Section 4. Development Standards

4.01. General Design Requirements

A. All subdivisions hereafter established in Cherokee County shall be developed in accordance with the design standards and requirements set forth in this Ordinance.

B. Land subject to flooding, improper drainage or erosion, or which has topographical, geological or other constraints on its development, shall not be subject to development for any uses which may continue such conditions or increase the danger to health, safety, life or property, unless such constraints can be legally eliminated or abated.

C. All subdivisions shall be identified by name. Subdivision names may not be duplicated unless they are a logical extension of and are contiguous to an existing subdivision.

4.02. Conformance with Other Plans and Regulations

A. All proposed subdivisions shall conform to all applicable zoning regulations and development policies of Cherokee County in effect at the time of submission of the construction plans or any variance that has been granted.

B. Whenever there is a discrepancy between the minimum standards or dimensions required herein and those contained in the Cherokee County Zoning Regulations, Building Code, or other official regulations or resolutions, the most restrictive shall apply.

4.03. Monuments

All property line corners shall be marked with a metallic pin, at least one-half inch in diameter and 24 inches in length. The top level of such pin shall be approximately level with the finished grade. If the ground cannot be penetrated the required 24 inches, another type of permanent monument shall be installed.

4.04. Construction Testing

A. All quality control testing which is a part of roadway construction will be performed by a reputable professional geo-technical and testing engineering company that will be employed by the developer and all associated costs will be paid by the developer.

B. The following information is required on the compaction and depth check reports submitted by the approved Geotechnical Engineer to the County Development Inspector:

1. Subdivision name
2. Street name
3. Station number or structure number
4. Location
5. Percent compaction required
6. Percent of compaction tested

7. Passed or failed statement
8. Thickness required
9. Thickness testing results
10. Any rechecking of failed compactions
11. Maximum dry density, in-place density and percent of moisture for each test.
12. Location of aggregate quarry
13. Asphaltic Compactions
    a. Theoretical
    b. Target density
    c. In-place dry density
    d. Percent compaction required
    e. Percent of compaction tested
    f. Type mix
    g. Passed or failed statement
    h. Subdivision name
    i. Street name
    j. Date of test
    k. Location and station number
    l. Location and name of asphalt plant
14. Asphaltic Concrete Job Mix Formula
    a. Design mix and graduation and ac content
    b. Design temperature
    c. Theoretical
    d. Type Mix
    e. Plant Location
15. Asphaltic Extractions
    a. Subdivision name
    b. Date and time of test
    c. Location and name of asphalt plant
    d. Type Mix
    e. Acceptance test – percent passing each sieve and percent of asphalt
    f. Percent passing each sieve and ac content from job mix formula
    g. Temperature of asphaltic concrete mix and time of sampling
    h. Correction made to asphaltic concrete mix shall be documented in extraction report
    i. Tons of asphalt of each type mix ran each day

C. The developer must contact the County Development Inspector by fax or e-mail within twenty-four (24) hours of any testing procedures. If the County Development Inspector does not respond within 24 hours, the developer may proceed with testing using an approved geotechnical engineer. All testing procedures shall be done at locations on the project at the direction of the County Representative while both the Testing Technician and the County Representative are present on the project, unless

otherwise directed by the County Representative, so that test results can be given directly and additional tests may be ordered if necessary.

4.05. Streets

A. Street Design Requirements

1. General

a. The arrangement of streets shall conform to the Cherokee County Road Classification Map, or, for streets not shown on this plan, shall provide for an appropriate extension of the existing pattern of streets.

b. The minimum right-of-way as required by this ordinance must be shown on the final plat and dedicated to Cherokee County if the proposed development fronts on an existing county road. All building setback requirements shall be measured from this established right-of-way line.

c. Traffic studies shall be required for all residential subdivisions containing more than 250 lots, non-residential subdivisions containing more than 25,000 square feet of floor area, or at the discretion of the Engineering Manager. Such studies will at a minimum address the level of traffic generated by the proposed development and its distribution on the existing road network; and the need for traffic signals, deceleration lanes, left turn lanes, other additional lanes and other traffic control devices on all existing and proposed roadways.

d. All streets with curb and gutter shall be constructed with a minimum thirteen-foot (13') shoulder behind both curbs. See Standard Detail 201 "Residential Streets" and Standard Detail 202 "Non-Residential Streets."

e. All streets shall have a minimum centerline grade of at least 1.0% including cul-de-sacs and intersections.

f. Super-elevated curves shall be provided as per Georgia Department of Transportation design guidelines for arterial streets.

g. Where a deflection angle of more than ten (10) degrees occurs, a horizontal curve of reasonably long radius shall be introduced.

h. The minimum length of crest vertical curves shall be one hundred (100) feet. Longer lengths may be required based on required the AASHTO K-Values for stopping sight distance. The sight distance for crest vertical curves shall be measured along the roadway from three and a half (3½) feet above the pavement to an object two (2) feet high, as discussed in the current AASHTO policy on design. Vertical curves may be designed to extend past the end of a cul-de-sac provided stopping sight distance is met. See Standard Detail 203 "Minimum Stopping Sight Distance."

i. The minimum length of sag vertical curves shall be one hundred- (100) feet. Longer lengths may be required based on required the AASHTO K-Values for stopping sight distance. Vertical curves may be designed to extend passed the end of a cul-de-sac provided stopping sight distance is met.

j. Sight distances at intersections shall be determined by the posted speed limit of the street (existing county road or state highway) onto which a vehicle must turn. Such distances shall be measured beginning from a point established fifteen (15) feet from the edge of the travel way on the centerline of the egress lane at a height of three and a half (3½) feet above the finish grade elevation. The line of sight is then extended the minimum required distance on either side to the centerline of the road terminating at a point three and a half (3½) feet above the finish grade elevation (See Standard Detail 204 "Intersection Sight Distance").

k. If a subdivision street accesses a county road, the design consultant shall verify the intersection stopping distance and shall determine if hidden dips occur on the county road which will impact the proposed access point.

l. Roads may be constructed across an existing or proposed dam. The appropriate state approved professional shall provide a report certifying that the existing or proposed dam is structurally capable of supporting the road. Any road across a dam shall be a private street. Ingress and egress easements, not right-of-way, shall be granted. A second point of access to the subdivision across a public or private street must be provided. The section of road across the dam, and the dam itself, shall be maintained by the subdivision property owners or a mandatory homeowners' association.

