RUNOFF CALCULATIONS FOR 100 YEAR/6 HOUR STORM

BASIN	*AREA (SF)*	*AREA (AC)*	*AREA (MI²)*
ON-SITE	180,179.14	4.1363	0.006463

E = $\frac{EA(AA) + EB(AB) + EC(AC) + ED(AD)}{AA + AB + AC + AD}$

V-360 = Weighted E (AA + AB + AC + AD)/12

EA = 0.66
EB = 0.92
EC = 1.29
ED = 2.36

LAND TREATMENT
DEVELOPED CONDITION
AA = 0.00%
AB = 10.00% (18,017.91 SF)
AC = 68.14.00% (104,933.27 SF)
AD = 31.76% (57,227.96 SF)

DEVELOPED Weighted E = 1.72

V-360 (DEVELOPED) = 25,833.81 CF

A = 1.87 CFS/AC
B = 2.60 CFS/AC
C = 3.45 CFS/AC
D = 5.02 CFS/AC

TOTAL QP = QPA AA + QPB AB + QPC AC + QPD AD
QP (DEVELOPED) = 17.39 CFS

POND CALCULATIONS

***VOL** = (TOP AREA + BOTTOM AREA) / 2 * (TOP ELEVATION - BOTTOM ELEVATION)*

Pond A

ELEV (FT)	AREA (SF)	VOLUME (CF)
5198.00	1,334.99	2,330.09
5197.00	871.18	1,233.30
5196.00	512.85	541.29
5195.00	247.42	161.15
5194.00	182.88	

PONDING VOLUME = 2,330.09 CF

Pond B

ELEV (FT)	AREA (SF)	VOLUME (CF)
5195.00	9,831.95	25,637.62
5194.00	5,893.62	17,774.84
5193.00	4,718.73	12,468.66
5192.00	3,673.00	8,272.80
5191.00	2,760.07	5,056.26
5190.00	1,978.83	2,686.81
5189.00	1,315.05	1,039.87
5188.00	764.69	

PONDING VOLUME = 25,637.62 CF

TOTAL PONDING VOLUME PROVIDED = 2,330.09 + 25,637.62 = 27,967.71 CF

REQUIRED 1ST FLUSH VOLUME = (57,228)x0.34/12 = 1,621.46 CF

ALLOWABLE DISCAHRGE BASED ON SAD 224:

HOLLY BASIN = 22.91 ACRES
TOTAL RUOFF Q = 72.00 CFS
ALLOWABLE DISCHARE PER ACRE = 72.00/22.91 = 3.14 CFS/AC
TOTAL DISCHARGE = 4.14 AC x 3.14 CFS/AC = 13.00 CFS

Location
This site is located at southeast corner of I-25 frontage and Carmel Ave. NE, containing 4.1363 acre. See attached portion of Vicinity Map for exact location.

Purpose
The purpose of this drainage report is to present a grading and drainage solution for new parking area for the RVs and parking area in front of the existing building.

Existing Drainage Conditions
This site falls within drainage plan for SAD 224. Based on the allowable of 72 cfs and basin area of 22.77 acres which caculates to be 3.14 cfs/acre. Therefore the total allowable discharge from this site is approximately 13.00 cfs. The site currently drains from east to west and then south to exiting culverts.

Proposed Conditions and On-Site Drainage Management Plan
The drainage pattern will reamin the same as existing conditions conditions draining from west to east. But the runoff under the proposed conditions will be fully retained on site based on the 100-year/6-hr volume (25,833.81 cf). The total volume provided bewteen the two ponds A & B (27,967.71 cf) exceeds the 100 yr/6-hr volume. The total impervious area (treatment D) is approximately 40,000.00 sf. We have used a larger area in our caluclation if they decide to pave more area where they dispay the RVs close to the road.

Calculations
City of Albuquerque, Development Process Manuel, Section 22.2, Hydrology Section, was used for runoff calculations. See this plan for the calculations.

GENERAL NOTES

1: CONTOUR INTERVAL IS HALF (1.00) FOOT.

