

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

JUL 03 2017

DEPARTMENT OF
WATER RESOURCES

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-336921. Owner City of Boise, Department of Parks and RecreationPhone No. 208-608-7600Current address 1104 Royal Boulevard, Boise, ID 837062. Examiner's name Terry Scanlan, P.E., P.G.EXAM DATE 6/14/20173. Accompanied by Mike WoodwardEmail mwoodward@cityofboise.orgAddress 1104 Royal Boulevard, Boise, ID 83706Relationship to permit holder Horticulture Manager, BPRDPhone No. 608-71894. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use Nampa & Meridian Irrigation District water2. Other water rights with the same source and point of diversion None**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
	1	NE	NE	NE	3	3N	1E	Ada	Exam, Aerial Photo

2. Place(s) of Use:

Method of determination Exam, aerial photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	1E	3	M																
			L1																

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well Pump	Goulds	5	Submersible	Goulds	1.25" x 2" transition
				25G550	

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
32 gallon trash can & stop watch						

2. **Measurements:** _____

Well discharge pipe used to fill a 32-gallon container to determine flow rate.

Fill times: 55 seconds, 55 seconds, 55 seconds

32 gallons/55 seconds x 60 seconds/min = 35 gpm = 0.08 cfs

E. NARRATIVE/REMARKS/COMMENTS

A 6-inch well equipped with a 5-hp submersible pump provides ground water to a pressurized irrigation system and spray park at Comba Park. Surface water from Nampa & Meridian Irrigation District (delivered by Settlers Irrigation District) is the primary irrigation water source when available and is pumped with a 3-hp submersible pump from a wet well into the pressurized irrigation system. The wet well is located adjacent to the canal in the southwest corner of the Park near the ground water well and pump house. Water is diverted from the groundwater well and either (1) pumped directly into the pressurized irrigation system (to supplement the surface water supply) or (2) used for a spray park. Spray park water drains into a buried storage tank, and is then pumped into the pressurized irrigation system or overflows to the sanitary sewer when the storage tank is full.

The well was completed with 6-inch diameter steel casing from +2 to 219 feet, sealed with bentonite to 200 feet, and has a 6-inch stainless well screen from 219 to 239 feet. The 5-hp well pump capacity is 35 gpm (0.08 cfs) based on timed volumetric measurements at the time of the exam. Pump capacity is consistent with the pump curve. The 0.08 cfs capacity is less than the permit allowance of 0.12 cfs.

Irrigation development found at the time of the exam includes 2.0 acres of park landscape area. Additional municipal water use is in the spray park (water playground).

