

BILL NO. 2148

ORDINANCE NO. 2148

AN ORDINANCE AMENDING SECTIONS II, V, AND XIV OF ORDINANCE 1175, THE ZONING ORDINANCES OF THE CITY OF LADUE, ST. LOUIS COUNTY, MISSOURI, CONCERNING EROSION CONTROL, GREEN SPACE AND LOT COVERAGE; AND AMENDING CHAPTERS 94 AND 110 OF THE LADUE CODE OF ORDINANCES REGARDING STORMWATER REQUIREMENTS FOR SUBDIVISIONS AND RE-SUBDIVISIONS, EROSION CONTROL, AND POST-CONSTRUCTION STORMWATER REQUIREMENTS.

WHEREAS, the Ladue Stormwater Advisory Committee was developed early in 2016 to meet in conjunction with the stormwater needs assessment and planning being conducted by HR Green regarding stormwater problems in Ladue; and

WHEREAS, the Stormwater Advisory Committee identified the need to form a Residential Standards Sub-Committee in order to address the stormwater runoff created by residential development in Ladue; and

WHEREAS, the Residential Standards Sub-Committee met from May 2016 to October 2016 and developed recommendations for code updates to minimize the impact of stormwater runoff from residential developments; and

WHEREAS, the recommendation from the Residential Standards Sub-Committee were reviewed by the Zoning and Planning Commission at their meetings on November, 2016; January, 2017; February, 2017; and March, 2017; and

WHEREAS, the Zoning and Planning Commission, after recommending changes to the code updates, voted to recommend approval of the code changes attached hereto by a vote of 5 in favor, 0 opposed; and

WHEREAS, a duly noticed and published public hearing was held on March 27, 2017, regarding the proposed amended regulations in conformity with all requirements of Section 89.060 of the Missouri Revised Statutes and Zoning Ordinance 1175; and

WHEREAS, this bill has been made available for public inspection prior to its consideration by the City Council and read by title two times in open meeting prior to passage.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LADUE, ST. LOUIS COUNTY, MISSOURI, AS FOLLOWS:

SECTION 1. Section II.A(7) of Ordinance 1175, the Zoning Ordinances of the City of Ladue, St. Louis County, Missouri, is hereby repealed and replaced with a new Section II.A.(7), to read as follows:

(7) Clearing, grading, excavating, filling, paving, removal of topsoil, changes in grade, and any other land disturbance activities on a property shall take place only in compliance with Section 110, Article IV of the Ladue Code of Ordinances. Such activities may not take place on

the property without a primary structure on the property, an active permit for a primary structure, or other permitted use.

SECTION 2. Subsection V.C.(1)(m) of Ordinance 1175, the Zoning Ordinances of the City of Ladue, St. Louis County, Missouri, is repealed and replaced with a new Subsection V.C.(1)(m), to read as follows:

(m) In the E-1 District, if deemed necessary by the Building Official for rear or side garage access, in lieu of a front yard garage, a driveway not to exceed ten (10) feet in width may be placed in one (1) side yard. In such a situation, the 25% maximum side yard coverage limit may be waived for one side yard. Additional paving or construction may take place in the rear yard up to the 30% maximum rear yard coverage limit. A separate rear or side yard garage shall not be allowed on a property in addition to a front access garage

SECTION 3. Section V of Ordinance 1175, the Zoning Ordinances of the City of Ladue, St. Louis County, Missouri, is hereby amended to add a new Subsection G, to read as follows:

G. Lot coverage restrictions

(1) Green Space requirements are shown in the following table:

District	Minimum green space required on each lot	Maximum extent of accessory structures and pavement per yard (Section IV. A (4), Section V. C)
A	80%	30% of front yard and rear yard, 25% of side yards
B	75%	30% of front yard and rear yard, 25% of side yards
C	65%	30% of front yard and rear yard, 25% of side yards
D	55%	30% of front yard and rear yard, 25% of side yards
E	40%	30% of front yard and rear yard, 25% of side yards
E-1	40%	30% of front yard and rear yard, 25% of side yard. (Coverage limits in one side yard may be waived in accordance with Section V.C.(1)(m))
G – Commercial	30% with a Site Development Plan (Section VIII E(b))	

(2) Green space shall include undisturbed natural areas, rain gardens, landscaped grass and gardens. Provided green space shall not include buildings, driveways, decks and patios, pools, sidewalks and paths (except stepping stone paths), or other permeable or impermeable pavement (sports courts, etc.), except as described in part (3) of this section.

(3) Partial Credits.

