

APPENDIX 5

Long-Term (Post-Construction) Stormwater Measures

Contents

BMP

- 5-1 LEED Silver Standards for Capital Improvement Projects**
- 5-1 Engineering and Construction Design Guidelines**
- 5-4 Review of Development Plans for Compliance with Urban Drainage Criteria**
- 5-5 Stormwater Drainage Basin Map**
- 5-5 Stormwater Infrastructure Inventory**
- 5-5 MS4 Basin & Structures Screening Data**



State of New Mexico

Office of the Governor

Bill Richardson
Governor

EXECUTIVE ORDER 2006-001

STATE OF NEW MEXICO ENERGY EFFICIENT GREEN BUILDING STANDARDS FOR STATE BUILDINGS

WHEREAS, the State of New Mexico is committed to improving the health of its employees and its citizens, increasing the production and use of clean energy sources, reducing waste, conserving water, and reducing greenhouse gas emissions, and desires to empower sustainable economic development;

WHEREAS, the Federal Government through programs fostered within many of its key agencies, numerous State governments as well as municipalities across the U.S. have adopted high performance green building principles through the incorporation of the U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) rating system into their building services;

WHEREAS, a recent study by the Lawrence Berkley National Laboratory completed the most definitive cost-benefit analysis of green buildings ever conducted and concluded that the financial benefits of green design are between \$50 and \$70 per square foot in a LEED building, more than 10 times the additional cost associated with building green. Additionally, the large positive impact on employee productivity and health gains suggests that green building has a cost-effective impact beyond just the utility bill savings;

WHEREAS, studies have indicated that student attendance and performance is higher in green school buildings;

WHEREAS, recognizing that a building's initial construction costs represents only 20-30 percent of the building's entire costs over its 30 to 40 year life, emphasis should be placed on the "life cycle costs" of a public building rather than solely on its initial capital costs; and

WHEREAS, the construction industry in the State of New Mexico represents a significant portion of our economy and a significant portion of the building industry is represented by small business and an increase in sustainable building practices will encourage and promote new and innovative small business development throughout the State.

NOW, THEREFORE, I, Bill Richardson, Governor of the State of New Mexico, declare that the state adopt specific standards to implement and facilitate the use of high performance energy efficient green building practices for all state-funded existing and new buildings throughout the State of New Mexico.

IT IS THEREFORE ORDERED that all Executive Branch state agencies, including the Higher Education Department, adopt the U.S. Green Building Council's LEED™ rating system consistent with all applicable laws to achieve the following:

- New construction of public buildings in excess of 15,000 square feet and/or using over 50 kW peak electrical demand shall build to and achieve a minimum rating of "LEED™ Silver." In achieving its LEED™ rating, the project must achieve a minimum delivered energy performance standard of one half the U.S. energy consumption for that building type as defined by the U.S. Department of Energy.
- New construction and renovation projects of public buildings between 5,000-15,000 square feet in size shall achieve a minimum delivered energy performance standard of one half the U.S. energy consumption for that building type as defined by the U.S. Department of Energy.
- Renovations of public buildings in excess of 15,000 square feet and/or using over 50 kW peak electrical demand and comprising upgrades or replacement of two of the three major systems (HVAC, lighting, and plumbing), shall achieve a minimum rating of "LEED Silver" and a minimum delivered energy performance standard of one half the U.S. energy consumption for that building type as defined by the U.S. Department of Energy.
- All other new construction, renovations, repairs, and replacements of state buildings shall employ cost-effective, energy-efficient, green building practices to the maximum extent possible; and

IT IS FURTHER ORDERED, that the General Services Department, in coordination with the Energy, Minerals and Natural Resources Department, **the Construction Industries Division**, and the New Mexico Chapter of the U.S. Green Building Council, shall develop criteria and a workable process for implementing this system; and

IT IS FURTHER ORDERED, that the General Services Department encourage private-sector building owners that lease to State agencies to comply with the same energy-efficiency performance standards required of State agencies in this Executive Order by offering preference points as determined by the Evaluation Committee for each lease RFP conducted under jurisdiction of the General Services Department; and

IT IS FURTHER ORDERED, that the Energy, Minerals, and Natural Resources Department (EMNRD) convene a "Public Schools Clean Energy Task Force" that shall be advisory in nature and shall make recommendations to implement aggressive energy efficiency measures in all existing school buildings and in the construction of all new schools and school renovations, including adopting the same energy efficiency standards established for executive branch agencies in this order. The Task Force shall also address the public schools' implementation of Executive Order 05-049, *Requiring the Increased Use of Renewable Fuels in New Mexico State Government*. The Task Force shall consist of representatives from EMNRD, Public Education Department, New Mexico Coalition of School Administrators, New Mexico School Boards Association, Public School Facilities Authority, Public Schools Capitol Outlay Task Force, and other members as appropriate. The Task Force shall report to the Governor by August 1, 2006 on its findings and recommendations; and

IT IS FURTHER ORDERED, that the Local Government Division of the Department of Finance and Administration, evaluate and develop recommendations to ensure that the siting of public buildings, including schools, minimizes transportation-related energy usage; and

IT IS FURTHER ORDERED, that the Construction Industries Division (CID) and the Construction Industries Commission (CIC) pursue updating residential and commercial building codes to promote and encourage consumers to develop state-of-the-art cost-effective energy efficient buildings and, in cooperation with EMNRD, engage the active support and participation from the CID and CIC on green building outreach, training, and technical assistance efforts; and

IT IS FURTHER ORDERED, that all State agencies are encouraged to work cooperatively with one another to achieve the goals outlined in this executive order.

THIS ORDER supersedes any other previous orders, proclamations, or directives in conflict. This Executive Order shall take effect immediately and shall remain in effect until such time as the Governor rescinds it.

