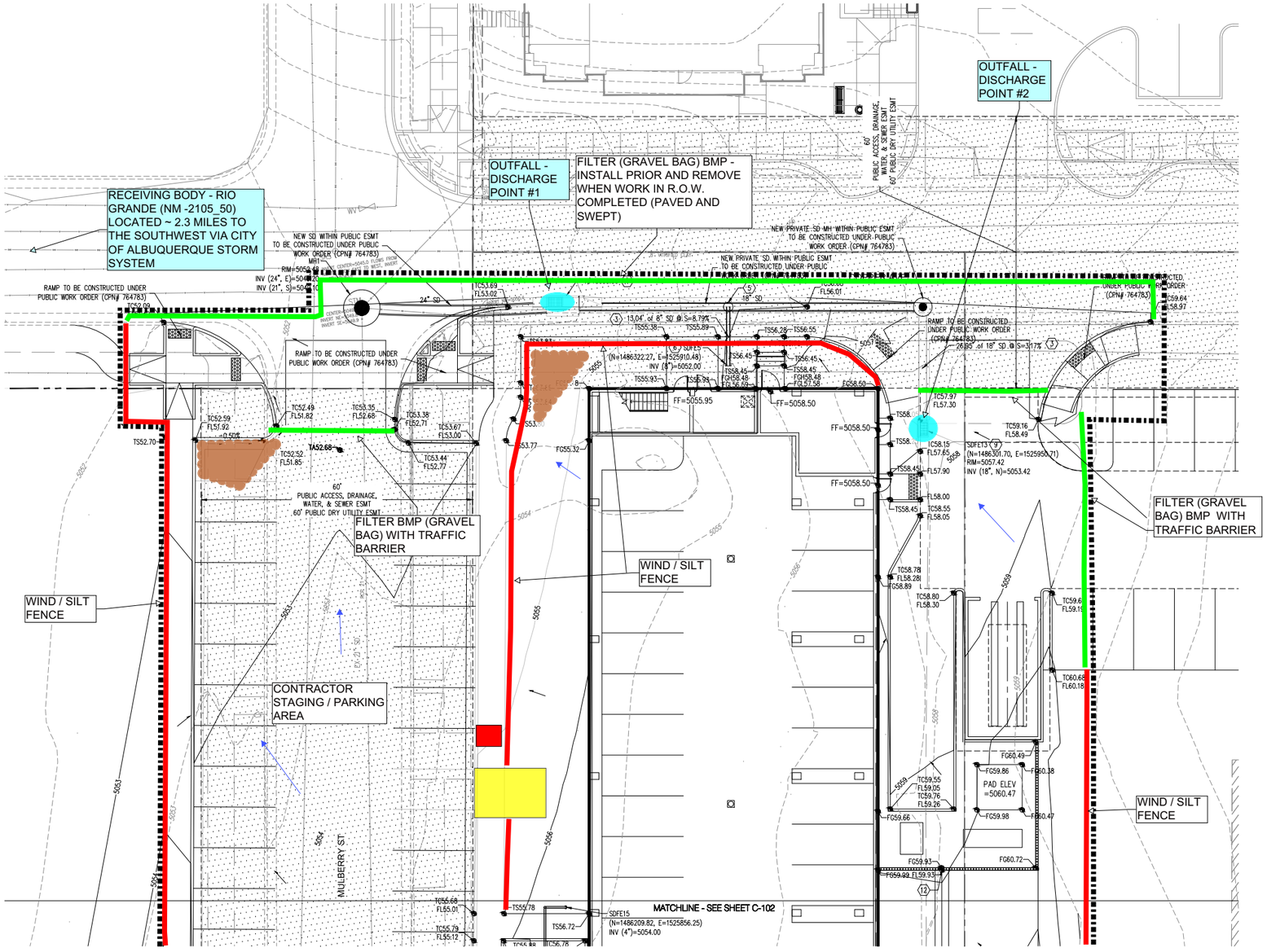

NOTE: NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW AND PUBLIC EASEMENTS WITHOUT AN APPROVED PUBLIC WORK ORDER.

NOTE: ALL WORK SHOWN IN THE R/W AND PUBLIC EASEMENTS SHALL BE CONSTRUCTED PER COA PUBLIC WORK ORDER CPN #764783. GRADES SHOWN WITHIN THE R/W AND PUBLIC EASEMENTS ARE FOR REFERENCE ONLY. IF PROPOSED GRADES IN R/W DIFFER FROM ON-SITE GRADES SHOWN, CONTACT ENGINEER IMMEDIATELY.

