

BASED ON THE L.O.D. (LIMIT OF DISTURBANCE)			TARGET ESD <sub>v</sub> = Total site									
DRYWELL Structure	IMPERVIOUS Area Numbers	DRAINAGE Area (SQ. FT.)	MINIMUM REQUIRED ESD, $P_{\rm E} = 1.0 \ \text{In} \\ \text{(Cubic Feet)}$	DRY WELL DIMENSIONS SURFACE AREA (FEET) (SQUARE FEET)		TOTAL DRY WELL VOLUME (CUBIC FEET)	Q <sub>E</sub> MAXIMUM VOLUME CHECK (1-YEAR STORM: 2.6 IN)	DRY WELL VOLUME PROVIDED (CUBIC FEET)				
		DATA BELOW ROUNDED TO 1 DECIMAL PLACE; RV FOR DRYWELLS IS 0.95 (100% IMPERVIOUS ROOF AREA)										
A ROOF	3	337 SF		11.1 (LENGTH) 8.6 (WIDTH)				191.0 CF				
	4	511 SF	FSDv = 930 (A) x 1.0 (Pe Min) x 0.95 (Rv)		A = 11.1 (L) x 8.6 (W)	V = 95.5 (A) x 5 (D) x 0.4	ESDv = $\frac{930 \text{ (A) x } 2.6 \text{ (Pe Max) x } 0.95 \text{ (Rv)}}{12}$					
	7	82 SF	ESDV = 12		A = 95.5 SF	V = 191.0 CF	ESDV = 12					
			ESDv Min = 73.6 CF	5.0 (DEPTH)	A = 90.5 SF	V = 191.0 OF	ESDv Max = 191.4 CF					
	TOTAL	930 SF										
B ROOF	5	406 SF						132.8 CF				
	6	246 SF	ESDv = 652 (A) x 1.0 (Pe Min) x 0.95 (Rv)	8.3 (LENGTH)	A = 8.3 (L) x 8 (W) A = 66.4 SF	V = 66.4 (A) x 5 (D) x 0.4	ESDv = 652 (A) x 2.6 (Pe Max) x 0.95 (Rv)					
			12 ESDV =	8.0 (WIDTH)		V = 132.8 CF	ESDV = 12					
			ESDv Min = 51.6 CF	5.0 (DEPTH)	A = 00.4 SF	V = 132.0 UF	ESDv Max = 134.2 CF					
	TOTAL	652 SF										
C ROOF	12	503 SF										
			ESDv = 503 (A) x 1.0 (Pe Min) x 0.95 (Rv)	7.6 (LENGTH)	$A = 7.6 (L) \times 6.8 (W)$	$V = 51.7 (A) \times 5 (D) \times 0.4$	ESDv = $\frac{503 \text{ (A) x 2.6 (Pe Max) x 0.95 (Rv)}}{1000 \text{ (A) x 2.6 (Pe Max) x 0.95 (Rv)}}$					
			ESDV = 12	6.8 (WIDTH)	A 54.7.05	V 400 4.0F	ESDV = 12	103.4 CF				
			ESDv Min = 39.8 CF	5.0 (DEPTH)	A = 51.7 SF	V = 103.4 CF	ESDv Max = 103.5 CF					
	TOTAL	503 SF										
D ROOF	11	502 SF			A = 9.5 (L) x 9.2 (W)			174.8 CF				
	14	176 SF	854 (A) x 1.0 (Pe Min) x 0.95 (Rv)	9.5 (LENGTH)		V = 87.4 (A) x 5 (D) x 0.4	854 (A) x 2.6 (Pe Max) x 0.95 (Rv)					
	15	176 SF	ESDv = $\frac{6.54 \text{ (ii)} \times 1.5 \text{ (i c willi)} \times 6.55 \text{ (iiv)}}{12}$	9.2 (WIDTH)			$ESDV = \frac{6.94 \text{ (A) } \text{ A 2.0 (1 e initial) A 0.93 (inity)}}{12}$					
			ESDv Min = 67.6 CF	5.0 (DEPTH)	A = 87.4 SF	V = 174.8 CF	ESDv Max = 175.8 CF					
	TOTAL	854 SF										
E ROOF	8	218 SF										
	9	163 SF	812 (A) x 1.0 (Pe Min) x 0.95 (Rv)	9.2 (LENGTH)	A = 9.2 (L) x 9 (W)	$V = 82.8 (A) \times 5 (D) \times 0.4$	ESDv = 812 (A) x 2.6 (Pe Max) x 0.95 (Rv)					
	10	431 SF	$ESDv = \frac{612 (11/2 \times 1.5) (1 \text{ e willing } \times 6.55) (11/2)}{12}$	9.0 (WIDTH)	A = 82.8 SF	V = 165.6 CF	ESDV = 12	165.6 CF				
			ESDv Min = 64.3 CF	5.0 (DEPTH)	A = 82.8 SF	V = 100.0 OF	ESDv Max = 167.1 CF					
	TOTAL	812 SF										
AREAS NOT	1 1	1,450 SF	DRIVEWAY - NOT TREATED BY THIS PLAN, UNABLE TO DISCONNECT									
	2	195 SF	WALK/STEPS - NOT TREATED DUE TO YARD SLOPES GREATER THAN 5%.									
TREATED	13	250 SF	PATIO - NOT TREATED DUE TO INSUFFICIENT AREA FOR A NON-ROOFTOP DISCONNECT									
	TOTAL	1,895 SF	The state of the s									