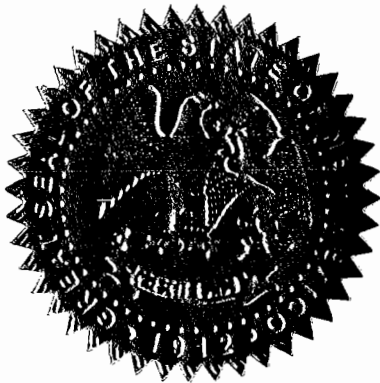
ATTEST:



REBECCA VIGIL-GIRON
SECRETARY OF STATE

DONE AT THE EXECUTIVE OFFICE THIS 16TH
DAY OF JANUARY, 2006

WITNESS MY HAND AND THE GREAT SEAL
OF THE STATE OF NEW MEXICO



BILL RICHARDSON
GOVERNOR

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Design Guidelines, Studies, and Reports

Engineering and Construction Guidelines

- [Volume1 – Design Procedures](#)
- [Volume2 – Div 1–26,28–32 \(Table of Contents on Page 3\)](#)
- [Volume3 – Div 27 – ICT – Communications](#)
- [Volume4 – Div 33 Utilities](#)
- Drawings
- [NMSU Custodial Closet Drawing Guidelines](#)
- [NMSU Fire Protection Drawing Guidelines](#)
- [NMSU ICT Drawing Guidelines](#)
- [NMSU Utility Drawing Guidelines](#)

Building Specifications

- [NMSU Urban Drainage Criteria](#)
- [Section 100 General Conditions](#)
- [Section 200 Sewer Materials Specifications](#)
- [Section 300 Sewer Construction Specifications](#)
- [Section 400 Water Materials Specifications](#)
- [Section 500 Water Construction Specifications](#)

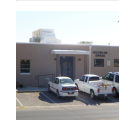
Reports

- [2015 Bohannon and Huston, Inc – Farm Building Evaluation Report](#)
- [2014 Huitt–Zollars – Analysis of Campus Fume Hoods](#)
- [2014 Huitt–Zollars – Supplemental Info to Planning Report for NMSU Computer Data Center](#)
- [2013 Parkhill Smith, & Cooper – Drainage Concerns](#)
- [2012 Holzman Moss Bottino Architecture – Visual Arts Study for Williams Hall](#)
- [2012 Facilities and Services Assessment Alcalde / Artesia / Clayton / Clovis / Mora / Tucumcari](#)
- [2009 Smith Group NMDA Conceptual Programming Study](#)
- [2009 Whitney Smelser, PS – Control Surveying Report for NMSU, Main Campus](#)
- [2010 Bohannon Huston – Branson Library Floor Loading Study](#)
- [1998 Molzen Corbin Report – Sustainable Ag Science Center – Alcalde, NM](#)

Other

- [Campus Animal and Range Facilities](#)

Office Information



Hours of
Operation
8:00 AM – 5:00
PM

Physical Location

1530 Wells

Mailing Address

MSC 3545 / PO Box 30001
Las Cruces, NM 88003

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System

Contact Us



Facilities & Services Work
Orders Phone:575.646.7114
Email:AskFS@nmsu.edu

Arrowhead Park Drawing Review Comment Summary

Project: *BCOM Site Development (SDP) Submittal*

17-Nov-14



Drawing / Section	Comment	Comment Only	Required Item	BCOM Response	NMSU Response	Action Taken	Closed
AE201	Looking at the SW elevation: this wall seems massive and the door seems proportionately small. Any chance of a porch or something to make the wall less flat and massive?	Y		"The door on this elevation is not a main entrance, and is only meant for deliveries, hence the small proportion. The elevation overall has been updated with a "bay window" feature to give this elevation some relief and interest to resolve the flat and massive issue".			
AS101	Carefully review people's walking patterns and compare them to the sidewalk locations. There will be some indirect paths cut across landscaping in some areas.	Y		Additional sidewalks have been shifted and added to improve circulation routes			
AS101	How does the curved sidewalk cross the gabions? This walk may also be too steep for wheelchairs. Could it use a handrail?	Y		Gabions have been re-designed so sidewalk does not cross these. Final grading will allow for sidewalk to be accessible. If final design requires handrails these will be added.			
AS101	Minimal 25' width for fire truck apparatus.		Y	All driveways requiring access by fire trucks currently designed and noted on site plans as 28 feet wide.			
AS101	Additional fire hydrant on south side of the complex.		Y	Additional fire hydrant on South side of complex included in final utility plans			
AS101	Pavement and bricked area can it handle an 80K lb fire truck and have the required turning radius		Y	All driveways and radius will be designed to accommodate fire trucks where necessary.			
AS101	Fire protection system plan review is required. To include all devices and locations.		Y	The final fire protection system will be designed and permitted by the contractor. This is typically not a part of the A/E scope of work. GC will be made aware that they are to submit this to NMSU for review and approval.			
C101	What is setback to curb of parking lot along Triviz? Any impacts to drainage swale along Triviz?		Y	Drainage swale is not affected by new construction on the site.			

C101	Effect of sidewalks shown along Triviz and Wells for drainage swales?		Y	Sidewalks along Triviz and Wells have been deleted from this project.			
C101	Loop road on south edge of property runs outside property line. Let's talk about easement requirements.		Y	Property line at South edge of property has been moved South to include the loop road as well as area disturbed by grading for this project.			
C101	Recommend use of as much of existing landscaping on NE corner of site (Triviz and Wells), trees are mature.	Y		Noted. Final Landscape plans are to maintain existing landscaping at this corner.			
C101	Question about the elevations at the main door (NE corner): it appears the finish floor level is the same as the contour line approx. 150' NE of the front door. In fact, all the area around the circle drive appears to be dead flat. With all the water running downhill to this area from the east parking lot, a lot of that water will find its way in the front door.	Y		Final drainage plans have been updated to include slope away from buildings			
C101	Drainage pond at west end: is it possible pipe drainage into the arroyo downstream of the culverts? There will be some cuts across Arrowhead anyway for fiber optic lines.	Y		Extending drainage pipes across Arrowhead is not recommended. The existing culverts at the corner of Wells and Arrowhead have been sized to accommodate existing flows. The flows through the pond are sized to replicate existing flows.			
C101	Is there anything you can do to lessen the deep hole at the west detention pond? Or landscape it, or something?	Y		The volume of water that the pond is required to retain and the available site area to accommodate this necessitates the depth of the pond as shown on the grading plans. The edges of the pond will be landscaped to lessen the visual impact of this.			
C101	The BCOM access road along the southern perimeter is showing an inverted crown (e.g., center of road lower than curb area). In this configuration, runoff will flow down the center of the road mostly miss the two drop inlets near Arrowhead Drive. Recommend constructing road with a more conventional center crown.		Y	Crown will be modified on final grading drawings.			
C101	What is the precipitation event used to design/size the retention pond at the western edge of the site? NMSU design guidelines call for a 24-hour 100-year storm event.		Y	Retention pond and pipe flows are for 100 year, 24 hour storm			
C102	Existing water line along Triviz that feeds greenhouse complex is not shown. Utility location required by contractor.		Y	Water lines have been located and noted on updated utility plans			

