CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

January 25, 2019

Ron Bohannan, P.E.
Tierra West, LLC
5571 Midway Park Place, NE
Albuquerque, NM 87109

RE: **Behavioral Health Hospital**
1525 Renaissance Blvd NE
Grading Plan Stamp Date: 1/16/19
Drainage Report Stamp Date: 1/16/19
Hydrology File: F16D051A

Dear Mr. Bohannan,

Based on the submittal received on 1/18/19, the grading plan and drainage report are approved for Building Permit.

Prior to Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. A Bernalillo County Recorded Drainage Covenant (No Public Easement) is required for the stormwater control ponds and for the storm pipes and swale that convey flows from the upstream tracts. The pipes and swale should name Tr 9B, 9C, and 9D as beneficiaries. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

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

Sincerely,

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Behavioral Health Hospital Building Permit #: _____ Hydrology File #: F16D051A

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

Legal Description: TRACT 9-A-1-B PLAT OF TRACTS 9-A-1-A & 9-A-1-B RENAISSANCE CENTER

City Address: 1525 RENAISANNCE CENTER

Applicant: AS REALTY INVESTORS Contact: AVI SCHLESINGER

Address: 3710 S. ROBERTSON BLVD #201, CULVER CITY CA 90232

Phone#: 310-936-9395 Fax#: _____ E-mail: AVI@ASREALTYINVESTORS.COM

Other Contact: TIERRA WEST LLC Contact: VINNY PEREA

Address: 5571 MIDWAY PARK PLACE NE ALBUQUERQUE NM 87109

Phone#: 505-858-3100 Fax#: 505-858-1118 E-mail: VPEREA@TIERRAWESTLLC.COM

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL? X Yes _____ No

DEPARTMENT _____ TRANSPORTATION X HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

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

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X 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
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

DATE SUBMITTED: 1-18-2019 By: VINNY PEREA

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

TIERRA WEST, LLC

5571 Midway Park Pl. NE Albuquerque, NM 87109
(505) 858-3100 fax (505) 858-1118 1-800-245-3102
tierrawestllc.com

January 16, 2019

Mr. Dana Peterson, P.E.
Sr. Engineer-Hydrology
City of Albuquerque
600 2nd Street NW
Albuquerque, NM 87102

RE: BEHAVIORAL HEALTH HOSPITAL
GRADING AND DRAINAGE PLAN RESPONSE TO COMMENTS
ENGINEER'S STAMP DATE 10/1/2018 (F16D051A)

Dear Mr. Peterson:

Per your correspondence dated October 11, 2018, please find the following responses addressing the comments listed below:

Prior to Building Permit:

1. Provide written permission from the owner of Tract 9A-1A (Frito-Lay) for the regrading of the pond on their property.
   Response: A Site Access Agreement Letter from the property owner of Tract 9A-1A is included with this drainage resubmittal. The letter is to acknowledge that re-grading of the existing pond to its initial conditions will be acceptable by the contractor for Tract 9A-1B.

2. On the grading plan, add existing contour labels; increase the density of the proposed contour labels, especially around the ponds and when tying in at the property/ROW lines.
   Response: Additional contour labels have been added around the ponds as well as the slope tying areas along the perimeter of the property.

3. Land treatments need to be revisited. Many of the sloped areas are assumed as land treatment B. Per the DPM Ch22.1.A, table A-4 *...soil uncompacted by human activity with slopes at 20 percent or greater should be land treatment C* and *...irrigated lawns and parks with slopes greater than 10 percent should be land treatment C.*
   Response: The land treatments for each basin have been revisited and looked at more carefully for each proposed basin. Basin P2 and P5 are predominantly the ponding areas, so these have been updated for increased treatment C area. Basins P1 and P3 were correct on the area of treatment C. Basins P4 and P6 were updated as well for an increase in land treatment C area. These changes can be found in the hydrology table in Appendix B.

4. If these sloped areas are to be landscaped (w/gravel mulch) please state on plans; otherwise annotate that disturbed areas are to be reseeded per Std Specification Section 1012.
   Response: The cross sections on Sheet C4 have called out gravel mulch and to refer to landscape plans on all the sloped areas shown.

5. Call out Std Dwg 2426 and 2420 for the drive entrance.
   Response: This callout has been added to the driveway on the plan view on Sheet C3.

6. Include project benchmark and datum.
Response: The benchmark and datum have been added to the plans in the SW corner of the plan view on Sheet C3.

7. Provide sections through the ponds and across the property line onto FedEx. Show 100-yr water surface elevations, tops and bottoms of berms. What design considerations were made to ensure FedEx is protected by the proposed berms? Hydrology recommends following levee and berm criteria per DPM Ch22.3.F.
Response: Sections F-F and G-G have been extended to the FedEx side to show the concrete slope and elevation callouts on the FedEx side of the property line. Sections E-E and G-G have also been updated to show the 100-year MWSE as well as the First Flush water surface elevations.

Design considerations for prevention of runoff overtopping the west property line to FedEx were considered in the maximum water surface elevation of the ponds. The ponds provide a freeboard with respect to the west property line of 1.8'. The lowest point of the existing grade along the west property line is at the NW corner. The grading has been updated with a small retaining wall to lift this corner area to provide the 1.8' of freeboard consistently across the west property line. The addition of a concrete-lined emergency overflow with riprap rundown and with an overflow invert approximately 1.8' below the west property line will also assure that any buildup of drainage in the ponds will exit through the overflow before overtopping the property line.

The pond bottom has also been lowered to an elevation of 65.00 to allow for more freeboard and storage than the initial drainage pond design. Updates to the pond table, pond schematic, and AHYMO modeling results are included in Appendix D.

8. Provide emergency spillways for the ponds, sized for the 100-yr storm inflow, or provide 2x capacity in the discharge pipes. Show the 100-yr and first flush water surface elevations for the ponds.
Response: An emergency overflow has been added to the south side of the SW pond. Since both the NW and SW ponds act as one singular pond together, only one overflow was necessary. The overflow has been sized to accommodate the 100-yr storm inflow to the ponds (26.54 cfs). Overflow will be lined with concrete and riprap rundown pad added to the downstream side of overflow and towards Renaissance Blvd. Plan view detail can be found Sheet C3 and a cross sectional view can be found on Sheet C4. Capacity calculations can be found in Appendix C.

If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Sincerely,

Ronald R. Bohannan, PE

JN: 2017054
RRB/vp

SITE ACCESS AGREEMENT FOR POND WORK

THIS SITE ACCESS AGREEMENT FOR POND WORK ("Agreement") is made and entered into this 16th day of January 2019, between AS Realty Investors, a Nevada LLC ("AS Realty") and Rolling Frito-Lay Sales, LP ("Frito-Lay").

WHEREAS, AS Realty is the owner of record of that certain real property located at 1525 Renaissance Blvd NE Albuquerque, NM 87107 and known as Tract 9-A-1-B as depicted on the attached Exhibit A, attached hereto and made a part hereof;

WHEREAS, access to various properties in the vicinity of Tract 9-A-1-B will be necessary to allow AS Realty to develop Tract 9-A-1-B and AS Realty desires to complete such development of said parcel;

WHEREAS, Frito-Lay owns and occupies that certain real property located at 1550 Mission Ave. NE, Albuquerque, NM 87107 and known as Tract 9-A-1-A ("Property") as depicted on the attached Exhibit A, which lies adjacent to Tract 9-A-1-B;

WHEREAS, AS Realty has requested access to a portion of the Property to make improvements to the drainage detention pond located at the southwest corner of such portion of the Property, such portion more particularly depicted in Exhibit A (the "Access Area"); and

WHEREAS, Frito-Lay wishes to grant to AS Realty a license to conduct such activities, subject to certain conditions and requirements set out herein.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, Frito-Lay and AS Realty, intending to be legally bound, hereby agree as follows:

1. Frito-Lay hereby grants to AS Realty a temporary license, subject to the terms hereof, to enter upon the Property for the purpose of performing the following limited activities in the Access Area: (collectively referred to herein as the "Activities").

2. The Activities shall be performed by Jaynes Construction, its consultants, and contractors. AS Realty shall be responsible for causing its consultants and contractors to comply with the terms of this Agreement and shall be liable for any failure of any of them to do so. AS Realty, its consultants, and contractors shall also adhere to such security and safety requirements that Frito-Lay may impose for access to the Property.

(a) AS Realty, its consultants, and contractors shall work with the Frito-Lay representative, designated pursuant to paragraph 14 of this Agreement, to arrange for each and every occasion when site access is desired and for the Activities to be conducted during each and every such occasion.

(b) AS Realty shall provide or cause to be provided at least seven (7) calendar days advance written notice to Frito-Lay (through Frito-Lay's appointed representative) of each and every date on which access to the Property is desired to conduct the Activities.

(c) AS Realty shall provide or cause to be provided to Frito-Lay such information as Frito-Lay shall request, including without limitation, the purpose and scope and location of any and all requested access, detailed information and plans for the work to be performed, and names of AS Realty and Jaynes's consultant's personnel requiring access to the Property on each and every occasion that access is desired.

(d) AS Realty understands and acknowledges that Frito-Lay strictly controls access to the Property. If Frito-Lay objects to a request by AS Realty for access or demands additional information, representatives of Frito-Lay and AS Realty shall consult promptly to resolve any issues and to ensure compliance with this Agreement. AS Realty agrees that upon notice of Frito-Lay's objection, neither it nor its consultants or contractors shall access the Property until consultations with Frito-Lay pursuant to this paragraph are completed to Frito-Lay's satisfaction.

(e) Coordination, consultations, and communications between representatives of AS Realty and Frito-Lay pursuant to this Agreement may be undertaken by the most efficient means, including telephone, email, facsimile or in writing, as appropriate, to discuss the scope of any work on the Property and to resolve any access, safety, security, or coordination issues which may arise from time to time. Such communications shall take place as necessary and upon reasonable request of Frito-Lay's representative.

3. Frito-Lay shall have the right, but not the duty, to impose reasonable conditions and restrictions on performance of the Activities (including, without limitation, reasonable schedule modifications) so as to minimize disturbances to Frito-Lay's business activities or other activities at or around the Property.

4. This Agreement shall become effective upon execution by the parties and shall automatically terminate on the Expiration Date. The period during which access will be granted to AS Realty under this Agreement shall commence at 6:00 am local Albuquerque, NM time on January 17, 2019, and automatically expire at 12:00 am local Albuquerque, NM time on February 20, 2019 ("Expiration Date"). Frito-Lay and AS Realty acknowledge and agree that, notwithstanding anything to the contrary contained in this Agreement, the Expiration Date shall not be subject to an extension of time, and if not completed in the stated time frame must be re-scheduled.

5. Upon termination of this Agreement, all of AS Realty's rights arising under this Agreement to access the Property shall be terminated.

6. Frito-Lay shall have access to the data, conclusions or recommendations generated or arising in connection with the Activities performed hereunder, including the right to copy such data and any and all diagrams, drawings, or other documents generated as a result of, or depicting the results of, the activities performed under this Agreement.

7. Frito-Lay and AS Realty shall cooperate in good faith to implement the terms of this Agreement.

8. AS Realty shall perform or cause to be performed the Activities described herein in conformity with the following terms and conditions:

(a) AS Realty shall not permit any damage, nuisance or waste at, on, or around the Property or improvements thereon, as a result of the Activities.

(b) AS Realty agrees to maintain equipment and other materials in an orderly manner while they are located on the Property and to maintain them in locations specified by Frito-Lay. AS Realty further agrees to remove all debris, trash, equipment and other materials resulting from the Activities as soon as the activity for which such equipment and other materials are used is completed. AS Realty shall at all times take all appropriate measures for the safety of persons and property on the Property and shall comply with all legal requirements as the same may be affected by the Activities. AS Realty shall restore any and all damage at, on or around the Property resulting from the Activities.

(c) AS Realty shall use best efforts, including using underground utility location services (such as USA), to identify any underground utilities, pipelines or other underground structures prior to conducting any Activities.

(d) AS Realty shall be solely responsible for the proper identification, characterization, labeling, handling, packaging and disposal of all waste, including any waste characterized as hazardous, generated by AS Realty, its consultants, and contractors during the course of the Activities and related on-site work. AS Realty shall properly store, secure, transport and dispose of all waste generated on the Property under this Agreement in compliance with all applicable laws; provided, however, that nothing in this Agreement shall authorize AS Realty to store any waste or hazardous materials on the Property, even temporarily. AS Realty acknowledges that it (and not Frito-Lay) is the generator of any waste generated by AS Realty, its consultants, and contractors during the Activities performed under to this Agreement, and that AS Realty (and not Frito-Lay) shall be responsible for the preparation and execution of any manifests required for disposal of waste. AS Realty does not waive any rights it may otherwise have against third parties that are not a party to this Agreement. The provisions of this subparagraph shall survive the termination or other expiration of this Agreement.

(e) AS Realty shall not permit any mechanics or other liens or encumbrances to be filed against the Property, by reason of labor or materials furnished to the Property in connection with the activities performed under this Agreement. If any such lien is filed, AS Realty shall cause its discharge of record by payment of the lien claim or the posting of a bond within thirty (30) days after demand by Frito-Lay. AS Realty shall indemnify, hold harmless and defend Frito-Lay against any such lien. The provisions of this subparagraph shall survive the termination or other expiration of this Agreement.

9. AS Realty, at no expense to Frito-Lay, shall (and shall cause its consultants and contractors entering the Property to) maintain and to furnish proof of each of the following types of insurance:

(a) Commercial General Liability (CGL) insurance on an occurrence basis (not claims made), with limits of not less than $2,000,000 per occurrence, for bodily injury and property damage, including coverage for liability arising from premises, operations, broad form property damage, products and completed operations extending at least two years after termination of this Agreement, personal injury, independent contractor's liability, contractual liability covering this Agreement as an "insured contract," and work performed for others. Any general aggregate limit shall apply separately to this Agreement.

(b) Business Automobile Liability insurance on an occurrence basis, with limits of not less than $2,000,000 per occurrence for bodily injury and property damage, including coverage for all owned, non-owned, leased, hired and borrowed vehicles used in connection with this Agreement.

(c) Worker's compensation insurance with limits as required by Iowa law.

(d) Employer's Liability coverage with limits of at least $1,000,000 for each accident, one million dollars ($1,000,000) for Bodily Injury – each accident, $1,000,000 for Bodily Injury by disease – policy limit and $1,000,000 for Bodily Injury by disease – each employee. Consultant is required to carry this insurance regardless of eligibility for waiver or exemption of coverage under state statute, however a qualified self-insured is acceptable or Consultant may maintain an Occupational Accident Policy where allowed by law.

(e) Excess Liability coverage with respect to the CGL, Business Automobile Liability, and Employer's Liability policies described above, in an umbrella form and on an occurrence basis with limits of not less than $3,000,000 per occurrence.

Contractors Pollution Liability Insurance including Contractor's contractual liability to the additional insureds stated herein covering claims for bodily injury and property damage defined as physical injury to or destruction of tangible property damage coverage including the resulting loss of use of damaged property thereof or of tangible property that has not been physically injured, cleanup costs, and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims, as well as for pollution conditions arising out of the covered operations performed by the Contractor described under the scope of services of this Agreement. Policy limit must be $1,000,000 each claim and in the aggregate. Policy must contain an extended discovery period of three (3) years. Policy must also contain a separation of insureds clause

(f) Prior to the first entry onto the Property by AS Realty, its consultants, and contractors, AS Realty and such consultants shall obtain the required minimum insurance and deliver to Frito-Lay certificates of insurance in a form acceptable to Frito-Lay, evidencing that AS Realty and such consultants and contractors have the insurance required under this Agreement. Frito-Lay shall be named as an "additional insured" with respect to all coverages (except statutory Workers Compensation) required by this subparagraph. All policies shall maintain waiver of subrogation in favor of Frito-Lay. All such policies must be obtained from a company or companies licensed to do business in New Mexico at the time the policies are issued, and be written with insuring company(ies) with AM Best financial strength ratings of "A" or higher and financial size categories of "VII" or greater. None of the policies shall be cancelled or materially changed without 30 calendar days' prior written notice from the insurer to the insured and to Frito-Lay. Frito-Lay shall be under no duty to examine the certificates of insurance provided hereunder or to advise AS Realty or its consultants or contractors if their insurance is not in compliance with this Agreement. If any of AS Realty or its consultants or contractors fail to furnish the certificates described above or to maintain the insurance required by this subparagraph, or if any such insurance policy is cancelled, Frito-Lay may deny access to the Property to AS Realty or such contractor or subcontractor and/or may terminate this Agreement, and AS Realty shall reimburse Frito-Lay for any losses resulting from any failure by AS Realty or its consultants or contractors to comply with this subparagraph. All insurance required under this subparagraph shall be primary insurance and not excess over nor contributing

with any insurance maintained by Frito-Lay. In addition, the insurance requirements set forth herein are minimum coverage requirements and are not to be construed in any way as a limitation on AS Realty's or its consultants' or contractors' liability under this Agreement.

(g) AS Realty shall comply and shall cause its entering onto the Property to comply with all applicable federal, state and local laws, regulations, ordinances, codes and other requirements applicable to the work conducted on the Property.

10. Nothing in this Agreement shall be deemed or construed to obligate Frito-Lay to perform or enter into an agreement for additional access with respect to the Property.

11. This Agreement is only intended and shall be construed to grant to AS Realty a temporary license to enter and conduct the Activities upon the Property, and not to grant an easement or any other interest in the Property.

12. (a) AS Realty shall indemnify, defend, and save Frito-Lay harmless from and against any and all losses, damages, costs, expenses (including reasonable attorney's fees), fines and penalties, claims, demands, actions, suits, judgments, and liabilities to the extent arising out of or attributable to the performance or nonperformance of the Activities or to the errors, omissions, contract breaches or negligence or misconduct by AS Realty or its consultants or contractors hereunder, except to the extent such injuries or damages are caused by the sole negligence or willful misconduct of Frito-Lay. The provisions of this subparagraph shall survive the termination or other expiration of this Agreement.

(b) Frito-Lay shall not be liable for any loss, damage or injury of any kind, to any person or property, arising out of or attributable to (i) any access to, use of or work conducted on the Property by AS Realty and/or its consultants and/or contractors, (ii) the Activities, (iii) any defect in the Property or any structure, equipment, facility or improvement thereon, (iv) any act or omission of Frito-Lay, or (v) any accident or other casualty on the Property, except to the extent such loss, damage or injury are caused by the sole negligence or willful misconduct of Frito-Lay. AS Realty, as a material part of the consideration for this Agreement, hereby waives and releases, all claims and demands against Frito-Lay for any such loss, damage or injury of AS Realty or its consultants or contractors. The provisions of this subparagraph shall survive the termination or other expiration of this Agreement.

13. AS Realty hereby agrees to maintain and ensure all of its consultants and contractors maintain strictly confidential all information, data, and materials disclosed, furnished, or obtained by it or its consultants or contractors pursuant to this Agreement, which relate to the types and composition of materials, procedures, business operations, production techniques, practices and the like of Frito-Lay, and which are not otherwise available to the general public. AS Realty shall provide to its consultants and contractors prior to accessing the Property a copy of this Agreement and shall require its consultants and contractors to adhere to its terms. The provisions of this paragraph shall survive the termination or other expiration of this Agreement.

14. Any notice to be given under this Agreement shall be in writing and delivered to the address of the respective party below. The appointed representative of any party may be changed upon written notice to the other party.

AS Realty's Representative:

Danielle Salazar or Lorenzo Garcia

Jaynes Corporation

2906 Broadway NE

Albuquerque, New Mexico 87107

Frito-Lay's Representative:

David Rich
Frito-Lay
1550 Mission Ave. NE
Albuquerque, NM 87107
(505) 449-4019 Office
(505) 314-4229 Cellular

15. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors, and assigns. Except upon the sale of the Property, in which event Frito-Lay's rights and obligations under this Agreement may be assigned to the purchaser of the Property, at Frito-Lay's and such purchaser's option, neither party shall assign its rights or obligations under this Agreement, and any attempt to do so shall be void.

16. The obligations of AS Realty hereunder (including, without limitation, those described in paragraphs 8 and 12) shall survive termination of the license granted hereunder and any termination of this Agreement.

17. No modification of the covenants and terms herein shall be effective unless in writing and duly executed by the authorized representatives of the respective parties.

18. This Agreement shall be construed and enforced in accordance with the laws of the State of New Mexico.

19. The undersigned specifically represent that they are authorized to execute this Agreement and that the parties have the right and capacity to perform the acts contemplated by this Agreement.

