

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department Transportation Development Services Section

December 19, 2001

Ronald Bohannan, Registered Professional Engineer 8509 Jefferson NE Albuquerque, NM 87113

Re:

Certification Submittal for Final Building Certificate of Occupancy for

Panda Express, [F16 / D5H1] 1408 Mercantile Avenue, NE Engineer's Stamp Dated 10-23-01

Dear Mr. Bohannan:

The TCL / Letter of Certification submitted is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

Sincerely,

Leslie Romero

Engineering Associate

Development and Building Services

Public Works Department

c: Architect

 8509 Jefferson NE Albuquerque, NM 87113 (505) 858-3100 fax (505) 858-1118

twllc@tierrawestllc.com 1-800-245-3102

December 18, 2001

Mr. Mike Zamora
Development and Building Services
Public Works Department
600 2nd Street, NW
Albuquerque, NM 87102

RE:

Final Traffic Control Plan (Site Plan) Certification

Panda Express Restaurant, 1408 Mercantile Avenue, NE. Tract 5B2C1A,

North Renaissance Center, F-16/D005H1

Dear Mike:

Enclosed please find one copy of the As-Built Site Plan for Subdivision and As-Built Site Plan for Building Permit for the Panda Express restaurant. Jaynes Corporation completed the onsite paving, curb and gutter and striping. Landscaping is complete. As-built information was field verified by our office. All work is in compliance with the approved site plan. We are, therefore, requesting a Final Certification of the Site Plan for Certification of Occupancy.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Ronald R. Bohannan, PE

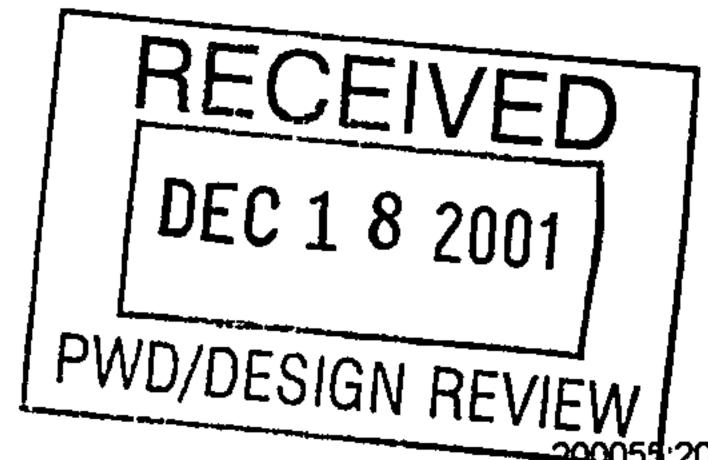
Enclosures

CC:

Roger Su (w/out enclosures)

Phillip Tenorio

JN 200055 RRB/ma



200055:2055rco121801.FinalTrfCert



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 26, 2001

Ronald R. Bohannan, P.E. Tierra West, LLC 8509 Jefferson NE Albuquerque, New Mexico 87113

RE: PANDA EXPRESS @ RENAISSANCE CENTER

(F-16/D5H1)

(1408 Mercantile Ave NE)

ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY

ENGINEERS STAMP DATED 12/1/2000 Rev. 10/23/2001

ENGINEERS CERTIFICATION DATED 12/18/2001

Dear Mr. Bohannan:

Based upon the information provided in your Engineers Certification submittal dated 12/26/2001, and the approval of the SO19 dated 12/10/2001, the above referenced site is approved for a Permanent Certificate of Occupancy for the above mentioned project.

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin

Hydrology Plan Checker

Tensa A. Minter

Public Works Department

BLB

C: Vickie Chavez, COA drainage file approval file





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 15, 2001

Ronald R. Bohannan, P.E. Tierra West, LLC 8509 Jefferson NE Albuquerque, NM 87113

Attn: Sara Lavy, P.E.

RE: PANDA EXPRESS RESTAURANT AT TRACT 5, RENAISSANCE CENTER (F16-D5H1). Revised GRADING AND DRAINAGE PLAN FOR PRELIMINARY AND FINAL PLAT APPROVALS, AND FOR BUILDING PERMIT AND SO#19 PERMIT APPROVALS. ENGINEER'S STAMP DATED OCTOBER 23, 2001.

Dear Mr.Bohannan:

Based on the information provided on your November 2, 2001 resubmittal, the above referenced project is approved for Plat actions, Building Permit and SO#19 Permit.

See also F16-D5L for the adjacent IHOP project.

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

A separate permit is required for construction within the City right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

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: Pam Lujan
Terri Martin
File



PUBLIC WORKS DEPARTMENT

NOVEMBER 15, 2001

INTEROFFICE CORRESPONDENCE

HYDROLOGY DIVISION

TO:

Pam Lujan, Permits

FROM:

Whn Murray, Hydrology, PWD

SUBJECT:

T: PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY DRAINAGE FILE NUMBER (F16-D5H1). PANDA EXPRESS @ Tract 5,

RENAISSANCE CENTER.

Transmitted herewith is a copy of the approved drainage plan for the referenced project incorporating the SO #19 design.

This plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed off SO #19 is required by this office for Certificate of Occupancy release; therefore your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation and if you should have any questions and/or comments, please feel free to call me at 924-3984.

Attachment



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 5, 2000

Ron Bohannan, PE
Tierra West, LLC
4421 McLeod NE, Ste. D
Albuquerque, NM 87109

Re: Panda Express @ Tract 5B2C1A, Renaissance Center, Drainage Report Engineer's Stamp dated 12-1-00 (F16/D5H1)

Dear Mr. Bohannan,

Based upon the information provided in your submittal dated 12-4-00, the above referenced site is approved for Building Permit, Preliminary Plat, Site Development Plan for Subdivision, Site Development Plan for Building Permit and Grading Permit. This approval is for the Panda Express site only.

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

Also, 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,

Bradley L. Bingham, PE Sr. Engineer, Hydrology

C: file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 7, 2001

Ron Bohannan, P.E.
Tierra West, LLC
4421 Mcleod NE Suite D
Albuquerque, New Mexico 87109

Attn: Sara Levy

RE: PANDA EXPRESS @ RENAISSANCE CENTER (F-16/D005H1).

GRADING AND DRAINAGE PLAN FOR SO#19 PERMIT APPROVAL.

ENGINEERS STAMP DATED 2/9/2001.

Dear Mr. Bohannan:

Based on the information provided on your February 14, 2001 submittal, the above referenced project is approved for SO#19 Permit.

A seperate permit is required for construction within the City right-of-way. A copy of this approved plan must be on hand when applying for the excavation permit.

If I can be of further assistance, please feel free to contact me at 924-3986.

Sincerely, Bughan

Bradley L. Bingham, P.E.

Hydrology Division/Public Works Dept.

City of Albuquerque

c: Pam Lujan

DRAINAGE REPORT

for

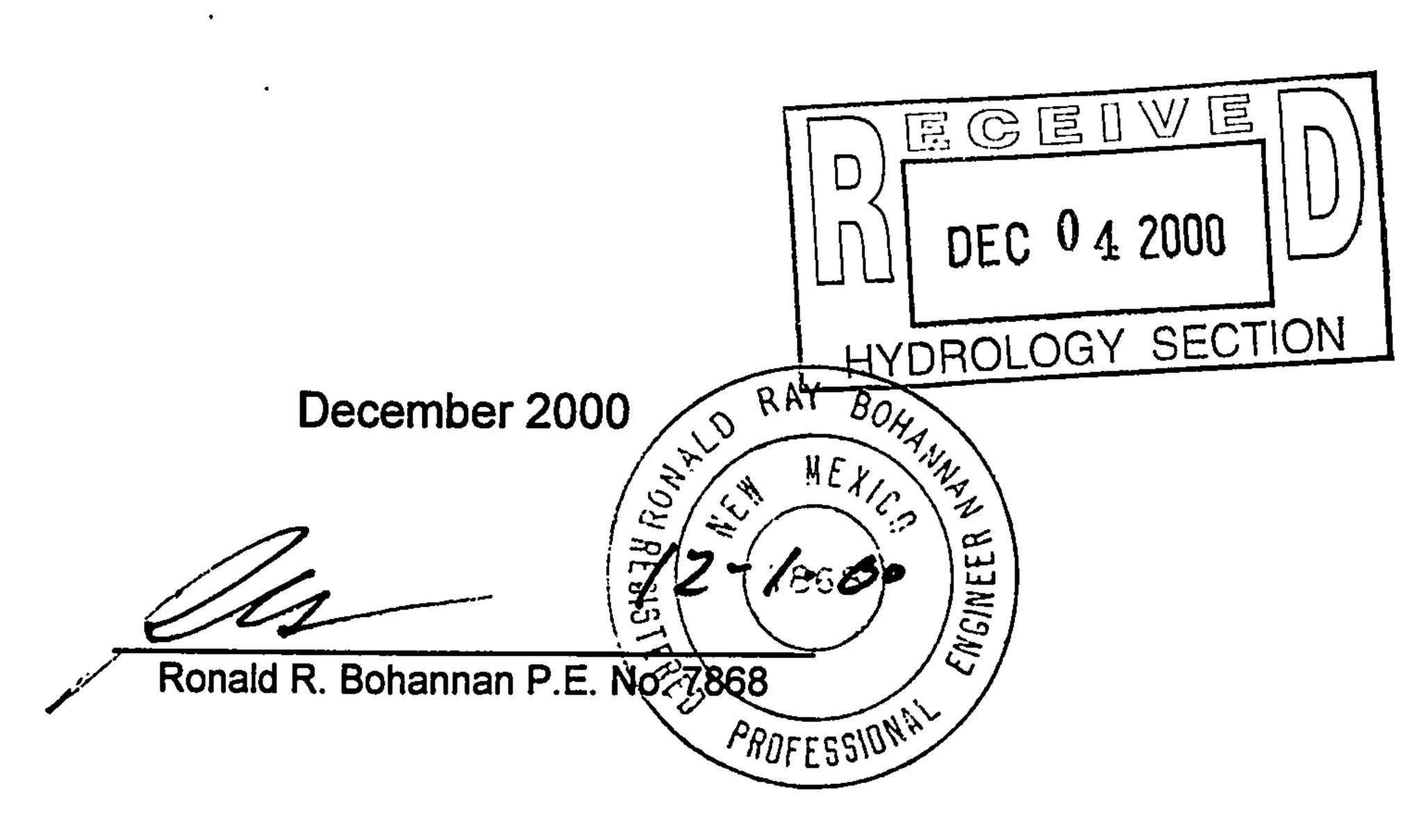
Panda Express at Tract 5

Prepared by

Tierra West, LLC 8509 Jefferson NE Albuquerque, New Mexico 87113

Prepared for

Union Pension Transaction Trust 93-2 NM 4411 McLeod Rd, NE Suite G Albuquerque, New Mexico 87109



Location

The site is a proposed Panda Express Restaurant of 2395 square feet. It is located south of Culture Drive between Montano Road and Interstate 25 in the Renaissance Center. The legal description of the site is Tract 5B2C1A of the North Renaissance Center. Tract 5 is shown on the attached Zone Atlas Map F-16 and contains approximately 6.5 acres, total. Panda Express is located in the southwest corner of Tract 5 and will contain approximately 0.70 acres, and the undeveloped area remaining on Tract 5 is approximately 3.96 acres. The purpose of this report is to provide the drainage analysis and management plan for the Panda.