(a) Certain types of permeable pavement may be allowed to receive a partial credit for required green space. Further details can be found in the Ladue Stormwater Toolbox information page. Any types of pavement not mentioned in this subsection will not receive credit for green space. The following types of surfaces will receive credits, as indicated:

- (1) Grass pavers may qualify for a 50% green space credit
- (2) Gravel pavers may qualify for a 25% green space credit
- (3) Porous/ permeable pavers may qualify for a 25% green space credit

This following table provides an example of how this credit would work.

Type of pavement	Proposed area (in square feet)	Percentage of area to be credited	Area to be considered green space
Grass pavers	500	50%	250
Gravel pavers	500	25%	125
Porous/permeable pavers	500	25%	125

(b) Once green space credit is granted, maintenance of these permeable surfaces is required to ensure the effective infiltration of water. Failure to maintain a green space-approved permeable surface, resulting in a substantial decrease of the infiltration of water is a violation of this ordinance. Each day the violation continues shall be a separate offense. Maintenance reports will be required periodically by the City. Contents of the report will be established by the Building Commissioner.

SECTION 4. Section XIV of Ordinance 1175, the Zoning Ordinances of the City of Ladue, St. Louis County, Missouri, is hereby amended to add the following new definitions:

Grass pavers. A type of surface covering in which plastic rings in a flexible grid system are placed on a base of blended sand, gravel and topsoil, then filled with topsoil and planted with vegetation. This pavement gives designers a turfgrass alternative to asphalt or concrete for such low-traffic areas as firelanes, overflow and event parking, golf cart paths, residential driveways, and maintenance and utility access lanes. The support base and the rings' walls prevent soil compaction and reduce rutting and erosion by supporting the weight of traffic and concentrated loads, while the large void spaces in the rings allow a strong root network to

develop. The end result is a load-bearing surface covered with natural grass and which is typically around 90% pervious, allowing for stormwater pollution filtration and treatment.

Gravel Pavers: Similar to grass pavers, ring structures are used, but the voids in the rings are filled with gravel in order to provide greater load bearing support for unlimited traffic volumes and/or parking durations. Manufacturers provide specifications on the sieve analysis that should be used to generate the clean gravel fill for the rings, and a geotextile fabric is used to prevent the gravel infill from migrating to the soil subbase. This pavement option is intended for high frequency, low speed traffic areas

Pavement. An area covered with material that provides a firm level surface for travel or other activities. This may include asphalt, concrete, gravel, stone, pavers, or other materials.

Porous/permeable pavers. Interlocking hard materials that do not create a solid block, allowing water to permeate the surface. Drainage openings should comprise at least 10% of the paver's surface area. When properly filled with permeable material, the voids allow for drainage of stormwater through the pavement surface into the layers below. The system is a highly durable, yet capable of supporting heavier vehicular loads than grass or gravel pavers.

Stepping Stone Path. A path no more than 2 feet in width made up of multiple stones, each stone separated by at least 2 inches of vegetated material.

SECTION 5. Chapter 94 of the Ladue Code of Ordinances is hereby amended to add a new Article VI. Stormwater Management, to read as follows:

ARTICLE VI. STORMWATER MANAGEMENT

Sec. 94-115. Requirements for stormwater design for subdivisions

Subdivisions shall be designed with a holistic approach in order to develop a more hydraulically functional site, help to maximize the effectiveness of on-site retention, and integrate stormwater management throughout the project site.

- (a) All new subdivisions or any modifications to existing subdivisions must comply with the requirements in Chapter 110, Article IV regarding land disturbance activities, stream buffers, and post construction storm water control.
- (b) Stormwater management design must be evaluated and approved by the St. Louis Metropolitan Sewer District prior to the City's acceptance of Subdivision Improvement Plans. This may apply to new subdivisions as well as modifications to existing subdivisions.
- (c) When determining stormwater management requirements for subdivisions, calculations and designs must be determined based on the future impact of the entire subdivision and not determined on a lot by lot basis. This also applies to the redevelopment of adjacent lots in an existing subdivision (by a common owner/developer).
- (d) Retention/detention basins, swales, and other major stormwater collection devices designed for a subdivision improvement shall be designated as common ground or located in an easement and maintained by the subdivision.