2. Residential Street Design Requirements

a. Residential streets shall be classified into a street hierarchy system for design and construction purposes. Street design standards in residential subdivisions shall be based on road function and the number of dwelling units (d.u.) served by the street. Rural residential streets may be used only in residential subdivisions where lot sizes are 60,000 square feet or larger. Residential street classifications and their corresponding dwelling unit thresholds are:

Street Type	Dwelling Units Served
Rural Residential	0 - 10
Residential 1	0 - 200
Residential 2	201 - 400
Residential 3	401 - 1000

b. Apartment, condominium, and mobile home park streets shall be designed and constructed to the same standards as other residential streets.

c. The following residential street design standards shall apply to all public and private streets in residential subdivisions. See Standard Detail 201

"Residential Streets." Design requirements for arterial and collector Streets in residential subdivisions shall be based on AASHTO and Georgia D.O.T. standards, and approved by the Engineering Manager.

d. DEPTH REQUIREMENTS: Depth checks on base material and asphalt cores shall be taken at random locations at 500' intervals along each road and at a minimum of one (1) per street. Any area found deficient shall be brought up to the required thickness prior to placing any additional layer of material. All asphalt core holes shall be filled with hot mix asphalt of similar grade prior to approval of the final plat.

	Residential 3	Residential 2	Residential 1	Rural Residential
Dwelling Units Served	401-1000	201-400	0-200	0-10
Minimum ROW (ft)	60[4]	60[2,4,6]	50[7] or 60[2,4,6]	60[2,4,5]
Minimum Pavement Width (ft)	24[1]	24[1,6] or 20[1]	20[1]	20[1]
Minimum Lane Width (ft)	12	12	10	10
Maximum Grade (%)	14	14[2]	14[2]	14[2]
Minimum Stopping Sight Distance (ft)	250	155	155	80
Design Speed (mph)	35	25	25	15
Minimum Centerline Radius (ft)	440	100	100	100
Minimum Tangent for Reverse Curves (ft)	440	100	100	100
Minimum Intersection Sight Distance (ft)	See SD 204	See SD 204	See SD 204	See SD 204
Minimum Length Sag Vertical Curve (ft)	100	100	100	50
Minimum Length Crest Vertical Curve (ft)	100	100	100	50
Internal Subdivision Curb or EOP Radius (ft)	35	35	35	25
Entrance to Subdivision Radius (ft)	40	40	40	30

Residential Street Design Requirements Table Footnotes:

1. Minimum pavement width does not include curb and gutter.
2. Streets constructed without curb and gutter and where storm water management does not allow ditches to be within the 50-foot right-of-way.
3. Pavement width for main parkways.
4. Private streets shall contain access and utility easements in lieu of right-of-way.
5. All residential streets shall be constructed with curb and gutter, except for Rural residential streets and residential streets serving subdivisions where the minimum lot size is at least eighty thousand (80,000) square feet. Residential subdivision curb and gutter may be either vertical faced or roll-over.

6. The applicant shall demonstrate to the Engineering Manager that the distribution of traffic to the proposed residential street system shall not exceed the dwelling unit thresholds for any of the proposed street classifications. Submitted construction plans must indicate the number of lots being served by each street for subdivisions that contain 201 lots or more.

3. Non-Residential Street Design Requirements

a. Non-residential streets shall be classified into a street hierarchy for design and construction purposes. Street design standards in non-residential subdivisions shall be based on road function and the average daily traffic (ADT) the street will accommodate, as determined in the current edition of ITE's Trip Generation manual. Non-residential street classes and their corresponding ADT thresholds are 0 - 10,000 ADT.

b. Pavement depth shall be based upon projected traffic loads designed by a professional engineer currently registered in the State of Georgia but in no event shall it be less than 6”/2”/1½”.

c. Arterial or collector streets shall be required when ADT generated by the development will exceed 10,000 daily trips. Street design requirements for arterial and collector streets shall be based on AASHTO and Georgia D.O.T. standards, and approved by the Engineering Manager.

d. Jogs in the centerline, pavement, or right-of-way shall not be permitted for residential or non-residential streets.

e. The applicant shall demonstrate to the Engineering Manager that the distribution of traffic to the proposed street system shall not exceed the ADT thresholds for any of the proposed street classifications.

f. All non-residential streets shall be constructed with curb and gutter, except for those non-residential streets serving developments where the minimum lot size is five (5) acres or larger. Non-residential subdivision curb and gutter may be either vertical faced or rollover.

g. The following non-residential street design standards shall apply to all public and private streets constructed in non-residential subdivisions. See Standard Detail 202 "Non-Residential Streets." The minimum standard for non-residential subdivision street design and construction shall be a Non-Residential 1 street.

h. Grading and embankment specifications are the same as “4.05-B, Roadway Grading Requirements.” Pavement depth for any use other than automobiles shall be based on projected traffic loads and design by a professional engineer currently registered in the State of Georgia.

	Non-Residential 1
Minimum ROW (ft)	60
Minimum Pavement Width (ft)	24
Minimum Lane Width (ft)	12[1]
Maximum Grade (%)	14
Minimum Stopping Sight Distance (ft)	250
Design Speed (mph)	35
Minimum Centerline Radius (ft)	440
Minimum Tangent for Reverse Curves (ft)	100
Minimum Intersection Sight Distance (ft)	See SD 204
Minimum Length Sag Vertical Curve (ft)	100
Minimum Length Crest Vertical Curve (ft)	100
Internal Subdivision Curb or EOP Radius (ft)	40

Non-Residential Street Design Table Footnotes:

1. Minimum pavement width does not include curb and gutter.

B. Roadway Grading Requirements

1. All streets and roads shall be graded to their full width by the subdivider so that pavements and sidewalks, where required or proposed for future installation, can be constructed on a level plane as shown in Standard Detail 201 “Residential Streets" and Standard Detail 202 "Non- Residential Streets."

2. The entire area within the typical grading section shall be cleared and grubbed of all trees, bushes, stumps and debris. Such debris shall be disposed of in a lawful manner, and shall not be buried in the right-of-way.

3. Embankment: The embankment shall be constructed in parallel layers. The material shall be deposited and spread in uniform, horizontal layers not more than eight (8) inches thick, loose measurement, for the full width of the cross-section where practicable, and these layers shall be kept uniform by the use of motor graders, bulldozers or other approved equipment.

   a. Embankment shall be compacted to at least 95% of the maximum laboratory dry density.

   b. Each layer shall be compacted within the range of optimum moisture content to permit the specified compaction. Successive layers shall not be constructed on previous layers that exhibit excessive pumping under construction equipment regardless of compaction. Material containing too much moisture

shall be dried to the moisture content necessary to obtain stability and compaction.

c. If the material is too dry, water shall be added and uniformly mixed with the soil to the extent necessary to obtain stability and compaction.

d. Embankment at bridge structures shall be compacted to at least 100 percent of the maximum laboratory dry density for the full depth of the embankment, beginning at the top of the slope and extending 100 feet from the end of the bridge.

e. Embankments at structures – No rock more than 4 inches in any diameter shall be placed within 2 feet of any drainage structure. Before any traffic is allowed over any structure the contractor shall provide sufficient depth to adequately protect the structure from damage or displacement.

f. Compaction of the embankment will be accomplished by the use of a sheep's foot roller.

g. Embankment Compaction Tests shall be taken at an interval not exceeding 5,000 cubic yards or one per day. Compaction test results shall be reported to the County Development Inspector immediately after results are obtained.

h. All areas that are not accessible by a roller shall be required to use an approved mechanical tamper to achieve compaction. The density requirements of the Cherokee County Development Regulations shall apply.

i. Compaction backfill for minor structures shall be placed in uniform 6” layers compacted to ninety-five (95) percent of maximum dry density and the top twelve (12”) inches will be compacted to 100 percent of the maximum dry density.

j. Utility trenches cut in the subgrade shall have the backfill material placed in uniform 6” layers compacted to ninety-five (95) percent of maximum density and the top twelve (12”) will be compacted to 100 percent of the maximum laboratory dry density.

k. Compaction backfill for minor structures shall be taken at an interval not exceeding one per structure.

l. Compaction test results shall be reported immediately after results are obtained to the County Development Inspector.