C102	Need submittal and approval of gabion walls or alternate along drainage		Y	Noted. Additional informatin will be provided prior to finalizing design.			
C102	I see EIFS/CMU enclosure around dumpster. Is similar enclosure planned for electrical transformer and generator?		Y	Yes a similar enclosure will be provided around the transformer and generator. Current site plans indicate this.			
C102	NMSU / Arrowhead is not aware of an existing water line running across the middle of the site, under the building area as shown.	Y		Existence of water line under the building has been confirmed.			
Checklist	Total of 185 parking spaces shown onsite. Thought total required was closer to 400? Still need offsite?		Y	The total parking required by BCOM when the college is at capacity is closer to 400. As previously discussed, off site parking has been offered by NMSU for use by students attending BCOM. It was the desire of NMSU to lessen the amount of parking on site.			
E601	Earlier estimates of power requirements at max demand in excess of 900kW. 750kVA transformer is too small for this demand. Is demand right?		Y	Power requirement estimates have been revised. Final electrical design will confirm transformer requirements.			
E601	Transformer primary voltage is not correct if BCOM to connect to NMSU Circuit 5. Required voltage is 23.9-kV (LL).		Y	Electrical engineer will correct the voltage.			
E601	NMSU to Supply all meters. Electrical contractor to pull communications lines and run conduits for communications		Y	It is our understanding from discussions with AHC that NMSU would bring all required conduit and fiber to the ground floor IT Rooms. If this is not the case please advise.			

Additional Guidance: NMSU Fire Department

On the 1st comment - The minimum width of a fire access roadway is 20 feet. If a center median is included, the required width shall be provided on both sides of the median. In Hazardous Fire Areas, fire lanes shall be at least 28 feet wide, so 25 ft provided is minimum because of the size of our vehicles and especially with an aerial that off-tracks going through that round-about could cause some damage if the room isn't there for the driver to use

Noted see responses above on current fire lane widths noted on site plans.

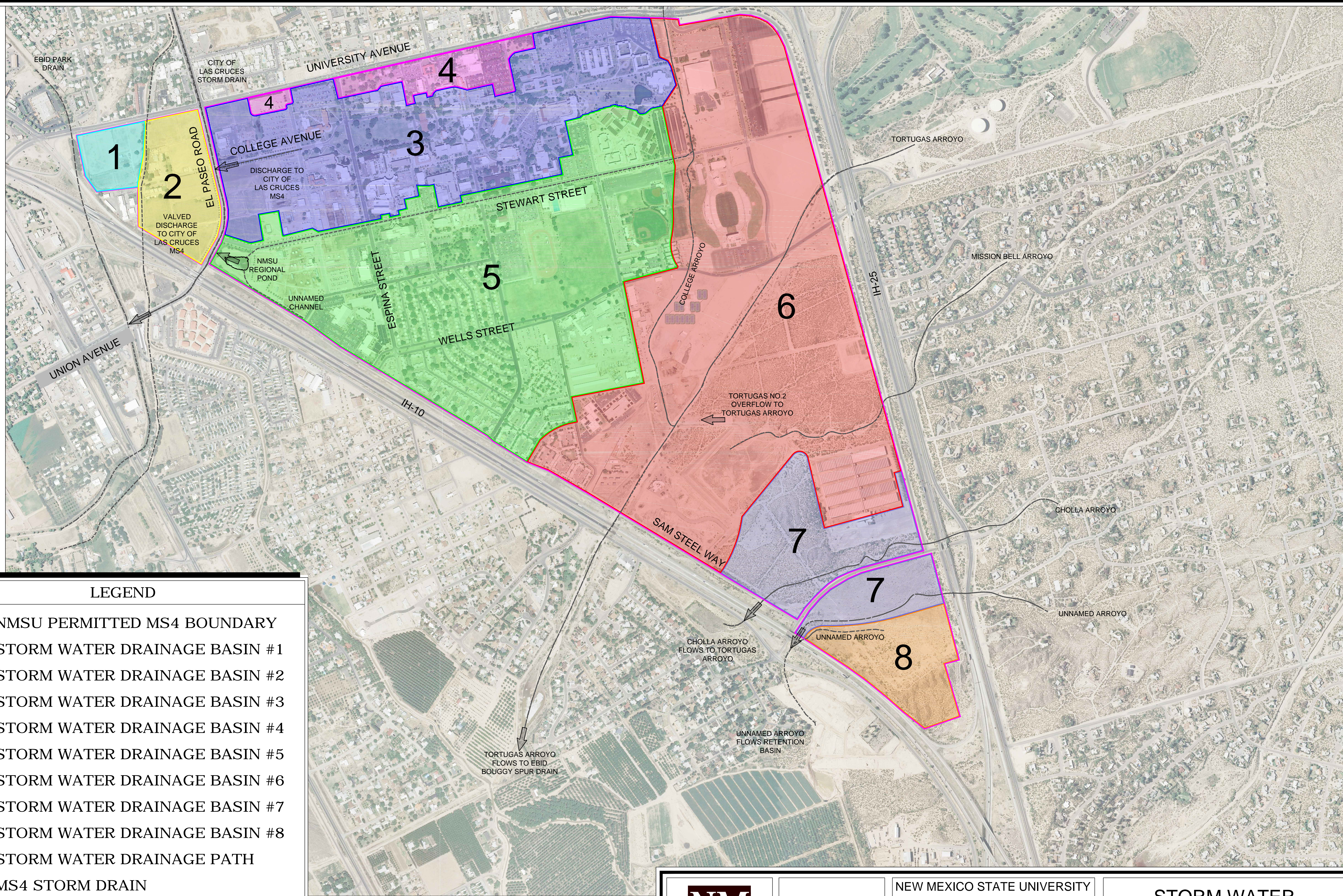
On the 3rd comment - Inside and Outside Turning Radii - The inside turning radius for an access road shall be 17 feet or greater. The outside turning radius for an access road shall be 38 feet or greater. As fire apparatus are unable to negotiate tight "S" curves, a 56-foot straight leg must be provided between these types of compound turns or the radii and/or road width must be increased accordingly. Note: to accommodate NMSU FD's largest fire apparatus an inside and outside turning radius of 20 and 42 feet, respectively, is recommended and requested.

Noted. All fire access lanes will be designed to accommodate these requirements.

NMSU uses the International Building Code and the International Fire Code 2009 or 2012 preferably.

