

SUBDIVISION
REGULATIONS

GALLATIN
TENNESSEE

ADOPTED
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CHAPTER 1

GENERAL PROVISIONS

1-101 Title – These Subdivision Regulations (hereinafter “Regulations”) shall hereafter be known and cited as the “Subdivision Regulations of the City of Gallatin and the Gallatin Planning Region.”

1-102 Authority – These Regulations are adopted by the Gallatin Municipal-Regional Planning Commission (hereinafter referred to as the “Planning Commission”), acting under the authority granted pursuant to Title 13, Chapters 3 and 4 of the Tennessee Code Annotated.

Having adopted a Major Thoroughfare Plan for both the corporate limits of the City of Gallatin and the Planning Region, having filed a certified copy of the plan in the office of the Sumner County Register of Deeds (hereinafter “Register”), and having held a public hearing on these Regulations as indicated in Chapter 2 of these Regulations and as required by Title 13, Chapters 3 and 4, Tennessee Code Annotated, the Planning Commission has fulfilled the requirements set forth in State law as prerequisites to the adoption of these Regulations.

1-103 Jurisdiction – These Regulations shall apply to all subdivisions, as herein defined, located within the corporate limits of the City of Gallatin and Planning Region as established by resolution of the State Local Planning Office. No land shall be subdivided within either the City of Gallatin or the Planning Region until the subdivider submits a plat as required by these Regulations, obtains Planning Commission approval of the plat, and files the approved plat with the Register.

1-104 Policy and Purpose – It is hereby declared to be the policy of the Planning Commission to consider the subdivision of land and development of a subdivision plat as subject to the control of the General Development Plan of the City for the orderly, planned, and efficient physical and economical development of the City. Land to be subdivided shall be of such character that it can be used for building purposes without danger of health, fire, flood, or other menace. Land shall not be subdivided until proper provisions have been made for drainage, water, sewerage, and other public utilities and for other required public facilities and improvements. The existing and proposed public improvements shall generally conform to and be properly related to the proposals shown in the General Development Plan of the City.

These Regulations shall supplement and facilitate the enforcement of the provisions and standards contained in the Gallatin Zoning Ordinance.

These Regulations are adopted for the following purposes:

1. To promote the public health, safety, and general welfare of the City.
2. To guide the development of the City and Planning Region in accordance with the adopted General Development Plan, considering the suitability of nonresidential and public areas of the City and Planning Region and having regard for the most beneficial land use in such areas.
3. To provide for adequate light, air, and privacy; to secure safety from fire, flood, and other dangers; and to prevent overcrowding of the land and undue congestion of population.
4. To protect the character and the social and economic stability of the City and Planning Region, especially the unincorporated areas thereof and to encourage the orderly and beneficial development of all areas in the City and Planning Region.
5. To conserve the value of land, buildings, and improvements throughout the City and Planning Region and to minimize the conflicts among the uses of land and buildings.
6. To serve as a guide for public policy and action, adequately providing for transportation, water, sewerage, schools, parks, playgrounds, recreation, and other public needs and for private enterprise in building development, investment, and other economic activity related to uses of land and buildings throughout the City and Planning Region.
7. To provide the most beneficial relationship between the uses of land and buildings and the traffic movement throughout the City and Planning Region, especially attempting to avoid traffic congestion and to provide for the proper location and width of streets and building lines.
8. To establish reasonable standards of design and procedures for subdivisions and resubdivisions, to further the orderly layout and use of land, and to insure proper legal descriptions and proper monumenting of subdivided land.
9. To prevent the pollution of air, streams, and ponds; to assure the adequacy of drainage facilities; to safeguard the water table; and to encourage the wise use and management of natural resources throughout the City and Planning Region in order to preserve the integrity, stability, and beauty of the community and the value of the land.
10. To preserve the natural beauty and topography of the City and Planning Region and to insure appropriate development with regard to these natural features.

11. To provide for open spaces through the most efficient design and layout of the land, including the use of average density in providing for minimum width and area of lots while preserving the density of land as established in the applicable Zoning Ordinance.

1-105 Repeal of Previous Regulations – Upon the adoption and effective date of these Regulations, the Subdivision Regulations of Gallatin, Tennessee, adopted July 20, 1987, as amended, are hereby repealed.

1-106 Interpretation, Conflict, and Severability

1-106.1 Interpretation – These Regulations are intended to promote the health, safety, and welfare of the persons within this City and Planning Region and toward that purpose, these Regulations are to be liberally construed.

1-106.2 Conflict with Public and Private Provisions

1-106.201 Public Provisions – These Regulations are not intended to interfere with, abrogate, or annul any resolution, action of the City Council or any other Federal, State or Local regulation, statute, or other provision of law provided that, if any provision of these Regulations or any resolution, action of the City Council or Federal, State, or Local statute conflicts, whichever provision is more restrictive or imposes higher standards shall control.

1-106.202 Private Provisions – These Regulations are not intended to abrogate any easement, covenant, or any other private agreement or restriction provided that, where these Regulations are more restrictive or impose higher standards than such easement, covenant, or other private agreement or restriction, the requirements of these Regulations shall govern. Where the provisions of the easement, covenant, or private agreement or restriction impose more restrictive obligations and duties or impose higher standards than the requirements of these Regulations or than the determinations of the Planning Commission in approving a subdivision or in enforcing these Regulations, it shall not be the policy of the Planning Commission to intervene into or enforce such easement, covenant, or private agreement.

1-106.203 Severability – If any part or provision of these Regulations or application thereof to any person or circumstances is adjudged invalid by any court of competent jurisdiction, such judgment shall be confined in its operation to the part, provision, or application directly involved in the controversy in which such judgment shall have been rendered and shall not affect or impair the validity of the remainder of these Regulations or the application thereof to other persons or circumstances and for such purpose, the provisions or any portion of the provisions in these Regulations are considered severable. The Planning Commission hereby declares that it would have enacted the remainder of these Regulations even without any such part, provision, or application.

1-107 Saving Provision – These Regulations shall not be construed as abating any action now pending under or by virtue of previous Subdivision Regulations or as discontinuing, abating, and modifying or altering any penalty accruing or about to accrue or as affecting the liability of any person or as waiving any right of the City under any Section or provision existing at the time of adoption of these Regulations or as vacating or annulling any rights obtained by any person by lawful action of the City except as expressly shall be provided otherwise in these Regulations.

1-107.1 Previously-Approved Subdivisions

1-107.101 Unexpired Preliminary Approval – The approval granted on any plat prior to the effective date of these Regulations shall remain in force and effect for the time period stipulated by the Regulations under which the approval was first granted.

1-107.102 Expired Preliminary Approval – In any instance in which the period of preliminary approval shall have passed with some portion of the subdivision not having received final approval and the applicant wishes an extension of the preliminary approval, the Planning Commission may:

1. Permit the remaining portion of the subdivision to be constructed and to receive approval under provisions set forth in the Regulations whereby preliminary approval was originally granted; or,
2. Stipulate that the plat is null and void and that a new plat be presented subject to the provisions of these Regulations.

In making this determination, the Planning Commission shall consider all pertinent facts available to it. The current state and active pursuit of construction and development activities within the subdivision shall be given due consideration in the course of the Planning Commission's deliberations on this question.

1-108 Amendments

- 1-108.1 Enactment – For the purpose of providing for the public health, safety, and general welfare, the Planning Commission may amend these Subdivision Regulations by the affirmative vote of a majority of its entire membership. Before the adoption of any amendment to these Regulations, a public hearing thereon shall be held by the Planning Commission thirty (30) days notice of the time and place of which shall be given by publication in a newspaper of general circulation in the Planning Region.
- 1-108.2 Certification and Distribution – Subsequent to the adoption of any amendment to these Regulations, such amendment shall be incorporated into the text of these Regulations. All amendments shall be listed in Chapter 6 of these Regulations.

1-109 Resubdivision of Land

- 1-109.1 Procedures for Resubdivision – If any change in an approved or recorded subdivision plat would affect any street layout shown on such plat or areas reserved thereon for public use or any lot line or if it would affect any map, plan, or plat legally recorded before the adoption of any Subdivision Regulations, such amendment must be approved by the Planning Commission by the same procedure, rules, and regulations as for a subdivision.
- 1-109.2 Procedures for Subdivision Where Future Resubdivision is Foreseen – Whenever a parcel of land is subdivided and the subdivision plat shows one (1) or more lots containing more than one (1) acre of land or double the minimum required area for the zoning district in which the lot is located, and the Planning Commission has reason to believe that such lots will be resubdivided into smaller building sites, the Planning Commission may require that the subdivision and development of such parcel of land allow for the future opening of streets and the ultimate extension of adjacent streets. The Planning Commission may require that dedications providing for the future opening and extension of such streets be so indicated on the plat.

1-110 Conditions – Regulation of the subdivision of land and the attachment of reasonable conditions to land subdivision is an exercise of valid police power delegated by the State to this Planning Commission. The developer has a duty to comply with reasonable conditions imposed by the Planning Commission for design, dedication, improvement, and restrictive use of the land so as to provide for the physical and economical development of the Planning Region and the safety and general welfare of the future lot owners in the subdivision of the community at large.

1-111 Vacation of Plats – Any plat or any part of any plat may be vacated by the owner of the premises at any time before the sale of any lot described therein by a written instrument to which a copy of such plat shall be attached, declaring the plat or part of the plat to be vacated. The Planning Commission will follow the same procedure for approval of such instrument as required for approval of plats. The City Council may reject any such instrument which abridges or destroys any public rights in any of its public uses, improvements, streets, or alleys. Such an instrument shall be executed, acknowledged, or approved and duly recorded or filed. When approved by the City, the instrument shall operate to void the recorded plat and divest all public rights in the streets, alleys, and public grounds and all dedications laid out or described in such plat. When any lot or lots have been sold, the plat may be vacated in the manner herein provided only if all the owners of lots in such plat join in the execution of such writing.

1-112 Variances

1-112.1 General – If the Planning Commission finds that extraordinary hardships or practical difficulties may result from strict compliance with these Regulations, a variance from these Regulations may be granted, provided that such variance shall not have the effect of nullifying the intent and purpose of these Regulations and provided further that the Planning Commission shall not recommend variances unless it shall make findings based upon the evidence presented to it in each specific case that:

1. The granting of the variance will not be detrimental to the public safety, health, or welfare or injurious to other property or improvements in the neighborhood in which the property is located;
2. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought and are not applicable generally to other property;
3. Because of the particular physical surroundings, shape, or topographical conditions of the specific property involved, a particular hardship to the Owner would result, as distinguished from a mere inconvenience, if the strict letter of these Regulations were carried out; and,

4. The variance will not in any manner vary the provisions of the adopted General Development Plan, Major Thoroughfare Plan, Zoning Ordinance, or other City documents.

1-112.2 Procedures – A petition for any such variance shall be submitted in writing by the subdivider along with the initial filing of the plat. The petition shall state fully the grounds for the application and all of the facts upon which the petitioner is relying.

1-112.3 Conditions – In approving variances, the Planning Commission may impose such conditions as in its judgment will secure substantially the objectives, standards, and requirements of these Regulations.

1-113 Enforcement, Violations, and Penalties

1-113.1 General

1-113.101 Authority – The enforcement of these Regulations and the penalties for violations are provided in Title 13, Chapters 3 and 4, Tennessee Code Annotated.

1-113.102 Enforcing Officer – It shall be the duty of the City Engineer or his designated appointee to enforce these Regulations and to bring to the attention of the City Attorney any violations or lack of compliance herewith.

1-113.103 Recording of Plats – Pursuant to Title 13, Chapters 3 and 4, Tennessee Code Annotated, no plat of a subdivision of land within the Planning Region shall be filed by any person or admitted to the land records of the County or received or recorded by the Register until the plat has received final approval of the Planning Commission, in accordance with these Regulations, and such approval has been endorsed in writing on the plat by the Planning Commission in the manner prescribed by Section 2-105.7 of these Regulations.

1-113.104 Use of Unapproved Plats – Pursuant to Title 13, Chapters 3 and 4, Tennessee Code Annotated, no owner or agent of the owner of any land shall transfer or sell or agree to sell or negotiate to sell such land by reference to or exhibition of or by other use of a plat of a subdivision of such land without first having submitted a plat of such subdivision to the Planning Commission and obtained its approval as required by these Regulations and having recorded such plat in the Office of the County Register, provided, however, that the owner or agent of the Owner of any land in the Planning Region may sell, transfer, or agree to sell any lots or lots shown on a plat having been approved by the Planning Commission as required by these Regulations and provided, further, that the Owner or agent posts Surety in a form and amount and with conditions and surety satisfactory to the Planning Commission providing for and securing to the public the actual construction and installation of required improvements and utilities within a period specified by the Planning Commission and expressed in the Surety.

The description by metes and bounds in the instrument of transfer or other document used in the process of selling or transfer shall not exempt any Owner or agent violating the provisions of the preceding paragraph from the penalties or remedies provided in Sections 1-113.2 and 1-113.3 of these Regulations.

1-113.105 Metes and Bounds Subdivision – The subdivision of any lot or parcel of land by use of metes and bounds description without complying with the plat provisions of these Regulations shall not be permitted. All such described subdivisions shall be subject to all of the requirements of these Regulations.

1-113.106 False Statement About Roads – Pursuant to Title 13, Chapters 3 and 4, Tennessee Code Annotated, no Owner or agent of the Owner of any land shall falsely represent to a prospective purchaser of real estate that roads or streets will be built or constructed by any city, county, or any other political subdivision.

1-113.107 Roads and Utilities – Pursuant to Title 13, Chapters 3 and 4, Tennessee Code Annotated, no county or court, board, officer, or authority thereof or any municipal official or authority shall accept, lay out, open, improve, grade, pave, or light any street, lay or authorize the laying of water mains or sewers, or construction or authorize the construction of other facilities or utilities in any street located within the Planning Region unless such street has been accepted, opened, or otherwise received the legal status of a public street prior to the attachment of the Planning Commission’s jurisdiction or unless such street corresponds in its location and lines to a street shown on a subdivision plat approved by the Planning Commission or on a street plat made by the Planning Commission; provided, however, that the County Commission or City Council may accept or lay out any other street or adopt any other street location, provided the resolution, ordinance, or other measure for such acceptance, laying out or adoption first shall be submitted to the Planning Commission for its approval and, if disapproved by the Planning Commission, shall receive the favorable vote of a majority of the entire membership of the County Commission or City Council as appropriate. A street approved by the Planning Commission upon such submittal or accepted, laid out, or adopted by the Planning Commission shall have the status of an approved street location as fully as though it originally had been shown on a subdivision plat made and adopted by the Planning Commission. In case, however, of any State highway constructed or to be constructed in the Planning Region by the State of Tennessee with State funds as a part of the State highway system, the submittal to the Planning Commission shall be by the State Commissioner of Transportation, who shall have the power to overrule the disapproval of the Planning Commission.

1-113.108 Building Permits – No building permit shall be issued for the construction of any building or structure located on a lot or plat subdivided or sold in violation of any provision of these Regulations.

1-113.109 Access to Lots by Roads or Easements – Pursuant to Title 13, Chapters 3 and 4, Tennessee Code Annotated, no building permit or Certificate of Occupancy shall be issued for or no building or structure shall be erected on any lot within the Planning Region, unless the street giving access to the lot upon which the building or structure is proposed to be placed shall have been accepted or opened or shall have otherwise received the legal status of a public road prior to the attachment of the Planning Commission’s platting jurisdiction or unless such street corresponds in its location and lines with a street plat given approval by the Planning Commission as prescribed in Section 1-113.107 of these Regulations, unless such lot fronts upon a permanent easement with access to an existing public highway, street, or thoroughfare, provided, however, that the provisions of this Section relating to access shall not apply to subdivisions of property zoned commercial or industrial and that no building permit shall be withheld in such cases of noncompliance with this Section. Provided further that when a permanent easement to a public street is used as access to a lot or tract of land having been or being separated by deed or plat from other property, such easement shall be at least fifty (50) feet in width from and after the time of adoption of this amendment and shall not be used to provide access to more than one (1) lot or tract of land. This Section shall not be construed to prohibit the development of buildings on lots or tracts with permanent access provided by private streets provided such development is in the form of condominium ownership of such private improvements which has been approved by the Planning Commission in perpetuity. Any building or structure erected or to be erected in violation of this Section shall be deemed an unlawful building or structure.

1-113.2 Violations and Penalties

1-113.201 Recording of Unapproved Plats – Any Register receiving, filing, or recording a plat of a subdivision in violation of Section 1-113.103 of these Regulations shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

1-113.202 Use of Unapproved Plats – Any Owner or agent of the Owner of any land who violates Section 1-113.104 of these Regulations shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

1-113.203 False Statement About Roads – Any Owner or agent of the Owner of any land who violates Section 1-113.106 of these Regulations shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

1-113.3 Civil Enforcement

1-113.301 General – Appropriate actions and proceedings may be taken by law or equity to prevent any violation of these Regulations, to prevent unlawful construction, to recover damages, to restrain, correct, or abate a violation, to prevent illegal occupancy of a building, structure, or premises, and these remedies shall be in addition to the penalties described in Section 1-113.2 of these Regulations.

1-113.302 Specific Statutory Remedies

- A. Use of Unapproved Plats – The City, through its attorney or other official designated by the City Council, may enjoin by action for injunction any transfer of, sale of, or agreement to sell any land in violation of Section 1-113.104 of these Regulations.
- B. Erection of Unlawful Buildings – Where any building or structure is erected or being erected on any lot in violation of the road or easement frontage requirements of Section 1-113.109 of these Regulation, the City Building Official or the City Attorney or other official designated by the City Council may bring action to enjoin such erection or cause the building or structure to be vacated or removed.
- C. Enforcement of Sureties – Where a Surety is accepted in lieu of completion of subdivision improvements and utilities as provided in Chapter 3 of these Regulations, the City or County, as appropriate, may enforce such Surety in the manner prescribed by Chapter 3 of these Regulations.

CHAPTER 2

PLATS

2-101 General Procedure

2-101.1 Plat Approval Requirements – Except as otherwise provided in Section 1-113.104 of these Regulations, before any contract is executed for the sale of any part of land which is proposed to be subdivided and before any permit for the erection of any structure in a proposed subdivision shall be granted, the subdividing Owner or his authorized agent shall apply for and secure the Planning Commission’s approval of the proposed subdivision in accordance with the procedures of this Chapter.

2-101.2 Conformance to Applicable Rules and Regulations – In addition to the requirements established herein, all subdivision plats shall comply with all applicable laws, ordinances, resolutions, rules, or regulations, including, but not limited to, the following:

1. All applicable provisions of Tennessee law, regulations, or policy,
2. The Gallatin Zoning Ordinance, building and housing codes, and all other applicable laws of the City of Gallatin and Sumner County,
3. The adopted General Development Plan and Major Thoroughfare Plan, including all streets shown on the Major Thoroughfare Plan,
4. The adopted Storm Water Ordinance, Construction Manual, Construction Details Handbook, and Bicycle and Pedestrian Master Plan,
5. The rules of the County Health Department and the Tennessee Department of Health and Environment,
6. The rules of the Tennessee Department of Transportation if the subdivision or any lot contained therein abuts a State highway, and,
7. The standards and regulations adopted by all other boards, commissions, and agencies of the City or County, where applicable.

Plat approval may be withheld if a subdivision is not in conformity with the above guides or with the policy and purpose of these Regulations as set forth in Section 1-104 of these Regulations.

2-101.3 Classification of Subdivisions – The Chief Enforcing Officer shall classify each subdivision proposal as either major or minor as defined herein.

2-101.4 Schedule for Submittals – The subdivider shall follow the procedures described below in order to secure plat approval.

1. Minor Subdivision (1-5 Lots):

- a. Pre-application conference with City staff, including submittal of a scale drawing or survey of the proposed subdivision for preliminary discussion and review.
- b. Securing of approvals from other public agencies and any affected utility districts or companies.
- c. Submittal of a Final Plat, prepared in accordance with the specifications in Section 2-105 of these Regulations for approval by the Planning Commission.

2. Major Subdivision (More Than 5 Lots):

- a. Pre-application conference on the subdivision with City staff, advising the Planning Commission, including a Sketch Plat.
- b. Submittal of a Sketch Plat prepared in accordance with Section 2-102 herein for Planning Commission approval.
- c. Securing of approvals from other public agencies and any affected utility districts or companies.
- d. Submittal of the Preliminary Plat prepared in accordance with Section 2-103 herein for Planning Commission approval.
- e. Submittal of the Construction Plans prepared in accordance with Section 2-104 herein for approval by the City Engineer.
- f. Submittal of the Final Plat prepared in accordance with Section 2-105 herein for Planning Commission approval.

2-101.5 Official Submittal Date – For the purpose of these Regulations, for both major and minor subdivisions, the date of the regular meeting of the Planning Commission at which the hearing on the Final Plat, including any adjourned date thereof, is closed, shall constitute the official submittal date of the plat at which the statutory period required in Title 13 Chapters 3 and 4, Tennessee Code Annotated, for formal approval or disapproval of the plat shall commence.

2-101.6 Zoning Regulations – Every plat shall conform to the existing Zoning Ordinance and Subdivision Regulations applicable at the time of proposed final approval, except that any plat which has received preliminary approval shall be exempt from any subsequent amendments to the Zoning Ordinance or these Subdivision Regulations rendering the plat nonconforming as to bulk, use, or development standards, provided that final approval is obtained within the effective period of preliminary approval set forth in Section 2-103 of these Regulations.

2-101.7 Self-Imposed Restrictions – If the Owner places restrictions on any of the land contained in the subdivision greater than those required by the Zoning Ordinance or these Regulations, such restrictions or reference thereto shall be required to be recorded, along with the Final Plat with the Register on a separate form and referenced on said plat.

2-101.8 Subdivision Name – The proposed name of the subdivision shall not duplicate or too closely approximate phonetically the name of any other subdivision in the area covered by these Regulations. The Planning Commission shall have authority to designate the name of the subdivision which shall be determined at Sketch Plat or Preliminary Plat approval.

2-101.9 Public Uses

2-101.901 Plat to Provide for Public Use – Except when a developer utilizes a Master Planned Zoning District, in which land is set aside by the developer as required by provisions of the Zoning Ordinance, whenever a tract to be subdivided includes a school, recreation uses, a portion of a major thoroughfare, or other public uses, as indicated on the adopted General Development Plan, Major Thoroughfare Plan, Greenway Concept Master Plan, or any portion thereof, such space shall be suitably incorporated by the developer into the plat when first presented for review by the Planning Commission.

After proper determination of its necessity by the Planning Commission and the appropriate City or County official or other public agency involved in the acquisition and use of each such site, and after a determination has been made to acquire the site by the public agency, the site shall be suitably incorporated by the developer into the plat prior to final approval by the Planning Commission and the recording of the plat.

2-101.902 Referrals to Public Body – The Planning Commission shall refer any plat presented in accordance with Section 2-101.901 of these Regulations to the public body concerned with acquisition for its consideration and report. The Planning Commission may propose alternate areas for such acquisition and shall allow the public body or agency thirty (30) days for reply.

Among the areas which the Planning Commission may propose for public acquisition, when the Commission deems it appropriate and consistent with the policies and purposes set forth in Sections 1-104 and 4-101 of these Regulations, is any land within a floodway or floodway fringe area determined according to the procedure described in Section 4-101 of these Regulations.

The acquiring agency's recommendation, if affirmative, shall include a map showing the boundaries and area of the parcel to be acquired and an estimate of the time required to complete the acquisition.

2-101.903 Notice to Property Owner – Upon receipt of an affirmative report, the Planning Commission shall notify the property Owner and shall designate on all plats any areas proposed to be acquired by the public body. Upon such designation by the Planning Commission, any reserved portion of any floodway or floodway fringe area shall not be altered from its natural state by the developer in any manner whatsoever, except upon the written approval of the Planning Commission.

2-101.904 Duration of Land Reservation – The acquisition of land reserved by a public agency on the Final Plat shall be initiated within twenty-four (24) months of notification, in writing, from the Owner that he intends to develop the land. Such letter of intent shall be accompanied by a plat of the proposed development and a tentative schedule of construction. Failure on the part of the public agency to initiate acquisition within the prescribed twenty-four (24) months shall result in the removal of the "reserved" designation from the property involved and the freeing of the property for development in accordance with these Regulations.

2-101.10 Phasing of Subdivision Plats – Prior to granting final approval of a major subdivision plat, the Planning Commission may permit the plat to be divided into two (2) or more phases and may impose such conditions upon the filing of each phase as it may deem necessary to assure the orderly development of the subdivision.

Such authorized phases must contain at least ten percent (10%) of the total number of lots contained in the proposed plat unless a specific waiver of this requirement is granted by the Planning Commission.

Subdivisions being submitted in parts shall be submitted as Phases and may be broken down further into Sections.

2-102 Sketch Plat

2-102.1 Application – The subdivider shall submit a Sketch Plat for the pre-application conference with the City Staff, if required. The Sketch Plat is to be a concept plan for design purposes and should be used to discover all factors that may have an impact on the proposed development and to advise the subdivider of various possibilities before substantial amounts of time and money have been invested in a very detailed proposal that may contain elements contrary to these Regulations.

The Sketch Plat application shall:

1. Be made on forms available at the office of the City Planner and shall be accompanied by a fee as determined by the City Council.
2. Be presented to the City Planner at least five (5) weeks prior to a regular, officially-opened meeting of the Planning Commission.
3. Be accompanied by a minimum of nine (9) copies of the Sketch Plat as described herein. The copies shall be distributed by the Planning Division prior to the Planning Commission meeting at which the plat is to be considered.

2-102.2 Requirements – Sketch Plats shall be submitted to the Planning Commission prepared using pen, pencil, or computer-aided drafting and design (CADD). An applicant preparing a Sketch Plat using CADD shall be required to submit a digital file of the Sketch Plat at the time of re-submittal.

The Sketch Plat shall show all information as listed on the Sketch Plat Checklist in Appendix A of these Regulations.

2-102.3 Review – The City Staff shall initiate an administrative review of the Sketch Plat and any exhibits submitted in conformance with these Regulations. This review shall include the City Staff advising the applicant of required revisions to the plat. The review shall be performed during the first week of the month prior to the regularly-scheduled Planning Commission meeting.

2-102.4 Resubmittal – The applicant shall resubmit sixteen (16) revised copies of the Sketch Plat addressing the City Staff comments. This resubmittal shall be presented to the City Staff per the annually adopted Submittal Schedule. A staff analysis of the resubmitted plats shall be presented to the Planning Commission.

2-102.5 Approval – After the Planning Commission has reviewed the Sketch Plat, exhibits, and the results of administrative reviews, the City Planner shall provide the applicant with an Action Form stating any required changes or additions. Approval of the Sketch Plat shall constitute authorization to prepare a Preliminary Plat and detailed Construction Plans and specifications.

2-102.6 Expiration – The approval of the Sketch Plat shall expire within one (1) year if no other progress is made toward the development. An extension may be granted upon proper application.

2-103 Preliminary Plat (Major Subdivisions Only)

2-103.1 Application – The applicant shall file with the City Staff a Preliminary Plat application. The failure of the applicant to satisfy the requirements of this Section with full and correct information shall be cause for disapproval of a Preliminary Plat. The Preliminary Plat application shall:

1. Be made on forms available at the office of the City Planner and shall be accompanied by a fee as determined by the City Council.
2. Be presented to the City Planner at least five (5) weeks prior to a regular, officially-opened meeting of the Planning Commission.
3. Be accompanied by a minimum of nine (9) copies of the Preliminary Plat as described herein. The copies shall be distributed by the Planning Division prior to the Planning Commission meeting at which the plat is to be considered.

2-103.2 Requirements – The Preliminary Plat shall be prepared by a registered land surveyor, landscape architect, architect, land planner, or licensed engineer engaged in the practice of civil engineering. The plat may be prepared in pen, pencil, or computer-aided drafting and design (CADD), and the sheets shall be numbered in sequence if more than one (1) sheet is used. An applicant preparing a Preliminary Plat using CADD shall be required to submit a digital file of the Preliminary Plat at the time of resubmittal.

Preliminary Plat shall show all information as listed on the Preliminary Plat Checklist in Appendix A of these Regulations.

- 2-103.3 Review – The City Staff shall initiate an administrative review of the Preliminary Plat and any exhibits submitted in conformance with these Regulations. This review shall include the City Staff advising the applicant of required revisions to the plat. The review shall be performed during the first week of the month prior to the regularly-scheduled Planning Commission meeting.
- 2-103.4 Resubmittal – The applicant shall resubmit sixteen (16) revised copies of the plat addressing the City Staff comments. This resubmittal shall be presented to the City Staff per the annually adopted Submittal Schedule. A staff analysis of the resubmitted plats shall be presented to the Planning Commission.
- 2-103.5 Approval – The Planning Commission shall afford the affected property Owner a hearing, as required by Title 13, Chapters 3 and 4, Tennessee Code Annotated, on each Preliminary Plat brought before it. After the Planning Commission has reviewed the Preliminary Plat, exhibits, and the results of administrative reviews, the City Planner shall provide the applicant with an Action Form stating any required changes or additions. The Planning Commission shall approve, conditionally approve, or disapprove the Preliminary Plat within thirty (30) days after the date of the regular meeting of the Planning Commission at which the hearing on preliminary approval, including adjourned date thereof, is closed.

The failure of the Planning Commission to act upon a Preliminary Plat within the prescribed time shall be deemed preliminary approval of the plat and, in such event, a Certificate of Preliminary Approval shall be issued by the Chairman and Secretary of the Planning Commission upon demand, and the applicant may proceed to apply for Final Plat approval in the manner prescribed by Section 2-105 of these Regulations.

After the Planning Commission approves, conditionally approves, or disapproves the Preliminary Plat, one (1) copy of the proposed Preliminary Plat shall be returned to the developer with the date of approval, conditional approval, or disapproval and the reasons therefore accompanying the plat. If a Preliminary Plat is disapproved, the Planning Commission shall state specific reasons for disapproval that shall be entered into the minutes of the meeting.

Before the Planning Commission approves a Preliminary Plat showing park reservation or land for other public use proposed to be dedicated to the City or County, the Planning Commission shall obtain approval of the park or land reservation from the appropriate governmental agency.

2-103.6 Expiration – The approval of a Preliminary Plat shall be effective for a period of one (1) year, at the end of which time approval of the Final Plat must have been obtained from the Planning Commission, although the plat need not have been signed and filed with the Register. Any plat not having received final approval within the period of time set forth herein shall be null and void, and the developer shall be required to submit a new plat for preliminary approval subject to all new zoning restrictions and Subdivision Regulations. Prior to the expiration of the preliminary approval, such plat approval may be extended for one (1) additional year upon proper request and if the Planning Commission deems such advisable based upon progress made in developing the subdivision.

2-104 Construction Plans

2-104.1 Application – The applicant shall file with the City Staff at least three (3) sets of Construction Plans. The failure of the applicant to satisfy the requirements of this Section with full and correct information shall be cause for removal of the associated Final Plat from the Planning Commission agenda.

2-104.2 Requirements – These plans shall comply with the specifications in Chapter 4 of these Regulations, the Gallatin Construction Manual, and the Gallatin Storm Water Ordinance. Construction Plan approval must precede actual construction.

An applicant preparing Construction Plans using computer-aided drafting and design (CADD) shall be required to submit a digital file of the Construction Plans at the time of resubmittal. Submittal of as-built drawings of the Construction Plans shall be required before final acceptance of the subdivision. An applicant preparing as-built drawings using CADD shall be required to submit a digital file of the as-built drawings before final acceptance of the subdivision.

The Construction Plans shall show all information as listed on the Construction Plans Checklist in Appendix A, as well as meet all other requirements of these Regulations, the Gallatin Construction Manual and the Gallatin Storm Water Ordinance.

2-104.3 Review - After the Engineering Division has reviewed the Construction Plans and any attached exhibits, the applicant shall be advised of any required changes or additions. One (1) copy of the proposed Construction Plans shall be returned to the developer with notes and corrections.

2-104.4 Resubmittal – The applicant shall resubmit two (2) revised copies of the Construction Plans addressing the City staff comments. Once all conditions have been met, the Construction Plans will be signed and approved.

2-104.5 Approval – If the Construction Plans are approved, at least one copy will be returned to the applicant with the signatures of the City Engineer and the City staff plans reviewer. Once the applicant has received their signed copy of the Construction Plans, the applicant may begin erosion control and grading operations and proceed to apply for Final Plat approval in the manner prescribed by Section 2-105 of these Regulations.

The Construction Plans may accompany the Preliminary Plat submittal or be submitted afterwards. The Planning Commission shall consider no Final Plat until the required Construction Plans have been approved.

2-104.6 Expiration – The approval of a Construction Plan shall be effective for a period of two (2) years, at the end of which time approval of the Final Plat must have been obtained from the Planning Commission, although the plat need not have been signed and filed with the Register. Any plat not having received final approval within the period of time set forth herein shall cause the Construction Plans to be null and void, and the developer shall be required to submit a new set of Construction Plans for approval subject to all new zoning restrictions and Subdivision Regulations.

2-105 Final Plat

2-105.1 Application – The applicant shall file with the City Staff a Final Plat application. The failure of the applicant to satisfy the requirements of this Section with full and correct information shall be cause for disapproval of a Final Plat.

