

FEE
PAID _____

APPLICATION FOR ZONING PERMIT WITHIN THE VILLAGE OF MIDDLEFIELD

14860 North State Avenue
P.O. Box 1019

Phone: (440) 632-5248
Fax: (440) 632-0591

Date of Application: _____

Address of Property: _____

Village _____ State _____ Zip _____

Signature of Property Owner _____ Date _____

Signature of Applicant _____ Date _____

Print Name _____

Print Name _____

Phone/Fax _____

Phone/Fax _____

Mailing Address: _____

Mailing Address: _____

Application For: (check one) (see reverse side for fees)

- | | |
|-----------------------------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Single family dwelling | <input type="checkbox"/> Deck |
| <input type="checkbox"/> Two family dwelling | <input type="checkbox"/> Shed |
| <input type="checkbox"/> Residential Construction/Addition | <input type="checkbox"/> Garage |
| <input type="checkbox"/> Commercial construction / addition | <input type="checkbox"/> Pool |
| <input type="checkbox"/> Industrial construction / addition | <input type="checkbox"/> Zoning Exemption |
| <input type="checkbox"/> Permanent Sign | <input type="checkbox"/> Lot Split |
| <input type="checkbox"/> Temporary Sign | <input type="checkbox"/> Fence |
| <input type="checkbox"/> Temporary Sign (for non-profit organization) | <input type="checkbox"/> Open Storage & Display |
| <input type="checkbox"/> Other: (explain) _____ | |

For residential, commercial and industrial construction / additions, site plans conforming to the Village of Middlefield Site Plan Regulations must be provided with the application for review.

Each application for a sign permit shall be accompanied by professional quality, color scale drawings showing:

1. The width of the building face which abuts the frontage street and, for a building located on a corner lot, the building depth facing the secondary street.
2. The sign design, color and proposed layout, including the total area of the sign and the size, height, character and materials of all letters, lines and symbols.
3. The exact location of the sign in relation to the building and property lines.
4. Details and specifications for construction, erection and attachment of the sign, and the name and address of any contractor who will be installing the sign.
5. Color photographs of existing buildings or color renderings of proposed buildings.
6. For illuminated signs, the number and types of lamps and lens material and a statement in writing that the illumination of such sign will comply with the provisions of Section 1165.05.
7. Each application for a sign permit shall depict the location and type of lighting fixture, if any, including the method and intensity of the illumination.
8. A table of existing and or proposed signs showing dimensions and square footage of the signs, along with showing the calculated allowable square footage for the site.

RESIDENTIAL \$50.00 _____
 COMMERCIAL \$100.00+ (see chart) _____
 INDUSTRIAL \$250.00+ (see chart) _____

**APPLICATION FOR OCCUPANCY PERMIT
 WITHIN THE VILLAGE OF MIDDLEFIELD**

14860 North State Avenue
 P.O. Box 1019

Phone: (440) 632-5248
 Fax: (440) 632-0591

The undersigned hereby makes application for Occupancy in accordance with the requirements of section 1140 of the Village of Middlefield Municipal Ordinances. The undersigned agrees that the premises described below **shall not be occupied** until an Occupancy Permit has been issued.

Date of Application: _____

Name of Applicant: _____ Telephone No. _____

Address: _____

City _____ State _____ Zip _____

Address of Premises to be occupied: _____

Square Footage _____ Land Lot/Parcel _____ Zoning _____

Proposed Date of Occupancy _____ Zoning Permit No. _____

Use of Building _____ New _____ Alteration _____

Owner of Building _____ Former Occupant _____

Signature of Owner **Date**

Signature of Applicant **Date**

 Print Name

 Print Name

 Phone/Fax

 Phone/Fax

REQUIREMENTS FOR PERMIT:

- | | | | |
|-----------------------------------------------------------------|-----------|----------|-------------|
| 1. Approved site plan | Yes _____ | No _____ | Date: _____ |
| 2. Approved Foundation elevation check | Yes _____ | No _____ | Date: _____ |
| 3. Approved Record As-Built Drawings | Yes _____ | No _____ | Date: _____ |
| 4. Residential Occupancy Permit
Geauga County Building Dept. | Yes _____ | No _____ | No. _____ |
| 5. Impact Fee Paid | Yes _____ | No _____ | Date: _____ |
| 6. Fire Department Approval (Commercial) | Yes _____ | No _____ | Date: _____ |

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- I. GENERAL APPLICATION OF STANDARDS. These requirements for plan content are intended for use on all development projects involving building construction and / or earth disturbing activities within the municipality.
1. REQUIREMENTS ARE MINIMUM. These requirements for plan contents establish the minimum information necessary to adequately review development plans for conformance with Municipal regulations, and to provide for the enforcement of said regulations during the construction of development projects. They further define the specific minimum content requirements for each of the component plans required to be included in various submittals
 2. GENERAL APPLICATION OF REQUIREMENTS. The standards are intended to provide not only a reference for the preparation of plans for submittal, but also as a checklist for the review of plans by the Municipal reviewing authorities. Therefore, applicants submitting plans for review should insure that the required information is provided when and where these regulations stipulate. Failure to do so may result in unnecessary confusion, delayed processing and additional expense to the applicant for plan reviews.
 3. APPLICATION OF REQUIREMENTS TO SPECIFIC PROJECTS. It is recognized that not all of the items or improvements addressed in these standards will be included in all types of development projects. When a particular item or improvement is not part of a subject project it will not be included in the plans. For instance, there may not be any existing buildings on or adjacent to a particular subject property; therefore any requirement contained in these standards that relates to “existing buildings on or adjacent to the subject property” would not be applicable in that instance. A minor subdivision may be proposed for the sole purpose of selling the subject property and no grading work of any kind will be done by the developer; the requirement to include a grading plan would not be therefore be applicable in this example. When an item or improvement is included in a subject project it shall be included in the plans.
 4. VARIANCES. Conformance with these and all other applicable regulations is required. However, when for just cause and in accordance with applicable regulations, the developer needs to attempt to gain a variance from any requirement, the plans and details should reflect the proposed variation. The appropriate application for variance including all required documentation shall be included in the submittal. When a variance has been granted prior to plan submittal, written approval of same from the appropriate approving authority shall be included in the current submittal.
 5. DEGREE OF DETAIL REQUIRED IN PLANS. In most cases the plan content requirements are divided into minimum, concept, preliminary and construction document information layers. These information layers are cumulative. When an applicant makes a concept submittal the plans shall contain the concept information required. When a preliminary submittal is made, the plans shall contain the required concept information and the required preliminary information. Construction document submittals shall contain all of the required concept, preliminary and construction information. When a particular plan is required only in the construction documents submittal it shall contain all of the required information. In certain instances (including but not limited to, topographic maps, grading plans and landscaping plans) no division of requirements is made. In such instances all of the information shall be included when the plan is first required to be submitted.
 6. CROSS INDEXED REQUIREMENTS. In some instances the content requirement for a plan may require the inclusion of “minimum” information from some other plan (i.e. “minimum property information (see Plat of Survey)” or “minimum street information (see Street Plan)”). In these instances, the referenced plan content requirements identify the minimum information to be provided. This method of cross indexing information requirements has been carefully considered and arranged to meet the need to have the same information occur in more than one location without duplicating requirements.
 7. STANDARDS SUBJECT TO CHANGE. These standards are subject to change in order to meet the changing needs of the Municipality; to accommodate new development methods, processes and changing technologies; and provide for improvements in the processing of development projects. They form the standard components for future additional submittal content requirements and component plan requirements.

II RESIDENTIAL SITE PLAN REQUIREMENTS

This section applies to site plan requirements for one or two family dwellings new construction, additions or alterations.

Site Plan requirements - The site plan shall be 11 inches by 17 inches or 17 inches by 22 inches using a standard engineers scale no less than 1 inch equals 60 feet and prepared by an Ohio registered engineer, surveyor, or architect. The site plan is to conform to the master grading plan for the subdivision or development, if applicable. The Site plan shall contain the following minimum information:

1. Owners name and address
2. Street name and address of site
3. Name of Builder, address, and telephone number
4. Name of Plan preparer, address and telephone number
5. Name of subdivision, record volume and page numbers
6. Sublot number
7. Permanent parcel number
8. Zoning District of Parcel
9. Scale
10. Date
11. Proposed Use of Land
12. Surveyors statement, signature, and seal:

I, the undersigned, do hereby state, that this topography, indicated by 6", 1', or 2' contours, and elevations shown hereon represent an actual field survey made by _____ name _____ on the _____ day of __, 20____ and that the elevations were taken at the appropriate intervals and that as of the date of the survey the existed as indicated hereon.

Signature _____ Date _____
Printed name & registration number

13. North arrow
14. Bench mark
15. Legend depicting all symbols
16. The distances and bearings of all property lines
17. Corner monumentation with a notation as to found or set and description of material and condition.
18. Lot size – square feet and acreage
19. Distance to nearest intersection (provide street names)
20. Proposed or existing easements, which apply to any part of the site, shall be shown and their ownership and purpose stated.
21. Existing contours (as dashed lines) and proposed contours (as solid lines) shall be shown for the entire site and fifty (50) foot beyond the property lines with intervals as directed by the following:
 - i. Less than 1% grades – 6"
 - ii. 1% to 6% grades – 1'
 - iii. Greater than 6% grades – 2'
22. Dimension of all existing and proposed structures or buildings, including patios, decks and accessory structures, including overall height of structures
23. Number of families
24. Notation of new Construction, Addition, or Alteration
25. Number of stories
26. Number of bedrooms
27. Usable floor space designed for use as living quarters exclusive of basements, porches, garages, breezeways, terraces, attics or partial stories.
28. First floor sq. ft.
29. Second floor sq. ft.
30. Provide sideline and setback dimensions from all structures to all property lines
31. Indicate the proposed top of footer elevation along with finish floor elevations of the basement, first floor or slab floor, and the garage floor.

32. Indicate existing finish floor elevations, garage floor elevations and ground elevations of buildings and/or structures on the adjacent properties.
33. Existing and proposed grade elevations at corners of existing and proposed buildings shall be indicated.
34. Existing and proposed grade elevations at the lot corners and on the property line, opposite all house corners shall be shown.
35. Show the location and composition of existing and proposed driveways, sidewalks, and aprons
36. Show the location and material of existing pavement with grades at the centerline, gutter and top of curb
37. Label the existing and proposed grade at the back of the sidewalk and at any proposed curb cuts
38. The location and elevation of all existing and proposed utilities within or adjacent to the lot, including, but not limited to,
 - a. sanitary sewers including upstream and downstream manholes
 - b. storm sewers including upstream and downstream manholes
 - c. drive culverts
 - d. water lines, fire hydrants, water shut off and line valves
 - e. gas service
 - f. electric , phone, cable services
39. Show rim and invert elevations of all manholes, catch basins and lateral connections. Show size material and grade of all pipes.
40. Show the location of all existing, swales, yard drains, or other drainage facilities on or adjacent to the site.
41. Show the location of all proposed swales, yard drains, or other drainage facilities sufficient to provide positive drainage of the entire site.
42. Show roof downspout discharge points and direction for all structures. Include note that all downspouts are to be outletted on splash blocks if a storm connection is not provided.
43. Show any platted or jurisdictional wetlands
44. Show the location and details for all erosion control measures (silt fence, diversion swales, construction entrance, inlet protection, concrete truck wash out location, etc.)
45. Add the following general notes to the plan if applicable.
 - a. A variance for _____ was granted per ordinance _____, dated _____.
 - b. Provide an expansion joint per ODOT item 705.03 where the drive apron abuts the sidewalk and street curb.
 - c. All drive aprons and sidewalks across the drive shall be a minimum of 6 inches thick ODOT item 452.
 - d. Temporary seeding and mulching to be completed within 7 days after foundation is backfilled.
 - e. The applicant shall complete the installation of the lawn within one (1) year of the issuance of the Preliminary Zoning Certificate.
 - f. Street sweeping shall be performed on streets adjacent to construction entrances and those streets receiving traffic from the development area. These shall be cleaned daily to remove sediment tracked off site. If applicable, catch basins shall be cleaned weekly.
 - g. Mud tracked onto streets shall be removed daily to prevent it from accumulating. It shall be removed by shoveling and scraping and shall not be washed off paved surfaces or into storm drains.
 - h. Rough graded areas shall be below flow elevation of curbs and inlets.
 - i. The applicant or applicants representative shall inspect and maintain the erosion control measures at least once every seven calendar days and within 24 hours after any storm event greater than ½” of rain in a 24 hour period.
 - i. All control measures in need of repair or maintenance shall be repaired or maintained within 3 days of inspection or notification from the Village.
 - ii. If a control measure is failing to perform its intended function and a more appropriate control measure is required, the site plan must be amended and the new control measure installed within 10 days of inspection or notification from the Village
 - iii. If erosion control measures have not been installed, they must be implemented within 3 days of inspection or notification from the Village. If a planned erosion control measure is not needed, a written statement of explanation shall be provided to and approved by the zoning inspector.

- 46. Any other information that may be required by the Zoning Inspector or the Village Engineer to assure that the proposed building elevations and site grading is compatible with adjacent property and that positive drainage is achieved.
- 47. Record (“as built”) drawings for one or two family dwellings, new construction, additions or alterations, shall be submitted upon completion of the site plan construction for review and approval by the Village. The as built drawing shall contain a statement by a registered surveyor:

I hereby state the circled information as shown hereon is existing as obtained on the site this _____ day of _____, 20____

Signature _____ Date _____
 Printed name & registration number

- (a) The Record (“as built”) drawing requirements are:
 - (1) Verify actual locations of all structures, setbacks, utilities, pavements and other physical features.
 - (2) Verify elevations of:
 - i) basement, first floor and garage
 - ii) ground grades at corner of buildings
 - iii) sidewalk
 - iv) lot corners & property line opposite building corners
 - v) rim & invert of each yard drain, catch basin and manhole
 - vi) inverts of culverts or flow line of ditches and swales
 - vii) sufficient spot elevations to substantiate drainage patterns
 - (3) Driveway and apron must be completed and indicate type of pavement.
 - (4) Iron pins at all lot corners
 - (5) As Built certification and seal of registered Surveyor

III. APPROVAL PROCESSING AND CONSTRUCTION ACTIVITIES. The following is a summary of the Municipal Ordinances and the approval procedure for Preliminary and Construction Documents. Concept plans do not require, nor will they receive any Municipal approval, only a review with the applicant.

1. All submittal packages will be delivered to the Village of Middlefield Municipal Center a minimum of two weeks prior to a regularly scheduled meeting of the Planning Commission. Required with the submittal are the application and payment of appropriate fees. The required applications and fees will be reviewed, outlined and listed to determine applicability of each required depending upon the type of development to take place. The Village will then distribute received submittals to Village Engineer and Zoning Inspector and determine if it is acceptable for review. If the submittal does not conform to the requirements of this section, the Village Engineer and/or Zoning Inspector shall notify the applicant and require the submittal be changed to eliminate all non-conforming aspects thereof. If accepted for review, Village Engineer will review, report and recommend on the effects of traffic circulation, safety, utility usage, construction plans and compliance with all village ordinances, municipal standards for plan content, and design guidelines.
2. Based on the scope of the project, the Engineer may forward copies of the site plan to the following:
 - a. Utility Committee will review the submission for effects and resolution of impacts on all Village utilities. i.e. Sanitary, Water and Storm Sewer Systems. When impacts to utilities are defined, a report will be forwarded to Planning Commission with a statement as to impacts on utilities and recommendations.
 - b. Streets Committee will review, report and recommend on effects to streets and sidewalks.
 - c. Zoning Inspector will review, report and recommend on effects to Zoning Ordinances.
 - d. Fire Chief will review, report and recommend on effects of safety and fire prevention.
 - e. Police Chief will review, report and recommend on effects of safety and traffic control.
 - f. Solicitor will review with respect to all legal issues.
3. Upon resolution of all matters contained in the reports received above, the Village Engineer will place the submittal on the next available Planning Commission agenda for action. Upon approval by the Planning Commission, the Zoning Inspector may issue the Zoning Permit.
 - a. Prior to issuance of the Zoning Permit, the Village should receive escrow amounts from developer / builder to cover the cost of inspection services as may be necessary during construction.
 - b. All approvals to issue the Zoning Permit will be valid for twelve months only. If Construction not started, new submittals may be required.
4. Preliminary Zoning Permit issuance allows construction to commence. The following existing codes require developer's actions during construction to assure construction compliance to the approved plans.
 - a. 1140.06.(c) – Surveyor certification that stakes set on property line and building location prior to construction activities
 - b. 1140.06/(d) – Surveyor places bench mark within 100' of building and certifies-- inspection by zoning inspector.
 - c. 1140.06/(e) – Engineer and zoning inspector right to inspect site at any time.
 - d. 1140.06/(f) – Surveyor certification of footer location and elevation prior to construction on these footers.
 - f. 1140.06/(h) – Surveyor certification of as built site plan and final grading.
5. An Occupancy Permit must be issued prior to occupancy of building and upon completion of site plan improvements and punch list items.