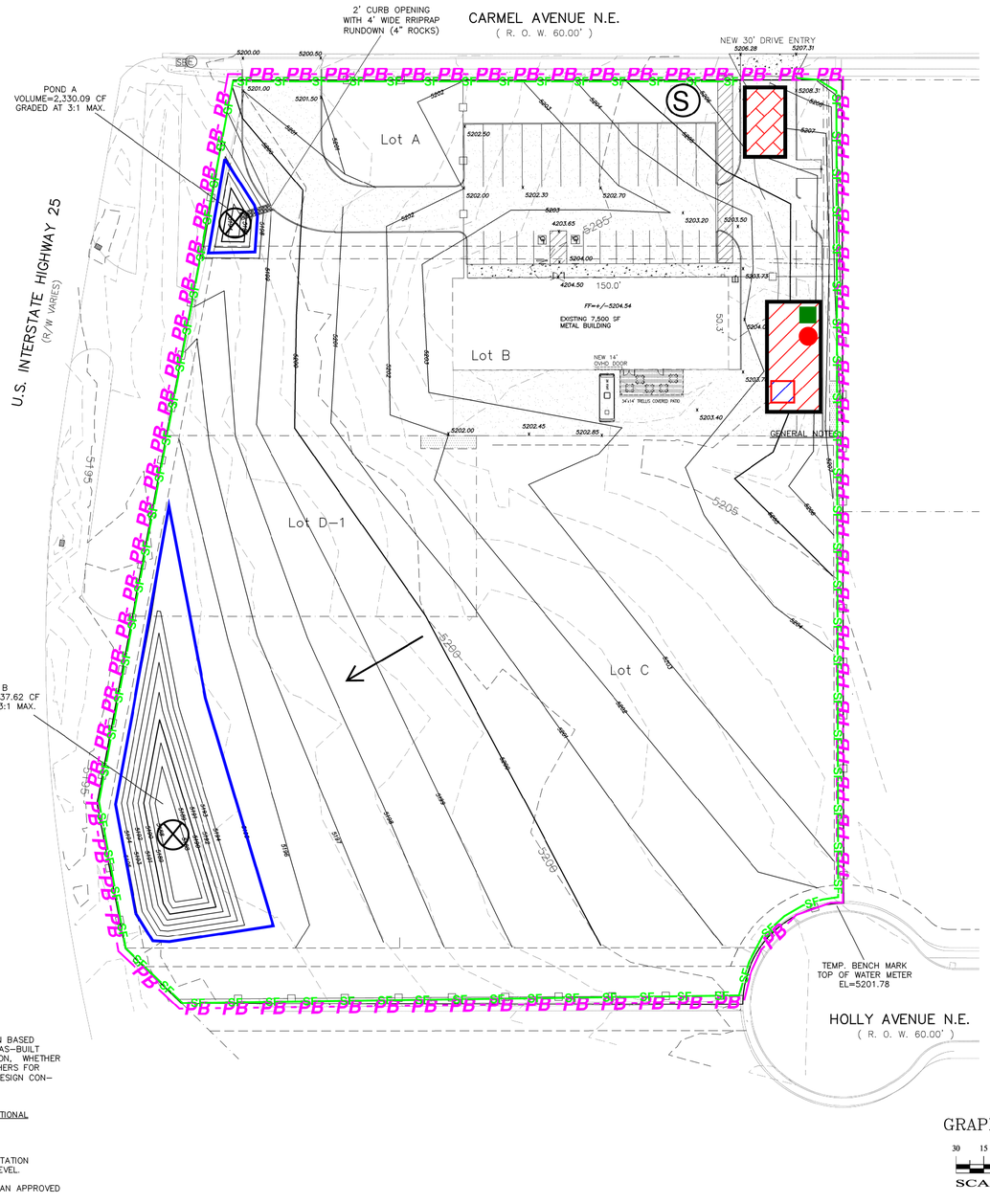
2: UTILITIES SHOWN HEREON ARE IN THEIR APPROXIMATE LOCATION BASED ONLY ON ABOVE GROUND EVIDENCE FOUND IN THE FIELD AND AS-BUILT INFORMATION PROVIDED BY THE CLIENT. UTILITIES SHOWN HEREON, WHETHER INDICATED AS ABANDONED OR NOT, SHALL BE VERIFIED BY OTHERS FOR EXACT LOCATION AND/ OR DEPTH PRIOR TO EXCAVATION OR DESIGN CON-SIDERATIONS.

