Cactus Patch Plaza

7801 La Morada Place NW, Albuquerque, NM 87120

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

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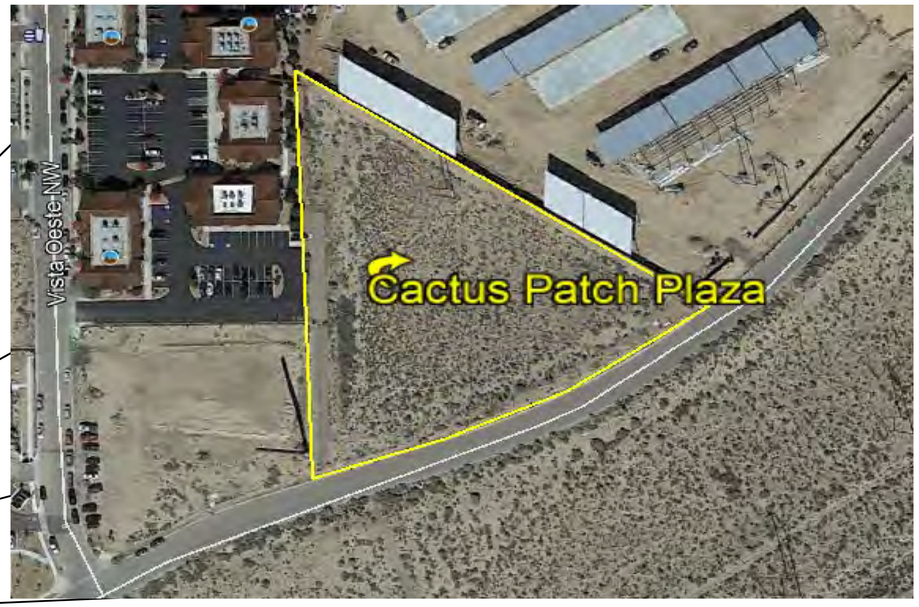

GPS COORDINATES:

35.1087

-106.7285

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC®
James Tolman
No. 10631

CPESC STAMP

Cactus Patch Plaza — PROJECT TITLE	
AlBUQUERQUE, NM - BERNALILLO COUNTY — CITY, COUNTY, STATE	
10/10/2024 — DATE	INSPECTIONS PLUS
Doug Lewis/J. Tolman — DRAWN BY	

PERMIT NUMBER:	NMR100433
	NMR100000 State of New Mexico, Except Indian Country
OWNER NAME:	Pacific Cactus, LLC
OWNER POINT OF CONTACT:	Aaron Carlson, Executive Vice President
NOI PREPARED BY:	Inspections Plus
PROJECT/SITE NAME:	Cactus Patch Plaza
PROJECT/SITE ADDRESS:	7801 La Morada Place NW, Albuquerque NM 87120
LATITUDE	35.1087
LONGITUTE	-106.7285
ESTIMATED PROJECT START DATE	08/02/2021
ESTIMATED PROJECT COMPLETION DATE	10/31/2025
PROPERTY SIZE	2.7185 acres
TOTAL AREA OF DISTURBANCE	2.7185 acres
MAXIMUM AREA DISTURBED AT ONE TIME	2.7185 acres
TYPE OF CONSTRUCTION	Commercial
DEMOLITION OF ANY STRUCTIONS 10,000 SQ FT OR GREATER BUILT OR RENOVATED BEFORE JANUARY 1, 1980?	N/A
WAS THE PREDEVELOPMENT LAND USED FOR AGRICULTER?	N/A
COMMENCED EARTH DISTURBING ACTIVITIES?	No
DISCHARGE TO MS4? MS4 NAME?	Yes – COA
SURFACE WATERS WITHIN 50FT?	No
RECEIVING WATER	Ladera Dam
IS RECEIVING WATER IMPAIRED? TIER DESIGNATION	No
WHAT IMPAIRMENTS, IF ANY?	None
SWPPP CONTACTION INFORMATION	Aaron Carlson, 505-506-6310, aaron.carlson@yahoo.com
ENDARED SPECIES CRITERIA	Criterion "A"; No Critical Habitats
HISTORICAL LOCATION CRITERIA	Preexisting Development.

ESC Plan Standard Notes (2023-06-16)

1. All Erosion and Sediment Control (ESC) work on these plans, except as otherwise stated or provided hereon shall be permitted, constructed, inspected, and maintained in accordance with:
   a. The City Ordinance § 14-5-2-11, the ESC Ordinance,
   b. The EPA's 2022 Construction General Permit (CGP), and
   c. The City Of Albuquerque Construction BMP Manual.
2. All BMP's must be installed prior to beginning any earth moving activities except as specified hereon in the Phasing Plan. Construction of earthen BMP's such as sediment traps, sediment basins, and diversion berms shall be completed and inspected prior to any other construction or earthwork. Self-inspection is required after installation of the BMPs and prior to beginning construction.
3. Self-inspections - In accordance with City Ordinance § 14-5-2-11(C)(1), "at a minimum a routine self-inspection is required to review the project for compliance with the Construction General Permit once every 14 days and after any precipitation event of 1/4 inch or greater until the site construction has been completed and the site determined as stabilized by the city. Reports of these inspections shall be kept by the person or entity authorized to direct the construction activities on the site and made available upon request.
4. Corrective action reports must be kept by the person or entity authorized to direct the construction activities on the site and made available upon request.
5. Final Stabilization and Notice of Termination (NOT) - In accordance with City Ordinance § 14-5-2-11(C)(1), self-inspections must continue until the site is "determined as stabilized by the city." The property owner/operator is responsible for determining when the "Conditions for Terminating CGP Coverage" per CGP Part 8.2 are satisfied and then for filing their Notice of Termination (NOT) with the EPA. Each operator may terminate CGP coverage only if one or more of the conditions in Part 8.2.1, 8.2.2, or 8.2.3 has occurred. After filing the NOT with the EPA, the property owner is responsible for requesting a Determination of Stabilization from the City.
6. When doing work in the City right-of-way (e.g. sidewalk, drive pads, utilities, etc.) prevent dirt from getting into the street. If dirt is present in the street, the street should be swept daily or prior to a rain event or contractor induced water event (e.g. curb cut or water test).
7. When installing utilities behind the curb, the excavated dirt should not be placed in the street.
8. When cutting the street for utilities the dirt shall be placed on the uphill side of the street cut and the area swept after the work is complete. A wattle or mulch sock may be placed at the toe of the excavated dirt pile if site constraints do not allow placing the excavated dirt on the uphill side of the street cut.
9. ESC Plans must show longitudinal street slope and street names. On streets where the longitudinal slope is steeper than 2.5%, wattles/mulch socks or j-hood silt fence shall be shown in the front yard swale or on the side of the street.

