Standard Detail & Specifications
Mulching

1. Materials and Amounts

a. *Straw* - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as; thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.

b. *Wood chips* - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).

c. *Hydraulically applied mulch* -The following conditions apply to hydraulically applied mulch:

i. Definitions:

a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform state, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.

b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.

c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform state held together by a water resistant bonding agent. BFMs shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.

d. Refer to **Figure 3.4.5a** for conditions and limitations of use for each of the above categories of hydraulic mulch.

ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturers recommendations to ensure the proper results.

iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.

iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.

iv. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		DE-ESC-3.4.5 Sheet 1 of 3

Standard Detail & Specifications
Mulching

v. Application:

a. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope.

b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.

c. During the spring (March 1 to May 31) and fall (September 1 to November 30) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.

d. During the summer (June 1 to August 31) and winter (December 1 to February 28) seasons, the following two-step process is required:

Step One– Mix and apply seed and soil amendments with a small amount of mulch for visual metering.

Step Two – Mix and apply mulch at manufacturers recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.

e. Minimum curing temperature is 40° F (4° C). The best results and more rapid curing are achieved at temperatures exceeding 60° F (15° C). Curing times may be accelerated in high temperature, low humidity conditions on dry soils.

vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.

d. *Compost blanket (CB)* - Loosely applied with a pneumatic blower so that a 1" compost blanket uniformly covers the **soil with 100% coverage**. This application can be used with seed to promote germination by applying the approved seed mix directly into the loosely blown compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.

2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost.

a. *Crimping* - A crimper is a tractor drawn implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.

b. *Tracking* - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on cleated tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with cleat marks running across the slope.

c. *Liquid mulch binders* - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.

d. *Paper fiber* - The fiber binder shall be applied at a net dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.

e. *Nettings* - Synthetic or organic nettings may be used to secure straw mulch. Install and secure according to the manufacturers recommendations.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		DE-ESC-3.4.5 Sheet 2 of 3