The Final Plat application shall:

1. Be made on forms available at the office of the City Planner,
2. Include the entire subdivision, or section thereof, for which final approval is sought,
3. Be accompanied by a minimum of nine (9) copies of the Final Plat as described herein. The copies shall be distributed prior to the Planning Commission meeting at which the plat is to be considered,
4. Comply substantially with the Preliminary Plat and Construction Plans, as approved,

5. Be presented to the City Planner at least five (5) weeks prior to the regular meeting of the Planning Commission at which it is to be considered. The annually-adopted Submittal Schedule is available in the office of the City Planner,
6. Be accompanied by all formal Irrevocable Offers of Dedication to the public for all streets, City or County uses, utilities, parks, and easements, in a form approved by the City or County Attorney, as applicable. The Final Plat shall be marked with a notation indicating the formal Offers of Dedication as shown in Appendix A of these Regulations,
7. Be accompanied by the Performance Surety, if required per the conditions of Chapter 3 of these Regulations, in a form satisfactory to the City Attorney and in an amount satisfactory to the Planning Commission upon recommendation by the City Engineer,
8. Be accompanied, if the Final Plat contains open space, recreational facilities, or any portion of the site in common Ownership, regardless of the method of Ownership, by the following documentation for approval by the Planning Commission and recording with the Final Plat:
 - a. Plans for improvement and maintenance of the open space or facilities located thereon,
 - b. Where open space or facilities are to be deeded to a Homeowners Association or similar organization acting on behalf of the joint owners of said property, articles of incorporation and by-laws of the Homeowners Association or other legal entity charged with improving or maintaining the open space or facilities, and declaration of covenants and restrictions pertaining to each and every property within the subdivision,
 - c. Where open space or facilities are to be retained by the developer, declaration of covenants and restrictions pertaining to open space and facilities that assure long-term maintenance and the continued use of said facilities for the purpose intended, and
9. Plat certifications shall be required on all Final Plats. The form of the plat certifications shall be as reproduced in Appendix A of these Regulations and approved by the City Attorney. The form may be modified as required by the City Attorney.

- 2-105.2 Requirements – An applicant preparing a Final Plat using CADD shall be required to submit a digital file of the Final Plat before the plat can be recorded. The use of an appropriate smaller scale is permitted for lots larger than two (2) acres. When more than one (1) sheet is required, an index sheet of the same size shall be filed showing the entire subdivision with the sheets numbered in sequence.

Construction Plans, if required, as described in Section 2-104 of these Regulations, must have been approved prior to submittal to the Planning Commission of the Final Plat. The Planning Commission shall consider no Final Plat until the required Construction Plans have been approved.

The Final Plat (major subdivision) shall show all information as listed on the Final Plat Checklist in Appendix A of these Regulations.

The Final Plat (minor subdivision) shall show all information as listed on the Minor Subdivision Plat Checklist in Appendix A of these Regulations.

- 2-105.3 Review – The City Staff shall initiate an administrative review of the Final Plat and any exhibits submitted in conformance with these Regulations. This review shall include the City Staff advising the applicant of required revisions to the plat. The review shall be performed during the first week of the month prior to the regularly-scheduled Planning Commission meeting.
- 2-105.4 Resubmittal – The applicant shall resubmit sixteen (16) revised copies of the plat addressing the City Staff comments. This resubmittal shall be presented to the City Staff per the annually adopted Submittal Schedule. A staff analysis of the resubmitted plats shall be presented to the Planning Commission.
- 2-105.5 Approval – The City Planner shall provide the subdivider with an Action Form stating the date of approval, conditional approval, or disapproval, along with the reasons for any disapproval.

The Planning Commission shall afford the affected property Owner a hearing as required by Title 13, Chapters 3 and 4, Tennessee Code Annotated, on each Final Plat brought before it. The Planning Commission shall, within thirty (30) days after submittal of the plat, approve, conditionally approve, or disapprove the Final Plat by resolution which shall set forth in detail any conditions to which the approval is subject or reasons for disapproval.

The failure of the Planning Commission to act upon a plat within the prescribed time shall be deemed approval of the plat. In such event, a Certificate of Approval entitling the subdivider to proceed as specified in Section 2-105.7 of these Regulations shall be issued, upon demand, by the Chairman and Secretary of the Planning Commission.

2-105.6 Submittal of Recordable Plat – Upon approval of the Final Subdivision Plat by the Planning Commission, the applicant shall provide one (1) Mylar and two (2) vellum copies of the plat for recording.

2-105.7 Signing and Recording of Subdivision Plats

2-105.701 Vested Rights – No vested rights shall accrue to any plat by reason of preliminary or final approval until the actual signing of the plat by the Secretary of the Planning Commission. All requirements, conditions, or regulations adopted by the Planning Commission, applicable to the particular subdivision or to all subdivisions generally, shall be deemed a condition for any subdivision prior to the time of the signing of Final Plat by the Secretary of the Planning Commission and the initialing of the plat by the Chairman of the Planning Commission.

Where the Planning Commission has required the installation of improvements prior to the signing of the Final Plat, the Planning Commission shall not modify unreasonably the conditions set forth in the resolution of final approval.

2-105.702 Completion of Improvements – Before the Final Plat is signed by the Planning Commission officers specified in Section 2-105.703 of these Regulations, all applicants shall complete, in accordance with the Planning Commission's decision and to the satisfaction of the Chief Enforcing Officer, all improvements within the right-of-way, utilities, and other improvements, including lot improvements on the individual lots of the subdivision, as required in these Regulations and shall dedicate such improvements to the City or County free and clear of all liens and encumbrances on the property and public improvements thus dedicated. A Performance Surety, per Chapter 3, may be posted in lieu of completion prior to acceptance of these Regulations.

2-105.703 Signing of Plat – Where a Surety is required, the Secretary and Chairman of the Planning Commission shall endorse approval on the plat after the Surety has been approved by the Planning Commission and after all the conditions of the resolution pertaining to the plat have been satisfied.

When installation of improvements is required, the Chairman and Secretary of the Planning Commission shall endorse approval on the plat after all conditions of the resolution have been satisfied and all improvements satisfactorily completed. There shall be written evidence that the required public facilities have been installed in a manner satisfactory to the City as shown on the certifications by all appropriate officials that the necessary dedications of public lands and improvements have been accomplished.

When the conditions of this Section are satisfied, the Chairman will initial and the Secretary will sign one (1) Mylar and two (2) vellum copies of the Final Plat.

2-105.704 Recording of Plat – It shall be the responsibility of the City Staff to record the plat at the Register's office within ten (10) days of the date of signature. When the plat is recorded, the City Staff simultaneously shall record any agreement of dedication, together with any such legal documents as the City Attorney may require to be recorded. The applicant shall be responsible for the recording fee.

2-106 Easements – All easements required for the project shall be dedicated to the City of Gallatin prior to the final approval of the project. See Section 2-105.1 (6).

2-106.1 Drainage

1. Where a subdivision is traversed by a water course, drainage way, channel, or stream, there shall be provided a Drainage Easement conforming substantially to the lines of such water course and of such width as will be adequate for the purpose.

2. Where topography or other conditions are such as to make impractical the inclusion of drainage facilities within a road right-of-way, perpetual unobstructed easements at least twenty (20) feet in width for such facilities shall be provided across property outside the road lines and with satisfactory access to the road. Easements shall be indicated on the Preliminary and Final Plats. Drainage Easements shall be carried from the road to a natural water course or to other drainage facilities.
3. When a new drainage system is to be constructed, which will carry water across private land outside the subdivision, appropriate drainage rights must be secured and indicated on the plat.
4. The applicant shall dedicate, when required by the Planning Commission, either in fee or by drainage or conservation easement, the land on both sides of existing water courses to a distance to be determined by the City Engineer. See the City Of Gallatin Storm Water Ordinance for further guidelines on buffer requirements for waterways.

2-106.2 Utility

1. Public Utility and Drainage Easements (P.U.D.E.) centered on the side and rear lot lines shall be provided. Such easements shall be at least twenty (20) feet wide. The subdivider shall take such actions as are necessary to insure the coordination and continuation of easements established on adjacent properties with those proposed within his development.
2. Where topographical or other conditions are such as to make impractical the inclusion of utilities or drainage ways within the rear lot lines, perpetual unobstructed easements at least twenty (20) feet in width will be provided with satisfactory access to the road or rear lot lines. Easements shall be indicated on all plats. Zero lot line construction may warrant a variance from this requirement.

2-106.3 Access – Public access easements shall be required per the Gallatin Zoning Ordinance.

2-106.4 Construction – Temporary Construction Easements shall be required in all instances where work, storage, or equipment movements are expected to take place outside of the right-of-way boundary.

2-106.5 Slope – Permanent Slope Easements shall be required in all instances where the proposed grades extend beyond the right-of-way boundary.

2-106.6 Sidewalk – Public sidewalk easements shall be required in all instances where sidewalks extend or meander outside the public rights-of-way boundary.

2-106.7 Greenway – Greenway easements shall be required in instances where pedestrian or bike paths traverse a property. Easements shall extend a minimum of 10 feet from the edge of the path.

2-106.8 Use – Public use easements may be required in lieu of multiple overlapping easements. These easements may accommodate any of the uses described in Section 1-106.

2-106.9 Ancillary – All easements required for the project must be dedicated to the City of Gallatin before final acceptance of the project occurs.

2-107 Monuments and Pins - The subdivider shall place permanent reference monuments in the subdivision as required herein and as located by a Registered Land Surveyor. These monuments shall be concrete, not less than thirty (30) inches in length; not less than four (4) inches square or five (5) inches in diameter; and marked on top with a cross, brass plug, iron rod, or other durable material securely embedded. Monuments shall be located and set as follows:

1. Monuments shall be located on street right-of-way lines, at street intersections, and at the beginning and ending points of curves. All monuments shall be spaced so as to be within sight of each other.
2. All lot corners not following on any of the above-described points shall be marked by iron rods, pipes, or pins at least eighteen (18) inches long and five-eighths (5/8) inch in diameter.
3. All such monuments and pins shall be set flush with the ground and planted in such a manner that they will not be dislodged easily.
4. All monuments and pins shall be properly set in the ground and approved by a Registered Land Surveyor prior to the time the Planning Commission recommends approval of the Final Plat or release of the Surety where Surety is made in lieu of improvements.
5. Lot corners located within any waterway shall be located with witness pins.

2-108 Special Provisions Governing Unit Ownership (Condominium) Subdivisions

2-108.1 General Provisions

- A. Intent – This Section is intended to augment the general legislation of Sections 66-27-101 through 66-27-123, Tennessee Code Annotated, entitled “Horizontal Property Act,” by providing supplemental rules and regulations for the implementation of said Act, as specifically authorized in Section 66-27-121, Tennessee Code Annotated.

- B. Applicability – Whenever a developer, the sole Owner, or the Cowners of a building or buildings expressly declare(s), through the submittal of a master deed, lease, or plat, their desire to submit their property to a regime, as established and provided by Sections 66-27-101 through 66-27-121, Tennessee Code Annotated, wherein there is established a horizontal property regime, each such condominium or horizontal property regime created under the authority of these provisions for the purpose of sale or transfer of real property is subject to the provisions of these Regulations.
- 2-108.2 Submittal of Plat Required – Prior to the sale or transfer of any property incorporated in the property regime, the developer, sole Owner, or co-Owners of such property shall submit to the Planning Commission a subdivision plat of such property in the manner prescribed by these Regulations and such plat, if approved, shall be filed with the County Register of Deeds in the manner prescribed by these Regulations.
- 2-108.3 Determination of Subdivision Type – Condominium subdivisions shall be classified by the Planning Commission during the plat review process as either a Horizontal Condominium Subdivision or a Vertical Condominium Subdivision, according to the definitions contained in these Regulations.
- 2-108.4 Procedure – An applicant seeking approval of either a Horizontal Condominium Subdivision or a Vertical Condominium Subdivision shall proceed through the normal procedure for subdivision approval, as set forth in these Regulations.
- 2-108.5 Contents of Plans and Documents – The plats, plans, and documents submitted by an applicant seeking approval of either a horizontal condominium subdivision or a vertical condominium subdivision shall conform to the specifications set forth in these Regulations.

CHAPTER 3

SURETIES

3-101 Performance Surety

3-101.1 General – In its discretion, the Planning Commission, for any subdivision requiring public improvements totaling more than \$20,000, may waive the requirement that the applicant complete and dedicate all public improvements prior to the signing of the Final Plat and may provide that, as an alternative, the applicant shall post a surety in an amount estimated by the City Engineer and approved by the Planning Commission as sufficient to secure to the City the satisfactory construction, installation, and dedication of the uncompleted portion of required improvements. The surety shall be posted by 10 a.m. on the day of the recordation of the Final Plat in the Register's Office for Sumner County, Tennessee.

If permitted, a Performance Surety, and any extension thereof as provided below, shall cover the costs of all public improvements and infrastructure, and shall be retained by the Planning Commission on behalf of the City of Gallatin. The estimate of any surety shall be established by the Engineering Division based upon the latest revised edition of the RSMMeans Site Work & Landscape Cost Data and other reliable indices of construction cost as determined in the sole discretion of the City Engineer. If an extension of the surety is permitted, a new estimate to reflect an updated cost of completion shall be performed by the Engineering Division and established as the estimate for such extension. The amount of the surety initially, and for any extension, shall be set in the amount of one hundred ten percent (110%) of the estimate by the Engineering Division. Such performance surety shall comply with all statutory requirements as set forth in these Regulations and shall be satisfactory to the City Attorney as to form, sufficiency of surety, and manner of execution. It shall also include provisions that the principal of the surety shall comply with all the terms of the resolution of Final Plat approval, as determined by the Planning Commission, including, but without limitation, the performance of all required subdivision and off-site improvements, and that all improvements and land included in the Irrevocable Offer of Dedication shall be dedicated to the City or County free and clear of all liens and encumbrances on the premises. The Performance Surety shall be submitted by 10 a.m. to the Codes/Planning Department on the same day as the Final Plat with the recording fee. The Codes/Planning Department shall cause the Final Plat to be recorded on that day.

The expiration date of the Performance Surety initially, and for any extension, shall be set as one (1) year from the date of Final Plat recordation.

The Performance Surety shall be in the form of cash, a certified check, or an Irrevocable Letter of Credit.

All Irrevocable Letters of Credit must contain automatic renewal provisions, in language satisfactory to the City Attorney, that provide for automatic renewal of the Irrevocable Letter of Credit unless the City is provided at least sixty (60) days' notice of non-renewal by the issuer of said Irrevocable Letter of Credit.

All Irrevocable Letters of Credit submitted to the City must either be payable at a local bank within a fifty (50) mile radius of the corporate limits of the City of Gallatin or specifically state that the letter of credit can be drawn upon by certified mail. The period within which required improvements must be completed shall be specified by the Planning Commission in the resolution approving the Final Plat, shall be incorporated in the language of the Irrevocable Letters of Credit, shall not, in any event, exceed one (1) year from date of Final Plat recordation unless a longer period is specifically authorized by the Planning Commission or its designee, as provided below.

The Planning Commission's designee may, upon proof of difficulty, extend the completion date set forth in such surety for a period of one (1) additional year. The Planning Commission may, upon proof of difficulty, grant additional one (1) year extensions.

The Planning Commission may accept, at any time during the period of a Performance Surety, a substitution of principal or sureties on the Surety, so long as the substitution is satisfactory to the City Attorney or contains the same terms as originally issued.

- 3-101.2 Forms of Performance Surety – The form of the Performance Surety shall be as one of those reproduced in Appendix A of these Regulations and approved by the City Attorney.
- 3-101.3 Reduction of Performance Surety – A Performance Surety may be reduced by the City Engineer upon actual completion and inspection of public improvements and then only to the ratio that the public improvement completed bears to the total public improvements for the plat. In no event shall a Performance Surety be reduced below fifteen percent (15%) of the principal amount prior to final acceptance of all items covered under the Surety. A Performance Surety reduction shall be approved a maximum of twice a year and not more than once in any three (3) month period.

3-102 Maintenance Surety

3-102.1 General – The applicant shall be required to maintain all improvements, including all lot improvements, until acceptance of the public improvements by the appropriate governmental body.

A Maintenance Surety in the amount of ten percent (10%) of the calculated roadway and drainage costs, as estimated by the Engineering Division, shall be required on all subdivisions and shall be retained by the Planning Commission in a form satisfactory to the City Attorney, in order to assure the satisfactory condition of the required improvements, including all lot improvements.

The Maintenance Surety shall be in the form of cash, cashier's check, or Irrevocable Letter of Credit. The Maintenance Surety shall remain in effect for a period of one (1) year after the date of the acceptance of the public improvements by the governing body.

The maximum length of time to retain said Maintenance Surety shall be two (2) years after acceptance of the public improvements.

3-102.2 Reduction or Release of Maintenance Surety – A Maintenance Surety may not be reduced. At the end of the Maintenance Surety phase of development, all inspection report items shall be fully completed to the satisfaction of the Chief Enforcing Officer.

3-103 Builder's Permit Surety – The scope of repairs or maintenance required under the provisions of the Builder's Permit Surety shall include driveway tile size and installation, headwalls, ditches, curb and driveway ramps, sidewalks, damage, disturbance, or relocation of utilities, damage to adjacent properties, and any other damage incurred during the construction of the building for which a permit was issued. Builder's Permit Sureties shall be a minimum of \$500.00 for each lot and shall be posted with the Engineering Division prior to the issuance of a Building Permit, unless waived by the City Engineer. Such Surety shall remain in effect until the building is 100 percent (100%) complete, including final grading of the lot, and is to be released only after written authorization from the Engineering Division. Annual Builder's Permit Surety may be issued in lieu of multiple separate Builder's Sureties in an amount to be determined by the City Engineer.

Posting of the General Contractor's Surety, as required by Ordinance No. O0604-037, shall satisfy the requirements of a Builder's Permit Surety under this Section.

- 3-104 Contract in Lieu of Surety – In subdivisions for which no Performance Surety has been posted, if the improvements are not completed within the period specified by the Planning Commission in the resolution approving the plat, the Final Plat approval shall be deemed to have expired.

In those cases in which a Performance Surety has been posted and required improvements have not been installed within the terms of such Performance Surety, the City thereupon may declare the Surety to be in default and require that all the improvements be installed regardless of the extent of the building development at the time the Surety is declared to be in default. If a developer requests an extension of a Performance Surety, at which time the Performance Surety cannot be extended any further as in accordance with Section 3-101.1 of these Regulations, the City can hold all building permits and call the Surety to cover the costs of all necessary improvements.

3-105 Acceptance of Required Public Rights-of-way, Easements and Infrastructure Improvements

3-105.1 Timeline for Acceptance – The acceptance of public parks, transportation, utility, and drainage infrastructure, rights-of-way and easements will not be considered until four (4) years after the Final Plat has been recorded, or until 80 percent (80%) of the lots are fully developed, whichever is the shorter period of time.

3-105.2 Temporary Improvements – The applicant shall build and pay for all costs of temporary improvements required by the Planning Commission and shall maintain them to the reasonable satisfaction of the Chief Enforcing Officer for the period specified by the Planning Commission. Prior to construction of any temporary facility or improvement, the applicant shall file with the appropriate government entity a separate suitable Surety for temporary facilities, which shall insure that the temporary facilities will be properly constructed, maintained, and removed. The improvements may otherwise be included in an approved Performance Surety.

3-105.3 Cost of Improvements – All required improvements shall be made by the applicant at his expense. Any provisions for reimbursement by the City, County, or any utility district, as agreed to in writing by that entity, shall be stipulated clearly in the provisions of the Surety.

3-105.4 Failure to Complete Improvements – For subdivisions for which no performance surety has been posted, if the improvements are not completed within the period specified by the Planning Commission in the resolution approving the plat, the approval shall be deemed to have expired.

In those cases in which a performance surety has been posted and required improvements have not been installed within the terms of such performance surety, the City thereupon may declare the Surety to be in default and require that all the improvements be installed regardless of the extent of the building development at the time the Surety is declared to be in default. If a developer requests an extension of a performance surety, at which time the performance surety cannot be extended any further as in accordance with Section 3-101.1 of these Regulations, the City can hold all building permits and call the Surety to cover the costs of all necessary improvements.

- 3-105.5 Acceptance of Dedication Offers – Acceptance of formal Offers of Dedication of public parks, transportation, utility, and drainage infrastructure, rights-of-way and easements shall be by formal action of the City Council or Sumner County Highway Commission, as appropriate. Such action shall be in the form of a resolution recommended by the Planning Commission to the Sumner County Highway Commission or to the City Council. Final action shall be by the Sumner County Highway Commission or City Council, as appropriate. The approval by the Planning Commission of a subdivision plat shall not be deemed to constitute or imply the acceptance by the City or County of any public parks, transportation, utility, and drainage infrastructure, rights-of-way and easements shown on the plat. The Planning Commission may require the plat to be endorsed with appropriate notes to this effect. Additionally, the developer of such subdivision is bound to the City for all improvements, regardless of Surety status, until formal acceptance has been granted by either the City Council or Sumner County Commission. See Section 2-105 of these Regulations for Final Plat acceptance conditions.
- 3-105.6 Inspection of Improvements – The Planning Commission may provide for inspection of required improvements during construction and insure their satisfactory completion. If the Chief Enforcing Officer finds, upon inspection, that any of the required improvements have not been constructed in accordance with the applicable City of Gallatin construction standards and specifications, the applicant shall be responsible for completing the improvements to the required standards. Whenever a Performance Surety covers the cost of improvements, the applicant and the surety company shall be liable, separately and jointly, for completing said improvements according to specifications.

3-105.7 Certificate of Satisfactory Completion – The City Council or the Sumner County Highway Commission will not accept the dedication of required improvements nor release Performance Sureties until the City or County Department responsible for the required improvements, as appropriate, states that all required improvements have been satisfactorily completed and until the applicant’s engineer or surveyor has certified to the Planning Commission, through submittal of a detailed “as built” survey plat of the subdivision indicating location, dimensions, construction materials, and the other information required by the Planning Commission, and layout of the line and grade of all public improvements are in accordance with the approved Construction Plans for the subdivision. Upon such approval and recommendation, the governing body thereafter may accept the dedicated improvements in accordance with the procedure set forth in Section 1-113.107 and Section 3-105 of these Regulations. Easements shall also be obtained in accordance with Section 2-106.8 of these Regulations.

3-105.8 Dereliction of Improvements – Corrective maintenance required under provisions of the Maintenance Surety shall conform to the following procedure:

All necessary repairs required by the City or County Department responsible for the improvements during the period of time in which the Surety is in effect shall be at the expense of the Developer and shall be requested in writing by the City or County Department responsible for the required improvements. Should such requested repairs not be completed by the Developer within a reasonable specified time, such work shall be subcontracted or performed by the City or County Department responsible for the required improvements, with the cost of same being charged against the outstanding Maintenance Surety.

3-105.9 Deferral or Waiver of Required Improvements – The Planning Commission may defer or waive, at the time of Final Plat approval, subject to appropriate conditions, the provision of any or all such improvements as, in its judgment, are not requisite in the interest of the public health, safety, and general welfare or which are inappropriate because of inadequacy or lack of connecting facilities. Whenever it is deemed necessary by the Planning Commission to defer the construction of any improvement required herein because of incompatible grades, future planning, or for other reasons, the developer shall either pay his share of the costs of the future improvements to the City or County, as appropriate, prior to signing of the Final Plat by the Planning Commission officials or post a Surety insuring completion of said improvements upon demand of the City or County.

CHAPTER 4

LAYOUT AND DESIGN

4-101 Urban Design

- 4-101.1 Character of the Land – Land which the Planning Commission finds to be unsuitable for subdivision or development due to flooding, improper drainage, steep slopes, rock formations, adverse earth formations or topography, utility easements, or other features which will be harmful to the safety, health, and general welfare of inhabitants of the land and surrounding areas shall not be subdivided or developed unless adequate methods are formulated by the developer and approved by the Planning Commission, upon recommendation of the City staff, to solve the problems created by the unsuitable land conditions.
- 4-101.2 Preservation of Natural Features – Existing features which would add value to residential development or to the Planning Region as a whole, such as trees, water courses and falls, beaches, historic spots, and similar irreplaceable assets, shall be preserved in the design of the subdivision as required by the Planning Commission. No trees shall be removed from any subdivision nor any change of grade of the land affected until approval of a preliminary subdivision plat has been granted. All trees on the plat required to be retained shall be preserved, and all trees, where required, shall be welled and protected against change of grade. When required, the preliminary plat shall show the number and location of existing trees and shall indicate all those marked for retention.
- 4-101.3 Water Bodies – If a tract being subdivided contains a water body, or portion thereof, lot lines shall be so drawn as to distribute the entire Ownership of the water body among the fees of adjacent lots. The Planning Commission may approve an alternative plan whereby the Ownership of and responsibility for safe maintenance of the water body is so placed that it will not become a City or County responsibility. No more than ten (10) percent of the minimum area of a lot required under the Zoning Ordinance may be satisfied by land which is under water. Where a water course separates a buildable area of a lot from the street by which it has access, provisions shall be made for installation of a culvert or other structure of design approved by the Planning Commission, and no Certificate of Occupancy shall be issued for a structure on such a lot until the installation is completed and approved by the Chief Enforcing Officer.

4-101.4 Nonresidential Subdivisions – A non-residential subdivision shall also be subject to all the requirements of site plan approval set forth in the applicable Zoning Ordinances.

4-101.5 Flood Management

Flood management shall be subject to all requirements of the Gallatin Zoning Ordinance.

4-102 Subdivision Design

4-102.1 General – In order to provide for roads of suitable location, width, and improvement to accommodate prospective traffic and afford satisfactory access to police, firefighting, sanitation, and road-maintenance equipment and to coordinate roads so as to compose a convenient and safe system and avoid undue hardships to adjoining properties, the road design standards set forth in this Section are hereby required. Road classifications shall be as indicated on the Future Land Use Plan or Major Thoroughfare Plan, and all roads shall be classified by the Planning Commission according to the design requirements specified in Appendix B. The general design of all roads shall conform to the standards contained in Appendix B.

4-102.2 Lot Requirements

4-102.201 Lot Arrangement – The lot arrangement shall be such that there will be no foreseeable difficulties for reasons of topography, flood hazards, or other conditions in securing building permits to build on all lots in compliance with the Gallatin Zoning Ordinance and State and County Public Health Department regulations and in providing driveway access to buildings on such lots from an approved street.

4-102.202 Lot Dimensions – Lot dimensions shall comply with the minimum standards of the Gallatin Zoning Ordinance. Where lots are more than double the minimum area required by the Zoning Ordinance, the Planning Commission may require that such lots be arranged so as to allow further subdivision and the opening of future streets where they would be necessary to serve such potential lots, all in compliance with the Zoning Ordinance and these Regulations. In general, side lot lines shall be at right angles to street lines (or radial to curving street lines) unless a variation from this rule will give a better street or lot plan.

Dimensions of the corner lots shall be large enough to allow for corner radii and for erection of buildings, observing the minimum front-yard setback requirements from both streets. Depth and width of properties reserved or laid out for business, commercial, or industrial purposes shall be adequate to provide for the off-street parking and loading facilities required for the type of use and development contemplated and as established in the Zoning Ordinance.

4-102.203 Building Setback Lines – In the case of electric transmission lines where easement widths are not definitely established, a minimum building setback line from the center of the transmission line shall be established as follows:

<u>Voltage of Line</u>	<u>Building Setback</u>
46 KV	37 ½ feet
69 KV	50 feet
161 KV	75 feet

4-102.204 Double Frontage Lots – Double frontage and reversed frontage lots shall access the minor street only unless approved by the City Engineer.

4-102.205 Access from Arterial or Collector Streets – The Planning Commission may require that lots shall not, if avoidable, derive access exclusively from arterial or collector streets. Where driveway accesses from arterial or collector streets may be necessary for several adjoining lots, the Planning Commission may require that such lots be served by a combined access drive in order to limit possible traffic hazards on such street. Driveways shall be designed and arranged so as to avoid requiring vehicles to back onto arterial or collector streets.

4-102.206 Lot Drainage – Lots shall be laid out so as to provide positive drainage away from all buildings, and individual lot drainage shall be coordinated with the general storm drainage pattern, per the approved construction plans, for the area which includes subsurface drainage. Storm Water runoff shall be designed so as to avoid concentrated runoff from each lot on to adjacent lots, unless the runoff is in a designed conveyance system on the approved construction plans.

The Planning Commission reserves the right to set minimum elevations on all floors, patios, and building equipment. This prerogative to establish elevation exists in addition to any ordinances that refer to floodplain elevation requirements. The content of the preceding paragraph is to give summary review powers over any calculated or historical evidence of storm water presence in overland or channel conditions.

4-102.3 Topography and Arrangement

1. Roads shall be related appropriately to the topography. Minor roads shall be curved wherever possible to avoid conformity of lot appearance. All streets shall be arranged so as to obtain as many as possible of the building sites at or above the grades of the streets. Grades of streets shall conform as closely as possible to the original topography. A combination of steep grades and curves shall be avoided. Specific design standards are contained in Section 4-103.2 of these Regulations.
2. Proposed streets shall be extended to the boundary lines of the tract to be subdivided, unless prevented by topography or other physical conditions or unless, in the opinion of the Planning Commission, such extension is not necessary or desirable for the coordination of the layout of the subdivision with the existing layout or the most advantageous future development of adjacent tracts.

4-102.4 Blocks

1. Blocks shall have sufficient width to provide for two (2) tiers of lots of appropriate depths. Exceptions to this prescribed block width shall be permitted in blocks adjacent to major streets, railroad, or waterways.
2. Block lengths in residential areas shall not exceed sixteen hundred (1,600) feet nor be less than two hundred (200) feet, except as the Planning Commission deems necessary to secure efficient use of land or desired features of the street pattern. Wherever practicable, blocks along arterial or collector streets shall not be less than one thousand (1,000) feet in length.
3. In long blocks, the Planning Commission may require the reservation of an easement through the block to accommodate utilities, drainage facilities, or pedestrian traffic.

Pedestrian walkways may be required by the Planning Commission through the approximately center of blocks more than eight hundred (800) feet long, where deemed essential to provide circulation or access to schools playgrounds, shopping centers, transportation facilities, or other community facilities.

4-102.5 Access to Arterials and Collectors – Where a subdivision borders on or contains an existing or proposed arterial or collector route, the Planning Commission may require that access to such streets be limited by one of the following means:

1. The subdivision of lots so as to back on the arterial or collector route and front on a parallel minor street, no access shall be provided from the arterial or collector, and screening shall be provided in a strip of land along the rear property line of such lots.
2. A series of cul-de-sacs, “U”-shaped streets, or short loops entered from and designed generally at right angles to such a parallel street, with the rear lines of their terminal lots backing onto the arterial or collector route.
3. A marginal access or service road (separated from the arterial or collector route by a planting or grass strip and having access thereto at suitable points).

The number of residential and local streets entering on an arterial or collector street shall be kept to a minimum.

4-102.6 Intersections

1. Roads shall be laid out so as to intersect as nearly as possible at right angles. A proposed intersection of two (2) new roads at an angle of less than seventy-five (75) degrees shall not be acceptable. An oblique road should be curved approaching an intersection and should be approximately at right angles for at least one hundred (100) feet there from. Not more than two (2) roads shall intersect at any one point unless specifically approved by the Planning Commission.
2. Proposed new intersections along one side of an existing road shall coincide, wherever practicable, with any existing intersections on the opposite side of such road. Road jogs with centerline offsets of less than one hundred twenty-five (125) feet shall not be permitted, except where the intersected road has separated dual drives without median breaks at either intersection. Where roads intersect arterial or collector routes, their alignment shall be continuous. Intersections of arterial or collector roads shall be at least eight hundred (800) feet apart.

3. Minimum curb radius at the intersection of two (2) minor roads shall be twenty-five (25) feet, and minimum curb radius at an intersection involving a collector road shall be thirty-five (35) feet. All intersections and abrupt changes in alignment within a block shall have the corners cut off in accordance with standard engineering practice to permit safe vehicular movement.
4. Where a road intersection will involve earth banks or existing vegetation inside any log corner that would create a traffic hazard by limiting visibility, the subdivider shall cut such ground or vegetation (including trees) in connection with the grading of the public right-of-way to the extent necessary to provide adequate sight distances.
5. Vertical Alignment at Intersections – Intersections shall be designed with a flat grade wherever practical. At the approach to an intersection, a leveling area shall be provided having not greater than a two percent (2%) grade at a distance of sixty (60) feet, measured from the nearest right-of-way line of the intersecting street. Review vs. AASHTO.
6. Sight Distances at Intersections – Sign distances at intersections on lanes and places should be regulated to allow an approaching driver sufficient time to stop. All sight distances and sight distance calculations should conform to the latest edition of the AASHTO Policy on Geometric Design of Highways and Streets.
7. Horizontal Alignment at Intersections – The angle of intersection for streets intersecting arterial streets shall be 90 degrees unless approved by the City Engineer. The minimum angle is 75 degrees for non-arterial streets.
8. The cross-slope on a street should be limited to a maximum of five percent (6 inches of crown for a 20 foot wide roadway).

4-102.7 Railroads and Limited Access Highways – Railroad rights-of-way and limited access highway, where so located as to affect the subdivision of adjoining lands, shall be treated as follows:

1. In residential areas, a buffer strip at least twenty-five (25) feet in depth, in addition to the normally-required depth of the lot, may be required adjacent to the railroad right-of-way or limited access highway. This strip shall be part of the platted lots and shall be designated on the plat: “This strip is reserved for screening. The placement of structures hereon is prohibited.”

2. Roads parallel to the railroad, when intersecting a road which crosses the railroad at grade, shall, to the extent practicable, be at a distance of at least one hundred fifty (150) feet from the railroad right-of-way. Such distance shall be determined with due consideration of the minimum distance required for future separation of grades by means of appropriate approach gradients.

4-102.8 Bridges – Bridges of primary benefit to the subdivider, as determined by the Planning Commission, shall be constructed at the full expense of the subdivider without reimbursement from the City or County. The sharing of expenses for the construction of bridges not of primary benefit to the subdivider, as determined by the Planning Commission, shall be fixed by special agreement between the City Council or the County Commission, as appropriate, and the subdivider. The cost shall be charged to the subdivider pro rata as the percentage of his development and so served.

