



## PLANNING COMMISSION STAFF MEMORANDUM

**DATE:** May 1, 2025  
**TO:** Planning Commission  
**FROM:** Angela Snyder, Contract Staff - Planning Department  
**SUBJECT:** UPDATE TO ORIGINAL MEMO FOR **QUASI-JUDICIAL (PUBLIC HEARING)** Resolution 05-2025 – Consideration of a Shoreline Variance on Lot 6, Shadow Pointe, More Commonly Referred to as 300 Lakeside Drive

### Background

The proposed shoreline variance for a boat dock was continued from March 19, 2025 in order to afford the applicant time to collect more information.

One of the items requested by the Planning Commission was a survey of the bed of the channel between Shadow Mountain Lake and the Grand Lake Marina. The applicant has communicated often with Town Staff, exploring all avenues to procure this with no success. The applicant searched for navigational charts, topographical maps, surveys, floodplain elevation studies or engineering reports. Their surveyor, Tim Shenk, indicated in correspondence (attached) dated April 4, 2025, that to create a new study is not something a normal surveyor can complete. It would require a firm that does hydrographic surveying. Staff would like the Planning Commission to consider that the request for a hydrographic survey is not in proportion to the request and may be considered a regulatory burden.

Staff would like to clarify comments made at the March 19, 2025, meeting regarding an Army Corps of Engineers approval issued for the original boat slip design. There was public concern raised that the permit didn't cover the new location. Staff explored the concern. The original design called for excavation of the channel for the creation of a boat slip perpendicular to the channel. The new design does not require an ACOE permit, because it does not disturb the ground underneath the waterline.

However, the applicant has supplied exhibits in addition to those already in the record to aid the Planning Commission's decision.

### U.S. Forest Service Permit #SUL749

The USFS boat dock permit has been submitted by the applicant. The permit was issued for the purpose of "The construction and maintenance of a private boat dock (slip) on Shadow Mountain Reservoir with occupancy of no more than 600 square feet of reservoir surface..." For a full list of conditions, see the attached permit.

### Improvement Survey Plat

Tim Shenck supplied the applicant with a survey he created for the property in 2017 with a report detailing the property boundaries. The applicant has submitted this and emailed correspondence for the record.

### Construction Documents

The applicant has submitted the full-size construction documents and foundation cross section showing no physical disturbance of the channel.

### **Fire District Response**

The Seth St. Germain of the Grand Lake Fire Protection District has recommended that three conditions be added to the variance, if approved. Staff is in agreement with the recommended conditions and asks Planning Commission to add them to their recommendation to the Board of Trustees.

1. Property owners should only dock one vessel at a time. The docked vessel should not exceed the standard width of a “water recreational” craft of approximately 8’ (pontoons range from 10’ to 12’ and houseboats range from 15’ to 18’). a. If the property is used in the form of “transient occupancy (such as Short-Term Rental) the owners should create a clause stating that renters must follow the above recommendation.
2. The dock is engineered in a way that allows vessels to be docked parallel to structure. However, owners should ensure that two security cleats are provided on the dock to secure both the “bow” and “stern” to prevent any docked vessel from drifting further into the channels way of travel.
3. Property owners should install lower illumination lights at the point of the dock where a vessel would be secured. This illumination should only be broadcast onto the secured vessel to provide better visibility of said vessel at night.

The cantilevered dock meets municipal, county and federal requirements. The foundation is fully on the subject property, so shoreline impact is minimized. Staff recommends approval of the shoreline variance with the added conditions from the fire district.

### **Sample Motions**

#### **Approval**

I move to approve Resolution 05-2025, a resolution recommending approval of a Shoreline Variance for a boat dock as presented at 300 Lakeside Drive to the Board of Trustees with the recommended conditions from Grand Lake Fire Protection District.

#### **Denial**

I move to approve Resolution 05-2025, a resolution recommending denial of a Shoreline Variance for a boat dock as presented at 300 Lakeside Drive to the Board of Trustees.

Authorization ID: SUL749  
Contact Name: MARK CHAPDELAINE  
Expiration Date: 12/31/2029  
Use Code: 111

FS-2700-4 (VER. 03/17)  
OMB 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE**

**SPECIAL USE PERMIT**

**Authority: FEDERAL LANDS RECREATION ENHANCEMENT ACT, TITLE VIII, DIV. J, OF PL 108-447  
December 8, 2004**

MARK CHAPDELAINE of PO BOX 5134 SNOWMASS VILLAGE CO 81615 (hereinafter "the holder") is authorized to use or occupy National Forest System lands in the Arapaho-Roosevelt National Forests, Sulphur Ranger District unit of the National Forest System, subject to the terms and conditions of this special use permit (the permit).

This permit covers .01 acres and is described as T3N R75W SEC 6, ("the permit area"), as shown on the location map (Appendix A) attached to and made part of the permit.

The permit is issued for the purpose of:

Construction and maintenance of a private boat dock (slip) on Shadow Mountain Reservoir with occupancy of no more than 600 square feet of reservoir surface. If the dock is not removed from National Forest System lands in the winter, it must be adequately marked so as to be visible to winter recreationalists. The Arapaho National Recreation Area Private Dock Standards (Appendix B) are attached to and made a part of this permit.

**TERMS AND CONDITIONS**

**I. GENERAL TERMS**

**A. AUTHORITY.** This permit is issued pursuant to the FEDERAL LANDS RECREATION ENHANCEMENT ACT, TITLE VIII, DIV. J, OF PL 108-447 December 8, 2004 and 36 CFR Part 251, Subpart B, as amended, and is subject to their provisions.

**B. AUTHORIZED OFFICER.** The authorized officer is the Forest or Grassland Supervisor or a subordinate officer with delegated authority.

**C. TERM.** This permit shall expire at midnight on 12/31/2029.

**D. CONTINUATION OF USE AND OCCUPANCY.** This permit is not renewable. Prior to expiration of this permit, the holder may apply for a new permit for the use and occupancy authorized by this permit. Applications for a new permit must be submitted at least 6 months prior to expiration of this permit. Issuance of a new permit is at the sole discretion of the authorized officer. At a minimum, before issuing a new permit, the authorized officer shall ensure that (1) the use and occupancy to be authorized by the new permit is consistent with the standards and guidelines in the applicable land management plan; (2) the type of use and occupancy to be authorized by the new permit is the same as the type of use and occupancy authorized by this permit; and (3) the holder is in compliance with all the terms of this permit. The

authorized officer may prescribe new terms and conditions when a new permit is issued.

**E. AMENDMENT.** This permit may be amended in whole or in part by the Forest Service when, at the discretion of the authorized officer, such action is deemed necessary or desirable to incorporate new terms that may be required by law, regulation, directive, the applicable forest land and resource management plan, or projects and activities implementing a land management plan pursuant to 36 CFR Part 215.

**F. COMPLIANCE WITH LAWS, REGULATIONS, AND OTHER LEGAL REQUIREMENTS.** In exercising the rights and privileges granted by this permit, the holder shall comply with all present and future federal laws and regulations and all present and future state, county, and municipal laws, regulations, and other legal requirements that apply to the permit area, to the extent they do not conflict with federal law, regulation, or policy. The Forest Service assumes no responsibility for enforcing laws, regulations, and other legal requirements that fall under the jurisdiction of other governmental entities.

**G. NON-EXCLUSIVE USE.** The use or occupancy authorized by this permit is not exclusive. The Forest Service reserves the right of access to the permit area, including a continuing right of physical entry to the permit area for inspection, monitoring, or any other purpose consistent with any right or obligation of the United States under any law or regulation. The Forest Service reserves the right to allow others to use the permit area in any way that is not inconsistent with the holder's rights and privileges under this permit, after consultation with all parties involved. Except for any restrictions that the holder and the authorized officer agree are necessary to protect the installation and operation of authorized temporary improvements, the lands and waters covered by this permit shall remain open to the public for all lawful purposes.

**H. ASSIGNABILITY.** This permit is not assignable or transferable.

#### **I. TRANSFER OF TITLE TO THE IMPROVEMENTS.**

1. **Notification of Transfer.** The holder shall notify the authorized officer when a transfer of title to all or part of the authorized improvements is planned.

2. **Transfer of Title.** Any transfer of title to the improvements covered by this permit shall result in termination of the permit. The party who acquires title to the improvements must submit an application for a permit. The Forest Service is not obligated to issue a new permit to the party who acquires title to the improvements. The authorized officer shall determine that the applicant meets requirements under applicable federal regulations.

#### **II. IMPROVEMENTS**

**A. LIMITATIONS ON USE.** Nothing in this permit gives or implies permission to build or maintain any structure or facility or to conduct any activity, unless specifically authorized by this permit. Any use not specifically authorized by this permit must be proposed in accordance with 36 CFR 251.54. Approval of such a proposal through issuance of a new permit or permit amendment is at the sole discretion of the authorized officer.

**B. PLANS.** All plans for development, layout, construction, reconstruction, or alteration of improvements in the permit area, as well as revisions to those plans must be prepared by a professional engineer, architect, landscape architect, or other qualified professional based on federal employment standards acceptable to the authorized officer. These plans and plan revisions must have written approval from the authorized officer before they are implemented. The authorized officer may require the holder to furnish as-built plans, maps, or surveys upon completion of the work.

**C. CONSTRUCTION.** Any construction authorized by this permit shall be completed by 12/31/2020.

### **III. OPERATIONS.**

**A. PERIOD OF USE.** Use or occupancy of the permit area shall be exercised at least 30 days each year.

**B. CONDITION OF OPERATIONS.** The holder shall maintain the authorized improvements and permit area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the authorized officer and consistent with other provisions of this permit. Standards are subject to periodic change by the authorized officer when deemed necessary to meet statutory, regulatory, or policy requirements or to protect national forest resources. The holder shall comply with inspection requirements deemed appropriate by the authorized officer.

**C. MONITORING BY THE FOREST SERVICE.** The Forest Service shall monitor the holder's operations and reserves the right to inspect the permit area and transmission facilities at any time for compliance with the terms of this permit. The holder shall comply with inspection requirements deemed appropriate by the authorized officer. The holder's obligations under this permit are not contingent upon any duty of the Forest Service to inspect the permit area or transmission facilities. A failure by the Forest Service or other governmental officials to inspect is not a justification for noncompliance with any of the terms and conditions of this permit.

### **IV. RIGHTS AND LIABILITIES**

**A. LEGAL EFFECT OF THE PERMIT.** This permit, which is revocable and terminable, is not a contract or a lease, but rather a federal license. The benefits and requirements conferred by this authorization are reviewable solely under the procedures set forth in 36 CFR 214 and 5 U.S.C. 704. This permit does not constitute a contract for purposes of the Contract Disputes Act, 41 U.S.C. 601. The permit is not real property, does not convey any interest in real property, and may not be used as collateral for a loan.

**B. VALID EXISTING RIGHTS.** This permit is subject to all valid existing rights. Valid existing rights include those derived under mining and mineral leasing laws of the United States. The United States is not liable to the holder for the exercise of any such right.

**C. ABSENCE OF THIRD-PARTY BENEFICIARY RIGHTS.** The parties to this permit do not intend to confer any rights on any third party as a beneficiary under this permit.

**D. SERVICES NOT PROVIDED.** This permit does not provide for the furnishing of road or trail maintenance, water, fire protection, search and rescue, or any other such service by a government agency, utility, association, or individual.

**E. RISK OF LOSS.** The holder assumes all risk of loss associated with use or occupancy of the permit area, including but not limited to theft, vandalism, fire and any fire-fighting activities (including prescribed burns), avalanches, rising waters, winds, falling limbs or trees, and other forces of nature. If authorized temporary improvements in the permit area are destroyed or substantially damaged, the authorized officer shall conduct an analysis to determine whether the improvements can be safely occupied in the future and whether rebuilding should be allowed. If rebuilding is not allowed, the permit shall terminate.

**F. DAMAGE TO UNITED STATES PROPERTY.** The holder has an affirmative duty to protect from damage the land, property, and other interests of the United States. Damage includes but is not limited to fire suppression costs and damage to government-owned improvements covered by this permit.

1. The holder shall be liable for all injury, loss, or damage, including fire suppression, prevention and control of the spread of invasive species, or other costs in connection with rehabilitation or restoration of natural resources resulting from the use or occupancy authorized by this permit. Compensation shall include but not be limited to the value of resources damaged or destroyed, the costs of restoration, cleanup, or other mitigation, fire suppression or other types of abatement costs, and all administrative, legal (including attorney's fees), and other costs. Such costs may be deducted from a performance bond required under clause IV.J.

2. The holder shall be liable for damage caused by use of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees to all roads and trails of the United States to the same extent as provided under clause IV.F.1, except that liability shall not include reasonable and ordinary wear and tear.

**G. HEALTH AND SAFETY.** The holder shall take all measures necessary to protect the health and safety of all persons affected by the use and occupancy authorized by this permit. The holder shall promptly abate as completely as possible and in compliance with all applicable laws and regulations any physical or mechanical procedure, activity, event, or condition existing or occurring in connection with the authorized use and occupancy during the term of this permit that causes or threatens to cause a hazard to the health or safety of the public or the holder's employees or agents. The holder shall as soon as practicable notify the authorized officer of all serious accidents that occur in connection with these procedures, activities, events, or conditions. The Forest Service has no duty under the terms of this permit to inspect the permit area or operations of the holder for hazardous conditions or compliance with health and safety standards.

#### **H. ENVIRONMENTAL PROTECTION.**

1. For purposes of clause IV.H and section V, "hazardous material" shall mean (a) any hazardous substance under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601(14); (b) any pollutant or contaminant under section 101(33) of CERCLA, 42 U.S.C. 9601(33); (c) any petroleum product or its derivative, including fuel oil, and waste oils; and (d) any hazardous substance, extremely hazardous substance, toxic substance, hazardous waste, ignitable, reactive or corrosive materials, pollutant, contaminant, element, compound, mixture, solution or substance that may pose a present or potential hazard to human health or the environment under any applicable environmental laws.

2. The holder shall avoid damaging or contaminating the environment, including but not limited to the soil, vegetation (such as trees, shrubs, and grass), surface water, and groundwater, during the holder's use and occupancy of the permit area. Environmental damage includes but is not limited to all costs and damages associated with or resulting from the release or threatened release of a hazardous material occurring during or as a result of activities of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees on, or related to, the lands, property, and other interests covered by this permit. If the environment or any government property covered by this permit becomes damaged in connection with the holder's use and occupancy, the holder shall as soon as practicable repair the damage or replace the damaged items to the satisfaction of the authorized officer and at no expense to the United States.

