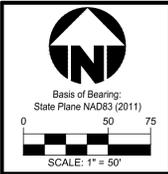
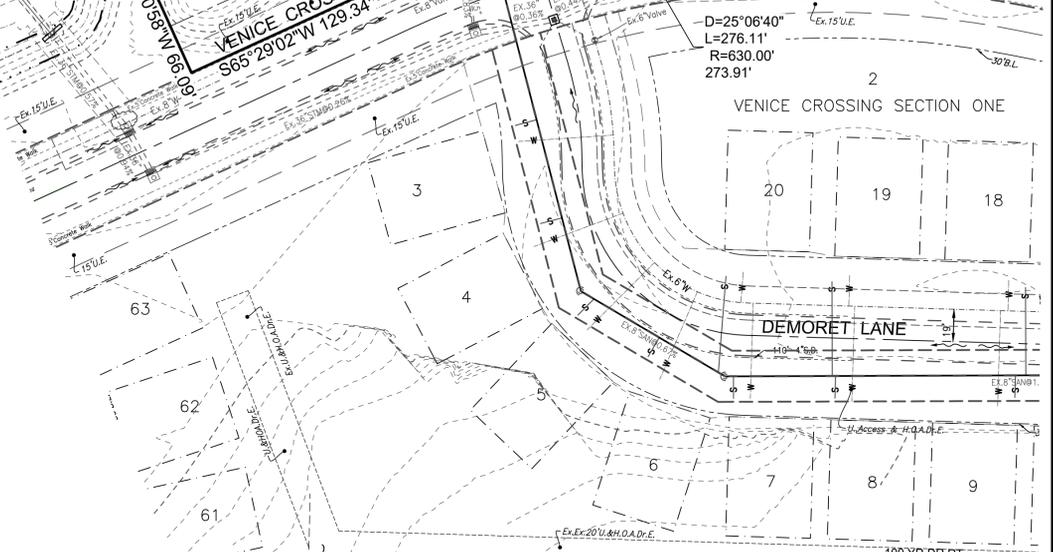
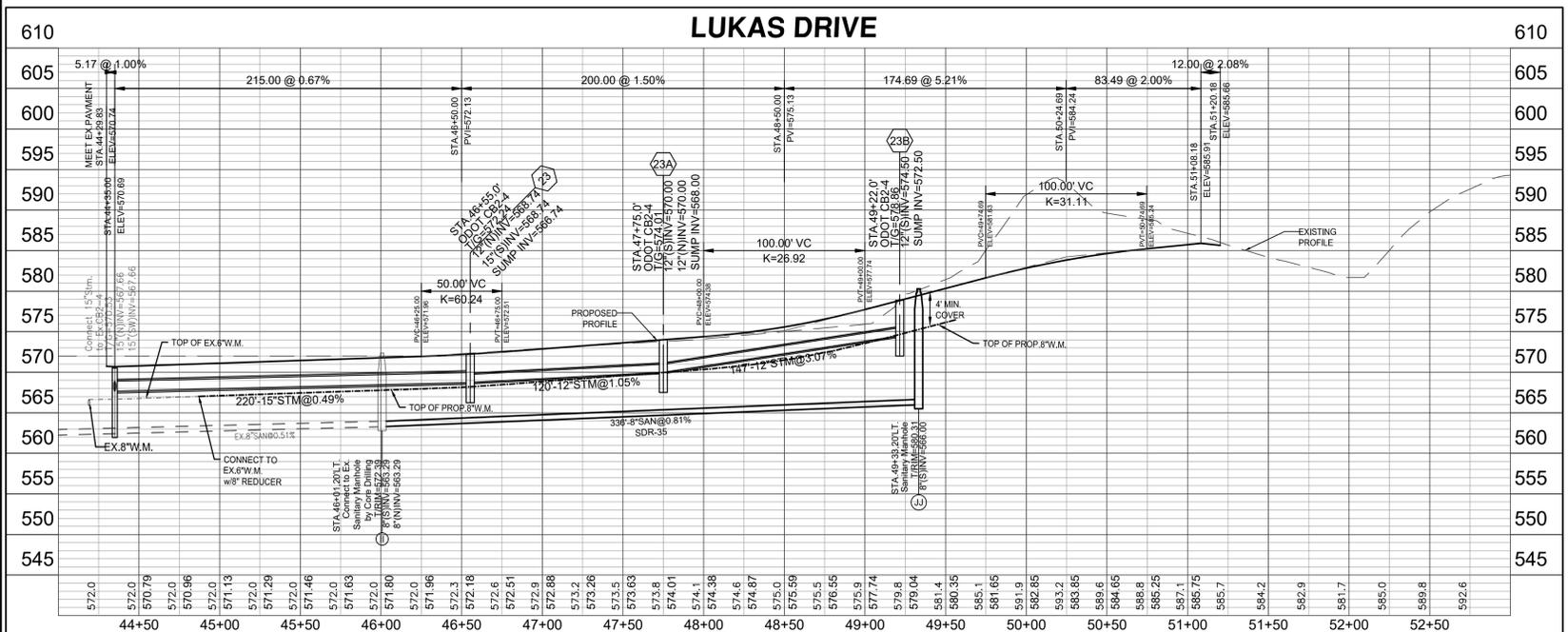
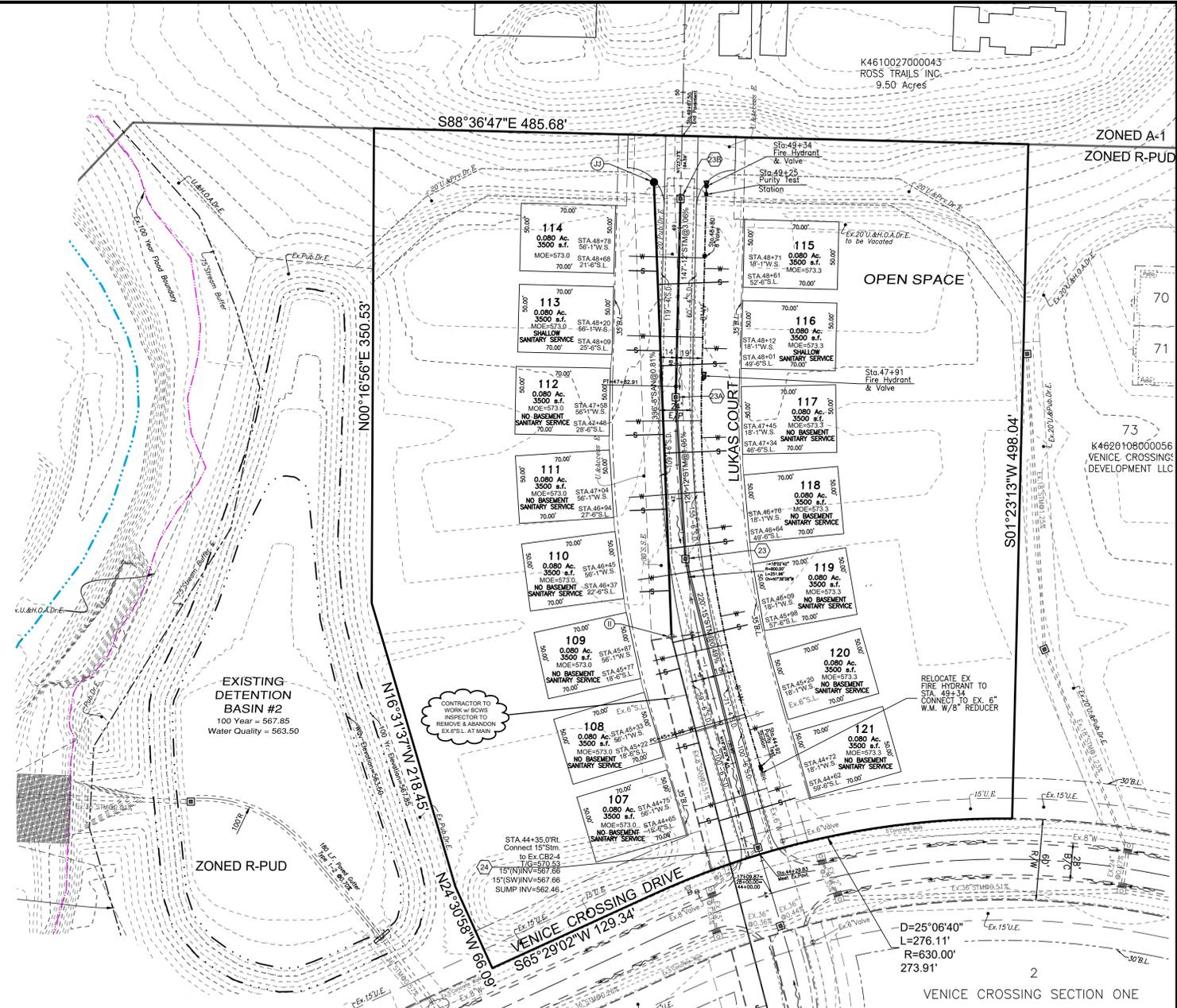


