

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

March 6, 2019

Jacky Lin, P.E.
WHPacific, Inc.
6501 Americas Parkway NE, Suite 400
Albuquerque, NM 87110

**RE: James Dwyer Substation Parking Lot Expansion
12700 Montgomery NE
Grading and Drainage Plan
Engineer's Stamp Date: 2/27/19
Hydrology File: G23D011**

Dear Mr. Lin:

PO Box 1293

Based on the submittal received on 2/27/19, the Grading Plan and Drainage Report are approved for Grading and Paving Permit.

Albuquerque

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

NM 87103

Sincerely,

www.cabq.gov

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: James Dwyer Substation Parking Lot Expansion **Building Permit #:** N/A **Hydrology File #:** G23D011
DRB#: N/A **EPC#:** SI-2018-00172 **Work Order#:** N/A
Legal Description: Lots 3A and 4, Block 2 Glenwood Hills Unit 1, On Montgomery Between Spanish Bit and Landau Drive.
City Address: 12700 Montgomery Blvd. NE, Albuquerque, NM 87111

Applicant: WHPacific, Inc **Contact:** Minxuan(Jacky) Lin
Address: 6501 America Pkwy NE, Ste 400
Phone#: 505-348-5221 **Fax#:** **E-mail:** jlin@whpacific.com
Owner: City of Albuquerque, Department of Municipal Development **Contact:** Stacy Herrera
Address: One Civic Plaza NW, 7th Floor, Albuquerque, NM 87102
Phone#: 505-768-2768 **Fax#:** **E-mail:** stacyherrera@cabq.gov

TYPE OF SUBMITTAL: PLAT (# OF LOTS) RESIDENCE DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL?: X Yes No

DEPARTMENT: TRAFFIC/ TRANSPORTATION X HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

ENGINEER/ARCHITECT CERTIFICATION
 PAD CERTIFICATION
 CONCEPTUAL G & D PLAN
X GRADING PLAN
 DRAINAGE MASTER PLAN
X DRAINAGE REPORT
 FLOODPLAIN DEVELOPMENT PERMIT APPLIC
 ELEVATION CERTIFICATE
 CLOMR/LOMR
 TRAFFIC CIRCULATION LAYOUT (TCL)
 TRAFFIC IMPACT STUDY (TIS)
 OTHER (SPECIFY)
 PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

BUILDING PERMIT APPROVAL
 CERTIFICATE OF OCCUPANCY
 PRELIMINARY PLAT APPROVAL
 SITE PLAN FOR SUB'D APPROVAL
 SITE PLAN FOR BLDG. PERMIT APPROVAL
 FINAL PLAT APPROVAL
 SIA/ RELEASE OF FINANCIAL GUARANTEE
 FOUNDATION PERMIT APPROVAL
X GRADING PERMIT APPROVAL
 SO-19 APPROVAL
X PAVING PERMIT APPROVAL
 GRADING/ PAD CERTIFICATION
 WORK ORDER APPROVAL
 CLOMR/LOMR
 FLOODPLAIN DEVELOPMENT PERMIT
 OTHER (SPECIFY)

DATE SUBMITTED: 2-27-2019 **By:** Minxuan(Jacky) Lin

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED:

FEE PAID:

WHPacific Project # P0022127W.0003

February 27, 2019

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services
PO Box 1293
Albuquerque, New Mexico 87103

**Re: James Dwyer Substation Parking Lot Expansion
12700 Montgomery NE
Grading and Drainage Plan
Hydrology File: G23D011**

Dear Dana:

Attached is the grading and drainage resubmittal for Grading & Paving Permit Approval. The following items has been revised & provided per your comment letter dated February 15, 2019.

1. Revised Drainage & Grading Plan for undeveloped area
2. Provided drainage analysis support documents / calculation for detention pond
3. Revised Grading Plan between parking lot and back of sidewalk on Montgomery
4. Provide drainage analysis support documents / calculation for concrete run-down and valley gutter
5. Revised Grading Plan to add more spot elevations & included landscape planting plan to show erosion protection between corner of wall & adjacent stairs.

Please contact me if you have any questions or comments.

Sincerely,

WHPacific, Inc.

By:
Minxuan(Jacky) Lin, PE
Civil Engineer, Development Services
6501 Americas Pkwy NE, Ste 400
Albuquerque, NM 87110
cc: Rick Beltramo

Drainage Analysis Report - Support Documents

For

James Dwyer Substation Parking Lot Expansion Albuquerque, New Mexico

Project No. P0022127W.0003



Prepared for:

City of Albuquerque,
Department of Municipal Development
One Civic Plaza NW, 7th Floor
Albuquerque, NM 87102

Prepared By:

WHPacific

6501 AMERICAS PARKWAY NE, SUITE 400
ALBUQUERQUE, NEW MEXICO 87110

February 27th, 2019

INTRODUCTION

This Drainage Analysis Report Support Document has been developed for City of Albuquerque, Department of Municipal Development in support of the proposed James Dwyer Substation Parking Lot Expansion project. Per the request of Hydrology Section, Development Review Services, the following are the support hydrology analysis:

APPENDIX 1 –

HMS Modeling for Proposed Onsite Detention Pond

APPENDIX 2 –

Hydraulic Capacity Calculation for Concrete Rundown & Valley Gutter
(Bentley FlowMaster)

APPENDIX 1



HEC-HMS

Project : James Dwyer HMS
Basin Model : James Dwyer Substation
Feb 25 08:57:26 MST 2019



Prop Basin 4 & 5



Detention Pond

Project: James Dwyer HMS Simulation Run: 100YR-6HR

Start of Run: 22Feb2019, 08:00

Basin Model: James Dwyer Subs

End of Run: 22Feb2019, 08:48

Meteorologic Model: Met 1

Compute Time: 25Feb2019, 09:10:37

Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI ²)	Peak Discharge (CFS)	Time of Peak	Volume (AC-FT)
Prop Basin 4 & 5	0.000765	2.4	22Feb2019, 08:12	0.10
Detention Pond	0.000765	1.5	22Feb2019, 08:34	0.05

Project: James Dwyer HMS Simulation Run: 100YR-6HR
Source: Prop Basin 4 & 5

Start of Run:	22Feb2019, 08:00	Basin Model:	James Dwyer Substation
End of Run:	22Feb2019, 08:48	Meteorologic Model:	Met 1
Compute Time:	25Feb2019, 09:10:37	Control Specifications:	Control 1

Volume Units: AC-FT

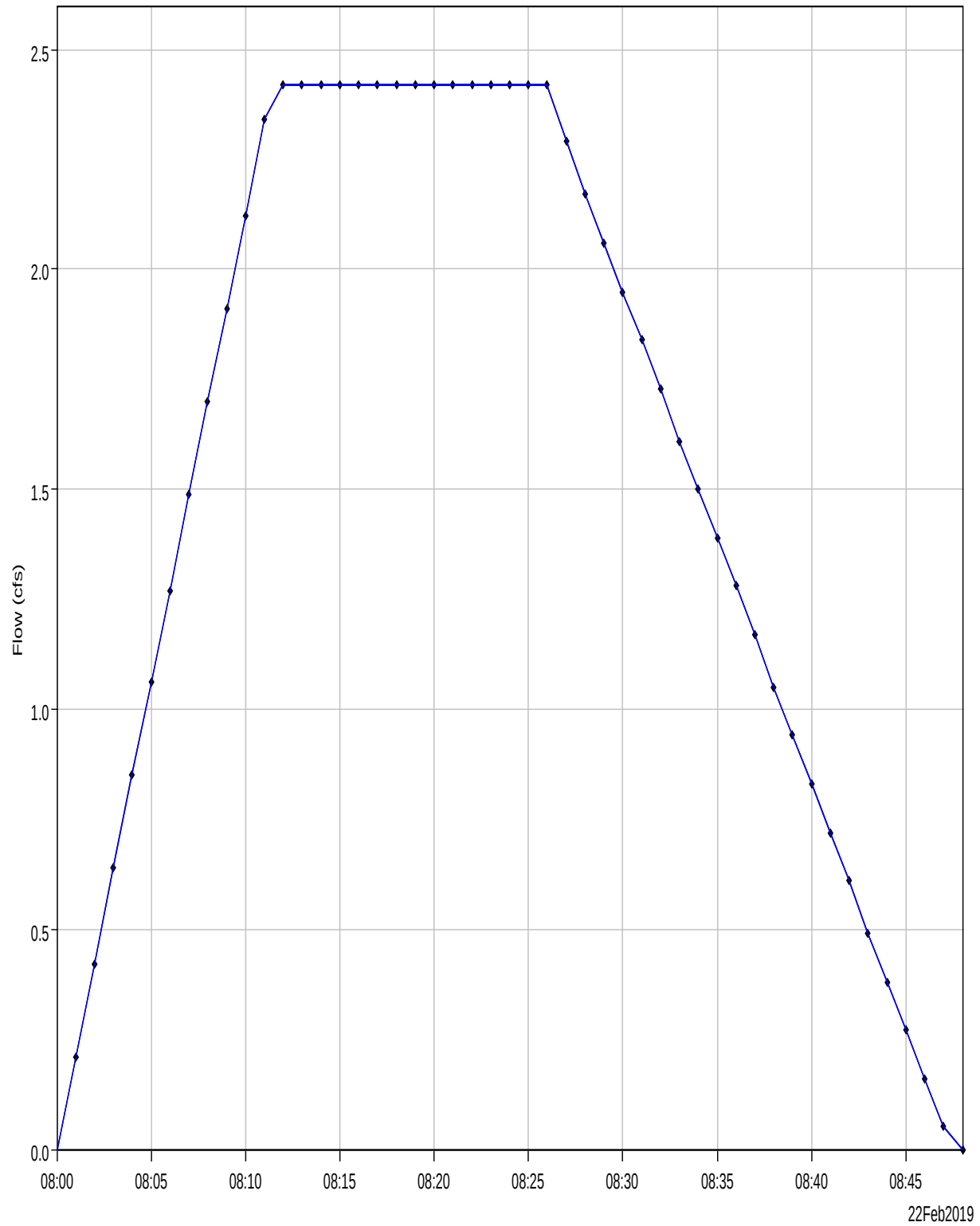
Computed Results

Peak Discharge: 2.4 (CFS)	Date/Time of Peak Discharge: 22Feb2019, 08:12
Volume: 0.10 (AC-FT)	

Observed Hydrograph at Gage Gage 1

Peak Discharge: 2.4 (CFS)	Date/Time of Peak Discharge: 22Feb2019, 08:12
Mean Abs Error: 0.0 (CFS)	RMS Error: 0.0 (CFS)
Volume: 0.10 (AC-FT)	Volume Residual: 0.00 (AC-FT)
Nash-Sutcliffe: 1.000	

Source "Prop Basin 4 & 5" Results for Run "100YR-6HR"



—◆— Run:100YR-6HR Element:Prop Basin 4 & 5 Result:Observed Flow

— Run:100YR-6HR Element:Prop Basin 4 & 5 Result:Outflow

Project: James Dwyer HMS Simulation Run: 100YR-6HR
Source: Prop Basin 4 & 5

Start of Run: 22Feb2019, 08:00 Basin Model: James Dwyer Subs
End of Run: 22Feb2019, 08:48 Meteorologic Model: Met 1
Compute Time: 25Feb2019, 09:10:37 Control Specifications: Control 1

Date	Time	Discharge (CFS)	Obs Flow (CFS)
22Feb2019	08:00	0.0	0.0
22Feb2019	08:01	0.2	0.2
22Feb2019	08:02	0.4	0.4
22Feb2019	08:03	0.6	0.6
22Feb2019	08:04	0.8	0.8
22Feb2019	08:05	1.1	1.1
22Feb2019	08:06	1.3	1.3
22Feb2019	08:07	1.5	1.5
22Feb2019	08:08	1.7	1.7
22Feb2019	08:09	1.9	1.9
22Feb2019	08:10	2.1	2.1
22Feb2019	08:11	2.3	2.3
22Feb2019	08:12	2.4	2.4
22Feb2019	08:13	2.4	2.4
22Feb2019	08:14	2.4	2.4
22Feb2019	08:15	2.4	2.4
22Feb2019	08:16	2.4	2.4
22Feb2019	08:17	2.4	2.4
22Feb2019	08:18	2.4	2.4
22Feb2019	08:19	2.4	2.4
22Feb2019	08:20	2.4	2.4
22Feb2019	08:21	2.4	2.4
22Feb2019	08:22	2.4	2.4
22Feb2019	08:23	2.4	2.4
22Feb2019	08:24	2.4	2.4
22Feb2019	08:25	2.4	2.4

Date	Time	Discharge (CFS)	Obs Flow (CFS)
22Feb2019	08:26	2.4	2.4
22Feb2019	08:27	2.3	2.3
22Feb2019	08:28	2.2	2.2
22Feb2019	08:29	2.1	2.1
22Feb2019	08:30	2.0	2.0
22Feb2019	08:31	1.8	1.8
22Feb2019	08:32	1.7	1.7
22Feb2019	08:33	1.6	1.6
22Feb2019	08:34	1.5	1.5
22Feb2019	08:35	1.4	1.4
22Feb2019	08:36	1.3	1.3
22Feb2019	08:37	1.2	1.2
22Feb2019	08:38	1.0	1.0
22Feb2019	08:39	0.9	0.9
22Feb2019	08:40	0.8	0.8
22Feb2019	08:41	0.7	0.7
22Feb2019	08:42	0.6	0.6
22Feb2019	08:43	0.5	0.5
22Feb2019	08:44	0.4	0.4
22Feb2019	08:45	0.3	0.3
22Feb2019	08:46	0.2	0.2
22Feb2019	08:47	0.0	0.0
22Feb2019	08:48	0.0	0.0