Noted

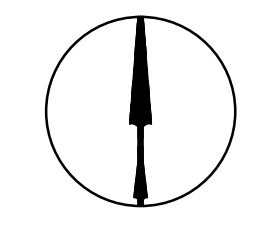
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LEGEND

- NMSU PERMITTED MS4 BOUNDARY
- STORM WATER DRAINAGE BASIN #1
- STORM WATER DRAINAGE BASIN #2
- STORM WATER DRAINAGE BASIN #3
- STORM WATER DRAINAGE BASIN #4
- STORM WATER DRAINAGE BASIN #5
- STORM WATER DRAINAGE BASIN #6
- STORM WATER DRAINAGE BASIN #7
- STORM WATER DRAINAGE BASIN #8
- STORM WATER DRAINAGE PATH
- MS4 STORM DRAIN
- MS4 OUTFALL

Scale: 1" = 500'
 0 250' 500'



NEW MEXICO STATE UNIVERSITY
 LAS CRUCES, NEW MEXICO
 STORM WATER
 DRAINAGE
 BASINS

STORM WATER
 DRAINAGE
 MAP 2014

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NMSU Storm Water Structures Inventory

Refer to the attached NMSU Storm Water Basin Map for basin designations.

Basin 1

DESCRIPTION

Topographically flat, agricultural lands at the western edge of the NMSU main campus. Bounded by University Avenue on the north, an Elephant Butte Irrigation District (EBID) irrigation canal on the east, College Avenue along the south, and an EBID drain on the west.

WATER ENTERS BASIN

- Via rainfall

WATER EXITS BASIN

- Surface runoff is retained in agricultural fields. However, in significant precipitation events, the western portion of this basin may discharge to the EBID Park Drain west of College Avenue and south of University Street.

OUTFALLS

- None

STORMWATER STRUCTURES

1. None

Basin 2

DESCRIPTION

Topographically flat agricultural land in the western portion of the NMSU main campus. It is bound by University Avenue on the north, Union Avenue on the east, College Avenue along the south, and an EBID irrigation canal on the west. The City of Las Cruces Convention Center, and its associated detention basin, is contained within this NMSU storm water drainage basin.

WATER ENTERS BASIN

- Via rainfall

WATER EXITS BASIN

- Surface runoff is retained in agricultural fields. Roof runoff on north side of the City of Las Cruces Convention Center (CC) flows to University Ave. Runoff from the parking lot south of the CC flows to a CC detention pond north of College Avenue.

OUTFALLS

- None

STORMWATER STRUCTURES

1. Detention pond (south of Convention Center and north of College Avenue).

Basin 3

DESCRIPTION

This basin is characterized by the central campus; it is a westward-sloping area with a high concentration of buildings and parking lots. There are numerous detention ponds allowing storage and infiltration of runoff.

WATER ENTERS BASIN

- Via rainfall

WATER EXITS BASIN

- Various locations onto Stewart Street (and into Basin 5).
- Into a series of drop inlets along College Avenue (and into the City of Las Cruces MS4 via Outfall NM007).
- A portion of the roof drainage from the Educational Services Building flows into the College Arroyo (and into Basin 6) through outfalls NM0012 through NM0015.

OUTFALLS

- NM007, NM0012, NM0013, NM0014, NM0015.

STORMWATER STRUCTURES

1. Drop inlet at Educational Services building (east side) and exits at College Arroyo
2. 14" corrugated PVC culvert at SE corner of Piñon Hall. Exit at south Piñon Hall.
3. 12" concrete pipe culvert at SW Piñon Hall. Exit at west Piñon Hall.
4. 2 drop inlets at east Piñon Hall courtyard. Exit west of Building.
5. 1 drop inlet at W. Piñon Hall courtyard. Exit south of Building.
6. 2 x 14" corrugated PVC culverts at south Piñon Hall. Exit within courtyard.
7. Aggie Pond serving as detention for immediate vicinity
8. 1 drop inlet at SE Garcia Hall. Exit at SW Garcia Hall.
9. 1 drop inlet at east Corbett Center 1st floor entry stair
10. 1 drop inlet at Corbett Center Courtyard
11. 1 drop inlet at Corbett Center Amphitheatre, located on north exterior of building
12. 1 drop inlet at NE corner of Garcia Annex
13. 1 drop inlet at west Campus Health Center entrance
14. Detention pond at SE exterior of Health and Social Services building
15. 1 drop inlet at north exterior of Milton Hall. Exit at sump pit to the west.
16. 2 Drop inlets at NE Zuhl Library
17. 1 Drop inlet at SE Zuhl Library
18. 1 Drop inlet at NE Science Hall entrance
19. 1 drop inlet at Science Hall courtyard
20. 1 drop inlet at east Engineering Complex III (EC III) detention pond
21. Detention pond east of ECIII
22. 4 - 1' x 4' box culverts at NE ECIII. Exit at NW ECIII.

23. 4 drop inlets east of ECIII
24. 1 drop inlet at ECIII Courtyard. Exit north of Hernandez Hall.
25. 3 roof drain outlets north of Hernandez Hall
26. 1 drop inlet at sidewalk south of ECI. Exit at Stewart St.
27. 2 x 14" corrugated PVC culverts at SW corner of parking lot #59. Exit at drop inlet south of ECI.
28. 1 drop inlet at east Jett Hall
29. 2 drop inlets at east Jett Hall courtyard
30. 2 drop inlets at west Jett Hall courtyard
31. Gerald Thomas Hall pond serves as retention for immediate vicinity
32. Detention pond with rip rap east of Skeen Hall
33. 1 drop inlet at south parking lot of Tejada Building
34. 1 drop inlet at north parking lot of Sugarman Building
35. Detention pond at SW corner of College Drive and Knox Street
36. 3 x 12" drop inlets north of detention pond at College and Knox feeding into detention.
37. Detention pond north of Alumni Center
38. 42" concrete pipe culvert under College Drive at intersection of College and Union Dr.
39. Drop inlet at south College Drive near NMSU Police Station

Basin 4

DESCRIPTION

This narrow strip along the northern boundary of the NMSU main campus is characterized by roof and parking lot run-off that flows to the north and onto University Avenue.

WATER ENTERS BASIN

- Rainfall (direct, and as roof drainage from some of the adjacent buildings)

WATER EXITS BASIN

- Roof drainage onto University Avenue (ex. Auxiliary Services Building)
- Parking lot drainage onto University Avenue
- Infiltration galley in the vicinity of the Center for the Arts

OUTFALLS

- None

STORMWATER STRUCTURES

1. Various curb cuts to facilitate local flow
2. 2 drop inlets north and south of the Center for the Arts building
3. 2 drop inlets east of the Health and Social Services building (within landscaped islands in parking lot number 14); the inlets convey water to parking lot number 11 (i.e., to the north and west).
4. Drop inlet at west side of Chemistry Building
5. Rock-lined detention swale on east side of the Center for the Arts building

Basin 5

DESCRIPTION

The area slopes westward and is the source of storm water conveyed via Stewart Avenue (the primary drainage pathway of this basin), and ultimately into the NMSU Regional Pond. This storm water basin is characterized by a predominance of athletic fields and campus residential housing (homes and apartments), with limited academic buildings. Doña Ana Community College is contained within this basin.

