

Order Plans @ www.LDILine.com

WRITTEN RATIONALE FOR ABSENCE OF TEMPORARY SEDIMENT BASIN:

THIS PROJECT SHALL INCLUDE A TOTAL LAND DISTURBANCE OF 6.1 ACRES AND A CONTRIBUTING DRAINAGE BASIN OF 6.8 ACRES. TEMPORARY SEDIMENT STORAGE SHALL BE PROVIDED IN A TEMPORARY SEDIMENT TRAP (Sd4) AND IN EXCAVATED INLET SEDIMENT TRAPS (Sd2-F) FOR AREAS THAT DO NOT FLOW TO THESE BMP'S SEDIMENT STORAGE. SHALL BE PROVIDED BEHIND SILT FENCE. (SEE DETAIL B). BASED ON THE LIMITED WORK AREA, A TEMPORARY SEDIMENT BASIN IS NOT FEASIBLE OR NECESSARY.

TEMPORARY SEDIMENT STORAGE CALCULATIONS:

-CONTRIBUTING DRAINAGE BASIN: 6.8 ACRES
 -REQUIRED SEDIMENT STORAGE: 61 C.Y./6.8 ACRES = 455.6 C.Y.
 -DISTURBED ACREAGE IN BASIN: 6.1 ACRES
 -TOTAL SEDIMENT STORAGE PROVIDED: 501.50 C.Y.

Sd4 #1 HAS DRAINAGE BASIN OF 3.23 ACRES & PROVIDES STORAGE CAPACITY OF 210.3 C.Y. (SEE DETAIL.)

THE (2) Sd2-F'S HAVE A DRAINAGE BASIN OF 2.87 ACRES & PROVIDES STORAGE CAPACITY OF 193.2 C.Y. (SEE DETAIL.)

1500 L.F. OF SILT FENCE PROVIDES 102 C.Y. OF STORAGE (75' PER FT.)

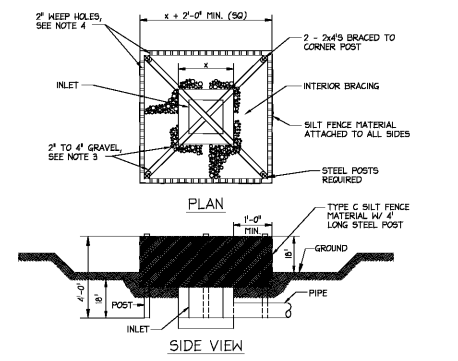
-REQUIRED SEDIMENT STORAGE IS MET.

EXCAVATED INLET SEDIMENT TRAP 'A'

1. DRAINAGE AREA = 1.31 ACRE
2. REQUIRED SEDIMENT STORAGE = 67 c.y./AC * DRAINAGE AREA
 REQUIRED SEDIMENT STORAGE = 67 c.y./AC * 1.31
 REQUIRED SEDIMENT STORAGE = 87.87 c.y. = 87.87 c.f.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT.) = 2.0 FT.
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
5. DETERMINE REQUIRED SURFACE AREA / EXCAVATION DEPTH
 $S_{Min} = \text{REQUIRED SEDIMENT STORAGE} / \text{EXCAVATION DEPTH}$
 $S_{Min} = 87.87 \text{ c.f.} / 2.0 \text{ FT.}$
 $S_{Min} = 43.94 \text{ s.f.}$
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS (A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATIO IS RECOMMENDED.)
 SHAPE: RECTANGULAR
 DIMENSIONS: L = 20 FT W = 20 FT diameter (if applicable) = N/A FT.

EXCAVATED INLET SEDIMENT TRAP 'B'

