

# LATERAL EXTENSION PROCEDURES

The construction of new sanitary facilities requires the approval of the following public agencies:

## A. Jefferson County

1. Louisville & Jefferson County Metropolitan Sewer District (MSD)
2. Louisville Metro Health Department (HD)
3. Kentucky Division of Water (DOW)
4. Metropolitan Louisville
5. Fourth Class Cities

## B. Oldham County

1. Louisville & Jefferson County Metropolitan Sewer District (MSD)
2. Kentucky Division of Water (DOW)
3. City of Crestwood or Oldham County Sanitation District depending on location

The purpose of this document is to provide developers, engineers, and others with a concise listing of the items required by MSD in order to approve plans and special provisions for a Lateral Extension (LE) or a Private Sewer – MSD System or a Non-MSD System project for construction of sanitary sewers and pumping stations. All sanitary projects which will become a part of MSD's system require the execution of a Wastewater Facilities Lateral Extension Contract or approval from MSD for the proposed project.

Sanitary projects which connect to systems which are not owned by MSD and will not be in an Easement or public Right of Way are subject to the same review and approval procedures, but do not require the execution of a contract with MSD. Unless otherwise noted, it should be assumed that all items in this document will be necessary for sanitary projects associated with non-MSD owned systems.

MSD has prepared a number of documents which are available to the engineer for wastewater projects. These items can be used as guides in order to facilitate the projects. A Design Manual, Standard Drawings, Standard Specifications, Special Provisions, a Pre-Approved Products List and a Design Manual are all available for these purposes.

The process begins with submittal of a capacity Worksheet to determine if the sewer system has capacity. Next a design approval must be obtained from MSD before the HD and DOW will review the set of plans for the project. This will reduce the overall time frame to start construction because MSD usually performs a much more detailed review than the other two agencies.

## **PLANNING PHASE**

Any proposed project which will connect to an MSD system should begin with a written request for service (Request for Sanitary Sewer Capacity Form and Location Map). This is a required step to prevent having the Developers run the risk of having plans prepared only to find that capacity for their project is not available or some other issue comes up that delays their project. The written request should include a location map.

**Capacity Charges.** All new developments which connect to MSD's system must pay capacity charges unless exempted from the charges. A capacity charge worksheet will be prepared to detail the capacity charge due for the development. Capacity Charges must be paid prior to MSD issuing a Notice-To-Proceed for construction. The specific language detailing whether or not a piece of property can be exempted is contained in MSD's Wastewater Service Charges, but generally, exemptions are allowed for properties which meet any of the following criteria:

1. Development previously served by a non-MSD system or by an on-site disposal system.
2. Property does not require a connection or an extension of the MSD's sewer system
3. Property within an Enterprise Zone.
4. Property owned by the City of Louisville, Jefferson County, or joint agencies of the City of Louisville and Jefferson County.
5. Property within the City of Louisville.
6. Properties to be served by a new treatment plant to be owned by MSD, but constructed and financed jointly by agreement between MSD and one or more developers, provided that the plant is constructed as a permanent, long-term facility.

7. Properties that are exempted because of previous agreements. These will usually be covered by treatment plant takeovers whereby the previous owner has identified specific properties.

Capacity charges are calculated either by the number of lots in a subdivision, the estimated gallons per day flow from the proposed structure, the estimated flow based on the number of employees, the flow based on actual water records of a similar type of facility. The minimum charge is based on a single family home of 370 gallons per day. For design flows and estimated flows from a variety of different types of facilities, see Chapter 8 of the Design Manual.

**Reservation of Capacity Agreements.** The developer may choose the option of executing a separate reservation of capacity agreement rather than paying capacity charges in the early stages of a development to assure capacity in the system will remain while going through decision making process of determining whether to proceed with the project. Capacity charges will still be due, but they may be deferred until the LE Contract is executed. By reserving capacity for one developer, MSD may have to turn down other requests and could lose the revenue from those potential customers. Therefore the agreement will specify that a monthly fee must be paid to MSD which is equal to the average wastewater service charge from the development. The agreement will be limited to two years. In order to process the agreement, the developer must provide the tax block and lot number for the property, along with the deed book and page number, the amount of flow to be reserved, and a project map showing the proposed development. The reservation of capacity must remain with the property and cannot be transferred to another parcel.