Project: James Dwyer HMS Simulation Run: 100YR-6HR
Reservoir: Detention Pond

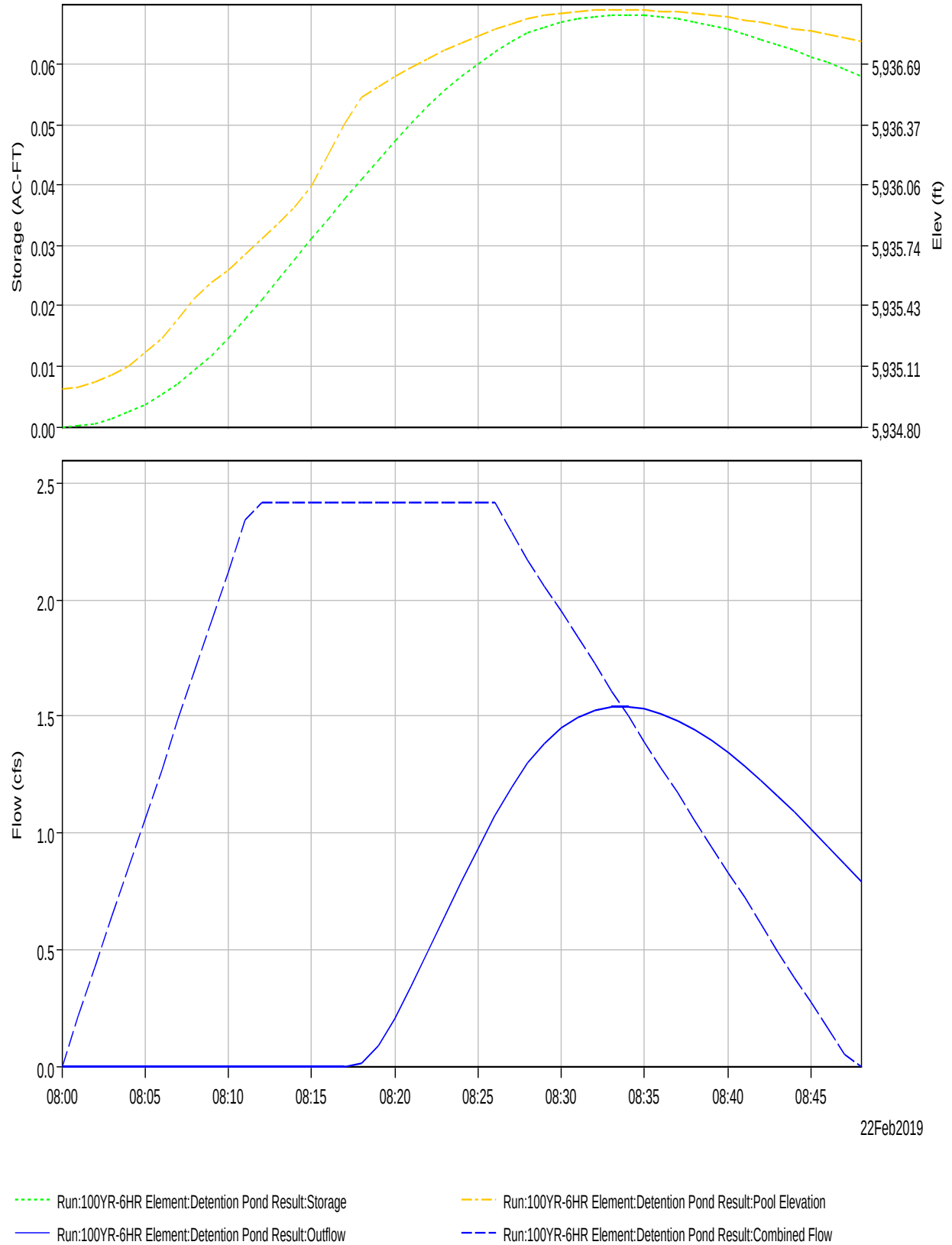
Start of Run:	22Feb2019, 08:00	Basin Model:	James Dwyer Substation
End of Run:	22Feb2019, 08:48	Meteorologic Model:	Met 1
Compute Time:	25Feb2019, 09:10:37	Control Specifications:	Control 1

Volume Units: AC-FT

Computed Results

Peak Inflow:	2.4 (CFS)	Date/Time of Peak Inflow:	22Feb2019, 08:12
Peak Discharge:	1.5 (CFS)	Date/Time of Peak Discharge:	22Feb2019, 08:34
Inflow Volume:	0.10 (AC-FT)	Peak Storage:	0.07 (AC-FT)
Discharge Volume:	0.05 (AC-FT)	Peak Elevation:	5937.0 (FT)

Reservoir "Detention Pond" Results for Run "100YR-6HR"



22Feb2019

Project: James Dwyer HMS Simulation Run: 100YR-6HR
 Reservoir: Detention Pond

Start of Run: 22Feb2019, 08:00 Basin Model: James Dwyer Subs
 End of Run: 22Feb2019, 08:48 Meteorologic Model: Met 1
 Compute Time: 25Feb2019, 09:10:37 Control Specifications: Control 1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
22Feb2019	08:00	0.0	0.00	5935.0	0.0
22Feb2019	08:01	0.2	0.00	5935.0	0.0
22Feb2019	08:02	0.4	0.00	5935.0	0.0
22Feb2019	08:03	0.6	0.00	5935.1	0.0
22Feb2019	08:04	0.8	0.00	5935.1	0.0
22Feb2019	08:05	1.1	0.00	5935.2	0.0
22Feb2019	08:06	1.3	0.01	5935.3	0.0
22Feb2019	08:07	1.5	0.01	5935.4	0.0
22Feb2019	08:08	1.7	0.01	5935.5	0.0
22Feb2019	08:09	1.9	0.01	5935.5	0.0
22Feb2019	08:10	2.1	0.01	5935.6	0.0
22Feb2019	08:11	2.3	0.02	5935.7	0.0
22Feb2019	08:12	2.4	0.02	5935.8	0.0
22Feb2019	08:13	2.4	0.02	5935.9	0.0
22Feb2019	08:14	2.4	0.03	5935.9	0.0
22Feb2019	08:15	2.4	0.03	5936.0	0.0
22Feb2019	08:16	2.4	0.03	5936.2	0.0
22Feb2019	08:17	2.4	0.04	5936.4	0.0
22Feb2019	08:18	2.4	0.04	5936.5	0.0
22Feb2019	08:19	2.4	0.04	5936.6	0.1
22Feb2019	08:20	2.4	0.05	5936.6	0.2
22Feb2019	08:21	2.4	0.05	5936.7	0.3
22Feb2019	08:22	2.4	0.05	5936.7	0.5
22Feb2019	08:23	2.4	0.06	5936.8	0.6
22Feb2019	08:24	2.4	0.06	5936.8	0.8
22Feb2019	08:25	2.4	0.06	5936.8	0.9

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
22Feb2019	08:26	2.4	0.06	5936.9	1.1
22Feb2019	08:27	2.3	0.06	5936.9	1.2
22Feb2019	08:28	2.2	0.07	5936.9	1.3
22Feb2019	08:29	2.1	0.07	5936.9	1.4
22Feb2019	08:30	2.0	0.07	5936.9	1.4
22Feb2019	08:31	1.8	0.07	5937.0	1.5
22Feb2019	08:32	1.7	0.07	5937.0	1.5
22Feb2019	08:33	1.6	0.07	5937.0	1.5
22Feb2019	08:34	1.5	0.07	5937.0	1.5
22Feb2019	08:35	1.4	0.07	5937.0	1.5
22Feb2019	08:36	1.3	0.07	5937.0	1.5
22Feb2019	08:37	1.2	0.07	5937.0	1.5
22Feb2019	08:38	1.0	0.07	5936.9	1.4
22Feb2019	08:39	0.9	0.07	5936.9	1.4
22Feb2019	08:40	0.8	0.07	5936.9	1.3
22Feb2019	08:41	0.7	0.06	5936.9	1.3
22Feb2019	08:42	0.6	0.06	5936.9	1.2
22Feb2019	08:43	0.5	0.06	5936.9	1.2
22Feb2019	08:44	0.4	0.06	5936.9	1.1
22Feb2019	08:45	0.3	0.06	5936.9	1.0
22Feb2019	08:46	0.2	0.06	5936.8	0.9
22Feb2019	08:47	0.0	0.06	5936.8	0.9
22Feb2019	08:48	0.0	0.06	5936.8	0.8

APPENDIX 2

Worksheet for 4ft Wide Concrete Rundown

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.02000	ft/ft
Bottom Width	4.00	ft
Discharge	2.12	ft ³ /s

Results

Normal Depth	0.13	ft
Flow Area	0.53	ft ²
Wetted Perimeter	4.26	ft
Hydraulic Radius	0.12	ft
Top Width	4.00	ft
Critical Depth	0.21	ft
Critical Slope	0.00475	ft/ft
Velocity	4.02	ft/s
Velocity Head	0.25	ft
Specific Energy	0.38	ft
Froude Number	1.95	
Flow Type	Supercritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.13	ft
Critical Depth	0.21	ft
Channel Slope	0.02000	ft/ft
Critical Slope	0.00475	ft/ft

Worksheet for Valley Gutter Capacity

Project Description

Solve For Spread

Input Data

Channel Slope	0.02000	ft/ft
Discharge	2.12	ft ³ /s
Gutter Width	0.00	ft
Gutter Cross Slope	0.00	ft/ft
Road Cross Slope	0.02	ft/ft
Roughness Coefficient	0.013	

Results

Spread	7.76	ft
Flow Area	0.60	ft ²
Depth	0.16	ft
Gutter Depression	0.00	ft
Velocity	3.52	ft/s

Cross Section for Valley Gutter Capacity

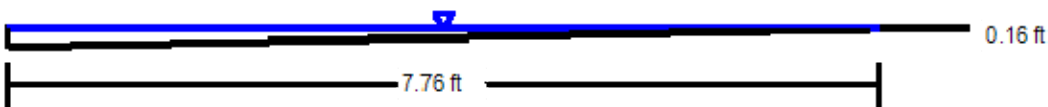
Project Description

Solve For Spread

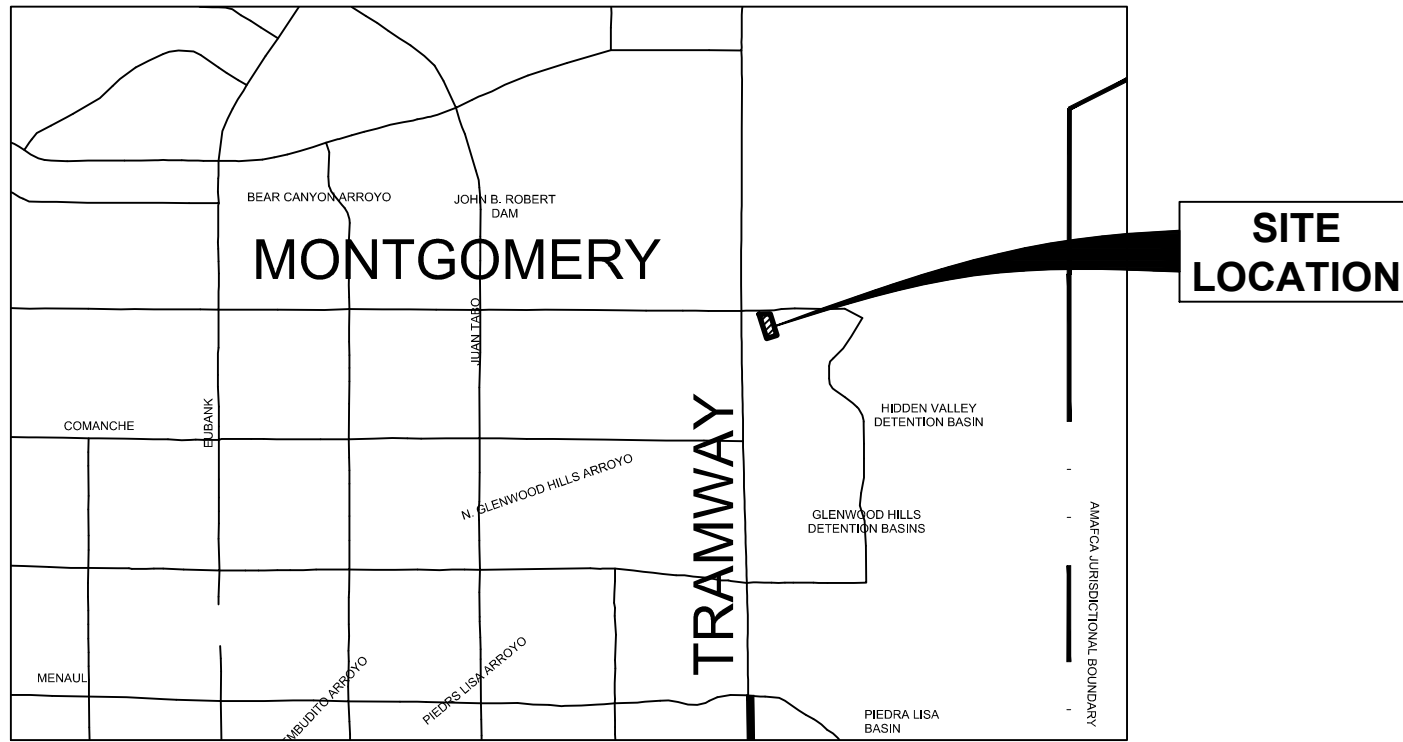
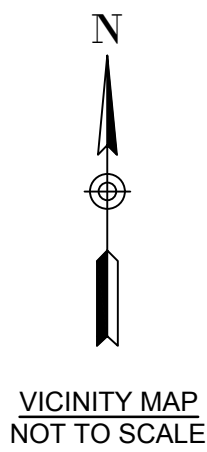
Input Data

Channel Slope	0.02000	ft/ft
Discharge	2.12	ft³/s
Gutter Width	0.00	ft
Gutter Cross Slope	0.00	ft/ft
Road Cross Slope	0.02	ft/ft
Spread	7.76	ft
Roughness Coefficient	0.013	

