



Planning Commission
Council Chambers
May 17, 2022 – 6:00 p.m.
233 South Main Street, Monroe, Ohio

Call to Order

Roll Call

Approval of the Minutes – March 15, 2022

Old Business

New Business

Case No. 2022-5-4. Consideration of Site Plan Application for Four Seasons Car Wash

Case No. 2022-5-5. Consideration of Site Plan Application for Gateway Tire

Administrative Reports

Adjournment



Planning Commission Minutes
March 15, 2022 – 6:00 p.m.
233 South Main Street, Monroe, Ohio

Call to Order

Mr. Kirkpatrick, Chair, called the meeting to order at 6:02 p.m.

Roll Call

Planning Commission members present: David Kirkpatrick, Christina McElfresh, Lyndsey Pyron, Brian Richards and Matt Frye.

Staff members present: William J. Brock, City Manager; Kameryn Jones, Assistant Director of Development; Angela S. Wasson, Assistant to the City Manager/Clerk of Council; Jameson Cole, Planner; Michelle Layman, Planning and Zoning Specialist; Matt Grubbs, Assistant Fire Chief.

Approval of the Minutes

Mr. Richards moved to approve the minutes of the February 15, 2022 meeting; seconded by Mr. Pyron. Voice vote. Motion carried.

Old Business

Case No. 2022-2-4. Motion to remove from being tabled

Mrs. McElfresh moved to remove Case No. 2022-2-4 from the table; seconded by Mr. Frye. Voice vote. Motion carried.

Mrs. Jones provided a recap of the previous meetings regarding this project. June 21, 2021 was the original presentation from applicant; October 21, 2021 Planning Commission had an informal work session; February 15, 2022 the case was tabled; March 3, 2022 Planning Commission met with the applicant along with fire and engineering to go over the February 15th meeting.

Mrs. Jones provided updates on changes the applicant has made since the February 15, 2022 meeting. They are as follows.

1. The formal open space was defined.
2. Applicant will provide 26 off street parking spots and 34 on street parking spots.
3. Two portions of Kings Crossing Ln need to be widened to 28 feet.
4. Applicant agreed to install 5ft walk on Coldwater



5. Applicant agreed to widen Roden Park Dr to an 8ft path.
6. Applicant showed updated plans with walk space and landscaping.
7. Applicant updated renderings provided that now show eaves, a bay window, and variation in siding material on the second floor.
8. Vinyl samples were provided to Planning Commission
9. The updated renderings satisfied the design element

Mrs. Jones reminded Planning Commission and the applicants of the Commissions role, stating it is to act as a recommending body to City Council. Planning Commission may choose to recommend approval, recommend approval with conditions, or recommend denial of the application. Council has the final say.

Mrs. Jones provided the following staff recommendations. They are as follows.

1. The overall project density be reduced to no more than 4 units per acre to better align with the designation of the Comprehensive Plan.
2. The applicant will provide elevation options for the sides of buildings located on street corners to meet Code architectural standards. Mrs. Jones states the developer has met this request.
3. Discussion of the request to utilize vinyl on the second floor of buildings.
4. In addition to the current plans provided, a minimum 5-foot-wide sidewalk with tree lawn and street trees every 40 feet on center be provided on both sides of all internal/private streets.
5. In addition to the current plans provided, the applicant will revise the landscape plan to address off-street parking areas to meet code requirements.
6. Applicant will provide revised plans to show a 5-foot walk (as agreed to by the applicant) and associated street trees on Cold Water Dr.
7. The walk on the north side of Roden Park Drive (currently shown as a 5-foot concrete walk) be changed to a minimum 8-foot-wide asphalt or concrete multiuse path.
8. The applicant installs a public walk the full extent of their frontage on Roden Park Drive and Cold Water Drive.

Mr. Kirkpatrick advised he would open Case No. 2022-2-4 for deliberation by the members of Planning Commission. All Planning Commission members should have an opportunity to speak one time before speaking again.

Mr. Pyron stated the developers have attempted to meet some guidelines but have too many variances. He is against the development.

Mrs. McElfresh felt that after all the meetings they have had with the developer, there was no improvement to warrant accepting the project. She is against the development.



Mr. Kirkpatrick expressed at the minimum the developer must meet codes. He is against the development.

Mr. Richards stated he reviewed the development in West Chester (same developer) at 7:30 pm to view the parking. He states there were no cars on the streets. He expressed the project was done tastefully but that Planning Commission denies constituents variances if the minimum standards aren't met and that this project should be considered in the same way. He is against the development.

Mr. Frye felt that if the project is approved giving the developer variances this will set a precedent to the community. The developer should meet the minimum standards. He is against the development.

Mr. Kirkpatrick was of the opinion that if the streets are private, it will be very hard to control what is or isn't happening on the City's side. Mr. Kirkpatrick stated at this time it appears no one on Planning Commission is ready to approve this project.

Mrs. McElfresh recommended they take a formal vote.

Mr. Kirkpatrick moved to deny and recommend City Council to deny the application of a zoning map amendment and associated Planned Unit Development regarding 20.91 acres of property at Roden Park Drive and Crossings Boulevard from C-4 Gateway Commercial Planned Unit Development to R-4 Multi-Family Residential Planned Unit Development; seconded by Mrs. McElfresh. Voice Vote. Motion carried.

New Business

No new business

Adjournment

Mr. Pyron moved to adjourn; seconded by Mr. Frye. Voice vote. Motion carried.

The Planning Commission meeting adjourned at 6:25 p.m.

Respectfully submitted,

Michelle Layman
Planning and Zoning Specialist



CITY OF MONROE
Inter-Office Correspondence

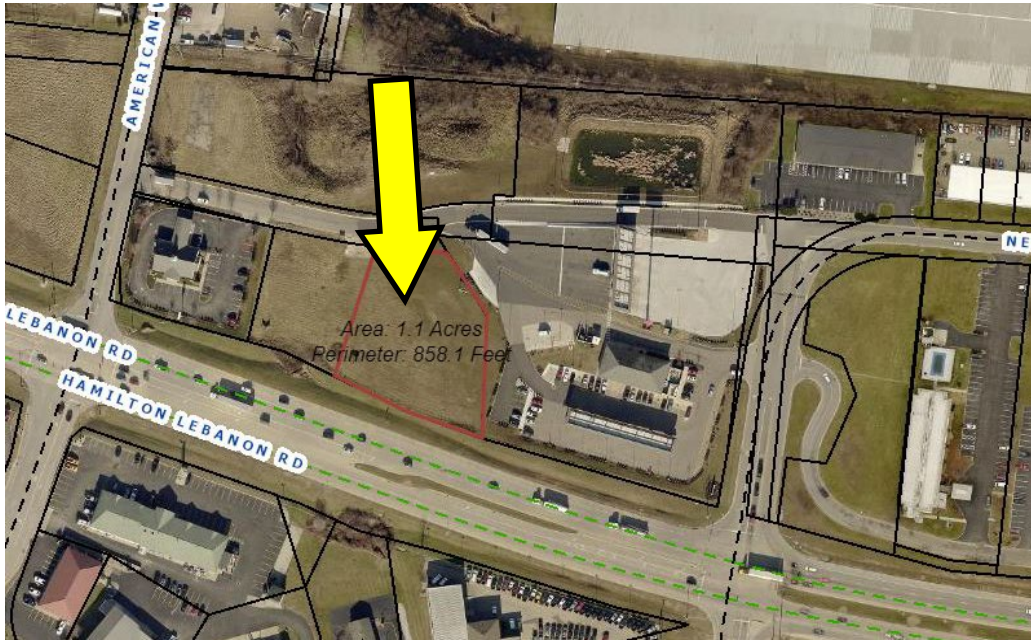
TO: Members of the Monroe Planning Commission
FROM: Kameryn Jones
Assistant Development Director

DATE: May 17, 2022
RE: Information Packet for May 17, 2022 Planning Commission Meeting at 6:00 p.m.

I. Case No. 2022-5-4— Consideration of Site Plan Application for Four Seasons Car Wash

A. Background

- Christian Stone, on behalf of Cincinnati Commercial Contracting, has submitted a site plan application for a new Four Seasons Car Wash.
- The applicant is proposing a 4,572 square foot car wash. The car wash is a 125 FT long single wash bay capable of washing five to six cars at one time.
- The site is approximately 1.07 acres currently zoned C-2 General Commercial.
- The applicant anticipates starting construction in July and completing by January 2023.



Overhead View of Property



Zoning Map of Proposed Site and Surrounding Properties



Westbound on State Route 63



Eastbound on State Route 63



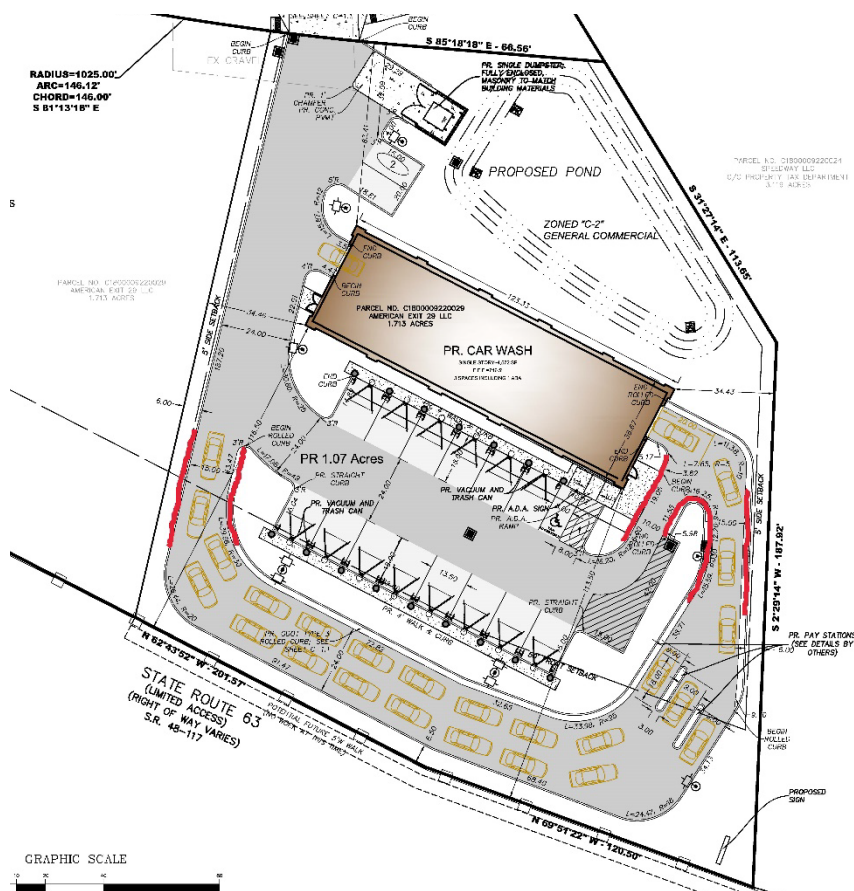
Eastbound on Clarence F Warner Dr



Westbound on Clarence F Warner Dr

B. Staff Comments

- **General—**
 - Access management regulations would state drives should be lined up across from one another when possible, and that access points should be spaced appropriately.
 - The proposed access for this site off Clarence F. Warner Drive does not line up with the recently approved access of the CCC North site on the north side.
 - As proposed, the current site would be split from the remaining acreage to the west, which would either necessitate shared access or a new access point for this undeveloped lot with limited space to do so.
 - Engineering will continue to work with the developer on access as it relates to future development on Clarence F. Warner.
- **Sidewalks—**
 - Minimum 5-foot walk is required along both private and public streets as well as a sidewalk connection to the building/use.
 - A 5-foot walk has been shown along Clarence F Warner, but none is shown along State Route 63.
 - No walkway connection to the building itself has been proposed.
- **Parking –**
 - Access drives must be a minimum 20 FT wide.
 - The access drive does not meet the minimum width in select areas. (Shown in red) These areas are points of ingress and egress from the stacking lanes.



- **Landscaping–**
 - Street trees shall be required every 40 foot on center at all new sites along all private and public streets located 40' on center.
 - This requirement has not been met on State Route 63 where the length is approximately 230 FT, requiring 5 trees. Perimeter landscape trees cannot count towards meeting the street tree requirement along SR 63. Please revise.
 - The access drive landscaping quantities and the physical plants do not match on the landscape plan. Please revise to show the correct amounts.
- **Screening–**
 - As a reminder, screening walls may not be constructed of unfinished concrete or cinder block.

C. Department Comments

- **Fire Department:** No comment. Reserves right to comment during plans review.
- **Police Department:** No comment.
- **Engineering/Public Works Department:**
 - Engineering review ongoing.

D. Staff Recommendation

- Staff recommends approval of the site plan application with the following conditions:
 - Discussion and decision on waiver of the required 5-foot sidewalk along State Route 63.
 - Discussion and decision on the street tree requirement along State Route 63.
 - The landscaping plan be revised to correct the quantities and physical planting on the plan.
 - As a reminder, all landscaping must meet all minimum species and size requirements and be detailed appropriately on the plan.
 - As a reminder, all ground mounted, and rooftop equipment must be appropriately screened as approved by Staff.
 - All Engineering review comments be addressed.
 - The applicant will be responsible for maintenance (mowing, etc.) of the right-of-way adjacent to the developed site once improvements are complete.
 - Digital files of final plans compatible with City GIS be submitted.
 - All other Staff comments be met.

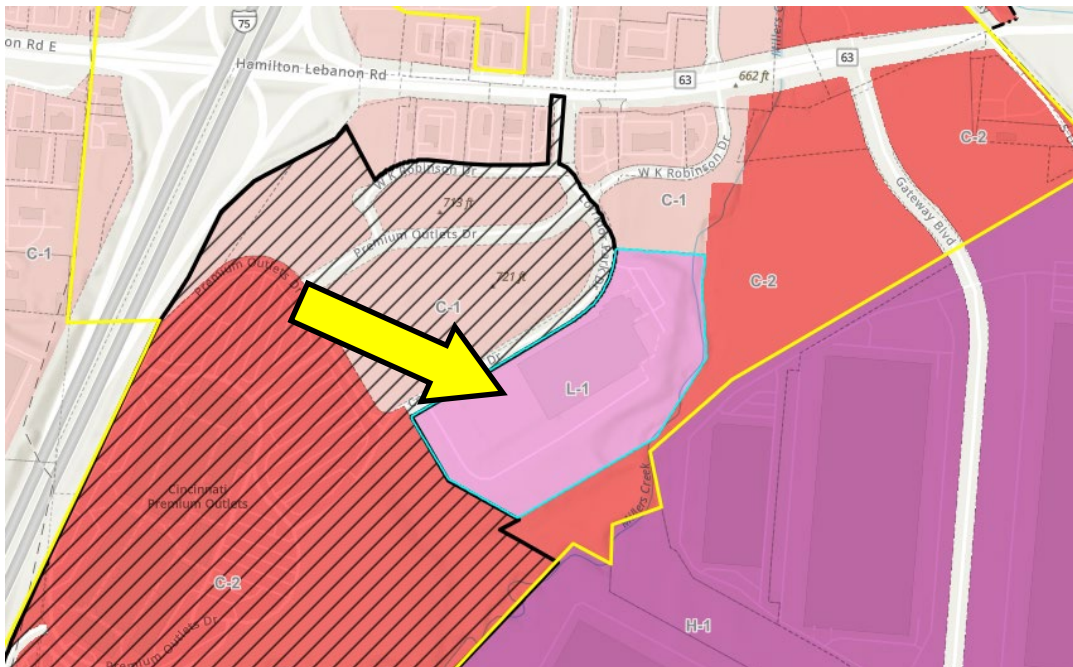
II. Case No. 2022-5-5. Consideration of Site Plan Application for Gateway Tire

A. Background

- Marshall Construction Company, LLC has submitted a site plan application for an expansion to the existing Gateway Tire building located at 100 Corridor Park Drive.
- The expansion will be 128,360 square feet of additional warehousing space. The existing space is 173,674 square feet and is comprised of administrative office area and warehousing space.
- The property is approximately 22 acres and is zoned L-1 Light Industrial.
- The applicant anticipates a construction start date this summer and completion near the end of this year.



Overhead View of Property



Zoning Map of Proposed Site and Surrounding Properties



Southbound on Corridor Park Drive



Southbound on Corridor Park Drive



Southbound on Corridor Park Drive



Facing Northeast on Corridor Park Drive

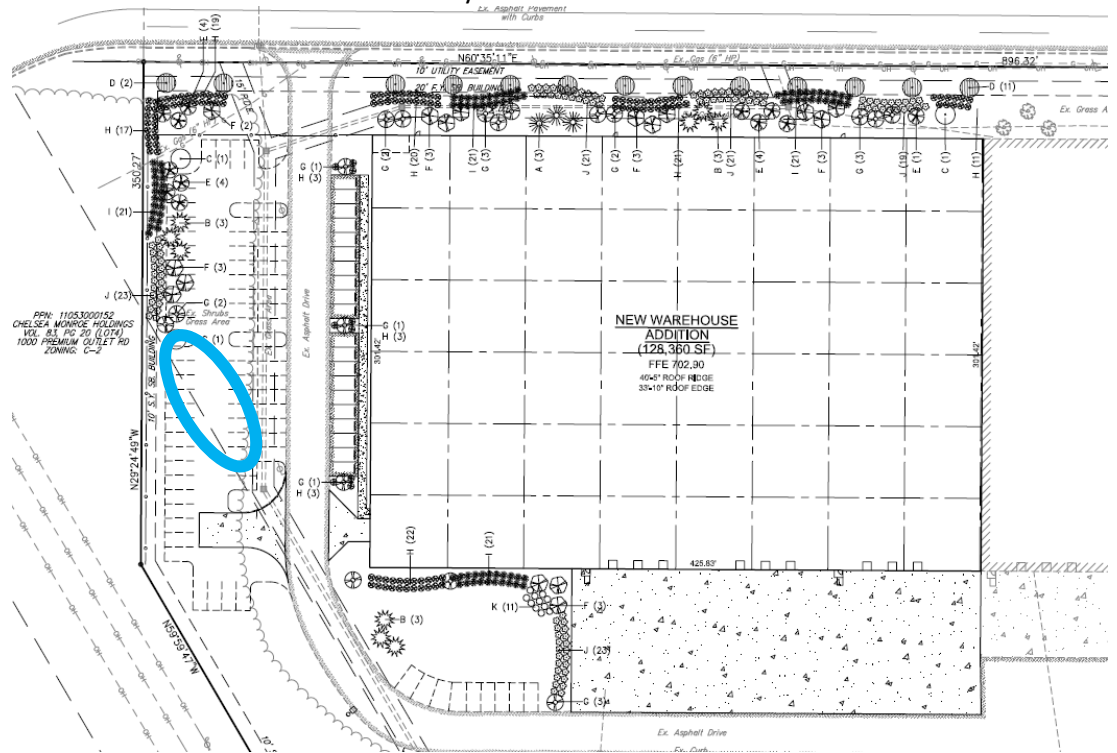
B. Staff Comments

- **Sidewalk:**
 - In new developments, a 5-foot sidewalk is required to be constructed in the public right-of-way along Corridor Park Drive. A sidewalk connection from the public walk to the site is also required.
 - The applicant has requested waiver of the 5-foot walk and associated walkway connection to the site.
- **Parking:**
 - For a storage/warehousing use, 1 per 1,250 SF required. The code permits the applicant by right to reduce or increase the parking count by 10%. Based on 128,360 square feet, 103 spaces are required. 10% waiver by right would require an absolute minimum of 93 parking spaces.
 - 20 parking spaces are provided to be installed with the building expansion with 74 shadow parking spaces shown for future needs.
 - Code may permit up to 50% reduction in parking spaces with remaining required amount shown in shared and/or shadow parking.
 - The applicant has shown the remaining required parking via shadow parking in two separate areas along the southwest and southeast portions of the site.
- **Landscaping:**
 - Street trees (canopy tree with minimum 40 FT mature height) are required every 40 FT on center in the public right-of-way along Corridor Park Drive.
 - Canopy trees have been provided but do not appear to be placed in the public right-of-way.
- **Screening:**
 - Buffer Type B required along south, east, and west sides of the property (expansion portion of site only) as all sides of the expansion area are surrounded by commercially zoned property, focusing on the south and west sides of the expansion area.

TABLE 1212-2: BUFFER TYPES		
BUFFER TYPE AND CONFIGURATION	OPTION 1: MINIMUM WIDTH 35 FEET	OPTION 2: MINIMUM WIDTH 20 FEET
Buffer Type B: Aesthetic - This perimeter buffer functions as an intermittent visual obstruction, and creates the impression of spatial separation without eliminating visual contact between uses.		
	8 ACI of canopy trees + 10 ACI of understory trees + 15 shrubs per 100 linear feet	2 ACI of canopy trees + 14 ACI understory trees + 35 shrubs per 100 linear feet

- The applicant has chosen Option 2 of Buffer Type B.
- Along the west side, 5 canopy trees are required with 7 proposed, 35 understory trees are required with 24 proposed, and 174 shrubs are required with 155 shrubs proposed.

- Along the south side (approximately 732 linear feet), a significant portion of the property is restricted by a 180-foot wide electrical easement for overhead utilities. Therefore, the applicant proposes buffering approximately 400 feet of the south side, a 174 linear foot area and 220 linear foot area, outside of that easement area.
- Based on these two proposed areas only, the buffer is deficient by 10 understory trees. Staff suggests placing these 10 remaining trees as well as the remaining 19 shrubs and 9 understory trees deficient along the west side buffer in the area shown in blue below. Staff would accept evergreen trees, canopy trees, or a combination as an alternative to understory trees in this area.



- **Photometric:**
 - The lighting plan submitted appears to show the site is under-lit in two small areas along the access drive and parking areas where the minimum required is 0.3 fc. Please revise.

C. Department Comments

- **Fire Department:**
 - Radio survey study for coverage within building.
 - Fire reserves the right to comment during plans review.
- **Police Department:** No comment.
- **Public Works/Engineering:** Engineering under review.

D. Staff Recommendation

Staff recommends approval of the site plan and conditional use with the following conditions:

- Discussion and decision on the waiver request regarding the sidewalk required along Corridor Park Drive.
- Discussion and decision on the placement of required street trees outside of the right-of-way along Corridor Park Drive.
- The landscape plan be revised based on staff comments.
- The lighting plan be revised to address staff comments.
- As a reminder, minimum size and species requirements related to landscaping must be met.
- As a reminder, if ground mounted or rooftop equipment becomes necessary in the future, screening will be required.
- The applicant will be responsible for maintenance (mowing, etc.) of the right-of-way adjacent to the developed site once improvements are complete.
- All other Staff comments to be met and any future Engineering review requirements.
- A GIS compatible file of finalized plans be submitted.



Application for Site Plan Review

Monroe Development Department
233 South Main Street, Monroe, Ohio 45050
Phone: 513-539-7374
www.monroehio.org

For Staff Use Only

Submittal Date:

Date Application Determined Complete:

Date of Planning Commission Review:

Fee Paid:

Staff Initials:

Application Number:

Site Plan Review Information

1. The site plan review procedure and applicability requirements are established in Section 1203.06 of the Monroe Planning and Zoning Code.
2. Prior to submitting this application, you are required to meet with staff from the Development Department for a pre-application conference. Please contact the department to schedule the conference.
3. The Monroe Planning Commission reviews all site plan review applications unless specifically exempted in Section 1203.06(B)(3).
4. Approval of a site plan does not constitute approval to begin construction. Applicants with approved site plans are required to submit all applicable zoning permit and building permit applications.
5. Unless an alternative timeline is approved by the Planning Commission, construction related to the approved site plan must begin within one year of the site plan approval or the approval shall be voided. See Section 1203.06(H) for additional information.

Basic Project and Site Information

Project Address: CLARENCE F. WARNER

County: ☒ Butler ☐ Warren Total Lot Area: 1.07 ACRES

County Tax Parcel ID: C1800009220029

Project/Development Name: FOUR SEASONS CARWASH

Existing Zoning District: C-2 GENERAL COMMERCIAL

Project Type: ☒ New Building ☐ Expansion of Existing Structure
☐ Addition to Site (e.g., parking, landscaping, lighting, etc.)

Applicant Information

Applicant Name: ALAN SCHERR ASSOCIATES, LLC

Contact Person: ALAN R. SCHERR, AIA

Contact Address: 3491 WESTBURY ROAD, KETTERING, OHIO 45409

Contact Phone Number: 937-222-4585

Contact Fax Number: 937-222-4520

Contact E-Mail: AS@ASAOHIO.COM

Property Owner Name: AMERICAN EXIT 29 LLC

The applicant may attach a separate sheet of a paper with contact information for additional people, if necessary (e.g., additional owners, registered engineer, landscape architect, etc.). The same contact information shall be provided for each contact name.

Project Address or Tax Parcel ID: C1800009220029

Additional Project Information

1) Please describe, in detail, any existing uses and/or buildings on the project site.

THE CURRENT SITE IS VACANT

2) Please describe, in detail, the proposed uses and the proposed development. Provide a summary of the square footage related to each use and/or the total number of proposed dwelling units.

THE PROPOSED SITE WILL BE DEVELOPED FOR A NEW TUNNEL STYLE CARWASH OPERATION. THE BUILDING SIZE IS 4,572 GROSS SQUARE FEET. IT WILL BE A ONE-STORY STRUCTURE.

3) What are the anticipated start and completion dates for the project?

Start Date: 7/14/2022

Completion Date: 1/14/2023

4) What is the estimated value (in dollars) of the proposed property improvements?

\$1.06 MILLION

5) Check any relevant procedural reviews applicable to this project (previously approved only):

☐ Conditional Use ☐ Variance ☐ Administrative Waiver ☐ Alternative Equivalent Compliance

If you checked any of the above procedures, please provide specific details on what waivers, variances, etc. were approved through the applicable review procedure? Provide the application/case numbers for any related applications.

Project Address or Tax Parcel ID: C1800009220029

Additional Project Information Continued

6) Does the project require any addition permits, licenses, or reviews by outside agencies (e.g., Butler or Warren County, ODNR, OEPA, etc.). ☐ Yes ☒ No If yes, please describe below.

Certification and Signatures

Applicant Signature - I certify that, to the best of my knowledge, the information contained in this form and within any attachments is correct and truthful. I understand that knowingly falsifying this information may be grounds for the denial or revoking of this application and any subsequent zoning permit or other review applications.

Print Name: ALAN R. SCHERR

Signature:



Date: APRIL 19, 2022

Property Owner Signature - If the property owner is not the named applicant on this form, the property owner shall sign the form below acknowledging that the applicant is an authorized agent of the property owner as it relates to proposed project. If the site plan review is for multiple properties, a signature from each property owner is required.

Print Name: CHRISTIAN STONE

Signature:



Date:

4/19/2022

Note: A letter signed by the property owner, authorizing the applicant to act on their behalf may be submitted in lieu of the property owner's signature on this form.

Submittal Requirement Checklist

Submittals shall include 3 copies (minimum of 24" x 36") and electronic submittal as outlined below.
Final approved plans must be submitted electronically.

Digital Submittal Requirements

- | | |
|-------------------------------------|---|
| ☒ | All document applications shall be submitted in an electronic format compatible (Adobe PDF) with the city's computer systems. |
| ☐ | All site plan materials, in map format, shall be submitted in a format compatible with the city's Geographic Information Systems (i.e. shapfile, geodatabase, or dwg) and shall be projected into NAD 1983 Ohio State Plane South - FIPS 3402 coordinate system using US Survey foot units. |

General Information

- | | |
|--------------------------|--|
| ☐ | Site Plan Review Application form |
| ☐ | Application fee |
| ☐ | Copies of the plans and maps established below at a scale no smaller than 1 inch = 100 feet, on full-sized copies unless otherwise is required |
| ☐ | Any additional information determined to be necessary by the Development Department |

Vicinity Map (Scale may be smaller than 1" = 100')

- | | |
|--------------------------|--|
| ☐ | Date, north arrow, scale, and a legend for all symbols |
| ☐ | Project location |
| ☐ | All surrounding properties, streets, and corporation limits within a minimum of 500' of the outer boundaries of the project site |

Existing Conditions Map

- | | |
|--------------------------|---|
| ☐ | All existing zoning district classifications on the site and adjacent to the site |
| ☐ | Parcel boundaries of the site and all parcels adjacent to the site |
| ☐ | Names of all subdivisions and land owners owning lots adjacent to the site |
| ☐ | Existing streets within 200' of site with names and centerlines |
| ☐ | Existing watercourses and bodies of water including any applicable flood hazard areas |
| ☐ | Planned road network (including street names if available) within 500' of site (if different from existing streets) |
| ☐ | Existing land uses on the site and adjacent parcels (including across any streets) |
| ☐ | Railroad infrastructure and rights-of-way |
| ☐ | All existing easements (including drainage) with dimensions and designation as to type |
| ☐ | Location of existing curb cuts, private streets, parking and loading areas, pedestrian walks, lighting facilities, and outside trash storage facilities |

Site Layout Plan

- | | |
|--------------------------|--|
| ☐ | Lot numbers and sizes |
| ☐ | Square footage (gross) of existing buildings to remain and proposed buildings |
| ☐ | Required front, side, and rear yard width/setbacks |
| ☐ | All existing and proposed easements, including dimensions and type (e.g., drainage, access, public utility, etc.) |
| ☐ | Location, width, and classification of all existing and proposed streets in the development |
| ☐ | Location of any outdoor storage area(s) that require screening |
| ☐ | Locations of all proposed external street connections (including street stubs) |
| ☐ | Location, width, and materials of all sidewalks, trails, and paths (including connections to the public sidewalk system and adjacent developments) |

Submittal Requirement Checklist

Parking Plan and Traffic Control Plan

☐	Traffic impact study, if required
☐	Notation of total number of parking spaces, loading spaces, and stacking spaces required by ordinance
☐	Total number, dimensions, and location of parking spaces proposed off-street, on-street, and within parking structures, including information on handicapped parking spaces
☐	Total number of parking spaces to be provided through approval of shadow parking, off-site parking, or shared parking alternatives
☐	Number, location, and size of loading spaces provided
☐	Number and location of stacking spaces provided
☐	Location, arrangement, and dimensions of vehicular entrances, exits and parking lot aisles
☐	Location of pedestrian walkways and crossings
☐	Number and location of pervious parking spaces, if provided
☐	Proposed traffic control devices (in accordance with the Manual on Uniform Traffic Control Devices)
☐	Signing and striping plan
☐	Fire lanes and areas of parking prohibition
☐	Location of all sight triangles

Stormwater Management Sheet and Drainage Plan

☐	Drainage basin(s) where the site is located and drainage patterns
☐	Existing and proposed locations, types, and sizes of drainage structures and calculations demonstrating how post-development runoff will not exceed pre-development runoff
☐	Erosion and siltation control measures and devices with narrative, including location of outfall for stormwater to proper catch basin (indicated sizes and slopes of existing pipes)
☐	Drainage computations from proposed development to proper pickup point
☐	All proposed elevations and slopes for grading
☐	Description of maintenance procedures for stormwater management devices

Utilities Plan (May be included on Site Layout Plan)

☐	Existing and proposed locations, types, and sizes of all water, sanitary sewer, storm sewer, gas, telephone, power and other utility lines and meters, easements and any other utilities affected by the site (includes above ground utilities and grades and computations where appropriate)
☐	Notation that all new utilities (including cable television, electrical, natural gas, sewer, telephone, and water lines) shall be placed underground
☐	Locations where existing overhead utilities will be relocated underground (if applicable)
☐	Identification of any connections, above or below ground, that are located within the City of Monroe's right-of-way

Landscaping Plan

☐	Exact locations, dimensions, and counts of existing and proposed landscape materials provided within and around vehicular use areas, including the size of landscaping islands
☐	Exact locations and counts of existing and proposed landscape materials provided within any required buffer areas including the type of buffer used, the buffer width provided, the proposed configuration of trees, shrubs, and screening features
☐	Location, size, and species of all existing and proposed street trees
☐	The total number of trees and shrubs provided, and the total number of different species planted
☐	Notations for any existing landscape within sight triangles indicating maximum shrub height or tree canopy height

Submittal Requirement Checklist

Submittals shall include 8 copies (minimum of 24" x 36") and 8 copies (minimum of 11" x 17") Additional copies may be required based on project specifics. Final mylars and digital Files will be required after approval.

☐	Location and amount of credit towards landscape material requirements provided by existing landscaping
☐	Demarcation of existing trees to be removed
☐	Location and amount of all open space set-aside areas by development phase
☐	Details of all open space improvements and common features (e.g., fountains, benches, street furnishings, play equipment, etc.)
Architectural and Building Elevation Plans	
☒	Color elevations for each building (principal and accessory) side, illustrating compliance with the architectural standards of the applicable zoning district
☒	Dimensions, in feet, of all façade recesses or similar fenestration
☒	Preliminary floor plan for principal buildings
☒	Height of all buildings in feet, including number of building stories
☒	Accessory structure size(s), if applicable
☒	Accessory structure height(s), if applicable
☒	Description of the type of material(s) used on each façade elevation
☒	Illustrative elevation of all fencing, walls, and retaining walls visible from a street, open space, or public building that will be used for buffering or screening of adjacent residential uses, dumpsters, service structures, utilities, parking areas, loading areas, and similar activity areas
Lighting Plan	
☐	Location, type, and height of all lighting fixtures (including street lights)
☐	Details on colors and materials for all lighting fixtures
☐	Grid or photometric diagram showing maximum illumination values at the lot line, and uniformity ratios within parking lots, measured in footcandles
Signage Plan	
☐	All sign areas, dimensions and height (including shape)
☐	Position of all signs in relation to the use being advertised (may be identified on the site layout plan)
☐	Location and style of all address numbers, building numbers, or allowable building identifications
☐	Plan of illumination for the sign including information on message timing for electronic message centers
☐	Landscaping around base of sign (may be identified on the landscaping plan)

GENERAL NOTES:

THE OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIAL SPECIFICATIONS", CURRENT EDITION, AND THE CURRENT "RULES AND REGULATIONS" OF THE CITY OF MONROE SHALL GOVERN ALL CONSTRUCTION ITEMS ON THIS PLAN, UNLESS OTHERWISE NOTED.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PER LOCAL, STATE, AND FEDERAL REQUIREMENTS.

WHERE PLANS REFER TO CONTRACTOR, IT MAY MEAN SUBCONTRACTOR AT THE GENERAL CONTRACTOR'S DISCRETION.

ALL WORK IN THE AMERICAN WAY, AND/OR CLARENCE F WARNER DR., RIGHT OF WAY, INCLUDING UTILITY CUTS/TAPS WILL NEED A PERMIT FROM THE CITY OF MONROE.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR AND SUB-CONTRACTOR(S) TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS WORK.

ITEM 201: CLEARING AND GRUBBING: THIS WORK CONSISTS OF CLEARING, GRUBBING, SCALPING, REMOVING TREES AND STUMPS, AND REMOVING ALL VEGETATION AND CONSTRUCTION DEBRIS FROM THE LIMITS SHOWN ON THE PLANS, EXCEPT SUCH OBJECTS THAT ARE TO REMAIN OR ARE TO BE REMOVED ACCORDING TO OTHER ITEMS OF WORK.

USE REMOVED OR EXCAVATED MATERIALS IN THE WORK WHEN THE MATERIAL CONFORMS TO THE SPECIFICATIONS; IF NOT THEN RECYCLE, OR DISPOSE OF THE MATERIAL ACCORDING TO 105.16 AND 105.17.

REMOVE OR SAVE ALL TREES, SHRUBS, AND PLANTS AS DESIGNATED ON THE PLANS. PRESERVE ALL VEGETATION AND OBJECTS NOT DESIGNATED FOR REMOVAL. PAINT CUT OR SCARRED SURFACES OF TREES OR SHRUBS SELECTED FOR RETENTION ACCORDING TO 666.04. IN ORDER TO RETARD AND PREVENT THE SPREAD OF THE EMERALD ASH BORER, LIMIT THE MOVEMENT OF REGULATED ARTICLES ACCORDING TO OHIO ADMINISTRATIVE CODE 901:5-36. OBSERVE REQUIREMENTS FOR HANDLING AND TRANSPORTING OF REGULATED ARTICLES IN QUARANTINED AREAS AS DEFINED BY THE OHIO DEPARTMENT OF AGRICULTURE ([HTTP://WWW.AGRI.OHIO.GOV/EAB/](http://www.agri.ohio.gov/EAB/)).

ALL EROSION AND SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE SWPPP PLAN AND LOCAL AND OHIO EPA REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL INSPECTIONS AND REPORTING AS REQUIRED BY THE OHIO EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION (NPDES) PERMIT. CONTRACTOR SHALL PROVIDE WRITTEN REPORTS TO THE OWNER AND KEEP COPY ON FILE.

THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED THROUGH INFORMATION PROVIDED BY THE VARIOUS UTILITY OWNERS AND BY FIELD SURVEY, BUT ARE NOT GUARANTEED TO BE ACCURATE OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, PRIOR TO CONSTRUCTION, TO DETERMINE THE ACTUAL FIELD LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES IMPACTING HIS WORK. BY LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE OHIO UTILITY PROTECTION, INC. AT OHIO811.ORG, 8-1-1 OR 1-800-362-2764 AT LEAST 48 HOURS BUT NO MORE THAN 10 WORKING DAYS (EXCLUDING WEEKENDS AND LEGAL HOLIDAYS) BEFORE BEGINNING ANY DIGGING.

THE LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY FOR THE MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF OPERATIONS OF THE CONTRACTOR, NOR FOR SAFETY ON THE JOB SITE OR THE CONTRACTOR'S FAILURE TO COMPLETE THE WORK AS SPECIFIED ON THIS PLAN.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SURVEYING AND CONSTRUCTION STAKING REQUIRED FOR SITEWORK IN THIS PACKAGE AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL RESTRICT ALL CONSTRUCTION ACTIVITIES TO THE PROJECT SITE AND EXISTING RIGHTS-OF-WAY, CONSTRUCTION AND PERMANENT EASEMENTS AND SHALL NOT TRESPASS UPON OTHER PROPERTY WITHOUT WRITTEN CONSENT OF THE PROPERTY OWNER.

ACCESS TO ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

ANY STORM PIPES DAMAGED DURING CONSTRUCTION SHALL EITHER BE RESTORED TO ITS ORIGINAL CONDITION OR CONNECTED TO THE STORM SEWER SYSTEM AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DISPOSE OF ALL SURPLUS EXCAVATION AS DIRECTED OR APPROVED BY THE OWNER.

ALL TRENCHES SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS.

ALL MANHOLES, FIRE HYDRANTS AND VALVE BOXES SHALL BE ADJUSTED TO FINAL GRADE AT THE CONTRACTOR'S EXPENSE.

GRANULAR BACKFILL SHALL BE REQUIRED IN ALL TRENCHED IN AREAS OF EXISTING PAVEMENT. FILL IN PROPOSED PAVEMENT OR BUILDING PAD AREAS SHALL BE COMPACTED TO THE PROJECT'S GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND FIELD PERSONELL APPROVAL.

STORM SEWERS AND STRUCTURES:

ALL PROPOSED STORM SEWERS AND STRUCTURES ARE PRIVATE AND SHALL BE MAINTAINED BY THE OWNER. SUPPLY PIPE OF THE REQUIRED SIZE OR ONE SIZE LARGER. PROPOSED STORM SEWERS "PR. STM" SHALL BE PVC-SDR 35/ HIGH DENSITY POLYETHYLENE (HDPE), PER ODOT 707.33/ OR REINFORCED CONCRETE PIPE, PER ODOT ITEM 706.02, CLASS IV. ALL STORM SHALL BE INSTALLED PER ODOT ITEM 611.10, TYPE A (CULVERTS) AND TYPE B (STORM/SANITARY UNDER PAVEMENT).

611.06 BEDDING. TYPE 1 BEDDING CONSISTS OF STRUCTURAL BACKFILL EXTENDING AT LEAST 6 INCHES (150 MM) BELOW THE BOTTOM OF THE CONDUIT FOR THE FULL WIDTH OF THE TRENCH. COMPACT THE BEDDING ACCORDING TO 611.06.

USE TYPE 1 BEDDING FOR 706.05, OR 706.051 AND 706.052 ON SLAB BOTTOMS, OR CORRUGATED INVERT PLATES.

TYPE 2 BEDDING CONSISTS OF STRUCTURAL BACKFILL EXTENDING AT LEAST 3 INCHES (75 MM) FOR ALL 706 RIGID PIPE CONDUITS AND 6 INCHES (150 MM) FOR ALL OTHER CONDUITS BELOW THE BOTTOM OF THE CONDUIT FOR THE FULL WIDTH OF THE TRENCH. EXTEND THE BEDDING UP AROUND THE PIPE FOR A DEPTH OF NOT LESS THAN 30 PERCENT OF THE RISE OF THE CONDUIT. SHAPE THE BEDDING TO FIT THE CONDUIT WITH RECESSES SHAPED TO RECEIVE THE BELL OF BELL-AND-SPIGOT PIPE. LEAVE THE BEDDING BELOW THE MIDDLE ONE-THIRD OF THE PIPE SPAN UNCOMPACTED. COMPACT THE REMAINING BEDDING ACCORDING TO 611.06.

USE TYPE 2 BEDDING FOR TYPES A, B, C, AND D CONDUITS EXCEPT FOR LONG SPAN STRUCTURES AND FOR CONDUITS THAT REQUIRE TYPE 3 BEDDING.

COMPACTED FILLS SHALL BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO TRENCHING FOR PLACEMENT OF SEWER. ALL FILLS SHALL BE INSPECTED AND APPROVED BY THE PROJECT'S GEOTECHNICAL ENGINEER, OR PER GOVERNING AGENCIES APPROVAL.

CATCH BASINS AND/OR MANHOLES OVER 4 FEET SHALL BE FURNISHED WITH STEPS, MEETING ODOT ITEM 706.13, 711.13, 711.30, OR 711.31.

CATCH BASINS LOCATED IN PAVEMENT AREAS SHALL HAVE FINGER DRAINS. (SEE DETAIL SHEET).

DISTANCES LISTED ON THE PLANS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

EXCAVATION/FILL:

SITE BUILDING PAD EXCAVATION AND EMBANKMENT SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATION AND APPROVAL

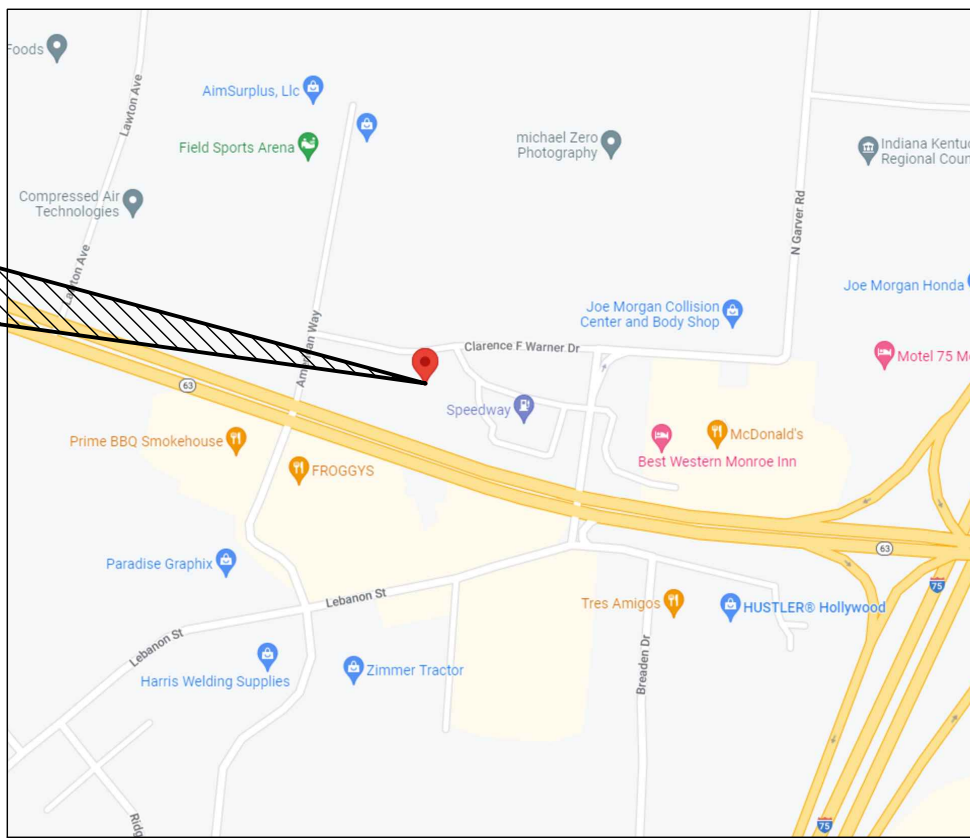
PLANS FOR THE CONSTRUCTION OF A NEW COMMERCIAL BUILDING KNOWN AS:

FOUR SEASONS CAR WASH

CLARENCE F. WARNER, CITY OF MONROE, BUTLER COUNTY, OHIO

APRIL, 2022

PROPOSED SITE



LOCATION MAP

APPLICANT:

CINCINNATI COMMERCIAL CONTRACTING
4779 RED BANK EXPRESSWAY
CINCINNATI, OHIO 45227

CIVIL ENGINEERING:

EVANS ENGINEERING
4240 AIRPORT RD., SUITE 211
CINCINNATI, OHIO 45226
(513)-321-2168
JONATHAN R. EVANS, P.E.

SURVEYING:

BINZ SURVEYING, LLC
6547 BROOKS RD.
HARRISON, OHIO 45030
(513)-202-0525
DANIEL BINZ

INDEX:

- C-1 TITLE SHEET & GENERAL NOTES
- C-1.1 SITE CONSTRUCTION DETAILS
- C-2 EXISTING CONDITIONS & DEMO PLAN
- C-3 SITE DIMENSION PLAN
- C-3.1 UTILITY SERVICE PLAN
- C-4 GRADING PLAN
- C-5 STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
- C-5.1 SWPPP NOTES & DETAILS

STANDARD DRAWINGS:

THE FOLLOWING ODOT AND LOCAL STANDARD DRAWINGS SHALL BE CONSIDERED A PART OF THIS PLAN:

- CB-2-2A, 2-2B, 2-2C (7-16-2021) CATCH BASINS Nos 2-2A, B & C
- CB-2-3, 2-4 (7-16-2021) CATCH BASINS No's 2-3 & 2-4
- CB-2-5, 2-6 (7-16-2021) CATCH BASINS No's 2-5 & 2-6
- CB 3 (7-16-2021) CATCH BASIN No. 3
- CB 3A (7-16-2021) CATCH BASIN No. 3A
- MH 3 (7-16-2021) MANHOLE No. 3
- BP-7.1 (7-17-2020) NEW CURB RAMPS
- HW-2.1 (7-20-2018) HALF-HEIGHT HEADWALLS

THE FOLLOWING CITY OF MONROE STANDARD DRAWINGS SHALL BE CONSIDERED A PART OF THIS PLAN:

- 300-9, 300-15, 300-16, 300-17, 300-19, 800-2, 800-13

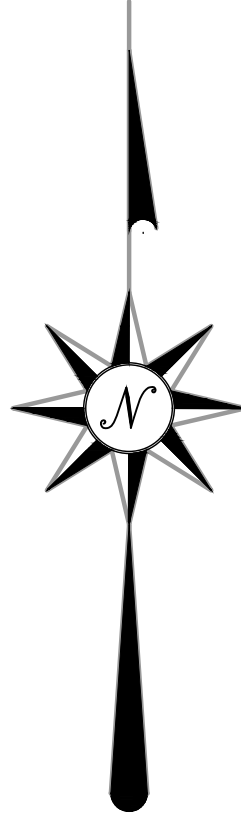
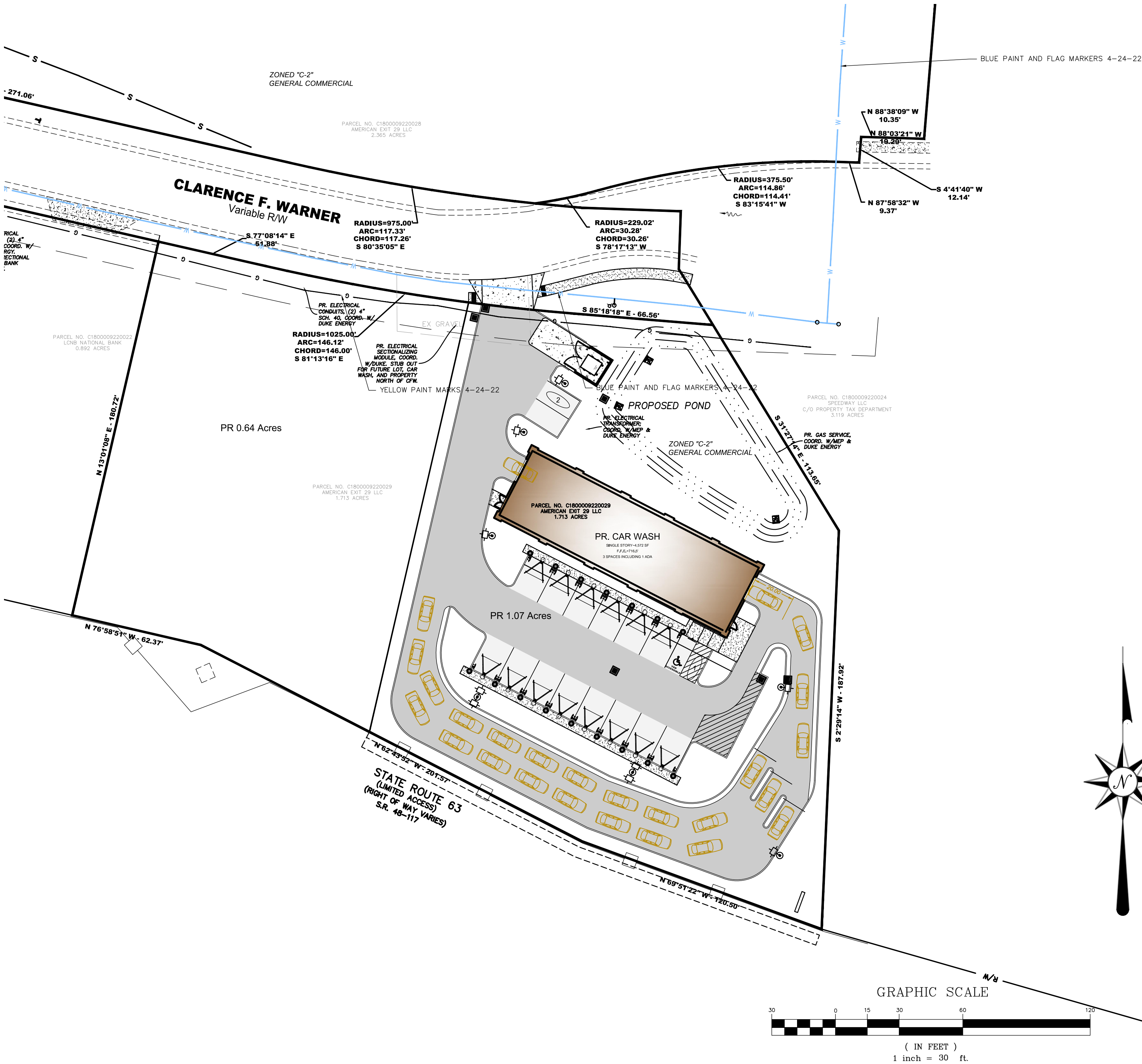
ANY MAINTENANCE OF TRAFFIC SHALL BE PER ODOT AND ODOT SPEC MT-101.9.

