



HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

3430 Court House Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Voice/Relay

Amy Gowan, Director

FAX 410-313-3467

September 23, 2021

Celia Greenberg
10702 Faulkner Ridge Circle
Columbia, Maryland 21044
Sent via email: celia.greenberg@gmail.com

RE: WP-22-012 10702 Faulkner Ridge

Dear Ms. Greenberg:

This letter is to inform you that your request for alternative compliance to the Howard County Subdivision and Land Development Regulations for the subject project was reviewed.

On September 20, 2021 and pursuant to Section 16.116(d), the Director of the Department of Planning and Zoning, Director of the Department of Public Works and Administrator of the Office of Community Sustainability considered and **approved** your request for alternative compliance with respect to **Section 16.116(a)(2)(iii)** of the Subdivision and Land Development Regulations to remove and replace a failed timber retaining wall with a masonry wall in the same location for the purpose of soil stabilization. The Directors approved this request only because the proposal would be replacing an existing wall and would be correcting and improving the existing condition within the buffer. Please see the attached Final Decision Action Report for more information.

Approval of this Alternative Compliance is subject to the following conditions:

1. Approval of the alternative compliance is to permit only the replacement of the failing timber retaining wall with a masonry retaining wall in the same location, within the 100-foot stream bank buffer. No new construction will be allowed within the 100-foot stream bank buffer. Deviation from the approved exhibit or alteration of the masonry retaining wall may require the approval of another alternative compliance request.
2. The applicant shall obtain all required Federal, State, and Local authorizations for disturbances to environmental features. Reference the applicable permits and tracking numbers on all grading permits.

Indicate this alternative compliance petition file number, request, section of the regulations, action, conditions of approval, and date on all related plats, and site development plans, and building permits. This alternative compliance approval will remain valid for one year from the date of this letter or as long as a subdivision or site development plan is being actively processed in accordance with the processing provisions of the Regulations.

If you have any questions, please contact Kathryn Bolton at (410) 313-2350 or email at kbolton@howardcountymd.gov.

Sincerely,

DocuSigned by:

Anthony Cataldo, AICP, Chief
Division of Land Development

AC/KB

cc: Research
DED
DLD - Julia Sauer
Real Estate Services
Eugene Berk: LandEscapes2018@yahoo.com



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ALTERNATIVE COMPLIANCE FINAL DECISION ACTION REPORT

DEPARTMENT OF PLANNING AND ZONING
DEPARTMENT OF PUBLIC WORKS
OFFICE OF COMMUNITY SUSTAINABILITY

RE: **WP-22-012 10702 Faulkner Ridge**
Request for an alternative compliance to Section 16.116(a)(2)(iii) of the Subdivision and Land Development Regulations.

Applicant: Celia Greenberg
10702 Faulkner Ridge Circle
Columbia, Maryland 21044
Sent via email: celia.greenberg@gmail.com

Pursuant to Section 16.116(d), the Director of the Department of Planning Zoning, Director of the Department of Public Works and the Administrator of the Office of Community Sustainability considered and **approved** the applicants request for an alternative compliance with respect to **Section 16.116(a)(2)(iii)** of the Subdivision and Land Development Regulations. The purpose is to remove and replace a failed timber retaining wall with a masonry wall in the same location for the purpose of soil stabilization. The Directors approved this request only because the proposal would be replacing an existing wall and would be correcting and improving the existing condition within the buffer. The Directors deliberated the application in a meeting on September 20, 2021.

Each Department hereby determines that the applicant has demonstrated to its satisfaction that strict enforcement of the above-cited regulation would result in unreasonable hardship or practical difficulty. This determination is made with consideration of the alternative compliance application and the seven (7) items the applicant was required to address, pursuant to Section 16.104(a)(1) and Section 16.116(d):

1. Strict conformance with the requirements will deprive the applicant of rights commonly enjoyed by other in similar areas.

The original subdivision occurred prior to these environmental regulations and therefore was not subject to them. According to current requirements, the onsite stream bank buffer (SBB), greatly reduces the buildable area of the site. The surrounding properties are all residentially zoned and mostly developed with single-family dwellings. Multiple properties have improved their house and rear property with other structures that encroach into or exist entirely within the SBB. The applicant is requesting to replace an existing timber retaining wall, which is no longer functioning as it was originally designed, with a masonry retaining wall. The disturbance will be limited to the area required to install the retaining wall. Strict conformance with the requirements would deprive the applicant reasonable use of their property.

2. The uniqueness of the property or topographical conditions would result in practical difficulty, other than economic, or unreasonable hardship from strict adherence to the regulations.

The rear property line of the lot runs adjacent to a stream. The buffer for the offsite stream takes up nearly the entire rear of the property and a portion of the existing home. The property was recorded in 1967, prior to these environmental regulations and therefore, was not subject to them. There are no environmental features shown on the recorded plat for this property. This creates a practical difficulty in complying with the regulations since the lot was created prior to being subject to the regulations for environmental features.

- 3. The variance will not confer to the applicant a special privilege that would be denied to other applicants.**
Approval of this alternative compliance would not grant a special privilege that would be denied to other applicants. There are other lots within the immediate surrounding neighborhood with similar encroachments into the SBB.
- 4. The modification is not detrimental to the public health, safety or welfare, or injurious to other properties.**
The approval of this request would not be detrimental to the public health, safety or welfare, or injurious to other properties since the request is to replace a failing retaining wall. Replacement of the retaining wall will eliminate the eroding soil and reduce its runoff from the property into the adjoining stream. The disturbance will be limited to the area required to replace the retaining wall and the encroachment would be consistent with similarly situated lots in the surrounding neighborhood.
- 5. Any area of disturbance is returned to its natural condition to the greatest extent possible.**
Approval of the request would require protection of the environmental features during the construction of the retaining wall with minimal disturbance to the soil. Once the retaining wall is complete, the ground will be stabilized with shrubs and reseeded to natural lawn.
- 6. Mitigation is provided to minimize adverse impacts to water quality and fish, wildlife, and vegetative habitat.**
The purpose of the request is to reduce the amount of soil runoff into the adjoining stream, which will reduce the adverse impact to water quality and fish, wildlife, and vegetative habitats. Soil erosion and sediment control measures will be implemented under the grading permit and during construction of the wall, the owner will keep the site stabilized with sediment control measures.
- 7. Grading, removal of vegetative cover and trees, or construction shall only be the minimum necessary to afford relief and to the extent required to accommodate the necessary improvements.**
The construction for the retaining wall only requires minimal disturbance to the soil and will be stabilized with shrubs and grass once the wall is completed. The purpose is to reduce the amount of soil runoff and stabilize the rear yard.

Directors Action: Approval of alternative compliance of Section 16.116(a)(2)(iii) is subject to the following conditions:

1. Approval of the alternative compliance is to permit only the replacement of the failing timber retaining wall with a masonry retaining wall in the same location, within the 100-foot stream bank buffer. No new construction will be allowed within the 100-foot stream bank buffer. Deviation from the approved exhibit or alteration of the masonry retaining wall may require the approval of another alternative compliance request.
2. The applicant shall obtain all required Federal, State, and Local authorizations for disturbances to environmental features. Reference the applicable permits and tracking numbers on all grading permits.

DocuSigned by:

Amy Gowan

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Amy Gowan, Director
Department of Planning and Zoning

DocuSigned by:

Thomas Meunier

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Thomas Meunier, Director
Department of Public Works

DocuSigned by:

Joshua Feldmark

3241B974513E4B7...

Joshua Feldmark, Administrator
Office of Community Sustainability

cc: Research
DED
OCS, Joshua Feldmark
DPW, Thomas Meunier
Eugene Berk: LandEscapes2018@yahoo.com



Howard County Maryland
Department of Planning and Zoning
 3430 Courthouse Drive, Ellicott City, MD 21043

(410) 313-2350

DPZ Office Use only:

File No.

