

EXHIBIT NO. 1

STORM DRAINAGE NOTES

The following storm sewer and/or storm drainage notes are to be shown on the development plans, when applicable. Also, use the notes that apply to any building permit plans that the Department of Planning and Development reviews for storm drainage approval.

1. All plans and construction within the unincorporated areas of Hamilton County shall comply with the current "Rules and Regulations" of the Planning and Development Department of Hamilton County, governing the design, construction, operation, maintenance and use in the County of Hamilton Storm Drainage System. Copies of these "Rules and Regulations" are available at the Department of Planning and Development, Room 801 County Administration Building, 138 East Court Street, Cincinnati, Ohio 45202.
2. All storm sewer, surface drainage and detention/retention facility construction and material shall be in accordance with the State of Ohio Construction and Material Specifications, current edition.
3. All storm sewer, surface drainage (except for storm sewer within County road right-of-way) and detention/retention facility construction to be under the inspection and supervision of the Hamilton County Planning and Development Department. Phone (513) 946-4550 at least 24 hours in advance of construction.

Storm systems constructed within county road right-of-way is to be inspected by the Hamilton County Engineer.

4. Unless otherwise specified, storm sewer pipe shall be Type "C" Conduit 706.02, Class IV. Bedding and backfill is to comply with ODOT 611.06 for all storm sewers.
5. Thermoplastic storm sewer pipe may be substituted for concrete pipe. The type of pipe and ASTM or AASHTO numbers must appear on the plans and profiles. Also, the pipes shall be stamped by the manufacturer prior to shipment for field verification. The pipe shall comply with the specifications of the Hamilton County Planning and Development Rules and Regulations. (Section ST 713(b)).
6. Unless otherwise specified, storm sewer manholes are to be ODOT Std No. 1, Std. No. 3 or Std. No.5, and catch basins are to be ODOT Std. catch basins.

All catch basin outlet pipes connecting to manholes are to be sloped at 2% unless otherwise specified. Maximum permitted depth of ODOT Std Catch Basins shall be as follows:

CB-3A, CB2-2-A and CB2-2-B: 4'0"

CB-3 and CB-3M: 6'-0"

CB-3MH: 12'-0" Should it become necessary to increase depths beyond 12'-0", reinforced concrete walls shall be used. Developer shall submit design details for approval.

7. All wingwall headwalls designated as (Std. H.W.) or (W.W.H.W.) shall be Hamilton County Department of Planning and Development Std. Plate 5 Wingwall Headwall.

8. RCP indicates Item 601 Rock Channel Protection. Dimensions on plan indicate size (Type B, C, etc.), width and length and depth.

9. Compacted fills are to be made to a minimum of three feet above the crown of any proposed sewer prior to cutting of trenches for placement of said sewers. All fills shall be controlled, compacted and inspected by an approved testing laboratory or an inspector from the appropriate governmental agency.

10. Area of Subdivision is _____ acres.

11. All proposed private storm sewers and surface or other drainage facilities are to be private and maintained by the property owner for nonresidential developments.

12. All ground surface areas that have been exposed or left bare as a result of construction and are to final grade and are to remain so shall be seeded and mulched as soon as practical in accordance with State of Ohio Specification Item 659.

13. CB3-M or CB-3MH catch basins as designated on the plans refer to Hamilton County Department of Planning and Development latest Std. Drawings.

14. Steps shall be provided in all catch basins where the depth exceeds 4'-0" and shall meet the requirements of the State of Ohio Std. Construction Drawing MH-1.

15. No direct connections of effluent pipes from household sewage disposal systems are permitted to closed public storm drainage systems. Furthermore, the discharge shall not enter the public storm sewer.

16. Temporary erosion, sediment and debris control according to Storm Drain Inlet Protection under Chapter 6 of the Ohio Rainwater and Land Development Manual (RLDM) must be provided for at all catch basins, inlets and the inlet side of all new pipe openings, or approved equal.

17. Temporary erosion, sediment and debris control using a Rock Check Dam according to Chapter 5 of the RLDM must be provided for at the outlet ditch, swale, watercourse or pipe. See approved plans for any other specific locations, also, or approved equal.

18. In addition to any temporary erosion, sediment, and debris control details and notes shown on the plans, the developer shall construct temporary sediment basins, earth

dikes, temporary or permanent seeding, mulching and/or mulch netting or any other generally accepted methods to prevent erosion, mud and debris from being deposited on other property, on newly constructed or existing roads, or into existing sewers or new sewers within the development. The developer shall continually monitor the construction progress and make any necessary temporary adjustments to maintain this control.