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Cactus Patch Plaza
PROJECT TITLE

AIBUQUERQUE, NM - BERNALILLO COUNTY
CITY, COUNTY, STATE

10/10/2024
DATE

Doug Lewis/J. Tolman
DRAWN BY

INSPECTIONS PLUS

Operator:

Pacific Cactus, LLC
1750 California Avenue, Suite 101
Corona, CA 98221
505-506-6310

Aaron Carlson
Executive Vice President
505-506-6310
aaron.carlson@yahoo.com

Owner:

1750 California Avenue, Suite 101
Corona, CA 98221
505-506-6310

Aaron Carlson
Executive Vice President
505-506-6310
aaron.carlson@yahoo.com

Nature of Construction Activities
Cactus Patch Plaza will consist of the development of access, infrastructure, utilities, permanent drainage, and permanent stabilization for the construction of a retail plaza. Cactus Patch Plaza is a 3.0 gross acre site with a disturbed acreage of 3.0. Site hours will consist of Monday through Friday 7am to 5pm. Construction Support Activities will include a staging area and material storage and are included in within the perimeter controls of the site.

VICINITY MAP

LEGAL DESCRIPTION
TR 24 PLAT FOR LADERA BUSINESS PARK
UNIT 1 CONT 2.7185 AC

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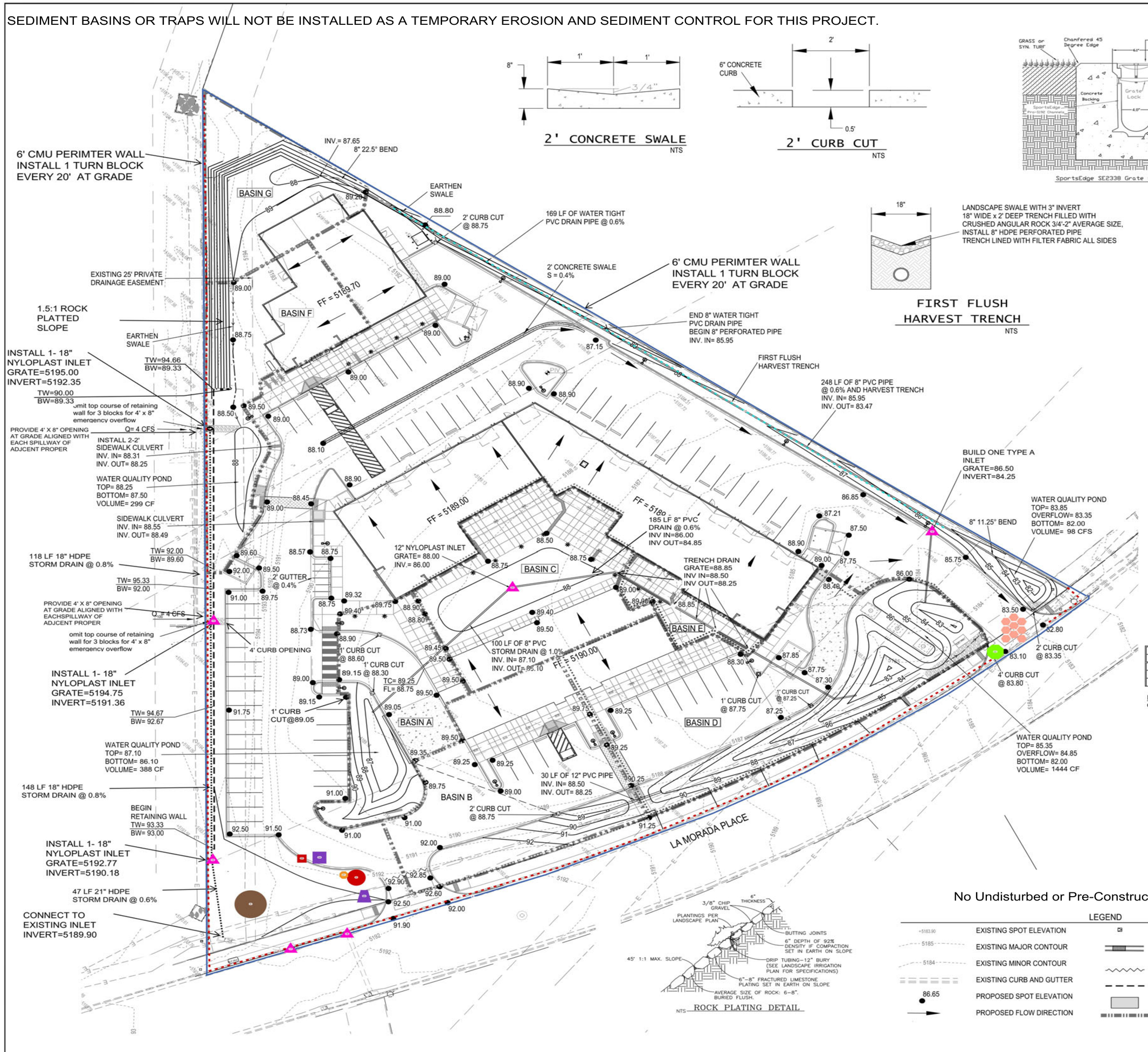
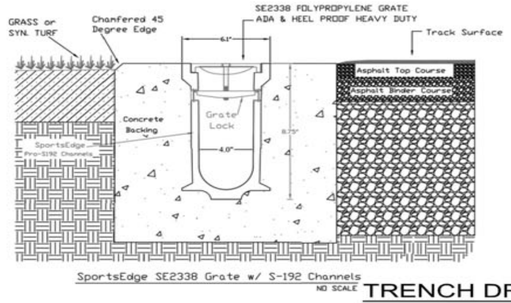
INSPECTIONS PLUS	

