CITY OF ALBUQUERQUE

September 29, 2014

Graeme Means, PE
High Mesa Consulting Group
6010 –B Midway Park Blvd NE
Albuquerque, NM 87109

Re: Sandia High School Science/Math Classroom Building Library
7801 Candelaria Rd NE
Engineer's Stamp dated: 77/27/2012 (G19D021)
Certification dated: 9-23-14

Dear Mr. Means,

Based on the Certification received 8/12/2014, the site is acceptable for release of Certificate of Occupancy by Hydrology.

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

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

RR/CC
C: CO Clerk
email

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Sandia High School Science/Math Classroom Building Library Building Permit #: _____ City Drainage #: G-19-D021

DRB#: 1008844 EPC#: _____ Work Order#: _____

Legal Description: Tract A, Sandia High School (2011C-0137)

City Address: 7801 Candeleria Rd. NE

Engineering Firm: High Mesa Consulting Group Contact: Graeme Means #13676

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: gmeans@highmesacg.com

Owner: Albuquerque Public Schools Contact: David Ritchey

Address: 915 Oak Street SE, Albuquerque, NM 87106

Phone#: 848-8876 Fax#: _____ E-mail: ritchey_d@aps.edu

Architect: Mahlman Studio Architecture Contact: Steve Hall

Address: 206 Broadway SE, Albuquerque, NM 87102

Phone#: 243-0101 Fax#: _____ E-mail: slhall@mahlmanstudio.com

Surveyor: High Mesa Consulting Group Contact: Chuck Cala #11184

Address: 6010-B Midway Park Blvd NE, Albuquerque, NM 87109

Phone#: 345-4250 Fax#: _____ E-mail: ccala@highmesacg.com

Contractor: HB Construction Contact: Ty Perry

Address: 5301 Beverly Hills NE, Albuquerque, NM 87113

Phone#: 856-0404 Fax#: _____ E-mail: typ@hbconstruction.com

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION & SEDIMENT CONTROL PLAN (ESC)
X 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
X 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)

RECEIVED
SEP 23 2014
LAND DEVELOPMENT SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED: ____ Yes X No ____ Copy Provided

DATE SUBMITTED: 9/23/14 By: J. Graeme Means

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

CITY OF ALBUQUERQUE

March 12, 2013

Jeffery G. Mortensen
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87106

Re: Sandia HS Softball Field, 7801 Candelaria Rd. NE
Request for Permanent C.O. –Accepted
Engineer's Stamp dated: ~~07-2~~7-12, (G19/D021) 1-18-12
Certification dated: 3-7-13

Dear Mr. Mortensen,

Based upon the information provided in the Certification received 03-06-13, the above referenced Certification is acceptable for a release of a Permanent Certificate of Occupancy by Hydrology.

Hydrology is asking for an electronic copy, in .pdf format, of this certification for our records. This certification can be e-mailed to me at: ccherne@cabq.gov or tsims@cabq.gov.

If you have any questions, you can contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

Curtis A. Cherne, P.E.
Principal Engineer—Hydrology Section
Development and Building Services

RR/CC
C: CO Clerk—Katrina Sigala
e-mail

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

January 31, 2012

J. Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87109

Re: Sandia H.S. Softball Field Grading and Paving Permit, 7801 Candelaria NE
Engineer's Stamp dated 01-18-12 (G19-D021)

Dear Mr. Means,

Based upon the information provided in your submittal dated 01-18-12, the above referenced plan is approved for Building Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge as well as a Topsoil Disturbance Permit since it is disturbing ¾ of an acre or more.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Building Services

C: email

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

August 29, 2012

J Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87109

Re: Sandia High School, Science/Math Classroom Building and Library Grading and Drainage Plan
Engineer's Stamp Date 7/27/2012 (G19/D021)

Dear Mr. Duneman,

Based upon the information provided in your submittal received 7-30-12, the grading and Drainage Plan is approved for Building Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge for disturbing one acre or more and a Topsoil Disturbance Permit for disturbing ¾ of an acre or more. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

Albuquerque's MS4 Permit became effective March 1st, 2012. Grading and Drainage Plans and Drainage Reports will have to comply with the requirements of the new permit (http://www.cabq.gov/planning/landcoord/Hydrology.html).

If you have any questions, you can contact me at 924-3695.

Sincerely,

Shahab Biazar, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: e-mail

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

May 9, 2014

Graeme Means, PE
High Mesa Consulting Group
6010-B Midway Park NE
Albuquerque, NM 87109

Re: Sandia HS Science & Math Bldg.,
7801 Candelaria NE
Request for 180 day Temporary C.O. - Accepted
Engineer's Stamp dated: 07-27-12 (G19D021)
Certification dated: 5-07-14

Dear Mr. Means,

Based on the Certification received 5/7/2014, the site is acceptable for release of a 180 day Temporary Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

RR/CC
C: CO Clerk—Katrina Sigala
email

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CITY OF ALBUQUERQUE

December 28, 2006

Angela N. Valdez, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Sandia High School Campus-Wide Drainage Improvements Overall Grading and Drainage Plan

Engineer's Stamp dated 12-13-06 (G19/D21)

Dear Ms. Valdez,

Based upon the information provided in your submittal dated 12-14-06, the above referenced plan cannot be approved for Rough Grading Permit until the following comments are addressed:

- As stated previously, to obtain a Rough Grading Permit, the plan submitted must be detailed enough for a contractor to build from it. Build notes to include inverts, grate heights, elevations for retaining walls, etc.

- Thank you for meeting with me today, 12-28-06, to discuss the requirements of your next submittal.

Thank you for submitting an updated Drainage Report.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003)

PROJECT TITLE: Sandia High School Campus-wide ZONE MAP/DRG. FILE#: G-19/D21

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Sandia High School

CITY ADDRESS: N/A.

ENGINEERING FIRM: Wilson & Company, Inc. CONTACT: Angela N. Valdez, PE

ADDRESS: 4900 Lang Avenue NE PHONE: (505) 898-8021 348-4000

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87124

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: Karen Alarid, AIA, FP&C Director

ADDRESS: 915 Oak Street SE PHONE: (505)-848-8810

CITY, STATE: Albuquerque, NM 87107 ZIP CODE: 87107

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: Wilson & Company, Inc. CONTACT: C. Scott Croshaw

ADDRESS: 4900 Lang Avenue NE PHONE: 505-348-4000

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87109

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- X **DRAINAGE REPORT AND GRADING PLAN**
- ___ GRADING PLAN 1st SUBMITTAL, REQUIRES TCL OR EQUAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ AMENDED GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEERS CERTIFICATION (HYDROLOGY)
- ___ CLOMR\LOMR
- ___ TRAFFIC CIRCULTAION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS CERTIFICATION (DRB, APPR. SITE PLAN)
- ___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATION OF OCCUPANCY (PERM.)
- ___ CERTIFICATION OF OCCUPANCY (TEMP.)
- X ROUGH GRADING PERMIT
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- X YES
- _____ NO
- _____ COPY PROVIDED

RECEIVED
DEC 14 2006
HYDROLOGY SECTION

Date Submitted: 12-14-06 By: Angela N. Valdez, 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 of 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
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

DRAINAGE REPORT

for

SANDIA HIGH SCHOOL CAMPUS-WIDE DRAINAGE IMPROVEMENTS
Albuquerque, New Mexico

DECEMBER 13, 2006

PREPARED FOR:

ALBUQUERQUE PUBLIC SCHOOLS
Albuquerque, New Mexico

PREPARED BY:

Wilson & Company, Engineers & Architects
4900 Lang Avenue, NE
Albuquerque, New Mexico 87109

WCEA File No. 0660010300

WILSON & COMPANY

DRAINAGE REPORT

for

SANDIA HIGH SCHOOL CAMPUS-WIDE DRAINAGE IMPROVEMENTS
Albuquerque, New Mexico

DECEMBER 13, 2006

I, Angela N. Valdez, do hereby certify that this report was prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.

Angela Valdez

Angela N. Valdez, P.E.
NM No. 15814

12/13/06

Date

Table of Contents

List of Exhibits

List of Plates

(Located in Pocket)

List of Appendices

I. Introduction

Wilson & Company Inc. (WCI) prepared this drainage report under contract to Albuquerque Public Schools (APS). The document provides a basis for the design and improvements of storm water conveyance systems within Sandia High School. The objective of this report is to analyze the hydrologic characteristics associated with the proposed improvements to the site and to provide hydraulic analysis of a storm system that safely conveys runoff from the 100-year, 24-hour storm event.

In recent years, the site has experienced runoff that has inundated the existing storm systems, causing flooding of various building structures. Repairs to the flooded buildings have been very costly to the school district. Under the project scope, WCI is to analyze the entire campus and any offsite areas contributing runoff to the site. Our objective is to provide a master planned drainage system that will mitigate the on-site drainage and reduce flooding and provide expanding capabilities for future planned improvements to the site.

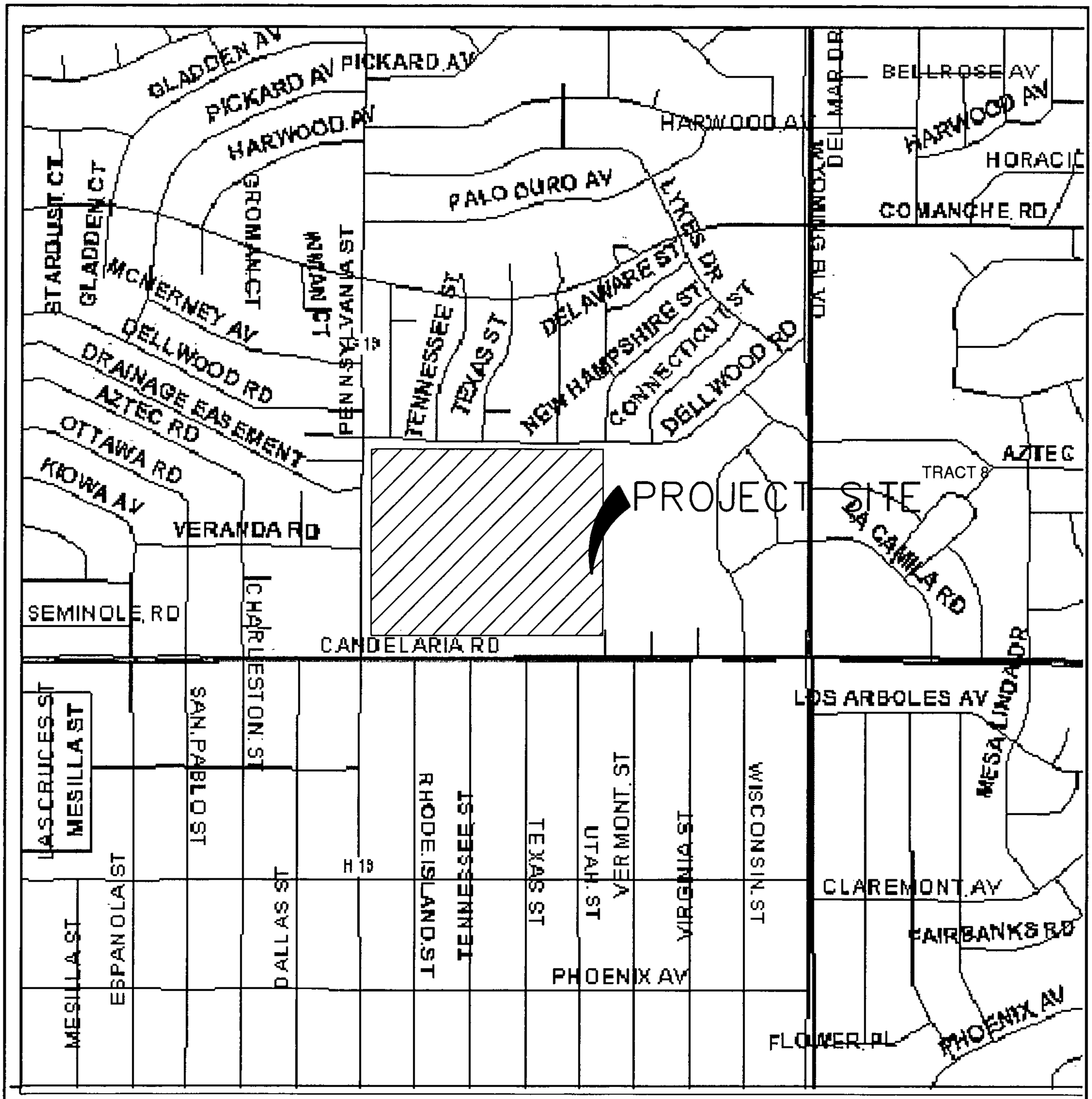
II. Project Description

Sandia High School is located within the City of Albuquerque, New Mexico. The subject property consists of approximately 36.0 acres of developed land located at the corner of Candelaria Road and Pennsylvania Street in Albuquerque's Northeast heights. Pennsylvania Street binds the subject property to the west, Dellwood Street to the north, Candelaria Road to the south and a residential subdivision to the east. See Exhibit A, Vicinity Map.

The site is located in the City's Zone Atlas Sheet G-19 (Exhibit A). According to the FEMA FIRM Panel 356 (dated September 20, 1996) the majority of the site lies within Flood Zone X. The concrete lined Hahn Arroyo is identified within Flood Zone A (undetermined base flood elevation). See Exhibit B for site location on the Flood Insurance Rate Map. The soils are classified as (Etc) based on sheet 21 of the Soil survey of Bernalillo County. See Exhibit C for site location on the Soils map.

III. Existing Conditions

The Sandia campus is approximately 70% developed with various buildings, athletic fields, parking lots and concrete walkways. The site drains in a northwesterly direction. The majority of the site has relatively gentle slopes, however, the area northeast of the football field/track has much steeper slopes where grading was done to accommodate building construction. The site has not been extensively graded within recent years so slopes are well established. The majority of the site drains toward the concrete-lined Hahn Arroyo that bisects the north end of the site from east to west.



