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STAFF REPORT

Date: March 23, 2023

To: TRPA Hearings Officer

From: TRPA Staff

Subject: Spirit of Tahoe LLC, Shoreline Protective Structure Reconstruction; 1330 Westlake Boulevard, Placer County, California; Assessor's Parcel Number (APN): 083-162-013; TRPA File No.: ERSP2022-0326

Proposed Action: Hearings Officer action on the proposed project and related findings based on this staff summary and the draft permit (Attachment B).

Staff Recommendation: Staff recommends the Hearings Officer make the required findings and approve the project subject to the standard and special conditions in the draft permit.

Project Description: The applicant is proposing to construct a 100-foot-long, 8-foot-high sheet pile retaining wall directly in front of the existing shoreline revetment. The existing revetment supports a sewer man line that is located approximately 10 feet above the revetment and the geotechnical engineer recommends installing the new sheet pile wall while the existing retaining wall is in place to protect the integrity of the sewer line. The existing revetment is showing signs of failure and is in need of repair.

The geotechnical report considered four design options to evaluate the best approach to stabilizing the slope while eliminating risk of upset to the existing sewer line. The geotechnical report recommends the installation of a vertical sheetpile wall to effectively retain the soils behind it, more effectively controlling the issue of piping and subsequent erosion of the soils being retained and considerably reducing if not completely solving the problem of ongoing erosion. It is also considered the least invasive, since it may not require the removal of the existing revetment.

The design for the installation of the sheetpile wall structure requires the individual sheetpile units to be driven into the siltstone/claystone at depth and to a minimum depth of 14 feet. Erosion will be further reduced by armoring the foreshore with the same type of cobble cover currently present in the toe area of the existing structure to be replaced. Further, the cobble armor at the toe of the sheetpile wall system is anticipated to considerably dissipate the wave energy.

The installation of the sheetpile type wall is considered the least invasive method of construction, requiring only vibratory/hammer equipment to drive the interlocking individual sheetpile units to the required depth. The new sheetpile wall is anticipated to contain the retained uphill

soils much better than the existing rock and mortar wall to be replaced and to be much more effective in controlling soil erosion. Further, the implementation of this type of structure is anticipated to immensely improve the existing conditions at the site and to substantially stabilize and limit the potential for foreshore erosion that may otherwise radiate to the adjacent properties or vice versa. In addition, the sheetpile returns at each end of the wall will be similar in shape as the existing wall. Existing foreshore erosion is considered negligible and foreshore erosion from the proposed wall is not anticipated to exacerbate the existing condition.

The shorezone lakeward of the retaining wall is located in an area mapped as "Spawning Habitat" by TRPA. The westerly 20 foot and the easterly 10 foot portion of the retaining wall is located entirely above the high-water line of Lake Tahoe. The portion between these two sections is located up to two feet below the high-water line. Approximately 175 square feet of spawning habitat will be impacted by the placement of cobbles and small boulders at the toe of the wall that will serve as a small dynamic revetment. The area of spawning habitat covered by the boulders will impact the fish habitat and is required to be mitigated at a ratio of 1.5:1.

Access to the site will be from Lake Tahoe. The project will be constructed with the use of a floating/amphibious barge. All material will be transported to the site via barge. Best Management Practices, as required by TRPA and other agencies, will be in effect during construction. It is anticipated that all work will take place above the existing lake level and erosion and sediment disturbance will not occur. The proposed project does not include any changes to the upland property. A current BMP certificate is on file with TRPA (#14741).

Site Description: There is an existing residence on the upland property and an existing pier/boathouse. The southerly portion of the lot abuts Lake Tahoe and has a rock and mortar retaining wall that retains a grassy backyard area and a sewer main. The existing site conditions are shown in the attached photos (See Attachment C). The shoreline near the residence is generally rocky. The upland is verified as Class 5, 3 and 1b (SEZ). The shorezone lakeward of the retaining wall is in an area mapped as "Spawning Habitat" by TRPA. The site is boarded by single family residences and Lake Tahoe.

Issues: The proposed project involves a special use determination for the shoreline protective structure and therefore requires Hearing Officer review in accordance with Chapter 2, Subsection 2.2.2. of the TRPA Code. The project issues and others are discussed in the following staff analysis:

Staff Analysis:

- A. Environmental Documentation: The applicant completed an Initial Environmental Checklist (IEC) in order to assess the potential environmental impacts of the project. No significant environmental impacts were identified, and staff has concluded that the project will not have a significant adverse effect on the environment. A copy of the completed IEC will be made available at the Hearings Officer hearing and at the TRPA offices.
- B. Land Use/Plan Area Statement: The project site is in the Tavern Heights Subdistrict of the Placer County Tahoe Basin Area Plan. The Land Use Classification is Residential. The proposed shoreline protective structure is accessory to the primary residential use. Agency staff reviewed the Area

Plan and determined the project is consistent with the applicable planning statement, planning considerations and special policies.

- C. Shorezone Tolerance District/Construction Methodology: The site is mapped as Shorezone Tolerance District 7, which is characterized comparatively level shorezone underlain by morainic and alluvial materials with slopes of zero to nine percent.

The following development standard is applicable to Shorezone Tolerance District 7:

- A. Permitted development or continued use may be conditioned upon installation and maintenance of vegetation to stabilized backshore areas and protect existing cliffs from accelerated erosion.
- B. Projects shall not be permitted in the backshore unless TRPA finds such project is unlikely to require the cliff area to be mechanically stabilized or that the project will not accelerate cliff crumbling, beach loss, or erosion.
- C. Access to shoreline shall be restricted to stabilized access ways which minimize the impact to the backshore.
- D. Vehicular access to the shoreline shall not be permitted except where TRPA finds that such access will not cause environmental harm.

The purpose of the project is to provide long term protection of the backshore from accelerated erosion. Access to the shoreland will be from the lake using a barge and/or rubber-tired vehicle which is a common construction technique utilized for shoreline protective structures. Photographs will be taken of the area prior to construction to ensure the construction access area is returned to pre-project conditions if disturbance is observed upon completion of the project.