4. Cut and fill slope ratios shall start at the edge of the right-of-way and shall not exceed 2:1. In lieu of a cut or fill slope, a retaining wall may be utilized where necessary with the approval of the Engineering Manager.

5. Cut or fill slopes shall be uniform for each section of cut or fill. When a cut made in rock requires blasting, the slope may be changed to a vertical slope upon written approval of the Engineering Manager.

6. If paving is to be delayed, provisions shall be made to drain low points in the roadway. If curbing has not been installed, a break in the berm section may be provided. If curbing is in place, pipe sections which are functioning and maintained shall be used to provide drainage under the curb to side slopes.

7. It is expressly reserved by Cherokee County that any and all reasonable inspections of roads under construction in a subdivision may be initiated at any time by Cherokee County. All work must be approved by the County Development Inspector prior to placement of base material. It is the County's duty to inspect and verify that road grading specifications have been met.

8. In the event that the County Development Inspector is not available at the time of the proof roll and the developer has notified the Development Inspector by fax or e-mail at least 24 hours prior to the proof roll, then the developer may proceed under the direction of a county-approved geotechnical engineer. The developer shall thereby be required to proceed by following the recommendations of the county-approved geotechnical engineer.

C. Roadway Subgrade Requirements

1. The entire surface of the in-place subgrade shall be plowed, harrowed and mixed to a depth of at least 6". After the material has been thoroughly mixed, the top 12" of subgrade shall be brought to grade and compacted to 100% of the maximum laboratory dry density as tested for both cut and fill sections at a frequency of one (1) test for every fifteen hundred (1,500) liner feet of roadway for a two (2) lane road with a minimum of one test per street.

2. Compaction of the subgrade will be accomplished by the use of a sheep's foot roller. In all places that are not accessible by a roller, the required compaction shall be secured by the means of approved mechanical tampers. The same density requirements as stated above shall apply.

3. Prior to placing any subsequent layers of base and paving materials, the subgrade shall have sufficient stability to support construction equipment without excessive movement regardless of compaction. The Development Inspector may direct the contractor to proof roll the subgrade with a loaded dump truck.

4. If any sections of subgrade are composed of unsuitable or unstable material, such material shall be removed to a depth directed by the approved Geotech Engineer, replaced with suitable dry material and compacted to 100 percent of maximum density.

5. The surface of the completed subgrade shall be bladed to a smooth and uniform texture. The centerline profile shall conform to the established elevations with an acceptable tolerance as established by the Cherokee County Development Regulations.

6. No graded aggregate materials shall be placed on a muddy or frozen subgrade.

7. Test results shall be reported immediately after results are obtained to the Development Inspector.

8. No graded aggregate material shall be placed on the subgrade until passing compaction results are reported to the Development Inspector.

9. When a street will be used for construction traffic before paving work is completed, a layer of #3 stone shall be laid as a traffic surface at the entrance of the subdivision for a distance of fifty (50) feet. The developer shall maintain at all times a construction entrance per Standard Detail #214 until the graded aggregate base has been approved. This material shall not be used as part of the base material. It may be worked into the subgrade, or it shall be removed before the base course is set up for paving. An alternative method of protecting the base material and the existing street may be used if approved by the Engineering Manager or Development Inspector.

D. Roadway Graded Aggregate Base Requirements

1. This work shall consist of constructing a base of mineral aggregate on a prepared subgrade in accordance with these specifications and in reasonably close conformity with the lines, grades, thickness and typical cross-sections shown on the plans or established by the Engineering Manager.

2. All equipment necessary for the proper construction of the base shall be on the project and in satisfactory condition before construction will be permitted to begin.

3. No graded aggregate base shall be placed on muddy or frozen subgrade.

4. The materials shall be spread uniformly to the proper depth to obtain the specified thickness. Graded aggregate materials containing frost or frozen particles shall not be placed.

5. The moisture content of the mixture of materials at the time of compaction shall be uniformly distributed and shall be adequate to allow compaction to the specified density. After the material placed has been shaped to line, grade and cross-section, it shall be rolled until the course has been uniformly compacted to at least 100 percent of the maximum dry density when group 2 aggregate in used, or to at least 98 percent of maximum dry density when group 1 aggregate is used Compaction tests shall be taken at an interval not exceeding one per 1,500 feet per two lanes of road way with a minimum of one test per street.

6. The Compacted Base shall have sufficient stability to support construction equipment without pumping regardless of compaction. If the base material becomes unstable as a result of too much moisture, the base material and the underlying subgrade if necessary shall be dried and reworked to a moisture content that will provide stability and compaction.

7. At all places not accessible to the roller, the required compaction shall be secured by means of approved mechanical tampers. The same density requirements as stated above apply.

8. The finished surface of the base shall be checked by a system of ordinates measured from a stringline. Ordinates measured from the bottom of the stringline to the surface shall not exceed ¼ inch at any point. Any variations found in excess of these requirements shall be immediately corrected.

9. The base shall be maintained and cured for a minimum of 36 hours during the compaction testing, proof-rolling, and priming process before any pavement can be placed.

10. This maintenance shall consist of such additional wetting, rolling and blading as may be necessary to maintain true grade, crown and cross-section. This preservation does not relieve the contractor of his responsibility to maintain the work until final acceptance.

11. Depth checks shall be taken at random locations at 500-foot intervals along each road. The thickness of the base shall be determined by making as many checks as necessary to determine the average thickness.

12. Any area deficient in thickness by more than ½ inch shall be corrected by adding additional quantities of the same materials and scarified and rebuilt to the design thickness.

13. When graded aggregate Base is used under asphaltic construction less than five (5) inches, bituminous prime shall be applied.

14. Test results shall be reported immediately after results are obtained to the Development Inspector.

15. No asphalt material shall be placed on the graded aggregate base until passing results and depth checks are reported to the Development Inspector.

16. The Theoretical Maximum Dry Density shall be established Using Test Method GDT-49 of the Georgia D.O.T. Sampling, Testing and Inspection Manual.

