

# **Water Review Comment Response**

Provide a written explanation of the amendments and alterations made to all water related submission items (e.g. water information summary sheet, water resources report). For the initial submission you may provide this page as a placeholder.

# WATER SUPPLY INFORMATION SUMMARY

Section 30-28-133(d), C.R.S. requires that the applicant submit to the County, "Adequate evidence that a water supply that is sufficient in terms of quantity, quality and dependability will be available to ensure an adequate supply of water."

<b>1. NAME OF DEVELOPMENT AS PROPOSED</b>			
Manley			
<b>2. LAND USE ACTION</b>			
Minor subdivision			
<b>3. NAME OF EXISTING PARCEL AS RECORDED</b>			
#11223 Manley Sub Fil No. 1			
<b>SUBDIVISION</b>	<b>FILING</b>	<b>BLOCK</b>	<b>LOT</b>
	No. 1		2
<b>4. TOTAL ACREAGE</b>	22.29	<b>5. NUMBER OF LOTS PROPOSED</b>	2
		<b>PLAT MAP ENCLOSED</b>	<input checked="" type="checkbox"/> YES
<b>6. PARCEL HISTORY</b> - Please attach copies of deeds, plats or other evidence or documentation. See attached			
A. Was parcel recorded with county prior to June 1, 1972? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
B. Has the parcel ever been part of a division of land action since June 1, 1972? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
If yes, describe the previous action <u>Original 40-acre parcel was divided into 5 lots in 2010</u>			
<b>7. LOCATION OF PARCEL</b> - Include a map delineating the project area and tie to a section corner.			
SW 1/4 OF SW 1/4 SECTION 22 TOWNSHIP 13 <input type="checkbox"/> N <input checked="" type="checkbox"/> S RANGE 64 <input type="checkbox"/> E <input checked="" type="checkbox"/> W			
<b>PRINCIPAL MERIDIAN:</b> <input checked="" type="checkbox"/> 6TH <input type="checkbox"/> N.M. <input type="checkbox"/> UTE <input type="checkbox"/> COSTILLA			
<b>8. PLAT</b> - Location of all wells on property must be plotted and permit numbers provided.			
Surveyors plat <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If not, scaled hand drawn sketch <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>9. ESTIMATED WATER REQUIREMENTS</b> - Gallons per Day or Acre Feet per Year		<b>10. WATER SUPPLY SOURCE</b>	
HOUSEHOLD USE # <u>2</u> of units	GPD <u>0.59</u> AF	<input checked="" type="checkbox"/> EXISTING WELLS <u>1</u>	<input type="checkbox"/> DEVELOPED SPRING
COMMERCIAL USE # _____ of S.F.	GPD _____ AF	WELL PERMIT NUMBERS <u>104-RP</u>	
IRRIGATION # _____ of acres	GPD _____ AF	_____	
STOCK WATERING # _____ of head	GPD _____ AF	_____	
OTHER _____	GPD _____ AF	<input type="checkbox"/> MUNICIPAL <input type="checkbox"/> ASSOCIATION <input type="checkbox"/> COMPANY <input type="checkbox"/> DISTRICT NAME _____ LETTER OF COMMITMENT FOR SERVICE <input type="checkbox"/> YES <input type="checkbox"/> NO	
TOTAL	GPD <u>0.59</u> AF	<input checked="" type="checkbox"/> NEW WELLS - <u>1</u> PROPOSED AQUIFERS - (CHECK ONE) <input type="checkbox"/> ALLUVIAL <input checked="" type="checkbox"/> UPPER ARAPAHOE <input type="checkbox"/> UPPER DAWSON <input type="checkbox"/> LOWER ARAPAHOE <input type="checkbox"/> LOWER DAWSON <input type="checkbox"/> LARAMIE FOX HILLS <input type="checkbox"/> DENVER <input type="checkbox"/> DAKOTA <input type="checkbox"/> OTHER _____	
See Determination 104-BD-RP		WATER COURT DECREE CASE NO.'S <u>Determination 103-BD</u> <u>Determination 104-BD-RP</u> <u>Determination 102-BD</u>	
<b>11. ENGINEER'S WATER SUPPLY REPORT</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE FORWARD WITH THIS FORM. (This may be required before our review is completed.)			
<b>2. TYPE OF SEWAGE DISPOSAL SYSTEM</b>			
<input type="checkbox"/> SEPTIC TANK/LEACH FIELD	<input type="checkbox"/> CENTRAL SYSTEM - DISTRICT NAME _____		
<input type="checkbox"/> LAGOON	<input type="checkbox"/> VAULT - LOCATION SEWAGE HAULED TO _____		
<input type="checkbox"/> ENGINEERED SYSTEM (Attach a copy of engineering design)	<input checked="" type="checkbox"/> OTHER <u>Non-evaporative individual septic system</u>		

# MANLEY SUBDIVISION FILING NO. 2

ALL OF LOT 2 MANLEY SUBDIVISION FILING No. 1 AND A PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 13 SOUTH, RANGE 64 WEST, OF THE 6th P.M., COUNTY OF EL PASO, STATE OF COLORADO

## KNOW ALL MEN BY THESE PRESENTS:

That NANCY MANLEY, being the owner of the following described tract of land to wit:

A Tract of Land Being all of Lot 2, Manley Subdivision filing No. 1 and a Portion of the Southwest 1/4 of the Southwest 1/4 of Section 22, Township 13 South, Range 64 West, of the 6th P.M., El Paso County, Colorado, more particularly Described as follows;

COMMENCING at the Southwest corner of said Section 22,

THENCE N 00°35'14" E along the Westerly Line thereof, 503.50 feet;

THENCE S 89°24'46" E, 60.00 feet to the Southwest corner of Lot 2 as platted in Manley Subdivision Filing No. 1, Reception No. 202122985 of the records of El Paso County and the East right of way line of Curtis Road and the POINT OF BEGINNING;

THENCE N 00°35'14" E along said East right of way line, 463.18 feet to the Northwest corner of Lot 2 as platted in said Manley Subdivision Filing No. 1;

THENCE N 89°45'17" E along the North line of said Lot 2, 590.07 feet;

THENCE N 00°35'14" E along the East line of Lot 1 Manley Subdivision Filing No. 1, 350.72 feet to a point on the North line of said SW 1/4 of the SW 1/4 of Section 22;

THENCE N 89°44'58" E along said North line, 669.69 feet to the Northeast corner of said SW 1/4 of the SW 1/4;

THENCE S 00°32'27" W along the East line of said SW 1/4 of the SW 1/4, 1316.62 feet to the Southeast Corner thereof;

THENCE S 89°45'24" W along the South line of said SW 1/4 of the SW 1/4, 391.21 feet to the Southeast corner of said Manley Subdivision Filing No. 1;

The following 4 courses are along the boundary of said Manley Subdivision Filing No. 1;

THENCE N 00°50'51" W, 662.31 feet;

THENCE N 89°44'33" W, 262.93 feet;

THENCE S 29°47'59" W, 179.46 feet;

THENCE S 88°59'57" W, 502.62 feet to the POINT OF BEGINNING.  
CONTAINING 22.189 acres more or less.

