

ARTICLE 6

REQUIREMENTS FOR CONSTRUCTION OF IMPROVEMENTS

Section 600

Construction Procedure and Materials

The subdivider shall design and construct improvements not less than the standards outlined in these regulations. The work shall be done under County supervision and inspection and shall be completed within the time fixed or agreed upon by the County Engineer and/or Sanitary Engineer. The minimum requirements for materials shall be in accordance with the standards of the current volume of "Construction and Material Specifications" of the State of Ohio Department of Transportation, and the requirements of the Ohio Department of Health. All inspection costs shall be paid for by the subdivider.

Section 601

Construction, Improvement Plans and Specifications

Drawings showing cross sections, profiles, elevations, construction details, and specifications for all required improvements shall be prepared by a professional engineer. The improvement plans shall be prepared in accordance with the standards, provisions, and terms set forth in Articles 5 and 6 of these regulations.

If it becomes necessary to modify the improvements as approved due to unforeseen circumstances, the subdivider shall inform the County Engineer and/or the County Sanitary Engineer in writing of the conditions requiring the modifications. Written authorization and approval by the County Engineer and/or the County Sanitary Engineer, to make the required modifications must be received before proceeding with the construction of the improvement.

Before construction begins, and before acceptance, the subdivider shall notify, in writing, the County Engineer and County Sanitary Engineer a set of reproducible drawings (excluding sepia) for permanent record, showing the locations, sizes, and elevations of all improvements as to be constructed.

Pre-Construction Meeting and Work Schedules

Prior to the commencement of any construction the subdivider shall notify, in writing, the County Engineer and County Sanitary Engineer of the date of commencement of construction. A pre-construction meeting may be required with regard to procedure, materials, and inspection of the project.

Construction Inspections

1. Responsible Official:

The County Engineer shall be responsible for inspection of all street improvements including storm sewers. The County Sanitary Engineer shall be responsible for the inspection of all sanitary sewers, sanitary treatment plants, and appurtenances as well as central water supply and treatment facilities, and appurtenances.

2. Authority and Duty of Inspectors:

Inspectors employed by the County shall be authorized to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The Inspector shall not be authorized to revoke, alter or waive any requirements of the specifications or plans. He shall be authorized to call the attention of the contractor to any failure of the work or materials to conform to the specifications and contract in writing. He shall be authorized to call the attention of the contractor to any failure of the work or materials to conform to the specifications and contract in writing. He shall have the authority to reject in writing materials which do not meet specification requirements or suspend the portion of the work involved until any question at issue can be referred to and decided by the County Engineer or Sanitary Engineer.

3. Final Inspection:

Upon completion of all the improvements, the subdivider shall request in writing a final inspection by the County. The County Engineer shall make a final inspection of all streets and storm sewers. The County Sanitary Engineer shall make a final inspection of all sanitary sewers and central water supply systems. All inspections shall be made promptly and approval or rejection shall be submitted in writing.

Before any roads developed as part of a subdivision become public, the County Engineer shall first inspect such roads and certify his approval of them to the Board of Portage County Commissioners.

The developer should have his representative present at the time of all inspections.

Construction Responsibilities

1. Cooperation of Subdivider and/or Contractor

The subdivider and/or contractor shall have available on the project, at all times, a clearly readable copy of all required plans and specifications. He shall cooperate with the inspector and with other contractors in every way possible. The subdivider and/or contractor shall have a competent representative acting as his agent on the project.

The representative shall be capable of reading and thoroughly understanding the plans and specifications, and he shall receive instructions from the Inspector. The representative shall have full authority to execute the orders or directions of the Inspector and to promptly supply such materials, tools, plans, equipment and labor as may be required. The Inspector's orders should be executed without delay. A representative shall be furnished irrespective of the amount of work sublet.

2. Grade Stakes:

Pavement and pipe grade stakes shall be set at twenty-five (25) foot intervals on horizontal and vertical curves and for all grades less than one (1) percent. Tangent pavement grades and pipe grades over one (1) percent may be set at a maximum interval of fifty (50) feet. The Inspector may ask for additional grade stakes if it is deemed necessary. Other means of line and grade may be used as approved by the County Engineer and/or Sanitary Engineer.

3. Repair of Damage:

Any damage done to the improvements by construction traffic, local traffic, or by any other means shall be repaired or the damaged materials replaced in a satisfactory condition.