Date Filed

ALTERNATIVE COMPLIANCE APPLICATION

Site Description: We were requested to replace a woden retaining wall in our client's Backyard which failed and which posed a landslide hazard

Subdivision Name/Property Identification: Faulkner Ridge Neighborhood: 15010102.4

Location of property: 10702 Faulkner Ridge Circle, Columbia MD 21044

Existing Use: Residential **Proposed Use:** Same Residential

Tax Map: 0029 **Grid:** 0024 **Parcel No:** 0136 **Election District:**

Zoning District: **Total site area:** wall - 11'5"-125' LF

Please list all previously submitted or currently active plans on file with the County (subdivision plans, Board of Appeals petitions, alternative compliance petitions, etc.). If no previous plans have been submitted, please provide a brief history of the site and related information to the request:

Residential Retaining Wall Permit # B21002560

In the area below, the petitioner shall enumerate the specific numerical section(s) from the Subdivision and Land Development Regulations for which an alternative compliance is being requested and provide a brief summary of the request. Please use the additional page if needed.

Section Reference No.	Brief Summary of Request
16.116.A.2 III	Owner purchased home from previous owner who built a 115' long by 5' high timber retaining wall in backyard. We believe wall was built to better utilize sloping backyard by making it flatter. Wall has subsequently collapsed leading to a condition where the soil of the backyard could erode and or collapse down into adjacent CA owned property. Our intent is to rebuild the wall using masonry in the same location as where the old wall was built. A section of that wall would fall within 100' of the stream buffer.

Section Reference No.	Brief Summary of Request

Signature of Property Owner: *Celia Greenberg* Date: *7-29-21*

Signature of Petitioner Preparer: *Eugene Berk* Date: *7/29/21*

Name of Property Owner: *Celia Greenberg*
Greenberg
Address: 10702 Faulkner Ridge Circle

Name of Petition Preparer: Eugene Berk for Land Escapes LLC
Address: 7249 Procopio Circle

City, State, Zip: Columbia, MD 21044

City, State, Zip: Columbia MD 21046

E-Mail: *celia.greenberg@gmail.com*

E-Mail: *tfdinc@berkfda.com & LandEscapes2018@yahoo.com*

Phone No.: 4109972950

Phone No.: 4438122760 and 4103008413

Contact Person: *Celia Greenberg*

Contact Person: Eugene Berk

Owner's Authorization Attached

Department of **Planning & Zoning**

HOWARD COUNTY MARYLAND GOVERNMENT

3430 Court House Drive, Ellicott City, Maryland 21043 410-313-2350

www.howardcountymd.gov

FAX: 410-313-3467

TDD: 410-313-2323

Certification of Applicant

Advisory Comment – In accordance with Section 16.1103 of Subtitle 11, "Adequate Public Facilities Ordinance" (APFO), all residential subdivisions or site development plans (if subdivision is not required) are required to pass the tests for adequate public school facilities as a condition of approval, except those listed as exemptions under Section 16.1107.

I hereby certify that the information supplied herewith is correct and complete and authorize such periodic on-site inspections by the Department of Planning and Zoning and the Subdivision Review Committee agencies as may be necessary to review this application and any waiver petitions filed in connection herewith and to enforce the Subdivision Regulations and other applicable laws. This right-of-entry shall continue until all administrative appeals pertaining to the property have been exhausted. ***If the applicant is the owner's agent, written documentation from the property owner granting that authority is required.**

Celia Greenberg *Celia Greenberg* *7-29-21*
(Signature of Property Owner/Agent)* (Print Name of Owner/Agent) (Date)

Celia.Greenberg@gmail.com
(Property Owner's Email Address)

10702 Faulkner Ridge *Md 21044*
(Property Owner's Address) (State and Zip Code)

n/a
(Property Owner's Fax Number)*

Greenberg Sexton Alternate Compliance Application Detailed Narrative

Background behind the need to replace failed Wooden Retaining Wall

When we, Landscape Escapes LLC, were asked by our clients, Celia Greenberg and William Sexton, to replace a wooden retaining wall in early April 2021, we found the existing wooden retaining wall (hereinafter "Wall") was in need of replacement. Much of that Wall was falling away from the earth it was supposed to be retaining with some timbers already lying on the ground below the Wall itself. Due to the failure of the Wall some soil was washing down the slope towards the Columbia Association (hereinafter "CA") property behind the house. We advised the client that what was left of the Wall was in imminent danger of collapsing and that might cause erosion of the soil originally retained by that wooden Wall.

We developed a plan to construct, in the same site as the original retaining wall, a more permanent and structurally sound masonry wall consisting of Keystone Compact III retaining wall blocks capped with Keystone #3 caps. On the left side (as viewed from the back of the house) we intended to build steps leading down from the property to the bottom of the wall, an area that the client advised us was within the boundaries of their property, so they could access and maintain that wall and the area just beyond it. We advised the client that before we could take on this project they would need to obtain both a survey of their property (attached to this application) to assure to us that the new wall would be in fact inside of their property boundaries and submit the project for approval to replace their wooden wall with a masonry wall to the Wilde Lake Village Association (hereafter "WLVA".) Once they did that, we could present them with a contract.

After they obtained the survey we presented the clients with a final contract. Once they accepted that contract we hired a licensed Professional engineer who works in association with Keystone Retaining Wall Systems LLC to prepare an engineering report.

We were able to obtain that report for the client by late May. That report (copy attached to this submission) contains full instructions and requirements for the construction of the wall we proposed; a new Masonry wall approx 115' to 125' total length. After we gave the client the Engineer's report the client made a submission to the WLVA asking for approval to replace their old wooden retaining wall with the masonry wall we proposed to build.

Several weeks later the client did receive the approval to build the replacement wall from the WLVA . We then revisited the client in early July and discovered that the Wall had deteriorated substantially more. By this point in time, portions of the Wall had collapsed and were sitting on the ground below the Wall. Another problem was that portions of the Wall separated from the earth such that the Wall was unable to retain the soil previously held in place. There was evidence of significant soil erosion and we believed that there was an imminent danger of a collapse of the soil that could cause a landslide down the slope into the property owned by the CA.

Prior to all this, In May 2021, we called the Howard County Department of Inspections/Licenses/Permits to inquire as to whether a building permit was required to replace a retaining wall which would be greater than 3' in height but no more than 5 to 6' in height at its highest point. The person who answered the phone stated that as long as we were just replacing a wall, that no permit was necessary. Once we asked my subcontractor to begin his work he told us that such a permit was needed, and urged us to re-contact that office and obtain the statement that a permit was not required in writing. To our chagrin we discovered that we were either misled or misunderstood what we were told in May. An application for a building permit was immediately prepared and delivered to that office. The permit was assigned the # B21002560. After a period of almost two

weeks we were informed that the proposed wall was within a 100' Stream Buffer.

Note: At the time of our proposal and before we filed for a building permit, our firm was unaware the 100' Stream Buffer requirement applied. As noted above, we only discovered that issue with the stream buffer after we filed our building permit.

Our client was even more surprised as prior to their purchase of their home they were led to believe that no sale could be completed without the WLVA review of their home to make sure there were no violations of WLVA rules. Such a review they understood would include unapproved/un-reviewed major modifications to their home or property. Without WLVA approval they understood the sale of the home to them could not go forward until the home was fully in compliance with applicable WLVA regulations. Apparently no such review was conducted prior to the approval of the sale. Therefore, the client had no idea that the existing wall (built by the previous owner) on the property they wanted to buy was in violation of any Local, County or State regulation(s.)

As it stands now, unless we are able to complete the construction of this replacement masonry wall for our client, there is a significant danger that the back of the property will erode or, worse, collapse into the CA owned property below and the stream within that property. The masonry wall we propose would create a permanent solution to prevent such occurrences. Again we would construct this wall in the same location as the previously located Wall. In fact, even more of that wooden wall had totally rotted away and/or had collapsed down slope and these remnants were in danger of actually falling down slope into CA property, such that we felt it best to remove those timbers before that could happen. In addition, to temporarily minimize the threat of erosion or a small landslide into CA property, we excavated several feet of soil away from the edge of the slope on which the Wall was built and created a 4' to 5' wide ledge to try to contain at least some of that eroding soil. Note: we believe that that ledge, and the silt fence we placed lower down on the owner's portion of that slope, will not suffice as a permanent nor as a long term solution to this dilemma and if we receive a substantial rainfall of 4" or more or the heavy prolonged rainfall from a tropical storm this temporary solution will not hold.