- IV. TITLE INFORMATION AND TITLE SHEET REQUIREMENTS. Title sheets, or the first sheet in a plan set where a separate title sheet is not required in the submittal contents, shall contain the following Main Title Information.
1. Submittal identification (concept, preliminary, etc.)
 2. Project Name or other means of identification
 3. Project location information (street address, municipality)
 4. Property owner information: name mailing address, phone number
 5. Plan author information: company, mailing address, phone number
 6. Developer information: name, mailing address, phone number
 7. Vicinity map
 - a. All surrounding streets shall be shown and labeled
 - b. Display a north arrow.
 - c. Depict and label corporation limits.
 - d. Minimum area shown shall be the radial distance of 3000' from the edges of the project site.
 8. Index of sheets in the plan set
 9. Legends shall include all symbols used and their description
 10. Zoning districts in which the property is located and all surrounding parcels
 11. The gross square footage of each non residential building.
 12. A statement indicating whether or not any part of the subject land has been previously used to provide yard space or lot area for another use, parcel, building or development project.
 13. Proposed zoning district change, if any.
 14. Proposed zoning use classifications to be included in the project.
 15. Space for Municipal approval.
 16. Certifications (see Plat of Survey)
 17. The seal of an Architect, Surveyor or Engineer as may be applicable. Ohio registrations required.
 18. Furthermore, each sheet within the plan set shall contain the following minimum Plan Title Information
 - a. Project Identification
 - b. Sheet Number
 - c. Plan name or content identification
 - d. Date prepared or revised
 - e. Scale of drawings as necessary
 - f. North arrow as necessary

- V. SUBDIVISION PRELIMINARY PLAN REQUIREMENTS. The preliminary plan shall contain the following information:
1. The preliminary plan shall be clearly and legibly drawn by a professional surveyor registered with the state of Ohio. The plan shall be labeled "preliminary plan." There is no minimum sheet size required. If the subdivision is on more than one sheet, match lines and page references shall be provided. Each sheet shall be numbered (eg. 1 of 2, 2 of 2).
 2. The preliminary plan shall include all land intended for ultimate development even though only a portion of the tract is to be initially recorded.
 3. The name by which the proposed subdivision will be recorded. The name shall not duplicate, be the same in spelling or alike in pronunciation with any other recorded subdivision in Geauga County.
 4. The location of the subdivision by section numbers, township, county, state and other legally established district, corporation or unit.
 5. Scale of 1"=100', or at the option of the applicant, the scale may be larger if the size of the subdivision so warrants.
 6. The basis of bearings, north arrow, date and graphic scale.
 7. A vicinity map with a north arrow showing the boundaries of the subdivision in relationship to existing roads.
 8. The name, address, and telephone number of the owner and/or developer.
 9. If the subdivision boundary has been surveyed, the name, address, and telephone number of the registered surveyor who surveyed it and prepared the plan. The name, address, and telephone number of the registered surveyor who surveyed the boundary of the subdivision, if different from the surveyor who prepared the plan.
 10. The subdivision boundary dimensions may be based upon a survey of the premises or upon existing deed records, as recorded in the county recorder's office, provided such records are adequate. Certification, signature, and seal of the registered surveyor who surveyed the subdivision and prepared the plan, that the plan represents a boundary survey made by him in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code, that he has prepared the plan, and that the dimensions shown thereon are correct to the best of his knowledge and belief. If the surveyor who surveyed the subdivision did not prepare the plan, then he also should sign the plan and place his seal thereon and certify that he has surveyed the boundary of the subdivision in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code and that the survey is correct to the best of his knowledge and belief. If the subdivision boundary dimensions are from existing deed records, then the surveyor who prepared the plan shall indicate the same thereon. He shall also state that he has prepared the plan, sign and date the plan, and place his seal thereon. All existing easements and existing deed restrictions shall also be listed.
 11. The area in acres shall be given for each lot or block. The area may be rounded to the nearest hundredth of an acre.
 12. The name of any abutting subdivision with the plat book volume and page number of the recorded plat and the owner's names, deed volume and page number, and permanent parcel numbers of all abutting properties.
 13. The location and distances to the property lines of existing and proposed streets, buildings and structures, water courses and other features in the subdivision and within one hundred (100) feet adjacent to the proposed subdivision.
 14. The location, right-of-way width, and dimensions both at the right-of-way margin and centerline for all existing and proposed roads both adjacent to and within the subdivision.
 15. The purpose, location, and dimensions of all existing and proposed easements, including utility and oil and gas easements, both adjacent to and within the subdivision. Any existing blanket easement(s) of record shall be released either on the final plat or by recording a separate instrument for same. Existing easements which interfere with the installation of road or other public improvements may be required to be relocated.
 16. The purpose, location, boundaries, dimensions, and acreage of any lots used for, including but not limited to, open space areas, recreation areas, common areas, water and sewage treatment sites, storm water retention or detention sites, and any other public or private sites or lots.
 17. A tabulation of the total subdivision data including:
 - a. Area in sublots (in acres).

- b. Area in existing and proposed road right-of-way(s) (in acres).
 - c. Area in any blocks (in acres).
 - d. Total area in the subdivision (in acres).
 - e. Total length of roads (lineal feet).
 - f. Total number of sublots.
18. If two family dwelling units or multiple family dwelling units are proposed, a statement regarding the number of buildings and dwelling units contained therein for each proposed lot and the total number of buildings and dwelling units for the entire subdivision along with the number of units per acre.
 19. A statement with respect to the proposed use of lots, stating type of proposed buildings so as to reveal the effect of the development on traffic (a traffic impact analysis may be required), fire hazards (a water distribution impact analysis may be required), increase in school enrollment or congestion of population and with respect to protective covenants and deed restrictions.
 20. The location, width, name and approximate grade of proposed streets, lots, easements or other rights of way indicated as dedicated or undedicated. A typical street cross section shall be shown indicating the location of sidewalks and curbs and the location and size of utilities.
 21. The lot dimensions and lot numbers.
 22. The location, elevation and size of all existing sanitary and storm sewers, water mains, culverts and other underground structures.
 23. A statement that water mains, fire hydrants and other appurtenances will be installed in accordance with the rules and regulations and under the supervision of the Village of Middlefield.
 24. Elevation datum shall be based on and related to the Geauga County Geodetic Survey. At a minimum, two (2) County Monuments shall be referenced and shown on the drawings. The contour and topographic conditions shall be shown as follows:
 - a. Existing ground elevations and watercourses in the subdivision and within one hundred (100) feet of its boundaries showing contours at an interval of not more than two (2) feet. The source of information concerning ground elevations shall be provided.
 - b. The base flood elevation data and the boundary of the flood hazard area shall be shown on the plan. If there are no flood hazard areas in the subdivision pursuant to the Flood Insurance Rate Map(s), then a statement shall be provided on the preliminary plan indicating same. The map number and effective date of the applicable Flood Insurance Rate Map(s) shall be provided.
 25. Any wetland area(s) under the purview of the U.S. Army Corps of Engineers and the Ohio EPA shall be identified by category (1, 2, or 3) and the boundaries and acreage thereof shall be shown on the plan based upon a wetland delineation. The source(s) of information pertaining to detailed soils and wetlands (if any) within the subdivision shall be documented on the plan. A qualified wetland professional accepted by the U.S. Army Corps of Engineers shall provide the wetland information and their name address and phone number shall appear on the plan. If wetland exist within the subdivision, it shall be the responsibility of the developer to consult with the U.S. Army Corps of Engineers and the Ohio EPA, regarding applicable regulations. In addition, the planning commission shall forward a copy of the plan to the U.S. Army Corps of Engineers. The developer is encouraged to place wetlands in common open space or to delineate an easement generally around such wetlands, to be granted to an entity such as a land trust, and to devise and record covenants and restrictions running with the land to preserve and protect them. If no wetlands exist within the subdivision, a statement on the plan shall be provided indicating same. The developer shall be responsible for following all applicable federal and state regulations for wetlands, regardless of the statement on the plan.
 26. The zoning classification including use, height and area requirements and the minimum setback building lines.
 27. Proposed sites that are to be dedicated or reserved for parks, playgrounds, schools or other public uses or open spaces.
 28. If any zoning changes are contemplated by the subdivider, the proposed zoning shall be outlined.
 29. A notation on the plan shall be shown as follows: "This plan is hereby (approved) or (conditionally approved) by the Village of Middlefield Planning Commission this _____ day of _____, 20____. By: _____ (Signature of the Chairman of Planning Commission), Chairman, Village of Middlefield Planning Commission.

- VI. SUBDIVISION FINAL PLAT REQUIREMENTS. The final plat shall be prepared and legibly drawn by a professional surveyor, registered with the state of Ohio, based upon his survey of the premises in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code. The final plat shall be drawn in black ink on mylar and shall contain at a minimum the following information:
1. The sheet size shall be 24 inches x 36 inches with a border of 0.5 of an inch. Each sheet shall be numbered (eg. 1 of 2, 2 of 2). If the subdivision is on more than one sheet, match lines and page references shall be provided.
 2. The proposed name of the subdivision, which shall not duplicate the name of any other subdivision already recorded in the county.
 3. Township, tract, original lot or section number, permanent parcel number, and deed volume and page in which the subdivision is located.
 4. Scale of 1"=100', or at the option of the applicant, the scale may be larger if the size of the subdivision so warrants.
 5. North arrow and date of plat.
 6. A vicinity map with a north arrow showing the boundaries of the subdivision in relationship to existing roads.
 7. All dimensions, angles, and bearings are to be referred to the nearest established road lines; recognized permanent monuments; township tract, lot, or section lines; and other established control points.
 8. The names of all adjacent lot owners with the volume and page number of each owner's deed and permanent parcel number or the adjacent subdivision name(s) with the plat book volume and page number of the subdivision as recorded with the county recorder.
 9. The road name of each road within the subdivision and those adjacent to its boundaries.
 10. The location, right-of-way width, bearings, and dimensions of all existing and proposed roads both adjacent to and within the subdivision both at the right-of-way margin and centerline. The bearings shall be to the nearest second and dimensions to the nearest one-hundredth of a foot. The dimensions of all curves shall include the following information: radii, arcs, chords, chord bearings, deltas, and tangents. Any road right-of-way to be dedicated for public use shall be free of any easements, encroachments, liens, mortgages or other encumbrances.
 11. The purpose, location, width, bearings and dimensions of all existing and proposed easements, including but not limited to the drainage maintenance district, utility, and oil and gas easements, both adjacent to and within the subdivision. The volume and page number from the County Recorder's office shall be provided for existing easements of record. Proposed easements shall either be granted on the plat and accepted by the appropriate entity or recorded prior to the submission of the final plat. Existing and proposed towers; utility lines; drainage pipe and structures; oil and gas pipelines, wells, and tank batteries; pipe, pipelines, cable, or any other appurtenant structure(s) and the like, whether for public or private use, shall be within specifically delineated easements on the plat. Such easement rights may include the right to install, construct, reconstruct, maintain, and remove such facilities and related appurtenances within said easement as well as the right of ingress and egress. Any existing blanket easement(s) of record shall be released either on the final plat or by recording a separate instrument for same, before the final plat is submitted for approval. Existing easements which interfere with the installation of road or other public improvements may be required to be relocated or extinguished.
 12. The location, boundaries, owner's name and volume and page number of the recorded deed and permanent parcel number of any outlot(s) not platted and already divided out of the original tract. Such lot(s) shall be labeled "not a part of this subdivision." Such lot(s) shall not be numbered.
 13. The boundary lines of the subdivision showing the bearings and dimensions as surveyed by a registered surveyor. The bearings shall be to the nearest second and dimensions to the nearest one hundredth of a foot. The dimensions of all curves shall include the following information: radii, arcs, chords, chord bearings, central angles, and tangents.
 14. The boundary lines of each lot or block in the subdivision with bearings and dimensions. The bearings shall be to the nearest second and dimensions to the nearest one hundredth of a foot. The dimensions of all curves shall include the following information: radii, arcs, chords, chord bearings, central angles, and tangents.
 15. Lots in the subdivision shall be numbered progressively. If the subdivision is phased, lots shall be numbered in progressive order as each phase is submitted. Blocks shall be labeled alphabetically.

16. The area in acres shall be given for each lot or block. Said areas shall be calculated to the third decimal place.
17. The dimensions and location of the minimum building setback line(s), including any minimum riparian setback line(s), in accordance with the applicable and current zoning ordinance requirements for the Village and zoning district in which the subdivision is located.
18. The location and description of all existing monuments and iron pipes or pins found and those set in the subdivision shall be shown. If new, monuments encased in concrete shall be set in place at all subdivision corners, iron pins in boxless monuments shall be set at all appropriate road centerline locations and all road intersections, and iron pins shall be set at all subplot corners, the termination of curves, and angle points.
19. The purpose, location, boundaries, bearings and dimensions and acreage of any blocks used for, including but not limited to, open space areas, recreation areas, common areas, water and sewage treatment sites, storm water management facilities, and any other public or private sites or lots. The dimensions shall be to the nearest one-hundredth of a foot and the bearings to the nearest second. Acreages shall be to the third decimal place. Such sites shall be given a block designation on the plat (eg. block "A").
20. The base flood elevation data and the boundary of the special flood hazard area shall be delineated on the plat. The developer is encouraged to place special flood hazard areas in common open space or to delineate an easement generally around such areas and to devise and record covenants and restrictions running with the land to preserve and protect them.
21. Any wetland area(s) under the purview of the U.S. Army Corps of Engineers and the Ohio EPA shall be identified by category (1, 2, or 3), if applicable. Boundaries and acreage thereof shall be shown on the plat based upon the wetlands delineation. Pursuant to Article IV, Section 401 (A) (21) of these regulations, if wetlands exist within the subdivision, it shall be the responsibility of the developer to consult with the U.S. Army Corps of Engineers and the Ohio EPA. In addition, the planning commission shall transmit a copy of the final plat to the U.S. Army Corps of Engineers. The developer should place wetlands in common open space or delineate an easement, with its dimensions and area, generally around such wetlands and devise and record covenants and restrictions running with the land to preserve and protect them. The easement should be granted to an entity that will provide ongoing monitoring of the wetlands, such as a land trust. Granting the easement to a homeowners' association is strongly discouraged.
22. A tabulation of the total subdivision data including:
 - a. Area in sublots (in acres).
 - b. Area in existing and proposed road right-of-way(s) (in acres).
 - c. Area in any blocks (in acres).
 - d. Total area in the subdivision (in acres).
 - e. Total length of roads (lineal feet).
 - f. Total number of sublots.
 - g. If two family dwelling units or multiple family dwelling units are proposed, a statement regarding the number of buildings and dwelling units contained therein for each proposed lot and the total number of buildings and dwelling units for the entire subdivision.
23. The plat shall be superimposed on a survey of the lands of the dedicators from which such plat is drawn, and shall contain an accurate background drawing of any metes and bounds descriptions of the lands of the dedicators from which such plat is drawn.
24. At the time of submission of the final plat the following certifications shall appear on the plat:
 - a. Certification, signature, seal, and date by a registered surveyor that he has surveyed the premises and prepared the plat in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code and that the plat is correct to the best of his knowledge and belief. If the surveyor who surveyed the subdivision did not prepare the plat, then he shall also sign the plat and place his seal thereon and certify that he has surveyed the subdivision in accordance with the provisions of Chapter 4733-37 of the Ohio Administrative Code and the survey is correct to the best of his knowledge and belief. The subdivision boundary and all of the sublots therein shall close within the minimum standards for surveying as set forth in Ohio Administrative Code Chapter 4733-37.
 - b. Notarized certification by the owner of the subdivision, signature, and date that the plat represents his subdivision of land and that he has offered for dedication to public use

- those roads, improvements, and other areas shown thereon that will be used for public purposes and granted any easement(s) shown on the plat to the appropriate entity. The grantee of any easement shall sign the plat, indicating its acceptance.
- c. A notarized mortgage release statement (if applicable) by the financial institution that it has released its lien on the roads or other areas shown on the plat to be dedicated to public use. The statement shall be signed and dated by the appropriate official of the financial institution.
 - d. The planning commission shall require proof of compliance with any applicable zoning ordinances as a basis for the approval of a final plat. Said proof of compliance shall consist of a statement on the final plat, signed and dated by the zoning inspector, that the plat complies with the applicable Village zoning ordinances. If revisions to a final plat are made subsequent to the date that the zoning inspector has signed it, and such revisions affect any of the sublots shown thereon, then the zoning inspector shall re-sign and date the plat.
25. At the time of submission of the final plat the following notations for approval shall appear on the plat:
- a. For approval of the plat by the chairman of the planning commission.
 - b. For acceptance of the utility easement by all of the public utility companies and the acceptance by the appropriate entity of any other easement(s) granted by the owner of the subdivision and shown on the plat.
 - c. For certification by the village engineer that he has inspected the construction of the road and related improvements on the premises and that the road has been constructed in accordance with the specifications set forth on the approved plat and plans and that the road is in good repair; and, that the plat has been reviewed and meets the minimum standards for boundary surveys codified in Chapter 4733-37 of the Ohio Administrative Code.
 - e. The signature of the Fiscal Officer, certifying that the Council has adopted an ordinance approving the filing of the final plat and stating the ordinance number and its date of adoption;
 - f. The signature of the Solicitor, certifying that the final plat conforms to the formal requirements of the Codified Ordinances. The Solicitor shall not sign the plat until both of the following have occurred:
 - g. The developer shall present to the Solicitor evidence that all taxes against proposed roads and streets have been paid and evidence that all encumbrances or liens of record against such proposed roads have been released.
 - h. The developer shall present to the Solicitor evidence that all improvements have either been installed and approved by the proper officials or agencies, or that a performance bond or a performance fund complying with the requirements of the Codified Ordinances and insuring their installation has been accepted by Council.
 - i. For transfer by the county auditor.
 - j. For recording by the county recorder.
26. A notation for the volume and page number assigned by the county recorder for the covenants and restrictions (if any) shall be provided for on the plat.

