SECTION 1 - PROCEDURES FOR PLAN SUBMISSION AND REVIEW

1.1. Preliminary Plat or Plan Submission and Approval

1.1.1. Submission Requirements

1. A preliminary plat (or plan) showing the layout of the area intended to be developed will be submitted to the Drain Commissioner's Office by the Owner. This plat (or plan) will be prepared under the direction of, and sealed by, a registered professional engineer or a registered land surveyor and should fit on a sheet of paper that does not exceed 24 inches by 36 inches. The preliminary plat (or plan) shall be drawn to a standard engineering scale no smaller than 1" =100'.

2. Two (2) prints of the preliminary plat (or plan), prepared in accordance with the rules set forth in this section, will be submitted together with a letter of transmittal requesting that the preliminary plat be reviewed and, if found satisfactory, approved. The names of the Owner and engineering or surveying firm, with mailing addresses, emails and telephone numbers for each, will be included with the transmittal.

3. The preliminary plat (or plan) will include the following general information. A checklist including additional details is provided in Appendix B:

    a. The location of the proposed development by means of a small location map.

    b. The township, city, or village in which the parcel is situated.

    c. The section and part of section in which the parcel is situated.

    d. The proposed drainage system for the development.

    e. The proposed street, alley, and lot layouts and approximate dimensions.

    f. The location and description of all on-site and adjacent off-site features within 200 feet of the property boundary that may be relevant in determining the overall requirements for the development. For example:

        1) Adjoining roads and developments
        2) Railroads
        3) High tension power lines or underground transmission lines
        4) Cemeteries
        5) Parks
        6) Natural and artificial watercourses, wetlands and wetland boundaries, floodplains, lakes, bays, and lagoons
        7) Designated natural areas
        8) Any proposed environmental mitigation features
        9) Drains, sewers, water mains

10) Existing and proposed easements
11) Features greater than 200 feet from the property boundary may need to be shown depending on their relevancy to the drainage system design
12) Septic fields and wells
13) Wellhead protections areas

g. The number of acres to be developed.

h. Contours, at two-foot intervals or less, using the North American Vertical Datum (NAVD 88)

i. Test pits or soil borings indicating seasonally high groundwater elevations are required at the sites of proposed retention/detention/infiltration facilities, and as needed in areas where high ground water tables exist. Soil borings are only acceptable in areas where test pits are impractical due to basin depth as determined by the Drain Commissioner's Office.

4. Required Stormwater Management Information

a. A description of the off-site outlet, evidence of its adequacy, and a detailed description of the effects of said outlet on downstream properties.

b. Any natural watercourses, county and inter-county drains that traverse or abut the development.

c. Any watercourse passing through the development, along with the following:

1) Area of upstream watershed and current zoning.

2) Preliminary calculations of runoff from the upstream watershed area for the WQ, CPVC, CPRC, and Flood Control Volumes (link to page or section), for fully developed conditions according to the current land use plan for that area.

d. All calculations, including an electronic copy of any spreadsheets in Microsoft Excel format, used in the preliminary design of stormwater management systems must be submitted to the Drain Commissioner on the construction plans.

4. The Owner will describe the mechanism to be established to provide for long-term maintenance of the stormwater management system. The Drain Commissioner may require that a county drainage district be established pursuant to the Drain Code.

5. Should the Owner plan to develop a given area but wish to begin with only a portion of the total area, the original preliminary plat or plan will include the proposed general layout for the entire area. The first phase of the development will be clearly

superimposed upon the overall plat or plan in order to illustrate clearly the method of development that the Owner intends to follow. Each subsequent plat or plan will follow the same procedure until the entire area controlled by the Owner is developed.

6. Final acceptance by the Drain Commissioner of only 1 portion or phase of a development does not ensure final acceptance of any subsequent phases or the overall general plat or plan for the entire area; nor does it mandate that the overall general plat or plan be followed as originally proposed, if deviations or modifications acceptable to the Drain Commissioner are proposed.