- NOTES:
- 48 hours notice to be given to affected residents before construction begins.
 - All Catch Basin B/C Elevations located within the curb are set to the Back of Curb Elevations.
 - Lower 1" Water Services as needed to avoid conflicts with Storm with Min. 4" Cover.
 - Location of existing utilities to be determined in the field prior to work beginning.
 - All lots Sump to Sump Drain unless otherwise noted in plan.
 - Sump Lines to be installed as per Standard Service Detail. Wyes or Tees are to be placed ten feet past lot line, on the low side of specified lots, and marked with Wye poles.
 - Contractors to accept all quantities as correct prior to beginning construction.

NOTE:
At Crossings, the water main shall have a minimum vertical distance of eighteen (18") inches from storm and sanitary sewers. Also, one full length of water main shall be located so the joints are as far from the storm and sanitary sewers as possible. Fittings, not joint deflection, must be used when water main is lowered at crossings.



Item	Revision Description	Date	Drawn	Chk
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VENICE CROSSING SECTION FOUR
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 26, TOWN 3, RANGE 2
PLAN & PROFILE



Drawing: 13M074-004 CD
Drawn by: JMW
Checked by: TAC
Issue Date: 4-27-22

Plot time: May 02, 2022 - 12:51pm
Drawing name: J:\2013\13M074-004\CD\DWG\13M074-004 CD.dwg - Layout Tab: 2PP

EROSION CONTROL NOTES

- SEEDING AND MULCHING
- SODDING
- PRESERVE EXISTING VEGETATION
- STRAW BALE
- SILT FENCE OR MULCH BERM
- SOIL PILES
- TEMPORARY STREAM CROSSING
- GRAVEL CURB INLET SEDIMENT FILTER
- GEOTEXTILE INLET SEDIMENT FILTER
- GABIONS
- STRAW BALE DROP INLET SEDIMENT FILTER
- SOD DROP INLET SEDIMENT FILTER
- GRAVEL & WIRE MESH DROP INLET SEDIMENT FILTER
- BLOCK & GRAVEL CURB INLET SEDIMENT FILTER
- TEMPORARY SEDIMENT TRAPS & DAMS
- DIKES & SLOPE PROTECTION
- ROLLED GRAVEL CURB INLET SEDIMENT FILTER
- CHECK DAM
- TEMPORARY DETENTION SEDIMENT FILTER/BASIN
- DANDY BAG/BEAVER DAM® OR EQUAL
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT AREA
- SEE SOIL EROSION & SEDIMENTATION CONTROL DETAIL SHEET (Page #7)

- CLEARING LIMITS
- SILT FENCE OR MULCH BERM
- REGULATED WATERWAY OF STATE OF OHIO

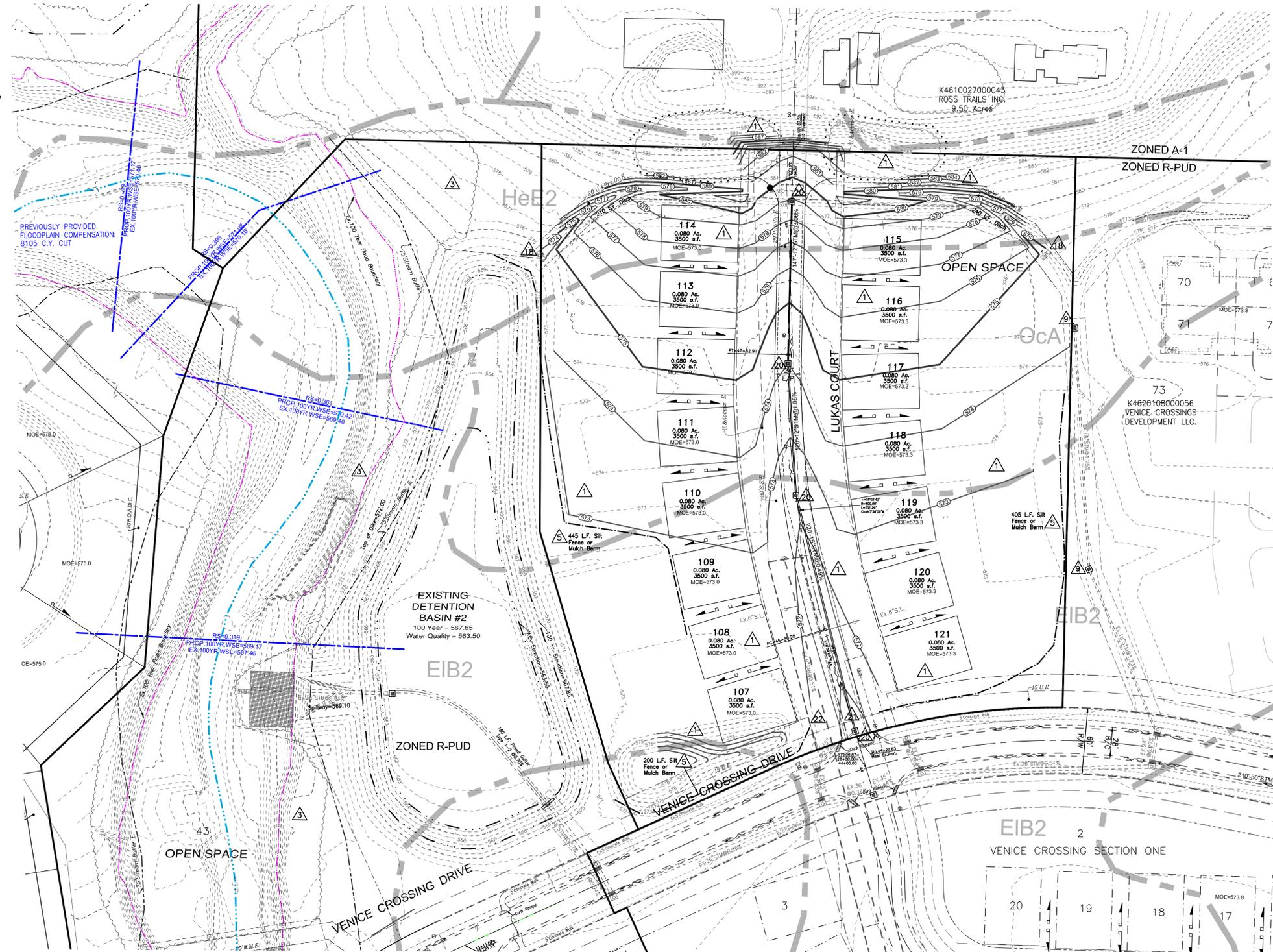
- NOTES:**
- Regular inspection and maintenance will be provided for all erosion and sediment control practices. Permanent records of maintenance and inspections must be kept throughout the construction period. Inspections must be made a minimum of once every seven (7) days and immediately after storm events greater than 0.5 inches of rain in a 24 hour period. Provided will be name of inspector, major observations, date of inspection and corrective measures taken.
 - All erosion and sediment control practices must conform to the specifications of Rainwater and Land Development, Ohio's standards for storm water management, land development and urban stream protection.
 - Perimeter Sedimentation control and basins/traps shall be implemented as the first step of grading and within seven (7) days of initial grubbing or grading and shall continue to function until upland areas are stabilized.
 - Disturbed areas which will remain unworked for a period of twenty-one (21) days or more, shall be stabilized with seeding and mulching or other approved means within seven (7) days. All disturbed areas within fifty (50) feet of an intermittent or solid blue line stream shall be stabilized within two (2) days. All areas of a site which are at final grade shall be stabilized with seeding and mulching or other approved means within seven (7) days.
 - Quantities for Erosion Control may vary between detailed plans and field conditions during construction. Plan quantities are a minimum; more erosion control may be necessary due to environmental conditions.
 - Sedimentation control and ditch swales are subject to change upon completion of entire set of construction drawings.
 - No solid or liquid waste shall be discharged into storm water runoff.
 - Home builders are responsible for erosion control on each individual lot.
 - Contractors to accept all quantities as correct prior to beginning construction.