Exam Attachments

Attachment A: Field Exam Map

Attachment B: System Components and Diagrams

Attachment C: Flow Rate and Volume Calculations

Attachment D: Exam Photos

Attachment E: Proof of Beneficial Use

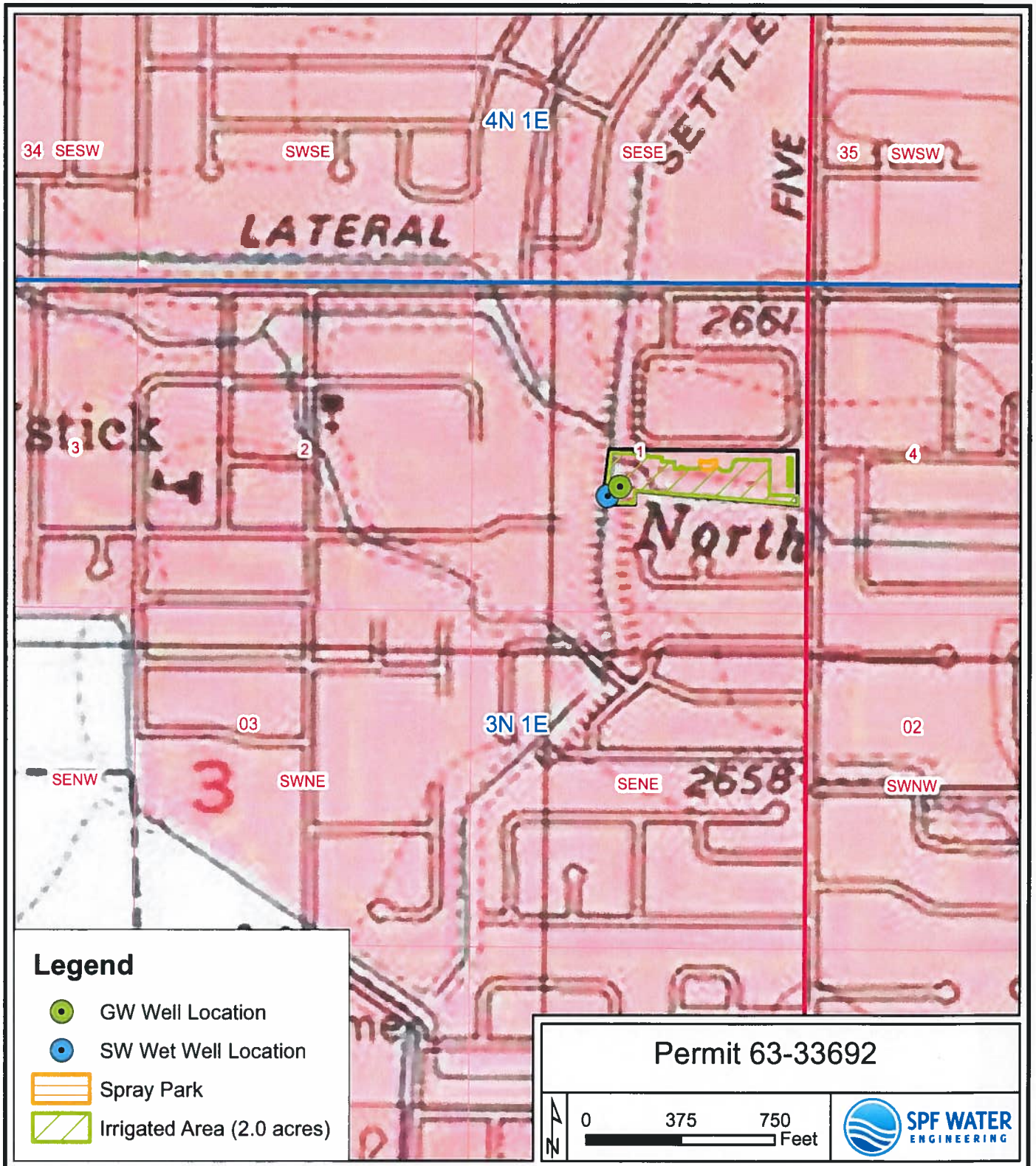
Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