3. Storm Water Pollution Prevention Plans (Erosion Control):

As part of submitting Improvement Plans, the subdivider shall prepare a Storm Water Pollution Prevention Plan (SWPPP) according to the format and principles described in the Ohio Environmental Protection Agency's general permit for storm water discharges associated with construction activity under the National Pollutant Discharge Elimination System (NPDES) (The above Ohio EPA Regulations became effective October 26, 1992). Such plan shall be submitted to the Portage County Soil and Water Conservation District Office and at the same time provided to the County Engineer as part of the Improvement Plans.

The following items provide a checklist for what shall be included in the Storm Water Pollution Prevention Plan (SWPPP):

A. Site Inspection

- a) A description of the nature and type of the construction activity;
- b) Total area of the site and area of the site that is expected to undergo excavation, filling or grading;
- c) Calculation of the runoff coefficients for both pre and post construction conditions;
- d) Describe the soil and quality of any discharge from the site;
- e) Schedule of construction operations;
- f) The name and/or location of the immediate receiving stream or surface water(s);
- g) Site map showing: Limits of earthmoving, existing contours, proposed contours, future drainage patterns, surface water locations (wetlands, streams, etc.), existing locations of buildings, proposed buildings locations and dimensions, erosion and sediment control practices, permanent storm water management practices.

B. Erosion and Sediment Controls

a) Vegetative Practices

A description of control practices designed to preserve existing vegetation where attainable and revegetate disturbed areas as soon as practicable after grading or construction shall be provided. Appropriate vegetative practices shall be initiated on all disturbed areas within (7) days if the area(s) are to remain dormant (undisturbed) for more than forty-five (45) days. Such vegetative practices may include: temporary seeding, permanent seeding, sodding, mulching, phasing and protection of trees, and vegetative buffer strips.

When seasonal conditions prohibit the application of temporary or permanent seeding, non-vegetative soil stabilization practices such as mulching and matting shall be used.

b) Structural Practices

A description of structural practices that shall store runoff allowing sediments to settle and/or divert flows from exposed soils or otherwise limit runoff from eroding exposed areas of the site shall be provided. Structural practices shall be used to control erosion and trap sediment from all sites remaining disturbed for more than fourteen (14) days. Such practices may include: Sediment traps, sediment basins, silt fences, earth diversion dikes, check dams, storm drain inlet protection.

Timing

Sediment control structures shall be functional throughout earth disturbing activity. Sediment ponds and perimeter sediment barriers shall be implemented as the first step of grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is restabilized.

- c) Before any land disturbing activities begin, the County Engineer and the Portage Soil and Water Conservation District shall have approved and signed the Storm Water Pollution Prevention Plan (SWPPP). The Portage Soil and Water Conservation District will review the erosion control provisions of the plan and the County Engineer will review the stormwater management aspect of the SWPPP. The County Engineer and the Portage Soil and Water Conservation District will work jointly to inspect the work, to ensure that the developer has installed the vegetative and structural practices as indicated on the approved Storm Water Pollution Prevention Plan. The subdivider and/or contractor shall take necessary procedures to prevent soil erosion and downwash of grits and sediments onto adjoining properties or into existing drainage facilities. The County Engineer may require stoppage of work during construction if proper controls for soil erosion, siltation and sedimentation are not being provided by the developer or contractor. The County Engineer may take the necessary steps to provide corrective measures, and the cost of such services will be charged to the developer. This does not relieve the developer or contractor of downstream liabilities. No project will be released from bond for failure to comply with this regulation and without cleanup and repair of damages. Final inspection requires all drainage facilities to be free of depositions from erosion, siltation and construction debris.

C. Final Cleaning Up:

Upon completion of the work and before acceptance, the subdivider and/or contractor shall clean all ground occupied or affected by him/her in connection with the work. The entire area shall be left in a neat and presentable condition.

