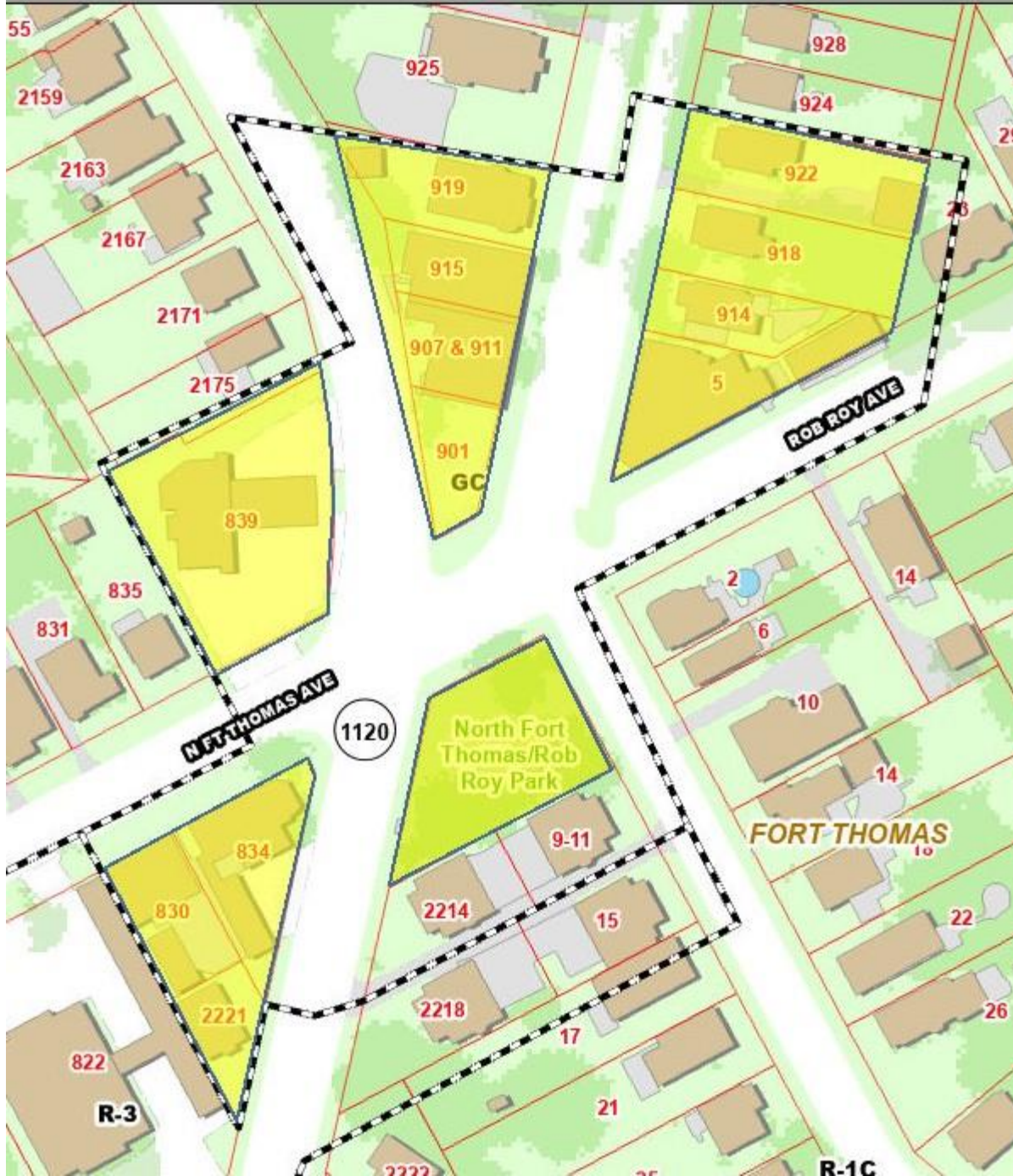


<b>Unified Development Ordinance Organization of Unified Development Ordinance</b>	
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# Traditional Business District



**TBD**  
**Traditional Business District**

# CBD-Town Center



**CBD-TCS**  
 CBD – Town Center Supporting

**CBD-TCC**  
 CBD – Town Center Core

**CBD-TCR**  
 CBD – Town Center Residential



## Central Business District – Midway

CBD-MC1=Core 1

CBD-MC2=Core 2

CBD-MC3=Core 3

CBD-MR1=Residential 1

CBD-MR2=Residential 2

## SECTION 5.4

### Conditional and Restricted Use Regulations

5.4.01	Intent.	5.4.03	Schedule of Use-Specific Regulations.
5.4.02	Applicability; Conflict with District Standards.	5.4.04	Supplementary Use-Specific Regulations.

#### 5.4.01 INTENT.

**This Section establishes supplemental standards, exceptions to standards, or alternative standards for particular uses in order to protect surrounding property values and uses as well as to protect the public health, safety, and general welfare of the community.**

#### 5.4.02 APPLICABILITY; CONFLICT WITH DISTRICT STANDARDS.

**No use governed by the regulations in this Section may be initiated, established, or maintained unless it complies with the standards set forth for such use in this Section.**

- A. **Where site development standards for a specific use are not listed, such use shall comply with the development standards for the applicable zoning district.**
- B. **To the extent there is a conflict between a standard in another Section or subsection of this Ordinance and a standard in this Chapter, the standard in this Section governs unless otherwise indicated.**
- C. **Whenever state law requires a use regulated by this Ordinance to be registered, certified or licensed, compliance with such law shall be a condition precedent to zoning approval of such use. Failure to maintain such license, certification or other approval requirements shall be cause for revocation of the applicant's Conditional Use or any applicable zoning permit or certificate.**
- D. **Any use in this Section that is regulated as a conditional use in the district in which it proposed shall also comply with the conditional use criteria set forth in Section 1.6.**

**Question to Consider:** Please review the following standards being mindful as to whether the use is conditional or restricted and in what zoning district. The standards were developed to manage specific uses in specific zoning districts.

#### 5.4.03 SCHEDULE OF USE-SPECIFIC REGULATIONS.

Schedule 5.4.03 references additional requirements for uses in the Residential, Business, Mixed-Use, and Other Districts. Supplemental requirements pertaining to uses are imposed in Section 5.4.04, Supplementary Use-Specific Regulations and referenced in Schedule 5.4.03 below.

Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and **Deletions**

Schedule 5.4.03 Schedule of Use-Specific Regulations			
	Conditional Use in District or Sub-Zoning District	Restricted Use in District or Sub-Zoning District	See Sub- Section
A. Agriculture		R-1AA RP CO	5.4.04 A.
B. Animal Hospital/Veterinarian Clinic	AP-MX NC/O		5.4.04 B.
C. Artisan or Craft Workshop		CBD-TCR CBD-MR2 TBD	5.4.04 C.
D. Artisan Industrial		AP-MX NC/O CBD-TCC CBD-TCS CBD-MC1 CBD-MC2 CBD-MC3 TBD	5.4.04 D.
E. Artist Studio		CBD-TCR CBD-MR2 TBD	5.4.04 E.
F. Assembly Hall		NC/O	5.4.04 F.
G. Auto Service Stations	AP-MX		5.4.04 G.
H. Brewpubs		AP-MX NC/O CBD-TCC CBD-MC1 CBD-MC2 CBD-MC3 TBD	5.4.04 H.
I. Campground/Recreational Vehicle Park	RP		5.4.04 I.
J. Cemetery	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5 AP-MX		5.4.04 J.
K. Commercial Kitchen		AP-MX	5.4.04 K.
L. Commercial Recreation Facility, Indoors	AP-MX NC/O		5.4.04 L.
M. Community Center	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5	NC/O	5.4.04 M.
N. Congregate Care Facility		TBD	5.4.04 N.

Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and **Deletions**

Schedule 5.4.03 Schedule of Use-Specific Regulations			
	Conditional Use in District or Sub-Zoning District	Restricted Use in District or Sub-Zoning District	See Sub- Section
O. Country Club (public, private/semi-private) including golf courses	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5		5.4.04 O.
P. Day Care Center, Adult or Child	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5		5.4.04 P.
Q. Drive-thru Facility in Association with a Principal Permitted Use	AP-MX NC/O		5.4.04 Q.
R. Electric Vehicle Charging Stations		CBD-TCC CBD-TCS CBD-MC1 CBD-MC2 CBD-MC3 TBD	5.4.04 R.
S. Food Trucks		AP-MX NC/O	5.4.04 S.
T. Freestanding Drive-thru Facility	AP-MX NC/O		5.4.04 T.
U. Funeral Homes	R-1C, & D R-2 R-3 & R-5 NC/O AP-MX CBD-TCS		5.4.04 U.
V. Habitable Roof – Non-Residential Use	TBD	CBD-TCC CBD-TCS CBD-MC1 CBD-MC2 CBD-MC3	5.4.04 V.
W. Health Club		NC/O	5.4.04 W.
X. Hotel		NC/O	5.4.04 X.
Y. Institutions for Human Medical Care	R-1 AA R-1 A, B, C, & D R-3 & R-5 AP-MX NC/O		5.4.04 Y.
Z. Live Entertainment Venue		CBD-TCC CBD-MC1 CBD-MC2 CBD-MC3 TBD	5.4.04 Z.
AA. Manufacturing, Light		AP-MX	5.4.04 AA.

Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and **Deletions**

Schedule 5.4.03 Schedule of Use-Specific Regulations			
	Conditional Use in District or Sub-Zoning District	Restricted Use in District or Sub-Zoning District	See Sub- Section
BB. Medical/Dental Clinic Urgent Care		NC/O	5.4.04 BB.
CC. Micro Production of Alcohol		CBD-TCC CBD-MC1 CBD-MC2 CBD-MC3	5.4.04 CC.
DD. Multi-family Dwellings		CBD-TCC CBD-TCS TBD	5.4.04 DD.
EE. Off-street Parking Lots		CBD-TCC CBD-TCS CBD-MC1 CBD-MC2 CBD-MC3 TBD	5.4.04 EE.
FF. Open Space Recreation Area	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5		5.4.04 FF.
GG. Parking Structure - Accessory to a Principal Use	AP-MX NC/O	R-3 & R-5	5.4.04 GG.
HH. Parking Structure – Principal Use	CBD-TCC CBD-MC2 CBD-MC3		5.4.04 HH.
II. Places of Worship	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5	NC/O	5.4.04 II.
JJ. Pleasure boat harbors & marinas	RP		5.4.04 JJ.
KK. Public Boat Landing or Launching Facilities	RP		5.4.04 KK.
LL. Public Facility		R-1 AA R-1 A, B, C, & D R-1-TC R-2 R-3 & R-5 AP-MX NC/O	5.4.04 LL.
MM. Public Park/Playground		R-1 AA R-1 A, B, C, & D R-1-TC R-2 R-3 & R-5	5.4.04 MM.
NN. Recreational Dockage Facilities	RP		5.4.04 NN.
OO. Research and Development Facility		AP-MX	5.4.04 OO.



Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and **Deletions**

<b>Schedule 5.4.03 Schedule of Use-Specific Regulations</b>			
	<b>Conditional Use in District or Sub-Zoning District</b>	<b>Restricted Use in District or Sub-Zoning District</b>	<b>See Sub- Section</b>
PP. Riding Academies and Stables (Commercial)	RP CO		5.4.04 PP.
QQ. Riding and Stables (Personal Use)	RP CO		5.4.04 QQ.
RR. School (public/private), College/University	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5	AP-MX NC/O TBD	5.4.04 RR.
SS. School (Public/Private) Elementary/Secondary	R-1 AA R-1 A, B, C, & D R-2 R-3 & R-5	AP-MX NC/O TBD	5.4.04 SS.
TT. Shop house		CBD-TCR CBD-MR2 TBD	5.4.04 TT.
UU. Single-family Dwelling, Attached		R-3 R-5	5.4.04 UU.
VV. Single-family Dwelling, Detached		CBD-TCS TBD	5.4.04 VV.
WW. Theater, Indoors		NC/O	5.4.04 WW.
XX. Trade or Vocational School		NC/O	5.4.04 XX.
YY. Two-Family Dwelling		R-1B, C, & D R-1-TC 1 & 2 CBD-TCR CBD-MR1 CBD-MR2	5.4.04 YY.
ZZ. Utility substation/distribution facility, indoor/outdoor	R-1 AA R-1 A, B, C, & D RP CO		5.4.04 ZZ.
AAA. Vehicle Fueling Stations	AP-MX NC/O		5.4.04 AAA.
BBB. Vehicle Sales/Rental/Service Facilities	NC/O		5.4.04 BBB.

**RESIDENTIAL DISTRICTS**

Single-Family Residential = R-1AA, R-1A, R-1B, R-1C, R-1D, R-1-TC1, R-1-TC2

Two-Family Residential = R-2

Multi-Family Residential = R-3, R-5

**BUSINESS and MIXED-USE DISTRICTS**

Traditional Business District = TBD

Alexandria Pike Mixed Use District = AP-MX

Neighborhood Commercial/Office District = NC/O

**OTHER DISTRICTS**

River Preservation District = RP

Conservation District = CO

**CBD DISTRICTS & SUB-ZONING DISTRICTS**

Town Center Core = CBD-TCC

Town Center Supporting = CBD-TCS

Town Center Residential = CBD-TCR

Midway Core-1 = CBD-MC1

Midway Core-2 = CBD-MC2

Midway Core-3 = CBD-MC3

Midway Residential-1 = CBD-MR1

Midway Residential-2 = CBD-MR2

Questions to Consider: 1. Should Single-family detached dwellings be “P” or “R” in CBD-TCS?  
2. Should Single-family detached dwellings be “P” or “R” in TBD?

#### 5.4.04 SUPPLEMENTARY USE-SPECIFIC REGULATIONS.

**This sub-section provides supplementary site planning, development, and/or operating standards for certain land uses. The land uses and activities covered by this sub-section shall comply with the applicable standards for the specific use, which, unless otherwise noted, are in addition to all other applicable provisions of this Ordinance including, but not limited to, parking, signs, landscaping, lighting, etc.**

- A. **Agriculture.** Agricultural uses shall comply with the following requirements:
1. The keeping of fowl or small animals not primarily for gain provided that any enclosures for such fowl and animals shall be at least a 20-foot distance from every lot line.
  2. The keeping of horses, cows, and other livestock, not primarily for gain and only within an enclosure, which shall be a distance at least 100 feet from every lot line. No manure or bedding shall be stored or kept within 100 feet of any lot line and same is prohibited unless stored or kept in a sanitary manner and so as not to emit or produce noxious or objectionable odors.
- B. **Animal Hospital/Veterinarian Clinic.** Such uses shall comply with the following requirements:
1. **The use shall be operated by a licensed or registered veterinarian.**
  2. **All principal use activities shall be conducted within a totally enclosed principal building; no outdoor pet enclosures or runs are permitted.**
  3. **Any indoor boarding shall be limited to that incidental to treatment or surgery. 24-hour boarding supervision shall be provided when animals are boarded overnight.**
  4. **Outdoor exercising is allowed when the pet is accompanied by an employee provided no animals shall be permitted outside of the buildings between 10:00 p.m. and 6:00 a.m.**
  5. **A caretaker’s quarters is permitted as an accessory use.**
  6. **There shall be no burial or incineration of animals on the premises.**
  7. **Odor and noise shall be adequately controlled to ensure that animals do not create a nuisance.**

8. **All waste material shall be removed from the site on a daily basis, and no animal waste shall be buried on site or be allowed to accumulate on the premise.**
  9. **The Board of Adjustment may impose additional conditions or restrictions, such as increasing buffers and screening materials, requiring odor or noise mitigation, and setting limits on the number of animals, to ensure that the proposed use will not be detrimental to the health, safety, or general welfare of the surrounding area.**
  10. **Facility shall be operated in accordance with all applicable Commonwealth of Kentucky and Campbell County Health Code regulations.**
  11. **When located adjacent to a residential zoning district, the following additional restrictions shall apply:**
    - a. **Soundproofed, air-conditioned buildings shall be located a minimum distance of 50 feet from any residential zoning district boundary line. Walls shall be soundproofed to allow a maximum transmission of 65 dB measured at any point on the outside of the exterior wall, and doors shall be solid core.**
    - b. **All non-soundproofed structures where animals are confined shall be located a minimum distance of 200 feet from any residential zoning district boundary line.**
    - c. **All non-soundproofed structures for the confinement of animals shall be screened by a solid fence or wall a minimum of 6 feet in height located within 50 feet of the principal non-soundproofed building.**
    - d. **Animals shall be confined in an enclosed building between the hours of 10:00 p.m. and 6:00 a.m. of the following day.**
- C. Artisan or Craft Workshop. See Shop House.
- D. Artisan Industrial. Such facilities shall comply with the following:
1. **The principal activities of the use shall occur completely within an enclosed building.**
  2. **There shall be no outdoor storage of merchandise for sale, goods, or materials.**
  3. **All work activities, artistic shows, programs, and other events shall be listed on the Development Plan application or the Zoning Permit application. If any additional activities are proposed that were not included on the original**

- application, then a new application shall be required according to the procedures in this Ordinance.**
4. **The proposed use shall not generate excessive noise, odor, dust, or smoke beyond the principal building.**
  5. **When adjacent to single-family residential district, the production of offensive noise, vibration, smoke, dust or other particulate matter, heat, humidity, glare, or other objectionable effect is prohibited.**
    - a. **No vibration shall be permitted which is discernible without instruments at the property line.**
    - b. **No emission shall be permitted of odorous gases or other odorous matter in such quantities as to be offensive at the property line.**
  6. **When adjoining single-family detached dwellings, no operations between the hours of 11:00 PM and 7:00 AM.**
  7. **A minimum of five percent (5%) of the floor area shall be required, as an accessory use, for retail sales of goods manufactured on-site.**
  8. **When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.**
- E. Artist Studio. See Shop House.
- F. Assembly Hall. **When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.**
- G. Auto Service Stations; Vehicle Fueling Stations. Such establishments shall comply with the following requirements:
1. **The minimum lot size shall be 25,000 square feet. Abutting R-1 Districts, the minimum pavement setback shall be 20 feet.**
  2. **Fuel pumps, canopies over fuel pumps, and electric vehicle charging stations shall be located behind the front line of the primary structure. When it is impractical to do so, the Board of Adjustment may grant an exception to this requirement due to the shallow depth of a parcel, the location of existing mature trees, the location of existing fuel pumps or canopies, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar factors unless beneficial to surrounding properties**

to not do so. In such cases, additional front yard landscaping shall be considered as a condition for approval.

3. No equipment, or parts shall be permitted to remain outside on the property.
4. Except while being serviced at a pump island or fueling station, no vehicle shall be parked between the fuel pumps, charging stations, and the front property line if fuel pumps and charging stations are located between the primary structure and a street right-of-way.
5. A car wash establishment may be combined with a vehicle fueling station or an automobile service station, provided that the minimum lot size for the combined uses is a minimum of 50,000 square feet.
6. An area for vehicular circulation that is not otherwise used for required parking shall be provided at each end of a pump island or fueling station. Such area shall be a minimum of 30 feet in width.
7. When an establishment with vehicle fueling stations is located on a corner lot, the following shall apply:
  - a. The lot shall have a minimum of 100 feet of lot frontage on each of the two intersecting streets;
  - b. The location of access drives shall be placed as far as possible from the intersection; and
  - c. Shall be limited to no more than one access drive or driveway per street frontage.
  - d. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
8. The location, dimensions, and design concept of any proposed signage will be included in the Conditional Use Permit application.
9. All hydraulic hoists, oil pits, and all lubricants, greasing, vehicle washing, and repair equipment shall be enclosed entirely within a building. No outdoor disassembly or repair of motor vehicles shall be permitted.
10. Activities shall be limited to:
  - a. The sale of fuel;

- b. The servicing of motor vehicles with minor repair work;
  - c. Automatic or hand washing of vehicles within an enclosed building;
  - d. The retail sale of vehicle parts and products relating to minor repair work such as, but not limited to, oil, grease, antifreeze, batteries, windshield wipers, etc.
11. Retail sales activity that is usual and customary to the use is permitted as an accessory use and incidental to the principal use.
  12. Any major repair work, including automobile body repair and painting, work on vehicles over a 1.5-ton weight, automobile glass work, automobile transmission work, automobile engine overhaul and repair, and radiator repair is prohibited.
  13. Vehicles being serviced or awaiting same shall be stored for no longer than 7 days on the site if in unenclosed areas.
  14. Any removal of pumps or tanks shall be undertaken in accordance with safe accepted practices as prescribed by the National Fire Protection Association and filling depressions to the grade level of the lot.
  15. The storage and disposal of solid waste and recyclable materials, including used or discarded motor vehicle parts or equipment, and fluids, shall comply with all applicable federal, State, and local requirements.
  16. No junk, inoperative, or unlicensed vehicle will be permitted to remain outdoors.
  17. The exterior/outdoor display or storage of new or used automobile parts is prohibited.
  18. All vehicles shall be parked in marked parking spaces on concrete, asphalt, or other permanent surfacing material other than crushed stone. Such parking areas shall be indicated on the Development Plan.
  19. Vehicle parking areas, vehicle storage areas, maneuvering lanes and access ways to public streets shall be designed to prevent interference with the safe and convenient movement of vehicular and pedestrian traffic on the site and adjacent public rights-of-way.
- H. Brewpubs; Micro Production of Alcohol. Such facilities shall comply with the following requirements:
1. Each brewpub or micro production facility shall manufacture and sell alcoholic beverages in accordance with the provisions of the Kentucky

**Department of Alcohol Beverage Control and the Bureau of Alcohol, Tobacco, and Firearms (ATF), and shall maintain current licenses as required by each agency.**

2. **Brewpubs:**
  - a. **A minimum of 50% of the gross floor area of the brewpub shall be devoted to restaurant use for on-site consumption of food and beverages, including the kitchen and seating area, but not including any outdoor dining area.**
  - b. **The area used for on-site production, including but not limited to manufacturing, bottling and storage, shall not exceed 50% of the total floor area of the entire facility or 8,000 square feet, whichever is less.**
  - c. **Where this use abuts a residential property, any outdoor dining or service area shall be setback a minimum of 5 feet from any property line and enclosed by a fence that is a minimum of 4 feet in height. The 5 feet setback area shall be landscaped with a minimum of one tree every 30 linear feet or portion thereof. For every required tree a corresponding number of plantings or trees, from either a, b, or c, will be required for each Development Plan: a) Bushes: 3 Per Required Tree b) Flowering Perennials Plants: 6 Per Required Tree c) Trees: 1 Per Required Tree**
3. **Micro production facilities may provide on-site retail sale, restaurant, or tasting room for the on-site consumption of products produced on the premises and shall provide a minimum of five percent (5%) of the gross floor area for retail sales of products and/or beverages.**
4. **No outdoor storage of brewing equipment or materials shall be permitted.**
5. **The facility shall be designed and operated so as not to produce odors, gas, dust, or any other atmospheric pollutant detrimental to the health, safety, or general welfare of persons living or working in the surrounding area. The emission of odorous matter or smells in such quantities as to produce a public nuisance or hazard is not permitted.**
6. **The facility shall not generate truck traffic materially different in truck size or frequency from that truck traffic generated by the surrounding non-residential uses.**
7. **Each facility shall maintain copies of all reports filed with the Bureau of Alcohol, Tobacco, and Firearms (ATF) and shall be able to demonstrate, upon request of the City, that they have not exceeded the annual beverage production limit in any twelve (12) month period.**

8. **When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.**
- I. **Campground/Recreational Vehicle Park. Campground/Recreational Vehicle Parks shall comply with the following requirements:**
  1. **A minimum lot area of 6 acres is required.**
  2. **Manager/Owner and members of their household shall be the only permanent residents.**
  3. **Campsites, whether occupied by tents; recreational vehicles; or other camping equipment, shall not be inhabited more than 20 days in a 30-day period by the same occupants.**
  4. **No camper trailer, tents or recreational vehicles shall be permanently placed at campsites as evidenced by the presence of sheds, roofs over campsites or recreational vehicles or similar structures or activities that demonstrate permanent placement.**
  5. **Trash collection areas shall be screened in accordance with Section 5.3, Landscaping, Screening, and Lighting Regulations.**
  6. **No outdoor storage of any material or waste shall be permitted on site.**
  7. **Individual camp or recreational vehicle sites shall maintain a minimum size of 750 square feet in area and at least 20 feet in width.**
  8. **Individual campsites or recreational vehicle sites shall be set back at least 80 feet from the front lot line and a minimum of 25 feet from the side and rear lot lines.**
  9. **All areas within a campground shall have sufficient groundcover to prevent erosion and blowing dust.**
  10. **After-hours lighting shall be limited to that necessary only for security purposes. All lighting shall comply with the requirements in Section 5.3, Landscaping, Screening, and Lighting Regulations.**
  11. **Campground and recreational vehicle parks may include restrooms with showers as well as water, sewer, and electric hookups to each recreational vehicle lot. Accessory retail uses where they are clearly incidental and intended to serve park patrons only as also permissible.**



12. **Multiple structures may be constructed on the property, such as cabins, lodges, and other facilities typical of a camp provided that all structures comply with the setback requirements for a principal structure from adjoining property lines.**
  13. **Each building or campsite intended to accommodate guests shall be accessible via an all-weather road suitable to accommodate emergency vehicles serving the property.**
  14. **Any outdoor activity area, swimming pool, or ball field or court that adjoins a neighboring residential use shall have a thirty (30) foot setback, which shall be landscaped in accordance with sub-section 150.800.8 (F), Screening. Where night-time lighting of such areas is proposed, large evergreen trees, which are a minimum of six (6) feet in height at planting, shall be required in a location appropriate to screen adjoining residences.**
- J. **Cemetery.** Cemeteries and associated uses shall comply with the following requirements:
1. In addition to the other requirements in this sub-section, in Residential Districts, the following standards shall apply:
    - a. The minimum lot area shall be 22,500 square feet.
    - b. The minimum lot width at building setback line **shall be** 150 feet;
    - c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** yards 50 feet.
    - d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
  2. **Sufficient parking spaces shall be provided throughout the cemetery so as not to hinder traffic flow.**
  3. **No gravesite shall be located within 25 feet of a public street right-of-way or residential zoning district boundary.**
  4. **No building, such as a mausoleum or columbarium, shall be located within the required setback.**
  5. **The minimum parking setback shall be 20 feet.**
  6. **Cemeteries shall include drive aisles or vehicular accessways of at least 12 feet in width or greater as needed for the parking and maneuvering of funeral processions.**

7. **All driveway shoulders shall be constructed with a reinforced grass system or a similar alternative to prevent the destruction of grass next to interior streets and drives.**
  8. **In R-1 districts, a funeral home is not allowed as an accessory use.**
- K. **Commercial Kitchen.** Such facilities shall comply with the following requirements:
1. **The principal activities of the use shall occur completely within an enclosed building.**
  2. **There shall be no outdoor storage of merchandise, goods, equipment, or materials.**
  3. **All work activities, programs, and other events shall be listed on the Development Plan application or the Zoning Permit application. If any additional activities are proposed that were not included on the original application, then a new application shall be required according to the procedures in this Ordinance.**
  4. **The proposed use shall not generate excessive noise, odor, dust, or smoke beyond the principal building.**
  5. **Trash collection areas shall be located behind the principal structure and screened as required by Section 5.3, Landscaping, Screening, and Lighting Regulations.**
  6. **When adjacent to single-family residential district, the production of offensive noise, vibration, smoke, dust or other particulate matter, heat, humidity, glare, or other objectionable effect is prohibited.**
    - a. **No vibration shall be permitted which is discernible without instruments at the property line.**
    - b. **No emission shall be permitted of odorous gases or other odorous matter in such quantities as to be offensive at the property line.**
  7. **Applicants shall obtain and maintain all required food handling and serving licenses from the Commonwealth of Kentucky.**
  8. **The applicant shall provide a parking plan for delivery vehicle and mobile food units (food trucks) stored or parked on site. Fleet vehicle parking shall be to the side or rear of the property on a striped asphalt or concrete paved surface.**
  9. **Fleet vehicle parking areas shall be screened by landscaping along all sides visible from adjoining residential property.**

- L. Commercial Recreation Facility, Indoors; Theater, Indoors. Such facilities shall comply with the following requirements:
1. **The minimum lot size shall be one acre.**
  2. **The use shall not generate noise beyond the premises above the prevailing noise levels of permitted uses in the zoning district. To minimize noise, the Board of Adjustment may require noise reduction measures to assure that the level of noise is no more than the prevailing noise levels of permitted uses in the District.**
  3. **The Board of Adjustment may limit the hours of operations to ensure that the proposed use is compatible with the surrounding uses.**
  4. **Applicant shall clearly demonstrate that the use will be compatible with the surrounding land uses and the surrounding built environment, particularly with regarding to traffic circulation, parking, and appearance.**
  5. **Points of ingress and egress to the site shall be minimized and placed in such a way as to maximum safety, maximize efficient traffic circulation, and minimize the impact on the surrounding area.**
  6. **Retail sales activity that is usual and customary to the use is permitted as an accessory use and incidental to the principal use. Examples are an office and the retail sale of refreshments, food, or souvenirs.**
  7. **The use shall be located on an arterial or collector street or provide direct access to an arterial or collector street**
  8. **The landscaping on the site shall provide appropriate transition from commercial to residential districts, separates and buffers the buildings from other uses especially abutting residential districts, and provides visual relief from stark, linear building walls.**
  9. **In the Business and Mixed-Use Districts, principal buildings shall comply with the Required Design Standards in the applicable zoning district.**
  10. **All uses and operations, except off street parking and loading facilities, shall be operated and performed within an enclosed building.**
- M. Community Center. See the requirements for Places of Worship.
- N. Congregate Care Facility. **In the TBD, buildings that existed prior to [Insert date of passage of zoning amendments] may be converted into Congregate Care Facilities pursuant to all applicable regulations in this Ordinance. After [Insert date of passage of zoning amendments], new construction of Congregate Care Facilities is prohibited.**

- O. Country Club (public, private/semi-private) including golf courses. Such facilities shall comply with the following requirements:
1. **The minimum lot area shall be 40,000 square feet.**
  2. **The minimum parking setback from all project boundaries shall be 20 feet.**
  3. **The minimum building setback for both principal and accessory buildings from all lot lines shall be 50 feet.**
  4. **The proposed use shall not generate excessive noise beyond the premises. In order to minimize any effects of the above, the Board of Adjustment may require additional noise reduction measures to assure that the level of noise is no more than the prevailing noise levels of permitted uses in the District.**
  5. **Exterior lighting shall be compatible with the surrounding neighborhood or development and comply with Section 5.3, Landscaping, Screening, and Lighting Regulations. No exterior lighting of golfing areas or driving ranges shall be permitted within 100 feet of any residentially zoned property line.**
  6. **Where night-time lighting of outdoor recreation areas is proposed evergreen trees, which shall be a minimum of 6 feet in height at the time of planting, shall be required in a number and location appropriate to screen adjoining residences.**
  7. **The minimum setback from all lot lines for all outdoor recreation areas shall be 50 feet measured from the edge of the recreation area including any associated seating areas.**
  8. **All activities, programs and other events shall be directly related to the activities listed on the approved Conditional Use Permit. If any additional activities are proposed that were not included on the approved conditional use permit, then a new Conditional Use Permit shall be required according to the procedures in this Ordinance.**
  9. **For driving ranges, tees shall have at least 1,000 feet to the end of any open-air driving area. The Board of Adjustment may reduce this requirement if the end of the driving area is controlled by netting or other measures to control golf balls.**
  10. **Fencing, netting, trees, berms, or other control measures shall be provided around the perimeter of the golf course to prevent golf balls from leaving the property.**

Most of this Section is new, but changes from existing provisions are noted: Substantive Additions and Deletions

- 11. **Safety netting of not less than 32 feet in height shall be placed along the perimeter of the golf course playing area that abuts any public road frontage.**
  - 12. **Retail and restaurant uses shall be limited to accessory eating, dining and pro-shop sales. Such facilities shall be provided for the convenience of the members or customers attending the Country Club or Golf Course, and no sign advertising the retail or restaurant uses shall be permitted.**
  - 13. **Swimming pools shall comply with the regulations in Section 5.1, Temporary and Accessory Use/Structure Regulations.**
  - 14. **Operational hours for maintenance vehicles, course maintenance and/or irrigation may be restricted by the Board of Adjustment to protect nearby residential districts. Maintenance sheds shall not be visible from any adjacent single family residential areas or from a public street right-of-way.**
  - 15. **Buffering and screening shall be required as mandated by Section 5.3, Landscaping, Screening, and Lighting Regulations.**
- P. **Day Care Center, Adult or Child.** A day care center, adult or child shall comply with the following requirements:
- 1. The minimum lot area shall be as required by Schedule 5.4.03 P. unless there are less than five (5) children in which case **the minimum lot area shall conform to the minimum lot area in the applicable zoning district.** such uses may conform to Paragraph "D" of this Section

<b>Schedule 5.4.03 P.</b>	
<b>Minimum Lot Area for Day Care Center, Adult or Child</b>	
<b>Zoning District</b>	<b>Minimum Lot Area (Square Feet)</b>
R-1AA	19,000
R-1A	19,000
R-1B	15,000
R-1C	14,000
R-1D	19,000
R-2	16,000
R-3	16,000
R-5	16,000

- 2. The minimum lot width ~~at building setback line~~ **shall be** 150 feet.

3. **The minimum** front, side (~~on each side of the lot~~) and rear **setback shall be** yards 50 feet.
4. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
5. **A copy of the site plan and descriptive plan of operation shall be submitted with the application for a Conditional Use Permit.**
6. **A drop-off/pick-up location, which will not impede traffic on or off the site, shall be provided to ensure pedestrian safety.**
7. **For the protection of children and adults enrolled in the Day Care Center, a fence or wall having a height of at least five (5) feet shall enclose all outdoor activity areas. A securely fastened entry gate shall be provided to such outdoor activity areas.**
8. **Privacy screening at least 6 feet tall shall be provided along play areas abutting a residential lot or use. Such screening shall include a fence and a vegetative buffer. This privacy screening may serve as the protection fence or wall required by this sub-section.**
9. **Whenever an application is made in any Residential District for a building permit or certificate of occupancy for a day care center for 30 or more children and/or adults located in a school, community center, or place of worship, no occupancy certificate shall be issued until the applicant complies with the Conditional Use provisions in this Ordinance, in addition to any and all other provisions of the Ordinance as may be applicable.**
10. **Parking shall be located behind the front line of the principal building. The Board of Adjustment may grant an exception to the prohibition against front yard parking where necessary due to shallow depth of a parcel, the location of existing mature trees, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar circumstances.**
11. **Applicants shall clearly demonstrate that the use will be compatible with the neighborhood, particularly with regard to traffic circulation, parking, and appearance. The hours of operation may be restricted through the Conditional Use Permit.**
12. **The location, dimensions, and design concept of any proposed signage should be provided at the time of the Conditional Use Permit application.**
13. **Exterior lighting shall be residential in character and compatible with the surrounding neighborhood. After-hours lighting shall be limited to that necessary only for security purposes. All lighting shall comply with the**

**requirements in Section 5.3, Landscaping, Screening, and Lighting Regulations.**

14. **Entrances to the site should be minimized and placed in such a way as to maximize safety, maximize efficient traffic circulation, and minimize the impact on any surrounding residential neighborhood.**
  15. **The location and design of the facility shall provide for the protection of the children and adults from the traffic, noise, and other hazards of the area.**
- Q. **Drive-thru Facility in Association with a Principal Permitted Use; Freestanding Drive-thru Facility.** Such facilities shall comply with the following requirements:
1. **Drive-thru facilities shall have a minimum lot area of one (1) acre and a minimum lot width of 150 feet.**
  2. **Such facilities shall be located on an arterial or collector street in an area least disruptive to pedestrian and vehicular traffic.**
  3. **Any proposed loudspeaker system shall be approved as part of the Conditional Use Permit application.**
  4. **All access drives shall be located as far as practicable from existing intersections in order to minimize congestion and constricted turning movements.**
  5. **The hours of operation of a drive-thru facility may be limited by the Board of Adjustment as a condition of approval for the Conditional Use Permit. In evaluating this provision, the Board shall consider the proximity of residential zoning districts, schools, places of worship, parks/playgrounds, and similar uses.**
  6. **A traffic analysis may be required as part of the Conditional Use Permit application, including but not limited to proposed traffic flow, sight visibility for emerging vehicles, roadway capacity for turning movements, and other public safety factors.**
  7. **Stacking spaces shall be provided for any use having a drive-thru facility as required by Section 5.5, Off-street Parking, Loading, and Access Regulations. The following standards shall apply to all drive-thru facilities:**
    - a. **Stacking spaces and lanes for drive-thru stations shall not impede on and off-site traffic movements and shall not create a potentially unsafe condition where crossed by pedestrian access to a public entrance of a building.**

- b. Drive thru lanes shall be separated from off-street parking areas. Individual lanes shall be curbed or otherwise distinctly delineated.
- c. Approach lanes for drive-thru facilities shall have the following minimum widths:
  - i. One lane = 12 feet.
  - ii. Two or more lanes = 12 feet per lane.
- d. All drive-thru facilities shall be provided with a bypass lane with a minimum width of 10 feet.
- e. Each stacking space shall be a minimum of 10 feet by 20 feet.

The Board of Adjustment may grant an exception to these stacking standards where necessary due to shallow depth of a parcel, the location of existing mature trees, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar circumstances.

- R. Electric Vehicle Charging Stations. Accessory Electric Vehicle Charging Stations shall comply with the following requirements:
- 1. Electric vehicle (EV) charging station spaces shall be posted with signage identifying the spaces as reserved for the charging of electric vehicles, amperage and voltage levels, any enforceable time limits or tow away provisions, and contact information for reporting non-operating equipment or other problems.
  - 2. EV charging station equipment shall be located so as not to interfere with vehicle, bicycle, or pedestrian access and circulation, or with required landscaping.
  - 3. Transformers and similar equipment shall be screened in accordance with Section 5.3, Landscaping, Screening, and Lighting Regulations.
  - 4. Dedicated electric vehicle charging spaces may be included in the calculation for minimum required parking spaces.
  - 5. The maximum height of the dispenser is 6 feet in a surface parking lot.
  - 6. Dispenser and associated equipment for EV charging stations shall not be located on the front façade of any principal building in the CBD or TBD.
  - 7. Each dispenser is permitted to have digital/static display area up to 1.5 square foot in size. Digital/static display areas greater than 1.5 square feet



**are regulated as signs and are subject to the regulations in Section 5.7, Sign Regulations.**

8. **The related equipment cabinets and/or structures for electric vehicle charging stations shall not be located in any required buffer yard. The location of plantings required for parking lot landscaping may be modified for electric vehicle charging stations, but the parking lot landscaping requirements shall be in accordance with Section 5.3, Landscaping, Screening, and Lighting Regulations.**
9. **A canopy is not permitted in association with an electric vehicle charging stations located in a surface parking lot unless it supports a solar collection system. Any canopy supporting a solar collection system shall comply with height and setback requirements for a freestanding accessory structure in the applicable zoning district and shall not include signage or illumination on the sides of the canopy.**
- S. **Food Trucks.** Food trucks, otherwise known as mobile food vending service, shall comply with the following requirements:
  1. **The food truck/mobile food vending service is permitted as an accessory use when permitted in the applicable zoning district.**
  2. **The food truck/mobile food vending service shall not be located in any required setback, sight distance triangle, buffer yard, or on existing landscaped areas.**
  3. **Food truck/mobile food vending service shall not be parked or located:**
    - a. **Within any public street, right-of-way, or sidewalk;**
    - b. **In any fire lane, travel lane, or entrance/exit.**
  4. **Food truck/mobile food vending service shall not use or permit use of parking spaces on the site if doing so will adversely affect the required off-street parking available for the primary use(s) of the site during peak periods as determined by the Zoning Administrator.**
  5. **Any operator of a food truck/mobile food vending service shall receive and display a valid Certificate of Zoning Compliance from the Zoning Administrator.**
  6. **The operator of a food truck/mobile food vending service shall obtain, in writing, the property owner's permission to operate on the property and shall submit a copy to the Zoning Administrator with their application for a Zoning Permit.**

7. The operator of a food truck/mobile food vending service shall meet all applicable local and state laws, rules, regulations, and ordinances.
8. Food trucks/mobile food vending service may only operate for a maximum of 6 hours in any one day at any one location, including set-up and break-down.
9. A maximum of 3 food trucks/mobile food vending service are permitted at any one location at the same time, provided that additional food trucks may be permitted in conjunction with special events or special permits permitted by the City of Fort Thomas.
10. Food trucks/mobile food vending services shall be located on a level, paved, or gravel surface with safe pedestrian access.
11. The vicinity around the food truck/mobile food vending service shall be kept clean and free of debris.
12. Trash receptacles shall be provided.
13. No liquid waste or grease is to be disposed into tree pits, storm drains, or onto the sidewalks, streets, or other public locations. Under no circumstances shall grease be released into or disposed of in the City's sanitary sewer system.
14. There shall be no audio amplifier or similar device to attract the attention of the public.
15. Food truck/mobile food vending services shall not be in operation between the hours of 10 p.m. and 7 a.m., except when associated with a special event authorized by the City of Fort Thomas.
16. The mobile vending unit or food trucks may be painted with signage, but no additional site signage is permitted.
17. The mobile vending unit or food trucks shall be lit with available site lighting. No additional exterior lighting is permitted unless permitted by the Zoning Administrator upon finding that proposed exterior lighting mounted to the mobile vending unit or food truck will not spill over onto adjacent residential uses as measured at the property line.
18. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.

- T. Freestanding Drive-thru Facility. See Drive-thru Facility in Association with a Principal Permitted Use.
- U. Funeral homes. Funeral homes shall comply with the following requirements:
1. In addition to the other requirements in this sub-section, in Residential Districts:
    - a. The minimum lot area shall be 22,500 square feet.
    - b. The minimum lot width ~~at building setback line~~ **shall be** 150 feet;
    - c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
    - d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
    - e. **Such facilities shall be** located adjacent to an arterial street.
  2. **Cremation units may be included within mortuaries and funeral homes if permitted in the applicable zoning district.**
  3. **All activity shall be conducted inside the buildings except organizing the funeral processions.**
  4. **Sufficient car stacking space shall be provided on the lot such that the arterial road need not be used for the forming of funeral processions. The area of the lot used for the forming of funeral processions shall have direct, but limited, access to arterial road. This assembly area for the funeral procession shall be in addition to required off-street parking and its related maneuvering area.**
  5. **Indoor storage shall be provided adequate in size to store all vehicles related to the funeral home. The Board of Adjustment may permit outdoor storage of vehicles related to the funeral when screening is provided to adequately screen these vehicles from surrounding single-family residential dwellings.**
  6. **A caretaker's residence may be provided within the principal building.**
  7. **No outdoor storage of any material, equipment, or waste shall be permitted on site.**
  8. **Trash collection areas shall be located behind the principal structure and screened as required by Section 5.3, Landscaping, Screening, and Lighting Regulations.**
  9. **In Residential Districts:**

- a. Applicants shall clearly demonstrate that the use will be compatible with the neighborhood, particularly with regard to traffic circulation, parking, and appearance.
  - b. The hours of operation may be restricted.
  - c. Funeral homes shall not contain facilities for performing autopsies or other surgical procedures.
  - d. The external appearance of the funeral home and any accessory building shall be residential in character.
  - e. The parking of vehicles related to the funeral home in the front yard is prohibited except such vehicles are permitted in the front yard when forming the funeral procession.
- V. Habitable Roof – Non-Residential Use. Non-residential uses of a Habitable Roof shall comply with the following requirements:
1. Permitted uses of a habitable roof include outdoor dining, assembly uses, and live entertainment venues when permitted in the district or sub-district. Structural suitability of the roof for these uses shall be evaluated by the Building Official.
  2. In the CBD sub-districts, all structures; features; furnishings; and exterior modifications shall be reviewed by the Design Review Board as required by this Ordinance.
  3. Seating areas for outdoor dining and assembly uses shall be set back a minimum of 5 feet from the roof's edge and shall be cordoned off as required by the Building Official.
  4. If 50% or more of habitable roof is covered, whether with a permanent roofing structure or a more temporary covering such as lattice, canvas, or other similar cloth coverings, then the habitable roof shall be included in the calculation of maximum height.
  5. If music or other live entertainment is provided, compliance with the standards for Live Entertainment Venues is required.
  6. When a Habitable Roof for a Non-residential Use is a Conditional Use, the Board of Adjustment may:
    - a. May require noise reduction measures to assure that the level of noise is compatible with surrounding uses.

**b. The Board of Adjustment may limit the hours of operations to ensure that the proposed use is compatible with the surrounding uses.**

- W. Health Club. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
- X. Hotel. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
- Y. Institutions for Human Medical Care. Institutions for human medical care shall comply with the following requirements:
1. In addition to the other requirements in this sub-section, in Residential Districts:
    - a. The minimum lot area shall be 22,500 square feet.
    - b. The minimum lot width at building setback line **shall be** 150 feet;
    - c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
    - d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
    - e. **Such facilities shall be** located adjacent to an arterial street.
  2. In addition to the other requirements in this sub-section, in the Business and Mixed-Use Districts:
    - a. **The minimum lot size shall be 2 acres.**
    - b. **The minimum lot width shall be 200 feet.**
    - c. **Such use shall be located on an arterial or collector street.**
    - d. **The maximum height, building/parking setbacks shall be the development standards in the applicable zoning district.**
  3. **No outdoor storage of any material or waste shall be permitted on site.**
  4. **Trash collection areas shall be located behind the principal structure and screened as required by Section 5.3, Landscaping, Screening, and Lighting Regulations.**

5. The emergency vehicle entrance shall be accessed from an arterial or collector street.
6. Outdoor storage of ambulances and other vehicles used in the operation of the principal use may be permitted provided such storage areas are located in the side or rear yard in off-street parking areas. The areas devoted to the outdoor storage of such vehicles shall be enclosed with a fence having a minimum height of six (6) feet.
7. Parking shall be located behind the front line of the principal building. The Board of Adjustment may grant an exception to this requirement where necessary due to shallow depth of a parcel, the location of existing mature trees, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar circumstances.
8. Applicants shall clearly demonstrate that the use will be compatible with the surrounding land uses, particularly with regard to traffic circulation, parking, noise, and appearance.
9. Entrances to the site should be minimized and placed in such a way as to maximize safety, maximize efficient traffic circulation, and minimize the impact on any surrounding residential neighborhood. No more than two curb cuts shall be allowed per street frontage. Factors including the number of existing curb cuts in the area, the potential for increased traffic hazards and congestion, and the number of travel lanes of the street that serves the development shall be used to determine the actual number of curb cuts permitted.
10. The scale, massing, and building design should be compatible with the surrounding built environment. In the Business and Mixed-Use Districts, principal buildings shall comply with the Required Design Standards in the applicable zoning district.
11. The public street elevation of the principal structure shall have at least one street-oriented entrance, and contain the principal windows of the establishment.
12. The location, dimensions, and design concept of any proposed signage should be provided at the time of the Conditional Use Permit application.
13. Loading and emergency entrance areas shall be sited in such a way so as to minimize the impact on the surrounding land uses.
14. A traffic analysis may be required from the applicant as part of its application for a Conditional Use Permit. Such analysis may include, but not be limited to, existing background traffic volumes, the proposed traffic flows and

**volumes, sight visibility for emerging vehicles, and other public safety factors as may be required.**

Z. Live Entertainment Venue.

1. **In the CBD-TCC and the TBD, a maximum area of 15 percent of the square footage of the area of the principal use accessible to the public or 250 square feet, whichever is larger, as evidenced by submission of a floor plan, may be used for entertainment, as determined by the Zoning Administrator. Entertainment may include dancing, live entertainment including recorded music with a DJ, or other similar uses. This entertainment area may be inside or outside of the building hosting the Live Entertainment Venue.**
2. **The building shall be configured and the use operated such that sound from amplified music or other performance taking place within the building is not audible at the lot line after 11:00 PM.**
3. **No outdoor entertainment shall be permitted between 11 PM and 10 AM on Friday, Saturday, and any evening preceding a holiday recognized by the City of Fort Thomas, KY and between 10 PM and 10 AM on any other day.**
4. **The use of mechanically produced sound, amplified sound or live music shall only be permitted in conformity with the City's noise standards and the Performance Standards in this Ordinance.**

AA. Manufacturing, Light; Research and Development Facility. Such facilities shall comply with the following requirements:

1. **The minimum lot area shall be 40,000 square feet.**
2. **Existing natural or manmade barriers at the site shall be provided as protection and screening against noise, dust, and visual protection for all operations. At a minimum, a 35-foot buffer yard shall be provided adjacent to any R-1 zoning district. It shall be planted with large and small evergreen trees and one row of evergreen shrubs. The large evergreen trees shall be at least 6 feet in height when planted and allowed to grow to a minimum of 10 feet. The small evergreen trees shall be at least 4 feet in height when planted and permitted to grow to a minimum of 6 feet. The evergreen shrubs shall be three (3) feet when planted. Trees and/or shrubs shall be adequately spaced to form a solid, continuous visual screen within one (1) year after the initial installation. At a minimum, at the time of planting, the spacing of trees shall not exceed 12 feet on center.**
3. **The facility shall be designed and operated so as not to produce odors, gas, dust, or any other atmospheric pollutant detrimental to the health, safety, or general welfare of persons living or working in the surrounding area. The**

- emission of odorous matter or smells in such quantities as to produce a public nuisance or hazard shall not be permitted.**
4. **The facility shall not generate truck traffic materially different in truck size or frequency from that truck traffic generated by the surrounding non-residential uses.**
  5. **Points of ingress and egress to the site shall be minimized and placed in such a way as to maximum safety, maximize efficient traffic circulation, and minimize the impact on the surrounding area. All site circulation, including loading and unloading, shall take place on site.**
  6. **There shall be no outside activities conducted or outside storage.**
  7. **Showrooms and the sale of goods produced on-site are permitted.**
- BB. Medical/Dental Clinic Urgent Care. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
- CC. Micro Production of Alcohol. See Brewpubs.
- DD. Multi-family Dwellings.
1. **In the CBD-TCC, multi-family dwellings shall only be permitted when the multi-family building existed prior to [Insert date of passage of zoning amendments].**
  2. **In the CBD-TCS and TBD, buildings that existed prior to [Insert date of passage of zoning amendments] may be converted into multi-family dwellings pursuant to all applicable regulations in this Ordinance. After [Insert date of passage of zoning amendments], new construction of multi-family dwellings is prohibited.**
- EE. Off-street Parking Lots. In all CBD sub-districts and the TBD, accessory Off-street Parking Lots shall comply with the Parking/Vehicular Access standards in Schedule 3.7.03 B., Development Standards TBD, CBD-TCC, CBD-TCS, CBD-MC1, CBD-MC2, CBD-MC3. If Off-street Parking Lots existing as of [insert date of passage of Ordinance amendments] do not comply with the standards in Parking/Vehicular Access standards in Schedule 3.7.03 B, those Off-street Parking Lots may continue as provided for in sub-section 1.9.06, Non-conforming Site Conditions.
- FF. Open Space Recreation Area. Open Space Recreation Areas shall comply with the following requirements:
1. The minimum lot area shall be 22,500 square feet.



Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

2. The minimum lot width at building setback line **shall be** 150 feet;
  3. **The minimum** front, side (~~on each side of the lot~~) and rear **setback for principal and accessory buildings shall be** yards 50 feet.
  4. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
  5. **The site shall be adequate to accommodate the intended use(s), parking and adequate buffer areas without significant impact on nearby properties in terms of noise, traffic, lighting glare, views, odors, trespassing, dust or blowing debris, as determined by the Board of Adjustment.**
  6. **Swimming pools shall comply with the regulations in Section 5.1, Temporary and Accessory Use/Structure Regulations.**
  7. **The Board of Adjustment may require active recreation areas to be enclosed by a fence having a minimum height of 5 feet.**
  8. **The proposed use shall comply with the standards in Section \_\_\_\_\_, Performance Standards, and shall not generate excessive noise, odor, dust or smoke beyond the premises. To minimize any effects of the above, the Board of Adjustment may require all applicable surface areas to be paved, and impose additional noise reduction measures, including mounding, landscaping and sound barriers, to ensure that the level of noise is less than or the same as the prevailing noise levels of permitted uses in the District.**
  9. **All activities, programs and other events shall be directly related to the Conditional Use Permit so granted, and any proposed changes from the approved conditional use permit shall be reviewed and approved by the Board of Adjustment according to the procedures in this Section.**
  10. **An adequate number of public restrooms shall be provided and maintained.**
  11. **The Board of Adjustment may limit the hours of operation to ensure that the proposed use is compatible with the surrounding uses.**
  12. **Only retail uses that are customary accessory and incidental to the principal use shall be permitted. Included as such retail uses are refreshment stands, souvenir stands, concession stands, and an office.**
- GG. **Parking Structure – Accessory to a Principal Use.** Such facilities shall comply with the following requirements:
1. **In all zoning districts:**

- a. When Parking Structures are not constructed as part of the principal building, parking structures shall be located behind front building line of the principal building on the site.
  - b. Parking structures shall have a minimum side and rear setback of 25 feet.
  - c. The maximum height shall be as permitted in the applicable zoning district.
  - d. Where possible, parking structures shall be constructed as part of the principal structure.
  - e. Solar canopies are permitted on parking structure roofs and shall not be included in the calculation of maximum height.
2. Applicants shall clearly demonstrate that the use will be compatible with the neighborhood, particularly with regard to traffic circulation, parking, and appearance.
  3. Design of Parking Structure:
    - a. The parking structure shall be designed to be compatible with surrounding development. Considerations include design elements that break up long, monotonous building walls and any other design elements that are compatible with the desired character of the District. Parking structure elevations shall use color, massing, or architectural features to reduce the appearance of bulk.
    - b. The materials for the parking structure shall be compatible with the surrounding built environment or the desired character of the District.
  4. Parking structure façades facing residential lots shall:
    - a. Be enclosed to prevent light spillover from headlights, adverse noise, or pollutants; and
    - b. Incorporate architectural design elements, including surface treatments, offset planes, structural articulation, and landscaping to provide visual interest and compatibility with adjacent residential uses.
  5. The landscaping on the site shall provide an appropriate transition to single-family residential districts, separates and buffers the building from uses in abutting single-family residential districts, and provides visual relief from the building walls of the parking structure.

- HH. Parking Structure – Principal Use. When Parking Structures are the principal use, such Parking Structures shall comply with the following requirements:
1. Parking structures shall contain commercial uses along the frontage line. These commercial uses shall have a minimum depth of 20 feet from the frontage line. The Board of Adjustment may grant an exception to this requirement if the applicant presents compelling information that commercial tenants cannot be found at the time of construction. If the exception is granted, the parking structure shall be designed and constructed to accommodate ground floor non-residential uses in future with a minimum ceiling height of 20 feet above grade to ease conversion, and the parking structure shall have:
    - a. Architectural features, such as piers, columns, and/or colors, to break up the wall mass. A pedestrian-oriented plaza with pedestrian amenities such as benches, planters, landscaping, bicycle racks, and similar pedestrian amenities shall also be provided. The Board of Adjustment shall evaluate the appropriateness of the pedestrian-oriented plaza when deciding upon the requested exception and may seek guidance from the Design Review Board; OR,
    - b. Display window shall be provided and outfitted with displays. These display windows shall be vertical in proportion, have a minimum depth of three (3) feet, be internally lit, and have a minimum height of five (5) feet, and a minimum width of three (3) feet. The Board of Adjustment shall evaluate the spacing and adequacy of activating the public realm with these display windows when deciding upon the requested exception. The Board of Adjustment may seek guidance from the Design Review Board when deciding upon the spacing and adequacy of the proposed display windows.
  2. In those zoning districts with maximum setback requirements, the Board of Adjustment may increase the maximum setback to soften the impact of the parking structure. In the increased setback, the Board may require additional landscaping, including shade and evergreen trees that are of significant size.
- II. Places of Worship; Community Center. Such facilities shall comply with the following requirements:
1. When located in a Residential District, such facilities shall comply with the following:
    - a. The minimum lot area shall be 22,500 square feet.
    - b. The minimum lot width ~~at building setback line~~ **shall be** 150 feet;

- c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
- d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
- e. **Such facilities shall be** located adjacent to an arterial street.
- f. **Screening and buffering shall be required as mandated in Section 5.3, Landscaping, Screening, and Lighting Regulations.**
- g. **All outdoor children's activity areas are to be enclosed by an ornamental or stockade fence or wall having a height of at least 5 feet but not exceeding 6 feet. An entry gate shall be securely fastened.**
- h. **All activities, programs and other events shall be listed on the Conditional Use Permit application and be directly related to the conditional use permit so granted. These activities shall be adequately and properly supervised so as to prevent any hazard and to assure against any disturbance or nuisance to surrounding properties, residents or to the community in general. If any additional activities are proposed that were not included on the approved Conditional Use Permit, then a new Conditional Use Permit shall be requested according to the procedures in this Ordinance.**
- i. **Parking shall not be located in the front yard and shall be a minimum of 10 feet from side and rear lot lines. The Board of Adjustment may grant an exception to the prohibition against front yard parking where necessary due to shallow depth of a parcel, the location of existing mature trees, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar circumstances.**
- j. **Outdoor recreation areas shall be not located in the front yard. The minimum setback from side and rear lot lines for all outdoor recreation areas shall be 50 feet measured from the edge of the recreation area including any associated seating areas.**
- k. **No outdoor activity area, such as a swimming pool, ball field or court shall be permitted unless the lot area is 3 acres or more. When an outdoor activity area adjoins a residential zoning district boundary, these activity areas shall be setback 40 feet from any side or rear lot line. These outdoor activity areas shall be located behind the rear building line. Where exterior lighting of such areas is proposed large evergreen trees, which shall be a minimum of 6 feet at planting, shall be required in a location appropriate to screen adjoining residences.**

- I. Applicants shall clearly demonstrate that the use will not cause a nuisance to neighboring properties with respect to traffic, parking, and noise. Drop off areas may be located in the front yard, but shall maintain a residential character and appearance.
  - m. After-hours lighting shall be limited to that necessary only for security purposes. All lighting shall comply with the requirements in Section 5.3, Landscaping, Screening, and Lighting Regulations.
  - n. Entrances to the site should be minimized and placed in such a way as to maximize safety, maximize efficient traffic circulation, and minimize the impact on any surrounding residential neighborhood.
  - o. The principal structure shall be street oriented with pedestrian entrances from the street. A pedestrian walkway shall be provided from the public sidewalk to the principal entrance.
  - p. The use of land, buildings, and facilities associated with a Place of Worship use may be used for other accessory purposes in furtherance of the mission of the Place of Worship use. These additional uses, such as childcare centers or private schools, will require an additional Conditional Use Permit if so specified in the applicable zoning district.
  2. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
- JJ. Pleasure Boat Harbors & Marinas; Public Boat Landing or Launching Facilities; Recreational Dockage Facilities. All such facilities shall comply with the following requirements:
1. ~~The following uses~~ Pleasure boat harbors & marinas; public boat landing or launching facilities; and recreational dockage facilities shall only be ~~are~~ permitted in connection with streams, rivers, lakes, or other bodies of water, providing that the development of all permitted facilities in or adjacent to navigable waters shall be approved by the Corps of Engineers, Department of the Army, and such statement of approval or denial shall be submitted to the Board of Adjustment at the time of submittal for a Conditional ~~zoning certificate~~ Use Permit.
  2. No trailer, camper, manufactured housing unit, modular office trailer or similar unit shall be used on the property for any purpose.
  3. Trash collection areas shall be located behind the principal structure, and shall be screened as required by Section 5.3, Landscaping, Screening, and Lighting Regulations.

4. **No outdoor storage of any material or waste shall be permitted on site.**
  5. **Structures, other than light poles and those regulated by this sub-section, shall be located a minimum of 50 feet from all nonriparian lot lines.**
  6. **Engine and hull repair shops shall only be permitted when conducted within a completely enclosed building, or completely obscured from view beyond the property boundaries with a continuous masonry wall, six feet in height or a heavily planted greenbelt 10 feet in width.**
  7. **All multi-slip and marina docking facilities in or adjacent to natural waterbodies shall be set back a minimum of 25 feet from all adjoining side lot lines.**
  8. **All boat ramps shall setback 20 feet from all adjoining side lot and side riparian lines.**
  9. **Ancillary long-term dry storage of recreational watercraft in racks or other storage systems is permitted provided the dry storage area is a minimum of 50 feet from all nonriparian lot lines.**
  10. Off-street parking facilities and temporary parking of boat trailers including spaces large enough to accommodate automobiles pulling boat trailers **are permitted.**
  11. The following uses shall be permitted as accessory uses in connection with any **boat landing or launching facilities or any** boat harbor or marina and primarily intended to serve only persons using the ~~boat harbor or marina~~ **these facilities:**
    - a. Boat fueling, service and repairs;
    - b. Sale of boat supplies;
    - c. Grocery store;
    - d. Restaurant; **and,**
    - e. Club house and lockers.
- KK. **Public Boat Landing or Launching Facilities.** See Pleasure Boat Harbors & Marinas.
- LL. **Public Facility.** See Public Park/Playground.
- MM. **Public Park/Playground; Public Facility.** Such facilities shall comply with the following requirements:
1. The minimum lot area shall be 22,500 square feet.

2. The minimum lot width ~~at building setback line~~ **shall be** 150 feet;
  3. **In the Residential Districts:**
    - a. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
    - b. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
  4. **In the Business and Mixed-Use Districts, all building, parking, and land shall comply with the Development Standards in the applicable zoning district except minimum lot area and minimum lot width which is regulated by this sub-section.**
- NN. Recreational Dockage Facilities. See Pleasure boat harbors & marinas; public boat landing or launching facilities; recreational dockage facilities.
- OO. Research and Development Facility. See Manufacturing, Light.
- PP. Riding Academies and Stables (commercial). **All stables and academies for the rearing and housing of horses and ponies shall meet the following requirements:**
1. **The number of permitted animals shall not exceed 2 animals for the first 5 acres and one animal per additional 2 acres.**
  2. **Any buildings used to house animals shall be a minimum of 100-feet from any property line.**
  3. **When animals are fed hay and oats or other feed outside of a building, the feeding area shall be located not less than one hundred (100) feet from all property lines. Corrals where animals graze only shall not be considered feeding areas.**
  4. **Stables shall be enclosed by a suitable fence, and shall be maintained so that odor, dust, noise, or water drainage shall not constitute a nuisance or hazard to adjoining premises.**
  5. **Outdoor storage or composting of animal waste shall be located a minimum of 50-ft from any property line. No other outdoor storage of any material or waste shall be permitted on site.**
  6. **No trailer, camper, manufactured housing unit, modular office trailer or similar unit shall be used on the property for any purpose.**
  7. **Fences enclosing the facility will be set back a minimum of ten (10) feet from any property line.**

8. **No emission shall be permitted of odorous gases or other odorous matter in such quantities as to be offensive at the property line.**
  9. **If there is a lighted outdoor riding ring or riding area, the use of outdoor lighting for such areas is limited to 7:00 AM to 7:00 PM.**
  10. **Stables shall be operated and maintained in a healthy and safe manner. Healthy and safe is defined as, but not limited to: fences kept in good repair; potable water available on demand; protection from wind or rain; a sign posted indicating the name and phone number of the person to be contacted in case of emergency.**
- QQ. Riding and Stables (Personal Use). **The keeping of horses and/or ponies primarily owned and kept for the personal use of the owner of the land on which they are maintained on parcels of at least 2 acres in area, provided:**
1. **All buildings used in connection with the keeping of horses or ponies shall be located at least 100 feet from all property lines.**
  2. **All bulk feed and other supplies, equipment and materials used in connection with the keeping of horses or ponies shall be located in such buildings or structures located a minimum of 100 feet from all property lines.**
  3. **Stables and riding areas shall be enclosed by a suitable fence, and shall be maintained so that odor, dust, noise, or water drainage shall not constitute a nuisance or hazard to adjoining premises.**
  4. **If there is a lighted outdoor riding ring or riding area, the use of outdoor lighting for such areas is limited to 7:00 AM to 7:00 PM.**
  5. **Stables shall be operated and maintained in a healthy and safe manner. Healthy and safe is defined as, but not limited to: fences kept in good repair; potable water available on demand; protection from wind or rain; a sign posted indicating the name and phone number of the person to be contacted in case of emergency.**
- RR. School (public/private), College/University. Such facilities shall comply with the following requirements:
1. In the Residential Districts, such facilities shall comply with the following requirements:
    - a. The minimum lot area shall be 22,500 square feet.
    - b. The minimum lot width ~~at building setback line~~ **shall be** 150 feet;



Most of this Section is new, but changes from existing provisions are noted: **Substantive Additions** and **Deletions**

- c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
  - d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
  - e. **Such facilities shall be** located adjacent to an arterial street, **and all access shall be from an arterial street.**
  - f. **The maximum lot coverage shall be 75%.**
  - g. **No outdoor storage of any material or waste shall be permitted on site.**
  - h. **Exterior lighting shall be residential in character and compatible with the surrounding neighborhood. After-hours lighting shall be limited to that necessary only for security purposes. All lighting shall comply with the requirements in Section 5.3, Landscaping, Screening, and Lighting Regulations.**
  - i. **Such facilities shall not include athletic or large-scale assembly-type facilities.**
  - j. **Points of ingress and egress to the site shall be minimized and placed in such a way as to maximum safety, maximize efficient traffic circulation, and minimize the impact on the surrounding area.**
  - k. **The building and roof shall be designed to be compatible with surrounding development. Considerations include design elements that break up long, monotonous building or rooflines and any other design elements that are compatible with the character of the surrounding residential districts.**
  - l. **The materials used for buildings, roofs, fences, and other structures shall be compatible with the surrounding residential development and built environment.**
2. **When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in the public right-of-way owned and maintained by the City of Fort Thomas.**
  3. **In the Alexandria Pike Mixed Use District, such facilities are exempt from the Required Design Standards except for the following:**

- a. Buildings and principal building entrances shall be oriented toward the public street so as to define the street edge and contribute to a dynamic pedestrian and street environment.
  - b. For the first floor, the front facade of every building shall have transparent areas, equal to 60 % of the front facade area (measured as the total area below the transition line). These transparent areas shall be between two (2) and nine (9) feet above the sidewalk or finished grade.
  - c. The pattern of architectural features, such as windows and doors, shall be placed upon the street facing facade of a building in a pattern that creates a building fenestration that has a constant rhythm, a harmonious appearance, and is proportional to one another and surrounding buildings, if applicable.
  - d. Buildings shall have finish materials on all sides. Finish materials shall not include cinder block or vinyl siding.
  - e. A combination of materials, textures, colors, and finishes shall be utilized to create visual interest.
  - f. Facades may be supplemented by awnings, which shall be straight sheds without side flaps, but shall not be cubed or curved.
  - g. Materials within ten (10) feet of the ground or the sidewalk shall be of a durable material. If “dry vit” or E.I.F.S is used as an exterior building material, impact resistant E.I.F.S., as classified by EIMA (EIFS Industry Members Association), shall be used on all wall areas within ten (10) feet of the ground or sidewalk.
  - h. All roof top equipment shall be concealed in building materials that match the structure or shall be painted to be visually compatible with the structure.
4. In the Traditional Business District, buildings that existed prior to [Insert date of passage of zoning amendments] may be converted into School (public/private), College/University pursuant to all applicable regulations in this Ordinance. After [Insert date of passage of zoning amendments], new construction of Schools (public/private), College/University is prohibited.
- SS. School (Public/Private) Elementary/Secondary. Such facilities shall comply with the following requirements:
1. In the Residential Districts, such facilities shall comply with the following requirements:

- a. The minimum lot area shall be 22,500 square feet.
- b. The minimum lot width ~~at building setback line~~ **shall be** 150 feet;
- c. **The minimum** front, side ~~(on each side of the lot)~~ and rear **setback for principal and accessory buildings shall be** ~~yards~~ 50 feet.
- d. The maximum building height **shall be** 35 feet or two and one-half (2 1/2) stories.
- e. **The maximum lot coverage shall be 75%.**
- f. **All activities, programs and other events shall be directly related to the approved Conditional Use Permit. These activities shall be adequately and properly supervised so as to prevent any hazard and to assure against any disturbance or nuisance to surrounding properties, residents or to the community in general. If any additional activities are proposed that were not included on the approved conditional use permit, then a new Conditional Use Permit shall be requested according to the procedures in this Ordinance.**
- g. **Outdoor recreation areas shall be not located in the front yard. The minimum setback from side and rear lot lines for all outdoor recreation areas shall be 50 feet measured from the edge of the recreation area including any associated seating areas.**
- h. **Such uses should be located on an arterial or collector street or have direct access to an arterial or collector street to minimize impacts on local streets and residential neighborhoods, with the exception of elementary schools. Elementary schools may be located on local streets provided documentation is supplied that indicates a majority of students are within walking distance of the elementary school.**
- i. **Exterior lighting shall be compatible with the surrounding neighborhood.**
- j. **Entrances to the site should be minimized and placed in such a way as to maximize safety, maximize efficient traffic circulation, and minimize the impact on any surrounding residential neighborhood.**
- k. **The scale, massing, and building design shall be compatible with the surrounding neighborhood.**
- l. **In order to minimize any effects from this use, the Board of Adjustment may require additional noise reduction measures to assure that the level of noise is no more than the prevailing noise levels of permitted uses in the District.**

- m. **The structure shall be street oriented with the principal entrance oriented toward the public street.**
  
- 2. **When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.**
  
- 3. **In the Alexandria Pike Mixed Use District, such facilities are exempt from the Required Design Standards except for the following:**
  - a. **Buildings and principal building entrances shall be oriented toward the public street so as to define the street edge and contribute to a dynamic pedestrian and street environment.**
  
  - b. **For the first floor, the front facade of every building shall have transparent areas, equal to 60 % of the front facade area (measured as the total area below the transition line). These transparent areas shall be between two (2) and nine (9) feet above the sidewalk or finished grade.**
  
  - c. **The pattern of architectural features, such as windows and doors, shall be placed upon the street facing facade of a building in a pattern that creates a building fenestration that has a constant rhythm, a harmonious appearance, and is proportional to one another and surrounding buildings, if applicable.**
  
  - d. **Buildings shall have finish materials on all sides. Finish materials shall not include cinder block or vinyl siding.**
  
  - e. **A combination of materials, textures, colors, and finishes shall be utilized to create visual interest.**
  
  - f. **Facades may be supplemented by awnings, which shall be straight sheds without side flaps, but shall not be cubed or curved.**
  
  - g. **Materials within ten (10) feet of the ground or the sidewalk shall be of a durable material. If “dry vit” or E.I.F.S is used as an exterior building material, impact resistant E.I.F.S., as classified by EIMA (EIFS Industry Members Association), shall be used on all wall areas within ten (10) feet of the ground or sidewalk.**
  
  - h. **All roof top equipment shall be concealed in building materials that match the structure or shall be painted to be visually compatible with the structure.**

4. In the Traditional Business District, buildings that existed prior to [Insert date of passage of zoning amendments] may be converted into School (public/private), elementary/secondary, pursuant to all applicable regulations in this Ordinance. After [Insert date of passage of zoning amendments], new construction of Schools (public/private), elementary/secondary is prohibited.
- TT. Shop House; Artisan or Craft Workshop; Artist Studio. Such live/work uses shall comply with the following requirements:
1. The workspace shall occupy less than 50% of the dwelling unit's gross floor area.
  2. The occupant of the dwelling unit shall be the owner and primary person involved in the business or activity.
  3. Not more than one (1) full-time, non-resident employee or the equivalent may be employed in the live/work use.
  4. There shall be no outdoor storage of equipment or materials used for the work activity of a live/work unit.
  5. In no way shall the appearance of a residential structure be altered or the activity within the residence be conducted in such a manner that changes the essential character of the dwelling.
  6. Live/work units shall have a common access for both the residential and nonresidential space and be designed in such a way as to prevent separate lease of spaces.
  7. Neither a live/work use nor any equipment used in conjunction with the work activities in the workspace shall produce heat, sound, vibration, light, glare, dust, odor, smoke, or fumes detectable to normal sensory perception by a person located off premises. No equipment or process shall create a hazard to person or property, resulting in electrical, visual, or audible interference to nearby machinery or equipment, become a nuisance, or cause fluctuation on line voltage or utilities off or on the premises.
  8. Any work activities associated with the live/work use shall be completely contained wholly within the live/work unit and shall not be permitted in any detached accessory buildings or structures.
  9. No outdoor display of materials, goods, supplies, or equipment shall be allowed.
  10. Signs for the live/work use shall be no greater than 4 square feet and shall only be placed in a window or mounted on the wall of the live/work unit.

11. Office uses are limited to Office – administrative/professional uses; medical/dental uses are prohibited. Retail sales and personal service uses are permitted in the live/work unit. Restaurants are prohibited.
12. Any application to establish a live/work use or to change the use of a live/work unit shall specifically identify the nature of the work activities, the hours of operation, whether or not there will be one full-time employee or multiple part-time employees, and the number and type of expected deliveries. The application shall also include a floor plan that identifies those areas of the dwelling unit to be used as living space and those areas to be used as work space. The floor plan shall include the nature and location of any equipment to be used for work activities.
13. Separate parking shall not be provided for the workspace portion of the live/work unit. All parking for the live/work unit shall be provided in the driveway.
14. An Occupational License shall be obtained from the City of Fort Thomas, KY.

Question to Consider: Are these standards appropriate given the location of these live/work units?

- UU. Single-family Dwelling, Attached. Attached single-family dwelling units shall comply with the following requirements:
1. In addition to the other requirements in this sub-section, in the R-3 District:
    - a. No more than 4 single-family attached dwelling units shall be constructed in one building.
    - b. Maximum Density. The gross density shall not exceed 6.5 dwelling units per acre.
  2. In addition to the other requirements in this sub-section, in the R-5 District:
    - a. No more than 6 single-family attached dwelling units shall be constructed in one building.
    - b. Maximum Density. The gross density shall not exceed 9 dwelling units per acre.
  3. Building Placement.
    - a. A minimum 10 feet of separation shall be maintained between all principal buildings in the development.

- b. Principal buildings shall be set back from private drives and parking lots a minimum of ten feet as measured from back of curb or edge of pavement, if no curb is provided.
  - c. Principal buildings shall be set back from public streets in or abutting the development a minimum of 35 feet.
  - d. For principal buildings, the minimum side setback from a project boundary shall be 15 feet, and the minimum rear setback from a project boundary shall be 35 feet. Setback requirements do not apply to individual attached single-family dwelling lots. Setback requirements do apply to the lot or parcel from which the individual attached single-family dwelling lots are subdivided.
  - e. All accessory structures shall be located behind the rear building line of the attached single-family dwellings.
4. Design of Attached Single-family Dwellings:
- a. Each attached unit shall have a width of at least 20 feet.
  - b. The principal orientation of the attached single-family units shall be the public street on which the lot has frontage. There shall be at least one entrance of each unit, facing the public street, and the principal windows of the attached single-family units shall also face this street.
  - c. The maximum height shall be 35 feet or 2.5 stories.
  - d. The front façade shall be at least 25% windows or doors.
  - e. All buildings shall utilize high-quality building materials that are in keeping with traditional architectural styles. Permitted wall materials include brick, stone, wood, and fiber cement siding. Vinyl siding is prohibited.
5. Access.
- a. Single-family attached developments shall abut a public street.
  - b. Individual single-family attached lots need not abut a public street provided that every dwelling unit shall be provided access to their property via either a public right-of-way or a private vehicular or pedestrian way owned by the individual lot owner in fee or in common ownership with other property owners in the development.
  - c. Adequate access shall be provided for firefighting equipment, service deliveries, and refuse collection.

- d. Vehicular entrances to the attached single-family development shall be minimized and designed in such a way as to maximize safety, maximize efficient traffic circulation, and minimize the impact on any adjacent residential neighborhood.
6. Parking spaces shall be located behind the front building line, provided a waiver to this requirement may be granted by the Planning Commission where necessary due to shallow depth of a parcel, the location of existing mature trees, the location of utilities and access points, the location of existing buildings or parking facilities, or other similar factors.
7. Garages shall be located in the rear yard and shall only be accessed by a rear entrance or from a side street. The Planning Commission may permit garage doors on the front façade where the lot depth will not permit a rear entrance; provided the front of the garage does not project closer to the street than the wall of the livable portion of the dwelling and the garage does not occupy more than 50% of the total length of the street-facing building façade and each door is a maximum of 8 feet wide with a minimum 8 inch column between doors.
8. A subdivision plat shall be submitted with the development plan if the attached single-family dwelling units will be constructed on individual lots.
9. Notwithstanding the above requirements, the Planning Commission may grant waivers to all of the requirements in this sub-section, except maximum density and height, based upon the proposed development plan.
10. Detached garages and other accessory buildings shall be located in the rear yard shall be set back a minimum of 3 feet from the rear and side lot lines and shall have a maximum height of 15 feet.
- VV. Single-family Dwelling, Detached. Only Single-family Detached Dwellings that existed prior to [fill in date of passage of these amendments] shall be permitted. No new Single-family Detached Dwellings are permitted in the CBD-TCS or the TBD.
- WW. Theater, Indoors. See Commercial Recreation Facility, Indoors
- XX. Trade or Vocational School. When located in the Neighborhood Commercial/Office District, such facilities shall not be located on corner lots with lot frontage on a local public street that is in a public right-of-way owned and maintained by the City of Fort Thomas.
- YY. Two-family dwelling. Only Two-family Dwellings that existed prior to [fill in date of passage of these amendments] shall be permitted. Newly constructed Two-family Dwellings and the conversion of dwellings, which predate [fill in date of passage of these amendments], into Two-family Dwellings are prohibited.



**ZZ. Utility substation/distribution facility, indoor/outdoor.**

1. **Public utility facilities, including substations, shall be permitted as a conditional use only when the distribution of service is essential to the immediate neighborhood or when topological features restrict the location of such facility.**
2. **Natural or man-made barriers shall be provided to lessen any intrusion into a residential area. In making this determination, the Board of Adjustment shall consider the proximity of residential uses, the form of surrounding built environment, and the location and type of surrounding land uses shall be considered.**
3. **Storage of materials shall be within a completely enclosed building.**
4. **Substations, as measured from the outermost edge of the facility, shall be located a minimum of fifty (50) feet from any residential property line and from any street right-of-way line.**
5. **For facilities other than sub-stations adjacent to residential property lines, the minimum front setback shall be twenty-five (25) feet, and the minimum side setback shall be fifteen (15) feet.**
6. **Fences and walls, in excess of six (6) feet in height shall be setback from every public street right of way line a distance no less than twelve (12) feet and shall be setback from every other property line a distance of no less than ten (10) feet. Within these setbacks, evergreen shrubs and trees, which meet the standards for trees specified in Schedule 5.3.11 Minimum Size Requirements for Plant Materials, shall be planted in addition to the deciduous trees required in sub-section 7. below. At a minimum, at the time of planting, the spacing of trees shall not exceed 12 feet on center, and the planting pattern shall be staggered. Shrubbery shall be more closely spaced.**
7. **The entire perimeter of the site shall be landscaped with deciduous trees 2.5 inches in caliper planted thirty (30) feet on center.**

AAA. **Vehicle Fueling Stations.** See Auto Service Stations.

BBB. **Vehicle Sales/Rental/Service Facilities.** Such facilities shall comply with the following requirements:

1. **The minimum lot area shall be 2.5 acres.**
2. **Buildings and premises for the sale, rental, and ancillary servicing of vehicles in operating condition shall be limited to the following:**
  - a. **Passenger automobiles, up to ¾ ton trucks, and motorcycles;**

- b. Vans, but not including any vehicle designed primarily for the transportation of ten or more passengers;
    - c. Boats less than 26 feet in length; and,
    - d. Specialized vehicles such as recreational vehicles and boat trailers having a maximum length of 17 feet.
  3. A service garage, leasing department, and other activities customarily incidental to a vehicle sales and leasing facility shall be permitted as accessory to the sale of vehicles provided the activities are conducted entirely in an enclosed building.
  4. Only repair of vehicles customarily associated with vehicle sales and leasing shall be permitted and shall be conducted inside a suitable building.
  5. No inoperable or unlicensed vehicles, which are not displayed for sale, shall be stored or parked outside for more than 48 hours.
  6. Vehicle parking areas, vehicle storage areas, maneuvering lanes, and access ways to public streets shall be designed to prevent interference with the safe and convenient movement of vehicular and pedestrian traffic on the site and adjacent public rights-of-way.
  7. Outdoor areas devoted to storage, loading, parking, and display are limited to the portion of the site designated for such activities. Such areas shall comply with the following standards:
    - a. The areas shall be located on the same lot with and ancillary to a sales room, rental office, or service facility.
    - b. Except loading areas, if located on the ground and open to the sky, the areas may be located in any yard, provided, the areas shall be located a minimum of 10 feet from any front lot line; set back a minimum of 20 feet from any R-1 zoning district boundary line; and set back a minimum of 20 feet from any non-residential zoning district boundary line.
    - c. If located contiguous to a street, the areas shall have a curb between the area and the street.
    - d. The areas, including aisles and driveways, shall be constructed and maintained with concrete, asphalt, or other permanent surfacing material other than crushed stone. Such areas shall be indicated on the Development Plan.
  8. No vehicles or other similar items shall be displayed on the top of a building.

9. **All lights and lighting shall be designed and arranged so no source of light is directly visible from any adjacent property.**

DRAFT

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

## ARTICLE 7 - FORT THOMAS SUBDIVISION REGULATIONS

### SECTION 7.0 – APPLICATION AND AUTHORITY OF REGULATIONS

#### Sub-sections

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7.0.02	Purpose and Authority
7.0.03	Schedule of Construction and Sale of Lots
7.0.04	Schedule of Improvements
7.0.05	General Responsibilities

### SECTION 7.1 – DEFINITIONS

### SECTION 7.2 – SUBDIVISION PROCEDURE

#### Sub-Sections

7.2.01	Preliminary Information
7.2.02	Submission of Preliminary Plat
7.2.03	Processing of the Preliminary Plat
7.2.04	Planning Commission Action
7.2.05	Submission and Processing of Preliminary Grading Plans
7.2.06	Submission of Improvement Drawings and Specifications
7.2.07	Processing of Improvement Drawings and Plans
7.2.08	Submission of the Final Plat
7.2.09	Processing of the Final Plat and Where Applicable, the Improvement Drawings and Specifications
7.2.10	Planning Commission Action
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### SECTION 7.3 – PRELIMINARY PLAT REQUIREMENTS

#### Sub-Sections

7.3.01	Specifications for and Content of the Preliminary Plat
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### SECTION 7.4 – FINAL PLAT REQUIREMENTS INCLUDING IMPROVEMENT DRAWINGS & SPECIFICATIONS

#### Sub-Sections

7.4.01	Specification for and Content of the Final Plat
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### SECTION 7.5 – DESIGN STANDARDS FOR THE LAYOUT OF SUBDIVISIONS

#### Sub-Sections

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7.5.02	Intersections
7.5.03	Easements
7.5.04	Physical Considerations
7.5.05	Flood Hazard
7.5.06	Blocks
7.5.07	Lots
7.5.08	Pedestrian Ways

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

7.5.09 Public Sites

SECTION 7.6 – IMPROVEMENTS

Sub-Sections

- 7.6.01 Minimum Design Standards and Criteria for the Storm Drainage System
- 7.6.02 Sanitary Sewer System
- 7.6.03 Water System
- 7.6.04 Streets
- 7.6.05 Driveway Approaches
- 7.6.06 Off-Street Parking Areas
- 7.6.07 Private Utilities
- 7.6.08 Street Signs
- 7.6.09 Streets Lights
- 7.6.10 Planting Screen or Fences
- 7.6.11 Monumentation
- 7.6.12 Plans for Future Expansion–Extra Size and Off-Site Improvements
- 7.6.13 Plans Required for the Control of Erosion and Sedimentation
- 7.6.14 Construction Inspections
- 7.6.15 Construction Responsibilities
- 7.6.16 Final Cleaning Up
- 7.6.17 Agreements and Guarantees

SECTION 7.7 – ADMINISTRATION AND ENFORCEMENT

Sub-Sections

- 7.7.01 Administration
- 7.7.02 Fees for Plats and Plans
- 7.7.03 Payment of Fees
- 7.7.04 Recordation Fees in County Clerk’s Office
- 7.7.05 Modifications
- 7.7.06 Enforcement
- ~~Penalties~~
- ~~Severability~~
- 7.7.07 Appeals from Planning Commission’s Duly Authorized Representative
- ~~Appeals from Planning Commission~~
- ~~Conflict~~

APPENDICES

APPENDIX “A” – PAVEMENT DESIGN

APPENDIX “B” – GEOTECHNICAL EXPLORATION AND EARTHWORK CONSTRUCTION REQUIREMENTS

APPENDIX “C” – STANDARD CONSTRUCTION DETAILS FOR STREETS, SIDEWALKS, AND DRIVEWAYS

The existing Subdivision Ordinance includes an Appendix D, which included all of the required certifications on plats. This Appendix will be recreated and included with Phase 3.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**SECTION 7.0**  
**Application and Authority of Regulations**

7.0.01	Short Title.	7.0.04	Schedule of Improvements.
7.0.02	Purpose and Authority.	7.0.05	General Responsibilities.
7.0.03	Schedule of Construction & Sale of Lots.		

Regulations for establishing subdivision procedures for the submission and approval of the Preliminary, **Identification**, and Final Plats and recording of Final Plats; design standards and principles for the layout of subdivision and for the surveying and platting requirements thereof; requiring the installation of certain improvements and providing for the necessary construction agreements and guarantees therein; providing for certain Preliminary, **Identification**, and Final Plat requirements; defining certain terms used herein; **and**, providing for the method of administration and enforcement. ~~and the penalties for violation thereof; providing for the means of adoption and amendment; repealing all regulation, resolution, orders, ordinances and/or codes in conflict herewith.~~

**7.0.01 SHORT TITLE.**

Those regulations shall be known and may be cited as the “Subdivision Regulations” of the City of Fort Thomas, State of Kentucky.

**7.0.02 PURPOSE AND AUTHORITY.**

- A. PURPOSE: These Subdivision Regulations are herein set forth, have been prepared in accordance with the adopted comprehensive plan for Fort Thomas, to promote the public health, safety, morals and general welfare of the ~~county~~ **City**; to provide for the proper arrangement of streets in relation to existing or proposed streets; to provide for adequate and convenient open spaces for vehicular and pedestrian traffic, utilities, access of firefighting apparatus, recreation, light and air, and the avoidance of congestion of population, and to facilitate the orderly and efficient layout and appropriate use of the land. In addition, these regulations also provide for the accurate surveying of land, preparing and recording of plants and the equitable handling of all subdivision plats by providing uniform procedures and standards for observance by both the approving authority and subdividers.
- B. AUTHORITY: These regulations are adopted in accordance with the Kentucky Revised Statutes – Chapter ~~100.111 – 100.991~~.

**7.0.03 SCHEDULE OF CONSTRUCTION AND SALE OF LOTS.**

No lot, tract, or parcel in a subdivision ~~may~~ **shall** be sold or transferred unless a Final Plat has been approved by the Planning Commission and recorded with the Campbell County Clerk.

**7.0.04 SCHEDULE OF IMPROVEMENTS.**

The subdivider of any tract or parcel of land located within Fort Thomas shall not proceed with the construction of any improvements until they have obtained: (1) approval or conditional approval of

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

the Preliminary Plat; (2) approval or approval subject to conditions, of the improvement drawings and specification; or (3) Final Plat approval. Preliminary grading of the site may proceed following approval or conditional approval of the preliminary plat, providing that plans for erosion and sedimentation are submitted to the City Engineer ~~for and approval~~ **approved** or ~~approval~~ **approved** subject to conditions.

#### 7.0.05 GENERAL RESPONSIBILITIES.

- A. Subdivider. The subdivider shall: use a land surveyor and engineer, as defined herein, to prepare plats and plans consistent with the design standards; accomplish improvements consistent with the improvement requirements; and submit said plats and plans in accordance with these **Subdivision** regulations **and this Ordinance**.
- B. Planning Commission. The Planning Commission, or its support staff, is charged with the duty of making investigations and reports on the design and improvements of proposed subdivisions, and requiring conformance of such subdivisions with the Kentucky Revised Statutes, Chapter 100, and these **Subdivision** regulations **and this Ordinance**.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

## SECTION 7.1 Definitions

- 7.1.01 Words and Phrases.  
7.1.02 Definitions.

Most of the lined-out terms will be incorporated into the Definition Section of the Unified Development Ordinance. Please review the newly defined terms of Major and Minor Subdivision.

### 7.1.01 WORDS AND PHRASES.

For the purpose of these regulations, certain terms, phrases, words, and their derivatives, are herewith defined as follows: Words used in the future tense include the present; Words used in the present tense include the future; Words used in the singular form include the plural; Words used in the plural form include the singular; Words used in the masculine include the feminine; Words used in the feminine include the masculine; The words "shall" **and "must" are** is mandatory; The words "may" and "should" are permissive.

### 7.1.02 DEFINITIONS.

- A. **Words used in these Subdivision Regulations are used in their ordinary English usage.**
- B. **The following shall serve as definitions for terms used in this Section. Other terms are defined in Section 1.1, Definitions.**

ACCESS POINT: An access point is:

- (1) A driveway, a local street, a collector street, or sub collector street, intersecting an arterial street;
- (2) A driveway or a local street intersecting a collector street or sub collector street; or
- (3) A driveway or a local street intersecting a local street.

~~AGRICULTURE: The use of land for agricultural purposes, including agriculture, dairying, farming, floriculture, horticulture, pasturage, viticulture, and animal and poultry husbandry and the necessary accessory uses for packing, treating, or storing the produce; provided, however, that the operation of any such accessory use shall be secondary to that of the normal agricultural activities.~~

ALLEY: Public right-of-way which normally affords a secondary means of access to abutting property.

BLOCK: A parcel of land within a subdivision that is bounded by streets or bounded by streets and the exterior boundary of the subdivision. For this definition, an alley is not considered a street, but part of the block.

BLOCK LENGTH: The distance between intersections of through streets, such distance being measured parallel to the longest street bounding the block and from right of way line to right of way line of the two intersecting streets.

CERTIFICATE OF OCCUPANCY: A certificate which must be obtained prior to occupancy of any premises.



Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

CITY INSPECTOR: A person employed by the legislative body or the Planning Commission, whose responsibility it is to inspect items required by these regulations.

COMMISSION (OR PLANNING COMMISSION, OR PLANNING AND ZONING COMMISSION): The Fort Thomas Planning and Zoning Commission, Commonwealth of Kentucky.

~~COMPREHENSIVE PLAN: The comprehensive plan for Fort Thomas, adopted by the Fort Thomas Planning and Zoning Commission. It is a guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships. It shall contain as a minimum, the following elements:~~

- ~~A. a statement of goals and objectives, principles, policies and standards;~~
- ~~B. a land use plan element;~~
- ~~C. a transportation plan element;~~
- ~~D. a community facilities plan element;~~
- ~~E. may include any additional elements, such as, without being limited to: community renewal, housing, flood control, pollution, conservation, natural resources, and others.~~

DEVELOPER: Synonymous with term "subdivider".

DULY AUTHORIZED REPRESENTATIVE: The Fort Thomas City Staff shall serve as the duly authorized representative for the Fort Thomas Planning and Zoning Commission and shall be authorized to check, review, and approve, where provided in these regulations, all submissions regarding their conformance to these regulations.

EASEMENT: A right, distinct from the ownership by fee simple title of the land, to cross property with facilities such as, but not limited to, sewer lines, water lines, and transmission lines, or the right, distinct from the fee simple title ownership of the land, to reserve and hold an area for drainage or access purposes.

ENGINEER: A qualified registered professional engineer in good standing with the Kentucky Board of Registration for Professional Engineers and Land Surveyors.

FINAL PLAT: A subdivision plat proposed in accordance with the provisions herein in which said plat is designated to be placed on record with the County Clerk after approval by the Planning Commission.

FLOOD: A general and temporary condition of partial or complete inundation of normally dry land areas from: (a) the overflow of inland waters; (b) the unusual and rapid accumulation of runoff of surface waters from any source; and (c) mudslides (i.e., mudflows) which are caused or precipitated by accumulations of water on or under the ground.

FLOOD - 100 YEAR FREQUENCY: The highest level of flooding that, on the average, is likely to occur once every 100 years or has a 1% chance of occurring in any given year.

FLOOD PLAIN OR FLOOD PRONE AREA: Any normally dry land area that is susceptible to being inundated by water from any source.

FLOODWAY: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot at any point.

FLOODWAY ENCROACHMENT LINES: The lines marking the limits of floodways on the official zoning map.

Changes from existing provisions are noted: **Substantive Additions** and Deletions

**FRONTAGE LOT:** All the property abutting on one side of the right-of-way of a street, measured along the right-of-way line of the street between the intersecting lot lines. In no case shall the line along an alley be considered as acceptable for frontage.

~~**FRONT YARD DEPTH:** The minimum distance required to be maintained within the lot between a line parallel to the front lot line, as defined herein, and the front lot line.~~

**INDENTIFICATION PLAT.** **An Identification Plat is a drawing representing a proposed Minor Subdivision of land that does not contain public Improvements. See Subdivisions, Minor.**

**IMPROVEMENT PLANS:** The engineering plans showing types of materials and construction details for the physical structures and facilities to be installed in, or in conjunction with, the subdivision.

~~**LOT:** A parcel of land or any combination of several lots of record, occupied or intended to be occupied by a principal building or a building group as permitted under the Fort Thomas Official Zoning Ordinance, together with their accessory buildings or uses and such access, yards, and other open spaces required under those zoning ordinances.~~

~~**LOT OF RECORD:** A designated fractional part of a subdivision according to a specific recorded plat or survey, the map of which has been officially approved by the Planning Commission and recorded in the office of the County Clerk.~~

~~**LOT AREA:** The total area of a horizontal plane bounded by the front, side, and rear lot lines, but not including any area occupied by street, alley, or railroad rights of way, as opposed to an easement, and shall be in one zone only.~~

~~**LOT, CORNER:** A corner lot is a lot situated at the intersection of two streets or on a curved street on which the interior angle of such intersection or curved street does not exceed one hundred thirty five (135) degrees.~~

~~**LOT, DEPTH OF:** The distance measured in the mean direction of the side lot lines from the midpoint of the front lot lines to the midpoint of the rear lot lines.~~

~~**LOT, DOUBLE FRONTAGE:** A lot other than a corner lot that has frontage on more than one street.~~

~~**LOT, FLAG:** A lot which abuts a public street via a narrow strip of land, which connects that portion of the lot containing the required lot width to the public right of way. Said lot shall have a minimum of (25) feet fronting on a dedicated public right of way.~~

~~**LOT, INTERIOR:** A lot other than a corner lot with only one frontage on a deeded and improved public right of way.~~

~~**LOT LINE, FRONT:** The common boundary line of a lot and a street right of way line. In the case of a corner lot or a double frontage lot, the common boundary line and that street right-of-way line toward which the principal or usual entrance to the main building faces.~~

~~**LOT LINE, REAR:** The boundary line of a lot which is most nearly opposite the front lot line of such lot. In the case of a triangular or wedge shaped lot, for measurement purposes only, a line ten (10) feet in length within the lot parallel to and at the maximum distance from the front lot line. In the case of a corner lot, providing that all requirements for yard space are complied with, the owner may choose either side not abutting a street as the rear lot line, even though it is not opposite the front lot line. Once the choice has been made, it cannot be changed unless all requirements for yard space can be complied with.~~

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

~~LOT LINE, SIDE: Any boundary line of a lot, other than a front lot line or rear lot line.~~

~~LOT WIDTH: The width of the lot as measured along the building front setback.~~

OFFICIAL MAP: ~~The~~ **An** adopted official map of the City of Fort Thomas, as provided for in the Kentucky Revised Statutes, Chapter 100.

PRELIMINARY PLAT: A tentative plat of a proposed subdivision prepared in accordance with the provisions herein for presentation to the Planning Commission for its action.

RESUBDIVISION: A subdivision which is actually a resubdivision of a previously recorded plat, representing a revision of the old lots, but where no new improvements are to be constructed or extended.

RIGHT-OF-WAY: A general term denoting land, property, or interest therein, usually in a strip and dedicated for or devoted to such uses as a street, alley, or railroad.

STREETS: Any vehicular ways except alleys.

- A. All streets will be within dedicated rights-of-way which have been properly processed, approved and recorded.
- B. The following shall be used to classify all streets:

STREET, PRIVATE: A paved private roadway which affords access to abutting property for private users of such property, and that has not been accepted for ownership by the City. As such, the property owners of mutual benefit are responsible for maintenance of said street. For the purposes of density calculations, a private street shall constitute the areas of its paved surface and sidewalks or the private right-of-way if designated on the recorded plat.

STREET, PUBLIC: A public roadway, constructed within the boundaries of an officially dedicated public right-of-way, which affords principal means of access to abutting property. For purposes of density calculations, a public street shall constitute all of the area within the public right-of-way.

STREET, ARTERIAL: Public thoroughfares which serve the major movements of traffic within and through the community.

STREET, COLLECTOR: Public thoroughfares which serve to collect and distribute traffic primarily from subcollector to arterial streets.

STREET CUL-DE-SAC OR COURT: A street having an outlet at one end only and having the other end permanently closed with facilities permitting vehicles to turn around.

STREET, DEAD-END: A street having an outlet at one end only and terminated at or partial control of access and generally with grade separations at major intersections.

STREET, EXPRESSWAY: A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections.

STREET FREEWAY: A divided multi-line highway for through traffic with all crossroads separated in grades and with full control of access.

STREET, FRONTAGE ROAD (SERVICE OR ACCESS ROAD): A street adjacent to a freeway, expressway, or arterial street separated therefrom by a dividing strip and providing access to abutting properties.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**STREET LOCAL:** Roadways which are designed to be used primarily for direct access to abutting properties.

**STREET SUBCOLLECTOR:** A street designed to provide a traffic route from local to collector streets.

**SUBDIVIDER:** Any individual, firm, association, syndicate, co-partnership, corporation, trust, governmental agency or any other legal entity commencing proceedings under these regulations, to create a subdivision of land as defined herein for himself or for another.