Attachment A
Field Exam Map

Comba Park



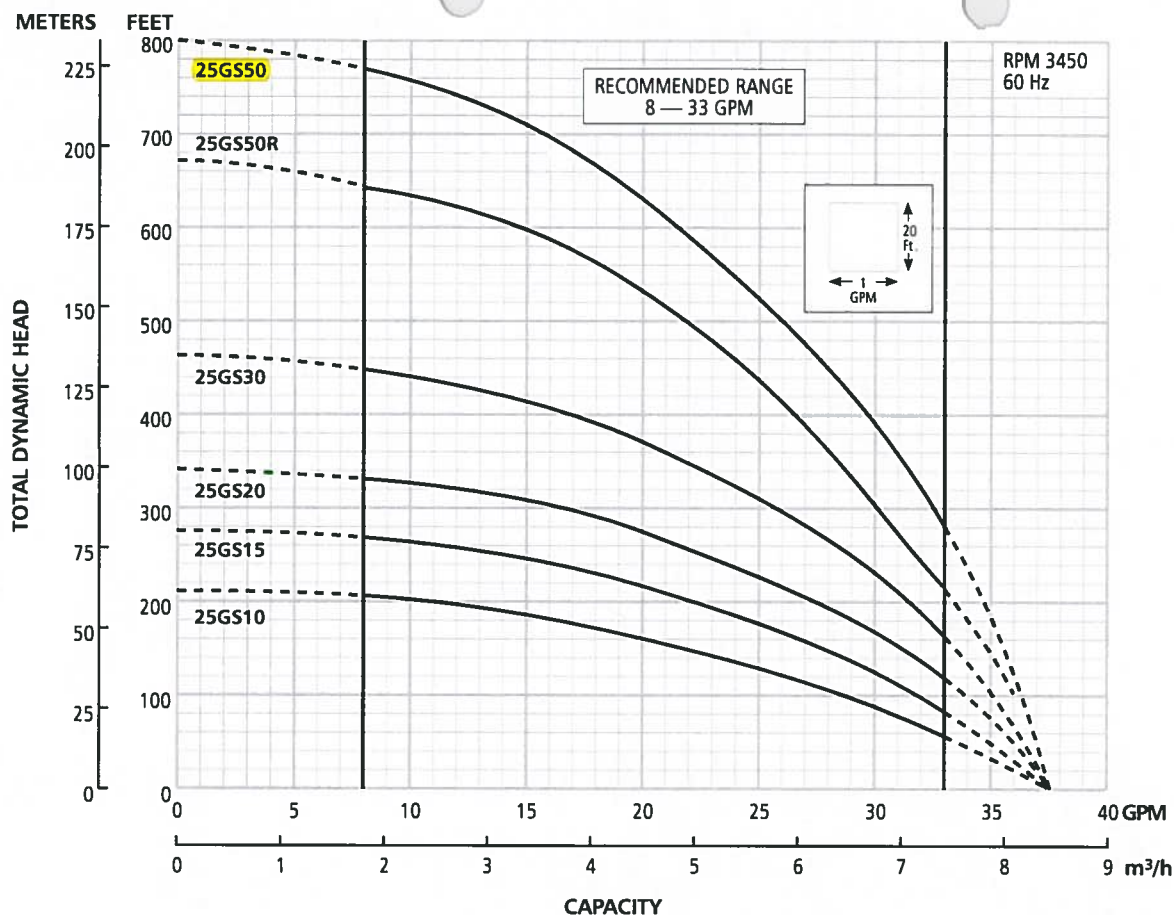
Comba Park



Attachment B

System Components and Diagrams

Model 25GS



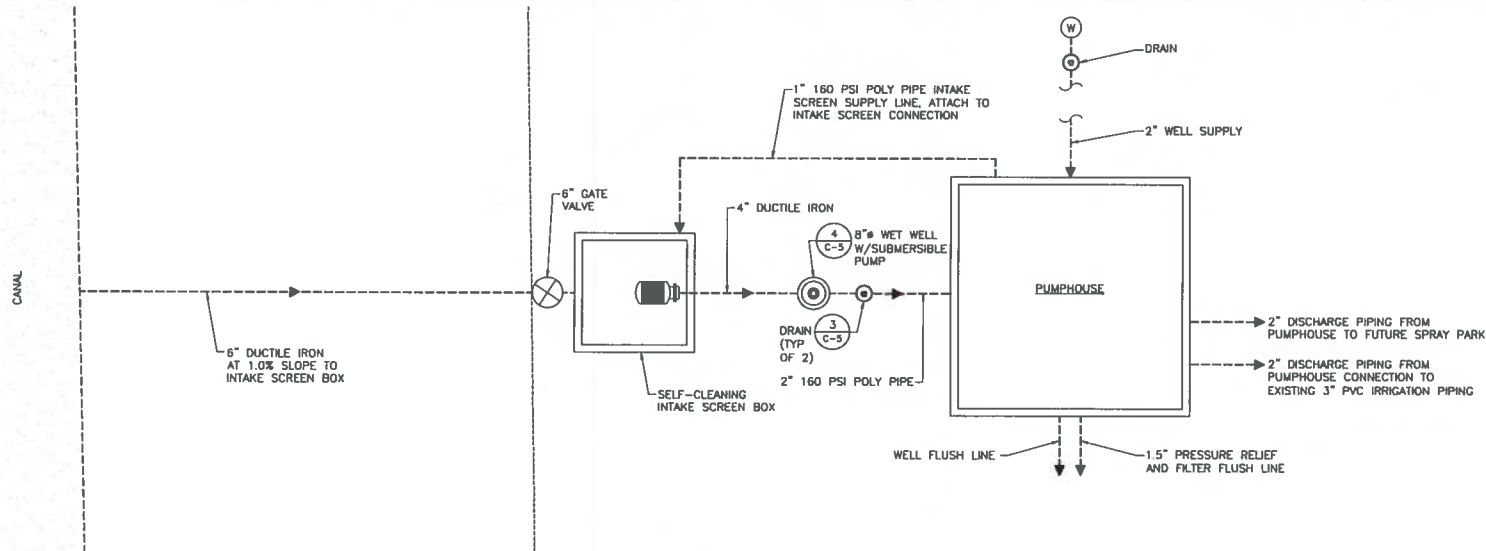
$$\begin{aligned} \text{TDH} &= \text{discharge pressure} + \text{pumping lift} + \text{headloss} \\ &= (45 \text{ psi} \times 2.31 \text{ feet/psi}) + 50 \text{ feet} + 25 \text{ feet} = 180 \text{ feet} \end{aligned}$$

