	Individual	Property
--	------------	----------

- □ Community Common
- Property
- Community Standard
- Reston Association



Date Received:		
Review Date:		
Review Level:		
Registered AP:		
Assigned Advisor:		

#### Design Review Application—PART II

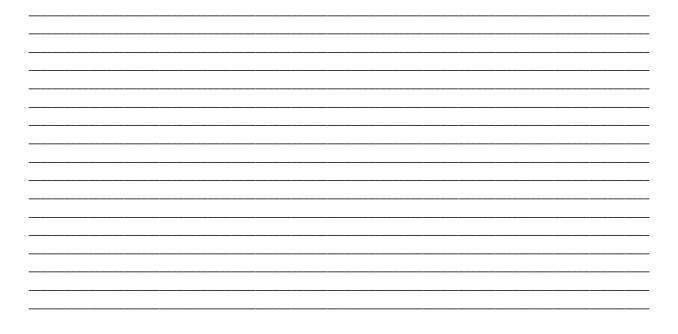
#### Applications can be emailed to advisors, faxed, or delivered to the association office. Advisor email lookup: <u>https://www.dropbox.com/sh/bagohxky1d52bq6/AAAKNa\_aOl3erv8FX\_yNUksNa?dl=0</u>

Name:	
Cluster/Business Name:	
Property Address:	
Mailing Address (if different):	
Daytime Phone:	Is this 🗆 Cell 🗆 Work 🗆 Home (Check one)
Email Address:	
Is this project existing :  Yes  No Proposed Start Date:	Proposed Completion Date:
Were considerations given to make the project energy efficient and	(or reduce adverse environmental impacts) 🗌 Vec 🗌

Were considerations given to make the project energy efficient and/or reduce adverse environmental impacts? 
Yes No If yes, please elaborate below.

#### **Description of Project (s):**

Provide a summary below of the project, to include a complete listing and description of the materials to be used and overall dimensions: height, length, width, type, style, colors etc. Please include wide-angled color pictures of the house/building and/or existing conditions that are relevant to the project (recommended five best) and samples of any required materials and colors as outlined in the project requirement checklist. Reston Association may require additional information as necessary to make a decision. Incomplete applications will be returned to the applicant.



#### **Applicant Acknowledgements**

#### I/we understand and agree by checking the following:

- 1. 
  There are architectural requirements and standards addressed in the Design Guidelines and review process established by the Reston Association Deed and Resolutions, and I agree to follow them.
- 2. D No work on the modifications on this Application will begin until I receive written approval from the DRB; if work is started prior to approval, I may be required to remove any or all of the modifications, should they not be approved, and restore my property to its original condition at my own expense; and I may be held responsible for any legal fees incurred.
- 3. Approval is contingent upon the modifications being completed as approved by the DRB and any variation from the original application must be resubmitted for approval. I agree to take no action to implement this project until receipt of the final approval.
- 4. Approval is contingent upon construction being completed in a timely and professional workmanlike manner; and that the approval by the DRB (if so granted) will automatically expire should the proposed project not be completed within eighteen (18) months of approval.
- 5. I/we am responsible for all landscaping, grading and/or drainage issues related to the improvements. All work associated with the project will be completed within the property lines. Any damage to adjoining properties or common areas will become the direct responsibility of the owner making the modification.
- 6. I/we understand that members of the Design Review Board and Staff of Reston Association are authorized to enter onto my property to make routine inspections in accordance with the Reston Deed. I further understand and authorize inspections as required to support this application.
- 7. It is my/our responsibility and obligation to obtain all building permits, to contact Miss Utility and to construct the improvements in a workmanlike manner in conformance with all applicable building and zoning codes.
- 8. I/we agree to abide by all applicable County and State laws (e.g., zoning laws, ordinances, building codes) and that I/we will obtain any licenses, permits or approvals that may be necessary or required by state and local authorities.
- 9. RPA (Chesapeake Bay Resource Protection Area) In addition to DRB requirements, your property may be in a designated RPA where tree removal and building restrictions, and additional waivers and permits my apply. No construction or tree removal may be undertaken/started without "certification" of county approval. Before beginning any tree removal or construction, contact Fairfax County's Land Development Services at 703-324-1780.

I/we prefer to have our decision letter: (Please check one) 

Emailed to \_\_\_\_\_

Mailed

Only in the case that your application requires review by a Panel of the DRB, do you wish to attend the meeting: (Please check one)  $\Box$  Yes  $\Box$  No (If you check "No", a Panel of the DRB will review the application without your attendance and a decision will be emailed/mailed to you seven to ten days after the date of the review meeting)

#### Either the owner OR the cluster/condominium president or vice president shall sign this page. Acknowledgement signatures for adjacent lots and/or board officers are on page 6.

Owner Signature:	Date:
(Signature must be legal property owner)	
Printed Name:	
OR	
Cluster/Condo Officer Signature:	Date:
(Signature must be Association President or Vice President)	
Printed Name:	
Signature of Authorized Agent:	Date:
Printed Name:	
Authorization letter attached	
RVSD 12.2021	Page 6 of 8
12001 Sunrise Valley Drive   Reston   Virginia   20191-340	04   P: 703-435-6530   F: 703-673:2040   www.reston.org

#### Cluster or Condominium Association Notification and Acknowledgement - PART III

#### Individual Property Owner Notification:

Section III.6.d(4)(iii) of the Reston Deed requires all Land Owner Applicants to submit with their application the signatures of at least three (3) different Lot Owners adjacent to or within view of the Applicant's alteration or improvement, at least one of which shall be from an adjacent Lot Owner. Use this page for those signatures. In addition, if the Applicant's Lot is within a **Cluster (or Condominium) Association** at least one of the signatures must be that of a Cluster (or Condominium) officer listed with the SCC as the president, vice president, secretary, or treasurer on the board: <u>https://cis.scc.virginia.gov</u>. Such signature merely represents acknowledgement of notice of the Applicant's submission to the DRB. All neighbor notification signatures must be from an owner of the lot and may not be a renter.

#### **Cluster or Condominium Association Notification:**

**Community Standard or Community owned property:** The Reston Deed requires that Cluster/Condominium Association applications require the signatures of at least three (3) different Cluster/Condominium Association Board Officers: The signature of two (2) community board officers is required on this page and the signature of the President or Vice President is required on page five (5). If your project is on common property and is adjacent to individually owned property, notification of those individual owners will be required. Also, if your project impacts the entire community, community notification will be also be required.

