

**SECTION UC-005**  
**PROJECT APPROVAL**

**PART 1 - GENERAL**

1.01 SCOPE

- A. This Section outlines procedures and submittals required to secure the approval of the MD-WASD for the construction of donation water mains, wastewater pump stations, force mains and gravity sewer mains.
- B. Review and approval by the MD-WASD does not relieve the Engineer of Record, Contractor or Owner from their responsibility to design, construct and convey to the MD-WASD a system in complete conformance with these Standards, any special requirements by MD-WASD and the requirements of any other governing authority.
- C. All exterior exposed items incorporated in structures such as exterior doors, louvers, etc., and all other such items as required by the Miami-Dade County Building Department to have product control approval shall, when submitted for approval by the MD-WASD be accompanied by their Miami-Dade County Product Approval Notice.
- D. Laterals, fire lines and service connections larger than two (2) inches require a blanket form from the MD-WASD's Plan Review Office, call (305) 669-7658 for further information.

1.02 DEFINITION

The term "Engineer of Record" as used herein shall mean a registered Professional Engineer licensed for practice by the State of Florida.

1.03 PROCEDURES FOR APPROVAL

- A. Discuss scope of proposed project with the MD-WASD's Plans Review Office. Contact the Plans Review Office for current fees charged for review of plans. Two (2) sets of plans are required for dry-run. Submit water, sewer and pump station plans at the same time for dry-run review. (See requirements for submittal of pump stations.)
- B. Secure agreement with the MD-WASD's New Business Office. The MD-WASD will not review nor approve final plans until such agreement is secured.
- C. In general, the following shall be strictly adhered to, unless otherwise stated herein or as required by the MD-WASD:
  - 1. One (1) copy of approved Public Works dry-run to be submitted at the time that plans are submitted or prior to submittal of final plans for approval.
  - 2. Submit fifteen (15) sets of plans for acceptance of both water and sewer plans, plus five (5) water and three (3) sewer, DERM and/or Health Department applications. All plans shall be sealed, dated and signed, with original signature, by the Engineer of Record. The

applications shall be sealed by the Engineer of Record and signed, with original signatures, by both the Engineer of Record and his client.

3. Twelve (12) sets of the accepted plans and all applications, which have been signed by a representative of the MD-WASD, will be returned to the Engineer of Record.
  4. The Engineer of Record will be responsible for obtaining approvals, acceptances and permits from all other agencies.
  5. Approved plans are valid for three hundred sixty-five (365) days. Thereafter, two (2) copies of dry-runs are required to be submitted in order to obtain a restamp or revision. Prior to submittal, the Engineer of Record shall present proof that an agreement with the MD-WASD has been renewed.
- D. For donation pump station projects, submit three (3) sets of plans and two copies of the Pump Station Design Package (Appendix A) to the Utility Development Division's Plans Review Section (dry run). Each set of Plans and each of the covers of the Pump Station Design Packages shall bear the date, address, phone number, license number and the impress seal and signature of the Engineer of Record, who shall be a registered Professional Engineer licensed for practice by the State of Florida. See Subsection 1.04-C, herein, for additional submittal requirements. One copy of the plans and Pump Station Design Package will be returned with comments.
- E. The Utilities Development Division will submit pump station project submittals to the MD-WASD's Engineering Division for technical review. Upon completion of technical review and recommendations are completed, the Engineering Division Reviewer will do the following:
1. If technical recommendation concluded that the project should be approved, the Engineering Division Reviewer's comments and project documents will be returned to the Plans Review Section of the Utilities Development Division to continue their processing. A copy of the Engineering Division's recommendation will be called in and/or faxed to the Engineer of Record for information.
  2. If the technical recommendation concluded that the project should not be approved, the Engineering Division's Reviewer will inform the Plans Review Section.
    - a) This conclusion, along with the Engineering Division Reviewer's comments, will also be called in and/or faxed to the Engineer of Record.
    - b) The Engineer of Record will have five (5) working days, from date informed above, to contact the Engineering Division Reviewer to discuss the disapproval or comments and/or propose additional information for consideration. His available options are follows:
      - i) Set an appointment through the Plans Review Section of the Utilities Development Division to discuss the project.
      - ii) Submit additional information to the Plans Review Section of the Utilities Development Division for transmittal to the Engineering Division Reviewer.

iii) Meet with or call the Engineering Division Reviewer during Walk-in Periods, which will be Monday through Friday, from 8:30 A.M. to 10:30 A.M. Meetings will be scheduled on a first-come-first-served basis at Room 211, of the MD-WASD's LeJeune Building (3575 S. LeJeune Rd.). Meetings during Walk-in Periods will be coordinated by the staff of the Engineering Division.

c) In the event the Engineer of Record is non-responsive and fails to respond according to b), above, the Engineering Division Reviewer will disapprove project documents and return with comments to the Plans Review Section of the Utilities Development Division.