20. Each provision of this Agreement, whether or not contained in separate paragraphs, shall be considered severable. If for any reason any provision or parts of such provision are determined to be invalid, unenforceable, or contrary to any existing or future applicable law or judicial ruling, such invalidity shall not impair the operation of, or affect those portions of this Agreement which are valid. In such event, this Agreement shall be construed and enforced in all respects as if such invalid or unenforceable provision or part of such provision had been omitted.

21. No purported alteration, amendment, change, waiver, termination or other modification of this Agreement shall be binding upon any of the parties hereto or have any other force or effect in any respect or particular, unless the same shall be in writing and signed by or on behalf of the parties to be charged therewith.

22. All prior understandings and agreements among the parties are merged in this Agreement, which alone fully and completely express the understandings among the parties thereto and which are entered into after full investigation. This Agreement shall be given a fair and reasonable construction in accordance with the intention of the parties hereto and without regard to or aid of canons requiring construction against the party responsible for the drafting of the same.

23. No failure or delay of any party in the exercise of any right given to such party hereunder, or the waiver by any party of any condition hereunder for its benefit, shall constitute a waiver of any other or further right, nor shall any single or partial exercise of any right preclude other or further exercise thereof or any other right. The waiver of any breach hereunder shall not be deemed to be a waiver of any other or subsequent breach hereof.

24. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. A facsimile/scanned signature shall be deemed an original signature for purposes of this Agreement and for the purposes of execution and enforcement of this Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement to become effective on the date above first written.

[*next page is the signature page*]

ROLLING FRITO-LAY SALES, LP

By: _____

Name: Betsy K. Power

Title: Dir. Global Real Estate

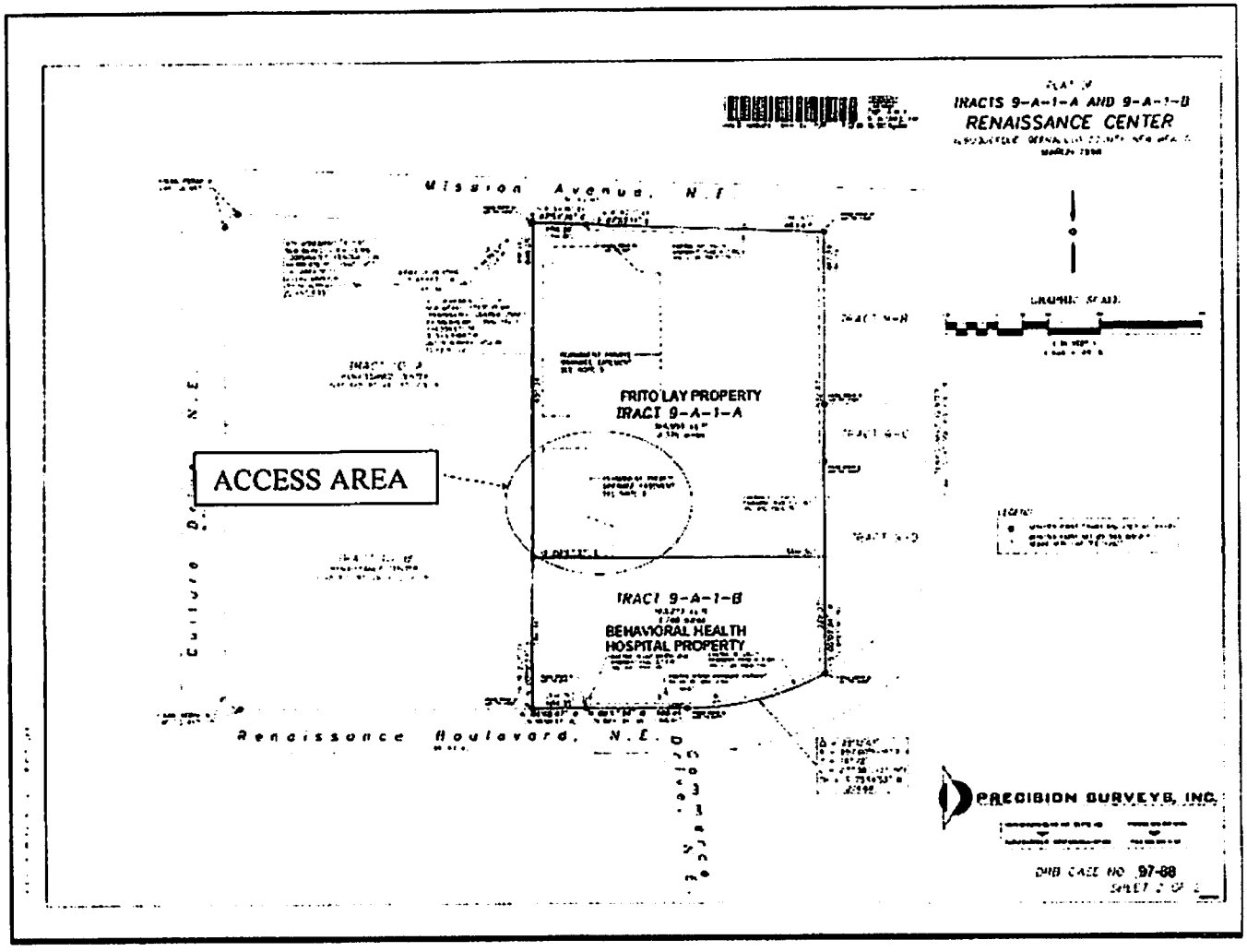
AS Realty Investors, a Nevada LLC

By: _____

Name: Avi Schlesinger

Title: Manager

EXHIBIT A


TRACTS 9-A-1-A AND 9-A-1-B
RENAISSANCE CENTER
Mission Avenue, N.E.
FRITO LAY PROPERTY
TRACT 9-A-1-A
ACCESS AREA
TRACT 9-A-1-B
BEHAVIORAL HEALTH
HOSPITAL PROPERTY
Renaissance Boulevard, N.E.
PRECISION SURVEYS, INC.
DHB CASE NO. 97-68

DRAINAGE REPORT

For

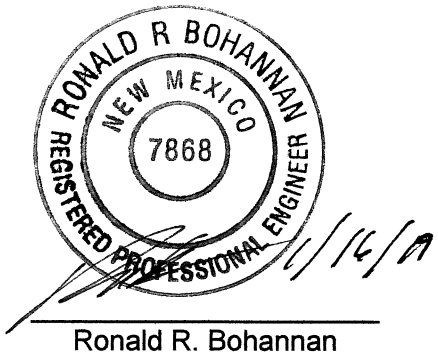
Behavioral Health Hospital
Tract 9A-1B Renaissance Center

Prepared by:

Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, New Mexico 87109

January 16, 2019

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.



Ronald R. Bohannan
PE # 7868

Job No. 2017054

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Appendices

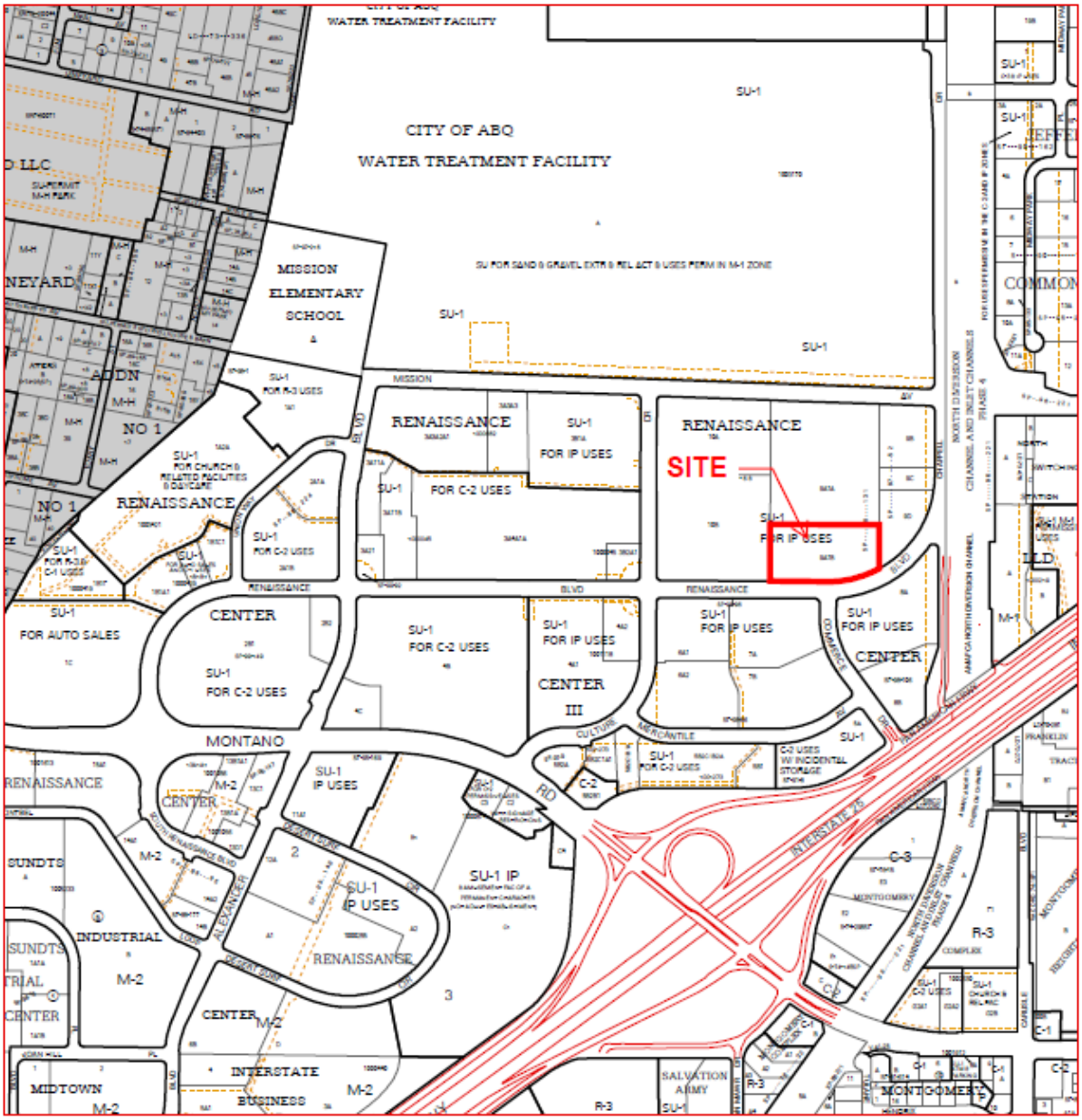
Purpose

The purpose of this report is to develop a Drainage Management Plan for developing a new behavioral health (psychiatric) hospital building on an undeveloped 3.75-acre parcel of land, entitled Tract 9A-1B of the Tracts 9A-1A & 9A-1B Renaissance Center Plat. The 3.75 acres will include an additional drainage inflow from three upland developed tracts (totaling 4.7-acres) directly east of the site, giving a total of 8.45 acres of drainage area.

Location

This site is located within the Renaissance Center directly north of the Renaissance Blvd./Commerce Dr. intersection. The site is bounded by Renaissance Blvd. to the south, FedEx Shipping Center to the west, Frito-Lay to the north, and Zenith American Solutions to the east. The site consists of 1 undeveloped lot which will be developed for a single-story hospital building with two exterior courtyards and a storage building.

Exhibit A – Vicinity Map



For more current information and more details visit: http://www.cabq.gov/gis

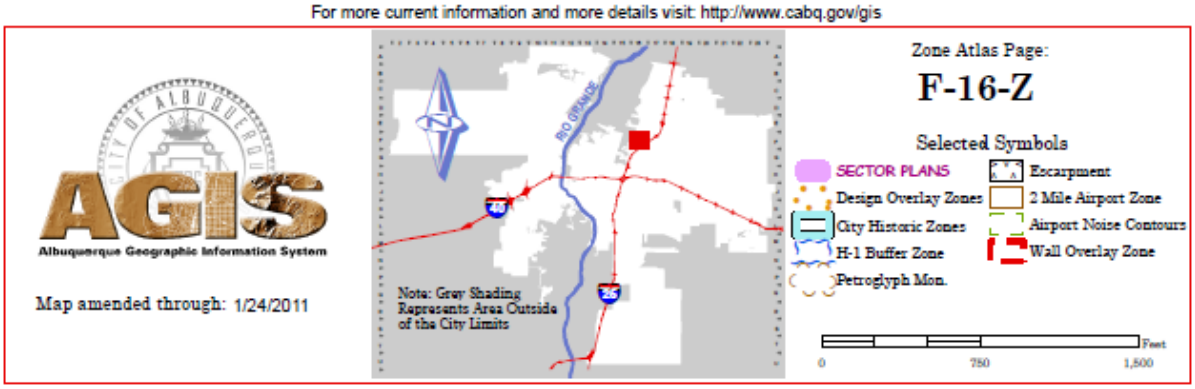
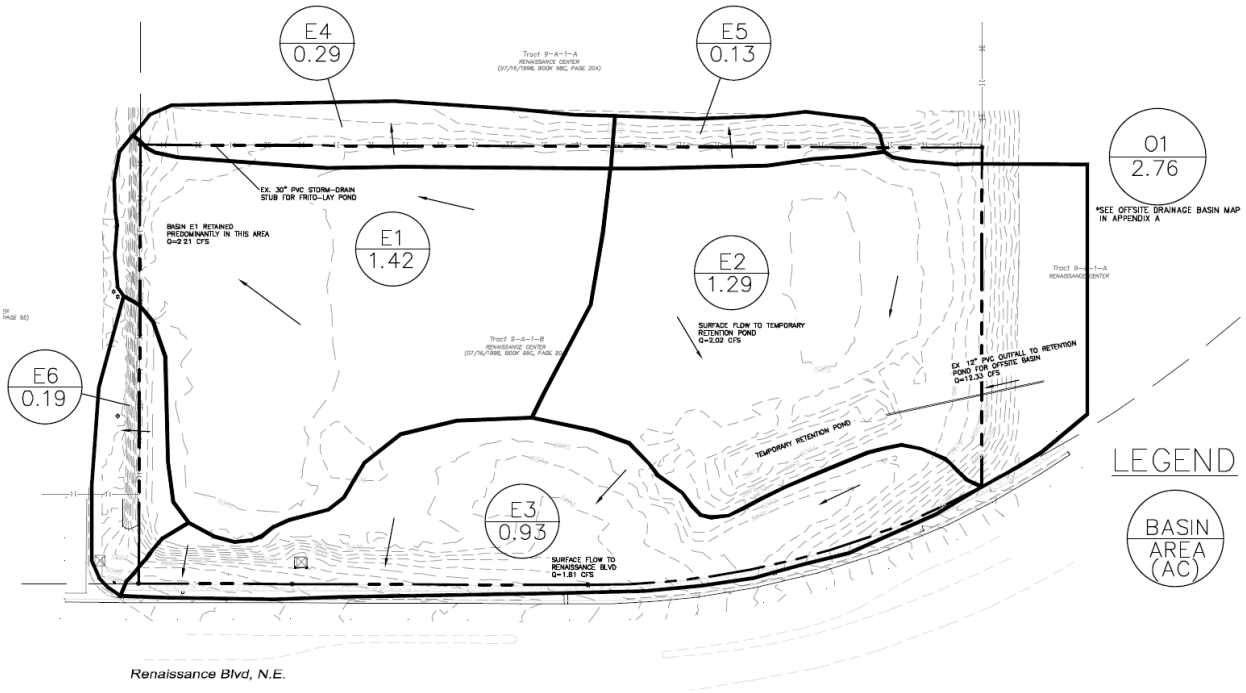


Exhibit B – Site Aerial Image

Exhibit C – Existing Basin Map



Existing Conditions

The site is undeveloped and predominantly retains runoff onsite. The site currently consists of three larger drainage basins, E1, E2, and E3. There are a few smaller drainage basins that send flow to other sites or public right-of-way based off of existing topography, basins E4, E5, and E6. There is also an offsite basin O1 that drains to the site.

Basin E1 consists of most of the northwest quadrant of the property with no impervious area, runoff from this basin flows from southeast to northwest and is retained onsite at the northwest corner of the property. There is an existing 30” RPC stub-out that leads to the Frito-Lay tract to the north where there is a drop inlet and detention pond in the southeast corner of the Frito-Lay property. The ultimate drainage plan is for this Frito-

Lay pond to accept all drainage flows from Tracts 9A-1B, 9B, 9C, and 9D. This drainage concept is explained further in the subsequent section of this report.

Basin E2 consists of predominantly the eastern half of the property, runoff flows from north to south towards an existing onsite retention pond. The retention pond receives flows from the offsite drainage basin to the east via a 12” pvc pipe.

Basin E3 consists of most of the southern frontage of the property, flows from this basin are directed from north to south via surface flow and free discharge into Renaissance Boulevard where the flows are collected in the Renaissance Boulevard storm drain system.

Basin E4 and E5 consist of small portions of onsite that are near the northern property line. These flows drain north via surface flow towards the Frito-Lay tract. Basin E6 consists of a portion of the southwest corner of the property, these flows drain via surface flow towards the FedEx property.

The offsite basin, O1, consists of the three developed MCA tracts (Tracts 9B, 9C, and 9D) to the east of the subject property. These flows are picked up through a series of drop inlets in the parking lot that are interconnected to a private storm drain system. This storm drain system outfalls via 12” pvc pipe towards the onsite retention pond that is located in Basin E2.

The total 100-year peak flow of these existing basins is 19.51 cfs, hydrology calculations and an enlarged drainage basin map can be found in Appendix A.

Drainage Concept for Overall Development

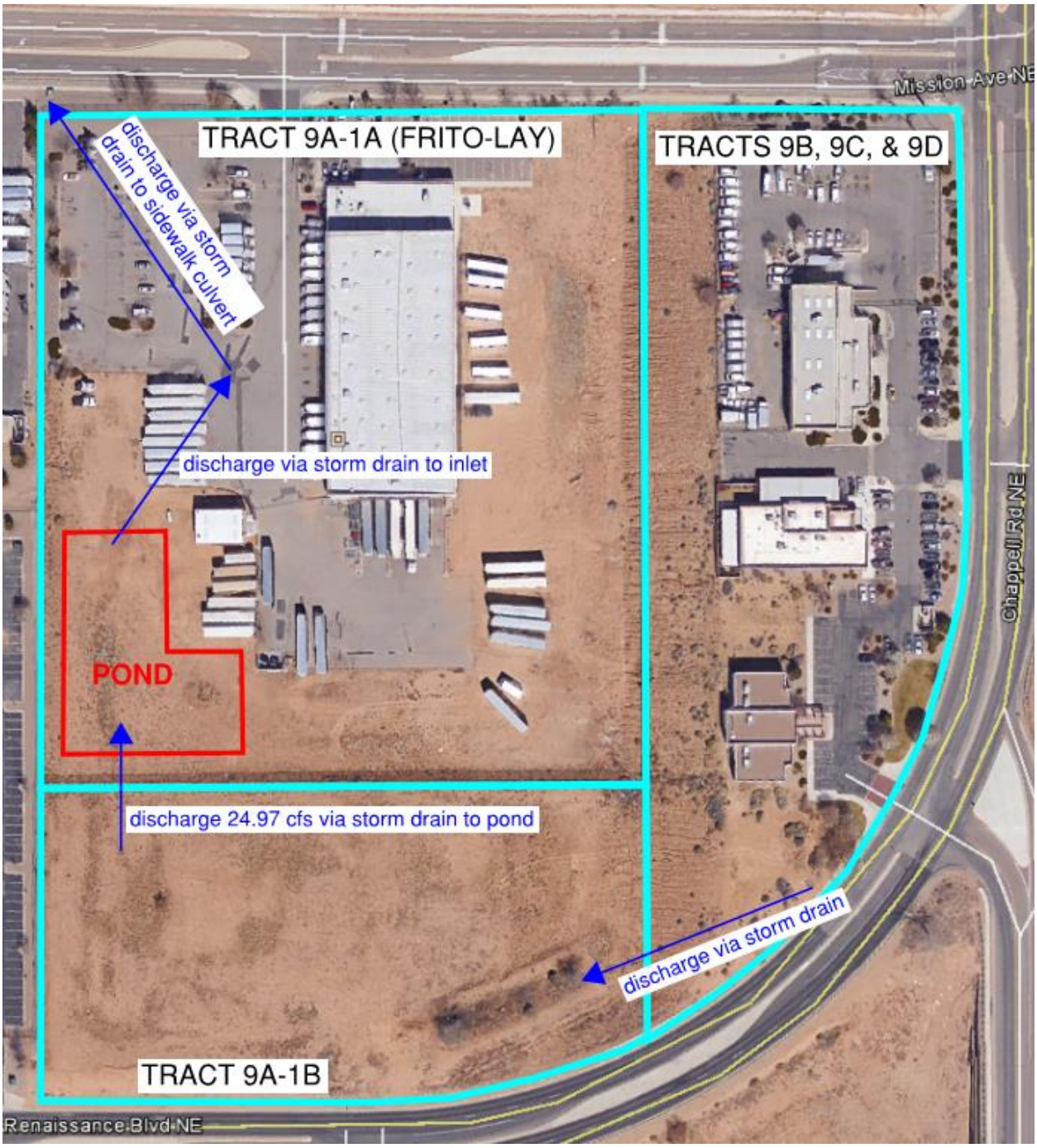
During the development and design of the Frito-Lay tract directly north of the subject property (Tract 9A-1A), a master drainage solution was submitted and approved by the City of Albuquerque on 9/10/1998 (F16D051). This drainage plan included ponding and hydrology analysis for Tracts 9A-1A, 9A-1B, 9B, 9C, and 9D. The Frito-Lay pond located in the southwest corner of the respective property was sized to accept and

detain flows from Tracts 9A-1B, 9B, 9C, and 9D. These 4 tracts are allowed to discharge to this pond at a rate of 24.97cfs, based on the current configuration and size of the pond. This would be the ultimate outfall rate needed to discharge from the NW corner of Tract 9A-1B. From the pond located on Frito-Lay, drainage would be conveyed through a storm drain and drop inlet with an orifice plate before being released into Mission Ave. at the allowable discharge rate per the Renaissance Master Plan.