4-102.9 Pedestrian and Bicycle Path Standards

4-102.901 Purpose and Intent - The purpose of this section is to provide for the health, safety and welfare of the citizens of Gallatin by requiring the construction of pedestrian and bicycle access ways in new residential and commercial developments in order to:

1. Maximize pedestrian safety and make pedestrian travel a more attractive alternative;
2. Provide a safer environment for pedestrians by separating pedestrian and vehicular traffic;
3. Provide a bicycle route system throughout the City of Gallatin;
4. Improve the aesthetics and connectivity of neighborhoods within the City of Gallatin.

4-102.902 Applicability - The provision of safe and convenient pedestrian access shall be incorporated into all new developments in residential zones R-6, R-8, R-10, R-15, R-20 and PRD, in mixed-use zones MRO, MU, GO and OR and in commercial zones CS, CG, CC, PGC, PNC and PBP. Such pedestrian systems may include conventional sidewalks or alternative walkways and new trails, as approved by the Gallatin Municipal Regional Planning Commission. New construction should be completed with consideration of pedestrian safety, handicapped access and visual quality.

4-102.903 Sidewalks

1. Residential and Mixed Use Subdivisions: Sidewalks shall be required in all residential and mixed-use subdivisions, with the exception of those subdivisions:
 - a. That received Final Plat approval prior to the enactment of this Pedestrian and Bicycle Path Amendment.
 - b. That are Final Plats of additional sections of subdivisions where sidewalks were not required in the previously recorded sections of those subdivisions.
 - c. That are Minor Subdivisions containing five (5) lots or less, unless specifically required by the Planning Commission.
2. Commercial Subdivisions: Sidewalks shall be required for all commercial subdivisions, with the exception of those commercial subdivisions:
 - a. That received Final Plat approval prior to the enactment of this Pedestrian and Bicycle Path Amendment.
 - b. That are Final Plats of additional sections of subdivisions where sidewalks were not required in the previously recorded sections of those subdivisions.
3. Design Standards: The design, dimensions, dedications, easements, and reservations for all sidewalks shall conform to all applicable City of Gallatin regulations. Sidewalks constructed within the public rights-of-way shall be installed in accordance with the adopted standards of the City of Gallatin.
 - a. Sidewalks are required to be constructed on both sides of all streets within or abutting the subdivision and shall connect to sidewalks in adjoining subdivisions.
 - b. Sidewalks shall be constructed of concrete and shall be a minimum of five (5) feet in width on all streets in residential subdivisions and six (6) feet in width for non-residential subdivisions.

- c. Sidewalks shall maintain minimum thickness of four (4) inches except at driveway areas where the minimum thickness is six (6) inches.
- d. Along streets where concrete curbs are required, a median strip of grassed or landscaped area of at least five (5) feet wide shall be provided between the curb and sidewalk.
- e. Upon the request of any Owner of property to which this section applies, the Planning Commission may approve an alternative pedestrian walkway design which is not in strict compliance with the requirements of this section, if the Commission finds that such an alternative meets the purpose and intent of the requirements of this section. In making the determination the Commission may consider issues such as impeding road construction, significant trees, severe roadside conditions, or recommendations from approved traffic studies that could impact a proposals conformance to these standards.

4-102.904 Bicycle Lanes, Paths and Alternate Pedestrian Walkway Systems

- The Planning Commission may require or approve an alternate pedestrian walkway system or bicycle paths for a given development. Alternative pedestrian walkways and bikeways may include walking trails, multi-use trails, bicycle lanes, or bicycle paths.

1. Design Standards

- a. Bicycle lanes and paths where required by the Planning Commission, shall be improved as required by the City Engineer and shall be a designed portion of the roadway included within the dedicated street right-of-way.
- b. Bicycle lanes shall be designed according to the latest edition of the American Association of State Highway and Transportation Official (AASHTO) Guide for the Development of Bicycle Facilities.

- c. Alternate pedestrian walkways, bikeways, and multi-use trails may be considered internal to the development and are not restricted to alongside streets. These facilities must conform to all applicable City of Gallatin regulations and improved as required by the City Engineer.

4-103 Street Design

- 4-103.1 Purpose – The design criteria should serve as the basis for establishing specific street standards on right-of-way and pavement widths, parking, design of turnarounds, horizontal and vertical alignments, pavement thicknesses and other factors that influence the design of the total development. Also, the criteria provides values for the characteristics of motor vehicles, the clearance needs of various types of vehicles, the volumes of traffic generated by residential areas, speed, and other related factors.

All street design and calculations should conform to the latest edition of the AASHTO Policy on Geometric Design of Highways and Streets.

All road pavement layers, shoulders, drainage improvements and structures, driveway culverts, curb turnabouts, and sidewalks shall conform to all construction standards and specifications adopted by the Planning Commission and shall be incorporated into approval by the construction plans required to be submitted by the developer for the Engineering Division. The road construction specifications are included in these Regulations as Appendix B and are adopted as a part hereof. These specifications are the minimum standards for road construction in any subdivision in the City or the Planning Region. The Planning Commission shall not approve any plat of a subdivision which does not make adequate provisions for storm or flood water runoff. The storm water drainage systems shall be separate and independent of any sanitary sewer system.

4-103.2 Traffic Volumes

1. Average Daily Traffic – The following table should be used for the purpose of determining Average Daily Traffic (ADT) for streets associated with different housing types.

<u>Housing Type</u>	<u>ADT (per Dwelling Unit)</u>
Single family detached homes	10.0
Group or townhouses	7.0
Garden apartments 1 to 4 story	6.0
Elevator apartment over 4 stories with elevator	5.0

2. Variations in Traffic Volumes – Traffic volumes in residential areas have the greatest intensity in the late afternoon on weekdays. These peak loading conditions do not have a significant effect in the design of local residential streets. Peak loading may need to be considered in the design of collector streets, through streets, and access points from major thoroughfares to the development. The selection of street right-of-way widths sometimes includes a factor for future widening of the streets. However, most residential streets carry only traffic volumes generated as a result of the homes on a given street, for example, local streets branching off a collector street and ending in places, lanes, and cul-de-sacs. For these types of streets, allowances for future widening are not necessary.

4-103.3 Vehicle Characteristics

1. Dimensions – Table 1 (page B-37) provides typical dimensions, turning radii, and clearances for several types of vehicles that can be expected on residential streets.
2. Turning Requirements – Turning requirements for various vehicle types are set forth in Table 1 (page B-37). These shall be considered when determining radii of cul-de-sacs, turnarounds, and street intersection returns.
3. Vehicle Clearances – Table 2 (page B-38) provides the total width and typical clearance needs for various vehicle encounters. All vehicles can pass freely when two 10-foot moving lanes are provided. On short streets with little traffic, speeds are low and encounters between large vehicles infrequent. One vehicle can pull to the side of the road or wait before entering to allow the street to clear. In this case, 18 feet is a functionally adequate width for two moving lanes. Eighteen feet permits relative ease of movement for almost all types and encounters at slow speeds. Twenty feet is adequate for free movement in all other encounters except those involving moving vans, fire trucks, or refuse vehicles, a low-probability occurrence.

4-103.4 Speed – The typical residential street speed, without regard for the posted limit, is governed by: (1) The open width or clearance of the street; (2) horizontal and vertical alignments; (3) number of access points to the street; (4) number of parked cars or other obstructions on the street; (5) signs and signals at intersections; and (6) speed of other traffic on the street. For safety purposes, on low traffic volume streets, the designer should consider use of traffic calming devices and features that tend to reduce speed, including narrower widths, shorter streets, curves and hills, elimination of through traffic and related factors noted above.

4-103.5 Turnarounds – The advantages of clustering homes have led to the use of a variety of configurations, including cul-de-sacs, courts, T's, Y's, etc. Turnarounds should be designed to accommodate emergency and service vehicles, as well as passenger cars. Exceptions to the turnaround requirements may be made for short streets, up to 300 feet long where emergency and service vehicles are able to back out with relative ease. The maximum lengths of streets leading to turnarounds are not regulated in the standards as long as the turnarounds are adequate for the vehicles likely to use them. The design flexibility allowed with the longer street is desirable. Longer streets with turnarounds at the end may be divided into one or more segments with intermediate turning circles. Figure 1 (page B-39) illustrates the turnaround dimensions.

Turnaround Standards

1. Place – Turnarounds for places shall conform to any of those shown in Figure 1 or to other configurations approved by the Engineering Division.
2. Lane – Turnarounds for lanes shall conform to the circle and T-turn shown in Figure 1 or to other configurations approved by the Engineering Division.
3. Other – Turnarounds may be waived by the Engineering Division at the ends of minor collector and collector streets if there is a branching street intersection within 300 feet of the end of the street.

Arrangement of Roads and Dead-End Roads

1. Arrangement of Roads – The arrangement of streets shall provide for the continuation of streets between adjacent properties when such continuation is necessary for convenient movement of traffic, effective fire protection, and efficient provision of utilities or when such continuation is in accordance with the Major Thoroughfare

Plan. If the adjacent property is undeveloped and the street must be a dead-end street temporarily, the right-of-way shall be extended to the property line. A temporary cul-de-sac or temporary T- or L-shaped turnabout shall be provided on all temporary dead-end streets as required in the following turnabout standards, with a notation on the subdivision plat that land outside the normal street right-of-way shall revert to abutting property Owners whenever the street is continued. The reconstruction of the temporary turnabout into the normal right-of-way shall be the responsibility of the City or County, as appropriate.

The Planning Commission may limit the length of temporary dead-end streets in accordance with the design standards of these Regulations.

2. Dead-End Roads (Permanent) – Where a road does not extend beyond the boundary of the subdivision and its continuation is not required by the Planning Commission for access to adjoining property, its terminus shall normally not be nearer to such boundary than fifty (50) feet. However, the Planning Commission may require the reservation of an appropriate easement to accommodate drainage facilities, pedestrian traffic, or utilities. A cul-de-sac turnaround shall be provided at the end of a permanent dead-end street in accordance with the design standards of these Regulations.

For greater convenience to traffic and more effective police and fire protection, permanent dead-end streets shall, in general, be limited in length in accordance with the design standards of these Regulations.

- 4-103.6 Off-Street Parking – Adequate off-street parking is usually safer and more economical than curb parking. In special situations, it may be appropriate to increase or decrease the off-street parking requirements; for example, for developments with families of high or low incomes or for housing for the elderly.

In lieu of the typical parallel parking lane, parking bays on one or both sides of places and lanes may be more desirable. Either 90-degree parking or angle parking may be suitable. Large parking bays or parking lots for multi-family housing should have appropriate dividers for safety and better appearance.

Off-street parking shall be provided in accordance with the provisions of the Zoning Ordinance.

4-103.7 Emergency Vehicle Access – Paved access shall be available to fire, ambulance, and police vehicles within 50 feet of the principal entrances to dwellings or apartment buildings. Access may be by means of the street or by paved access ways.

4-103.8 Additional Width on Existing Streets – Where a subdivision adjoins an existing narrow road or where the Major Thoroughfare Plan or zoning setback regulations indicate plans for realignment or widening of the road that would require use of some of the land in the subdivision, the subdivider shall be required to dedicate, at his expense, areas for widening or realigning such road as set forth below:

1. The entire right-of-way shall be provided where any part of the subdivision is on both sides of the existing street.
2. When the subdivision is located on only one (1) side of an existing road, one-half (1/2) of the required right-of-way, measured from the centerline of the existing roadway, shall be provided.

4-103.9 Right-of-Way Widths – Right-of-way widths are determined by the following formula:

$$W = P + S + G + U + X$$

Where:

W = Right-of-way width

P = Pavement width, including curb and gutter.

S = Sidewalk width, one or both sides, if required.

G = Grass strip, one or both sides, if required with the sidewalks.

U = Utility easement, one or both sides, if required.

X = Width, one or both, sides required for shoulders, planting strips, snow storage, surface drainage, or widening, if required.

4-103.10 Pavement Width Standards

1. Street Classification – Residential streets are classified into five types based on ranges of average daily traffic. ADT's of 200, 500, 1,000, and 3,000 have been selected at the “break points.” The total ADT for a street shall be determined by using the appropriate ADT values per dwelling unit set forth in the Design Criteria Section, “Traffic Volumes,” plus through traffic, if any. Table 3 establishes pavement widths by street type and on-street parking requirements and related design factors. Pavement widths are dimensioned to the street face of the curb or to the centerline of the concave radius of mountable or rolled curbs. The following description of the five street types provides the basis for the selection of the pavement widths in Table 3.
 - a. Place – A place is a short street, a cul-de-sac, or court with a projected ADT of 200 or less. Table 3 provides, in the case of an 18-foot street width, for two 9-foot-wide moving lanes when there is no on-street parking; or an 8-foot-wide parking lane and a 10-foot-moving lane when parking is allowed on one side (one lane is temporarily held up to provide space for passing in the case of two moving vehicles encountering each other and a parked vehicle simultaneously). When parking is permitted on both sides, Table 3 provides, in the case of a 26-foot width, for two 8-foot-wide parking lanes and a 10-foot moving lane. Design speed limit is intended to be 20 miles per hour or less.
 - b. Lane – A lane is designed for an ADT of 201 to 500. It may be a dead-end street or a street with branching places or lanes. With no on-street parking, two 9-foot moving lanes are accommodated by the 18-foot pavement width. When parking is allowed on one side, the 18-foot width provides for a 10-foot moving lane and an 8-foot parking lane. The 26-foot wide pavement, with parking on one side only, allows for two 9-foot moving lanes and one 8-foot parking lane. When parking is permitted on both sides of the lane, the 26-foot width provides for two 8-foot wide parking lanes and a 10-foot moving lane. Design speed limit is intended to be 25 miles per hour or less.

- c. Minor Collector – The ADT of minor collector streets range from 501 to 1,000. The minor collector street width of 26 feet allows for two 9-foot-wide moving lanes plus an 8-foot-wide emergency stopping or temporary standing lane in the case of no parking on either side. When parking is allowed on one side, the 28-foot width provides for an 8-foot-wide parking lane and two 10-foot-wide moving lanes. When parking is allowed on both sides, the 36-foot width provides for two 10-foot moving lanes and two 8-foot parking lanes. Design speed is intended to be limited to 30 miles per hour.
 - d. Collector – Collector streets have an ADT ranging from 1,001 to 3,000. The collector street width of 28 feet allows for two 10-foot moving lanes and one 8-foot lane for emergency stopping or temporary standing when no parking is allowed on either side. When parking is allowed on one side, the 36-foot width provides for two 10-foot moving lanes plus one 8-foot parking lane plus an 8-foot lane for emergency stopping or temporary standing. When parking is allowed on both sides, the 36-foot width provides for two 10-foot moving lanes and two 8-foot parking lanes. Design speed is intended to be limited to 35 miles per hours.
 - e. Arterial Streets – Arterial streets have an ADT over 3,000 and are usually major thoroughfares. Each arterial street shall be designed to accommodate the traffic and roadway conditions for that street. Specific requirements will be determined by the Engineering Division. Direct access from individual driveways or other off-street parking spaces shall be limited. Design speeds are intended to be over 35 miles per hour.
2. One-Way Streets – For an ADT of 500 or less with no parking allowed, the minimum width of a one-way street shall be 12 feet when a shoulder is provided for stalled vehicle parking. When the ADT ranges from 501 to 1,000 or when no shoulder is provided for stalled vehicles or when parking is allowed on one side, the minimum width of a one-way street shall be 18 feet. Collector and minor collector streets may be split to provide two lanes in opposite directions. Lanes and places may be one-way loop streets.

4-103.11 Street Pavement – The pavement of residential streets shall be designed to provide adequate access to the home sites and to provide a durable and safe route from the lot to other communities. The pavement for lightly-traveled places and lanes need not be as durable nor does it need to be able to carry the same loads as sub-collector and collector streets.

Pavement shall be designed in relation to the expected traffic and geographic conditions. This assures an adequate pavement and results in economy for the residents and the community which must accept responsibility for maintenance.

1. Asphalt Concrete Pavement – Figure 2 (page B-47) shows the thickness requirements for asphalt pavement for various types of streets based on the California Bearing Ratio (CBR) or the Resistance Value (R) of the soil and the ADT of the street. The use of crushed stone or other similar material as a base reduces the thickness of asphalt required. Two inches of compacted crushed stone may be substituted for one inch of asphalt concrete. In no case should the asphalt concrete be reduced below one-and-one-half (1 ½) inches in thickness. The use of appropriate slag, gravel, or other related material instead of crushed stone is acceptable.

To use Figure 2, locate the appropriate CBR or R value and follow that point vertically to its intersection with the appropriate street type line. Then, proceed horizontally to the left from the point of intersection to find the required asphalt concrete thickness. When substituting crushed stone for asphalt concrete, the required thickness of crushed stone, assuming the minimum allowable thickness of asphalt concrete of one and one-half (1 ½) inches, shall be determined as follows:

$$B = 2(T - 1.5)$$

Where:

B = Required thickness of crushed stone base in inches

T = Required thickness of asphalt concrete in inches as shown in Figure 2

The procedures for mixing, proportioning and placing asphalt concrete shall be designed by a licensed engineer with experience in asphalt concrete pavement construction acceptable to the City Engineer.

2. Portland Cement Concrete Pavement, Un-reinforced – Figure 3 sets forth the thickness requirements for Portland cement concrete pavement. The Figure 3 values are based on a modulus of rupture of 650 psi using third-point loading and a 20-year design life. To use Figure 3, locate the approximately CBR or K value (modulus of sub-grade reaction) and follow that point vertically to its intersection with the appropriate street type curve. Then, proceed horizontally to the left from that point of intersection to find the required Portland cement concrete pavement thickness.

Portland cement concrete pavements preferably may be combined with an integral curb to provide a thickened edge.

The procedures for mixing, proportioning, and placing Portland cement concrete shall be designed by a licensed engineer with experience in Portland cement concrete pavement construction acceptable to the City Engineer.

3. Fixed-State Alternative – In lieu of the above procedure, a standard street cross-section (as indicated) may be constructed based upon the specifications in Section B-4 of these Specifications.

4-103.12 Street Cross-Sections

1. Number of Lanes – For residential streets with an ADT from 500 to 3,000, two moving lanes (in opposite directions) are adequate. Whenever possible, four moving lanes should be avoided in residential areas except for required arterial or major collector streets. Four lanes may be warranted for short distances at entrances to larger developments.

One-way streets are adequate and, in some cases, desirable for loop streets or where there is a need to split the pavement to preserve natural land features or avoid excessive grading of slopes.

2. On-Street Parking – There are three possible alternatives to parking requirements.
 - a. Adequate off-street parking for occupants and visitors and no parallel parking allowed on streets.
 - b. Allowed parking on one side only.
 - c. Allowed parking on both sides of the street. Parking bays for visitors and/or occupants may be provided in lieu of on-street parallel parking space.

Ordinarily, space should be provided on one-way streets for parking on one side or a shoulder for stalled vehicles. Where shoulders are constructed to provide a natural or rural appearance, they may be used for stalled vehicle parking or, if paved or covered with rock or gravel, for visitor parking. Shoulders used for parking should be eight feet in width.

3. Pavement Widths – Standards for pavement widths are based on number of moving lanes, average daily traffic, parking requirements, and design speed. Minimum widths required to serve the above needs should be used to reduce long-term maintenance costs. For residential streets having a design speed of 25 miles per hour or less and an ADT of 500 or less or for streets having an ADT of 1,000 or less and no parking, moving lane widths of nine feet are adequate. However, an 8-foot wide lane for emergency stopping or temporary standing should be provided. For streets having an ADT of more than 500, with the exception noted above, moving lane widths of 10 feet are adequate. Parallel parking lane widths should be 8 feet.

Excess pavement widths increase the community's long-term maintenance costs such as pothole repair, resurfacing, snow removal, and street sweeping. In addition, excess pavement widths increase surface water runoff, thereby increasing the runoff volume and decreasing runoff concentration time. These factors have two adverse ecological effects. First, they increase the hazards due to flooding with attendant soil erosion and other ecological damage. And, second, they decrease ground absorption of rainfall, thereby contributing to the depletion of the ground water supply.

5. Right-of-Way Widths – Right-of-way widths for residential streets should be no more than that required for street pavements plus, when required, necessary widths for sidewalks, utility and drainage easements, drainage or slope retention grading, and planting strips. Right-of-way widths for future widening of streets are not necessary for most breaching streets. If utility easements are not a part of the right-of-way, they may be included in easements and become part of the building setback.

4-103.13 Paths – Parking paths that connect dwellings with off-street parking pads, parking lots, etc. shall have a minimum width of three (3) feet. Public paths or sidewalks that connect clusters or groups of homes with commercial centers or public facilities shall have a minimum width of six (6) feet or, if they include a bicycle lane, the minimum width shall be eight (8) feet. A separate single-lane bicycle path shall have a minimum width of two-and-one-half feet, and a separate two-lane bicycle path shall have a minimum width of four feet.

4-103.14 Reserve Strips – The creation of reserve strips adjacent to a proposed street in such a manner as to deny access from adjacent property to such street shall not be permitted.

4-103.15 Utilities

Water facilities

Sewage facilities

CHAPTER 5

DEFINITIONS

5-101 Usage

1. For the purpose of these Regulations, certain numbers, abbreviations, terms, and words used herein shall be used, interpreted, and defined as set forth in this chapter.
2. Unless the context clearly indicates to the contrary, words used in the present tense include the future tense, and words used in the plural number include the singular; the work “herein” means “in these Regulations”; and the word “regulations” means “these Regulations.”
3. A “person” includes a corporation, a partnership, and an unincorporated association of persons, such as a club; “shall” is always mandatory; a “building” or “structure” includes any part thereof; “used” or “occupied,” as applies to any land or building, shall be construed to include the word “intended, arranged, or designed to be used or occupied.”

5-102 Words and Terms Defined

Except where definitions are specifically included in various articles and sections, words in the text or tables of these Regulations shall be interpreted in accordance with the provisions set forth in this section. Where words have not been defined, the standard dictionary definition shall prevail.

AASHTO (American Association of State Highway and Transportation Officials – A policy on geometric design of highways and streets.

Addenda – Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the contract documents, drawings, and specifications by additions, deletions, clarifications, or corrections.

Alley – A public or private right-of-way primarily designed to serve as secondary access to the site or rear of those properties whose principal frontage is on some other street.

Applicant – The Owner of land proposed to be subdivided or his authorized representative. Consent shall be required from the legal Owner of the premises.

Architect – See “Registered Architect.”

Arterial Road – A road intended to move traffic to and from major industrial areas or a route for traffic between communities or large areas and which has an average daily traffic count in excess of 3,000.

BMP (Best Management Practices) – Land management practices or techniques that reduce both the velocity of runoff waters and the process of erosion that causes particles to become suspended in runoff waters.

Block – A tract of land bounded by streets or by a combination of streets and public parks, cemeteries, railroad rights-of-way, or shorelines of waterways.

Builder's Permit Surety – A Surety, letter of credit, or cashier's check required of builders, Contractors, or subcontractors, as appropriate, to cover any damage to City property resulting from construction activities.

Building – Any structure built for the support, shelter, or enclosure of persons, animals, chattels, or movable property of any kind. The term includes any permanent structure including mobile homes.

Capital Improvements Program – A proposed schedule of all future projects, listed in order of construction priority, together with cost estimates and the anticipated means of financing each project. All major projects requiring the expenditure of public funds, over and above the annual local government operating expenses, for the purchase, construction, or replacement of the physical assets for the community are included.

Change Order – A written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the contract documents, or authorizing an adjustment in the contract price or contract time.

Channel – A natural or artificial water course of perceptible extent, with definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow is therefore that water which is flowing within the limits of the defined channel.

Chief Enforcing Officer – The City Engineer or such person as designated by the City Engineer responsible for enforcing the provisions of these Regulations.

City – City of Gallatin, Tennessee.

City Attorney – The attorney holding the position of attorney for the City or such licensed attorney designated by the City Attorney to furnish legal assistance for the administration of these Regulations.

City Engineer – The authorized representative of the City of Gallatin responsible for managing the Engineering Division and the enforcement of the Gallatin Subdivision Regulations.

City Planner – The authorized representative of the City of Gallatin responsible for managing the Planning Department and the enforcement of the Gallatin Zoning Ordinances

City Specifications – Written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship required by the City of Gallatin for a project intended to become a part of the Municipal System.

City Staff – The staff employed by the City to assist the Planning Commission in planning and land use regulation activities.

Codes– City of Gallatin Codes Administration.

Collector Road – A road intended to move traffic from local roads to arterial routes. A collector road serves a neighborhood or large subdivision. Collector streets have an average daily traffic count ranging from 1,001 to 3,000.

Common Elements – Any portion of a condominium which is held in common by Owners of condominium units. These elements may be either general common elements or limited common elements, as defined below.

General Common Elements – Any of the common elements of a condominium which are held in joint ownership by all owners of the condominium.

Limited Common Elements – Any of the common elements of a condominium which are reserved for use by the Owner of a particular condominium unit or group of units.

Condominium – A form of Ownership of less than the whole of a building or system of buildings under a statute which provides the mechanics and facilities for formal filing and recordation of divided interests in real property, where the division is vertical as well as horizontal.

Condominium Subdivision – The subdivision of property through the establishment of a condominium or horizontal property regime.

Horizontal Condominium Subdivision – A condominium subdivision where each unit occupies some ground space.

Vertical Condominium Subdivision – A condominium subdivision of a multi-story building in which one or more units do not occupy ground area.

Condominium Unit – A dwelling unit conveyed by separate title and located within a condominium.

Construction Plan – The maps or drawings accompanying the preliminary plat and showing the specific location and design of improvements to be installed in the subdivision in accordance with the requirements of the Planning Commission as a condition of the approval of said plat.

Contract Documents – The contract executed by the Owner and Contractor for the construction of a project, consisting of agreement, change order, drawings, specifications, and addenda.

Contract Price – The total monies payable to the Contractor under the terms and conditions of the contract documents.

Contractor – An individual, firm, or corporation with whom an Owner or the City has executed an agreement for construction work.

County – The County of Sumner, Tennessee.

County Commission – The chief legislative body for Sumner County, Tennessee.

County Engineer – That person designated by the County Commission to administer engineering regulations for the County.

County Environmentalist – That person designated to administer the health regulations of the County as an agent of the County Health Department.

Cul-de-Sac – A minor street having only one outlet and having an appropriate terminal for the safe and convenient reversal of traffic movement.

Developer – The Owner of land proposed to be subdivided or his authorized representative. Consent shall be required from the legal Owner of the premises.

Drainage Basin – That portion of the earth's surface upon which falling precipitation flows to a given location.

Drawings – The part of the contract documents which show the characteristics and scope of construction work to be performed and which have been approved by the City Engineer.

Dwelling Unit – One room or rooms connected together constituting a separate, independent housekeeping establishment for Owner occupancy or rental or lease on a daily, weekly, monthly, or longer basis; physically separated from any other rooms or dwelling units which may be in the same structure; and containing independent cooking and sleeping facilities.

Easement – Authorization by a property Owner for the use by another, for a specified purpose, of any designated part of his property.

Engineer – See “Registered Engineer,” “City Engineer,” or, “County Engineer as appropriate, depending upon the context.

Engineers – The Owner’s engineer and the City Engineer collectively.

Equal Degree of Encroachment – The delineation of floodway limits so that floodplain lands on both sides of a stream are capable of conveying a proportionate share of flood flows. This is determined by considering the hydraulic conveyance of the floodplain along both sides of a stream for a significant reach.

Escrow – A deposit of cash with the City in lieu of an amount required and still in force on a performance or maintenance surety.

External Subdivision Boundary – All points along the periphery of a subdivision.

Field Order – A written order effecting a change in the work not involving an adjustment in the contract price or an extension of the contract time, issued by the Owner’s engineer or the City Engineer to the Contractor during construction.

Final Plat – See “Final Subdivision Plat.”

Final Subdivision Plat – The final map or drawing and accompanying materials, described in these Regulations, on which the subdivider’s plan of the subdivision is presented to the Planning Commission for approval and which, if approved, may be submitted to the County Register of Deeds for recording.

Finished Grade – The final slope or elevation of the ground surface after all cutting and filling are complete.

Flood – A temporary rise in stream level that results in inundation of areas not ordinarily covered by water. See “One-Hundred-Year Flood.”

Flood Frequency – The statistically determined average for how often a specific flood level or discharge may be equaled or exceeded

Flood Hazard Area – The maximum area of the floodplain that, on the average, is likely to be flooded once every one hundred years (i.e., that has a one percent chance of being flooded in any year).

Flood Hazard Boundary Map – An official map, issued by the Federal Insurance Administrator, on which the boundaries of the floodplain areas having special flood hazards have been delineated.

Floodplain – A land area adjoining a river, stream, water course, bay, or lake which is likely to be flooded. See “One-Hundred-Year Flood,” “Floodway,” and “Floodway Fringe.” The floodplain is composed of a floodway and floodway fringe.

Floodplain Management Program – The overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, building code regulations, health regulations, Zoning Ordinance regulations, and these Subdivision Regulations.

Flood Profile – A graph showing the water-surface elevation or height of a particular flood event for any point along the longitudinal course of a stream. The flood profile is determined through the use of standard open-channel hydraulic calculations.

Flood-Prone Area – Same as “Flood Hazard Area.”

Flood Proofing – Any combination of structural and nonstructural additions, changes, or adjustments to properties and structures which reduce or eliminate potential flood damage to lands; water facilities, sanitary facilities and other utilities; structures; and contents of buildings and which prevent pollution of floodwaters from such natural or man-made sources.

Flood Protection Elevation – The elevation which is one foot above the 100-year floodplain as established by the Corp of Engineers for the Federal Flood Insurance Study for the City of Gallatin. In areas where such 100-year floodplains are not developed, the flood protection elevation is the March 1975 flood for the Cumberland River and two (2) feet above the 50-year developed flood for the tributary streams mapped by the U.S. Geological Survey prior to January 1, 1976.

Floodway – The stream channel and adjacent over-bank area required to carry and safely discharge the 100-year flood without increasing flood levels more than one foot above natural flood levels. See “One-Hundred-Year

Floodway Encroachment Limits – The lines marking the limits of floodways on official Federal, State, and local floodplain maps, including such maps as are included in the appendix of these Regulations.

Floodway Fringe – The area adjoining a water course which, although not lying within a floodway, has been or may hereafter be covered by a 100-year flood. See “One-Hundred-Year Flood.”

Frontage – That side of a lot abutting on a street or way and ordinarily regarded as the front of the lot, but it shall not be considered as the ordinary side of a corner lot.

Frontage Street – Any street to be constructed by the developer or any existing street in which development shall take place on both sides.

Future Land Use Plan – The general development plan for Gallatin, Tennessee. This plan meets the intent of Sections 13-3-301, 13-3-302, and 13-4-102, Tennessee Code Annotated.

General Development Plan –

General Common Elements – See “Common Elements.”

Grade – The slope of a road or other public way specified in percentage terms.

Grading – Any operation or occurrence by which the existing site elevations are changed, or where any ground cover, natural or manmade, is removed; or any water course or body of water, natural or manmade, which is relocated on any site, thereby creating an unprotected area. This includes stripping, cutting, filling, stockpiling, or any combination thereof, and shall apply to the land in its cut or filled condition.

Grading Permit – A permit issued by the Engineering Division to authorize excavation and or fill placement to be under these Regulations.

Health Authority – See “County Environmentalist.”

Highway, Limited Access – A freeway or expressway providing a traffic way for through traffic, in respect to which Owners or occupants of abutting property or lands and other persons have no legal right of access to or from the traffic way, except at such points and in such manner as may be determined by the public authority having jurisdiction over such traffic way.

Horizontal Condominium Subdivision – See “Condominium Subdivision.”

Horizontal Property Act – The Tennessee Horizontal Property Act as codified in Sections 64-2701 through 64-2722, Tennessee Code Annotated.

Hundred-Year Flood – See “One-Hundred-Year Flood.”

Impervious Surface – Any ground or structural surface which water cannot penetrate or through which water penetrates with great difficulty.

Improvements – See “Lot Improvement” or “Public Improvement.”

Individual Sewage Disposal System – A septic tank, seepage tile sewage disposal system, or any other sewage treatment device other than a public treatment system approved by the appropriate local or State government authorities.

Inspector – The authorized representative of the City of Gallatin who is assigned to the project site or any part thereof.

Internal Subdivision Boundary – All points within subdivisions which do not constitute external boundaries.

Joint Ownership – Joint ownership among persons shall be construed as the same o “Constructive Ownership” for the purpose of imposing Subdivision Regulations.

Land Surveyor – See “Registered Land Surveyor.”

Lot – A tract, plat, or portion of a subdivision or parcel of land intended as a unit for the purpose, whether immediate or future, or transfer of Ownership or for building development.

Lot, Corner – A lot situated at the intersection of two (2) streets, the interior angle of such intersection, not exceeding 135 degrees.

Lot Improvement – Any building, structure, place, work of art, or other object or improvement of the land on which they are situated, constituting a physical betterment of real property or any part of such betterment.

Major Road – A road which is classified as a collector or arterial road according to these Regulations or by the Major Thoroughfare Plan for the planning region. See “Arterial Road,” “Collector Road,” and “Major Thoroughfare Plan.”

Major Thoroughfare Plan – The Plan adopted by the Planning Commission, pursuant to Sections 13-3-402 and 13-4-302, Tennessee Code Annotated, showing, among other things, “the general location, character, and extent of public ways . . . (and) the removal, relocation, extension, widening, narrowing, vacating, abandonment, or change of use of existing public ways. . .”

Major Street – See “Major Road.”

Major Subdivision – All subdivisions not classified as minor subdivisions including, but not limited to, subdivisions of five or more lots or subdivisions of any size requiring any new or improved road, the extension of City or County facilities, or the creation of any public improvements or containing any flood-prone area.