EROSION AND SEDIMENT CONTROL PLAN (ESC PLAN)

TOTAL SITE ACRES 1.2 ACRES
TOTAL DISTURBED AREA 1.2 ACRES
REFER TO SITE SWPPP FOR ADDITIONAL COMPLIANCE REQUIREMENTS. REFER TO THE ESC PLAN BMP DETAILS FOR INSTALLATION, INSPECTION AND MAINTENANCE REQUIREMENTS.

ERORION AND SEDIMENT CONTROL PLAN LEGEND

	LIMITS OF DISTURBANCE
AS INDICATED	PERIMETER BMP
	VTC (VEHICLE TRACKING CONTROL)
	SEDIMENT TRAP
	INLET / OUTLET PROTECTION
	SANITARY TOILETS (TBD)
	DUMPSTER (TBD)
	CWA (CONCRETE WASHOUT AREA)

N

10 5 0 10
1"=10'

GRADING KEYNOTES

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2. PUBLIC TYPE 'D' INLET. SEE PUBLIC WORK ORDER (CPN #764783). GRATE ELEVATION FOR REFERENCE ONLY.
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5. INSTALL PRE-FABRICATED STORM DRAIN FITTING.
6. STUB PROPOSED ROOF DRAIN CONNECTIONS WITHIN 5' OF THE BUILDING. SEE PLUMBING PLANS FOR CONTINUATION. CONTRACTOR TO PROVIDE APPROPRIATE FITTINGS.
7. REMOVE EXISTING STORM DRAIN.
8. EXISTING STORM DRAIN INLET TO BE REMOVED. SEE PUBLIC WORK ORDER (CPN # 764783).
9. INSTALL 18" 2'X3' NYLOPLAST STORM DRAIN TRAFFIC RATED INLET OR APPROVED EQUAL PER MANUFACTURER'S SPECIFICATIONS.
10. INSTALL MEDIAN CURB & GUTTER PER COA STD. DWG. 2415B.
11. INSTALL HDPE (N12WT, OR APPROVED EQUAL) STORM DRAIN REDUCER FITTING (SIZE PER PLAN).
12. INSTALL 6" PVC GROUTED THROUGH WALL AT ELEVATION.
13. INSTALL 30" NYLOPLAST DRAIN BASIN AND SOLID H-20 GRATE (OR APPROVED EQUAL) PER MANUFACTURER'S SPECIFICATIONS.

EROSION CONTROL/ENVIRONMENTAL PROTECTION/STORM WATER POLLUTION PREVENTION PLAN WATER AND WASTEWATER GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL NECESSARY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, OBTAINING AN NPDES PERMIT PRIOR TO CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, AND FILLING OUT THE NOTICE OF TERMINATION (NOT) APPLICATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION OF AND INSPECTION REPORTS FOR THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL SUBMIT THE SWPPP WITH THE PROPOSED CONSTRUCTION STAGING AREA AND TEMPORARY SANITARY FACILITIES CLEARLY SHOWN. ANY CHECK DAMS, SILT FENCES, OR OTHER BEST MANAGEMENT PRACTICES (BMPS) THAT ARE REQUIRED IN THE APPROVED SWPPP SHALL BE INCLUDED IN AND ARE INCIDENTAL TO THE SWPPP BID AMOUNT.
2. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN.
3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM THE REGULATORY AGENCIES.
4. THE CONTRACTOR SHALL EITHER PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR INSTALL BMPS IDENTIFIED IN THE APPROVED SWPPP TO PREVENT DISCHARGE OF EXCAVATED MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY DURING A RAIN OR WIND EVENT.
5. THE CONTRACTOR SHALL IMPLEMENT THE APPROVED SWPPP AND ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
6. THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING BMPS IDENTIFIED IN THE APPROVED SWPPP IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS AS SPECIFIED IN THE SWPPP.
7. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL IN COMPLIANCE WITH GOVERNMENT ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR.
8. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY LANDSCAPING OR AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING. WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, STABILIZATION MEASURES MUST BE INITIATED. UNLESS INDICATED OTHERWISE ON THESE PLANS OR ON THE LANDSCAPING PLAN, NATIVE GRASS SEEDING SHALL BE SEEDING PER SECTION 1012 OF THE NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHARTER, LATEST EDITION.
9. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNATED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.) GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINTS, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-9329.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER. CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.
12. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.
13. WHERE STORM INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM CONSTRUCTION ACTIVITIES, PROTECTION SHALL BE PROVIDED ON THEIR UPSTREAM SIDE UTILIZING BMPS IDENTIFIED IN THE APPROVED SWPPP.