The Plat of Tracts 9A-1A & 9A-1B Renaissance Center contains a drainage easement in the location of the Frito-Lay pond for the benefit of tracts 9A-1B, 9B, 9C, and 9D in order for this drainage concept to work. The development of Tract 9A-1B will require the contractor to assure that the Frito-Lay pond currently has the capacity as shown on the approved Frito-Lay grading and drainage plan with a stamp date of 9/10/1998 to assure that this drainage concept is acceptable for final drainage certification. If the pond has been filled in due to sediment accumulation then the contractor will have to re-grade the pond to the finished grades from the previously approved Frito-Lay grading and drainage plan.

The upland tracts of 9B, 9C, & 9D have been re-analyzed for hydrology and can be found in the hydrology tables for basin O1 found in Appendices A & B. Exhibit C shows an aerial of the drainage concept for all of the tracts involved. Appendix E and F contain excerpts of the drainage calculations from the approved Frito-Lay plan and plat with the drainage easement information, respectively.

Exhibit D – Overall Drainage Concept



Flood Plain

The site is located on FIRM Map 35001C0138H. The map indicates that the site does not lie within any flood hazard areas.

Exhibit D – FIRM Map

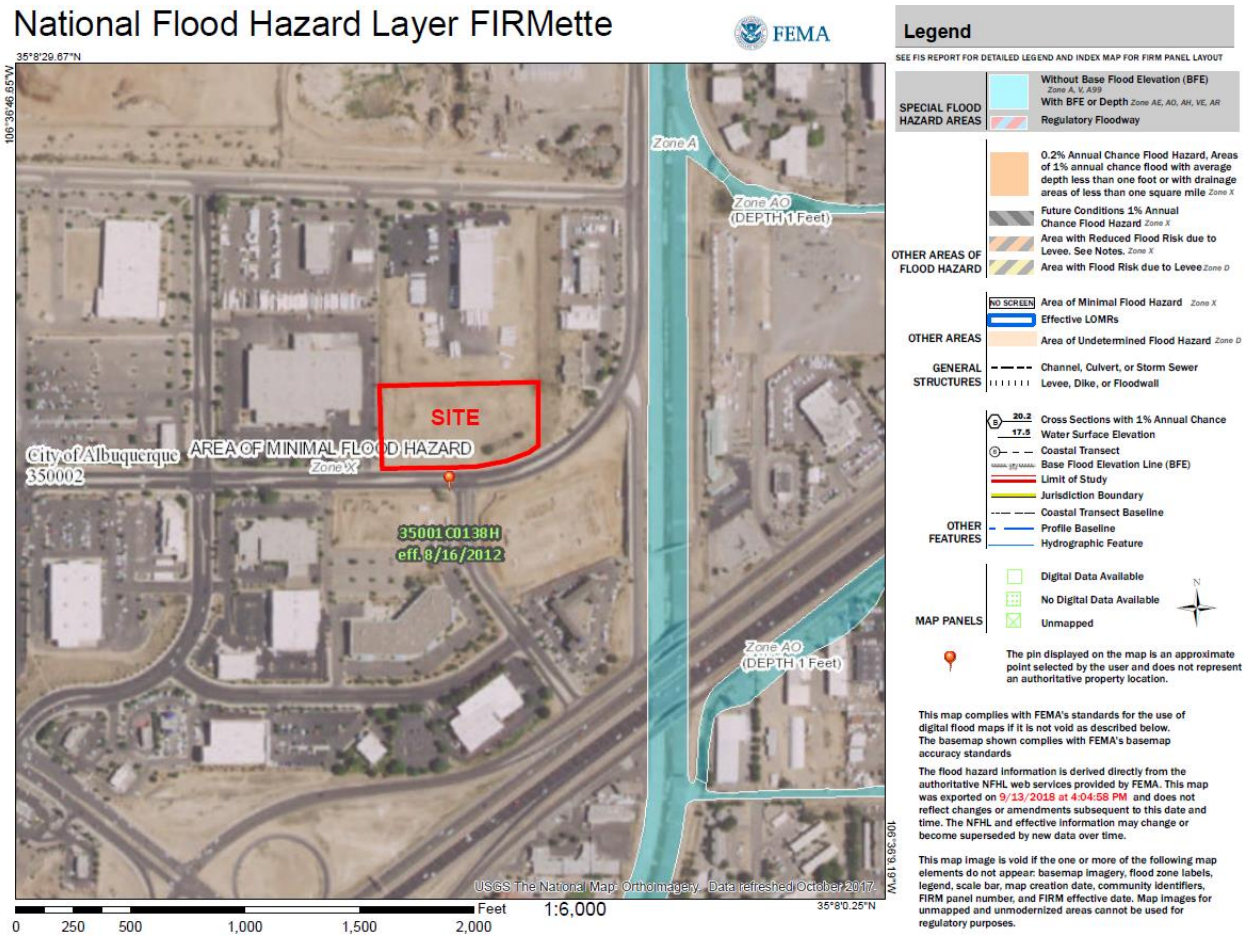
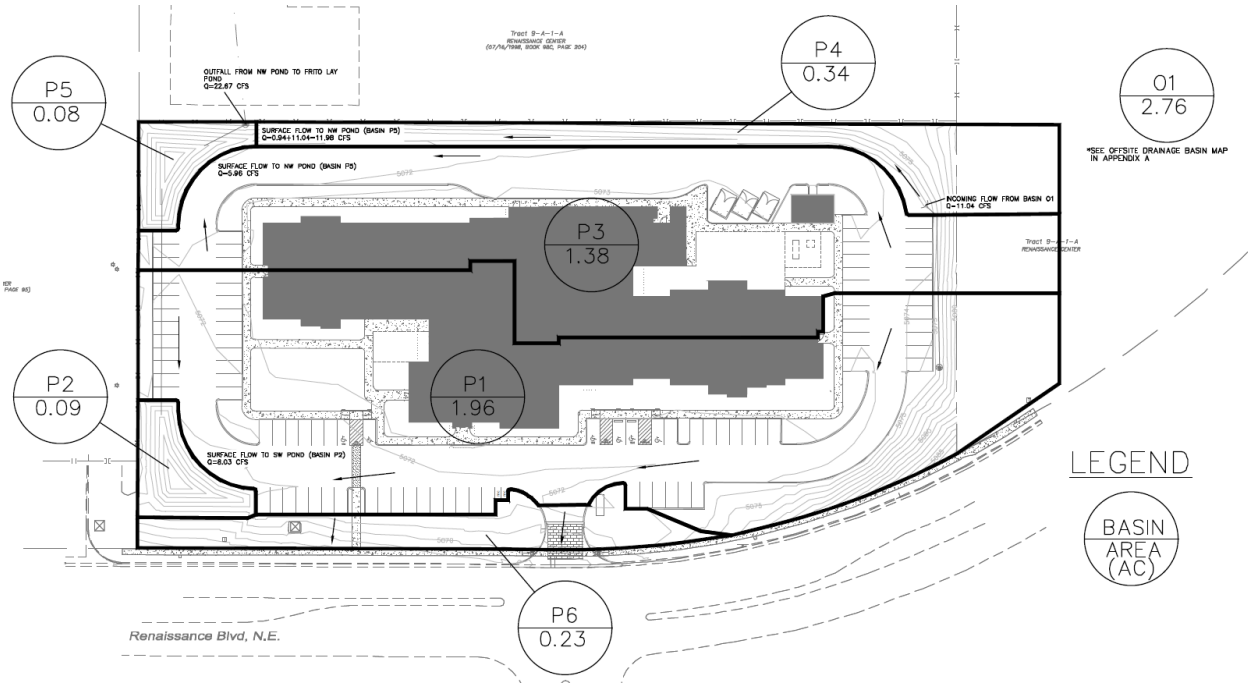


Exhibit E – Proposed Basin Map



Proposed Conditions

All improvements will be built out in their entirety. The grading and drainage design is configured to accommodate the proposed building and associated improvements plus the drainage received from the upland tracts 9B, 9C, and 9D (basin O1 on the provided drainage basin maps).

Basin P1 consists of primarily the southern half of the site, including a portion of the sloping terrain directly east of the site. Runoff will be directed from east to west via surface flow through the drive aisle in front of the proposed building. The basin will discharge through a 3’ curb cut and into the SW drainage pond located within Basin P2. Total flow rate from this basin is 8.03 cfs.

Basin P3 consists of primarily the northern half of the site, including a portion of the sloping terrain directly east of the site. Similar to Basin P1, Runoff in P3 will be directed

from east to west via surface flow and will discharge through a 2.5' curb cut and into the NW drainage pond located in basin P5. Total flow rate from this basin is 5.96 cfs.

Basin O1, which is the offsite basin, will convey flows via storm drain that will daylight into the northern onsite landscaped area, which is Basin P4. Basin P4 is the entire northern landscaped area that will convey runoff from O1 towards the NW pond (Basin P5) via a landscaped swale. Total flow rate from P4 and O1 is 11.98 cfs. Again, the offsite basin O1 has been re-analyzed for updated flow rates that enter tract 9A-1B.

Basins P2 and P5 are the onsite SW and NW detention ponds, respectively. These ponds will be interconnected with a 24-inch culvert to act as one single pond. The drainage outfall for the site is located in the NW corner pond, where the discharge for the site will be conveyed through an 18-inch storm drain that will connect to the existing 30" RCP stub-out in this area. The 18-inch outfall will have a 27-3/4" orifice plate where the discharge to the Frito-Lay pond is 22.12 cfs, which is less than the maximum allowable 24.97 cfs. The total flow rate that enters the NW and SW onsite ponds is 26.39 cfs. The Contractor responsible for grading the site will also be responsible for assuring that the Frito-Lay pond has the grades for the allowable capacity as shown on the grading plan. If not, then the contractor will need to re-grade the pond to its original and intended conditions.

Basin P6 is located along the southern landscaped portion of the site. Due to the slope-tying and grades, this basin is directed via sheet flow from north to south towards Renaissance Blvd. The proposed hydrology table and an enlarged proposed basin map can be found in Appendix B. Hydraulic calculations for the landscaped swale, curb cuts and storm drain culverts can be found in Appendix C. Calculations for the NW and SW onsite ponds can be found in Appendix D.

Water Quality Management

The management of water quality for this site intends to capture the 99th percentile storm event and retain onsite prior to any discharge off of the site. This volume was

calculated per the COA drainage ordinance as 0.44" (minus initial abstractions) over the developed impervious areas, giving a total of 3,061 cubic feet of runoff to retain. The water quality will be retained in the NW and SW onsite ponding areas. The ponds will have an outfall invert elevation that is 3 feet higher than the bottom of pond. The volume that is retained below this invert elevation exceeds the required first flush retention volume. The water quality volume calculations can be found on the proposed hydrology table in Appendix B.

Calculations

The Weighted E Method from the "City of Albuquerque Development Process Manual Volume I – Design Criteria, 2006 Revision" was used to calculate the runoff and volume for the site, the hydrology tables can be found in Appendix A and B. Drainage capacities for the landscaped swale, storm drain culverts, curb cuts, and emergency overflow were determined through Bentley FlowMaster and results can be found in Appendix C.

Summary

The entire site will be graded and all of the surface improvements will be built out in their entirety. The enclosed grading plan shows the grades for the entire project.

The proposed development consists of development for a new hospital with 6 onsite basins and 1 offsite basin. All of the basins, except P6, will convey flow via surface flow towards the NW and SW onsite ponds and discharge towards the Frito-Lay pond to the north at an appropriate flow rate of 22.12 cfs. The contractor that will be grading the site will be responsible for assuring that the Frito-Lay pond has the capacity and depth of the original development of that pond. The top and bottom of pond elevations of this pond can be found on the grading plan.

APPENDIX A

EXISTING CONDITIONS HYDROLOGY TABLE AND DRAINAGE BASIN MAP

DPM Weighted E Method

Precipitation Zone 2
Renaissance Center
Behavioral Health Hospital - 1525 Renaissance Blvd NE
TWLLC **Date** 9/12/2018

Existing Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr		
Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs
E1	61,801.05	1.419	0.00222	100%	1.419	0%	0.000	0%	0.000	0%	0.000	0.530	0.063	2.21	0.130	0.015	0.54
E2	56,325.55	1.293	0.00202	100%	1.293	0%	0.000	0%	0.000	0%	0.000	0.530	0.057	2.02	0.130	0.014	0.49
E3	40,592.75	0.932	0.00146	63%	0.587	32%	0.298	0%	0.000	5%	0.047	0.690	0.054	1.81	0.239	0.019	0.65
E4	12,662.62	0.291	0.00045	100%	0.291	0%	0.000	0%	0.000	0%	0.000	0.530	0.013	0.45	0.130	0.003	0.11
E5	5,762.09	0.132	0.00021	100%	0.132	0%	0.000	0%	0.000	0%	0.000	0.530	0.006	0.21	0.130	0.001	0.05
E6	8,286.76	0.190	0.00030	36%	0.068	44%	0.084	0%	0.000	20%	0.038	0.958	0.015	0.48	0.438	0.007	0.23
O1	120,249.01	2.761	0.00431	0%	0.000	18%	0.497	17%	0.469	65%	1.794	1.711	0.393	11.04	1.010	0.232	6.91
Total	**305,679.83**	**7.017**	**0.01096**		**3.790**		**0.879**		**0.469**		**1.879**		**0.601**	**18.22**		**0.292**	**8.98**

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted E * Total Area

Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

Excess Precipitation, E (in.)		
Zone 2	100-Year	10-Year
Ea	0.44	0.08
Eb	0.67	0.22
Ec	0.99	0.44
Ed	1.97	1.24

Peak Discharge (cfs/acre)		
Zone 2	100-Year	10-Year
Qa	1.29	0.24
Qb	2.03	0.76
Qc	2.87	1.49
Qd	4.37	2.89

E4
0.29

E5
0.13

Tract 9-A-1-A
RENAISSANCE CENTER
(07/16/1998, BOOK 98C, PAGE 204)

EX. 30" PVC STORM-DRAIN
STUB FOR FRITO-LAY POND

BASIN E1 RETAINED
PREDOMINANTLY IN THIS AREA
Q=2.21 CFS

E1
1.42

E2
1.29

SURFACE FLOW TO TEMPORARY
RETENTION POND
Q=2.02 CFS

Tract 9-A-1-A
RENAISSANCE CENTER

01
2.76

*SEE OFFSITE DRAINAGE BASIN MAP
IN APPENDIX A

'0-B
NCE CENTER
IOK 97C, PAGE 95)

Tract 9-A-1-B
RENAISSANCE CENTER
(07/16/1998, BOOK 98C, PAGE 20

EX. 12" PVC OUTFALL TO RETENTION
POND FOR OFFSITE BASIN
Q=12.33 CFS

E6
0.19

TEMPORARY RETENTION POND

E3
0.93

SURFACE FLOW TO
RENAISSANCE BLVD
Q=1.81 CFS

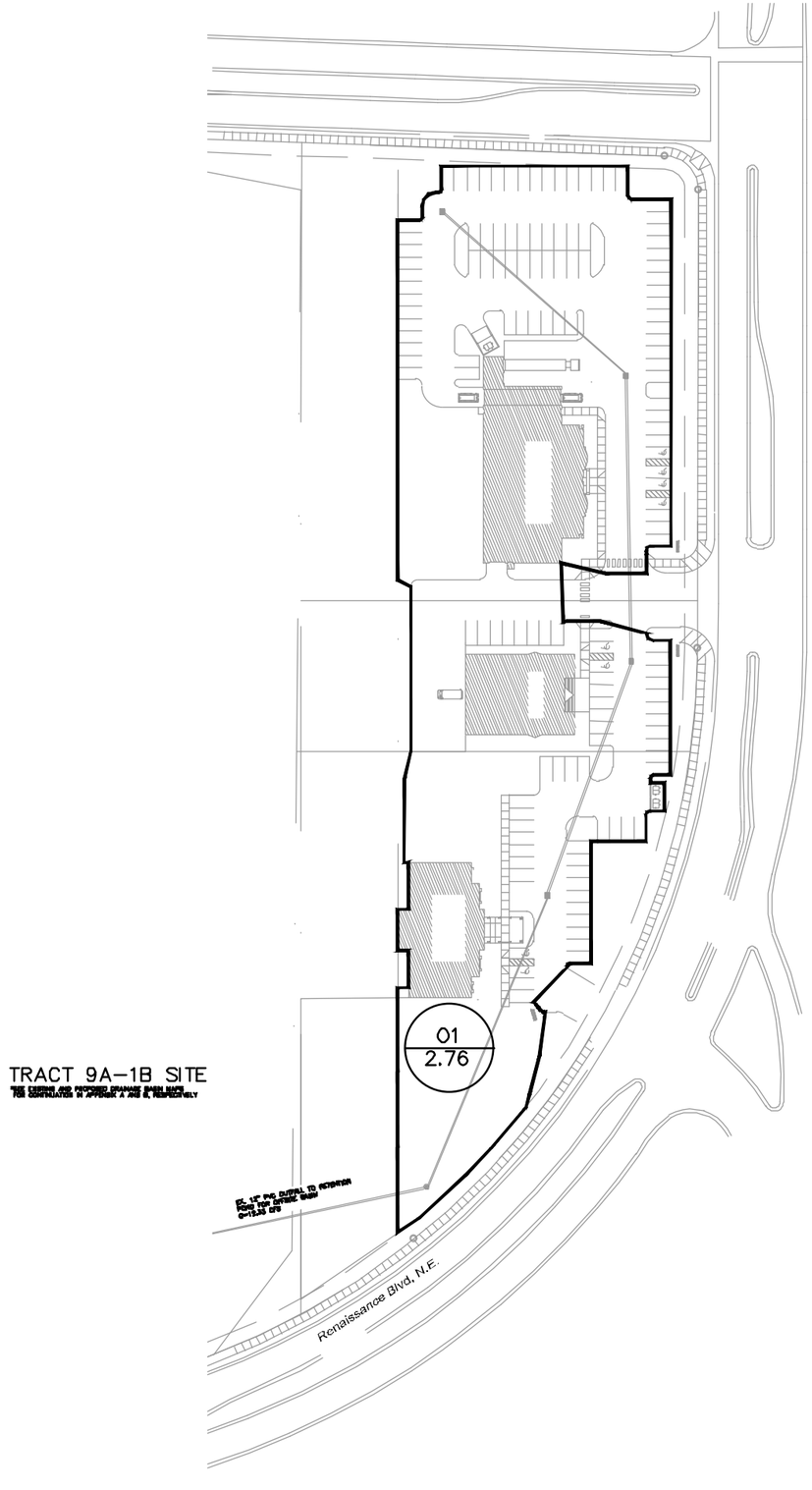
LEGEND

BASIN
AREA
(AC)

Renaissance Blvd, N.E.