ESD COMPUTATIONS - 9120 QUINTANA DRIVE (HYDROLOGIC SOIL GROUP B)

AREA PERCENTAGE (I)

FOR PEDETERMINATION

27.24 %

L.O.D. IMPERVIOUS

FOR R<sub>V</sub> DETERMINATION

32.65%

TARGET  $ESD_V = (PE) \times (RV) \times (A) / 12$ 

AREA PERCENTAGE (I)

 $P_E$  = RAINFALL TARGET (INCHES)

APPLY IMPERVIOUS COVER PERCENTAGE TO TABLE 5.3

1.6 IN

 $R_V = RUNOFF VOLUME$ 

0.05 + 0.009(1)

(I = Impervious Percentage)

PER SECTION 5.2.3, THE SIZE OF ANY

PRACTICE IS LIMITED TO THE RUNOFF

FROM THE 1-YEAR 24-HOUR STORM

 $(Q_E)$  VOLUME = (Area) x 2.6 in (Pe Max) x  $(R_V)$  / 12

VOLUME PROVIDED VIA ESD DEVICE NOT

EXCEED THE Q<sub>E</sub> MAXIMUM (1-YEAR STORM)

ESDV PROVIDED

**VIA PERMEABLE** 

PAVEMENTS

0.0 CF

**ESDV PROVIDED VIA** 

0.0 CF

ESD TO THE MEP, QN WAIVER REQUIRED

TOTAL LOT IMPERVIOUS AREA

FOR P<sub>e</sub> DETERMINATION

5,884 SF

TOTAL IMPERVIOUS AREA WITHIN L.O.D.

FOR R<sub>V</sub> DETERMINATION

6,236 SF

TOTAL LOT AREA

FOR P<sub>e</sub> Determination

21,602 SF

TOTAL L.O.D. AREA

FOR R<sub>V</sub> & ESD<sub>V</sub> DETERMINATION

19,100 SF

DETERMINE ESD<sub>V</sub>REQUIRED

TOTAL SITE IMPERVIOUS AREA 5,646 SF

MPERVIOUS AREA IN RIGHT-OF-WAY 352.0 SF

TOTAL ESD<sub>V</sub> PROVIDED

IS ESD<sub>V</sub> ADEQUATE

IS P<sub>E</sub> ADEQUATE

DRYWELL SCHEDULE - 9120 QUINTANA DRIVE												
DRYWELL STRUCTURE	FINISHED GRADE (LOW SIDE)	FINISHED GRADE (HIGH SIDE)	ELEVATION AT TOP OF GRAVEL (1'-3' cover)	COVER DEPTH OVER DRY WELL ON HIGH SIDE (3' MAX.)	PIPE INVERT IN FROM DOWNSPOUTS	TOTAL DEPTH OF GRAVEL (4' max. depth)	ELEVATION AT BOTTOM OF GRAVEL	TOTAL DEPTH OF SAND	ELEVATION AT BOTTOM OF SAND	TOTAL DEPTH OF DRYWELL (gravel + sand, 5' max. depth)	TOTAL DEPTH OF DRYWELL FROM GRADE (8' max. depth)	RECOMMENDED OVERFLOW
A	246.4	247.4	244.4	3.0	243.4	4.0 ft	240.4	1.0 ft	239.4	5.0 ft	8.0 ft	POP UP EMITTER AT DRY WELL CLEANOUTS AND A SURCHARGE PIPE AT EACH DOWNSPOUT.
В	244.3	246.0	243.3	2.7	242.3	4.0 ft	239.3	1.0 ft	238.3	5.0 ft	7.7 ft	
С	244.2	245.4	242.7	2.7	241.7	4.0 ft	238.7	1.0 ft	237.7	5.0 ft	7.7 ft	
D	246.7	247.9	245.2	2.7	244.2	4.0 ft	241.2	1.0 ft	240.2	5.0 ft	7.7 ft	
E	247.1	247.7	245.1	2.6	244.1	4.0 ft	241.1	1.0 ft	240.1	5.0 ft	7.6 ft	

