

STORM WATER POLLUTION PREVENTION PLAN

FOR

SADDLEBROOK PLAT XIX

MIDDLETON TOWNSHIP, WOOD COUNTY, OHIO

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BENCHMARK DATA

Site Bench Mark

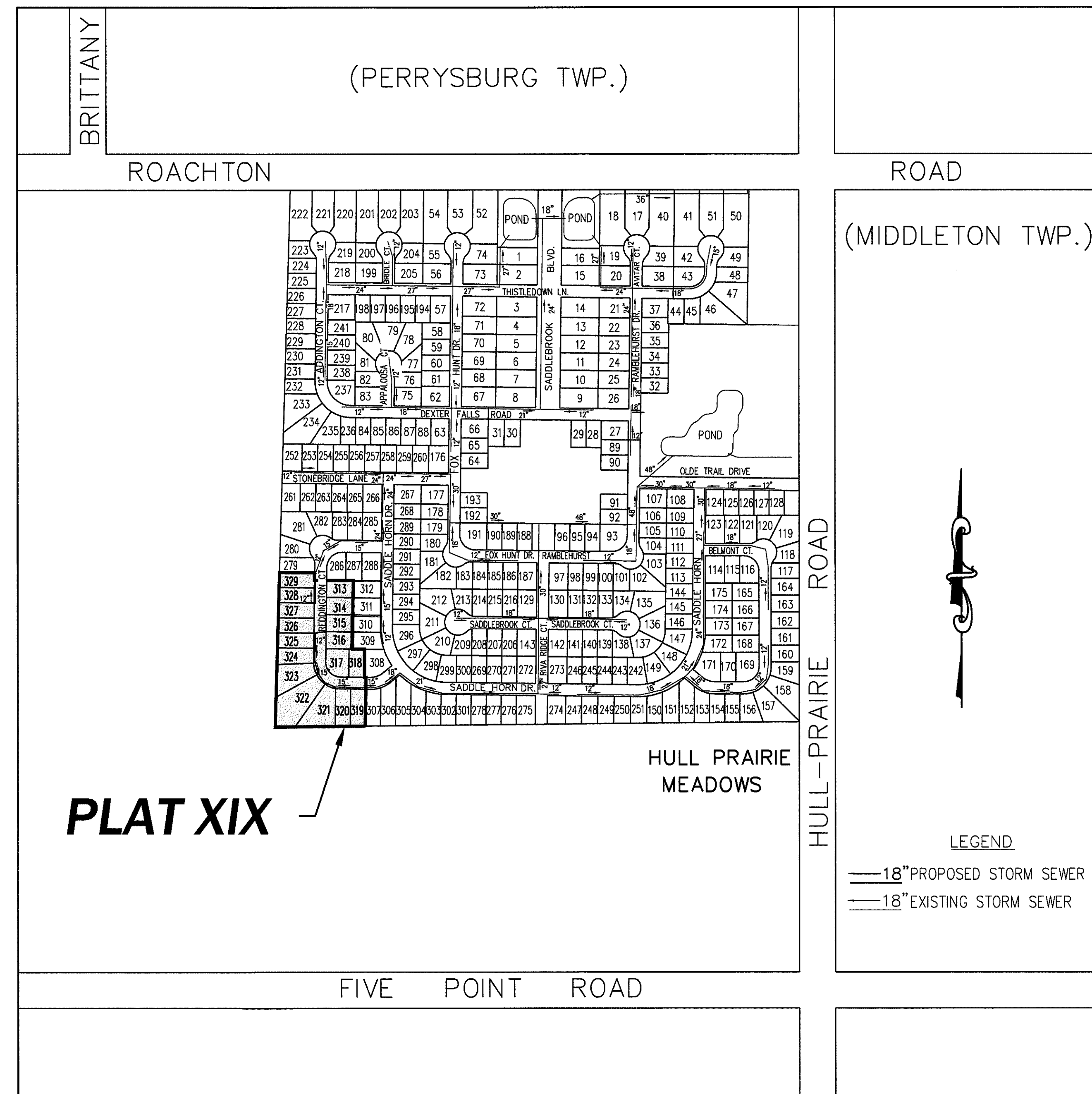
North Bonnet Bolt on Fire Hydrant North side of Reddington Court,
Station 13+20.47, 40.35' Rt., Elevation..... 648.78

Site Bench Mark

North Bonnet Bolt on Fire Hydrant South side of Reddington Court,
Station 21+23.01, 18.73' Rt., Elevation..... 648.67

CONVENTIONAL SIGNS

Centerline	_____
Existing Pavement	_____
Existing Utilities	_____
Fence Line	_____ x _____
Power Pole	_____ ♂
Telephone Pole	_____ ♂
RM-1.1 Monument Assembly	_____ ⬠
Wood County Type A Monument Assembly	_____ ⬠
Storm Manhole	_____ STMH
Catch Basin	_____ CB
Yard Drain	_____ YD
Sanitary Manhole	_____ SAMH
Existing Storm Sewer	_____
Proposed Storm Sewer	_____



LOCATION MAP

1"=400'

DEVELOPED BY:

SADDLEBROOK DEVELOPMENT CO., LTD.
3150 REPUBLIC BLVD. NORTH
SUITE 3
TOLEDO, OHIO 43615

APPROVED BY:

John M. Musteric 05-09-2018
JOHN M. MUSTERIC, PE, PS DATE

THE ABOVE SIGNATURE CONSTITUTES APPROVAL OF THOSE ITEMS OUTLINED IN THE WOOD COUNTY CONSTRUCTION STANDARDS OR AS AMENDED BY THE WOOD COUNTY ENGINEER. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

SIGNATURE VALID FOR 18 MONTHS FROM DATE OF SIGNING.

