



Guide to New Construction RESIDENTIAL

Provided by Metro Water Services
Revision Date: April 2008



The Metropolitan Government of Nashville and Davidson County, Tennessee
This handbook is provided for informational purposes only. It is not intended to be a legal document.



This handbook is provided for informational purposes only and is not intended to be a legal document. Information is current as of the revision date that appears on the front cover.

For more recent updates and amendments, please visit the Metro Water Services Web site at www.nashville.gov/water or call MWS at 615-862-7225.

table of contents

Introduction..... 4

Process Overview..... 5

Process Detail..... 6-13

Appendix 1: Request for Water and Sewer Availability Form..... 14

Appendix 2: Construction Plan Review Checklist..... 15

Appendix 3: Projected Flow Examples..... 16

Appendix 4: Standard Plan Notes..... 17

Appendix 5: Application for Service/Set Meter Permit..... 18

Appendix 6: Who to Call Guide..... 19

Appendix 7: Glossary..... 20

Introduction

Dear Customer:

We are pleased to provide this guide to introduce customers to our department's policies and procedures regarding new residential construction. Metro Water Services is a department of the Metropolitan Government of Nashville and Davidson County that provides service to more than 171,000 water accounts and more than 183,000 sewer accounts.

Our department supplies drinking water to customers in Davidson County as well as portions of Rutherford and Williamson Counties. Two water treatment plants serve this community: The K.R. Harrington and the Omohundro Water Treatment Plants have a combined capacity of 180 million gallons of water per day. The drinking water is conveyed by a distribution system consisting of more than 2,700 miles of water main, with our largest pipe being five feet in diameter.

Wastewater is treated by one of three wastewater treatment plants: Central, Whites Creek and Dry Creek. These facilities serve customers in Davidson and portions of Sumner, Robertson, Wilson, Rutherford, and Williamson Counties. The Central Wastewater Treatment Plant, our largest, is able to treat 330 million gallons of wastewater per day. The Dry Creek and Whites Creek Wastewater Treatment Plants have a combined capacity to treat more than 129 million gallons per day. Our wastewater collection system has more than 3,000 miles of piping, the largest of which is 16 feet in diameter. On an average day, we treat more than 150 million gallons of wastewater.

Responsibility for Nashville's Stormwater management was transferred to MWS from the Department of Public Works in 2002. The Stormwater Division utilizes both educational and regulatory initiatives to improve water quality by reducing the amount of pollutants entering rivers and streams as a result of Stormwater run-off. The division reviews plans for new development projects for compliance with Metro Stormwater regulations, issues grading permits, and inspects construction sites for proper erosion control measures. It is responsible for maintenance of the storm sewer system, construction of Stormwater capital improvement projects, and compliance with Metro's Municipal Separate Storm Sewer System Permit.

We hope this guide will make it easier for you to do business with Metro Water Services and answer many of your questions. Telephone numbers and Web site references are provided throughout for additional information. Please contact us with any questions or issues not addressed in this guide.

Metro Water Services encourages the involvement of our customers. The Trades Advisory Council offers plumbers, engineers, contractors and developers a unique opportunity to get involved. This group reviews changes in policy that affect customers that want to connect to our infrastructure and makes suggestions to help make it easier to do business with the department. If you would like to get involved or request more information, please contact the MWS Permits Office at 862-7225.

Thank you for allowing us to serve you.

Scott Potter
Director

THE MISSION OF METRO WATER SERVICES IS:

To provide drinking water, wastewater treatment and stormwater management services to our community so we can enjoy a vital, safe and dependable water supply and protected environment.

Process overview

Step 1 >> Submit request for water and sewer availability to MWS Development Services

Step 2 >> Development Services performs capacity study

Step 3 >> Development Services sends letter outlining capacity fees and requirements to MWS Permits Office and customer

Step 4 >> Pay capacity fees to MWS Permits Office

Step 5 >> Development Services sends availability letter to customer

Step 6 >> Is a water or sewer extension necessary?

- No? Skip to step 14
- Yes? Continue with steps 7-13

Step 7 >> Submit two sets of construction plans and review fee for approval by MWS

Step 8 >> Pre-construction meeting is held after plans are approved

Step 9 >> Apply to MWS Permits Office for construction permit

Step 10 >> Construct public water and or sewer extensions (including all water and sewer service lines) to MWS specifications as directed by MWS inspector. Request MWS inspector to schedule run to curbs (water only) after completion of the water main

Step 11 >> Does developer request water and/or sewer service taps by MWS?

