Denver Road Estates
~~Sunset Ridge Estates~~

Pct 1

Appendix A

SUBDIVISION APPLICATION CHECKLIST

The following tasks must be completed by the developer prior to filing any application for subdivision approval:

✓ Meet with the Precinct Commissioner and Development Officer at least 15 days prior to the date of filing the application of the subdivision property, to visually inspect the property, review the developer's intentions, establish any special requirements for the plat application, and to discuss the application process.

✓ Confirm whether the planned subdivision will be classified as First or Second Tier.

✓ Check the proposed subdivision name for conflicts or similarly named subdivision that is not a subsequent phase of an existing subdivision.

The following items must be included in any plat application for approval of a First Tier subdivision:

✓ A plat of the proposed subdivision in compliance with these regulations.

✓ A written, affirmative acknowledgement of the requirements in Section 1.2.

✓ Five (5) copies of the plat; 1 Mylar and 4 regular paper copies.

✓ A digital map or a certificate regarding the availability of a digital map.

✓ A certificate from the Upper Trinity Groundwater Conservation District that the proposed subdivision will have adequate water availability.

✓ A survey of the proposed subdivision in compliance with these regulations.

✓ A certificate from the surveyor who prepared the plat and survey in substantially the form as Appendix E.

✓ A description by the developer of the manner and means of providing drinking water, sewerage, roads, electricity, and drainage structures.

✓ All engineering specifications, drawings, and plans for infrastructure to be constructed comprising a plat application in compliance with these regulations.

✓ A certificate from each engineer confirming compliance of their specifications, plans, and drawings, in substantially the form as Appendix F.

✓ A certificate from NORTEX confirming the road names or numbers reserved for roads laid out in the subdivision. Email certification of review from Jo Lee.

✓ Tax certificates confirming that no property taxes are due and unpaid for the subdivision.

N/A A certificate from the developer confirming that approval of the plat application and filing of the plat does not mean that the County will be responsible for maintenance of subdivision roads and streets. all lots face county roads.

✓ If water, sewerage, and electricity are to be provided by a public utility, the developer must submit an executed public utility certificate in substantially the form as Appendix D. Wise Electric

✓ If water is to be provided by private well, a Disclosure Statement shall be provided to the buyer prior to closing disclosing the nature of provision of water, together with certification of water availability and quality.

✓ If OSSF is included in the plat application, a certificate from the Montague County OSSF Inspector or Development Officer stating that the subdivision plans comply with all applicable TCEQ rules, including housing density requirements or lot frontage, street width and all-weather capacity to handle emergency vehicles.

N/A If fire hydrants or filler plugs are included in a plat application, a certificate from the public utility serving the subdivision to confirm sufficient water capacity is available to operate the fire hydrants or filler plugs.

✓✓ All fees due to the County for the filing of an application must be paid to the County Clerk contemporaneously with the submission of the application.

The following items must be included in any application for approval of a Second Tier subdivision: Section N/A

___ A plat of the subdivision showing the area/acreage of each lot or tract. Lots must have a minimum of sixty (60') feet of frontage to the adjoining street.

___ Certificates from the developer confirming the following:

_____ Availability of water and sewage service.

_____ Compliance with set-back lines.

_____ Disclosure and Dedication of all necessary utility easements.

_____ Confirming the installation of culverts in compliance with the County ordinance on culverts.

_____ If OSSF is proposed for the Second Tier subdivision, a certificate from the Montague County OSSF Inspector or Development Officer stating that the subdivision plans comply with all applicable TCEQ rules, including housing density requirements, street width and all-weather capacity to handle emergency vehicles.

_____ A survey that shows sufficient topographic information adequate to demonstrate that the proposed subdivision will adequately drain and that any proposed development will not alter the natural flow of water to adjoining properties.

_____ All fees due to the County for the filing of an application must be paid to the County Clerk contemporaneously with the submission of the application.

After an application is approved, the developer must:

_____ File a plat of the proposed subdivision in compliance with these regulations.

N/A Meet with the Precinct Commissioner to review all materials used in constructing roads in the subdivision.

_____ Ensure that the work described in the plat application is completed in a good and workmanlike manner, in accordance with these regulations, the plat application, and any conditions of the order approving the application.

N/A Advise the Precinct Commissioner of the status of construction prior to expiration of any construction deadline.

✓ All fees due to the County for an approved application must be paid to the County Clerk no later than ten (10) days after the approval of the application.

