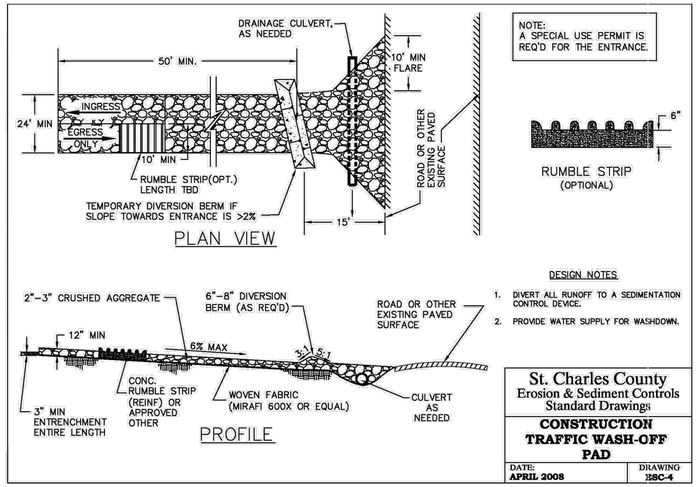


NOTE:
A SPECIAL USE PERMIT IS REQ'D FOR THE ENTRANCE.

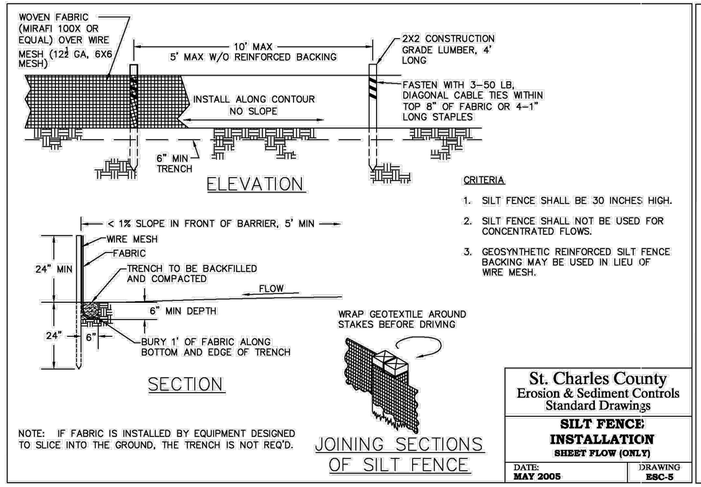
DESIGN NOTES

1. DIVERT ALL RUNOFF TO A SEDIMENTATION CONTROL DEVICE.
2. PROVIDE WATER SUPPLY FOR WASHDOWN.

St. Charles County
Erosion & Sediment Controls
Standard Drawings

CONSTRUCTION TRAFFIC WASH-OFF PAD

DATE:	DRAWING
APRIL 2008	ESC-4



CRITERIA

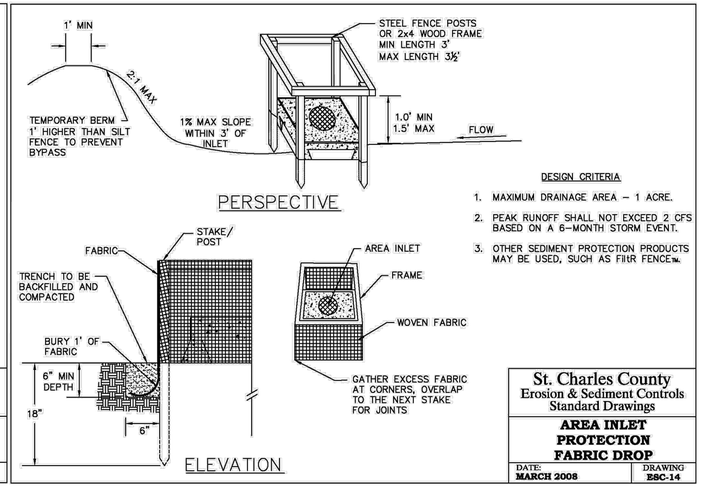
1. SILT FENCE SHALL BE 30 INCHES HIGH.
2. SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
3. GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.

NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

St. Charles County
Erosion & Sediment Controls
Standard Drawings

SILT FENCE INSTALLATION
SHEET FLOW (ONLY)

DATE:	DRAWING
MAY 2005	ESC-5



DESIGN CRITERIA

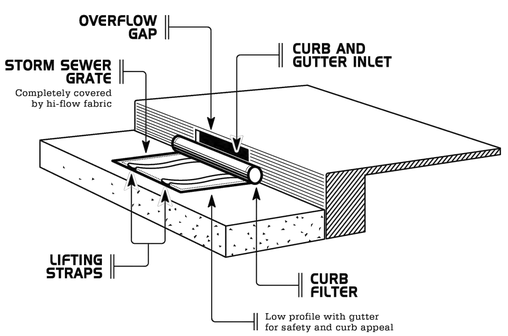
1. MAXIMUM DRAINAGE AREA – 1 ACRE.
2. PEAK RUNOFF SHALL NOT EXCEED 2 CFS BASED ON A 6–MONTH STORM EVENT.
3. OTHER SEDIMENT PROTECTION PRODUCTS MAY BE USED, SUCH AS FILTR FENCE™.

St. Charles County
Erosion & Sediment Controls
Standard Drawings

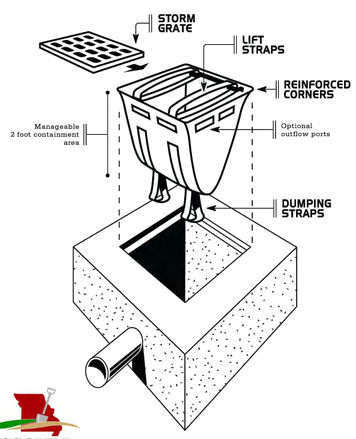
AREA INLET PROTECTION FABRIC DROP

DATE:	DRAWING
MARCH 2008	ESC-14

DANDY CURB BAG™



DANDY SACK™



MISSOURI ONE CALL SYSTEM
811 or 1-800-344-7483
https://www.mo1call.com

DANDY CURB BAG®
CURB AND GUTTER INLET/GRATE PROTECTION SYSTEM
GUIDE SPECIFICATION

1.0 **Description:**

1.1 Work covered under this item consists of installing a Dandy Curb Bag® curb and gutter inlet protection system. The purpose is to keep silt, sediment, and construction debris out of the storm water system.

2.0 **Material:**

2.1 The Dandy Curb Bag® curb and gutter inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric unit enclosing a porous structure in the form of a cylindrical tube placed in front of and extending beyond the inlet opening on both sides and have a geotextile fabric envelope fitted to the individual grate(s)on the street side of the sewn unit for grate(s) to be inserted and to completely enclose the grate(s).

2.2 The Dandy Curb Bag® shall have lifting devices to allow manual inspection of the storm water system.

2.3 The Dandy Curb Bag® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Tensile Strength	ASTM D4632	lbs	450 x 300
Elongation	ASTM D4632	%	38% x 21%
Trapezoidal Tear	ASTM D4533	lbs	165 x 150
CBR Puncture	ASTM D6241	lbs	1000
HYDRAULIC PROPERTIES:			
Apparent Opening Size (AOS)	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec[1]	4.9
Water Flow Rate	ASTM 4491	gal/min/ft²	365
% Open Area (POA)	COE - 27125-86	%	29
UV resistance (% Retained @ 2500 hrs)	ASTM D 4355	%	70
Color			Orange[1]

[1]The color orange is a trademark of Dandy Products, Inc.
The property values listed above are effective April 2022 and are subject to change without notice.

3.0 **Installation:**

3.1 Place the empty Dandy Curb Bag® unit over the grate as the grate stands on end.

3.2 *For oil and sediment model; to install or replace absorbent, place absorbent pillow in pouch, on the bottom (below-grade side) of the unit.*

3.3 Tuck the enclosure flap inside to completely enclose the grate.

3.4 Holding the lifting devices, being careful not to damage the sewn fabric unit, insert the grate into its frame, street side edge first, then lower back edge with cylindrical tube into place. The cylindrical tube should be partially blocking the curb hood opening when installed properly.

4.0 **Maintenance:**

4.1 The contractor shall remove all accumulated sediment and debris from surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.

4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

DANDY SACK®
INLET PROTECTION SYSTEM GUIDE SPECIFICATION

1.0 **Description:**

1.1 Work covered under this item consists of installing a Dandy Sack® inlet protection system. The purpose is to keep silt, sediment, and construction debris out of the storm water system.