7. Land Use Summary Table located in Appendix J shall be included with submittal.

1.1.2. Drainage Review Requirements

1. Proposed drainage for the development shall conform to existing watershed boundaries, natural drainage patterns within the site, or any established county drainage districts.

    a. Proposed drainage shall complement any local stormwater management plans that may exist and/or comply with any ordinance in effect in the municipalities where the development is located.

    b. The concentration of flow due to development of the site shall not create adverse impacts to downstream property owners and watercourses.

    c. Off-site drainage and/or flooding easements will not be required where the discharge is directly to a sufficient outlet (e.g., a lake, stream, wetland, or County drain) and the developer determines that no adverse impacts will occur to downstream property owners. Where the discharge is not directly to a sufficient outlet, off-site easements will be required unless the following conditions are met:

        1) Discharge does not exceed the pre-development peak flow rate for a series of rainfall events. At a minimum, analyses of the Water Quality Volume, Channel Protection Volume Control, Channel Protection Rate Control Volume, and Flood Control Volume are required. Definitions for these volumes can be found in section 2.2.1 beginning on page 19. Analysis of additional storms between the 10-year and 100-year may be required for larger developments or developments anticipated to have regional drainage impacts.
        2) An outlet assessment is performed which includes descriptions of the surrounding area, including nearby houses, that would be impacted by the concentration of flow.
        3) The developer and his/her Engineer determine that no adverse impact will occur to downstream property owners and stipulate this in writing.

    d. Discharge shall not exceed existing drain capacity. Both volume and rate of discharge from a development may be reduced to levels lower than stated (and as determined by the Drain Commissioner) in these guidelines if proposed discharge

levels exceed existing drain capacity. If sufficient downstream capacity exists, the variable release rate defined in Section 2.2.1 paragraph 4b may be applied.

2. In general, the Drain Commissioner will not accept responsibility for roadside ditches. The Livingston County Road Commission maintains these if located within the right-of-way of a public road.

1.1.3. Preliminary Plat or Site Plan Approval

1. The Drain Commissioner will approve or reject a preliminary plat or plan within 30 days of its submittal. If the proposed plat is not approved as originally submitted, the Commissioner will notify the Owner in writing, setting forth the reasons for withholding approval. If the proposed preliminary plat as submitted meets all requirements, one (1) approved copy of the preliminary plat will be returned to the Owner. Approval of the preliminary plat is required before the Drain Commissioner will proceed with review of final construction plans.

2. Payment of all fees is a prerequisite to approval (see Drain Commissioner's Office Fee Schedule on the Livingston County Website)

1.2. Construction Plan Approval

1.2.1. General Information

For all projects, the developer will submit a letter of transmittal requesting review. The names of the Owner and engineering firm, with mailing addresses, emails and telephone numbers for each, shall be included with the transmittal.

The Drain Commissioner will review construction plans to ensure that the design provides adequate storm drainage and that the stormwater management system provides adequate water quantity and quality management within the proposed development and downstream. In addition, the system must not impact upstream conveyance.

1.2.2. Submission Requirements

1. For all projects, the developer will submit two (2) complete sets of construction plans, drawn to a scale no smaller than 1" = 50' and on sheets no larger than 24" x 36". The plans shall be sealed by a registered professional engineer in the State of Michigan and drawn to standard engineering scales. When plans have been approved, copies of the electronic files, in accordance with the formats approved by the Livingston County Geographic Information Systems (GIS) Department, shall also be provided. Those items that specifically relate to the storm drainage facilities such as storm sewers, swales, basins, grading plans, etc., as well as all available information such as complete site layout, sanitary sewer and watermain plans, topographic surveys, etc., shall be included. Construction plans shall include all drainage information requirements listed in Section

II, as well as the following, where applicable (see Appendix C for Construction Plan Check List):

a. The property description including total acreage as well as the location of the proposed project by means of a small location map. If the project is to be completed in phases, the number of acres in each phase shall also be included.

b. The proposed project layout with all dimensions, including the proposed drainage system for the project.

c. A map, using a scale of 1 inch to 2,000 feet or greater (i.e. 1 inch to 1,000 feet), showing the drainage boundary of the proposed project and its relationship with existing drainage patterns.

d. The location and description of all on-site and adjacent off-site features including but not limited to: adjoining roads and subdivisions; railroads; high tension power lines and/or underground transmission lines; cemeteries; parks; natural and artificial watercourses; wetlands and wetland boundaries; floodplains, lakes, bays, and lagoons; designated natural areas; any proposed environmental mitigation features; drains, sewers, watermains, septic fields, and wells; existing and proposed easements.