N/A Submit proof of any required financial security to the Precinct Commissioner no later than thirty (30) days after the approval of the application.

BIGGS & MATHEWS INC.
Consulting Engineers

August 16, 2024

Charley Lanier
Montague County Development Officer
11339 Highway 59 N
P.O. Box 416
Montague County, Texas 76251

RE: Review & Comments – First Tier Subdivision
Final Plat – Denver Road Estates
79.18 Acres – Lots 1 Thru 20
Montague County, Texas

Dear Mr. Lanier:

We have reviewed the above referenced submitted plat to determine its conformance with the latest Montague County Subdivision Regulations, Approved & Accepted by Montague County Commissioners Court on May 28, 2024.

Based on our review, please see the following information and our response to the submission.

GENERAL SITE INFORMATION:

Owner/Developer: Top Notch Homes, LLC
Final Plat – 79.18 Acres - Lots 1-20 Denver Road Estates
Site Location: Adjacent to Denver Rd. and Huddleston Rd.

REVIEWED SUBMITTED DOCUMENTS:

Final Plat – Lots 1-20 Denver Road Estates
Drainage Area Map & Calculations
Site Soils Evaluation Report
Tax Certificates
Certification of Groundwater Availability (TCEQ TAC 230)
Water Quality Test Reports
TDLR Well Reports
UTGCD Electric Logs

2500 BROOK AVENUE • WICHITA FALLS, TEXAS 76301-6105 • (940) 766-0156 • FAX: (940) 766-3383

CONFORMANCE WITH TIER 1 PLAT REQUIREMENTS:

1) *Name & mailing address of the developer* ✓
2) *Name of subdivision* ✓
3) *North directional indication arrow* ✓
4) *Location map showing the subdivision in relation to major roads, town cities, and Topographic features - Show Elevations of Contours* ✓
5) *Description of boundary by metes & bounds* ✓
6) *Total area/acreage within subdivision* ✓
7) *Total number of lots* ✓
8) *Area/acreage of roads – Length of roads & street right-of-way widths* ✓
9) *Area /acreage of each lot* ✓
10) *Bearing and distance for each lot boundary line with minimum frontage of 60' to adjoining street - Lots 19 & 20 show less than 60' frontage*
11) *Areas dedicated for public use* ✓
12) *ROW or easements, including alley, drainage easements, and utility easements* ✓
13) *Proposed land use of all lots being subdivided – Single family or residential, multi-family residential, agricultural, commercial, public use dedication* ✓
14) ✗ *All 100-year floodplains - Floodplain Map Not Provided*
15) *Road names or numbers for all roads or streets* ✓
16) *Lot and block numbers arranged in a systematic order* ✓

Note: Items shown in "red" should be addressed to the satisfaction of the Montague County prior to approval of the plat

PLAT SURVEY REQUIREMENTS:

The plat and survey must be prepared from an actual on the ground survey under the direct supervision of a registered professional land surveyor and their certificate to that effect must appear on the plat and survey. The land surveying form's name and license number, address, and phone number must be listed on the plat and survey.

1) *Real property index information (instrument number or volume and page) and names of all current owners of contiguous property to the subdivision.* ✓
2) *Location of existing permanent, man-made structures within the subdivision, including Houses, barns, fences, walls, ponds.. etc.* ✓
3) *Major topographic features on or adjacent to the property, elevation contours (no greater than 5' intervals in floodplain and no greater than 20' intervals in other areas. (Show Elevations of Contours)* ✓
4) *Location of all visible water wells, oil wells, and natural gas wells.* ✓

Note: See Attached Appendix A – Subdivision Application Checklist

This concludes our review, and if you have any questions concerning our review, please contact me.