2.0 **Material:**

2.1 The Dandy Sack® inlet protection unit shall be a **sewn in the U.S.A.** geotextile fabric unit.

2.2 The Dandy Sack® shall have lifting straps to allow removal of the unit and manual inspection of the storm water system.

2.3 The Dandy Sack® unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

3.0 **Installation:**

3.1 Remove the grate from the catch basin.

3.2 For Oil and Sediment Model; to install or replace absorbent, place absorbent pillow in unit, on the bottom (below-grade side) of the unit.

3.3 Stand the grate on end. Move the top lifting straps out of the way and place the grate into the Dandy Sack® unit so that the grate is below the top straps and above the lower straps. The grate should be cradled between the upper and lower straps.

3.4 Holding the lifting devices, insert the grate into the inlet, being careful that the grate remains in place and being careful not to damage the Dandy Sack® unit.

4.0 **Maintenance:**

4.1 Remove all accumulated sediment and debris from vicinity of unit after each storm event.

4.2 After each storm event and at regular intervals, look into the Dandy Sack® unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.

4.3 To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of the contents. Holding the dumping straps on the outside at the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

4.4 *For Oil and Sediment Model; remove and replace absorbent when near saturation.*

4.5 Dispose of unit and/or absorbent in accord with applicable Federal, state and local environmental laws and regulations.

60.20.2.1.4 Submittals and Follow-up Care

The following submittals are required prior to temporary seeding:

1. Soil test report
2. Seeding date
3. Fertilization mixture and rate
4. Seed mixture(s) and rate(s), supplier, purity percentage
5. Mulching material(s) and application rate(s)
6. Mowing height and schedule

Seeded areas shall be re-fertilized 4 weeks after initial seeding. All areas identified as bare and sparse (less than 30% ground cover) during the inspection shall be re-seeded and mulched. Grass shall not be cut until 4 inches of growth occurs.

60.20.2.2 Permanent Seeding

After land disturbance activities have been completed in an area, permanent seeding shall be applied. Permanent seeding is the establishment of perennial vegetation on disturbed areas for periods longer than 12 months. Permanent seeding is used when vegetation is designed to permanently stabilize the soil. Particular care is required to establish a thick cover of permanent grass.

Refer to Sections 60.20.2.1.1, 60.20.2.1.2, and 60.20.2.1.4 and to NRCS MOFOTG Code 342 (Critical Area Planting) in Appendix D for permanent seeding guidelines.

60.20.2.4 Mulching

Mulching and hydro mulch are the application of plant residues such as straw or other suitable materials to the soil surface. Mulch protects the soil surface from the erosive force of raindrop impact and reduces the velocity of overland flow. It helps seedlings germinate and grow by conserving moisture, protecting against temperature extremes, and controlling weeds. Mulch also maintains the infiltration capacity of the soil.

Mulch shall be applied to seeded areas to help establish plant cover. It can also be used as temporary cover in unseeded areas to protect against erosion over the winter or until final grading and shaping can be accomplished. Application rates are shown in Table 60-9 below.

Table 60-9 Mulching Materials

Material	Rate	Requirements	Installation/Uses
Straw	1.5-2.5 tons/ac (3-4 tons, if roller punched)	Dry, unchopped, unweathered; free of weed seeds & rot.	Spread by machine 1.5-2.5 inches deep; must be tacked or tied down.
Compost Blanket	1" thick	Double the application rate for embankments	Follow manufacturer's application method.
Wood fiber, wood cellulose, paper	1-2 tons/ac	Double the application rate in critical areas	Use with power mulcher or hydroseeder; may be used to tack straw on steep slopes. Cannot be used in hot dry weather.

Table 60-7 Temporary Fall Seeding

Plant Species	Rate [1] (lb/acre)	Seeding Times
Side-Oats	65	8/16 – 9/30
Winter Rye	50	8/01 – 10/15
Winter Wheat	60	8/01 – 10/15
Orchard Grass	120	8/01 – 10/15
Perennial Ryegrass	80	8/01 – 10/15
Tall fescue, Smooth Brome	80	8/01 – 10/15
K-31 Fescue	120	9/01 – 11/15
Ladino Clover	2 [2]	8/15 – 9/15
Crimson Clover	6 [2]	8/15 – 9/15
Orchard Grass and Oats or Rye	15 [2] 40 [2]	8/15 – 9/15

[1] If using aerial seeding or other broadcast method to apply seed without rolling or culti-packing, increase seeding rates by 50 percent.