- No? Appropriately licensed contractor makes taps in accordance with requirements of Tap Policy
- Yes? Continue with steps 12-16

Step 12>> MWS approves construction and completes run to curbs as appropriate

Step 13 >> Deliver plat and letters of equity transfer to MWS Permits Office

Step 14 >> Apply for water and/or sewer tap and/or set water meter permits

Step 15 >> Request inspection of water and sewer taps

- *Water and sewer taps*>>Call MWS Permits Office to request inspection
- *Sewer Service Lines*>> Call Metro Codes to request inspection

Step 16 >> Pick up water meter at MWS Customer Service Center

Step 17 >> Install water meter and water meter box

Process End

Once all items are installed correctly and pass final inspection, MWS Permits Office releases its portion of the use and occupancy (U&O) building permit.

1 >>

Availability Request

All proposed commercial, institutional, residential, and industrial developments within the Department's water or sewer service areas require a determination of the availability of water and/or sewer services.

Developers and property owners, or their representatives, should contact Development Services to determine water and sewer availability. Requests for water and sewer availability may be made via letter or using the Request for Water and Sewer Availability form (Appendix 1).

The following information must be included:

- Location of the property with tax map and parcel number, Council District
- Total acreage of the site
- Intended type of development or use of the property, along with total square footage of proposed buildings
- Projected wastewater flow in gallons per day (GPD)
- Subdivision development plan with finished floor elevations

Submit the request letter or form, development plan and application fee (See Fee Schedule insert). Make check payable to Metro Water Services and mail to:

*Metro Water Services
Development Services
Attn: Availability Request
1600 2nd Ave. North
Nashville, TN 37208*

For assistance or additional information, please contact MWS Development Services at (615)862-4598 and follow instructions for list of options.

2 >>

Capacity Study

Upon receipt of a request for availability, Development Services will perform a capacity study based on the projected flows for the proposed development in gallons per day (GPD). (Please see Appendix 3 for examples of projected flows for various developments)

3 >>

Fees and Requirements

Upon completion of the capacity study, Development Services will send the customer a letter outlining capacity fees (See Fee Schedule insert) and any special conditions or requirements for providing water and/or sewer service to the development.

Sewer and water capacity fees are currently assessed per unit of flow. A unit of flow is equal to 350 gpd. (See Appendix 3 for a list of projected flow examples) This study usually takes 15 working days to complete, depending on the size and complexity of the proposed development.

For assistance or additional information, please contact the MWS Development Services Office at (615)862-4598 and follow instructions for list of options.

4 >>

Capacity Fees

Permits Office must receive a letter outlining capacity fees. Capacity fees must be paid in accordance with MWS guidelines to reserve capacity.

Note: If construction of the proposed project has not begun within one year or required additional capacity fees has not been paid, a renewal of availability letter will be required. Capacity for the remainder of the development must be requested and purchased in order to reserve full capacity.

5 >>

Availability Letter

After payment is made, Development Services will send an availability letter to confirm the point of connection for the water and sanitary sewer, as well as:

- Water service elevations
- Existing water main size
- Capacity purchased

The statement of sewer and water availability is effective for one year from the date of the availability letter. If, after approval of sewer and water availability, construction has not begun within the established time period, a renewal of the availability statement will be required and all applicable departmental regulations and fees in force at that time will be imposed.

6 >>

Water and Sewer Extensions

Is a water or sewer extension necessary?

- No? Skip to step 14
- Yes? Continue with steps 7-13

7 >>

Construction Plans

If a proposed development requires the extension of a public water main or sewer line, the owner or developer shall retain the services of a State of Tennessee Professional Engineer to prepare construction plans.

Two sets of plans must be submitted to Development Services along with the appropriate review fee (See Fee Schedule insert). The engineer's seal must be affixed to the proposed plan. Plans will be reviewed and returned with any necessary revisions.

A letter of credit will be required if a plat is not involved. The amount of the letter of credit will be determined by MWS Development Services.

For additional information, call MWS Development Services at (615)862-4598 and follow instructions for list of options.

Plan Submittal Requirements

MWS has adopted the following general guidelines for all proposed water and sewer system extension plans. These guidelines are intended to aid in the preparation of construction plans and are not intended to supersede standards of the Tennessee State Health Department criteria. These guidelines should not be considered as all-inclusive requirements. Where circumstances warrant, additional information may be required. A Construction Plan Review Checklist is provided in Appendix 2.

Schedule

Plans must be submitted at least 30 days prior to the date on which action by MWS is requested. In the case of pump stations and other special circumstances, a longer review period may be required. Plans and review fees will not be accepted for review until the minimum capacity fees due have been paid.