Sincerely,

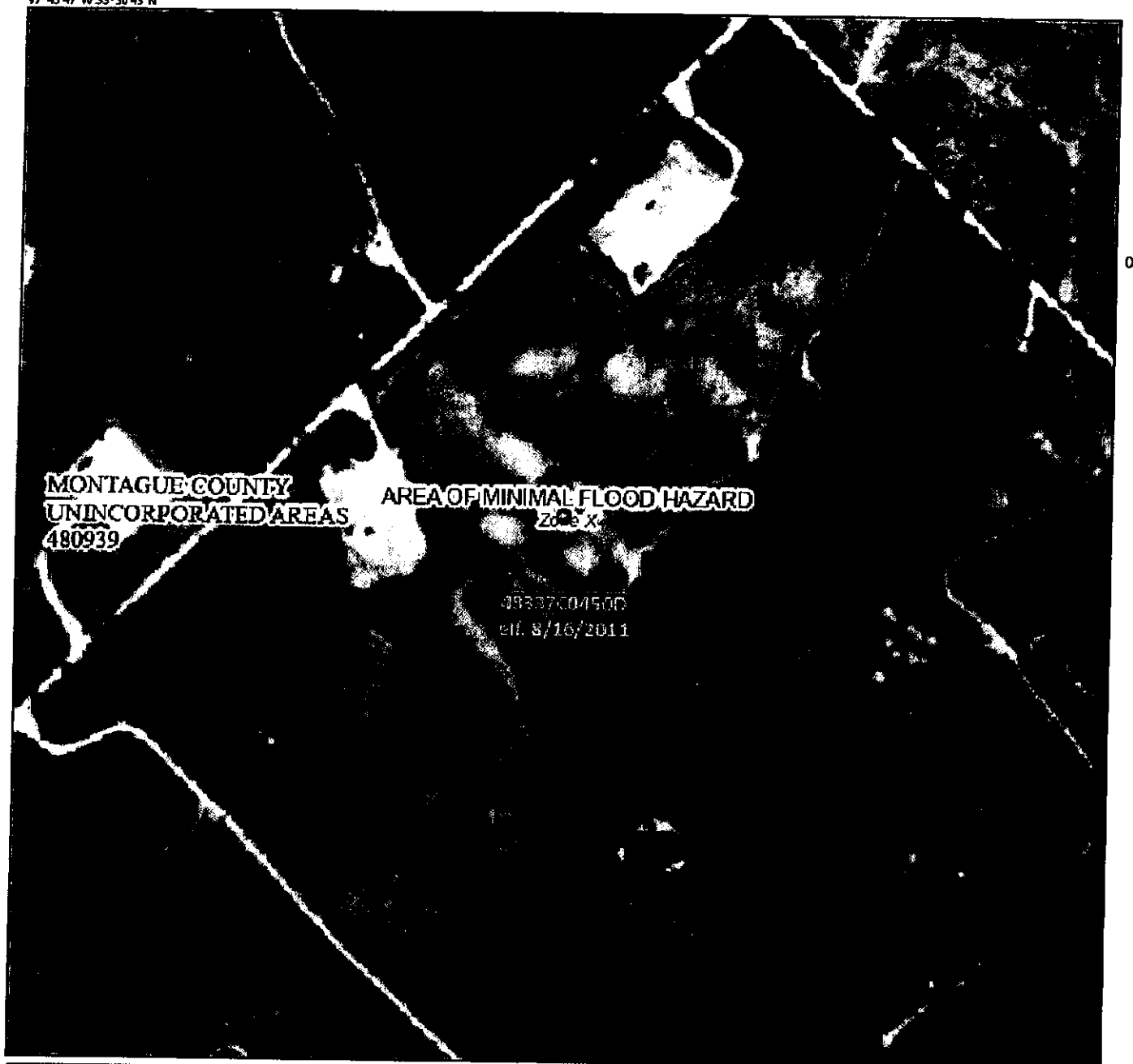
BIGGS & MATHEWS, INC.

Kerry D. Maroney, P.E.

National Flood Hazard Layer FIRMette

FEMA

97°43'47"W 33°30'43"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

97°43'9"W 33°30'13"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/14/2024 at 2:43 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

P. O. BOX 1749
1859 W. HWY 199
SPRINGTOWN, TX 76082

WWW.UPPERTRINITYGCD.COM

December 3rd, 2024 via email: co.judge@co.montague.tx.us

Kevin Benton – Montague County Judge
Montague County Commissioners Court
11339 TX-59
Montague, TX 76251

RE: Groundwater Availability Certification Report – Denver Road Estates

Judge Benton and Members of the Court,

Montague County (the "County"), as authorized by Section 232.0032 of the Texas Local Government Code, requires applicants seeking to plat certain tracts of land for which groundwater under that land is intended to be the source of supply to provide a statement prepared by a geoscientist licensed to practice in Texas or an engineer licensed to practice in Texas certifying that adequate groundwater is available for the subdivision in accordance and in compliance with the rules of the Texas Commission on Environmental Quality (TCEQ) set forth in Title 30, Texas Administrative Code, Chapter 230 (the "Groundwater Availability Certification" or "GAC").

