

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 85-15769
Exam Date: 06/17/2021

1. Current Owner:
CITY OF WINCHESTER PO BOX 245 WINCHESTER ID 83555-0245
2. Accompanied by: Michael Haight
Phone No: C: 208-791-6748
Address: Same as above
Relationship to permit Holder: Water system operator

3. SOURCE:
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
85-7307 & 85-7363	GROUNDWATER	MUNICIPAL	DECREED
85-4404 & 85-4405	GROUNDWATER	MUNICIPAL	DECREED

Comments: Right(s) 85-7307, 85-7363, 85-4404, & 85-4405 are prior decreed municipal water rights for the City of Winchester. WR 95-15769 adds additional diversion rate to previous municipal recorded WRs, and condition X35 is not recommended for licensing this right.

2. Other water rights with the same point-of-diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
85-7307 & 85-7363	GROUNDWATER	MUNICIPAL	DECREED
85-4404 & 85-4405	GROUNDWATER	MUNICIPAL	DECREED

Comments: Right(s) 85-7307, 85-7363, 85-4404, & 85-4405 all use the same water system infrastructure. Condition F06 was added during licensing review describing the four prior rights and this right share the same POD(s).

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER L29 (SW¼ SE¼), Sec. 31, Twp 34N, Rge 02W, B.M. LEWIS County
GROUND WATER L20 (NW¼ SE¼), Sec. 31, Twp 34N, Rge 02W, B.M. LEWIS County
GROUND WATER L29 (SW¼ SE¼), Sec. 31, Twp 34N, Rge 02W, B.M. LEWIS County
GROUND WATER L25 (SW¼ SW¼), Sec. 33, Twp 34N, Rge 02W, B.M. LEWIS County
GROUND WATER L9 (SW¼ NW¼), Sec. 33, Twp 34N, Rge 02W, B.M. LEWIS County

Method of Determination: GPS located 5ea PODs as listed below:

- L29 (SW¼ SE¼), Sec. 31 = Well No.6 -116°37.751, 46°14.465
- L20 (NW¼ SE¼), Sec. 31 = Well No.4 -116°37.696, 46°14.540
- L29 (SW¼ SE¼), Sec. 31 = Well No.6 -116°37.761, 46°14.489
- L25 (SW¼ SW¼), Sec. 33 = Well No.15 -116°35.879, 46°14.728 (D0067920)
- L9 (SW¼ NW¼), Sec. 33 = Well No.15 -116°35.879, 46°14.365 (D0067919)

Method of Determination: Large area POU designated; determined by field exam, existing municipal right 85-4404 POU shape, and Arcmap aerial imagery.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be

X 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
WELL No.4		5			
WELL No.6		UNK			
WELL No.7		5			
WELL No.15 (D0067920)		15			
WELL No.13 (D0067919)		15			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
FLOWMETER(S) 5EA		SIEMENS	SITRANS FM MAG 5100			

2. Measurements: Each of the 5 groundwater wells have a Siemens flowmeter installed, from which a flow measurement was taken during the exam with respective well pump running and stabilized prior to capturing the diversion rate. Additional pump capacity records were reviewed for well No. 13 & 15 which provided higher flow rates during the development period, which were used to calculate overall flow rates. The combined diversion rate equals 33.0 gpm (No.4) + 28.1 gpm (No.7) + 21.0 gpm (No.6) + 79 gpm (No.13) + 89 gpm (No.15) = 250.10 gpm or 0.56 cfs considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: flow measurement readings taken from each respective wells Siemens flowmeter connected to main service line from well to pump house or historic flowmeter data (well No. 13 & No. 15) as follows:

- 33.0 gpm (No.4) + 28.1 gpm (No.7) + 21.0 gpm (No.6) = 82.1 gpm
- 79 gpm (No.13) + 89 gpm (No.15) = 168 gpm
- Total flow measurement = 82.1 gpm + 168 gpm = 250.1 gpm or 0.56 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

2. Volume Calculations for Other Uses: City of Winchester is an incorporated city, and no volume limitations are applied to the license.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 6/17/2021 with the applicant's water system operator, Michael Haight, showed 5ea groundwater wells serving the municipal water system for the City of Winchester (City), PWS# ID2310007. The permit approved development of 6ea PODs, but at time of exam groundwater well No.10 had been abandoned by the City and the associated POD was removed from the permit during licensing review. The table below details each POD and related diversion works data as operating at time of exam:

Well or Diversion ID No.*	Pump Motor Hp	Flowmeter	Flow Measurement (GPM)	Notes:
WELL No.4 (E0005243)	5	SIEMENS - SITRANS F M MAG 5100 W	33.0	
WELL No.6 (E0008546)	UNK	SIEMENS - SITRANS F M MAG 5100 W	28.1	No pump data available from applicant, system data plates, nor Stuvenga Vessey Drilling
WELL No.7 (E0005243)	5	SIEMENS - SITRANS F M MAG 5100 W	21.0	
WELL No.15 (D0067920)	15	SIEMENS - SITRANS F M MAG 5100 W	31.1	historic flowmeter data demonstrates pump capacity of 79 gpm during year 2017
WELL No.13 (D0067919)	15	SIEMENS - SITRANS F M MAG 5100 W	45.3	historic flowmeter data demonstrates pump capacity of 89 gpm during year 2017

The historic flowmeter data for well(s) 13 & 15 are within the development period of the permit and shall be used to determine the diverting works maximum instantaneous flow rate which equals 33.0 gpm (No.4) + 28.1 gpm (No.6) + 21.0 gpm (No.7) + 79 gpm (No.13) + 89 gpm (No.15) = 250.1 gpm or 0.56 cfs considering department rounding standards. Although the City has proven the system is capable of 0.56 cfs, I am recommending a maximum diversion rate to license this right of **0.14 cfs** for licensing purposes.

At time of exam, each of the 15 hp pump motors variable frequency drive settings for well(s) 13 & 15 were operating at a lower range, producing lower flow rates of 31.1 gpm and 45.3 gpm respectively (see table above). Water system operating flow rate observed during the field exam equals 158.5 gpm or 0.35 cfs, showing the City is not over diverting their permit approved rate of 0.50 cfs. The City's combined decreed water right(s) diversion rate equals 0.08 cfs (85-7363) + 0.11 cfs (85-7306) + 0.155 cfs (85-4404) + 0.075 cfs (85-4405) = 0.42 cfs. Subtracting recorded WR diversion rates from the maximum instantaneous diversion rate found at time of exam produces the following: 0.56 cfs (observed) – 0.42 cfs (recorded WRs) = 0.14 cfs.