PROJECT DATA		
Total Site Area	5.87 Ac.	
Sediment Basin Calculations:		
Drainage Area	27.97 Ac.	
Disturbed Tributary Area	4.50 Ac.	
Required Sediment Storage	0.10 Ac./Ft.	
Required Dewatering Storage	0.18 Ac./Ft.	
Water Quality Volume Provided	1.01 Ac./Ft.	
Pre-Developed Runoff Coefficient	0.32	
Post-Developed Runoff Coefficient	0.50	
Estimated Proposed Impervious Area	1.50 Ac.(25.0%)	
Immediate Receiving Waters	Dry Run Creek	
Subsequent Receiving Waters	Great Miami River	
SOIL TYPES		
Symbol	Name	Type
E1A	Eldon loam 0 to 2 percent slopes	B
E1B2	Eldon loam 2 to 6 percent slopes, moderately eroded	B
HeE2	Hennepin-Miamian silt loams 18 to 25 percent slopes, moderately eroded	B
OcA	Ockley silt loam 0 to 2 percent slopes	B

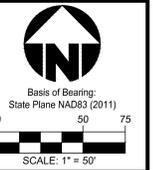
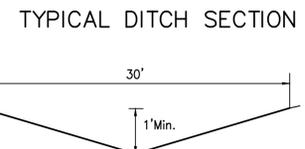
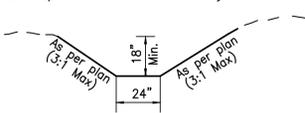
NOTE:
The Temporary Sediment Basins are to be cleaned out in accordance with the Rainwater and Land Development Manual and Butler County standards.

GRADING NOTES

- LOCATION OF EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT PRIOR TO BIDDING THE PROJECT.
- CONTRACTORS SHALL SET UP AN ONSITE PRE-CONSTRUCTION MEETING WITH THE BUTLER COUNTY STORM WATER DISTRICT/BCOE DEVELOPER, PROJECT GEOTECHNICAL ENGINEER, EARTHWORK CONTRACTOR, AND SITE CIVIL ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL ASSUME THE TOP 8" OF EXISTING GROUND IS TOPSOIL. TOPSOIL REMOVED TO DEPTHS GREATER THAN 8" SHALL BE DONE ONLY AFTER CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER AND APPROVAL OF THE DEVELOPER.
- ALL EARTHWORK AND CONSTRUCTION ACTIVITY SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS DESCRIBED IN THE GEOTECHNICAL EXPLORATION REPORT AND ALL ADDENDUMS.
- CONTRACTOR SHALL VERIFY ALL EARTHWORK QUANTITIES PRIOR TO AWARD OF CONTRACT. PAY QUANTITIES ARE FINAL EXCEPT FOR DOCUMENTED UNDERCUT APPROVED BY DEVELOPER PRIOR TO COMPLETION OF THE EXTRA WORK. UPON REQUEST, CONTRACTORS MAY HAVE ACCESS TO THE SITE TO FIELD CHECK TOPOGRAPHY.
- THE AREAS LABELED DENSE VEGETATION ARE WHERE THE EXISTING GROUND WAS OBSCURED FROM VIEW BY EXISTING VEGETATION. THE EXISTING CONTOURS SHOWN IN THIS AREA MAY VARY.



Note: All ditches constructed by the Developer shall be sodded or hydra-seeded.

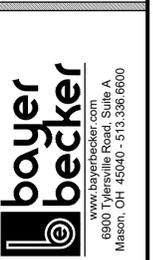


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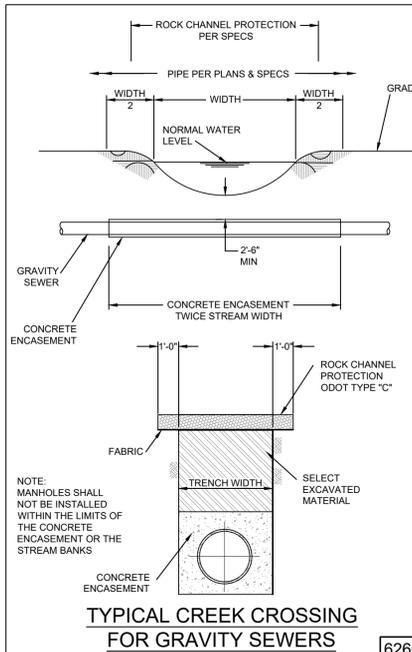
Item	Revision Description
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VENICE CROSSING SECTION FOUR
ROSS TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 26, TOWN 3, RANGE 2

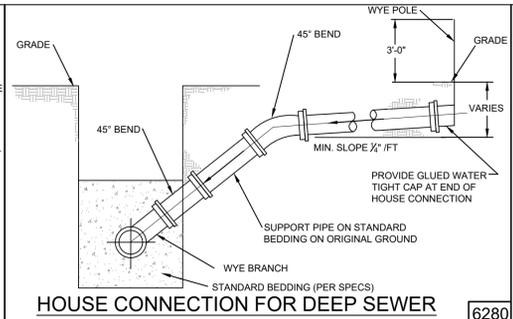
GRADING PLAN



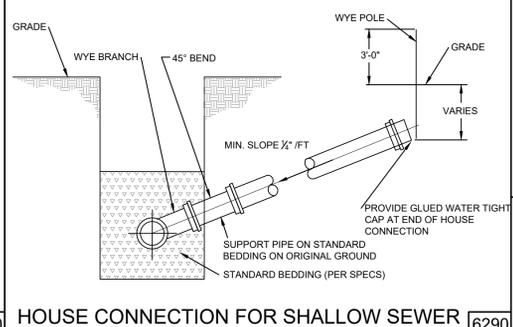
Drawing: 13M074-004 CD
Drawn by: JMW
Checked by: TAC
Issue Date: 4-27-22
Sheet:



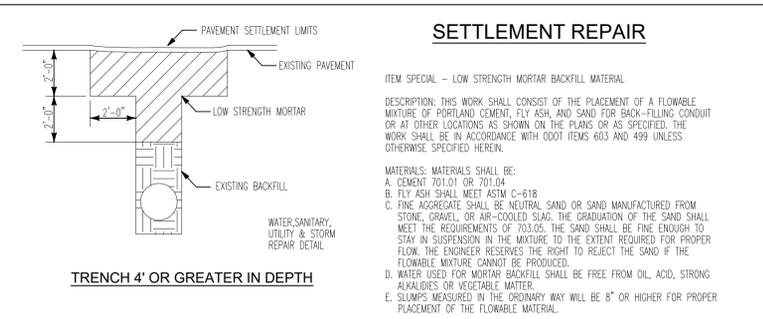
TYPICAL CREEK CROSSING FOR GRAVITY SEWERS [6260]



HOUSE CONNECTION FOR DEEP SEWER [6280]



HOUSE CONNECTION FOR SHALLOW SEWER [6290]



SETTLEMENT REPAIR

ITEM SPECIAL - LOW STRENGTH MORTAR BACKFILL MATERIAL

DESCRIPTION: THIS WORK SHALL CONSIST OF THE PLACEMENT OF A FLOWABLE MIXTURE OF PORTLAND CEMENT, FLY ASH, AND SAND FOR BACK-FILLING CONDUIT OR AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH ODOT ITEMS 603 AND 499 UNLESS OTHERWISE SPECIFIED HEREIN.