Standard Detail & Specifications
Mulching

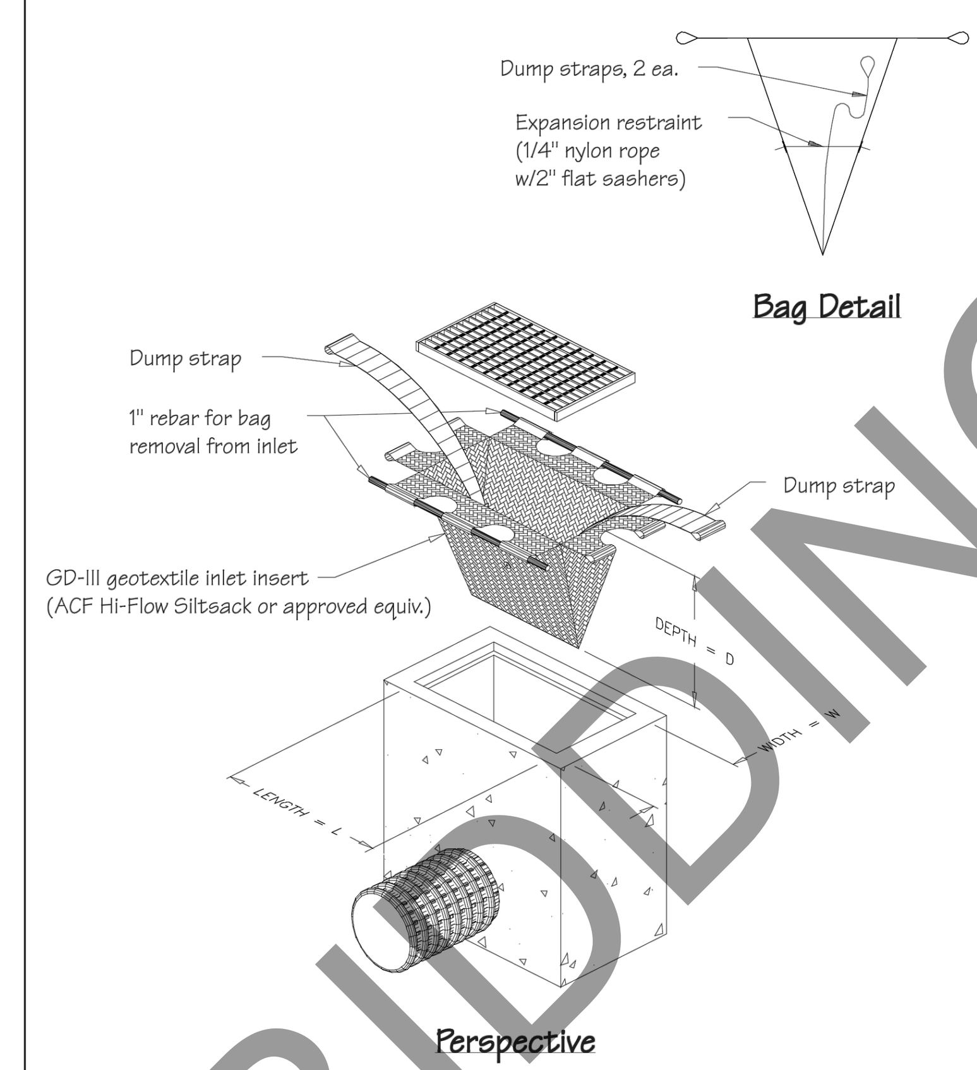
MULCHING MATERIAL SELECTION GUIDE

Percent Slope	Type of Mulch / App. Rate*	Dec. 1 to Feb. 28(29)	March 1 to May 31	June 1 to Aug. 31	Sept. 1 to Nov. 30
Less than 2%	Blended Fiber @ 2000 lbs/ac. minimum	xxxxxxxxxxxxxxxxxx	OK (≤ 1 ac.)	xxxxxxxxxxxxxxxxxx	OK (≤ 1 ac.)
	Wood Fiber @ 2000 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	BFM @ 3000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. Min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
2% to 5.9%	Wood Fiber @ 2000 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	BFM @ 3000-3500 lbs/ac. min	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
6% to 10.9%	Wood Fiber @ 2000-2500 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
11% to 24.9%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
25% to 33%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	BFM @ 4000 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
33% and up	BFM @ 4000-4500 lbs/ac. min.	xxxxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxxxx	OK
	Straw @ 2 Tons/ac. min.***	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	2:1 Max.	2:1 Max.	2:1 Max.	2:1 Max.

* Note: Manufacturers Recommended Rates for informational purposes only. Performance standard requires 100% soil coverage.
** Note: Stabilization Matting must be applied in accordance with Section 3.4.6 of the Delaware ESC Handbook.
***Note: Straw applied on slopes greater than 33% must be netted (this does not apply to topsoil stockpiles).
OK = Acceptable to use during this time period.
xxx = Not acceptable to use during this time period.
All application rates are minimums

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		DE-ESC-3.4.5 Sheet 3 of 3

Standard Detail & Specifications
Inlet Protection - Type 2



Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 1 of 2

Standard Detail & Specifications
Inlet Protection - Type 2

Notes:

1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oil-absorbant material with a woven pillow.

Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 2 of 2

Standard Detail & Specifications
Topsoiling

Construction Notes:

1. **Site Preparation** (Where Topsoil is to be added)

Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

a. Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.

b. Liming - Where the topsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

c. Tilling - After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of a least 3 inches to permit bonding of the topsoil to the subsoil. Pack by passing a bulldozer up and down over the entire surface area of the slope to create horizontal erosion check slots to prevent topsoil from sliding down the slope.

2. **Topsoil Material and Application**

Note: Topsoil salvaged from the existing site may often be used but it should meet the same standards as set forth in these specifications. The depth of topsoil to be salvaged shall be no more than the depth described as a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experimental Station.

Source:	Symbol:	Detail No.
USDA - NRCS		DE-ESC-3.4.1 Sheet 1 of 2

Standard Detail & Specifications
Topsoiling

Construction Notes (cont.)

a. Materials - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragment, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH value is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Note: No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.

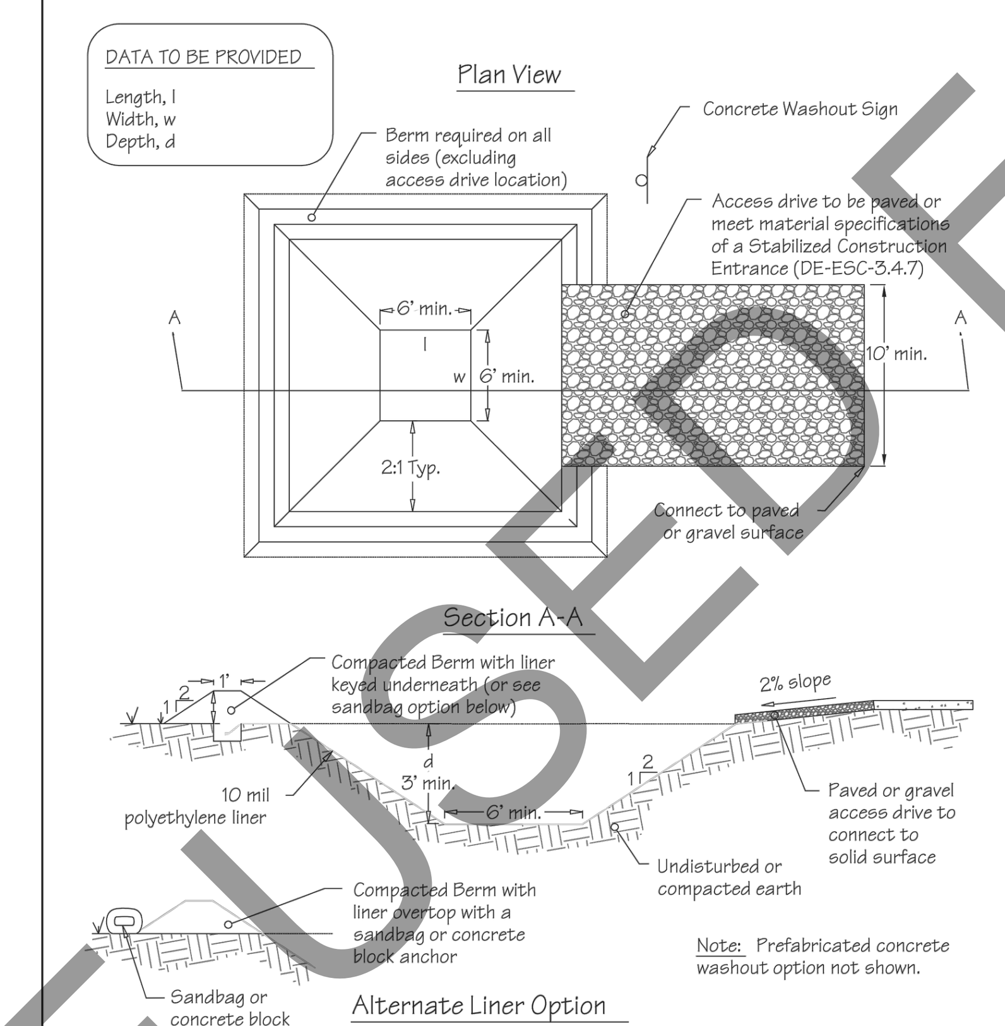
b. Grading - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note: Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source:	Symbol:	Detail No.
USDA - NRCS		DE-ESC-3.4.1 Sheet 2 of 2

