



ARTICLE 6: WATER RESOURCES' STANDARDS for CENTRAL SEWER and WATER IMPROVEMENTS

Section 600

Intent of Regulations, Project Scope and Plans

The intent of these regulations is to prescribe complete functional Improvements, which the Developer undertakes to do, at no cost to Portage County and in full compliance with the approved plans, standard drawings and specifications of the Portage County Water Resources Department (PCWR). Should any misunderstanding arise as to the intent or meaning of said plans, specifications or standard drawings or any discrepancy appear in either, the decision of the Portage County Water Resources Department in such case shall be final and conclusive.

Section 601

Improvement Plans

601.1 General Standards for Sewer and Water Improvement Plans

All drawings should be easy to read, with all lines and letters dark enough to provide good contrast with the paper and follow Ohio Environmental Protection Agency (OEPA) design guidelines. Plans with more than one sheet, should present stationing from left to right or from bottom to top. All plans must include the PCWR Project Number, Standard Details and Notes and include a table of Estimated Quantities.

Horizontal locations shall be recorded to within one tenth (0.1) of a foot. Vertical elevations, i.e. rim and inverts, shall be recorded to within on one-hundredth (0.01) of a foot. Drawings shall contain the seal and signature of the Professional Engineer of Record licensed by the State of Ohio responsible for the design.

601.2 Drawings shall be submitted in the following format:

- A. Drawing Sheet: 24" x 36"
- B. North Arrow: Include on all plan view drawings. Where possible, north arrow shall face up or to the right hand side of the plan sheet.
- C. Symbols/lines: Existing features shall be presented as hatched lines 0.05 mm thickness. Proposed features shall be identified as solid black lines 0.4 mm thickness.
- D. Scale:
 - 1. General Plan Scale 1" = 100'
 - 2. Plan and Profile Scale Congested Area 1"= 20' horizontal, 1"= 5' vertical
 - 3. Plan and Profile Scale Rural Area 1"= 50' horizontal, 1"= 5' vertical

- E. Datum: The Ohio State Plane Coordinate System, NAD 83 (2011) and NAVD 88, or most current adjustment shall be used for the horizontal and vertical datum, respectively. Show State Plane Coordinates for three (3) major corners of the subdivision and list the combined scale and elevation factor. List vertical datum on plan and specify the benchmark to be used for vertical control during construction.

Section 602

Sewer Improvement Plans

602.1. Gravity Sewer

- A. Show proposed alignment of gravity sewer without-distances from the property/easement line(s), the location of proposed sewer facilities (i.e., manholes) with lengths from center of manhole to center of manhole. Include pipe diameter, material, slope, direction of flow and any bore casings diameter, length and material. Manholes shall be identified with a unique Manhole ID, station and offset. Designer shall include rim elevation, invert elevation and direction, drop (if applicable), and angle between pipe inverts (if not a 90-degree increment).
- B. Sanitary laterals shall be centered on the front yard property line and ten feet from the water service lateral and shall be presented with length, depth, material, station and offset, and distance from side yard property line (minimum diameter 6-in, minimum slope 1%). In cul-de-sacs the designer shall place the sanitary lateral outside the boundary of a driveway. Landscaping (such as trees) shall not be planted in the utility right-of-way adjacent to the sanitary service lateral. Cleanouts may be required at the right-of-way.

602.2 Sanitary Force Main

Show proposed alignment of force main without-distances from the property/easement line(s), the location of proposed sewer facilities (air release, flushing stations, pump station, manholes, etc.) with length between them and station and offset. Include depth, material, diameter, bore casings' diameters, lengths and material, air release, flushing stations, manholes, and direction of flow. Provide location and type for all sewer facilities. Include dimensions from existing to proposed connection.

Section 603

Water Improvement Plans

- A. Show the proposed alignment of the water main without-distances from the property/easement line(s), the location of proposed water facilities (i.e., valves, fire hydrants, and fittings) with length between them and station and offset. Include material, diameter, depth, bore casings' diameter, length and material and restrained

lengths. Provide hydrants, valves, air release, meter pits, manholes – location, type, with station and offset. Include dimensions from existing valves to proposed connection.

- B. Curb boxes: For residential subdivisions, curb boxes shall be centered on the front yard property line and ten feet from the sanitary service and outside the boundary of a proposed sidewalk and driveway. In cul-de-sacs the designer shall place the curb box outside the boundary of a proposed driveway and/or sidewalk. When depth to water main exceeds seven (7) feet below grade a stainless-steel extension shall be provided on the valve. Landscaping (such as trees) shall not be planted in the utility right-of-way adjacent to the water service lateral.