**New or Expanded Wastewater Treatment Plants.** If a new development will require modifications to an existing treatment plant, or construction of a new plant, MSD has established guidelines for processing the design and approval of such facilities. The guidelines generally apply to wastewater treatment plants with a design capacity of 500,000 gallons per day, or less, and are available upon request.

## **DESIGN PHASE**

Specific items which must be submitted to MSD as part of the design review submittal process are identified below:

1. **Application For Approval Of Contract Documents for Sanitary Sewer Projects.** This provides basic information about the project, along with the terms and conditions of the approval. It should be noted that MSD's approval is only valid for a period of one year.
2. **Minimum Requirements Checklist for Sanitary Sewer Construction Plans.** This form must be included with the original application. It provides the Applicant with a listing of items normally required for MSD to complete its review of the material.
3. **Construction Plans.** Plan drafting standards and design criteria are covered in MSD's Design Manual. Generally, final plans must be submitted on double-matte, 24" x 36" sheet mylar, with a minimum thickness of 3 mils. Review transmittal copies may be standard blue-line or black-line prints. Two (2) copies are required for each submission. The title sheet should include a location map, a sheet index, the name, address and telephone number of the engineer who prepared the plans, the name, address and telephone number of the developer, the name, address and telephone number of the owner, the surveyor's certification block with a Professional Surveyor's seal, signature and date, a legend, standard and special notes, the Professional Engineer's seal, signature and date, and an approval block for MSD. All sheets must include the project name, the developer's information, the owner's information, the engineer's information, sheet title, submittal date, Professional Engineer seal/signature/date, and Professional Land Surveyor seal/signature/date. The seals and signatures of the engineer and the surveyor (both of whom must be currently licensed in the Commonwealth of Kentucky) must be originals. The Professional Engineer's seal/signature/date is required on all sheets and the Professional Land Surveyor's seal/signature/date is required on all sheets with boundaries shown.
4. **Special Provisions.** Special provisions shall be submitted project and shall be adjusted to address the specifics of the project.
5. **Design Calculations.** The proposed development, along with all upstream or tributary areas must be shown on a topographic map at an appropriate scale. The expected saturation population, based on current zoning, should be used to size the proposed sewers. Population based on zoning can be found in Chapter 8 of MSD's Design Manual. It should be noted that MSD may require improvements to downstream facilities in order to accommodate the flow from proposed developments. This will be determined on a case-by-case basis. Reference should be made to Chapter 8 of the Design Manual for the required "Computations For Sanitary Sewer Design" format and instructions.

6. **Extension of Boundaries.** This item is required to be submitted if the project is outside the City of Louisville Boundaries of 1947 and will be an extension of MSD's system.
7. **Easement Plats (if required).** Plats must meet minimum standards for land surveying in Kentucky. They must be certified and sealed by a Professional Land Surveyor currently licensed in the Commonwealth of Kentucky. Two (2) copies are required for each submission, and the original plats must be included with the final submission of documents. MSD will be responsible for recording all easements for public sewers in Jefferson County. In Oldham County, MSD must be provided a copy of the recorded easement. See Chapter 7 of MSD's Design Manual for guidelines.
8. **Record Plat.** A copy of the record plat (recorded or unrecorded) is acceptable. This must be submitted in order for MSD to determine whether or not additional sewer and drainage easements will be required. Before MSD will allow sanitary sewers to be accepted and put into service, all public sewers must be in public rights of way or in a public easement.
9. **Preliminary Subdivision Plans.** A copy of the approved preliminary subdivision plans should be submitted with the original submission.
10. **Roadway Plans (if applicable).** A copy of the roadway plans should be submitted in order for MSD to determine if sufficient cover will be available and to ensure that there are no conflicts with any other proposed facilities.
11. **Contacting Other Utilities.** Documentation must be provided showing that potential conflicts with existing utilities have been addressed to the satisfaction of the utility company. MSD must be copied on all letters and transmittals to and from the various utility companies.
12. **City/County/State Permits.** If proposed sewers will be located within, or crossing, the right of way of existing roads, or if proposed sewers will be located outside of the pavement of proposed roads, but still within the right of way, an encroachment permit is needed from the appropriate agency. MSD will apply for the encroachment permit, with the exception of Non-MSD Systems, from the governing agency prior to the start of construction. The Design Drawings and Special Provisions provided by the Design Engineer must include the requirements of the governing agency. It is assumed that the Design Engineer has been in contact with the Regulating Agency prior to submittal of the Encroachment Permit. Two (2)

