CITY OF ALBUQUERQUE

March 26, 2015

Patrick J. Conley, P.E.
Smith Engineering Company
2201 San Pedro NE
Albuquerque, New Mexico 87103

RE: **Sandia Prep School Running Track Reconstruction**
532 Osuna Rd. NE
Grading and Drainage Plan
Engineers Stamp Date 3/13/15 (E16D012)

Dear Mr. Conley,

Based upon the information provided in your submittal received 3/17/15, this plan is approved for Grading Permit and Paving Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

When completed please provide a copy of the as-build for our records.

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

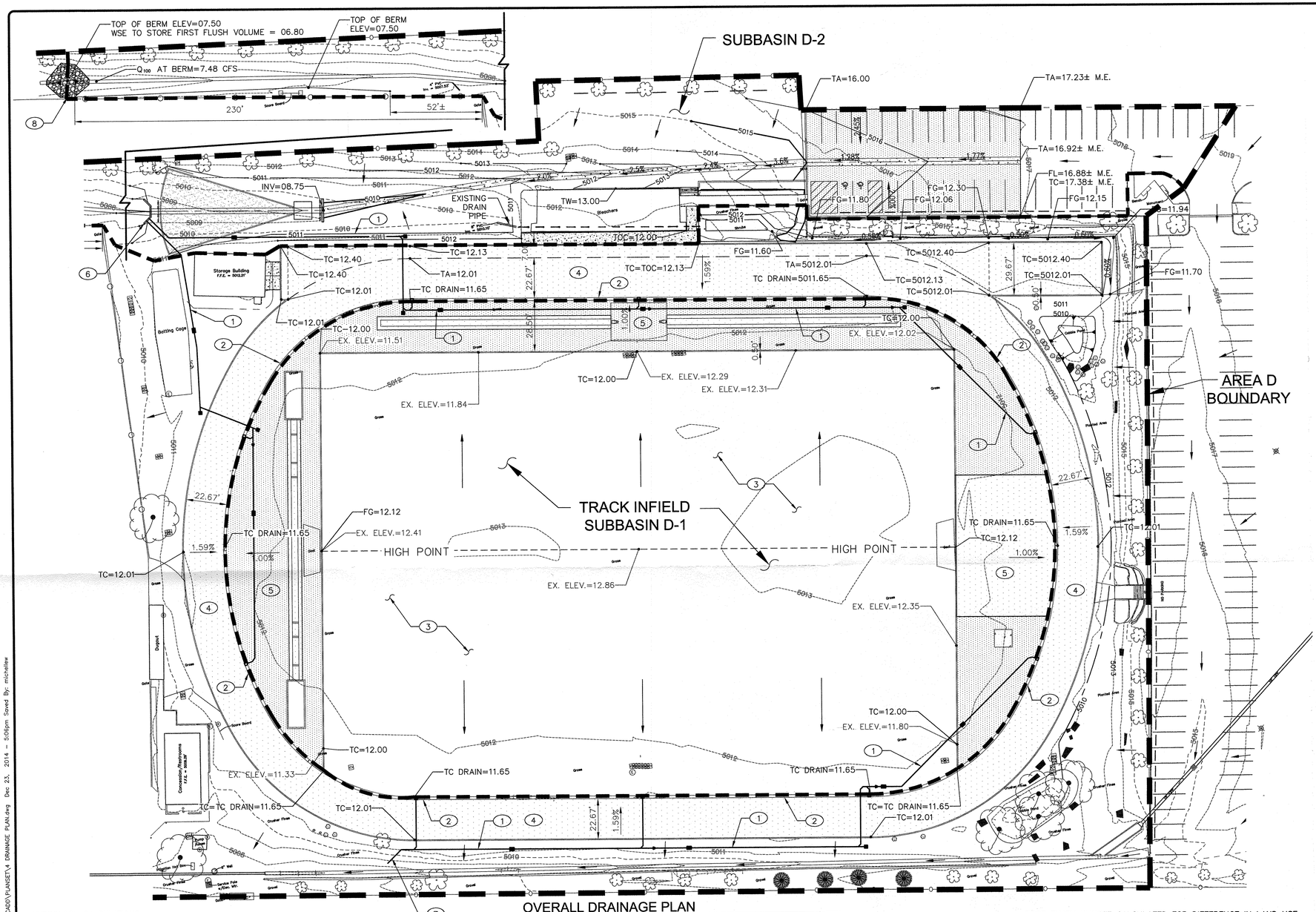
RR/RH
C: File

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov



OVERALL DRAINAGE PLAN

SCALE: 1"=30'