Section 604
Standards for Construction of Sewer and Water Improvements

Section 604.1 Sewage Treatment and Sanitary Sewer Improvements *(Section 630, p. 49, in 1984 PCSR)*

Sewage treatment alternatives shall follow the wastewater prescriptions established and/or amended in the current clean water plan (208 map). The following requirements shall govern sewage treatment improvements for all Subdivisions:

A. Extension of Public Sanitary Sewer System

Where an adequate public sanitary sewer system is reasonably accessible by determination of PCWR, the public sanitary sewer shall be extended to adequately serve all lots. Combined sanitary sewer and storm sewers are prohibited. Extensions shall meet, at the time of the submittal:

1. The current and amended requirements of the Ohio Environmental Protection Agency
2. *Ten States Standards*
3. PCWR Standard Specifications, Standard Sewer Details
4. Standards of all other government agencies having jurisdiction, including but not limited to the local fire department, Portage County Building Department and the township.

B. Public Sanitary Sewer System Not Available

Where a public sanitary sewer system is not reasonably accessible the Developer shall provide either:

1. A Central Treatment Plant:

A central treatment plant may be installed with the permission of and in accordance with the Ohio Environmental Protection Agency and PCWR requirements; or

2. Household Sewage Treatment Systems:

Lots may be served by individual household sewage treatment systems only when a public sanitary sewerage system is not reasonably accessible, and the installation of a central treatment facility has not been approved by the Ohio Environmental Protection Agency.

- a. Where the installation of an individual household sewage treatment system is considered, the suitability of the soil, the absorptive ability of the soil, surface drainage, ground-water level and topography and all other requirements of the Sewage Treatment System Regulations shall be the criteria for determining whether or not the installation of such a system is permissible and what type of approved system is to be used.
- b. An Ohio certified soil scientist shall do an on-site soil evaluation of each proposed building lot of the area being subdivided and submit a copy of the soils review to the portage county health department.
- c. Criteria governing the installation of individual household sewage treatment systems shall be in accordance with the requirements of the Portage County Combined General Health District, the *Ohio Revised Code* and the *Ohio Administrative Code* pertaining to household sewage treatment systems.
- d. Any person proposing to create a Subdivision shall submit to the Portage County Combined General Health Department, for approval, plans clearly showing that the provisions of the current rules of the Portage County Combined General Health District, the *Ohio Revised Code* and the *Ohio Administrative Code* pertaining to household sewage treatment systems can be adequately met, before any of the lots in the Subdivision are sold or offered for sale, whether or not such sale entails a transfer of title or deed.

604.2 Water Supply (Section 631, p. 50, 1984 PCSR)

The following requirements shall govern water supply improvements for all Subdivisions:

A. Extension of Public Water System

Where an adequate public water system is reasonably accessible by determination of PCWR, the public water system shall be extended to adequately serve all lots. Such extensions shall meet, at the time of submittal, all current and amended requirements of:

1. The Ohio Environmental Protection Agency
2. *Ten States Standards*
3. PCWR Standard Specifications and Details
4. Standards of all other governmental agencies having jurisdiction, including but not limited to the local fire department, Portage County Building Department, and the affected township.

B. Private Water System

Where no public water system is reasonably accessible to the subdivision, individual wells for each subplot may be approved according to the requirements of the Ohio Environmental Protection Agency, the Portage County Health District and all other agencies having jurisdiction.

Section 605

Installation of Public Sanitary Sewer and/or Water Improvements *(Section (632, p. 50, 1984 PCSR)*

Section 605.1 General Standards

Prior to plat approval by the Portage County Regional Planning Commission, all public sanitary sewer or water Improvements required herein shall be financed and/or constructed by the Developer and inspected and approved by PCWR in accordance with all other sections of these Regulations and the *Portage County Rules and Regulations Governing the Construction, Maintenance and Operation, Use and Protection of Sanitary Sewer Systems and the Waterworks Systems in The Portage County Regional Sewer District and Streetsboro Sanitary District No. 4.*

Section 605.2 Required Information

The Developer shall provide PCWR with the following documents and fees:

- A. Detailed construction plans and specifications and estimates of construction costs prepared by an Ohio Registered Professional Engineer for approval by PCWR;
- B. A completed PCWR application to extend facilities;
- C. Applicable design review fees;
- D. Ohio Environmental Protection Agency Permit to Install application and an Ohio Environmental Protection Agency approved drawing set;
- E. A copy of the construction contract between the Developer and contractors;
- F. A construction schedule;
- G. Applicable construction service fees;
- H. A set of as-built drawings;
- I. Affidavits of verification of payments stating that the work has been completed and all subcontractors, material suppliers and laborers have been paid in full and there are no claims outstanding which would entitle them to claim a lien on the property;
- J. An executed sewer and water agreement between the Developer and the Portage County Board of Commissioners;
- K. A Maintenance Guarantee in accordance with Section 607.

Section 606

Performance Guarantees

606.1 Performance Guarantee in lieu of the Installation of Sanitary Sewer and/or Water Improvements *(Section 633, p. 51, 1984 PCSR)*

- A. As consideration for plat approval by the Portage County Regional Planning Commission, and in lieu of the actual installation, completion and acceptance of any required improvement(s) prior to said plat approval, the Developer may execute a cash Performance Guarantee obligating the Developer to the completion of the required improvements and the payment of all costs incurred in such construction.
- B. Such Performance Guarantee shall be secured by a cash escrow account established with a solvent financial institution.
- C. The Developer will remain liable for any expenditure over and above the derived Performance Guarantee, including but not limited to unforeseen site conditions that increase the construction estimate or increased material costs.
- D. Payments to the Developer's contractor shall be made upon the recommendation of the Developer's engineer and the approval of the Developer and PCWR.
 1. A retainage of ten percent (10%) shall be withheld until completion and acceptance of the project. The cash balance remaining in the cash escrow account shall at all times be adequate to complete construction.
 2. If submitted invoices exceed the percent of construction complete, the Developer will be responsible to pay the difference between invoiced amounts and the released funds.

606.2 Term of Sewer and/or Water Improvement(s) Performance Guarantee *(Section 634, p. 51, 1984 PCSR)*

- A. The term for the completion of the required sanitary sewer and/or water improvement(s) shall be for a period of no longer than eighteen (18) months.
- B. The Portage County Board of Commissioners may extend the time period by resolution where circumstances and conditions warrant such extension.
- C. If the extension is instituted by the Developer, the request for an extension of the term and the reason for the extension must be submitted in writing to PCWR by the Developer at least one (1) month prior to expiration of the 18-month term.

606.3 Amount of Sewer and/or Water Improvements Performance Guarantee *(Section 635, 1984 PCSR)*

The amount of the Performance Guarantee shall be determined by the following procedures:

- A. The Developer's engineer shall prepare an estimate of the construction cost based upon the approved Improvement Plans.

- B. The Developer shall acquire bids from reputable and competent contractors proposing to furnish all labor and materials for the completion of the required Improvements. The Developer shall then enter into a construction contract with the bidder of his choice. Such construction contract shall be in accordance with the approved Improvement Plans.
- C. PCWR shall review the construction plans, the Developer's engineer's estimate, construction bids and determine the construction cost estimate. An additional amount, not less than ten percent (10%) of the construction cost estimate, shall be included for payment of contingency items required to complete the improvement. The Developer shall be responsible for payment of any contingencies, omitted items or extra costs that are in excess of the amount of the Performance Guarantee.

606.4 Release of the Performance Guarantee for Sanitary Sewer and/or Water Improvements *(Section 636, p. 52, 1984 PCSR)*

The Performance Guarantee may periodically be partially released by PCWR. PCWR will authorize such release of construction estimates from the Performance Guarantee to pay the Developer or the contractor for materials and/or labor furnished for the satisfactory completion of the sewer and/or water improvements. All payments shall be made according to the following general procedures:

- A. The Developer's engineer shall prepare the estimates on forms prescribed by PCWR and shall certify to PCWR that the work has been done according to the plans and specifications of PCWR.
 - 1. The sum to be paid must represent an increase in the value of the project at least equivalent to amount to be paid; and,
 - 2. Upon payment of the estimates, sufficient funds will remain to complete the project.
- B. Upon the approval of the Developer and PCWR, the estimates will be forwarded to the financial institution for payment.
- C. At all times, the retainage amount of ten percent (10%) of each construction estimate will be withheld as stipulated in Section 606.1.
- D. PCWR will release the ten percent (10%) retainage of the Performance Guarantee upon final acceptance of the completed improvements by the Portage County Board of Commissioners.