Standard Detail & Specifications
Concrete Washout



Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 1 of 2

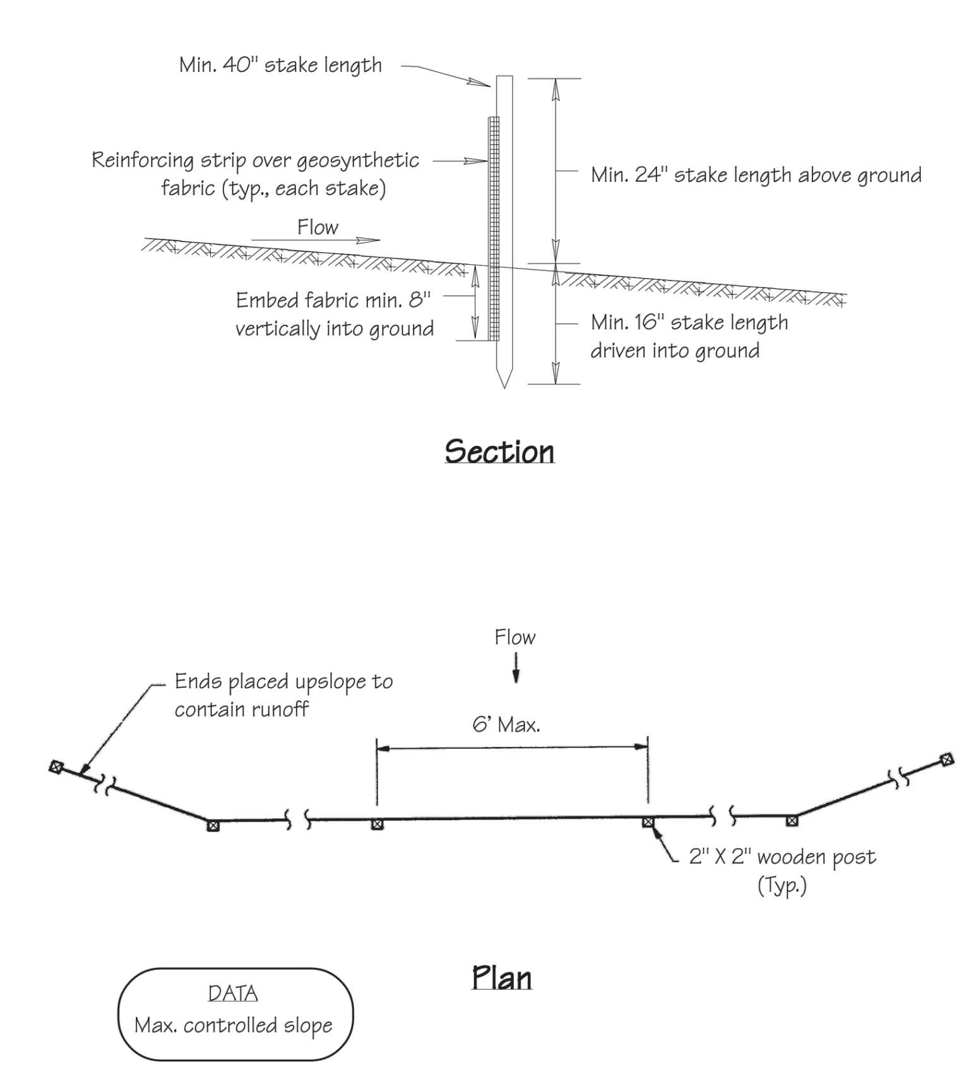
Standard Detail & Specifications
Concrete Washout

Construction Notes:

1. Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
4. The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
5. Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
7. Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

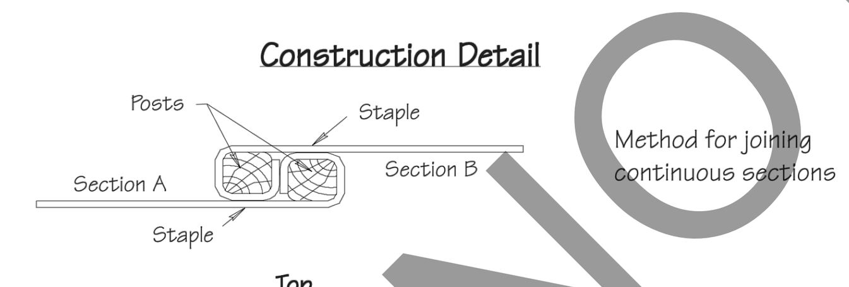
Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 2 of 2