The client has also requested us to come up with a plan to install shrubs along the house side of the masonry wall. We intend to recommend and use shrubs listed in the Howard County Landscape Manual Updates: Recommended Street Tree List (Appendix B) – Effective July 1, 2010. This will further reduce the potential for soil erosion beyond the masonry wall and thus keep it from entering the CA property (and again the stream contained within it.)

Justifications Addressing the Criteria from Sections 16.104.a.1 and 16.116.d.1:

1 Strict conformance with the requirements will deprive the applicant of rights commonly enjoyed by others in similar areas.

The backyard of our client's home is rather short, and is approximately 32 feet wide to where the old wooden wall was constructed. If a new wall is not constructed the soil, which is longer being retained by the prior wood retaining wall, will erode or simply cascade (landslide) down the steep slope beyond where the existing wooden retaining wall (hereinafter "Wall") was situated. If the soil continues to erode, the erosion could even undermine the deck which came with the house when it was purchased. In any event, failure to maintain the integrity of the soil that was held back could render their backyard useless to them.

Apparently their neighbors have also erected somewhat smaller retaining walls; ostensibly in an effort to prevent similar damage to their backyards.

2 The uniqueness of the property or topographical conditions would result in practical difficulty, other than economic, or unreasonable hardship from strict adherence to the regulations.

The area beyond the site of the Wall is very steep. Without some way to retain the soil that was originally retained by that Wall, soil will erode/wash down the steep slope and there will be incursion onto CA owned property and eventually into the stream contained within the CA owned area. This is not just a hypothetical. As noted in the narrative above, we had already seen significant erosion occurring as a result of that previous wall's collapse. So much occurred that we felt it prudent to remove approximately 5 feet of soil that was in place behind the Wall to create a small shelf to hold back some of that eroding soil from cascading down the slope behind the owner's property. Even with that we also installed a silt fence to further assist in keeping that eroding soil from causing an incursion into CA's property.

Again as stated above, the shelf and the silt fence are only temporary "fixes" and in the event of a major rainfall (4 inches or more or the heavy rain of a tropical storm) neither of these two measures would likely stop the soil from cascading down this steep slope behind their property and onto CA property.

3 The variance will not confer on the applicant a special privilege that would be denied to other applicants.

The masonry wall we have proposed to our clients to be built will be built in the exact location of the Wall that existed when our clients' purchased this home. We are not asking for the construction of something that had not existed before but rather to replace the Wall with a new wall constructed with a much longer lasting material (masonry.) The Clients simply want to restore the integrity of the soil in their backyard and to prevent damage to property owned by the CA. The client wants to preserve the woodlands and the stream behind their house and prevent damage to the woodlands. They are trying to be Eco-conscious in their effort to preserve that environment.

4 The modification is not detrimental to the public health, safety or welfare or injurious to other properties.

Allowing our client to replace the Wall with a masonry wall creates a permanent (masonry) retaining wall would not only **not** be detrimental to the public health, safety or welfare or injurious to other properties, but in fact it would protect the public health, safety and welfare of those who live along or use the CA owned property. This would prevent damage caused by a catastrophic landslide of soil no longer being retained on their property onto CA's Property. Such a landslide could cause direct or indirect injury to CA property and the other properties that abut that property. If a landslide ended up in the stream it could also divert/redirect the water from that stream onto the property owned by others.

5 Any area of disturbance is returned to its natural condition to the greatest extent possible.

The short 2' to 3' strip of soil beneath the replacement wall we propose to build will be seeded with grass seed to hold soil in place until the area can be re-populated by the native flora. In addition, as mentioned in the above narrative, the client has asked us to develop a plan to install shrubs along the house side of the wall using shrubs listed in the Howard County Landscape Manual Updates: Recommended Street Tree List.

6 Mitigation is provided to minimize adverse impacts to water quality and fish, wildlife, and vegetative habitat.

A major reason that the client has asked us to replace their failed wooden wall with a masonry wall was to prevent the very adverse impacts to water quality and fish, wildlife, and vegetative habitat that would likely occur if the soil no longer being retained by their Wall erodes and cascades down into those habitats. A major landslide would have a catastrophic effect on these habitats.

7 Grading, removal of vegetative cover and trees, or construction shall only be the minimum necessary to afford relief and to the extent required to accommodate the necessary improvements. In these cases, the least damaging designs shall be required, such as bridges, bottomless culverts or retaining walls, as well as environmental remediation, including the planting of the areas where grading or removal of vegetative cover or trees has taken place, utilizing best practices for ecological restoration and water quality enhancement projects.

The work we propose will not result in the removal of any vegetative covers (other than what was already damaged by soil erosion that had occurred as a result of the Wall's failure or in our effort to create a ledge to catch some of the eroding soil) nor are we going to remove any trees. As stated in justification 5 above, the short 2' to 3' strip of soil that will be below the masonry wall we propose to build, that has been disturbed, will be seeded with grass seed. We expect that the grass seed will be overcome by the native flora in a short time, but in the meantime the grass will hold the soil in place until that occurs.

Again as stated in justification 5 above, shrubs as listed in the Howard County Landscape Manual Updates: Recommended Street Tree List will be installed on the soil above the wall. Such shrubs will further enhance the environment of these habitats by retaining soil and water within the owner's property which otherwise could cause erosion and other damage to the steep slope beyond the owner's property.

I was also asked what would be the maximum height of the masonry wall we propose to build in place of the failed wooden wall (Wall). Any masonry wall we build would stand no more than 6' from the ground to the top of the wall (including its cap.) If need be we will remove any excess soil that would otherwise necessitate building this wall in excess of 6', just so we can maintain that 6' maximum height.

We urge approval of this Alternative Compliance Application as soon as possible to minimize the likelihood of the type of weather event described above and the potential for a catastrophic landslide.

Thank you for your consideration



Eugene (Gene) Berk, Landscape Designer/Certified Professional Horticulturist
TFMD on behalf of Land Escapes LLC (MHIC 136489)
7249 Procopio Circle
Columbia, MD 21046
443 812-2760(Cell) / 410 300-8413 (Office)

Plat (survey) and Other Comments

Attached is a Survey the owner had prepared for them this year in anticipation of the need to at sometime in the future request permission from the Wilde Lake HOA to replace the retaining wall in their backyard.

I have added a note to it indicating that a portion of their backyard from the point where we would build a retaining wall to replace the one that collapsed was 60 feet above a stream on CA owned property. That stream is only partially that distance away before it takes a sharp turn in a direction further away from the property and then turns again to run parrallel to the owner's property. Between the previous retaining wall and the house the owner has a deck that extends 12' back towards the rear of the property. The house itself is very close to being precisely 100 feet back from that stream where the stream makes its closest approach to the house.