Cross Section Image



V: 1
H: 1



LEGAL DESCRIPTION

A TRACT OF LAND SITUATED WITHIN TOWNSHIP 10 NORTH, RANGE 4 EAST, SECTION 2, NEW MEXICO PRINCIPLE MERIDIAN, WITHIN THE CITY OF ALBUQUERQUE, COUNTY OF BERNALILLO, STATE OF NEW MEXICO. SAID TRACT OF LAND BEING DESCRIBED AS LOT 4, BLOCK 2 AS SHOWN ON THE PLAT ENTITLED "UNIT 1, GLENWOOD HILLS, SUBDIVISION, ALBUQUERQUE, NEW MEXICO", BEING MORE PARTICULARLY DESCRIBED BY NEW MEXICO STATE PLANE GRID, CENTRAL ZONE (NAD83) BEARINGS AND GRID DISTANCES AS FOLLOWS:

COMMENCING AT A FOUND CITY OF ALBUQUERQUE BRASS CAP MONUMENT "1-G23";

THENCE N 84°53'59" W, A DISTANCE OF 3,372.80 FT TO A POINT ON THE WESTERLY RIGHT OF WAY LINE LANDAU STREET TO A FOUND NO. 5 REBAR, BENT;

THENCE, S 72°39'13" W, ALONG THE SOUTHERLY BOUNDARY OF SAID LOT 4, BLOCK 2, A DISTANCE OF 220.13 FT TO A FOUND NO. 5 REBAR, WITH A YELLOW PLASTIC CAP MARKED "PS 11482";

THENCE, N 17°30'30" W, ALONG THE WESTERLY BOUNDARY OF SAID LOT 4, BLOCK 2, COMMON TO THE EASTERLY LINE OF LOT 3A, BLOCK 2 AND ALSO BEING THE EASTERLY BOUNDARY OF A 150 FT WIDE P.N.M. EASEMENT, COMMON TO THE WESTERLY BOUNDARY OF A 10 FT WIDE P.N.M. & M.S.T.&T. EASEMENT, A DISTANCE OF 519.08 FT TO A POINT ON THE NORTHERLY BOUNDARY OF SAID LOT 4, BLOCK 2, AND BEING ON THE SOUTHERLY RIGHT OF WAY LINE MONTGOMERY BOULEVARD TO A POINT NOT SET;

THENCE, N 89°44'38" E, WITH THE SAID SOUTHERLY RIGHT OF WAY LINE AND ON THE NORTHERLY BOUNDARY OF SAID LOT 4, BLOCK 2, A DISTANCE OF 231.10 FT TO THE INTERSECTION OF THE WESTERLY RIGHT OF WAY LINE LANDAU STREET TO A POINT NOT SET;

THENCE, S 17°26'06" E, ON THE SAID RIGHT OF WAY LINE LANDAU STREET AND ON THE EASTERLY BOUNDARY OF SAID LOT 4, BLOCK 2, A DISTANCE OF 451.17 FT TO THE POINT OF BEGINNING;

THE DESCRIBED ENCLOSED AREA CONSISTS OF 106,938.33 SQ. FT. OR 2.4550 ACRES OF LAND, MORE OR LESS.

DOCUMENTS USED TO PREPARE THIS BOUNDARY SURVEY

- Montgomery and Tramway Police Station Site Plan as prepared by Dekker/Perich/Sabatini, dated December 10, 2001, Project No. 6230.91.
- Summary Plat Lots 2A and 3A being a Replat of Lot 3 and a portion of Lot 2 Block 2, Unit 1, Glenwood Hills, Bernalillo County, New Mexico, dated June 1983. Prepared by Ronald A. Forstbauer.
- Unit 1, Glenwood Hills, dated February 1961.
- Tracts X-1-A and X-2-A Block 2, Unit 1, Glenwood Hills, dated March, 1987 as prepared by Thomas T. Mann, Jr., dated April 2, 1987.
- Tract A, Block 1, Unit 1 Glenwood Hills, filed September 18, 1983, C22-32.

NOTES:

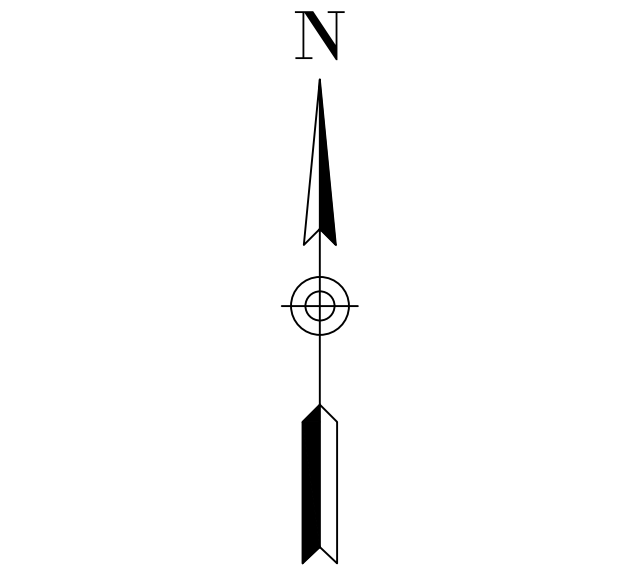
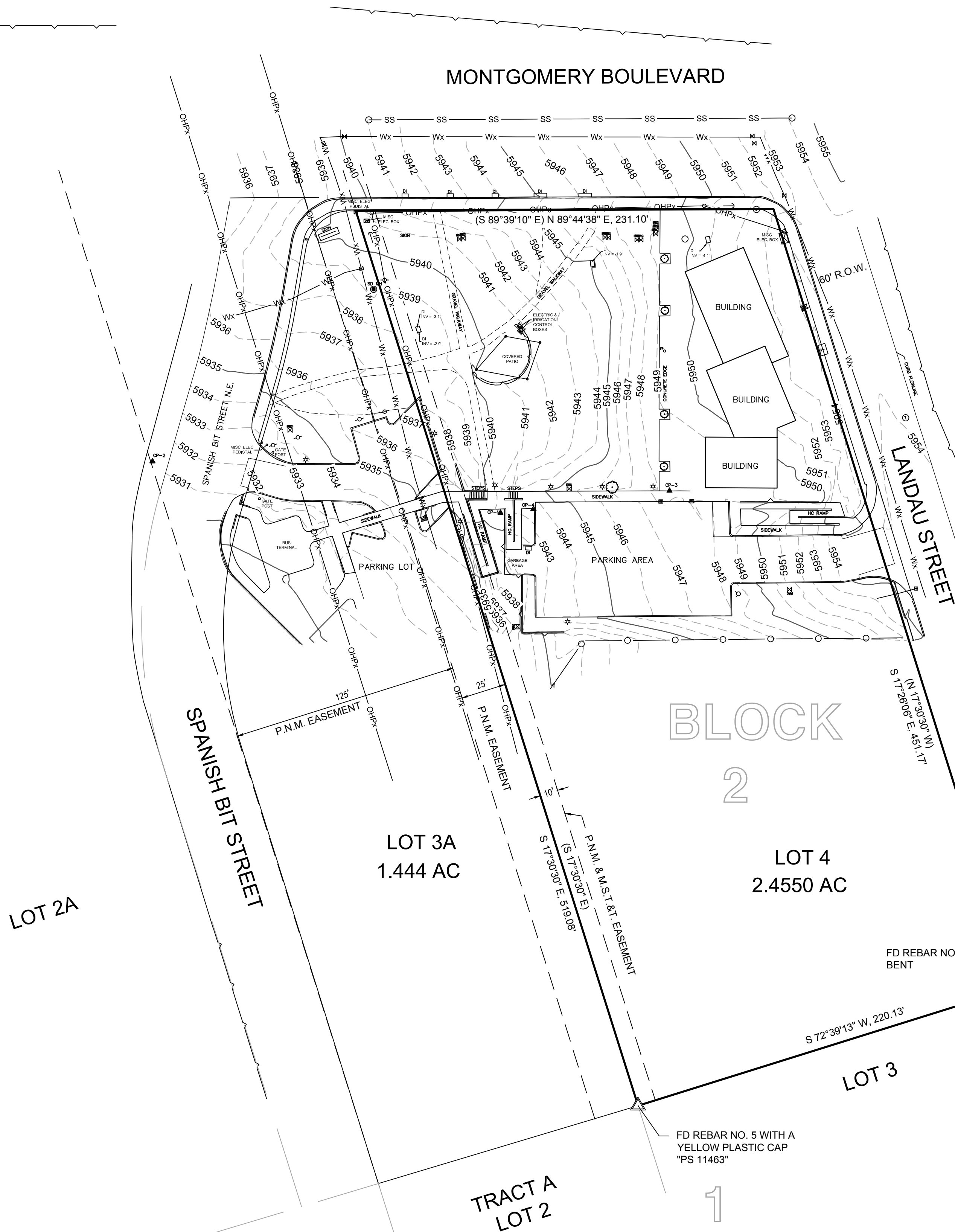
- Survey commenced on July 2, 2018 and was completed on July 31, 2018.
- Surface improvements were located at the time of this survey.
- Control Points shown were set at the time of this survey. Coordinates shown were derived from GPS Static observations as completed by NGS (OPUS).
- The Basis of Bearing for this project is based on GPS (Grid) and the distance shown are grid distances.
- The grid to ground scale factor for this project is 1.000374870. The combined grid scale factor for this project is 0.99962527.
- The purpose of this survey was to define the boundary and provide a topographic survey of the existing conditions on a portion of Lot 3A and a portion of Lot 4. The boundary as shown was taken from the design drawings as provided by the City of Albuquerque, Public Works Department as prepared by Dekker/Perich/Sabatini, dated 8/1/2000.

SURVEYOR'S CERTIFICATE

I, Lynn D. Lantz, New Mexico Professional Surveyor No. 10856, do hereby certify that this Boundary Survey Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey; that this survey meets that Minimum Standards for Surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this survey is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is a Boundary Survey Plat of an existing tract.

Surveyor's Name _____ PS No. _____ Date _____

GLENWOOD HILLS, UNIT 1 LOT 4, BLOCK 2



LEGEND

- ◇ POWER POLE
- ◇ POWER POLE WITH DROP
- ← GUY ANCHOR
- ★ LIGHT
- TELEPHONE CABINET
- TELEPHONE MANHOLE
- WATER METER
- × WATER VALVE
- IRRIGATION VALVE
- ▽ FIRE HYDRANT
- TREE
- SEWER MANHOLE
- STORM DRAIN MANHOLE
- ▲ SIGN
- ▲ FLAG POLE
- ▲ SURVEY CONTROL POINT

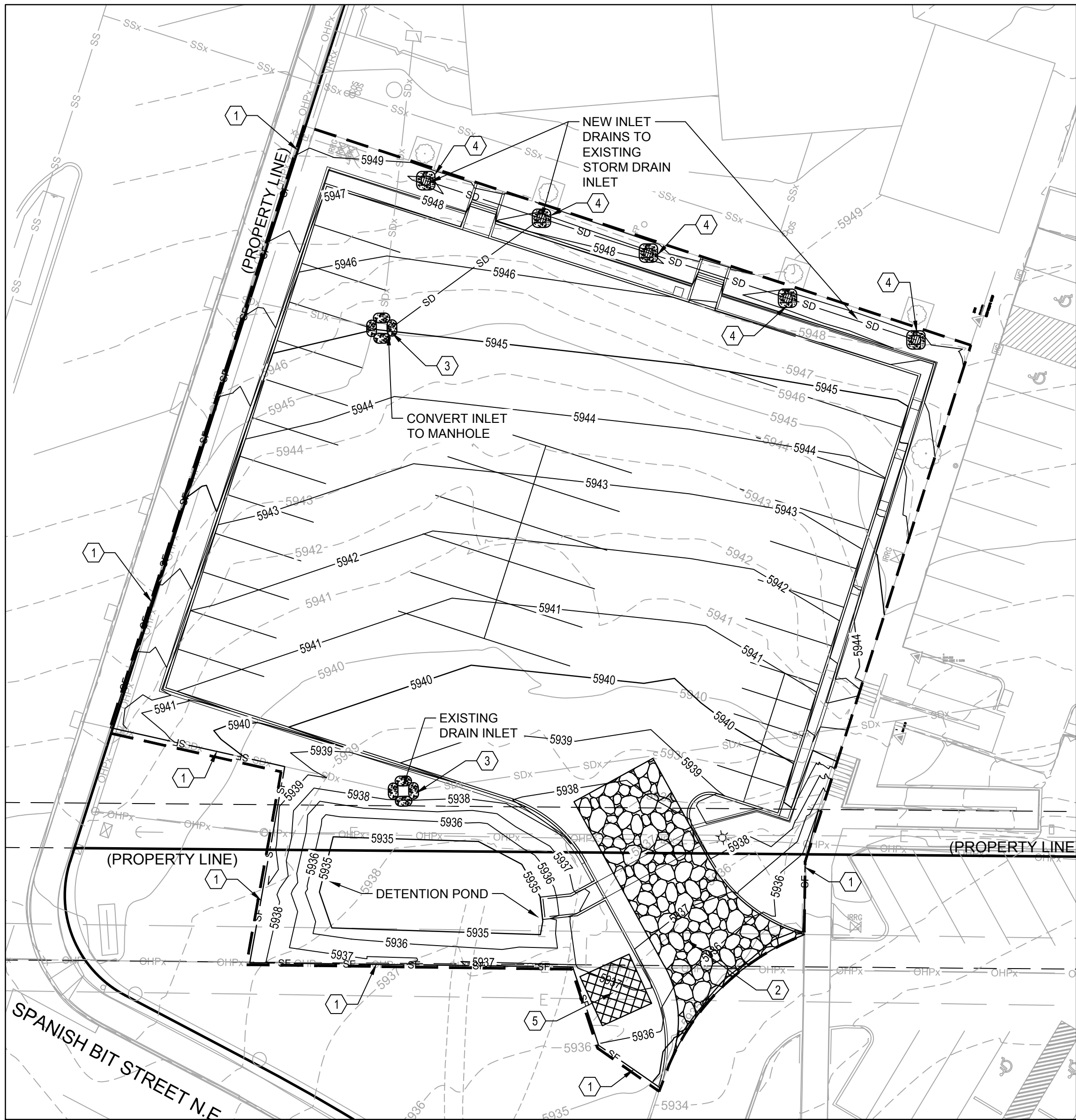
- Wx — WATER LINE
- SS — SEWER LINE
- OHPx — OVERHEAD POWER LINE
- — APPROXIMATE EASEMENT LINE
- ○ — CHAIN LINK FENCE
- — WALL