**767.6 CF** < 865.9 CF

**1.42 IN** < 1.60 IN

0.0 CF

0.0 CF

VIA DRY WELLS

767.6 CF

### **SEQUENCE OF CONSTRUCTION**

- Prior to clearing of trees, installing sediment control measures, or grading, a preconstruction meeting must be conducted on-site with the Montgomery County Department of Permitting Services (MCDPS) sediment control inspector (240) 777-0311 (48 hours notice), the Owners representative, and the site Engineer. In order for the meeting to occur, the applicant must provide one paper set of approved sediment control plans to the MCDPS sediment control inspector at the preconstruction meeting. If no plans are provided, the
- meeting shall not occur and will need to be rescheduled prior to commencing any work. The limits of disturbance must be field marked prior to clearing of trees, installation of sediment control
- measures, construction, or other land disturbing activities. 3. Clear and grade for installation of sediment control devices.
- 4. Install sediment control devices (Super Silt Fence, Stabilized Construction Entrance, and Clean Water Diversion Fence).
- 5. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS Sediment Control Inspector before proceeding with any additional clearing, grubbing, or grading.
- 6. Staging, access, and stockpiling activities may not occur in the public right-of-way or beyond the approved limits of disturbance (L.O.D.) defined by this plan.
- 7. The Stabilized Construction Entrance (SCE) is an erosion and sediment control practice and must remain
- in place until written permission is granted from the inspector for its removal. 8. Install base courses for driveway and construct house, etc.
- 9. Gutters and downspouts to be installed early as possible, subject to availability of materials and labor.
- 10. Install stormwater management devices, associated piping, and removable pop-up emitters, but do not connect to downspouts at this time.
- 11. Pave driveway, permanently stabilize all remaining areas. 12. Connect downspouts to roof drain piping and stormwater management devices.
- 13. Provide signed record set of plans to the sediment control inspector. 14. Obtain written approval from Sediment Control Inspector prior to the removal of any sediment control device.

#### **DIVERSION FENCE NON-EROSIVE CONVEYANCE COMPS** Confirm Q(10) through LI-N facility will discharge at a non-erosive velocity using FlowMaster, trapezoidal channel design for the overflow weir. Impervious Area ...... 4,898 SF = 0.112 acres (9.2%) Pervious Area .......... 48,496 SF = 1.113 acres (90.8%) $Q10 = C \times I10 \times A$ $Q10 = 0.23 \times 5.00 \times 1.226$ Q10 = 1.41 CFS TRIANGULAR CHANNEL, SOLVE FOR DEPTH: Lt Side Slope: 0.01:1 (H:V) Rt Side Slope: 24.0:1 (H:V) 0.96 sf Flow Area: Manning's n: 0.060 (grass gutter, < 6" flow) Flow Top Width: 6.80 ft 7.09 ft Channel Slope: 0.0500 ft/ft Wetter Perimeter: 0.24 ft 0.28 ft Critical Depth:

Since the velocity of the discharge is less than 4 fps, 10-yr discharge is non-erosive.

## E.S.D. TO THE M.E.P. STATEMENT

Critical Slope:

Froude #:

0.1119 ft/ft

0.69

Environmental Site Design (E.S.D.) volume has been provided to the Maximum Extent Practicable (M.E.P.) through the use of five (5) gravel dry wells.