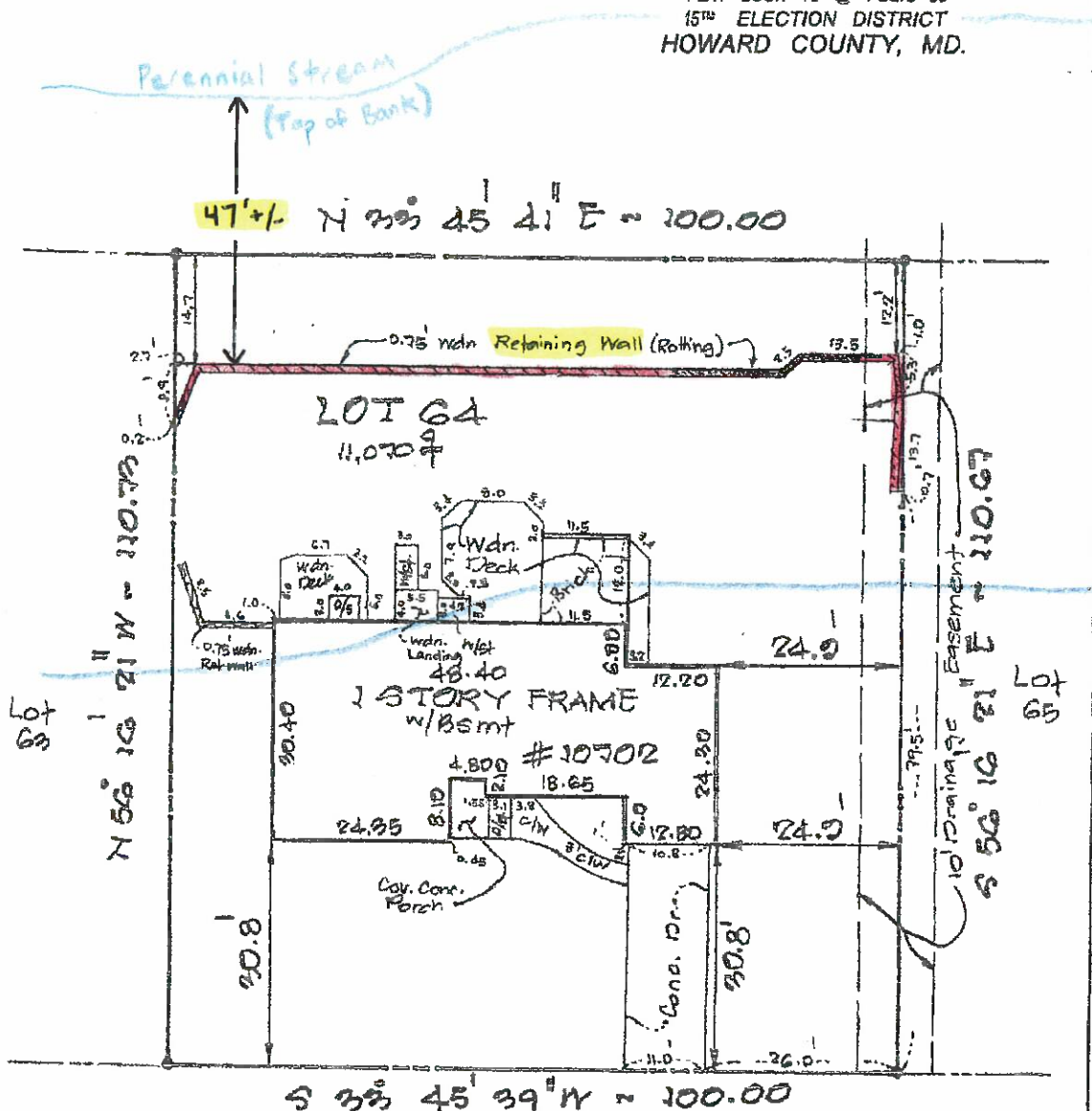
Note the replacement wall will be built using Keystone Compact III retaining wall blocks capped with Keystone 3 caps. Area of displaced soil will not exceed 625 SF. During wall construction that displaced area will be back-filled with 57 Stone and some of the previously displaced soil. At the left end of wall we will build concrete block steps into the wall to allow access to area behind the wall. Any disturbed remaining soil in the rear of the wall be seeded with grass seed.



Eugene (Gene) Berk, Landscape Designer/Certified Professional Horticulturist
TFMD on behalf of Land Escapes LLC (MHIC 136489)
7249 Procopio Circle
Columbia, MD 21046
443 812-2760(Cell) / 410 300-8413 (Office)

Note: There is a stream behind the home. At its closest (~ within the first 20 feet of the left hand side of the house) it is ~60' from the proposed replacement wall, and ~100' from the house, before it turns away from that point becoming even further away from the Proposed Replacement Retaining Wall.

LOT 64, SECTION 5
COLUMBIA
VILLAGE OF WILDE LAKE SUBDIVISION
FAULKNER RIDGE, SHEET 2 OF 5
PLAT BOOK 12 @ FOLIO 85
15TH ELECTION DISTRICT
HOWARD COUNTY, MD.



FAULKNER RIDGE [60W] CIRCLE

SURVEYOR'S CERTIFICATES:

I hereby certify that the position of the existing improvements on the above described property has been established by a field survey and that, unless otherwise shown, there are no visible encroachments, if any.

This location drawing is not to be relied for establishing boundary lines.

DATE: 20th March 2021 *W.L.M.*

I hereby certify that I have carefully surveyed the property as shown by this plat and Permanent Survey Markers are in place as shown.

DATE:

NOTE: Location drawing does NOT include setting Permanent Survey Markers at property corners.
NO TITLE REPORT FURNISHED

PLAT SUBJECT TO RESTRICTIONS & EASEMENTS OF RECORD OR OTHERWISE.



W. L. MEEKINS, INC.

3101 RITCHIE ROAD
FORESTVILLE, MD 20747
TEL.: 301-726-7115
email: info@meekins.com
web: www.meekins.com

REGISTRATIONS

MD # 10813
DCLS # 900880

Perennial stream

100' Stream Bank Buffer



Addendum to Alternative Compliance Request

Images of Wall Prior to and After Collapse

1 – When we were first called in to discuss wall replacement with client (April 2021) this was an example of the then current condition of the wall. Client thought the cost was too high and decided to defer action against our advice. (NOTE: Client purchased this house from a prior owner who built this wall.)



2 – Soon after that their wall began to fail and client agreed to have us replace the wall. This is an example of what they observed that caused that request to replace the wall.



3 – The following images show what happened to the wall before we showed up at their home with

equipment to start construction.





4 – Almost all of the rotted lumber had fallen away from the soil it was supposed to retain or was on the ground beneath the wall and was precariously hanging over the slope leading down towards the CA owned property and the stream contained within it. We, in order to prevent that material from cascading down that slope removed all the lumber. Since the soil was no longer being held back by the previous retaining wall we also realized that a landslide of that soil could occur. We, therefore, removed a four to five foot width of soil to create a ledge. That ledge would hopefully retain some of that soil from a light to moderate rainfall and would also serve as the starting point for the new masonry retaining wall we were contracted to build.



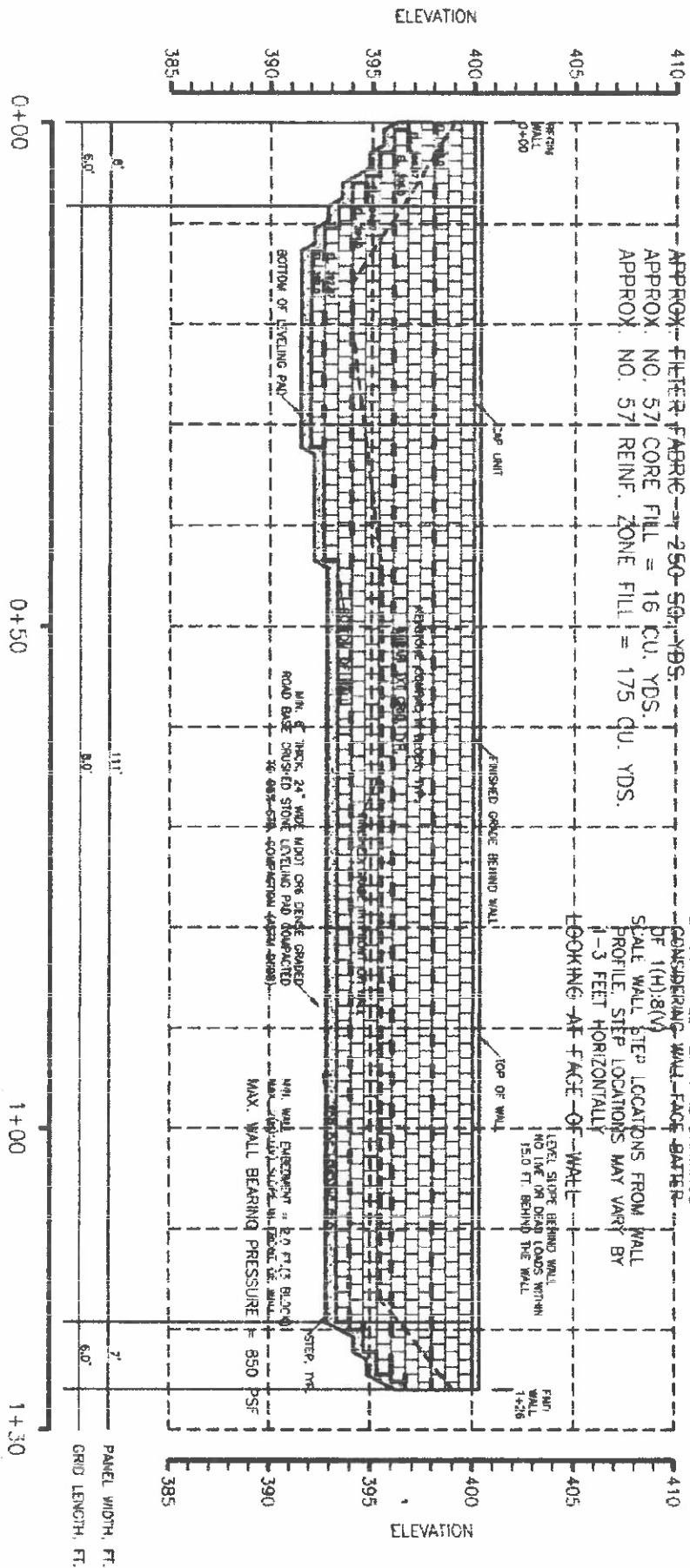
Our concern is that even this ledge, and the silt fence we installed below the proposed wall, would not be sufficient to prevent a major landslide into the CA owned property and the stream within it; especially if we should have a major rainfall event and/or a tropical storm.