Commerce Dr

EXISTING BASIN MAP



OFFSITE BASIN MAP

APPENDIX B

PROPOSED CONDITIONS HYDROLOGY TABLE AND DRAINAGE BASIN MAP

DPM Weighted E Method

Precipitation Zone 2
Renaissance Center
Behavioral Health Hospital - 1525 Renaissance Blvd NE
TWLLC **Date** 11/2/2018

Proposed Conditions

Basin Descriptions												100-Year, 6-Hr			10-Year, 6-Hr		
Basin ID	Area (sf)	Area (acres)	Area (sq miles)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	Weighted E (in)	Volume (ac-ft)	Flow cfs	Weighted E (in)	Volume (ac-ft)	Flow cfs
P1	85,547.56	1.964	0.00307	0%	0.000	15%	0.295	16%	0.314	69%	1.355	1.761	0.288	8.03	1.050	0.172	5.07
P2	4,031.22	0.093	0.00014	0%	0.000	29%	0.027	71%	0.066	0%	0.000	1.029	0.008	0.27	0.450	0.003	0.14
P3	59,914.55	1.375	0.00215	0%	0.000	10%	0.138	8%	0.110	82%	1.128	1.907	0.219	5.96	1.168	0.134	3.86
P4	14,611.08	0.335	0.00052	0%	0.000	23%	0.077	77%	0.258	0%	0.000	1.050	0.029	0.99	0.465	0.013	0.51
P5	3,654.00	0.084	0.00013	0%	0.000	10%	0.008	90%	0.075	0%	0.000	1.095	0.008	0.26	0.496	0.003	0.14
P6	10,048.29	0.231	0.00036	0%	0.000	21%	0.048	79%	0.182	9%	0.021	1.247	0.024	0.78	0.590	0.011	0.42
O1	120,249.01	2.761	0.00431	0%	0.000	18%	0.497	17%	0.469	65%	1.794	1.711	0.393	11.04	1.010	0.232	6.91
Total	**298,055.71**	**6.842**	**0.01069**		**0.000**		**1.090**		**0.000**		**4.298**		**0.969**	**27.32**		**0.569**	**17.05**

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted E * Total Area

Flow = Qa*Aa + Qb*Ab + Qc*Ac + Qd*Ad

Excess Precipitation, E (in.)		
Zone 2	100-Year	10-Year
Ea	0.44	0.08
Eb	0.67	0.22
Ec	0.99	0.44
Ed	1.97	1.24

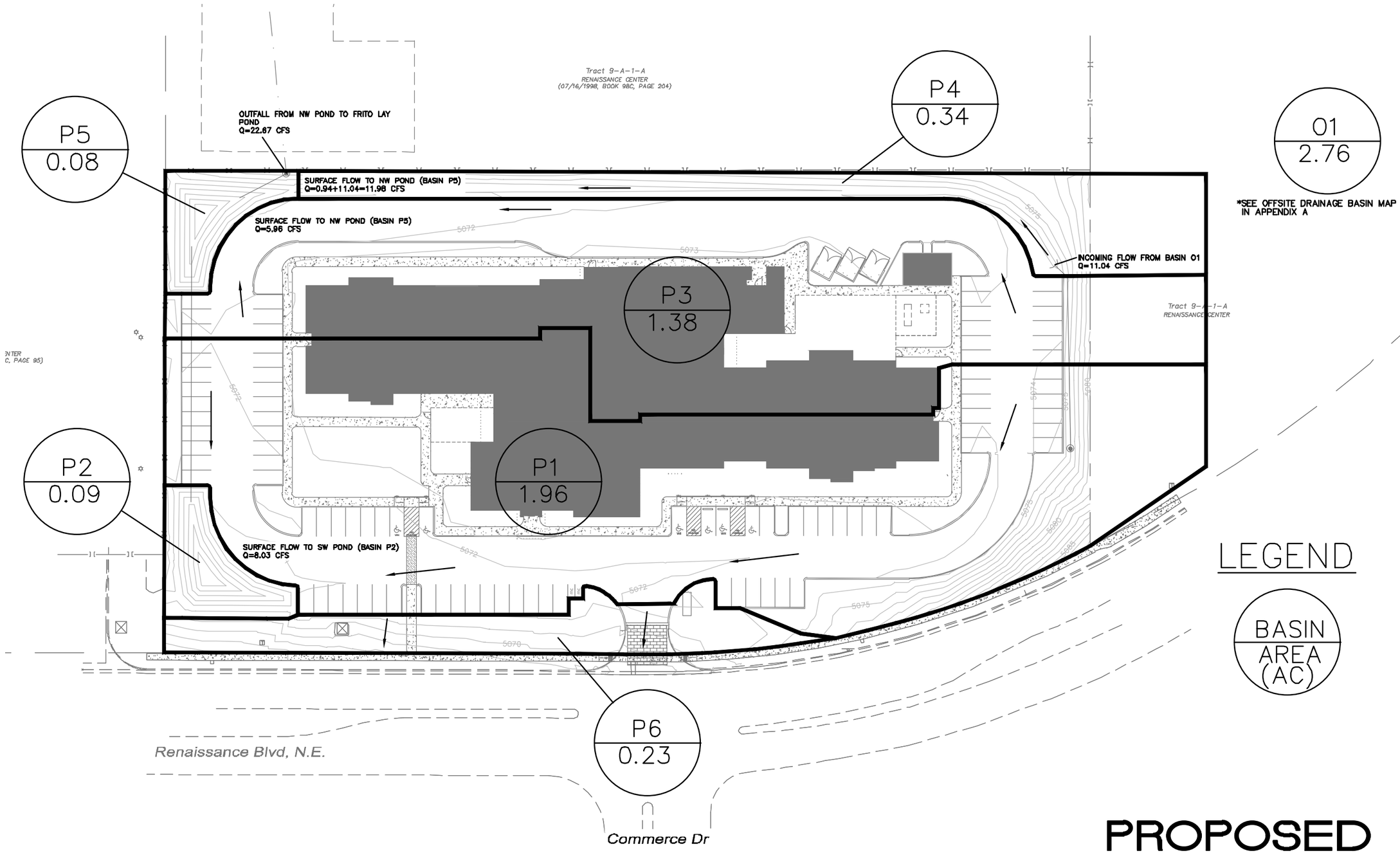
Peak Discharge (cfs/acre)		
Zone 2	100-Year	10-Year
Qa	1.29	0.24
Qb	2.03	0.76
Qc	2.87	1.49
Qd	4.37	2.89

Water Quality Volume (First Flush)

Total Impervious Area (Basins P1 & P3) = 2.483 acres = 108,159 SF

Retainage depth = 0.44"-0.1" = 0.34" = 0.0283'

Retention Volume = 0.0283' x 108,159 SF = **3,061 CF**



PROPOSED BASIN MAP

APPENDIX C

CALCULATION TABLES FOR CULVERTS, CURB CUTS, AND LANDSCAPE SWALE

Worksheet for 18" PVC for Offsite Outfall

Project Description

Friction Method	Manning Formula
Solve For	Channel Slope

Input Data

Roughness Coefficient	0.010	
Normal Depth	1.50	ft
Diameter	1.50	ft
Discharge	11.04	ft³/s

Discharge from Basin O1 and towards north landscape swale

Results

Channel Slope	0.00815	ft/ft
Flow Area	1.77	ft²
Wetted Perimeter	4.71	ft
Hydraulic Radius	0.38	ft
Top Width	0.00	ft
Critical Depth	1.33	ft
Percent Full	100.0	%
Critical Slope	0.00729	ft/ft
Velocity	6.98	ft/s
Velocity Head	0.76	ft
Specific Energy	2.26	ft
Froude Number	0.00	
Maximum Discharge	13.26	ft³/s
Discharge Full	12.33	ft³/s
Slope Full	0.00815	ft/ft
Flow Type	SubCritical	

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
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s

Worksheet for North Landscape Swale

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.033	
Channel Slope	0.00400	ft/ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Discharge	11.98	ft³/s

Discharge from Basins O1 and P4 towards NW Pond

Results

Normal Depth	1.37	ft
Flow Area	5.61	ft²
Wetted Perimeter	8.65	ft
Hydraulic Radius	0.65	ft
Top Width	8.21	ft
Critical Depth	1.00	ft
Critical Slope	0.02146	ft/ft
Velocity	2.13	ft/s
Velocity Head	0.07	ft
Specific Energy	1.44	ft
Froude Number	0.46	
Flow Type	Subcritical	

Min. depth used for landscape swale

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	1.37	ft
Critical Depth	1.00	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.02146	ft/ft

Worksheet for SW Corner Pond Curb Cut

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	0.50	ft
Discharge	8.03	ft³/s

Discharge from Basin P1 to SW Pond

Results

Bottom Width	2.74	ft
Flow Area	1.37	ft²
Wetted Perimeter	3.74	ft
Hydraulic Radius	0.37	ft
Top Width	2.74	ft
Critical Depth	0.64	ft
Critical Slope	0.00476	ft/ft
Velocity	5.85	ft/s
Velocity Head	0.53	ft
Specific Energy	1.03	ft
Froude Number	1.46	
Flow Type	Supercritical	

3' curb cut called out in plans

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	0.50	ft
Critical Depth	0.64	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00476	ft/ft

Worksheet for NW Corner Pond Curb Cut

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	0.50	ft
Discharge	5.96	ft³/s

Discharge from Basin P3 towards NW Pond

Results

Bottom Width	2.14	ft
Flow Area	1.07	ft²
Wetted Perimeter	3.14	ft
Hydraulic Radius	0.34	ft
Top Width	2.14	ft
Critical Depth	0.62	ft
Critical Slope	0.00532	ft/ft
Velocity	5.58	ft/s
Velocity Head	0.48	ft
Specific Energy	0.98	ft
Froude Number	1.39	
Flow Type	Supercritical	

2.5' Curb Cut called out in plans

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	0.50	ft
Critical Depth	0.62	ft
Channel Slope	0.01000	ft/ft
Critical Slope	0.00532	ft/ft

Worksheet for 24" PVC Pond Connection

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.00900	ft/ft
Diameter	2.00	ft
Discharge	26.39	ft³/s

Total discharge from all basins directed to both NW and SW ponds

Results

Normal Depth	1.55	ft
Flow Area	2.61	ft²
Wetted Perimeter	4.31	ft
Hydraulic Radius	0.61	ft
Top Width	1.67	ft
Critical Depth	1.80	ft
Percent Full	77.5	%
Critical Slope	0.00711	ft/ft
Velocity	10.10	ft/s
Velocity Head	1.59	ft
Specific Energy	3.14	ft
Froude Number	1.42	
Maximum Discharge	30.01	ft³/s
Discharge Full	27.90	ft³/s
Slope Full	0.00805	ft/ft
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
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	77.49	%
Downstream Velocity	Infinity	ft/s

Worksheet for Pond Emergency Overflow

Project Description

Friction Method	Manning Formula
Solve For	Bottom Width

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01000	ft/ft
Normal Depth	0.50	ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	3.00	ft/ft (H:V)
Discharge	26.54	ft³/s

Includes all proposed basins except P6

Results

Bottom Width	6.82	ft
Flow Area	4.16	ft²
Wetted Perimeter	9.99	ft
Hydraulic Radius	0.42	ft
Top Width	9.82	ft
Critical Depth	0.70	ft
Critical Slope	0.00306	ft/ft
Velocity	6.38	ft/s
Velocity Head	0.63	ft
Specific Energy	1.13	ft
Froude Number	1.73	
Flow Type	Supercritical	

Bottom width of overflow is 7 ft therefore OK

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	0.50	ft
Critical Depth	0.70	ft
Channel Slope	0.01000	ft/ft

APPENDIX D

ONSITE POND CALCULATIONS

NW & SW Ponds (Combined)
Volume Calculations

A_b - Bottom Of The Pond Surface Area

A_t - Top Of The Pond Surface Area

D - Water Depth

D_t - Total Pond Depth

C - Change In Surface Area / Water Depth

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

C = $(A_t - A_b) / D_t$

A_b =	32.94	ft^2
A_t =	4,740.15	ft^2
D_t =	5.40	ft
C =	871.71	

ACTUAL ELEVATION	DEPTH (ft)	VOLUME (ac-ft)	Q (cfs)	Note
65.00	0.00	0.0000	0.0000	BOP
65.40	0.40	0.0019	0.0000	
65.90	0.90	0.0088	0.0000	
66.40	1.40	0.0207	0.0000	
66.90	1.90	0.0376	0.0000	
67.40	2.40	0.0594	0.0000	
67.90	2.90	0.0863	0.0000	
68.40	3.40	0.1182	0.0000	Outfall Invert
68.90	3.90	0.1551	6.1920	
69.40	4.40	0.1970	12.3840	
69.90	4.90	0.2439	18.5760	
70.40	5.40	0.3074	38.1330	TOP

Orifice Equation

$Q = CA(2gH)^{1/2}$

C =	0.8
Diameter (in)	27.75
Area (ft^2)=	4.200
g =	32.2
H (ft) =	Depth of water above center of orifice
Q (cfs)=	Flow

TIERRA WEST, LLC

5571 Midway Park Place NE • Albuquerque, NM 87109 • (505) 858-3100 • (505) 858-1118 Fax • 1-800-245-3102 • twllc@tierrawestllc.com

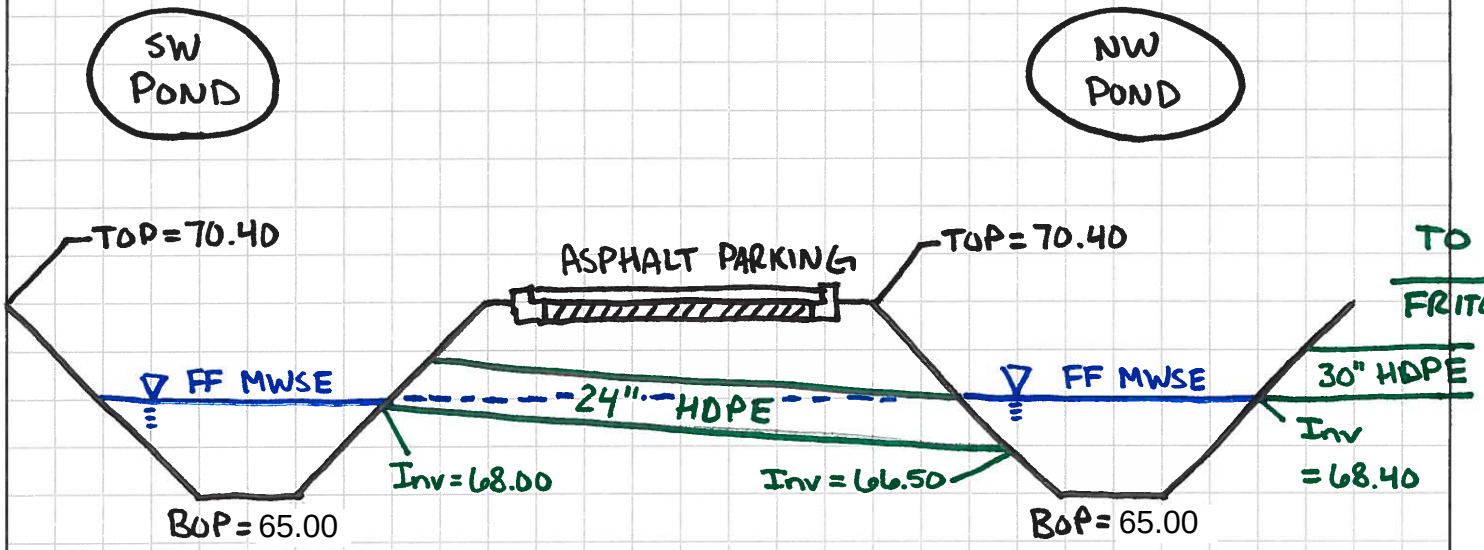
Project _____ Date _____

Project No. _____

Meeting Purpose _____ Sheet No ___ of ___

Attendees _____

FIRST FLUSH POND SCHEMATIC



FF MWSE = 5068.40

FF Volume Required = 3,061 CF (Calcs under Proposed Hydrology Table)

FF Volume Provided = 3,398 CF

```
        AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel: 01a
             RUN DATE (MON/DAY/YR) = 11/07/2018
             START TIME (HR:MIN:SEC) = 08:51:31     USER NO.=
AHYMO_Temp_User:20122010
             INPUT FILE = Z:\2017\2017054 Tract 9A Hospital\Drainage\2017054 hymo
9-19-18.txt

    ************************************************************
    *         BEHAVIORAL HEALTH HOSPITAL, ALBUQUERQUE, NM          *
    ************************************************************
    *  100-YEAR 24-HR STORM (UNDER PROPOSED CONDITIONS) W/ ROUTING  *
    ************************************************************
    START               TIME=0.0
    *
    *
    RAINFALL            TYPE=2 RAIN QUARTER=0.0 IN
                        RAIN ONE=2.01 IN RAIN SIX=2.35 IN
                        RAIN DAY=2.75 IN DT=0.05 HR

                   24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
AREAS (NM & AZ) - D1
                   DT =   0.050000 HOURS       END TIME =    24.000002 HOURS
                     0.0000  0.0023  0.0046  0.0071  0.0099  0.0127  0.0159
                     0.0203  0.0272  0.0347  0.0424  0.0509  0.0595  0.0684
                     0.0776  0.0870  0.0974  0.1084  0.1204  0.1437  0.1728
                     0.2117  0.2559  0.3104  0.3831  0.4649  0.6062  0.8258
                     1.2021  1.4666  1.6752  1.7800  1.8719  1.9379  1.9905
                     2.0362  2.0697  2.1005  2.1259  2.1418  2.1530  2.1629
                     2.1722  2.1803  2.1879  2.1953  2.2025  2.2084  2.2118
                     2.2152  2.2186  2.2217  2.2247  2.2278  2.2307  2.2336
                     2.2363  2.2391  2.2417  2.2443  2.2469  2.2494  2.2518
                     2.2542  2.2565  2.2588  2.2611  2.2633  2.2654  2.2676
                     2.2697  2.2717  2.2738  2.2758  2.2778  2.2798  2.2817
                     2.2837  2.2856  2.2874  2.2893  2.2911  2.2930  2.2948
                     2.2965  2.2983  2.3000  2.3017  2.3034  2.3051  2.3068
                     2.3084  2.3100  2.3117  2.3133  2.3148  2.3164  2.3180
                     2.3195  2.3210  2.3225  2.3240  2.3255  2.3269  2.3284
                     2.3298  2.3313  2.3327  2.3341  2.3355  2.3368  2.3382
                     2.3396  2.3409  2.3422  2.3436  2.3449  2.3462  2.3474
                     2.3487  2.3500  2.3513  2.3525  2.3538  2.3551  2.3563
                     2.3576  2.3589  2.3601  2.3614  2.3627  2.3639  2.3652
                     2.3665  2.3677  2.3690  2.3702  2.3715  2.3728  2.3740
                     2.3753  2.3765  2.3778  2.3790  2.3803  2.3815  2.3828
                     2.3840  2.3853  2.3865  2.3878  2.3890  2.3903  2.3915
                     2.3927  2.3940  2.3952  2.3965  2.3977  2.3989  2.4002
                     2.4014  2.4027  2.4039  2.4051  2.4064  2.4076  2.4088
                     2.4101  2.4113  2.4125  2.4137  2.4150  2.4162  2.4174
```