17. Graded aggregate base shall meet the requirements of Georgia D.O.T. specification #815 and produced from an approved D.O.T. source.

18. Non-Compliance in graded aggregate base may be corrected by scarifying in asphalt screenings (when too coarse) or coarse aggregate (when too fine). The

scarifying operations produce a uniformly graded lift in compliance with all specification requirements and reasonably close to the theoretical density gradation. The lift thickness and compaction requirements are maintained. The scarifying operation should be accomplished without soil contamination. The blend materials are to be acquired from the same source as the base material. All areas that have been blended to produce specification compliance will be verified through additional project testing before placing asphalt.

19. If the contractor and/or materials supplier is unable to meet all of the above, areas of Non-Compliance should be removed and replaced with acceptable materials.
20. Graded aggregated base must pass proof rolling prior to placement of asphalt.
21. A job mix formula for each type of asphaltic concrete mixture to be used shall be submitted for approval in writing to the County Development Inspector. All proposed job mix formulas shall be submitted two (2) weeks prior to beginning mixing operation. The contractor may, at any time after construction has started, request that the job mix formula be revised as necessary and submit a revised formula for consideration.
22. Asphalt Plants shall be on the Georgia Department of Transportation's approved list.
23. All equipment for transporting and construction of hot mix asphaltic concrete shall be approved by the Development Inspector. The equipment shall be in satisfactory mechanical condition and capable of its intended function at all times during productions and placement operations. The contractor shall provide sufficient hand tools and power equipment for cleaning the roadway surface prior to the placement of the bituminous tack coat.
24. The bituminous pavers used for placement of hot mix asphaltic concrete shall be capable of spreading and finishing all courses to the indicated widths and depths, true to line, grade, and cross section, and shall be capable of striking a smooth finish, uniform in density and texture.
25. The compaction equipment must be in good mechanical condition and capable of compacting the mixture to the required density. The number, type, size, operation, and condition of the compaction equipment shall be subject to the approval of the Development Inspector.
26. Trucks used for hauling bituminous mixture shall have tight, clean smooth beds. An approved releasing agent from the approved qualified product list of the Georgia Department of Transportation may be used in the beds of the transporting vehicles shall prevent the mixture from adhering to the beds. The releasing agent shall not be detrimental to the mixture and shall be applied in such a manner that the excess will be drained from the bed prior to loading.

27. Diesel fuel will not be allowed in the beds of vehicles transporting asphalt.

28. Each haul vehicle shall use a waterproof cover large enough to extend down over the side and ends of the bed far enough to protect the mixture and shall be securely fastened while in transit. Adequate provisions shall be made to assure the mixture will be delivered to the roadway at a temperature within +/-20 degrees F. of that specified on the job mix formula.

29. The county-approved geotechnical engineer shall test the temperature of the job mix within the first three trucks to ensure that the temperature meets the County Development Regulations. The geotechnical engineer shall fax a certified letter stating that the job mix temperature is in compliance with the County Development Regulations.

30. WEATHER LIMITATION

Lift Thickness	Minimum Temperature
1” or Less	55°F
1.1” to 2”	45°F
2.1” to 3”	35°F
3.1” to 4”	30°F
4.1” to 8”	Contractors Discretion w/ Approval of Development Inspector

31. Cleaning of Existing Surface: Before beginning the application of any hot mix asphaltic concrete pavement, the existing surface shall be cleaned to the satisfaction of the Development Inspector.

32. Bituminous Tack Coat: The application rate shall be determined by the Development Inspector and will be within the minimum of 0.04 and the maximum of 0.06.

33. Spreading Operations: Upon arrival at the point of paving operations the mixture shall be unloaded into the paver hopper from the delivery vehicles and transferred into the spreader. The mixture shall be spread by means of a mechanical spreader, true to line, grade, and cross section specified and to the loose depth that will result in the specified compacted thickness or the specified rate of spread.

34. Truckloads of mixture that are visually inspected by the Development Inspector and can reasonably be expected not to meet these specifications, such as a mixture containing segregated material, nonconforming to temperature, a deficiency or excess of asphalt content, or otherwise unsuitable for placing on the roadway shall not be used in the work. Any mixture containing segregated spots, deficiency of excess of asphalt content, or otherwise unsuitable that is placed on the roadway shall be removed and replaced with satisfactory material.

35. Rolling Operation: The type of equipment used for compacting the material shall be approved by the Development Inspector. Rolling shall be started as close

behind the spreader as possible without excessive distortion and shall be continued until roller marks are no longer visible. Pneumatic tired rollers shall be used in conjunction with breakdown rollers on all surface and subsurface courses.

36. Plant Production, Transportation and paving operations shall be so coordinated that a uniform continuity of operation is maintained.

37. One asphalt concrete extraction test per type mix shall be taken at an interval not exceeding 500 tons or one per type mix per day. Extraction test results shall be reported to the Development Inspector of the county daily.

38. If the acceptance test for asphalt cement content exceeds (0.20) two tenths from the approved job mix formula, the contractor will make the necessary adjustment to the mix to bring the asphalt cement back to the approved job mix formula.

39. If the acceptance test for asphaltic concrete "B" exceeds 4.1 on the 3/8" sieve or 3.6 on the no. 8 sieve from the approved job mix formula, the contractor will make the necessary adjustment to the mix to bring the gradation back to the approved job mix formula.

40. If the acceptance test for asphaltic concrete "F" exceeds 3.8 on the no. 4 sieve or 3.2 on the no. 8 sieve from the approved job mix formula, the contractor will make the necessary adjustment to the mix to bring the gradation back to the approved job mix formula.

41. If the acceptance test for asphaltic concrete "E" exceeds 5.6 on the no. 3/8th sieve or 4.8 on the no. 8 sieve from the approved job mix formula, the contractor will make the necessary adjustment to the mix to bring the gradation back to the approved job mix formula.

42. Asphaltic concrete compaction test for each mix shall be taken at an interval not exceeding one per 500 linear feet per two lanes of roadway with a minimum of one test per street.

43. The target density will be set at 94 percent of the theoretical voidless mix for 50 blow marshall design.

44. The asphalt shall be rolled and compacted to at least 97.5 percent of the target density.

45. Three asphalt cores will be taken from the first day's production for each type mix to determine if compactions are meeting the 97.5 percent of target density. If the compaction does not equal or exceed 97.5 percent of target density, the contractor will establish a new rolling pattern to achieve the 97.5 percent of target density.

46. Compaction test results shall be reported daily to the Development Inspector immediately after results are obtained.

47. In the event that a majority of a pavement course is in place and found to be deficient in density, it will be left to the discretion of the Engineering Manager as to what course of action to take in regarding correction.

48. The thickness of the asphaltic concrete "B" or surface course shall be determined by taking as many cores as necessary to determined the average thickness of the course. A minimum of one core per 500 feet per two lanes of roadway shall be taken randomly for thickness determinations with a minimum of one test per street.