All officer signatures must be that of a Cluster (or Condominium) officer listed with the SCC as the president, vice president, secretary or treasurer on the board: <u>https://cis.scc.virginia.gov</u>. Please note that board directors and at-large members are not considered authorized signatories. Please note that the location and scope of your project may necessitate additional notification, please contact your Covenants Advisor for details. If additional notification signatures are required, please submit the signature addendum sheet (Addendum I), make additional copies if needed.

The required signatures are merely an acknowledgement of the Applicant's submission to the DRB and are in no way to be considered either an approval or disapproval of the pending application. At the discretion of the DRB, applications that the DRB determines to have a wider impact on the community may be required to provide additional notice beyond the signatory requirements of this provision.

If you are unable to obtain a notification signature in person, you may send a copy of your application and all supporting documents via certified mail to the owner you need to notify and submit a copy of your mail receipt with your application as proof of notification. You may also provide proof of notification via email (RA staff must be able to confirm valid email address) by sending an email with the application and all supporting documents to the neighbor or cluster board officer and copying your RA advisor.

#### Neighboring Property Owners & Board Officer Acknowledgement

#### (Required for all applications)

Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
I have a concern and would like to	register as an affected party to participate	e in the review of this application : $\ \square$ Yes $\ \square$ No
Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
I have a concern and would like to register as an affected party to participate in the review of this application : 🛛 Yes 🗌 No		
Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:

I have a concern and would like to register as an affected party to participate in the review of this application : 🛛 Yes 🖓 No

An Affected Party is any owner of Property subject to the Reston Deed, including but not limited to the Reston Association Board of Directors, or Cluster, or Condominium, or their agents who register with the DRB and who is materially impacted by the use or design of another Property owner. To register as an Affected Party, you must submit a written statement of concerns to the DRB secretary within five (5) days of signing this application. If you fail to submit a written statement within (5) days, you will be removed from the application as a registered Affected Party. Any Affected Party may be heard by a DRB Panel; will receive notice of decisions and any subsequent actions taken by the DRB; will be sent notice of the Applicant's appeal, if made; and may file his/her own appeal, all with respect to this application. *All applications with a registered affected party, cannot be reviewed at a staff or consultation level, and must be reviewed at a panel or full DRB meeting.* 

RVSD 12.2021 Page 7 of 8 12001 Sunrise Valley Drive | Reston | Virginia | 20191-3404 | P: 703-435-6530 | F: 703-673:2040 | www.reston.org

#### **NOTIFICATION SIGNATURE ADDENDUM I (Optional)**

Applicant: If your project on common property is adjacent to individually owned property, notification of those individua	l owners may be re-
quired. Please check with your Covenants Advisor for your specific project and use this sheet for notification signatures.	Make additional copies
as needed.	

Adjacent owner: Please sign below to acknowledge your notification concerning this application.

Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
I have a concern and wo	ould like to register as an affected par	rty to participate in the review of this application : $\ \square$ Yes $\ \square$ No
Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
I have a concern and wo	ould like to register as an affected par	rty to participate in the review of this application : $\ \square$ Yes $\ \square$ No
Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
I have a concern and wo	ould like to register as an affected par	rty to participate in the review of this application : $\Box$ Yes $\Box$ No
Name:		Phone:
Address:		Email:
Signature:	Date:	Board Officer/Position:
have a concern and wo	ould like to register as an affected par	rty to participate in the review of this application : $\ \square$ Yes $\ \square$ No
Name:		Phone:
Signature:	Date:	Board Officer/Position:
I have a concern and wo	ould like to register as an affected par	rty to participate in the review of this application : $\ \square$ Yes $\ \square$ No
Name:		Phone:
	Date:	
		rty to participate in the review of this application : 🛛 Yes 🗆 No

An Affected Party is any owner of Property subject to the Reston Deed, including but not limited to the Reston Association Board of Directors, or Cluster, or Condominium, or their agents who register with the DRB and who is materially impacted by the use or design of another Property owner. To register as an Affected Party, you must submit a written statement of concerns to the DRB secretary within five (5) days of signing this application. If you fail to submit a written statement within (5) days, you will be removed from the application as a registered Affected Party. Any Affected Party may be heard by a DRB Panel; will receive notice of decisions and any subsequent actions taken by the DRB; will be sent notice of the Applicant's appeal, if made; and may file his/her own appeal, all with respect to this application. *All applications with a registered affected party, cannot be reviewed at a staff or consultation level, and must be reviewed at a panel or full DRB meeting.* 

# 11434/11432 Hollow Timber Court



# **Proposed Drainage Improvements**

September 2024

Prepared By: James Talley, PE, PMP

# **Table of Contents**

Table of Contents	1
Application Checklist	2
Project Background	3
Problem Description	3
Proposed Solution	4
Location Map	A.1
Site Plan	A.2
Typical Sections	A.3-A.4
Plan and Profile Sheets	A.5-A.6
Round Pipe vs. Trapezoidal Channel – Hydraulic/Velocity Comparison	A.7
2009 Timberview Drainage Plan	A.8
Similar Channel Installations	A.9-A.10

# **Reston Association Application Checklist – Landscaping**

Checklist Item	Refer To
1.Include plat/house location survey (clearly and legibly drawn to scale) with the following:	
1.A. Property lines with dimensions to proposed project	Location Map Site Plan Plan and Profile Sheets
1.B. Existing conditions and proposed improvement dimensions (including aerial map view if needed)	Typical Sections Plan and Profile Sheets
2. Proposed product material, type, size, and location in context with existing vegetation	Similar Installations Sheets
3. Provide color product photos and specifications and identify proposed style and color	Similar Installation Sheets
4. Show any proposed lighting locations, fixture type, finish and include manufacturer specifications information (lumens/kelvins/color)	Not Applicable – no lighting included in this project
5. Provide color photos of each elevation (front, rear, and/or side)	Typical Sections Plan and Profile Sheets

### **Project Background**

The entire rear roof area of 11434 Hollow Timber Ct. and approximately 50% of the rear roof area of 11432 Hollow Timber Ct. are served by a connected gutter with two 4"x3" downspouts. Each downspout is connected to a 4" corrugated, slotted High-Density Polyethylene (HDPE) pipe in the common area behind the two houses. From the outlet of the pipe, water flows down a slope of approximately 10-20% to the tree line. The common area and slope are grassed with several areas of exposed, bare soil.

In June of 2024, the Timberview Cluster Board noted that the existing Pipe 1 is exposed, damaged, and needs to be replaced. This project proposes to replace Pipe 1 with a rock channel to minimize erosion-causing damage to the surrounding soil and construct a rock channel to mitigate current erosion at the outlet of Pipe 2.

