TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

November 4, 1998

Mr. Matt Harrison
Harrison Worldwide Enterprises
6400 Yaupon Drive
Austin, TX 78759

Re: EDWARDS AQUIFER, Comal County
PROJECT: Riverwoods Subdivision, Project number 1030, Located on Riada Drive and Bretzke Lane, New Braunfels, Texas
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §213.5(b); Edwards Aquifer Protection Program

Dear Mr. Harrison:

The Texas Natural Resource Conservation Commission (TNRCC) has completed its review of the WPAP application for the referenced project that was submitted by Edward C. Moore of Loomis & Moore, Inc. on behalf of Harrison Worldwide Enterprises to the San Antonio Regional Office on July 30, 1998. Final review of the WPAP submittal was completed after additional material was received on October 6, 1998, October 20, 1998, October 26, 1998, and October 27, 1998. The WPAP proposed in the application is in general compliance with 30 TAC § 213.5(b); therefore, approval of the plan is hereby granted subject to applicable state rules and the conditions in this approval letter. *This approval expires two (2) years from the date of this approval unless, prior to the expiration date, construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed residential project will have an area of 196.593 acres and will consist of 75 single family residential lots, 10,500 linear feet of 24 foot wide private roadway with concrete ribbon curb built to Comal County standards, and 10,500 linear feet of 8 inch water line to serve the proposed development. Other site improvements will include the construction of electrical, telephone and cable service to each single family lot. In addition, various architectural amenities will be constructed at the entrance of the proposed development including a mail center, private access gate and an entry sign. Concrete culverts will be constructed at the low points of the proposed roads to

convey drainage through the proposed development. Project wastewater for each residence will be treated by a private on-site septic system. According to a July 20, 1998, letter signed by Thomas H. Hornseth, P.E., Comal County Engineer, the land in the development is acceptable for the use of private sewage facilities. The proposed impervious cover for the development is approximately 15.66 acres (7.96%). The site is located within the extra-territorial jurisdiction of the City of New Braunfels, and must conform with applicable codes and requirements of the City of New Braunfels.

GEOLOGY ON SITE

According to the geologic assessment included with the submittal, twenty-six geologic or man-made features were identified. None of the features assessed by the geologist were identified as "sensitive". Six of the features, S-5, S-8, S-20, S-23, S-24, and S-25, were described as being "possibly sensitive". The remaining of the features were identified as being "not sensitive" or having a "low sensitivity".

The San Antonio Regional Office site inspection of September 23, 1998, revealed no geologic or man-made features in addition to those reported in the geologic assessment. The solution cavity features identified as S-23, S-24, and S-25 were observed as having fern growth at the feature openings. Additionally, these features have a subsurface horizontal element not indicated on the geologic assessment table. Based on the observation of these features during the inspection, it appears that features S-23, S-24, and S-25 may be "sensitive".

GEOLOGY DOWNGRADIENT OF SITE

According to the geologic assessment included with the submittal, two main tributaries drain from the site to the Guadalupe River which lies approximately 1,300 feet south of the site. This downgradient area passes through the Riada subdivision and access was denied to the property by the home owners association.

PERMANENT POLLUTION ABATEMENT MEASURES

Six geologic or manmade features on the project site were assessed as being sensitive or possibly sensitive. The permanent pollution abatement measures that will be provided to protect these features are provided in the table below.

Feature ID	Permanent Pollution Abatement Measure	OSSF Separation Distance Proposed	Affected lots
S-5	None proposed -features are upgradient from proposed development	Yes	Phase 1 Lots 4 and 5 and adjacent property
S-8	None proposed-features are upgradient from proposed development	Yes	Phase 2 Lots 7 and 8 and adjacent property
S-20	None proposed	No	Phase 1 Lot 71
S-23	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.	Yes	Phase 1 Lots 63, 64, and 65
S-24	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.	Yes	Phase 1 Lots 63, 64, and 65
S-25	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.	Yes	Phase 1 Lots 63, 64, and 65

SPECIAL CONDITIONS

1. If any potential sensitive features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.

2. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of permanent erosion and sedimentation (E&S) control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

3. The proposed on-site sewage facility (OSSF) must be permitted by a local or the state permitting authority prior to commencement of construction.

4. All planning and design materials for the proposed OSSF shall be submitted by a professional engineer or a sanitarian registered in Texas.

5. A site evaluation shall be conducted by a certified site evaluator possessing a valid certificate beginning August 1, 1998.

6. The following minimum separation distances in feet must be provided between OSSF units and recharge features or possible recharge features:

Sewage Treatment Tanks or Holding Tanks	50
Soil Absorption Systems, & Unlined Evapo-transpiration Beds	150
Lined Evapotranspiration Beds	50
Sewer Pipe with Watertight Joints	50
Surface Irrigation Fields	150
Drip Irrigation Fields	100 when $R_a \leq 0.1$ 150 when $R_a > 0.1$

7. The proposed OSSF must meet all other requirements found in 30 TAC § 285--On-Site Sewage Facilities.

8. The applicant must notify purchasers of each of the lots that certain lots must have the required separation distances. The notification must include a copy of this letter.

STANDARD CONDITIONS

1. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity, upon which that person or entity shall assume responsibility for all provisions and conditions of this approval.

2. Any modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a WPAP to amend this approval, including the payment of appropriate fees and all information necessary for its review and approval.

3. Prior to commencing any regulated activity, the applicant or his agent must notify the San Antonio Regional Office in writing of the date on which the regulated activity will begin.

4. The applicant or his agent shall record this WPAP approval in the county deed records within 30 days of receiving this notice of approval. Proof of deed recordation shall be submitted to the San Antonio Regional Office prior to commencing construction. A suggested format that you may use to deed record the approved WPAP is enclosed.

5. All contractors conducting regulated activities at the project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. If any significant recharge feature [sensitive feature] is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potential adverse impacts to water quality.

8. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

9. Any abandoned wells shall be plugged in accordance with 30 TAC § 338 or an equivalent method, as approved by the Executive Director.

Any drill holes resulting from core sampling on-site or down-gradient of the site shall be plugged with native soil, from the bottom of the hole to the top of the hole, so as to not allow water or contaminants to enter the subsurface environment.

10. Pursuant to §26.136 of the Texas Water Code, any violations of the requirements in 30 TAC §213 may result in administrative penalties.

If you have any questions or require additional information, please contact Lynn M. Bumguardner of the Edwards Aquifer Protection Program at 210/403-4023. Please reference project number 1030.

Sincerely,

Bobby D. Caldwell

for Jeffrey A. Saitas, P.E.
Executive Director

JAS/LMB/eg

Enclosure: Deed Recordation Affidavit

cc: Edward C. Moore, Loomis & Moore, Inc.
Harry Bennett, City of New Braunfels
Tom Hornseth, Comal County
Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations, Austin

Riverforest

~~Riverwoods~~ Subdivision
Water Pollution Abatement Plan

for

The Texas Natural Resource Conservation Commission

Submitted By:

Loomis & Moore, Inc.
3103 Bee Caves Road, Suite 225
Austin, TX 78746

July 2, 1998

GENERAL INFORMATION FORM
FOR
REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §§213.4 & 213.5, EFFECTIVE DECEMBER 27, 1996

PROJECT NAME: Riverwood Subdivision

COUNTY: Comal County STREAM BASIN: Guadalupe River

TYPE: ✓ WPAP ____ AST ____ EXCEPTION
____ SCS ____ UST ____ MODIFICATION

Do not write in this box. TNRCC use only.	
Received by Region	
Fee Due:	$
Payment Verified:	
Inspection Date:	
Judged Administratively ____ complete ____ incomplete	
Written Comments Received From City/County: UWCD within 30 Days:	 __ Yes __ No __ Yes __ No
____ Approved ____ Incomplete and Returned	

APPLICANT INFORMATION

1. Applicant:

Contact Person: Matt Harrison - Project Manager
Entity: Harrison Worldwide Enterprises
Mailing Address: 6400 Yaupon Drive

TNRCC-0587 (2/1/97)

City, State: Austin, Texas Zip: 78759
Telephone: (512) 419-6109 FAX: _____

2. Agent/Representative (If any):

Contact Person: Edward C. Moore, P.E.
Entity: Loomis & Moore, Inc.
Mailing Address: 3103 Bee Caves Road, Suite 225
City, State: Austin, Texas Zip: 78746
Telephone: (512) 327-1180 FAX: (512) 327-4062

PROJECT LOCATION

3. Site Address: 200 acres on Riada Drive northwest of Gruene
Street: Riada Drive
City: New Braunfels Zip: _____

4. ____ This project is inside the city limits of the City of _____.

✓ This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of the City of New Braunfels, Texas.

____ This project is not located within any city's limits or ETJ, but is located within _____ County.

5. The location of the project site is described below. Provide sufficient detail and clarity so that the TNRCC's Regional staff can easily locate the project for a field investigation.

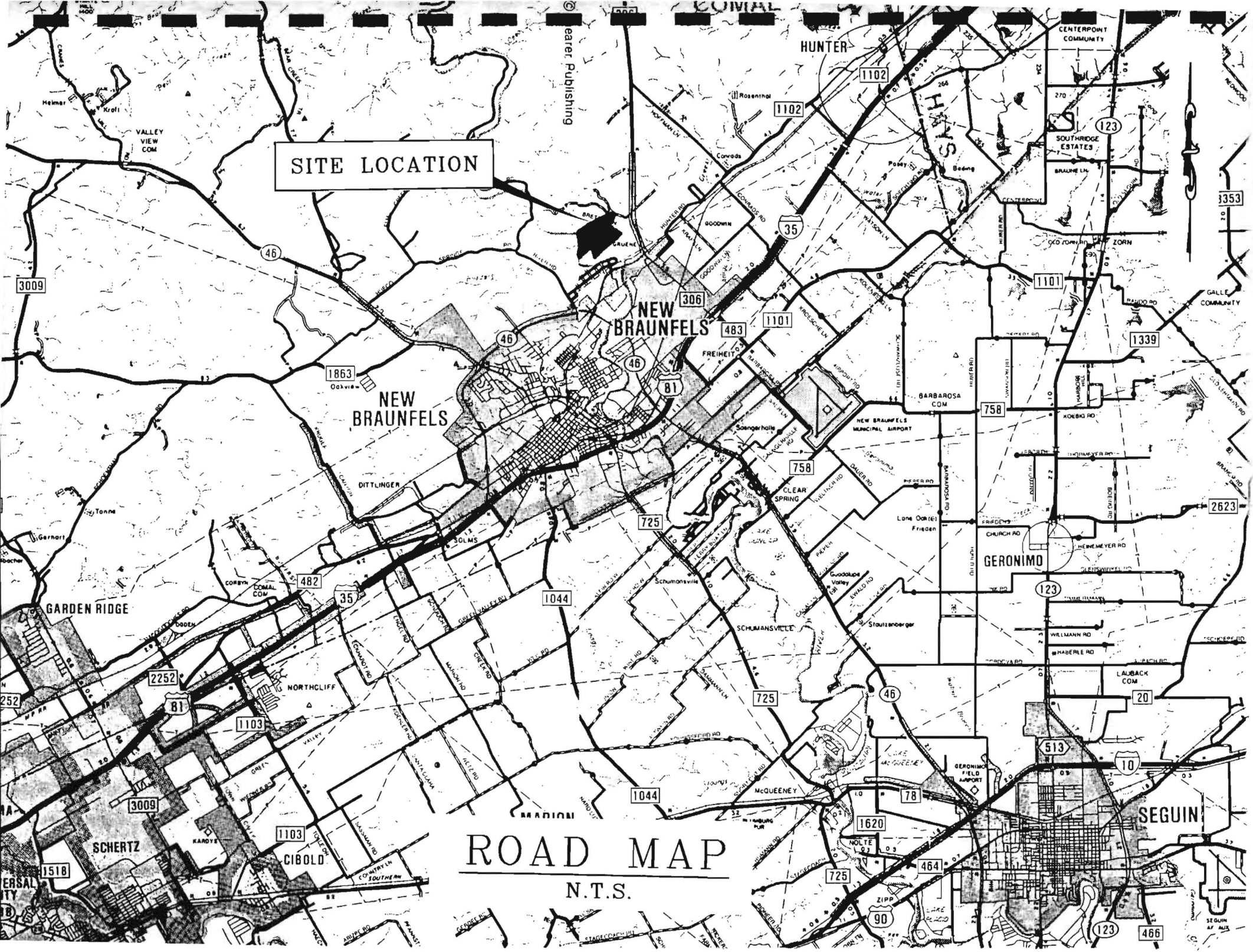
Site is located on Riada Drive northwest of Gruene, Texas

Main Entrance will be approximately 2,100 feet north on

Bretzkel Ln. from the intersection of Riada Dr. & Bretzkel Ln.

