

CITY OF ALBUQUERQUE



March 22, 2015

Frank Corral, P.E.
CEA Group
4712 Woodrow Bean Suite F
El Paso, TX 79924

**RE: Albuquerque Biopark Zoo - Carousel Area
COA Zoo 903 10th St SW
Request Permanent C. O. - Accepted
Engineers Stamp Date 4/10/15 (K13D034E)
Certification date: 3-18-16**

Dear Mr. Corral,

Based upon the information provided in your submittal received 3/21/2016, the above referenced Certification received is acceptable for the release of Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3695 or Totten Elliott at 924-3982.

PO Box 1293

Sincerely,

Albuquerque

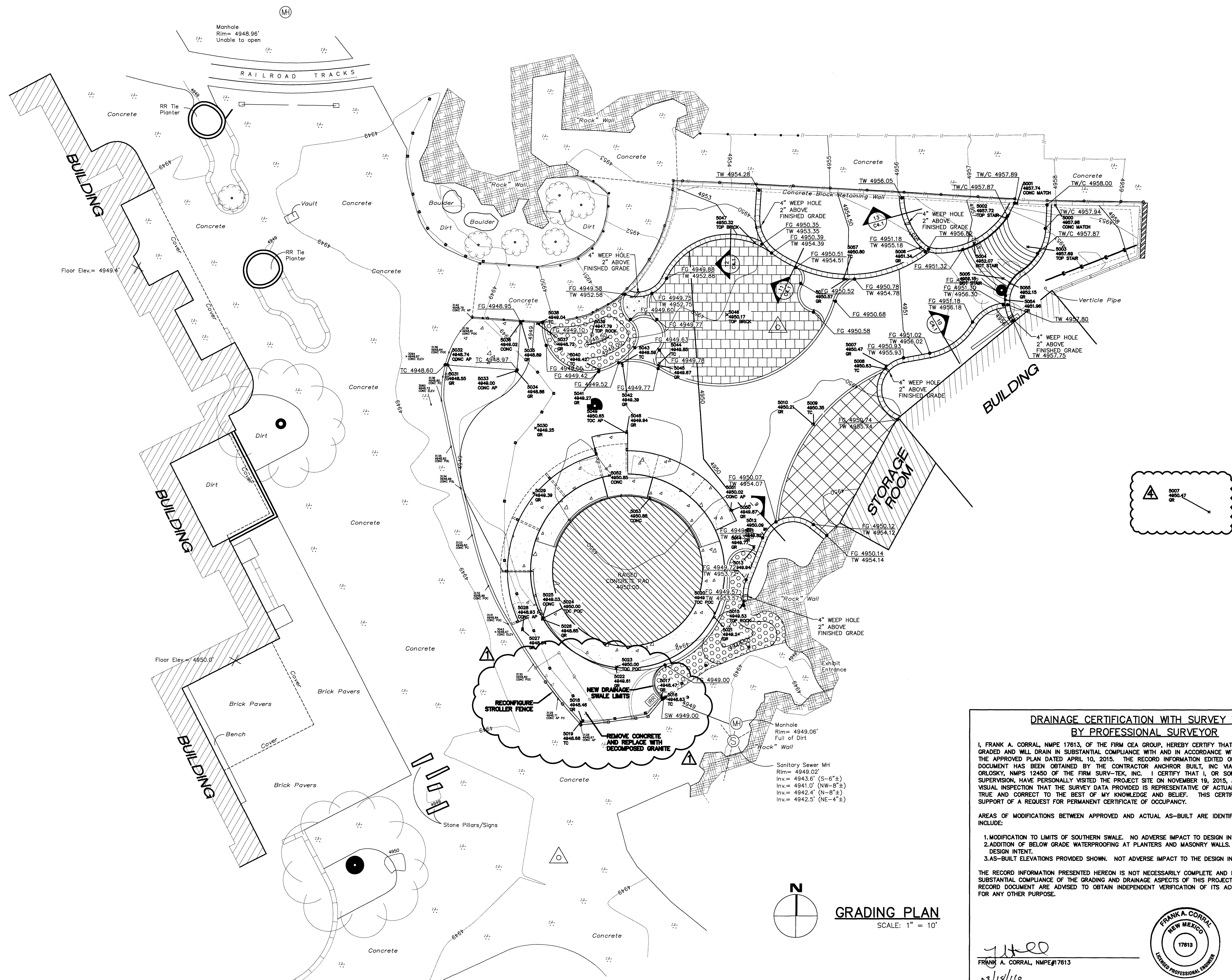
New Mexico 87103

Abiel Carrillo, P.E.
Principal Engineer, Planning Department
Development and Review Services

www.cabq.gov

TE/AC
C: e-mail,

Cordova, Camille C.; Connor, Miranda, Rachel; Sandoval, Darlene M.; Blocker, Lois