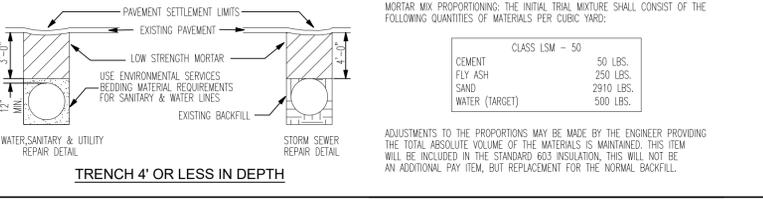
MATERIALS: MATERIALS SHALL BE:
 A. CEMENT 701.01 OR 701.04
 B. FLY ASH SHALL MEET ASTM C-618
 C. FINE AGGREGATE SHALL BE NEUTRAL SAND OR SAND MANUFACTURED FROM STONE, GRAVEL OR AIR-COOLED SLAG. THE GRADATION OF THE SAND SHALL MEET THE REQUIREMENTS OF 703.05. THE SAND SHALL BE FINE ENOUGH TO STAY IN SUSPENSION IN THE MIXTURE TO THE EXTENT REQUIRED FOR PROPER FLOW. THE ENGINEER RESERVES THE RIGHT TO REJECT THE SAND IF THE FLOWABLE MIXTURE CANNOT BE PRODUCED.
 D. WATER USED FOR MORTAR BACKFILL SHALL BE FREE FROM OIL, ACID, STRONG ALKALIES OR VEGETABLE MATTER.
 E. SLUMPS MEASURED IN THE CROWNWAY MAY WILL BE 8" OR HIGHER FOR PROPER PLACEMENT OF THE FLOWABLE MATERIAL.

MORTAR MIX PROPORTIONING: THE INITIAL TRIAL MIXTURE SHALL CONSIST OF THE FOLLOWING QUANTITIES OF MATERIALS PER CUBIC YARD:

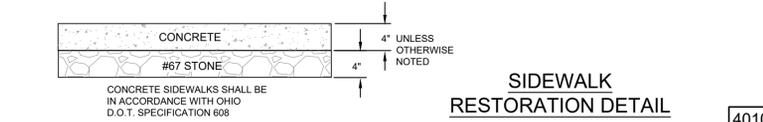
CEMENT	50 LBS.
FLY ASH	250 LBS.
SAND	2910 LBS.
WATER (TARGET)	500 LBS.

ADJUSTMENTS TO THE PROPORTIONS MAY BE MADE BY THE ENGINEER PROVIDING THE TOTAL ABSOLUTE VOLUME OF THE MATERIALS IS MAINTAINED. THIS ITEM WILL BE INCLUDED IN THE STANDARD 603 INSULATION. THIS WILL NOT BE AN ADDITIONAL PAY ITEM, BUT REPLACEMENT FOR THE NORMAL BACKFILL.

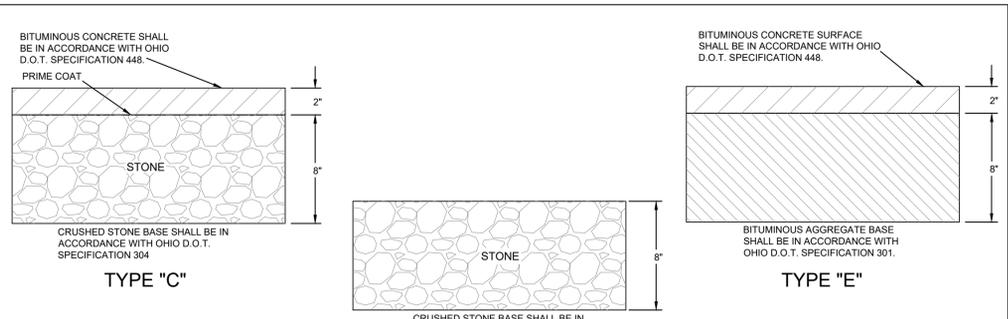
TRENCH 4' OR GREATER IN DEPTH



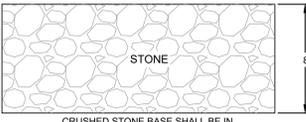
TRENCH 4' OR LESS IN DEPTH



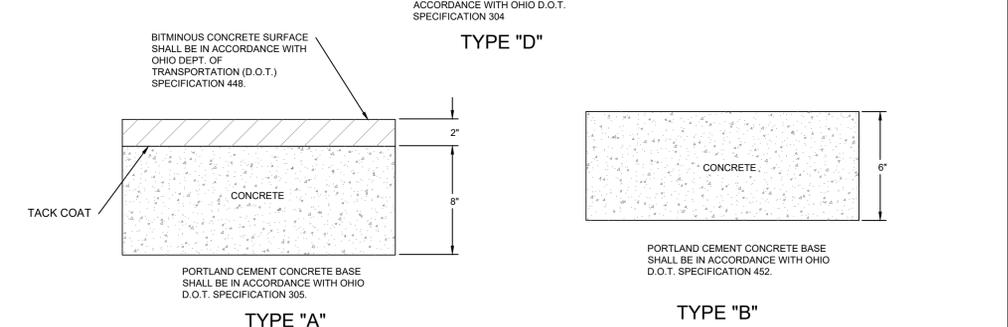
SIDEWALK RESTORATION DETAIL [4010]



TYPE "C"



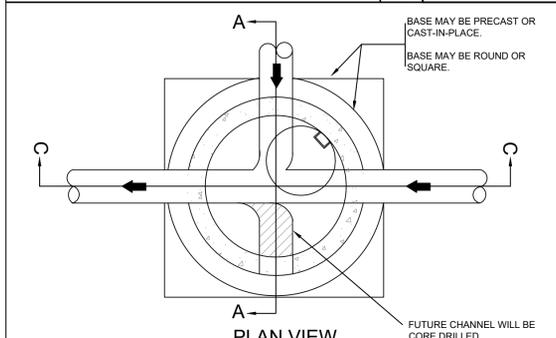
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TYPE "A"

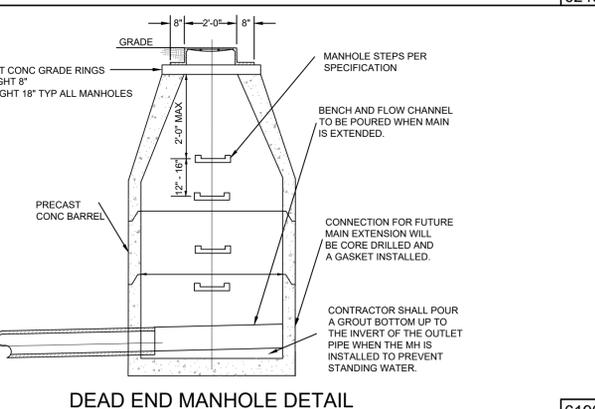
TYPE "B"

PAVEMENT REPLACEMENT DETAILS [4120]

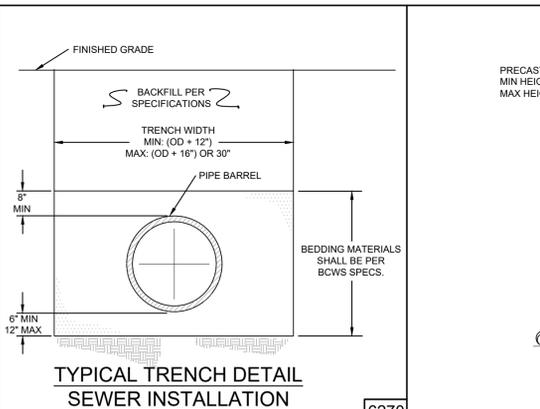


PIPE SIZE	CY CONC PER LIN FT	LENGTH OF NO 3 BARS	SPACING (FT) BETWEEN NO 3 BARS
6"	0.121	3'-9"	1.64
8"	0.159	4'-3"	1.26
10"	0.157	4'-9"	1.12
12"	0.177	5'-3"	1.02
16"	0.200	6'-3"	0.85
18"	0.247	6'-10"	0.78
20"	0.270	7'-5"	0.72
24"	0.315	8'-6"	0.63
30"	0.540	10'-0"	0.57