ROAD AND RECHARGE ZONE MAPS

6. ✓ A **Road Map** is attached behind this sheet showing directions to and location of project site.


SITE LOCATION
NEW BRAUNFELS
NEW BRAUNFELS
HUNTER
GARDEN RIDGE
SCHERTZ
CIBOLD
NORTHCLIFF
SOLMS
DITTLINGER
SCHUMANSVILLE
McQUEENEY
GERONIMO
SEGUIN
BARBAROSA COM
NEW BRAUNFELS MUNICIPAL AIRPORT
GERONIMO FIELD AIRPORT
CENTERPOINT COMMUNITY
SOUTHRIDGE ESTATES
VALLEY VIEW COM
COMAL COM
LAUBACK COM
GALLE COMMUNITY
CLEAR SPRING
FREIHEIT
Sengerhalle
Schumansville
Guadalupe Valley
Stautzenberger
Lone Oak(e)
Frieden
Rosenthal
Conrads
Posey
Bading
Helmer
Kraft
Oakview
Tonne
Gernert
Doeden
Kardys
Zorn
Zipp
Nolte
Country Ln
Southern
Stagecoach Hill
Seguin Af Aux
Lake McQueeney
Lake Placid
Comal
Bexar
Publishing
©

ROAD MAP

N.T.S.

7. ✓ A copy of the official 7 1/2 minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

- ✓ **Project site.**
- ✓ **USGS Quadrangle Name(s).**
- ✓ **Boundaries of the Recharge Zone (and Transition Zone, if applicable).**
- ✓ **Drainage path from the project to the boundary of the Recharge Zone.**

Recharge/Transition Zone Maps are available from:
Accugraphics 512/459-4929
Barton Springs/Edwards Aquifer Con. District 512/282-8441
Edwards Aquifer Authority 210/222-2204
Ferguson Map Company 210/829-7629

8. ✓ Sufficient survey staking is provided on the project to allow TNRCC regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TNRCC must be able to inspect the project site or the application will be returned.**

PROJECT DESCRIPTION

9. ✓ A detailed narrative description of the proposed project is provided directly behind this page.

10. Existing project site conditions are noted below:

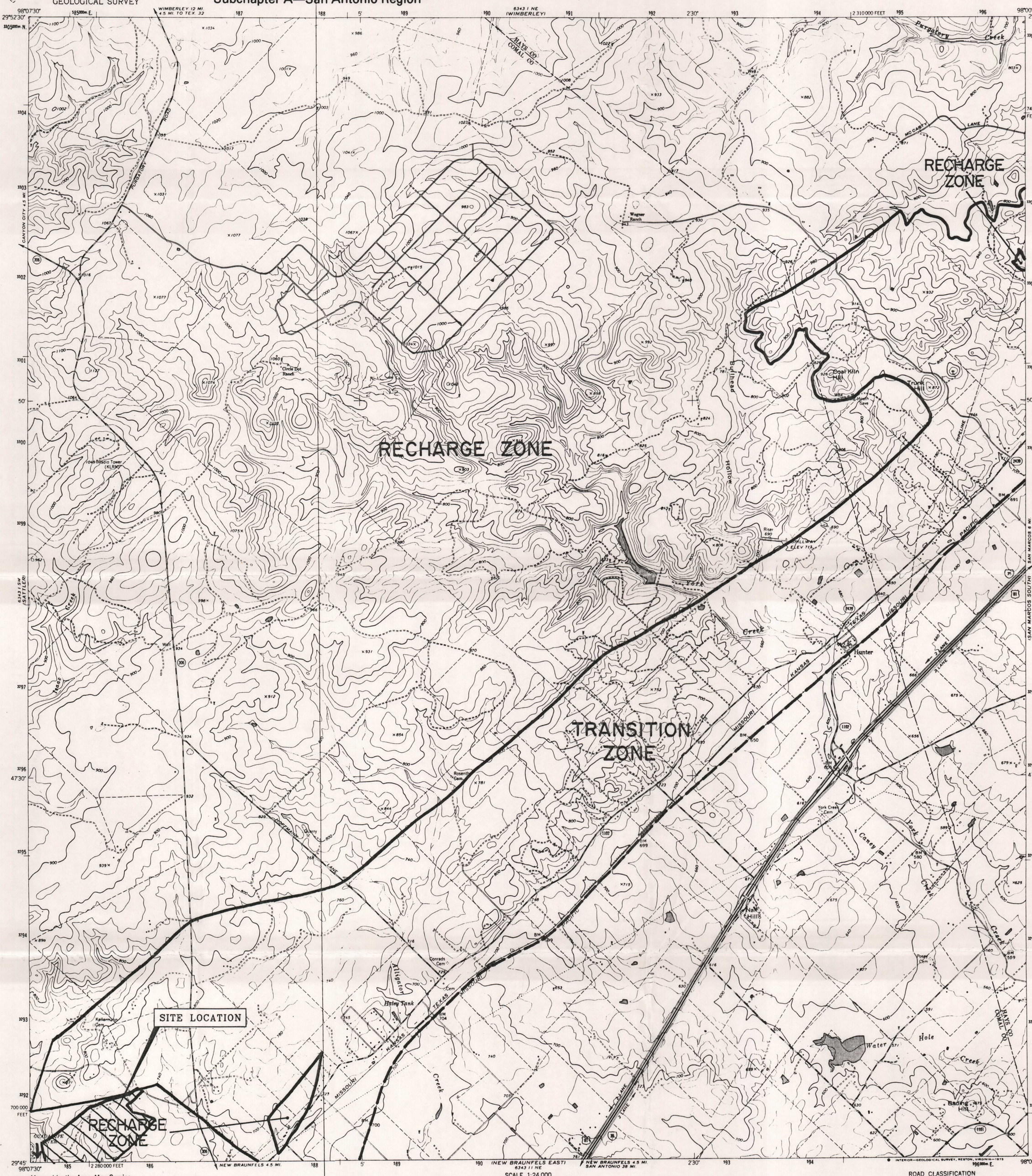
____ Existing commercial site
____ Existing industrial site
____ Existing residential site
____ Existing paved and/or unpaved roads
____ Undeveloped (Cleared)
✓ Undeveloped (Undisturbed/Uncleared)
____ Other: _____

SOLID AND HAZARDOUS WASTES

Official Edwards Aquifer Recharge Zone Map
31 Texas Administrative Code Chapter 313
Subchapter A—San Antonio Region

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HUNTER QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped by the Army Map Service
Edited and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1958. Field checked by USGS 1964

Polyconic projection. 1927 North American datum
10,000-foot grid based on Texas coordinate system, south central zone
1000-metre Universal Transverse Mercator grid ticks, zone 14, shown in blue

Fine red dashed lines indicate selected fence lines

Area covered by dashed light blue pattern are subject to controlled inundation

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1973. This information not field checked

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U. S. Route — State Route

HUNTER, TEX.
N2945—W9800/7.5

1964
PHOTOREVISED 1973
AMS 6343 I SE—SERIES V882

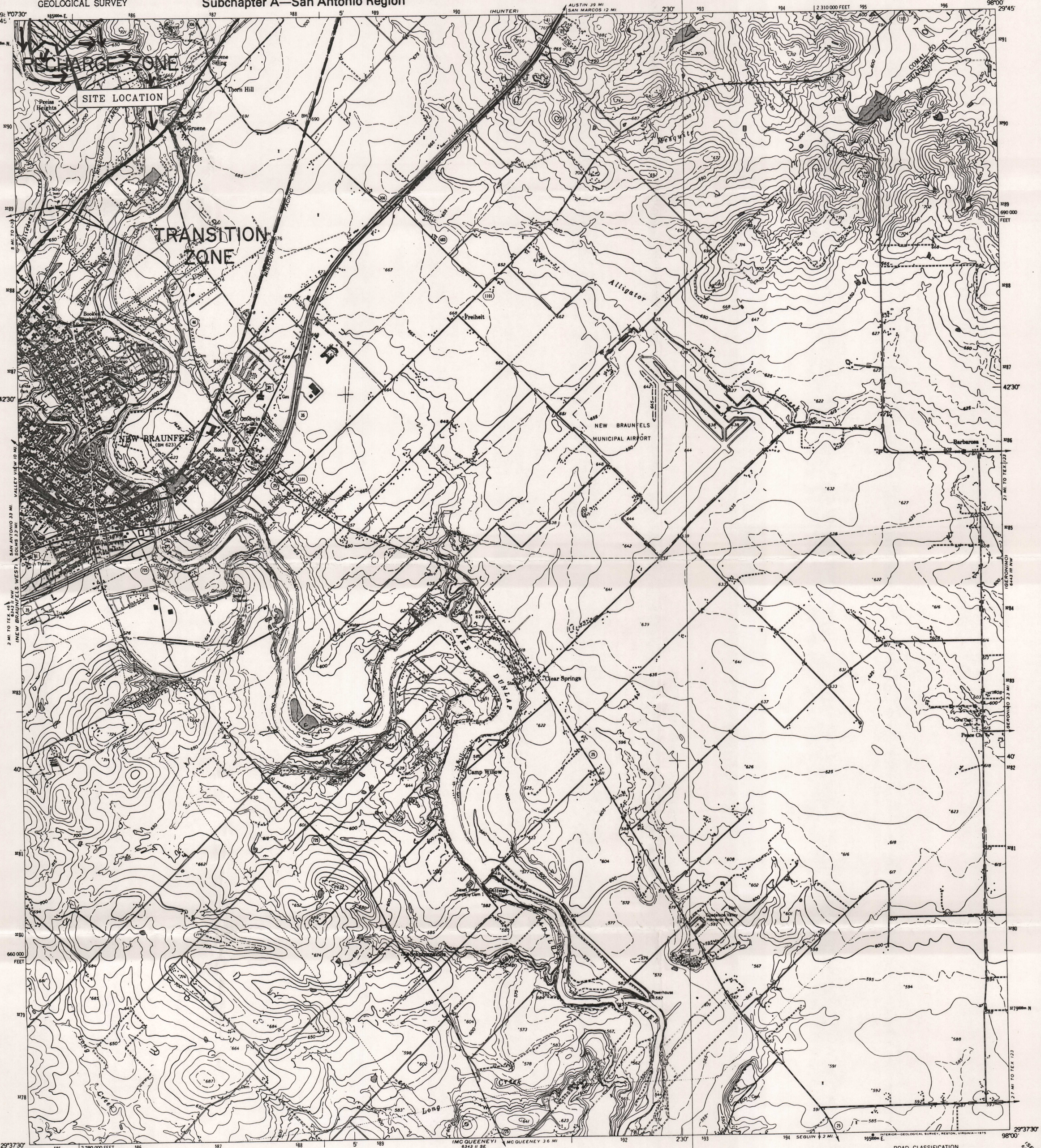
2998-441

11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Official Edwards Aquifer Recharge Zone Map
31 Texas Administrative Code Chapter 313
Subchapter A—San Antonio Region

NEW BRAUNFELS EAST QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped by the Army Map Service
Published for civil use by the Geological Survey

Control by USGS, NOS/NOAA, and USCE

Topography from aerial photographs by photogrammetric methods
Aerial photographs taken 1956. Field check 1958

Polyconic projection. 1927 North American datum
10,000-foot grid based on Texas coordinate system, south central zone
1000-metre Universal Transverse Mercator grid ticks, zone 14, shown in blue

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1973. This information not field checked

Purple tint indicates extension of urban areas

MN
GN
0°28'
8 MILS
8½°
151 MILS

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETRE

CONTOUR INTERVAL 10 FEET
DASHED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION

ROAD CLASSIFICATION

Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U. S. Route — State Route

NEW BRAUNFELS EAST, TEX.

N2937.5—W9800/7.5

1958
PHOTOREVISED 1973
AMS 6343 II NE SERIES V882

2998-414

9

Project Description

The project consists of a single-family residential development located on 196.593 acres in Comal County in the Extra-Territorial Jurisdiction of the City of New Braunfels, Texas. The proposed development includes:

1. 75 single family residential lots;
2. 10,500 linear feet of 24' wide private roadway with concrete ribbon curb built to Comal County standards;
3. 10,500 linear feet of 8" waterline to serve the proposed development.