## DEDICATION:

The above owner has caused said tract of land to be surveyed and platted into lots, road right-of-way and easements as shown on the accompanying plat, which plat is drawn to a fixed scale as indicated thereon and accurately sets forth the boundaries and dimensions of said tract and the locations of said lots, road right-of-way and easements, and which tract so platted shall be known as MANLEY SUBDIVISION FILING NO. 2, El Paso County, Colorado. The road right-of-way as platted is hereby dedicated to public use.

## IN WITNESS WHEREOF:

The aforementioned, NANCY MANLEY, has executed this instrument

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ A.D.

By \_\_\_\_\_  
NANCY MANLEY

## NOTARIAL:

STATE OF COLORADO }  
COUNTY OF EL PASO } SS

The above and aforementioned was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ A.D., by NANCY MANLEY.

Witness my hand and seal \_\_\_\_\_

Address \_\_\_\_\_

My commission expires \_\_\_\_\_

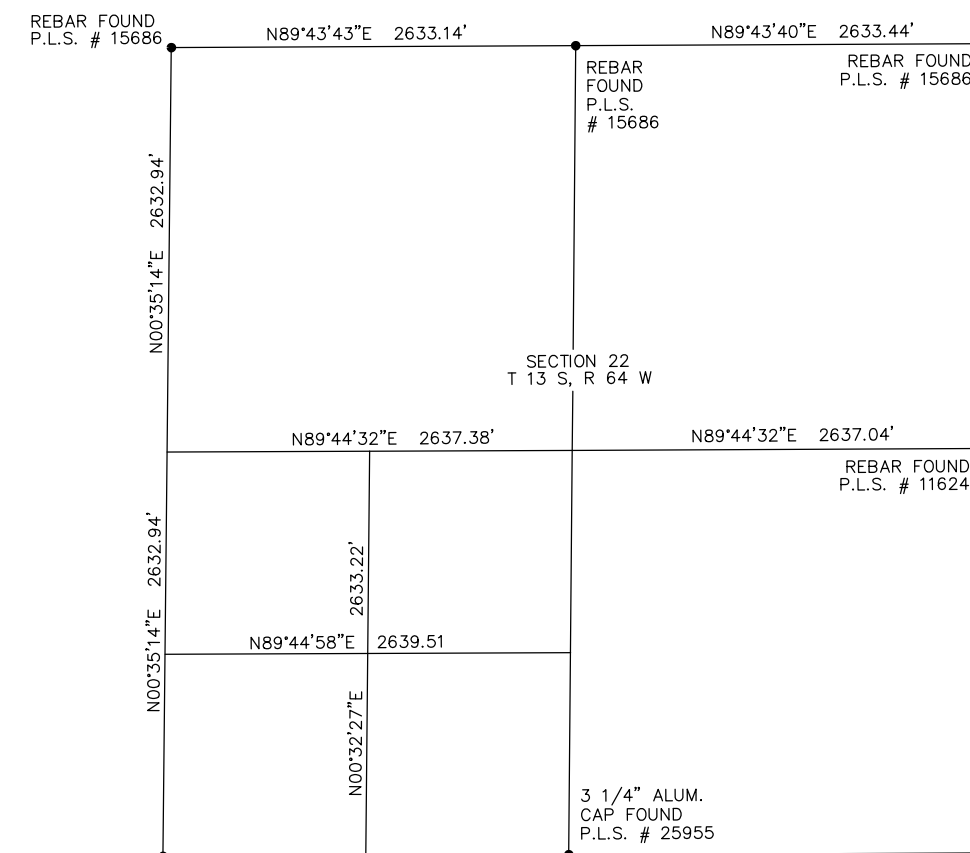
## SURVEYOR'S CERTIFICATION:

I Daniel L. Kupferer, a duly registered Professional Land Surveyor in the State of Colorado, do hereby certify that this plat correctly represents the results of a survey made September, 2021, by me or under my direct supervision and accurately shows the subdivision thereof and that all monuments exist as shown hereon; that mathematical closure errors are less than 1:10,000; and that said plat has been prepared in full compliance with all applicable provisions of the El Paso County Land Development Code, and that the requirements of Title 38 of the Colorado Revised Statutes, 1973 have been met to the best of my professional knowledge, belief and opinion and that it is accordance with applicable standards of practice and this is not a guaranty or warranty, either expressed or implied.



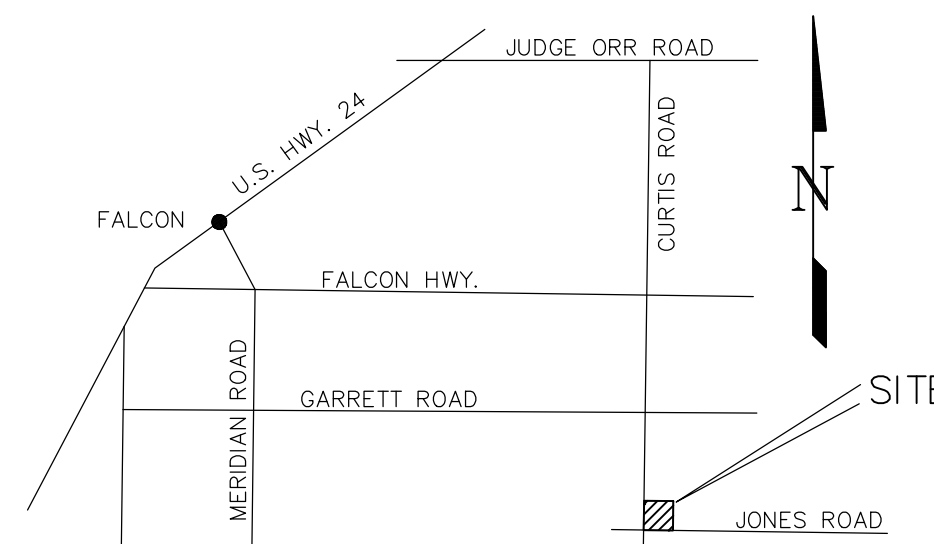
PRELIMINARY COPY  
SUBJECT TO FINAL  
COUNTY APPROVAL

Daniel L. Kupferer  
Colorado Professional Land Surveyor No. 18465  
For and on behalf of LDC, Inc



SECTION MAP

N.T.S.



VICINITY MAP

N.T.S.

## NOTES:

- o - Indicates survey monument set with a #4 rebar with Surveyor's Cap, P.L.S. #18465.
- - Indicates recovered survey monument as noted.
- SS - Indicates "Not a part of this subdivision."

1. Basis of Bearings (as shown on the SECTION MAP on this sheet). . . the South line of the Southwest 1/4 of Section 22, Township 13 South, Range 64 West, 6th P.M. monumented as shown and assumed to bear North 89°45'24" East, a distance of 2633.14 feet.