The application of other ESD practices, such as landscape infiltration facilities, micro bioretention, micro infiltration trenches, rain gardens and non-rooftop disconnects credits were considered as were permeable pavers. However, due to topographic constraints such as inability to cross-slope the driveway for disconnection, driveway run-on greater than 1:1 that precludes the use of permeable pavers, and rear yard swales that prevent disconnection of the patio, these devices were determined to not be feasible. Dry wells

have been utilized for as many roof areas as possible. Although a Pe of 1.6" cannot be achieved, a Pe of 1.42" is hereby proposed and a quantity waiver is requested. Appropriate fees will be paid at the time of sediment control permit issuance.

## **CAS ENGINEERING DRAINAGE NOTES**

Discharge: 1.41 cfs (see above)

- 1. All storm drain pipe to be Schedule 40 PVC or of higher quality.
- 2. Downspout leaders originating directly from downspouts to be 4" diameter PVC, unless noted otherwise. 3. Maintain minimum 12" cover over all pipe. Pipe slopes to be 2% minimum.
- 4. All areaway and window well drains to sump pump by plumber unless noted otherwise. 5. Sump pump discharge to be located so as to avoid impact to the neighboring properties and to avoid recirculation of water.
- 6. The permittee shall install a splash block at the bottom of each downspout.
- 7. Maintenance of gutters, downspouts, leaf filters, inlets, drain pipes, drainage swales, drywells and other drainage related items should be performed as needed, but at least twice per year.

8. Drainage swales and drainage patterns shall not be impeded with trees, landscaping, fences, etc.

- 9. Window wells shall have a minimum freeboard of 6 inches and should be kept free of leaves and debris. 10. Ground cover (sod, seed, etc.) shall be selected based on soil conditions, drainage, sun exposure, final
- grade slopes, etc. per M.D.E. specifications. 11. Multi-Flow™ or equivalent drainage systems are recommended in lawn areas with a 3% slope or less.
- 12. Gutters and downspouts to be installed early as possible, subject to availability of materials and labor.
- 13. Sediment control devices must be inspected daily and with extra care before storm events. On disturbed sites they should be monitored during storm events.
- 14. Areas where construction is complete, such as side and rear yards, should be permanently stabilized as early as possible and in conformance with M.D.E. specifications.
- 15. Sump pumps serving driveways, patios, areaways, and other large open impervious surfaces must be sized for a 100-year storm event.

9120 Quintana Drive Lot 9, Block 8, Burning Tree Estates Building Permit Site Plan, Stormwater Management Plan, and Sediment Control Plan **Sediment Control Permit #: 291646** 

**CAS ENGINEERING-MD** 10 South Bentz Street Frederick, Maryland 21701 301-607-8031 Phone info@casengineering.com www.casengineering.com

CAS ENGINEERING-DC, LLC 4836 MacArthur Boulevard, NW, 2nd Floor Washington, DC 20007 202-393-7200 Phone info@cas-dc.com

0" 0.5" 1.0" 1.5" 2.0

NOT TO SCALE OR AS NOTED

www.cas-dc.com

SHEET TITLE: **Building Permit Site Plan,** SWM Plan, and **Sediment Control Plan** 

2 of 3

P:\2023\230954\_\_9120 Quintana Drive\6 drawings\230954\_SCP+RWRTP.dwg, 4/16/2024 3:33:21 PM, jmo, © 2024 CAS Engineering and CAS Engineering-DC, L

Drive of 208

Quintana l a, Marylano

20 sda

91) Bethes

CAS JOB NO.: 23-0954

2/14/24 IND - Building Permit Site Plan Base Sheet to Client and Architect.

03/19/24 PNK - Sediment Control Permit Application Submitted. 03/20/24 PNK - SCP Uploaded to ePlans for Initial Plan Review by MCDPS-WRS

04/16/24 JMO- SCP Uploaded for Final Approval by MCDPS-WRS.

JARED M. CARHART, P.E.

PROFESSIONAL ENGINEER CERTIFICATION: I hereby certify that these documents were pre-

pared or approved by me, and that I am a duly

licensed professional engineer under the laws

of the State of Maryland, License No. 51012,

expiration date 06/07/2025, and that this plan

meets MCDPS criteria for building and sedi-

ment control permit applications.

DATE REVISION

## STANDARD EROSION AND SEDIMENT CONTROL NOTES

- 1. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.
- The permittee must obtain inspection and approval by DPS at the following points: At the required pre-construction meeting.
- b. Following installation of sediment control measures and prior to any other land disturbing activity.
- c. During the installation of a sediment basin or stormwater management structure at the required inspection points (see inspection checklist on plan). Notification prior to commencing construction is mandatory. d. Prior to removal or modification of any sediment control structure(s). e. Prior to final acceptance.
- shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.