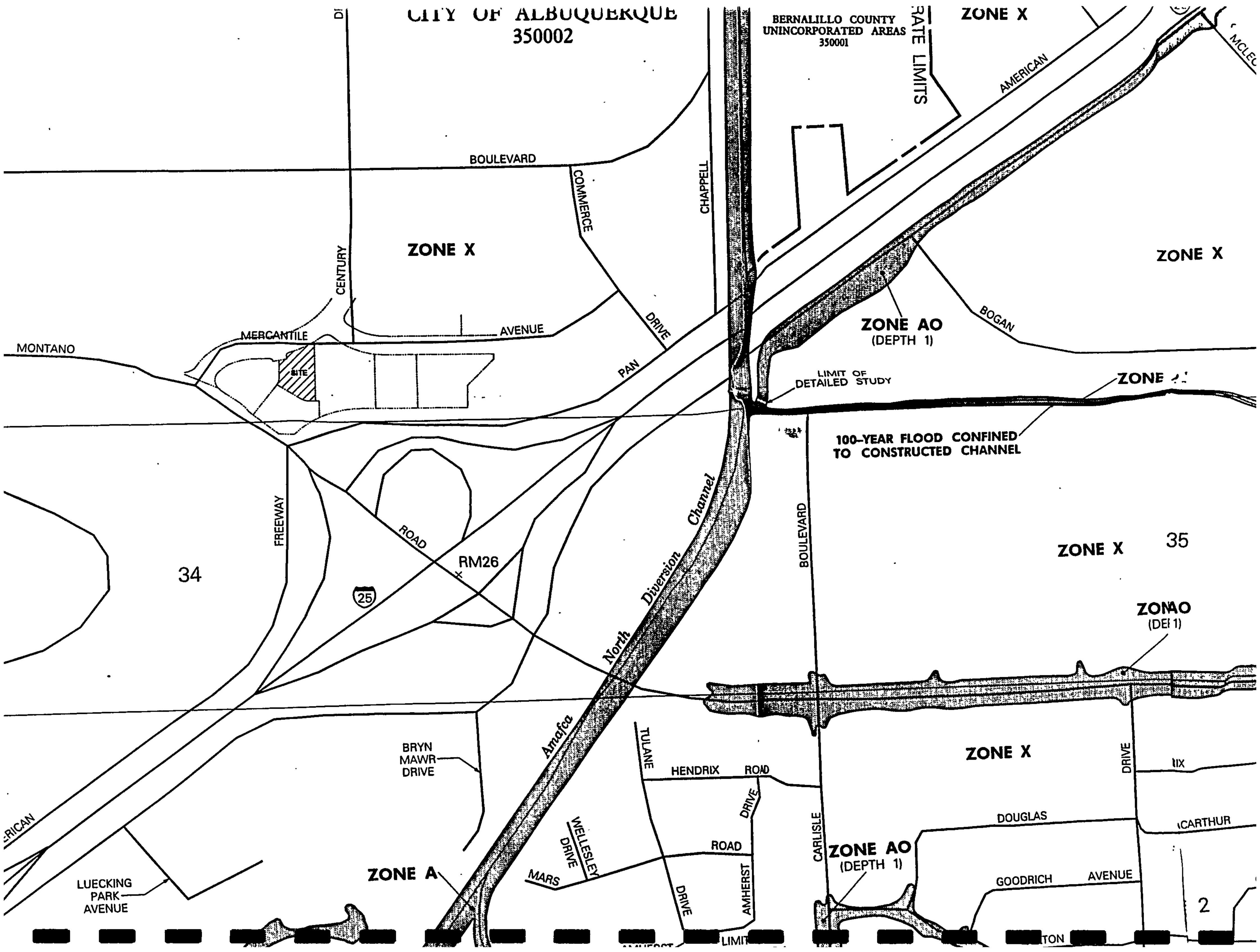
Existing Drainage Conditions

The site is part of the existing Renaissance Master Drainage Plan, which states that only 0.1 cfs/acre may be discharged from the site. The site is also part of two previous drainage reports for Tract 5B2 and 5B2B1 of the Renaissance Center (F16-D5H). These reports were prepared while developing the Wendy's and Arby's restaurant sites. The Wendy's report also prepared a master plan for the entire Tract 5. The master plan for Tract 5 was updated with the Arby's report due to the many changes to the overall site plan. This current report follows the approved drainage master plan for Tract 5 and also updates the master plan for Tract 5B2C1.

The site is currently undeveloped. There are no offsite flows entering the site. There is an existing Wendy's restaurant to the west of the site, located on Tract 5B2A and an existing Arby's located to the south on Tract 5B2B1. There is also an existing Union Bank located to the east of Tract 5. The development of the Union Bank prevents any offsite flows from entering the site from the east. Mercantile Avenue, Culture Drive and Interstate 25 intercept any offsite flows from the north and south.

FIRM Map and Soil Conditions

The site is located on FIRM Map 35001C0138 D as shown on the attached excerpt. The



map shows that the site does not lie within any 100 year flood plains.

The site contains two soil types from the Soil Conservation Service Soil Survey of Bernalillo County. These are a Wink-Embudo complex and a Bluepoint-Kokan association. The Wink-Embudo complex has a moderate hazard of water erosion and medium runoff. The Bluepoint-Kokan association has slow runoff and moderate to severe hazard of water erosion. However, the site is the location of an old gravel pit and the existing soils are a blend of native materials.

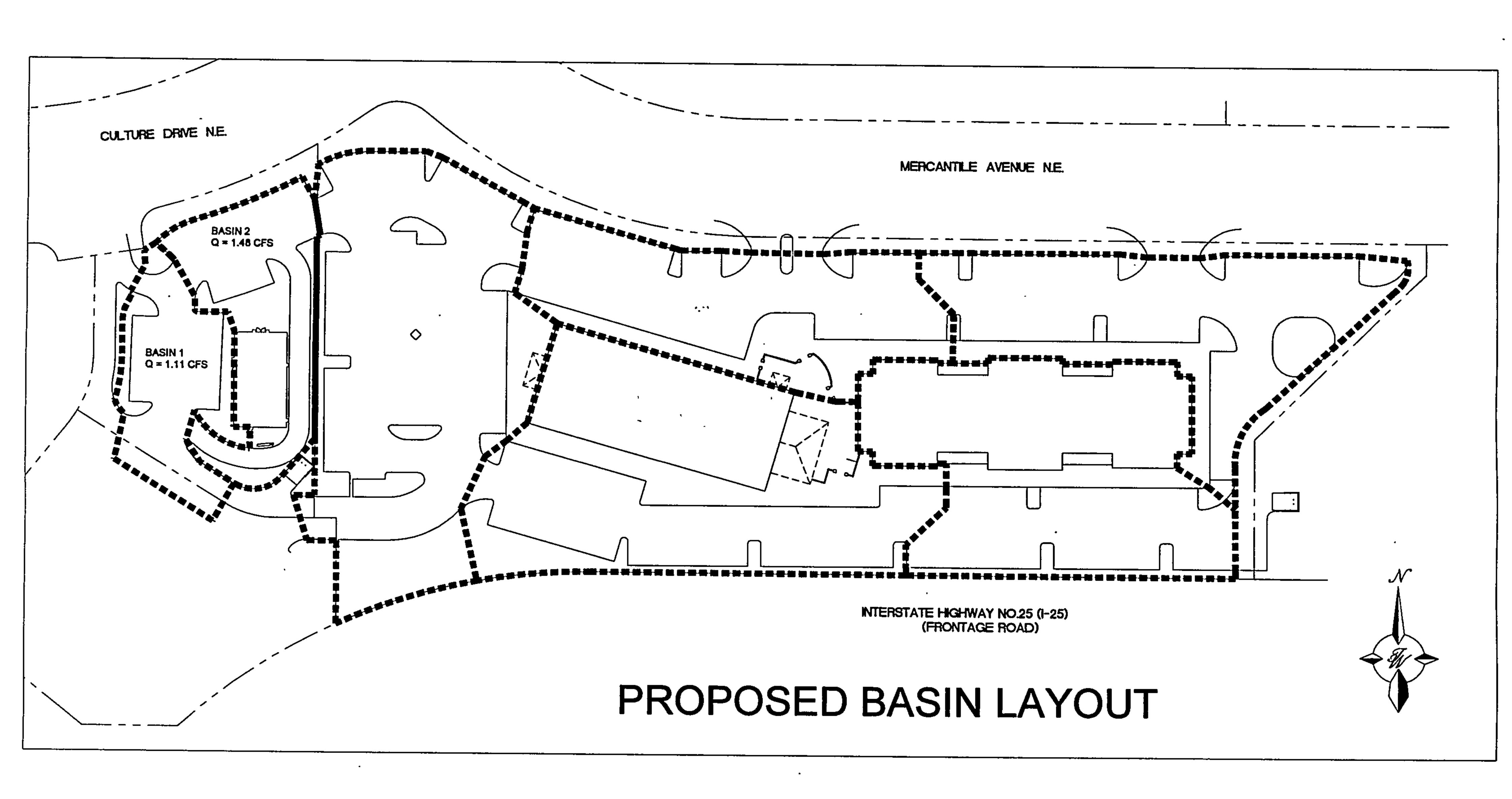
On-Site Drainage Management Plan

The Panda Express site has been divided into two proposed basins in order to pond the drainage and control the rate of runoff. The basin delineation is shown on the attached "Proposed Basin Layout" and within each basin is located a pond. The storm drain system will discharge to an existing drop inlet located in Mercantile Avenue. The remainder of Tract 5 is shown conceptually on the Basin Layout but is subject to change. The ponds and routing will be calculated when that tract is developed. The maximum allowable flow from the remainder of the site is 0.40 cfs and is shown on the Grading Plan.