GRADING LEGEND

PROPERTY LINE	PROPOSED CURB & GUTTER
PROJECT LIMITS OF GRADING	DIRECTION OF FLOW
5025 EXISTING INDEX CONTOUR	WATER BLOCK/GRADE BREAK
5024 EXISTING INTERMEDIATE CONTOUR	PROPOSED STORM DRAIN LINE
5025.25 EXISTING GROUND SPOT ELEVATION	PROPOSED STORM DRAIN MANHOLE
5025 PROPOSED INDEX CONTOUR	PROPOSED STORM DRAIN INLETS
5024 PROPOSED INTERMEDIATE CONTOUR	PROPOSED RETAINING WALL
26.75 PROPOSED FINISHED GRADE SPOT ELEVATION TC=TOP OF CURB, FL=FLOW LINE, TS=TOP OF SIDEWALK TG=TOP OF GRATE, FGH=FINISH GROUND HIGH, FGL=FINISH GROUND LOW	EASEMENT

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(505-898-9615 John Braly)

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MICHAEL DAVID TULL
NEW MEXICO
21757
8-30-18
PROFESSIONAL ENGINEER

DATE	ISSUE TITLE
01/02/18	ISSUE FOR DESIGN DEVELOPMENT
04/23/18	ISSUE FOR PERMIT
06/08/18	ISSUE FOR MARRIOTT'S 90% SET

REV.	DATE	ISSUE TITLE
1	06/18/18	CITY PERMIT REVIEW
2	08/27/18	CITY PERMIT REVIEW

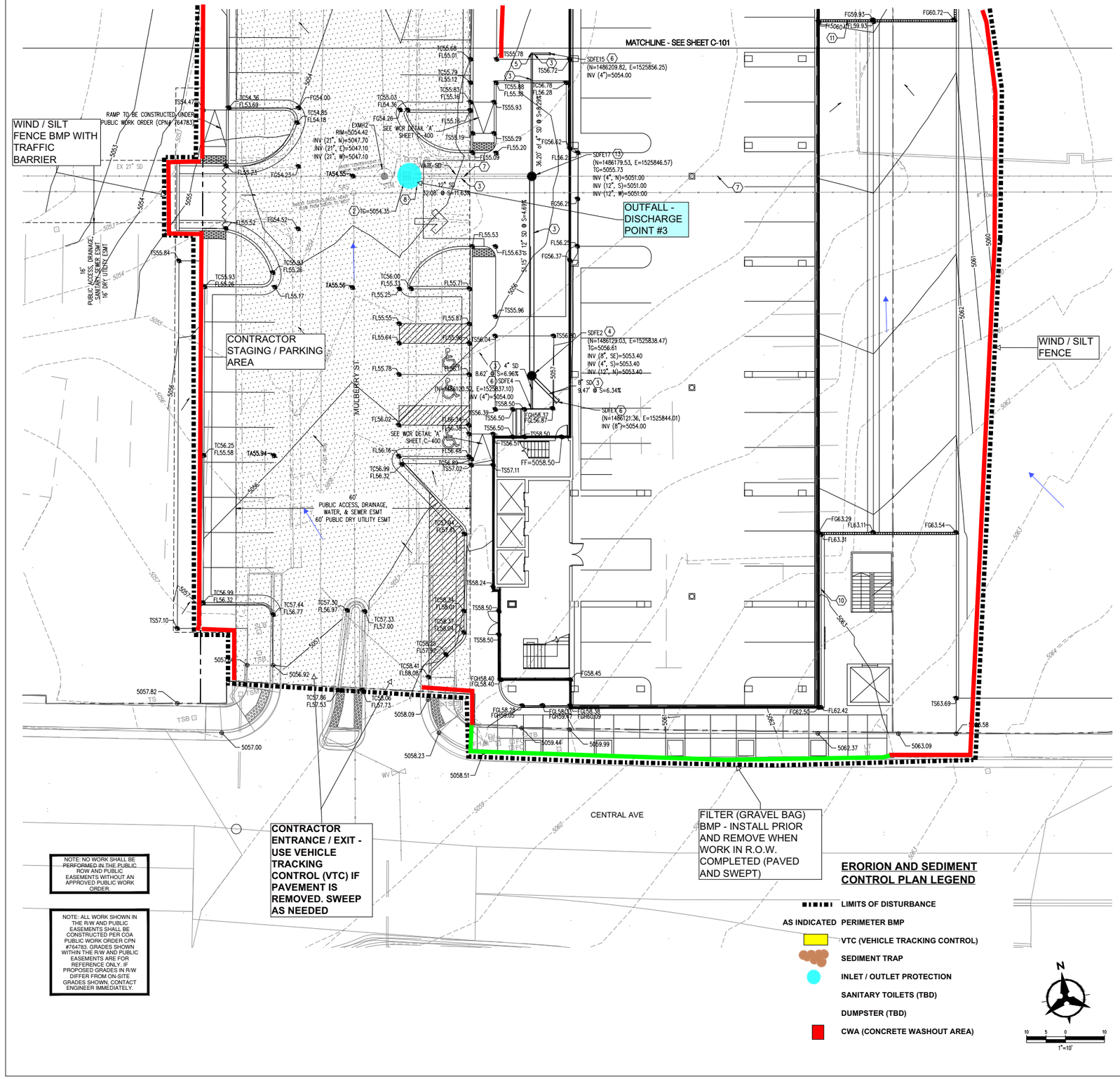
SPRINGHILL SUITES - ALBUQUERQUE
CENTRAL AVE. & MULBERRY ST.
ALBUQUERQUE, NM 87105