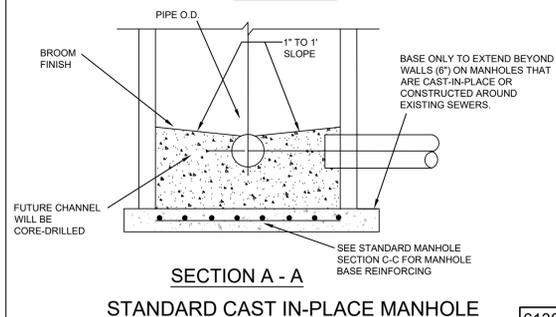
CONCRETE ENCASEMENT DETAIL [6240]



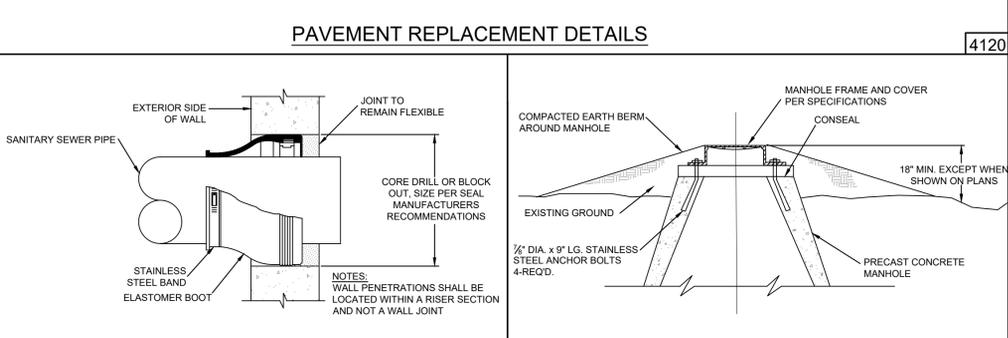
DEAD END MANHOLE DETAIL [6190]



TYPICAL TRENCH DETAIL SEWER INSTALLATION [6270]

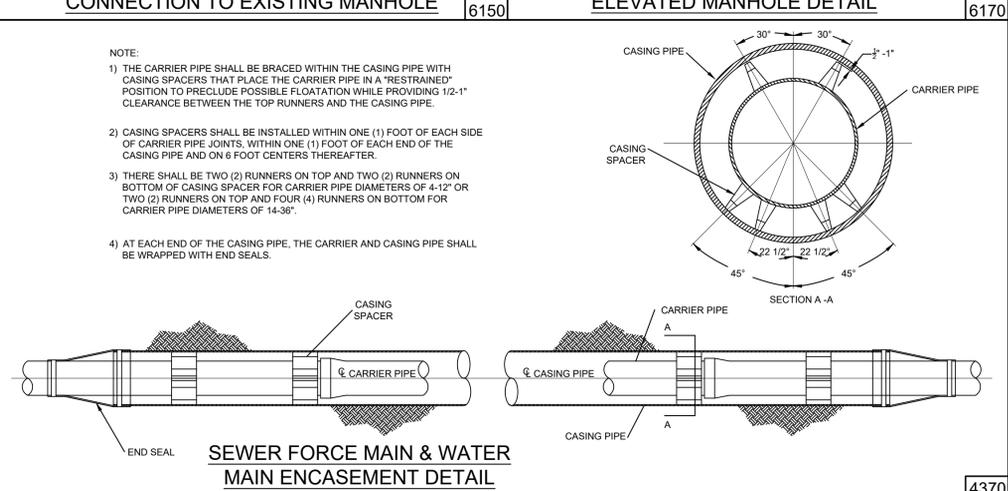


SECTION A - A STANDARD CAST IN-PLACE MANHOLE [6130]

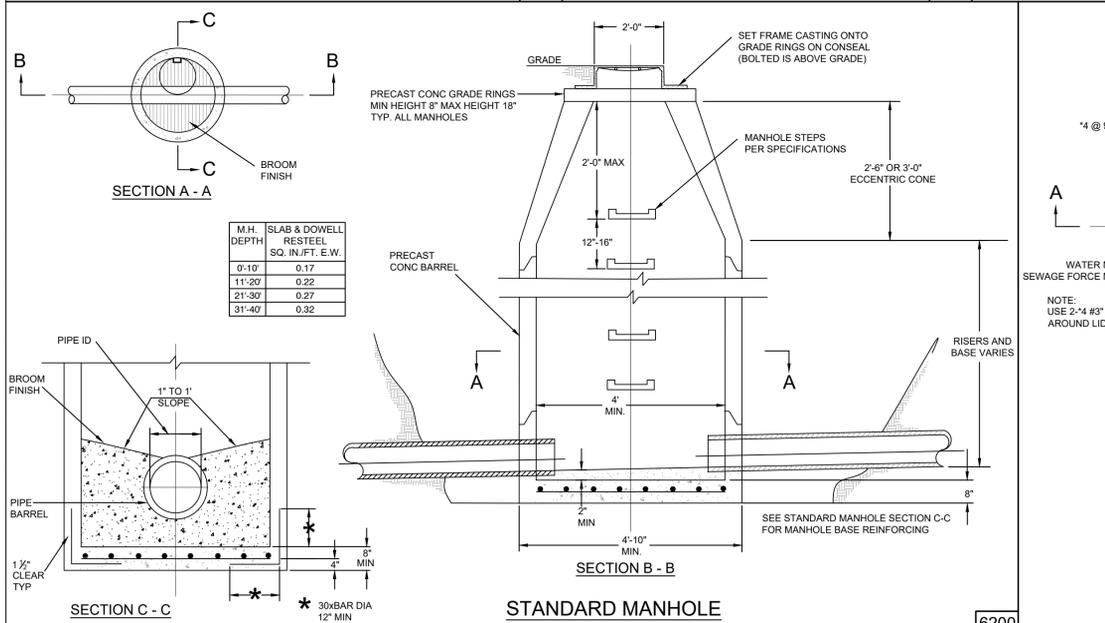


CONNECTION TO EXISTING MANHOLE [6150]

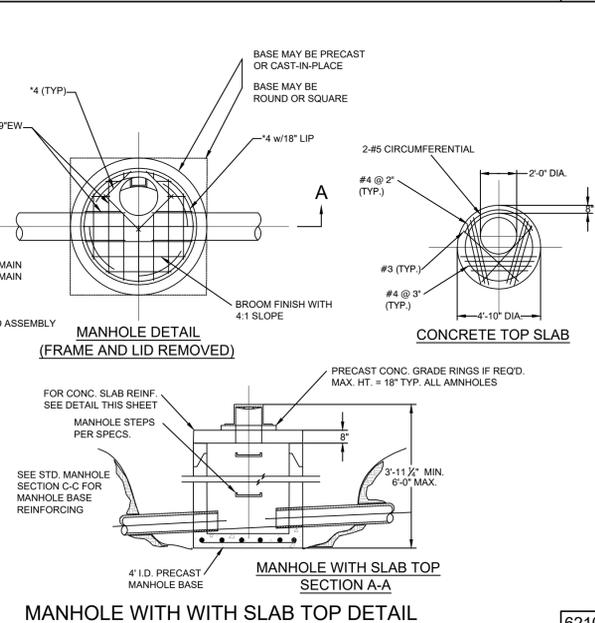
ELEVATED MANHOLE DETAIL [6170]