Required Actions: Staff recommends the Hearings Officer:

- I. Approve the findings contained in this staff summary and a finding of no significant environmental effect.
- II. Approve the project, based on the staff summary, subject to the conditions contained in the attached Draft Permit.

Contact Information:

For questions regarding this agenda item, please contact Paul Nielsen, Special Projects Manager, at 775-589-5284 or pnielsen@trpa.gov.

Attachments:

- A. Required Findings
- B. Draft Permit
- C. Site Photographs
- D. Project Plans

Attachment A
Required Findings

Required Findings

The following is a list of the required findings as set forth in Chapters 4, 21, 80, 81, 84 and 85 of the TRPA Code. Following each finding, Agency staff has indicated if there is sufficient evidence contained in the record to make the applicable findings or has briefly summarized the evidence on which the finding can be made.

1. Chapter 4 – Required Findings:

- (a) The project is consistent with and will not adversely affect implementation of the Regional Plan, including all applicable Goals and Policies, Plan Area Statements and maps, the Code and other TRPA plans and programs.

There is no evidence in the file or record showing that the proposed project will have an adverse effect on the Land Use, Transportation, Conservation, Recreation, Scenic Quality Public Service and Facilities, or Implementation sub-elements of the Regional Plan. The site is mapped as Shorezone Tolerance District 7, which is characterized comparatively level shorezone underlain by morainic and alluvial materials with slopes of zero to nine percent.

Permitted development or continued use may be conditioned upon installation and maintenance of vegetation to stabilize backshore areas and protect existing cliffs from accelerated erosion. Projects shall not be permitted in the backshore and upland unless TRPA finds such project is unlikely to require the cliff area to be mechanically stabilized or that the project will not accelerate cliff crumbling, beach loss, or erosion. Access to shoreline shall be restricted from the upland to stabilized access ways which minimize the impact to the backshore. The purpose of the project is to protect the existing eroded terrace from further erosion.

- (b) The project will not cause the environmental threshold carrying capacities to be exceeded.

TRPA staff has completed the "Project Review Conformance Checklist and Article V (g) Findings" in accordance with Section 4.4.2 of the TRPA Code of Ordinances. All responses contained on said checklist indicate compliance with the environmental threshold carrying capacities. Also, the applicant has completed an Initial Environmental Checklist (IEC) which was reviewed by TRPA staff. No significant environmental impacts were identified, and staff has concluded that the project will not have a significant effect on the environment. A copy of the completed checklist and IEC will be made available at the Hearings Officer hearing and at TRPA.

- (c) Wherever federal, state, or local air and water quality standards apply for the Region, the strictest standards shall be attained, maintained, or exceeded pursuant to Article V (d) of the TPRA Compact.

The project, as conditioned, will comply with all applicable air and water quality standards for the region. The project as designed will enhance water quality values through improved shoreline stability and reduced erosion.

2. Chapters 21 and 81 – Special Use Findings.

- (a) The project, and the related use, is of such a nature, scale, density, intensity and type to be appropriate for the project area, and the surrounding area.

The proposed project is an appropriate use for the project area. The proposed sheet pile wall will be approximately 100 feet long. The sheet pile wall and associated dynamic revetment will deflect and dissipate wave energy and provide long term stabilization of the upland portion of the property which contains a sewer main and a residence. The new revetment should reduce coherent wave reflection which will reduce potential for on and off-site site erosion. Based on the analysis contained in the administrative record and the IEC, the proposed project is an appropriate use for the project area.

- (b) The project, and the related use, will not injure or disturb the health, safety, environmental quality, enjoyment of property, or general welfare of persons or property in the neighborhood, or in the region.

The project as designed will inhibit further erosion which will benefit on and off-site environmental conditions. The proposed project includes several components to ensure the structure will not cause significant erosion or modification of the foreshore on the property or adjacent properties. The existing revetment is unstable and the steep backshore bluff can be displaced and further destabilized by wave action which represents a risk of upset to the sewer main located just upslope from the existing revetment.

- (c) The project, and the related use, will not change the character of the neighborhood, detrimentally affect or alter the purpose of any applicable plan area statement, community, redevelopment, specific, or master plan.

The proposed improvements are consistent with the configuration, size and location of the previously existing deteriorating shoreline protective structure and is in keeping with the general character of the shoreline. The proposed project will help stabilize the backshore slope that is partially eroded. The project is not expected to affect or change the character of the neighborhood and does not affect or alter the purpose of the applicable plan area statement which lists shoreline protective structures as a permissible special use. The project as designed and conditioned is compatible with, and will not adversely affect, the residential character of the surrounding neighborhood.

4. Chapter 80 – Shorezone Findings:

- (a) Significant Harm: The project will not adversely impact littoral processes, fish spawning habitat, backshore stability, or on-shore wildlife habitat, including waterfowl nesting areas.

The proposed shoreline protective treatment is designed to protect the shoreline from the continued effects of erosion and therefore will not have negative effects on wildlife habitat. There are no known waterfowl nesting areas in the area. The shorezone

lakeward of the retaining wall is located in an area mapped as "Spawning Habitat" by TRPA. The westerly 20' and the easterly 10' portion of the retaining wall is located entirely above the high-water line of Lake Tahoe. The portion between these two sections is located up to two feet below the high-water line. Approximately 175 square feet of spawning habitat will be impacted by the placement of cobbles and small boulders at the toe of the wall that will serve as a small dynamic revetment. The area of spawning habitat covered by the boulders will impact the fish habitat and is required to be mitigated at a ratio of 1.5:1.

The project will include the use of temporary BMPs as necessary to protect water quality.

(b) Accessory Facilities: There are sufficient accessory facilities to accommodate the project.

The proposed shoreline protective structure is an accessory use to the upland residential use.

(c) Compatibility: The project is compatible with existing shorezone and lakezone uses or structures on, or in the immediate vicinity of, the littoral parcel; or that modifications of such existing uses or structures will be undertaken to assure compatibility.

Shoreline protective structures are permissible uses in the applicable area plan. The proposed shoreline protective structure as designed and conditioned, will be compatible with existing shorezone and lakezone uses in the immediate vicinity. The design of the project will ensure access along the shoreline is maintained.

(d) Use: The use proposed in the foreshore or nearshore is water dependent.