Add the following "Restrictions on Sewer Easements", Note 19, when following instructions of Section ST 407(a), 407(a)(1) and 407 (a)(2).

19. "Restriction on Sewer Easements": No structure of any kind which can interfere with access to said public sewer shall be placed in or upon a permanent sewer easement excepting items such as recreational surfaces, paved areas for parking lots, driveways, or other surfaces used for ingress and egress, plants, trees, shrubbery, fences, landscaping or other similar items, being natural or artificial. No items such as recreational surfaces, paved areas for parking lots, driveways, or other surfaces used for ingress and egress, plants, trees, shrubbery, fences, landscaping or other similar items, being natural or artificial shall be placed in a private drainage easement that impedes or diverts the flow. i.e. Typical Section A-A Emergency Overflow Swale.

Any of the aforesaid surfaces, paved areas, plants, trees, shrubbery, fences, landscaping or other similar items which may be placed upon such said permanent easement shall be so placed at the sole expense of the property owner, and the grantees or assigns of any permanent easement henceforth shall not be responsible to any present owners of the property, nor to their heirs executors, administrators or assigns, for the condition, damage to, or replacement of any such aforesaid items, or any other items placed upon the easement, resulting from the existence or use of the said permanent sewer easement by the grantees or assigns.

Any structure construction on said property in which said permanent sewer easement exists shall be kept not less than three (3) feet outside the permanent sewer easement line nearest the site of the proposed structure, except that this restriction is not applicable to all storm sewer easements.

Any deviation from the aforesaid restrictions shall be petitioned by written request to the grantees or their assigns. Each such request shall be considered on an individual basis with approval not to be unreasonably withheld.

20. Private storm sewer easements shown on these plans are not accepted by the Board of County Commissioners of Hamilton County, and the County of Hamilton is not obligated to maintain, repair or operate any private storm sewer line. Operation and maintenance of all private storm sewer lines shown on these plans is the obligation of the owners of the lots using the storm sewer lines.

21. Private individual disposal line easements shown on these plans are not accepted by the Board of County Commissioners of Hamilton County, and the County of Hamilton is not obligated to maintain, repair or operate any private disposal line. Operation and maintenance of all private disposal lines shown on these plans is the obligation of the owners of the lots using the disposal lines.

The following note is to be used on subdivision or development plans where there is an existing watercourse, swale or drainage channel extending thru two or more lots within the plan limits.

22. Private drainage easements shown on these plans are not accepted by the Board of County Commissioners of Hamilton County, and the County of Hamilton is not obligated to maintain or repair any watercourses, drainage channels or installations in said easements. The easement area of each lot and all improvements in it shall be maintained continuously by the owner of the lot. Within these easements, no structures, planting or other material shall be placed or permitted to remain which may obstruct, retard or change the direction of the flow of water through the watercourses or drainage channels in the easement.

The following note is to be used on subdivision or development plans where the proposed home or building low floor elevation (including basement) can be flooded as computed by the methods indicated in the Department of Planning and Development current Rules and Regulations:

The following note, or a similar note, must be shown on the Building Permit Plan (Plot Plan) for the following lots if the lowest floor elevation (including basements) is below the elevations stated below.

“No gravity flow storm drains from any driveway, window well, stairwell, foundation, basement, patio or other source will be permitted to be directly connected to the proposed storm sewer system and/or existing or proposed watercourse below the following elevations:

LOT	ELEVATION	LOT	ELEVATION

If the basement floor is below the above stated elevation, the basement shall be provided with a sump pump well and sump pump. The pump shall be discharged on the lot at or above the elevation stated above.

A gravity flow storm system may be discharged on the lot at a point where the outlet is not affected by flooding from the proposed storm sewer system and/or existing or proposed watercourse."

23. Special flood hazard areas as shown on these plans must be shown on the Building Permit (Plot Plan).

24. The Board of County Commissioners has adopted flood damage prevention regulations. These regulations require that an application for a development permit for work within the flood plain limits shall be made to the Department of Planning and Development/sanitary engineer's department of Hamilton County, Ohio. An approval of said development permit shall be obtained prior to performing any work within these limits.

The easement notes that follow shall be provided on the Improvement Plan.

