considered your request for a boundary adjustment for property located on Guard Hill Road. The Board of Supervisors adopted the enclosed resolution to decline to consent to the boundary adjustment of property identified on Tax Map 20 as a portion of Lot 26.

Should you have questions, please do not hesitate to contact me.

Sincerely,

Douglas P. Stanley
County Administrator

Enclosure

JCS

cc: Steve Burke, Front Royal Town Manager

RESOLUTION

of the Board of Supervisors of Warren County

PROPOSED BOUNDARY ADJUSTMENT BETWEEN THE TOWN OF FRONT ROYAL AND THE COUNTY OF WARREN

WHEREAS, Chris Ramsey representing Ramsey, Inc. has requested that the Town of Front Royal and the County of Warren consider the adjustment of the property identified on tax map 20, as a portion of parcel 26 and consisting of 20.2206 acres into the limits of the Town of Front Royal;

WHEREAS, Mr. Ramsey has indicated that the boundary adjustment is necessary to facilitate the development of ten multi-family targeted senior housing buildings containing ten housing units per building for a total of 100 housing units or a density of 5 units per acre;

WHEREAS, the Board of Supervisors has discussed this request on a number of occasions and has referred the request to the Warren County Planning Department and the Town of Front Royal for review and comment;

WHEREAS, the review of the application has identified concerns with the condition of Route 637 (Guard Hill Road), traffic concerns at the intersection of Route 637 (Guard Hill Road) and Route 340/522 (Winchester Road), the topography of the site, and the visual impact of the site on the northern entrance to the Town of Front Royal;

WHEREAS, the Future Land Use Map of the Warren County Comprehensive Plan specifically identifies this area to be used for agricultural uses and not higher density residential development;

WHEREAS, with the recent boundary adjustment of the Front Royal Limited Partnership (FRLP) property into the Town of Front Royal in February 2015 consisting of 604.76 acres in 2015 that would allow for the construction of an estimated 1,200+ housing units;

WHEREAS, based on the historical growth of the Town of Front Royal from 2005-2015 of 25 new housing units per year, the FRLP property will provide land to address residential growth needs for the next 25-50 years;

NOW, THEREFORE, BE IT RESOLVED that it is the determination of the Warren County Board of Supervisors that the requested boundary adjustment is not needed at this time and is in conflict with the adopted Warren County Comprehensive Plan and the existing development along this portion of Route 637 (Guard Hill Road), and would significantly impact the functional capacity of Route 637 (Guard Hill Road) if developed as outlined; and

BE IT FINALLY RESOLVED that the Warren County Board of Supervisors hereby declines to consent to the boundary adjustment of the property identified on tax map 20, as a portion of parcel 26 and consisting of 20.2206 acres into the limits of the Town of Front Royal.

Adopted: September 20, 2016

Linda P. Glavis

Linda P. Glavis
Chair, Board of Supervisors
County of Warren, Virginia

Attest:

Douglas P. Stanley
Clerk, Board of Supervisors
County of Warren, Virginia

8/1/16 RAMSEY WS minutes

Ramsey Boundary Adjustment – *Town Manager*

Summary: At the July 21st Liaison Meeting, Warren County requested that the Town confirm all issues and concerns regarding the request to boundary adjust 55.88 acres of property located on Guard Hill Road into the Town limits. The submitted concept plan includes ten multi-family dwellings in an age-restricted development. Council is requested to identify issues that would need to be addressed prior to consideration this request.

Staff Evaluation: Development concerns include: 1) Road Maintenance of and necessary improvements to Guard Hill Road; 2) Additional traffic on Guard Hill Road and intersection with Rt 340/522; 3) Additional development of proposed property; 4) Additional properties to be included in the boundary adjustment request

Council Discussion:
Council discussed that the County of Warren made it clear that they would not do any boundary adjustments on this. Councilman Hrbek asked why the applicant would like to be in Town. Mr. Ramsey noted that water, sewer and other Town services was preferred. He stated that he would not put wells and septic on that site.