OWNER'S CERTIFICATION:

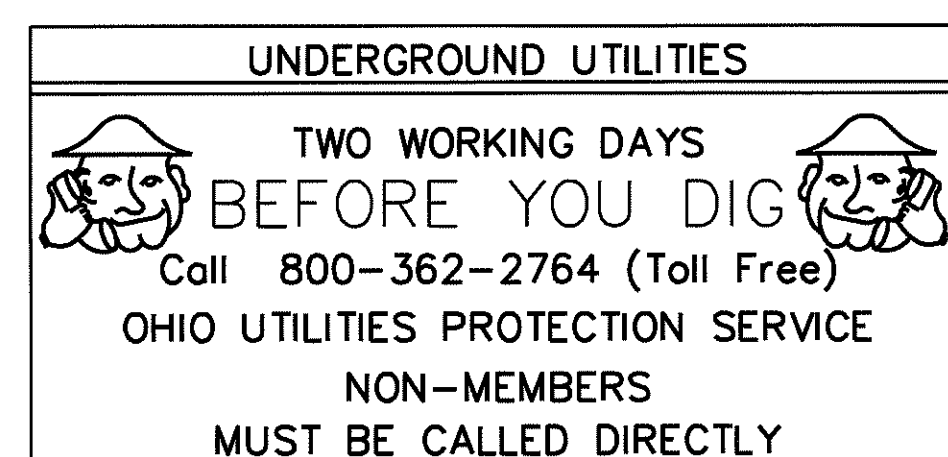
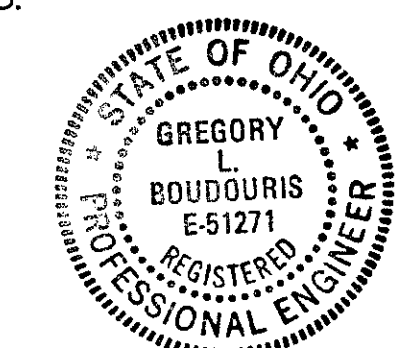
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE 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.

Gregory L. Boudouris 4/30/18
NAME DATE

PREPARED BY:

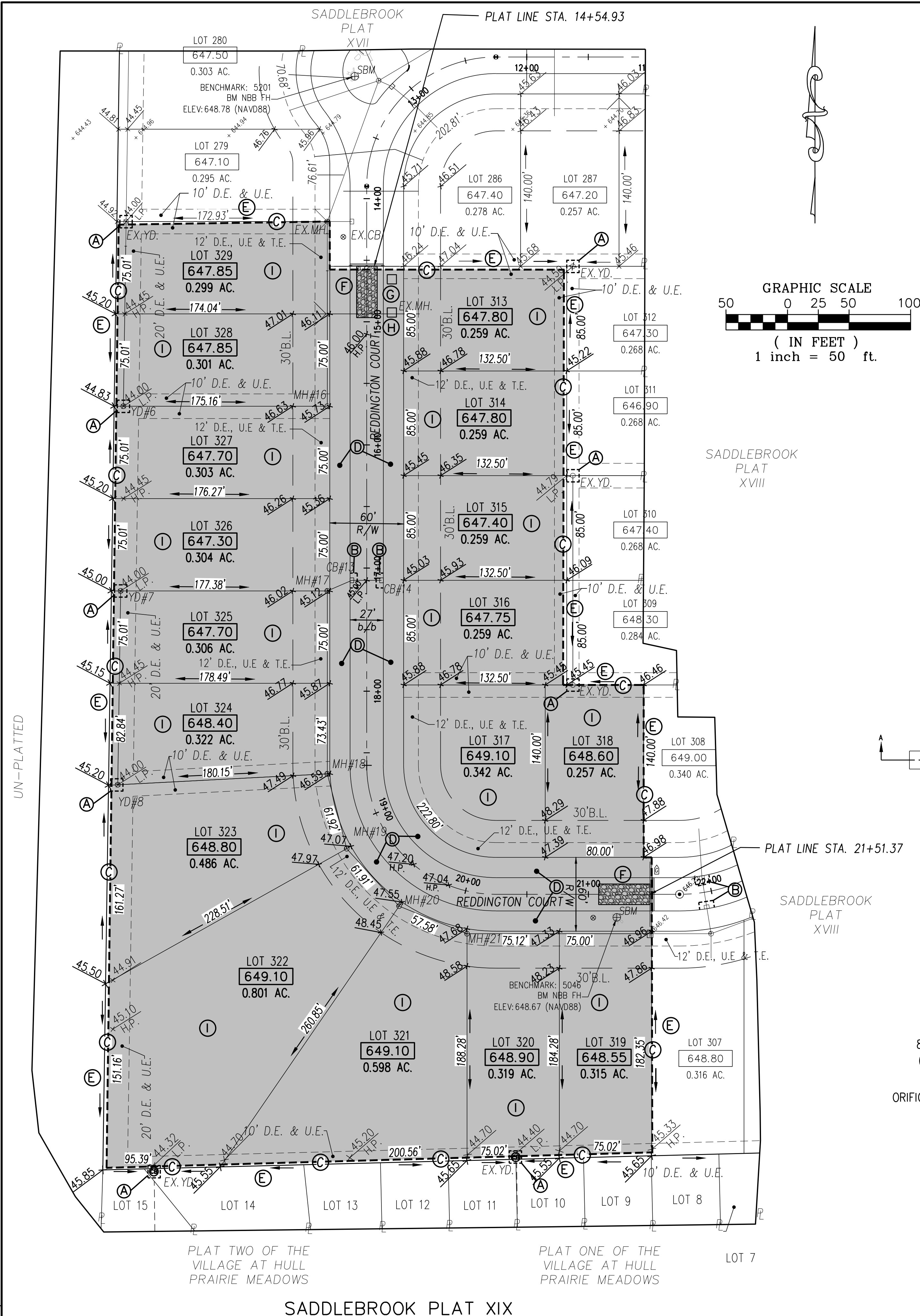
ESA
Engineers, Surveyors & Associates, LLC
5353 Secor Road, Toledo, Ohio, 43623
Phone: (419) 475-9445, Fax: (419) 475-9473

Gregory L. Boudouris 4/30/2018
GREGORY L. BOUDOURIS, P.E., P.S. DATE



811
Know what's below.
Call before you dig.

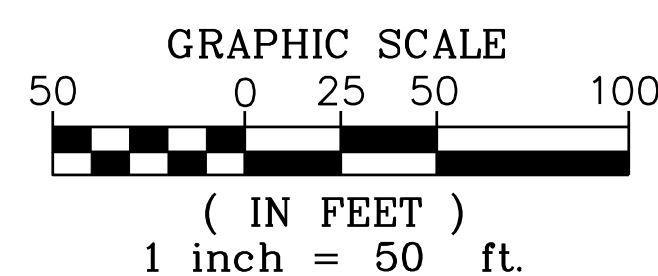
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BENCH MARK DATA	BENCH MARK DATA
NORTH BONNET BOLT ON FIRE HYDRANT STA. 13+20.47, 40.35' RT, REDDINGTON CT. ELEVATION.....648.78	NORTH BONNET BOLT ON FIRE HYDRANT STA. 21+23.01, 18.73' RT, REDDINGTON CT. ELEVATION.....648.67