2.4186	2.4199	2.4211	2.4223	2.4235	2.4247	2.4260
2.4272	2.4284	2.4296	2.4308	2.4320	2.4333	2.4345
2.4357	2.4369	2.4381	2.4393	2.4405	2.4417	2.4429
2.4441	2.4453	2.4465	2.4478	2.4490	2.4502	2.4514
2.4526	2.4538	2.4550	2.4561	2.4573	2.4585	2.4597
2.4609	2.4621	2.4633	2.4645	2.4657	2.4669	2.4681
2.4692	2.4704	2.4716	2.4728	2.4740	2.4752	2.4764
2.4775	2.4787	2.4799	2.4811	2.4822	2.4834	2.4846
2.4858	2.4869	2.4881	2.4893	2.4905	2.4916	2.4928
2.4940	2.4951	2.4963	2.4975	2.4986	2.4998	2.5010
2.5021	2.5033	2.5044	2.5056	2.5068	2.5079	2.5091
2.5102	2.5114	2.5125	2.5137	2.5148	2.5160	2.5171
2.5183	2.5194	2.5206	2.5217	2.5229	2.5240	2.5252
2.5263	2.5274	2.5286	2.5297	2.5309	2.5320	2.5331
2.5343	2.5354	2.5365	2.5377	2.5388	2.5399	2.5411
2.5422	2.5433	2.5445	2.5456	2.5467	2.5478	2.5490
2.5501	2.5512	2.5523	2.5535	2.5546	2.5557	2.5568
2.5579	2.5590	2.5602	2.5613	2.5624	2.5635	2.5646
2.5657	2.5668	2.5679	2.5691	2.5702	2.5713	2.5724
2.5735	2.5746	2.5757	2.5768	2.5779	2.5790	2.5801
2.5812	2.5823	2.5834	2.5845	2.5856	2.5867	2.5878
2.5889	2.5899	2.5910	2.5921	2.5932	2.5943	2.5954
2.5965	2.5976	2.5986	2.5997	2.6008	2.6019	2.6030
2.6040	2.6051	2.6062	2.6073	2.6084	2.6094	2.6105
2.6116	2.6126	2.6137	2.6148	2.6159	2.6169	2.6180
2.6191	2.6201	2.6212	2.6223	2.6233	2.6244	2.6254
2.6265	2.6276	2.6286	2.6297	2.6307	2.6318	2.6328
2.6339	2.6350	2.6360	2.6371	2.6381	2.6392	2.6402
2.6413	2.6423	2.6433	2.6444	2.6454	2.6465	2.6475
2.6486	2.6496	2.6506	2.6517	2.6527	2.6538	2.6548
2.6558	2.6569	2.6579	2.6589	2.6600	2.6610	2.6620
2.6630	2.6641	2.6651	2.6661	2.6672	2.6682	2.6692
2.6702	2.6712	2.6723	2.6733	2.6743	2.6753	2.6763
2.6774	2.6784	2.6794	2.6804	2.6814	2.6824	2.6834
2.6844	2.6854	2.6865	2.6875	2.6885	2.6895	2.6905
2.6915	2.6925	2.6935	2.6945	2.6955	2.6965	2.6975
2.6985	2.6995	2.7005	2.7015	2.7025	2.7034	2.7044
2.7054	2.7064	2.7074	2.7084	2.7094	2.7104	2.7114
2.7123	2.7133	2.7143	2.7153	2.7163	2.7172	2.7182
2.7192	2.7202	2.7211	2.7221	2.7231	2.7241	2.7250
2.7260	2.7270	2.7280	2.7289	2.7299	2.7309	2.7318
2.7328	2.7338	2.7347	2.7357	2.7366	2.7376	2.7386
2.7395	2.7405	2.7414	2.7424	2.7433	2.7443	2.7452
2.7462	2.7472	2.7481	2.7491	2.7500		

*
*BASIN O1
*

```
    COMPUTE NM HYD      ID=10 HYD NO=110.1 AREA=0.00431 SQ MI
                        PER A=0.0 PER B=18.00 PER C=17.00 PER D=65.0
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   11.060    CFS   UNIT VOLUME =   0.9981       B =   526.28
 P60 = 2.0100
         AREA =     0.002802 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.120119HR    TP =  0.133300HR    K/TP RATIO =  0.901116     SHAPE
CONSTANT, N =  3.932522
         UNIT PEAK =   3.9682    CFS   UNIT VOLUME =   0.9980       B =   350.65
 P60 = 2.0100
         AREA =     0.001509 SQ MI    IA =   0.42714 INCHES    INF =   1.04600
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=10 CODE=1

                                      PARTIAL HYDROGRAPH   110.10


        RUNOFF VOLUME =     2.00230 INCHES     =       0.4603 ACRE-FEET
        PEAK DISCHARGE RATE =      11.57 CFS  AT   1.500 HOURS   BASIN AREA =
0.0043 SQ. MI.



    *
    *
    *BASIN P1
    *
    COMPUTE NM HYD      ID=1 HYD NO=100.1 AREA=0.00307 SQ MI
                        PER A=0.0 PER B=15.00 PER C=16.00 PER D=69.0
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   8.3632    CFS   UNIT VOLUME =   0.9978       B =   526.28
 P60 = 2.0100
         AREA =     0.002118 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
```

```
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.119369HR    TP =  0.133300HR    K/TP RATIO =  0.895494     SHAPE
CONSTANT, N =  3.958796
         UNIT PEAK =   2.5161    CFS   UNIT VOLUME =   0.9959       B =   352.42
 P60 = 2.0100
         AREA =     0.000952 SQ MI    IA =   0.42258 INCHES    INF =   1.03323
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=1 CODE=1

                                       PARTIAL HYDROGRAPH   100.10


        RUNOFF VOLUME =     2.06216 INCHES     =       0.3376 ACRE-FEET
        PEAK DISCHARGE RATE =       8.40 CFS  AT   1.500 HOURS   BASIN AREA =
0.0031 SQ. MI.



    *
    *
    *BASIN P2
    *
    COMPUTE NM HYD      ID=2 HYD NO=200.1 AREA=0.00014 SQ MI
                        PER A=0.0 PER B=29.00 PER C=71.00 PER D=0.0
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.114592HR    TP =  0.133300HR    K/TP RATIO =  0.859655     SHAPE
CONSTANT, N =  4.136672
         UNIT PEAK =  0.38249    CFS   UNIT VOLUME =   0.9686       B =   364.18
 P60 = 2.0100
         AREA =     0.000140 SQ MI    IA =   0.39350 INCHES    INF =   0.95180
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=2 CODE=1

                                       PARTIAL HYDROGRAPH   200.10


        RUNOFF VOLUME =     1.12715 INCHES     =       0.0084 ACRE-FEET
        PEAK DISCHARGE RATE =       0.30 CFS  AT   1.500 HOURS   BASIN AREA =
```

0.0001 SQ. MI.

```
    *
    *
    *BASIN P3
    *
    COMPUTE NM HYD      ID=3 HYD NO=300.1 AREA=0.00215 SQ MI
                        PER A=0.0 PER B=10.00 PER C=8.00 PER D=82.0
                        TP=-0.1333 HR MASS RAINFALL=-1

         K =  0.072649HR    TP =  0.133300HR    K/TP RATIO =  0.545000     SHAPE
CONSTANT, N =  7.106428
         UNIT PEAK =   6.9604    CFS   UNIT VOLUME =   0.9975       B =   526.28
 P60 = 2.0100
         AREA =     0.001763 SQ MI    IA =   0.10000 INCHES    INF =   0.04000
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000


         K =  0.121136HR    TP =  0.133300HR    K/TP RATIO =  0.908746     SHAPE
CONSTANT, N =  3.897525
         UNIT PEAK =   1.0111    CFS   UNIT VOLUME =   0.9886       B =   348.28
 P60 = 2.0100
         AREA =     0.000387 SQ MI    IA =   0.43333 INCHES    INF =   1.06333
INCHES PER HOUR
         RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

    PRINT HYD           ID=3 CODE=1

                                          HYDROGRAPH FROM AREA   300.10


        RUNOFF VOLUME =     2.24476 INCHES     =       0.2574 ACRE-FEET
        PEAK DISCHARGE RATE =       6.19 CFS  AT   1.500 HOURS   BASIN AREA =
0.0022 SQ. MI.



    *
    *
    *BASIN P4
    *
    COMPUTE NM HYD      ID=4 HYD NO=400.1 AREA=0.00052 SQ MI
                        PER A=0.0 PER B=23.00 PER C=77.00 PER D=0.0
```

TP=-0.1333 HR MASS RAINFALL=-1

K = 0.113114HR TP = 0.133300HR K/TP RATIO = 0.848564 SHAPE CONSTANT, N = 4.195544
UNIT PEAK = 1.4356 CFS UNIT VOLUME = 0.9933 B = 368.00 P60 = 2.0100
AREA = 0.000520 SQ MI IA = 0.38450 INCHES INF = 0.92660 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=4 CODE=1

HYDROGRAPH FROM AREA 400.10

RUNOFF VOLUME = 1.14349 INCHES = 0.0317 ACRE-FEET
PEAK DISCHARGE RATE = 1.09 CFS AT 1.500 HOURS BASIN AREA = 0.0005 SQ. MI.

*
*
*BASIN P5
*
COMPUTE NM HYD ID=5 HYD NO=500.1 AREA=0.00013 SQ MI
PER A=0.0 PER B=10.00 PER C=90.00 PER D=0.0
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.109910HR TP = 0.133300HR K/TP RATIO = 0.824532 SHAPE CONSTANT, N = 4.330015
UNIT PEAK = 0.36728 CFS UNIT VOLUME = 0.9673 B = 376.60 P60 = 2.0100
AREA = 0.000130 SQ MI IA = 0.36500 INCHES INF = 0.87200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=5 CODE=1

OUTFLOW HYDROGRAPH RESERVOIR 500.10

RUNOFF VOLUME = 1.18074 INCHES = 0.0082 ACRE-FEET
PEAK DISCHARGE RATE = 0.29 CFS AT 1.500 HOURS BASIN AREA = 0.0001 SQ. MI.

```
    *
    *ADD BASIN O1 AND P4
    ADD HYD             ID=40 HYD NO=410.1 ID=10 ID=4
    PRINT HYD           ID=40 CODE=1

                                          HYDROGRAPH FROM AREA   410.10


        RUNOFF VOLUME =     1.90977 INCHES     =       0.4920 ACRE-FEET
        PEAK DISCHARGE RATE =      12.66 CFS  AT   1.500 HOURS   BASIN AREA =
0.0048 SQ. MI.



    *
    *ADD BASIN O1/P4 AND BASIN P3
    ADD HYD             ID=30 HYD NO=310.1 ID=40 ID=3
    PRINT HYD           ID=30 CODE=1

                                          HYDROGRAPH FROM AREA   310.10


        RUNOFF VOLUME =     2.01291 INCHES     =       0.7493 ACRE-FEET
        PEAK DISCHARGE RATE =      18.84 CFS  AT   1.500 HOURS   BASIN AREA =
0.0070 SQ. MI.



    *
    *ADD BASIN O1/P4/P3 AND BASIN P5
    ADD HYD             ID=50 HYD NO=510.1 ID=30 ID=5
    PRINT HYD           ID=50 CODE=1

                                    OUTFLOW HYDROGRAPH RESERVOIR   510.10


        RUNOFF VOLUME =     1.99768 INCHES     =       0.7575 ACRE-FEET
        PEAK DISCHARGE RATE =      19.13 CFS  AT   1.500 HOURS   BASIN AREA =
0.0071 SQ. MI.



    *
    *ADD BASIN P1 AND P2
    ADD HYD             ID=20 HYD NO=210.1 ID=2 ID=1
    PRINT HYD           ID=20 CODE=1
```

PARTIAL HYDROGRAPH 210.10

RUNOFF VOLUME = 2.02128 INCHES = 0.3460 ACRE-FEET
PEAK DISCHARGE RATE = 8.69 CFS AT 1.500 HOURS BASIN AREA = 0.0032 SQ. MI.

```
*
*ADD BASIN P1/P2 AND BASIN O1/P3/P4/P5
ADD HYD             ID=25 HYD NO=250.1 ID=20 ID=50
PRINT HYD           ID=25 CODE=1
```

PARTIAL HYDROGRAPH 250.10

RUNOFF VOLUME = 2.00502 INCHES = 1.1036 ACRE-FEET
PEAK DISCHARGE RATE = 27.83 CFS AT 1.500 HOURS BASIN AREA = 0.0103 SQ. MI.

```
*
*ROUTE NW/SW PONDS COMBINED
*
ROUTE RESERVOIR     ID=11 HYD NO=101.1 INFLOW ID=25 CODE=24
                    OUTFLOW(CFS) STORAGE(AC-FT) ELEVATION(FT)
                    00.0000      0.0000         5065.00
                    00.0100      0.0019         5065.40
                    00.0101      0.0088         5065.90
                    00.0102      0.0207         5066.40
                    00.0103      0.0376         5066.90
                    00.0104      0.0594         5067.40
                    00.0105      0.0863         5067.90
                    00.0106      0.1182         5068.40
                    06.1920      0.1551         5068.90
                    12.3840      0.1970         5069.40
                    18.5760      0.2439         5069.90
                    24.7680      0.3074         5070.40
```

* * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5065.00	0.000	0.00

1.20	3.25	5066.90	0.038	0.01
2.40	0.88	5068.49	0.125	1.14
3.60	0.04	5068.40	0.118	0.04
4.80	0.06	5068.40	0.119	0.06
6.00	0.10	5068.41	0.119	0.10
7.20	0.11	5068.41	0.119	0.11
8.40	0.11	5068.41	0.119	0.11
9.60	0.10	5068.41	0.119	0.10
10.80	0.10	5068.41	0.119	0.10
12.00	0.10	5068.41	0.119	0.10
13.20	0.10	5068.41	0.119	0.10
14.40	0.10	5068.41	0.119	0.10
15.60	0.09	5068.41	0.119	0.10
16.80	0.09	5068.41	0.119	0.09
18.00	0.09	5068.41	0.119	0.09
19.20	0.09	5068.41	0.119	0.09
20.40	0.09	5068.41	0.119	0.09
21.60	0.09	5068.41	0.119	0.09
22.80	0.08	5068.41	0.119	0.08
24.00	0.08	5068.41	0.119	0.08
25.20	0.00	5068.39	0.118	0.01
26.40	0.00	5068.37	0.117	0.01
27.60	0.00	5068.36	0.115	0.01
28.80	0.00	5068.34	0.114	0.01
30.00	0.00	5068.32	0.113	0.01
31.20	0.00	5068.31	0.112	0.01
32.40	0.00	5068.29	0.111	0.01
33.60	0.00	5068.27	0.110	0.01
34.80	0.00	5068.26	0.109	0.01
36.00	0.00	5068.24	0.108	0.01
37.20	0.00	5068.23	0.107	0.01
38.40	0.00	5068.21	0.106	0.01
39.60	0.00	5068.19	0.105	0.01
40.80	0.00	5068.18	0.104	0.01
42.00	0.00	5068.16	0.103	0.01
43.20	0.00	5068.14	0.102	0.01
44.40	0.00	5068.13	0.101	0.01
45.60	0.00	5068.11	0.100	0.01
46.80	0.00	5068.09	0.099	0.01
48.00	0.00	5068.08	0.098	0.01
49.20	0.00	5068.06	0.097	0.01
50.40	0.00	5068.04	0.096	0.01
51.60	0.00	5068.03	0.095	0.01
52.80	0.00	5068.01	0.093	0.01
54.00	0.00	5068.00	0.092	0.01
55.20	0.00	5067.98	0.091	0.01
56.40	0.00	5067.96	0.090	0.01
57.60	0.00	5067.95	0.089	0.01

58.80	0.00	5067.93	0.088	0.01
60.00	0.00	5067.91	0.087	0.01
61.20	0.00	5067.90	0.086	0.01
62.40	0.00	5067.88	0.085	0.01
63.60	0.00	5067.86	0.084	0.01
64.80	0.00	5067.84	0.083	0.01
66.00	0.00	5067.82	0.082	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
67.20	0.00	5067.80	0.081	0.01
68.40	0.00	5067.78	0.080	0.01
69.60	0.00	5067.76	0.079	0.01
70.80	0.00	5067.74	0.078	0.01
72.00	0.00	5067.72	0.077	0.01
73.20	0.00	5067.70	0.076	0.01
74.40	0.00	5067.69	0.075	0.01
75.60	0.00	5067.67	0.074	0.01
76.80	0.00	5067.65	0.073	0.01
78.00	0.00	5067.63	0.072	0.01
79.20	0.00	5067.61	0.071	0.01
80.40	0.00	5067.59	0.070	0.01
81.60	0.00	5067.57	0.069	0.01
82.80	0.00	5067.55	0.067	0.01
84.00	0.00	5067.53	0.066	0.01
85.20	0.00	5067.51	0.065	0.01
86.40	0.00	5067.49	0.064	0.01
87.60	0.00	5067.47	0.063	0.01
88.80	0.00	5067.45	0.062	0.01
90.00	0.00	5067.44	0.061	0.01
91.20	0.00	5067.42	0.060	0.01
92.40	0.00	5067.40	0.059	0.01
93.60	0.00	5067.37	0.058	0.01
94.80	0.00	5067.35	0.057	0.01
96.00	0.00	5067.33	0.056	0.01
97.20	0.00	5067.30	0.055	0.01
98.40	0.00	5067.28	0.054	0.01
99.60	0.00	5067.25	0.053	0.01
100.80	0.00	5067.23	0.052	0.01
102.00	0.00	5067.21	0.051	0.01
103.20	0.00	5067.18	0.050	0.01
104.40	0.00	5067.16	0.049	0.01
105.60	0.00	5067.14	0.048	0.01
106.80	0.00	5067.11	0.047	0.01
108.00	0.00	5067.09	0.046	0.01
109.20	0.00	5067.07	0.045	0.01
110.40	0.00	5067.04	0.044	0.01

111.60	0.00	5067.02	0.043	0.01
112.80	0.00	5067.00	0.042	0.01
114.00	0.00	5066.97	0.041	0.01
115.20	0.00	5066.95	0.040	0.01
116.40	0.00	5066.93	0.039	0.01
117.60	0.00	5066.90	0.038	0.01
118.80	0.00	5066.87	0.037	0.01
120.00	0.00	5066.84	0.036	0.01
121.20	0.00	5066.81	0.035	0.01
122.40	0.00	5066.78	0.034	0.01
123.60	0.00	5066.75	0.033	0.01
124.80	0.00	5066.72	0.032	0.01
126.00	0.00	5066.69	0.031	0.01
127.20	0.00	5066.66	0.030	0.01
128.40	0.00	5066.63	0.029	0.01
129.60	0.00	5066.60	0.027	0.01
130.80	0.00	5066.57	0.026	0.01
132.00	0.00	5066.54	0.025	0.01
133.20	0.00	5066.51	0.024	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
134.40	0.00	5066.48	0.023	0.01
135.60	0.00	5066.45	0.022	0.01
136.80	0.00	5066.42	0.021	0.01
138.00	0.00	5066.39	0.020	0.01
139.20	0.00	5066.34	0.019	0.01
140.40	0.00	5066.30	0.018	0.01
141.60	0.00	5066.26	0.017	0.01
142.80	0.00	5066.22	0.016	0.01
144.00	0.00	5066.18	0.015	0.01
145.20	0.00	5066.13	0.014	0.01
146.40	0.00	5066.09	0.013	0.01
147.60	0.00	5066.05	0.012	0.01
148.80	0.00	5066.01	0.011	0.01
150.00	0.00	5065.96	0.010	0.01
151.20	0.00	5065.92	0.009	0.01
152.40	0.00	5065.87	0.008	0.01
153.60	0.00	5065.79	0.007	0.01
154.80	0.00	5065.72	0.006	0.01
156.00	0.00	5065.65	0.005	0.01
157.20	0.00	5065.58	0.004	0.01
158.40	0.00	5065.50	0.003	0.01
159.60	0.00	5065.43	0.002	0.01
160.80	0.00	5065.30	0.001	0.01
162.00	0.00	5065.18	0.001	0.00

PEAK DISCHARGE = 22.121 CFS - PEAK OCCURS AT HOUR 1.60

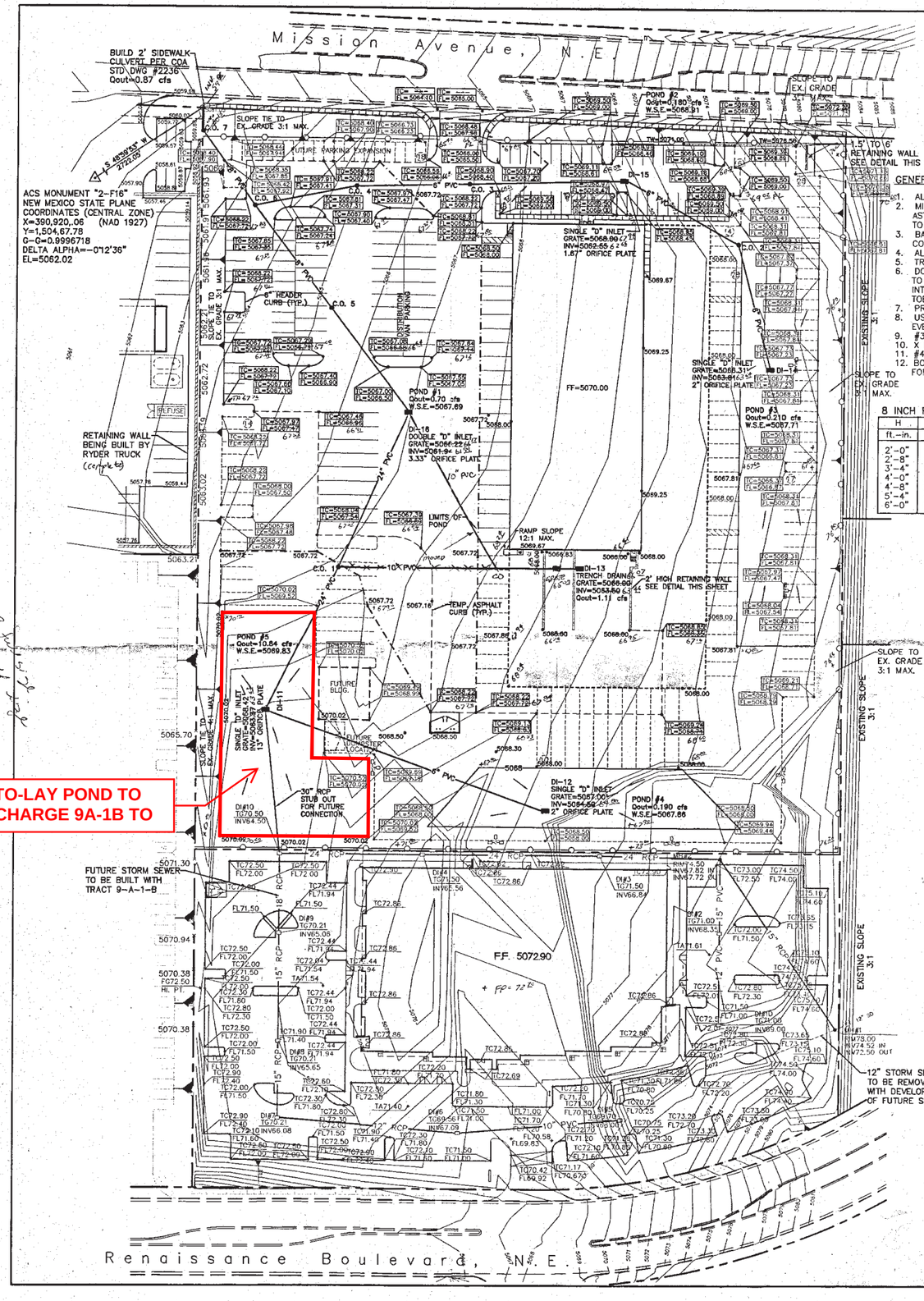
Less than maximum discharge allowed towards Frito-Lay Pond (24.97 cfs)