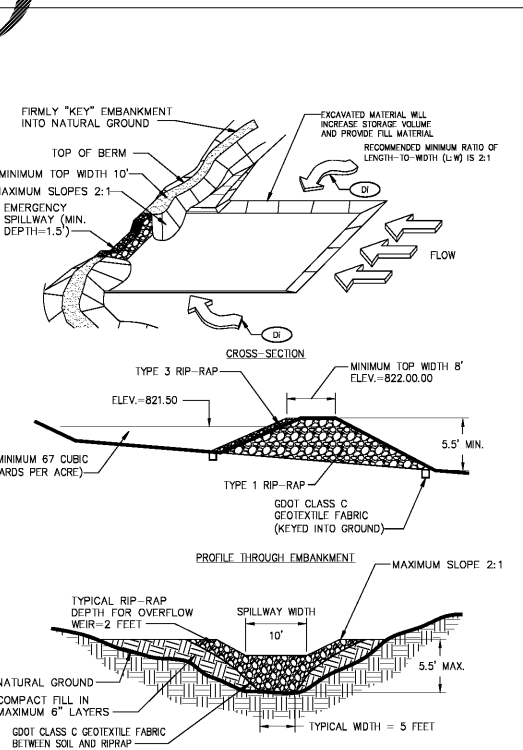
1. DRAINAGE AREA = 0.56 ACRE
2. REQUIRED SEDIMENT STORAGE = 67 c.y./AC * DRAINAGE AREA
 REQUIRED SEDIMENT STORAGE = 67 c.y./AC * 0.56 AC.
 REQUIRED SEDIMENT STORAGE = 37.52 c.y. = 103 c.f.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT.) = 2.0 FT.
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2:1
5. DETERMINE REQUIRED SURFACE AREA
 $S_{Min} = \text{REQUIRED SEDIMENT STORAGE} / \text{EXCAVATION DEPTH}$
 $S_{Min} = 103 \text{ c.f.} / 2.0 \text{ FT.}$
 $S_{Min} = 51.5 \text{ s.f.}$
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS (A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATIO IS RECOMMENDED.)
 SHAPE: RECTANGULAR
 DIMENSIONS: L = 35 FT W = 15 FT diameter (if applicable) = N/A FT.



NOTES:

1. EXCAVATE AROUND STRUCTURE TO PROVIDE SEDIMENT STORAGE AS REQUIRED ON EROSION AND SEDIMENTATION CONTROL PLAN.
2. DIMENSIONS OF THE BOX WILL VARY ACCORDING TO THE SIZE OF THE INLET AND THE DEPTH OF THE BASIN.
3. PLACE GRAVEL INSIDE THE BOX ALL AROUND THE INLET TO A DEPTH OF 2" TO 4".

TEMPORARY SEDIMENT TRAP
 Sd2-F N.T.S.

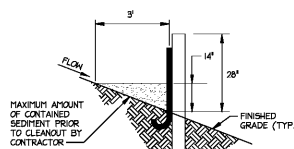


CALCULATIONS

REQUIRED VOLUME:
 DRAINAGE AREA x 61 C.Y./ACRE = MIN. STORAGE REQUIRED
 3.23 ACRES x 61 C.Y./ACRE = 210.41 C.Y. REQUIRED (194.3 C.Y.)
 PROVIDED VOLUME:
 4695 C.Y. (SEE CHART BELOW)

Flow Rate	Storage	Retention	Concave Bank	Incremental Storage	Total Storage
0	0	0	0	0	0
1	1.30	110.00	2.300	0.200	1.100
2	2.20	121.00	4.300	2.800	3.200

TEMPORARY SEDIMENT TRAP WITH ROCK OUTLET
 Sd4 #1 N.T.S.



SEDIMENT STORAGE BEHIND SILT FENCE
 N.T.S.

MAXIMUM AMOUNT OF CONTAINED SEDIMENT PRIOR TO CLEANOUT BY CONTRACTOR

FINISHED GRADE (TYP.)

3'

1'

20'

FLOW

CALCULATION: 3' X 1' X 1' X 1' X 1' X 0.5 = 1.74 C.F. STORAGE PER 1 L.F. OF SILT FENCE. A TOTAL OF 1500 L.F. OF SILT FENCE INCLUDED ON PROJECT SHALL PROVIDE 2587 C.F. (OR 102 C.Y.) OF STORAGE.

TEMPORARY SEDIMENT STORAGE

REVISIONS/ISSUANCES	
NO.	DESCRIPTION

GEORGIA 811
 Professional Corporation
 Call before you dig

KEY PLAN

CARTER Engineering Group
 6310 Pender Road, Suite 200
 Marietta, GA 30159
 (478) 219-2600

STATE OF GEORGIA REGISTERED PROFESSIONAL ENGINEER
 LEVEL CERTIFIED
 DESIGN PROFESSIONAL # 2001
 ISSUED: 11/2/2017 EXPIRES: 11/2/2022

STATE OF GEORGIA REGISTERED ARCHITECT

Manley Spangler Smith Architects
 A Professional Corporation

525 East Taylor St.
 P.O. Box 880
 Griffin, Georgia 30224
 Office 770.227.5473
 Fax 770.228.3442

PROJECT:
HENRY COUNTY SCHOOLS DISTRIBUTION CENTER

CLIENT:
HENRY COUNTY BOARD OF EDUCATION

SHEET TITLE:
STORMWATER POLLUTION PREVENTION DETAILS

© 2020 Manley Spangler Smith Architects, PC
 PROJECT NUMBER: 201627
 DATE: 08.13.20
 SCALE: AS SHOWN
 DRAWN BY: BCS
 CHECKED BY: DLC

SHEET NO:
C6.10