49. Any core found deficient shall be brought up to the required thickness prior to placing any additional layer of material.

50. All asphalt core holes shall be filled and compacted with hot mix asphalt of a similar grade prior to approval of the final plat.

Course	Thickness Specified
Asphaltic Concrete "B"	± 1/8"
Asphaltic Concrete "E or F"	± 1/8"
Total Thickness	± 1/4"

51. Pavement and base specifications for other classifications of residential Streets shall be determined by the Engineering Manager, using the current Georgia D.O.T. and AASHTO methods and standards.

E. Paving Requirements

1. Residential

	Residential 3	Residential 2	Residential 1	Rural Residential
Minimum Paving Requirements[1]	Variable[1]	6" / 2" / 1-1/2"	6" / 2" / 1-1/2"	6" / 1-1/2"
Graded Aggregate Base	Variable[1]	6"	6"	6"
Prime Coat	Variable[1]	Yes	Yes	No
Type "B" Binder	Variable[1]	2"	2"	
Tack Coat	Variable[1]	Yes	Yes	No
Type "E" or "F" Surface	Variable[1]	1-1/2"	1-1/2"	1-1/2"

Residential Street Design Requirements Table Footnotes

1. Pavement design for Residential 3 Streets shall be based on AASHTO and Georgia D.O.T. standards, and approved by the Engineering Manager, or supporting documentation from a professional engineer currently registered in the State of Georgia stating design requirements for Residential 3 Streets. But in no event shall the paving requirements be less than 6"/2"/1 ½".

2. Non-Residential

	Residential 2
Minimum Paving Requirements[1]	6” / 2” / 1-1/2”
Graded Aggregate Base	6”
Prime Coat	Yes
Type “B” Binder	2”
Tack Coat	Yes
Type “E” or “F” Surface	1-1/2”

For subdivisions in commercial and industrial zones, pavement design shall be based on projected traffic loads. Pavement design shall be based on AASHTO and Georgia D.O.T. standards, and approved by the Engineering Manager, or supporting documentation from a professional engineer currently registered in the State of Georgia. In no event shall the paving requirements be less than 6"/2"/1 ½".

4.06. Curb and Gutter

A. Concrete curb and gutter shall be required for all paved streets, except in residential subdivisions with lots eighty thousand (80,000) square feet or larger or on Rural Residential streets.

B. Residential subdivision curb and gutter may be either vertical faced or rollover. Residential subdivision vertical faced curbing shall have a typical minimum section of 6" x 24" x 12". Residential subdivision rollover curbing shall have a typical minimum section of 6" x 24" x 9". The concrete shall have a minimum compressive strength of 3,000 PSI at 28 days. Vertical faced curb and gutter shall be used at all subdivision entrances, deceleration lanes and downhill cul-de-sacs. See Standard Detail 207 "Curb and Gutter Cross Sections."

C. Non-residential subdivision curb and gutter may be either vertical faced or rollover. Non-residential subdivision vertical faced curbing shall have a typical minimum section of 6" x 24" x 12". Non-residential subdivision rollover curbing shall have a typical minimum section of 6" x 24" x 9". The concrete shall have a minimum strength of 3,000 PSI at 28 days. See Standard Detail 207 "Curb and Gutter Cross Sections."

D. Parallel curb lines shall be at the same elevation on each side of the street at the same station except for intersections and approved super-elevated sections.

E. One-half inch expansion joints or pre-molded bituminous expansion joint material shall be provided at all structures and radius points and at intervals not to exceed 500 feet in the remainder of the curb and gutter. Provide construction joints at intervals not to exceed twenty (20) feet.

F. Cracks in the concrete are permissible provided that there is no vertical displacement, or that any horizontal displacement shall not exceed one eighth (1/8) of an inch.

G. Graded aggregate base shall be placed under the curb and gutter or the area where curb and gutter is to be placed must pass a proof roll inspection for all roadways that are to be County accepted.

4.07. Intersections

A. Street intersections shall be as nearly at right angles as possible, but in no case shall a street intersection be at an angle of less than seventy (70) degrees. The one hundred ten (110) degree angle of the intersection should be directed towards the approach with the highest volume of traffic.

B. Interior street jogs or intersections shall have centerline offsets of a minimum of one hundred twenty-five (125) feet. Exterior street jogs or intersections shall have centerline offsets of a minimum of two hundred fifty (250) feet.

C. Islands at intersections shall meet sight distance requirements established by AASHTO and the Georgia D.O.T., and the developer shall submit a maintenance agreement satisfactory to meet the County Attorney's approval. Anything extending more than three (3) feet above the top of the curb within the right-of-way of the intersecting streets shall require approval by the Engineering Manager.

D. A utility easement shall be provided at all street intersections. This easement shall form a triangle with two, twenty-foot legs of the triangle leading away from the street right-of-way intersection. This easement miter shall be graded a minimum of thirteen (13) feet back from the intersecting right-of-way lines to provide for utility line placement (25 feet for overhead utilities).

4.08. Cul-de-sacs

A. All permanent dead-end streets shall be constructed as cul-de-sacs with a turn-around provided at the closed end. Cul-de-sacs shall be constructed according to their street level classification.

B. Residential cul-de-sacs shall have a right-of-way radius of at least fifty (50) feet, and a pavement radius of at least forty (40) feet, as measured to the back of the curb. See Standard Detail 205 "Cul-de-sac Details."

C. Non-residential cul-de-sacs shall have a right-of-way radius of at least seventy-five (75) feet, and a pavement radius of at least sixty (60) feet, as measured to the back of the curb. See Standard Detail 205 "Cul-de-sac Details."

D. Islands at intersections shall meet sight distance requirements established by AASHTO and the Georgia D.O.T., and the developer shall submit a maintenance agreement satisfactory to meet the County Attorney's approval. Anything extending more than three (3) feet above the top of the curb within the right-of-way of the intersecting streets shall require approval by the Engineering Manager.

E. If a street is planned to be terminated as a cul-de-sac the subdivider may not utilize a vacant lot to extend the street to an adjacent property without proper notification of affected property owners. Such a change in the construction plans shall be considered a variance and must be submitted to the Zoning Board of Appeals for review and approval.

F. In the event that a cul-de-sac is used to terminate a street which abuts an adjacent property that has no other access but to use the street and cul-de-sac as his only access than the developer shall cross hatch the cul-de-sac and place a reversion clause on the final plat notifying all who will purchase a home/lot in the development that in the future the cul-de-sac may be removed allowing for access to the development of the rear property.

G. Rural Residential streets may utilize alternate turnarounds as shown in Appendix D of the International Fire Code

4.09. Private Streets

A. All private streets shall require the approval of the Planning Department and the Engineering Manager, and shall be built to county pavement specification standards. A homeowner's association document requiring the subdivision property owners to maintain all private streets shall be recorded with and denoted on the final plat. Also, on the final plat it should be denoted that this is a private subdivision and not maintained by the County. If requested by the homeowners, the streets may become County accepted only if they are brought up to the existing County Requirements.