During the exam, each well site was observed and well casing GPS located. Several wells use the same POD data point as existing WRs on file, and Arcmap aerial imagery was used to create WR PODs for well(s) 13 & 15. During the exam Mr. Haight and I discussed the municipal service area, and he verified it has not changed; the large municipal POU for the permit was assigned as the large POU during licensing review. Groundwater pumped from each well site is routed by water main line to a 400,000-gal storage reservoir that is co-located with well(s) 6 & 7. Photographs were taken of the historic water system schematics that show routing of main service lines that follow the city streets for the most part. The City of Winchester is an incorporated city, and no volume limitations are applied to the license.

Conditions 26A, 046, and 134 were removed from the permit during licensing review. Condition X35 was removed from the permit during licensing review, as the diversion rate recommended for licensing is additive to the existing recorded WRs owned by the City. Condition F06 was added to describe that multiple water rights share the same POD(s). All other

conditions on the permit shall be carried to the license. Overlap Concerns: Right(s) 85-7307, 85-7363, 85-4404, & 85-4405 are prior decreed municipal water rights for the City of Winchester that use the same infrastructure, but this permit adds additional diversion rate which is additive in nature, and not a concern for overlap. There are no additional overlap concerns for this water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>
MUNICIPAL	01/01 to 12/31	0.14 CFS

Totals: 0.14 CFS

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☒ None

I. AUTHENTICATION

Luke Bates -

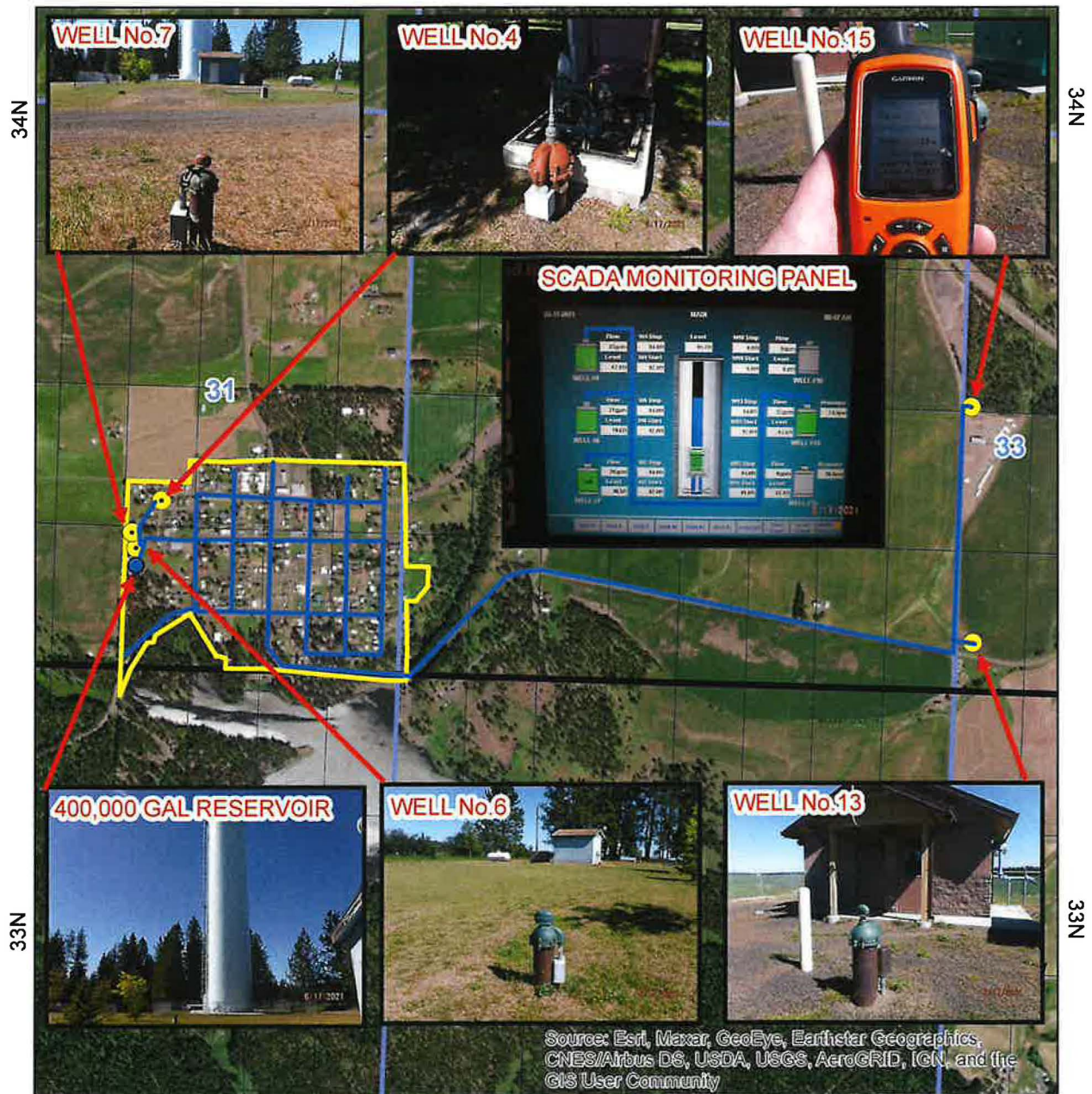
Field Examiner's Name JD B Date 8/10/2022

Reviewer Chris Bell Date 5/22/24

Attachment to Field Exam

85-15769

MUNICIPAL system diagram.