Additional project information is shown on the attached Location Map, Site Plan, and Plan and Profile Sheets.

### **Problem Description**

### **Existing Pipe Construction**

The primary issue with the existing Pipe 1 is that it has become broken over time. This is due to the pipe being buried with insufficient cover. Pipes should be buried at least 12" below ground to distribute any loads through the surrounding soil. Because this was not done, the pipe has become exposed and damaged by mowers and foot traffic.

### **Hydraulics**

When draining stormwater, two of the primary reasons why a pipe would be required is to avoid some obstacle (i.e. diverting water under a road or parking area) or when the ground profile has such a steep uphill grade that installing a channel becomes impractical. Neither of these conditions are met in this case.

Pipes have a finite cross-sectional area to drain water; once that limit is reached, the pipe can back up and pressure flow can occur. Pipes can become clogged with debris or small nesting animals, reducing the capacity of the pipe and requiring maintenance, which can be challenging with a buried pipe.

For these reasons, a pipe is not the ideal approach to address stormwater in the project area.

### Erosion

While there is some grass cover, there are several areas of exposed ground which, along with the slope of the ground, increase the risk of erosion. One of the main factors contributing to erosion is the velocity of the water; the existing pipe constricts the flow of water, which leads to higher velocity. Options to reduce velocity are limited to the pipe construction (material, corrugations); therefore, rock or some other energy dissipator is used at the outlet of the pipe as protection for the downstream channel.

In order to replace the broken pipe and re-bury it with sufficient cover, excavation and disturbance of the existing slope will be required. Soil can be replaced, compacted, and stabilized; however, once disturbed, the soil cannot be

compacted to the existing level of compaction and the risk of erosion is increased. The ground can be seeded and stabilized but, as indicated by the current site conditions, grass is not guaranteed to grow to cover the entire disturbed area.

### Proposed Solution

### General

In order to address the problems above, two small rock channels are proposed. Both are shown in the attached Site Map as well as the Plan and Profile Sheets.

The alignment for Pipe 1 begins at the vertical downspout, station 1+00. The existing pipe will remain in place from station 1+00 to the broken section, approximately station 1+21.50. The remaining pipe from station 1+21.50 to 1+27.50 will be removed and replaced with a rock channel as shown in the Typical Sections; the rock channel will continue to the bottom of the slope at station 1+30. The outlet of the existing pipe will be sawcut to match the existing slope.

The alignment for Pipe 2 begins at the vertical downspout, station 2+00. The existing pipe will remain in place but will be sawcut at station 2+10.50 to match the existing slope. There is already a channel eroded into the slope; this existing channel will be reinforced with rock, which will continue to the bottom of the slope at station 2+26.

### **Hydraulics**

As shown on the Round Pipe vs. Trapezoidal Channel Hydraulic/Velocity Comparison sheet, constructing a rock channel instead of a 4" corrugated pipe will result in an approximately 50% reduction in stormwater velocity. The reduction in velocity will help to reduce the potential for future erosion as noted above.