The proposed shoreline protective structure will provide long term stability to the backshore of the project area from continued effects of soil erosion and wave erosion. The design is water dependent. The project design which includes a dynamic revetment in front of the vertical sheetpile wall is intended to effectively reduce wave energy.

(e) Hazardous Materials: Measures will be taken to prevent spills or discharges of hazardous materials.

Hazardous materials will not be used during construction. As a condition of final permit approval, the permittee shall provide an emergency spill prevention plan to be implemented for any emergency associated with leaking equipment.

(f) Construction: Construction and access techniques will be used to minimize disturbance to the ground and vegetation.

A construction methodology is required to be submitted prior to construction to ensure construction and access techniques will be used to minimize disturbance to the ground and vegetation. Construction access will be from the lake via a barge that will avoid impacts to the upland ground and vegetation. All construction wastes will be collected

and disposed of at the nearest approved dumpster or sanitary landfill site. Temporary material staging and storage will be on paved surfaces.

- (g) Navigation and Safety: The project will not adversely impact navigation or create a threat to public safety as determined by those agencies with jurisdiction over a lake's navigable waters.

The location of the proposed shoreline protective structure is within the backshore of the property and encroaches below the high-water line by approximately two feet which will not affect navigation or create a threat to public safety within Lake Tahoe due to the inability of water craft to access shallow water immediately adjacent to the highwater line.

- (h) Other Agency Comments: TRPA has solicited comments from those public agencies having jurisdiction over the nearshore and foreshore and all such comments received were considered by TRPA, prior to action being taken on the project.

TRPA solicited comments from public agencies with jurisdiction in the lake at the December 15, 2022, Shorezone Review Committee. The California State Lands Commission suggested they may require signage designating the public trust area which is open to public use. Lahontan Water Board indicated an evaluation was needed to determine potential erosion impacts to neighboring properties and the California Department of Fish and Wildlife both indicated permits were required to be obtained from their respective agencies.

5. Chapter 84 - Shoreline Protective Structure Findings:

- (a) Structures in the backshore or environmental threshold values will be enhanced by the construction and maintenance of the protective structures.

The proposed improvements will limit lakeshore erosion, dissipate wave energy, and decrease sediment entering Lake Tahoe. The shoreline protective structure will provide benefits while maintaining and improving the existing soil and rock materials and upholding the character of the shoreline while providing long term stability to the sewer main located upslope from the proposed structure.

- (b) The protection of structures in the backshore or the enhancement of environmental threshold values more than offset the adverse environmental effects of the construction and maintenance of the shoreline protective structures.

The proposed shoreline protective structure will stabilize the shoreline that has experienced erosion due to wave action. The goals of the project are to increase shoreline stability that will minimize erosion and sediment transport into the lake.

- (c) A sloping permeable revetment is not feasible.

The geotechnical report prepared for the project evaluated four different designs and determined that a sloping permeable revetment was the least preferred approach to provide long term stability to the upland portion of the property.

- (d) The alternative structure will not cause significant erosion or modification of the foreshore.

The vertical sheetpile wall will have a small dynamic revetment constructed at the toe of the wall to dissipate wave energy. The geotechnical report states "...the cobble armor at the toe of the sheetpile wall system is anticipated to considerably dissipate the wave energy before it has the opportunity to reach the underlying siltstone/claystone layer..." The report also states that "The new sheetpile wall is anticipated to contain the retained uphill soils much better than the existing rock and mortar wall to be replaced and to be much more effective in controlling soil erosion..."

- (e) Each protective structure has been designed so that backshore erosion on adjacent properties will not be accelerated as a result of the erection of the protective structure.

As designed, the protective structure will not cause any significant long-term impacts to the environment as documented in the geotechnical engineer's report (HEM Consulting LLC, January 24, 2023) prepared for the project.

6. Chapter 85 - Findings for Erosion Control and Similar Projects:

- (a) The project, program, or facility is necessary for environmental protection.

The applicant proposes to construct a shoreline protective structure to stabilize the shoreline that has experienced erosion due to wave action. The goals of the project are to increase safety, stability, vegetative cover and provide long term stability to the backshore and a sewer main located in close proximity to the shoreline. The design of the rock revetment is intended to reduce wave energy that will minimize erosion and sediment transport into the lake.

- (b) There is no reasonable alternative, which avoids or reduces the extent of encroachment in the backshore.

The proposed project will address erosion within the backshore and thus encroachment into the backshore cannot be avoided. The project design and construction methodology prescribe the minimum encroachment necessary to inhibit further degradation of the backshore. Without this work, erosion and slope instability will continue.

Attachment B

Draft Permit

Draft Permit

PROJECT DESCRIPTION: Shoreline Protective Structure APN: 083-162-013

PERMITTEE: Spirit of Tahoe, LLC FILE #: ERSP2022-0326

COUNTY/LOCATION: 1330 West Lake Boulevard, Sunnyside, Placer County, California

Having made the findings required by Agency ordinances and rules, the TRPA Hearings Officer approved the project on March 30, 2023, subject to the standard conditions of approval attached hereto (Attachments Q and S) and the special conditions found in this permit.

This permit shall expire on March 18, 2026, without further notice unless the construction has commenced prior to this date and diligently pursued thereafter. Diligent pursuit is defined as completion of the project within the approved construction schedule. The expiration date shall not be extended unless the project is determined by TRPA to be the subject of legal action, which delayed or rendered impossible the diligent pursuit of the permit.

NO DEMOLITION, CONSTRUCTION OR GRADING SHALL COMMENCE UNTIL:

- (1) TRPA RECEIVES A COPY OF THIS PERMIT UPON WHICH THE PERMITTEE(S) HAS ACKNOWLEDGED RECEIPT OF THE PERMIT AND ACCEPTANCE OF THE CONTENTS OF THE PERMIT;
- (2) ALL PRE-CONSTRUCTION CONDITIONS OF APPROVAL ARE SATISFIED AS EVIDENCED BY TRPA'S ACKNOWLEDGEMENT OF THIS PERMIT;
- (3) THE PERMITTEE OBTAINS APPROPRIATE COUNTY PERMIT. TRPA'S ACKNOWLEDGEMENT MAY BE NECESSARY TO OBTAIN A COUNTY PERMIT. THE COUNTY PERMIT AND THE TRPA PERMIT ARE INDEPENDENT OF EACH OTHER AND MAY HAVE DIFFERENT EXPIRATION DATES AND RULES REGARDING EXTENSIONS; AND
- (4) A TRPA PRE-GRADING INSPECTION HAS BEEN CONDUCTED WITH THE PROPERTY OWNER AND/OR THE CONTRACTOR.