- VII. LAND USE PLAN REQUIREMENTS. The plan shall show the overall land use design of the proposed project. The plan shall include all land contained within the project boundaries. The proposed use of land shall conform to all applicable requirements and master plans of the municipality. The plan content shall include the following:
1. A detailed statement regarding the zoning uses to be established
 2. A topographic map (see requirements) upon which the following shall be shown:
 - a. Title information (see Title Information requirement)
 - b. Vicinity map
 - c. Minimum Site Plan (See Site Plan Requirements). The location and footprint of proposed buildings may be general, rather than specific only under the conditions of the submittal being concept or preliminary. In Construction document submittals when the subject buildings are proposed to be on fee simple lots and their design and location is the responsibility of the future lot owner, houses shall be delineated in order to show a reasonable size and location. The locations and sizes shall also show the possibility of accordance with all applicable zoning and other municipal regulations.
 - d. Minimum property survey information (See Plat of Survey)
 - e. Minimum street information (See Street Plan)
 - f. Minimum utilities information (See Utility Plan)
 - g. For Major subdivision and Planned Unit Developments the plan shall also show the allocation of land use by location, type of use, and acreage including:
 1. Open / Common areas and proposed ownership thereof
 2. Lands to be dedicated to public use
 3. Parks, playgrounds and other recreational uses
 4. Sublots and / or building sites
 5. Non-residential uses
 6. Residential uses (one, two and multifamily dwellings)
 7. Where residential uses are proposed in PUDs include a) Estimated population of the development; b) types of dwelling units to be constructed; c) unit densities by area; d) total number of units for each density area; e) total number of units proposed in the plan

VIII. SITE PLAN REQUIREMENTS.

1. Minimum site plan information shall contain the following:
 - a. The location and footprint of all proposed and existing structures inside the project boundaries and within 35 feet thereof.
 - b. Proposed modifications to the existence, location, or size of existing structures.
 - c. Existing underground structures not otherwise indicated within the plans to be submitted (i.e. abandoned building foundations, cisterns, etc.)
 - d. The location and width of proposed sidewalks and pedestrian ways.
 - e. The location and size of parking areas, loading/unloading areas and their associated means of access.
2. Concept site plans shall also include:
 - a. Title information (see title information requirements).
 - b. Vicinity map
 - c. Minimum property survey information (see Plat of Survey).
 - d. Minimum street plan information (if applicable; see Street Plan).
 - e. The location of the subject property referenced along the centerline of the street, or streets, providing access thereto, to its intersection with the nearest cross street centerline.
 - f. The required building setback line and other yard space limits on all sides of the project boundaries.
 - g. The building setback line along both sides of proposed streets.
 - h. Traffic circulation patterns (if not otherwise clear and evident)
3. Preliminary site plans shall further include:
 - a. A topographic map (see Topographic Map) upon which all information shall be shown.
 - b. Proposed construction phase lines for multi-phased projects.
 - c. The location of existing and proposed fire hydrants and fire lanes on the subject property or adjacent thereto.
 - d. The location of any other proposed or existing structures not otherwise defined within the submittal including sufficient details, specifications and/or other data to clearly communicate the scope and intent of the proposed work or existing facility.
4. Construction document site plans shall further include:
 - a. The number of floors, floor area (per floor) and building height of each existing and proposed building on the subject property.
 - b. Paving specifications for sidewalks and other pedestrian ways.
 - c. Paving specifications for parking areas, loading/unloading areas and their associated means of ingress and egress.
 - d. The size and dimensions of each parking space and loading/unloading area, and the width of all means of access thereto.
 - e. The location of garbage collection facilities and type of enclosure.
 - f. Architectural elevation drawings demonstrating the design and character of the proposed structures and/or the proposed modifications to existing structures.
 - g. US Army Corps of Engineers or Ohio Environmental Protection Agency wetlands permit as may be applicable. In lieu of permit, a letter of non-jurisdiction by the US Army Corps of Engineers office will be acceptable.

IX. LOT SPLIT REQUIREMENTS

1. Plan Title Information
2. Plat of Survey Information
3. For each new parcel being created or left in residue, an accurate and current survey description shall be prepared by a professional surveyor registered with the State of Ohio and in accordance with the following.
 - a. Professional Land Surveyors of Ohio publication "Minimum Standards for Boundary Surveys in the State of Ohio"
 - b. The Conveyance Standards for Geauga County
 - c. The requirements as stated herein
4. Zoning classification of all parcels split, remaining and adjoining.
5. Location, type, dimensions and distances to property lines from any existing ponds, buildings or structures on the lot and adjacent thereto including any driveways, parking areas, signs and/or loading/unloading spaces serving said buildings or structures, sufficient to determine the lot split(s) and remainder parcels all meet current zoning.
6. Reference to an established point of beginning, such as a monumented centerline of intersections of streets or monumented corner of sections, lots or township lines.
7. Survey Descriptions and Plats must be stamped approved by the Geauga County Engineers Office.
8. Signature and approval block for the Village Engineer and Planning Commission.
9. All approved lot split, consolidations, and remainder descriptions and plats shall be recorded with the Geauga County Recorder.

- X. **PLAT OF SURVEY REQUIREMENTS.** For the purposes of this section, the term “Accurate bearings and distances” shall be interpreted to mean that distances shall be to the nearest one-hundredth of a foot and bearings to the nearest second. The dimensions of all curves shall include the delta angle, radius, arc length, tangent, and chord bearing and distance. The area shall be described in acres and calculated to the third decimal place.
1. Minimum Plat of Survey or property survey information shall contain the following:
 - a. All existing streets on, or adjacent to, the subject property; including the street name, right of way width, centerline referenced with accurate bearings and distances, and the location and width of pavement.
 - b. Boundaries of the subject submittal area referenced with accurate bearings and distances. This information may be based on record information.
 - c. All existing rights of way and easement on, or adjacent to, the subject property, giving their width and purpose. The centerline thereof shall be accurately referenced by bearings and distances.
 - d. When sub lots or other separate parcels are to be contained in the subject project the boundary lines of such lots or parcels shall be shown.
 2. Plats of Survey shall further include:
 - a. Title information (as appropriate)
 - b. Identification of the Municipality, County, and State, original township section, tract or lot of the subject property.
 - c. All municipal corporation, township and county lines and section lines traversing or immediately adjacent to the property.
 - d. All proposed streets on, or adjacent to, the subject property; including the street name, right of way width, centerline referenced with accurate bearings and distances, and the location and width of pavement.
 - e. All proposed rights of way and easements on, or adjacent to, the subject property, giving their width and purpose. The centerline thereof shall be accurately referenced by bearings and distances.
 - f. All abutting property boundaries.
 - g. The name of the concerned property, if any and the property deed reference number(s).
 - h. Which abutting land was formerly that of the owner of the subject property and the date of title transfer.
 - i. The name of all owners of record of adjoining unplatted land; include the Geauga County Recorder’s deed record volume and page reference.
 - j. The plat name of adjoining platted lands; include the Geauga County Recorder’s plat volume and page reference.
 - k. The location and description of all property monuments; include whether monuments are found, set, or to be set.
 - l. When sub lots are to be contained within the subject property, include the following:
 1. The property boundaries of each lot referenced with accurate bearings and distances.
 2. A tabulation showing the exact area of each lot, reserve or other parcels shown on the plat (other than streets and alleys).
 3. Show the sub lot identification number for each lot.
 4. Show the required building setback line for each lot along the street, or streets, providing access thereto.
 - m. Horizontal control for all surveys shall be tied to a minimum of two (2) Geauga County Geodetic Survey markers, and information shown on the plat.
 3. The boundaries of the subject property shall be referenced, with accurate bearings and distances, to the surrounding area in conformance with the following requirements:
 - a. Single lot development and subdivisions with a total land area of less the ten (10) acres shall be referenced along the centerline of the street, or streets, providing access to the property to the nearest cross street centerline.
 - b. Planned Unit Development and all other projects of ten (10) acres or more shall be referenced from a monument established upon the subject property boundary to the following

1. The three (3) nearest existing street centerline monuments or other official monument.
 2. Each subdivision and P.U.D. boundary within two hundred (200) feet of the subject property.
4. The following certifications shall be required on all plats.
 - a. Registered surveyor's preparation of plat
 - b. Current taxes and assessments paid
 - c. Signature approval block for Approving Authority
5. The following additional certifications shall be required on all plats which include lands and/or improvements to be dedicated to, or reserved for, public use.
 - a. Ownership and dedication (with acknowledgment).
 - b. Current title commitment for the property.
 - c. Release of all encumbrances.
 - d. Approval of installation of improvements.
 - e. Acceptance of public lands, easements and improvements by Council.
6. The following legal descriptions shall be required when applicable:
 - a. Each separate area to be dedicated to, or reserved for, public use; include purpose and acreage.
 - b. Areas to be reserved by deed covenant for the common use of all property owner; including acreage.
7. All Plats of survey shall be prepared in accordance with the Professional Land Surveyors of Ohio publication "Minimum Standards for Boundary Surveys in the State of Ohio", the Conveyance Standards for Geauga County, and the requirements as stated herein, by a professional surveyor registered with the State of Ohio.

XI STREET PLAN REQUIREMENTS.

1. Minimum street plan information shall include the following information.
 - a. Information shall be provided for all streets whether public or private.
 - b. All existing streets (and other means of vehicular access) providing access to, or immediately adjacent to, the subject project including; name, right of way width (if applicable), and pavement width.
 - c. All existing and proposed sidewalks and other pedestrian ways including; location and width.
 - d. All proposed streets (and other means of vehicular access) whether public or private on or immediately adjacent to the subject project including; name, right of way width, and pavement width.
 - e. All proposed streets shall be annotated as to proposed ownership (public or private).
 - f. Provisions for the off-site extension and/or connection of existing and proposed streets.
2. Concept streets plans shall further include:
 - a. Plan title information
 - b. Minimum property survey information (see Plat of Survey)
 - c. Traffic circulation patterns (if not otherwise clear and evident).
3. Preliminary street plans shall further include:
 - a. Right of way cross section details; include pavement, utilities and other pertinent details. A similar cross section detail shall be provided for private access facilities.
 - b. Street centerline curve radii.
 - c. Cul-de-sac radius to outer edge of pavement.
 - d. Centerline distance between street intersections.
 - e. The center line length of non-through streets; measured from the intersection of the street centerlines to the center of the cul-de-sac or end of pavement as may be applicable.
4. Construction document street plans shall further include:
 - a. Use of the drafting standards identified in the O.D.O.T. LOCATION AND DESIGN MANUAL, VOLUME 3, (HIGHWAY PLANS), section 1205 "Drafting" and 1206 "Computer Aided Design and Drafting (CADD)" is recommended.
 - b. Pavement specifications for streets.
 - c. Pavement specification for sidewalks.
 - d. Centerline bearings, distances, angles to accurately locate and reference existing and proposed streets.
 - e. Plan and centerline profile drawings with maximum scales of Horizontal scale of 1"=20' and Vertical scale of 1"=5'
 - f. Tabulated curve data including radii, arc length, tangent length, central angle, point of curvature, point of tangent, chord distance, chord bearing.
 - g. Street monuments (both centerline and offset) conforming to Municipal requirements.
 - h. The location of all street name signs, traffic control signs and devices, and pavement markings.
 - i. Other construction details, specifications, and data as may be necessary to clearly communicate the intent, scope and specifics for all of the proposed and required work.
 - j. Vertical curves shall be indicated on the plans with data giving the type and length of curve; location and elevation of points of vertical tangency, intersection and curvature; centerline elevations at 25 foot intervals; and stopping sight distance.

- XII. TOPOGRAPHIC MAP REQUIREMENTS. Topography may be compiled by photogrammetric methods or by actual field surveys. Topographic maps shall contain the following:
1. Plan title information
 2. The topographic information shall be certified by a professional surveyor as reflecting a true and actual survey performed by himself, or under his direction, and giving the date of such survey.
 - a. Certification statement shall be "I, the undersigned, do hereby state that this topography, indicated by 6", 1' or 2' contours, and elevations shown hereon, represent an actual field survey made by name on the day of month, year and that the elevations were taken at the appropriate intervals and that of the date of the survey they existed as indicated hereon."
 - b. Certification Statements shall be signed and sealed with the surveyor's name and registration number clearly printed and legible.
 3. Elevation datum shall be based on and related to the Geauga County Geodetic Survey. At a minimum, two (2) County Monuments shall be referenced and shown on the drawings.
 4. The maximum contour interval shall be two feet. On plans for streets and utilities which are intended for dedication to public use, the topographic data used shall be based on a recent and accurate topographic or photogrammetric survey originally prepared at a scale not greater than 1"=50'; with a maximum one foot contour interval. Smaller contour intervals may be required by the Municipal Engineer for some cases.
 5. Topography information on the subject property and within fifty feet thereof. When, in the opinion of the Municipal Engineer, this distance is deemed inadequate for a particular project (due to severe conditions, or for other good cause) said engineer may require a greater distance within which said information shall be provided.
 6. All physical features and natural conditions including the location of substantial tree masses.
 7. The location and identification of isolated, preservable trees and other significant features (isolated tree locations not required for other than single building site projects).
 8. Natural and artificial water courses, marshes, and shorelines.
 9. Surface drainage, and areas subject to flooding, within fifty feet of the project boundaries, unless modified by the Municipal Engineer (See Note 5 above).
 10. Existing buildings, and other permanent facilities on the subject property and within thirty five feet thereof, unless modified by the Municipal Engineer (See Note 5 above.)
 11. The location of existing streets; including the location of pavement and sidewalks within thirty five feet of the project boundaries, unless modified by the Municipal Engineer (See Note 5 above).
 12. Indicate subsurface soils/conditions within the project boundaries.
 13. Wetland areas as defined and affirmed by the US Army Corps of Engineers.

