CITY OF ALBUQUERQUE

February 24, 2006

Mr. Steve J. Salazar, PE
WILSON & COMPANY, INC.
2600 The American Road SE, Suite 100
Rio Rancho, NM 87124

RE: TAOS AT THE TRAILS (C-9/D1A)
Engineers Certification for Release of Financial Guaranty
Engineers Stamp dated 02/24/2005
Engineers Certification dated 02/24/2006

Dear Steve:

Based upon the information provided in your Engineer's Certification submittal dated 02/24/2006, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

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

Sincerely,

Arlene V. Portillo
Plan Checker, Planning Dept.- Hydrology
Development and Building Services

C: Marilyn Maldonado, COA# 730082
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

November 9, 2005

Steve Salazar, P.E.
Wilson & Company
2600 The American Rd. SE, Suite 100
Rio Rancho, NM 87124

Re: Santa Fe at the Trails, Tract C of the Trails Bulk Land Plat, SIA/Financial Guarantee Release

Engineer's Stamp dated 12-24-03 (C9-D1A)

Certification dated 6-23-05

Dear Mr. Salazar,

Based upon the information provided in your submittal received 11-07-05, the above referenced certification is approved for release of SIA and Financial Guarantee.

If you have any questions, you can contact me at 924-3981.

Sincerely,

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

C: Marilyn Maldonado, COA# 730083
File

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

CITY OF ALBUQUERQUE

March 1, 2005

Steve Salazar, PE
Wilson & Company
2600 American Rd, SE, Ste. 100
Rio Rancho, NM 87124

Re: Taos at The Trails Amended Grading and Drainage Plan
Engineer Stamp 2-24-05 (C9/D1A)

Dear Mr. Salazar,

Based upon information provided in your submittal dated 2-25-05, the above referenced plan is approved for Preliminary Plat action by the DRB. Once that board approves the plan, please submit a mylar copy of the plan for my signature in order to obtain a Rough Grading Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

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

Sincerely,

Bradley L. Bingham, PE
Principal Engineer, Planning Dept.
Development and Building Services

C: Chuck Caruso, DMD
file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 6, 2004

Rick Beltramo, PE
Bohannan Huston, Inc
7500 Jefferson NE
Albuquerque, NM 87109

Re: The Trails Subdivision Tracts C & D Drainage Study
Engineer's Stamp dated 12-24-03, (C9/D1A)

Dear Mr. Beltramo,

Based upon the information provided in your submittal dated 12-24-03, the above referenced study is approved for Preliminary Plat action by the DRB. Once that board has approved the plan, please submit a mylar copy for my signature in order to obtain a Grading Permit.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso) or 768-3645 (Brian Wolfe).

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Planning Dept
Development and Building Services

C: Chuck Caruso, CoA
file

DRAINAGE STUDY
FOR
TRACTS C AND D
AT
THE TRAILS SUBDIVISION

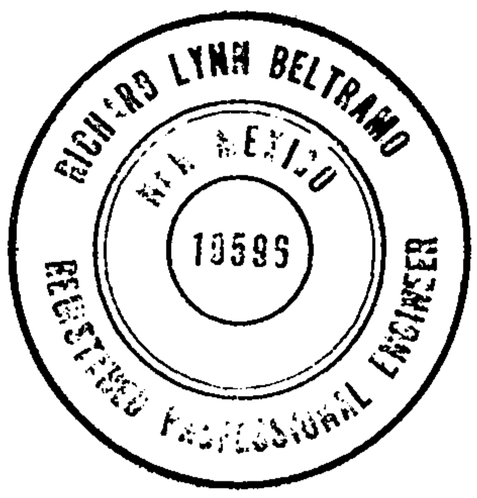
DECEMBER 2003

Prepared for:

LONGFORD HOMES
7301 JEFFERSON NE
ALBUQUERQUE, NM 87109

Prepared by:

BOHANNAN HUSTON, INC.
COURTYARD I
7500 JEFFERSON STREET NE
ALBUQUERQUE, NM 87109



Prepared by:

12/24/03

Rick L. Beltramo, P.E. Date

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APPENDICES

PLATES

I. INTRODUCTION

This drainage study establishes a drainage management plan for the proposed development of the properties legally described as Tracts C and D of The Trails. These properties are to be re-subdivided with proposed R-D zoning. The subject property is located on Albuquerque's northwest mesa, west of Universe Boulevard and south of Paseo Del Norte. (See vicinity map on the *Preliminary Plat* for location, *Plate 1*).