Other site improvements will include construction of electrical, telephone and cable service to each single-family lot. In addition, various architectural amenities will be constructed at the entrance of the proposed development including a mail center, private access gate and an entry sign. Concrete culverts will be constructed at the low points of the proposed roads to convey drainage through the proposed development.

11. Solid wastes and/or hazardous wastes:

____ There are areas of trash, debris or other solid waste and hazardous waste on this property which will be disposed of properly at an authorized facility prior to commencing construction.

_✓_ There are no areas of trash, debris or other solid waste or hazardous waste existing on this property.

____ Other. A narrative description is provided directly behind this page.

12. Will there be any on-site land disposal of Municipal Solid Waste as defined in 30 TAC §330?

____ Yes

_✓_ No

PROHIBITED ACTIVITIES

13. _✓_ I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:

(1) waste disposal wells regulated under 30 TAC §331 of this title (relating to Underground Injection Control);
(2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
(3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
(4) the use of sewage holding tanks as parts of organized collection systems; and
(5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

14. _✓_ I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:

(1) waste disposal wells regulated under 30 TAC §331 (relating to Underground Injection Control);
(2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
(3) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are

defined in §330.41 (b), (c), and (d) of this title.

ADMINISTRATIVE INFORMATION

15. Under 30 TAC §213.14, application fees are due and payable at the time the application is filed. I understand that if the correct fee is not submitted, the TNRCC is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

    ____ Austin central office
    ____ Austin regional office (for projects in Hays, Travis, and Williamson Counties)
    ✓ San Antonio regional office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

16. ✓ One (1) original and three (3) copies of the completed application shall be submitted to the appropriate Regional Office for distribution by the TNRCC to the local municipality or county, groundwater conservation districts, and the TNRCC's Central Office.

17. ✓ All items required for this development, as listed in the **APPLICATION GUIDELINES**, are attached.

18. As applicant for the proposed project I am aware that:

    ✓ **It is the applicant's responsibility to use the current TNRCC Edwards Aquifer application forms.**
    ✓ The executive director must declare that the application is administratively complete or deficient within 30 days of receipt by the appropriate regional office and must complete the review of an application within 90 days after determining that it is administratively complete. Grounds for a deficient application include, but are not limited to, failure to pay all applicable application fees.

    ✓ No person shall commence any regulated activity until a Water Pollution Abatement Plan for such activity has been filed with and approved by the TNRCC.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **GENERAL INFORMATION FORM** is hereby submitted for TNRCC review. The application was prepared by:

Edward C. Moore

Print Name of Applicant/Owner/Agent

Edward C. Moore

Signature of Applicant/Owner/Agent

7·2·98

Date

GEOLOGIC ASSESSMENT
FOR
REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE/TRANSITION ZONES
AND RELATING TO 30 TAC §213.5(b)(3), EFFECTIVE DECEMBER 27, 1996

PROJECT NAME: Riverwoods

TYPE OF PROJECT: ✔ WPAP ___ AST ___ SCS ___ UST

PROJECT INFORMATION

1. Project is on the: ✔ Recharge Zone ___ Transition Zone ___ Both

Recharge Zone Boundary:

___ The Recharge Zone boundary is located on-site. **This Geologic Assessment includes a description of the geologic or manmade features identified on-site.**
___ The Recharge Zone boundary is located within the downgradient area.
✔ The Recharge Zone boundary is not located within the downgradient area.

2. **100-year floodplain boundaries**:

___ The 100-year floodplain is located on-site. This Geologic Assessment includes a description of the geologic or manmade features identified on-site and within the 100-year floodplain downgradient of the site for a distance of one-half mile or to the Recharge Zone boundary, whichever is less.
✔ The 100-year floodplain is located downgradient of the site within a distance of one-half mile or the Recharge Zone boundary, whichever is less. This Geologic Assessment includes a description of the geologic or manmade features identified on-site and within the 100-year floodplain downgradient of the site for a distance of one-half mile or to the Recharge Zone boundary, whichever is less.
___ No part of the area downgradient of the site is located within the 100-year floodplain. This Geologic Assessment includes a description of the geologic or manmade features identified on-site.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
FIRM 485463 0105 C, 29 September 1986

3. ___ This project is part of a multi-phase project. The Geologic Assessment is site specific and covers only that area undergoing review at this time.
✔ This is not a multi-phase project.

4. ✔ Geologic or manmade features are described and evaluated using the attached GEOLOGIC ASSESSMENT TABLE.

5. Soil cover on the project site is 0 to 2.0 feet thick. In general, the soil present appears to have the ability to:

✔ transmit fluid flow to the subsurface.
___ impede fluid flow to the subsurface.

6. ✔ A **stratigraphic column(s)** is attached **directly behind this page**. The outcropping unit is at the top of the stratigraphic column.

7. ✔ A narrative description of the site specific geology for this project is provided directly behind this page.

8. ✔ Appropriate Geologic Map(s) are provided:

SITE GEOLOGIC MAP

The Site Geologic Map must be the same scale as the applicant's Site Plan.

Applicant's Site Plan Scale	1" = 200'
Site Geologic Map Scale	1" = 200'

Items 9 through 13 must be included on the Site Geologic Map.

9. ✔ The Project Site is shown and labeled.

10. ✔ Surface Geologic Units are shown and labeled.

11. **Geologic or manmade features.**

✔ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the SITE Geologic Map and are described in the attached Geologic Assessment Table.
___ Geologic or manmade features were not discovered on the project site during the field investigation.

12. ✔ The Recharge Zone boundary and the 100-year floodplain is shown and labeled, if appropriate.

STRATIGRAPHIC COLUMN
RIVERWOODS

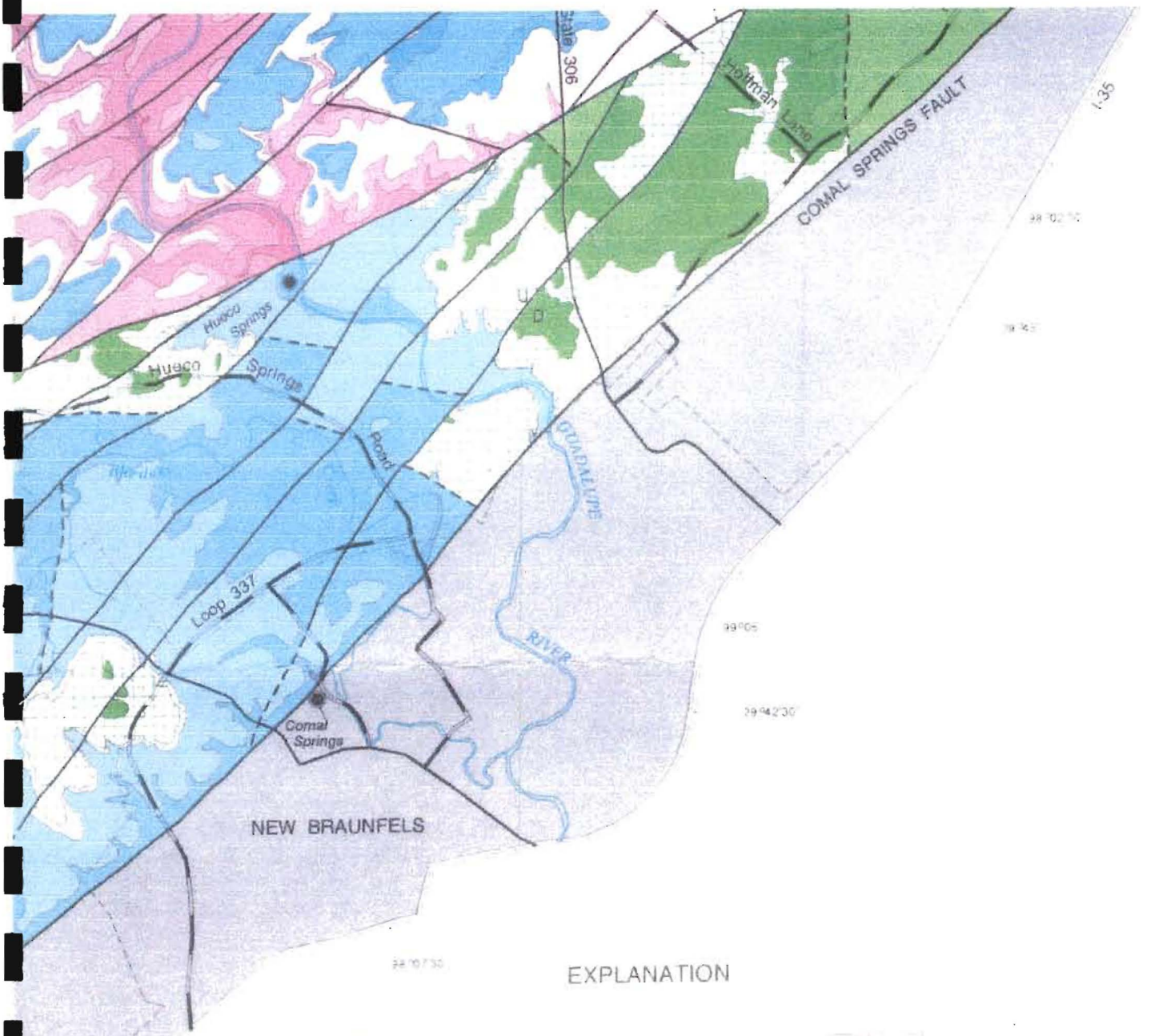
Formation	Member	Lithology	Thickness (feet)
Person	Cyclic and marine (undivided)	Mudstone to packstone; miliolid grainstone; chert	80 -100
Person	Leached & collapsed (undivided)	Crystalline limestone, mudstone to grainstone; chert; collapsed breccia	80 - 100
Person	Regional dense	Dense, argillaceous mudstone	20 - 24
Kainer	Grainstone	Grainstone; mudstone to wackestone; chert	50 - 60
Kainer	Kirschberg evaporite	Highly altered crystalline limestone; chalky mudstone; chert	50 - 60
Kainer	Dolomitic	Mudstone to grainstone; crystalline limestone; chert	110 - 130
Kainer	Basal Nodular	Shaly, nodular limestone; mudstone and grainstone	50 - 60
Glen Rose	Upper	Thinly bedded limestone and marl	350 - 500

RIVERWOODS
GEOLOGIC NARRATIVE

Riverwoods is underlain by the Person Formation. The geologic map of Comal County mistakenly shows the northeastern portion of the site to be underlain by the Del Rio Clay and the Georgetown Formation. The cyclic and marine members (undivided) of the Person Formation are present on the site.

The Edwards Group is about 440 feet thick in Comal County and consists of limestone with chert in the form of nodules, lenses and discontinuous beds. The cyclic and marine members, undivided consist of variably burrowed mudstone, grainstone, and crystalline limestone with chert lenses common. The cyclic member was reportedly eroded prior to the deposition of the Georgetown Formation. The remaining marine member consists of medium to thick beds of mudstone and fossiliferous packstone.

The leached and collapsed members (undivided), which underlie the cyclic and marine members) has vuggy and burrow porosity and permeability assisted with burrowed zones; breccia and cavern porosity and permeability associated with collapsed zones resulting from dissolution of evaporites; and fracture porosity and permeability associated with faulting. The regional dense member, below the leached and collapsed members, has little porosity or permeability except for some fracture porosity and permeability associated with faulting.



EXPLANATION

UPPER CRETACEOUS
UPPER CONFINING UNITS

- NAVARRO AND TAYLOR GROUPS UNDIVIDED
- AUSTIN GROUP
- EAGLE FORD GROUP
- BUDA LIMESTONE
- DEL RIO CLAY

LOWER CRETACEOUS
EDWARDS AQUIFER
EDWARDS GROUP
KAINER FORMATION

- V GRAINSTONE MEMBER
- VI KIRSCHBERG EVAPORITE MEMBER
- VII DOLOMITIC MEMBER
- VIII BASAL NODULAR MEMBER
- UPPER MEMBER OF THE GLEN ROSE LIMESTONE (LOWER CONFINING UNIT)

EDWARDS AQUIFER
EDWARDS GROUP
PERSON FORMATION

- I GEORGETOWN FORMATION
- II CYCLIC AND MARINE MEMBERS UNDIVIDED
- III LEACHED AND COLLAPSED MEMBERS UNDIVIDED
- IV REGIONAL DENSE MEMBER

HYDROGEOLOGIC SUBDIVISIONS I - VIII
Modified from Maclay and Small (1976)

U / D — PRIMARY FAULT
U, upthrown; D, downthrown

INFERRED FAULT

3 MILES

METERS

13. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

__ There are __(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
- __ The wells are not in use and have been properly abandoned.
- __ The wells are not in use and will be properly abandoned.
- __ The wells are in use and comply with 30 TAC §238.