SCALE: NTS

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

SANDIA HIGH SCHOOL
ZONE ATLAS MAP

EXHIBIT A

REFERENCE: ZONE ATLAS MAP G-19

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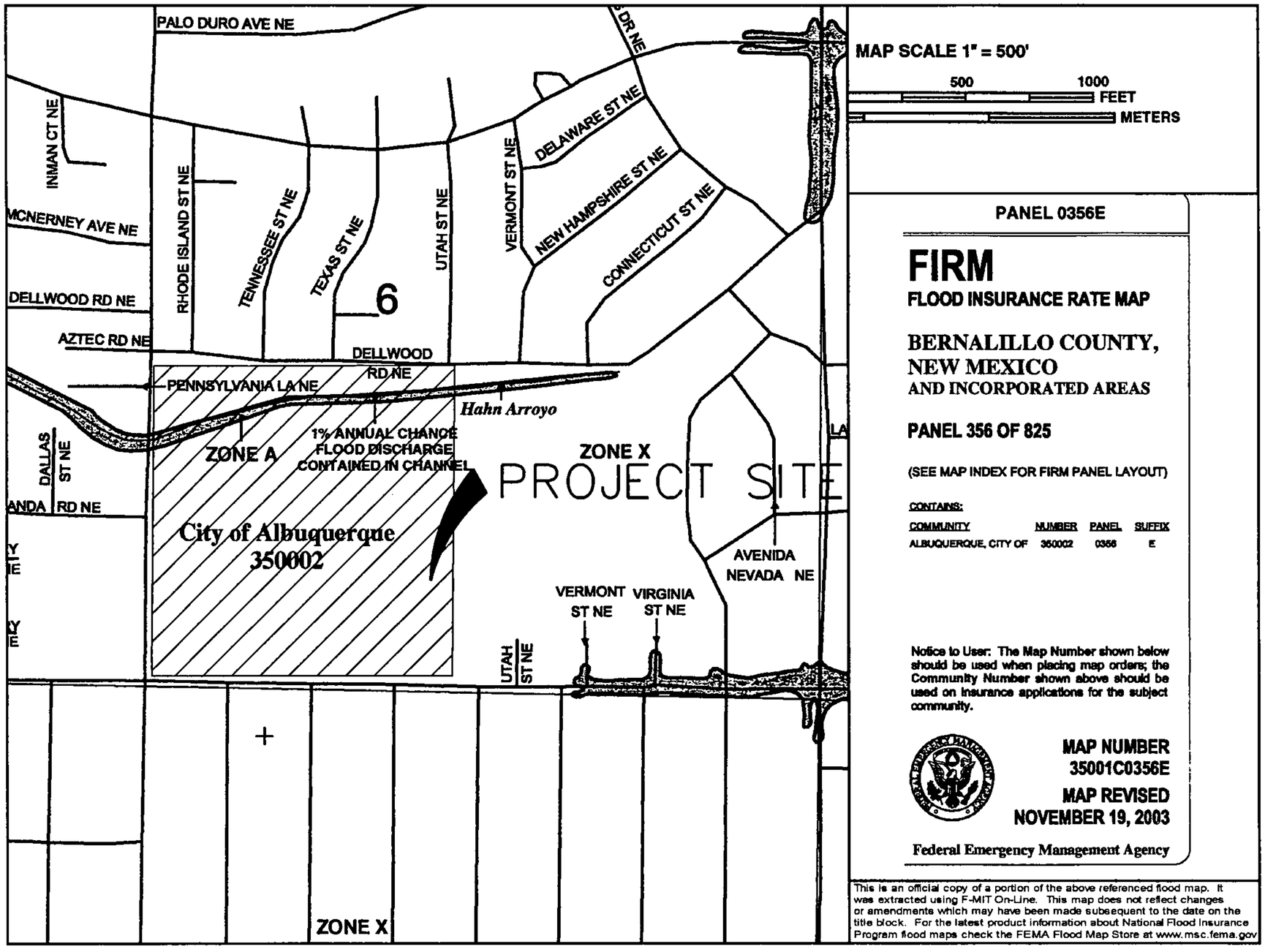


N

SCALE: 1"=1000'

WILSON & COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

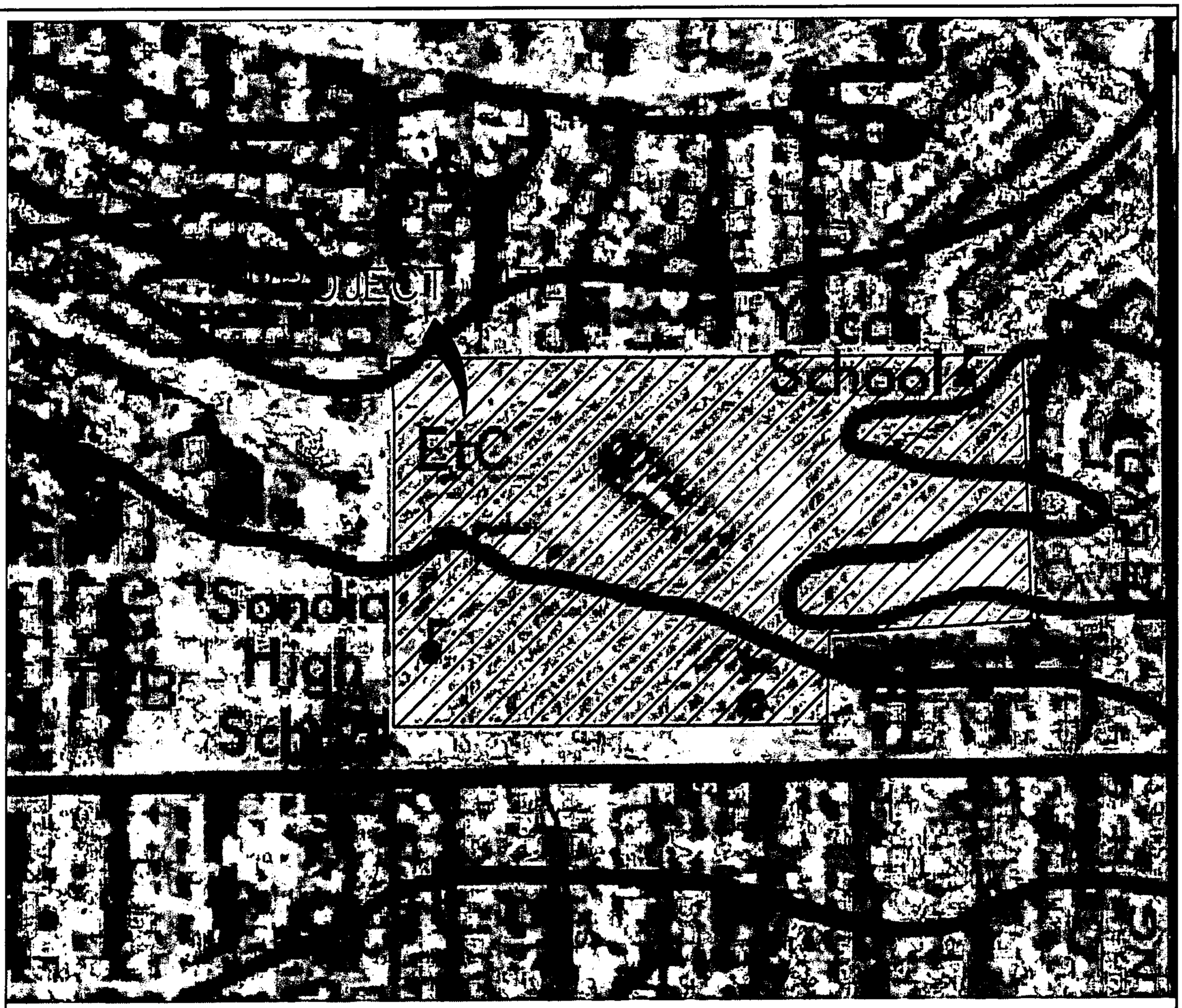
SANDIA HIGH SCHOOL

FEMA MAP

EXHIBIT B

REFERENCE: FLOOD INSURANCE STUDY, PANEL 356

T:\Projects\0660010300\ENG_DATA\Drainage Report\FEMA.dwg 11/8/2006 11:02:22 AM MST



N

SCALE: NTS

WILSON &COMPANY
2600 THE AMERICAN ROAD S.E.
SUITE 100
RIO RANCHO, NEW MEXICO
87124
(505) 898-8021

SANDIA HIGH SCHOOL
SOILS MAP

EXHIBIT C

REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY, SHEET 21

T:\Projects\0660010300\ENG_DATA\Drainage Report\SOILSMAP.dwg 11/8/2006 11:05:38 AM MST

Offsite flows contributing runoff to the site are from the residential area to the east and south of the campus. The southern areas drain onto the campus via wall penetrations in the residential backyard walls. Runoff in the cul-de-sacs drains north through concrete line swales through the corner lots to the area south of the track. It appears that only the backyards of lots adjacent to the school drain through penetrations in the east perimeter wall. Runoff in Candelaria appears to be contained within the existing curb.

Through investigations of the on-site drainage system and plans filed with the City of Albuquerque, it was determined that a public storm drain exists on Sandia's campus. At this time, as-built information of the line cannot be obtained. The storm drain is an extension of the system east of the campus that drains the majority of the area between Sandia High School and Wyoming Boulevard. The storm drain enters the site at the southwest corner of the campus and outlets at the Hahn Arroyo near the northeast corner of the existing soccer field. From field surveys, it was determined that the pipe is 30"-diameter CMP pipe. The majority of the pipe is buried approximately 10 to 14-feet deep.

IV. Developed Conditions

At this time, no additional structures are proposed. The scope of this project is to construct an on-site drainage system that safely conveys runoff to Hahn Arroyo. The majority of the existing on-site storm systems will be removed and replaced with the new system.

This report divides the project site into sub-basins as shown in the Master Drainage Plan, Plate 1. Drainage basin boundaries were determined based on both existing flow patterns and proposed grading to be completed with construction of the new storm drain systems. At this time, considerations were taken only for the proposed eastern gymnasium expansion to be constructed at a later date. Further drainage calculations will be necessary at the time of future building construction.

In order to accommodate future modifications to the soccer field, the school will be required to relocate the existing public storm drain. The existing outlet into the concrete channel will remain undisturbed. Changes to the pipe will be made to upstream sections only.

Re-grading and construction of surface inlets are proposed in order to control erosion along the south edge of the Hahn Arroyo.

V. Methodology

Table A-5 from Section 22.2 of the City of Albuquerque Development Process Manual was used for determining the percentage of Land Treatment D (Impervious) for the site.

The hydrologic analysis for the developed conditions was completed using the methodology outlined in Section 22.2 of the City of Albuquerque Development Process

Manual. The 100-year 24-hour return frequency storm was used as the basis of analysis. Storm drain analysis was completed using the Hydraflow Storm Sewers 2005 program. Hydraulic Grade Line elevations could not be established using the original design plans, therefore, they were assumed at top of channel elevations. Inlet capacities were modeled using FlowMaster by Haested Methods.

VI. Hydrology

The total generated runoff for the site under the current developed conditions, including offsite flows, is 257.8 cfs. Plates 1A, 1B and 1C, Overall Grading & Drainage Plan identify proposed basin boundaries and storm drain systems. The calculated runoff from onsite basins 107_1, 108_3, 108_4, 108_5 and 111, which contribute a total of 27.4-cfs, will be collected into Storm Drain 1 and routed to the Hahn Arroyo at Analysis Point 1. Onsite flows from basins 101_1, 101_2, 103_2, 108_1, 108_2 and 108_6, and offsite flows from basin 204, contribute a total of 50.7-cfs. These flows will be collected in Storm Drain 2 and routed to the Hahn Arroyo at Analysis Point 2. Onsite basin 110 will be collected by Storm Drain 3 and routed to the Hahn at Analysis Point 3. Discharge of 52.36-cfs from offsite basins 201, 202, 203, onsite basins 103_1 and portions of basins 106 and 108 will be collected and routed to the existing public storm drain (Storm Drain 4). The public storm drain will be re-aligned from the northwest corner of the football field to the outlet at the arroyo. The existing channel outlet will not be reconstructed. Discharge from the residential area east of Sandia High School (Basin 300), approximately 51.6-cfs, will continue to flow to the Hahn Arroyo via the newly aligned public storm drain. Onsite basins 107_2, 106 (eastern portion), 115 and overflow from basin 107_1 will continue to sheet flow to the Hahn Arroyo. Developed flows from basins 101_3, 112, 113, and 114 will continue to drain into adjacent streets where they are mitigated by COA storm drain systems. Table A (Appendix A) summarizes the hydrologic calculations. Storm drain analysis output is located in Appendix B.

VII. Conclusion

The analysis performed for this report demonstrates that the proposed storm drainage system improvements within the site will safely convey 100-year, 24-hour storm runoff from the offsite and the onsite basins contributing flows. WCI recommends that the proposed storm drain systems, as well as, existing systems such as roof drains, undergo regular maintenance activities. This should include removing debris from grate inlets, as well as removing sediment build-up within the pipe system and roof drain systems. As future onsite development occurs, the storm drain system should be re-analyzed in greater detail to ensure that the storm drains can adequately mitigate the additional runoff and is within the constraints of this design.

APPENDICES

APPENDIX A

HYDROLOGIC ANALYSIS, COA DPM

SANDIA HIGH SCHOOL
CAMPUS WIDE DRAINAGE IMPROVEMENTS

HYDROLOGY CALCULATIONS - DEVELOPED CONDITIONS

Per City of Albuquerque Development Process Manual
100-yr., 24-hour Storm Event
Precipitation Zone: 3

December 13, 2006

Not accounting for concrete paving in developed conditions

Basin ID	Area (acres)	%A	%B	%C	%D	Weighted E (inches)	V_{360} (ac-ft)	V_{1440} (ac-ft)	Peak Discharge Q_{100} (cfs)
AP 1									
Onsite Basins									
107_1	1.58	0%	10%	39%	52%	1.81	0.24	0.27	6.61
108_3	1.18	0%	12%	0%	88%	2.19	0.22	0.26	5.58
108_4	1.82	0%	3%	0%	97%	2.32	0.35	0.43	9.02
108_5	0.23	0%	10%	38%	53%	1.81	0.03	0.04	0.96
111	1.06	0%	5%	0%	95%	2.29	0.20	0.24	5.20
					TOTAL AP 1		**1.04**	**1.24**	**27.38** ✓
AP 2									
Onsite Basins									
101_1	1.43	0%	57%	35%	9%	1.18	0.14	0.15	4.45
101_2	3.53	0%	45%	15%	40%	1.55	0.46	0.52	13.05
103_2	2.38	0%	5%	85%	10%	1.38	0.27	0.28	8.48
108_1	1.28	0%	7%	50%	45%	1.77	0.19	0.21	5.33
108_2	1.82	0%	11%	17%	72%	2.02	0.31	0.36	8.17
108_6	0.86	0%	11%	17%	72%	2.02	0.14	0.17	3.86
Offsite Basin									
204	1.88	0%	27%	27%	45%	1.67	0.26	0.30	7.39
					TOTAL AP 2		**0.50**	**0.57**	**50.71** ✓
AP 3									
Onsite Basins									
110 *	1.79	0%	7%	26%	68%	1.99	0.30	0.35	7.97
					TOTAL AP 3		**0.30**	**0.35**	**7.97**
AP 4									
Onsite Basins									
103_1	1.70	0%	48%	47%	5%	1.17	0.17	0.17	5.30
103_3	3.80	0%	52%	26%	22%	1.33	0.42	0.46	12.74
105	3.61	0%	11%	54%	36%	1.63	0.49	0.55	14.16
106(portion)	0.87	0%	0%	42%	58%	1.91	0.14	0.16	3.79
108_1(portion)	0.20	0%	0%	80%	20%	1.50	0.03	0.03	0.75
Offsite Basins									
201	0.63	0%	33%	33%	34%	1.54	0.08	0.09	2.34
202	1.70	0%	32%	32%	36%	1.55	0.22	0.25	6.36
203	1.88	0%	49%	10%	41%	1.55	0.24	0.27	6.91
300	12.83	0%	25%	25%	50%	1.73	1.85	2.12	51.61
					TOTAL AP 4		**1.79**	**1.97**	**103.97**
COA STORM SYSTEM									
Onsite Basins									
107_2	4.10	0%	65%	26%	9%	1.15	0.39	0.41	12.50
107_3	0.38	0%	8%	11%	82%	2.13	0.07	0.08	1.77
101_3	0.72	0%	0%	4%	96%	2.32	0.14	0.17	3.57
106	3.09	0%	10%	69%	21%	1.48	0.38	0.41	11.41
112	2.86	0%	28%	0%	72%	1.96	0.47	0.55	12.42
113	3.26	0%	8%	0%	92%	2.24	0.61	0.73	15.71
114	1.67	0%	11%	0%	89%	2.20	0.31	0.37	7.95
115	0.53	0%	11%	0%	89%	2.20	0.10	0.12	2.52
					TOTAL COA STORM		**1.97**	**2.31**	**67.85**
					TOTAL RUNOFF		**5.59**	**6.44**	**257.88**

NOTE: 1. PORTIONS OF BASIN 107_1, 107_2, AND 106 DRAIN TO HAHN ARROYO.
NOTE: 2. BASINS 107_3, AND 115 DRAIN DIRECTLY TO HAHN ARROYO.