**SUBDIVISION:** The division of a parcel of land into two or more lots or parcels ~~or tracts~~ for the purpose, whether immediate or future, of sale, lease, ~~or~~ **or** building development, or if a new street is involved, any division of a parcel of land; providing that a division of land for agricultural ~~purposes~~ **uses** into lots or parcels of five acres or more and not involving a new street shall not be deemed a subdivision. The term includes resubdivision and when appropriate to the context, shall relate to the process of subdivision or to the land subdivided; **any division or redivision of land into Parcels of less than one acre occurring within 12 months following a division of the same land shall be deemed a Subdivision within the meaning of these regulations.**

**SUBDIVISION, MAJOR: A Major Subdivision is a proposed Subdivision of land that contains public infrastructure Improvements or the construction of a public or private Street.**

**SUBDIVISION, MINOR: A Minor Subdivision is a proposed Subdivision of land that does not contain public infrastructure Improvements.**

Question to Consider: Should these Subdivision Regulations include definitions for Major and Minor Subdivisions? If so, are these the appropriate definitions?

**SURVEYOR:** A qualified registered-land surveyor in good standing with the Kentucky Board of Registration.

**TRACT:**A parcel of land identified by letter or number, the boundaries of which are shown on the recorded subdivision plat.

Changes from existing provisions are noted: Substantive Additions and ~~Deletions~~

**SECTION 7.2  
Subdivision Procedure**

7.2.01	Preliminary Information.	7.2.10	Planning Commission Action.
7.2.02	Submission of Preliminary Plat.	7.2.11	Effect of Approval.
7.2.03	Processing of Preliminary Plat.	7.2.12	Disposition of Approved Final Plat.
7.2.04	Planning Commission Action.	7.2.13	Recording.
7.2.05	Submission & Processing of Preliminary Grading Plans.	7.2.14	Submission of As-Built Improvement Drawings.
7.2.06	Submission of Improvement Drawings & Specifications.	7.2.15	Acceptance of Improvement For Maintenance and/or Land Offered for Dedications.
7.2.07	Processing of Improvement Drawings & Plans.	7.2.16	Submission & Processing of Identification Plats.
7.2.08	Submission of the Final Plat.	7.2.17	Submission & Processing of Condominium Property Regime Plats.
7.2.09	Processing of the Final Plat & Where Applicable, Improvement Drawings & Specifications.	7.2.18	Revocation of Subdivision Plat.

A flow chart will be included in Phase 3 that outlines the Subdivision Procedures.

Any person desiring to subdivide any lot, tract, or parcel of land within Fort Thomas, shall comply with the procedures established in this ~~article~~ **Section** and other applicable ~~articles and~~ sections of these **Subdivision** regulations and this Ordinance and in the sequence specified.

**7.2.01 PRELIMINARY INFORMATION.**

~~The subdivider is required to notify the Planning Commission, or its duly authorized representative, of his intention to subdivide a property prior to submission of the preliminary plat. Such notification shall be made to the Planning Commission at a regularly scheduled meeting at least one month prior to the requested public hearing for the subdivision. At this time, the following material shall also be submitted.~~

- A. Pre-application Meeting. Attendance at a pre-application meeting(s) between City staff and the subdivider is encouraged prior to submission of an application for Major Subdivision review. The purpose of this meeting is to:
  - 1. Acquaint the subdivider with the standards and requirements of these regulations;
  - 2. Review with the subdivider the required procedures and Application requirements; and,
  - 3. Allow City staff and other regulatory authorities to identify problematic components of the project and to suggest improvements that will speed the approval process and avoid future costly plan revisions.
  
- B. Application for Preliminary Plat Approval. An application (provided by the commission) shall be submitted. At the time of ~~submission~~ a complete application that includes all of the elements required by these Subdivision Regulations and this Ordinance is accepted, the City official, shall indicate on the application the date of submission and signature of the City official.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- C. Preliminary Plat Fees. Preliminary plat fees shall be submitted in accordance with the **adopted fee schedule for the City of Fort Thomas, KY**. ~~Article VIII, Section 8.1 of these regulations.~~

#### 7.2.02 SUBMISSION OF PRELIMINARY PLAT.

The subdivider shall file, **with the Zoning Administrator**, five (5) copies **or digital files acceptable to the Zoning Administrator** of the Preliminary Plat ~~to the Zoning Administrator~~, prepared in accordance with the requirements of ~~Article IV~~ **Section 7.3**, at least twenty-one (21) consecutive days prior to the next regular meeting of the Planning Commission. At this time, the following material shall also be filed where applicable.

- A. Individual On-site Disposal System Permit. Where individual on site disposal systems have been approved, ~~as per Section 7.1 of these regulations~~, a copy of the permit to use onsite disposal systems, approved by the ~~Department of Housing, Buildings, and Construction – Division of Plumbing~~, **Northern Kentucky Health Department** shall be required.
- B. Erosion & Sedimentation Control Plans. In the event the subdivider elects to proceed with grading, following preliminary plat approval, or conditional approval, but prior to the submission of improvement drawings and specifications, two (2) copies of plans for the grading and control of erosion and sedimentation (as per Section 7.12) ~~must~~ **shall** also be submitted to the Planning Commission for review and approval.

#### 7.2.03 PROCESSING OF PRELIMINARY PLAT.

The applicant shall be required to notify the local and state governmental agencies, and other organizations of the public meeting and shall submit to them copies of the proposed preliminary plat.

The local and state governmental agencies and other affected organizations shall forward their recommendations and/or comments, if any, to the Planning Commission prior to or at the meeting of the Planning Commission at which the issue will be heard.

The preliminary plat, the application, and all other required information shall be checked by the Planning Commission for compliance with: (1) the requirements of the preliminary plat as per **Section 7.3** ~~Article IV~~; (2) the requirements of the applicable **regulations in this Ordinance** ~~zoning ordinance~~; and (3) any other pertinent sections of applicable regulations.

#### 7.2.04 PLANNING COMMISSION ACTION.

The City staff shall review the Preliminary Plat, including determination of its conformance to the requirements of these **Subdivision Regulations and this Ordinance**, and shall consider the recommendations and/or comments of all applicable state governmental agencies and other applicable organizations, and shall forward such recommendations and/or comments to the Planning Commission along with its recommendations and/or comments. The Planning Commission shall then review the recommendations and take one of the following actions: (1) approve the plat; (2) approve the plat, subject to conditions; or (3) disapprove the plat; within two consecutive regularly scheduled meetings from date of official filing, unless such time is extended by agreement between the Planning Commission and the subdivider. Approval of the preliminary plat by the Commission does not constitute final approval of the subdivision, but is merely an authorization to proceed with the preparation of the improvement drawings and specifications and the Final Plat.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

In the event of conditional approval or disapproval of the preliminary plat, a statement, in writing, by the Planning Commission, setting forth the conditions of approval, or reasons for disapproval, shall be submitted to the subdivider.

Approval or conditional approval of a preliminary plat shall be valid and not subject to additional requirements for a period of twelve (12) consecutive calendar months, except that if a portion of an approved preliminary plat is approved or conditionally approved as a Final Plat, said approval or conditional approval of the remainder of the preliminary plat shall be valid for eighteen (18) consecutive calendar months after the date of approval or conditional approval of said Final Plat (as provided for in sub-section **7.2.08 3-7**). The Planning Commission may, upon receipt of a request by the subdivider, grant an extension not to exceed one (1) year to this twelve (12) month period if prevailing conditions have not changed appreciably.

#### **7.2.05 SUBMISSION AND PROCESSING OF PRELIMINARY GRADING PLANS.**

Following approval or conditional approval of the preliminary plat, the subdivider may elect to proceed with preliminary grading of the area to be subdivided, provided that grading plans with provisions for control of erosion and sedimentation (as per sub-section **7.6.13 7-12**) are submitted to the City Staff who shall check the proposed grading and erosion and sedimentation control plans to ensure their conformance with the approved or conditionally approved preliminary plat and that they meet the requirements established in ~~Article VII~~ **Section 7.6 – Improvements** and other pertinent sections of these **Subdivision Regulations and this Ordinance**. Following this review, the staff shall take one of the following actions: (1) approve the erosion and sedimentation plans for preliminary grading; (2) approve the erosion and sedimentation plans for preliminary grading, subject to conditions; or (3) disapprove the erosion and sedimentation plans for preliminary grading. In the event of conditional approval or disapproval, a statement, in writing, setting forth the conditions of approval, or the reasons for disapproval, shall be submitted to the subdivider.

#### **7.2.06 SUBMISSION OF IMPROVEMENT DRAWINGS AND SPECIFICATIONS.**

Following approval or conditional approval of the Preliminary Plat by the Planning Commission, the subdivider shall submit the improvement drawings and specifications to the City staff for review and approval, prior to the submission of the Final Plat. It shall also be the responsibility of the subdivider to submit copies of the improvement drawings and specifications to the applicable local and state governmental agencies and other organizations affected by the subdivision. Said improvement drawings and specifications shall include at least the area intended for processing as a Final Plat. At this time, the subdivider shall submit the following to the City staff.

- A. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Sanitary Sewerage & Storm System Plans and Profiles (~~as per Sections 7.0 and 7.1~~).
- B. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Water System Plans (~~as per Section 7.2~~).
- C. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Street Plans and Profiles, including typical cross sections (~~as per Section 7.0~~).
- D. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Drainage Report, including computations, (~~as per Section 7.0~~).
- E. Three (3) copies **or digital files acceptable to the Zoning Administrator** of plans for grading and control of erosion and sedimentation (~~as per Section 7.12~~) if not submitted previously for processing (~~as per Section 3.4~~).

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- F. The required fees **the adopted Fee Schedule for the City of Fort Thomas, KY.** ~~as per Section 8.1.~~

### 7.2.07 PROCESSING OF IMPROVEMENT DRAWINGS AND PLANS.

The City staff shall check the improvement drawings and plans to ensure they are in conformance with the approved or conditionally approved Preliminary Plat and that they meet the requirements established in **Section 7.6** ~~Article VII~~ and other pertinent sections of these **Subdivision** Regulations. The staff shall also contact the applicable local and state governmental agencies and other organizations for their comments as they pertain to the proposed improvement drawings and specifications. Following these reviews, the staff shall take one of the following actions: (1) approve the improvement drawings and specifications; (2) approve the improvement drawings and specifications, subject to conditions; or (3) disapprove the improvement drawings and specifications. In the event of conditional approval or disapproval, a statement, in writing, by the staff, setting forth the reasons for conditional approval or disapproval, shall be submitted to the subdivider.

### 7.2.08 SUBMISSION OF THE FINAL PLAT.

- A. **General.** The Final Plat shall only be submitted after the Preliminary Plat has been approved. The Final Plat shall conform to the approved or conditionally approved Preliminary Plat and shall include all changes, additions, deletions, or approvals as may be required on conditional approval by the Commission, and shall be prepared in accordance with ~~Article V~~ **Section 7.4** and other applicable sections of these **Subdivision** regulations **and this Ordinance.**
- B. **Preparation.** The subdivider may cause, within twenty-four (24) consecutive calendar months after the approval or conditional approval of the preliminary plat, the subdivision, or any part thereof, to be surveyed and a Final Plat thereof to be prepared. The Final Plat shall contain only that portion of the approved or conditionally approved Preliminary Plat which the subdivider wishes to have approved, recorded and developed at that time. Final Plats which are a portion of the approved or conditionally approved preliminary plat shall be named and listed as "Phase No. (Name of Subdivision)". Final Plats which are resubdivisions of approved and recorded Final Plats shall be labeled as "RESUBDIVISION OF (Appropriate Listing Title)". The subdivider shall insure that the Final Plat is prepared under the supervision of a registered land surveyor.
- C. **Filing.** The subdivider shall submit, to the City's staff, three (3) copies of the Final Plat drawing prepared in accordance with ~~Article V~~ **Section 7.4** of these **Subdivision** regulations. As this time, the following material shall also be filed with the staff, unless otherwise noted:
1. **Application for Final Plat Approval.** An application (provided by the Commission **and available in the Office of the Zoning Administrator and on the City's website**) shall be submitted (~~see Appendix E~~). At the time of submission, the staff, shall indicate, on the application, the date of submission and signature of the City official.
  2. **Traverse Sheets.** One (1) copy of the traverse calculations. The minimum traverse calculations required shall include a closed traverse of the subdivision boundaries (~~as per Section 5.0.B~~).
  3. **Improvement Drawings and Specifications.** Improvement drawings and specifications will be required, if not submitted previously for processing, ~~as per Sections 3.5 and 3.6.~~



Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- a. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Sanitary Sewerage & Storm Systems Plans and Profiles ~~(as per Section 7.1)~~.
  - b. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Water System Plans ~~(as per Section 7.2)~~.
  - c. Three (3) copies **or digital files acceptable to the Zoning Administrator** of the Street Plans and Profiles, including typical cross sections ~~(as per Section 7.3)~~.
4. Drainage Plans Including Computations and Plans for Control of Erosion and Sedimentation: This report will be required, if not submitted previously for processing, as per Sections 3.4 & 3.5.
    - a. Three (3) copies of Drainage Report, including computations ~~(as per Section 7.0)~~.
    - b. Three (3) copies of plans for control of erosion and sedimentation ~~(as per Section 7.12)~~.
  5. As-Built Improvement Drawings. Where the improvement drawings and specifications were previously submitted and approved prior to the submission of the Final Plat, as per Sections 3.5 and 3.6, and where improvements were constructed differently from the originally approved improvement drawings, the subdivider shall submit three (3) copies of As-Built Improvement Drawings for the sanitary sewerage and storm system and water system.
  6. Final Plat Fees. Final Plat fees shall be submitted in accordance with ~~Section 8.1~~ **the adopted Fee Schedule for the City of Fort Thomas, KY**.
  7. Guarantee: A guarantee (if applicable) per sub-section ~~7.16~~ **7.6.17** of these regulations.

#### **7.2.09 PROCESSING OF THE FINAL PLAT AND WHERE APPLICABLE, THE IMPROVEMENT DRAWINGS AND SPECIFICATIONS.**

The City's staff shall check the Final Plat as to conformity with the approved, or conditionally approved, Preliminary Plat and all other pertinent aspects as required in ~~Article VI~~ **Section 7.5** and other applicable sections of these **Subdivision** Regulations. Where applicable, the staff shall also check the improvement drawings and specifications, drainage plans and plans for erosion and sedimentation control, to ~~insure~~ **ensure** that they are in conformity with the Final Plat and that they meet the requirements established in ~~Article VII~~ **Section 7.6** and other pertinent sections of these **Subdivision** regulations **and this Ordinance**. In the event the improvement drawings and specifications were previously submitted and approved, prior to the submission of the Final Plat, the staff shall review the as-built drawings ~~(if required as per Section 3.7.C.5)~~ for their conformity to the Final Plat.

#### **7.2.10 PLANNING COMMISSION ACTION.**

Following the review of the Final Plat and when applicable the improvement drawing and specifications, ~~as per Section 3.8~~, the staff shall take one of the following final actions:

- A. Final Approval. Final approval of a plat shall be given in one of two ways:

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1. **After Construction of Improvements.** after the subdivider has obtained approval or conditional approval, as indicated in sub-section ~~3-6~~ **7.2.07** and has installed all required improvements in compliance with these regulations and has provided as-built drawings, (if such improvements were constructed differently than from the originally approved improvement drawings), the Planning Commission shall then give final approval. The original drawing of the Final Plat shall then be signed and dated by the chair~~man~~ of the Planning Commission.
  2. **Before Construction of Improvements.** The City's staff may give final approval before all required improvements are installed, provided that a construction agreement and a guarantee are provided for the purpose of assuring installation of such improvements. The amount of the guarantee shall be based on an estimate made by subdivider and approved by the City Engineer (see sub-section **7.6.17** ~~7-16~~). Upon determination that all requirements of these regulations have been met, the Planning Commission shall give Final **Plat** approval. The original drawing of the Final Plat shall then be signed and dated by the chair~~man~~ of the Planning Commission. The guarantee shall not be returned to the subdivider until all improvements are installed, and as-built drawings have been provided, according to these regulations.
- B. **Disapproval.** Should the Planning Commission decide to disapprove the Final Plat, written notice of such action, including the reasons for disapproval shall be ~~mailed~~ **transmitted** to the subdivider by the Zoning Administrator. The action shall be entered on the official records of the Planning Commission.

#### **7.2.11 EFFECT OF APPROVAL.**

After the Final Plat has been approved by the Planning Commission, and signed by the chair~~man~~ of the Planning Commission, it shall be recorded as specified in sub-section **7.2.13** ~~3-12~~ of these regulations.

#### **7.2.12 DISPOSITION OF APPROVED FINAL PLAT.**

After approval of the Final Plat by the Planning Commission, the Zoning Administrator shall cause to have made at the expense of the subdivider, three (3) copies of the Final Plat to be retained by the Zoning Administrator one copy of which shall be a reproducible mylar to be retained by the City.

#### **7.2.13 RECORDING.**

After approval of the Final Plat, the original drawing of the approved Final Plat shall be filed in the County Clerk's office, after which lots may be sold, leased, or transferred. A certificate of occupancy, however, may not be issued until all required improvements have been installed or a guarantee is executed as per sub-section **7.6.17** ~~7-16-B~~. In the case where sidewalk improvements have not been completed, a conditional certificate of occupancy shall be given, provided either a guarantee is executed as per sub-section **7.6.17** ~~7-16-B~~ of these regulations, or a time period for completion is established, by contract with the applicable legislative body not to exceed six (6) months, signed by both the builder and owner of the premises for which the improvements will serve.

#### **7.2.14 SUBMISSION OF AS-BUILT IMPROVEMENT DRAWINGS.**

In the case where the Planning Commission has given Final Plat approval before construction of improvements as per Section ~~3-9-A-2~~, and after all water, sewer, and street improvements have been installed, in accordance with these regulations, the subdivider shall submit to the Zoning Administrator

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one (1) copy each of the as-built drawings for water, sanitary and storm sewer improvements, for record purposes.

### 7.2.15 ACCEPTANCE OF IMPROVEMENTS FOR MAINTENANCE AND/OR LAND OFFERED FOR DEDICATIONS.

After all improvements have been installed in accordance with the approved improvement drawings and specifications and the as-built drawings have been submitted, and the City Engineer and/or Building Inspector has indicated, that the inspection was made and approved (~~as per Section 7.13~~) the applicable legislative body or other applicable public body should accept the improvements for maintenance (or in the case of lands to be dedicated may accept such lands in fee simple, by easement, or other such instrument approved by the applicable governmental body) and then transmit a copy of the instrument of acceptance to the Zoning Administrator.

### 7.2.16 SUBMISSION AND PROCESSING OF IDENTIFICATION PLATS.

A. General. It is the purpose of the identification plat to provide a process whereby not more than two lots, including the residual property, may be subdivided from land held in large tracts, without having to be processed through the Preliminary and Final Plat procedures, as established in these **Subdivision** Regulations. Said identification plat process is also intended to provide for certain lot line adjustments that may be required (e.g., such as side and rear lot lines) when involving no more than three contiguous lots. In order to be processed as an identification plat, the following requirements ~~must~~ **shall** be met in addition to other requirements of these regulations:

1. The parcel to be subdivided will not involve the construction of any public water lines, storm and sanitary sewers, and streets, etc.
2. Not more than two lots, including the residual parcel, may be subdivided from the original tract of land existing prior to 1966.
3. Lot lines that are to be adjusted in already recorded subdivisions shall not involve more than three contiguous lots. If more than three lots are involved then said lots shall be handled as a resubdivision and processed according to the applicable requirements of the Preliminary and Final Plats.
4. Except as noted in item (3) above, the identification plat process shall not be permitted in areas already approved or conditionally approved as a preliminary plat.

**Questions to Consider:** Use of an Identification plat means an applicant has a one step process for plat approval. In other words, an applicant does not have to submit and receive approval from the Planning Commission for both a preliminary and final plat. They only come before the Planning Commission one time for approval of an Identification Plat. Given that process implication:

1. Are the above requirements for an Identification Plat still appropriate?
2. If not, what type of subdivision/lot line adjustments/etc. should be able to use an Identification Plat?

B. Submission of the Identification Plat. The subdivider shall submit to the City staff, the original and three copies of the identification plat at a size measuring 8-1/2 x 11" or 8-1/2 x 14" (intended for attachment to a deed) and prepared in accordance with the applicable

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requirements of **Section 7.4 Article V** and other pertinent sections of these regulations. In addition, the Identification Plat shall also contain the following information:

1. A statement by a registered land surveyor preparing the plat that the parcel represents the first or second parcel subdivided from the original tract existing prior to 1966.
2. In the case of the second lot to be subdivided, sufficient information shall be included to locate the parcel being subdivided in relation to the previous subdivided parcel, as well as its location within the original tract existing prior to 1966.
3. A vicinity map drawn at a scale of one (1) inch to two thousand (2,000) feet or greater (e.g., one (1) inch to one thousand (1,000) feet on the plat showing, within one half (1/2) mile of the proposed subdivision, existing roads and other significant features (e.g., streams, lakes, etc.)

At this time the following information shall also be filed with the staff:

1. Application for Identification Plat Approval. An application (provided by the Commission **and available in the Office of the Zoning Administrator and on the City's website**) shall be submitted (~~see Appendix E~~) at the time of submission, the staff, shall indicate on the application the date of submission and signature of the City official.
  2. Traverse Sheets. One copy of the traverse calculations. The minimum traverse calculations required shall include a closed traverse of the subdivision boundaries as per Section 5.0.B.
  3. Identification Plat Fees. Plat fees shall be submitted in accordance with **the adopted Fee Schedule of the City of Fort Thomas, KY** ~~Section 8.1 of these regulations~~.
- C. Processing of Identification Plat. The Planning Commission shall review the Identification Plat as per the applicable requirements of **Section 7.4 Article V**, the requirements of this section, and other pertinent sections of these **Subdivision Regulations and this Ordinance**. Following the review, the Planning Commission shall take one of the following actions: (1) approve the Identification Plat; (2) or disapprove the Identification Plat. Should the Planning Commission disapprove the identification plat, written notice of such action, including the reasons for disapproval shall be ~~mailed~~ **transmitted** to the subdivider by the Planning Commission. The action shall be entered in the official records of the Planning Commission. If approved and signed by the chairman of the Planning Commission, the original Identification Plat shall be recorded in the County Clerk's office per the County's requirements.

## 7.2.17 SUBMISSION AND PROCESSING OF CONDOMINIUM PROPERTY REGIME PLATS.

- A. General. In accord with the Horizontal Property Law (KRS 381.805-381. 910), whenever a developer, the sole owner, or the co-owners of a building or buildings constructed or to be constructed, expressly declare, through the recordation of a master deed or lease, a condominium property regime may be established. Once the property is submitted to the condominium property regime, a unit in the building(s) may be individually conveyed and may be the subject of ownership possession or sale and other acts as if it were sole and entirely independent of the other units in the building(s) of which they form a part and the corresponding individual titles and interest shall be recordable. It is the purpose of the

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condominium property regime plat to provide a process whereby two or more apartments, townhouses, rooms, office spaces, or other units in existing or proposed buildings or structures may be subdivided and offered for sale in accordance with requirements as established by these regulations. In order to be processed as a condominium property regime plat, the following requirements must be met in addition to other requirements of these regulations and applicable sections of KRS 381.805 to 381.910:

1. The condominium project will not involve the construction of any public streets, water lines, storm and sanitary sewers ~~which~~ **that** require review and processing through Preliminary and Final Plat procedures.
  2. The condominium project will not involve the subdivision and conveyance of land with any unit within the condominium property regime for which other processes are available.
- B. **Submission of Condominium Property Regime Plats.** The developer shall submit to the Planning Commission, three (3) copies of the Final Plat drawing prepared in accordance with **Section 7.4 Article V** of these regulations. In addition to other requirements of these regulations, the Final Plat shall show the location of the building or buildings proposed for the condominium project. Simultaneously, with the submission of the Final Plat, there shall be attached three (3) copies of a set of floor plans of the building or buildings in accord with KRS 381.835 bearing the certification of a registered architect or professional engineer.

At this time, the following information shall be filed with the City staff:

1. **Application for Condominium Property Regime Plat Approval.** An application form provided by the Commission, shall be submitted ~~(see Appendix E)~~ at the time of filing for Condominium Property Regime Plat approval.
  2. **Traverse Sheets.** One (1) copy of the traverse calculations. The minimum traverse calculations required shall include a closed traverse of the property (as per Section 5.0.B).
  3. **Master Deed or Lease.** One (1) copy of the master deed or lease, in accord with the requirements of KRS 381.835 to 381.837.
  4. **Condominium Property Regime Plat Fees.** Plat fees shall be submitted the same as for Final Plats, in accord with Section 8.1 of these regulations.
- C. **Processing of Condominium Property Regime Plats.** The City staff shall review the condominium property regime plats for conformance to the applicable requirements of **Section 7.4 Article V** of these regulations and KRS 381.805 to 381.910. Following the review, the staff shall forward its recommendation and/or comments to the Planning Commission. The Planning Commission shall then review the recommendations of the staff and shall take one of the following actions: (1) approve the condominium property regime plats; (2) or disapprove the condominium property regime plats. Should the Planning Commission disapprove the plats, written notice of such action, including the reasons for disapproval, shall be ~~mailed~~ **transmitted** to the subdivider by the Zoning Administrator. The action shall be entered in the official records of the Planning Commission and signed by the Chair~~man~~ of the Planning Commission. If approved and signed by the Chair~~man~~ of the Planning Commission, the original condominium property regime plats shall be recorded simultaneously with the master deed or lease in the County Clerk's office per the County's requirements.

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**7.2.18 REVOCATION OF SUBDIVISION PLAT.**

**Revocation of a previously approved Subdivision Plat shall be permitted only in accordance with KRS 100.285.**

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### SECTION 7.3 Preliminary Plat Requirements

- 7.3.01 Specifications for & Content of the Preliminary Plat.

#### 7.3.01 SPECIFICATIONS FOR AND CONTENT OF THE PRELIMINARY PLAT.

The subdivider shall file with the City staff, three (3) copies or digital files acceptable to the Zoning Administrator of the preliminary plat for review. Such plat shall be drawn at a scale of one (1) inch to one hundred (100) feet or greater (e.g., one (1) inch to fifty (50) feet).

- A. The following information shall be clearly shown or accompany the preliminary plat:
1. Proposed name of subdivision, which shall not duplicate or too closely approximate, phonetically, or in spelling, the name of any other subdivision in the county.
  2. Name, address, and phone number of record owner(s).
  3. Name, address, and phone number of subdivider(s).
  4. Name, address, and phone number of person, firm, or organization preparing the preliminary plat, with the seal and signature of the registered professional engineer responsible for its preparation.
  5. North arrow, written and geographic scale, and date.
  6. Vicinity sketch map: a vicinity sketch map drawn at a scale of one (1) inch to two thousand (2000) feet or greater (e.g., one (1) inch to one thousand (1000) feet), including the following information, if applicable within at least one half (1/2) mile of the proposed subdivision:
    - a. Proposed subdivision name and location;
    - b. Existing and proposed streets;
    - c. Other significant features (e.g., streams, lakes, etc.)
  7. The perimeter boundary lines of the tract to be subdivided and submitted as a preliminary plat shall be drawn to scale showing all bearings and distances.
  8. The existing use or uses of the property and, to scale, the outline of any existing buildings or improvements to be retained and their location in relation to existing or proposed street and lot line locations (addresses if available).
  9. The right-of-way lines and names of all existing or platted streets, other public ways and easements adjacent to or in connection with the subdivision including right-of-way widths and other important features at least within one hundred (100) feet of the boundary lines, such as railroad lines, watercourses, etc.

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10. Names of adjacent subdivisions and the property lines, at least within one hundred (100) feet of the subdivision boundary, and owners of record of all adjacent parcels that are unsubdivided (for adjacent platted land, refer to subdivision plat by name, plat book, and page).
11. Location and dimensions of all existing easements and rights-of-way way within the subdivision.
12. Existing utilities on and adjacent to the subdivision: location and size of water mains, sanitary, storm and/or combined sewers.
13. Existing contours at five (5) foot intervals within the subdivision and within 100 feet of the subdivision boundary.
14. Subsurface conditions on the subdivision; any known conditions that are not typical, or which may cause problems, such as: soils and geological formations, old mine shafts, wells, known material deposits, etc.
15. Proposals:
  - a. Streets and Alleys: layout, names, right-of-way and pavement widths, approximate corner radii at the right-of-way line and the approximate proposed grades of all streets.
  - b. Other Rights-of-Way or Easements: location, width, and purpose.
  - c. Lots: lots & blocks numbered.
  - d. Water and Sewer Systems: plan view layout of water lines, storm and sanitary sewer lines, including sizes, to serve the subdivision.
16. Statement of the lot area of the smallest lot in the subdivision (reference shall be made to the lot and block number).
17. Parcels of land intended to be dedicated or temporarily reserved for public use, or to be reserved by deed restriction or protective covenant for use of all property owners in the subdivision or parcels of land or lots to be used for any purpose other than private, shall be so designated.
18. Proposed uses for all land in the subdivision.
19. Approximate boundaries of areas subject to flood of 100-year frequency (including 100-year floodway) and the location, width, and direction of flow of all watercourses, lakes, marshy areas, and swamps.
20. Total site data: including acreage, number of lots, **the area of each lot**, and if applicable, approximate number of square feet or acres in parks and other public uses.
21. **For major subdivisions**, tree Conservation and Restoration Requirements as established per City Ordinance 0-4-90 including all amendments thereto **and codified as Chapter 98, Trees, of the City of Fort Thomas, KY General Ordinances**.



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- B. ADDITIONAL INFORMATION TO BE SUBMITTED AT TIME OF FILING OF PRELIMINARY PLAT:
1. One (1) copy of an application for Preliminary Plat approval (provided by the Commission **and available in the Office of the Zoning Administrator and on the [City's website](#)**) See Appendix E.
  2. If individual on-site disposal systems have been approved, ~~as per Section 7.1 of these regulations,~~ one (1) copy of a permit to use on-site disposal systems approved by the Northern Kentucky ~~District~~ Health Department.
  3. One (1) copy of applicable Board of Adjustment action identifying any dimensional variances granted, if applicable.
  4. In the event the subdivider elects to proceed with preliminary grading following the preliminary plat approval or conditional approval, but prior to submission and processing of the improvement drawings and specifications, one (1) copy of plans for grading and control of erosion and sedimentation must also be submitted to the City Engineer, for review and approval.
  5. **Identify the owner and/or entity responsible for ownership and/or maintenance of common areas, storm water facilities, and other similar features such as homeowners' associations.**

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## SECTION 7.4 Final Plat Requirements including Improvement Drawings & Specifications

7.4.01 Specifications for & Content of the Final Plat.

### 7.4.01 SPECIFICATIONS FOR AND CONTENT OF THE FINAL PLAT:

The subdivider shall file with the Zoning Administrator, three (3) copies of the Final Plat for review. The Final Plat of the subdivision shall be drawn on material as required by the county clerk's office in a black, waterproof media ink. The Final Plat shall be drawn at a scale of one (1) inch to fifty (50) feet or greater (e.g., one (1) inch to thirty (30) feet). However, if the Final Plat will contain lots of one hundred (100) feet or greater, fronting along a street, then a scale of one (1) inch to one hundred (100) feet or greater may be used.

Where necessary, the Final Plat may be on several sheets accompanied by an index showing the entire subdivision. The particular number of the sheet, the total number of sheets, and the relation of each adjoining sheet shall be clearly shown by a small key map on each sheet. Each sheet of said plat shall show the north arrow, written and graphic scale and the date. The Final Plat shall contain a vicinity map showing the location of the subdivision with relation to at least one (1) east/west and one (1) north/south major arterial. The Final Plat shall further locate and retrace any of the required data thereon.

#### A. Information to be Contained on Final Plat:

1. The boundary lines of the Final Plat shall be drawn in heavy solid lines with accurate lengths and bearings. These boundaries shall be determined by an accurate field survey, which shall be balanced and closed. All lines shown on the plat which do not constitute a part of the subdivision shall be dashed. Any area enclosed by the subdivision, but not a part thereof, shall be labeled "Not a Part of This Subdivision".
2. The exact location and the widths of all existing or recorded streets, intersecting or paralleling the boundaries of the subdivision at least within one hundred (100) feet.
3. The exact location and width of all abutting lot lines. Names of recorded owners of adjoining unplatted land and reference to subdivision plats of adjoining platted land by name, plat book, and page and lot numbers for lots within an existing subdivision.
4. The boundary line of the proposed Final Plat shall be tied by bearings and distances to a selected point or points (described on the plat) on the nearest established centerline or right-of-way line of any street or highway or a previously established monument(s) in which case the location of said monument shall be identified and accurately described on the plat. In addition, the final plat shall be tied by bearings and distances to a point in the original parent tract.
5. Municipal and County boundaries lines, if applicable.
6. The exact layout of the subdivision showing:

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- a. Street and alley centerlines and right-of-way lines shall be graphically shown; street names and bearings and distances along centerlines.
  - b. Sufficient linear, angular, and curve data (at least Delta, Tangent, Radius, and Length of Curve) to readily determine the bearing and length of the boundary lines of every block, lot and tract which is a part of the subdivision.
  - c. All easements or other rights-of-way (the limitation of the easement rights shall be stated or referenced on the plat).
  - d. All lot lines with dimensions and bearings.
7. Identification of any waivers of the subdivision regulations granted by the Planning Commission, such as: sidewalks on one side of the street; width of street pavement; any need for additional off-street parking spaces; etc.
  8. All blocks and lots numbered or lettered in a consecutive manner with no omissions or duplications. Lot area of all lots. Ditto marks shall not be used for lot dimensions. Tracts offered for dedication, other than for streets or easements shall be designated by letter or number. Further, the accurate outline of all such tracts shall be shown with the proposed use indicated thereon.
  9. All permanent monuments set or to be set shall be shown on the Final Plat (see sub-section **7.6.11** ~~7.10.A & B~~):
    - a. The location of all monuments placed in making the survey and if any points were reset, that fact shall be stated and attached to Final Plat for recording (minimum four (4) monuments per subdivision boundary).
    - b. Monuments shall be set at intersections of street center lines and curve points or offsets therefrom. The exact location of all such monuments shall be shown on the Final Plat before approval is requested.
    - c. Description (size and material) of all monuments set and/or found.
  10. The accurate outline of all property (if applicable) which is to be reserved by deed restriction or protective covenant for the common use of the property owners in the subdivision.
  11. Flood Hazard Information: Elevation and flood profiles shall be shown on the Final Plat if required (as determined as per sub-section **7.5.05** ~~6.4.A~~ of these regulations).
  12. All easements shall be shown by a fine dashed line and clearly labeled and identified on the plat. If an easement shown on the plat is already of record, its recorded reference must be given.
  13. Name of the subdivision and name or number or the large subdivision or tract of which the tract now being subdivided is a part.
  14. North arrow (showing true north), written and graphic scale, and date.
  15. Total site data including acreage, and, if applicable, number of square feet or acres in parks and other public uses.

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16. Certification, acknowledgments, and descriptions: The following certificates, acknowledgements, and descriptions shall appear on the title sheet of the Final Plat (unless otherwise stated herein). Representative certificates, acknowledgments, and approvals that shall be used on the Final Plat appear in Appendix D of these regulations.
  - a. Dedication certificates: a notarized certificate shall be signed and acknowledged offering for dedication all parcels of land shown on the Final Plat which are intended for public dedication.
  - b. Surveyor's certificate: a certificate shall be signed by a Registered Land Surveyor, in Kentucky, stating that he is responsible for the survey and that the Final Plat accurately depicts the subdivision and the survey. The signature of such surveyor must be accompanied by his seal and registration number.
  - c. Reference of property from which the plat is taken: each reference in such description to any tract, development, or subdivision, shall show a complete reference to records of the county.
  - d. Other affidavits, etc.: the title sheet shall contain such other affidavits, certificates, acknowledgments, endorsements, and notarial seals as are required by law and by these regulations. If such documents are recorded elsewhere, then reference to such documents should be included on the Final Plat.
  - e. Certificate of approval by the chairman of the Planning Commission.
  - f. Certificate of acceptance for recording by the County Clerk.
  - g. Certificate of acceptance of public improvements and lands dedicated for public use by the Mayor.
- B. Additional Information to be submitted at the time of filing of final plat:
  1. One (1) copy of an application for Final Plat approval provided by the Commission **and available in the Office of the Zoning Administrator**. ~~(see Appendix E).~~
  2. One (1) copy of traverse calculations, resulting from an accurate and complete boundary survey of the perimeter of the Final Plat. Traverse calculations when computed from field measurements, on the ground, shall close with an error of closure not to exceed one (1) foot to five thousand (5,000) feet.
  3. Improvement drawings and specifications (improvement drawings and specifications will be required if not submitted previously for processing as per Sections 3.5 and 3.6): Drawings, showing typical cross sections, profiles, construction details, and specifications for all required improvements shall be prepared by a registered engineer in conformance with the provisions in ~~Article VII~~ **Section 7.6** and any other pertinent sections of these regulations.
    - a. Three (3) copies of the Sanitary Sewerage & Storm Systems Plans ~~(as per Sections 7.0 & 7.1).~~
    - b. Three (3) copies of the Water System Plans ~~(as per Section 7.2).~~

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- c. Three (3) copies of the Street Plans and Profiles, including typical cross sections ~~(as per Section 7.3)~~.
  - d. Three (3) copies of the Drainage Report, including computations ~~(as per Section 7.0)~~.
  - e. Three (3) copies of plans for control of erosion and sedimentation ~~(as per Section 7.12)~~.
4. As-Built improvement drawings: Where the improvement drawings and plans were previously submitted and approved prior to the submission of the Final Plat, the subdivider shall be required to submit two (2) copies each of as-built improvement drawings for: sanitary sewerage & storm system, and water system & roadway.
  5. Two (2) copies of all deed restrictions or protective covenants (may be either placed directly on the final plat, or if separately recorded, reference is made on the final plat).
  6. Final plat fees: final plat fees shall be submitted in accordance with **the adopted Fee Schedule of the City of Fort Thomas, KY** ~~Section 8.1~~.
  7. Guarantee: a guarantee (if applicable) per sub-section **7.6.17** ~~7.18~~.
  8. Recording fees: The subdivider shall pay the recording fee, per requirements of the County Clerk.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

## SECTION 7.5 Design Standards for the Layout of Subdivisions

7.5.01	Streets.	7.5.06	Blocks.
7.5.02	Intersections.	7.5.07	Lots.
7.5.03	Easements.	7.5.08	Pedestrian Ways.
7.5.04	Physical Considerations.	7.5.09	Public Sites.
7.5.05	Flood Hazard.		

### 7.5.01 STREETS.

- A. Conformity to Comprehensive Plan and/or Official Map. Whenever a tract of land to be subdivided or resubdivided includes any part of, or is adjacent to, a proposed arterial or collector street as designated on the comprehensive plan and/or the Official Map, the subdivider shall meet with the Zoning Administrator to determine the design requirements needed for compliance with comprehensive plan (e.g., right-of-way width for future widening and pavement widths).
- B. Street Extension.
1. Existing Streets. The arrangement of streets in new subdivisions shall make provision for the proper continuation of existing streets in adjoining areas, unless determined otherwise by the Planning Commission.
  2. Adjacent Property. Where adjoining areas are not subdivided and are appropriate for future subdivision, arrangement of streets in new subdivisions shall make provision for the proper projection of streets to those adjoining areas in a manner which shall provide for the practical development of the adjacent property.
  3. Half Streets. Dedication of one-half (1/2) of the right-of-way (half streets) for streets proposed along the boundaries of land to be subdivided, shall be prohibited.
- C. Street Classification and Function:
1. Arterial Streets. Arterial streets should be planned so as to provide for the smooth flow of traffic between points of heavy traffic generation and from one section of the community or communities to another. Such arterial streets should traverse the entire community or communities. Arterial streets should not bisect neighborhoods but should act as boundaries between such neighborhoods. Direct access onto the roadway from abutting properties shall be discouraged.
  2. Collector Streets. Collector streets should be designed to provide for the smooth flow of traffic from subcollector streets to arterial streets. These streets should be designed to carry traffic which has an origin or designation within the neighborhood and between arterial streets. Said streets shall be designed in such a manner to discourage "short cuts" through the neighborhood. Direct access to abutting property should be discouraged whenever possible.

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- 3. Subcollector Streets. Subcollector streets shall be designed to provide a traffic route from local streets. Said streets will serve equally both traffic movement and abutting properties.
- 4. Local Streets, including Cul-de-sacs and Courts. Local streets shall provide direct and full access to each lot and direct traffic movement to another local street or to a subcollector street. Said street ~~shall~~ **may** be laid out so that their use by through traffic will be discouraged. Local street intersections with arterial streets shall be discouraged, whenever practical.
- 5. Frontage Roads. Frontage roads may be required along existing or proposed arterial streets to provide access to lots along such streets.
- 6. Alleys. Where alleys are to be provided (e.g., in the case of certain commercial development), they shall be designed to provide only secondary access.

D. Street Rights-of-Way and Grades:

- 1. Widths and grades of new streets: Street right-of-way widths and grades shall conform to the following minimum requirements:

The Planning Commission shall maintain the authority to grant relief of strict compliance of street grades when unique circumstances are presented and substantiated by the applicant.

STREET RIGHTS-OF-WAY WIDTH AND GRADE REQUIREMENTS

TYPE OF STREET	MINIMUM RIGHT-OF-WAY WIDTH (IN FEET)***	GRADES BY PERCENT	
		MAXIMUM	MINIMUM
ARTERIAL	*	*	*
COLLECTOR	60	10	.5
SUBCOLLECTOR	50	12	.8
LOCAL (INCLUDING CUL-DE-SACS)			
Residential	50	12	.8
Commercial and Industrial Areas	60	12	
COURTS (LESS THAN 400' LENGTH)	40	12	.8
FRONTAGE ROAD	*	**	**

This Table has been replaced by Table 1. below.

\* Arterial streets shall be based on current design standards and other pertinent requirements of the Kentucky Department of Transportation and the official area-wide comprehensive plan.

\*\* Requirements will vary for a frontage road depending on whether the street would serve as a local subcollector or collector type street and as such would be designed in accordance with the respective requirements of said streets.

\*\*\* Except as may be permitted in Table 3 of these regulations.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

TABLE 1 STREET RIGHT-OF-WAY WIDTH AND GRADE REQUIREMENTS			
TYPE OF STREET	MINIMUM RIGHT-OF-WAY WIDTH (FT) ***	GRADES (%)	
		MAXIMUM	MINIMUM
ARTERIAL	*	*	*
COLLECTOR	60	10	1
SUBCOLLECTOR	50	12	1
LOCAL (INCLUDING CUL-DE-SACS)			
- RESIDENTIAL	50	12	1
- COMMERCIAL & INDUSTRIAL AREAS	60	8	1
COURTS (LESS THAN 400' LENGTH)	40	12	1
FRONTAGE ROAD	**	**	**

NOTES:  
 \* Arterial streets shall be based on current design standards and other pertinent requirements of Kentucky Transportation Cabinet and the official area-wide comprehensive plan.  
 \*\* Requirements will vary for frontage roads depending on whether the street would serve as a local subcollector or collector type street and as such would be designed in accordance with the respective requirements of said streets.  
 \*\*\* Except as may be permitted in Table 4 of these regulations.

2. Existing Streets: Subdivisions platted along existing streets shall dedicate additional right-of-way, if necessary, to meet the minimum street width requirements set forth in ~~Section 6.0, Subsection D (1)~~ **Table 1** of these regulations. Such dedication shall be in accordance with the followings:
  - a. At least the minimum right-of-way width shall be dedicated where the subdivision is on both sides of an existing street.
  - b. When the subdivision is located on only one side of an existing street, one-half (1/2) of the required right-of-way width, measured from the centerline of the existing right-of-way, shall be dedicated. However, the owner or owners of such property shall not be required to dedicate more than one-half (1/2) of the required rights-of-way width.

E. Curves and Sight Distance

1. Sight Distance. Minimum Sight Distances for vehicles entering and exiting an intersection shall be designed in compliance with the guidelines established by the American Association of State Highway Officials (AASHTO) manual "A Policy of the Geometric Design of Highway and Streets," as summarized in Tables 2-A & 2-B. Sight Distance calculations and profiles shall utilize a driver's eye height of 3.5 feet and an object height of 2.0 feet.



Changes from existing provisions are noted: **Substantive Additions** and **Deletions**

TABLE 2a

SIGHT DISTANCES FOR VEHICLES EXITING FROM ACCESS POINTS ONTO ADJACENT ROADS

D = DISTANCE ALONG MAJOR ROAD FROM ACCESS POINT TO ALLOW VEHICLE TO ENTER SAFELY (FEET) SEE ACCOMPANYING ILLUSTRATION (\*)

VEHICLE TYPE	20 MPH			30 MPH			40 MPH			50 MPH			60 MPH		
	2 Lane	4 or 6 Lane	D	2 Lane	4 or 6 Lane	D	2 Lane	4 or 6 Lane	D	2 Lane	4 or 6 Lane	D	2 Lane	4 or 6 Lane	D
Passenger Car	150	130	130	360	260	220	530	440	380	740	700	620	950	1050	950
Truck	300	200	200	500	400	400	850	850	850	1600	1600	1600	2500	2500	2500

TABLE 2b

LEFT TURN SIGHT DISTANCE FOR VEHICLES ENTERING ACCESS POINTS

S = SIGHT DISTANCE ALONG MAJOR ROUTE FOR VEHICLE TO SAFELY TURN LEFT INTO ACCESS POINT (FEET) - SEE ACCOMPANYING ILLUSTRATION

VEHICLE TYPE	20 MPH			30 MPH			40 MPH			50 MPH			60 MPH		
	2 Lane	4 Lane	6 Lane	2 Lane	4 Lane	6 Lane	2 Lane	4 Lane	6 Lane	2 Lane	4 Lane	6 Lane	2 Lane	4 Lane	6 Lane
Passenger Car	150	160	170	230	250	270	370	400	420	520	550	580	700	740	780
Truck	260	260	300	400	440	480	570	620	670	810	880	950	1000	1100	1200

\* Measured from a vehicle ten (10) feet back of the pavement edge

NOTE:

Values are for urban conditions. On rural streets, distances are to be increased by 10 percent to allow for longer drive reaction time

The sight distances apply when street grades are zero to 3.0 percent (either up or down). When an approach is steeper than 3.0 percent, adjustments are to be made to compensate for the longer time required to reach the speed of highway traffic. The time is less than shown when the highway is descending. Adjustment factors below apply to grades only in that portion of the road between the access points and the downstream point at which a vehicle emerging from the access points has been able to accelerate to within ten miles per hour of the route speed.

When the street, in the section to be used for acceleration after leaving the access point, ascends at 3 to 4 percent, then sight distances in the direction of approaching ascending traffic are to be increased by a factor of 1.4. When the access point ascends at 5 to 6 percent, sight distance should be increased by a factor of 1.7.

When the road in the section to be used for acceleration after leaving the access point descends at 3 to 4 percent, sight distances in the direction of approaching descending highway traffic should be reduced by a factor of 0.6. If the road descends at 5 to 6 percent, sight distance should be reduced by a factor of 0.5.

When the criteria for sight distances to the right cannot be met, the need can be eliminated by prohibiting left turns by exiting vehicles.

All of these tables have been replaced by Tables 2a, 2b, and 3 as well as the accompanying text.

TABLE 3

IMPROVEMENT REQUIREMENTS BY TYPE OF STREET SERVING RESIDENTIAL SUBDIVISIONS (F)

TYPE OF STREET	NO. OF LOTS SERVED	RIGHT-OF-WAY WIDTH (IN FT.)	PAVEMENT WIDTH (IN FT.)	CURB AND GUTTER (C)	SIDEWALKS ALONG STREET (B)	ON-STREET PARKING	MINIMUM FRONT YARD DEPTH REQUIRED (IN FEET)	OFF-STREET PARKING REQUIRED	MINIMUM LOT WIDTH REQUIRED (IN FEET)	MINIMUM PAVEMENT THICKNESS (G)
COLLECTOR - Standard	Typical Optional	Under 7	40 40	25 22	Yes Yes	One side One side	(A) 35	(A) 4 spaces (E)	(A) (A)	(G) (G)
COLLECTOR - Standard	Typical Optional	7-25	50 40	28 25	Yes Yes	Both sides Both sides	(A) 50	(A) 4 spaces (E)	(A) (A)	(G) (G)
LOCAL	Typical Optional	Under 100	50 40	28 25	Yes Yes	Both sides Both sides	(A) 50	(A) 4 spaces (E)	(A) (A)	(G) (G)
COLLECTOR	Typical Optional	100-500	50 40	28 25	Yes Yes	Both sides Both sides	(A) 50	(A) 4 spaces (E)	(A) (A)	(G) (G)
COLLECTOR (D)	Typical Optional	Over 500	60 60	40 36	Yes Yes	Both sides Both sides	(A) 50	(A) 4 spaces (E)	(A) (A)	(G) (G)

NOTE: Where streets are to serve industrial or commercial areas, the pavement design shall be based on a study prepared by the subdivision's engineer, projecting the type of vehicles using the street and traffic volumes and approved by the planning commission's duly authorized representative.

(A) Minimum as per applicable zoning ordinance requirements.