sets of plans need to be submitted to MSD after the project has received the Design Approval. These sets of plans will then be sent to the governing agency for their review and issuance of the encroachment permit. Seven (7) sets of plans are needed for submittal to the State. The encroachment permit or permits will be included with the package issued with the Notice-Of-Proceed for construction by MSD.

13. **Small City Permits.** If the proposed facilities will be located within the corporate limits of any third or fourth class cities, completed permits showing MSD as the Applicant must be included. The developer/engineer is also responsible for complying with any additional ordinances (e.g. tree cutting) which may be required by third or fourth class cities. Approved permits must be included with the final submittal of plans to MSD. Fifth and sixth class cities will be notified of the proposed project by MSD. Any other requirements by the 5th and 6th class cities shall be handled on a case-by-case basis. MSD must be copied on all correspondence to and from the small city.
14. **Railroad Crossings.** If proposed sewers will be located within, or crossing, the right of way of existing railroads, executed easement plats must be included for each occurrence. Permits will not be acceptable. MSD must be copied on all correspondence to and from the governing railroad. Applicant is responsible for payment of all fees.
15. **Miscellaneous Permits.** If proposed sewers will be located within, or crossing, the right of way of any other existing facilities (e.g. Texas Gas), completed permits showing MSD as the Applicant must be included in the final submittal of plans to MSD. MSD must be copied on all correspondence to and from the agency.
16. **Proposed Project Plan.** An 8 1/2" x 11" drawing showing the proposed project must be submitted to MSD. In order to provide consistency in the appearance of project plans, please use the template provided. Hand lettering is not allowed. The Proposed Project Plan should be submitted with the original submission.
17. **Erosion/Sediment Control Plan.** The Engineer must submit a plan for erosion and sediment control. It must specify the construction sequence, the individual responsible for maintenance, and the removal of all temporary devices when they are no longer necessary. The erosion and sediment control plan must include the actual depths and locations of all control measures, including any additional items as required by the Louisville and Jefferson County Planning Commission. The plan must be stamped and sealed by a Kentucky licensed

engineer. A Notice of Intent permit should be submitted to DOW 72 hours before construction starts.

18. **Wastewater Facilities Lateral Extension Contract.** This document is the legal agreement between the developer and MSD regarding the construction of sanitary sewerage facilities. It conveys the sewerage facilities to MSD, upon completion and acceptance by MSD. The developer agrees to construct the project according to the plans, special provisions and specifications, to employ an engineer to be available during construction, to review shop drawing submittals and other services as the developer's representative, to commence the project within one year, and to furnish record information once the job is finished. MSD agrees to inspect the work, and to accept ownership of the facilities, along with operation and maintenance responsibilities, once they are completed.
19. **Accepted Bid Proposal.** MSD requires that the lump sum cost for the construction of the sanitary sewers be submitted. The lump sum amount shown on the form shall be the same as the amount shown on the Performance Bond.
20. **Bonds.** MSD requires that a Performance Bond be posted covering the cost of sewer facilities construction during construction.

If the proposed sanitary facilities will be located under any pavement (roads, streets, parking lots, driveways of any material besides earth), MSD will also require that a Maintenance Bond be posted in the amount calculated by the engineer in accordance with the guidelines specified in the "Instructions For Special Provisions" and indicated in the Special Provisions (\$5,000.00 minimum, \$4 per LF under Pavement county Road, \$50 per LF under State Maintained Road).

After the project has been accepted by MSD, a one-year warranty period begins. If there are no problems with the facilities after one year, MSD will release the bonds.

21. **Pump Stations** – All four (4) of the following items must be submitted, for either a public or private pump station, before the review will take place.