3. The holder shall as soon as practicable, as completely as possible, and in compliance with all applicable laws and regulations abate any physical or mechanical procedure, activity, event, or condition existing or occurring in connection with the authorized use and occupancy during or after the term of this permit that causes or threatens to cause harm to the environment, including areas of vegetation or timber, fish or other wildlife populations, their habitats, or any other natural resources.

**I. INDEMNIFICATION OF THE UNITED STATES.** The holder shall indemnify, defend, and hold harmless the United States for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the holder in connection with the use or occupancy authorized by this permit. This indemnification provision includes but is not limited to acts and omissions of the holder or the holder's heirs, assigns, agents, employees, contractors, or lessees in connection with the use or occupancy authorized by this permit which result in (1) violations of any laws and regulations which are now or which may in the future become applicable; (2) judgments, claims, demands, penalties, or fees assessed against the United States; (3) costs, expenses, and damages incurred by the United States; or (4) the release or threatened release of any solid waste, hazardous waste, hazardous materials, pollutant, contaminant, oil in any form, or petroleum product into the environment. The authorized officer may prescribe terms that allow the holder to replace, repair, restore, or otherwise undertake necessary curative actions to mitigate damages in addition to or as an alternative to monetary indemnification.

**J. BONDING.** The authorized officer may require the holder to furnish a surety bond or other security for any of the obligations imposed by the terms and conditions of this permit or any applicable law, regulation, or order.

## **V. RESOURCE PROTECTION**

**A. COMPLIANCE WITH ENVIRONMENTAL LAWS.** The holder shall in connection with the use or occupancy authorized by this permit comply with all applicable federal, state, and local environmental laws and regulations, including but not limited to those established pursuant to the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq., the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq., the Oil Pollution Act, as amended, 33 U.S.C. 2701 et seq., the Clean Air Act, as amended, 42 U.S.C. 7401 et seq., CERCLA, as amended, 42 U.S.C. 9601 et seq., the Toxic Substances Control Act, as amended, 15 U.S.C. 2601 et seq., the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, 7 U.S.C. 136 et seq., and the Safe Drinking Water Act, as amended, 42 U.S.C. 300f et seq.

**B. VANDALISM.** The holder shall take reasonable measures to prevent and discourage vandalism and disorderly conduct and when necessary shall contact the appropriate law enforcement officer.

## **C. PESTICIDE USE.**

1. **Authorized Officer Concurrence.** Pesticides may not be used outside of buildings in the permit area to control pests, including undesirable woody and herbaceous vegetation (including aquatic plants), insects, birds, rodents, or fish without prior written concurrence of the authorized officer. Only those products registered or otherwise authorized by the U.S. Environmental Protection Agency and appropriate State authority for the specific purpose planned shall be authorized for use within areas on National Forest System lands.

2. **Pesticide-Use Proposal.** Requests for concurrence of any planned uses of pesticides shall be provided in advance using the Pesticide-Use Proposal (form FS-2100-2). Annually the holder shall, on the due date established by the authorized officer, submit requests for any new, or continued, pesticide usage. The Pesticide-Use Proposal shall cover a 12-month period of planned use. The Pesticide-Use Proposal shall be submitted at least 60 days in advance of pesticide application. Information essential for review shall be provided in the form specified. Exceptions to this schedule may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time a Pesticide-Use Proposal was submitted.

3. **Labeling, Laws, and Regulations.** Label instructions and all applicable laws and regulations shall be strictly followed in the application of pesticides and disposal of excess materials and containers. No

pesticide waste, excess materials, or containers shall be disposed of in any area administered by the Forest Service.

**D. ARCHAEOLOGICAL-PALEONTOLOGICAL DISCOVERIES.** The holder shall immediately notify the authorized officer of all antiquities or other objects of historic or scientific interest, including but not limited to historic or prehistoric ruins, fossils, or artifacts discovered in connection with the use and occupancy authorized by this permit. The holder shall follow the applicable inadvertent discovery protocols for the undertaking provided in an agreement executed pursuant to section 106 of the National Historic Preservation Act, 54 U.S.C. 306108; if there are no such agreed-upon protocols, the holder shall leave these discoveries intact and in place until consultation has occurred, as informed, if applicable, by any programmatic agreement with tribes. Protective and mitigation measures developed under this clause shall be the responsibility of the holder. However, the holder shall give the authorized officer written notice before implementing these measures and shall coordinate with the authorized officer for proximate and contextual discoveries extending beyond the permit area.

**E. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (NAGPRA).** In accordance with 25 U.S.C. 3002(d) and 43 CFR 10.4, if the holder inadvertently discovers human remains, funerary objects, sacred objects, or objects of cultural patrimony on National Forest System lands, the holder shall immediately cease work in the area of the discovery and shall make a reasonable effort to protect and secure the items. The holder shall follow the applicable NAGPRA protocols for the undertaking provided in the NAGPRA plan of action or the NAGPRA comprehensive agreement; if there are no such agreed-upon protocols, the holder shall as soon as practicable notify the authorized officer of the discovery and shall follow up with written confirmation of the discovery. The activity that resulted in the inadvertent discovery may not resume until 30 days after the forest archaeologist certifies receipt of the written confirmation, if resumption of the activity is otherwise lawful, or at any time if a binding written agreement has been executed between the Forest Service and the affiliated Indian tribes that adopts a recovery plan for the human remains and objects.

**F. PROTECTION OF THREATENED AND ENDANGERED SPECIES, SENSITIVE SPECIES, AND SPECIES OF CONSERVATION CONCERN AND THEIR HABITAT.**

1. Threatened and Endangered Species and Their Habitat. The location of sites within the permit area needing special measures for protection of plants or animals listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, 16 U.S.C. 1531 et seq., as amended, or within designated critical habitat shall be shown on a map in an appendix to this permit and may be shown on the ground. The holder shall take any protective and mitigation measures specified by the authorized officer as necessary and appropriate to avoid or reduce effects on listed species or designated critical habitat affected by the authorized use and occupancy. Discovery by the holder or the Forest Service of other sites within the permit area containing threatened or endangered species or designated critical habitat not shown on the map in the appendix shall be promptly reported to the other party and shall be added to the map.

2. Sensitive Species and Species of Conservation Concern and Their Habitat. The location of sites within the permit area needing special measures for protection of plants or animals designated by the Regional Forester as sensitive species or as species of conservation concern pursuant to FSM 2670 shall be shown on a map in an appendix to this permit and may be shown on the ground. The holder shall take any protective and mitigation measures specified by the authorized officer as necessary and appropriate to avoid or reduce effects on sensitive species or species of conservation concern or their habitat affected by the authorized use and occupancy. Discovery by the holder or the Forest Service of other sites within the permit area containing sensitive species or species of conservation concern or their habitat not shown on the map in the appendix shall be promptly reported to the other party and shall be added to the map.



**G. CONSENT TO STORE HAZARDOUS MATERIALS.** The holder shall not store any hazardous materials at the site without prior written approval from the authorized officer. This approval shall not be unreasonably withheld. If the authorized officer provides approval, this permit shall include, or in the case of approval provided after this permit is issued, shall be amended to include specific terms addressing the storage of hazardous materials, including the specific type of materials to be stored, the volume, the type of storage, and a spill plan. Such terms shall be proposed by the holder and are subject to approval by the authorized officer.

**H. CLEANUP AND REMEDIATION.**

1. The holder shall immediately notify all appropriate response authorities, including the National Response Center and the authorized officer or the authorized officer's designated representative, of any oil discharge or of the release of a hazardous material in the permit area in an amount greater than or equal to its reportable quantity, in accordance with 33 CFR Part 153, Subpart B, and 40 CFR Part 302. For the purposes of this requirement, "oil" is as defined by section 311(a)(1) of the Clean Water Act, 33 U.S.C. 1321(a)(1). The holder shall immediately notify the authorized officer or the authorized officer's designated representative of any release or threatened release of any hazardous material in or near the permit area which may be harmful to public health or welfare or which may adversely affect natural resources on federal lands.

2. Except with respect to any federally permitted release as that term is defined under Section 101(10) of CERCLA, 42 U.S.C. 9601(10), the holder shall clean up or otherwise remediate any release, threat of release, or discharge of hazardous materials that occurs either in the permit area or in connection with the holder's activities in the permit area, regardless of whether those activities are authorized under this permit. The holder shall perform cleanup or remediation immediately upon discovery of the release, threat of release, or discharge of hazardous materials. The holder shall perform the cleanup or remediation to the satisfaction of the authorized officer and at no expense to the United States. Upon revocation or termination of this permit, the holder shall deliver the site to the Forest Service free and clear of contamination.

**VI. LAND USE FEE AND DEBT COLLECTION**

**A. LAND USE FEES.** The holder shall pay an initial annual land use fee of \$485.50 for the period from 01/01/2020 to 12/31/2020, and thereafter on January 1st. The annual land use fee shall be adjusted annually using the federal deflator rate indexing factor.

**B. MODIFICATION OF THE LAND USE FEE.** The land use fee may be revised whenever necessary to reflect the market value of the authorized use or occupancy or when the fee system used to calculate the land use fee is modified or replaced.

**C. FEE PAYMENT ISSUES.**

1. Crediting of Payments. Payments shall be credited on the date received by the deposit facility, except that if a payment is received on a non-workday, the payment shall not be credited until the next workday.

2. Disputed Fees. Fees are due and payable by the due date. Disputed fees must be paid in full. Adjustments will be made if dictated by an administrative appeal decision, a court decision, or settlement terms.

3. Late Payments

(a) Interest. Pursuant to 31 U.S.C. 3717 et seq., interest shall be charged on any fee amount not paid within 30 days from the date it became due. The rate of interest assessed shall be the higher of the Prompt Payment Act rate or the rate of the current value of funds to the United States Treasury (i.e., the Treasury tax and loan account rate), as prescribed and published annually or quarterly by the Secretary of the Treasury in the Federal Register and the Treasury Fiscal Requirements Manual Bulletins. Interest on the principal shall accrue from the date the fee amount is due.

(b) Administrative Costs. If the account becomes delinquent, administrative costs to cover processing and handling the delinquency shall be assessed.

(c) Penalties. A penalty of 6% per annum shall be assessed on the total amount that is more than 90 days delinquent and shall accrue from the same date on which interest charges begin to accrue.

(d) Termination for Nonpayment. This permit shall terminate without the necessity of prior notice and opportunity to comply when any permit fee payment is 90 calendar days from the due date in arrears. The holder shall remain responsible for the delinquent fees.

4. Administrative Offset and Credit Reporting. Delinquent fees and other charges associated with the permit shall be subject to all rights and remedies afforded the United States pursuant to 31 U.S.C. 3711 et seq. and common law. Delinquencies are subject to any or all of the following:

(a) Administrative offset of payments due the holder from the Forest Service.

(b) If in excess of 60 days, referral to the United States Department of the Treasury for appropriate collection action as provided by 31 U.S.C. 3711(g)(1).

(c) Offset by the Secretary of the Treasury of any amount due the holder, as provided by 31 U.S.C. 3720 et seq.

(d) Disclosure to consumer or commercial credit reporting agencies.

## **VII. REVOCATION, SUSPENSION, AND TERMINATION**

**A. REVOCATION AND SUSPENSION**. The authorized officer may revoke or suspend this permit in whole or in part:

1. For noncompliance with federal, state, or local law.
2. For noncompliance with the terms of this permit.
3. For abandonment or other failure of the holder to exercise the privileges granted.
4. With the consent of the holder.
5. For specific and compelling reasons in the public interest.

Prior to revocation or suspension, other than immediate suspension under clause VII.B, the authorized officer shall give the holder written notice of the grounds for revocation or suspension and a reasonable period, typically not to exceed 90 days, to cure any noncompliance.

**B. IMMEDIATE SUSPENSION.** The authorized officer may immediately suspend this permit in whole or in part when necessary to protect public health or safety or the environment. The suspension decision shall be in writing. The holder may request an on-site review with the authorized officer's supervisor of the adverse conditions prompting the suspension. The authorized officer's supervisor shall grant this request within 48 hours. Following the on-site review, the authorized officer's supervisor shall promptly affirm, modify, or cancel the suspension.

**C. APPEALS AND REMEDIES.** Written decisions by the authorized officer relating to administration of this permit are subject to administrative appeal pursuant to 36 CFR Part 214, as amended. Revocation or suspension of this permit shall not give rise to any claim for damages by the holder against the Forest Service.

**D. TERMINATION.** This permit shall terminate when by its terms a fixed or agreed upon condition, event, or time occurs without any action by the authorized officer. Examples include but are not limited to expiration of the permit by its terms on a specified date and termination upon change of control of the business entity. Termination of this permit shall not require notice, a decision document, or any environmental analysis or other documentation. Termination of this permit is not subject to administrative appeal and shall not give rise to any claim for damages by the holder against the Forest Service.

**E. RIGHTS AND RESPONSIBILITIES UPON REVOCATION OR TERMINATION WITHOUT ISSUANCE OF A NEW PERMIT.** Upon revocation or termination of this permit without issuance of a new permit, the holder shall remove all structures and improvements, except those owned by the United States, within a reasonable period prescribed by the authorized officer and shall restore the site to the satisfaction of the authorized officer. If the holder fails to remove all structures and improvements within the prescribed period, they shall become the property of the United States and may be sold, destroyed, or otherwise disposed of without any liability to the United States. However, the holder shall remain liable for all costs associated with their removal, including costs of sale and impoundment, cleanup, and restoration of the site.

## **VIII. MISCELLANEOUS PROVISIONS**

**A. MEMBERS OF CONGRESS.** No member of or delegate to Congress or resident commissioner shall benefit from this permit either directly or indirectly, except to the extent the authorized use provides a general benefit to a corporation.

**B. CURRENT ADDRESSES.** The holder and the Forest Service shall keep each other informed of current mailing addresses, including those necessary for billing and payment of land use fees.

**C. SUPERIOR CLAUSES.** If there is a conflict between any of the preceding printed clauses and any of the following clauses, the preceding printed clauses shall control.

### **D. AQUATIC NUISANCE SPECIES (ANS) PREVENTUION OF INTRODUCTION, TRANSPORT AND SPREAD (R2-D-110).**

1. The holder shall be responsible for preventing transport and spread of Aquatic Nuisance Species (ANS) of concern on the area authorized by this authorization. ANS of concern are those species listed in the Rocky Mountain Region Invasive Species Management Strategy, dated June 09, 2009 or subsequent policy.