EROSION CONTROL LEGEND

- (A) * YARD DRAIN SEDIMENT BARRIER
 - (B) * CURB INLET SEDIMENT BARRIER
 - (C) * FILTER FABRIC FENCE
 - (D) PERMANENT SEEDING & MULCHING
 - (E) MAINTAIN EXISTING VEGETATION
 - (F) * CONSTRUCTION ENTRANCE DETAIL
 - (G) * CONCRETE WASHOUT AREA
 - (H) DUMPSTER LOCATION / VEHICLE FUELING
 - (I) TEMPORARY STABILIZATION AS NEEDED
(TEMPORARY SEEDING & MULCHING
BETWEEN R/W & REAR YARD EASEMENTS)
- * SEE SHEET 3 OF 5 FOR DETAILS.



ORIGINAL SEDIMENT STORAGE VOLUME REQUIRED
FOR VILLAS POND
(67 CY/ACRE) FOR 79.0 ACRES = 5293 CY

SADDLEBROOK DEVELOPMENT - UNDEVELOPED
AREA = 6.95 ACRES

CURRENT UNDEVELOPED AREA FLOWING INTO THE
VILLA'S POND AS OF 11/6/2015 = 6.95 ACRES.

CURRENT SEDIMENT VOLUME REQUIRED BELOW THE
NORMAL WATER SURFACE FOR AREA (67 CY/ACRE)
FOR 6.95 ACRES = 465 CY

SEDIMENT STORAGE PROVIDED BELOW NORMAL
WATER SURFACE = 5012 CY

THE SEDIMENT POND WAS CLEANED OUT IN 2017

SADDLEBROOK PLAT 19, ROACHTON ROAD & HULL PRAIRIE ROAD, MIDDLETON TOWNSHIP, WOOD COUNTY, OHIO
OWNER: STEVE MITCHELL, SADDLEBROOK DEVELOPMENT CO., LTD., 3150 REPUBLIC BLVD. NORTH, SUITE 3, TOLEDO, OHIO 43615 (419-841-4831)
SITE OPERATOR: JIM KELLY - ED KELLY & SONS
PROJECTED PREPARATION DATE: 6/1/2018, PROJECTED START DATE: 6/1/2018
PROJECTED COMPLETION DATE: 12/30/2018

TYPE OF CONSTRUCTION:	LOW DENSITY RESIDENTIAL
LATITUDE & LONGITUDE:	LATITUDE: 41°30'55" LONGITUDE: -083°41'01"
TOTAL PLAT AREA:	6.95 AC.
AREA DISTURBED:	6.95 AC.
PRE-CONSTRUCTION RUNOFF COEFFICIENT:	0.10
POST-CONSTRUCTION RUNOFF COEFFICIENT:	0.33
IMPERVIOUS AREA:	1.77 ACRES
% IMPERVIOUS AFTER CONSTRUCTION:	30%
SOIL TYPE:	HoA = HOYTVILLE CLAY LOAM
PRIOR LAND USE:	CULTIVATED
RECEIVING STREAM:	DITCHES, GRASSY CREEK & MAUMEE RIVER