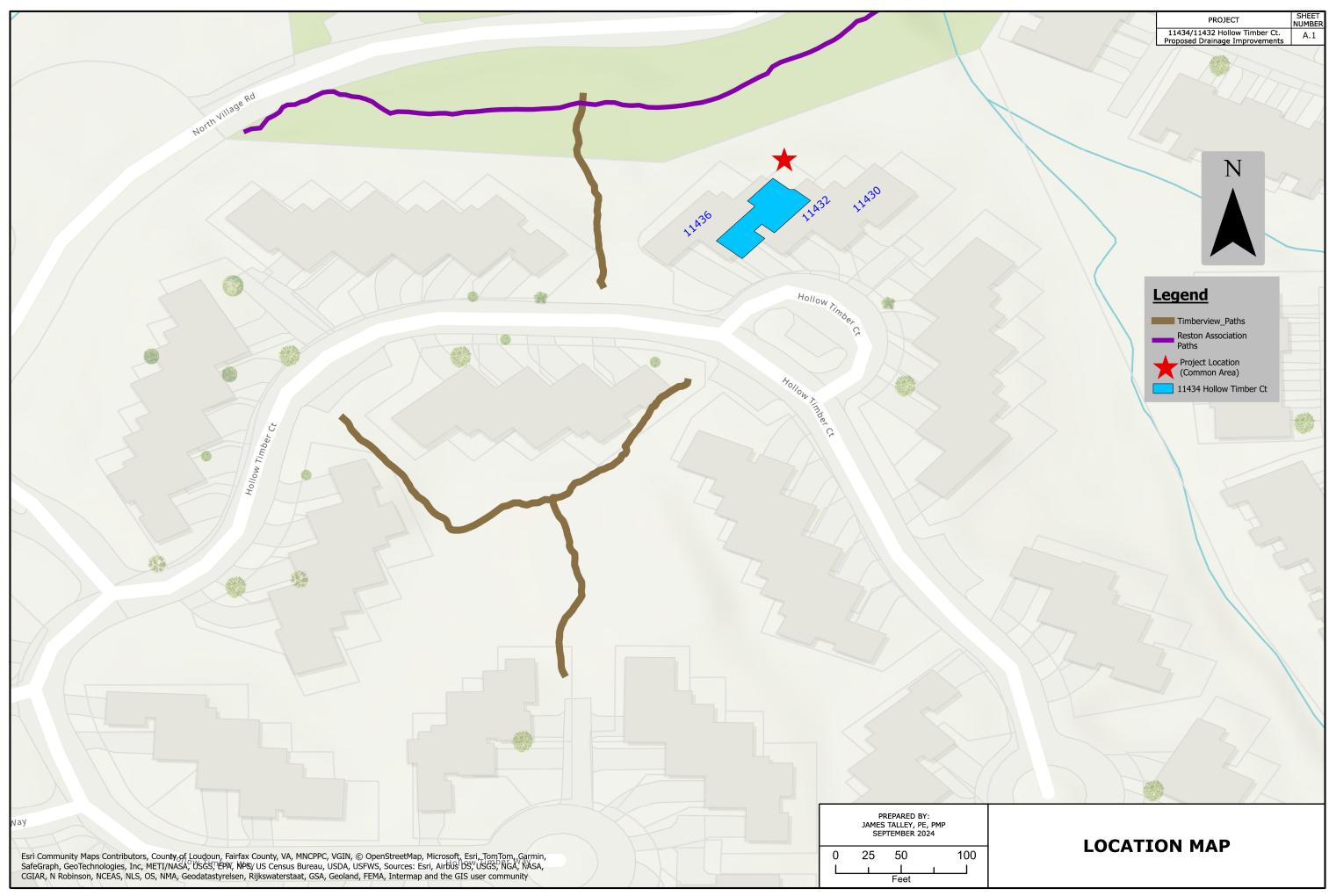
### Erosion

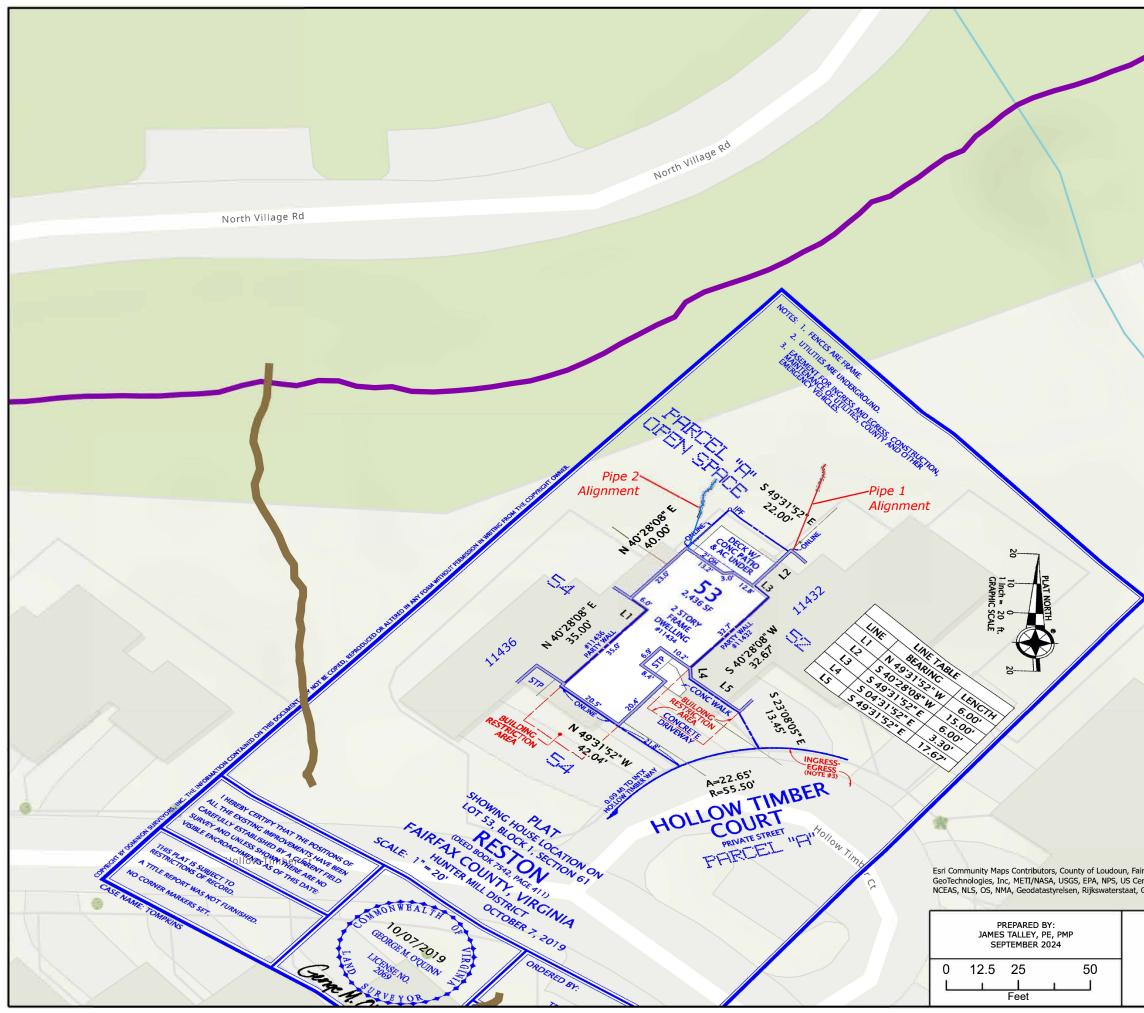
Due to the small size of the project site, no perimeter erosion controls will be required. The 6' section of existing pipe can be removed and stabilized by rock channel within the same working day, and any required excavation will be minimal.