Councilman Tewalt asked about the proffers for the community. Mayor Darr noted that there may be some for fire and rescue, etc., but not for school, for example because it was an over 55 community. Councilman Hrbek stated that he would be in favor of the project at this point. Mayor Darr noted that conceptually he was in favor of the project as this point, though he would be like to have Town Staff evaluate the matter in full.

Councilman Egger stated that she had concerns about who would pay for the traffic light at Guard Hill Road. She also questioned the legality of a community limiting access to homes by someone's age and she expressed concern with the entrance – one way in and out.

Councilman Connolly stated that he previously was in favor of the project and he is at this point as well, even though the Town has not specifically dove into the project. He noted that if the County is not willing to consider the project than there is no need to move forward and expend Staff resources.

Councilman Hrbek stated that the Town will dive into the matter if conceptually the County is willing to take the matter serious and discuss the matter in full.

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Town of Front Royal, Virginia
Council Agenda Statement

Page 1
Item No. 16

Meeting Date: October 28, 2019

Agenda Item: CLOSED MEETING – EDA Lawsuit, Personnel and Disposition of Town Property

Summary: Council is to go into Closed Meeting for **1)** Consultation with legal counsel and briefings by staff members or consultants pertaining to actual or probable litigation, where such consultation or briefing in Open Meeting would adversely affect the negotiating or litigating posture of the public body; pursuant to Section 2.2-3711. A. 7. of the Code of Virginia; **2)** Discussion and consideration of performance, demotion, salaries, disciplining, or resignation of specific public officers, appointees, or employees of Town Council, pursuant to Section 2.2-3711. A. 1. of the Code of Virginia and **3)** to discuss the disposition of publicly held real property, specifically, the sale or vacation of a Town right of way, being the entire approximately twelve foot five inch alley between 303 and 311 Brown Avenue in the Town of Front Royal, VA, as shown on a plat prepared by Joseph G. Brogan, Sr., C.L.S, dated March 25, 1987, a copy of which is on file in the office of the Town Manager of the Town of Front Royal, Virginia, pursuant to Section 2.2-3711.A.3., where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of Town Council.

Budget/Funding: None **Attachments:** None **Meetings:** None

Staff Recommendation: Approval JW Denial______

Motion to Go Into Closed Meeting - I move that Town Council convene and go into Closed Meeting for **1)** Consultation with legal counsel and briefings by staff members or consultants pertaining to actual or probable litigation, where such consultation or briefing in Open Meeting would adversely affect the negotiating or litigating posture of the public body; pursuant to Section 2.2-3711. A. 7. of the Code of Virginia; **2)** Discussion and consideration of performance, demotion, salaries, disciplining, or resignation of specific public officers, appointees, or employees of Town Council, pursuant to Section 2.2-3711. A. 1. of the Code of Virginia and **3)** to discuss the disposition of publicly held real property, specifically, the sale or vacation of a Town right of way, being the entire approximately twelve foot five inch alley between 303 and 311 Brown Avenue in the Town of Front Royal, VA, as shown on a plat prepared by Joseph G. Brogan, Sr., C.L.S, dated March 25, 1987, a copy of which is on file in the office of the Town Manager of the Town of Front Royal, Virginia, pursuant to Section 2.2-3711.A.3., where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of Town Council.

Motion to Certify Closed Meeting at its Conclusion *[At the conclusion of the Closed Meeting, immediately re-convene in open meeting and take a roll call vote on the following:]* I move that Town Council certify that to the best of each member's knowledge, as recognized by each Council member's affirmative vote, that only such public business matters lawfully exempted from Open Meeting requirements under the Virginia Freedom of Information Act as were identified in the motion by which the Closed Meeting was convened were heard, discussed or considered in the Closed Meeting by Council, and that the vote of each individual member of Council be taken by roll call and recorded and included in the minutes of the meeting of Town Council.

*Note: Motions are the formal & final proposal of Council,
proposed motions are offered by Staff for guidance
*To be clear and concise, motions should be made in the positive

Approved By: JW