Initial Submittal

The initial submittal shall consist of two sets of construction plans (paper) as well as electronic drawing files in *.dwg format. Electronic files shall be in AutoCAD Civil3D. Plans are to be prepared in or converted to model space, and no paper space drawings will be accepted. Electronic drawings should be adjusted horizontally and vertically to NAD 1983 Tennessee State Plane Coordinate System. Electronic drawings shall not contain special fonts or attributed data with the files. Standard AutoCAD fonts only are to be used in all cases.

When a project is to be built in phases, an overall plan of the entire project shall be submitted with the first phase. Future phases will require two sets of construction plans, electronic files and any changes to the overall plan. Should additional phases be added or if changes in the layout are required, an update to the overall drawing shall be submitted at the earliest date possible.

Engineering Design Report

The engineering design report (if required) shall contain the following information:

- Topographic map indicating the area to be served indicating total acreage of the proposed development and calculations supporting all water main sizing, including fire protection requirements from the Metro Fire Marshall's office
- Current and proposed zoning/density for the area
- Compare service elevation with proposed buildings and pressure system information available from Development Services
- Total number of units for the proposed development
- Water usage of the proposed system, both present and future, from the development and adjacent areas. Show calculated total and peak flows of the proposed development. Peak factors used for the flow calculations shall be as provided by Development Services. Normally, a peak factor ranging from 2.5 to 4 shall be used in the calculations. Calculate the projected ultimate usage for the area based on Metro Planning Commission (MPC) projections as well. Proposed usage will be based on State design criteria and projections of population density, for a minimum of a 20-year period, based on the MPC sub area plans
- Compare with the MWS Master Water Plan for the area of proposed development and incorporate any required improvements into the project. Where two or more alternatives exist for providing public facilities, each of which is feasible and practical, a summary of the alternate plans shall be provided with reason for selecting the one recommended, including financial considerations of the options
- General system layout of the development and impact on the existing systems

State of Tennessee Requirements for Connections to Public Mains

In addition to department requirements, all state health department requirements in effect at the time of construction shall be followed. In case of

conflict, the more stringent requirement shall apply to the proposed construction.

Online resources for additional information regarding state requirements:

Sewer: www.state.tn.us/environment/gwp/

Water: www.state.tn.us/environment/dws/

Construction Plan Design Guidelines

Plans will be reviewed and returned to the engineer with any necessary revisions indicated. Format and content of the plans shall be as follows:

- All plans shall be sealed by a Tennessee Licensed Professional Engineer
- A cover sheet shall be made a part of all plans, and shall incorporate a location map on an approximate scale not less than 1"=1,000 feet, the name of the project, the council district, and the names, addresses and telephone numbers of the developer and the engineer
- Plans shall be drawn on standard 24" x 36" sheets. Note: No other size will be accepted
- Standard Plan Notes (Appendix 4) shall be shown on all plans submitted for review
- Water lines shall be shown on the overall plan. Indicate all conflicts with other utilities and label all sleeves, valves, fire hydrants, proposed service locations, etc.
- Plans shall be drawn on a 1"=50 feet scale and the profile shall be drawn on a scale of 1"=50 feet horizontal and 1"=5 feet or 1"=10 feet vertical. In areas where the topographic features are dense, detail sheets may be required on a scale of 1"=20 feet, with the clearance between the proposed main and existing structures clearly defined and noted
- All plans shall include a Benchmark based on USGS Datum and referenced to State Plane Coordinates
- Show all topographic features such as driveways, pavement, sidewalks, right-of-ways, property lines, storm drainage structures, etc.

