



GUIDE FOR OBTAINING A PERMIT FOR COMMERCIAL DEVELOPMENTS

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To obtain a development permit (hereinafter called “permit”) from the City of Johnson City, site specific plans must be submitted to the Johnson City Codes Division for review and approval, as outlined below. The user is cautioned that not all plans are discussed in this Guide, only the most common plans.

Permit Approval Process

1. Submit (2) complete sets of plans for the entire development to the Plans Examiner’s Office of the Codes Division for review. Link to [Site Plan Approval Procedure](#) or see *Appendix A* for details of the procedure. Link to [Development Permit Process](#) or see *Appendix B* for summary and additional information concerning the procedure. The telephone number of the Plans Examiner is 423-434-6055 for all questions and further information.
2. A completed Plan Review Application and a Plan Review Fee must be paid upon submittal of the plans. Link to [Plan Review Fee Schedule](#) or see *Appendix C*.
3. After submittal of these documents, the Plans Examiner will contact you (usually within 5-10 working days) if additional information is required or if the permit is approved. A revised copy of the plans on CD and a revised paper site plan must be submitted to the Codes Division when acquiring the permit.
4. A pre-construction meeting for Erosion Prevention and Sediment Control must be scheduled with the Johnson City Stormwater Division after the site plans are approved and before the permit will be released. A revised paper site plan must be submitted to the Stormwater Division at the time of the meeting. Contact the Stormwater Division at 423-975-2701 to schedule that meeting.
5. After the plans have been approved, the following fees (as applicable) must be paid before the permit can be issued.
 - A. Water and Sewer Tap Fees. These fees must be paid at the Water and Sewer Services Department or Codes Division. All other fees are paid at the Codes Division. The receipt for the water and sewer tap fee must be taken to the Codes Division in order for the permit to be issued. Link to [Water/Sewer Fee Schedule](#) or see *Appendix D*.
 - B. Planning Department Site Plan Review Fee. Link to [Site Plan Review Fee Schedule](#) or see *Appendix E*.
 - C. Access Control or Driveway Fee. Link to [Driveway Fee](#) or see *Appendix F*.
 - D. Building Fee. Link to [Building Fee Schedule](#) or see *Appendix C*.
 - E. Electrical, Mechanical, and Plumbing Fees. These fees must be paid as needed before commencing respective work after the permit is issued.

Building Plans

1. Detailed building plans are required to build multi-family dwellings, businesses, mercantile (retail or wholesale), educational, assembly, industrial, and institutional buildings. Basically, any building that is not a one or two family dwelling or an accessory building is generally considered to be a commercial building. For a definition of “dwelling, multi-family” link to [Zoning Code Article II, Definitions](#) or see *Appendix G*.
2. Building plans must comply with the 2012 International Building Codes and the 2011 National Electric Code and the City of Johnson City Amendments. Link to [City of Johnson City Amendments](#) or see *Appendix H*.

3. Plans must be prepared by design professionals when required by the [Tennessee Board of Architectural and Engineering Examiners Reference Manual](#). Link to [Design Requirements from that manual](#) or see [Appendix I](#).
4. Unless directed otherwise by the Plan's Examiners Office, the set of building plans must include at a minimum the following component plans:

(click the link for a checklist of typical items needed for each component or see the <i>Appendix</i>)	
A. General Requirements <i>Appendix M</i> B. Cover Sheet <i>Appendix N</i> C. Site Plans <i>Appendix O</i> D. Architectural Floor Plans <i>Appendix P</i> E. Structural Design Plans <i>Appendix Q</i> ; For Design Criteria Table see <i>Appendix R</i>	F. Mean of Egress Plans <i>Appendix S</i> G. Mechanical HVAC System <i>Appendix T</i> H. Plumbing System Plans <i>Appendix U</i> I. Electrical Design <i>Appendix V</i> J. Fire Protection System Designs <i>Appendix W</i>

5. If the entire cost of a project totals less than \$25,000, the property owner or a contractor must perform the construction work. A contractor must comply with the items listed in *Appendix X* (link to [Contractor Requirements](#)) on file with the Codes Division.
6. If the entire cost of a project totals to \$25,000 or more, a State of Tennessee Licensed Contractor must perform the construction work. The contractor must comply with the items listed in *Appendix X* (link to [Contractor Requirements](#)) on file with the Codes Division.

Site Plans

1. For guidance on site plans link to [Planning Department Site Plan Review Checklist](#) or see *Appendix Y*.
2. **Existing Site Plan** and a **Proposed Site Plan** must be included.
3. **Grading Plan** (Link to [Grading Plan Requirements](#) or see *Appendix Z* for instructions)
4. **Stormwater Management Plans**
 - a. *Stormwater Detention and Drainage Control Plan* (For more information link to [Public Works Standards - Chapter 5, Storm Water Management](#))
 - b. *Erosion Prevention and Sediment Control Plan*. For more information on this plan link to:
 - i. [Erosion and Sediment Control, Minimum Plan and Report Requirements](#) or see *Appendix AA*.
 - ii. [Erosion and Sediment Control Plan Check List \(One Acre and Larger\)](#) or see *Appendix BB*.
 - iii. [Erosion and Sediment Control Plan Check List \(Less Than One Acre\)](#) or see *Appendix CC*.
 - c. *Water Quality Management Plan*. For more information link to:
 - i. [Northeast TN Water Quality BMP Manual](#)
 - ii. [Post-Construction Storm Water Quality Ordinance](#)
 - d. *Floodplain Management Plan*. For building within a sinkhole or a 100-year floodplain of any water body link to [Floodplain Regulations](#).
 - e. For acceptable precipitation values used in development of stormwater management plans link to [Johnson City Precipitation Parameters](#) or see *Appendix DD*.
5. **Utility Plans:** This plan must show all water, sewer, electrical, gas, etc. plans.
6. **Photometric Plan** (Link to [Lighting Regulations](#))
7. **Landscape Plan** (Link to [Landscape Regulations](#))

**ARTICLE V
SITE PLAN APPROVAL PROCEDURE**

5.1 APPLICATION AND APPROVAL PROCEDURE

With the exception of single-family and two-family dwellings, the following site plan approval procedure shall govern all development:

- 5.1.1. Two (2) sets of complete site plan drawings and an electronic copy of the site plan shall be submitted to the Code Enforcement Division, along with the appropriate review fee, if required.
- 5.1.2. The site plan shall be drawn to scale and include:
 - A. Boundary of the tract, including dimensions and location of any new or revised lots or easements within the tract;
 - B. The location and dimensions of all existing and proposed roads, driveways, entrances and exits, lanes, easements, and parking areas, including the number of parking spaces;
 - C. Proposed building locations and dimensions including the height of buildings and building entrances both pedestrian and vehicular;
 - D. Location and extent of existing and proposed landscaping, buffer yards, fences, lighting, pedestrian walkways, and signage;
 - E. Proposed use of land and buildings;
 - F. The relation of the project to the adjoining street system and surrounding area, including the zoning and land use of surrounding properties;
 - G. The complete grading plan, erosion prevention and sediment control plan in compliance with ordinance number 4064-04, water quality plan in compliance with ordinance number 4293-07, floodplain regulations information in compliance with Article VIII of the Zoning Ordinance, and stormwater runoff calculations supporting the stormwater collection and detention plan, shall also be submitted;
 - H. Location and profiles of proposed sanitary sewers and stormwater sewers with grades, sizes, and elevations indicated;
 - I. Proposed water distribution system showing pipe location, sizes, and the location of all pumps, meters, valves, and fire hydrants; and

- J. The location and extent of other utility facilities, including electric, telephone, and TV cable lines, natural gas lines, and poles for power or telephone.

5.1.3 Review procedure:

Staff review procedure - Upon receipt of a site plan, the Code Enforcement Division shall:

- A. Notify the Planning Department, Engineering Division, Water and Sewer Department, and any other department as appropriate of submitted plans;
- B. Each department shall promptly review the site plan for conformity with the requirements in Subsection 5.1.2 and convey its findings to the Code Enforcement Division, which shall compile a consolidated staff report on the site plan;
- C. If any deficiency is found in the plan, the applicant and property owner shall be contacted and the deficiency or deficiencies explained. If the applicant and owner agree to amend the plan to correct all deficiencies, then a corrected site plan shall be submitted for review; and
- D. Finding of compliance - Upon finding that the site plan is in full compliance with the requirements of Subsection 5.1.2, the Chief Building Official shall issue the appropriate grading or building permits.

5.1.4 Appeal procedure:

- A. If the applicant disagrees with the findings of the city staff, an appeal may be made to the Planning Commission. Such appeal shall be made in writing to the Planning Department and shall state the reasons why in the applicant's opinion, that feels the site plan is in compliance. The appeal shall be filed no later than ten (10) full working days prior to the next Planning Commission meeting and shall be accompanied by ten (10) additional copies of the site plan.
- B. The Planning Commission at its regular meeting shall review the disputed site plan and hear evidence from the applicant, the staff, and from any other interested persons. After hearing evidence, the Planning Commission shall approve the site plan as submitted, approve with amendments, or disapprove the plan. In determining its findings, the Planning Commission shall take into consideration the character of the surrounding area to: (1) protect adjoining residentially-zoned lots and residential uses; (2) to provide for the public safety; and (3) to prevent traffic congestion.

- C. The applicant may appeal the Planning Commission's finding to the City Commission. After receiving the findings of the Planning Commission, the City Commission shall review the site plan and the evidence presented by the staff, the applicant, and any other concerned persons. The appeal shall be filed no later than fourteen (14) full working days prior to the next City Commission meeting and shall be accompanied by seven (7) additional copies of the site plan. After such review, the City Commission shall approve, disapprove, or approve with amendment the site plan. In determining its action, the City Commission may also make additional reasonable requirements.