2. When determined to be necessary by the authorized officer, the holder shall develop a site-specific/activity specific plan that addresses the prevention of introduction, transport and spread of ANS. Such plan shall be subject to Forest Service approval. Upon Forest Service approval, the prevention of transport and spread of ANS control plan shall become a part of this authorization, and its provisions shall be enforceable under the terms of this authorization.

**E. SURVEYS, LANDS CORNERS (D-4).** The holder shall protect, in place, all public land survey monuments, private property corners, and Forest boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges permitted by this authorization, depending on the type of monument destroyed, the holder shall see that they are reestablished or referenced in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specifications of the county surveyor, or (3) the specifications of the Forest Service.

Further, the holder shall cause such official survey records as are affected to be amended as provided by law. Nothing in this clause shall relieve the holder's liability for the willful destruction or modification of any Government survey marker as provided at 18 U.S.C. 1858.

**F. GROUND SURFACE PROTECTION AND RESTORATION (D-9).** The holder shall prevent and control soil erosion and gully on National Forest System lands in and adjacent to the permit area resulting from construction, operation, maintenance, and termination of the authorized use. The holder shall construct authorized improvements so as to avoid accumulation of excessive amounts of water in the permit area and encroachment on streams. The holder shall revegetate or otherwise stabilize (for example, by constructing a retaining wall) all ground where the soil has been exposed as a result of the holder's construction, maintenance, operation, or termination of the authorized use.

**G. PROTECTION OF ENDANGERED, THREATENED, AND SENSITIVE SPECIES (X-8).** The location of sites within the permit area needing special measures for protection of plants or animals listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, 16 U.S.C. 531 *et seq.*, as amended, or as sensitive by the Regional Forester under Forest Service Manual (FSM) 2670, pursuant to consultation conducted under section 7 of the ESA, may be identified on the ground or shown on a separate map. The map shall be attached to this permit as an appendix. The holder shall take any protective and mitigative measures specified by the Authorized Officer. If protective and mitigative measures prove inadequate, if other sites within the permit area containing threatened, endangered, or sensitive species are discovered, or if new species are listed as threatened or endangered under the ESA or as sensitive by the Regional Forester under the FSM, the Authorized Officer may specify additional protective and mitigative measures. Discovery of these areas by the holder or the Forest Service shall be promptly reported to the other party.

**H. DISPUTES (X-96).** Appeal of any provisions of this authorization or any requirements thereof shall be subject to the appeal regulations at 36 CFR 214, as amended or revisions thereto.

THIS PERMIT IS ACCEPTED SUBJECT TO ALL ITS TERMS AND CONDITIONS.

BEFORE ANY PERMIT IS ISSUED TO AN ENTITY, DOCUMENTATION MUST BE PROVIDED TO THE AUTHORIZED OFFICER OF THE AUTHORITY OF THE SIGNATORY FOR THE ENTITY TO BIND IT TO THE TERMS AND CONDITIONS OF THE PERMIT.

ACCEPTED:

  
\_\_\_\_\_  
MARK CHAPDELAINE

5-4-20  
\_\_\_\_\_  
DATE

APPROVED:

\_\_\_\_\_  
MONTE WILLIAMS,  
FOREST SUPERVISOR,  
ARAPAHO AND ROOSEVELT NATIONAL FOREST AND PAWNEE NATIONAL GRASSLAND  
DATE

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082. The time required to complete this information collection is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

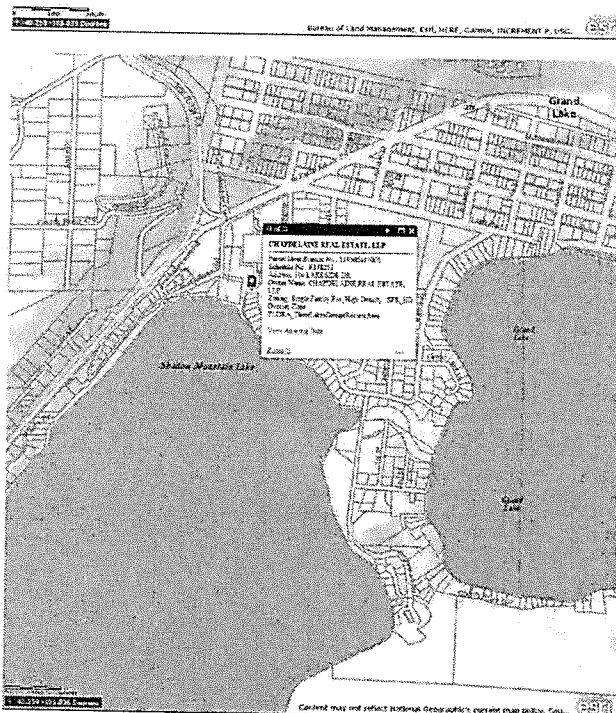
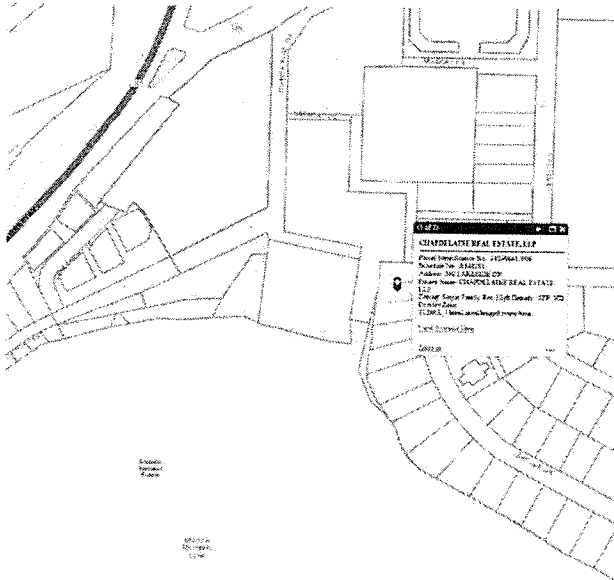
To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

Authorization ID: SUL749  
Contact Name: MARK CHAPDELAINE  
Expiration Date: 01/01/2029  
Use Code: 111

## APPENDIX A

6<sup>th</sup> PM T3N R75W SEC6



**APPENDIX B**  
**ARAPAHO NATIONAL RECREATION AREA**  
**PRIVATE BOAT DOCK STANDARDS**

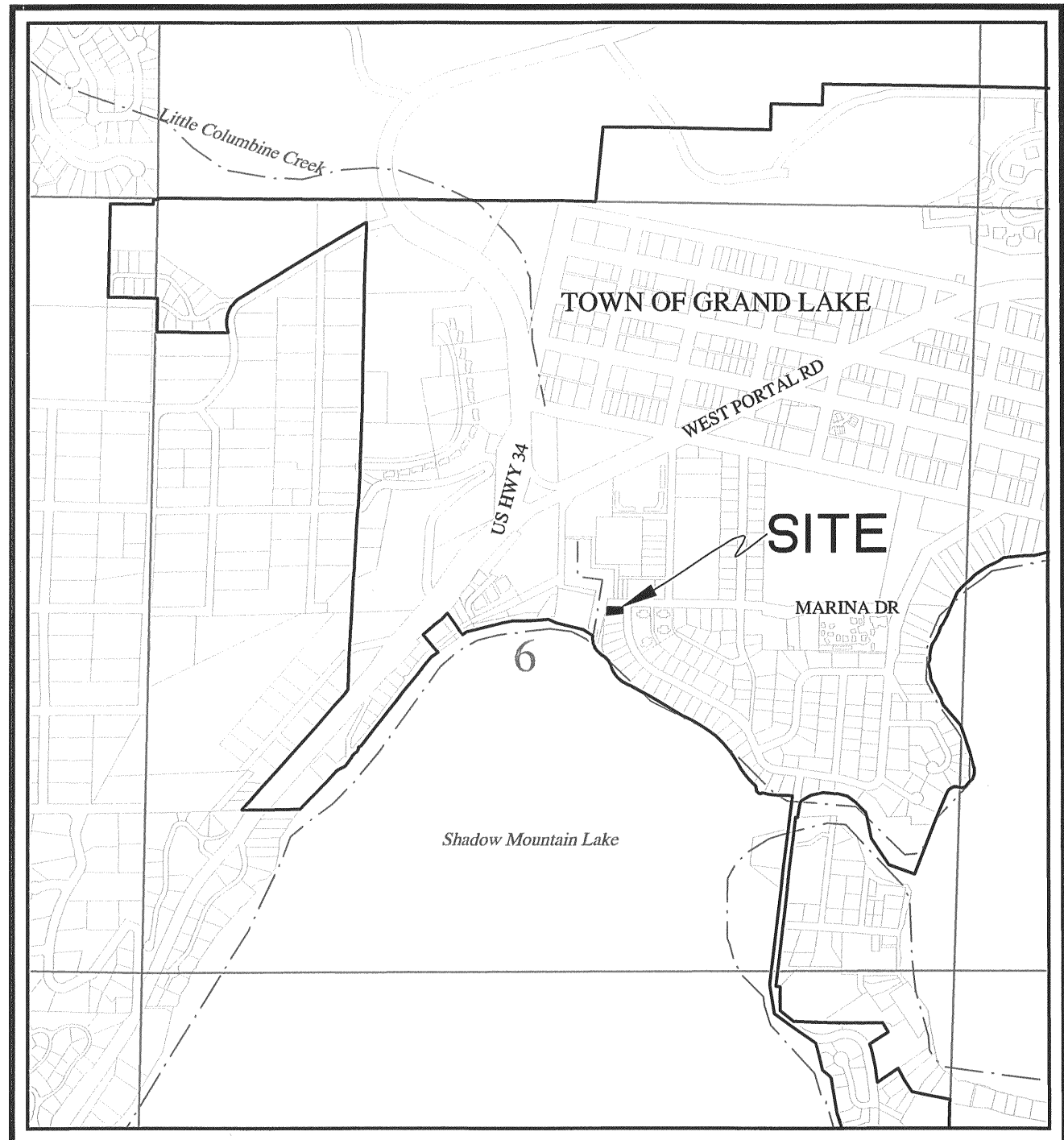
An individual private boat dock is defined as a facility providing boat storage for up to two boats in slips exclusively for the use of the owner/occupant of shore front property.

- a. An individual private dock (excluding the gangway) and associated boats must occupy no more than 600 square feet of reservoir surface as determined by the exterior dimensions of dock and/or boats. A gangway to the dock may be permitted, if appropriate, but in no case can it exceed 4 feet in width and 20 feet in length.
- b. Dock decking should be of a non-slip surface.
- c. The dock flotation, if used, must be of a type designed and manufactured for marine use. Flotation must be plastic encased.
- d. Non-reflecting coatings and colors must be compatible with the surrounding landscape as determined by the Forest Service.
- e. Covered docks will be allowed with designs approved by the Forest Service on a case-by-case basis. Covered docks must have profile and color schemes that blend in with the summer visual desires for the area.
- f. Permit individual docks dug into the shoreline on a case-by-case basis.
- g. Permit new boat garages on a case-by-case basis which do not have living space and/or storage rooms attached to the structure.



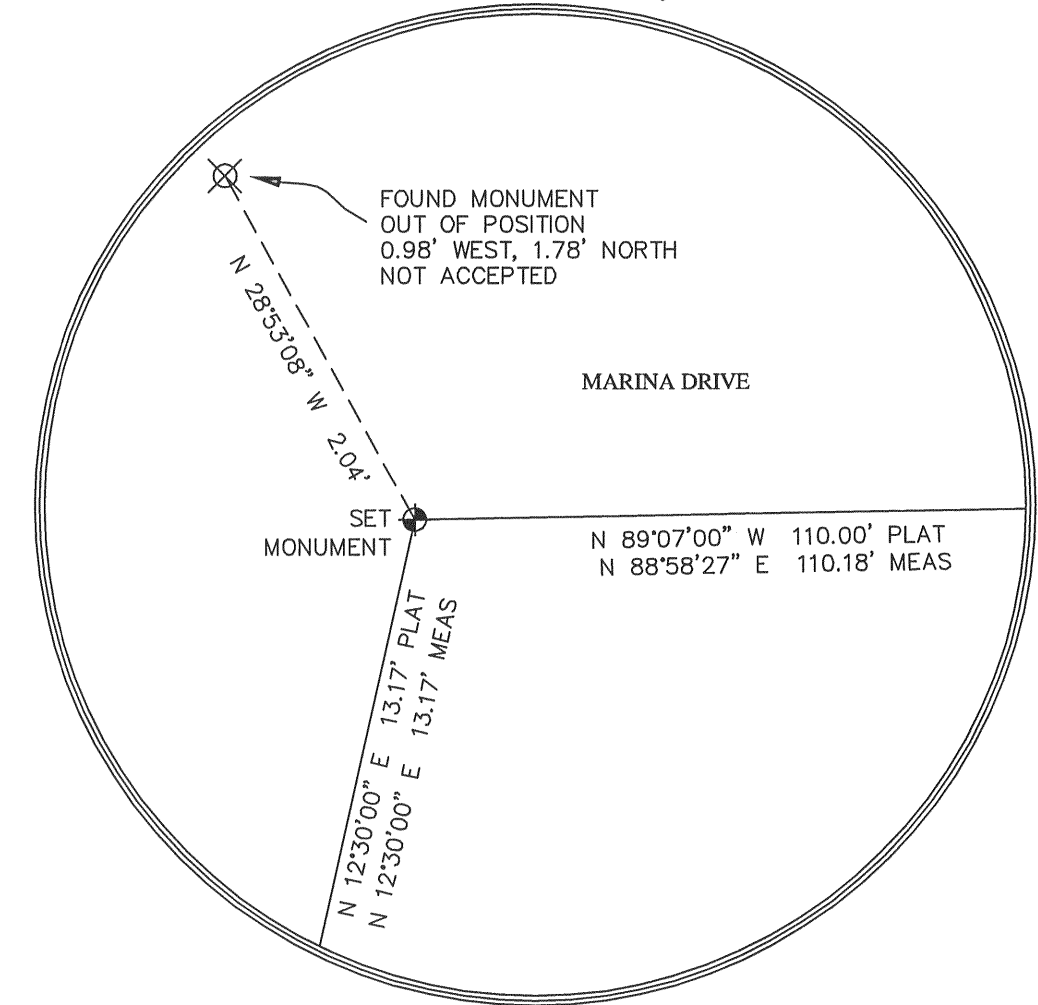
# IMPROVEMENT SURVEY PLAT

LOT 6, SHADOW POINTE, RECEPTION No. 285236  
SECTION 6, TOWNSHIP 3 NORTH, RANGE 75 WEST OF THE 6TH PRINCIPAL MERIDIAN,  
TOWN OF GRAND LAKE, COUNTY OF GRAND, STATE OF COLORADO  
OWNERSHIP VESTED AT WARRANTY DEED 2014-004329