- XIII. GRADING AND SURFACE WATER DRAINAGE PLAN REQUIREMENTS. The grading and surface water drainage plan shall consist of a topographic map (see requirements) upon which the following shall be shown:
1. Plan title information
 2. Minimum property survey information (see Plat of Survey).
 3. Minimum Street plan information (see Street Plan).
 4. Minimum site plan information (see Site Plan).
 5. A benchmark shall be established, based on and related to the Geauga County Geodetic Survey, at a permanent convenient location which shall remain undisturbed during construction activities.
 6. All proposed changes to existing grade and/or topography.
 7. All proposed grading shall be shown with maximum one (1) foot contour intervals.
 8. Grade elevations for existing and proposed streets and means of vehicular access shall include centerline, gutter/edge of pavement, top of curb (if applicable), bottom of ditch (if applicable), back of sidewalks, right of way/property line. Such elevations shall be provided at convenient intervals to adequately depict conditions.
 9. Storm water drainage inlets with top of casting elevations.
 10. Storm sewer outfalls (where permitted) including; location, discharge pipe size, invert elevation, headwall detail, erosion control measures.
 11. Sanitary sewer manholes with top of casting elevation.
 12. Proposed finish grades.
 13. Existing and proposed drainage ways, water courses and other bodies of water.
 14. Rechanneled waterways.
 15. Existing and proposed drainage ways, water courses and other bodies of water.
 16. Terraces, retaining walls and construction details therefor.
 17. Storm water management structures including retention/detention basins, dams, spillways, etc. and construction details therefor.
 18. First floor elevation of existing and proposed buildings.
 19. All areas of proposed excavation, grading and filling.
 20. Bottom width, side slopes and grade of existing and proposed drainage ways.
 21. Driveway and street culvert pipes; including size and specification.
 22. When not otherwise included in the submittal the following information shall be provided:
 - a. Provide a general description of fill materials which are to be deposited on the property; and their source.
 - b. Identify haul roads to be used within the Village if over the road vehicles are to be employed.
 - c. Identify methods of traffic control to be utilized.
 - d. Identify methods to be employed to maintain public rights of way to insure that they are kept undisturbed and clean and safe along, and in the vicinity of, the haul roads involved.

XIV. UTILITY PLAN REQUIREMENTS.

1. Minimum utility information shall show the following information:
 - a. The location, size, and purpose of existing and proposed utility easements.
 - b. The location and size of main lines for all utilities necessary to serve the subject development including:
 - c. All existing utilities on, or adjacent to, the subject land (when utilities that are not on, or adjacent to, the subject land identify all utilities that are accessible to the property (within 1000 feet thereof), and their location relative to the property).
 - d. All proposed Municipal utility mains within the project boundaries, as well as off-site extensions of same.
2. Concept utility plans shall further include:
 - a. Plan title information
 - b. Minimum property survey information (see Plat of Survey)
 - c. Minimum site plan information (see Site Plan)
 - d. Minimum street information (see Street Plan).
3. Preliminary utility plans shall further include:
 - a. Storm water drainage facilities including drainage calculations, detention/retention facilities, and storm sewer facilities.
 - b. Storm sewer outfalls (where permitted) including; location, discharge pipe size, invert elevation, and erosion control measures.
 - c. Storm sewer inlets including; the location, top of casting elevations, invert elevations.
 - d. Storm sewer lines including; location, size, slope, distance between inlets.
 - e. Sanitary sewer manholes including; location, top of casting elevation, invert elevations.
 - f. Sanitary sewer lines including; location, size, slope, and distance between manholes, etc.
 - g. Water main location and size.
 - h. Fire hydrant locations and branch size.
4. Final utility plans shall further include:
 - a. Use of the drafting standards identified in the O.D.O.T. LOCATION AND DESIGN MANUAL, VOLUME 3, (HIGHWAY PLANS), section 1205 "Drafting" and 1206 "Computer Aided Design and Drafting (CADD)" (or as thereafter amended) is recommended.
 - b. Plan and profile drawings for water mains, sanitary sewers, and storm sewers (required for major subdivisions and PUDs and when required by municipal reviewing authority where extensive improvements are proposed). Plan and profile drawings for utilities to be dedicated to public use shall be at the following scales: horizontal 1"=20'; vertical 1"=5'.
 - c. The location reference, based on centerline stationing and the off-set therefrom, for all catch basins, manholes, main valves, curb boxes, fire hydrants, tap-ins, end of service laterals (wye poles) and other major components of storm sewers, sanitary sewers, and water mains.
 - d. All tap-ins to Municipal utilities including; location and specifications.
 - e. All utility service laterals to existing buildings within the project boundaries including; location, size, and specification.
 - f. All utility service laterals to proposed buildings, building sites and sublots including; location, size, and specification.
 - g. Construction detail for all improvements (including but not limited to manholes, storm sewer inlets, headwalls, hydrant installation, pipe bedding, etc.).
 - h. The location, size, and pressure rating of gas mains.
 - i. The location of electric service lines.
 - j. The location of telephone service lines.
 - k. The location of cable television service lines.
 - l. The location and detail for manual relief valve on temporary dead end water lines.

- XV. LANDSCAPE PLAN REQUIREMENTS. Plans shall demonstrate conformance with all rules and regulations of the Shade Tree Commission and other applicable Municipal requirements. The identification of all planting shall be, at a minimum, by botanical and common name. Landscape plans shall contain the following minimum information.
1. Plan title information
 2. Minimum Site Plan information.
 3. Minimum Streets Plan information.
 4. The location of all signs; include architectural elevation details for each type of sign. Traffic control signs, conforming in all respects with the Ohio Department of Transportation specifications for same, are not required to be detailed.
 5. The location of all required landscape screening (including fences, screening structures, and natural plantings); include architectural elevation details thereof.
 6. The location and identification of any landscape plantings, and ground covers, proposed to be located in any public right of way, or easement.
 7. The location and identification of all proposed trees and shrubs.
 8. Identify areas to be planted with ground covers including identification of said ground covers.
 9. The location of all proposed planting areas. Include a separate detail defining the areas and contents.
 10. A tabulation of all proposed plantings including; botanical and common name, shape, foliage color, flower color, flowering season, approximate mature height, number of units to be installed, minimum proposed height on installation, growth rate.
 11. Planting details for ground covers, trees and shrubs; include anchoring details, planting specifications, excavation, and backfill requirements.

XVI. RECORD (AS-BUILT) DRAWING REQUIREMENTS.

1. Record drawings are required to reflect the actual construction details, specifications, locations, and other pertinent information for all underground utilities, lands or improvements to be dedicated to public use, and other improvements connected to, or having a direct impact upon, public utilities and public facilities; and other improvements when so required by Municipal regulations.
2. One complete Mylar set of the approved as built drawings shall be provided to the Municipality as part of the record documents submittal.
3. As built maps and details shall show the actual location and specifics of the subject improvements. Said map and details shall conform to the applicable plan requirements of these regulations. For the purpose of defining the degree of detail and information to be required on such maps they shall be considered construction documents.
4. In instances where storm water management control devices are installed on the project, as built record information shall be used to verify that the design of the as built devices will function according to the original design. The design engineer shall submit calculations verifying this functionality.
5. The as built drawing shall contain a statement by a registered surveyor certifying the information shown on the submitted as-built plan is existing as obtained on the site this day _____ of _____, 20____, and include his printed name, registration number, seal and signature.

XVII. EROSION AND SEDIMENT POLLUTION CONTROL PLAN REQUIREMENTS. See Village of Middlefield Sediment Control and Water Quality Regulations

XVIII. STORM WATER MANAGEMENT PLAN REQUIREMENTS. See Village of Middlefield Storm Water Management Regulations

VILLAGE OF MIDDLEFIELD SEDIMENT CONTROL AND WATER QUALITY REGULATIONS**I. GENERAL REQUIREMENTS**

- A. No person shall cause or allow earth-disturbing operations on any area except in compliance with the criteria established by these regulations.
- B. A Storm Water Pollution Prevention Plan (SWP³) shall be provided for:
 - 1. Operations that disturb more than one acre of land, or are part of a larger common plan of development such as residential subdivision.
 - 2. Commercial developments or sites regardless of size.
 - 3. Industrial development sites regardless of size.
- C. If a site owner desires to begin clearing operations prior to approval or submission of a SWP³ for the entire site, a separate SWP³ must be submitted and approved for the clearing operation.
- D. Proposed SWP³ must be submitted to the Village of Middlefield for review and approval. No earth disturbing activities shall commence prior to the filing of the SWP³ plan with the Village of Middlefield and the approval thereof.
- E. The Village of Middlefield shall be notified 48 hours prior to commencement of earth disturbing activities for all approved commercial, industrial or residential development, regardless of the site acreage.
- F. Submittal of a SWP³ does not relieve the owner from complying with the full requirements of the Ohio EPA NPDES #OHIC000002 Authorization for Storm Water Discharges Associated with Construction Activities under the National Pollutant Discharge Elimination System (NPDES) if applicable for the site.

II. STORM WATER POLLUTION PREVENTION PLAN (SWP³) REQUIREMENTS:

- A. The Storm Water Pollution Prevention Plan (SWP³) shall incorporate measures as recommended by the most current edition of the Rainwater and Land Development Manual in addition to the following items as listed in these regulations.
- B. A Registered Professional Engineer must certify sediment & erosion control calculations, designs, and plan sheets. To the extent necessary, a Registered Professional Surveyor may be required to certify boundary lines, measurements, or land surfaces.
- C. A Registered Professional Engineer, Registered Professional Surveyor, Registered Landscape Architect, or Certified Professional Erosion and Sediment Control Specialist (CPESC), or other qualified person may select BMP's for sediment and erosion control that do not require designs or the exercise of professional judgment, such as, locating silt fence or straw bales at land disturbance boundaries, limiting the area of project disturbance, seeding and mulching or similar, and are also related to single-family residential development on individual lots less than 5 acres and are not part of a larger common plan of development.
- D. The following items must be included in the narrative related to the site description:
 - 1. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);

2. Phase of construction (if applicable)
3. Ohio EPA NPDES permit Number
4. Address of Site
5. Total area of the site.
6. Area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
7. Number of sublots (if applicable)
8. An estimate of the impervious area and percent imperviousness created by the construction activity;
9. Existing data describing the soil and, if available, the quality of any discharge from the site;
10. A description of prior land uses at the site;
11. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s).
12. Description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project;
13. List of Conservation easements or other restrictive uses of the property on record.
14. Contact information:
 - a. Engineers name, address, phone number, and contact person
 - b. Owners name, address, phone number, and contact person
15. An inspection and maintenance agreement binding the owner and all subsequent owners of lands where a Post Construction Storm Water Quality Control facility(s) is to be constructed. Such agreements/deed restrictions/restrictive covenants shall designate and minimally provide the following and be recorded with the deed of the property:
 - a. The party(s) responsible for long-term maintenance including repairs as necessary for the facility(s);
 - b. Prohibit unauthorized alteration of the facility(s) without prior written approval from the Village of Middlefield;
 - c. Allow the Village of Middlefield access to the Post Construction Storm Water Quality Control facility(s) at reasonable times for inspections to document the facilities condition and ensure its originally designed function. Alterations to these stipulations or termination of any of these requirements are prohibited in the document and must run with the land. The document must clearly identify each facility and its location. The owner may provide a draft for review as part of the submittal. Once the draft is approved, a recorded copy of the entire document must be submitted to the Village of Middlefield to receive final inspection approval of the site.

16. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices. This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones.
 17. An implementation schedule which describes in detail the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence.
 18. Prior to construction commencing or before the pre-construction meeting, the following must additionally be provided:
 - a. Primary operator or contractors name, address and phone that is responsible for the development area.
 - b. List of all contractors/subcontractors contact information involved in the implementation of the SWP3 Plan including a written document containing signatures of all parties as proof of acknowledgement that they reviewed and understand the requirements and responsibilities of the SWP3 Plan.
- E. The SWP3 must reflect all temporary and permanent BMP's proposed to be used during all phases of construction. It is preferred that the entire site be contained on one sheet if possible to permit an entire view of the site for analysis. If a smaller scale is used to permit inclusion of the entire site on one sheet, separate sheets providing an enlarged view of areas on individual sheets should be additionally provided. The following items shall be provided within the plans and follow the applicable performance and design standards as outlined in these regulations:
1. Vicinity Map
 2. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate SWP3;
 3. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils;
 4. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 5. Existing and proposed contours (1) foot contour elevations;
 6. Existing and planned locations of buildings, roads, parking facilities and utilities;
 7. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;
 8. Sediment pond and sediment traps, noting their sediment settling volume and contributing drainage area;
 9. Detail drawings of permanent and temporary storm water management practices to be used to control pollutants in storm water for both pre and post construction operations.

All should meet the standards and specifications in the current edition of Ohio's Rainwater and Land Development;

10. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
11. The location of designated construction entrances where the vehicles will access the construction site;
12. The location of any in-stream activities including stream crossings;
13. Description and specifications for stabilization of all disturbed areas of the site and guidance to which method of stabilization should be employed for any time of the year shall be provided. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, the use of construction entrances, and the use of alternative ground cover.
14. The plan must make use of non-structural practices that preserve the existing natural condition to the maximum extent practicable. Such practices may include preserving riparian areas, preserving existing vegetation and vegetative buffer strips, phasing construction operation in order to minimize the amount of disturbed land at any one time, and designation of tree preservation areas or other protective clearing or grubbing practices.
15. Construction schedule clearly identifying the appropriate erosion, sediment or storm water control method and the general sequence during the construction process when each specific method will be implemented and the contractor responsible for implementation.
16. General Notes must be provided to clearly indicate the methods, timing and implementation of all temporary and permanent storm water management, erosion and sediment control items. The following notes or similar but not less restrictive should be provided:
 - a. "Minimize tracking of sediments by vehicles by utilizing the construction entrance as the only entrance for vehicles. Maintain this entrance with stone as needed to prevent dirt and mud from tracking onto the roadway. Regular sweeping of the roadway may be necessary to ensure roadway does not build up with sediments."
 - b. "The owner of record must provide regular inspection and maintenance for all erosion and sediment control practices. Permanent records of all maintenance and inspections must be kept throughout the construction period. Inspection must be made a minimum of once every seven (7) days and immediately after storm events greater than 0.5 inches of rain within a 24-hour period. The name of owner's designated inspector, major observations, date of inspections and corrective measures taken must be noted on all inspections."
 - c. "Other erosion and sediment control items may be necessary due to environmental conditions and may be required at the discretion of the Village of Middlefield or its representatives."
 - d. "Sediment/stormwater ponds and erosion and sediment controls shall be implemented as the first step of grading and within 7 days from the start of grubbing. Upon completion of construction of ponds, seeding and mulching shall immediately follow to aid in the stabilization and minimize erosion and

sediment transport of the soil before water leaves the pond. All erosion and sediment controls shall continue to function until disturbed areas are restabilized.”

- e. Seeded areas shall be inspected and where the seed has not produced 80% cover shall be reseeded as necessary by the contractor. Areas shall be stabilized with mulch when conditions prohibit seeding.
- f. Straw mulching shall be applied at a rate of 2-3 standard 45-lb. bales per 1000 sq.ft. of disturbed area or two (2) tons per acre. All hydroseeding must be straw mulched according to the above specifications unless it is watered weekly.
- g. “No solid or liquid waste shall be discharged into storm water runoff. (This includes washing out of cement trucks.) Designated wash pit areas are shown on the plans and are preset for this purpose away from areas of storm water runoff.”
- h. “Site stabilization either permanent or temporary must follow the requirements as applicable on the following tables:” (These tables are provided in Section II, b of these regulations labeled “Permanent Stabilization” & “Temporary Stabilization”.)

III. EROSION AND SEDIMENT CONTROL

A. Protection of adjacent properties

- 1. Properties adjacent to the site including public land and waters of the State shall be protected from sediment deposition resulting from land disturbance during construction. This may be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters or dikes, or sediment basins, or by a combination of such measures.
- 2. When water must be pumped for the purposes of dewatering such as culvert construction, storm sewer construction or pond maintenance/construction, this water must pass through a filtering device or onto well-vegetated soil on the property where construction is occurring before entering adjacent properties or drainageways.