(B) Sidewalks may be permitted on only one side of the street, providing the minimum front yard depth is 50 feet and the minimum lot width is 100 feet. When subdivisions are designed to provide pedestrian walkways to the rear of lots or in other locations other than along the street, the planning commission may require sidewalks along the streets. In the case where local streets serving less than 25 lots, sidewalks may be permitted on one side of the street.

(C) Shoulders and side ditches may be permitted and designed in accordance with these regulations (see Appendix C) provided the minimum front yard depth is 50 feet, the minimum lot width is 100 feet, the minimum right-of-way is increased by 10 feet, except for collector streets.

(D) Driveway access to streets along collector streets shall be discouraged, however, if permitted, shall be spaced not less than 200 feet apart.

(E) Individual off-street parking spaces shall be laid out in such a manner to insure that each space has unrestricted ingress and egress to a public street (i.e., not blocked from gaining access to the street via another parked vehicle).

(F) Arterial streets shall be designed in accordance with the requirements of the Kentucky Department of Transportation.

(G) Minimum pavement thickness for portland cement concrete and asphalt concrete shall be designed in accordance with Table 3 and 6, respectively. The case where local streets serving less than 25 lots, the minimum lot width shall be as per the applicable zoning ordinance requirements.

Changes from existing provisions are noted: **Substantive Additions** and **Deletions**

TABLE 2-A: SIGHT DISTANCE REQUIREMENTS FOR EXITING VEHICLES (FEET)								
NO. OF LANES	POSTED SPEED LIMIT (MILES PER HOUR)							
	20	25	30	35	40	45	50	55
2-LANES	230	285	340	400	455	510	570	625
4-LANES	245	305	365	425	485	545	605	665

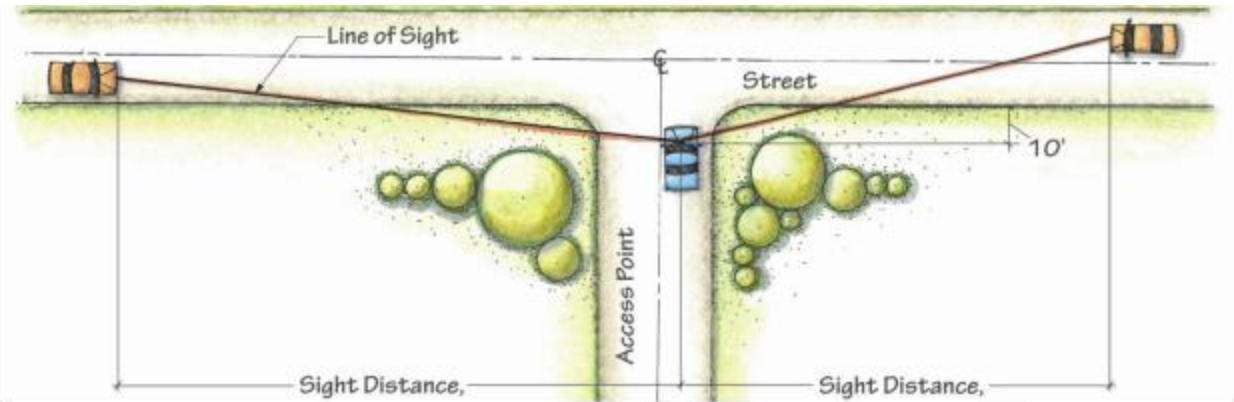


Figure 1: Illustration of Sight Distance Requirements for Exiting Vehicles

TABLE 2-B: SIGHT DISTANCE REQUIREMENTS FOR EXITING VEHICLES (FEET)								
NO. OF LANES	POSTED SPEED LIMIT (MILES PER HOUR)							
	20	25	30	35	40	45	50	55
2-LANES	165	205	245	285	325	365	405	445
4-LANES	180	220	265	310	355	400	440	485
6-LANES	195	240	290	335	385	430	480	525

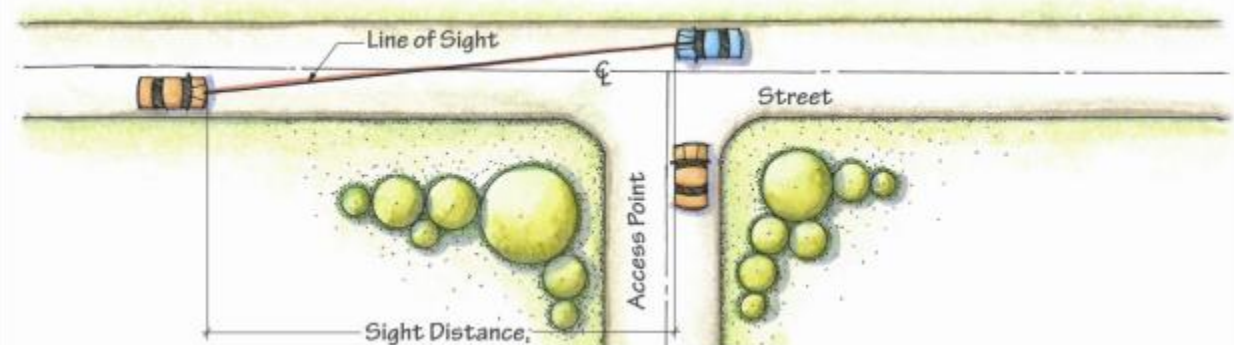


Figure 2: Illustration of Sight Distance Requirements for Approaching Vehicles

2. **Horizontal Curve.** Where there is a change in the alignment of a street along the centerline, a curve with a radius adequate to insure safe sight distance shall be constructed. The minimum radii of curves are shown in Table 3.
3. **Reverse Curves.** A tangent of at least two hundred (200) feet for collector streets, shall be provided between reverse curves. No tangent shall be required for local and subcollector streets.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- 4. **Vertical Curves.** The minimum vertical curve length required shall be calculated by multiplying the algebraic difference in grades times a "K" factor. Rounded "K" factors for local and subcollector and collector streets are shown in Table 3.

TABLE 3: GEOMETRIC DESIGN STANDARDS				
FUNCTIONAL CLASSIFICATION	DESIGN SPEED	HORIZONTAL	VERTICAL	
			CREST	SAG
		MINIMUM RADIUS (FT)	K FACTOR MINIMUM	K FACTOR MINIMUM
ARTERIAL	*	*	*	*
LOCAL	25	100	15	15
SUBCOLLECTOR	25	100	15	15
COLLECTOR	35	400	30	35
NOTES:				
* Design of arterial streets shall be based on current standards of the Kentucky Transportation Cabinet.				

- F. **Cul-de-Sac and Dead-end Streets.** Cul-de-Sacs and Dead-end streets designed and constructed to be dead-end permanently, unless local topographic or other physical conditions are such as to render this provision impracticable.
- G. **Street Names.**
  - 1. **Duplication:** The name of a new street shall not duplicate existing or platted street names in the county, or approximate such names in spelling, or sound, or pronunciation, or by the use of alternate prefixes such as "North", "South", or such suffixes as "Lane", "Way", "Drive", "Court", "Avenue", "Street", etc.
  - 2. **Continuation of Streets:** New street names shall bear the same name of any continuation of, or when in alignment with, an existing or platted street.
  - 3. **Approval of Street Names:** All street names shall be approved by the Planning Commission before approval of the final plat.
- H. **Private Streets.**
  - 1. New private streets or alleys shall not be created or extended, except as approved by the Planning Commission, and existing ones shall, whenever practicable, be dedicated to the public. The Planning Commission may approve private streets to serve three (3) lots or less within any subdivision. Private streets shall be a minimum of sixteen (16) feet in **pavement** width. Pavement composition shall be consistent with standards established herein for public streets. "On-street" parking restrictions shall be implemented for all private streets and "on-street" parking restrictions shall be implemented.

Changes from existing provisions are noted: **Substantive Additions** and Deletions

**TABLE 4: IMPROVEMENT REQUIREMENTS BY TYPE OF STREET SERVING RESIDENTIAL SUBDIVISIONS (F)**

TYPE OF STREET	NO. OF LOTS SERVED	RIGHT-OF-WAY (FT)	PAVEMENT WIDTH (FT)	CURB & GUTTER (C)	SIDEWALKS ALONG STREET (B)	ON-STREET PARKING REQUIRED	OFF-STREET PARKING REQUIRED	MINIMUM FRONT YARD DEPTH SETBACK REQUIRED (FT)	MINIMUM LOT WIDTH REQUIRED (FT)	MINIMUM PAVEMENT THICKNESS
COURTS TYPICAL OPTIONAL	Under 7	40 40	25 22	YES YES	ONE SIDE ONE SIDE	ONE SIDE NONE	(A) 4 SPACES (E)	(A) 35	(A) (A)	(G)
CUL-DE-SAC TYPICAL OPTIONAL	7-25	50 40	28 <del>25</del> <b>24</b>	YES YES	BOTH SIDES BOTH SIDES (B)	ONE SIDE NONE	(A) 4 SPACES (E)	(A) 50	(A) (A)	(G)
LOCAL TYPICAL OPTIONAL	Under 100	50 40	28 <del>25</del> <b>24</b>	YES YES	BOTH SIDES BOTH SIDES (B)	ONE SIDE NONE	(A) 4 SPACES (E)	(A) 50	(A) 100 (H)	(G)
SUBCOLLECTOR TYPICAL OPTIONAL	100-500	50 40	28 <del>25</del> <b>24</b>	YES YES	BOTH SIDES BOTH SIDES (B)	ONE SIDE NONE	(A) 4 SPACES (E)	(A) 50	(A) 100	(G)
COLLECTOR (D) TYPICAL OPTIONAL	Over 500	60 60	40 36	YES YES	BOTH SIDES BOTH SIDES (B)	BOTH SIDES NONE	(A) 4 SPACES (E)	(A) 50	(A) 100	(G)

**NOTES:**

- Where streets are to serve industrial or commercial areas, the pavement design shall be based on a study prepared by the subdivider’s engineer, projecting the type of vehicles using the street and traffic volumes and approved by the Planning Commission’s duly authorized representative.
- (A) Minimum as per applicable zoning ordinance requirements.
  - (B) Sidewalks may be permitted on only one side of the street, providing that the minimum front yard depth is 50 feet and the minimum lot width is 100 feet. When subdivisions are designed to provide pedestrian walkways to the rear of lots or in other locations, other than along the street, the Planning Commission may waive sidewalks along the streets. In the case where local streets serving less than 25 lots, sidewalks may be permitted on one side of the street.
  - (C) Shoulders and side ditches may be permitted and designed in accordance with the regulations (see Appendix C), providing that the minimum front yard depth is 50 feet, the minimum lot width is 100 feet, the minimum right-of-way is increased by 10 feet, except for collector streets.
  - (D) Driveway access points along collector streets shall be discouraged, however, if permitted, shall be spaced not less than 200 feet apart.
  - (E) Individual off-street parking spaces shall be laid out in such a manner to ensure that each space has unrestricted ingress and egress to a public street (i.e., not blocked from gaining access to the street via another parked vehicle).
  - (F) Arterial streets shall be designed in accordance with the requirements of the Kentucky Transportation Cabinet.
  - (G) Minimum pavement thickness shall be designed in accordance with Appendix A.
  - (H) In the case where local streets serving less than 25 lots, the minimum lot width shall be as per the zoning ordinance requirements.

Changes from existing provisions are noted: **Substantive Additions** and Deletions

**Question to Consider for Table 4:** Is it appropriate to reduce the minimum pavement width, as shown in Table 4, given that the width of many City streets is less than 25 feet?

DRAFT

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**7.5.02 INTERSECTIONS.**

- A. Angle of Intersection. The centerline of all streets shall intersect as nearly at a ninety (90) degree angle as possible, but in no case shall the angle of intersection be less than seventy (70) degrees or greater than one hundred and ten (110) degrees, unless a special modification is granted by the Planning Commission due to certain exceptional conditions.
- B. Centerline Offset of Adjacent Intersections. Where T-intersections are used, the following minimum centerline offsets of adjacent intersections shall be as follows:

Type of Street	Minimum Centerline Offset (FT)
Local – Local	150
Local – Subcollector	150
Subcollector – Collector	<del>150</del> <b>200</b>
Collector – Collector	200

- C. Corner Radii. Property lines at street intersections shall be provided from the same radius point necessary to establish the pavement radius. If because of certain exceptional conditions, a modification is granted permitting an angle of intersection less than seventy (70) degrees, or greater than one hundred and ten (110) degrees, then the minimum radii shall be increased or decreased, respectively.
- D. Centerline Grades within Intersections. Maximum centerline grades within street intersections shall not exceed the grade for through streets, as identified in Table 1 of these regulations, depending on the type of street. The maximum grade of the centerline of the side streets intersecting with the gutter line of the through street shall not exceed four (4) percent for a distance of not less than seventy-five (75) feet from the centerline for local and subcollector streets and one hundred and fifty (150) feet for collector streets.
- E. Design Adjacent to Freeways, Expressways, Arterials or Collectors. The following principles shall be used in the design of subdivisions adjacent to freeways, expressways, or arterials:
  1. Street Design shall have the purpose of making adjacent lots desirable by cushioning the impact of heavy traffic and of minimizing the interference with traffic on such thoroughfares.
  2. Collector, Subcollector, and Local streets shall not be permitted to intersect with freeways or expressways. The number of intersections with arterial streets shall be held to a minimum. Wherever practical, such intersections shall be spaced not less than 600 feet apart. In the case of collector streets, intersections with said streets shall be spaced not less than four hundred (400) feet apart and access to driveways shall be spaced at intervals of not less than 200 feet. At those access points where turning vehicles to and from the arterial and collector streets will affect the roadway capacity or safety, reserved turn lanes shall be required, wherever practical. Frontage or service roads shall be used when these spacing requirements cannot be met.
  3. Where frontage roads are not required, lots adjacent to such thoroughfares shall, when practical, be served and be accessible only by a street generally paralleling said thoroughfare from an internal street system.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

### 7.5.03 EASEMENTS.

- A. Utility Easements. **Unless waived in writing by the City Engineer,** public utility easements at least ten (10) feet in total width ~~may~~ **shall** be required along the front, rear and sides of lots where needed for the accommodation of a public utility, drainage, or sanitary structures, or any combination of the foregoing. Where deemed necessary by the Planning Commission or its staff, an additional easement width shall be provided.
- B. Watercourses. The subdivider shall dedicate rights-of-way or provide easements for storm drainage purposes which conform substantially with the lines of any natural watercourses, channels, streams, or creeks which traverse the subdivision or for any new channel which is established to substitute for a natural watercourse, channel, stream, or creek. Such rights-of-way or easements shall be of a width ~~which~~ **that** will provide for the maintenance needs of the channel as determined by the Planning Commission **after consultation with the City Engineer.**

### 7.5.04 PHYSICAL CONSIDERATIONS.

- A. Natural Land Use. Wherever practical, subdivisions shall be planned to take advantage of the natural topography of the land, to economize in the construction of drainage facilities, to reduce the amount of danger, to minimize destruction of trees and topsoil, and to preserve such natural features as watercourses, unusual rock formations, large trees, sites for historical significance, and other assets which, if preserved, will add attractiveness and value to the subdivision and the community.

### 7.5.05 FLOOD HAZARDS.

- A. Prohibition of Development in Areas Susceptible to Flooding. Land subject to flooding or otherwise uninhabitable shall not be platted for residential, commercial, or industrial uses or for any other use which may increase the danger of health, life, property, or aggravate erosion or flood hazards. Such land within the subdivision shall be set aside on the plat for such uses as will not be endangered by periodic or occasional inundation or will not result in conditions contrary to the public welfare (e.g., use as open space, extensive recreation use, conservation purposes).
- B. Areas of land adjacent to streams, rivers, or bodies of water which have a high degree of susceptibility to flooding shall be limited to development according to either the flood protection control regulations, if adopted as part of the applicable zoning ordinance, or according to the following regulations:
1. The limits of the floodplain (areas subject to flooding during the occurrence of a 100-year flood) including elevations of the 100-year flood level along the Ohio River and certain tributaries thereof, are designated on maps and charts on file with the Kentucky Division of Water. The limits of the floodway are contained within the flood plain area.
  2. In the case of any subdivision to be developed along the tributaries of the Ohio River and located in those areas which are identified as being susceptible to flooding according to the report prepared by the U.S. Department of the Agriculture, Soil Conservation Service, "Soil Survey of Boone, Campbell, and Kenton Counties, Kentucky", August, 1973, a survey shall be made by a qualified civil engineer establishing the limits of the 100-year floodplain and floodway for said tributary.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

3. No subdivider in development of a subdivision, shall fill any area with earth, debris, or any other material or raise the level of any area in any manner, or place a building, barrier, or obstruction of any sort on any area located within the floodway which would result in any increase in flood levels during the occurrence of a 100-year flood discharge. Plans and specifications for any work which the subdivider believes will not increase the flood levels shall be submitted to the City staff for review and approval to determine if said encroachment will meet the requirements of these regulations. Mobile homes shall be prohibited from being placed within the floodway.
4. All land in the subdivision which is outside the floodway of the Ohio River and its tributaries, but located within the floodplain, may be used for any purpose for which it is zoned; provided that:
  - a. The land is graded in such a manner that any residential construction, within said floodplain shall have the lowest floor, including the basement, elevated to or be above the level of the 100-year flood; and,
  - b. The land is graded in such a manner that any new nonresidential structures within the floodplain area shall have the lowest floor (including basements) elevated to or be above the level of the 100-year flood or together with attendant utility and sanitary facilities shall be designed and flood proofed so that any structures that are anticipated to be constructed below the 100-year flood level are water tight with walls impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
5. All streets and utilities constructed to serve the subdivision to be located within the floodplain, but outside the floodway, shall be:
  - a. flood protected;
  - b. The land filled; or
  - c. Any combination thereof, to a level of not less than the elevation of the 100-year flood level. Where the fill is partially within the floodplain, roadway access and utilities shall be provided from the "dry" side (areas located above the 100-year floodplain).
- C. **Stream Easement.** If a stream flows through or is adjacent to, the proposed subdivision, the plat shall provide for a storm water easement or drainage right-of-way along the stream for a floodway of at least ten (10) feet. For the smaller streams, the plat shall provide for channel improvement to enable them to carry all reasonable floods (25 year flow) within banks. The floodway easement shall be wide enough to provide for future enlargement of the stream channels as adjacent areas become more highly developed and run-off rates are increased. (Based upon development under present zoning classification).
- D. **Streets.** Approval shall not be given for streets within a subdivision which would be subject to flooding. All streets ~~must~~ **shall** be located at elevations above a flood of a 100-year frequency. However, streets may be permitted in areas subject to flooding of a 100-year frequency provided said streets provide access to activities relating to rivers, streams, and recreational activities located along said areas.



Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

#### 7.5.06 BLOCKS.

- A. Arrangement. The arrangement of blocks shall be such as to provide for convenient access, circulation, control, and safety of street traffic. Blocks intended to be used for commercial or industrial purposes shall be designed specifically for such uses with space set aside for off-street parking and loading and/or unloading facilities as required by **this Ordinance or** the applicable zoning ordinance.
- B. Length. Blocks should not **be less than two hundred and forty feet (240') nor** exceed twelve hundred (1,200) feet, except where topographical or exceptional physical conditions exist.
- C. Width. The width of blocks should ordinarily be sufficient to allow for two (2) tiers of lots except for double frontage lots, as permitted in sub-section ~~6-6~~ **7.5.07** of these **Subdivision** Regulations.

#### 7.5.07 LOTS.

- A. Conformance to Zoning. All lots shall conform to or exceed the requirements of **this Ordinance or** the applicable zoning ordinance. Each lot shall front at least twenty-five (25) feet onto a publicly dedicated street and comply with all applicable sections of **this Ordinance or** the City's Official Zoning Ordinance.
- B. Lot Frontage and Width.
  1. Arterial Street Frontage. No access onto an arterial street shall be permitted from abutting properties except as provided for in these **Subdivision** Regulations.
  2. Corner Lots. Corner lots shall have extra width to permit conformance to the minimum setback from the side street. In no case shall a corner lot be so narrow that minimum zoning requirements cannot be met.
  3. Double Frontage Lots. Lots shall not be laid out so that they have frontage onto more than one (1) street except: (a) when the lots are adjacent to the intersection of two (2) streets; or (b) when the rear of the lot faces an arterial, freeway, expressway, collector street, railroad right-of-way, etc., and the front of the lot faces onto another street.
- C. Lot Depth.
  1. Conformance to Zoning. Each lot shall conform to all requirements of **of this Ordinance or** the Official Zoning Ordinance.
  2. Maximum Depth. The maximum depth of a lot shall not be greater than four (4) times the width of the lot, except lots which contain over five (5) acres of area. Exceptional individual site conditions may require ~~variation~~ **a waiver** from these requirements, as permitted by the Planning Commission **in sub-section 7.7.05**.
  3. Extra Depth and Width in Certain Cases. Additional side yard and lot depth as per **this Ordinance or** the applicable zoning ordinance may be required where a lot in a subdivision abuts ~~an industrial or commercial~~ **a non-residentially** zoned area.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

D. Usable Lots.

1. Building Lots. All subdivisions shall result in the creation of lots which are developable and capable of being built upon. No lots may be developed which create building sites which are impracticable to improve due to known problems related to soil conditions and geological formations, topography, and areas subject to flood prone conditions based on information prepared by the U.S. Soil Conservation Service, Geological survey maps prepared by the U.S. Geological Survey, and flood prone information supplied by the U.S. Army Corps of Engineers and the U.S. Geological Survey.
2. Strips or Parcels. No remnants of property shall be left which do not conform to minimum lot requirements of the zoning district in which the property is located, or which are not required for a private or public utility purpose, or which are not accepted by the Board of Council or any other appropriate public body for an appropriate use.
3. Side Lot Lines. The side lot lines of all lots, whenever practical, shall be at right angles to the street which the lot faces or radial to the center of curvature, if such street is curved. In the case of a cul-de-sac on which the lot faces, side lot lines shall be as nearly radial to the cul-de-sac as practical.
4. Lot Arrangement and Sizes. **The size, shape, and arrangement of lots in proposed subdivisions or developments shall be such as set forward in this Ordinance and these Subdivision Regulations. Rectangular shaped lots shall be encouraged in all zoning districts. Extremely irregularly shaped lots shall be avoided. Consideration of additional lot depth should be made when lots adjoin railroads, major utility easements, commercial or industrial areas, or other conflicting land uses. Except flag lots, lots shall be more or less rectangular in form; triangular, elongated or other shapes that restrict its use as a building site shall be avoided.**

**7.5.08 PEDESTRIAN WAYS.**

- A. Location. Where deemed necessary by the Planning Commission, pedestrian ways may be required, and if provided, they should not exceed a fifteen (15) percent grade, unless steps of an acceptable design, as determined by the City Engineer, are to be constructed.

**7.5.09 PUBLIC SITES.**

Where a proposed park or other recreational area, school site, or other public ground identified in the adopted Fort Thomas Comprehensive Plan **or the Official Map**, is located in whole or in part within the proposed subdivision, the Planning Commission may require a reservation, as a condition precedent to preliminary plat approval, not to exceed one (1) year, for the purchase of such public ground by the applicable public body.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

Much of this Section was rewritten to refer to the requirements of Sanitation District No. 1. Due to the considerable revisions, this text is not, for the most part, marked with the changes from existing provisions.

**SECTION 7.6  
Improvements**

7.6.01	Minimum Design Standards & Criteria for Storm Water Management.	7.6.11	Monumentation.
7.6.02	Sanitary Sewer System.	7.6.12	Plans for Future Expansion Extra Size & Off-Site Improvements.
7.6.03	Water System.	7.6.13	Plans Required for the Control of Erosion & Sedimentation.
7.6.04	Streets.	7.6.14	Construction Inspections.
7.6.05	Driveway Approaches.	7.6.15	Construction Responsibilities.
7.6.06	Off-Street Parking Areas.	7.6.16	Final Cleaning Up.
7.6.07	Private Utilities.	7.6.17	Agreements & Guarantees.
7.6.08	Street Signs.		
7.6.09	Street Lights.		
7.6.10	Planting Screen or Fences.		

The improvements which are hereby required shall be designed by a registered professional engineer and installed in accord with the provisions of these and other applicable regulations. Prior to the commencement of any project, a preconstruction meeting will be held with the City staff, to discuss the project in regard to procedure, materials, inspections, etc.

**7.6.01 MINIMUM DESIGN STANDARDS AND CRITERIA FOR THE STORM WATER MANAGEMENT SYSTEM.**

- A. Storm Water Drainage Systems. All storm water Drainage systems shall comply with the Northern Kentucky Regional Storm Water Management Program Rules and Regulations of Sanitation District No. 1 (SD1’s Storm Water Regulations).
  - 1. Sanitation District No. 1 shall perform the plan review of the storm water drainage system(s) and issue the appropriate permit(s) for any development that disturbs one acre of land or greater, or for disturbances of less than one acre when that disturbance is part of a larger overall development.
  - 2. Development that does not disturb one acre of land or greater will be subject to the requirement of plan reviews and/or permits through these regulations and/or the applicable zoning ordinance.
  - 3. Any proposed Subdivision that requires submission of a grading plan or improvement drawing to Staff shall receive grading plan or improvement drawing approval prior to the commencement of any earth moving operations.
- B. Inlet Grates. Except for inlets serving temporary silt basins, detention and/or retention basins, inlet grates shall not allow a sphere with a diameter of six inches to pass through.
- C. On-Street Inlet Location. Inlet spacing along streets shall be based upon gutter and inlet capacity, street slope, and contributing drainage area. In addition, inlet spacing shall not exceed the

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following spacing requirements unless hydraulic calculations are submitted that indicate acceptable capacity:

1. Along continuous grades less than two percent - 400 feet maximum.
  2. Along continuous grades two percent and over - 600 feet maximum.
  3. At sag locations less than two percent - 400 feet maximum between inlets or from a high point.
  4. At sag locations two percent and over - 600 feet maximum between inlets or from a high point.
  5. Inlets shall be placed immediately upstream of Pedestrian Walkways and designed to intercept 100 percent of the flow at the gutter line.
  6. Inlets placed at locations other than in sub-section ~~7.0.C.5~~ **7.6.01 C.5.** above shall be designed to conform to SD1's Storm Water Regulations.
  7. Roll type grate inlets shall be used in any location where a driveway will intersect the street.
- D. **Cul-de-sac Inlet Location.** Special consideration should be given to storm drainage entering cul-de-sacs. In addition to an inlet provided at the low point within the cul-de-sac, two additional inlets shall be required along each curb prior to the entrance of the cul-de-sac:
1. For street slopes eight percent and less draining more than 400 feet of pavement.
  2. For all street slopes more than eight percent and draining more than 300 feet of pavement.
- E. **Culverts and Pipe Types.** Culverts and pipe types shall be designed in accord with SD1's Storm Water Regulations.
1. All pipe installations greater than 30 inches in diameter require full-time on-site inspections under the direction of a qualified geotechnical engineer or firm.
- F. **Lot Grading and Drainage.** The following shall apply to lot grading and drainage:
1. Surface drainage swales to accommodate individual lot drainage shall be constructed as part of the final lot grading and seeded and mulched.
  2. Surface drainage swales shall have a minimum grade of two percent and shall be constructed so that the surface water will drain onto a street, storm inlet, natural drainage area, or other drainage feature.
  3. Roof downspouts, footing, foundation drains, and sump pumps that are discharged above ground shall be discharged onto the same Parcel of land from which the water is generated, as far from the property line as practical and at least five feet from the residence.
  4. Roof downspouts, footing, foundation drains, and sump pumps discharging toward the street shall be discharged onto a pervious area no closer than 20 feet from the edge of pavement or back of curb.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

5. The connection of roof downspouts, footing, foundation drains, or sump pumps to the public storm sewer system shall be prohibited unless approved by Sanitation District No. 1 in writing.
- G. A waiver of stormwater management control facilities may be granted by Staff when the following criteria are present:
  1. Less than one acre of land is disturbed and the area is not part of a larger overall development.
  2. Less than ½ acre will be impervious area.
  3. Drainage calculations indicate that the downstream drainage facilities are adequately sized to accommodate the additional stormwater runoff and that no pre-existing stormwater drainage problems in this watershed exist immediately downstream.

#### **7.6.02 SANITARY SEWER SYSTEM.**

The subdivider shall construct a sanitary sewage collection system designed to serve adequately all lots in his subdivision plus lines adequate in size to facilitate the orderly development of nearby land which is an integral part of the neighborhood service or drainage area (see sub-section ~~7.11~~ **7.6.12** of these regulations) and connect said collection system to a centralized sewerage system, or an approved package treatment plant (surface discharge), except as herein provided.

- A. Plans Required. The subdivider shall submit plans and specifications prepared by a registered professional engineer, showing the proposed sanitary sewerage system and facilities. Said plans shall show pipe sizes, gradients, type of pipe, invert elevations, location and type of manholes, the location, type and size of all lift or pumping stations, location, type and capacity of all proposed package treatment plants, and all construction details including such other information as required by the Planning Commission's duly authorized representative.
- B. Design Standards. The sanitary sewerage system shall comply with the Rules and Regulations of Sanitation District No. 1.
- C. Sanitary Sewer Extensions. The sanitary sewer system easement shall be required to be provided to adjacent property not presently served by a sanitary sewer system.

#### **7.6.03 WATER SYSTEM.**

It shall be the responsibility of the subdivider to contact the applicable water district, indicating his/her proposed layout of the water distribution system, according to the subdivision procedures identified in ~~ARTICLE III~~ **Section 7.2** of these regulations. The subdivider shall design and construct a complete water distribution system which shall serve adequately all lots within the proposed subdivision plus coordinated with the applicable water district, lines adequate in size to facilitate the orderly development of nearby land which is an integral part of the neighborhood service area.

- A. Plans Required. The subdivider shall submit plans and specifications prepared by a registered professional engineer, showing the proposed water system. Said plans shall show location and size of lines, type of pipe, location of hydrants and valves and supply facilities, booster pumps, elevated or ground-level storage tanks, if applicable, including all construction details and such

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

other information as may be required by the Planning Commission or its duly authorized representative.

- B. **Design Standards.** The design criteria for the water distribution system shall be as required by the Rules and Regulations of Northern Kentucky Water District and the applicable design criteria of the Insurance Services Offices of Kentucky and the National Fire Protection Association. The minimum fire hydrant flows within residential developments shall be provided in accordance with Table 6. The maximum spacing of the fire hydrants shall be provided in accordance with Table 7. A fire Hydrant shall be located a maximum of 500 feet from the face of any building within developments where new street is involved.

#### 7.6.04 STREETS.

- A. **Plans Required.** The subdivider shall submit plans and specifications prepared by a registered engineer showing the proposed street system. Said plans shall show the proposed right-of-way width, pavement width, location and the proposed alignment, grade, geometric details, and typical cross sections of each proposed street, including curbs and gutters and sidewalks (where applicable). Said plans and specifications shall show for each proposed street, design criteria such as street classification, pavement classification and thickness of base and subbase materials.

In addition, the following information shall be required:

1. The plans and profiles of all surrounding streets which are to connect to a street in the proposed subdivision (for a distance of one hundred (100) feet back from the boundary line of the proposed subdivision).
  2. All profiles shall be drawn at a scale not to exceed one (1) inch equals fifty (50) feet horizontal and one (1) inch equals ten (10) feet vertical.
  3. Elevations shall be shown at all vertical point of intersection(s), between point of intersection(s) and at 50 feet stations on tangents and 25 feet stations on vertical curves.
  4. Elevations shall be tied to a bench mark (U.S.G.S. or other bench marks when available), when, within a reasonable distance (as determined by the City Engineer) and shall be shown on the improvement drawings.
  5. Details of curb and gutter, sidewalks, street section and paving.
  6. Intersections and cul-de-sac details, including geometrics and detrics and detailed grading.
- B. **Pavement Specifications.** All streets shall be paved with Portland Cement concrete or asphalt concrete and constructed in accordance with the specifications in Appendix A of these regulations.
- C. **Minimum Pavement Widths.** Pavement widths shall be measured from back of curb to back of curb, or if no curbs are required, then measurements shall include the entire paved surface. Minimum pavement widths for each street shall be as shown in Table 4 (~~see page 6-5~~) and laid out in the manner indicated by the typical street the manner indicated by the typical street cross sections shown in Appendix C.
- D. **Curbs and Gutters.** The subdivider shall construct vertical curbs, at least six (6) inches in height or rolled curbs four (4) inches in height, for all residential streets (where applicable) as identified

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

in Table 4. For streets to be constructed of asphalt concrete, curb and gutter shall be constructed according to the typical section detail in Appendix C.

All curbs and gutters shall be constructed of Portland Cement concrete and in accordance with the specifications in Appendix A and typical cross sections in Appendix C.

E. **Curb Radii.** The minimum curb radius at intersections shall be as follows:

TABLE 6: CURB RADII	
TYPE OF STREET INTERSECTION *	MINIMUM CURB RADIUS (FT)
LOCAL – LOCAL OR SUBCOLLECTOR	25
SUBCOLLECTOR – SUBCOLLECTOR	25
SUBCOLLECTOR – COLLECTOR	30
COLLECTOR – COLLECTOR	30
ARTERIAL - ARTERIAL	**
Notes:	
* In the case of local or collector streets located in commercial or industrial areas, the minimum curb radii shall be increased to fifty (50) feet.	
** Shall be based on current design standards of Kentucky Transportation Cabinet.	

F. **Sidewalks.** Sidewalks shall be required as identified in Table 4 of these regulations. Sidewalks shall be constructed of Portland Cement concrete in accordance with the specifications of Appendix A of these regulations, at least four (4) inches thick and increased to five (5) inches of thickness when included as part of a driveway. All sidewalks shall be constructed with a minimum width of four (4) feet and this width increased to five (5) feet for streets in multi-family residential, commercial, and industrial areas, where pedestrian traffic volume indicates the need for this additional width. (Sidewalks shall be laid out in the manner indicated by the typical cross sections shown in Appendix C).

G. **Alternative Pedestrian Walkways.** Alternative Pedestrian Walkways may be permitted in developments by the choice of the Applicant and/or as an alternative to Sidewalks. Pedestrian Walkways within the public right-of-way shall be constructed of Portland cement concrete. Pedestrian Walkways located outside of the public right-of-way that are intended to meet in an alternative way, may be constructed of asphalt. Asphalt walkways shall have a minimum width of five (5) feet and a minimum thickness of five (5) inches consisting of a modified base mixture. The subgrade for the asphalt walkways shall be proofrolled prior to the placement of the sidewalk. Walkways constructed outside the public right-of-way shall only be permitted within developments that contain a homeowners’ association with specific maintenance and Easement agreements for the walk recorded at the County Clerk’s office. If the requirements for sidewalks have been met, by either concrete sidewalks within the right-of-way or asphalt sidewalks outside of the right-of-way, then any other sidewalk construction is not regulated in terms of material used. Sidewalk construction where materials are not regulated by these regulations is still required to comply with the Americans with Disabilities Act of 1990.

H. **Americans with Disabilities Act (ADA) Curb Ramps.** Where sidewalks along streets are required, Curb ramps shall comply with the U.S. Department of Justice’s regulations for the Americans with Disabilities Act of 1990 and the current ADA Standards for Accessible Design.

1. Curb ramp installation shall prohibit stormwater from flowing onto the ramps.

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2. Curb ramps shall be installed at all new Street intersections in conjunction with construction of the concrete curbs and gutters.
  3. Curb ramps shall be installed at the intersection of the sidewalk and curb when sidewalk dead-ends into a t-type or hammerhead type turnaround.
  4. Curb ramp locations shall be shown on submitted improvement plans.
- I. **Parking.** Parking on any street where pavement width is less than thirty-six (36) feet, shall be limited to one side of the street. Parking lanes shall not be shifted from one side to the other from block to block or where the proposed street is the extension of an existing street the parking lane shall extend continuously on the same side of the street. If practicable, the parking lane shall be located on the opposite side of the street from where the fire hydrants are located.
- J. **Cul-de-sacs and Dead-End Streets.** Cul-de-sac courts and dead-end streets shall be designed in accordance with the typical design details as per Appendix C of these regulations. However, if conditions warrant, other turn around designs may be permitted by the Planning Commission. If such street is of a temporary nature and a further extension into adjacent land is anticipated, then said turn around, beyond normal street width, shall be in the nature of an easement of the premises included in said turn around, as per the typical design in Appendix C. Such easement may be vacated to abutting property owners when said dead-end street is legally extended into adjacent land. If such dead-end street serves four (4) lots or less, no temporary turn around will be required.
- K. **Construction of Required Pavement Width on Existing Streets.** When a subdivision is located on only one side of an existing street, and where the pavement width of such existing street is less than that required by these regulations, the subdivider shall be required to construct one-half (1/2) the required pavement width, as per these regulations, along the side fronting his property on such street.

#### **7.6.05 DRIVEWAY APPROACHES.**

Driveways for residential areas (**detached** single and two-family) shall be provided with a minimum width of nine (9) feet and a minimum radius at the curb of five (5) feet, or a five (5) foot flare, for collector streets and a minimum radius at the curb of four (4) feet, or a four (4) foot flare, for local and subcollector streets. In areas of heavier traffic volumes or where special conditions are encountered (Multi-family, industrial, commercial areas), increased driveway widths, plus increased minimum radii or flares may be required by the Planning Commission. All driveways within the right-of-way shall be constructed in accordance with the specifications of Appendix A of these regulations. Within the street right-of-way area, driveway grades shall not exceed eight (8) percent. In upward sloping driveways beyond the street right-of-way area, the change in grade shall not exceed twelve (12) percent within ten (10) feet of distance. On downward sloping driveways beyond the street right-of-way area, (entering basement garages), the change in grade shall not exceed eight (8) percent within any ten (10) feet of distance (see design as per Appendix C).

#### **7.6.06 OFF-STREET PARKING AREAS.**

Off-street parking areas shall be constructed in accordance with the requirements of the applicable zoning **this Ordinance**.



Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

#### 7.6.07 PRIVATE UTILITIES.

All new telephone, cable television, **fiber, gas, and** electrical utility lines, **and any other private utilities** shall be installed underground and be in conformance with the appropriate utility company's policy and requirements. **Such utilities shall be placed within the in the street right-of-way, or within platted easements.**

#### 7.6.08 STREET SIGNS.

- A. **Street Name Signs.** The City should arrange for installation of street signs at all street intersection. The signs shall conform to the City's specifications and be mounted at a height of approximately seven (7) feet above the top of the curb or the crown of the pavement. They shall be located on diagonally opposite corners on the far right hand side of the intersection for traffic on the more important streets.
- B. **Traffic Control Signs and Devices.** The City shall arrange for the installation of traffic control signs and devices which shall be in conformance with the "Manual on Uniform Traffic Control Devices" as prepared by the Joint Committee on Traffic Control Devices, U.S. Department of Commerce, Bureau of Public Roads.

#### 7.6.09 STREETLIGHTS.

The subdivider shall submit a detailed layout of street lighting within the proposed subdivision. The street lighting plan shall include the light fixtures, style, size, height, spacing, intensity of illumination, power source, etc. Street lighting plans shall be reviewed by the Planning Commission and Zoning Administrator and forwarded to the Board of Council for acceptance. Installation costs of improvements shall be at the expense of the subdivider.

#### 7.6.10 PLANTING SCREEN OR FENCES.

The Planning Commission may require and permit planting screens, fences, or masonry walls, as required by the applicable zoning **this Ordinance.**

#### 7.6.11 MONUMENTATION.

- A. **Monuments of Record – Permanent Control Monuments.** The subdivider shall establish or confirm the prior establishment of permanent control monuments along the center line of all streets not to exceed five hundred (500) feet in spacing. Such permanent control monuments shall be designed according to specifications as per Appendix C. All such monuments shall be set in pavement. All permanent control monuments shall be clearly shown on the Final Plat.
- B. **Other Monuments.** Other monuments set shall be metal pins of no less no less than one (1) inch diameter and no less than twenty-four (24) inches in length. Monuments of this type shall be set at all of the following locations:
1. At every point of intersection of the outer boundary of the subdivision with an existing or created right-of way: line of any street, railroad, or other way.
  2. At least four (4) - 4 inch square by 30" long concrete monuments shall be placed on the major comers of the subdivision and at common corners of subdivision phases

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

3. Prior to final plat certification by the planning commission and recording or a subdivision plat, all property lines of lots created by the subdivision shall be appropriately marked. In addition, appropriately identified markings shall also be located at points along the building set-back line on every-other lot line.
4. Appropriately identified markings shall also be located at each point along the street curb which intersects with the side lot lines of each lot.
5. In such cases where the placement of a required monument at its proper location is impractical, a reference monument may be set close by the proper point providing its location and tie to the proper point is properly shown on the final plat.

#### **7.6.12 PLANS FOR FUTURE EXPANSION - EXTRA SIZE & OFF-SITE IMPROVEMENTS.**

All improvements shall be installed to satisfy the service requirements for the service or drainage area in which the subdivision is located and the improvements shall be of sufficient capacity to handle the expected development of the overall service or drainage area involved.

- A. **Extra-Size Improvements.** Where the Planning Commission has determined, **after consultant with the City Engineer,** that improvements in excess of the size needed to serve just the proposed subdivision are required, the subdivider shall be so notified and arrangements for construction shall be agreed upon.

#### **7.6.13 PLANS REQUIRED FOR THE CONTROL OF EROSION AND SEDIMENTATION.**

Any developer who intends to make changes in the contour of any land proposed to be subdivided, developed, or changed in use by grading, excavating, or removing the natural topsoil, trees, or other vegetative covering thereon, shall submit a plan for erosion and sedimentation control to the City Engineer for approval. The City Engineer may determine that such plans are not necessary. If the disturbed limits of the site exceeds one (1) acre, the developer will be required to obtain a Land Disturbance Permit from Sanitation District No. 1.

Such plans, if required, shall contain adequate measures for control of erosion and siltation where necessary, using the guidelines and policies contained herein.

- A. Requirements:
  1. One (1) set of plans for the control of erosion and sedimentation shall be submitted to the Planning Commission, as per the procedures established in Article III.
  2. In the event the Planning Commission and/or City Engineer gives final plat approval before construction of improvements, as per Section 3.09.A.2, measures to be taken to control erosion and sedimentation shall be included as per these regulations.
  3. The City Engineer shall make periodic inspections of the methods used and the overall effectiveness of the erosion and sedimentation control program.
- B. **Suggested Control Measures.** The following control measures should be used for an effective erosion and sedimentation control plan for the area being subdivided:

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

1. The smallest practical area of land should be exposed at any one time during development.
2. When land is exposed during development, the exposure should be kept to the shortest practical period of time.
3. Where necessary, after grading, temporary vegetation and/or mulching should be used to protect areas exposed during development.
4. Sediment basins (debris basins, desilting basins, or silt traps) should be installed and maintained until ground cover has been completed to remove sediment from run-off waters from land undergoing development.
5. On-site provisions should be able to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development.
6. The permanent final vegetation and structures should be installed as soon as practical in the development.
7. The development plan should be fitted to the topography and soils so as to create the least erosion potential.
8. Wherever feasible, natural vegetation should be retained and protected.
9. Silt fences, straw bale silt traps, straw and bale inlet filters and bale ditch checks.

#### **7.6.14 CONSTRUCTION INSPECTIONS.**

- A. Authority and Duties of City Inspectors. Inspectors shall inspect all work done and all materials furnished. Such inspection, including final inspection, may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector shall not be authorized to revoke, alter, or waive any requirements of the approved improvement drawings and specifications, but authorized to call to the attention of the contractor, any failure of the work or materials to conform to the approved improvement drawing and specifications. The contractor shall notify the inspector within 48 hours prior to the time when the work is to begin on each phase of construction, such as sewer and water lines, storm sewers and street paving. The inspector shall begin inspection at the time of construction and maintain inspection as necessary as the work progresses on each phase of the project until all construction is complete. Further, and during the time of construction, any work determined by the inspector not to conform to the requirements of the approved improvement drawings and specifications, shall be referred to and decided upon by the City staff.

#### **7.6.15 CONSTRUCTION RESPONSIBILITIES.**

- A. Cooperation of Subdivider and/or Contractor. The subdivider and/or contractor shall have available on the project, at all times, two (2) copies of all required plans and specifications. He shall cooperate with the inspector and with other contractors in every way possible. The subdivider and/or contractor shall, at all times, during actual construction, have a competent superintendent acting as his agent on the project. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and he shall receive instructions from the inspector. The superintendent shall have full authority to execute the orders or directions of the inspector. A superintendent shall be furnished irrespective of the amount of work sublet.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

Subdivider and contractors are not relieved of other responsibilities and requirements or other state and local agencies relating to zoning, permits, etc., which may be beyond the scope of requirements of the Subdivision Regulations. Satisfactory completion of inspections and certification that improvements have been constructed in accord with grading plans related to public improvements construction, erosion and sedimentation control plans, and improvement drawings and specifications per these regulations, shall not be a defense in an action for damages against anyone who may be liable by reason of non-compliance with the requirements of these regulations.

#### **7.6.16 FINAL CLEANING UP.**

Upon completion of the work, the subdivider and/or contractor shall clean up all ground occupied or affected by him in connection with the work and return same to original or better condition.

#### **7.6.17 AGREEMENTS AND GUARANTEES.**

Guarantees. The subdivider may execute and file guarantees with the Planning Commission and/or staff, in lieu of actual installation or completion of the required improvements, except sidewalks, when requesting approval of the final plat. Such guarantees shall be an amount for the required improvements, as estimated by the subdivider's engineer, and approved by the Planning Commission and/or City Engineer. The cost estimate shall be based on the amount determined to be reasonably necessary to complete all of the improvements required to be constructed by the subdivider, as specified in the approved improvement drawings and specifications, including the fees for field inspections.

The guarantee shall be in the form of cash, direct or general obligations of the United States Government, a surety bond, or an approved escrow agreement or letter of credit. The guarantee shall be executed by the subdivider as principal, and if a surety bond, shall be executed by a corporation authorized to act as a surety under the laws of the state of Kentucky, as surety. The guarantee shall be an assurance of faithful performance of any and all work and the construction and in-stallation of all improvements required to be done by the subdivider, as specified in the approved improvement drawings and specifications, together with all engineering and inspection fees as required by Section 8.1, of these regulations. The guarantee shall contain the further condition that should the subdivider fail to complete all work and improvements required to be done by him within twenty four (24) consecutive calendar months of the date of approval of the final plat, or within a mutually agreed upon extension, but never to exceed twelve (12) consecutive calendar months, that the Planning Commission or its duly authorized representative, may at its option, cause all required work to be done and improvements constructed. The parties executing the guarantee shall be firmly bound for the payment of all necessary costs thereof. Whenever the subdivider elects to deposit cash or direct or general obligations of the United States Government, or an approved escrow agreement, the Planning Commission or its duly authorized representative, shall be authorized, in the event of any default on the part of the subdivider or the performance of any work or construction of any improvements for which such guarantees have been deposited, to cause the required work to be done and to withdraw that amount required for payment of all costs thereof.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**SECTION 7.7  
Administration and Enforcement**

7.7.01	Administration.	7.7.06	Enforcement.
7.7.02	Fees for Plats and Plans.	7.7.07	Appeals from the Planning
7.7.03	Payment of Fees.		Commission’s Duly Authorized
7.7.04	Recordation Fees in County Clerk’s Office.		Representative.
7.7.05	Modifications.		

**7.7.01 ADMINISTRATION.**

It shall be the responsibility of the Planning Commission and the City staff, as provided per these **Subdivision** Regulations.

**7.7.02 FEES FOR PLATS AND PLANS.**

The schedule of fees, charges, etc. shall be as established by the Board of Council.

**7.7.03 PAYMENT OF FEES.**

The subdivider shall pay all fees to the Zoning Administrator at the time of submitting plats, improvement drawings and specifications, and grading plans for approval. Said fees shall be paid by check or money order only, and made payable to the City of Fort Thomas.

**7.7.04 RECORDATION FEES IN COUNTY CLERK'S OFFICE.**

The subdivider shall pay the recording fee as per the requirements of the County Clerk's office.

**7.7.05 MODIFICATIONS.**

**In lieu of the Waiver and Modification authority granted in Section 1.10 - Waivers and Modifications,** the Planning Commission may grant a modification or waiver to these **Subdivision** Regulations **in Article VII, as where** specified herein, providing the Planning Commission shall find:

- A. That unusual topographical or exceptional physical conditions exist; or
- B. That strict compliance with these regulations would create an extraordinary hardship in the face of the exceptional conditions; or
- C. That the modifications would provide for an innovative design layout of the subdivision.

In granting any modification or waiver to these regulations, the Planning Commission shall find that said modification or waiver will not be detrimental to the public interest nor in conflict with the intent and purpose of these **Subdivision** Regulations.

Changes from existing provisions are noted: **Substantive Additions** and Deletions

The Planning Commission may require certain conditions to be met, as may be determined necessary, to accomplish the purpose of these regulations, when modified.