**DRAINAGE CERTIFICATION WITH SURVEY WORK
BY PROFESSIONAL SURVEYOR**

I, FRANK A. CORRAL, NMPE 17813, OF THE FIRM CEA GROUP, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED APRIL 10, 2015. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THE CONTRACTOR ANCHOR BUILT, INC VIA THE SURVEYOR JOSEPH ORLOSKY, NMPS 12450 OF THE FIRM SURV-TEK, INC. I CERTIFY THAT I, OR SOMEONE UNDER MY DIRECT SUPERVISION, HAVE PERSONALLY VISITED THE PROJECT SITE ON NOVEMBER 19, 2015, AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PERMANENT CERTIFICATE OF OCCUPANCY.

AREAS OF MODIFICATIONS BETWEEN APPROVED AND ACTUAL AS-BUILT ARE IDENTIFIED ON THE PLANS, AND INCLUDE:

1. MODIFICATION TO LIMITS OF SOUTHERN SWALE. NO ADVERSE IMPACT TO DESIGN INTENT.
2. ADDITION OF BELOW GRADE WATERPROOFING AT PLANTERS AND MASONRY WALLS. NO ADVERSE IMPACT TO DESIGN INTENT.
3. AS-BUILT ELEVATIONS PROVIDED SHOWN. NOT ADVERSE IMPACT TO THE DESIGN INTENT.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

PROJ. #: 2710-001.MG
DATE: 10 APRIL 2015
DRAWN BY: A.B.
CHECKED BY: F.C.
SCALE: AS NOTED

FRANK A. CORRAL, NMPE#17813
DATE: 03/18/16

FRANK A. CORRAL
NEW MEXICO
17813
LICENSED PROFESSIONAL ENGINEER

steven m. cecivala, aia
architect & planner
751 cornell avenue
drexel hill, pa 19026
t 610.955.3306

cea
GROUP
engineers • architects • planners
4712 Woodrow Wilson, Ste. F El Paso, TX 79904
Office 915.544.5232 Fax 915.544.5233 www.ceagroup.net

VERTICERRE
CORPORATION
"Engineering a Greater Planet"
326 GOLD AVE SW STE 600,
ALBUQUERQUE, NM 87102
PH-505-877-4499 WEB SITE
WWW.VERTICERRE.COM

FRANK A. CORRAL
NEW MEXICO
17813
PROFESSIONAL ENGINEER
4/10/15

ABQ BIOPARK

CAROUSEL AREA
Albuquerque BioPark

ISSUE DATES:

NO.	DESCRIPTION	DATE
1	REVISIONS	4/26/15
2	AS-BUILTS	3/18/16
3		
4		
5		
6		
7		
8		
9		
10		

GRADING
PLAN

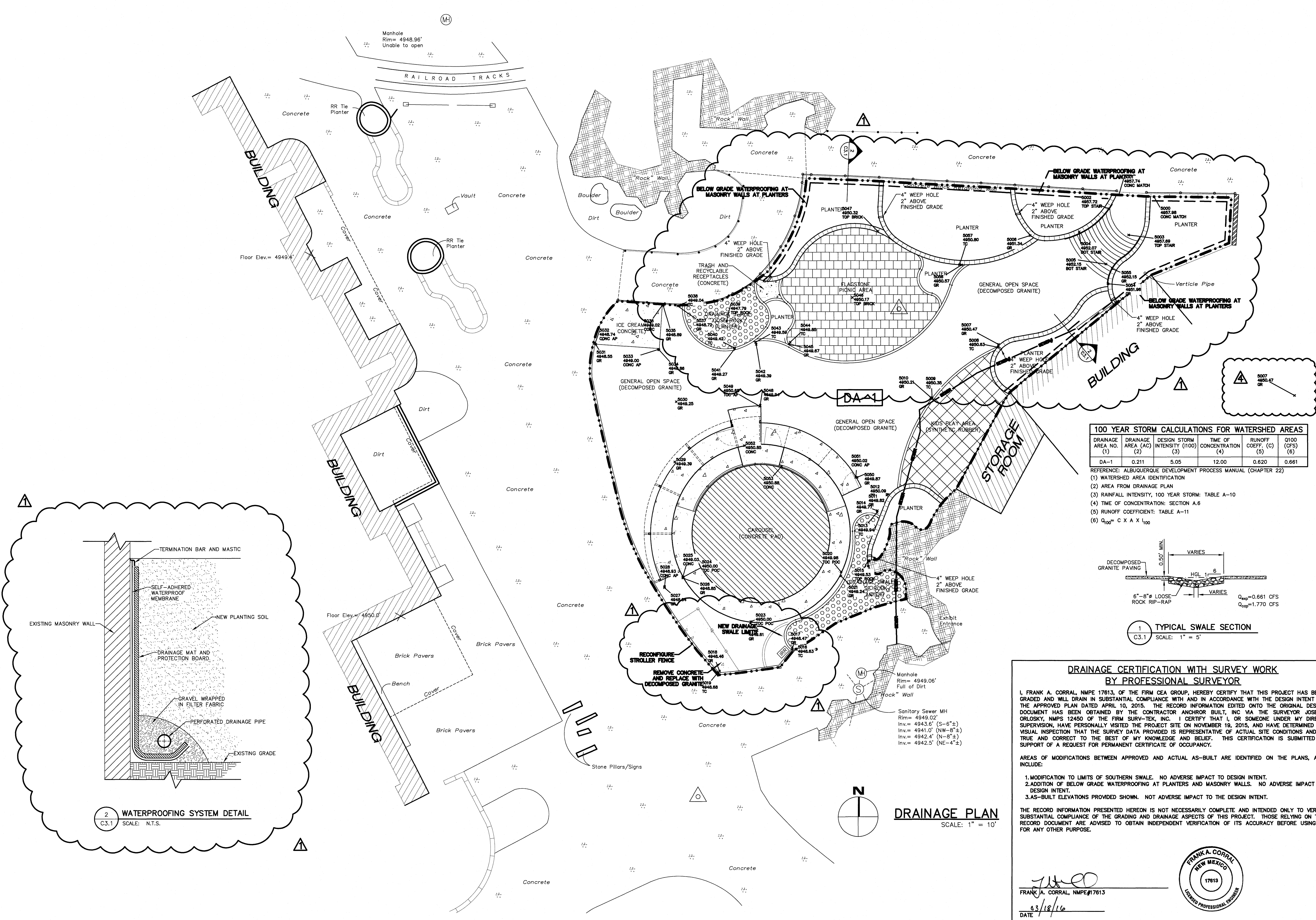
SHEET NUMBER
C2.1

NO.	DESCRIPTION	DATE
1	REVISIONS	4/28/15