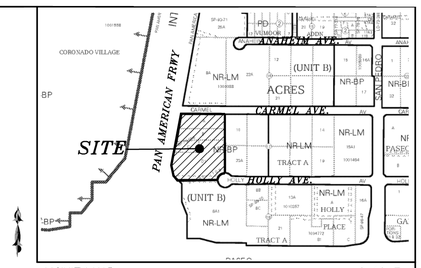
3: THIS IS NOT A BOUNDARY SURVEY, BEARINGS ARE ASSUMED, DISTANCES AND FOUND PROPERTY CORNERS ARE FOR INFORMATIONAL PURPOSES ONLY.

4: SLOPES ARE AT 3:1 MAXIMUM.

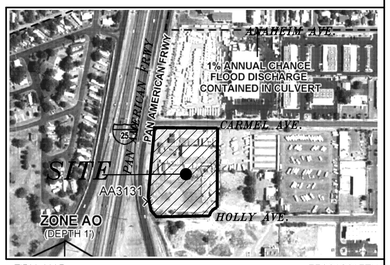
5: ELEVATIONS ARE BASED ON CITY OF ALBUQUERQUE CONTROL STATION ZAB_B, HAVING AN ELEVATION OF 5195.09 FEET ABOVE SEA LEVEL.

6: NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW WITHOUT AN APPROVED CITY WORK ORDER OR AN EXCAVATION PERMIT.





VICINITY MAP: C-18-Z



FIRM MAP: 35001C0137H
EFFECTIVE DATE: 08-16-2012

SITE WILL HAVE A SILT FENCE PERIMETER. STAGING AREA IS REPRESENTATIVE AND MAY BE MOVED TO ACCOMODATE PROJECT.

LEGEND

EROSION AND SEDIMENT CONTROL PLAN

- PROJECT PERIMETER & DISTURBED AREA
- SILT FENCE
- MULCH SOCKS
- FLOW DIRECTION
- STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- TRASH RECEPTACLE
- CHEMICAL TOILET
- CONCRETE WASHOUT
- RETENTION POND
- RIP RAP
- CHECK DAM
- DROP INLET PROTECTION
- OUTFALL
- POSTING SIGN
- PRESERVED VEGETATION

RECEIVING WATERS:	**RIO GRANDE 2105_50 TIER II AND IMPAIRED WITH PCBs IN FISH TISSUE, DISSOLVED OXYGEN AND E. COLI**
CRITICAL HABITAT:	**CRITERION "A"; NO CRITIAL HABITAT WITHIN PROJECT AREA**
GPS LOCATION:	**35.1764, -106.5820**

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
LELAN MORRISON
No. 8376

03/06/2019

CPESC Stamp

ALOHA RV ADDITION
PROJECT TITLE

ALBUQUERQUE, BERNALILLO COUNTY, NM
CITY, COUNTY, STATE

03/06/2019 DATE

C. DURKIN DRAWN BY

Inspections Plus, Inc.

City of Albuquerque

Planning Department

Stormwater Control Permit for Erosion and Sediment Control

Project Title ALOHA RV

Project Location (Major Cross Streets/Arroyo or address) 8212 PAN AMERICAN FWY, NE

Property Owner: (Note: If applying for a Building Permit, the "Owner" or "Company" name on this form must match the "Owner" name on the Building Permit.)

Company or Owner Name: MEMBERS, LLC

Street: 8300 PAN AMERICAN FWY, NE

City, State, Zip Code: ALBUQUERQUE, NM 87113

Responsible Person:

Name: PETER LARSON

Phone Number: 505-903-7093

E-mail: ALOHARV@MSN.COM

The person listed on the permit and/or the onsite representative will be contacted if any issues are observed during an inspection.
There will be a $100 Stormwater Quality Inspection fee when the site is inspected. The Owner will be invoiced after the inspection.

Operators are encouraged to be familiar with the NPDES Construction General Permit and BMP installation standards.