TRPA Executive Director/Designee

Date

PERMITTEES' ACCEPTANCE: I have read the permit and the conditions of approval and understand and accept them. I also understand that I am responsible for compliance with all the conditions of the permit and am responsible for my agents' and employees' compliance with the permit conditions. I also understand that if the property is sold, I remain liable for the permit conditions until or unless the new owner acknowledges the transfer of the permit and notifies TRPA in writing of such acceptance. I also understand that certain mitigation fees associated with this permit are non-refundable once paid to TRPA. I understand that it is my sole responsibility to obtain any and all required approvals from any other state, local or federal agencies that may have jurisdiction over this project whether or not they are listed in this permit.

Signature of permittee(s) _____ Date _____

(PERMIT CONTINUED ON NEXT PAGE)

APN 083-162-013
FILE NO. ERSP2022-0326

Security Posted (1): Amount \$10,000.00 Posted _____ Type _____ Receipt No. _____

Security Administrative Fee (2): Amount \$ _____ Paid _____ Receipt No. _____

Notes:

- (1) See Special Condition 3.D, below.
- (2) See TRPA Filing Fee Schedule.

Required plans determined to be in conformance with approval: Date: _____

TRPA ACKNOWLEDGEMENT: The permittee has complied with all pre-construction conditions of approval as of this date:

TRPA Executive Director/Designee

Date

SPECIAL CONDITIONS

1. This permit authorizes construction of a 100-foot-long, 8-foot-high sheet pile retaining wall directly in front of the existing shoreline revetment. The sheetpile wall requires the individual sheetpile units to be driven into the siltstone/claystone at depth and to a minimum depth of 14 feet. A small dynamic revetment consisting of cobbles and small boulders will be placed at the toe of the wall.

Access to the site will be from Lake Tahoe. The project will be constructed with the use of a floating/amphibious barge. All material will be transported to the site via barge. It is anticipated that all work will take place above the existing lake level and erosion and sediment disturbance will not occur. The proposed project does not include any changes to the upland property. The property has a BMP certificate (#14741).
2. The Standard Conditions of Approval listed in Attachments Q and S shall apply to this permit.
3. Prior to permit acknowledgement, the following conditions of approval must be satisfied:
 - A. The permittee shall submit a final construction methodology to TRPA for review and approval. The construction methodology must address construction techniques to be used based on projected lake levels at the time of construction. The methodology must include the use of turbidity curtains if warranted by lake levels and construction techniques.
 - B. The permittee shall submit a final construction schedule.
 - C. The permittee shall provide an emergency spill prevention plan to be implemented for emergencies associated with leaking construction equipment. The Plan shall require absorbent

sheets/pads to be available within the project area. A contact list of all emergency response agencies shall always be available at the project site during construction.

- D. The security required under Standard Condition I.B. of Attachment Q shall be \$10,000.00. The security shall not be released until TRPA determines the project was constructed in accordance with the approved plans and the required fish habitat restoration is completed.
 - E. The permittee shall submit final construction drawings.
 - F. The permittee shall submit pre-construction photographs of the construction site and lake bed condition in the immediate vicinity of the construction site.
 - G. The permittee shall submit final color samples for the sheetpile wall
4. All landscaping and native vegetation shall be maintained in perpetuity in a condition consistent with this approval. The use of fertilizer backshore is prohibited.
 5. The project shall be constructed in accordance with the recommendations of the approved construction methodology plan.
 6. To the maximum extent allowable by law, the Permittee agrees to indemnify, defend, and hold harmless TRPA, its Governing Board (including individual members), its Planning Commission (including individual members), its agents, and its employees (collectively, TRPA) from and against any and all suits, losses, damages, injuries, liabilities, and claims by any person (a) for any injury (including death) or damage to person or property or (b) to set aside, attack, void, modify, amend, or annul any actions of TRPA. The foregoing indemnity obligation applies, without limitation, to any and all suits, losses, damages, injuries, liabilities, and claims by any person from any cause whatsoever arising out of or in connection with either directly or indirectly, and in whole or in part (1) the processing, conditioning, issuance, administrative appeal, or implementation of this permit; (2) any failure to comply with all applicable laws and regulations; or (3) the design, installation, or operation of any improvements, regardless of whether the actions or omissions are alleged to be caused by TRPA or Permittee.

Included within the Permittee's indemnity obligation set forth herein, the Permittee agrees to pay all fees of TRPA's attorneys and all other costs and expenses of defenses as they are incurred, including reimbursement of TRPA as necessary for any and all costs and/or fees incurred by TRPA for actions arising directly or indirectly from issuance or implementation of this permit. TRPA will have the sole and exclusive control (including the right to be represented by attorneys of TRPA's choosing) over the defense of any claims against TRPA and over their settlement, compromise, or other disposition. Permittee shall also pay all costs, including attorneys' fees, incurred by TRPA to enforce this indemnification agreement. If any judgment is rendered against TRPA in any action subject to this indemnification, the Permittee shall, at its expense, satisfy and discharge the same.

7. It is the permittee's responsibility to receive authorization and/or obtain any necessary permits from other responsible agencies for the proposed project.
8. Any and all temporary soil stockpiles shall be appropriately covered with tarps and contained by

temporary erosion control fences and/or coir logs with gravel bags.