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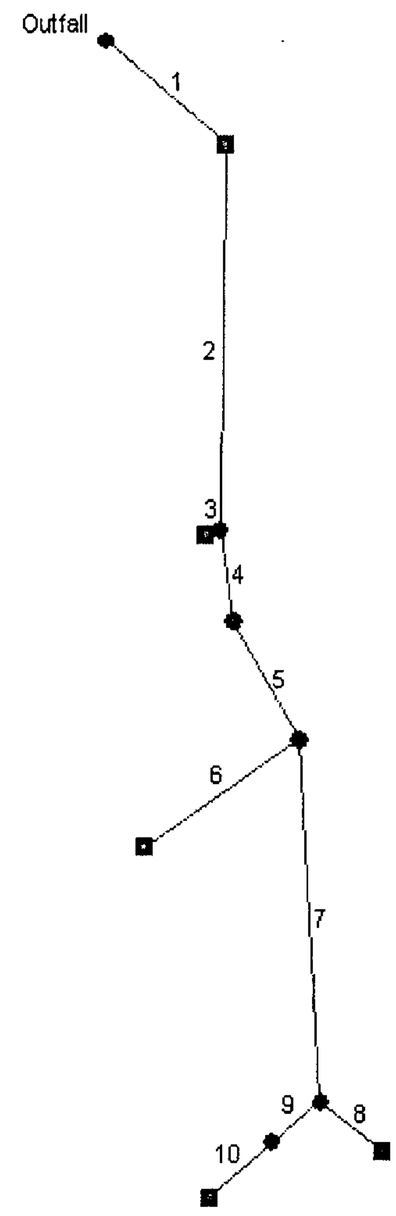
APPENDIX B

HYDRAFLOW, STORM DRAIN SIZING ANALYSIS

Hydraflow Plan View



SD1-112706	No. Lines: 10	12-06-2006

Storm Sewer Summary Report

Can't verify

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns line No.
1		23.30	36 c	80.7	5353.58	5354.30	0.892	5356.75	5356.80	0.26	5357.07	End
2		23.30	30 c	186.3	5354.40	5355.24	0.451	5357.07	5357.61	0.35	5357.96	1
3		3.50	18 c	8.0	5355.24	5355.40	1.996	5358.26*	5358.27*	0.06	5358.33	2
4		19.80	30 c	44.6	5355.34	5355.56	0.494	5358.07*	5358.17*	0.11	5358.28	2
5		19.80	30 c	66.8	5355.66	5355.90	0.359	5358.28	5358.40	0.25	5358.65	4
6		5.58	18 c	96.4	5355.99	5356.50	0.529	5358.75*	5359.02*	0.16	5359.18	5
7		14.22	24 c	175.5	5355.99	5359.13	1.789	5358.65	5360.47	n/a	5360.47 j	5
8		9.02	24 c	40.4	5359.23	5362.63	8.416	5361.23	5363.69	n/a	5363.69 j	7
9		5.20	18 c	32.0	5359.23	5359.87	2.000	5360.96	5360.97	0.03	5361.00	7
10		5.20	18 c	41.9	5359.97	5360.81	2.007	5361.47	5361.68	n/a	5361.68 j	9

SD1-112706 | Number of lines: 10 | Run Date: 12-06-2006

NOTES: c = cir; e = ellip; b = box; Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Tabulation

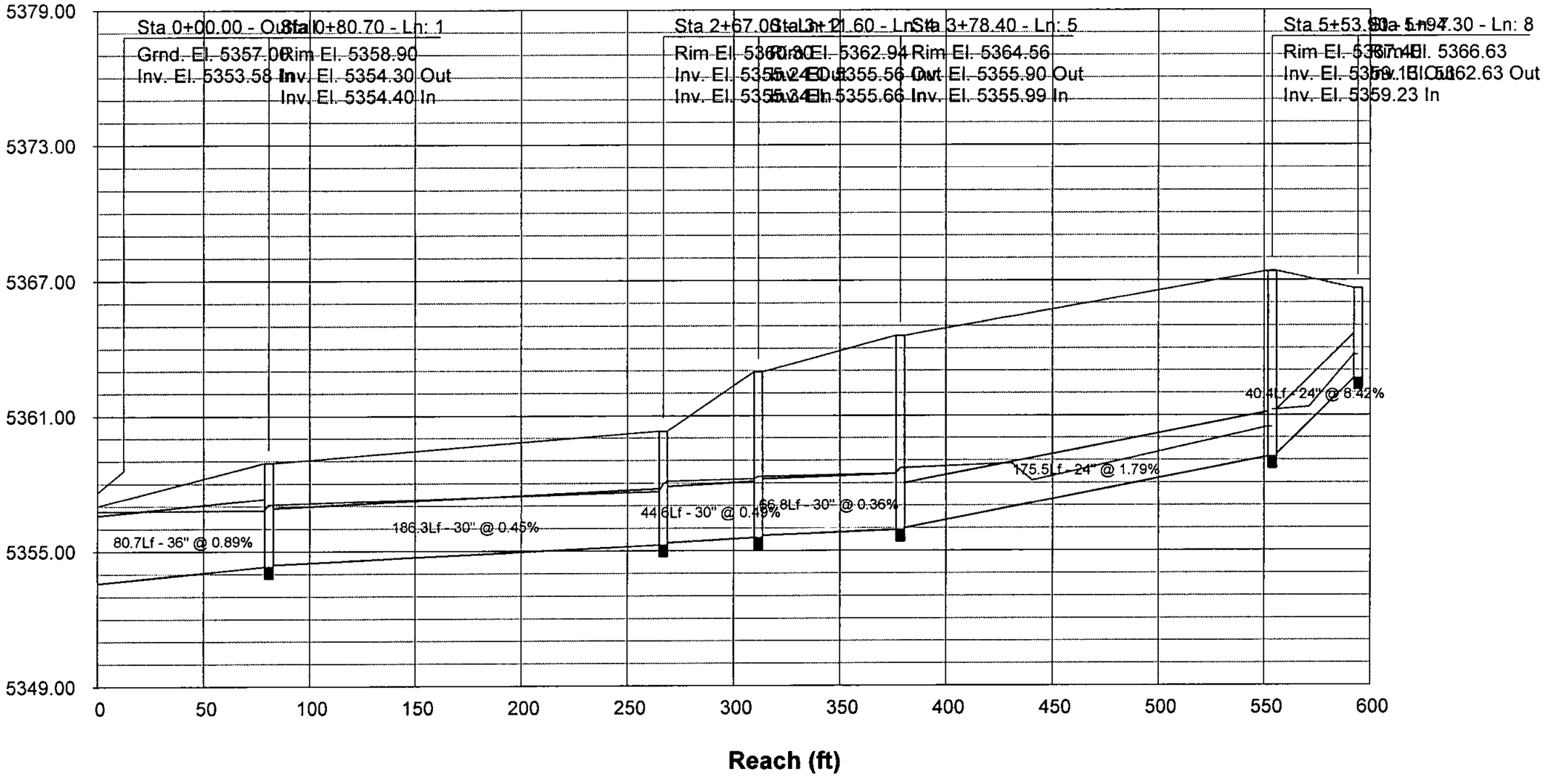
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	80.7	0.00	0.00	0.00	0.00	0.00	0.0	2.2	0.0	23.30	62.98	3.50	36	0.89	5354.30	5353.58	5356.80	5356.75	5358.90	5357.00	
2	1	186.3	0.00	0.00	0.00	0.00	0.00	0.0	1.5	0.0	23.30	27.54	4.79	30	0.45	5355.24	5354.40	5357.61	5357.07	5360.30	5358.90	
3	2	8.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.50	14.84	1.98	18	2.00	5355.40	5355.24	5358.27	5358.26	5359.90	5360.30	
4	2	44.6	0.00	0.00	0.00	0.00	0.00	0.0	1.3	0.0	19.80	28.82	4.03	30	0.49	5355.56	5355.34	5358.17	5358.07	5362.94	5360.30	
5	4	66.8	0.00	0.00	0.00	0.00	0.00	0.0	1.1	0.0	19.80	24.57	4.03	30	0.36	5355.90	5355.66	5358.40	5358.28	5364.56	5362.94	
6	5	96.4	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	5.58	7.64	3.16	18	0.53	5356.50	5355.99	5359.02	5358.75	5359.50	5364.56	
7	5	175.5	0.00	0.00	0.00	0.00	0.00	0.0	0.4	0.0	14.22	30.25	5.45	24	1.79	5359.13	5355.99	5360.47	5358.65	5367.40	5364.56	
8	7	40.4	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	9.02	65.61	4.09	24	8.42	5362.63	5359.23	5363.69	5361.23	5366.63	5367.40	
9	7	32.0	0.00	0.00	0.00	0.00	0.00	0.0	0.2	0.0	5.20	14.85	3.35	18	2.00	5359.87	5359.23	5360.97	5360.96	5367.71	5367.40	
10	9	41.9	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	5.20	14.88	3.92	18	2.01	5360.81	5359.97	5361.68	5361.47	5368.00	5367.71	