Standard Detail & Specifications
Silt Fence



Source:	Symbol:	Detail No.
Adapted form MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 1 of 2

Standard Detail & Specifications
Silt Fence



Construction Notes:

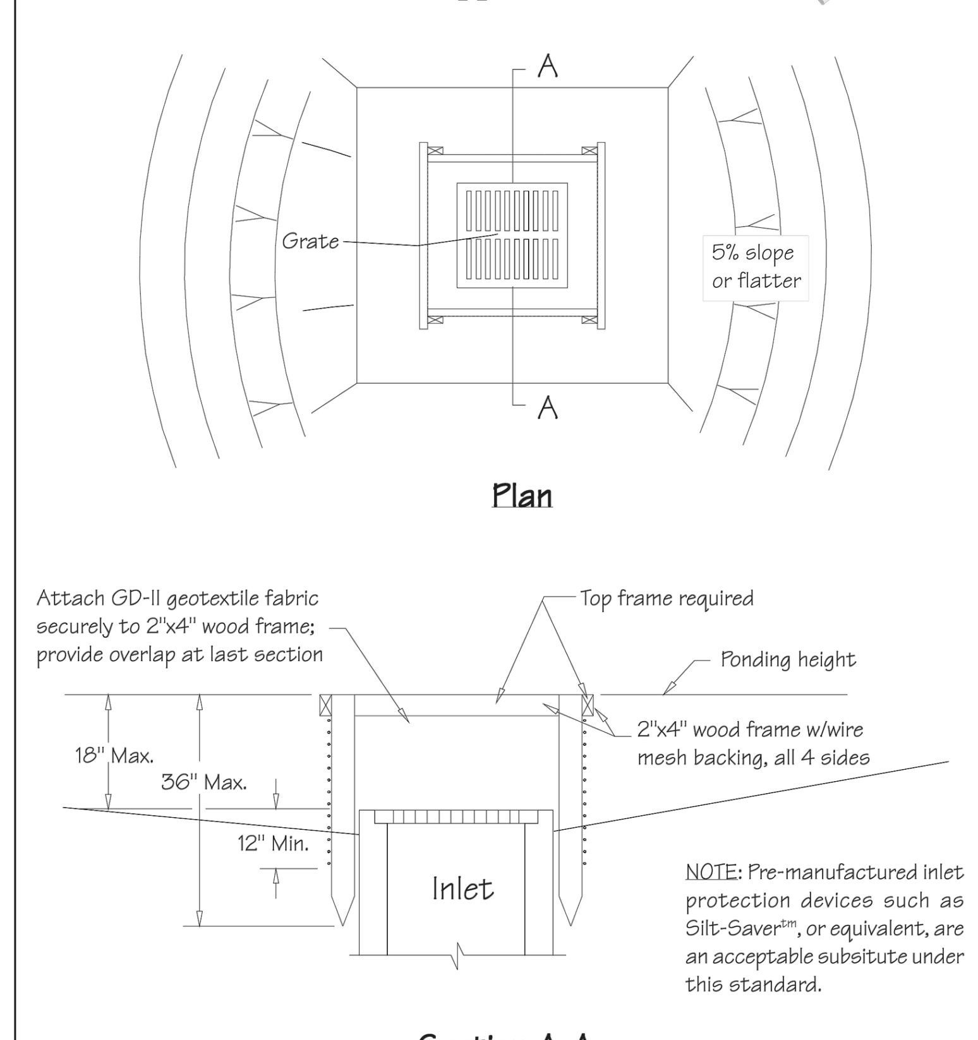
1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-I
3. Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
4. Prefabricated Unit: Geofab, Envirofence, or approved equivalent

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 2 of 2

Standard Detail & Specifications
Inlet Protection - Type 1



Source:	Symbol:	Detail No.
Adapted from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 1 of 2

Standard Detail & Specifications
Inlet Protection - Type 1

Construction Notes:

1. Excavate completely around inlet to a depth of 18" below grate elevation.
2. Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2" x 4" frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
4. Stretch geotextile fabric tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet grate elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
5. Backfill around inlet in compacted 6" layers until at least 12" of geotextile fabric is buried.
6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
7. This structure must be inspected frequently and the filter fabric replaced when clogged.

Materials:

1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
2. Wire mesh must be of sufficient strength to support filter fabric with water fully impounded against it.
3. Geotextile fabric: Type GD-II

Source:	Symbol:	Detail No.
Adapted. from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 2 of 2

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
EASTON, MARYLAND (410) 770-4744
MILFORD, DELAWARE (302) 424-1441

EROSION & SEDIMENT CONTROL DETAILS

FERRIS SCHOOL FOR BOYS NEW PARKING LOT
DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES
CHRISTIANA HUNDRED, NEW CASTLE COUNTY, DE

Date:	AUGUST, 2016
Scale:	AS NOTED
Dwn.By:	ACM
Proj.No.:	0586B036
Dwg.No.:	ES-03

DATA COLUMN

1. TAX MAP ID: 07-032.30-010

2. ACRES: 179.93

3. ZONING
EXISTING: SR – UDC – SUBRBAN RESERVE
NC15 – UDC – SINGLE FAMILY – 15000 SF

4. PROPOSED IMPERVIOUS AREA: ±0.82 ACRES

5. PARKING REQUIREMENTS:
REQUIRED: 0.75/BED X 186 BEDS = 140 SPACES
PROPOSED: 61 SPACES
PROVIDED: 452 SPACES (INCLUDES HANDICAP PARKING)

