

Site Design, Architecture & Engineering ad hoc Focused Working Group **Progress report, July 31, 2024**

The Task Force has been meeting at least weekly since establishment of the ad hoc. Members of the community have come forward that represent areas of expertise, profession, and experience that inform the Task Force's efforts including fireman, architect, water, boarders, construction, etc.

To drill down into more detail, it became clear we needed to establish subcommittees to focus on three particular topics to aid in informing the larger picture of Site Design, Architecture & Engineering, and to get better clarity on how best to proceed.

The areas of focus for the subcommittees that became apparent are listed below along with the name of the subcommittee lead who will present "findings" and identified questions to this point. The work presented here by subcommittee leads is also the culmination of the efforts of the larger group. It is understood that the work presented at this interim juncture is not final and will be informed and refined as the process continues in collaboration with the other ad hoc committees and Midpen staff.

There has also been exploration of the spring and how and/or if to repair and reuse that resource. This is reserved for a future consideration or conversation.

The Task Force as a whole has as its objectives:

Site efficiencies

Cost savings

Program retention and/or restoration

Compliance with Bear Creek Preserve Plan and Bear Creek Stables plan and objectives more specifically

Assumptions :

This group has focused on Roadway Access, Fire Concerns, Water Usage and Distribution, and Site Program for Lower Program Area to date - Upper Boarder Area not included at this time.

Subcommittee focus areas and subcommittee leads:

Roads and Fire

Mike Bushue

Water

Bob Alexander

Site Design and Architecture

Pam Warren

Again, the Task Force is fully aware that we are but one of the 3 Focused Working Groups and as such cannot fully appreciate or incorporate at this juncture the efforts of the other 2 groups. Our work will, in combination, inform a more comprehensive recommendation or set of recommendations.

Road and Fire Protection Systems

Mike Bushue, presenter

- Avid equestrian who purchased his first horse in the late 60's.
- Volunteer fireman in Spokane county in the early 80's.
- Boarder at Webb Ranch for the last 20 years
- Involved in ETRAC, Equestrian Trail Riders Action Committee, since 2005.
- Retired SR staff Engineer after 40 years of design and project management
- Involved in design and construction of trails for San Mateo County parks system.
- On the board for San Mateo County Large Animal evacuation group.

Recommended option: make the upper road from Bear Creek rd down the boarder area the preferred ingress and egress to the site. This would mean making this 1550 ft section of road 2 lanes wide by cutting the uphill side. Make the roadway 16 ft plus 2 ft on each side as a shoulder to satisfy fire marshal requirements. Use the uphill shoulder to divert any run off away from the hillside and to stabilize the lower area in the hopes of mitigating any need for changes to the existing lower retaining walls.

Roads presently are less than 15% grade and can be maintained as gravel. Installing paving in an equestrian facility is a less than desirable option due to safety of horses walking on smooth surfaces.

Utilization of the upper road greatly improves traffic circulation in the facility. Concessionaire vehicle traffic is limited to lower area by the Tevis barn while boarders will transit in/out through upper road.

Maintain the lower road as a single lane exit road from the concessionaire area.

At the junction of the boarder level and the rd. to the lower Tevis area create an adequate turning area so that fire trucks could be staged at a proposed hydrant from the new tank. This area could also be used for the large semi-trucks to bring in hay and squeeze to the appropriate locations.

Existing road that goes around boarding arena to be maintained for fire truck turn around as well as taking semi-sized hay truck around if driver chooses not to back truck around at above turning spot.

Design the west side of the rd. around the border arena to collect and percolate water from the hillside and upper road. This may mean modifying the stalls in this area to have a known swale / wet area during the rainy season.

Utilize any dirt removed from the upper rd. cut back to reshape the area along the west side of the boarder area and to level out/ reshape the area that was called the dressage arena. (South area beyond the boarder area.)

Mitigation for tree removal for the rd. improvement should be done around the facility. An evaluation should be done to utilize volunteer resources to maintain the trees.

"Two Fire Attack Points"

1st hydrant to be in the location of existing (non-operational) hydrant near Bear Creek Rd. = S.J. Water. This hydrant would have less volume and unlimited water amount.

2nd hydrant to be at a proposed location to be plumbed into the Proposed New Water Tank on the hillside (near Boat Houses). Hydrant will have a larger volume and limited water amount.