VICINITY MAP  
SCALE: 1" = 1000'

DETAIL C  
SCALE: 1" = 1'



## NOTES

- THE FOLLOWING PLAT DOCUMENTS WERE UTILIZED IN THE PREPARATION OF THIS SURVEY:  
A. GRAND COUNTY RECORDS, GRAND LAKE ESTATES SECOND FILING, RECEPTION NO. 90690.  
B. GRAND COUNTY RECORDS, RECEPTION NO. 285236, "FINAL PLAT SHADOW POINTE".  
C. GRAND COUNTY RECORDS, RECEPTION NO. 194740, SHADOW GRAND MANOR  
D. GRAND COUNTY RECORDS, RECEPTION NO. 154432, CONDOMINIUM MAP OF SHADOW CREST CONDOMINIUMS.  
E. GRAND COUNTY SURVEYOR'S RECORDS, LS 870, LAND SURVEY PLAT OF LOT 19, BLOCK 7 GRAND LAKE ESTATES AND LOT 1 SHADOW POINTE.  
F. TITLE POLICY NO. 60006483 WITH THE EFFECTIVE DATE OF JULY 1, 2015 ISSUED BY LAND TITLE GUARANTEE COMPANY.
- FIELDWORK FOR THIS SURVEY PERFORMED SEPTEMBER 20-21, 2017.
- THESE PREMISES ARE SUBJECT TO ANY AN ALL EASEMENTS, RIGHTS OF WAYS, VARIANCES, AND/OR AGREEMENTS AS OF RECORD MAY APPEAR.
- UNDERGROUND UTILITIES (IF ANY) ARE NOT SHOWN.
- THE SUBJECT PROPERTY IS CURRENTLY ZONED GRAND LAKE "RESIDENTIAL-HIGH DENSITY". ADDITIONALLY, THE SUBJECT PARCELS ARE SITUATED IN THE THREE LAKES DESIGN REVIEW AREA.
- ALL MEASUREMENTS ARE EXPRESSED IN U.S. SURVEY FOOT AND DECIMALS THEREOF.
- LOT 6 OF SHADOW POINTE (SUBJECT PROPERTY) HAS A MIS-CLOSURE OF +/- 4'. THE MIS-CLOSURE IS SITUATED AT THE N.W. CORNER OF SAID LOT 6. ASSUMING THE PLAT BEARING OF S 88°58'27" E IS UTILIZED, THE RESULTANT DISTANCE FOR THE NORTHERMOST PORTION OF THE WEST LINE OF SAID LOT 6 WOULD BE N 12°30'00" E FOR A DISTANCE OF 17.18' RATHER THAN THE PLATTED DISTANCE OF 13.17'. CONVERSELY, ASSUMING THE PLAT BEARING IS S 88°58'27" W, (RATHER THAN S 88°58'27" E) THE MIS-CLOSURE IS ELIMINATED AND THE RESULTANT AREA OF 6205.3 SQUARE FEET IS A MATCH TO THE SHADOW POINTE PLAT OF 6206 SQUARE FEET. THE MORE NORTHERLY LINE (S 88°58'27" E) IS MORE CONSISTENT TO THE OVERALL WIDTH OF 50' FOR MARINA DRIVE WHEN MEASURED TO THE APPARENT MONUMENTED NORTH LINE, HOWEVER THE MORE SOUTHERLY LINE (S 88°58'27" W) ENABLES CLOSURE AND MATCHES THE PLATTED AREA. NEITHER LINE ENABLES A 50' RIGHT OF WAY IF MEASURED TO THE CALCULATED NORTH LINE. FOR PURPOSES OF THIS SURVEY, THE SOUTHERLY LINE HAS BEEN UTILIZED.
- THE CALCULATED POSITION OF THE N.W. CORNER OF MARINA DRIVE IS SIGNIFICANTLY DIFFERENT THAN THE APPARENT MONUMENTED POSITION. ADDITIONALLY, AN OVERLAP APPEARS TO EXIST BETWEEN THE WEST LINE OF SHADOW POINTE (ORIGINALLY TRACT A, BLOCK 7, GRAND LAKE ESTATES FIRST FILING) AND THE EAST LINE OF LOT 2, BLOCK 13, GRAND LAKE ESTATES SECOND FILING (MARINA). SAID OVERLAP APPEARS TO BE RELATED TO THE LACK OF SPECIFICITY IN THE 15TH & 16TH CALLS FOUND IN THE ORIGINAL PLAT OF FILING 1 AND A CONTRASTING BASIS OF BEARING BETWEEN SHADOW POINTE SUBDIVISION AND THE BOUNDARY OF FILING 2 (WHEN ALIGNED ALONG THE WEST BY AP210 & THE CENTER 1 CORNER). IT IS THIS SURVEYOR'S OPINION THAT SAID OVERLAP IS "THEORETICAL" IN NATURE AND THAT THE TRUE WEST LINE OF TRACT A FIRST FILING (NOW KNOWN AS SHADOW POINTE) IS AS MONUMENTED BY SHADOW POINTE AND THIS RE-SURVEY. ADDITIONALLY IT IS THIS SURVEYOR'S OPINION THAT THE WEST LINE OF SHADOW POINTE IS SENIOR TO THE EAST LINE OF LOT 2, BLOCK 13 (MARINA) PROPERTY. LEGAL COUNSEL AND ADDITIONAL LAND SURVEYING IS REQUIRED IF RESOLUTION OF THIS MATTER IS NECESSARY.
- THE MONUMENTED NORTH LINE OF MARINA DRIVE IS SIGNIFICANTLY DIFFERENT (+/- 14') THAN THE CALCULATED LINE AS SHOWN HEREIN. ONCE AGAIN, THIS APPEARS TO BE RELATED TO LACK OF SPECIFICITY IN FILING 1 AND VARIATIONS IN MONUMENTS IF AND WHEN FILING 1 IS COMPARED WITH FILING 2. LEGAL COUNSEL AND ADDITIONAL LAND SURVEYING IS REQUIRED IF RESOLUTION OF THIS MATTER IS NECESSARY.
- ACCORDING TO COLORADO LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

## LINE TABLE (PLAT & MEAS)

| LINE | BEARING       | DISTANCE |
|------|---------------|----------|
| L1   | N 06°43'30" E | 27.16'   |
| L2   | N 06°41'58" E | 19.60'   |
| L3   | N 12°31'57" E | 17.18'   |

THIS IS THE CORRECT WEST LINE OF OUTLOT A, SHADOW POINTE

CALCULATED WEST LINE OF SHADOW POINTE

OUTLOT A SHADOW POINTE ARAPAHO-ROOSEVELT NATIONAL FOREST QCD BOOK 479 PAGE 646

## LAND SURVEYOR'S CERTIFICATE:

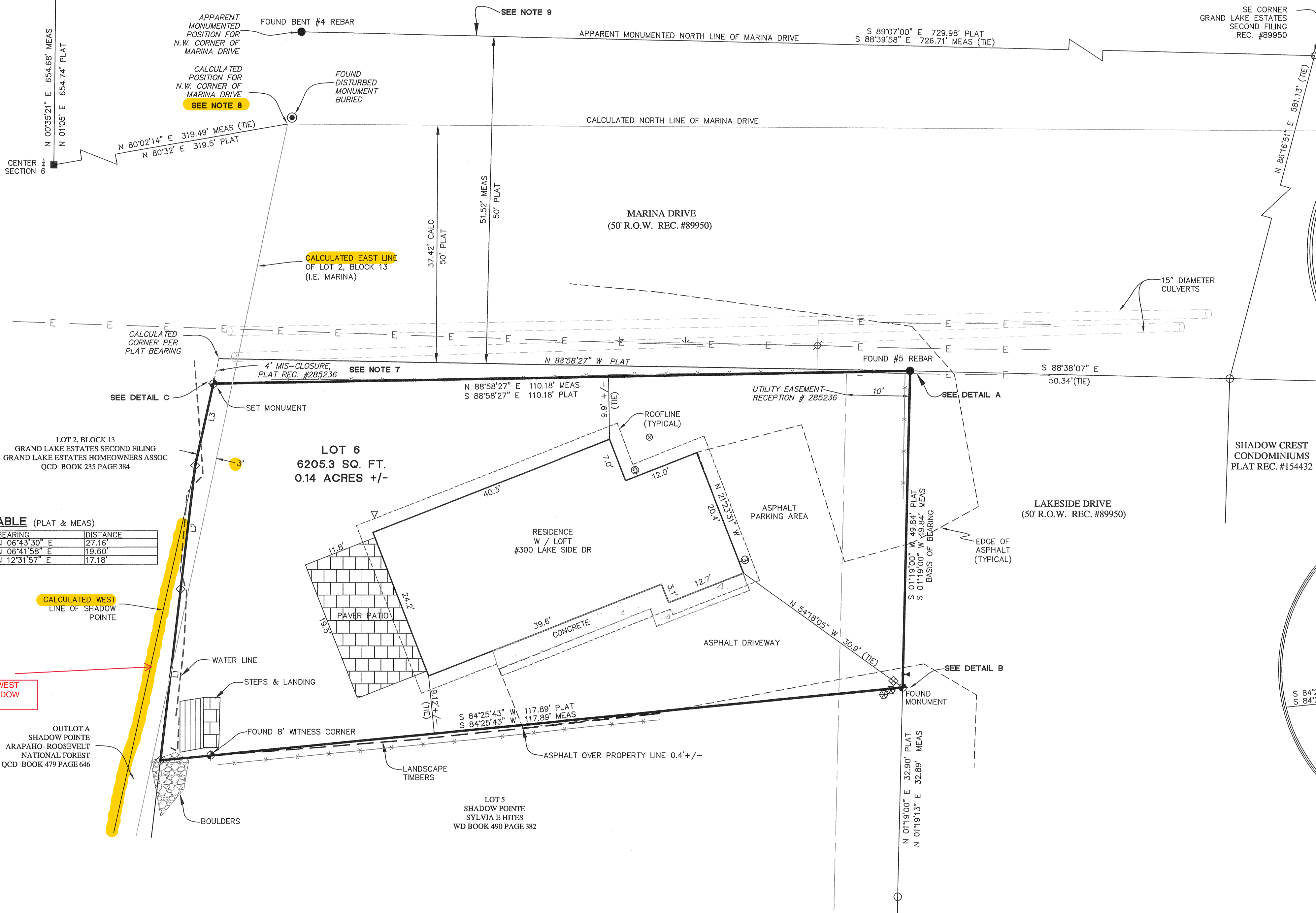
I, TIMOTHY R. SHENK, A DULY LICENSED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS IMPROVEMENT SURVEY PLAT OF LOT 6, SHADOW POINTE TRULY AND CORRECTLY REPRESENTS THE RESULTS OF A SURVEY MADE BY ME OR UNDER MY DIRECTION, AND THAT SAID PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, COLORADO REVISED STATUTES, 1973, AND THAT THE MONUMENTS, REQUIRED BY SAID STATUTE HAVE BEEN PLACED ON THE GROUND.

DATED THIS 13TH DAY OF OCTOBER, 2017.

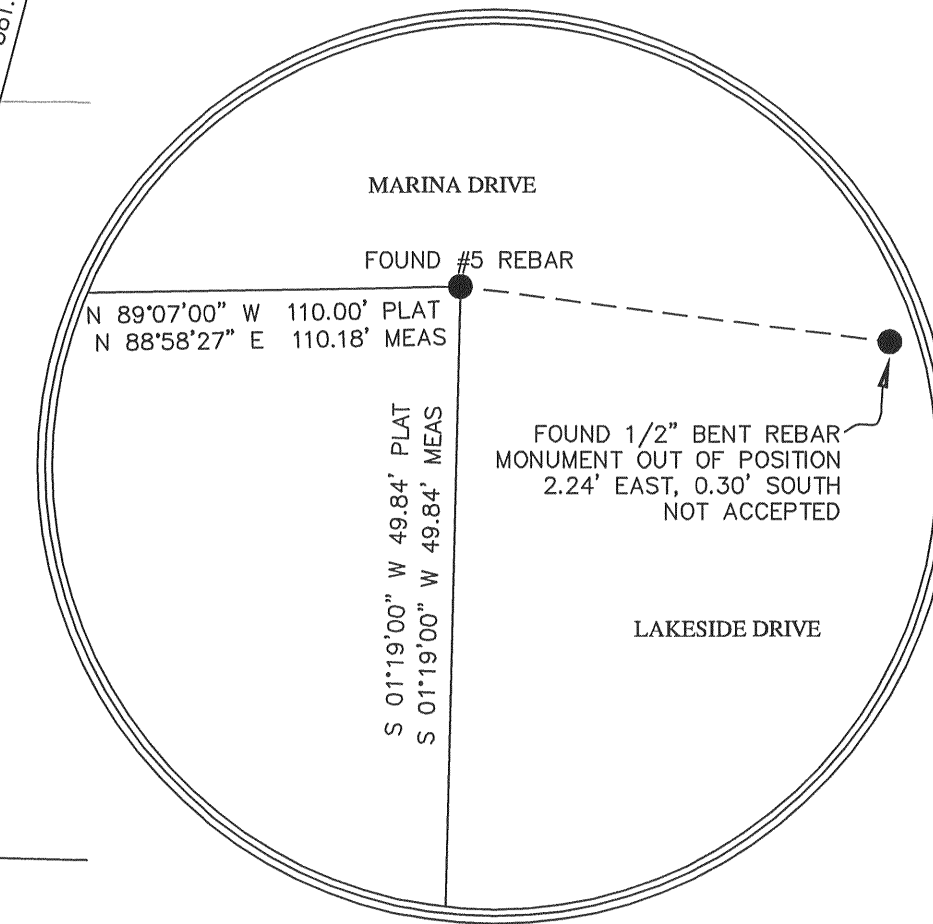


TIMOTHY R. SHENK, COLORADO P.L.S. #31942  
PREPARED ON BEHALF OF TIM SHENK LAND SURVEYING, INC.