EROSION AND SEDIMENT CONTROL PLAN

ESC 101

2

IMM012
PROJECT NUMBER



GRADING KEYNOTES

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GRADING LEGEND

- PROPERTY LINE
- PROJECT LIMITS OF GRADING
- 5025 EXISTING INDEX CONTOUR
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- PROPOSED CURB & GUTTER
- DIRECTION OF FLOW
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- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLETS
- PROPOSED RETAINING WALL
- EASEMENT

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CENTRAL AVE. & MULBERRY ST.
ALBUQUERQUE, NM 87106

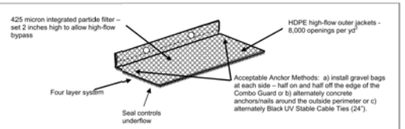
EROSION AND SEDIMENT CONTROL PLAN

IMM012 PROJECT NUMBER

ESC 102 SHEET NUMBER

2

SWPPP Binder Insert - Curb & Grate Inlet Protection
ERTEC Combo Guard™



Product Designation	Grate Size
CG 28x22	Fits 23" by 19" Grate
CG 58x22	Fits 36" x 18" **and** 36" x 20" **and** 40" x 17" Grates
CG 48x27	Fits 40" x 24" Grate
CG 58x30	Fits 42" x 28" Grate
Custom sizes available upon request	

Definition – ERTEC Combo Guard
A temporary sediment filter made of high density polyethylene with an integrated filter. During construction, place device over the grate and curb opening of the drain inlet near disturbed soil. Anchor with 2 Gravel Bags, or alternately 2 ERTEC GR-8 Hooks™ or alternately concrete anchors/nails or alternately black UV stable cable ties (24 to 36").

Purpose
Storm drain inlet protection is used to intercept sediment laden water at the curb and grate apening and prevent the sediment, associated pollutants and debris from entering the storm water underground pipe systems. The system reduces water velocity which causes heavier soil particles to be deposited above ground. While allowing flow through the module, the barrier filters certain smaller sized particles from suspension and prevents them from flowing through the device and into the pipes. Heavy flows are passed over the top of the filter. Advantages are that it is effective, durable, re-usable, easily installed and cleaned.

Conditions Where the Practice Applies
It is recommended for use over curb & grate openings with small drainage areas. Generally, the drainage areas should be less than 1/3 acre and the total for inlets in series should be 1 acre or less with slopes flatter than 5 percent in the contributing drainage area.

Design Criteria
- Geo-textile Filter: Apparent Opening Size (AOS) = 425 micron integrated particle filter. Flow rate (ASTM D-4491) = 145 gpm/ft². Provide a bypass over the top.
- Outer Jacket Material: HDPE. For detailed characteristics contact ERTEC. Module weight = 3 to 5 lbs. Module height = 6.0". Module length/opening size protected varies as per the chart above – according to grate size. Service temperature (deg F) = -30 to 160.
- Install system with the vertical section covering the curb inlet and the horizontal section covering the grate. Alternate anchor methods listed above. If using Gravel Bags - place small gravel bags containing clean, pea-sized graded gravel on each end of the cover and butt the bags tightly against the curb to keep water in the gutter from flowing behind the filter (do not use sandbags). The porosity of the gravel bag should allow for design flow rate through the bag. The bag should be durable enough to last the period of intended use. If the storm inlet opening exceeds 5.0' in length, overlap one module by 6" over side of adjoining module for a continuous run until the desired length is achieved. Anchor thru the overlap as necessary.

Maintenance
Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Debris shall be removed daily and sediment shall be removed when the sediment accumulation reaches 2 inches. Removed sediment shall be incorporated in the project at designated locations or disposed-of outside the project or in conformance with requirements. Remove the device after final stabilization has been achieved.