SEDIMENT BASINS OR TRAPS WILL NOT BE INSTALLED AS A TEMPORARY EROSION AND SEDIMENT CONTROL FOR THIS PROJECT.



2' CONCRETE SWALE
NTS

2' CURB CUT
NTS



TRENCH DRAIN DETAIL

LANDSCAPE SWALE WITH 3" INVERT
18" WIDE x 2' DEEP TRENCH FILLED WITH CRUSHED ANGULAR ROCK 3/4'-2' AVERAGE SIZE, INSTALL 8" HDPE PERFORATED PIPE TRENCH LINED WITH FILTER FABRIC ALL SIDES

FIRST FLUSH HARVEST TRENCH
NTS

NTS ROCK PLATING DETAIL

Weighted E Method

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (ac-ft)	100-Year, 6-hr. Volume (ac-ft)	Flow cfs	24 hour Volume (ac-ft)
ALLOWED													12.00	0.000
PROPOSED A	6279.00	0.144	0%	0	5%	0.007	30%	0.0432	65%	0.094	1.778	0.021	0.53	0.028
PROPOSED B	10253.00	0.235	0%	0	0%	0.000	22%	0.0518	78%	0.184	1.956	0.038	0.91	0.051
PROPOSED C	8824.00	0.203	0%	0	13%	0.026	20%	0.0405	67%	0.136	1.786	0.030	0.73	0.038
PROPOSED D	15100.00	0.347	0%	0	10%	0.035	29%	0.1005	61%	0.211	1.715	0.050	1.23	0.064
PROPOSED E	1654.00	0.038	0%	0	0%	0.000	10%	0.0038	90%	0.034	2.111	0.007	0.15	0.009
PROPOSED F	5629.00	0.129	0%	0	0%	0.000	87%	0.1124	13%	0.017	1.118	0.012	0.39	0.013
PROPOSED G	7484.00	0.172	0%	0	0%	0.000	64%	0.11	36%	0.062	1.414	0.020	0.57	0.024
PROPOSED H	63260.00	1.452	0%	0	0%	0.000	6%	0.0871	94%	1.365	2.163	0.262	5.87	0.353
COMPARISON												0.038	10.39	0.051

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Where for 100-year, 6-hour storm- zone 1

Ea= 0.55 Qa= 1.54
Eb= 0.73 Qb= 2.16
Ec= 0.95 Qc= 2.87
Ed= 2.24 Qd= 4.12

ONSITE Conditons
FIRST FLUSH WATER QUALITY VOLUME

	REQUIRED (CF)	PROVIDED (CF)
WATER QUALITY	0	2229
FLOOD CONTROL	2205	2229

Narrative

This site is within the Ladera Business Park Master Drainage plan boundaries. The site is allowed to discharge 12 cfs to La Morada Place
This site is impacted by 8cfs from upland that is allowed to enter and free discharge from this site.
We propose to discharge 10.39 cfs, which is less than allowed. We also are retaining 2229 cf for water quality that exceeds the 2205 required.
This plan was modified to modify the dirt balance and to provide a modified drainage solution. The plan conforms to the master drainage plan and the city of Albuquerque drainage ordinance

Pipe Capacity

Pipe	D (in)	Slope (%)	Area (ft^2)	R	Q Provided (cfs)	Q Required (cfs)	Velocity (ft/s)
NORTH REACH	18	0.8	1.77	0.375	9.42	0.26	0.15
WEST REACH	18	0.8	1.77	0.375	9.42	0.26	0.15
WEST REACH	21	0.6	2.41	0.4375	12.31	0.26	0.11

Manning's Equation:
Q = 1.49/n * A * R^(2/3) * S^(1/2)

A = Area
R = D/4
S = Slope
n = 0.013

WALL OPENING

Weir Equation:

$Q = C L H^{3/2}$

Q= 4 total allowed
C = 2.95
H = 0.67 ft
L = Length of weir=10

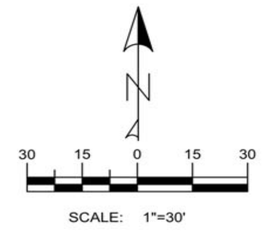
$Q = 2.95 * 4 * 6.67^{(1.5)}$

Q allowable = 6.47 > Q required=4 therefore ok

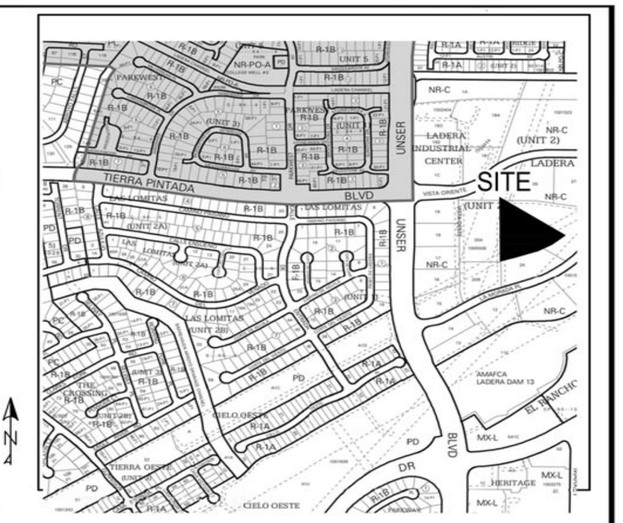
No Undisturbed or Pre-Construction Cover On Site

LEGEND

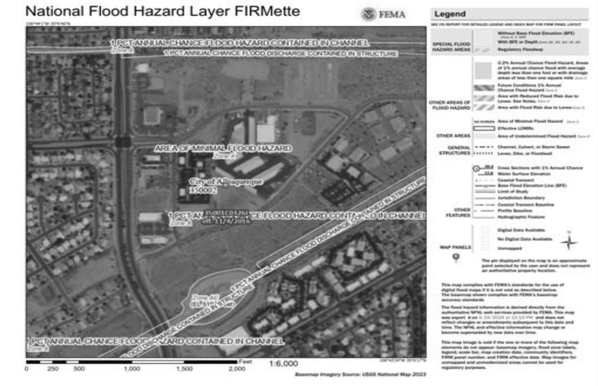
+5183.90	EXISTING SPOT ELEVATION		PROPOSED CURB CUT
5185	EXISTING MAJOR CONTOUR		PROPOSED 2' WIDE SIDEWALK CULVERT PER COA STD DWG 2236
5184	EXISTING MINOR CONTOUR		PROPOSED WATER BLOCK
	EXISTING CURB AND GUTTER		PROPOSED RETAINING WALL
86.65	PROPOSED SPOT ELEVATION		PROPOSED PONDING
	PROPOSED FLOW DIRECTION		BASIN BOUNDARY



SCALE: 1"=30'



National Flood Hazard Layer FIRMette



Cactus Patch Plaza
Inspections Plus, LLC
Cactus Patch Plaza.pdf

LEGEND

- Limit of Disturbance (1)
- Silt Fence (2)
- Drainage Swale (1)
- Material Storage (1)
- Stockpiles (1)
- Inlet Protection (6)
- Portable Toilet (1)
- Dumpster (1)
- Spill Kit (1)
- Site Notice/NOI Posting (1)
- Concrete Washout (1)
- Stabilized Construction Entrance/Exit (1)

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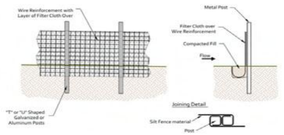
ENGINEER'S SEAL
DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER
7/24/24
DAVID SOULE P.E. #14522

CACTUS PATCH PLAZA
7801 LA MORADA PL. NW
GRADING AND DRAINAGE PLAN

Rio Grande Engineering
1606 CENTRAL AVENUE SUITE 201
ALBUQUERQUE, NM 87106
(505) 872-0999

DRAWN BY DEM
DATE 2-15.24
Cactus Patch Plaza Topo With NEW SITE.DWG
SHEET # C-1
JOB # XXXXX

4.2.3 Silt Fence



DESCRIPTION AND PURPOSE

Silt fence is a temporary, structural BMPs consisting of filter fabric stretched across stakes and entrenched.

OBJECTIVES:

- Sediment Control
- Runoff Control

TARGETED POLLUTANTS

- Sediment
- Trash and Debris

APPLICATIONS

- Perimeter Control
- Small Sediment Containment System

LIMITATIONS

- Silt fence should not be installed where conditions preclude uniform entrenchment of filter fabric or installation posts. (e.g. across a paved or rocky area)
- Silt fence may not be used in an area of concentrated flow.
- Silt fence is degraded by ultraviolet (UV) light and wind.
- Silt fence is designed to accept a certain amount of flow from a drainage area per linear foot of silt fence.
- Not for use in areas where accumulation of water may cause flooding.
- Not for use on steep slopes.

INSPECTION

- Inspect according to regulatory timetables
- Placement according to the SWPPP Plan, with field adjustments as needed.
- Sagging, frayed, torn, or otherwise worn or damaged fabric
- Proper stake materials and filter fabric.
- Damaged or broken reinforcement and staking materials
- Correct stake spacing, every 10 feet.
- Sediment build-up
- Undercutting/end runs
- Missing or removed silt fence
- Ensure proper entrenchment, applying physical pressure for verification.

MAINTENANCE

- Repair end runs and undercutting within 24 hours.
- Repair or replace worn, torn, or sagging fabric within 24 hours.
- Remove sediment deposits that accumulate to 1/3 height of the fabric within 24 hours.