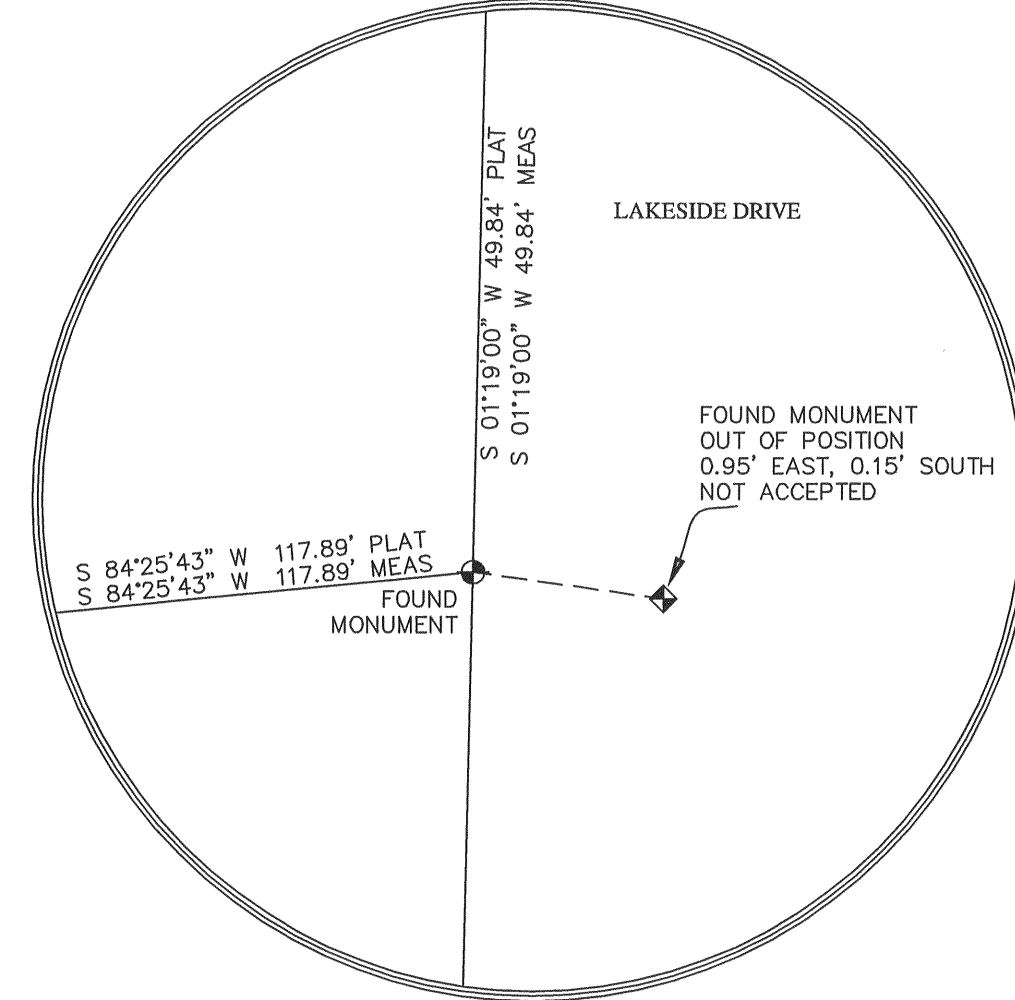
LS2191



DETAIL A  
SCALE: 1" = 1'

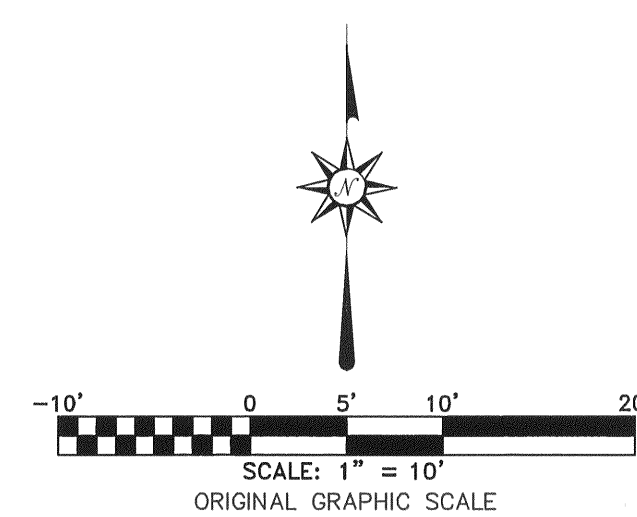


DETAIL B  
SCALE: 1" = 1'



## LEGEND

- ◇ - CALCULATED CORNER ONLY, NO MONUMENT FOUND OR SET
- ◆ - ALUMINUM CAP, P.L.S. #31942 ON 18\"/>



TIM SHENK  
LAND SURVEYING INC.  
P.O. BOX 1670  
GRANBY, CO 80446  
(970) 887-1046

STATE OF COLORADO  
County of GRAND  
Filed for record this 16th day of July 2018  
at o'clock M.  
Recorded in Book \_\_\_\_\_ Page \_\_\_\_\_  
Deputy  
Fees \$ 20.00

SHEET 1 OF 1:

|               |                 |                  |                 |
|---------------|-----------------|------------------|-----------------|
| JOB: 17119    | SCALE: 1" = 10' | DATE: 10/13/2017 | CHECKED BY: TRS |
| DWG: 17119.05 | CRD: 17119.07   | DRAWN BY: JL/TRS | REVISED:        |



## LAND SURVEYOR'S REPORT

TIM SHENK LAND SURVEYING, INC.  
P.O. BOX 1670  
GRANBY CO. 80446  
PHONE 970-887-1046  
tshenk@tslsi.com

**DATE:** 05/13/2022

**PROJECT:** Response to Kim White E-mail dated April 28, 2022 at 2:51:49 PM

**ATTENTION:** Kimberly G. White, Community Development Director, Town of Grand Lake

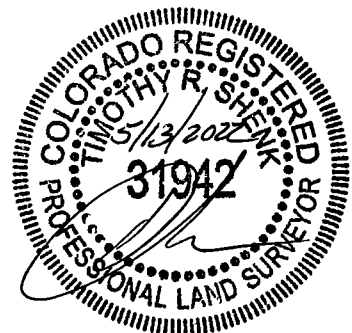
Regarding the 3' difference between the calculated east line of Lot 2, Block 13 (Marina) and the calculated and monumented west line of Shadow Pointe, Lot 6:

Plat note 8) The calculated position of the N.W. corner of Marina Drive is significantly different than the apparent monumented position. Additionally, an overlap appears to exist between the west line of Shadow Pointe (originally Tract A, Block 7, Grand Lake Estates First Filing) and the East Line of Lot 2, Block 13, Grand Lake Estates Second Filing (marina). Said overlap appears to be related to the lack of specificity in the 15th & 16th calls found in the original plat of Filing 1 and a contrasting Basis of Bearing between Shadow Pointe Subdivision and the boundary of Filing 2 (when aligned along the west by AP 210 & the center 1/4 corner). It is this surveyors opinion that said overlap is "theoretical" in nature and that the true west line of Tract A First Filing, (now known as Shadow Pointe) is as monumented by Shadow Pointe and this re-survey. Additionally it is this surveyors opinion that the west line of Shadow Pointe is senior to the east line of Lot 2, Block 13 (marina) property. Legal counsel and additional land surveying is required if resolution of this matter is necessary.

What does this plat note mean? It means that the plats of Grand Lake Estates First Filing and Second Filing don't fit together mathematically. They inherently cannot fit mathematically because of the lack of specificity in the 15<sup>th</sup> and 16<sup>th</sup> calls of the Filing 1 plat. Therefore, what is the solution? The solution lies in the 5<sup>th</sup> call of the Filing 2 plat. The language "along the west line of Lot A, Block 7, Grand Lake Estates, First Filing" is the true location of the line. In other words, regardless of the math, this line must be contiguous with Lot A, Block 7, which is now known as Shadow Point Subdivision.

The correct west line of Outlot A, Shadow Pointe is indicated on my survey.

Prepared by Timothy R. Shenk, Co. PLS #31942 on 05/13/2022





---

**RE: Survey of the Channel**

---

**From** Snyder, Angela <SnyderA@AyresAssociates.com>  
**Date** Tue 2025-04-29 4:01 PM  
**To** Linda Chapdelaine <l\_chapdelaine@hotmail.com>  
**Cc** acarrell@toglco.com <acarrell@toglco.com>

Thanks, Linda, I've made a copy and it will go in my packet.

**Angela Snyder, CFM | Planning Lead**

**Office:** 970.223.5556 | **Direct:** 970.821.6366

**Ayres Associates Inc.** | [www.AyresAssociates.com](http://www.AyresAssociates.com)

*Ingenuity, Integrity, and Intelligence.*

---

**From:** Linda Chapdelaine <l\_chapdelaine@hotmail.com>  
**Sent:** Tuesday, April 29, 2025 2:17 PM  
**To:** Snyder, Angela <SnyderA@AyresAssociates.com>  
**Subject:** Fw: Survey of the Channel

Here is the response from Tim Shenk about obtaining a topo/hydrographic survey of the channel.

Please include this in our packet.

---

**From:** Tim Shenk <TShenk@tslsi.com>  
**Sent:** Friday, April 4, 2025 3:53 PM  
**To:** Linda Chapdelaine <l\_chapdelaine@hotmail.com>  
**Subject:** RE: Survey of the Channel

I don't have any topo of the channel, and that is not something that I have equipment for.

You (We) need to find a company that performs hydrographic surveying.

The Planning Commission is requesting something that is not easy to do.

I will ask around.

TIMOTHY R. SHENK on behalf of

Tim Shenk Land Surveying, Inc.

Box 1670, Granby Co. 80446

970-887-1046

---

**From:** Linda Chapdelaine <[l\\_chapdelaine@hotmail.com](mailto:l_chapdelaine@hotmail.com)>

**Sent:** Friday, April 4, 2025 3:33 PM

**To:** Tim Shenk <[TShenk@tslsi.com](mailto:TShenk@tslsi.com)>

**Subject:** Survey of the Channel

Hi Tim,

Wondering if you had a chance to chat about some survey needs that I have. We are trying to get the dock still at 300 Lakeside and the planning commission wants us to get a topographical map of the channel/survey of the channel. Do you happen to have anything like that or know how I could get that.

Thanks,

Linda

970-274-8042

GENERAL STRUCTURAL NOTES

1.0 GOVERNING BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE

2.0 DESIGN LOADS

A. DEAD LOADS:

a. DECK:5 psf

B. LIVE LOADS:

a. SNOW (ROOF):70 psf

b. DECKS:60 psf

3.0 GENERAL

A. THE STRUCTURAL DOCUMENTS ILLUSTRATE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED AND BRACED. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE BRACING AND SHORING AS REQUIRED DURING CONSTRUCTION TO WITHSTAND ALL LOADS, STOCKPILES OF MATERIALS AND EQUIPMENT. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS REQUIRED UNTIL THE CONSTRUCTION OF THE STRUCTURE IS COMPLETED.

B. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS DURING CONSTRUCTION.

C. WHERE PERIODIC OR CONTINUOUS INSPECTIONS AND / OR TESTING ARE REQUIRED BY THESE DOCUMENTS, GOVERNING BUILDING CODE OR THE GOVERNING BUILDING OFFICIAL, ENGINEER OR AN INDEPENDENT INSPECTION AND / OR TESTING AGENCY SHALL BE RETAINED BY THE OWNER TO PERFORM REQUIRED INSPECTIONS AND / OR TESTING.

D. THE CONTRACTOR SHALL INFORM ARCHITECT AND ENGINEER CLEARLY IN WRITING AND PROVIDE DOCUMENTATION FOR THE REVIEW OF ANY SUBSTITUTIONS OR DEVIATIONS OF REQUIREMENTS OF THE CONTRACT DOCUMENTS.

E. THESE PLANS HAVE BEEN ENGINEERED FOR CONSTRUCTION AT ONE SPECIFIC BUILDING SITE. BUILDER ASSUMES ALL RESPONSIBILITY FOR USE OF THESE PLANS AT ANY OTHER LOCATION.

F. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE. PLANS AND DETAILS ARE TO SCALE UNLESS NOTED. WHILE DRAWING SCALE IS BELIEVED TO BE RELIABLE, THE ACCURACY AND COMPLETENESS IS NOT GUARANTEED BY THE ENGINEER. CONSULT THE ARCHITECT OR ENGINEER OF RECORD FOR DIMENSION VERIFICATION. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS BETWEEN THE ARCHITECTURAL AND STRUCTURAL DOCUMENTS BEFORE PROCEEDING WITH THE WORK.

G. NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS ALLOWED BY MANUFACTURER, SPECIFICALLY SHOWN ON THESE DOCUMENTS OR APPROVED BY THE ENGINEER IN ADVANCE.

H. SECTIONS OR DETAILS SHOWN OR NOTED APPLY TO SIMILAR CONDITIONS ELSEWHERE NOT SPECIFICALLY SHOWN OR NOTED.

I. THESE CONSTRUCTION DOCUMENTS ARE BASED ON THE WORK BEING COMPLETED IN A WORKMAN LIKE MANNER BY A CONTRACTOR EXPERIENCED WITH SIMILAR CONSTRUCTION.

4.0 FOUNDATIONS

A. TYPICAL CODE MINIMUM SOIL DESIGN VALUES SHOWN BELOW HAVE BEEN ASSUMED FOR USE IN THE FOUNDATION DESIGN, AND AT OWNERS OPTION AND RISK ARE TO BE VERIFIED BY OPEN HOLE INSPECTION BY A SOILS ENGINEER RETAINED BY THE OWNER. ANY CHANGES IN THE STATED SOIL DESIGN VALUES MAY REQUIRE REVISIONS TO THE FOUNDATION DESIGN.

B. FOOTINGS SHALL BE FOUNDED UPON UNDISTURBED NATURAL SOIL OR COMPACTED FILL, TESTED AND APPROVED BY A SOILS ENGINEER.

a. MAXIMUM DESIGN SOIL BEARING PRESSURE: 2,000 PSF.

b. MINIMUM DEAD LOAD: N/A.

c. FOOTINGS SHALL BE PLACED A MINIMUM OF 30" BELOW FINAL FINISHED GRADE (FROST DEPTH)

d. DESIGN LATERAL SOIL PRESSURE (EQUIVALENT FLUID PRESSURE, AT REST CONDITION, USING ON-SITE GRANULAR SOILS AS BACKFILL): 50 PSY/FT.