Capacity at 180 feet TDH = 36 gpm = 0.08 cfs

xylem
Let's Solve Water

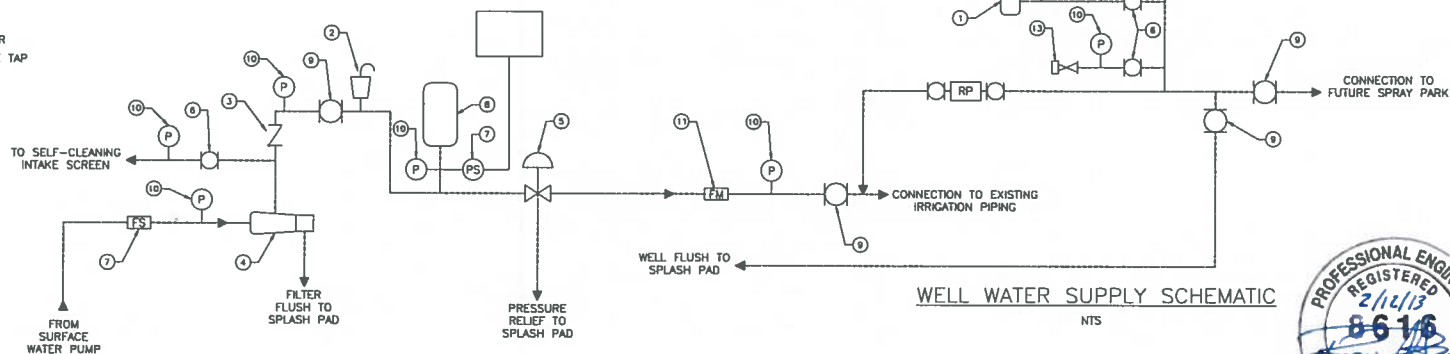
Xylem, Inc.
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 Seneca Falls, NY 13148
 Phone: (866) 325-4210
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www.xyleminc.com/brands/gouldswatertechnology

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OVERALL FLOW SCHEMATIC
NTS

- ① ~22 GAL PRESSURE TANK
- ② COMBINATION AIR RELEASE/VACUUM VALVE AT HIGH POINT
- ③ CHECK VALVE
- ④ AMIAD TAF750E FILTER, OR EQUAL
- ⑤ PRESSURE RELIEF VALVE
- ⑥ 1" BALL VALVE
- ⑦ PRESSURE SWITCH
- ⑧ ~120 GAL PRESSURE TANK
- ⑨ 2" BALL VALVE
- ⑩ PRESSURE GAUGE
- ⑪ FLOW METER
- ⑫ PRESSURE TRANSDUCER
- ⑬ SMOOTH NOSE SAMPLE TAP
- ⑭ FLOW SWITCH