The two ponds on the Panda Express site will act as one pond with a maximum water surface elevation of 5086.20. An orifice plate with a diameter of 0.9 inches will be located at the outlet of Pond 2. The proposed storm drain system will connect to the existing system in Mercantile Avenue.

The total runoff from the Panda Express site from both routes is 0.07 cfs. The proposed discharge of 0.07 cfs is equal to the allowable discharge permitted (0.07 cfs) by the Renaissance Master Drainage Plan.

The on-site ponds will overflow into the east driveway in the event of a storm greater than 100 year.



Criteria

The City of Albuquerque Development Process Manuel Volume II – 1997 Revision criteria was used to calculate the flows and volumes. The AHYMO computer program was used to calculate flows, volume and pond calculations.

Summary

There are two on-site basins and ponds that control the discharge to the allowable permitted by the Renaissance Master Plan. The ponds will act as one pond and the discharge will be limited through an orifice plate at the outlet of Pond 2. The discharge from the site to Mercantile Avenue will be limited to 0.07 cfs.

Drainage Basins

Proposed

BASIN	BASIN AREA (SF) AREA		AREA (MI ²)
1	10,654	0.2446	0.000382
2	14,247	0.3271	0.000511
Total	24,901	0.5716	0.000893

Runoff Calculation Results

Proposed

BASIN	Q-100	Q-10	V-100	V-10
	CFS	CFS	AC-FT	AC-FT
1	1.11	0.71	0.040	0.025
2	1.48	0.95	0.054	0.034
Total	2.59	1.66	0.094	0.059

AHIMO PROGRAM SUMMARY TABLE (AHYMO 97) -- VERSION: 1997.02a RUN DATE (MON/DAY/YR) = 12/01/2000INPUT FILE = A: POND2.DAT USER NO. = AHYMO-I-9702a0100011K-SH FROM TO PEAK RUNOFF TIME TO CFS PAGE = 1HYDROGRAPH ID ID AREA DISCHARGE VOLUME RUNOFF PEAK PER COMMAND IDENTIFICATION NO. NO. (SQ MI) (CFS) (AC-FT) (INCHES) (HOURS) ACRE NOTATION START TIME= .00 RAINFALL TYPE = 1RAIN6= 2.350 COMPUTE NM HYD 100.10 .00038 _ 1.11 .040 1.98165 1.500 4.526 PER IMP= 90.00 COMPUTE NM HYD 100.20 .00051 1.48 .054 1.98165 1.500 4.511 PER IMP= 90.00 COMPUTE NM HYD 100.10 .00089 1.31 .037 .77821 1.533 2.292 PER IMP= .00 RAINFALL TYPE = 1RAIN6= 1.570 COMPUTE NM HYD 101.10 .00038 _ .71 .025 1.23172 1.500 2.923 PER IMP= 90.00 COMPUTE NM HYD 101.20 .00051

.95

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1.500

1.533

2.916 PER IMP=

.941 PER IMP=

90.00

.00

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101.10

COMPUTE NM HYD

FINISH

VOLUME CALCULATIONS

POND 1 AND 2

ACTUAL	DEPTH	VOLUME	Q
ELEV.	(FT)	(AC-FT)	(CFS)
74.74	0.00	0.0000	0.0000
85.10	10.36	0.0016	0.0683
85.30	10.56	0.0019	0.0690
85.50	10.76	0.0062	0.0697
85.70	10.96	0.0165	0.0703
85.75	11.01	0.0197	0.0705
85.90	11.16	0.0333	0.0709
85.95	11.21	0.0393	0.0711
86.10	11.36	0.0617	0.0716
86.15	11.41	0.0707	0.0717
86.24	11.50	0.0886	0.0720

Orifice Equation

Q = CA SQRT(2gH)

C = 0.6 Diameter (in) 0.9 Area (ft^2)= 0.00442

g = 32.2

H (ft) = Depth of water above center of orifice

Q (cfs)= Flow

VOLUME CALCULATIONS

POND 1

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

Ab = 6.80

At = 3,795.00

Dt = 0.54

C = 7015.19

ACTUAL	DEPTH	VOLUME
ELEV.	(FT)	(AC-FT)
81.75	0	0
85.7	3.95	0.0006
85.75	4	0.0006
85.90	4.15	0.0025
85.95	4.2	0.0039
86.10	4.35	0.0105
86.15	4.4	0.0136
86.24	4.49	0.0200

VOLUME CALCULATIONS

POND 2

Ab - Bottom Of The Pond Surface Area

At - Top Of The Pond Surface Area

D - Water Depth

Dt - Total Pond Depth

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

Ab = 6.80

At = 5,828.00

Dt = 1.00

C = 5821.20

ACTUAL	DEPTH	VOLUME
ELEV.	(FT)	(AC-FT)
74.74	0	0
85.24	10.50	0.0016
85.30	10.56	0.0019
85.50	10.76	0.0062
85.70	10.96	0.0158
85.75	11.01	0.0191
85.90	11.16	0.0308
85.95	11.21	0.0354
86.10	11.36	0.0512
86.15	11.41	0.0571
86.24	11.5	0.0686

DROP INLET CALCULATIONS

Pond	Type of Inlet	Area (SF)	Q (CFS)	H (FT)	Allowable H (FT)
1	Single 'D'	2.30	1.11	#REF!	0.54
2	Single 'D'	2.30	1.48	#REF!	1.00

ANIMO PROGRAM SUMMARY TABLE (AHIMO 97) -1997.02a RUN DATE (MON/DAY/YR) = 12/01/2000- VERSION: INPUT FILE = A:POND1.DAT USER NO. = AHYMO-I-9702a0100011K-SH FROM TO PEAK RUNOFF TIME TO PAGE = 1CFS HYDROGRAPH ID ID AREA DISCHARGE VOLUME RUNOFF PEAK PER COMMAND IDENTIFICATION NO. NO. (SQ MI) (CFS) (AC-FT) (INCHES) (HOURS) ACRE NOTATION START TIME= .00 RAINFALL TYPE= 2RAIN24= 2.750 COMPUTE NM HYD 100.10 .00038 1.11 .046 2.27939 1.500 4.526 PER IMP= 90.00 COMPUTE NM HYD 100.20 .00051 1.48 .062 2.27937 1.500 4.511 PER IMP= 90.00 ADD HYD 101.20 1& 2 .00089 2.58 .109 2.27938 1.500 4.518 ROUTE RESERVOIR 500.10 3 .00089 .07 .108 2.27110 2.466 .126 AC-FT=

FINISH

.081

F-16/D5I

DRAINAGE REPORT FOR

TRACT 9 OF RENAISSNACE CENTER

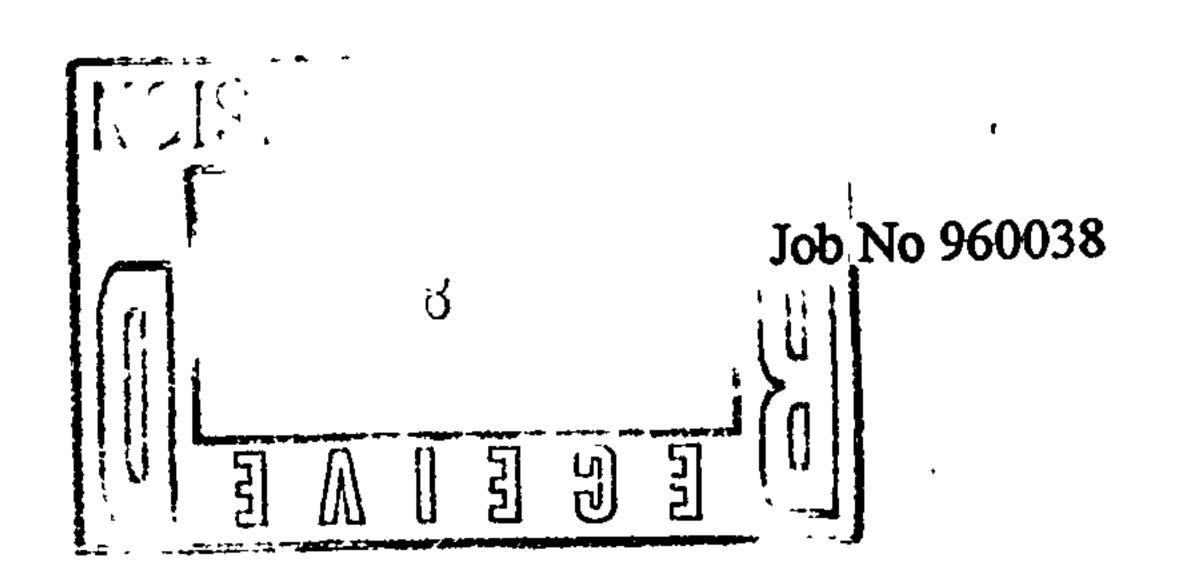
Prepared by:



Tierra West Development Management Services
4421 McLeod Rd., NE, Suite D
Albuquerque, New Mexico 87109

October, 1996

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the state of New Mexico in good standing.