✔ There are no wells or test holes of any kind known to exist on the project site.

DOWNGRADIENT GEOLOGIC MAP N/A

Downgradient Geologic Map Scale 1" = 400'

Items 14 through 16 must be included on the Downgradient Geologic Map.

14. __ Surface Geologic Units are shown and labeled.

15. **Geologic or manmade features**:

* Geologic or manmade features were discovered within the downgradient area. They are shown and labeled on the Downgradient Geologic Map and described in the attached Geologic Assessment Table.

__ No geologic or manmade features were discovered within the downgradient area.

16. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

__ There are __(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
- __ The wells are not in use and have been properly abandoned.
- __ The wells are not in use and will be properly abandoned.
- __ The wells are in use and comply with 30 TAC §238.

__ There are no wells or test holes of any kind known to exist on the project site.

* Access denied by home owners of Riada Subdivision.

ADMINISTRATIVE INFORMATION

17. ✔ One (1) original and three (3) copies of the following forms, in the order listed below, have been provided.
- *** THIS FORM**
- *** GEOLOGIC ASSESSMENT TABLE ****
- *** SITE GEOLOGIC MAP**
- *** DOWNGRADIENT GEOLOGIC MAP, if needed**

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **GEOLOGIC ASSESSMENT** is hereby submitted for TNRCC review. The application was prepared by:

Date(s) Geologic Assessment was performed: April 6,9,17,23; June 6, 8, 1998

Boyd V. Dreyer
Print Name of Geologist

(512) 312-0714
Telephone

(512) 295-2307
FAX

6/30/98
Signature of Geologist

Date

Representing: GeoConsul, 12520 Taylor Dr., Buda, TX 78610
(Name of Company)

GEOLOGIST'S COMMENTS
RIVERWOODS

SITE

Riverwoods is underlain by the Person Formation. The geologic map of Comal County mistakenly shows the northeastern portion of the site to be underlain by the Del Rio Clay. The cyclic and marine members (undivided) of the Person Formation are present on the site.

SITE FEATURES

Feature ID	Type	Comment
S-1	SC	Three small solution cavities exist in close proximity. Two (2) have dimensions of 3' x 3' x 1' and one (1) has the dimensions of 1' x 1' x 0.5'. Features are filled with fine grained materials.
S-2	SC	Feature is a solution cavity approximately 6' x 6' x 1'. Feature may be developed along fracture planes orientated N 75 E and N 4 W. Feature is filled with fine grained material.
S-3	SC	Feature is a solution cavity approximately 2' x 6 'x 1.5'. Feature may be developed along fracture planes orientated N 75 E and N 3 W. Feature is filled with fine grained material.
S-4	CD	Feature is a closed depression approximately 4' x 4' x 1.5'. Feature is filled with fine grained material.
S-5	CD	Feature is a closed depression approximately 4' x 4' x 2' orientated N 40 E with a solution cavity of approximately 3' x 3' x 2' within the CD.' Feature is filled with fine and coarse grained material.
S-6	CD	Feature is a closed depression approximately 7' x 7' x 1.5'. Feature is filled with fine grained material.
S-7	SC	Feature is four (4) small solution cavities, each being approximately 1' x 1' x 1'. Feature are filled with fine grained material.
S-8	VR	Feature is an exposure of vuggy rock approximately 40' x 40'. Vugs are up to 12" diameter with spacing less than 2" with some vugs interconnected. Vugs are filled with fine grained materials.
S-9	SC	Feature is a solution cavity approximately 4' x 4 'x 1.5'. Feature may be developed along fracture planes orientated N 75 W. Feature extends in a horizontal direction approximately 2.5'. Feature is filled with fine grained material.

S-10	SC	Feature is a solution cavity approximately 2' x 3' x 1'. Feature is filled with fine grained material.
S-11	SC	Feature is a solution cavity approximately 2' x 3' x 1'. Feature is filled with fine grained material.
S-12	SC	Feature is a solution cavity approximately 3' x 4' x 1.5'. Feature is filled with fine grained material.
S-13	SC	Feature is a solution cavity approximately 2' x 3' x 1.5'. Feature is filled with fine grained material.
S-14	CD	Feature is a closed depression approximately 3' x 8' x 1' with a solution cavity of approximately 1' x 1.5' x 1' within the CD.' Feature is filled with fine grained material.
S-15	SC	Feature is a solution cavity approximately 1' x 2' x 2'. Feature may be developed along fracture planes orientated N 20 W. Feature is filled with fine grained material.
S-16	VR	Feature is an exposure of vuggy rock approximately 20' x 40'. Vugs are up to 4" diameter with spacing grater than 4". Vugs are not interconnected. Vugs are filled with fine grained materials.
S-17	SC	Feature is a solution cavity approximately 1.5' x 1.5' x 1'. Feature is filled with fine grained material.
S-18	CD	Feature is a closed depression approximately 6' x 10' x 2'. Feature is orientated N 70 W and is filled with fine grained material.
S-19	CD	Feature is a closed depression approximately 4' x 4' x 1.5'. Feature is filled with fine grained material.
S-20	MM	Feature is several rock filled depressions and/or voids found along the fence line which had been previously cleared by a dozer. Depressions and voids may have been the result of dislodging of boulders. the largest area is approximately 10' x 3' by an unknown depth due to being filled with rock.
S-21	SC	Feature is a solution cavity approximately 3' x 3' x 1'. Feature is filled with fine grained material.
S-22	SC	Feature is a solution cavity approximately 3' x 3' x 2'. Feature is filled with fine grained material.
S-23	SC	Feature is a solution cavity approximately 2' x 2' x 3'. Feature is open and probably extends horizontally.
S-24	SC	Feature is a solution cavity approximately 2' x 3' x 3'. Feature is open and extends horizontally 10+ ft..

S-25	SC	Feature is a small solution cavity approximately 1' x 1' x 1'. Feature is approximately 20' north of S-23 & 24 and probably is interconnected. Feature is open and probably extends horizontally.
S-26	SC	Feature is a solution cavity approximately 1' x 1' x 2'. Feature is filled withcoarse and fine grained materials.

DOWNGRADIENT AREA

Two main tributaries drain from the site to the Guadalupe River which lies approximately 1,300 feet south of the site. This downgradient area passes through the Riada subdivision and access was denied to the property by the home owners association.

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Riverwoods

FEATURE ID			FEATURE CHARACTERISTICS																							PHYSICAL SETTING													
1A	1B	1C	2	3			4			5	6		7			8			9				10			11	12			13				14					15	16			17
LOCATION	TYPE (1)	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VF)			APERTURE (FR, VR)			INFILLING (CD, FR, FZ, SC, SH, VR)				RELATIVE INFILTRATION RATE			SUB-TOTAL	SENSITIVITY			DRAINAGE AREA (ACRES)				TOPOGRAPHY (2)					SUB-TOTAL	POTENTIAL RECHARGE			COM-MENTS
				C, CD, SC, SH			C, SC			FZ, FR, VR, Z		10	0	5	10	0	5	10	0	5	10	15	0	10	30					0	5	10	15	0	5	10	15	20					
				X	Y	Z	X	Y	Z		DIRECTION	DOMINANT	LOW	MODERATE	HIGH	SMALL	MEDIUM	LARGE	CEMENTED	FINE	COARSE	NONE	NONE/LOW	MODERATE	HIGH		NOT <25	POSSIBLE 25 - 60	SENSITIVE >60	<1	<10	<50	>50	WALL	HILLTOP	HILLSIDE	FLOODPLAIN	STREAM BED		NONE/LOW <15	MODERATE 15 -20	HIGH >20	YES
S-1	SC	10	Kep	3	3	1					N 82 E									5			0			15	15			0						10			10	10			Y
S-2	SC	10	Kep	6	6	1					N 75 E									5			0			15	15			0						10			10	10			Y
S-3	SC	10	Kep	2	6	1.5					N 75 E									5			0			15	15			0						10			10	10			Y
S-4	CD	10	Kep	4	4	1.5					NONE									5			0			15	15			0						10			10	10			Y
S-5	CD	10	Kep	4	4	2					N 40 E	10									10		0			30		30		0						10			10	10			Y
S-6	CD	10	Kep	7	7	1.5					NONE									5			0			15	15			0						10			10	10			Y
S-7	SC	10	Kep	1	1	1					NONE									5			0			15	15				10					10			20		20		Y
S-8	VR	0	Kep							40 X 40					10			10		5			0			25		25			10					10			20		20		Y
S-9	SC	10	Kep	4	4	1.5					N 75 W									5			0			15	15				10					10			20		20		Y
S-10	SC	10	Kep	2	3	1					NONE									5			0			15	15				10					10			20		20		Y
S-11	SC	10	Kep	2	3	1					NONE									5			0			15	15				10					10			20		20		Y
S-12	SC	10	Kep	3	4	1.5					NONE									5			0			15	15				10					10			20		20		Y
S-13	SC	10	Kep	2	3	1.5					NONE									5			0			15	15				10					10			20		20		Y
S-14	CD	10	Kep	3	8	1					NONE									5			0			15	15				10					10			20		20		Y
S-15	SC	10	Kep	1	2	2					N 20 W									5			0			15	15				10					10			20		20		Y
S-16	VR	0	Kep							40 X 20			0					10		5			0			15	15				10					10			20		20		Y
S-17	SC	10	Kep	1.5	1.5	1					NONE									5			0			15	15				10					10			20		20		Y
S-18	CD	10	Kep	6	10	2					N 70 W									5			0			15	15				10					10			20		20		Y
S-19	CD	10	Kep	4	4	1.5					NONE									5			0			15	15				10					10			20		20		Y

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

Geologist signature

6-30-98

Date

(2) WALL = Vertical/near veritical wall above 100-yr floodplain
FLOODPLAIN = 100-yr floodplain
STREAM BED = Ordinary High Water Mark

Sheet 1 of 2

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Riverwoods

FEATURE ID			FEATURE CHARACTERISTICS																								PHYSICAL SETTING													
1A	1B	1C	2	3			4			5	6		7			8			9				10			11	12			13				14					15	16			17
LOCATION	TYPE (1)	POINTS	GEOLOGIC FORMATION	VERTICAL FEATURE (FEET)			HORIZONTAL FEATURE (FEET)			LENGTH & WIDTH (FEET)	TREND (C, CD, FR, FZ, SC, SH)		DENSITY (FR, VF)			APERTURE (FR, VR)			INFILLING (CD, FR, FZ, SC, SH, VR)				RELATIVE INFILTRATION RATE			SUB-TOTAL	SENSITIVITY			DRAINAGE AREA (ACRES)				TOPOGRAPHY (2)					SUB-TOTAL	POTENTIAL RECHARGE			COM-MENTS
				C, CD, SC, SH			C, SC			FZ, FR, VR, Z		10	0	5	10	0	5	10	0	5	10	15	0	10	30					0	5	10	15	0	5	10	15	20					
				X	Y	Z	X	Y	Z		DIRECTION	DOMINANT	LOW	MODERATE	HIGH	SMALL	MEDIUM	LARGE	CEMENTED	FINE	COARSE	NONE	NONE/LOW	MODERATE	HIGH		NOT <25	POSSIBLE 25 - 60	SENSITIVE >60	<1	<10	<50	>50	WALL	HILLTOP	HILLSIDE	FLOODPLAIN	STREAM BED		NONE/LOW <15	MODERATE 15 -20	HIGH >20	YES
S-20	MM	35	Kep																									35		0						10			10	10			Y
S-21	SC	10	Kep	3	3	1					NONE									5			0			15	15			0						10			10	10			Y
S-22	SC	10	Kep	3	3	2					NONE									5			0			15	15				5					10			15		20		Y
S-23	SC	10	Kep	2	2	3					NONE											15			30	55		55		0						10			10	10			Y
S-24	SC	10	Kep	2	3	3					NONE											15			30	55		55		0						10			10	10			Y
S-25	SC	10	Kep	1	1	1					NONE											15			30	55		55		0						10			10	10			Y
S-26	SC	10	Kep	1	1	2					NONE										10		0			20	20			0						10			10	10			Y