### Aesthetics

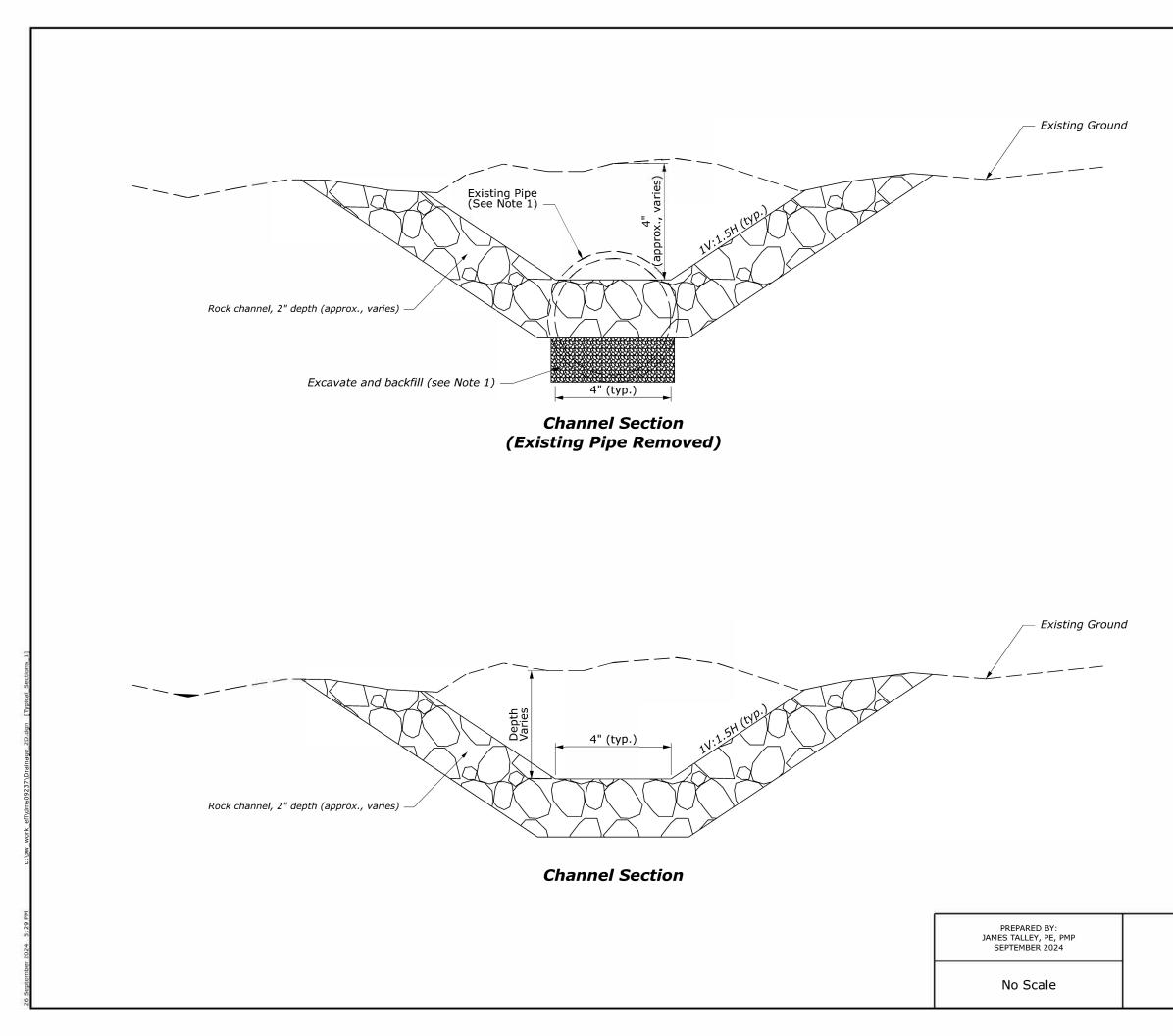
In addition to hydraulic and erosion concerns, maintaining the aesthetic appeal of the Timberview Cluster is a primary goal. When preparing this proposal, the 2009 Timberview Drainage and Erosion Project was reviewed and an informal survey of other rock channels throughout Timberview was conducted. A geolocated map of the 2009 project is shown on the 2009 Timberview Drainage Plan sheet; photos and dimensions of several of the channels are shown on the Similar Installations sheets. The channels constructed during the 2009 project average 3-5' wide with stones ranging in size from 2" to 16". This proposal will construct smaller channels averaging 1.5' wide using stones averaging 2" in size; therefore, any visual/aesthetic impact will be minimal.

While no two stone sources are exactly the same, stone for this project will be selected to match color and texture of the 2009 channels as closely as possible.





	PROJECT	SHEET
	11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	NUMBER A.2
		1
	Ν	1
		- 2
	Legend	
	Name	
	Pipe1_Alignment	1
	Pipe2_Alignment	
	Rock_Channel	
	Reston Association Paths	
	Timberview_Paths	. K.
fax County, VA, MNCPPC, VGIN, © OpenStreetMa Isus Bureau, USDA, USFWS, Sources: Esri, Airbus	ap, Microsoft, Esri, TomTom, Garmin, Safe	Graph,
isus Bureau, USDA, USFWS, Sources: Esri, Airbus SA, Geoland, FEMA, Intermap and the GIS user		
		1
SITE	PLAN	



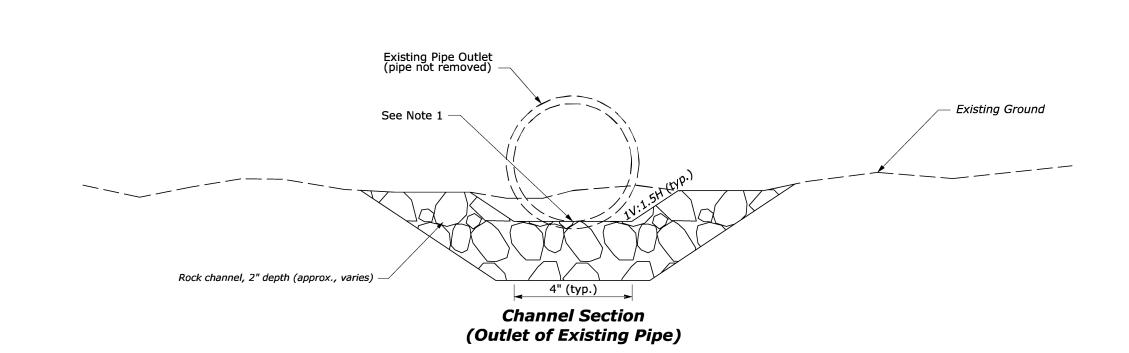
PROJECT	SHEET NUMBER
11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	A.3

Notes:

1. Excavate and remove existing 4" diameter plastic pipe, backfill approx. 2", compact, and construct rock channel

# TYPICAL SECTIONS

SHEET 1 OF 2



PREPARED	BY:
JAMES TALLEY,	PE, PMP
SEPTEMBER	2024

No Scale

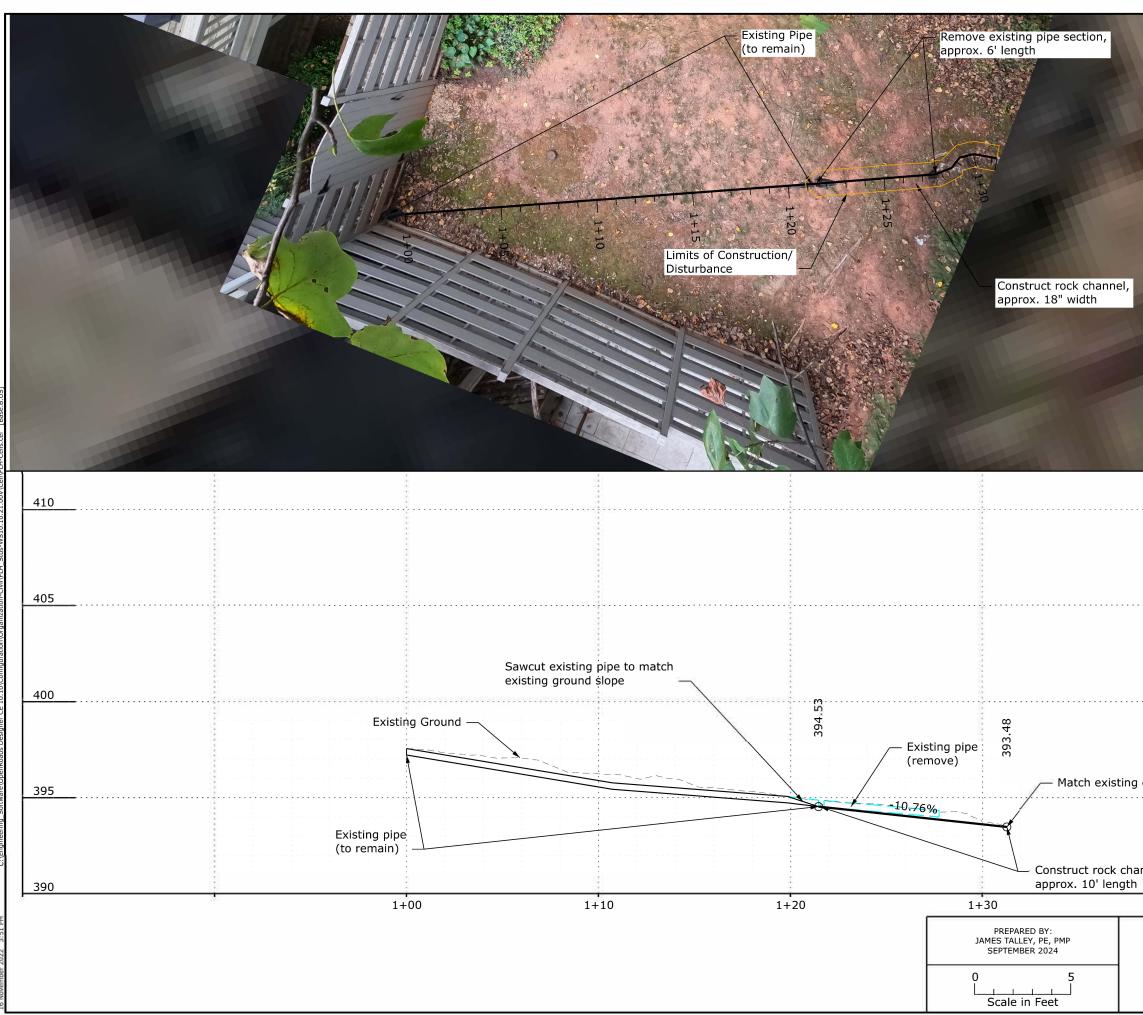
PROJECT	SHEET NUMBER
11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	A.4