Location

Tract 9 of Renaissance is a 14.6487 acre site which is located at the southwest corner of Chappell Drive and Mission Avenue. See attached Zone Atlas page number F-16 for location. We are proposing to build three new buildings as part of Phase I. Building 1 is the Mechanical Contractors Association (Tract 9-D, 1.833 acres) building with an area of 5,328 square feet and a future Building addition of 3,675 square feet. Building 2 is Mediaworks (Tract 9-C, 0.741 acre) with a building area of 4,589 square feet, and Building 3 is Distribution Management Corporation (Tract 9-B, 2.216 acre) with a building area of 9,153 square feet. Phase II of Tract 9 (Tract 9-A) is a preliminary layout which proposed two buildings consisting of 55,500 sf and 29,125 sf, respectively. Phase II is shown in concept only and will have a future plan submittal at the time of development.

Purpose

The purpose of this drainage report is to present a grading and drainage solution for Tract 9, Phase I. We are requesting a grading permit and building permit for Phase I. We are also requesting replat (to create Tracts 9A through 9D) approval as well as site development plan approval for building permit purposes.

Existing Drainage Conditions

The site falls within the Renaissance Drainage Master Plan, and it is currently undeveloped. The existing undeveloped runoff partially drains (Basin 1) east to Chappell Drive at a flow rate of 3.00 cfs. The majority portion of Tract 9 (Basin 2) drains west and south to an existing desilting pond on the southwest corner of the tract and from there it drains to Renaissance Boulevard at a flow rate of 30.38 cfs. There is no offsite runoff entering the site. The existing curb and gutter around the site intercepts all of the offsite runoff (See exiting overall basin layout enclosed in the map pocket). An exiting AMAFCA easement encroaches 49' feet on the east side of the property. The easement was established to protect undermining of the North Diversion Channel from gravel extraction. These proposed grades will not compromise the structure and will actually set permanent grades in the easement. An encroachment agreement will be requested from AMAFCA from the parking lot and landscaping. A copy of the request will be submitted at a later time.

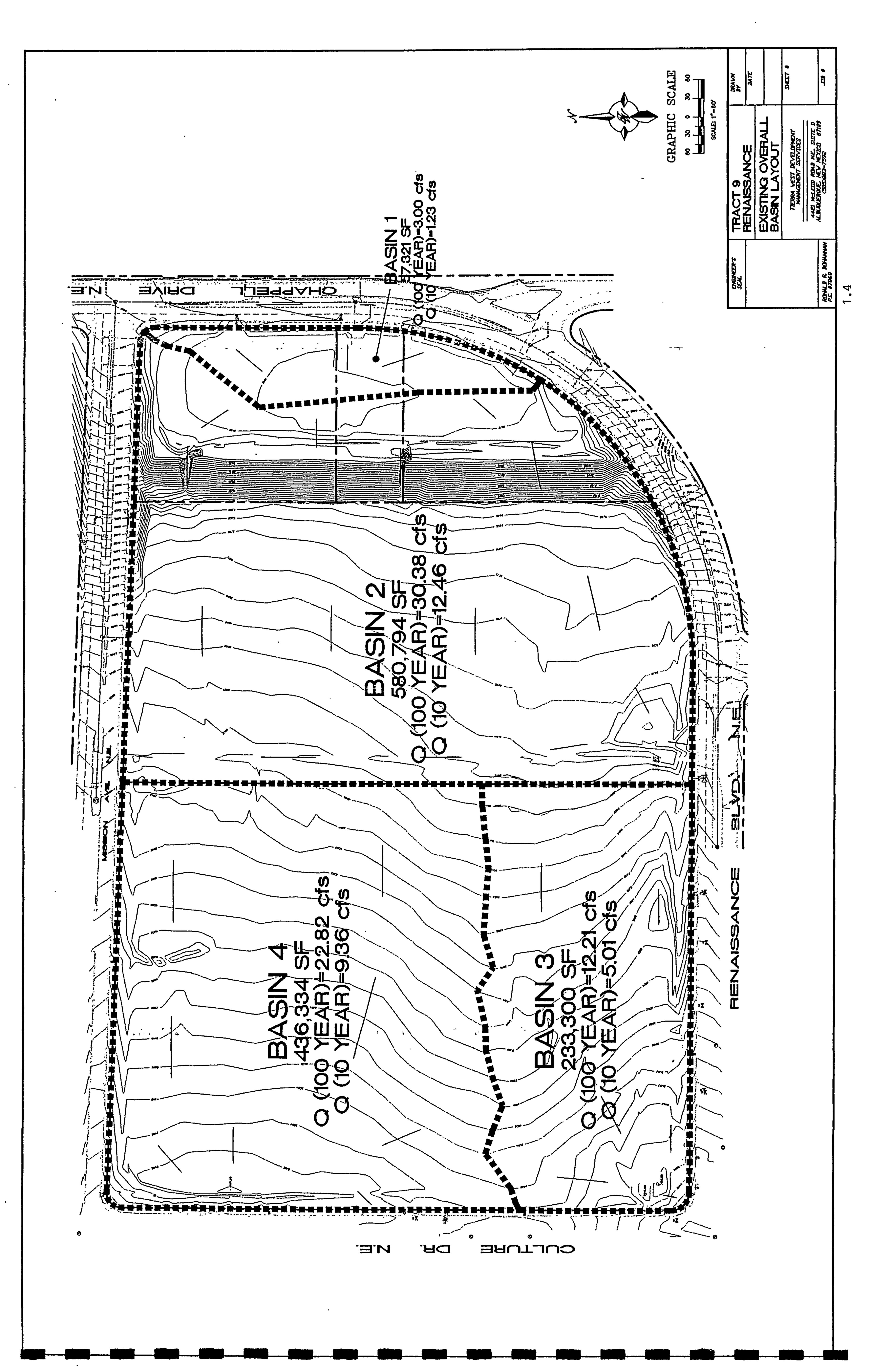
That the Proposition

FEMA Map and Soil Condition

. Level Start of the submitted at a later time.

The site is located on FEMA Map section 350002 panel 16 as shown on the attached excerpt. The map shows that the site does not lie within any 100 year flood plains.

The site contains two different soil types as indicated on the Soil Map from the Soil Conservation Service Survey of Bernalillo County. These soil types are Embudo (EmB) and Bluepoint-Kokan association. The Embudo is gravelly fine sandy loam where runoff is



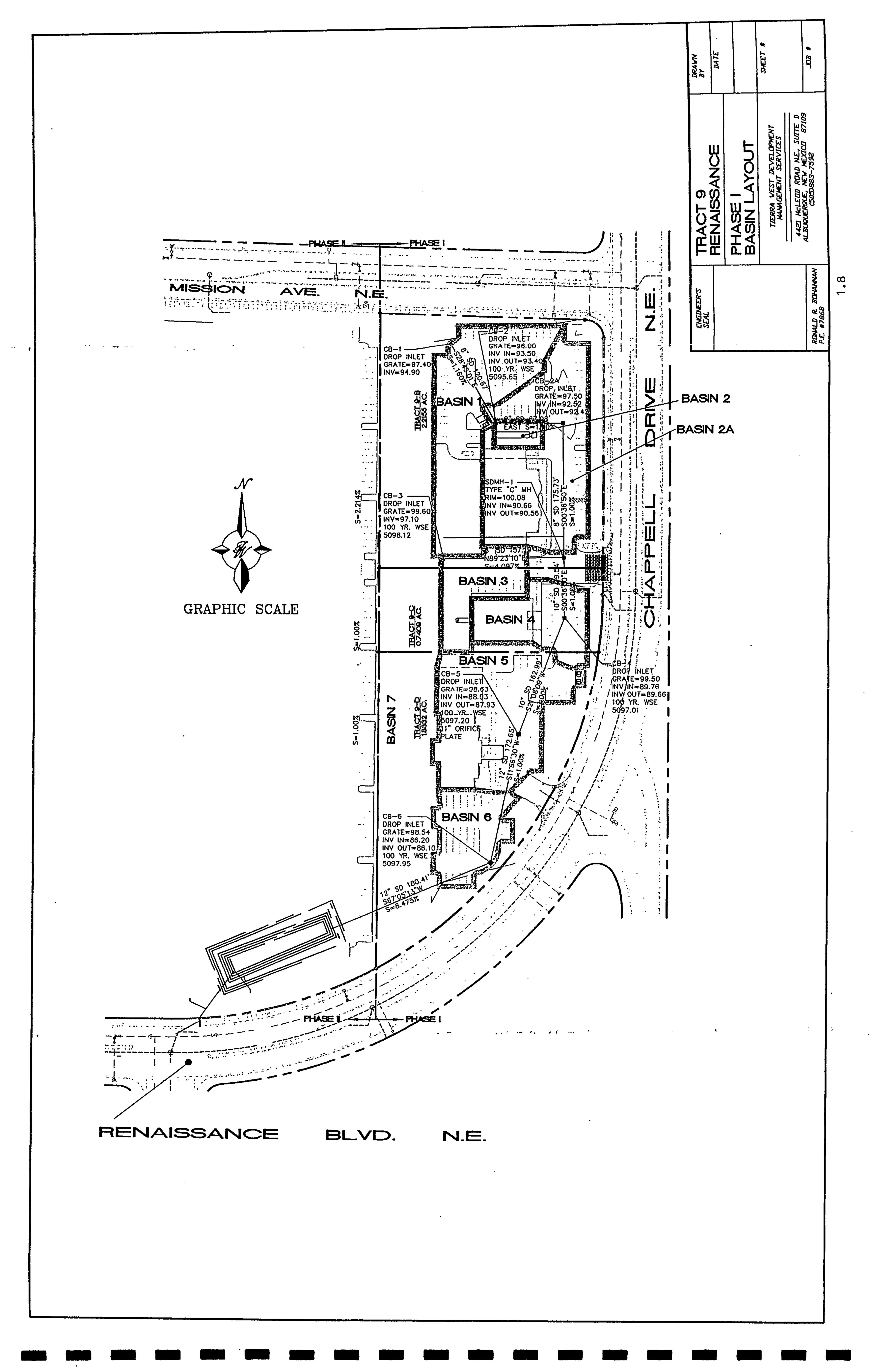
medium and the hazard of water erosion is moderate. Control of moisture is needed for proper compaction. The Bluepoint-Kokan association is a Bluepoint loamy fine sand that has slow runoff, rapid permeability, and moderate to severe hazard of water erosion.