LIMITS OF EARTH
DISTURBING ACTIVITY

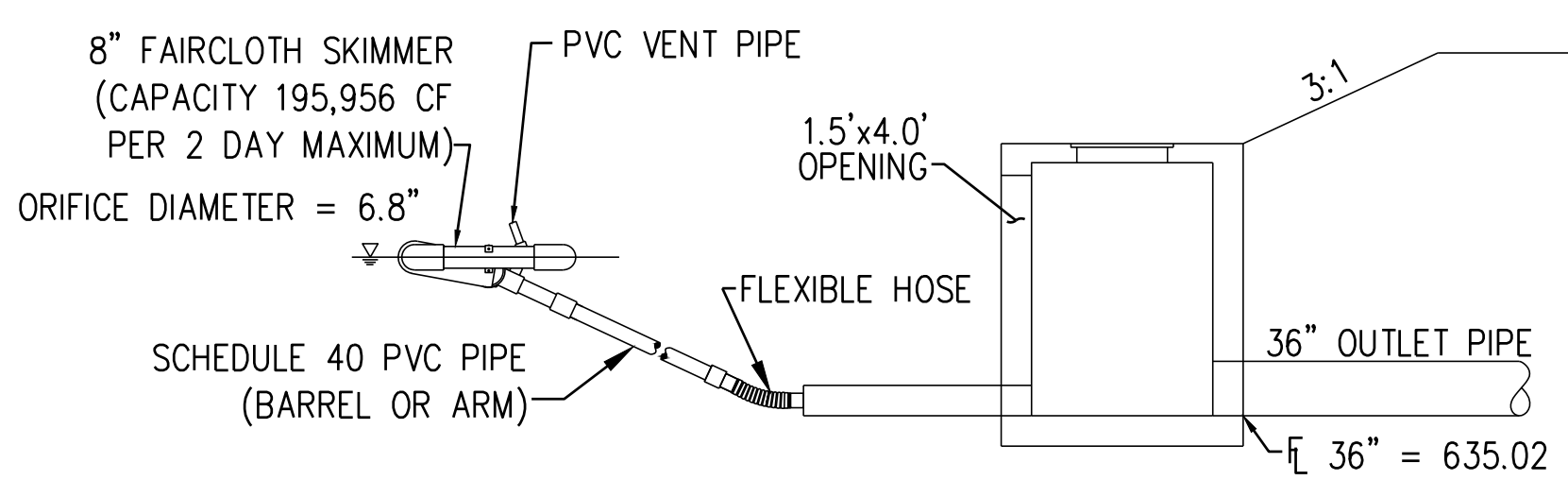
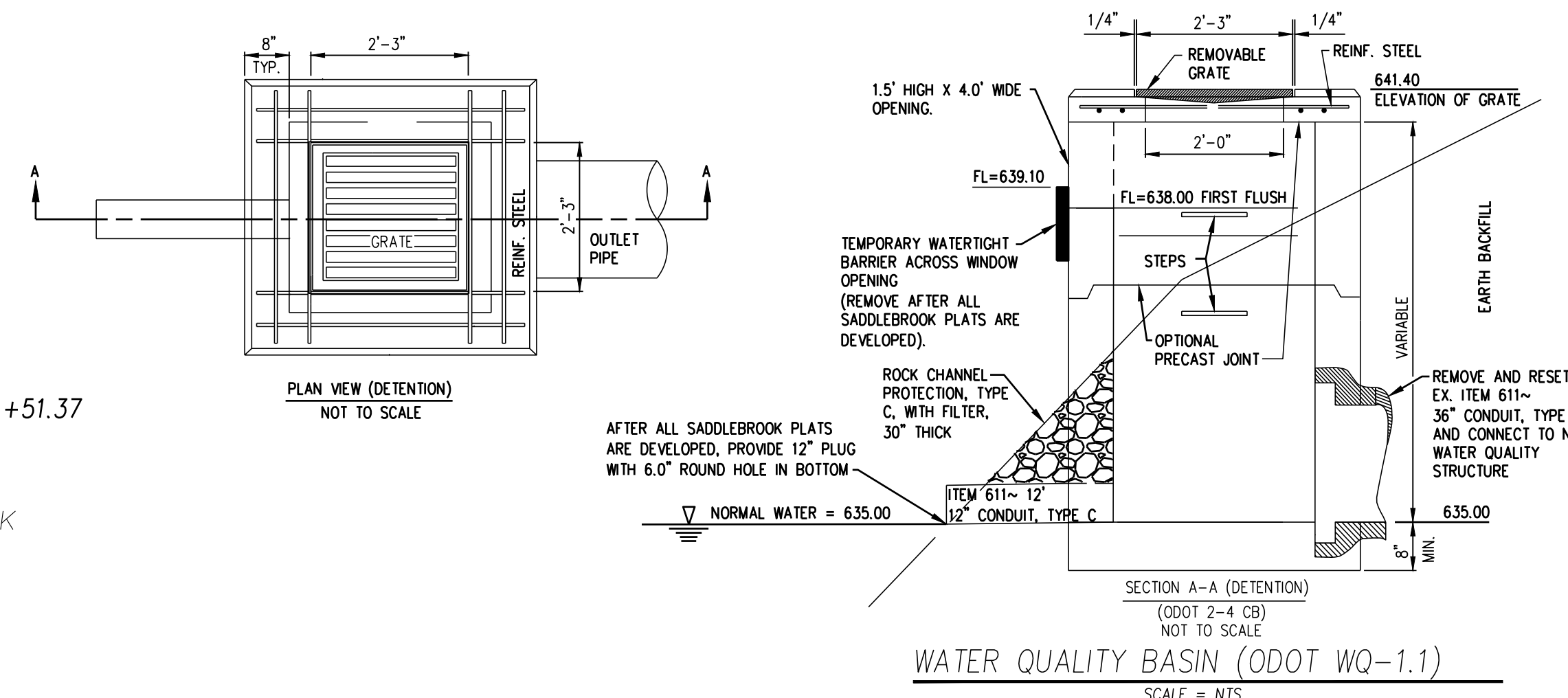
AGGREGATE CONSTRUCTION ENTRANCE
6" OF #2 OR #3 STONE
ON GEOTEXTILE FABRIC

IMPLEMENTATION SCHEDULE

1. CONTACT WOOD COUNTY ENGINEER'S OFFICE
PRIOR TO EARTH DISTURBING ACTIVITIES. (6/1/2018)
2. INSTALL PERIMETER CONTROLS (6/7/2018)
3. CLEAR AND GRUB (6/11/2018)
4. UNDERGROUND UTILITIES (6/16/2018)
5. INLET CONTROLS AT CATCH BASINS (7/15/2018)
6. EXCAVATE AND BUILD ROADWAY (8/1/2018)
7. GRADE BACK OF CURB (8/27/2018)
8. CONSTRUCTION SEEDING & MULCHING (9/3/2018)
9. SINGLE FAMILY LOT EROSION CONTROL (9/15/2018)
10. HOUSE CONSTRUCTION
11. FINAL SEED