C. PRIOR TO BACKFILLING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING FOUNDATION WALLS TO RETAIN EARTH AGAINST BACKFILLING PRESSURES UNTIL SUPPORTING ELEMENTS INCLUDING FLOOR SLABS ARE IN PLACE.

D. FOUNDATION WALLS AND GRADE BEAMS HAVING EARTH PLACED ON BOTH SIDES SHALL HAVE BOTH SIDES FILLED SIMULTANEOUSLY TO MAINTAIN A COMMON ELEVATION.

E. DO NOT BACKFILL WITH EXPANSIVE SOILS, VERIFY FILL TYPE WITH SOILS ENGINEER PRIOR TO BACKFILLING.

F. CENTER ALL FOOTINGS UNDER WALLS, COLUMNS OR GRIDLINES UNLESS NOTED OTHERWISE ON DOCUMENTS.

5.0 CONCRETE AND REINFORCEMENT

A. CONCRETE DESIGN IS BASED ON "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).

B. CONCRETE SHALL CONFORM TO THE APPLICABLE PROVISIONS OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).

C. CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) WITH STONE AGGREGATE AND DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH PER THE CONCRETE MIX TABLE ON THE STRUCTURAL DRAWINGS.

D. CEMENT SHALL BE OF THE TYPE SPECIFIED ON THE CONCRETE MIX TABLE ON THE STRUCTURAL PLANS, CONFORMING TO ASTM C150.

E. FLY ASH SHALL CONFORM TO ASTM C618, CLASS C OR F. FLY ASH SHALL NOT EXCEED 20% OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIAL.

F. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE.

G. COLD WEATHER CONCRETING: WHEN TEMPERATURES DROP BELOW 40 DEGREES AT ANY TIME DURING CONCRETE PLACING AND CURING, THE PROVISIONS OF ACI308R SHALL BE FOLLOWED TO PROTECT CONCRETE FROM FREEZING.

H. HOT WEATHER CONCRETING: PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 305. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE SLUMP AT TIME OF PLACEMENT BELOW 90 DEGREES F.

I. CONCRETE MUST BE CONTINUOUSLY PLACED WITHOUT HORIZONTAL COLD JOINTS. IF COLD JOINTS ARE NECESSARY, ADEQUATE REINFORCING AND HORIZONTAL KEYS OR A ROUGHENED SURFACE MUST BE PROVIDED; COORDINATE REQUIREMENTS WITH ENGINEER. ALL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

J. DEFORMED REINFORCEMENT: ASTM A615, GRADE 60 EXCEPT TIES OR STIRRUPS: ASTM A615, GRADE 40.

K. REINFORCING BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60.

L. WELDED WIRE FABRIC: ASTM A185 (LAP ONE FULL MESH AND TIE SECURELY, CUT ALTERNATE WIRES AT CONTROL JOINTS).

M. REINFORCEMENT SHALL BE FABRICATED AND PLACED AS PER THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315).

N. SPLICE LENGTH, DOWEL PROJECTION OR EMBEDMENT SHALL BE A MINIMUM OF 58 BAR DIAMETERS.

O. MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL:

a. UNIFORMED SURFACE CAST AGAINST EARTH: 3"

b. FORMED SURFACE EXPOSED TO EARTH OR WEATHER

1. #6 THROUGH #10 BARS2"

2. #5 AND SMALLER BARS1 1/2"

c. FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER

1. SLABS, WALLS AND JOISTS(a) #14 THROUGH #18 BARS1 1/2"(b) #11 AND SMALLER BARS3/4"

2. BEAMS AND COLUMNS1 1/2"

P. MAINTAIN CONTINUITY OF ALL HORIZONTAL REINFORCEMENT AT CORNERS, INTERSECTIONS AND AT STEPS IN THE TOP AND BOTTOM OF WALLS OR FOOTINGS.

6.0 WOOD FRAMING

A. ALL DIMENSIONAL LUMBER AND TIMBERS USED FOR STRUCTURAL FRAMING SHALL BE AT A MOISTURE CONTENT OF 19% OR LESS AND HAVE THE FOLLOWING MINIMUM VISUAL GRADE STAMP WITH UNFACTORED ALLOWABLE STRESSES:

a. 2x STUDS, < 8'-0" HEM FIR, STUD GRADE (Fb=675 psi, Fc= 800 psi, E=1,200,000psi)

b. 2x STUDS, > 8'-0", < 12'-0", HEM FIR, NO. 2 (Fb=850 psi, Fc= 1300 psi, E=1,300,000psi)

c. 2x4x JOISTSTRARTER: HEM FIR, NO. 2 (Fb=850 psi, E=1,300,000psi)

d. 4x POSTS: DOUGLAS FIR, NO. 1 (Fb=1000psi, Fc=1500psi, E=1,700,000psi)

e. POSTS AND TIMBERS (5x5 AND LARGER): DOUGLAS FIR, NO. 1 (Fb=1200psi, Fc=1000 psi, E=1,600,000psi)

f. BEAMS AND STRINGERS (5x5 AND LARGER): DOUGLAS FIR, NO. 1 (Fb=1350psi, Fc=925 psi, E=1,600,000psi).

B. PROVIDE PRESSURE TREATED LUMBER OR ICC APPROVED BARRIER AT LOCATIONS WHERE MEMBER IS TO BE IN CONTACT WITH CONCRETE, MASONRY, SOIL, OR EXPOSED TO WEATHER, UNLESS NOTED OTHERWISE.

C. PRESSURE TREATED LUMBER: ALL FASTENERS AND HANGERS FOR USE WITH ACO TREATED LUMBER SHALL BE GALVANIZED WITH A G185 COATING OR SHALL BE STAINLESS STEEL. LUMBER IN CONTACT WITH CONCRETE BUT NOT EXPOSED TO WEATHER SUCH AS MUFGUS MAY BE TIMBERSTRAND STRANDGUARD AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL IN LIEU OF CORROSIVE ACO TREATED LUMBER.

D. METAL HANGERS AND CONNECTORS SHALL BE "SIMPSON STRONG-TIE" OR AN APPROVED EQUAL. UNLESS NOTED OTHERWISE PROVIDE ALL MANUFACTURER RECOMMENDED FASTENERS FOR THE MAXIMUM CAPACITY OF THE HANGER.

E. NAILING SHALL CONFORM TO INTERNATIONAL BUILDING CODE, TABLE 2304.10.1, UNLESS MORE OR LARGER NAILING IS OTHERWISE SPECIFIED.

F. FASTEN ALL WOOD MEMBERS WITH COMMON NAILS UNLESS NOTED OTHERWISE, WHERE POWER NAILS ARE USED THEY SHALL BE EQUIVALENT IN DIAMETER TO THE COMMON NAIL INDICATED. PREDRILL NAIL HOLES AS REQUIRED TO PREVENT SPLITTING OF THE WOOD MEMBERS.

7.0 STRUCTURAL INSPECTIONS

A. CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL OR SPECIAL INSPECTORS AND SUCH CONSTRUCTION SHALL REMAIN VISIBLE AND ABLE TO BE ACCESSED FOR INSPECTION PURPOSES UNTIL APPROVED.

B. AS REQUIRED BY THE BUILDING OFFICIAL, THE BUILDING OFFICIAL OR SPECIAL INSPECTORS EMPLOYED BY THE OWNER MAY BE REQUIRED TO PROVIDE STRUCTURAL INSPECTIONS FOR THE FOLLOWING TYPES OF CONSTRUCTION PER INTERNATIONAL BUILDING CODE. CONTRACTOR SHALL COORDINATE WITH THE BUILDING OFFICIAL ON REQUIRED INSPECTIONS. IF SPECIAL INSPECTORS ARE EMPLOYED A SIGNED FINAL REPORT SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT, ARCHITECT AND STRUCTURAL ENGINEER.

a. PREPARATION OF FOUNDATION SUBGRADE INCLUDING FILLING AND COMPACTION.

b. CONCRETE PLACEMENT INCLUDING REINFORCING STEEL AND POST-TENSIONING STRANDS, EXCEPT NON POST-TENSIONED SLABS-ON-GRADE.

CONCRETE MIX MATRIX

| INTENDED USE OF CONCRETE       | COMPRESSIVE STRENGTH (28 DAYS) | MAX. W/C RATIO | MAX. AGG. SIZE [1] | SUMP LIMITS [2] | CEMENT TYPE | AIR CONTENT [2] |
|--------------------------------|--------------------------------|----------------|--------------------|-----------------|-------------|-----------------|
| FOUNDATION WALLS & GRADE BEAMS | 4,500 PSI                      | 0.50           | 1"                 | 3" - 5"         | I / II      | 5% - 8%         |
| FOOTINGS                       | 4,000 PSI                      | --             | 1"                 | 3" - 5"         | I / II      | --              |
| DRILLED PIERS                  | 4,000 PSI                      | --             | 1"                 | 7"              | I / II      | --              |
| INTERIOR SLABS-ON-GRADE        | 4,000 PSI                      | 0.45           | 3/4"               | 3" - 5"         | I / II      | 0% - 2%         |
| STRUCTURAL SLABS               | 4,500 PSI                      | 0.45           | 3/4"               | 3" - 5"         | I / II      | 5% - 7%         |

NOTES:

1. NORMAL WEIGHT AGGREGATE UNLESS NOTED OTHERWISE

2. RANGE INDICATES MINIMUM AND MAXIMUM LIMITS

ABBREVIATIONS

|       |  |
|-------|--|
| AB    | ANCHOR BOLT  |
| ADOL  | ADDITIONAL ALTERNATE                                   |
| ARCH  | ARCHITECTURAL  |
| ATR   | ALL THREAD ROD   |
| BLDG  | BUILDING   |
| BM    | BEAM   |
| BOB   | BOTTOM OF BEAM   |
| BO5   | BOTTOM OF SLAB   |
| BO    | BOTTOM OF  |
| BOT   | BOTTOM   |
| BRG   | BEARING  |
| BTWN  | BETWEEN  |
| CJ    | CONST/CONTROL JOINT                                    |
| CJP   | COMPLETE JOINT PENETRATION                             |
| CL    | CENTERLINE   |
| CMU   | CONC MASONRY UNIT                                      |
| COL   | COLUMN   |
| CONC  | CONCRETE   |
| CONN  | CONNECTION   |
| CONST | CONSTRUCTION   |
| CONT  | CONTINUOUS   |
| DBL   | DOUBLE   |
| DIM   | DIMENSION  |
| DWG   | DRAWING  |
| EA    | EACH   |
| ELEV  | ELEVATION  |
| EMBED | EMBEDMENT  |
| EX    | EXISTING   |
| EXP   | EXPANSION  |
| EXT   | EXTERIOR   |
| FF    | FINISHED FLOOR   |
| FLR   | FLOOR  |
| FDN   | FOUNDATION   |
| FOW   | FACE OF WALL   |
| FO    | FACE OF  |
| FRMG  | FRAMING  |
| FTAO  | FORCE TRANSFER AROUND OPENING (SEE SHEAR WALL DETAILS) |
| FTG   | FOOTING  |
| FS    | FAR SIDE   |
| GEN   | GENERAL  |
| GLB   | GLU-LAM BEAM   |
| HAS   | HEADED ANCHOR STUDS                                    |
| HORIZ | HORIZONTAL   |
| HT    | HEIGHT   |
| INT   | INTERIOR   |
| K     | KING STUD(S)   |
| LAT   | LATERAL  |
| LLH   | LONG LEG HORIZ   |
| LLV   | LONG LEG VERT  |
| LONG  | LONGITUDINAL   |
| MFR   | MANUFACTURER(S)  |
| MAS   | MASONRY  |
| MAX   | MAXIMUM  |
| MECH  | MECHANICAL   |
| MIN   | MINIMUM  |
| (N)   | NEW  |
| NS    | NEAR SIDE  |
| NTS   | NOT TO SCALE   |
| OC    | ON CENTER  |
| OPP   | OPPOSITE   |
| PCF   | POUNDS PER CUBIC FOOT                                  |
| PERF. | PERFORATED SHEAR WALL                                  |
| PL    | PLATE  |
| PLF   | POUNDS PER LINEAR FOOT                                 |
| PSF   | POUNDS PER SQUARE FOOT                                 |
| PSI   | POUNDS PER SQUARE INCH                                 |
| PT    | PRESSURE TREATED / POST-TENSIONED                      |
| REINF | REINFORCEMENT  |
| REQD  | REQUIRED   |
| RET   | RETAINING  |
| SOG   | SLAB ON GRADE  |
| SCH   | SCHEDULE   |
| SHTG  | SHEATHING  |
| SIM   | SIMILAR  |
| SIP   | STRUCTURAL INSULATING PANEL                            |
| STD   | STANDARD   |
| STL   | STEEL  |
| SW    | SHEARWALL  |
| T     | TRIM STUD(S)   |
| TOB   | TOP OF BEAM  |
| TOP   | TOP OF PLATE   |
| TO5   | TOP OF SLAB / TOP OF STEEL                             |
| TO    | TOP OF   |
| THK   | THICK, THICKNESS                                       |
| TRANS | TRANSVERSE   |
| TYP   | TYPICAL  |
| UNO   | UNLESS NOTED OTHERWISE                                 |
| VERT  | VERTICAL   |
| W     | WITH   |
| WWF   | WELDED WIRE FABRIC                                     |

SYMBOL LEGEND

|  |   |
|--|---|
|  | STEP IN TOP OF WALL OR GRADE BEAM   |
|  | STEP IN BOTTOM OF WALL OR GRADE BEAM                                      |
|  | CONCRETE MASONRY UNIT (CMU) WALL  |
|  | INTERIOR WOOD BEARING WALL  |
|  | POST BELOW, (2) 2x4 OR (2) 2x6 MIN., POSTS TO MATCH WALL STUD SIZE U.N.O. |
|  | POST FROM ABOVE, SEE PLAN ABOVE FOR SIZE                                  |
|  | JOIST HANGER  |
|  | CONCEALED FLANGE JOIST HANGER   |
|  | JOIST BEARING ON BEAM   |
|  | STEEL MOMENT CONNECTIONS TO BEAM  |
|  | STEEL MOMENT CONNECTION TO COLUMN   |
|  | STEEL BEAM SPLICE   |
|  | ELEVATION   |
|  | KEYNOTE   |
|  | FOOTING RE. SCHEDULE, P = PAD FOOTING, F = CONTINUOUS WALL FOOTING        |
|  | REVISION NUMBER   |
|  | HOLDOWN   |
|  | STANDARD AISC SHEAR CONNECTION, V = BOXED VALUE (KIPS, UNFACTORED)        |
|  | SECTION CUT & VIEW REFERENCE  |
|  | WOOD SHEAR WALL RE. SCHEDULE  |
|  | FIELD WELD: MAY BE PERFORMED IN THE FIELD OR THE SHOP                     |
|  | SHOP WELD: MUST BE PERFORMED IN THE SHOP                                  |
|  | CAISSON CALLOUT   |
|  | BEAM REACTION (SEE ABOVE)   |
|  | TOP OF STEEL ELEVATION  |
|  | BEAM SIZE (XXX'-XX")  |
|  | CAMBER (in)   |