B. Soil Stabilization

- 1. Permanent Soil Stabilization is required within 7 days of reaching final grade. This is usually accomplished by seeding and mulching, but special measures are sometimes required. Permanent stabilization must be specified and performed as listed in the Table below:

<i>Permanent Stabilization</i>	
<i>Area</i>	<i>Time Frame</i>
Any areas that will lie dormant for one year or more	Within 7 days of the most recent disturbance
Any areas within 50 ft. of a stream and at final grade	Within 2 days of reaching final grade
Any other areas at final grade	Within 7 days of reaching final grade within that area

Table 1. Ohio EPA Permit No. OHC000002, Part III.G.b.i

- a. For slopes steeper than 3:1, erosion control netting, placement of seed and mulch with tackifier, retaining walls, and/or other comparable method shall be utilized. All drainage ditches shall be designed and stabilized with rock riprap, sod, or erosion control matting as appropriate. If failures occur within these created channels, immediate repair and/or revised design is required. Soil stabilization measures should be selected to be appropriate for the time of year, site conditions, and estimated length of use should include the use of the addition of topsoil, erosion control matting, rock riprap, and/or retaining walls. Permanent seeding should be done March 1 to May 31 and August 1 to September 30. Dormant seeding can be done from November 20 to March 15. At all other times of the year, the area should be temporarily stabilized until a permanent seeding can be applied.
 - b. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until an 80% ground cover is achieved that is mature enough to control soil erosion satisfactorily and to survive severe weather conditions.
2. Temporary Soil Stabilization is the most effective BMP during construction. The goal of temporary stabilization is to provide cover, quickly. This is accomplished by seeding with fast growing grasses then covering with straw mulch. Apply only mulch between November 1 and March 31. To minimize costs of temporary stabilization, leave natural cover in place for as long as possible. Only disturb areas where work is anticipated within the next 21 days. Temporary soil stabilization is required and NOT an option. Temporary stabilization must be specified and performed as listed in the Table below.

<i>Temporary Stabilization</i>	
<i>Area</i>	<i>Time Frame</i>
Any disturbed areas within 50 ft. of a stream, not at final grade	Within 2 days of the most recent disturbance if the area will remain idle for more than 21 days
For all construction activities, any disturbed areas that will be dormant for more than 21 days but less than one year	Within 7 days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least 7 days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over Winter	Prior to Nov. 1
Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.	

Table 2. Ohio EPA Permit No. OHC000002, Part III.G.b.i

3. Standard Temporary / Permanent Seeding Specifications

Seeding Dates	Species Mixes	Lbs./1,000 ft. ²	Per Acre
March 1 to August 15	Oats,	3	128 lb.
	Tall Fescue, and Annual Ryegrass	1	40 lb.
		1	40 lb.
	Perennial Ryegrass	1	40 lb.
August 16 to November 1	Tall Fescue, and Annual Ryegrass	1	40 lb.
		1	40 lb.
		1	40 lb.
	Rye,	3	112 lb.
	Tall Fescue, and Annual Ryegrass	1	40 lb.
		1	40 lb.
	Wheat , Annual Ryegrass	3	120 lb.
		1	40 lb.
November 1 to Spring Seeding	Tall Fescue, and Annual Ryegrass	1	40 lb.
		1	40 lb.
		1	40 lb.
	Perennial Ryegrass, Tall Fescue, and Annual Ryegrass	1	40 lb.
Note: other approved seed species may be substituted			

-Table from ODNr Rainwater and Land Development Manual

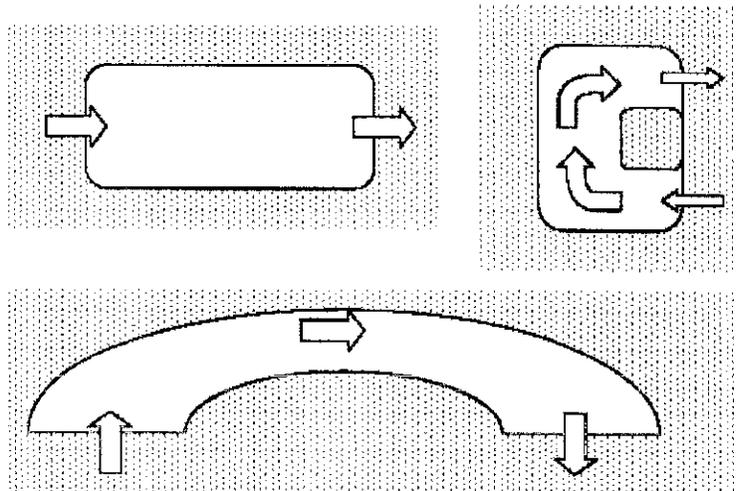
4. Soil stockpiles shall be stabilized with temporary seed and mulch or have perimeter silt fencing placed to prevent soil loss. All stockpiles shall be located at least one hundred (100) feet from all watercourses, drainage ways, wetlands and site drainage exit points.

C. Storm Water Runoff Controls

1. Runoff control practices and associated details must be provided to control the flow of runoff from disturbed areas to prevent erosion. Such practices may include rock check dams, pipe slope drains, and diversions to direct flow away from exposed soil and protective grading practices. These practices shall divert runoff away from the disturbed areas and steep slopes where practicable.
2. Control of storm water runoff requires the use of grassed/vegetated areas, or sedimentation basins, to remove sediment and/or contaminants.
 - a. Vegetated filter strips, a minimum of 15 feet in width, can be utilized when sheet or overland flow is planned (storm water is not collected). If at any time it is found that a vegetated filter strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls shall be provided.
 - b. Grassed swales can be utilized for treatment if the development site is not conducive to more diffuse overland flow. A minimum ratio of 100 linear feet of grassed swale per acre of impervious area is required. When possible, swales should be designed to minimize the velocity of runoff to less than 2 feet per second for a 10-year, 24-hour storm. If failures occur within these swales, immediate repair and/or revised design is required.
 - c. A thirty (30) foot vegetated buffer strip is required to be retained or re-established immediately along all existing disturbed water and drainage ways. Construction will not be permitted in these areas between October 1st thru May 1st due to the inability of an immediate reestablishment of vegetation.

D. Sediment Control

1. Sediment control devices must be constructed for all areas on the site that will remain disturbed for over 14 days. Consideration must be given to how much acreage will be disturbed when the controls are selected.
2. Options for sediment control include:
 - a. Sediment settling ponds and sediment traps
 - i. Where five (5) acres or more of development area is disturbed in one watershed, storm water runoff from that watershed shall pass through a sediment basin or other suitable sediment trapping facility with equivalent or greater storage capacity. All sediment basins and/or traps must provide a minimum storage of 67 cubic yards per acre of total contributing drainage area. The use of a de-watering device must be provided on the outlet structure to allow dewatering of the facility and ensure adequate time for sediment settlement. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the sediment-settling pond must be less than or equal to five feet. The configuration between inlets and outlet of the basin must provide at least two units of length for each one unit of width (>2:1 length: width ratio).



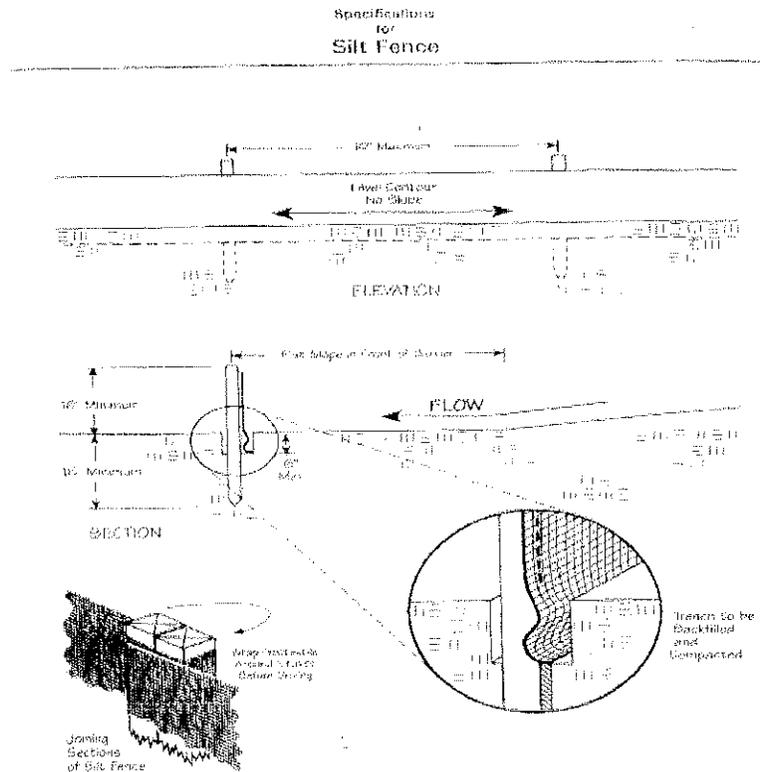
Sediment must be removed from the sediment-settling pond when the design capacity has been reduced by 40 percent. (This is typically reached when sediment occupies one-half of the basin depth). Any dredged sediments placed on site must be immediately seeded and mulched or hauled off site to an appropriate location. When designing sediment-settling ponds, the applicant must consider public safety as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- ii. The Village of Middlefield may require sediment settling basins or traps for smaller disturbed areas where deemed necessary. Sediment settling basins or traps whether permanent or temporary must be provided and continue to function until final stabilization of the site is achieved. Temporary sediment settling basins or traps may be removed following final stabilization of the site.

b. Silt fences (sheet erosion only)

- i. Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour and not placed where concentrated flow is directed toward it. Silt fence shall be pulled tight and trenched least 4" to 6" into the ground and backfilled to prevent runoff from cutting underneath the fence. Sections of silt fence shall be joined so there are no gaps in the fence. The ends of the silt fence shall be brought upslope of the rest of the fence to prevent runoff from going around the ends. Silt fence shall not control large drainage areas. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the table below.

Maximum Drainage Area to 100 Linear Feet of Silt Fence (in acres)	Range of Slope for a Particular Drainage Area (in percent)
0.5	<2
0.25	≥2 but < 20
0.125	≥20 but < 50



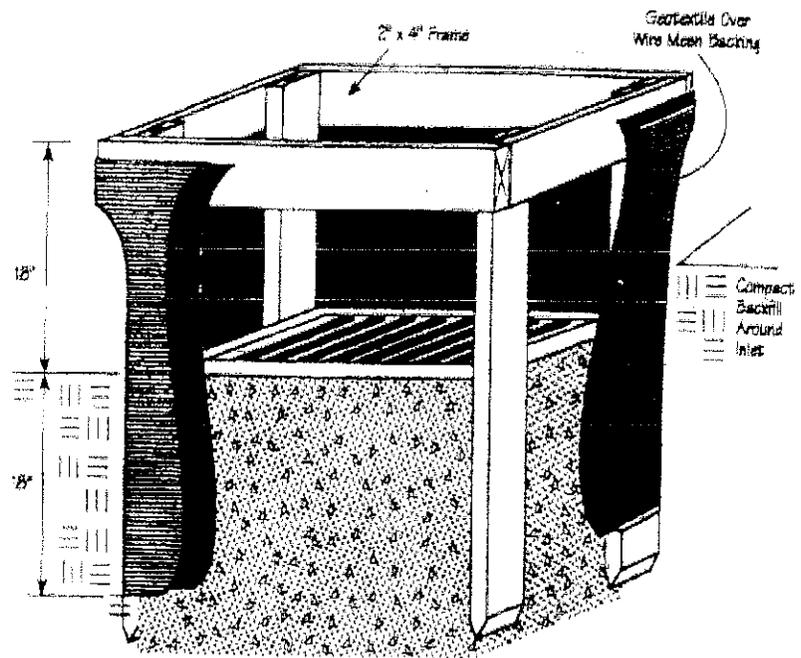
c. Earth diversion dikes or channels which direct runoff to a sediment settling pond or vegetated settling area

- i. The use of a combination barrier constructed of silt fence supported by straw bales or silt fence embedded within rock check dams may be effective for use in roadside ditches and on-site diversion swales and ditches. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or borms, may receive storm water runoff from areas up to 10 acres.

d. Storm drain inlet protection

- i. Storm Drain Inlet protection must be provided to minimize sediment-laden water from entering storm sewer system(s), unless the storm sewer system drains to a sediment-settling pond. All storm sewer inlets/catch basins that are made operable during construction shall be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediment. Provisions shall be made for these inlets/catch basins to operate and be maintained before, during and after the final surface is applied around it such as concrete, asphalt or grass. This may require a provision for an alternate method of inlet protection such as the use of a "Dandy Bag" or approved equal. Water should pond around the inlet when it rains. Silt fence alone cannot be utilized as inlet protection. A

sturdy frame must be constructed such as wood 2x4's to support silt fence around inlets.



The storm sewer inlet/catch basin protection should encircle the entire basin and be properly entrenched if silt fence is to be utilized. Sediment must be removed on a regular basis around the inlet and properly spread, seeded and mulched or disposed of appropriately off-site.

3. All sediment controls must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless they are used in conjunction with a sediment settling pond or settling area.
4. Detailed drawings of all sediment control devices are to be included on the plans.
5. Sediment basins and traps, diversion dikes, sediment barriers, and other measures intended to trap sediment on-site shall be constructed as a first step in grading and be made functional before upslope land disturbance takes place. Earthen structures whether permanent or temporary such as dams, dikes, sediment basins, storm water basins and diversions shall be seeded and mulched within seven (7) days after installation is complete.

E. Slope Stabilization

1. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Consideration should be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions, and other applicable factors. Slopes should be no steeper than 2:1 and preferably 3:1. Slopes that are found to be eroding excessively during the first year after construction shall be provided with additional slope stabilizing measures by the developer until the problem is corrected. The following guidelines are provided to aid in developing an adequate design:

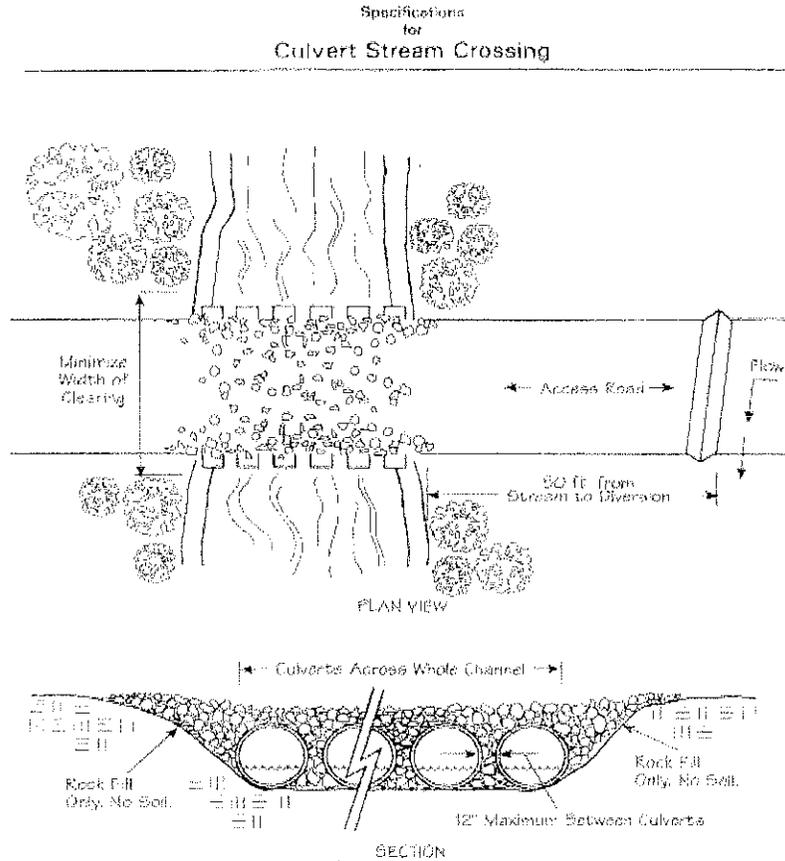
- a. Roughened soil surfaces are generally preferred to smooth surfaces on slopes. Tracking should be done perpendicular to the direction of flow to retard runoff.
- b. Diversions should be constructed at the top of long steep slopes that have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.
- c. Concentrated storm water should not be allowed to flow down cut or fill slopes unless contained within an adequate channel, flume, or slope drain structure.
- d. Wherever a slope face crosses a water seepage plane that endangers the stability of the slope, adequate drainage or other protection should be provided.

F. Stabilization of Waterways and Outlets

1. Permanent stabilization of conveyance channels must be shown for all channels and outfalls to prevent erosive flows. Measures may include erosion control matting, sodding, or rock riprap. All on-site storm water conveyance channels, except roadway ditches, shall be minimally designed and constructed to withstand the expected velocity of flow from a 10-year, 24-hour frequency storm without erosion. Stabilization adequate to prevent erosion shall also be provided at the outlets of all pipes and paved channels. Permanent stabilization of ALL non-paved channels carrying storm water including roadside ditches must consist of excelsior matting in the bottom of the channel. Roadway ditches shall be designed according to the regulations and standard specifications required by the Village of Middlefield.
2. All constructed waterways/drainage ways not directed to a sediment basin must be stabilized either temporarily or permanently immediately following construction to prevent scour and erosion from occurring. All culvert outlets must have rock channel protection placed immediately following construction.