● Point of Diversion

Water Service Area Boundary

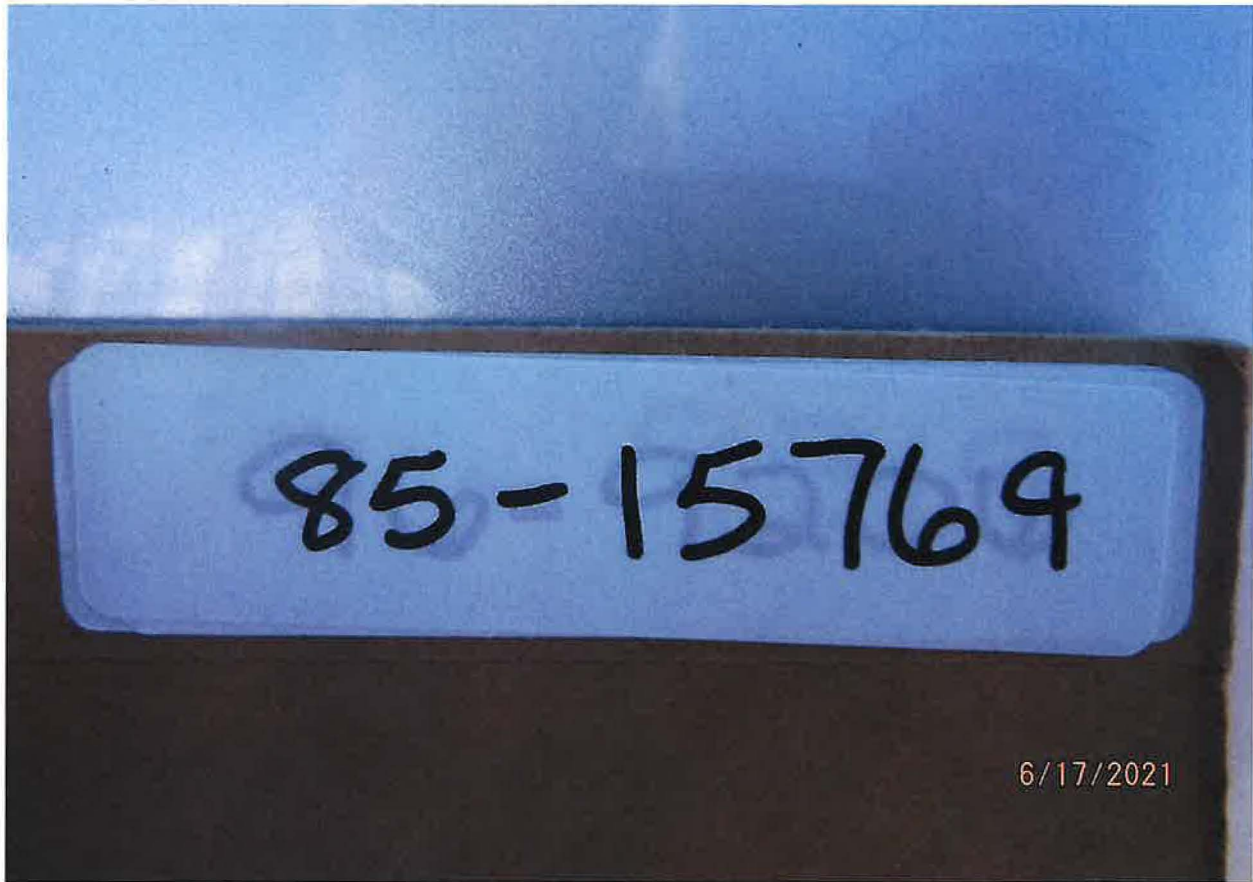
Townships

PLS Sections

Quarter Quarters

0 0.175 0.35 0.7 Miles





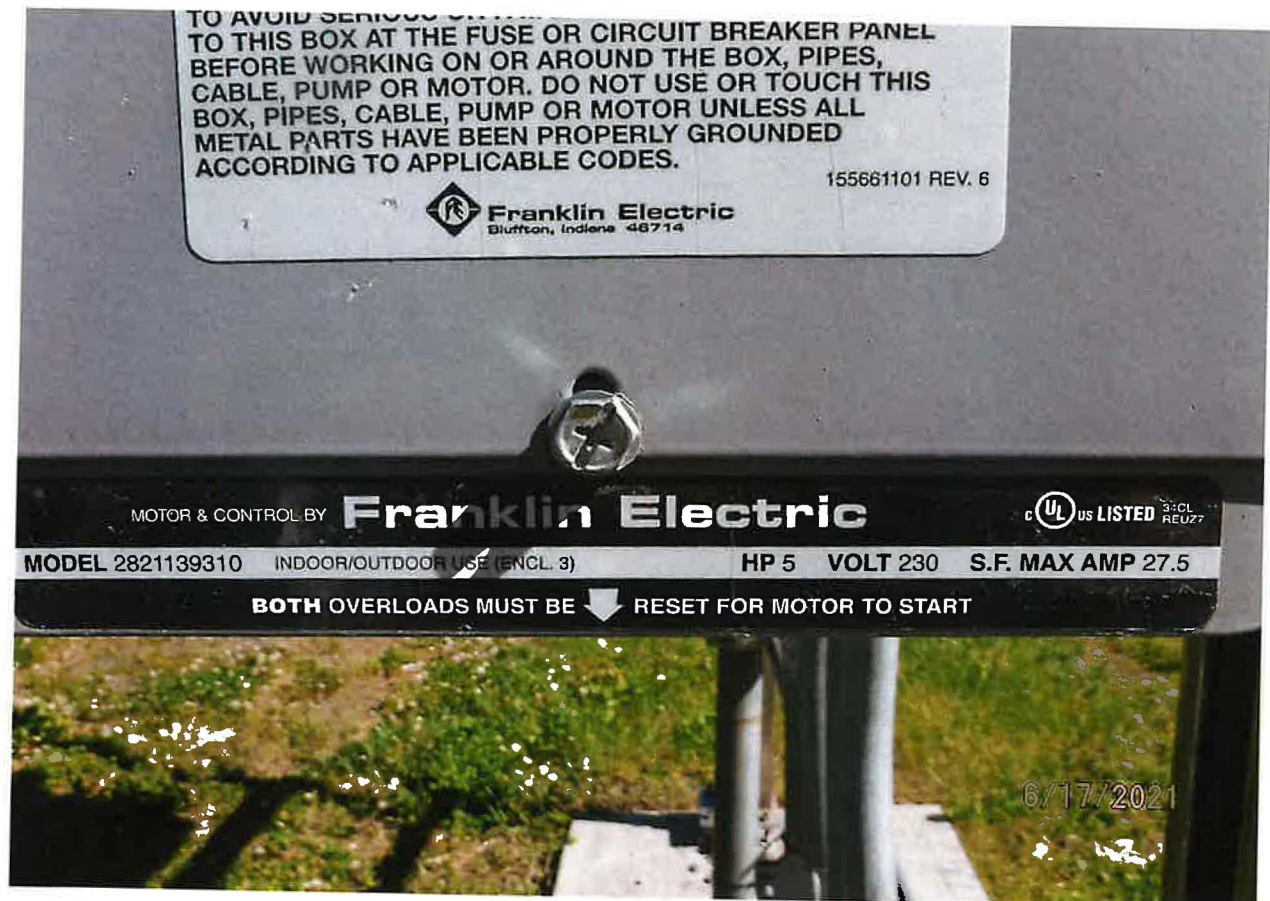
FIELD EXAM DATE 6/17/2021



CITY OF WINCHESTER, ID



POD – WELL No.4, WITH DEQ TAG (E0005243)



