

EXHIBIT A

9-1-3: RETAINING WALLS:

A. Applicability:

1. This section applies to all “retaining walls”, as defined in this section.

B. Retaining Wall Defined: “Retaining wall” is defined as any structure designed to resist the lateral displacement of soil or other materials. Examples include block walls, rockery walls, concrete walls and segmented walls. A “retaining wall” is not considered a fence.

C. Permit Required:

1. The following permits shall be required for the construction of all retaining walls within the city regardless of height or location:
 - a. Land Use Permit. All retaining walls less than four feet (4') tall, measured from the top of the wall to the finished grade.
 - b. Building Permit. All retaining walls or retaining wall systems which are greater than four (4) feet, measured from the top of the wall to the finished grade, or walls of any height subject to a Geologic Hazards Review.
2. Geologic Hazards Review. All retaining walls shall be subject to a Geologic Hazards Review, in accordance with Title 10, Chapter 12, Sensitive Area District and Geologic Hazards, as follows:
 - a. Any lot or parcel located within the Sensitive Lands Overlay Zone;
 - b. Any subdivision lot which has been designated as a Restricted Lot on the recorded subdivision plat;
 - c. Any lot or parcel which has been deemed a restricted lot, as defined in section 10-1-47; or
 - d. Any lot or parcel with an average slope of 15% or greater;
3. This requirement includes all cantilever concrete retaining walls, as well as nonconventional wall systems, such as reinforced earth structures, rockery walls, etc.
4. Wall systems four feet (4') tall or taller which are based on organic material, such as treated lumber or railroad ties, are not allowed.
5. To obtain a building permit for a retaining wall, the following shall be submitted to the city for review:
 - a. An engineered site plan and wall design stamped by a civil, structural or geotechnical engineer registered and qualified to perform work in the state. The design shall:
 - (1) Include a site plan showing:
 - (A) The boundary of the property, including any required setbacks, easements, and building envelopes;
 - (B) the existing and proposed grading;

(C) location of proposed retaining wall(s) noting the height and elevation of the top and bottom of wall.

(D) the extent of cuts and/or fills that will be necessary to construct the retaining wall; and

(E) shading of all areas on the property with slopes 30% or greater.

(2) Include sections and details to be utilized in construction of the retaining wall, including a drainage system to relieve hydrostatic pressure on the retaining wall.

(3) Be specific to the site and not a generic standard design.

b. If the retaining wall is to be a rock retaining wall, in addition to the structural report, the contractor shall submit a geological report by a certified geologist identifying the type of rock to be used as a rock that will hold the slope and not deteriorate over time. Rock retained slopes may not be constructed of conglomerate rock.

c. Additional requirements associated with retaining walls subject to Geologic Hazards may be required as prescribed in Title 10, Chapter 12 on a site specific basis.

D. Special Requirements for Rockery Walls:

1. Construction plans must show a detailed cross section showing the minimum rock size, for each lift, a maximum wall height, backfill specification, drainage, slope of adjacent ground, embedment into existing soil, and batter.
2. Monitoring: All phases of rockery wall construction shall be monitored by the geotechnical engineer employed by the owner/contractor to verify that the nature and quality of the materials being used are appropriate and that the construction is in accordance with the engineered design. The geotechnical engineer shall verify to the city in writing that the materials and construction of the rockery walls as-built is accordance with the engineered design after construction is complete.
3. Fill Compaction: Where the rockery walls are constructed in front of a fill, the fill shall be placed and compacted in a manner that will provide a competent fill mass as noted in the drawings. All fills shall consist of quality fill meeting the geotechnical engineers recommendations as noted on the drawings or report.
4. Rock Selection: Rock shall be of a generally cubical, tabular, or rectangular shape. Rounded rocks shall not be used and internal void spaces in the facing shall be kept to a minimum. Prior to being placed, all rock shall be inspected and approved by the geotechnical engineer. The rock source shall be preapproved by the geotechnical engineer. Rocks shall be placed to decrease in size with increasing wall height. Rocks shall be placed to bear on good flat-to-flat surfaces. The long dimension of the rocks shall extend back toward the cut/fill face. Rocks shall bear on at least two (2) or more other rocks.
5. Rock placement: Rock shall be placed as recommended by the geotechnical engineer. A keyway (one (1) foot minimum) as recommended by the geotechnical engineer shall be constructed into unyielding soil.
6. Steepness of walls: The steepness of the rockery wall shall be noted on the drawings.