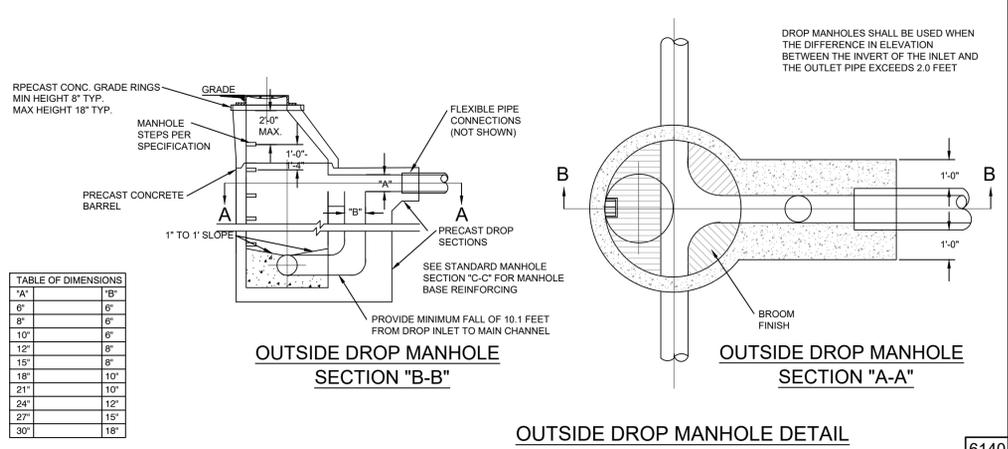
SEWER FORCE MAIN & WATER MAIN ENCASEMENT DETAIL [4370]



STANDARD MANHOLE [6200]



MANHOLE WITH WITH SLAB TOP DETAIL [6210]



OUTSIDE DROP MANHOLE SECTION "B-B"

OUTSIDE DROP MANHOLE SECTION "A-A"

OUTSIDE DROP MANHOLE DETAIL [6140]

Plot time: Apr 26, 2022 - 11:56am
 Drawing name: K:\OLD-K\Mason\FF BLOCKS\DETAILS\BUTLER\BC SAN.dwg - Layout Tab: SAN

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Date: _____
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 Item: _____
 Revision Description: _____

BUTLER COUNTY, OHIO
MISCELLANEOUS & SANITARY DETAILS

www.bayerbecker.com
 6000 Tylerville Road Suite A
 Mason, Ohio 45040 - 513.336.6600

Drawing: BC SAN
 Drawn by:
 Checked by:
 Issue Date: 12-28-17
 Sheet: **4/7**

GENERAL NOTES: EROSION PREVENTION AND SEDIMENT CONTROL ON SITE

Introduction: By using some simple Best Management Practices (BMP's) developers and contractors can do their share to protect the project area's water resources from the harmful effects of sediment. The topography of the site and the extent of the construction activities will determine which of these practices are applicable to any given site, but the BMP's listed here are applicable to most construction sites. For details on the installation and maintenance of these BMP's, please refer to the approved plans and to the Rainwater and Land Development, Ohio's Standards for Storm Water Management, Land Development and Urban Stream Protection (ODNR).

Timing: Sediment control structures shall be functional throughout earth disturbing activity. They shall continue to function until the development area is restabilized.

Temporary Stabilization is the most effective BMP. All disturbed areas that will lie dormant for 14 days or more must be stabilized within 7 days of the date the area becomes inactive. The goal of temporary stabilization is to provide cover quickly. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade. This is accomplished by seeding with fast-growing grasses, then covering with straw mulch. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. To minimize your costs of temporary stabilization, leave natural cover in place for as long as possible by only disturbing areas worked within the next 14 days.

Construction Entrances are installed to minimize off-site tracking of sediments. A rough stone access drive underlain with woven geotextile shall be installed at every point where vehicles enter or exit the site. Every individual lot should also have its own drive entrance construction on the lot begins. Maintenance is performed by top dressing with stone and/or street sweeping.

Silt Fence or Mulch Berms are typically used at the perimeter of a disturbed area. They are only for small drainage areas on relatively flat slopes or around small soil storage piles, not suitable where runoff is concentrated in a ditch, pipes or through structures. For large drainage areas where flow is concentrated, collect runoff in diversion berms or channels and pass it through a sediment pond prior to discharging it from the site. Combination barriers constructed of silt fence supported by welded wire fencing, mulch berms supported by rock check dams, or silt fence embedded within rock check dams may be effective within small channels. As with all sediment controls, silt fence or mulch berms must be capable of ponding runoff so that sediment can settle out of suspension. These must be installed within 7 days of first grubbing the area it controls. Whenever practical they should be installed before clearing or grubbing the area it controls.

Inlet Protection must be installed on all yard drains and curb drains when these inlets do not drain to a sediment trap or basin. Even if there is a sediment trap or basin, inlet protection is still recommended, as it will reduce the amount of sediment entering the basin and increase the overall sediment removal efficiency. Best used on roads with little or no traffic. If working properly, inlet protection will cause water to pond. If used on curb inlets, streets will flood temporarily during heavy storms, (overflow should be built-in.) Check with the authority that has jurisdiction over the roads before installing. They may prefer an alternate BMP. Care should be taken when placing inlet protection so that the runoff is not diverted to public roads or other areas where it could cause a hazard.

Waste Disposal: No solid or liquid waste, including building materials, shall be discharged in storm water runoff. Off-site vehicle tracking of sediments shall be minimized. The plan shall ensure and demonstrate compliance and applicable State of local waste disposal, sanitary sewer or septic system regulations.

Permanent Stabilization must occur on areas at final grade within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. This is particularly true in drainage ditches or on steep slopes. These measures include the addition of topsoil, erosion control matting, rock riprap or retaining walls. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. At all times of the year, the area should be temporarily stabilized until a permanent seeding can be applied. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade.

Maintenance: All temporary and permanent control practices shall be maintained and repaired as needed to assure continued performance of their intended function.

Inspections shall be performed at least once a week and within 24 hours after a storm event greater than 1/2 inch of rainfall within a 24-hour duration using the enclosed Inspection Form. Inspections can be tracked using the enclosed Inspection Log. These shall be maintained throughout the development process and kept on file for three years per OEPA requirements. Inspection shall be done only by a qualified inspection personnel as determined by the Construction Stormwater General permit. Inspection frequency may be reduced to monthly for dormant sites if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions for extended periods of time. Erosion prevention and sediment control (EP&SC) measures shall be observed to ensure correct operation. Discharge locations shall be inspected to determine effectiveness of EP&SC measures in preventing significant impacts to the receiving waters. Where practices require repair or maintenance, it must be accomplished within three days of the inspection or as soon as site conditions allow. Repairs to sediment ponds shall be completed within 10 days or as soon as site conditions allow. Most of these BMP's are easy to implement with a little bit of planning and go a long way toward keeping your site clean and organized if they are properly installed and maintained. Please be sure to inform all parties on site how these BMP's affect their operations on the site, particularly those that will be working near a stream.

TEMPORARY SEEDING & MULCHING

Temporary seeding provides erosion control on areas in between construction operations. Grasses which are quick growing are seeded and usually mulched to promote prompt, temporary soil stabilization. It effectively minimizes the area of a construction-site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

CONDITIONS WHERE PRACTICE APPLIES

Temporary seeding should be applied on exposed soil where additional work (grading, etc.) is not scheduled for more than 14 days. Permanent seeding should be applied if the areas will idle for more than a year.

PLANNING CONSIDERATIONS

This practice has the potential to drastically reduce the amount of sediment eroded from a construction-site. Control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even in areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction-sites, its liberal use is highly recommended.

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1,000 ft. ²	Per Acre
March 1 to August 15	Oats	3	4 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
August 16 to November 1	Rye	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Wheat	3	2 bushel
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
	Perennial Ryegrass	1	40 lb.
	Tall Fescue	1	40 lb.
	Annual Ryegrass	1	40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding.		

Note: Other approved seed species may be substituted.