Minor Road – A road which is not classified as an arterial or collector road. See “Arterial Road” and “Collector Road.”

Minor Street – See “Minor Road.”

Minor Subdivision – Any subdivision containing not more than five (5) lots fronting on an existing street; not involving any new or improved road, the extension of City facilities, or the creation of any public improvements and not containing any flood-prone area, not adversely affecting the remainder of the parcel or adjoining property, and not in conflict with any provision of the adopted Future Land Use Plan, Major Thoroughfare Plan, Zoning Ordinance, or these Regulations.

MUTCD (Manual on Uniform Traffic Control Devices) – the national standard for traffic control devices on all public roads open to public travel.

National Flood Insurance Program – A program established by the U. S. Government in the National Flood Insurance Act of 1968 and expanded in the Flood Disaster Protection Act of 1973 in order to provide flood insurance at rates made affordable through a Federal subsidy in local political jurisdictions which adopt and enforce floodplain management programs meeting the requirements of the National Flood Insurance Program regulations. The program regulations are found at 24 Code of Federal Regulations, Chapter X Subchapter B.

Natural Ground – The ground surface in its original state prior to any grading, excavating, or filling.

Off-Site – Any premises not located within the area of the property to be subdivided, whether or not in the same Ownership of the applicant for subdivision approval.

One-Hundred-Year Flood – A flood having an average frequency of occurrence of once in 100 years, although it may occur in any year. It is based on statistical analysis of stream flow records available for the watershed and analysis of rainfall and runoff characteristics in the general region of the watershed.

Owner – Any person, group of persons, firm or firms, corporation or corporations, or any other legal entity having legal title to or sufficient proprietary interest in the real property.

Owner’s Engineer – The person, firm, or corporation named as such in the contract documents to perform engineering services for the Owner.

Ownership, Same – See “Same Ownership.”

Performance Surety – See “Surety.”

Perimeter Street – Any existing street to which the parcel of land to be subdivided abuts on only one side.

Planned Unit Development – As defined in the Gallatin Zoning Ordinance.

Planning Commission – The Gallatin Municipal-Regional Planning Commission created in accordance with Title 13 of the Tennessee Code Annotated.

Planning Region – All land, unincorporated, lying within the boundaries of the Gallatin Planning Region as established by the Tennessee State Planning Office by actions further described in Section 1-103 of these Regulations.

Preliminary Plat – The preliminary drawing or drawings, described in these Regulations, indicating the proposed manner of layout of the subdivision to be submitted to the Planning Commission for approval.

Premises – A tract of land, together with any buildings or structures which may be thereon.

Project – The construction work to be performed as provided in the contract documents.

Public Improvement – Any drainage ditch, roadway, parkway, sidewalk, pedestrian way, tree, lawn, off-street parking area, lot improvement, or other facility for which the City or County may ultimately assume the responsibility for maintenance and operation or which may affect an improvement for which City or County responsibility is established.

Public Works – The City of Gallatin Public Works Department.

PUD – Planned Unit Development.

Quality Control Inspector – See “Inspector.”

Reach – A hydraulic engineering term to describe longitudinal segments of a stream or river. A reach generally includes the segment of the flood-hazard area where flood heights are influenced by a man-made area or natural obstruction. In an urban area, the segment of a stream or river between two consecutive bridge crossings typically would constitute a reach.

Registered Architect – An architect certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee; or a landscape architect certified and licensed by the State Board of Landscape Architects pursuant to Section 62-203, Tennessee Code Annotated, to practice in Tennessee.

Registered Engineer – An engineer certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee.

Registered Land Surveyor – A land surveyor certified and registered by the State Board of Land Survey Examiners pursuant to section 62-1803, Tennessee Code Annotated, to practice in Tennessee.

Regulatory Flood – The one-hundred-year flood. See “One-Hundred-Year Flood.”

Regulatory Flood Elevation – The water-surface elevation of the regulatory flood.

Regulatory Flood Protection Elevation – The elevation of the regulatory flood plus one foot of freeboard to provide a safety factor.

Resubdivision – A change in a map of any approved or recorded subdivision plat if such change affects any street layout on such map, or any area reserved thereon for public use, or any lot line, or if it affects any map or plan legally recorded prior to the adoption of any Regulations controlling subdivisions.

Right-of-Way – A strip of land occupied or intended to be occupied by a street, crosswalk, railroad, road, electric transmission lines, oil or gas pipeline, water main, sanitary or storm sewer line, or for another special use. The usage of the term “right-of-way” for land platting purposes shall mean that every right-of-way hereafter established and shown on a Final Plat is to be separate and distinct from the lots or parcels adjoining such right-of-way and not included within the dimensions or area of such lots or parcels.

Right-of-Way Excavation Permit – A permit required of builders, Contractors, or subcontractors, as appropriate, when working within the City’s right-of-way to cover any damage resulting from construction activities.

Road, Classification – For the purpose of providing for the development of the streets, highways, roads, and rights-of-way in the City and planning region and for their future improvement, reconstruction, realignment, and necessary widening, including provision for curbs and sidewalks, each existing street, highway, road, and right-of-way and those located on approved and filed plats have been designated on the Major Thoroughfare Plan and classified herein. The classification of each street, highway, road, and right-of-way is based upon its location in the respective zoning districts of the City and Planning Region, its present and estimated future traffic volume, and its relative importance and function, as specified in the Future Land Use Plan.

Road, Dead-End – A road or a portion of a road with only one vehicular-traffic outlet.

Road Right-of-Way Width –The distance between property lines measured at right angles to the centerline of the road.

Sale or Lease – Any immediate or future transfer or ownership, including contract of sale or transfer, of an interest in a subdivision or part thereof, whether by metes and bounds, deed, contract, plat, map, or other written instrument.

Same Ownership – Ownership by the same person, corporation, firm, entity, partnership, or unincorporated association or ownership by different corporations, firms, partnerships, entities, or unincorporated associations in which a stockholder, partner, associate, or a member of his family own an interest in each corporation, firm partnership, entity, or unincorporated association.

Sediment – Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, or gravity as a product of erosion.

Setback – The distance between a building and the street line nearest thereto.

Site – All contiguous land and bodies of water under one Ownership, graded or proposed for grading or development as a unit, although not necessarily at one time.

Shop Drawings – All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the, a subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the work shall be fabricated or installed.

Sketch Plat – A sketch preparatory to the preparation of the preliminary plat (or final subdivision plat, in the case of minor subdivisions) to enable the subdivider to save time and expense in reaching general agreement with the Planning Commission as to the form of the plat and the objectives of these Regulations.

Slope – Degree of deviation of a surface from the horizontal, usually expressed in percent or ratio.

Special Flood Hazard Area – See “Flood Hazard Area.”

Special Flood Hazard Map – The official map designated by the Federal Insurance Administrator to identify floodplain areas having special flood hazards.

Specifications – A part of the contract documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship.

Start of Construction – The first placement of permanent construction on a site, such as the pouring of slabs or footings or any work beyond the state of excavation. For a structure without a basement or poured footings, the start of construction includes the first permanent framing or assembly of the structure or any part thereof on its pilings or foundation or the affixing of any prefabricated structure or mobile home to its permanent site. Permanent construction does not include land preparation; land clearing; grading; filling’ excavation for basement, footings, piers, or foundations; erection of temporary forms; the installation of piling under proposed subsurface footings; installation of sewer, gas, and water pipes and of electric or other service lines from the street; or existence on the property of accessory buildings.

State Highway Surety – A Surety to cover repairs or damage to any State highway resulting from any construction activity and also to cover any damage claim from individual as a result of any construction activity.

Storm Water Pollution Prevention Plan (SWPPP) – A plan submitted for approval to the City or State showing erosion, sediment, water pollution, and storm water management.

Street – See “Road, Classification”

Stripping – Any activity which removes or significantly disturbs the vegetative surface cover including clearing and grubbing operations.

Structure – Anything constructed or erected, the use of which requires a more or less permanent location, above or below the ground.

Subcontractor – An individual, firm, or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the work at a site.

Subdivider – Any person who (1), having an interest in land, causes it, directly or indirectly, to be divided into a subdivision or who (2), directly or indirectly sells, leases, or develops or offers to see, lease or develop, or advertises for sale, lease, or development any interest, lot, parcel site, unit, or plot in a subdivision or who (3), engages, directly or indirectly or through an agent in the business of selling, leasing, developing, or offering for sale, lease, or development a subdivision or any interest, lot, parcel site, unit, or plot in a subdivision or who (4), is directly or indirectly controlled by or under direct or indirect common control with any of the foregoing. See “Subdivision.”

Subdivision – Any land, vacant or improved, which is divided or proposed to be divided into two (2) or more lots, parcels, sites, units, plots, or interests of less than five (5) acres in size for the purpose, whether immediate or future, of offer, sale, lease, or development, either on the installment plan or upon any and all other plans, terms, and conditions, including resubdivision, provided, however, that the term “subdivision” does not include land partitioned by Owners among themselves either in court or by deeds. (The term “subdivision” includes the process of subdivision or division of residential or nonresidential land, whether by deed, metes and bounds description, map, plat, or other recorded instrument.) See also “Major Subdivision,” “Minor Subdivision,” and “Resubdivision.”

Subdivision Agent – Any person who represents or acts for or on behalf of a subdivider or developer in selling, leasing, or developing or offering to sell, lease, or develop any interest, lot, parcel, unit, site, or plot in a subdivision, except an attorney-at-law whose representation of another person consists solely of rendering legal service.

Subdivision, Major – See “Major Subdivision.”

Subdivision, Minor – See “Minor Subdivision.”

Substantial Completion – That date as certified by the City Engineer when the construction of the project or a specified part thereof is sufficiently completed, in accordance with the contract documents and City specifications so that the project or specified part can be utilized for the purposes for which it is intended.

Substantial Improvement – Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the actual cash value of the structure either before the improvement is begun or, if the structure has been damaged and is being restored, before the damage occurred. Substantial improvement begins when the first alteration of any structural part of the building commences.

Suppliers – Any person, supplier, or organization who supplies materials or equipment for the work, including that fabricated to a special design, but who does not perform labor at the site.

Surety – An Irrevocable Letter of Credit, certified check, or cash in a form specified by Chapter 5 of these Regulations.

SWPPP – See “Storm Water Pollution Prevention Plan.”

Temporary Improvement – Any improvement built and maintained by a subdivider during construction of the subdivision and prior to release of the performance surety, the cast deposited in escrow, or a letter of credit designed to ensure completion of required improvements.

Temporary Protection – Short-term stabilization of erosive or sediment producing areas.

Thoroughfare Plan – See “Major Thoroughfare Plan.”

Vegetative Protection – Stabilization of erosive or sediment producing areas by covering the soil with:

- a. Permanent seeding, producing long-term vegetative cover.
- b. Short-term seeding producing temporary vegetative cover, or sod, producing areas covered with a turf of perennial sod-forming grass, or
- c. tree planting, or
- d. other planting.

Vertical Condominium Subdivision – See “Condominium Subdivision.”

Water Surface Elevation – The heights in relation to mean sea level expected to reach by floods of various magnitudes and frequencies at pertinent points in the floodplain. Also the level of natural flows or collections of water which may be expected to be found above or below surface.

Water Course – A channel, natural depression, slough, gulch, stream, creek, pond, reservoir, or lake in which storm run-off and floodwater flows either regularly or infrequently. This includes major drainage ways for carrying urban storm run-off.

Work – All labor necessary to produce the construction required by the contract documents, City specifications, and all materials and equipment incorporated or to be incorporated in the project.

Zoning Ordinance – Municipal Regulations enforced by the Planning Department.

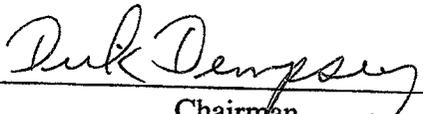
CHAPTER 6

ADOPTION OF REGULATIONS AND AMENDMENTS

6-101 Original Enactment – In order that land shall be subdivided in accordance with the objectives and standards set forth in these Regulations, these Subdivision Regulations are hereby adopted this 28th day of April, 2008, and immediately shall be in full force and effect. Pursuant to Sections 13-3-303 and 13-4-303, Tennessee Code Annotated, a public hearing was held on these Regulations April 28, 2008, at 5:00 p.m. at City Hall in Gallatin, notice of which was given by publication in The Gallatin Newspaper on March 27, 2008.

6-102 Amendments - Pursuant to Section 1-108.2, all amendments to the Regulations shall be listed in this Section upon adoption of the amendment by the Planning Commission.

<u>Section</u>	<u>Date</u>
3-101 Performance Bonds	3/23/09
3-101 Performance Bonds	6/22/09
3-101 Performance Bonds	12/14/09
3-101 Performance Bonds	04/26/10


Chairman

5-5-08
Date


Secretary

5-1-08
Date

APPENDIX A
FORMS

GALLATIN MUNICIPAL-REGIONAL PLANNING COMMISSION

PERFORMANCE SURETY

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principals, _____, State of _____, and the _____ INSURANCE COMPANY, a _____ Corporation authorized to do business in the State of Tennessee, having an office and place of business at _____, as Surety, are held and firmly bound unto the City of Gallatin as Oblige, in the sum of _____ DOLLARS (\$ _____) lawful money of the United States, for the payment whereof to the Oblige, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly to these presents:

SIGNED, SEALED, AND DATED this _____ day of _____, _____.

WHEREAS, application was made to the Gallatin Municipal-Regional Planning Commission for approval of a subdivision shown on plat entitled “ _____,” filed with the Chief Enforcing Officer of the City of Gallatin on _____, _____, said Final Plat being approved by the Gallatin Municipal-Regional Planning Commission upon certain conditions, one of which is that a Performance Surety in the amount of _____ DOLLARS (\$ _____) is to be filed with the Planning Commission and accepted by the local governing body to guarantee certain improvements in the subdivision named above.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the above-named Principal shall within one (1) year from the date hereof (time may be extended for one year only beyond this period by the local governing body upon the recommendation of the Planning Commission with the consent of the parties) will and truly make and perform the required improvements and construction of public improvements in said subdivision in accordance with the local government specifications and the Resolution of _____, _____, then this obligation is to be void; otherwise to remain in full force and effect.

It is hereby understood and agreed that, in the event that any required improvements have not been installed as provided by said Resolution, within the term of this Performance Surety, the governing body may thereupon declare this Surety to be in default and collect the sum remaining payable there under, and upon receipt of the proceeds thereof, the local government shall install such improvements as are covered by this Surety and commensurate with the extent of building development that has taken place in the subdivision but not exceeding the amount of such proceeds.

Principal

Principal

INSURANCE COMPANY

by _____
Attorney-in-fact

SURETY NO. _____

ACKNOWLEDGEMENT;

COPARTNERSHIP

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known and known to me to be one of the firm of _____, described in and who executed the foregoing instrument, and he thereupon acknowledged to me that he executed such instrument as and for the act and deed of said firm.

CORPORATE

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known, who being by me first duly sworn, did depose and say that he resides in _____; that he is the _____ of _____, the corporation described in and which executed the foregoing instrument; that he knows the corporate seal of said corporation, that it was so affixed by order and authority of the Board of Directors of said corporation, and that he signed his name thereto by like order and authority.

INDIVIDUAL

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known and known to me to be the individual described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same.

GALLATIN MUNICIPAL-REGIONAL PLANNING COMMISSION

OFFER OF IRREVOCABLE DEDICATION

AGREEMENT made this _____ day of _____, _____, by and between _____, a _____, having its office and place of business at _____, hereinafter designated as “developer” and Gallatin, Tennessee, having its principal office at Gallatin, Tennessee, hereinafter designated as the “local government.”

WHEREAS, the Gallatin Municipal-Regional Planning Commission is in the process of approving a final subdivision plat entitled _____ dated _____, and made by _____; and

WHEREAS, said map designates certain public improvements consisting of _____
_____ to be dedicated to the CITY OF GALLATIN free and clear of all encumbrances and liens, pursuant to the requirements of the Planning Commission and the local government; and

WHEREAS, the developer, simultaneously herewith, shall post a Performance Surety with the City for the construction, maintenance, and dedication of said improvements, if required; and

WHEREAS, the developer is desirous of offering for dedication the said improvements and land to the local government, more particularly described in Schedule _____ attached hereto; and

WHEREAS, the developer has delivered deeds of conveyance to the local government for the said land and improvements as described herein;

NOW, THEREFORE, in consideration of the sum of \$1.00 lawful money of the United States paid by the local government to the developer and other good and valuable consideration, it is mutually AGREED as follows:

1. The developer herewith delivers to the local government deeds of conveyance for the premises described in Schedule _____ attached hereto, said delivery being a formal offer of dedication to the local government until the acceptance or rejection of such offer of dedication by the governing body of the local government.
2. The developer agrees that the same formal offer of dedication is irrevocable and can be accepted by the local government at any time.

3. The developer agrees to complete the construction and maintenance of the land and improvements pursuant to the Performance Surety and the requirements of the Gallatin Municipal-Regional Planning Commission and any ordinances, regulations, requirements, covenants, and agreement that may be imposed by the local government with respect thereto and, upon acceptance by the local government of the offer of dedication, furnish to the local government a sworn statement certifying that the premises are free and clear of all liens and encumbrances and shall furnish to the local government a check for all necessary fees and taxes to record the deeds heretofore delivered.
4. That this Irrevocable Offer of Dedication shall run with the land and shall be binding on all assigns, grantees, successors, or heirs of the developer.

_____, _____
 Date Developer

(CORPORATE SEAL)

ATTEST:

FOR THE CITY OF GALLATIN:

BY _____

_____, _____
 Date Date

ACKNOWLEDGEMENT;

COPARTNERSHIP

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known and known to me to be one of the firm of _____, described in and who executed the foregoing instrument, and he thereupon acknowledged to me that he executed such instrument as and for the act and deed of said firm.

CORPORATE

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known, who being by me first duly sworn, did depose and say that he resides in _____; that he is the _____ of _____, the corporation described in and which executed the foregoing instrument; that he knows the corporate seal, that it was so affixed by order and authority of the Board of Directors of said corporation, and that he signed his name thereto by like order and authority.

INDIVIDUAL

(STATE OF TENNESSEE)

(COUNTY OF SUMNER) SS.:

On this _____ day of _____, _____, before me personally appeared _____, to me known and known to me to be the individual described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same.

GALLATIN MUNICIPAL-REGIONAL PLANNING COMMISSION

IRREVOCABLE DOCUMENTARY LETTER OF CREDIT

Date of Issue _____

Credit Number of Issuing Bank _____

Credit Number of Advising Bank _____

Advising Bank _____

Accountee _____

Beneficiary, Mail to _____

Latest Performance Date _____

Latest Date for Negotiation _____

Maximum Amount _____

We hereby issue this Documentary Letter of Credit in your (the beneficiary's) favor which is available against your drafts at _____ drawn on _____ Bank, _____, Tennessee, bearing the clause "Drawn under _____ Bank, Credit No. _____" accompanied by the following document:

A Certificate of Default signed under oath by the Chairman of the Gallatin Municipal-Regional Planning Commission and the Mayor of the City of Gallatin certifying that the Accountee has not complied with the terms of the agreement between the Planning Commission and the Accountee and the amount of approximate damage to the local government, which amount shall be identical to the face amount of the accompanying draft.

SPECIAL CONDITIONS

We hereby engage with the bona fide holders of all drafts or documents presented under and in compliance with the terms of this Letter of Credit that such drafts or documents will be duly honored upon presentation to us.

Gallatin Municipal-Regional Planning Commission
Irrevocable Documentary Letter of Credit
Page 2

The amount of each drawing must be endorsed on the reverse of this Letter of Credit by the negotiating bank.

The advising bank is requested to advise this Letter of Credit without engagement of their part.

_____ Bank

Authorized Signature, Issuing Bank

Authorized Signature, Issuing Bank

Sketch Plat Checklist

1. The names of the Owner(s) and the Owners of any adjoining property.
2. Border of the property and at least one Benchmark.
3. The date of the map, title of the subdivision, vicinity map, north arrow, scale, and City Limits (if applicable).
4. Acreage of the original tract(s) and new tracts being subdivided.
5. Any existing rights-of-way or easements or other encumbrances affecting the property.
6. Approximate topography of the site extended at least 50 feet into adjacent properties with existing contours no greater than five (5) feet apart.
7. Any areas that are within the floodway or floodplain.
8. Estimates of traffic volumes and movements to and from the completed project and boundary streets per the Zoning Ordinance Section 06.07. List any Traffic or Pedestrian Study required per the Zoning Ordinance Section 13.06.010 or required by the City Engineer.
9. Label any areas that may require a Geotechnical Study.
10. Label any streams, wetlands, water bodies, cemeteries, railroads, and bridges.
11. Existing street names on all sheets per the Official Street Index.
12. Proposed right-of-way widths, roadway widths, and sidewalk widths.
13. Rights-of-way less than 50 feet may be increased to 50 feet minimum or as required on the Major Thoroughfare Plan.
14. Properties must have access to a public roadway and cannot have access primarily through an access easement, except commercial lots.
15. Check access locations per the Zoning Ordinance Section 13.06.
16. "No Access" along major roads if the lot can be accessed primarily through a minor road, or if directed so by the Chief Enforcing Officer.
17. General road and lot pattern that allows for proper sight distances and horizontal and vertical alignments.
18. Required temporary sediment pond and detention pond locations.
19. Proposed phasing, if any, including timeline for improvements.

Preliminary Plat Checklist

1. The names of the Owner(s) and the Owners of any adjoining property.
2. Border of the property and at least one Benchmark.
3. The date of the map, title of the subdivision, vicinity map, north arrow, scale, and City Limits (if applicable).
4. Acreage of the original tract(s) and new tracts being subdivided.
5. The name, stamp, and signature of the Registered Land Surveyor or other professional person responsible for preparation of the plat.
6. The location, scale dimensions, and areas of all proposed or existing lots. Number all lots.
7. Notation of any existing legal rights-of-way or easements or other encumbrances affecting the property.
8. Approximate topography of the site extended at least 50 feet into adjacent properties with existing contours no greater than five (5) feet apart.
9. Any areas that are within the floodway or floodplain.
10. Label any streams, wetlands, water bodies, cemeteries, railroads, and bridges.
11. Proposed and existing street names on all sheets per the Official Street Index.
12. Existing and proposed right-of-way widths.
13. All proposed easements (drainage, utility, slope, construction, sidewalk, etc.).
14. Proposed roadway and sidewalk widths.
15. All roadways must be within the right-of-way and all sidewalks must be within the right-of-way or a dedicated sidewalk easement.
16. Rights-of-way less than 50 feet may be increased to 50 feet minimum or as required on the Major Thoroughfare Plan.
17. Properties must have access to a public roadway and cannot have access primarily through an access easement, except commercial lots.
18. Check access locations per the Zoning Ordinance Section 13.06.
19. "No Access" along major roads if the lot can be accessed primarily through a minor road, or if directed so by the Chief Enforcing Officer.
20. Intersection design per GSR Section 4-103.203 including:
 - a. Connections at right angles
 - b. No more than two roads intersecting at one location
 - c. Opposing centerlines at 125' minimum offset
 - d. Intersections of arterial or collector roads to be separated 800' minimum
 - e. 25' minimum curb radius at connection of two local roads
 - f. 35' minimum curb radius at connection involving a collector road
 - g. Adequate sight distance
 - h. Flat grade wherever practical
 - i. In hilly or rolling areas, a leveling area with 2% grade or less for at least 60' from the intersecting right-of-way line
21. Existing and proposed culverts, driveway tiles, associated drainage structures sized along with necessary easements.
22. The location of any required temporary sediment pond and detention pond.
23. Show and label all Phase lines.
24. Concrete monuments at new right-of-way boundaries, per GSR Section 4-101.3.

25. The location and scale dimensions of all property proposed to be set aside for park or playground use or other public or private reservation, with designation of the purpose thereof, and conditions, if any, of the dedication or reservation.
26. Add notes indicating any lots or areas within the subdivision that may require a Geotechnical Study.
27. In the instance of condominium subdivisions, the position of all existing or proposed buildings.
28. The zoning classification of all zoned lots, as well as an indication of all uses other than residential proposed by the sub-divider.
29. The distance and bearing of one of the corners of the boundary of the subdivision to the nearest intersection of existing streets or roads and to an original corner of the original survey of which it is a part.
30. For any lot where public sewage or water system is not available, the following shall be shown:
 - a. Areas to be used for sewer disposal and their percolation results or, if the Planning Commission desires, any other acceptable data to show that the site can be served effectively by septic tanks.
 - b. Water wells (existing and proposed).
 - c. Rock outcroppings, marshes, springs, sinkholes, natural storm drains, and other outstanding topographical features.
31. Draft of proposed restrictive covenants, if any, to be imposed and designation of areas subject to special restrictions.
32. A form for endorsement of Planning Commission approval of the preliminary plat, which shall read as follows:

Approved by the Gallatin Municipal-Regional Planning
Commission, with such exceptions or conditions as are
indicated in the minutes of the Commission are
_____.

This preliminary plat approval does not constitute approval of
this subdivision in final form and does not constitute approval
for recording of the plat.

Construction Plans Checklist

General:

1. Verify that a preliminary plat has been submitted.
2. Submit a digital file of the construction plans with the final revisions.
3. Provide a copy of an approved NPDES Storm Water Construction Permit, if required.
4. Provide a copy of an approved TDOT Construction Permit, if required.
5. Apply for a City ROW Excavation Permit, if required.
6. Provide a copy of an approved ARAP Permit and “No Rise” Certificate, if required.
7. Provide a copy of a stream determination letter from TDEC, if required.
8. Provide a copy of TDEC authorization to inject runoff into the subsurface, if required.
9. Provide a Traffic Study for the project, if required in Zoning Ordinance Section 6.07 or by the City Engineer.
10. Provide drainage calculations for post-construction runoff. Design detention ponds to pass a 10 year-24 hour storm event and hold up to a 100 year-24 hour storm event. Design for 100yr storm event under collector roads.
11. Border of the property being subdivided and at least one Benchmark.
12. Label all Phase and Section lines.
13. The date of the map (including revision dates), title of the subdivision, vicinity map, north arrow, scale, and City Limits (if applicable).
14. The name, stamp, and signature of the Registered Engineer and Registered Land Surveyor responsible for preparation of the plans.
15. Approval signature block per GSR Section 5-103.2 (8).
16. The names of all proposed roads as approved by the Planning Commission and the names of existing adjoining streets shown on the plat.
17. In addition to the other requirements of this Section, construction plans for condominium subdivisions shall contain “as-built” drawings of all underground utilities, regardless of proposed Ownership, and the construction design of all public facilities which are proposed for dedication to the City or County, as appropriate.
18. Location, size, elevation, and other appropriate description of any existing facilities or utilities, including but not limited to, existing streets, sewers, drains, water mains, easements, water bodies, streams, and other pertinent features, such as swamps, railroads, buildings, features noted on the Future Land Use Plan or Major Thoroughfare Plan at the point of connection to proposed facilities and utilities within the subdivision. The water elevations of adjoining lakes or streams and the approximate high- and low-water elevations shall be referred to the U.S.G.S. datum plane. If the subdivision borders a lake, river, or stream, the distance and bearings of a meander line established not less than twenty (20) feet back from the ordinary high-water mark of such waterways.

Grading:

19. Add Note: Erosion and sediment controls must be in place and inspected by the Engineering Division prior to beginning grading.
20. All existing and proposed elevation lines with contours no greater than 5 feet apart. Existing contours shall be field surveyed or taken from acceptable aerial photographs. Show the existing topography of the site extended into adjacent properties at least 50’.

21. Plan views should show all pertinent information and elevations to efficiently and correctly construct the proposed project.
22. Profile views should show existing and proposed elevations along the centerlines of all roads (including tangents, percent grade, and central angles) as well as all existing and proposed utility and storm drainage locations.
23. Existing and proposed right-of-way widths.
24. Proposed roadway and sidewalk widths.
25. Roadway stationing on all sheets.

Drainage:

26. Location of all storm drainage and detention within drainage easements.
27. Retention or detention pond location, design, and details to match requirements of the drainage calculations.
28. Drainage Table for the storm sewer including: top of grate, invert in, invert out, pipe type, pipe size, pipe length, pipe slope, and other necessary information for installation. Letter or number designation for all structures.
29. Reinforced Concrete Pipe (RCP) shall be used under all roadways. Provide a minimum of one (1) foot of cover over all pipes. When changing from RCP to other pipes, make the change within a structure.
30. Inlet castings should match the curb or curb and gutter.
31. Ditches behind and parallel to curbs are discouraged.
32. Sinkhole remediation detail and capacity calculations from sinkhole to aquifer.
33. Show easements or riparian buffers for any TDEC identified stream.
34. Storm water must leave the site at an easement location.
35. Downstream drainage system must be improved, from the site outlet to the nearest major storm water conveyance, to handle the new flow.

Erosion Control:

36. Add Note: Inspection and maintenance of erosion control devices will be performed on a regular basis and after each storm event.
37. Areas where erosion controls may be needed.
38. Type of cover for ditches per GSR Section B-5.02. Ditch slopes where not apparent.
39. Energy dissipater blocks at all outlet headwalls.
40. Erosion control fabric instead of riprap.
41. Erosion control details. i.e. – silt fence, straw bales, check dams, inlet control, etc.
42. Construction entrance location and details.

Traffic & Design:

43. Improvements shown as per the Traffic Study.
44. Design speed for proposed roads.
45. Paving cross-sections per the Construction Manual
46. Roadway slopes not less than 1% (see blue insert)
47. Intersection design per GSR Section 4-103.203 including:
 - d. Connections at right angles,
 - e. No more than two roads intersecting at one location,

- f. Opposing centerlines at 125' minimum offset,
 - g. Intersections of arterial or collector roads to be separated 800' minimum,
 - h. 25' minimum curb radius at connection of two local roads,
 - i. 35' minimum curb radius at connection involving a collector road,
 - j. Adequate sight distance,
 - k. Flat grade wherever practical,
 - l. In hilly or rolling areas, a leveling area with 2% grade or less for at least 60' from the intersecting right-of-way line.
48. Correct taper lengths for turn lanes.
49. Show only approved or existing driveway entrances. Driveway apron detail.
50. Entrances, roadways, and sidewalks to align with those across the street.
51. Sidewalks located within the R.O.W. or a sidewalk easement.
52. Sidewalks and curbs should extend to the connecting roadway.
53. Handicap ramps shall be shown at all ends of sidewalks and stop sign locations.
54. Sidewalk and handicap ramp details.
55. All signage and pavement markings. Specifications shall be per the MUTCD, current edition. Items not contained with the body of the MUTCD will require shop drawing submittal and approval and a letter of intent for future maintenance.
56. In addition to the other requirements of this Section, the developer shall prepare, for any portion of a subdivision containing a flood-prone area or an area known to be subject to flooding, the following information necessary for the Planning Commission to determine the suitability of the particular site for the proposed development:
- a. Plans in triplicate drawn to scale showing the nature, location, dimensions, and elevation of any part of the subdivision within a flood-prone area, existing or proposed structures or building sites, fill, storage of materials, flood proofing measures as specified in Section 4-101.4 of these Regulations, and the relationship of the above to the location of the stream channel, floodway, floodway fringe, the regulatory flood elevation, and the regulatory flood protection elevation.
 - b. A typical valley cross-section showing the channel of the stream, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high-water information, if required by the Planning Commission.
 - c. Surface-view plans showing elevations and contours of the ground; pertinent structures, fill or storage elevations of streets and water supply and sanitary facilities; soil types and other pertinent information, if required by the Planning Commission.
 - d. Specifications for building construction and materials, flood proofing, filling, dredging, grading, storage of materials, water supply, and sanitary facilities.
57. Bridges to TDOT specifications and hydraulically adequate.
58. If a traffic signal is being installed:
- a. Any old equipment will remain City property,
 - b. All disturbed areas will be repaired by installer,
 - c. Time of Day and Phasing plans,
 - d. Pre-empts if needed,

Major Final Plat Checklist

1. The Final Plat SHALL NOT be submitted nor reviewed prior to the signed approval of the construction plans and drainage calculations.
2. Submit a digital file of the plat, including utilities, with the final submittal.
3. Verify there is an approved NPDES Storm Water Construction Permit on file.
4. Verify there is a TDOT Construction Permit on file, if necessary.
5. The names of the owner(s) and the owners of any adjoining property.
6. Border of the property and at least one Benchmark.
7. The date of the map, title of the subdivision, vicinity map, north arrow, scale, and City Limits (if applicable).
8. Acreage of the original tract(s) and new tracts being subdivided.
9. The name, stamp, and signature of the Registered Land Surveyor or other professional person responsible for preparation of the plat.
10. The location, scale dimensions, and areas of all proposed or existing lots. Number all lots.
11. Notation of any existing legal rights-of-way or easements or other encumbrances affecting the property.
12. No contours shown on the Final Plat.
13. Label any floodway and floodplain. Provide FFE for lots within the floodplain.
14. Label any streams, wetlands, water bodies, cemeteries, railroads, and bridges.
15. Proposed and existing street names on all sheets per the Official Street Index.
16. Existing and proposed right-of-way widths.
17. All proposed easements (drainage, utility, slope, construction, sidewalk, etc.).
18. Verify the R.O.W. and Easements are shown as required on the construction plans.
19. For Private Streets, does the plat show ownership of R.O.W. and utility and drainage easements across the R.O.W.?
20. Proposed roadway and sidewalk widths.
21. All roadways must be within the right-of-way and all sidewalks must be within the right-of-way or a dedicated sidewalk easement.
22. Rights-of-way less than 50 feet may be increased to 50 feet minimum or as required on the Major Thoroughfare Plan.
23. Properties must have access to a public roadway and cannot have access primarily through an access easement, except commercial lots.
24. Check access locations per the Zoning Ordinance Section 13.06.
25. "No Access" along major roads if the lot can be accessed primarily through a minor road, or if directed so by the Chief Enforcing Officer.
26. Street address for every lot. Numbering per the Engineering Division.
27. Existing and proposed culverts, driveway tiles, associated drainage structures sized along with necessary easements.
28. The location of any designated detention pond or drainage area.
29. Show and label all Phase lines.
30. Concrete monuments at new right-of-way boundaries, per GSR Section 4-101.3.
31. The location and scale dimensions of all property proposed to be set aside for park or playground use or other public or private reservation, with designation of the purpose thereof, and conditions, if any, of the dedication or reservation.