Site design and architecture

Pam Warren, presenter

- Resident of Los Gatos and current horse boarder at Bear Creek Stables.
- Licensed Architect in the State of California (1984)
- Devcon Construction

Interested in investigating:

- a) Interested in consolidation of Site Functions and economies that can be obtained by considering alternative layouts for major components of project, for instance co-locating the waste considerations.
- b) Consideration of deferment of non-essential project structure improvements (Tevis Barn)
- c) Separation of circulation between visitors and boarders

The following two pages (4 and 5) provide two different scenarios for site planning based on a) and c) above.

Potential Value Engineering (Cost Reduction) that merit exploration utilizing, for instance, alternative site plans on pages 4 and 5. Based on costs identified on District plans, some examples include:

- potential elimination/partial elimination of leach field: \$460k
- potential elimination/partial elimination of bioswales: \$460k
- potential elimination of retaining wall (relocating pkg): \$700k
- potential savings from relocating caretaker’s unit: \$280k (partial)
- potential savings from GC mobilization \$400k (partial)
- potential savings utilizing permeable paving: \$125k (partial)

We also question the trail connection that will happen no matter if the Stables remain or not being charged to Stables

\$168k

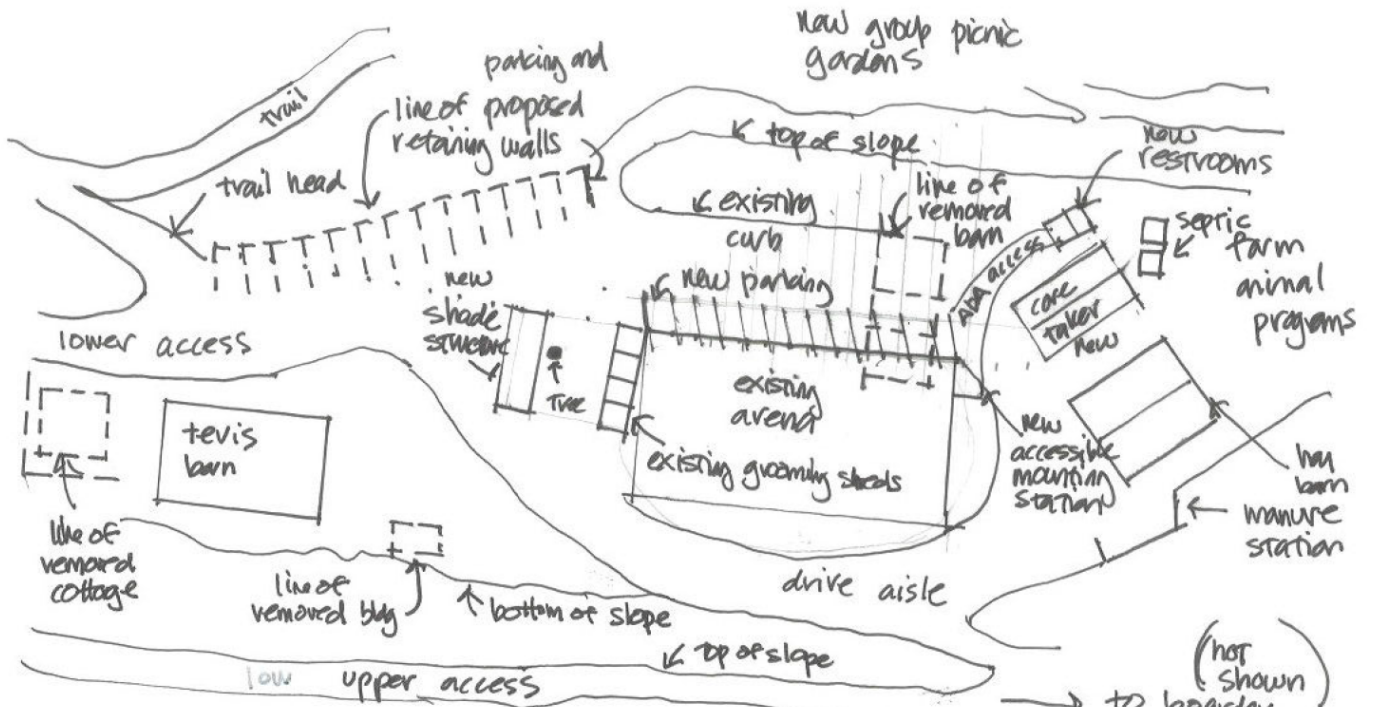
The same question is raised regarding the restoration planting:

\$ 550k

Issues to be resolved, accommodated:

- Haybarn location TBD if relocated from current location
- Verify haybarn capacity and height for appropriate workable solution.
- Quarantine area currently in lower arena area needs to be accounted for in Upper Boarder Area
- Boarder locker area needs to be accounted for in Upper Boarder Area
- Tevis Barn scope – deferred (potentially and pending possible funding opportunities)
- Permeable surface assumptions need to be verified to eliminate or reduce Bioswale Scope
- Program Info - missing throughout, pending Program ad hoc input
- Barn Manager Office needs to be confirmed for usage and location
- Pit or compost toilet needs to be located in Upper Boarder Area
- Hours of operation

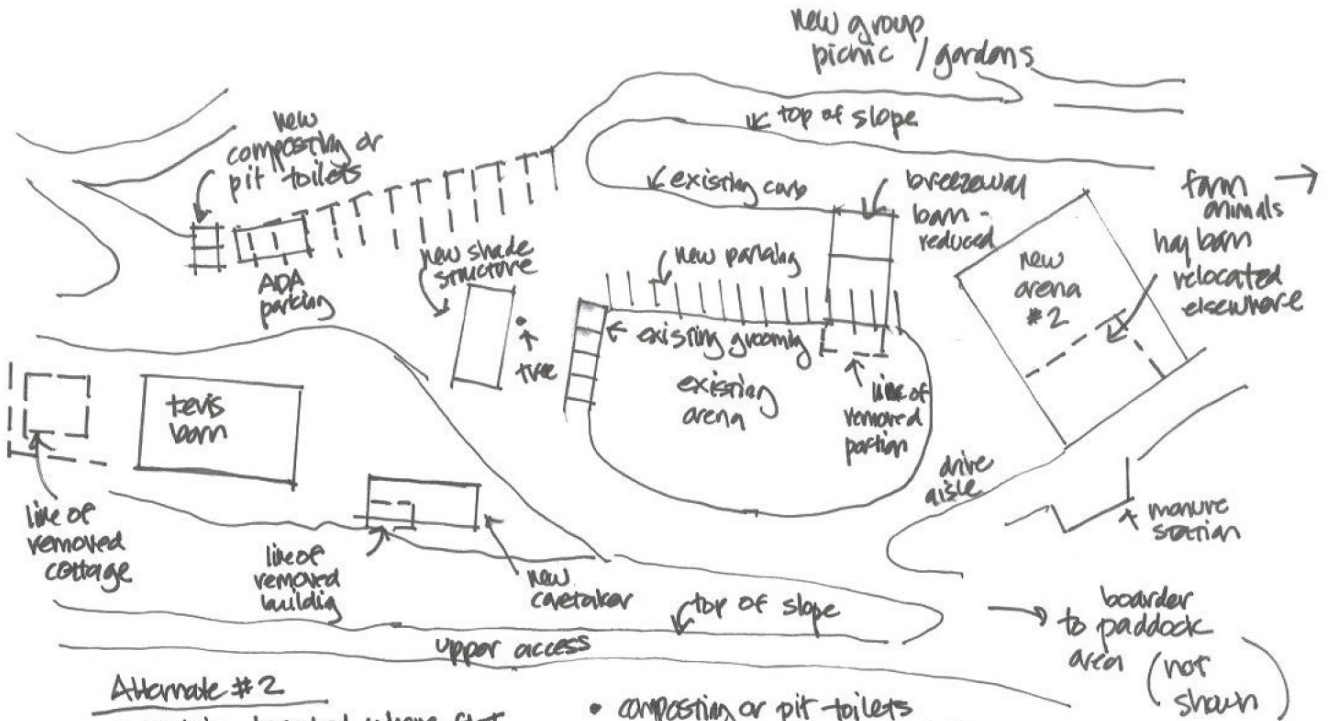
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Alternate #1 • Tevis barn deferred

- consolidate new construction (fire sprinkler + water distribution consolidated)
- new or renovated hay barn
- park where flat areas are available without retaining walls
- potential elimination of leach fields (composting or pit toilets, pump-and-septic tanks)
- limited boarder activity (majority of paddocks) + traffic separation
- quarantine area board

7.21.2024



Alternate #2

- parking located where flat areas are available to eliminate retaining walls
- hay barn relocated elsewhere
- Tavis barn destroyed
- composting or pit toilets
- elimination of leach fields (pumpable septic tank)
- quarantine area moved
- limited boarder activity (majority in paddocks) + traffic separation

Water:

Bob Alexander

- WG Water Specialist
- Open Space & Equestrian Advocate
- Thirty years experience as an engineer and tradesman
- Work over the last 10yrs, has focused on building and improving stables / barns including Ag water supply and distribution.
- Presently, expanding an equestrian facility near Summit Rd and installing water supply / distribution systems in the South County.

1) Request: Can we supply water to (re-activate) upper and lower Fire Hydrants? Alternately, we recommend the single operating “courtesy-hydrant” be moved to the upper hydrant’s location for visibility and emergency vehicle access?

Narrative: A single unmarked newly-installed courtesy hydrant is functional, the others are not. Can Staff advise on reconnecting the upper/lower hydrants and properly marking all hydrants.

Staff Interim Finding: Existing (inoperable) hydrants will be properly marked (bagged inoperable) and courtesy hydrant will have required signage/markings added. Further review and possible action pending outcome pursuant to board-approved “final” BCS plan.

2) Request: Can “as-built” drawings for water distribution be provided?

Narrative: Confirmation of water supply lines was made possible by Staff-provided drawings. Two inconsequential “field modifications” were found (without impact to service or distribution).

Finding: Staff advised that as-built drawings had not been provided to them by contractor and were therefore unavailable.

3) Request: Can existing water holding tanks (2ea) 5,000 gal be connected and filled?

Narrative: On-Site water holding is important for both emergency (fire) and backup water.

Staff interim Finding: A water holding tank (30k-gal +/-) is planned which will be plumbed pending outcome and possible modifications pursuant to board-approved “final” BCS plan

4) Request: Can we utilize volunteers to help and perform installation or otherwise facilitate installing the distribution laterals to horse stalls?

Narrative: By utilizing the already installed & pressurized lines in Christy boxes, faucets can be stubbed-up and be put into service. Approximately 70% running-ft of garden hoses and 50% of terminations/extensions could then be eliminated.

Staff interim Finding: Work will be scheduled, pending outcome and possible modifications pursuant to board-approved “final” BCS plan. Volunteer participation might then be utilized.

5) Request: Can Ag water rates (and per-unit discounts) be applied for water savings?

Narrative: It appears BCS is designated 1(c) on SJ Water’s rate schedule. Equine water usage is often designated as Agricultural, however, standard application forms are suited to for-profit farming. It is likely special review (Valley Water) will be required to secure Ag designation & billing rates.

Agenda Item: 1C

Finding: This item can/will be investigated. Additionally, current billing will be investigated to determine likely impacts & ongoing OpEx savings.

Please note most findings are stated as "Staff Interim" based on the notion that we'd like to facilitate a more timely & positive outcome.

Also please note that currently there is no separate meter for the Stables, meaning that all water coming from the Bear Creek Road meter appears to be attributed to the Stables even if used for other purposes such as irrigation, road work, etc.

The table below: ROM Ag-rate savings based on new SJ-Water rates (July 1)

Bear Creek Stables Water Calculations (horses only)					
	Gallons of Water	Units of water	Schedule 1c Rate	If Ag Rate	Savings/Yr
20 Horses, Max water consumed per mo.	18000	24.06417112	\$177.58	\$56.64	\$1451.27
72 Horses, Max water consumed per mo.	64800	86.63101604	\$639.29	\$203.91	\$5224.58
ASSUMPTIONS					
Water billing / Units	Unit = 100cu-ft	748gal	748		
Consumption	Per horse	drinks up to gal/day	15		
		grooming up to gal/d	15		
Present Population		numb of horses	20		
Desired Population		numb of horses	72		
Planning Month		days per month	30		
Schedule 1 Rate (SJ Water)	July 1, 2024	\$ per unit	7.3795		
Schedule 1 Rate Ag Credit (SJ Water)	July 1, 2024	\$ per unit	5.0257		
Note: Water Calculations are based on number of horses and amount of water they consume. Not included are connection and other fees applied regardless of present horses					