SD1-112706 | Number of lines: 10 | Run Date: 12-06-2006

NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Storm Sewer Profile

Proj. file: SD1.stm



Storm Sewer Profile

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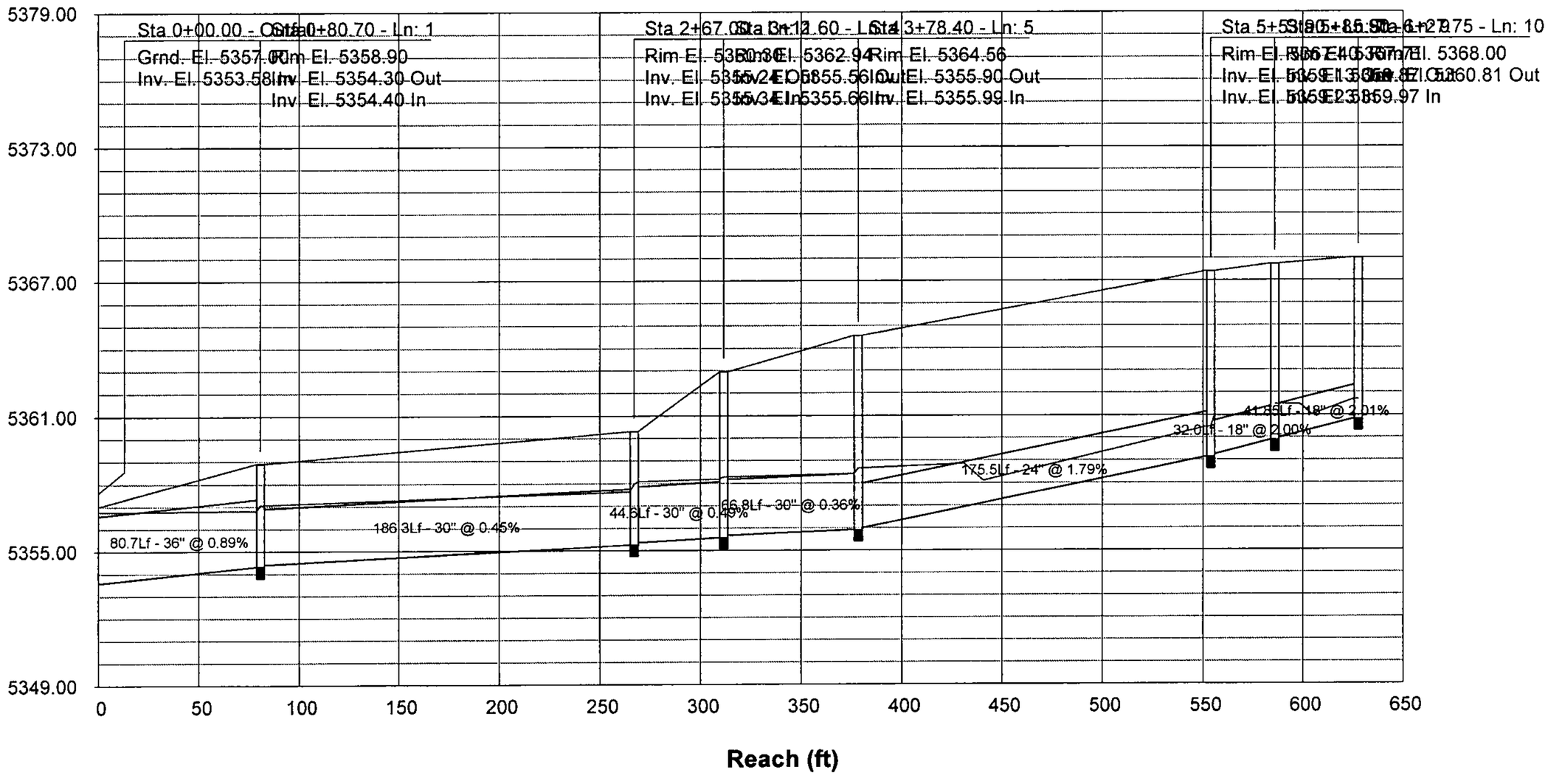
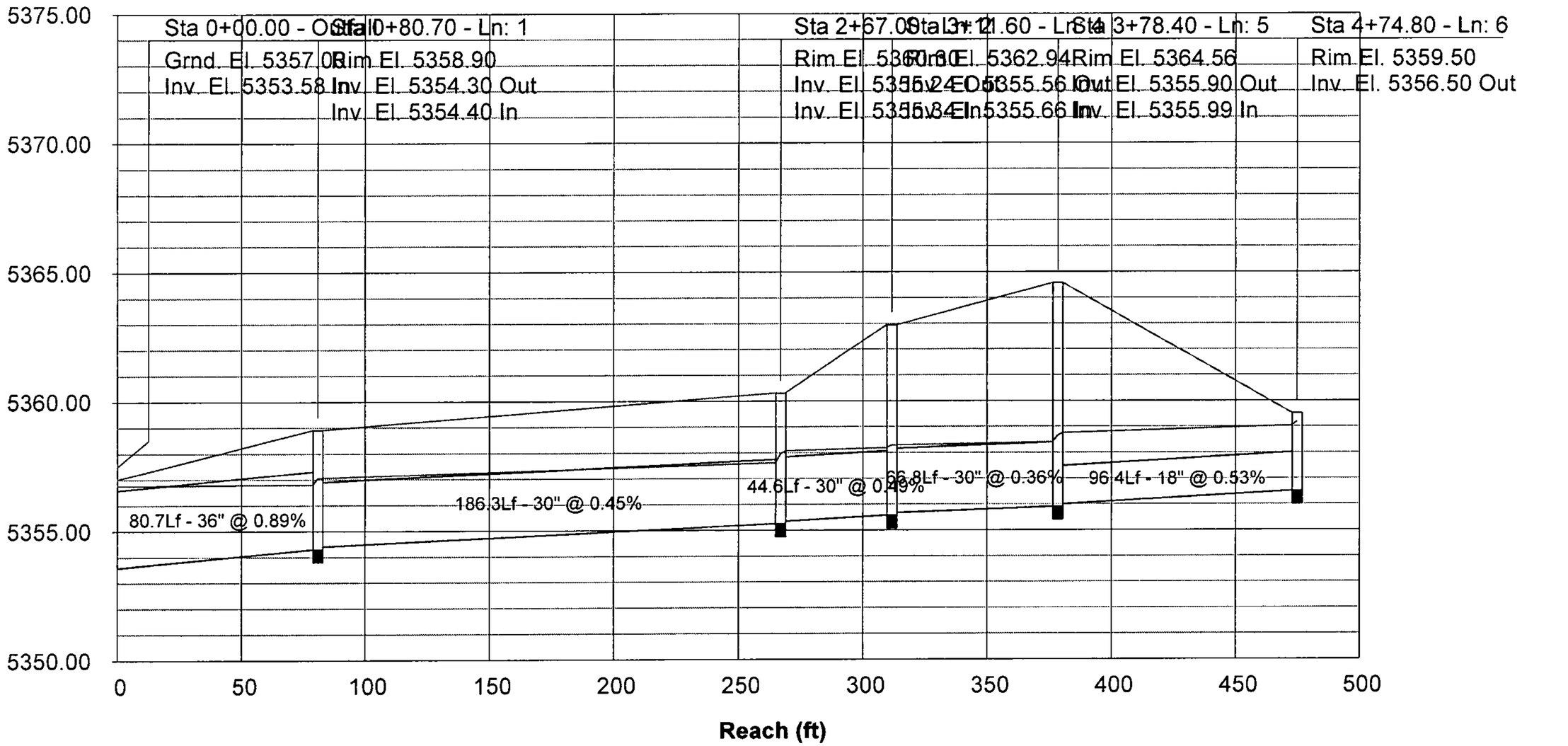
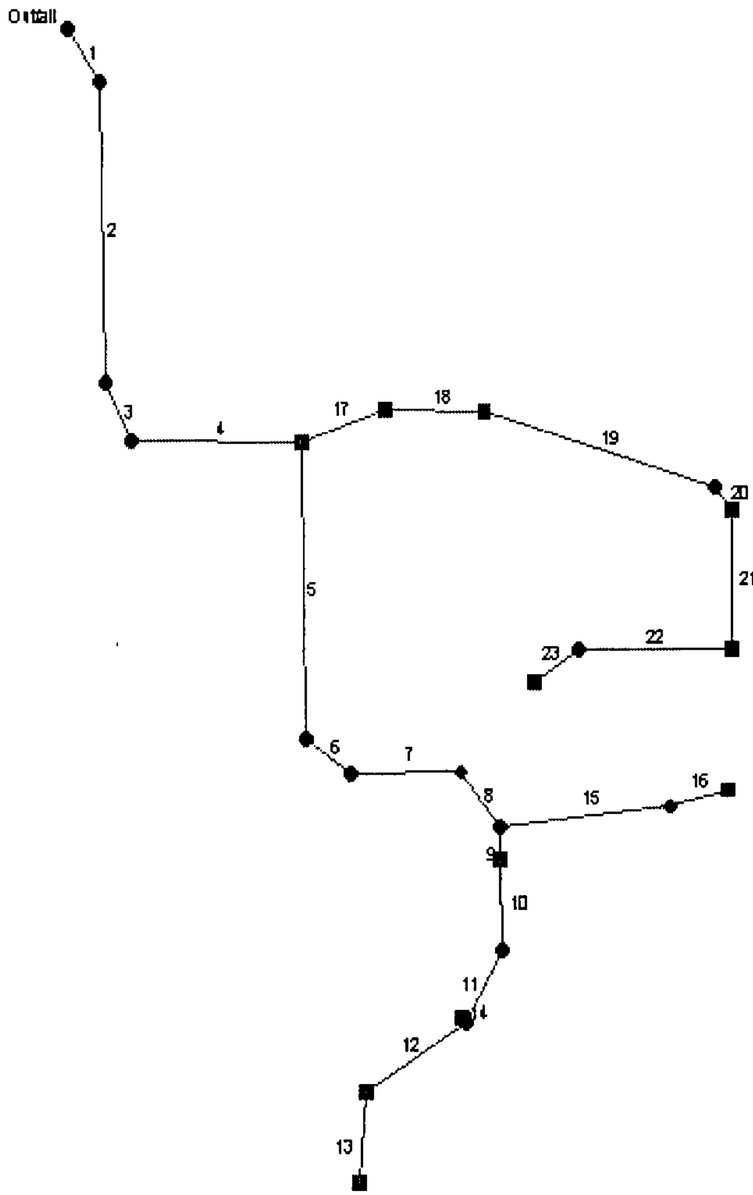


Storm Sewer Profile

Proj. file: SD1.stm



Hydraflow Plan View



Project File: SD2.stm	No. Lines: 23	12-06-2006

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns line No.
1		51.50	42 c	47.0	5354.22	5355.90	3.574	5360.75*	5360.87*	0.25	5361.13	End
2		51.50	42 c	222.0	5356.00	5357.82	0.820	5361.13*	5361.71*	0.20	5361.92	1
3		51.50	42 c	48.0	5357.92	5358.30	0.791	5361.92*	5362.04*	0.41	5362.45	2
4		51.50	42 c	137.3	5358.40	5359.50	0.802	5362.45	5362.76	0.97	5363.72	3
5		33.50	30 c	219.8	5359.60	5361.90	1.046	5363.72*	5365.19*	0.61	5365.80	4
6		33.50	30 c	44.8	5362.00	5363.50	3.345	5365.80*	5366.10*	0.46	5366.56	5
7		33.50	30 c	87.9	5363.60	5365.14	1.752	5366.56	5367.08	n/a	5367.08 j	6
8		33.50	30 c	52.0	5365.24	5365.50	0.500	5367.74*	5368.09*	0.63	5368.72	7
9		17.50	30 c	23.6	5365.60	5365.70	0.425	5369.24*	5369.29*	0.10	5369.39	8
10		13.05	30 c	67.2	5365.80	5366.12	0.477	5369.47*	5369.54*	0.06	5369.60	9
11		13.05	24 c	61.5	5366.22	5366.53	0.503	5369.60*	5369.81*	0.27	5370.08	10
12		6.96	24 c	96.0	5366.63	5367.11	0.500	5370.27*	5370.36*	0.10	5370.45	11
13		2.76	18 c	68.0	5367.21	5368.30	1.603	5370.49*	5370.54*	0.04	5370.58	12
14		6.10	18 c	5.2	5366.63	5366.73	1.925	5370.16*	5370.18*	0.19	5370.36	11
15		16.00	18 c	137.0	5365.60	5368.34	2.000	5368.72*	5371.90*	0.22	5372.12	8
16		16.00	18 c	48.0	5368.44	5369.40	2.000	5372.12*	5373.23*	1.27	5374.51	15
17		14.09	30 c	70.2	5359.60	5359.95	0.499	5364.07*	5364.15*	0.08	5364.23	4
18		12.23	30 c	80.5	5360.05	5360.45	0.497	5364.26*	5364.33*	0.05	5364.38	17
19		10.23	24 c	193.6	5360.55	5361.52	0.501	5364.38*	5364.78*	0.10	5364.88	18
20		10.23	24 c	22.5	5361.62	5361.73	0.488	5364.88*	5364.93*	0.17	5365.10	19
21		7.23	18 c	103.5	5361.83	5362.35	0.502	5365.10*	5365.59*	0.39	5365.98	20
22		4.17	18 c	124.0	5362.45	5363.07	0.500	5366.15*	5366.35*	0.05	5366.40	21
23		4.17	18 c	42.5	5363.17	5363.38	0.494	5366.40*	5366.47*	0.09	5366.55	22

Project File: SD2.stm	Number of lines: 23	Run Date: 12-06-2006

NOTES: c = cir; e = ellip; b = box; Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	47.0	0.00	0.00	0.00	0.00	0.00	0.0	4.9	0.0	51.50	190.2	5.35	42	3.57	5355.90	5354.22	5360.87	5360.75	5361.00	5360.50	
2	1	222.0	0.00	0.00	0.00	0.00	0.00	0.0	4.2	0.0	51.50	91.09	5.35	42	0.82	5357.82	5356.00	5361.71	5361.13	5363.64	5361.00	
3	2	48.0	0.00	0.00	0.00	0.00	0.00	0.0	4.1	0.0	51.50	89.50	5.35	42	0.79	5358.30	5357.92	5362.04	5361.92	5364.00	5363.64	
4	3	137.3	0.00	0.00	0.00	0.00	0.00	0.0	3.6	0.0	51.50	90.07	5.44	42	0.80	5359.50	5358.40	5362.76	5362.45	5364.50	5364.00	
5	4	219.8	0.00	0.00	0.00	0.00	0.00	0.0	2.7	0.0	33.50	41.95	6.83	30	1.05	5361.90	5359.60	5365.19	5363.72	5367.00	5364.50	
6	5	44.8	0.00	0.00	0.00	0.00	0.00	0.0	2.6	0.0	33.50	75.01	6.83	30	3.35	5363.50	5362.00	5366.10	5365.80	5369.50	5367.00	
7	6	87.9	0.00	0.00	0.00	0.00	0.00	0.0	2.4	0.0	33.50	54.29	7.52	30	1.75	5365.14	5363.60	5367.08	5366.56	5373.40	5369.50	
8	7	52.0	0.00	0.00	0.00	0.00	0.00	0.0	2.2	0.0	33.50	28.99	6.83	30	0.50	5365.50	5365.24	5368.09	5367.74	5373.30	5373.40	
9	8	23.6	0.00	0.00	0.00	0.00	0.00	0.0	2.1	0.0	17.50	26.73	3.57	30	0.42	5365.70	5365.60	5369.29	5369.24	5372.75	5373.30	
10	9	67.2	0.00	0.00	0.00	0.00	0.00	0.0	1.7	0.0	13.05	28.31	2.66	30	0.48	5366.12	5365.80	5369.54	5369.47	5373.00	5372.75	
11	10	61.5	0.00	0.00	0.00	0.00	0.00	0.0	1.4	0.0	13.05	16.05	4.15	24	0.50	5366.53	5366.22	5369.81	5369.60	5373.45	5373.00	
12	11	96.0	0.00	0.00	0.00	0.00	0.00	0.0	0.7	0.0	6.96	15.99	2.22	24	0.50	5367.11	5366.63	5370.36	5370.27	5371.21	5373.45	
13	12	68.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	2.76	13.29	1.56	18	1.60	5368.30	5367.21	5370.54	5370.49	5371.80	5371.21	
14	11	5.2	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	6.10	14.57	3.45	18	1.92	5366.73	5366.63	5370.18	5370.16	5372.38	5373.45	
15	8	137.0	0.00	0.00	0.00	0.00	0.00	0.0	0.1	0.0	16.00	14.85	9.06	18	2.00	5368.34	5365.60	5371.90	5368.72	5375.00	5373.30	
16	15	48.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	16.00	14.85	9.06	18	2.00	5369.40	5368.44	5373.23	5372.12	5376.00	5375.00	
17	4	70.2	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.0	14.09	28.96	2.87	30	0.50	5359.95	5359.60	5364.15	5364.07	5365.00	5364.50	
18	17	80.5	0.00	0.00	0.00	0.00	0.00	0.0	2.7	0.0	12.23	28.92	2.49	30	0.50	5360.45	5360.05	5364.33	5364.26	5366.00	5365.00	
19	18	193.6	0.00	0.00	0.00	0.00	0.00	0.0	1.7	0.0	10.23	16.01	3.26	24	0.50	5361.52	5360.55	5364.78	5364.38	5366.50	5366.00	
20	19	22.5	0.00	0.00	0.00	0.00	0.00	0.0	1.6	0.0	10.23	15.80	3.26	24	0.49	5361.73	5361.62	5364.93	5364.88	5366.50	5366.50	
21	20	103.5	0.00	0.00	0.00	0.00	0.00	0.0	1.2	0.0	7.23	7.44	4.09	18	0.50	5362.35	5361.83	5365.59	5365.10	5366.50	5366.50	

Project File: SD2.stm | Number of lines: 23 | Run Date: 12-06-2006

NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Storm Sewer Tabulation

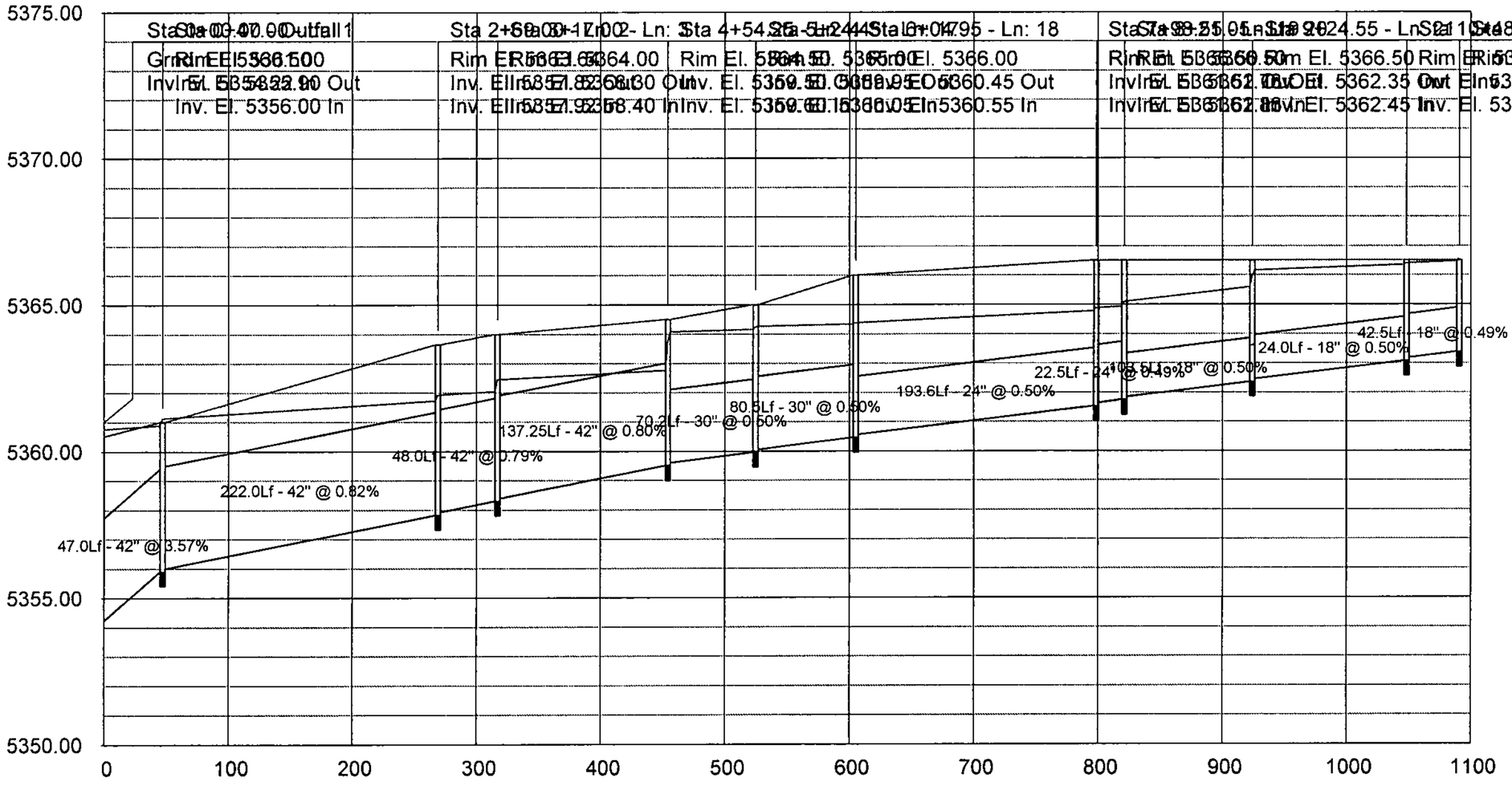
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
22	21	124.0	0.00	0.00	0.00	0.00	0.00	0.0	0.3	0.0	4.17	7.42	2.36	18	0.50	5363.07	5362.45	5366.35	5366.15	5366.50	5366.50	
23	22	42.5	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	4.17	7.38	2.36	18	0.49	5363.38	5363.17	5366.47	5366.40	5366.50	5366.50	