Section 602

Construction Schedule

The storm sewers, sanitary sewers and roadway sub-grade shall be installed prior to the construction of buildings within a subdivision. No lot shall be sold or leased, nor shall any building permits be issued for any building unless required improvements are first constructed as specified by these regulations. It is imperative that traffic be contained on the pavement and driveway areas since stronger pipe is to be provided at these areas. This case will aid in preventing damage to the storm and sanitary sewer systems. In addition, all items constructed shall be completely protected. Damaged items shall be replaced or repaired as directed by the inspector and at the contractor's expense. The curbing and road base will follow when ordered by the inspector upon an approved sub-grade. Upon completion and approval of all other items, the pavement surface-course will be applied. (Amended June 26, 1984)

Section 603

Performance Guarantee for Installation of Street, Storm Sewer, and Drainage Improvements

All improvements required herein shall be constructed prior to the granting of the plat approval by the Planning Commission, or the subdivider shall furnish the Board with the following performance guarantees which shall be deposited and remain at all times with the Clerk of the Board of County Commissioners.

1. Type of Guarantee

As consideration for the approval of a plat by the Planning Commission in lieu of the actual installation or completion of the required improvements required by these regulations and with the approval of the County Commissioners, the subdivider or land developer may execute and file a financial guarantee with the County providing for the completion of the required improvements. Such guarantee shall be in the form of a construction loan, cash escrow account, savings account or other financial arrangement which binds the developer to completion of the improvements and from which the County Engineer has the authority to release funds as the work progresses.

The work performed under the jurisdiction of the Portage County Engineer's Office shall be a separate guarantee from the work performed under the jurisdiction of the County Sanitary Engineer.

2. Term of Guarantee

The guarantee for the completion of the required improvements shall be for a period of not longer than eighteen (18) months except that the Board may extend the time period by resolution where circumstances and conditions warrant such extension.

3. Amount of Guarantee

The Guarantee shall be determined by:

- A. The Portage County Engineer shall review the construction plans and the project engineer's estimate.
- B. The developer shall present firm bids, for construction of the project, from the contractors.

- C. An amount of 10% of the total project cost shall be added to the guarantee to assure completion of improvements. This amount shall be released when all improvements have final approval and acceptance.
- D. The developer shall be responsible for payment of any contingencies or added costs that do not appear on the estimates and are not included in the construction account. In no case shall a payout exceed the amount of the guaranteed account.

4. Reduction of Performance Guarantee

The County Engineer shall upon receiving invoices, make payouts from the account. An amount of 10% shall be retained from each invoice until the improvement has been completed. Upon completion of the improvement the retainer may be released.

5. Release of Performance Guarantee

The County Engineer shall make the inspection required for the release of the performance guarantee upon demand of the Subdivider or the Developer; and if said improvements specified in these regulations have been completed shall promptly certify and report to the Board as to the acceptance of said improvements and the release of said performance bond.

6. Engineer's Guarantee

After construction of said improvements, the subdivider's engineer, or his successor in interest, shall file with the Board and County Engineer, an affidavit setting forth that all the required improvements have been constructed in accordance with the plans and specifications approved under the provisions of these regulations, including such modifications or variances granted by the County Engineer.

Section 604

Guarantee for Maintenance of Street, Storm Sewer, and Drainage Improvements

The subdivider shall be responsible for the maintenance of the improvements installed and for providing the services necessary to guarantee access to all the occupied lots, for a period of one (1) year after the Board has accepted the required improvements. Such acceptance by the Board shall be made upon the recommendation by the County Engineer. The subdivider shall provide a maintenance guarantee to the County providing for the care and maintenance of the physical improvements as specified herein, which shall be deposited and remain at all time with the Clerk of the Board. The subdivider shall also maintain the improvements prior to their acceptance by the Board.

1. Type of Guarantee

As consideration for the approval of a plat by the Planning Commission, the subdivider shall execute and file a financial guarantee with the Clerk of the Board providing for the care and maintenance of the physical improvements provided for in these Subdivision Regulations for a period of one (1) year from the date of the acceptance of the improvements by the Board.

Such guarantee shall be in the form of a performance or surety bond unless the Board shall approve another form of financial guarantee by resolution in a specific case.

2. Amount of Guarantee

The financial guarantee for maintenance shall be in addition to the performance bond for the completion of the required improvements as specified in Section 603 of these regulations and may be included with the performance bond.

The amount of the maintenance guarantee shall be three percent (3%) of the total of the performance guarantee, approved by the Board, and shall not be for less than one thousand dollars. (\$1,000)

3. Term of Guarantee

The subdivider shall be responsible for routine maintenance of all improvements and shall repair all failures due to faulty construction as soon as they become apparent. Said subdivider shall also make repairs due to erosion or abuse by utility companies installing utilities and shall repair all failure, for all other reasons during the one (1) year period. He shall restore the improvements at the end of the maintenance period.