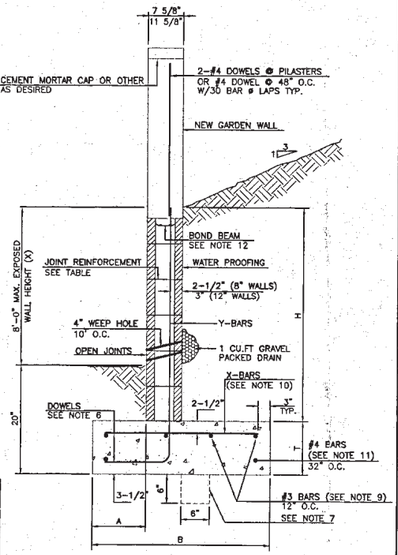
```
 MAXIMUM WATER SURFACE ELEVATION =     5070.186
 MAXIMUM STORAGE =        0.2802 AC-FT      INCREMENTAL TIME=    0.050000HRS

*
PRINT HYD           ID=11 CODE=1

                                    PARTIAL HYDROGRAPH   101.10


     RUNOFF VOLUME =     2.00502 INCHES     =       1.1036 ACRE-FEET
     PEAK DISCHARGE RATE =      22.12 CFS  AT   1.600 HOURS   BASIN AREA =
0.0103 SQ. MI.



*
FINISH

     NORMAL PROGRAM FINISH          END TIME (HR:MIN:SEC) = 08:51:31
```

Less than top of NW and SW pond elevations (5070.40)

APPENDIX E

EXCERPTS FROM APPROVED FRITO LAY GRADING PLAN AND DRAINAGE REPORT





RETAINING WALL DETAIL

NOT TO SCALE

GENERAL NOTES:

1. ALL CONCRETE IS TO BE 4000 PSI @ 28 DAYS.
2. MINIMUM COMPACTION UNDER FOOTINGS IS TO BE 95% PER ASTM. D 1557 FOR A DEPTH OF 12" MOISTURE CONTENT IS TO BE ± 2.0%.
3. BACK FILL AGAINST WALLS IS TO BE HAND-PLACED AND COMPACTED.
4. ALL BARS ARE TO BE GRADE 60, ASTM 615.
5. TRUSS TYPE DUR-O-WALL EVERY OTHER COURSE.
6. DOWELS SHALL BE AT LEAST EQUAL IN SIZE AND SPACING TO V-BARS| SHALL PROJECT A MINIMUM OF 30 BAR DIA. INTO THE FILLED BLOCK CORES, AND SHALL EXTEND TO THE TOE OF THE FOOTING.
7. PROVIDE KEY FOR 8" AND 12" WALLS WHERE H EXCEEDS 6'-0"
8. USE EITHER EXPANSION JOINTS ON 20' CENTERS OR PILASTERS EVERY 16'.
9. #3 BARS TO BE USED ON WALLS EXCEEDING 2'-8" HEIGHT
10. X BARS TO BE USED ON WALLS EXCEEDING 2'-8" HEIGHT
11. #4 BARS TO BE USED ON WALLS SMALLER THAN 3'-4"
12. BOND BEAM, 1-#4 BARS FOR WALLS UNDER 3'-4", 2-#4 BARS FOR WALLS UNDER 5'-4", 2-#5 BARS FOR WALLS OVER 5'-4".

8 INCH REINFORCED CONCRETE MASONRY WALL

H	X	A	B	T	Y-BARS	X-BARS
ft.-in.	ft.-in.	in.	ft.-in.	in.		
2'-0"	1'-1"	8"	2'-4"	9"	#3 @32" O.C.	
2'-8"	1'-9"	8"	2'-9"	9"	#4 @32" O.C.	#3 @27" O.C.
3'-4"	2'-5"	8"	2'-4"	9"	#3 @32" O.C.	#3 @27" O.C.
4'-0"	3'-1"	10"	2'-9"	9"	#4 @32" O.C.	#3 @27" O.C.
4'-8"	3'-10"	12"	3'-4"	10"	#5 @32" O.C.	#3 @27" O.C.
5'-4"	4'-6"	14"	3'-8"	10"	#4 @16" O.C.	#4 @30" O.C.
6'-0"	5'-3"	16"	4'-2"	12"	#6 @24" O.C.	#4 @25" O.C.

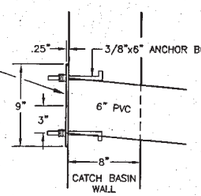
NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. 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 INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. 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.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO RESIDENTIAL STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVALS	NAME	DATE
A.C.E./DESIGN		
INSPECTOR		
A.C.E./FIELD		

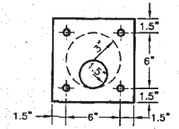
CLEAN OUT DATA

CO	RIM=	INV=
1	5067.81	5062.66
2	5067.81	5063.19
3	5067.53	5061.83
4	5067.55	5061.28
5	5066.94	5061.37
6	5067.60	5060.80
7	5062.24	5060.40



DETAIL A

TO BE INSTALLED @ THE OUTFLOW OF ALL CATCH BASINS



TYP. ORIFICE PLATE DETAIL

N.T.S.

GENERAL NOTES:

1. A DRAINAGE EASEMENT IS GRANTED TO TRACTS 9B, 9C, 9D OVERT AND ACROSS TRACT 9-1-1-B FOR THE BENEFIT OF 9B, 9C, 9D TO BE MAINTAINED BY TRACT 9-A-1-B.
2. A DRAINAGE EASEMENT IS GRANTED TO TRACTS 9B, 9C, 9D AND 9-1-1-B OVER AND ACROSS TRACT 9-A-1-A ALONG WITH A PERMANENT PONDING EASEMENT (PONDS #1 AND #5) FOR THE BENEFIT OF 9B, 9C, 9D AND 9-A-1-B TO BE MAINTAINED BY TRACT 9-A-1-A.

I certify that the grades shown on the plans have been built in substantial compliance with approved grading and drainage plan dated 9-10-99. Survey information was supplied by Wagner Land Surveying in accordance with normal surveying practices.

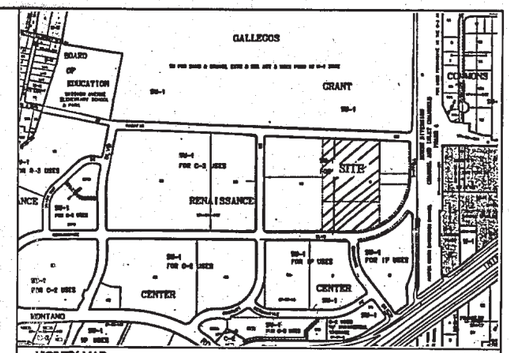
Ronald R. Bohannan 3/19/99 5-12-99 #7868 NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

GRAPHIC SCALE

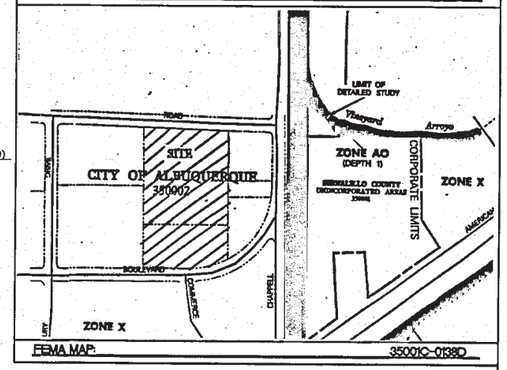
50 25 0 25 50

SCALE: 1"=50'

50/980044/9844OVGR.DWG/JDN/09-10-98



VICINITY MAP: F-16-Z



FEMA MAP: 35001C-0138D

LEGAL DESCRIPTION:

TRACT 9-A-1-A AND 9-A-1-B OF NORTH RENAISSANCE CENTER

EROSION CONTROL PLAN NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT OUT OF EXISTING RIGHT-OF-WAY.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING UP ANY SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEAN-UP OF SEDIMENT ACCUMULATION ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

LEGEND

- EXISTING CURB & GUTTER
- TEMPORARY ASPHALT CURB
- 5065 EXISTING CONTOUR (MAJOR)
- 5064 EXISTING CONTOUR (MINOR)
- BOUNDARY LINE
- EASEMENT
- PROPOSED SIDEWALK

RECEIVED MAY 12 1999 HYDROLOGY SECTION

ROUGH GRADING APPROVAL DATE

ENGINEER'S SEAL — RONALD R. BOHANNAN P.E. #7868

FRITO LAY

GRADING AND DRAINAGE PLAN

TIERRA WEST, LLC
4421 McLEOD ROAD, N.E., SUITE D
ALBUQUERQUE, NEW MEXICO 87109
(505)883-7592

DRAWN BY JDN
DATE 06-30-98
9844DVGR.DWG
SHEET # 3 OF 4
JOB # 980044

Pond 1 will drain to Mission Avenue at a rate of 0.70 cfs limited by 4.75" orifice plate.

Route 2

Basin 8 will drain to Pond 3 at a rate of 2.32 cfs.

Pond 3 will drain to Pond 2 at a rate of 0.21 cfs limited by a 2" orifice plate.

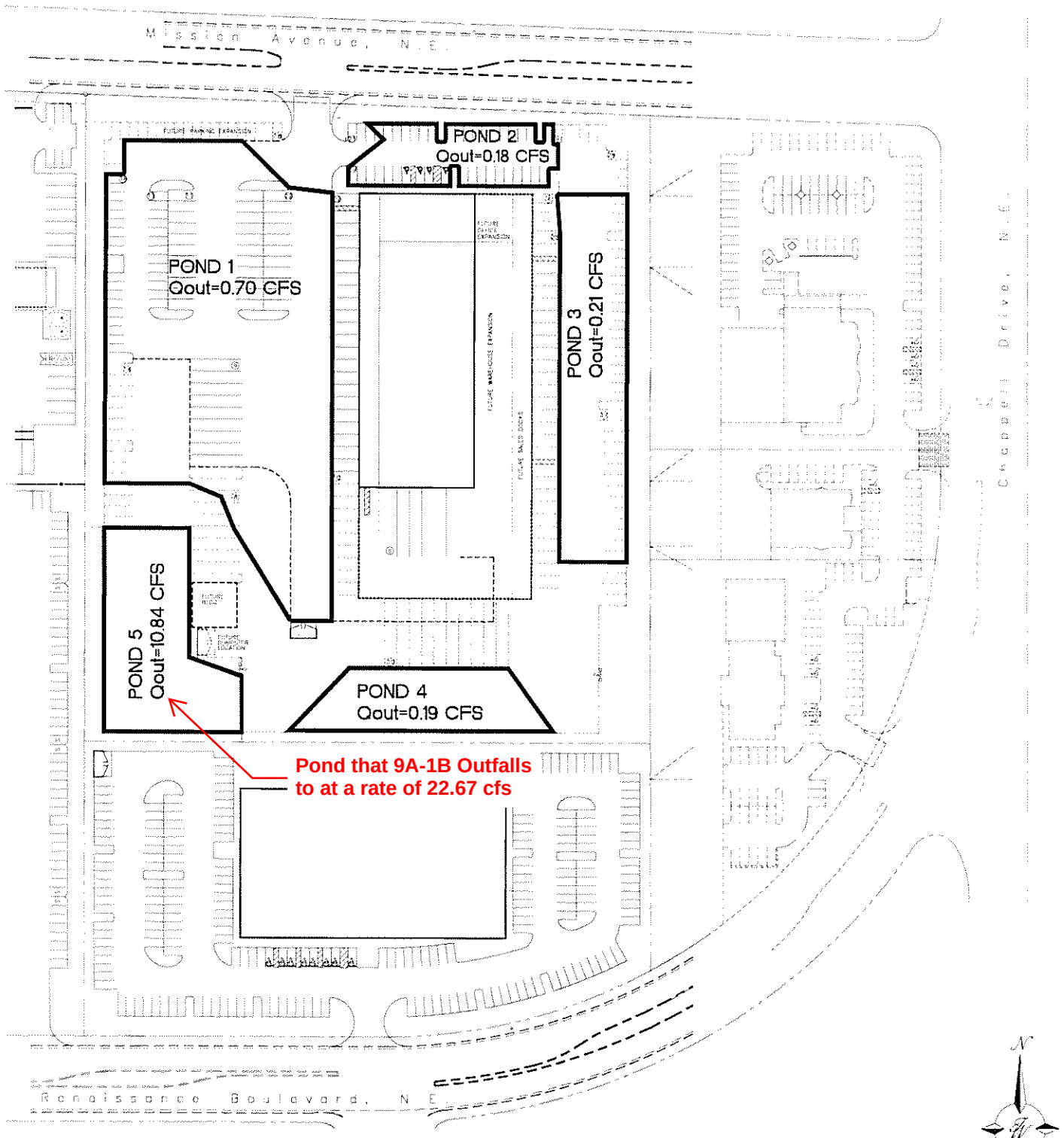
Pond 2 will drain to Mission Avenue at a rate of 0.18 cfs limited by 1-2/3" orifice plate.

The outflow from Pond 1 and Pond 2 will be combined for a total developed flow to Mission Avenue of 0.87 cfs.

The entrance northwest entrance to the FritoLay site will act as an emergency overflow in the event of a storm greater than 100 year. Pond 1 and Pond 2 are the final ponds in the series and will overflow out the entrance.

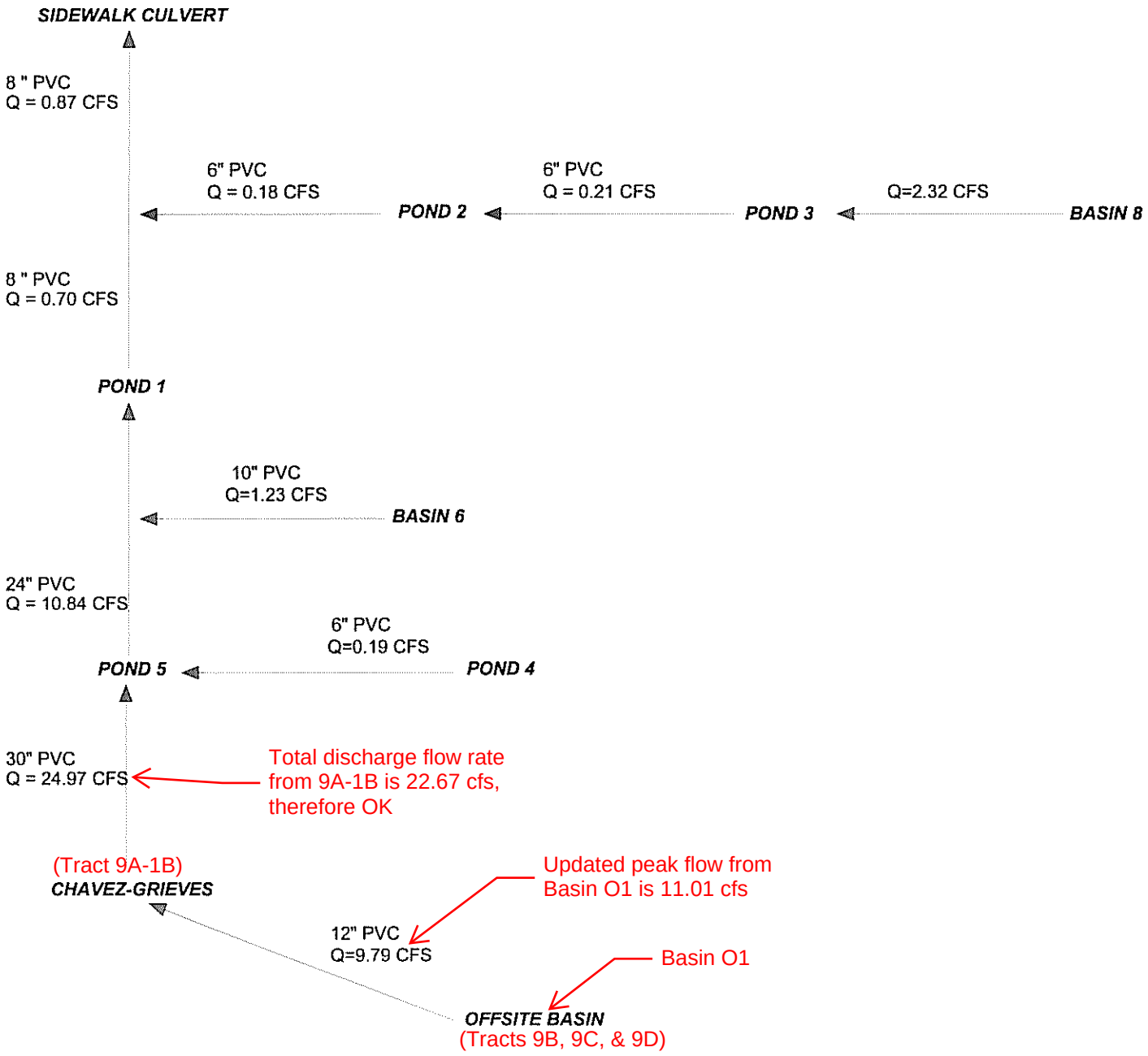
Summary

Tract 9-A-1-A consists of the proposed FritoLay site containing 8.38 acres, and Tract 9-A-1-B is the location of the proposed Chavez-Grieves office building containing 3.75 acres. The Frito Lay site is the outfall for four tracts that drain through a series of storm sewer to a central pond on site. Tracts 9B, 9C, and 9D drain to Tract 9-A-1-B (Chavez-Grieves) via a 12" pipe. These flows, along with the flows generated by Chavez-Grieves, are collected in a 30" storm sewer and discharged to Pond 1 on-site. Pond 1 and Pond 2 will discharge a combined flow of 0.87 cfs to Mission Avenue via a sidewalk culvert. Mission Avenue drains west per the approved Andrew, Asbury, and Roberts Master Drainage Plan to a central off-site pond.