Proposed Conditions and On-Site Drainage Management Plan

The site will develop in two phases. Phase I consists of Tract 9-B (Distribution Management Corporation), Tract 9-C (Mediaworks Building), and Tract 9-D (Mechanical Contractors Association Building). Phase II is a preliminary layout for two future buildings with building areas of 55,500 sf and 29,125 sf. (See the overall proposed basin layout as well as the grading plans for Phases I and II enclosed in the map pocket.)

Phase I - Drainage Management

Per Renaissance Master Drainage Plan 0.1 cfs/acre can be discharged from the site. Therefore the allowable discharge rate for Tract 9 (14.6487 acres) is 1.46 cfs. Phase I (Tract 9-B, 9-C, 9-D) is divided into several subbasins. The runoff from this phase is collected through a series of storm sewer inlets and then drained to Phase II. Since Tract 9 will develop in two phases, a temporary detention pond will be placed on Phase II to detain the runoff from Phase I and discharged at an allowable discharge rate less than or equal to 0.48 cfs. The flows from Tracts 9B, 9C, and 9D will be collected in a private storm drain system and routed to the temporary pond located on Tract 9A.



- The following is a tabulation of the routing used to collect all of the flows:
- CB-1 captures the runoff from Basin 1 (2.70 cfs) and drains the runoff to CB-2 at a flow rate of 2.55 cfs through an 8" pipe. In the case of an emergency, i.e., a storm event greater than the 100-year storm or clogging of the drop inlet, the runoff backs up into the parking lot and drains over the curb and into Mission Avenue.
- CB-2 captures the runoff from the loading area (Basin 2 with runoff rate of 0.23 cfs) and the runoff from CB-1 and then drains to CB-2A at a flow rate of 2.65 via an 8" pipe. In the case of an emergency the runoff backs up into the loading area and then overflows to CB-1.
- CB-2A captures the runoff from Basin 2A (3.04 cfs) and CB-2 and drains to SDMH-1 (storm sewer manhole) at a flow rate of 3.86 cfs via an 8" pipe. In the case of an emergency the runoff backs up into the parking lot and then overflows to CB-1.
- CB-3 captures the runoff from Basin 3 (1.01 cfs) and drains to SDMH-1 at a flow rate of 1.00 cfs through an 8" pipe. In the case of an emergency the runoff backs up into the parking lot and drains over the curb and into Tract 9A.
- SDMH-1 captures the runoff from CB-2A and CB-3 and drains to CB-4 at a flow rate of 4.80 cfs through a 10" pipe.
- CB-4 captures the runoff from Basin 4 (1.23 cfs) and SDMH-1 and drains to CB-5 at a flow rate of 6.02 cfs through a 10" pipe. In the case of an emergency the runoff backs up into the parking lot and drains out of the entrance into Chappell Drive.
- CB-5 captures the runoff from Basin 5 (2.86 cfs) and CB-4 and drains to CB-6 at a flow rate of 8.86 cfs through a 12" pipe (with an 11" orifice plate). In the case of an

emergency the runoff backs up into the parking lot and drains out of the entrance to Renaissance Boulevard.

CB-6 captures the runoff from Basin 6 (1.07 cfs) and CB-5 and drains to a detention pond on Phase II at a flow rate of 9.92 cfs through a 12" pipe. From there the runoff is detained and released to Renaissance Boulevard at a confined flow rate of 0.47 cfs.

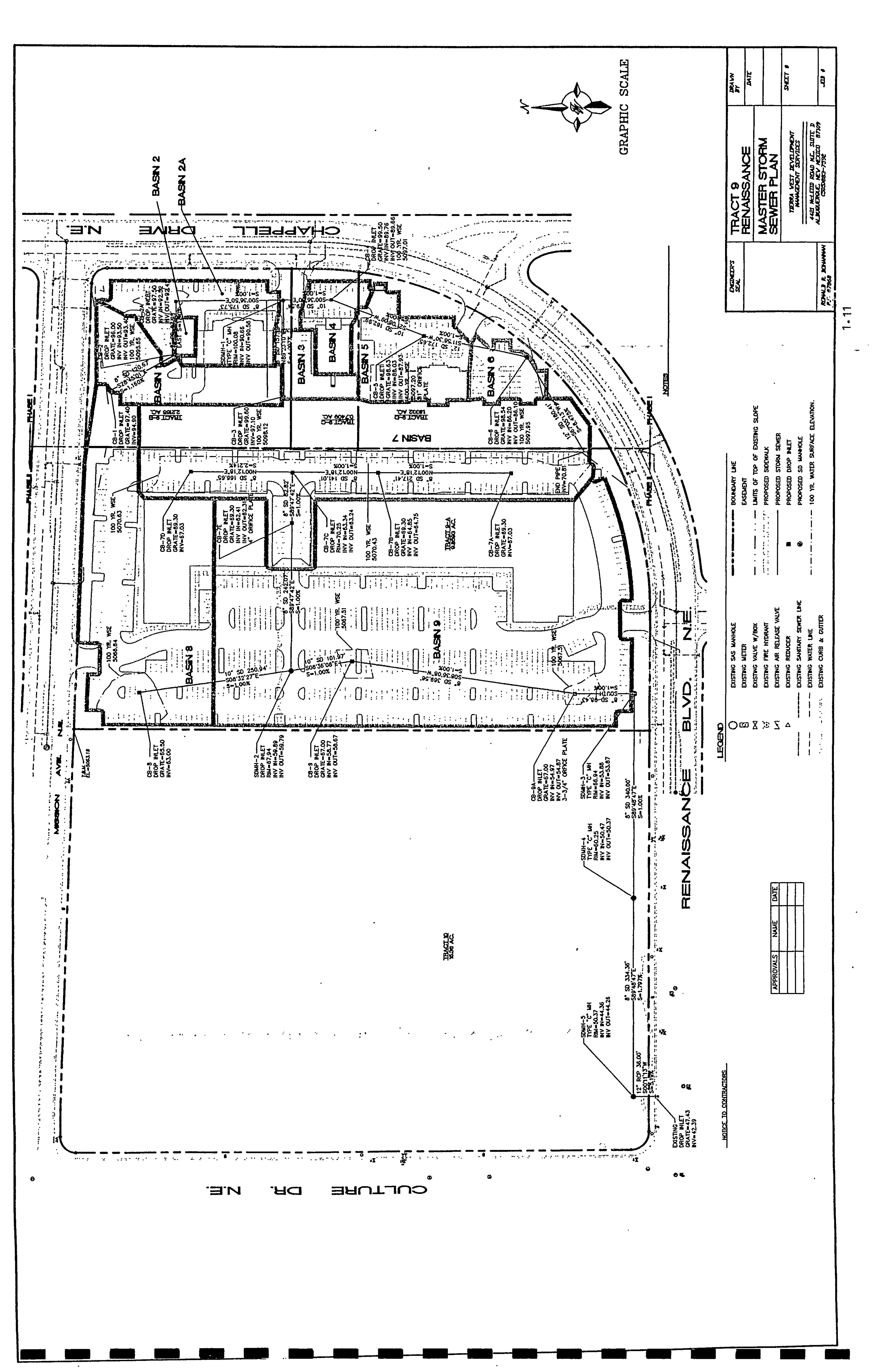
The runoff from the pond is drained out via a 3" pipe. The 3" pipe is extended to a sidewalk culvert. In the case of an emergency the runoff overflows the desilting pond and drains to Renaissance Boulevard.

Phase II - Drainage Management

Phase I drains to Phase II parking lot at a flow rate of 9.92 cfs via a 12" pipe. At this time the temporary detention pond will be removed. The runoff from this phase along with the runoff from Phase I is collected through a series of storm sewer inlets and then, via an 8" storm sewer pipe, the runoff is carried to an existing drop inlet located on the southwest end of Tract 10 (on the north side of the Renaissance Boulevard). This phase has been broken down into three subbasins. A final development plan will be submitted for Tract 9A prior to the build out of the tract. The plan shown is conceptual only.

The following is a tabulation of the routing used to collect all of the flows:

CB-7A, 7B, 7C, 7D, & 7E captures the runoff from Basin 7 (12.94 cfs) and CB-6 and drains to SDMH-2 at a flow rate of 1.23 cfs through an 8" pipe (confined with a 4" orifice plate). In the case of an emergency the runoff backs up into the parking lot and drains out over the curb and to Tract 9A.



- CB-8 captures the runoff from Basin 8 (9.46 cfs) and drains to SDMH-2 at a flow rate of 3.64 cfs through a 10" pipe. In the case of an emergency the runoff backs up into the parking lot and drains out of the entrance to Mission Avenue.
- SDMH-2 captures the runoff from CB-7E and CB-8 and drains to CB-9 at a flow rate of 4.85 cfs via a 10" pipe.
- CB-9 and CB-9A capture the runoff from Basin 9 (25.07 cfs) and SDMH-2 and drain the runoff to SDMH-3 at a flow rate of 1.3 cfs through an 8" pipe (confined with a 3¾" orifice plate). In the case of an emergency the runoff backs up into the parking lot and drains out of the entrance and to Renaissance Boulevard.
- SDMH-3 captures the runoff from CB-9A and drains it to SDMH-4 and from there to SDMH-5 at flow rate of 1.3 cfs. From there the runoff drains to an existing drop inlet on the north side of Renaissance Boulevard just east of Century Drive via a 12" R.C.P. (See Master Storm Sewer Plan enclosed in the map pocket.)

The slope area between Tracts 9B, 9C, 9D, and 9A will be landscaped and maintained by the owner of the individual tracts. Directing the flow away from the slope will stabilize the slopes even further.