Combo Guard™

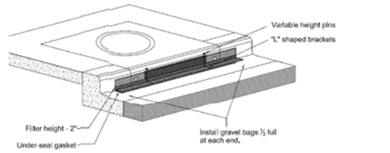
www.ertecsystems.com
Toll Free: 866-521-0724

H400032 Updated: 8/11

A2-40

SWPPP Binder Insert - Curb Inlet Protection
ERTEC Curb Inlet Guard™

Inlet Size	# of Modules
5.0'	1 Module
10.0'	2 Modules
15.0'	3 Modules
20.0'	4 Modules



Definition – ERTEC Curb Inlet Guard
A temporary sediment barrier, "L" shaped, made of high density polyethylene (HDPE) with an integrated filter (woven geo-textile). During construction, place device over the opening of the curb storm inlet near where soil is disturbed (See drawings).

Purpose
Storm drain inlet protection is used to intercept sediment laden water at the curb gutter opening and prevent sediment, debris and associated pollutants from entering the storm water underground pipe systems. The barrier reduces water velocity which in turn causes heavier soil particles to be deposited in front. While allowing flow through the module, the barrier filters certain smaller sized particles from suspension and prevents them from flowing through the device and into the pipes. Excessive flows are passed over the top of the filter. Advantages are that it is effective, durable, re-usable, easily installed and cleaned.

Conditions Where the Practice Applies
It is recommended for use in curb openings in front of areas with small drainage areas. Generally, the drainage areas should be less than 1/3 acre and the total for inlets in series should be 1 acre or less with slopes flatter than 5 percent in the contributing drainage area.

Design Criteria
- Geo-textile Filter: See drawing for dimensions. Apparent Opening Size (AOS) = 425 micron integrated particle filter. Flow rate (ASTM D-4491) = 145 gpm/ft². Provide a bypass over the top.
- Outer Jacket Material: HDPE. For detailed characteristics contact ERTEC. Module weight = 3.5 lbs. Module height = 7.5". Module length/opening size protected = 6' 3"/5.0 ft. Service temperature (deg F) = -30 to 160.
- Install barrier with the anchor flap facing upstream toward the street. Place small gravel bags containing clean, pea-sized graded gravel on each end of the flap and butt the bags tightly against the curb to keep water in the gutter from flowing behind the filter. Additional bags can be placed on the flap as necessary; however, bags should be kept off the street for safety reasons. The porosity of the gravel bag should allow for design flow rate through the bag. The bag should be durable enough to last the period of intended use. If the storm inlet opening exceeds 5.0' in length, overlap one of module by 6" over end of adjoining module for a continuous run until the desired length is achieved. When overlapping, note the gasket material under the flap is cut-out where the flap of top module sits on flap of bottom module.

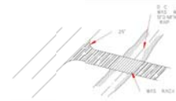
Maintenance
Perform maintenance as required. Inspect following rainfall events and at least daily during prolonged rainfall. Maintain to provide an adequate sediment holding capacity. Trash shall be removed daily and sediment shall be removed when the sediment accumulation reaches 1 inch. Removed sediment shall be incorporated in the project at designated locations or disposed-of outside the project or in conformance with requirements. Remove the device after final stabilization has been achieved.

Curb Inlet Guard™
ERTEC Environmental Systems
www.ertecsystems.com
Toll Free: 866-521-0724

H999222 Updated: 02/10

A2-41

Stabilized Construction Entrance/Exit



Applications
- Perimeter Control
- Slope Protection
- Sediment Trapping
- Channel Protection
- ✓ Temporary Stabilization
- Permanent Stabilization
- Waste Management
- Housekeeping Practices

Targeted Constituents
- ✓ Sediment
- Nutrients
- Toxic Materials
- Oil and Grease
- Floatable Materials
- Construction Wastes

Impact
- ✓ Significant
- ✓ Medium
- Low
- Unknown or Questionable

DESCRIPTION
A stabilized construction entrance consists of a pad of crushed stone, recycled concrete, or other rock-like material on top of a geotextile filter cloth, which is used to facilitate the washdown and removal of sediment and other debris from construction equipment prior to exiting the site. During the construction phase of a project, regular street sweeping should be performed to remove debris carried from the site.

PRIMARY USE
Stabilized construction entrances are used to reduce offsite sediment tracking from trucks and construction equipment, and for sites where considerable truck traffic occurs each day. They also reduce the need to clean adjacent pavement as often, and help route site traffic through a single point.

APPLICATIONS
As a part to the erosion-control plan required for sites larger than five acres, and recommended for all construction sites.

LIMITATIONS
Selection of the construction entrance location is critical. To be effective, it must be used exclusively.

Stabilized entrances are rather expensive, considering that they must be installed in combination with one or more other sediment control techniques. It may be more cost effective, however, than labor-intensive street cleaning.

MAINTENANCE REQUIREMENTS
Inspections should be made on a regular basis and after large storm events in order to ascertain whether or not sediment and pollution are being effectively detained on site.