WATER ENTERS BASIN

- Rainfall

WATER EXITS BASIN

- 48" concrete culvert at west side of the NMSU Regional Pond. This culvert discharges to the City of Las Cruces MS4.

OUTFALLS

NM006 and NM008 (non-storm water)

STORMWATER STRUCTURES

1. Various curb cuts to facilitate local flow
2. Two drop inlets in the Chamisa dorm courtyards convey storm water to the west side of dorms (and discharge to grade) via subgrade PVC piping.
3. Drop inlet east of the Aggie X-Press store (corner of Standley Drive and Williams Avenue) conveys water to a detention pond north of store.
4. There are a series of corrugated metal culverts parallel to, and along the north side of, Sam Steel Road to convey flow westward, and ultimately into the NMSU Regional Pond. These are present from Doña Ana Community College, and westward.
5. 18" drop inlet at center of Stewart Street (near the Equine Education Center); conveys the Stewart Street flow into the NMSU Regional Pond.

Basin 6

DESCRIPTION

The Mission Bell, College, and Tortugas Arroyos each discharge into this basin. Storm water exits campus via the Tortugas Arroyo (under Interstate 10). This basin is characterized by a lack of development, and is primarily unpaved.

WATER ENTERS BASIN

- College Arroyo (adjacent to the southwest corner of the University Avenue and Triviz Street intersection). Two 60" diameter concrete culverts.
- Tortugas Arroyo west of Triviz Road, north of Wells Street. Eight 10' x 10' box culverts.
- Runoff discharge from I-25, south of the Wells Street overpass. Flow is routed through a 24" diameter corrugated metal pipe.
- Mission Bell Arroyo via two 6' x 4' concrete box culverts under I-25

WATER EXITS BASIN

- Via Tortugas Arroyo (under I-10)

OUTFALLS

- 1 Drop inlet at Triviz median at entry to campus. Exits at College Arroyo (Outfall NM032)
- 1 Drop inlet at east of Pan Am ticket office. Exits at College Arroyo (Outfall NM009).
- 1 Drop inlet at west of Pan Am ticket office. Exits at College Arroyo (Outfall NM010).
- 2 Strip inlets at south Pan Am Entrance. Exits at College Arroyo (Outfalls NM017 AND NM018).
- 2 Drop inlets at east Pan Am Entrance. Exits at College Arroyo (Outfall NM016).
- Roof drains at Fulton Center flow to College Arroyo via parking lot 33 (Outfalls NM020 – NM024).
- 4" drain pipe at from the Arrowhead Research Center (detention pond at north end). Discharges to the Tortugas Arroyo (Outfall NM0028).

STORMWATER STRUCTURES

1. 1 Drop inlet (into sump) at east Pan Am Ramp Entrance. Water pumped to grade.
2. Three 48" diameter metal corrugated culverts conveying water NE to SW under Wells Street (immediately east of Arrow head Drive)
3. One drop inlet at SE corner of Wells Street and Arrowhead Drive (outfall NM030)
4. Ten 55" diameter concrete culverts conveying water (NE to SW) under Arrowhead Drive (immediately south of Wells Street).
5. Drop inlet strip on the north side of Wells Street near the intersection with the College Arroyo (east of the Greek Complex). Water is conveyed under Wells Street and southward to a small headwall structure. Note; the inlet is not at the low spot, and the subgrade pipe discharge point is partially buried. This structure does not function well.
6. One 36" diameter concrete culvert under Arrowhead Drive (flows east to west). Discharges into the Early College High School parking lot.
7. One 36" diameter concrete culvert under Arrowhead Drive (flows east to west). Discharges into the Mission Bell Arroyo (south of the Early College High School).

8. Six 36" diameter concrete culverts under Arrowhead Drive conveying the Mission Bell arroyo flow (east to west). Discharge is into the EBID Tortugas #2 Dam.
9. Two 36" concrete culverts under Arrowhead Drive conveying the flow from an unnamed arroyo east to west. Discharge is south of the Mission Bell arroyo discharge into the EBID Tortugas #2 Dam.
10. One 24" diameter corrugated PVC culvert under Arrowhead Drive (conveys flow southwest to northeast, towards the Tortugas Arroyo).

Basin 7

DESCRIPTION

Basin 7 contains the entrance and exit of Cholla Arroyo, as it flows through the NMSU campus, as well as an unnamed arroyo that contributes flow to the Cholla Arroyo. This relatively small basin is primarily undeveloped, and exhibits a primarily east-to-west flow pattern.

WATER ENTERS BASIN

- Via rainfall, Cholla Arroyo, and on the east, drainage from Interstate 25.

WATER EXITS BASIN

- Via Cholla Arroyo.

OUTFALLS

- None

STORMWATER STRUCTURES

1. Consists of sheet flow and small drainage pathways towards the Cholla Arroyo, and/or culverts under Interstate 10 at west end of basin.

Basin 8

DESCRIPTION

This relatively small basin contains no named or significant arroyos, and is characterized by sheet flow and preferential drainage to a discharge point under Interstate 10.

WATER ENTERS BASIN

- Via rainfall and drainage from I-10 and I-25.