Check for reinforcement and staking materials for structural integrity and replace when necessary.

4.3 Sediment Track Out

OBJECTIVE:

A project site's access points experience concentrated and loose sediment. The EPA suggests this directive as a minimum performance guideline, "At a minimum, you must provide for maintenance that meets the following requirement in CGP Part 2..2.4.d: Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day it track out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S." The entrance may utilize several types of controls to capture sediment and prevent its movement offsite. Specifically, rumble mats or round stone approximately 4" in diameter have proven as effective dry approaches. Wash stations are effective wet solutions although the expense and maintenance of this method is significantly greater than a dry method.

INSTALLATION:

Stabilize all entrances to a site before construction and site disturbance begin. The stabilized entrances need to be large enough to allow the largest construction vehicle that will enter the site to fit through with room to spare. If many vehicles are expected to use an entrance in any one day, make the site entrance wide enough for two vehicles to pass at the same time with room on either side of each vehicle, and long enough to allow two full tire rotations.
If a site entrance leads to a paved road, make the end of the entrance flared so that long vehicles do not leave the stabilized area when they turn onto or off the paved roadway. If a construction site entrance crosses a stream, swale, or other depression, provide a bridge or culvert to prevent erosion from unprotected banks.
Make sure stone and gravel used to stabilize the construction site entrance are large enough so that they are not carried offsite by vehicles. Avoid sharp-edged stone to reduce the possibility of puncturing tires. Install stone or gravel at a depth of at least 6 inches for the entire length and width of the stabilized construction entrance.

INSPECTION:

Common items to consider when inspecting a rock construction entrance is to determine if the rock is the appropriate size, if the rock is compacted due to frequent use and no longer effective, and if the rock has been placed over a filter cloth or blanket material. Similarly, it is important to determine if the entrance is of sufficient length and width and allow for adequate wheel rotation. Ineffective installation and maintenance of a construction entrance or track – out pad may lead to increased offsite sediment tracking and pollutant discharge.

MAINTENANCE

- Remove accumulated sediment.
- Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or water of the U.S.

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4.4 Stockpiled Sediment or Soils

OBJECTIVE:

Stockpiles of soil, Portland Cement Concrete (PCC), Asphalt Concrete (AC), Hot Mix Asphalt Cement (HMAC) and rubble are potential storm water pollutants if not properly managed. Eliminate stockpiles whenever possible. Elimination is the most certain method available to prevent sediment discharge. Secondary protection may include perimeter control or covering with blankets to minimize the stockpile's exposure to stormwater and non-stormwater discharge. The following are requirements that apply to all stockpiles, regardless of season or material, if elimination is not possible:
Locate stockpiles away from drainage courses, drain inlets or concentrated flows of stormwater.
For wind erosion control, apply water or other dust palliative to stockpiles.
Small stockpiles may be covered as an alternative.
Place bagged materials on pallets and cover them with a tarp or similar material.

Soil Stockpiles

The temporary perimeter sediment barriers (e.g. wattles, dikes, silt fence) will contain any soil stockpiles. The description of the structural practice employed is included in the Perimeter Control section of this document. The design, installation and maintenance requirements are included in the description. A soil stabilization measure may be used in lieu of a perimeter control when active use of the stockpile ceases for short periods. Year-round, active soil stockpiles are to be protected with temporary linear sediment barriers prior to the onset of rain.

Paving Material & Waste Stockpiles

Stockpiles of PCC, AC/HMAC, aggregate base course, aggregate sub grade materials or rubbles are to be managed as follows:
Cover non - active stockpiles or protect them with temporary perimeter sediment barriers prior to the onset of rain;
Year – round, protect active stockpiles with temporary linear sediment barriers prior to the onset of rain.

Asphalt Stockpiles

During the non-rainy season, place non-active stockpiles of asphalt on plastic or a comparable material and cover the stockpile prior to the onset of rain.
During the rainy season, place asphalt stockpiles on plastic and always cover them. Year-round, active asphalt stockpiles are to be placed on plastic and covered prior to rain.

INSPECTION AND MAINTENANCE

Inspect stockpiles as part of the routine storm water inspection. The Owner and/or Operator may repair or replace perimeter controls and covers to ensure proper function.

4.5 Minimize Dust

OBJECTIVE:

Dust control BMPs reduce surface activities and air movement that causes dust to be generated from disturbed soil surfaces. Construction sites can generate large areas of soil disturbance and open space for wind to pick up dust particles. Limited research at construction sites has established an average dust emission rate of 1.2 tons/acre/month for active construction (WA Dept. of Ecology, 1992).
Airborne particles pose a dual threat to the environment and human health. First, dust can be carried offsite, thereby increasing soil loss from the construction area and increasing the likelihood of sedimentation and water pollution. Second, blowing dust particles can contribute to respiratory health problems and create an inhospitable working environment.

INSTALLATION:

Dust control measures are applicable to any construction site where there is the potential for air and water pollution from dust traveling across the landscape or through the air. Dust control measures are especially important in arid or semiarid regions, where soil can become extremely dry and vulnerable to transport by high winds.
Implement dust control measures on all construction sites where there will be major soil disturbances or heavy equipment construction activity such as clearing, excavation, demolition, or excessive vehicle traffic. Earthmoving activities are the major source of dust from construction sites, but traffic and general disturbances can also be major contributors (WA Dept. of Ecology, 1992). The dust control measures that are implemented at a site will depend on the topography and land cover of the site and its soil characteristics and expected rainfall.