I have read, understood, and followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

Geologist signature 6-30-98 Date

(2) WALL = Vertical/near veritical wall above 100-yr floodplain
FLOODPLAIN = 100-yr floodplain
STREAM BED = Ordinary High Water Mark

Sheet 2 of 2

RIVERWOODS

LANDATA GEO SERVICES

PHOTOGRAMMETRIC, GIS, AND CARTOGRAPHIC SPECIALISTS

3411 Bankwood Drive • San Antonio, Texas 78220 • (210) 684-5247 • FAX (210) 684-2884

APPROX. 200 ACRES

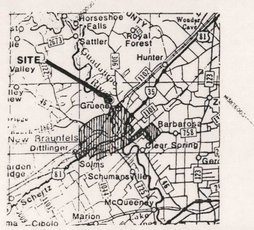
SITE LOCATED ON RIADA DRIVE NORTWEST OF GRUENE, TEXAS

MAP SCALE: 1" = 200' CONTOUR INTERVAL: 2'

DATE OF PHOTOGRAPHY: OCT. 16 1997 VERTICAL DATUM: NGVD 29

HORIZONTAL DATUM: TEXAS STATE PLANE - NAD 83

LGS JOB: NO 5478 SHEET NO. 1 OF 1



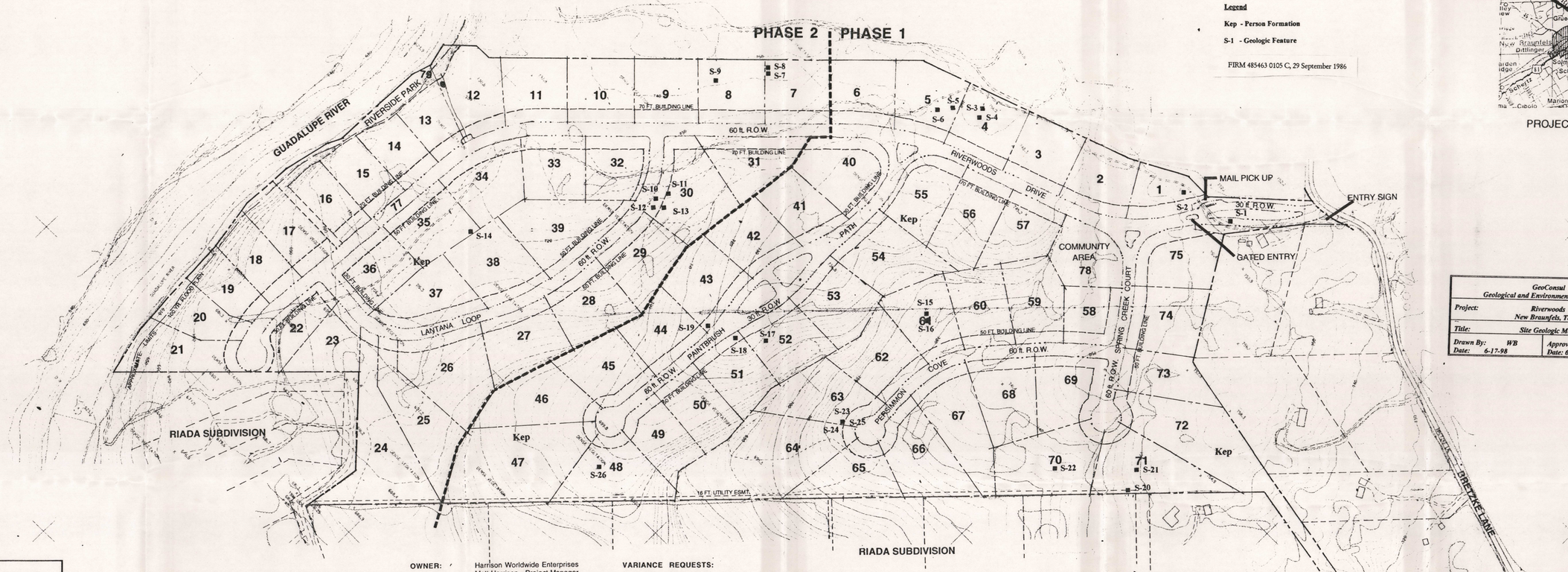
PROJECT LOCATION

Legend

Kep - Person Formation

S-1 - Geologic Feature

FIRM 485463 0105 C, 29 September 1986



GeoConsul Geological and Environmental Consultants	
Project: Riverwoods New Braunfels, Texas	
Title: Site Geologic Map	
Drawn By: WB Date: 6-17-98	Approved By: BD Date: 6-17-98

4 ACRES

0 100 200 400 FT

THE ORIGINAL SCALE IS 1"=200'

2/26/98

Prepared by:

SLA Studio Land Inc.

Planners/landscape Architects

OWNER: Harrison Worldwide Enterprises
Matt Harrison - Project Manager
6400 Yaupon Drive
Austin, TX 78759

ENGINEER: Craig Holmig and Associates
410 N. Seguin
New Braunfels, TX 78130

PLANNER: SLA Studio Land
308B Congress Avenue
Austin, TX 78701

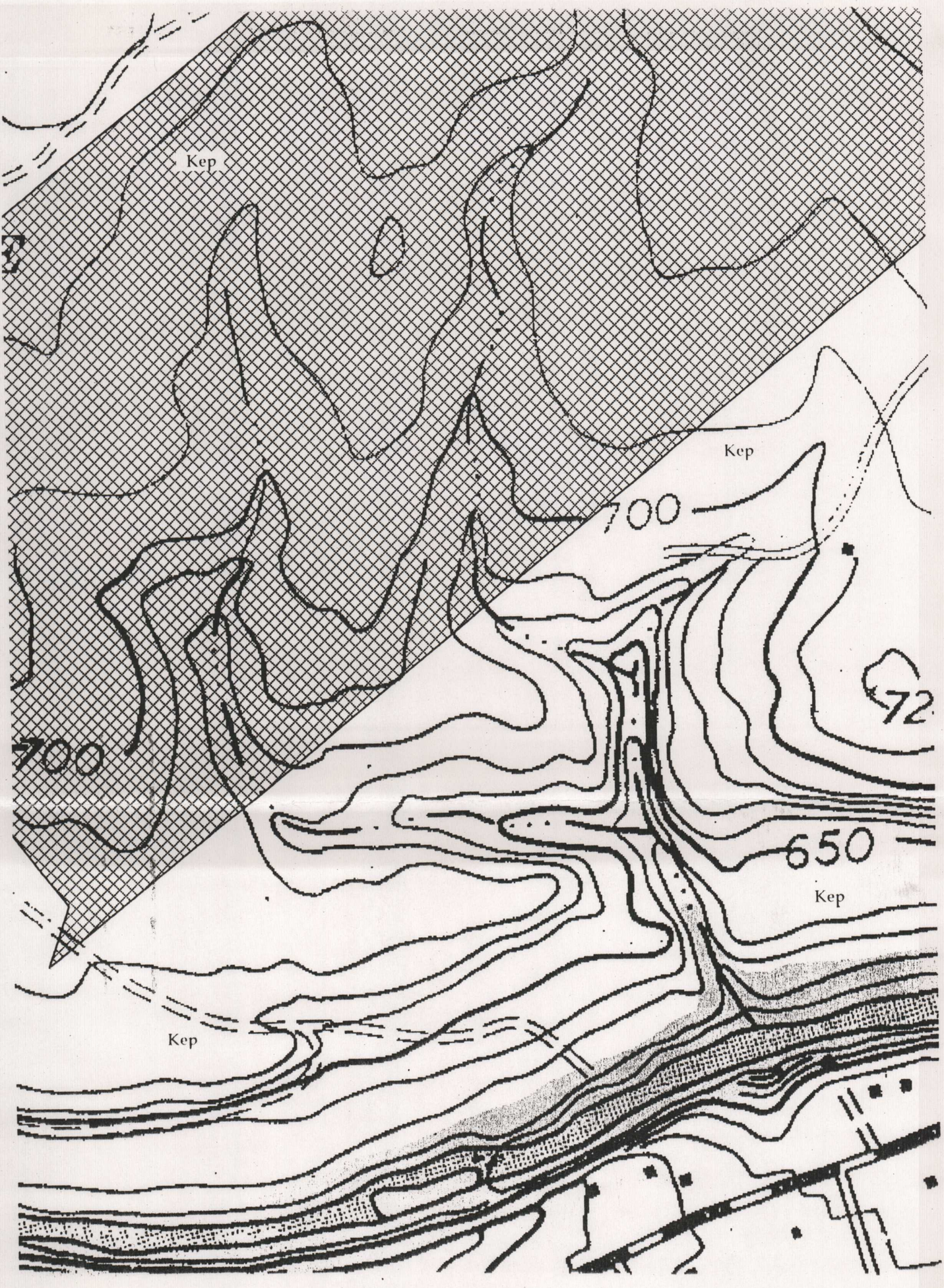
VARIANCE REQUESTS:

1. Cul de sac length on Spring Creek Court and Paint Brush Path due to topographic constraints.
2. County standard private streets (see detail)
3. Gated community.

NOTE:

1. Entire tract falls within the City of New Braunfels ETJ.
2. Proposed zoning is not required due to the fact that the tract lies outside the corporate limits of the City of New Braunfels.

DENSITY: 75 Single family dwelling units



Scale: 1″ = 400′

Legend:

- 100-yr. Flood Plain
- Kep - Person Formation
- Site

N

FIRM 485463 0106 C 17 June 1986
City of New Braunfels

GeoConsul *Geological and Environmental Consultants*	
Project: **Riverwoods New Braunfels, Texas**	
Title: **Downgradient Geological Map**	
Plate: **I**	*Project:* **98007**
Drawn By: **WB** *Date:* **6/27/98**	*Approved By:* **BD** *Date:* **6/27/98**

WATER POLLUTION ABATEMENT PLAN APPLICATION
FOR
CONSTRUCTION OF REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §213.5(b), EFFECTIVE DECEMBER 27, 1996

PROJECT NAME: Riverwoods Subdivision

PROJECT INFORMATION

1. The type of project is:
   ✓ Residential: # of Lots: 75
   ____ Residential: # of Living Unit Equivalents: _____
   ____ Commercial
   ____ Industrial
   ____ Other: _____

2. Total Acreage (Size of project): 196.593

3. Projected population: 75 lots x 3.5 persons = 263

4. The amount and type of impervious cover is shown below:

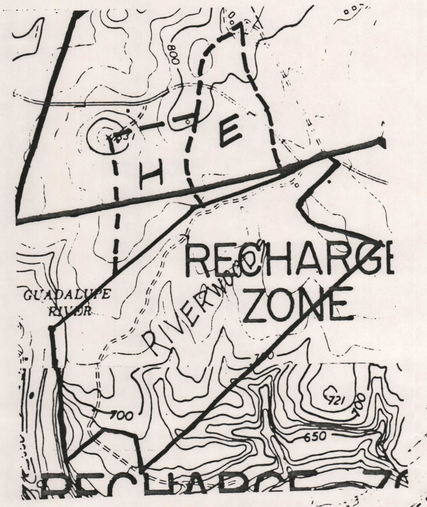
Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops		÷ 43,560 =	
Parking/Paved Surfaces	282,762	÷ 43,560 =	6.49
Other:		÷ 43,560 =	
Total Impervious Cover	282,762	÷ 43,560 =	6.49
Total Impervious Cover ÷ Total Acreage x 100 =			3.30 %

