CITY OF ALBUQUERQUE

August 26, 2010

James H. Littlejohn, P.E.
Littlejohn Engineering
1935 21st Ave South
Nashville, TN 37212

Re: New Mexico Donor Services, 1609 University Blvd NE,
Request for Permanent C.O.—Approved
Engineer's Stamp dated: 9-14-09, (J-15/D094)
Certification dated: 8-24-10

Dear Mr. Littlejohn,

Based upon the information provided in your submittal, received 8-26-10, the above referenced Certification is approved for a release of a Permanent Certificate of Occupancy by Hydrology.

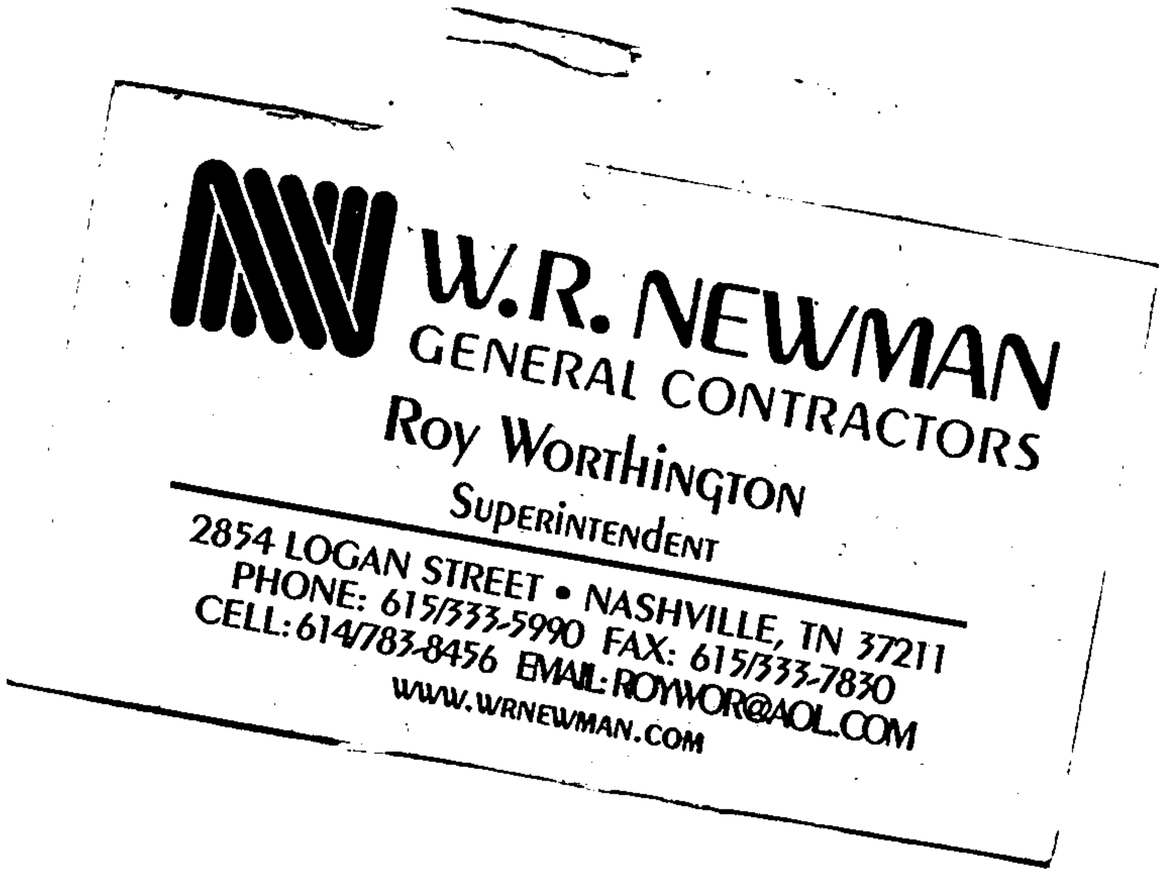
If you have any questions, you can contact me at 924-3695.