5 HP PUMP/MOTOR INSTALLED IN WELL No.4



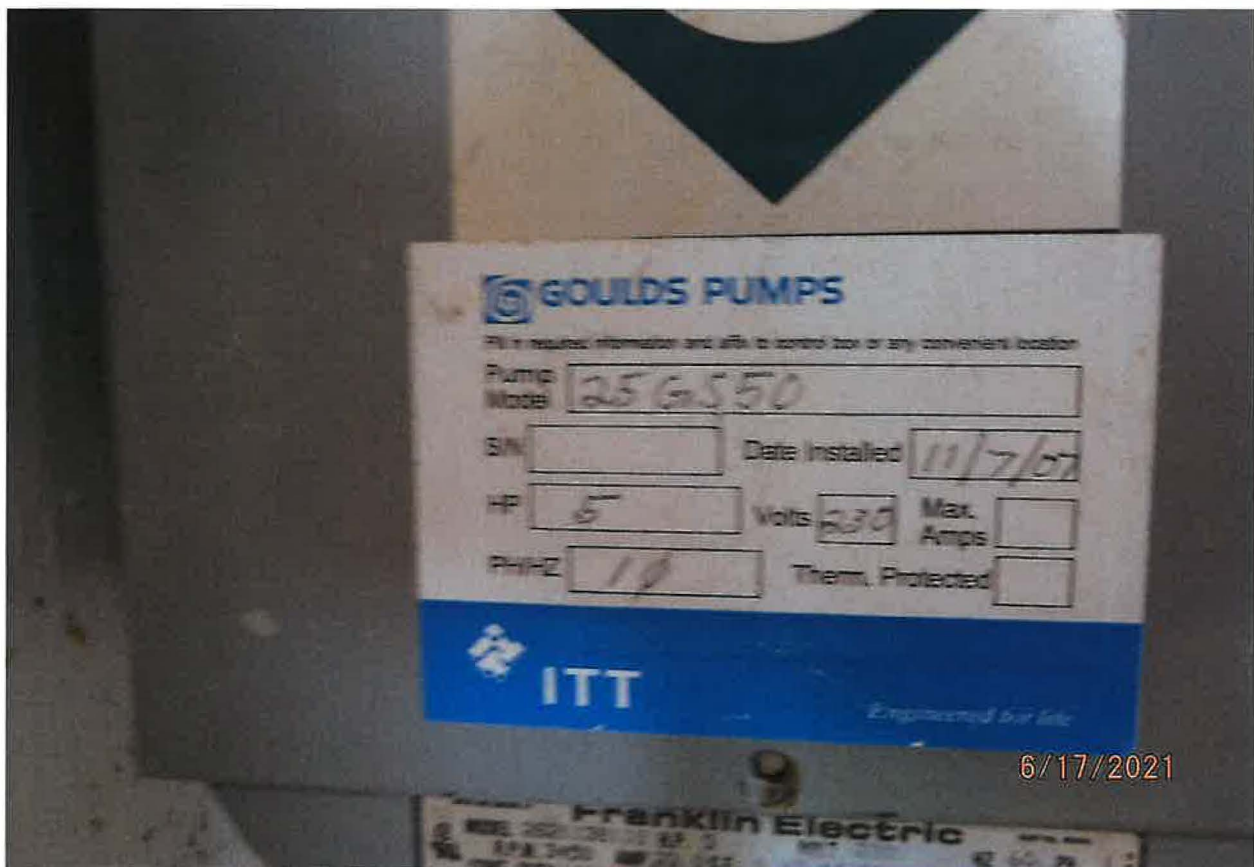
WELL No.4 DIVERTING WORKS WITH SIEMENS FLOWMETER INSTALLED



WELL No.4 - SITRANS F M MAG 5100 W FLOWMETER, S/N 7ME658 02621U463



POD – WELL No.7, WITH DEQ TAG E0005243



5 HP PUMP/MOTOR INSTALLED IN WELL No.7



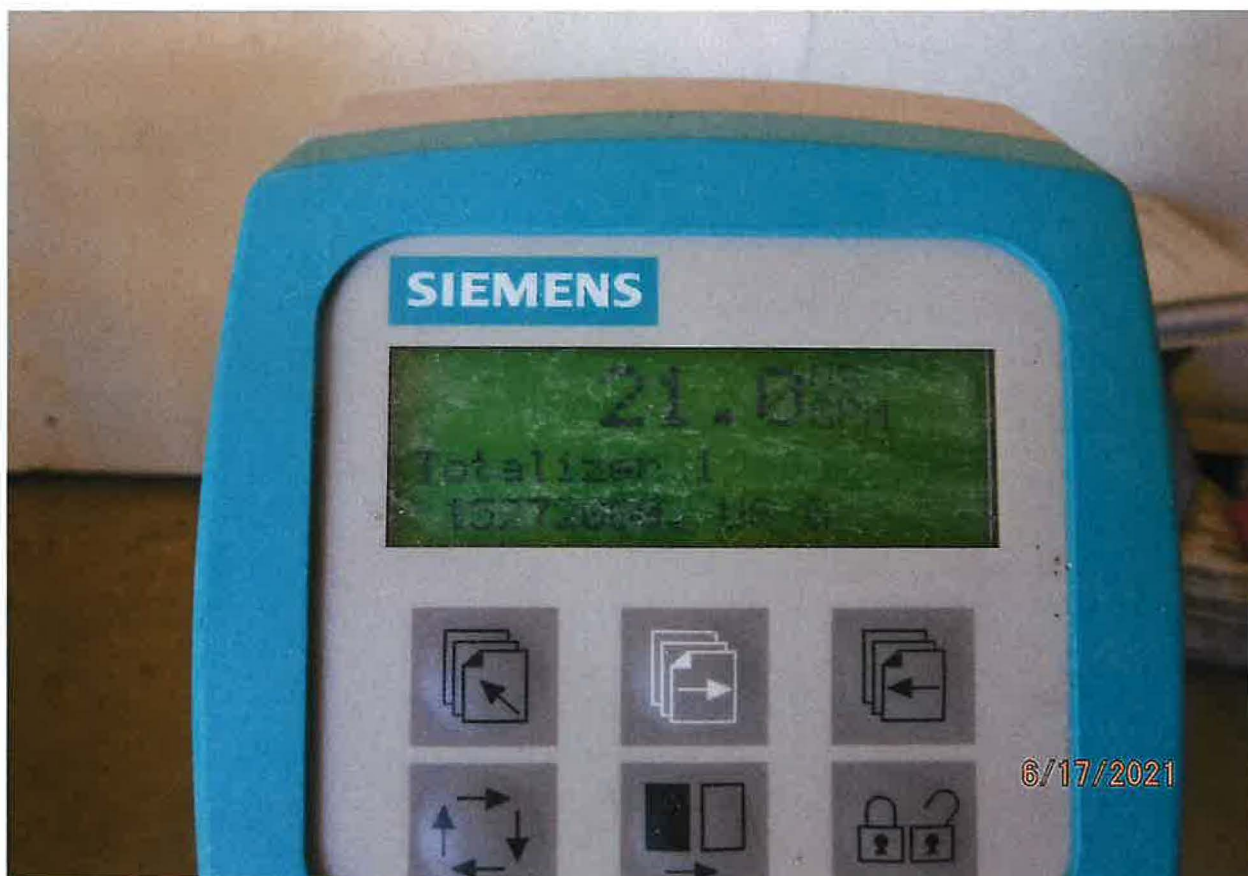
WELL No.4 - SITRANS F M MAG 5100 W FLOWMETER, S/N 7ME658 415001U293