F. For final approval of combination water and sewer extension projects:

1. One copy of approved Public Works dry-run shall submitted at the time that plans are submitted or prior to submittal of final plans for approval.
2. Submit fifteen (15) sets of plans, plus five (5) water and three (3) sewer, DERM and/or Health Department applications. All plans shall be sealed, dated and signed, with original signature, by the Engineer of Record. The applications shall be sealed by the Engineer of Record and signed, with original signatures, by both the Engineer of Record and his client.
3. Twelve (12) sets of the accepted plans and all applications, which have been signed by a representative of the MD-WASD, will be returned to the Engineer of Record.
4. The Engineer of Record will be responsible for obtaining approvals, acceptances and permits from all other agencies.

G. For final approval of sewer extension or sewer lateral projects:

1. Submit ten (10) sets of plans along with DERM application for approval. All of these submittals shall be originally signed and sealed by the Developer's Engineer of Record. The Engineer of Record shall be a registered Professional Engineer licensed for practice by the State of Florida.
2. Seven (7) sets of the accepted plans and all applications, which have been signed by a representative of the MD-WASD, will be returned to the Engineer of Record.

H. Obtain approvals and permits from all concerned agencies.

#### 1.04 SUBMITTAL REQUIREMENTS FOR PUMP STATION PROJECTS

A. Three (3) copies of dry-run plans shall be provided at the time of submission (See Section 01725). The following data shall be submitted along with initial (dry run) plans, including two required copies of water and sewer plans:

1. Submit Pump Station Design Package (Pages 1,2 and 3) contained in Appendix A. This design package shall be submitted as the cover for the design package along with all information and attachments as stated therein. The covers of all Pump Station Design Packages submitted shall bear the date, address, phone number, license number and the

impress seal and signature of a registered Professional Engineer licensed for practice by the State of Florida.

2. Three copies of the pump station calculations.
  3. Three copies of the proposed sewer master plan, on 24" x 36" plan format, depicting the proposed pump station location, clearly identifying the area to be served and showing terminal manholes with a 4-foot cover to the invert of the pipe. A 0.4% slope shall be used to calculate the required depth. Information on the proposed rim elevations for the terminal manholes and final grade elevation at the pump station site shall be shown based on flood criteria.
  4. A pump station site plan shall be shown on the pump station plans. It shall include a 25-foot long by 12-foot wide paved driveway, which shall provide access to all structures, wet well, dry well, valve pit, emergency generator building and fuel tank slab. A minimum separation of 5-feet, shall be maintained between any two sewer mains, measured edge to edge. A typical pump station site plan shall have a 45-foot by 65-foot dimensions.
  5. If an emergency generator is required in accordance with "STANDBY POWER" of Section UC-500, emergency generator and fuel tank plans shall also be submitted. In all cases, a fuel tank slab and generator building shall be constructed together with all required piping and ducts.
- B. Sixteen (16) copies of the pump station final plans shall be submitted for approval together with the water and sewer plans.

#### 1.05 GENERAL SUBMITTAL CONTENT REQUIREMENTS

Construction Plans: Plans submitted shall be 24 inches by 36 inches in size and shall contain at least the following information, in addition to those listed above, when applicable:

##### A. GENERAL

1. Submit two (2) sets of plans for dry-run (i.e. unsigned or sealed). Plan sheets submitted for approval shall bear the date, address, phone number, license number and the impress seal and signature of a registered Professional Engineer, licensed for practice by the State of Florida.
2. The standard notes shown on Standard Detail GS 0.5 shall be contained on all water and sewer plans. All other notes, such as DERM, Engineer or Contractor notes, shall be label "Not Part of M-DWASD Notes nor Approval" or placed on a separate sheet on the plans.
3. Construction plans for pump station projects shall contain Miami-Dade Water and Sewer Department standard notes. The following design guidelines shall modify all previous standards as they apply to the design and other pertinent criteria for pump stations:
  - a) Supplemental Design Guidelines for Lift Stations and Force Mains, May 1994 (See Appendix B)