B. All non-standard traffic control devices constructed of materials other than those provided by the County shall be the responsibility of the developer and the homeowners association and for the perpetual maintenance of these devices. All nonstandard traffic control devices shall provide "break-away" features and/or other appropriate safety measures prior to installation. The number, type and location of all traffic control devices shall be approved by the Engineering Manager.

4.10. Development Entrances, Residential

A. Access to every subdivision shall be provided over a public street. Existing subdivisions with private streets can be continued without additional access to a public street, subject to Section 4.10 (B) below.

B. All subdivisions resulting in the creation of one hundred and fifty (150) or more lots shall be provided with a minimum of two entrances. Where the property configuration prohibits or makes impractical the installation of two public access entrances, an alternative access may be approved or this provision may be waived by the Engineering Manager for existing zoned property only. All property applying for rezoning that have less than the required number of entrances must receive approval from the Board of Commissioners.

C. In the event an alternative second entrance is required, said entrance must be at least twenty (20) feet wide with a twenty (20) foot wide access easement and be constructed of an all weather surface. All alternative secondary access entrances and construction materials must be pre-approved by the Engineering Manager and the Cherokee County Fire Marshal.

D. All proposed subdivision developments (residential, non-residential, and non-residential single lot developments) where a new entrance is provided from an existing county road, shall construct deceleration lanes subject to the following requirements, and Standard Detail 206 "Subdivision Entrance Intersection."

E. Any residential subdivision accessed by a County road shall conform to Standard Detail 206 "Subdivision Entrance Intersection."

F. All non-residential subdivisions will install a full deceleration lane, offset radii and tapers.

G. Access onto a state road shall meet existing Georgia D.O.T. requirements. Before the plans can be approved, a copy of the Georgia D.O.T. permit or D.O.T. Letter of Intent shall be submitted to the Engineering Manager stating that a curb cut will be granted as long as the applicant meets all D.O.T. standards. The submitted construction plans must indicate by a note on the preliminary plat that the plans have been approved subject to all modifications or requirements placed upon the development by the Georgia D.O.T.

H. Deceleration lane and taper length shall be based on the main roadway posted speed limit as follows. The Engineering Manager may require residential subdivisions exceeding two hundred (200) or at his discretion below two hundred (200) lots to install longer deceleration lanes and/or a center turn lane. If the Engineering Manager determines that the entrance onto a County roadway could result in a safety problem then the County may require the Developer to present a traffic study to address any safety concerns.

Main Road Speed Limit	Deceleration Lane Length	Transition Taper Length
55 mph	200 ft	50 ft
50 mph	150 ft	40 ft
45 mph	110 ft	35 ft
40 mph	90 ft	30 ft
35 mph or less	50 ft	25 ft

I. The minimum pavement width of a deceleration lane shall be twelve (12) feet, and the minimum turning radius shall conform with Standard Detail 206. The minimum pavement design for on the proposed street shall be 6"/2"/1 ½" or match the existing pavement specification, whichever is greater.

J. Additional street right-of-way necessary for deceleration lanes shall be dedicated as needed, and as illustrated in Standard Detail 206 "Subdivision Entrance Intersection."

K. The cross slope of any deceleration lane shall follow the crown or super elevation of the existing street.

L. In cases involving rock cuts, deep fills or cuts, proximity to a floodplain, or other constraints to construction, the requirements for pavement widening for a full deceleration lane may be waived by the Engineering Manager.

M. Vertical faced curb and gutter is required through the radius, excluding the tapers.

N. The developer shall be responsible for the costs of any utility relocation or catch basins that must be constructed.

4.11. Development Entrances, Non-Residential

All driveways providing access to the street shall be designed as illustrated in Standard Detail 210 "Non-Residential Driveways" and Standard Detail 211 "Non-Residential Driveway Landing Requirements on Existing Streets."

4.12. Temporary Turn-Arounds

A. Stub-out streets shall not be allowed, except at unit lines. A temporary turn-around is required when the street length exceeds the minimum width of one lot permitted under the applicable zoning district.

B. A temporary turn-around shall be maintained for a period not to exceed twenty-four (24) months. All such turn-arounds shall, at a minimum, be constructed with six (6) inches of graded aggregate base, and have a minimum driving radius of thirty (30) feet.

C. Where temporary turn-arounds are permitted, the Engineering Manager may require a performance guarantee for completion of a cul-de-sac. The Planning and Zoning Department or Engineering Manager may also require that the final plat record sufficient right-of-way to construct a permanent cul-de-sac. Such right-of way will revert to typical street right-of-way when the street is extended.

4.13. Street Names

Street names shall require the approval of the GIS Department. Streets that are obviously in alignment with streets within the same subdivision development shall be given the same name. The names of new streets shall not duplicate or closely approximate those of existing streets in Cherokee County.

4.14. Traffic Control Devices

A. All required street name signs, traffic control signs and other traffic control devices shall be installed by Cherokee County at the developer's expense, except within private developments.

B. The design and placement of all traffic control devices shall meet the requirements of the Manual on Uniform Traffic Control Devices. The design professional shall show the placement of all required street markers.

C. All non-standard traffic control devices constructed of materials other than those provided by the County shall be the responsibility of the developer and the homeowners association and for the perpetual maintenance of these devices. All nonstandard traffic control devices shall provide "break-away" features and/or other appropriate safety measures prior to installation. The number, type and location of all traffic control devices shall be approved by the Engineering Manager.

4.15. Sidewalks

A. Concrete sidewalks are required to be placed on only one side of the roadway for zoning categories with densities of R-40 or greater and on both sides of the roadway for all Residential 3 Collector Roads and for all new roads constructed to the interior of the development, which will become a part of the County Maintenance program. All sidewalks must follow a logical design. Sidewalk locations can be varied at the discretion of the Engineering Manager with prior approval. Sidewalks are not required for a development containing a non-curb and gutter roadway section.

B. Sidewalks shall be located on the east or north sides of streets, as established at the subdivision entrance.

C. Sidewalks shall be constructed per Standard Sidewalk Detail #215.

D. Sidewalks shall be placed in the right-of-way and run parallel to the street. They shall be centered five (5) feet from the back of the curb.

E. No certificate of occupancy will be granted for any specific lot that the installation of sidewalks are required until they are constructed.

F. All sidewalks shall be constructed in compliance with all handicapped and American National Standards Institute (ANSI) requirements.

G. The concrete shall be a minimum of four (4) inches thick and shall have a minimum compressive strength of 3,000 PSI at 28 days.

H. Sidewalks shall be backfilled and stabilized by grass.

I. Handicapped access ramps shall be provided at all street intersections and curb cuts.

J. Amenity areas must be accessible by sidewalks from the nearest sidewalk in the subdivision.

K. When a subdivision project abuts a public right-of-way, sidewalks shall be required for a length equal to the distance of the required road improvements along the road frontage, Sidewalks will be constructed on both sides of the road (if development abuts both sides of the road) when the road is classified as an arterial, major collector or minor collector roadway.