WELL No.6 & No. 7 PUMP STATION WITH DIVERTING WORKS



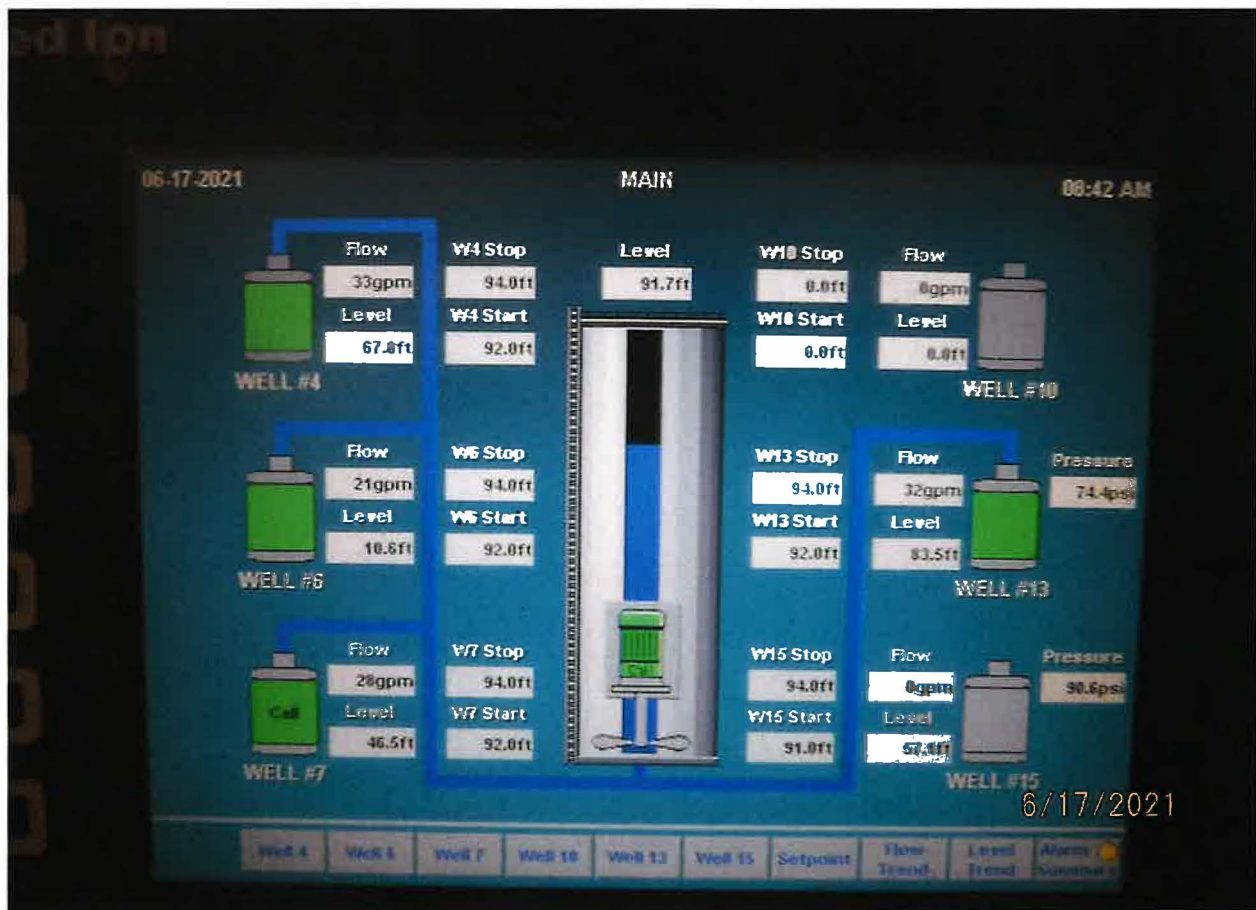
POD – WELL No.6, WITH DEQ TAG E0008546; UNKOWN PUMP HP INSTALLED IN WELL



WELL No.6 - SITRANS F M MAG 5100 W FLOWMETER



PUMP STATION WELL No.6 & No.7 CONTROL PANEL



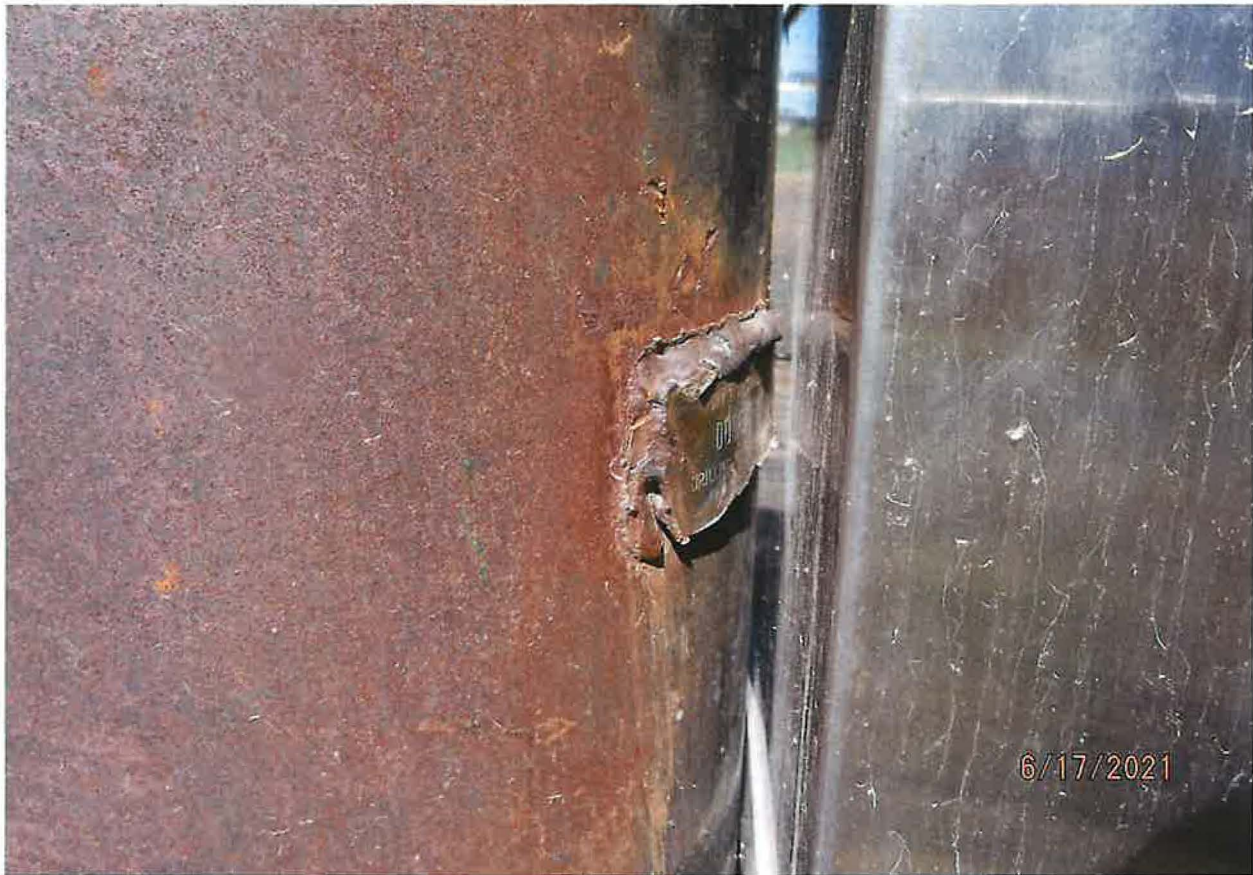
WATER SYSTEM SCADA MONITORING PANEL (WELL No. 10 ABANDONED, WELL No. 13 & 15 ALTERNATE)