32. Add notes indicating any lots or areas within the subdivision that may require a Geotechnical Study.
33. In the instance of condominium subdivisions, the position of all existing or proposed buildings.
34. The zoning classification of all zoned lots, as well as an indication of all uses other than residential proposed by the sub-divider.
35. The distance and bearing of one of the corners of the boundary of the subdivision to the nearest intersection of existing streets or roads and to an original corner of the original survey of which it is a part.
36. For any lot where public sewage or water system is not available, the following shall be shown:
 - a. Areas to be used for sewer disposal and their percolation results or, if the Planning Commission desires, any other acceptable data to show that the site can be served effectively by septic tanks.
 - b. Water wells (existing and proposed).
 - c. Rock outcroppings, marshes, springs, sinkholes, natural storm drains, and other outstanding topographical features.
37. Draft of proposed restrictive covenants, if any, to be imposed and designation of areas subject to special restrictions.
38. Notations and certifications in the forms required in GSR Section 2-104.3 and reproduced in Appendix A shall appear upon the Final Plat, if applicable.

Minor Subdivision Plat Checklist

1. The Final Plat SHALL NOT be submitted nor reviewed prior to the signed approval of the construction plans and drainage calculations.
2. Verify there is an approved NPDES Storm Water Construction Permit on file.
3. Verify there is a TDOT Construction Permit on file, if necessary.
4. The names of the owner(s) and the owners of any adjoining property.
5. Border of the property and at least one Benchmark.
6. The date of the map, title of the subdivision, vicinity map, north arrow, scale, and City Limits (if applicable).
7. Acreage of the original tract(s) and new tracts being subdivided.
8. The name, stamp, and signature of the Registered Land Surveyor or other professional person responsible for preparation of the plat.
9. The location, scale dimensions, and areas of all proposed or existing lots. Number all lots.
10. Notation of any existing legal rights-of-way or easements or other encumbrances affecting the property.
11. No contours shown on this Final Plat. Contours will be checked “in-house” for drainage issues and geotechnical concerns.
12. Label any floodway and floodplain. Provide FFE for lots within the floodplain.
13. Label any streams, wetlands, water bodies, cemeteries, railroads, and bridges.
14. Proposed and existing street names on all sheets per the Official Street Index.
15. Existing and proposed right-of-way widths.
16. All proposed easements (drainage, utility, slope, construction, sidewalk, etc.).
17. Verify the R.O.W. and Easements are shown as required on the construction plans.
18. For Private Streets, does the plat show Ownership of R.O.W. and utility and drainage easements across the R.O.W.?
19. Proposed roadway and sidewalk widths.
20. All roadways must be within the right-of-way and all sidewalks must be within the right-of-way or a dedicated sidewalk easement.
21. Rights-of-way less than 50 feet may be increased to 50 feet minimum or as required on the Major Thoroughfare Plan.
22. Properties must have access to a public roadway and cannot have access primarily through an access easement, except commercial lots.
23. Check access locations per the Zoning Ordinance Section 13.06.
24. “No Access” along major roads if the lot can be accessed primarily through a minor road, or if directed so by the Chief Enforcing Officer.
25. Street address for every lot. Numbering per the Engineering Division.
26. Existing and proposed culverts, driveway tiles, associated drainage structures sized along with necessary easements. Driveway culverts may be installed by the City of Gallatin if requested.
27. The location of any designated detention pond or drainage area.
28. Show and label all Phase lines.
29. Concrete monuments at new right-of-way boundaries, per GSR Section 4-101.3.

30. The location and scale dimensions of all property proposed to be set aside for park or playground use or other public or private reservation, with designation of the purpose thereof, and conditions, if any, of the dedication or reservation.
31. Add notes indicating any lots or areas within the subdivision that may require a Geotechnical Study.
32. In the instance of condominium subdivisions, the position of all existing or proposed buildings.
33. The zoning classification of all zoned lots, as well as an indication of all uses other than residential proposed by the sub-divider.
34. The distance and bearing of one of the corners of the boundary of the subdivision to the nearest intersection of existing streets or roads and to an original corner of the original survey of which it is a part.
35. For any lot where public sewage or water system is not available, the following shall be shown:
 - a. Areas to be used for sewer disposal and their percolation results or, if the Planning Commission desires, any other acceptable data to show that the site can be served effectively by septic tanks.
 - b. Water wells (existing and proposed).
 - c. Rock outcroppings, marshes, springs, sinkholes, natural storm drains, and other outstanding topographical features.
36. Draft of proposed restrictive covenants, if any, to be imposed and designation of areas subject to special restrictions.
37. Notations and certifications in the forms required in GSR Section 2-104.3 and reproduced in Appendix A shall appear upon the Final Plat, if applicable.

FINAL PLAT CERTIFICATES

- 1. Certification showing that the applicant is the landowner; that he dedicates roads, rights-of-way, and any site for public use and that he consents to the subdivision plan:

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (We) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in book number _____, page _____, County Registrar’s Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers of irrevocable dedication for all public roads, utilities, and other facilities have been filed as required by the Gallatin Municipal-Regional Subdivision Regulations.

_____, _____ Date Owner

- 2. Certification by surveyor or professional engineer too accuracy of the survey and plat and the placement of monuments:

CERTIFICATE OF ACCURACY

I hereby certify that the plan shown and described hereon is a true and correct survey to the accuracy required by the Gallatin Municipal-Regional Planning Commission and that the monuments have been or will be placed, as shown hereon, to the specifications in these Regulations.

_____, _____ Date Owner

3. Certification by appropriate officials that sewage disposal and water systems have been installed as required by local and State law and regulations.

CERTIFICATE OF APPROVAL OF WATER SYSTEMS

I hereby certify that the water systems outlined or indicated on the final subdivision plant entitled _____ have been installed in accordance with current local and State government requirements or a sufficient Surety or cash has been filed which will guarantee said installation.

Water System _____, _____
Date Superintendent of Public Utilities

CERTIFICATE OF APPROVAL OF SEWER SYSTEMS

I hereby certify that the sewer systems outlined or indicated on the final subdivision plant entitled _____ have been installed in accordance with current local and State government requirements or a sufficient Surety or cash has been filed which will guarantee said installation.

Sewer System _____, _____
Date Superintendent of Public Utilities

CERTIFICATE OF APPROVAL BY COUNTY HEALTH DEPARTMENT

I hereby certify that the sewage disposal systems installed or proposed for installation in the subdivision entitled _____ fully meet the requirements of the Sumner County Health Department and are hereby approved.

_____, _____
Date Sumner County Environmentalist

6. Certification of the Planning Commission's approval for recording of the plat:

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the Gallatin Municipal-Regional Subdivision Regulations, with the except of such variances, if any, as are noted in the minutes of the Planning Commission, and that it has been approved for recording in the office of the County Registrar.

_____, _____
Date

Secretary, Planning Commission

_____, _____
Date

Chairman's Initials

-
- 7. Notation of Possible Flooding - If any portion of the land being subdivided is subject to flooding, as defined in these Regulations, a notation shall be made on the plat that development or modification of the land within any floodway delineated on the plat is prohibited and that development within floodway fringe areas delineated on the plat shall be done in such a manner that any structure shall be protected against flood damage to at least the regulatory flood protection elevation, which elevation shall be stated in the notation. Any additional restrictions imposed by the Planning Commission upon development within flood-prone areas also shall be indicated on the plat.
 - 8. Notation of Health Restrictions - Any modifications or limitations which may be imposed by the State or County Public Health Department shall be clearly indicated on plat.
 - 9. Notation of Private Restrictions - Private restrictions and trusteeships and their periods of existence shall be indicated. Should these restrictions or trusteeships be of such length as to make their lettering on the plat impracticable and thus necessitate the preparation of a separate instrument, reference to such instrument shall be made on the plat or, if the restrictions and trusteeships are of record, the plat note shall state where they are recorded.
-

10. Pursuant to T.C.A. 13-4-302(a), if a plat of subdivision divides a tract into no more than two lots, the Secretary of the Planning Commission may approve the subdivision plat upon certification by the Planning staff of the Municipal Planning commission that the subdivision plat complies with the provisions of the Subdivision Regulations governing the subdivision of land and that no requests for variances from such regulations has been requested. Therefore, the following certificate must be included on all plats approved by staff under the above-mentioned provision:

CERTIFICATE OF STAFF CERTIFICATION

Date

City Planner

APPENDIX B
STREET DESIGN CRITERIA, CONSTRUCTION, AND
DRAINAGE SPECIFICATIONS

GENERAL INSTRUCTIONS

To ensure the expeditious handling and approval of plans and specifications before construction, three sets of the plans and specifications should be presented to the City of Gallatin Planning Commission. Plans shall include a complete plan of the proposed development, showing complete contours at an interval no greater than five feet and, based on the USGS datum. A north arrow shall be shown on the plan. Profiles of the roadway shall be included and shall show the location of any utilities and drainage tiles in relation to the roadway subgrade. After final approval is granted by the Planning Commission and the City Engineer, two sets of as-built plans and specifications must be submitted to the City Engineer.

The City shall have the right to take possession of and use any completed or partially-completed portions of the work, but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the City specifications.

The acceptance of the project for maintenance by the City of Gallatin will not be granted until the notice of substantial completion has been granted in writing from the City Engineer.

The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury, or loss to:

1. all employees on the project and other persons who may be affected thereby,
2. all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and
3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadway, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor will keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the work and, at the completion of the work, he will remove all waste materials, rubbish, and debris from and about the premises, as well as all tools, construction equipment and machinery, and surplus materials and will leave the site clean and ready for occupancy by the Owner. The Contractor will restore to their original condition those portions of the site not designated for alternation by the contract documents.

All easements required for the project must be dedicated to the City of Gallatin before final approval of the project is made.

SECTION B-1 GENERAL

B-1.01 Jurisdiction

These rules, Regulations, and specifications for the construction of streets and drainage area applicable to all areas within the jurisdictional boundary of the Gallatin Municipal-Regional Planning Commission. All streets and drainage constructed within this boundary shall conform to this document.

B-1.02 Purpose

The purpose of these specifications is to provide adequate policies in the construction procedures and quality or materials that will be in the best interest of safety, convenience, and durability.

B-1.03 Approvals

All roadway and drainage plans shall be prepared and submitted to the Engineering Division in accordance with the requirements set forth herein.

The approval of the construction plans shall be good for a period of two years. If construction has not begun within this time, plans shall be resubmitted for approval of the Engineering Division.

Final inspection for acceptance of streets and drainage system will not be granted until the original two-year approval has expired or until 80 percent of the lots are fully developed, whichever is the shorter period of time.

All easements required for the project must be dedicated to the City of Gallatin before final approval of the project is made.

B-1.04 Developer's Performance Surety

A performance surety, as required in Section 3-101 of the Subdivision Regulations, in the amount of 110 percent of the construction costs, as estimated by the Engineering Division, shall be required to cover the costs of streets and drainage.

B-1.05 Developer's Maintenance Surety

A maintenance surety, as required in Section 3-101 of the Subdivision Regulations, in the amount of 10 percent of the completed roadway and drainage costs, as estimated by the Engineering Division, shall be required on all subdivisions and shall be retained by the Planning Commission.

The maximum length of time to retain said maintenance surety shall be two years after construction completion or until 80 percent of the lots are fully developed, whichever is the shorter period of time.

Corrective maintenance required under provisions of the maintenance surety shall conform to the following procedure:

All necessary repairs required by the Engineering Division during the period of time in which the Surety is in effect shall be at the expense of the developer and shall be required in writing by the Engineering Division. Should such requested repairs not be made by the developer within a reasonable specified time, such work shall be subcontracted by the Engineering Division or performed by the Public Works Department personnel with the cost of same being charged against the outstanding maintenance Surety.

B-1.06 Builder's Permit Surety

The scope of repairs or maintenance required under the provisions of the builder's permit surety shall include driveway tile size and installation, including headwalls, ditches, curb and driveway ramps, damage, disturbance, or relocation of utilities, damage to adjacent properties, and any other damage incurred during the construction of the building for which a permit was issued.

The builder's permit shall be in the amount of \$500.00 for each lot and shall be posted with the Building Inspector prior to the issuance of a building permit.

Such surety shall remain in effect until the building is 100 percent complete, including final grading of the lot, and is to be released by the Building Inspector only after a written authorization from the Engineering Division.

B-1.07 Laboratory Testing

The Engineering Division reserves the right to require soil, material, and/or density testing when deemed necessary. All laboratory testing required shall be conducted by a private laboratory licensed by the State of Tennessee at the expense of the developer.

B-1.08 State Highway Surety

When a State or Federal highway has to be cut for utility installation or other construction purposed, a Surety may be required by the Planning Commission for repair of the highway and for any damages that may be caused by such construction.

SECTION B-2 PRELIMINARY WORK

B-2.01 Location and Protection of Underground Utilities

Prior to beginning excavation or grading, the Contractor shall determine, insofar as possible, the actual location of all underground utilities in the vicinity of his operations and shall clearly mark their location so that they may be avoided by equipment operators. Where such utility lines or services appear to lie in the path of construction, they shall be uncovered in advance to determine the exact location and depth and to avoid damage due to excavation or grading operations. Existing facilities shall be protected during construction or removed and replaced in equal condition, as necessary.

Should any existing utility line or service be damaged during or as a result of the Contractor's operations, the Contractor shall take such emergency measures as may be necessary to minimize damage and shall immediately notify the utility involved. The Contractor shall then repair the damage to the satisfaction of the utility or shall pay the utility for making the repairs. In all cases, the restoration and/or repair shall be such that the damaged structure will be in as good or better condition as before the damage occurred.

B-2.02 Surveying and Staking

The Contractor shall be responsible for his own surveys and establish his own graded unless otherwise directed by the City Engineer.

B-2.03 Removal of Obstructions

The Contractor shall be responsible for the removal, safeguarding, and replacement of fences, walls, structures, culverts, street signs, billboards, shrubs, mailboxes, or other obstructions which must be moved to facilitate construction. Such obstructions must be restored to at least their original condition within the time period specified by the City Engineer.

B-2.04 Clearing and Grubbing

The Contractor shall be responsible for cutting, removing, and disposing of all trees, brush, stumps, roots, and weeds within the construction area. Disposal shall be by means of chippers, landfills, or other approved method not in conflict with State or local ordinances. Where grubbing is not specifically required, trees, stumps, and brush shall be cut to a height of no more than 6 inches above the ground. Grubbing of roots and stumps will not be required.

Care shall be taken to avoid unnecessary cutting or damage to trees not in the construction area. The Contractor will be responsible for loss or damage to trees outside the permanent easement or rights-of-way.

B-2.05 Traffic Control and Safety

The Contractor shall provide and maintain access to and from all properties along the line of his work. The Contractor shall also provide temporary bypasses and bridges, where necessary, to route traffic and shall maintain them in a safe and unaltered condition, whenever, in the opinion of the City Engineer, detouring of traffic to parallel routes cannot be done without hardship or excessive increase in travel by the public.

Where single-lane bypasses are provided, the Contractor shall furnish signalmen to control traffic operations and minimize delays.

The Contractor shall provide, erect, and maintain adequate barricades, warning signs, and lights at all excavations, closures, detours, points of danger, and uncompleted pavement.

SECTION B-3 ROADWAY CONSTRUCTION

B-3.01 Stripping, Stockpiling, and Placing Topsoil

All topsoil shall be stripped within the street right-of-way and from any other areas designated by the City Engineer. Topsoil shall be stored in stockpiles. All organic matter within the right-of-way shall be stripped and disposed of unless directed otherwise by the City Engineer.

A two- or three-inch layer of topsoil shall be placed where seeding is required or where required by the City Engineer.

After the stockpiled topsoil has been placed, as specified above, the areas upon which the topsoil was stockpiled shall be neatly graded and dressed.

B-3.02 Excavation

Excavation shall conform to limits indicated on the plans. Excavation materials shall be removed in such a manner that the slopes may be neatly trimmed. Excavation shall not be made below grade except where rock or stone masonry is encountered or undercutting of unstable material is required. Material removed below grade shall be replaced with approved material thoroughly compacted.

Where borrow material is required to complete embankments or fills, the Contractor shall be responsible for providing it.

Rock excavation shall be removed to a minimum depth of 12 inches below the subgrade and backfilled with approved material which shall be thoroughly compacted.

Where springs or seepage water is encountered that are not provided for on drainage plans, it shall be reported to the City Engineer.

B-3.03 Fills and Embankments

Embankment and fill material shall be free from frost, stumps, trees, roots, sod, or muck. Only material from excavation or borrow pits or other material approved by the City Engineer shall be used. Material shall not be placed on frozen ground.

B-3.04 Undercutting

This work shall consist of the removal and disposal of unsatisfactory materials below grade in cut sections or areas upon which embankments are to be placed. It shall also include undercutting for pipe and box culverts where required.

Known areas to be undercut will be designated on the plans; however, the City Engineer may increase, decrease, or shift such designated areas as conditions require as the construction progresses.

Undercut areas shall be backfilled with suitable material approved by the City Engineer. The backfill material shall be placed in 8-inch lifts and compacted, as specified for fill construction.

Disposal of unsatisfactory materials shall be approved by the City Engineer.

B-3.05 Subgrade Construction and Preparation

The subgrade shall be prepared in reasonably close conformity with the lines and grades as shown on the plans.

Grading of subgrade shall be performed in such a manner as to provide ready drainage of water. Ditches and drains shall be maintained to provide proper drainage during construction.

Hauling over finished subgrade shall be limited to that which is essential for construction purposes, and all ruts or rough places that develop in a completed subgrade shall be smoothed and recompact. Soft areas shall be removed and replaced with crushed stone or as directed by the City Engineer.

The subgrade shall have a 6-inch crown at the roadway centerline.

The subgrade will be checked and approved by the City Engineer for adherence to the plans before any base material is to be placed.

B-3.06 Shoulders and Slopes

All shoulders and slopes shall be trimmed and shaped to conform with the cross-sections shown on the plans and as specified in Section B-4.05. Rock cuts shall be sealed of all loose fragments, projecting points, etc., so as to leave a clean and neat appearance. Shoulders shall be completed where required, as shown on the plans, and shall be double bituminous surface treated, with care being taken to

protect the surface and edges of pavement. Shoulder material shall be placed in uniform layers and compacted by rolling with overlapping by the roller when rolling both base course and pavement. The finished shoulder shall be firm against the pavement.

SECTION B-4 ROADWAY SURFACE

B-4.01 Base Stone

The base course of stone shall be placed and compacted in two (2) layers or lifts upon the prepared subgrade to a finish thickness of six (6) inches, as described and shown herein, and to the grade indicated on the plans or to thicken.

The base course shall be a pugmill mix of mineral aggregate meeting the State of Tennessee Highway Department Specifications, Sections 303 and 903.

The aggregate base shall not be spread on a subgrade that is frozen or that contains frost. The base shall be placed and spread in each of the two uniform layers (or lifts) without segregation of size, and each layer shall be compacted to a three (3) inch thickness. The stone shall be mixed with graders or other equipment until a uniform mixture is obtained. Each layer shall be compacted by rolling with alternate blading until a smooth, even, and uniformly compacted finish is obtained.

The base stone shall be graded and rolled while it is still moist from the pugmill mix. If the City Engineer determines that the mix is too dry, then the Contractor shall add Water with a distributor tank truck while the stone is being graded and rolled. Compaction shall be uniform for the entire width of the roadway until a density of 80 percent of the solid volume has been achieved. Placement and compaction of each layer shall be approved by the City Engineer before material for the next successive layer is placed. All loose stone shall be graded from the surface before any pavement is placed.

No pavement shall be placed until the stone base has been approved by the City Engineer.

B04.02 Prime Coat

After the base stone has been prepared, as outlined above, a bituminous prime coat shall be applied uniformly over the surface of the base by the use of an approved bituminous distributor. The prime coat shall be applied at the rate of three-tenth (3/10) gallon per square yard, using cut-back asphalt grade rC-070 or RC-250 or refined tar grade RT-2, RT-03, or emulsified asphalt grade AE-P. If, after the bituminous material has been applied, it fails to penetrate before the time that the roadway must be used by traffic, dry cover material shall be spread at a rate established by the City Engineer, between eight and twelve pounds per square yard to prevent damage to the primed surface. An excess of cover material shall be avoided. No succeeding stage of construction shall be placed upon the prime coat until it has properly cured. Aggregate for cover material shall be size number 78 or 8.

B-4.03 Tack Coat

A tack coat shall be applied to old or existing pavement surfaces or to a previously prepared base or surface to provide surety an overlaid course. The tack coat shall be applied at the rate of one-tenth (1/10) gallon per square yard using tar grade RTCB-5 or RTCB-6; cut-back asphalt, grade RC-70 or RT-250; or emulsified asphalt, SS-1, RS-2, or AE-3. The surface shall be thoroughly cleaned of all dirt and other foreign or loose matter prior to the application of the tack coat. All holes and surface failures shall be repaired prior to applying the tack coat. Immediately after cleaning the surface, the tack coat shall be applied with a pressure distributor at the rate specified above. The tacked surface shall be allowed to dry until it is in a proper condition to receive the surface course. The Contractor shall protect the tack coat from damage until the surface course is placed.

B-4.04 Wearing Surface

Upon completion of the application of the prime coat or tack coat, an asphaltic concrete surface (hot mix) shall be applied. The wearing surface shall be State Highway Department Specification mix at the thickness shown on the detail sheet for that class street. Initial compaction shall be secured with ten-ton roller or as directed by the City Engineer. Rolling shall begin as soon after spreading as it will bear a roller without undue displacement or hair cracking. Rolling shall start longitudinally at the extreme sides of the lanes and proceed toward the center of the roadway pavement and overlapping on successive trips by at least one-half the width or the rear wheel of the roller. The mixture shall be rolled diagonally crossing the lines of the first. Rolling shall proceed at a rate of not more than 150 square yards per hour and shall continue until all roller marks are eliminated. The initial or breakdown rolling shall be followed by additional rolling of as many complete coverages as the City Engineer may direct. Any displacements of the mixture occurring from any cause shall at once be corrected by the use of rakes and fresh mixture, where required. Skin patching on an area that has been rolled will not be permitted. Any defective areas of construction shall be cut out and replaced at the Contractor's expense. Joints shall comply with the same uniformity of texture, density, etc., as the other sections of the surface. The outside edges of the pavement shall be hand tamped and neatly trimmed to line or gutter edge while the course is being finished.

B-4.05 Shoulders

Shoulder construction shall be completed by blading, moistening as may be necessary, and thoroughly compacting. The shoulders shall be at the width and thickness shown on the typical section of the plans and covered with a double bituminous surface treatment. The surface shall be thoroughly cleaned of all dirt and other foreign or loose matter prior to the first application of bituminous

material. All holes and surface failures shall be repaired as directed in advance of the surface construction. Upon completion of the prime coat, a double bituminous surface treatment will be applied with the first course being applied at a rate of between 0.38 and 0.42 gallon per square yard. If the width of application is wider than the distributor, each width of spread shall not be less than one-half the surface to be treated. Areas which are inaccessible to the distributor shall be treated, either with hand sprays or pouring pots. Immediately after each application of bituminous material has been made, it shall be covered uniformly with size No. 6 mineral aggregate. The aggregate shall be spread at a rate of between 30 and 40 pounds per square yard. This first application shall be allowed to cure for a length of time to be determined by the City Engineer before the second application is begun.

The second application of bituminous material shall be applied in the same manner as for the first application at a uniform rate between 0.30 and 0.35 gallon per square yard. Mineral aggregate size No. 7 shall then be spread in the same manner as for the first spread at a rate between 20 and 25 pounds per square yard.

Immediately after each spread of cover aggregate, uniform coverage shall be achieved by hand broomings. Additional aggregate shall be placed by hand on thin or bare areas.

Immediately after spreading and brooming the cover aggregate, the entire surface shall be rolled, beginning at the edges and progressing to the edge of the pavement. Rolling shall begin within 30 minutes after the aggregate has been spread. The same rolling and curing procedures required in making the first application shall be repeated in making the second application.

SECTION B-5 DRAINAGE

B-5.01 Ditching and Channelization

This work shall consist of the construction of ditches adjacent to roadway shoulders and feeding to and from culverts under or adjacent to the roadway. All drainage ditches shall be graded in their entirety during the time in which the roadways are being graded, and such grading is to be completed prior to final inspection of the roadways.

B-5.02 Stabilization of Ditches

All open ditches shall be stabilized in accordance with the following requirements:

Size of Nearest Culvert (Upstream)	Seeding Required	Sod Required	To Be Concrete Lined
15"	Grades 1.00-3.00%	Grades 3.00-12.00%	Grades Exceeding 12.00%
18" thru 24"	Grades 1.00-1.50%	Grades 1.50-7.00%	Grades Exceeding 7.00%
30" thru 36"	Grades 1.00-1.50%	Grades 1.00-4.00%	Grades Exceeding 4.00%
42" thru 72"		Grades 2.50% or less	Grades Exceeding 2.50%

B-5.03 Concrete Ditch Paving

Concrete ditch paving shall consist of the construction of paved ditches on a prepared subgrade. The subgrade shall be shaped and compacted to a firm even surface. All soft material shall be removed and replaced with acceptable material and compacted as directed by the City Engineer.

Concrete ditch pavement shall be 4 inches in thickness throughout and shall be backfilled immediately after the concrete has set and the forms removed. The backfill material shall be thoroughly compacted. Expansion joints shall be located as directed by the City Engineer.

B-5.04 Culverts and Storm Drains

This work shall consist of the construction of pipe culverts and storm sewers as shown on the plans. No metal pipe shall be used without the approval of the City Engineer. Reinforced concrete pipes shall conform the minimum standards for Class III Reinforced Pipe, ASTM C76.

Bedding for pipe culverts shall be Class “B” material. Pipe shall be bedded on a six-inch thickness of Class “B” material and backfilled to a depth of 30 percent of the diameter of the pipe. Recesses shall be dug in the bedding material to accommodate the bell. Class “B” bedding shall be size No. 7 as shown in chart No. 903.23 of the Tennessee Department of Highways Standard Specifications. Culverts and storm drains in existing roadways shall be backfilled the depth of the cut.

B-5.05 Headwalls

Concrete headwalls shall be constructed at both ends of cross drains, as shown and detailed on the standard drawings included herein (pages B-42 and B-43).

B-5.06 Catch Basins

This work shall consist of constructing catch basins complete with inlets, outlets, and inverts. Tops and inlets shall be constructed to conform to the roadway grade so that drainage can easily be caught and no ponding created. Catch basins shall be constructed as shown and detailed on the standard drawings contained herein (pages B-40 and B-41).

B-5.07 Box Culverts and Bridges

Design of box culverts and bridges shall be submitted to the City Engineer for approval before any construction will be permitted. These designs shall be stamped and signed by a licensed engineer in the State of Tennessee before submittal to the City for approval.

B-5.08 Curbs

Concrete curbs shall conform to the standard drawings as detailed herein (pages B-44, B-45, and B-46). Concrete for curbs shall be class “A” at 3500 psi.

Curbs shall be to the lines and grades shown on the plans or as designated by the Engineer. The final subgrade for curbs shall be carefully graded and compacted to an even density and shall be smooth and true to grade. Curbs shall be constructed in sections of uniform length of approximately 10 feet unless otherwise shown on the plans or directed by the Engineer. Expansion joints shall be formed at intervals of approximately 50 feet using 3/4-inch thick joint filler.

SECTION B-6 FINAL DRESSING, SEEDING, AND SODDING

B-6.01 Final Dressing

This work shall consist of dressing all slopes and areas to within reasonable close conformity to the lines and grades indicated on the plans or as directed by the City Engineer. Final dressing shall be performed by hand or machines to produce a uniform finish to all parts of the roadway, including embankments, ditches, etc. Rock cuts shall be cleaned of all loose fragments, and side slopes shall be laid back to a 3:1 slope and seeded, as described in these Specifications.

The entire right-of-way shall be cleaned of all weeds and brush, and all structures, both old and new, shall be cleared of all brush, rubbish, sediment, or other objectionable material.

B-6.02 Seeding

In all areas damaged or disturbed by the Contractor's operation where established ground cover was present before beginning of construction, the Contractor shall be responsible for restoring this ground cover after completion of construction (unless noted otherwise on drawings). All areas seeded shall be graded smooth prior to seeding, and the Contractor shall be responsible for maintenance of this smooth finished grade until grass growth is established.

After designated areas have been carefully hand graded, soil shall be prepared for fertilizing and seeding. Fertilizer shall be a standard commercial fertilizer grade 15-15-15 or equivalent and applied at a rate of not less than 10 pounds per 1,000 square feet. The fertilizer shall be lightly harrowed, raked or otherwise incorporated into the soil for a depth of approximately ½ inch. The Contractor will be responsible for any necessary regrading or reseeding required to produce an acceptable grass cover. Rutting and washing must be restored by reseeding and strawing or, in areas of extreme erosion, sodding may be required.

The Contractor shall backfill behind all curbs in order to force storm water onto the street, unless the material traverse slope of the land opposed. Parallel ditches behind and adjacent to curbs will not be allowed.

The seed shall be as follows:

<u>Name</u>	<u>Percent by Weight</u>
Lespedeza	20
Sericea Lespedeza	15
Kentucky 31 Fescue	40
English Rye	15
White Dutch Clover	5
Weeping Love Grass	5
Kentucky 31 Fescue	55
Redtop	15
English Rye	20
White Dutch Clover	5
Weeping Love Grass	5

The seed shall be sown uniformly at the rate of 1-1/2 pounds per 1,000 square feet.

B-6.03 Sodding

Sodding shall consist of furnishing and placing sod at all locations shown on the plans or as directed by the City Engineer. The work will include the furnishing and placing of new sod which shall consist of live, dense, well-rooted growth of permanent grasses free from Johnson grass and other obnoxious grasses or weeds, well suited for the soil on which it is placed. All sod shall be cleanly cut in strips having a uniform thickness of not less than 2-1/2 inches. Sod shall be set when the soil is moist and favorable to growth. No setting shall be done between October 1 and April 1 without permission of the City Engineer. The area to be sodded shall be brought to the lines and grades shown on the plans or as directed by the City Engineer.

The surface of the ground to be sodded shall be loosened to a depth of not less than one inch with a rake or other device. If necessary, it shall be sprinkled until saturated for a minimum depth of one inch and kept moist until the sod, fertilizer, and lime shall be applied uniformly to the prepared surface of the ground. Fertilizer shall be applied at the rate of 8 pounds of grade 15-15-15, or equivalent, per 1,000 square feet.

Sod shall be placed as soon as practical after removal from the point of origin and shall be kept in a moist condition during the interim. The sod shall be carefully placed by hand on the prepared ground surface with the edges in close contact and, as far as possible, in a position to break joints. Each strip of sod laid shall be fitted into place and tamped. Immediately after placing, the sod shall be thoroughly wetted and rolled with an approved roller. On slopes of 2:1 or steeper, pinning or pegging may be required to hold the sod in place.

The sod shall be watered as directed by the City Engineer for a period of two weeks. The Contractor shall not allow any equipment or material placed on any planted area and shall erect suitable barricades and guards to prevent his equipment, labor, or the public from traveling on or over any area planted with sod.

SECTION B-7 INSPECTION OF WORK

B-7.01 Notice of Work Beginning

Prior to the beginning of construction, the Contractor shall notify the City Engineer in writing at least 24 hours in advance.

B-7.02 Precedence

Should the specifications in the contract documents differ from those contained herein, the most stringent shall take precedence unless specified in writing by the City Engineer.

B-7.03 City Representative

The City of Gallatin shall have a representative, referred to herein as Inspector, on the site during construction to insure compliance with the City specifications. The Inspector is the agent of the City only and will act as directed by and under the supervision of the City Engineer. He will confer with the City Engineer regarding his actions. His dealings in matters pertaining to onsite work shall, in general, be only with the City Engineer, Owner, Owner's Engineer, and Contractor. His dealings with subcontractors shall only be through or with the full knowledge of the Contractor or his Superintendent.

B-7.04 Duties and Responsibilities of Inspector

The Inspector will be responsible for:

1. Schedules: Review and progress schedule, schedule of shop drawing submissions, and schedule of values prepared by Contractor and consult with the Owner's Engineer concerning their acceptability.
2. Conferences: Attend preconstruction conferences. Arrange a schedule of progress meetings and other job conferences, as required, in consultation with engineers and notify those expected to attend in advance. Attend meetings and maintain and circulate copies of minutes thereof.
3. Shop drawings and samples:
 - A. Receive and record data of receipt of shop drawings and samples which have been approved by the engineers.
 - B. Receive samples which are furnished at the site by Contractor for Engineer's approval and notify City Engineer of their availability for examination.