- Structural erosion- and sediment-control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction-site.
- Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 14 days or more. These idle areas should be seeded as soon as possible after grading or soil shall be seeded within 7 days. Several applications of temporary seeding are necessary on typical construction projects.
- The seeded shall be pulverized and tamped to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.
- Soil Amendments—Applications of temporary vegetation shall establish adequate stands of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.
- Seeding Method—Seed shall be applied uniformly with a cyclone seeder, drill, outdragger seeder, or hydrosower. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or outdragger. If hydrosowing is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

MULCHING TEMPORARY SEEDING

- Applications of temporary seeding shall include mulch which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.
- Materials:
 - *Straw—If straw is used, it shall be unrotted small-grain straw applied at the rate of 2 tons/acre, or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
 - *Hydrosowers—If wood cellulose fiber is used, it shall be used at 2,000 lb/acre, or 46 lb./1,000 sq. ft.
 - *Other—Other acceptable mulches include mulch matting applied according to manufacturer's recommendations or wood chips applied at 6 tons/acre.
- Straw mulch shall be anchored immediately to minimize loss by wind or water. Anchoring Methods:
 - *Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.
 - *Mulch Nettings—Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.
 - *Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./acre.
 - *Synthetic Binders—Synthetic binders such as Acrylic DLR (Agi-Tac), DCA-70, Petrosol, Terra Tack or equal may be used at rates recommended by the manufacturer.
 - *Wood-Cellulose Fiber—Wood-cellulose fiber shall be applied at a net dry weight of 750 lb./acre. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.

SODDING

Spread 4 to 6 inches of topsoil. Fertilize according to soil test (or apply 100/1000 sq. ft. of 20-10-10 or 10-10-10 fertilizer.) Lightly water the soil. Lay sod. Tamp or roll lightly. On slopes, lay sod starting at the bottom and work toward the top. Peg each sod down in several places. Initial watering should wet soil 6 inches deep (or until water stands 1 inch deep in a straight-sided container.) Then water lightly every day or two for 2 weeks. If construction is completed after October 31, seeding or sodding may be delayed. Applying mulch or temporary seed (such as rye or winter wheat) is recommended if weather permits. Straw bales or silt fences must be maintained until final seeding or sodding is completed in spring March 15– May 31.

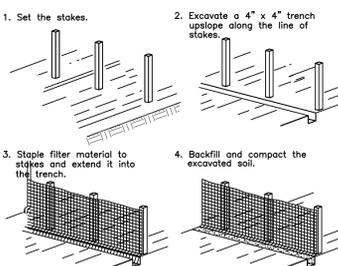
PRESERVING EXISTING VEGETATION

Whenever possible, preserve existing trees, shrubs, and other vegetation. To prevent root damage, do not grade, place soil piles, or park vehicles near trees marked for preservation. Place plastic mesh or snow fence barriers around trees to protect the area below their branches.

SILT FENCE OR MULCH BERM

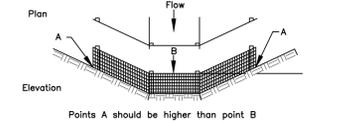
Put up before any other work is done. Install on downslope away from site with ends extended up sideslopes a short distance. Place parallel to the contour of the land to allow water to pond behind fence. Entrench 4 inches deep (see back page.) Stake (2 stakes per bale OR 1 stake every 3 feet for silt fence.) Leave no gaps between bales or sections of silt fence. Inspect and repair once a week and after every 1/2 inch rain. Remove sediment if deposits reach half the fence or straw bale height. Maintain until a lawn is established.

SILT FENCE OR MULCH BERM DETAILS



CONSTRUCTION OF A FILTER BARRIER

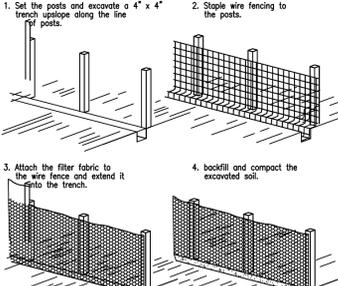
Source: Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant



Points A should be higher than point B

PROPER PLACEMENT OF A STRAW BALE BARRIER IN DRAINAGE WAY

Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

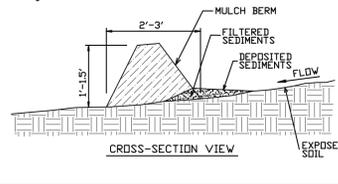


IRRIGATION

- Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.
- Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

INSTALLATION NOTES AND SPECIFICATIONS FOR MULCH BERM.

- Mulch berm should be placed along a level contour so that it will not channel runoff and create concentrated flows.
- Upland drainage limitations (sheet flow).
- Design Criteria:
 - particle sizes (99% passing 1 inch sieve etc.)
 - moisture content
 - no less than 70% organidies
- Planning considerations: most effective when combined with vegetated buffer.



SOIL PILES

Located away from any downslope street, driveway, stream, lake, wetland, ditch or drainage way. Temporary seed such as annual rye is recommended for topsoil piles. Surround with straw bales or silt fence.

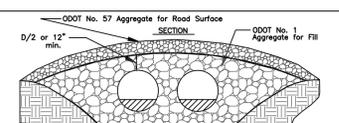
GRAVEL DRIVE

Install a single access drive using 3 to 5 inch aggregate over a geotextile material. Lay gravel 6 inches deep and 10 feet wide from the foundation to the street. Use to prevent tracking dirt onto the road by all vehicles. Maintain throughout construction until driveway is paved. Park all construction vehicles on the street and off of the site.

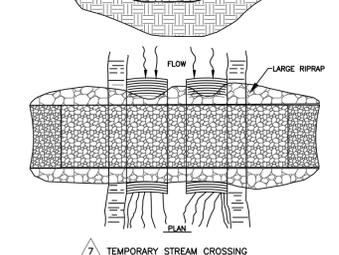
SEDIMENT CLEANUP

By the end of each work day, sweep or scrape up soil tracked onto the road. By the end of the next work day after a storm, clean up soil washed off-site, and check straw bales and silt fence for damage or sediment buildup. DOWNSPOUT EXTENDERS

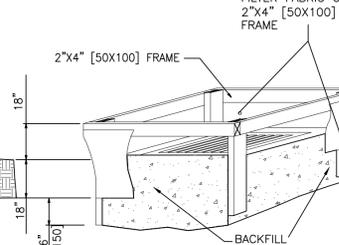
Not required, but highly recommended. Install as soon as gutters and downspouts are completed. Route water to a grassed or paved area. Maintain until a lawn is established.



TEMPORARY STREAM CROSSING



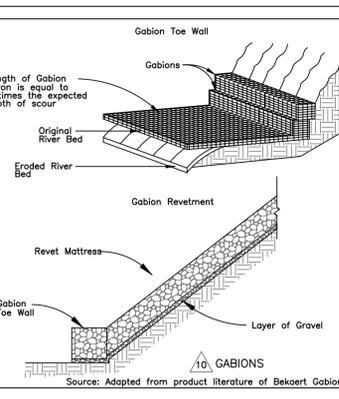
FILTER FABRIC OVER 2"x4" [50X100] FRAME



GEOTEXTILE INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS

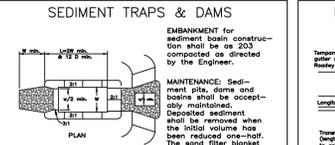
- Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
- The earth around the inlet shall be excavated completely to a depth of at least 18 in.
- The wooden frame shall be constructed of 2-by-4-in. construction-grade lumber. The 2-by-4-in. Posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of the 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6-in. below adjacent road/soil ponded water pose a safety hazard to traffic.
- Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
- Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
- Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
- A compact earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

GABIONS

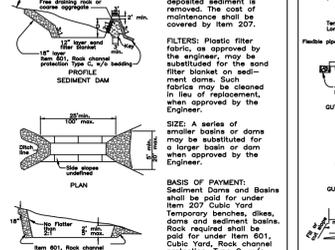


Source: Adapted from product literature of Bekaert Gabions

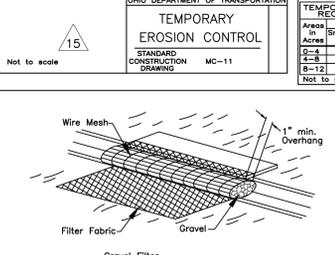
SEDIMENT TRAPS & DAMS



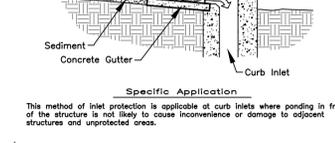
TEMPORARY SLOPE DRAIN



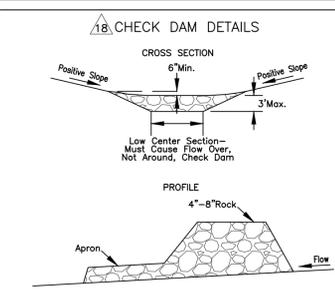
TEMPORARY SLOPE DRAIN



WRAPPED GRATE, ROLLED GRAVEL CURB INLET FILTER



CHECK DAM DETAILS



Check Dam Spacing				
Dam Height (ft.)	< 5%	5-10%	10-15%	15-20%
1	65 ft.	30 ft.	20 ft.	15 ft.
2	130 ft.	65 ft.	40 ft.	30 ft.
3	200 ft.	100 ft.	65 ft.	50 ft.