4. Release of Maintenance Guarantee

The County Engineer shall promptly make the inspection required for the release of the maintenance guarantee at the end of the one (1) year period and shall certify his report to the Board for their action. The Board shall release the maintenance guarantee if said maintenance of the required improvements has been approved by the County Engineer.

Section 610

Construction Requirements and Specifications for Street Improvements

1. Road Design Criteria:

Design speed – 35 m.p.h. minimum

Minimum stopping sight distance – 250 feet

Maximum grade through an intersection – 2% desirable, 3% absolute

Maximum degree of curvature – 20 degrees

Maximum gradient – 6% desirable, 8% absolute

(All changes of grade shall be connected by vertical curves of appropriate lengths.)

2. Grading:

Item 203, Roadway Excavation and Embankment O.D.O.T. Specifications: The road shall be graded the entire width of the right-of-way in accordance with the attached typical cross section, and approved before any pavement is placed or any other improvements are made.

No trees shall be allowed to remain standing within the limits of the right-of-way. After grading is completed, no trees shall be planted within the limits of the right-of-way.

3. Roadway and Pavement Construction:

Roadway, pavement and sidewalk construction shall be constructed in accordance with Appendix I.

Section 618

Storm Water Management Requirements

1. The design and construction of Storm Water Management Facilities shall require the review and approval of the County Engineer in accordance with the technical criteria described herein. Include storm water runoff estimations and calculations for pre and post development peak discharges, using the U.S. Soil Conservation Services TR-55 method, or other method approved by the County Engineer. (A copy of the TR-55 software can be obtained by contacting the Cuyahoga County SWCD Office at (216) 524-6580). All calculations and design specifications will be prepared by a registered engineer.

2. In order to control water pollution by soil sediment from accelerated stream channel erosion and flood plain erosion caused by accelerated storm water runoff from development areas, the peak rates of runoff from an area after development may be no greater than the peak rates of runoff from the same area before development for all twenty-four hour storms from one to one hundred year frequency. Design and development to match the peak rate of runoff for the one-, two-, five-, ten-, twenty-five-, fifty- and one hundred year storms may be considered adequate to meet this requirement.

If an increase in volume is expected after development, peak rates of runoff must be reduced. Reduce rates of critical storm and all more frequent storms to one year 24 hour frequency. Less frequent storms shall have peak runoff rates no greater than pre-development peak runoff rates.

3. The critical storm for a specific development area is determined as follows:
 - A. Determine the total volume of runoff from a one-year frequency, twenty-four hour storm, occurring on the development area before and after development.
 - B. From the volumes in paragraphs 2 and 3 above, determine the percent of increase in volume of runoff due to development and using this percentage, select the critical storm from Table 1.

TABLE 1

If the Percentage Increase in Volume of Runoff is		
Equal To or Greater Than	And Less Than	The 24 Hour "Critical Storm" For Discharge Limitation Will Be
0	10	1 Year
10	20	2 Year
20	50	5 Year
50	100	10 Year
100	250	25 Year
250	500	50 Year
500	-----	100 Year

- C. Drainage shall be kept to the most natural state feasible, allowable types of storm water management facilities include but are not limited to:
- Retention ponds
 - Detention basins
 - Rooftop storage areas
 - Parking lot storage areas
 - Swales/buffer strips
 - Natural depressions
- D. Clear provision must be made for who will be responsible for the long term maintenance of any permanent storm water facilities on the final plat.

Section 619

Wetlands

Wetlands will be identified on the improvement drawings. If they are going to be changed in any manner, the developer is responsible for contacting the U.S. Army Corps of Engineers. If a U.S. Army Corps of Engineers permit is required, the permit number shall be shown on the final plat.

Section 620

Drainage Design

No subdivision will be approved unless there is an outlet for all storm water. Provisions shall be made to accommodate effectively the increase runoff caused by changed soil and surface conditions during and after development. It may be necessary to direct surface water to a drainage ditch, stream, or an existing storm system which has the capacity to carry the flow. No natural drainage course shall be altered and no fill, buildings, nor structures shall be placed in, on, or over it unless provision is made for the flow of water in a manner satisfactory to the County Engineer. An easement shall be provided on both sides of an existing improvement surface drainage course for the purpose of maintaining, protecting, widening, deepening, enclosing, or otherwise improving such stream for drainage purposes.