APPROVAL:

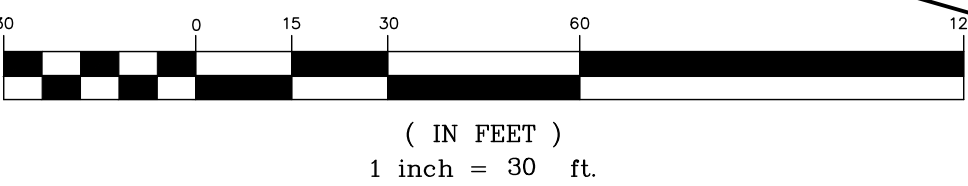
DRAWINGS APPROVED FOR CONSTRUCTION-CITY OF MONROE:

BY: _____

TITLE _____ DATE: _____



GRAPHIC SCALE



DEPARTMENT/ UTILITY TABLE:

DUKE ENERGY-ELECTRIC
BRETT KING
CINCINNATI, OHIO 45216
TEL: 513-287-4658
BRETT.KING@duke-energy.com

BUTLER COUNTY WATER & SEWER
(FOR SEWER)
RICK SMITH
130 HIGH STREET
HAMILTON, OH 45011
513.887.3067
RICHARD.SMITH@BCOHIO.US

CITY OF MONROE PLANNING & ZONING & BUILDING DEPARTMENT
233 S. MAIN ST.
MONROE, OHIO 45050
KAMERYN JONES
513-539-7374 EXT.-1020
JONESK@MONROEOHIO.ORG

DUKE ENERGY-GAS
JEREMY PRATT
TEL: 513-287-4625
TEM: JEREMY.PRATT@DUKE-ENERGY.COM

CITY OF MONROE PUBLIC WORKS
(WATER, STORM & SWP3)
1000 HOLMAN AVENUE
MONROE, OH 45050
513-727-8953

CITY OF MONROE PUBLIC WORKS AND ENGINEERING DEPARTMENT
FOR ANY WORK IN R/W
233 S. MAIN ST.
MONROE, OHIO 45050
BILL BROCK



PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS
NO. & DESCRIPTION

BY

DATE

EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 211
CINCINNATI, OHIO 45226
(513) 321-2168



FOUR SEASONS CAR WASH
TITLE SHEET & GENERAL
NOTES
CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

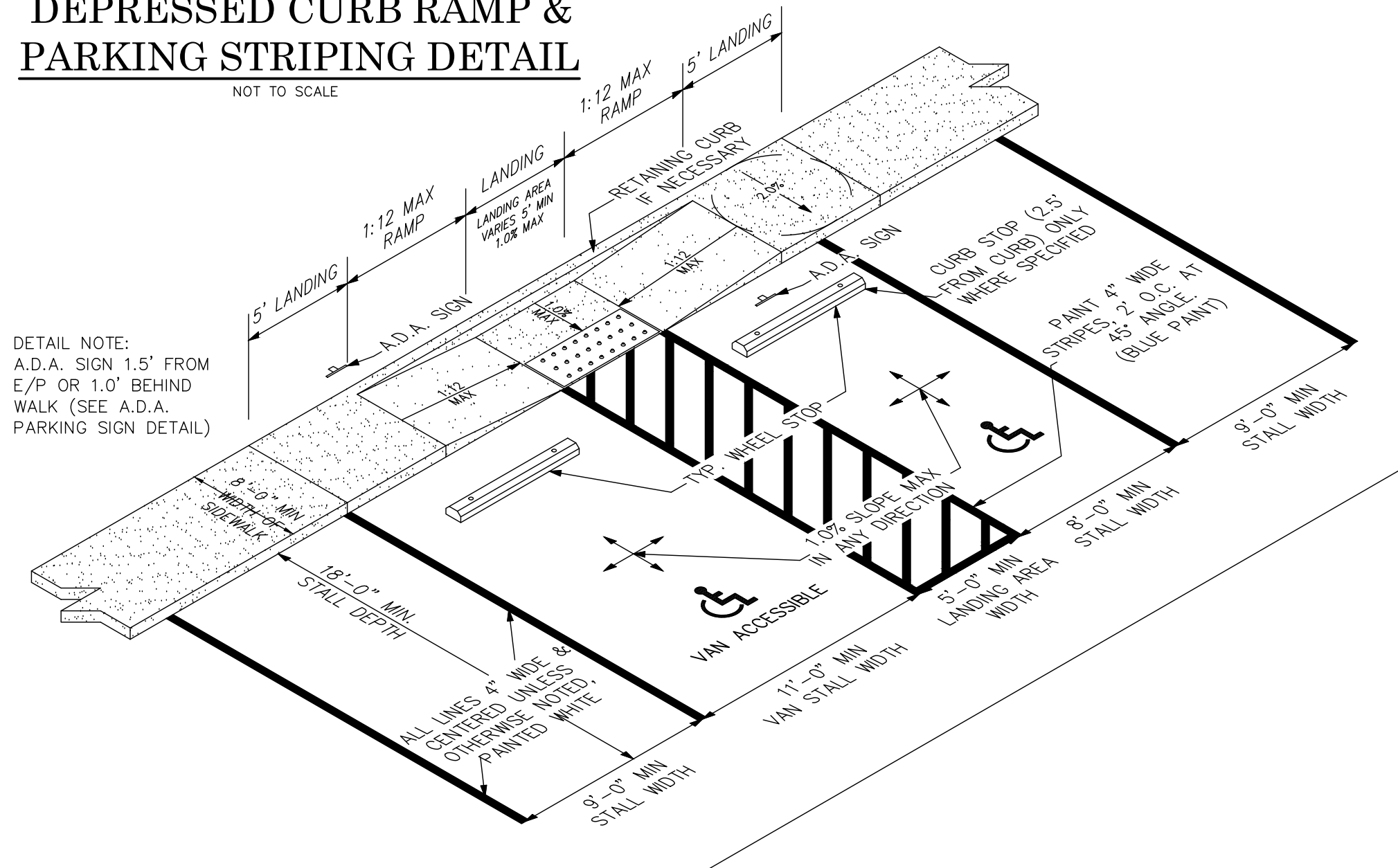
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	1"=30'	N/A
JOB NO.	22-121	
DATE	May. 5, 2022	

SHEET NO.

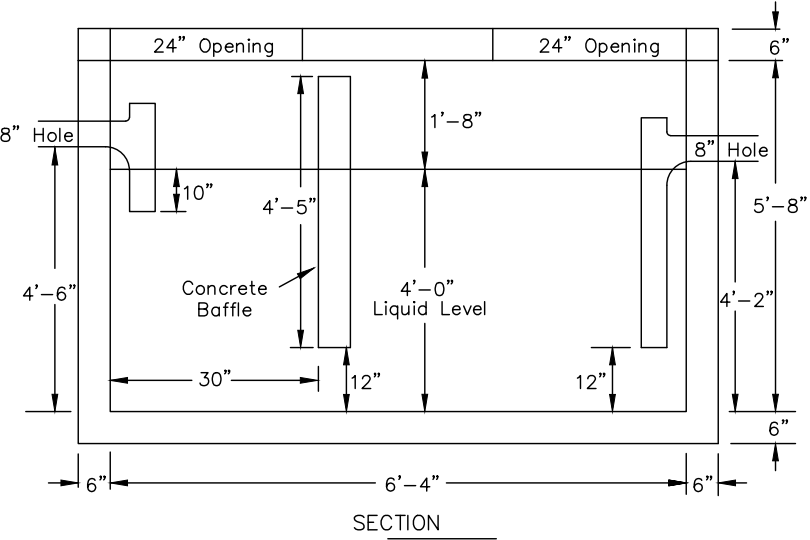
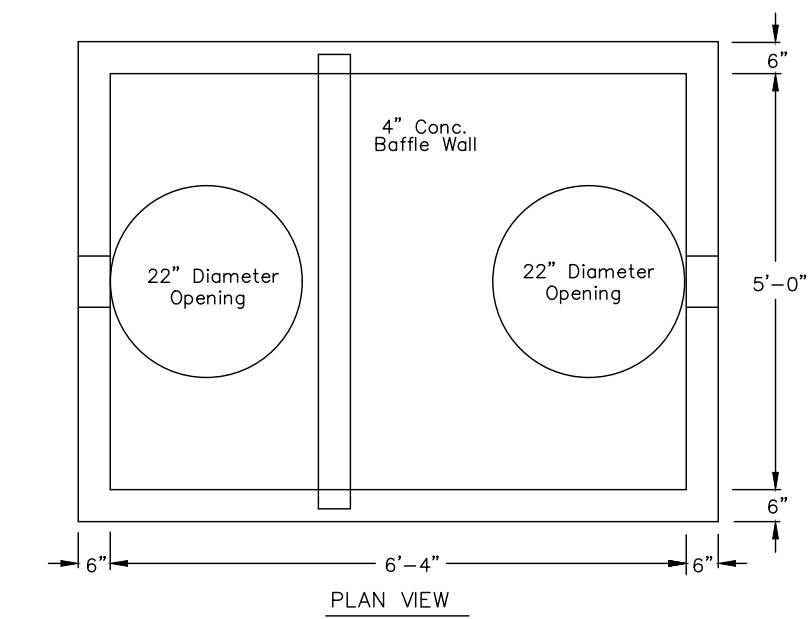
C-1

DEPRESSED CURB RAMP & PARKING STRIPING DETAIL

NOT TO SCALE



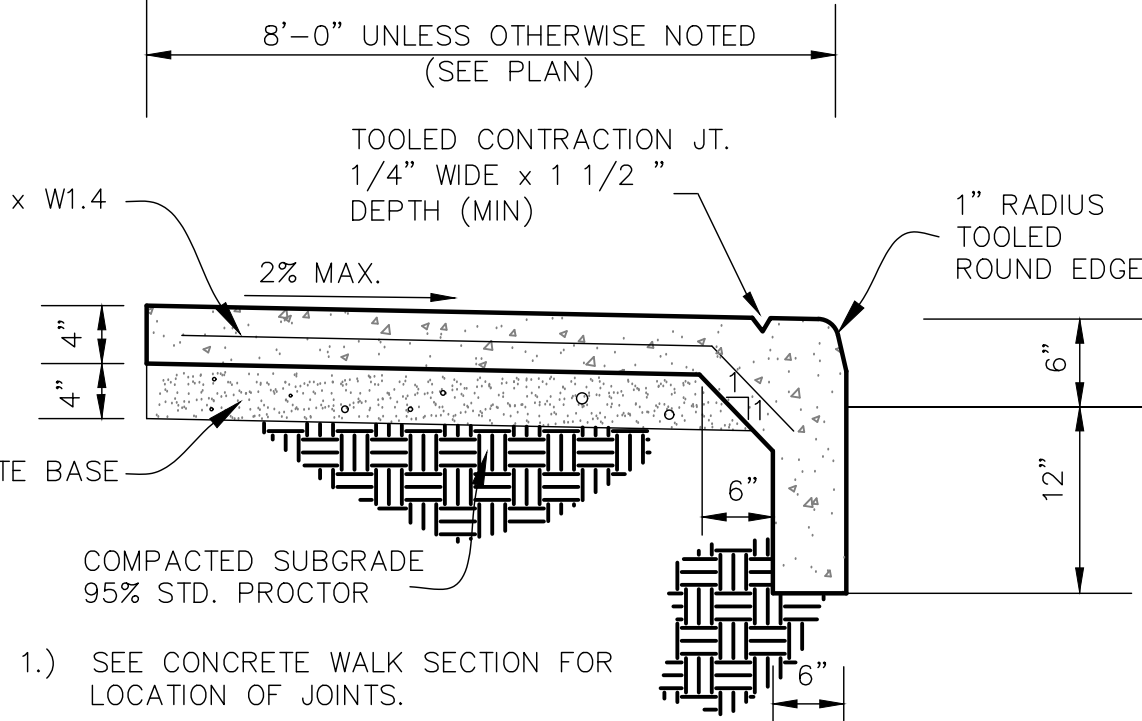
DETAIL NOTE:
A.D.A. SIGN 1.5' FROM
E/P OR 1.0' BEHIND
WALK (SEE A.D.A.
PARKING SIGN DETAIL)



- Note:
1. Concrete design strength is equal to 4000 PSI @ 28 days.
 2. Conforms to Portland Cement ASTM C 150, Type 1.
 3. Lifting Devices: Base Section; 4 lift hooks in floor of base.
 4. Top Slab: 4 Lift Hooks.
 5. Structure Includes Base Section, Top Slab & Baffle Only. All Other Stand Pipes And Fittings Are The Contractors Responsibility.
 6. Inlet And Outlet Holes Are Formed @ 8" To Fit A 4" Or 6" Press Seal PSD Boot.
 7. Base Weight: 13,600 #, Lid Weight: 3,300 # Baffle Weight: 1,000 #
 8. 22" Opening in Top Slab For Neenah R-6461-EH Castings.

GREASE INTERCEPTOR DETAIL

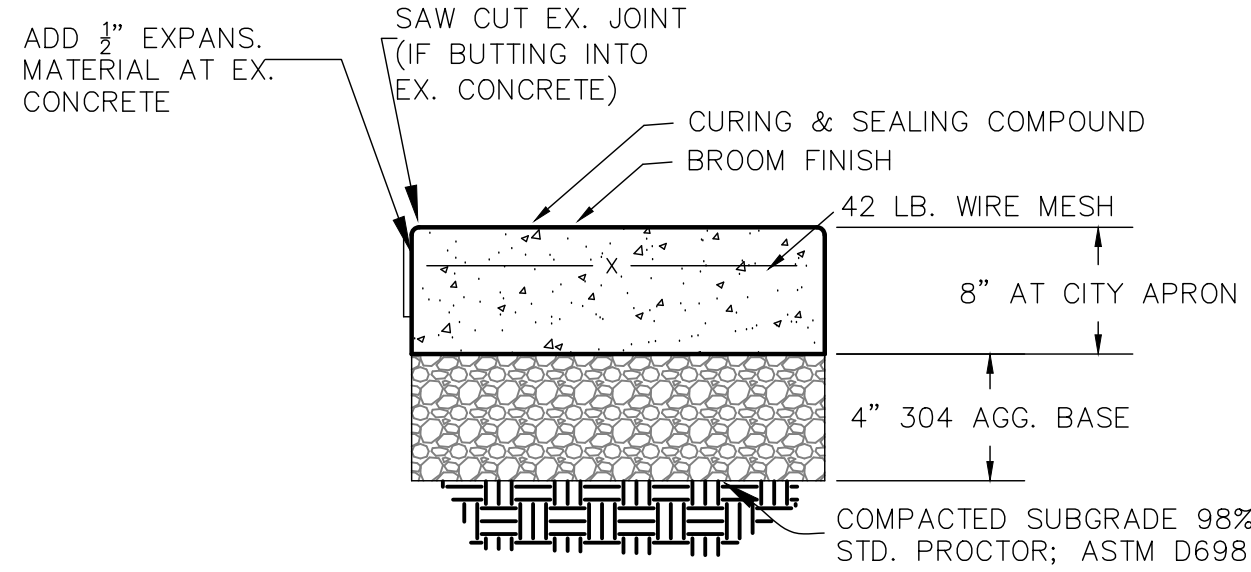
NOT TO SCALE



- 1.) SEE CONCRETE WALK SECTION FOR LOCATION OF JOINTS.
- 2.) FULL DEPTH SEPARATORS ARE NOT PERMITTED EXCEPT AT EXP. JTS.
- 3.) CONCRETE SHALL BE 4000 PSI A.E.

INTEGRAL WALK AND CURB

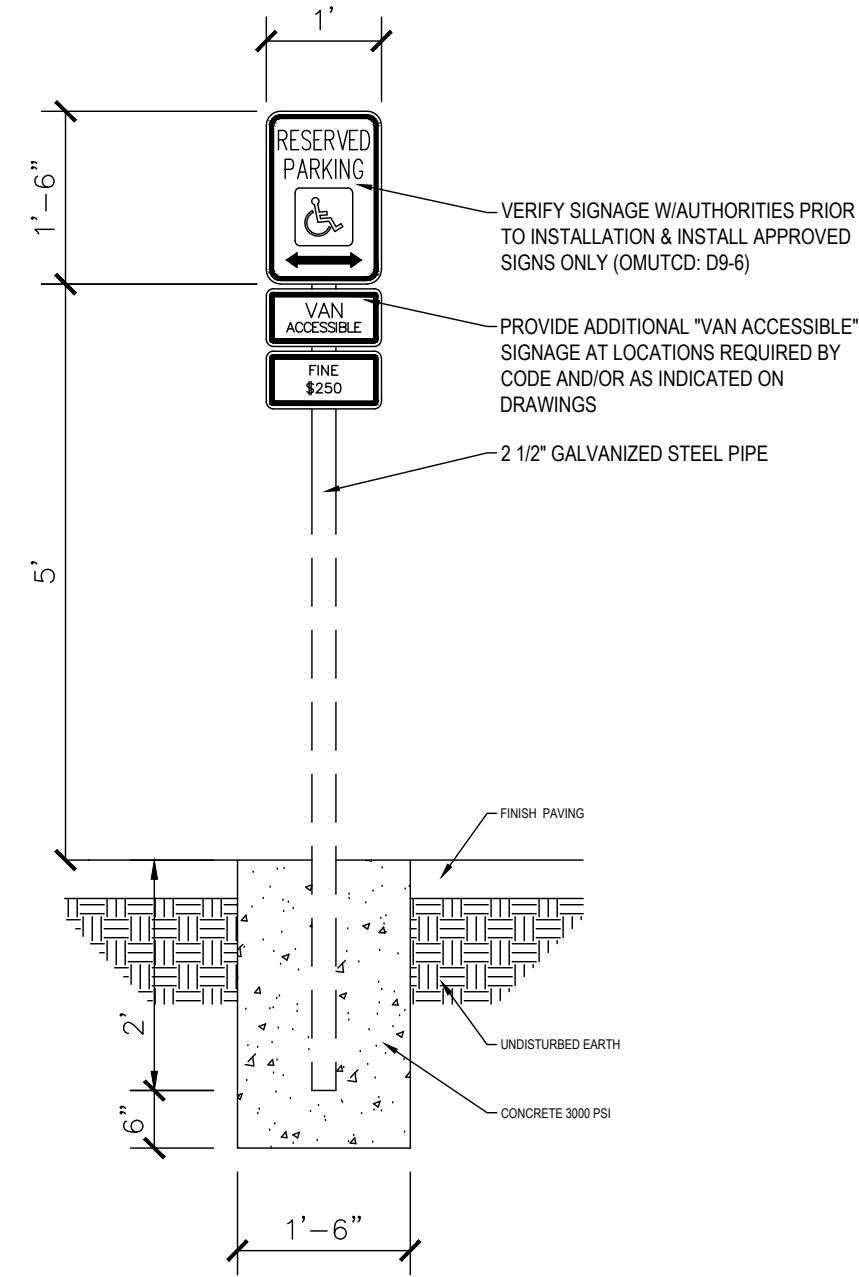
NOT TO SCALE



- 1.) CONTROL JOINTS 10' O.C. MAX (EACH DIRECTION).
- 2.) PRE-FORMED EXPANSION JOINTS 30' O.C. MAX. & WHERE ABUTS CONCRETE
- 3.) CONCRETE SHALL BE 4000 PSI A.E.

CONCRETE PAVING DETAIL

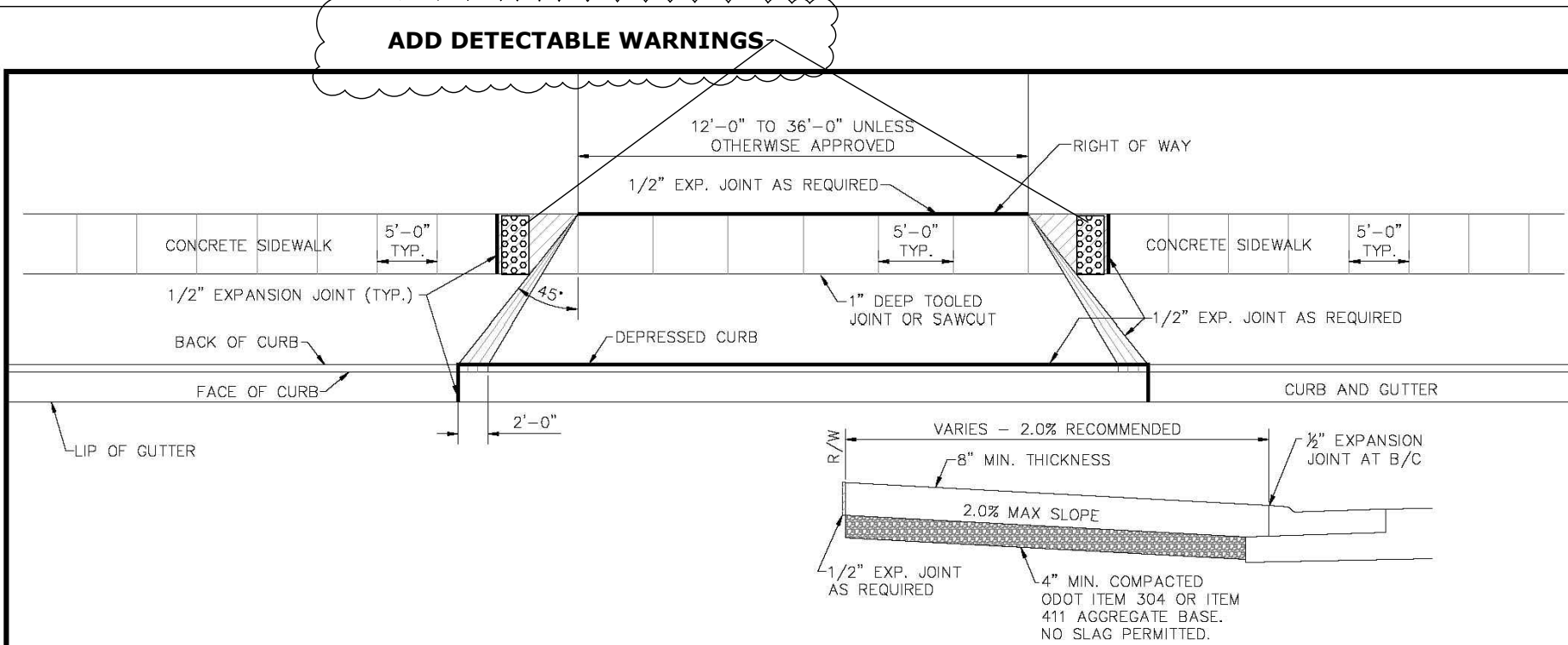
NOT TO SCALE



- NOTES:
1. ALL SIGNS SHOWN SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES
 2. ALL SIGNS SHOWN SHALL BE REFLECTORIZED TO SHOW THE SAME COLOR BY NIGHT AS BY DAY.
 3. ALL SIGNS SHALL BE SECURELY MOUNTED ON GALVANIZED STEEL POSTS.
 4. INSTALL QUANTITY AND AT LOCATIONS REQUIRED BY CODE AND/OR AS INDICATED ON DRAWINGS. CONFIRM ALL HANDICAPPED SIGNAGE CODES.

ADA PARKING SIGN DETAIL

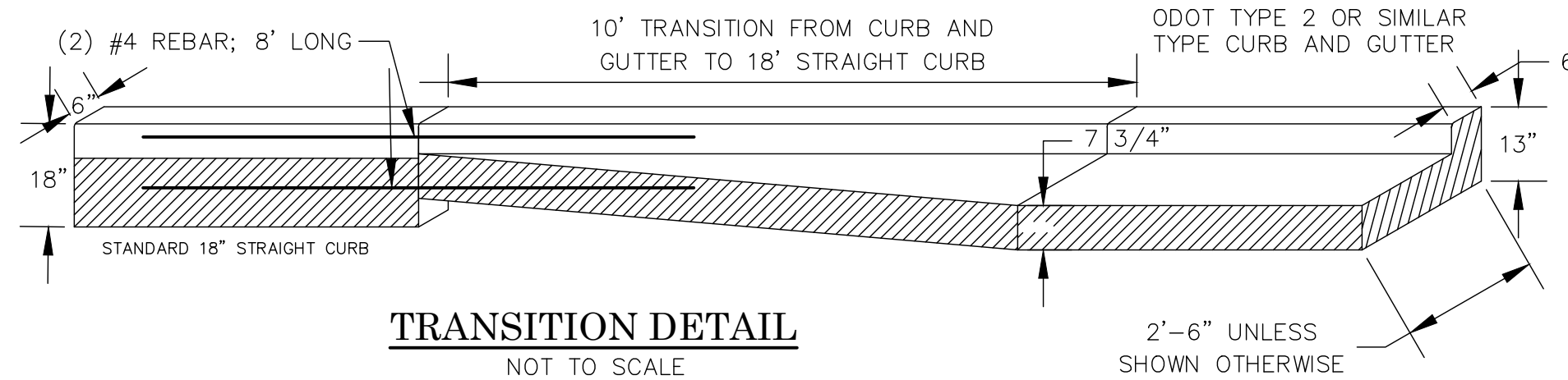
NOT TO SCALE



- NOTES
- A. DRIVE APPROACHES MUST MEET THE REQUIREMENTS OF ODOT ITEM 452 AND 499 CAST IN PLACE CONCRETE.
 - B. DRIVE APPROACHES MAY BE PLACED MONOLITHICALLY WITH CURB, PROVIDING A 1" DEEP CONTROL JOINT TO BE TOOLED AT THE BACK OF CURB.
 - C. MAXIMUM JOINT SPACING MUST BE 10' LONGITUDINALLY AND TRANSVERSELY WITH JOINTS AT TAPERS.
 - D. EXPANSION MATERIAL MUST BE 1/2" PREMOLODED VINYL.
 - E. 6" OF COMPACTED ODOT ITEM 304 OR ITEM 411 AGGREGATE BASE MUST BE PLACED UNDER DRIVE APPROACHES.
 - F. PROVIDE BROOM FINISH AND EDGING TO ALL EXPOSED SURFACES.
 - G. WHERE CURB AND GUTTER HAS NOT BEEN DROPPED AT DRIVE APPROACHES, THE CONTRACTOR WILL CUT AND REMOVE CURB (SEE DETAIL).
 - H. WHERE ASPHALTIC CONCRETE PAVEMENT IS DISTURBED, THE ASPHALT MUST BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE CITY.
 - I. JOINTS MUST BE CLEANED AND EDGED BY A 1/4" RADIUS EDGER. LONGITUDINAL JOINTS MUST BE AS DIRECTED BY THE CITY. EXPANSION JOINTS MUST BE OF SUCH DIMENSIONS AS SHOWN ON STANDARD DRAWINGS FOR CONSTRUCTION JOINTS.
 - J. USE APPROVED CURING COMPOUND IMMEDIATELY AFTER FINISHING SURFACES OR OTHER APPROVED METHOD.
 - K. THIS STANDARD DRAWING IS FOR GUIDELINE PURPOSES. APPLICANT MUST PROVIDE A DRAWING SHOWING THE LOCATION OF THE PROPOSED APPROACH.
 - L. CONCRETE MUST BE GC. 1P
 - M. ALL NEW CONSTRUCTION OR MODIFICATIONS OF DRIVE APPROACHES REQUIRE A CONCRETE APPROACH, REGARDLESS OF WHETHER THERE IS A SIDEWALK OR NOT. THE NEW APPROACH IS TO GO FROM EDGE OF EXISTING STREET TO RIGHT OF WAY OR A MINIMUM OF 10'-0"
 - N. DRAINAGE ISSUES WILL HAVE TO BE ADDRESSED, WHEN A DRIVEWAY IS INSTALLED OR MODIFIED.
 - O. PRECAUTIONS MUST BE TAKEN TO PROTECT EXISTING CONCRETE, BRICK, ETC. FROM TIRE MARKS AND DAMAGE DURING CONSTRUCTION.

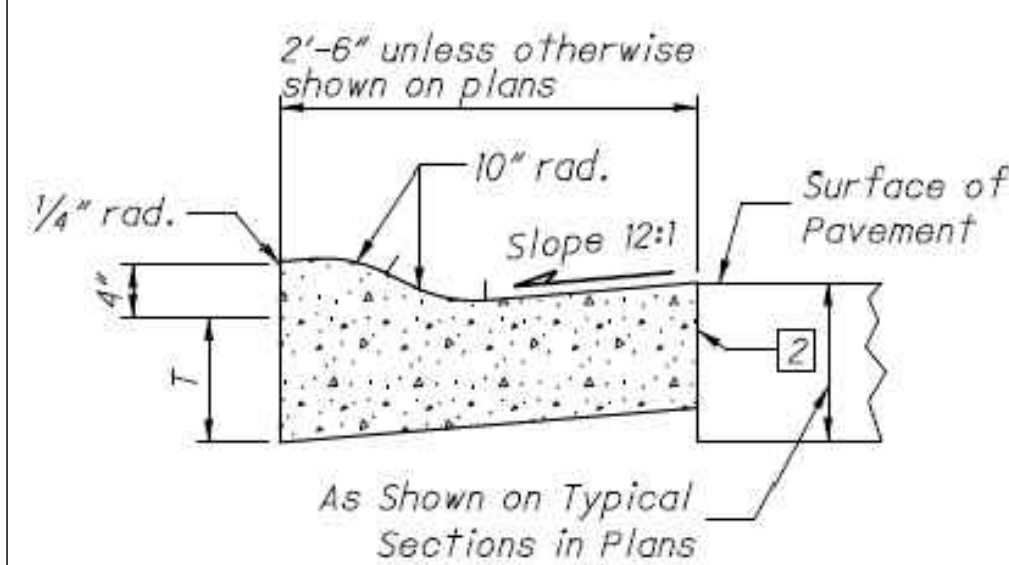
COMMERCIAL AND INDUSTRIAL DRIVE APPROACH

REVISIONS:
01/28/2021
DATE APPROVED:
01/30/2020
PAGE NO:
300-9



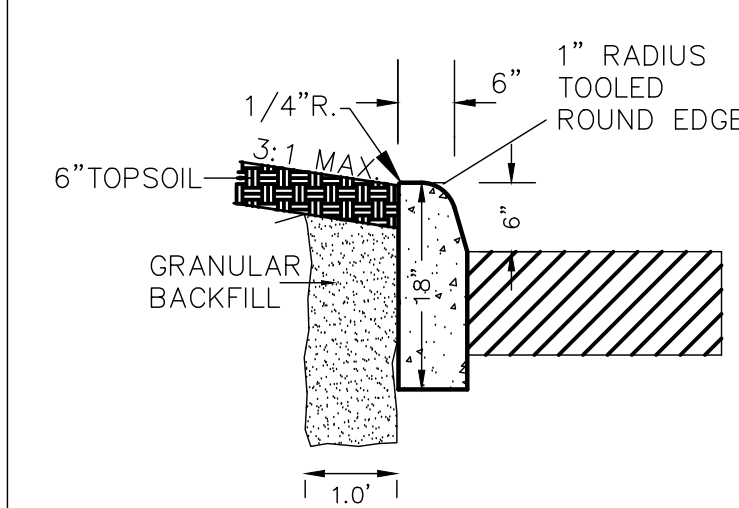
TRANSITION DETAIL

NOT TO SCALE



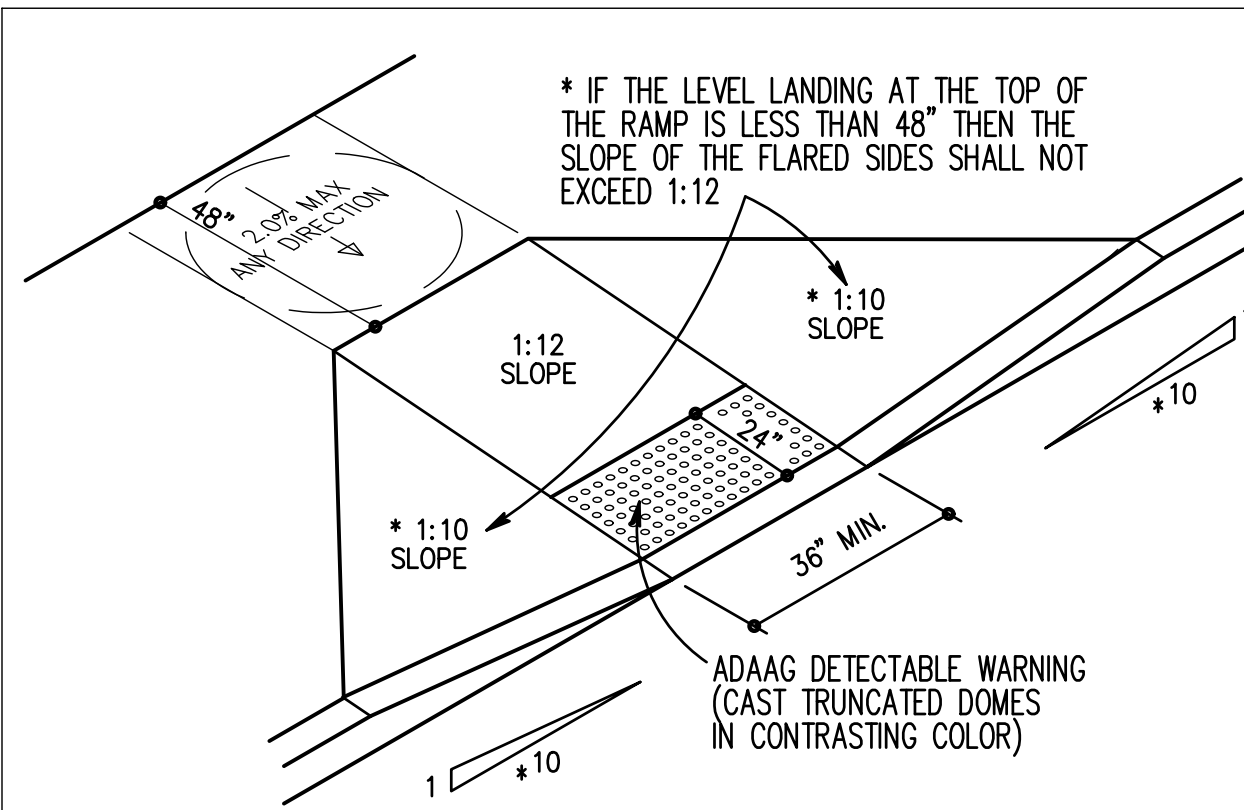
O.D.O.T. ROLLED CURB DETAIL

NOT TO SCALE



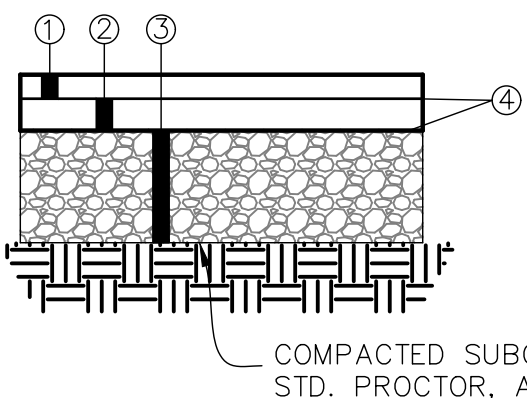
18" STRAIGHT CURB

NOT TO SCALE



CURB RAMP DETAIL

NO SCALE



- ① -1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446 & 448), PG64-22
- ② -2" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)
- ③ -6" COMPACTED AGGREGATE BASE-#304 (2 LIFTS)
- ④ ODOT ITEM 407 TACK COAT BETWEEN LAYERS

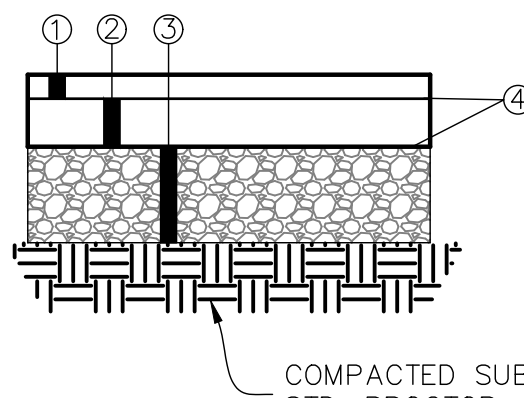
MEDIUM DUTY ASPHALT PAVING

NOT TO SCALE

ADDITIONAL PAVING NOTES:

AFTER BITUMINOUS PAVEMENT HAS BEEN REPLACED, SAWCUT OR ROUTE JOINT BETWEEN EXISTING AND NEW PAVEMENT AND FILL WITH HOT POURED RUBBER JOINT SEALER PRODUCT. HOT POURED RUBBER JOINT SEALER SHALL BE ONE OF THE FOLLOWING OR AN APPROVED EQUAL:

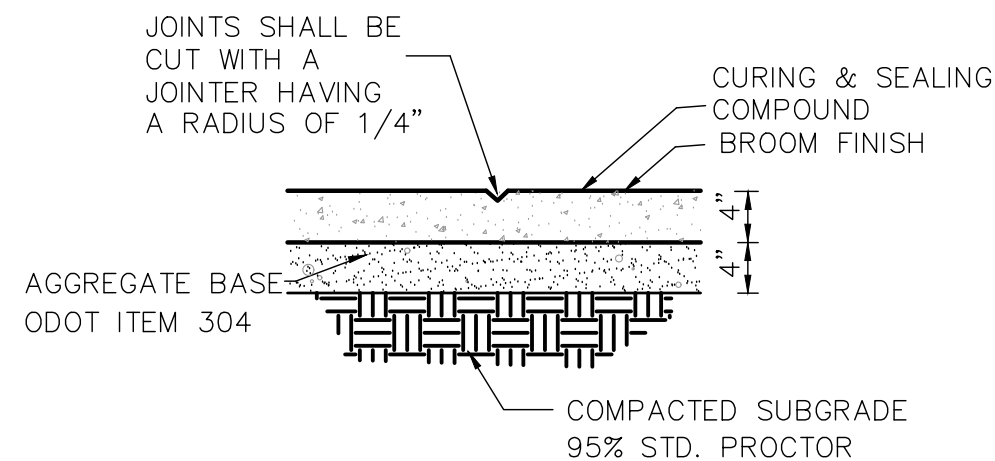
- 1) ROADSAVER 221; CRAFCO INC.
- 2) PRODUCT #9005 OR #9030; KOCH MATERIAL COMPANY
- 3) SEALTIGHT HI-SPEC; W.R. MEADOWS, INC.



- ① -1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446 & 448), PG64-22
- ② -3" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) (2 LIFTS)
- ③ -6" COMPACTED AGGREGATE BASE-#304 (2 LIFTS)**
- ④ ODOT ITEM 407 TACK COAT BETWEEN LAYERS

HEAVY DUTY ASPHALT PAVING

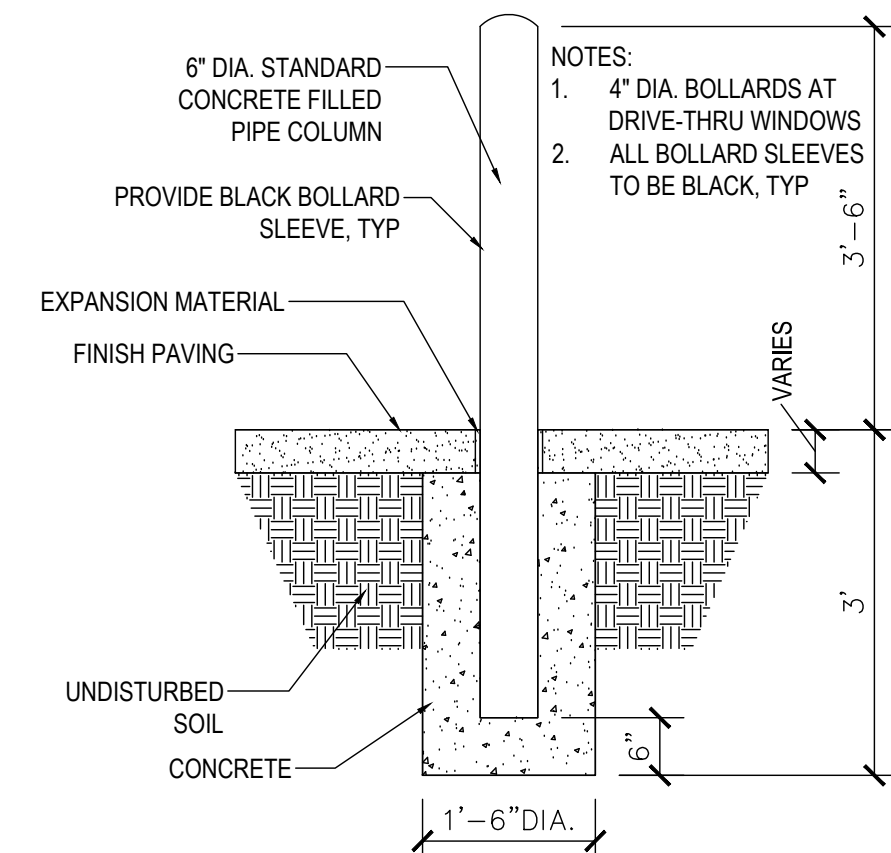
NOT TO SCALE



- NOTE:
- 1.) CONTROL JOINTS 5' O.C. MAX.
 - 2.) EXPANSION JOINTS 30' O.C. MAX.
 - 3.) CONCRETE SHALL BE 4000 PSI A.E

CONCRETE WALK DETAIL

NOT TO SCALE



BOLLARD DETAIL

NOT TO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS	BY	NO. & DESCRIPTION

EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 211
CINCINNATI, OHIO 45226
(513) 321-2168



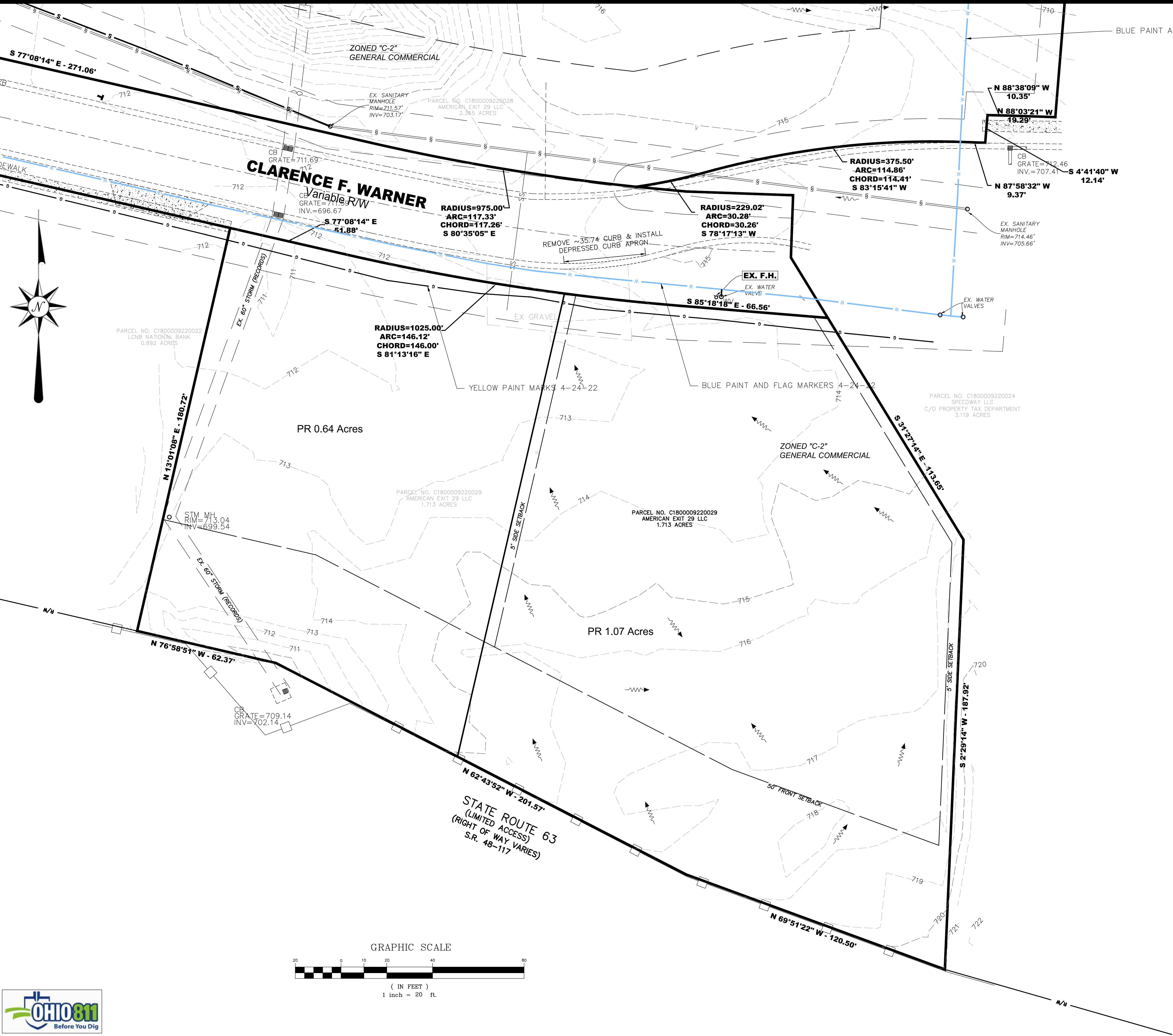
FOUR SEASONS CAR WASH
SITE CONSTRUCTION
DETAILS

CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

SCALE:	HORIZ.	VERT.
	N/A	N/A
JOB NO.	22-121	
DATE	May. 5, 2022	

SHEET NO.

C-1.1



EXISTING CONDITION NOTES:

1. CURRENT ZONING FOR THE PROPERTY IS "C-2". ANY SPECIFIC QUESTIONS REGARDING ZONING SHALL BE DIRECTED TO THE CITY OF MONROE ZONING DEPARTMENT.
2. USE WILL BE COMMERCIAL AND IS UNDERSTOOD TO BE COMPATIBLE WITH CURRENT ZONING.
3. PER FLOOD INSURANCE RATE MAP NUMBER 39017C0228F AND 39017C0228F EFFECTIVE 10/19/2018, THE SUBJECT PROPERTY IS LOCATED IN ZONE "X". ZONE "X" IS AN AREA OF MINIMAL FLOOD HAZARD.
4. ALL DEMOLITION SHALL BE PERFORMED BY A LICENSED CONTRACTOR AND BE PERFORMED PER LOCAL REQUIREMENTS. ALL REMEDIATION WORK SHALL BE PROVIDED BY A PROPERLY LICENSED ABATEMENT CONTRACTOR. ALL DEBRIS TO BE DISPOSED OF IN A LAWFUL MANNER AND APPROVED BY OWNER.
5. CONTRACTOR SHALL FIELD VERIFY AND MARK LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEERING FIRM IF ANY UTILITIES OR UNDERGROUND FEATURES ARE ENCOUNTERED WHICH ARE NOT SHOWN ON THESE PLANS OR DIFFER IN LOCATION, HORIZONTAL OR VERTICAL.
6. ANY PORTIONS OF WALK, CURB, OR PAVEMENT (OUTSIDE OF SITE CONSTRUCTION LIMITS) DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED IN-KIND.
7. CONTRACTOR SHALL INSTALL CONSTRUCTION BARRIER FENCE DURING AND AFTER DEMOLITION. ANY OPEN EXCAVATION SHALL BE PROPERLY BARRICADED AS REQUIRED BY LOCAL, STATE OR FEDERAL REGULATIONS.
8. CONTRACTOR SHALL REMOVE EXISTING GROUND COVER ONLY AS NECESSARY FOR THE PROJECT PHASE CURRENTLY UNDER CONSTRUCTION.
9. EXCAVATION AND DEMOLITION CONTRACTOR SHALL TAKE EXTREME CARE TO PREVENT MUD AND DEBRIS FROM ENTERING EXISTING STORM SEWERS AND WATER COURSES.
10. THE CONTRACTOR SHALL KEEP EXISTING PAVEMENT SURROUNDING THE SITE "BROOM CLEAN" AND FREE OF SOIL OR AGGREGATE THAT MIGHT BE BROUGHT OFF-SITE FROM THE PROPERTY.
11. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STREET/PARKING LOT CLEAN BY PREVENTING DEBRIS, MUD, DIRT, ETC. FROM BEING TRACKED ONTO THE STREET/PARKING LOT. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DEBRIS, MUD, ETC. FROM THE STREET IMMEDIATELY WHEN IT OCCURS AND SHALL INSPECT THE STREET AT THE END OF EACH WORKING DAY.

LEGEND-PROP. FEATURES

 REMOVE PAVEMENT/CONCRETE

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION
BY	
DATE	

EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 211
CINCINNATI, OHIO 45226
(513) 321-2168



FOUR SEASONS CAR WASH

EXISTING CONDITIONS &
DEMO PLAN

CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

SCALE:	HORIZ.	VERT.
	1"=20'	N/A
JOB NO.	22-121	
DATE	May. 5, 2022	

SHEET NO.