In order to ensure compliance with the law and to facilitate cooperation between the County and the Upper Trinity Groundwater Conservation District ("the District") in instances where a GAC is required for a proposed subdivision of a tract of land and to ensure that, prior to receiving an approved plat from the County, such an applicant certifies adequate groundwater availability, the County and the District have entered into an interlocal agreement whereby the District reviews the GAC of the applicant and provides a report of its review to the County with certain recommendations. As set forth in the interlocal agreement, this report sets forth the opinions and recommendations of the District through its General Manager and staff to the County for the County's consideration in making a decision on the plat application.

This transmittal letter includes summaries of both the results submitted as part of the Plat Applicant's certification as well as the District's recommendations related to the Groundwater Certification Statement related to the proposed Denver Road Subdivision. Please note that the District's recommendations are non-binding suggestions and are meant to supplement the information provided to aid the County's decision-making process.

Additionally, all District recommendations are based on the best available science and other relevant data available to the District.

P. O. BOX 1749
1859 W. HWY 199
SPRINGTOWN, TX 76082

WWW.UPPERTRINITYGCD.COM

Summary of the Certification Statement:

The plat applicant's pump test data and subsequent calculations produced the following projections for the upper portion of the Antlers Formation of the Trinity Aquifer, which is proposed to serve the projected community:

- The applicant projected the following impacts at the test well, completed to 180 feet below surface (this analysis assumes no other pumping wells).
    - 10–year estimated drawdown of 0.075 feet.
        - Static water level after 10 years –63.745 feet below ground surface
    - 30–year estimated drawdown of 0.078 feet.
        - Static water level after 30 years – 63.748 feet below ground surface
- Modeling conducted by the District produced an anticipated drawdown of 0.138 ft. at the test well site over 10 years and 0.14 ft. over 30 years (assuming no additional wells).
    - Although the applicant's engineer and District staff utilized the same gallons per day (195.78) to estimate impact, the results are slightly different because the District utilizes modeling software (described in section 4.0 in the report), whereas the applicant utilized the simplified Cooper-Jacobs drawdown approximation.
- The modeled 10–year cone of depression for the test well was 6 ft.
- The modeled 30-year cone of depression for the test well was 11 ft.
- The plat applicant calculated a well efficiency of 51%.
    - The accepted established threshold for well efficiency is approximately 65-70%.
    - This value is impacted by the applicant's projected water demand, aquifer parameters, and well construction.
    - The applicant's use of the projected yearly pumping rate, rather than the instantaneous pumping rate of the test in conjunction with an erroneous data interpretation implementing seconds, rather than minutes, likely contributed to the aquifer parameters produced from Aqtesolv. These aquifer parameters were then utilized to calculate well efficiency, where the applicant's engineer then entered an incorrect well radius, again adversely impacting the projections. *Additional care should be taken by the applicant's engineer when producing final aquifer parameters for the purposes of modeling.*
- The applicant did complete the entire water quality portion of the test.
    - The results that were collected all occurred within the threshold of primary water standards established by the EPA and regulated by the TCEQ.
- The applicant provided most of the required maps, graphs, data, formulas, and variables for assessing the potential of well interference on the property and how it would impact anticipated drawdown levels at 10 years and 30 years.
    - Below are some concerns identified by District Staff
        - The applicant's engineer's well efficiency is lower than what district staff has calculated, this is likely due to the engineer's use of a well radius

P. O. BOX 1749
1859 W. HWY 199
SPRINGTOWN, TX 76082

WWW.UPPERTRINITYGCD.COM

greater than what was identified on the driller's well report, for that well. Additionally, because it appears the engineer did not utilize the correct discharge rates within their simulation, it is difficult for staff to compare modified efficiency values, however staff confirms that when well efficiency increases, drawdown decreases.

- In four of the twenty modeled pumping wells, the discharge rate was modified from 26.17 cubic feet per day to a volume of 828 cubic feet per day. Additionally, the applicant's start time of pumping for one well began at one day while the other 19 wells began at zero.
- The applicant's engineer utilized an incorrect well diameter of one foot in the online calculator to verify drawdown for the purposes of calculating efficiency. District staff is unsure why the applicant's engineer used a radius greater than what is identified on the driller's well report when calculating well efficiency, used varying pumping rates, and pumping start times for the modeled wells in the projection.
- The applicant also slightly modified their Transmissivity value for the FWDSOLV projections, as 759.9 sqft/day is identified on their 230 form, and 758.9 sqft/day appears to be used on their projections page.