Preston Avenue, N.E.
POND 1
Qout=0.70 CFS
POND 2
Qout=0.18 CFS
POND 3
Qout=0.21 CFS
POND 4
Qout=0.19 CFS
POND 5
Qout=10.84 CFS
Pond that 9A-1B Outfalls
to at a rate of 22.67 cfs
Renaissance Boulevard, N.E.
Chaddesden Drive, N.E.
N

POND LAYOUT

RUNOFF FLOW PATH



APPENDIX F

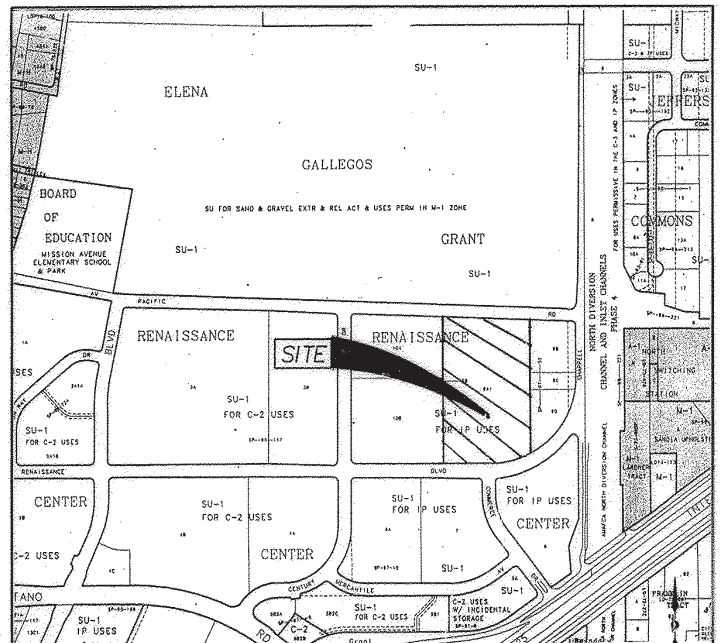
PLAT OF TRACTS 9A-1A & 9A-1B RENAISSANCE CENTER

G:\PLATS\1998\986060P Mon Mar 2 08:11:08 1998

PLAT OF TRACTS 9-A-1-A AND 9-A-1-B RENAISSANCE CENTER

ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
MARCH 1998

1998089211
5978863
Page: 1 of 2
07/16/1998 11:19A
Judy D. Woodward Bern. Co. PLAT R 12.00 Bk-98C Pg-204



LOCATION MAP
ZONE ATLAS MAP NO. F-16-Z
N.T.S.

LEGAL DESCRIPTION

A TRACT OF LAND COMPRISING OF TRACT 9-A-1 OF RENAISSANCE CENTER AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON MARCH 31, 1997, IN VOLUME 97C, FOLIO 95, CONTAINING 12.127 ACRES (528,231 SQ. FT.) MORE OR LESS, NOW COMPRISING TRACTS 9-A-1-A AND 9-A-1-B, RENAISSANCE CENTER.

SUBDIVISION DATA:

GROSS SUBDIVISION ACREAGE: 12.127 ACRES±
ZONE ATLAS INDEX NO: F-16-Z
NO. OF TRACTS CREATED: 2
NO. OF LOTS CREATED: 0
MILES OF FULL-WIDTH STREETS CREATED: 0 MILES
DATE OF SURVEY: FEBRUARY 19, 1998

EASEMENTS

THIS PLAT SHOWS EXISTING RECORDED AND APPARENT EASEMENTS AS NOTED.

PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT ARE GRANTED FOR THE COMMON AND JOINT USE OF:

1. PNM ELECTRIC SERVICES FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF OVERHEAD AND UNDERGROUND ELECTRICAL LINES, TRANSFORMERS, POLES AND ANY OTHER EQUIPMENT, FIXTURES, STRUCTURES AND RELATED FACILITIES REASONABLY NECESSARY TO PROVIDE ELECTRICAL SERVICE.
2. PNM GAS SERVICES FOR INSTALLATION, MAINTENANCE, AND SERVICE OF NATURAL GAS LINES, VALVES AND OTHER EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE NATURAL GAS.
3. U.S. WEST FOR THE INSTALLATION, MAINTENANCE AND SERVICE OF ALL BURIED AND AERIAL COMMUNICATION LINES AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE COMMUNICATION SERVICES, INCLUDING BUT NOT LIMITED TO ABOVE GROUND PEDESTALS AND CLOSURES.
4. JONES INTERCABLE FOR THE INSTALLATION, MAINTENANCE, AND SERVICE OF SUCH LINES, CABLE, AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE CABLE TV SERVICE.

INCLUDED IS THE RIGHT TO BUILD, REBUILD, CONSTRUCT, RECONSTRUCT, LOCATE, RELOCATE. CHANGE, REMOVE, MODIFY, RENEW, OPERATE, AND MAINTAIN FACILITIES FOR THE PURPOSES DESCRIBED ABOVE, TOGETHER WITH FREE ACCESS TO, FROM, AND OVER SAID EASEMENTS, INCLUDING SUFFICIENT WORKING AREA SPACE FOR ELECTRIC TRANSFORMERS, WITH THE RIGHT AND PRIVILEGE TO TRIM AND REMOVE TREES, SHRUBS OR BUSHES WHICH INTERFER WITH THE PURPOSES SET FORTH HEREIN. NO BUILDING, SIGN, POOL (ABOVEGROUND OR SUBSURFACE), HOT TUB, CONCRETE OR WOOD POOL DECKING, OR OTHER STRUCTURE SHALL BE ERECTED OR CONSTRUCTED ON SAID EASEMENTS, NOR SHALL ANY WELL BE DRILLED OR OPERATED THEREON. PROPERTY OWNERS SHALL BE SOLELY RESPONSIBLE FOR CORRECTING ANY VIOLATIONS OF VIOLATIONS OF NATIONAL ELECTRICAL SAFETY CODE CAUSED BY CONSTRUCTION OR POOLS, DECKING, OR ANY STRUCTURES ADJACENT TO WITHIN OR NEAR EASEMENTS SHOWN ON THIS PLAT.

NOTES:

1. MISC. DATA: ZONING SU FOR IP USES
2. BEARINGS SHOWN ARE GRID BEARINGS (NM CENTRAL ZONE-NAD 1927).
3. ALL DISTANCES ARE GROUND DISTANCES.
4. THIS PROPERTY LIES WITHIN PROJECTED SECTION 34, TOWNSHIP 11 NORTH, RANGE 3 EAST, N.M.P.M., ELENA GALLEGOS GRANT, BERNALILLO COUNTY, NEW MEXICO.
5. THE PURPOSE OF THIS PLAT IS TO REPLAT THE EXISTING TRACT INTO TWO NEW TRACTS.
6. PLAT SHOWS ALL EASEMENTS OF RECORD.
7. SP NO. 98030410420295
8. A DRAINAGE EASEMENT IS GRANTED TO TRACTS 9B, 9C, 9D OVER AND ACROSS TRACT 9-A-1-B FOR THE BENEFIT OF 9B, 9C, 9D TO BE MAINTAINED BY TRACT 9-A-1-B.
9. A DRAINAGE EASEMENT IS GRANTED TO TRACTS 9B, 9C, 9D AND 9-A-1-B OVER AND ACROSS TRACT 9-A-1-A ALONG WITH A PERMANENT PONDING EASEMENT FOR THE BENEFIT OF 9B, 9C, 9D AND 9-A-1-B TO BE MAINTAINED BY TRACT 9-A-1-A.

THIS IS TO CERTIFY THAT TAXES ARE CURRENT AND PAID ON UPC #: 2 upc code # to see attached tax cert.
PROPERTY OWNER OF RECORD: United NM Trust Co / trustee of
BERNALILLO COUNTY TREASURER'S OFFICE: Pauline Rodriguez 7/16/98

FREE CONSENT AND DEDICATION

THE REPLAT SHOWN HEREON IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNER AND/OR PROPRIETOR. EXISTING PUBLIC UTILITY EASEMENTS SHOWN HEREON FOR THE COMMON AND JOINT USE OF GAS, ELECTRICAL POWER AND COMMUNICATION SERVICES FOR BURIED DISTRIBUTION LINES, CONDUITS AND PIPES FOR UNDERGROUND UTILITIES WHERE SHOWN OR INDICATED, AND INCLUDING THE RIGHT OF INGRESS AND EGRESS FOR CONSTRUCTION AND MAINTENANCE, AND THE RIGHT TO TRIM INTERFERING TREES AND SHRUBS SAID OWNER AND/OR PROPRIETOR DOES HEREBY CERTIFY THAT THIS SUBDIVISION IS THEIR FREE ACT AND DEED.

[signature] 3/3/98
GEORGE H. KUHN — DATE
SENIOR VICE PRESIDENT & SENIOR TRUST OFFICER
NORWEST BANK NEW MEXICO, N.A. TRUSTEE
UNION PENSION TRANSACTION TRUST 93-2, NM

[signature] 3/3/98
KAREN LOFTUS — DATE
ASSISTANT VICE PRESIDENT
NORWEST BANK NEW MEXICO, N.A.
UNION PENSION TRANSACTION TRUST 93-2, NM

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 3rd DAY OF March, 1998 BY GEORGE H. KUHN, SENIOR VICE PRESIDENT & SENIOR TRUST OFFICER, NORWEST BANK NEW MEXICO, N.A. TRUSTEE, UNION PENSION TRANSACTION TRUST 93-2, NM

BY Donna J. Bohannan, NOTARY PUBLIC — MY COMMISSION EXPIRES: 3-26-2000

OFFICIAL SEAL DONNA BOHANNAN NOTARY PUBLIC STATE OF NEW MEXICO My Commission Expires

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 3rd DAY OF March, 1998 BY KAREN LOFTUS, ASSISTANT VICE PRESIDENT, NORWEST BANK NEW MEXICO, N.A., UNION PENSION TRANSACTION TRUST 93-2, NM

BY Donna J. Bohannan, NOTARY PUBLIC — MY COMMISSION EXPIRES: 3-26-2000

OFFICIAL SEAL DONNA BOHANNAN NOTARY PUBLIC STATE OF NEW MEXICO My Commission Expires

APPROVALS

97-98-131

Approval	Date
CITY PLANNER, ALBUQUERQUE PLANNING DIVISION	7-16-98
CITY ENGINEER	7-10-98
A.M.A.F.C.A.	7-10-98
TRAFFIC ENGINEER	4-28-98
CITY SURVEYOR	031198
PROPERTY MANAGEMENT	7-10-98
WATER RESOURCES DEPARTMENT	4.28.98
DEVELOPMENT CIP	4-28-98
PNM ELECTRIC SERVICES	4-29-98
PNM GAS SERVICES	4-29-98
U.S. WEST COMMUNICATIONS	05-01-98
JONES INTERCABLE, INC.	4-2-98

In approving this plat, PNM Electric Services and Gas Services (PNM) did not conduct a Title Search of the properties shown hereon. Consequently, PNM does not waive nor release any easement or easement rights to which it may be entitled.

SURVEYOR'S CERTIFICATE

I, LARRY W. MEDRANO, A REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY MEETING THE MINIMUM REQUIREMENTS FOR MONUMENTATION AND SURVEYS OF THE CITY OF ALBUQUERQUE SUBDIVISION ORDINANCE AND OF STANDARDS FOR LAND SURVEYS OF THE N.M. BOARD OF REGISTRATION FOR ENGINEERS AND SURVEYORS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT NO ENCROACHMENTS EXIST EXCEPT AS NOTED ABOVE AND THAT ALL IMPROVEMENTS ARE SHOWN IN THEIR CORRECT LOCATION RELATIVE TO RECORD BOUNDARIES AS LOCATED BY THIS SURVEY.

[signature] 3/2/98
LARRY W. MEDRANO — DATE
N.M.P.S. No. 11993

LARRY W. MEDRANO NEW MEXICO 11993 REGISTERED PROFESSIONAL SURVEYOR

PRECISION SURVEYS, INC.
2929 COORS BLVD NW, SUITE 105 — PHONE 505 839 0569
ALBUQUERQUE, NEW MEXICO 87120 — FAX 505 839 4153

DRB CASE NO. 97-88
SHEET 1 OF 2

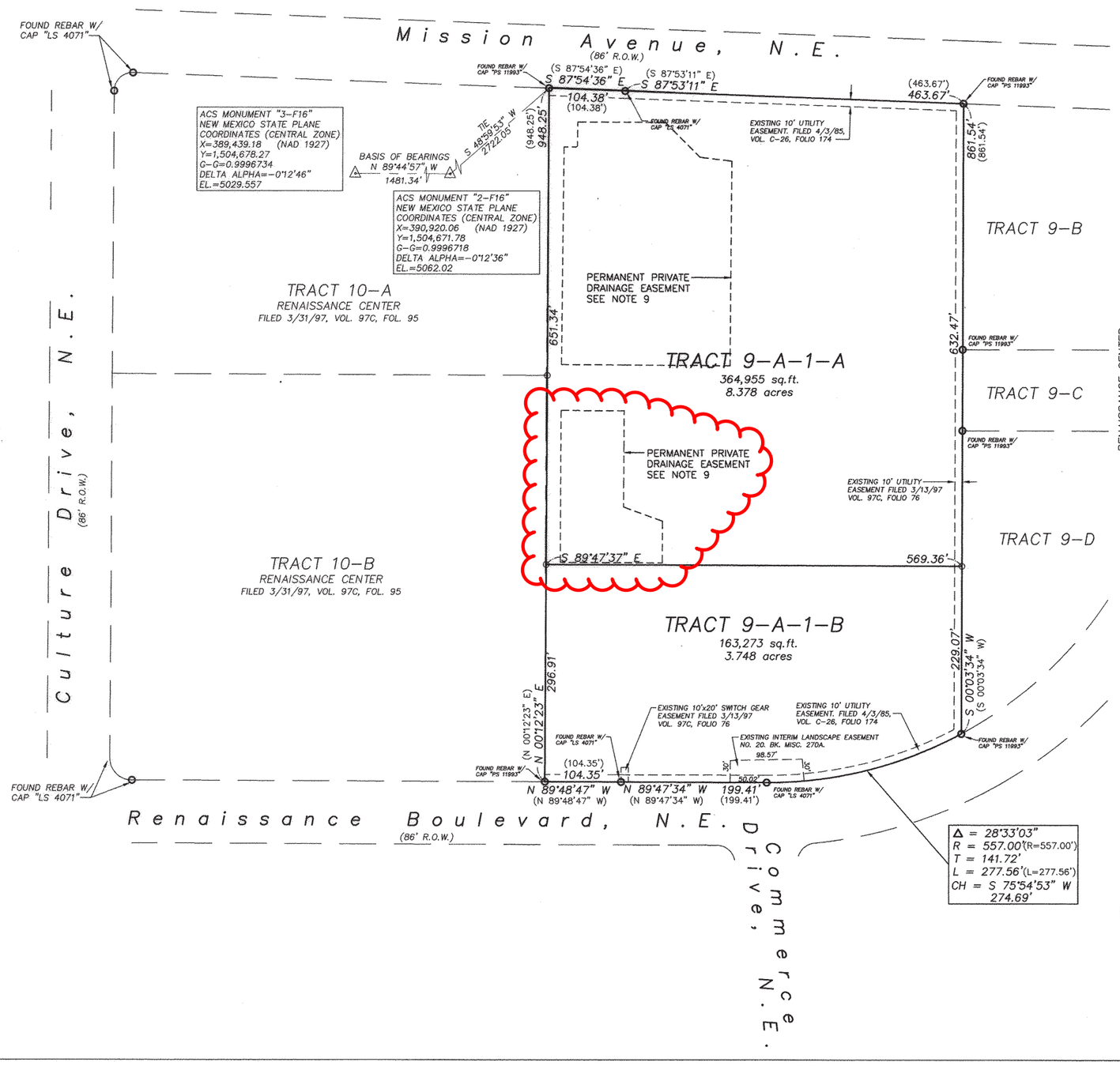
986060P

1998089211
5978663
Page: 2 of 2
07/16/1998 11:19A
Judy D. Woodward Bern. Co. PLAT R 12.00 BK-98C Pg-284

PLAT OF

TRACTS 9-A-1-A AND 9-A-1-B
RENAISSANCE CENTER

ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
MARCH 1998



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND

- O DENOTES POINT FOUND AND USED AS SHOWN
- O DENOTES POINT SET BY THIS SURVEY – REBAR WITH CAP "PS 11993"

PRECISION SURVEYS, INC.

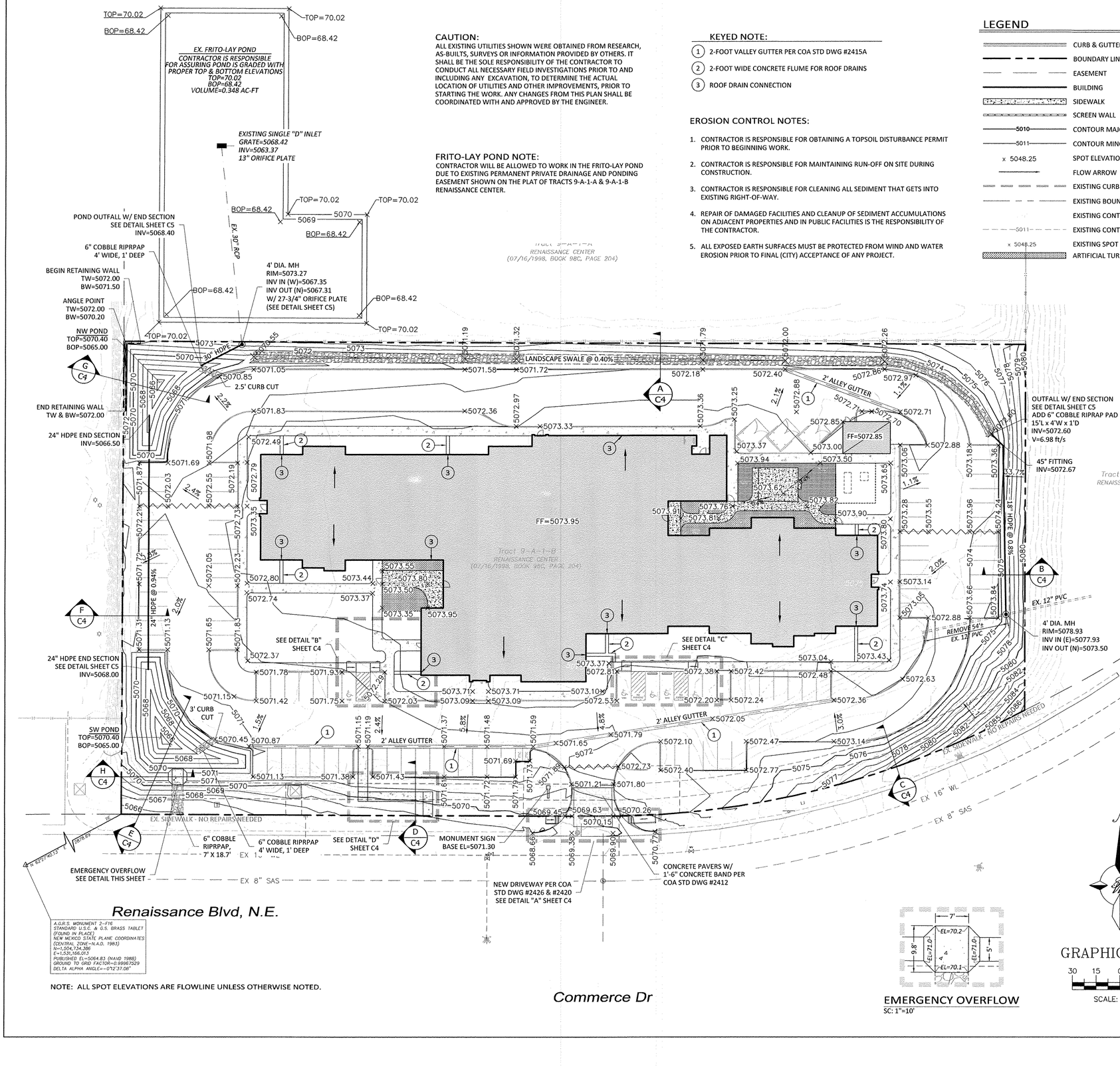
2929 COORS BLVD NW, SUITE 105
ALBUQUERQUE, NEW MEXICO 87120
PHONE 505 839 0569
FAX 505 839 4153

DRB CASE NO. 97-88

SHEET 2 OF 2

986060P

G:\PLATS\1998\986060P Mon Mar 2 08:46:51 1998



NOTE: ALL SPOT ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.

CAUTION:

ALL EXISTING UTILITIES SHOWN WERE OBTAINED FROM RESEARCH, AS-BUILTS, SURVEYS OR INFORMATION PROVIDED BY OTHERS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO AND INCLUDING ANY EXCAVATION, TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS, PRIOR TO STARTING THE WORK. ANY CHANGES FROM THIS PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER.

FRITO-LAY POND NOTE:

CONTRACTOR WILL BE ALLOWED TO WORK IN THE FRITO-LAY POND DUE TO EXISTING PERMANENT PRIVATE DRAINAGE AND PONDING EASEMENT SHOWN ON THE PLAT OF TRACTS 9-A-1-A & 9-A-1-B RENAISSANCE CENTER.