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

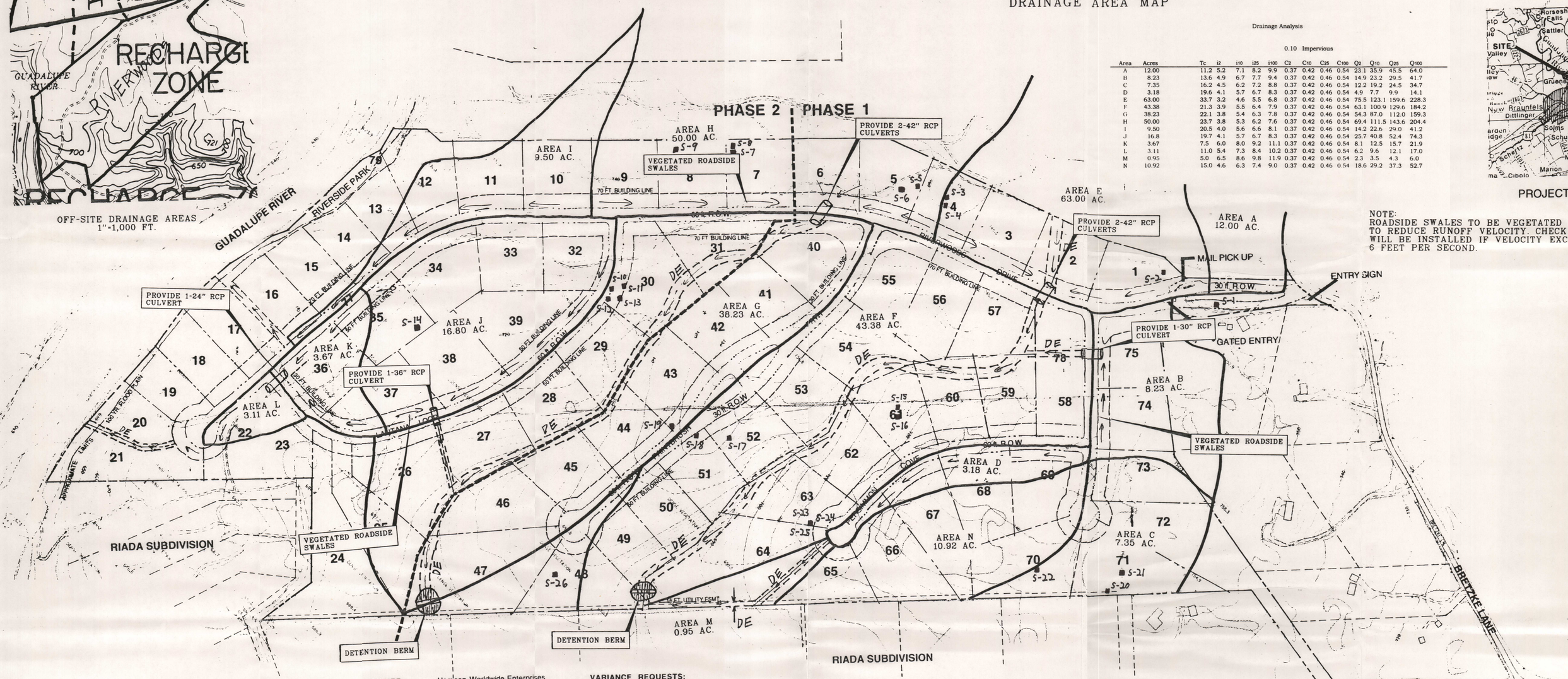
5. A description of the character and volume of the stormwater runoff which is expected to occur from the proposed project is attached directly behind this page. (See Drainage Area Map)

RIVERWOODS

DRAINAGE AREA MAP



OFF-SITE DRAINAGE AREAS
1"=1,000 FT.

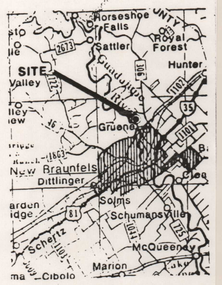


Drainage Analysis

0.10 Impervious

Area	Acres	Tc	i2	i10	i25	i100	C2	C10	C25	C100	Q2	Q10	Q25	Q100
A	12.00	11.2	5.2	7.1	8.2	9.9	0.37	0.42	0.46	0.54	23.1	35.9	45.5	64.0
B	8.23	13.6	4.9	6.7	7.7	9.4	0.37	0.42	0.46	0.54	14.9	23.2	29.5	41.7
C	7.35	16.2	4.5	6.2	7.2	8.8	0.37	0.42	0.46	0.54	12.2	19.2	24.5	34.7
D	3.18	19.6	4.1	5.7	6.7	8.3	0.37	0.42	0.46	0.54	4.9	7.7	9.9	14.1
E	63.00	33.7	3.2	4.6	5.5	6.8	0.37	0.42	0.46	0.54	75.5	123.1	159.6	228.3
F	43.38	21.3	3.9	5.5	6.4	7.9	0.37	0.42	0.46	0.54	63.1	100.9	129.6	184.2
G	38.23	22.1	3.8	5.4	6.3	7.8	0.37	0.42	0.46	0.54	54.3	87.0	112.0	159.3
H	50.00	23.7	3.8	5.3	6.2	7.6	0.37	0.42	0.46	0.54	69.4	111.5	143.6	204.4
I	9.50	20.5	4.0	5.6	6.6	8.1	0.37	0.42	0.46	0.54	14.2	22.6	29.0	41.2
J	16.8	19.7	4.1	5.7	6.7	8.3	0.37	0.42	0.46	0.54	25.7	40.8	52.4	74.3
K	3.67	7.5	6.0	8.0	9.2	11.1	0.37	0.42	0.46	0.54	8.1	12.5	15.7	21.9
L	3.11	11.0	5.4	7.3	8.4	10.2	0.37	0.42	0.46	0.54	6.2	9.6	12.1	17.0
M	0.95	5.0	6.5	8.6	9.8	11.9	0.37	0.42	0.46	0.54	2.3	3.5	4.3	6.0
N	10.92	15.0	4.6	6.3	7.4	9.0	0.37	0.42	0.46	0.54	18.6	29.2	37.3	52.7

LANDATA GEO
PHOTOGRAMMETRIC, GIS AND CARTOGRA
APPROX. 200 A
SITE LOCATED ON RIADA DRIVE NORTHWE
MAP SCALE 1" = 200'
DATE OF PHOTOGRAPHY OCT. 10,1997 VER
HORIZONTAL DATUM TEXAS STATE PLANE -
LGS JOB NO. 5478



PROJECT LOCATI

NOTE:
ROADSIDE SWALES TO BE VEGETATED TO REDUCE RUNOFF VELOCITY. CHECK DAMS WILL BE INSTALLED IF VELOCITY EXCEEDS 6 FEET PER SECOND.

0 100 200 400 FT
SCALE IS 1"=200'

Prepared by:
SLA Studio Land Inc.
Planners/landscape Architects

OWNER: Harrison Worldwide Enterprises
Matt Harrison - Project Manager
6400 Yaupon Drive
Austin, TX 78759

ENGINEER: Craig Holmig and Associates
410 N. Seguin
New Braunfels, TX 78130

PLANNER: SLA Studio Land
308B Congress Avenue
Austin, TX 78701

VARIANCE REQUESTS:

1. Cul de sac length on Spring Creek Court and Paint Brush Path due to topographic constraints.
2. County standard private streets (see detail).
3. Gated community.

NOTE:

1. Entire tract falls within the City of New Braunfels ETJ.
2. Proposed zoning is not required due to the fact that the tract lies outside the corporate limits of the City of New Braunfels.

DENSITY: 75 Single family dwelling units

LM Loomis & Moore, Inc.
Engineering, Planning and Environmental Services
3103 Bee Caves Road • Suite 225 • Austin Texas 78746 (512) 327-1180

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

6. The character and volume of wastewater is shown below:

100	% Domestic	18,000	gallons/day
____	% Industrial	_____	gallons/day
____	% Commingled	_____	gallons/day
	TOTAL	18,000	gallons/day

7. Wastewater will be treated by:

✓ **On-Site** Sewage Facility (OSSF/Septic Tank):
An on-site sewage facility will be used to treat and dispose of the wastewater. The **appropriate licensing authority's written approval is attached directly behind this page.** It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.

✓ I verify that each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a registered engineer or sanitarian and installed by a licensed installer in compliance with 30 TAC §285.

____ Sewage Collection System (Sewer Lines):

____ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

____ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

____ The SCS was previously submitted on _____.

____ The SCS was submitted with this application.

____ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to executive director approval.

The sewage collection system will convey the wastewater to the _____ (name) Treatment Plant. A letter from the owner of the Treatment Plant indicating that the plant has sufficient capacity and accepting the wastewater is attached directly behind this page.

Comal County

OFFICE OF COMAL COUNTY ROAD DEPARTMENT

July 20, 1998

Mr. Matt Harrison
Harrison Worldwide Enterprises
6400 Yaupon Drive
Austin, TX 78759

Re: Proposed subdivision, RIVERFOREST, within Comal County, Texas

Dear Mr. Harrison:

We have completed the field inspection of the referenced for the recommendation for private sewage facilities and have found the proposed subdivision to be approved with the condition that individual septic systems permits shall be required for the lots within this subdivision.

Please be advised that these individual permits will be required to meet 30 TAC 285.40, SubChapter E. (copy attached) Please specifically reference the one acre minimum lot size and 150 foot distance requirement to recharge features.

Should you have any questions, please feel free to contact us.

Sincerely,

Thomas H. Hornseth, P.E.
Comal County Engineer

4931 Highway 46 W. • New Braunfels, Texas 78132-3760 • (830) 608-2090 • FAX (830) 608-2009

8. N/A All private service laterals will be inspected as required in 30 TAC 213.5(c)(3)(I).

SITE PLAN

Items 9 through 16 must be included on the Site Plan.

9. The Site Plan must have a minimum scale of 1" = 400'.
   Site Plan Scale: 1" = 200 '.

10. ✓ **Layout of the development** (Location of lots, recreation centers, buildings, roads, etc.) is shown and labeled.

11. N/A A narrative description of any on-site chemical storage is provided directly behind this page.

12. **Geologic or manmade features** which are associated with this project:

    ✓ All **geologic or manmade** features identified in the Geologic Assessment are shown and labeled. Features associated with this project are those located on-site and those located either one-half mile downgradient or to the Recharge Zone boundary, whichever is shorter, and within the 100-year floodplain.

    ____ **No geologic or manmade features** were identified in the Geologic Assessment.

    ____ A Geologic Assessment is not required; however, **geologic or manmade** features were found and are shown and labeled.

    ____ A Geologic Assessment is not required and no **geologic or manmade** features were found.

13. ✓ Existing topographic contours are shown and labeled. The contour interval is 2 feet. (Contour interval must not be greater than 5 feet).

14. ____ **Finished topographic contours** are shown and labeled. The contour interval is _____ feet. (Contour interval must not be greater than 5 feet).

    ✓ Finished topographic contours will not differ from the existing topographic configuration and are not shown.

15. **100-year floodplain boundaries**

✓ **Some part**(s) of the project site is located within the 100-year floodplain and is shown and labeled.

____ **No part** of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following **specific** (including date of material) sources(s):
FEMA Flood Insurance Rate Panel #485463 0105 C,
Date September 29, 1986

16. **All known wells** (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

____ There are ____(#) wells present on the project site and the locations are **shown and labeled**. (Check all of the following that apply)

____ The wells are not in use and have been properly abandoned.

____ The wells are not in use and will be properly abandoned.

____ The wells are in use and comply with 30 TAC §238.

✓ There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

17. ✓ One (1) original and three (3) copies of the following forms, in the **order listed below**, have been provided.

* **GENERAL INFORMATION FORM**
* **GEOLOGIC ASSESSMENT**
* **THIS FORM**
* **TEMPORARY STORMWATER SECTION**
* **PERMANENT STORMWATER SECTION**
* **All THE ADDITIONAL REQUIREMENTS LISTED ON THE APPLICATION GUIDELINES**
* **AGENT AUTHORIZATION FORM, if submitted by agent**
* **FEE FORM**

18. **Any modification of this WPAP will require TNRCC approval, prior to construction, and may require submission of a revised application, with appropriate fees.**

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated

activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION** is hereby submitted for TNRCC review. The application was prepared by:

Edward C. Moore

Print Name of Applicant/Owner/Agent

Edwl C. Moore

Signature of Applicant/Owner/Agent

7-2-98

Date

TEMPORARY STORMWATER SECTION
FOR
REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §213.5(b)(4), EFFECTIVE DECEMBER 27, 1996

PROJECT NAME: Riverwoods Subdivision

PROJECT DESCRIPTION

1. Geologic or manmade features identified on the project site in the geologic assessment are shown below:

#[1]	Feature Type	Relative Infiltration Rate (refer to Geologic Assessment)	Sensitivity Of Feature	Temporary Pollution Abatement Measures (Design attached at the end of this form)
S-1	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-2	SC	None/Low	Not	None. Feature is upgradient of proposed construction.
S-3	SC	None/Low	Not	None. Feature is upgradient of proposed construction.
S-4	CD	None/Low	Not	None. Feature is upgradient of proposed construction.
S-5	CD	None/Low	Possible	None. Feature is upgradient of proposed construction.
S-6	CD	None/Low	Not	None. Feature is upgradient of proposed construction.
S-7	SC	None/Low	Not	None. Feature is upgradient of proposed construction.
S-8	VR	None/Low	Possible	None. Feature is upgradient of proposed construction.
S-9	SC	None/Low	Not	None. Feature is upgradient of proposed construction.
S-10	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-11	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-12	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-13	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-14	CD	None/Low	Not	Silt fence will be placed upslope of the feature.