Drainage System Requirements

The design criteria for the drainage system shall be based on the State of Ohio Department of Transportation design policy. This criteria shall apply to development along existing roads as well as those requiring new roads to be constructed.

1. Road Drainage System

The road storm drainage system shall serve as the local drainage system. It shall be designed to carry roadway, adjacent land, and house storm water drainage. To prevent excessive pipe sizes, storm sewers shall drain into natural waterways as soon as possible.

2. Off-Road Drainage System

The design of the off-road drainage system shall include the watershed affecting the subdivision and shall be extended to a watercourse or ditch adequate to receive the storm drainage.

Section 621

Drainage System Design and Protection

1. Flood Hazard

If any portion of the land within the subdivision falls within the 100 year flood plain areas as indicated on the Federal Emergency Management Agency Flood Insurance Rate Maps or other approved technical documentation, the flood plain must be shown on the Improvement Plans and Plat, and must comply with all the provisions in the Portage County Flood Damage Prevention Regulations.

2. Dams or Basins Embankments

Three (3) copies of detailed drawings of proposed dams or basins and all calculations shall be submitted to the County Engineer for approval. The developer or his engineer shall apply for a permit from the State of Ohio, Department of Natural Resources, Division of Water, if applicable, and any other applicable agencies.

3. Protection of Drainage Systems

The subdivider shall adequately protect all ditches (roadways and watercourses) to the satisfaction of the County Engineer as shown by calculations made in accordance with the policy of the State of Ohio, Department of Transportation.

In all cases, any drainage facilities within the subdivision shall be in a stable condition, free from either excessive erosion or sedimentation and/or other debris. Any damage resulting from erosion, scour, silting of drainage ways, or blockage of storm drainage systems, on and off the development caused by the construction, shall be corrected at the developer's expense.

4. Drainage Outlets

Where the County Engineer finds it necessary to clean, alter, or reconstruct a natural drainage course or storm sewer system outside the development boundary to provide a storm water outlet, or to prevent damage to other properties due to an increased or accelerated flow, the outlet shall be provided and constructed at the expense of the developer and in accordance with plans and specifications approved by the County Engineer.

5. Drainage Drawings

The developer's engineer shall make a complete study of the drainage area contributing to the subdivision. He/she will then prepare a plan of the entire subdivision showing the following:

- A. Existing and proposed contours at two (2) foot intervals.
- B. Proposed streets and lots.
- C. Proposed drainage system showing the area contributing to each pipe or drainage structure.

The developer's engineer shall submit copies of all data and calculation sheets to the County Engineer for his/her review and approval.

Section 625

Seeding and Sodding

Item 659 and Item 660, O.D.O.T. Specifications. The entire area within the right-of-way shall be seeded, sodded or otherwise protected from erosion. All areas outside the limits of the right-of-way and adjoining land of the project where the vegetation has been injured or destroyed or in need of protection (due to the fact that erosion of these unprotected areas will result in having dirt, etc., deposited in the drainage structures and other improvements within the project and/or create an unsightly condition) shall be restored and protected as directed by the County Engineer, with the recommendation of the Portage Soil and Water Conservation District.

Areas to be seeded under Item 659 or sodded under Item 600 shall have commercial fertilizer (12-12-12) applied at the rate of 20 pounds per 1000 square feet.

The seed shall be thoroughly mixed and then evenly sown over the prepared areas at the rate of 3 pounds per 1000 square feet. Seed shall be sown dry or hydraulically.

All areas to be seeded which are considered to be urban in character, and any area immediately in front of a residence, shall be seeded with the following mixture: (Percentages by weight)

40 percent Kentucky Bluegrass (*Poa pratensis*)
 40 percent Creeping Red Fescue (*Festuca rubra*)
 20 percent Annual Ryegrass (*Lolium multiflorum*)

Areas to be sodded under Item 660 shall be loosened to a depth of two (2) inches just prior to laying the sod.