STEPS 7 Detail

- Show all property lines on the plans as well as map and parcel information for each parcel. Where possible, show lot numbers and/or street addresses
- All plans must show the locations of the existing utilities, including but not limited to gas lines, underground utility conduits, power and telephone poles, water mains, sanitary sewer lines, storm sewers, etc., with measurements and/or details of proposed clearances of same
- The direction of North should be clearly shown on all plans
- Careful attention to development sites and finished floor elevations is necessary to insure adequate water pressure. The engineer is responsible for providing accurate elevation data and determining finished floor elevations adequate for service
- All water mains shall have minimum of 30 inches cover in paved areas
- All water meters installed must be equipped with electronic MXU device
- Public water mains on private property or in alleys are not normally approved
- When crossing under an interstate highway or railroad, a minimum size carrier pipe of 18 inches will be required (Steel)
- A minimum of 10 feet of horizontal clearance between water mains and sanitary sewers shall be maintained whenever possible. When the 10 feet of separation is not possible, a minimum vertical separation of 18 inches shall be maintained. When the vertical separation cannot be maintained, the sewer must be built to water main specifications. Whenever sewers must cross under water mains, the sewer shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main
- Any mains/services to be abandoned must be cut and capped at a point to be determined by MWS
- A preliminary subdivision plat that has the Metro Planning Commission's stamp of approval must accompany the initial plans submittal and with all proposed subdivision section or phase lines clearly defined
- Water mains proposed to serve property where the serviceability is questionable shall indicate the service elevation, where this condition exists and must be clearly indicated on the plan and profile. On lots where the structure will be above the service elevation, 20 P.S.I. must be provided at the street with the lot served by a privately-owned and maintained booster pump
- A connection must be provided for each parcel or proposed lot. The tap location will be shown on the plans and an appropriately sized service line extension to the curb indicated, where applicable, for each parcel
- The following agencies may also require approval of the construction plans:
 - **U.S. Army Corps of Engineers**
 - **Metro Public Works**
 - **Tennessee Valley Authority**
 - **Tennessee Department of Transportation**
 - **Railroads**
 - **Private property owners**
 - **TN Dept of Environment and Conservation**
(required for stream crossing)
- Easement agreements with owners of private property involved with the construction must be obtained and a right of entry notification executed before construction begins
- The Engineer shall contact the Fire Marshall's office to determine the required fire flow for the development
- The Engineer shall contact the MWS Dispatch office at (615)862-4600 and follow instructions for list of options to schedule a Two Hydrant Flow Test for the design of all water mains

STEPS 7 Detail

Recording Easements

Easements for sanitary sewer extensions may be documented in two ways:

1. *Easement Document on Standard Metro Form*
Submit to MWS Development Services and include map and parcel number, legal owner's name, instrument number or deed book and page number, legal description of the easement, scale drawing or exhibit/map showing the easement, and notarized signature of owner. MWS must approve and will record the easement at the developer's expense.
2. *Recorded with Subdivision Plat*
A preliminary development plan of the subdivision must be provided at the time of plan submittal. This plat must clearly define the easement to be recorded. A licensed Professional Engineer or Registered Land Surveyor will seal the final subdivision plat assuring that the easement is recorded, as shown on the preliminary plat.

Redevelopment of Previously Developed Property

Consistent with the latest MWS specification on service line ownership, all service line renewals, as a result of redevelopment, will be the responsibility of the developer for both water and sewer. Further, it shall be the responsibility of the developer to investigate, evaluate and determine if existing services are compliant with current standards or should be renewed. All costs associated with these determinations will be at the developer's expense. Should the redevelopment of property require the relocation or abandonment of existing easements that contain facilities owned and operated by MWS, the approval of the Metropolitan Planning Commission and subsequent passage of an approving ordinance by the Metro Council is required. Easement documents on standard Metro forms are required to relocate existing easements. These approvals must be completed prior to the demolition of the old easements and facilities. The relocation, inspection and acceptance of the relocated facilities should take place prior to the legislation being passed. As significant time is required to complete this activity, developers should provide the required information to MWS Development Services as early as possible to avoid delays to the project.

Once reviewed and all review comments have been incorporated, submit five (5) paper sets of plans for approval. Sealed, approved plans will be distributed to appropriate parties for their use.

Easement Requirements

Public Facilities

When constructing public sanitary sewer lines or water mains outside a public right of way, an easement must be provided and conveyed to the Metropolitan Government. Documentation of the easement should be submitted to MWS Development Services, which will approve and record it with the Register of Deeds for the county in which the property is located. Recording fees are the responsibility of the Developer.

General Requirements

Minimum width	20' for all sizes
Permanent easement	
Minimum total width	30' (20' permanent + 10' temporary)

Additional Requirements

Sewers – 8" through 24"

Depth	Easement Width
0' to 5'	30' (Minimum 20' Permanent + 10' temporary)
5' to 7.5'	35' (Minimum 20' Permanent + 15' temporary)
7.5' to 10'	40' (Minimum 20' Permanent + 20' temporary)

Depending on specific site conditions, additional easements may be required. Please contact MWS Development Services at (615)862-4598 and follow instructions for list of options.

For requirements for larger diameter lines, please contact MWS Development Services at (615)862-4598 and follow instructions for list of options.