Sincerely,

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

C: CO Clerk—Katrina Sigala
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov


W.R. NEWMAN
GENERAL CONTRACTORS
Roy Worthington
Superintendent
2854 LOGAN STREET • NASHVILLE, TN 37211
PHONE: 615/333-5990 FAX: 615/333-7830
CELL: 614/783-8456 EMAIL: ROYWOR@AOL.COM
WWW.WRNEWMAN.COM

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 12/2005)

PROJECT TITLE: New Mexico Diner Services ZONE MAP: J-15 #D094
DRB#: NA EPC#: WORK ORDER#:

LEGAL DESCRIPTION: See attached
CITY ADDRESS: 4613 University Blvd NE Albuquerque, NM 87102 4609

ENGINEERING FIRM: Littlejohn Engineering CONTACT: Jim Littlejohn
ADDRESS: 1985 21st Ave. South PHONE: 615-385-1194
CITY, STATE: Nashville, TN ZIP CODE: 37212

OWNER: D.C.I. Diner Services, Inc. CONTACT:
ADDRESS: 1660 Hayes Street PHONE: 615-377-3041
CITY, STATE: Nashville, TN ZIP CODE: 37203

ARCHITECT: Jack Freeman & Associates CONTACT: Jack Freeman
ADDRESS: 211 22nd Ave North PHONE: 615-329-2424
CITY, STATE: Nashville, TN ZIP CODE: 37203

SURVEYOR: Aldrich Land Surveying, Inc. CONTACT: Tim Aldrich
ADDRESS: 4109 Montgomery Blvd PHONE: 505-328-3988
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: W.R. Newman & Sons, Inc. CONTACT:
ADDRESS: 2851 Logan Street PHONE: 615-333-5490
CITY, STATE: Nashville, TN ZIP CODE: 37211

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. DIV. PLAN FOR SUB'D APPROVAL
- ____ S. DIV. FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED
AUG 20 2010
HYDROLOGY SECTION

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

DATE SUBMITTED: BY: 8/9/10

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.

RECEIVED
AUG 26 2010
HYDROLOGY SECTION

Call Roy Worthington after he get everything.
1. Engineer Cert for Drainage Cert 9-24-10
2. Original letter

DRAINAGE CERT W/ SURVEY WORK BY OTHERS

12/28/01

DRAINAGE CERTIFICATION

I, JAMES H. LITTLEJOHN, NMPE 14788 OF THE FIRM LITTLEJOHN ENGINEERING, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS PROJECT HAS BEEN GRADED AND WILL DRAIN IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 12-15-09. THE RECORD INFORMATION EDITED ONTO THE ORIGINIAL DESIGN DOCUMENT HAS BEEN OBTAINED BY NMPS TIM ALDRICH OF THE FIRM ALDRICH LAND SURVEYING, INC. I FURTHER CERTIFY THAT A MEMBER OF THE PROJECT TEAM VISITED THE PROJECT SITE ON 8-3-2010 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR A FINAL CERTIFICATE OF OCCUPANCY.

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

JAMES H. LITTLEJOHN, NMPE 14788

8/24/10

DATE

JAMES H. LITTLEJOHN NEW MEXICO 14788 REGISTERED PROFESSIONAL ENGINEER

RECEIVED

AUG 26 2010

HYDROLOGY SECTION

CITY OF ALBUQUERQUE

September 15, 2009

James H. Littlejohn, P.E.
Littlejohn Engineering Associates
1935 Twenty-First Ave South
Nashville, TN 37212

Re: New Mexico Donor Services

Engineer's Stamp date 9-14-09 (J15/D094)

Dear Mr. Littlejohn,

Based upon the information provided in your submittal received 9-15-09, 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

AMMENDMENT 2

TO

DRAINAGE REPORT

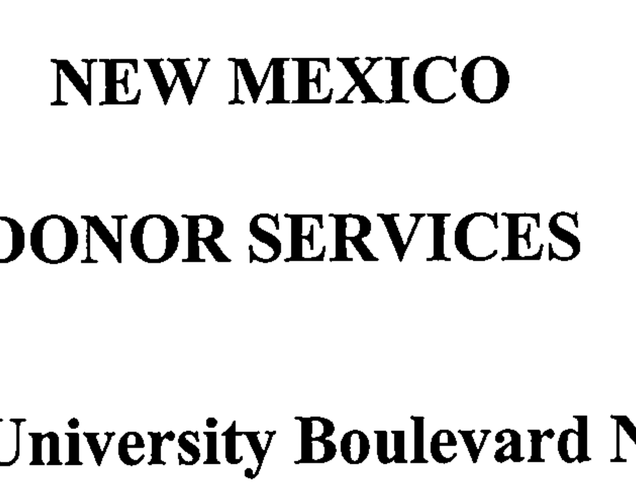
FOR

NEW MEXICO

DONOR SERVICES

1509 University Boulevard N.E.
Albuquerque, Bernalillo County, New Mexico

July 23, 2009
Amendment 1: August 27, 2009
Amendment 2: September 14, 2009



Prepared by:

Littlejohn Engineering Associates, Inc.
1935 21st Avenue South
Nashville, Tennessee 37212
(615) 385-4144

New Mexico Donor Services

1509 University Boulevard N.E.
Albuquerque, Bernalillo County, New Mexico
Drainage Report

Overview

This 2.33± acre referenced site is located at Section 16, Township 10 North, Range 3 East, New Mexico Principal Meridian City of Albuquerque, Bernalillo County, New Mexico, tract B-1A at 1509 University Boulevard N.E. The existing site is currently an undeveloped dirt lot, and it is located in the middle of a developed area.

For this project a 15,556 sq ft donor services facility is going to be constructed along with associated sidewalks, drives, landscape areas, and storm drainage.

The runoff from the site is going to discharge to the Department of Transportation right-of-way, and the DOT has agreed that detention is not required.

Runoff Analysis

Existing Conditions

As stated previously the property is currently an undeveloped dirt lot with "poor" vegetation, and it is in the middle of a developed area. The site discharges to the drainage ditch for I-25 in the DOT right-of-way on the west side of the property. However, approximately 1.87 acres of off-site runoff drains through the site from the neighboring property to the east.

The site is located in zone 2. The entire 2.33 acres on-site area consists of land treatment C. The neighboring off-site area consists of 1.03 acres of land treatment D and 0.84 acres of land treatment C.

According to Table A-9, the peak discharge for the 100-yr storm for this site is 3.14 cfs/acre. For land treatment C and 4.70 cfs/acre for land treatment D.

Therefore, the total peak discharge, Qp, is:

Qp=(3.14 cfs/ac * 2.33 ac)+(4.70 cfs/ac * 1.03 ac)+(3.14 cfs/ac * 0.84 ac)=14.79 cfs

Proposed Conditions

When the site is developed, it will consist of approximately 1.45 acres of land treatment D and 0.88 acres of land treatment C. The offsite area will still drain through the site, and the outfall point will remain the same. Therefore, the total peak discharge, Qp, for the proposed conditions will be:

Qp=(4.70 cfs/ac *1.45 ac)+(3.14 cfs/ac * 0.88 ac)+(4.70 cfs/ac * 1.03 ac)+(3.14 cfs/ac * 0.84 ac)=17.06 cfs

The total increase in peak discharge is 2.27 cfs. Therefore, there is very little increase of runoff for the developed site.

Pipe Sizing

The site is designed to capture runoff in underground storm sewer pipes that discharge to the state right-of-way. The storm sewer system was designed for the 100-yr storm event.

The drainage areas for each inlet are shown on Attachment 5, the Storm Sewer Drainage Area Map. The rational method was used to calculate the flow and the following table summarizes the calculations:

Inlet	Rational Coefficient C100	Intensity I100 (in/hr)	Area A (acres)	Peak Flow Q100 (cfs)
A2	0.88	5.05	0.18	0.80
A3	0.92	5.05	0.03	0.14
A4	0.87	5.05	0.10	0.44
A5	0.79	5.05	1.13	4.51
A6	0.77	5.05	0.38	1.48
B1	0.77	5.05	0.63	2.45
B2	0.92	5.05	0.34	1.58
B3	0.80	5.05	0.42	1.70
C2	0.93	5.05	0.10	0.47
C3	0.93	5.05	0.08	0.38
D2	0.93	5.05	0.08	0.38
D3	0.93	5.05	0.10	0.47

The calculated flows were modeled in StormCAD and the pipe sizes were analysed. The results from StormCAD are included as attachment 4 in this report. Standard loss coefficients were used for headloss.

Summary

In summary, this site will use underground storm sewer pipes to capture the runoff and discharge it to the ditch along I-25. The small increase in flow from the developed site is within the capacity of the drainage ditch, and therefore detention is not required.