S-15	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-16	VR	None/Low	Not	Silt fence will be placed upslope of the feature.
S-17	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-18	CD	None/Low	Not	Silt fence will be placed upslope of the feature.
S-19	CD	None/Low	Not	Silt fence will be placed upslope of the feature.
S-20	MM	None/Low	Possible	Silt fence will be placed upslope of the feature.
S-21	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-22	SC	None/Low	Not	Silt fence will be placed upslope of the feature.
S-23	SC	High	Possible	Silt fence will be placed upslope of the feature.
S-24	SC	High	Possible	Silt fence will be placed upslope of the feature.
S-25	SC	High	Possible	Silt fence will be placed upslope of the feature.
S-26	SC	None/Low	Not	Silt fence will be placed upslope of the feature.

1. If there are no features present, enter NONE in this column.

POTENTIAL SOURCES OF CONTAMINATION

2. If asphalt is to be used for paving, roofing, etc. describe measures that will be taken during construction to prevent seal coat, emulsion, or other asphaltic products from washing off the project site.

   ____ No asphalt products will be used on this project.

   ✓ Asphalt products will be used on this project. After placement of asphalt, emulsion or coatings, the applicant will be responsible for immediate clean-up should an unexpected rain occur. For the duration of the asphalt product curing time, the applicant should maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur.

   ____ Other Measures. A narrative description is provided directly behind this page.

3. Fuels for construction equipment and hazardous substances which will be used during construction:

____ Aboveground storage tanks with a cumulative storage capacity of less that 250 gallons will be stored on the site for less than one (1) year. A lined earthen berm providing 150% containment is recommended for the temporary aboveground fuel storage tank.

____ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year. A lined earthen berm providing 150% containment will be provided for temporary aboveground fuel storage.

____ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Hydrocarbon and Hazardous Substance Application** must be submitted to the appropriate Regional Office of the TNRCC prior to moving the tanks onto the project.

✓ Fuels and hazardous substances will be provided by an off-site facilities.

4. ✓ A description of the measures that will be taken to contain any spill of hydrocarbons or hazardous substances is provided directly behind this page.

5. ✓ **No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.**

6. ✓ Construction equipment/vehicles will be limited, where possible, to traveling within the limits of the project site. Any soil, mud, etc. carried from the project onto public roads will be cleaned up within 24 hours.

7. ✓ All soil, sand, gravel and excavated materials stockpiled on-site will have appropriately sized erosion and sedimentation controls placed downgradient.

8. ✓ Intentional release of vehicle or equipment fluids onto the ground is prohibited. Contaminated soil resulting from accidental spills will be removed and disposed of properly.

9. ✓ All waste construction material and debris will be disposed of properly at an authorized facility.

Hazardous Materials Containment Measures

Although no construction equipment fuel will be stored on-site, periodic refueling of the construction equipment will be required throughout construction. It is assumed that the all re-fueling will occur from a fuel tanker truck that will be onsite during the re-fueling procedure only. The TNRCC will be notified immediately concerning any hazardous material spill. In case of a spill or accident during the re-fueling or other process involving hazardous material, the contractor will immediately use whatever means is acceptable to the TNRCC to contain the material. The hazardous material will then be collected and taken to an approved TNRCC disposal facility. The contractor will follow all TNRCC rules, regulations and procedures for the notifying, containment and disposal of any hazardous material spill. All actions taken during a hazardous material spill will be documented and recorded per the TNRCC rules and regulations.

10. ____ Other potential sources of contamination. A narrative description is provided directly behind this page.
✓ The are no other potential sources of contamination.

SITE PLAN

Items 11 through 15 must be included on the Site Plan.

11. ✓ Layout of development (Location of lots, buildings, roads, etc.) is shown and labeled.

12. Temporary pollution abatement measures for Sensitive Features:

✓ Geologic or manmade features and temporary pollution abatement measures are shown and labeled.
____ There are no geologic or manmade features associated with this project.
____ No geologic assessment is required.

13. ✓ Stabilized Construction Exits are shown and labeled.

14. Appropriate temporary erosion and sedimentation controls are shown and labeled:

✓ Silt fences (for drainage areas <2 acres)
✓ Rock berms (for drainage areas <5 acres)
____ Sedimentation basins (drainage <100 acres)

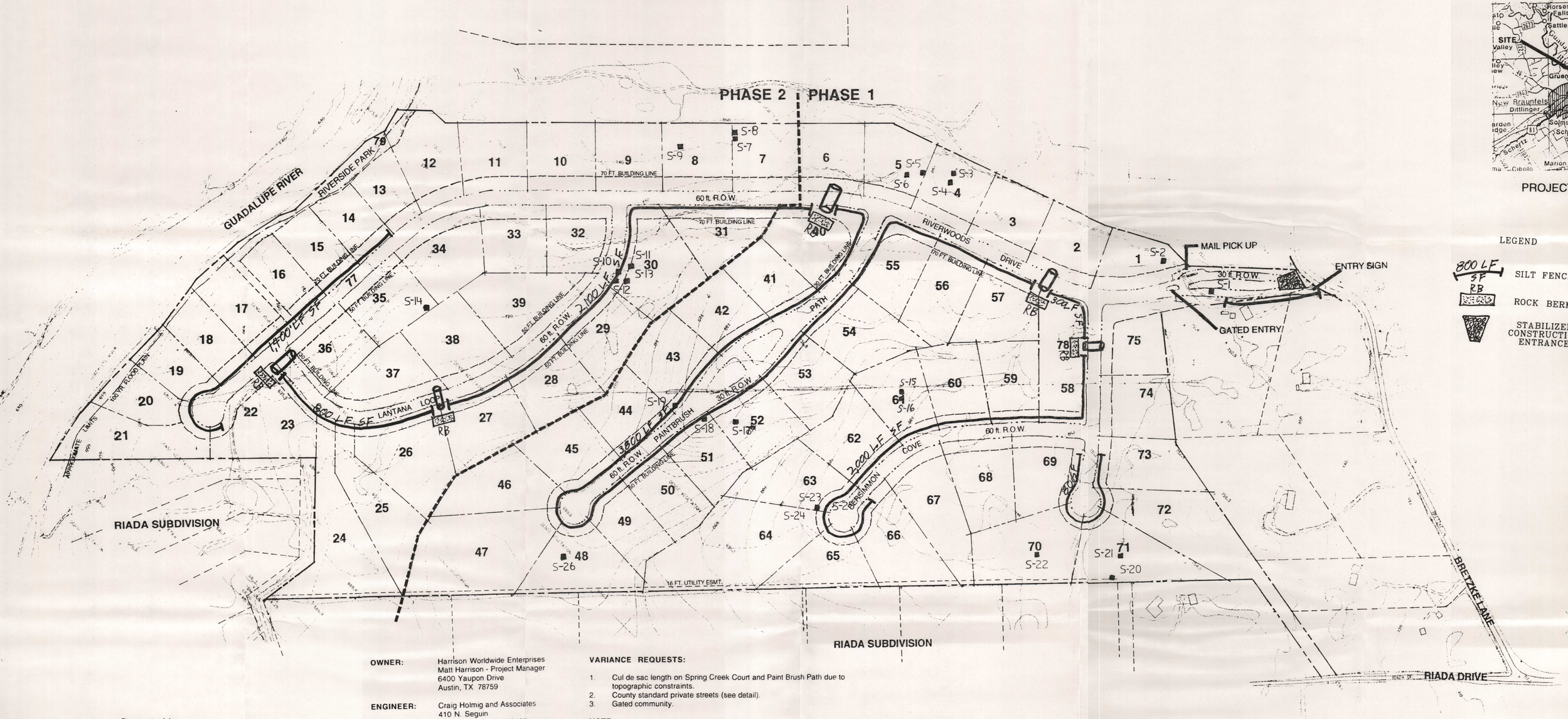
____ Other measures. A narrative description is provided directly behind this page.

15. Measures to be taken to prevent pollution of stormwaters **originating on-site or upgradient** of the site.

____ Stormwater will be directed around the project site with diversion berms/channels/swales labeled on the TEMPORARY WPAP Site Plan. Approval has been obtained from the appropriate regulating authority.
✓ Stormwater flow from upgradient will **flow across** the project site. A narrative description is provided directly behind this page. (See Drainage Area Map)
____ Other measures are shown and labeled on the TEMPORARY WPAP Site Plan. A narrative description is provided directly

RIVERWOODS

TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN



0 100 200 400 FT

SCALE IS 1"=200'

Prepared by:

SLA Studio Land Inc.

Planners/landscape Architects

OWNER: Harrison Worldwide Enterprises
Matt Harrison - Project Manager
6400 Yaupon Drive
Austin, TX 78759

ENGINEER: Craig Holmig and Associates
410 N. Seguin
New Braunfels, TX 78130

PLANNER: SLA Studio Land
308B Congress Avenue
Austin, TX 78701

VARIANCE REQUESTS:

1. Cul de sac length on Spring Creek Court and Paint Brush Path due to topographic constraints.
2. County standard private streets (see detail).
3. Gated community.

NOTE:

1. Entire tract falls within the City of New Braunfels ETJ.
2. Proposed zoning is not required due to the fact that the tract lies outside the corporate limits of the City of New Braunfels.

DENSITY: 75 Single family dwelling units

LANDATA GE

PHOTOGRAMMETRIC, GIS AND CARTOGR

APPROX. 200

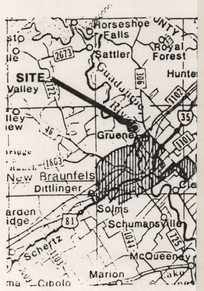
SITE LOCATED ON RIADA DRIVE NORTW

MAP SCALE 1" = 200'

DATE OF PHOTOGRAPHY: OCT. 16,1997

HORIZONTAL DATUM: TEXAS STATE PLANE

LGS JOB NO. 5478



PROJECT LOCAT

LEGEND

800 LF SF RB — SILT FENCE

ROCK BERM

STABILIZED CONSTRUCTION ENTRANCE

LM Loomis & Moore, Inc.
Engineering, Planning and Environmental Services
3103 Bee Caves Road, Suite 225; Austin Texas 78746 (512) 327-1180

behind this page.

ADMINISTRATIVE INFORMATION

16. N/A All structural controls will be maintained according to the submitted and approved operation and maintenance plan for the project.

17. ✓ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TNRCC Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

18. ✓ Contractor will construct and maintain silt fences, diversion berms, and other temporary erosion and sediment controls as appropriate to prevent pollutants from entering sensitive features discovered during construction.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **TEMPORARY STORMWATER SECTION** is hereby submitted for TNRCC review. The application was prepared by:

Edward C. Moore

Print Name of Applicant/Owner/Agent

Edwd C. Moore

Signature of Applicant/Owner/Agent

7.2.98

Date

PERMANENT STORMWATER SECTION
FOR
REGULATED ACTIVITIES
ON THE EDWARDS AQUIFER RECHARGE ZONE
AND RELATING TO 30 TAC §213.5(b)(4), EFFECTIVE DECEMBER 27, 1996

PROJECT NAME: Riverwoods Subdivision

PROJECT DESCRIPTION

1. Geologic or manmade features identified on the project site in the geologic assessment are shown below:

#[1]	Feature Type		Sensitivity Of Feature	Permanent Pollution Abatement Measure[2] (Design attached at the end of this form)
S-1	SC	None/Low	Not	None
S-2	SC	None/Low	Not	None
S-3	SC	None/Low	Not	None
S-4	CD	None/Low	Not	None
S-5	CD	None/Low	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-6	CD	None/Low	Not	None
S-7	SC	None/Low	Not	None
S-8	VR	None/Low	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-9	SC	None/Low	Not	None
S-10	SC	None/Low	Not	None
S-11	SC	None/Low	Not	None

S-12	SC	None/Low	Not	None
S-13	SC	None/Low	Not	None
S-14	CD	None/Low	Not	None
S-15	SC	None/Low	Not	None
S-16	VR	None/Low	Not	None
S-17	SC	None/Low	Not	None
S-18	CD	None/Low	Not	None
S-19	CD	None/Low	Not	None
S-20	MM	None/Low	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-21	SC	None/Low	Not	None
S-22	SC	None/Low	Not	None
S-23	SC	High	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-24	SC	High	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-25	SC	High	Possible	Storm runoff to be routed around the feature. Stabilize site vegetation to minimize stormwater erosion.
S-26	SC	None/Low	Not	None

1 If there are no features present, enter NONE in this column.
2 If the sensitivity value for a feature is indicated as "NOT", no permanent measures are required.