BENCH MARKS		AS BUILT INFORMATION	
COORDINATES ARE MODIFIED (SURFACE) NEW MEXICO STATE PLANE COORDINATES-CENTRAL ZONE, NAD 83. TO OBTAIN TRUE STATE PLANE COORDINATES, MULTIPLY THE COORDINATES HEREON BY THE PROJECT AVERAGE COMBINED GROUND TO GRID FACTOR OF CF=.99962526. ELEVATIONS ARE REFERRED TO SEA LEVEL, NAVD 88 AND HAVE BEEN ADJUSTED TO THE C.O.A. CONTROL STATION "17_G22"		CONTRACTOR WORK STACKED BY ACCEPTANCE BY FIELD LOCATION BY DRAWINGS CORRECTED BY MICRO-FILM INFORMATION RECORDED BY NO. DATE	
SURVEY INFORMATION		ENGINEERS SEAL	
FIELD NOTES		DATE	
NO.		REMARKS	
		DESIGNED BY JP/MUL DATE 2-27-2019	
		DRAWN BY JP/MUL DATE 2-27-2019	
		CHECKED BY RB DATE 2-27-2019	

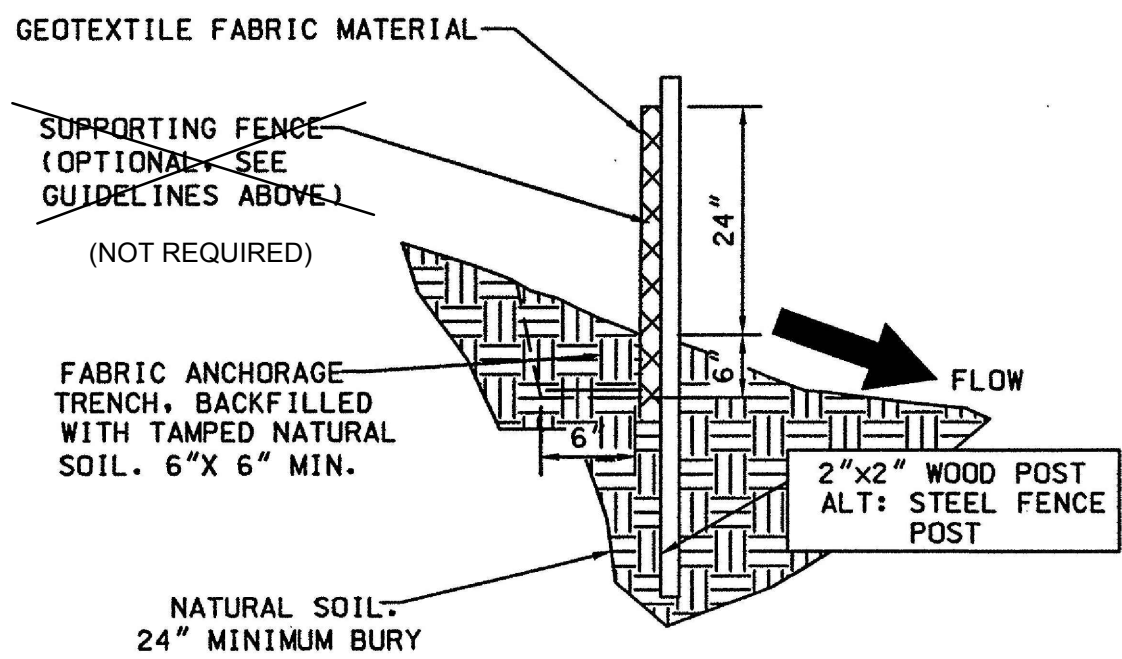


		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES			
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION EXISTING SURVEY PLAN					
Design Review Committee	City Engineer Approval	Ms./Day/Yr.	Ms./Day/Yr.		
City Project No. 6526.03		Zone Map No. G - 23 - Z	Sheet 3	Of	



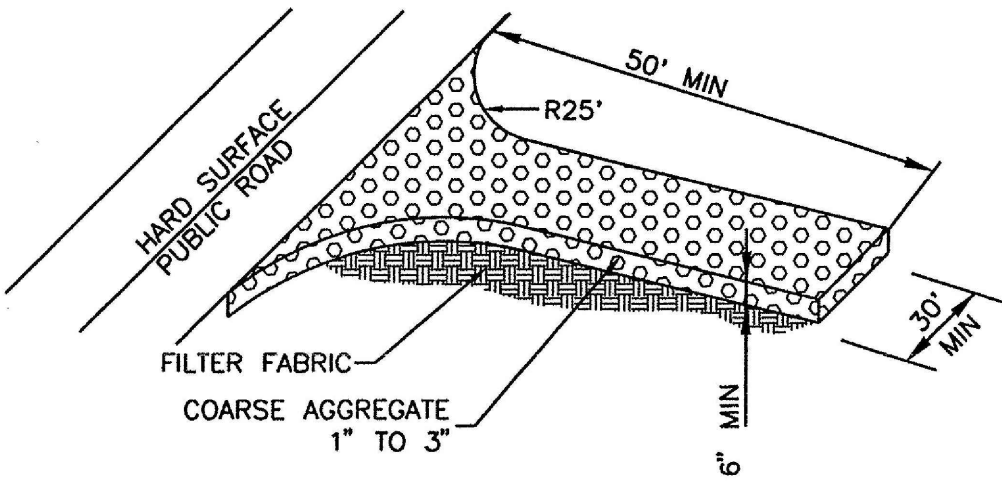


EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 20'



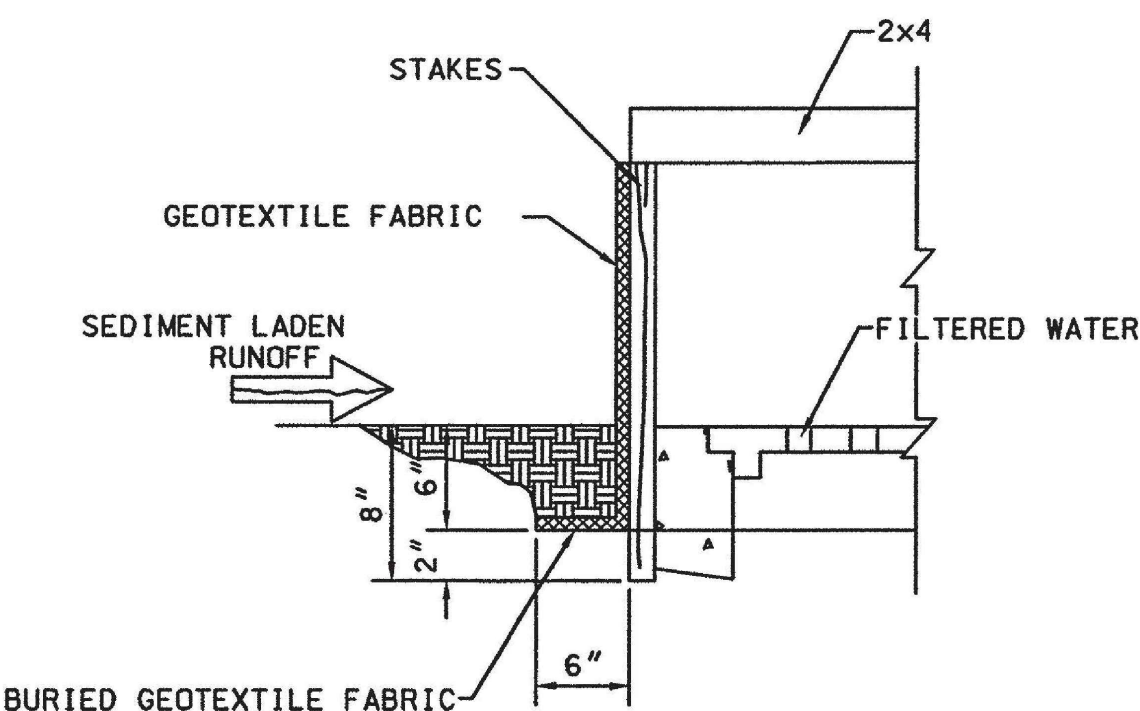
SILT FENCE
SCALE: N.T.S.

1
6A



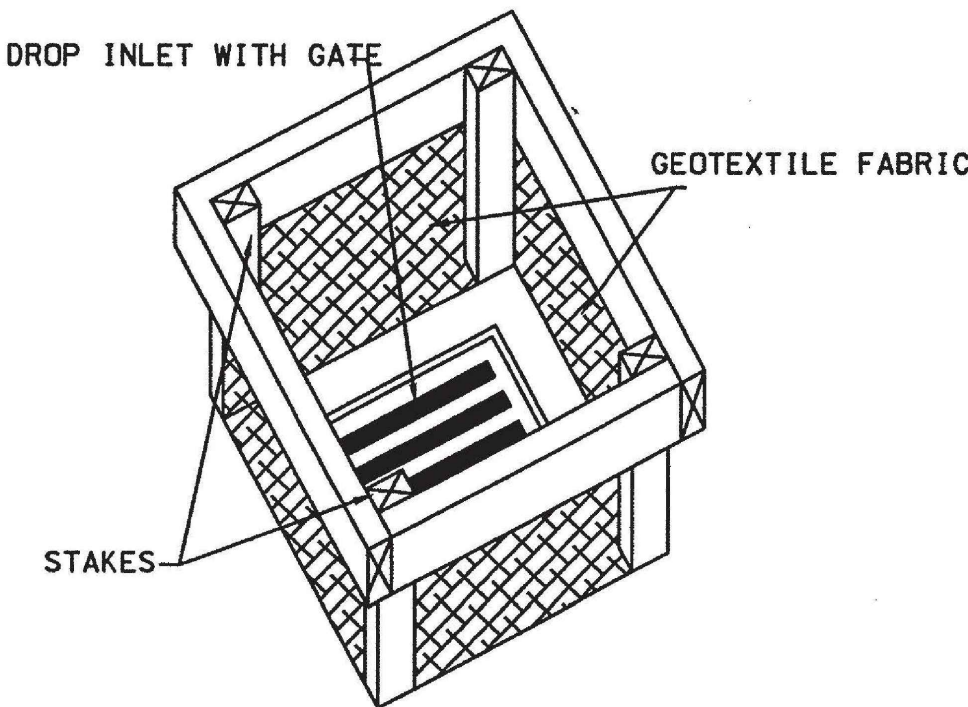
STABILIZED CONSTRUCTION ENTRANCE
SCALE: N.T.S.

2
6A



INLET PROTECTION
SCALE: N.T.S.

3
6A



TYPE I

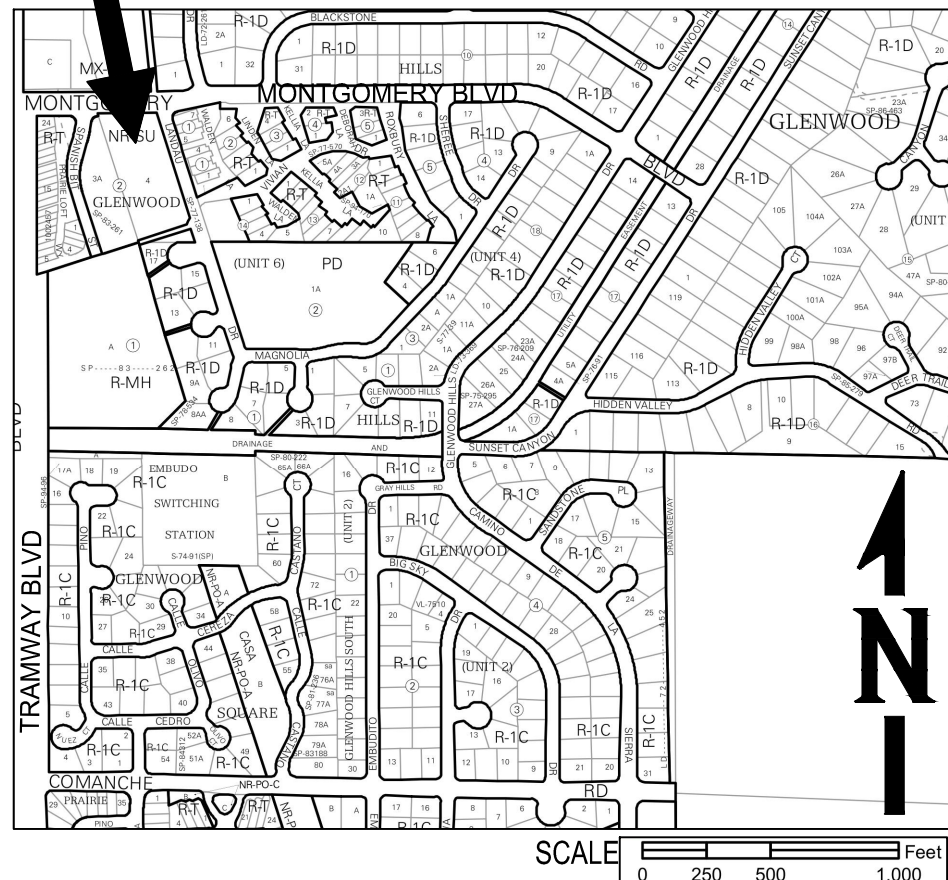
NOTE: WHEN SPECIFIED, ROCKS OR STRAW BALES CAN BE SUBSTITUTED FOR SILT FENCE.