- C. Advise Engineer and Contractor or his Superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the submission has not been approved by the Owner's Engineer and/or the City Engineer.
4. Review of work, rejection of defective work, inspection, and tests:
- A. Conduct onsite observation of the work in progress to assist the City Engineer in determining that the project is proceeding in accordance with the City Specifications.
 - B. Report to the City Engineer whenever he believes that any work is unsatisfactory, faulty, or defective or does not conform to the requirements of the City Specifications or does not meet the requirements of any inspections, tests, or approval required to be made and advise the City Engineer when he believes work should be uncovered for observation or require special testing or inspection.
 - C. Verify that tests, equipment, and system startups and operating and maintenance instructions are conducted as required by the Specifications and in the presence of the required personnel and that Contractor maintains adequate records thereof; observe, record, and report to the City Engineer appropriate details relative to the test procedures and startups.
 - D. Accompany visiting inspectors representing public or other agencies having jurisdiction over the project, record the outcome of these inspections, and report to the City Engineer.
5. Modifications: Consider and evaluate Contractor's suggestions for modifications in drawings or specifications and report them with recommendations to the City Engineer.
6. Records:
- A. Maintain orderly files for correspondence, reports of job conferences, shop drawings, and sample submissions, reproductions, or original Contract Documents, including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Contract. Engineer's clarification and interpretations of the Contract Documents, progress reports, and other project-related documents.

- B. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extra work or deduction in work, list of visiting officials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures. Send copies to the City Engineer.
- C. Record names, addresses, and telephone numbers of all contractors, subcontractors, and major suppliers of equipment and materials.

7. Reports:

- A. Furnish the City Engineer periodic reports, as required, of progress of the work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submission.
- B. Consult with the City Engineer in advance of scheduled major tests, inspections, or start of important phases of the work.

8. Guarantees, certificates, maintenance, and operating manuals: During the course of the work, verify that guarantees, certificates, maintenance and operation manuals, and other data required to be assembled and furnished by Contractor are applicable to the items actually installed and deliver a copy of this material to the City Engineer.

9. Completion:

- A. Before the City Engineer issues a certification of substantial completion, submit to the Contractor a list of observed items requiring correction.
- B. Conduct final inspection in the company of the City Engineer, Owner, and Contractor and prepare a final list of items to be corrected.
- C. Verify that all items on final list have been corrected and make recommendations to the City Engineer concerning acceptance.

B-7.05 Limitations of Authority

Except upon written instructions of the City Engineer, the Inspector:

- A. Shall not authorize any deviation from the Contract Documents, City Specifications, or approve any substitute material or equipment.

- B. Shall not undertake any of the responsibilities of Contractor, subcontractors, or Contractor's Superintendent.
- C. Shall not expedite work for the Contractor.
- D. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences, or procedures of construction unless such is specifically called for in the Specifications.
- E. Shall not advise on or issue directions as to safety precautions and programs in connection with the work.
- F. Shall not authorize owner to occupy the project in whole or in part.
- G. Shall not participate in specialized field or laboratory tests.

SECTION B-8 STREET DESIGN OBJECTIVES AND PRINCIPLES

B-8.01 Objectives

The objectives of the following principles, criteria, and standards are to:

- A. Provide safe, convenient motor vehicle and pedestrian circulation within residential communities.
- B. Encourage the creation of residential environments that are aesthetically pleasing and contribute to better livability.
- C. Provide value-engineered design and construction.
- D. Assure long-term economies.

B-8.02 Principles

Function

- A. The circulation pattern of a new development shall complement the major street plan of the community.
- B. The development should be conveniently accessible from major highways or streets.
- C. Collector street systems should be designed to define cohesive residential areas and not break up the internal cohesiveness of these areas.
- D. Circulation plans, based on a branching street system, should be encouraged.
- E. Cluster housing around cul-de-sacs, courts, eyebrows, and loop streets whenever possible
- F. Local streets provide convenient access to housing.
- G. Off-street parking should be encouraged in lieu of on-street parking.
- H. Dwelling unit entrances should relate to parking spaces to provide convenient and safe access.
- I. All housing units shall be accessible by emergency and service vehicles.
- J. Horizontal and vertical alignments should take into account adverse weather conditions.

- K. Pedestrian circulation should relate to dwelling units, parking, and community facilities and be safe and attractive.

Safety

- A. Minimize unnecessarily wide, straight collector and arterial streets.
- B. Minimize driveways entering onto arterial and collector streets.
- C. Through traffic within residential areas should be avoided.
- D. Access points to main highways should be limited in number and should have special design treatment.
- E. Limit number of intersections along arterial and collector streets. Minimize four-way intersections on places, lanes, and subcollectors.
- F. Avoid oblique intersections.
- G. Avoid intersections and entrances near crests of hills.
- H. Separate pedestrian and vehicular traffic.

Aesthetics

- A. Horizontal and vertical street alignment should relate to the natural contours of the site.
- B. Natural features of the land should be retained by permitting different vertical alignments on local split streets and one-way streets.
- C. Paved areas should be limited as much as possible to increase the green space in the community.
- D. Large areas of paved parking should be broken by green islands or dividers.
- E. Streets should be landscaped with existing or new trees and plants.

Economics

- A. The overall circulation pattern should minimize the overall length of streets.
- B. Right-of-way widths should be the minimum consistent with requirements for street widths, utilities and, if needed, for sidewalks, for snow storage, planting, etc.

- C. Pavement widths should be the minimums set forth in the street-width standards.
- D. Pavement area should be minimized to reduce storm water runoff.
- E. The number of intersections should be minimized.
- F. Horizontal and vertical alignments of streets should be related to economical grading practices.
- G. Simplify and standardize curb and sidewalk cross-sections.
- H. Sidewalks should be eliminated whenever possible on short, low-traffic-volume streets in low-density areas.
- I. Pavement thicknesses should be the minimum consistent with the subgrade conditions, traffic type, and volume, climatic conditions, and long-term performance.

SECTION B-9 STREET DESIGN CRITERIA

B-9.01 Purpose

The design criteria should serve as the basis for establishing specific street standards on right-of-way and pavement widths, parking, design of turnarounds, horizontal and vertical alignments, pavement thicknesses, and other factors that influence the design of the total development. Also, the criteria provides values for the characteristics of motor vehicles, the clearance needs of various types of vehicles, the volumes of traffic generated by residential areas, speed, and other related factors.

B-9.02 Traffic Volumes

A. Average Daily Traffic

The following table should be used for the purpose of determining average daily traffic (ADT) for streets associated with different housing types.

<u>Housing Type</u>	<u>ADT (per dwelling unit)</u>
Single family detached homes	10.0
Group or townhouses	7.0
Garden apartments 1 to 4 stories	6.0
Elevator apartment over 4 stores with elevator	5.0

B. Variations in Traffic Volumes

Traffic volumes in residential areas have the greatest intensity in the late afternoon on weekdays. These peak loading conditions do not have a significant effect in the design of local residential streets. Peak loading may need to be considered in the design of collector streets, through streets, and access points from major thoroughfares to the development. The selection of street right-of-way widths sometimes includes a factor for future widening of the streets. However, most residential streets carry only traffic volumes generated as a result of the homes on a given street; for example, local streets branching off a collector street and ending in places, lanes, and cul-de-sacs. For these types of streets, allowances for future widening are not necessary.

B-9.03 Vehicle Characteristics

A. Dimensions

page B-37) provides typical dimensions, turning radii, and clearances for several types of vehicles that can be expected on residential streets.

B. Turning Requirements

Turning requirements for various vehicle types are set forth in Table 1 (page B-37). These shall be considered when determining radii of cul-de-sacs, turnarounds, and street intersection returns.

C. Vehicle Clearances

(page B-38) provides the total width and typical clearance needs for various vehicle encounters. All vehicles can pass freely when two 10-foot moving lanes are provided. On short streets with little traffic, speeds are low and encounters between large vehicles infrequent. One vehicle can pull to the side of the road or wait before entering to allow the street to clear. In this case, 18 feet is a functionally adequate width for two moving lanes. Eighteen feet permits relative ease of movement for almost all types of encounters at slow speeds. Twenty feet is adequate for free movement in all other encounters except those involving moving vans, fire trucks, or refuse vehicles—a low probability occurrence.

B-9.04 Speed

The typical residential street speed, without regard for the posted limit, is governed by: 1) The open width or clearance of the streets; 2) horizontal and vertical alignments; 3) number of access points to the street; 4) number of parked cars or other obstructions on the street; 5) signs and signals at intersections; and 6) speed of other traffic on the street. For safety purposes, on low traffic volume streets, the designed should consider use of features that tend to reduce speed, including narrower widths, shorter streets, curves, and hills, elimination of through traffic, and related factors noted above.

B-9.05 Access

Access is a term describing the vehicular ingress into and egress from the traveled portion of the street. Increasing the number of driveway openings and intersections into a given section of street decreases the capacity of the street and tends to lower vehicle speed. Entrances to developments from arterial streets and highways should be kept to a minimum and designed for safety and convenient turning. Left-turn lanes to right-turn lanes may be needed at intersections of collector streets and arterial streets.

B-9.06 Turnarounds

The advantages of clustering homes have led to the use of a variety of configurations, including cul-de-sacs, courts, T's, Y's, etc. Turnarounds should be designed to accommodate emergency and service vehicles, as well as passenger cars. Exceptions to the turnaround requirements may be made for short streets, up to 300 feet long where emergency and service vehicles are able to back out with relative ease. The maximum lengths of streets leading to turnarounds are not regulated in the standard as long as the turnarounds are adequate for the vehicles likely to use them. The design flexibility allowed with the longer street is desirable. Longer streets with turnarounds at the end may be divided into one or more segments with intermediate turning circles. Figure 1 (page B-39) illustrates the turnaround dimensions.

B-9.07 Street Cross Sections

A. Number of Lanes

For residential streets with an ADT from 500 to 3,000, two moving lanes (in opposite directions) are adequate. Whenever possible, four moving lanes should be avoided in residential areas except for required arterial or major collector streets. Four lanes may be warranted for short distances at entrances to larger developments.

One-way streets are adequate and, in some cases, desirable for loop streets or where there is a need to split the pavement to preserve natural land features or avoid excessive grading of slopes.

B. On-Street Parking

There are three possible alternatives to parking requirements. The first provides for adequate off-street parking for occupants and visitors, and no parallel parking is allowed on streets. The second alternative allows parking on one side only. The third alternative allows parking on both sides of the street. Parking bays for visitors and/or occupants may be provided in lieu of on-street parallel parking space. Ordinarily, space should be provided on one-way streets for parking on one side or a shoulder for stalled vehicles. Where shoulders are constructed to provide a natural or rural appearance, they may be used for stalled vehicle parking or, if paved or covered with rock or gravel, for visitor parking. Shoulders used for parking should be 8 feet in width.

C. Pavement Widths

Standards for pavement widths are based on number of moving lanes, average daily traffic, parking requirements, and design speed. Minimum widths required to serve the above needs should be used to reduce long-term maintenance costs. For residential streets having a design speed of 25 miles per hour or less and an ADT of 500 or less or for streets having an ADT of 1,000 or less and no parking, moving lane widths of 9 feet are adequate. However, an 8-foot wide lane for emergency stopping or temporary standing should be provided. For streets having an ADT of more than 500, with the exception noted above, moving lane widths of 10 feet are adequate. Parallel parking lane widths should be 8 feet.

Excess pavement widths increase the community's long-term maintenance costs. Excess widths increase maintenance costs for repair, resurfacing, snow removal, and street sweeping. In addition, excess pavement widths increase surface water runoff, thereby increasing the first cost, as well as maintenance costs for related storm water management facilities due both to the effect of increased runoff volume and to decreased runoff concentration time. Both of these factors have two adverse ecological effects—first, they increase the hazards due to flooding with attendant soil erosion and other ecological damage and, second, they decrease ground absorption of rainfall, thereby contributing to depletion of the ground water supply and wasting a previous natural resource that is in short supply in many areas.

- D. Sidewalks shall be a minimum of five (5) feet in width on all streets in residential subdivisions and six (6) feet in width for nonresidential subdivisions. Along streets where concrete curbs are required, a median strip of grassed or landscaped areas of at least five (5) feet shall be provided between the curb and sidewalk.

E. Right-of-Way Widths

Right-of-way widths for residential streets should be no more than that required for street pavements plus, when required, necessary widths for sidewalks, utility and drainage easements, drainage or slope retention grading, and planting strips. Right-of-way widths for future widening of streets are not necessary for most branching streets. If utility easements are not a part of the right-of-way, they may be included in easements and become part of the building setback.

B-9.08 Street Alignment

A. Horizontal Alignment

Restrictions on horizontal alignment of streets are based on the sight distances required to provide safety for vehicles and pedestrians. Street centerline radii should be adequate for sight distances and for turning requirements of vehicles that will use the streets.

B. Vertical Alignment

Vertical alignments are controlled to assure that the street grades can be negotiated in adverse weather conditions and that sight distances are adequate for safety. Within the values for maximum permissible grades, flexibility should be allowed to provide for economies in grading, drainage needs, and desirable overall appearance.

The rate of change of vertical curves and their length should be determined such that the sight distances specified in Table 3 on page 23 are provided.

Cross slopes of streets should be limited to a maximum of five percent may be used in appropriate climates for places and lanes.

B-9.09 Intersection Design

A. Sight Distances at Intersections

Sight distances at intersections on lanes and places should be regulated to allow approaching drivers sufficient time to stop. Each vehicle should be visible to the other driver when each vehicle is located on the street centerline and 75 feet from the point of intersection of the street centerlines. For intersections of streets having an ADT of 200 or less or having 20 mile-per-hour speed limit, the minimum sight distance may be waived. For streets intersecting with collector streets or with arterial streets, a greater sight distance is desirable.

B. Horizontal Alignment at Intersections

The preferred angle of intersection for intersection streets is 90 degrees. The minimum angle is 60 degrees for nonarterial streets. Two streets intersecting the same street should be offset at least 125 feet.

C. Vertical Alignment at Intersections

The grade of places, lanes, subcollector and collector streets of the 200 feet of the street nearest the intersection with a major street should not exceed five percent. Grades within an intersection generally should coincide with the major street grade.

B-9.10 Off-Street Parking

Adequate off-street parking is usually safer and more economical than curb parking. In special situations, it may be appropriate to increase or decrease the off-street parking requirement; for example, for developments with families of high or low incomes or for housing for the elderly.

In lieu of the typical parallel parking lane, parking bays on one or both sides of places and lanes may be more desirable. Either 90 degree parking or angle parking may be suitable. Large parking bays or parking lots for multi-family housing should have appropriate dividers for safety and better appearance.

SECTION B-10 STREET DESIGN STANDARDS

B-10.01 Pavement Width Standards

A. Street Classification

Residential streets are classified into five types, based on ranges of average daily traffic. ADT's of 200, 500, 1,000, and 3,000 have been selected at the "break points." The total ADT for a street shall be determined by using the appropriate ADT values per dwelling unit, set forth in the Design Criteria Section, "Traffic Volumes," plus through traffic, if any. Table 3 establishes pavement widths by street type and on-street parking requirements and related design factors. Pavement widths are dimensioned to the street face of the curb or to the centerline of the concave radius of mountable or rolled curbs. The following description of the five street types provide the basis for the selection of the pavement widths in Table 3.

B. Place

A place is a short street, a cul-de-sac, or court with a projected ADT of 200 or less. Table 3 provides, in the case of an 18-foot street width, for two 9-foot wide moving lanes when there is no on-street parking; or an 8-foot wide parking lane and a 10-foot moving lane when parking is allowed on one side (one lane is temporarily held up to provide space for passing in the case of two moving vehicles encountering each other and a parked vehicle simultaneously). When parking is permitted on both sides, Table 3 provides, in the case of a 26-foot width, for two 8-foot wide parking lanes and a 10-foot moving lane. Design speed limit is intended to be 20 miles per hour or less.

C. Lane

A lane is designed for an ADT of 201 to 500. It may be a dead-end street or a street with branching places or lanes. With no on-street parking, two 9-foot moving lanes are accommodated by the 18-foot pavement width. When parking is allowed on one side, the 18-foot width provides for a 10-foot moving lane and an 8-foot parking lane. The 26-foot wide pavement, with parking on one side only, allows for two 9-foot moving lanes and one 8-foot parking lane. When parking is permitted on both sides of the lane, the 26-foot width provides for two 8-foot wide parking lanes and a 10-foot moving lane. Design speed limit is intended to be 25 miles per hour or less.

D. Subcollector

The ADT of subcollector streets range from 501 to 1,000. The subcollector street width of 26 feet allows for two 9-foot wide moving lanes plus an 8-foot wide emergency stopping or temporary standing lane in the case of no parking on either side. When parking is allowed on one side, the 28-foot width provides for an 8-foot wide parking lane and two 10-foot wide moving lanes. When parking is allowed on both sides, the 36-foot width provides for two 10-foot moving lanes and two 8-foot parking lanes. Design speed is intended to be limited to 30 miles per hour.

E. Collector

Collector streets have an ADT ranging from 1,001 to 3,000. The collector street width of 28 feet allows for two 10-foot moving lanes and one 8-foot lane for emergency stopping or temporary standing when no parking is allowed on either side. When parking is allowed on one side, the 36-foot width provides for two 10-foot moving lanes plus one 8-foot parking lane plus an 8-foot lane for emergency stopping or temporary standing. When parking is allowed on both sides, the 36-foot width provides for two 10-foot moving lanes and two 8-foot parking lanes. Design speed is intended to be limited to 35 miles per hour.

F. Arterial Streets

Arterial streets have an ADT over 3,000 and are usually major thoroughfares. Each arterial street shall be designed to accommodate the traffic and roadway conditions for that street. Specific requirements will be determined by the Engineering Division. Direct access from individual driveways or other off-street parking spaces shall be limited. Design speeds are intended to be over 35 miles per hour.

G. One-Way Streets

For an ADT of 500 or less with no parking allowed, the minimum width of a one-way street shall be 12 feet when a shoulder is provide for stalled vehicle parking. When the ADT ranges from 501 to 1,000 or when no shoulder is provide for stalled vehicles or when parking is allowed on one side, the minimum width of a one-way street shall be 18 feet. Collector and subcollector streets may be split to provide two lanes in opposite directions. Lanes and places may be one-way loop streets.

B-10.02 Right-of-Way Widths

Right-of-way widths are determined by the following formula:

$$W = P + S + U + X$$

W = Right-of-way width

P = Pavement width, including curb and gutter

S = Sidewalk width, one or both sides, if required

U = Utility easement, one or both sides, if required

X = Width, one or both sides required for shoulders, planting strips, snow storage, surface drainage, or widening, if required.

B-10.03 Turnaround Standards

A. Place

Turnaround for places shall conform to any of those shown in Figure 1 or to other configurations approved by the Engineering Division.

B. Lane

Turnarounds for lanes shall conform to the circle and T turn shown in Figure 1 or to other configurations approved by the Engineering Division.

C. Other

Turnarounds may be waived by the Engineering Division at the ends of subcollector and collector streets if there is a branching street intersecting within 300 feet of the end of the street.

B-10.04 Off-Street Parking

Off-street parking shall be provided in accordance with the provisions of the Zoning Ordinance.

B-10.05 Emergency Vehicle Access

Paved access shall be available to fire, ambulance, and police vehicles within 50 feet of the principal entrances to dwellings or apartment buildings. Access may be by means of the street or by paved access ways.

B-10.06 Street Pavement

The pavement of residential streets shall be designed to provide adequate access to the home sites and to provide a durable and safe route from the lot to other communities. The pavement for lightly-traveled places and lanes need not be as durable nor does it need to be able to carry the same loads as subcollector and collector streets.

Pavements shall be designed in relation to the expected traffic and geographic conditions. This assures an adequate pavement and results in economy for the residents and the community, which must accept responsibility for maintenance.

A. Asphalt Concrete Pavement

Figure 2 shows thickness requirements for asphalt pavement for various types of streets based on the California Bearing Ratio (CBR) or the Resistance Value ® of the soil and the ADT of the street. The use of crushed stone or other similar material as a base reduces the thickness of asphalt required. Two inches of compacted crush stone may be substituted for one inch of asphalt concrete. In no case should be asphalt concrete be reduced below 1-1/2 inches in thickness. The use of appropriate slag, gravel, or other related material instead of crushed stone is acceptable.

To use Figure 2, locate the appropriate CBR or R value and follow that point vertically to its intersection with the appropriate street type line. Then, proceed horizontally to the left from the point of intersection to find the required asphalt concrete thickness. When substituting crushed stone for asphalt concrete, the required thickness of crushed stone, when using the minimum allowable thickness of asphalt concrete (1-1/2 inches), shall be determined as follows:

$$B = 2 (T - 1.5)$$

B = Required thickness of crushed stone base in inches

T = Required thickness of asphalt concrete in inches, as shown in Figure 2

The procedures for mixing, proportioning, and placing asphalt concrete shall be designed by a licensed engineer with experience in asphalt concrete pavement construction acceptable to the Engineering Division.

B. Portland Cement Concrete Pavement, Unreinforced

Figure 3 sets forth the thickness requirements for Portland cement concrete pavement. The Figure 3 values are based on a modulus of rupture of 650 psi using third-point loading and a 20-year design life. To use Figure 3, locate the appropriate CBR or K value (modulus of subgrade reaction) and follow that point vertically to its intersection with the appropriate street type curve. Then, proceed horizontally to the left from that point of intersection to find the required Portland cement concrete pavement thickness.

Portland cement concrete pavements preferable may be combined with an integral curb to provide a thickened edge.

The procedures for mixing, proportioning, and placing Portland cement concrete shall be designed by a licensed engineer with experience in Portland cement concrete pavement construction acceptable to the Engineering Division.

C. Fixed-State Alternative

In lieu of the above procedure, a standard street cross section (as indicated) may be constructed based upon the specifications in Section B-4 of these specifications.

B-10.07 Street Curbs and Curbs and Gutters

Street curbs or curbs and gutters, when required, shall be constructed of Portland cement concrete.

Portland cement concrete curbs or curbs and gutters may be constructed as header curbs or as straight side or roll curbs and gutters. Figure 4 shows acceptable curb and curb and gutter cross sections with dimensions. Other cross sections may be approved for use by the Engineering Division

Portland cement concrete curbs or curbs and gutters shall be constructed with an expansion joint at ends of all curbs; at junctions with any structures; at driveway entrances, except when using a roll curb; and at intervals not greater than 100 feet. Construction joints shall be spaced at intervals of approximately 10 feet, but in no event shall they be closer than 6 feet. Procedures for mixing, proportioning, and placing Portland cement concrete curbs or curbs and gutters shall be designed by a licensed engineer with experience in Portland cement concrete pavement construction acceptable to the Engineering Division.

B-10.08 Paths

Parking paths that connect dwellings with off-street parking pads, parking lots, etc., shall have a minimum width of 3 feet. Local paths or public sidewalks that are within the street right-of-way or in maintained open spaces shall have a minimum width of 4 feet. Public paths or sidewalks that connect clusters or groups of homes with commercial centers or public facilities shall have a minimum width of 4 feet or, if they include a bicycle lane, the minimum width shall be 5 feet. A separate single-lane bicycle path shall have a minimum width of 2-1/2 feet, and a separate two-lane bicycle path shall have a minimum width of 4 feet.

B-10.09 Sidewalks

When possible, steps in sidewalks and paths shall be avoided. When steps are necessary, the minimum number of risers shall be two in adjacent series or at least two single risers may be used in a ramp series with the maximum distance between risers being 6 feet. Risers shall not exceed six inches. All risers and treads shall be uniform in a single flight. All risers in a single sidewalk or path shall be uniform in height. Tread width shall be at least 11 inches or 12 inches when step flights have a total rise of more than 30 inches. Tread pitch shall be 1/8-inch per foot for drainage.

Sidewalks and paths may be paved with asphalt or Portland cement concrete. Other suitable materials for surfaces may be used as appropriate for local conditions or aesthetics. Procedures for asphalt concrete mixing, proportioning and placement shall be designed by a licensed engineer having experience in asphalt concrete construction acceptable to the Engineering Division.

Portland cement concrete sidewalk or path paving shall have expansion joints at all intersections with other paths or sidewalks and structures and at the bottom and top of flights of steps with three or more risers. Portland cement concrete sidewalk or path surfaces shall be brushed or broomed. Procedures for mixing, proportioning, and placing Portland cement sidewalks or paths shall be designed by a licensed engineer having experience in Portland cement concrete construction acceptable to the Engineer Division.

Concrete sidewalks shall be at least 4 inches thick except under driveways when at least 6 inches must be used.

B-10.10 Traffic Control Devices

Traffic control devices within a residential area consist of signs, signals, and pavement markings used to regulate, warn, or guide traffic. Motorists, bicyclists, and pedestrians are trained to recognize standard traffic control devices and to respond in a lawful and safe manner. They cannot be expected to obey nonuniform devices; therefore, it is extremely important to utilize only uniform traffic control devices in residential areas.

The developer/owner shall, at the time of posting performance surety, pay to the City of Gallatin the sum of Ninety-Five (\$95) Dollars per traffic controls sign and Thirty (\$30) Dollars per street name sign. Traffic control signage and street name signage shall be installed by the City of Gallatin.

B-10.11 Traffic Signal Specifications - All traffic signals shall be hung from black mast arms. Mast arms shall be in accordance with TDOT standards for structural supports. Mast arms shall be galvanized steel with black powder coat paint using high durable polyester resin meeting AAMA 2064 (American Architectural Manufacturer's Association 5 year standard) standards for gloss and color retention. Signal back plates, housing, and visors shall be constructed of black non-reflective aluminum or steel.

TABLE I.

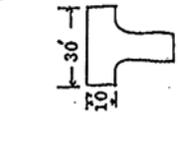
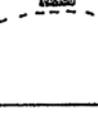
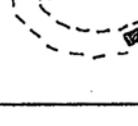
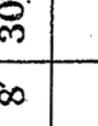
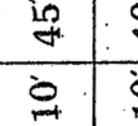
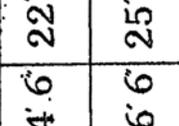
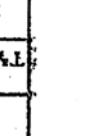
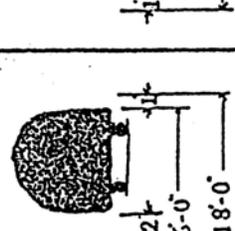
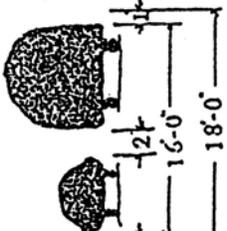
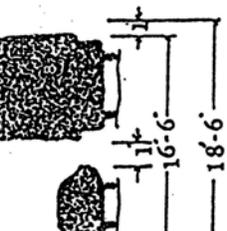
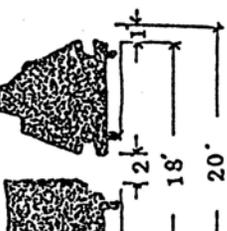
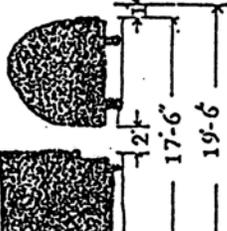
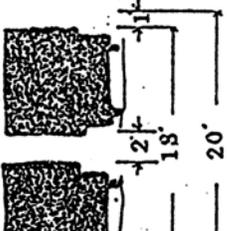
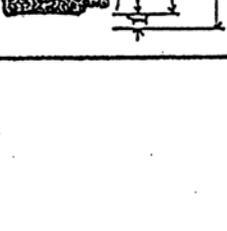
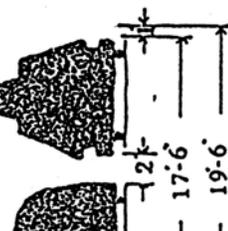
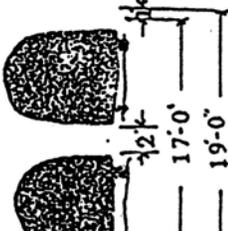
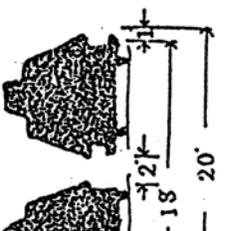
TYPES OF VEHICLES	VEHICULAR CHARACTERISTICS					DESIGN AREAS			
	A. LENGTH	B. WIDTH	C. HEIGHT	D. TURN RADIUS	E. CLEARANCE	WIDTH OF MOVING LANE		TURNING REQUIREMENTS	
						TURNING RADIUS	TURN - AROUND		
MOTOR	17'	6'	4'6"	22'	2'				
 FIRE VEHICLE	19'	6'6"	6'6"	25'	2'				
 SCHOOL BUS	30'	7'6"	10'	45'	2'				
 BUS	30'	7'6"	8'	30'	2'				
Moving									
 VAN	35'	8'	12'6"	40'	2'				
	55'	8'	13'6"	23'	2'				

TABLE 2

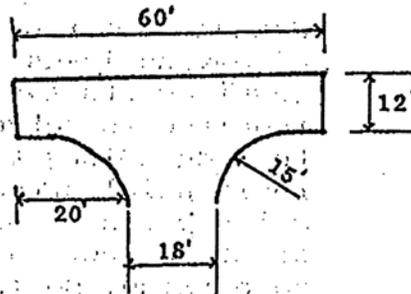
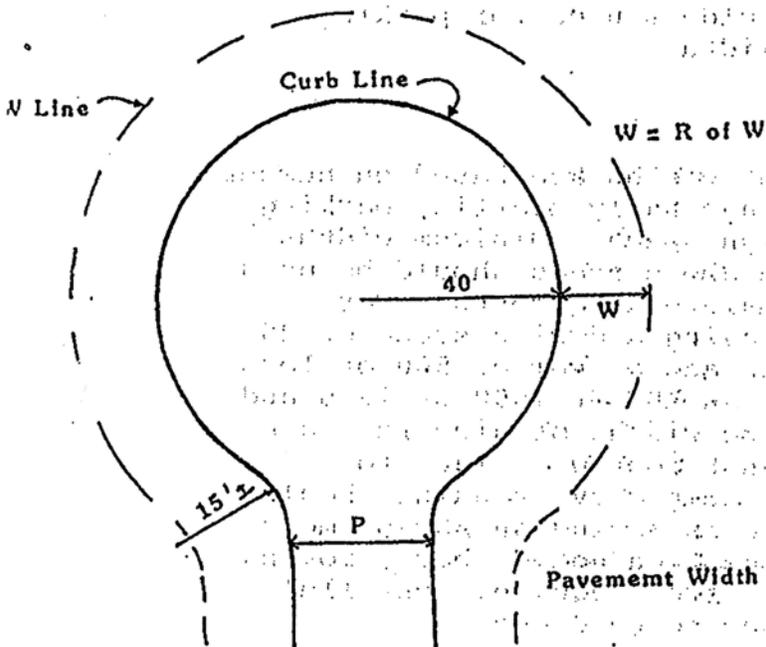
MOTOR VEHICLE	MOVING VAN	SCHOOL BUS	FIRE VEHICLE
			
			
			
			

TURNS AROUND DIMENSIONS

FIGURE 1

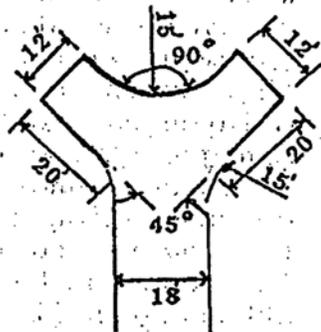
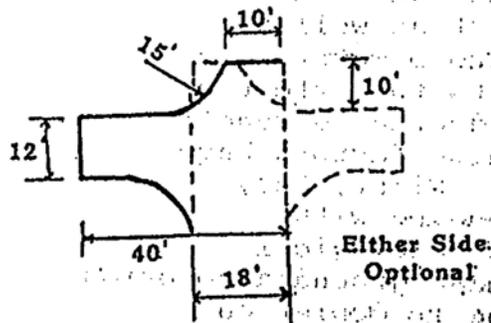
Circle

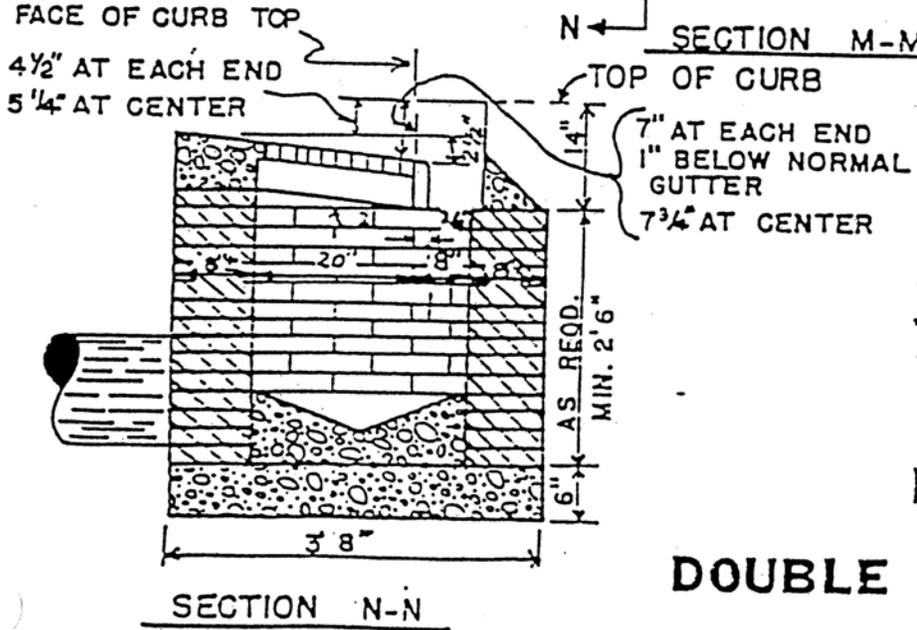
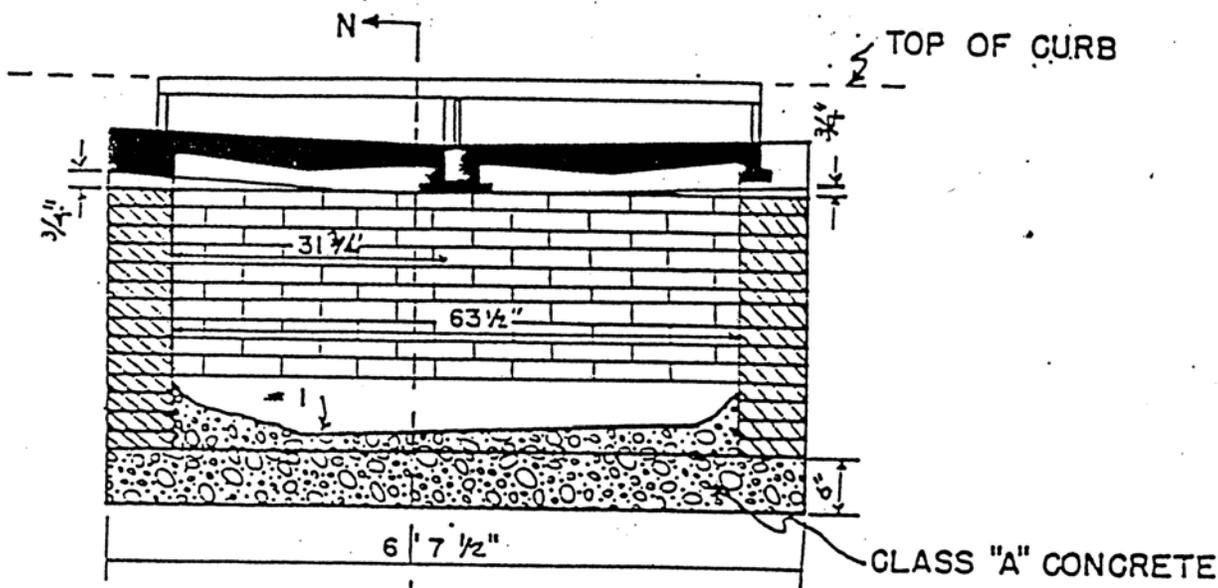
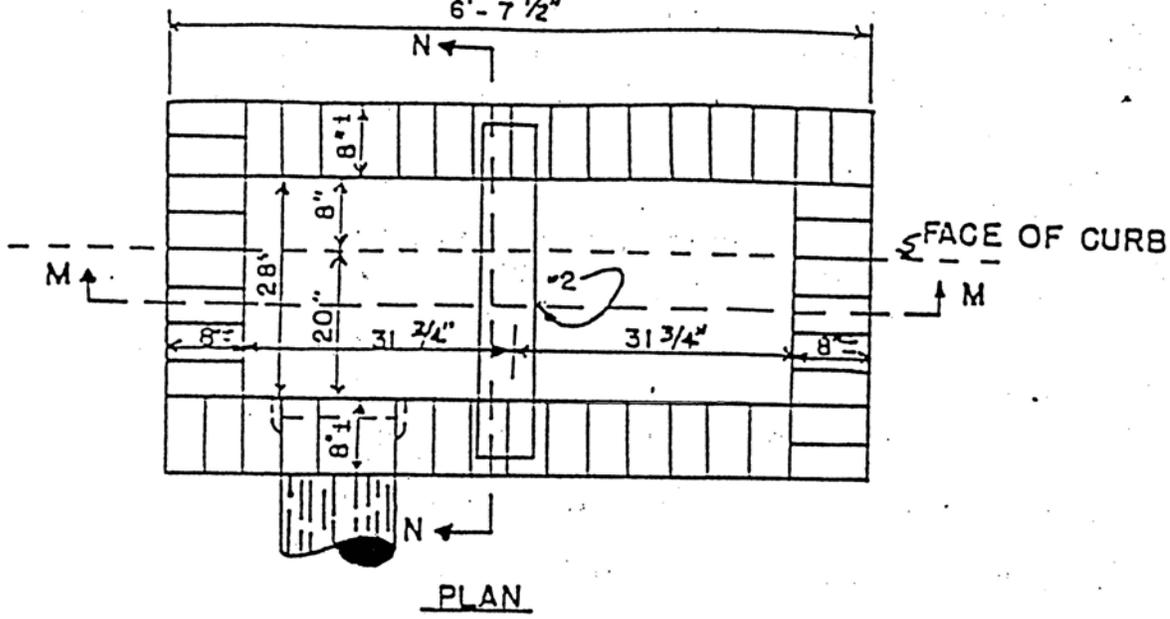
T Turn



Y Turn

Shunt





NOTE: CASTINGS SHOWN IN PLACE TO BE JOHN BOUCHARD SONS CO. NO. 3101 OR APPROVED EQUAL.