2. This survey does not constitute a title search by LDC, Inc. to determine ownership or easements of record. For all information regarding easements, rights-of-way and title of record, LDC, Inc. relied upon a Commitment for Title Insurance, prepared by LAWYERS TITLE INSURANCE CORPORATION, Commitment No. 170142TR dated February 21, 2001 at 7:30 A.M.

### SCHEDULE B - 2 EXCEPTIONS:

Item 8 - Right of Way and/or Easement, given to MOUNTAIN VIEW ELECTRIC for electrical purposes recorded August 27, 1968 in Book 2250 at Page 687 . . . "blanket easement condition".

Item 10 - Right of Way and/or Easement, given to EL PASO COUNTY MUTUAL TELEPHONE COMPANY for communication purposes recorded August 17, 1973 in Book 2614 at Page 372 . . . "blanket easement condition".

Items 1 through 7, and Items 11 through 13, were not examined or addressed by LDC, Inc.

Item 9 does not affect Lots 1 thru 4.

3. The addresses exhibited on this plat (4645) are for informational purposes only. They are not the legal description and are subject to change.

4. The El Paso County Department of Transportation must be contacted prior to the establishment of any driveway.

5. The following reports have been submitted and are on file at the County Planning and Community Development Department: Soils and Geological Study; Water Availability Study; Drainage Report; Wildfire Hazard Report; Natural Features Report; Percolation Test Results; Erosion Control Report.

6. FEDERAL EMERGENCY MANAGEMENT AGENCY, Flood Insurance Rate Map Number 08041C0568 G, effective date, December 7, 2018, indicates the area in the vicinity of this parcel of land to be a Zone X (area determined to be out of the 500 year flood plain).

7. Sewage treatment is the responsibility of each individual property owner. The El Paso County Health Department must approve each system and, in some cases, the Department may require a specially designed system prior to permit approval.

## NOTES (cont.):

8. Individual wells are the responsibility of each property owner. Permits for individual domestic wells must be obtained from the State Engineer who by law has the authority to set conditions for the issuance of these permits.

9. Easements are as shown hereon with sole responsibility for maintenance hereby vested with the individual property owners.

10. All structural foundations shall be located and designed by a Professional Engineer, currently registered in the State of Colorado.

11. Water in the Denver Basin Aquifers is allocated based on a 100 year aquifer life; however, for El Paso County planning purposes, water in the Denver Basin Aquifers is evaluated based on a 300 year aquifer life. Applicants, the Home Owners Association, and all future owners in the subdivision should be aware that the economic life of a water supply based on wells in a given Denver basin aquifer may be less than either the 100 years or 300 years indicated due to anticipated water level declines. Furthermore, the water supply plan should not rely solely upon non-renewable aquifers. Alternative renewable water resources should be acquired and incorporated in a permanent water supply plan that provides future generations with a water supply.

12. The property owner, its successors and assigns, and all future lot owners in this development are hereby on notice that they may be required to comply with applicable rules, if any, of the Colorado Groundwater Commission and/or the upper Black Squirrel Creek Ground Water Management District, which compliance may result in a reduction of well withdrawal limits, and thus a reduction in water availability.

## EASEMENTS:

Unless otherwise shown, both sides of all side lot lines and common rear lot lines are hereby platted with a ten (10) feet wide public utility and drainage easement on each side and a ten (10) feet wide public utility and drainage easement on lot lines abutting a public right-of-way and a twenty (20) feet wide public utility and drainage easement on the subdivision boundary lines. Said easements are hereby dedicated to the public for installation and maintenance of public utilities and drainage facilities as shown hereon, with the sole responsibility for maintenance being vested with the property owners.

## BOARD OF COUNTY COMMISSIONERS CERTIFICATE:

This plat of MANLEY SUBDIVISION FILING NO. 2 was approved for filing by the El Paso County, Colorado Board of County Commissioners on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, subject to any notes specified hereon and any conditions included in the resolution of approval.

Chair, Board of County Commissioners \_\_\_\_\_ Date \_\_\_\_\_

## APPROVALS:

This subdivision was approved by the El Paso County Planning and Community Development Department this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ A.D.

Director, Planning and Community Development Department \_\_\_\_\_

## RECORDING:

STATE OF COLORADO }  
COUNTY OF EL PASO } SS

I hereby certify that this instrument was filed for record in my office at \_\_\_\_\_ o'clock \_\_\_\_\_M.

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ A.D., and is duly recorded under

Reception No. \_\_\_\_\_ of the records of El Paso County, Colorado.

Chuck Broerman, Recorder BY: \_\_\_\_\_ Deputy

SURCHARGE: \_\_\_\_\_  
FEE: \_\_\_\_\_

## FEES:

Park Fee: \_\_\_\_\_  
Bridge Fee: \_\_\_\_\_  
Drainage Fee: \_\_\_\_\_  
School Fee: \_\_\_\_\_

PCD File No. \_\_\_\_\_

According to Colorado law, you must commence any legal action based upon this instrument within three years from the date you first discover such defect. In no event, may any action on this instrument be commenced more than ten years from the date of the certification.