In any event, the proposed masonry wall would restore the grade of the owner's property back to where it was before the collapse of the timber wall, which was in place prior to the current owner's purchase of this property in 2005.

Thank you for considering our Alternative Compliance Application.

A handwritten signature in black ink that reads "Eugene M Berk". The signature is written in a cursive style with a long horizontal line extending to the right.

Eugene (Gene) Berk, Landscape Designer/Certified Professional Horticulturist
TFMD on behalf of Land Escapes LLC (MHIC 136489)
7249 Procopio Circle
Columbia, MD 21046
443 812-2760(Cell) / 410 300-8413 (Office)



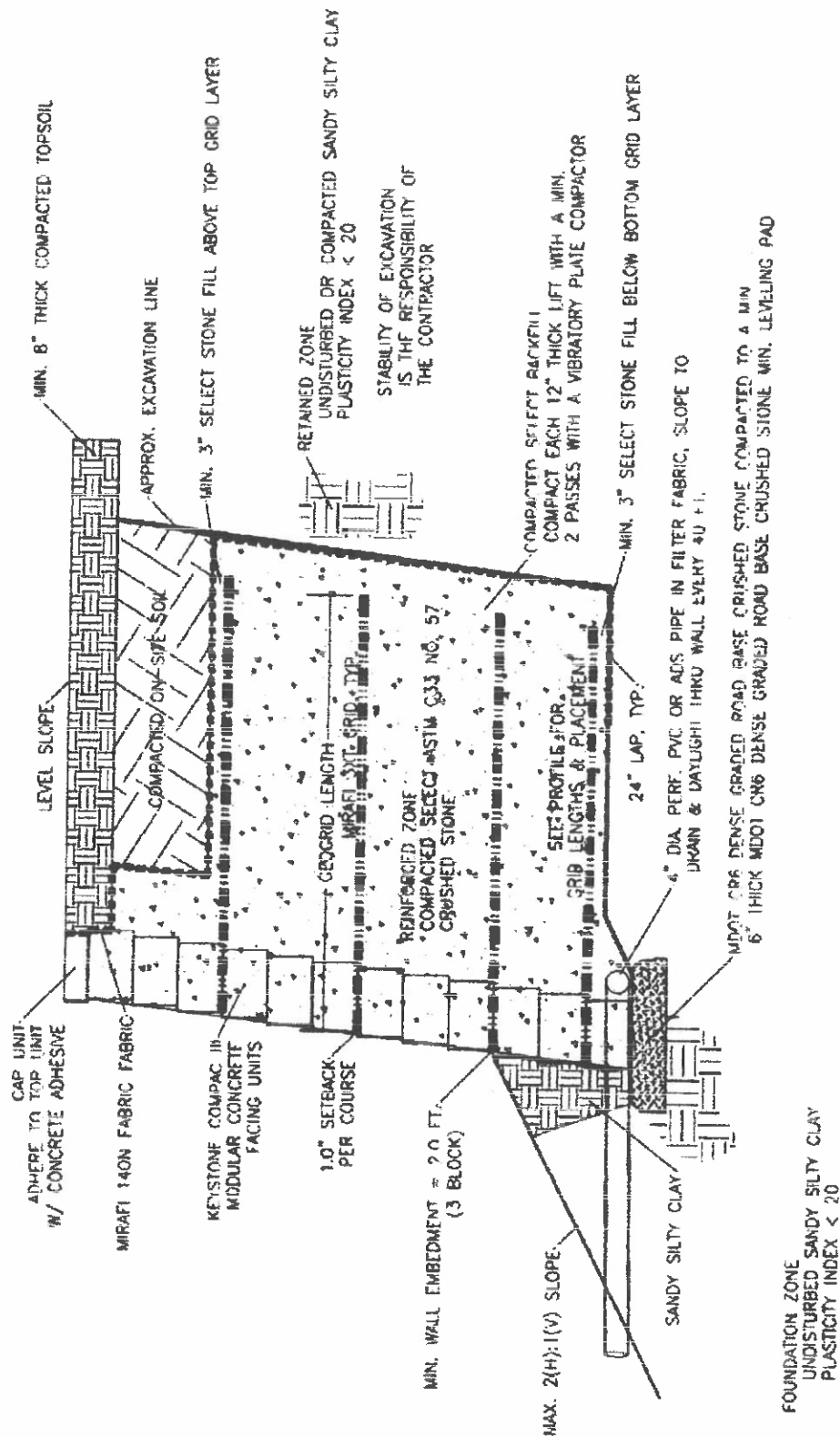
KEY
 UNPAVED 3XT GRID, 1/4"

WALL 1 PROFILE

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

PANEL WIDTH, FT.
 GRID LENGTH, FT.

NO LIVE OR DEAD LOADS WITHIN 15.0 FT. BEHIND THE WALL



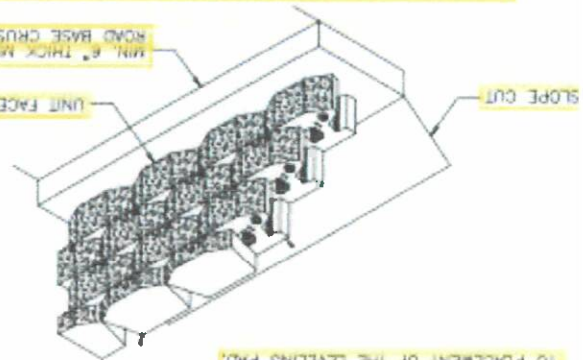
TYPICAL KEYSTONE COMPAC III REINFORCED WALL SECTION

SCALE: NONE

BASE LEVELING PAD NOTES:

THE LEVELING PAD IS TO BE CONSTRUCTED OF MIN. 6" THICK CORG. DENSE GRADED ROAD BASE CRUSHED STONE.

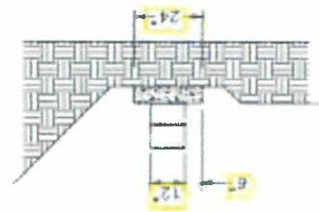
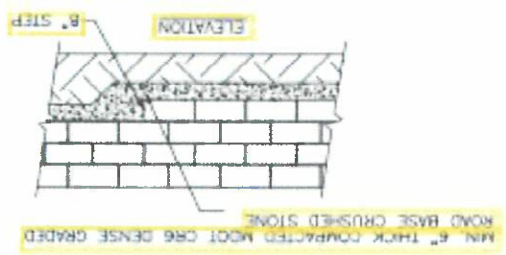
THE BASE FOUNDATION IS TO BE APPROVED BY THE WALL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.