<u>Notes:</u>

1. Match invert elevation at pipe outlet

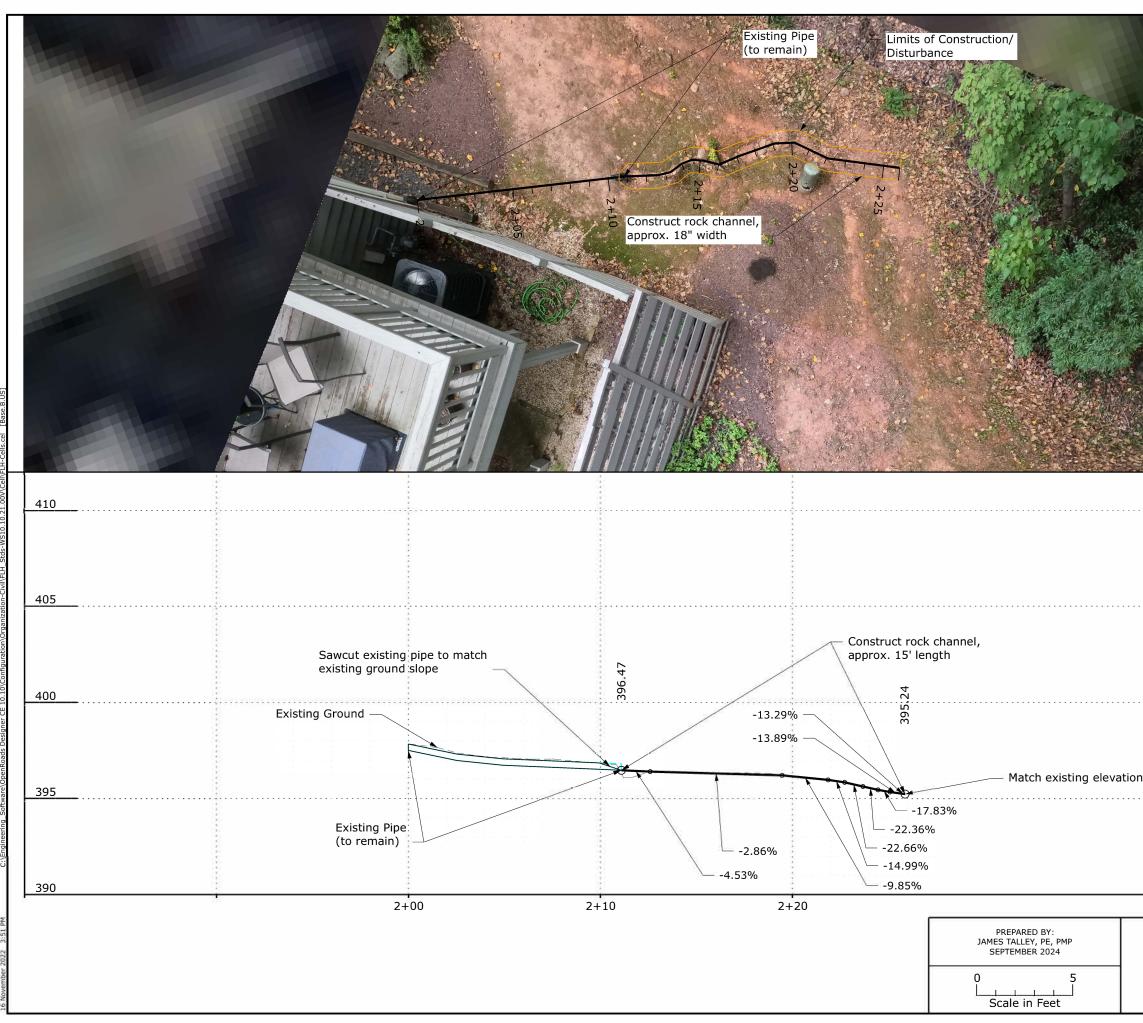
# **TYPICAL SECTIONS**

SHEET 2 OF 2



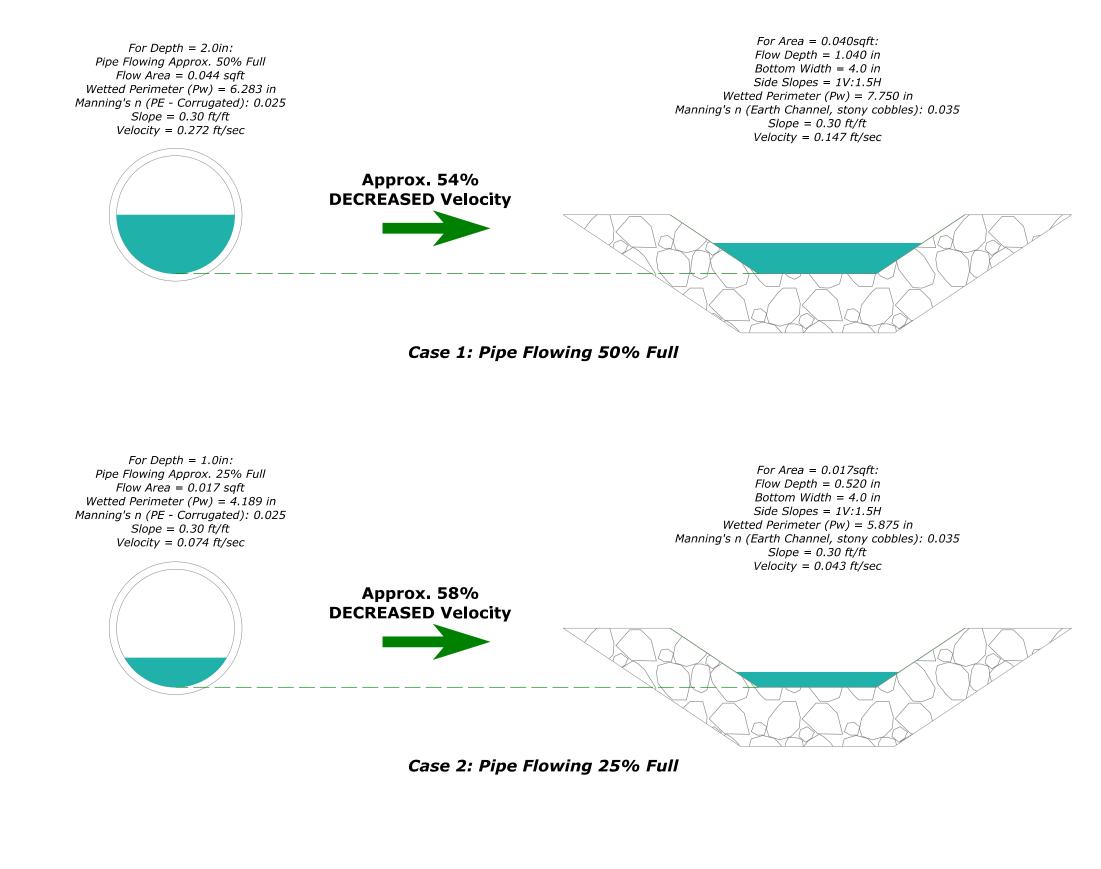
# PIPE 1 RECONSTRUCTION PLAN AND PROFILE

	PROJECT	SHEET NUMBER
	11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	A.5
	Z	
	Z	
	4	10
	·····	<u> </u>
	4(	05
	4(	00
elevation	2(	95
annel,		
, I	39	90



# PIPE 2 RECONSTRUCTION PLAN AND PROFILE

	PROJECT	SHEET NUMBER
	11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	A.6
	Proposed Drainage Improvements	
	4	10
		05
		00
1	3	95
	3	90