6. VERTICAL DATUM: NAVD 88

7. HORIZONTAL DATUM: NAD 83/STATE PLANE

8. SITE BENCHMARK: X-MARK IN LIGHT POLE BASE, ELEV.= 163.13'

9. SOURCE OF TOPOGRAPHY: FIELD SURVEY CONDUCTED BY DAVIS, BOWEN & FRIEDEL ON AUGUST 10, 2016

10. WATER: CITY OF WILMINGTON – SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DEPARTMENT OF PUBLIC HEALTH.

11. SEWER: NEW CASTLE COUNTY SYSTEM – SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE NEW CASTLE COUNTY DEPARTMENT OF PUBLIC WORKS.

12. ALL PROPERTY LINES SHOWN ARE BASED ON DEEDS AND AVAILABLE PLANS, AND DO NOT CONSTITUTE A PROPERTY SURVEY BY DAVIS, BOWEN & FRIEDEL, INC.

13. BULK AREA REQUIREMENTS:

	EXISTING	PROPOSED	TOTAL
GROSS FLOOR AREA:	280,440 S.F	0 S.F.	280,440 S.F.
BUILDING COVERAGE:	191,552 S.F.	0 S.F.	191,552 S.F.
PAVING:	6.72 ± AC	0.82 ± AC	7.54 ± AC
OPEN SPACE:	168.81 ± AC	−0.82 ± AC	167.99 ± AC
TOTAL:	179.93 AC		179.93 AC

14. SUBURBAN RESERVE (SR) ZONE REQUIREMENTS:

LOT AREA:	5 AC
LOT WIDTH:	300'
STREET YARD:	100'
SIDE YARD:	50'
REAR YARD:	100'
PAVING STREET YARD/ OTHER YARD:	75'/40'
BUILDING HEIGHT:	50'

15. NEIGHBORHOOD CONSERVATION (NC15) ZONE REQUIREMENTS:

LOT AREA:	15,000 S.F.
LOT WIDTH:	100'
STREET YARD:	400'
SIDE YARD:	12'
REAR YARD:	40'
PAVING STREET YARD/ OTHER YARD:	N/A
BUILDING HEIGHT:	40'

PROPERTY OWNER:
DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES
1825 FAULKLAND ROAD
WILMINGTON, DE 19805
PHONE: 302-633-2632

ENGINEER:
DAVIS, BOWEN, & FRIEDEL, INC.
23 NORTH WALNUT STREET
MILFORD, DE 19963
PHONE: 302-424-1441
FAX: 302-424-0430

PROPERTY ADDRESS:
959 CENTRE ROAD,
BUILDING #2 (ADMISSION OFFICE)
WILMINGTON, DE 19805

GENERAL NOTES:

1. THIS PLAN SUPERSEDES, IN PART, THE RECORD MINOR SUBDIVISION PLAN OF "DELAWARE YOUTH AND FAMILY SERVICES" DATED FEBRUARY 21, 2003 AND RECORDED SEPTEMBER 24, 2003 IN THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY, STATE OF DELAWARE INSTRUMENT NUMBER 20121003-0056977.
2. ACCORDING TO FEMA FLOOD INVENTORY MAP #10003C0065J, DATED JANUARY 17, 2007, THE SITE IS NOT LOCATED WITHIN THE 100 YEAR FLOOD PLAIN.
3. WETLANDS DO NOT EXIST IN THE AREA OF THE DISTURBANCE PER PER NWI (2012). A WETLANDS INVESTIGATION WAS NOT CONDUCTED.
4. THE SITE DOES NOT CONTAIN ANY CRITICAL NATURAL AREAS ACCORDING TO THE NEW CASTLE COUNTY STATE RESOURCE AREA MAP UPDATED IN 2006.
5. BUILDING PERMIT WILL BE REQUIRED FOR ALL RETAINING WALL STRUCTURES WITH STEM HEIGHTS IN EXCESS OF 4 FEET.
6. NO PORTION OF THIS PROPERTY IS LOCATED WITHIN A WATER RESOURCE PROTECTION AREA (WRPA). SEE WRPA MAP FOR NEW CASTLE COUNTY, DE, SHEET 1 OF 3, DATED 1987, REVISED 1993, MAY 2001, FEB 2006 AND DEC 2011.
7. IMPACT FEES IN ACCORDANCE WITH ARTICLE 5.050.H OF THE UDC, THIS PROJECT IS EXEMPT FROM THE REQUIREMENT FOR IMPACT FEES.
8. A STORMWATER MANAGEMENT FACILITY IS LOCATED ON PROPERTY, OUTSIDE OF PROJECT LIMITS.
9. NEW CASTLE COUNTY DRAINAGE CODE: "DRAINAGE, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE NEW CASTLE COUNTY DRAINAGE CODE."
10. UNLESS OTHERWISE SPECIFIED ON THE PLAN, SIDEWALKS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THIS PLAN PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE DWELLING (OR GROUP OF DWELLINGS FOR ATTACHED DWELLINGS) IN FRONT OF WHICH THEY ARE SHOWN. SIDEWALKS SHALL BE FIVE (5) FEET IN WIDTH AND CONSTRUCTED OF PORTLAND CEMENT CONCRETE.
11. SEWERAGE IS SUBJECT TO THE APPROVAL OF THE NEW CASTLE COUNTY DEPARTMENT OF SPECIAL SERVICES. AT THE TIME OF APPROVAL OF THIS PLAN, SEWER CAPACITY EXISTED TO ACCOMMODATE THE ANTICIPATED FLOWS GENERATED BY THIS ADDITIONAL DEVELOPMENT. NEW CASTLE COUNTY HAS COMMITTED TO PROVIDE SEWER SERVICE IN ACCORDANCE WITH THE LAND DEVELOPMENT AGREEMENT FOR THIS DEVELOPMENT. THE OWNER OF THIS PROPERTY, HIS SUCCESSORS OR ASSIGNS, SHALL BE RESPONSIBLE FOR EXTENDING THE SEWER SERVICE TO EACH LOT ON OR CREATED BY THIS PLAN.
12. THERE SHALL BE NO DEBRIS DISPOSAL BURIED ON SITE.
13. TREE PRESERVATION: THE DEVELOPER SHALL PRESERVE ALL TREES ON THIS SITE EXCEPT WHERE NECESSARY TO CONSTRUCT BUILDINGS, ACCESSWAYS, AND UTILITIES, AND WHERE SELECTIVE THINNING OF EXISTING VEGETATION IS APPROVED, EXISTING PLANT MATERIALS DESIGNATED TO REMAIN ON THIS PLAN, OR THE LANDSCAPE PLAN, SHALL BE PRESERVED AND PROPERLY PROTECTED DURING CONSTRUCTION. IN THE CASE OF UTILITY RIGHTS-OF-WAY AND EASEMENTS, ANY DISTURBED AREAS SHALL BE REPLANTED SO AS TO ACHIEVE A RECURRENCE OF NATURAL VEGETATIVE COVER.
14. LOADING: PURSUANT TO SECTION 40.03.510.A.4, OF THE UNIFIED DEVELOPMENT CODE, THIS SITE REQUIRES ONE LOADING BAY WHICH IS ACCOMMODATED AT ITS CENTRAL RECEIVING AREA. THE PROPOSED MULTI-PURPOSE BUILDING DOES NOT IMPACT THIS ARRANGEMENT. THE CENTRAL RECEIVING AREA IS AT BUILDING 6.
15. FIRE PROTECTION: ALL FIRE LANES, FIRE HYDRANTS, SPRINKLERS, STANDPIPE CONNECTIONS AND FIRE EXITS SHALL BE MARKED AND PROTECTED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS. A FIRE FIRE MARSHAL RECORD-TYPE PLAN, LAST DATED JUNE 4, 2012, OR AS LATER AMENDED AND APPROVED IN WRITING BY THE DELAWARE STATE FIRE MARSHAL, IS HEREBY CONSIDERED PART OF THIS PLAN.
16. ENTRANCE/EXIT FACILITIES SHALL CONFORM TO STATE OF DELAWARE DIVISION OF HIGHWAY STANDARDS AND SHALL BE SUBJECT TO THEIR APPROVAL. THE DEVELOPER IS REQUIRED TO OBTAIN AN ENTRANCE PERMIT FROM THE DELDOT CANAL DISTRICT PERMIT OFFICE.
17. COMMON FACILITIES: ALL COMMON FACILITIES INCLUDING, BUT NOT LIMITED TO, PAVED AREAS, SIDEWALK, CURBING, LANDSCAPING, OPEN SPACE, DRAINAGE AND STORMWATER MANAGEMENT FACILITIES SHALL BE KEPT IN GOOD REPAIR AND MAINTAINED IN A SAFE AND SANITARY CONDITION IN ACCORDANCE WITH THE PROVISIONS OF THE UNIFIED DEVELOPMENT CODE.
18. THE LIMITS OF CONSTRUCTION AS SHOWN ON THE CONSTRUCTION PLANS WILL BE FENCED WITH SILT FENCE PRIOR TO ANY LAND DISTURBING ACTIVITY.
19. ALL STORMWATER MANAGEMENT FACILITIES ARE OWNED AND MAINTAINED BY THE PROJECT'S OWNER.
20. THIS PLAN QUALIFIES FOR EXEMPTIONS PER SECTION 40.05.050.H OF THE NCC UDC.
21. THE NATURAL RESOURCES DEPICTED ON THIS PLAN ARE BASED ON AVAILABLE PUBLIC INFORMATION AND HAVE NOT BEEN SURVEYED OR CALCULATED IN THE FIELD. THEIR LOCATIONS AND THEIR AREAS ARE APPROXIMATED.
22. WETLANDS: IN A FIELD INVESTIGATION CONDUCTED BY LANDMARK JCM ON DECEMBER 29, 2011, THIS SITE WAS EVALUATED IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1), AND SUBSEQUENT PUBLIC NOTICES, TO IDENTIFY THE PRESENCE OF JURISDICTIONAL WETLANDS. NO WETLANDS WERE FOUND TO EXIST IN THE PROPOSED CONSTRUCTION AREA.
23. PERFORMANCE SURETY: ALL IMPROVEMENTS REQUIRED BY THIS PLAN AND THE NEW CASTLE COUNTY CODE SHALL BE SUBJECT TO THE LAND DEVELOPMENT IMPROVEMENT AGREEMENT (LDIA), AND THE PERFORMANCE GUARANTEE INCORPORATED THEREIN.