5.1.6 Subdivision and replatting procedure:

- A. In order to promote interconnectivity, reduce the number of curb cuts, and the development of comprehensive stormwater management, a Subdivision Site Plan shall be required for all subdivisions in the B-4, B-5, and PB districts. A Subdivision Site Plan shall include the following:
 - 1. Location and number of proposed curb cuts;
 - 2. Proposed interconnectivity between proposed lots; and
 - 3. Preliminary stormwater detention location.
- B. In the B-4, B-5, and PB districts, lots may be created which gain access from a private drive, private street, or easement. Any creation of lots or easements or any replatting of or within the original tract shall be reviewed according to the provisions of the Subdivision Regulations of the Johnson City Regional Planning Commission. The original subdivision of land within the tract or the establishment of permanent easements for access shall be reviewed by the Planning Commission; thereafter, replats or further subdivisions may be reviewed administratively subject to the provisions of the Subdivision Regulations.

5.2 DEVELOPMENT STANDARDS:

Each proposed site plan shall be evaluated according to the following standards:

5.2.2 Internal circulation and curb-cut location:

To promote and protect the safety and function of city streets, the internal circulation and the location and number of curb cuts of each project shall be carefully regulated. The City Engineer may request that information from the developer be provided concerning future development plans. In addition, developments having off-street parking facilities shall

interconnect on-site vehicular access with adjoining property where practical.

5.2.3 Private streets and permanent easements:

- A. Private streets designed to serve as internal streets within a commercial development shall be built to the public street standards of Article IV of the Subdivision Regulations. So long as such streets and utilities remain private, their maintenance shall be the responsibility of the property owner. Upon verification by the Planning Commission, City Engineer, and the Water and Sewer Engineer that private streets and utilities have been constructed according to Subdivision Regulations standards for public streets and the utilities have been constructed according to TDEC and Water and Sewer Department Standards, they may be accepted by the city upon dedication by the owner.

- B. Permanent private easements for transportation access may be established within a commercial development across parking lots or driveways where appropriate, based on traffic volumes, site conditions, and building location. The minimum width of such easement shall be twelve (12) feet for one-way traffic and twenty (20) feet for two-way traffic. The minimum pavement depths of such easements shall be 6 inches of mineral aggregate base and 3 inches of asphalt. The maintenance of such easements shall be the permanent responsibility of the owner. In no case shall the city accept such easements as public nor maintain them.

5.2.4 Sidewalk Requirement:

Sidewalks shall be required for all multi-family, commercial, and office developments along their public street frontages, and for all industrial developments along their collector and arterial street frontages, in accordance with Article IX, Sidewalk Regulations, and The Standards of Design for Streets and Drainage.

DEVELOPMENT PERMIT PROCESS

Project: _____

Date: _____

Check Box	Step No.	Description	Remarks
		SECTION 1	
	1	Submit building plans and site plans to the Plans Examiner's Office of the Codes Enforcement Division	
	2	Staff review of building and site plans	
	3	Adjustments made to building and site plans	
	4	Staff review of building and site plans	The review & adjust may cycle until comments are met.
	5	Receive TDEC Notice of Coverage (NOC)	
	6	Plans Examiner verifies staff approval	
	7	Post bond for storm water quality Maintenance Covenants	
	8	Development Permit issued for construction	
	9	Construction begins	
	10	Construction is completed	If some construction is deferred by using a bond, see SECTION 2 below.
	11	Submit storm water management record drawings	
	12	Final inspection by staff	
	13	Certificate of Occupancy issued by Chief Building Official	
	14	Execute and record the Maintenance Covenants at the courthouse	
	15	Release Maintenance Covenants bond	
	16	Obtain TDEC Notice of Termination (NOT)	
		SECTION 2	
		(If a bond is used to defer construction)	
	1	Inspection by staff to identify construction to be deferred and confirm bond amount	
	2	Bond is provided for deferred construction (deferment for one year only)	
	3	Certificate of Occupancy issued by Chief Building Official	
	4	Construction is completed	
	5	Submit storm water management record drawings	
	6	Final inspection by staff	
	7	Release of bond by Chief Building Official	
	8	Execute and record the Maintenance Covenants at the courthouse	
	9	Release Maintenance Covenants bond	
	10	Obtain TDEC Notice of Termination (NOT)	



Development Services Department

Administration • Codes • Planning
Community Development • GIS • MTPO

Codes Division

BUILDING PERMIT FEE SCHEDULE

<u>TOTAL VALUATION</u>	<u>FEES</u>
\$1,000 OR LESS	NO FEE UNLESS INSPECTION REQUIRED, IN WHICH CASE A \$15.00 FEE FOR EACH INSPECTION SHALL BE CHARGED.
\$1,000 TO \$50,000	\$15.00 FOR THE FIRST \$1,000 PLUS \$5.00 FOR EACH ADDITIONAL THOUSAND OR FRACTION THEREOF. TO AND INCLUDING \$50,000.00.
\$50,001 TO \$100,000	\$260.00 FOR THE FIRST \$50,000.00 PLUS \$4.00 FOR EACH ADDITIONAL THOUSAND OR FRACTION THEREOF. TO AND INCLUDING \$100,000.00.
\$100,001 TO \$500,000	\$460.00 FOR THE FIRST \$100,000.00 PLUS \$3.00 FOR EACH ADDITIONAL THOUSAND OR FRACTION THEREOF. TO AND INCLUDING \$500,000.00.
\$500,001 AND UP	\$1,660.00 FOR THE FIRST \$500,000.00 PLUS \$2.00 FOR EACH ADDITIONAL THOUSAND OR FRACTION THEREOF.

WHEN WORK FOR WHICH A PERMIT IS REQUIRED BY CODE IS STARTED PRIOR TO OBTAINING SAID PERMIT, THE PERMIT FEE SPECIFIED SHALL BE DOUBLED.

REINSPECTION FEE	\$ 25.00
DEMOLITION OF SINGLE FAMILY RESIDENTIAL	\$ 50.00
DEMOLITION OF OTHER STRUCTURES	\$ 100.00
MOVING OF STRUCTURE	\$ 55.00

PLANS REVIEW FEE

(to be rounded up to the nearest dollar)

MINIMUM	\$25.00
RESIDENTIAL	\$25.00 PER UNIT (Single family, duplexes & townhouses.)
COMMERCIAL	.0005 x CONSTRUCTION VALUE (to include apts. & condos)

*******NOTE: WATER & SEWER TAP FEES MUST BE PAID PRIOR TO ISSUANCE OF BUILDING PERMIT. (NEW HOUSES OR NEW COMMERCIAL)*******

"The Johnson City Development Services Department is committed to a comprehensive approach to guide and shape quality development in our region."

**CITY OF JOHNSON CITY WATER AND SEWER DEPARTMENT
CITY RATE SCHEDULE EFFECTIVE JULY 1, 2013**

INSIDE CORPORATE LIMITS WATER & SEWER RATE TABLE					
WATER RATE			SEWER RATE		
BASE CHARGE PER BILL			BASE CHARGE PER BILL		
		\$4.29			\$5.17
RATE 1	0-20,000 GAL	\$3.34/M GALLONS	RATE 1	0-20,000 GAL	\$5.19/M GALLONS
RATE 2	20,001 - 190,000 GAL	\$2.67/M GALLONS	RATE 2	20,001 - 190,000 GAL	\$5.19/M GALLONS
RATE 3	190,001 - 490,000 GAL	\$2.40/M GALLONS	RATE 3	190,001 - 490,000 GAL	\$5.19/M GALLONS
RATE 4	OVER 490,000 GAL	\$2.17/M GALLONS	RATE 4	OVER 490,000 GAL	\$5.19/M GALLONS
Effective 7-1-13			Effective 7-1-13		

WATER CONNECTION FEES					
5/8"	METER AND CONNECTION CHARGE	\$750.00		FIRE HYDRANT	\$2,100.00
1"	METER AND CONNECTION CHARGE	\$900.00	3"	FIRE LINE	\$2,230.00 / NO MON FEE
1" Fire Service	METER AND CONNECTION CHARGE	\$980.00	4"	FIRE LINE	\$2,545.00 / NO MON FEE
1 1/2"	METER AND CONNECTION CHARGE	\$1,180.00	6"	FIRE LINE	\$2,855.00 / NO MON FEE
2"	METER AND CONNECTION CHARGE	\$1,360.00	8"	FIRE LINE	\$3,325.00 / NO MON FEE
2" Fire Service	METER AND CONNECTION CHARGE	\$1,555.00	10"	FIRE LINE	\$3,640.00 / NO MON FEE
2" Compound	METER AND CONNECTION CHARGE	\$2,395.00	12"	FIRE LINE	\$4,420.00 / NO MON FEE
3"	METER AND CONNECTION CHARGE	\$3,740.00			
4"	METER AND CONNECTION CHARGE	\$6,000.00			
6"	METER AND CONNECTION CHARGE	\$9,550.00			
8"	METER AND CONNECTION CHARGE	\$13,150.00			
5/8"	TEMPORARY METER	\$150.00			
3"	TEMPORARY METER	\$325.00			

**All Connections Larger Than 8" To Be Figured at Cost Including Labor, Materials, and Overhead

SANITARY SEWER CONNECTION FEES		
		Boones Creek Drainage Area
(A) Single Family Residence	\$1,550	\$2,745
(B) Small Commercial Users (I.E. Service Stations, Office Building, Other Non-Residential)	\$1,550	\$2,745
(C) Car Wash	\$1,550 First Bay, \$900 each additional Bay	\$2,745 First Bay, \$1,610 Each Additional Bay
(D) Apartments, Condominiums, Multi-Unit Family Complexes, Etc., Per Unit; Trailer Courts, Trailer or Unit	\$1,550 For the first unit, \$900 for the next (50) units Plus \$550 for each additional unit	\$2,745 For the first unit, \$1,610 for the next (50) units, Plus \$850 for each additional unit
(E) Factories, Shopping Centers, Schools, Warehouses, Parking Garages	\$1,550 For the first 10,000 Sq Ft of floor space, Plus \$900 for each additional 10,000 Sq Ft of floor space	\$2,745 For the first 10,000 Sq Ft of floor space, Plus \$1,610 for each additional 10,000 Sq Ft of floor space
(F) Motels, Hotels, Hospitals, Nursing Homes and Dormitories (1)Each Rental Unit/Room with NO In-Room Kitchen Facilities	\$1,550 For the first unit, \$550 for each additional unit	\$2,745 For the first unit, \$1,000 for each additional unit
(G) Rental Housing with Private Bathroom Facilities per Bedroom	\$1,550 For the first unit, \$550 for each additional unit	\$2,745 For the first unit, \$1,000 for each additional unit
(H) Additional existing units on same lot or parcel of land with existing residence and connected to the same sewer tap	\$1,550	\$2,745
(I) New Residences-Located in areas developed under the regulations governing the subdivision of land of the Johnson City Regional Planning Commission in which adequate and proper sewer lines constructed in conformity with applicable statutes of the State of Tennessee and Ordinances of the City pertaining to sanitation have been constructed as a part of private subdivision development	\$1,050	\$2,745
(J) On-site residential pump (Requires evaluation & written approval)		
(1) Standard	\$3500	\$3,920
(2) Extra Volume	\$4,900	\$5,420

Effective 7-1-13

**REVISED FEE SCHEDULE
ADOPTED BY CITY COMMISSION ON JUNE 7, 2001**

DESCRIPTION	FEE
<u>Rezoning</u>	
To R-1, R-2, R-2A, R-2B, or R-2C and ≤ 5 acres	\$200
To R-1 through R-2C between 5 acres and 20 acres And all other rezonings ≤ 20 acres	\$450
Any rezoning > 20 acres	\$500
Zoning text change	\$150
R-O-W abandonment	\$130
Street renaming	\$335
Variance	\$105
Special Exception	\$115
Code interpretation/administrative ruling	\$120
Called meeting of BZA (plus request fee)	\$145
Cell Tower	
Co-location	\$350
New Transmission Towers	\$1,500
Standard subdivision	\$40/lot
Minor subdivision/condominium location plat	\$25
Multiple building development or PUD	\$20/unit
Mobile home development	\$25/unit
Site plan review	
<10,000 sq. ft. of GFA*	\$55
10,000 – 100,000 sq. ft. of GFA*	\$155
>100,000 sq. ft. of GFA	\$250

*Gross Floor Area



DRIVEWAY PERMIT – FEE SCHEDULE

Driveway up to 15 ft	Flat Rate	\$ 5.50
Driveway 16 ft to 30 ft	Flat Rate	\$ 11.00
Driveway 31 ft to 40 ft	Flat Rate	\$ 16.50

****MAXIMUM WIDTH FOR RESIDENTIAL DRIVEWAYS – TWENTY-FOUR (24) FEET****

****MAXIMUM WIDTH FOR COMMERCIAL DRIVEWAYS – FORTY (40) FEET****

DRIP LINE: A vertical line extending from the outer edge of the canopy of a tree to the ground.

DWELLING, MULTI-FAMILY: A building designed, constructed, or reconstructed and used for more than two (2) dwelling units, with each dwelling unit having a common structural or load-bearing wall of at least ten (10) lineal feet with any other dwelling unit on the same floor or building level.

DWELLING, SINGLE-FAMILY: A building designed, constructed, and used for one dwelling unit.

- A. **DETACHED:** A one-family dwelling which is completely surrounded by open spaces.
- B. **SEMI-DETACHED:** A one-family dwelling that is connected on one side by means of a common dividing structural or load-bearing wall of at least ten (10) lineal feet to another one-family dwelling, each dwelling on its own individual lot.
- C. **ATTACHED:** A one-family dwelling that is connected on two sides by means of a common dividing structural or load bearing wall of at least ten (10) lineal feet of two or more other one-family dwellings, or the end dwelling of a series of such dwellings, each dwelling unit on its own individual lot.
- D. **DWELLING GROUP, ONE-FAMILY ATTACHED:** A line of one-family attached dwellings, joined at the sides by means of common structural or load bearing walls, comprising an architectural whole.

DWELLING, TWO-FAMILY OR DUPLEX: A building designed, constructed, or reconstructed and used for two dwelling units that are connected by a common structural or load-bearing wall of at least ten (10) lineal feet.

DWELLING UNIT: One room, or rooms, connected together, constituting a separate, independent housekeeping establishment for owner occupancy, or rental, or lease on a weekly, monthly, or longer basis, and physically separated from any other rooms or dwelling units which may be in the same structure, and containing independent cooking and sleeping facilities for permanent residential occupancy by one family.

ELEVATED BUILDING: A non-basement building: 1) built to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls and 2) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Flood Zones A1-30, AE, A, A99, AO, AH, B, C, X, or D, elevated building also includes a building

ORDINANCE NO. 4509-13

AN ORDINANCE TO AMEND THE JOHNSON CITY MUNICIPAL CODE BY DELETING THE PRESENT SECTION 12-301 OF SAID CODE IN ITS ENTIRETY AND SUBSTITUTING A NEW SECTION 12-301 IN LIEU THEREOF AND TO ADOPT THE INTERNATIONAL BUILDING CODE 2012 EDITION, THE INTERNATIONAL RESIDENTIAL CODE 2012 EDITION, THE INTERNATIONAL EXISTING BUILDING CODE 2012 EDITION, THE INTERNATIONAL FIRE CODE 2012 EDITION, THE INTERNATIONAL MECHANICAL CODE 2012 EDITION, THE INTERNATIONAL FUEL GAS CODE 2012 EDITION, THE INTERNATIONAL PLUMBING CODE 2012 EDITION, THE 2010 ADA EDITION STANDARDS FOR ACCESSIBLE DESIGN, THE NATIONAL ELECTRICAL CODE 2011 EDITION, THE INTERNATIONAL ENERGY CONSERVATION CODE 2006 EDITION, THE INTERNATIONAL PROPERTY MAINTENANCE CODE 2012 EDITION, AND REPEALING ALL ORDINANCES AND PARTS OF ORDINANCES IN CONFLICT HEREWITH.

NOW THEREFORE BE IT ORDAINED BY THE CITY OF JOHNSON CITY as follows:

SECTION I. BE IT FURTHER ORDAINED that Section 12-301 of the Johnson City Municipal Code is hereby repealed in its entirety, and a new Section 12-301 is adopted in lieu thereof, which section shall provide as follows:

12-301. Codes adopted. The following codes are hereby adopted by reference as though they were copied herein fully:

International Building Code – 2012 Edition with Appendix D Fire District attached thereto.

Section -903.2.3 Group E is amended by deleting the entire section therein and replacing it with the following: “An automatic sprinkler system shall be provided throughout all Group E occupancies.”

Section 907.2.1 Group A is amended by changing “300” to “100” for Group A-2 occupancies as defined in section 903.2.1.2.

Section 1018.1 Corridors, Exceptions is amended by adding #6, “In lieu of a fire rated corridor required in Group B, fire areas exceeding 3,000 square feet but not exceeding 5,000 square feet may have a fire alarm system installed per NFPA 72 with smoke detectors installed as required by the fire official. The fire alarm signal shall be transmitted to an approved central station. Occupant notification shall be by horn/strobes installed per NFPA 72.”

Delete chapter 13 and replace it with the 2006 International Energy Conservation Code.

Section 3412.2 Applicability, is amended by adding the date “1960”.

International Residential Code 2012 Edition with Appendix G, Swimming Pools, Spas and Hot Tubs and Appendix J, Existing Buildings and Structures attached thereto. Except for: Section R 105.2 #1 and #10.

Section R313.2, One and Two Family Dwellings Automatic Fire Sprinkler Systems, pursuant to T.C.A. & 68-102-101 (A) (8).

Delete Chapter 11 and replace it with the 2006 International Energy Conservation Code.

Delete Chapters 34-43, relating to electrical.

Section R2415.3 is amended by adding a sentence as follow: The gas line must be installed in a ditch separate from other utility lines unless approved by the authority having jurisdiction.

Section P2903.3.1 is amended by adding a sentence at the end of the section as follows: “A listed water pressure regulator with strainer shall be installed inside all buildings and structures.”

International Existing Building Code – 2012 Edition.

No amendments

International Fire Code –2012 Edition.

Section 503.2.1 is amended by adding Exception #1: Existing public roads, streets or lanes may be continued in use as a fire access road at their existing dimensions, if approved by the City Manager in consultation with the Fire Chief.

Section 507.5.1 and Section 912.2 are amended by adding as follows: “Fire department connections for each sprinkler or standpipe system shall be located not more than 100 ft. (30 m) from the nearest fire hydrant connected to an approved water supply.”

Section 903.2.3 Group E is amended by deleting the entire section therein and replacing it with the following: “An automatic sprinkler system shall be provided throughout all Group E occupancies.”

Section 905.3.1 is amended by changing the language contained in Exception # 1 to read as follows: “Class 1 Standpipes (except manual wet or dry standpipes) are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.”

Section 905.8 is amended by changing the exception thereunder to read as follows: Where subject to freezing and in accordance with NFPA 14 and only in areas classified as parking

garages or other outside, non-heated, non-residential, low-rise occupancies, taking into consideration the added response time and its effect on occupancy characteristics of the building.

Section 907.2.1 Group A is amended by changing “300” to “100” for Group A-2 occupancies as defined in section 903.2.1.2.

International Mechanical Code – 2012 Edition.

No amendments

International Fuel Gas Code – 2012 Edition.

Section 404.3 is amended by adding a sentence as follows: “The gas line must be installed in a ditch separate from other utility lines unless approved by the authority having jurisdiction.”

International Plumbing Code – 2012 Edition.

Section 604.8 is amended by adding a sentence at the end of the section as follows: “A listed water pressure regulator with strainer shall be installed inside of all buildings and structures.”

2010 ADA Edition Standards for Accessible Design.

No amendments.

National Electrical Code – 2011 Edition as published by the National Fire Protection Association.

Article 210.3 is amended by adding a sentence at the end of the section as follows: “All interior wiring shall be at a minimum size number twelve (12) AWG copper conductor sized for a maximum of ten (10) outlets permitted on a 20 amperes branch circuit.”

Amend Article 210.5 (C) add:

“Means of identification of ungrounded conductors shall be color coded as follows:

120/208 Volt wiring systems

Phase 1 Black

Phase 2 Red

Phase 3 Blue

Neutral White

277/480 Volt wiring systems

Phase 1 Brown

Phase 2 Orange

Phase 3 Yellow

Neutral Gray

Ground Wire Green

All boxes and enclosures for emergency systems and fire alarm systems shall be permanently marked. The color red shall be used for fire alarm systems (NEC Article 760.30). The color orange shall be used for emergency systems.”

Article 230.70 (A3) is amended by adding a sentence at the end of the section as follows:

“Service panels or switch gears shall have an interim service disconnect device such as a main circuit breaker or fused disconnect. When such device is located on the interior of a structure and in excess of 10 feet from an exterior door, a shunt trip device shall be installed with a Knox key switch at a location specified by the fire official. All conductors installed for operation of the SHUNT TRIP BREAKER for main services or to shut down generators serving emergency power shall be installed in a metallic conductor system. This conduit system shall be continuous from end to end without junction boxes or splices and shall be identified by the same color code as for emergency circuits.”

Article 230.71 (A) is amended by adding a sentence at the end of the section as follows: “Meter centers installed for multiple occupancy residential structures with more than six meters shall require a main breaker or disconnect be installed. Structures with multiple meter centers shall have shunt trip breakers and Knox switches installed to disconnect all services from each location.”

Article 334.12 is amended by adding #11: “Cable NM, type NMC NMB and type NMS as defined in Article 334 of the National Electrical Code shall not be permitted for use in the following applications:

- A. Group R1 Residential Hotels and Motels;
 - B. Buildings, other than Residential;
 - C. Other building types where prohibited by the National Electrical Code;
 - D. All buildings over three stories; and
 - E. All buildings located in the fire district as defined by the City Zoning Code.
- Conduit, raceways and wire-ways shall be metallic for all non residential buildings unless for special applications.”

International Energy Conservation Code, 2006 edition.Section 101.4.3 is amended by adding the following exceptions:

5. Reroofing for roofs where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.

6. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving doors, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed.

7. Alterations that replace less than 50 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulbs and ballast within the existing luminaires in the space provided that the alteration does not increase the installed interior lighting power.

International Property Maintenance Code, 2012 Edition.

SECTION II. BE IT FURTHER ORDAINED that all ordinances and parts of ordinances in conflict herewith be and the same are hereby repealed.

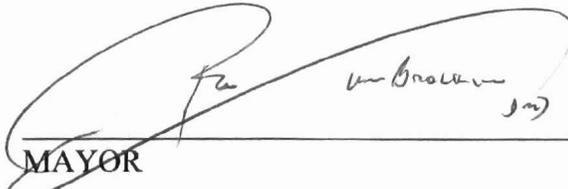
SECTION III. This ordinance shall take effect January 1, 2014 upon final passage and publication of this ordinance in a newspaper of general circulation, the public welfare requiring it.

PASSED IN OPEN, PUBLIC MEETING ON
THE FIRST READING 05 Sept. 2013

PASSED IN OPEN, PUBLIC MEETING ON
THE SECOND READING 19 Sept 2013

PASSED IN OPEN, PUBLIC MEETING ON
THE THIRD READING 03 Oct 2013

APPROVED AND SIGNED IN OPEN MEETING
ON THE 3rd DAY OF October, 2013
FOLLOWING PASSAGE ON THIRD READING.



MAYOR

ATTEST:



CITY RECORDER

APPROVED AS TO FORM:



CITY ATTORNEY

Introduction

The people of the State of Tennessee live and work in an environment which is largely manmade. Tennessee law recognizes the need "to safeguard life, health and property, and to promote public welfare" in that environment by ensuring that design professionals — architects, engineers, landscape architects, and registered interior designers — who shape that environment are properly qualified. Through the State Board of Architectural and Engineering Examiners, the State sets standards for the education, experience, and performance of those who wish to practice these professions.

Similarly, building officials — through their enforcement of building codes — safeguard life, health and property, and promote public welfare. The State Board of Architectural and Engineering Examiners, the building officials, and the State Fire Marshal's Office each have a vital role in the protection of the public; each must be able to depend on the others to fill its assigned role. The building official must be able to depend on professionals who are licensed by the Board to design competently and according to required standards. The Board must depend primarily upon the local building official and State Fire Marshal, particularly in nonexempt municipalities, to assure that only those who are properly licensed are allowed to provide design services.

This manual is provided to assist in the understanding of the laws and rules under which the Board and its registrants are governed with the goal of better serving the people of Tennessee, and updates and replaces the manual published in 2006.

The following portions of this manual have been significantly revised since the last publication:

- The Requirements for Building Design
- A Check List for the Examination of Building Construction Documents
- Appendix B—Letter of Clarification
- Appendix C—Seal Exemptions Clarification [T.C.A., Section 62-2-102(b)]. The former Appendix C (Example of Minimum Conditions Requiring a Registered Architect and/or Engineer When Space is Less Than 5,000 Square Feet) has been deleted due to changes to the Seal Exemptions Clarification policy.
- Appendix H—Design and Practice Policies
 - Addition of As-Built Drawings Policy
 - Revised Delineation of Engineering and Surveying Policy
 - Revised Design Competitions/Requests for Proposals/Requests for Qualifications Policy
 - Replacement of Townhouses Policy with One-Family and Two-Family Dwellings Policy
 - Addition of Signs Policy

The Requirements for Building Design

In general, all structures must have plans prepared by design professionals registered by the Board. Plans and specifications for all structures classified as "assembly," "educational," and "institutional" in the Standard Building Code must also be prepared by architects or engineers.

The only exceptions to this requirement are:

- Structures classified as "business," "factory-industrial," "hazardous," "mercantile," "residential" and "storage" occupancies, as such occupancies are defined in the 1985 edition of the Standard Building Code, which are:
 1. Less than three (3) stories in height; AND
 2. Less than five thousand square feet (5,000 sq. ft.) in total gross area;
- One-family and two-family dwellings and domestic outbuildings pertaining thereto; and
- Farm buildings not designed or intended for human occupancy.
- Signs that do not exceed either of the following limits (unless failure of the support system for the sign is likely to cause harm to people or property):
 - (i) Any portion of the sign is twenty feet (20') or more above the ground level; or

- (ii) Any portion of the sign is fifteen feet (15') or more above the ground level, if the sign has more than one hundred twenty square feet (120 sq. ft.) in total sign face area.

In addition, other Tennessee laws and regulations require that plans and specifications for buildings in these classifications be approved by the State Fire Marshal or the State Department of Health as is appropriate to their use. It should be noted that the law provides that any awarding authority, public or private, may require the services of a design professional for any project.

The Board

The Tennessee Board of Architectural and Engineering Examiners is composed of twelve members — three registered architects, three registered engineers, one registered landscape architect, one registered interior designer, a public member who is not engaged in the practice of architecture, engineering, or landscape architecture, and three non-voting associate engineer members. The members are appointed by the governor and serve for a period of four (4) years. The Board usually meets six (6) times a year and at such other times as the business of the Board may require.

The Board is charged with the examination of the qualifications of applicants for registration and, in proper cases, the issuing of certificates of registration. The Board may also suspend or revoke certificates of registration in cases of misconduct and has the duty to inquire into the identity of any person (or firm) claiming to be an architect, engineer, landscape architect, or registered interior designer and to prosecute persons violating provisions of the registration law. Suspected violations of the registration law should be reported to the Board office. State investigators, representing the Board, gather evidence for use in the examination of reported violations. Their work often includes joint investigations with building officials. If, in the opinion of the Board's legal staff, evidence warrants the filing of formal charges, an outline of the case is presented to the Board for action. The identity of persons involved is not known to the members of the Board until presented to them for formal action. If charges are filed, a formal hearing is held with an administrative judge from the Secretary of State's office conducting the proceeding and the Board members sitting as jury, rendering decisions and penalties where appropriate.

The terms of the act governing the four professions are found in Tennessee Code Annotated (T.C.A.), Title 62, Professions, Businesses and Trades; Chapter 2, Architects, Engineers, Landscape Architects, and Registered Interior Designers; and in the Rules, Chapters 0120-1, 0120-2, 0120-4, and 0120-5. Copies of the law and rules are available from the Board office, or can be viewed on the Board's website located at www.tn.gov/commerce/boards/ae.

The Registration Process

Candidates for registration must be of good character and repute, must have professional degrees, a specified period of experience, and must have passed an examination. Candidates holding unexpired certificates of registration from any state or jurisdiction may be registered without additional examination, provided that the applicant's qualifications meet the requirements of the Tennessee Board.

Examinations are prepared by the four (4) national professional councils of state registration boards—the National Council of Architectural Registration Boards (NCARB), the National Council of Examiners for Engineering and Surveying (NCEES), the Council of Landscape Architectural Registration Boards (CLARB), and the National Council for Interior Design Qualification (NCIDQ)—to provide consistent national standards of examination and to facilitate reciprocal registration among the various state registration boards.

Upon application, the candidates are required to submit records of education, experience, and letters of recommendation. The submittals are reviewed by Board members of the applicant's profession, and, if found satisfactory, the candidate is admitted to the examination. Registration certificates are awarded at the satisfactory completion of the examination.

Corporations, Partnerships and Firms

Corporations, partnerships, and firms (such as LLC's, LP's, and LLP's) may engage in the practice of architecture,

APPENDIX C

SEAL EXEMPTIONS CLARIFICATION [T.C.A., Section 62-2-102(b)]

The following are situations where a registered architect, engineer, or landscape architect is not required unless an awarding authority deems it necessary:

1. Tenant finishes and tenant improvements to a building of B, F, H, R, M, or S occupancy may be designed by a non-registrant with the following provisions:
 - A. Each separate tenant space is less than 5,000 square feet and the tenant spaces are separated from other tenant spaces by the minimum fire-rated separation required by the applicable code. In accordance with Section 402.1.2 of the 1985 edition of the Standard Building Code, "each part of a building or structure included within fire walls shall be considered a separate building."
 - B. Remodeling, maintenance, or renovation of any building or structure, which does not alter the structural system, or fire protection, or egress requirements.
2. The following exemptions apply to buildings, structures and spaces of B, F, H, R, M, or S occupancy that are 5,000 square feet or more in total gross area or over two stories in height:
 - A. Existing interior space. Normal maintenance or remodeling of an existing interior space in an existing building where the occupancy or floor plan do not change but upgrades are needed, such as, remove and replace finishes (wall, floor, ceiling, where these are not a part of a required fire rated assembly), change light bulbs or filters, and rearrange prefabricated partitions.
 - B. Mechanical design.
 - i. The design of a mechanical system for a building or structure of B, F, H, R, M, or S occupancy, and a temporary structure, wherein the HVAC system developed is not more than a total of 12.5 ton capacity and not more than a total of 500,000 BTU of heating per hour output.
 - ii. Normal maintenance or replacement of defective mechanical equipment with like equipment with like size may be accomplished by contractors licensed in their respective trades.
 - C. Plumbing design. Minor plumbing upgrades and additions up to the equivalent of three (3) fixture unit values, which do not require any change to the capacity of any waste, vent or supply system.
 - D. Electrical design. Minor electrical additions, such as receptacles, lighting, or other circuits, not to exceed 20 amperes, may be designed without benefit of a registrant, if the additional circuits do not require additional distribution panel(s) and/or the need for upgrading, resizing, or enlarging branch circuits and main feeders. In addition, such work shall be performed by an appropriately licensed individual in the state of Tennessee, and such person shall certify to any authority having jurisdiction, in writing, that he/she has evaluated such work in relation to the National Electrical Code and local codes, providing, for the record, the number of circuits added and the revised loads on the existing panel(s).
 - E. Reroofing. Normal maintenance or repair of an existing roof where the weight, drainage, fire protection, and other code related requirements of the original design are not changed or compromised.

Note: In no case can anyone other than an architect or engineer registered in Tennessee provide design documentation with regard to assembly, institutional, and educational occupancies.

Note Regarding Public Works Projects: T.C.A. 62-2-107. (Employment of licensees on public works — Excluded public works)

Appendix I (Pg. 4 of 4)

- a. Neither the state, any county, city, town, or village, or other political subdivision of the state, shall engage in the construction or maintenance of any public work involving architecture, engineering, or landscape architecture for which the plans, specifications, and estimates have not been made by a registered architect, registered engineer, or registered landscape architect.
- b. Nothing in this section shall be held to apply to such public work wherein the contemplated expenditure for the complete project does not exceed twenty-five thousand dollars (\$25,000), and such work does not alter the structural, mechanical, or electrical system of the project.
- c. For the purposes of this chapter, "public work" does not include construction, reconstruction, or renovation of all or any part of an electric distribution system owned or operated directly or through a board by a municipality, county, power district, or other subdivision of the state of Tennessee, that is to be constructed, reconstructed or renovated according to specifications established in the American National Standard Electrical Safety Code, the National Electrical Code, or other recognized specifications governing design and construction requirements for such facilities. Notwithstanding the foregoing, "electrical distribution system" does not include any office buildings, warehouses, or other structures containing walls and a roof, which are to be open to the general public. [Acts 1979, ch. 263, § 36; T.C.A., 62-236; Acts 1988, ch. 990, § 9; 1994, ch. 644, § 3.]

HISTORICAL FOOTNOTE: This policy was adopted by the Board as a result of negotiations with construction-related industry representatives to get T.C.A., Section 62-2-102(b), enacted into law.

Adopted 4-27-89

Revised and adopted 6-8-89

Revised and adopted 10-4-97

Revised and adopted 10-12-01

Revised and adopted 1-9-03

Revised and adopted 4-22-04

Revised and adopted 5-22-08

Revised and adopted 7-10-08

Revised and adopted 9-18-08

Revised and adopted 12-11-08

Revised and adopted 6-25-09



Development Services Department

Administration • Codes • Planning
Community Development • GIS • MTPO

Codes Division

APPLICATION FOR BUILDING PERMIT

(see "Contractor Requirements" info sheet prior to application)

Project Address: _____

Name of Business/ Complex / Subdivision: _____

Contractor: _____ E-mail: _____ Phone: _____	Client/Owner: _____ E-mail: _____ Phone: _____
--	--

Project Type (Check only one):

* 1 or 2 Family Res Commercial Mixed Use Condo/ Apt/ Townhouse: #Units _____

(only 1 or 2 Fam Res).....#Bedrooms _____ *# Baths _____

Proposed Use: _____ Stories/Ht: _____ Total Sq. ft. _____

Cost of Job (materials & labor) \$ _____

Construction Type (Check all that apply –New construction only):

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> New structure | <input type="checkbox"/> Renovation | <input type="checkbox"/> Addition | <input type="checkbox"/> Site work / excavation |
| <input type="checkbox"/> Shell only | <input type="checkbox"/> Deck / porch | <input type="checkbox"/> Foundation only | <input type="checkbox"/> Paving |
| <input type="checkbox"/> Interior build out | <input type="checkbox"/> Garage /Storage | <input type="checkbox"/> Pool | <input type="checkbox"/> Other (explain below) |
| <input type="checkbox"/> Driveway: Width at Street (1) _____ (2) _____ | | <input type="checkbox"/> Temp power needed?: (Y_N_) | |
| Lower Lev Construction..... <input type="checkbox"/> Slab on grade | | <input type="checkbox"/> Crawl space | <input type="checkbox"/> Basement |

(ALWAYS CALL 811, OR VISIT WWW.TENN811.COM, PRIOR TO DIGGING TO LOCATE UNDERGROUND UTILITIES – PER T.C.A 65-31)

Briefly explain project: _____

Applicant certifies that the above information is true to the best of his/her knowledge and understands that this permit may become null and void if information listed is found to be in error.

Applicant Name	Date	Phone / Email
Codes Division	Date	Planning Division

"The Johnson City Development Services Department is committed to a comprehensive approach to guide and shape quality development in our region."

PLANS SUBMITTAL REQUIREMENTS
CHECKLIST FOR COMMERCIAL & MULTIFAMILY
CITY OF JOHNSON CITY

A complete set of design drawings must include, but is not limited to the following (check yes to all that apply, and see note below about authorization about checking N/A):

- | | | |
|------------------------------|------------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 1. Cover Sheet |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 2. Site Plans |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 3. Means of Egress |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 4. Architectural Floor Plans |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 5. Structural Design Plans |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 6. Mechanical HVAC System |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 7. Plumbing Systems Plans |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 8. Fire Protection Sprinkler/ Standpipe/ Fire Pump Systems Design |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | 9. Electrical Design |

Signature of Plans Designer

By signing this document the Plans Designer has attested that all items checked are in the design drawings. The Codes Enforcement Division must authorize the Designer to check any items the Designer thinks is not applicable (N/A). Failure to include the checked items will result in a rejection of the plans. If the same set of plans is rejected twice for failure to include these checked items, the plans must be resubmitted.

Heavy workload for the Codes Enforcement Division can extend the time period for reviews to be returned. However, under normal workload conditions, the goal of the Codes Enforcement Division is to have reviews returned to the design engineer in:

	<u>First Review</u>	<u>Second Review</u>
Commercial Plans	10 days	5 days
Residential Plans	5 days	3 days

Failure to retrieve plans after 60 days will result in a set of voided plans, and new plans must be resubmitted.

For any permit issued, if work stops for more than 6 months, all permits will be void.

COMMERCIAL & MULTIFAMILY COVER SHEET CHECKLIST CITY OF JOHNSON CITY

Cover Sheet

Code analysis for the building, which are enforceable at the time of submittal, that reflect any related currently adopted minimum for:

Yes N/A Building

Yes N/A Fire

Yes N/A Life Safety

Yes N/A Accessibility Codes

**See the City Ordinance for all items not mentioned in this checklist.*

COMMERCIAL & MULTIFAMILY SITE PLANS CHECKLIST CITY OF JOHNSON CITY

Site Plans

- Yes N/A Show the grading plan.
- Yes N/A Show underground utilities.
- Yes N/A Show underground fire protection sprinkler piping.
- Yes N/A Show fire department access.
- Yes N/A Show exit discharge to a public way.
- Yes N/A Show fire hydrant location with hydrant test data.
- Yes N/A Show erosion prevention and sediment control plan.
- Yes N/A Show water quality plan, as necessary.
- Yes N/A Show floodplain regulations information, as necessary.
- Yes N/A Show storm water runoff calculations supporting the storm water collection and detention plan.
- Yes N/A Show potable water connection points & sizes (e.g. meters, fire taps).
- Yes N/A Show meter pit w/details (applies to meters \geq 3”).
- Yes N/A Show sanitary sewer connection points.

**See the City Ordinance for all items not mentioned in this checklist.*

Appendix P

COMMERCIAL & MULTIFAMILY ARCHITECTURAL FLOOR PLANS CHECKLIST CITY OF JOHNSON CITY

Architectural Floor Plans

- Yes N/A Show the use for each space.
- Yes N/A Show dimensions.
- Yes N/A Show doors.
- Yes N/A Show door hardware schedules.
- Yes N/A Show window schedule.
- Yes N/A Show section details.
- Yes N/A Show UL fire resistance rated assembly details for rated walls.
- Yes N/A Show rated floor/ ceiling assemblies.
- Yes N/A Show rated roof/ ceiling assemblies.
- Yes N/A Show rated columns, girders, and beams.
- Yes N/A Show head of wall joints and floor to exterior wall joints.

**See the Building Code for items not mentioned in this checklist.*

Appendix Q

**COMMERCIAL & MULTIFAMILY
STRUCTURAL DESIGN PLANS CHECKLIST
CITY OF JOHNSON CITY**

Structural Design Plans

- Yes N/A Show details.
- Yes N/A Show seismic design loads.
- Yes N/A Show minimum design loads and locations.
- Yes N/A Show details of any 2/ 3/ 4 hour fire resistant rated fire walls.

**See the Building Code and Fire Code for all items not mentioned in this checklist.*



Development Services Department

Administration • Codes • Planning
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Codes Division

Johnson City, TN – Design Criteria :

Ground Snow Load = 15 psf

Seismic Design Category = B

Frost Line Depth = 12 inches

Winter Design Temperature = 14 degrees

Mean Annual Temperature = 55 degrees

Wind Speed = 90 mph

Weathering = Severe

Termite = Moderate-Heavy

Ice Barrier Underlayment Required = No

Air Freezing Index = $> 0 - 1000$

COMMERCIAL & MULTIFAMILY MEANS OF EGRESS CHECKLIST CITY OF JOHNSON CITY

Means of Egress

- Yes N/A Show the use for each space with occupant loads based on occupant load factor.
- Show exiting paths:
- Yes N/A With exit occupant load.
- Yes N/A With capacity of the exit door or exit stairway.
- Yes N/A Show common path and travel distance.
- Yes N/A Show limits and enclosures of smoke partitions.
- Yes N/A Show smoke barriers.
- Yes N/A Show one/ two hour fire resistance rated partitions.
- Yes N/A Show 2/ 3/ 4 hour fire resistance rated fire walls with appropriate legends.

**See the Building Code and Fire Code for items not mentioned in this checklist.*

Appendix T

**COMMERCIAL & MULTIFAMILY
MECHANICAL HVAC SYSTEM DESIGN
CHECKLIST CITY OF JOHNSON CITY**

Mechanical HVAC System Design

- Yes N/A Show drawings which include fire, smoke, and combination fire/ smoke damper locations.
- Yes N/A Show drawings with gas furnace/ boiler combustion air.
- Yes N/A Show drawings with fire resistance rated wall limits and legend that matches architectural plans.
- Yes N/A Show drawings with UL fire stopping details for penetrations through rated assemblies.

**See the Building Code and Fire Code for all items not mentioned in this checklist.*

Appendix U

**COMMERCIAL & MULTIFAMILY
PLUMBING SYSTEMS DESIGN CHECKLIST
CITY OF JOHNSON CITY**

Plumbing Systems Design

- Yes N/A Show drawings which include fire resistance rated wall limits and legend that matches architectural plans.
- Yes N/A Show drawings with UL fire stopping details for penetrations through rated assemblies.

**See the Building Code and Fire Code for all items not mentioned in this checklist.*

COMMERCIAL & MULTIFAMILY ELECTRICAL DESIGN CHECKLIST CITY OF JOHNSON CITY

Electrical Design

- Yes N/A Show drawings including complete fire alarm system.
- Yes N/A Show drawings with emergency lighting.
- Yes N/A Show drawings with exit signs.
- Yes N/A Show duct smoke detectors for HVAC fan shut down including fire resistance rated wall limits and legend that matches architectural plans.
- Yes N/A Show drawings with UL fire stopping details for penetrations through rated assemblies.

**See the Building Code and Fire Code for all items not mentioned in this checklist.*

Appendix W

COMMERCIAL & MULTIFAMILY FIRE PROTECTION SYSTEMS DESIGN CHECKLIST CITY OF JOHNSON CITY

Fire Protection Systems Design

All Fire Protection System Designs require shop drawings that must include:

- | | | |
|------------------------------|------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | Resistance Rated Wall Limits and a Legend that matches the Architectural Plans. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | UL Fire Stopping details for penetrations through rated assemblies. |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | Battery calculations for Fire Alarm Systems |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | Data Sheets for Fire Protection Devices, Panels, Risers |
| <input type="checkbox"/> Yes | <input type="checkbox"/> N/A | Hard copy of drawings, including any floor plans affecting Fire Protection System |

**See the Building Code and Fire Code for all items not mentioned in this checklist.*



Development Services Department

Administration • Codes • Planning
Community Development • GIS • MTPO

Codes Division

CONTRACTOR INFORMATION NEEDED PRIOR TO OBTAINING PERMITS

To become an approved contractor doing business In Johnson City, the following Information must be submitted prior to Issuance of a permit:

- A.** Copy of Workers Compensation Insurance Certificate (if you or your organization employs full time workers).
- B.** Business License with the City of Johnson City, (please call the Tax Department 423-434-2393 to determine If this Is needed).
- C.** \$10,000 Surety bond between you and/or your organization and the City of Johnson City (copy of bond form may be faxed upon request) call 423-434-6047. Form must be completed by an Insurance company of your choice and returned to the Codes Enforcement Office.
- D.** (1) General Contractor: If job exceeds \$25,000 in value (materials & labor) copy of your State of Tennessee Contractor's License is required, along with other information listed below". If under \$25,000, only information listed below is required.

(2) Sub-Contractor: All sub contractors must submit a copy of your State of TN Contractor's License or a letter from the state confirming you have taken and passed their trades' exam, along with information below. Commercial plans must be submitted for a review a minimum of five (5) days prior to Issuance of a permit. Residential plans must be submitted a minimum of three (3) days prior to issuance of a permit. If additional information is needed, you may call the Codes Enforcement Office at one of the numbers below.

"The Johnson City Development Services Department is committed to a comprehensive approach to guide and shape quality development in our region."

Effective Date: _____

Bond No.: _____

**BUILDING LICENSE BOND
Johnson City, Tennessee**

KNOW ALL MEN BY THESE PRESENTS That we, _____

_____, as Principal and
(hereinafter called the Principal)

_____, as Surety
(hereinafter called the Surety)

are held and firmly bound unto the CITY OF JOHNSON CITY, TN, the Obligee, in the sum of Ten Thousand Dollars (\$10,000) lawful money of the United States of America, for the payment of which we hereby bond ourselves, our respective heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has applied for a license as a building contractor in the City of Johnson City, Tennessee and under provisions of Ord. No. 3442, Art. 1, Sec. 7.2 of the Code of said City, is called upon to furnish this bond as a condition precedent to engaging in the building contracting business in said City.

NOW THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully observe all the laws pertaining to building construction, blasting, and excavating, constructing or reconstructing and shall indemnify and save harmless the Obligee from all claim arising from accidents and damage of any character whatsoever caused by the negligence of the Principal while engaged in said building contracting business or caused by any other unfaithful inadequate work done either by the Principal or the Principal's agents or employees and if the Principal shall further maintain in a safe condition for a period of one (1) year all ditches and excavation which may be opened in the performance of any construction work and shall replace all excavated dirt and other material in a good condition with similar materials (it being understood that where such excavation is made in an unpaved street, or any street paved with chert or macadam, the word "street" as herein used, shall apply to sidewalks, curbs, gutters, parkways, storm & sanitary sewers and appurtenances, and street paving) then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, this Bond is executed upon the following express conditions:

- FIRST: Regardless of the period of time this Bond shall remain in force, or the number of premiums paid therefor, the liability of the Surety shall not be cumulative and the aggregate liability of the Surety for any and all claims, suits or actions under this Bond shall in no event exceed the sum of Ten Thousand Dollars (\$10,000).

- SECOND: This Bond may be cancelled at any time by the Surety upon giving thirty (30) days written notice to the City of Johnson City, TN, in which event the liability of the Surety shall terminate at the end of said thirty (30) day period, and which said period shall commence on the first regular business day following actual receipt of the City of said notice, except as to any default or defaults under this Bond occurring prior to the expiration of said thirty (30) day period.

- THIRD: No right of action shall accrue upon or by reason of this Bond, to or for the use or benefit of anyone whatsoever other than the Obligee named herein.

SIGNED, SEALED, AND DATED THIS _____ day of _____, _____

Principal: _____ Surety: _____

Representative

Attorney in Fact

**PLANNING DEPARTMENT
SITE PLAN REVIEW CHECKLIST**

Date: _____



Applicant:			
Site Location:			
Total Acreage:			
Zoning District:			
Overlay District:			
All site plans must be drawn to scale and shall include at a minimum:			
	Boundary of the tract, including dimensions and location of any new or revised lots or easements within the tract.		
	The location and dimensions of existing and proposed roads, driveways, entrances and exits, lanes, easements, and parking areas, including the number of parking spaces.		
	Proposed building locations and dimensions including the height of buildings and building entrances both pedestrian and vehicular.		
	Location and extent of existing and proposed landscaping, buffer yards, fences, lighting, pedestrian walkways, and signage.		
	Proposed use of land and buildings.		
	The relation of the project to the adjoining street system and surrounding area, including the zoning and land use of surrounding properties.		
	The complete grading plan, erosion prevention and sediment control plan.		
	*Stormwater Plan including calculations supporting the stormwater collection and detention plan. Addresses stormwater quality for sites with land disturbance over one acre.		
	Location and profiles of proposed sanitary sewers with grades, sizes, and elevations indicated.		
	Proposed water distribution system showing pipe location, sizes, and the location of meters, valves, and fire hydrants.		
AREA REQUIREMENTS			
Street Classification:	Arterial	Collector	Others
		Minimum Required	Provided
Front Yard			
Side Yard			L. R.
Rear yard			
		Maximum Allowed	Provided
Lot Coverage			
Building Height			
Density (units per acres)			
PARKING			
		Minimum Required	Provided
Total Parking Spaces			
Size of Parking Spaces			
Width of Travel Aisle			

*Developments or redevelopments that disturb less than one (1) acre of land are exempt from the requirements for a Water Quality Management Plan. No exemption is granted if the development or redevelopment is part of a larger common plan of development or sale that would disturb one (1) acre or more and the stormwater runoff from the development or redevelopment is not treated for water quality via a downstream or regional Water Quality Management Facility or BMP that meets the requirements of this ordinance.

HANDICAPPED PARKING

		Minimum Required	Provided
	Handicapped Spaces		
	HC loading Aisle Width (5 ft.)		
	Van Assessable Spaces (1 of 8 spaces 8 ft.)		

LANDSCAPING

		Minimum Required	Provided
	Landscape Yard	Feet of frontage / 50 = _____ Shade Trees	_____ Shade Trees
		<i>OR</i>	
	Interior Landscaping	Feet of frontage / 50 = _____ Ornamental Trees	_____ Ornamental Trees
		Parking spaces / 10 = _____ Interior Shade Trees	_____ Interior Shade Trees
	Buffer Yard	Parking spaces x 35 = _____ SF of landscape Area	_____ SF of landscape Area
		Type: 1 2 3 4 (circle one)	Type:

LIGHTING PLAN

	Photometric Plan
	Height of pole
	Recessed lighting (shoe box)

*lighting fixtures of 160 watts or less are exempt

SIDEWALKS

	A 5' sidewalk is required for all commercial, office, and multi-family development.
	Fee-in-lieu per requirements of Article 9.2.2.1 (\$11 per foot of frontage)

COMMENTS

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Public Works Department

Engineering • Solid Waste • Stormwater • Street • Traffic

Revised: April 24, 2008
December 12, 2011

GRADING PERMIT REQUIREMENTS

Grading Permit is required:

Within the corporate limits of Johnson City a permit to grade land is required before any excavation is initiated. In the majority of cases a permit to grade is granted with the over-all building permit, but in those instances where a building is not immediately planned the City requires a minimum amount of information before a permit is issued for excavating activity.

Grading is defined as excavation activity that changes the original elevations of the land by cutting away, filling in, or stockpiling of earth materials on the land. Grading can also be any combination of these activities.

The Minimum Information Needed for Review Prior to Issuance of a Permit to Grade:

Submit a Site Plan, which must include:

- A. **A Grading Plan**, showing how the property will be changed. This is typically done with a contour map that shows the existing contours of the property and the proposed contours of the land after the grading activity is completed. Site plans for grading a parcel of land that is larger than 4,000 square feet must be prepared by a licensed engineer or architect, experienced in preparing site or grading plans.
- B. **A Stormwater Drainage System Plan** that shows how the flow of storm water will be managed. Changing the contour of land can change the location and direction that storm water will leave the property and will change the volume of storm water leaving the property. Because of this, ditches or swales, pipes, and detention basins are necessary to control the changes in storm water and keep the post excavation conditions as close to before excavation conditions as possible. A licensed engineer or architect must prepare the drainage plan. Accompanying the drainage plan is the designer's drainage report, which includes a written narrative. This report with a written narrative identifies for those performing the review, the engineer's choice of a method for calculating flow rates and detention volumes, any assumptions related to water shed characteristics and choices of hydrological data being used in the design. The narrative explains the engineer's design of the storm water collection system, which includes pipe sizing, inlet spacing, locations of the 100 year flow path footprint for natural and manmade swales, and the detention system. The engineer should discuss the assumptions and parameter selections that were made, and explain how the detention system will control post development flows to a level that does not exceed the predevelopment conditions, and how detention will actually reduce the post development flows to below the predevelopment conditions. The narrative is not the same narrative that is provided to TDEC for the SWPPP, but is additional information for the city. However, this narrative and calculations can be added to the written portion of the SWPPP if the engineer should desire to combine the two reports into one.
- C. **Erosion Prevention and Sediment Control Plan**. Since the natural ground cover will be removed in order to excavate a site, provisions must be made to control the movement of soil by storm water, wind and construction equipment such as trucks hauling soil to or from a site. An erosion control plan will show how temporary and permanent erosion control measures will be used to control movement of soil.

Examples of temporary erosion control measures are silt fences and berms of crushed stone. Permanent erosion control measures include replacement ground cover such as seeding with mulch or sod. Sediment basins can be either temporary or a permanent feature depending on the design. A final and permanent ground cover will be required. Permanent ground cover can be in the form of pavement and buildings in addition to replacement of natural ground covers.

- D. **Stormwater Quality Management Plan**. In compliance with the State of Tennessee regulations that communities the Size of Johnson City have an ordinance to regulate the quality of stormwater as it runs off of impervious surfaces, the City of Johnson City requires developments or redevelopments to have designed water quality BMP's constructed. The grading plan shall include a stormwater quality management plan that conforms to the City's ordinance. Exempted from the stormwater quality management plan are developments or redevelopments that disturb less than one (1) acre of land. No exemption is granted if the development or redevelopment is part of a larger common plan of development or sale that would disturb one (1) acre or more and the Stormwater Runoff from the development or redevelopment is not treated for water quality via a downstream or regional Water Quality Management Facility or BMP that meets the requirements of the City's ordinance.
- E. **"Rough Grading Permit"**. Unofficially, the city has recognized the need for rough grading on a site to prepare it for final grading at a later date. Rough grading a site may or may not require plans for these previous plan categories: Drainage System Plan, EP&SC Plan, and Stormwater Quality Management Plan. Each request for a "Rough Grading Permit" will be evaluated by the City Staff to determine if any of these categories can be postponed until the final grading plan is submitted.

Erosion and Sediment Control

Minimum Plan and Report Requirements

Section 5.2 of the Erosion and Sediment Control Ordinance (For 1 Acre and above).

5.2 Plan Contents

At a minimum, erosion and sediment control plans shall include the following:

1. A project description, discussing the intended development or redevelopment, number of units and structures to be constructed, and the infrastructure required;
2. A map presented at a scale sufficient to reveal:
 - a. Topographic contours at a 2-foot interval.
 - b. Existing and proposed topography including soil types, wetlands, water courses, water bodies and sink holes, including intermittent and wet-weather conveyances.
 - c. Proposed area alterations including property lines, existing and proposed structures, utilities, driveways and roads.
 - d. Limits of proposed clearing, grading, filling and/or other land disturbing activities.
 - e. Boundaries of designated floodplains and floodways.
 - f. Outfall points for storm water discharges from the site.
3. A general description of the existing land cover. Individual trees and shrubs do not need to be identified;
4. A general description of the existing soil types and characteristics, and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.
5. The calculations for peak discharges for existing storm water runoff leaving any portion of the site for the 2-year, 24-hour storm event. Include an estimate of the runoff coefficient of the site before construction.
6. The calculations for peak discharges for storm water runoff leaving any portion of the site after construction is complete for the 2-year, 24-hour storm event. Include an estimate of the runoff coefficient of the site after construction is complete.
7. The design, construction and maintenance details for: soil erosion and sediment control BMPs, including sediment basins, silt fencing, check dams, construction entrances and other BMPs as included in the *TDEC Erosion & Sediment Control Handbook*, as amended.
8. Location(s) of any existing and proposed storm water management structures or facilities.
9. Seeding and stabilization specifications, including temporary and permanent groundcovers, mulching rates, and methods for anchoring mulch. If proprietary sediment and/or erosion control products are used, include the manufacturer's installation and maintenance guidance.
10. A construction sequence addressing the following:
 - a. All major construction activities indicating the anticipated start and completion of development.

- b. The sequence of land disturbance activities and subsequent stabilization
 - c. Installation and maintenance of all erosion and sediment control BMPs
 - d. The perimeter measures that will be installed prior to commencing land-disturbing activities.
11. A description of other construction related waste controls that are expected to be implemented on-site. Such details should include, but are not limited to: the construction/location of vehicle wash pads; litter and waste materials control; sanitary and chemical waste control, and concrete truck washout areas.
12. A copy of the *Tennessee Construction General Permit Notice of Intent and Storm Water Pollution Prevention Plan* submitted to TDEC for the land disturbing activities detailed in the erosion and sediment control plan;
13. Any other information deemed necessary and appropriate by the owner or operator or requested by the Director.

Section 5.3 of the Erosion and Sediment Control Ordinance (For site between 6,000 SF and 1 acre).

5.3 Small lot erosion and sediment control plan contents

1. Requirements
- a. Land disturbing activities that affect less than one acre and are not part of a larger common plan of development with an approved plan shall submit and obtain approval of a small lot erosion and sediment control plan prior to obtaining a building permit.
 - b. The plan shall include the following information:
 - 1. address/location of land disturbing activity;
 - 2. owner/operator name and contact information;
 - 3. building permit application number (if available);
 - 4. locations of streams, wetlands, ponds, sinkholes, easements, existing drainage structures with respect to the site;
 - 5. a description of other construction related waste controls that are expected to be implemented on-site. Such details should include, but are not limited to: the construction/location of vehicle wash pads; litter and waste materials control; sanitary and chemical waste control, and concrete truck washout areas.
 - 6. approximate disturbed area limits; and
 - 7. location of stabilized construction entrance/egress.
 - c. The small site erosion and sediment control plan will be included with the building permit and must be followed by the building permit holder and the owner or operator.
 - d. The Director has the discretion to require a fully engineered erosion and sediment control plan as set forth in Section 5.2 of the erosion and sediment control ordinance.

Erosion and Sediment Control Plan Check List
(Larger Than One Acre)

Appendix BB

Date: _____

Project Name: _____

Check	Located In		Item No.	Description
	Report	–	1	A project description, discussing the intended development or redevelopment, number of units and structures to be constructed, and the infrastructure required.
	Report	Plan	2	A map presented at a scale sufficient to reveal; <ul style="list-style-type: none"> a. Topographic contours at a 2-foot interval. b. Existing and proposed topography including soil types, wetlands, water courses, water bodies and sink holes, including intermittent and wet-weather conveyances. c. Proposed area alterations including property lines, existing and proposed structures, utilities, driveways and roads. d. Limits of proposed clearing, grading, filling and / or other land disturbing activities. e. Boundaries of designated floodplains and floodways. f. Outfall points for storm water discharges from the site.
	Report	–	3	A general description of the existing land cover. Individual trees and shrubs do not need to be identified.
	Report	–	4	A general description of the existing soil types and characteristics, and any anticipated soil erosion and sedimentation problems resulting from
	Report	–	5	The calculations for peak discharges for existing storm water runoff leaving any portion of the site for the 2-year, 24-hour storm event. Include an estimate of the runoff coefficient of the site before construction.
	Report	–	6	The calculations for peak discharges for storm water runoff leaving any portion of the site after construction is complete for the 2-year, 24-hour storm event. Include an estimate of the runoff coefficient of the site after construction is complete.
	–	Plan	7	The design, construction and maintenance details for: soil erosion and sediment control BMP's, included in the <u>TDEC Erosion & Sediment Control Handbook</u> , as amended.
	–	Plan	8	Locations) of any existing and proposed storm water management structures or facilities.
	Report	Plan	9	Seeding and stabilization specifications, including temporary and permanent groundcovers, mulching rates, and methods for anchoring mulch. If proprietary sediment and / or erosion control products are used, include the manufacturer's installation and maintenance guidance.
	Report	Plan	10	A construction sequence addressing the following: <ul style="list-style-type: none"> a. All major construction activities indicating the anticipated start and completion of development. b. The sequence of land disturbance activities and subsequent stabilization c. Installation and maintenance of all erosion and sediment control BMP's d. The perimeter measures that will be installed prior to commencing land-disturbing activities.
	Report	Plan	11	A description of other construction related waste controls that are expected to be implemented on-site. Such details should include, but are not limited to: the construction / location of vehicle wash pads; litter and waste materials control; sanitary and chemical waste control, and concrete truck washout areas.
	Report	–	12	A copy of the NOI / NOC and SWPPP documents that were submitted to TDEC for the land disturbing activities detailed in the erosion and sediment control plan.
	Report	Plan	13	Does this location appear on the Endangered or Threatened Species Map?

Erosion and Sediment Control Plans Check List
(Less Than One Acre)

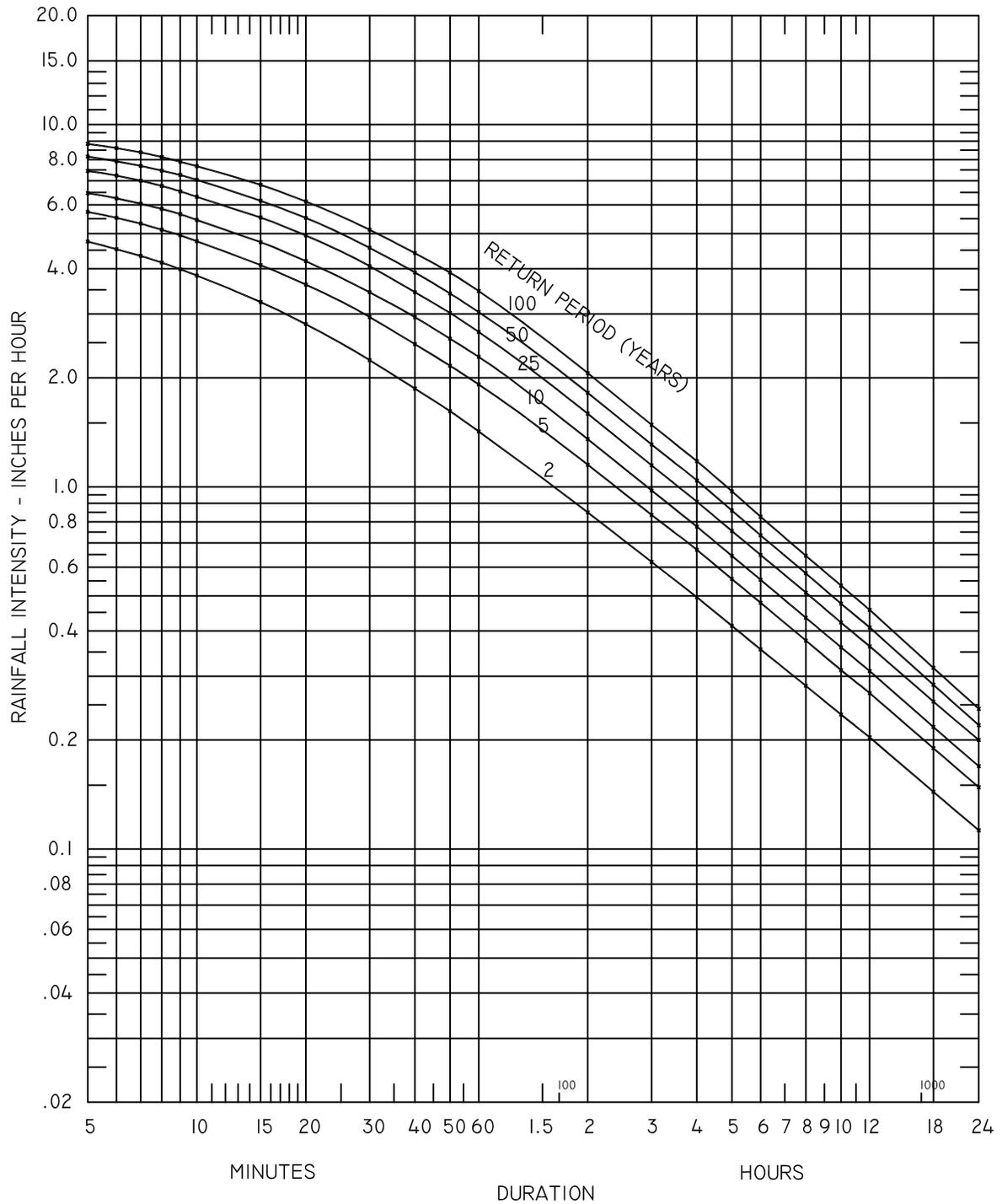
Date: _____

Development Name: _____

Check	Item No.	Description
	1	Provide the address/location of land disturbing activity;
	2	Indicate the Owner/operator name and contact information;
	3	Show the building permit application number (if available);
	4	Show the locations of streams, wetlands, ponds, sinkholes, easements, existing drainage structures with respect to the site;
	5	Show the design, construction and maintenance details for: soil erosion and sediment control BMPs, including sediment basins, silt fencing, check dams, and other BMPs as included in the TDEC Erosion & Sediment Control Handbook , as amended
	6	Provide a description of other construction related waste controls that are expected to be implemented on-site. Such details should include, but are not limited to: the construction/location of vehicle wash pads; litter and waste materials control; sanitary and chemical waste control, and concrete truck washout areas.
	7	Show the approximate disturbed area limits; and
	8	Show the location of stabilized construction entrance / egress.
	9	The small site erosion and sediment control plan will be included with the building permit and must be followed by the building permit holder and the owner or operator.
	10	Does this location appear on the Endangered or Threatened Species Map?

CITY OF JOHNSON CITY
PUBLIC WORKS DEPARTMENT

RAINFALL INTENSITY-DURATION-FREQUENCY CURVES



JOHNSON CITY, TENNESSEE - IDF CURVES

NOTE: $T_c = 5$ MINUTES IS MINIMUM VALUE TO USE IN ALL CASES

SOURCE: NOAA TECHNICAL PAPER 40, NWS HYDRO 35 &
IDF CURVES FOR KNOXVILLE, TN & WYTHEVILLE, VA

CITY OF JOHNSON
PUBLIC WORKS DEPARTMENT

RAINFALL INTENSITY DURATION FREQUENCY CURVES

INTENSITY VALUES (in/hr)

DURATION (MIN)	5	6	7	8	9	10	15	20	30	40	50	60
FREQUENCY												
2-yr	4.76	4.53	4.34	4.16	3.99	3.83	3.24	2.81	2.24	1.87	1.62	1.42
5-yr	5.74	5.53	5.33	5.12	4.95	4.76	4.09	3.62	2.94	2.48	2.16	1.92
10-yr	6.47	6.26	6.05	5.85	5.66	5.45	4.74	4.20	3.44	2.94	2.56	2.28
25-yr	7.45	7.23	7.00	6.77	6.54	6.32	5.54	4.94	4.06	3.45	3.02	2.68
50-yr	8.16	7.92	7.69	7.46	7.26	7.04	6.16	5.52	4.57	3.91	3.42	3.04
100-yr	8.85	8.61	8.38	8.14	7.90	7.68	6.82	6.13	5.12	4.42	3.90	3.47

INTENSITY VALUES (in/hr)

DURATION (hr)	2	3	4	5	6	8	10	12	18	24
FREQUENCY										
2-yr	0.85	0.62	0.50	0.41	0.36	0.28	0.24	0.20	0.14	0.11
5-yr	1.15	0.84	0.67	0.56	0.48	0.38	0.31	0.27	0.19	0.15
10-yr	1.35	0.98	0.78	0.64	0.55	0.44	0.36	0.31	0.22	0.17
25-yr	1.59	1.15	0.91	0.76	0.65	0.51	0.42	0.36	0.26	0.20
50-yr	1.82	1.31	1.04	0.86	0.73	0.58	0.48	0.41	0.28	0.22
100-yr	2.06	1.48	1.18	0.97	0.83	0.65	0.53	0.46	0.32	0.24

JOHNSON CITY, TENNESSEE – IDF CURVES

NOTE: TIME OF CONCENTRATION OF 5 MINUTES IS THE MINIMUM TO USE IN ALL CASES

SOURCE: NOAA TECHNICAL PAPER 40, NWS HYDRO 35 & IDF CURVES FOR KNOXVILLE, TN & WYTHEVILLE, VA

Johnson City, Tennessee Precipitation
(Inches of Rainfall)

Return Frequency (Years)	Duration						
	30 Minutes	1 Hour	2 Hour	3 Hour	6 Hour	12 Hour	24 Hour
1	0.97	1.24	1.54	1.60	1.98	2.42	2.75
2	1.18	1.47	1.80	1.97	2.43	2.84	2.98
5	1.51	1.88	2.38	2.50	2.94	3.44	3.92
10	1.77	2.18	2.69	2.94	3.43	3.95	4.77
25	1.98	2.52	3.00	3.40	3.96	4.79	5.27
50	2.20	2.81	3.45	3.69	4.58	5.00	5.88
100	2.44	3.09	3.82	4.00	4.92	5.83	6.28

Source: The above data was derived from interpolation of isopach maps contained in NOAA Technical Paper No. 40 "Rainfall frequency atlas of the United States for durations from 30 minutes to 24 hours and return periods from 1 to 100 years" (Hershfield, 1961)