DUST CONTROL METHODS

When designing a dust control plan for a site, the amount of soil exposed will dictate the quantity of dust generation and transport. Therefore, construction sequencing and disturbing only small areas at a time can greatly reduce problematic dust from a site. If land must be disturbed, consider using temporary stabilization measures before disturbance. Several methods exist which can be used to control dust from a site but not all will be applicable to a site.
Consider site-specific assessments and weather conditions to determine which method may be most effective. The following lists some control measures and design criteria:

<u>Sprinkling/Irrigation</u>
Sprinkling the ground surface with water until it is moist is an effective dust control method for haul roads and other traffic routes (Smolen et al., 1988). This practice can be applied to almost any site.

<u>Vegetative Cover</u>
In areas not expected to handle vehicle traffic, vegetative stabilization of disturbed soil is often desirable. Vegetative cover provides coverage to surface soils and slows wind velocity at the ground surface, thus reducing the potential for dust to become airborne.

<u>Mulch</u>
Mulching can be a quick and effective means of dust control for a recently disturbed area and may reduce wind erosion by up to 80 percent.

<u>Wind Breaks</u>
Wind breaks are barriers (either natural or constructed) that reduce wind velocity through a site and, therefore, reduce the possibility of suspended particles. Wind breaks can be trees or shrubs left in place during site clearing or constructed barriers such as a wind fence, snow fence, tarp curtain, hay bale, crate wall, or sediment wall.
For each foot of vertical height, and 8 to 10-foot deposition zone develops on the leeward side of the barrier. The permeability of the barrier will change the breaks effectiveness at capturing windborne sediment.

<u>Tillage</u>
Deep tillage in large open areas brings soil clods to the surface where they rest on top of dust, preventing it from becoming airborne. Roughening the soil can reduce losses by approximately 80 percent in some situations.

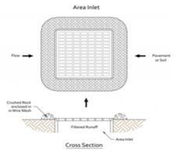
<u>Stone</u>
Stone can be an effective dust deterrent for construction roads and entrances or as a mulch in areas where vegetation cannot be established. The size of the stones can affect the amount of erosion taking place. In areas of high wind, small stones are not as effective as 20 cm stones, for example.

<u>Spray-on Chemical Soil Treatments (Palliatives)</u>
Chemical palliatives should be used only on mineral soils. When considering chemical application to suppress dust, determine whether the chemical is biodegradable or water-soluble and what effect its application could have on the surrounding environment, including water bodies and wildlife. Per limited research, the effectiveness of polymer stabilization methods range from 70 percent to 90 percent.

INSPECTION AND MAINTENANCE:

Because dust controls are dependent on specific site and weather conditions, inspection and maintenance requirements are unique for each site. Generally, however, dust control measures involving application of either water or chemicals require more monitoring than structural or vegetative controls to remain effective. If structural controls are used, inspect them regularly for deterioration to ensure that they are still achieving their intended purpose.

4.9 Storm Drain Inlet Controls



DESCRIPTION AND PURPOSE

Inlet protection at grade is a structural BMP that protects inlets that are flush with the ground or at grade (drop or yard inlets) which receive stormwater from disturbed areas of the construction site. This inlet protection may include any number of above ground constructions.

OBJECTIVES:

- Runoff Control
- Sediment Control

TARGETED POLLUTANTS

- Sediment
- Trash and Debris

APPLICATIONS

- Where additional sediment control is needed
- Where other surface protection is prohibited due to:
- The presence of vehicular traffic
- Safety hazards
- regulations
- Along highways where grates are used in combination with curb inlets

LIMITATIONS

- Pooling situation created by the inlet protection at grade may encroach upon roadways or parking structures.
- May be safety issues on roadways

INSPECTION

- Inspect according to regulatory timetables
- Protection fitting grate dimensions.
- Rips, tears, or other damage to materials
- Install according to SWPPP Plan.
- Sediment accumulation
- Check for bypass

MAINTENANCE

- Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.

4.14.2 Temporary Sanilet Facilities

OBJECTIVE:

Provide personal waste facilities for site personnel for the proper collection, disposal and prevention of waste products in compliance with OSHA regulations. Temporary sanilet facilities encourage good housekeeping measures at the construction site. Their installation meets OSHA regulations and prevents pollution and stormwater contamination.

INSTALLATION:

The sanilet provider may install the device at locations throughout the project site which provide convenient access to both site personnel and equipment maintenance or removal operators. Sanilets should not be installed near any discharge or inlet location, such as on top of or uphill from a storm drain or drop inlet. The sanilet provider should securely anchor the facility to prevent tipping. It may be necessary to install a secondary control measure, such as a wattle perimeter or earth berm, to further ensure minimal runoff.

INSPECTION AND MAINTENANCE:

Inspect sanilet facilities daily to determine if they have reached 50% volume capacity. The facilities should be removed, replaced or emptied when they have reached or exceeded this amount. Daily inspection should check that all plastic structures are intact and do not show signs of damage from construction, vandalism or weather – related activities. Inspectors should also determine if the location is appropriate and not near discharge or inlet locations.

Sanilets are designed to promote safe and sanitary use. However, if stored liquids have not been removed and the sanilet is nearing capacity, vacuum and dispose of them in an approved manner - check with the local sanitary sewer authority to determine if there are special disposal requirements.

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	10/10/2024 — DATE
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5.3 Fueling and Maintenance of Equipment or Vehicles

OBJECTIVE:

Minimize or eliminate the discharge of fuel spills and other pollutants into the MS4 on construction sites. Key areas include all construction sites where storage and maintenance occur on – site, and all fueling areas within a construction site.