**Waivers to regulations controlled by Articles III and V of this Ordinance shall be heard through the applicable waiver or variance procedure in Article I, General Provisions and Administration.**

#### **7.7.06 ENFORCEMENT.**

- A. Planning Commission Approval Required for All Subdivisions. No person or his agent shall subdivide any land, before securing Planning Commission approval of a plat designating the areas to be subdivided, and no plat of a subdivision of land within the planning unit jurisdiction shall be recorded by the county clerk until the plat has been approved by the Commission and the approval entered thereon in writing by the chairman.
- B. Sale of Land Subdivision. No person owning land composing a subdivision, or his agent, shall transfer or sell or agree to sell, any lot or parcel of land located within a subdivision by reference to, or by exhibition, or by any other use of a plat of such subdivision, before such plat has received final approval of the Planning Commission signed by the chairman of the Planning Commission and has been recorded. Any such installment of transfer, sale, or contract shall be void and shall not be subject to be recorded, but all rights of such purchaser to damages are hereby preserved. The description of such lot or parcel by metes and bounds in any contract or instrument of transfer or other document used in the process of selling or transferring same shall not exempt the person attempting to transfer from penalties provided or deprive the purchaser of any rights or remedies he may otherwise have.
- C. Revisions of Plat after Approval. No changes, erasures, modifications, or revisions shall be made in any plat of a subdivision after final approval has been given by the Planning Commission and an endorsement is made in writing on the plat, unless the plat is first resubmitted and the changes approved by the Planning Commission.
- D. Improvements in Conflict with Official Map. After the Board of Council has adopted an official map, no board, public officer, or authority shall accept, layout, improve, or authorize any improvements to be constructed in any street, including rights-of-way, watercourses, park and playgrounds, public school or other public building sites shown on the official map, except as provided for in KRS 100.293 - 100.317.
- E. Enforcement by the Planning Commission. The Planning Commission, shall have a cause of action for all appropriate relief including injunctions against any governmental bodies or any person who violates any of these regulations.

#### **PENALTIES:**

~~Pursuant to KRS 100.991, any person or entity who violates any of these regulations shall, upon conviction, be fined not less than ten dollars (\$10.00) but not more than five hundred dollars (\$500.00). Each day of violation shall constitute a separate offense.~~

#### **SEVERABILITY:**

~~If any article, section, sub-section, sentence, clause, or phrase of these regulations is, for any reason, held unconstitutional or invalid, such decision or holding shall not affect the validity of the remaining~~

Changes from existing provisions are noted: **Substantive Additions** and Deletions

~~portions hereof, it being the intent to enact each section and portion thereof, individually, and each such section shall stand alone, if necessary, be in force notwithstanding the validity of any other article, section, sub-section, sentence, clause or phrase of these regulations.~~

**7.7.07 APPEALS FROM PLANNING COMMISSION'S DULY AUTHORIZED REPRESENTATIVE:**

Regarding those actions authorized under Article VII of this Ordinance, any subdivider claiming to be aggrieved by any actions by the City Staff may appeal such actions to the Planning Commission.

**~~APPEALS FROM PLANNING COMMISSION:~~**

~~Any appeal from the Planning Commission's action may be taken in the following manner:~~

- ~~A. Any person or entity claiming to be injured or aggrieved by any final action of the Planning Commission may appeal from the action to the circuit court of the county in which the land lies. Such appeal shall be taken within thirty (30) consecutive calendar days after the final action of the Planning Commission. Final action shall not include the Commission's recommendation made to other governmental bodies.~~
- ~~B. All appeals shall be taken in the appropriate circuit court within thirty (30) consecutive calendar days after the action or decision of the Planning Commission and all decisions which have not been appealed within thirty (30) consecutive calendar days shall become final. After the appeal is taken, the procedure shall be governed by the rules of civil procedure. When an appeal has been filed, the clerk of the circuit court shall issue a summons to all parties, including the Planning Commission in all cases, and shall cause it to be delivered for service as in any other law action.~~

**CONFLICT:**

~~All regulations, resolutions, orders, ordinances, and/or codes in conflict herewith are hereby repealed on the effective date of these regulations; providing, however, that such repeal shall not affect or prevent the prosecution or punishment of any person for any action done or committed in violation of any such Subdivision Regulations, Order, Resolutions, and/or Amendments thereto, hereby repealed prior to the effective date of these regulations.~~

Changes from existing provisions are noted: Substantive Additions and ~~Deletions~~

**ARTICLE IX**

**~~ADOPTION, AMENDMENT, AND EFFECTIVE DATE~~**

**~~SECTION 9.0 PUBLIC HEARING:~~**

~~Before adoption of these subdivision regulations, or any amendments thereto, by the Planning Commission, a public hearing shall be held by the Planning Commission. A public notice of the time and place of the public hearing shall be published in a newspaper of general circulation in Campbell County, in accordance with Kentucky Revised Statutes Chapter 424.~~

**~~SECTION 9.1 EFFECTIVE DATE:~~**

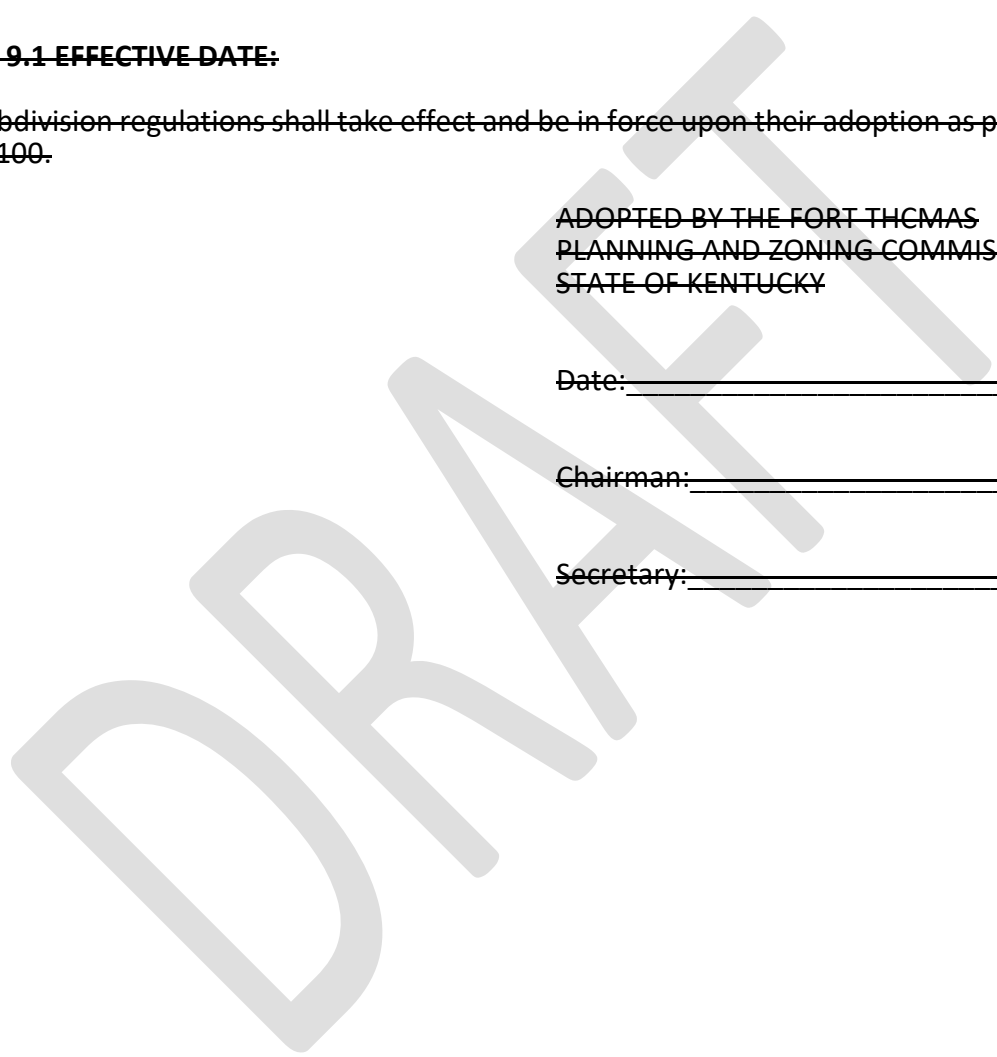
~~These subdivision regulations shall take effect and be in force upon their adoption as provided for in KRS Chapter 100.~~

~~ADOPTED BY THE FORT THOMAS  
PLANNING AND ZONING COMMISSION,  
STATE OF KENTUCKY~~

~~Date: \_\_\_\_\_~~

~~Chairman: \_\_\_\_\_~~

~~Secretary: \_\_\_\_\_~~





Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

The appendices have been updated to reflect current engineering standards.

**APPENDIX A**  
**PAVEMENT DESIGN**

**SECTION A.1: PAVEMENT DESIGN METHOD AND REQUIRED THICKNESSES**

**A.1-1 Pavement Design Method**

AASHTO Guide for Design of Pavement Structures (1986 and 1993), published by The American Association of State Highway and Transportation Officials is the design method used herein and is specified as the design method to be used for any alternate pavement designs that are allowed or required in this regulation. Table A-1: Subdivision Pavement Design Parameters Using AASHTO Method sets out the design parameters used herein for Campbell County Subdivision pavements. For definition and explanation of the parameters shown here, see the above mentioned AASHTO guides. Project specific pavement designs are required for residential streets serving over 1,000 residences or commercial/industrial streets serving more than 3,500,000 ESALs or alternative pavement designs proposed under Section A.1-2: Required Thicknesses. Any project specific pavement designs are required to use the design parameters identified in Table A-1: Subdivision Pavement Design Parameters Using AASHTO Method.

<b>Table A-1: Subdivision Pavement Design Parameters Using AASHTO Method</b>		
Parameter	Design Values	
	Concrete	Asphalt
Design Life	20 years	20 years
Life Cycle Analysis	50 years	50 years
Drainage Coefficient	1.0	--
Reliability	80%	80%
Deviation	0.35	0.45
Initial Serviceability	4.2	4.5
Terminal Serviceability	2.5	2.5
Modulus of Rupture	600 psi	--
Modulus of Elasticity	3,600,000psi	--
CBR, Minimum	2 (K=50 pci)	3 (MR=2700 psi)
Load Transfer	4.4 (no dowels)	--
Load Transfer	3.2 (dowels)	--
20 Year ESAL, Residential Local Street, ≤ 199 Residential Units served	81,000	81,000
20 Year ESAL, Residential Sub-collector Street, 200-500 Residential Units served	203,000	203,000
20 Year ESAL, Residential Collector Street, 501-1000 Residential Units served	406,000 <sup>[2]</sup>	406,000 <sup>[2]</sup>
20 Year ESAL, Light Commercial	1,000,000 <sup>[1]</sup>	1,000,000 <sup>[1]</sup>
20 Year ESAL, Heavy Commercial/Industrial Street	3,500,000 <sup>[1]</sup>	3,500,000 <sup>[1]</sup>
Year 17 to Year 34 and Year 34 to Year 50 ESAL, Residential Local Street, ≤ 199 Residential Units served	53,000	53,000

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Year 17 to Year 34 and Year 34 to Year 50 ESAL, Residential Local Street, 200-500 Residential Units served	133,000	133,000
Year 17 to Year 34 and Year 34 to Year 50 ESAL, Residential Local Street, 501-1000 Residential Units served	265,000 <sup>[2]</sup>	265,000 <sup>[2]</sup>
Year 17 to Year 34 and Year 34 to Year 50 ESAL, Light Commercial	850,000 <sup>[1]</sup>	850,000 <sup>[1]</sup>
Year 17 to Year 34 ESAL, Heavy Commercial/Industrial	2,975,000 <sup>[1]</sup>	2,975,000 <sup>[1]</sup>
ESAL, Arterial	Per KYTC Specifications	
Asphalt Surface Layer Coefficient		0.44
Asphalt Base Layer Coefficient		0.40
Crushed Stone Base Layer Coefficient		0.14
Crushed Stone Base with Tensar TX5 Geogrid Layer Coefficient		0.25 for CBR ≥ 3
		0.21 for 2 ≤ BR < 3
Thickness conversion factor, 17 year old asphalt – Residential		0.70
Thickness conversion factor, 34 year old asphalt – Residential		0.60
Thickness conversion factor, 17 year old asphalt – Light Commercial		0.85
Thickness conversion factor, 34 year old asphalt – Light Commercial		0.75
Thickness conversion factor, 17 year old asphalt – Heavy Commercial/Industrial		0.90
Thickness conversion factor, 34 year old asphalt – Heavy Commercial/Industrial		0.80
NOTES:		
<sup>[1]</sup> Engineer shall submit a Traffic Impact Study (TIS) documenting project-specific design ESALs for each commercial/industrial Subdivision generating more than 100 vehicle trips per hour during the AM or PM peak period. If project-specific ESAL loading is greater than 3,500,000, a project-specific pavement design is required.		
<sup>[2]</sup> Project-specific pavement design required for residential streets serving more than 1,000 residential units.		

**A.1-2 Required Thicknesses**

(A) Table A-2: Required Subdivision Street Thicknesses shows the required pavement thicknesses for various Street classifications for Asphalt and Concrete Streets where in situ Subgrade soils can meet the minimum required Subgrade CBR equal to 2 or greater for Concrete pavements or CBR of 3 or greater for Asphalt pavements. These thicknesses were determined using the AASHTO Guide for Design of Pavement Structures (1986 and 1993) and the design parameters identified in Table A-1: Subdivision Pavement Design Parameters Using AASHTO Method. These values meet requirements for a 50 year life cycle without replacement, assuming resurfacing at 17 and 34 years.

Changes from existing provisions are noted: **Substantive Additions** and **Deletions**

Table A-2: Required Subdivision Street Thicknesses								
Street Classification With Number of Residential Units Served <sup>[5][6]</sup>	Concrete Over Crushed Stone Base (CSB)		Asphalt Over Crushed Stone Base (CSB)			Asphalt Over Crushed Stone Base (CSB) + Geogrid <sup>[7]</sup>		
	Concrete	CSB	Surface	Base	CSB <sup>[1]</sup>	Surface	Base	CSB <sup>[1]</sup>
Residential Local ≤ 199 R.U.	7” <sup>[2]</sup>	4”	1.5”	5”	7” <sup>[4]</sup>	1.5”	3”	7” <sup>[4]</sup>
Residential Sub-collector 200-500 R.U.	8” <sup>[2]</sup>	4”	1.5”	6”	7” <sup>[4]</sup>	1.5”	4”	7” <sup>[4]</sup>
Residential Collector 501-1000 R.U.	9” <sup>[2]</sup>	4”	1.5”	7.75”	7” <sup>[4]</sup>	1.5”	5.75”	7” <sup>[4]</sup>
Light Commercial ≤1 Million ESALS	8.5” <sup>[3]</sup>	4”	1.5”	8”	7” <sup>[4]</sup>	1.5”	6”	7” <sup>[4]</sup>
Heavy Commercial/ Industrial ≤3.5 Million ESALS	10” <sup>[3]</sup>	4”	1.5”	9.5”	7” <sup>[4]</sup>	1.5”	7.5”	7” <sup>[4]</sup>
Arterial	Per KYTC Specifications							
<p>[1] Average thickness. Varies from 1 inch less at centerline to 1 inch greater at gutter apron.</p> <p>[2] Plain Concrete, tooled skewed transverse Contraction Joints without dowels (see Details C.17 &amp; C.18).</p> <p>[3] Plain Concrete, with doweled and sawed (non-skewed) transverse Contraction Joints (see Detail C.16).</p> <p>[4] 6-8 inch KYTC crushed stone base for residential pavements to be installed in one lift (pug milled) and properly compacted (one lift). Any crushed stone base greater in thickness than the above noted 6-8 inches must be installed in two lifts.</p> <p>[5] Residential Unit means a residential dwelling unit and shall include single-family unattached homes, condominiums, town homes, duplex, triplex and fourplex units, and individual apartment units in a multi-family building.</p> <p>[6] Number of residential units served for a particular Street is defined as the number of residential units which that Street serves as the sole access or, where a number of residential units are served by more than one access, it is an approximation of the number of residential units served that is equivalent to one access.</p> <p>- Example 1: A particular section Street serves as the sole access to less than 200 residential units. That Street would then be a Local Street.</p> <p>- Example 2: An area of existing and future residential development of 450 residential units is served by more than one access Street. Only those Streets that will carry traffic and ESAL loading higher than a Subdivision Street that provides sole access to more than 200 residential units will be classified as a Subcollector Street.</p> <p>[7] Geogrid shall be Tensar TX5 triaxial geogrid.</p>								

(B) Wherever the minimum CBR values for Asphalt or Concrete pavements as defined in Table A-1: Subdivision Pavement Design Parameters Using AASHTO Method cannot be provided by the in situ Subgrade soils, the Engineer shall: 1) submit an engineered Subgrade improvement design that increases the CBR value of the in situ Subgrade soils to the required minimum CBR values for Asphalt and Concrete pavement in Subsection A.1-1: Pavement Design Method; or 2) submit an engineered alternate pavement design that takes into account the substandard CBR values.

(1) Engineered subgrade improvements may include:

- a) Undercutting the substandard Subgrade soils and replacing them with documented soils that provide the minimum CBR values, or greater.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- b) Providing a chemically stabilized Subgrade (usually lime stabilization) to effectively provide the minimum CBR values, or greater.
  - c) Utilizing crushed stone base with geotextile and/or Tensar TX5 triaxial geogrid to effectively provide the minimum CBR values, or greater.
- (2) Alternative pavement designs may be proposed for Asphalt pavement on subgrades with a CBR value of 2, provided the pavement structure is shown to meet the structural number requirements identified in Table A-3: Structural Numbers for Alternative Asphalt Pavement Designs (CBR =2). Alternative pavement designs are not permitted for Subgrade soils with a CBR less than 2; rather, the subgrade soils shall be improved to CBR equal to 2 or greater, per Subsection A.1-2(B)(1).

Street Classification	Structural Number
Local (≤199 Residential Units)	4.09
Sub-collector (200-500 Residential Units)	4.92
Collector (501-1000 Residential Units)	5.60
Light Commercial	5.15
Heavy Commercial/Industrial	6.31

- (3) When chemically stabilized Subgrade demonstrates a documented CBR value greater than 3, an alternative asphalt pavement design may be proposed to reduce pavement thickness, provided the pavement structure is shown to meet the structural number requirements identified in Table A-4: Structural Numbers for Alternative Asphalt Pavement Designs.

Street Classification	Structural Number			
	CBR 4	CBR 5	CBR 6	CBR 7
Local (≤199 Residential Units)	2.85	2.50	2.24	2.04
Sub-collector (200-500 Residential Units)	3.52	3.14	2.84	2.60
Collector (501-1000 Residential Units)	4.09	3.65	3.34	3.07
Light Commercial	4.05	3.75	3.55	3.35
Heavy Commercial/Industrial	4.87	4.55	4.26	4.05

- a) For Asphalt over Crushed Stone Base pavements, the crushed stone base may not be reduced below the thicknesses shown in Table A-2: Required Subdivision Street Thicknesses and minimum total Asphalt thickness of 4.5” (local streets), 5.5” (subcollector streets), 6.5” (residential collector streets), and 7.5” (commercial/industrial streets) shall be maintained.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- b) There shall be no reduction in thickness for Concrete pavements below those shown in Table A-2: Required Subdivision Street Thicknesses.
- c) Alternative pavement designs shall not be permitted for:
  - i. in situ soils with CBR values greater than 3;
  - ii. undercut and replaced subgrade soils; or
  - iii. crushed stone base and geotextile/geogrid subgrade improvements.

**A.1-3 Pavement and Pavement Drainage Construction Details**

Appendix C: Standard Construction Requirements and Details for Streets, Sidewalks, Driveways contains important construction details that are a part of these specifications for the pavement, pavement Drainage system, and other utility construction within the Right of Way that can impact pavement performance. Proper construction execution of the details in Appendix C: Standard Construction Requirements and Details for Streets, Sidewalks, Driveways is important to good pavement performance.

**SECTION A.2: USE OF AGGREGATES WITHIN THE RIGHT-OF-WAY**

**A.2-1 Aggregate Specifications**

Table A-5 indicates the specifications for the various aggregate types and their uses in improvement construction within the Street Right-of-way. All aggregates must pass all KYTC aggregate requirements for their intended use as set out in Section 800 of the KYTC Road and Bridge Manual, latest edition.

<b>Table A-5: Aggregate Specification Table</b>	
KYTC Specification	Use Within Right-of-Way
Pipe Bedding Sand	Bed and cover for deep sanitary sewer and storm sewer
Concrete Sand	Concrete mix and bed and cover for waterline and power and communication utilities
DGA	Backfill for waterline and power and communication utilities under the Street
57’s Crushed Limestone	Concrete pavement aggregate and catch basin crossover construction
57’s Gravel	Allowable aggregate for all Concrete not used in Concrete Pavement and Concrete Curb and Gutter
No. 8’s Gravel	Allowable aggregate for all Concrete
#4 Crushed Limestone	Required aggregate for Concrete Pavements
Crushed Stone Base	Base material all pavements
Asphalt Aggregates See Table A-14.	Asphalt pavement aggregates must meet requirements in Section 400 of KYTC Road and Bridge Manual, latest edition, except where noted otherwise in this specification

All aggregates must pass all KYTC aggregate requirements for their intended use as set out in Section 800 of the KYTC Road and Bridge Manual, latest edition.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**SECTION A.3: PORTLAND CEMENT CONCRETE (CONCRETE) INFRASTRUCTURE**

**A.3-1 General Requirement**

- (A) **Materials**  
Portland cement, water, aggregates, air entraining agents, and admixtures to reduce water, retard set, etc. shall satisfy the material specifications of, and be proportioned, batched, delivered, and cured in accordance with, the Portland Cement Association (PCA), Design and Control of Concrete Mixtures, latest edition, except as noted otherwise in these regulations.
- (B) **Mix Design**  
Concrete mix design shall: (1) contain six bags of cement (564 pounds) per cubic yard; (2) be air entrained to an air content of six percent +2 percent using ASTM air entraining admixture; and (3) have a maximum water cement ratio of 0.45, and a maximum slump of four inches. Aggregate type, gradation and weight distribution will vary depending on the intended use, as spelled out in Subsections A.3-2(A), A.3-3(A), and A.3-4(A).
- (C) **Fly Ash**  
No fly ash is allowed in the Concrete mix.
- (D) **Strength**  
Finished Concrete shall attain a minimum compressive strength at 28 days of 4,000 pounds per square inch.
- (E) **Ready Mix Suppliers**  
All Concrete Ready Mix must be provided by Ready Mix plants listed on the KYTC List of Approved Materials (LAM) as a qualified producer. In the alternative, the Ready Mix supplier must supply to the staff an executed original of KTC Form TC-64-764/09 2011 "Certification of Compliance for Freeze Thaw Resistant Concrete Aggregate" for the aggregate used in Concrete mixes prior to commencement of construction. All Ready Mix Concrete suppliers shall submit to the Staff in January of each year mix design verifications for all Concrete mixes that will be supplied during that year for use in Subdivision improvements.
- (F) **Delivery and Discharge**  
Concrete shall be delivered and discharged from a truck mixer or agitator truck within the periods specified in Table A-6. Delivery tickets shall have this time clearly shown and be checked for conformance by the Staff. Delivery tickets shall also show the date of the delivery, the Concrete mix supplied, and the design compressive strength. All delivery tickets shall be delivered to Staff. Any Concrete which is not plastic and workable when placed shall be rejected.

<b>Table A-6: Maximum Concrete Discharge Time</b>	
<b>Air Temperature</b>	<b>Maximum Discharge Time</b>
Up to 85 degrees Fahrenheit	1.5 hours
More than 85 degrees Fahrenheit	1 hour

- (G) **Curing**  
Concrete shall be cured in accordance with Section 601.03.17 of the KYTC specification.
- (H) **Expansion and Isolation Joints**  
Expansion and Isolation Joint material used herein shall be pre-formed one inch thick material, the full depth of the Concrete, and shall conform to KYTC specifications for use in Concrete pavements.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- (I) Cold Weather Placement  
Concrete may be placed when the ambient air temperature in the shade and away from artificial heat is 40° F (and rising). No concrete shall be placed upon frozen subgrade. Concrete shall be protected from freezing for a period of up to seven days.
- (J) Hot Weather Placement  
Maintain the temperature of the mixture at or below 90° F during placement. Cease concrete production when the mixture exceeds 90° F until adequate methods are in place to reduce or maintain the mixture temperature. Do not place concrete in areas where the ambient temperature is above 100° F.

**A.3-2 Street Pavement Requirements**

- (A) Aggregates
  - (1) Aggregates for Concrete Street pavement shall be a blend of No. 467 crushed limestone, No. 8 gravel and concrete sand.
  - (2) The No. 467 crushed limestone aggregate shall meet the gradation limits shown in Table A-7.

Table A-7: No. 467 Gradation Limits	
Sieve Size	Percent Passing
2"	100
1 1/2"	93-98*
1"	--
3/4"	35-70
1/2"	--
3/8"	10-30
#4	0-5
#8	--

\*Note that the specified percent passing the 1 1/2" sieve differs from Section 800 of the KYTC Road and Bridge Manual, latest edition, for No. 467 gradation. The No. 467 crushed limestone for Street pavement in the Regulation must have 2% to 7% retained on the 1 1/2" sieve.

- (3) Gradation of the No. 8 gravel and the concrete sand shall meet the requirements of Section 800 of the KYTC Road and Bridge Manual, latest edition.
- (4) Minimum cement factor shall be 564 pounds per cubic yard.
- (5) Minimum compressive strength at 28 days shall be 4,000 psi.
- (6) Maximum water / cement ratio shall be 0.45.
- (7) Air entrainment shall be 6% ± 2%.
- (8) Maximum slump without mid-range water reducer shall be 4-inches.
- (9) Maximum slump with mid-range water reducer shall be 7-inches.
- (10) Workability factor shall be between 38 high to 33 low.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

(11) Coarseness factor shall be between 73 high to 68 low.

(B) Thickness Requirements

Pavement thicknesses for various classifications of Streets shall be as shown in Table A-2: Required Subdivision Street Thicknesses. Various critical Concrete pavement design and construction details that shall be used in Concrete Subdivision pavements are shown in Appendix C: Standard Construction Requirements and Details for Streets, Sidewalks, Driveways.

(C) Testing Requirements

- (1) One set of three test cylinders shall be made for each day's placement of Street. An additional set of three test cylinders shall be made for each additional 100 cubic yards of placement. One slump, air entrainment and temperature test shall be performed for each set of Concrete test cylinders.
- (2) One cylinder shall be tested for compressive strength at no later than seven days and two cylinders at 28 days.
- (3) Part of the plastic Concrete sample used for the test cylinders shall be washed to visually confirm that crushed limestone coarse aggregate was used in the Concrete mix.
- (4) All Concrete testing shall be performed by a Qualified Materials Testing firm in accord with applicable ASTM specifications, latest editions. The results of all Concrete testing are required to be provided to Staff by the Developer prior to the approval of a Final Plat.

(D) Reinforcing Steel

The use of continuous reinforced concrete pavements is not required but can be considered for streets serving commercial/industrial uses.

- (1) Bent bars are not considered reinforcing steel in the contents of this section.
- (2) The use of wire mesh in concrete pavements is prohibited.

(E) Placement

- (1) Formwork
  - a) Fixed forms shall have a depth equal to or greater than the thickness of the pavement.
  - b) Forms shall be of such cross-sections and strength and so secured as to resist the pressure of the Concrete when placed, and the impact and vibration of any equipment which they support, without springing or settlement.
- (2) Setting  
The Subgrade under the forms shall be compacted and shaped so that the form set shall provide the specified elevation.
- (3) Grade and Alignment  
The alignment and grade elevation of the forms shall be checked by the Contractor immediately ahead of Concrete placement and corrections made when necessary.
- (4) Placement Method



Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- a) All Concrete placement shall conform to ACI Specifications, latest edition.
- b) The Concrete shall be mixed in quantities required for immediate use and shall be deposited on the Subgrade to the required depth and width of the construction lane in successive batches and in a continuous operation. The terminus of a continuous pour shall be a Construction Joint per Appendix C: Detail C.17.
- c) The Concrete shall be placed as uniformly as possible in order to minimize the amount of additional spreading necessary.
- d) The Concrete shall be vibrated and consolidated with suitable tools while being placed so that the formation of voids or honeycomb pockets is prevented.
- e) Concrete shall not be placed around manholes or other structures until they have been brought to the required grade and alignment.
- f) Additional tamping and compaction of surrounding fill material may be required after raising manholes.

(5) Consolidating and Finishing

- a) Concrete pavement shall be struck off and consolidated with a mechanical finishing machine, vibrating screed, slipform paver, or by hand-finishing methods such that, after consolidation and final finishing, it shall be at the elevation shown on the approved plans.
- b) The finishing method shall incorporate a screed, which will consolidate the Concrete by pressure, vibration, or both.
- c) The Concrete shall be brought to a true and even surface, free from rock pockets.
- d) Hand-finishing tools shall be kept available for use in case the mechanical finishing machine breaks down.
- e) When hand finishing, the pavement shall be struck off and consolidated by a vibrating screed to the elevation as shown on the plans. When the forward motion of the vibrating screen is stopped, the vibrator shall be shut off and not be allowed to idle on the Concrete.

(6) Scraping and Straight Edging

- a) The Inspector may require that the pavement be scraped with a straightedge with a minimum width of six feet, equipped with handles long enough to permit it to be operated from the edge of the pavement.
- b) When irregularities with the surface elevation are discovered, they shall be corrected by adding or removing Concrete. All disturbed areas shall be floated with a wooden or metal float not less than four feet long and not less than six inches wide and straight edged.

(7) Edging

Before final finishing is completed and before the Concrete has taken its initial set, the edges of the slab and Curb shall be carefully finished with an edger.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

(8) Final Surface Finish

- a) The final surface of the Concrete pavement and Curb shall have a uniform gritty texture at the grades and cross-sections shown on the plans.
- b) A burlap drag or medium broom shall be used as the final finishing method for Concrete pavement.
- c) A burlap drag finish shall have a minimum width of at least three feet and have a length that is long enough to cover the entire pavement width.
- d) The burlap drag shall be pulled forward across the pavement in the direction in which the pavement is being placed.
- e) A broom finish shall be drawn transversely across the pavement using overlapping strokes to produce surface corrugations of uniform appearance approximately 1/16th inch in depth.
- f) Curbs shall be finished using the same method as the pavement.

(9) Integral Curb

- a) Curbs shall be constructed monolithically with pavement extrusion equipment or hand formed prior to the finishing operation.
- b) The integral barrier and sloped Curb shall be constructed with or prior to the finished paving operation. Special care shall be taken so that the Curb construction does not create a “cold joint.”
- c) Curbs placed immediately following the paving operation shall be sufficiently consolidated with the paving slab and shall not contain voids within or along the back face of the Curb.
- d) Integral barrier Curbs along the edges of Street pavement shall contain depressed Curbs not less than 1-3/4 inches above the gutter line at all Driveway entrances and at such other locations as designed on the approved plans.
- e) When barrier Curb is used, the Curb may be sawed horizontally to facilitate residential Driveways, approaches, and Sidewalks.

(F) Concrete Street Pavement Joints

(1) Contraction Joints

- a) All Contraction Joints shall be placed a maximum of 15 feet on center. Commercial/Industrial Subdivision pavements shall have sawed transverse Contraction Joints with steel dowels that are cut perpendicular across the pavement. All residential pavements shall have tooled or sawed Contraction Joints without dowels. Residential pavement transverse Contraction Joints shall be skewed (except at intersections, paired catch basins and in Cul-de-sacs). See Appendix C: Detail C.18.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- b) Sawed joints shall be equal to a depth of one-fourth (1/4) of the pavement thickness continuous across the slab.
  - c) The timing of the installation of joints shall conform to ACI specifications, latest edition.
  - d) Contraction Joints cut into fresh Concrete with a jointing tool shall be a minimum 1½ inches deep.
- (2) Expansion Joints  
There shall be no Expansion Joints in any pavements except at bridge abutments and where required by Appendix C: Detail C.12, C.13, C.14, C.22, C.23, and C.24.
- (3) Longitudinal Joints
- a) All pavements wider than 15 feet require Longitudinal Joints. Longitudinal Joints may be Construction Joints or tooled/sawed joints.
  - b) Longitudinal Construction Joints will require 18 inches long #4 deformed bars embedded into each slab at the mid-slab height, no more than four feet on center and no closer than 18 inches to each Contraction Joint.
  - c) Bent bars may be inserted into fresh Concrete before its initial set.
  - d) Bent bars shall not be straightened until the Concrete has cured sufficiently to enable bending without fracture of the Concrete slab.
- (4) Other Pavement Joints  
Other Contraction Joints and Isolation Joints shall be constructed per Appendix C: Detail C.17.
- (G) Manholes and On-Street Inlets  
Manholes, on-Street inlets, and water valves encountered in the areas to be paved shall be raised or lowered to the surface of the new pavement. On-Street inlets may be separated from the pavement and Curb by boxing out around the inlet. Details for Joint construction at manholes and catch basins are in Appendix C: Details C.22, C.23, and C.24.
- (H) Protection and Opening to Traffic
- (1) Traffic shall be prohibited from the pavement until the Concrete has attained a compressive strength of 3,500 pounds per square inch.
  - (2) Prohibited traffic shall include Contractor's vehicles.
  - (3) Prior to opening to public traffic, the Developer is responsible for completing, curing and sealing the pavement, including box outs, backfilling the Street, sealing the joints and cleaning the pavement of all debris.
- (I) Concrete Pavement Lugs  
The purpose of pavement lugs in Subdivision pavements is to provide some additional resistance to Contraction Joints separating during repeated expansion and contraction cycles over the life of the pavement in certain open ended and relatively steep downhill pavement conditions. In these open ended and downhill conditions, resistance to pavement lengthening at contraction joints is substantially reduced as compared to Contraction Joints in long stretches relatively

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straight pavement. In the long, relatively straight streets, the repetitive adjacent slabs help keep the contraction joints from separating during repeated expansion and contraction cycles. Those conditions which shall require lugs are related to the geometry of the Streets and are as follows (see Appendix C: Details C.19, C.20, and C.21).

- (1) The ends of Cul-de-sacs where the Street grade approaching the Cul-de-sac decreases more than 20 feet vertically, at an average grade of more than six percent, before there is a change in direction of Street Drainage. In this condition, install a lug near the end of the Cul-de-sac across the extension of the two lanes of pavement.
- (2) At T-intersections, place a lug on the intersecting street near the intersection, where grade on the intersecting Street is going up from the intersection more than 20 feet vertically, at an average grade of more than six percent, before there is a change in the Drainage direction.
- (3) On the main line of a Street pavement where the pavement is going straight and downhill more than 20 feet vertically, at an average grade of more than six percent and the direction of centerline deflects horizontally by more than 30 degrees, place a lug just uphill of the start of the horizontal curve.
  - a) Lugs shall be placed at least 20 feet uphill from any shallow utility excavation transverse to the pavement.
- (4) The Design Engineer may add other lugs in conditions he considers critical to Contraction Joint integrity.
- (5) Lug locations are to be shown on construction design and as-built drawings.

#### (J) Joint Sealing Compound

- (1) Joint sealing compound shall conform to the following standard designations:
  - a) Hot-poured elastic type, as specified by AASHTO, latest edition; or
  - b) Silicone rubber sealant type (non-sag, self-leveling, or rapid cure) conforming to the KYTC Department of Highways Standard Specifications for Road and Bridge Construction, latest edition; or
  - c) An approved equal, as determined and approved by Staff.
- (2) The application of joint sealant is prohibited at temperatures below 40 degrees Fahrenheit.

### A.3-3 Concrete Curb and Gutter Requirements

#### (A) Aggregates

- (1) Aggregates for Concrete Curb and Gutter shall consist of KYTC aggregates approved for use in pavements.
- (2) The following quantities and aggregate types shall be provided for one cubic yard of concrete:
  - a) 1,500 pounds of #57 crushed limestone.

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- b) 300 pounds #8 gravel.
- c) 1,320 pounds of Concrete sand.

(B) Curb Design

- (1) 24-inch wide Concrete Curb and gutter shall be used for all Streets Types with Asphalt pavements.
- (2) All Streets serving residential developments shall use the sloped curb as shown in Appendix C: Details C.10 and C.11.
- (3) All Streets serving industrial/commercial developments shall use the six inch barrier Curb.

(C) Concrete Curb over Crushed Stone Base

Concrete Curb over Crushed Stone Base shall be a minimum of seven inches thick at the Curb apron.

(D) Expansion Joints

- (1) Expansion Joints shall be placed in Concrete Curbs at each side of Curb inlet catch basins.
- (2) Two 3/4-inch diameter, 18-inch long smooth dowels with expansion caps shall be placed in each Expansion Joint location.
- (3) Expansion material must go completely through the Curb cross section, preventing Concrete to Concrete contact.

(E) Contraction Joints

Contraction Joints shall be installed in the Curb at a spacing of no more than 10 feet on center.

(F) Standard Details

Details for Concrete Curb and gutter are shown in Appendix C: Details C.10 and C.11.

(G) Testing Requirements

- (1) One set of three test cylinders shall be made for each day's placement of Street. An additional set of three test cylinders shall be made for each additional 100 cubic yards of placement. One slump, air entrainment and temperature test shall be performed for each set of Concrete test cylinders.
- (2) One cylinder shall be tested for compressive strength at no later than seven days and two cylinders at 28 days.
- (3) Part of the plastic Concrete sample used for the test cylinders shall be washed to visually confirm that crushed limestone coarse aggregate was used in the Concrete mix.
- (4) All Concrete testing shall be performed by a Qualified Materials Testing firm in accord with applicable ASTM specifications, latest editions. The results of all Concrete testing are required to be provided to Staff by the materials testing firm prior to the approval of a Final Plat.

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### A.3-4 Concrete Public Sidewalks, Pathways, Driveway Aprons and Other Infrastructure

#### (A) Concrete Mix Design Requirements

- (1) Aggregates shall be a blend of No. 57 gravel or crushed limestone, No. 8 gravel and concrete sand.
- (2) Gradation of the No. 57 gravel or crushed limestone, the No. 8 gravel and the concrete sand shall meet the requirements of Section 800 of the KYTC Road and Bridge Manual, latest edition.
- (3) Minimum cement factor shall be 564 pounds per cubic yard.
- (4) Minimum compressive strength at 28 days shall be 4,000 psi.
- (5) Maximum water / cement ratio shall be 0.45.
- (6) Air entrainment shall be 6% ± 2%.
- (7) Maximum slump without mid-range water reducer shall be 4-inches.
- (8) Maximum slump with mid-range water reducer shall be 7-inches.
- (9) Workability factor shall be between 40 high to 35 low.
- (10) Coarseness factor shall be between 63 high to 58 low.

#### (B) Subgrade

- (1) Subgrade for Sidewalks, pathways, and Driveway aprons shall be non-organic and consist of natural clay or sand soils.
- (2) Clay soils must be knit together without any loose clay soils. Any material used to finish grade Subgrade shall be bank run sand, KYTC crushed limestone DGA, or crushed recycled Concrete.
- (3) Any granular material in excess of two inches thick shall be compacted with a vibrating plate compactor or equivalent.
- (4) No gravel and no other crushed limestone gradation will be used for finish grade fill material.

#### (C) Thickness Requirements

- (1) Concrete for public Sidewalks and pathways shall be a minimum of four inches thick.
- (2) Residential Driveway aprons shall be a minimum of five inches thick.
- (3) Commercial and industrial Driveway aprons shall be a minimum of seven inches thick.

#### (D) Drive/Apron Requirements

Required Driveway apron layouts and construction details, including required Expansion Joint thickness and location, are shown in Appendix C: Details C.12, C.13, and C.14. Special care must

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be taken during construction to make sure there is no Concrete-to-Concrete contact under all Expansion Joints.

(E) Edge Drain Installation

When installing Driveway aprons, special care must be taken not to damage the edge drain installed on the outside of the Curb. If the edge drain is damaged, the damaged section must be properly replaced to assure water flow through the edge drain.

(F) Contraction Joint Spacing

For Sidewalks, the maximum spacing of Contraction Joints shall not exceed five feet, except when the Sidewalk or pathway is wider than five feet when the spacing shall not exceed the width of the slab.

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Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**SECTION A.4: ASPHALT CONCRETE (ASPHALT) PAVING MIXTURE AND CONSTRUCTION SPECIFICATIONS**

**A.4-1 General Requirement**

- (A) All Subdivision Streets in Campbell County Subdivisions shall be constructed in accordance with the latest edition of the KYTC Roadway Manual, Division 400, except where noted otherwise in this specification.
- (B) All Contractors, suppliers and producers must be prequalified by KYTC or demonstrate experience and success on similar projects in order to perform this work.
- (C) All construction materials incorporated into the work shall conform to the requirements set forth in the KYTC Roadway Manual.
- (D) The Contractor shall notify Staff of the intent to start the project within 24 hours of beginning production.

**A.4-2 Mixture Designation and Design**

- (A) Volumetric Mix Design  
The Contractor shall perform the volumetric mix design according to AASHTO R35 and conforming to AASHTO M323 and utilize 50 gyrations.
- (B) Mix Design Submittal  
At least 72 hours prior to the start of production, the Contractor shall submit the mix design to the Staff and the Applicant’s Qualified Material Testing Lab for review.
- (C) Aggregate Gradation  
Aggregate gradations for base, intermediate and surface mixtures shall conform to KYTC Roadway Manual Division 400 and Table A-8.

<b>Table A-8: Aggregate Gradations</b>			
Sieve Size	1.0 Base Mixture	0.75 Intermediate Mixture	Surface Mixture
1-1/2"	100	--	--
1"	90-100	100	--
3/4"	<90	90-100	--
1/2"	--	<90	100
3/8"	--	--	90-100
#4	--	--	<70
#8	19-45	23-49	25-55
#16	--	--	--
#200	1-7	2-8	2-10

- (D) Voids in Mineral Aggregate (VMA), Asphalt Content (AC) and Air Voids (AV) VMA, AC and AV for residential streets shall be as specified in Table A-9 and for commercial/industrial streets as specified in Table A-10.

<b>Table A-9: VMA, AC, and AV for Residential Streets</b>			
	Minimum VMA	Minimum AC	AV
Base Mixture	12%	4%	4%
Intermediate Mixture	13%	4.3%	4%
Surface Mixture	14%	5.4%	3%



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	Minimum VMA	Minimum AC	AV
Base Mixture	12%	4%	4%
Intermediate Mixture	13%	4.3%	4%
Surface Mixture	14%	5.4%	4%

(E) Remaining Mix Design

The remaining mix design shall conform to the applicable KYTC mix designations Class 2 BASE 0.75D PG64-22 or Class 2 BASE 1.0D PG64-22 “Base and Intermediate Mixture” and Class 2 SURF 0.38D PG64-22 “Surface Mixture”.

(F) Recycled Asphalt Pavement and Recycled Asphalt Shingles

Recycled Asphalt Pavement (RAP) may be used but is limited to 25 percent of the mixture by weight in the surface and 30 percent of the mixture by weight in the base. Recycled Asphalt Shingles (RAS) may be used but is limited to 3.0 percent of the mixture by weight. However, when combined, the total amount of RAP and RAS may not exceed 25 percent in the surface and 30 percent in the base with no more than three percent RAS. Warm mix Asphalt technology is allowed on a permissive base similar to the KYTC Standard Specifications. See Table A-11.

	Maximum RAP	Maximum RAS	Maximum RAP and RAS
Base Mixture	30%	3%	30%
Intermediate Mixture	30%	3%	30%
Surface Mixture	25%	3%	25%

### A.4-3 Plant Mix Operation

(A) Plant Requirements

- (1) All Asphalt mixing plants shall conform to KYTC standards.
- (2) Maximum asphalt temperature during plant operations is 330° F.
- (3) Minimum asphalt temperature in the truck at the plant is 220° F.

(B) Plant Testing Requirements

- (1) The Contractor shall monitor the plant production and perform quality control testing at the Asphalt mixing plant.
- (2) Staff shall be provided access to the facility during production and may be present to observe sampling and testing by the Contractor personnel.
- (3) A minimum of one test shall be performed per day of paving and additional tests shall be performed for each 1,000 tons produced.
  - a) The Contractor may perform additional testing as desired to control mix properties.

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- b) When multiple test samples are obtained, the average value of those results shall be used for acceptance.
- c) At the start of production on the project, the first sample shall be obtained after a minimum of 50 tons have been loaded.
- d) Samples shall be tested for conformance to gradation and Asphalt content requirements (AASHTO T164 & AASHTO T30).
- e) Testing results from any offsite laboratory testing shall be reported to Staff, the applicant and the Qualified Material Testing Lab within 24 hours.

**A.4-4 Minimum and Maximum Lift Thicknesses**

Minimum and maximum thicknesses for asphalt lifts are indicated in Table A-12.

Table A-12: Minimum and Maximum Lift Thickness		
	Minimum Lift	Maximum Lift
Base	3"	5"
Intermediate	2-1/4"	4-1/4"
Surface	1-1/4"	1-3/4"

**A.4-5 Placement Procedures**

(A) General

- (1) All Contractors must be prequalified by KYTC or demonstrate experience and success on similar projects in order to perform this work.
- (2) Immediately before placing Asphalt materials, remove loose and deleterious materials using a power broom or street sweeping equipment.

(B) Subgrade

- (1) Asphalt placement is prohibited on subgrade with free water on the surface.
- (2) Pavement Subgrade cross slopes shall vary from 3.7 percent to 5 percent depending on the applicable Street cross section.

(C) Overlay

- (1) A tack coat shall be evenly applied across the width of the lane at a rate of 0.05 gallons per square yard. Adjust spray bars as necessary to avoid streaks.
- (2) A tack coat is not required when placing Asphalt base mixtures on granular base layers.
- (3) When Asphalt surface abuts a barrier Curb or similar vertical surface, the abutting surface shall be tack coated prior to construction of the Asphalt course.

(D) Equipment

- (1) The Contractor shall furnish dump trucks with clean, smooth metal beds to transport materials and shall use approved and environmentally friendly release agents.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- (2) Use of diesel fuel is strictly prohibited in truck beds.
- (3) Sufficient trucks should be scheduled to allow for a continuous paving operation without significant delays between trucks.
- (4) The Contractor shall furnish a self-propelled paver with the capacity of spreading and finishing all courses to the indicated widths, depths, line, grade and cross section, with a smooth finish, uniform in density and texture.
- (5) Rollers must also be self-propelled and capable of reversing smoothly. Steel wheel rollers must be equipped with adjustable scrapers, spray bars, and/or wetting pads to keep wheels clean at all times.
- (6) Hand tampers may also be used in tight areas inaccessible by rollers.

(E) Temperatures for Asphalt, Ambient Air and Subgrade

- (1) Do not place Asphalt mixtures when the ambient air temperature and existing surface temperatures on the project are less than those specified below or when weather conditions otherwise prevent the proper handling or finishing of the Asphalt mixtures.
  - a) Minimum ambient air and existing surface temperature shall be 35° F (and rising) prior to placement of Asphalt Base Mixture.
  - b) Minimum ambient air and existing surface temperature shall be 40° F (and rising) prior to placement of Asphalt Surface Mixture:
- (2) The maximum temperature of the mixture shall not exceed 330° F at any time, and the minimum temperature (measured in the truck at the project site) shall not fall below 200° F for all mixtures.
- (3) Compaction efforts shall be completed before the Roadway mix temperature falls below 150° F.

(F) Application of Asphalt Mixes

- (1) All courses shall be placed and spread as continuously as possible, keeping the number of joints to a minimum.
- (2) The longitudinal joint in the final surface course shall be placed along the dividing line between the lanes.
- (3) Best paving practices shall be utilized to ensure the proper amount of material at the joint and to make the same number of passes over the joint as the middle of the mat.
- (4) The finished Joint shall be smooth and tight and free from voids or coarse material.

(G) Surface Course Application

- (1) The surface course application shall be provided no later than 12 months from the date the base Asphalt was placed.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- (2) Prior to the surface course application, Staff shall inspect the Asphalt base course. Damage to the Asphalt base course that will affect the structural integrity or future maintainability of the pavement section shall be repaired prior to placement of the surface course.
- (3) Damage to Curb and gutter sections identified by Staff that will affect the structural integrity and/or future maintainability of the Curb and gutter shall be removed and replaced prior to the placement of surface Asphalt course.
- (4) The surface course shall be compacted to between 1/8" and 1/2" above adjacent Concrete Curb apron.
- (5) The pavement surface cross slope shall be three percent.
- (6) The joint between Curb and gutter and Asphalt pavements shall be sealed in accord with Subsection A.4-7: Joint Sealing.

#### **A.4-6 Density Testing Requirements**

(A) Sampling

All base and surface Asphalt and aggregate materials shall be sampled, tested, and reported by a Qualified Material Testing Lab in accordance with the KYTC Roadway Manual Division 400.

(B) Testing Frequency and Results

- (1) Density tests shall be performed at least every 150 feet along each lane of asphalt placed.
- (2) At the discretion of Staff, a quality assurance check (including cores) of the sampling and testing may be required if deficiencies are suspected.
- (3) Asphalt base and surface courses shall be compacted to an average density of between 90 and 97 percent of solid volume.
- (4) Density testing shall be per ASTM D2950 "Density of Bituminous Concrete In Place by Nuclear Density Methods" or ASTM D7113 "Density of Bituminous Mixtures In Place by Electromagnetic Surface Contact Methods".