GENERAL NOTES:

- PARKING AND STAGING AREAS ARE LOCATED OFF DISTURBED SITE IF NOT INDICATED ON THIS DRAWING.
- NATURAL VEGETATION WILL BE USED AS THE INITIAL BMP.
- ALL SITE FEATURES (EXISTING/PROPOSED GRADES, EXISTING CONSTRUCTION, FUTURE CONSTRUCTION, ETC.) SHOWN IS FOR INFORMATION ONLY.
- LOCATE TEMPORARY CONCRETE WASHOUT, CONSTRUCTION ENTRANCE, AND TRASH CONTAINMENT AREA TO MINIMIZE SITE DISTURBANCE DURING CONSTRUCTION ACTIVITY AND MODIFY AS REQUIRED PER SITE REQUIREMENTS.
- DISTURBED AREAS REMAINING NOT COVERED BY PERMANENT STRUCTURES OR BMPS SHALL BE STABILIZED BY SEEDING LAY CHAPTER 76, ARTICLE 10, SECTION 11-22 NMSA 1978.
- PROJECT IS REQUIRED TO MAINTAIN A REGIMENT OF STREET SWEEPING AND CLEAN UP MEASURES IN THE EVENT OF TRACK OUT TO MINIMIZE AND PREVENT OFF SITE CONVEYANCES.
- PERMANENT STABILIZATION:
GRAVEL MULCH
REVEGETATION SEEDING
(PER PROJECT PLANTING PLAN)

VICINITY MAP

PROJECT LOCATION

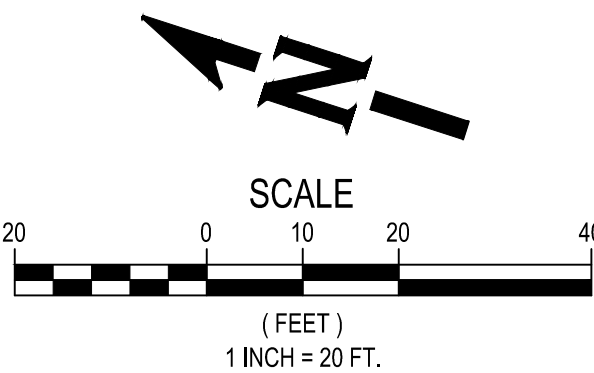


LEGEND

- DISTURBED AREA
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASH OUT PIT
- INLET PROTECTION

KEY NOTES

- INSTALL SILT FENCE PER DETAIL 1 ON THIS SHEET.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 2 ON THIS SHEET.
- INSTALL INLET PROTECTION ON EXISTING DRAIN INLET PER DETAIL 3 ON THIS SHEET.
- INSTALL INLET PROTECTION ON NEW INLINE DRAIN PER DETAIL 3 ON THIS SHEET.
- CONCRETE WASH OUT PIT.

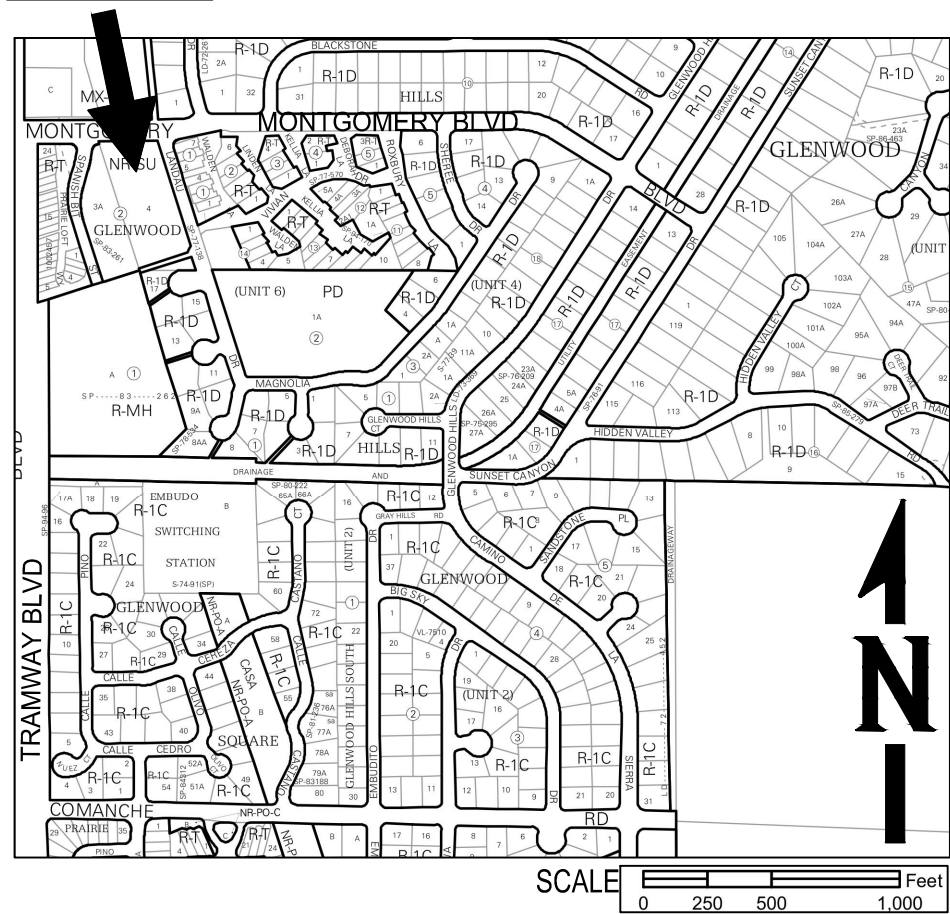


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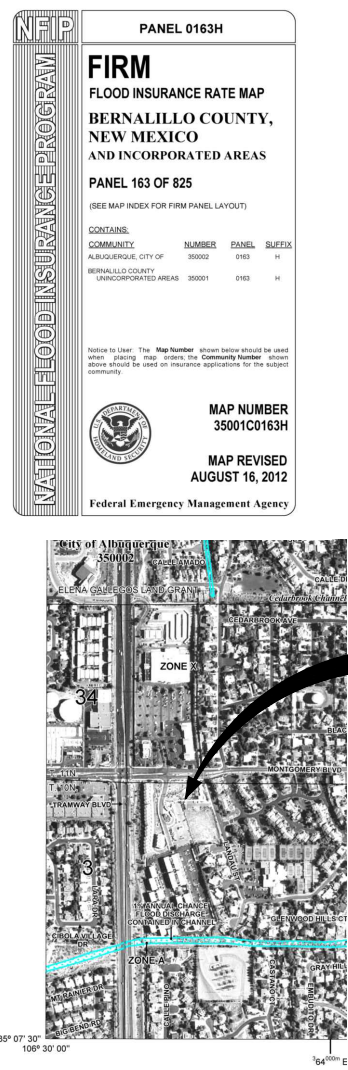
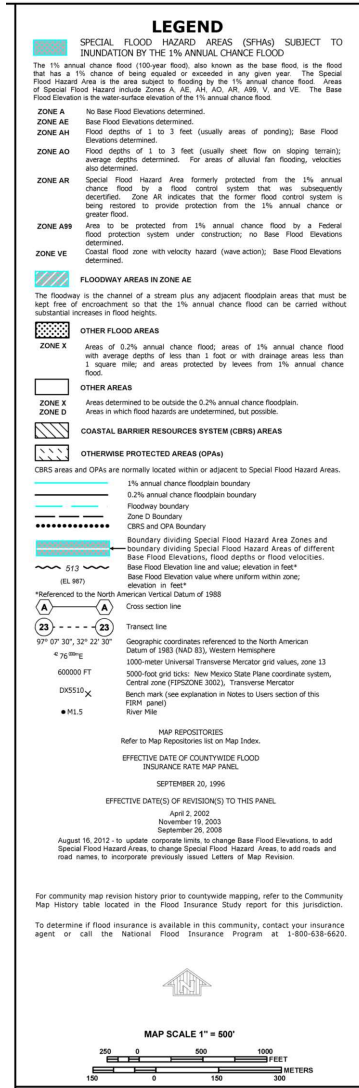
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CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES	
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION EROSION AND SEDIMENT CONTROL PLAN	
Design Review Committee	City Engineer Approval
City Project No. 6526.03	Zone Map No. G - 23 - Z
Sheet 6A	Of

VICINITY MAP

PROJECT
LOCATION

FIRM MAP : MAP NUMBER 35001C0163H

PROJECT
LOCATION

100-YR & 90th PERCENTILE STORM EVENTS HYDROLOGIC CALCULATIONS

BASIN	AREA (ACRES)	LAND TREATMENT				100-YR				90th Percentile Storm Events			
		A (%)	B (%)	C (%)	D (%)	UNIT PEAK DISCHARGE (CFS/AC)	WEIGHTED E (IN)	PEAK DISCHARGE (CFS)	VOLUME 6 HOUR (AC-FT)	UNIT PEAK DISCHARGE (CFS/AC)	WEIGHTED E (IN)	PEAK DISCHARGE (CFS)	VOLUME 6 HOUR (AC-FT)
EXISTING CONDITIONS													
EX 1	0.03	0.0	0.0	0.0	100.0	5.25	2.64	0.16	0.01				
EX 2	0.07	0.0	0.0	0.0	100.0	5.25	2.64	0.37	0.02				
EX 3	0.24	0.0	0.0	100.0	0.0	3.73	1.46	0.90	0.03				
EX 4	0.36	0.0	0.0	88.0	12.0	3.91	1.60	1.41	0.05				
TOTALS	0.70							2.83	0.099			0.00	0.00
PROPOSED CONDITIONS													
1	0.117	0.0	0.0	23.0	77.0	4.90	2.37	0.57	0.02		0.44	0.00	0.004
2	0.035	0.0	0.0	100.0	0.0	3.73	1.46	0.13	0.004				
3	0.058	0.0	0.0	90.0	10.0	3.88	1.58	0.23	0.008				
4	0.41	0.0	0.0	5.0	95.0	5.17	2.58	2.12	0.088		0.44	0.00	0.02
5	0.08	0.0	0.0	100.0	0.0	3.73	1.46	0.30	0.010				
TOTALS	0.70							3.35	0.133			0.00	0.02
PROPOSED VS. EXISTING DIFFERENCE													
								0.52	0.034			0.00	0.02

REFERENCE:

SECTION 22.2, HYDROLOGY, DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA OCTOBER 2008 REVISION, CITY OF ALBUQUERQUE, NEW MEXICO
PRECIPITATION ZONES = ZONE 4
DRAINAGE ORDINANCE DEFINES THE 90th PERCENTILE STORM EVENTS AS 0.44 INCHES.

DETENTION POND					
ELEVATION	AREA (FT ²)	STORAGE (FT ³)	STORAGE (AC-FT)	CUMMULATIVE STORAGE (FT ³)	CUMMULATIVE STORAGE (AC-FT)
5935.0	921	0	0.00	0	0.00
5935.5	1125	512	0.01	512	0.01
5936.0	1380	626	0.01	1138	0.03
5936.5	1710	773	0.02	1910	0.04
5937.0	2070	945	0.02	2855	0.07
TOTAL STORAGE				2855	0.07

LEGAL DESCRIPTION
LOTS 3A AND 4, BLOCK 2, UNIT 1, GLENWOOD HILLS TOGETHER

DRAINAGE BASIN AREA
0.54 ACRE; 23,489.04 SF

FLOOD ZONE DESIGNATION
NO PORTION OF THIS SITE LIES WITH A FLOOD PLAIN AS DESIGNATED ON PANEL 163 OF 825 OF THE FEMA FLOOD INSURANCE RATE MAPS, MAP NUMBER 35001C0163H DATED AUGUST 16, 2012.

DRAINAGE CRITERIA

CALCULATIONS FOR EXISTING PEAK DISCHARGE AND VOLUMETRIC RUNOFF WERE PERFORMED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL CHAPTER 22, SECTION 2, HYDROLOGY'S DRAINAGE CRITERIA FOR THE 100-YR, 6 HOUR DESIGN STORM.

HYDROLOGIC STUDY

EXISTING CONDITIONS

THE SITE IS PRESENTLY LANDSCAPED AREA ON THE WEST SIDE OF THE EXISTING JAMES DWYER POLICE SUBSTATION. THERE WAS AN OPEN PAVILION NEAR THE CENTER OF THE PARCEL, AND GRAVEL TRAILS TRAVERSED THE SITE. THE GROUND SURFACE CONTAINED A MODERATE GROWTH OF GRASS AND SHRUBS. IT IS BORDERED BY MONTGOMERY BLVD. TO THE NORTH, LANDAU DRIVE TO THE EAST AND SPANISH BIT DRIVE TO THE WEST. BOTH MONTGOMERY BLVD. AND SPANISH BIT DRIVE HAVE EXISTING STORM DRAIN SYSTEMS WITH INLETS ADJACENT TO THE PROPERTY.

SITE DRAINAGE TRENDED TO THE WEST FROM EXISTING JAMES DWYER POLICE SUBSTATION BUILDING AS SURFACE SHEET FLOW AT SLOPE APPROXIMATELY 8-15%. AN INLET LOCATED AT THE EAST END OF THE SITE ACCEPTS THE EXISTING FLOWS FROM THE POLICE SUBSTATION. ANOTHER INLET LOCATED AT THE WEST END OF THE SITE ACCEPTS THE FLOW WITHIN THE SITE. BOTH INLETS COLLECT FLOWS THEN CONVEYED TO EXISTING STORM DRAIN SYSTEM LOCATED AT MONTGOMERY BLVD. THE REST OF THE AREA SURFACE FLOW TO SPANISH BIT DRIVE. SEE EXISTING DRAIN PLAN FOR EXISTING BASINS.