CALL BEFORE YOU DIG . . .  
**811**  
DIAL 811

No.	Description	By	Date

H Scale: N/A  
V Scale: N/A  
Designed By: DLK  
Drawn By: DAS  
Checked By: DLK

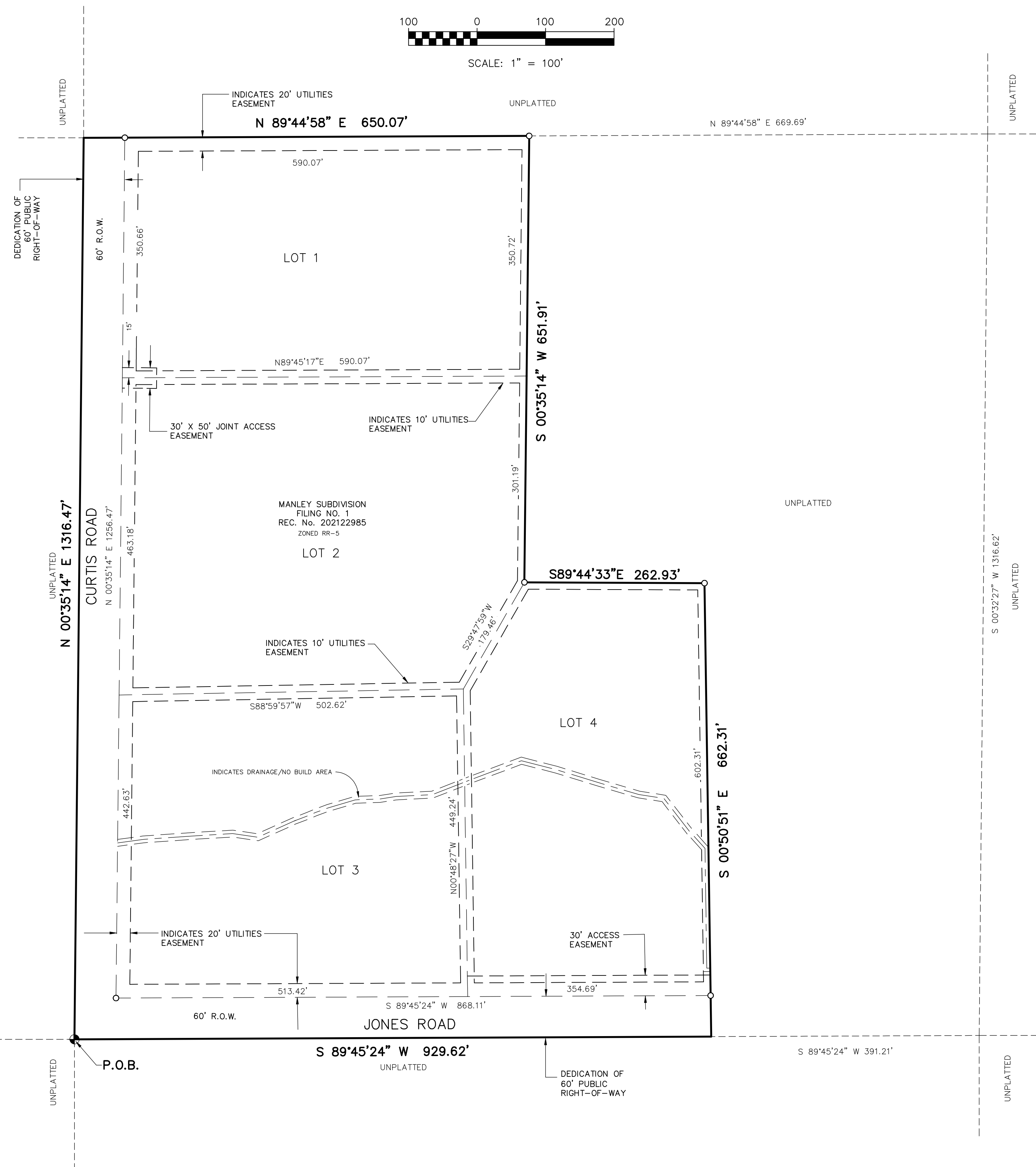
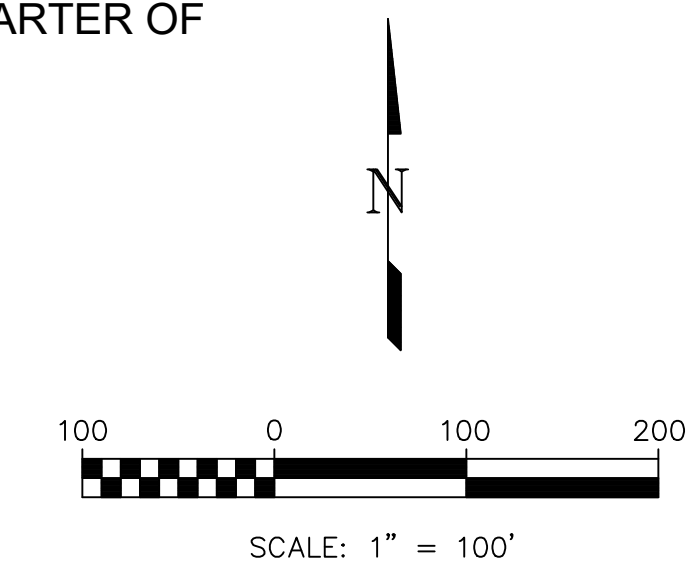
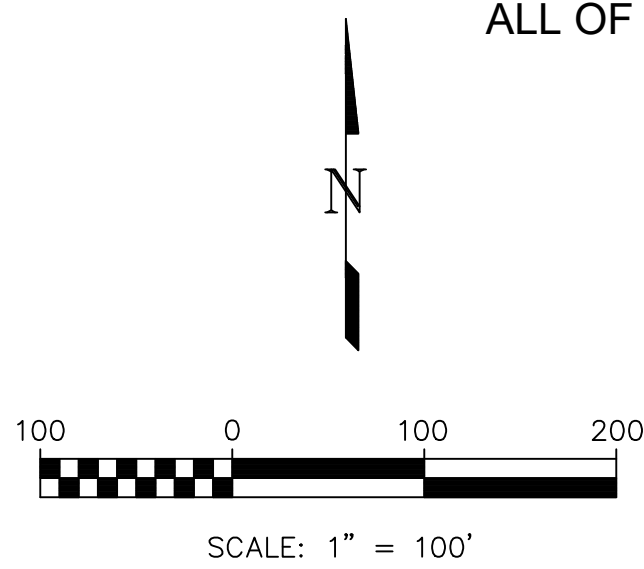


MANLEY SUBDIVISION  
FILING NO. 2  
FINAL PLAT

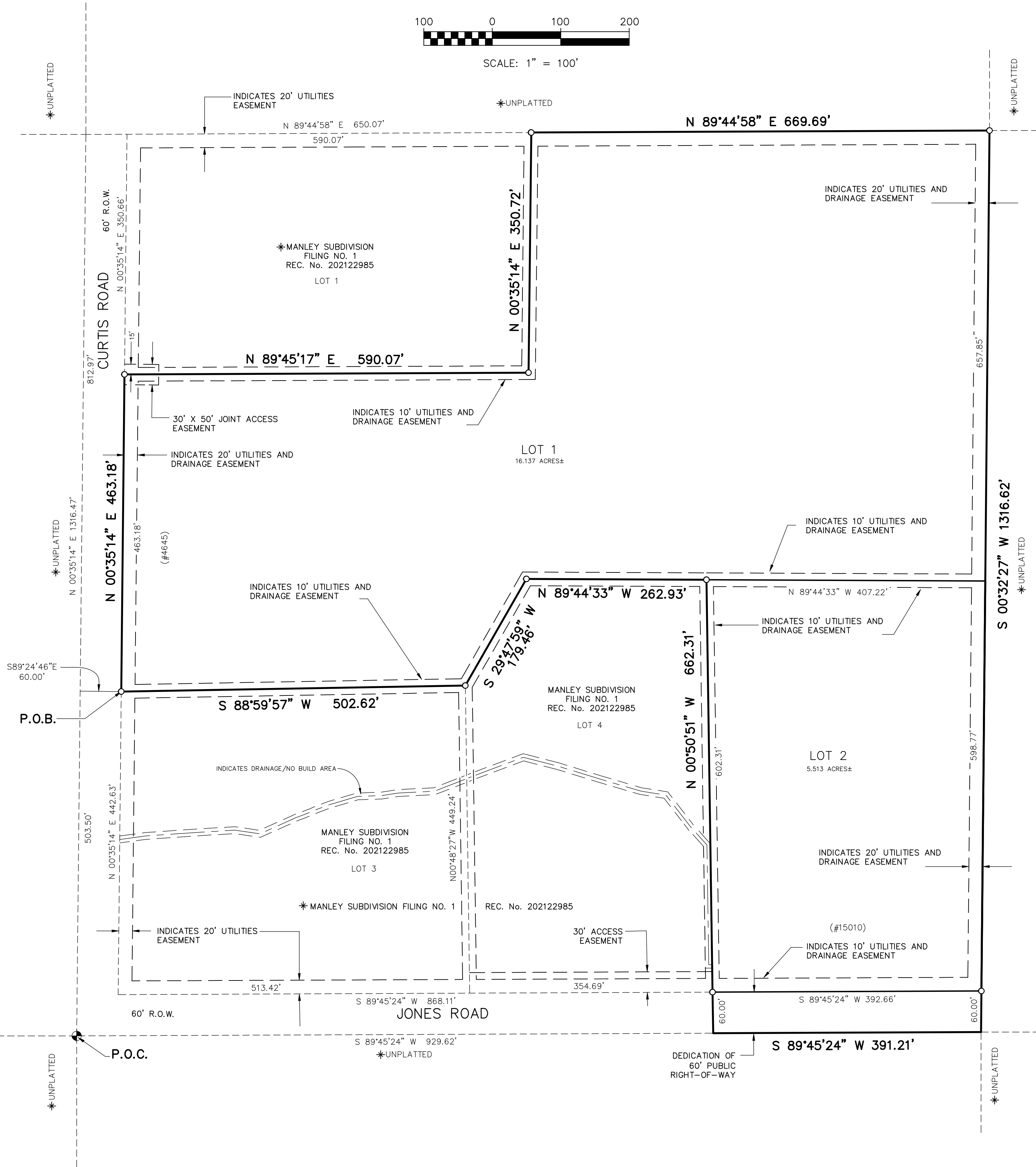
Project No.: \_\_\_\_\_  
Sheet: **99**  
1 of 2