Attachments

Attachment 1 StormCAD Calculations
Attachment 2 Storm Sewer Drainage Area Map

Attachment 1

StormCAD

Pipe Sizing Calculations

FlexTable: Conduit Table (27037_2009-09-14_calcs_re storm pipe sizing.stc)

Current Time: 0.000 min

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Upstream Inlet C	Upstream Inlet Area (acres)	System CA (acres)	System Intensity (in/hr)	System Flow Time (min)
P1	A6	71.07	A5	69.77	26.0	0.050	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.000
P2	A5	69.57	A4	68.56	101.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.595
P3	A4	68.36	A3	67.33	103.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.861
P4	A3	67.13	A2	65.75	138.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	1.128
P5	A2	57.90	A1	55.00	58.0	0.050	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	1.485
P6	B3	70.94	B2	70.49	45.0	0.010	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.000
P7	B2	70.29	B1	68.57	172.0	0.010	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.169
P8	B1	68.37	A2	67.48	59.0	0.015	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.711
P9	C3	72.49	C2	71.91	58.0	0.010	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.000
P10	C2	71.91	C1	70.43	74.0	0.020	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.258
P11	C1	70.43	A2	69.14	43.0	0.030	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.468
P12	D3	73.09	D2	72.49	60.0	0.010	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.000
P13	D2	72.49	D1	71.68	54.0	0.015	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.253
P14	D1	71.68	A5	70.50	59.0	0.020	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.427

Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
1.48	14.44	76.50	73.30	71.55	70.58	4.18	2.28	7.58
6.84	10.50	73.30	73.70	70.58	69.44	2.23	3.64	6.33
7.28	10.50	73.70	74.10	69.41	68.25	3.84	5.27	6.42
7.42	10.50	74.10	71.70	68.19	66.68	5.47	4.45	6.44
14.80	23.49	71.70	57.50	59.30	55.91	12.30	1.00	14.05
1.70	6.46	74.50	74.50	71.46	71.02	2.31	2.76	4.44
3.28	6.46	74.50	71.90	71.02	69.34	2.96	2.08	5.29
5.73	7.93	71.90	71.70	69.34	68.27	2.28	2.97	7.04
0.38	0.73	75.10	75.75	72.80	72.36	2.11	3.34	3.75
0.85	1.03	75.75	73.05	72.36	70.78	3.34	2.12	5.86
0.85	1.26	73.05	71.70	70.88	69.44	2.12	2.06	6.90
0.47	0.73	75.50	75.90	73.44	72.94	1.91	2.91	3.95
0.85	0.89	75.90	75.50	72.94	72.07	2.91	3.32	5.18
0.85	1.03	75.50	73.30	72.13	70.85	3.32	2.30	5.86

Bentley Systems, Inc. Haestad Methods Solution Center
27 Siemon Company Drive Suite 200 W Watertown, CT 06795 USA
+1-203-755-1666

Attachment 2

Storm Sewer

Drainage Area Map

CITY OF ALBUQUERQUE

August 26, 2010

James H. Littlejohn, P.E.
Littlejohn Engineering Associates
1935 21st Ave. South
Nashville, TN 37212

Re: NM Donor Services, 1609 University Blvd NE
Permanent Certificate of Occupancy – Transportation Development
Engineer's Stamp dated 12-15-09 (J15-D094)
Certification dated 08-24-10

Dear Mr. Littlejohn,

Based upon the information provided in your submittal received 08-26-10, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: CO Clerk
File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

TRAFFIC CERTIFICATION

I, JAMES H. LITTLEJOHN, NMPE 14788 OF THE FIRM LITTLEJOHN ENGINEERING, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS PROJECT IS IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE TCL APPROVED PLAN DATED 9/17/2009.

THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY TIM ALDRICH OF THE FIRM ALDRICH LAND SURVEYING, INC. I FURTHER CERTIFY THAT A MEMBER OF THE PROJECT TEAM VISITED THE PROJECT SITE ON 8-3-2010 AND HAVE DETERMINED BY VISUAL INSPECTION THAT THE SURVEY DATA PROVIDED IS REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR A FINAL CERTIFICATE OF OCCUPANCY.