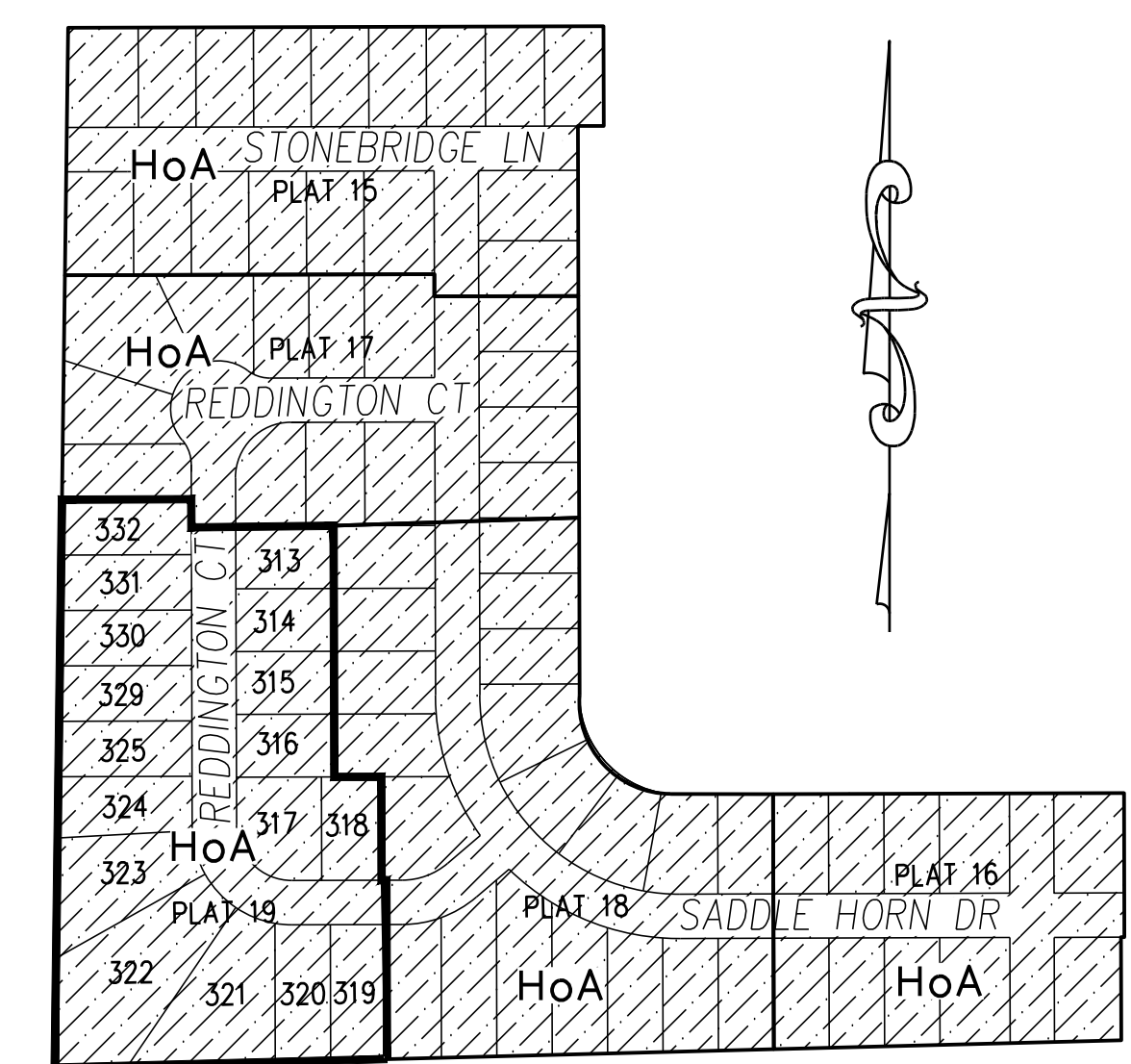
NOTE:
THE CONTRACTOR SHALL INSTALL AND MAINTAIN A
"GRAVEL CONSTRUCTION ENTRANCE" WHERE PROPOSED
ROAD MEETS EXISTING ROAD. IT SHALL CONSIST OF
A MINIMUM OF 6" OF 2" TO 3" SIZE STONE. 20 FEET WIDE
AND 70 FEET IN LENGTH. THE LUMP SUM PRICE BID FOR
ITEM 832 "EROSION CONTROL, CONSTRUCTION ENTRANCE"
SHALL INCLUDE ALL COSTS FOR INSTALLATION AND
REMOVAL AS REQUIRED.

NOTE:
TEMPORARY EROSION CONTROL SHALL BE IN
ACCORDANCE WITH ODOT STANDARD CONSTRUCTION
DRAWINGS DM-4.3 AND DM-4.4 AND ITEM 832.



DETENTION POND OUTLET STRUCTURE
(DURING CONSTRUCTION) - WQ1.1
SCALE = NTS

AFTER ALL HOUSES ARE CONSTRUCTED AND LOTS
TURF IS ESTABLISHED, THE FAIRCLOTH SKIMMER
SHALL BE REMOVED AND THE 6.0" HOLE PROVIDED
IN THE PIPE INSTALLED IN THE WATER QUALITY
STRUCTURE. THE DETENTION POND WAS CLEANED
OUT IN 2017.

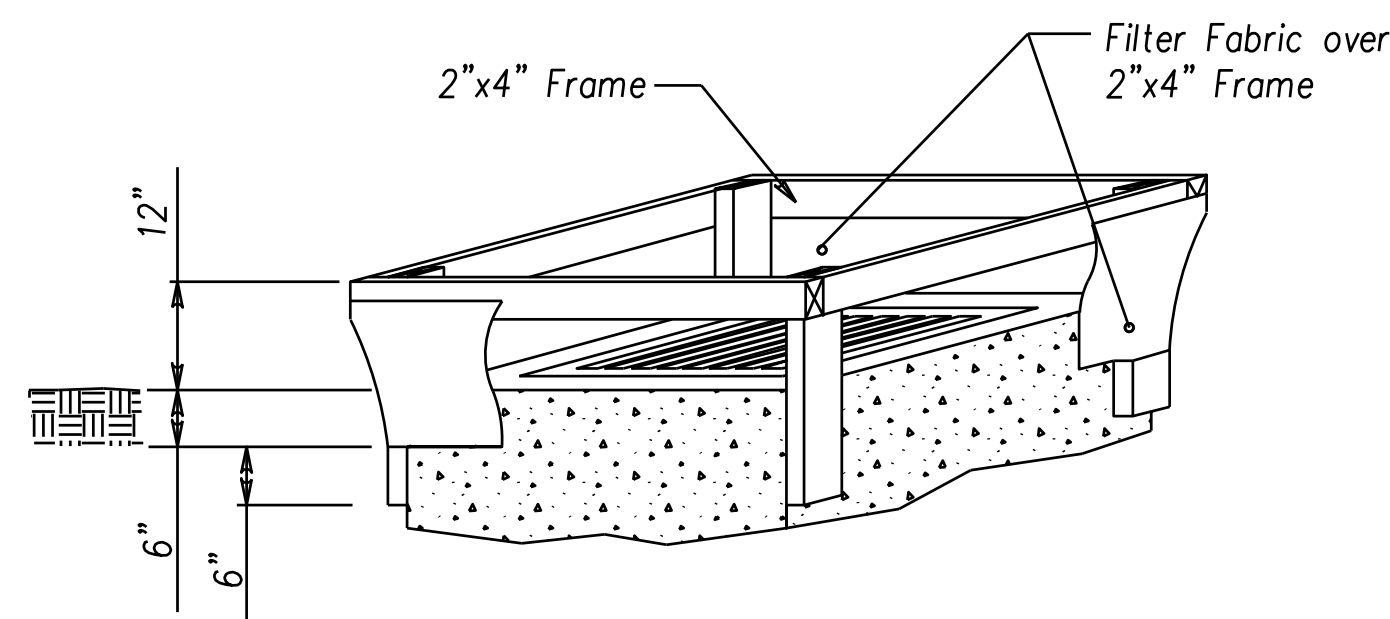


PLAT XIX
HoA = Hoytville Clay Loom
SOILS MAP
SCALE 1" = 200'