Project File: SD2.stm | Number of lines: 23 | Run Date: 12-06-2006

NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Storm Sewer Profile

Proj. file: SD2.stm



Storm Sewer Profile

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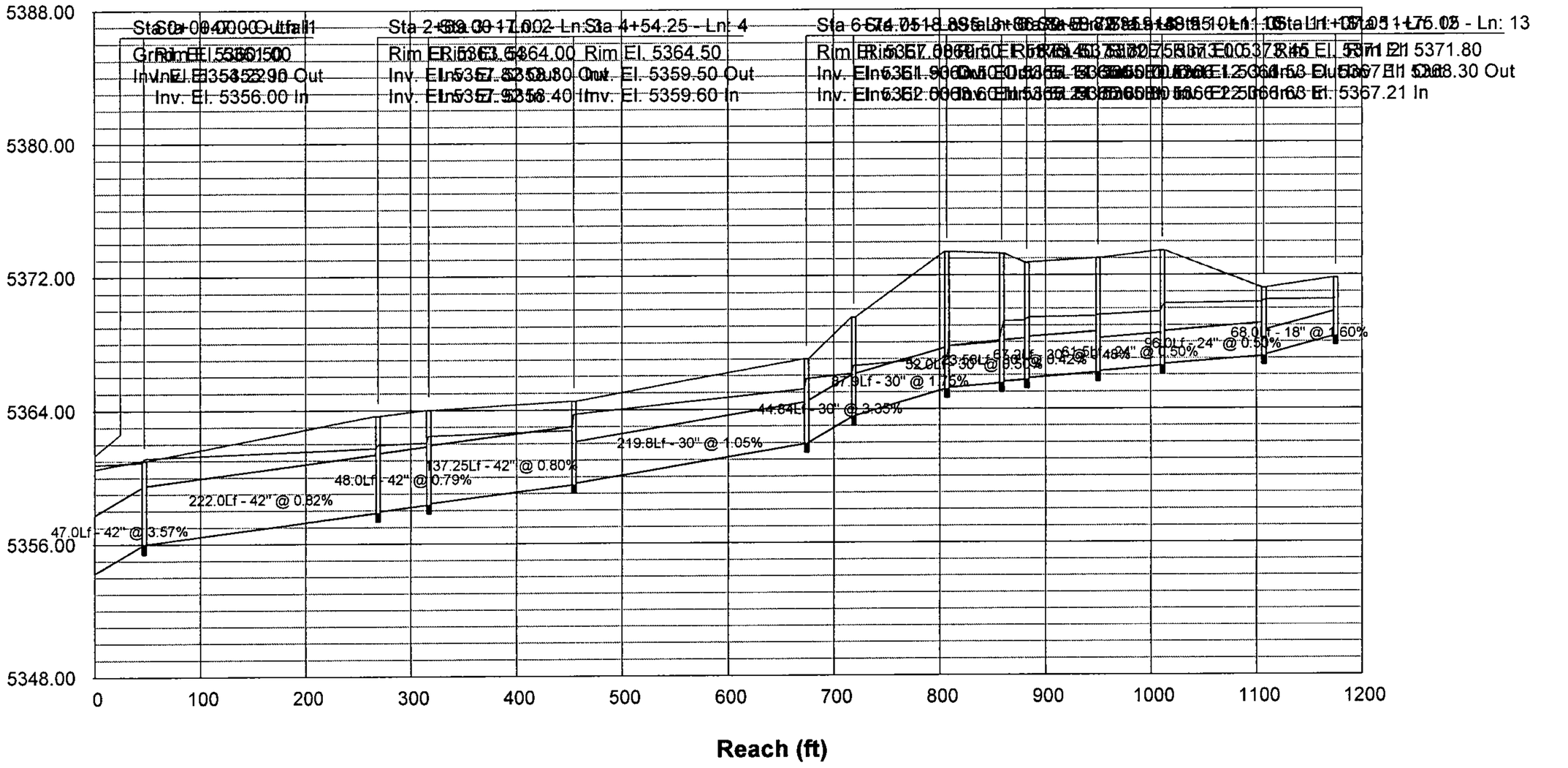

Storm Sewer Profile

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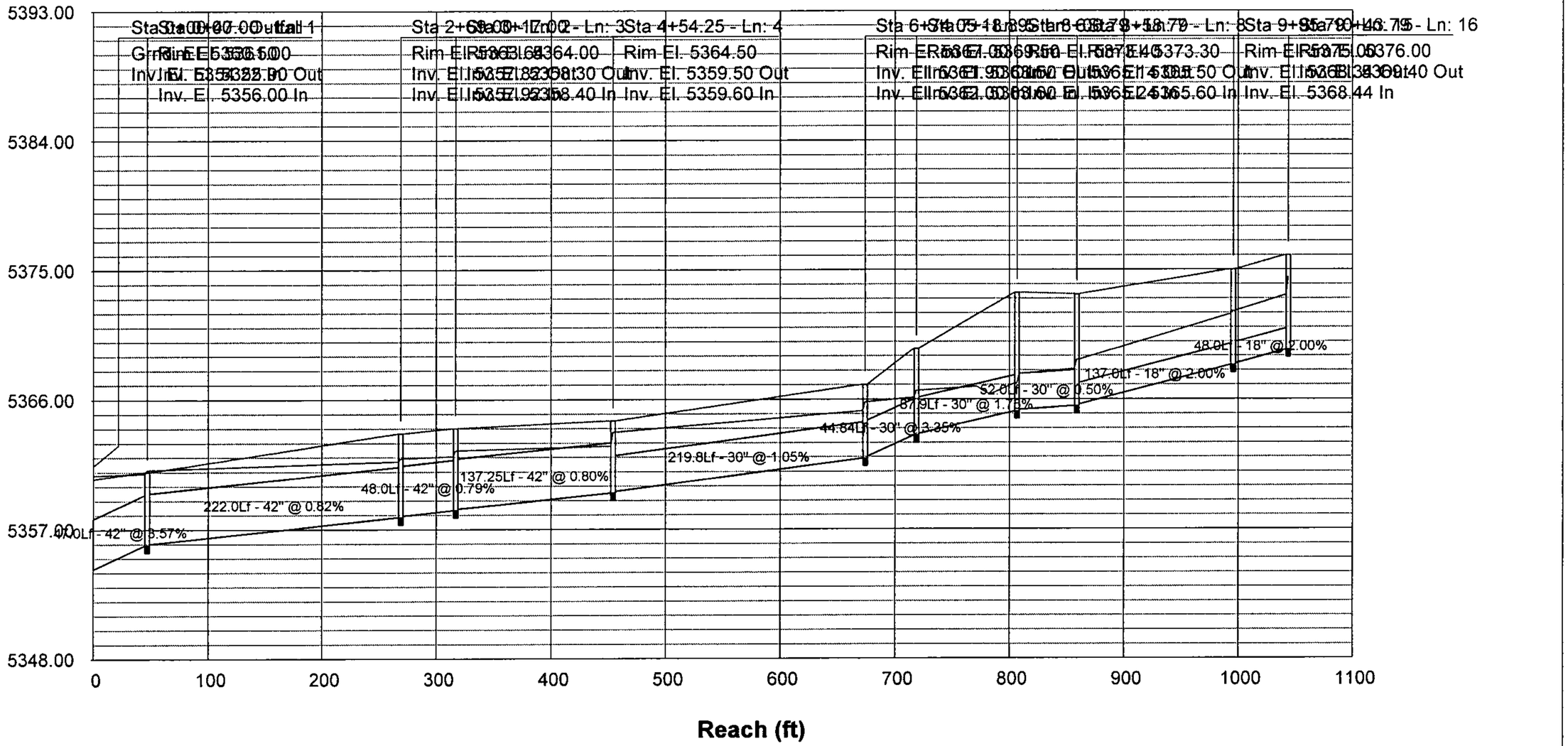
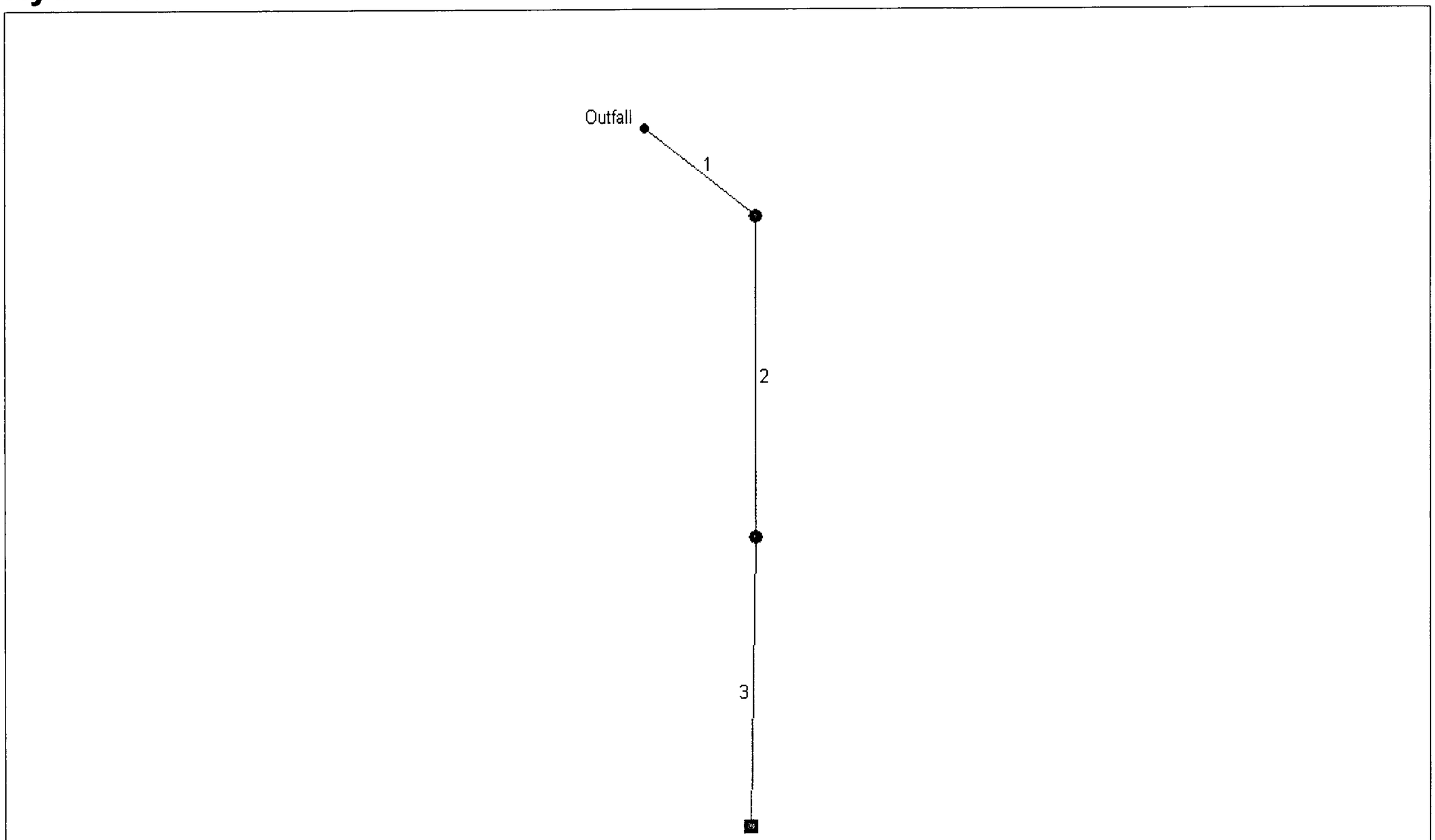


Hydraflow Plan View



SD3	No. Lines: 3	12-06-2006

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns line No.
1		8.50	18 c	45.0	5350.67	5351.57	2.000	5354.00*	5354.30*	0.00	5354.30	End
2		8.50	18 c	96.7	5351.67	5354.57	2.999	5354.30	5355.68	n/a	5355.68 j	1
3		8.50	18 c	86.8	5354.67	5355.54	1.002	5356.17	5356.65	n/a	5356.65 j	2

SD3 | Number of lines: 3 | Run Date: 12-06-2006

NOTES: c = cir; e = ellip; b = box; Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Tabulation