WELL WATER SUPPLY SCHEMATIC
NTS

SURFACE WATER SUPPLY SCHEMATIC
NTS



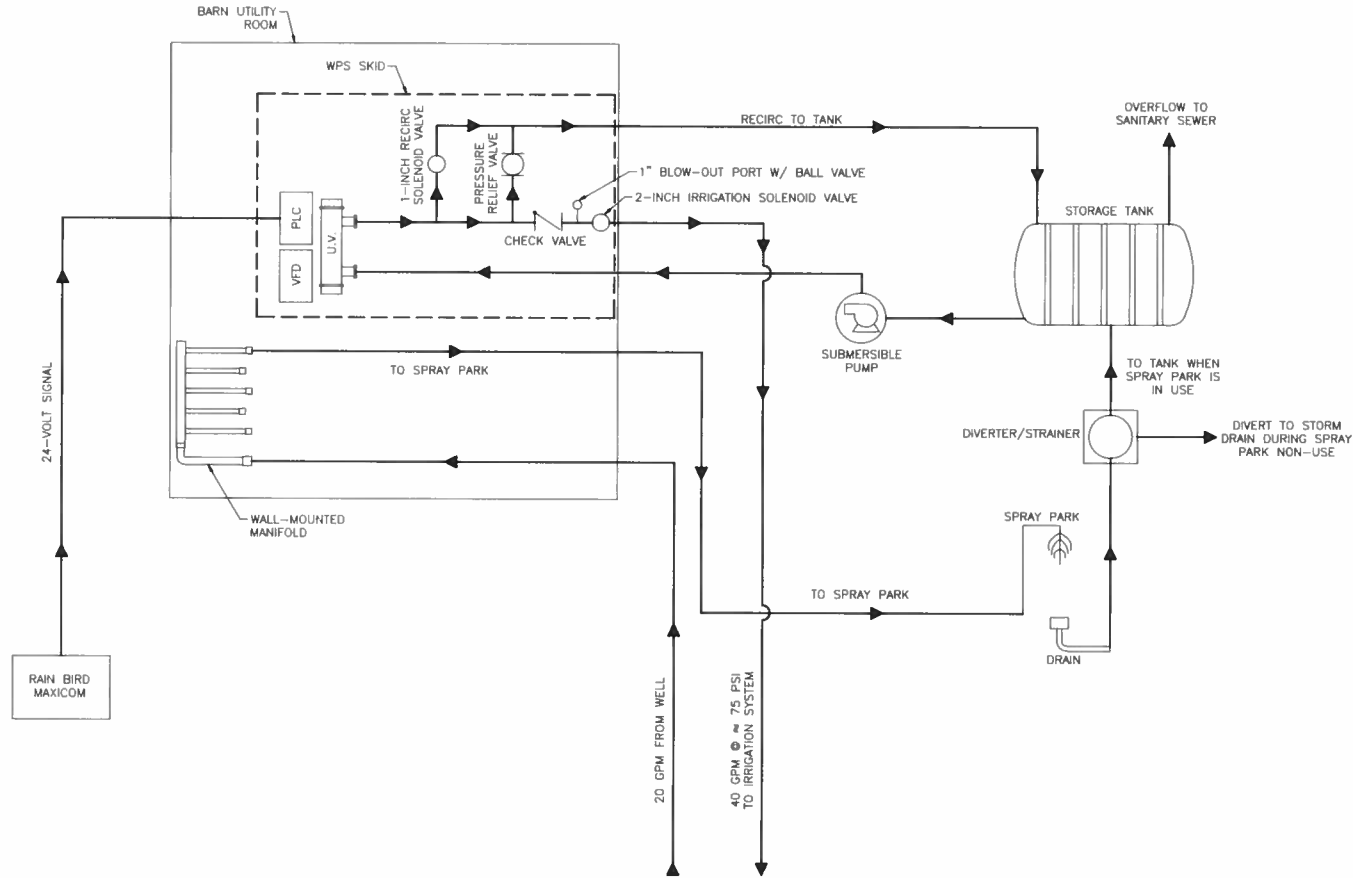
CITY OF BOISE PARKS AND RECREATION
COMBA PARK IRRIGATION SUPPLY SYSTEM
FLOW SCHEMATICS

DRAWN BY: JACQUELYNNE
BOISE PARKS AND RECREATION
BOISE, IDAHO
1104 10TH AVE
PHONE: (208) 343-4140

DRAWN BY: S. BENNETT
CHECKED BY: B. HARDGROVE
SCALE: AS NOTED
PLOT SCALE:

NO.	DATE	DESCRIPTION
1	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
2	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
3	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
4	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
5	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
6	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
7	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
8	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
9	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
10	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
11	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
12	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
13	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION
14	2/12/13	ISSUED FOR PERMIT AND CONSTRUCTION

Path: Y:\PROJECTS\389 0472\SWF Filename: 3890472-C-102 Plot date: Mar 20, 2014-11 45:35am CAD User: Jerridon
 Xref Filename: 3890472-SR-TB