CHECK DAMS

- The check dam should be constructed of 4 to 8 inch diameter stone, placed so that it completely covers the width of the channel.
- The top of the check dam shall be constructed so that the center is approximately 6 inches lower than the outer edges so water will flow across the center and not around the ends.
- The maximum height of the check dam at the center of the weir shall not exceed 3 ft.
- Spacing between dams shall be as shown by the check dam spacing table.

DESCRIPTION

Check dams are small rock dams constructed in swales, grassed waterways or diversions. They reduce the velocity of concentrated flows, thereby reducing erosion within the swale or waterway. While this practice often traps some sediment, its trapping efficiency is extremely poor, thus, it should not be used as a sediment trapping practice.

CONDITIONS

This practice is limited to use in small open channels where it is necessary to slow the velocity of flows in order to prevent erosion. Applications include temporary swales which, because of their short length of service, are not practical to receive a nonerodible lining or swales which need protection during the establishment of grass linings. See specifications for rock check and gravel grille for larger channels and streams.

DESIGN LIMITS

Check dams must not be relied upon to remove sediment from runoff flowing through a channel, but rather are used to reduce erosion of the channel itself. However, innovative applications may produce effective ponding areas behind check dam or silt fence structures adequate to trap sediment from sites with very little slope and very little drainage area, less than 2% slope and less than 2 ac. drainage area.

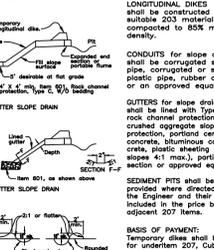
SPLASH APRON

Where check dams are expected to be in use for an extended period of time, a stone apron may be constructed immediately downstream of the check dam to prevent flows from undercutting the structure. The apron should be 6 inches thick and its length two times the height of the dam.

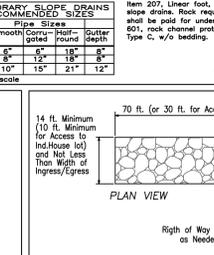
DIKES AND SLOPE PROTECTION



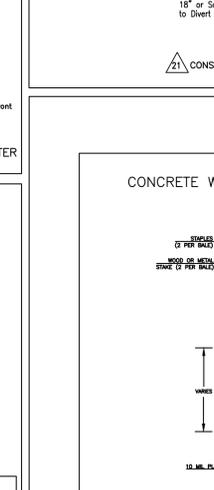
TEMPORARY SLOPE DRAIN



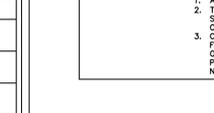
TEMPORARY SLOPE DRAIN



CONCRETE WASTE MANAGEMENT



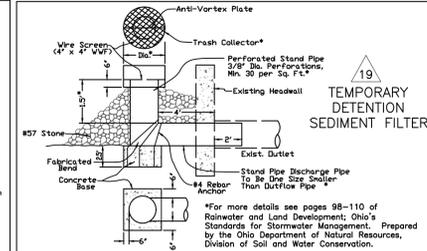
CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



CONCRETE WASHOUT AREA

NOTES: 1. ACTUAL LAYOUT DETERMINED IN THE FIELD. 2. THE CONCRETE WASHOUT SIGN (SEE FIGURE ABOVE) SHALL BE INSTALLED WITHIN 10 M OF THE TEMPORARY CONCRETE WASHOUT FACILITY. 3. CONCRETE WASH WATER SHOULD NOT BE ALLOWED TO RUN TO STREAMS, DITCHES, STORM DRAINAGE OR ANY OTHER WATER CONVEYANCE. A SUMP OF PIT WITH NO POTENTIAL FOR DISCHARGE SHOULD BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.

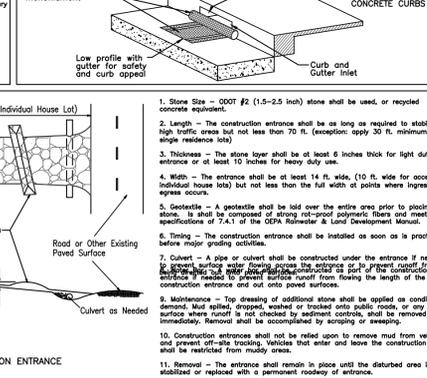
TEMPORARY DETENTION SEDIMENT FILTER



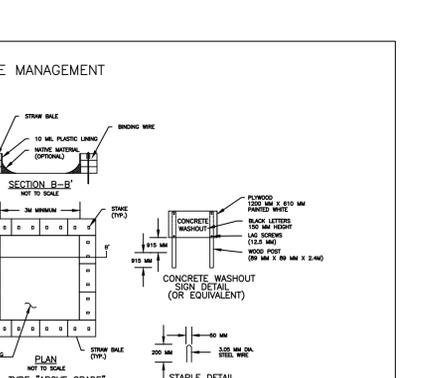
DANDY BAG®/BEAVER DAM

Installation and Maintenance Guidelines
Installation: The empty Beaver Dam should be placed over the grate as the grate stands on end, if using optional oil absorbents place absorbent pillow on each side of the grate (grass side first), then lower back edge with dam into place. The Beaver Dam should be partially buckled the curb hook when installed properly.
Maintenance: Remove all accumulated sediment and debris from surface and vicinity of unit after each storm event. Remove sediment that has accumulated within the containment area of the Beaver Dam as needed. If using optional oil absorbents, remove and replace absorbent pillow when near saturation.

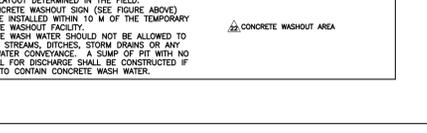
CONSTRUCTION ENTRANCE



WRAPPED GRATE, ROLLED GRAVEL CURB INLET FILTER



CONCRETE WASTE MANAGEMENT



EROSION CONTROL FOR INDIVIDUAL LOTS & SMALL SITES

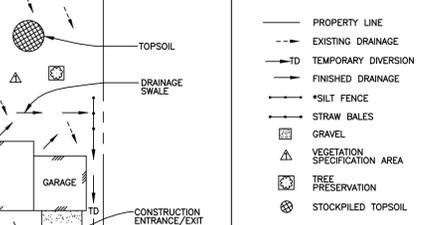
WARNING! Extra measures may be needed if your site:

- Is within 300 feet of a stream or wetland
- Is within 1000 feet of a lake
- Is steep (slopes of 12% or more)
- Receives runoff from 10,000 sq. ft. or more of adjacent land
- Has more than an acre of disturbed ground

Typical Lawn Seed Mixtures

Grass	Sunny Site	Shady Site
Kentucky bluegrass	65%	15%
Fine fescue	20%	70%
Perennial ryegrass	15%	15%
Seeding rate	3-4	4-5
(lb./1000 sq. ft.)		

EROSION CONTROL PLAN LEGEND



SOIL TYPE: SILTY CLAY SLOPE : 3%

SOIL TYPE: SILTY CLAY SLOPE : 3%

Revision Description

Date

Drawn: Chk

Item

www.bayerbecker.com
6900 Tyersville Road, Suite A
Mason, OH 45404 • 513.336.6600

Drawing: SOIL

Drawn by:

Checked by:

Issue Date: 3-4-2022

Sheet: 7/7

Plot time: Apr 26, 2022 11:51am
Drawing name: K:\OLD-K\Mason\4-FF BLOCKS\DETAILS\SOLLEROS\SOLL.DWG - Layout Tab: SOIL

EROSION & SEDIMENT CONTROLS