WATER EXITS BASIN

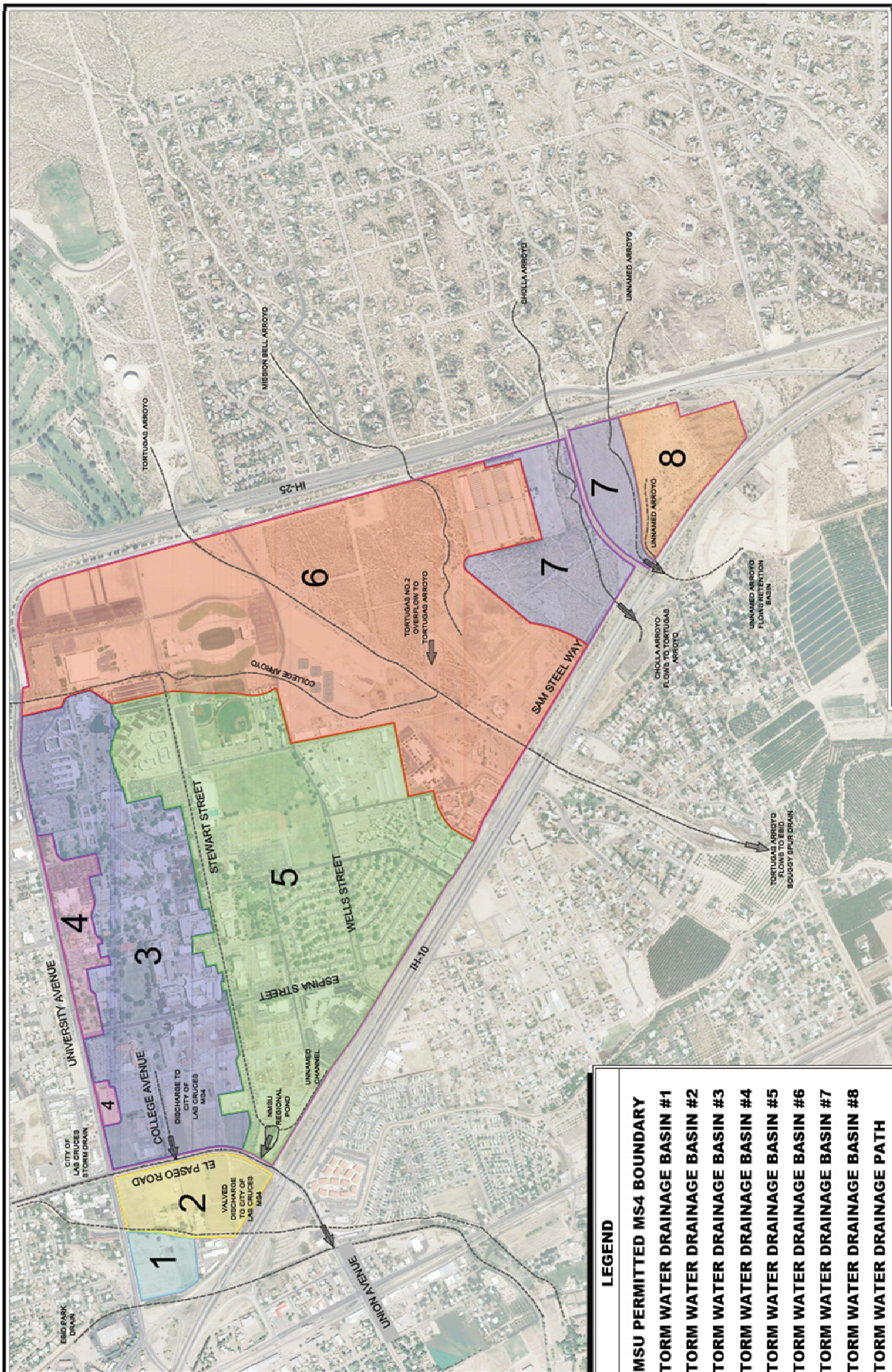
- Via an unnamed arroyo into five 24" concrete culverts under Interstate 10

OUTFALLS

- None

STORMWATER STRUCTURES

1. Five 24" concrete culverts under Interstate 10



**STORM WATER
DRAINAGE
MAP 2014**

NEW MEXICO STATE UNIVERSITY
LAS CRUCES, NEW MEXICO
STORM WATER
DRAINAGE
BASINS



Scale: 1" = 500'
0 250' 500'

- LEGEND**
- NMSU PERMITTED MS4 BOUNDARY
 - STORM WATER DRAINAGE BASIN #1
 - STORM WATER DRAINAGE BASIN #2
 - STORM WATER DRAINAGE BASIN #3
 - STORM WATER DRAINAGE BASIN #4
 - STORM WATER DRAINAGE BASIN #5
 - STORM WATER DRAINAGE BASIN #6
 - STORM WATER DRAINAGE BASIN #7
 - STORM WATER DRAINAGE BASIN #8
 - STORM WATER DRAINAGE PATH
 - MS4 STORM DRAIN
 - ↑ MS4 OUTFALL

and



MS4 Basin and Structures Screening Data

Inspector's Name: Michael Lucero Date: May 29, 2015

MS4 Drainage Basin No.: 1

Last Rain Occurred: <24 Hours <3 Days **More than 3 Days**

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]: _____

No storm water structures within this area of Basin 1

MS4 Basin and Structures Screening Data

If helpful, draw a diagram of the system and label the major components:

MS4 Basin and Structures Screening Data



Inspector's Name: Michael Lucero Date: May 29, 2015

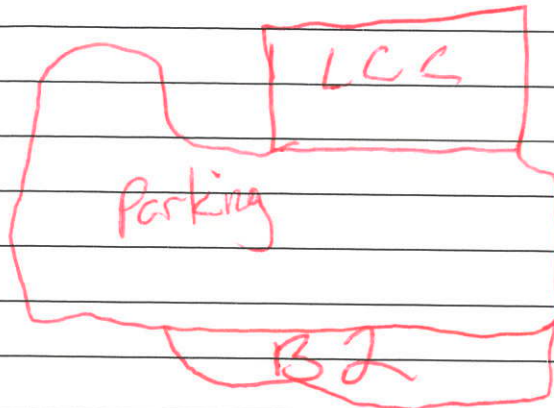
MS4 Drainage Basin No.: 2

Last Rain Occurred: <24 Hours <3 Days More than 3 Days

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]: _____

Structure is South of Las Cruces Convention Center parking lot and North of College Avenue. Detention pond is made up of heavy rock/concrete and is also secured on all sides with fencing. No structural or illegal dumping was noticed at the time of inspection. Pond integrity is sufficient enough to provide proper flow. There is no obstruction to flow. No maintenance and no other issues for Basin 2.

MS4 Basin and Structures Screening Data



If helpful, draw a diagram of the system and label the major components:



MS4 Basin and Structures Screening Data

Inspector's Name: Michael Lucero Date: June 10, 2015

MS4 Drainage Basin No.: 3

Last Rain Occurred: <24 Hours <3 Days **More than 3 Days**

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]: _____

Basin 3 located within the central part of campus contains various curbs cuts, drop inlets, detention ponds and some corrugated PVC and concrete culverts. Basin 3 houses Academic buildings and some student housing. The area of Basin 3 slopes from east to west and also contain some Outfalls that flow into the College Arroyo. These drop inlets within Basin 3 travel along College Avenue and into the City of Las Cruces MS4 via Outfall NM007. Construction of structures within Basin 3 consists of corrugated PVC, concrete, and metal/concrete inlets, and detention ponds made of rock. At the time of inspection all storm water structures seemed efficient enough to provide proper flow. There were no obstructions to flow and no illegal dumping noticed at the time of inspection. The storm water structures had no signs deterioration and the integrity of the structures was sufficient to provide proper flow. There is no maintenance required for any storm water structures within Basin 3.