2	AS-BUILTS	3/18/16

PROJ. #: 2710-001-MG
DATE: 10 APRIL 2015
DRAWN BY: A.B.
CHECKED BY: F.C.
SCALE: AS NOTED

DRAINAGE
PLAN

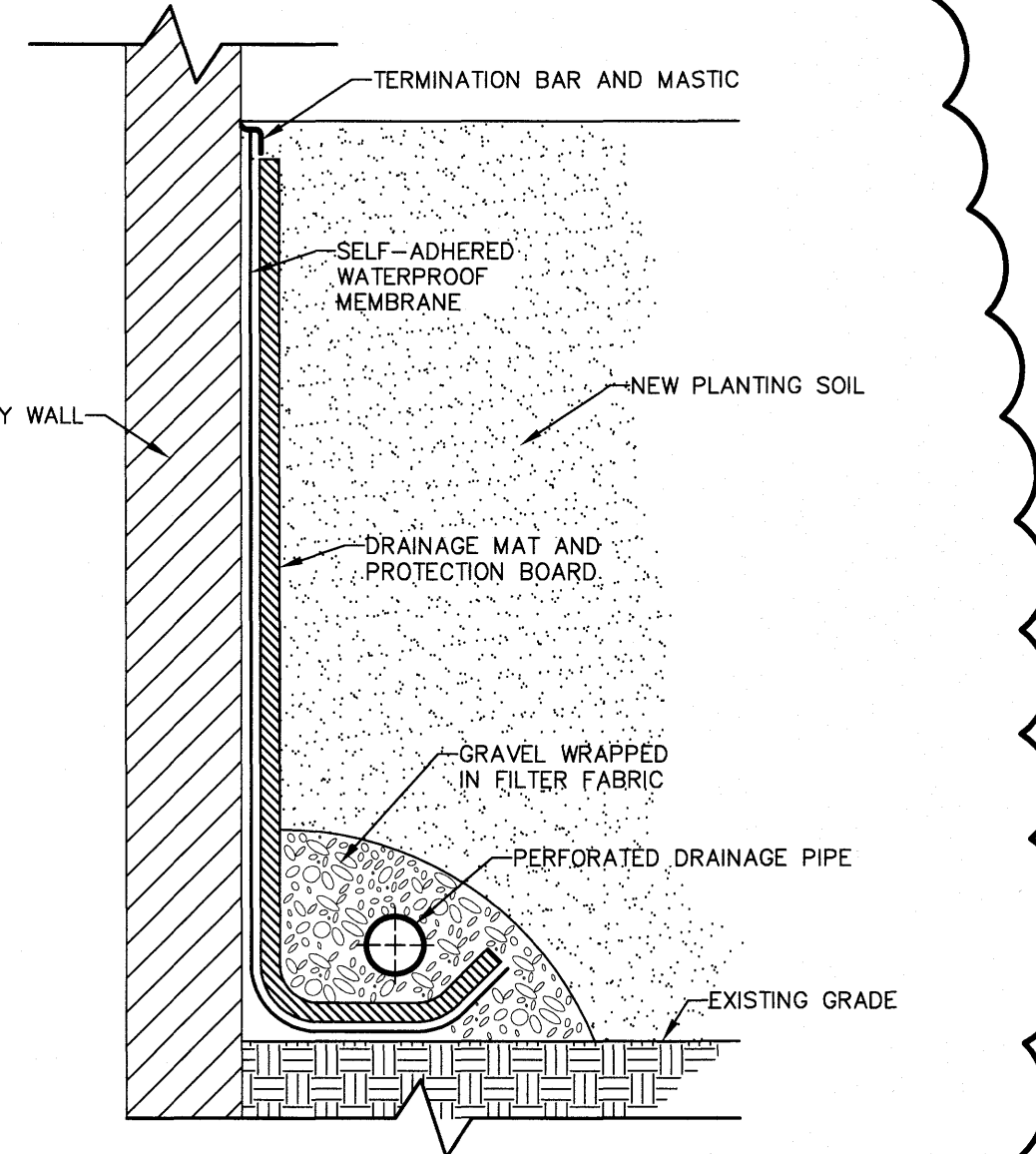
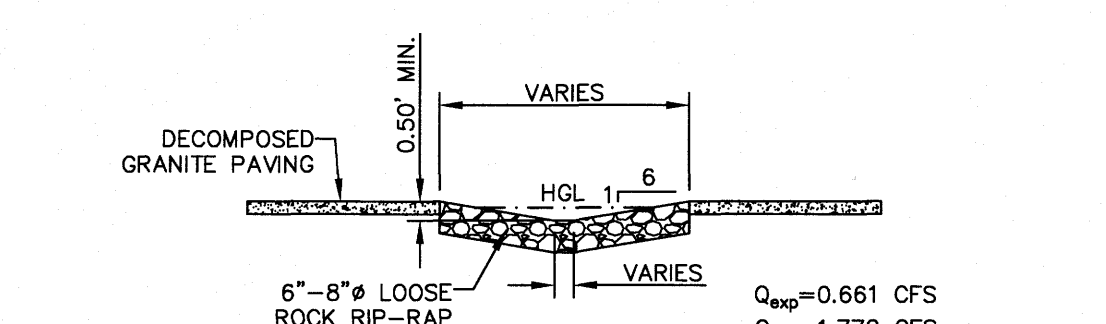
SHEET NUMBER
C3.1