400,000-GAL STORAGE TANK, CO-LOCATED WITH WELL No.6 & No.7 WITH PUMP HOUSE



POD – WELL No.13 WITH 15 HP 10-STAGE PUMP/MOTOR INSTALLED



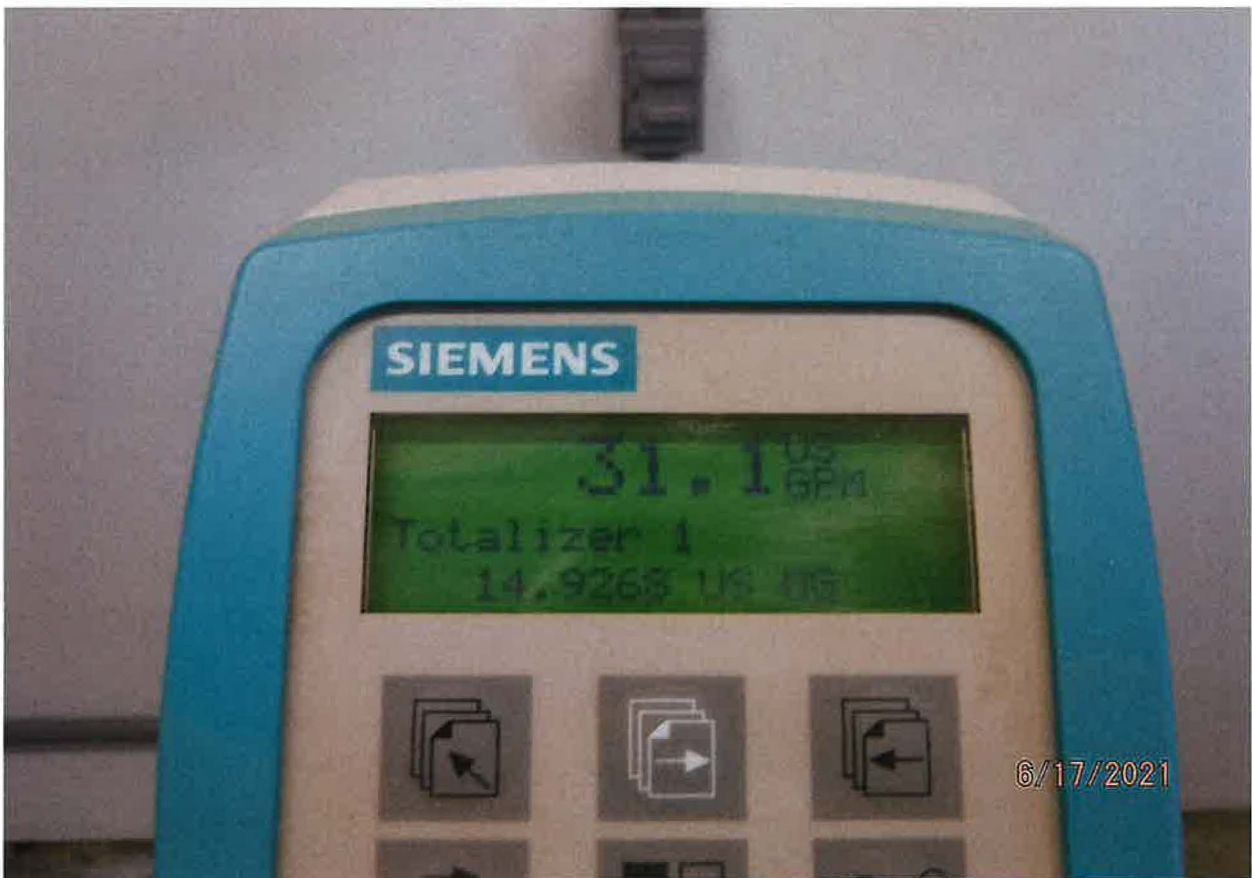
WELL No.13 D-TAG D0067919



WELL No.13 PUMP STATION WITH DIVERTING WORKS