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

SIGNATURE OF ENGINEER OR ARCHITECT

8/24/10

DATE

JAMES H. LITTLEJOHN NEW MEXICO 14788 REGISTERED PROFESSIONAL ENGINEER

RECEIVED

AUG 26 2010

HYDROLOGY SECTION

CITY OF ALBUQUERQUE

August 26, 2009

James H. Littlejohn, P.E.
Littlejohn Engineering Associates
1935 21st Ave. South
Nashville, TN 37212

Re: NM Donor Services, 1613 University Blvd NE, Traffic Circulation Layout Engineer's Stamp dated 08-06-09 (J15-D094)

Dear Mr. Littlejohn,

Based upon the information provided in your submittal received 08-19-09, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

1. List radii for all curves shown; for passenger vehicles, the minimum end island radius is 15 feet.
2. Please include two copies of the traffic circulation layout at the next submittal.
3. Provide details for all wheelchair ramps; define the maximum slope.
4. Build notes, referring to the specific city standards, must be provided for all items proposed within the right of way (sidewalk, curb cuts, etc.).
5. All wheelchair ramps located within the city right of way must have truncated domes.
6. Clarify how the two-directional traffic transitions to one-directional traffic.
7. Since University Boulevard is a minor arterial roadway, a minimum radius of 20 feet is required at the entrance (see Chapter 23, Section 6, Part B of the City of Albuquerque *Development Process Manual*).

If you have any questions, you can contact me at 924-3991.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

CITY OF ALBUQUERQUE

December 17, 2009

James H. Littlejohn, P.E.
Littlejohn Engineering Associates
1935 21st Ave. South
Nashville, TN 37212

Re: NM Donor Services, 1613 University Blvd NE, Traffic Circulation Layout
Engineer's Stamp dated 12-15-09 (J15-D094)

Dear Mr. Littlejohn,

The TCL submittal received 12-16-09 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

-----Original Message-----
From: Afaghpour, Reza, NMDOT <Reza.Afaghpour@state.nm.us>
To: roywor@aol.com
Cc: Crum, Aurelia, NMDOT <Aurelia.Crum@state.nm.us>
Sent: Fri, Aug 20, 2010 1:27 pm
Subject: New Mexico Donor Services

NMDOT has approved the drainage for the New Mexico Donor Services site plan. There exists 1-18" CMC with riprap at outlet on the east side of I-25; this structure is acceptable. No additional work is required for this development site.

If you have any questions, please call me @ 505 490-2752. Thank you.

Reza Afaghpour, PE
NMDOT Drainage Bureau

J15/D094 /D94

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 12/2005)

PROJECT TITLE: New Mexico Data Services ZONE MAP: J-15-Z
DRB#: NA EPC#: WORK ORDER#:

LEGAL DESCRIPTION: See attached.
CITY ADDRESS: ~~1115~~ 1609 University Blvd NE Albuquerque, NM 87102

ENGINEERING FIRM: Wilson Engineering CONTACT: Jim Wilson
ADDRESS: 1965 21st Ave South PHONE: 615-385-4194
CITY, STATE: Nashville, TN 37212 ZIP CODE: 37212

OWNER: New Data Services, Inc CONTACT:
ADDRESS: 1100 Hayes Street PHONE: 615-337-3601
CITY, STATE: Nashville, TN ZIP CODE: 37203

ARCHITECT: Jack Freeman & Associates CONTACT: Jack Freeman
ADDRESS: 211 22nd Ave North PHONE: 615-329-2424
CITY, STATE: Nashville, TN ZIP CODE: 37203

SURVEYOR: Ardaugh Land Surveying Inc CONTACT: Jim Ardaugh
ADDRESS: 4104 Montgomery Blvd PHONE: 505-323-3999
CITY, STATE: Albuquerque, NM ZIP CODE: 87109

CONTRACTOR: W.R. Newman & Sons Inc. CONTACT:
ADDRESS: 2824 Logan Street PHONE: 615-333-1970
CITY, STATE: Nashville, TN ZIP CODE: 37211

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
__X__ 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 (PERM)
__X__ CERTIFICATE OF OCCUPANCY (TEMP) 30 DAY
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ WORK ORDER APPROVAL
_____ OTHER (SPECIFY)

HYDROLOGY SECTION
AUG 26 2010
RECEIVED

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

DATE SUBMITTED: 8-19-10 8-24-10

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 (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.