Service Area Map – A topographic map showing the proposed development, along with all upstream or tributary areas shown. The expected saturation population, based on current zoning, should be shown in each area of the map.

Calculations – The calculations should be for both the initial and the ultimate conditions. All calculations shall be presented in a neat and orderly manner.

Specifications – MSD’s standard specifications for both the grinder and the solid-passing pumps shall be used. The appropriate modifications and spaces need to be filled-in before submitting for review.

### Design Drawings

**22. Plan Review and Approval.** MSD will review the information submitted, assign an LE and/or Record number and Manhole numbers to the project, and usually return comments to the contact person as specified on the “Application for Approval of Contract Documents For Sanitary Sewer Projects,” within ten (10) working days. If a meeting is in order, MSD and the project engineer will discuss the project in detail. After revisions have been made and returned along with all MSD “mark-ups”, MSD will review the submittal and if everything is in order, issue a Design Approval letter. When MSD receives written approval from other governing agencies, the engineer submits the original mylars to MSD along with any corrected copies of all items, including the completed developer signed LE Contract, the appropriate bonds, and all other required documents. Note: If there are any revisions to the plans, prior to construction, new mylars must be submitted before the project will be released for construction.

## **CONSTRUCTION PHASE**

After receiving the completed design documents, all required permits and easements, performance and maintenance bonds, drawings on mylar, special provisions, other agency approvals and capacity charges payments, MSD will issue a Notice-To-Proceed letter for construction and assign an inspector to the job (if applicable). This process will normally take five (5) working days. Construction must commence within one year of the Notice-To-Proceed date. After completion of the sewer installation, the Contractor in accordance with the plans, special provisions and specifications and MSD’s inspection, will conduct an initial air and deflection test of all of the lines. After all other utilities have been installed, a second air test will be performed by the Contractor and the lines will be teleinspected. Once pavement is installed, the chimney shall be sealed and the manhole vacuum tested. Assuming all tests are passed, the teleinspection does not reveal any problems, and appropriate restoration of the

disturbed area has been completed in accordance with the Erosion and Sediment Control Plan and all other close out criteria are met, MSD will accept the sewers and release the lines for connections, by notifying the appropriate agencies, (HD, OCSD or City of Crestwood) in writing. In order to connect any buildings to the sewers, the developer must obtain permission from the HD.

**Revisions During Construction.** If minor changes to the project are necessary during construction, the developer's engineer should try to resolve the matter by discussing it with MSD's inspector. MSD's inspector will determine whether or not additional review is required. If additional review is required, the developer's engineer must submit a "red-line" drawing of the proposed changes to MSD, who will make a decision on the matter as soon as possible and will notify the developer's engineer of the changes approval. The developer's engineer will then submit four (4) copies of the "red-line" drawings to MSD for distributing them to the field. "Significant" changes may require HD and DOW approval.

**Property Service Connections.** Each separate piece of property must have a property service connection (PSC) from the public sewer. The size of PSC's for single family residential properties is 4-inches. PSC's for other properties must be sized in accordance with KY Plumbing Codes with the a minimum being 6-inches. The PSC must be installed with green metallic "locator" tape labeled "SEWER" above the PSC and at a depth of not more than 30". The depth of each PSC at the property line (or the edge of the easement) must be shown on the plans. If basement facilities are to be served, the minimum elevation of the lowest facility must be at least six inches higher than the rim elevation of the nearest manhole on the line to which the property will be connected. For additional information, see Chapter 8 of MSD's Design Manual.

**Record Drawings.** Once construction is completed, the developer's engineer/surveyor must revise the original mylars to accurately reflect the size, location, depth, etc. of the facilities, the location of property service connections and easement data. PSC information which must be shown on the drawings includes the location of the PSC in relation to the sewer along with the length and size of the PSC and any other information referenced in the special provisions under the "Stakes and Final Record Drawing" section. This information should also be shown on the "Property Service Connections Inlet Sheet". The revisions must be made in MSD's Main Office. Original mylars may not be taken out of the building. MSD will provide drafting space for the developer's representative to make the necessary changes. When completed, the drawings must be signed and sealed by a Land Surveyor who is licensed in the State of Kentucky. The sewers will not be made available until all of this information is completed.