When sediment has substantially clogged the void area between the rocks, the aggregate mat must be washed down or replaced.

Periodic re-grading and top dressing with additional stone must be done to keep the efficiency of the entrance from diminishing.

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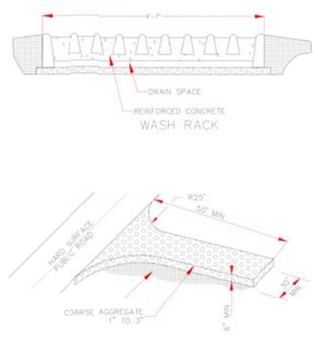
A5-19

Stabilized Construction Entrance/Exit (continued)



ROCK / AGGREGATE VEHICLE TRACKING CONTROL

01C11R.DOC

A3-22

Drop Inlet Protection

TYPE I

Applications
- Perimeter Control
- Slope Protection
- ✓ Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization
- Waste Management
- Housekeeping Practices

Targeted Constituents
- ✓ Sediment
- Nutrients
- Toxic Materials
- Oil and Grease
- ✓ Floatable Materials
- Construction Wastes

Impact
- ✓ Significant
- ✓ Medium
- Low
- Unknown or Questionable

DESCRIPTION
A variety of drop inlet protection methods are used to intercept sediments at inlets through the use of stone, filter fabric, or other materials.

PRIMARY USE
Drop inlet protection is normally used as a second defense in site erosion control. A backup to onsite systems that have limited effectiveness.

APPLICATIONS
- Filter barrier when site is less than one acre and slope is less than 5%
- Block and gravel are used when flows exceed 0.5 cfs
- Wire mesh and gravel are used where traffic crosses inlet

LIMITATIONS
Ponding will occur at the inlet, with possible flooding as a result.

Inlet protection is only viable at low-point inlets. Inlets that are on a slope cannot be effectively protected because storm water will bypass the inlet and continue downstream, causing an overload condition at inlets beyond.

MAINTENANCE REQUIREMENTS
Inspections should be made on a weekly basis, especially after large (>0.5 inches) storm events. When silt fence is used and the fabric becomes clogged, it should be cleaned or, if necessary, replaced. Also, sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.

For systems using stone filters, when the stone filter becomes clogged with sediment, the stones must be pulled away from the inlet and cleaned or replaced. Since cleaning of gravel at a construction site may be difficult, an alternative approach would be to use the clogged stone as fill material and put new stone around the inlet.

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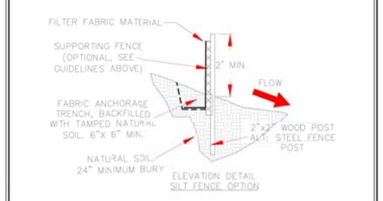
A2-17

Drop Inlet Protection (continued)



TYPE I

TYPE II

01C11R.DOC

A2-18

Temporary Sediment Control
Gravel Bag Berm

Definition A gravel bag berm consists of a series of gravel-filled bags made of a woven polypropylene geotextile fabric abutted end to end to form a berm. Gravel bag berms can be used as a perimeter control and placed along the site perimeter to contain pollutants on site, they can be placed on the toe and face of slopes to intercept runoff and reduce flow velocity, and they can also be used around temporary stockpiles.

Purpose As a perimeter control, the gravel bag berm is used to intercept sediment-laden stormwater and prevent the sediment and associated pollutants from entering the street and the stormwater system. For specifications regarding gravel bag berm use on slopes, please refer to TSC – 5 Slope BMP: Fiber Roll or Gravel Bag. For specifications regarding gravel bag berm use around temporary stockpiles, please refer to WM – 5 Stockpile Management.

Conditions
Where the
Practice Applies
As a perimeter control, gravel bag berms can be used anywhere along the site perimeter, even on impermeable surfaces. All new and existing roadways, curbs, and gutters must be protected from sediment-laden runoff, are considered as perimeters of the site, and will need perimeter controls installed.

Specifications:
Design and
Installation
Gravel Bags
• Bags shall be woven polypropylene, polyethylene, or polyamide fabric.
• Minimum unit weight o f 8 ounces per square yard.
• Burst strength exceeding 200 lbs in conformance with ASTM designation D4632.
• Ultraviolet stability exceeding 70% in conformance with ASTM designation D4355.
• Each gravel-filled bag shall have a length of 24-32 inches, width of 16-20 inches, and mass of approximately 30-50 lbs.
• Fill material shall be between 3/8 and 1 inch in diameter.
• Fill material shall be free from clay balls, organic matter, sand or silt, and other deleterious material.

Installation Requirements
• Install along a level contour.
• Clear bedding area of obstructions one inch in diameter or larger.
• Place in single layer with ends abutted tightly and not overlapped.
• Use in conjunction with temporary soil stabilization.