G. Working in or Crossing Watercourses

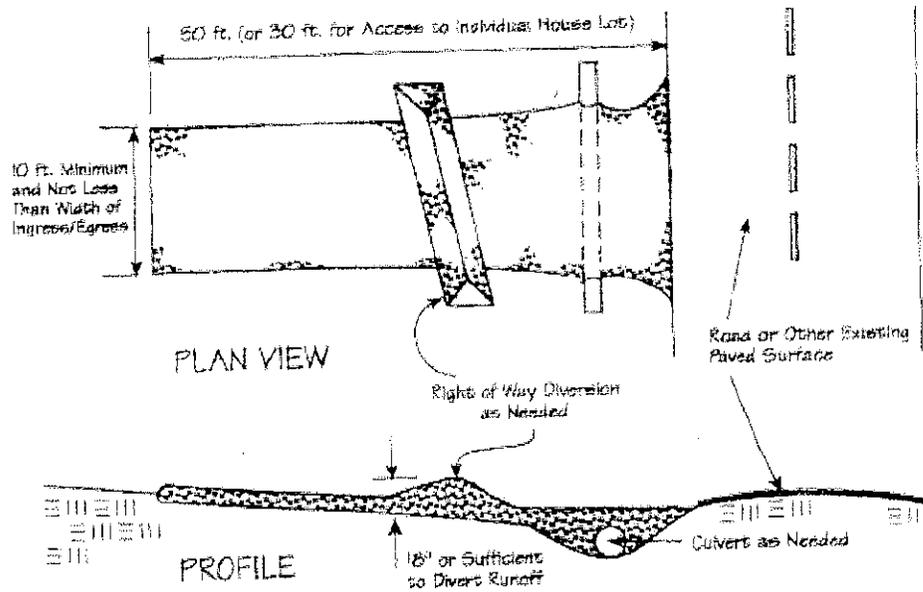
1. Construction vehicles should be kept out of watercourses to the extent possible. Where in-channel work is necessary, precautions shall be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) shall always be restabilized immediately after in-channel work is completed. An Ohio EPA 401 Permit and/or a U.S. Army Corps Section 404 Permit may be necessary to perform projects within watercourses.
2. Where a live (wet) watercourse will be crossed by construction vehicles regularly during construction, a temporary vehicular watercourse crossing shall be provided.



3. If construction activities will disturb areas adjacent to watercourses, structural practices shall be designed and implemented on site to protect all adjacent watercourses from the impacts of sediment runoff. No structural sediment controls (e.g. the installation of silt fence or a sediment settling pond in watercourses) shall be used in a watercourse. For all construction activities immediately adjacent to surface waters of the state, it is recommended that a setback of at least 25-feet, as measured from the ordinary high water mark of the surface water, be maintained in its natural state as a permanent buffer.

H. Construction Entrances

Good housekeeping practices must be implemented to ensure sediment is not tracked off-site. Construction entrances shall be installed and maintained to minimize off-site tracking of sediments. A stone access drive should be installed at every point where vehicles enter or exit the site. Maintenance of the stone access drive with additional stone throughout construction to ensure mud is not tracked out onto the roadway is required. The length of the construction stone entrance must be at least 50 feet (30 feet for an individual subplot).



I. Trench and Ground Water Control

There shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If ground water or a trench contains sediment, it must pass through a sediment settling pond or equally effective sediment control device prior to being discharged from the construction site. Alternately, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

J. Other Pollutant Controls

No solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. Wash pit areas must be constructed in pre-designated areas as shown on the plans. The applicant must implement all necessary BMP's to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state. Under no circumstance shall concrete trucks wash out directly into a drainage channel, storm sewer or surface waters of the state. No exposure of storm water to waste materials is recommended.

K. Single Lot Erosion and Sediment Control Requirements

1. The site plans for individual lots must show erosion and sediment controls including erosion control general notes. Each site plan must reflect existing and proposed topography and building conditions and have the erosion and sediment controls designed to reflect that. Each individual site plan is also required to have labeled topography (at 1-foot intervals), street names, subplot numbers, the subdivision name, and date. The following BMP's are required to be shown on the site plans for a single lot:
 - a. Stone construction entrance underlain with the appropriate geotextile

- b. Temporary seeding and mulching of all disturbed areas (first 30' from street) and stormwater facilities within the rights-of-way
- c. Storm sewer inlet protection for rear yard drains and catch basins
- d. Temporary seeding within 50 feet of any stream or wetland
- e. Silt fencing (where necessary)
- f. Concrete washout basin

L. Inspections of temporary Measures

The contractor is responsible to have qualified inspection personnel conduct an inspection of the site every seven days, at a minimum. Additionally, inspections are required within 24 hours of a storm event greater than 0.5 inches of rain per 24-hour period. All disturbed areas, material storage areas, erosion and sediment control devices/measures, discharge locations and vehicle access points must be inspected and deemed to be operating properly.

M. Maintenance of Temporary Measures

All temporary and permanent erosion and sediment control practices shall be maintained and repaired as needed to assure continued performance of their intended function throughout the course of soil-disturbing activities and until any up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns. If inspections or other information indicates a control has been used inappropriately or incorrectly, the applicant must replace or modify the control for site conditions. Other erosion and sediment control items may be necessary due to environmental conditions and may be required at the discretion of the Village of Middlefield or its representatives. The owner will be responsible for such maintenance until final inspection approval by the Village of Middlefield.

N. Disposition of Temporary Measures

All temporary erosion and sediment control measures shall be disposed of within 30 days after final stabilization of the site is achieved and approved by the Village of Middlefield or after the temporary measures are no longer needed, unless otherwise authorized by the Village of Middlefield. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sediment accumulation.

O. Compliance With Other Requirements

The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

IV. POST CONSTRUCTION STORMWATER QUALITY CONTROL

- A. Post-construction stormwater management practices are to protect stormwater runoff quality and quantity. This in turn will protect the physical, chemical and biological characteristics of the receiving stream. The SWP3 is to contain a description of the post-construction best management practices (BMPs) as well as the rationale for their selection.

1. Small construction sites are considered sites that will disturb between 1 and 5 acres of land that are not part of a larger common plan of development or sale which will disturb five or more acres of land. For disturbances activities on these sites a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable.
 - a. Such practices may include, but are not limited to:
 - i. Storm water detention structures (including wet basins);
 - ii. Storm water retention structures
 - iii. Flow attenuation by use of open vegetated swales and natural depressions
 - iv. Infiltration of runoff onsite
 - v. sequential systems (which combine several practices)

The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

- b. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).
2. Large construction sites are those disturbing 5 acres or more or will disturb less than five acres, but are a part of a larger common plan of development or sale which will disturb five or more acres of land. For these sites the post construction BMP(s) chosen must be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQv) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQv shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to one of the two following methods:
 - a. Through a site hydrologic study approved by the Village of Middlefield that uses continuous hydrologic simulation and local long-term hourly precipitation records or
 - b. Using the following equation:

$$WQv = C * P * A / 12$$

where:

WQv = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch (see Table 1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

Table 1

Runoff Coefficients Based on the Type of Land Use	
Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$.

- c. An additional volume equal to 20 percent of the WQv shall be incorporated into the BMP for sediment storage and/or reduced infiltration capacity during construction.
- d. BMP's shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rain events as described in Table 2 below.

Table 2

Target Draw Down Times for Structural Post-Construction Treatment Control Practices	
Best Management Practice (BMP)	Drain Time of WQv
Infiltration	24 - 48 hours
Vegetated Swale or Filter Strip	24 hours
Extended Detention Basin (Dry Basins)	48 hours
Retention Basins (Wet Basins)	* 24 hours
Constructed Wetlands (above permanent pool)	24 hours
Media Filtration, Bioretention	40 hours

* Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at 0.75 * WQv

- e. Methods for controlling increases in the rate and volume of storm water runoff may include, but are not limited to, the following:
 - i. Retarding flow velocities by increasing friction. (For example, using grass-lined road ditches, rather than paved street gutters where practical, and discharging roof water to vegetated areas, or grass and rock lined drainage channels.)
 - ii. Grading and construction of terraces or diversions to slow runoff by diffusion, or use of grade control structures, such as check dams, to provide a level of control in flow paths and/or existing drainageways.
 - iii. Induced infiltration of increased storm water runoff into the soil where practical. (For example, constructing special infiltration areas where soils are suitable, retaining topsoil for all areas to be revegetated, or providing good infiltration areas with proper emergency overflow facilities.)

- iv. Provisions for detention and retention of storm water, with properly designed retention basins being preferred. For example, utilizing permanent ponds and lakes as storm water basins that provide multiple use areas for storm water detention, recreation, wildlife, fire protection, and aesthetics. Constructed wetlands, extended dry detention basins, or subsurface storage areas are other options.
 - v. Use of Low Impact Design methods such as bioretention areas, bio-swales, and infiltration trenches.
- f. A description of the post-construction BMP's that will be installed during construction for the site and the rationale for their selection in protection of channels from erosion and pollution prevention from sediment deposition must be provided. All pond designs must provide a minimum one foot of freeboard. When designing storm water ponds, the applicant must consider public safety as a design factor for the pond and alternative designs must be implemented where site limitations would preclude a safe design.
 - g. Maintenance plans shall be provided for all post-construction BMP's. Maintenance plans shall be provided by the permittee to the post-construction operator of the site upon completion of construction activities and should be included in the Inspection and Maintenance Agreement that is recorded with the deed as required in Section II.D.15 and Section X.A.5. All storm water management facilities shall be cleaned and maintained such that the full water quality volume is available and that the facility functions as designed.
 - h. Construction activities shall be exempt from these requirements if it can be demonstrated that these post-construction storm water management requirements have been provided as part of a larger common plan of development or if they are addressed in a regional or local storm water management plan. These postconstruction storm water management requirements are not required if the construction activity is less than five (5) acres and is part of a larger common plan of development which was approved and constructed under previous regulations that did not require all the listed post-construction storm water management requirements. In this latter case, the lots must comply with the requirements for small construction activities as listed below in Section XI.B.
3. Redevelopment Projects that disturb more than 5 acres of land, post-construction BMPs must ensure a 20% net reduction of the site impervious area or provide treatment for 20% of the WQv. A combination of the two may be acceptable.

V. NON-SEDIMENT POLLUTANT CONTROLS

No pollutant is allowed to be discharged in stormwater runoff. Pollutants include solids wastes other than sediment, including building materials, and liquid waste. Pollutants must be disposed of in a proper manner in accordance with local, state and federal regulations.

A. Toxic or Hazardous Materials

1. Plan general notes must include language on how to properly dispose of toxic or hazardous materials and procedures for proper spill clean up. This information can be general unless the designer has knowledge of a specific chemical being used on the site. The plans must provide areas for recycling of used or unused hazardous materials. This requirement has been implemented to eliminate the disposal of toxic and hazardous materials into storm drains, septic tanks, or by burying, burning or mixing the wastes.

B. Waste Disposal

1. Containers must be available on the construction site for the disposal of debris, trash, hazardous or petroleum wastes. All containers must be covered and leak-proof. Clean Hard Fill Clean hard fill is considered to be bricks, concrete and uncontaminated soil waste. Clean hard fill may be used on the construction site, but there should be language on the plans stating that it must have no contaminants. Note: Check with the County General Health District for more detailed information on what qualifies as clean hard fill.

C. Construction and Demolition Debris

1. All construction and demolition debris (CD&D) must be disposed of in an Ohio EPA approved CD&D landfill or a solid waste landfill. The plans must include a note that directs such debris to be disposed of in a proper manner. Open burning of construction waste or land clearing waste is not permitted.

D. Construction Chemical Debris

1. The plans must designate an area for mixing and storing of compounds such as fertilizers, lime, asphalt, or concrete. They should be stored inside if possible, or under a cover. The storage areas must be located away from watercourses, drainage ditches, field drains, or other stormwater drainage areas.

E. Equipment Fueling and Maintenance

1. The site plans must designate an area for fueling and/or performing vehicle maintenance. This area must be away from watercourses, drainage ditches, field drains, or other water drainage areas. Any site that has one or more storage tank of 660 gallons or more, total above ground tank storage of 1330 gallons, or below ground tank storage of 42,000 gallons of fuel must prepare a Spill Prevention Control and Countermeasures (SPCC) plan.

F. Concrete Wash Waters

1. All concrete wash waters must be directed to a designated site located away from watercourses, drainage ditches, field drains, or other water drainage areas. This site must be shown on the plans and clearly identified on the construction site.

G. Contaminated Soils

1. Notes must be included on the site plans indicating the handling and disposal requirements for petroleum or other chemically contaminated soils.

H. Spill Reporting Requirements

1. The SWP3 must include a note directing individuals to contact Ohio EPA, the local fire department, and the local emergency planning committee in the event of a spill of petroleum fuel (>25 gallons) or the presence of a sheen. Notes must also be present detailing a spill response for a small release (less than 25 gallons).

I. Open Burning

1. Open burning is prohibited.

J. Dust Controls/Suppressants

1. The SWP3 should provide a note about the need for dust controls. If dust controls are required near catch basins, storm sewers or other drainage areas, inlet protection must be implemented. It should be noted that oil is strictly prohibited for use as a dust suppressant.

VI. SUBMITTAL AND REVIEW

- A. When a Storm Water Pollution Prevention Plan (SWP3) is required or recommended two (2) copies shall be submitted to the Village of Middlefield.
- B. For a proposed subdivision, a SWP3 shall be submitted to the Village of Middlefield after the acceptance of the preliminary plan by the Village of Middlefield Planning Commission, and concurrently with the submittal of construction drawings.
- C. Within thirty (30) days of receipt of a complete SWP3 the Village of Middlefield shall indicate its status of compliance or non-compliance to the owner, or to his appointed representative. Indication of non-compliance shall include specific plan deficiencies and the procedures for filing a revised plan.
- D. At the time of submission of the revised plan, another 30-Day period begins. Plans found in compliance with these regulations shall remain effective and valid for 1 year (12 months) from date of approval unless renewed. Renewal is accomplished by the submission of another plan.

VII. INSPECTION AND COMPLIANCE

- A. The Village of Middlefield will make regular inspections of development areas to determine compliance with these rules and regulations and a report sent to the Planning Commission of the sites compliance status. All construction activities, including permanent storm water facilities, will be constructed in conformity with approved SWP3 plans. If it appears that a violation of these regulations has occurred, the owner or his appointed representative shall be notified of the deficiencies or non-compliance by the Village of Middlefield in writing. If within two (2) weeks after the date of the proof of mailing receipt, the deficiency or non-compliance has not been corrected, or plans have not been approved by the Village of Middlefield Engineer for its correction, said deficiency or non-compliance shall be reported to the Planning Commission for consideration of a "finding of violation".
- B. If, in the opinion of the Village of Middlefield Engineer, immediate and irreparable damage will occur because of the violation, the Village of Middlefield Engineer may approach the Planning Commission for consideration without delay.
- C. If the Planning Commission determine that a violation exists and requests the Village of Middlefield Solicitor in writing, the Solicitor shall seek an injunction or other appropriate relief to abate excessive erosion or sedimentation and secure compliance with these regulations. In granting relief, the court may order the construction of sediment control improvements or implementation of other control measures.

VIII. VARIANCE

- A. The Planning Commission may grant a variance to these regulations where the owner or his appointed representative can show that a hardship exists whereby compliance with these regulations is not appropriate, based upon the following:
 1. That exceptional topographic or other physical conditions exist that are peculiar to the particular parcel of land.

2. That the peculiar condition in (A) above did not result from previous actions by the owner.
 3. That a literal interpretation of these regulations would deprive the owner of rights enjoyed by other property owners.
- B. Adverse economic conditions shall not be considered as a valid reason or hardship for a variance request to be granted. No variances will be granted where activities occur that will defeat the purposes of these regulations.
- C. The request for a variance shall be submitted to the Village of Middlefield Planning Commission and shall state the specific variances sought and include sufficient data to justify the granting of a variance.