Section 630

Sewage Disposal and Sanitary Sewer Improvements

The following requirements shall govern sewage disposal improvements for all subdivisions:

1. Extension of Public Sanitary Sewer System

Where an adequate public sanitary sewer system is reasonably accessible in determination of the County Sanitary Engineer, public sanitary sewer shall be installed to adequately serve all lots, connecting to the public system. Extensions shall meet the requirements of the Ohio Environmental Protection Agency and the County Sanitary Engineer. Combination of sanitary sewer and storm sewers shall be prohibited.

2. Where Public Sanitary Sewer System Not Available

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

A. A Central Treatment Plant:

A central treatment plant for the lots provided that such central treatment plant be installed in accordance with the Ohio Environmental Protection Agency and the Portage County Sanitary Engineer's requirements; or

B. Individual Sewage Disposal Systems:

Lots may be served by individual sewage disposal systems only when extension of a public sanitary sewerage system is not reasonably accessible and the installation of a central treatment facility has been found unnecessary by the Planning Commission.

- a. Where the installation of an individual sewage disposal system is considered, the suitability of the soil for individual sewage disposal systems, the absorptive ability of the soil, surface drainage, ground-water level and topography shall be the criteria for determining whether or not the installation of an individual sewage disposal system is permissible and the type of individual sewage disposal system to be used.
- b. A soil scientist, or technician, provided by the Portage Soil and Water Conservation District, shall make an on-site inspection and a study of the area being platted and a copy of the soils review shall be submitted to the Portage County Health Department and the Portage County Planning Commission.
- c. Criteria shall be in accordance with the Portage County Board of Health requirements governing the installation of individual sewage disposal systems.
- d. Any person proposing to create a subdivision shall submit to the Board of Health, for approval, plans clearly showing that the provisions of the rules for Household Sewage Disposal Systems (3701-29-01 to 3701-29-21 of the Ohio Sanitary Code) 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.

Section 631

Water Supply

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

1. Extension of Public Water System

Where an adequate public water system is reasonably accessible in the determination of the Portage County Sanitary Engineer, such water system shall be extended to adequately serve all lots. Such extensions shall meet all requirements of the Ohio Environmental Protection Agency, the Portage County Sanitary Engineer and all other governmental agencies having jurisdiction.

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 Department and all other agencies having jurisdiction.

Section 632

Performance Guarantee for the Installation of Sanitary Sewer and/or Water Improvements

Prior to plat approval, all sanitary sewer or water facility improvements required herein shall be constructed by the subdivider and inspected and approved by the Sanitary Engineer prior to the granting of plat approval by the Planning Commission in accordance with all other sections of these Regulations and the following:

1. Detailed construction plans, estimates of cost and specifications shall be prepared by the subdivider's engineer and presented by him to be approved by the Sanitary Engineer.
2. A Performance Bond shall be executed by the subdivider and secured by a cash escrow account established with a solvent financial institution from which all construction costs will be paid to assure that adequate financial reserves have been dedicated to the construction of the project, and only acceptable work will be paid for, and to assure payment of all engineering, administrative and inspection costs incurred by the Sanitary Engineering Department.
3. Payments to the subdivider's contractor shall be made upon the recommendation of the subdivider's engineer and the approval of the subdivider and the Portage County Sanitary Engineer. A retainage of ten percent (10%) shall be withheld until completion and acceptance of the project, provided that the cash balance remaining in the construction escrow account shall at all times be adequate to complete construction.

Section 633

Performance Guarantee for the Installation of Sanitary Sewer and/or Water Improvements with Plat Approval

As consideration for the plat approval by the Commission, and in lieu of the actual installation, completion and acceptance of the required improvements prior to said plat approval, the subdivider may execute a cash performance bond obligating the subdivider to the completion of the required improvements and the payment of all costs incurred in such construction. Such performance bond shall be secured by a construction loan account established with a solvent building and loan institution or a cash escrow account established with a solvent financial institution.

Section 634

Term of Sewer and/or Water Improvement Guarantee

The guarantee for the completion of the required improvements shall be for a period of not longer than eighteen (18) months except that the Board may extend the time period by resolution where circumstances and conditions warrant such extension.