The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence

- The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee
- \* Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within: a. Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes
- steeper than 3 horizontal to 1 vertical (3:1); and b. Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
- All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. maintenance must be performed as necessary to ensure continued stabilization. The permittee shall apply \*sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas.
- roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February,
- and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15. The site permit, work, materials, approved SC/SWM plans, and test reports shall be available at the site for inspection by duly
- authorized officials of Montgomery County. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
- Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.

Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following

- establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well. \* No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient
- steeper than 2:1 will not be permitted with vegetative stabilization. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to
- For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.
- Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment. 18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
- All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
- 20. \* Vegetative stabilization shall be performed in accordance with the standards and specifications for soil erosion and sediment Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the
- point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-III) or when required by the
- 22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain. 23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high. have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in
- height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times. 24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at
- 1-800-257-7777, 48 hours prior to the start of work. 25. Off-site spoil or borrow areas must have prior approval by DPS.
- 26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for <u>each</u> application. The following methods may be considered:
- a. Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or b. The pump intake may utilize a removable pumping station and must discharge into an undisturbed area through a
- non-erosive outlet; or c. The pump intake may be floated and discharge into a dirt bag (12 oz. non-woven fabric), or approved equivalent, located in an undisturbed buffer area. Remember: Dewatering operation and method must have prior approval by the DPS inspector.
- The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
- \* Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".
- Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and the Sediment Control Inspector.

- STABILIZED CONSTRUCTION ENTRANCE EXISTING PAVEMENT — FARTH FILL NONWOVEN -PIPE (SEE NOTE 6) — 50 FT MIN. LENGTH \* -
- **CONSTRUCTION SPECIFICATIONS** . PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- 2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.

**PLAN VIEW** 

5. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. 4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, O TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONMENT

STANDARD SYMBOL SUPER SILT FENCE ├── SSF ──┤ 10 FT MAX. <u>+</u>34 IN MIN. GROUND SURFACE — -8 IN **1**//≈//≈ 2% IN DIAMETER — GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE OR ALUMINUM **ELEVATION** CHAIN LINK FENCING — WOVEN SLIT FILM GEOTEXTILE -

## **CONSTRUCTION SPECIFICATIONS**

. INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36

CROSS SECTION

CHAIN LINK FENCE 8 IN

MIN. INTO GROUND

- . FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 $^{3}\!\!\!/\!\!\!/$  INCH MAXIMUM OPENING) 42
- INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. . FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- 4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT
- 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS 3. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING
- THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS,

REINSTALL CHAIN LINK FENCING AND GEOTEXTILE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

# SAND SPECIFICATIONS

#### WASHED ASTM C33 FINE AGGREGATE CONCRETE SAND IS UTILIZED FOR STORMWATER MANAGEMENT APPLICATIONS IN MONTGOMERY COUNTY. IN ADDITION TO THE ASTM C33 SPECIFICATION, SAND MUST MEET ALL OF THE FOLLOWING CONDITIONS:

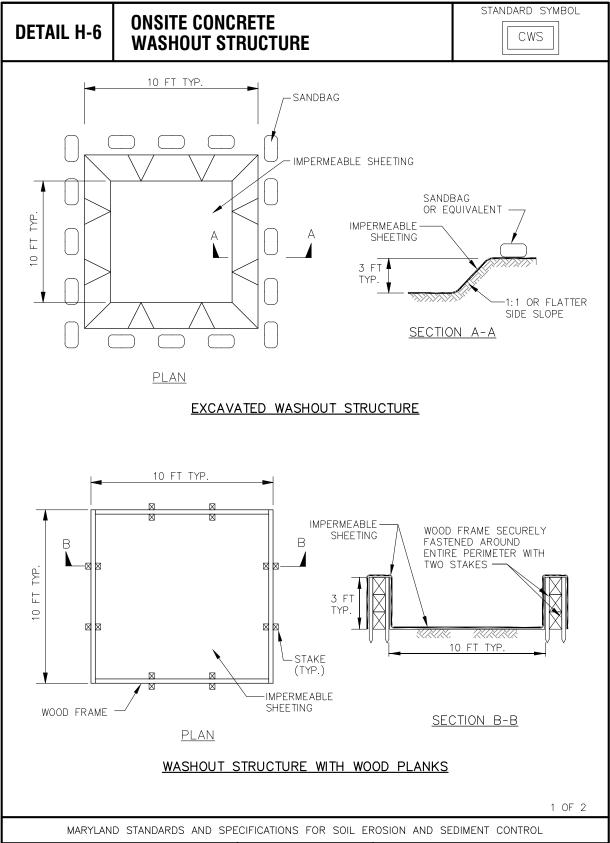
1. Sand must meet gradation requirements for ASTM C-33 Fine Aggregate Concrete Sand. AASHTO M-6 gradation is also acceptable. 2. Sand must be silica—based...no limestone based products may be used. If the material is