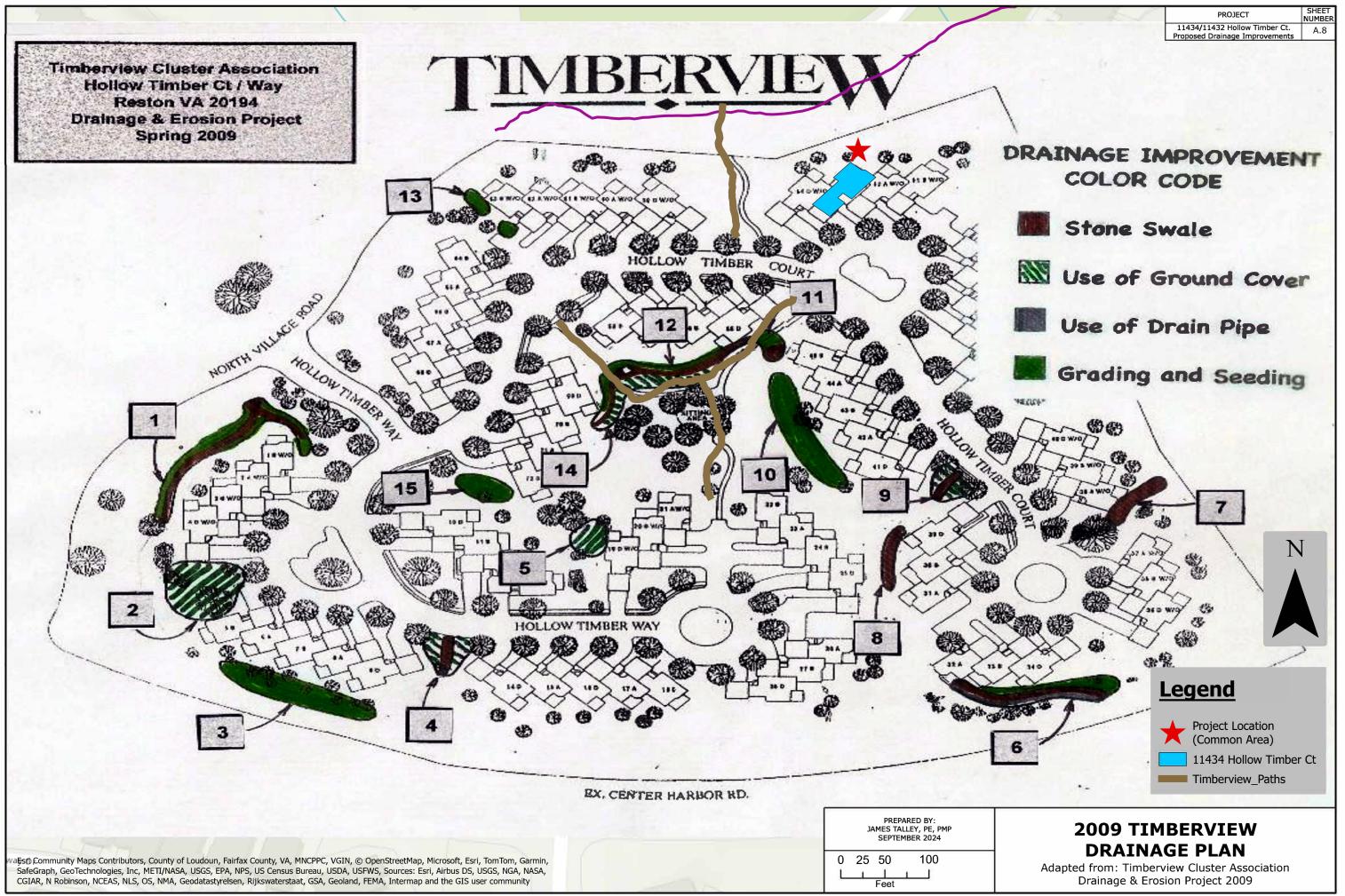


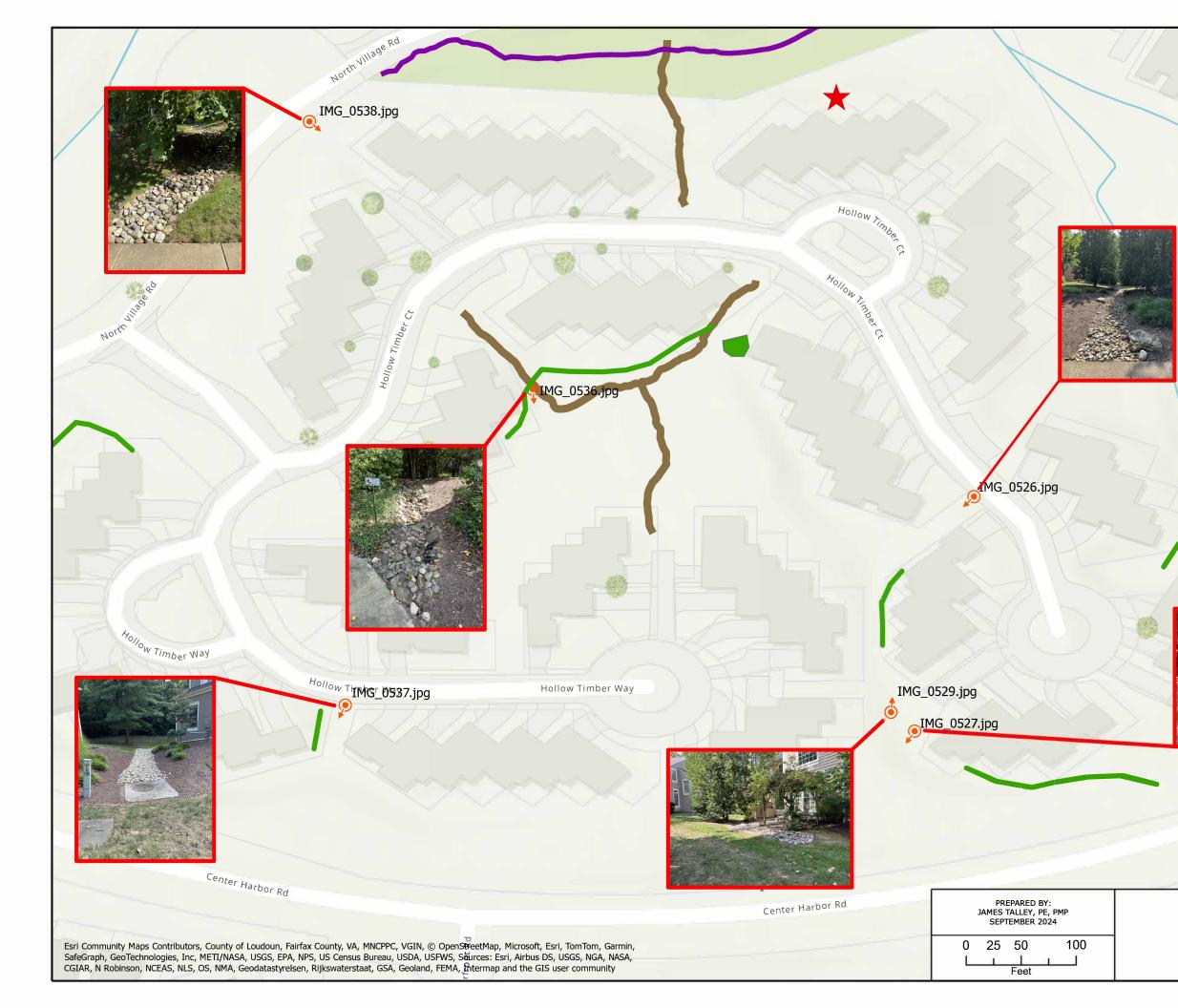
PREPARED BY:	
JAMES TALLEY, PE, PMP	
SEPTEMBER 2024	

No Scale

# **ROUND PIPE VS. TRAPEZOIDAL CHANNEL**

HYDRAULIC/VELOCITY COMPARISON





SHEET NUMBER PROJECT 11434/11432 Hollow Timber Ct. A.9 Proposed Drainage Improvements

N

# Legend



**Timberview Photo** Points

Timberview\_Paths

Reston Association Paths

Project Location

Center Harbor Rd

2009 Drainage Channel 2009 Drainage Channel



## SIMILAR CHANNEL **INSTALLATIONS** MAP VIEW



IMG\_0526.jpg Channel 9 4' avg. width, 2-5" avg. stone size



IMG\_0536.jpg Channel 14 4' avg. width, 3-16" avg. stone size



IMG\_0537.jpg Channel 4 5' avg. width, 2-5" avg. stone size



IMG\_0527.jpg Channel 6A (Not Shown on 2009 Plan) 4' avg. width, 2-6" avg. stone size



IMG\_0529.jpg Channel 8 4' avg. width, 2-5" avg. stone size

PREPARED BY: JAMES TALLEY, PE, PMP SEPTEMBER 2024

	PROJECT	SHEET NUMBER
	11434/11432 Hollow Timber Ct. Proposed Drainage Improvements	A.10
	Caller 1 1 1	
	SPEC	
	1	
	Ser and the	
The Her		
A GUSCIES AND		
The the		
	an an ar - prove man	
	and the second	
IMG_0538.jpg		
Channel 13		
3' width, 5-6" stone	es	

SIMILAR CHANNEL INSTALLATIONS PHOTO VIEW