9. Best practical control technology shall be employed to prevent earthen materials from being re-suspended or transported to adjacent lake waters because of construction activities.
10. Disturbance of lakebed materials shall be kept to a minimum and the area shall be returned to its pre-project condition upon completion of the project.
11. All employee construction vehicles shall be parked on existing paved surfaces.
12. All rock material (gravel, cobble, and/or boulders) imported to the site for use in the shoreline construction area shall be thoroughly washed and shall be free of any silt and clay material.
13. The discharge of petroleum products, construction waste and litter (including sawdust), or earthen materials to the surface waters of the Lake Tahoe Basin is prohibited. All surplus construction waste materials shall be removed from the project and deposited only at approved points of disposal.
14. Grading and excavation is prohibited at any time of the year during periods of precipitation and for the resulting period of time when the site is covered with snow or is saturated, muddy or unstable.
15. Any normal construction activities creating noise in excess to the TRPA noise standards shall be considered exempt from said standards provided all such work is conducted between the hours of 8:00 A.M. and 6:30 P.M.
16. For the authorized construction area landward of the high-water line, the site shall be winterized in accordance with the provisions of Attachment Q by October 15th unless a grading season exception is granted.
17. The shoreline protective structure shall be maintained in a condition consistent with the approved project plans in perpetuity.
18. All Best Management Practices shall be maintained in perpetuity to ensure effectiveness which may require BMPs to be periodically reinstalled or replaced. Prior to release of the project security all existing water quality BMPs shall be maintained and/or reinstalled to ensure effectiveness.
19. All excavated materials shall be hauled away from the site to a legally acceptable location.
20. Within two years of the pre-grade inspection the permittee shall restore spawning habitat in Lake Tahoe at a ratio of 1.5:1 for the area covered by the proposed rock revetment. The restoration may occur on-site or offsite. Prior to implementation of the restoration the permittee shall submit a restoration plan prepared by a qualified professional to TRPA for review and approval. The plan shall include a construction methodology.
21. Should access to the shorezone area be required from the upland property, prior authorization shall be obtained from TRPA. Upland access shall be limited to areas of existing access and disturbed areas.

22. The construction site and barge area will kept in an orderly condition and free of trash throughout the construction period. All debris and waste will be stored on the barge.
23. Trash and debris shall be collected and offloaded at a nearby marina. All debris shall be transported by truck to an approved disposal location.
24. Construction materials will be stored within the barge and protected from discharge to Lake Tahoe.
25. Spill containment materials shall be present during construction should any mechanical fluids be discharged from the barge.
26. The sheet pile shall be installed with the use of a vibratory hammer.
27. Any change to the project requires approval (except for TRPA exempt activities) of a TRPA plan revision permit prior to the changes being made to any element of the project (i.e. structural modifications, coverage, scenic, grading, BMPs, etc.). Failure to obtain prior approval for modifications may result in monetary penalties and removal of the unapproved elements.

END OF PERMT

Attachment C
Site Photographs

Photographs



Easterly view of existing retaining wall, 2020



View towards upland, 2020



View of lake bottom, note siltstone/claystone on the right, 2020



Westerly view, 2021



Easterly view, 2021

Habitat Evaluation of the Tahoe Yellow Cress (Rorippa subumbellata)

The proposed project is located on the west shore of Lake Tahoe. The project includes repairing an existing retaining wall partially within Lake Tahoe. All work will be accomplished using a rubber tire amphibious vehicle. Disturbance to the shorezone will be the minimum necessary to accomplish the construction.

The Tahoe Yellow Cress (*Rorippa subumbellata*, TYC) is a rare species of flowering plant in the mustard family. It is a California endangered plant species and a candidate for listing under the federal Endangered Species Act. The TYC grows in the sandy beach habitat on the shores of Lake Tahoe. The proposed project is not located in the vicinity of known TYC populations.

A site visit by TRPA to the project location was completed in the summer of 2021. The area was evaluated for potential habitat for TYC. No TYC or potential habitat was observed at the site. See TYCS2021-1078.

The proposed project does not appear to impact any existing populations of TYC. Care will be taken to prevent damage to potential TYC habitat.

Source Control and Spill Prevention Measures

Construction materials will be stored within the barge and protected from discharge to Lake Tahoe. The barge will be checked and maintained daily to prevent leaks of hazardous materials. Spill containment materials including oil absorbent pillows and pads will be present during construction should any mechanical fluids be discharged from the barge.

Fueling of the barge will occur offsite. Fueling of other equipment will be completed on the barge with personnel present to detect and contain spills.

All waste will be stored in secure containers on the barge. Waste will be removed by barge to appropriate facilities. No disposal of any waste will occur onsite.

After construction, no stains will be applied to any materials. No materials will be discharged to Lake Tahoe.

Spills must be reported to the appropriate agencies as soon as possible. A list of all agencies will be present on the barge at all times.

Construction Cost Estimate

Cost of the materials to construct the pier are as follows:

<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Amount</u>
Sheet Pile	115	L.F.	\$250.00	\$28,750.00
Top Cap	115	L.F.	\$20.00	\$2,300.00
			Total	\$18,050.00

Construction Methodology

1. All steel will be pre-painted and fabricated off-site except for the final cutting of the sheet pile. Welding will be performed by electrically powered welders whenever possible to minimize air and noise pollution. Sheet pile will be installed with the use of a vibratory hammer.
2. Best Management Practices as required by TRPA and other agencies will be in effect during construction. BMPs will be installed to minimize and avoid impacts to Lake Tahoe.
3. The proposed repair of the retaining wall will be supplied primarily from the lake by means of a rubber tired amphibious vehicle. Low ground pressure tires will ensure minimal lakebed disturbance. Day access by workers will be from the land over existing pathways. No materials or supplies will be stored on the shoreline. The amphibious vehicle will be parked adjacent to the shoreline during non-construction periods. No construction will take place on weekends or between the hours of 7 am and 6 pm.
4. Any debris will be skimmed from the lake surface and retrieved and removed. All organic debris will be disposed of at an approved sanitary landfill or recycled.
5. No containers of fuel, paint or other hazardous materials will be stored on the pier when not in immediate use. No construction materials will be stored on the shoreline.
6. A spill response kit will be on-site at all times.