C-2

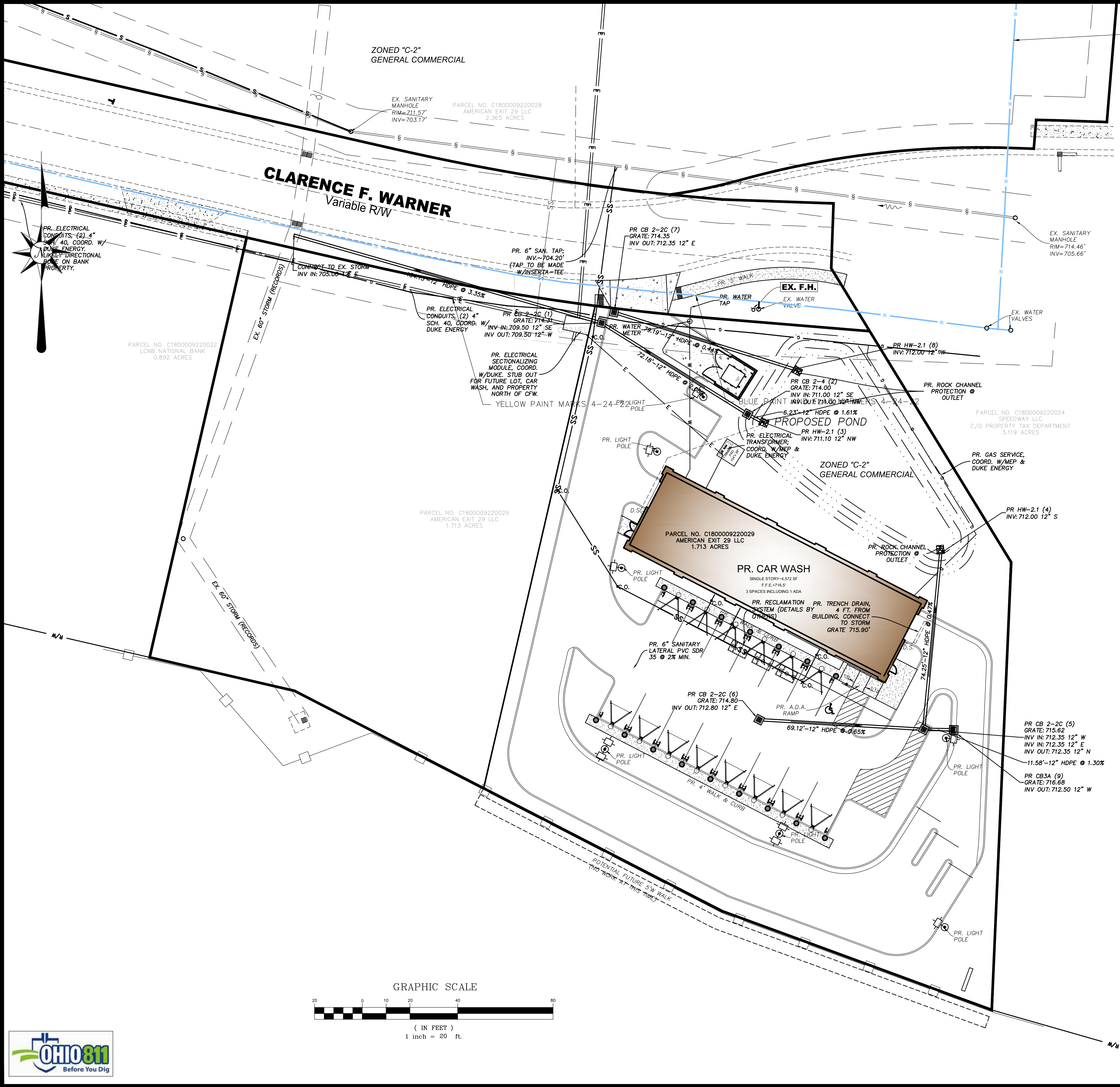




NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB, CENTERLINE OF STRIPE, PROPERTY LINE OR R/W UNLESS OTHERWISE NOTED.
2. ALL CURB RADI ARE 3' UNLESS OTHERWISE NOTED.
3. ALL CONSTRUCTION STAGN ACTIVITIES MUST BE SELF-CONTAINED WITHIN THE LOT.
4. ALL STORAGE OF CONSTRUCTION MATERIALS, CONSTRUCTION STAGING AREAS AND THE PARKING OF CONSTRUCTION VEHICLES, INCLUDING VEHICLES OF WORKERS, SHALL OCCUR ONLY ON THE SUBJECT PROPERTY.
5. ONLY THE ACCESS POINTS LOCATED UPON THE PROPERTY SHALL BE USED BY ALL LABORERS, SUPPLIERS, CONTRACTORS AND OTHERS CONNECTED WITH SUCH CONSTRUCTION ACTIVITIES.
6. ALL CONCRETE FOR SITE WORK SHALL BE PER ODOT 452, CLASS "C", 4,000 PSI, 5-7% AIR ENTRAINED.
7. PROVIDE A TOOLED JOINT AT THE PERIMETER OF THE CONCRETE DRIVE.

PRELIMINARY NOT FOR CONSTRUCTION											
<table border="1"> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>DATE</th> <th>BY</th> <th>NO. & DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>			REVISIONS			DATE	BY	NO. & DESCRIPTION			
REVISIONS											
DATE	BY	NO. & DESCRIPTION									
EVANS ENGINEERING 4240 AIRPORT ROAD, SUITE 211 CINCINNATI, OHIO 45226 (513) 321-2168 											
FOUR SEASONS CAR WASH SITE DIMENSION PLAN CLARENCE F. WARNER, CITY OF MONROE, BUTLER COUNTY, OHIO											
SCALE:	HORIZ.	VERT.									
	1"=20'	N/A									
JOB. NO.	22-121										
DATE	May. 5, 2022										
SHEET NO.											
C-3											



LEGEND-PROP. FEATURES

- W PROPOSED DOMESTIC WATER SERVICE (2" METER; 2" LINE, TYPE K COPPER)
- SS ALL WATER LINES TO HAVE A MINIMUM OF 48" OF COVER
- PROPOSED 6" SANITARY LATERAL PVC SDR 35 @ 2% MIN.
- E PROPOSED UNDERGROUND ELECTRIC SERVICE
- G PROPOSED GAS SERVICE (SIZE TBD BY USE)
- INSTALL 4" CONDUIT WITH PULL STRING AND LOCATOR WIRE (IF NEEDED FOR TIMING SEE NOTE 24 BELOW)
- DS -PR. DOWNSPOUT
- RD -PR. 6" SDR 35 ROOF DRAIN @ 1.00% (OR SLOPED AS NOTED)

UTILITY NOTES:

- CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST FOR REPAIRING OR RELOCATING ALL UTILITIES AFFECTED BY CONSTRUCTION. LOCATIONS AS SHOWN ARE BASED UPON UTILITY RECORDS AND A FIELD SURVEY BY BINZ SURVEYING.
- ALL UTILITY SERVICES SHOULD BE COORDINATED WITH THE LOCAL PROVIDER FOR OPTIMAL PLACEMENT OF SERVICES (SEE COVER SHEET FOR CONTACTS).
- FURTHERMORE, ALL BUILDING UTILITY CONNECTION POINTS SHALL BE VERIFIED WITH CURRENT ARCHITECTURAL AND M.E.P. PLANS PRIOR TO STARTING CONSTRUCTION.
- THE COST OF ALL UTILITY TAPS AND COORDINATION FEES SHALL BE THE RESPONSIBILITY OF THE OWNER.
- IF LOWEST LEVEL ELEVATION IS BELOW RIM ELEVATION OF UPSTREAM MANHOLE, THEN TAP MUST INCLUDE BACKFLOW PREVENTION OR BE PUMPED TO GRAVITY.
- SANITARY CLEANOUTS WITHIN PAVEMENT SHALL HAVE NEENAH R-1976 LID AND FRAME.
- COORDINATE WITH BODS FOR SEWER SERVICE AND MONROE PUBLIC WORKS FOR BUILDING WATER SERVICE.
- ROOF DRAINS, FOUNDATION DRAINS, COOLING WATER, SWIMMING POOL WATER OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- ROOF DRAINS SHALL BE SDR 35 AND TIED DIRECTLY INTO THE UNDERGROUND STORM SEWER SYSTEM.
- SEE ELECTRICAL PLAN (BY OTHERS) FOR LOCATION OF METER SETTING.
- A SIGN PERMIT IS NECESSARY. APPLICANT MUST SUBMIT AND GET APPROVAL BY ZONING DEPARTMENT AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
- EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PRESENCE AND LOCATION OF THE EXISTING UTILITIES, AS SHOWN OR NOT SHOWN ON THESE PLANS, AND REPAIRING ANY DAMAGE DONE TO THE UTILITIES DURING PROBING OR CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE AND/OR UTILITY OWNER, AS REQUIRED. CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE FOR INSPECTION. ALL TRENCHES, PIPING AND TAPS SHALL BE LEFT EXPOSED AND PROTECTED UNTIL INSPECTED AND APPROVED.
- SITE CONTRACTOR SHALL CLEAN ALL CONDUITS AND PIPES THAT COLLECT DEBRIS, MUD, CONCRETE, TRASH, ECT. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
- SITE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR PLACEMENT OF ALL NECESSARY CONDUIT PRIOR TO PAVING OPERATIONS.
- SITE CONTRACTOR TO REFER TO THE ARCHITECTURAL PLAN FOR ADDITIONAL NOTES AND DETAILS, INCLUDING SITE LIGHTING, IRRIGATION, GAS, ELECTRIC, INTERNET AND OTHER CONDUIT TO BE COORDINATED WITH UTILITY INSTALLATION.
- DOWNSPOUT DRAIN CONNECTION SHALL BE 2.0' MIN. BELOW FINISHED FLOOR ELEVATION. CONTRACTOR TO VERIFY AND COORDINATE WITH ARCHITECTURAL PLAN.
- CONTRACTOR SHALL COORDINATE ALL UTILITY SERVICE LOCATIONS AND ELEVATIONS WITH ARCHITECTURAL PLAN.
- THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS.
- WATER MAINS SHALL BE LAID IN A MINIMUM OF 4'-0" FROM TOP OF FINISHED GRADE TO THE TOP OF WATER MAIN.
- DOMESTIC WATER PIPE FROM MAIN TO METER SHALL BE COPPER TUBING, TYPE K. PLASTIC PIPING, 200-250 PSI CAN BE USED FROM 3' OUTSIDE METER TO BUILDING.(CONFIRM WITH MONROE & BUTLER COUNTY WATER AND SEWER)???
- SANITARY SERVICE SHALL BE 6" PVC SDR-35 @ 2.00% MIN.
- CONTRACTOR SHALL ENSURE MINIMUM CLEARANCE OF 18" BETWEEN CROSSING UTILITIES, UNLESS OTHERWISE REQUIRED BY GOVERNING MUNICIPALITY UTILITIES REQUIREMENTS.

PRELIMINARY
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REVISIONS	NO. & DESCRIPTION
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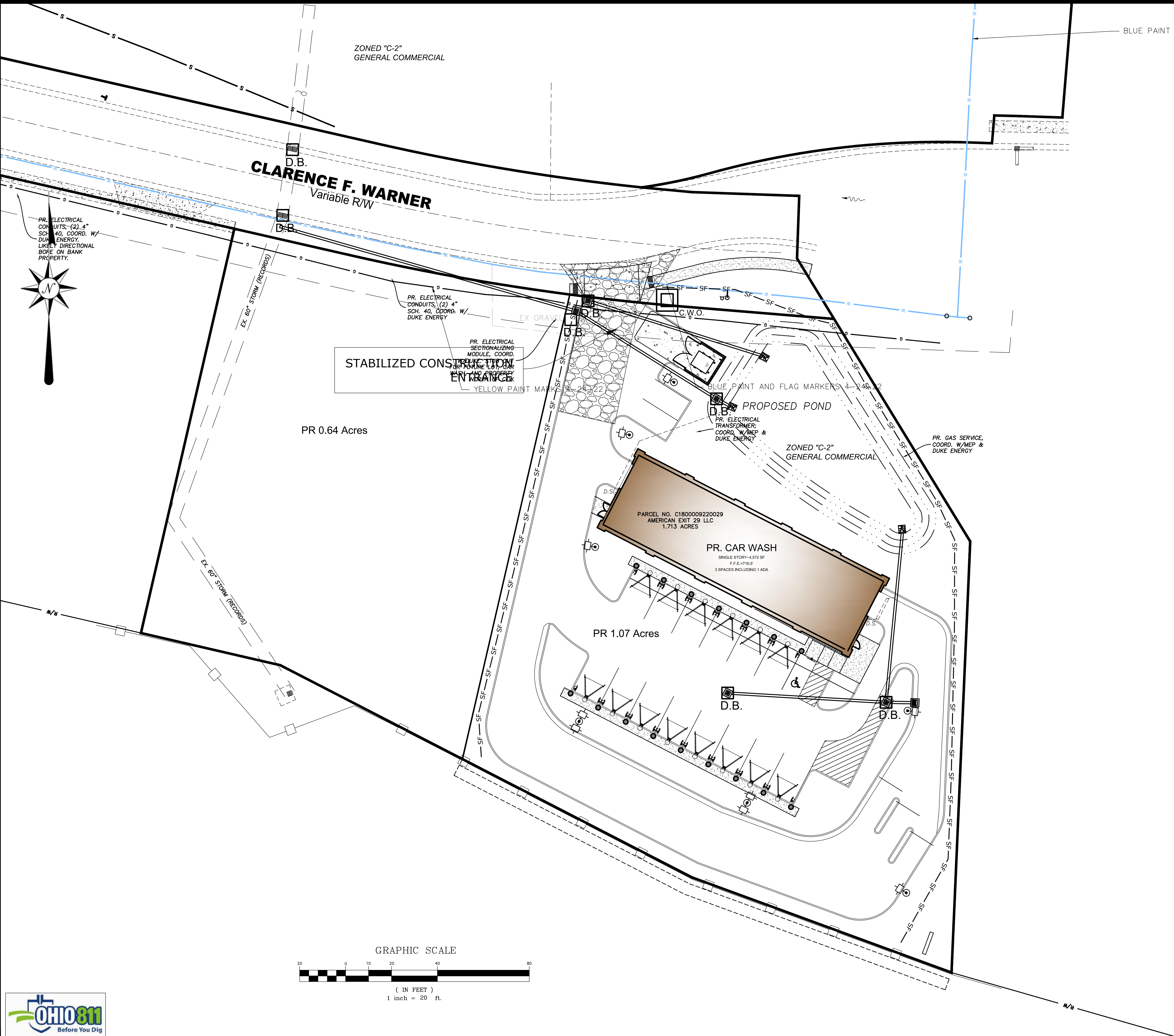
EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 211
CINCINNATI, OHIO 45226
(513) 321-2168

FOUR SEASONS CAR WASH
UTILITY SERVICE PLAN
CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

SCALE:	HORIZ.	VERT.
	1"=20'	N/A
JOB NO.	22-121	
DATE	May. 5, 2022	

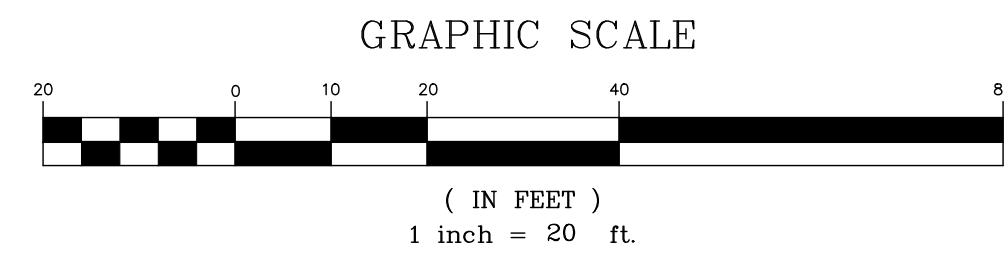
SHEET NO.

C-3.1



EROSION CONTROL LEGEND

- SF SILT FENCE
- D.B. DANDY BAG OR APPROVED EQUAL INLET PROTECTION FILTER
- CONSTRUCTION ENTRANCE
- C.W.O. CONCRETE WASHOUT



PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS	
NO.	DESCRIPTION

EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 211
CINCINNATI, OHIO 45226
(513) 321-2168

FOUR SEASONS CAR WASH
STORMWATER POLLUTION
PREVENTION PLAN (SWPPP)
CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

SCALE:	HORIZ.	VERT.
	1"=20'	N/A
JOB. NO.	22-121	
DATE	May. 5, 2022	

SHEET NO.

C-5

EROSION AND SEDIMENT CONTROL NOTES:

PRE-CONSTRUCTION:

1. THE CONTRACTOR SHALL NOTIFY THE CITY OF MONROE (513) 352-4973 AT LEAST SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITIES AND, UNLESS WAIVED BY THE UTILITY, WILL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES FROM THE CITY OF MONROE.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF MONROE BY TELEPHONE AT THE FOLLOWING POINTS:
- A. THE REQUIRED PRE-CONSTRUCTION MEETING
 - B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
 - C. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE
 - D. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES
 - E. PRIOR TO FINAL ACCEPTANCE

3. A COPY OF THE APPROVED SEDIMENT AND EROSION CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

4. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE CITY OF MONROE PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES.

5. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE AN EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM A REPRESENTATIVE OF THE CITY OF MONROE.

6. THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE CITY OF MONROE BEFORE ANY CHANGES TO THE SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION ARE IMPLEMENTED UNLESS IMMEDIATE ACTION IS NECESSARY. IN THIS CASE, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

7. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM AN SMU REPRESENTATIVE. THE CONTRACTOR SHALL KEEP WRITTEN RECORDS OF ALL SEDIMENT AND EROSION CONTROL INSPECTIONS AND MAINTENANCE FOR THE DURATION OF THE PROJECT. THIS INFORMATION MUST BE MADE AVAILABLE TO REPRESENTATIVES OF THE CITY OF MONROE UPON REQUEST.

SAFETY:

8. THE CITY OF MONROE SITE REPRESENTATIVE ALWAYS HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES IF DEEMED NECESSARY.

9. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE MUST BE MADE OF WELDED WIRE AND AT LEAST FORTY TWO (42) INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN EIGHT (8) FEET, HAVE MESH OPENINGS NO GREATER THAN TWO (2) INCHES IN WIDTH AND FOUR (4) INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.

10. STORM DRAIN INLETS IN NON-SUMP AREAS SHALL HAVE TEMPORARY ASPHALT PADS CONSTRUCTED AT THE TIME OF BASE PAVING TO DIRECT UTTER FLOW INTO THE INLETS TO AVOID SURCHARGING AND OVERFLOW OF INLETS IN SUMP AREAS.

11. STOCKPILE SLOPES SHALL NOT BE STEEPER THAN 2:1.

STABILIZED CONSTRUCTION ENTRANCE:

12. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY USING A STREET SWEEPER OR SCRAPER. DEBRIS SHALL NOT BE WASHED OFF PAVED SURFACES OR INTO STORM DRAINS.

13. CONSTRUCTION ENTRANCES SHOULD NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES. VEHICLES THAT ENTER AND LEAVE THE SITE SHALL BE RESTRICTED FROM MUDDY AREAS OR CLEANED BEFORE LEAVING SITE.

SEDIMENT TRAPS AND BASINS:

14. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN TWENTY (20) FEET OR ANY EXISTING OR PROPOSED FOUNDATION OR TRAFFIC AREA. NO STRUCTURE MAY BE CONSTRUCTED WITHIN TWENTY (20) FEET OF AN ACTIVE SEDIMENT TRAP OR BASIN.

15. SEDIMENT TRAPS AND BASINS MUST HAVE STABLE INFLOW AND OUTFLOW POINTS SO THAT WATER CAN DISCHARGE WITHOUT CAUSING EROSION.

16. SEDIMENT BASINS/TRAPS SHALL NOT BE GREATER THAN FOUR (4) FEET IN DEPTH.

17. SEDIMENT MUST BE CLEANED, AND THE TRAP/BASIN RESTORED TO ITS ORIGINAL DIMENSIONS, WHEN ACCUMULATION REACHES A HEIGHT HALF-WAY UP TO THE TOP OF THE DESIGNED HOLDING AREA.

18. SEDIMENT REMOVED FROM TRAPS AND BASINS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR VEGETATION PRESERVATION AREA.

19. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE MUST BE DIRECTED TO A SEDIMENT TRAPPING DEVICE PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM, STABLE GROUND SURFACE, OR RELEASE FROM THE SITE.

20. SEDIMENT BASINS MUST BE REMOVED WITHIN THIRTY SIX (36) MONTHS AFTER THEIR CONSTRUCTION.

21. OHIO DAM SAFETY LAWS APPLY TO BASINS LARGER THAN FIFTEEN (15) ACRE-FEET (24,000 C.Y.) AS MEASURED TO THE TOP OF THE HOLDING AREA.

TEMPORARY & PERMANENT STABILIZATION:

22. ALL CRITICAL SLOPES (3:1 OR STEEPER) SHALL BE STABILIZED WITH SOD OR SEED AS SOON AS POSSIBLE BUT NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER ACHIEVING FINAL GRADE.

23. ALL AREAS NOT DRAINING TO A FUNCTIONING SEDIMENT BASIN MUST BE FINAL GRADED AND STABILIZED WITH SOD OR SEED WITHIN SEVEN (7) CALENDAR DAYS OF ACHIEVING FINAL GRADE.

24. ALL AREAS WITHIN FIFTY (50) FEET OF A STREAM MUST BE STABILIZED WITHIN TWO (2) CALENDAR DAYS OF ACHIEVING FINAL GRADE.

25. ALL AREAS THAT ARE TO REMAIN IDLE, INCLUDING STOCK PILES, FOR FOURTEEN (14) CALENDAR DAYS MUST BE STABILIZED WITH SEED OR SOD.

26. WHEN THE PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.

27. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL METHOD, RIP-RAP, OR BY OTHER APPROVED STABILIZATION MEASURES WITHIN TWO (2) DAYS OF ACHIEVING FINAL GRADE.

28. TEMPORARY SEDIMENT CONTROL DEVICES MAY BE REMOVED, WITH PERMISSION OF AN SMU REPRESENTATIVE, THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS.

29. STORMWATER MANAGEMENT STRUCTURES, USED TEMPORARILY FOR SEDIMENT CONTROL, SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS.

TEMPORARY AND PERMANENT SEEDING:

1.1 SEEDBED PREPARATION

A. LIME (IN LIEU OF A SOIL TEST RECOMMENDATION) ON ACID SOIL (pH=5.5 OR LESS) AND SUBSOIL AT A RATE OF 100 POUNDS PER 1000 SF, OR TWO (2) TONS PER ACRE OF AGRICULTURAL GROUND LIMESTONE.

B. FERTILIZER (IN LIEU OF A SOILS TEST RECOMMENDATION) SHALL BE APPLIED AT A RATE OF 12-15 POUNDS (25 POUNDS FOR PERMANENT SEEDING) PER 1000 SF OF 10-10-10 OR 12-12-12 ANALYSIS OR EQUIVALENT.

1.2 SEEDING

1. TEMPORARY SEEDING MIXTURE

SEEDING PERIOD	TYPE	RATE (1000 SF)
SPRING AND SUMMER	1. OATS	3 LBS
	2. PEREN. RYEGRASS	1 LBS
	3. TALL FESCUE	1 LBS
FALL	1. PEREN. RYEGRASS	1 LBS
	2. RYE	3 LBS
	3. WHEAT	3 LBS
	4. TALL FESCUE	1 LBS

2. PERMANENT SEEDING MIXTURE

SEEDING PERIOD	TYPE	RATE (1000 SF)
SPRING, SUMMER, AND FALL	1. CREEPING RED FESCUE	0.5 LBS
	2. DOMESTIC RYEGRASS	0.25 LBS
	3. KENTUCKY BLUEGRASS	0.25 LBS
FALL	2. TALL FESCUE	1 LBS
	3. DWARF FESCUE	1 LBS

2-1 SEEDING FOR STEEP BANKS OR CUTS

SPRING, SUMMER, AND FALL	1. TALL FESCUE	1 LBS
	2. CROWNVETCH	0.25 LBS
	TALL FESCUE	0.50 LBS
FALL	3. FLATPEA	0.50 LBS
	TALL FESCUE	0.50 LBS

2-2 SEEDING FOR WATERWAYS AND ROAD DITCHES

SPRING, SUMMER AND FALL	1. TALL FESCUE	1 LBS
	FALL	

B. APPLY THE SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) PREFERABLY ON A FIRM, MOIST SEEDBED. SEED WHEAT OR RYE NO DEEPER THAN ONE (1) INCH. SEED RYEGRASS NO DEEPER THAN ONE QUARTER (1/4) OF AN INCH.

TEMPORARY AND PERMANENT SEEDING CONT.

C. WHEN FEASIBLE, EXCEPT WHERE A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMLY FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHEREVER POSSIBLE.

D. OTHER SEEDING SPECIES MAY BE SUBSTITUTED FOR THESE MIXTURES.

E. THESE SEEDING RATES NEED TO BE INCREASED TWO TO THREE TIMES IF THEY ARE TO BE USED AS A LAWN.

2. DORMANT SEEDING

A. TEMPORARY SEEDING-AFTER NOVEMBER 1, USE MULCH ONLY.

B. PERMANENT SEEDING- SEEDINGS SHOULD NOT BE PLANTED FROM OCTOBER 1 THROUGH NOVEMBER 20. THE FOLLOWING METHODS MAY BE USED TO MAKE A "DORMANT SEEDING":

1. FROM OCT. 1 THROUGH NOV. 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOV. 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.

2. FROM NOV. 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE SEEDBED, LIME AND FERTILIZE. APPLY THE SELECTED SEED MIXTURE, AND MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.

3. MULCHING

A. MULCH SHALL CONSIST OF SMALL GRAIN STRAW (PREFERABLY WHEAT OR RYE) AND SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE OR 100 POUNDS PER 1000 SF.

B. SPREAD THE MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED.

C. MULCH ANCHORING METHODS:

1. MECHANICAL- USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH INTO THE SOIL.

2. ASPHALT EMULSION-APPLY AT THE RATE OF 160 GALLONS PER ACRE INTO THE MULCH AS IT IS BEING APPLIED.

3. MULCH NETTING-USE ACCORDING TO THE MANUF. RECOMMENDATIONS.

4. IRRIGATION

SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED.

STABILIZATION:

DISTURBED AREAS MUST BE STABILIZED AS FOLLOWS:

PERMANENT STABILIZATION

Area requiring permanent stabilization	Time frame to apply erosion controls
Any area that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any area within 50 feet of a stream and at final grade	Within two days of reaching final grade
All other areas at final grade	Within seven days of reaching final grade within that area

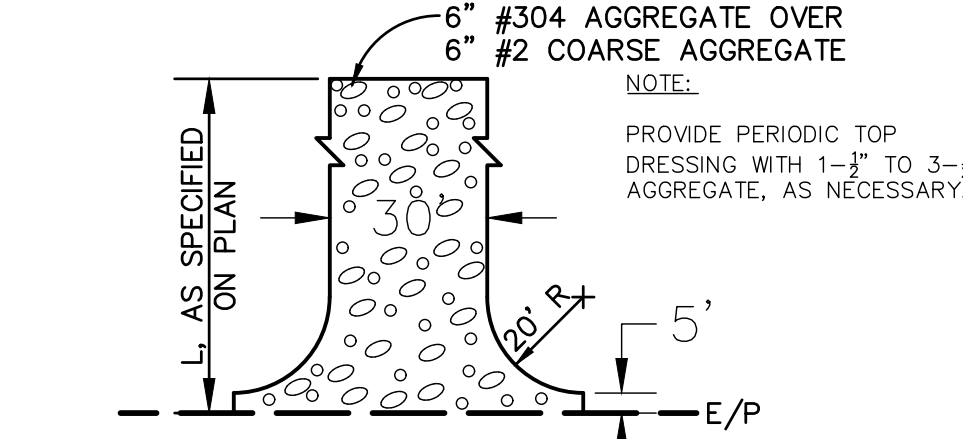
TEMPORARY STABILIZATION

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a stream and not at final grade	Within two days of the most recent disturbance if the area will lie dormant for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a stream	Within seven days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

THE DEVELOPER AND/OR CONTRACTOR SHALL PERFORM REGULAR STREET SWEEPING TO MINIMIZE SEDIMENTS TO THE PROPOSED STORM SEWER SYSTEM.

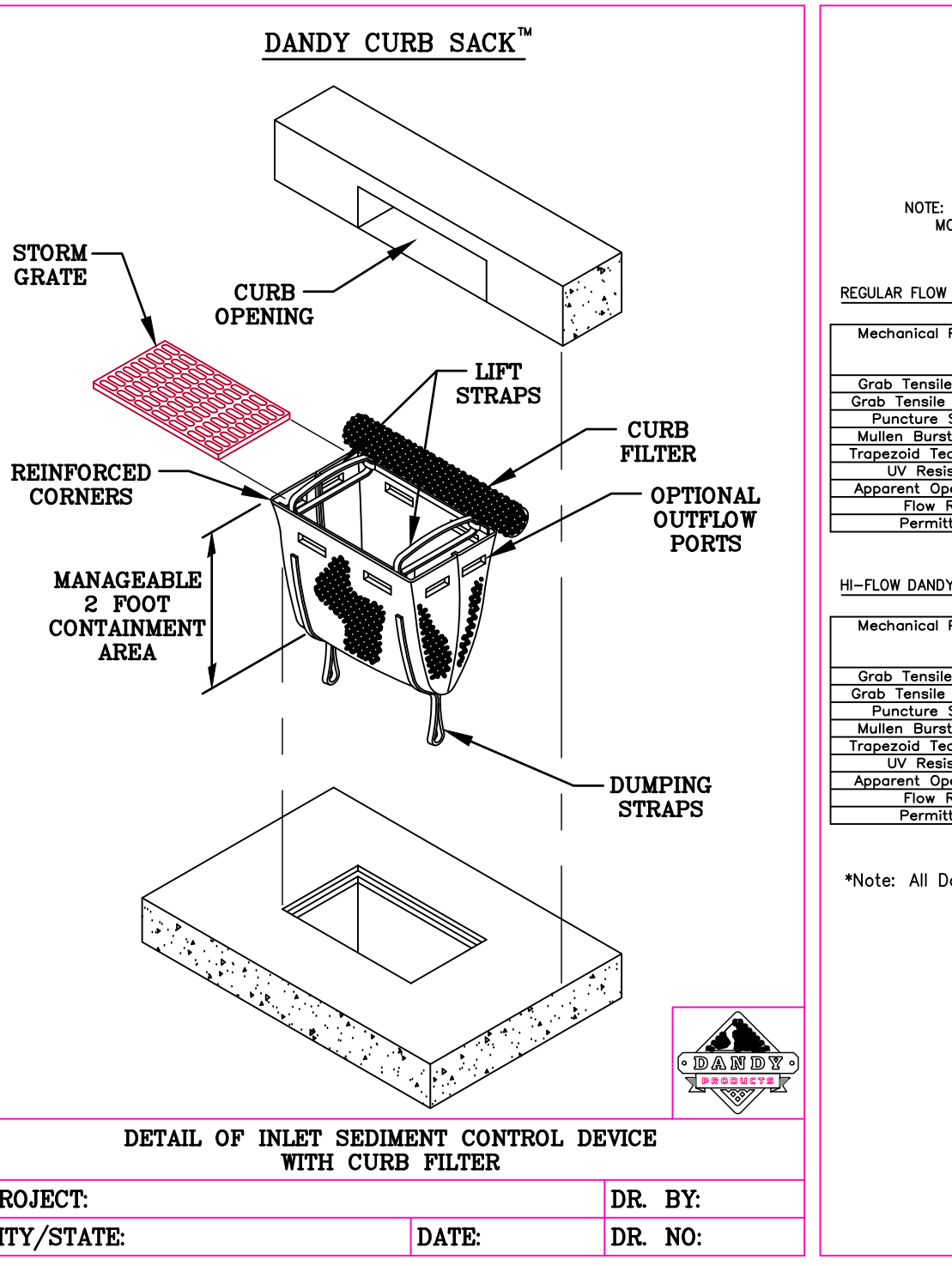
UPON REQUEST OF THE OHIO EPA, OR LOCAL JURISDICTION, THE CONTRACTOR SHALL PROVIDE ALL NPDES PERMIT REPORTS AND A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN. THE CONTRACTOR SHALL ALLOW THE OHIO EPA, OR LOCAL JURISDICTION, TO ENTER THE SITE TO INSPECT AND MONITOR ALL EROSION CONTROL MEASURES.

DUMPSTERS AND PORT-O-LETS ARE NOT TO BE CLOSER THAN 20' FROM THE PROPERTY LINES.

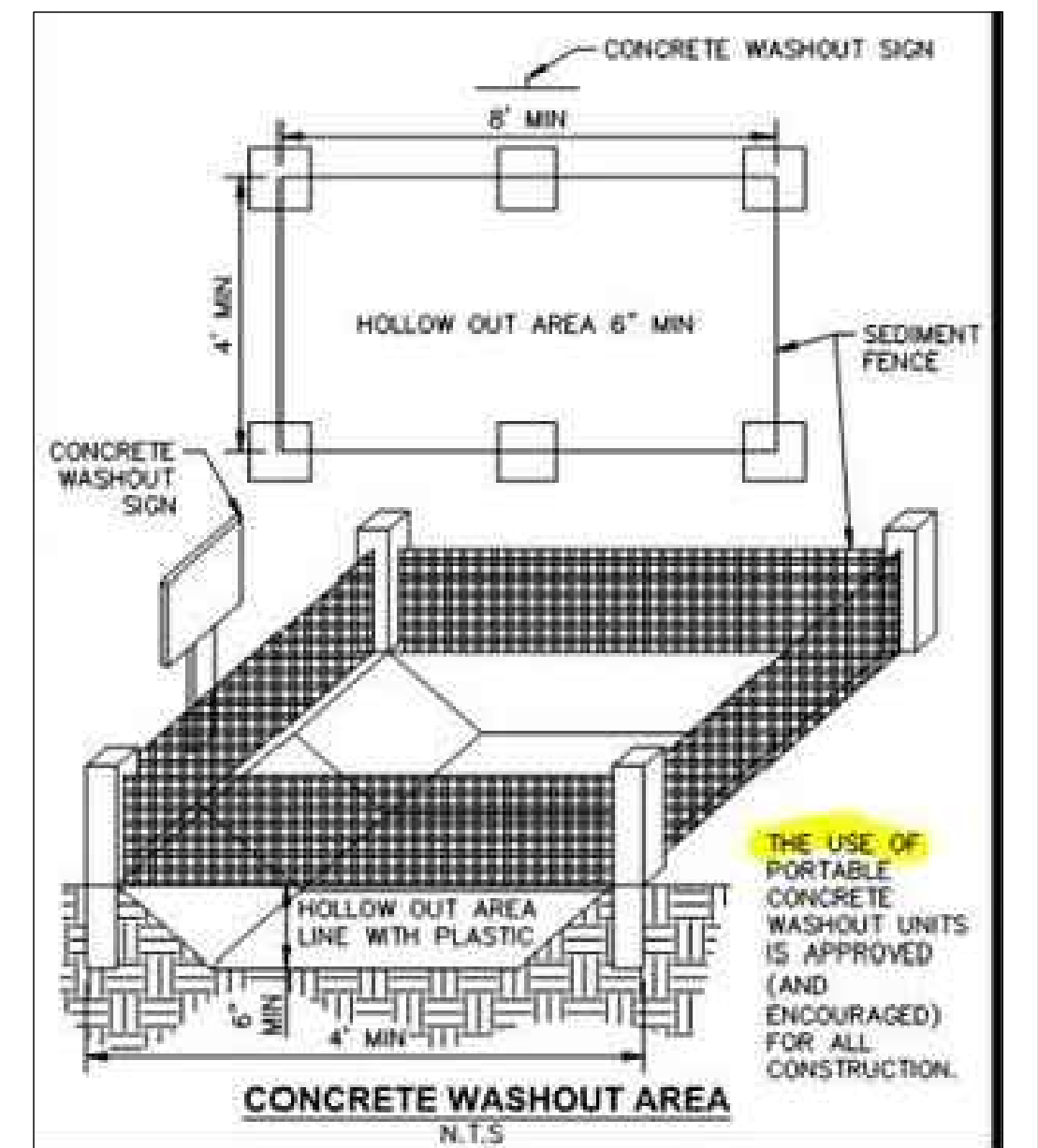


STABILIZED CONSTRUCTION ENTRANCE

NO SCALE



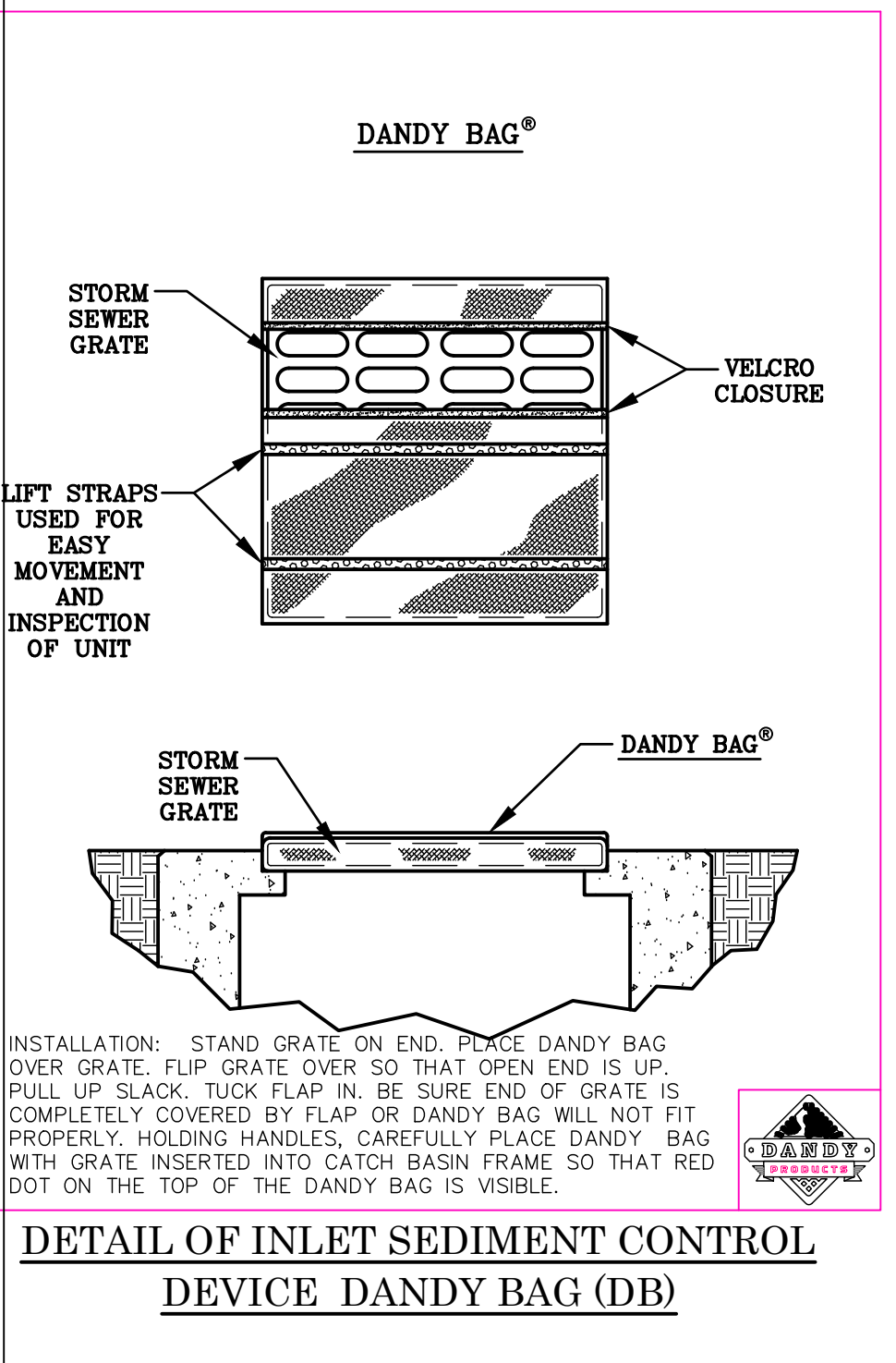
DETAIL OF INLET SEDIMENT CONTROL DEVICE DANDY CURB FILTER BAG



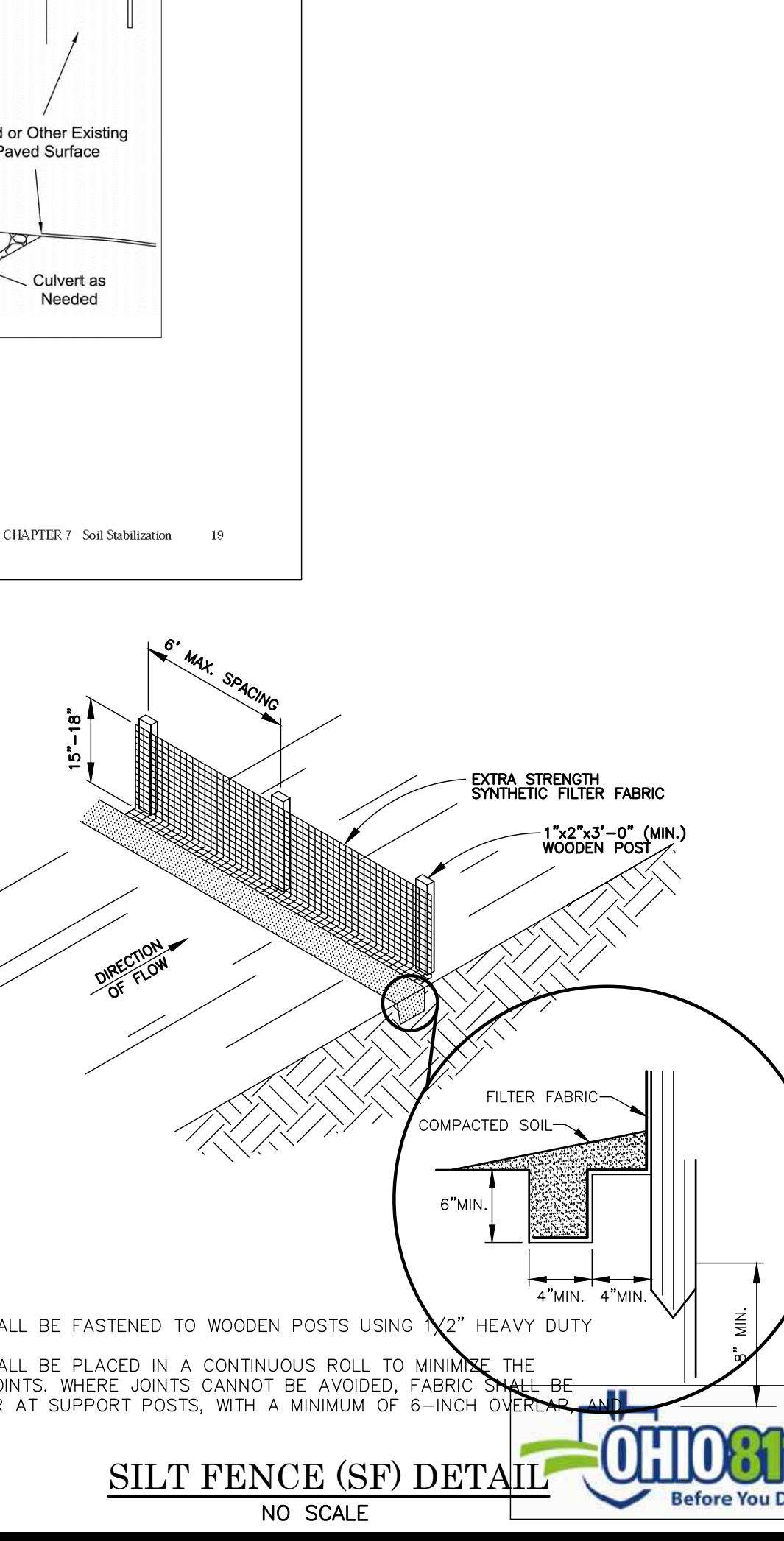
CONSTRUCTION SEQUENCE:

Stage	Actions
Mark off set aside areas	1. Fence naturally vegetated areas and the dripline of trees that will be maintained and protected during construction.
Install initial sediment and erosion controls	2. Install appropriate sediment controls to protect downstream and adjacent areas. These are to be installed prior to grading and construction begins and includes practices such as sediment traps, sediment barriers(silt fence, filter socks and berms) and protection of catch basins with inlet protection.
Prepare site and construct improvements	3. Install stone construction entrance prior to general grading or excavation or delivery of materials.
Final grading and stabilization	4. Remove topsoil and stockpile, seeding stockpile immediately upon completion. Install sediment controls as necessary.
	5. Grade site or excavate building foundation or basement.
	6. Temporary seed rough graded areas and maintain or repair sediment controls as needed. Maintenance includes the removal of sediment from streets and sediment controls.
	7. Construct the building and site improvements.
	8. Complete land grading and shaping. Soils shall be roughly graded, followed by the spreading and grading of topsoil. Installation of roof drains and other drains to stable outlets should be completed at this time.
	9. Establish permanent vegetation. After reaching final grade elevations and leveling of topsoil, bare soils shall be stabilized with seed and mulch, sod or other permanent landscaping materials.
	10. Remove temporary sediment control practices once vegetation is established.

DANDY CURB SACK™ SPECIFICATIONS			
NOTE: THE DANDY CURB SACK™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:			
REGULAR FLOW DANDY CURB SACK™ (BLACK)			
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	lbf (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	5 x 15
Puncture Strength	ASTM D 4633	lbf (lbs)	0.167 (150)
Mullen Burst Strength	ASTM D 3786	psi (psi)	5500 (500)
Trapezoid Tear Strength	ASTM D 4533	lbf (lbs)	0.67 (150) x 0.23 (185)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4461	1/min/m² (gal/min/ft²)	2852 (70)
Permeability	ASTM D 4461	Sec	0.90
HI-FLOW DANDY CURB SACK™ (SAFETY ORANGE)			
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	lbf (lbs)	1.62 (365) x 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 x 10
Puncture Strength	ASTM D 4633	lbf (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	psi (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	lbf (lbs)	0.51 (115) x 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4461	1/min/m² (gal/min/ft²)	5807 (145)
Permeability	ASTM D 4461	Sec	2
*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows			



Specifications for Construction Entrance	
1. Stone Size—GDOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.	6. Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
2. Length—The Construction Entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. exception: apply 30 ft. minimum to single residential lots.	7. Culvert—A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed onto paved surfaces.
3. Thickness—The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.	8. Water Bar—A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
4. Width—The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.	9. Maintenance—Top dressing of additional stone shall be applied as conditions demand. Must be kept dropped, washed or tracked onto public roads, or any surface where runoff is checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
5. Geotextile—A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong no-stap geotextile fabric and meet the following specifications:	10. Construction entrance shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter before the construction-site shall be restricted from muddy areas.
Figure 7.6.1	
Minimum Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	60 psi.
Minimum Tear Strength	150 lbs.
Minimum Burst Strength	200 psi.
Minimum Elongation	20%.
Equivalent Opening Size	100 - 0.6 mm.
Permeability	1-10-3 cm/sec.



NOTES:

FILTER FABRIC SHALL BE FASTENED TO WOODEN POSTS USING 1/2" HEAVY DUTY STAPLES. FILTER FABRIC SHALL BE PLACED IN A CONTINUOUS ROLL TO MINIMIZE THE OCCURRENCE OF JOINTS. WHERE JOINTS CANNOT BE AVOIDED, FABRIC SHALL BE SPLICED TOGETHER AT SUPPORT POSTS, WITH A MINIMUM OF 6-INCH OVERLAP, SECURELY SEALED.

SILT FENCE (SF) DETAIL

NO SCALE



PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

NO. & DESCRIPTION

BY

DATE

EVANS ENGINEERING
4240 AIRPORT ROAD, SUITE 2411
CINCINNATI, OHIO 45226
(513) 321-2168



FOUR SEASONS CAR WASH
SWPPP NOTES & DETAILS
CLARENCE F. WARNER,
CITY OF MONROE, BUTLER COUNTY, OHIO

SCALE:	HORIZ.	VERT.
	N/A	N/A

JOB NO.	22-121
DATE	May. 5, 2022

SHEET NO.

C-5.1



6'-0"

ADJUSTABLE ROD & TURNBUCKLE FOR EACH GATE

3'-0"

POUR CONCRETE BASE AROUND 6" DIAMETER POST

7'-0"

A4.01

8" 4000SI CONCRETE SLAB w/6x6x42#

GRAVEL BASE

PRECAST COPING

WELDED CAP

PINTED METAL PANELS IN A STEEL FRAME

6" DIAMETER STEEL TUBE GALVANIZED

6'-0" HIGH METAL SWINGING GATES WITH DROP LOCKS

4'-0"

3'-0"

DOME CAP

6" DIAMETER GALV. STEEL - PRIMED & PAINTED, CONCRETE FILLED BOLLARD 48" HIGH

POUR CONCRETE BASE AROUND 6" DIAMETER POST

PRECAST CONCRETE OR METAL COPING

8" CMU COATED TO MATCH PRIMARY BLDG COLOR

GRADE

Site plan of a dumpster enclosure. The overall dimensions are 13' - 3 1/4" wide by 8' - 8" deep. The enclosure is defined by a concrete footing and a precast concrete or metal coping. The interior floor is an 8" 4000SI concrete slab with a 1/4" / FT slope. A central area is labeled "DUMPSTER BY OTHERS". The enclosure is bordered by an 8" concrete slab to match existing adjacent concrete pavement elevation. The enclosure is surrounded by a concrete apron with a 6" - 0" high metal swinging gate w/drop locks. The enclosure is bordered by a concrete footing and a precast concrete or metal coping. The interior floor is an 8" 4000SI concrete slab with a 1/4" / FT slope. A central area is labeled "DUMPSTER BY OTHERS". The enclosure is bordered by an 8" concrete slab to match existing adjacent concrete pavement elevation. The enclosure is surrounded by a concrete apron with a 6" - 0" high metal swinging gate w/drop locks.

Callouts and dimensions:

- 13' - 3 1/4" (Overall width)
- 8' - 8" (Overall depth)
- 4' - 0" (Three segments of width)
- 3' - 1' - 0" (Segment of width)
- 6" (Thickness of concrete footing)
- 8" (Thickness of concrete slab)
- 6" (Height of metal swinging gate)
- 3' (Width of concrete apron)
- 1/4" / FT (Slope of concrete slab)
- 1/4" (Slope of concrete apron)

Callouts:

- A4.01 (Four locations)
- CONCRETE FOOTING
- 8" CONCRETE SLAB TO MATCH EXISTING ADJACENT CONCRETE PAVEMENT ELEVATION
- DUMPSTER BY OTHERS
- LINE OF FOOTER BELOW GRADE
- 6" DIAMETER CONCRETE FILLED BOLLARD 48" HIGH (TYPICAL) SEE DETAIL 2 THIS SHEET
- LINE OF PRECAST CONCRETE OR METAL COPING ABOVE
- 8" 4000SI CONCRETE SLAB w/6x6x42#
- 8" CMU COATED TO MATCH PRIMARY BLDG COLOR
- THICKENED SLAB EDGE
- 6" - 0" HIGH METAL SWINGING GATES w/DROP LOCKS
- CONCRETE APRON SEE CIVIL DWGS

Diagram illustrating the elevation of a wall section. The wall is constructed of 8" CMU (Concrete Masonry Units) coated to match the primary building color. The top of the wall is finished with a precast concrete coping. The ground level is indicated by a dashed line labeled "GRADE".