#### **A.4-7 Joint Sealing**

(A) Compound Material

The Joint Sealing Compound shall conform to the following standard designations:

- (1) Hot-Poured Elastic Type, as specified by AASHTO, latest edition; or
- (2) Silicone Rubber Sealant Type (Non-Sag, Self-Leveling, or Rapid Cure) conforming to the KYTC Roadway Manual, latest edition; or
- (3) An approved equal, as determined and approved by Staff.
- (4) The use of AC-20 as joint sealant is prohibited.

(B) Air Temperature

The application of joint sealant is prohibited at air temperatures below 40° F.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

(C) Application

- (1) Joint Sealant shall be applied to all Joints abutting the Asphalt, which includes the Joint between the base Asphalt and the Curb if the surface course is not going to be applied immediately.
- (2) Joint sealant shall be applied to the Curb line immediately upon placement of the surface Asphalt.

**A.4-8 Acceptance**

(A) All Asphalt pavement materials shall be evaluated by the Staff, per the requirements set forth in this specification and the KYTC Roadway Manual. Asphalt mixtures will be considered acceptable if the test results determine the materials are within the acceptable limits, as shown in Table A-13 and Table A-14. Any materials deemed to be outside of these ranges shall be retested for compliance.

<b>Table A-13: Acceptable Ranges for AC and Density</b>	
Asphalt Content	Density
±0.6%	90%-97%

<b>Table A-14 : Acceptable Gradation Ranges</b>			
Sieve Size	Acceptable Ranges Percent Passing		
	1.0 Base Mixture	0.75 Intermediate Mixture	0.38 Surface Mixture
1-1/2"	94-100	--	--
1"	84-100	94-100	--
3/4"	<90	84-100	--
1/2"	--	<90	94-100
3/8"	--	--	84-100
#4	--	--	<90
#8	14-50	18-54	32-73
#16	--	--	--
#200	1-10	1-10	1-10

- (B) When test results are in the "Acceptable Ranges," the material will be accepted. Staff shall require the Applicant to "Remove and Replace" the materials when the test results indicate they are outside the limits of the "Acceptable Ranges".
- (C) The surface of each course shall be inspected for uniformity and adequate thickness. Base courses shall be placed within a ½ inch tolerance and surface courses within ¼ inch tolerance. All irregularities exceeding the allowable tolerances must be repaired as directed by the Staff.

## APPENDIX B

### GEOTECHNICAL EXPLORATION AND EARTHWORK CONSTRUCTION REQUIREMENTS

#### SECTION B.1: GEOTECHNICAL EXPLORATIONS

##### B.1-1 Purpose

This section fulfills the infrastructure requirements of Kentucky Revised Statutes (KRS) 100.273 through 100.292 by determining that: (1) important in situ Subdivision soils and geologic features that will impact the functional use of public and private improvements have been identified; and (2) that soils and geologic aspects of the design and construction of public and private improvements within the Public Street Right of way or Private Street easements meet the support requirements of their intended use.

- (A) All earthwork and geotechnical exploration requirements within Appendix B shall apply to areas within the Public Street Right-of-way and Private Street easements, and areas structurally supporting the Public Street Right-of-way and Private Street easements;
- (B) All Geotechnical Engineering and Geotechnical Technician work and reporting required under Appendix B shall be provided by the Applicant of the proposed Subdivision. The Geotechnical Technician must be under the direction and control of the Geotechnical Engineer who has been employed by the Applicant for the proposed Subdivision. The proposed Subdivision's Geotechnical Engineer shall have substantial professional engineering discretion to determine when the Geotechnical Engineering intent of the requirements of this Appendix is being met.
- (C) The Applicant shall submit all Geotechnical Engineering and Geotechnical Technician reports and testing results to staff at the appropriate submittal time, as noted in Appendix B.

##### B.1-2 Geotechnical Explorations Outside of Right-of-Way

- (A) Prior to the approval of the preliminary plat, a geotechnical engineer shall complete a preliminary report that addresses the soil and bedrock types and any existing slope stability issues that are expected in the proposed Subdivision.
  - (1) The Geotechnical Engineer's preliminary report will render a preliminary engineering opinion about the suitability of those soil and bedrock types and existing slopes to provide the necessary support for the intended private property use of the Subdivision.
  - (2) The opinion of expected soil and bedrock types and opinion of soil support suitability can be based on the Geotechnical Engineer's local soil and bedrock knowledge, USGS maps, and a visual field reconnaissance.
- (B) The requirement for preliminary and final geotechnical explorations outside of the Public Right-of way may be further regulated by the applicable legislative body's zoning ordinance.

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### **B.1-3 Geotechnical Explorations Within Right-of-Way**

#### **(A) Preliminary Geotechnical Exploration**

- (1) Prior to the approval of the preliminary plat a geotechnical engineer shall complete a preliminary geotechnical exploration report. The report will address the soil and bedrock types that are expected on the project site, and present an engineering opinion about the suitability of the soil and bedrock types (when properly prepared and constructed) to provide adequate proposed Public Street Right-of-way structural support, including the minimum required CBR (subgrade support) values for asphalt and/or concrete pavements described herein.
- (2) The opinion of expected soil and bedrock types and opinion of Subgrade support suitability can be based on the Geotechnical Engineer's local soil and bedrock knowledge, USGS maps, and a visual field reconnaissance.
- (3) Campbell County soil types that may require replacement or other form of remediation during Subgrade construction in order to provide the minimum required CBR values for Concrete and Asphalt pavement designs shown in Table A-1 are non-plastic silts (soils that classify ML according to the Unified Soil Classification System (USCS)) and highly plastic silts and clays (MH and CH soils) with standard Proctor maximum dry densities less than 100 pounds per cubic foot and plasticity indices greater than 30 percent.

#### **(B) Final Geotechnical Exploration**

Prior to approval of the Improvement Plans or Grading Plans a Geotechnical Engineer shall complete a final geotechnical exploration report that identifies the soil and bedrock types present on the project site covered by the Improvement Plans or Grading Plans and presents a written engineering opinion about the suitability of the soils and bedrock to provide stable Right-of-way earthwork construction, and to provide the minimum CBR values for Asphalt and Concrete pavement.

- (1) This written report shall be submitted to staff and be based on the results of soil borings, test pits, field and laboratory soil testing, etc. that are sufficient for the Geotechnical Engineer to render his/her engineering opinion.
- (2) If the soils are not suitable to provide the minimum CBR values, the Geotechnical Engineer shall include recommendations in the written report for subgrade improvement or alternate pavement designs.

## **SECTION B.2: EARTHWORK SPECIFICATIONS**

### **B.2-1 Purpose**

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

The purpose of this section is to establish the appropriate earthwork specifications and material testing requirements so that the Public Street Right-of-way and Private Street easements have adequate earthwork structural support and the required pavement subgrade support.

### **B.2-2 Earthwork Excavations**

The following shall apply to earthwork excavations other than trenches or temporary excavations:

- (A) All topsoil shall be stripped from proposed cut, fill and pavement areas.
- (B) Excavations shall be made to approximate grade or Subgrade elevations consistent with approved plans.
- (C) Final cut slopes shall not be steeper than a slope of 3.0 horizontal to 1.0 vertical unless otherwise designed by a Geotechnical Engineer, but in no case shall be steeper than 2.0 horizontal to 1.0 vertical.
- (D) Any spongy, unstable, or organic material that is exposed at the finished Subgrade level must be removed to expose stiff, non-yielding, non-organic soils and the excavated material replaced with soils capable of producing the required Subgrade CBR for the pavement design being used for the project (see Section A.1: Pavement Design Method and Required Thicknesses of these regulations).
- (E) When excavating at the cut/fill transition during earthwork, remove spongy or unstable material, organic matter, or other unsuitable materials that are exposed. The Contractor shall remove same to expose stiff, non-yielding, non-organic soils and shall replace with approved materials, placed and compacted in accordance with these regulations and the recommendations of the geotechnical engineer.
- (F) Excavations can be backfilled with the same soils that were removed, provided they meet the requirements of Subsection B.2-3: Controlled Fill, Subsection B.2-4: Trench Backfill, Subsection B.2-5: Shallow Trench Backfill, and Subsection B.2-6: Deep Trench Backfill.

### **B.2-3 Controlled Fill Other than Trench Backfill**

- (A) Construction of controlled fills shall be observed and tested by a Geotechnical Technician. Density testing and reporting is required at a minimum frequency of one density test per 500 cubic yards.
- (B) Organic or vegetative soils shall not be used in the construction of the controlled fill.
- (C) Controlled fills shall be constructed of natural soils or bedrock to approximate Subgrade elevation in level lift thicknesses that are approved by the Geotechnical Engineer. All shale used in controlled fills shall be pulverized to a soil-like consistency and moisture-conditioned the same as a soil. Limestone shall be laid flat and shall be broken up and dispersed in the fill so that it does not nest or impede compaction. The incorporation of limestone floaters in the fill shall be in



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accordance with the recommendations of the Geotechnical Engineer.

- (D) Except for the top one foot of earthwork finished grades, which is the pavement subgrade, controlled fills shall be constructed with soils that are within two percent below to three percent above their optimum moisture content and compacted to a firm, non-yielding condition and to dry densities at least 95 percent of the maximum dry density, as determined by the standard Proctor moisture-density test (ASTM D698, latest edition), or 87 percent of maximum dry density as determined by the modified Proctor moisture-density test (ASTM D1557, latest edition).
- (E) Clean granular soils that do not exhibit a well-defined moisture-density curve shall be compacted to a firm, non-yielding condition and to at least 75 percent relative density as determined by the testing methods contained in ASTM D4253 and D4254, latest edition.
- (F) Controlled fill slopes shall not be steeper than 3.0 horizontal to 1.0 vertical unless otherwise designed by a Geotechnical Engineer. In no case shall unreinforced fill slopes be steeper than 2.5 horizontal to 1.0 vertical.
- (G) Lime stabilization in controlled fills is prohibited unless designed and approved by a Geotechnical Engineer.
  - (1) Prior to using lime stabilization, staff shall approve the recommended lime stabilization specifications from a Geotechnical Engineer.
  - (2) The Geotechnical Engineer shall be required to monitor the lime stabilization process in the field to determine that it is consistent with their recommended specifications.
  - (3) A letter from the Geotechnical Engineer shall be submitted to staff confirming that the lime stabilization process used in the field was consistent with their written recommendations.
- (H) Heavy equipment used for compaction shall be capable of producing the required controlled fill densities without lamination.
  - (1) Cohesive soils shall be compacted with kneading type compaction equipment.
  - (2) Cohesionless soils shall be compacted with smooth face vibratory equipment.

#### **B.2-4 Trench Backfill**

The following general information shall apply to all trench backfill:

- (A) Trench backfill is defined as the backfill material used to refill the trench excavation above the initial utility conduit bedding and cover that is a part of underground utility installation.
- (B) Natural non-organic soils, bedrock, approved aggregates, and Controlled Low Strength Material

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shall be used to backfill utility trenches as defined herein.

(C) Backfill shall not be flushed with water to obtain compaction.

(D) A Geotechnical Technician shall observe, test and report on the trench backfill compaction at least once per day when said trench backfill operations are occurring.

### **B.2-6 Deep Trench Backfill**

The following shall apply to deep trench backfill:

(A) Deep trench backfill is defined as any trench with backfill deeper than shallow trench backfill.

(B) Deep trench backfill shall consist of natural non-organic soil or bedrock (no pieces of limestone thicker than six inches or more than 12 inches long/wide) or specified aggregates as set out in Appendix C: Details C.2 and C.3.

(1) All shale shall be pulverized to a soil-like consistency and moisture-conditioned as a soil.

(2) All limestone shall be laid flat, broken up and dispersed so that it does not nest or impede compaction.

(3) All backfill shall be moisture-conditioned to within two percent below to three percent above the optimum moisture content for compaction.

(4) Backfill lifts shall be 10 inches thick or less (unless otherwise specified by the Geotechnical Engineer), and compacted to not less than 95 percent of the standard Proctor maximum dry density for that soil.

(5) Backfill method shall be either a sheepsfoot roller attachment on a track mounted excavator or a self-propelled kneading-type compactor operating longitudinally in the trench excavation.

(C) Where depths of trenches are more than four feet and worker safety is at risk, the technician shall observe the compaction process in layers with an appropriate type of compaction equipment and document observations until worker safety is assured when compaction testing, as required, is resumed.

### **B.2-7 Street Pavement Subgrade**

(A) Subgrade Preparation During Excavation

Subgrade is defined as the top one foot of the soils under the pavement. The pavement Subgrade must provide adequate support for the pavement structure as defined in these regulations.

(1) During earthwork and initial pavement subgrade preparation, the Geotechnical Engineer

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

or Geotechnical Technician shall evaluate in situ pavement subgrade materials on the site and develop an opinion about their suitability to provide the minimum CBR values when compacted to the required densities at the specified moisture contents.

- (2) Any soils identified as unsuitable to prove the minimum CBR values will be removed from the subgrade and replaced with suitable soils, or otherwise improved as recommended by the Geotechnical Engineer.

#### (B) Final Subgrade Preparations and Testing

- (1) At the time of final Subgrade preparation, density testing and proofrolling before paving, the Subgrade shall be within two percent of its optimum moisture content and compacted to a firm, non-yielding condition and to dry densities at least 98 percent of the maximum dry density, determined by the standard Proctor moisture-density test (ASTM D698, latest edition) or 89 percent of the maximum dry density as determined by the modified Proctor moisture-density test (ASTM D1557, latest edition). Cohesive Subgrade material shall be properly knit together and free of loose, dry, crumbly, baked or crusted soil material.
- (2) The Subgrade shall consist of cohesive soils, clean #57 crushed limestone, crushed stone base, or Controlled Low Strength Material (CLSM). Any aggregate material used to replace part of the cohesive Subgrade soil must be drained, so that no standing water can collect and be held in the aggregate Subgrade.
- (3) Clean granular soils that do not exhibit a well-defined moisture-density curve shall be compacted to a firm, non-yielding condition and to at least 80 percent relative density as determined by the testing methods contained in ASTM D4253 and D4254, latest edition.
- (4) The Subgrade shall be shaped to plan elevation and cross-section and checked by the Staff inspector for conformity with the cross section shown on the approved Improvement Drawings immediately prior to placing the pavement. Pavement shall not be placed on any part of the Subgrade which does not conform to the cross section shown on the approved Improvement Drawings.

#### (C) Final Subgrade Proofrolling

- (1) Subgrade Proofrolling is the final test to be performed immediately prior to beginning the paving operations.
- (2) Prior to the placement of pavement materials and after confirming proper density and moisture content of the Subgrade soils, all Street Subgrades shall be proofrolled to test the stability and uniformity of Subgrade materials.
- (3) Subgrade Proofrolling shall be performed with a dual axle dump truck fully loaded with clayey soils or aggregate.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- (4) Subgrade Proofrolling shall be performed at walking speed with at least two passes made in each drive lane direction with the outside wheel generally traveling along the inside line of the future Curb during one pass, and the wheel-paths offset one-half of the truck width during the second pass to maximize subgrade coverage. Extra proofroll passes shall be made at the discretion of the Staff inspector.
  - a) Where proofrolling indicates areas of soft or unsuitable Subgrade soils or areas of non-uniform Subgrade stability, the area shall be delineated and repaired.
  - b) Areas of soft or unsuitable Subgrade soils or areas of non-uniform Subgrade stability shall be identified by observing Pumping and/or Rutting. Pumping is defined as movement or deflection of the Subgrade soil that extends beyond the limits of the direct wheel load. Unless accompanied by Rutting (which is common), the pumping Subgrade soil may rebound back to its original position after the wheel load passes. Pumping failures are typically caused by Subgrade soils with higher than optimum moisture content located within a zone up to several feet below the Subgrade surface. Rutting is defined as imprints or depressions in the Subgrade caused by direct wheel loads. Rutting failures are typically caused by inadequate compaction of near surface soils.
  - c) Rutting in excess of one inch in depth shall be deemed a Subgrade failure requiring Subgrade repair.
  - d) Pumping or deflection of less than one inch is acceptable so long as the Subgrade soil rebounds back to its original position after the wheel load passes. Pumping or deflection greater than one inch or areas of permanent deflections shall be deemed a Subgrade failure requiring Subgrade repair.
  - e) For larger areas of subgrade proofroll failure, the alternative pavement design procedures in Subsection A.1-2(B) can be implemented by the Applicant.
- (5) Subgrade repairs shall be performed by scarifying, aerating and recompacting the Subgrade soils. As an alternative, the failed Subgrade soils can be removed and replaced with properly compacted soils capable of producing the required CBR value.
- (6) In all cases, repaired areas shall be retested for compaction and proofrolled again before proceeding with the placement of pavement materials. Rutting can typically be repaired by scarifying, aerating, and recompacting, while areas of pumping will more likely require a more significant repair with depth often including the removal and replacement of unsuitable Subgrade materials.

#### (D) Final Subgrade Inspection Testing and Reporting Requirements

- (1) Both the Staff inspector and the Geotechnical Technician have final Subgrade review, testing, and reporting responsibilities.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

- (2) The Geotechnical Engineer shall provide soil testing to develop an opinion of adequate bearing characteristics of the final Subgrade soils. Those tests will include, but are not limited to, moisture content testing, density testing, and verification of soil types being adequate to produce the required CBR values for the pavement. Moisture content testing, density testing, and verification of soil types being adequate to produce the required CBR values for the pavement shall be performed by the Geotechnical Engineer at intervals no less than one test per 100 lineal feet of Street for Streets of 500 lineal feet or less, or one test per 200 lineal feet for Streets over 500 lineal feet.
- (3) The Geotechnical Technician and the Staff Inspector shall review the proofrolling described in Subsection B.2-7(C): Final Subgrade Proofrolling and determine whether the Subgrade passes the proofroll.
- (4) Paving operations shall only be permitted to begin after passing inspection results are achieved from Subsection B.2-7: Street Pavement Subgrade, Subsection B.2-7(C): Final Subgrade Proofrolling, and Clause B.2-7(D)(2). Inspection reports referenced in Clause B.2-7(D)(1) and Clause B.2-7(D)(2) shall be placed in the Staff project file and Staff shall make their inspection records available to the Developer.
- (5) Street paving shall occur within 30 hours after passing inspection results are achieved from Clause B.2-7(D)(1) and Clause B.2-7(D)(2). A ¼ inch rain event or sub-freezing temperature occurrence between a passing proofroll and Street paving shall void the proofroll and geotechnical testing and shall require re-evaluation.
- (6) For concrete pavements, small pours of up to one hundred square yards to complete intersections, cul-de-sacs, etc. do not require subgrade re-proofrolling after initially passing a proofroll as part of a large subgrade preparations and testing. Moisture conditioning and rerolling may be required.

#### **B.2-8 Controlled Low Strength Material**

- (A) CLSM may be used in place of compacted clayey soils to uniformly backfill utility trenches, manholes, etc.
- (B) CLSM shall not be used in place of clean, free-draining #57 crushed limestone specified for and intended as Drainage backfill around catch basins and manholes or in trench drains, such as between catch basin pairs.
- (C) CLSM shall be transported by mixing truck to ensure proper suspension when placed. Constant agitation is required.
- (D) Flotation of pipes should be avoided by backfilling in 8 to 12 inch lifts until fluid head subsides.
- (E) Adequate separation from aluminum pipe, such as a bituminous coating, is required.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

(F) CLSM shall extend from the top of compacted bedding or other backfill to bottom of pavement structure.

(1) CLSM placement shall begin no greater than six inches above the top of the pipe.

(G) CLSM shall have a minimum excavatable strength of 20 pounds per square inch at three days and 30 pounds per square inch at 28 days. CLSM shall have a maximum excavatable strength of 100 pounds per square inch at 28 days for potential future excavatability.

### **B.2-9 Construction Equipment on Paved Surfaces**

Only rubber tired or rubber tracked equipment shall be used on paved surfaces.

### **B.2-10 Work Adjacent to Plastic Concrete**

Grading operations adjacent to Concrete Curb are prohibited for a minimum of 24 hours after Concrete placement has been completed.

### **B.2-11 Final Geotechnical Reporting**

After the completion of all earthwork covered under this Appendix, for each Subdivision section that is constructed and is to be recorded, the Geotechnical Engineer shall complete a final written report for that Subdivision section. The report will include the following:

- (1) All relevant construction inspection results; and
- (2) A statement from the project Geotechnical Engineer that, to the best of his/her knowledge and belief, all earthwork operations within the Public Street Right-of-way, Private Street easements and areas structurally supporting the Public Street Right-of-way and Private Street easements were performed in general conformance with the requirements of this Appendix and the recommendations for the areas within the Public Street Right-of-way, Private Street easements and areas structurally supporting the Public Street Right-of-way and Private Street easements contained in the associated geotechnical exploration report.

Changes from existing provisions are noted: **Substantive Additions** and ~~Deletions~~

**APPENDIX C**

**STANDARD CONSTRUCTION REQUIREMENTS AND DETAILS FOR STREETS, SIDEWALKS, DRIVEWAYS**

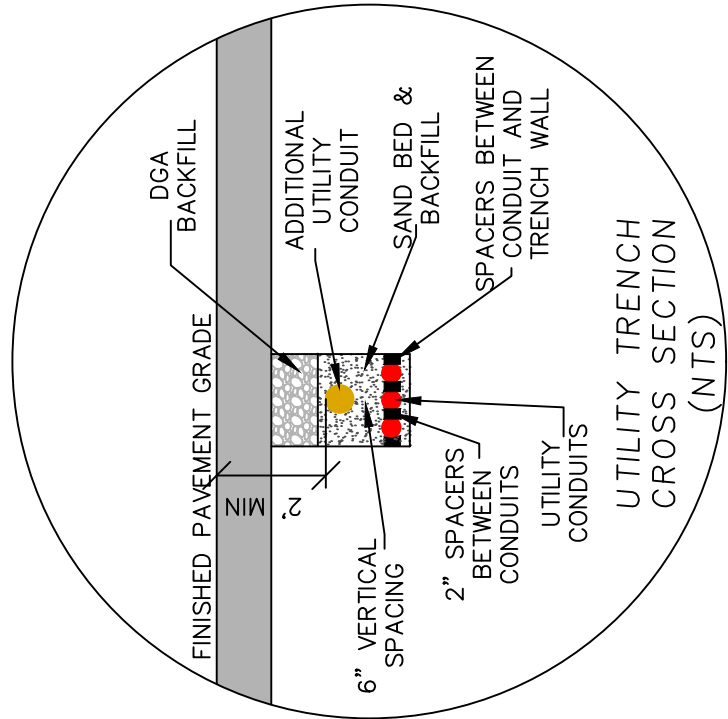
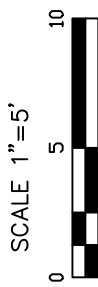
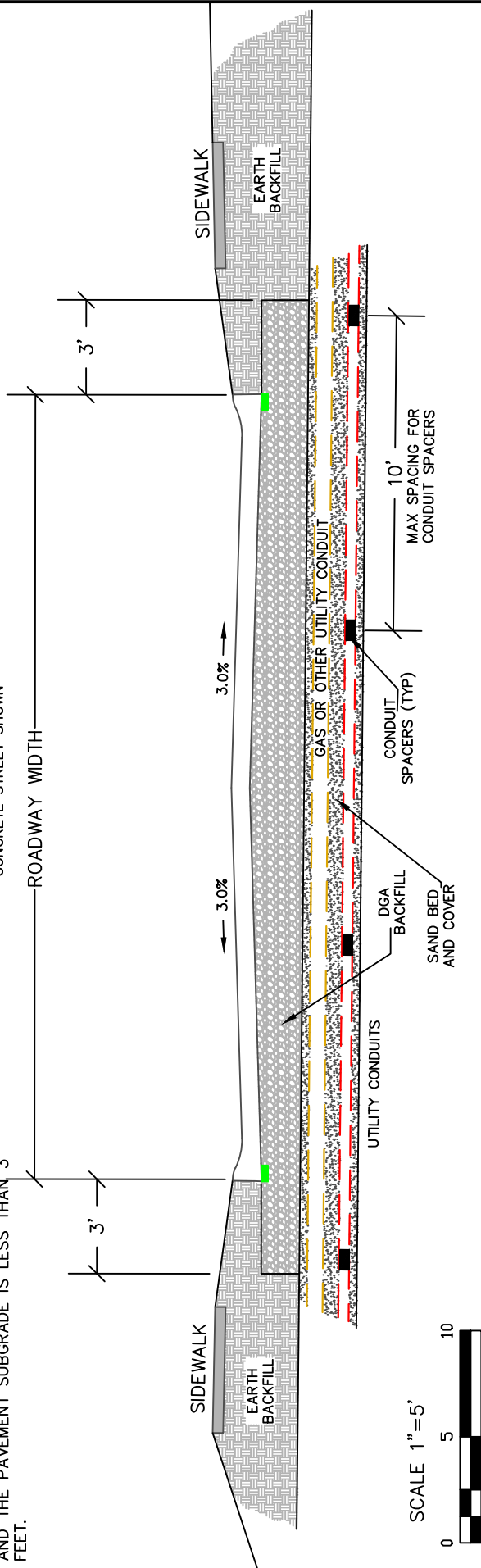
DRAFT

THIS DETAIL SHALL APPLY TO ALL SHALLOW UTILITY CROSSINGS UNDER THE STREET. SHALLOW IS DEFINED AS WHEN THE DISTANCE BETWEEN THE TOP OF THE INITIAL GRANULAR COVER & BEDDING AND THE PAVEMENT SUBGRADE IS LESS THAN 3 FEET.

# STREET CROSS SECTION AT SHALLOW UTILITY CROSS OVER

CONCRETE STREET SHOWN

## DETAIL #1



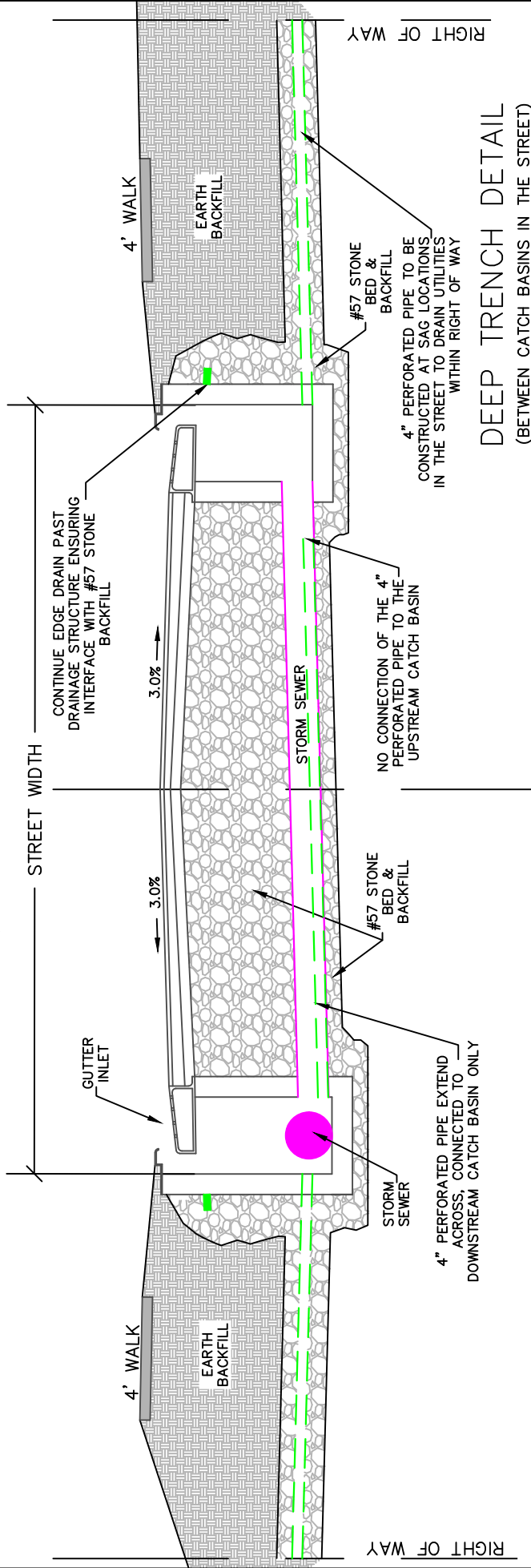
### SHALLOW UTILITY CROSSOVER INSTALLATION PROCEDURE

1. ALL UTILITY CONDUITS SHALL BE SDR-35 OR EQUAL.
2. A MINIMUM OF 4" BETWEEN EACH OUTSIDE CONDUIT AND THE WALL OF THE TRENCH. (EACH CONDUIT MUST HAVE A MINIMUM SPACING OF 2" BETWEEN THE OUTSIDE EDGE OF EACH CONDUIT)
3. INSTALL A MINIMUM SAND BEDDING OF 3" IN THE BOTTOM OF THE TRENCH.
4. INSTALL UTILITY CONDUITS IN ONE SINGLE ROW (DO NOT STACK CONDUITS DIRECTLY ON TOP OF EACH OTHER) WITH A MINIMUM SPACING OF 2" BETWEEN THE OUTSIDE EDGE OF EACH CONDUIT AND A MINIMUM OF 4" BETWEEN THE LAST CONDUIT AND THE TRENCH WALL. THE MINIMUM 2" SPACING BETWEEN CONDUITS MUST BE ACCOMPLISHED USING SPACERS SUCH AS MANUFACTURED SPACERS, BRICKS, BLOCKS, ETC. THERE SHALL BE BLOCKS / SPACERS BETWEEN THE TRENCH WALL AND EACH OUTSIDE CONDUIT. SPACERS SHALL BE INSTALLED AT THE BEGINNING AND THE END OF EACH UTILITY TRENCH AND AT MINIMUM OF EVERY 10 FEET ALONG THE CONDUIT IN THE TRENCH.
5. BACKFILL CONDUITS WITH SAND TO A MINIMUM COVER OF 6" AND COMPACT WITH VIBRATORY PLATE COMPACTOR MAKING A MINIMUM OF 2 PASSES.
6. INSTALL NEXT ROW OF CONDUITS (IF NECESSARY) A MINIMUM OF 6" VERTICAL ABOVE THE FIRST ROW OF CONDUITS (MEASURED FROM THE TOP OF THE LOWER CONDUIT TO THE BOTTOM OF THE UPPER CONDUIT)
7. BACKFILL CONDUITS WITH SAND TO A MINIMUM COVER OF 6" AND COMPACT WITH VIBRATORY PLATE COMPACTOR MAKING A MINIMUM OF 2 PASSES.
8. INSTALL DGA BACKFILL (PUG MILLED) UP TO SUBGRADE OF STREET USING MAXIMUM LIFTS OF 8" AND COMPACTING WITH A VIBRATORY PLATE COMPACTOR MAKING A MINIMUM OF 2 PASSES.
9. THIS METHOD SHALL APPLY TO ALL SHALLOW UTILITY CROSSINGS (WATER MAIN, WATER SERVICES, ELECTRIC, TELEPHONE, CABLE, ETC.);

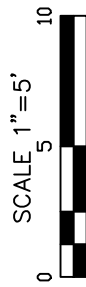


# STREET CROSS SECTION AT PAIRED CATCH BASIN CROSSING (FULL-DEPTH ASPHALT STREET SHOWN)

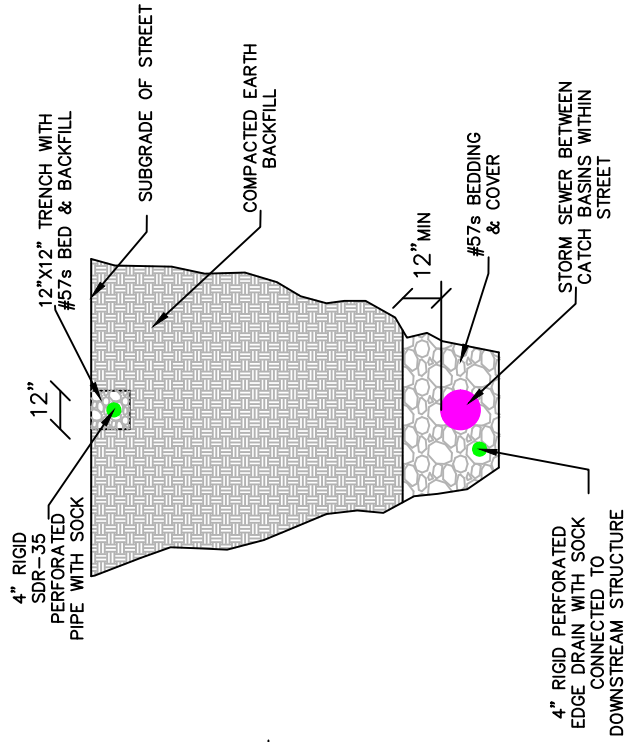
## DETAIL #2



3.3

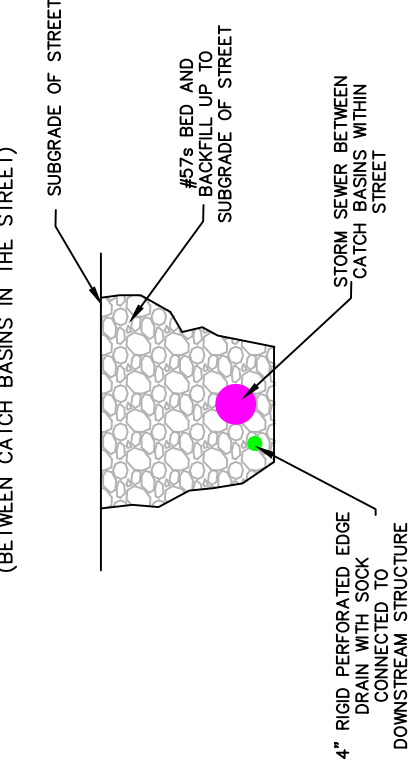


### DEEP TRENCH DETAIL (BETWEEN CATCH BASINS IN THE STREET)

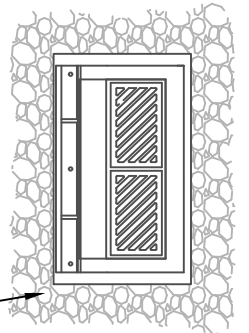


NOTE: DEEP TRENCH DETAIL CAN BE USED WHEN THE DISTANCE BETWEEN THE TOP OF THE GRANULAR COVER & BEDDING AND THE SUBGRADE OF THE STREET IS 3 FEET OR GREATER.

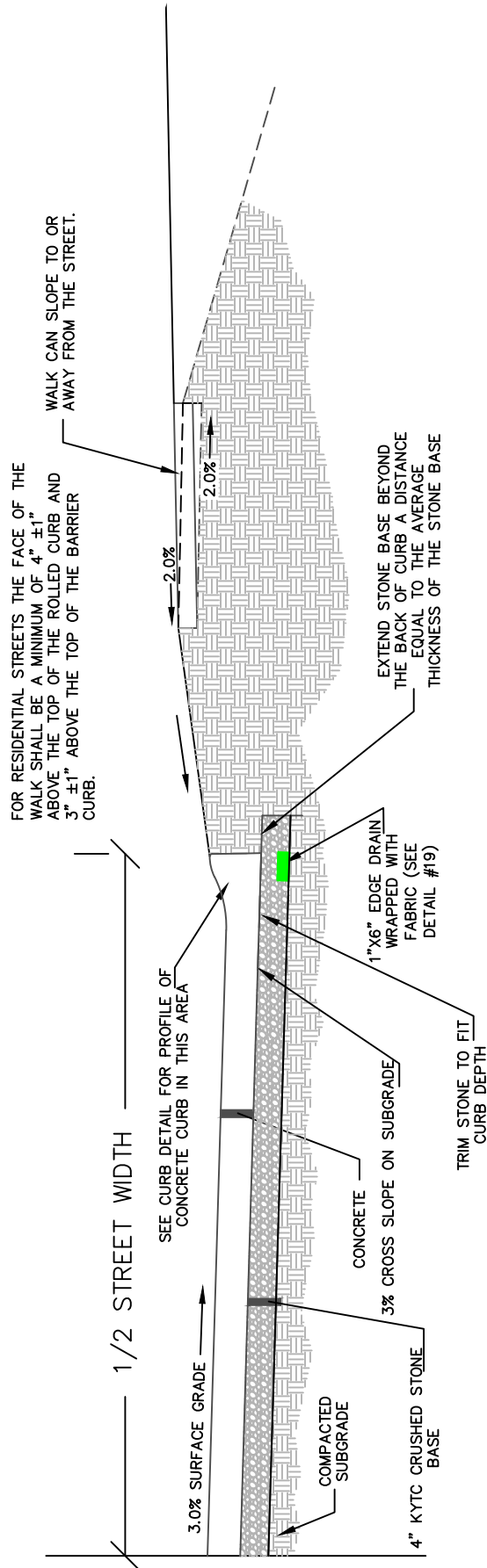
### SHALLOW TRENCH DETAIL (BETWEEN CATCH BASINS IN THE STREET)



BACKFILL ALL SIDES OF CATCH BASIN FROM BOTTOM TO SUBGRADE WITH #57 STONE FOR BOTH SHALLOW AND DEEP TRENCH APPLICATIONS



# SUBURBAN & URBAN PAVEMENT SECTIONS

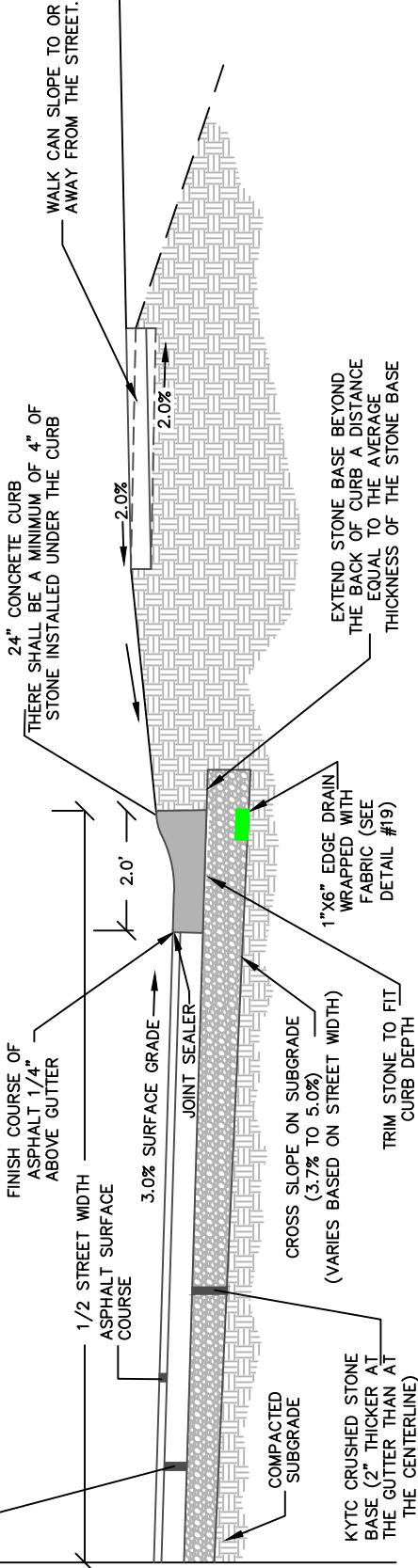


SEE TABLE A-2 FOR ALL PAVEMENT THICKNESSES

CONCRETE

## SUBURBAN & URBAN PAVEMENT SECTIONS

- ASPHALT INTERMEDIATE COURSE
1. IF SURFACE IS INSTALLED IMMEDIATELY THIS COURSE CAN BE INSTALLED AS AN ASPHALT BASE COURSE
  2. IF SURFACE IS NOT INSTALLED IMMEDIATELY THIS COURSE SHALL BE INSTALLED USING AN INTERMEDIATE ASPHALT COURSE. IF THIS COURSE IS INSTALLED IN TWO LIFTS THEN ONLY THE SECOND LIFT SHALL BE REQUIRED TO BE AN INTERMEDIATE ASPHALT COURSE.



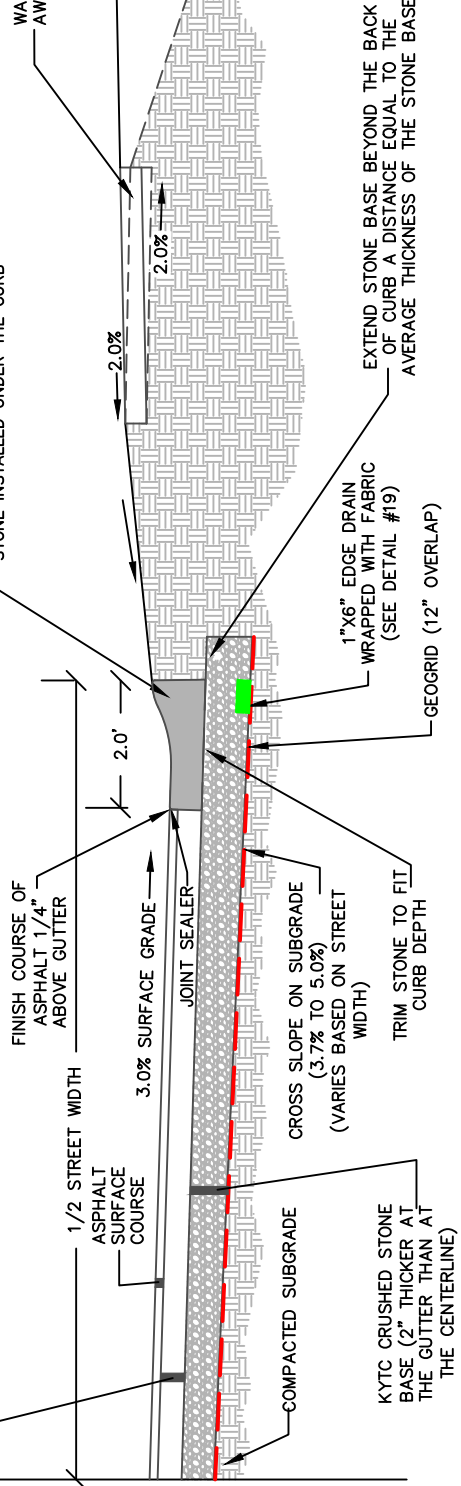
FOR RESIDENTIAL STREETS THE FACE OF THE WALK SHALL BE A MINIMUM OF 4" ±1" ABOVE THE TOP OF THE ROLLED CURB AND 3" ±1" ABOVE THE TOP OF THE BARRIER CURB.

WALK CAN SLOPE TO OR AWAY FROM THE STREET.

EXTEND STONE BASE BEYOND THE BACK OF CURB A DISTANCE EQUAL TO THE AVERAGE THICKNESS OF THE STONE BASE

## ASPHALT WITH STONE BASE

- ASPHALT INTERMEDIATE COURSE
1. IF SURFACE IS INSTALLED IMMEDIATELY THIS COURSE CAN BE INSTALLED AS AN ASPHALT BASE COURSE
  2. IF SURFACE IS NOT INSTALLED IMMEDIATELY THIS COURSE SHALL BE INSTALLED USING AN INTERMEDIATE ASPHALT COURSE. IF THIS COURSE IS INSTALLED IN TWO LIFTS THEN ONLY THE SECOND LIFT SHALL BE REQUIRED TO BE AN INTERMEDIATE ASPHALT COURSE.



FOR RESIDENTIAL STREETS THE FACE OF THE WALK SHALL BE A MINIMUM OF 4" ±1" ABOVE THE TOP OF THE ROLLED CURB AND 3" ±1" ABOVE THE TOP OF THE BARRIER CURB.

WALK CAN SLOPE TO OR AWAY FROM THE STREET.

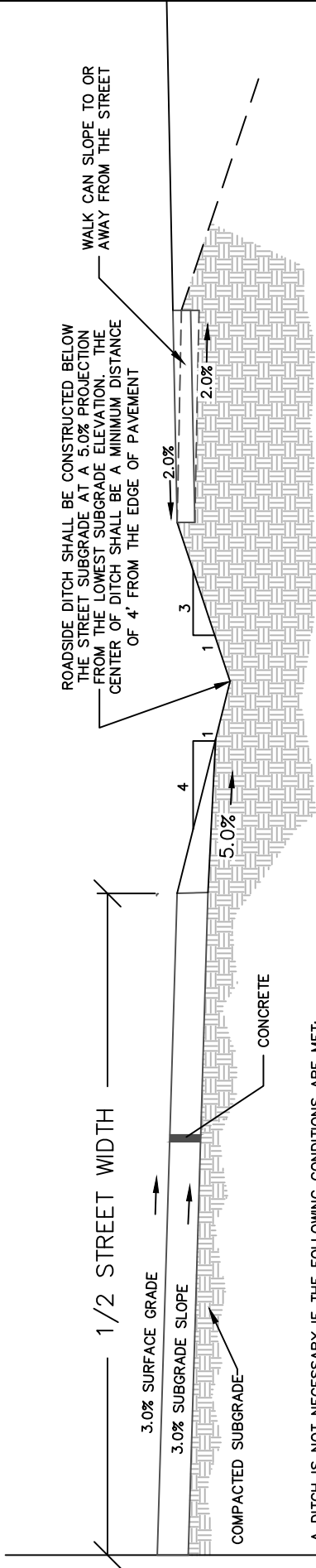
EXTEND STONE BASE BEYOND THE BACK OF CURB A DISTANCE EQUAL TO THE AVERAGE THICKNESS OF THE STONE BASE

## ASPHALT WITH STONE BASE & GEOGRID

- ASPHALT INTERMEDIATE COURSE
1. IF SURFACE IS INSTALLED IMMEDIATELY THIS COURSE CAN BE INSTALLED AS AN ASPHALT BASE COURSE
  2. IF SURFACE IS NOT INSTALLED IMMEDIATELY THIS COURSE SHALL BE INSTALLED USING AN INTERMEDIATE ASPHALT COURSE. IF THIS COURSE IS INSTALLED IN TWO LIFTS THEN ONLY THE SECOND LIFT SHALL BE REQUIRED TO BE AN INTERMEDIATE ASPHALT COURSE.