WELL No.13 CONTROL PANEL AND SCADA SYSTEM CONTROL PANEL



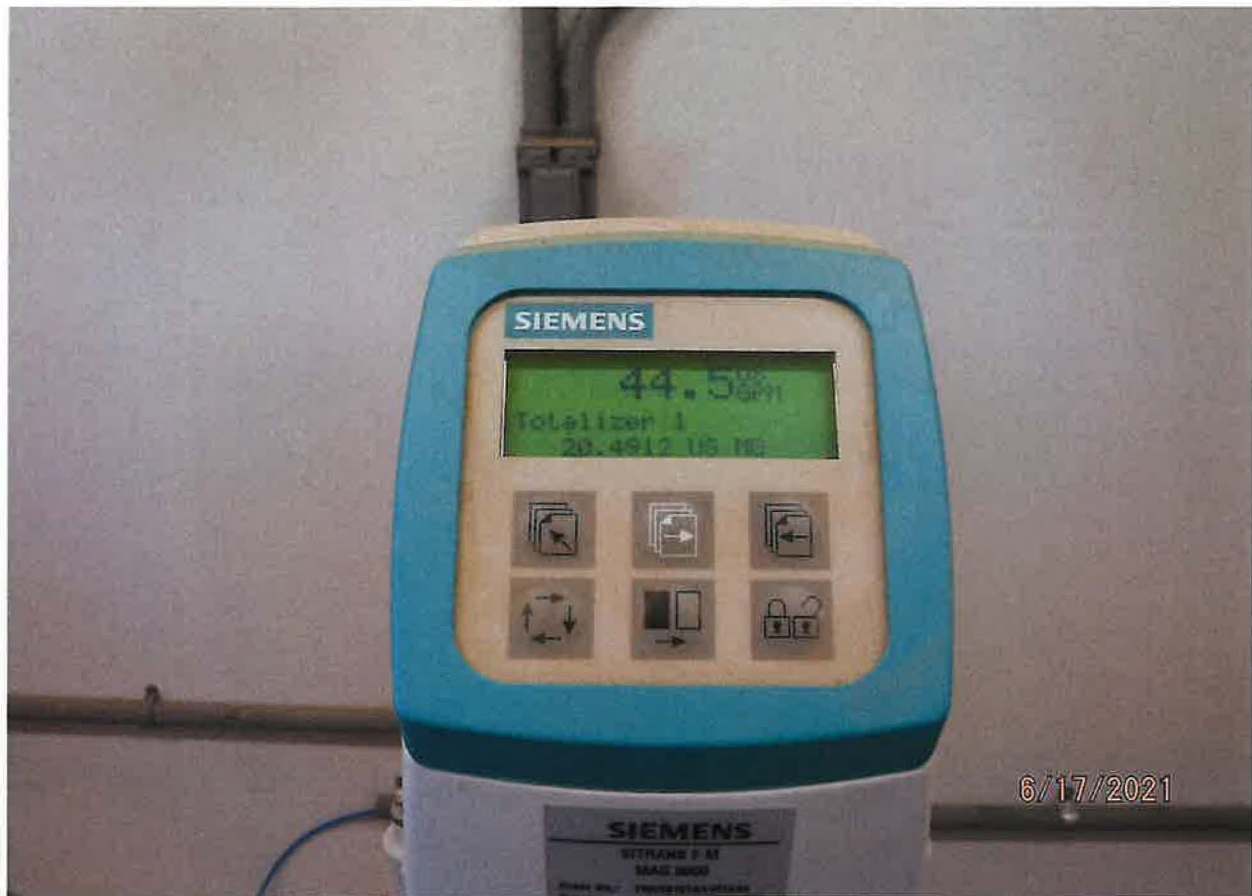
WELL No.13 - SITRANS F M MAG 5100 W FLOWMETER, S/N IXF6231483



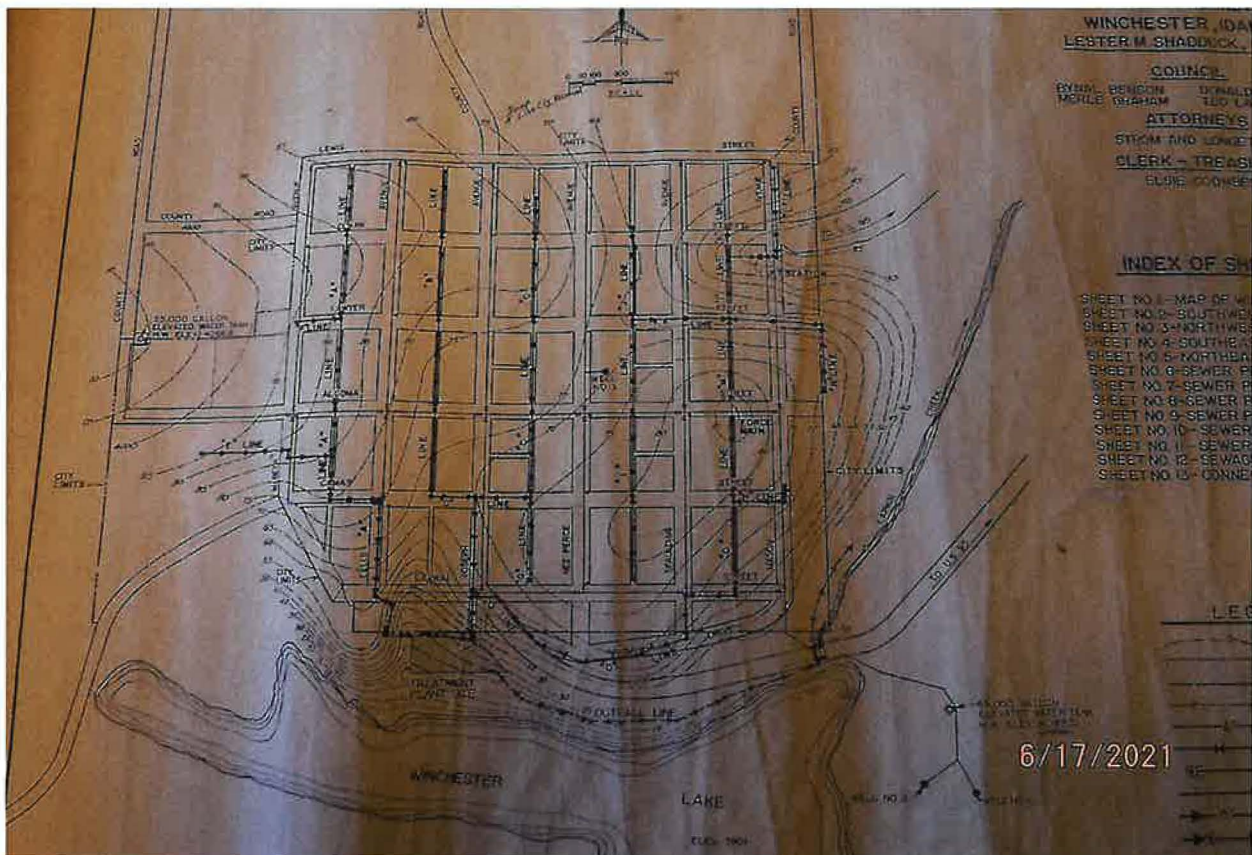
POD – WELL No.15 D-TAG DOO67920 WITH 15 HP 12 STAGE PUMP/MOTOR INSTALLED