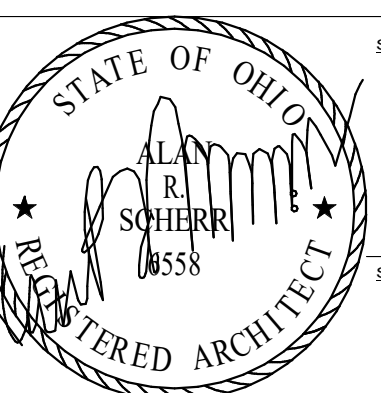


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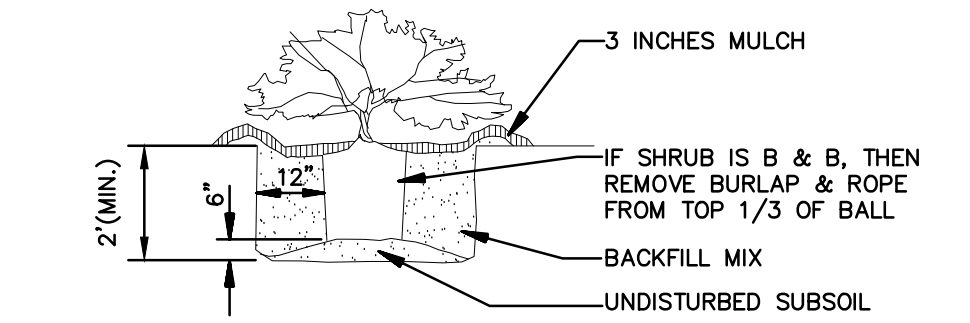
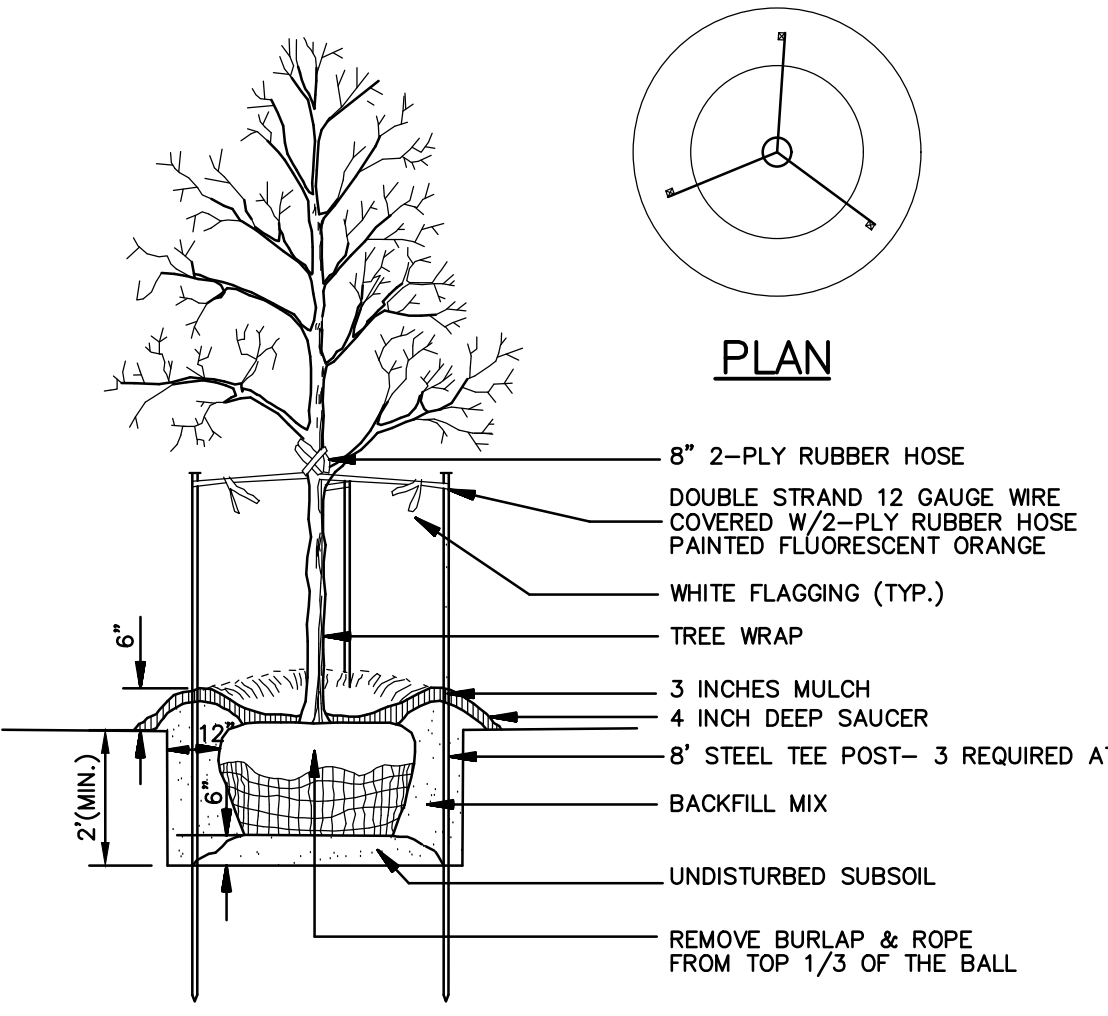
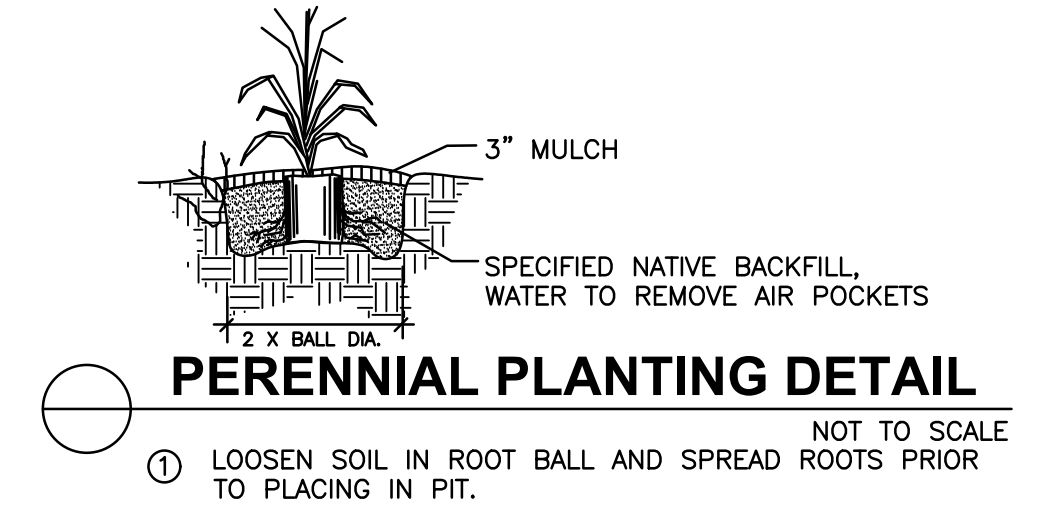
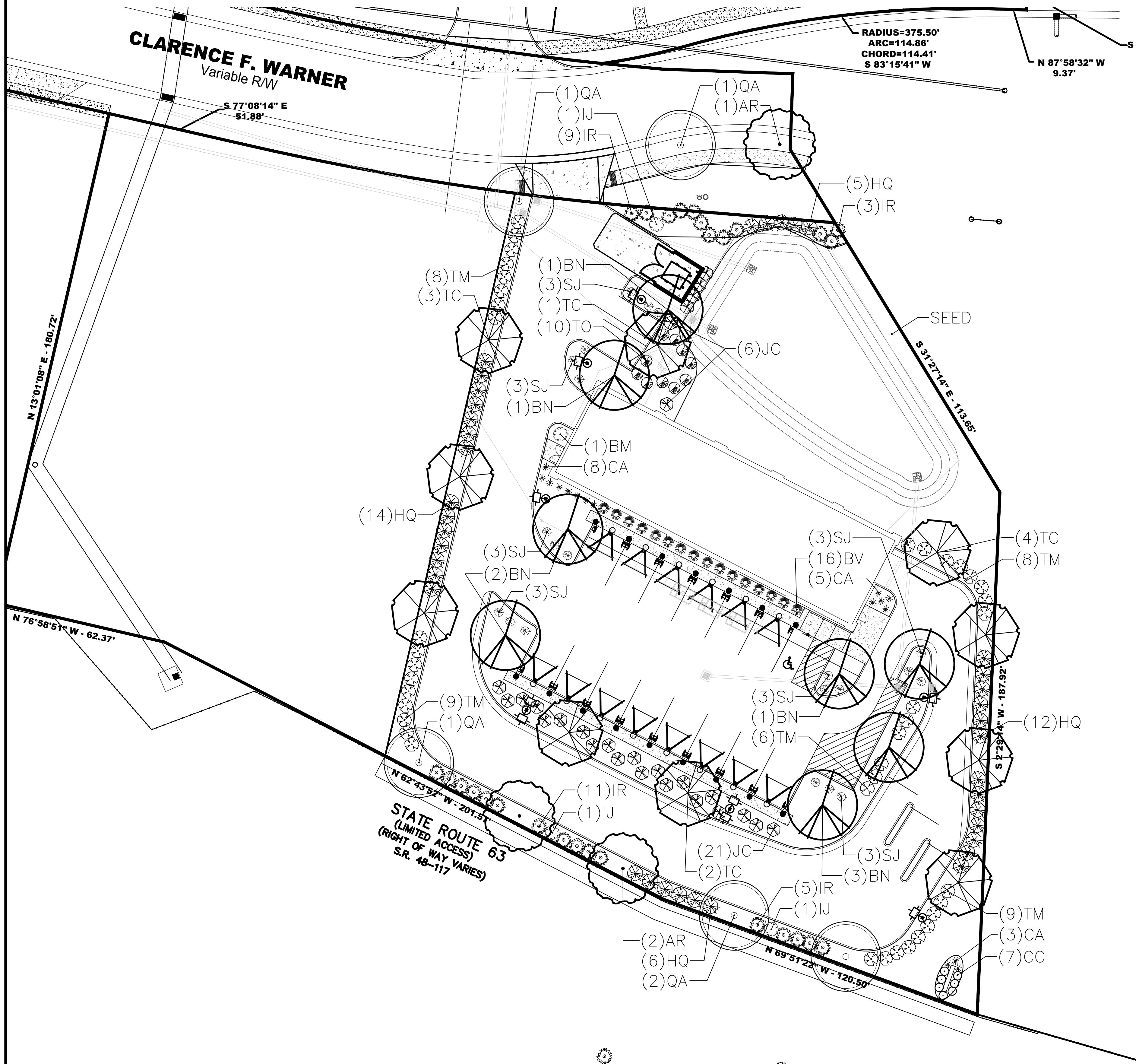
01	OWNER REVISIONS	
	DESCRIPTION	

CLARENCE F. WARNER DRIVE
MONROE, OHIO



A4.01

ALAN R. SCHERR LICENSE #6558
EXPIRATION DATE 12/31/22

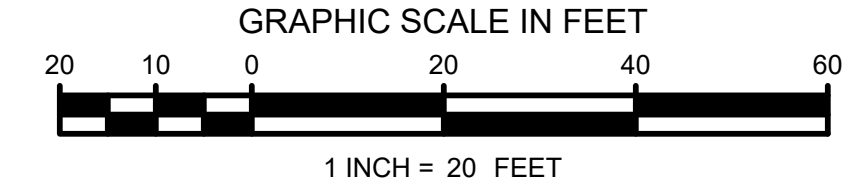


- LANDSCAPE NOTES:**
- ALL PLANTING BEDS TO BE TILLED TO A DEPTH OF 4\".
 - ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
 - ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
 - ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD.
 - ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
 - ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA 2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING PER SPECIFICATIONS TO MAINTAIN HEALTHY PLANT CONDITIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE PERIOD OF SPECIFIED.
 - ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
 - STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
 - WHERE SHOWN ON THE PLANS AND DETAILS, PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH A SHREDDED HARDWOOD MULCH TO A MINIMUM DEPTH OF THREE INCHES. APPLY PRE-EMERGENT HERBICIDE BEFORE MULCHING.
 - ALL EXISTING TREES SHOWN ON THE PLAN TO BE PRESERVED AND PROTECTED.

- PERMANENT SEEDING**
- ALL DISTURBED AREAS SHOULD BE FINE GRADED AND SEEDED IMMEDIATELY AFTER CONSTRUCTION. SEED WITH APPROPRIATE MIXTURE AT THE MANUFACTURE'S WRITTEN RECOMMENDED RATE.
 - TILL AREAS TO BE SEEDED TO A DEPTH OF 4\".
 - PROTECT SEEDED AREAS WITH STRAW MULCH AT A UNIFORM RATE OF 2 TONS PER ACRE TO A DEPTH OF 1\" OVER SEEDED AREAS.

KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	REMARKS
CANOPY/EVERGREEN TREES						
AR	3	Acer rubrum 'October Glory'	October Glory Maple	2.5\" cal.	B&B	Straight Central Leader
BN	7	Betula Nigra 'Dura Heat'	River Birch	8\" ht.	B&B	Clump
QA	8	Quercus alba	White Oak	2.5\" cal.	B&B	Straight Central Leader
TC	11	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	2.5\" cal.	B&B	Straight Central Leader
SHRUBS						
BM	1	Buxus x 'Green Mountain'	Green Mountain Boxwood	36\" ht.	B&B	
BV	16	Buxus microphylla 'Green Velvet'	Green Velvet Boxwood	18\"	B&B	
HQ	37	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea		#3 cont.	
IJ	3	Ilex verticillata 'Jim Dandy'	Jim Dandy Winterberry Holly	24\" ht.	B&B	
IR	28	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry Holly	24\" ht.	B&B	
JC	27	Juniperus chinensis 'Sea Green'	Sea Green Chinese Juniper	36\" ht.	B&B	
SJ	21	Spirea japonica 'Little Princess'	Little Princess Japanese Spirea	18\" ht.	#3 cont.	
TM	40	Taxus x media 'Densiformis'	Densiformis Yew	36\" ht.	B&B	
TO	10	Thuja occidentalis 'Emerald'	Emerald Green Arborvitae	6\" ht.	B&B	
ORNAMENTAL GRASSES						
CA	16	Calamagrostis acutiflora 'Karl Foerster'	Feather Reed Grass		#3 cont.	
PERENNIALS						
CC	7	Caryopteris x clandonensis 'Dark Knight'	Dark Knight Bluebeard		#3 cont.	

LANDSCAPE REQUIREMENTS		REQUIRED	PROVIDED
VEHICULAR USE AREAS (ISLANDS)	1 TREE AND 3 SHRUBS PER ISLAND, 7 ISLANDS = 7 TREES AND 21 SHRUBS		7 TREES, 21 SHRUBS
VEHICULAR USE AREAS (PERIMETER)	1 TREE PER 5 PARKING SPACES AND 3' TALL EVERGREEN SCREEN ALONG PARKING AREAS. 20 PARKING SPACES = 4 TREES		4 TREES, 3' TALL EVERGREEN SCREEN
NON-PARKING VEHICULAR USE AREAS	1 TREE PER 50 LINEAR FEET AND 3 SHRUBS PER 15 LINEAR FEET OF VUA. 520 LINEAR FEET OF ACCESS DRIVE = 11 TREES AND 104 SHRUBS.		11 TREES (INCLUDING SR 63 STREET TREES), 104 SHRUBS (INCLUDES FRONT YARD SHRUBS ALONG SR 63 AND PERIMETER VUA SHRUBS)
FRONT YARD LANDSCAPE REQUIREMENTS (PARKING LOT ADJACENT TO ROW)	20% TO BE LANDSCAPED WITH TREES AND SHRUBS. (MIN. 6 FOOT WIDE AREA ADJACENT TO THE RIGHT OF WAY. PERIMETER VUA CAN COUNT TOWARDS REQUIREMENT.) CLARENCE WARNER: 1,750 SF FRONT YARD AREA = 350 SF LANDSCAPE AREA REQUIRED SR 63: 2,000 SF FRONT YARD AREA = 500 SF LANDSCAPE AREA REQUIRED.		CLARENCE WARNER: 500 SF FRONT YARD LANDSCAPE AREA PROVIDED. SR 63: 1,100 SF FRONT YARD LANDSCAPE AREA PROVIDED.
STREET TREES	CLARENCE WARNER: 1 TREE PER 40 LF. ALONG ROW. 115 LF ROW TOTAL = 3 STREET TREES. SR 63: 1 TREE PER 40 LF. ALONG ROW. 230 LF ROW TOTAL = 5 STREET TREES.		CLARENCE WARNER: 3 STREET TREES SR 63: 5 TREES



UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE

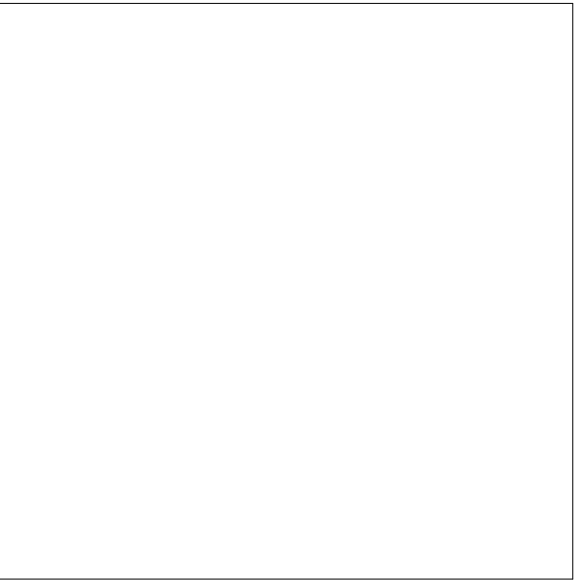
REVISION NUMBER	DATE	REMARKS

2K LA
2K Landscape Architecture, LLC
3234 Harvest Ave.
Cincinnati, Ohio 45213
513.228.8572
www.2KLandscapeArchitecture.com

LANDSCAPE PLAN
FOUR SEASONS CAR WASH
CLARENCE F. WARNER
CITY OF MONROE, BUTLER COUNTY, OHIO

OWNER:
PROJECT NO.: 2022-20
DATE: MAY 10, 2022
DRAWN BY: KTC
CHECKED BY: KTC
SCALE: 1" = 20'

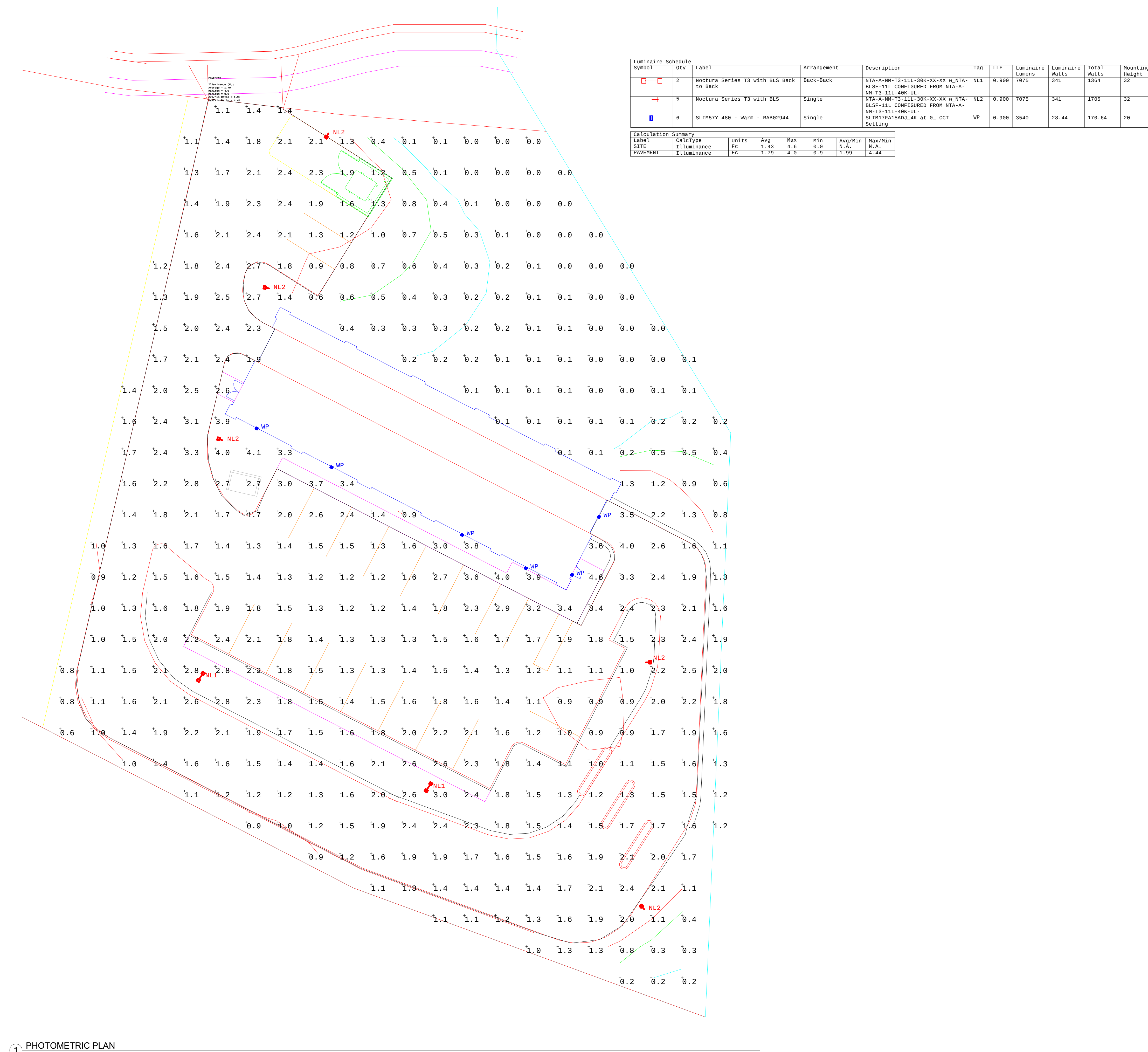
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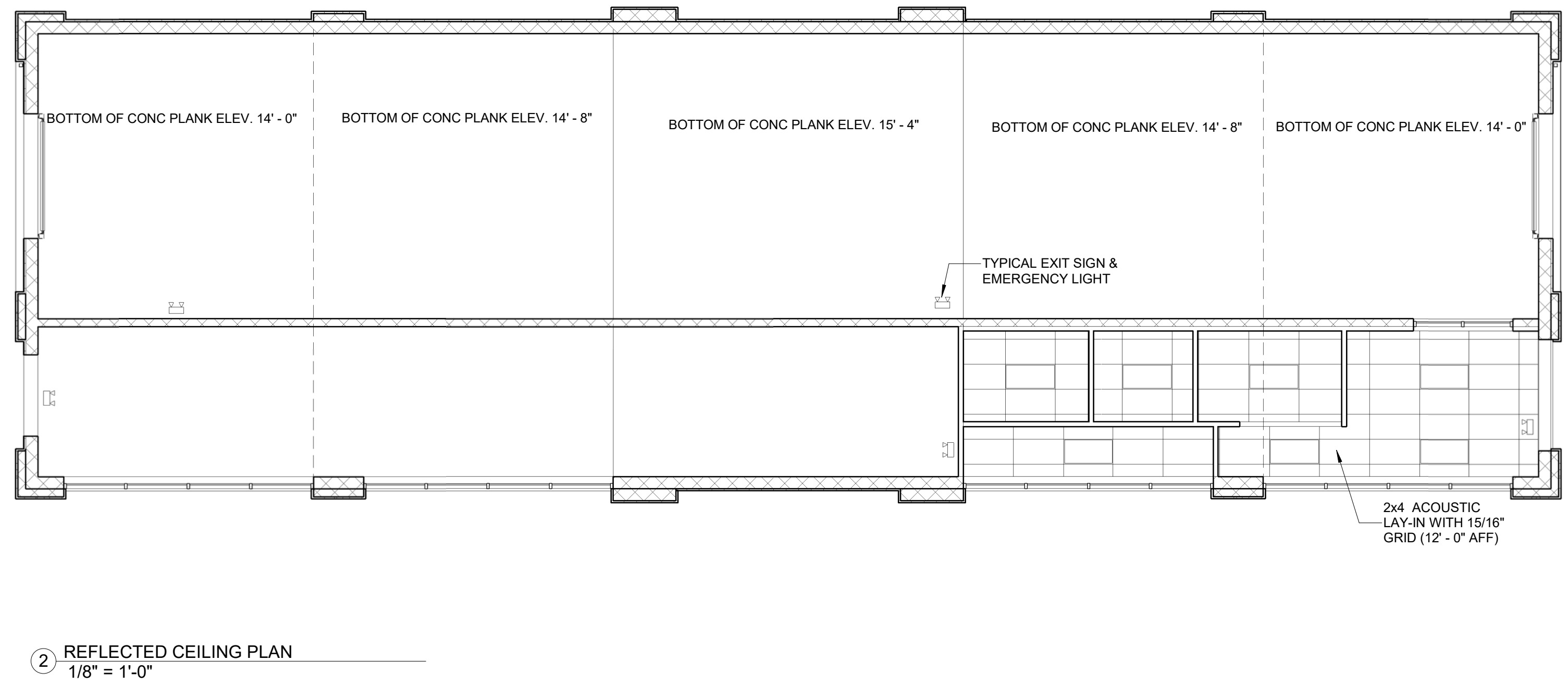
4 SEASONS CAR WASH
NEW FACILITY

CLARENCE WARNER DRIVE
MONROE, OH 45050

REV	DATE	DESCRIPTION



1 PHOTOMETRIC PLAN
1/16" = 1'-0"



01	OWNER REVISIONS	

SEAL OF THE STATE OF OHIO
 ALAN R. SCHERR
 16558
 REGISTERED ARCHITECT

© 2022 Alan Scherr Associates, LLC

FLOOR PLAN

1000

Journal of Management Education 36(7)p.809-824

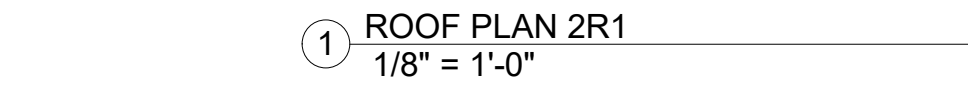
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Journal of Management Education 36(7)p.809-824

A101

7.1.61

Page 10 of 10



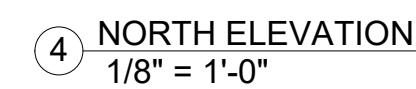
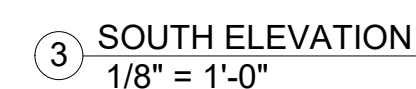
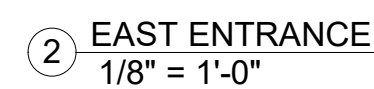
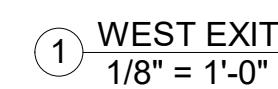
01	OWNER REVISIONS	
DESCRIPTION		

ASA
ALAN SCHERR ASSOCIATES

shall not be used by the recipient, or transferred to any other party, for use in other projects, additions to current projects, or any other purpose for which the material was not strictly intended by ASA without express written permission.	CHECKED BY: _____ Checker ASA COMM. NO.: _____ 2205
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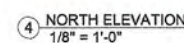
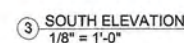
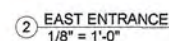
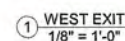
A1.02



A close-up photograph of a stone wall, showing the rough, layered texture of the stones and the mortar joints. The stones are in various shades of brown and tan, with some showing signs of weathering and lichen growth.



A3.01

[illegible]

FOUR SEASONS CAR WASH

[illegible]

ALAN R. SCHERR LICENSE #6558
EXPIRATION DATE 12/31/23

**EXTERIOR
ELEVATIONS**

SHEET NO.

A3.01A



Application for Site Plan Review

Monroe Development Department
233 South Main Street, Monroe, Ohio 45050
Phone: 513-539-7374
www.monroeohio.org

For Staff Use Only

Submittal Date:

Date Application Determined Complete:

Date of Planning Commission Review:

Fee Paid: \$1983.60

Staff Initials: *WMB*

Application/Case Number: 20220156

Site Plan Review Information

1. The site plan review procedure and applicability requirements are established in Section 1203.06 of the Monroe Planning and Zoning Code.
2. Prior to submitting this application, you are required to meet with staff from the Development Department for a pre-application conference. Please contact the department to schedule the conference.
3. The Monroe Planning Commission reviews all site plan review applications unless specifically exempted in Section 1203.06(B)(3).
4. Approval of a site plan does not constitute approval to begin construction. Applicants with approved site plans are required to submit all applicable zoning permit and building permit applications.
5. Unless an alternative timeline is approved by the Planning Commission, construction related to the approved site plan must begin within one year of the site plan approval or the approval shall be voided. See Section 1203.06(H) for additional information.

Basic Project and Site Information

Project Address: 100 Corridor Park Drive

County: ☐ Butler ☒ Warren Total Lot Area: 22.212

County Tax Parcel ID: 11054000110

Project/Development Name: Gateway Tire Warehouse Addition 2022

Existing Zoning District: L-1

Project Type: ☐ New Building ☒ Expansion of Existing Structure
☒ Addition to Site (e.g., parking, landscaping, lighting, etc.)

Applicant Information

Applicant Name: Marshall Construction Company, LLC

Contact Person: Chuck Naegle

Contact Address: 3457 Granger Rd, Akron, Ohio 44333

Contact Phone Number: 330-659-2040

Contact Fax Number:

Contact E-Mail: cnaegle@mccdesignbuild.com

Property Owner Name: Gateway Tire Company Inc

The applicant may attach a separate sheet of a paper with contact information for additional people, if necessary (e.g., additional owners, registered engineer, landscape architect, etc.). The same contact information shall be provided for each contact name.

Project Address or Tax Parcel ID: 100 Corridor Park Drive

Additional Project Information

1) Please describe, in detail, any existing uses and/or buildings on the project site.

The subject parcel currently has a 173,674 s.f. warehouse/office building with a parking area north of the building. There are two access drives for the site from Corridor Park Drive.

2) Please describe, in detail, the proposed uses and the proposed development. Provide a summary of the square footage related to each use and/or the total number of proposed dwelling units.

The Owner is requesting to add a 128,360 s.f. building addition (425.83' x 301.42') south of the existing building wall. The proposed use of this addition will be for warehouse. This addition will be constructed within an area that was previously rough graded for a building addition during the original phase of construction for this property

3) What are the anticipated start and completion dates for the project?

Start Date: 4/1/22

Completion Date: 12/1/22

4) What is the estimated value (in dollars) of the proposed property improvements?

\$7,444,880

5) Check any relevant procedural reviews applicable to this project:

☐ Conditional Use ☐ Variance ☐ Administrative Waiver ☐ Alternative Equivalent Compliance

If you checked any of the above procedures, please provide specific details on what you are seeking to have approved through the applicable review procedure? Provide the application/case numbers for any related applications.

Project Address or Tax Parcel ID:

Additional Project Information Continued

6) Does the project require any addition permits, licenses, or reviews by outside agencies (e.g., Butler or Warren County, ODNR, OEPA, etc.). ☒ Yes ☐ No If yes, please describe below.

OEPA Construction Stormwater NOI

Certification and Signatures

Applicant Signature - I certify that, to the best of my knowledge, the information contained in this form and within any attachments is correct and truthful. I understand that knowingly falsifying this information may be grounds for the denial or revoking of this application and any subsequent zoning permit or other review applications.

Print Name: Emerson Marshall

Signature:



Date: 3/14/22

Property Owner Signature - If the property owner is not the named applicant on this form, the property owner shall sign the form below acknowledging that the applicant is an authorized agent of the property owner as it relates to proposed project. If the site plan review is for multiple properties, a signature from each property owner is required.

Print Name:

Dennis King

Signature:



Date:

3-14-22

Note: A letter signed by the property owner, authorizing the applicant to act on their behalf may be submitted in lieu of the property owner's signature on this form.

Submittal Requirement Checklist

Submittals shall include 8 copies (minimum of 24" x 36") and 8 copies (minimum of 11" x 17") Additional copies may be required based on project specifics. Final mylars and digital Files will be required after approval.

Digital Submittal Requirements

☒	All document applications shall be submitted in an electronic format compatible (Adobe PDF) with the city's computer systems.
☒	All site plan materials, in map format, shall be submitted in a format compatible with the city's Geographic Information Systems (i.e. shapfile, geodatabase, or dwg) and shall be projected into NAD 1983 Ohio State Plane South - FIPS 3402 coordinate system using US Survey foot units.

General Information

☒	Site Plan Review Application form
☒	Application fee
☒	Copies of the plans and maps established below at a scale no smaller than 1 inch = 100 feet, on full-sized copies unless on 11" x 17" or otherwise noted
☐	Any additional information determined to be necessary by the Development Department

Vicinity Map (Scale may be smaller than 1" = 100')

☒	Date, north arrow, scale, and a legend for all symbols
☒	Project location
☒	All surrounding properties, streets, and corporation limits within a minimum of 500' of the outer boundaries of the project site

Existing Conditions Map

☒	All existing zoning district classifications on the site and adjacent to the site
☒	Parcel boundaries of the site and all parcels adjacent to the site
☒	Names of all subdivisions and land owners owning lots adjacent to the site
☒	Existing streets within 200' of site with names and centerlines
☒	Existing watercourses and bodies of water including any applicable flood hazard areas
☒	Planned road network (including street names if available) within 500' of site (if different from existing streets)
☒	Existing land uses on the site and adjacent parcels (including across any streets)
☒	Railroad infrastructure and rights-of-way
☒	All existing easements (including drainage) with dimensions and designation as to type
☒	Location of existing curb cuts, private streets, parking and loading areas, pedestrian walks, lighting facilities, and outside trash storage facilities

Site Layout Plan

☒	Lot numbers and sizes
☒	Square footage (gross) of existing buildings to remain and proposed buildings
☒	Required front, side, and rear yard width/setbacks
☒	All existing and proposed easements, including dimensions and type (e.g., drainage, access, public utility, etc.)
☒	Location, width, and classification of all existing and proposed streets in the development
☒	Location of any outdoor storage area(s) that require screening
☒	Locations of all proposed external street connections (including street stubs)
☒	Location, width, and materials of all sidewalks, trails, and paths (including connections to the public sidewalk system and adjacent developments)

Submittal Requirement Checklist

Submittals shall include 8 copies (minimum of 24" x 36") and 8 copies (minimum of 11" x 17") Additional copies may be required based on project specifics. Final mylars and digital Files will be required after approval.

Parking Plan and Traffic Control Plan

☐	Traffic impact study, if required
☒	Notation of total number of parking spaces, loading spaces, and stacking spaces required by ordinance
☒	Total number, dimensions, and location of parking spaces proposed off-street, on-street, and within parking structures, including information on handicapped parking spaces
☒	Total number of parking spaces to be provided through approval of shadow parking, off-site parking, or shared parking alternatives
☒	Number, location, and size of loading spaces provided
☐	Number and location of stacking spaces provided
☒	Location, arrangement, and dimensions of vehicular entrances, exits and parking lot aisles
☒	Location of pedestrian walkways and crossings
☐	Number and location of pervious parking spaces, if provided
☐	Proposed traffic control devices (in accordance with the Manual on Uniform Traffic Control Devices)
☐	Signing and striping plan
☐	Fire lanes and areas of parking prohibition
☐	Location of all sight triangles

Stormwater Management Sheet and Drainage Plan

☒	Drainage basin(s) where the site is located and drainage patterns
☒	Existing and proposed locations, types, and sizes of drainage structures and calculations demonstrating how post-development runoff will not exceed pre-development runoff
☒	Erosion and siltation control measures and devices with narrative, including location of outfall for stormwater to proper catch basin (indicated sizes and slopes of existing pipes)
☒	Drainage computations from proposed development to proper pickup point
☒	All proposed elevations and slopes for grading
☒	Description of maintenance procedures for stormwater management devices

Utilities Plan (May be Included on Site Layout Plan)

☒	Existing and proposed locations, types, and sizes of all water, sanitary sewer, storm sewer, gas, telephone, power and other utility lines and meters, easements and any other utilities affected by the site (includes above ground utilities and grades and computations where appropriate)
☒	Notation that all new utilities (including cable television, electrical, natural gas, sewer, telephone, and water lines) shall be placed underground
☒	Locations where existing overhead utilities will be relocated underground (if applicable)
☒	Identification of any connections, above or below ground, that are located within the City of Monroe's right-of-way

Landscaping Plan

☒	Exact locations, dimensions, and counts of existing and proposed landscape materials provided within and around vehicular use areas, including the size of landscaping islands
☒	Exact locations and counts of existing and proposed landscape materials provided within any required buffer areas including the type of buffer used, the buffer width provided, the proposed configuration of trees, shrubs, and screening features
☒	Location, size, and species of all existing and proposed street trees
☒	The total number of trees and shrubs provided, and the total number of different species planted
☐	Notations for any existing landscape within sight triangles indicating maximum shrub height or tree canopy height

Submittal Requirement Checklist

Submittals shall include 8 copies (minimum of 24" x 36") and 8 copies (minimum of 11" x 17") Additional copies may be required based on project specifics. Final mylars and digital Files will be required after approval.

☐	Location and amount of credit towards landscape material requirements provided by existing landscaping
☒	Demarcation of existing trees to be removed
☐	Location and amount of all open space set-aside areas by development phase
☐	Details of all open space improvements and common features (e.g., fountains, benches, street furnishings, play equipment, etc.)
Architectural and Building Elevation Plans	
☐	Color elevations for each building side facing a public street, alley, public open space, or public building, illustrating compliance with the architectural standards of the applicable zoning district
☐	Dimensions, in feet, of all façade recesses or similar fenestration
☐	Preliminary floor plan for principal buildings
☐	Height of all buildings in feet, including number of building stories
☐	Accessory structure size(s), if applicable
☐	Accessory structure height(s), if applicable
☐	Description of the type of material(s) used on each façade elevation
☐	Illustrative elevation of all fencing, walls, and retaining walls visible from a street, open space, or public building that will be used for buffering or screening of adjacent residential uses, dumpsters, service structures, utilities, parking areas, loading areas, and similar activity areas
Lighting Plan	
☐	Location, type, and height of all lighting fixtures (including street lights)
☐	Details on colors and materials for all lighting fixtures
☐	Grid or photometric diagram showing maximum illumination values at the lot line, and uniformity ratios within parking lots, measured in footcandles
Signage Plan	
☐	All sign areas, dimensions and height (including shape)
☐	Position of all signs in relation to the use being advertised (may be identified on the site layout plan)
☐	Location and style of all address numbers, building numbers, or allowable building identifications
☐	Plan of illumination for the sign including information on message timing for electronic message centers
☐	Landscaping around base of sign (may be identified on the landscaping plan)

CORRIDOR PARK DRIVE (Width Varies)

PPN: 11053000152
CHELSEA MONROE HOLDINGS
VOL. 83, PG. 20 (LOT 4)
1000 PREMIUM OUTLET RD
ZONING: C-2

PPN: 11054000110
GATEWAY TIRE COMPANY INC.
VOL. 106, PG. 8
100 CORRIDOR DR
22.212 AC
ZONING: L-1

EXISTING BUILDING
1-STORY
PRECAST CONC. BUILDING
165,441 SF (WAREHOUSE)
1,074 SF (OFFICE)
FFE 702.90

Benchmark:
Top of Hydrant (170.5' East of NW Corner of Parcel)
Elevation = 705.70 (NAVD88)
Basis of Survey Location Point:
GPS Observation - Ohio State Plane Coordinate Geodetic North

NEW WAREHOUSE ADDITION (128,360 SF)
FFE 702.90
40'-5" ROOF RIDGE
33'-10" ROOF EDGE

PROPOSED 8' HIGH CHAIN LINK FENCE (BLACK AND PLASTIC COATED)

PROPOSED 6' HIGH CHAIN LINK FENCE

SECURITY SLIDE GATE AND OPERATOR WITH RADIO RECEIVER

PROPOSED ASPHALT PAVING

WHEEL STOPS

OVERHEAD DOOR

EXISTING FIRE HYD. (INSTALL 2 BOLLARDS)

(9) LOADING DOCKS WITH OVERHEAD DOORS

PROPOSED STAIRS (SEE ARCH. PLANS)

PROPOSED HEAVY DUTY CONCRETE LOADING DOCK AREA

PROPOSED HEAVY DUTY CONCRETE

PROPOSED SAWCUT

PROPOSED GRASS AREA (REMOVE GRAVEL)

SHADOW PARKING AREA

RELOCATED LIGHT POLE

EX. ASPHALT DRIVE

EX. CURB

EX. GAS TRANS. PIPELINE (RECORD)

TEXAS GAS TRANS. EASEMENT

180° ELECTRIC EASEMENT

20' SANITARY EASEMENT

MODIFY EXISTING DRY DETENTION POND (PROPOSED WATER QUALITY ENHANCEMENTS)

PPN: 11053000261
CORRIDOR 75 PARK LTD
O.R. 1226, PG. 23
(VACANT-DETENTION POND)
ZONING: C-2

ZONING DISTRICT * L-1 - LIGHT INDUSTRIAL DISTRICT				
<u>MINIMUM PARKING SPACES CODE DATA</u>				
<u>EXISTING SITE:</u>	<u>S.F.</u>	<u>REQUIRED</u>		
* INDUSTRIAL OFFICE (18,979 - 2,340) 1 space/300 SF	16,318	55.5		
* WAREHOUSE (165,441 - 8,085) 1 space/1,250 SF (10,001 SF OR MORE)	157,356	125.9		
		181		
<u>PROPOSED ADDITION:</u>	<u>S.F.</u>	<u>REQUIRED</u>		
* WAREHOUSE (128,360 - 5,660) 1 space/1,250 SF (10,001 SF OR MORE)	122,700	98.2		
		279		
<u>10% REDUCTION CH. 1211.03 (1) (2) (a)</u>	-28	251		
<u>TOTAL PARKING PROVIDED:</u>	<u>AMOUNT</u>			
* EXISTING PARKING	108			
* PROPOSED PARKING	20			
* SHADOW PARKING (50% MAX)	123 (49%)			
	251			
* HANDICAP SPACES REQUIRED:	7 (5 EXISTING + 2 FUTURE)			
* 10' x 18' SPACE - 24 ft Min. Aisle Width (20' Depth Provided)				
<u>LOT & YARD REQUIREMENTS</u>	<u>REQ'D</u>	<u>PROPOSED</u>		
* MINIMUM BLDG FRONT YARD SETBACK	20 ft	50.15 ft		
* MINIMUM BLDG SIDE YARD SETBACK	10 ft	136.70 ft		
* MINIMUM BLDG REAR YARD SETBACK	10 ft	329.93 ft		
* MINIMUM PARK FRONT YARD SETBACK	20 ft	-- ft		
* MINIMUM PARK SIDE YARD SETBACK	10 ft	-- ft		
* MINIMUM PARK REAR YARD SETBACK	10 ft	-- ft		
* MAXIMUM BUILDING HEIGHT	70 ft	40.42 ft		
* MAXIMUM LOT COVERAGE	85%	54.53%		
<u>LAND USE DATA</u>	<u>EXISTING AREA (AC.)</u>	<u>%</u>	<u>PROPOSED AREA (AC.)</u>	<u>%</u>
* BUILDING	4.235	19.07	7.180	32.33
* PAVEMENT/IMPERVIOUS	4.611	20.75	4.028	18.13
* LANDSCAPING/BUFFERS	13.366	60.18	10.065	45.31
* SHADOW PARKING AREA	0.000	0.00	0.939	4.23
* TOTAL (NOT INCLUDING R/W)	22.212	100	22.212	100

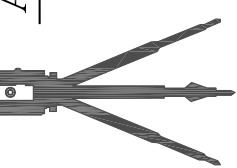
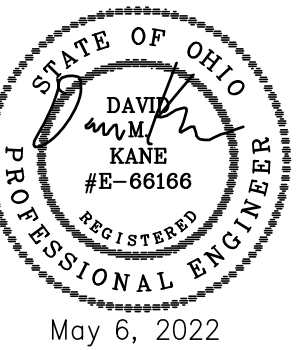
1. FOR EXACT BUILDING DIMENSIONS PLEASE SEE THE ARCHITECTURAL PLANS.
2. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D. OR AS OTHERWISE SHOWN IN THE PLANS. PARKING SPACES SHALL BE 4" WIDE PAINTED WHITE ON ASPHALT AND YELLOW ON CONCRETE. HANDICAP STRIPING SHALL BE SHERWIN WILLIAMS "H.C." BLUE.
3. THE BUILDING SQUARE FOOTAGE WAS REDUCED IN ACCORDANCE WITH 1211.03 (D) (F) (A) FOR THE REQUIRED PARKING SPACE CALCULATIONS.
4. THE REQUIRED PARKING SPACE REQUIREMENT WAS REDUCED BY 10% IN ACCORDANCE WITH 1211.03 (I) (2).
5. "SHADOW" PARKING SPACES WILL BE CONSTRUCTED ACCORDING TO THE CITY OF MONROE ZONING REGULATIONS IN THE EVENT THAT THE CODE ENFORCEMENT OFFICER DETERMINES AT ANY TIME THAT ALL OR ANY PORTION OF THIS PARKING IS NECESSARY.

1. THERE ARE NO KNOWN ACTIVE OR PLUGGED OIL/GAS WELLS LOCATED WITHIN THE PROJECT PARCEL BASED ON INFORMATION AVAILABLE FROM ODNR.
2. THE PROPOSED BUILDING AND PAVEMENT AREA IS LOCATED IN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD ZONE) AS SHOWN ON COMMUNITY PANEL NUMBER 39017C0240F (10/19/2018). PORTIONS OF THE SITE ARE WITHIN A ZONE AE REGULATORY FLOODWAY.

1. ALL DISTURBED AREAS NOT MULCHED SHALL BE SEEDED.
2. SEE LANDSCAPE PLAN FOR FURTHER DETAILS AND PLANT LOCATIONS.
3. ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE CITY OF MONROE.



ALBAN SURVEYING CO.
Engineers and Surveyors
38052 Euclid Avenue, Suite 200
Willoughby, Ohio 44094
Phone: 440-946-0752

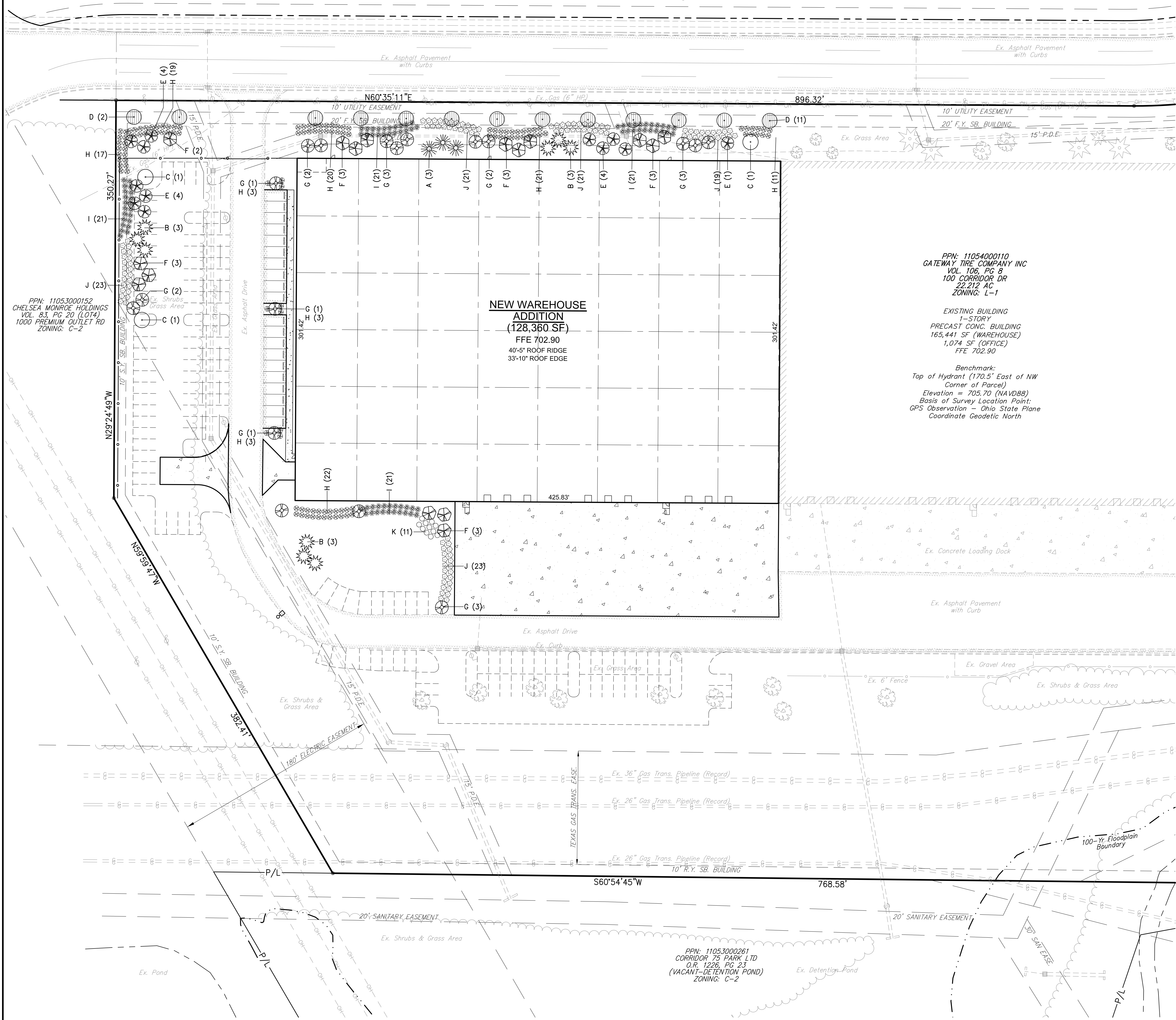
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CATEWAY LINK
WAREHOUSE ADDITION 2022
100 Corridor Park Dr, Monroe, Ohio
SITE PLAN

Number:

CE-5

CORRIDOR PARK DRIVE (Width Varies)



PLANTING SCHEDULE TREES				
SYMBOL	AMOUNT	KEY	COMMON NAME/BOTANICAL	ROOT TYPE / CALIPER
	3	A	EASTERN WHITE PINE	6' HEIGHT
	9	B	PINUS STROBUS	2" MIN
	3	C	PIN OAK	2" MIN
	13	D	QUERCUS PALUSTRIS	2" MIN
	13	E	ACER FREEMANII 'JEFFSRED'	2" MIN
	13	F	SKYLINE THORNLESS HONEY LOCUST	2" MIN
	13	G	GLEDITSIA TRIACANTHOS INEMIS 'SKYCOLE'	2" MIN
	17	H	SUGAR TYME FLOWERING CRAB	6' HEIGHT
	18	I	MALUS 'SUTYZAM'	6' HEIGHT
	18	J	AUTUMN BRILLIANCE SERVICEBERRY	6' HEIGHT
	18	K	AMELANCHIER GRANDIFLORA	6' HEIGHT
	18	L	SERVICEBERRY	6' HEIGHT
	18	M	AMELANCHIER CANADENSIS	6' HEIGHT

PLANTING SCHEDULE SHRUBS & GRASSES			
SYMBOL	AMOUNT	KEY	COMMON NAME/BOTANICAL
	119	H	ARROWWOOD VIBURNUM
	84	I	VIBURNUM DENTATUM
	107	J	DOUBLE PLAY RED SPIREA
	11	K	SPIRAEA JAPONICA
	11	L	SEA GREEN JUNIPER
	11	M	JUNIPERUS x PTERIANA 'SEA GREEN'
	11	N	KARL FOERSTER REED GRASS
	11	O	CALAMAGROSTIS ACUTIFLORA

CHAPTER 1212.06 - STREET TREE REQUIREMENTS
STREET TREES SHALL BE PLANTED 40 FEET ON CENTER
(13 PROVIDED ALONG CORRIDOR PARK DR ADJACENT TO ADDITION)

CHAPTER 1212.07 - LANDSCAPING FOR VEHICULAR USE AREAS
IF VEHICULAR USE AREA IS EXPANDED MORE THAN 35%, ENTIRE
PARKING AREA MUST COME INTO COMPLIANCE WITH CURRENT CODE.