IX. MAINTENANCE & FINAL INSPECTION APPROVAL

- A. To receive final inspection and acceptance of any project the following must be provided or completed:
1. Disposition of all temporary erosion and sediment control measures.
 2. Final stabilization and all permanent erosion and sediment control measures must be established.
 3. Permanent storm water management facilities must be installed and made functional per the approved WMSC Plan.
 4. A copy of the complete inspection and maintenance agreement as specified in Section II.D.15 must be provided as recorded with the Geauga County Recorder.
- B. The above listed items must be received by the Village of Middlefield prior to receiving approval from the Village of Middlefield Engineer for the maintenance period inspection for subdivisions and final inspection approval of all other construction sites.
- C. As an alternative, the owner/responsible party may petition the Planning Commission for permanent maintenance of storm water control structures and/or facilities when the benefiting area involves two or more property owners, through the Ohio Drainage Law, R.C. 6131, or R.C. 1515. The Village may require alternate designs of facilities to reduce maintenance costs.

X. COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Approvals issued in accordance with this regulation do not relieve the applicant of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the US Army Corps of Engineers, and other federal, state, and/or county agencies not listed herein. If requirements vary, the most restrictive requirement shall prevail. These permits may include but are not limited to those listed below. Proof of compliance with these state and federal regulations is required to be submitted with the Water Management and Sediment Control Plan before the Village of Middlefield will approve or recommend approval.

- A. Ohio EPA NPDES Permits authorizing storm water discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, Ohio EPA NPDES Permit Number for the project, or a letter from the site owner explaining why the NPDES Permit is not applicable.

- B. If there is any indication or reasonable evidence that disturbance of an existing watercourse, or potential wetland might occur, one or all of the following may be required depending on the extent and type of disturbance.
1. **Jurisdictional Determination:** Proof of compliance shall be a copy of the Jurisdictional Determination from the U.S. Army Corps of Engineers affirming the findings of a qualified professionals survey and report of the site.
 2. **Section 404 of the Clean Water Act:** Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, if an Individual Permit is required for the development project, public notice, or project approval. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. This shall include the following:
 - a. A site plan showing that any proposed fill of waters of the United States conforms to the general and specific conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
 3. If a Section 404 Permit or Jurisdictional Determination is not required because wetlands or watercourses are not present on the property and there is no indication or reasonable evidence that disturbance will occur, a letter from the site owner verifying that a qualified professional has surveyed the site and found no waters of the United States must be provided.
 4. **Ohio EPA Isolated Wetland Permit:** Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application, public notice, or project approval, or a letter from the site owner verifying that a qualified professional has surveyed the site and found no waters of the State. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
 5. **Section 401 of the Clean Water Act:** Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application, public notice, or project approval, or a letter from the site owner verifying that a qualified professional has surveyed the site and found no waters of the United States. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
 6. **Ohio Dam Safety Law:** Proof of compliance shall be a copy of the ODNR Division of Water permit application, a copy of the project approval letter from the ODNR Division of Water, or a letter from the site owner explaining why the Ohio Dam Safety Law is not applicable.

XI. INTERPRETATION OF TERMS AND WORDS

For the purpose of these regulations certain rules or word usage apply to the text as follows:

- A. Words used in the present tense include the future tense, and the singular includes the plural, unless the context clearly indicates the contrary.
- B. The term "shall" is always mandatory and not discretionary; the word "may" is permissive. The term "should" is permissive, but indicates strong suggestion.

- C. The word or term not interpreted or defined by this Section shall be construed according to the rules of grammar and common usage so as to give these regulations their most reasonable application.

XII. WORDS AND TERMS DEFINED

ACRE: A measurement of area equaling 43,560 square feet.

BEST MANAGEMENT PRACTICES (BMPS): Structural or nonstructural facilities or activities that control soil erosion and/or storm water runoff at a development site. This includes treatment requirements, operating and maintenance procedures, and other practices to control site runoff, leaks, or waste disposal.

CHANNEL: A natural bed that conveys water; a ditch excavated for the flow of water.

WATER QUALITY VOLUME WQV: Volume of storm water runoff that must be captured and treated before discharge from the developed site after construction is complete. WQV is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

CUT: An excavation that reduces an existing elevation, as in road or foundation construction.

DETENTION STRUCTURE: A permanent storm water management facility for the temporary storage of runoff, which is designed so as not to create a permanent pool of water.

DEVELOPMENT AREA: A lot or contiguous lots owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other non-farm construction or alternative that changes runoff characteristics, upon which soil-disturbing activities occur.

DEVELOPMENT DRAINAGE AREA: A combination of each hydraulically unique drainage areas with individual outlet points on the development area.

DISTURBED AREA: An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities.

DITCH: An open channel, either dug or natural, for the purpose of drainage or irrigation with intermittent flow.

DRAINAGE: The removal of excess surface water or groundwater from land by surface or subsurface drains.

DRAINAGE IMPROVEMENT: As defined in R.C. 6131.01 (C), and/or conservation works of improvement, R.C. 1511 and 1515.

DUMPING: Grading, pushing, piling, throwing, unloading, or placing.

EARTH MATERIAL: Soil, sediment, rock, sand, gravel and organic material or residue associated with or attached to the soil.

ENGINEER: A Professional Engineer registered in the State of Ohio.

EROSION: The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.

EROSION AND SEDIMENT CONTROL: The control of soil material, both mineral and

organic, to minimize the removal of soil material from the land surface and to prevent its transport out of a disturbed area by means of wind, water, ice, gravity, or any combination of those forces.

FARM: Land or water devoted to growing crops or cultivated in connection with raising or harvesting any agricultural or horticultural commodity, and the raising, shearing, feeding, caring for, training, and management of livestock and poultry.

FINAL STABILIZATION: All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% cover for the area has been established or equivalent stabilization measures, such as the use of mulches, geotextiles, have been employed.

GRASSED WATERWAY: A broad or shallow natural watercourse or constructed channel, covered with erosion-resistant grasses or similar vegetative cover, used to convey surface water.

HYDRIC SOILS: Soils that are saturated, flooded, or ponded for a long enough time period during the growing season that anaerobic conditions develop in the upper part of the soil. Soils that are considered "wetland" soils.

HYDROPHYTIC VEGETATION: Plants that are found in wetland areas. These plants have been classified by their frequency of occurrence in wetlands.

IMPERVIOUS: Not allowing infiltration which means any paved, hardened or structural surface regardless of its composition including (but not limited to) buildings, roads, driveways, parking lots, loading/unloading spaces, decks, patios, and swimming pools.

LANDSCAPE ARCHITECT: A Professional Landscape Architect registered in the State of Ohio.

LARGER COMMON PLAN OF DEVELOPMENT: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

LOT: A tract of land occupied or intended to be occupied by a use, building, or group of buildings and their accessory uses and buildings as a unit, together with such open spaces and driveways as are provided and required. A lot may contain more than one contiguous lot.

MAXIMUM EXTENT PRACTICABLE: The level of pollutant reduction that site owners of small municipal separate storm sewer systems regulated under 50 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Storm Water Phase II, must meet.

MULTI-FAMILY DEVELOPMENT: Apartments, condominiums, townhouses, duplexes, or other similar buildings housing more than one family.

NPDES: National Pollutant Discharge Elimination System. A regulatory program in the Federal Clean Water Act that prohibits the discharge of pollutants into surface water of the United States without a permit.

NOI: Notice of Intent obtained from the Ohio EPA under the NPDES Phase 2 Program

NOT: Notice of Termination obtained from the Ohio EPA under NPDES Phase 2 Program

OHIO EPA: Ohio Environmental Protection Agency

ODNR-DSWC: Ohio Department of Natural Resources, Division of Soil and Water Conservation.

PERSON: Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent or combination thereof.

PHASING: Clearing/grubbing/excavating a parcel of land in distinct sections, with the stabilization of each section occurring before clearing the next.

RAINWATER AND LAND DEVELOPMENT MANUAL: Ohio's standards for storm water management, land development, and urban watercourse protection. The most current edition of these standards shall be used with this regulation.

RETENTION STRUCTURE: A permanent storm water management facility that provides for the storage of runoff by means of a permanent pool of water.

RUNOFF: The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually returned to water resources, watercourses, or wetlands.

SEDIMENT: Soils or other surface materials that are or have been transported or deposited by the action of wind, water, ice, gravity, or any combination of those forces, as a product of erosion.

SEDIMENTATION: The deposition or settling of sediment.

SEDIMENT BASIN: A barrier or other suitable retention structure built across an area of water flow to intercept runoff and allow transported sediment to settle and be retained, prior to discharge into waters of the State.

SEDIMENT POLLUTION: Degradation of waters of the state by sediment as a result of failure to apply management or conservation practices to abate wind or water soil erosion, specifically in conjunction with soil-disturbing activities on land used or being developed for commercial, institutional, industrial, residential, or other non-farm purposes.

SETBACK: A designated transition area around water resources or wetlands that is left in a natural, usually vegetated, state to protect the water resources or wetlands from runoff pollution. Construction activities in this area are restricted or prohibited as required in this regulation.

SLOUGHING: A slip or downward movement of an extended layer of soil resulting from the undermining action of water or the soil-disturbing activity of man.

SOIL DISTURBING ACTIVITY: Clearing, grubbing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed and which may result in, or contribute to erosion and sediment pollution. This may also include construction of non-farm buildings, structures, utilities, roadways, parking areas, and septic systems that will involve soil disturbance or altering of the existing ground cover.

SOIL LOSS: Soil moved from a given site by the forces of erosion, measured using "T".

STABILIZATION: The use of Best Management Practices, such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.

STORM FREQUENCY: The average period of time within which a storm of a given duration and intensity can be expected to be equaled or exceeded.

STORM WATER: Storm water runoff, snowmelt, surface runoff, and drainage.

STORM WATER MANAGEMENT: Runoff water safely conveyed or temporarily stored and released at an allowable rate to minimize erosion and flooding.

SUBSOIL: That portion of the soil below the topsoil or plow layer, typically beginning 6-12" below the surface, but can also extend to 48" or deeper in the case of prime farmland soils, down to bedrock parent material.

SWP3: Storm Water Pollution Prevention Plan as defined and required by the Ohio EPA.

TEMPORARY SOIL STABILIZATION: Establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

TOPSOIL: The upper layer of soil that is usually darker in color and richer in organic matter and nutrients than the subsoil.

USDA-NRCS: United States Department of Agriculture, Natural Resources Conservation Service.

WATERCOURSE: A definite channel with defined bed and banks within which concentrated water flows, either continuously or intermittently, (e.g. brooks, channels, creeks, rivers or streams).

WATER RESOURCE: Any public or private body of water including lakes and ponds, as well as streams, gullies, ditches, swales, or ravines that have banks, a defined bed, and a definite direction of course, either continuously or intermittently flowing.

WATERSHED: The total drainage area contributing runoff to a single point.

WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and contain a predominance of hydric soils, and that under normal circumstances do support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).

VILLAGE OF MIDDLEFIELD STORM WATER MANAGEMENT REGULATIONS

I. PLAN REQUIREMENTS

- A. Construction Plans shall include a Grading and Surface Water Drainage Plan with the requirements specified in the Village of Middlefield Municipal Standards for Plan Content Section X.
- B. Construction Plans shall include plan and profiles for storm sewer as required by the Village of Middlefield Municipal Standards for Plan Content Section XI "UTILITY PLAN REQUIREMENTS".

II. STORM DRAINAGE SYSTEM DESIGN REQUIREMENTS

- A. An adequate storm drainage system shall be provided for each site development.

1. Hydrologic Design

- a. The Rational Method shall be used for calculating peak flows for areas of five (5) acres or less. Rainfall intensity, runoff coefficients, and time of concentration used in computing flows and structure sizes shall be in accordance with the following tables, charts, and data shown below:

- i. Rainfall intensity shall be based on the following Tables:

Rainfall Intensity Values

Return Period (yr.)	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min
2	4.20	3.45	2.91	2.51	2.20	1.96
5	5.10	4.18	3.53	3.05	2.68	2.38
10	6.00	4.92	4.16	3.59	3.15	2.80
25	7.38	6.05	5.11	4.41	3.87	3.44
50	7.98	6.55	5.53	4.77	4.19	3.72
100	9.00	7.38	6.24	5.38	4.72	4.20

Return Period (yr.)	35 Min	40 Min	45 Min	50 Min	55 Min	60 Min
2	1.76	1.60	1.46	1.34	1.24	1.15
5	2.14	1.94	1.77	1.63	1.51	1.40
10	2.52	2.28	2.09	1.92	1.77	1.65
25	3.10	2.81	2.57	2.36	2.18	2.03
50	3.35	3.04	2.77	2.55	2.36	2.19
100	3.78	3.42	3.13	2.88	2.66	2.47

ii. Runoff Coefficients shall be:

Impervious Area (pavement, roofs, ect...)	0.90
Grass	0.35
Woods	0.30
Farmland	0.60

Often the contributing area to a given point is comprised of a combination of surface covers therefore requiring a weighted coefficient of runoff "C".

iii. Time of concentration shall be calculated by using the U.S. Soil Conservation Service's Technical release No. 55 method. A minimum time of 10 minutes shall be used.

b. For areas Greater than 5 acres the peak runoff rate shall be calculated using the methods described in the U.S. Soil Conservation Service's Technical release No. 20 (TR-20) and its latest editions, including all applicable supplement methods. Additional requirements utilized in TR-20 for calculating peak flows and volumes are found in section IIIH of these regulations.

2. Hydraulic Design - All areas that contribute storm water to the proposed or existing storm drainage system must be considered in the determination of the sizes of the structures and channels. The storm drainage system design must conform to the following:

a. Storm Sewer System Design

- i. Design shall be based on a minimum 10-year storm frequency without surcharging the sewer. A 25-year storm frequency hydraulic gradient check will be required to show no flooding to public streets.
- ii. Manning's "n" values to be used in the calculation of storm sewer capacity and velocity are as follows:

Type of Pipe	Manning's "n"
Concrete pipe	0.015
Plastic pipe (smooth wall)	0.013
Plastic pipe (Corrugated)	0.020
Corrugated Metal Pipe	0.027
Ductil Iron Pipe	0.012

iii. The Storm Sewers shall maintain a flow velocity of 3 fps. at minimum grade during the design storm.

iv. Storm sewer physical requirements:

1. Storm sewers shall be constructed of materials approved for use by the Village of Middlefield Engineer based on performance standards as established by ASTM or other testing agencies.
2. Minimum pipe size for storm sewers within the right of way is 12 inches.
3. Storm sewer crossings of sanitary sewers should have no less than 6 inches of clearance. Special structural support will be required if there is less than 18 inch clearance. Clearance refers to the distance from the outside of the sewer pipe to the outside of the storm sewer pipe.
4. Manholes shall be provided at all changes in alignment and grade of storm sewers and at such other locations as necessary to maintain a maximum length of 300 feet between manholes.
5. When there exists a possibility that ground water may be diverted and follow the path of the new sewer, then ground water barriers shall be constructed in adequate numbers to prevent ground water migration down sewer trenches.
6. Where a storm sewer discharges into a natural channel or ditch, an outlet structure should be provided that will blend the storm sewer discharge into the natural channel flow in such a way as to prevent erosion of the bed or banks of the channel.
7. Downspouts shall be outlet on splash blocks unless specifically approved in writing by the Village Engineer.
8. Direct connection from building footers to storm sewer shall not be allowed unless specifically approved in writing by the Village Engineer.
9. Storm inlet or catch basin grates shall be of a type designed to permit safe crossing by bicycles as approved by the Village Engineer.
10. Each building site or lot created by subdivision of property shall have access to a rear yard drain connected to the subdivision drainage system. This requirement can be waived when a natural waterway transverses the rear yards and when the rear property is at a slope greater than 2% toward the waterway.

b. Culvert Design

- i. The hydraulic analysis of a culvert, including a determination of the headwater depth and outlet velocity for the design discharge shall be conducted in accordance with the procedures outlined in the The Ohio Department of Transportation (ODOT) Location and Design Manual, Volume Two Drainage Design, Section 1105.4.

- ii. Design shall be based on a minimum 25-year storm frequency rainfall.
- iii. Maximum allowable head water shall be 1 foot below the near, low edge of pavement and for the design storm. Head water shall not be allowed to over top a roadway during a 50 year storm frequency rainfall.

c. Bridge Design

- i. Design shall be based on a 50-year storm frequency rainfall.

d. Drainage ditch Design

- i. Design shall be based on a minimum 10-year storm frequency to determine the depth of flow and a minimum 5-year storm to determine the velocity of flow. The Village engineer may require a more stringent design of larger open water carriers.
- ii. Manning's "n" values to be used in the calculation of Drainage Ditch capacity and velocity are shown as follows:

Type of Lining	Manning's "n"
Seeded	0.03
Sod	0.04
Erosion Control Matting	0.04
Concrete	0.015
Rock channel Protection	0.06

- iii. Allowable velocities shall be:

Type of Lining	Allowable Velocities (fps)
Seeded	2.0-2.5
Sod	5
Erosion Control Matting	5
Rock channel Protection	>5

All road side ditches shall have erosion control matting or sod as a minimum for velocity protection.