For City personnel use only:

City Personnel Signature:_____ Date_____

(Rev July 2018)

NPDES FORM 3510-9	EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460 NOTICE OF INTENT (NOI) FOR THE 2017 NPDES CONSTRUCTION PERMIT	FORM Approved OMB No. 2040-0004

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section III of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section II of this form. Submission of this NOI also constitutes notice that the operator identified in Section III of this form meets the eligibility requirements of Part 1.1 CGP for the project identified in Section IV of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

Permit Information

NPDES ID: NMR1001Z3

State where your construction site is located: NM

Is your construction site located on Indian Country Lands? ☐ YES ☑ NO

Are you requesting coverage under this NOI as a *"Federal Operator"* as defined in Appendix A (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_a_-_definitions_508.pdf)?
☐ YES ☑ NO

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? ☐ YES ☑ NO

Will you use polymers, flocculants, or other treatment chemicals at your construction site? ☐ YES ☑ NO

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? ☑ YES ☐ NO

Are you able to demonstrate that you meet one of the criteria listed in Appendix D (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_d_-_endangered_species_reqs_508.pdf) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?
☑ YES ☐ NO

Have you completed the screening process in Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf) relating to the protection of historic properties?
☑ YES ☐ NO

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state or local authorities after issuance of this permit via any means, Including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an Inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.
☑ YES ☐ NO

Operator Information

Operator Information

Operator Name: SBS Construction and Engineering, LLC

Mailing Address:

Street/Location: 10209 Snowflake Ct NW

City: Albuquerque **State:** NM **Zip Code:** 87114

County or Similar Government Subdivision: BERNALILLO

Operator Point of Contact Information

First Name, Middle Initial, LastName: Shawn Biazar

Title: Managing Member

Phone: 505-804-5013 **Ext.**

Email: aecllc@aol.com

Project/Site Information

Project/Site Name: Aloha RV Addition

Project/Site Address

Street/Location: 8212 Pan American Fwy NE

City: Albuquerque **State:** NM **Zip Code:** 87113

County or Similar Government Subdivision: BERNALILLO

Latitude/Longitude: 35.1764°N, 106.582°W

Latitude/Longitude Data Source: Google Earth **Horizontal Reference Datum:** WGS 84

Project Start Date: 2019-03-15 **Project End Date:** 2019-06-15 **Estimated Area to be Disturbed:** 4

Types of Construction Sites:

- Commercial

Will there be demolition of any structure built or renovated before January 1, 1980? ☐ YES ☑ NO

Was the pre-development land use used for agriculture? ☐ YES ☑ NO

Have earth-disturbing activities commenced on your project/site? ☑ YES ☐ NO

Is your project an *"emergency-related project"*? ☐ YES ☑ NO

Is your project located on a property of religious or cultural significance to an Indian tribe? ☐ YES ☑ NO

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☑ YES ☐ NO

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? ☐ YES ☑ NO

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Appendix F (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_f_-_tier_3_tier_2_and_tier_2.5_waters_508.pdf)

☑ YES ☐ NO

001: MS4 to Rio Grande River

Latitude/Longitude: 35.1771°N, 106.5825°W

Tier Designation: Tier 2

Is this receiving water impaired (on the CWA303(d) list)? ☑ YES ☐ NO

Has a TMDL been completed for this receiving waterbody? ☑ YES ☐ NO

Pollutant	Causing Impairment?	TMDL ID	TMDL Name
E. coli	Yes	38855	Rio Grande 2105_50 E. coli TMDL
PCB in fish tissue	Yes	38855	Rio Grande 2105_50 E. coli TMDL
Oxygen, dissolved percent saturation	Yes	38855	Rio Grande 2105_50 E. coli TMDL

Stormwater Pollution Prevention Plan (SWPPP)

First Name, Middle Initial, LastName: Shawn Biazar

Title: Managing Member

Phone: 505-804-5013 **Ext.**

Email: aecllc@aol.com

Endangered Species Protection

Using the Instructions in Appendix D of the CGP, under which criterion listed in Appendix D are you eligible for coverage under this permit? Criterion A

Provide a brief summary of the basis for criterion selection listed above (the necessary content for a supportive basis statement is provided under the criterion you selected.):

Per communication with the USFWS there are no critical habitats within the project area.