This study provides hydrologic and hydraulic analysis and provides a drainage management plan as necessary to support the planned development. More specifically, this report is submitted in conjunction with the preliminary plat application. Preliminary plat approval and grading plan approval is requested. Prior to final plat and building permit approvals of this project, the City of Albuquerque (COA) must approve final grading plans and work order construction plans.

II. METHODOLOGY

Existing and proposed site hydrological conditions were analyzed for the 100-year, 6-hour storm in accordance with the revised Section 22.2, Hydrology, of the Development Process Manual (DPM) for the City of Albuquerque, dated January 1993. Street capacities were analyzed using Manning's equation, consistent with the revised DPM Section 22.2. All data and calculations supporting this study are located in *Appendix B*. The AHYMO computer program was utilized to determine peak flow rates for design of the storm drainage improvements within the project. The 100-year, 6-hour storm is used as the design event. The results are included in *Appendix A*.

III. EXISTING CONDITIONS

A. Topography

The Trails is currently undeveloped land, sloping from north to south and west to east with an approximate slope of 2%. Soils consist of deep, well-drained loamy fine sands typical of the West Mesa. Vegetation is light and consists mostly of native grasses and sand sagebrush.

B. Existing Drainage Patterns

The Trails is mostly located within the Mariposa/Boca Negra watershed and discharges into the Boca Negra Arroyo to the south. The "Master Drainage Study for The Trails Subdivision" contains more detailed information about the area. Adjacent properties and public roadways have been or will be constructed which intercept much of the potential off-site runoff.

IV. PROPOSED CONDITIONS

Tracts C and D will drain to a temporary pond located within Tract G. They will be graded such that no offsite flows enter the sites. As additional tracts are developed, the temporary pond will be removed and Tracts C and D will drain within a proposed network of storm drains and ponds as described within the "Master Drainage Study for The Trails Subdivision".

V. CONCLUSION

This report provides a detailed study of the developed runoff and street capacities for the proposed Tracts C and D Subdivisions. Included is the preliminary plat, proposed conditions basin map, grading plan, infrastructure list, and all necessary hydrologic and hydraulic analyses. This drainage plan maintains the overall drainage pattern of the area as proposed in "Master Drainage Study for The Trails Subdivision", and allows for safe management of storm runoff in permanent as well as interim conditions.

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02c RUN DATE (MON/DAY/YR) =12/15/2003
INPUT FILE = TRACTC.HYM USER NO.= AHYMO-S-9702c1BohanHu-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
S	PROJECT NAME: TRACT C AT THE TRAILS SUBDIVISION										
S	DATE: DECEMBER 15, 2003										
S	INPUT FILE NAME: TRACTC.HYM										
S	OUTUPUT FILE NAME: TRACTC.OUT										
S	PROJECT NUMBER: 040170										
S	COMMENTS: 100 YEAR-6 HOUR STORM										
*S	//										
START										TIME=	.00
RAINFALL TYPE= 1										RAIN6=	2.200
*S	**********										
COMPUTE NM HYD	BASIN.A	-	1	.00432	9.13	.321	1.39393	1.500	3.301	PER IMP=	56.50
*S	**********										
COMPUTE NM HYD	BASIN.B	-	2	.00927	19.57	.689	1.39393	1.500	3.299	PER IMP=	56.50
*S	**********										
COMPUTE NM HYD	BASIN.C	-	4	.00617	13.03	.459	1.39393	1.500	3.300	PER IMP=	56.50
*S	**********										
*S	ADD BASINS B AND C FOR DISCHARGE INTO RAINBOW BLVD.										
ADD HYD	B.C	2& 4	6	.01544	32.60	1.148	1.39389	1.500	3.299		
*S	**********										
COMPUTE NM HYD	BASIN.D	-	7	.00578	12.21	.430	1.39393	1.500	3.300	PER IMP=	56.50
*S	**********										
*S	ADD BASINS B, C, AND D FOR DISCHARGE INTO RAINBOW BLVD.										
ADD HYD	B.C.D	6& 7	8	.02122	44.81	1.578	1.39389	1.500	3.299		
*S	**********										
FINISH											

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - - VERSION: 1997.02c RUN DATE (MON/DAY/YR) =12/20/2003
INPUT FILE = TRACTD.HYM USER NO.= AHYMO-S-9702c1BohanHu-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION

S PROJECT NAME: TRACT D AT THE TRAILS SUBDIVISION
S DATE: DECEMBER 20, 2003
S INPUT FILE NAME: TRACTD.HYM
S OUTUPUT FILE NAME: TRACTD.OUT
S PROJECT NUMBER: 040171
S COMMENTS: 100 YEAR-6 HOUR STORM
*S //

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*S**********										
COMPUTE NM HYD	BASIN.A	-	1	.00759	16.03	.564	1.39393	1.500	3.299 PER IMP=	56.50
*S**********										
COMPUTE NM HYD	BASIN.B	-	2	.00521	11.01	.387	1.39393	1.500	3.301 PER IMP=	56.50
*S**********										
ADD HYD	A.B	1& 2	3	.01280	27.03	.952	1.39389	1.500	3.300	
*S**********										
COMPUTE NM HYD	BASIN.C	-	4	.00480	10.14	.357	1.39393	1.500	3.301 PER IMP=	56.50
*S**********										
COMPUTE NM HYD	BASIN.D	-	5	.00750	15.84	.558	1.39393	1.500	3.299 PER IMP=	56.50
*S**********										
ADD HYD	C.D	4& 5	6	.01230	25.98	.914	1.39389	1.500	3.300	
*S**********TOTAL FLOW INTO LADRON DRIVE STUB**********										
ADD HYD	A.B.C.D	3& 6	7	.02510	53.01	1.866	1.39389	1.500	3.300	
*S**********										
COMPUTE NM HYD	BASIN.E	-	8	.01050	22.17	.781	1.39393	1.500	3.298 PER IMP=	56.50
*S**********										
*S**********TOTAL FLOW FROM TRACT D INTO TREE LINE AVE. STORM DRAIN****										
ADD HYD	A.B.C.D.E	7& 8	9	.03560	75.18	2.647	1.39389	1.500	3.300	
*S**********										
FINISH										

TRACT C AT THE TRAILS SUBDIVISION
Internal Street Capacity Calculations
December 23, 2003

1. **Basin A**
(See Basin Map)
Q = 9.1 cfs

The developed runoff from this basin will flow north into a temporary pond. As additional tracts are developed, future inlets in Tract A will capture this flow and convey it through a network of storm drains and ponds. The internal street flow does not exceed the street capacity, however, an inlet will be placed at the north end of Sabinal Drive to convey the flow from Basin A into the pond. This pond has been sized to contain the 100-year 10-day storm volume. See PC stream output.

2. **Basin B**
(See Basin Map)
Q = 19.6 cfs

The flow from this basin does not exceed the street capacity, therefore, no inlets are required. (See PC stream output.) Runoff from this basin will drain into Basin C.

3. **Basins C**
(See Basin Map)
Q = 13.0 cfs

The total runoff from Basins B and C will be captured by inlets at the east end of Teypana Road. This inlet discharges into a storm drain to be built through Las Nutrias Road in Tract D. This storm drain will capture additional flows from Tract D and discharge into a temporary pond. The internal street flow from these basins does not exceed the street capacity, therefore, no inlets are required within the Tract C subdivision. See PC stream output.

4. **Basin D**
(See Basin Map)
Q = 12.2 cfs

An offsite temporary retention pond to be located at the west end of Tree Line Avenue will capture offsite flows and convey runoff into a storm drain in Tree Line Avenue. The surface runoff created in Basin D does not exceed the street capacity of Tree Line Avenue. However, inlets will be placed at the east end of the road to ensure that no surface runoff from Basin D crosses Rainbow Blvd. See PC stream output.

TRACT D AT THE TRAILS SUBDIVISION
Internal Street Capacity Calculations
December 23, 2003

1. **Basins A, B, C, and D**
(See Basin Map)
Q = 53.0 cfs

The total runoff from these basins flows toward the south end of Ladron Drive. Just passed Cuchillo Road, the street capacity is exceeded, therefore, inlets are required. (See PC stream output and inlet nomograph.) Four inlets are proposed in Ladron Drive to capture 32 cfs. The balance of the flow will continue south into inlets at the stub terminus of Ladron Drive. Inlets discharge into a storm drain to Tree Line Avenue.

2. **Basin E**
(See Basin Map)
Q = 10.6 cfs

The total street flow in this basin does not exceed the street capacity, however, inlets will be placed at the east end of Tree Line Avenue to capture all of the remaining street flow. This storm drain collects the flow from Tract C and Tract D and conveys it to a permanent retention pond. This pond has been sized to contain flows from the 100-year 10-day storm volume produced from Tracts C and D. As additional tracts from The Trails are developed, this pond will become a surge detention pond.