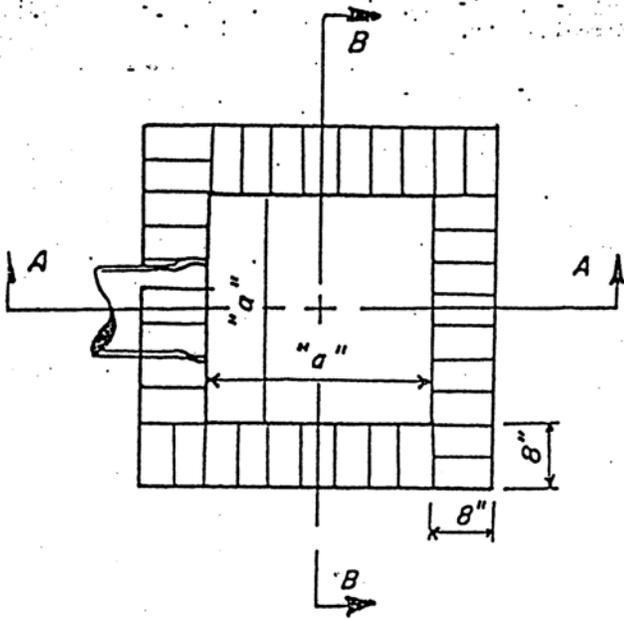
#1. MIN SLOPE 3/4" IN 12"

#2. CAST IRON LINTEL TO BE 1" X 6" X 42". WEIGHT APPROXIMATELY 70 LBS

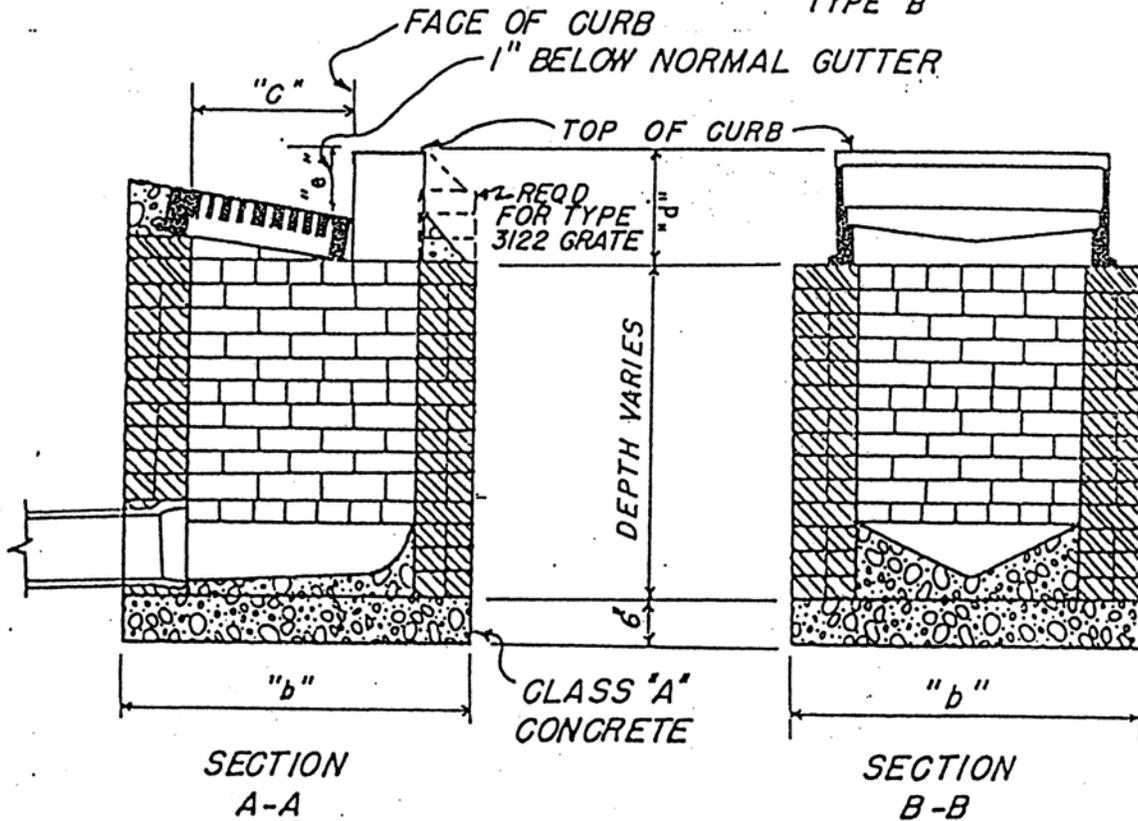
DETAIL OF DOUBLE CATCH BASIN

No Scale

156



NOTE: CASTINGS SHOWN IN PLACE.
 JOHN BOUGHARD & SONS CO.
 NO. 3080, 3122 OR APPROVED
 EQUAL FOR TYPE "A" OR NO.
 3100 OR APPROVED EQUAL FOR
 TYPE "B"



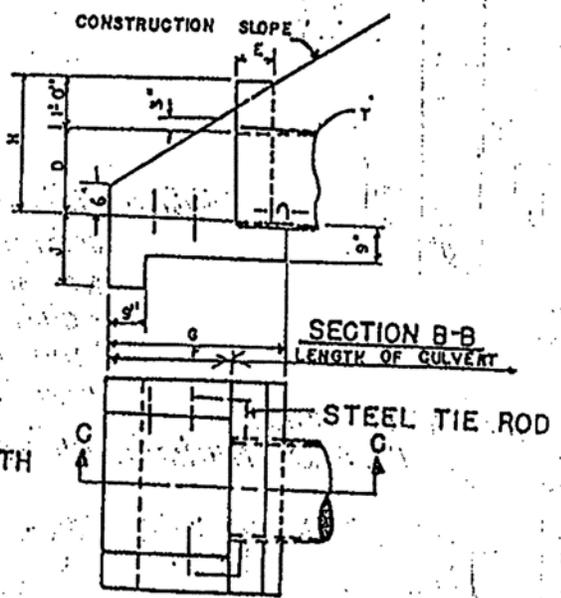
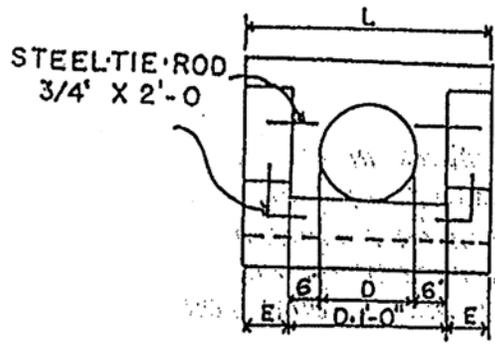
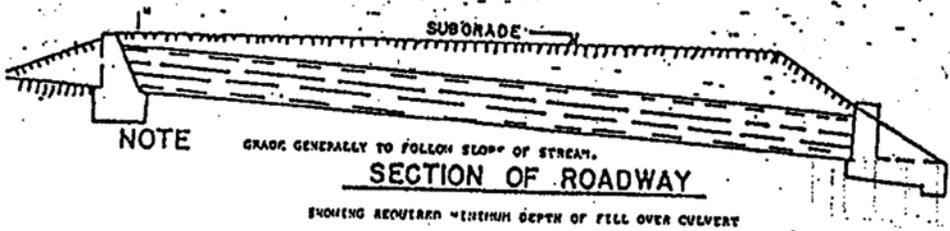
	TYPE "A"	TYPE "B"
"a"	24"	28"
"b"	3'-4" ±	3'-8" ±
"c"	19"	20"
"d"	12"	14"
"e"	6"	7"

NOTE TYPE "A" CATCH BASIN
 TO BE USED WITH
 6-24 CURB & GUTTER
 TYPE "B" CATCH BASIN
 TO BE USED WITH
 8-30 CURB & GUTTER

B-41

DETAIL OF CATCH BASIN

No Scale



LENGTH DESIGN SKETCH.

NOTE LENGTH DESIGN FOR STRAIGHT ENDWALL SIMILAR EXCEPT SIDEWALL IS OMITTED

SECTION C-C

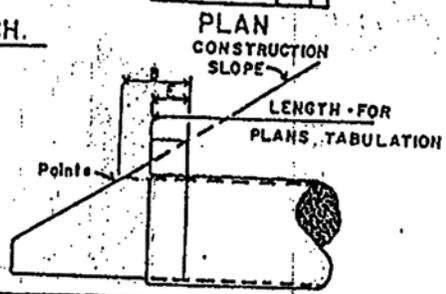


TABLE OF DIMENSIONS & ESTIMATED QUANTITIES TYPE "U" SLOPE 1-1 1/2 TO 2-1

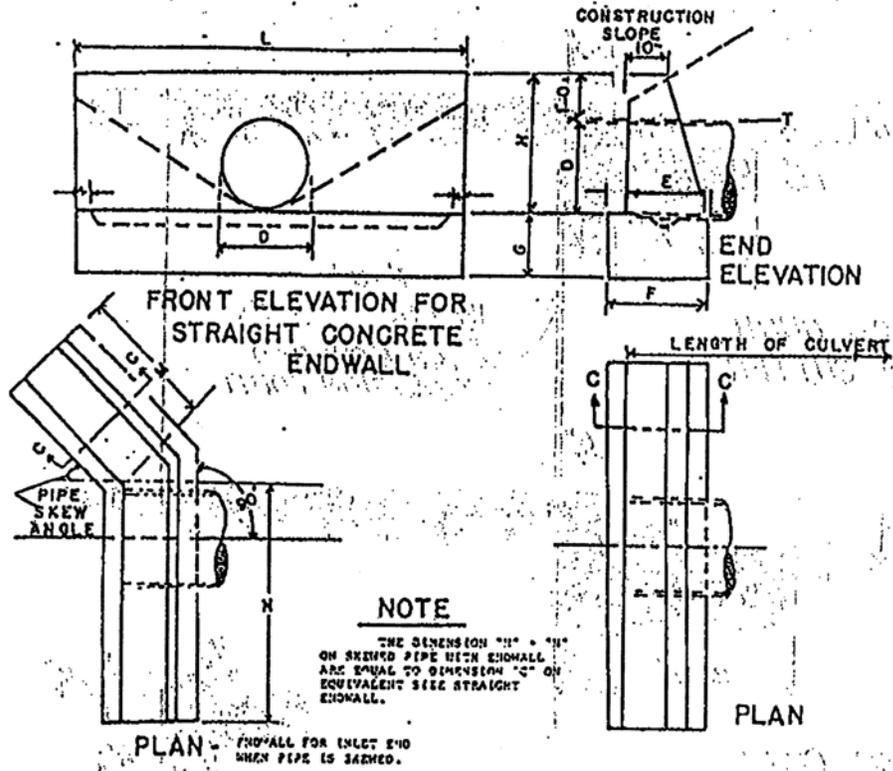
HING	DIMENSIONS							CONCRETE IN ONE ENDWALL			CU. YDS. FOR EACH LINE OF PIPE	FOOT OF LENGTH "G"	CU. YDS. FOR REINFORCING STEEL LBS.
	AREA	M	E	F	J	G	HALL	FOOTING	TOTAL				
0.19	2'-0"	2'-0"	9"	2'-3"	2'-3"	3'-4"	0.31	0.37	0.68	0.23	0.128	20	
1.23	3'-9"	2'-3"	9"	2'-9"	1'-3"	3'-10"	0.38	3.45	0.83	0.29	0.146	20	
1.17	4'-0"	2'-6"	9"	3'-3"	1'-3"	4'-4"	0.47	0.34	1.01	0.35	0.162	20	
3.14	4'-8"	3'-0"	10"	4'-2"	1'-6"	5'-4"	0.73	0.79	1.52	0.15	0.215	20	
4.91	5'-2"	3'-6"	10"	5'-2"	1'-8"	6'-4"	0.98	1.02	2.00	0.73	0.251	20	
7.07	5'-2"	4'-0"	10"	6'-2"	1'-3"	7'-4"	1.26	1.10	2.56	0.36	0.292	20	
9.62	6'-4"	4'-8"	11"	7'-1"	1'-10"	8'-1"	1.71	1.68	3.39	1.12	0.350	20	
12.57	7'-0"	5'-0"	11"	8'-0"	2'-0"	9'-1"	2.31	2.06	4.37	1.40	0.409	20	
15.10	7'-8"	5'-6"	11"	8'-11"	2'-2"	10'-1"	3.01	2.50	5.51	1.73	0.473	20	
19.64	8'-4"	6'-0"	11"	9'-10"	2'-4"	11'-1"	3.83	2.99	6.82	2.08	0.540	20	

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES ONE "U" TYPE ENDWALL SLOPE 1:1 OR FLATTER

HING	DIMENSIONS					CONCRETE			CU. YDS. FOR EACH ADDET. LINE OF PIPE	CU. YDS. PER FT. OF LENGTH "G"	REINFORCING STEEL LBS.
	M	E	F	J	G	HALL	FOOTING	TOTAL			
	2'-0"	9"	3'-9"	1'-3"	4'-0"	0.41	0.52	0.93	0.29	0.155	20
1.23	3'-9"	9"	4'-6"	1'-3"	5'-7"	0.52	0.43	1.15	0.30	0.183	20
1.17	4'-0"	9"	5'-3"	1'-3"	6'-4"	0.63	0.76	1.39	0.48	0.210	20
3.14	4'-8"	10"	6'-0"	1'-4"	7'-0"	1.00	1.11	2.11	0.76	0.285	20
4.91	5'-2"	10"	6'-2"	1'-6"	8'-0"	1.35	1.15	2.50	1.05	0.342	20

IF MORE THAN ONE LINE OF PIPE IS USED THE DISTANCE CENTER OF PIPES SHALL BE 3'-1'-0"

HEADWALL FOR
OUTLET END OF
DRAIN TILE
No Scale

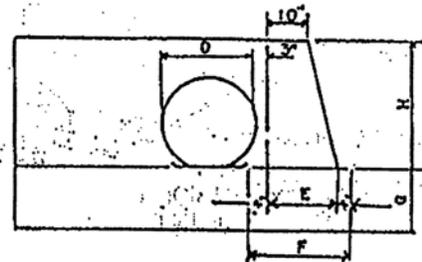
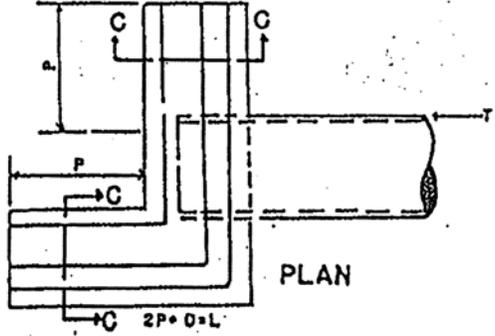


NOTE
 THE DIMENSION "H" + "H"
 ON SKEWED PIPE WITH ENDWALL
 ARE EQUAL TO DIMENSION "G" ON
 EQUIVALENT SIZE STRAIGHT
 ENDWALL.

GENERAL NOTES

CONCRETE SHALL BE CLASS "A" MIXED, PLACED, FORMED AND FINISHED IN ACCORDANCE WITH SECTION 504 AND 511 STANDARD SPECIFICATION.
 A FIRM AND APPROPRIATE FOUNDATION FOR THE STRUCTURE, AND ALL STRUCTURE EXCAVATION AND BACKFILL SHALL BE PROVIDED AND/OR PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.

NOTE: WHEN MORE THAN ONE LINE OF PIPE IS REQUIRED THE DISTANCE FROM CENTER TO CENTER OF PIPES SHALL BE 0'-1" O.C.



FRONT ELEVATION-CONCRETE ENDWALL "L" TYPE

NOTE: DIMENSIONS NOT SHOWN SAME AS FOR STRAIGHT WALL.

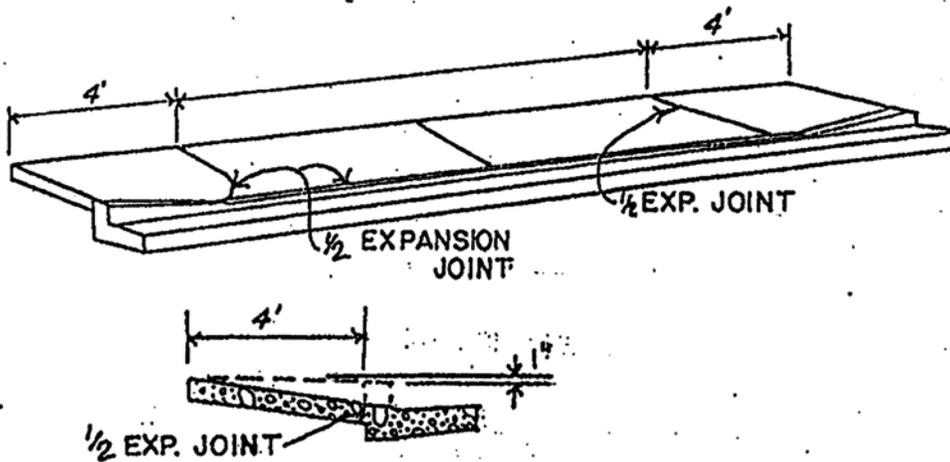
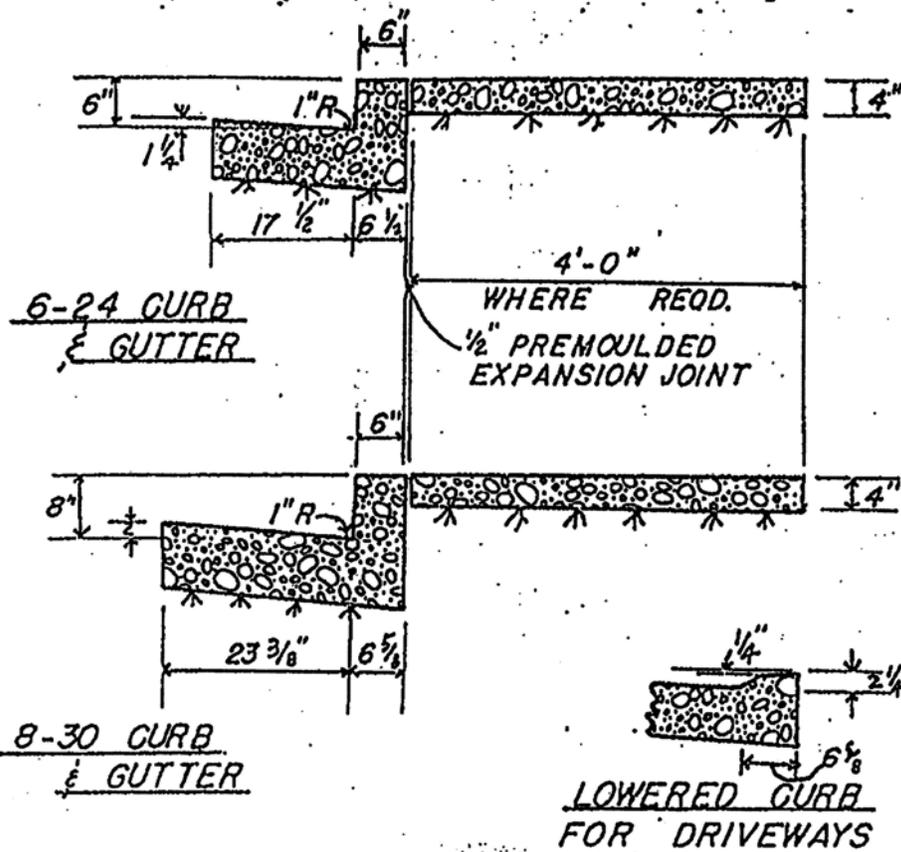
TABLE OF DIMENSIONS

ESTIMATED QUANTITIES (STRAIGHT)

OPENING SIZE	DIMENSIONS						CONCRETE IN ONE ENDWALL			CU. YDS. FOR EACH		CU. YDS. PER FOOT		
	L	H	E	F	G		WALL CU. YDS.	FOOTING CU. YDS.	TOTAL CU. YDS.	ADDITIONAL LINE OF PIPE	OF LENGTH "L"			
											WALL	FOOTING	TOTAL	
1'-0"	0.79	4'-0"	2'-0"	1'-2"	1'-10"	1'-10"	0.27	0.27	0.54	0.25	0.074	0.068	0.142	
1'-3"	1.23	3'-0"	2'-3"	1'-2"	1'-10"	1'-2"	0.37	0.40	0.77	0.22	0.083	0.079	0.162	
1'-6"	1.77	4'-0"	2'-6"	1'-3"	1'-11"	1'-3"	0.51	0.53	1.04	0.29	0.094	0.089	0.183	
1'-9"	2.14	3'-0"	3'-0"	1'-4"	2'-0"	1'-4"	0.83	0.79	1.62	0.32	0.120	0.099	0.219	
2'-0"	2.19	4'-0"	3'-6"	1'-6"	2'-2"	1'-6"	1.29	1.21	2.50	0.74	0.131	0.121	0.252	
2'-3"	2.07	3'-0"	4'-0"	1'-10"	2'-6"	1'-8"	1.31	1.59	2.90	0.86	0.137	0.154	0.291	
2'-6"	2.62	4'-0"	4'-6"	2'-1"	3'-9"	1'-10"	2.62	2.61	5.23	1.14	0.243	0.184	0.429	
2'-9"	3.57	4'-0"	5'-0"	2'-4"	3'-0"	2'-0"	3.37	3.53	6.90	1.48	0.293	0.222	0.515	
3'-0"	3.99	4'-0"	5'-6"	2'-7"	3'-3"	2'-2"	4.74	4.70	9.44	1.84	0.349	0.261	0.610	
3'-3"	4.64	4'-0"	6'-0"	3'-0"	3'-6"	2'-4"	6.16	6.06	12.22	2.27	0.407	0.302	0.709	

**HEADWALL FOR
 INLET END OF
 DRAIN TILE**

No Scale



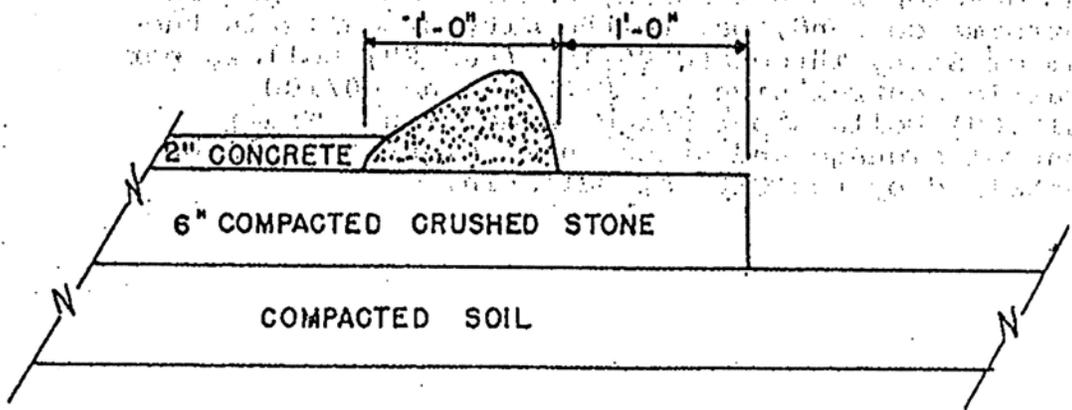
DETAIL OF CURB

- GUTTER = DRIVEWAY ENTRANCE

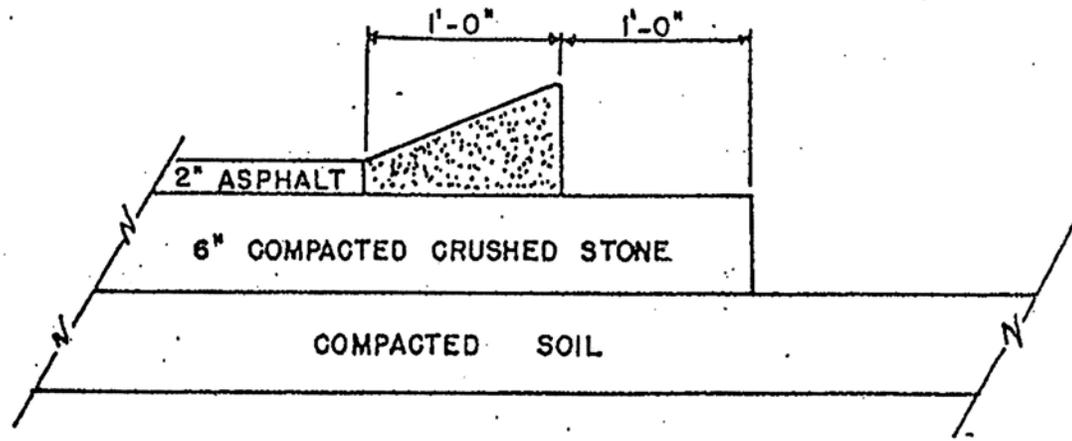
TYPICAL CROSS SECTION OF ALTERNATIVE CURB DESIGNS

(NOT DRAWN TO SCALE)

SECTION RAISED 3'
PLANNING COMMISSION
ITEM 7-3-94



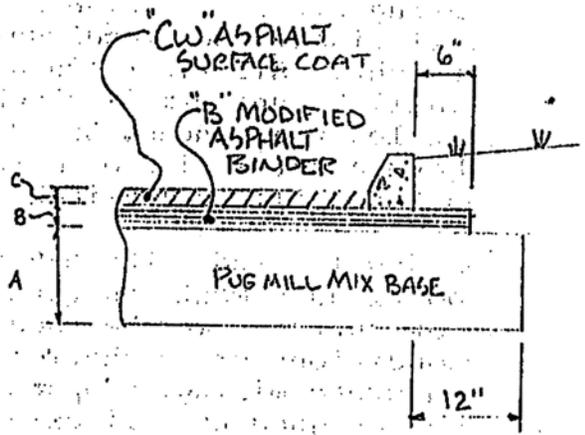
A. CONCRETE CURBS



B. FORMED CONCRETE CURBS

SECTION REVISED 3/28/09
 PLANNING COMMISSION.
 ITEM 7-3-09A

SEE ATTACHED



STREET TYPE	A	B	C
LOCAL RESIDENTIAL	6"	2.5"	1.5"
RESIDENTIAL ARTERIAL	8"	2.5"	1.5"
INDUSTRIAL	10"	3"	2"

Fixed - State Alternative
 (Not To Scale)

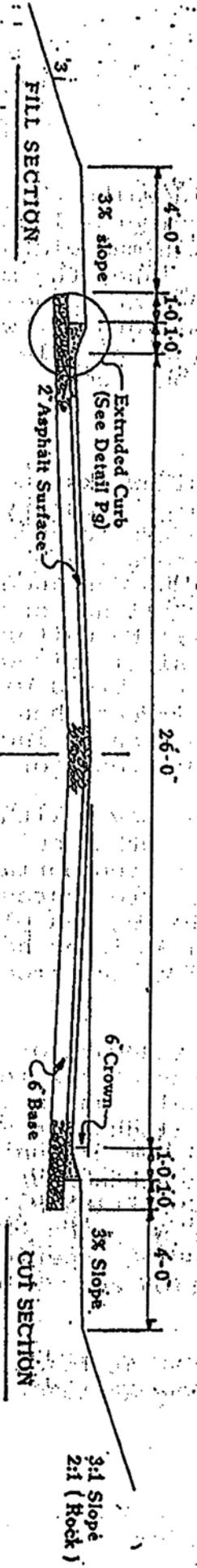
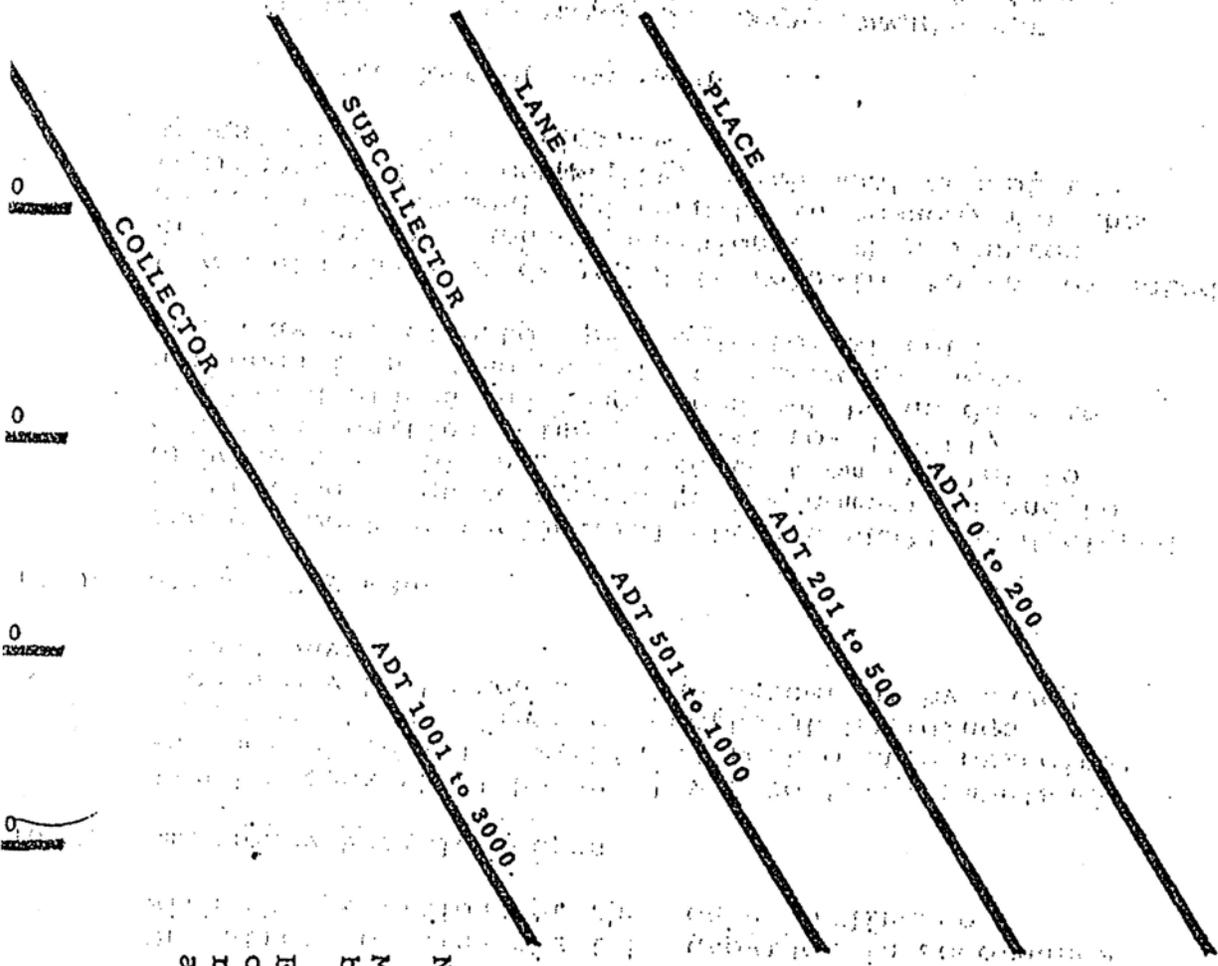


FIGURE 2. Asphalt concrete pavement

CBR OF SUBGRADE



NOTES:

Minimum thickness of asphalt should be 1-1/2 inches.