Section 635

Amount of Sewer and/or Water Guarantee

The amount of guarantee shall be determined by:

1. The subdivider's project engineer shall prepare an estimate of cost based upon the rules, regulations, standard, standard specifications and standard bidding documents of the Sanitary Engineering Department.
2. The subdivider shall acquire bids from reputable and competent contractors proposing to furnish all labor and materials for the completion of the requirement improvements. The subdivider shall then enter into a construction contract with the bidder of his choice. Such construction contract shall be in accordance with the standard bidding documents of the Sanitary Engineering Department and conditioned upon approval of the subdivision plat.

3. The Sanitary Engineer shall review the construction plans, project engineers estimate, construction bids and, if necessary, estimate the cost of construction to arrive at the mount of cash bond required. Such cash bond shall also include an amount not less than 12% of the Sanitary Engineer's direction construction cost estimate for payment of contingency items which is required to complete the improvement, and a sum representing the Sanitary Engineer's estimate of the costs to be incurred by the Sanitary Engineering Department including costs of engineering, inspection, administrative and supervisory costs. The subdivider shall be responsible for payment of any contingencies, omitted items or extra costs that are in excess of the amount of the Performance Bond.

Section 636

Reduction of Performance Guarantee

The Performance Guarantee Bond may, periodically be partially reduced by authorizing the release of construction estimates to pay the subdivider or the contractor for materials and/or labor furnished to the satisfaction of the Sanitary Engineer. All such payments shall be made according to the following general procedures:

1. The subdivider's project engineer shall prepare the estimate on forms prescribed by the Portage County Sanitary Engineer and shall certify to the Sanitary Engineer that the work has been done according to the plans and specifications of the Sanitary Engineering Department; the sum to be paid represents an increase in the value of the project at least equivalent to amount to be paid; and, upon payment of the estimate, sufficient funds will remain to complete the project.
2. A retainage in the amount of 10% of each estimate will be withheld to assure completion and acceptance of the improvement.
3. The Sanitary Engineer shall add to the estimate all costs incurred by his department including the costs of engineering, inspection, administrative and supervisory costs, including overhead. When deemed necessary the Sanitary Engineer reserves the right to draw from and receive in hand all monies due to the Sanitary Engineering Department before approving any construction estimates for payment.
4. Upon the approval of the subdivider and the Portage County Sanitary Engineer, the estimate will be forwarded to the financial institution for payment.

Section 637

Guarantee of Workmanship and Materials

Prior to release of the retainage and final acceptance of the completed improvements, the subdivider shall provide a one year cash or surety bond guaranteeing all workmanship and materials involved in the construction. Such guarantee shall be in the amount of 5% of the cost of the improvement provided that the amount of guarantee shall not be less than One Thousand Dollars and No/Cents. (\$1,000.00)

Section 638Proof of Carriage of Contractors Insurance

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

The amounts of such insurances shall be as follows:

BODILY INJURY LIABILITY

Each Person	\$500,000.00
Each Accident	\$1,000,000.00

PROPERTY DAMAGE LIABILITY

Each Accident	\$500,000.00
All Accidents	\$1,000,000.00

Section 639Construction Schedule

The subdivider's contractor shall submit a written work schedule in accordance with Section 108.03 of the Standard Specifications of the Portage County Sanitary Engineering Department.

If satisfactory progress is not made in the construction of the required improvements, the Sanitary Engineer may revoke any sewer or water permits issued and refuse to issue any further permits until satisfactory progress is achieved.

Section 640Road Name Signs

Road name signs shall be erected by the subdivider at all road intersections. These signs shall be constructed in accordance with the attached standards. (See Appendix J) Road numbers will be assigned by the Portage County Engineer.

Section 650Inspector's Salary

The developer shall pay the salary of the inspector. All work (highway, storm and sanitary sewers and sewage disposal plants) will be inspected. The rate per hour will be the inspector's regular rate per hour as paid by the Portage County Engineer, plus 25%. If the inspector is employed by the County Sanitary Engineer, the inspection costs will be the inspector's regular rate per hour, plus the prevailing overhead rate (which in October of 1980 was 100%). The developer is held responsible for all inspection fees which will be payable monthly. The construction bond posted by the developer guarantees the payment of all inspection fees and no bonds will be released until all inspection fees have been paid in full.

Section 660

Samples and Tests

In order to assure the use of suitable materials, the County Engineer and/or County Sanitary Engineer may require certain tests to be made, such as compressive strength of concrete, etc. The developer shall pay for all tests whether performed by the County Engineer, or an independent testing firm.