4

50.1

3/4" = 1'-0"

TOP & BOTTOM REINFORCING

TOP & BOTTOM REINFORCING

TYP. WALL REINFORCING

TYP. VALUES:

#5 LAP SPLICE = 38", STD HOOK = 10"

#4 LAP SPLICE = 31", STD HOOK = 8"

NOTE: LAP SPLICES MAY BE REPLACED w/ CONTINUOUS BARS

5

50.1

1/2" = 1'-0"

TYP. CORNER REINFORCEMENT

TYP. CORNER REINFORCEMENT

TYP. FOUNDATION WALL STEP

TYP. FOUNDATION WALL STEP

6

50.1

3/4" = 1'-0"

TYP. DOCK SECTION

TYP. DOCK SECTION

Drawn By JLV

Review By JLV

Description CONSTRUCTION SET

Date 1/16/23

No. 1

PROJECT NUMBER 2020-0247

GENERAL NOTES

BOAT DOCK

300 LAKESIDE DR

GRAND LAKE, COLORADO

COLORADO LICENSE  
SIGNED & SEALED  
54318  
09/16/2024  
PROFESSIONAL ENGINEER

S0.1

Sheet 1 of 2

9/16/2024 2:16:51 PM





GENERAL STRUCTURAL NOTES

1.0 GOVERNING BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE

2.0 DESIGN LOADS

A. DEAD LOADS:

a. DECK: 5 psf

B. LIVE LOADS:

a. SNOW (ROOF): 70 psf

b. DECKS: 60 psf

3.0 GENERAL

A. THE STRUCTURAL DOCUMENTS ILLUSTRATE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED AND BRACED. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE BRACING AND SHORING AS REQUIRED DURING CONSTRUCTION TO WITHSTAND ALL LOADS, STOCKPILES OF MATERIALS AND EQUIPMENT. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS REQUIRED UNTIL THE CONSTRUCTION OF THE STRUCTURE IS COMPLETED.

B. GENERAL CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS DURING CONSTRUCTION.

C. WHERE PERIODIC OR CONTINUOUS INSPECTIONS AND / OR TESTING ARE REQUIRED BY THESE DOCUMENTS, GOVERNING BUILDING CODE OR THE GOVERNING BUILDING OFFICIAL, ENGINEER OR AN INDEPENDENT INSPECTION AND / OR TESTING AGENCY SHALL BE RETAINED BY THE OWNER TO PERFORM REQUIRED INSPECTIONS AND / OR TESTING.

D. THE CONTRACTOR SHALL INFORM ARCHITECT AND ENGINEER CLEARLY IN WRITING AND PROVIDE DOCUMENTATION FOR THE REVIEW OF ANY SUBSTITUTIONS OR DEVIATIONS OF REQUIREMENTS OF THE CONTRACT DOCUMENTS.

E. THESE PLANS HAVE BEEN ENGINEERED FOR CONSTRUCTION AT ONE SPECIFIC BUILDING SITE. BUILDER ASSUMES ALL RESPONSIBILITY FOR USE OF THESE PLANS AT ANY OTHER LOCATION.

F. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE. PLANS AND DETAILS ARE TO SCALE UNLESS NOTED. WHILE DRAWING SCALE IS BELIEVED TO BE RELIABLE, THE ACCURACY AND COMPLETENESS IS NOT GUARANTEED BY THE ENGINEER. CONSULT THE ARCHITECT OR ENGINEER OF RECORD FOR DIMENSION VERIFICATION. NOTIFY ARCHITECT OR ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS BETWEEN THE ARCHITECTURAL AND STRUCTURAL DOCUMENTS BEFORE PROCEEDING WITH THE WORK.

G. NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS ALLOWED BY MANUFACTURER, SPECIFICALLY SHOWN ON THESE DOCUMENTS OR APPROVED BY THE ENGINEER IN ADVANCE.

H. SECTIONS OR DETAILS SHOWN OR NOTED APPLY TO SIMILAR CONDITIONS ELSEWHERE NOT SPECIFICALLY SHOWN OR NOTED.

I. THESE CONSTRUCTION DOCUMENTS ARE BASED ON THE WORK BEING COMPLETED IN A WORKMAN LIKE MANNER BY A CONTRACTOR EXPERIENCED WITH SIMILAR CONSTRUCTION.

4.0 FOUNDATIONS

A. TYPICAL CODE MINIMUM SOIL DESIGN VALUES SHOWN BELOW HAVE BEEN ASSUMED FOR USE IN THE FOUNDATION DESIGN, AND AT OWNERS OPTION AND RISK ARE TO BE VERIFIED BY OPEN HOLE INSPECTION BY A SOILS ENGINEER RETAINED BY THE OWNER. ANY CHANGES IN THE STATED SOIL DESIGN VALUES MAY REQUIRE REVISIONS TO THE FOUNDATION DESIGN.

B. FOOTINGS SHALL BE FOUNDED UPON UNDISTURBED NATURAL SOIL OR COMPACTED FILL, TESTED AND APPROVED BY A SOILS ENGINEER.

a. MAXIMUM DESIGN SOIL BEARING PRESSURE: 2,000 PSF.

b. MINIMUM DEAD LOAD: N/A.

c. FOOTINGS SHALL BE PLACED A MINIMUM OF 30" BELOW FINAL FINISHED GRADE (FROST DEPTH)

d. DESIGN LATERAL SOIL PRESSURE (EQUIVALENT FLUID PRESSURE, AT REST CONDITION, USING ON-SITE GRANULAR SOILS AS BACKFILL): 50 PSF/FT.

C. PRIOR TO BACKFILLING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING FOUNDATION WALLS TO RETAIN EARTH AGAINST BACKFILLING PRESSURES UNTIL SUPPORTING ELEMENTS INCLUDING FLOOR SLABS ARE IN PLACE.

D. FOUNDATION WALLS AND GRADE BEAMS HAVING EARTH PLACED ON BOTH SIDES SHALL HAVE BOTH SIDES FILLED SIMULTANEOUSLY TO MAINTAIN A COMMON ELEVATION.

E. DO NOT BACKFILL WITH EXPANSIVE SOILS, VERIFY FILL TYPE WITH SOILS ENGINEER PRIOR TO BACKFILLING.

F. CENTER ALL FOOTINGS UNDER WALLS, COLUMNS OR GRIDLINES UNLESS NOTED OTHERWISE ON DOCUMENTS.

5.0 CONCRETE AND REINFORCEMENT

A. CONCRETE DESIGN IS BASED ON "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).

B. CONCRETE SHALL CONFORM TO THE APPLICABLE PROVISIONS OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).

C. CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) WITH STONE AGGREGATE AND DEVELOP A MINIMUM 28-DAY COMPRESSIVE STRENGTH PER THE CONCRETE MIX TABLE ON THE STRUCTURAL DRAWINGS.

D. CEMENT SHALL BE OF THE TYPE SPECIFIED ON THE CONCRETE MIX TABLE ON THE STRUCTURAL PLANS, CONFORMING TO ASTM C150.

E. FLY ASH SHALL CONFORM TO ASTM C618, CLASS C OR F. FLY ASH SHALL NOT EXCEED 20% OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIAL.

F. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE.

G. COLD WEATHER CONCRETING: WHEN TEMPERATURES DROP BELOW 40 DEGREES AT ANY TIME DURING CONCRETE PLACING AND CURING, THE PROVISIONS OF ACI308R SHALL BE FOLLOWED TO PROTECT CONCRETE FROM FREEZING.

H. HOT WEATHER CONCRETING: PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 305. COOL INGREDIENTS BEFORE MIXING TO MAINTAIN CONCRETE SLUMP AT TIME OF PLACEMENT BELOW 90 DEGREES F.

I. CONCRETE MUST BE CONTINUOUSLY PLACED WITHOUT HORIZONTAL COLD JOINTS. IF COLD JOINTS ARE NECESSARY, ADEQUATE REINFORCING AND HORIZONTAL KEYS OR A ROUGHENED SURFACE MUST BE PROVIDED; COORDINATE REQUIREMENTS WITH ENGINEER. ALL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

J. DEFORMED REINFORCEMENT: ASTM A615, GRADE 60 EXCEPT TIES OR STIRRUPS: ASTM A615, GRADE 40.

K. REINFORCING BARS TO BE WELDED SHALL BE ASTM A706, GRADE 60.

L. WELDED WIRE FABRIC: ASTM A185 (LAP ONE FULL MESH AND TIE SECURELY, CUT ALTERNATE WIRES AT CONTROL JOINTS).

M. REINFORCEMENT SHALL BE FABRICATED AND PLACED AS PER THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315).

N. SPLICE LENGTH, DOWEL PROJECTION OR EMBEDMENT SHALL BE A MINIMUM OF 58 BAR DIAMETERS.

O. MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL:

a. UNIFORMED SURFACE CAST AGAINST EARTH: 3"

b. FORMED SURFACE EXPOSED TO EARTH OR WEATHER

1. #6 THROUGH #10 BARS 2"

2. #5 AND SMALLER BARS 1 1/2"

c. FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER

1. SLABS, WALLS AND JOISTS

(a) #14 THROUGH #18 BARS 1 1/2"

(b) #11 AND SMALLER BARS 3/4"

2. BEAMS AND COLUMNS 1 1/2"

P. MAINTAIN CONTINUITY OF ALL HORIZONTAL REINFORCEMENT AT CORNERS, INTERSECTIONS AND AT STEPS IN THE TOP AND BOTTOM OF WALLS OR FOOTINGS.

6.0 WOOD FRAMING

A. ALL DIMENSIONAL LUMBER AND TIMBERS USED FOR STRUCTURAL FRAMING SHALL BE AT A MOISTURE CONTENT OF 19% OR LESS AND HAVE THE FOLLOWING MINIMUM VISUAL GRADE STAMP WITH UNFACTORED ALLOWABLE STRESSES:

a. 2x STUDS, < 8'-0" HEM FIR, STUD GRADE (Fb=675 psi, Fc= 800 psi, E=1,200,000psi)

b. 2x STUDS, > 8'-0", < 12'-0", HEM FIR, NO. 2 (Fb=850 psi, Fc= 1300 psi, E=1,300,000psi)

c. 2x4x JOIST/RAFTER: HEM FIR, NO. 2 (Fb=850 psi, E=1,300,000psi)

d. 4x POSTS: DOUGLAS FIR, NO. 1 (Fb=1000psi, Fc=1500psi, E=1,700,000psi)

e. POSTS AND TIMBERS (5x5 AND LARGER): DOUGLAS FIR, NO. 1 (Fb=1200psi, Fc=1000 psi, E=1,600,000psi)

f. BEAMS AND STRINGERS (5x5 AND LARGER): DOUGLAS FIR, NO. 1 (Fb=1350psi, Fc=925 psi, E=1,600,000psi).

B. PROVIDE PRESSURE TREATED LUMBER OR ICC APPROVED BARRIER AT LOCATIONS WHERE MEMBER IS TO BE IN CONTACT WITH CONCRETE, MASONRY, SOIL, OR EXPOSED TO WEATHER, UNLESS NOTED OTHERWISE.

C. PRESSURE TREATED LUMBER: ALL FASTENERS AND HANGERS FOR USE WITH ACQ TREATED LUMBER SHALL BE GALVANIZED WITH A G185 COATING OR SHALL BE STAINLESS STEEL. LUMBER IN CONTACT WITH CONCRETE BUT NOT EXPOSED TO WEATHER SUCH AS MUFGUS MAY BE TIMBERSTRAND STRANDGUARD AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL IN LIEU OF CORROSIVE ACQ TREATED LUMBER.

D. METAL HANGERS AND CONNECTORS SHALL BE "SIMPSON STRONG-TIE" OR AN APPROVED EQUAL. UNLESS NOTED OTHERWISE PROVIDE ALL MANUFACTURER RECOMMENDED FASTENERS FOR THE MAXIMUM CAPACITY OF THE HANGER.

E. NAILING SHALL CONFORM TO INTERNATIONAL BUILDING CODE, TABLE 2304.10.1, UNLESS MORE OR LARGER NAILING IS OTHERWISE SPECIFIED.

F. FASTEN ALL WOOD MEMBERS WITH COMMON NAILS UNLESS NOTED OTHERWISE, WHERE POWER NAILS ARE USED THEY SHALL BE EQUIVALENT IN DIAMETER TO THE COMMON NAIL INDICATED. PREDRILL NAIL HOLES AS REQUIRED TO PREVENT SPLITTING OF THE WOOD MEMBERS.

7.0 STRUCTURAL INSPECTIONS

A. CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL OR SPECIAL INSPECTORS AND SUCH CONSTRUCTION SHALL REMAIN VISIBLE AND ABLE TO BE ACCESSED FOR INSPECTION PURPOSES UNTIL APPROVED.

B. AS REQUIRED BY THE BUILDING OFFICIAL, THE BUILDING OFFICIAL OR SPECIAL INSPECTORS EMPLOYED BY THE OWNER MAY BE REQUIRED TO PROVIDE STRUCTURAL INSPECTIONS FOR THE FOLLOWING TYPES OF CONSTRUCTION PER INTERNATIONAL BUILDING CODE. CONTRACTOR SHALL COORDINATE WITH THE BUILDING OFFICIAL ON REQUIRED INSPECTIONS. IF SPECIAL INSPECTORS ARE EMPLOYED A SIGNED FINAL REPORT SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT, ARCHITECT AND STRUCTURAL ENGINEER.

a. PREPARATION OF FOUNDATION SUBGRADE INCLUDING FILLING AND COMPACTION.

b. CONCRETE PLACEMENT INCLUDING REINFORCING STEEL AND POST-TENSIONING STRANDS, EXCEPT NON POST-TENSIONED SLABS-ON-GRADE.