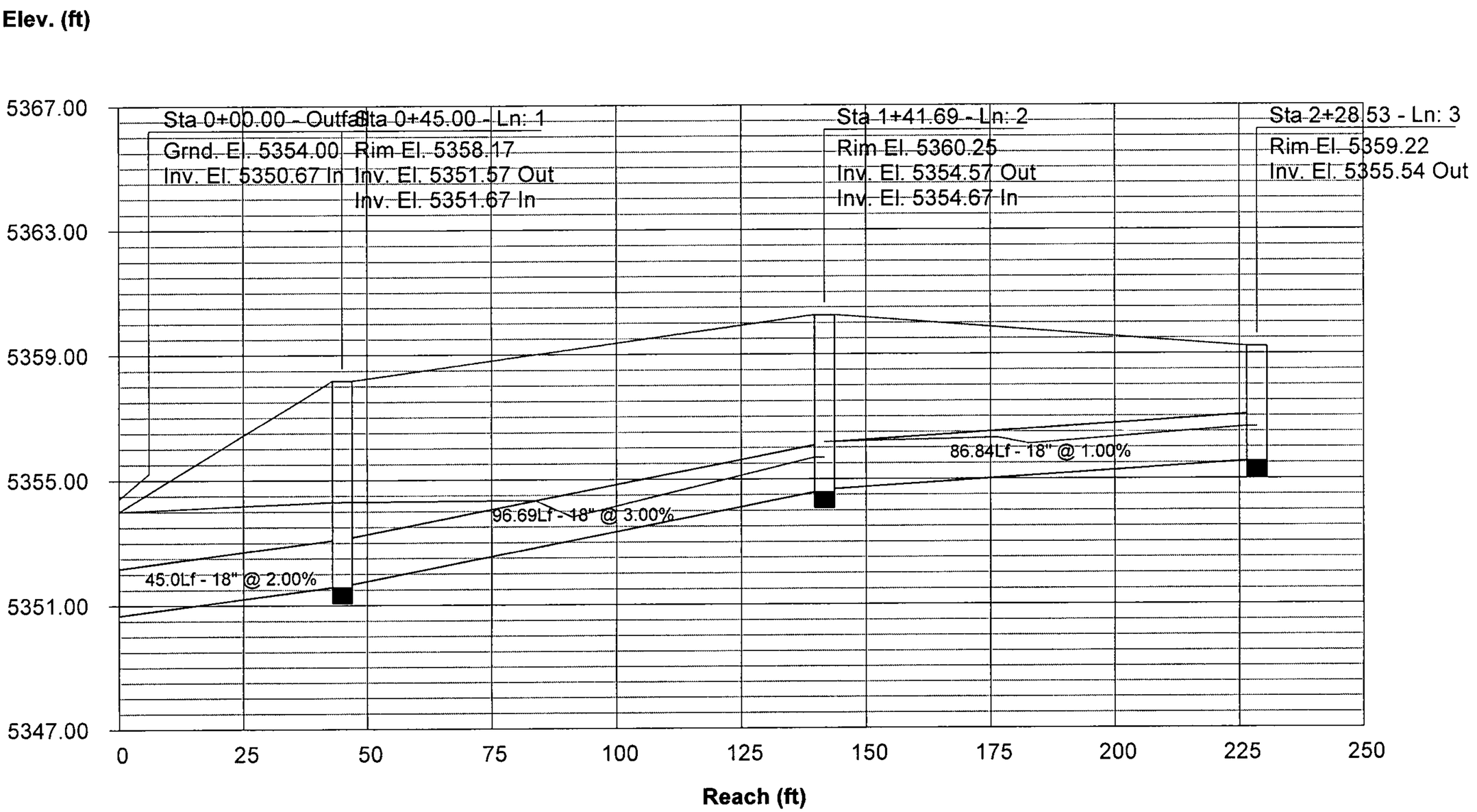
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	45.0	0.00	0.00	0.00	0.00	0.00	0.0	0.6	0.0	8.50	14.85	4.81	18	2.00	5351.57	5350.67	5354.30	5354.00	5358.17	5354.00	
2	1	96.7	0.00	0.00	0.00	0.00	0.00	0.0	0.3	0.0	8.50	18.19	5.43	18	3.00	5354.57	5351.67	5355.68	5354.30	5360.25	5358.17	
3	2	86.8	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	8.50	10.51	5.43	18	1.00	5355.54	5354.67	5356.65	5356.17	5359.22	5360.25	

SD3 | Number of lines: 3 | Run Date: 12-06-2006

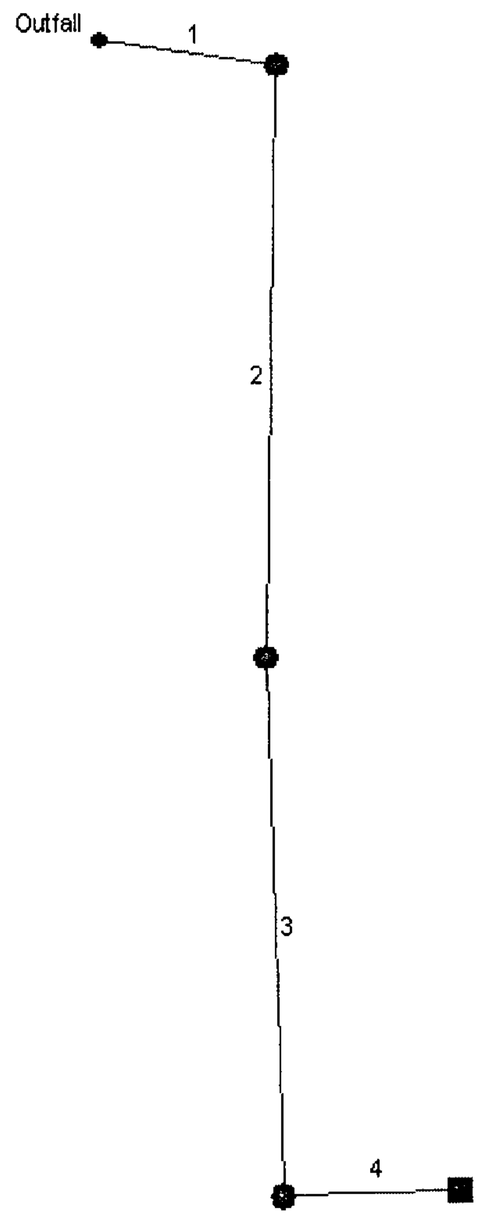
NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Storm Sewer Profile

Proj. file: SD3.stm



Hydraflow Plan View



SD4	No. Lines: 4	12-06-2006

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns line No.
1		15.00	30 c	64.2	5366.98	5369.60	4.081	5371.71	5371.77	0.17	5371.94	End
2		15.00	30 c	196.2	5369.50	5370.64	0.581	5372.00	5372.20	0.05	5372.25	1
3		10.00	30 c	178.2	5370.54	5373.53	1.678	5373.04	5374.59	n/a	5374.59 j	2
4		10.00	18 c	63.6	5373.43	5374.60	1.840	5374.93	5375.81	n/a	5375.81 j	3

SD4 | Number of lines: 4 | Run Date: 12-06-2006

NOTES: c = cir; e = ellip; b = box; Return period = 100 Yrs. ; j - Line contains hyd. jump.

Storm Sewer Tabulation

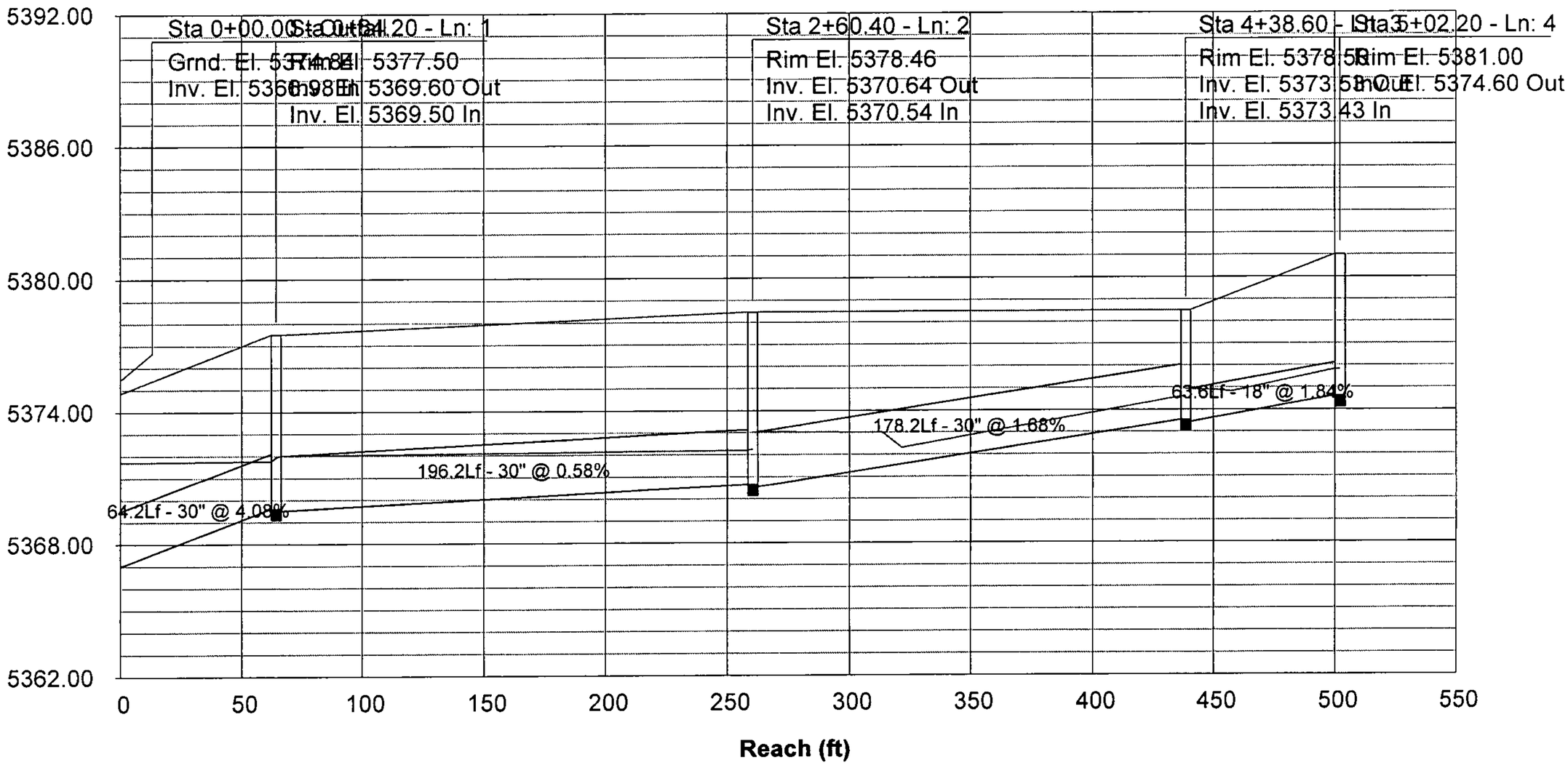
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	64.2	0.00	0.00	0.00	0.00	0.00	0.0	2.7	0.0	15.00	82.85	3.19	30	4.08	5369.60	5366.98	5371.77	5371.71	5377.50	5374.84	
2	1	196.2	0.00	0.00	0.00	0.00	0.00	0.0	1.6	0.0	15.00	31.26	3.86	30	0.58	5370.64	5369.50	5372.20	5372.00	5378.46	5377.50	
3	2	178.2	0.00	0.00	0.00	0.00	0.00	0.0	0.2	0.0	10.00	53.12	3.55	30	1.68	5373.53	5370.54	5374.59	5373.04	5378.50	5378.46	
4	3	63.6	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	10.00	14.24	6.11	18	1.84	5374.60	5373.43	5375.81	5374.93	5381.00	5378.50	

SD4 | Number of lines: 4 | Run Date: 12-06-2006

NOTES: Intensity = 127.16 / (Inlet time + 17.80) ^ 0.82; Return period = 100 Yrs.

Storm Sewer Profile

Proj. file: SD4.stm



PLATE

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003)

PROJECT TITLE: Sandia High School Campus-wide ZONE MAP/DRG. FILE#: G-19 ~D31

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Sandia High School

CITY ADDRESS: _____

ENGINEERING FIRM: Wilson & Company, Inc. CONTACT: Angela N. Valdez, PE

ADDRESS: 4900 Lang Avenue NE PHONE: (505) 348-4000

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87124

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: Karen Alarid, AIA, FP&C Director

ADDRESS: 915 Oak Street SE PHONE: (505)-848-8810

CITY, STATE: Albuquerque, NM 87107 ZIP CODE: 87107

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: Wilson & Company, Inc. CONTACT: C. Scott Croshaw

ADDRESS: 4900 Lang Avenue NE PHONE: 505-348-4000

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87109

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

___ DRAINAGE REPORT AND GRADING PLAN
___ GRADING PLAN 1st SUBMITTAL, REQUIRES TCL OR EQUAL
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ AMENDED GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEERS CERTIFICATION (HYDROLOGY)
___ CLOMR\LOMR
___ TRAFFIC CIRCULTAION LAYOUT (TCL)
___ ENGINEERS CERTIFICATION (TCL)
___ ENGINEERS CERTIFICATION (DRB, APPR. SITE PLAN)
___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

___ SIA / FINANCIAL GUARANTEE RELEASE
___ PRELIMINARY PLAT APPROVAL
___ S. DEV. PLAN FOR SUB'D. APPROVAL
___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
___ SECTOR PLAN APPROVAL
___ FINAL PLAT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ BUILDING PERMIT APPROVAL
___ CERTIFICATION OF OCCUPANCY (PERM.)
___ CERTIFICATION OF OCCUPANCY (TEMP.)
X ~~ROUGH~~ GRADING PERMIT
X PAVING PERMIT APPROVAL
___ WORK ORDER APPROVAL
___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

X YES
_____ NO
_____ COPY PROVIDED

HYDROLOGY SECTION
RECEIVED
DEC 28 2006

Date Submitted: 12-28-06 By: Angela N. Valdez, 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 of 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
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

QUESTION: WORK ORDER OR SO #19 ?
PIPE/PENETRATION WOULD NOT
HAVE ONLY
PRIVATE FLOW LIKE
TYPICAL SO #19
+ MAINTENANCE?

work order
11-7-11

Proposed Public Storm Drainage
Easement per plat

N

EXIST.
CONC. CHANNEL

NEW PENETRATION
& MH

EXIST. MH

EXIST.
24" CMP

EXIST
30" RCP

EXIST
MH.

24"

CONNECTION TO
PRIVATE INLET
TO BE REMOVED

NEW 24"
PRIVATE SD
FOR APS
FLOWS

EXIST.
30" RCP
(Public Flow)

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

DATE: 8-15-11
CONFERENCE RECAP

ZONE ATLAS PAGE NO: G 19
DRAINAGE FILE: G19/D021
ZONING: _____
DRB:
SUBJECT: Sandia Hgts school MDP
STREET ADDRESS (IF KNOWN): _____
SUBDIVISION NAME: _____

APPROVAL REQUESTED:

ATTENDANCE: Curtis Cherne, Graeme Means, Jeff Mortensen

FINDINGS:

- APS will not be required to upsize the storm drain that conveys offsite flows from the inlets in Wisconsin st as part of redevelopment of the campus or the "clean-up" plat. This is because it is a public storm drain and an existing condition. There is also no evidence that this SD is surging to overland flow on the campus.

- Channel penetration to be permitted by SO-19. public SD by WO 11-20-11

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Curtis A Cherne
NAME (PRINT): Curtis A. Cherne

SIGNED: J. Graeme Means Graeme Means
NAME (PRINT):

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.

CITY OF ALBUQUERQUE

August 13, 20100

J. Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Sandia High School Additions and Renovations, 7801 Candelaria Rd. NE,
Request for Permanent C.O. - Approved
Engineer's Stamp dated: 04-22-09 (G-19/D021)
Certification dated: 08-11-10

Dear Mr. Means,

Based upon the information provided in the Certification received 08-12-10, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

If you have any questions, you can contact me at 924-3982.