SECTION 6. Section 110-103 of Chapter 110, Article IV is hereby repealed and replaced with a new Section 110-103, to read as follows:

Section 110-103 Erosion Control Requirements and Permits

- (a) For all projects, surface water runoff should be controlled to ensure that soil and sediment is contained on the site during any land disturbance or other development activities. No land disturbance, construction, or other activities shall be permitted to deposit mud, soil, sand, gravel, or other like materials on streets or adjoining properties, unless prior approval has been granted for storage purposes.
- (b) Any person who intends to conduct any land disturbance activities (e.g. Clearing, grading excavating, filling, paving, removal of topsoil, or construction of improvements) shall notify the Building Department and fill out the necessary documents as required by the City.
- (c) If the Building Department determines that the land disturbance activity will disturb one acre or more, a land disturbance permit will be required from the City of Ladue.
 - (1) The land disturbance application shall be accompanied by a Stormwater Pollution Prevention Plan (SWPPP) for the specific site by or under the direction of a qualified professional, and a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the Stormwater Pollution Prevention Plan. (Sections 104-107 of this chapter describe the requirements and enforcement of the SWPPP)
 - (2) The fee to be paid for a permit shall be as follows: \$250.00 for land disturbance between one (1) and five (5) acres and \$500.00 for land disturbance greater than five (5) acres.
 - (3) The permit applicant will be required to obtain a land disturbance permit issued by the Missouri Department of Natural Resources for any site where one acre or more of land will be disturbed, before beginning any site work authorized by a city permit. This requirement applies to sites of less than one acre that are part of a larger common plan that will ultimately disturb one acre or more.
 - (4) Any person who buys a lot for construction from a person who has been issued a permit according to this subsection c, (unless purchased for the purpose of building their own private residence) must obtain a separate site disturbance permit from the City of Ladue unless the original permittee retains responsibility for the land disturbance activities on the sold lot.
- (d) If the land disturbance activity will disturb less than one acre, a Building Permit is required when the land disturbance activity reaches any of the following thresholds:
 - Occurs in an area exceeding 2,500 square feet
 - Moves, depletes, replaces, or increases more than 50 cubic feet of material
 - Changes the existing elevation by more than two (2) feet

- Alters the quantity of concentration of stormwater as it flows onto an adjacent property, street, or common area (Ord. 1916)
- (1) The Building Permit shall be denied if such change on the property is likely to cause unreasonable injury to the condition, safety, or use of other property by diversion of storm water, obstruction of sight lines, or other cause.
 - (2) Silt fences or other erosion control measures should be shown on a plan and submitted to the Building Department for approval. Such plan shall be submitted as part of the permit application. On certain sites, silt fences may not be adequate for erosion control and additional erosion control BMPs will be required by the Building Commissioner. Erosion control BMPs are required to remain until landscaping provides adequate erosion control.
 - (3) Permit fees will be determined based on the cost of improvements according to the Building Department fee schedule.
- (e) Applications for permits shall be made in writing upon forms or blanks issued by the Building Commissioner. All applications shall state clearly and fully the work proposed to be done, the cost thereof, a reasonable time for the completion of such work, and shall be signed by the owner or his agent and filed in the office of the Commissioner. No application will be accepted or permit issued if any City of Ladue taxes or fees are in arrears on any property owned in Ladue by the applicant.
 - (f) Each permit application shall bear the name(s) and address(es) of the owner or developer of the site, and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm and shall be accompanied by a filing fee.
 - (g) Even if no permit is required for land disturbance, every project must contain sediment on the site during construction. This may necessitate silt fences or other erosion control methods.
 - (h) Any mud and debris tracked onto any streets, roads, or sidewalks from trucks and construction equipment must be removed daily.
 - (i) Land disturbance permits are not required for the following activities:
 - (1) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources.
 - (2) Existing nursery and agricultural operations conducted as a permitted main or accessory use.

SECTION 7. Sections 110-141 through 110-147 of Chapter 110, Article IV. Division 3. are hereby repealed and replaced with new Sections 110-141 through 110-148, to read as follows:

DIVISION 3. POST CONSTRUCTION STORM WATER CONTROL

Sec. 110-141. Introduction and Purpose

- (a) Land development projects and associated increases in impervious cover alter the hydrology of local watersheds and increase storm water runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition. This storm water runoff contributes to increased quantities of water-borne pollutants, and storm water runoff, soil erosion and non-point source pollution can be controlled and minimized through the regulation of storm water runoff from development sites.
- (b) The Metropolitan St. Louis Sewer District (MSD) has established a set of water quality and quantity policies applicable to development in the MSD service area, including the City of Ladue, to provide reasonable guidance for the regulation of storm water runoff for the purpose of protecting local water resources from degradation. It has been determined that the regulation of storm water runoff discharges from land development projects and other construction activities in order to control and minimize increases in storm water runoff rates and volumes, soil erosion, stream channel erosion and non-point source pollution associated with storm water runoff is in the public interest and will prevent threats to public health and safety.
- (c) The purpose of this Article is to protect and safeguard the general health, safety and welfare of the public residing in watersheds within the City of Ladue which is included in the MSD service area. In general, the City of Ladue seeks to meet that purpose through the following objectives:
 - (1) Minimize increases in storm water runoff to reduce flooding, siltation and erosion;
 - (2) Minimize increases in non-point source pollution caused by storm water runoff from development which would otherwise degrade local water quality; and
 - (3) Reduce storm water runoff rates and volumes, soil erosion and non-point source pollution, wherever possible, through storm water management controls and to ensure that these management controls are properly maintained and pose no threat to public safety or adjacent properties.

Sec. 110-142. Storm Water Design

- (a) No improvements shall increase stormwater runoff onto adjacent properties.
- (b) The City of Ladue specifies the MSD Rules and Regulations and Engineering Design Requirements for Sanitary and Storm Water Drainage Facilities as originally adopted February 2006, or latest version, as the applicable document for the proper implementation of the requirements of this Article.
- (c) The MSD regulations include a list of acceptable storm water treatment practices, including the specific design criteria for each storm water practice. The manual may be updated and expanded from time to time, at the discretion of MSD, based on improvements in engineering, science, monitoring and local maintenance experience. Storm water treatment practices that are designed and constructed in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards.

- (d) Developers shall include storm water control measures on the site plan submitted for the Building Department review of proposed construction in addition to submittal to MSD for appropriate permits. The Building Commissioner may require a stormwater study, commissioned by the City at the cost of the Developer, when it appears from the plan, at the discretion of the Building Commissioner, that there could be an increase in velocity or volume of stormwater onto adjacent properties.
- (e) Stormwater shall be discharged from buildings in a way that does not detrimentally affect neighboring properties. Discharge points shall be managed as follows:
 - (1) Stormwater runoff discharge points shall, whenever possible, as determined by the Building Commissioner meet the setbacks for the zoning district in which they are located.
 - (2) Any building downspouts, regardless of building location, may drain at grade. Downspouts that drain at grade may encroach slightly into the building setback as long as the downspout is located no more than 2 feet from the building wall.
 - (3) Runoff from downspouts may be piped underground to discharge at an outlet point away from the building, however discharge points must comply with the following:
 - (a) Discharge outlets shall be located in the buildable area of the lot and not in any required yard (setback).
 - (b) Exceptions may be made in situations in which the building occupies all or nearly all of the buildable area, as determined by the Building Commissioner. Exceptions shall comply with the following:
 - i. If deemed necessary by the Building Commissioner, the discharge point may encroach into the required yard by up to 5 feet.
 - ii. Exceptions will not be approved if this would allow discharge pipes to be less than 20 feet from any property lines.
 - (c) In higher density zoning districts, such as D, E, and E1, in which infiltration of stormwater on each property is not practical, runoff shall be collected by a MSD-approved storm sewer, a designated swale, or other stormwater management BMP, as approved by the Building Commissioner and MSD, if necessary. Stormwater may drain to the street, if approved by the Building Commissioner. The project must also be approved by the Public Works Director if a public street will be affected.
 - (4) Discharge from sump pumps may be piped underground to discharge at an outlet point away from the building, however discharge points must comply with the following:
 - (a) Discharge outlets shall be located in the buildable area of the lot and not in the required yard (setback).

- (b) Exceptions may be made in situations in which the building occupies all or nearly all of the buildable envelope, as determined by the Building Commissioner. Exceptions shall comply with the following:
 - i. If deemed necessary by the Building Commissioner, the discharge point may encroach into the required yard by up to 5 feet.
 - ii. Exceptions will not be approved if this allows discharge pipes to be less than 20 feet from any property lines.
- (c) In higher density zoning districts, such as D, E, and E1, in which infiltration of stormwater on each property is not practical, sump pump drainage may be collected by a MSD-approved storm sewer, a designated swale, or other stormwater management BMP, if approved by the Building Commissioner and MSD, if necessary. Runoff from sump pumps shall not be allowed to drain to any street or sidewalk.

Sec. 110-143. Permit Required

All projects that include the construction of a Main Building, as defined in Section 110-2, constitute a subdivision, as defined in section 94-1, for the purposes of this Article or any project which disturbs one acre or more shall be evaluated and approved by MSD for storm water quantity and quality management, including all new single family homes, all new commercial and institutional building structures, regardless of the amount of land disturbance prior to commencing the proposed activity. Verification of this approval will be a set of plans approved by MSD including a valid MSD project number.