# MANLEY SUBDIVISION FILING NO. 2

ALL OF LOT 2 MANLEY SUBDIVISION FILING No. 1 AND A PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 13 SOUTH, RANGE 64 WEST, OF THE 6th P.M., COUNTY OF EL PASO, STATE OF COLORADO



"AS PLATTED"



"AS REPLATTED"

PRELIMINARY COPY  
SUBJECT TO FINAL  
COUNTY APPROVAL

According to Colorado law, you must commence any legal action based upon this survey within three years after you first discover such defect. In no event, may any action in this survey be commenced more than three years from the date of recording.

CALL BEFORE YOU DIG  
**811**

No.	REVISIONS Description	By	Date

H Scale: 1" = 100'  
V Scale: N/A  
Designed By: DLK  
Drawn By: JG  
Checked By: NLR



MANLEY SUBDIVISION  
FILING NO. 2  
FINAL PLAT

EXHIBIT A

Page 1 of 1

GWS-1 (Rev, Sept 1996)

STATE OF COLORADO  
OFFICE OF THE STATE ENGINEER  
DIVISION OF WATER RESOURCES

RECEIVED  
MAR 24 2000  
WATER RESOURCES  
STATE ENGINEER  
COLO.

NONTRIBUTARY GROUND WATER LANDOWNERSHIP STATEMENT

I (we) Nancy M. Manley and Jerry L. Manley  
(Name)

claim and say that I (we) am (are) the owner(s) of the following described property consisting of 40 acres in the County of El Paso, State of Colorado:

Southwest Quarter of the Southwest Quarter of Section 22, Township 13 South, Range 64 West  
\_\_\_\_\_  
\_\_\_\_\_

and, that the ground water sought to be withdrawn from the Arapahoe aquifer underlying the above-described land has not been conveyed or reserved to another, nor has consent been given to it's withdrawal by another.

Further, I (we) claim and say that I (we) have read the statements made herein; know the contents hereof; and that the same are true to my (our) own knowledge.

Nancy M. Manley 3/22-00  
(Signature) (Date)  
Jerry L. Manley 3/22-00  
(Signature) (Date)

INSTRUCTIONS:

Please type or print neatly in black ink. This form may be reproduced by photocopy or word processing means. See additional instructions on back.



Wm. CURTIS WELLS & CO. / *consulting geologists*  
the ranch office commons, bldg 3, suite 102 / 2010 west 120th avenue  
denver, colorado 80234 / telephone (303) 466-3801 / fax 465-5859

# Fax

**Name:** Bill Fronczak  
**Organization:** Colorado Division of Water Resources  
**Fax:** 303-866-3589  
**Phone:** 303-866-3581  
**From:** Curt Wells  
**Date:** 5/8/00  
**Subject:** Manley Preliminary Plat  
**cc:** Mike Hrebenat/Dan Kupferer  
**Pages:** 6

Comments: Enclosed is a copy of my revised ground water supply report on the Manley Property preliminary plat. The revision reflects the current water supply planning where the existing well would be used for just one home as the only Denver well on a tract of land 35 acres or more. The remaining six existing or proposed homes would have individual non-tributary Arapahoe aquifer wells.

Bill, Ms. Manley has submitted Determination of Water Rights for her property. My client understands this property cannot advance to a final plat until the Determinations are issued.

If you have questions, please call. - Thanks - Curt



Wm. CURTIS WELLS & CO. / *consulting geologists*  
the ranch office commons, bldg 3, suite 102 / 2010 west 120th avenue  
denver, colorado 80234 / telephone (303) 466-3901 / fax 465-5859

March 20, 2000  
Revised May 8, 2000

Ms. Nancy M. Manley  
4645 North Curtis Road  
Falcon, CO 80831

Re: Ground Water Investigation, 40 Acre Manley Property, El Paso County, Colorado.  
Job No. 4655

Dear Ms. Manley:

At your request, I have prepared this report on the ground water availability beneath your 40 acres at the northeast corner of Curtis and Jones Roads. This property occupies the Southwest Quarter of the Southwest Quarter, Section 22, Township 13 South, Range 64 West, as shown on the attached figure. I understand seven single family homesites may be platted on this parcel. There is an existing domestic well, No. 164691, located on proposed Lot No.2.

Currently this well serves three existing homes that are located on proposed Lot Nos. 2, 3 and 4. As of the date of this revised report, the existing well will serve only the home on Lot No. 2. The homes on Lot Nos. 3 and 4 plus the additional homesites would be served by individual wells and non-evaporative septic systems would be the method of wastewater treatment. Normally, homeowners in this development would require a water supply of about 0.5 acre feet per year per home. With the available ground water supply, the homeowners could use up to 0.75 acre feet per year. This amount of water would supply the in-house use of about 0.27 acre feet, the watering of four horses and the irrigation of approximately 6,800 square feet of lawn or garden. Annually, the six additional homeowners would use about 4.5 acre feet of ground water.

#### GENERAL COMMENTS

The subject property occupies east sloping grass covered terrain. Surface water flows in this direction



and becomes a part of the West Fork of Black Squirrel Creek.

As you may know, this parcel is underlain by three of the four Denver Basin aquifers. In descending stratigraphic order they are the Denver, Arapahoe and Laramie Fox Hills formations. The base of these respective aquifers should be at depths of 580, 1,090 and 1,740 feet below ground surface. Commonly, wells tapping these respective aquifers should yield 15, 50 and 100 gallons per minute.