LIMITATIONS:

Fuel vehicles on-site only when off-site fueling is impractical.
Comply with local codes regarding fluid disposal and on-site equipment maintenance.

STANDARDS AND SPECIFICATIONS:

- Spill cleanup kits should be available in fueling areas and on fueling trucks. Proper disposal is required.
- A drip pan or absorbent pad should be used unless fueling or maintenance activities occur over an impervious surface.

- When a vehicle is located over a water body (dock, barge) and is planned to be idle for more than one hour, a drip pan, or sheet should be placed under the vehicle.

Fueling areas should be:

- Located at least 100 feet from waterways, channels, and storm drains.
- Protected from run-on or runoff.
- Located on a level-graded area.
- Attended always during fueling.
- Fueling equipment should be equipped with an automatic shut-off nozzle to contain drips.
- Fuel tanks should not be "topped-off".
- Avoid mobile fueling.
- Observe federal, state, and local requirements relating to any stationary aboveground storage tanks. Double containment mechanisms should be employed whenever possible.
- Do not dump fuels and lubricants onto the ground.
- Do not bury used tires.
- Do not dispose of oil in a dumpster or pour it down the storm drain.
- Properly dispose of used batteries.
- Conduct washing, fueling, and major maintenance off-site whenever possible.
- Inspect vehicles for leaky hoses, gaskets, or other problems.
- Locate vehicle services areas away from waterways, storm drains, gutters, and curbs.
- Use berms, sandbags, or other barriers to contain areas.
- Do not use detergents, solvents, degreasers, or other chemical products to do on-site cleaning.
- Use a drip pan or drip cloth if fluids will be drained and replaced on-site.
- Collect all used fluids, store in separate labeled containers, and either recycle or dispose of properly.

INSPECTION AND MAINTENANCE:

- Inspect on all containment structures.
- Maintain waste fluid containers in a leak proof condition.
- Service sumps associated with wash areas regularly.
- Inspect daily for leaks on vehicles and equipment.
- Keep an ample supply of spill cleanup materials available on-site.
- Clean up spills immediately and dispose of waste properly.
- Prevent boil-over by regularly cleaning equipment radiators.

5.4 Washing of Equipment and Vehicles

OBJECTIVE:

To minimize or eliminate the discharge of pollutants entering the storm drain system from vehicle and equipment cleaning operations at all construction sites where vehicle cleaning occurs.

INSTALLATION:

Limitations:

Wash water discharges may need to be pretreated before release into the sanitary sewer.

Standards and Specifications:

- On-site vehicle and equipment washing is discouraged.
- Do not clean vehicles and equipment with detergent, solvents, or steam on the project site.
- Contain wash water away from storm drain inlets or waterways for evaporative drying or percolation.
- Off-site cleanings are encouraged for all vehicles and equipment that regularly enter and leave the construction site.
- Conduct washing, fueling, and major maintenance off-site whenever possible.
- If equipment or vehicle washing must occur on-site:
- Locate cleaning area away from storm drain inlets, drainage facilities, or waterways.
- Perform the washing in a paved area with concrete or asphalt utilizing a berm to contain wash waters and prevent run-on or runoff.
- Install a sump to collect wash water.
- Do not discharge wash waters to storm drains or waterways.
- Use only when necessary.
- When cleaning vehicles with water:
- Consider using a high-pressure sprayer or a positive shut-off valve to reduce water usage.

INSPECTION AND MAINTENANCE:

- Inspect the control measure at a minimum of once per week.
- Monitor employees and subcontractors to ensure they are implementing or following proper practices.
- Regularly inspect and maintain the sump. Remove sediments and liquids as needed.

5.5.2 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

OBJECTIVE:

To minimize or eliminate the discharge of hazardous or non-hazardous materials to storm drains, watercourses, or drainage channels. These practices are applicable to all construction sites that have delivery and/or storage of:

- Fuel, oil, grease
- Herbicides, pesticides, fertilizers
- Asphalt, concrete and their components
- Acids, curing and form compounds
- Other hazardous materials

INSTALLATION:

Limitations:

- All temporary storage buildings must meet building codes.
- Storage must meet fire codes.
- All secondary containment structures and materials should be removed from the site upon completion of the project and disposed of per regulations.

Standards and Specifications:

- Designate a storage area that is not near a storm drain or watercourse.
- Follow manufacturers' instructions on application, storage, and disposal of materials.
- Store on-site only the amount of material necessary for the job.
- Use non-hazardous and environmentally friendly products.
- Provide indoor storage or cover stockpiled materials and wastes with a tarp.
- Provide covered storage for secondary containment of hazardous materials.
- Use secondary storage to prevent soil contamination.
- Monitor employees and subcontractors to ensure that proper practices are being implemented.
- Keep all material in original containers.
- Label all stored materials per state, local and federal regulations.
- Do not store incompatible materials together.
- Keep adequate supply of cleanup materials on site at all times.
- Report all spills.
- Do not apply hazardous chemicals during wet or windy conditions.

INSPECTION AND MAINTENANCE:

- Inspect storage areas weekly to ensure neatness.
- Post proper storage instructions and Safety Data Sheets (SDS) for all currently stored materials.
- Repair and replace damaged secondary containment facilities.
- Remove all empty containers and packaging from site.
- Store materials with adequate clearances for access and emergency response.