LOCATION MAP
SCALE: 1" = 800' BASE TAX MAP: 7-32.3

BOUNDARY OF PROPERTY SHOWN AS PER RECORD PLAN NO. 20030924-0121564, RECORDED SEPTEMBER 24, 2003.

THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH.

PROPERTY LINE TABLE

LINE	BEARING	DISTANCE
L1	N 75°30'32" W	207.92'
L2	N 74°54'45" W	1101.50'
L3	N 56°33'45" W	378.37'
L4	N 44°23'25" W	975.19'
L5	N 77°39'15" W	662.40'
L6	N 25°30'55" E	778.61'
L7	N 37°56'21" E	41.92'
L8	N 59°49'35" E	49.74'
L9	N 14°33'37" W	79.56'
L10	N 41°43'46" E	99.16'
L11	N 22°08'43" E	92.85'
L12	N 09°57'02" E	115.74'
L13	N 20°59'06" E	78.19'
L14	N 75°59'00" E	34.13'
L15	N 21°45'49" E	78.07'
L16	N 04°07'32" E	22.91'
L17	N 06°10'15" E	33.08'
L18	N 17°18'53" E	35.26'
L19	N 12°51'42" E	28.05'
L20	S 65°06'47" E	37.28'
L21	N 28°16'46" E	121.02'
L22	N 32°44'14" E	104.23'
L23	N 42°02'18" E	162.54'
L24	N 49°15'08" E	43.48'
L25	N 04°54'13" E	85.19'
L26	N 55°00'46" E	84.58'
L27	N 17°52'31" E	143.65'
L28	N 53°17'44" E	59.37'
L29	N 18°15'00" E	140.00'
L30	N 14°22'00" E	135.22'
L31	S 66°26'48" E	392.76'
L32	S 06°14'30" E	477.50'
L33	N 83°10'40" E	768.17'
L34	S 06°52'20" E	203.60'
L35	N 85°44'44" E	718.97'
L36	N 82°32'26" E	759.75'
L37	S 54°16'27" W	478.89'
L38	S 30°16'27" W	200.00'
L39	S 45°03'33" E	250.93'
L40	S 70°28'42" E	20.00'
L41	S 06°10'00" W	1804.46'

PROPERTY CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	30.00'	50.04'	44.44'	S 53°57'10" W
C2	612.96'	180.96'	180.30'	S 83°22'11" W
C3	1990.08'	208.30'	94.40'	S 24°09'35" W
C4	1970.08'	459.21'	458.17'	S 12°50'39" W

PURPOSE OF PLAN

THE PURPOSE OF THIS PLAN IS TO ADD 61 PARKING SPACES AND SIDEWALK TO IMPROVE INNER-SITE CONNECTIVITY.

CERTIFICATION OF PLAN APPROVAL

APPROVED_____BY_____
DATE GENERAL MANAGER

FOR DEPARTMENT OF LAND USE OF NEW CASTLE COUNTY.

APPROVED_____BY_____
DATE GENERAL MANAGER

FOR COUNTY COUNCIL OF NEW CASTLE COUNTY.

ENGINEER'S STATEMENT

I, RING W. LARDNER, P.E., HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER WITH A BACKGROUND IN CIVIL ENGINEERING IN THE STATE OF DELAWARE AND THAT ALL OF THE INFORMATION ON THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED ENGINEERING STANDARDS AND PRACTICES AND BY THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE.

DAVIS, BOWEN & FRIEDEL, INC. DATE
by RING W. LARDNER, P.E.

OWNER'S STATEMENT

WE, DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY WHICH IS SUBJECT OF THIS PLAN AND THAT THE LAND USE ACTION PROPOSED BY THIS PLAN IS MADE AT OUR DIRECTION AND THAT WE AUTHORIZE THIS PLAN TO BE RECORDED IN ACCORDANCE WITH THE REGULATIONS OF THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE.