KATRINA INITIALED W/ B & S TL 8-10-10

30 DAY TEMP GRANTED FOR HYDROLOGY & TRANSPORTATION

- KATRINA NEEDS LETTER FOR BOTH (TEMP. C.O.)
- BRAD NEEDS CONCURRENCE FROM NMDOT FOR GRADING/DRAINAGE PLAN FOR PERMANENT C.O.
- 30 DAY VERBAL W/ KATRINA - Paid 8/20

CITY OF ALBUQUERQUE

September 17, 2009

James H. Littlejohn, P.E.
Littlejohn Engineering Associates
1935 21st Ave. South
Nashville, TN 37212

Re: NM Donor Services, 1613 University Blvd NE, Traffic Circulation Layout
Engineer's Stamp dated 09-08-09 (J15-D094)

Dear Mr. Littlejohn,

The TCL submittal received 09-15-09 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Kristal D. Metro, P.E.
Traffic Engineer, Planning Dept.
Development and Building Services

C: File

PO Box 1293
Albuquerque
NM 87103
www.cabq.gov

J15

AMMENDMENT 2

TO

DRAINAGE REPORT

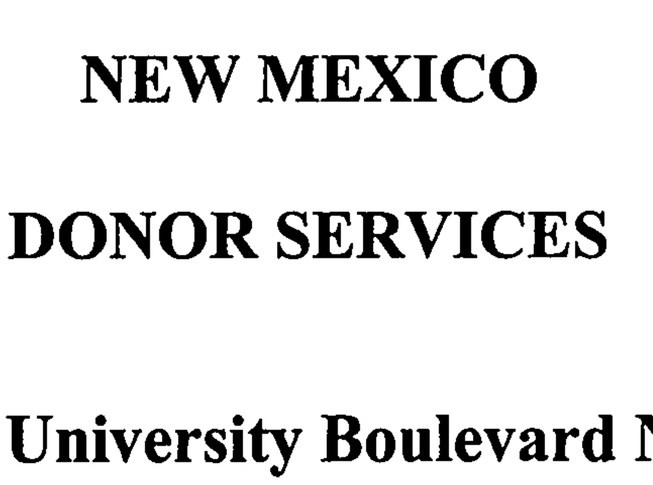
FOR

NEW MEXICO

DONOR SERVICES

1509 University Boulevard N.E.
Albuquerque, Bernalillo County, New Mexico

July 23, 2009
Amendment 1: August 27, 2009
Amendment 2: September 14, 2009



9/14/09

Prepared by:

Littlejohn Engineering Associates, Inc.
1935 21st Avenue South
Nashville, Tennessee 37212
(615) 385-4144

New Mexico Donor Services

1509 University Boulevard N.E.
Albuquerque, Bernalillo County, New Mexico
Drainage Report

Overview

This 2.33± acre referenced site is located at Section 16, Township 10 North, Range 3 East, New Mexico Principal Meridian City of Albuquerque, Bernalillo County, New Mexico, tract B-1A at 1509 University Boulevard N.E. The existing site is currently an undeveloped dirt lot, and it is located in the middle of a developed area.

For this project a 15,556 sq ft donor services facility is going to be constructed along with associated sidewalks, drives, landscape areas, and storm drainage.

The runoff from the site is going to discharge to the Department of Transportation right-of-way, and the DOT has agreed that detention is not required.

Runoff Analysis

Existing Conditions

As stated previously the property is currently an undeveloped dirt lot with "poor" vegetation, and it is in the middle of a developed area. The site discharges to the drainage ditch for I-25 in the DOT right-of-way on the west side of the property. However, approximately 1.87 acres of off-site runoff drains through the site from the neighboring property to the east.

The site is located in zone 2. The entire 2.33 acres on-site area consists of land treatment C. The neighboring off-site area consists of 1.03 acres of land treatment D and 0.84 acres of land treatment C.

According to Table A-9, the peak discharge for the 100-yr storm for this site is 3.14 cfs/acre. For land treatment C and 4.70 cfs/acre for land treatment D.

Therefore, the total peak discharge, Qp, is:

Qp=(3.14 cfs/ac * 2.33 ac)+(4.70 cfs/ac * 1.03 ac)+(3.14 cfs/ac * 0.84 ac)=14.79 cfs

Proposed Conditions

When the site is developed, it will consist of approximately 1.45 acres of land treatment D and 0.88 acres of land treatment C. The offsite area will still drain through the site, and the outfall point will remain the same. Therefore, the total peak discharge, Qp, for the proposed conditions will be:

Qp=(4.70 cfs/ac *1.45 ac)+(3.14 cfs/ac * 0.88 ac)+(4.70 cfs/ac * 1.03 ac)+(3.14 cfs/ac * 0.84 ac)=17.06 cfs

The total increase in peak discharge is 2.27 cfs. Therefore, there is very little increase of runoff for the developed site.