Summary

Phase 1

Tracts 9B, 9C, & 9D contain 6 basins which will be routed through a series of inlets which then drains to Tract 9A (Phase II) at runoff rate of 9.92 cfs via a 12" pipe to a detention

pond. From there the runoff is ponded and released at a confined flow rate of 0.47 cfs via a 3" pipe to a sidewalk culvert and then to Renaissance Boulevard. This sidewalk culvert will be built under SO-19.

Phase 2

Phase I drains to Phase II. The entire runoff from Tract 9 is ponded within Tract 9A and released at a flow rate of 1.3 cfs. The runoff drains to an existing inlet at the southeast end of Tract 10 via an 8" storm sewer pipe.

Emergency Conditions

Should the pond exceed the capacity during Phase I development the runoff will flow over the top into Tract 9D. From there the runoff flows west to an existing desilting pond at the southwest corner of Tract 9D. If during Phase II, the drop inlets should clog or a storm larger than the 100 year event occur, the emergency spillway will be the entrance to the street.

Infrastructure Requirements

An infrastructure list has been supplied in the report. The storm sewer is proposed to be private and will not be included on the list. Further, a temporary drainage easement on Tract 9A will be granted with plat action. A separate agreement and covenant has been returned along with the infrastructure list in section 9.

RUNOFF CALCULATIONS

The site is @ Zone 2

LAND TREATMENT

Proposed

D = 90 %

B = 10 %

Existing

B = 100 %

DEPTH (INCHES) @ 100-YEAR STORM

 $P_{60} = 2.01$ inches

 $P_{360} = 2.35 \text{ inches}$

 $P_{1440} = 2.75 \text{ inches}$

DEPTH (INCHES) @ 10-YEAR STORM

 $P_{60} = 2.01 \times 0.667$ = 1.34 inches

 $P_{260} = 1.57$

 $P_{1440} = 1.83$

See the summary output from AHYMO calculations.

Also see the following summary tables.

RUNOFF SUMMARY TABLE

PROPOSED

DRAINAGE BASINS

SUB-BASIN	AREA (SF)	AREA (AC)	AREA (MI²)
1	26202.93	0.6015	0.000940
2	2086.81	0.0479	0.000075
2A	29540.41	0.6782	0.001060
3	9675.23	0.2221	0.000347
4	11861.70	0.2723	0.000425
5	27824.07	0.6388	0.000998
6	10320.14	0.2369	0.000370
7	126280.55	2.8990	0.004530
8	92340.08	2.1198	0.003312
9	244820.96	5.6203	0.008782

BASINS RUNOFF CALCULATION RESULTS UNDER PROPOSED CONDITIONS

		
BASIN -	Q-100	Q-10
	CFS	CFS
1	2.7	1.75
2	0.23	0.15
2A	3.04	1.97
3	1.01	0.65
4	1.23	. 0.79
5	2.86	1.85
6	1.07	0.69
7	12.94	8.38
8	9.46	6.13
9	25.07	16.23

EXISTING

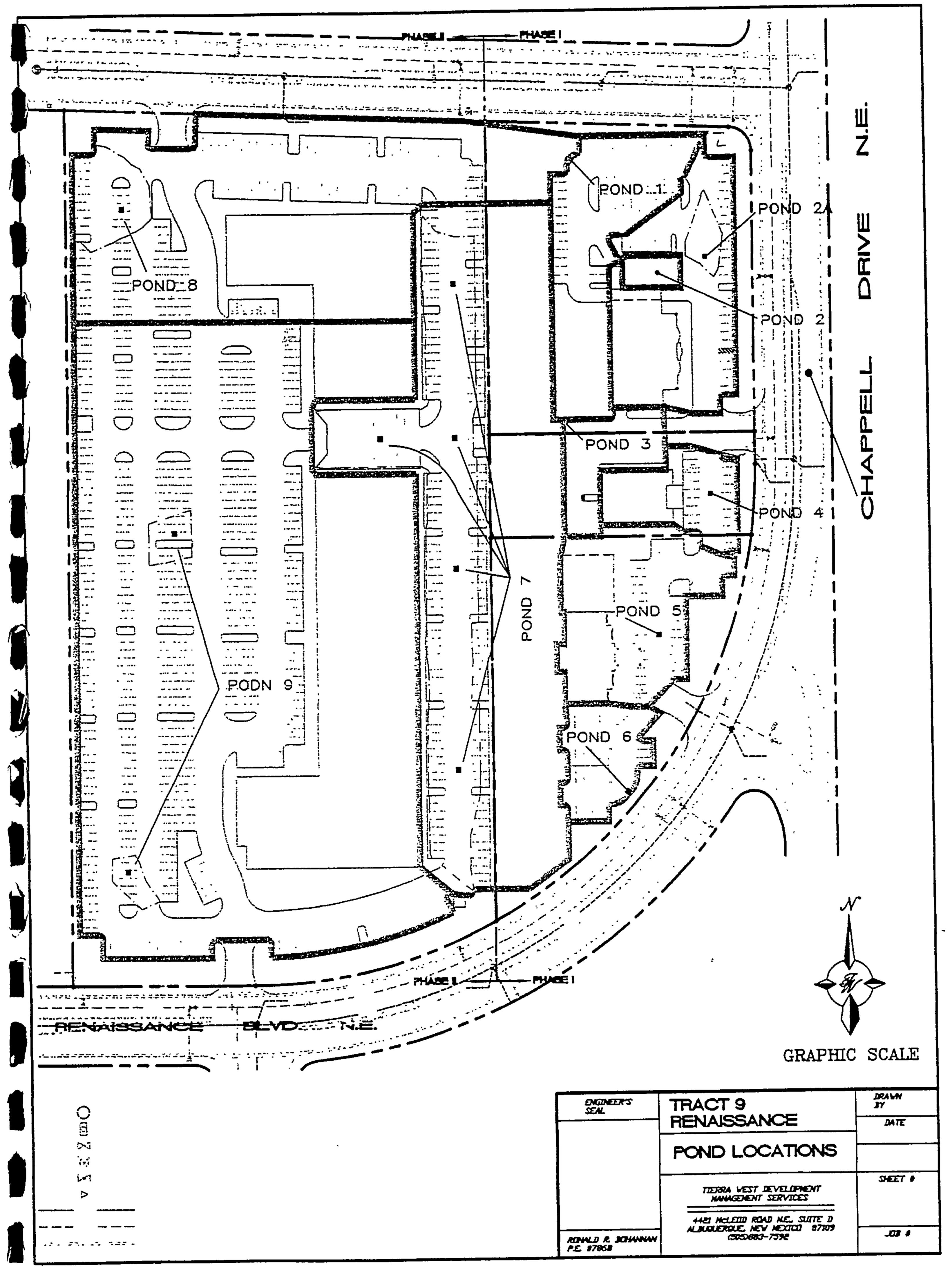
DRAINAGE BASINS

SUB-BASIN	AREA (SF)	AREA (AC)	AREA (MI ²)
1	57321.00	1.3159	0.002056
2	580794.00	13.3332	0.020833
3	233300.00	5.3558	0.008368
4	436334.00	10.0169	0.015651

BASINS RUNOFF CALCULATION RESULTS

UNDER PROPOSED CONDITIONS

OT IDEAL I	OTIDINE LICOT OPED COTIDITIONS				
BASIN	Q-100	Q-10			
	CFS	CFS			
1	3.00	1.23			
2	30.38	12.46			
3	12.21	5.01			
4	22.82	9.36			



POND VOLUME CALCULATIONS

POND #1

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =2.50'

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

Ab = 6.94 SF At = 1,226.30 SF

Dt = 1,220.50 BI

(Ponding depth from top of the inlet to maximum ponding depth

Dia = 8 IN Radius = 4 IN

C = 2438.72 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5094.90
2.50	2.50	0.00040	2.47	5097.40
2.60	0.10	0.00069	2.53	5097.50
2.70	0.20	0.00155	2.59	5097.60
2.80	0.30	0.00297	2.64	5097.70
2.90	0.40	0.00494	2.69	5097.80
3.00	0.50	0.00748	2.74	5097.90

$$Q = CA \sqrt{2gH}$$

C = 0.60

 $A = \P r^2$

g = 32.2

H = water depht, measured from the center of the orifice plate

POND #2

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =2.60'

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

$$C = (At - Ab) / Dt$$

6.94 SF Ab =

2,044.82 SF At =

(Ponding depth from top of the inlet to maximum ponding depth) 2.20 FT Dt =

8 IN Dia =

4 IN Radius =

926.31 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5093.40
2.60	2.60	0.00041	2.53	5096.00
3.10	0.50	0.00315	2.80	5096.50
3.60	1.00	0.01121	3.04	5097.00
4.10	1.50	0.02458	3.26	5097.50
4.60	2.00	0.04326	3.47	5098.00
4.80	2.20	0.05223	3.55	5098.20

POND #2A

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =5.08'

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D²

C = (At - Ab) / Dt

Ab = 6.94 SF

At = 4,594.77 SF

Dt = 0.70 FT (Ponding depth from top of the inlet to maximum ponding depth)

Dia = 8 IN

Radius = 4 IN

C = 6554.04 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5092.42
5.08	5.08	0.00081	3.66	5097.50
5.18	0.10	0.00158	3.70	5097.60
5.28	0.20	0.00385	3.74	5097.70
5.38	0.30	0.00763	3.78	5097.80
5.48	0.40	0.01291	3.81	5097.90
5.58	0.50	0.01970	3.85	5098.00
5.68	0.60	0.02799	3.89	5098.10
5.78	0.70	0.03778	3.92	5098.20

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =10.70

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

$$C = (At - Ab) / Dt$$

Ab =6.94 SF

2,275.37 SF At =

(Ponding depth from top of the inlet to maximum ponding depth) 0.37 FT Dt =

Dia =11 IN

Radius = 5.5 IN

6130.89 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5087.93
10.70	10.70	0.00170	10.17	5098.63
10.80	0.10	0.00242	10.22	5098.73
10.90	0.20	0.00455	10.27	5098.83
11.00	0.30	0.00809	10.32	5098.93
11.07	0.37	0.01140	10.35	5099.00