- iv. Minimum slope in a ditch is 0.5%

3.

Drainage Map

A Drainage Map shall be provided for each site development. The drainage map shall contain a minimum of:

- a. Topographic mapping showing the existing and proposed contours. Contour elevations shall be at a minimum of 2' intervals unless otherwise approved by the Middlefield Village Engineer.
- b. Predominant Soil Types located on the site.
- c. Proposed and Existing Ground cover located on the site.
- d. All proposed and existing drainage system components.
- e. Clearly delineated drainage areas that contribute storm water to the drainage system components.
- f. All runoff flow paths used in drainage calculations for calculating the time of concentration.

III. **STORM WATER MANAGEMENT DESIGN REQUIREMENTS**

- A. Storm water management ponds or basins shall be provided where necessary to control the volume and velocity of storm water leaving the site. These ponds or basins shall be designed in accordance with master watershed drainage plans. Where such plans do not exist, storm water detention/retention facilities shall be designed in accordance with the design criteria contained within these regulations.
- B. The purpose of Storm water management ponds or basins is to:
 1. Permit commercial, industrial, and residential development without increasing the flooding of other lands.
 2. Limit and/or reduce the adverse impact on receiving streams, storm sewers, and other drainage facilities caused by accelerated runoff due to development.
 3. Provide a basis for design of storm drainage systems on lands above or below undeveloped areas, which will preserve the rights and options of both contributing and receiving property owners and assure the long-term adequacy of storm drainage systems.
- C. Detention ponds or retention basins shall be provided for:
 1. Residential developments or sites containing five (5) acres or more, or comprising ten (10) building sites or ten (10) individual dwelling units or more;
 2. Commercial developments or sites regardless of size;
 3. Industrial developments or sites regardless of size;
- D. The design criteria will require that peak discharge flow rates obtained by using the SCS TR-20 Hydraulic Analysis Model be controlled in proportion to increased runoff volume. If the development does not increase runoff volume, peak flows will not be required to be controlled. However, as development increases the runoff volume due to increased area of impervious surfaces, the critical storm mythology shall be implemented.

E. Increased storm water peak flow rates and runoff volumes shall be controlled such that:

1. The peak flow rate generated from the critical storm and all more frequent occurring storms on the Post-development or site area does not exceed the peak flow rate from a one-year storm frequency, twenty four (24) hour storm occurring on the same area under pre-development conditions.
2. Storms of less frequent occurrence (longer return periods) than the critical storm up to the one hundred (100) year storm have peak flow rates not greater than the equivalent size storms under the pre-development conditions. Consideration of the 1, 2, 5, 10, 25, 50, and 100-year storm event will be considered adequate in designing and developing drainage facilities to meet this guideline.

F. The critical storm for a specific development or site area shall be determined as follows:

1. Determine the total runoff volume of storm water using the SCS TR-20 Hydraulic Analysis Model for a one-year storm frequency, twenty four-hour storm occurring on the development or site area before and after the proposed development for each unique drainage discharge point. Include clearly in your calculations the lot coverage assumptions used for full build out of the proposed condition. Curve numbers for the predevelopment condition must reflect the average type of land use over the past 10 years and not only the current land use. To account for unknown future cosmetic improvements to a construction site, an assumption of an impervious surface such as asphalt or concrete must be utilized for all parking areas or driveways, even if stone/gravel is to be utilized in construction.
2. Based on the runoff volume calculated in number 1 above, determine the percent increase in runoff volume due to the development and using this percentage, select the twenty four hour critical storm from the following table:

If the percentage of increase in volume of runoff is:

Equal to or greater than	And less than	The critical storm 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 and over		100-year

(For example, if the percent increase between the pre-development and post-development runoff volume for a 1-year storm is 35%, the critical storm is a 5-year storm. The peak discharge rate of runoff for all storms up to this frequency shall be controlled so as not to exceed the peak discharge rate from the 1-year frequency storm under pre-development conditions in the development drainage area. The post-development runoff from all less frequent storms need only be controlled to meet the pre-development peak discharge rate for each of those same storms.)

G. Complete flood routing calculations will be required to confirm that the proposed detention pond or retention basin facility meets the above criteria. As a minimum, the flood routing calculations shall include the following information:

1. Overall drainage plan of the site showing:
 - a. Existing and proposed grading
 - b. Existing and proposed runoff flow paths

- c. Existing and proposed drainage facilities
 - d. Contributing areas draining to the drainage system
 - e. Predominant soil types and description of all ground covers.
 - f. For each drainage area list the CN, area, and time of concentration.
2. Weighted runoff curve number (CN) calculations for each drainage area for both pre and post-development conditions. Weighted Runoff curve number shall be calculated according to the procedures in the United States Department of Agriculture's Urban Hydrology for Small Watersheds (TR-55). Ground Cover type and condition shall be clearly described for each drainage area.
 3. Time of concentration (Tc) calculations for each drainage area for both pre and post-development conditions. The time of concentration shall be calculated according to the procedures in the United States Department of Agriculture's Urban Hydrology for Small Watersheds (TR-55)
 4. Hydrographs shall be developed for all drainage areas affected by the proposed development in graphical form for all storm events from 1 to 100-years. The required inflow hydrographs shall include both pre-development and post-development conditions. Provide any assumption and/or calculations utilized in determining the inflow hydrographs in accordance with the accepted hydrologic method. The Village Engineer may request hydrographs in tabular form in certain cases.

The hydrographs shall be developed by using the methods described in the U.S. Soil Conservation Service's Technical release No. 20 (TR-20) and its latest editions, including all applicable supplement methods. Rainfall data utilized in the design shall be as follows:

Information for northeast Ohio for Storms having a duration of 24 hours	
Return Period	Rainfall depth (inches)
1-year	2.04
2-year	2.50
5-year	3.10
10-year	3.60
25-year	4.39
50-year	5.11
100-year	5.89

Source: *Floyd A Huff and James R. Angel. 1992
Rainfall Frequency Atlas of the Midwest. NOAA National
Weather Service Midwest Climate Center Research Report 92-03. (Bulletin 71)*

5. Detention pond or basin reservoir capacity vs. Reservoir water surface elevation calculations.

6. Outlet control structure discharge vs. Reservoir water surface elevation hydraulic calculations, including the assumptions or calculations made to determine the existing drainage system hydraulic gradient or water surface elevation at the outlet control structure discharge point.
7. Plan view, typical sections and pertinent details of the proposed detention pond or basin and its primary and emergency outlet control structure(s).
8. Provide a summary of calculated Pre vs. Post peak discharge and volumes for each unique discharge point.

IV. EASEMENT REQUIREMENTS

- A. Easements governing storm drainage Improvements in the Village of Middlefield shall be determined in accordance with the following criteria.
 1. All storm drainage structures shall be placed on appropriate drainage easements with area wide facilities placed on Village owned easements and local service facilities placed on homeowner, owner, or homeowner's association-owned easements.
 - a. An area wide facility is one, which has one or more of the following characteristics:
 - i. Dedicated public street drainage is dependent upon the storm sewer or ditch.
 - ii. Storm sewer or ditch receives upstream flows from a defined drainage channel.
 - iii. Storm sewer or ditch serves more than 12 sub lots.
 - iv. Lake, pond, or basin is designed to detain or retain substantial storm water beyond the development in which the facility is contained.
 - v. An addition to or an improvement of an existing area wide facility.
 - b. Local service facilities shall include all other facilities not meeting the above characteristics.

V. SUBMITTAL AND REVIEW

- A. Two (2) copies of the design computations and one (1) copy of all drainage maps shall be submitted to the Village of Middlefield simultaneously with the improvement plans.
- B. Within thirty (30) days of receipt of a complete Storm Water Management Report the Village of Middlefield shall indicate its status of compliance or non-compliance to the owner, or to his appointed representative. Indication of non-compliance shall include specific plan deficiencies and the procedures for filing a revised plan.
- C. At the time of submission of the revised plan, another 30-Day period begins. Plans found in compliance with these regulations shall remain effective and valid for 1-years (12 months) from date of approval unless renewed. Renewal is accomplished by the submission of another plan.

VI. VARIANCE

- A. The Planning Commission may grant a variance to these regulations where the owner or his appointed representative can show that a hardship exists whereby compliance with these regulations is not appropriate, based upon the following:
1. That exceptional topographic or other physical conditions exist that are peculiar to the particular parcel of land.
 2. That the peculiar condition in (A) above did not result from previous actions by the owner.
 3. That a literal interpretation of these regulations would deprive the owner of rights enjoyed by other property owners.
- B. Adverse economic conditions shall not be considered as a valid reason or hardship for a variance request to be granted. No variances will be granted where activities occur that will defeat the purposes of these regulations.
- C. The request for a variance shall be submitted to the Village of Middlefield Planning Commission and shall state the specific variances sought and include sufficient data to justify the granting of a variance.

VII. INSPECTION AND COMPLIANCE

- A. The Village of Middlefield will make regular inspections of development areas to determine compliance with these rules and regulations and a report sent to the Planning Commission of the sites compliance status. All construction activities, including Stormwater Management facilities, will be constructed in conformity with the approved Improvement Plans. If it appears that a violation of these regulations has occurred, the owner or his appointed representative shall be notified of the deficiencies or non-compliance by the Village of Middlefield in writing. If within two (2) weeks after the date of the proof of mailing receipt, the deficiency or non-compliance has not been corrected, or plans have not been approved by the Village of Middlefield Engineer for its correction, said deficiency or non-compliance shall be reported to the Planning Commission for consideration of a "finding of violation".
- B. If, in the opinion of the Village of Middlefield Engineer, immediate and irreparable damage will occur because of the violation, the Village of Middlefield Engineer may approach the Planning Commission for consideration without delay.
- C. If the Planning Commission determines that a violation exists and requests the Village of Middlefield Solicitor in writing, the Solicitor shall seek an injunction or other appropriate relief to abate excessive erosion or sedimentation and secure compliance with these regulations. In granting relief, the court may order the construction of sediment control improvements or implementation of other control measures.

VIII. MAINTENANCE & FINAL INSPECTION APPROVAL

- A. To receive final inspection and acceptance of any project the following must be provided or completed:
1. An "as-built survey" of the storm sewer system according to the requirements specified in the Village of Middlefield Municipal Standards for Plan Content Section XIII.
 2. An "as-built survey" must be certified (sealed, signed and dated) by a Registered Surveyor and/or Engineer as applicable with a statement certifying that the storm water

facilities as designed and installed meet the requirements of the improvement plans originally found in compliance by the Village of Middlefield. This may include a new set of stormwater facility calculations to be provided if the design was altered significantly. The "as-built" survey must minimally provide the location, dimension, and bearing of such facilities and reference the entity or individual (s) responsible for long-term maintenance.

3. A copy of the complete inspection and maintenance agreement as specified in the Village of Middlefield Sediment Control and Water Quality Regulations Section II.D.15 must be provided as recorded with the Geauga County Recorder.
- B. The above listed items must be received by the Village of Middlefield prior to receiving approval from the Village of Middlefield Engineer for the maintenance period inspection for subdivisions and final inspection approval of all other construction sites.
- C. As an alternative, the owner/responsible party may petition the Planning Commission for permanent maintenance of storm water control structures and/or facilities when the benefiting area involves two or more property owners, through the Ohio Drainage Law, R.C. 6131, or R.C. 1515. The Village may require alternate designs of facilities to reduce maintenance costs.

IX. INTERPRETATION OF TERMS AND WORDS

For the purpose of these regulations certain rules or word usage apply to the text as follows:

- A. Words used in the present tense include the future tense, and the singular includes the plural, unless the context clearly indicates the contrary.
- B. The term "shall" is always mandatory and not discretionary; the word "may" is permissive. The term "should" is permissive, but indicates strong suggestion.
- C. The word or term not interpreted or defined by this Section shall be construed according to the rules of grammar and common usage so as to give these regulations their most reasonable application.

X. WORDS AND TERMS DEFINED

ACRE: A measurement of area equaling 43,560 square feet.

CHANNEL: A natural bed that conveys water; a ditch excavated for the flow of water.

CRITICAL STORM: That storm which is calculated by means of the percentage increase in volume of runoff by a proposed development. The critical storm is used to calculate the maximum allowable storm water discharge rate from a developed site.

DETENTION STRUCTURE: A permanent storm water management facility for the temporary storage of runoff, which is designed so as not to create a permanent pool of water.

DEVELOPMENT AREA: A lot or contiguous lots owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other non-farm construction or alternative that changes runoff characteristics, upon which soil-disturbing activities occur.

DEVELOPMENT DRAINAGE AREA: A combination of each hydraulically unique drainage areas with individual outlet points on the development area.

DISTURBED AREA: An area of land subject to erosion due to the removal of vegetative cover

and/or soil disturbing activities.

DITCH: An open channel, either dug or natural, for the purpose of drainage or irrigation with intermittent flow.

DRAINAGE: The removal of excess surface water or groundwater from land by surface or subsurface drains.

DRAINAGE IMPROVEMENT: As defined in R.C. 6131.01 (C), and/or conservation works of improvement, R.C. 1511 and 1515.

EARTH MATERIAL: Soil, sediment, rock, sand, gravel and organic material or residue associated with or attached to the soil.

ENGINEER: A Professional Engineer registered in the State of Ohio.

EROSION: The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.

FARM: Land or water devoted to growing crops or cultivated in connection with raising or harvesting any agricultural or horticultural commodity, and the raising, shearing, feeding, caring for, training, and management of livestock and poultry.

GRASSED WATERWAY: A broad or shallow natural watercourse or constructed channel, covered with erosion-resistant grasses or similar vegetative cover, used to convey surface water.

HYDRIC SOILS: Soils that are saturated, flooded, or ponded for a long enough time period during the growing season that anaerobic conditions develop in the upper part of the soil. Soils that are considered "wetland" soils.

IMPERVIOUS: Not allowing infiltration which means any paved, hardened or structural surface regardless of its composition including (but not limited to) buildings, roads, driveways, parking lots, loading/unloading spaces, decks, patios, and swimming pools.

LANDSCAPE ARCHITECT: A Professional Landscape Architect registered in the State of Ohio.

LARGER COMMON PLAN OF DEVELOPMENT: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

LOT: A tract of land occupied or intended to be occupied by a use, building, or group of buildings and their accessory uses and buildings as a unit, together with such open spaces and driveways as are provided and required. A lot may contain more than one contiguous lot.

MULTI-FAMILY DEVELOPMENT: Apartments, condominiums, townhouses, duplexes, or other similar buildings housing more than one family.

ODNR-DSWC: Ohio Department of Natural Resources, Division of Soil and Water Conservation.

PERSON: Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent or combination thereof.

PHASING: Clearing/grubbing/excavating a parcel of land in distinct sections, with the stabilization of each section occurring before clearing the next.

RETENTION STRUCTURE: A permanent storm water management facility that provides for the storage of runoff by means of a permanent pool of water.

RUNOFF: The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually returned to water resources, watercourses, or wetlands.

SETBACK: A designated transition area around water resources or wetlands that is left in a natural, usually vegetated, state to protect the water resources or wetlands from runoff pollution. Construction activities in this area are restricted or prohibited as required in this regulation.

SOIL DISTURBING ACTIVITY: Clearing, grubbing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed and which may result in, or contribute to erosion and sediment pollution. This may also include construction of non-farm buildings, structures, utilities, roadways, parking areas, and septic systems that will involve soil disturbance or altering of the existing ground cover.

STORM FREQUENCY: The average period of time within which a storm of a given duration and intensity can be expected to be equaled or exceeded.

STORM WATER: Storm water runoff, snowmelt, surface runoff, and drainage.

STORM WATER MANAGEMENT: Runoff water safely conveyed or temporarily stored and released at an allowable rate to minimize erosion and flooding.

WATERCOURSE: A definite channel with defined bed and banks within which concentrated water flows, either continuously or intermittently, (e.g. brooks, channels, creeks, rivers or streams).

WATER RESOURCE: Any public or private body of water including lakes and ponds, as well as streams, gullies, ditches, swales, or ravines that have banks, a defined bed, and a definite direction of course, either continuously or intermittently flowing.

WATERSHED: The total drainage area contributing runoff to a single point.