TYPICAL MAINTENANCE ACTIVITIES FOR WATER QUALITY PONDS

SCHEDULE	ACTIVITY
MONTHLY	MOW EMBANKMENT AND CLEAN TRASH AND DEBRIS FROM OUTLET STRUCTURE. ADDRESS ANY ACCUMULATION OF HYDROCARBONS.
ANNUALLY	INSPECT EMBANKMENT AND OUTLET STRUCTURE FOR DAMAGE AND PROPER FLOW. REMOVE WOODY VEGETATION AND FIX ANY ERODING AREAS. MONITOR SEDIMENT ACCUMULATIONS IN FOREBAY AND MAIN POOL.
SEMI-ANNUALLY	INSPECT WETLAND AREAS FOR INVASIVE PLANTS.
3-7 YEARS	REMOVE SEDIMENT FROM FOREBAYS.
15-20 YEARS	MONITOR SEDIMENT ACCUMULATIONS IN THE MAIN POOL AND CLEAN AS POND BECOMES EUTROPHIC OR POND VOLUME IS REDUCED SIGNIFICANTLY.

TEMPORARY INLET PROTECTION FILTER FABRIC FENCE

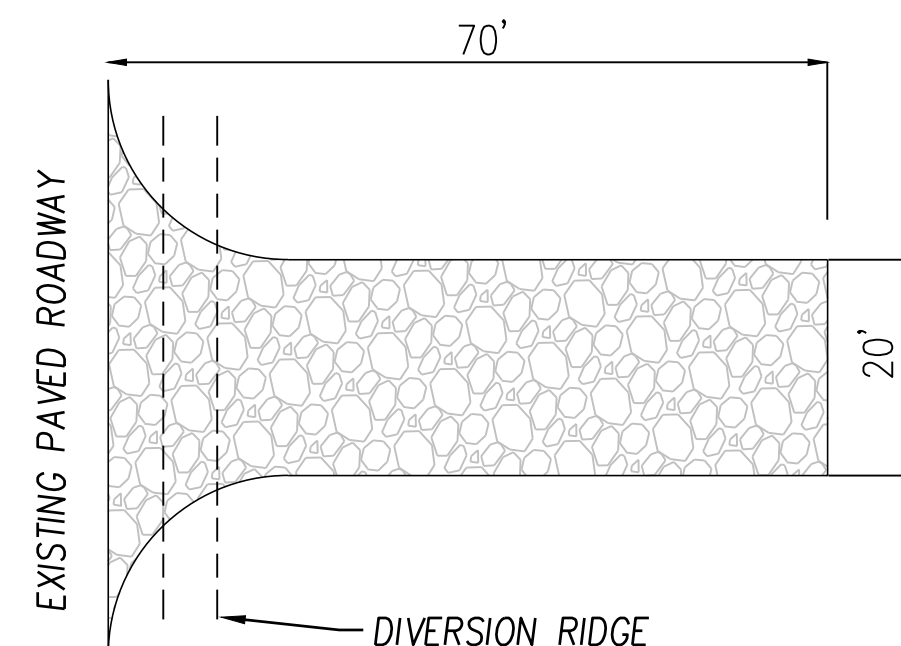
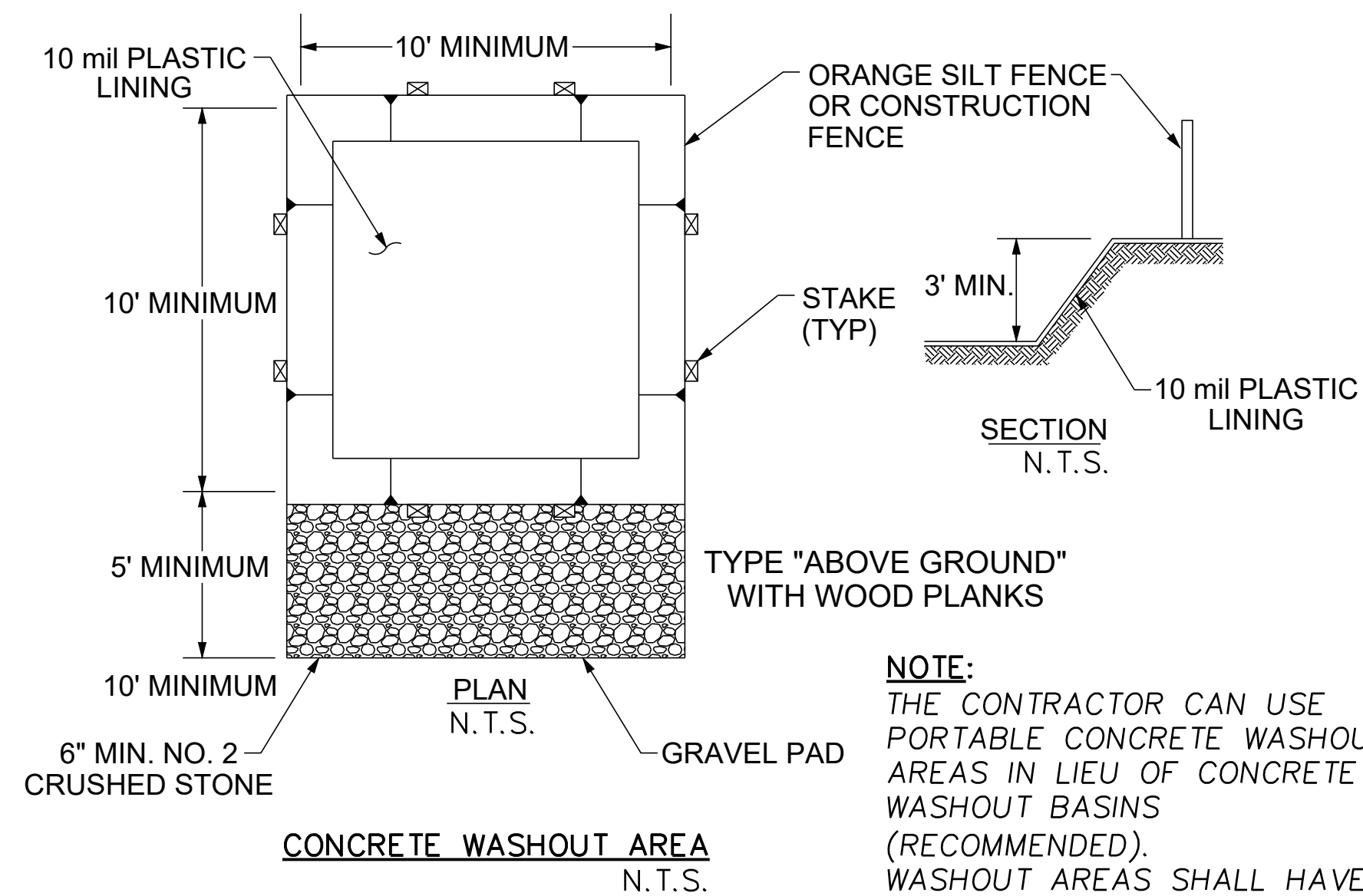