- b) Sewer Pump Stations Design Guidelines, April 1995 (See Appendix C)
  - c) Standard Pump Station Drawings (See Appendix D)
4. Location sketch, scaled at 1 inch = 300 feet, shall be on the first sheet. Sufficient streets and avenues shall be provided on sketch to help locate the subject property, which shall be properly identified.
  5. Plan and profile shall be scaled as follows:
    - Plan Scale: from 1 inch = 10 feet to 1 inch = 40 feet
    - Profile Scale: Horizontal - same as plan,  
Vertical - 1/10 of plan
  6. All construction notes, such as the notes on Standard Details WS 1.61, WS 4.5 and the like, shall be noted on plan not on profile. Call out all M-DWASD Standard Details when they apply and be aware that all M-D WASD Standard Details apply whether or not they are called out specifically.
  7. Show the following information when the proposed pipe will connect to existing piping:
    - a) Size of existing pipe.
    - b) Material type of existing pipe (e.g. C.I., D.I., Concrete, etc.)
    - c) Indicate whether proposed connection will require removal of any fitting, pipe or pipe section, concrete anchor or structure, and the like.
    - d) Locate the nearest valve that controls flow in the existing main when proposed connection involves removal of plug(s) instead of tapping.
  8. All MD-WASD easements containing water mains shall be 12 feet wide, clearly delineated with dark dashed lines and labeled "twelve (12) feet M-DWASD easement". Easements containing sewer mains shall be 15 feet wide, clearly delineated with dark dashed lines and labeled "fifteen (15) feet M-DWASD easement". Easements containing both water and sewer mains shall be a minimum of 23.5 feet and identified with six (6) feet offset from water main, seven and a half (7.5) feet offset for sewer main and a ten (10) feet separation between the water and sewer line.
  9. No structures shall be permitted inside of the MD-WASD's easement, including within the vertical projections thereof, easements shall be exclusively for M-DWASD mains. Overhead utilities or structures may only cross or be within the vertical projection of M-DWASD's water and sewer easements if a minimum of seventeen (17) feet clearance is provided.
  10. Plans with modification or relocation of existing water and sewer mains shall clearly delineate the existing and proposed M-DWASD water and sewer easements in the vicinity of the proposed area of work.
  11. Meters, fire hydrants, and all other M-DWASD utility accessories shall be placed outside of

the proposed or existing M-DWASD water and/or sewer easement with separate easements designed for said utility accessories.

12. Show all existing water and/or sewer mains as a broken line (i.e. dashed). Show proposed water and/or sewer mains as dark solid line. Also, identify respective utility pipe, size and material type. Existing or proposed mains 20-inches in diameter and greater, shall be shown as two lines (i.e. double line) of the linetype as stated.
13. Where existing and proposed utilities conflict, all conflicting existing utilities, including drainage, shall be shown in both plan and profile. Conflicting existing utilities shall be shown in both water and sewer plans.
14. For tapping sleeves, show offset distance from tapping sleeve to the nearest KNOWN centerline of street or avenue to obtain a reference point. Also show the material type and size of the existing pipe that will be tapped.
15. Single water or sewer mains in easements shall be located in the center of the easement.
16. Location and separation of water system mains shall conform with F. A. C. rule 62-555.314. Horizontal minimum separation between any water or sewer main and any utility or drainage, when not covered by F. A. C. rule 62-555.314 shall be 5 feet from face to face.
17. All buildings within the proposed project shall be identified as proposed or existing.
18. When using stationing for water or force mains on public right-of-way or private property, baseline shall not be set on top of main. Provide offset distance from baseline to proposed main on plans.
19. Centerline or baseline of all roads must be clearly labeled at two (2) points of the road fronting the project and all subsequent internal roads within the project. The same requirement applies to right-of-way and property line identification. In addition the following shall be identified, when applicable:
  - a) Changes in alignment of baseline.
  - b) Tie-in from centerline of proposed main to baseline at each end of plan and at every change in alignment of main.
  - c) Tie-in with existing mains, from centerline of existing main to baseline or centerline of both streets, if located at an intersection.
20. All proposed backflow preventers must be located in private property and on an easily accessible area.
21. All proposed M-DWASD mains, in private property, must be sufficiently separated from the footings of proposed structures or other foundations to prevent undermining during future repair by MD-WASD forces. Separation shall be properly designed by the Engineer of Record. The MD-WASD reserves the right to require such calculations during approval.

22. All ductile iron water and force mains of 12-inch nominal diameter or less and installed with less than 30-inch cover together with all ductile iron water or force mains of 16 through 24-inch nominal diameter and installed with less than 36-inch cover shall have a reinforced concrete slab as shown in Standard Detail GS 1.2. All ductile iron water and force mains of nominal diameter greater than 24-inches and installed at less than 36-inch cover shall have a reinforced concrete slab designed by a State of Florida licensed Professional Engineer.
23. Identify all proposed fittings, provide station location or offset (distances).
24. Location of proposed water main or sewer main in the public right-of-way shall be according to Miami-Dade County Public Works standards.
25. Show proposed water and sewer services together with any existing services crossed by proposed construction.
26. Show pump station site plan when project includes installation of a pump station.
27. Show proposed sidewalk, if any.
28. Fire hydrant service lines shall be 6-inch nominal diameter.
29. If the finished grade where M-DWASD mains shall be installed will be or are made of decorative pavers or ornamental bricks, a covenant shall be executed with the New Business Section to provide agreement that the MD-WASD will not be held responsible for the installation nor replacement of the same. In the event of main repairs the MD-WASD will only install asphalt.