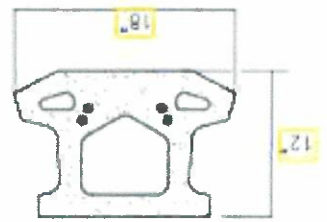
LEVELING PAD/BASE PAD ISOMETRIC VIEW
SCALE: NONE

LEVELING PAD DETAIL

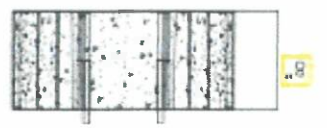
SCALE: NONE



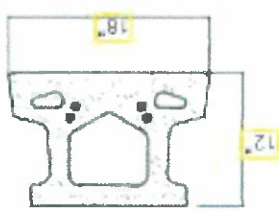
Compac III Plan
* Dimensions May Vary by Region



Compac III Elevation



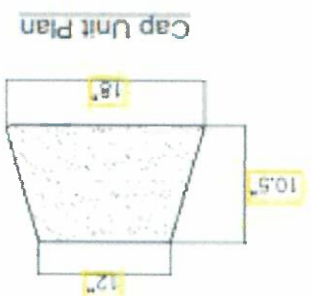
Compac III Plan
* Dimensions May Vary by Region



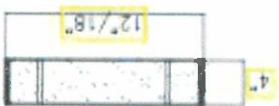
Compac III Elevation



Universal Cap Unit Option
* Dimensions & Availability Will Vary by Region

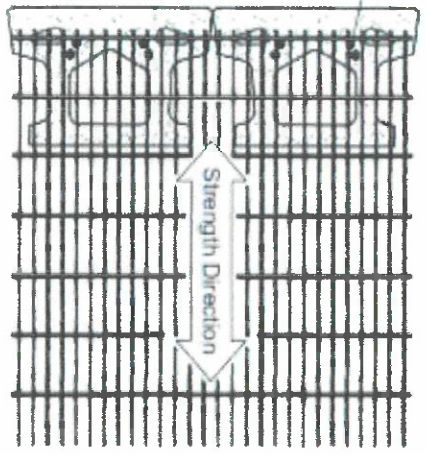


Cap Unit Elevation



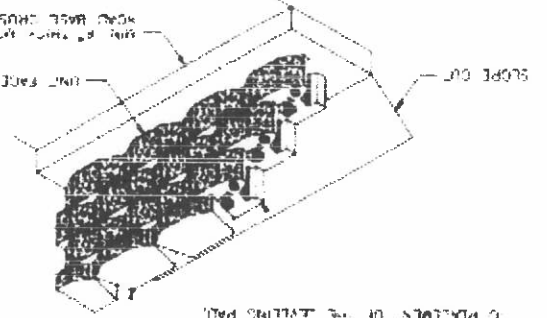
Grid & Pin Connection

Geogrid is to be Placed on Level Backfill and Extended Over the Fiberglass Pins. Place Next Unit Pull Grid Taught and Backfill. Stake as required.



BASE LEVELING PAD NOTES:

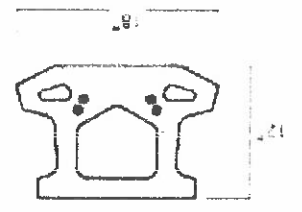
1. THE LEVELING PAD IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING NOTES.
 2. THE BASE CONSTRUCTION IS TO BE APPROVED BY THE LOCAL HEALTH DEPARTMENT.
 3. THE BASE CONSTRUCTION IS TO BE APPROVED BY THE LOCAL HEALTH DEPARTMENT.



LEVELING PAD/BASE PAD ISOMETRIC VIEW
SCALE: NONE

UNIT BACK CRUSHED STONE
UNIT FACE

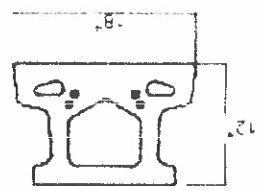
Compac III Plan
 Compac III Unit
 * Dimensions May Vary by Region



Compac III Elevation



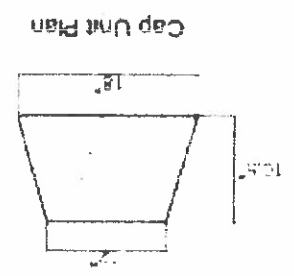
Compac III Unit
 Compac III Plan
 * Dimensions May Vary by Region



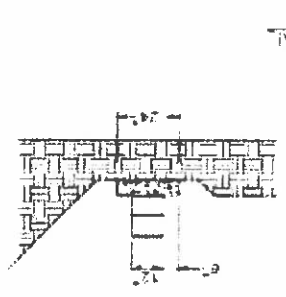
Compac III Elevation



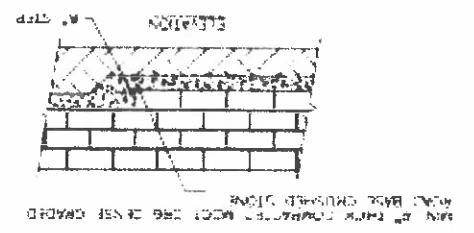
Universal Cap Unit Option
 * Dimensions & Availability Will Vary by Region



Cap Unit Elevation



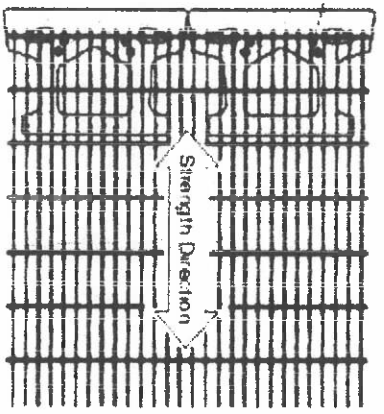
LEVELING PAD DETAIL
SCALE: NONE



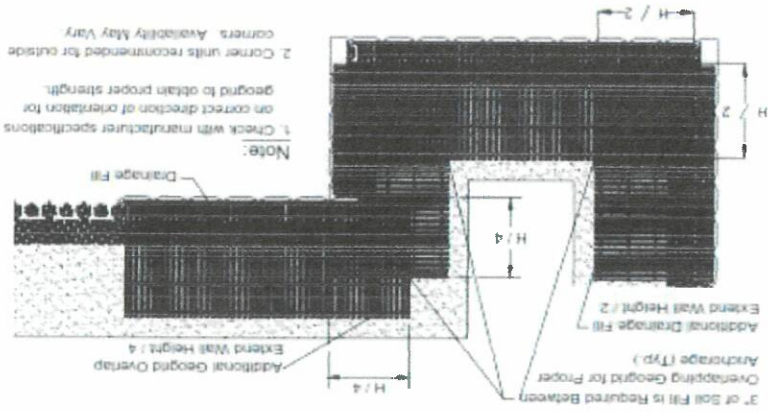
UNIT BACK CRUSHED STONE
UNIT FACE

Grid & Pin Connection

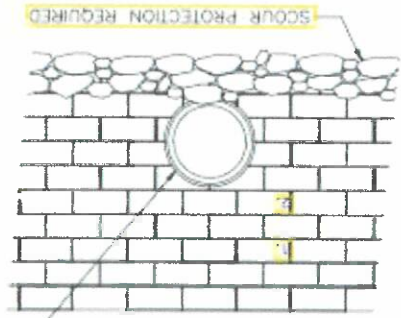
Geogrid is to be Placed on Level Backfill and Extended Over the Fiberglass Pins. Place Next Unit Pull Grid Tightly and Backfill. Stake as required.



NOTES:
 1. REINFORCING BARS SHALL BE 1/2" DIA. PER AISC 360.
 2. LEVELING SHALL BE PER AISC 360.
 3. FOUNDATION SHALL BE PER AISC 360.
 4. RETAINING WALL SHALL BE PER AISC 360.
 5. MINIMUM WALL THICKNESS SHALL BE PER AISC 360.
 6. A GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR ALL NO. 10 AND ALL NO. 11 MAXIMUM WALL HEIGHTS.
 7. WALL BRACING SHALL BE PER AISC 360.
 8. THE WALL SHALL BE PER AISC 360.
 9. THE WALL SHALL BE PER AISC 360.
 10. ALL NO. 10 AND ALL NO. 11 MAXIMUM WALL HEIGHTS SHALL BE PER AISC 360.
 11. MAXIMUM WALL HEIGHT SHALL BE PER AISC 360.
 12. THE WALL SHALL BE PER AISC 360.
 13. ALL OUTSIDE CORNERS SHALL BE PER AISC 360.
 VERIFY ALL.