5.5.4 Construction and Domestic Waste

DESCRIPTION

Building materials and other construction site wastes must be properly managed and disposed of to reduce the risk of pollution from materials such as surplus or refuse building materials or hazardous wastes. Practices such as trash disposal, recycling, proper material handling, and spill prevention and cleanup measures can reduce the potential for stormwater runoff to mobilize construction site wastes and contaminate surface or ground water.

APPLICABILITY

The proper management and disposal of wastes should be practiced at every construction site to reduce stormwater runoff. Use waste management practices to properly locate refuse piles, to cover materials that might be displaced by rainfall or stormwater runoff, and to prevent spills and leaks from hazardous materials that were improperly stored.

SITING AND DESIGN CONSIDERATIONS

Solid Wastes:

• Designate a waste collection area on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody.
• Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
• Schedule waste collection to prevent the containers from overfilling.
• Clean up spills immediately. For hazardous materials, follow cleanup instructions on the package. Use an absorbent material such as sawdust or kitty litter to contain the spill.
• During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
• Collect, remove, and dispose of all construction site wastes at authorized disposal areas. Contact a local environmental agency to identify these disposal sites.

To ensure the proper disposal of contaminated soils that have been exposed to and still contain hazardous substances, consult with state or local solid waste regulatory agencies or private firms. Some landfills might accept contaminated soils, but they require laboratory tests first.

Paint and dirt are often removed from surfaces by sandblasting. Sandblasting grits are the byproducts of this procedure and consist of the sand used and the paint and dirt particles that are removed from the surface. These materials are considered hazardous if they are removed from older structures because they are more likely to contain lead-, cadmium-, or chrome-based paints. Ensure proper disposal of sandblasting grits by contracting with a licensed waste management or transport and disposal firm.

Detergents:

Phosphorous and nitrogen containing detergents are used in wash water for cleaning vehicles. Excesses of these nutrients can be a major source of water pollution. Use detergents only as recommended and limit their use on the site. Do not dump wash water containing detergents into the storm drain system; direct it to a sanitary sewer or contain it so that it can be treated at a wastewater treatment plant.

LIMITATIONS

An effective waste management system requires training and signage to promote awareness of the hazards of improper storage, handling, and disposal of wastes. The only way to be sure that waste management practices are being followed is to be aware of worker habits and to inspect storage areas regularly. Extra management time may be required to ensure that all workers are following the proper procedures.

MAINTENANCE CONSIDERATIONS

Inspect storage and use areas and identify containers or equipment that could malfunction and cause leaks or spills. Check equipment and containers for leaks, corrosion, support or foundation failure, or other signs of deterioration, and test them for soundness. Immediately repair or replace any that are found to be defective.

5.5.5 Sanitary Waste

OBJECTIVE:

To minimize or eliminate the discharge of sanitary wastes from construction sites to storm drains, gutters, watercourses and drainage channels. These controls apply to construction sites that have portable or temporary sanitary waste systems.

INSTALLATION:

Limitations:

• To dispose of wastes to the sanitary sewer, the leasing company must be permitted.
• On-site disposal systems must comply with all local, and state regulations.
• Temporary connections to the sanitary sewer should meet codes and regulations.

Standards and Specifications:

• Locate toilets and disposal systems where accidental discharge cannot flow to storm drains, gutters, watercourses and drainage channels.
• Anchor portable toilets so they do not overturn during high winds.
• All sanitary wastes shall eventually be discharged to a sanitary sewer.
• Employ licensed sanitary services to ensure facilities are in working order at all times.

INSPECTION AND MAINTENANCE:

• Monitor employees and subcontractors to ensure that proper practices are being implemented.
• Sanitary storage and disposal should be inspected at least once per week. Units should be properly maintained, repaired, or replaced.

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5.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials

OBJECTIVE:

Concrete washouts are used to collect and contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed after delivery. The washout controls consolidate solids for easier disposal and prevent runoff of liquids. Proper containment prevents caustic material from reaching the soil surface and migrating to surface waters or ground water.

The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drainpipes and cause flooding. Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

INSTALLATION:

Install the washout in an area that is convenient and provides easy access for concrete trucks, preferably near the area in which the concrete is being poured. There are various types of washout containers the Contractor may use at a jobsite to collect and contain wash water. Such methods include but are not limited to chute washout boxes, buckets and pumps, lined washout pits surrounded by an adequate berm or bale barrier, vinyl washout containers, and metal washout containers.

Washout containers should be leak proof and of adequate size to accommodate anticipated material use and waste without causing spillage. Each method should be installed in concurrence with manufacturer specifications of design specifications.

INSPECTION AND MAINTENANCE:

Inspect all concrete washout facilities daily to determine if they have filled to 75 percent capacity, which is when materials need to be removed. Washouts should be inspected daily to ensure that plastic linings are intact, and sidewalls have not been damaged by construction activities. Inspectors should also note whether the facilities are being used regularly. If drivers have washed their chutes or hoppers in other locations; place additional washouts in more convenient locations.

Concrete washouts are designed to promote evaporation where feasible. However, if stored liquids have not evaporated and the washout is nearing capacity, vacuum and dispose of the waste in an approved manner. Check with the local sanitary sewer authority to determine if there are special disposal requirements for concrete wash water.

- Remove liquids or cover the structures before predicted rainstorms to prevent overflows.
- Remove hardened solids whole or break them up depending on available equipment for removal and local regulations.
- Following material removal, build a new structure, or if the previous structure is still intact, inspect the structure for signs of weakening or damage and make any necessary repairs.
- Line the concrete structure with new plastic that is free of holes or tears each time concrete removal is performed.
- Replace signage if necessary.