EXTEND STONE BASE BEYOND THE BACK OF CURB A DISTANCE EQUAL TO THE AVERAGE THICKNESS OF THE STONE BASE

# RURAL PAVEMENT SECTIONS



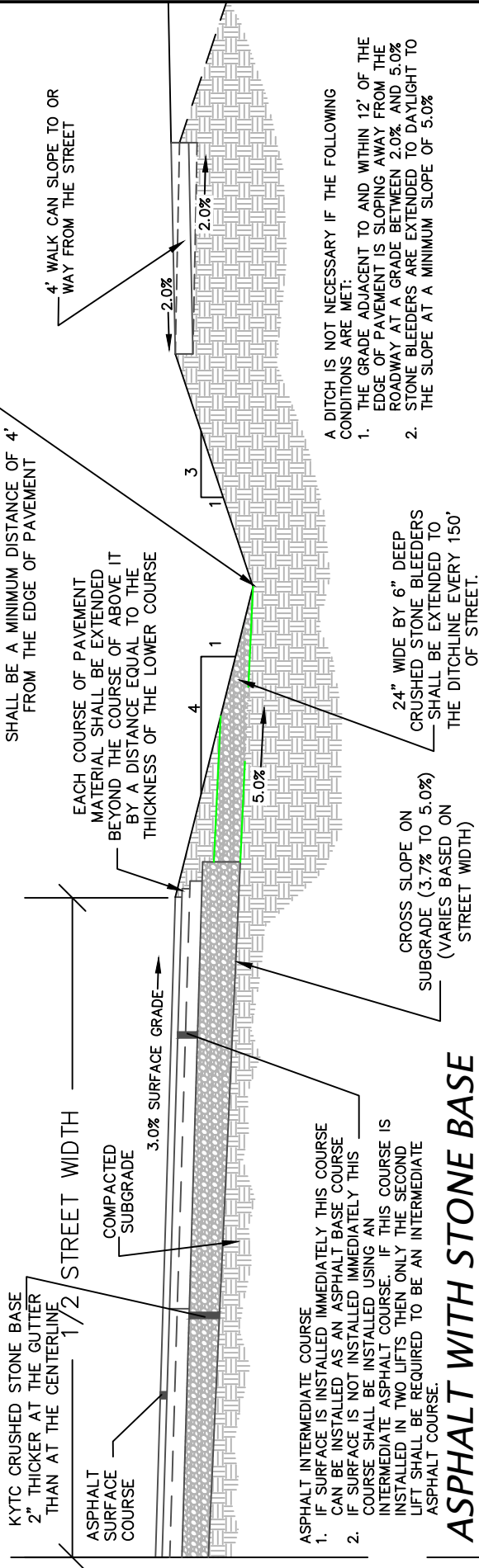
A DITCH IS NOT NECESSARY IF THE FOLLOWING CONDITIONS ARE MET:

1. THE GRADE ADJACENT TO AND WITHIN 12' OF THE EDGE OF PAVEMENT IS SLOPING AWAY FROM THE ROADWAY AT A GRADE BETWEEN 2.0% AND 5.0%
2. DRAINAGE FROM THE SUBGRADE OF THE PAVEMENT CAN BE DRAINED TO THE FACE OF THE SLOPE AT A MINIMUM OF 5.0%

SEE TABLE A-2 FOR ALL PAVEMENT THICKNESSES

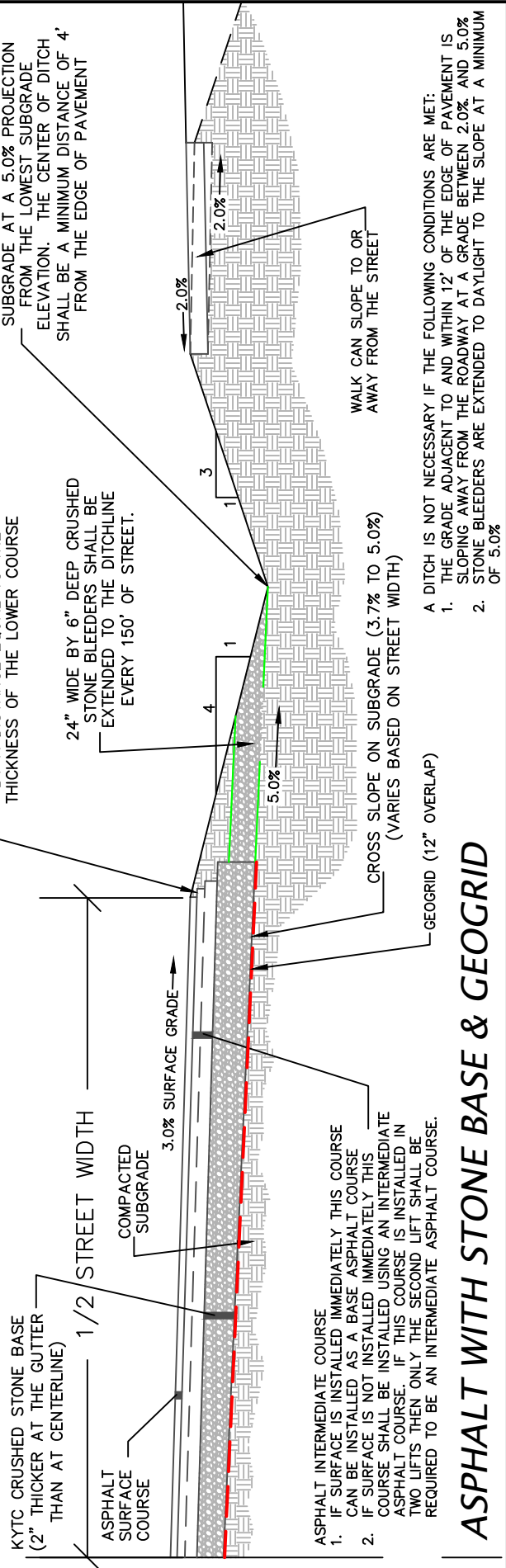
CONCRETE

# RURAL PAVEMENT SECTIONS



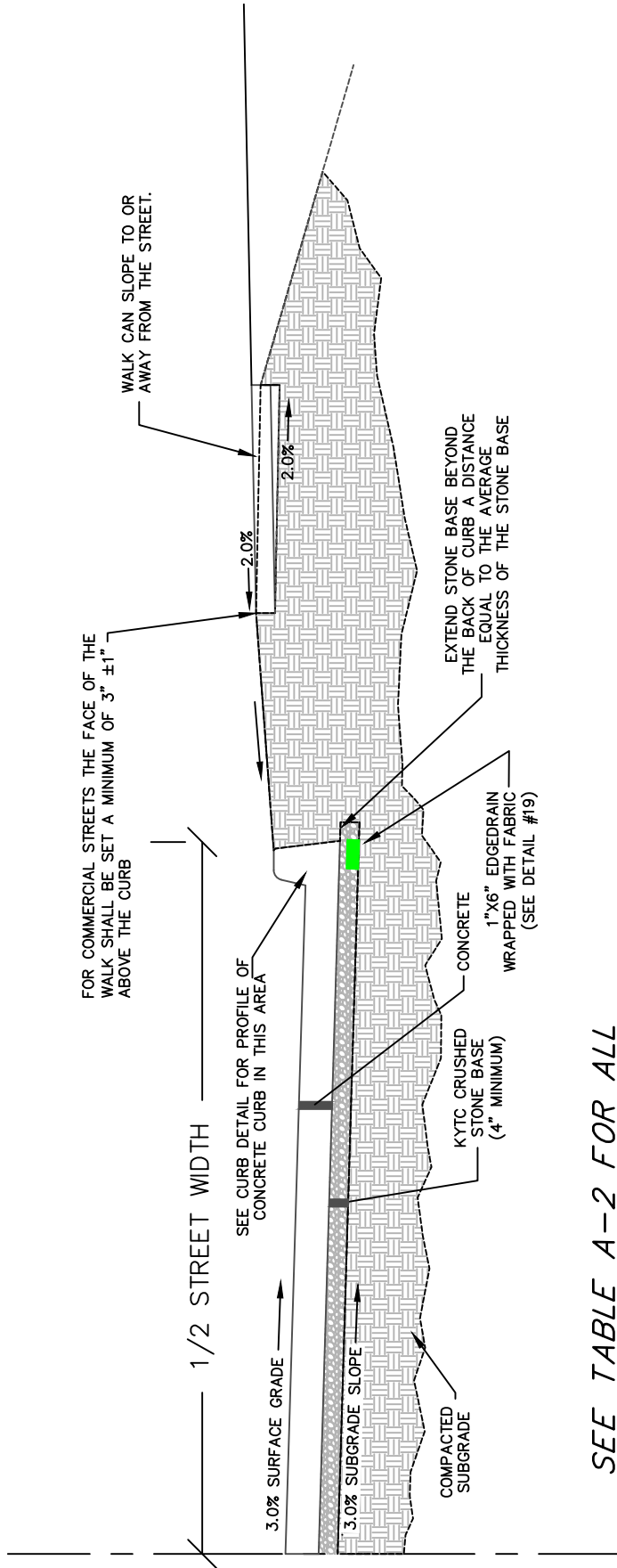
## ASPHALT WITH STONE BASE

### SEE TABLE A-2 FOR ALL PAVEMENT THICKNESSES



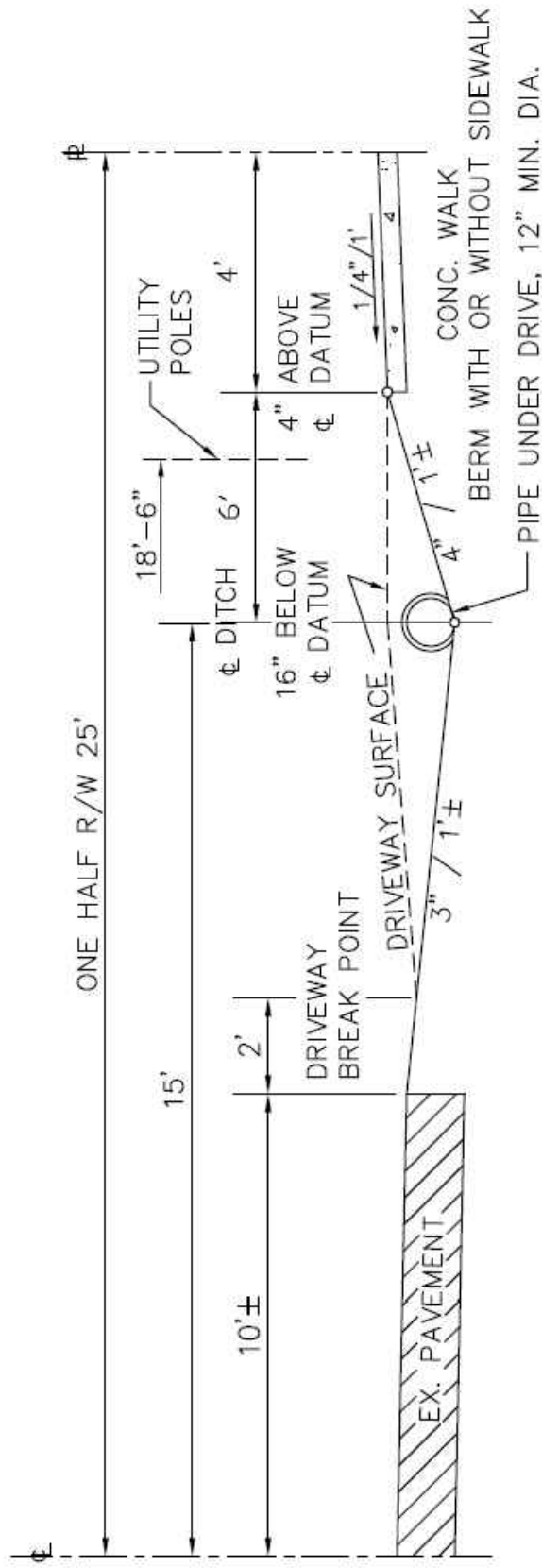
## ASPHALT WITH STONE BASE & GEOGRID

# COMMERCIAL/INDUSTRIAL PAVEMENT SECTION

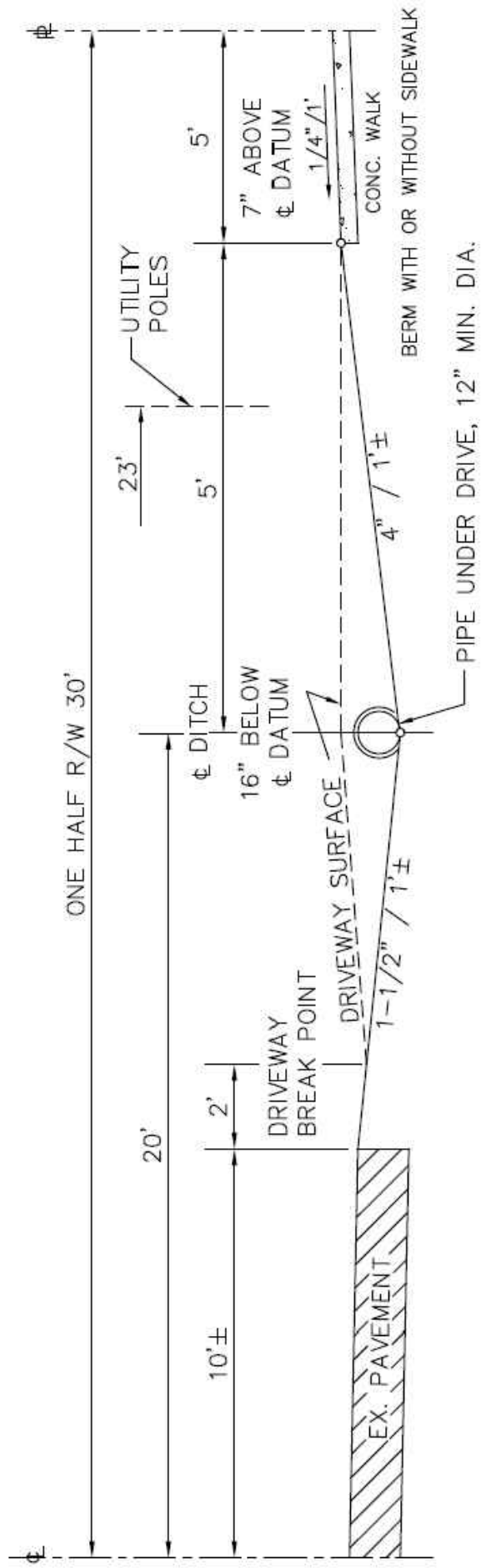


SEE TABLE A-2 FOR ALL PAVEMENT THICKNESSES

# TYPICAL SECTION – SIDE DITCH DRAINAGE AT DRIVEWAY

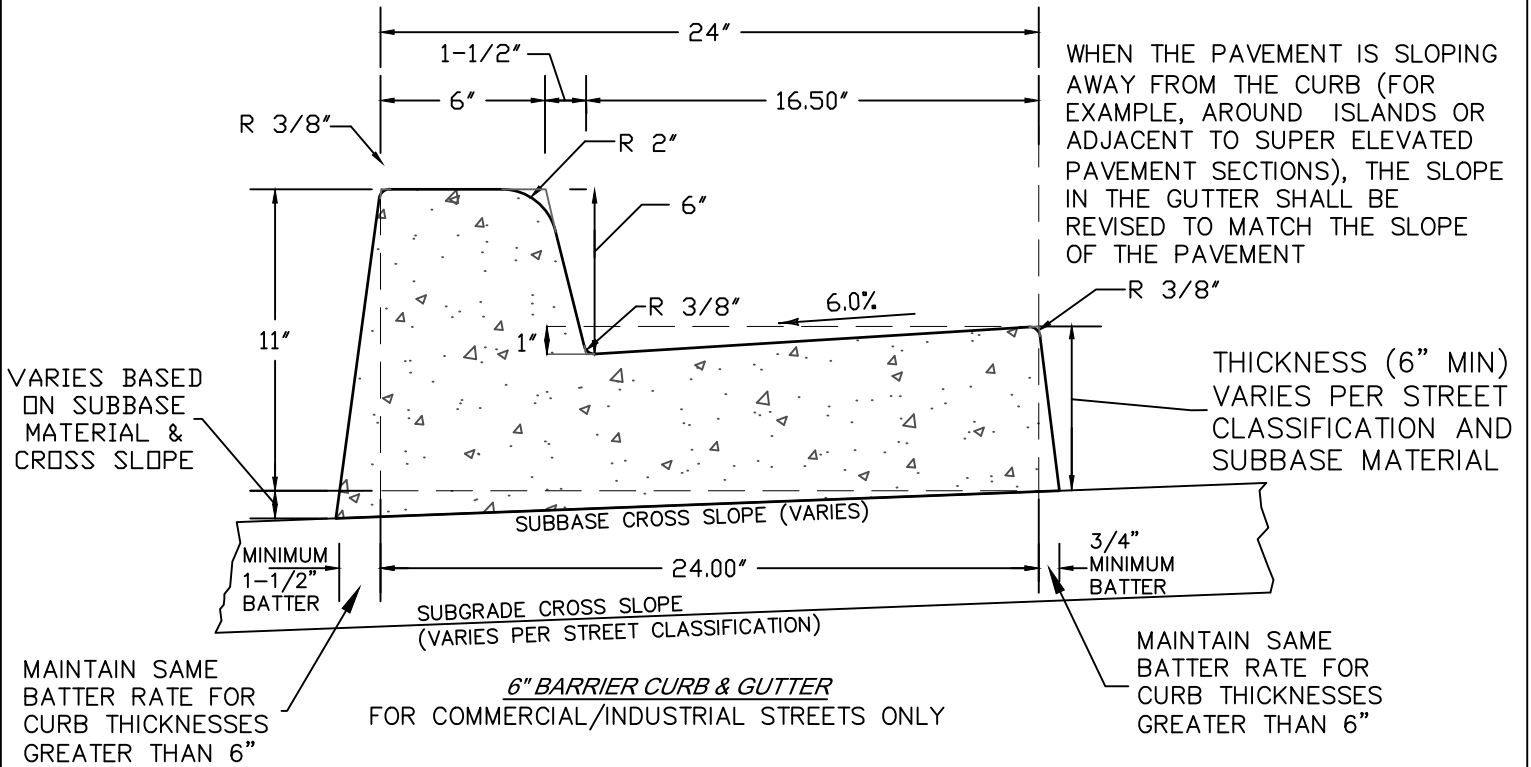


## 50 FOOT RIGHT-OF-WAYS

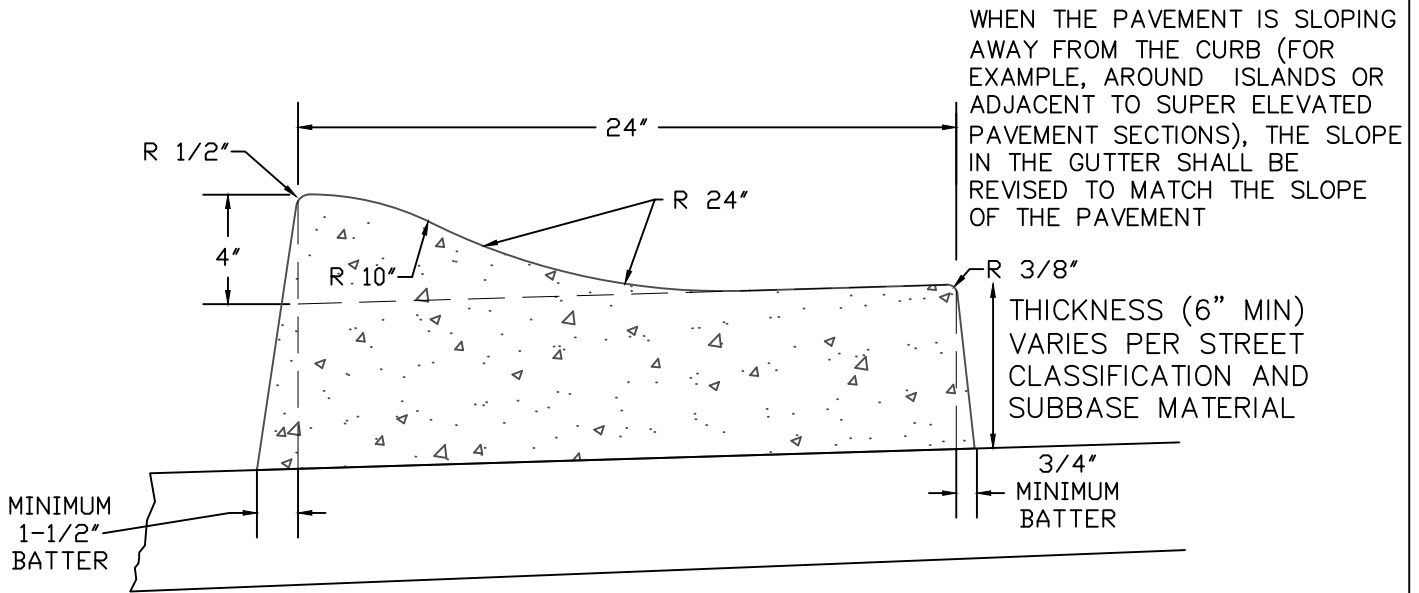


## 60 FOOT RIGHT-OF-WAYS

## MACHINE PLACED CURB DETAILS ASPHALT STREETS

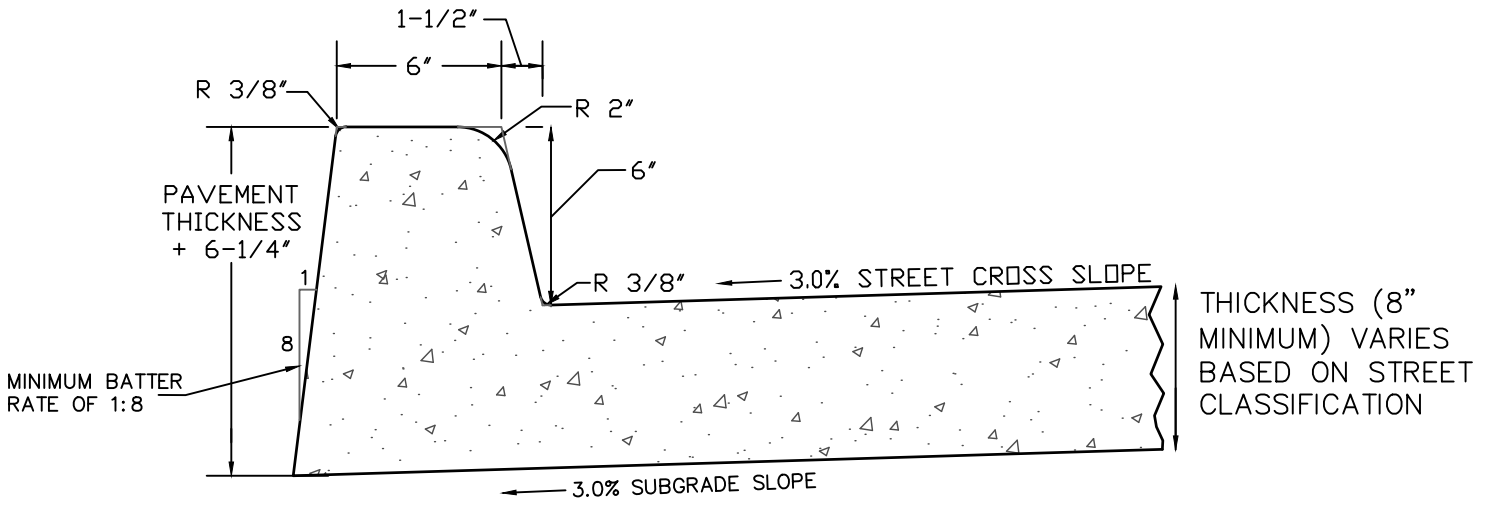


BATTER SHOWN ON THESE DETAILS ARE THE MINIMUM FOR MACHINE FORMED CURBS. HAND FORMED AND PLACED CURBS DO NOT REQUIRE THE BATTER SHOWN



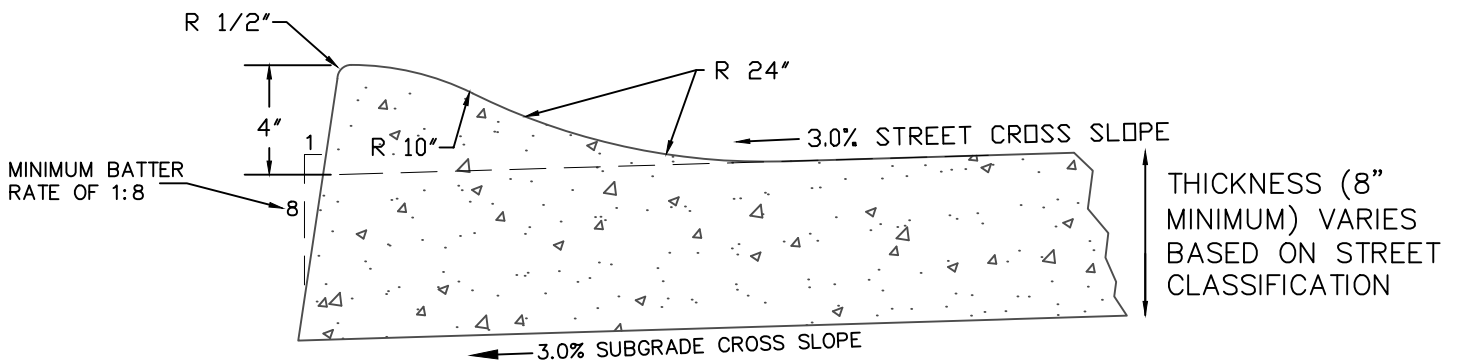


## MACHINE PLACED CURB DETAILS CONCRETE STREETS



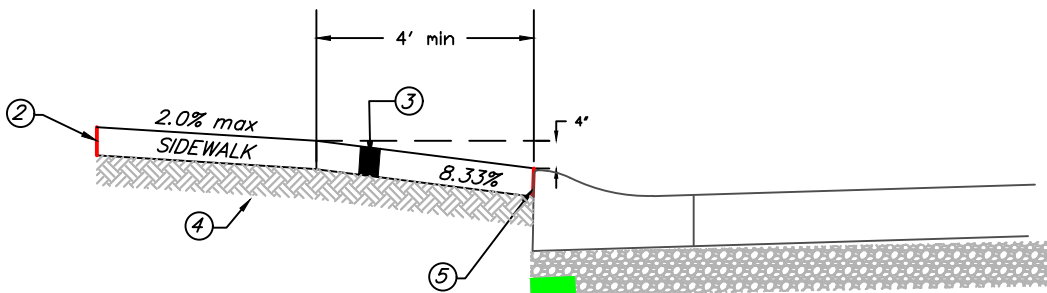
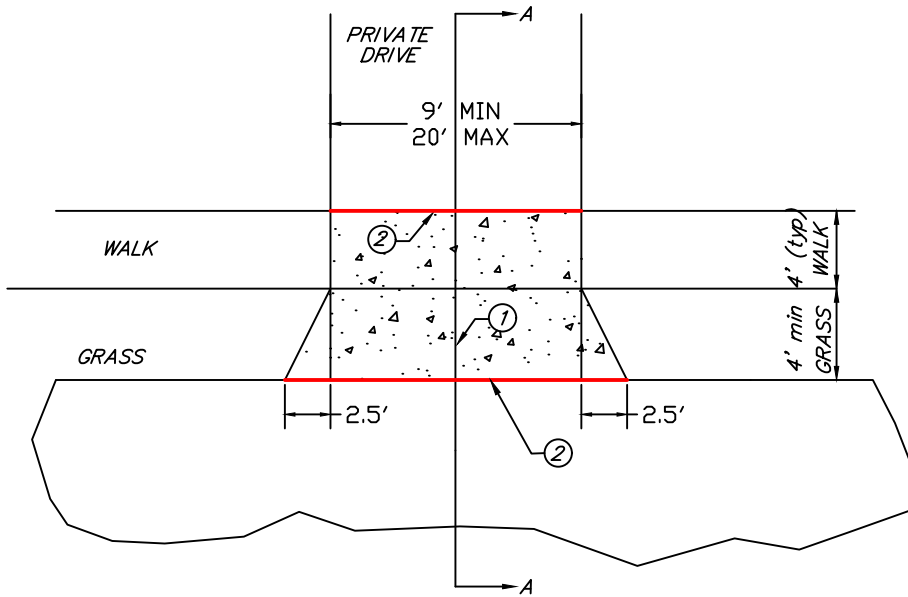
6" BARRIER INTEGRAL CURB  
FOR COMMERCIAL/INDUSTRIAL STREETS ONLY

BATTER SHOWN ON THESE DETAILS ARE THE MINIMUM FOR MACHINE FORMED CURBS. HAND FORMED AND PLACED CURBS DO NOT REQUIRE THE BATTER SHOWN



ROLLED INTEGRAL CURB  
FOR RESIDENTIAL STREETS ONLY

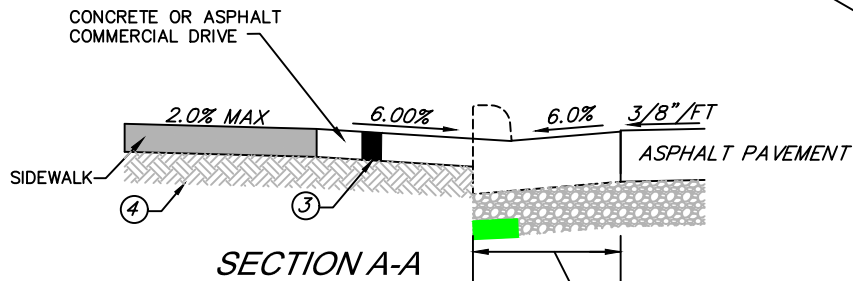
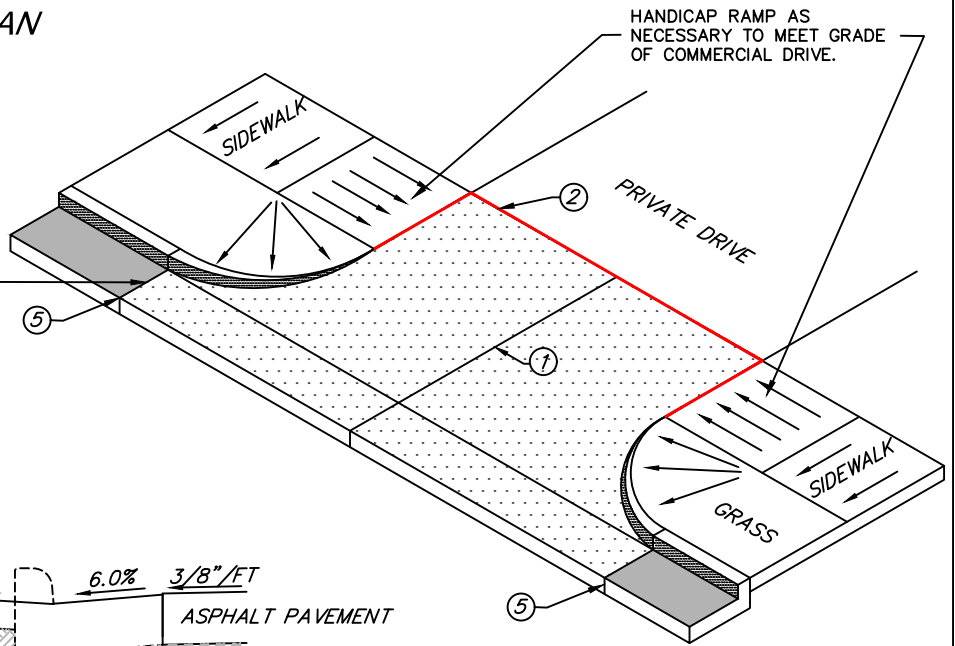
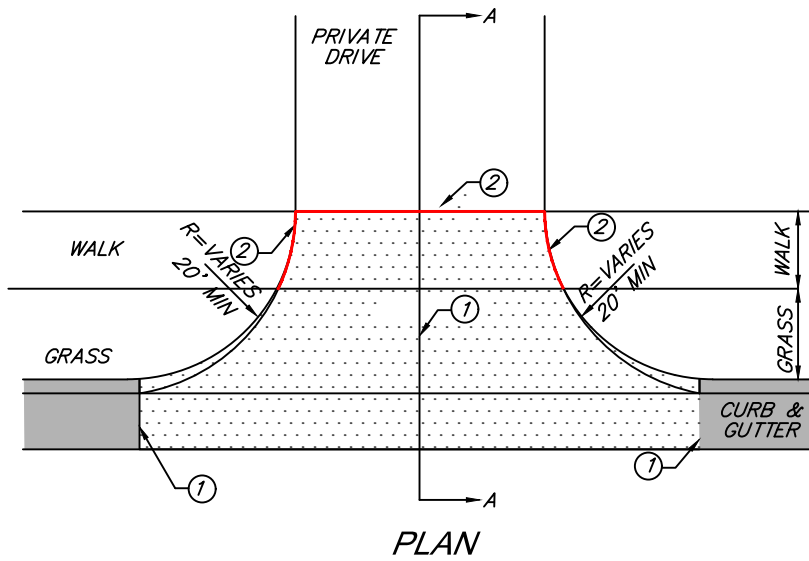
# RESIDENTIAL DRIVEWAY APRON SLOPED CURB



- ① CONTRACTION JOINT
- ② 1" EXPANSION JOINT
- ③ 5" CONCRETE RESIDENTIAL DRIVE
- ④ PREPARED SUBGRADE
- ⑤ EXPANSION MATERIAL (2" CONCRETE STREET, 1" ASPHALT STREET)

EXPANSION JOINTS MUST EXCEED THE DEPTH OF THE DRIVEWAY PAVEMENT

# COMMERCIAL DRIVEWAY APRON ASPHALT STREET WITH VERTICAL CURB & GUTTER



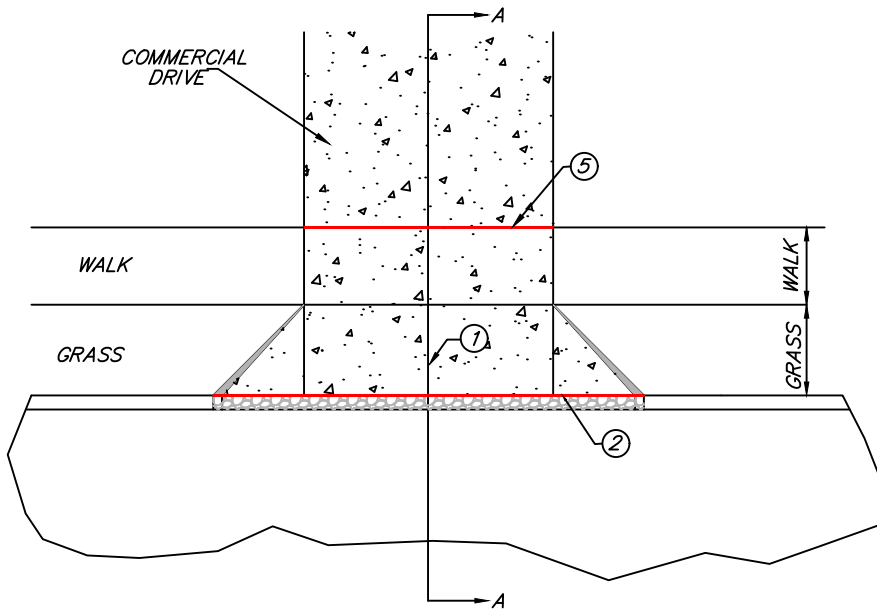
COMMERCIAL ASPHALT DRIVE IN THIS AREA TO MATCH THE DEPTH OF THE ASPHALT STREET. COMMERCIAL CONCRETE DRIVE SHALL MATCH CURB THICKNESS

**CONCRETE COMMERCIAL DRIVE NOTES**

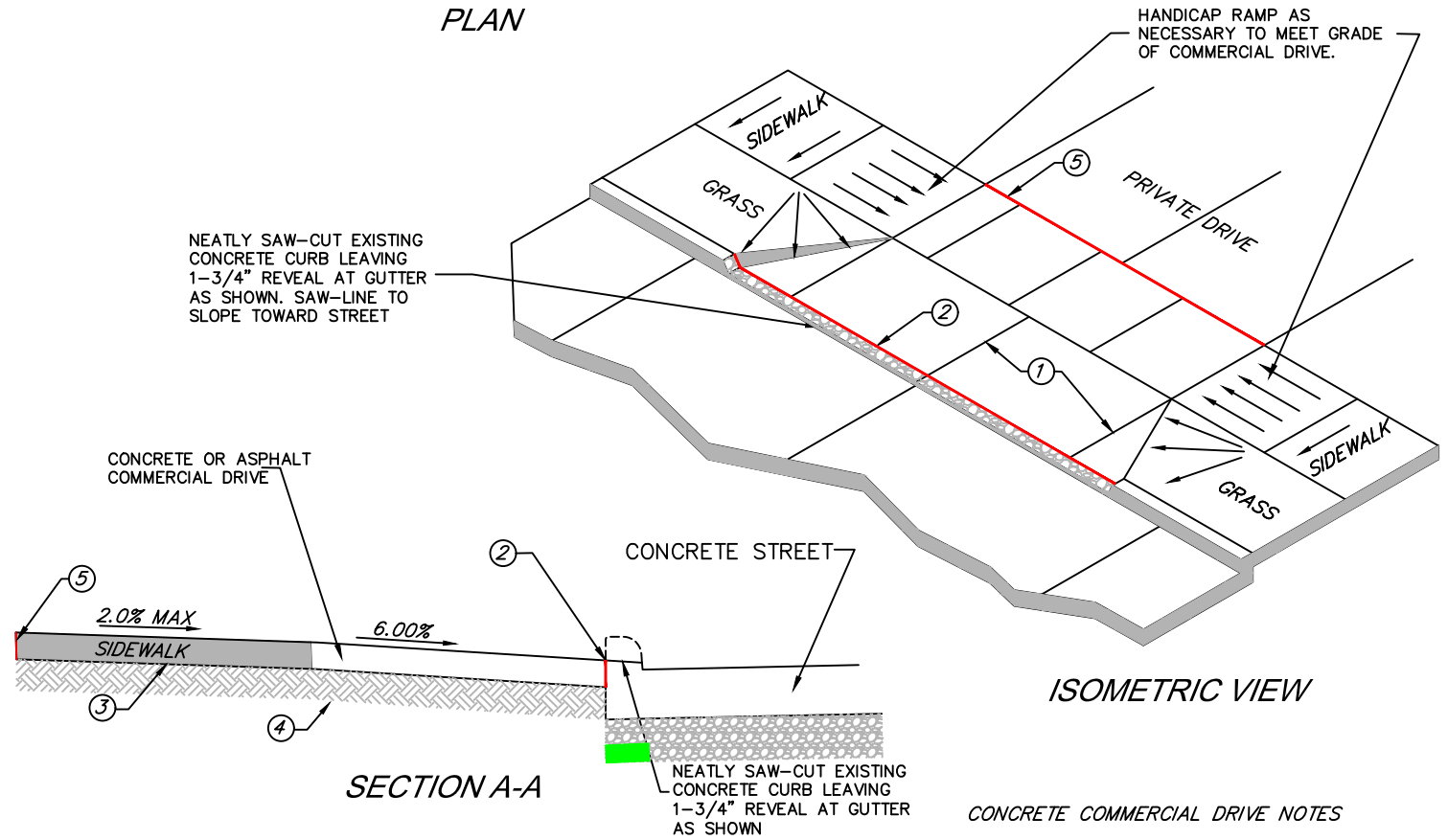
- ① CONTRACTION JOINT
- ② 1" EXPANSION MATERIAL
- ③ COMMERCIAL DRIVE
- ④ PREPARED SUBGRADE
- ⑤ CONSTRUCTION JOINT

EXPANSION JOINTS MUST EXCEED THE DEPTH OF THE DRIVEWAY PAVEMENT

# COMMERCIAL DRIVEWAY APRON CONCRETE STREET



PLAN



ISOMETRIC VIEW

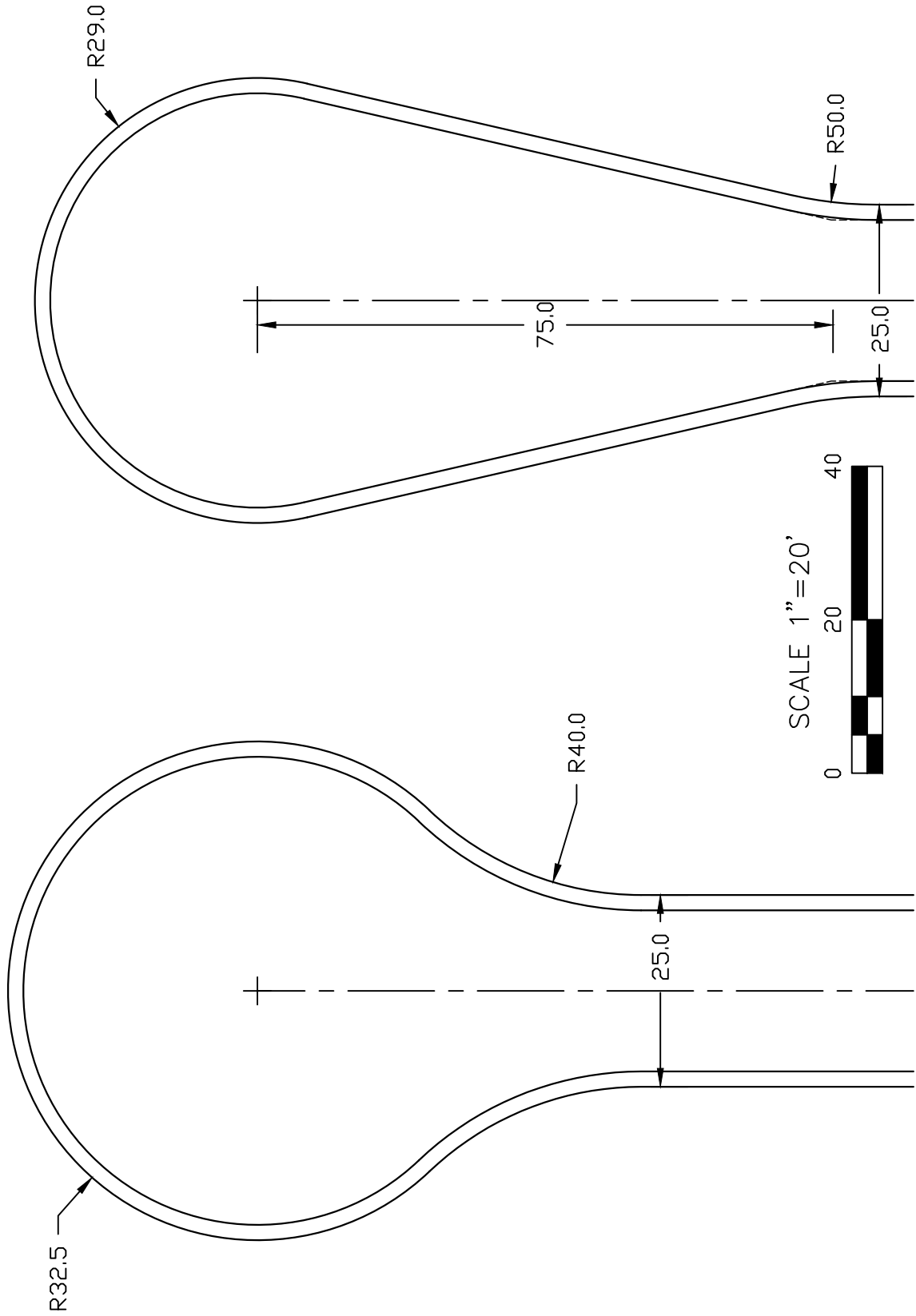
SECTION A-A

CONCRETE COMMERCIAL DRIVE NOTES

- ① CONTRACTION JOINT
- ② 2" EXPANSION JOINT
- ③ COMMERCIAL DRIVEWAY
- ④ PREPARED SUBGRADE
- ⑤ 1" EXPANSION JOINT

EXPANSION JOINTS MUST EXCEED THE DEPTH OF THE DRIVEWAY PAVEMENT

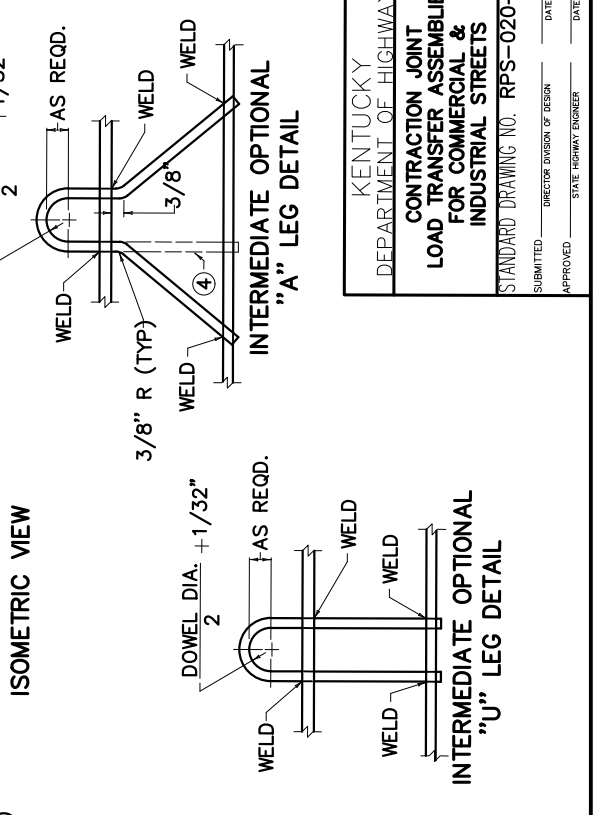
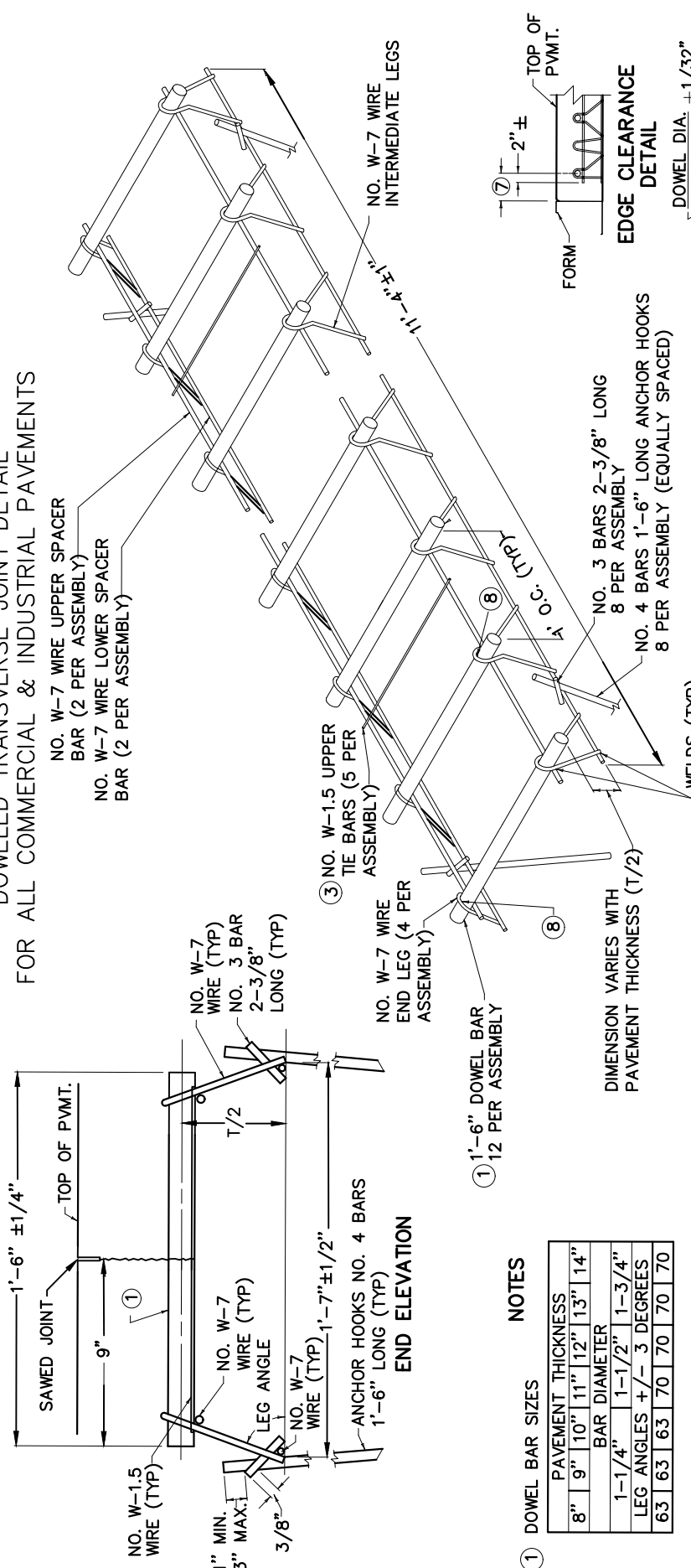
CUL-DE-SAC DETAILS



STANDARD CUL-DE-SAC

OPTIONAL TEAR DROP CUL-DE-SAC

**DOWELED TRANSVERSE JOINT DETAIL  
FOR ALL COMMERCIAL & INDUSTRIAL PAVEMENTS**



**NOTES**

① DOWEL BAR SIZES

PAVEMENT THICKNESS	BAR DIAMETER
8"	9"
10"	11"
12"	13"
14"	14"
1-1/4"	1-1/2"
1-3/4"	1-3/4"
LEG ANGLES +/− 3 DEGREES	63 70 70 70 70

② NOT USED

- ③ NO. W-1.5 UPPER TIE BARS WELDED TO UPPER SPACER BARS CUT AFTER FIRST CONCRETE PLACEMENT.
- ④ FOR END LEGS, BEND WIRE AS SHOWN BY PHANTOM LINES IN INTERMEDIATE LEG DETAIL.
- ⑤ REFERENCE POINTS SHALL BE REQUIRED ON EACH SIDE OF THE LOAD TRANSFER ASSEMBLY, IN ORDER TO LOCATE THE INTENDED SAWED JOINT AFTER PAVING. ALL SAWING SHALL BE ACCURATELY CONTROLLED TO THE CENTERLINE OF THE LOAD TRANSFER ASSEMBLIES. LONGITUDINAL ORIENTATION OF DOWEL BARS SHALL BE SUCH THAT ALL DOWEL BARS ARE PARALLEL WITH THE CENTERLINE OF EACH PAVING LANE.
- ⑥ NOT USED
- ⑦ 4-1/2" MIN. AND 10-1/2" MAX. FOR VARIABLE SLAB WIDTH. 6" FOR UNIFORM OR STD. SLAB WIDTH. LOCATION AND SPACING SEE APPLICABLE PAVEMENT STANDARD DRAWINGS.
- ⑧ WELD EITHER NO. W-7 UPPER SPACER BAR OR LEG SUPPORT TO ALTERNATE ENDS OF DOWEL BARS AS TYPICALLY SHOWN.
- ⑨ DOWEL ENDS SHALL NOT VARY MORE THAN 1/4" FROM A STRAIGHT LINE.
- ⑩ DOWELS SHALL BE PARALLEL WITH BASE, WITH A TOLERANCE OF 1/4".
- ⑪ EPOXY SHALL BE CLEANED OFF TO BARE METAL BEFORE WELDING DOWEL TO WIRE.
- ⑫ "U" LEG OR "A" LEG ARE ACCEPTABLE ALTERNATES PROVIDING MATCHED LEGS ARE SUPPLIED.

KENTUCKY  
DEPARTMENT OF HIGHWAYS

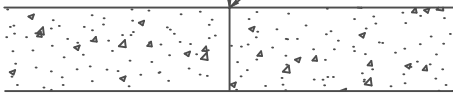
**CONTRACTION JOINT  
LOAD TRANSFER ASSEMBLIES  
FOR COMMERCIAL &  
INDUSTRIAL STREETS**

STANDARD DRAWING NO. RPS-020-13

SUBMITTED \_\_\_\_\_ DATE \_\_\_\_\_  
APPROVED \_\_\_\_\_ STATE HIGHWAY ENGINEER \_\_\_\_\_

# CONCRETE JOINT DETAILS

FILL WITH JOINT SEALER PER APPENDIX A      SAWED AND/OR TOOLED JOINT PER APPENDIX A



TRANSVERSE CONTRACTION  
JOINT  
(SAWED OR TOOLED JOINT)

NOTE: TRAVERSE JOINTS FOR COMMERCIAL AND INDUSTRIAL PAVEMENTS SHALL USE LOAD TRANSFER ASSEMBLIES PER DETAIL C.16.