Attachment D

Project Plans

ISSUES AND REVISIONS

No.	Date	Issue and Revision	By	Check
1	FEB. 18, 2022	SUBMITTAL	GF	GF

SHORELINE REVETMENT REPAIR
 SPIRIT OF TAHOE LLC

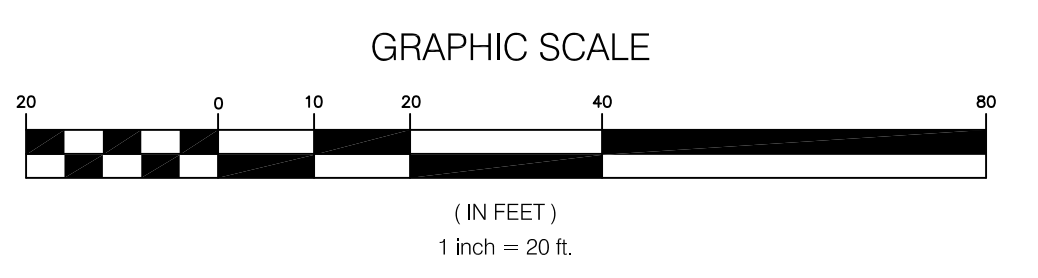
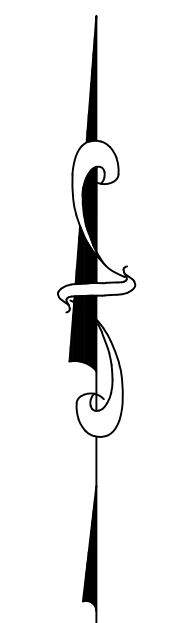
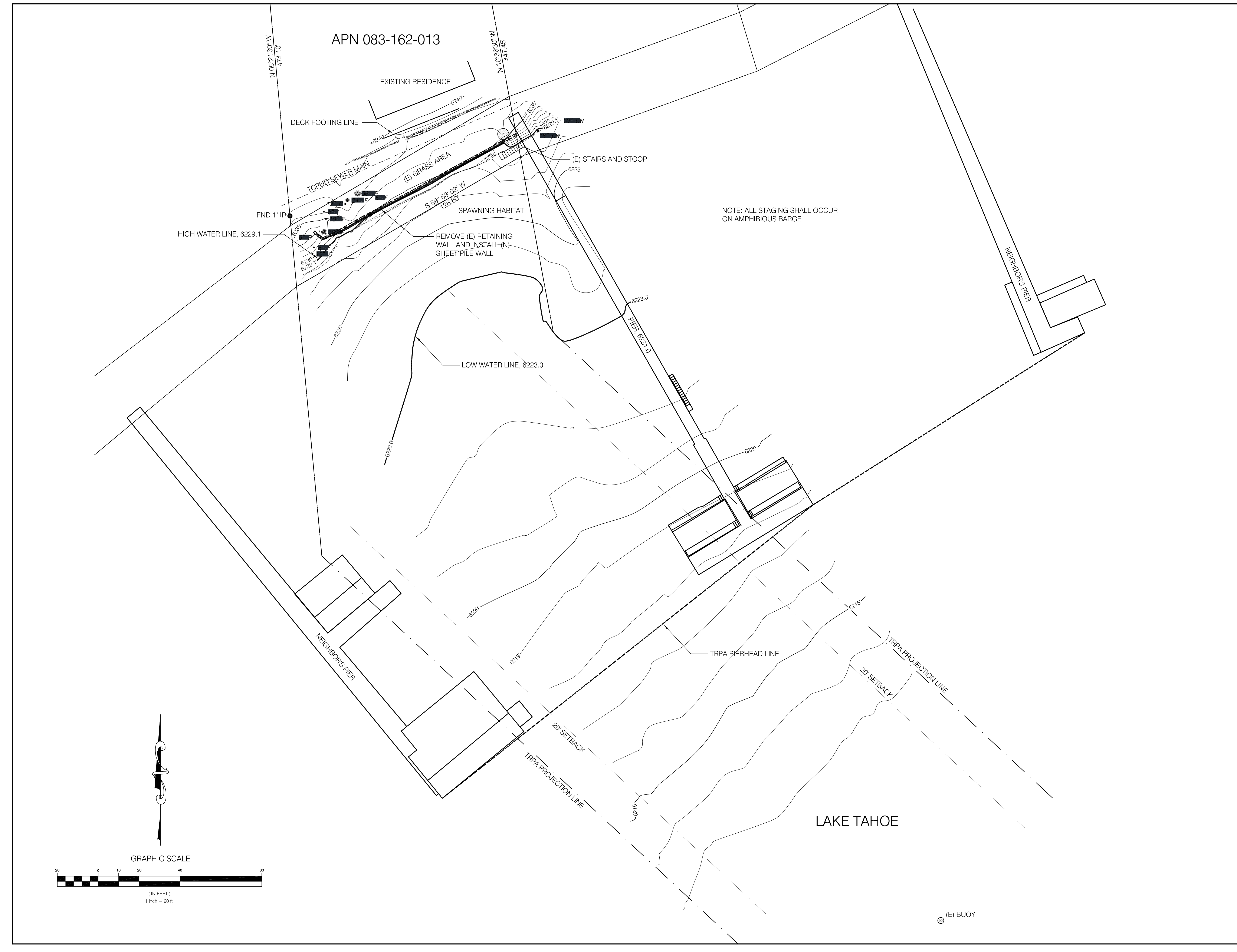
1330 WEST LAKE BLVD.
 TAHOE CITY
 PLACER COUNTY
 CALIFORNIA
 A.P.N. 083-162-013

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DESCRIPTION
SITE PLAN

SCALE 1" = 20'
 PROJECT NO. B20-34

1





STAMP DATE: 3/15/2022 1:22:58 PM

ISSUES AND REVISIONS				
#	Date	Issue & Revision	By	Check
1	02/03/22	TRPA SUBMITTAL	NN	GF