PROPOSED CONDITIONS

THE PROPOSED SITE IMPROVEMENTS FOR THE SITE WILL CONSIST OF A NEW SECURE PAVED PARKING LOT FOR LAW REINFORCEMENT VEHICLES WITH CMU RETAINING WALL / IRON FENCE, PEDESTRIAN & VEHICLE ACCESS GATES AND ONSITE PARKING LIGHTS.

THE PROPOSED DRAINAGE WILL BE DIVIDED INTO 5 BASINS, WITH OFF-SITE BASIN & ONSITE BASINS. SEE PROPOSED DRAINAGE PLAN FOR BASINS.

BASIN 1 WILL CONSISTED AREAS OF EXISTING SUB STATION CONCRETE SIDEWALK, DRAINAGE FLOW WILL COLLECTED THROUGH NEW INLINE DRAINS BETWEEN THE EXISTING AREA AND NEW IRON FENCE THAT CONNECT TO THE EXISTING STORM DRAIN SYSTEM LOCATED AT MONTGOMERY BLVD. BASIN 2 RUNOFF WILL BE SURFACE FLOW ALONG THE NORTHWEST WALL TO THE EXISTING DRAIN INLET OUTSIDE THE CMU WALL THAT CONVEYED TO THE SAME STORM DRAIN SYSTEM LOCATED AT MONTGOMERY BLVD.

BASIN 3 WILL BE CONSISTED OF OUTSIDE OF SOUTH WALL AND DRIVEWAY ENTRANCE TO THE NEW GATED PARKING. RUNOFF WILL SURFACE FLOW TO EXISTING PARK & RIDE PARKING LOT THAT CONVEYED TO SPANISH BIT STREET.

BASIN 4 WILL BE ALL AREA WITHIN THE SECURED PARKING. ALL DRAINAGE FLOWS WILL SURFACE FLOW THROUGH PROPOSED VALLEY GUTTER & CONCRETE RUNDOWN THAT LOCATED AT THE FRONT PARKING ENTRANCE.

BASIN 5 CONSISTED EXISTING AREA & PROPOSED DETENTION POND, THE DETENTION POND WILL BE CONSTRUCTED AT THE DOWN STREAM OF THE CONCRETE RUNDOWN TO INTERCEPT THE 90 PERCENTILE RUNOFF & TO RETAIN THE DIFFERENCE OF THE HISTORIC RUNOFF FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT WITH A GRAVEL EMERGENCY SPILLWAY. THE DETENTION POND WILL BE CONSTRUCTED WITH GRAVEL MULCH WITH LANDSCAPING.

DRAINAGE SUMMARY:

EXISTING DISCHARGE TO STORM INLET CONNECTED @ MONTGOMERY:
EX. BASIN 1 & EX. BASIN 3, DISCHARGE = 1.05 CFS, VOLUME = 0.04 AC-FT.

PROPOSED DISCHARGE TO STORM INLET CONNECTED @ MONTGOMERY:
PROP. BASIN 1 & 2, DISCHARGE = 0.70 CFS, VOLUME = 0.03 AC-FT.

NET DISCHARGE TO STORM INLET = -0.35 CFS, VOLUME = -0.01 AC-FT.

EXISTING DISCHARGE TO SPANISH BIT STREET:
EX. BASIN 2 & EX. BASIN 4, DISCHARGE = 1.78 CFS, VOLUME = 0.06 AC-FT.

PROPOSED DISCHARGE TO SPANISH BIT STREET:
PROP. BASIN 3, DISCHARGE = 0.23 CFS, VOLUME = 0.008 AC-FT.

PROPOSED DISCHARGE TO DETENTION POND:
PROP. BASIN 4 & 5, DISCHARGE = 2.40 CFS, VOLUME = 0.10 AC-FT.

PROPOSED DETENTION POND STORAGE: VOLUME = 0.07 AC-FT,
PROPOSED DISCHARGE FROM POND SPILLWAY: 1.50 CFS, VOLUME = 0.05 AC-FT.

TOTAL PROPOSED DISCHARGE TO SPANISH BIT STREET = 1.73 CFS, VOLUME = 0.058 AC-FT.

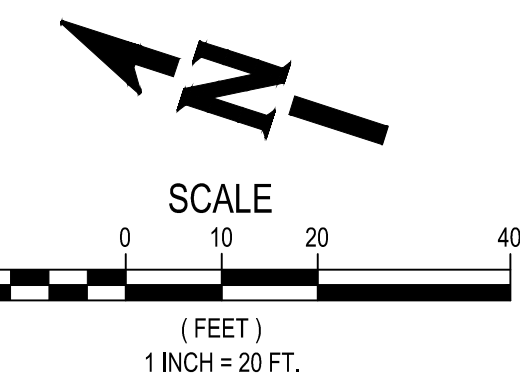
NET DISCHARGE TO SPANISH BIT STREET = -0.05 CFS, VOLUME = -0.002 AC-FT.

HYDROLOGIC STUDY CONCLUSION

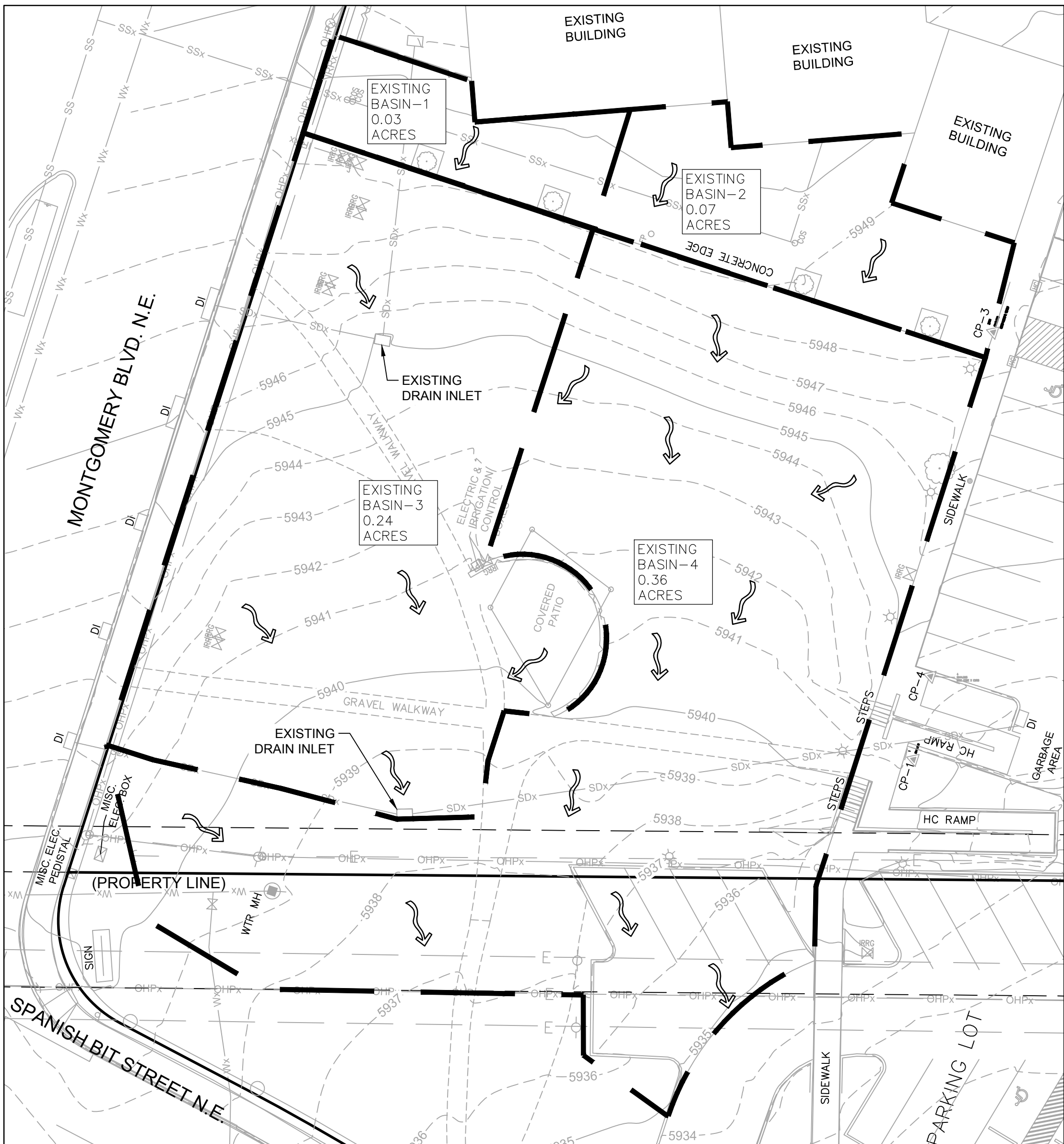
THE EXISTING 100-YR RUNOFF DISCHARGE & VOLUME FROM THE SITE IS 2.83 CFS & 0.10 AC-FT FOR THE 100-YR, 6HR EVENT. THE PROPOSED RUNOFF FROM THE SITE IS 2.66 CFS & 0.088 AC-FT SINCE MOST OF THE SURFACE RUNOFF WILL BE COLLECTED THROUGH THE DETENTION POND ONSITE. THIS RESULTS IN A NET REDUCTION OF 0.17 CFS & 0.012 AC-FT FROM EXISTING TO PROPOSED CONDITIONS. THE PROPOSED PARKING LOT ADDITION WILL HAVE NO IMPACT ON THE DOWNSTREAM AREAS SINCE THE RUNOFF AND DISCHARGE ARE LESS FROM THE PRE-DEVELOPED TO DEVELOPED CONDITION.

THE DETENTION POND HAVE BEEN DEVELOPED ON SITE FOR TWO REASONS:

- 1) TO MITIGATE STORM WATER RUNOFF FROM EXISTING TO PROPOSED CONDITION.
- 2) TO MANGE 90th PERCENTILE STORM EVENT FIRST FLUSH GENERATED BY CONTRIBUTING IMPERVIOUS SURFACES.



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EXISTING DRAINAGE PLAN

1" = 20'



PROPOSED DRAINAGE PLAN

SCALE: 1" = 20'

BENCH MARKS		AS BUILT INFORMATION	
CONTRACTOR	WORK	COORDINATES ARE MODIFIED (SURFACE) NEW MEXICO STATE	DATE
STACKED BY	PLANE COORDINATES-CENTRAL ZONE, NAD 83, TO OBTAIN	TRUE STATE PLANE COORDINATES; MULTIPLY THE	NO.
ACCEPTANCE BY	COORDINATES HEREON BY THE PROJECT AVERAGE COMBINED	GROUND TO GRID FACTOR OF CF=.99862526. ELEVATIONS	DATE
DRAWINGS	ARE REFERRED TO SEA LEVEL, NAD 88 AND HAVE BEEN	ADJUSTED TO THE C.O.A. CONTROL STATION "17_G22"	DESIGNED BY
CORRECTED BY	PUBLISHED ELEV.=5917.74', MEAS. ELEV.=5917.64' WITH	(GPS)	DRAWN BY
MICRO-FILM INFORMATION			CHECKED BY
RECORDED BY			
NO.			
SURVEY INFORMATION		ENGINEERS SEAL	
FIELD NOTES	DATE		
NO.			
REMARKS		DESIGNED BY	
		DATE 2-27-2019	
		DRAWN BY	
		DATE 2-27-2019	
		CHECKED BY	
		DATE 2-27-2019	

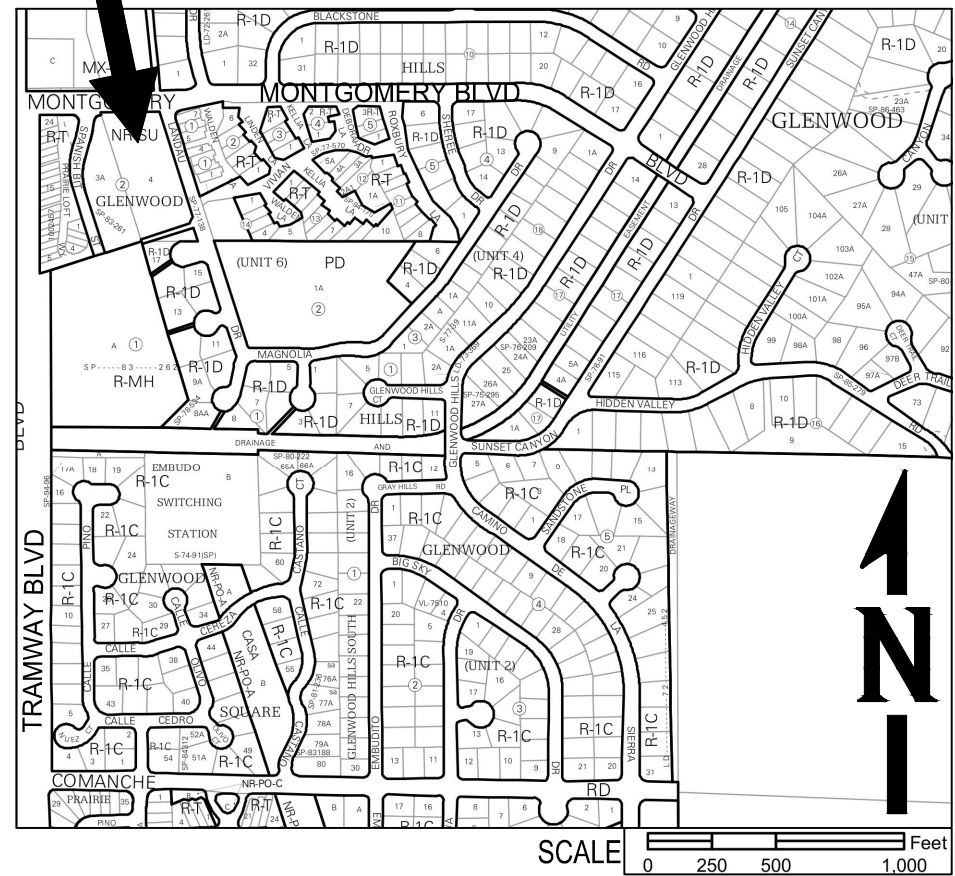
CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES			
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION DRAINAGE PLAN			
Design Review Committee	City Engineer Approval	Ms./Day/Yr.	Ms./Day/Yr.
City Project No. 6526.03		Zone Map No. G - 23 - Z	Sheet 6 Of



GRADING & DRAINAGE PLAN
SCALE: 1" = 10'

VICINITY MAP

PROJECT LOCATION

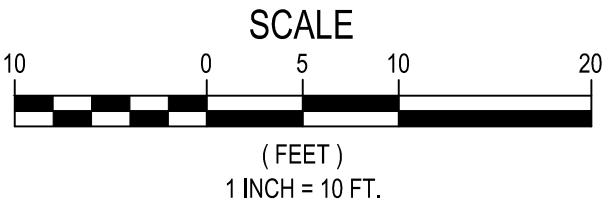
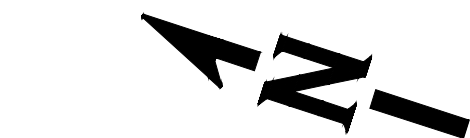


CONSTRUCTION NOTES

- AN EXCAVATION / CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2011.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- ALL ELEVATIONS SHOWN ON THIS PLAN FOR TO FLOW LINE OF CURB, TOP OF SIDEWALK, BOTTOM OF POND, BOTTOM OF WALL, FINISHED GRADE & EXISTING GRADE, UNLESS OTHERWISE NOTED.