**The Following notes shall be added to the mylar:**

**MSD does not warrant the design or computations contained in this plan. The correctness or accuracy of all engineering computations remain the sole responsibility of applicant's design professional. MSD's approval to proceed with construction is based solely on that professional's seal and signature.**

### **UTILITY NOTE**

**All utilities shown on these plans are approximate. Individual service lines are not shown. The Contractor or Subcontractor shall Notify the Utility Protection Center "B.U.D." (Toll Free Phone No. 1-800-752-6007) forty-eight (48) hours in advance of any construction on this project. This number was established to provide accurate locations of existing below ground utilities (i.e. cables, electric wires, gas, and water lines). The Contractor shall be responsible for becoming familiar with all utility requirements set forth on the Plans in the Technical Specifications and Special Provisions.**

### **EROSION PREVENTION AND SEDIMENT CONTROL NOTE:**

**The approved erosion prevention and sediment control (EPSC) plan shall be implemented prior to any land-disturbing activity on the construction site. Any modifications to the approved EPSC plan must be reviewed and approved prior to implementation by MSD's Development Area Team. EPSC BMP's (Best Management Practices) shall be installed per the plan and MSD standards.**

**Where construction or land disturbance activity will or has temporarily ceased on any portion of a site, Temporary site stabilization measures shall be required as soon as practicable, but no later than 14 days after the activity has ceased.**

**Sediment laden water encountered during trenching, boring, or other activities shall be pumped into a sediment trapping device prior to being discharged.**

**GENERAL NOTES:**

- 1. The Louisville and Jefferson County Metropolitan Sewer Districts Standard Specifications shall apply.**
- 2. Construct Property Service Connections to edge of Easement or Edge of Right of way.**
- 3. Property Service Connections shall be at a 2.0% slope or greater.**
- 4. Rock shall be shattered to 6 feet beyond end of Property Service Connection.**
- 5. Vertical Datum is referenced to \_\_\_\_\_ National Geodetic Vertical Datum.**
- 6. Sewage from this development will be treated at the \_\_\_\_\_ Sewage Treatment Plant.**
- 7. MSD will inspect all sewer construction.**
- 8. All sewers will receive a first and second air test, deflection test, have chimney seals installed and manholes vacuum tested in accordance with MSD's Standard Specifications.**

If the Engineer of Record wishes to make revisions electronically, the revised item shall be lined through and the new information added so it becomes clear what items were revised. **The following note shall be added to the mylar:**

**For the purpose of supplying record drawing information, sheets \_\_\_\_\_ of the original drawings replaces the approved**

**sheets \_\_\_\_\_ of construction drawings. Drawings had been design approved by \_\_\_\_\_ on \_\_\_\_\_ and approved for construction by \_\_\_\_\_ on \_\_\_\_\_. The original Drawings have been Archived.**

**Connection Availability.** After construction is completed, the applicant (or the applicant's representative) must complete an Available for Connections form which indicates that lines have been installed, have been tested, and meet MSD's requirements. MSD will then forward the form to the appropriate agencies. **The following note shall be added to the mylar:**

**The Final Record Information in this drawing was provided by the Professional Land Surveyor \_\_\_\_\_ on \_\_\_\_\_.** **The Property Service Connection information was collected by the General Contractor \_\_\_\_\_ with no field verification by the Professional Land Surveyor. The Final Record Data and Property Service Connection information has been accepted by MSD Inspector \_\_\_\_\_ on \_\_\_\_\_.**

**Warranty Period.** After construction is complete, the record drawings have been corrected to show "As Builts", MSD has received the "Contractor's Sworn Statement of Final Payment and the "Applicant's Sworn Statement of Final Payment", the Engineer of Record has sent a letter to the Kentucky Division of Water informing them that the sewer construction is complete or noting the differences that took place during construction and all outstanding complaints have been resolved, MSD will begin the formal one year warranty period, by issuing a "Letter of Acceptance" to that effect. Assuming there are no defects with the facilities, the bonds for the sewers will be released at the end of one year. Roadway and pavement warranties must be in effect for one year.