Maintenance &
Inspection
• Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, and weekly throughout the life of the Project.
• Gravel bags exposed to sunlight will need to be replaced every two to three months due to degradation of the bags.
• Reshape or replace gravel bags as needed.
• Repair washouts or other damage as needed. Split or torn gravel bags must be repaired, if possible, or replaced.
• Inspect gravel bag berms for sediment accumulation. Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance must be disposed of in a proper place that will not allow contamination of the stormwater system.
• Properly dispose of gravel bags that have been damaged or are no longer needed and cannot be reused.

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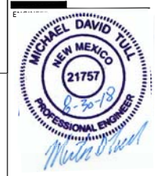
ARCHITECT



PROJECT

SPRINGHILL SUITES - ALBUQUERQUE
CENTRAL AVE & MULBERRY ST
ALBUQUERQUE NM

REVISIONS

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DATE **9/22/16**
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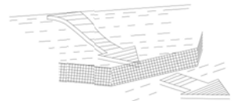
DRAWING NAME

EROSION AND SEDIMENT CONTROL DETAILS AND NOTES

SHEET NO.

ESC 103

Silt Fence



Applications
- ✓ Perimeter Control
- ✓ Slope Protection
- ✓ Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization
- Waste Management
- Housekeeping Practices

Targeted Constituents
- ✓ Sediment
- Nutrients
- Toxic Materials
- Oil and Grease
- ✓ Floatable Materials
- Construction Wastes

Impact
- ✓ Significant
- ✓ Medium
- Low
- Unknown or Questionable

SF

DESCRIPTION
A silt fence consists of geotextile fabric supported by backing stretched between posts, with the lower edge securely embedded in soil downstream of disturbed areas. Intercepts runoff in the form of sheet flow and provides filtration, sedimentation, and velocity reduction.

PRIMARY USE
Silt fences are used as perimeter control downstream of disturbed areas, and for non-concentrated sheet-flow conditions.

APPLICATIONS
Silt fences provide an economical way to mitigate overflow, non-concentrated flows, and as a perimeter control device. Best with coarse to silty soil types and to control wind erosion on sandy soils.

LIMITATIONS
Minor ponding will likely occur at the upstream side of the silt fence, resulting in minor localized flooding.

Fences that are constructed in swales or low areas subject to concentrated flow may be overtopped, resulting in failure of the filter fence. Silt fences subject to areas of concentrated flow (waterways with flows >1 cfs) are not acceptable.

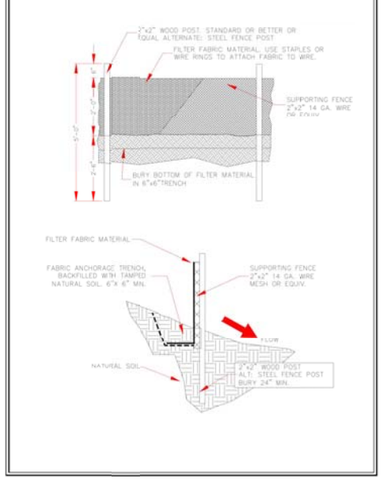
Silt fence can interfere with construction operations; therefore, planning of access routes onto the site is critical.

Silt fence can fail structurally under heavy storm flows, creating maintenance problems and reducing the effectiveness of the system.

MAINTENANCE REQUIREMENTS
Inspections should be made on a weekly basis, especially after large storm events. If the fabric becomes clogged, it should be cleaned or, if necessary, replaced.

Sediment should be removed when it reaches approximately one-half the height of the fence.

Silt Fence (continued)



filtrexx® LAND IMPROVEMENT SYSTEMS

Section 1: *Erosion & Sediment Control – Construction Activities*

SWPPP Cut Sheet: Filtrexx® Sediment Control

Sediment & Perimeter Control Technology

PURPOSE & DESCRIPTION
Filtrexx® Sediment control is a three-dimensional tubular sediment control and storm water runoff filtration device typically used for **perimeter control** of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbon), on and around construction activities.

APPLICATION
Filtrexx® Sediment control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration of soluble pollutants from runoff. Sediment control is effective when installed perpendicular to sheet or low concentrated flow. Acceptable applications include:
- Site perimeters
- Above and below disturbed areas subject to sheet runoff, interrill and rill erosion
- Above and below exposed and erodable slopes
- Around area drains or inlets located in a 'sump'
- On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation.
- On frozen ground where trenching of silt fence is impossible.
- On paved surfaces where trenching of silt fence is impossible.