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =12.44'

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

$$C = (At - Ab) / Dt$$

Ab =6.94 SF

At =1,819.68 SF

(Ponding depth from top of the inlet to maximum ponding depth) 0.50 FTDt =

Dia =12 IN

Radius = 6 IN

3625.48 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	50886.10
12.44	12.44	0.00198	13.07	50898.54
12.54	0.10	0.00241	13.12	50898.64
12.64	0.20	0.00368	13.18	50898.74
12.74	0.30	0.00578	13.23	50898.84
12.84	0.40	0.00870	13.28	50898.94
12.94	0.50	0.01247	13.34	50899.04

DETENTION POND

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

 $Volume = Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

Ab = 2,096.00 SF

At = 6,200.00 SF

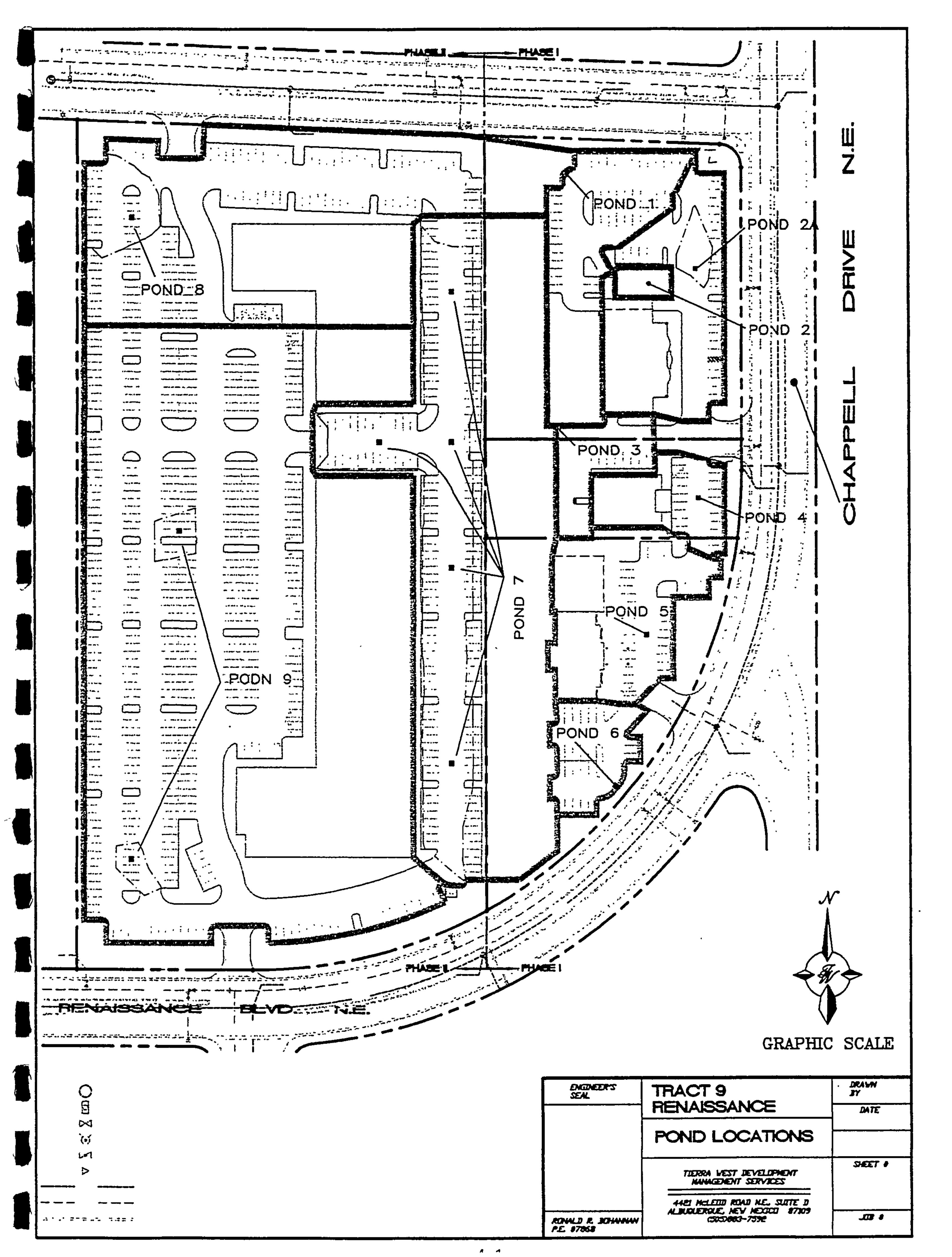
Dt = 4.00 FT (Ponding depth from top of the inlet to maximum ponding depth)

Dia = 3 IN

Radius = 1.5 IN

C = 1026.00 FT/LF-DEPTH

				· · · · · · · · · · · · · · · · · · ·
H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5070.00
0.50	0.50	0.02700	0.14	5070.50
1.00	1.00	0.05989	0.22	5071.00
1.50	1.50	0.09867	0.28	5071.50
2.00	2.00	0.14334	0.32	5072.00
2.50	2.50	0.19390	0.36	5072.50
3.00	3.00	0.25034	0.40	5073.00
3.50	3.50	0.31268	0.43	5073.50
4.00	4.00	0.38090	0.47	5074.00



Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =7.39' (CB-7e)

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

C = (At - Ab) / Dt

6.94 SF Ab =

58,037.95 SF At =

1.60 FT Dt =

(Ponding depth from top of the inlet to maximum ponding depth)

4 IN Dia =

2 IN Radius =

36269.38 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5061.91
2.50	2.50	0.00040	0.64	5064.41
5.00	5.00	0.00080	0.92	5066.91
7.39	7.39	0.00118	1.13	5069.30
7.59	0.20	0.01786	1.14	5069.50
7.79	0.40	0.06785	1.16	5069.70
7.99	0.60	0.15115	1.18	5069.90
8.19	0.80	0.26775	1.19	5070.10
8.39	1.00	0.41765	1.20	5070.30
8.59	1.20	0.60086	1.22	5070.50
8.79	1.40	0.81738	1.23	5070.70
8.99	1.60	1.06720	1.25	5070.90

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth = 2.70 (CB-8)

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth

(From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

$$C = (At - Ab) / Dt$$

Ab = 6.94 SF

At = 8,175.96 SF Dt = 1.20 FT

(Ponding depth from top of the inlet to maximum ponding depth)

Dia = 10 IN

Radius = 5 IN

C = 6807.52 FT/LF-DEPTH

H	D	VOLUME	- Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	62.80
2.70	2.70	0.00043	3.97	65.50
2.90	0.20	0.00359	4.14	65.70
3.10	0.40	0.01300	4.30	65.90
3.30	0.60	0.02866	4.46	66.10
3.50	0.80	0.05057	4.61	66.30
3.70	1.00	0.07873	4.76	66.50
3.90	1.20	0.11314	4.90	66.70

Volume = 6.94 * D (from bottom of the inlet to the top of inlet)

Inlet Depth =12.13' (CB-9a)

Ab - Bottom Of The Pond Surface Area (Top of the inlet)

At - Top Of The Pond Surface Area

D - Water Depth (From top of inlet)

Dt - Total Pond Depth (From top of inlet to maximum water detph)

C - Change In Surface Area / Water Depth

Volume = $Ab * D + 0.5 * C * D^2$

$$C = (At - Ab) / Dt$$

6.94 SF Ab =

At = 101,605.00 SF

2.00 FT Dt =

(Ponding depth from top of the inlet to maximum ponding depth)

3.75 IN Dia =

1.875 IN Radius =

50799.03 FT/LF-DEPTH

H	D	VOLUME	Q	FULL
(FT)	(FT)	(AC-FT)	(CFS)	ELEV.
0.00	0.00	0.00000	0.00	5054.87
3.00	3.00	0.00048	0.62	5057.87
6.00	6.00	0.00096	0.89	5060.87
9.00	9.00	0.00143	1.10	5063.87
12.13	12.13	0.00193	1.28	5067.00
12.33	0.20	0.02529	1.29	5067.20
12.53	0.40	0.09529	1.30	5067.40
12.73	0.60	0.21194	1.31	5067.60
12.93	0.80	0.37524	1.32	5067.80
13.13	1.00	0.58518	1.33	5068.00
13.33	1.20	0.84178	1.34	5068.20
13.53	1.40	1.14502	1.35	5068.40
13.73	1.60	1.49490	1.36	5068.60
13.93	1.80	1.89144	1.37	5068.80
14.13	2.00	2.33462	1.38	5069.00

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
INPUT FILE = 9E

RUN DATE (MON/DAY/YR) =10/11/1996
USER NO.= R_BOHANN.IO1

COMMAND	HYDROGRAP IDENTIFICATIO		TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE =	
I Start										TIME=	.00
	YPE= 1									RAIN6=	2.350
COMPUTE NM		0 -	1	.00206	3.00	.085	.77821	1.533	2.284	PER IMP=	.00
COMPUTE NM			1	.02083	30.38	.865	.77821	1.533	2.278	PER IMP=	.00
COMPUTE NM			1	.00837	12.21	.347	.77821	1.533	2.279	PER IMP=	.00
COMPUTE NM			1	.01565	22.82	.650	.77821	1.533	2.278	PER IMP=	.00
START			•							TIME=	.00
	YPE= 1									RAIN6=	1.570
COMPUTE NM		0 -	1	.00206	1.23	.031	.27828	1.533	.937	PER IMP=	.00
COMPUTE NM			1	.02083	12.46	.309	.27828	1.533	.935	PER IMP=	.00
COMPUTE NM			1	.00837	5.01	.124	.27828	1.533	.935	PER IMP=	.00
COMPUTE NM			1	.01565	9.36	.232	.27828	1.533	.935	PER IMP=	.00
FINISH											