Ground water availability in each aquifer is computed by multiplying the area of the property by the formation saturated sand thickness, thence by specific yield (drainable porosity). Based on published aquifer information from the Colorado Division of Water Resources, I list on the table below my estimates of unappropriated groundwater beneath this subject parcel. As shown in the Denver and Arapahoe aquifers there should be approximately 2,550 acre feet of stored ground water.

Aquifer		Sand Thickness (ft)	Ground Water Storage (af)
Denver	NNT	169	1050
Arapahoe	NT	221	1500
Laramie Fox Hills	NT	220	1300

The quality of ground water contained in these formations is normally acceptable for domestic purposes. The iron concentration in the water stored in all of the formations is commonly at or slightly higher than the drinking water standard. Initially you should anticipate that future homeowners would have to treat their drinking water for iron. Prior to final platting the property, County officials will require the ground water from at least one proposed well on the property be chemically tested.





## WATER SUPPLY DEVELOPMENT

The existing well on the property is a 175 foot deep Denver aquifer structure that at one time was tested at a rate of 60 gallons per minute. As permitted, the well can be used to serve the water needs of the three homes currently on the property. I understand you will use this well for just the home on Lot No.2. The homes on Lot Nos. 1 and 3 through 7 would be served with individual 600 to 1,000 foot deep Arapahoe aquifer wells. The County, in platting this property, will require a 300 year water supply. Under this water supply plan the Denver aquifer water demand over 300 years would be 225 acre feet while the six homeowners using Arapahoe wells would need 1,350 acre feet. These water use requirements are less than the estimated ground water storage in each aquifer.

If the six future homeowners were to use the non-tributary (NT) Arapahoe aquifer this can be supply done by submitting well permit applications once the Commission has issued its "Determination of Water Rights". I understand that recently you filed a request for these determinations. Arapahoe aquifer wells would be 900 to 1,000 feet deep and should cost \$12,000 to \$15,000 plus about \$3,000 for pumping equipment.

## RECOMMENDATIONS

- (1) Develop the property with specific well site locations shown on the plat map. This is needed so that all of the wells are equally spaced on the project to avoid well to well interference.
- (2) Prior to final platting the property, drill at least one Arapahoe aquifer domestic well and have the water pumped from both the existing Denver and Arapahoe wells chemically tested for water quality.



Professional judgements have been expressed in this report. They are based on my understanding of the project and my experience with the aquifers in this area. Well drilling and testing will be necessary to verify my preliminary opinions on well yield and water quality.

I trust this information satisfies you immediate needs. If you have questions, please call.

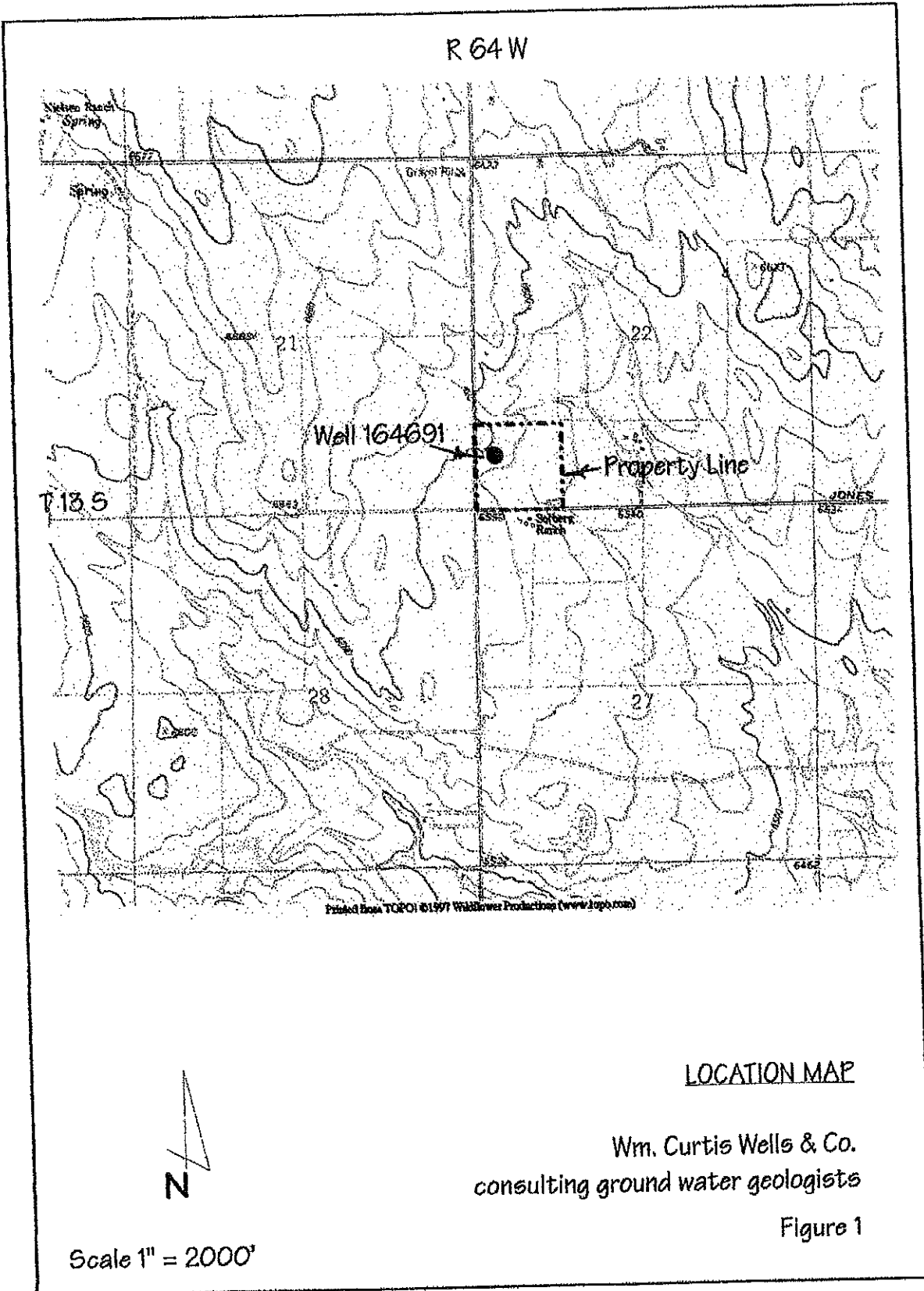
Very truly yours,

Wm. Curtis Wells & Co.

A handwritten signature in cursive script, appearing to read "Wm. Curtis Wells", is written over a horizontal line.