Except for 1-1/2-inch minimum thickness, crushed stone may be substituted at the rate of 2 inches stone for each inch of asphalt.

NOTE: REFER TO PLANNING
 COMMISSION MINUTES 3/28/94
 ITEM 7-3-94. REVISED
 STREET X-SECTIONS.

EXHIBITS

EXHIBITS

<u>Exhibit Number</u>	<u>Title</u>	<u>Page</u>
1	Calculations for Runoff Coefficient	E-3
2	Runoff Coefficient	E-4
3	Time of Concentration Nomograph	
4	Information Requirements for Site Preparation Plans	
5	Basic Information Required on Grading and Drainage Plans	

EXHIBIT 1

CALCULATIONS FOR RUNOFF COEFFICIENT

Determining C

Only a certain percentage of the total storm water falling on an area will reach the drainage structure. The percent of runoff will be governed by such factors as rate of evaporation, rate of transpiration, quantity of water soaking into the ground, and quantity of water ponding in the area. The percentage of water remaining as runoff is called the C factor. A close estimate of the C factor for an urban area may be made by subdividing the area according to type of cover, as listed in Table 1 below, and applying the recommended C value to each section. The summation of the products of the C values and the percentage for each section of the total area gives a weighted or average C value for the entire area. As an example, we may assume the following conditions for a particular area: 10 percent water-tight roof surfaces, 20 percent concrete pavement, 15 percent traffic-bound pavement, and 55 percent lightly pervious soil with turf. Referring to Table 1, the weighed C value is calculated.

Water right roof surfaces.	10 percent x 0.85 = .085
Traffic-bound pavement.	15 percent x 0.80 = .120
Concrete pavement.	20 percent x 0.90 = .180
Slightly pervious soil, with turf.	55 percent x 0.20 = .110
Weighted C factor	.495

TABLE 1

C Values for Urban Areas

<u>Type of Surface</u>	<u>C Factor</u>
All water-tight roof surfaces	.75 - .95
Bituminous or concrete pavement	.80 - .95
Traffic-bound pavement	.70 - .90
Gravel pavements	.35 - .70
Impervious soil (heavy)	.40 - .65
Impervious soils, with turf	.30 - .55
Slightly pervious soils	.15 - .40
Slightly pervious soils, with turf	.00 - .10
Moderately pervious soils	.10 - .30
Moderately pervious soils, with turf	.00 - .10

Adopted from: Manual of Instruction for Drainage Design – Kentucky Department of Highways

EXHIBIT 2

RUNOFF COEFFICIENTS

<u>Zoning Classification</u>	<u>Runoff Coefficients</u>	<u>Percent Impervious</u>
Business, commercial, and Industrial	0.80 – 0.90	90 percent
Apartments and townhouses	0.65 – 0.75	75 percent
Schools and churches	0.50 – 0.60	50 percent
R-6 zoning	0.40 – 0.50	35 percent
R-10 zoning	0.40 – 0.45	30 percent
R-15 zoning	0.35 – 0.45	25 percent
R-20 and R-40 zoning	0.30 – 0.40	20 percent
Parks, cemeteries, and <u>Unimproved areas</u>	0.25 – 0.35	15 percent

1. The lowest range of runoff coefficients may be used for flat areas (areas where the majority of the grades and slopes are 2 percent and less).
2. The average range of runoff coefficients should be used for intermediate areas (areas where the majority of the grades and slopes are from 2 percent to 5 percent).
3. The highest range of runoff coefficients shall be used for steep areas (areas where the majority of the grades are greater than 5 percent).

TECHNICAL GUIDELINES
FOR
DETENTION FACILITIES DESIGN

CITY OF GALLATIN, TENNESSEE

APRIL 28, 2008

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CHAPTER 1

TECHNICAL GUIDELINES DETENTION FACILITIES DESIGN

101 Drainage Design Criteria and Standards

101.1 Adequate Drainage

Adequate drainage must have the hydraulic characteristics to accommodate the maximum expected flow of storm water for a given watershed, or portion thereof, for a specified duration and intensity of rainfall.

Adequate drainage should be designed to (1) account for both offsite and onsite storm water, (2) honor natural drainage divides, (3) convey said storm water to a stream, channel, natural drainage way, or other existing facility, and (4) discharge said storm water into the natural drainage way by tying into the drainage way at natural elevations or by discharging the storm water into an existing facility of sufficient capacity to received the same.

Determination of the size and capacity of an adequate drainage system shall take into account the future development in the watershed or affected portions thereof. The design must not adversely affect adjacent or neighboring properties.

It is the responsibility of the developer or property owner to pick up or acceptably handle the runoff as it flows onto his property from the watershed above and conduct it through his property to an adequate outfall at his lower property line or beyond. The outfall must be sufficient to receive the runoff without deterioration of the downstream drainage way.

101.2 Minor Drainage System

The design of the minor storm drainage system shall be based on a storm frequency of 10 years. This criteria shall be applied to both closed conduit and open channel design. However, if the 10-year design flow for an open channel system is greater than 100 cfs (cubic feet per second), then the channel shall be capable of passing the 100-year design flow within the drainage easement.

In residential subdivision development, where the average lot size is less than 20,00 square feet, the following general guidelines shall be observed in the design of the minor system:

- A. No quantity of design surface runoff across lots shall have erosive velocities.
- B. Quantities of surface runoff greater than 4 cfs that flow through lots shall be picked up and conveyed in a storm sewer system. This system may be open channel, closed conduit, or a combination of both.
- D. Lots should generally be graded in such a manner that surface runoff does not cross more than three lots before it is collected in a storm sewer system. This system may be open channel, closed conduit, or a combination of both.

Design flows may be determined by the methods discussed in Section 102.

101.3 Major Drainage System

Whenever possible, natural waterways serving the major system should remain undisturbed, whereupon the proposed development must be situated wisely in respect to it. However, due to the insufficient capacity of most natural drains, improvements to the channel may be necessary in order to properly utilize the adjacent property. Improvements to natural open channels, which are to primarily function as the major system, shall be designed to pass the 100-year design flow without damage to the channel (trunk line system) shall be capable of carrying a 100-year design flow. Where man-made channels are necessary, the channels should be located as far away from buildings or structures as possible and preferably in established green belts. Culvert design procedures are covered in detail in other publications.

The onsite major storm drainage system for most developments is the natural backup system and, therefore, consists of the less obvious drainage ways. It is desirable that this major system provide drainage relief such that no building will be flooded with a 100-year design flow, even if the minor system should experience total failure. The 100-year frequency storm shall be used to compute runoff from the design of the onsite major drainage system. This system shall be designed to provide relief for flow in excess of the 10-year design flow.

Guidelines for design of the onsite major drainage system are as follows:

- A. Areas should be graded in such a manner and/or buildings located or constructed in such a manner that, if complete failure of the storm sewer system occurs, no building will be flooded by the design flow.
- B. Key areas to watch are sump areas, relatively flat areas, and areas where buildings are located below streets and/or parking lots.

- C. Use the 100-year frequency storm to compute runoff for the major drainage system.
- D. For the first trial, use the same time of concentration values that were used in designing the minor drainage system and assume the minor system completely inoperable. If no building will be flooded, based on these assumptions, then the analysis can be considered complete.
- E. If buildings will be flooded, based on the assumptions used in item (D), then the designer should perform more precise hydrologic and hydraulic computations. He should design the minor system, overland relief swales, and/or surface storage in such a way that no building will be damaged by flooding.
- F. In general, the designer should try not to oversize the minor storm drainage system as a design for the major system. The major drainage system should be in the form of grading of the area and/or locating and constructing buildings in such a manner that overload relief swales and/or surface storage will accomplish the objective.

Ordinarily, the design guidelines described in the previous paragraph are intended to result in a functional analysis rather than a numerical one. The project drainage plan should denote the major storm drainage system, including overland relief swales and areas that may be affected by surface storage for a 100-year design storm. Any calculations that may have been necessary in order to arrive at the major system should be submitted. Design flows may be determined by the methods discussed in Section 102.

101.4 Policy on Detention of Storm Water

Increased urbanization within the City of Gallatin has resulted in radical change to the topography, ground cover, and minor drainage systems within each drainage basin. These changes may have adverse effects on the environment, primarily through the subsequent increase in storm water runoff. In the interest of minimizing these adverse effects, onsite detention of storm water is mandatory for all industrial, commercial, and multi-family developments subject to the review process. However, in some areas of the watersheds, detention will cause increased peak flows to occur on the major streams and tributaries. The Department of Public Works reserves the right to prohibit detention of storm water where it is not in the best interests of the City of Gallatin. Nevertheless, in all cases where detention facilities are required, the location and design must comply with any master drainage plans which may have been adopted.

The release rate from any detention facilities should approximate that of the developed site prior to the proposed development for the design storm, but adequate alternate drainage must be provided to accommodate major storm flows. Detention systems must be constructed during the first phase of major developments in order to eliminate damage to adjacent properties during construction.

Care must be taken to insure that any required detention facilities do not become nuisances or health hazards. The design engineer should strive to design detention facilities which require minimal maintenance. The maintenance responsibility must be clearly stated on the plans. Where dual purpose facilities are provided, flat grades encountered, or poor drainage soils found, provisions for adequate low flow drainage may be required.

All required detention facilities located in residential developments, excluding condominium developments, shall be within storm drainage easements and shall be maintained by the Department of Public Works. Detention facilities located in industrial, commercial, institutional, apartment developments, and rental townhouses must be maintained by the property owner, and a maintenance agreement must be executed before the development plan is approved (Exhibit 6).

Although this policy is primarily concerned with maintaining post-development peak outflow at the level of the predevelopment condition, it may be applied under certain conditions for the purpose of rendering an existing inadequate outfall acceptable. When used in that fashion, such a facility may also aid in meeting the requirement for adequate drainage.

101.5 Design Criteria

The design criteria for detention facilities should include:

101.5.1 Release Rate

Control structure release rates shall approximate predevelopment peak runoff rates for the 10-year storm, with emergency overflow capable of handling the 100-year discharge except where waived or altered by the City of Gallatin. Design calculations are required to demonstrate that the 10-year design storm is controlled. If so, intermediate storm return periods can be assumed to be adequately controlled.

101.5.2 Detention Volume

Detention volume shall be adequate to attenuate the post-development peak discharge rates to allowable rates determined for Section 101.5.1. It is recommended that the storage indication method be used for reservoir routing calculations. If siltation during construction causes loss of detention volume, design dimensions shall be restored before as-built certification is submitted. Detention volume shall be drained within 72 hours.

101.5.3 Grading and Depth

The construction of detention facilities usually requires excavation or placement of earthen embankments to obtain sufficient storage volume. Vegetated embankments should be less than 10 feet in height and should have side slopes no steeper than 3:1 (horizontal to vertical). Riprap-protected embankments should be no steeper than 2:1. Geotechnical slope stability analysis is recommended for embankments greater than 3 feet in height and is mandatory for embankment slopes steeper than those given above. Procedures for performing slope stability evaluations can be found in most soil engineering textbooks.

Areas above the normal high water elevation of detention/retention facilities should be sloped at a minimum of 5 percent toward the facilities to allow drainage and to prevent standing water. Careful finish grading is required to avoid creation of upland surface depressions that may retain runoff.

The bottom area of detention/retention facilities should be graded toward the outlet to prevent standing water conditions. A minimum 2 percent bottom slope is recommended. A low flow or pilot channel constructed across the facility bottom from the inlet to the outlet is recommended to convey low flows, trap sediments, and prevent standing water conditions.

The maximum depth of storm water detention facilities will normally be determined during the design and permitting process. In general, the facility should not create a permanent pool of water.

Other considerations when setting depths include flood elevation requirements, public safety, land availability, and value, present and future land use, water table fluctuations, soil characteristics, maintenance requirements, and required freeboard.

Aesthetically pleasing features are also important. A minimum freeboard of 1 foot above the 100-year design storm high water elevation should be provided for impoundment depths of less than 20 feet. Impoundment depths greater than 20 feet are subject to the requirements of the State Dam Safety Act.

101.5.4 Outlet Works

Outlet works selected for detention facilities typically include a principal spillway and an emergency overflow and must be able to accomplish the necessary functions of the facility. Outlet works can take the form of drop inlets or any combination of pipes, weirs, and orifices. Slotted riser pipes are discouraged, but curb openings may be used for parking lot storage. The principal spillway is intended to convey the design storm without allowing flow to enter an emergency outlet. Selecting a magnitude for sizing the emergency outlet should be consistent with the potential threat to downstream life and property if the basin embankment were to fail. The sizing of a particular outlet work should be based on results of hydrologic routing calculations and should be consistent with criteria in previous sections.

101.5.5 Outlet Protection

The designer must consider and provide for methods to dissipate energy and eliminate scour on the downstream side of detention basin outlet. The designer must first determine the need for outlet protection, provide design calculations, and show, by detail on the drawings, the outlet protection used.

Examples of acceptable outlet protection devices are riprap aprons, riprap outlet basins, and baffled outlets.

101.5.6 Protective Treatment

Protective treatment may be required to prevent entry to facilities that present a hazard to children and, to a lesser extent, all persons. Fences may be required for detention areas where one or more of the following conditions exist:

- A. Rapid stage changes would make escape practically impossible for small children.
- B. Water depths either exceed 2.5 feet for more than 24 hours or are permanently wet and have side slopes steeper than 4:1 (horizontal to vertical).

C. A low-flow water course or ditch passing through the detention area has a depth greater than 5 feet or a flow velocity greater than 5 feet per second.

D. Side slopes equal or exceed 1.5:1 (horizontal to vertical).

Guards or grates may be appropriate for other conditions, but in all circumstances, heavy debris must be transported through the detention area. In some cases, it may be advisable to fence the water course or ditch rather than the detention area.

101.6 Flood Plain Policy

All proposed developments subject to inundation from a major stream channel must have flood plain water surface elevations provided in order that flood plain easements, required fill elevations, and first floor elevations may be established. Flood profiles for some streams in the City have previously been computed during the Federal Insurance Administration study which was performed by the Corps of Engineers. All developments proposed near streams included in this study must be designed in accordance with the data provided. Flood plain profiles for streams not included in the study must be provided in accordance with the requirements outlined in Section 102.

Development of property located within the flood plain must comply with guidelines established in the storm water management ordinance. Wise use of the flood plain is encouraged in order to minimize adverse effects on flood heights and velocities. Areas of the flood plain available for development must be protected through the use of compacted fill, elevated structure, dikes, and/or flood walls. Any use of these measures must be in accordance with guidelines established in Section 103. Other flood proofing measures available are subject to the approval of the Engineering Division.

101.7 Policy on Drainage Affecting Sink Holes

Due to the many drainage problems commonly associated with sink holes, it will be necessary for the developer to provide the following information prior to approval of any alteration of the natural drainage by our office:

A. The developer shall show proposed drainage channels onsite and off-site, to a point of acceptable discharge. The developer shall submit all necessary hydraulic calculations needed to show that off-site flooding will not be increased. Detailed drainage plans and hydraulic calculations are to be prepared by a registered civil engineer.

- B. Detailed contours are to be shown for all sink holes that are to receive storm water runoff from this site. These contours are to have a maximum interval of 2 feet and are to be verified by field surveys.
- C. The developer shall provide the Engineering Division with a geologic investigation of all sink holes receiving storm water runoff from this site. This investigation shall be prepared by a registered engineer experienced in geology and ground water hydrology. The report shall contain the following:
 - 1. Location and nature of underground aquifers
 - 2. Estimated safe discharge from sink hole to aquifers
 - 3. Potential siltation problems
 - 4. Foundation problems that may be expected around sink hole
 - 5. Details of drainage structures to be built in sink holes
 - 6. Any other factors relevant to the design of drainage from sink hole
- D. Any areas within the sink holes that would be flooded by a 100-year flood are to be shown on the plans, and no development will be allowed in this area.

102 Hydrologic Design

102.1 Design Runoff for Areas up to 200 Acres

The rational formula $Q = CIA$ is recommended for determining rates of runoff for areas up to 200 acres.

Q = Rates of runoff in cubic feet per second.

C = Runoff coefficient (ratio of runoff to rainfall).

I = Rainfall intensity in inches per hours.

A = Area of drainage basin in acres.

- A. Runoff coefficient (c) – Runoff coefficient used to compute flow to the point of interest shall be the composite of the “C” factors for all the areas tributary to the point of interest. Design should be based on zoning classification or type of surface using the “C” factors in Exhibits 1 and 2. Composite “C” factors for each point of interest are computed as follows:

$$C = \frac{A_1 C_1 + A_2 C_2 + \dots + A_n C_n}{A_1 + A_2 + \dots + A_n}$$

A_1, A_2, \dots, A_n = Areas of different surfaces

C_1, C_2, \dots, C_n = Runoff coefficients for different types of surface

N = Number of areas under consideration.

B. Rainfall intensity (I) – Rainfall intensity shall be determined from the rainfall frequency curves available for the Gallatin area. The 10-year frequency curve shall be used to design the storm drains (minor drainage systems). The 100-year frequency curve shall be used to design the less obvious drainage ways of the major drainage system. A 25-year to 100-year frequency curve may be required for use in designing some cases concerning major culverts.

C. Time of concentration (tc) – The time of concentration is the sum of the inlet time plus the time of flow to the conduits. The inlet time is the time required for the water to flow over the surface of the ground to the inlet. Flow time in conduits may be estimated from the hydraulic properties of the conduits.

1. A Nomograph to determine time of concentration is shown in Exhibit 3.

2. The following suggestions are made to assist the designer in determining inlet time at the upper inlet:

(a) Estimate the overland flow time (time for runoff to reach established surface drainage channels such as street gutters and ditches).

(b) Estimate the time of flow through the established surface drainage channels from the channel's hydraulic properties.

3. Judgment should be used in estimating time of concentration. Often, the initial inlet time should be based on the first few inlet areas. For instance, if the uppermost area has low runoff rates with long times of concentration (such as parks and cemeteries) and major portions of the lower area have high runoff rates with short times of concentration,

then the first inlet time should not necessarily be based only on its own land use. The above statements would also be true of the converse case; that is, the uppermost area producing high runoff rates with short times of concentration and the lower areas producing low runoff rates with long times of concentration.

- D. Area (A) – Area shall be determined from field run topography or current U. S. Geological Survey quadrangle sheets.

102.2 Design Runoff for Areas Larger than 200 Acres

Rational Formula – The use of the rational formula for determining design runoff for areas larger than 200 acres is strongly discouraged and should be used only with extreme caution.

Other Techniques – The use of other techniques are subject to approval by the Engineering Division. The following methods are recommended for design purpose: Soil Conservation Service unit hydrograph procedure, Colorado urban hydrograph procedure, U.S.G.S. discharge equations.

103 Flood Plains

103.1 Requirements

Flood plain reports shall be required by the Engineering Division for streams not included in the Federal Insurance Administration study when the stream has a drainage area of one square mile or more. The flood plain report shall consist of plan and profile and calculations of water surface elevations. The plan view shall show the flood plain water surface limits, flood plain easement lines, base line, cross section stations, and adjacent boundaries. The profile should show stream invert, cross section stations, and computed water surface elevations. The report should also show the drainage divides on the plan and the ultimate zoning categories used in the calculations.

103.2 Flows

All flood plains should be calculated for a quantity of runoff based on the 100-year design storm. Flows in flood plains will be determined by the methods discussed in Section 102.

103.3 Method and Guidelines to Calculations

Water surface elevations may be determined by the standard tap method.

The designer may be required to use different values of roughness coefficients for the center of the stream and the overflow banks of each cross section. The method is a trial and error procedure throughout most of the flood plain. General guidelines to performing calculations are as follows:

- A. Select flood plain cross sections. Those sections should be selected based on the field-run topography and any existing and/or proposed hydraulic control sections. Cross sections are needed at flood plain contractions, expansions, sharp changes in invert slope, and where abrupt changes in channel roughness occur. Special care should be taken to include the effects of all major constructions (such as culvert crossings under roads, etc.) in computations. Distance along the base line between sections should not exceed 300 feet. Location of cross sections is subject to approval of the Engineering Division; therefore, cross sections selected should be coordinated with the Engineering Division.
- B. Cross sections should be as nearly perpendicular to flood plain flow as possible. Base line should be located as closely as possible to the center of the flood area.
- C. The roughness coefficients (n) for the flood plain are to be approved by the Engineering Division.
- D. If the flood plain study is being prepared for a particular site or property, then the flood plain shall extend a minimum of 300 feet upstream and downstream from the particular site or property.

103.4 Water Surface Calculations

Water surface calculations should begin where the energy and hydraulic gradient are known or can readily be obtained. Calculations should generally be performed in an upstream direction since flood plains are usually sub-critical flow throughout the entire flood plain. Once the water surface is established at the cross section, the water surface in the next cross section is assumed, the total y (distance to the E.G.L.) is calculated, and the energy balance between the two cross sections is computed. If the energy balance does not meet the required accuracy of +/- 0.2 feet, then assume another water surface elevation and repeat calculations. When the energy balance meets the required accuracy, the water surface elevation is established and calculations may proceed between the next two cross sections.

103.5 Flood Plain Easement

All flood plains, or portions of flood plains, that pass through a project site shall have a flood plain easement. The easement shall be placed around the water surface limits as published by the flood plain calculations. This easement shall be ties to the site boundaries in such a way that the easement could be established at the site. The flood plain easements shall be placed on the record plat, the site construction drawings, and flood plains study. However, only the record plat needs to have the metes and bounds of the easements and the boundary tie information. No use shall be made of, nor shall any improvements be made in, the flood plain easement without the written approval of the Engineering Division.

103.6 Flood Plain Filling

All filling permitted in the flood plain shall be limited to the flood fringe areas where flooding results in ponding rather than high velocity flows and where flooding would occur less frequently than in the open floodway. Where areas of backwater are to be filled, alternate storage capacity must be provided by dredging out an equal amount of storage area as occupied by fill. All dredged areas shall be stabilized immediately to prevent excessive sedimentation. Areas to be filled must be cleared of standing trees, stumps, brush, downed timber and all objects, including structures on and above the ground surface. Topsoil shall be removed and stockpiled while all other spoil materials must be disposed of off-site. Fill material shall be placed in compacted layers, and the minimum distance from the perimeter of any proposed building to the top of the slope shall be either 25 feet or twice the depth of fill at that point, whichever is greater. The fill material must not have slopes steeper than 2:1:0, and all slopes shall be stabilized in accordance with probable velocities.

103.7 Elevated Structures

Elevating structures on stilts provides necessary flood protection without significantly affecting the storage capacity of the flood plain. This method of flood protection should only be used in low risk flood areas and where velocities are not too high. The structure must be designed to withstand any hydraulic forces which may occur and should have sufficient strength to withstand impact of floating debris. Structures can be elevated on piles, columns, stilts, or walls. Solid walls should be oriented with their longest dimension parallel to the flow. Columns, etc. shall have a minimum spacing of 8 feet and should be free of appendages or bracings that could restrict the passage of floating debris. Foundation support for stilts needs to be capable of resisting applied loads by utilizing devices such as spread footings and concrete mats. The effect of submergence of soil and water loads on the ground needs to be recognized. Possible flood scouring around stilts has to be prevented.

103.8 Dikes and Flood Walls

The design of dikes and flood walls for flood protection purposes should cover several different aspects. The loss of storage capacity, possible surcharge in flood heights, overtopping, or failure must be considered during design. Dikes are generally earth embankments that can extend around sections of a building. Fill material used in their construction should be dredged from the flood plain to aid in providing alternate storage. The fill material must be placed on cleared ground, compacted in layers, and protected from seepage. Buildings shall have a minimum setback from the base of the dike of 20 feet or twice the height of the embankment, whichever is greater. Flood walls are preferred for locations with limited space and can be constructed as cantilever I-type steel piles, cellular walls, buttress walls, or gravity walls. They must be well founded and cutoffs installed to prevent seepage. Areas located behind a dike or flood wall should be drained by conduits installed with automatic flap gates to prevent backflow or manually-operated valves that are closed during flooding or combination thereof.

DEFINITION OF
TERMS

DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these Regulations unless specifically stated otherwise:

BUILDING PERMIT – Permit required under the City of Gallatin Building Code.

CERTIFICATION – Written verification received by the City Engineer from a registered engineer that all work performed was done in compliance with any approvals and/or permits previously granted.

CHANNEL – A natural or artificial water course of perceptible extent with definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow thus is that water which is flowing within the limits of the defined channel.

CODES – City of Gallatin Codes Administration.

CRITICAL AREA - A site subject to erosion or sedimentation as a result of cutting, filling, grading, or other disturbance of the soil; a site difficult to stabilize due to exposed subsoil, steep slope, extent of exposure, and other conditions.

CUT – Portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to the excavated surface.

DEVELOPER – Any individual, firm, corporation, association, partnership, or trust involved in commencing proceedings to effect development of land for himself or others.

DRAINAGE BASIN – A part of the surface of the earth that is occupied by and provides surface water runoff into a drainage system, which consists of a surface stream or a body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

EROSION – The disintegration or wearing away of soil by the action of water.

EXCAVATION – See cut.

EXISTING GRADE – The slope or elevation of existing ground surface prior to cutting or filling.

FILL – Portion OF land surface or area to which soil, rock, or other materials have been or will be added; height above original ground surface after the material has been or will be added.

FINISHED GRADE – The final slope or elevation of the ground surface, after cutting or filling.

FLOOD – Water from a river, stream, water course, lake, or other body of standing water that temporarily overflows and inundates adjacent lands and which may affect other lands and activities through increased surface water levels and/or increased ground water level.

FLOOD PLAIN – The relatively flat or low land area adjoining a river, stream, water course, lake, or other body of standing water which has been or may be covered temporarily by flood water. For administrative purposes, the flood plain is defined as the area that would be inundated by high water at the flood profile from which the flood protection elevation is established.

FLOOD PROOFING – A combination of structural provisions, changes, or adjustments to properties and structures subject to flooding, primarily for the reduction or elimination of flood damages to properties, water and sanitary facilities, structures, and contents of buildings in a flood hazard area.

FLOOD PROTECTION ELEVATION – The elevation which is one foot above the 100-year flood high water profiles as developed by the Corps of Engineers for the Federal Flood Insurance Study for the City of Gallatin. Until this study is completed and adopted, in areas where such 100-year flood high water profiles are not developed, the flood protection elevation is the March 1975 flood for the Cumberland River and 2 feet above the 50-year developed flood for the tributary streams mapped by the U. S. Geological Survey prior to January 1, 1976.

FLOODWAY – That portion of the stream channel and adjacent flood plain required for the passage or conveyance of a 100-year flood discharge. The floodway boundaries are placed to limit encroachment in the flood plain so that a 100-year flood discharge can be conveyed through the flood plain without materially increasing (less than one foot) the water surface elevation at any point and without producing hazardous velocities or conditions. This is the area of significant depths and velocities, and due consideration should be given to effects of fill, loss of cross sectional flow area, and resulting water surface elevations.

FLOODWAY FRINGE – That portion of the floodplain lying outside the floodway. This is the area of the floodplain that may be developed or encroached upon as long as the water surface elevation of the 100-year flood is not increased by more than one foot at any point.

GRADING – Any operation or occurrence by which the existing site elevations are changed or where any ground cover, natural or man made, is removed; or any water course or body of water, either natural or man made, which is relocated on any site, thereby creating an unprotected area. This includes stripping, cutting, filling, stockpiling, or any combination thereof, and shall apply to the land in its cut or filled condition.

GRADING PERMIT – A permit issued to authorize excavation and/or fill to be performed under these Regulations.

HUMAN OCCUPANCY – Any portion of any enclosed structure wherein humans principally live or sleep, such as mobile homes, permanent residential activities, semitransient residential activities, health care community facilities, nursing home community facilities, orphanages, family care facilities, group care facilities, or transient habitation.

IMPERVIOUS SURFACE – A term applied to any ground or structural surface which water cannot penetrate or through which water penetrates with great difficulty.

MAJOR DRAINAGE SYSTEM – That storm drainage system which carries the runoff from a 100-year frequency storm. Although damage may occur, runoff will be carried by the major system whether or not it has been planned and designed, and whether or not improvements are situated wisely in respect to it.

The major system usually includes many features such as streets, gulches, and major drainage channels. Storm sewer systems may reduce the flow in many parts of the major system by storing and transporting water underground. Good planning and designing of a major system should eliminate major damage and loss of life from storms having a one percent chance of occurring in any given year.

MATERIALLY INCREASE THE DEGREE OF FLOODING – Shall be defined by the following criteria:

1. The proposed development raises the 100-year flood elevation more than 1 foot; or when considered in conjunction with other potential developments within the watershed, would contribute disproportionately to increased flooding which, when combined with other potential development, would cumulatively increase the 100-year flood elevation more than 1 foot.
2. The proposed development does materially increase the property damage caused by the 100-year flood.
3. The proposed development conflicts with the master plan adopted by the storm water management committee for reducing flood damage.

MINOR DRAINAGE SYSTEM – That storm drainage system which is frequently used for collecting, transporting, and disposing of snow melt, miscellaneous minor flows, and storm runoff up to the capacity of the system. The capacity should be equal to the maximum rate of runoff to be expected from the initial design storm which has statistical frequency of occurrence of one in ten year, or as specified by the storm water management committee.

The minor system is sometimes termed the “convenience system,” “initial system,” or the “storm sewer system.”

The minor system may include many features, ranging from curbs and gutters to storm sewer pipes and open drainage ways.

NATURAL GROUND SURFACE – The ground surface in its original state before any grading, excavating, or filling.

ONE HUNDRED-YEAR FLOOD – Is one that has an average frequency of occurrence of once in 100 years, determined from an analysis of floods on a particular water course and other water courses in the same general region. Statistically, it has a one percent chance of occurring in any given year.

PERMITTEE – Any person, firm, or other legal entity to whom a grading or building permit is issued in accordance with these Regulations.

PLANNING COMMISSION – city of Gallatin Planning Commission.

PUBLIC WORKS – City of Gallatin Department of Public Works.

P.U.D. – Planned Unit Development.

REGISTERED ARCHITECT – An architect duly registered or otherwise authorized by the State of Tennessee to practice in the field of landscape architecture.

REGISTERED ENGINEER – An engineer duly registered or otherwise authorized by the State of Tennessee to practice in the field of civil engineering.

REGULATED GRADING – Any grading performed with the approval of and in accordance with criteria established by the Engineering Division.

SEDIMENT – Solid materials, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, or gravity as a product or erosion.

SITE – All contiguous land and bodies of water in one ownership, graded or proposed for grading or development as a unit, although not necessarily at one time.

SLOPE – Degree of deviation of a surface from the horizontal, usually expressed in percent or ration.

SOIL – All unconsolidated mineral and organic material of whatever origin that overlies bedrock which can be readily excavated.

SOILS ENGINEER – A professional engineer who is qualified by education and experience to practice applied soil mechanics and foundation engineering.

STRIPPING – Any activity which removes or significantly disturbs the vegetative surface cover, including clearing and grubbing operations.

STRUCTURE – Anything constructed or erected, the use of which requires a more or less permanent location on or in the ground. Such construction includes, but is not limited to, objects such as buildings, towers, smokestacks, overhead transmission lines, carports, and walls.

STRUCTURE, PERMANENT – A structure which is built of such materials and in such a way that it would commonly be expected to last and remain useful for a substantial period of time.

STRUCTURE, TEMPORARY – A structure which is built of such materials and in such a way that it would commonly be expected to have a relatively short useful life or is built for a purpose that would commonly be expected to be relatively short term.

TEMPORARY PROTECTION – Short-term stabilization of erosive or sediment-producing areas.

VEGETATIVE PROTECTION – Stabilization of erosive or sediment-producing areas by covering the soil with:

- A. Permanent seeding, producing long-term vegetative cover, or
- B. Short-term seeding, producing temporary vegetative cover, or
- C. Sodding, producing areas covered with a turf of perennial sod-forming grass, or
- D. Tree planting, or
- E. Other planting

WATER COURSE – A channel, natural depression, slough, gulch, stream, creek, pond, reservoir, or lake in which storm runoff and flood water flows, either regularly or infrequently. This includes major drainage ways for carrying urban storm runoff.