Private Drainage and/or Storm Sewer Easement for Storm Water Detention/Retention Facility

Private storm drainage/sewer limits for storm water detention shown on this plan are not accepted by the Board of County Commissioners of Hamilton County and the County of Hamilton is not obligated to maintain or repair any channels or installations in said limits. The said limit area and all improvements in it shall be maintained continuously by the legal owner(s) for nonresidential developments. The said limit area and all improvements in it shall be maintained continuously by the Home Owner’s Association (HOA) or the proportional distribution of the property owners within the development if the HOA is dissolved or not formed for residential developments. No structures, planting or other material, shall be placed or permitted to remain which may obstruct, retard or change the direction of the flow of water through the drainage channel in the said limits.

The location of the Private Storm Drainage/Sewer Limits must be prepared by the Developer or his Engineer on an easement and/or record plat by the metes and bounds description. The plat is to be submitted to the Hamilton County Department of Planning and Development for review and approval prior to the Developer or his Engineer having the plat recorded. The Developer or his Engineer is to submit a print of the recorded plat to the Hamilton County Department of Planning and Development for their file and records prior to approval of the Final Development Plans or Certificate of Occupancy.

STORMWATER DETENTION/RETENTION SUMMARY TABLE								
DESIGNATION	DRAINAGE AREA (AC)	HIGH WATER ELEVATION (FT. ABOVE MSL)	PRE-DEV Q ₁ (CFS)	PRE-DEV Q ₁₀ (CFS)	POST-DEV Q ₁₀₀ (CFS)	REQUIRED VOLUME (CF)	PROVIDED VOLUME (CF)	WATER QUALITY VOLUME (CF)
DETENTION FACILITY 1								

The documentation and easement notes that follow shall be provided on the easement and/or record plat.

**DEDICATION OF PERMANENT
PRIVATE DRAINAGE EASEMENT
FOR
STORM WATER DETENTION**

Property conveyed to: _____

By deed recorded in Deed Book _____ Page _____

We the undersigned do hereby adopt and confirm this plat of private drainage limits. We also acknowledge that said limits as shown on this plat shall be reserved for storm sewers, surface ditches, primary and emergency structures and detention basin purposes only and subject to the terms and conditions of the private drainage note as described hereon.

Witness:

Signed:

State of Ohio, Hamilton County before me a Notary Public in
and for said County and State personally appeared

And acknowledge the signing of the foregoing instrument to be their voluntary act and deed for the uses and purposed therein mentioned in testimony where of I hereto set my hand and official

Seal this _____ day of _____

Notary Public, State of Ohio

My commission expires on _____

**Private Drainage and/or Storm Sewer Easement for Storm Water
Detention/Retention Facility**

Private drainage and/or storm sewer easements for storm water detention shown on these plans are not accepted by the Board of County Commissioners of Hamilton County, and the County of Hamilton is not responsible to maintain, repair or replace any channels or installations within said easements.

The easement areas and all improvements within said easements are to be maintained continuously by the legal owner(s), heir(s), assign (s) or successor(s) of the real estate wherein said easements occur.

Maintenance Schedule/Responsibility for Detention/Retention Basin:

1. Facility to be owned and maintained by _____.
2. Control structure catch basins to be inspected monthly and after large storm events to ensure orifices are clean and functioning properly.
3. Debris to be removed from inlet structure grate after large storm events.
4. Outlet structure to be inspected and sediment to be removed on a regular basis.
5. Repairs to the outlet structure and outlet pipe to be made if needed.
6. An annual statement is to be submitted to the Hamilton County Planning and Development, Stormwater and Infrastructure Division stating the facility is functioning.

Stormwater Management Facility Ownership & Maintenance:

We the undersigned owner of _____ accepts responsibility for ownership and proper maintenance of the permanent water quality system on _____ per the "Maintenance Schedule/Responsibility for Detention Basin" shown above. We will complete any necessary repairs and/or preventative maintenance procedures in a timely manner to ensure proper functioning of the system as a stormwater management device.

These obligations shall be binding upon and shall inure to the benefit of the owner(s) of _____ and their respective heir(s), successor(s) and assign(s) and shall run with the land comprising _____.

By: _____

Printed Name: _____

Title: _____

Date

Address

City

State

Zip Code

Approved: _____
Mohammad M. Islam, PE, CPESC
Project Engineering Manager
Planning and Development
Date