8 >>

Pre-Construction Meeting

After all approvals and easements required are obtained, inspection fees paid (See Fee Schedule insert) and the application for public utility extension has been secured, a pre-construction meeting will be held. The project engineer, developer and contractor are required to attend the pre-construction meeting conducted by the MWS Senior Inspector and Project Inspector. The contractor shall provide sewer construction cut sheets in acceptable MWS format where applicable. The agenda for the meeting includes construction requirements and any questions on materials and any other specific concerns relating to the project.

All water and sewer related construction shall be inspected by MWS. The builder or developer shall reimburse MWS for the cost of inspection (See Fee Schedule).

9 >>

Construction Permits

Upon conclusion of the pre-construction meeting, the permit for extension will be signed by the licensed municipal utility contractor or licensed master plumber involved at the Permits Office at the Metro Office Building. Construction may begin after the permit is signed.

Temporary meters for water main construction

If water service is required for construction of the new mains, a temporary meter may be issued for use on a public fire hydrant. Un-metered use of Metro fire hydrants and service lines is strictly prohibited. Please call the MWS Customer Service Center at (615)862-4600 and follow instructions for list of options to request a temporary meter for use on a fire hydrant.

10 >>

Water/Sewer Extension Construction

Construct public water and/or sewer extensions, including all water and sewer service connections, to MWS specifications as directed by MWS inspector. Request MWS inspector to schedule run to curbs (water only) after completion of the water main.

A licensed municipal utility contractor (for sewer or water) or licensed master plumber (for water) is required to perform all proposed public utility extension work. Contractors shall construct all water and/or sewer facilities according to MWS specifications, in conformance with applicable Metropolitan Code.

To request copies of the specifications, contact MWS Engineering Records at (615)862-4598 and follow instructions for list of options.

All water and sewer related construction shall be inspected and accepted by MWS. MWS will prepare the deeds of conveyance and send them to the developer, who is required to return the signed deeds to MWS upon completion of construction.

11 >>

Taps and Tap Policy

Does developer request taps by MWS?

- No? Licensed municipal utility contractor or licensed master plumber makes taps in accordance with requirements of Tap Policy below
- Yes? Continue with steps 12-16

Tap Policy

Contractor will make a service tap to create a sample point on new mains after tapping sleeve and valve (TS &V) and construction tap on existing main has been made. The contractor will run a copper jumper, complete with a double detector check valve, to the main line. (The TS&V will remain closed at all times during this process.) Wet taps are then allowed to be made by the contractor for ¾" and 1" service lines on the new line only.

Copper service lines should be run to the curb. Disinfection procedures will remain the same and MWS will conduct pressure test on all services and mains. A sample is taken on the entire distribution system in compliance with AWWA requirements and restrictions.

Additional guidelines include:

- Curb stops 18 inches inside property line (copper service)
- Curb stops in center of lot on single family homes
- Plans to include location of driveway

No permits will be released until as-builts and testing is completed.

12 >>

Tags and Run to Curbs

Water/Sewer taps and/or Run to Curbs must be scheduled in advance and in accordance with Metro guidelines. Only Metro Water may tap a public water or sewer main. Taps are scheduled on a first come first serve basis with completion no later than ten (10) working days from date of request. Site must be prepared.

13 >>

Plats and Letters of Transfer

Plats and letters of transfer should be delivered to the MWS Permits Office. Connections for individual lots may be permitted and constructed by the builder/developer upon approval and deeding of all water and/or sewer construction. Signed letters of transfer for water and/or sewer and copy of the final recorded plat are required prior to issuing connection permits.

Request for reimbursement may be made in lieu of providing letter of transfer. For additional information, contact the MWS Permits Office at 615-862-7225.

14 >>

Service Application/Set Meter Permits And Tap Fees

No connection permit will be issued prior to the deeding of a water/sewer main extension to MWS unless the appropriate early release forms have been signed and notarized and are in the MWS Permits Office. Construction permit completion as well as fee payment will be verified.

Apply for water and/or sewer tap and/or set water meter permits. MWS will automatically schedule initial field inspection 15 working days after permit is issued.

Tap fees for public water and/or sewer mains built by privately funded extensions

After the construction of a privately funded public water main extension, run-to-curb connections for individual lots may be made. The developer must provide a signed letter of equity transfer for all lots and a plat that shows the general arrangement of subdivision, lot numbers, water main sizes and locations. The letter of equity transfer accounts for the cost of each tap fee debited against the amount of the developer's equity or reimbursed to the developer if applicable.

The Metropolitan Code defines developer's equity as the cost of construction of the public main extension. This amount of equity may be used to offset any required tap fees up to the cost of the public extension. The cost of each tap is deducted from the amount of the developer's equity existing for the public main extension (both water and sewer) or reimbursed to the developer if applicable.