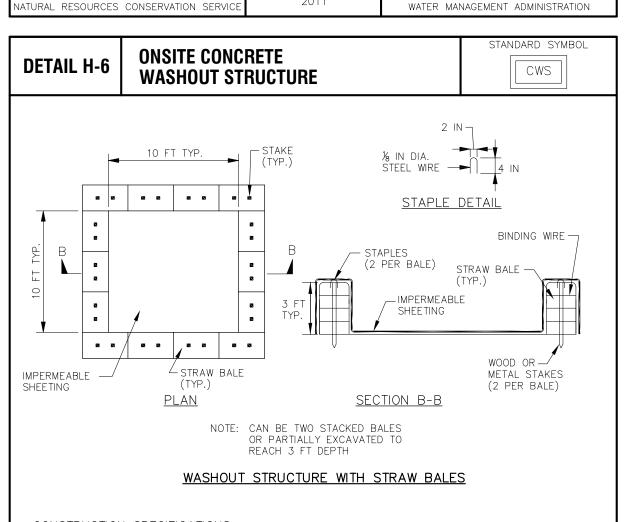
has become contaminated by improper storage or installation practices will be rejected.

4. Manufactured sand or stone dust is not acceptable under any circumstance.

white or gray in color, it is probably not acceptable. 3. Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that

# Department of Permitting Services



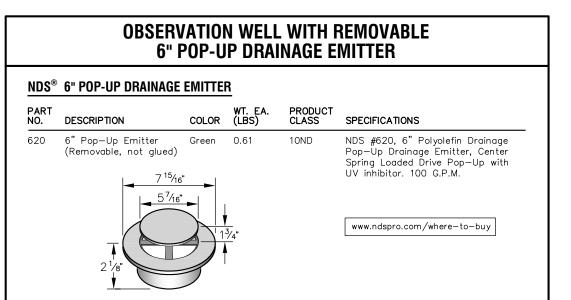


MARYLAND DEPARTMENT OF ENVIRONME

## CONSTRUCTION SPECIFICATIONS

- LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION
- SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3
- PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES
- AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
- KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED IQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MARYLAND DEPARTMENT OF ENVIRONME WATER MANAGEMENT ADMINISTRATION



#### **GENERAL NOTES:** 5. Impermeable liners may be used when specified by the 1. Dry wells may receive water from roof downspouts only. design engineer and shown on the plan. 2. Length, width, and depth of each dry well is to be as 6. Overflow pipes may be used when specified by the design specified by the design engineer on the approved plan. engineer and shown on the plan. They shall be set at a . Manufactured sand is not acceptable. Refer to the MCDPS minimum 2% slope. If the outfall is to daylight the outfall Sand Specifications. With the inspector's approval, dry well locations may be field 7. Pop-up emitters may be used when specified by the design adjusted for site conditions. All adjustments must meet the engineer and shown on the plan. minimum setbacks. **OBSERVATION WELL**/ CLEANOUT CAP DETAIL: -Splash Block Pipe Seal \_ Gasket \_12" Min. 36" Max. **IN-LINE FILTERING** DEVICE DETAIL: Open/Doorless Filterless In-Line Angled Screen • 3' - 4' from ground Water-tight cap 12" Sand Per MCDPS Sand Specs **LAYOUT GUIDANCE:** MINIMUM SETBACKS: **EXAMPLE LAYOUTS\*-PLAN VIEW:** 5 feet from property lines, Zero from R/W \* Design plans must show the layout of each dry well. Downspouts shall be shown on the 10 feet from slab-on-grade buildings/pools Conveyance pipe(s) from the 15 feet from buried foundations downspout(s) to the dry well shall be ∕-Downspout 15 feet from another dry well shown on the plan view, including 30 feet from septic trench or tank connections from other downspouts.