Section 607

Maintenance Guarantees

607.1 Guarantee of Workmanship and Materials – Maintenance Guarantee for Sanitary Sewer and/or Water Improvements *(Section 637, 1984 PCSR)*

The Developer shall provide a one-year Maintenance Guarantee in the form of a cash escrow account or surety bond guaranteeing all workmanship and materials involved in the construction of the sewer and/or water improvements.

- A. Such guarantee shall be in the amount of ten percent (10%) of the cost of the improvements but shall not be less than One Thousand Dollars and No/Cents (\$1,000.00).
- B. The Developer must submit the Maintenance Guarantee to the Portage County Water Resources Department prior to final acceptance by the Portage County Board of Commissioners of the completed improvements.
- C. PCWR may increase the required Maintenance Guarantee and/or time period if, in his/her opinion, unusual topographic, subsoil or other construction limitations warrant. In such situations PCWR will furnish written explanations to the Portage County Board of County Commissioners for their action.

607.2 Term of the Maintenance Guarantee

- A. The Developer must maintain, repair and restore the improvements until the improvements pass final inspection by PCWR.
- B. If the Developer fails to perform these activities in a timely fashion, but in no case longer than thirty (30) days, PCWR or their authorized agent may perform the work. The cost of such work will be deducted or drawn from the Maintenance Guarantee. The Developer will remain liable for any expenditure over and above the derived Maintenance Guarantee.
- C. It is the responsibility of the Developer to request the final inspection for the Maintenance Guarantee release.

Section 608

Construction Schedule for Sanitary Sewer and/or Water Improvements *(Section 639. p.53, 1984 PCSR)*

The Developer's contractor shall submit a written work schedule in accordance with *Portage County Rules and Regulations Governing the Construction, Maintenance and Operation, Use and Protection of Sanitary Sewer Systems and the Waterworks Systems in The Portage County Regional Sewer District and the Streetsboro Regional Sewer District No. 4.*

Section 609

Inspection of Construction of Sanitary Sewer and/or Water Improvements (Section 650, p.53, 1984 PCSR)

Section 609.1 Inspections and Testing

Per the *Portage County Rules and Regulations Governing the Construction, Maintenance and Operation, Use and Protection of Sanitary Sewer Systems and the Waterworks Systems in The Portage County Regional Sewer District and Streetsboro Regional Sewer District No. 4*, all connections to the public sewer and/or water systems shall be inspected by and subject to testing under the supervision of PCWR.

Section 609.2 Inspection Fees

The Developer shall pay PCWR the current fee rate prior to construction activities to cover the project administration and inspection services. Such fees must be paid prior to scheduling a pre-construction meeting.

Section 609.3 Inspection Schedule

All work will be inspected during PCWR's regular work hours. With approved scheduling, the regular hours of the inspector may be modified by PCWR. The Developer will be responsible to pay any overtime accumulated by the inspector to accommodate times outside of regular work hours.

Section 610

Samples and Tests for Sanitary Sewer and/or Water Improvements (Section 660 1984 PCSR)

In order to assure the use of suitable materials, PCWR may require certain tests to be made, including, but not limited to soil testing, compressive strength of concrete, etc. The Developer shall pay for all tests.

Section 611

Proof of General Liability Insurance (Section 638 1984 PCSR)

The Developer's contractor shall furnish the owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of the policies. Such certificates shall also contain the following statement: "The insurance covered by this certificate will not be cancelled or materially altered, except after thirty (30) days written notice has been received by the Portage County Water Resources Department." Forms for this purpose are available from PCWR.

The amounts of such insurances shall be as follows:

Liability Limit (bodily injury and property damage)

Per occurrence	\$1,000,000.00
Aggregate	\$2,000,000.00

Section 612

Acceptance of Improvement Project

If PCWR or its agent determines that the improvement is not in conformity with all the applicable regulations and the approved Improvement Plans, the Developer shall be advised in writing of the deficiencies in the form of a punch list. If the Developer fails to complete the punch list items within a time limit set by PCWR, the County may complete the improvement through the use of the Performance Guarantee.

PCWR will not issue sewer or water connection permits for the improvement until all conditions listed in Section 609 have been met and the improvement is accepted by resolution by the Portage County Board of Commissioners.