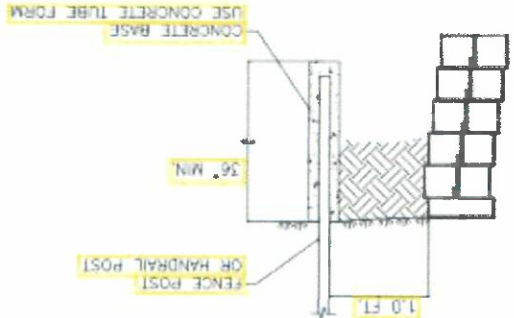


PIPE DETAIL < 15" DIA
 SCALE: NONE

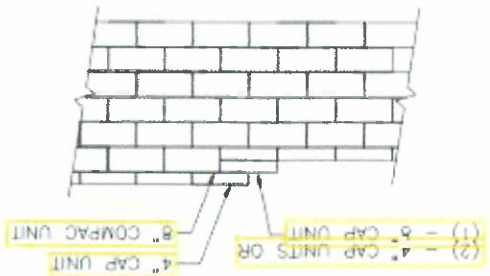


SCALE: NONE

POST & RAIL DETAIL
 TYPICAL HANDRAIL AND/OR RAIL POST
 SCALE: NONE



TOP OF WALL STEPS
 SCALE: NONE



SLEEVE-IT FENCE POST ALTERNATE DET.
 SCALE: NONE

ASSEMBLY & INSTALLATION

1. General - The Sleeve-It post foundation system shall be purchased and installed by the retaining wall contractor to include frame fence post installation. Contractor shall verify proper spacing requirements prior to installation.

2. Assembly & Installation - Refer to instructions provided with each specific retaining wall to the assembly of the Sleeve-It system and the correct installation procedure. When the approved retaining wall has been constructed to meet Step 1, prepare a hole in the wall face approximately 2\"/>

Step 1: Prepare a hole in the wall face approximately 2\"/>

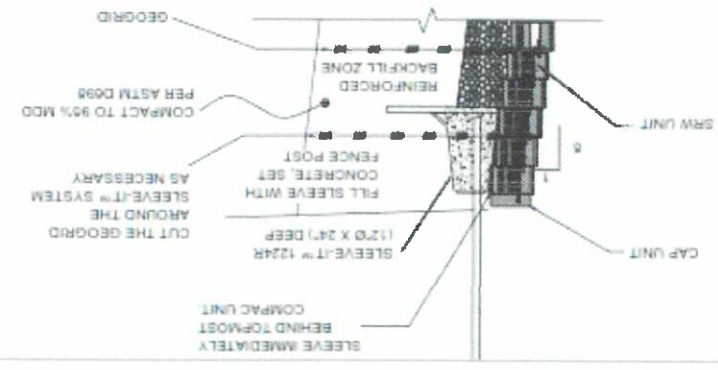
Step 2: Place the Sleeve-It unit on the level surface in an upright position with the front edge of the unit flush against the back of the wall. Multiple units should be spaced in accordance with fence specifications.

Step 3: Encapsulate and seal the Sleeve-It unit by placing and compacting additional concrete behind the unit as required. A geogrid is required at the geogrid penetration in the wall face just enough to fit around the base of the unit while ensuring that the geogrid remains properly attached to the wall. Continue the building process until the material meets the top of the lower. Do not remove partition board until ready to place post. Do not step on partitioned bit as this could cause serious bodily injury.

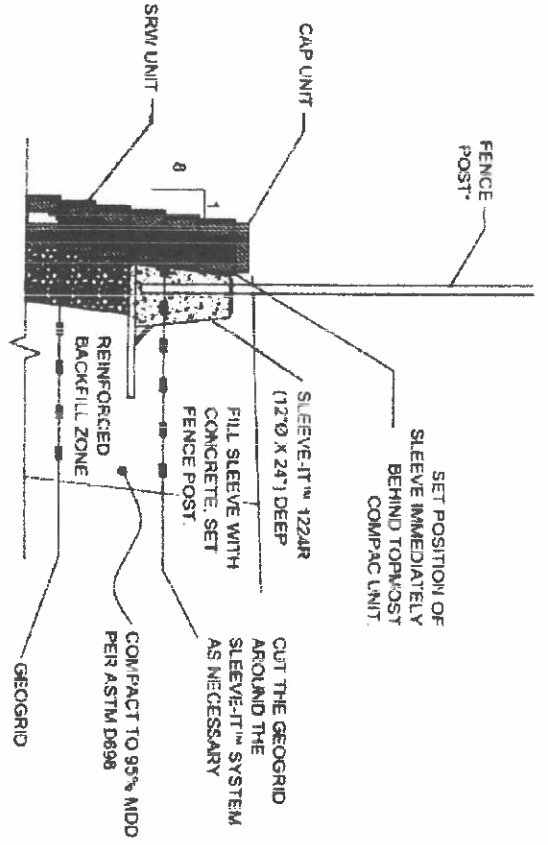
Step 4: Finish the partitioned hole by using a trowel or trowel to expose the inside of the Sleeve-It unit. Decked for can be left in place until ready to be removed. Do not use a shovel or pry bar to remove the Sleeve-It unit. Decked for can be removed easily. Follow guidelines as specified by unit supplier. Concrete is highly recommended as well as rebar.

Step 5: Place post through the exposed area and seal on the flat ground surface area inside the Sleeve-It cavity. Ensure that the post is upright and level and tied to place with quality ground rods and concrete through the Sleeve-It cavity. Frame post cap and sealant are provided by unit supplier. Concrete is highly recommended as well as rebar.

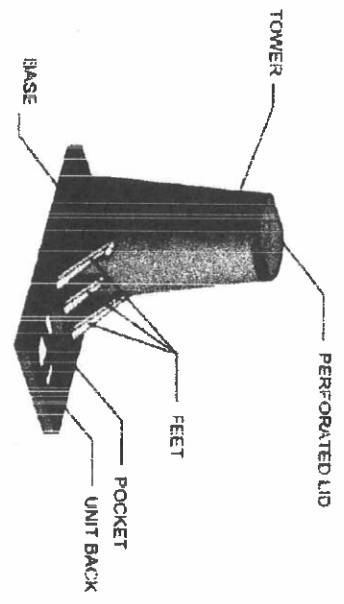
DETAIL OF FENCE POST INSTALLATION



PER ASTM D698
 COMPACT TO 95% MDD
 SLEEVE-IT™ SYSTEM AS NECESSARY
 AROUND THE SLEEVE-IT™ SYSTEM
 FILL SLEEVE WITH SLEEVE-IT™ SET
 FENCE POST
 CONCRETE SET
 SLEEVE-IT™ 1224R (12\"/>



DETAIL OF FENCE POST INSTALLATION USING SLEEVE-IT™
N.T.S.



ASSEMBLY & INSTALLATION

- 1. General** - The Sleeve-It™ post foundation system shall be purchased and installed by the retaining wall contractor to facilitate future fence post installation. Contractor shall verify proper spacing requirements prior to installation.
- 2. Assembly & Installation** - Refer to instructions provided with units for specific information related to the assembly of the Sleeve-It™ system and the correct installation procedure. When the segmental retaining wall has been constructed to two feet from top not including the capstone.
 - Step 1:** Prepare a level area approximately 24" wide x 36" deep behind the wall face. The prepared area should be 24" below the proposed top of wall (not including the cap stone).
 - Step 2:** Place the Sleeve-It unit on the level surface in an upright position with the front edge of the unit flush against the back of the wall. Multiple units should be spaced in accordance with fence specifications.
 - Step 3:** Encapsulate and stabilize the Sleeve-It unit by placing and compacting sufficient backfill material layers as required if geogrid is required, set the geogrid perpendicular to the wall face just enough to fit around the base of the unit while ensuring that the geogrid remains properly attached to the wall. Continue the backfill process until the material reaches the top of the tower. Do not remove deflated handi leads to raise post. Do not step on perforated lid as this could cause serious bodily injury.
 - Step 4:** Punch the perforated lid using a mallet or hammer to expose the inside of the Sleeve-It unit. Detached legs can be left inside the unit or discarded prior to pouring the fill material.
 - Step 5:** Place post through the exposed area and rest on the flat ground surface area inside the Sleeve-It cavity. Ensure that the post is upright and level and hold in place while carefully pouring fill material such as concrete through the exposed cavity. Follow guidelines as specified by fill supplier. Concrete is highly recommended as fill material.