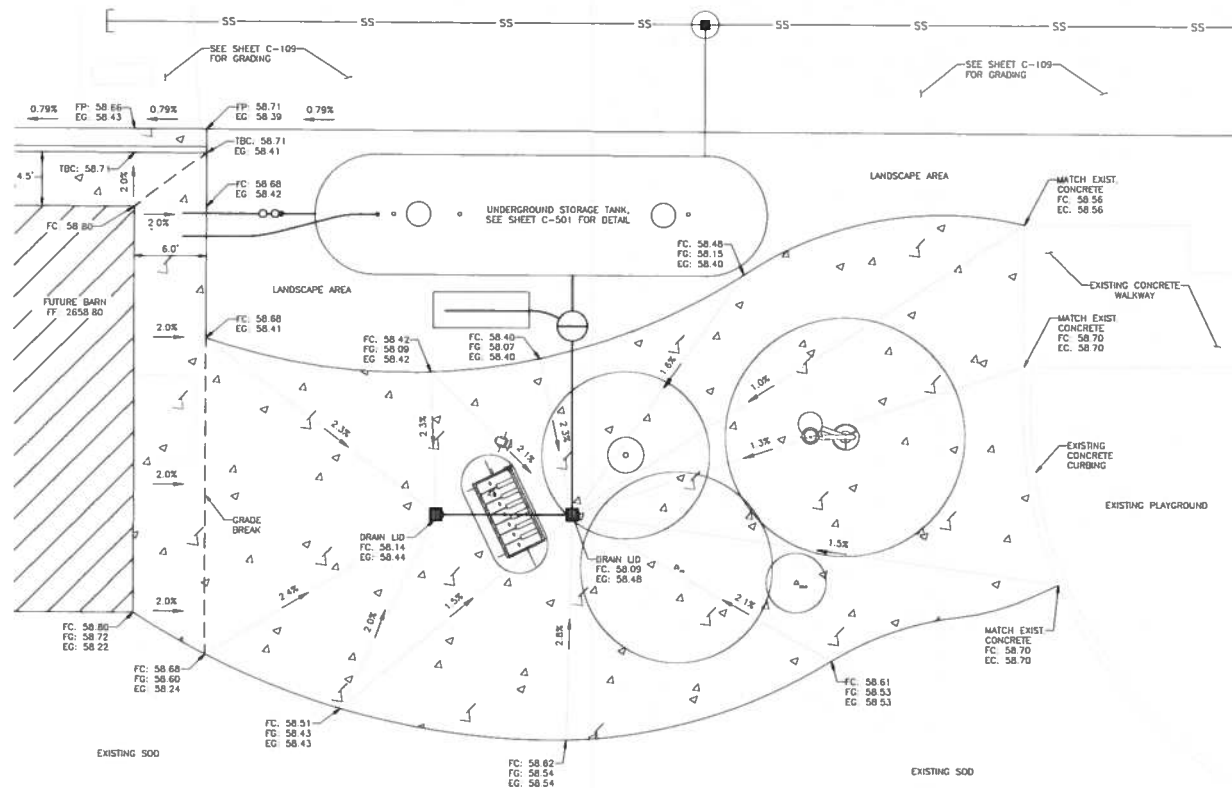


FLOW SCHEMATIC OF PROPOSED SPRAY PARK IRRIGATION SUPPLY



ITEM	REVISIONS	DESCRIPTION	DATE
0	ISSUED FOR PERMITTING		2-18-14
1	ISSUED FOR CONSTRUCTION		3-18-14

PROJECT:	389 0472
DESIGNED:	JCH
DRAWN:	JCH
CHECKED:	RRH



CONSTRUCTION NOTES

- UTILITIES ALONG THE EASTSIDE OF THE BARN ARE NOT SHOWN FOR CLARITY PURPOSES.
- SPOT ELEVATIONS SHALL BE ADJUSTED BY ADDING 2.600' TO GET CORRECT SURFACE ELEVATION.
- FINISHED GRADE OF SOD (FG) SHALL BE 1-INCH BELOW FINISHED SURFACE OF CONCRETE (FC).
- FINISHED SUBGRADE OF LANDSCAPE AREA (FG) SHALL BE 4-INCH BELOW FINISHED SURFACE OF CONCRETE (FC) TO ACCOMMODATE MULCH.
- CONTRACTOR TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SOD AND CONCRETE.
- SEE SHEET C-502 FOR CONCRETE FLAT WORK DETAIL.
- SEE SHEET C-104 & C-105 FOR UTILITY PLAN.