Sincerely,

Timothy E. Sims,
Plan Checker—Hydrology Section
Development and Building Services

C: CO Clerk—Katrina Sigala
BB Bradley L. Bingham, P.E., City Hydrologist
File

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

HMCG 2008029.3

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 01/06 - KDM)

PROJECT TITLE: Sandia High School Additions and Renovations ZONE MAP: G-19/D21
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Unplatted
CITY ADDRESS: 7801 Candelaria Road NE

ENGINEERING FIRM: High Mesa Consulting Group — J. Graeme Means, PE
ADDRESS: 6010 Midway Park Blvd. NE — CONTACT: #13676
CITY, STATE: Albuquerque, New Mexico — PHONE: 505-345-4250
ZIP CODE: 87109

OWNER: Albuquerque Public Schools — CONTACT: David Ritchey
ADDRESS: 915 Oak Street SE — PHONE: 505-848-8876
CITY, STATE: Albuquerque, New Mexico — ZIP CODE: 87106

ARCHITECT: Mahlman Studio Architecture — CONTACT: Stephen Hall
ADDRESS: 206 Broadway Boulevard, NE — PHONE: 505-243-0101
CITY, STATE: Albuquerque, New Mexico — ZIP CODE: 87102

SURVEYOR: High Mesa Consulting Group — Charles G. Cala, Jr., PS
ADDRESS: 6010 Midway Park Blvd. NE — CONTACT: #11184
CITY, STATE: Albuquerque, New Mexico — PHONE: 505-345-4250
ZIP CODE: 87109

CONTRACTOR: T.A. Cole and Sons — CONTACT: Skip Cole
ADDRESS: POB 10660 — PHONE: (505) 898-8698
CITY, STATE: Albuquerque, New Mexico — ZIP CODE: 87184

TYPE OF SUBMITTAL:
_____ DRAINAGE REPORT
_____ DRAINAGE PLAN 1st SUBMITTAL
_____ DRAINAGE PLAN RESUBMITTAL
_____ CONCEPTUAL G & D PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
X **ENGINEER'S CERT (HYDROLOGY)**
_____ CLOMR/LOMR
_____ TRAFFIC CIRCULATION LAYOUT
_____ ENGINEER'S CERT (TCL)
_____ ENGINEER'S CERT (DRB SITE PLAN)
_____ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL 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
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
X **CERTIFICATE OF OCCUPANCY (PERMANENT)**
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

RECEIVED
AUG 12 2010
HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:
_____ YES
X NO
_____ COPY PROVIDED

DATE SUBMITTED: August11, 2010 BY: J. Graeme Means, 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 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.

HIGH MESA Consulting Group

6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109
Phone: 505.345.4250
Fax: 505.345.4254
www.highmesacg.com

G19-D021
Jeff has file
3-31-11

TRANSMITTAL:

TO:	FROM:
Curtis Cherne, PE **COA Planning Dept / Hydrology**	**Graeme Means**
PROJECT:	**RE:**
Sandia High School	**Record Drawing Info**
JOB NO:	**DATE:**
2011.184.8	**03/30/2011**
CC:	

VIA: ☒ Delivery ☐ Pickup ☐ US Mail ☐ Federal Express Delivery ☐ Fax

WE ARE SENDING:

QTY.	DESCRIPTION:	FOR:
1	CD with PDF files of Record Drawings from Wilson & Company for Their 2008 Site Drainage Improvements Project	Your Info

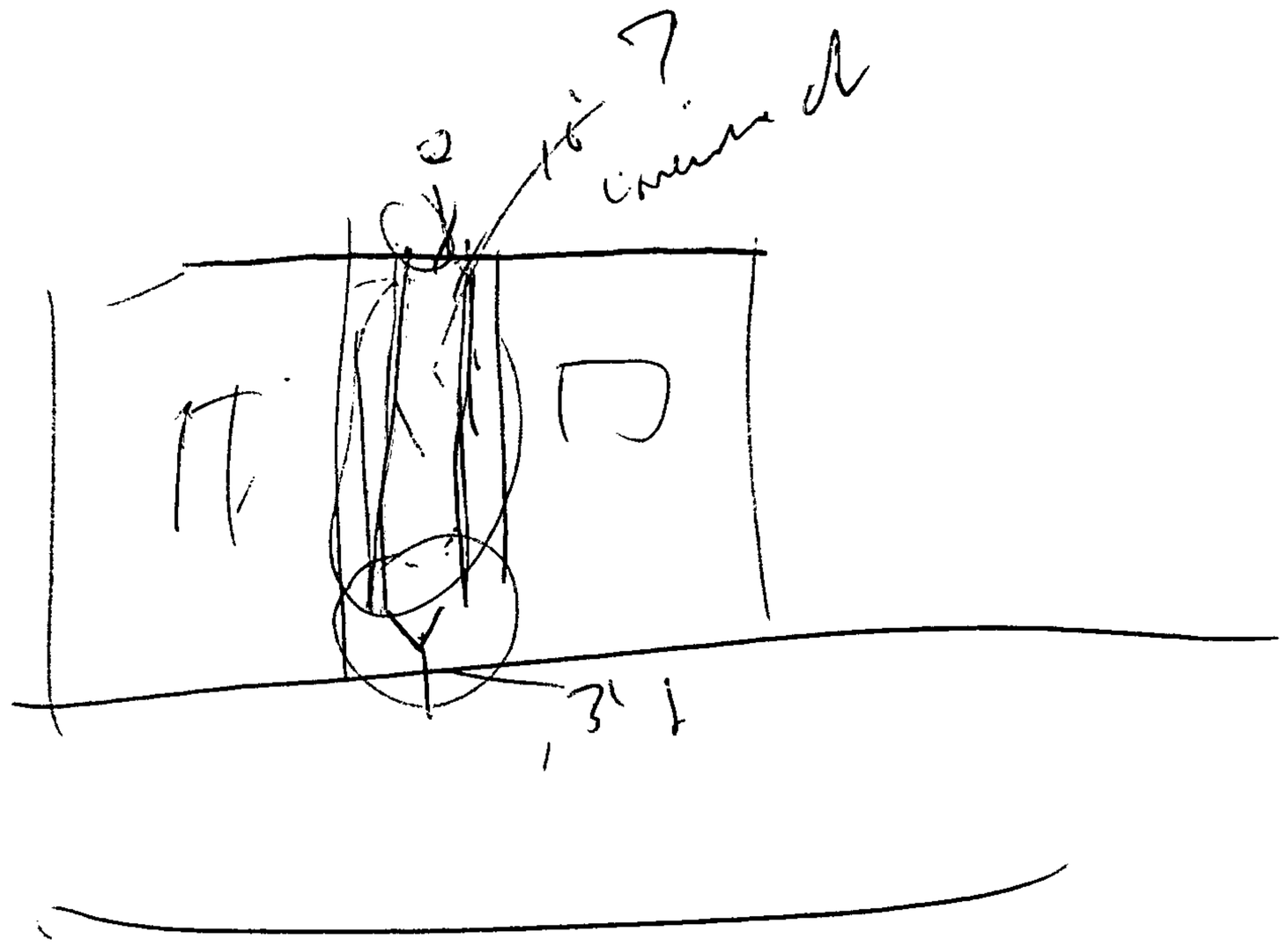
REMARKS:

Curtis,

Back in 2008, Wilson & Company provided us with a CD containing PDF files of record drawings for a drainage project they designed and administered for APS at Sandia High School. Transmitted herewith for your information and records is a copy of that information.

Let us know if you have any questions.

Graeme Means



CITY OF ALBUQUERQUE

November 13, 2006

Angela N. Valdez, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Sandia High School Campus-Wide Drainage Improvements Overall Grading and Drainage Plan
Engineer's Stamp dated 11-9-06 (G19/D21)

Dear Ms. Valdez,

Based upon the information provided in your submittal dated 11-9-06, the above referenced report cannot be approved for Rough Grading Permit until the following comments are addressed:

- To obtain a Rough Grading Permit, the plan submitted must be detailed enough for a contractor to build from it. Build notes to include inverts, grate heights, elevations for retaining walls, etc.
- I walked the site on 11-13-06. I have all of the comment areas listed below marked up on the plans you submitted. I think it would be beneficial to set a meeting, preferably onsite, to review these comments. What would make this project approvable would be to show the existing conditions (F.F. for all buildings, grate heights, spot and contour elevations) on separate sheets from the proposed conditions. Proposed conditions to include the existing storm drain to be removed, if any.
- The storm drain in the southeast corner of the site appeared to be 18" or 24", not 36" as specified.
- A pipe daylights in the Hahn Arroyo under the walkway furthest east on the site. It looked like a 30" pipe. This is not shown on the plan submitted. Where does this pipe come from?
- Runoff leaving the southwest corner of the track has eroded an arroyo that runs directly west into the baseball field where it appears to pond at a communications box. Basin 103_2 should be graded to direct water to the proposed inlet.
- Could the area west of Basin 204 be graded to drain south?

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

- Some grading will be required in Basin 105 for runoff to drain to the proposed inlet. There is a break in the earthen berm just north of the track where runoff ponds at the irrigation boxes.
- Some grading east of the track would help direct runoff to the proposed inlet there.
- There are two rundowns in Basin 106 east of the rundowns shown with 2' of erosion at the edges. There are also 2 large hoes in the rundown shown in this area. Should the old rundowns be removed and new ones built?
- The asphalt rundown in Basin 107_2 has considerable erosion (2'-3') on one side. Should this rundown be removed and a new one built?
- An inlet is proposed west of Building L. It seems it should be moved further to the east to the ponding area.
- The swale west of Building K has not been maintained. It should be graded to convey runoff to the inlet, thereby preventing the flow from crossing the basketball courts and flowing to the gym.
- The dirt area in Basin 115 should be graded to direct flow to a rundown to the Hahn Arroyo. There are two eroded earthen rundowns in this area.
- Where does the 8" pipe that daylights west of the performing arts center come from?

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

May 7, 2009

J. Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Re: Sandia High School Gymnasium Addition Grading Plan

Engineer's Stamp dated 4-22-09 (G19/D021)

Dear Mr. Means,

Based upon the information provided in your submittal received 4-23-09, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne

Curtis A. Cherne, P.E.
Senior Engineer, Planning Dept.
Development and Building Services

C: file

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003)

PROJECT TITLE: Sandia High School Campus-wide ZONE MAP/DRG. FILE#: G-19/D21

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Sandia High School

CITY ADDRESS: N/A.

ENGINEERING FIRM: Wilson & Company, Inc. CONTACT: Angela N. Valdez, PE

ADDRESS: 4900 Lang Avenue NE PHONE: (505) 898-8021

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87124

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: Karen Alarid, AIA, FP&C Director

ADDRESS: 915 Oak Street SE PHONE: (505)-848-8810

CITY, STATE: Albuquerque, NM 87107 ZIP CODE: 87107

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: Wilson & Company, Inc. CONTACT: C. Scott Croshaw

ADDRESS: 4900 Lang Avenue NE PHONE: 505-348-4000

CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87109

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- X **DRAINAGE REPORT AND GRADING PLAN**
- ___ GRADING PLAN 1st SUBMITTAL, REQUIRES TCL OR EQUAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ AMENDED GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEERS CERTIFICATION (HYDROLOGY)
- ___ CLOMR\LOMR
- ___ TRAFFIC CIRCULTAION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS CERTIFICATION (DRB, APPR. SITE PLAN)
- ___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATION OF OCCUPANCY (PERM.)
- ___ CERTIFICATION OF OCCUPANCY (TEMP.)
- X ROUGH GRADING PERMIT
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- _____ YES
- X NO
- _____ COPY PROVIDED

RECEIVED
NOV 09 2006
HYDROLOGY SECTION

Date Submitted: 11-09-06 By: Angela N. Valdez, 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 of 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
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003)

PROJECT TITLE: Sandia High School Campus-wide Drng. Impro. ZONE MAP/DRG. FILE#: G-19/D21

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Sandia High School

CITY ADDRESS: N/A.

ENGINEERING FIRM: Wilson & Company, Inc. CONTACT: Angela N. Valdez, PE
ADDRESS: 4900 Lang Avenue NE PHONE: (505) 898-8021
CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87124

OWNER: ALBUQUERQUE PUBLIC SCHOOLS CONTACT: Karen Alarid, AIA, FP&C Director
ADDRESS: 915 Oak Street SE PHONE: (505)-848-8810
CITY, STATE: Albuquerque, NM 87107 ZIP CODE: 87107

ARCHITECT: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: Wilson & Company, Inc. CONTACT: C. Scott Croshaw
ADDRESS: 4900 Lang Avenue NE PHONE: 505-348-4000
CITY, STATE: Albuquerque, NM 87109 ZIP CODE: 87109

CONTRACTOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- X **DRAINAGE REPORT AND GRADING PLAN**
- ___ GRADING PLAN 1st SUBMITTAL, REQUIRES TCL OR EQUAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ___ AMENDED GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEERS CERTIFICATION (HYDROLOGY)
- ___ CLOMR\LOMR
- ___ TRAFFIC CIRCULTAION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS CERTIFICATION (DRB, APPR. SITE PLAN)
- ___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATION OF OCCUPANCY (PERM.)
- ___ CERTIFICATION OF OCCUPANCY (TEMP.)
- X **GRADING PERMIT APPROVAL**
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ___ YES
- X NO
- ___ COPY PROVIDED

RECEIVED
OCT 04 2006
HYDROLOGY SECTION

Date Submitted: 10-04-06 By: Angela N. Valdez, 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 of 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
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

CITY OF ALBUQUERQUE

October 24, 2006

Angela N. Valdez, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Sandia High School Campus-Wide Drainage Improvements Drainage Report and Plan
Engineer's Stamp dated 10-4-06 (G19/D21)

Dear Ms. Valdez,

Based upon the information provided in your submittal dated 10-4-06, the above referenced report is approved for Conceptual Grading and Drainage Plan Report. The plan cannot be approved, because it was not stamped. It will be kept on file for informational purposes. Per our telephone conversation, more detail is required to obtain Grading Permit Approval.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

October 11, 2005

Mario G. Juarez-Infante, P.E.
Wilson & Company
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Sandia HS Drainage Improvements, 7801 Candelaria Blvd NE,
Grading and Drainage Plan
Engineer's Stamp dated 10-23-05 (G19-D21)

Dear Mr. Juarez-Infante,

Based upon the information provided in your submittal received 10-23-05, the above referenced plan is approved for Grading Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Charles Caruso).

If you have any questions, you can contact me at 924-3695.