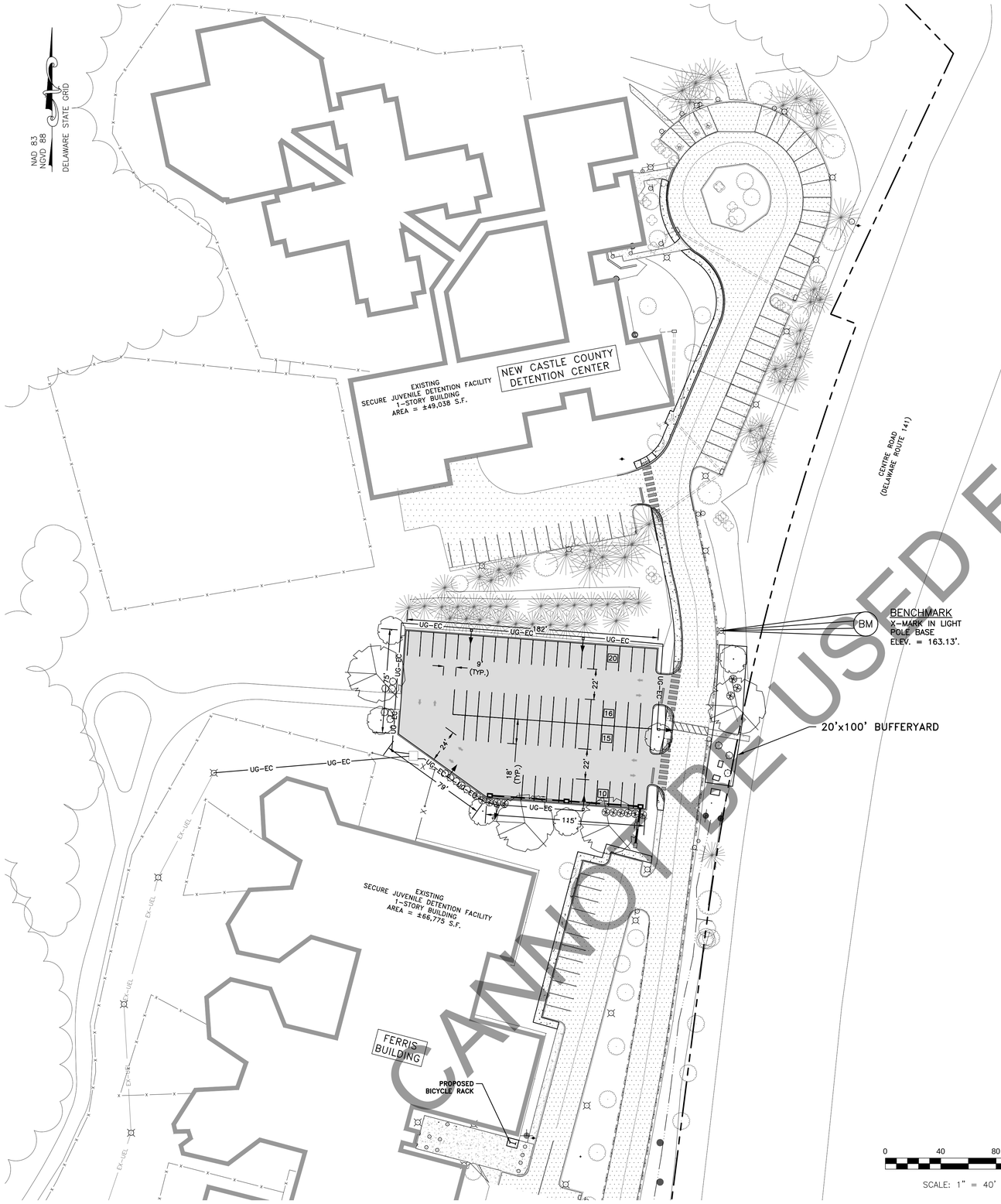
DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES (D.S.C.Y.F.) DATE
by CHARLES BORING

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

RECORD PLAN (APPLICATION NO. 2016-0637-S)

FERRIS SCHOOL FOR BOYS NEW PARKING LOT
DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES
CHRISTIANA HUNDRED, NEW CASTLE COUNTY, WILMINGTON, DE

Date: SEPTEMBER, 2016
Scale: AS NOTED
Dwn.By: ACM
Proj.No.: 0586B036
Dwg.No.: R-01



LEGEND

EXISTING		PROPOSED	
BOUNDARY LINE		PAVEMENT / FULL DEPTH	
SETBACK LINE		SIDEWALK	
ADJACENT PROPERTY OWNER		PARKING COUNT IDENTIFICATION	9
GAS LINE		CURB	
ELECTRIC CONDUIT LINE	E	LIGHT POLES	
CONTOUR ELEVATION AND LABEL	150	PAINTED DIRECTIONAL ARROW	
CATCH BASIN, STORM PIPE, STORM MANHOLE		CATCH BASIN, STORM PIPE, STORM MANHOLE, LABELS	DI NUM / MH NUM / P NUM
SANITARY SEWER MANHOLE, PIPE, FLOW ARROW, PIPE SIZE	EX-12SS		
SEWER CLEAN-OUT	C		
WATER VALVE, HYDRANT	W W		
GAS MANHOLE, GAS VALVE	G		
UTILITY POLE AND GUY WIRES, TELEPHONE	T		
SIGN, POSTS			
EXISTING SIDEWALK	EXISTING SIDEWALK		
TREES			
PAVEMENT			
BUILDING			
FENCE	— X — X —		

LIST OF ABBREVIATIONS

AC	ACRE
FF	FINISH FLOOR
EX	EXISTING
DI	DRAINAGE INLET
RCP	REINFORCED CONCRETE PIPE
INV	INVERT
MH	MANHOLE
P	PIPE
DI	DRAINAGE INLET
°	DEGREE
"	INCH
'	FOOT
%	PERCENT
MAX	MAXIMUM
MIN	MINIMUM
TYP	TYPICAL
TW	TOP OF WALL
HYD	HYDRANT

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FERRIS SCHOOL FOR BOYS NEW PARKING LOT

DEPARTMENT OF SERVICES FOR CHILDREN, YOUTH AND THEIR FAMILIES

CHRISTIANA HUNDRED, NEW CASTLE COUNTY, DE

REVISIONS:

Date:	SEPTEMBER, 2016
Scale:	AS NOTED
Dwn.By:	ACM
Proj.No.:	0586B036
Dwg.No.:	R-02