Wm. Curtis Wells CPG  
Consulting Ground Water Geologist

cc: Don Kupferer



LOCATION MAP

Wm. Curtis Wells & Co.  
consulting ground water geologists

Figure 1

Scale 1" = 2000'

**COLORADO GROUND WATER COMMISSION  
FINDINGS AND ORDER**

IN THE MATTER OF AN APPLICATION FOR REPLACEMENT PLAN TO ALLOW THE WITHDRAWAL OF GROUND WATER FROM THE DENVER AQUIFER IN THE UPPER BLACK SQUIRREL CREEK DESIGNATED GROUND WATER BASIN

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REPLACEMENT PLAN - DETERMINATION OF WATER RIGHT NO. 104-BD- Amendment No. 1

AQUIFER: DENVER

APPLICANT: NANCY MANLEY

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In compliance with Section 37-90-107.5, CRS, and the Designated Basin Rules, 2 CCR 410-1 (“Rules” or “Rule”), Nancy Manley (“Applicant”) submitted an application for a replacement plan to allow the withdrawal of ground water from the Denver Aquifer in accordance with Determination of Water Right No. 104-BD.

**FINDINGS**

1. Pursuant to Section 37-90-107(7), CRS, in a Findings and Order dated November 30, 2000, the Ground Water Commission (“Commission”) approved a Determination of Water Right, no. 104-BD, for the Denver Aquifer (“Aquifer”), summarized as follows.
  - a. The determination quantified an amount of water from beneath 40 acres of overlying land generally described as the SW 1/4 of the SW 1/4, Section 22, Township 13 South, Range 64 West, Sixth P.M., in El Paso County.
  - b. The total volume of underlying ground water that may be withdrawn from the Aquifer shall not exceed 980 acre-feet and the allowed average annual amount of ground water that may be withdrawn from the Aquifer shall not exceed 9.8 acre-feet.
  - c. The use of the allowed amount of underlying ground water shall be limited to the following beneficial uses: domestic, livestock watering and irrigation.
  - d. In accordance with Rule 5.3.6 the withdrawal of the subject ground water will, within one hundred years, deplete the flow of a natural stream or its alluvial aquifer at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal, the ground water is considered to be not-nontributary, and Commission approval of a replacement plan providing for actual depletion of affected alluvial aquifers and adequate to prevent any material injury to existing water rights in such alluvial aquifers is required prior to approval of well permits for wells to withdraw the subject ground water.
2. The subject water is Designated Ground water located within the boundaries of the Upper Black Squirrel Creek Designated Ground Water Basin and within the Upper Black Squirrel Creek Ground Water Management District. The Commission has jurisdiction.
3. Withdrawal of the subject ground water would deplete the alluvial aquifer of the Upper Black Squirrel Creek Designated Ground Water Basin, which, according to Rule 5.2.6.2, has been determined to be over appropriated. Such depletion would unreasonably impair existing alluvial rights withdrawing water from that alluvial aquifer.
4. Pursuant to Rule 5.6.1 this plan must be adequate to prevent any material injury to water rights of other appropriators, which for purposes of this plan means large capacity wells withdrawing water from the alluvial aquifer of the Upper Black Squirrel Creek Designated Ground Water Basin.

5. Pursuant to Rule 5.3.6.2(C) the amount of replacement water shall provide for the depletion of alluvial water for the first 100 years due to all previous pumping and if pumping continues beyond 100 years, shall replace actual impact until pumping ceases.
6. An application for the replacement plan was received by the Commission on June 19, 2018, and a replacement plan was originally approved on March 15, 2019. The applicant submitted a request to amend the replacement plan on April 10, 2019, claiming a misunderstanding as to what diversions and uses were intended to occur under the plan. The requested amendment to the plan will result in fewer diversions and uses, and less depletions to the alluvial aquifer, than those that would result from operating the plan as approved on March 15, 2019. Staff of the Commission therefore deems that the plan may be amended as requested without re-publication. This amendment replaces the plan as approved on March 15, 2019.
7. The Applicant proposes to divert 0.59 acre-feet annually from the Denver Aquifer for a period of 100 years and then divert 0.52 acre-feet annually from the Denver Aquifer for a period of 200 years, for a total pumping period of 300 years. The Denver aquifer water will be withdrawn through two wells to be located on two residential lots. Each well is proposed to divert 0.295 acre-feet of water annually for 100 years for use in 1 single family residence and irrigation of 700 square feet of lawn, garden, and trees or irrigation of 200 square feet of lawn, garden, and trees and watering of two domestic animals. After 100 years of pumping all irrigation and animal watering uses from the wells shall cease and the use of each well shall be limited to diversions of 0.260 acre-feet per year for in-house use in 1 single family residence.
8. At a continuous withdrawal of 0.59 acre-feet annually for 100 years and then 0.52 acre-feet annually for 200 year, total depletions to the alluvial aquifer system of the Upper Black Squirrel Creek Designated Ground Water Basin would steadily increase to 0.467 acre-feet per year in the 300th year, as shown in Exhibit A.
9. The Applicant proposes to provide 0.468 acre-feet per year of replacement water to the alluvial aquifer system of the Upper Black Squirrel Creek Designated Ground Water Basin. The proposed source of replacement water is septic and leaching field return flows from the in-house use of the ground water to be pumped under the plan. The Applicant estimates that return flows from each residence will consist of 90% of the water used for in-house purposes. Assuming each residence uses a total annual amount for in-house use of 0.26 acre-feet, the return flow per lot would be 0.234 acre-feet annually, and the return flows under the plan will total 0.468 acre-feet per year for two residences at full build out.
10. The subject property is located within the drainage of Black Squirrel Creek, and the return flows will flow to the alluvial aquifer of the Upper Black Squirrel Creek Designated Ground Water Basin. The Applicant proposes to aggregate all replacements to the drainage in which the well or wells will operate, in accordance with Guideline 2007-1.
11. So long as the septic and leaching treatment systems for the in-house use of the water are constructed and operated in compliance with state and county health department standards the plan would not cause unreasonable impairment of water quality of the alluvial aquifer.
12. Records in this office indicate that the Applicant controls the water right to be used as the

Aquifer: Denver

Applicant:

source of replacement water, consisting of Determination of Water Right No. 104-BD.

13. In accordance with Rule 5.6.2 the application was referred to the Upper Black Squirrel Creek Ground Water Management District on January 14, 2019. Written recommendations from the district were received on February 15, 2019.
14. In accordance with Sections 37-90-107.5 and 37-90-112, CRS, the application was published in the Ranchland News newspaper on January 17, 2019 and January 24, 2019. No objections to the application were received within the time limit set by statute.
15. The Commission Staff has evaluated the application pursuant to Section 37-90-107.5, CRS, and the requirements of Rule 5.3.6.2(C) and Rule 5.6.
16. According to Rule 5.6.2 of the Designated Basin Rules:
  - a. The Applicant has the burden of proving the adequacy of the plan in all respects.
  - b. The Commission Staff shall propose any additional terms and conditions or limitations which are necessary to prevent material injury and to ensure that the plan is administrable and enforceable.
17. Based on the above, no material injury will occur to the water rights of large capacity wells producing from the alluvial aquifer of the Upper Black Squirrel Creek Designated Ground Water Basin, due to diversions from the Denver Aquifer, if operated under this replacement plan, subject to the conditions given below.