Tap and/or capacity fees (See Fee Schedule insert) are due at the time of application for the sewer connection permit for the individual lot. For an example of the service permit application, see Appendix 5.

Service applications/set meter permit

A licensed master plumber must bring completed service application (Appendix 5) to the MWS Permits Office for set meter permit issuance. Service application information will be used to establish customer account for billing of water. Sewer billing will automatically be added to accounts 90 days later.

15 >>

Inspections

Request inspection of water/sewer taps and service line extensions inside easements or rights-of-way as follows:

Water/Sewer Connections and Service Lines (inside easements or rights-of-way)

In compliance with Metropolitan Code, contact the MWS Permits Office at (615)862-7225 to request inspection of water and sewer taps.

Service Lines (private property)

Contact Metro Department of Codes at (615)862-6550 to request inspection. Metro Codes will notify MWS of approval or non-approval.

16 >>

Residential Meters

For a residential connection, the plumber will be issued a 5/8" water meter including the AMR equipment for installation. Larger residential and/or irrigation meters will be furnished by the property owner at their expense. All meters installed shall meet the AMR requirements.

(See www.nashville.gov/water)

Residential meters may be obtained at MWS Customer Service Center, located at 1700 Third Avenue North. Approved additional meters may be purchased from a local distributor.

For more information, please contact MWS Customer Service at 615-862-4600.

17 >>

Meter and Meter Box Installation

For all installations, the property owner, contractor or licensed plumber shall furnish the meter box. It must meet current MWS specifications and standard details. Service connections within meter box must be flared or compression. (No soldered joints or plastic connections will be accepted.) Meter and service line will be a minimum of 24" not to exceed 28" to top of finished grade.

MWS will automatically schedule initial field inspection 15 working days after permit is issued. Customer will be notified of failed inspection and a re-inspection will automatically be scheduled. All inspection and re-inspection costs will be billed to the customer's account.

Final inspection is automatically scheduled 90 days after initial inspection is approved. All final inspection and re-inspection costs will be billed to the customer's account as well.

In accordance with MWS policy, the Metro Department of Codes Administration shall have jurisdiction within private property.

Call the MWS Permits Office at (615)862-7225 with questions concerning inspection of the meter and meter box.

Process End

The MWS portion of the Use and Occupancy Permit will be granted after final MWS inspection is complete.

Appendix 1
Request for Water and Sewer Availability

Information for the Availability / Capacity Response Letter

Date _____

Name of Requestor _____

Company name (if applicable) _____

Address _____

City, State, Zip Code _____

Phone Number _____ Fax Number _____

E-Mail Address _____

Property Information

Address of Property _____ Council District _____

Property Map _____ Parcel (s) _____

Purpose of Construction / Intended Use / # of Lots _____

Square Footage of Proposed Building _____

Projected Wastewater Flow (in G.P.D.) _____

Provide Site Utility Plan and/or Plat including finished floor elevations (attach with request).

ALL PLAT & PLANNED UNIT DEVELOPMENT SUBMITTALS TO METROPOLITAN PLANNING COMMISSION SHALL PROVIDE PROOF OF SEWER AVAILABILITY AS FOLLOWS:

- A. A "sewer capacity fee letter" which states that adequate sewer capacity to serve the proposed project can be purchased within a time period prescribed by Metro Water Services (90 days). Final plats and final PUD's require proof of payment of at least 30% of these capacity fees as outlined in this letter. Copy of receipt of capacity fee payment shall be included in submittal package; or
- B. An "availability letter" issued by Metro Water Services confirming that sewer capacity is available to the proposed development.

Enclose a check for **\$500.00 made payable to Metro Water Services** for this study.
Please note the study will take approximately **15 working days to complete.**

Address all correspondence to: **Metro Water Services – Development Section**
1600 Second Avenue North
Nashville, TN 37208
Phone Number (615)862-4598

Appendix 2 Construction Plan Review Checklist

Please photocopy this form for repeated use.

This checklist may be helpful by determining if your plans have all the information required by MWS and contains a list of some of the documents and/or agency approvals that may be necessary prior to final approval by the department.