- The preliminary plat provided by the applicant did not identify any existing water wells within the proposed subdivision.
  - If any water wells exist within the proposed subdivision, those should be included on the final plat.
- The applicant indicated that the well was developed by being "air drilled and pumped several hours until clear".
  - No evidence was provided to the District regarding the requirements of 230.8(c)(4)(B).
- The Certification Statement recommends a minimum spacing of 150 ft. between water wells.
- The Certification Statement recommends a produced well yield rate of 8 GPM, which is supported by submitted documentation on anticipated drawdown values at higher volumes.

District Recommendations:

The water wells used in the study were completed to a depth approximately 180 feet below surface, into the Antlers portion of the Trinity group of aquifers.

The District is charged with managing the groundwater resources, within its boundaries, in order to achieve the adopted Desired Future Conditions (DFCs) for each of the formations within the Trinity group of Aquifers. A desired future condition is a quantitative description of the desired condition of the groundwater resources in a management area at one or more specified future

P. O. BOX 1749
1859 W. HWY 199
SPRINGTOWN, TX 76082

WWW.UPPERTRINITYGCD.COM

times and can be different for different aquifers, subdivisions of aquifers, or geographic areas. Additionally, the DFCs must be physically possible.

The adopted DFC for the outcrop of the Antlers aquifer in Montague County is no more than 40 feet of water level decline by 2080. According to the 2023 annual report, the trend from the 20 monitoring wells in the outcrop of the Antlers aquifer in Montague County for the 1-year water level change indicates 1.3 feet of decline from 2022. Over a 5-year time period, the trend indicates 0.1 feet of water level decline. From 2010 through 2023, there is approximately 3.1 ft. of water level increase in the Antlers. However, the trend over the 10+ year period, should be taken with a grain of salt, as it is likely increasing due to the recovery at the end of the Barnett Shale boom, where a significant increase in groundwater production occurred and water levels were at all-time lows in many areas.

The following recommendations are based on utilizing the upper portion of the Antlers Sandstone as the source of water for the proposed subdivision.

Based on the data provided in the Certification Statement, other relevant data, and modeled simulation results, the District recommends a minimum spacing requirement of 150 ft. between water wells, however landowners should consider greater spacing between water wells. This is based on results from the actual aquifer test performed for the project. During that test, the applicant drilled two new wells on the property, located approximately 300 feet from the pumping well; during the test it was clearly demonstrated that the extent of pumping impact was seen in the observation well (see results discussed earlier in the report). During the 24-hour pump test, water levels in the observation well fell 2.77 feet, however fluctuations of level readings higher than the initial value were observed, calling into question the accuracy and precision of the dataset.

It is worth noting that the state approved Groundwater Availability Model (GAM) shows the Antlers portion of the aquifer extending to a depth of approximately 209 feet below ground surface within the proposed subdivision. Should the need for additional water arise, future homeowners may or may not encounter water bearing formations below the Trinity into the Cross Timbers minor aquifer. However, without additional testing, the quality and quantity of water, in the deeper portion of the aquifer, beneath the proposed subdivision remains unknown.

In agreement with the recommendation on the Certification Statement, and in order to minimize the immediate impact of any new well, the District concurs with the applicant and recommends a maximum production capacity of 8 gallons per minute for each well within the proposed subdivision. It is unclear if this could be enforced, either legally or logistically, but it might be worth considering a requirement to place a statement on the face of the plat identifying this recommendation. Realistically, all wells drilled in the proposed subdivision will likely be completed in such a way that they produce the maximum flow rate possible, generally up to 17.36 GPM. Statement about gas pipelines across the property for future well spacing?

P. O. BOX 1749
1859 W. HWY 199
SPRINGTOWN, TX 76082

WWW.UPPERTRINITYGCD.COM

The impacts of the proposed pumping are not only dependent upon the flow rate of the water wells but also the projected water demands of the landowners. The District highly encourages landowners to utilize conservation practices to minimize the pumping impacts within the subdivision as outlined in section 5.4 of the report.

Ultimately, it is our determination that the Certification Statement provided by the plat applicant generally conforms with the requirements set forth in Title 30, Texas Administrative Code, Chapter 230. In addition, it is our opinion that the findings presented in the Certification Statement are within reason and any shortcomings have been identified in the accompanying report.

Accompanying this letter please find UTGCD Report 24-011 which provides further information and details related to this project. Please feel free to contact me at doug@uppertrinitygcd.com or (817) 523-5200 with any questions.

Thank you,

Doug Shaw
General Manager