133,365 SF OF EXISTING VEHICULAR AREA
33,038 SF OF ADDITIONAL PROPOSED VEHICULAR AREA
168,403 SF TOTAL VEHICULAR AREA = INCREASE OF 26.3%

20 PARKING SPACES WILL REQUIRE A MINIMUM OF 4 CANOPY TREES
(4 PROVIDED ALONG SOUTH SIDE OF PARKING AREA)

CHAPTER 1212.08 - FRONT YARD LANDSCAPING (NON-RESIDENTIAL)
20% OF F.Y. AREA WITH MIN 6' WIDE AREA ADJ. TO R/W
REQUIRED: 2,344 SF (4' x 586') [PROVIDED WITH BUFFER]

CHAPTER 1212.10 - BUFFER REQUIREMENTS
TYPE B OPTION 2 ALONG WEST AND SOUTH PROPERTY LINES
20' WIDTH; 2 ACI CANOPY TREES; 14 ACI UNDERSTORY TREES;
35 SHRUBS; PER 100 LF

REQUIREMENTS:

WEST P/L: 496 LF (586' - 20' SOUTH BUFFER - 70' DRIVE)
496' OF BUFFER / 100 = 4.96
4.96 x 2 ACI = 10 ACI OF CANOPY TREE (5 TREES)
4.96 x 14 ACI = 70 ACI OF UNDERSTORY TREE (35 TREES)
4.96 x 35 = 174 SHRUBS

SOUTH P/L: 174 LF (NOT INCLUDING GAS & ELEC EASEMENTS)
174' OF BUFFER / 100 = 1.74
1.74 x 2 ACI = 4 ACI OF CANOPY TREE (2 TREES)
1.74 x 14 ACI = 25 ACI OF UNDERSTORY TREE (13 TREES)
1.74 x 35 = 61 SHRUBS

SOUTH P/L: 220 LF (EAST WALL & TRUCK DOCK BUFFER AREA)
220' OF BUFFER / 100 = 2.20
2.20 x 2 ACI = 5 ACI OF CANOPY TREE (3 TREES)
2.20 x 14 ACI = 31 ACI OF UNDERSTORY TREE (16 TREES)
2.20 x 35 = 77 SHRUBS

- LANDSCAPE NOTES**
- ALL DISTURBED AREAS NOT MULCHED SHALL BE SEEDED.
 - ALL TREES AND SHRUBS TO BE PLANTED IN MULCH BEDS WITH EDGE STRIPS TO SEPARATE TURF GRASS AREAS UNLESS NOTED OTHERWISE.
 - ALL LANDSCAPING MATERIALS SHALL BE INSTALLED AND MAINTAINED IN PERPETUITY ACCORDING TO ANSI.
 - ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE CITY OF MONROE.
 - SEE DETAIL SHEET FOR SHRUB AND TREE PLANTING DETAILS.

80
40
20
0

HORIZONTAL
SCALE IN FEET

PREPARED BY:

ALBAN SURVEYING CO.
Engineers and Surveyors
38052 Euclid Avenue, Suite 200
Willoughby, Ohio 44094
Phone: 440-946-0752

Revisions:

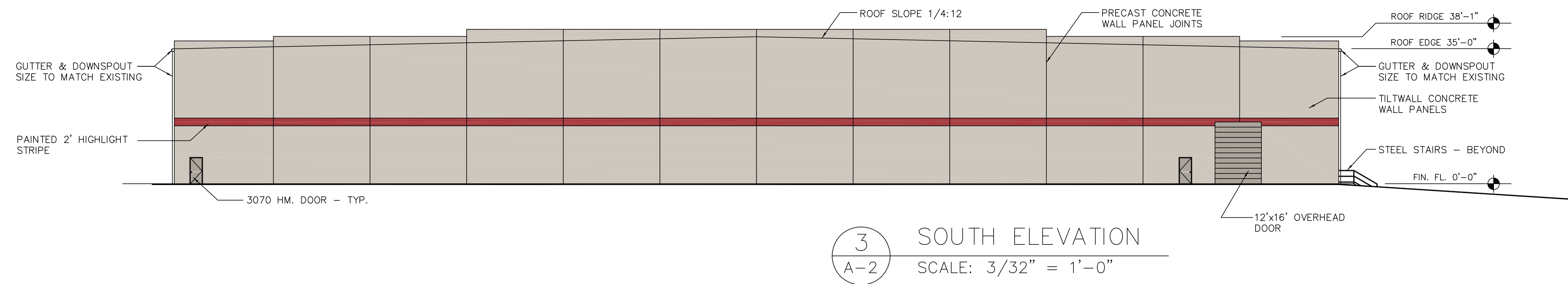
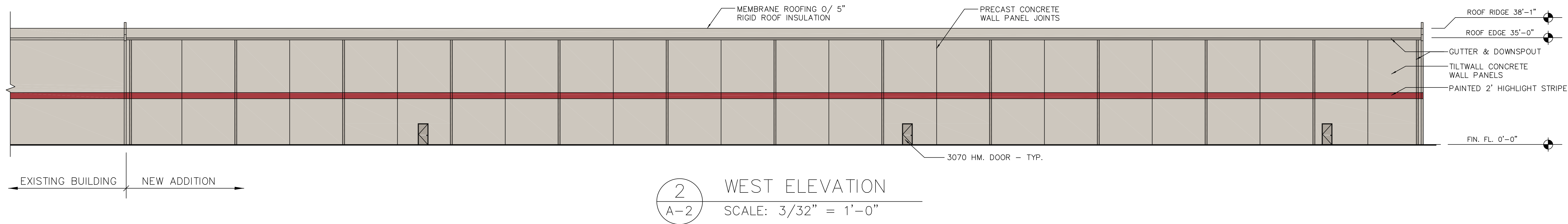
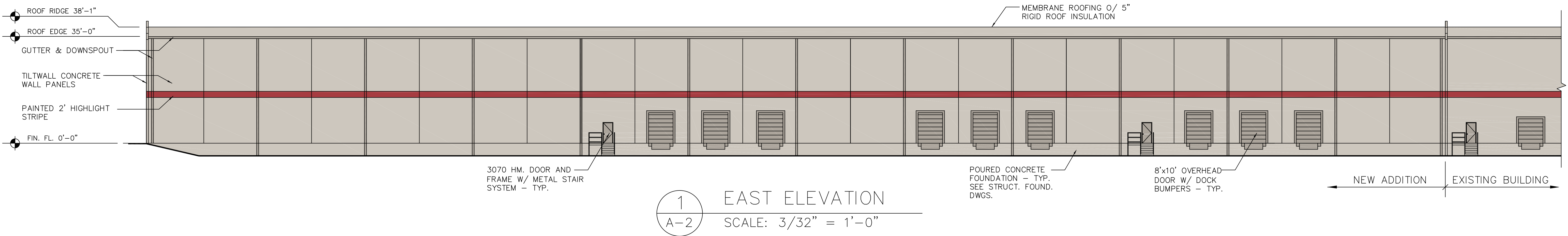
Date:	Issue:

STATE OF OHIO
DAVID M. KANE
#E-66166
REGISTERED
PROFESSIONAL ENGINEER
May 6, 2022

GATEWAY TIRE
WAREHOUSE ADDITION 2022
100 Corridor Park Dr, Monroe, Ohio
LANDSCAPE PLAN

Sheet Number:

CE-9



EXTERIOR MATERIAL LIST

PAINT - EXTERIOR METAL DOORS, FRAMES & DOWNSPOUTS SHERWIN WILLIAMS SEMI-GLOSS ALKYD ENAMEL EXTERIOR PAINT SW 7024 'FUNCTIONAL GRAY'.

PAINT - EXTERIOR HORIZONTAL ACCENT BAND SHERWIN WILLIAMS 'SHER-CRYL' HIGH PERFORMANCE ACRYLIC COATING. COLOR: SW 7588 'SHOW STOPPER'. (SEMI-GLOSS).

PAINT - EXTERIOR TILT WALL PANELS, U.N.O. (SATIN SHEEN). SHERWIN WILLIAMS EXTERIOR ACRYLIC LATEX PAINT OVER SW ULTRACRETE MEDIUM TEXTURE COATING. COLOR SW 7022 'ALPACA'.

NO.	REVISION	BY	DATE

DRAWN BY: J.W.

CHECKED BY:

APPROVED BY:

DATE: MARCH 2, 2022

PROJECT NO.: 2106

NEW BUILDING ADDITION FOR:

GATEWAY TIRE - MONROE

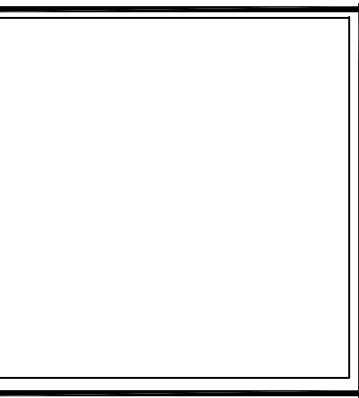
100 CORRIDOR PARK DRIVE

MONROE, OHIO 45050



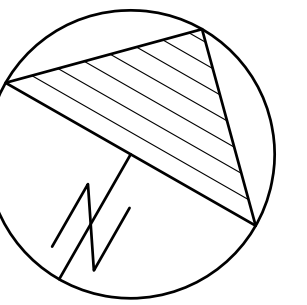
JAMES WALCH
ARCHITECTURE

295 WASHBURN ROAD
TALLMADGE, OHIO 44278
TEL: 330-630-1195



JAMES WALCH
LICENSE #8207099
EXPIRATION DATE 12/31/2023

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JAMES WALCH ARCHITECTURE



HORIZONTAL
SCALE IN FEET

ALBAN SURVEYING CO.
Engineers and Surveyors
38052 Euclid Avenue, Suite 200
Willoughby, Ohio 44094
Phone: 440-946-0752

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[illegible]

WAREHOUSE ADDITION 2022
100 Corridor Park Dr, Monroe, Ohio

PHOTOMETRIC PLAN

Number:

CE-10



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 19, 2022

Beacon Marshall
Charles Marshall
3457 Granger Rd
Akron OH 44333

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) – Construction Site Stormwater General Permit – 1GC08656*AG

Dear Applicant,

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name:	Gateway Tire Monroe 2022
Facility Location:	100 Corridor Park Dr
City:	Monroe
County:	Warren
Ohio EPA Facility Permit Number:	1GC08656*AG
Permit Effective Date:	April 19, 2022
Permit Expiration Date:	April 22, 2023

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. A copy of the general permit may be viewed or downloaded from [here](#). Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced General Permit. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

If you need assistance or have questions, please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at epa.ohio.gov.

Sincerely,

A handwritten signature in black ink that reads "Laurie A. Stevenson". The signature is written in a cursive, flowing style.

Laurie A. Stevenson
Director

Sheet Number:

Sheet Number:

SWP3-5

Stormwater Management Report

GATEWAY TIRE WAREHOUSE ADDITION 2022

100 CORRIDOR PARK DR, MONROE
WARREN COUNTY, OHIO

Completed by:

Alban Surveying Co
38052 Euclid Ave, Suite 200
Willoughby, Ohio 44094
David Kane, P.E. (#66166)
216-339-7034



March 7, 2022

Stormwater Management Report

Table of Contents

1.0	INTRODUCTION	2
2.0	PRE-DEVELOPED CONDITIONS	3 – 4
3.0	POST-DEVELOPED CONDITIONS	4 - 5
4.0	POST-DEVELOPED STORMWATER BMP	5 – 8

Appendices

A – POST-DEVELOPMENT MAP

B – SOILS REPORT

C – HYDRAULIC DATA

Stormwater Management Report

1.0 INTRODUCTION

A Storm Water Management Study has been prepared to effectively design and implement storm water runoff control for the post-development of the Gateway Tire Warehouse Addition 2022 Project located at 100 Corridor Park Dr, Monroe, Warren County, Ohio.

The project site consists of approximately 21.212 acres of partially developed land. The proposed development will consist of a 128,360 S.F. warehouse addition, storm sewers, detention pond modifications, site paving, and site grading. The disturbed area for this project is approximately 6.85 acres. The proposed addition is in Flood Zone "X" (area of minimal flood hazard) as shown on community panel #39017C0240F (10/19/2018). Portions of the project area are within Zone AE Regulatory Floodway.

Storm water quality may also be impacted by this development. This report will review the impacts of the proposed development and recommend Best Management Practices to reduce the impact of the post-development conditions.

Location Map:



Stormwater Management Report

2.0 PRE-DEVELOPED CONDITIONS

The property was previously developed in the late 90's. During this first phase of the project, the existing warehouse/office building, access drives for the entire property, a storm sewer system, utilities, and a dry detention basin were constructed. The site grading, storm sewers, utilities, and detention basin were sized to accommodate a future building expansion.

The Pre-developed site was delineated into one drainage area (see Appendix A for the Pre-Development Map). This drainage area represents the potential stormwater runoff that would drain to the project dry detention basin prior to the first phase of the development in the 90's and also prior to the construction of Corridor Park Dr. See the Pre-Development Map in Appendix A. The project area consists mostly of MrC2 (HSG C), Pb (HSG C/D), RvB (HSG C), and RvB2 (HSG C) silt loam.

PRE (1S): This area includes the prior grassland/range area that generally sloped from northwest to southeast towards Millers Creek. The drainage area is approximately 13.35 acres, has a weighted CN of 74, and a time of concentration of 25.7 min. See Appendix D for a detailed breakdown of the weighted curve number and time of concentration.

The 24-hour rainfall values for Monroe were obtained from NOAA Atlas 14:

STORM FREQUENCY	24 HOUR RAINFALL (INCHES)
1-YR	2.35
2-YR	2.82
5-YR	3.44
10-YR	3.93
25-YR	4.59
50-YR	5.11
100-YR	5.63

3.0 POST-DEVELOPED CONDITIONS

The proposed development will consist of a 128,360 S.F. warehouse addition, storm sewers, detention pond modifications, site paving, and site grading. The runoff from the warehouse addition will drain into the existing on-site storm sewer system which discharges into the existing dry detention basin. This detention basin discharges into Millers Creek. The Post-developed site was delineated into one drainage area (see Appendix B for the Post-Development Map).

POST (2S): This area includes the building addition, the eastern portion of the existing on-site building, some land west of Corridor Park Dr, and the on-site land southeast of the warehouse addition including the existing detention basin. The drainage area is approximately 18.21 acres, has a weighted CN of 89, and a time of concentration of 24.9 min. See Appendix D for a detailed breakdown of the weighted curve number and time of concentration

4.0 POST-DEVELOPED STORMWATER BMP

As previously stated, development of this type may increase the volume and rate of runoff from the pre-developed conditions. This increase must be mitigated so as not to cause a negative impact to the downstream uses.

The critical storm method shall be used for this project. To apply the critical storm method, the 1-yr 24-hour storm runoff must be calculated for the Pre-Developed conditions (see Existing Conditions and

Stormwater Management Report

Appendix A). Next, the corresponding Post-Development runoff for the 1-yr 24-hour storm must be calculated. Finally, the increase in storm water runoff volume is calculated. Based on the percent increase in runoff volume, the critical storm can be determined by the table below:

If the percent of increase in runoff volume is		The critical storm for peak rate control will be
equal to or greater than	and less than	
-	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	-	100 year

Based on the calculated critical storm, all post-development runoff with storm frequencies equal to and more frequent to the critical storm shall be restricted to the 1-yr pre-developed runoff rate.

The critical storm for this project can be calculated by the equation below:

Project Area:

$$= \frac{(1\text{-yr POST}) - (1\text{-yr PRE})}{(1\text{-yr PRE})} \times 100 = \frac{(2.121 \text{ ac-ft} - (0.585 \text{ ac-ft}))}{(0.585 \text{ ac-ft})} \times 100$$

$$= 263\%$$

$$= 50\text{-Year Critical Storm}$$

The delineated POST sub-catchment will drain to the existing detention basin and be detained in accordance with the Critical Storm Method. The post development 1 through 50-year storms will discharge from the detention pond at a flow rate less than or equal to the 1-year pre-developed storm. The post developed 100-year storm will discharge from the detention basin at a flow rate less than or equal to the same year pre-developed storm.

In accordance with the current Ohio EPA Construction Stormwater Permit the disturbed area for the project was reviewed. As mentioned in section 1.0 of this report the disturbed area for this project is approximately 6.85 acres with 18.21 acres discharging into the detention basin. The existing dry detention basin will be modified to comply with the current water quality and quantity regulations. This will include modifying the existing outlet control structure and constructing forebays at the storm sewer inlets into the detention basin along with constructing a micropool. This will then modify the existing dry detention basin into a dry extended detention basin. These BMPs along with proper maintenance of the storm water management system will help in controlling the discharge of pollutants.

Water Quality Volume (WQv) Required:

$$WQv = Rv \times P \times A / 12$$

$$Rv = 0.05 + 0.90 \times I = 0.05 + 0.90 \times (9.59/18.21) = 0.52$$

$$P = 0.90 \text{ in}$$

$$A = 18.21 \text{ (acres into the BMP)}$$

Stormwater Management Report

$$\begin{aligned} \text{WQv} &= 0.52 \times 0.90 \times 18.21 / 12 \\ &= 31,172 \text{ c.f. (provided at 673.94)} \end{aligned}$$

Required Forebay and Micro-Pool = 10% = $0.10 \times 31,172 = 3,117$ c.f.

Provided Forebay #1 = 1,900 c.f. (elev. 673.00 – 676.00)

Provided Forebay #2 = 1,900 c.f. (elev. 669.90 – 672.90)

Provided Micro-Pool = 5,528 c.f. (elev. 669.00 – 671.94)

Water Quality Orifice Diameter Sizing

No more than first half of WQv in less than one-third of drain time

Min. Drain Time = 48 hours ($1/3 = 16$ hours)

$1/2$ of WQv = 15,586 c.f.

Avg. Hydraulic Head = 1.00 ft

Orifice Diameter = 2.70 in

Volume discharged in $1/3$ of draw-down time = 14,091 c.f. (OK)

Draw-down time = 48 hours (OK)

Dry Extended Detention Basin Data:

- Invert: 671.94 (not including micropool)
- Rim: 678.00
- Side Slopes: Varies (3.5:1 max; 7:1 typical)
- Invert Emergency Spillway: 677.00 (8' bottom width; see Improvement Plans for details)

Dry Extended Detention Basin Outlet Control Structure:

- 6'x6' Pre-cast concrete basin *
- Rim: 676.70
- Grate: EJIW 5110-M1 (approximate. 360 sq. in. open area) (or approved equal)
- Invert of 60"x3" Window: 675.90 (W)
- Invert of 12" Diameter Inlet Pipe: 670.59 (W)
- Invert of 2.7" Diameter Water Quality Orifice: 671.94 (at headwall south of outlet structure)
- Invert of 48" Diameter Outlet pipe: 669.63 (E)

* See Improvement plans for detail

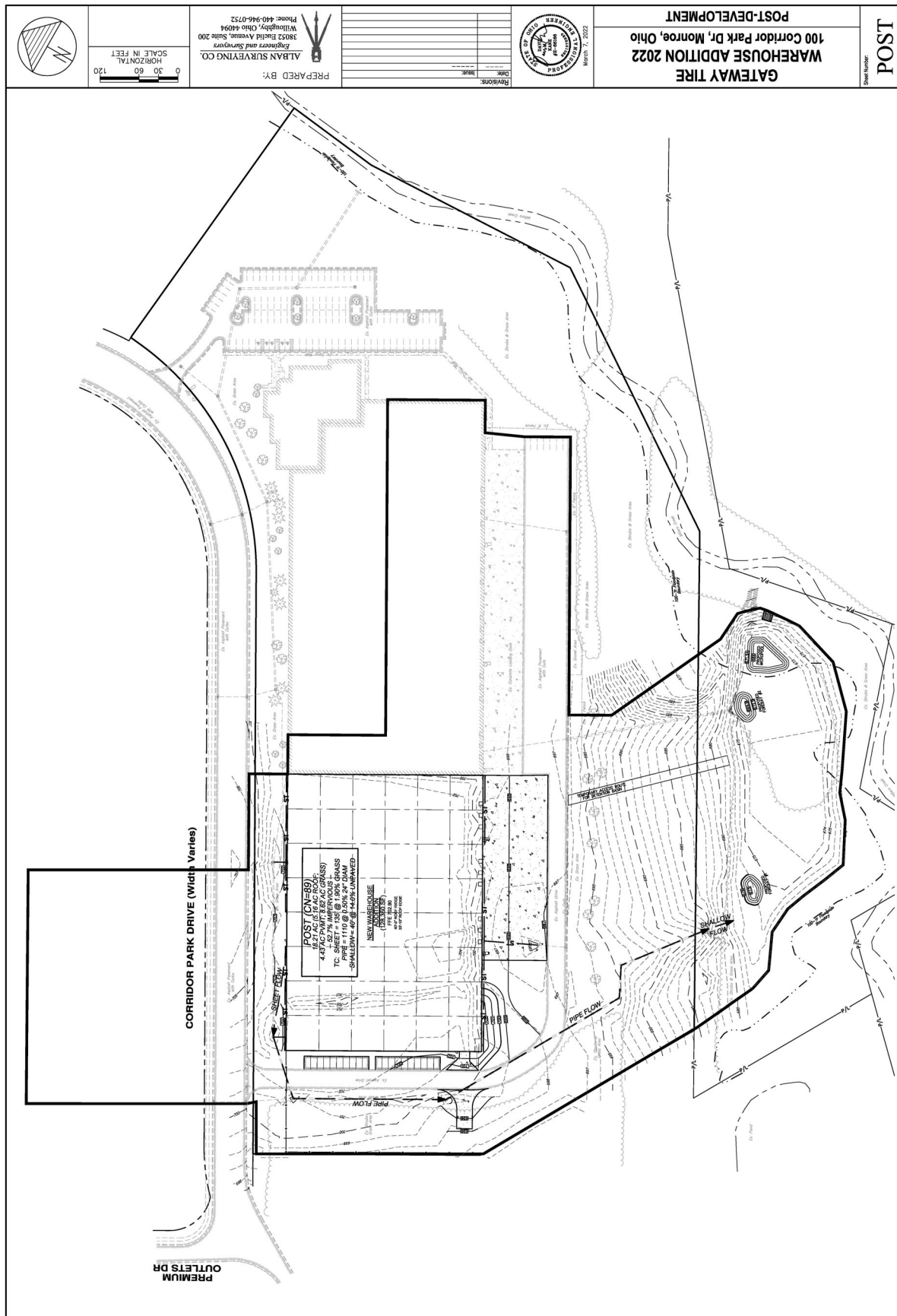
Dry Extended Detention Basin Hydrograph Summary:

		1	2	5	10	25	50	100
CFS	PRE (1S)	5.61	9.21	14.60	19.20	25.77	31.17	36.70
	POST (2S)	25.53	30.85	40.67	48.48	59.04	67.35	75.64
	Outflow DETENTION (1P)	0.32	0.30	0.85	1.90	3.74	4.97	7.89
	Required Discharge Rate	5.61	5.61	5.61	5.61	5.61	5.61	36.70
DETENTION Peak Elev. (ft)		674.91	675.50	676.01	676.12	676.67	676.65	676.88
DETENTION Storage (cf)		72,574	101,868	129,265	135,552	149,883	167,128	182,476
Millers Creek Flood Elev. (ft)		672.00	673.00	674.50	674.78	674.92	675.06	675.78

GATEWAY TIRE WAREHOUSE ADDITION 2022 – MONROE, OHIO



GATEWAY TIRE WAREHOUSE ADDITION 2022 – MONROE, OHIO



APPENDIX B: SOILS REPORT



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Warren County, Ohio**



February 28, 2022

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Warren County, Ohio
Survey Area Data: Version 20, Sep 14, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 28, 2019—Dec 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DaB	Dana silt loam, 2 to 6 percent slopes	11.9	17.8%
MnD2	Miamian-Hennepin silt loams, 12 to 18 percent slopes, moderately eroded	0.9	1.4%
MrC2	Miamian-Russell silt loams, 6 to 12 percent slopes, eroded	11.0	16.4%
Pb	Patton silt loam, silted	23.6	35.2%
Pc	Patton silty clay loam, 0 to 2 percent slopes	0.0	0.0%
RvB	Russell-Miamian silt loams, 2 to 6 percent slopes	9.9	14.8%
RvB2	Russell-Miamian silt loams, 2 to 6 percent slopes, moderately eroded	9.7	14.4%
Totals for Area of Interest		67.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit

descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Warren County, Ohio

DaB—Dana silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2w0v8
Elevation: 590 to 1,180 feet
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 145 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dana and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dana

Setting

Landform: Ground moraines, till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Loess over loamy till derived from sedimentary rock

Typical profile

Ap - 0 to 14 inches: silt loam
Bt - 14 to 37 inches: silty clay loam
2BC - 37 to 48 inches: clay loam
2Cd - 48 to 79 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 37 to 55 inches to densic material
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R111DY012IN - Till Ridge Prairie
Hydric soil rating: No

Minor Components

Brookston

Percent of map unit: 5 percent
Landform: — error in exists on —
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Ecological site: F111DY008IN - Till Depression Flatwood
Hydric soil rating: Yes

Raub

Percent of map unit: 5 percent
Landform: Till plains, hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R111DY012IN - Till Ridge Prairie
Hydric soil rating: No

MnD2—Miamian-Hennepin silt loams, 12 to 18 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 5rb3
Elevation: 400 to 1,530 feet
Mean annual precipitation: 30 to 42 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 151 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Miamian and similar soils: 60 percent
Hennepin and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Miamian

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy till

Custom Soil Resource Report

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 22 inches: clay loam
H3 - 22 to 60 inches: loam

Properties and qualities

Slope: 12 to 18 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Forage suitability group: Unnamed (G111BYA-1OH)
Other vegetative classification: Unnamed (G111BYA-1OH)
Hydric soil rating: No

Description of Hennepin

Setting

Landform: Till plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 8 inches: loam
H3 - 8 to 60 inches: loam

Properties and qualities

Slope: 12 to 18 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Hydric soil rating: No

Minor Components

Gravelly surface areas

Percent of map unit: 10 percent

MrC2—Miamian-Russell silt loams, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2vzcn
Elevation: 560 to 1,200 feet
Mean annual precipitation: 37 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 145 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Miamian, eroded, and similar soils: 60 percent
Russell, eroded, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Miamian, Eroded

Setting

Landform: Till plains
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 7 inches: silt loam
2Bt - 7 to 25 inches: silty clay loam
2BCt - 25 to 30 inches: clay loam
2Cd - 30 to 79 inches: loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Hydric soil rating: No

Description of Russell, Eroded

Setting

Landform: Till plains, hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 22 inches: silty clay loam
2Bt2 - 22 to 33 inches: clay loam
2BCt - 33 to 36 inches: clay loam
2Cd - 36 to 79 inches: loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 34 to 59 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Hydric soil rating: No

Minor Components

Losantville, severely eroded

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Shoulder

Custom Soil Resource Report

Landform position (three-dimensional): Nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F111DY010IN - Till Ridge
Hydric soil rating: No

Treaty

Percent of map unit: 5 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111DY008IN - Till Depression Flatwood
Hydric soil rating: Yes

Pb—Patton silt loam, silted

Map Unit Setting

National map unit symbol: 5rbc
Elevation: 300 to 450 feet
Mean annual precipitation: 35 to 48 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 160 to 225 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Patton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Patton

Setting

Landform: Depressions
Parent material: Lacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 64 inches: silty clay loam
H3 - 64 to 84 inches: stratified loam to silt loam to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Available water supply, 0 to 60 inches: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F111DY013IN - Wet Lacustrine Forest
Hydric soil rating: Yes

Minor Components

Eel

Percent of map unit: 4 percent
Landform: Flood-plain steps, flood plains
Ecological site: F111DY004IN - Dry Alluvium
Hydric soil rating: No

Genesee

Percent of map unit: 4 percent
Landform: Flood plains
Ecological site: F111DY004IN - Dry Alluvium
Hydric soil rating: No

Shoals

Percent of map unit: 4 percent
Landform: Flood plains
Ecological site: F111DY003IN - Wet Alluvium
Hydric soil rating: No

Algiers

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111DY003IN - Wet Alluvium
Hydric soil rating: No

Sloan

Percent of map unit:
Landform: Flood plains
Ecological site: F111DY003IN - Wet Alluvium
Hydric soil rating: Yes

Pc—Patton silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2w0tt
Elevation: 490 to 990 feet
Mean annual precipitation: 37 to 46 inches

Custom Soil Resource Report

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 145 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Patton, drained, and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Patton, Drained

Setting

Landform: Lake plains, terraces, depressions

Landform position (two-dimensional): Toeslope, footslope

Landform position (three-dimensional): Tread, flat, dip

Down-slope shape: Linear, concave

Across-slope shape: Concave

Parent material: Loamy glaciolacustrine deposits

Typical profile

Ap - 0 to 11 inches: silty clay loam

Bg1 - 11 to 31 inches: silty clay loam

Bg2 - 31 to 38 inches: silty clay loam

Cg - 38 to 60 inches: stratified silt loam to silty clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: F111DY013IN - Wet Lacustrine Forest

Hydric soil rating: Yes

Minor Components

Henshaw

Percent of map unit: 8 percent

Landform: Slackwater areas on outwash terraces

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: F111DY003IN - Wet Alluvium

Hydric soil rating: No

Custom Soil Resource Report

Uniontown

Percent of map unit: 4 percent
Landform: Stream terraces, lakebeds
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F111DY004IN - Dry Alluvium
Hydric soil rating: No

Genesee

Percent of map unit: 4 percent
Landform: Natural levees on flood plains, flood-plain steps on flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, rise, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111DY004IN - Dry Alluvium
Hydric soil rating: No

Algiers

Percent of map unit: 4 percent
Landform: Flood-plain steps, terraces, flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Convex, linear
Ecological site: F111DY003IN - Wet Alluvium
Hydric soil rating: No

RvB—Russell-Miamian silt loams, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5rbz
Elevation: 500 to 1,530 feet
Mean annual precipitation: 35 to 46 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 150 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Russell and similar soils: 65 percent
Miamian and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Russell

Setting

Landform: Till plains

Custom Soil Resource Report

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 29 inches: silty clay loam
H3 - 29 to 38 inches: silty clay loam
H4 - 38 to 60 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Hydric soil rating: No

Description of Miamian

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 24 inches: clay loam
H4 - 24 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Custom Soil Resource Report

Calcium carbonate, maximum content: 50 percent

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F111DY010IN - Till Ridge

Forage suitability group: Unnamed (G111BYA-1OH)

Other vegetative classification: Unnamed (G111BYA-1OH)

Hydric soil rating: No

Minor Components

Brookston

Percent of map unit: 5 percent

Landform: Drainageways, depressions

Ecological site: F111DY008IN - Till Depression Flatwood

Hydric soil rating: Yes

Birkbeck

Percent of map unit:

Landform: Draws

Ecological site: F111DY010IN - Till Ridge

Moderately eroded areas

Percent of map unit:

Xenia

Percent of map unit:

Landform: Till plains

Ecological site: F111DY010IN - Till Ridge

Wynn

Percent of map unit:

Landform: Till plains

Ecological site: F111DY010IN - Till Ridge

RvB2—Russell-Miamian silt loams, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 5rc0

Elevation: 500 to 1,530 feet

Mean annual precipitation: 35 to 46 inches

Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 150 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Russell and similar soils: 50 percent

Miamian and similar soils: 45 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Russell

Setting

Landform: Till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loess over loamy till

Typical profile

H1 - 0 to 5 inches: silt loam

H2 - 5 to 27 inches: silty clay loam

H3 - 27 to 36 inches: silty clay loam

H4 - 36 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F111DY010IN - Till Ridge

Hydric soil rating: No

Description of Miamian

Setting

Landform: Till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loess over loamy till

Typical profile

H1 - 0 to 6 inches: silt loam

H2 - 6 to 22 inches: clay loam

H3 - 22 to 60 inches: loam

Custom Soil Resource Report

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F111DY010IN - Till Ridge
Forage suitability group: Unnamed (G111BYA-1OH)
Other vegetative classification: Unnamed (G111BYA-1OH)
Hydric soil rating: No

Minor Components

Brookston

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Ecological site: F111DY008IN - Till Depression Flatwood
Hydric soil rating: Yes

Xenia

Percent of map unit:
Landform: Till plains
Ecological site: F111DY010IN - Till Ridge

Wynn

Percent of map unit:
Landform: Till plains
Ecological site: F111DY010IN - Till Ridge

Birkbeck

Percent of map unit:
Landform: Draws
Ecological site: F111DY010IN - Till Ridge

APPENDIX C: HYDRAULIC DATA

Project and Watershed Information; WQv Calculation

version 3.1 2018-10-25

Project Details

Project Name:	Gateway Tire Warehouse Addition
Project Location:	100 Corridor Park Dr
	City of Monroe
Project Latitude:	
Project Longitude:	
NPDES Permit Applicant:	
Submitted by:	David Kane
Date:	3/7/2022

Subwatershed Details

Subwatershed ID/Label:	Post Into Existing Detention Pond (Modify)		
Subwatershed Drainage Area, A_{total} =	18.21	acres	= 793,228 ft^2
Subwatershed Impervious Area, A_{imp} =	9.59	acres	= 417,740 ft^2
Imperviousness fraction, i =	0.53		= 53 %
Volumetric Runoff Coefficient, R_v =	0.52		
Water Quality Volume, WQ_v =	31,172	ft^3	

Dry Extended Detention Basin WQv Compliance Tool

version 3.1 2018-10-25

Project Summary

Project Name: Gateway Tire Warehouse Addition
 Subwatershed ID/Label: Post Into Existing Detention Pond (Modify)
 Submitted by: David Kane
 Date: 3/7/2022

Subwatershed Drainage Area, A_{total} =	18.21	acres	=	793,228	ft ²
Subwatershed Impervious Area, A_{imp} =	9.59	acres	=	417,740	ft ²
Imperviousness fraction, i =	0.53			53	%
Water Quality Volume, WQ_v =	31,172	ft ³	=	0.72	ac-ft

Step 1 - Soil Suitability

Soil Series

Pb (silt loam)

HSG

C

Step 1 - Soil Suitability

Soil Series	Pb (silt loam)	HSG	C
-------------	----------------	-----	---

Step 2 - Dry ED Basin Volume Requirements

Extended Detention Volume, EDv =	31172	ft ³
Minimum Sediment Storage Volume, V _{sediment} =	6234	ft ³
Minimum Forebay Volume, V _{forebay} =	3117	ft ³
Minimum Permanent Micropool Volume, V _{micropool} =	3117	ft ³

Step 3 - Basin Stage-Storage Relationship

[illegible][illegible]

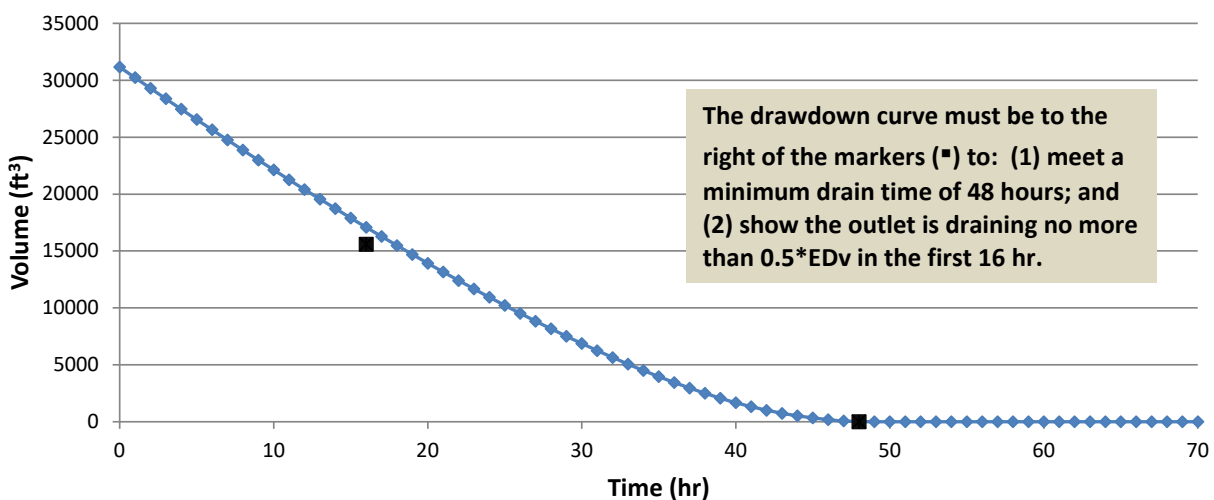
Step 4 - Outlet Elevations and Storage Volumes

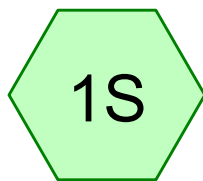
WQ Orifice Invert Elevation =	671.94		
Elevation of Top of EDv =	673.94		
Secondary Outlet Invert Elevation =	675.90		OKAY
WQ Treatment Volume Provided, $V_{\text{treatment}}$ =	121,180	ft ³	
Treatment Vol Provided Relative to EDv, $V_{\text{treatment}}/\text{EDv}$ =	3.89		= 389% OKAY
Permanent Pool Volume Provided, PPv =	5,528	ft ³	
Forebay Volume Provided, V_{forebay} =	3,800	ft ³	= 1.22
Is forebay volume below WQ outlet? (Yes or No)	No		= 122% OKAY
Permanent Micropool Volume Provided, $V_{\text{micropool}}$ =	5,528	ft ³	
Ratio $V_{\text{micropool}}$ Provided to $V_{\text{micropool}}$ Required =	1.77		= 177% OKAY
Sediment Storage Volume Provided, V_{sediment} =	9,328	ft ³	
Ratio V_{sediment} Provided to V_{sediment} Required =	1.50		= 150% OKAY

Step 5 - Outlet (Orifice) Sizing

Maximum Hydraulic Head, H_{max} =	2.00	ft	
Orifice Coefficient, C =	0.6		
Target (Minimum) Draw-down Time, T_d =	48	hr	
Target Average Discharge, Q_{avg} =	0.18	cfs	
Average Hydraulic Head, H_{avg} =	1.00	ft	
Estimated Orifice Area, A_{orifice} =	5.39	in ²	= 0.037 ft ²
Estimated Orifice Diameter, D_{orifice} =	2.62	in	= 0.22 ft
Design Orifice Diameter, D_{orifice} =	2.70	in	= 0.23 ft
Design Orifice Area, A_{orifice} =	5.69	in ²	= 0.040 ft ²
Time to Completely Drain EDv, T_d =	48	hr	must be ≥ 48 hr OKAY
Volume Drained in First 16 hr =	14,091	ft ³	
% of EDv =	45.2	%	must be $\leq 50\%$ OKAY

Dry Basin - EDv Drawdown vs Time





PRE

Millers Creek Flood Elevations
100' Downstream of X-Sect. 'M'
FEMA Map Revision 1/2/20

100-Year = 675.78

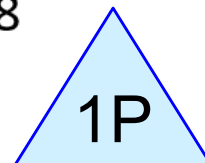
50-Year = 675.06

25-Year = 674.92

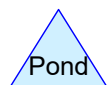
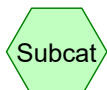
10-Year = 674.78



POST



DETENTION



Routing Diagram for Gateway Tire_1

Prepared by David Kane, PE, Printed 3/6/2022

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Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 1-Year Rainfall=2.35"

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Page 2

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=0.53"
Flow Length=970' Tc=25.7 min CN=74 Runoff=5.61 cfs 0.585 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=1.32"
Flow Length=1,285' Tc=24.9 min CN=89 Runoff=23.53 cfs 2.010 af

Pond 1P: DETENTION

Peak Elev=674.91' Storage=72,574 cf Inflow=23.53 cfs 2.010 af
Outflow=0.32 cfs 1.466 af

Total Runoff Area = 31.560 ac Runoff Volume = 2.595 af Average Runoff Depth = 0.99"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 1-Year Rainfall=2.35"

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Page 3

Summary for Subcatchment 1S: PRE

Runoff = 5.61 cfs @ 12.23 hrs, Volume= 0.585 af, Depth= 0.53"

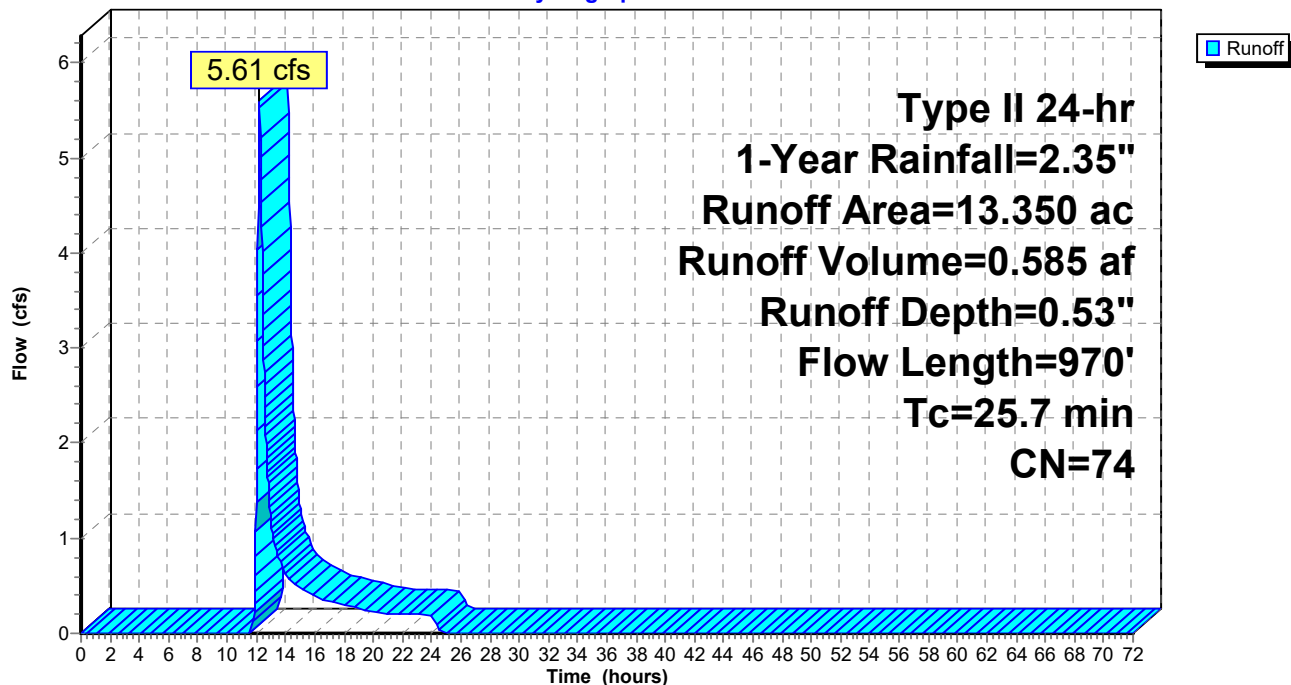
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type II 24-hr 1-Year Rainfall=2.35"

Area (ac)	CN	Description
13.350	74	Pasture/grassland/range, Good, HSG C
13.350		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8	280	0.0200	0.20		Sheet Flow, Range n= 0.130 P2= 2.44"
2.9	690	0.0600	3.94		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
25.7	970	Total			

Subcatchment 1S: PRE

Hydrograph



Gateway Tire_1

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Type II 24-hr 1-Year Rainfall=2.35"

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Summary for Subcatchment 2S: POST

Runoff = 23.53 cfs @ 12.19 hrs, Volume= 2.010 af, Depth= 1.32"

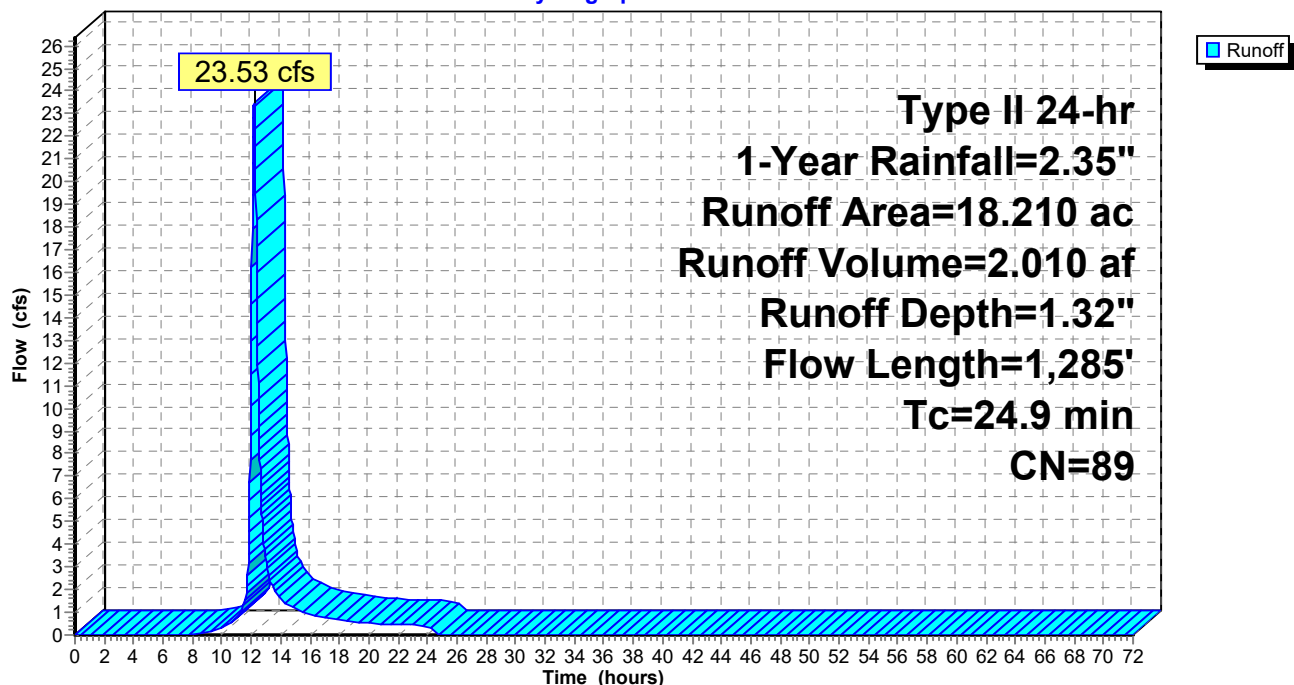
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type II 24-hr 1-Year Rainfall=2.35"

Area (ac)	CN	Description
5.160	98	Roofs, HSG D
8.620	80	>75% Grass cover, Good, HSG D
4.430	98	Paved parking, HSG D
18.210	89	Weighted Average
8.620		47.34% Pervious Area
9.590		52.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	135	0.0190	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 2.44"
3.6	1,110	0.0050	5.09	16.00	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
0.1	40	0.1400	6.02		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
24.9	1,285	Total			

Subcatchment 2S: POST

Hydrograph



Gateway Tire_1

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Type II 24-hr 1-Year Rainfall=2.35"

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Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 1.32" for 1-Year event
 Inflow = 23.53 cfs @ 12.19 hrs, Volume= 2.010 af
 Outflow = 0.32 cfs @ 24.24 hrs, Volume= 1.466 af, Atten= 99%, Lag= 723.5 min
 Primary = 0.32 cfs @ 24.24 hrs, Volume= 1.466 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 674.91' @ 24.24 hrs Surf.Area= 46,036 sf Storage= 72,574 cf

Plug-Flow detention time= 1,674.1 min calculated for 1.465 af (73% of inflow)
 Center-of-Mass det. time= 1,576.9 min (2,415.4 - 838.4)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

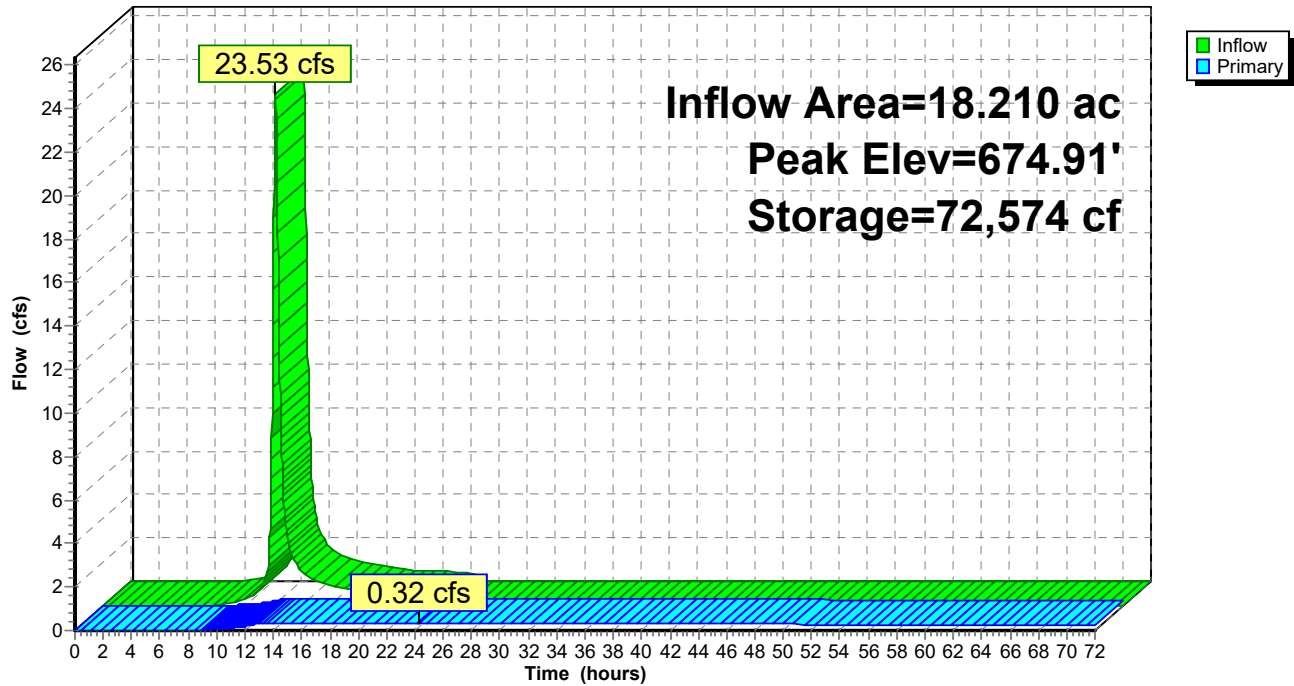
Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=0.32 cfs @ 24.24 hrs HW=674.91' TW=672.00' (Fixed TW Elev= 672.00')

1=Culvert (Passes 0.32 cfs of 103.14 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.32 cfs @ 8.13 fps)
 3=Windows (Controls 0.00 cfs)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Pond 1P: DETENTION

Hydrograph



Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 2-Year Rainfall=2.82"

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Page 1

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=0.80"
Flow Length=970' Tc=25.7 min CN=74 Runoff=9.21 cfs 0.886 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=1.74"
Flow Length=1,285' Tc=24.9 min CN=89 Runoff=30.85 cfs 2.637 af

Pond 1P: DETENTION

Peak Elev=675.50' Storage=101,868 cf Inflow=30.85 cfs 2.637 af
Outflow=0.30 cfs 1.361 af

Total Runoff Area = 31.560 ac Runoff Volume = 3.523 af Average Runoff Depth = 1.34"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 2-Year Rainfall=2.82"