MS4 Basin and Structures Screening Data

If helpful, draw a diagram of the system and label the major components:

MS4 Basin and Structures Screening Data



Inspector's Name: Michael Lucero Date: June 5, 2015

MS4 Drainage Basin No.: 4

Last Rain Occurred: <24 Hours <3 Days **More than 3 Days**

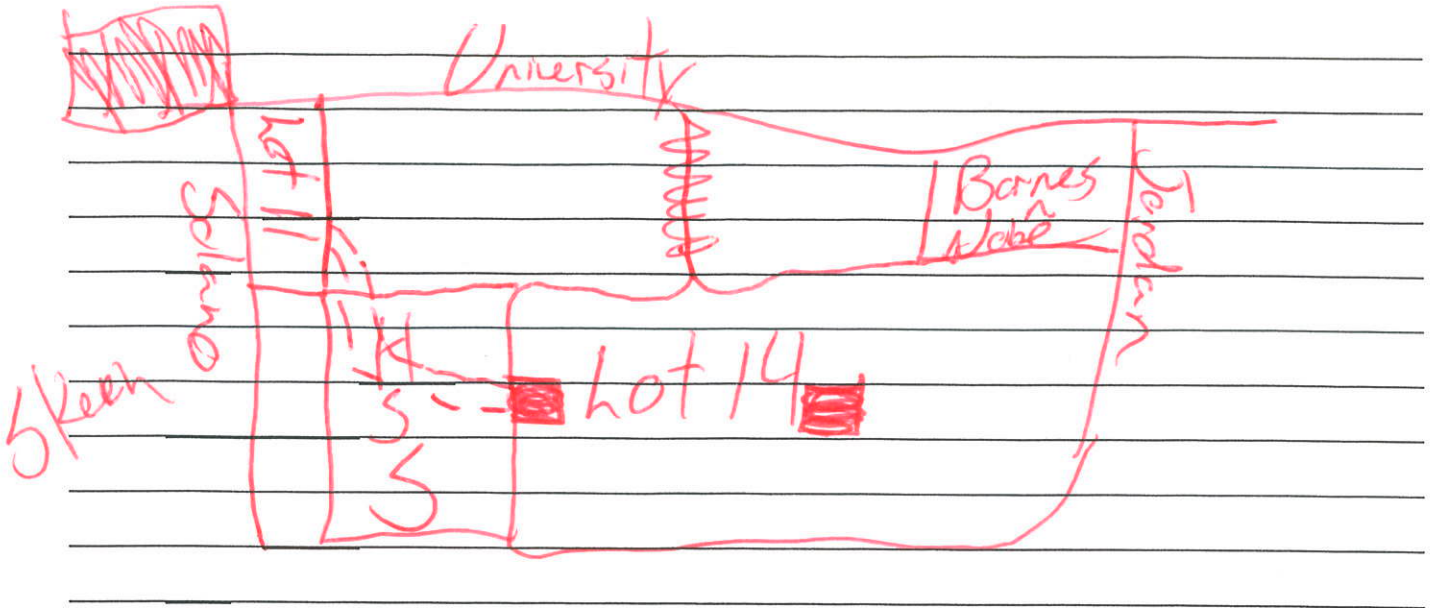
Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]:__

Basin 4 - 1. Corner of Knox and University is clear of obstruction and seems to be operating with free flow. No illegal dumping noted at the time of inspection. Integrity of the various curb cuts do not require any maintenance.

Basin 4 - 2. and 5. The Arts building located at the corner of Espina and University. Integrity of structures seem efficient enough to provide proper flow and are free of obstructions. There are 3 drop inlets on the Northside of the building, 3 drop inlets on the South side of the building and 1 drop inlet on the Eastside. There was no illegal dumping at the time of inspection.

Basin 4 - 3. Drop inlets within the parking Lot 14. In front of Health and Social Services building. Structures are made up of concrete and metal. Structures convey flow to Lot 11 and seem to be free of obstruction or any debris. There was no illegal dumping at the time of inspection and structure does not require any maintenance.

MS4 Basin and Structures Screening Data



If helpful, draw a diagram of the system and label the major components:

MS4 Basin and Structures Screening Data



Inspector's Name: Michael Lucero **Date:** June 5, 2015

MS4 Drainage Basin No.: 5

Last Rain Occurred: <24 Hours <3 Days **More than 3 Days**

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]: _____

Basin 5 area location is the center of NMSU main campus with its major drainage pathway being Stewart Avenue. This pathway along with the Storm water structures drain into NMSU Regional Pond. Outfalls that also drain into NMSU Regional pond are NM006 and NM008 which is a non-storm water outfall. The main areas within Basin 5 are athletic fields, residential housing and Dona Ana Community College. All structure locations consist of various constructions from concrete to metal corrugated culverts. All structures are free from obstruction indicating sufficient flow. There are no indications of illegal dumping. All structures exhibit signs of allowing proper flow and require no maintenance.

MS4 Basin and Structures Screening Data

If helpful, draw a diagram of the system and label the major components:



MS4 Basin and Structures Screening Data

Inspector's Name: Michael Lucero **Date:** June 10, 2015

MS4 Drainage Basin No.: 6

Last Rain Occurred: <24 Hours <3 Days More than 3 Days

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]: _____

Basin 6 within main campus consists of Mission Bell, College, and Tortugas Arroyos which discharge into this basin. Structures within Basin 3 are primarily constructed of concrete and corrugated metal culverts. There are a number of Outfalls that exit into College Arroyo from drop inlets. Most of the culverts range in size from 24", 36", 48" and 55". Some culverts divert water flow to the main arroyos while others are located within the flow path of the arroyos. All storm water structures within Basin 6 are sufficient enough to provide proper flow. At the time of inspection there was no obstruction to flow and no illegal dumping noticed. Since the storm water structures integrity is up to par there is no maintenance required to any structures within Basin 3.