MATERIALS: Filter Fabric shall meet the requirements of CMS 712.09, Type C. The framing wood shall be construction grade 2"x4" lumber.

CONSTRUCTION: Excavate a 6" deep trench around the inlet, then drive the 2"x4" posts 6" below the excavated trench. Construct the wooden frame using the overlap joint detail shown above. The filter fabric shall be stretched around the wooden frame and securely fastened. The filter fabric shall overlap across one side of the inlet such that the ends of the filter fabric are not attached to the same post. Backfill and compact the excavated soil. Other devices may be used with the approval of the Engineer.

MAINTENANCE: The filter fabric shall be maintained to be functional. This shall include removal of trapped sediment and required cleaning, repair, and/or replacement of the filter fabric. The maintenance or replacement cost will be paid for by the Department under unit bid prices, agreed unit prices, or under 832.

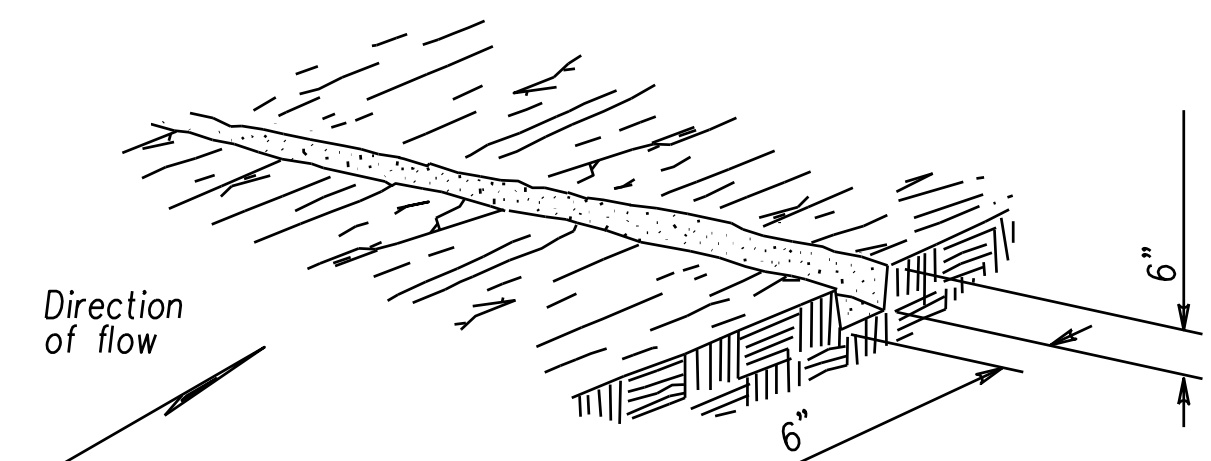
PAYMENT: The cost of all materials, construction and removal shall be paid for under Item 832 – Temporary Inlet Protection Filter Fabric Fence, Linear Foot.



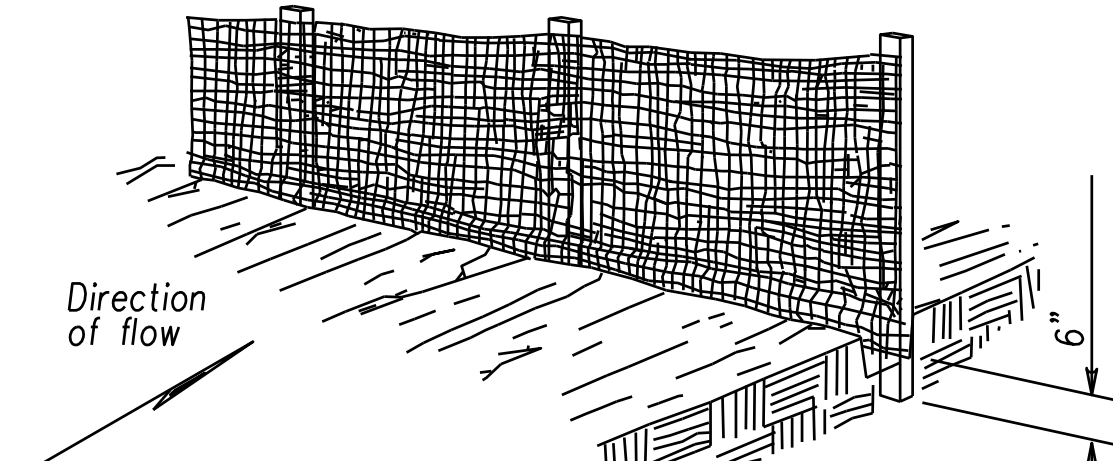
TYPICAL CONSTRUCTION ENTRANCE/EXIT DETAIL