L. For all streets without curb, all sidewalk design and locations shall be approved by the Engineering Manager.

M. Sidewalks are not required on Rural residential streets.

4.16. Lots and Blocks

A. Each lot, with the exception of those on private streets or in Traditional Neighborhood Developments (TND), shall front upon a dedicated public street having a right-of-way of not less than fifty (50) feet.

B. Side lot lines shall, as much as is practical, be at right angles to straight street lines or radial to curved street lines and cul-de-sacs.

C. Commercial uses on corner lots which have frontage on interior residential subdivision streets shall have access only from the higher level street.

D. Any lot which will be served by a septic tank shall be approved by the Cherokee County Health Department.

E. The length, width and shape of blocks shall be appropriate for the environment and the type of development proposed.

4.17. Utilities

A. General

1. The design and construction specifications for all public water and sanitary sewer facilities shall conform to the specifications of the Cherokee County Water and Sewer Authority or applicable city Water and Sewer Department.

2. Compaction test on all longitudinal pipe running within a roadway section shall be taken at intervals of one per two hundred fifty (1/250) linear feet or one (1) per day, whichever is greater. Compaction tests on cross drain pipes shall be taken at an interval of one per line or one (1) per day, whichever is greater. The Development Inspector has the authority to request additional compaction tests as deemed necessary. Compaction backfill shall be placed in uniform eight (8) inch layers compacted to ninety-five (95) percent of maximum dry density per standard proctor test. Additional layers of backfill shall not be placed on any material that has failed a compaction test meeting these standards. Compaction test results shall be reported to the County Development Inspector per Section 4.04: Construction Testing.

3. All utility crossings within the street right-of-way shall be installed and the ditches backfilled and thoroughly compacted before any pavement or base is installed. Compaction testing may be required by the County at the utility company's expense. Underground utilities shall be installed completely and proof rolled throughout the length of the street. Service connections for sanitary sewer and water shall be extended to the right-of-way line. Any pavement cuts to an existing street shall be repaired as specified in Standard Detail 212 "County Road Street Cut Repair or Standard Detail 213 "State Road Street Cut Repair."

4. Utility locations within a street right-of-way shall correspond to Standard Detail 208 "Utility Placement Detail." On streets constructed without curb and gutter, the utility depths may be increased by a minimum of one (1) foot to allow the County Roads and Bridges Division to realign the ditches without damaging the utilities. The developer is encouraged to coordinate with the Cherokee County Utility Coordinating Committee.

5. The following construction sequence is recommended in order to assure a safe working environment and to protect utilities from damage during the construction process. As each utility finishes construction, the developer should notify the next company to maintain the construction timetable and reduce erosion of the graded shoulders.

   a. Clearing and Stumping
   b. Grading
   c. Sanitary Sewer to the right-of-way
   d. Storm Sewer
   e. Curb and Gutter
   f. Utility Crossings (boring preferred)
   g. Water
   h. Subgrade
   i. Base and Paving
   j. Electric
   k. Gas
   l. Telephone
   m. Cable TV
   n. Sidewalk
   o. Grassing Shoulders

6. The standard color codes adopted by the American Public Works Association and the Georgia Utilities Coordinating Committee shall be utilized for any necessary marking of underground utility lines. The color scheme is as follows:

   Red = Electric
   Yellow = Gas/Oil
   Orange = Communications/Cable TV
   Blue = Water
   Green = Sewer
   White = Proposed Excavation

7. Utilities and contractors shall comply with O.C.G.A. 9 (25). The Utility Protection Center of Georgia shall be called as needed at least seventy-two (72) hours prior to earth disturbing activities involving machinery. The UPC number is 811.

8. All utility manholes and valve boxes shall be brought to the finished grade within the roadway section. Manhole covers and splice boxes placed within the sidewalk zone shall be constructed so as to be flush mounted with the finished sidewalk.

9. All manholes and junction boxes shall have concrete inverts.

10. Utility poles and transformers shall be located as near as possible to the lot frontage line. Wherever practical, utility poles or transformers shall not be located on the same lot corner as water service.

11. Utility companies may utilize a joint trench for utility installation. If a joint trench is used, its depth shall be that of the utility in the trench required to place its lines at the greatest depth.

12. The Cherokee County Government is authorized to require a performance guarantee from any private utility that is not governed by the public service commission. Such performance guarantee shall be separate from any guarantee provided by the developer.

13. All privately owned utilities or equipment, with the exception residential mailboxes, shall be allowed in the county right-of way only with a permit issued by Cherokee County with the exception of mailboxes constructed a brick or masonry are prohibited. Any such utility located in the county right-of-way shall be equipped with a tracing or locating mechanism. Irrigation sprinklers are not typically allowed in the right-of- way. However, a permit is required for the installation of irrigation within the County right-of-way. The applicant must submit a site plan indicating the locations of the irrigation systems along with a liability waiver from the appropriate entity (ie, Homeowners Association, owner, declarant) in the event that the county at some time in the future may damage, destroy or remove the system during a county road widening project. The applicant may submit their plans with the engineering plans for the project or with their request for a sign permit.

14. The responsibility for the location of any utility placed within a county right-of-way under a Cherokee County permit rests solely with the owner of the utility. Any repairs required by un-permitted utilities or privately owned equipment, including sprinklers, shall be the responsibility of the damaged utility owner or owner of such privately owned equipment.

15. The integrity of the established roadway shoulder elevations shall not be compromised by the placement of driveways or other appurtenances.

16. If any in place soil and erosion control measures are damaged by the utility company, the County shall issue a stop work order until they are repaired or replaced.

B. Sanitary Sewer

1. The developer shall be responsible for installing adequate public sanitary sewer facilities to serve all existing and proposed buildings in the subdivision.

2. Any residential dwelling, commercial establishment or industrial establishment shall be connected to public sewer when sewer lines are available for Connection. Connection shall be at the cost of the property owner and in accordance with the policies and procedures of the Cherokee County Water and Sewer Authority or applicable city Water and Sewer Department.

3. Where public sanitary sewer systems are not available, on-site sewage disposal systems may be installed, subject to Approval by the Cherokee County Health Department and provided that the lots conform to all requirements of the Cherokee County Zoning Ordinance.

C. Water

1. The developer shall be responsible for installing adequate water supply and distribution system to serve all existing and proposed buildings in the subdivision.

2. All public water facilities shall be installed subject to the policies and procedures of the Cherokee County Water and Sewer Authority or applicable City Water and Sewer Department.

3. Where public water is not available the developer or builder shall provide, at his expense, wells to supply water for domestic use. These wells shall be subject to approval of the Cherokee County Health Department.