Printed 3/6/2022

Page 4

Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 1.74" for 2-Year event
 Inflow = 30.85 cfs @ 12.18 hrs, Volume= 2.637 af
 Outflow = 0.30 cfs @ 24.32 hrs, Volume= 1.361 af, Atten= 99%, Lag= 728.1 min
 Primary = 0.30 cfs @ 24.32 hrs, Volume= 1.361 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 675.50' @ 24.32 hrs Surf.Area= 51,669 sf Storage= 101,868 cf

Plug-Flow detention time= 1,741.5 min calculated for 1.361 af (52% of inflow)
 Center-of-Mass det. time= 1,625.8 min (2,456.4 - 830.7)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' / ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=0.30 cfs @ 24.32 hrs HW=675.50' TW=673.00' (Fixed TW Elev= 673.00')

1=Culvert (Passes 0.30 cfs of 95.76 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.30 cfs @ 7.62 fps)
 3=Windows (Controls 0.00 cfs)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 5-Year Rainfall=3.44"

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Page 1

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=1.20"

Flow Length=970' Tc=25.7 min CN=74 Runoff=14.60 cfs 1.334 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=2.30"

Flow Length=1,285' Tc=24.9 min CN=89 Runoff=40.67 cfs 3.493 af

Pond 1P: DETENTION

Peak Elev=676.01' Storage=129,265 cf Inflow=40.67 cfs 3.493 af

Outflow=0.85 cfs 1.391 af

Total Runoff Area = 31.560 ac Runoff Volume = 4.826 af Average Runoff Depth = 1.84"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 5-Year Rainfall=3.44"

Printed 3/6/2022

Page 4

Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 2.30" for 5-Year event
 Inflow = 40.67 cfs @ 12.18 hrs, Volume= 3.493 af
 Outflow = 0.85 cfs @ 19.73 hrs, Volume= 1.391 af, Atten= 98%, Lag= 453.0 min
 Primary = 0.85 cfs @ 19.73 hrs, Volume= 1.391 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 676.01' @ 19.73 hrs Surf.Area= 56,347 sf Storage= 129,265 cf

Plug-Flow detention time= 1,432.5 min calculated for 1.391 af (40% of inflow)
 Center-of-Mass det. time= 1,309.5 min (2,132.2 - 822.7)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=0.84 cfs @ 19.73 hrs HW=676.01' TW=674.50' (Fixed TW Elev= 674.50')

1=Culvert (Passes 0.84 cfs of 74.40 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.24 cfs @ 5.92 fps)
 3=Windows (Orifice Controls 0.60 cfs @ 1.07 fps)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 10-Year Rainfall=3.93"

Printed 3/6/2022

Page 1

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=1.55"

Flow Length=970' Tc=25.7 min CN=74 Runoff=19.20 cfs 1.719 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=2.76"

Flow Length=1,285' Tc=24.9 min CN=89 Runoff=48.48 cfs 4.184 af

Pond 1P: DETENTION

Peak Elev=676.12' Storage=135,552 cf Inflow=48.48 cfs 4.184 af

Outflow=1.90 cfs 1.988 af

Total Runoff Area = 31.560 ac Runoff Volume = 5.903 af Average Runoff Depth = 2.24"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

Prepared by David Kane, PE

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Type II 24-hr 10-Year Rainfall=3.93"

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Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 2.76" for 10-Year event
 Inflow = 48.48 cfs @ 12.18 hrs, Volume= 4.184 af
 Outflow = 1.90 cfs @ 15.57 hrs, Volume= 1.988 af, Atten= 96%, Lag= 203.7 min
 Primary = 1.90 cfs @ 15.57 hrs, Volume= 1.988 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 676.12' @ 15.57 hrs Surf.Area= 57,521 sf Storage= 135,552 cf

Plug-Flow detention time= 1,013.9 min calculated for 1.988 af (48% of inflow)
 Center-of-Mass det. time= 897.0 min (1,714.6 - 817.6)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' / ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=1.90 cfs @ 15.57 hrs HW=676.12' TW=674.78' (Fixed TW Elev= 674.78')

1=Culvert (Passes 1.90 cfs of 70.10 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.22 cfs @ 5.58 fps)
 3=Windows (Orifice Controls 1.68 cfs @ 1.51 fps)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Gateway Tire_1

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Type II 24-hr 25-Year Rainfall=4.59"

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Page 1

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=2.04"

Flow Length=970' Tc=25.7 min CN=74 Runoff=25.77 cfs 2.272 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=3.38"

Flow Length=1,285' Tc=24.9 min CN=89 Runoff=59.04 cfs 5.130 af

Pond 1P: DETENTION

Peak Elev=676.37' Storage=149,943 cf Inflow=59.04 cfs 5.130 af

Outflow=3.73 cfs 2.882 af

Total Runoff Area = 31.560 ac Runoff Volume = 7.402 af Average Runoff Depth = 2.81"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

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Type II 24-hr 25-Year Rainfall=4.59"

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Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 3.38" for 25-Year event
 Inflow = 59.04 cfs @ 12.18 hrs, Volume= 5.130 af
 Outflow = 3.73 cfs @ 13.89 hrs, Volume= 2.882 af, Atten= 94%, Lag= 102.6 min
 Primary = 3.73 cfs @ 13.89 hrs, Volume= 2.882 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 676.37' @ 13.89 hrs Surf.Area= 60,123 sf Storage= 149,943 cf

Plug-Flow detention time= 739.9 min calculated for 2.881 af (56% of inflow)
 Center-of-Mass det. time= 631.2 min (1,443.0 - 811.8)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=3.73 cfs @ 13.89 hrs HW=676.37' TW=674.92' (Fixed TW Elev= 674.92')

1=Culvert (Passes 3.73 cfs of 72.78 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.23 cfs @ 5.79 fps)
 3=Windows (Orifice Controls 3.50 cfs @ 2.80 fps)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Gateway Tire_1

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Type II 24-hr 50-Year Rainfall=5.11"

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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=2.45"

Flow Length=970' Tc=25.7 min CN=74 Runoff=31.17 cfs 2.728 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=3.88"

Flow Length=1,285' Tc=24.9 min CN=89 Runoff=67.35 cfs 5.884 af

Pond 1P: DETENTION

Peak Elev=676.65' Storage=167,128 cf Inflow=67.35 cfs 5.884 af

Outflow=4.97 cfs 3.581 af

Total Runoff Area = 31.560 ac Runoff Volume = 8.612 af Average Runoff Depth = 3.27"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

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Type II 24-hr 50-Year Rainfall=5.11"

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Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 3.88" for 50-Year event
 Inflow = 67.35 cfs @ 12.17 hrs, Volume= 5.884 af
 Outflow = 4.97 cfs @ 13.57 hrs, Volume= 3.581 af, Atten= 93%, Lag= 83.7 min
 Primary = 4.97 cfs @ 13.57 hrs, Volume= 3.581 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 676.65' @ 13.57 hrs Surf.Area= 63,090 sf Storage= 167,128 cf

Plug-Flow detention time= 621.2 min calculated for 3.580 af (61% of inflow)
 Center-of-Mass det. time= 516.8 min (1,324.8 - 808.0)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 ' / ' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=4.98 cfs @ 13.57 hrs HW=676.65' TW=675.06' (Fixed TW Elev= 675.06')

1=Culvert (Passes 4.98 cfs of 76.20 cfs potential flow)
 2=WQ Orifice (Orifice Controls 0.24 cfs @ 6.06 fps)
 3=Windows (Orifice Controls 4.73 cfs @ 3.79 fps)
 4=Grate (EJIW 5110-M5) (Controls 0.00 cfs)
 5=Emergency Spillway (Controls 0.00 cfs)

Gateway Tire_1*Type II 24-hr 100-Year Rainfall=5.63"*

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Page 1

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE

Runoff Area=13.350 ac 0.00% Impervious Runoff Depth=2.88"

Flow Length=970' Tc=25.7 min CN=74 Runoff=36.70 cfs 3.200 af

Subcatchment2S: POST

Runoff Area=18.210 ac 52.66% Impervious Runoff Depth=4.38"

Flow Length=1,285' Tc=24.9 min CN=89 Runoff=75.64 cfs 6.643 af

Pond 1P: DETENTION

Peak Elev=676.88' Storage=182,476 cf Inflow=75.64 cfs 6.643 af

Outflow=7.89 cfs 3.951 af

Total Runoff Area = 31.560 ac Runoff Volume = 9.843 af Average Runoff Depth = 3.74"
69.61% Pervious = 21.970 ac 30.39% Impervious = 9.590 ac

Gateway Tire_1

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Type II 24-hr 100-Year Rainfall=5.63"

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Summary for Pond 1P: DETENTION

Inflow Area = 18.210 ac, 52.66% Impervious, Inflow Depth = 4.38" for 100-Year event
 Inflow = 75.64 cfs @ 12.17 hrs, Volume= 6.643 af
 Outflow = 7.89 cfs @ 13.12 hrs, Volume= 3.951 af, Atten= 90%, Lag= 56.9 min
 Primary = 7.89 cfs @ 13.12 hrs, Volume= 3.951 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Peak Elev= 676.88' @ 13.12 hrs Surf.Area= 65,626 sf Storage= 182,476 cf

Plug-Flow detention time= 390.1 min calculated for 3.950 af (59% of inflow)
 Center-of-Mass det. time= 284.7 min (1,089.3 - 804.6)

Volume	Invert	Avail.Storage	Storage Description
#1	671.94'	261,974 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
671.94	2,700	0	0
673.00	15,115	9,442	9,442
674.00	36,450	25,783	35,224
675.00	47,035	41,743	76,967
676.00	56,220	51,628	128,594
677.00	66,855	61,538	190,132
678.00	76,830	71,843	261,974

Device	Routing	Invert	Outlet Devices
#1	Primary	669.63'	48.0" Round Culvert L= 52.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 669.63' / 669.11' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 12.57 sf
#2	Device 1	671.94'	2.7" Vert. WQ Orifice C= 0.600
#3	Device 1	675.90'	60.0" W x 3.0" H Vert. Windows C= 0.600
#4	Device 1	676.70'	1.0" x 2.9" Horiz. Grate (EJIW 5110-M5) X 3.00 columns X 17 rows C= 0.600 Limited to weir flow at low heads
#5	Primary	677.00'	33.0 deg x 8.0' long x 1.00' rise Emergency Spillway Cv= 2.60 (C= 3.25)

Primary OutFlow Max=7.90 cfs @ 13.12 hrs HW=676.88' TW=675.78' (Fixed TW Elev= 675.78')

- 1=Culvert (Passes 7.90 cfs of 63.59 cfs potential flow)
- 2=WQ Orifice (Orifice Controls 0.20 cfs @ 5.06 fps)
- 3=Windows (Orifice Controls 5.57 cfs @ 4.46 fps)
- 4=Grate (EJIW 5110-M5) (Orifice Controls 2.12 cfs @ 2.07 fps)
- 5=Emergency Spillway (Controls 0.00 cfs)

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

Gateway Tire Warehouse Addition
100 Corridor Park Drive
Monroe, Warren County, Ohio 45050
800-837-1405

SWPPP Prepared For:

Gateway Tire Company Inc
Martin Dunlap
100 Corridor Park Drive
Monroe, Ohio 45050
800-837-1405
dandk-ax.tireweb.com

SWPPP Prepared By:

Alban Surveying Co.
David Kane, PE
38052 Euclid Ave, Suite 200
Willoughby, Ohio 44094
440-946-0752
kanecivil@gmail.com

SWPPP Preparation Date:

04/05/2022

Estimated Project Dates:

Project Start Date: 05/18/2022

Project Completion Date: 12/15/2022

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SECTION 1: CONTACT INFORMATION/RESPONSIBLE PARTIES

1.1 Operator(s) / Subcontractor(s)

Operator(s):

Gateway Tire Company Inc
Martin Dunlap
100 Corridor Park Dr
Monroe, Ohio 45050
800-837-1405
Dandk-ax.fireweb.com

Subcontractor(s):

Beacon Marshall (EM Construction, LLC)
Charles R. Marshall
3457 Granger Rd
Akron, Ohio 44333
330-659-2040
cmarshall@ mccdsgnbuild.com
General Site Contractor

[Repeat as necessary.]

Emergency 24-Hour Contact:

Beacon Marshall (EM Construction, LLC)
Charles R. Marshall
330-659-2040

1.2 Stormwater Team

Stormwater Team

Name and/or Position, and Contact	Responsibilities	I Have Completed Training Required by CGP Part 6.2	I Have Read the CGP and Understand the Applicable Requirements
		☐ Yes ☐ No	☐ Yes Date:
		☐ Yes ☐ No	☐ Yes Date:
		☐ Yes ☐ No	☐ Yes Date:

[Insert or delete rows as necessary.]

Stormwater Team Members Who Conduct Inspections Pursuant to CGP Part 4

Name and/or Position and Contact	Training(s) Received	Date Training(s) Completed	If Training is a Non-EPA Training, Confirm that it Satisfies the Minimum Elements of CGP Part 6.3.b
		Date:	☐ Principles and practices of erosion and sediment control and pollution prevention practices at construction sites ☐ Proper installation and maintenance of erosion and sediment controls and pollution prevention practices used at construction sites ☐ Performance of inspections, including the proper completion of required reports and documentation, consistent with the requirements of Part 4
		Date:	☐ Principles and practices of erosion and sediment control and pollution prevention practices at construction sites ☐ Proper installation and maintenance of erosion and sediment controls and pollution prevention practices used at construction sites ☐ Performance of inspections, including the proper completion of required reports and documentation, consistent with the requirements of Part 4
		Date:	☐ Principles and practices of erosion and sediment control and pollution prevention practices at construction sites ☐ Proper installation and maintenance of erosion and sediment controls and pollution prevention practices used at construction sites ☐ Performance of inspections, including the proper completion of required reports and documentation, consistent with the requirements of Part 4

[Insert or delete rows as necessary.]

SECTION 2: SITE EVALUATION, ASSESSMENT, AND PLANNING

2.1 Project/Site Information

Project Name and Address

Project/Site Name: Gateway Tire Warehouse Addition

Street/Location: 100 Corridor Park Dr

City: Monroe

State: Ohio

ZIP Code: 45050

County or Similar Government Division: Warren County

Project Latitude/Longitude

Latitude: 39.4544° N
(decimal degrees)

Longitude: - 84.3314 ° W
(decimal degrees)

Latitude/longitude data source: ☒ Map ☐ GPS ☐ Other (please specify): _

Horizontal Reference Datum: ☐ NAD 27 ☐ NAD 83 ☒ WGS 84

Additional Site Information

Is your site located on Indian country lands, or on a property of religious or cultural significance to an Indian Tribe? ☐ Yes ☒ No

If yes, provide the name of the Indian Tribe associated with the area of Indian country (including the name of Indian reservation if applicable), or if not in Indian country, provide the name of the Indian Tribe associated with the property: N/A

2.2 Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☒ Yes ☐ No

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? ☐ Yes ☒ No

Any earth disturbance will be approximately 90-feet from Millers Creek.

For each point of discharge, provide a point of discharge ID (a unique 3-digit ID, e.g., 001, 002), the name of the first receiving water that receives stormwater directly from the point of discharge and/or from the MS4 that the point of discharge discharges to, and the following receiving water information, if applicable:

Point of Discharge ID	Name of receiving water that receives stormwater discharge:	Is the receiving water impaired (on the CWA 303(d) list)?	If yes, list the pollutants that are causing the impairment:	Has a TMDL been completed for this receiving waterbody?	If yes, list TMDL Name and ID:	Pollutant(s) for which there is a TMDL:	Is this receiving water designated as a Tier 2, Tier 2.5, or Tier 3 water?	If yes, specify which Tier (2, 2.5, or 3)?
[001]	Shaker Creek (from Miller Creek)	☒ Yes ☐ No	Flow Regime Modification; Nutrients	☐ Yes ☒ No	N/A	N/A	☐ Yes ☒ No	N/A

[Include additional rows or delete as necessary.]

2.3 Nature of the Construction Activities

General Description of Project

Provide a general description of the nature of your construction activities, including the age or dates of past renovations for structures that are undergoing demolition:

Activity will include the construction of an industrial building addition, an asphalt pavement parking area, minor site grading, and modification of the existing detention basin. The project site is currently developed and the building/parking area was previously rough graded.

If you are conducting earth-disturbing activities in response to a public emergency, document the cause of the public emergency (e.g., mud slides, earthquake, extreme flooding conditions, widespread disruption in essential public services), information substantiating its occurrence (e.g., State disaster declaration or similar State or local declaration), and a description of the construction necessary to reestablish affected public services:

N/A

Business days and hours for the project: Monday through Saturday; 10 hours

Size of Construction Site

Size of Property	22.212 acres
Total Area Expected to be Disturbed by Construction Activities	6.85 acres
Maximum Area Expected to be Disturbed at Any One Time, Including On-site and Off-site Construction Support Areas	5.00 acres

Type of Construction Site (check all that apply):

- ☐ Single-Family Residential
 ☐ Multi-Family Residential
 ☐ Commercial
 ☒ Industrial
 ☐ Institutional
 ☐ Highway or Road
 ☐ Utility
 ☒ Other detention basin modifications

Will you be discharging dewatering water from your site? ☐ Yes ☒ No

If yes, will you be discharging dewatering water from a current or former Federal or State remediation site? ☐ Yes ☐ No

Pollutant-Generating Activities

List and describe all pollutant-generating activities and indicate for each activity the associated pollutants or pollutant constituents that could be discharged in stormwater from your construction site. Take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, that will be disturbed during construction.

Pollutant-Generating Activity (e.g., paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal; and dewatering operations)	Pollutants or Pollutant Constituents (e.g., sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels)
Paving operations	VOCs
Concrete	Wastewater from washout of concrete
Earthwork operations	Fuel, oils, or other pollutants used in equipment operation and maintenance

Construction Support Activities (only provide if applicable)

Describe any construction support activities for the project (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas):

N/A

Contact information for construction support activity:

N/A

2.4 Sequence and Estimated Dates of Construction Activities

Phase I

Building Addition, Parking Addition, Detention Basin Modification	
Estimated Start Date of Construction Activities for this Phase	5/18/2022
Estimated End Date of Construction Activities for this Phase	12/15/2022
Construct temporary construction entrance, install silt fence/filter sock, silt inlet protection and then begin clearing and grubbing operations.	5/18/2022
Commence site grading	5/18/2022
Construct storm sewers and building footers	5/30/2022
Finalize pavement subgrade preparation	6/20/2022
Install base material for pavement and building	7/5/2022
Final grading, seeding, and planting	9/5/2022
Inspect and clean storm drainage system	9/12/2022
Install final pavement surface course	9/19/2022
Estimated Date(s) when Stormwater Controls will be Removed	7/18/2022 9/23/2022

2.5 Authorized Non-Stormwater Discharges

List of Authorized Non-Stormwater Discharges Present at the Site

Authorized Non-Stormwater Discharge	Will or May Occur at Your Site?
Discharges from emergency fire-fighting activities	☒ Yes ☐ No
Fire hydrant flushings	☒ Yes ☐ No
Landscape irrigation	☒ Yes ☐ No
Water used to wash vehicles and equipment	☒ Yes ☐ No
Water used to control dust	☒ Yes ☐ No
Potable water including uncontaminated water line flushings	☒ Yes ☐ No
External building washdown (soaps/solvents are not used and external surfaces do not contain hazardous substances)	☒ Yes ☐ No
Pavement wash waters	☒ Yes ☐ No
Uncontaminated air conditioning or compressor condensate	☒ Yes ☐ No
Uncontaminated, non-turbid discharges of ground water or spring water	☐ Yes ☒ No
Foundation or footing drains	☐ Yes ☒ No
Uncontaminated construction dewatering water	☒ Yes ☐ No

2.6 Site Maps

See Appendix A and the attached SWPPP sheets (SWP3-1 to SWP3-6)

SECTION 3: DOCUMENTATION OF COMPLIANCE WITH OTHER FEDERAL REQUIREMENTS

3.1 Endangered Species Protection

Eligibility Criterion

Following the process outlined in Appendix D, under which criterion are you eligible for coverage under this permit?

-
- ☐ **Criterion A:** No ESA-listed species and/or designated critical habitat present in action area. Using the process outlined in Appendix D of the CGP, you certify that ESA-listed species and designated critical habitat(s) under the jurisdiction of the USFWS or NMFS are not likely to occur in your site's "action area" as defined in Appendix A of the CGP. *Please Note: NMFS' jurisdiction includes ESA-listed marine and estuarine species that spawn in inland rivers.*
- ☐ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D (Note: reliance on State resources is not acceptable; see CGP Appendix D).

Documentation: [Insert Text Here](#)

- ☐ **Criterion B:** Eligibility requirements met by another operator under the 2022 CGP. The construction site's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your "action area" under eligibility Criterion A, C, D, E, or F of the 2022 CGP and you have confirmed that no additional ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS not considered in the that certification may be present or located in the "action area." To certify your eligibility under this criterion, there must be no lapse of NPDES permit coverage in the other CGP operator's certification. By certifying eligibility under this criterion, you agree to comply with any conditions upon which the other CGP operator's certification was based. You must include in your NOI the NPDES ID from the other 2022 CGP operator's notification of authorization under this permit and list any measures that you must comply with. If your certification is based on another 2022 CGP operator's certification under criterion C, you must provide EPA with the relevant supporting information required of existing dischargers in Criterion C.
- ☐ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D.

Documentation: [N/A](#)

Eligibility Criterion

Following the process outlined in Appendix D, under which criterion are you eligible for coverage under this permit?

- ☒ **Criterion C:** Discharges not likely to result in any short- or long-term adverse effects to ESA-listed species and/or designated critical habitat. ESA-listed species and/or designated critical habitat(s) under the jurisdiction of the USFWS and/or NMFS are likely to occur in or near your site's "action area," and you certify to EPA that your site's discharges and discharge-related activities are not likely to result in any short- or long-term adverse effects to ESA-listed threatened or endangered species and/or designated critical habitat. This certification may include consideration of any stormwater controls and/or management practices you will adopt to ensure that your discharges and discharge-related activities are not likely to result in any short- or long-term adverse effects to ESA-listed species and/or designated critical habitat. To certify your eligibility under this criterion, indicate 1) the ESA-listed species and/or designated habitat located in your "action area" using the process outlined in Appendix D of this permit; 2) the distance between the site and the listed species and/or designated critical habitat in the action area (in miles); and 3) a rationale describing specifically how short- or long-term adverse effects to ESA-listed species will be avoided from the discharges and discharge-related activities. (Note: You must include a copy of your site map from your SWPPP showing the upland and in-water extent of your "action area" with your NOI.)
- ☒ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D.

Documentation: Based upon the project IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). The proposed modifications to the stormwater detention system will include sediment removal facilities that will provide the appropriate water quality control required per regulations.

- ☐ **Criterion D:** Coordination with USFWS and/or NMFS has successfully concluded. Coordination between you and the USFWS and/or NMFS has concluded. The coordination must have addressed the effects of your site's discharges and discharge-related activities on ESA-listed species and/or designated critical habitat under the jurisdiction of USFWS and/or NMFS, and resulted in a written confirmation from USFWS and/or NMFS that the effects of your site's discharges and discharge-related activities are not likely to result in any short- or long-term adverse effects. By certifying eligibility under this criterion, you agree to comply with any conditions you must meet for your site's discharges and discharge-related activities to not likely result in any short- or long-term adverse effects. You must include copies of the correspondence with the participating agencies in your SWPPP and this NOI.
- ☐ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D.

Documentation: N/A

Eligibility Criterion

Following the process outlined in Appendix D, under which criterion are you eligible for coverage under this permit?

- ☐ **Criterion E: ESA Section 7 consultation has successfully concluded.** Consultation between a Federal agency and the USFWS and/or NMFS under section 7 of the ESA has concluded. Consultations can be either formal or informal, and would have occurred only as a result of a separate Federal action (e.g., during application for an individual wastewater discharge permit or the issuance of a wetlands dredge and fill permit), and the consultation must have addressed the effects of your construction activity's discharges and discharge-related activities on all ESA-listed threatened or endangered species and all designated critical habitat under the jurisdiction of each Service, as appropriate, in your action area. The result of this consultation must be either:
- i. A biological opinion currently in effect that determined that the action in question (taking into account the effects of your facility's discharges and discharge-related activities) is likely to adversely affect, but is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The biological opinion must have included the effects of your facility's discharges and discharge-related activities on all the listed species and designated critical habitat in your action area under the jurisdiction of each Service, as appropriate. To be eligible under (i), any reasonable and prudent measures specified in the incidental take statement must be implemented;
 - ii. Written concurrence (e.g., letter of concurrence) from the applicable Service(s) with a determination that your facility's discharges and discharge-related activities are not likely to adversely affect ESA-listed species and/or designated critical habitat. The concurrence letter must have included the effects of your facility's discharges and discharge-related activities on all the ESA-listed species and/or designated critical habitat on your species list(s) acquired from USFWS and/or NMFS as part of this worksheet.

The consultation does not warrant reinitiation under 50 CFR §402.16; or, if reinitiation of consultation is required (e.g., due to a new species listing, critical habitat designation, or new information), the Federal action agency has reinitiated the consultation and the result of the consultation is consistent with the statements above. (Note: you must include any reinitiation documentation from the Services or consulting Federal agency with your NOI.) -

- ☐ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D.

Documentation: N/A

Eligibility Criterion

Following the process outlined in Appendix D, under which criterion are you eligible for coverage under this permit?

- ☐ **Criterion F: Issuance of section 10 permit.** Potential take is authorized through the issuance of a permit under section 10 of the ESA by the USFWS and/or NMFS, and this authorization addresses the effects of the site's discharges and discharge-related activities on ESA-listed species and designated critical habitat. You must include copies of the correspondence between yourself and the participating agencies in your SWPPP and your NOI.
- ☐ Check to confirm you have provided documentation in your SWPPP as required by CGP Appendix D.

Documentation: [N/A](#)

3.2 Historic Property Screening Process

Appendix E, Step 1

Do you plan on installing any stormwater controls that require subsurface earth disturbance, including, but not limited to, any of the following stormwater controls at your site? Check all that apply below, and proceed to Appendix E, Step 2.

- ☐ Dike
- ☐ Berm
- ☒ Catch Basin
- ☐ Pond
- ☒ Constructed Site Drainage Feature (e.g., ditch, trench, perimeter drain, swale, etc.)
- ☒ Culvert
- ☐ Channel
- ☒ Other type of ground-disturbing stormwater control: [Underground detention system](#)

(Note: If you will not be installing any subsurface earth-disturbing stormwater controls, no further documentation is required for Section 3.2 of the Template.)

Appendix E, Step 2

If you answered yes in Step 1, have prior professional cultural resource surveys or other evaluations determined that historic properties do not exist, or have prior disturbances at the site have precluded the existence of historic properties? ☒ YES ☐ NO

- If yes, no further documentation is required for Section 3.2 of the Template and you may provide the prior documentation in your SWPPP.
 - [TBD.](#)
- If no, proceed to Appendix E, Step 3.

Appendix E, Step 3

If you answered no in Step 2, have you determined that your installation of subsurface earth-disturbing stormwater controls will have no effect on historic properties? ☐ YES ☐ NO

- If yes, provide documentation of the basis for your determination. [N/A](#)
- If no, proceed to Appendix E, Step 4.

Appendix E, Steps 4 and 5

If you answered no in Step 3, did the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), or other Tribal representative (whichever applies) respond to you within 15 calendar days to indicate their views as to the likelihood that historic properties are potentially present on your site and may be impacted by the installation of stormwater controls that require subsurface earth disturbance? ☐ YES ☐ NO

- If yes, describe the nature of their response:
 - ☐ Written indication that no historic properties will be affected by the installation of stormwater controls. [N/A](#)
 - ☐ Written indication that adverse effects to historic properties from the installation of stormwater controls can be mitigated by agreed upon actions. [N/A](#)
 - ☐ No agreement has been reached regarding measures to mitigate effects to historic properties from the installation of stormwater controls. [N/A](#)
 - ☐ Other: [N/A](#)
- If no, no further documentation is required for Section 3.2 of the Template.

3.3 Safe Drinking Water Act Underground Injection Control Requirements

Do you plan to install any of the following controls? Check all that apply below.

- ☐ Infiltration trenches (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)
- ☐ Commercially manufactured pre-cast or pre-built proprietary subsurface detention vaults, chambers, or other devices designed to capture and infiltrate stormwater flow
- ☐ Drywells, seepage pits, or improved sinkholes (if stormwater is directed to any bored, drilled, driven shaft or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system)

[N/A](#)

SECTION 4: EROSION AND SEDIMENT CONTROLS AND DEWATERING PRACTICES

4.1 Natural Buffers or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any receiving waters within 50 feet of your project's earth disturbances? ☐ YES ☒ NO

(Note: If no, no further documentation is required for Section 4.1 in the SWPPP Template. Continue to Section 4.2.)

The actual earth disturbance work within the existing detention basin will be over 50 feet from Millers Creek. This activity will include the construction of two forebays and one micropool.

4.2 Perimeter Controls

General

- Silt fence will be installed along the downslope areas to meet Part CGP 2.2.3.

Specific Perimeter Controls

Silt Fence	
Description: Silt fence will be installed as shown on the plans. A 12" diameter filter sock can be used in lieu of a silt fence	
Installation	5/18/2022
Maintenance Requirements	Remove sediment before it has accumulated to one-half of the above-ground height. After a storm event, if there is evidence of stormwater circumventing or undercutting the perimeter control, extend controls and/or repair undercut areas to fix the problem.
Design Specifications	See SWPPP sheet SWP3-6 for further details and specifications.

4.3 Sediment Track-Out

General

- The existing asphalt drive or if needed a temporary gravel construction entrance will be installed along the downslope areas to meet CGP Part 2.2.4.

Specific Track-Out Controls

Temporary Gravel Construction Entrance	
Description: Minimum 70' long by 12' wide gravel entrance drive.	
Installation	5/18/2022

Temporary Gravel Construction Entrance	
Maintenance Requirements	The construction drive shall be maintained in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require top dressing, repair and/or cleanout. Where sediment has been tracked-out from your site onto paved roads, sidewalks, or other paved areas outside of your site, remove the deposited sediment by the end of the same business day in which the track-out occurs or by the end of the next business day if track-out occurs on a non-business day. Remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any constructed or natural site drainage feature, storm drain inlet, or receiving water.
Design Specifications	See SWPPP sheet SWP3-6 for further details and specifications.

4.4 Stockpiles or Land Clearing Debris Piles Comprised of Sediment or Soil

General

- Stormwater runoff to and from material stockpiles (if required) shall be controlled to prevent materials from creating a diversion of surface water to disturbed soils or from entering surface water to meet Part CGP 2.2.5.

Specific Stockpile Controls

Perimeter Silt Fence Stockpile Control	
Description: Perimeter silt fence and cover of stockpile with non-erosive material.	
Installation	5/18/2022
Maintenance Requirements	You are prohibited from hosing down or sweeping soil or sediment accumulated on pavement or other impervious surfaces into any constructed or natural site drainage feature, storm drain inlet, or receiving water.
Design Specifications	Topsoil stockpiles shall be surrounded with perimeter control measures and be covered with non-erosive material as soon as practicable but no longer than 14 days after the completion of the pile. Non-erosive material may include temporary seeding with straw mulch and tackifier, mulch, or other material providing suitable cover.

4.5 Minimize Dust

General

- Various methods will be employed to meet CGP Part 2.2.6. Dust control will be implemented as needed once site grading has begun and during windy conditions (forecasted or actual wind conditions of 20 mph or greater) while site grading is occurring. Spraying of potable water at a rate of 300 gallons per acre or less will be performed by a mobile pressure-type distributor truck no more than three times a day during the months of May–September and once per day during the months of October–April or whenever the dryness of the soil warrants it.

Specific Dust Controls

Soil Roughening
Description: Roughening the soil to produce ridges perpendicular to the prevailing winds.

Soil Roughening	
Installation	5/18/2022
Maintenance Requirements	Replace roughening as needed.
Design Specifications	Roughening the soil to produce ridges perpendicular to the prevailing winds. Ridges should be about six inches in height.

Watering	
Description: Watering of excavation and fill areas.	
Installation	5/18/2022
Maintenance Requirements	N/A
Design Specifications	Frequent watering of excavation and fill areas.

4.6 Minimize Steep Slope Disturbances

General

- Erosion Blankets will be installed if required within the detention basin to meet CGP Part 2.2.7.

Specific Steep Slope Controls

Erosion Blankets	
Description: Install erosion blankets within forebays and micropool within the detention basin.	
Installation	6/1/2022
Maintenance Requirements	After a storm event, if there is evidence of stormwater damaging the turf mat, repair to fix the problem
Design Specifications	Slope surface shall be free of rocks, clods, sticks, and grass. Mats shall have good soil contact. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch. See SWPPP sheet SWP3-6 for further details and specifications.

4.7 Topsoil

General

- Topsoil will be respread in the perimeter grass areas to meet CGP Part 2.2.8. Due to the limited proposed grass areas a portion of the topsoil will need to be removed from the site.

Specific Topsoil Controls

Temporary Topsoil Stockpile	
Description: Topsoil stockpile with silt fence perimeter control.	
Installation	5/30/2022
Maintenance Requirements	See maintenance requirements for silt fence and stockpiles in the above sections.

Temporary Topsoil Stockpile	
Design Specifications	Topsoil stockpiles shall be surrounded with perimeter control measures and be covered with non-erosive material as soon as practicable but no longer than 14 days after the completion of the pile. Non-erosive material may include temporary seeding with straw mulch and tackifier, mulch, or other material providing suitable cover.

4.8 Soil Compaction

General

- The soil within the future grass areas will be conditioned to meet CGP Part 2.2.9.

Specific Soil Compaction Controls

Soil Tilling for Seeding and/or Planting	
Description: The disturbed soil areas within the seeding and planting areas will be tilled.	
Installation	6/20/2022
Maintenance Requirements	Minimize soil compaction in proposed seeding areas.
Design Specifications	The proposed seeding area soil shall be tilled to provide non-compacted soils for beneficial vegetative growth.

4.9 Storm Drain Inlets

General

- Silt fence drop inlet sediment barriers and Dandy Bag inlet protection will be installed to meet CGP Part 2.2.10.

Specific Storm Drain Inlet Controls

Silt Fence Drop Inlet Sediment Barrier	
Description: Install silt fence drop inlet sediment barrier at locations shown on the SWPPP Plan.	
Installation	5/18/2022
Maintenance Requirements	Clean, or remove and replace, the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.
Design Specifications	See SWPPP sheet SWP3-6 for further details and specifications.

Dandy Bag Inlet Protection	
Description: Install Dandy Bag inlet protection or approved equal at locations shown on the SWPPP Plan.	
Installation	5/18/2022

Dandy Bag Inlet Protection	
Maintenance Requirements	Clean, or remove and replace, the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found or by the end of the following business day if removal by the same business day is not feasible.
Design Specifications	See SWPPP sheet SWP3-6 for further details and specifications.

4.10 Constructed Site Drainage Feature

General

- N/A for this project to meet CGP Part 2.2.11.

Specific Constructed Site Drainage Features

N/A	
Description: N/A	
Installation	Insert approximate date of installation
Maintenance Requirements	N/A
Design Specifications	N/A

4.11 Sediment Basins or Similar Impoundments

General

- The majority of the earth disturbance activity is within the proposed building addition area. This area was previously rough graded to the building gravel subbase depth so minimum earthwork will be required prior to stabilization so this permits the use of silt fence/filter sock in lieu of requiring a sediment basin to comply with CGP Part 2.2.12.

Specific Sediment Basin Controls

N/A	
Description: N/A	
Installation	Insert approximate date of installation
Maintenance Requirements	N/A Remove accumulated sediment to maintain at least one-half of the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.
Design Specifications	N/A

4.12 Chemical Treatment

Soil Types

List all the soil types including soil types expected to be exposed during construction in areas of the project that will drain to chemical treatment systems and those expected to be found in fill material: [N/A](#)

Treatment Chemicals

List all treatment chemicals that will be used at the site and explain why these chemicals are suited to the soil characteristics: [N/A](#)

Describe the dosage of all treatment chemicals you will use at the site or the methodology you will use to determine dosage: [N/A](#)

Provide information from any applicable Safety Data Sheets (SDS): [N/A](#)

Describe how each of the chemicals will be stored consistent with CGP Part 2.2.13c: [N/A](#)

Include references to applicable State or local requirements affecting the use of treatment chemicals, and copies of applicable manufacturer's specifications regarding the use of your specific treatment chemicals and/or chemical treatment systems: [N/A](#)

Special Controls for Cationic Treatment Chemicals (if applicable)

If the applicable EPA Regional Office authorized you to use cationic treatment chemicals, include the official EPA authorization letter or other communication, and identify the specific controls and implementation procedures designed to ensure that your use of cationic treatment chemicals will not lead to a discharge that does not meet water quality standards: [N/A](#)

Schematic Drawings of Stormwater Controls/Chemical Treatment Systems

Provide schematic drawings of any chemically-enhanced stormwater controls or chemical treatment systems to be used for application of treatment chemicals: [N/A](#)

Training

Describe the training that personnel who handle and apply chemicals have received prior to permit coverage, or will receive prior to the use of treatment chemicals: [N/A](#)

4.13 Dewatering Practices

General

- If trench dewatering is required geotextile filter bags will be used to comply with CGP Part 2.4.

Specific Dewatering Practices

Geotextile Filter Bags	
Description: Use geotextile filter bags to remove sediment from dewatering discharges.	
Installation	5/30/2022
Maintenance Requirements	Filter bag must be replaced when they become clogged or half full of sediment. For backwash water, either haul it away for disposal or return it to the beginning of the treatment process; replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
Design Specifications	Filter bag shall be chosen based on the predominant sediment size and be either woven monofilament polypropylene textile (course materials, e.g. sands) or non-woven geotextile (silts/clays). Filter bag must sit on a relatively flat grade and not be placed in close proximity to any surface water/ditch.

4.14 Other Stormwater Controls

General

- N/A

Specific Stormwater Control Practices

N/A	
Description: N/A	
Installation	Insert approximate date of installation
Maintenance Requirements	N/A
Design Specifications	N/A

4.15 Site Stabilization

Total Amount of Land Disturbance Occurring at Any One Time

- ☒ Five Acres or less
☐ More than Five Acres

Asphalt Pavement Area	
☐ Vegetative ☒ Non-Vegetative ☐ Temporary ☒ Permanent	
Description: ▪ Asphalt pavement will be installed for a small vehicle parking area south of the proposed building addition with appropriate BMPs to meet the requirements of CGP Part 2.2.14.a.	
Installation	6/20/2022
Completion	9/19/2022
Maintenance Requirements	Pavement areas shall be cleaned semi-annually and inspected for damage.
Design Specifications	Asphalt pavement section shall include 8" of compacted ODOT 304 stone, 2" asphalt binder course, and 2" asphalt wearing course.

Grass/Planting Area	
☒ Vegetative ☐ Non-Vegetative ☐ Temporary ☒ Permanent	
Description: ▪ Non-pavement areas shall be seeded to meet the requirements of CGP Part 2.2.14.a.	
Installation	9/5/2022
Completion	9/23/2022
Maintenance Requirements	Seeded area shall be irrigated as required, inspected for erosion, and mowed.
Design Specifications	See SWPPP sheet SWP3-6 for further details and specifications.

SECTION 5: POLLUTION PREVENTION CONTROLS

5.1 Potential Sources of Pollution

Construction Site Pollutants

Potential sources of sediment to stormwater runoff:

- Clearing and grubbing operations
- Grading and site excavation operations
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscape operations

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Small fueling activities, minor equipment maintenance, sanitary facilities, and hazardous waste storage.
- General building materials, solvents, adhesives, paints, aggregates, trash, and so on.
- Concrete pouring/mortar and building construction.
- Concrete Washout Area

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Pesticides	Chlorinated hydrocarbons, organophosphates, carbonates, arsenic	Herbicides used for noxious weed control
Fertilizer	Nitrogen, phosphorus	Newly seeded areas
Concrete	Limestone, sand, pH, chromium	Site pavement, building construction
Glue, adhesives	Polymers, epoxies	Building construction
Paints	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Naphtha	Site pavement
Hydraulic oil/fluids	Mineral oil	Leaks or broken hoses from equipment
Sanitary toilets	Bacteria, parasites, and viruses	See map
Gasoline	Benzene, ethyl benzene, toluene, xylene, MTBE	Within site
Diesel Fuel	Petroleum distillate, oil & grease, naphthalene, xylenes	Within Site
Kerosene	Coal oil, petroleum distillates	Within site

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site (or reference SWPPP site map where this is shown)
Antifreeze/coolant	Ethylene glycol, propylene glycol, heavy materials	Leaks or broken hoses from equipment

5.2 Spill Prevention and Response

1. Employee Training: All employees will be trained via biweekly tailgate sessions as detailed in this SWPPP document
2. Vehicle Maintenance: Vehicles and equipment will be maintained off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluids will not be allowed on-site. Drip pans will be placed under all vehicles and equipment that are parked overnight.
3. Hazardous Material Storage: Hazardous materials will be stored in accordance with this SWPPP document and federal and municipal regulations.
4. Spill Kits: Spill kits within the materials storage area and concrete washout areas.
5. Spills: All spills will be cleaned up immediately upon discovery. Spent absorbent materials and rags will be hauled off-site immediately after the spill is cleaned up for disposal at an approved site. Spills large enough to discharge to surface waters will be reported to the National Response Center at 1-800-424-8802.
6. Material safety data sheets, a material inventory, and emergency contact information will be maintained at the on-site project trailer.

5.3 Fueling and Maintenance of Equipment or Vehicles

General

- Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, and forklifts. All major equipment/vehicle fueling and maintenance will be performed off-site. A small, 20-gallon pickup bed fuel tank will be kept on-site in the combined staging area. When vehicle fueling must occur on-site, the fueling activity will occur in the staging area. Only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets in accordance with the SWPPP. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight. Inspect equipment/vehicle storage areas and fuel tank weekly and after storm events. Vehicles and equipment will be inspected on each day of use. Leaks will be repaired immediately, or the problem vehicle(s) or equipment will be removed from the project site. Keep ample supply of spill-cleanup materials on-site and immediately clean up spills and dispose of materials properly

Specific Pollution Prevention Practices

Spill Kits
Description: Absorbent, spill cleanup materials and spill kits.

Spill Kits	
Implementation	5/18/2022
Maintenance Requirements	N/A
Design Specifications	Spill kits shall be of the appropriate type for the vehicles at the site.

Drip Pans	
Description: Drip pans shall be placed under vehicles receiving maintenance or stored overnight at the site.	
Implementation	5/18/2022
Maintenance Requirements	N/A
Design Specifications	Drip pans shall be of the appropriate size for the vehicles at the site.

5.4 Washing of Equipment and Vehicles

General

- If washing of equipment and vehicles is required it will be done in a location to minimize any impact to receiving waters to comply with CGP Part 2.3.2. The use of water will be used to remove sediment from vehicles and equipment and will drain towards perimeter controls.

Specific Pollution Prevention Practices

Washing of Equipment and Vehicles	
Description: Remove sediment from equipment and vehicles with the use of water as needed.	
Implementation	5/18/2022
Maintenance Requirements	Equipment and vehicles should be inspected daily and cleaned as needed.
Design Specifications	N/A

5.5 Storage, Handling, and Disposal of Building Products, Materials, and Wastes

5.5.1 Building Materials and Building Products

(Note: Examples include asphalt sealants, copper flashing, roofing materials, adhesives, concrete admixtures, and gravel and mulch stockpiles.)

General

- Any building material required to be stored on-site that are not designed to be exposed to stormwater will be covered with plastic sheeting or temporary roofs to comply with CGP 2.3.3.a.

Specific Pollution Prevention Practices

Temporary Cover	
Description: Plastic Sheeting	
Implementation	9/5/2022

Temporary Cover	
Maintenance Requirements	N/A
Design Specifications	6 mil plastic sheeting

5.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscape Materials

General

- Fertilizers are currently planned not be used but if they are the SWPPP will be modified to comply with CGP Part 2.3.3.b.

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Implementation	Insert approximate date of implementation
Maintenance Requirements	N/A
Design Specifications	N/A

5.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

General

- These fuels and fluids will not be stored on-site. They will be brought in as needed for vehicle fueling and maintenance if required to comply with CGP Part 2.3.3.c.

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Implementation	Insert approximate date of implementation
Maintenance Requirements	N/A
Design Specifications	N/A

5.5.4 Hazardous or Toxic Waste

(Note: Examples include paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.)

General

- If required: all hazardous waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed shipping containers, within an approved hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be

disposed of in accordance with federal, state, and municipal regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed, during tailgate training sessions, regarding proper procedures for hazardous waste disposal. Notices that state these procedures will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed and comply with CGP Part 2.3.3.d.

5.5.5 Construction and Domestic Waste

(Note: Examples include packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, demolition debris, and other trash or discarded materials.)

General

- All waste materials will be collected and disposed of into a metal trash dumpster. The dumpster will have a secure watertight lid, be placed away from stormwater conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpster. No construction materials will be buried on-site. All personnel will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing these practices are followed. The dumpster will be inspected and emptied weekly (by local waste disposal company).

5.5.6 Sanitary Waste

General

- One temporary sanitary facility (portable toilets) will be provided at the site throughout the construction phase. The toilet will be located in approved location. The portable toilet will be located away from a concentrated flow paths and traffic flow and will have a collection pan underneath as secondary containment. The portable toilets will be inspected weekly for evidence of leaking holding tanks. All sanitary waste will be collected from the portable facilities a minimum of three times per week.

5.6 Washing of Applicators and Containers used for Stucco, Paint, Concrete, Form Release Oils, Cutting Compounds, or Other Materials

General

- If required the SWPPP will be modified to comply with CGP Part 2.3.3.g.

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Implementation	Insert approximate date of implementation
Maintenance Requirements	N/A
Design Specifications	NA/

5.7 Application of Fertilizers

General

- If fertilizers are required for the permanent seeding area the SWPPP will be modified to comply with CGP Part 2.3.5.

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Implementation	Insert approximate date of implementation
Maintenance Requirements	N/A
Design Specifications	N/A

5.8 Other Pollution Prevention Practices

General

- N/A

Specific Pollution Prevention Practices

N/A	
Description: N/A	
Implementation	Insert approximate date of implementation
Maintenance Requirements	N/A
Design Specifications	N/A

Concrete Washout Areas

- A designated temporary, above-grade concrete washout area will be constructed as detailed in the SWPPP plans. The temporary concrete washout area will be constructed in accordance to the SWPPP plans. Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized. The washout areas will be inspected daily to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75 percent of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to an approved site for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.

SECTION 6: INSPECTION, MAINTENANCE, AND CORRECTIVE ACTION

6.1 Inspection Personnel and Procedures

Site Inspection Schedule

Standard Frequency:
☒ Every 7 calendar days and within 24 hours of: ▪ A storm event of one-half inch or greater.

Dewatering Inspection Schedule

Select the inspection frequency that applies based on CGP Part 4.3.2

Dewatering Inspection
☒ Once per day on which the discharge of dewatering water occurs.

Rain Gauge Location (if applicable)

Rain gauge shall be located at the job trailer to quantify rain events of one-half inch or greater.

Inspection Report Forms

See Appendix D for a copy of an inspection report form.

6.2 Corrective Action

Personnel Responsible for Corrective Actions

The construction project manager will be responsible for initiating the corrective action within 24 hours of the report and completing maintenance as soon as possible or before the next storm event.

Corrective Action Logs

For a copy of the corrective action form, see Appendix E.