[2] Pure live seed (PLS)

Table 60-8 Temporary Spring Seeding

Plant Species	Rate [1] (lb/acre)	Seeding Dates
Winter Rye	50	3/15 – 5/31
Spring Oats	65	3/15 – 5/31
Annual Ryegrass	4 [2]	3/15 – 6/15
Sudangrass	16 [2]	4/15 – 6/15
K-31 Fescue	30 [2]	3/15 – 5/31
Red Clover & Oats	2 [2] 30 [2]	3/15 – 5/31

[1] If using aerial seeding or other broadcast method to apply seed without rolling or culti-packing, increase seeding rates by 50 percent.

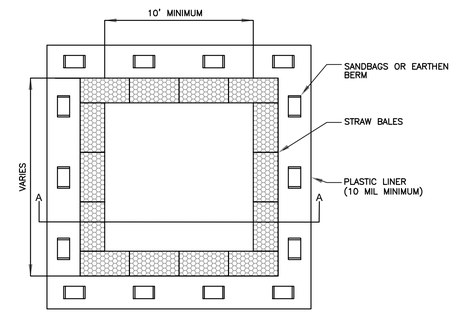
[2] Pure live seed (PLS)

60.20.2.1.3 Temporary Seeding Rates and Times

In areas that are on slopes flatter than 4:1 and that are not within watercourses, seeding shall be applied at the rates and times specified in Table 60-7 and Table 60-8. Seed shall be evenly spread with a broadcast seeder, drill, or hydro seeder. The proper depth is 1/4 to 1/2 inches deep for legumes and grasses such as annual ryegrass and up to 1 and 1/2 inches for cereal grains. If the seed is applied by a broadcast method, the area will be rolled or culti-packed immediately after seeding on a prepared seedbed only. Rolling or culti-packing is not required if the broadcast seeding rate is increased by 50 percent. Other seed species and mixtures can be proposed prior to planting, as recommended by an agronomist, competent nursery company, or refer to NRCS MOFOTG Code 340 (Cover Crop) in Appendix D.

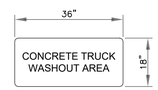
For channels, embankments, and slopes of 4:1 or steeper, seeding shall be a mixture of K31 fescue and rye at a rate of 400 pounds per acre.

SEED AND MULCH RATES



NOTES:

1. ALL WASHING OF CONCRETE TRUCKS AND EQUIPMENT TO BE CONDUCTED AT THIS SITE.
2. ALL WASHOUT LIQUID AND SOLID WASTES MUST BE CONTAINED IN A LEAK PROOF WASHOUT PIT WITH AN IMPERMEABLE 10 MIL LINER OR A PREFABRICATED CONTAINMENT FACILITY.
3. CLEAN OUT WASH PIT WHEN FILLED TO 50% CAPACITY. DISPOSE OF MATERIAL BY VACUUMING OUT LIQUID OR HAULING SOLIDS OFF SITE TO APPROPRIATE WASTE FACILITY.
4. MARK WASHOUT LOCATION WITH SIGNAGE.



SIGN DETAIL

DETAIL #30
CONCRETE WASHOUT PIT
N.T.S.

NOTES:

1. REFER TO SHEET C001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.

McDONALD'S
CONSTRUCTION PLAN
A TRACT OF LAND BEING LOT 4 OF 'BRYAN ROAD COMMERCIAL, PLAT 1' RECORDED AS DOCUMENT 2023R-038185 IN THE ST CHARLES COUNTY RECORDS, BEING IN THE SOUTHWEST QUARTER OF FRACTIONAL SECTION 30, TOWNSHIP 47 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

Civil & Environmental Consultants, Inc.
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STATE OF MISSOURI
PATRICK TODD BENNETT
NUMBER 2002003134
PROFESSIONAL ENGINEER
05/01/2024

PATRICK T. BENNETT
(MO PE# 2002003134)
PROFESSIONAL CIVIL ENGINEER
*HAND SIGNATURE ON FILE

DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT NO:
MNL	GAS	PTB	336-366

Developer / Owner Information
McDONALD'S RESTAURANT
NSN 43008 (024-1305)
962 BRYAN ROAD
O'FALLON, MISSOURI

EROSION CONTROL DETAILS

P+Z No. 24-001803
Approval Date 04/08/2024
Permit No.

Page No.
C901
22 OF 26