FILE VERSION: B20-34 1.x
 PUBLISH DATE: 3/15/2022 1:22:58 PM

NEW SHEET PILE WALL FOR:
TOBY DAVIS

1330 WEST LAKE BLVD.
 TAHOE CITY
 CALIFORNIA
 A.P.N. 083-162-013

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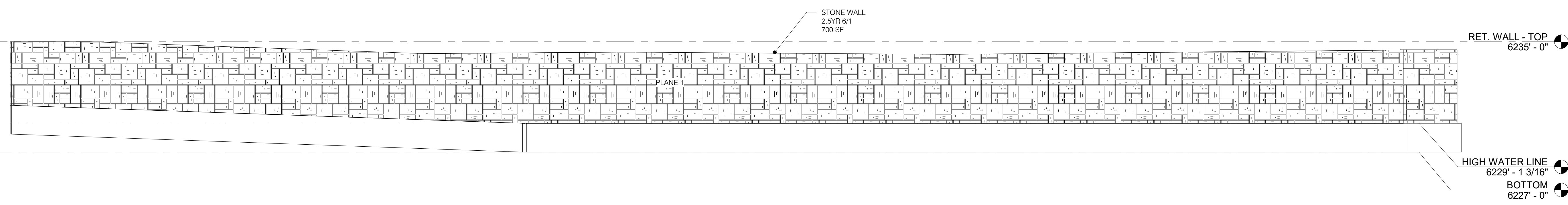
DESCRIPTION:
**EXISTING RET.
 WALL - TRPA
 ELEVATIONS**

SCALE: 1/4" = 1'-0"
 PROJECT #: B20-34

A4.3

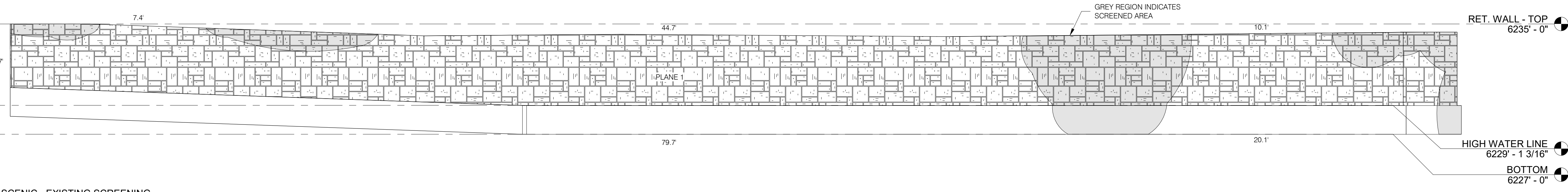
EXISTING:
 STONE WALL

EXISTING SURFACE AREAS	AREA	%
STONE WALL	747 SF	100%



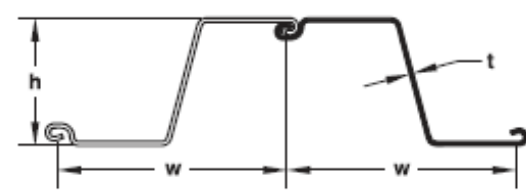
1 TRPA SCENIC - EXISTING AREAS
 1/4" = 1'-0"

EXISTING SCREENING AREAS	
TOTAL LAKE FRONT FACADE	747 S.F.
SCREENED AREA	124 S.F.
VISIBLE AREA	623 S.F.
PERIMETER	222.8'
VISIBLE PERIMETER	167.7' = 75.3%



2 TRPA SCENIC - EXISTING SCREENING
 1/4" = 1'-0"

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SECTION	Width (w) in	Height (h) in	Thickness (t) in	Cross Sectional Area in ²	WEIGHT		SECTION MODULUS		COATING AREA		
					Single Pile lb/ft	Wall Area ft ² /ft	Elastic in ⁴ /ft	Plastic in ⁴ /ft	Both Sides ft ² /ft	Coating Area ft ² /ft	
SCZ 12	28.50	10.00	0.200	3.32	27.08	11.37	11.52	19.10	576	6.30	1.28
SCZ 14	28.50	10.00	0.250	4.18	33.87	14.23	14.36	16.32	71.82	6.30	1.28
SCZ 16	28.50	10.00	0.276	4.62	37.37	15.73	15.75	17.97	78.73	6.30	1.28
SCZ 17N	28.50	10.00	0.296	4.95	40.03	16.86	16.87	19.21	84.35	6.30	1.28
SCZ 18N	28.50	10.00	0.27	5.31	42.94	18.08	18.0	20.61	90.48	6.30	1.28
SCZ 20N	28.50	10.00	0.275	6.29	50.84	21.41	21.43	24.40	107.13	6.30	1.28
SKZ 20	28.50	16.00	0.395	6.00	48.24	20.31	21.69	36.66	253.51	7.60	1.60
SKZ 22	28.50	16.00	0.325	6.20	51.30	21.60	23.43	38.84	267.40	7.60	1.60
SKZ 23	28.50	16.00	0.354	6.30	54.20	22.82	25.61	41.2	284.90	7.60	1.60
SKZ 24	28.50	16.00	0.375	7.10	57.43	24.18	27.73	43.52	301.80	7.60	1.60
SKZ 25	28.50	16.00	0.399	7.60	61.90	25.73	29.64	46.24	321.12	7.60	1.60
SKZ 31	28.50	18.00	0.450	9.07	73.82	31.08	35.56	60.51	464.05	8.06	1.70