SLEEVE-IT FENCE POST ALTERNATE DETAIL
SCALE: NONE

Important Note: Backfill soil as prescribed by retaining wall manufacturer. Backfill material above and surrounding the Sleeve-It™ system must be compacted to a minimum of 95% of the material's maximum dry density as determined by ASTM D-1557 Standard Proctor. Backfill and compaction within three feet of the wall face should be performed with hand operated equipment as recommended by the National Concrete Masonry Association (NCMA) SRW guidelines. Repeat above steps for next Sleeve-It™ unit.

Fence posts shall extend a minimum distance of 18" into the sleeve to ensure proper engagement with the Sleeve-It™ system. All posts must be on the "inboard" side of the vertical portion of the cantilever base. Fill cavity completely with concrete. When concrete cures, topsoil or other surficial layer may be placed over the Sleeve-It™ system to create the finished appearance.

The Sleeve-It™ product shall be evenly spaced. Use of the Sleeve-It™ system is limited to the following fencing applications without consideration of wind load:

- 6-foot high and under chain link fences
- 5-foot high and under wood fence with gaps between boards
- 5-foot high and under ballustraded PVC, steel, aluminum or wrought iron fences.

For other fencing systems, specifically not meeting these criteria, contact Strata Systems Inc. to determine suitability. (800) 841-7731 or email seale@stratasys.com

All materials may be subject to site testing for compliance to the above specifications.

NOTES:

1. REINFORCED ZONE- COMPACTED SELECT ASTM C33 NO. 57 CRUSHED STONE WITH AN EFFECTIVE FRICTION ANGLE = 36 DEGREES, MOIST UNIT WEIGHT= 105 PCF, COHESION = 0 PSF.
2. LEVELING PAD- MINIMUM 6" THICK MDOT CR6 DENSE GRADED ROAD BASE CRUSHED STONE COMPACTED TO A MIN. 95% STANDARD COMPACTION (ASTM D698).
3. FOUNDATION ZONE- UNDISTURBED SANDY SILTY CLAY WITH A PLASTICITY INDEX LESS THAN 20 WITH AN EFFECTIVE FRICTION ANGLE = 28 DEGREES, MOIST UNIT WEIGHT= 120 PCF, COHESION = 0 PSF, COHESION = 50 PSF USED IN GLOBAL STABILITY ANALYSIS, ONLY.
4. RETAINED ZONE- UNDISTURBED OR COMPACTED SANDY SILTY CLAY WITH A PLASTICITY INDEX LESS THAN 20 WITH AN EFFECTIVE FRICTION ANGLE = 28 DEGREES, MOIST UNIT WEIGHT= 120 PCF, COHESION = 0 PSF.
5. MINIMUM WALL EMBEDMENT- 2' (3 BLOCK)
6. A GEOTECHNICAL REPORT WAS NOT SUPPLIED FOR THE PROJECT AND THE RETAINED AND REINFORCED ZONE FILL SOIL PROPERTIES USED WERE ASSUMED FOR THE SITE. ALL FIELD SOIL PROPERTIES MUST BE VERIFIED BY THE TESTING AGENCY OF RECORD EMPLOYED BY THE OWNER AND THE WALL DESIGNER NOTIFIED OF SOILS DIFFERENT THAN THOSE NOTED HEREIN.
7. WALL BATTER WILL BE 1.0-INCH PER BLOCK COURSE
8. THE WALL DRAWINGS ARE BASED ON THE PROFILE AND WALL DESCRIPTIONS PROVIDED TO THE WALL DESIGNER BY THE CLIENT. THE TOP AND BOTTOM OF WALL ELEVATIONS AND SLOPES IN THE VICINITY OF THE WALL MUST BE VERIFIED BY THE WALL INSTALLER BEFORE BEGINNING WALL CONSTRUCTION. THE WALL DESIGNER MUST REVIEW ANY CHANGES TO THE WALL DIMENSIONS OR SLOPES AROUND THE WALL.
9. THE WALL DESIGNER ASSUMES NO LIABILITY FOR INFORMATION PROVIDED BY OTHERS OR NOT VERIFIED.
10. ALL NO. 57 FILL MUST BE PLACED IN MAXIMUM 12.0-INCH THICK LIFTS AND COMPACTED WITH A MINIMUM OF TWO PASSES WITH A VIBRATORY PLATE COMPACTOR. ALL SOIL AND CR6 FILL MUST BE PLACED IN MAXIMUM 8.0 INCH THICK LIFTS AND COMPACTED TO A MINIMUM OF 95% STANDARD COMPACTION (ASTM D698). THE COMPACTION OF EACH LIFT MUST BE VERIFIED BY THE TESTING AGENCY OF RECORD EMPLOYED BY THE OWNER WITH AT LEAST ONE TEST PER 5000 SQ. FT. OF FILL PLACED PER LIFT, PER DAY.
11. MAXIMUM WALL BEARING PRESSURE = 850 PSF.
12. THE LONG-TERM STATIC GROUNDWATER LEVEL IS ASSUMED TO BE BELOW THE BOTTOM OF THE WALL (GREATER THAN 10.0 FEET)
13. ALL QUANTITIES DO NOT INCLUDE ANY WASTE OR OVERLAP REQUIRED AND ARE BASED ON IN-PLACE COMPACTED VOLUMES. THE INSTALLER MUST VERIFY ALL QUANTITIES
14. WALL HEIGHTS SHOWN MUST NOT BE EXCEEDED WITHOUT THE CONSULTATION AND APPROVAL OF THE WALL DESIGNER.
15. ALL FACIA BLOCK MUST BE KEYSTONE COMPAC III UNITS.
16. ALL REINFORCING GEOGRID MUST BE MIRAFL 3XT GEOGRID AS SHOWN ON THE WALL DRAWINGS.
17. ALL UTILITIES BEHIND, IN FRONT AND UNDER THE WALL SHOULD BE INSTALLED BEFORE COMMENCING WALL CONSTRUCTION TO LIMIT DISTURBANCE AND DAMAGE TO THE GRID AND UNDERMINING OF THE WALL. THE COMPACTION OF ALL UTILITY BACKFILL UNDER THE BLOCK AND GRID ZONES MUST BE VERIFIED TO BE AT LEAST 95% STANDARD COMPACTION (ASTM D698).
18. MAXIMUM SLOPE BEHIND AND IN FRONT OF THE WALL ARE SHOWN ON THE WALL PROFILES AND SHALL NOT BE EXCEEDED WITHOUT THE CONSULTATION AND APPROVAL OF THE WALL DESIGNER.
19. CARE MUST BE TAKEN WHEN INSTALLING ANY UTILITIES, STRUCTURES OR LANDSCAPING BEHIND THE WALL SO AS NOT TO DAMAGE THE GEOGRID OR WALL FACE. ANY DAMAGED GEOGRID OR WALL FACE DISTORTION MUST BE REPLACED.
20. ALL ROOF DRAINS AND SURFACE WATER MUST BE ROUTED AROUND OR PIPED THROUGH THE WALL FACE. NO SURFACE WATER SHALL BE ALLOWED TO FLOW OVER THE WALL FACE DURING OR AFTER WALL CONSTRUCTION
21. ANY SPRINGS, SEEPS OR OTHER WATER SOURCES NOTED IN THE WALL EXCAVATION MUST BE IMMEDIATELY REPORTED TO THE WALL DESIGNER FOR REMEDIAL ACTION.
22. NO LIVE OR DEAD LOADS WITHIN 15.0 FT. BEHIND THE WALL.
23. ALL FILTER FABRIC MUST BE MIRAFL 140N FABRIC NON-WOVEN FABRIC OR APPROVED EQUIVALENT
24. FACTORS OF SAFETY USED IN DESIGN CALCULATIONS: SLIDING = 1.5, OVERTURNING = 2.0, BEARING CAPACITY = 2.0, GLOBAL STABILITY = 1.3