HYDROLOGY CALCULATIONS

This project is the reconstruction of the Sandia Preparatory School (SPS) running track. The project is located in Zone Atlas Map E-15/E-16. The project is located in an area with a Flood Zone X designation per the FIRM Panel 138 of 825 for Bernalillo County, New Mexico. Hydrology and volume calculations were completed using the Section 22.2 of the COA DPM and Precipitation Zone 2. Review of the Master Drainage Report for SPS dated December 17, 1990 and subsequently revised on August 2, 1995 shows that 33.29 cfs of runoff is generated to the east of the project area in drainage Areas B and C, consisting primarily of school buildings. Area B drainage around the south side of the new gymnasium and into a swale that runs along the southern edge property. Area C drains into the north parking lot. A high point in the parking lot at the northeastern boundary of Area D directs flow south. The flow is collected in a drop inlet and is directed to the open channel on the south side of the soccer field through a pipe. While this flow is conveyed through Basin D it does not impact the soccer field and moves west into the existing pond located adjacent to the Alameda Lateral at Edith Boulevard.

The project area is located in drainage Area D. For purposes of this analysis, the drainage areas affected by this project are designated Sub-basin D-1 (track and soccer field) and Sub-basin D-2 (parking area and open area north of the soccer field). The track is currently paved with a rubberized surfacing material while the existing infield within the track oval is grass. The changes in the land use will only occur on the existing soccer field contained within the inner perimeter of the track. Part of the existing soccer track will be paved to allow for additional areas for track events including pole vault, high jump and long jump. This will involve changing a portion of the land use of the soccer field from Land Use "B" to "D". The increase in "D" land use within the soccer field will result in an increase in runoff from this area of 1.67 cfs (from 6.22 cfs to 7.89 cfs). The runoff from the modified soccer field will be collected in a trench drain along the inner perimeter of the track and will be conveyed to discharge points outside the track using a storm drain system. The north side will have two discharge lines and the south side will have one discharge line. While this project includes regrading of areas outside the track to improve drainage patterns, these area land uses will not change. Therefore, all runoff excluding the inner perimeter of the track will remain the same as current (historic) conditions.

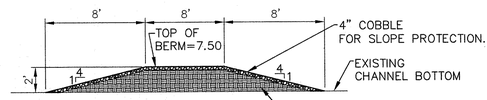
A berm will be constructed along the north side of the baseball field in an existing drainage swale to detain the initial 0.34 inches of runoff from the added "D" area in the soccer field allowing for infiltration of the initial 0.34 inches of runoff. As a result of topography, the north side of the site allows for better ponding than the south side of the site. Q100 flow through the north track collection system will total 3.48 cfs. Flows from Sub-basin D-2 will also reach the berm. The peak flow that will reach the proposed berm and ponding area is 7.48 cfs (3.48 cfs from Sub-basin D-1 and 4.0 cfs from Sub-basin D-2). The initial volume of runoff will result in a required pond volume of 852 cubic feet. All other runoff will be allowed to flow over the berm through historic paths and at historic rates.