## **B. WATER**

1. All proposed water valves (gate, butterfly, etc.) shall be identified on plan.
2. All water transmission mains twenty (20) inches or greater shall be provided with a valve every one half ( $\frac{1}{2}$ ) mile, unless otherwise required or directed by the MD-WASD.
3. Proposed mains thirty (30) inches or greater shall be provided with pipe specifications report in compliance with M-DWASD standards. Plans shall clearly identify all restrained joints and lengths, push-on joints, and other types of pipe joint proposed.
4. All proposed cutting and plugging of any existing M-DWASD owned water main shall be done by MD-WASD forces, at owners expense and clearly identified on the plans as such. All water services two (2) inches and below from existing mains shall be done by MD-WASD forces, at the owners expense.
5. All meters in private property shall be part of M-DWASD easements. Maximum length of the service line shall not exceed fifty (50) feet from main to meter.
6. In compliance with Section D8-05, Part 2 of the Public Works Manual, resilient-seat gate valves shall be provided every six-hundred sixty (660) feet on water mains. The same distance shall also apply for butterfly valves on water mains 42-inch nominal diameter and

greater. The MD-WASD reserves the right to require other types of valves on mains of whatever size as is considered in the best interest of MD-WASD. MD-WASD shall determine what is in the MD-WASD's best interest and said determination shall be final and binding.

7. On plans where no stations are provided, all water main pipe profile plans must be clearly identified with offset distance at all bends, joints, beginning point, ending point and other descriptive information.

### C. SEWER

1. Show direction of flow on proposed gravity sewer plans.
2. Plug valves shall be used on force mains and shall be provided at a spacing of no more than every one half ( $\frac{1}{2}$ ) mile, unless otherwise required or directed by the MD-WASD.
3. For proposed manhole show invert elevation of pipe and indicate direction of flow. Rim elevation shall be shown on top of the manhole.
4. Manholes for sewer mains shall be clearly labeled with manhole numbers, slope in profile, pipe size, material and distance from one manhole to the next. Manholes shall be provided in gravity sewer systems every four hundred (400) feet, maximum.
5. Where continuous lines are used to separate one sheet from the next, all manholes must end at said lines.
6. For gravity sewer mains located in grass areas, the following cover (i.e. COVER as measured from top of pipe) shall be observed:
  - a. COVER < 2.5 feet: Main shall be ductile iron pipe and installed under reinforced concrete slab.
  - b. 6 feet  $\geq$  COVER  $\geq$  2.5 feet: Main shall be ductile iron pipe or if approved, C900 PVC. SDR35 PVC can be used, if approved, and installed under a non-reinforced concrete slab.
  - c. 14 feet  $\geq$  COVER > 6 feet: PVC main may be used, if approved, without a concrete slab.
  - d. COVER > 14 feet: Ductile iron main is required.
7. For gravity sewers located under paved areas, the following shall be observed:
  - a. COVER < 3.5 feet: Ductile iron pipe or, if approved, C900 PVC pipe, is required, unless article 7b, below, is applicable.
  - b. COVER < 2.5 feet: Ductile iron pipe and reinforced concrete slab are required.

### D. PROFILE

1. Show elevation of finished grade every one hundred (100) feet.
2. For proposed water main or force main, show elevation every one hundred (100) feet on top

of pipe.

3. For proposed or existing sanitary and storm sewer, show top elevation.
4. Show top elevation of any other utilities crossing proposed utility.
5. All utilities in profiles shall be identified with labels, showing size, material and type of main. Also identify all fittings, valves, plugs, flushing valve outlets, air release valves and the like.
6. Identify in profiles the respective street or avenue location or other source of identifier which is also called out in corresponding plan view.
7. Sewer blankets (laterals or force mains) and water blankets having mains longer than 25 feet in length shall require a profile, regardless of whether there are utility crossings or not.
8. Each profile shall provide the invert elevation at the actual invert location of pipes and/or manholes, as applicable.

**PART 2 - PRODUCTS** (Not Used)

**PART 3 - EXECUTION** (Not Used)

END OF SECTION