6.3 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Construction Project Manager:

Beacon Marshall (EM Construction, LLC)
Charles R. Marshall
Project Manager
3457 Granger Road
Akron, Ohio 44333
330-659-2040
cmarshall@mccdesignbuild.com

SECTION 7: TURBIDITY BENCHMARK MONITORING FOR DEWATERING DISCHARGES

Procedures:

Collecting and evaluating samples	N/A
Reporting results and keeping monitoring information records	N/A
Taking corrective action when necessary	N/A

Turbidity Meter:

Type of turbidity meter	N/A
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Turbidity meter manuals and manufacturer instructions

N/A

Coordinating Arrangements for Turbidity Monitoring (if applicable):

Permitted operator name	N/A
Permitted operator NPDES ID	N/A
Coordinating Arrangement	N/A

Alternate turbidity benchmark (if applicable):

Alternate turbidity benchmark (NTU)	N/A
Data and documentation used to request the alternate benchmark	N/A

SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – Site Maps

Appendix B – Copy of 2022 CGP

Appendix C – NOI and EPA Authorization Email

Appendix D – Site Inspection Form and Dewatering Inspection Form (if applicable)

Appendix E – Corrective Action Log

Appendix F – SWPPP Amendment Log

Appendix G – Subcontractor Certifications/Agreements

Appendix H – Grading and Stabilization Activities Log

Appendix I – Training Documentation

Appendix J – Delegation of Authority

Appendix K – Endangered Species Documentation

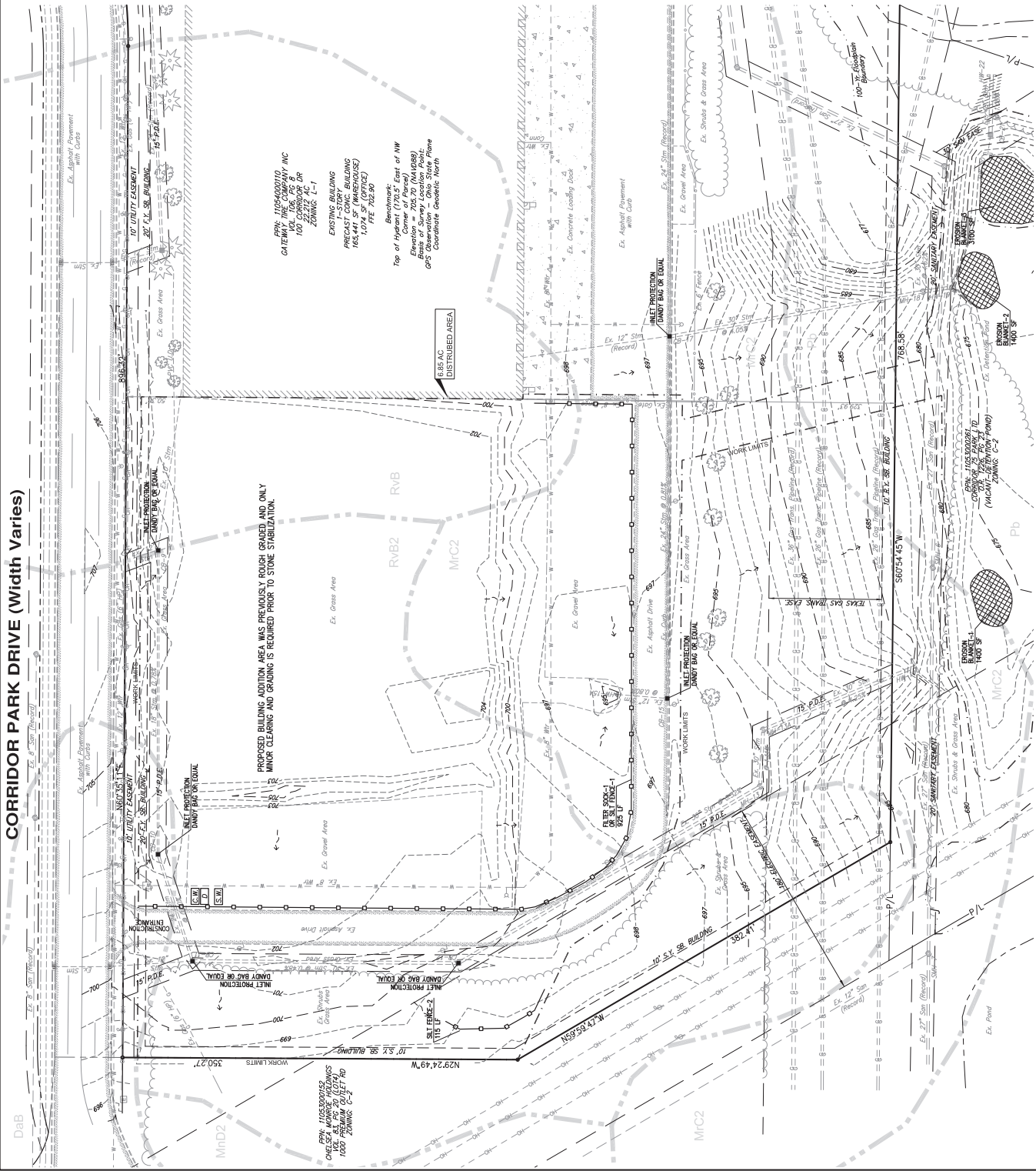
Appendix L – Historic Preservation Documentation

Appendix M – Rainfall Gauge Recording

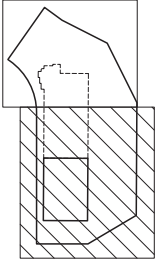
Appendix N – Turbidity Meter Manual and Manufacturer's Instructions

Appendix A – Site Maps

CORRIDOR PARK DRIVE (Width Varies)



SHEET MAP



EXISTING SANITARY AND STORM STRUCTURES	
EX. SAN. MAN-6 27'x10'x6.62' (N)	EX. HW-19 30'x10'x6.62' (N)
EX. SAN. MAN-7 12'x10'x6.62' (N)	EX. HW-20 12'x10'x6.62' (N)
EX. SAN. MAN-13A 12'x10'x6.62' (N)	EX. HW-21 12'x10'x6.62' (N)
EX. SAN. MAN-13B 12'x10'x6.62' (N)	EX. HW-22 12'x10'x6.62' (N)
EX. SAN. MAN-13C 12'x10'x6.62' (N)	EX. HW-23 12'x10'x6.62' (N)
EX. SAN. MAN-13D 12'x10'x6.62' (N)	EX. HW-24 12'x10'x6.62' (N)
EX. SAN. MAN-13E 12'x10'x6.62' (N)	EX. HW-25 12'x10'x6.62' (N)
EX. SAN. MAN-13F 12'x10'x6.62' (N)	EX. HW-26 12'x10'x6.62' (N)
EX. SAN. MAN-13G 12'x10'x6.62' (N)	EX. HW-27 12'x10'x6.62' (N)
EX. SAN. MAN-13H 12'x10'x6.62' (N)	EX. HW-28 12'x10'x6.62' (N)
EX. SAN. MAN-13I 12'x10'x6.62' (N)	EX. HW-29 12'x10'x6.62' (N)
EX. SAN. MAN-13J 12'x10'x6.62' (N)	EX. HW-30 12'x10'x6.62' (N)

UTILITY NOTES

- THE SIZE AND LOCATION, BOTH HORIZONTAL AND VERTICAL OF THE EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED ON THE SEARCH OF AVAILABLE RECORDS. VERIFICATION BY FIELD SURVEY IS REQUIRED TO CONFIRM THE LOCATION AND DEPTH OF ANY UTILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.
- BEFORE EXCAVATING IN THIS AREA, CALL "TIPS" AT 800-362-5764 FOR FIELD LOCATIONS OF ANY UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.

MISC. NOTES

- THERE ARE NO KNOWN ACTIVE OR PLUGGED OIL/GAS WELLS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.
- THE PROPOSED BUILDING AND PAVEMENT AREA IS LOCATED IN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD ZONE) AS SHOWN ON COMMUNITY PANEL NUMBER 100 CORRIDOR PARK DR., MONROE, OHIO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.

DEMOLITION NOTES

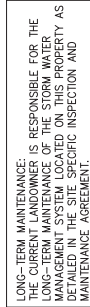
- PERMITS SWPPP ITEMS SHALL BE INSTALLED PRIOR TO ANY SITE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.

Surveyor's Certification:

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT I HAVE SURVEYED THE PREMISES AND MEASURED ELEVATIONS AT APPROPRIATE POINTS. THE ELEVATIONS ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF.

JOHN R. ALBAN, P.S. 7651
February 2, 2022





**PORT CONSTRUCTION WATER QUALITY
FOR EXTENDED DETENTION-BASIN CALCS**

$WQ_{\text{in}} = R \times P \times X / 12 = 0.05 \times 0.90 \times (9.59/18.21) = 0.52$
 $P = 0.05$ (from Table 1)
 $A = 18.21$ (acre inside the BMP)

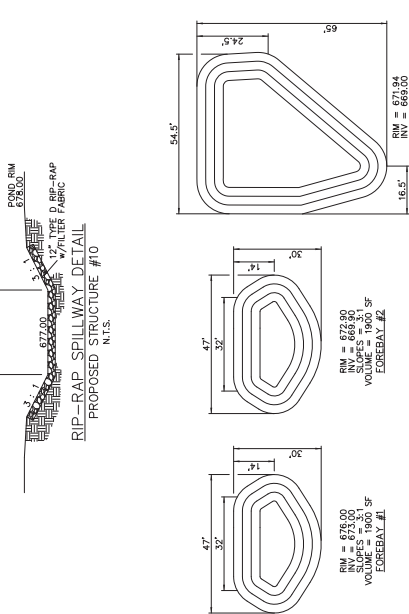
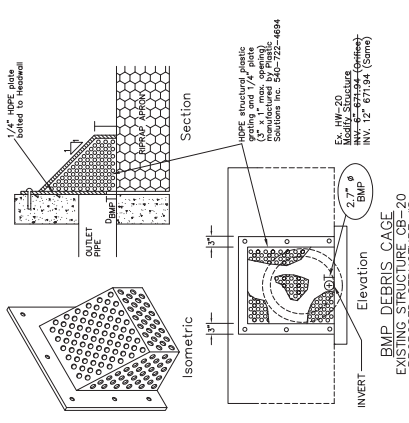
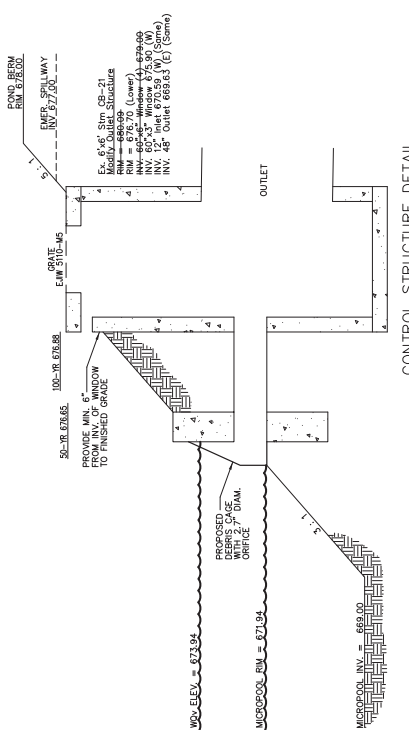
$WQ_{\text{in}} = 0.52 \times 0.90 \times 18.21 / 12$ (Provided at 673.94)
 $WQ_{\text{in}} = 317.12$ c.f.t. (Provided at 673.94)

Required flow and time = 1,000 c.f.t. (100 gals) @ 317.12 c.f.t. = 3.147 h.
Required flow and time = 1,000 c.f.t. (100 gals) @ 673.94 c.f.t. = 1.491 h.
Provided flow (2) = 1,900 c.f.t. (190 gals) @ 669.90 = 0.7230 h.
Provided flow (2) = 1,900 c.f.t. (190 gals) @ 669.50 = 0.7194 h.
Provided flow (2) = 5,250 c.f.t. (525 gals) @ 669.50 = 0.7194 h.

Flow = 1,900 c.f.t. (190 gals) @ 669.50 c.f.t. = 2.839 h.
Provided within the Freebay and Microport

Water Quality Office Diameter Sizing

No more than first 10% of flow is more than one-third of drain time
No more than first 10% of flow is more than one-third of drain time
 $1/2$ of flow = 15,596 c.f.t. @ 100 ft.
Office Diameter = 2.70 ft.
Drain-down time = 43 hours
Draw-down time = 43 hours (OK)



FOREBAY AND MICROPOOL DETAIL

EXISTING STRUCTURE CD-21
PROPOSED STRUCTURE #9

CONCRETE
WASHOUT
AREA

Appendix B – Copy of 2022 CGP

Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

Ohio EPA APR 23/18
Entered Directors Journal

OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED
WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.



Craig W. Butler
Director

Total Pages: 60

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

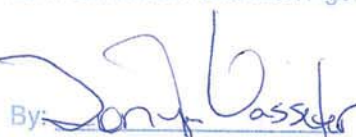
By:  Date: 4-23-18

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PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio. Appendices A and B of this permit contain additional watershed specific requirements for construction activities located partially or fully within the Big Darby Creek Watershed and portions of the Olentangy River Watershed. Projects within portions of the Olentangy River watershed shall seek coverage under this permit following the expiration of OHCO00002 (May 31, 2019).

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land are eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
 - c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
 - d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:

- a. Storm water discharges that originate from the site after construction activities have ceased, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
 - b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
 - c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit.
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
- a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
 - b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-02. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form and Storm Water Pollution Prevention Plan (SWP3) if located within the Big Darby Creek watershed or portions of the Olentangy watershed in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

F. Notice of Intent Requirements

1. Deadlines for notification.
 - a. Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) for projects within the Big Darby Creek and portions of the Olentangy river watersheds and appropriate fee at least 21 days (or 45 days in the Big Darby Creek watershed and portions of the Olentangy watershed) prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit prior to engaging in construction activities. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
 - b. Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
2. Failure to notify. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
3. How to submit an NOI. Operators seeking coverage under this permit must submit a complete and accurate Notice of Intent (NOI) application using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will

require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOI. Existing eBusiness Center account holders can access the NOI form through their existing account and submit using their existing PIN. Please see the following link for guidance:

<http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOI form through the agency eBusiness Center due to a demonstrated hardship, the NOI may be submitted on a paper NOI form provided by Ohio EPA. NOI information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOI form.

4. Additional notification. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.
5. Re-notification. Existing permittees having coverage under the previous generations of this general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations. You shall develop and implement the SWP3 in accordance with Part III of this permit to satisfy these non-numeric effluent limitations.

- A. **Erosion and Sediment Controls.** You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
 1. Control storm water volume and velocity within the site to minimize soil and stream erosion;
 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
 3. Minimize the amount of soil exposed during construction activity;

4. Minimize the disturbance of steep slopes;
 5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
 6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
 7. Minimize soil compaction and, unless infeasible, preserve topsoil.
- B. Soil Stabilization.** Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 2. Minimize the exposure of construction materials, products, and wastes; landscape materials, fertilizers, pesticides, and herbicides; detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
 3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- E. Prohibited Discharges.** The following discharges are prohibited:
1. Wastewater from washout of concrete, unless managed by an appropriate control;
 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
 4. Soaps or solvents used in vehicle and equipment washing or all other waste water streams which could be subject to an individual NPDES permit (Part III.G.2.g).
- F. Surface Outlets.** When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)
- G. Post-Construction Storm Water Management Controls.** So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for

subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall clearly identify all activities which are required to be authorized under Section 401 and subject to an antidegradation review. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants and impact of storm water discharges during construction and pollutants associated with the post-construction land use to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing.

An acceptable SWP3 shall be completed and submitted to the applicable regulated MS4 entity (for projects constructed entirely within a regulated MS4 area) prior to the timely submittal of an NOI. Projects within the Big Darby Creek and portions of the Olentangy watersheds must submit a SWP3 with the NOI. The SWP3 shall be updated in accordance with Part III.D. Submission of a SWP3 does not constitute review and approval on the part of Ohio EPA. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

In order to continue coverage from the previous generations of this permit, the permittee shall review and update the SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under, and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement.

Examples of OHC000005 permit conditions that would be infeasible for permittees renewing coverage to comply with include:

- OHC000005 post-construction requirements, for projects that obtained NPDES construction storm water coverage and started construction activities prior to the effective date of this permit;
- OHC000005 post-construction requirements, for multi-phase development projects with an existing regional post-construction BMP issued under previous NPDES post-construction requirements. This only applies to construction sites authorized under Ohio EPA's Construction Storm Water Permits issued after April 20, 2003;
- OHC000005 post-construction requirements, for renewing or initial coverage and you have a SWP3 approved locally and you will start construction within 180 days of the effective date of this permit;

- Sediment settling pond design requirements, if the general permit coverage was obtained prior to April 21, 2013 and the sediment settling pond has been installed; or
- Case-by-case situations approved by the Director.

C. SWP3 Signature and Review.

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.
2. Plan Availability
 - a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
 - b. By written request: The permittee must provide the most recent copy of the SWP3 within 7 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
 - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.
3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments.

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the

general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

E. Duty to inform contractors and subcontractors.

The permittee shall inform all contractors and subcontractors not otherwise defined as “operators” in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created, and signatures shall be obtained prior to commencement of earth disturbing activity on the construction site.

F. Total Maximum Daily Load (TMDL) allocations.

If a TMDL is approved for any waterbody into which the permittee's site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3. Specific conditions have been provided in Appendix A (for the Big Darby Creek Watershed) and Appendix B (for portions of the Olentangy river watershed).

G. SWP3 Requirements.

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:
 - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
 - b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
 - c. A measure of the impervious area and percent imperviousness created by the construction activity (existing, new and total impervious area after construction);
 - d. Storm water calculations, including the volumetric runoff coefficients for both the pre-construction and post- construction site conditions, and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3; and if applicable, explanation of the use of existing post-construction facilities. Ohio EPA recommends the use of data sheets (see Ohio's Rainwater and Land Development manual and Ohio EPA resources for examples);
 - e. Existing data describing the soil and, if available, the quality of any discharge from the site;

- f. A description of prior land uses at the site;
- g. A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);
- h. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities, infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- i. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and 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. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- j. For subdivided developments, a detail drawing of individual parcels with their erosion, sediment or storm water control practices and/or a typical individual lot showing standard individual lot erosion and sediment control practices.

A typical individual lot drawing 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;

- k. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:
 - i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
 - ii. Soils types for all areas of the site, including locations of unstable or highly erodible and/or known contaminated soils;

- iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
- iv. The location of any delineated boundary for required riparian setbacks;
- v. Conservation easements or areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities. A description of any associated temporary or permanent fencing or signage;
- vi. 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;
- vii. Existing and planned locations of buildings, roads, parking facilities and utilities;
- viii. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development;
- ix. Sediment traps and basins noting their sediment storage and dewatering (detention) volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see Ohio EPA's Rainwater and Land Development manual and website for examples) to provide data for all sediment traps and basins noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, detention volume, sediment storage volume, practice surface area, dewatering time, outlet type and dimensions;
- x. The location of permanent storm water management practices (new and existing) including pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features including catch basins, culverts, ditches, swales, surface inlets and outlet structures;
- xi. 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;
- xii. The location of designated construction entrances where the vehicles will access the construction site; and
- xiii. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings.

2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.h: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; phasing of construction operations to minimize the amount of disturbed land at any one time; and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. Erosion Control Practices. The SWP3 shall make use of erosion controls that provide cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-establish vegetation or suitable cover on disturbed areas after grading shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
- i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
- ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land

Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. Runoff Control Practices. The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. 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.
- d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, sediment barriers, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices 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 those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is stabilized with permanent cover. As construction progresses and the topography is altered, appropriate controls shall be constructed, or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- Concentrated or collected storm water runoff (e.g., storm sewer or ditch);
 - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers; or
 - Runoff from drainage areas that exceed the design capacity of inlet protection.

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft³) per acre of drainage (67 yd³/acre) with a minimum 48-hour drain time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft³ per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

Accumulated sediment shall be removed from the sediment storage zone once it exceeds 50 percent of the minimum required sediment storage design capacity and prior to the conversion to the post-construction practice unless suitable storage is demonstrated based upon over-design. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall 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 dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width ($\geq 2:1$ length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. Combining multiple sediment and erosion control measures in order to maximize pollutant removal is encouraged.

- iii. **Sediment Barriers and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers 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 downslope of the disturbed area. For most applications, standard silt fence may be substituted with a 12-inch diameter sediment barrier. The relationship between the maximum drainage area to sediment barrier for a particular slope range is shown in the following table:

Table 3 Sediment Barrier Maximum Drainage Area Based on Slope

Maximum drainage area (in acres) to 100 linear feet of sediment barrier	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	$\geq 2\%$ but < 20%
0.125	$\geq 20\%$ but < 50%

Placing sediment barriers in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Diversion practices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. Post-Construction Storm Water Management Requirements. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it is authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: local jurisdictions may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs in the SWP3. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). Maintenance plans shall ensure that pollutants collected within structural post-construction practices are disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as

designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone document which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; (5) construction drawings or excerpts showing the plan view, profile and details of the outlet(s); (6) a map showing all access and maintenance easements; and (7) for table 4a/4b practices, provide relevant elevations and associated volumes that dictate when removal of accumulated sediments must occur. Permittees are responsible for assuring all post-construction practices meet plan specifications and intended post-construction conditions have been met (e.g., sediment removed from, and sediment storage restored to, permanent pools, sediment control outlets removed and replaced with permanent post-construction discharge structures, and all slopes and drainageways permanently stabilized), but are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed may in themselves need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., park lands), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects (e.g., pipeline or utility line installation) which do not result in the installation of additional impervious surface are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance, and to achieve final stabilization of the disturbed area as defined in Part VII.M.1.

For all construction activities that will disturb two or more acres of land or will disturb less than two acres that are part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage storm water runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural 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 (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

$$WQ_v = R_v * P * A / 12 \quad (\text{Equation 1})$$

where:

WQ_v = water quality volume in acre-feet
R_v = the volumetric runoff coefficient calculated using equation 2
P = 0.90 inch precipitation depth
A = area draining into the BMP in acres

$$R_v = 0.05 + 0.9i \quad (\text{Equation 2})$$

where i = fraction of post-construction impervious surface

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage. Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Tables 4a and 4b below are considered standard BMPs approved for general use. However, communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQ_v in less than one-third of the drain time. The WQ_v is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development manual.

Post-construction practices shall be sized to treat 100% of the WQ_v associated with their contributing drainage area. If there is an existing post-construction BMP that treats runoff from the disturbed area and the BMP meets the post-construction requirements of this permit, no additional post-construction BMP will be required. A regional storm water BMP may be used to meet the post-construction requirement if: (1) the BMP meets the design requirements for treating the WQ_v; and (2) a legal agreement is established through which the regional BMP owner or operator agrees to provide this service in the long term. Design information for such facilities such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3.

Table 4a Extended Detention Post-Construction Practices with Minimum Drain Times

Extended Detention Practices	Minimum Drain Time of WQ_v
Wet Extended Detention Basin ^{1,2}	24 hours
Constructed Extended Detention Wetland ^{1,2}	24 hours
Dry Extended Detention Basin ^{1,3}	48 hours
Permeable Pavement – Extended Detention ¹	24 hours
Underground Storage – Extended Detention ^{1,4}	24 hours
Sand & Other Media Filtration - Extended Detention ^{1, 5}	24 hours

Notes:

1. The outlet structure shall not discharge more than the first half of the WQv in less than one-third of the drain time.
2. Provide a permanent pool with a minimum volume equal to the WQv and an extended detention volume above the permanent pool equal to $1.0 \times \text{WQv}$.
3. Dry basins must include a forebay and a micropool each sized at a minimum of $0.1 \times \text{WQv}$ and a protected outlet, or include acceptable pretreatment and a protected outlet.
4. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the SWP3. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.
5. The WQv ponding area shall completely empty between 24 and 72 hours.

Table 4b Infiltration Post-Construction Practices with Maximum Drain Times

Infiltration Practices	Maximum Drain Time of WQv
Bioretention Area/Cell ^{1,2}	24 hours
Infiltration Basin ²	24 hours
Infiltration Trench ³	48 hours
Permeable Pavement – Infiltration ³	48 hours
Underground Storage – Infiltration ^{3,4}	48 hours

Notes:

1. Bioretention soil media shall have a permeability of approximately 1 – 4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours.
2. Infiltrating practices with the WQv stored aboveground (bioretention, infiltration basin) shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.
3. Subsurface practices designed to fully infiltrate the WQv (infiltration trench, permeable pavement with infiltration, underground storage with infiltration) shall empty within 48 hours to recover storage for subsequent storm events.
4. Underground storage systems with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the SWP3 in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

Small Construction Activities. For all construction activities authorized under this permit which result in a disturbance less than 2 acres, a post-construction practice shall be used to treat storm water runoff for pollutants and to reduce adverse impacts on receiving waters. The applicant must provide a justification in the SWP3 why the use of table 4a and 4b practices are not feasible. The justification must address limiting factors which would prohibit the project going forward should table 4a and 4b practices be required. Please note that additional practices selected will require approval from the regulated MS4. The use of green infrastructure BMPs such as runoff reducing practices is also encouraged.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Tables 4a and 4b are not feasible and the following criteria are met: (1) a maintenance agreement or policy is established to ensure operations and treatment long-term; (2) the offsite location discharges to the same HUC-12 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI application.

Previously Developed Areas - Ohio EPA encourages the redevelopment of previously graded, paved or built upon sites through a reduction of the WQv treatment requirement. For a previously developed area, one or a combination of the following two conditions shall be met:

- A 20 percent net reduction of the site's volumetric runoff coefficient through impervious area reduction with soil restoration or replacing impervious roof area with green roof area (for these purposes green roofs shall be considered pervious surface) or
- Treatment of 20 percent of the WQv for the previously developed area using a practice meeting Table 4a/4b criteria.

Where there is a combination of redeveloped areas and new development, a weighted approach shall be used with the following equation:

$$WQv = P * A * [(Rv_1 * 0.2) + (Rv_2 - Rv_1)] / 12 \quad (\text{Equation 3})$$

where

P = 0.90 inches

A = area draining into the BMP in acres

Rv₁ = volumetric runoff coefficient for existing conditions (current site impervious area)

Rv₂ = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

Runoff Reduction Practices. The size of structural post-construction practices used to capture and treat the WQv can be reduced by incorporating runoff

reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the Rainwater and Land Development Manual. BMP-specific runoff reduction volumes are set by specifications in the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

A runoff reduction approach may be used to meet the groundwater recharge requirements in the Big Darby Creek Watershed. The runoff reduction practices used for groundwater recharge may be used to reduce the WQv requirement, see appendix A for details on groundwater recharge requirements.

In order to promote the implementation of green infrastructure, the Director may consider the use of runoff reducing practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, e.g., sheet flow from perimeter areas such as the rear yards of residential lots, low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs. This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. Alternative post-construction BMPs shall previously have been tested to confirm storm water treatment efficacy equivalent to those BMPs listed in Tables 4a and 4b using the protocol described in this section. BMP testing may include laboratory testing, field testing, or both.

Permittees shall request approval from Ohio EPA to use alternative post-construction BMPs on a case-by-case basis. To use an alternative post-construction BMP, the permittee must demonstrate that use of a BMP listed in Tables 4a and 4b is not feasible and the proposed alternative post-construction BMP meets the minimum treatment criteria as described in this section. The permittee shall submit an application to Ohio EPA for any proposed alternative post-construction BMP. Where the development project is located within a regulated municipal separate storm sewer system (MS4) community, the use of an alternative practice requires pre-approval by the MS4 before submittal of the

Ohio EPA permit application. Ohio EPA requires that approvals for alternative post-construction BMPs are finalized before permittees submit an NOI for permit coverage.

In addition to meeting sediment removal criteria, the discharge rate from the proposed alternative practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. Discharge rate is considered to have a negligible impact if the permittee can demonstrate that one of the following three conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.

If the conditions above that minimize the potential for hydrological impact to the receiving surface water of the state do not exist, then the alternative post-construction BMP must prevent stream erosion by reducing the flow rate from the WQv. In such cases, discharge of the WQv must be controlled. A second storm water BMP that provides extended detention of the WQv may be needed to meet the post-construction criteria.

Alternative Post-Construction BMP Testing Protocol. For laboratory testing, the alternative BMP shall be tested using sediment with a specific gravity of 2.65, a particle size distribution closely matching the distribution shown in Table 5, and total suspended sediment (TSS) concentrations within 10% of 200 mg/L (180 mg/L – 220 mg/L TSS). For an alternative BMP to be acceptable, the test results must demonstrate that the minimum treatment rate is 80% TSS removal at the design flow rate for the tested BMP.

Table 5 Particle Size Distribution for Testing Alternative Post-Construction BMPs

Particle Size (microns)	Percent Finer (%)
1,000	100
500	95
250	90
150	75
100	60
75	50
50	45
20	35
8	20
5	10
2	5

- For field testing, the alternative BMP shall be tested using storm water runoff

from the field, not altered by adding aggregate or subjecting to unusually high sediment loads such as those from unstabilized construction disturbance. The storm water runoff used for field testing shall be representative of runoff from the proposed installation site for the alternative BMP after all construction activities have ceased and the ground has been stabilized. The influent and effluent TSS concentrations of storm water runoff must be collected in the field. For an alternative BMP to be acceptable, the test results must demonstrate the minimum treatment rate is 80% TSS removal for influent concentrations equal to or greater than 100 mg/L TSS. If the influent concentration to the proposed alternative BMP is less than 100 mg/L TSS in the field, then the BMP must achieve an average effluent concentration less than or equal to 20 mg/L TSS.

- Testing of alternative post-construction BMPs shall be performed or overseen by a qualified independent, third-party testing organization;
- Testing shall demonstrate the maximum flow rate at which the alternative post-construction BMP can achieve the necessary treatment efficacy, including consideration for the potential of sediment resuspension;
- Testing shall demonstrate the maximum volume of sediment and floatables that can be collected in the alternative post-construction BMP before pollutants must be removed to maintain 80% treatment efficacy;
- Testing shall indicate the recommended maintenance frequency and maintenance protocol to ensure ongoing performance of the alternative post-construction BMP.

The alternative post-construction BMP testing protocol described in this section is similar to testing requirements specified by the New Jersey Department of Environmental Protection (NJDEP) for storm water Manufactured Treatment Devices (MTD) and therefore testing results certified by NJDEP shall be accepted by Ohio EPA. For examples of BMPs that have been tested using New Jersey Department of Environmental Protection's procedures, see the website: www.njstormwater.org.

Another nationally recognized storm water product testing procedure is the Technology Assessment Protocol – Ecology (TAPE) administered by the State of Washington, Department of Ecology. The TAPE testing procedure describes testing to achieve 80% TSS removal using a sediment mix with a particle size distribution with approximately 75% of the mass of the aggregate with particle diameters less than 45 microns. Overall, this particle size distribution is finer than the distribution in Table 5. Therefore, if TAPE testing results are available for a proposed alternative post-construction BMP, those results shall be accepted by Ohio EPA. The State of Washington, Department of Ecology website is <https://ecology.wa.gov/>.

Alternative BMPs that utilize treatment processes such as filtering or centrifugal separation, rather than a detention and settling volume, must be designed to ensure treatment of 90 percent of the average annual runoff

volume. For the design of these BMPs, the water quality flow rate (WQF) considered equivalent to the Water Quality Volume (WQv) shall be determined utilizing the Rational Method (Equation 4) with an intensity (i) appropriate for the water quality precipitation event. This intensity shall be calculated using the table given in Appendix C.

$$WQF = C * i * A \quad \text{(Equation 4)}$$

Where

WQF = water quality flow rate in cubic feet per second (cfs)
C = rational method runoff coefficient
i = intensity (in/hr)
A = area draining to the BMP (acres)

Alternative post-construction BMPs may include, but are not limited to: vegetated swales, vegetated filter strips, hydrodynamic separators, high-flow media filters, cartridge filters, membrane filters, subsurface flow wetlands, multi-chamber treatment trains, road shoulder media filter drains, wetland channels, rain barrels, green roofs, and rain gardens. The Director may also consider non-structural post-construction approaches.

- f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

g. Other controls.

- i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state or an MS4. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.
- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. No detergents may be used to wash vehicles. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **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. **Trench and ground water control.** In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water 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.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:
- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
 - Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
 - Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up-slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. Inspections. The permittee shall assign "qualified inspection personnel" to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.h of this permit or whether additional control measures are required. At a minimum, procedures in a SWP3 shall provide that all controls on the site are inspected:

- after any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled; and
- once every seven calendar days.

The inspection frequency may be reduced to at least once every month for dormant sites if:

- the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions for extended periods of time (e.g., site is covered with snow, ice, or the ground is frozen).

The beginning and ending dates of any reduced inspection frequency shall be documented in the SWP3.

Once a definable area has achieved final stabilization, the area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
 - ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
 - iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.h of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.
3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.
4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site-specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT.

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance plan in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
 - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;
 - c. A maintenance plan is in place to ensure all post construction BMPs are adequately maintained in the long-term;
 - d. For non-residential developments, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated. (i) For residential developments only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner; or

- e. An exception has been granted under Part III.G.4.

C. How to submit an NOT.

To terminate permit coverage, the permittee shall submit a complete and accurate Notice of Termination (NOT) form using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOT. Existing eBusiness Center account holders can access the NOT form through their existing account and submit using their existing PIN. Please see the following link for guidance: <http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOT form through the agency eBusiness Center due to a demonstrated hardship, the NOT may be submitted on paper NOT forms provided by Ohio EPA. NOT information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOT form.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee

shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to the director.
3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

P. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

Q. Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

R. Bypass.

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

S. Upset.

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

T. Monitoring and Records.

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

U. Reporting Requirements.

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Bankfull channel" means a channel flowing at channel capacity and conveying the bankfull discharge. Delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial or

the point at which the clearly scoured substrate of the stream ends and terrestrial vegetation begins.

- C. "Bankfull discharge" means the streamflow that fills the main channel and just begins to spill onto the floodplain; it is the discharge most effective at moving sediment and forming the channel.
- D. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- E. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- F. "Channelized stream" means the definition set forth in Section 6111.01 (M) of the ORC.
- G. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- H. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- I. "Director" means the director of the Ohio Environmental Protection Agency.
- J. "Discharge" means the addition of any pollutant to the surface waters of the state from a point source.
- K. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- L. "Drainage watershed" means for purposes of this permit the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This would also include any off-site drainage.
- M. "Final stabilization" means that either:
 - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:
 - a. The homebuilder completing final stabilization as specified above or
 - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- N. "General contractor" – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.
- O. "Individual lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).
- P. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- Q. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
 2. Designed or used for collecting or conveying solely storm water,
 3. Which is not a combined sewer and
 4. Which is not a part of a publicly owned treatment works.
- R. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

- S. "Natural channel design" means an engineering technique that uses knowledge of the natural process of a stream to create a stable stream that will maintain its form and function over time.
- T. "NOI" means notice of intent to be covered by this permit.
- U. "NOT" means notice of termination.
- V. "Operator" means any party associated with a construction project that meets either of the following two criteria:
1. The party has day-to-day operational control of all activities at a project which are necessary to ensure compliance with a SWP3 for the site and all permit conditions including the ability to authorize modifications to the SWP3, construction plans and site specification to ensure compliance with the General Permit, or
 2. Property owner meets the definition of operator should the party which has day to day operational control require additional authorization from the owner for modifications to the SWP3, construction plans, and/or site specification to ensure compliance with the permit or refuses to accept all responsibilities as listed above (Part VII.V.1).

Subcontractors generally are not considered operators for the purposes of this permit. As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.

- W. "Ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- X. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.
- Y. "Permanent stabilization" means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- Z. "Percent imperviousness" means the impervious area created divided by the total area of the project site.
- AA. "Point source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

- BB. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- CC. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- DD. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- EE. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.
- FF. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- GG. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- HH. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.
- II. "Steep slopes" means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a "steep slope," this permit's definition automatically adopts that definition.
- JJ. "Stream edge" means the ordinary high water mark.
- KK. "Subcontractor" – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.
- LL. "Surface waters of the state" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.
- MM. "SWP3" means storm water pollution prevention plan.
- NN. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment

facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- OO. “Temporary stabilization” means the 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.
- PP. “Water Quality Volume (WQ_v)” means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete.

Appendix A Big Darby Creek Watershed

CONTENTS OF THIS APPENDIX

- A.1 Permit Area
- A.2 TMDL Conditions
- A.3 Sediment Settling Ponds and Sampling
- A.4 Riparian Setback Requirements
- A.5 Riparian Setback Mitigation
- A.6 Groundwater Recharge Requirements
- A.7 Groundwater Recharge mitigation

Attachment A-A: Big Darby Creek Watershed Map

Attachment A-B: Stream Assessment and Restoration

A.1 Permit Area.

This appendix to Permit OHC00005 applies to the entire Big Darby Creek Watershed located within the State of Ohio. Please see Attachment A for permit area boundaries.

A.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL.

A.3 Sediment Settling Ponds and Sampling

Sediment settling ponds additional conditions. The sediment settling pond shall be sized to provide a minimum sediment storage volume of 134 cubic yards of effective sediment storage per acre of drainage and maintain a target discharge performance standard of 45 mg/l Total Suspended Solids (TSS) up to a 0.75-inch rainfall event within a 24-hour period. Unless infeasible, sediment settling ponds must be dewatered at the pond surface using a skimmer or equivalent device. The depth of the sediment settling pond must be less than or equal to five feet. 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).

Silt Fence and Diversions. For sites five or more acres in size, the use of sediment barriers as a primary sediment control is prohibited. Centralized sediment basins shall be used for sites 5 or more acres in size. Diversions shall direct all storm water runoff from the disturbed areas to the impoundment intended for sediment control. The sediment basins and associated diversions shall be implemented prior to the major earth disturbing activity.

The permittee shall sample in accordance with sampling procedures outlined in 40 CFR 136. Sampling shall occur as follows:

- i. Occur at the outfall of each sediment settling pond associated with the site. Each associated outfall shall be identified by a three-digit number (001, 002, etc.);
- ii. The applicable rainfall event for sampling to occur shall be a rainfall event of 0.25-inch to a 0.75-inch rainfall event to occur within a 24-hour period. Grab sampling shall be initiated at a site within 14 days, or the first applicable rainfall event thereafter, once upslope disturbance of each sampling location is initiated and shall continue on a quarterly basis. Quarterly periods shall be represented as January - March, April - June, July - September and October - December. Sampling results shall be retained on site and available for inspection.

If any sample is greater than the performance standard of 45 mg/l TSS, the permittee shall modify the SWP3 and install/implement new control practice(s) within 10 days to ensure the TSS performance standard is maintained. Within 3 days of improvement(s), or the first applicable rainfall event thereafter, the permittee shall resample to ensure SWP3 modifications maintain the TSS performance standard target.

For each sample taken, the permittee shall record the following information:

- the outfall and date of sampling;
- the person(s) who performed the sampling;
- the date the analyses were performed on those samples;
- the person(s) who performed the analyses;
- the analytical techniques or methods used; and
- the results of all analyses.

Both quarterly and sampling results following a discharge target exceedance shall be retained on site and available for inspection.

A.4 Riparian Setback Requirements.

The SWP3 shall clearly delineate the boundary of required stream setback distances. No construction activity shall occur, without appropriate mitigation, within the delineated setback boundary except activities associated with restoration or recovery of natural floodplain and channel form characteristics as described in Attachment B, storm water conveyances from permanent treatment practices and approvable utility crossings. Such conveyances must be designed to minimize the width of disturbance. If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix A.5 of this permit. Streams requiring protection under this section are defined as perennial, intermittent or ephemeral streams with a defined bed, bank or channel. National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks distance shall be delineated based upon one of the following two methods:

- i. The setback distance shall be sized as the greater of the following:

1. The regulatory 100-year floodplain based on FEMA mapping;
2. A minimum of 100 feet from the top of the streambank on each side; or
3. A distance calculated using the following equation:

$$W = 133DA^{0.43} \quad \text{(Equation 1, Appendix A)}$$

where:

DA = drainage area (mi²)

W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

- ii. **Stream Restoration with 100 feet (each side) Riparian Setback.** Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B, Part 1. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100-foot water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream," this Appendix A, Attachment B may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a surface water of the State or the delineated setback corridor.

Previously developed projects (as defined in Part III.G.2.e.) located within the delineated setback boundary are exempt from Riparian Setback Mitigation (A.5) provided the proposed project does not further intrude into the delineated setback boundary.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Riparian Setback Mitigation (Appendix A, A.5) if less than one acre of total new right-of-way is associated with the project.

A.5 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 25 feet from the stream edge. Zone 2 extends from 25 to 100 feet from the stream edge, and Zone 3 extends from 100 feet to the outer edge of the setback corridor. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale):

- i. Four times the total area disturbed in the stream and within Zone 1 of the site being developed shall be mitigated within Zone 1 of the mitigation location.
- ii. Three times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location.
- iii. Two times the area disturbed within Zone 3 of the site being developed shall be mitigated within any zone of the mitigation location.

In lieu of mitigation ratios found within in this section, linear transportation projects which result in total new right-of-way greater than one acre and less than two acres, which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities, shall provide Riparian Setback Mitigation at a ratio of 1.5 to 1.

All mitigation shall, at a minimum, include conserved or restored setback zone and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of disturbed area but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

A.6 Groundwater Recharge Requirements.

The SWP3 shall ensure that the overall site post-development groundwater recharge equals or exceeds the pre-development groundwater recharge. The SWP3 shall describe the conservation development strategies, BMPs and other practices deemed necessary by the permittee to maintain or improve pre-development rates of groundwater recharge. Pre-development and post-development groundwater recharge shall be calculated using the following equation:

i. $Vre_x = A_x * Dre_x / 12$ (Equation 2, Appendix A)

where:

X = represents a land use and hydrologic soil group pair

Vre_x = volume of total annual recharge from land use-soil group X
(in acre-ft)

Dre_x = depth of total annual recharge associated with land use-soil group X from Tables 1 or 2 (in inches)

A_x = area of land use-soil group X (in acres)

Table A-1 values should be used for land where the underlying geology indicates a potential for downward migration of groundwater. Table A-1 values represent the combined total groundwater recharge potential including groundwater contribution to stream baseflow and to the underlying bedrock aquifer. The potential for downward migration can be determined from a comparison of the potentiometric maps for the glacial and bedrock aquifers. Use Table A-2 when this potential is unlikely to exist. Detailed potentiometric maps for the Franklin county portion of the Darby watershed, and coarse potentiometric maps for the Darby watershed outside of Franklin County and hydrologic soil group data are available at:

http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx.

Table A-1 (Appendix A) Annual Average Expected Total Groundwater Recharge³

Land Use	Density (DU ¹ /acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group ²			
			A	B	C	D
Woods / Forest	-	-	17.0	16.6	15.6	14.6
Brush	-	-	17.0	16.6	15.6	14.6
Meadow	-	-	17.0	16.5	15.4	14.4
Managed Wood	-	-	16.9	16.0	14.7	13.4
Pasture	-	-	16.5	15.9	14.4	13.0
Row Crop	-	-	15.8	14.2	11.9	8.1
Urban Grasses	-	-	15.7	15.7	14.2	12.7
Low Density Residential	0.5	12%	15.7	15.7	14.2	12.7
Low Density Residential	1	20%	14.8	14.8	13.7	12.2
Medium Density Residential	2	25%	11.5	11.5	11.5	11.5
Medium Density Residential	3	30%	11.2	11.2	11.2	11.2
Medium Density Residential	4	38%	9.6	9.6	9.6	9.6
High Density Residential	≥5	65%	7.3	7.3	7.3	7.3
Commercial & Road Right-of-Way ⁴	-	90%	4.3	4.3	4.3	4.3

¹ DU = Dwelling Units

² Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.

³ These values apply when recharge of the aquifer is expected; recharge to the bedrock aquifer can be expected when the potentiometric head of the glacial aquifer is greater than the bedrock aquifer.

⁴ The 4.3 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-2 (Appendix A) Annual Average Expected Baseflow Recharge³

Land Use	Density (DU ¹ /acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group ²			
			A	B	C	D
Woods / Forest	-	-	11.8	11.4	10.7	9.9
Brush	-	-	11.7	11.4	10.7	9.9
Meadow	-	-	11.8	11.3	10.6	9.8
Managed Wood	-	-	11.7	11.0	10.0	9.1
Pasture	-	-	11.3	11.0	9.9	8.9
Row Crop	-	-	11.1	10.1	9.0	6.2
Urban Grasses	-	-	11.2	11.2	10.3	9.3
Low Density Residential	0.5	12%	11.2	11.2	10.3	9.3
Low Density Residential	1	20%	9.5	9.5	9.0	8.6
Medium Density Residential	2	25%	7.8	7.8	7.8	7.8
Medium Density Residential	3	30%	7.6	7.6	7.6	7.6
Medium Density Residential	4	38%	6.5	6.5	6.5	6.5
High Density Residential	≥5	65%	5.0	5.0	5.0	5.0
Commercial & Road Right-of-Way ⁴	-	90%	2.9	2.9	2.9	2.9

¹ DU = Dwelling Units

² Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.

³ These values apply when no recharge of the aquifer is expected.

⁴ The 2.9 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-3 (Appendix A) Land Use Definitions

Land Use	Definition
Woods / Forest	Areas dominated by trees. Woods are protected from grazing and litter and brush adequately cover the soil.
Brush	Brush, weeds, grass mixture where brush is the major element and more than 75% of the ground is covered.
Meadow	Continuous grass, protected from grazing, generally mowed for hay.
Managed Wood	Orchards, tree farms, and other areas planted or maintained for the production of fruits, nuts, berries, or ornamentals.
Pasture	Pasture, grassland, or range where at least 50% of the ground is covered and the area is not heavily grazed.
Row Crop	Areas used to produce crops, such as corn, soybeans, vegetables, tobacco, and cotton.
Urban Grasses	Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Examples include parks, lawns, golf courses, airport grasses, and industrial site grasses.
Residential	Areas with a mixture of constructed materials and vegetation; the average % imperviousness and number of dwelling units per acre to determine the appropriate density is specified.
Commercial	Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas not classified as High Intensity Residential.

- ii. The pre-development ground water recharge volume shall be calculated by determining the area of each land use-soil type pairing on the site of interest. The recharge associated with each such pairing multiplied by the area will give the pre-development volume of total groundwater

recharge. The same shall be done for the post-development land use-soil type pairings.

Any activity that is expected to produce storm water runoff with elevated concentrations of carcinogens, hydrocarbons, metals, or toxics is prohibited from infiltrating untreated storm water from the area affected by the activity. The groundwater recharge mitigation requirement for areas affected by such activities must be met by methods which do not present a risk of groundwater contamination. The following land uses and activities are typically deemed storm water hotspots:

Vehicle salvage yards and recycling facilities

- vehicle service and maintenance facilities (i.e. truck stops, gas stations)
- fleet storage areas (i.e. bus, truck)
- industrial sites subject to industrial storm water permitting requirements
- bulk terminals
- marinas
- facilities that generate or store hazardous materials
- other land uses and activities as designated by individual review

The following land uses and activities are not normally considered hotspots:

- residential streets and rural highways
- residential development
- institutional development
- commercial and office developments
- non-industrial rooftops
- pervious areas, except golf courses and nurseries

The applicant may use structural BMPs within drinking water source protection areas for community public water systems only to the extent that the structural BMP(s) does not cause contaminants in the recharge waters to impact the ground water quality at levels that would cause an exceedance of the drinking water Maximum Contaminant Levels (OAC Section 3745-81 and 3745-82). To obtain a map of drinking water source protection areas for community public water systems contact Ohio EPA's Division of Drinking and Ground Waters at (614) 644-2752.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Groundwater Recharge Mitigation (Appendix B, A.7) if less than one acre of total new right-of-way is associated with the project.

Protection of open space (infiltration areas) shall be by binding conservation easements that identify a third-party management agency, such as a homeowners' association/condominium association, political jurisdiction or third-party land trust.

A.7 Groundwater Recharge Mitigation.

If the post-development recharge volume is less than the pre-development recharge volume, then mitigation will be required. Two options are available for most applications:

- i. The preferred method is to convert additional land to land use with higher recharge potential. The difference in groundwater recharge between the existing and converted land use recharge is the amount which can be used as recharge credit. Off-site Groundwater Recharge Mitigation shall occur within the same Watershed Assessment Unit (12-digit HUC scale) as the permitted site and preferably up-gradient and within a 2-mile radius.

Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of the disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas.

- ii. On-site structural and non-structural practices may also be used to achieve groundwater mitigation requirements by retaining and infiltrating on-site a minimum volume of storm water runoff based on the area and hydrologic soil groups of disturbed soils. If these infiltrating practices are incorporated upstream of the water quality volume treatment practice, the volume of groundwater being infiltrated may be subtracted from the water quality volume for the purpose of meeting post-construction requirements. The on-site retention requirement is determined by the following formula:

$$V_{\text{retention}} = A_{\text{HSG-A}} * 0.90 \text{ in} + A_{\text{HSG-B}} * 0.75 \text{ in} + A_{\text{HSG-C}} * 0.50 \text{ in} + A_{\text{HSG-D}} * 0.25 \text{ in}$$

(Equation 3, Appendix A)

Where,

$V_{\text{retention}}$ = volume of runoff retained onsite using an approved infiltration practice

$A_{\text{HSG-x}}$ = area of each hydrologic soil group within the disturbed area

Table A-4: Hydrologic Soil Groups and On-site Retention Depth per Acre

Hydrologic Soil Group	HSG A	HSG B	HSG C	HSG D
Retention Depth (inches)	0.90	0.75	0.50	0.25

Retention volume ($V_{\text{retention}}$) provided by selected practices shall be determined using the runoff reduction method criteria as outlined in Part III.G.2.e, Ohio EPA's Runoff Reduction spreadsheet and supporting documentation in the Rainwater and Land Development manual. Hydrologic soil group (HSG) areas are to be determined by using the current version of SURRGO or Web Soil Survey soils information.

Appendix A Attachment A: Big Darby Creek Watershed



A more detailed map can be viewed at:

http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx

Appendix A Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting a setback as per Appendix A. A.4.i and ii.

In the event the assessment of the stream, meets all the criteria listed below, restoration (provided 401/404 permits are authorized) as depicted in Part 2 of this attachment, may be a means of reducing the setback distance required by A.4.i. (Appendix A).

Previously Channelized Low-Gradient Headwater Streams (drainage ditches) shall for the purposes of this permit be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area
- Low gradient and low stream power such that despite their straightened and entrenched condition incision (down-cutting) is not evident
- Entrenched, entrenchment ratio < 2.2
- Straight, sinuosity of the bankfull channel < 1.02

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design;
- b. Floodplain excavation necessary to promote interaction between stream and floodplain;
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target regardless of design approach shall be the frequently flooded width, which shall be maximized, at 10 times the channel's self-forming width. Five times the self-forming channel width may still be acceptable particularly on portions of the site if greater widths are achieved elsewhere.

Appendix B Olentangy River Watershed

CONTENTS OF THIS APPENDIX

- B.1 Permit Area
- B.2 TMDL Conditions
- B.3 Riparian Setback Requirements
- B.4 Riparian Setback Mitigation

Attachment B-A: Area of Applicability for the Olentangy Watershed (Map)

Attachment B-B: Stream Assessment and Restoration

B.1 Permit Area.

This appendix to Permit OHC00005 applies to specific portions of the Olentangy River Watershed located within the State of Ohio. The permit area includes the following 12-digit Hydrologic Unit Codes (HUC-12) within the Olentangy River Watershed:

12-Digit Hydrologic Unit Codes

12-Digit Hydrologic Unit Codes (HUC)	Narrative Description of Sub-Watershed
05060001 09 01	Shaw Creek
05060001 09 02	Headwaters Whetstone Creek
05060001 09 03	Claypool Run-Whetstone Creek
05060001 10 07	Delaware Run-Olentangy River
05060001 11 01	Deep Run-Olentangy River
05060001 11 02 (Only portion as depicted in Attachment A)	Rush Run-Olentangy River

Please see Attachment A (Appendix B) for permit area boundaries. An electronic version of Attachment A can be viewed at

http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

B.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Olentangy TMDL.

B.3 Riparian Setback Requirements.

The permittee shall comply with the riparian setback requirements of this permit or alternative riparian setback requirements established by a regulated MS4 and approved by Ohio EPA. The SWP3 shall clearly delineate the boundary of required stream setback distances. The stream setback shall consist of a streamside buffer and an outer buffer. No construction activity shall occur, without appropriate mitigation, within the streamside buffer except activities associated with storm water conveyances from permanent treatment practices, approvable utility crossings and restoration or recovery of floodplain and channel form characteristics as described in Attachment B. Storm water conveyances must be designed to minimize the width of disturbance.

Construction activities requiring mitigation for intrusions within the outer buffer for the Olentangy River mainstem and perennial streams are described in Appendix B.4.

If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix B.3. of this permit. Streams requiring protection under this section have a defined bed and bank or channel and are defined as follows:

- The Olentangy River mainstem;
- Perennial streams have continuous flow on either the surface of the stream bed or under the surface of the stream bed;
- Intermittent streams flow for extended periods of time seasonally of a typical climate year; and
- Ephemeral streams are normally dry and only flow during and after precipitation runoff (episodic flow).

National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks shall be delineated based upon one of the following two methods:

- i. The required setback distances shall vary with stream type as follows:
 - a. The setback distances associated with the mainstem of the Olentangy River shall consist of:
 - (1) A streamside buffer width of 100 feet as measured horizontally from the ordinary high water mark per side; and
 - (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. No impervious surfaces shall be constructed without appropriate mitigation and moderate to substantial fill activities with no impervious surface may require appropriate mitigation pending an individual approval by Ohio EPA.
 - b. The setback distance associated with perennial streams, other than the Olentangy mainstem, shall consist of:
 - (1) A streamside buffer width of 80 feet per side measured horizontally from the ordinary high water mark; and
 - (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. In the event the regulatory 100-year floodplain is not established, the outer buffer width shall be calculated using the following equation and measured horizontally from the ordinary high water mark. No impervious surfaces, structure, fill, or activity that would impair the floodplain or stream stabilizing ability of the outer buffer shall occur without appropriate mitigation:

$$W = 143DA^{0.41} \quad (\text{Equation 1 Appendix B})$$

where:

DA = drainage area (mi²)

W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

c. The setback distance associated with intermittent streams and ephemeral streams shall be a streamside buffer width of 30 feet per side measured horizontally from the centerline of the stream. No outer buffer is required for intermittent and ephemeral streams.

- ii. Stream Restoration with 100 feet (each side) Riparian Setback. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100 feet water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream", this may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a stream or the streamside buffer. Activities and controls that would not impair the floodplain or stream stabilizing ability of the outer buffer can be considered.