CONCRETE MIX MATRIX

| INTENDED USE OF CONCRETE       | COMPRESSIVE STRENGTH (28 DAYS) | MAX. W/C RATIO | MAX. AGG. SIZE [1] | SUMP LIMITS [2] | CEMENT TYPE | AIR CONTENT [2] |
|--------------------------------|--------------------------------|----------------|--------------------|-----------------|-------------|-----------------|
| FOUNDATION WALLS & GRADE BEAMS | 4,500 PSI                      | 0.50           | 1"                 | 3" - 5"         | I / II      | 5% - 8%         |
| FOOTINGS                       | 4,000 PSI                      | --             | 1"                 | 3" - 5"         | I / II      | --              |
| DRILLED PIERS                  | 4,000 PSI                      | --             | 1"                 | 7"              | I / II      | --              |
| INTERIOR SLABS-ON-GRADE        | 4,000 PSI                      | 0.45           | 3/4"               | 3" - 5"         | I / II      | 0% - 2%         |
| STRUCTURAL SLABS               | 4,500 PSI                      | 0.45           | 3/4"               | 3" - 5"         | I / II      | 5% - 7%         |

NOTES:

1. NORMAL WEIGHT AGGREGATE UNLESS NOTED OTHERWISE

2. RANGE INDICATES MINIMUM AND MAXIMUM LIMITS

ABBREVIATIONS

|       |  |
|-------|--|
| AB    | ANCHOR BOLT  |
| ADOL  | ADDITIONAL ALTERNATE                                   |
| ARCH  | ARCHITECTURAL  |
| ATR   | ALL THREAD ROD   |
| BLDG  | BUILDING   |
| BM    | BEAM   |
| BOB   | BOTTOM OF BEAM   |
| BO5   | BOTTOM OF SLAB   |
| BO    | BOTTOM OF  |
| BOT   | BOTTOM   |
| BRG   | BEARING  |
| BTWN  | BETWEEN  |
| CJ    | CONST/CONTROL JOINT                                    |
| CJP   | COMPLETE JOINT PENETRATION                             |
| CL    | CENTERLINE   |
| CMU   | CONC MASONRY UNIT                                      |
| COL   | COLUMN   |
| CONC  | CONCRETE   |
| CONN  | CONNECTION   |
| CONST | CONSTRUCTION   |
| CONT  | CONTINUOUS   |
| DBL   | DOUBLE   |
| DIM   | DIMENSION  |
| DWG   | DRAWING  |
| EA    | EACH   |
| ELEV  | ELEVATION  |
| EMBED | EMBEDMENT  |
| EX    | EXISTING   |
| EXP   | EXPANSION  |
| EXT   | EXTERIOR   |
| FF    | FINISHED FLOOR   |
| FLR   | FLOOR  |
| FDN   | FOUNDATION   |
| FOW   | FACE OF WALL   |
| FO    | FACE OF  |
| FRMG  | FRAMING  |
| FTAO  | FORCE TRANSFER AROUND OPENING (SEE SHEAR WALL DETAILS) |
| FTG   | FOOTING  |
| FS    | FAR SIDE   |
| GEN   | GENERAL  |
| GLB   | GLU-LAM BEAM   |
| HAS   | HEADED ANCHOR STUDS                                    |
| HORIZ | HORIZONTAL   |
| HT    | HEIGHT   |
| INT   | INTERIOR   |
| K     | KING STUD(S)   |
| LAT   | LATERAL  |
| LLH   | LONG LEG HORIZ   |
| LLV   | LONG LEG VERT  |
| LONG  | LONGITUDINAL   |
| MFR   | MANUFACTURER(S)  |
| MAS   | MASONRY  |
| MAX   | MAXIMUM  |
| MECH  | MECHANICAL   |
| MIN   | MINIMUM  |
| (N)   | NEW  |
| NS    | NEAR SIDE  |
| NTS   | NOT TO SCALE   |
| OC    | ON CENTER  |
| OPP   | OPPOSITE   |
| PCF   | POUNDS PER CUBIC FOOT                                  |
| PERF. | PERFORATED SHEAR WALL                                  |
| PL    | PLATE  |
| PLF   | POUNDS PER LINEAR FOOT                                 |
| PSF   | POUNDS PER SQUARE FOOT                                 |
| PSI   | POUNDS PER SQUARE INCH                                 |
| PT    | PRESSURE TREATED / POST-TENSIONED                      |
| REINF | REINFORCEMENT  |
| REQD  | REQUIRED   |
| RET   | RETAINING  |
| SOG   | SLAB ON GRADE  |
| SCH   | SCHEDULE   |
| SHTG  | SHEATHING  |
| SIM   | SIMILAR  |
| SIP   | STRUCTURAL INSULATING PANEL                            |
| STD   | STANDARD   |
| STL   | STEEL  |
| SW    | SHEARWALL  |
| T     | TRIM STUD(S)   |
| TOB   | TOP OF BEAM  |
| TOP   | TOP OF PLATE   |
| TO5   | TOP OF SLAB / TOP OF STEEL                             |
| TO    | TOP OF   |
| THK   | THICK, THICKNESS                                       |
| TRANS | TRANSVERSE   |
| TYP   | TYPICAL  |
| UNO   | UNLESS NOTED OTHERWISE                                 |
| VERT  | VERTICAL   |
| W     | WITH   |
| WWF   | WELDED WIRE FABRIC                                     |

SYMBOL LEGEND

|  |   |
|--|---|
|  | STEP IN TOP OF WALL OR GRADE BEAM   |
|  | STEP IN BOTTOM OF WALL OR GRADE BEAM                                      |
|  | CONCRETE MASONRY UNIT (CMU) WALL  |
|  | INTERIOR WOOD BEARING WALL  |
|  | POST BELOW, (2) 2x4 OR (2) 2x6 MIN., POSTS TO MATCH WALL STUD SIZE U.N.O. |
|  | POST FROM ABOVE, SEE PLAN ABOVE FOR SIZE                                  |
|  | JOIST HANGER  |
|  | CONCEALED FLANGE JOIST HANGER   |
|  | JOIST BEARING ON BEAM   |
|  | STEEL MOMENT CONNECTIONS TO BEAM  |
|  | STEEL MOMENT CONNECTION TO COLUMN   |
|  | STEEL BEAM SPLICE   |
|  | ELEVATION   |
|  | KEYNOTE   |
|  | FOOTING RE. SCHEDULE, P = PAD FOOTING, F = CONTINUOUS WALL FOOTING        |
|  | REVISION NUMBER   |
|  | HOLDOWN   |
|  | STANDARD AISC SHEAR CONNECTION, V = BOXED VALUE (KIPS, UNFACTORED)        |
|  | SECTION CUT & VIEW REFERENCE  |
|  | WOOD SHEAR WALL RE. SCHEDULE  |
|  | FIELD WELD: MAY BE PERFORMED IN THE FIELD OR THE SHOP                     |
|  | SHOP WELD: MUST BE PERFORMED IN THE SHOP                                  |
|  | CAISSON CALLOUT   |
|  | BEAM REACTION (SEE ABOVE)   |
|  | TOP OF STEEL ELEVATION  |
|  | CAMBER (in)   |

4

50.1

3/4" = 1'-0"

TOP & BOTTOM REINFORCING

TYP. WALL REINFORCING

TYP. VALUES:

#5 LAP SPLICE = 38", STD HOOK = 10"

#4 LAP SPLICE = 31", STD HOOK = 8"

NOTE: LAP SPLICES MAY BE REPLACED w/ CONTINUOUS BARS

5

50.1

1/2" = 1'-0"

TYP. CORNER REINFORCEMENT

TYP. FOUNDATION WALL STEP

6

50.1

3/4" = 1'-0"

TYP. DOCK SECTION

Drawn By JLV

Review By JLV

Description CONSTRUCTION SET

Date 1/16/23

No. 1

PROJECT NUMBER 2020-0247

GENERAL NOTES

BOAT DOCK

300 LAKESIDE DR

GRAND LAKE, COLORADO

COLORADO LICENSED PROFESSIONAL ENGINEER

54318

09/16/2024

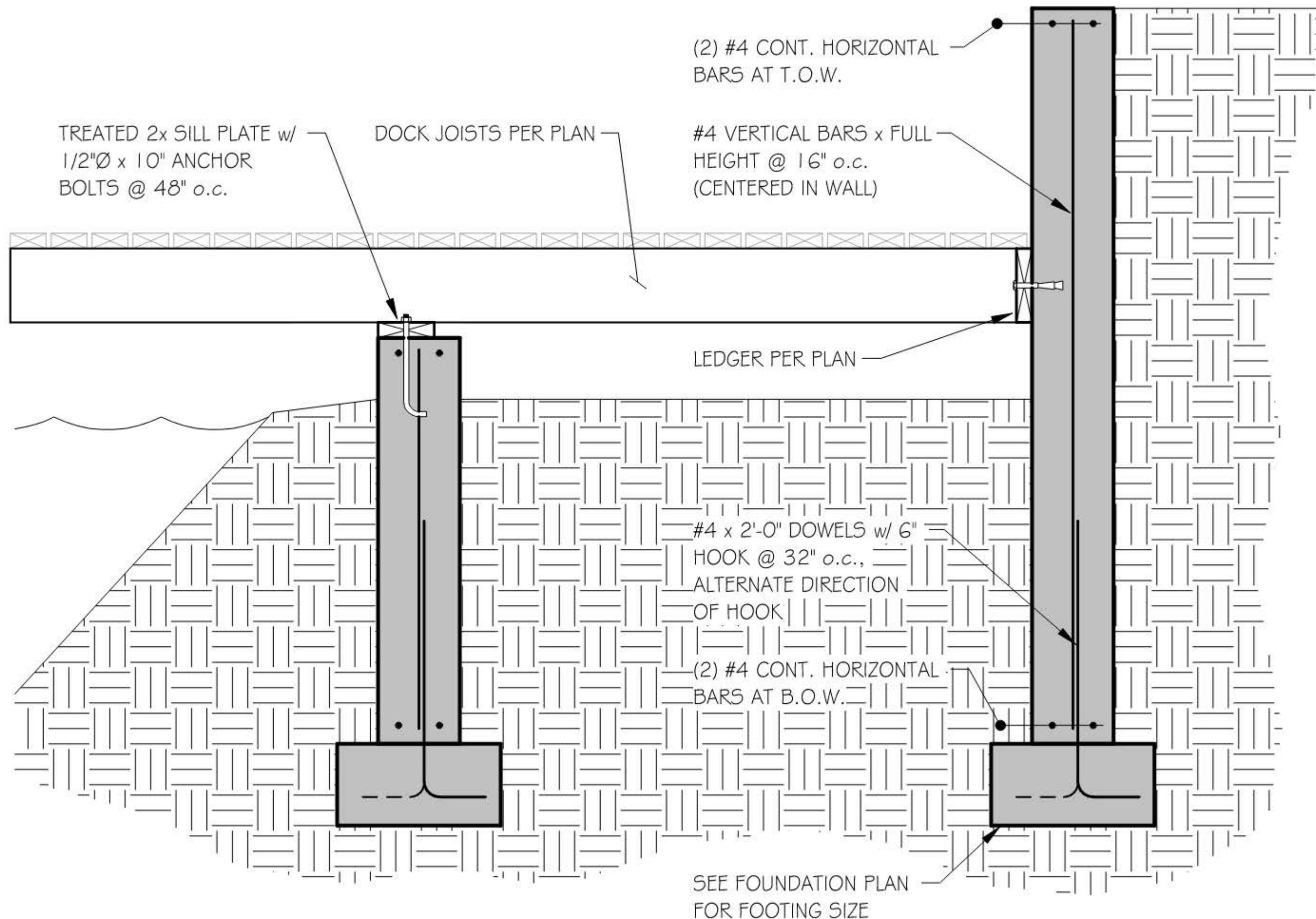
S0.1

Sheet 1 of 2

9/16/2024 2:16:51 PM









# GRAND LAKE FIRE PROTECTION DISTRICT



**DATE:** April 7<sup>th</sup>, 2025

**TO:** Whom it may concern

**RE:** Private Boat Dock – 300 Lakeside Grand Lake Colorado

**FROM:** Fire Chief Seth St. Germain - GLFPD

Follow review of the submitted “Boat Dock” plans (see attached “Ascent Structural Engineering – Project # 2020-0247”), the Fire and Life Safety Authority Having Jurisdiction finds:

- The only relatable International Fire Code pertaining to “Private Boat Docks” falls under International Fire Code Chapter 36:
  - Section 3603 – Combustible debris and rubbish shall not be deposited or accumulated on land beneath the structure.
  - Section 3604 – While a vessel is “docked” at the structure, a portable fire extinguisher of the ordinary hazard type (Class ABC) shall be provided.

The property owner requested input from Grand Lake Fire Protection District regarding any safety concerns with the attached plans and the location of the dock.

Following review of the attached plans and related dimensions, the Grand Lake Fire Protection District only finds three safety concerns.

1. Channel width. The number of vessels docked at one time and docked vessel width.
2. Channel width. An improperly secured vessel could greatly reduce the available “travel space” in the channel.
3. Nighttime visibility of docked vessel.

**Recommendations:**

1. Property owners should only dock one vessel at a time. The docked vessel should not exceed the standard width of a “water recreational” craft of approximately 8’ (pontoons range from 10’ to 12’ and houseboats range from 15’ to 18’).
  - a. If the property is used in the form of “transient occupancy (such as Short-Term Rental) the owners should create a clause stating that renters must follow the above recommendation.
2. The dock is engineered in a way that allows vessels to be docked parallel to structure. However, owners should ensure that two security cleats are provided on the dock to secure both the “bow” and “stern” to prevent any docked vessel from drifting further into the channels way of travel.



## GRAND LAKE FIRE PROTECTION DISTRICT



- Property owners should install lower illumination lights at the point of the dock where a vessel would be secured. This illumination should only be broadcast onto the secured vessel to provide better visibility of said vessel at night.

*It must be clear that GLFPD authority over any body of water, or waterway only extends to fire suppression and rescue. GLFPD does not have the legal authority to supersede or overrule any private property HOA CC&R, or State / Federal Regulations or Statutes in a non-emergency capacity.*

|   |
|---|
|  |
| <b>FIRE CHIEF GRAND LAKE FIRE PROTECTION DISTRICT</b>                             |