#### ORDER

In accordance with Section 37-90-107.5, CRS, and the Designated Basin Rules, the Colorado Ground Water Commission orders that the application for a replacement plan to allow the withdrawal of ground water from the Denver Aquifer underlying 40 acres that are the subject of Determination of Water Right no. 104-BD is approved subject to the following conditions:

18. The Denver aquifer water will be withdrawn through two wells to be located on two residential lots. For the first 100 years of pumping the allowed use of ground water for each well is use in 1 single family residence and irrigation of 700 square feet of lawn, garden, and trees or irrigation of 200 square feet of lawn, garden, and trees and watering of two domestic animals. After 100 years of pumping all irrigation and animal watering uses from the wells shall cease and the use of each well shall be limited to in-house use in 1 single family residence.
19. The allowed annual amount of ground water to be withdrawn from the aquifer by all wells operating under this plan shall not exceed 0.59 acre-feet for the first 100 years then 0.52 acre-feet for the next 200 years, for a total pumping period of 300 years. The allowed annual amount of water to be withdrawn from each well shall not exceed 0.295 acre-feet for the first 100 years then 0.26 acre-feet for the next 200 years.
20. A totalizing flow meter shall be installed on each well. The well owner shall maintain the meter in good working order.
21. Permanent records of all withdrawals of ground water from each well shall be recorded at least annually by the well owners, permanently maintained, and provided to the

Aquifer: Denver

Applicant:

Commission and the Upper Black Squirrel Creek Ground Water Management District upon request.

22. Pumping under this plan is limited to a period of 300 years. The year of first use of this replacement plan shall be the calendar year of construction of a well permitted pursuant to this plan or permitting of an existing well pursuant to the plan.
23. Return flows from in-house use of ground water shall occur through individual on-lot non-evaporative septic systems located within the 40 acres of overlying land that are the subject of Determination of Water Right No. 104-BD.
24. The septic systems must be constructed and operated to state and county health department standards.
25. Replacement of depletions must be provided annually in the acre-feet amounts shown in Exhibit A. Annual replacement requirements may be computed by pro-rating between the values given on Exhibit A, or for simplicity may be taken as the amount shown in the next succeeding 5 year increment.
26. The Applicant or their successor(s) are responsible for ensuring that replacement water is provided to the alluvial aquifer as required by this plan, and that the replacement prevents any material injury to the water rights of other appropriators. The annual replacement requirement and the annual amount of replacement water provided shall be calculated and reported on a form acceptable to the Commission. The annual amount of replacement water provided must be no less than the annual replacement requirement on a yearly basis. No credit shall be claimed by the Applicant for an oversupply of replacement water provided to the alluvium during previous years.
27. The Applicant must provide the required annual amount of replacement water for the first 100 years, or for as long as a well is operated pursuant to this plan, whichever is longer.
28. Each occupied single family dwelling that is being supplied by a well that utilizes a non-evaporative septic and leaching field treatment system shall be assumed to be providing 0.234 acre-feet of replacement water to the alluvial aquifer. To assure adequate return flows, the number of occupied single-family dwellings that are generating return flows via a non-evaporative septic and leaching field system must be equal to or greater than the number of dwellings shown in Table 1 below, or an amended or alternate replacement plan must be obtained that will make the required replacement deliveries.

Table 1		
Year	No. of Wells	Return Flow (af/yr)
1-15	1	0.234
16-300	2	0.468

29. The Applicant or their successor(s) must gather, record and maintain permanent records of all information pertaining to operation of this plan, which shall include, but is not be limited to, those items identified below. The Applicant must submit records to the Commission and the Upper Black Squirrel Creek Ground Water Management District on forms acceptable to the Commission, on an annual basis for the previous calendar year, by February 15<sup>th</sup> of the following year.

Aquifer: Denver

Applicant:

- a. Identification of all well permits issued and wells constructed under this plan.
  - b. The amount of water diverted by each well and all wells in total, both annually and cumulatively since operation of the plan began.
  - c. The number of occupied dwellings served by each well.
  - d. The number of square feet irrigated by each well.
  - e. The number of large domestic animals served by each well.
  - f. The return flows occurring from use of all wells operating under the plan, assuming 0.234 acre-feet per year (90% of the water used for in-house purposes) enters the alluvial aquifer as replacement water from each occupied single family dwelling.
  - g. Any other information the Commission deems relevant and necessary to operation, monitoring, accounting, or administration of the plan.
30. The Applicant or their successor(s) are fully responsible for the operation, monitoring, and accounting of the replacement plan. In the event a lot with a well permitted or operating pursuant to this plan is sold, evidence of the sale and notification to the new owner of their responsibility under the replacement plan shall accompany that year's accounting.
31. Any covenants adopted for this subdivision should contain a description of the replacement plan, including the limitations on water use for each lot, metering of well pumping, and how the plan is to be administered.
32. In the event the permitted well or wells are not operated in accordance with the conditions of this replacement plan, they shall be subject to administration, including orders to cease diverting ground water.
33. All terms and conditions of Determination of Water Right No. 104-BD must be met.
34. Pursuant to Designated Basin Rule 5.6.1(F), the Commission retains jurisdiction to modify or revoke approval of this replacement plan if monitoring or operating experience reveals that the plan results in any material injury to water rights of other appropriators or in unreasonable impairment to water quality.
35. A copy of this Findings and Order shall be recorded by the Applicant in the real property records of El Paso County, so that a title examination of the above described property, or any part thereof, shall reveal to all future purchasers the existence of this replacement plan. The terms and conditions of this replacement plan shall be considered to be a covenant on and running with the subject property.
36. This amendment to the plan replaces the plan as approved on March 15, 2019.

Dated this 30th day of April, 2019.

By: 

Kevin G. Rein, P.E.  
Executive Director  
Colorado Ground Water Commission



Keith Vander Horst, P.E.  
Chief of Water Supply, Basins



Exhibit A  
Replacement Plan - Determination No.: 104-BD  
Page 1 of 1

Designated Basin Summary Table for Nancy Manley Pumping Rate of 1.77 acre-feet per year for 100 years then 1.56 acre-feet per year for 200 years from the Denver aquifer Section(s): Section 22, T13S, R64W, 6th P.M.			
Year	Annual Depletion (AF/YR)	Year	Annual Depletion (AF/YR)
5	0.29	155	1.34
10	0.51	160	1.35
15	0.67	165	1.35
20	0.80	170	1.35
25	0.90	175	1.35
30	0.98	180	1.36
35	1.05	185	1.36
40	1.10	190	1.36
45	1.15	195	1.36
50	1.19	200	1.37
55	1.22	205	1.37
60	1.25	210	1.37
65	1.28	215	1.37
70	1.30	220	1.38
75	1.32	225	1.38
80	1.34	230	1.38
85	1.35	235	1.38
90	1.37	240	1.38
95	1.38	245	1.38
100	1.40	250	1.39
105	1.37	255	1.39
110	1.36	260	1.39
115	1.35	265	1.39
120	1.34	270	1.39
125	1.34	275	1.39
130	1.34	280	1.40
135	1.34	285	1.40
140	1.34	290	1.40
145	1.34	295	1.40
150	1.34	300	1.40

Created by Ground Water Commission Staff: aat on January 09, 2019