Redevelopment projects (i.e., developments on previously developed property) located within the delineated setback boundary is exempt from Riparian Setback Mitigation (B.3) provided the proposed project does not further intrude the delineated setback boundary.

B.4 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback of the **Olentangy River mainstem or perennial streams** shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 30 feet from the stream edge. Zone 2 extends

from 30 feet to the outer edge of the streamside buffer. Zone 3 extends from the outer edge of the streamside buffer to the outer edge of the outer buffer. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale). Alternative mitigation, within the permit area, may be considered on a case-by-case basis:

1. Four (4) times the total area disturbed in the stream within Zone 1 of the site being developed shall be mitigated; or, two (2) times the total area disturbed in the stream within Zone 1 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected by binding conservation easements or environmental covenants.
2. Three (3) times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location; or, one and one-half (1.5) times the total area disturbed within Zone 2 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.
3. Two (2) times the area to be mitigated within Zone 3 of the site being developed shall be mitigated within any Zone of the mitigation location; or, one (1) times the total area to be mitigated within any zone shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

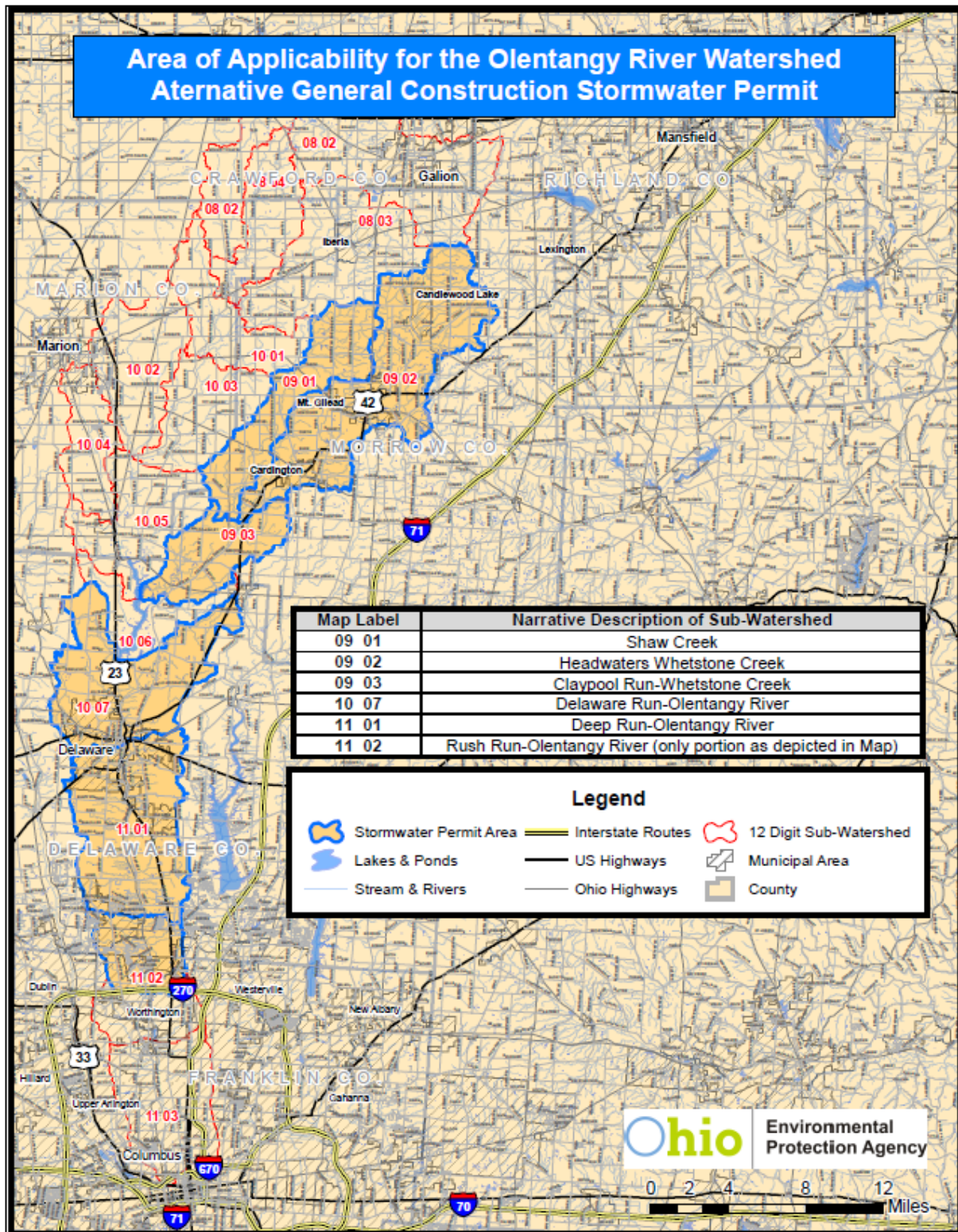
The mitigation required for intrusion into the riparian setback of an **intermittent stream** shall be four (4) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or two (2) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

The mitigation required for intrusion into the streamside buffer of an **ephemeral stream** shall be two (2) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or one (1) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

All mitigation shall, at a minimum, include conserved or restored setback zone, and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of permit authorization. Granting of binding conservation easements or environmental covenants protected for land outside of disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

Appendix B Attachment A Applicable Portions of the Olentangy Watershed



A more detailed map can be viewed at:
http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

Appendix B Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting an outer 'no build' setback as per Appendix B B.2i. and ii.

In the event the assessment of the stream meets all the criteria listed below, restoration as depicted in Part 2 of this attachment or natural channel design could be performed, provided 401/404 permits are authorized, and may be a means of reducing the setback distance required by B.2.i. (Appendix B).

Previously Modified, Low-Gradient Headwater Streams shall, for the purposes of this permit, be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area;
- Low gradient and low stream power such that incision (down-cutting) is not evident;
- Entrenched such that the ratio of the frequently flooded width to the bankfull width is less than 2.2; and
- Straight with little or no sinuosity present such that the ratio of the bankfull channel length to the straight-line distance between two points is less than 1.02.

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design;
- b. Floodplain excavation necessary to promote interaction between stream and floodplain;
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target shall be a frequently flooded width of 10 times the channel's self-forming width. Five times the self-forming channel width may be acceptable if sufficient elements of natural channel design are included in the restoration project.

Appendix C Rainfall Intensity for Calculation of Water Quality Flow (WQF)

DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)	DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)
5	2.37	33	0.95
6	2.26	34	0.93
7	2.15	35	0.92
8	2.04	36	0.90
9	1.94	37	0.88
10	1.85	38	0.86
11	1.76	39	0.85
12	1.68	40	0.83
13	1.62	41	0.82
14	1.56	42	0.80
15	1.51	43	0.78
16	1.46	44	0.77
17	1.41	45	0.76
18	1.37	46	0.75
19	1.33	47	0.74
20	1.29	48	0.73
21	1.26	49	0.72
22	1.22	50	0.71
23	1.19	51	0.69
24	1.16	52	0.68
25	1.13	53	0.67
26	1.10	54	0.66
27	1.07	55	0.66
28	1.05	56	0.65
29	1.03	57	0.64
30	1.01	58	0.64
31	0.99	59	0.63
32	0.97	60	0.62

Note: For $t_c < 5$ minutes, use $i = 2.37$ in/hr; for $t_c > 60$ minutes, use $i = 0.62$ in/hr. For all other t_c , use the appropriate value from this table.

Appendix C – Copy of NOI and EPA Authorization Email



Division of Surface Water - Notice of Intent (NOI) For Coverage Under Ohio Environmental Protection Agency General NPDES Permit

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: Beacon Marshall

Mailing (Applicant) Address: 3457 Granger Rd

City: Akron

State : OH

Zip Code: 44333

Country: USA

Contact Person: Charles Marshall

Phone: (330) 659-2040

Fax:

Contact E-mail Address: cmarshall@mccdesignbuild.com

II. Facility/Site Location Information

Facility/Site Name: Gateway Tire Monroe 2022

Facility Address: 100 Corridor Park Dr

City: Monroe

State: OH

Zip Code: 45050

County: Warren

Township:

Facility Contact Person: Charles Marshall

Phone: (330) 659-2040

Fax:

Facility Contact E-mail Address: cmarshall@mccdesignbuild.com

Latitude: 39.43548561

Longitude: -84.3314306

Facility/Map Attachment 100 Corridor Dr_2022
NOI Map.pdf

Receiving Stream or MS4:

III. General Permit Information

General Permit Number: OHC000005

Initial Coverage: Y **Renewal Coverage:** N

Type of Activity: Construction Site Stormwater General Permit

SIC Code(s):

Existing NPDES Facility Permit Number: 1GC08656*AG

ODNR Coal Mining Application Number:

If Household Sewage Treatment System, is system for:

New Home Construction:

Replacement of failed existing system:

Outfall

Design Flow (MGD):

Associated Permit Effluent Table:

Receiving Water :

Latitude

Longitude

Are These Permits Required?

PTI: NO

Individual 401 Water Quality Certification: NO

Individual NPDES: NO

Isolated Wetland: NO

U.S. Army Corp Nationwide Permit: NO

Proposed Project Start Date(if applicable): May 18, 2022

Estimated Completion Date(if applicable): December 15, 2022

Total Land Disturbance (Acres): 6.85

MS4 Drainage Area (Sq. Miles):

SWP3 Attachment(s): Gateway Tire_2022_SWPPP (4-5-22).pdf

IV. Payment Information

Check #:

For Ohio EPA Use Only

Check Amount:

Check ID(OFA):

ORG #:

Date of Check:

Rev ID:

DOC #:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name (printed or typed):

Title:

Signature:	Date:
ADDITIONAL INFORMATION	
<i>Please add any additional comments or attachments below.</i>	

Appendix D – Copy of Site and Dewatering Inspection Forms

Section A – General Information (If necessary, complete additional inspection reports for each separate inspection location.)	
Inspector Information	
Inspector Name:	Title:
Company Name:	Email:
Address:	Phone Number:
Inspection Details	
Inspection Date:	Inspection Location:
Inspection Start Time:	Inspection End Time:
Current Phase of Construction:	Weather Conditions During Inspection:
Did you determine that any portion of your site was unsafe for inspection per CGP Part 4.5? ☐ Yes ☐ No	
If “Yes,” provide the following information: Location of unsafe conditions: The conditions that prevented you inspecting this location:	
Indicate the required inspection frequency: (Check all that apply. You may be subject to different inspection frequencies in different areas of the site.)	
Standard Frequency (CGP Part 4.2): ☐ At least once every 7 calendar days; OR ☐ Once every 14 calendar days and within 24 hours of the occurrence of either: • A storm event that produces 0.25 inches or more of rain within a 24-hour period, or • A snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period	
Increased Frequency (CGP Part 4.3.1) (If site discharges to sediment or nutrient-impaired waters or to waters designated as Tier 2, Tier 2.5, or Tier 3): ☐ Once every 7 calendar days and within 24 hours of the occurrence of either: • A storm event that produces 0.25 inches or more of rain within a 24-hour period, or • A snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period	

Reduced Frequency (CGP Part 4.4):

- ☐ For stabilized areas: Twice during first month, no more than 14 calendar days apart; then once per month after first month until permit coverage is terminated
- ☐ For stabilized areas on "linear construction sites": Twice during first month, no more than 14 calendar days apart; then once more within 24 hours of the occurrence of either:
- A storm event that produces 0.25 inches or more of rain within a 24-hour period, or
 - A snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period
- ☐ For arid, semi-arid, or drought-stricken areas during seasonally dry periods or during drought: Once per month and within 24 hours of the occurrence of either:
- A storm event that produces 0.25 inches or more of rain within a 24-hour period, or
 - A snowmelt discharge from a storm event that produces 3.25 inches or more of snow within a 24-hour period
- ☐ For frozen conditions where construction activities are being conducted: Once per month

Was this inspection triggered by a storm event producing 0.25 inches or more of rain within a 24-hour period? ☐ Yes ☐ No

If "Yes," how did you determine whether the storm produced 0.25 inches or more of rain?

- ☐ On-site rain gauge
☐ Weather station representative of site.
Weather station location:

Total rainfall amount that triggered the inspection (inches):

Was this inspection triggered by a snowmelt discharge from a storm event producing 3.25 inches or more of snow within a 24-hour period? ☐ Yes ☐ No

If "Yes," how did you determine whether the storm produced 3.25 inches or more of snow?

- ☐ On-site rain gauge
☐ Weather station representative of site.
Weather station location:

Total snowfall amount that triggered the inspection (inches):

Section B – Condition and Effectiveness of Erosion and Sediment (E&S) Controls (CGP Part 2.2)

(Insert additional rows if needed)

Type and Location of E&S Control	Conditions Requiring Routine Maintenance? ¹	If "Yes," How Many Times (Including This Occurrence) Has This Condition Been Identified?	Conditions Requiring Corrective Action? ^{2, 3}	Date on Which Condition First Observed (If Applicable)?	Description of Conditions Observed
1.	☐ Yes ☐ No		☐ Yes ☐ No		
2.	☐ Yes ☐ No		☐ Yes ☐ No		
3.	☐ Yes ☐ No		☐ Yes ☐ No		
4.	☐ Yes ☐ No		☐ Yes ☐ No		
5.	☐ Yes ☐ No		☐ Yes ☐ No		
If the same routine maintenance was found to be necessary three or more times for the same control at the same location (including this occurrence), follow the corrective action requirements and record the required information in your corrective action log, or describe here why you believe the specific condition should still be addressed as routine maintenance:					

¹ Routine maintenance includes minor repairs or other upkeep performed to ensure that the site's stormwater controls remain in effective operating condition, not including significant repairs or the need to install a new or replacement control. Routine maintenance is also required for specific conditions: (1) for perimeter controls, whenever sediment has accumulated to half or more the above-ground height of the control (CGP Part 2.2.3.c.i); (2) where sediment has been tracked-out from the site onto paved roads, sidewalks, or other paved areas (CGP Part 2.2.4.d); (3) for inlet protection measures, when sediment accumulates, the filter becomes clogged, and/or performance is compromised (CGP Part 2.2.10.b); and (4) for sediment basins, as necessary to maintain at least half of the design capacity of the basin (CGP Part 2.2.12.f)

² Corrective actions are triggered only for specific conditions (CGP Part 5.1):

1. A stormwater control needs a significant repair or a new or replacement control is needed, or, in accordance with Part 2.1.4.c, you find it necessary to repeatedly (i.e., three (3) or more times) conduct the same routine maintenance fix to the same control at the same location (unless you document in your inspection report under Part 4.7.1.c that the specific reoccurrence of this same problem should still be addressed as a routine maintenance fix under 2.1.4); or
2. A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly; or
3. Your discharges are not meeting applicable water quality standards; or
4. A prohibited discharge has occurred (see CGP Part 1.3); or
5. During the discharge from site dewatering activities:
 - a. The weekly average of your turbidity monitoring results exceeds the 50 NTU benchmark (or alternate benchmark if approved by EPA pursuant to Part 3.3.2.b); or
 - b. You observe or you are informed by EPA, State, or local authorities of the presence of the conditions specified in Part 4.6.3.e.

³ If a condition on your site requires a corrective action, you must also fill out a corrective action log found at <https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates>. See CGP Part 5.4 for more information.

Section C – Condition and Effectiveness of Pollution Prevention (P2) Practices and Controls (CGP Part 2.3)					
Type and Location of P2 Practices and Controls	Conditions Requiring Routine Maintenance? ¹	If “Yes,” How Many Times (Including This Occurrence) Has This Condition Been Identified?	Conditions Requiring Corrective Action? ^{2, 3}	Date on Which Condition First Observed (If Applicable)?	Description of Conditions Observed
1.	☐ Yes ☐ No		☐ Yes ☐ No		
2.	☐ Yes ☐ No		☐ Yes ☐ No		
3.	☐ Yes ☐ No		☐ Yes ☐ No		
4.	☐ Yes ☐ No		☐ Yes ☐ No		
5.	☐ Yes ☐ No		☐ Yes ☐ No		
If the same routine maintenance was found to be necessary three or more times for the same control at the same location (including this occurrence), follow the corrective action requirements and record the required information in your corrective action log, or describe here why you believe the specific condition should still be addressed as routine maintenance:					

Section D – Stabilization of Exposed Soil (CGP Part 2.2.14) (Insert additional rows if needed)						
Specific Location That Has Been or Will Be Stabilized	Stabilization Method and Applicable Deadline	Stabilization Initiated? ☐ Yes ☐ No If "Yes," date initiated:	Final Stabilization Criteria Met? ☐ Yes ☐ No If "Yes," date criteria met:	Final Stabilization Photos Taken? ☐ Yes ☐ No	Notes	
1.						
2.						
3.						
4.						
5.						

Section E – Description of Discharges (CGP Part 4.6.2)
(Insert additional rows if needed)

Was a discharge (not including dewatering) occurring from any part of your site at the time of the inspection? ⁴ ☐ Yes ☐ No	
If “Yes,” for each point of discharge, document the following: • The visual quality of the discharge. • The characteristics of the discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants. • Signs of the above pollutant characteristics that are visible from your site and attributable to your discharge in receiving waters or in other constructed or natural site drainage features.	
Discharge Location	Observations
1.	
2.	
3.	
4.	
5.	

⁴ If a dewatering discharge was occurring, you must conduct a dewatering inspection pursuant to CGP Part 4.3.2 and complete a separate dewatering inspection report.

Section F – Signature and Certification (CGP Part 4.7.2)	
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."	
MANDATORY: Signature of Operator or "Duly Authorized Representative:"	
Signature:	Date:
Printed Name:	Affiliation:
OPTIONAL: Signature of Contractor or Subcontractor	
Signature:	Date:
Printed Name:	Affiliation:

General Tips for Using This Template

This Site Inspection Report Template is provided to assist you in preparing site inspection reports for EPA's 2022 Construction General Permit (CGP). If you are covered under the 2022 CGP, you can use this template to create a site inspection report form that is customized to the specific circumstances of your site and that complies with the minimum reporting requirements of Part 4.7 of the permit. Note that the use of this form is optional; you may use your own site inspection report form provided it includes the minimum information required in Part 4.7 of the CGP.

This template does not address the CGP's inspection reporting requirements related to dewatering activities. A separate inspection template has been developed specifically for dewatering activities and is available at <https://www.epa.gov/hpdes/construction-general-permit-resources-tools-and-templates>.

Keep in mind that this document is a template and not an "off-the-shelf" inspection report that is ready to use without some modification. You must first customize this form to include the specifics of your project in order for it to be useable for your inspection reports. Once you have entered all of your site-specific information into the blank fields, you may use this form to complete inspection reports.

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Review the inspection requirements.** Before you start developing your inspection report form, read the CGP's Part 4 inspection requirements. This will ensure that you have a working understanding of the permit's underlying inspection requirements.
- **Complete all required blank fields.** Fill out all blank fields. Only by filling out all fields will the template be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may delete these or cross them off as you see fit. Or, if you need more space to document your findings, you may insert additional rows in the electronic version of this form or use the bottom of the page in the field version of this form.)
- **Use your site map to document inspection findings.** In several places in the template, you are directed to specify the location of certain features of your site, including where stormwater controls are installed and where you will be stabilizing exposed soil. You are also asked to fill in location information for unsafe conditions and the locations of any discharges occurring during your inspections. Where you are asked for location information, EPA encourages you to reference the point on your SWPPP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Complete the inspection report within 24 hours of completing a site inspection.** You must complete an inspection report in accordance with Part 4.7.1 of the CGP.
- **Include the inspection form with your SWPPP.** Once your form is complete, make sure to include a copy of the inspection form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all inspection reports with your records.** You must also retain in your records copies of all inspection reports in accordance with the requirements in Part 4.7.3 of the CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated in accordance with the requirements in Part 4.7.4 of the CGP.

Instructions for Section A

Inspector Name

Enter the name of the person that conducted the inspection. Include the person's contact information (title, affiliated company name, address, email, and phone number).

Inspection Date and Time

Enter the date you performed the inspection and the time you started and ended the inspection.

Weather Conditions During Inspection

Enter the weather conditions occurring during the inspection, e.g., sunny, overcast, light rain, heavy rain, snowing, icy, windy.

Current Phase of Construction

If this project is being completed in more than one phase, indicate which phase it is currently in.

Inspection Location

If your project has multiple locations where you conduct separate inspections, specify the location where this inspection is being conducted. If only one inspection is conducted for your entire project, enter "Entire Site." If necessary, complete additional inspection report forms for each separate inspection location.

Unsafe Conditions for Inspection (CGP Part 4.5.7)

Inspections are not required where a portion of the site or the entire site is subject to unsafe conditions. These conditions should not regularly occur and should not be consistently present on a site. Generally, unsafe conditions are those that render the site (or a portion of it) inaccessible or that would pose a significant probability of injury to applicable personnel. Examples could include severe storm or flood conditions, high winds, and downed electrical wires.

If your site, or a portion of it, is affected by unsafe conditions during the time of your inspection, provide a description of the conditions that prevented you from conducting the inspection and what parts of the site were affected. If the entire site was considered unsafe, specify the location as "Entire Site."

Inspection Frequency

Check all the inspection frequencies that apply to your project. Note that you may be subject to different inspection frequencies in different areas of your site.

Inspection Triggered by a Storm Event

If you were required to conduct this inspection because of a storm event that produced 0.25 inches or more of rain within a 24-hour period, indicate whether you relied on an on-site rain gauge or a nearby weather station (and where the weather station is located). Also, specify the total amount of rainfall for this specific storm event.

If you were required to conduct this inspection because of a snowmelt discharge from a storm event that produced 3.25 inches or more of snow within a 24-hour period, then indicate whether you relied on an on-site measurement or a nearby weather station (and where the weather station is located). Also, specify the total amount of snowfall for this specific storm event.

Instructions for Section B**Type and Location of Erosion and Sediment (E&S) Controls**

Provide a list of all erosion and sediment (E&S) controls that your SWPPP indicates will be installed and implemented at your site. This list must include at a minimum all E&S controls required by CGP Part 2.2. Include also any natural buffers established under CGP Part 2.2.1. Buffer requirements apply if your project's earth-disturbing activities will occur within 50 feet of a discharge to receiving water. You may group your E&S controls on your form if you have several of the same type of controls (e.g., you may group "Inlet Protection Measures," "Perimeter Controls," and "Stockpile Controls" together on one line), but if there are any problems with a specific control, you must separately identify the location of the control, whether routine maintenance or corrective action is necessary, and in the notes section you must describe the specifics about the problem you observed.

Conditions Requiring Routine Maintenance?

Answer "Yes" if the E&S control requires routine maintenance as defined in footnote 1 of this template. Note that in many cases, "Yes" answers are expected and indicate a project with an active operation and maintenance program. You should also answer "Yes" if work to fix the problem is still ongoing from the previous inspection, though necessary work must be initiated immediately and completed by the end of the next business day or within seven calendar days if documented in accordance with CGP Part 2.1.4.b.

If "Yes," How Many Times (Including this Occurrence) Has this Condition Been Identified?

Indicate how many times the routine maintenance has been required for the same control at the same location.

Conditions Requiring Corrective Action?

Answer "Yes" if you found any of the conditions listed in footnote 2 in this template to be present during your inspection (CGP Part 5.1). If you answer "Yes," you must take corrective action and complete a corrective action log, found at <https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates>. You should also answer "Yes" if work to fix the problem from a previous inspection is still ongoing, though the operator must comply with the corrective action deadlines in CGP Part 5.2.

Date on Which Condition First Observed (If Applicable)?

Provide the date on which the condition that triggered the need for routine maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition's discovery.

Description of Conditions Observed

For each E&S control and the area immediately surrounding it, describe whether the control is properly installed and whether it appears to be working to minimize sediment discharge. Indicate also whether a new or modified control is necessary to comply with the permit. Describe any problem condition(s) you observed such as the following:

1. Failure to install or to properly install a required E&S control
2. Damage or destruction to an E&S control caused by vehicles, equipment, or personnel, a storm event, or other event
3. Mud or sediment deposits found downslope from E&S controls, including in receiving waters, or on nearby streets, curbs, or open conveyance channels
4. Sediment tracked out onto paved areas by vehicles leaving construction site
5. Noticeable erosion or sedimentation at discharge outlets or at adjacent streambanks or channels
6. Erosion of the site's sloped areas (e.g., formation of rills or gullies)
7. E&S control is no longer working due to lack of maintenance
8. Other incidents of noncompliance

Describe also why you think the problem condition(s) occurred as well as actions (e.g., routine maintenance or corrective action) you will take or have taken to fix the problem.

For buffer areas, make note of whether they are marked off as required, whether there are signs of construction disturbance within the buffer, which is prohibited under the CGP, and whether there are visible signs of erosion resulting from discharges through the area.

If routine maintenance or corrective action is required, briefly note the reason. If routine maintenance or corrective action has been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action log describing the condition and your work to fix the problem.*

Routine Maintenance Need Has Been Found to be Necessary Three (3) or More Times for the Same Control at the Same Location (Including this Occurrence)
If routine maintenance has been required three (3) or more times for the same control at the same location, the permit requires (CGP Part 2.1.4.c) you to fix the problem using the corrective action procedures in CGP Part 5 or to document why you believe the reoccurring problem can be addressed as a routine maintenance fix. If you believe the problem can continue to be fixed as routine maintenance, describe why you believe the specific condition should still be addressed as routine maintenance.

Instructions for Section C

Type and Location of Pollution Prevention (P2) Practices and Controls

Provide a list of all pollution prevention (P2) practices and controls that are implemented at your site. This list must include all P2 practices and controls required by CGP Part 2.3 and those that are described in your SWPPP.

Conditions Requiring Routine Maintenance?

Answer "Yes" if the P2 practice or control requires routine maintenance as defined in footnote 1 of this template. Note that in many cases, "Yes" answers are expected and indicate a project with an active operation and maintenance program. You should also answer "Yes" if work to fix the problem is still ongoing

from the previous inspection, though necessary work must be initiated immediately and completed by the end of the next business day or within seven calendar days if documented in accordance with CGP Part 2.1.4.b.

If “Yes,” How Many Times (Including this Occurrence) Has this Condition Been Identified?

Indicate how many times the routine maintenance has been required for the same practice or control at the same location.

Conditions Requiring Corrective Action?

Answer “Yes” if you found any of the conditions listed in footnote 2 in this template to be present during your inspection (CGP Part 5.1). If you answer “Yes,” you must take corrective action and complete a corrective action log, found at <https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates>. You should also answer “Yes” if work to fix the problem from a previous inspection is still ongoing, though the operator must comply with the corrective action deadlines in CGP Part 5.2.

Date on Which Condition First Observed (If Applicable)?

Provide the date on which the condition that triggered the need for maintenance or corrective action was first identified. If the condition was just discovered during this inspection, enter the inspection date. If the condition is a carryover from a previous inspection, enter the original date of the condition’s discovery.

Description of Conditions Observed

For each P2 control and the area immediately surrounding it, describe whether the control is properly installed, and whether it appears to be working to minimize or eliminate pollutant discharges. Indicate also whether a new or modified control is necessary to comply with the permit. Describe any problem condition(s) you observed such as the following:

1. Failure to install or to properly install a required P2 control
2. Damage or destruction to a P2 control caused by vehicles, equipment, or personnel, or a storm event
3. Evidence of a spill, leak, or other type of pollutant discharge, or failure to have properly cleaned up a previous spill, leak, or other type of pollutant discharge
4. Spill response supplies are absent, insufficient, or not where they are supposed to be located
5. Improper storage, handling, or disposal of chemicals, building materials or products, fuels, or wastes
6. P2 control is no longer working due to lack of maintenance
7. Other incidents of noncompliance

Describe also why you think the problem condition(s) occurred as well as actions (e.g., routine maintenance or corrective action) you will take or have taken to fix the problem.

If routine maintenance or corrective action is required, briefly note the reason. If routine maintenance or corrective action has been completed, make a note of the date it was completed and what was done. *If corrective action is required, note that you will need to complete a separate corrective action log describing the condition and your work to fix the problem.*

Routine Maintenance Need Was Found to be Necessary Three (3) or More Times for the Same Control at the Same Location (Including this Occurrence)

If routine maintenance has been required three (3) or more times for the same control at the same location, the permit requires (CGP Part 2.1.4.c) you to fix the problem using the corrective action procedures in CGP Part 5 or to document why you believe the reoccurring problem can be addressed as a routine maintenance fix. If you believe the problem can continue to be fixed as routine maintenance, describe why you believe the specific condition should still be addressed as routine maintenance.

Instructions for Section D

Specific Location That Has Been or Will Be Stabilized

List all areas where soil stabilization is required to begin because construction work in that area has permanently stopped or temporarily stopped (i.e., work will stop for 14 or more days), and all areas where stabilization has been implemented (CGP Part 2.2.1.4).

Stabilization Method and Applicable Deadline

For each area, specify the method of stabilization (e.g., hydroseed, sod, planted vegetation, erosion control blanket, mulch, rock).

Specify also which of the following stabilization deadlines apply to this location:

1. .5 acres or less of land disturbance occurring at any one time at site: Complete no later than 14 calendar days after stabilization initiated.
2. More than .5 acres of land disturbance occurring at any one time at site: Complete no later than 7 calendar days after stabilization initiated.
3. Arid, semi-arid, and drought-stricken areas: See CGP Part 2.2.14.b.i.
4. Unforeseen circumstances: See CGP Part 2.2.14.b.ii.
5. Discharges to a sediment- or nutrient-impaired water or to a water identified as Tier 2, 2.5, or 3 for antidegradation purposes: Complete no later than 7 days after stabilization initiated.

Stabilization Initiated?

For each area, indicate whether stabilization has been initiated. If "Yes," then enter the date stabilization was initiated.

Final Stabilization Criteria Met?

For each area, indicate whether the final stabilization criteria in CGP Part 2.2.14.c have been met. If "Yes," then enter the date final stabilization criteria were met.

Final Stabilization Photos Taken?

Answer "Yes" if you have taken photos before and after meeting the stabilization criteria as required in CGP Part 8.2.1.a.

Notes

For each area where stabilization has been initiated, describe the progress that has been made and what additional actions are necessary to complete stabilization. Note the effectiveness of stabilization in preventing erosion. If stabilization has been initiated but not completed, make a note of the date it is to be completed. If stabilization has been completed, make a note of the date it was completed. If stabilization has not yet been initiated, make a note of the date it is to be initiated and the date it is to be completed.

Instructions for Section E

You are only required to complete this section if a discharge is occurring at the time of the inspection (CGP Part 4.6.2).

Was a discharge (not including dewatering) occurring from any part of your site at the time of the inspection?

During your inspection, examine all points of discharge from your site, and determine whether a discharge is occurring. If a dewatering discharge was occurring, you must conduct a dewatering inspection pursuant to CGP Part 4.3.2. If there is a discharge, answer "Yes" and complete the questions below regarding the specific discharge. If there is not a discharge, answer "No" and skip to the next page.

Discharge Location (Repeat as necessary if there are multiple points of discharge.)

Specify the location on your site where the discharge is occurring. The location may be an outlet from a stormwater control or constructed stormwater channel, a discharge into a storm sewer inlet, or a specific point on the site. Be as specific as possible; it is recommended that you refer to a precise point on your site map.

Observations

Document the visual quality of the discharge and take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oily sheen; and other indicators of stormwater pollutants. Also, document signs of these same pollutant characteristics that are visible from your site and attributable to your discharge in receiving waters or in other constructed or natural site drainage features.

Instructions for Section F

Each inspection report must be signed and certified to be considered complete (CGP Part 4.7.2).

Operator or “Duly Authorized Representative” – MANDATORY (CGP Appendix G Part G.11.2 and CGP Appendix H Section X)

At a minimum, the site inspection report must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply:

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities; provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively.
- *For a municipality, State, Federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
 - The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- Sign, date and print your name and affiliation.

Contractor or Subcontractor - OPTIONAL

Where you rely on a contractor or subcontractor to complete the site inspection report, you should consider requiring the individual(s) to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the site inspection report as well. If applicable, sign, date, and print your name and affiliation.

Note

While EPA has made every effort to ensure the accuracy of all instructions contained in this template, it is the permit, not this template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between this template and any corresponding provision of the CGP, you must abide by the requirements in the permit. EPA welcomes comments on this Site Inspection Report Template at any time and will consider those comments in any future revision. You may contact EPA for CGP-related inquiries at cgp@epa.gov

Section A – Dewatering Discharges (CGP Part 4.6.3) Complete this section within 24 hours of completing the inspection. (If necessary, complete additional inspection reports for each separate inspection location.)	
Inspector Information	
Inspector Name:	Title:
Company Name:	Email:
Address:	Phone Number:
Inspection Details	
Inspection Date:	Inspection Location:
Discharge Start Time:	Discharge End Time:
Rate of Discharge (gallons per day):	Corrective Action Required? ¹ ☐ Yes ☐ No
Describe Indicators of Pollutant Discharge at Point of Dewatering Discharge: ¹	
Attach Photographs of: 1. Dewatering water prior to treatment by a dewatering control(s) and the final discharge after treatment; and 2. Dewatering control(s); and 3. Point of discharge to any receiving waters flowing through or immediately adjacent to the site and/or to constructed or natural site drainage features, storm drain inlets, and other conveyances to receiving waters.	

¹If you observe any of the following indicators of pollutant discharge, you are required to take corrective action under Part 5.1.5.b:

- a sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; or
- a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

Section B – Signature and Certification (CGP Part 4.7.2)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

MANDATORY: Signature of Operator or "Duly Authorized Representative:"	
Signature:	Date:
Printed Name:	Affiliation:
OPTIONAL: Signature of Contractor or Subcontractor	
Signature:	Date:
Printed Name:	Affiliation:

General Tips for Using This Template

This Dewatering Inspection Report Template is provided to assist you in preparing dewatering inspection reports for EPA's 2022 Construction General Permit (CGP). If you are covered under the 2022 CGP, you can use this template to create a dewatering inspection report form that complies with the minimum reporting requirements of Part 4.6.3 of the permit. Note that the use of this form is optional; you may use your own inspection report form provided it includes the minimum information required in Part 4.6.3 of the CGP.

This template is for dewatering inspections only. A separate site inspection report template that does not include dewatering inspections and complies with the minimum reporting requirements of Part 4.7 of the permit is available at <https://www.epa.gov/npdcs/construction-general-permit-resources-tools-and-templates>.

If you are covered under a State CGP, this template may be helpful in developing a report that can be used for that permit; however, it will need to be modified to meet the specific requirements of that permit. If your permitting authority requires you to use a specific inspection report form, you should not use this form.

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Review the inspection requirements.** Before you start developing your inspection report form, read the CGP's Part 4 inspection requirements. This will ensure that you have a working understanding of the permit's underlying inspection requirements.
- **Complete all required blank fields.** Fill out all blank fields. Only by filling out all fields will the template be compliant with the requirements of the permit. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may delete these as you see fit. Or, if you need more space to document your findings, you may insert additional rows in the electronic version of this form or use the bottom of the page in the field version of this form.)
- **Use your site map to document inspection findings.** In several places in the template, you are directed to specify the location of certain features of your site, including where stormwater controls are installed and where you will be stabilizing exposed soil. You are also asked to fill in location information for unsafe conditions and the locations of any discharges occurring during your inspections. Where you are asked for location information, EPA encourages you to reference the point on your SWPPP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Include the inspection form with your SWPPP.** Once your form is complete, make sure to include a copy of the inspection form in your SWPPP in accordance with Part 7.2.7.e of the CGP.
- **Retain copies of all inspection reports with your records.** You must also retain copies of all inspection reports in your records in accordance with the requirements in Part 4.7.3 of the CGP. These reports must be retained for at least 3 years from the date your permit coverage expires or is terminated in accordance with the requirements in Part 4.7.4 of the CGP.

Instructions for Section A

Inspector Name

Enter the name of the person that conducted the inspection. Include the person's contact information (title, affiliated company name, address, email, and phone number).

Inspection Date

Enter the date you performed the inspection.

Inspection Location

If your project has multiple locations where you conduct separate dewatering inspections, specify the location where this inspection is being conducted. Otherwise, you can enter "dewatering operation."

Discharge Start and End Times

Enter the approximate time the dewatering discharge started and ended on the day of the inspection.

Rate of Discharge

Enter the rate of discharge in gallons per day on the day of inspection.

To estimate the approximate discharge rate on the day of dewatering inspection, one approach is to use the manufacturer's design pump rating for the pump model in use. For example, a pump rated at 164 gpm (gallons per minute) by the manufacturer can be assumed to be discharging at 164 gpm in most cases. To convert to gallons per day, multiply the rate in gpm by the ratio of minutes in one-day (1,440 minutes per day), resulting in a discharge rate of 236,160 gallons per day.

In cases where the dewatering discharge is being pumped over long distances or a substantial distance uphill, which will result in a reduced pump rate relative to manufacturer's specification, the operator may improve the accuracy of the estimate by estimating the time required to fill a container of a known volume. For example, if it takes 60 seconds to fill an empty 55-gallon barrel, the estimated discharge rate is 55 gpm, or 79,200 gallons per day.

Indicators of Pollutant Discharge

For the point of discharge, describe any observed sediment plume, suspended solids, unusual color, presence of odor, decreased clarity, or presence of foam; and/or a visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water.

Corrective Action Required?

Answer "Yes" if during your inspection you found any of the conditions listed above in the instructions for the Indicators of Pollutant Discharge section. If you answer "Yes," you must take corrective action and complete a corrective action log, found at <https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates>. Answer "No" if you did not observe any of the listed pollutant indicators.

Photographs

As required in CGP Part 8.2.1.a, attach photos of: (1) dewatering water prior to treatment by a dewatering control(s) and the final discharge after treatment; (2) the dewatering control(s); and (3) the point of discharge to any receiving waters flowing through or immediately adjacent to the site and/or to constructed or natural site drainage features, storm drain inlets, and other conveyances to receiving waters.

Instructions for Section B

Each inspection report must be signed and certified to be considered complete (CGP Part 4.7.2).

Operator or "Duly Authorized Representative" – MANDATORY (CGP Appendix G Part G.11.2 and CGP Appendix H Section X)

At a minimum, the dewatering inspection report must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply:

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively.

- *For a municipality, State, Federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
 - The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- Sign, date and print your name and affiliation.

Contractor or Subcontractor - OPTIONAL

Where you rely on a contractor or subcontractor to complete the dewatering inspection report, you should consider requiring the individual(s) to sign and certify each report. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the dewatering inspection report as well. If applicable, sign, date, and print your name and affiliation.

Note

While EPA has made every effort to ensure the accuracy of all instructions contained in this template, it is the permit, not this template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between this template and any corresponding provision of the CGP, you must abide by the requirements in the permit. EPA welcomes comments on this Dewatering Inspection Report Template at any time and will consider those comments in any future revision. You may contact EPA for CGP-related inquiries at cgp@epa.gov

Appendix E – Copy of Corrective Action Log

2022 CGP Corrective Action Log

Project Name: _____

NPDES ID Number: _____

Section A – Individual Completing this Log	
Name:	Title:
Company Name:	Email:
Address:	Phone Number:
Section B – Details of the Problem (CGP Part 5.4.1.a) Complete this section within 24 hours of discovering the condition that triggered corrective action.	
Date problem was first identified:	Time problem was first identified:
What site conditions triggered this corrective action? (Check the box that applies. See instructions for a description of each triggering condition (1 thru 6).) ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5a ☐ 5b ☐ 6	
Specific location where problem identified:	
Provide a description of the specific condition that triggered the need for corrective action and the cause (if identifiable):	
Section C – Corrective Action Completion (CGP Part 5.4.1.b) Complete this section within 24 hours after completing the corrective action.	
For site condition # 1, 2, 3, 4, or 6 (those not related to a dewatering discharge) confirm that you met the following deadlines (CGP Part 5.2.1):	
☐ Immediately took all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. AND	
☐ Completed corrective action by the close of the next business day, unless a new or replacement control, or significant repair, was required. OR	
☐ Completed corrective action within seven (7) calendar days from the time of discovery because a new or replacement control, or significant repair, was necessary to complete the installation of the new or modified control or complete the repair. OR	
☐ It was infeasible to complete the installation or repair within 7 calendar days from the time of discovery. Provide the following additional information: Explain why 7 calendar days was infeasible to complete the installation or repair:	

Provide your schedule for installing the stormwater control and making it operational as soon as feasible after the 7 calendar days:			
For site condition # 5a, 5b, or 6 (those related to a dewatering discharge), confirm that you met the following deadlines:			
☐ Immediately took all reasonable steps to minimize or prevent the discharge of pollutants until a solution could be implemented, including shutting off the dewatering discharge as soon as possible depending on the severity of the condition taking safety considerations into account.			
☐ Determined whether the dewatering controls were operating effectively and whether they were causing the conditions.			
☐ Made any necessary adjustments, repairs, or replacements to the dewatering controls to lower the turbidity levels below the benchmark or remove the visible plume or sheen.			
Describe any modification(s) made as part of corrective action: <i>(Insert additional rows below if applicable)</i>	Date of completion:	SWPPP update necessary?	If yes, date SWPPP was updated:
1.		☐ Yes ☐ No	
2.		☐ Yes ☐ No	
Section D - Signature and Certification (CGP Part 5.4.2)			
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."			
MANDATORY: Signature of Operator or "Duly Authorized Representative:"			
Signature:	Date:		
Printed Name:	Affiliation:		
OPTIONAL: Signature of Contractor or Subcontractor			
Signature:	Date:		
Printed Name:	Affiliation:		

General Instructions

This Corrective Action Log Template is provided to assist you creating a corrective action log that complies with the minimum reporting requirements of Part 5.4 of the EPA's Construction General Permit (CGP). For each triggering condition on your site, you will need to fill out a separate corrective action log.

The entire form must be completed to be compliant with the requirements of the permit. (Note: In Section C, if you do not need the number of rows provided in the corrective action log, you may delete these or cross them off. Alternatively, if you need more space to describe any modifications, you may insert additional rows in the electronic version of this form or use the bottom of the page in the field version of this form.)

If you are covered under a State CGP, this template may be helpful in developing a log that can be used for that permit; however, you will likely need to modify this form to meet the specific requirements of any State-issued permit. If your permitting authority requires you to use a specific corrective action log, you should not use this template.

Instructions for Section A

Individual completing this form Enter the name of the person completing this log. Include the person's contact information (title, affiliated company name, address, email, and phone number).

Instructions for Section B

You must complete Section B within 24 hours of discovering the condition that triggered corrective action. (CGP Part 5.4)

When was the problem first discovered?

Specify the date and time when the triggering condition was first discovered.

What site conditions triggered this corrective action? (CGP Parts 5.1 and 5.3)

Check the box corresponding to the numbered triggering condition below that applies to your site.

1. A stormwater control needs a significant repair or a new or replacement control is needed, or, in accordance with Part Error! Reference source not found., you find it necessary to repeatedly (i.e., 3 or more times) conduct the same routine maintenance fix to the same control at the same location (unless you document in your inspection report under Part Error! Reference source not found. that the specific reoccurrence of this same problem should still be addressed as a routine maintenance fix under Part Error! Reference source not found.);
2. A stormwater control necessary to comply with the requirements of this permit was never installed, or was installed incorrectly;
3. Your discharges are not meeting applicable water quality standards;
4. A prohibited discharge has occurred (see Part 1.3);
5. During discharge from site dewatering activities:
 - a. The weekly average of your turbidity monitoring results exceeds the 50 NTU benchmark (or alternate benchmark if approved by EPA pursuant to Part **Error! Reference source not found.**); or
 - b. You observe or you are informed by EPA, State, or local authorities of the presence of any of the following at the point of discharge to a receiving water flowing through or immediately adjacent to your site and/or to constructed or natural site drainage features or storm drain inlets:
 - sediment plume
 - suspended solids
 - unusual color
 - presence of odor
 - decreased clarity
 - presence of foam
 - visible sheen on the water surface or visible oily deposits on the bottom or shoreline of the receiving water
6. EPA requires corrective action as a result of permit violations found during an inspection carried out under Part 4.8.

Provide a description of the problem (CGP Part 5.4.1.a)

Provide a summary description of the condition you found that triggered corrective action, the cause of the problem (if identifiable), and the specific location where it was found. Be as specific as possible about the location; it is recommended that you refer to a precise point on your site map.

Instructions for Section C

You must complete Section C within 24 hours after completing the correction action. (CGP Part 5.4)

Deadlines for completing corrective action for condition # 1, 2, 3, 4, or 6 (if not relating to a dewatering discharge) (CGP Part 5.2.1)

Check the box to confirm that you met the deadlines that apply to each triggering condition. You are always required to check the first box (i.e., immediately took all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events.). Only one of the next three boxes should be checked depending on the situation that applies to this corrective action.

Check the second box if the corrective action for this particular triggering condition does not require a new or replacement control, or a significant repair. These actions must be completed by the close of the next business day from the time of discovery of the condition.

Check the third box if the corrective action for this particular triggering condition requires a new or replacement control, or a significant repair. These actions must be completed by no later than seven calendar days from the time of discovery of the condition.

Check the fourth box if the corrective action for this particular triggering condition requires a new or replacement control, or a significant repair, and if it is infeasible to complete the work within seven calendar days. Additionally, you will need to fill out the table below the checkbox that requires:

1. An explanation as to why it was infeasible to complete the installation or repair within seven calendar days of discovering the condition.
2. Provide the schedule you will adhere to for installing the stormwater control and making it operational as soon as feasible after the seventh day following discovery.

Note: Per Part 5.2.1.c, where these actions result in changes to any of the stormwater controls or procedures documented in your SWPPP, you must modify your SWPPP accordingly within seven calendar days of completing this work.

Deadlines for completing corrective action for condition # 5a, 5b, or 6 related to a dewatering discharge (CGP Part 5.2.2)

These deadlines apply to conditions relating to construction dewatering activities. Check the box to confirm that you met the deadlines that apply to each triggering condition. You are required to check all of the boxes in this section to indicate your compliance with the corrective action deadlines.

List of modification(s) to correct problem

Provide a list of modifications you completed to correct the problem.

Date of completion

Enter the date you completed the modification. The work must be completed by the deadline you indicated above.

SWPPP update necessary?

Check "Yes" or "No" to indicate if a SWPPP update is necessary consistent with Part 7.4.1.a in order to reflect changes implemented at your site. If "Yes," then enter the date you updated your SWPPP. The SWPPP updates must be made within seven calendar days of completing a corrective action. (CGP Part 5.2.1.c)

Instructions for Section D

Each corrective action log entry must be signed and certified following completion of Section D to be considered complete. (CGP Part 5.4.2)

Operator or "Duly Authorized Representative" – **MANDATORY** (CGP Appendix G Part G.1.1.2 and CGP Appendix H Section X)

At a minimum, the corrective action log must be signed by either (1) the person who signed the NOI, or (2) a duly authorized representative of that person. The following requirements apply:

If the signatory will be the person who signed the NOI for permit coverage, as a reminder, that person must be one of the following types of individuals:

- *For a corporation:* By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- *For a partnership or sole proprietorship:* By a general partner or the proprietor, respectively.
- *For a municipality, State, Federal, or other public agency:* By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

If the signatory will be a duly authorized representative, the following requirements must be met:

- The authorization is made in writing by the person who signed the NOI (see above);
 - The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- Sign, date and print your name and affiliation.

Contractor or Subcontractor - OPTIONAL

Where you rely on a contractor or subcontractor to complete this log and the associated corrective action, you should consider requiring the individual(s) to sign and certify each log entry. Note that this does not relieve you, the permitted operator, of the requirement to sign and certify the log as well. If applicable, sign, date, and print your name and affiliation.

Recordkeeping

Logs must be retained for at least 3 years from the date your permit coverage expires or is terminated. (CGP Part 5.4.4)

Keep copies of your signed corrective action log entries at the site or at an easily accessible location so that it can be made immediately available at the time of an on-site inspection or upon request by EPA. (CGP Part 5.4.3) Include a copy of the corrective action log in your SWPPP. (CGP Part 7.2.7.e)

Note

While EPA has made every effort to ensure the accuracy of all instructions contained in this template, it is the permit, not this template, that determines the actual obligations of regulated construction stormwater discharges. In the event of a conflict between this template and any corresponding provision of the CGP, you must abide by the requirements in the permit. EPA welcomes comments on this Corrective Action Log Template at any time and will consider those comments in any future revision. You may contact EPA for CGP-related inquiries at cgp@epa.gov

Appendix G – Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above-named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

Appendix H – Grading and Stabilization Activities Log

[illegible]

Appendix I –Training Documentation

Stormwater Pollution Prevention Training Log

Project Name: _____

Project Location: _____

Instructor's Name(s): _____

Instructor's Title(s): _____

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- | | |
|---|--|
| ☐ Sediment and Erosion Controls | ☐ Emergency Procedures |
| ☐ Stabilization Controls | ☐ Inspections/Corrective Actions |
| ☐ Pollution Prevention Measures | |

Specific Training Objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		

Appendix J – Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the EPA's Construction General Permit (CGP), at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, State, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix G of EPA's CGP, and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix G.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix K – Endangered Species Documentation



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

Project code: 2022-0027427

Project Name: Gateway Tire 2022 Expansion

April 04, 2022

Subject: Consistency letter for the 'Gateway Tire 2022 Expansion' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear DAVID KANE:

The U.S. Fish and Wildlife Service (Service) received on April 04, 2022 your effects determination for the 'Gateway Tire 2022 Expansion' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause “take”^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action’s effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* Threatened

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Gateway Tire 2022 Expansion

2. Description

The following description was provided for the project 'Gateway Tire 2022 Expansion':

Gateway Tire 2022 Expansion - CPG

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.43490115,-84.3310171882446,14z>

**Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. [Semantic] Is the project action area located within 0.25 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

5. [Semantic] Is the project action area located within 150 feet of a known occupied northern long-eared bat maternity roost tree?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

Automatically answered

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Alban Surveying Inc

Name: DAVID KANE

Address: 38052 Euclid Ave suite 200

City: Willoughby

State: OH

Zip: 44094

Email: kanecivil@gmail.com

Phone: 2163397034

Appendix L – Historic Properties Documentation

Appendix M – Rainfall Gauge Recording

Use the table below to record the rainfall gauge readings at the beginning and end of each work day. An example table follows.

Month/Year			Month/Year			Month/Year		
Day	Start time	End time	Day	Start time	End time	Day	Start time	End time
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
11			11			11		
12			12			12		
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19			19			19		
20			20			20		
21			21			21		
22			22			22		
23			23			23		
24			24			24		
25			25			25		
26			26			26		
27			27			27		
28			28			28		
29			29			29		
30			30			30		
31			31			31		

Example Rainfall Gauge Recording

April 2022			May 2022			June 2022		
Day	7:00 am	4:400 pm	Day	7:00 am	4:00 pm	Day	7:00 am	4:00 pm
1	--	--	1	0.2	0	1	0	0.4
2	--	--	2	0	0	2	0	0
3	0	0	3	0.1	0.3	3	--	--
4	0	0.3	4	0	0	4	--	--
5	0	0	5	0	0	5	0	0

In this example (for only partial months), 0.25-inch rainfall inspections would have been conducted on April 4 and June 1.

Appendix N – Turbidity Monitoring Sampling Documentation

N/A