e. Plans, profiles, and details of all roads and storm sewers. The storm sewer details will include type and class of pipe, length of run, percent of slope, invert elevations, rim elevations, depth of burial, backfill type, depth and compaction, and profile of the hydraulic gradient, as specified in Section II of these rules.

f. Storm sewer calculations, indicating the number of acres calculated to the nearest tenth of an acre, contributing to each specific inlet/outlet, the calculated hydraulic gradient elevation, maximum flow in cubic feet per second (cfs) and the flow velocities for enclosed systems.

g. Open ditch drains and drainage swales shall be shown with a typical ditch cross-section and matching contours.

h. Plans and details of the proposed soil erosion and sedimentation control measures, both temporary (during construction) and permanent.

i. Plans and details of proposed retention/detention facilities. Test pits and seasonally high groundwater elevations are required at the sites of these facilities and as needed in areas where high ground water tables exist.

j. A drainage area map overlaid onto a copy of the site grading plan, which clearly shows the areas tributary to each inlet and/or storage basin.

k. Topographic maps, at one-foot contour intervals or less using the North American Vertical Datum (NAVD 88), showing existing and proposed elevations, as well as off-site topography over at least 200 feet of the adjoining property. Maps will also show all existing watercourses, lakes and wetlands, and the extent of all off-site drainage areas contributing flow to the development. The Livingston County GIS

Department is a good resource for topographic maps within the county, for more information visit https://www.livgov.com/gis. These topographic maps are also available from SEMCOG. The designer assumes responsibility for topographic information used on the maps.

l. Locations of all drain fields and reserve areas as approved by the Livingston County Health Department. Drain fields shall not be located within drainage easements and shall also comply with isolation distance requirements as stated in the Livingston County Sanitary Code.

m. Locations of all drinking water wells, including the well record for each well. Wells shall not be located within drainage easements and shall also comply with the isolation distance requirements as state in the Livingston County Sanitary Code, and/or the Michigan Well Construction Code (Part 127 of Act 368 of 1978, as amended), and/or the Michigan Safe Drinking Water Act, (Act 399 of 1976, as amended).

n. Minimum basement opening elevations are required where walkout, daylight basements, or egress windows are proposed. Where walkout, daylight basements, or egress windows are proposed construction will be contingent on these elevations being matched or exceeded as certified by the Applicant's Surveyor or Engineer. Where finished grades indicate a substantial amount of drainage across adjoining lots, inlet structures and piped outlets shall be provided inside yards along lot lines. To ensure that property owners do not alter or fill drainage swales, easements in the developments governing documents (eg. deed restrictions or master deed) will be required over areas deemed necessary by the Drain Commissioner. Additional information regarding site grading can be found in Appendix I.

o. Benchmark locations and elevations using NAVD 88.

2. Specifications governing construction of stormwater management facilities.

a. Design data and criteria used for sizing all drainage structures, channels, and detention/retention basins including weighted runoff coefficient calculations. (Refer to Appendices.)

b. A stormwater facility maintenance plan, schedule, and budget estimating the costs that will be associated with system maintenance.

3. A soil erosion permit under Part 91 of the The Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended, will be obtained from the Livingston County Drain Commissioner prior to any construction.

4. Review of construction plans by the Drain Commissioner will not proceed until preliminary plat or plan approval has been granted.

5. Approval of construction plans by the Drain Commissioner's office is valid for one (1) calendar year or up to two (2) calendar years if allowed by the local governing body. If an extension beyond this period is needed, the Owner will submit a written request to the

Drain Commissioner for an extension. The Drain Commissioner may grant one-year extensions of the approval and may require updated or additional information, if needed. Should modifications be made to the plans, a new review may be required subject to the appropriate review fees.

3. Payment of all fees is prerequisite to approval (see Drain Commissioner's Office Fee Schedule on the Livingston County Website)

1.3. Final Subdivision Plat Approval

1.3.1. General Requirements

Final subdivision plat review will be completed by the Drain Commissioner's office within ten (10) days of submission by the Owner. If the plat is not acceptable, written notice of rejection and the reasons therefore will be given to the Owner. If the Commissioner approves the plat, s/he will affix his/her signature to it and the plat will be executed.