KEYED NOTE:

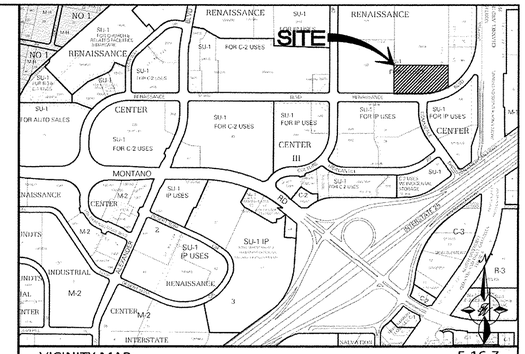
1. 2-FOOT VALLEY GUTTER PER COA STD DWG #2415A
2. 2-FOOT WIDE CONCRETE FLUME FOR ROOF DRAINS
3. ROOF DRAIN CONNECTION

EROSION CONTROL NOTES:

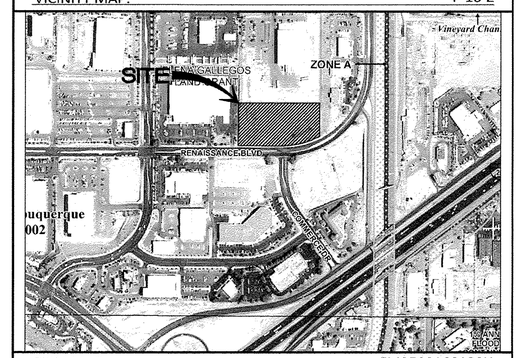
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.

LEGEND

- CURB & GUTTER
- BOUNDARY LINE
- EASEMENT
- BUILDING
- SIDEWALK
- SCREEN WALL
- 5010 CONTOUR MAJOR
- 5011 CONTOUR MINOR
- x 5048.25 SPOT ELEVATION
- FLOW ARROW
- EXISTING CURB & GUTTER
- EXISTING BOUNDARY LINE
- EXISTING CONTOUR MAJOR
- 5011 EXISTING CONTOUR MINOR
- x 5048.25 EXISTING SPOT ELEVATION
- ARTIFICIAL TURF



VICINITY MAP: F-16-Z



FIRM MAP: FM35001C0138H

NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HERON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONNECTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED. 7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL	NAME	DATE
INSPECTOR		

ROUGH GRADING APPROVAL DATE

EMERGENCY OVERFLOW
SC: 1"=10'

GRAPHIC SCALE
30 15 0 15 30
SCALE: 1"=30'

ENGINEER'S SEAL
RONALD R. BOHANNAN
NEW MEXICO
7868
REGISTERED PROFESSIONAL ENGINEER

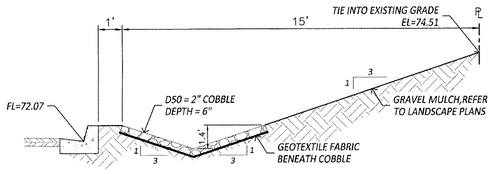
RONALD R. BOHANNAN
P.E. #7868

BEHAVIORAL HEALTH HOSPITAL
RENAISSANCE CENTER

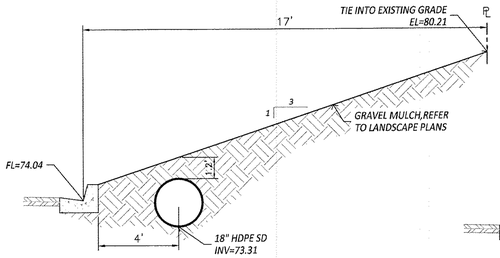
GRADING AND DRAINAGE PLAN

TIERRA WEST, LLC
5571 MIDWAY PARK PLACE NE
ALBUQUERQUE, NM 87109
(505) 858-3100
www.tierrawestllc.com

DRAWN BY: DY
DATE: 11/12/18
2017054-GR
SHEET # C3
JOB # 2017054



SECTION A-A
NTS



SECTION B-B
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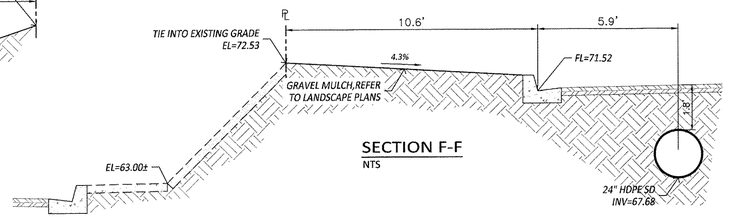

SECTION F-F
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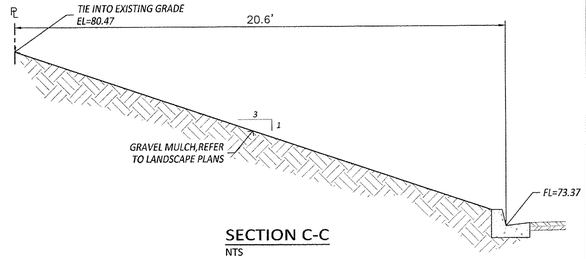

SECTION C-C
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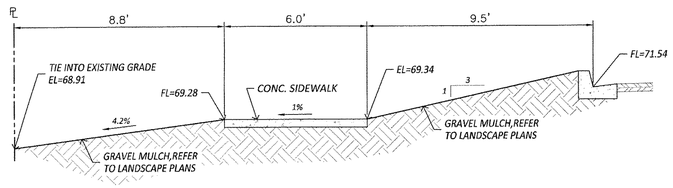

SECTION D-D
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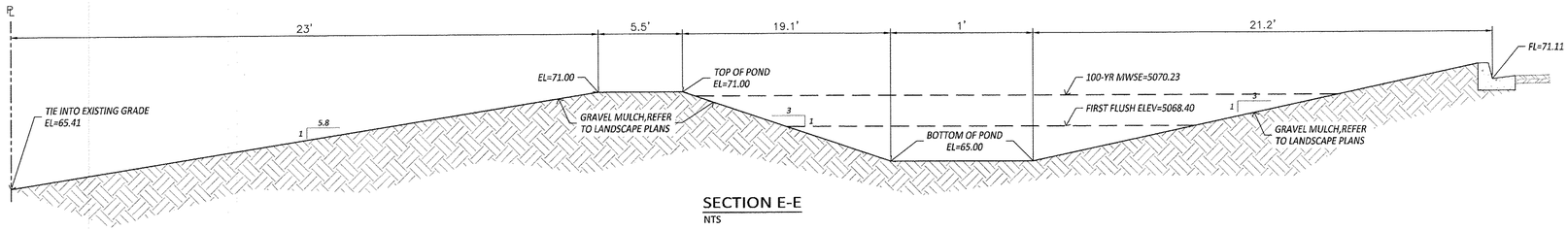

SECTION E-E
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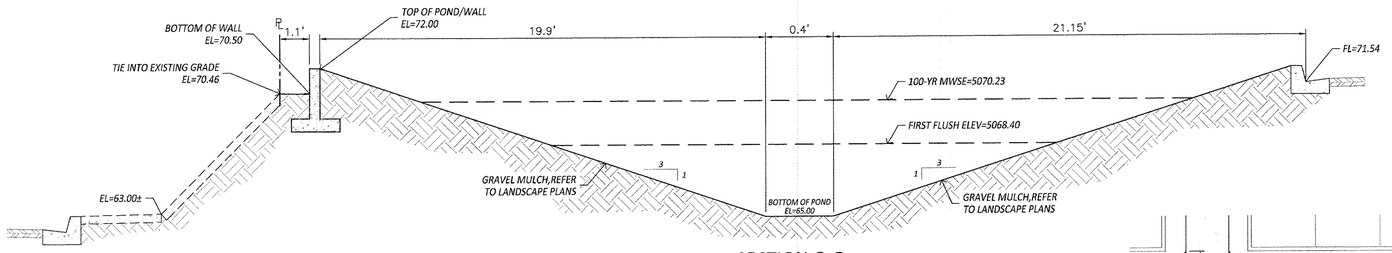

SECTION G-G
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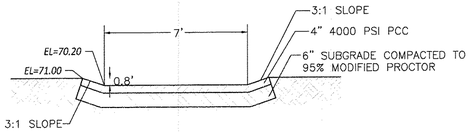

SECTION H-H
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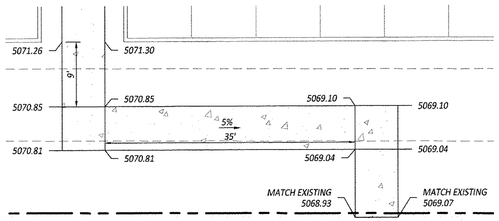
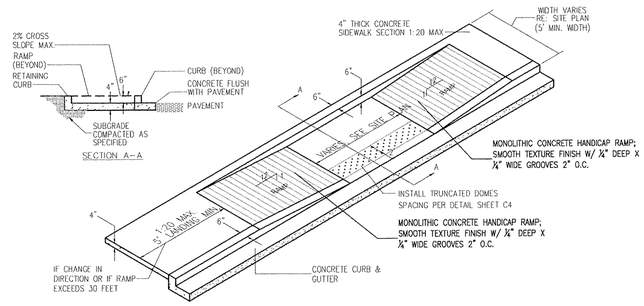
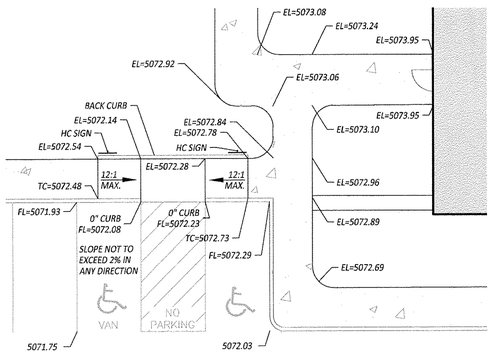


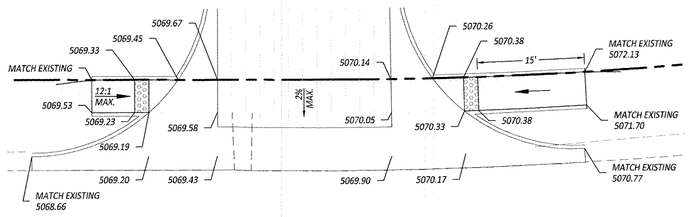
DETAIL "D"
SCALE: 1"=10'



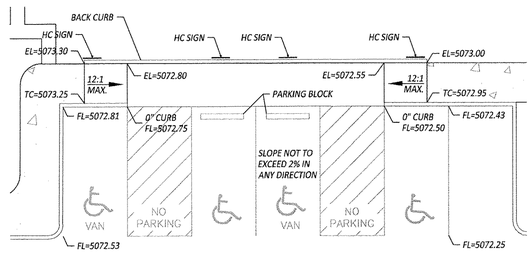
ADA RAMP DETAIL - SEE DETAIL "B" & "C" THIS SHEET
NTS



DETAIL "B"
SCALE: 1"=10'



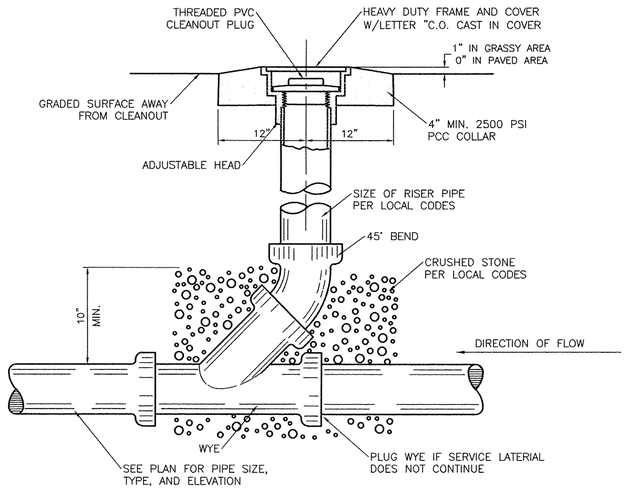
DETAIL "A"
SCALE: 1"=10'



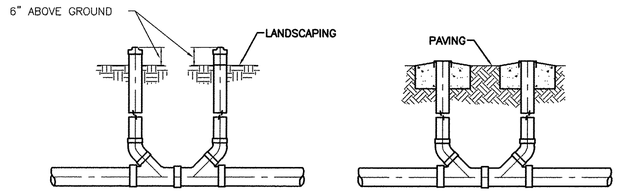
DETAIL "C"
SCALE: 1"=10'

NOTES:
1) *International Symbol of Accessibility shall be painted on the pavement at rear of space, white symbol on blue background.*
2) *Parking space lines and diagonal striping to be painted blue.*
3) *Access aisle shall have the words "NO PARKING" in capital letters, each of which shall be at least one foot high and at least two inches wide, placed at the rear of the parking space so as to be close to where an adjacent vehicle's rear tires would be placed.*
4) *See sheet C5 for HC Parking Sign Detail.*

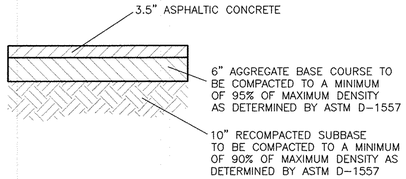
ENGINEER'S SEAL RONALD R BOHANNAN NEW MEXICO 7868 REGISTERED PROFESSIONAL ENGINEER RONALD R. BOHANNAN P.E. #7868	BEHAVIORAL HEALTH HOSPITAL RENAISSANCE CENTER CROSS SECTIONS AND ADA DETAILS	DRAWN BY DY DATE 11/12/18 2017054–SECTIONS
	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858–3100 www.tierrawestllc.com	SHEET # C4 JOB # 2017054



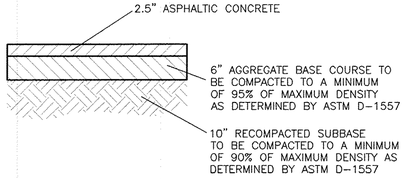
SANITARY SEWER CLEAN-OUT
NTS



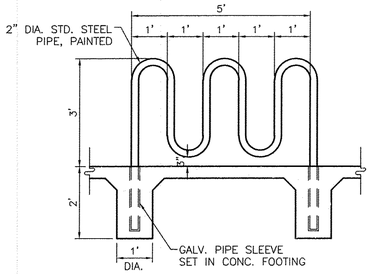
SANITARY SEWER DOUBLE CLEAN-OUTS
NTS



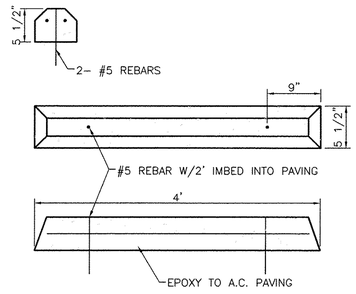
PAVING SECTION - MAIN DRIVE AISLES
NTS



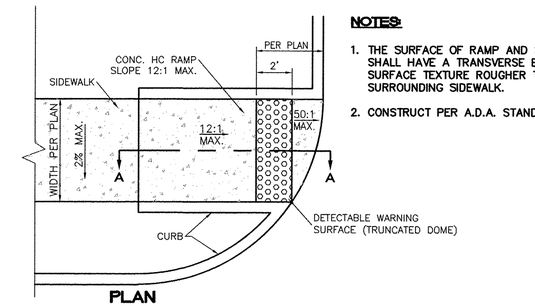
PAVING SECTION - PARKING AREAS
NTS



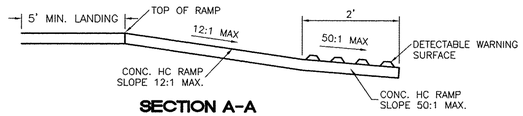
BIKE RACK DETAIL
SCALE: 1/2"=1'



WHEEL BUMPER
NTS



PLAN

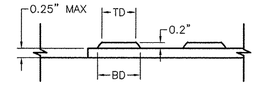


SECTION A-A

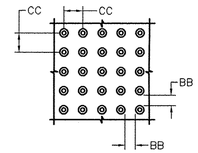
UNIDIRECTIONAL HC RAMP
NOT TO SCALE

NOTES:

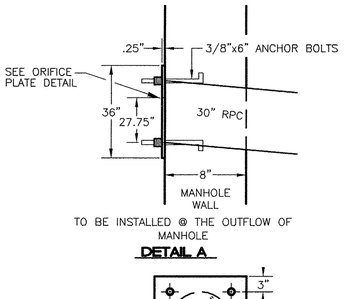
1. **THE SURFACE OF RAMP AND SIDES SHALL HAVE A TRANSVERSE BROOMED SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDEWALK.**
2. **CONSTRUCT PER A.D.A. STANDARDS.**



DOME SECTION
BD – BASE DIAMETER 0.9" MIN
TD – TOP DIAMETER 50% OF BD MIN TO 65% OF BD MAX

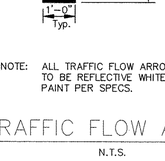


DOME SPACING
CC – CENTER TO CENTER SPACING 2.35"
BB – BASE TO BASE SPACING 1.48" MIN



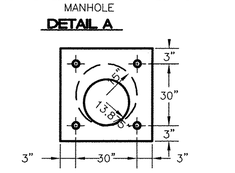
TO BE INSTALLED @ THE OUTFLOW OF MANHOLE

DETAIL A

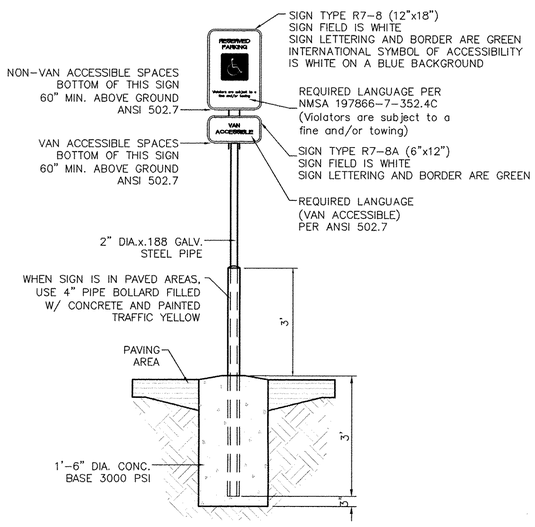


NOTE: ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE WHITE PAINT PER SPECS.

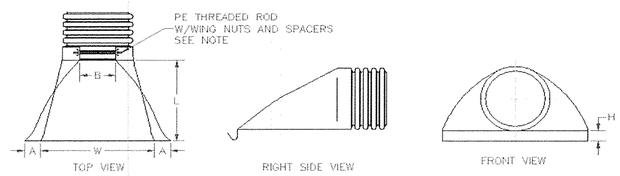
TRAFFIC FLOW ARROW
N.T.S.



27-3/4" ORIFICE PLATE DETAIL
NTS

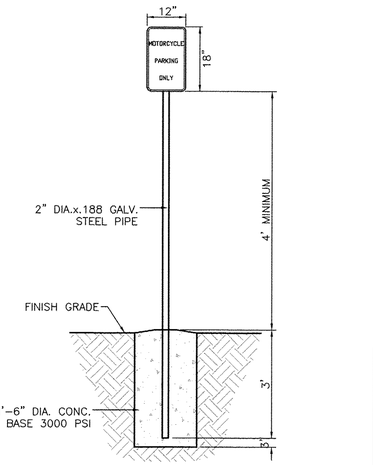


ACCESSIBLE PARKING SIGN
NTS

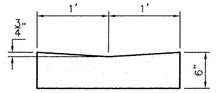


PART #	PIPE SIZE	A	B(MAX)	H	L	W
1015NP	10 in (250 mm)	3.8 in (95 mm)	10.0 in (254 mm)	6.5 in (165 mm)	28.0 in (711 mm)	34.5 in (876 mm)
1215NP	12 & 15 (300 & 375mm)	6.5 in (165 mm)	10.0 in (254 mm)	6.5 in (165 mm)	25.0 in (635 mm)	29.0 in (737 mm)
1810NP	18 in (450 mm)	7.5 in (191 mm)	15.0 in (381 mm)	6.5 in (165 mm)	32.0 in (813 mm)	35.0 in (889 mm)
2410NP	24 in (600 mm)	7.5 in (191 mm)	18.0 in (457 mm)	6.5 in (165 mm)	36.0 in (914 mm)	45.0 in (1143 mm)
3015NP	30 in (750 mm)	7.5 in (191 mm)	12.0 in (305 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)
3615NP	36 in (900 mm)	7.5 in (191 mm)	25.0 in (635 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)

HDPE END SECTION DETAIL
NTS



MOTORCYCLE PARKING SIGN
NTS



CONCRETE VALLEY GUTTER DETAIL
SCALE: 1"=1'

ENGINEER'S SEAL	BEHAVIORAL HEALTH HOSPITAL RENAISSANCE CENTER	DRAWN BY	DY
	DETAIL SHEET	DATE	9/13/18
			2017054-DETAILS
	TIERRA WEST, LLC 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	SHEET #	C5
RONALD R. BOHANNAN P.E. #7868		JOB #	2017054

Z:\2017\2017054 Tract 9A Hospital\dwg\Bldg Permit\2017054-Details.dwg Jan 16, 2019 - 2:21pm