Project Name: _____ **Project No.:** _____

	YES	NO
Plan size standard 24" x 36" (no other size accepted)		
Availability requested/answered		
Sewer capacity available		
Water pressure/volume adequate including fire protection requirements		
Easement(s) provided for adjacent property in the drainage area		
Easement(s) obtained and indicated on plan		
State highway permit		
TVA permit		
Railroad permit		
Corps of Engineers permit		
Streets names		
Private streets/open space – indicated as public utility easements		
Engineer's stamp on each plan sheet – signed and dated		
Location map and Council District(s)		
Map and parcel numbers		
Site plan (requires entire property)		
Sewer service tees indicated for each lot – no bends (from main to ROW)		
Sewer sized for drainage area		
Existing utilities shown		
Sufficient topography shown		
Adequate cover (for sewer, 4 ft in street/pavement, 30" private property)		
Pipe material indicated		
Future extension considered		
Attached plan notes correct		
Water mains located 5 ft inside curbs		
Water meters located 25 ft from property corners		
2" blow off valves indicated at ends of water main		
Bench mark, must be based on USGS datum – NAD 83		
Valving correct		
Plat received/bond set		
Proper scale – less than 600 ft – 1"=20'		
Proper scale – more than 600 ft – 1"=50'		
Drainage conflicts – storm pipes/creeks/etc.		
Water main to end within pavement		
No sewer lines or manholes located on property lines		
Ductile iron pipe Class 52 used if depth exceeds 15 ft (sewer) or grade exceeds 19%		
10 foot separation between water and sewer lines		
Fire hydrants spaced at 500 ft intervals, with 250 ft coverage		
Sanitary sewers located in the center of road when possible		
Provide as-builts to MWS Engineering Review Section (hard copy and digital formats)		
Provide owner's name, address and phone on cover sheet of construction plans		

Appendix 3 Projected Flow Examples

Discharge Facility	Design Units	Flow in GPD
Single family dwelling	Per dwelling	350
General office space	Per employee	25
Office/warehouse space	Per square foot	0.1
Schools w/showers & cafeteria	Per person	16
Schools w/out showers & cafeteria	Per person	12
Boarding schools / Dormitories	Per person	75
Motels at 65 gal/person (rooms only)	Per person	130
Trailer courts at 3 persons/trailer	Per trailer	225
Restaurants	Per seat	40
Service stations	Per fuel island	1000
Factories	Per person per 8-hour shift	25
Shopping centers (no food) of ultimate floor space	Per 1,000 square feet	150
Hospitals	Per bed	200
Nursing homes (add 75 gallons for laundry)	Per bed	120
Home for the aged	Per bed	60
Child care center	Per child and adult	10
Laundromats	Per machine	250
Swimming pools	Per swimmer	10
Theaters, auditorium type	Per seat	5
Retirement living	Per resident	100
Resort camps, day & night w/limited plumbing	Per campsite	50
Luxury camps with flush toilets	Per campsite	100
Churches (no kitchen)	Per seat	3
Churches (with kitchen)	Per seat	5
Car wash – (stand alone)	Per bay	500
Barber/salons	Per station	200

Appendix 4 Standard Plan Notes

1. All water and sewer construction shall be in accordance with specifications and standard details of the Metro Water Services.
2. The contractor is responsible for reimbursing the Metro Water Services the cost of inspection.
3. The contractor is to provide and maintain the construction identification sign for private development approved.
4. After completion of the sanitary sewer, the developer is responsible for the televising of the lines prior to final acceptance. The videotaping must be coordinated with the Metro Water Services Inspection Section. All costs will be borne by the developer.
5. All connections to existing manholes shall be by coring and resilient connector method.
6. Reduced Pressure Backflow Prevention Devices (RPBP) or dual check valve will be required on all test and fill lines (jumper) needed for water main construction and must be approved by the Metro Water Services.
7. All water meters shall be a minimum of 24" not to exceed a maximum of 28" below finished grade.
8. Upon completion of construction of water and/or sewer, the engineer shall provide the department with a complete set of as-built plans on moist erasable mylars in reverse and in digital (*.dwg) format. Sewer plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include actual field angles between lines, all actual service lines and tee locations, the distance of the end of the service line to property corners and lines and/or station and offset from sewer centerline to end of service line, the depth to the top of the end of the service line, and shall reflect all alignment and grade changes. Water line plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include offset distance from the roadway centerline, or property line right of way, line depth, locations of hydrants, valves, reducers, tees and pressure reducing devices where applicable. All drawings must be completed and submitted prior to acceptance of the sewers or water mains into the public system and any connections being made.
9. Pressure regulating devices will be required on the customer side of the meter when pressures exceed 100 psi.
10. Pressure regulating devices will be required on the street side of the meter when pressures exceed 150 psi.
11. All water mains must be located within the paved area including all blow-off assemblies.