1.3.2. Review Requirements

1. The preliminary plat must be approved by the municipal governing body in which the proposed development is located. Evidence of this approval will be submitted to the Drain Commissioner's office with the final plat.

2. If the Owner does not present the final plat to the Drain Commissioner for approval within two (2) years after preliminary plat approval, resubmittal of the preliminary plat and/or construction plans may be required in light of new information which may become available in the interim.

3. Before approval of the final plat or construction plans, it must be demonstrated that all necessary wetland, floodplain, inland lakes and streams, erosion control or other needed State, Federal, or local permits are in place.

4. If the stormwater management system is constructed before the Owner seeks final plat approval, the Developer's Engineer will submit certification of the stormwater system construction. This certification will state that the stormwater facilities were installed in an acceptable manner and according to construction plans approved by the Drain Commissioner.

1.4. Drains Under the Jurisdiction of the Drain Commissioner

The Drain Commissioner may require jurisdiction over developments with a direct connection to a county drain. The Drain Commissioner will only accept jurisdiction over other developments where the Livingston County Road Commission accepts the road system. For drains proposed to be under the jurisdiction of the Drain Commissioner, the following additional requirements apply:

1.4.1. Prior to Construction Plan Approval and Issuance of a Grading Permit

1. Developments proposed to have public drains must submit a completed Section 433 Agreement (see Appendix A).

2. A cash deposit must be made to provide for future maintenance. An additional administrative fee will be required as defined on the County's website, https://www.livgov.com/drain/Pages/drainage-review-fees.aspx.

3. Approval by the Drain Commissioner's Office of the master deed and/or land use and deed restriction language. The deed restriction language shall include the minimum finish floor and basement opening elevations from the approved plans.

4. Existing county drain easements will be indicated on the plans and designated as shown on the example in Appendix F. County drain easements prior to 1956 were not required by statute to be recorded; therefore, it may be necessary to check the permanent records of the Drain Commissioner's Office to see if a drain easement is in existence on the subject property. Related easement language will be depicted on final Mylar plats and/or exhibit B condominium drawings as follows:

"All drainage easements and detention (or retention) areas are under the jurisdiction of the Livingston County Drain Commissioner and the (Insert Drain Name) drainage district."

The placement of any utilities in a drainage easement is strongly discouraged and will require that a license be obtained from the Livingston County Drain Commissioner for the placement of any permanent structure within a drainage easement. Any utility shall be located such that it shall not significantly increase the expense of maintaining the drainage facility.

5. A permit will be obtained from the Drain Commissioner prior to tapping or crossing any county drain.

6. Agreements for any proposed relocations of county drains will be processed through the office of the Drain Commissioner and recorded prior to the issuance of a grading permit and/or the start of construction.

1.4.1. The Owner will follow the instructions on the County's website for posting financial guarantees. This deposit will be held for one (1) year after the date of final acceptance of the stormwater facilities.

1. This deposit will be returned to the Owner, as provided above, provided all stormwater facilities are clean, unobstructed, and in good working order.

2. The Owner shall make arrangements acceptable to the Drain Commissioner for inspection during construction, including submittal of inspection reports, and for final verification of the construction by a Michigan registered professional engineer prior to the approval of the final construction plans.

3. Prior to Final Acceptance by the Drain Commissioner

   a. Release of drainage easements to the drainage district, including a metes and bounds legal description and sketch or drawing. This must be executed and recorded prior to final acceptance of the drainage district.

   b. Public drainage systems shall be inspected and approved by the Office of the Livingston County Drain Commissioner prior to final acceptance.

   c. Digital files of the as-built stormwater management systems. Including both the DWG and PDF files for the stormwater management systems will be sent to the Drain Commissioner. These will be submitted by the Owner or his/her Engineer to the Commissioner along with the final plat or upon completion of system construction.

   d. A post-construction letter of volume certification from the professional engineer responsible for the design that certifies construction of the system in accordance with the approved plans and guarantees the as-built volume of any stormwater management basins to meet or exceed approved storage capacities shall be received.

   e. Copies of all documents recorded at the Register of Deeds shall be submitted to the Drain Commissioner.