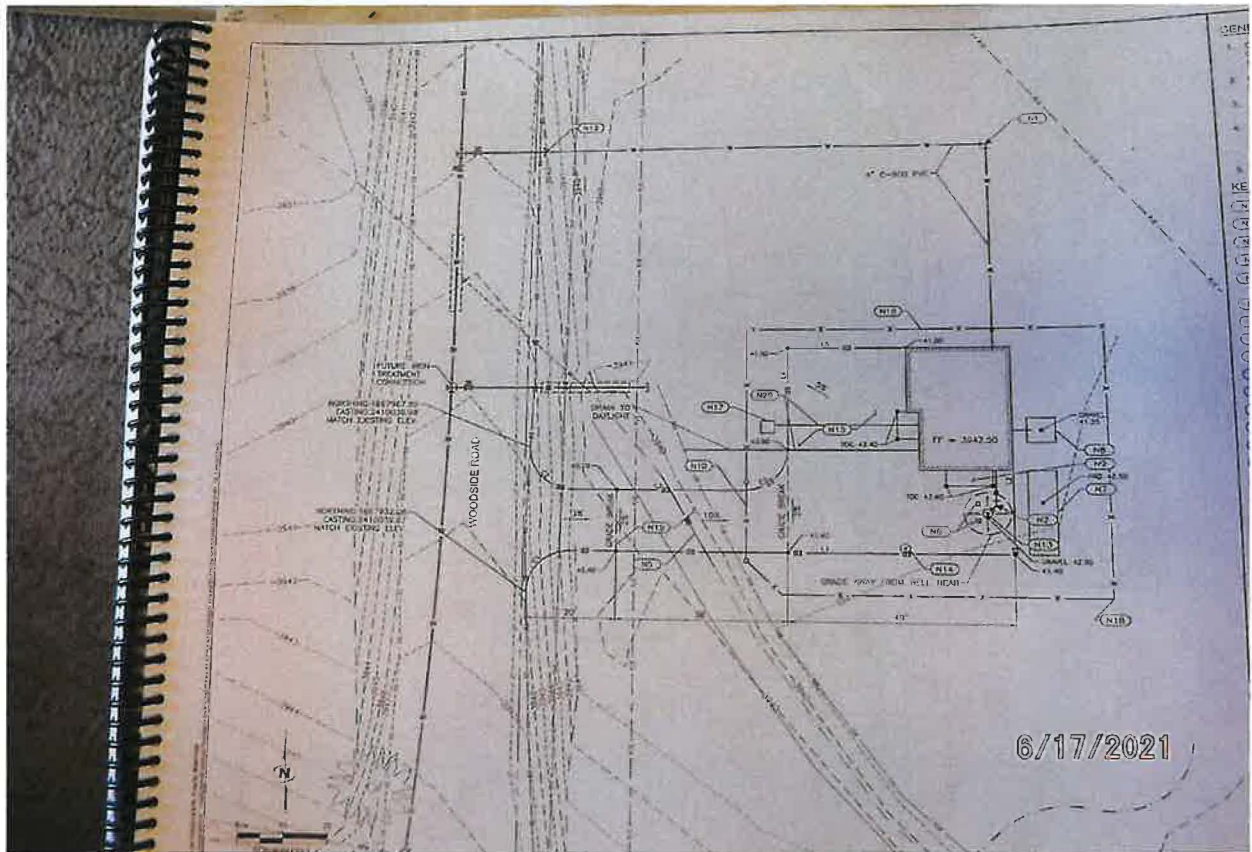
WELL No.15 PUMP STATION AND DIVERTING WORKS



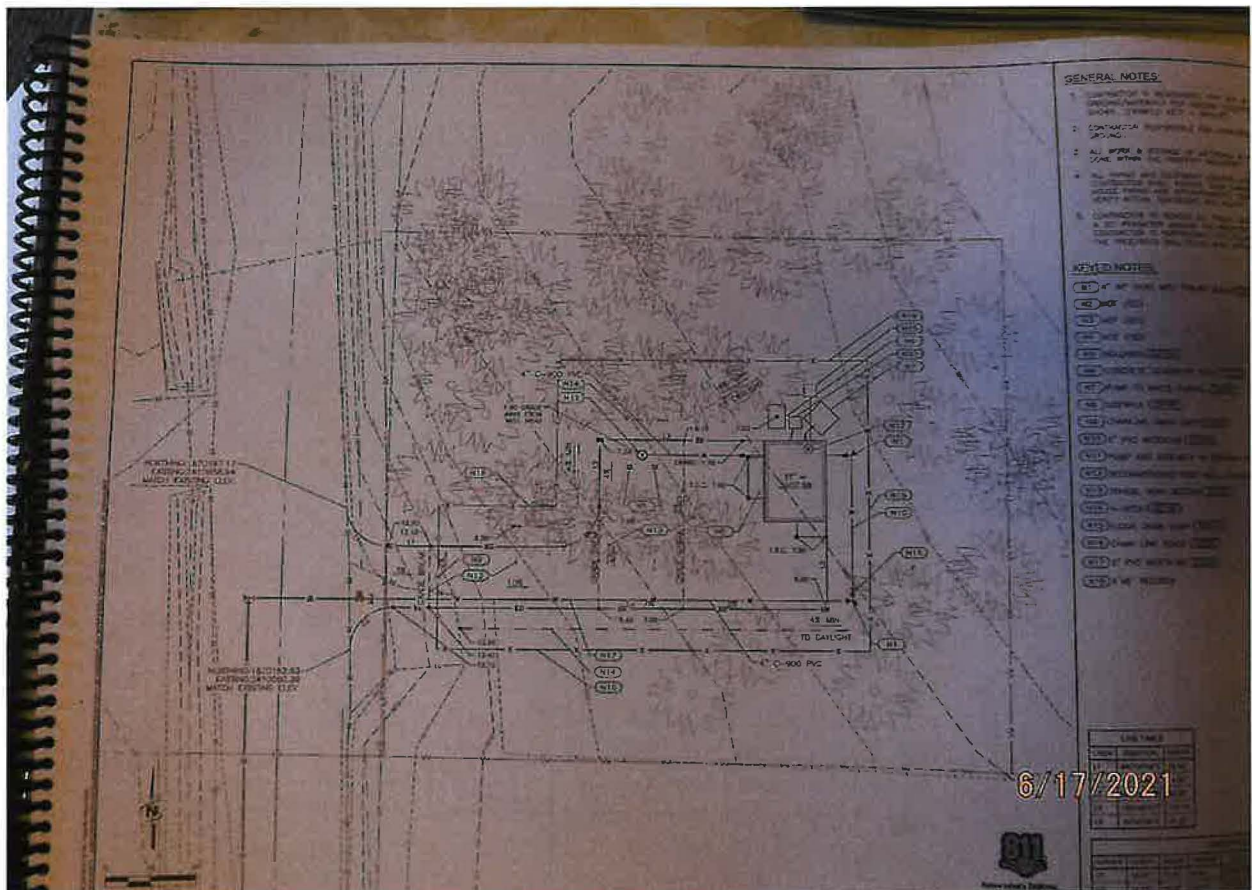
WELL No.15 - SITRANS F M MAG 5100 W FLOWMETER, S/N IXF6231479



MUNICIPAL POU – CITY OF WINCHESTER (DOESN'T INCORPORATE WELL No.13 or No.15 INFRASTRUCTURE)



WELL No.13 SCHEMATIC FOR WATER MAIN ROUTING



WELL No.15 SCHEMATIC FOR WATER MAIN ROUTING