ABBREVIATIONS

- FF FINISHED FLOOR OF FUTURE BARN
 FC FINISHED SURFACE OF CONCRETE
 FG FINISHED GRADE OF SOD OR SUBGRADE OF LANDSCAPE AREA
 EG EXISTING GRADE
 EC EXISTING CONCRETE
 TBC TOP BACK OF CURB

REVISIONS DUE TO BARN LOCATION SHIFT OF 8.5- FEET SOUTH

CITY OF BOISE PARKS AND RECREATION
COMBA SPLASH PARK
SPLASH PAD GRADING PLAN



REVISIONS	DATE	DESCRIPTION
1	2-18-14	ISSUED FOR PERMITTING
2	3-18-14	ISSUED FOR CONSTRUCTION

PROJECT: 389 0472
 DESIGNED: JCH
 DRAWN: JCH
 CHECKED: RSH

C-107

Attachment C

Flow Rate and Volume Calculations

Flow Rate Measurements

Timed filling of 32-gallon trash can. Three fills over a 15-minute period, each at 55 seconds with a discharge pressure of 45 psi.

$$32 \text{ gallons} / 55 \text{ seconds} \times 60 \text{ seconds} / 1 \text{ minute} = 35 \text{ gpm} = 0.08 \text{ cfs}$$

Theoretical Flow Rate From Pump Curve

TDH = discharge pressure + pumping lift + headloss

$$= (45 \text{ psi} \times 2.31 \text{ feet/psi}) + 50 \text{ feet} + 25 \text{ feet} = 180 \text{ feet}$$