INSTALLATION
1. Sediment control used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrexx® Soxx™ Material Specifications and use Certified Filtrexx® FilterMedia™.
2. Contractor is required to be Filtrexx® Certified™ as determined by Filtrexx® International, LLC (440-926-2607 or visit website at www.filtrexx.com). Certification shall be considered current if appropriate identification is shown during time of bid or at time of application (current listing can be found at www.filtrexx.com). Look for the Filtrexx® Certified™ Seal.
3. Sediment control will be placed at locations indicated on plans as directed by the Engineer.
4. Sediment control should be installed parallel to the base of the slope or other disturbed area. In extreme conditions (i.e., 2:1 slopes), a second Sediment control shall be constructed at the top of the slope.
5. Effective Soxx™ height in the field should be as follows: 8" Diameter Sediment control = 6.5" high, 12" Diameter Sediment control = 9.5" high, 18" Diameter SiltSoxx™ = 14.5" high, 24" Diameter Sediment control = 19" high.
6. Stakes shall be installed through the middle of the Sediment control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) hard wood stakes. In the event staking is not possible, i.e., when Sediment control is used on pavement, heavy concrete blocks shall be used behind the Sediment control to help stabilize during rainfall/runoff events.
7. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
8. Loose compost may be backfilled along the upslope side of the Sediment control, filling the seam between the soil surface and the device, improving filtration and sediment retention.
9. If the Sediment control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.
10. Filtrexx® Sediment control is not to be used in perennial, ephemeral, or intermittent streams.

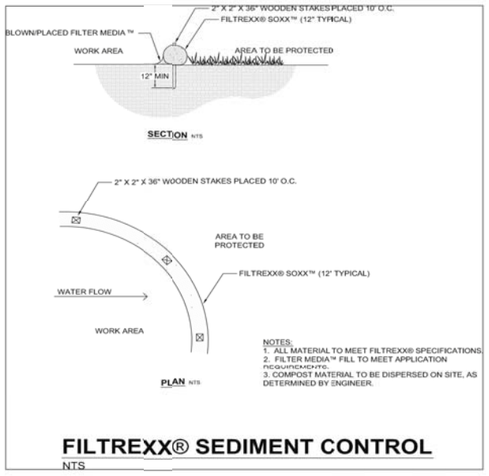
See design drawing schematic for correct Filtrexx® Sediment control installation (Figure 1.1).

INSPECTION AND MAINTENANCE
Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Sediment control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional Sediment control may be required to reduce effective slope length or sediment removal may be necessary. Sediment control shall be inspected until area above has been permanently stabilized and construction activity has ceased.
1. The Contractor shall maintain the Sediment control in a functional condition at all times and it shall be routinely inspected.
2. If the Sediment control has been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove sediment at the base of the upslope side of the Sediment control when accumulation has reached 1/2 of the effective height of the Sediment control, or as directed by the Engineer. Alternatively, a new Sediment control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. Sediment control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FilterMedia™ will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, Sediment control can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (contained vegetative filter strip). The appropriate seed mix shall be determined by the Engineer.

Slope Percent	Maximum Slope Length Above Sediment Control n Feet (meters)*				
	8 in (203 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mm) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control
	6.5 in (160 mm)**	9.5 in (240 mm) **	14.5 in (360 mm) **	19 in (480 mm) **	26 in (650 mm) **
2 (or less)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

* Based on a failure point of 36 in ft (6 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of sediment control device, 1 or 24 hr (25 mm/24 hr) rain event.
** Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.

SWPPP Cut Sheet - 1.1. Filtrexx® Sediment Control



FILTREXX® SEDIMENT CONTROL
NTS

Concrete Waste Management

Applications
- Perimeter Control
- Slope Protection
- Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization
- ✓ Waste Management
- ✓ Housekeeping Practices

Targeted Constituents
- Sediment
- Nutrients
- Toxic Materials
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- Floatable Materials
- ✓ Construction Wastes

Impact
- Significant
- ✓ Medium
- Low
- Unknown or Questionable

DESCRIPTION
Concrete waste management prevents or reduces the discharge of pollutants to storm water by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

APPLICATIONS
The following low-cost measures will help reduce storm water pollution from concrete wastes:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement onsite.
- Perform washout of concrete trucks offsite or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite except in designated areas.
- For onsite washout:
  - Locate washout area at least 50 feet from storm drains, open ditches, or water bodies. Prevent runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
  - Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed of properly.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water to a bermed or level area.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stock pile, or dispose in the trash.
- Train employees and subcontractors in proper concrete waste management.

LIMITATIONS
Offsite washout of concrete wastes may not always be possible.

MAINTENANCE REQUIREMENTS
Inspect subcontractors to ensure that concrete wastes are being properly managed.

If using a temporary pit, dispose of hardened concrete on a regular basis.

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ALBUQUERQUE NM

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