100 feet from primary well location

or open loop geothermal well

or closed loop geothermal well

So as to avoid basement seepage

In accordance with other county

PVC PIPE:

DIVERSION

FENCE

50 feet from alternate well location

its width, consider locating the perforated Schedule 40 PVC pipe along the longest dimension. 3/8 Inch holes The observation well with cleanout cap 4" on center shall be shown on the plan view. 90° around pipe **MONTGOMERY COUNTY** DEPARTMENT OF **PERMITTING SERVICES** WATER RESOURCES SECTION

DETAIL C-9

GROUND SURFACE —

OR ALUMINUM

4 FT MIN. ALONG FLOW SURFACE

FMBED IMPERMEABLE-

SHEETING 8 IN MIN.

Standard, readily-available bends

When possible there should be only

one conveyance pipe entering the dry well. It should be centered and should

The interior 6" PVC perforated pipe shall

maximize distribution within the dry well.

When a dry well's length is greater than

be designed and shown on the plan to

shall be used at couplings.

enter at 90 degrees.

**DRY WELL FOR ROOF RUNOFF** DETAIL

SEPTEMBER 2021 SCALE: NONE

STANDARD SYMBOL ├── DF ─── 136 IN MIN. SHEETING ON BOTH SIDES OF FENCE OR ALUMINUM

ONSTRUCTION SPECIFICATIONS

S. DEPARTMENT OF AGRICULTURE

- USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING ( $2\frac{3}{8}$  INCH MAXIMUM OPENING). USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH
- SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.

<u>ELEVATION</u>

- SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES
- SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF
- 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM
- KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF

TORN. IF UNDERMINING OCCURS, REINSTALL FENCE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONME

## **DESIGN CERTIFICATION**

I hereby certify that this plan has been prepared in accordance with the "2011 Maryland Standards and Specification for Soil Erosion and Sediment Control," Montgomery County Department of Permitting Services Executive Regulations 5-90, 7-02AM and 36-90, and Montgomery County Department of Public Works and Transportation "Storm Drain Design Criteria" dated August 1988.

04/16/2024 No. 51012 REGISTRATION NUMBER

## **CERTIFICATION OF THE QUANTITIES**

I hereby certify that the estimated total amount of excavation and fill as shown on these plans has been computed to 480 cubic yards of excavation, 25 cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be\_19,600 square feet.

No. 51012

# OWNER/DEVELOPER CERTIFICATION

Manager: Jeffrey L. Cohen

I/We hereby certify that all clearing, grading, construction, and or development will be done pursuant to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project.

Tilden Signatures Quintana, LLC 6110 Executive Blvd, Suite 310 Rockville, MD 20852

9120 Quintana Drive Lot 9, Block 8, Burning Tree Estates **Building Permit Site Plan,** Stormwater Management Plan, and Sediment Control Plan **Sediment Control Permit #: 291646** 

CAS JOB NO.:

DATE REVISION 2/14/24 IND - Building Permit Site Plan Base Sheet to Client and Architect 03/19/24 PNK - Sediment Control Permit Application Submitted. 03/20/24 PNK - SCP Uploaded to ePlans for 04/16/24 JMO- SCP Uploaded for Final Approval by MCDPS-WRS.



PROFESSIONAL ENGINEER CERTIFICATION I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51012, expiration date 06/07/2025, and that this plan meets MCDPS criteria for building and sediment control permit applications.

> 9 **Q** Quintana ı, Marylan 0 9 ethe

**CAS ENGINEERING-MD** 10 South Bentz Street Frederick, Maryland 21701 301-607-8031 Phone info@casengineering.com www.casengineering.com

CAS ENGINEERING-DC, LLC 4836 MacArthur Boulevard, NW, 2nd Floo Washington, DC 20007 202-393-7200 Phone info@cas-dc.com

www.cas-dc.com

NOT TO SCALE OR AS NOTED

**SHEET TITLE: Building Permit Site Plan**, SWM Plan, and **Sediment Control Plan** 

3 OF 3 P:\2023\230954\_9120 Quintana Drive\6 drawings\230954\_SCP+RWRTP.dwg, 4/16/2024 3:34:07 PM, jmo, © 2024 CAS Engineering and CAS Engineering-DC,