Historic Preservation

Are you installing any stormwater controls as described in Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf) that require subsurface earth disturbances? (Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf), Step 1)

☑ YES ☐ NO

Have prior surveys or evaluations conducted on the site already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf), Step 2):

☑ YES ☐ NO

Certification Information

Certified By: Shahram Biazar (SBSCONSTRUCTION)

Certified On: 03/06/2019 2:28 PM

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Curb Storm Inlet Protection with Wattles

Inlet Filter Installation Instructions:

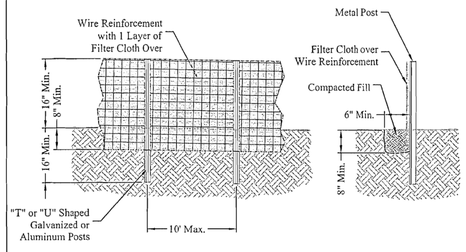
1. Remove sediment, debris, ice and snow from the inlet grate surface and surrounding area.

2. Verify fit by placing filter over inlet grate to ensure that Inlet Filter extends at least one inch beyond the front and both curb ends. The overlap slows water flow and starts filtering sediment and debris before water drops into the inlet.

3. Position the mat. Place Inlet Filter on grate with the net side down, flush to the back edge and extending beyond the grate opening on the front and both sides. The zip ties attach Inlet Filter to the inlet grate cover WITHOUT LIFTING THE GRATE COVER.

4. The filter material covering the inlet can be any material that will prevent the sediment and other foreign matter from entering the storm drain system.

Reinforced Silt Fence



Definition

A temporary barrier of Geotextile Class "F" over wire reinforcement used to intercept sediment laden runoff from small drainage areas.

Purpose

The purpose of silt fence is to reduce runoff where velocity and allow the deposition of transported sediment to occur. Limits imposed by ultraviolet light on the stability of the fabric will dictate the maximum period that the silt fence may be used.

1. Silt fence provides a barrier that can collect and hold debris and soil, preventing the material from entering critical areas, streams, streets, etc.
2. Silt fence can be used where the installation of a dike would destroy sensitive areas; woods, wetlands, etc.

Conditions where the Practice Applies

Silt Fence is limited to intercepting sheet flow runoff from limited distances according to slope. It provides filtering and velocity dissipation to promote gravity settling of sediment.

Design Criteria

Steel posts must be used. Silt fence should be placed as close to the contour as possible. No section of silt fence should exceed a grade of 5 percent for a distance more than 50 feet. Where ends of the geotextile fabric come together, the ends shall be overlapped, folded, and stapled to prevent sediment bypass. The length of the flow contributing to silt fence shall conform to the following limitations.

Slope (%)	Slope Steepness	Slope Length (Ft.) (Maximum)	Silt Fence Length (Ft.) (Maximum)
0-10	0-10:1	Unlimited	Unlimited
10-20	10:1-5:1	200	1,500
20-33	5:1-3:1	100	1,000
33-50	3:1-2:1	100	500
50 +	2:1 +	50	250

Erosion Control Notes

1. All perimeter erosion and sediment control measures shall be installed prior to the execution of any grading work and maintained by the grading contractor for the duration of the grading project. Failure to install and maintain erosion control is a violation of State Law and subject to fine.

2. The appropriate erosion control devise(s) shall be installed prior to the inception of any land disturbing activity and shall be properly maintained for construction activities.

3. All Erosion Control devices and their installation shall meet the standards prescribed in the current guidelines for storm water management for construction activities.

4. Sediment collected behind the sediment filters and silt fences shall be removed when sediment reaches on third the height of the barrier.

5. Inspection of erosion and sediment control and other protective measures are required once every 7 days from July 1st to October 31st and once every 14 days from November 1st to June 30th and after a precipitation event of ¼ inch or greater until the site is considered stabilized by the City. Inspection reports are to be kept by the person or entity authorized to direct construction activities on the site

6. Construction Site Entrance: The contractor shall construct as a minimum one stabilized construction entrance at the location shown on the plans. If additional ingress and egress to the construction site is required, the contractor shall coordinate with the construction manager the location of these additional stabilized construction entrances. Usage of non-stabilized for ingress and egress will not be permitted. The stabilized entrances shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way and paved driving lanes. This may require periodic top dressing with additional stone as conditions warrant. Repair of the entrances or cleaning of the right-of-way and paved driving lanes that have been soiled shall be performed by the contractor at his own expense satisfactory to the construction manager. When necessary, vehicle wheels and tires shall be cleaned to remove sediment prior to entering onto public right-of-way and public streets. When washing is required, it shall be done on an area stabilized with crushed stone.