FIRST FLUSH RUNOFF CALCULATED FOR DIFFERENCE IN LAND USE

TOTAL INCREASE OF TYPE "D" AREA, SF	30,056
VOLUME OF RUNOFF FOR 0.34 INCHES RAINFALL, FT³	852

	LAND USE AND ACREAGE			
	A	B	C	D
INFIELD, EXISTING CONDITIONS	0	2.73	0	0
INFIELD, DEVELOPED CONDITIONS	0	2.06	0	0.69

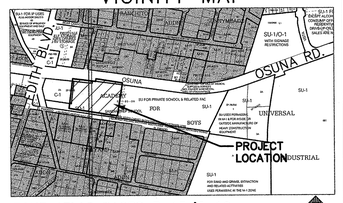
	RUNOFF, CFS/ACRE				TOTAL RUNOFF, CFS	INCREASE IN RUNOFF, CFS
	A	B	C	D		
INFIELD, EXISTING CONDITIONS	0	6.22	0	0	6.22	1.67
INFIELD, DEVELOPED CONDITIONS	0	4.65	0	3.20	7.89	



PONDING BERM DETAIL

SCALE: NONE

VICINITY MAP



ZONE ATLAS PAGES E-15/E-16

N.T.S.

532 OSUNA RD NE
Lots: 2A AND 2B – SANDIA PREP SCHOOL
Block: 0000
Subdivision: ACADEMY FOR BOYS

ZONING

LOT 2A
Designation: C-1
Category: COMMERCIAL
Land Use Classification: 2000

LOT 2B
Designation: SU-1
Category: INSTITUTIONAL/GOVERNMENT
Land Use Classification: 7100

GENERAL NOTES

1. ALL SPOT ELEVATIONS ARE PLUS 5000 FEET.

KEYED NOTES:

(1) NEW DRAIN PIPE FOR TRACK DRAIN.

(2) NEW TRACK TRENCH DRAIN SYSTEM.

(3) EXISTING SOCCER FIELD.

(4) RECONSTRUCTED TRACK.

(5) NEW PAVED "D" AREAS AND POLE VAULT AREAS.

(6) DISCHARGE POINT FOR TRACK DRAIN ON NORTH.

(7) DISCHARGE POINT FOR TRACK DRAIN ON SOUTH.

(8) CONSTRUCT NEW PONDING BERM. SEE DETAIL THIS SHEET.

LEGEND

TC	TOP OF CURB
TC DRAIN	TRENCH DRAIN TOP OF CURB
TA	TOP OF ASPHALT
FG	FINISHED GRADE
WSE	WATER SURFACE ELEVATION
- - -	SUBBASIN BOUNDARY
- - -	DRAINAGE AREA BOUNDARY PER MASTER GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'

30' 0 30' 60' 90' Feet

ERNEST PATRICK J. CONLEY
NEW MEXICO
14147
PROFESSIONAL ENGINEER
12/23/14

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

SANDIA PREPARATORY SCHOOL
ALBUQUERQUE, NEW MEXICO

SANDIA PREPARATORY SCHOOL
HIGH SCHOOL TRACK RECONSTRUCTION

DRAINAGE PLAN

SOLUTIONS FOR TODAY...
VISION FOR TOMORROW
2201 San Pedro Dr. NE
Building 4, Suite 200
Albuquerque, NM 87110
Phone: (505) 884-0700
Fax: (505) 884-2376
TEXAS
SMITH ENGINEERING COMPANY
NEW MEXICO

JOB NO: 114653
DATE: 12/23/2014
SHEET 4 OF 19

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Sandia Prep. School Running Track Reconstruct Building Permit #: N/A City Drainage #: N/A

DRB#: Not applicable EPC#: Not applicable Work Order#: Not applicable

Legal Description:

City Address: 532 Osuna Rd. NE, Albuquerque, NM 87113

Engineering Firm: Smith Engineering Company Contact: Patrick J. Conley, PE

Address: 2201 San Pedro NE, Bldg 4, Suite 200, Albuquerque, NM 87110

Phone#: 505-884-0700 Fax#: 505-884-2376 E-mail: patc@smithengineering,pro

Owner: Sandia Preparatory School Contact: Jerry Lovato

Address: 532 Osuna Rd. NE, Albuquerque, NM 87113

Phone#: 505-338-3000 Fax#: 505-338-3099 E-mail:

Architect: Contact:

Address:

Phone#: Fax#: E-mail:

Surveyor: Contact:

Address:

Phone#: Fax#: E-mail:

Contractor: Contact:

Address:

Phone#: Fax#: E-mail:

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL G & D PLAN
- X 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
- X 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 X No ____ Copy Provided

DATE SUBMITTED: 12/26/2014 By: Patrick J. Conley, PE

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 followin

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

Solutions for Today...