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
INPUT FILE = 9

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	PAGE =	
CTADT				•						TIME=	.00
START	YPE= 2									RAIN24=	2.750
RAINFALL T	·	_	1	.00094	2.70	.114	2.27933	1.500	4.486	PER IMP=	90.00
COMPUTE NM		-	1	.00008	.23	.009	2.27969	1.500	4.689	PER IMP=	90.00
COMPUTE NM		_	1	.00106	3.04	.129	2.27932	1.500	4.481	PER IMP=	90.00
COMPUTE NM		_	1	-00035	1.01	.042	2.27940	1.500	4.532	PER IMP=	90.00
COMPUTE NM		_	1	.00043	1.23	.052	2.27938	1.500	4.521	PER IMP=	90.00
COMPUTE NM			1	.00100	2.86	.121	2.27932	1.500	4.485	PER IMP=	90.00
COMPUTE NM			1	.00037	1.07	.045	2.27939	1.500	4.526	PER IMP=	90.00
COMPUTE NM			1	.00453	12.94	.551	2.27928	1.500	4.463	PER IMP=	90.00
COMPUTE NM			1	.00331	9.46	. 403	2.27929	1.500	4.465	PER IMP=	90.00
COMPUTE NM			1	.00878	25.07	1.068	2.27928	1.500	4.460	PER IMP=	90.00
START										TIME=	.00
RAINFALL	TYPE= 2									RAIN24=	1.830
COMPUTE NM	HYD 111.00	-	1	.00094	1.75	.071	1.42512	1.500	2.902	PER IMP=	90.00
COMPUTE NM	HYD 112.00	-	1	.00008	.15	.006	1.42535	1.500	3.030	PER IMP=	90.00
COMPUTE NM	HYD 112.20	-	1	.00106	1.97	_081	1.42511	1.500	2.900	PER IMP=	90.00
COMPUTE NM	HYD 113.00	-	1	.00035	.65	.026	1.42517	1.500	2.927	PER IMP=	90.00
COMPUTE NM	HYD 114.00	-	1	.00043	.79	.032	1.42515	1.500	2.920	PER IMP=	90.00
COMPUTE NM	HYD 115.00	-	1	.00100	1.85	.076	1.42512	1.500	2.901	PER IMP=	90.00
COMPUTE NM	HYD 116.00	-	1	.00037	.69	.028	1.42516	1.500	2.923	PER IMP=	90.00
COMPUTE NM	HYD 117.00	-	1	.00453	8.38	.344	1.42509	1.500		PER IMP=	90.00
COMPUTE NM	HYD 118.00	-	1	.00331	6.13	.252	1.42510	1.500		PER IMP=	
COMPUTE NM	HYD 119.00	-	1	.00878	16.23	.667	1.42509	1.500	2.888	PER IMP=	90.00
FINISH											

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
INPUT FILE = 9PP1

				4 P. C. A	PEAK	RUNOFF	RUNOFF	TIME TO PEAK	CFS PER	PAGE =	1
COMMAND	HYDROGRAPH	ID	ID	AREA	DISCHARGE	VOLUME (AC-FT)	(INCHES)	(HOURS)	ACRE	NOTATIO	3N
COMMAND	IDENTIFICATION	NO.	NO.	(SQ MI)	(CFS)	(ACTI)	(INCHES)	(1100110)	AOKE		
START									•	TIME=	-00
RAINFALL TYP	E= 2									RAIN24=	2.750
COMPUTE NM HY	101.00	-	1	.00094	2.70	.114	2.27933	1.500	4.486	PER IMP=	90.00
ROUTE RESERVO	IR 501.00	1	2	.00094	2.55	.114	2.27930	1.533	4.235	AC-FT=	.001
COMPUTE NM HY	102.00	-	1	.00008	.23	-009	2.27969	1.500	4.689	PER IMP=	90.00
ADD HYD	102.10	1& 2	3	.00102	2.76	.123	2.27046	1.533	4.252		
ROUTE RESERVO	IR 502.10	3	1	.00102	2.65	.123	2.27043	1.567	4.076	AC-FT=	.002
COMPUTE NM HY	102.20	-	2	-00106	3.04	.129	2.27932	1.500	4.481 I	PER IMP=	90.00
ADD HYD	102.30	1& 2	3	.00208	5.62	.252	2.27497	1.500	4.232		
ROUTE RESERVO	IR 502.30	3	1	.00208	3.86	.252	2.27493	1.633	2.907	AC-FT=	.022
COMPUTE NM HY	D 103.00	-	2	.00035	1.01	.042	2.27940	1.500	4.532	PER IMP=	90.00
ROUTE RESERVO	IR 503.00	2	3	.00035	1.00	-042	2.27937	1.500	4.525	AC-FT=	.000
ADD HYD	103.10	1& 3	2	.00242	4.80	.294	2.27557	1.500	3.094		
COMPUTE NM HY	D 104.00	-	1	.00043	1.23	.052	2.27938	1.500	4.521	PER IMP=	90.00
ADD HYD	104.10	1& 2	3	.00285	6.03	.346	2.27614	1.500	3.307		
ROUTE RESERVO	IR 504.10	3	1	.00285	6.02	.346	2.27610	1.500	3.302	AC-FT=	.001
COMPUTE NM HY	D 105.00	-	2	.00100	2.86	.121	2.27932	1.500	4.485	PER IMP=	90.00
ADD HYD	105.10	1& 2	3	.00385	8.88	.467	2.27694	1.500	3.609		
ROUTE RESERVO	IR 505.10	3	1	.00385	8.86	.467	2.27690	1.500	3.602	AC-FT=	.001
COMPUTE NM HY	D 106.00	-	2	.00037	1.07	.045	2.27939	1.500	4.526	PER IMP=	90.00
ADD HYD	106.10	1& 2	3	-00422	9.94	.512	2.27712	1.500	3.683		
ROUTE RESERVO	IR 506.10	3	1	.00422	9.91	.512	2.27710	1.500	3.675	AC-FT=	.002
ROUTE RESERVO	IR 500.61	3	1	.00422	.47	.490	2.18189	2.400	.174	AC-FT=	.380
FINISH											

		FROM	TO		PEAK	RUNOFF		TIME TO	CFS	PAGE =	: 1
	HYDROGRAPH	ID	ID	AREA	DISCHARGE	VOLUME	RUNOFF	PEAK	PER		
COMMAND	IDENTIFICATION	NO.	NO.	(SQ MI)	(CFS)	(AC-FT)	(INCHES)	(HOURS)	ACRE	NOTATI	ON
START										TIME=	-00
RAINFALL TY	PE= 2									RAIN24=	2.750
COMPUTE NM H	YD 101.00	-	1	.00094	2.70	.114	2.27933	1.500	4.486	PER IMP=	90.00
ROUTE RESERVE	DIR 501.00	1	2	.00094	2.55	.114	2.27930	1.533	4.235	AC-FT=	.001
COMPUTE NM HY	YD 102.00	-	1	.00008	.23	.009	2.27969	1.500	4.689	PER IMP=	90.00
ADD HYD	102.10	1& 2	3	.00102	2.76	.123	2.27046	1.533	4.252		
ROUTE RESERVO	DIR 502.10	3	1	.00102	2.65	.123	2.27043	1.567	4.076	AC-FT=	.002
COMPUTE NM HY	rD 102.20	-	2	.00106	3.04	.129	2.27932	1.500	4.481	PER IMP=	90.00
ADD HYD	102.30	1& 2	3	.00208	5.62	.252	2.27497	1.500	4.232		
ROUTE RESERVO	DIR 502.30	3	1	-00208	3.86	.252	2.27493	1.633	2.907	AC-FT=	.022
COMPUTE NM HY	D 103.00	-	2	.00035	1.01	.042	2.27940	1.500	4.532	PER IMP=	90.00
ROUTE RESERVO	DIR 503.00	2	3	.00035	1.00	.042	2.27937	1.500	4.525	AC-FT=	.000
ADD HYD	103.10	1& 3	2	.00242	4.80	.294	2.27557	1.500	3.094		
COMPUTE NM HY	D 104.00	-	1	.00043	1.23	.052	2.27938	1.500	4.521	PER IMP=	90.00
ADD HYD	104.10	1& 2	3	.00285	6.03	.346	2.27614	1.500	3.307		
ROUTE RESERVO	DIR 504.10	3	1	-00285	6.02	. 346	2.27610	1.500	3.302	AC-FT=	.001
COMPUTE NM HY	rD 105.00	-	2	.00100	2.86	.121	2.27932	1.500	4.485	PER IMP=	90.00
ADD HYD	105.10	1& 2	3	.00385	8.88	.467	2.27694	1.500	3.609		
ROUTE RESERVO	DIR 505.10	3	1	.00385	8.86	-467	2.27690	1.500	3.602	AC-FT=	.001
COMPUTE NM HY	/D 106.00	-	2	.00037	1.07	-045	2.27939	1.500	4.526	PER IMP=	90.00
ADD HYD	106.10	1& 2	3	.00422	9.94	.512	2.27712	1.500	3.683		
ROUTE RESERVO	DIR 506.10	3	1	.00422	9.91	.512	2.27710	1.500	3.675	AC-FT=	.002
COMPUTE NM HY	rD 107.00	-	2	.00453	12.94	. 551	2.27928	1.500	4.463	PER IMP=	90.00
ADD HYD	107.10	1& 2	3	.00875	22.85	1.063	2.27823	1.500	4.083		
ROUTE RESERVO	DIR 507.10	3	1	.00875	1.23	1.063	2.27811	2.333	.219	AC-FT=	.740
COMPUTE NM HY	D 108.00	-	2	.00331	9.46	.403	2.27929	1.500	4.465	PER IMP=	90.00
ROUTE RESERVO	DIR 508.00	2	3	.00331	3.64	-404	2.28717	1.766	1.716	AC-FT=	.102
ADD HYD	108.10	1& 3	2	-01206	4.85	1.467	2.28060	1.800	.629		
COMPUTE NM HY	D 109.00	-	1	_00878	25.07	1.068	2.27928	1.500	4.460	PER IMP=	90.00
ADD HYD	109.10	2& 3	3	.01537	8.49	1.871	2.28201	1.766	.863		
ROUTE RESERVO	DIR 509.10	3	1	.01537	1.30	1.870	2.28186	8.366	.132	AC-FT=	.670
FINISH											