Sec. 110-144. Maintenance of storm water management facilities.

- (a) A legally binding maintenance agreement specifying the parties responsible for the proper maintenance of stormwater management facilities shall be secured prior to issuance of permits for land disturbance activities. Such maintenance agreement shall be secured per the requirements of MSD and a copy of such agreement shall be submitted to the City of Ladue.
- (b) Maintenance shall be performed regularly on retention/detention basins and other stormwater management facilities to ensure they are functioning properly. All owners or other parties responsible for retention/detention basins in the City of Ladue shall submit yearly maintenance reports to the City of Ladue. This may consist of a copy of a report submitted to MSD or other form as required by the Building Commissioner. Any property owner or other party responsible for a subdivision or other property that has failed to submit retention/detention basin maintenance reports may be denied building permits until the necessary reports and/or other required documentation have been submitted.

Sec. 110-145. Inspection of Storm Water Facilities

Inspection of facilities may be made on a reasonable basis including, but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations or inspection of drainage features. Inspections may include, but are not limited to: reviewing maintenance records; sampling discharges, surface water, ground

water and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other storm water treatment practices.

Sec. 110-146. Right-of-Entry For Inspection

When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system, sanitary sewer or combined sewer, the property owner shall grant to the City of Ladue's Public Works and/or Building Department and/or MSD the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when there is a reasonable basis to believe that a violation of this Chapter is occurring or has occurred and to enter when necessary for abatement of a public nuisance or correction of a violation of this Chapter.

Sec. 110-147. Failure To Maintain Practices

If the property owner fails or refuses to meet the requirements of the maintenance agreement, the City of Ladue, after reasonable notice, may issue violation notices per this Article. In the event that the storm water management facility becomes a danger to public safety or public health, MSD and the City of Ladue Building Department shall notify the party responsible for maintenance of the storm water management facility in writing. Upon receipt of that notice, the responsible person shall have thirty (30) days to effect maintenance and repair of the facility in a manner acceptable to the City or legal action may be pursued.

Sec. 110-148. Storm Water Management Plan Components to the Site Plan

- (a) During the building permit/ site plan process, the applicant shall define a storm water plan for the property. This storm water runoff plan is subject to approval of the Building Commissioner.
- (b) The applicant shall submit the following information in a form as prescribed by the City of Ladue Director of Building and Zoning. Only those items applicable to the proposed site need be submitted:
 - (1) Applicant information;
 - (2) Name, Legal address and telephone number;
 - (3) Common address and legal description of site;
 - (4) Vicinity map
- (c) Existing and proposed mapping and plans (scale 1" – 20') which illustrate at a minimum:
 - (1) Site plan sealed by a registered professional engineer in the State of Missouri;
 - (2) Existing and proposed topography (minimum of two (2) foot contours);
 - (3) Perennial and intermittent streams;
 - (4) Mapping of predominant soils from soil surveys;
 - (5) Boundaries of existing predominant vegetation and proposed limits of clearing;
 - (6) Location and boundaries of resource protection areas such as wetlands, lakes, ponds and other setbacks;

- (7) Location of existing and proposed roads, buildings, and other structures;
- (8) Existing and proposed utilities (e.g., water, sewer, gas, electric) and easements;
- (9) Location of existing and proposed conveyance systems such as grass channels, swales and storm drains;
- (10) Flow paths;
- (11) Location of floodplain / floodway limits and relationship of site to upstream and downstream properties and drainages (if applicable);
- (12) Location and dimensions of proposed channel modifications, such as bridge or culvert crossings (if applicable);
- (13) Location, size and limits of disturbance of proposed structural storm water management practices; and
- (14) Stormwater runoff calculations

SECTION 8. The portions of this Ordinance shall be severable. In the event that any portion of this Ordinance is found by a court of competent jurisdiction to be invalid, the remaining portions of this Ordinance are valid, unless the court finds that the valid portions of this Ordinance are so essential and inseparably connected with and dependent upon the void portion that it cannot be presumed that the City Council would have enacted the valid portions without the invalid ones, or unless the court finds that the valid portions standing alone are incomplete and are incapable of being executed in accordance with the legislative intent.

SECTION 9. This Ordinance shall take effect and be in force from and after its passage and approval by the Mayor.

PASSED THIS 27TH DAY OF MARCH, 2017.

President, City Council

APPROVED AND ADOPTED THIS 27TH DAY OF MARCH, 2017.

Nancy Spewak, Mayor

ATTEST:

Laura Rider, City Clerk