Pipe Sizing

The site is designed to capture runoff in underground storm sewer pipes that discharge to the state right-of-way. The storm sewer system was designed for the 100-yr storm event.

The drainage areas for each inlet are shown on Attachment 5, the Storm Sewer Drainage Area Map. The rational method was used to calculate the flow and the following table summarizes the calculations:

Inlet	Rational Coefficient C100	Intensity I100 (in/hr)	Area A (acres)	Peak Flow Q100 (cfs)
A2	0.88	5.05	0.18	0.80
A3	0.92	5.05	0.03	0.14
A4	0.87	5.05	0.10	0.44
A5	0.79	5.05	1.13	4.51
A6	0.77	5.05	0.38	1.48
B1	0.77	5.05	0.63	2.45
B2	0.92	5.05	0.34	1.58
B3	0.80	5.05	0.42	1.70
C2	0.93	5.05	0.10	0.47
C3	0.93	5.05	0.08	0.38
D2	0.93	5.05	0.08	0.38
D3	0.93	5.05	0.10	0.47

The calculated flows were modeled in StormCAD and the pipe sizes were analysed. The results from StormCAD are included as attachment 4 in this report. Standard loss coefficients were used for headloss.

Summary

In summary, this site will use underground storm sewer pipes to capture the runoff and discharge it to the ditch along I-25. The small increase in flow from the developed site is within the capacity of the drainage ditch, and therefore detention is not required.

Attachments

Attachment 1 StormCAD Calculations
Attachment 2 Storm Sewer Drainage Area Map

Attachment 1

StormCAD

Pipe Sizing Calculations

FlexTable: Conduit Table (27037_2009-09-14_calcs_re storm pipe sizing.stc)

Current Time: 0.000 min

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Length (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Manning's n	Upstream Inlet C	Upstream Inlet Area (acres)	System CA (acres)	System Intensity (in/hr)	System Flow Time (min)
P1	A6	71.07	A5	69.77	26.0	0.050	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.000
P2	A5	69.57	A4	68.56	101.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.595
P3	A4	68.36	A3	67.33	103.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.861
P4	A3	67.13	A2	65.75	138.0	0.010	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	1.128
P5	A2	57.90	A1	55.00	58.0	0.050	18.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	1.485
P6	B3	70.94	B2	70.49	45.0	0.010	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.000
P7	B2	70.29	B1	68.57	172.0	0.010	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.169
P8	B1	68.37	A2	67.48	59.0	0.015	15.0	Concrete	0.013	(N/A)	(N/A)	0.000	8.000	0.711
P9	C3	72.49	C2	71.91	58.0	0.010	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.000
P10	C2	71.91	C1	70.43	74.0	0.020	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.258
P11	C1	70.43	A2	69.14	43.0	0.030	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.468
P12	D3	73.09	D2	72.49	60.0	0.010	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.000
P13	D2	72.49	D1	71.68	54.0	0.015	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.253
P14	D1	71.68	A5	70.50	59.0	0.020	6.0	PVC	0.010	(N/A)	(N/A)	0.000	8.000	0.427

Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
1.48	14.44	76.50	73.30	71.55	70.58	4.18	2.28	7.58
6.84	10.50	73.30	73.70	70.58	69.44	2.23	3.64	6.33
7.28	10.50	73.70	74.10	69.41	68.25	3.84	5.27	6.42
7.42	10.50	74.10	71.70	68.19	66.68	5.47	4.45	6.44
14.80	23.49	71.70	57.50	59.30	55.91	12.30	1.00	14.05
1.70	6.46	74.50	74.50	71.46	71.02	2.31	2.76	4.44
3.28	6.46	74.50	71.90	71.02	69.34	2.96	2.08	5.29
5.73	7.93	71.90	71.70	69.34	68.27	2.28	2.97	7.04
0.38	0.73	75.10	75.75	72.80	72.36	2.11	3.34	3.75
0.85	1.03	75.75	73.05	72.36	70.78	3.34	2.12	5.86
0.85	1.26	73.05	71.70	70.88	69.44	2.12	2.06	6.90
0.47	0.73	75.50	75.90	73.44	72.94	1.91	2.91	3.95
0.85	0.89	75.90	75.50	72.94	72.07	2.91	3.32	5.18
0.85	1.03	75.50	73.30	72.13	70.85	3.32	2.30	5.86

Attachment 2

Storm Sewer

Drainage Area Map