E. Height and Terracing:

1. For the purposes of this subsection, the height of a retaining wall is measured as the total height of the wall from the top of the exposed face to the finished grade.
2. A single retaining wall shall not exceed eight feet (8') in height.
3. Terracing of retaining walls is permitted where justified by topographic conditions, but the combined height of all walls shall not exceed sixteen feet (16').
 - a. In a terrace of retaining walls, there shall be a minimum separation of one-half ($\frac{1}{2}$) the height of the taller wall as measured from the back of the lower wall to the face of higher wall.
 - b. Walls with a separation of at least two (2) times the height of the largest of two (2) walls from the face of the wall to the face of the wall shall be considered as separate walls.
 - c. Terraced retaining walls shall be constructed out of one type of material that is similar in appearance, color, and texture.
4. Retaining walls within the front yard public utility easement shall be limited to a height of three (3) feet, except by conditional use permit.
5. Height Exception: The City Engineer may approve, in writing, an exception to the maximum height of a retaining wall as deemed appropriate in his or her sole discretion based upon the circumstances and conditions of the proposed site and grading plan. Any retaining wall proposed in excess of eight feet (8') or terraced walls in excess of sixteen feet (16') shall be supported by a report prepared and signed by a professional engineering geologist and geotechnical engineer attesting to the appropriateness, safety and stability of the proposed retaining wall. Such documentation and report shall be prepared at the applicant's expense and shall address the safety and stability of the proposed wall(s) and surrounding properties. Height exceptions will only be considered for:
 - a. Walls installed and approved as a part of the overall subdivision improvement plan necessary for the installation of critical infrastructure;
 - b. Where necessary to adequately address a geologic hazard; or
 - c. To repair, replace, or address a deficiency in an existing retaining wall.

F. Setbacks:

1. The setback from a retaining wall to a building or structure shall meet all setback requirements as outlined in the International Building Code and International Residential Code.
2. The setback from a retaining wall to a building shall be equal to or greater than the height of the retaining wall.
3. Retaining walls constructed in utility easements shall not be constructed without prior written permission in a form acceptable to the city from each affected utility. Notwithstanding any written permission, the city reserves the right to deny a permit for a wall within, or over, a utility easements.

G. Clearance from Utility Facilities:

1. No retaining wall may be located closer than five (5) feet:
 - a. Fire hydrants;

- b. Water meter boxes;
- c. Telecommunication pedestals; and
- d. Street lights.

H. Inspections And Final Report:

1. Along with the wall design and site plan, the design engineer shall submit an inspection frequency schedule for city approval.
 2. The design engineer shall be responsible for all inspections needed for final approval and acceptance of the retaining wall when construction is complete. A final report from the engineer shall state that the retaining wall was built according to the submitted design. The report shall include details of the inspections of the wall in accordance with the approved inspection frequency schedule. All pertinent compaction testing shall also be included with the final report.
- I. Maintenance: All retaining walls must be maintained in a structurally safe and sound condition and in good repair. (Ord. 2010-08, 6-1-2010; amd. Ord. 2020-13, 6-16-2020)
- J. Conflict: In cases of conflict between the provisions contained within this title and adopted zoning regulations, building code, subdivision ordinance, sensitive area and geologic hazards ordinances, or any other ordinance of the City of North Salt Lake, the most restrictive provision shall apply.