7. The contractor shall at his own expense, periodically water the site to control dust.

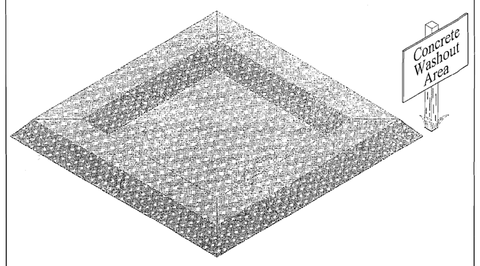
8. Sedimentation and erosion control measures shall be removed following construction or upon permanent stabilization of the disturbed and graded areas, whichever occurs last.

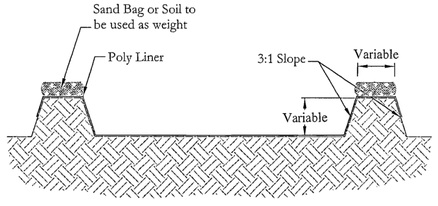
9. All disturbed areas that are not to be paved shall be re-seeded unless noted otherwise.

10. The contractor shall deep the site clean at all times and control dust resulting from the earthwork operation. The contractor shall not track mud onto the public streets.

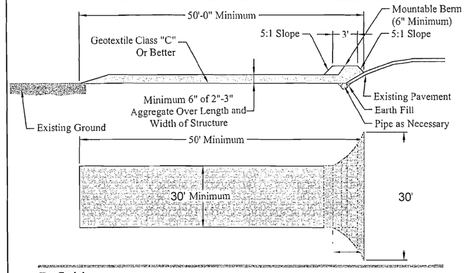
Concrete Washout Area

For use in High Water Table Areas





Stabilized Construction Entrance



Definition

A stabilized layer of aggregate that is underlain with Geotextile Class "C" (See Standards for Geotextile). Stabilized entrances are located at any point where traffic enters or leaves a construction site.

Purpose

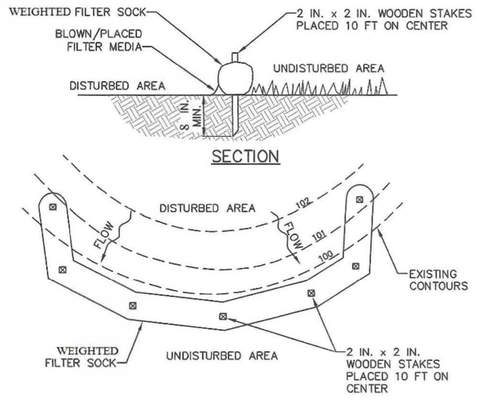
The purpose of the stabilized construction entrance is to reduce tracking of sediment onto streets or public rights-of-way and provide a stable area for entrance or exit from the construction site.

Conditions where the Practice Applies

1. Stabilized construction entrances shall be located at points of construction ingress and egress.
2. For single family residences, the entrance should be located at the permanent driveway.
3. Stabilized construction entrances should not be used on existing pavement.

Design Criteria

1. Length - Minimum of 50'-0"
2. Width - Minimum of 30'-0", should be flared at the existing road to provide a turning radius.
3. Geotextile Class "C" shall be placed over the exiting ground prior to placing stone. The Plan approval authority may not require geotextile fabric for single family residence.
4. Stone-crushed aggregate 2"-3" (See Standards for Geotextile and Rock). Recycled concrete equivalent may be used also. The rock should be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - All the surface water flowing to or diverted toward construction entrances shall be piped under the entrance to maintain positive drainage. Pipe installed under the construction entrance shall be protected with a mountable berm. The pipe shall be sized according to the drainage, with the minimum diameter being 6".
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



RECEIVING WATERS:	**RIO GRANDE 2105_50 TIER II AND IMPAIRED WITH PCBs IN FISH TISSUE, DISSOLVED OXYGEN AND E. COLI**
CRITICAL HABITAT:	**CRITERION "A"; NO CRITIAL HABITAT WITHIN PROJECT AREA**
GPS LOCATION:	**35.1764, -106.5820**

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
LELAN MORRISON
No. 8376

03/06/2019

CPESC Stamp

ALOHA RV ADDITION

PROJECT TITLE

ALBUQUERQUE, BERNALILLO COUNTY, NM

CITY, COUNTY, STATE

03/06/2019 DATE

C. DURKIN DRAWN BY

Inspections Plus, Inc.