Vision for Tomorrow

December 23, 2014

Ms. Amy L. D. Niese, PE
Senior Engineer Hydrology
City of Albuquerque Planning Department
600 2nd Street NW, Suite 201
Albuquerque, NM 87102

Re: Sandia Preparatory School Running Track Reconstruction Re-submittal 114653

Dear Ms. Niese:

Smith Engineering is providing this re-submittal for the grading plan for review and approval by the City of Albuquerque for a Grading Permit. The project includes the reconstruction of an existing running track on the grounds of the Sandia Preparatory School. There will not be any work within the City of Albuquerque right-of-way. We have reviewed the existing drainage file provided by the City and have modified the drainage plan based on the information in those files. This re-submittal addresses the items that you provided comments on in your December 19, 2014 review letter. These have been addressed as follows:

Item 1: Discussion of 100-Year floodplain is included.
Item 2: The first flush is re-calculated based on 0.34 inches rainfall.
Item 3: The elevation of the WSE for the first flush is shown on the plan. Calculations in determining that elevation are provided with this letter.
Item 4: We are not using the existing pond for retention of the first flush. The proposed berm will control the first flush.
Item 5: The existing 10-inch storm pipe under the bleachers is shown.

I have attached a Drainage and Transportation Information Sheet with one (1) copy of the grading plan for your review. Thank you in advance for your time and please let me know if you have any questions or if you need additional information.

Sincerely,

Smith Engineering Company

Patrick J. Conley, PE
Project Engineer

Enclosure
cc: File

2201 San Pedro Drive, NE | Building 4, Suite 200 | Albuquerque, NM 87110
Tel: 505.884.0700 | PatC@smithengineering.pro | Fax: 505.884.2376

SANDIA PREPARATORY SCHOOL FIRST FLUSH BERM

NAVD 88 Contour Elevation (ft)	Contour Area (ft^2)	Incremental Depth (ft)	Cumulative Depth (ft)	Incremental Average End Area Volume (ft^3)	Cumulative Average End Area Volume (ft^3)	Cumulative Average End Area Volume (ac-ft)
5005.21	0.00	0.00	0.00	0.00	0.00	0.0000
5006.00	432.00	0.79	0.79	170.64	170.64	0.0039
5007.00	1677.00	1.00	1.79	1054.50	1225.14	0.0281

Available storage at elevation 5007.00 exceeds required storage of 825 ft^3.
Assume each 0.10 of a foot between 06 and 07 provides 124.5 ft^2 ((1677 ft^2 - 432 ft^2)/10) of area to more precisely determine water surface elevation that will result in 825 ft^3 of storage.

SANDIA PREPARATORY SCHOOL FIRST FLUSH BERM

NAVD 88 Contour Elevation (ft)	Contour Area (ft^2)	Incremental Depth (ft)	Cumulative Depth (ft)	Incremental Average End Area Volume (ft^3)	Cumulative Average End Area Volume (ft^3)	Cumulative Average End Area Volume (ac-ft)
5005.21	0.00	0.00	0.00	0.00	0.00	0.0000
5006.00	432.00	0.79	0.79	170.64	170.64	0.0039
5006.10	556.50	0.10	0.89	49.43	220.07	0.0051
5006.20	681.00	0.10	0.99	61.87	281.94	0.0065
5006.30	805.50	0.10	1.09	74.33	356.27	0.0082
5006.40	930.00	0.10	1.19	86.77	443.04	0.0102
5006.50	1054.50	0.10	1.29	99.23	542.26	0.0124
5006.60	1179.00	0.10	1.39	111.68	653.94	0.0150
5006.70	1303.50	0.10	1.49	124.12	778.06	0.0179
5006.80	1428.00	0.10	1.59	136.58	914.64	0.0210
5006.90	1552.50	0.10	1.69	149.02	1063.66	0.0244
5007.00	1677.00	1.00	1.79	1054.50	1225.14	0.0281

Water surface elevation to store 825 ft^3 is approximately 5006.80 ft.