Appendix 5 Application for Set Meter/Service Permit

PLEASE PHOTOCOPY THIS FORM FOR REPEATED USE

METER WATER SERVICES – PERMITS SECTION
REQUEST FOR SET METER/SERVICE PERMITS
MWS PERMITS FAX: (615)862-7257

Date: _____

TYPE OF REQUEST:

SEWER APPROVAL _____
WATER APPROVAL _____
SET METER PERMIT _____

PAYMENT TYPE:

CHECK/CASH/CC: _____
TRANSFER SLIP _____
DEVELOPERS EQUITY _____

CODES BUILDING PERMIT NUMBER: _____

SERVICE ADDRESS PROPERTY INFORMATION:

Street address _____ City _____ Zip _____

Property description, full name of subdivision, i.e. name, phase, section, revision plus lot number

Map/Parcel number: _____

.....
Party responsible for bill: _____

Address: _____

Contact person: _____ Phone #: _____

Contractor: _____

Contractor's address: _____

Contact person: _____ Phone #: _____

Contractor number (JC, PC, GC): _____

Commercial: _____ **Residential:** _____

New _____ Existing _____ Domestic _____ Irrigation _____ Fire Service _____

Change Meter _____ Current Meter Number _____ Reading _____

Other (Meter Deduct, Cooling Tower, Blow Down, FS Flushing) _____

*Meters will be inspected 15 working days after permit is issued. Inspection fees will be charged for all meter inspections.

For Permits Staff use only:

Has a PRV or booster pump been recommended? Yes _____ No _____

Appendix 6 Who To Call Guide

Metro Water Services	
Central Laboratory Water Quality.....	862-4591
Communications Services.....	862-4494
Customer Service Center.....	862-4600
<i>Service Changes</i>	
<i>Billing</i>	
<i>Customer Concerns</i>	
<i>IVR payments/inquiries</i>	
Cross Connections.....	862-4563
Emergency Services.....	862-4600
<i>Leak in Street/Meter Box</i>	
<i>Sewer Overflow</i>	
Development Services/Engineering	
<i>Capacity Study</i>	862-4598
<i>Engineering Records</i>	862-4598
<i>Construction Plans Review</i>	862-4598
<i>Construction/Inspections</i>	862-4555
Environmental Compliance.....	862-4590
Permits/Customer Connections.....	862-7225
<i>Water/Sewer Tap Scheduling</i>	
<i>Tap Inspection</i>	
<i>Meter Box Inspection</i>	
Stormwater.....	862-4600
 Other Metropolitan Agencies	
Fire Marshall.....	862-5230
Codes Department.....	862-6500
Metro Development and Housing Authority (MDHA).....	252-8400
Public Works.....	862-8700
 Additional Numbers	
BellSouth.....	866-620-6000
Comcast Cable.....	244-5990
Nashville Gas.....	734-0665
NES.....	736-6900
Tennessee Department of Transportation.....	741-3196
Tennessee One Call.....	366-1987
Tennessee Valley Authority.....	232-6000

Appendix 7 Glossary

Availability Letter >> A letter issued by Metro Water Services after receiving developer payment of capacity fees that confirms water service elevations, water main size, and sewer availability/capacity.

Capacity Study >> A fee charged to reserve capacity for proposed developments.

Contractor >> One who agrees to furnish materials and/or construction services for an agreed price.

Developer >> One who develops real estate for residential or commercial purposes.

Developer's Equity >> Equity for developer's construction of sewer/water main extension after such has been deeded to MWS with amount based on the contractor's certificates of cost showing the charges for the construction.

Easement >> A right, given to a person or agency, to make limited use of real property owned by someone else.

Licensed Utility Contractor >> A contractor approved and licensed by the State of Tennessee.

Metro Water Services >> The Department of Water and Sewerage Services of the Metropolitan Government of Nashville and Davidson County.

Run-to-Curb >> Water service installed from the public main to the property line or right-of-way.

Right-of-Entry >> Notification executed by each property owner affected by public water or sewer construction.

Sewer Connection >> Point of entry by new tap or connection to an existing lateral service.

Letters of Transfer >> Letters that must be submitted prior to issuance of permits that convey a developer's equity to the current property owner.

Water/Sewer Tap Fees >> A privilege fee paid to MWS prior to connection to MWS distribution system.

The Mission of Metro Water Services

To provide drinking water, wastewater treatment and stormwater management services to our community so we can enjoy a vital, safe and dependable water supply and protected environment.



Requests for ADA accommodations
Should be directed to:
ADA Coordinator
Metro Water Services
1600 2nd Avenue North
Nashville, TN 37208-2206
(615)862-4862