$$\text{Capacity at 180 feet TDH} = 36 \text{ gpm} = 0.08 \text{ cfs}$$

Attachment D

Exam Photos



Ground water well



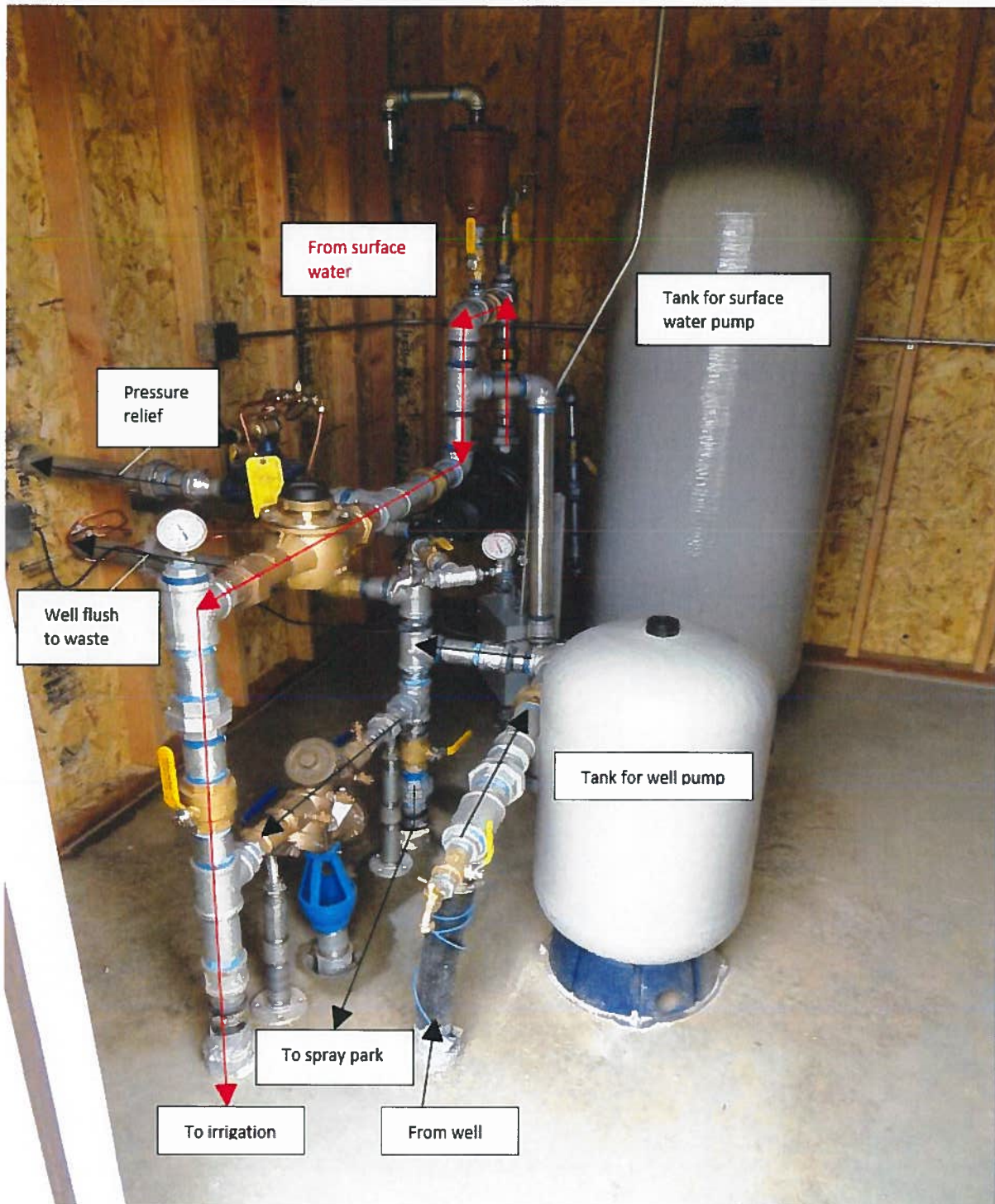
Surface water wet well



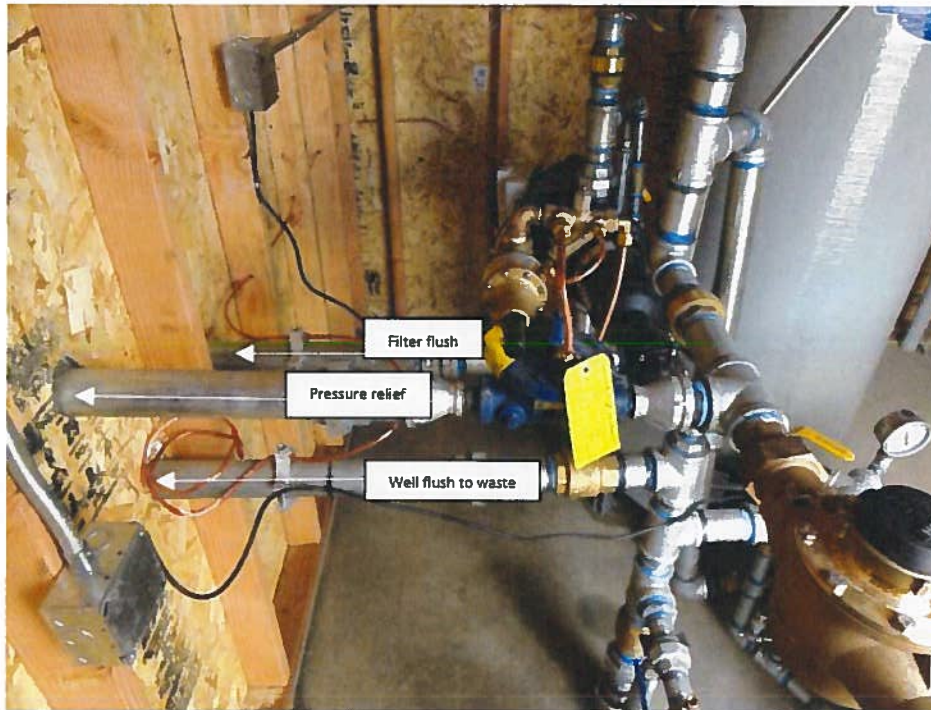
Ground water and surface water pump house



Well pump VFD



Well house plumbing



Well house plumbing



32-gallon trash can for volumetric flow measurement



Spray park controlling works



Wet well location for spray-park reuse pump



Spray park fun



Place of use



Place of use



Place of use