FILL WITH JOINT SEALER PER APPENDIX A      TOOLED JOINT PER APPENDIX A



TRANSVERSE CONSTRUCTION  
JOINT  
(PLANNED OR EMERGENCY)  
COINCIDE WITH CONTRACTION JOINT

FILL WITH JOINT SEALER PER APPENDIX A      SAWED OR TOOLED JOINT PER APPENDIX A



1/2" DIAMETER REBAR  
18" LONG @ 5' O.C.  
HELD IN PLACE WITH  
METAL CHAIRS

LONGITUDINAL SAWED OR  
TOOLED JOINT  
(PLANNED)  
COINCIDE WITH CONTRACTION JOINT

FILL WITH JOINT SEALER PER APPENDIX A      EDGED JOINT PER APPENDIX A



1/2" DIAMETER REBAR 18"  
LONG @ 4' O.C., 9" DEEP  
DRILLED AT 30 DEGREE  
ANGLE OR INJECTED INTO  
FRESH CONCRETE

LONGITUDINAL CONSTRUCTION  
JOINT  
(DRILLED OR INJECTED)

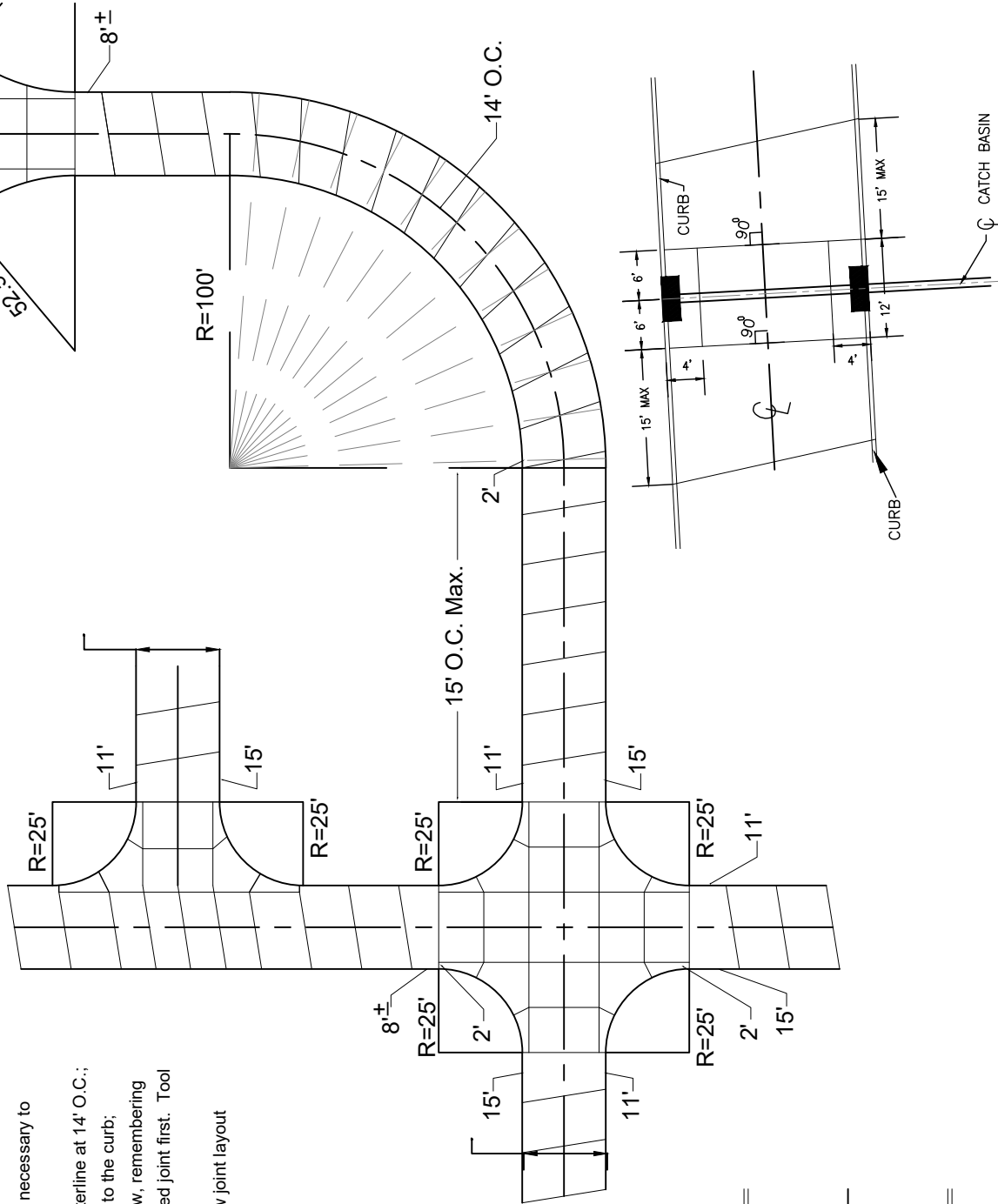
# CONCRETE PAVEMENT JOINT PLAN

## GENERAL RULES OF TOOLED CONTRACTION JOINT LAYOUT

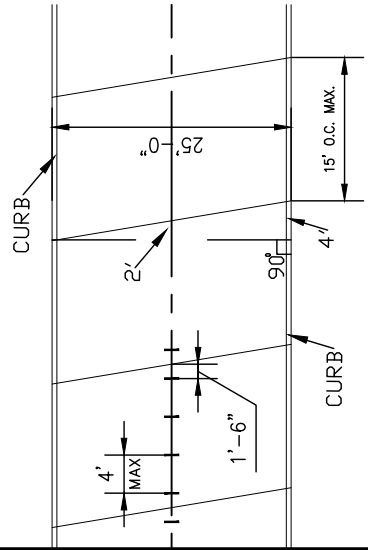
- 1.) Skew joints 2' in each 12.5' lane; 2'-4" skew in each 14' lane.
- 2.) Always have the driver's side front wheel of the vehicle hit the skewed joint first.
- 3.) Maximum joint spacing = 15'; adjust joint spacing as necessary to keep spacing above a 8' minimum.
- 4.) On horizontal curves, layout joint spacing along centerline at 14' O.C.; visually determine a radial line from the centerline back to the curb; measure back (forward) from that point 2' to set the skew, remembering the driver's side front wheel of the vehicle hits the skewed joint first. Tool the joint at the skewed line.
- 5.) At intersections, catch basins and cul-de-sacs, follow joint layout shown.

### NOTE:

ALL CONSTRUCTION JOINTS ARE DOWELED JOINTS.



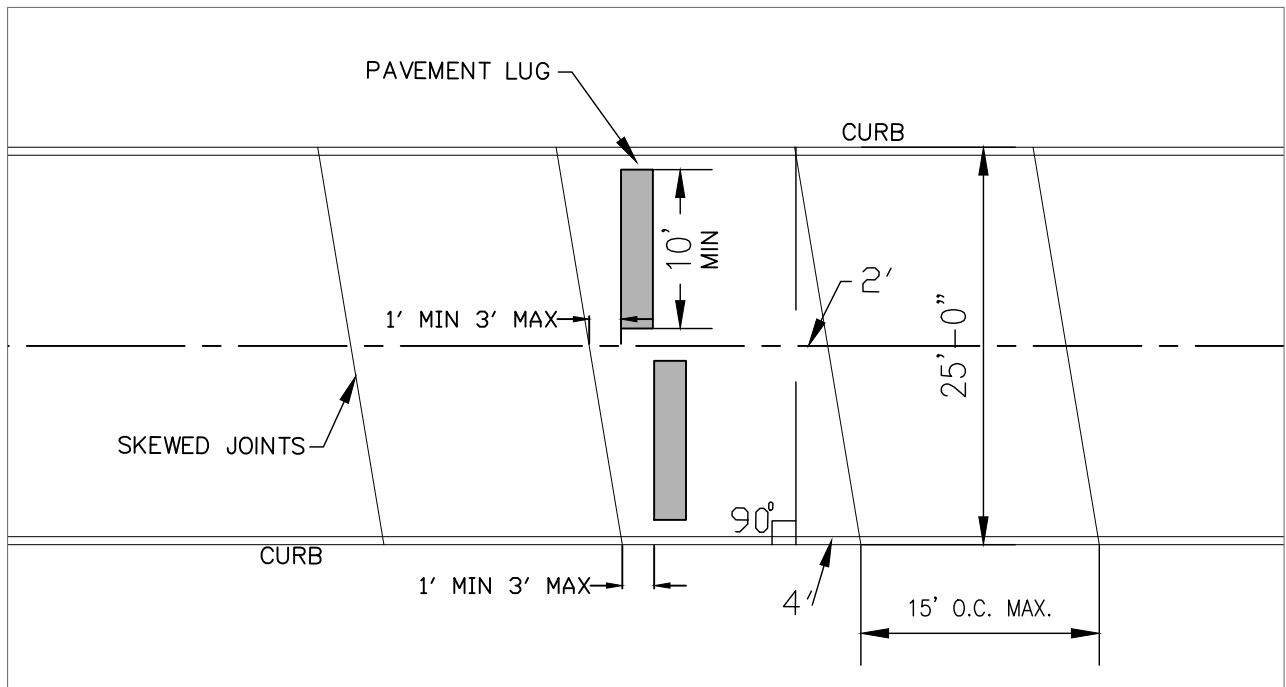
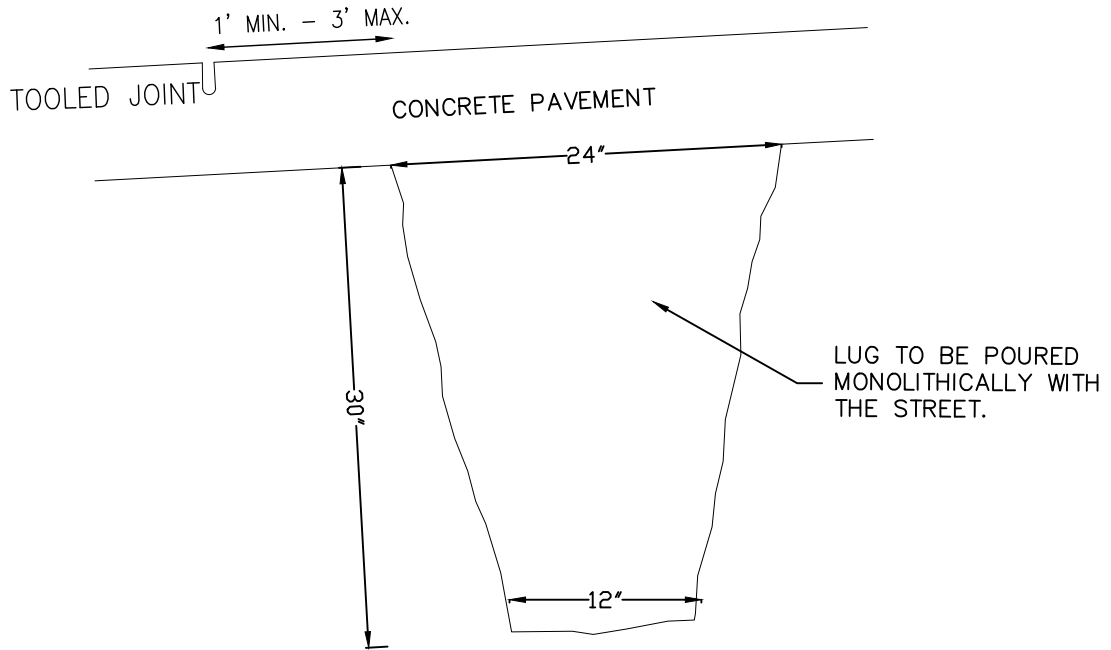
TYPICAL SKEWED JOINT AND  $\phi$  BENT BAR LAYOUT  
SCALE: N.T.S.



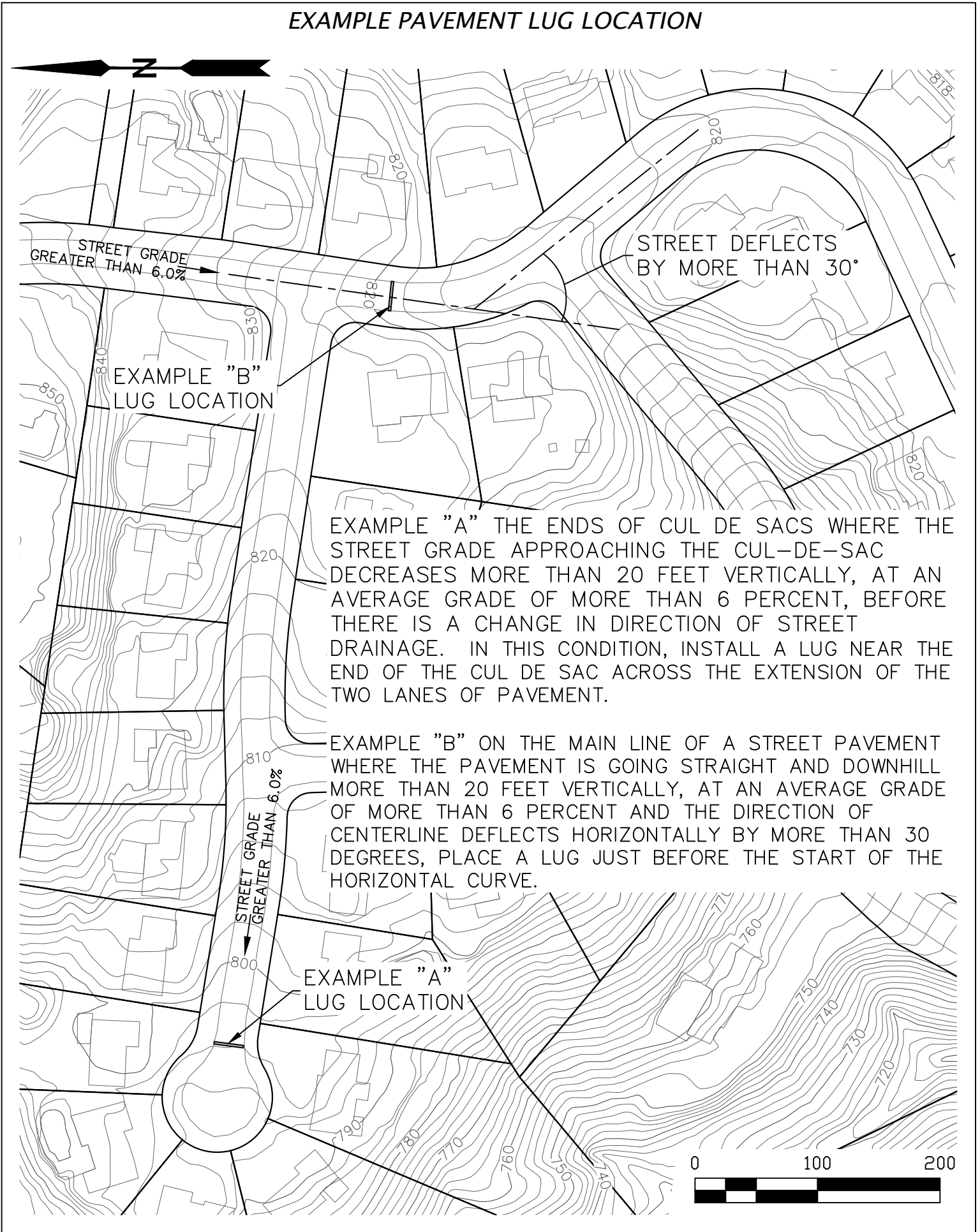
JOINT LAYOUT FOR PAIRED CATCH BASINS



# PAVEMENT LUG DETAIL



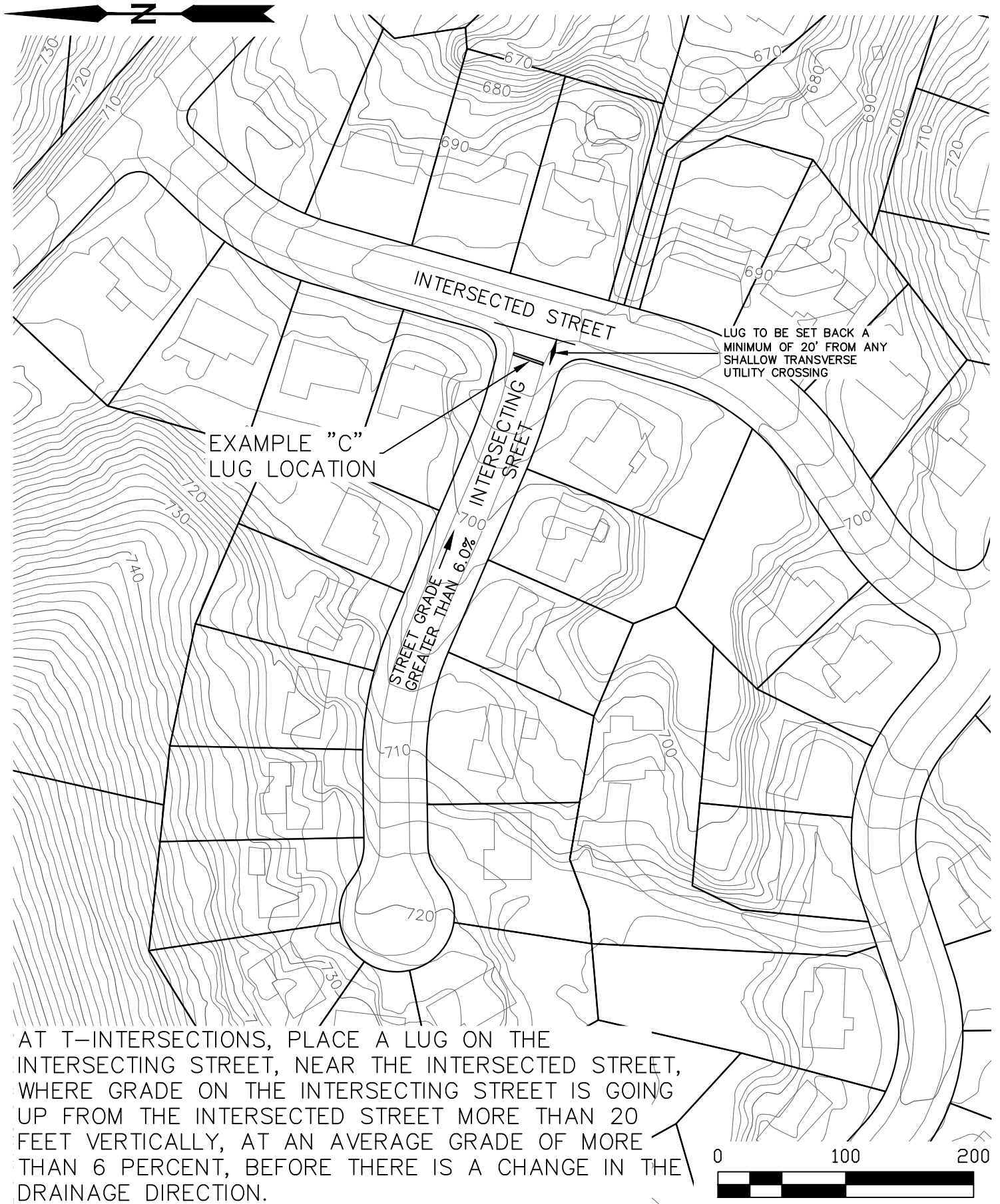
# EXAMPLE PAVEMENT LUG LOCATION



EXAMPLE "A" THE ENDS OF CUL DE SACS WHERE THE STREET GRADE APPROACHING THE CUL-DE-SAC DECREASES MORE THAN 20 FEET VERTICALLY, AT AN AVERAGE GRADE OF MORE THAN 6 PERCENT, BEFORE THERE IS A CHANGE IN DIRECTION OF STREET DRAINAGE. IN THIS CONDITION, INSTALL A LUG NEAR THE END OF THE CUL DE SAC ACROSS THE EXTENSION OF THE TWO LANES OF PAVEMENT.

EXAMPLE "B" ON THE MAIN LINE OF A STREET PAVEMENT WHERE THE PAVEMENT IS GOING STRAIGHT AND DOWNHILL MORE THAN 20 FEET VERTICALLY, AT AN AVERAGE GRADE OF MORE THAN 6 PERCENT AND THE DIRECTION OF CENTERLINE DEFLECTS HORIZONTALLY BY MORE THAN 30 DEGREES, PLACE A LUG JUST BEFORE THE START OF THE HORIZONTAL CURVE.

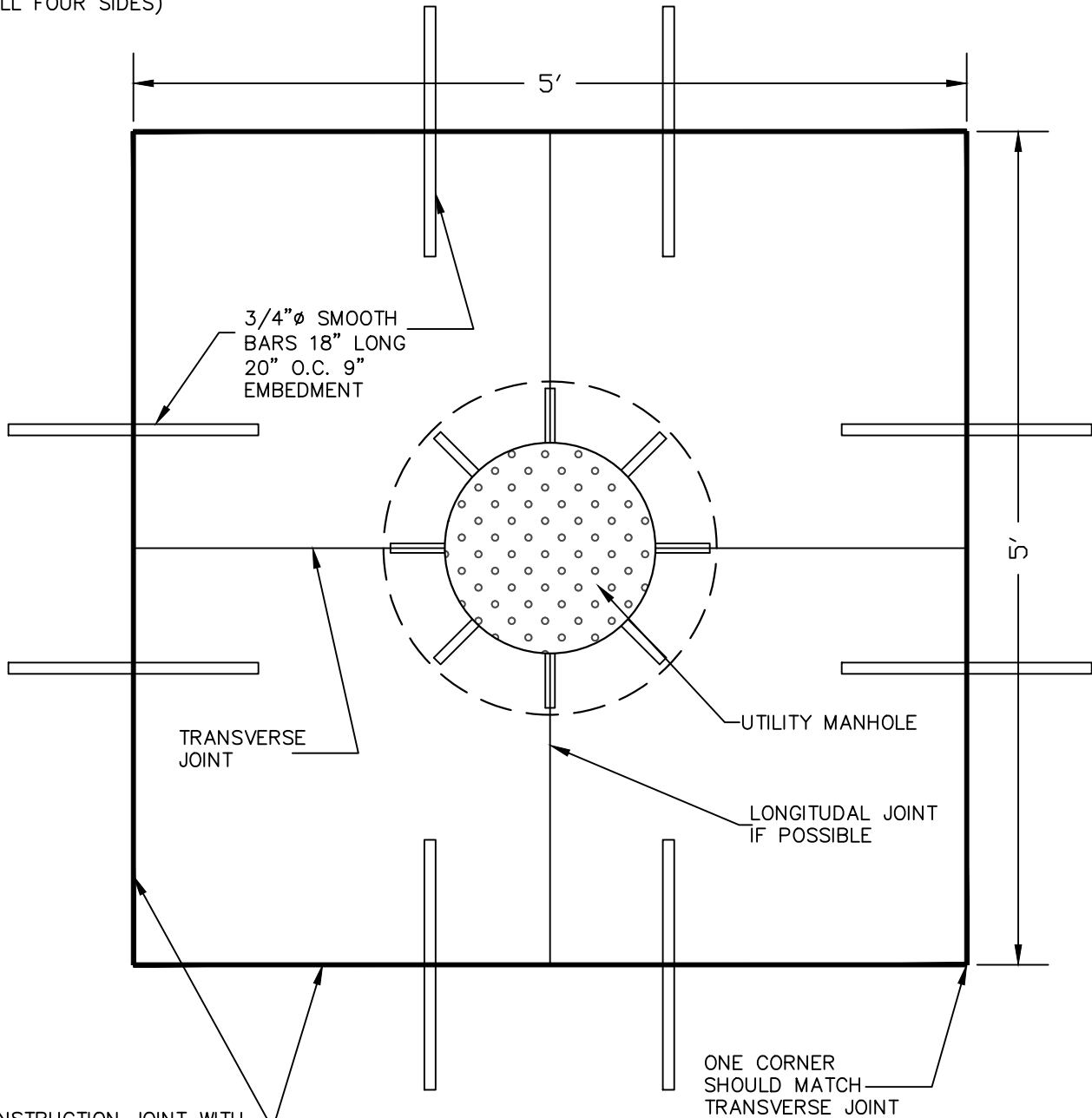
# EXAMPLE PAVEMENT LUG LOCATION



AT T-INTERSECTIONS, PLACE A LUG ON THE INTERSECTING STREET, NEAR THE INTERSECTED STREET, WHERE GRADE ON THE INTERSECTING STREET IS GOING UP FROM THE INTERSECTED STREET MORE THAN 20 FEET VERTICALLY, AT AN AVERAGE GRADE OF MORE THAN 6 PERCENT, BEFORE THERE IS A CHANGE IN THE DRAINAGE DIRECTION.

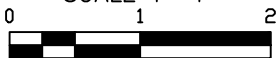
**MANHOLE BLOCK-OUT DETAIL  
(CONCRETE PAVEMENT)  
THIS DETAIL DOES NOT APPLY FOR UTILITIES  
ALREADY BROUGHT TO GRADE**

1" EXPANSION MATERIAL  
(ALL FOUR SIDES)

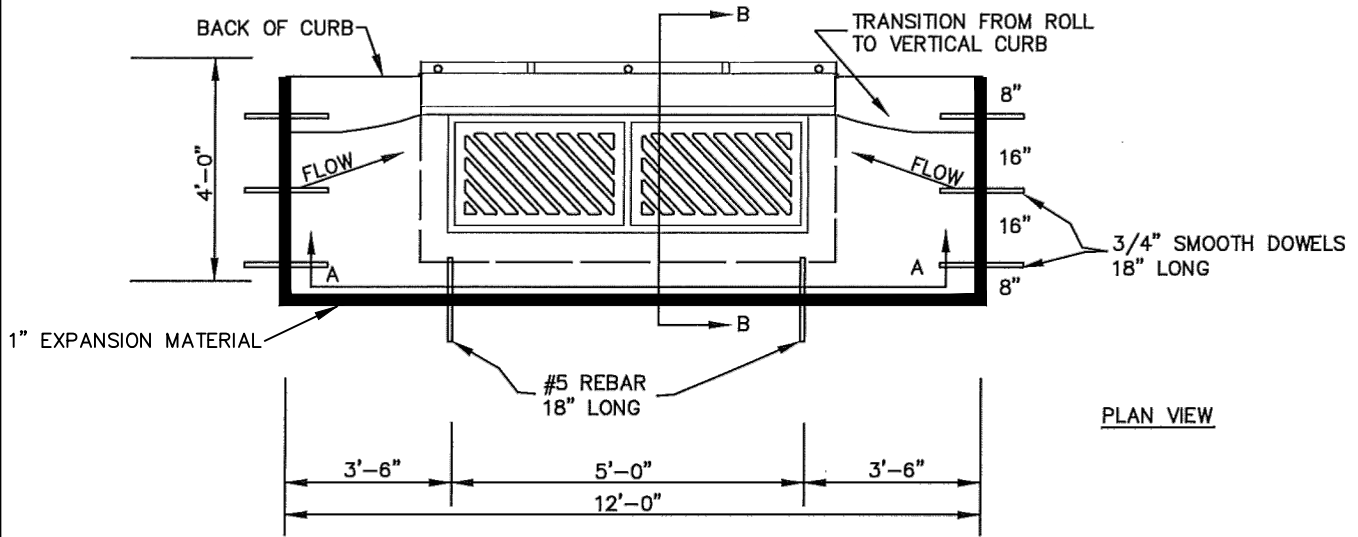


CONSTRUCTION JOINT WITH  
1" EXPANSION MATERIAL  
(ALL FOUR SIDES)

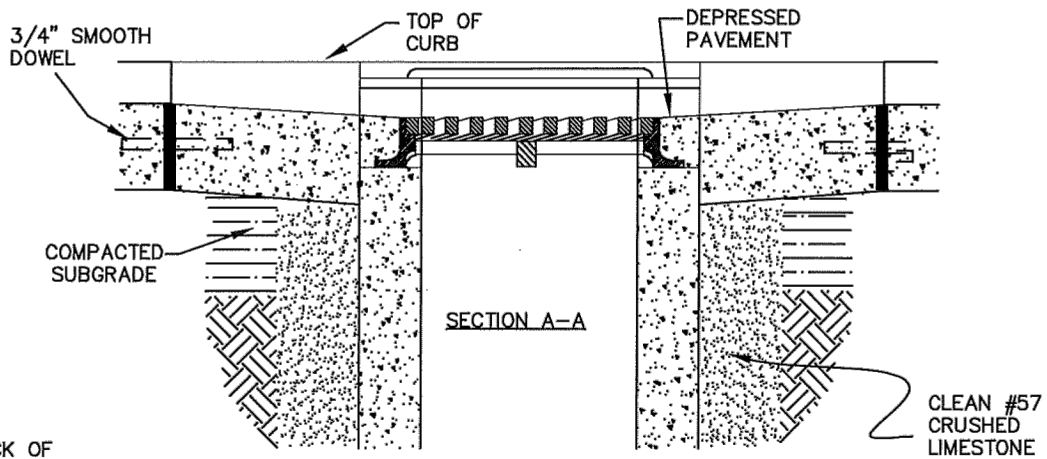
SCALE 1"=1'



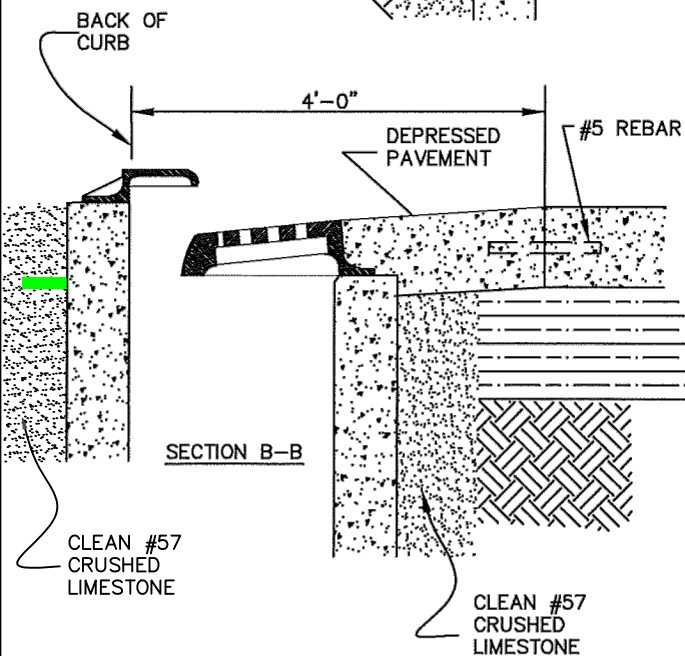
**STANDARD CURB INLET  
(CONCRETE PAVEMENT BLOCKOUT DETAIL)**



PLAN VIEW



SECTION A-A



SECTION B-B

**NOTES:**

CONCRETE PAVEMENT FOR THE BLOCKOUTS SHALL MEET THE SAME REQUIREMENTS AS THE CONCRETE PAVEMENT.

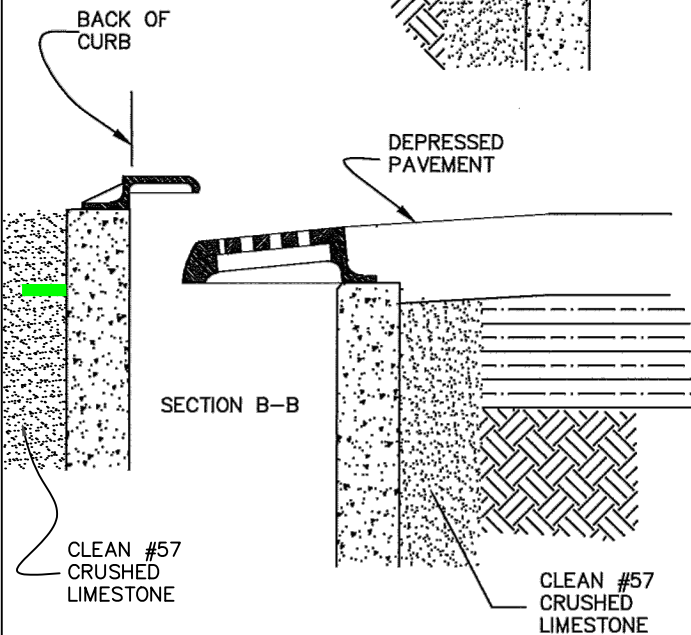
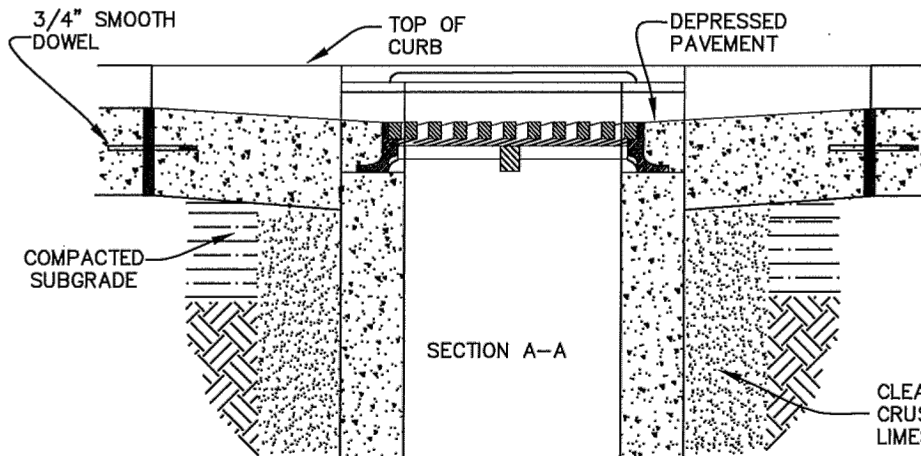
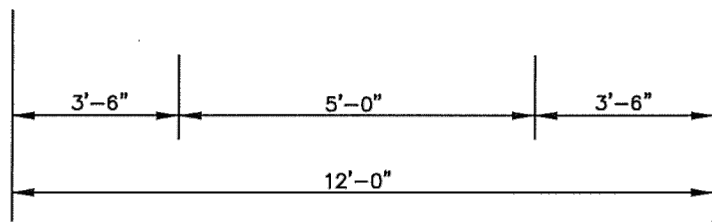
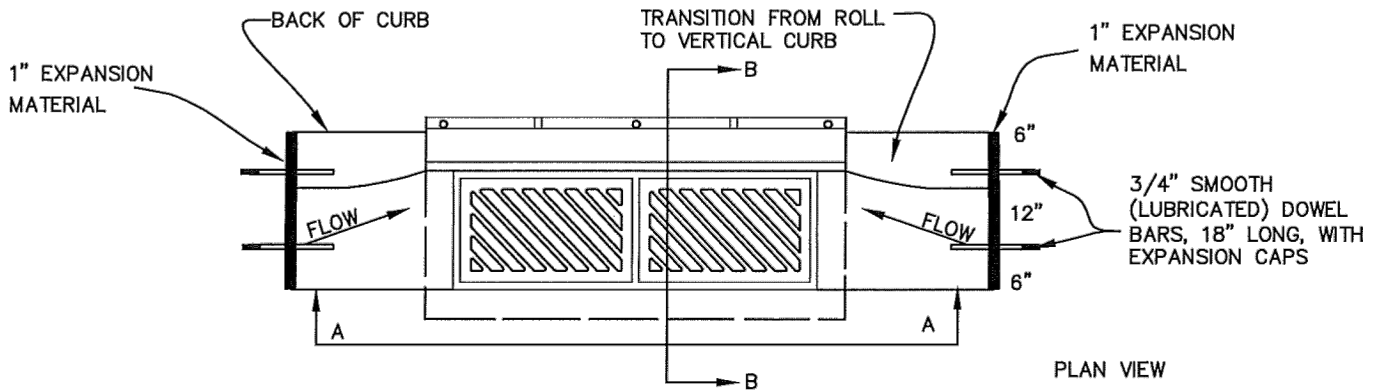
BLOCKOUTS FOR SINGLE INLET CATCH BASINS SHALL BEAR THE SAME DIMENSIONS AS THE DOUBLE INLET CATCH BASIN.

3/4"x18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT.

TWO #5 BARS, 18" LONG ARE REQUIRED ALONG BUTT JOINT OF ISOLATION AREA.

ALL GRATES SHALL BE VANE GRATES

**STANDARD CURB INLET  
(ASPHALT PAVEMENT BLOCKOUT DETAIL)**



**NOTES:**

CONCRETE PAVEMENT FOR THE BLOCKOUTS SHALL MEET THE SAME REQUIREMENTS AS THE CONCRETE PAVEMENT.

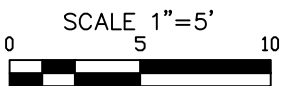
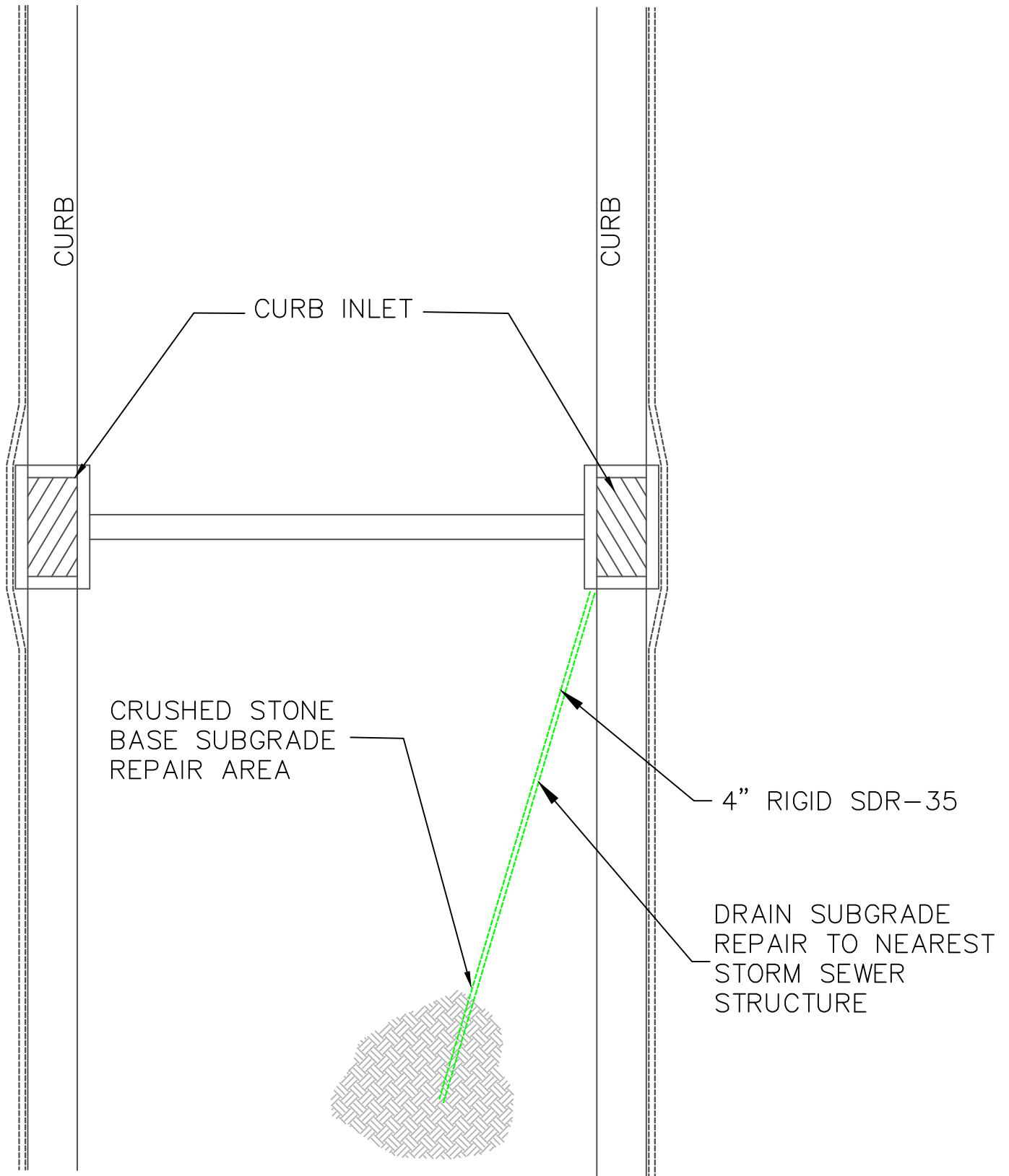
BLOCKOUTS FOR SINGLE INLET CATCH BASINS SHALL BEAR THE SAME DIMENSIONS AS THE DOUBLE INLET CATCH BASIN.

3/4"x18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT.

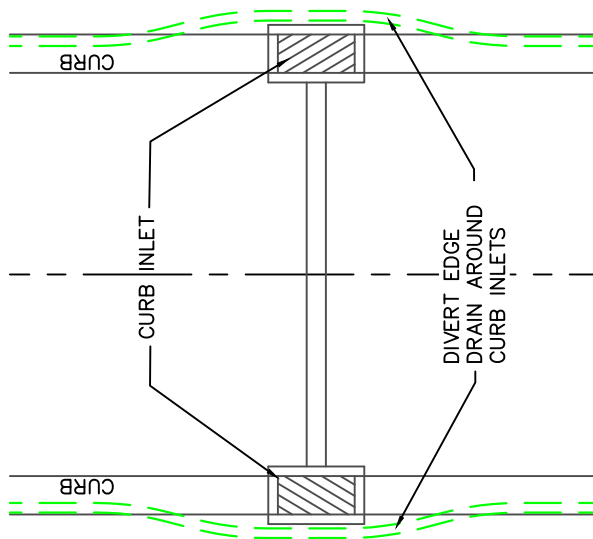
PAVEMENT THICKNESS SHALL CONFORM TO THE RELATED STREET CLASSIFICATION.

ALL GRATES SHALL BE VANE GRATES

*DRAINAGE FOR SUBGRADE REPAIR*



## EDGE DRAIN INSTALLATION WITH STONE BASE STREETS



SCALE 1"=5'

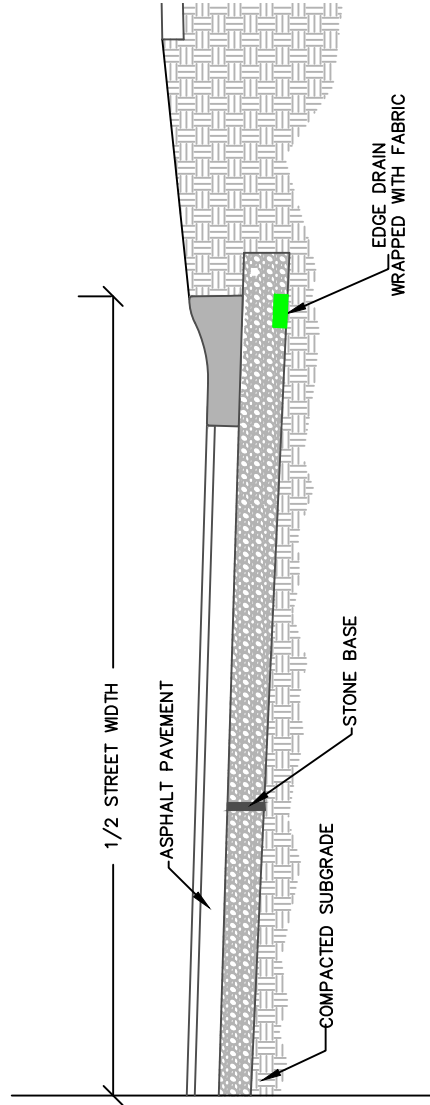


### EDGE DRAIN MATERIAL SPECIFICATIONS

- A. CORE
- MATERIAL: POLYETHYLENE OR POLYPROPYLENE. POLYSTYRENE WILL NOT BE ACCEPTED.
  - MINIMUM THICKNESS: 1.0"
  - WIDTH = 6" (MINIMUM)
  - MINIMUM COMPRESSIVE STRENGTH: ONE-SIDED (OPEN-CORE) NOT ACCEPTED  
CLOSED CORE CONDUIT = 6,000 PSF (ASTM D-1621) OR = 4,000 PSF (ASTM D-6364)
- B. GEOTEXTILE FILTER FABRIC:
- MATERIAL: NON-WOVEN NEEDLE PUNCH GEOTEXTILE FABRIC THAT MEETS AASHTO CLASS 3.
  - ATTACHMENT: THE GEOTEXTILE FILTER FABRIC SHALL BE WRAPPED AROUND THE DRAINAGE COMPOSITE CORE AND SECURED IN PLACE.
- C. CERTIFICATIONS
- CONTRACTOR SHALL SUPPLY MANUFACTURER'S CERTIFICATION THAT THE EDGE DRAIN INSTALLED MEETS PERFORMANCE SPECIFICATION AND THE INTENDED USE SHOWN ON THIS DETAIL.
- D. APPROVED PRODUCTS: ADS ADVANEDGE, MULTI-FLOW OR EQUAL

### EDGE DRAIN INSTALLATION PROCEDURE FOR STONE BASE STREETS

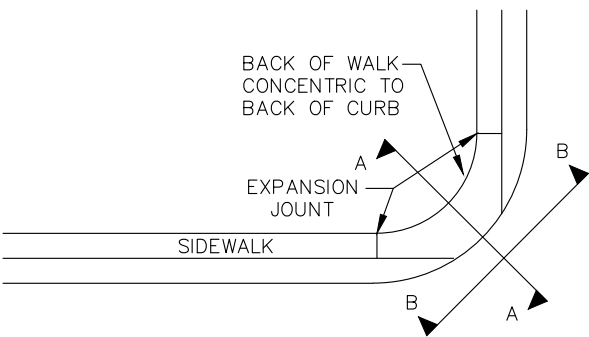
- ROLL OUT EDGE DRAIN FLAT (HORIZONTAL) SO THAT OUTSIDE FACE OF EDGE DRAIN ALIGNS WITH THE OUTSIDE EDGE OF CURB.
- TACK EDGE DRAIN EVERY 5 FEET TO THE SUBGRADE USING 16 PENNY NAILS OR EQUAL.
- DO NOT DRIVE CONSTRUCTION EQUIPMENT DIRECTLY ON EDGE DRAIN.
- INSTALL STONE BASE TO A MINIMUM THICKNESS OF 4" OVER EDGE DRAIN.
- COMPACT STONE BASE AS NECESSARY AND PROCEED WITH REMAINING PAVEMENT INSTALLATION.
- AT CATCH BASINS CONTINUE EDGE DRAIN ALONG THE BACK SIDE OF CATCH BASIN.
- EDGE DRAIN SHALL BE CONTINUOUS ALONG BOTH SIDES OF CURB.
- EDGE DRAIN SHALL BE IN DIRECT CONTACT WITH #57 STONE BACKFILL AT ALL CATCH BASINS.
- SPLICES IN EDGE DRAIN SHALL BE MADE WITH MANUFACTURER'S COUPLERS OR OTHER APPROVED CONNECTION BY MANUFACTURER.



SCALE 1"=3'



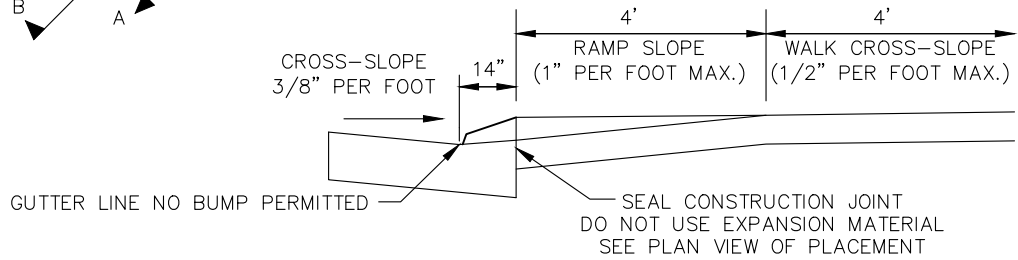




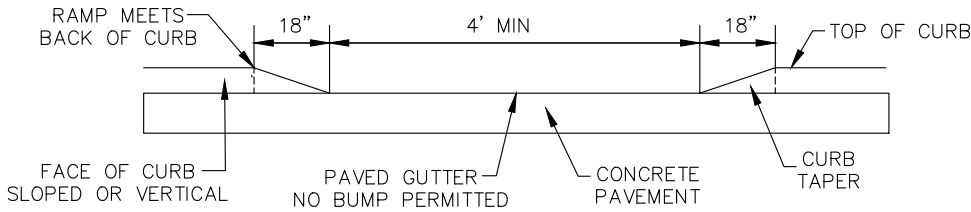
PLAN VIEW

NOTES

1. SIDEWALK RAMPS SHALL BE CONSTRUCTED OF MINIMUM 4000 PSI AIR-ENTRAINED CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED.
2. NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP FOR DRAINAGE.
3. MINIMUM THICKNESS FOR RAMPS, SHALL BE 4 INCHES, SAME AS SIDEWALKS
4. NO FREE DRAINING GRANULAR FILL PERMITTED UNDER RAMPS.
5. HANDICAP RAMPS SHALL MEET ADA REQUIREMENTS AND CONTAIN DETECTABLE WARNINGS CONSISTING OF RAISED TRUNCATED DOMES. ONLY COMPOSITE INLAYS WILL BE PERMITTED.



SECTION A-A



SECTION B-B

SIDEWALK RAMP AT INTERSECTION

N.T.S.

**TEMPORARY TURN-AROUND DETAIL**