Sincerely,

Rudy E. Rael, Associate Engineer
Planning Department.
Development and Building Services

C: Charles Caruso, DMD Storm Drainage Design
CC: File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/28/2003)

PROJECT TITLE: Sandia HS Drainage Improvements ZONE MAP/DRG. FILE#: G-19 / D9.1

DRB#: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Unplatted/Sandia High School/Yucca Annex

CITY ADDRESS: 7801 Candelaria Rd NE

ENGINEERING FIRM: Wilson & Company CONTACT: Jesse Dickson

ADDRESS: 4900 Lang Ave. NW PHONE: (505) 348-4136

CITY, STATE: Albuquerque, NM ZIP CODE: 87109

OWNER: Albuquerque Public Schools Albuquerqu Karen Alarid

ADDRESS: 915 Oak Street SE 915 Oak (505) 831-9600

CITY, STATE: CITY, STATE: CITY, 87106

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: Wilson & Company CONTACT: Scott Croshaw

ADDRESS: 4900 Lang Ave. NW PHONE: (505) 348-4035

CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

- ✓ DRAINAGE REPORT
- ✓ DRAINAGE PLAN 1st SUBMITTAL. REQUIRES TCL OR EQUAL
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ✓ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEERS CERTIFICATION (HYDROLOGY)
- ___ CLOMR\LOMR
- ___ TRAFFIC CIRCULTAION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
- ___ ENGINEERS CERTIFICATION (DRB. APPR. SITE PLAN)
- ___ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SIA / FINANCIAL GUARANTEE RELEASE
- ___ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ___ SECTOR PLAN APPROVAL
- ___ FINAL PLAT APPROVAL
- ___ FOUNDATION PERMIT APPROVAL
- ___ BUILDING PERMIT APPROVAL
- ___ CERTIFICATION OF OCCUPANCY (PERM.)
- ___ CERTIFICATION OF OCCUPANCY (TEMP.)
- ✓ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ✓ YES
- ___ NO
- ___ COPY PROVIDED

RECEIVED
OCT 03 2005
HYDROLOGY SECTION

Date Submitted: October 03, 2005 By: Jesse Dickson

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of 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
2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

ONE STOP SHOP
CITY OF ALBUQUERQUE PLANNING DEPARTMENT
Development & Building Services

PAID RECEIPT

APPLICANT NAME ALBUQ. PUBLIC SCHOOLS

AGENT WILSON & COMPANY

ADDRESS 915 OAK ST. SE

PROJECT & APP # _____

PROJECT NAME SANDIA HS DRAINAGE IMPROVEMENTS

$ _____ **441032/3424000 Conflict Management Fee**

$ _____ **441006/4983000 DRB Actions**

$ _____ **441006/4971000 EPC/AA/LUCC Actions & All Appeals**

$ _____ **441018/4971000 Public Notification**

$ 100.00 **441006/4983000 ~~DRAINAGE PLAN~~ REVIEW OR TRAFFIC IMPACT STUDY*****
( )Major/Minor Subdivision ( )Site Development Plan ( )Bldg Permit
( ) Letter of Map Revision ( )Conditional Letter of Map Revision
( ) Traffic Impact Study

G.P.

$ 100.00 **TOTAL AMOUNT DUE**

*****NOTE*: *If a subsequent submittal is required, bring a copy of this paid receipt with you to avoid an* additional charge.**

WILSON & COMPANY

P.O. Box 94000
Albuquerque, NM 87199-4000
505-348-4000

SUNFLOWER BANK, Salina, KS

83-62 / 1011

102357
102357

VOID AFTER 90 DAYS

9/30/2005

PAY ********************************100** *DOLLARS AND* ************00** *CENTS*

City Of Albuquerque
Treasury Division
$ *****************100.00**

TWO SIGNATURES REQUIRED OVER $50,000

10/3/2005 1:58PM LOC: ANNX
RECEIPT# 00047776 WS# 006 TRANS# 0047
Account 441006 Fund 0110
Activity 4983 RSEJA
Trans Amt $100.00
J24 Misc
$100.00
CK $100.00
CHANGE $0.00

TO **CITY OF ALBUQUERQUE/PLANNING DEPT.**
THE **DEVELOPMENT REVIEW BOARD**
ORDER **600 2ND STREET NW**
OF **ALBUQUERQUE, NM 87102 US**

DocuCheck™ SECURITY PAPERS • MicroPrinting SIGNATURE LINE • Copy Void PANTOGRAPH

⑈102357⑈ ⑆101100621⑆0109146348⑈ Thank You

WILSON & ASSOCIATES

• Civil/Environmental Engineering
• Surveying

• 809 Copper Ave. NW
• Albuquerque, NM

May 24, 1995

Bernie J. Montoya
City of Albuquerque
Hydrology Section
P.O. Box 1293
Albuquerque, NM 87103

Re: Grading/Paving Plan for Sandia High School (G-19-D21)

In response to your comments dated May 22, 1995 on the above referenced drainage plan submittal, the attached resubmittal has been revised as follows:

1. The zone atlas number is shown in the title block and has been added to the vicinity map.
2. Flow volumes and rates calculations are attached and shown in tabular format on the plan.
3. Noted
4. A catch basin and standard curb and gutter have been added to the overflow parking area. An 8 inch pipe connects the catch basin to the existing storm drain. Calculated capacity of this pipe and the catch basin are shown in the Notes section.
5. A detail of the proposed inlet from the french drain system to the existing storm drain is shown.

Please contact me if you need to discuss this resubmittal prior to your approval.

Sincerely,

John C. Wilson

John C. Wilson, P.E.

P.O. Box 7787 • Albuquerque, NM 87194-7787 • (505) 243-6434 • FAX (505) 243-5710

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 5, 1995

John C. Wilson
Wilson & Associates
809 Copper Ave. NW
Albuquerque, NM 87102

RE: REVISED GRADING/PAVING PLAN FOR SANDIA HIGH SCHOOL (G19-D21)
ENGINEER'S STAMP DATED 5/24/95.

Dear Mr. Wilson:

Based on the information provided on your May 25, 1995, the above referenced site is approved for Grading/Paving.

Please be advised that Engineer Certification per the D.P.M. checklist will be required after completion of the project.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 25, 2000

Guy Jackson, P.E.
BPLW
6200 Uptown Blvd., Suite 220
Albuquerque, NM

RE: ENGINEER'S CERTIFICATION FOR SANDIA POOL, SANDIA HIGH SCHOOL,(G-19/ D021), ENGINEER'S STAMP DATED 3/24/99, CERTIFICATION DATED 08/4/2000.

Dear Mr. Jackson,

Based upon the information provided in your submittal dated August, 7, 2000, the Engineering Certification for Certificate of Occupancy for the project referred to above is approved.

If you have any questions, please call me at 924-3988.

Sincerely,

Stuart Reeder P.E.

Stuart Reeder, P.E.
Hydrology Division

xc: Whitney Reierson
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 18, 1998

Guy Jackson, P.E.
BPLW Architects & Engineers
6200 Uptown Blvd. NE
Suite 400
Albuquerque, NM 87110

Attn: Mike De Lilla

RE: SANDIA SWIMMING POOL (G19-D21). DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED OCTOBER 12, 1998.

21 + adus pool

Dear Mr. Jackson:

Based on the information provided on your October 26, 1998 submittal, the above referenced project is approved for Building Permit.

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

Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Andrew Garcia
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 22, 1995

John C. Wilson
Wilson & Associates
809 Copper Ave. NW
Albuquerque, NM 87102

RE: GRADING/PAVING PLAN FOR SANDIA HIGH SCHOOL (G19-D21)
ENGINEER'S STAMP DATED 4/14/95.

Dear Mr. Wilson:

Based on the information provided on your April 17, 1995 submittal, listed are some concerns that will need to be addressed prior to final approval:

1. Please identify the zone atlas number on the plan drawing.

2. Flow volumes and rates-calculations showing on-site undeveloped and developed flow volumes and rates. Use Section 22.2 Hydrology of the D.P.M. January 1993 to calculate the volume and flowrate.

3. A field inspection has identified that a large amount of erosion has taken place at the inlet into the channel.

4. The proposed track and over flow parking must be tied into the existing storm drain to assure that no further erosion takes place within the existing swale.

5. Please provide the hydrualics for all the pipes and inlets that will be required to interconnect with the existing storm line.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Flowrate
Diameter	8.0000 in
Depth	6.0000 in
Slope	0.1200 ft/ft
Manning's n	0.0090

Computed Results:

Flowrate	5.5137 cfs
Area	0.3491 ft2
Wetted Area	0.2808 ft2
Wetted Perimeter	16.7552 in
Perimeter	25.1327 in
Velocity	19.6341 fps
Hydraulic Radius	2.4135 in
Percent Full	75.0000 %
Full flow Flowrate	6.0465 cfs
Full flow velocity	17.3221 fps

SANDIA HIGH SCHOOL - ZONE MAP No. G-19-Z
BERNALILLO COUNTY, NM

DETERMINE UNDEVELOPED AND DEVELOPED VOLUME AND FLOWRATES PER SEC. 22.2

- SITE IS IN ZONE 3 (FIG. A-1)
- DEPTH (INCHES) AT 100-YR. STORM (TABLE A-2)

$P_{360} = 2.60"$

- LAND TREATMENTS: (TABLE A-4)

PROPOSED	EXIST.		
	0	ACRES ARE TREATMENT A	$= A_A$
(8.2)	9.0	" " " B	$= A_B$
	0	" " " C	$= A_C$
(1.8)	1.0	" " " D	$= A_D$

- EXCESS PRECIP., E (INCHES) - 6 HR. STORM (TABLE A-8)

ZONE 3 TREAT B = 0.92

" TREAT D = 2.36

- FIND 100-year V_{360}: (for existing condition)

Weighted E = $((9.0 * 0.92) + (1.0 * 2.36)) / 10$

= 10.64/10

= 1.064 inches

V_{360}, VOLUME = $(1.064 * 10)/12$

V_{360} = 0.89 Ac.-ft.

- FIND 100-year V360 : (For proposed condition)

Weighted E = ((8.2 * 0.92) + (1.8 * 2.36))/10

= 11.79/10

= 1.179 inches

V360, VOLUME = (1.179 * 10)/12

V360 = 0.98 Ac.-ft.

- FIND 100-yr. Qp : (for existing condition)

TABLE A-9 ZONE 3

TOTAL QP = (2.60 * 9.0) + (5.02 * 1.0)

= 28.4 cfs

- FIND 100-yr. Qp : (for proposed condition)

TOTAL QP = (2.60 * 8.2) + (5.02 * 1.8)

= 30.4 cfs

Sandia High School

Alan Construction
Mark Alvidrez
ph: 341-1551
cell: 220-5330

SO-19 for Drop inlet
Reconstruction at
Sandia High School

= Wilson =

Sandia High School
Mario, Denise

Student drop off a packet for the
Stamp March
9-3-08
want to turn a "C" into a
"D" - add b c C

3:20 pm
10/29/08

Stopped by to discuss the additional inlet. Please call to discuss.

Denise
301-8452

Called 10-31-08, told her that has to do WO ctr on Candeland

CITY OF ALBUQUERQUE

January 18, 2007

Angela N. Valdez, P.E.
Wilson & Company, Inc.
4900 Lang Ave. NE
Albuquerque, NM 87109

Re: Sandia High School Campus-Wide Drainage Improvements Grading and Drainage Plan

Engineer's Stamp dated 12-15-06 (G19/D21)

Dear Ms. Valdez,

Based upon the information provided in your submittal dated 12-28-06, the above referenced plan is approved for Grading Permit and Paving Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions, please free to call the Municipal Development Department Hydrology Section at 768-3654 (Sertil Kanbar).

Upon completion of the project, please provide an Engineer Certification for our files.

If you have any questions, you can contact me at 924-3695.

Sincerely,

Curtis A. Cherne, E.I.
Engineering Associate, Planning Dept.
Development and Building Services

C: file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

January 24, 2012

J Graeme Means, P.E.
High Mesa Consulting Group
6010-B Midway Park Blvd NE
Albuquerque, NM 87109

Re: Sandia High School Master Drainage Report
Engineer's Stamp date 12-23-11 (G19/D021)

Dear Mr. Means,

Based upon the information provided in your submittal received 12-23-11, the above referenced report is approved as the Master Drainage Report and for Work Order.

Sincerely,

Curtis A. Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Building Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

C: GMeans@highmesacg.com

2010.184.8

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 01/06 – KDM)

PROJECT TITLE: Sandia High School Master Drainage Report ZONE MAP: G-19/D021
DRB#: 1008844 EPC#: WORK ORDER#: 795183
LEGAL DESCRIPTION: Tract A, Sandia High School (2011C-0137)
CITY ADDRESS: 7801 Candelaria Rd. NE GMeans@highmesacg.com

ENGINEERING FIRM: High Mesa Consulting Group CONTACT: Graeme Means #13676
ADDRESS: 6010-B Midway Park Blvd NE PHONE: 345-4250
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

OWNER: Albuquerque Public Schools CONTACT: David Ritchey
ADDRESS: 915 Oak Street SE PHONE: 848-8876
CITY, STATE: Albuquerque, NM ZIP CODE: 87106

ARCHITECT: Mahlman Studio Architecture CONTACT: Steve Hall
ADDRESS: 206 Broadway SE PHONE: 243-0101
CITY, STATE: Albuquerque, NM ZIP CODE: 87102

SURVEYING FIRM: High Mesa Consulting Group LICENSED SURVEYOR: Chuck Cala, #11184
ADDRESS: 6010-B Midway park Blve NE PHONE: 345-4250
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: N/A CONTACT: Owner
ADDRESS: PHONE:
CITY, STATE: ZIP CODE:

TYPE OF SUBMITTAL:
X **DRAINAGE REPORT**
____ DRAINAGE PLAN 1st SUBMITTAL
____ DRAINAGE PLAN RESUBMITTAL
____ CONCEPTUAL G & D PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERT (HYDROLOGY)
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT
____ ENGINEER'S CERT (TCL)
____ ENGINEER'S CERT (DRB SITE PLAN)
____ OTHER

CHECK TYPE OF APPROVAL 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
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
X **OTHER (MASTER DRAINAGE REPORT)**
X **OTHER (WORK ORDER)**

RECEIVED
DEC 23 2011
HYDRO
SEC

WAS A PRE-DESIGN CONFERENCE ATTENDED:
X YES
____ NO
X COPY PROVIDED

DATE SUBMITTED: 12/23/2011 BY: J. Graeme Means

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.

2010.184.8

CITY OF ALBUQUERQUE
PLANNING DEPARTMENT
DEVELOPMENT SERVICE / HYDROLOGY SECTION

DATE: 8-15-11
CONFERENCE RECAP

ZONE ATLAS PAGE NO: G 19
DRAINAGE FILE: G19/D021
ZONING: _____
DRB:
SUBJECT: Sandia Hgh school MDP
STREET ADDRESS (IF KNOWN): _____
SUBDIVISION NAME: _____

RECEIVED
DEC 13 2011
HYDROLOGY SECTION

APPROVAL REQUESTED:

ATTENDANCE: Curtis Cherne, Graeme Means, Jeff Mortensen

FINDINGS:

- APS will not be required to upsize the storm drain that conveys offsite flows from the inlets in Wisconsin st as part of redevelopment of the campus or the "clean-up" plat. This is because it is a public storm drain and an existing condition. There is also no evidence that this SD is surging to overland flow on the campus.

- Channel penetration to be permitted by SO-19.

THE UNDERSIGNED AGREES THAT THE ABOVE FINDINGS ARE SUMMARIZED ACCURATELY AND ARE SUBJECT TO CHANGE IF FURTHER INVESTIGATION REVEALS THAT THEY ARE NOT REASONABLE OR THAT THEY ARE BASED ON INACCURATE INFORMATION.

SIGNED: Curtis A Cherne
NAME (PRINT): Curtis A. Cherne

SIGNED: J. Graeme Means Graeme Means
NAME (PRINT):

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH YOUR DRAINAGE SUBMITTAL.