KEY NOTES

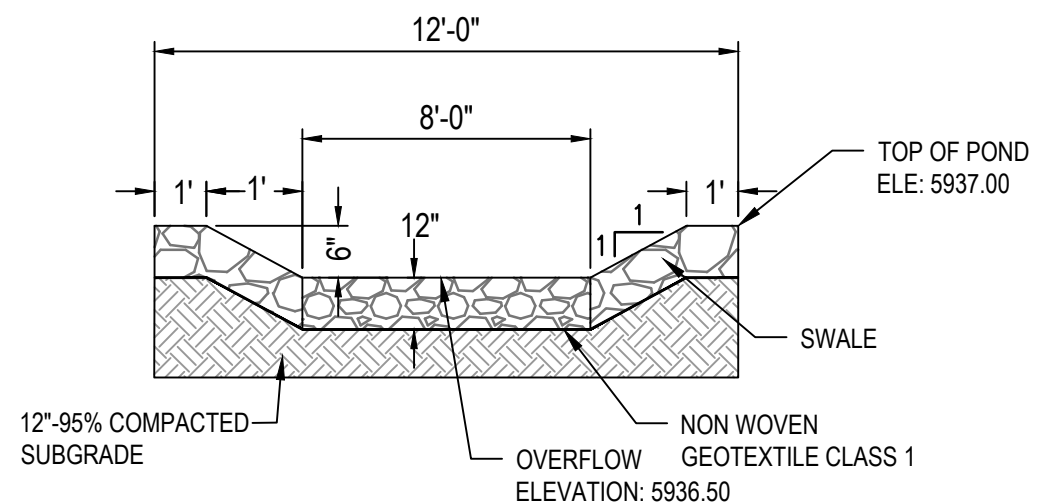
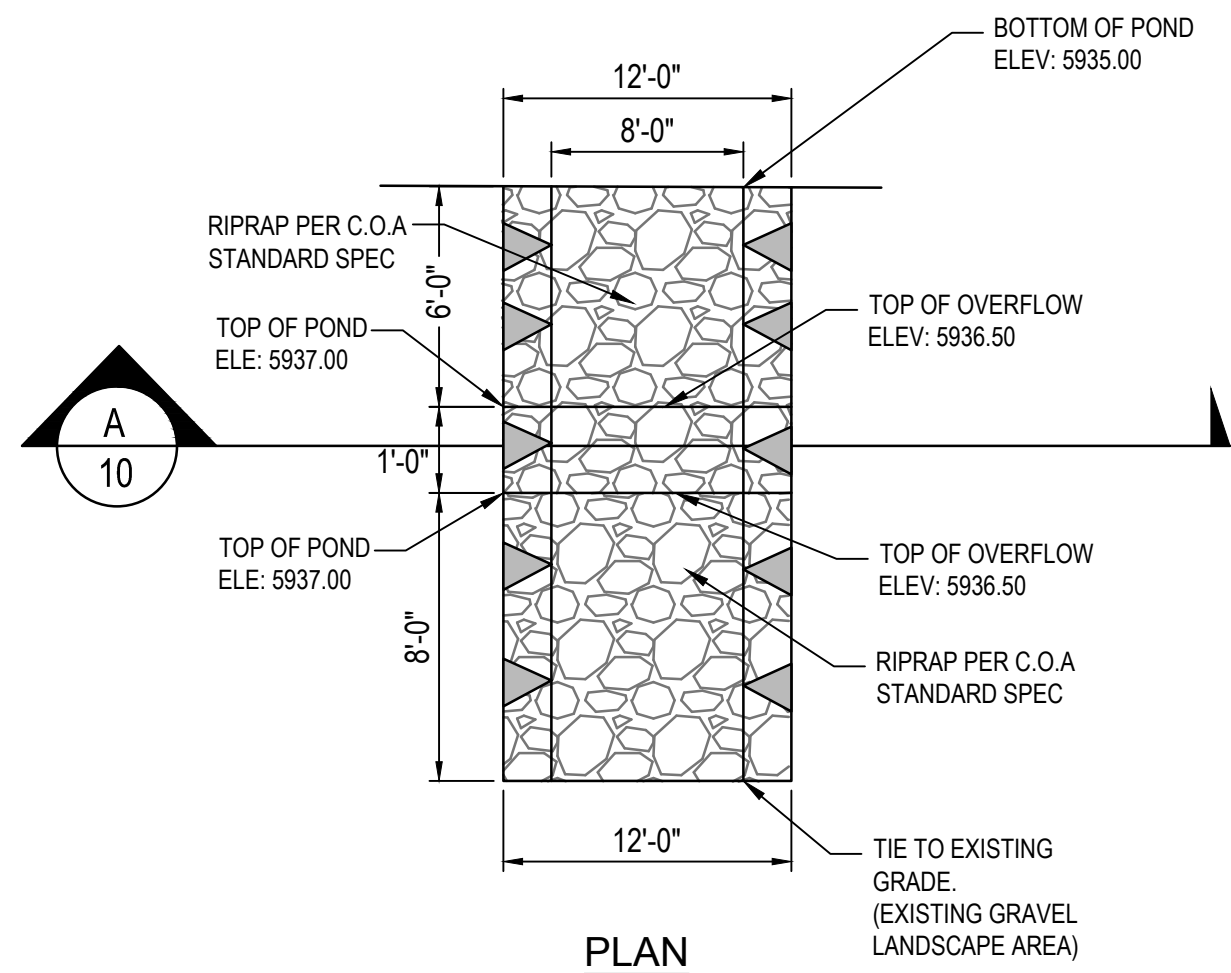
- TIE TO EXISTING GRADE, CONTRACTOR TO FIELD VERIFY.
- NEW DETENTION POND. SEE PLANTING PLAN FOR MATERIAL USE ON RETENTION POND.
- CONSTRUCT RETENTION POND @ 3H: 1V MAX SLOPE.
- INSTALL 12" HDPE STORM DRAIN PIPE.
- INSTALL 12" NYLOPLAST INLINE DRAIN BASIN WITH DOME GRATE, OR APPROVED EQUIVALENT.
- TIE INTO EXISTING CONCRETE DRAIN INLET.
- CONVERT EXISTING DRAIN INLET INTO STORM DRAIN MANHOLE WITH TRAFFIC RATED LID.
- EXISTING STORM DRAIN LINE TO REMAIN & PROTECTED THROUGH CONSTRUCTION.
- EXISTING STORM DRAIN INLET TO REMAIN & PROTECTED THROUGH CONSTRUCTION.
- CONSTRUCT 4" CONCRETE VALLEY GUTTER PER C.O.A STANDARD DETAILS.
- CONSTRUCT 4" WIDE CONCRETE RUNDOWN TO BOTTOM OF RETENTION POND PER DETAIL 4, SHEET 10.
- INSTALL 10' X 10' RIPRAP PAD PER DETAIL 5, SHEET 10.
- CONSTRUCT CMU WALL & WROUGHT IRON FENCE PER DETAIL 1, SHEET 11.
- INSTALL CMU WALL PER DETAIL 2, SHEET 11.
- INSTALL WROUGHT IRON FENCE WITH CMU PILLASTERS AND CMU FOUNDATION PER DETAIL 3, SHEET 11.
- CONSTRUCT CONCRETE STAIRS PER DETAIL 3, SHEET 10.
- CONSTRUCT RIPRAP OVERFLOW SPILLWAY PER DETAIL 1, SHEET 8 OR DETAIL 6, SHEET 10.
- SEE PLANTING PLAN SHEET 15 FOR EROSION CONTROL FOR STEEP SLOPE.



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		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES			
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION GRADING PLAN					
Design Review Committee	City Engineer Approval		Ms./Day/Yr.	Ms./Day/Yr.	
City Project No. 6526.03			Zone Map No. G - 23 - Z	Sheet 7	Of
City Project No. 6526.03			Zone Map No. G - 23 - Z	Sheet 7	Of



RIPRAP OVERFLOW SPILLWAY DETAIL
SCALE: N.T.S.

1
8

SURVEY CONTROL TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1502754.11	1566646.85	5934.23	FL
2	1502763.58	1566668.68	5936.68	FL
3	1502780.14	1566684.28	5937.13	FL-VG
4	1502785.31	1566689.17	5937.34	FL
5	1502806.00	1566697.34	5938.03	FL
6	1502846.06	1566697.18	5939.56	FL
7	1502886.12	1566697.02	5941.10	FL
8	1502886.30	1566742.02	5943.35	FL
9	1502886.48	1566787.02	5945.60	FL
10	1502886.58	1566814.02	5947.15	FL
11	1502854.87	1566814.14	5946.49	FL
12	1502848.87	1566814.17	5946.43	FL
13	1502802.08	1566814.35	5945.96	FL
14	1502796.08	1566814.38	5945.90	FL
15	1502748.60	1566814.56	5945.43	FL
16	1502748.46	1566778.56	5943.27	FL
17	1502748.32	1566742.56	5941.11	FL
18	1502748.20	1566712.56	5939.31	FL
19	1502762.18	1566712.50	5938.96	FL
20	1502765.92	1566703.87	5937.88	FL
21	1502763.68	1566701.76	5937.61	FL-VG
22	1502762.23	1566700.39	5937.70	FL
23	1502759.85	1566698.16	5937.54	FL
24	1502734.40	1566688.65	5934.75	FL

SURVEY CONTROL TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
25	1502790.02	1566670.57	5935.00	POND
26	1502834.55	1566657.65	5935.00	POND
27	1502839.63	1566664.40	5935.00	POND
28	1502840.50	1566677.00	5935.00	POND
29	1502809.50	1566686.00	5935.00	POND
30	1502792.74	1566678.60	5935.00	POND
31	1502786.11	1566688.31	5937.78	EG
32	1502806.00	1566696.17	5938.09	EG
33	1502845.94	1566696.01	5939.12	EG
34	1502887.29	1566695.85	5942.70	EG
35	1502887.47	1566742.02	5945.18	EG
36	1502887.65	1566787.01	5947.37	EG
37	1502887.77	1566818.18	5948.89	EG
38	1502745.45	1566818.75	5947.58	EG
39	1502746.08	1566815.07	5945.91	FG
40	1502745.43	1566815.08	5947.32	EG
41	1502745.95	1566778.61	5943.78	FG
42	1502745.29	1566778.61	5945.40	EG
43	1502745.81	1566742.62	5941.66	FG
44	1502745.15	1566742.62	5942.61	EG
45	1502745.70	1566712.07	5939.85	FG
46	1502745.03	1566711.41	5938.51	FG
47	1502752.71	1566711.38	5938.43	FG
48	1502746.12	1566818.07	5945.97	FG

SURVEY CONTROL TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
49	1502795.60	1566817.88	5946.46	FG
50	1502795.60	1566818.55	5948.46	FG
51	1502796.10	1566819.88	5946.18	STAIR
52	1502796.11	1566821.43	5948.18	STAIR
53	1502796.12	1566824.68	5949.05	SWLK
54	1502802.62	1566824.71	5949.10	SWLK
55	1502802.11	1566821.40	5948.24	STAIR
56	1502802.10	1566819.85	5946.24	STAIR
57	1502802.60	1566817.85	5946.53	FG
58	1502802.60	1566818.52	5948.48	FG
59	1502848.38	1566817.68	5947.00	FG
60	1502848.39	1566818.34	5948.24	FG
61	1502848.89	1566819.67	5946.71	STAIR
62	1502848.90	1566821.22	5948.71	STAIR
63	1502848.41	1566825.03	5949.05	SWLK
64	1502855.41	1566825.00	5949.11	SWLK
65	1502854.90	1566821.19	5948.77	STAIR
66	1502854.89	1566819.64	5946.77	STAIR
67	1502855.38	1566817.44	5947.06	FG
68	1502855.39	1566818.31	5948.32	FG
69	1502887.10	1566817.52	5947.71	FG
70	1502886.96	1566820.58	5949.00	FG
71	1502866.00	1566822.00	5947.76	FG-GRATE
72	1502839.00	1566822.00	5947.50	FG-GRATE