MS4 Basin and Structures Screening Data



Inspector's Name: Michael Lucero Date: May 29, 2015

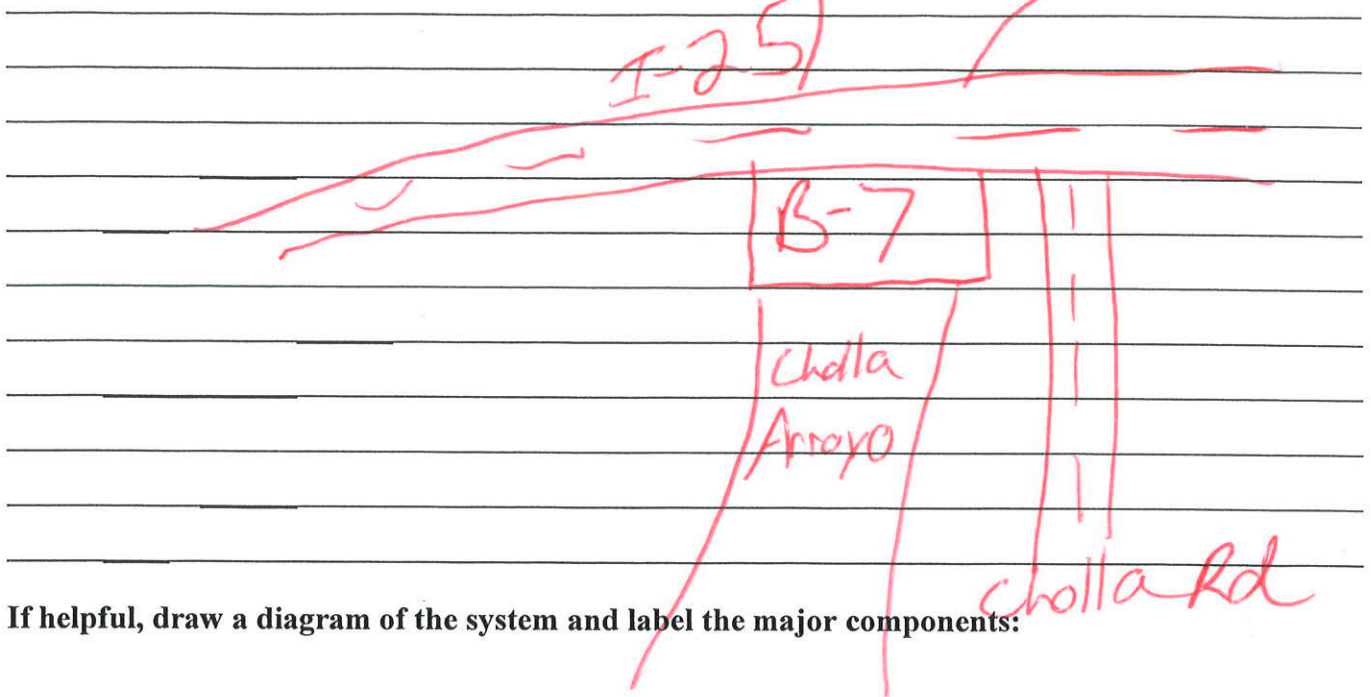
MS4 Drainage Basin No.: 7

Last Rain Occurred: <24 Hours <3 Days More than 3 Days

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]:

Basin 7 storm water structure is West of I-25 and South of Cholla Street. Five 24" inch corrugated metal discharge/concrete culvert. No illegal dumping noted at the time of inspection. Structure is free from obstructions and integrity is sufficient enough to provide proper flow. Structure is free of any damage and does not require maintenance.

MS4 Basin and Structures Screening Data



If helpful, draw a diagram of the system and label the major components:

MS4 Basin and Structures Screening Data



Inspector's Name: Michael Lucero **Date:** May 29, 2015

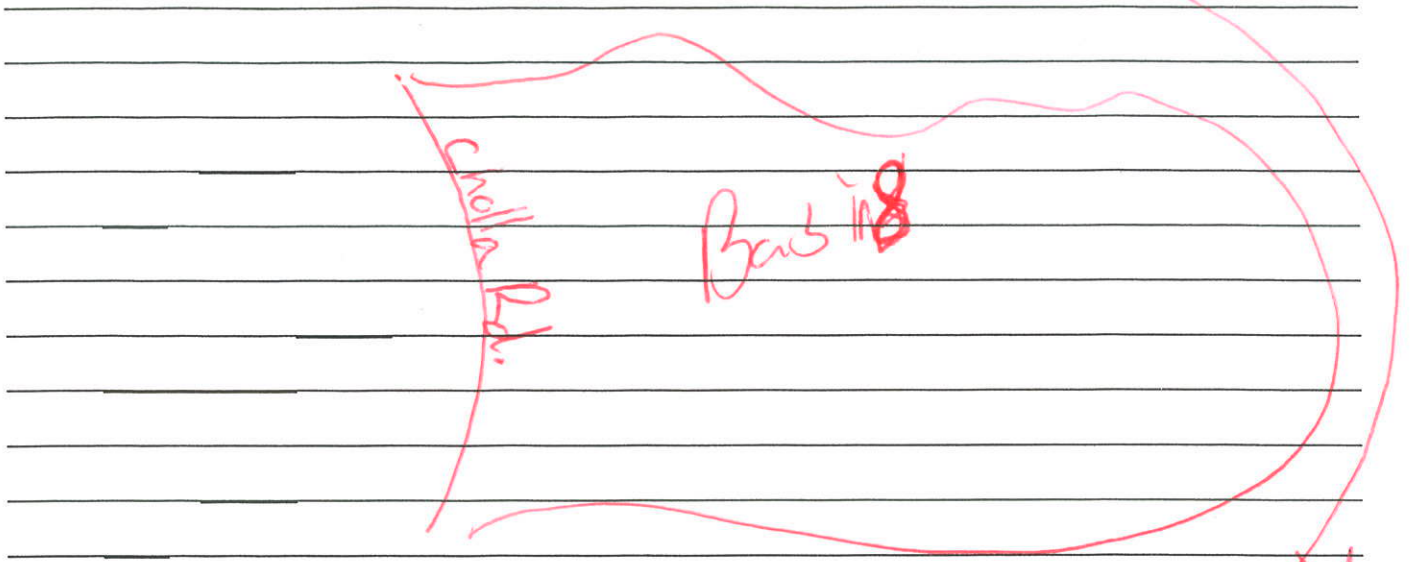
MS4 Drainage Basin No.: 8

Last Rain Occurred: <24 Hours <3 Days **More than 3 Days**

Describe the inspected structures within this basin [general location, materials of construction, whether or not repair or maintenance is required (and why), evidence of illegal dumping, etc.]:

Basin 8 is located South of NMSU Main campus and contains no named or significant arroyos, and is characterized by sheet flow and preferential drainage to a discharge point under Interstate 10. The area is free of any debris and there was no noted illegal dumping at the time of inspection. Since there are no storm water structures in this area there is no maintenance needed.

MS4 Basin and Structures Screening Data



If helpful, draw a diagram of the system and label the major components:

