STREET/GARAGE COMMITTEE
AGENDA

DATE: July 27, 2020
LOCATION: Street Department Conference Room, 199 Tenth Street
Google Meets Meeting ID meet.google.com/oky-awqv-jzk or Phone Numbers
(US)+1 419-945-6015 PIN: 528 698 853#

TIME: 3:00 P.M.

I. CALL TO ORDER

II. ANNOUNCE MEMBERS IN ATTENDANCE (Verify Quorum)

III. APPROVAL OF ELECTRONIC MEETING
"In order to comply with the technical aspects of the Governor's Executive Order regarding holding open meetings in a forum other than in the open and in public, this governing body determines that meeting electronically is necessary to protect the health, safety, and welfare of its citizens due to the COVID-19 outbreak."

IV. ADOPTION OF MINUTES: (January 27, 2020 and February 24, 2020)

V. DEPARTMENT REPORTS

A. Street Department Reports - David Shepard

1. Department Report
2. Capital Project Update
3. Site Review/Traffic Assessment Update

B. Garage Department Reports - Billy Lee

1. Monthly Report

VI. COMMITTEE ACTION REQUIRED (action required)

A. Street Department

1. SWMM Chapter 4, 5 and 8 Update
2. College Street Truck Restriction Resolution

VII. CITY COUNCIL ACTION REQUIRED (no action required)

VIII. PUBLIC COMMENTS (5 minutes each)

IX. ADJOURNMENT

STREET/GARAGE COMMITTEE
Minutes

DATE: **January 27, 2020**
LOCATION: **Street Department Conference Room**
199 Tenth Street
TIME: **3:00 P.M.**

I. CALL TO ORDER

The Street Committee was called to order on January 27, 2020, at 3:00 P.M.

II. ANNOUNCE MEMBERS IN ATTENDANCE - (Verify Quorum)

Member Present	Other Present
Tim Chandler - Chairman	David Shepard
Jeff Henley	Randy Reese
Ron Erb	Scott Bibb
Richard Garrett	Jeff Bryant
	Chris Cowan
	Eric Salmon

Member Absent
Gary Norris

III. ADOPTION OF MINUTES:

The November 25, 2019 minutes were approved by Chairman Chandler and the Street Committee Members.

IV. DEPARTMENT REPORTS

A. Street Department Reports - David Shepard

1. Monthly Report

The debris removal ended from the storm on October 26, 2019, and we are looking for FEMA reimbursement. We have a meeting on Wednesday, January 29, 2020, with FEMA to discuss reimbursement.

2. Capital Project Update

A Whitfield Road Improvements- Title Search is done and appraisal has starting
B New Sidewalks-working on the installation of Sidewalk 2019 and Sidewalk 2020 will go out for bid next month
C Dunlop international-still waiting on ATT
D Adaptive signal-RFQ will go out next month

E Rossview-still waiting on TDOT. Chris Cowan is making weekly phone calls to determine the status of phase 1

F 4th and College Street- engineering contract is ready for signature

G Intersection Modification -engineering contract is ready for signature

B. Garage Department Reports - Randy Reese

1. December of 2019 Monthly Report

Total number of Work Orders: 358
Fuel Cost Unleaded: $1.825 per gallon (last delivery on 12/26/19)
Fuel Cost Diesel: $2.006 per gallon (last delivery on 12/30/19)

C. Other

- Councilmember Chandler said the offsite fueling is up and to know who uses offsite pumping the most. Randy Reese replied that mostly the fire department and police department if it possible the Garage is looking for possible offsite pumping areas to cut the costs. They looked into putting one located at or near the airport on the northside of town.
- Chairman Chandler asked for the list of suggested traffic signal intersection going into a flashing mode at night. We have not completed the list of suggested traffic signal intersections but by the next meeting, the list will be finished.

V. COMMITTEE ACTION REQUIRED - Deferred until next month

A. Street Department

1. SWMM Chapter 4, 5 and 8 Update

VI. CITY COUNCIL ACTION REQUIRED - None

VII. PUBLIC COMMENTS - None

VIII. ADJOURNMENT

The January 27, 2020 meeting at 3:45 p.m. was adjourned by Chairman Chandler and the Street Committee Members.

_____ _____

Chairman Signature Date

STREET/GARAGE COMMITTEE
MINUTES

DATE: February 24, 2020
LOCATION: Street Department Conference Room
199 10th Street
TIME: 3:00 P.M.

MEMBERS PRESENT
Ron Erb

MEMBERS ABSENT
Tim Chandler
Jeff Henley
Richard Garrett
Gary Norris

EMPLOYEES PRESENT
Randy Reese
Scott Bibb
Jeff Bryant
Chris Cowan
Shirley Williams

The meeting of the Street/Garage February 24, 2020 was called to order by Councilman Erb.

Randy Reese gave the garage monthly report.

Due to no quorum, the meeting was adjourned at 3:15 P.M.

_____ _____
DATE

Chapter 4

PERMITTING PROCEDURES

4.1 Overview

This chapter presents the procedure for applying for grading permits and the process by which the Street Department reviews and approves permits. Also discussed are the responsibilities of the permit applicant for posting permits, maintaining compliance with regulations, meeting time limits, and obtaining other required federal and state permits.

4.2 Digital Submittal Requirements

The Street Department maintains and updates an inventory of the City's storm drain system, using Geographic Information Systems (GIS) and computer aided drawing (CAD) software. Digital plans for new developments and redevelopments can be submitted and incorporated into the GIS, allowing the City to maintain up-to-date mapping of the City's system as development occurs. Pursuant to the City's Storm Water Management Ordinance (Appendix E), the Street Department is requiring that new development plans be **submitted in both digital and hard copy formats**. Hard copies are restricted to 24 x 36 plan sheet size. This section defines the standards and specifications that will apply to all digital submissions to the Street Department.

Standard specifications in this document pertain to the digital drawings for all new developments and redevelopments. Furthermore, the digital submissions and standard specifications shall not supersede the current requirements for hard copy drawing submittal; the digital submission of drawings shall be **in addition** to all existing plan submittal requirements.

All digital data submitted to the Street Department shall be formatted in accordance with the standards contained in these sections. Please submit a digital CAD file that has a coordinate system referenced to it, such as NAD State Plane 83. Digital submittals must have all proposed/As-built

stormwater structures and pipes. All stormwater features must have the following attributes in a corresponding table, in the fields of the CAD database, or as annotations;

Pipes:

- Material
- Diameter
- Slope
- Shape
- Length
- Number of barrels if more than one

Structure:

- Type
- Material
- Number of grates
- Cast elevation
- Invert elevation

Digital submittals that contain incorrectly formatted data, unreadable data, or missing required information shall be returned to the responsible agency or person for corrections and resubmittal. Grading Permit approval shall be contingent upon the submission of correct and accurate digital data. Failure to provide the digital information in the format required may cause the plan to be rejected.

4.2.1 Acceptable Digital Submittal Formats

The Street Department will accept the following file formats for digital submittals:

Table 4.1 – Acceptable Formats for Digital Files

File Format	Preliminary Submittals	Digital As-Built Certifications[1]
*.dgn (Microstation)	X	X
*.dwg (AutoCAD)	X	X
*.dxf (drawing interchange file)	X	X
*.shp (ArcView shapefile)	X	X
*.pdf (portable document format from Adobe)	X	

Notes: 1. All as-built submittals must be georeferenced.

Other formats will be reviewed by the City of Clarksville on a case-by-case basis to determine compatibility and use. A digital submittal not compatible with the formats listed above will be disapproved.

4.2.2 Transfer Media Requirements

Digital submittals must be presented to the City of Clarksville Street Department using the following media:

- CD-ROM, and DVD
- USB Drive
- Email attachment (no current size limit)

Digital submittals presented to the Street Department using media other than those listed above will not be accepted.

4.3 Activities Requiring Grading Permits

As prescribed in the Storm Water Management Ordinance (Appendix E), grading permits are required for all land disturbing activities except the following:

1. Construction within a subdivision or PUD where there exists an approved grading, drainage, and erosion control plan so long as the construction is performed in a manner consistent with the approved plan;

2. Finish grading or excavation below finished grade for retaining walls, swimming pools, normal burial activities that occur at human or animal cemeteries;

3. Construction of accessory structures related to single family residences or duplex dwellings;

4. Additions or modifications to single family residences or duplex dwellings or their accessory structures;

5. Agricultural practices such as plowing, cultivation, construction of agricultural structures, nursery operations, tree cuttings at or above ground level, and logging operations leaving the stump, ground cover, and root mat intact; and

6. Grading associated with maintenance, landscaping, excavation, or placement of fill so long as 100 cubic yards or less of soil is disturbed.

These grading permit exemptions do not relieve the owner, contractor, or other legal representative of the responsibility to employ appropriate erosion control measures. All land disturbing activities must employ erosion control features to control erosion to the maximum extent practicable in order to prevent sediment from leaving the site by storm water runoff, vehicular traffic, or construction related activities. Under no circumstances may excavated or fill material be placed on an impervious service where contact with storm water would result in sediment being conveyed to a storm water drainage system.

4.4 Storm Water Concept Plans

Prior to submission of construction plans and applications for grading permits, applicants must prepare and submit a storm water concept plan to the Street Department for review and approval. The purpose of the storm water concept plan is to review the storm water management requirements for the development so that expectations are stated early in the plans development process, in an effort to minimize later interruptions in the submittal, review and approval of construction plans.

4.4.1 Concept Plan Requirements

A storm water concept plan is a preliminary plan for a proposed development that presents a concept of how the site will be developed and how storm water will be handled by the

development's drainage system. A storm water concept plan is a preliminary plan of the proposed development with the following inclusions and/or requirements:

1. A map showing the area proposed for development in plan view. The map base may be a USGS 7.5 minute quadrangle, a map of local data that includes similar features (streams, topography, streets, and buildings or parcels), or a FEMA flood insurance rate map (FIRM) or flood hazard boundary map (FHBM).

2. Existing floodplain and floodway boundaries, if applicable.

3. Arrows indicating the existing and proposed direction(s) of storm water runoff on the site.

4. The existing and proposed (conceptual) storm water drainage systems including ditches, streams, inlets, curb and gutters, detention/retention facilities, storm water quality BMPs, storm sewers, culverts, bridges, and sinkholes.

Storm water concept plans do not need to be prepared by a registered professional since no design calculations are required. The concept plan can be a decision making tool that is used to determine how storm water will be handled for a given site and development combination. In cases of new development, the details of the proposed internal drainage systems (ditches, inlets, curb and gutters, storm sewers, culverts, and bridges) may be omitted from the plan. However, proposed detention/retention facilities, storm water quality BMPs, and sinkholes must be included on all concept plans.

Engineering studies are routinely prepared by the City and private design engineers that set floodplain elevations and floodway widths that supersede those published by FEMA. Once approved by the Director of Streets, these "best available data" must be used in the design of proposed developments. Therefore, it is advisable to contact the Street Department before preparing a storm water concept plan to obtain the most current floodplain and floodway information available.

4.4.2 Concept Plan Review

Storm water concept plans must be submitted to the Street Department for review and approval. The Director will review the plan within 5 business days of receipt. The concept plan review is mandatory and will be used to determine if a proposed project qualifies for any exemptions and to determine how technical guidelines and criteria should be applied in the detailed design of the storm water system. The Director will approve the concept plan, approve the concept plan with changes, or reject the concept plan. If the plan is rejected, the Director will identify changes, additional analysis, or other information needed to approve the plan on resubmittal.

4.5 Preparation of Grading Permit Applications

4.5.1 Required Information and Checklist

Each application for a grading permit shall contain site preparation plans certified by a registered professional licensed to practice in the State of Tennessee. The plans shall indicate whether or not the tract will be developed in stages and timing schedules shall be included as appropriate. In particular, site preparation plans shall include grading, drainage, and erosion control measures with appropriate plan and profile sheets for proposed streets or roads and details of the storm water management systems.

A grading permit application checklist is provided in Appendix B of this manual. The checklist will assist the applicant in preparation of a complete application package and thereby ensure a timely review. The checklist does not circumvent any requirements that may be necessary for the applicant to meet applicable State and Federal regulations. It is the responsibility of the applicant to seek out and obtain any applicable State and Federal permits, prior to the initiation of any land disturbance activities.

The application checklist also contains information pertinent to the protection of Threatened or Endangered (T&E) species located within Clarksville. The checklist questions provide a screening mechanism for potential impacts to T&E species. An applicant is responsible for contacting the TDEC Natural Heritage Program for more information about T&E species and should specifically

inquire about T&E species impacts if indicated by the checklist screening process. *In any event, it is the applicant's responsibility to ensure that Threatened and Endangered Species are not being impacted by their development.*

Some requirements of the checklist will not be applicable to all projects. These should be checked as not applicable (N/A). Omission of any required items shall render the plans incomplete, and they shall be returned to the applicant, or the applicant's engineer, for additional information.

4.5.2 Plan Contents

The grading, drainage, and erosion control plan shall include as a minimum all of the following items:

1. A complete plan of the proposed development at a scale no less than 1" (one inch) = 100' (one hundred feet).

2. Existing property boundaries and parcel numbers for all parcels included in and adjacent to the development.

3. Existing and proposed site contours at an interval no greater than 2' (two feet). Contours shall be based on the horizontal datum NAD83 and the vertical datum NAVD88. Contours shall extend to the centerline of all roads bordering the site.

4. Existing and proposed buildings on the property.

5. Existing and proposed impervious surfaces. Calculations verifying the existing and proposed impervious area.

6. Plan view drawings showing existing and proposed storm water drainage structures on and in the immediate vicinity of the site including inlets, catch basins, junction boxes, drive pipes, culverts, cross drains, headwalls, storm water quality infrastructure or devices and outlet facilities, with size, type, slope, invert elevations, and quantity indicated. Also to be

included is the location, size, and capacity of the next two drainage structures immediately downstream in every direction that will receive runoff from the site. These off-site structures may be shown on a vicinity map with a scale no less than 1" (one inch) = 2000' (two thousand feet).

7. Tables of design data showing invert and top of grate elevations on all catch basins and inlets in addition to flow line elevations, stations, and percent grades of all cross drains and pipe between inlets and catch basins. Profile drawings may be provided instead of, or in addition to, the tabular data.

8. At least one benchmark located, with the proper elevation indicated (horizontal datum NAD83 and vertical datum NAVD88 to be used exclusively). Benchmarks shall be established based on control information in accordance with the City of Clarksville's GIS base mapping.

9. Temporary erosion and sediment control measures to be implemented during construction. Control measures can include, but are not limited to, temporary sediment basins, outlet protection devices, temporary seeding, mulching, geotextiles, silt fence, etc.

10. Final site stabilization measures proposed for all disturbed areas on the site including but not limited to ditches, channels, detention/retention facilities, sinkholes, and areas of excavation or fill. Supporting documentation, such as calculations and construction details, for final site stabilization measures must be provided.

11. Hydrologic and hydraulic calculations for appropriate design storms. Calculations shall include, but not be limited to, curb and gutter sections, inlets, pipes, culverts, bridges, and ditches.

12. Storm water quantity detention pond design calculations including inflow and outflow hydrographs, storage computations, and details of all outlet works including any spillway or overflow structures.

13. Sinkhole and/or drainage well design calculations including inflow and outflow hydrographs, storage computations, and details of all outlet works including any spillway or overflow structures.

14. Floodplain areas require the following information: existing and proposed floodplain and floodway boundaries, floodplain elevations and lowest floor elevations for buildings in the floodplain, and cut and fill cross sections and volume calculations. Hydraulic calculations shall be submitted, as appropriate.

15. Detail drawings of swales, ditches, inlets, head walls, detention pond or sinkhole outlet structures and overflow structures, and temporary and permanent erosion control measures.

16. Delineation of wetlands or other environmentally sensitive areas.

17. Delineation of water quality buffers around streams, waterbodies and wetlands, including the method of buffer protection during construction activities.

18. Subdivision plans shall include typical roadway pavement sections and a plan and profile of proposed roadways. Streets and roads shall be designed in compliance with the current edition of the Specifications for Streets and Roads by the Clarksville Street Department and the Subdivision Regulations by the Montgomery County Regional Planning Commission.

19. A preliminary construction schedule indicating the proposed construction milestones and staging. The preliminary construction schedule must include, at a minimum, the proposed months or seasons for the following activities:
    a) Installation of erosion control;
    b) Field delineation of water quality buffer protection areas;
    c) Initial site inspection by the Street Department;
    d) Site clearing and grubbing;

e) Site grading and excavation;

f) Slope stabilization;

g) Installation of storm drainage systems;

h) Second site inspection by the Street Department;

i) Establishment of permanent vegetative cover;

j) Installation of permanent water quality buffer protection signage; and

k) Final site inspection by the Street Department.

20. A storm water pollution prevention plan (SWPPP) prepared to document the control of construction site wastes other than sediment. Information required in the SWPPP for the development includes:

    - locations of construction vehicle parking and maintenance areas;
    - location(s) of concrete truck washout areas, and vehicle exit washout areas;
    - location(s) of chemical storage areas and identification of the chemicals that will potentially be stored on-site;
    - location(s) of construction materials and debris storage areas; and
    - location(s) of areas where construction debris will be buried.

    None of these locations shall be located in flood zones for rivers, streams and/or sinkholes. Show these locations on the grading, drainage and erosion control plans.

21. Plans submitted for a grading permit that do not include engineering design calculations may be signed and sealed by any registered professional (engineer, architect, landscape architect, or land surveyor) licensed to practice in the State of Tennessee. Plans that include or are based on engineering design calculations shall be signed and sealed by a registered engineer licensed to practice in the State of Tennessee.

22. Applications for a grading permit shall include copies of all applicable permit applications, Notice of Intents (NOI's), or issued permits from state and federal agencies. Section 4.8 discusses state and federal permits that should be investigated for applicability for any development.

23. The application must identify the person or persons responsible for erosion and sediment control measure installation and maintenance at the site.

Some requirements will not be applicable to all plans. Omission of any of the heretofore mentioned requirements that are applicable for detailed plans and calculations shall deem the plans as being incomplete, and shall be returned to the Developer, or designated Engineer, for completion before review.

4.5.3 Sinkhole and Drainage Well Requirements

Sinkholes, drainage wells, and closed depression areas present a unique challenge to the management of storm water runoff. These drainage features are primarily dependent on the volume of storm water runoff, while the rate of runoff is a secondary concern. To minimize the impact of new developments on these downstream volume-sensitive systems, additional reporting requirements are required. The following information shall be provided with the grading permit and/or storm water quality permit application if storm water runoff from the proposed development drains to a sinkhole or drainage well.

1. Proposed onsite and offsite storm water management channels that discharge to a sinkhole throat or drainage well inlet shall be delineated, along with appropriate hydraulic calculations to define the existing and altered (if appropriate) 100-year floodplain and to confirm that offsite flooding will not be increased. Such plans and hydraulic calculations are to be certified by a registered engineer.

2. It must be demonstrated that development (placement of habitable structures or structures that may cause a water quality concern) will not occur within the area flooded by the 100-year flood. The 100-year elevation may be lowered by providing additional storage through grading. Calculations that document a lowering of the 100-year flood elevation shall be based on the 100-year, 24-hour storm.

3. The contributing drainage area for the sinkhole or drainage well shall be delineated on a map to show basin wide contours. Preferably, the City of Clarksville GIS base map data will be used to delineate and present the contributing drainage area.

4. For those sinkholes requiring an undergound injection permit from TDEC, provide supporting documentation verifying the permit requirements for water quality treatment. Long term maintenance requirements and responsibilities must also be provided.

When a sinkhole or drainage well is used to store storm water drainage from the site, the hydrologic and hydraulic computations must assume that these features are blocked and do not actively convey runoff to the subsurface. If approved by the Street Department, a surface outlet may be provided to prevent storm water from rising above the 100- year flood elevation. No development will be allowed within the contributing drainage area of a sinkhole or drainage well if such development will lead to any additional increase in flood levels within that or adjacent drainage areas. Special care will be required during construction to prevent eroded soil or debris from being washed into the sinkhole.

4.6 Storm Water Quality

4.6.1 Required Information and Checklist

Storm water quality plans shall be certified by a registered professional (engineer, architect, landscape architect, or land surveyor) licensed to practice in the State of Tennessee. Further, Storm Water Quality Plans must be developed by a professional experienced in erosion and sediment control design, storm water pollution prevention, hydrology and hydraulics, and vegetation establishment and maintenance. The plans shall indicate whether or not the storm water quality management system will be developed in stages and timing schedules shall be included as appropriate.

A storm water quality checklist is provided in Appendix B of this manual. The checklist will assist the applicant in preparation of a complete plan and thereby ensure a timely review. The checklist does not circumvent any requirements that may be necessary for the applicant to meet applicable State and Federal regulations. It is the responsibility of the applicant to seek out and obtain any applicable State and Federal permits, prior to the initiation of any land disturbance activities.

Some requirements of the checklist will not be applicable to all projects. These should be checked as not applicable (N/A). Omission of any required items shall render the plans incomplete, and they shall be returned to the applicant, or the applicant's engineer, for additional information.

4.6.2 Storm Water Quality Plan Contents

Storm water quality plans shall include all of the items required for Grading, Drainage and Erosion Control plans stated in sections 4.5.2 and 4.5.3. In addition, storm water quality plans must include the following:

1. A narrative describing the storm water quality BMPs, both structural and non-structural. The narrative should describe the site transition from active construction site to developed site with respect to storm water quality BMPs.

2. A calculation of the amount of impervious surface on the site for pre- and post-development conditions. This information shall be as both a total impervious area (in acres) and as a percentage (%) of impervious surface over the total site. Impervious surfaces include, but are not limited to, rooftops, sidewalks, walkways, patio areas, driveways, parking lots, storage areas, compacted gravel and soil surfaces, awnings and other permanent fabric or plastic coverings.

3. Detailed design calculations for BMPs, including water quality volume computations, pre- and post-development runoff volumes, and storm routing through the BMP(s).

4. Designation of subwatersheds within the site.

5. Planting plans and specifications for BMPs that rely on plants to remove pollutants, such as bioretention areas and wetlands.

6. Results of geotechnical testing as appropriate to verify a site's suitability for water quality BMPs.

7. For those sinkholes requiring an underground injection permit from TDEC, provide supporting documentation verifying the permit requirements for water quality treatment.

A narrative presenting the long-term maintenance requirements and responsibilities must also be provided.

8. One copy of restrictive covenants for residential subdivisions where limitations on the amount of impervious surface are applicable.

9. One copy of the Storm Water Pollution Prevention Plan.

Some requirements will not be applicable to all plans. Omission of any of the requirements that are applicable for detailed plans and calculations shall deem the plans as being incomplete, and shall be returned to the Developer, or designated Engineer, for completion before review.

4.7 New Development Plans Review and Permitting Processing

Applications for grading permits are submitted to the Street Department. A flowchart for processing these permit applications is presented in Figure 4-1. Each major component of this review process is briefly described below.

4.7.1 Initial Receipt and Resubmittals

An application for a grading permit consists of a Plans Submittal Information form (available from the Street Department and in Appendix B), the plans submittal checklist (Appendix B), and the required construction plans. Applications for a grading permit will not be accepted for review without each of these components. Permit applications are logged in by date received and assigned a tracking number. Once assigned, the tracking number shall be used on all correspondence and resubmittals.

4.7.2 Priority Construction Site Requirements

- Pre-construction meetings with construction-site operators for priority construction activities
- Inspection by the City of priority construction sites at least once per month; and
- Documentation of procedures, including related meetings and inspections.

4.7.3 Pre-construction meeting

Once the plans have been reviewed, a pre-construction meeting shall be required. Those attending the pre-construction meeting should include the following representatives:

- the owner; or representative from applicant company
- the person or persons responsible for the installation and maintenance of erosion control measures at the site; this person will be listed on the grading permit
- the grading contractor, and the general construction contractor;
- appropriate Street Department staff.

It is the responsibility of the permit applicant to schedule the pre-construction meeting with the Street Department. Failure to conduct a pre-construction meeting before beginning land-disturbing activities at the site can subject the developer to enforcement action, as outlined in the *Storm Water Management Ordinance*. A grading permit will not be issued without first having a pre-construction meeting.

The purpose of the pre-construction meeting is to discuss the requirements of the *Storm Water Management Ordinance* and any related issues. The topics to be discussed at the pre-construction meeting include the construction schedule, erosion and sediment control, good housekeeping practices for the activity, potential sensitive issues related to the site, water quality buffers and other site-specific information. Documentation requirements include general contractor's construction schedule and a copy of the Notice of Coverage (NOC) for issued permits from applicable state and federal agencies.

4.7.4 Staff Review

The Street Department will conduct an initial completeness review of the permit application(s) to determine if all basic information has been included and to determine if the development requires a grading permit. Should the permit application be determined to be incomplete, the application will be returned to the applicant along with a request for any additional information and the

tracking number to accompany the resubmittal. The completeness review will be made within five working days of receipt of the permit application.

If the permit application(s) are complete, the Street Department staff will then conduct a technical evaluation of the permit application. The technical evaluation will be based on the technical criteria outlined in Volumes 2 and 3 of this manual. Upon receipt of a complete application and after the pre-construction meeting, the grading permit will be issued.

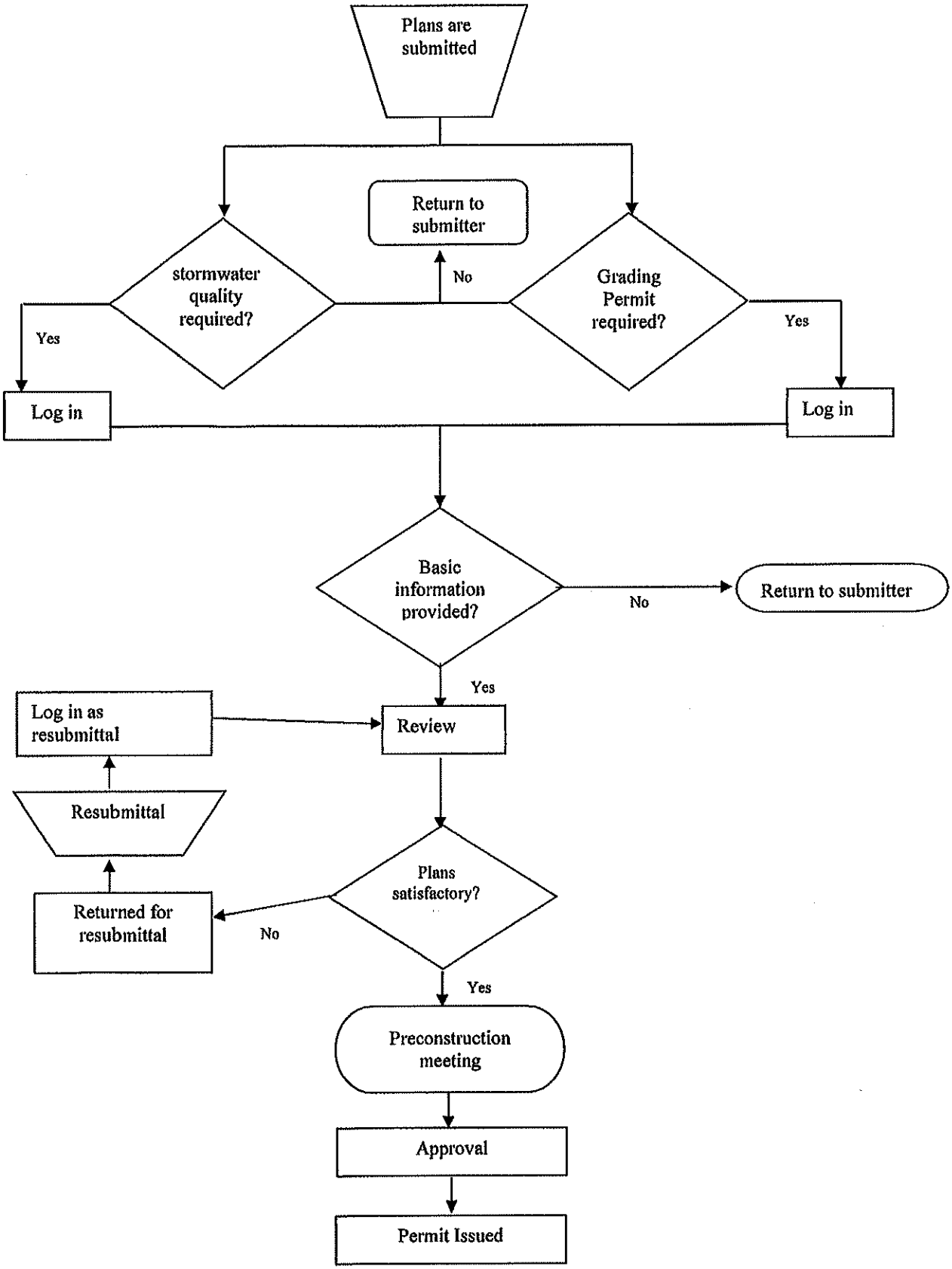

Figure 4.1 - Review Process for New Development Plans

4.7.5 Revisions to Approved Plans

Should changes be anticipated prior to or during construction that would constitute a revision of the plans already approved by the Street Department, the approved plans shall be revised and resubmitted in triplicate. The resubmission shall include a letter stating why such changes are believed necessary for the approved plans, the grading permit number and the completed Plans Submittal Information form. The Street Department reserves the right to waive this requirement or to re-review the entire set of plans in the light of requested changes.

4.8 Construction Procedures

A person, firm, or corporation required to obtain a grading permit in compliance with these regulations must do so prior to commencing any work pertaining to the permit. Corrective measures including but not limited to stop work orders, penalties, and injunctions may be taken as required to enforce the terms of this requirement.

4.8.1 Posting of Permit

Work requiring a grading permit shall not be commenced until the permit holder or his agent have posted the grading permit card in a conspicuous place on the front of the premises. The permit shall be protected from the weather and be placed to allow easy access for recording entries. The permit card shall remain posted by the permit holder until the following criteria are met:

1. The Building Department has issued a use and occupancy permit, if applicable; and

2. The Street Department has made a successful final inspection of the storm water drainage systems.

4.8.2 Effect of Permit

A grading permit issued pursuant to this section shall be construed to be a license to proceed with the work and shall not be construed as authority to violate, cancel, alter, or set aside any of the provisions of these regulations, nor shall issuance of a permit prevent the Street Department or Building Department from thereafter requiring a correction of errors in plans or in construction or of violations of these regulations.

4.8.3 Time Limits on Permit

Work authorized by a grading permit must be commenced within two (2) years following the date the permit was approved or the permit(s) shall become invalid and a new permit shall be required. Once construction begins, if the work authorized by such permit(s) has ceased for a period of 6 months and is beyond the 2 year authorization period, the permit(s) shall be invalid and application must be made for a new permit. No permit extensions are allowed.

4.9 Federal and State Permits

A grading permit issued by the Street Department does not relieve the applicant of responsibility for obtaining any permits required by the U.S. Army Corps of Engineers, Tennessee Department of Environment and Conservation, the U.S. Environmental Protection Agency, or other state or federal agencies. Chapter 3 provides contact information for these and other pertinent agencies.

Copies of permit applications or Notice of Intent (NOI) submitted to state and federal authorities must be submitted to the Street Department in conjunction with the application for a grading and/or storm water quality permit. These permits issued by the Street Department are contingent upon the issuance of applicable federal and state permits. The Street Department may suspend or revoke a grading or storm water quality permit immediately upon notification that state or federal permits were denied or applicable permit applications were not made.

4.9.1 Authority for Work in and/or Around a Stream

The City of Clarksville is a National Flood Insurance Program participant and therefore has the authority to approve or disapprove activities in the floodplain of streams and rivers within the City's jurisdiction. Work within the stream or river channel requires authorization from the U.S. Army Corps of Engineers, TDEC and also the City.

4.9.2 U.S. Army Corps of Engineers

Section 10 of the Rivers and Harbors Act of 1899 prohibits the unauthorized obstruction or alteration of any navigable water of the United States unless the work has been previously authorized by a Department of the Army (DA) permit. The construction of outfalls, storm water management outlets, or other structures below ordinary high water of any navigable water will require a DA permit prior to construction.

Section 301 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States unless the work has been previously authorized by a permit pursuant to Section 404 of the same Act. Placement of dredged or fill material below ordinary high water of any water in conjunction with storm water management improvements (e.g., channel realignments, concrete slope paving) will require a DA permit prior to construction. The placement of dredged or fill material or any grading activities within a wetland must also be in compliance with section 404.

If a permit is required, approximately sixty (60) days would normally be required for permit processing. Depending on the nature and location of the work, it is possible that the work has been previously approved under authority of the Nationwide Permit and individual processing would not be required.

4.9.3 Tennessee Department of Environment and Conservation

In accordance with the Tennessee Water Quality Control Act, T.C.A. 69-3-108, any activity which alters the course or physical character of a stream, requires an Aquatic Resource Alteration Permit (ARAP) from the Division of Water Resources. This permit is required for activities such as stream alteration, stream enlargement, dredging, and diversions in box culverts.

Section 405 of the Water Quality Act of 1987 (WCA) added section 402(p) of the Clean Water Act (CWA) to require the Environmental Protection Agency (EPA) to establish regulations setting forth National Pollutant Discharge Elimination (NPDES) permit application requirements. Projects must be designed with sensitivity to storm water quality issues and must comply with Section 405 as administered by the Division of Water Resources.

The Division of Water Resources is also the primary regulatory agency for injection wells including sinkholes. A sinkhole is considered an injection well under the Underground Injection Control (UIC) regulations. A UIC permit may be required for alterations to a sinkhole or alterations to any land in the contributing drainage area to a sinkhole.

Chapter 5

WATER QUALITY BUFFER REQUIREMENTS

5.1 Applicability

Water quality buffer requirements apply to all new land development containing streams or other water bodies such as ponds, lakes and wetlands, and subject to regulation under the City of Clarksville's Storm Water Management Ordinance. Water quality buffers must be protected, maintained and established. Buffers shall remain undisturbed for the length of the water feature. These requirements are in addition to, and do not replace or supersede, any other applicable buffer requirements established by the State.

Water quality buffers that are disturbed shall be re-vegetated as outlined in Chapter 10 of this manual. Water quality buffers shall be established as noted below and planted as outlined in Chapter 10.

The Clarksville Street Department will maintain a map identifying water features that must be buffered. These features will be added to or removed from this map as encountered in the field and investigated and/or as TDEC or COE designates. The City's designation map may not accurately capture TDEC or COE regulated streams or wetlands. Developers are responsible for complying with TDEC and COE permits related to streams and wetlands.

5.2 Buffer Widths and Zone

Buffer widths have been established separately for streams and other water bodies. Zones and/or buffer composition differ for streams and other water bodies. Buffer zone requirements only apply to new development areas.

5.2.1 Streams

New land disturbing activities along, adjacent to, or near streams shall establish, protect, and maintain a perpetual ~~60'~~ water quality buffer as described in Chapter 10. The buffer shall be measured horizontally from the top of bank. Top of bank shall mean the highest elevation of land which confines to their channel waters flowing in a stream.

Stream buffers shall have two zones as follows:

Zone 1(Construction) will begin at the top of bank and extend horizontally and perpendicular to the stream for an average of 30 feet but no less than 15 feet, unless the stream is impaired or an Exceptional Tennessee Waters the buffer should be 60 feet average with a minimum of 30 feet. It will consist of trees and deep-rooted vegetation and shall remain undisturbed except for uses provided in Section 5.5.

Zone 2 (Post-Construction) ~~will begin at the outer edge of Zone 1 and extend landward 30 feet, making the combined width of the zones 60 feet.~~ Streams or other waters with drainage areas less than 1 square mile will require buffer widths of 30 feet minimum. Streams or other waters with drainage areas greater than 1 square mile will require buffer widths of 60 feet minimum. The 60-feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 30 feet at any measured location. Grading and re-vegetating in Zone 2 is allowed provided that the health of Zone 1 is not compromised. Other allowable activities and uses are provided in Section 5.5.

5.2.2 Ponds, Lakes, Other Water Bodies

All land development activity subject to this ordinance shall establish and maintain a 30-foot grass buffer as described in Chapter 10 along all ponds, lakes, wetlands, and other water bodies. Where manmade ponds interrupt streams, Zone 1 of the stream buffer can stop at the pond and resume on other sections of the stream.

5.2.3 Wetlands

All land development activity subject to this ordinance shall establish and maintain a 30-foot wide water quality buffer as described in Chapter 10 adjacent to all wetlands. The buffer width shall be measured around the outer edge of the identified wetland. For those wetlands where the designation or extent of the wetland is in dispute, the City will rely on wetland designation by the COE or TDEC.

5.3 Exemptions

Land disturbing activities that are exempt from obtaining grading permits are also exempt from applying the requirements of this chapter.

5.4 Protection of Water Quality Buffers

Water quality buffers must be protected from disturbance during construction activities and maintained perpetually. Provisions must be taken to ensure that buffers are not disturbed during construction. Section 5.5 outlines allowable buffer disturbances. Any other disturbances are prohibited. Prohibited buffer disturbances must be mitigated with buffer restoration. Chapter 10 details buffer restoration plans.

5.4.1 During Construction

During construction activities, water quality buffers must be protected. Temporary fencing or other suitable alternative must be placed at the outer edge of the buffer to prevent inadvertent disturbance. The method of buffer protection must be detailed in the storm water quality plan.

5.4.2 Long Term

Water quality buffers must be protected and maintained perpetually. Permanent signs must be posted at 200-foot intervals or at every other lot line for residential developments along the outer edge of the water quality buffer. Buffer signage can be obtained from the City of Clarksville, Street Department. Contact the Clarksville Storm Water Program for more information at 931-645-7464.

5.5 Allowable Activities within a Water Quality Buffer

The City considers the activities listed in Table 5.1 as allowable buffer impacts. All other activities that impact the buffer shall proceed through a variance process.

Allowable Activities	Stream Buffers	Wetland Buffers	Pond Buffers
Recreation			
- Greenways and trails	Zone 1: Hardened surfaces are not allowable Zone 2: Hardened surfaces are allowable. Width not to exceed 5'.	Allowable. Width not to exceed 5'.	Allowable. Width not to exceed 5'.
- Wildlife and fisheries management	Wildlife and fishing approved by TDEC and/or U.S. Fish and Wildlife.		
Water dependent structures (boat docks, piers, marinas)	Allowable. Minimize distubance and stabilize disturbed areas.		
Driveway crossings	Less than 3600 square feet of buffer impact is allowable (based upon 30 foot wide disturbance) perpendicular to stream.	Allowable	Allowable
Road crossings	2 crossings per 1000 linear feet of stream is allowable. Crossings shall be perpendicular to the stream.	Allowable	Allowable
Underground utility lines	Zone 1: Not allowable Zone 2: Allowable Stream crossings shall be perpendicular to flow and shall impact no more than a 30' width perpendicular to flow.	Allowable	Allowable
Overhead utility lines	Allowable Stream crossings shall be perpendicular to flow and shall impact no more than a 30' width perpendicular to flow.	Allowable	Allowable

5.6 Buffer Ownership and Maintenance

For private properties and subdivisions, buffers shall be located inside of individual lots or located within easements in common areas. Maintenance of the buffer shall remain with the property owner or with a homeowner's association. Maintenance responsibilities shall be clearly indicated on plans submitted to the Street Department.

Maintenance shall be limited to removing dead or diseased plant material, repairing erosion problems internal to the buffer, clean up after a storm, or removal of invasive plants. Woody vegetation shall be removed by hand. Vegetative root systems shall be left intact to maintain the integrity of soil. Stumps shall remain where trees are cut.

Chapter 8

CONSTRUCTION SITE BMPS

8.1 Introduction to Construction Site BMPs

The City of Clarksville's erosion and sediment control program ~~guidance~~ is based on the design storm, 2 year/24 hour storm event or 5 year/24 hour storm event if draining into impaired or exceptional waters, and upon the most current edition of the *TDEC Erosion and Sediment Control Handbook.* Please refer to this handbook and the NPDES Construction General Permit for further guidance. The City of Clarksville may update or expand upon the handbook to require or prohibit specific measures based on recommendation of the Street Department, improvements in engineering, science, and local maintenance experience. Table 8.1 provides a listing of Management Practices in the most current TDEC E&SC Handbook.

Table 8.1 TDEC E&SC Handbook Construction Site Runoff Management Practices
Site Preparation
Identifying sensitive areas or critical areas
Construction sequencing
Topsoiling
Tree preservation
Surface roughening and tracking
Stabilization Practices
Stabilization with straw mulch
Stabilization with other mulch materials
Temporary vegetation
Permanent vegetation
Sod
Rolled erosion control products
Hydro applications
Soil binders

Table 8.1 TDEC E&SC Handbook Construction Site Runoff Management Practices
Emergency stabilization with plastic
Soil enhancement
Pollution Prevention
Concrete washout
Vehicle maintenance
Chemical storage
Trash and debris management
Runoff Control and Management
Check dam
Dewatering treatment practice
Diversion
Outlet protection
Slope drain
Tubes and wattles
Level spreader
Channels (stable channel design)
Sediment Control Practices
Construction exit
Tire washing facility
Filter ring
Sediment basin
Sediment trap
Baffles
Silt fence
Inlet protection – see below for approved methods
Construction road stabilization
Tubes and wattles
Filter berm
Turbidity curtain
Flocculants
Stream Protection Practices
Stream buffers
Stream diversion
Temporary stream crossing
Bioengineered streambank stabilization

8.2 Inlet Protection

Storm drain inlet protection can be a variety of temporary devices installed in or around a storm drain inlet, drop inlet, or curb inlet. This practice is intended to minimize sediment and prevent debris from entering storm drainage systems in areas where the contributing drainage area is temporarily disturbed. Location, level of sedimentation, anticipated flow and other site specific needs should be considered when selecting a type of inlet protection. The type of inlet protection chosen should reflect the specific needs of that particular site. The following inlet protection types have been approved by the City of Clarksville.

1. A variety of **manufactured inlet protection devices** are available for use. These devices can include inserts, pyramids, and filter bags as well as other designs. They are made of materials including metal plates, wire mesh, filter fabric, and/or a combination of these and other materials. These products are designed to be a reusable, convenient, cost-effective, and efficient sediment control option.

2. **Excavation around the perimeter of the drop inlet**: Excavating a small area around an inlet creates a settling pool that removes sediments as water is released slowly into the inlet through small holes protected by gravel and filter fabric.

3. **Erosion eels, socks, or wattles around inlet entrances**: Erecting a barrier made of a filter material such as straw, rubber scraps, gravel or other substrate enclosed in a porous fabric around an inlet creates a shield against sediment while allowing water to flow into the drain. This barrier slows runoff while catching soil and other debris at the drain inlet. Filter fabric shall be routinely inspected for damage and replaced immediately should functionality become compromised. Care should be taken to prevent filter material from becoming a pollutant.

4. **Gravel bags or sand bags** can also be used to create temporary sediment barriers at inlets. Bags shall be routinely inspected for damage and replaced immediately should functionality become compromised. Care should be taken to prevent filter material from becoming a pollutant.

5. **Block and gravel protection**: Standard concrete blocks, filter fabric, and gravel can be used to form a sediment barrier that permits water runoff to flow through blocks laid sideways. The filter fabric should always be placed in a manner that will allow it to act as a sediment barrier and prevent gravel from entering the inlet.

Inlet protection is only as effective as the filter or device used around the inlet. Effectiveness decreases rapidly if the inlet protection is not properly maintained and routinely inspected. Any inlet protection device or product that is damaged or found to be in disrepair shall be deemed non-functional and replaced immediately. No gaps shall be left in the material that would allow the flow of water to bypass the inlet protection device, except for overflow holes.

Field inspections have shown that filter fabric placed on top of inlet grates or used to wrap inlets require more frequent maintenance to function properly. Often, when filter fabric is used in the abovementioned manner, the fabric can cause excessive ponding and quickly becomes clogged with sediment. This condition results in the device being removed, punctured, or bypassed. For these reasons, the placement of filter fabric on top of inlet grating or the wrapping of inlets is prohibited.

8.3 Sediment Basins

Sites shall design sediment basins for the 2 year/24 hour design storm with outfalls greater than or equal to (≥) ten acres or a 5 year/24 hour design storm with outfalls greater than or equal to (≥) five acres if draining to Impaired or Exceptional Tennessee Waters.

RESOLUTION

A RESOLUTION EXPRESSING THE SENSE OF THE CITY COUNCIL PERTAINING TO A PROHIBITION THROUGH TRAFFIC REGULATION, LIGHTING AND / OR SIGNAGE TO PREVENT TRACTOR TRAILER TRUCKS FROM TURNING RIGHT FROM RIVERSIDE DRIVE ONTO COLLEGE STREET

WHEREAS, the City Council finds that within the past two years, there have been 207 crashes at the intersection of Riverside Drive and College Street; and

WHEREAS, the City Council finds that numerous crashes have involved commercial tractor trailer type vehicles and at least two of these crashes have resulted in fatalities to pedestrians, to include a City Street Department Employee who was run over on the sidewalk while working on City duty; and

WHEREAS, the Clarksville City Council finds that public safety at this dangerous intersection involving two State highways would best be served by the State enacting or authorizing a prohibition on commercial tractor trailer trucks from turning right from Riverside Drive onto College Street.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF CLARKSVILLE, TENNESSEE:

That it is the sense of the City Council, and that it is in the best interests of the City, its residents and visitors alike, and in furtherance of public safety and welfare, to request that the State of Tennessee, through the Tennessee Department of Transportation, enact or authorize a prohibition on commercial tractor trailer type vehicles from turning right from Riverside Drive onto College Street.

ADOPTED:

RESOLUTION 13-2020-21

A RESOLUTION EXPRESSING THE SENSE OF THE CITY COUNCIL PERTAINING TO A PROHIBITION THROUGH TRAFFIC REGULATION, LIGHTING AND / OR SIGNAGE TO PREVENT TRACTOR TRAILER TRUCKS FROM TURNING RIGHT FROM RIVERSIDE DRIVE ONTO COLLEGE STREET

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ADOPTED:

Proposed SR 48/US 79 Truck Route