2. The sealing of naturally occurring sensitive features as a pollution control measure will be avoided where reasonable and practicable alternatives exist and will be evaluated by the executive director on a case-by-case basis.

____ No naturally occurring geologic features were found on the project.

POTENTIAL SOURCES OF CONTAMINATION

3. List any potential sources of contamination associated with this project after construction is complete:

1. Non-Point Source Pollution
2. _____
3. _____
4. _____
5. _____

FOR MULTI-FAMILY, COMMERCIAL, INDUSTRIAL DEVELOPMENTS ANSWER ITEMS 4 THROUGH 6; OTHERWISE GO TO ITEM 7.

4. Measures to be taken to prevent pollution of stormwaters **originating on-site or upgradient** of the site.

N/A Stormwater will be directed around the project site with diversion berms/channels/swales labeled on the Permanent WPAP Site Plan. Approval has been obtained.

____ Stormwater flow from upgradient will flow across the project site and will be included in sizing calculations for any pollution abatement measures. A narrative description is provided directly behind this page.

____ Other measures are shown and labeled on the Permanent WPAP Site Plan. A narrative description is provided directly behind this page.

5. For multi-family residential, commercial, or industrial projects permanent stormwater pollution controls will be:

____ **Sedimentation/Filtration basins** designed to capture the first one-half (1/2) inch of stormwater runoff. The criteria used for design of the permanent stormwater controls is from:

____ City of Austin Environmental Criteria Manual
  ____ **Full** sedimentation/filtration basin system
  ____ **Partial** sedimentation/filtration basin system

____ Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual
  ____ **Full** sedimentation/filtration basin system
  ____ **Partial** sedimentation/filtration basin system

____ Other. A detailed explanation of the design criteria is provided directly behind this page.

____ **Vegetated filter strips** (Buffer Zone) designed to treat stormwater runoff. The criteria used for design of the vegetated filter strips is from:

____ City of Austin Environmental Criteria Manual

____ Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual

____ Other. A detailed explanation of the design criteria is provided directly behind this page.

____ **Alternative method.** A detailed explanation of the design criteria, including calculations showing pollutant removal rates, is provided directly behind this page. All submittals shall be signed and sealed by a registered professional engineer.

_✓_ This is a single-family residential subdivision.

6. N/A Scaled plans, profiles, and details are included which illustrate that the proposed treatment system is sized appropriately. Supporting calculations are shown on the plan sheet, including:

____ Volume of stormwater to be treated

____ Sizing of permanent pollution abatement measures.

OPERATION AND MAINTENANCE PROCEDURES

7. _✓_ The maintenance plan and schedule for each permanent pollution abatement structure or measure is provided directly behind this page.

STREAM CONTAMINATION AND/OR EROSION

8. If construction of the project will increase flashing, create stronger flow and stream velocity, or otherwise increase instream erosion and the degradation of water quality, measures to avoid or minimize the surface stream contamination or changes in the way that stormwater enters the stream must be taken.

_✓_ The project will not increase the peak of the downgradient instream stormwater hydrograph or the downgradient velocity of the stream.

____ The project will increase the peak of the downgradient instream stormwater hydrograph and/or the downgradient velocity of the stream. A description of the measures to avoid or minimize the effects of the regulated activity on

Maintenance Schedule for Permanent Pollution Abatement Measures

The proposed development will consist of large lot single family residences. Currently TNRCC does not require structural controls for single family development. The developer will augment water quality through the following measures:

- Low impervious cover will allow for natural water quality control as stormwater flows over vegetated areas,
- All stormwater will be conveyed via open channels, which contribute to water quality,
- Deed restrictions will limit clearing,
- Deed restrictions will require proper use of pesticides and fertilizer,
- Because native vegetation will be preserved where possible, no maintenance is anticipated.

the downgradient stream is provided directly behind this page.

SITE PLAN

Items 9 through 15 must be included on the Site Plan.

9. ✓ Layout of development (Location of lots, buildings, roads, etc.) is shown and labeled.

10. ✓ Geologic or manmade features are shown and labeled.
____ There are no geologic or manmade features associated with this project.

11. ____ Vegetated filter areas are shown and labeled.
✓ There are no vegetated filter areas associated with this project.

12. ____ Sedimentation/filtration basins are shown and labeled.
✓ There are no sedimentation/filtration basins associated with this project.

13. ✓ Berms, channels, etc. showing velocity controls are shown and labeled.
____ There are no berms, channels, etc. associated with this project.

14. ✓ Areas of concentrated runoff with appropriately sized energy dissipators at each outfall are shown and labeled.
____ There are no areas of concentrated runoff (channels, culverts, drainage pipe discharges, etc.) associated with this project.

15. N/A Other pollution abatement measures are shown and labeled. A narrative description is provided directly behind this page.

ADMINISTRATIVE INFORMATION

16. ✓ All structural controls will be maintained according to the submitted and approved operation and maintenance plan for the project.

17. ✓ If any geologic or manmade features, such as caves, faults,

Stream Contamination and/or Erosion Protection Measures

The proposed development will consist of large lot single family residences, with approximately 10% impervious cover added from the construction of roads, houses and driveways. The increase in runoff generated from this site will be minimal. In order to eliminate any increase in flow downstream, detention berms will be constructed at the downstream end of the subdivision in the two major drainage ways. These detention berms will include a flow-metering device to control runoff to pre-construction conditions. There will also be an overflow weir that will be capable of passing the 100-year storm event

17. ✓ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TNRCC Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TNRCC has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **PERMANENT STORMWATER SECTION** is hereby submitted for TNRCC review. The application was prepared by:

Edward C. Moore

Print Name of Applicant/Owner/Agent

Edd C. Moore

Signature of Applicant/Owner/Agent

7.2.98

Date

AGENT AUTHORIZATION FORM
FOR SUBMITTAL OF
EDWARDS AQUIFER PROTECTION PLANS
FOR REGULATED ACTIVITIES ON THE
EDWARDS AQUIFER RECHARGE/TRANSITION ZONES
AND RELATING TO 30 TAC §213.4(d), EFFECTIVE DECEMBER 27, 1996

I Matthew R. Harrison
Print Name

Officer
Title - Owner/President/Other

of High Goals L.L.P., Managing Development Partner
Corporation/Partnership/Entity Name

have authorized Edward C. Moore, P.E.
Print Name of Agent/Engineer

of Loomis & Moore, Inc.
Print Name of Firm

to represent and act on the behalf of the above named **Corporation, Partnership, or Entity** for the purpose of preparing and submitting this Edwards Aquifer Protection Plan application to the Texas Natural Resource Conservation Commission (TNRCC) for the review and approval consideration for construction of regulated activities on the Edwards Aquifer Recharge Zone or Transition Zone (30 TAC §213.4(d)).

I also understand that:

1. No regulated activity is allowed to commence prior to the executive director's approval of the Edwards Aquifer protection plan. If unauthorized construction begins before the approval is granted or if any aspect of the project does not conform to 30 Texas Administrative Code §213 and any condition of the TNRCC's approval letter, the TNRCC is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. Before beginning any construction related to the approved regulated activity, the appropriate TNRCC regional office must be given 24 to 48 hour written notice of the date when the regulated activity will commence.

3. **A notorized copy of the Agent Authorization Form must be provided for the person preparing the application, and the forms must accompany the completed submittal.**

4. Application fees accompanied by an Edwards Aquifer Application Fee Form are due and payable at the time the application is submitted. The application fee must be sent to the Revenues Section of the TNRCC or to the appropriate regional office. **The application will not be considered until the correct fee is received by the commission.**

Matthew R Harrison — 6/30/98

Applicant's Signature — Date

THE STATE OF TEXAS §

County of TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared MATTHEW R HARRISON known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 30 day of JUNE, 1998.

NOTARY PUBLIC

BARBARA L. HAWKINS

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 10/27/2000

NOTARY PUBLIC STATE OF TEXAS
BARBARA L. HAWKINS
Notary Public, State of Texas
My Commission Expires
OCT. 27, 2000

Signatories to Applications 30 TAC §213.4(d)

(1) Required Signature. All applications must be signed as follows.

(A) For a corporation, a principal executive officer (president, vice-president, or a duly authorized representative) must sign the application. A representative must submit written proof of the authorization.

(B) For a partnership, a general partner must sign the application;

(C) For a political entity such as a municipality, state, federal or other public agency, either a principal executive officer or a duly authorized representative must sign the application. A representative must submit written proof of the authorization.

(D) For an individual or sole proprietorship, the individual or sole proprietor must sign the application.

(2) Proof of Authorization to Sign. The executive director requires written proof of authorization for any person signing an application.

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

EDWARDS AQUIFER PROTECTION PROGRAM

APPLICATION FEE FORM

NAME OF PROPOSED PROJECT: Riverwoods Subdivision

PROJECT LOCATION: 200 acres on Riada Drive northwest of Gruene, Texas

NAME OF OWNER/DEVELOPER: Harrison Worldwide Enterprises-High Goals L.L.P., Matthew R. Harrison, Officer

OWNER'S ADDRESS: 6400 Yaupon Drive, Austin, Texas 78759

CONTACT PERSON: Matt Harrison PHONE: (512) 419-6109

Please Print

AUSTIN REGIONAL OFFICE

- ☐ Hays
- ☐ Travis
- ☐ Williamson

SAN ANTONIO REGIONAL OFFICE

- ☐ Bexar
- ☑ Comal
- ☐ Kinney
- ☐ Medina
- ☐ Uvalde

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. **TO ENSURE CREDIT TO THE PROPER ACCOUNT PLEASE RETURN THIS FORM WITH YOUR FEE PAYMENT. THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):**

☑ **SAN ANTONIO REGIONAL OFFICE**

☑ **Mailed to TNRCC:**

TNRCC - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ **AUSTIN REGIONAL OFFICE**

☐ **Overnight Delivery to TNRCC:**

TNRCC - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Application	Size	Fee Due		
		New (3373)	Modification (3374)	
WPAP	196.593 Acres	$5,000	$	PAP
SCS	L.F.	$	$	SCS
Lift Stations without sewer lines	Acres	$	$	
UST/AST	Tanks	$	$	HHS
Piping System(s) (Installed without tanks)	Each	$	$	PSM

TNRCC-0574 (2/4/97)

Extension of Time	Each	$	$	EXT

Matthew R. Harrison

Signature

6/30/98

Date

TNRCC-0574 (2/4/97)

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

EDWARDS AQUIFER PROTECTION PROGRAM

APPLICATION FEE SCHEDULE

Reference: 30 TAC §213.13 effective December 27, 1996 & 30 TAC §213.14 effective November 14, 1997

WATER POLLUTION ABATEMENT PLANS AND MODIFICATIONS

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	<5	$500
Multiple Single Family Residential and Parks	<5 5 < 10 10 < 50 ≥50	$1,000 $2,000 $3,000 $5,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 ≥10	$2,000 $3,000 $4,000 $5,000

SEWAGE COLLECTION SYSTEMS AND MODIFICATIONS

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	$0.50	$500 - $5,000

PROJECT	COST PER ACRE	FEE
Lift Stations without Sewage Collection Lines for Single Family Residential and Parks	<5 5 < 10 10 < 50 ≥50	$1,000 $2,000 $3,000 $5,000
Lift Stations without Sewage Collection Lines for Non-residential	< 1 1 < 5 5 < 10 ≥ 10	$2,000 $3,000 $4,000 $5,000

STATIC HYDROCARBONS OR HAZARDOUS SUBSTANCE STORAGE TANK SYSTEMS, FACILITY PLANS AND MODIFICATIONS

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE
Underground and Aboveground Storage Tank facilities	$500	$500 - $5,000

EXTENSION OF TIME REQUEST

PROJECT	FEE
Any Regulated Activity Approval	$100