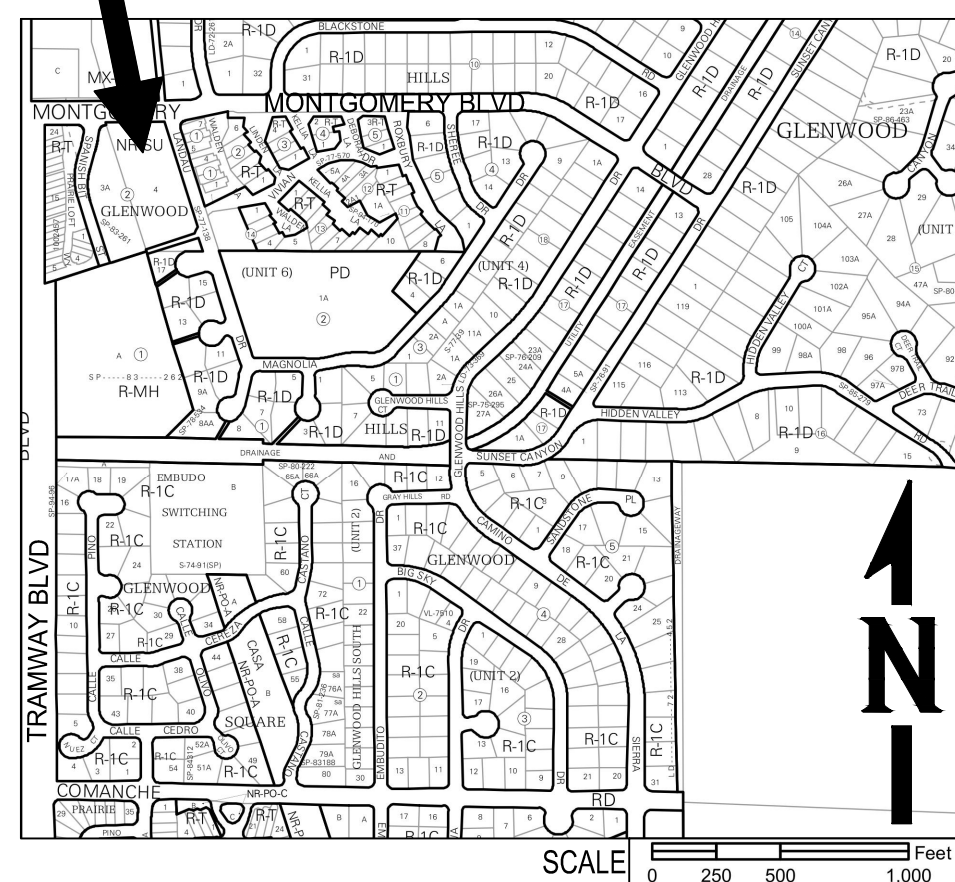
SURVEY CONTROL TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
73	1502814.00	1566822.00	5947.75	FG-GRATE
74	1502781.50	1566822.00	5947.00	FG-GRATE
75	1502751.50	1566822.00	5947.30	FG-GRATE
76	1502891.50	1566797.93	5947.80	FG
77	1502891.00	1566762.00	5945.79	FG
78	1502891.50	1566738.00	5944.81	FG
79	1502891.00	1566696.00	5942.51	FG
80	1502889.50	1566690.00	5941.00	FG
81	1502855.32	1566691.81	5939.00	FG
82	1502838.69	1566692.00	5938.46	FG
83	1502774.32	1566678.81	5937.30	FL
84	1502757.85	1566696.29	5937.78	FL
85	1502778.32	1566742.45	5949.24	FL-TA
86	1502781.66	1566714.02	5938.40	FL-TA
87	1502783.63	1566700.57	5937.64	FL-TA
88	1502778.69	1566682.93	5937.23	FL
89	1502781.60	1566685.67	5937.19	FL
90	1502764.86	1566703.56	5938.29	FG
91	1502752.91	1566712.04	5939.68	T.O.C
92	1502805.89	1566658.62	5936.50	FG-OVERFLOW
93	1502813.60	1566656.48	5936.50	FG-OVERFLOW
94	1502807.86	1566665.39	5935.00	POND
95	1502815.54	1566663.16	5935.00	POND

ABBREVIATION

FL - FLOW LINE
FG - FINISHED GRADE
SWLK - SIDEWALK
VG - VALLEY GUTTER
T.O.C- TOP OF CURB

VICINITY MAP

PROJECT LOCATION



AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEERS SEAL	
CONTRACTOR	WORK STACKED BY	COORDINATES ARE MODIFIED (SURFACE) NEW MEXICO STATE	PLANE COORDINATES-CENTRAL ZONE, NAD 83, TO OBTAIN TRUE STATE PLANE COORDINATES; MULTIPLY THE COORDINATES HEREON BY THE PROJECT AVERAGE COMBINED GROUND TO GRID FACTOR OF CF=.99862526. ELEVATIONS ARE REFERRED TO SEA LEVEL, NAD 88 AND HAVE BEEN ADJUSTED TO THE C.O.A. CONTROL STATION "17_G22"	DATE	FIELD NOTES		REMARKS DATE DESIGNED BY JP/MUL DRAWN BY JP/MUL CHECKED BY RB
NO.	NO.	NO.	NO.	NO.	NO.		

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES			
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION GRADING POINT TABLES			
Design Review Committee	City Engineer Approval	Ms./Day/Yr.	Ms./Day/Yr.
City Project No. 6526.03	Zone Map No. G - 23 - Z	Sheet 8	Of



PLANT LEGEND						
SYMBOL	COMMON NAME	BOTANICAL NAME	QTY	MIN. INSTALLED SIZE	CONTAINER	MATURE SIZE
TREES						
PP	PINON PINE	PINUS EDULIS	3	MIN 4' HT	B&B	15' HT & SPD
CT	CHASTE TREE	VITEX AGNUS-CASTUS	3	2" CAL, 12'-14' HT	B&B	20' HT & SPD
WH	WASHINGTON HAWTHORN	CRATAEGUS PHAENOPYRUM	6	MIN 2" CAL	B&B	15' HT & SPD
SHRUBS						
CH	CHAMISA	CHRYSOTHAMNUS NAUSEOSUS	4	MIN 18" HT	5-GAL	6' HT & SPD
MM	CURL LEAF MOUNTAIN MAHOGANY	CERCOCARPUS LEDIFOLIUS	4	MIN 36" HT	15-GAL	8' HT & SPD
RY	RED YUCCA	HESPERALOE PARVIFLORA	7	MIN 12" SPD	5-GAL	3' HT X 4' SPD
BM	BLUE MIST SPIREA	CARYOPTERIS CLANDONENSIS	10	MIN 18" HT	5-GAL	5' HT X 5' SPD
BG	BEAR GRASS	NOLINA MICROCARPA	4	MIN 18" HT.	5-GAL	3' HT X 6' SPD
	LANDSCAPE BOULDERS		14			

KEYED NOTES

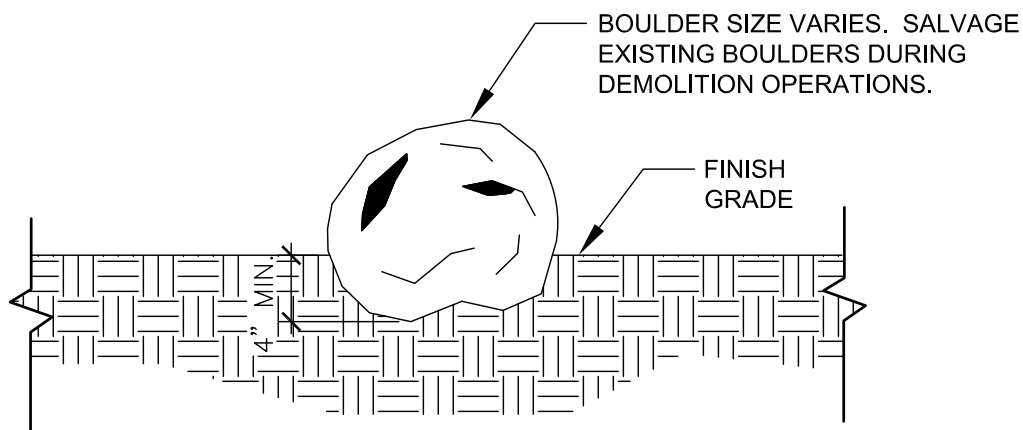
- EXISTING TREE TO REMAIN.
- POND. SEE CIVIL.
- TOP OF GRAVEL MULCH SHALL BE 1" BELOW TOP OF CONCRETE COLLAR AT DROP INLET.
- BOULDER PLACEMENT IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL INSTALL BOULDERS AT BASE OF SLOPES IN EXCESS OF 3:1 IN ORDER TO REDUCE GRADE TO KEEP GRAVEL MULCH IN PLACE ON SLOPES. SEE GENERAL NOTE F.

HATCH LEGEND

- 3/4" GRAVEL MULCH. SEE GENERAL NOTE B.
- REVEGETATION SEEDING. SEE GENERAL NOTE G.

GENERAL NOTES

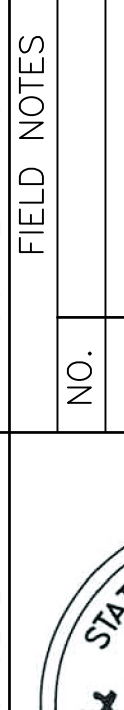
- A. IF THERE IS A DISCREPANCY BETWEEN PLANT QUANTITIES LISTED IN THE PLANT SCHEDULE AND THOSE SHOWN ON THE PLANTING PLAN, QUANTITIES SHOWN ON THE PLAN SHALL GOVERN. CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO BID. ADDITIONAL PAYMENT WILL NOT BE MADE FOR ANY DISCREPANCY IN QUANTITIES BETWEEN THE PLANTING PLAN AND THE PLANT SCHEDULE.
- B. CONTRACTOR SHALL INSTALL A 4" DEPTH OF 'MOUNTAINAIR BROWN' 3/4" GRAVEL MULCH S AVAILABLE FROM JPR GRAVEL (505-877-4913) OVER FILTER FABRIC. FILTER FABRIC SHALL BE MIN. 3.6 OZ/SY NONWOVEN NEEDLE PUNCHED POLYPROPYLENE, MIRAFI MSCAPE OR EQUIVALENT). OVERLAP ENDS 3". TURN DOWN EDGES 6". TOP OF GRAVEL MULCH SHALL BE 1/2" BELOW TOP OF ADJACENT PAVING. CONTRACTOR SHALL PROVIDE SAMPLE OF GRAVEL MULCH FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- C. IF THERE IS A DISCREPANCY IN THE FIELD OR NURSERY BETWEEN THE CONTAINER SIZE LISTED UNDER "CONTAINER" AND HEIGHT & SPREAD LISTED UNDER "INSTALLED SIZE", THE SPECIFIED PLANT SHALL MEET HEIGHT & SPREAD REQUIREMENTS SPECIFIED UNDER "INSTALLED SIZE". IF A LARGER CONTAINER SIZE IS REQUIRED TO MEET THESE SPECIFICATIONS, IT SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- D. TREES SHALL BE PLANTED PER C.O.A. STANDARD DRAWINGS 2714, 2715, 2716.
- E. SHRUBS SHALL BE PLANTED PER C.O.A. STANDARD DRAWING 2717.
- F. INSTALL LANDSCAPE BOULDERS PER DETAIL B-15. BOULDERS SHALL BE SALVAGED FROM SITE AND RE-USED. SEE CIVIL. QUANTITY SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY QUANTITY OF EXISTING BOULDERS.
- G. REVEGETATION SEEDING SHALL BE "GRAVELLY UPLANDS AND SLOPES" MIX PER COA STANDARD SPECIFICATIONS. CONTRACTOR SHALL INSTALL REVEGETATION SEED PER COA STANDARD SPECIFICATIONS.

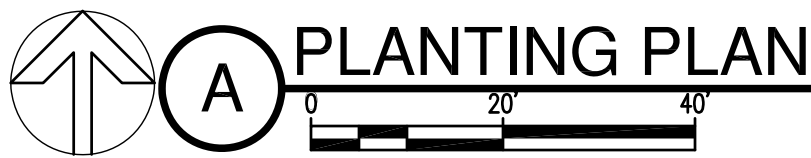


- NOTE:
- SOIL BENEATH BOULDER SHALL BE EXCAVATED APPROXIMATELY 4" DEEP BEFORE PLACING BOULDER.

B LANDSCAPE BOULDER

1/2" = 1'

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION		
	REMARKS	NO.	FIELD NOTES		COORDINATES ARE MODIFIED (SURFACE) NEW MEXICO STATE PLANE COORDINATES-CENTRAL ZONE, NAD 83. TO OBTAIN TRUE STATE PLANE COORDINATES, MULTIPLY THE COORDINATES HEREON BY THE PROJECT AVERAGE COMBINED GROUND TO GRID FACTOR OF CF=99962526. ELEVATIONS ARE REFERRED TO SEA LEVEL, NAVD 88 AND HAVE BEEN ADJUSTED TO THE C.O.A. CONTROL STATION "17 G22" (PUBLISHED ELEV.=5917.74', MEAS. ELEV.=5917.64' WITH GPS)	CONTRACTOR	DATE	
DESIGNED BY	BS/WM	DATE	02-14-2019			MICRO-FILM INFORMATION	RECORDED BY	DATE
DRAWN BY	BS/WM	DATE	02-14-2019					
CHECKED BY	WP	DATE	02-14-2019					



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		CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT ON-CALL ENGINEERING SERVICES							
TITLE: JAMES DWYER SUBSTATION PARKING LOT EXPANSION PLANTING PLAN									
Design Review Committee		City Engineer Approval		Last Design Update	Mo./Day/Yr.		Mo./Day/Yr.		
City Project No.		6526.03		Zone Map No.		G - 23 - Z		Sheet 15 of	