100 YEAR STORM CALCULATIONS FOR WATERSHED AREAS

DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	DESIGN STORM INTENSITY (1100) (3)	TIME OF CONCENTRATION (4)	RUNOFF COEFF. (C) (5)	Q100 (CFS) (6)
DA-1	0.211	5.05	12.00	0.620	0.661

REFERENCE: ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (CHAPTER 22)
(1) WATERSHED AREA IDENTIFICATION
(2) AREA FROM DRAINAGE PLAN
(3) RAINFALL INTENSITY, 100 YEAR STORM: TABLE A-10
(4) TIME OF CONCENTRATION: SECTION A.6
(5) RUNOFF COEFFICIENT: TABLE A-11
(6) $Q_{100} = C \times A \times I_{100}$



**DRAINAGE CERTIFICATION WITH SURVEY WORK
BY PROFESSIONAL SURVEYOR**

I, FRANK A. CORRAL, NMPE 17813, OF THE FIRM CEA GROUP, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED APRIL 10, 2015. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY THE CONTRACTOR ANCHOR BUILT, INC VIA THE SURVEYOR JOSEPH ORLOSKY, NMPS 12450 OF THE FIRM SURV-TEK, INC. I CERTIFY THAT I, OR SOMEONE UNDER MY DIRECT SUPERVISION, HAVE PERSONALLY VISITED THE PROJECT SITE ON NOVEMBER 19, 2015, AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR PERMANENT CERTIFICATE OF OCCUPANCY.

AREAS OF MODIFICATIONS BETWEEN APPROVED AND ACTUAL AS-BUILT ARE IDENTIFIED ON THE PLANS, AND INCLUDE:

1. MODIFICATION TO LIMITS OF SOUTHERN SWALE. NO ADVERSE IMPACT TO DESIGN INTENT.
2. ADDITION OF BELOW GRADE WATERPROOFING AT PLANTERS AND MASONRY WALLS. NO ADVERSE IMPACT TO DESIGN INTENT.
3. AS-BUILT ELEVATIONS PROVIDED SHOWN. NO ADVERSE IMPACT TO THE DESIGN INTENT.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THOSE RELYING ON THE RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

DATE: 03/18/16
FRANK A. CORRAL, NMPE #17813
PROFESSIONAL ENGINEER
NEW MEXICO
17813



City of Albuquerque

Planning Department

Development & Building Services Division DRAINAGE AND

TRANSPORTATION INFORMATION SHEET (REV 02/2013)

Project Title: ALBUQUERQUE BIOPARK CAROUSEL AREA Building Permit #: T20159107 City Drainage #: _____
 DRB#: _____ EPC#: _____ Work Order#: _____
 Legal Description: _____
 City Address: 903 10TH STREET SW, ALBUQUERQUE, NM 87102

Engineering Firm: CEA GROUP Contact: FRANK CORRAL
 Address: 4712 WOODROW BAWN, STE. F, EL PASO, TX 79924
 Phone#: 915-544-5232 Fax#: 915-544-5233 E-mail: fcorral@ceagroup.net

Owner: NEW MEXICO BIOPARK SOCIETY Contact: JULIE RUGG
 Address: 903 10TH STREET SW, ALBUQUERQUE, NM 87102
 Phone#: 505-764-6280 Fax#: 505-764-6226 E-mail: director@bioparksociety.org

Architect: TEAGA INTERNATIONAL Contact: STEVEN M. CECCHALA
 Address: 751 CORNELL AVE., DREXEL HILL, PA 19026
 Phone#: 610-955-3306 Fax#: _____ E-mail: scecchala@teaga-international.org

Surveyor: SURV-TEK, INC. Contact: RUSS HUGG
 Address: 9384 VALLEY VIEW DR NW, ALBUQUERQUE, NM 87114
 Phone#: 505-897-3366 Fax#: 505-897-3377 E-mail: ruhugg@survtek.com

Contractor: ANCHOR BUILT, INC. Contact: MICHAEL FRANCO
 Address: 304 INDIANA STREET SE, ALBUQUERQUE, NM 87108
 Phone#: 505-342-2452 Fax#: 505-344-2542 E-mail: mfranco@anchorbuilt.com

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☒ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☒ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes ☒ No _____ Copy Provided

DATE SUBMITTED: 03/21/16 By: JHR

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development