SELECTED SHEET PILING

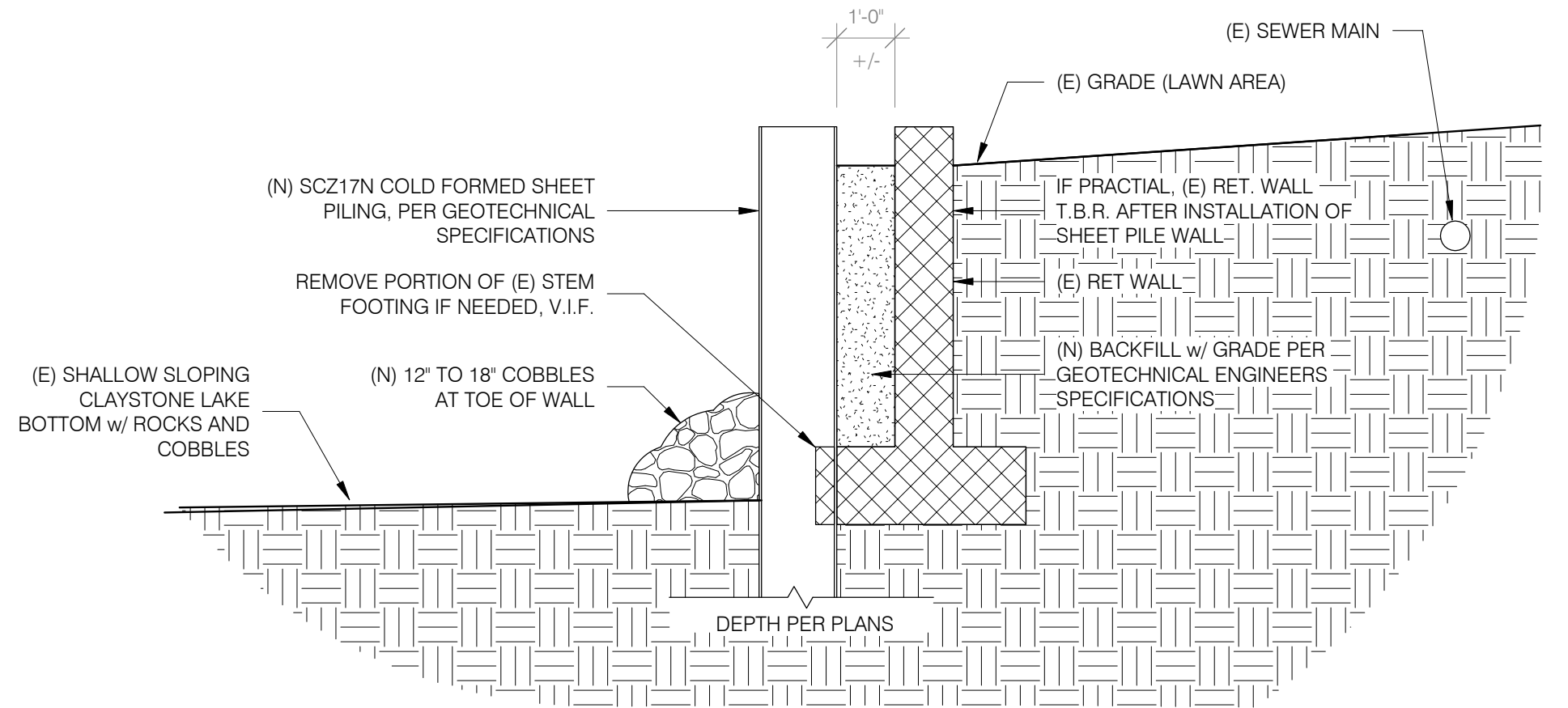


Sherwin Williams 4000 Series

Bolt Brown SW 4001	Modular Tan SW 4002	Pallet Tan SW 4003	Tannery SW 4004	Cylinder Cream SW 4005
Lodestone SW 4006	Bronze SW 4007	Umber SW 4008	Walnut Brown SW 4009	Pumice Stone SW 4010
Mortar SW 4011	Cirrus White SW 4012	Ballast Beige SW 4013	Cantilever Tan SW 4014	Torque Tan SW 4015
Corrugate Brown SW 4016	Graphite SW 4017	Tower Gray SW 4018	Flint Gray SW 4019	Zephyr SW 4020
Filament SW 4021	Balsam SW 4022	Olivine SW 4023	Enviro Green SW 4024	Anchor Gray SW 4025
Slate Gray SW 4026	Galvano SW 4027	Gypsum SW 4028	Pillar White SW 4029	Nickel SW 4030
Structural Gray SW 4031	Vacuum Black SW 4032	Brass SW 4033	Optic Yellow SW 4035	

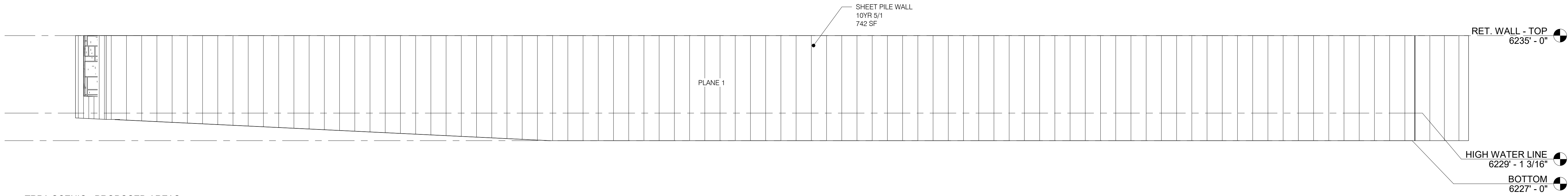
COLOR SELECTED

Due to screen limitations, colors seen here may not accurately reflect painted colors. To confirm your color choices when critical, request a hard copy to be sent to you or visit your neighborhood Sherwin-Williams store and refer to their in-store color cards or Color to Go® color samples.



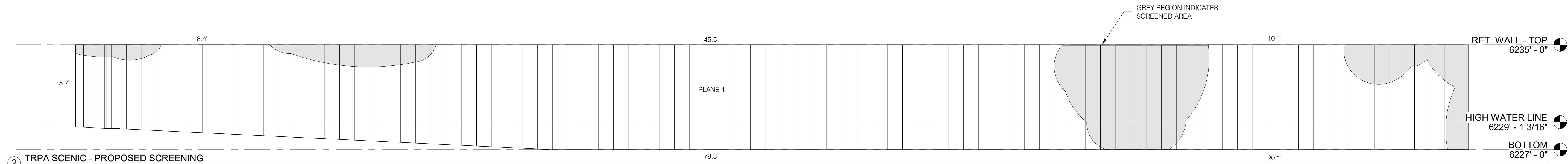
RET. WALL SECTION
3/8" = 1'-0"

PROPOSED:
SHEET PILE WALL



PROPOSED SURFACE AREAS	AREA	%
SHEET PILEWALL	817 SF	100%

1 TRPA SCENIC - PROPOSED AREAS
1/4" = 1'-0"



PROPOSED SCREENING AREAS	
TOTAL LAKE FRONT FACADE	817 S.F.
SCREENED AREA	124 S.F.
VISIBLE AREA	693 S.F.
PERIMETER	225.5'
VISIBLE PERIMETER	169.1' = 75.0%

2 TRPA SCENIC - PROPOSED SCREENING
1/4" = 1'-0"



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DESCRIPTION:
PROPOSED RET. WALL - TRPA ELEVATIONS

SCALE: As indicated
PROJECT #: B20-34

A4.4