4. The Cherokee County Water and Sewer Authority and the Cherokee County Fire Marshal's Office have determined the following requirements regarding placement of fire hydrants in all new developments:

    a. A fire hydrant shall be located a minimum of two hundred (200) feet internally to a residential development entrance.

    b. Fire hydrants shall be located at all street intersections located internally to the development.

    c. Fire hydrants shall be located every one thousand (1,000) feet on all county roads (improved existing roads or proposed county roads).

    d. Proposed non-residential/commercial structures may have an extension of permitted hose lay distance from the required three hundred (300) feet to five hundred (500) feet provided the structure is sprinkled with a NFPA 13, 13R, or 13D system.

    This outline is intended for informational purposes only. For current/detailed requirements, please contact the Cherokee County Fire Marshal's Office.

5. All new multi-family buildings (e.g.. apartments, town homes, condominiums) shall be built with individual water utility owned meters on each unit or sub-unit meters owned and managed by the property owner with a utility owned master meter that bills for water service based on volume of use. The billing for water use can be accomplished by the water provider or by a private, third party, such as the development owner.

4.18. Dedication and Reservation

A. Streets

1. Right-of-ways for all proposed and existing public streets shall be dedicated to Cherokee County as stipulated in the provisions of this Ordinance.

2. No landscape irrigation systems will be authorized for installation in a dedicated street right-of-way without a permit from the Cherokee County Engineering Department. A permit is required for the installation of irrigation within the County right-of-way. The applicant must submit a site plan indicating the locations of the irrigation systems along with a liability waiver from the appropriate entity (ie, Homeowners Association, owner, declarant) in the event that the county at some time in the future may damage, destroy or remove the system during a county road widening project. The applicant may submit their plans with the engineering plans for the project or with their request for a sign permit.

B. Utilities

1. Permanent sanitary sewer easements shall be provided for all pipes except for reinforced concrete pipe (RCP) and ductile iron pipe (DIP) a width of four (4) times the pipe's vertical depth. For RCP and DIP at depths from 0 - 5 feet, the easement width shall be ten (10) feet. For RCP and DIP at depths of five (5) feet or greater, the easement shall be twenty (20) feet in width.

2. When aerial utilities are placed in any development, a twelve (12) foot easement shall be provided beyond the edge of the street right-of-way for tree clearing and the installation of necessary support guys with anchors. This easement will be shown on the final plat and provided to any public utility installing aerial facilities in the development.

C. Storm Drainage

1. Drainage easements shall be twenty (20) feet wide for open channels, and easements shall be provided for all pipes, except for reinforced concrete pipe (RCP), a width of four (4) times the pipe's vertical depth. For RCP at depths from 0 - 5 feet, the easement width is ten (10) feet. For RCP at depths of five (5) feet or greater, the easement shall be twenty (20) feet in Width.

2. Drainage easements shall be provided where a subdivision is traversed by a watercourse, drainageway, natural stream or channel. They shall conform substantially to the limits of such watercourse plus any additional width as is necessary to accommodate future construction.

3. Drainage easements off the street right-of-way shall be clearly defined on the final plat and the plat of the individual property owner. Cherokee County will not maintain drainage easements outside of the street right-of-way.

4. Cherokee County maintains the right, but not the obligation to access drainage easements for emergency purposes as deemed necessary by the Stormwater Manager. The following statement shall appear on all final plats: "Cherokee County maintains the right to access drainage easements for emergency purposes as deemed necessary by the Stormwater Manager."

5. Drainage and sanitary sewer easements may be combined when both are piped, but must be a minimum of twenty-five (25) feet if it is a concrete pipe with ten (10) foot spacing, or thirty (30) feet if it is a metal pipe.

6. It is the policy of Cherokee County that drainage easements are dedicated to the public use are not accepted by Cherokee County for County maintenance and are not considered County property. Therefore, it is Cherokee County Policy that no County forces or equipment shall be used to perform construction to any drainage easement within Cherokee County, unless said easement lies within Cherokee County right-of-way and/or said work is necessary to protect County right-of-way.

7. It is Cherokee County Policy that no County forces or equipment shall be used to perform construction to any drainage easement within Cherokee County, unless said easements lie within Cherokee County right-of-way and/or said work is necessary to protect County right-of-way.

4.19. Construction Schedule

A. No construction activity of any kind, including grading, installation of improvements shall begin on any land within the jurisdiction of these regulations without prior approval of the construction plans.

B. Grading or land disturbing activities may commence only after a Land Disturbance Permit has been issued.

C. Utility installation shall not occur until the Development Inspector has approved the rough grade of the street and shoulder.

D. Periodic inspection during the installation of the required improvements in a development may be made by the Development Inspector to insure conformity with the approved plans and specifications. Such inspections will be made at the following stages of construction:

1. At the completion of clearing and stump removal.
2. Beginning of grading operation to insure proper compaction.
3. During the installation of storm sewer cross drains.
4. During the construction of curb and gutter, lateral storm drains, and storm drainage structures.
5. Beginning of subgrade preparation and after subgrade preparation.
6. Beginning of base installation and at the completion of base installation.
7. Beginning of asphalt installation.
8. At the completion of all grading and stabilization of shoulders through the following methods:
   a. hydroseeding
   b. wheat straw at 75 percent minimum coverage
   c. wood mulch at a minimum of six (6') inches thick
   d. sod
9. During the life of the project for proper erosion and sedimentation control.

E. The developer shall notify the Development Inspector when each phase of the installation is completed and ready for inspection. Upon completion of steps 1-9 the County shall approve and sign the final plat for recording.

F. No lot or parcel of land shall be sold or transferred or a building permit issued until the final plat, of which said lot or parcel is a part, has been approved and recorded. The developer may complete the required improvements or provide a performance guarantee prior to the recording of the final plat as allowed in Section 3.05 of the Development Ordinance.

G. Within each phase of subdivision development, no building may be occupied for dwelling or other purposes, nor shall a Certificate of Occupancy be issued, until all streets and required utility installations have been completed to the satisfaction of the Development Inspector.

4.20. Model Home Construction

A. The building official, after the issuance of a land disturbance permit but prior to final plat approval, shall authorize the construction of not more than three (3) units per 100 lots/units to be used as model units in a subdivision. If the Subdivision has less than 100 lots/units then 3 units will be allowed as model units. If the subdivision has more than 100 lots/units, the ratio of one unit per 33 homes with a maximum of 6 units per subdivision will be allowed as model units. Said units shall not be authorized for occupancy until final plat approval has been given and the final plat has been recorded.

B. In the case of a large master-planned community containing more than one subdivision, the developer shall, prior to zoning, meet with the engineering staff to determine the maximum amount of model units permitted.

C. Prior to the issuance of a model home permit the applicant must provide evidence of appropriate fire protection to include adequate hose lay distance from an active fire hydrant as well as an all weather access surface acceptable to the Cherokee County Fire Marshal.