SCALE = NTS

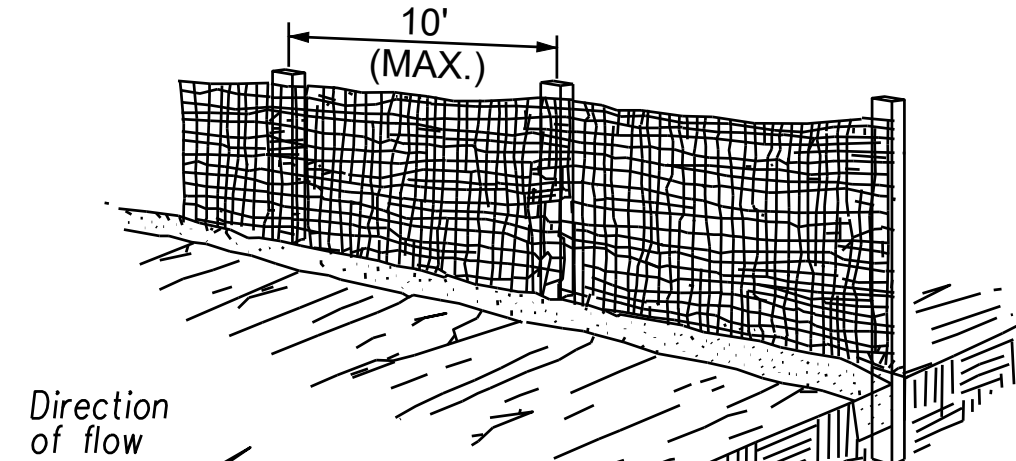
IF MUD MAT BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE CLEANED AND REPLACED.
ALL EQUIPMENT LEAVING SITE MUST USE MUD MAT AND HAVE LOADS STABILIZED AND TIGHT WITH ALL LOOSE DEBRIS AND MATTER REMOVED PRIOR TO TRAVELING ON PUBLIC ROADWAYS.
ANY TRACK-OUT NOT CONTAINED BY THE MUD MAT MUST BE CLEANED UP BY THE CONTRACTOR IMMEDIATELY AFTER OCCURRENCE.



STEP 1



STEP 2



STEP 3

PLACEMENT AND CONSTRUCTION OF PERIMETER FILTER FABRIC FENCE

OHIO

FLEXSTORM CATCH-IT FILTERS FOR TEMPORARY INLET PROTECTION PRODUCT SELECTION AND SPECIFICATION DRAWING

FLEXSTORM CATCH-IT INLET FILTERS FOR ROUND OPENINGS FLEXSTORM CATCH-IT INLET FILTERS FOR SQUARE/RECTANGULAR OPENINGS FLEXSTORM CATCH-IT INLET FILTERS FOR CURB BOX OPENINGS (MAGNETIC CURB FLAP)

Product selection for FLEXSTORM CATCH-IT Filters (Temporary Inlet Protection)

Standard	East Jordan Casting	Nemah Casting	Inlet Type	Grate Size	Opening Size	Bag Cap. (ft³)	Flow Ratings (CFS)		ADS P/N
							FX	Bypass	
2-2A	5110 Grate on Cast Iron Angle Frame	R-4859-C	Square/Rect. (SQ)	27.75 X 27.75	24.5 x 24.5	3.3	2.0	5.2	62MSQ22AFX
2-2B/2-3/4/2-5/2-6	5110 Grate On 2" x 2" Concrete Box or Frame	R-4859-C	Concrete Box (HD)	27.75 X 27.75	24.0 x 24.0	3.3	2.0	5.2	62MSQ242AFX
CB-3	7358 (side by side 7350s)	R-3288	Curb Box (CB)	29.87 x 16.75	28.2 x 14.75	4.4	3.6	6.8	62XLCB3FX
CB-3 Fischer Flap	7358 & 23" X 40" FISCHER FLAP	R-3288	Curb Box (CB)	29.87 x 16.75	28.2 x 14.75	4.4	3.6	6.8	62XLCB3FX-FF
CB-3A	7350	R-3289	Curb Box (CB)	29.87 x 16.75	28.2 x 14.7	2.2	1.8	3.3	62MCB3AFX
CB-3A Fischer Flap	7350 & 23" X 40" FISCHER FLAP	R-3289	Curb Box (CB)	29.87 x 16.75	28.2 x 14.7	2.2	1.8	3.3	62MCB3AFX-FF
CB-6	6254	R-3415 & R-3451	Square/Rect. (SQ)	35.75 x 17.75	34 x 16	2.8	2.0	3.8	62LSQ3618FX
CB-7	Many	Many	Round (RD)	22.0	18.0	1.3	2.5	4.4	62MRD2218FX
N/A	6250	R-3405	Square/Rect. (SQ)	23.6 x 23.6	22.125 x 22.125	3.1	1.9	4.5	62MSQ2222FX
N/A	7390	R-3514-F	Roller Curb (RC)	29 x 27.75	27.375 x 26.125	4.5	2.2	6.5	62LRC7390FX

City of Columbus Standard

S128	7030/7035	R-3067	Curb Box (CB)	35.5 x 17.75	33.2 x 15.5	2.8	2.0	3.8	62LCB3618FX
S138	7030/7035	R-3067	Curb Box (CB)	35.5 x 17.75	33.2 x 15.5	3.4	2.1	5.2	62LCBEXTFX (EXT)
S129	7495	3501-TR	Roller Curb (RC)	26 x 23.5	26.1 x 21.5	3.2	2.0	5.1	62LRC3501TRFX
S133/S134/2-2B	5110 Grate On 2" x 2" Concrete Box	R-4859-S	Concrete Box (HD)	27.5 X 27.5	24.0 x 24.0	3.3	2.0	5.2	62MSQ242AFX
S139	5110/5115 Grate on 5110 Frame	R-4859-C	Square/Rect. (SQ)	27.5 x 27.5	25.5 x 25.5	3.7	2.2	5.5	62LSQ2525FX
S138	1660	Many	Round (RD)	22.25	20.7	1.4	2.7	4.8	62MRD2220FX
S140	NA	N/A	Square/Rect. (SQ)	23.8 X 14.8	22.0 X 13.0	1.6	1.5	3.8	62MSQ2213FX
S141	5115 Grate on 5115 Frame	R-4859	Square/Rect. (SQ)	27.0 x 27.0	25.0 x 25.0	3.6	2.1	5.4	62LSQ2525FX
Ditch Grates	2830, 2870, 6527	Many	Round (RD)	Various	24	1.9	3.0	2.1	62MRD24FX

***FLOW RATINGS SHOWN ARE 50% MAXIMUM**

INSTALLATION:

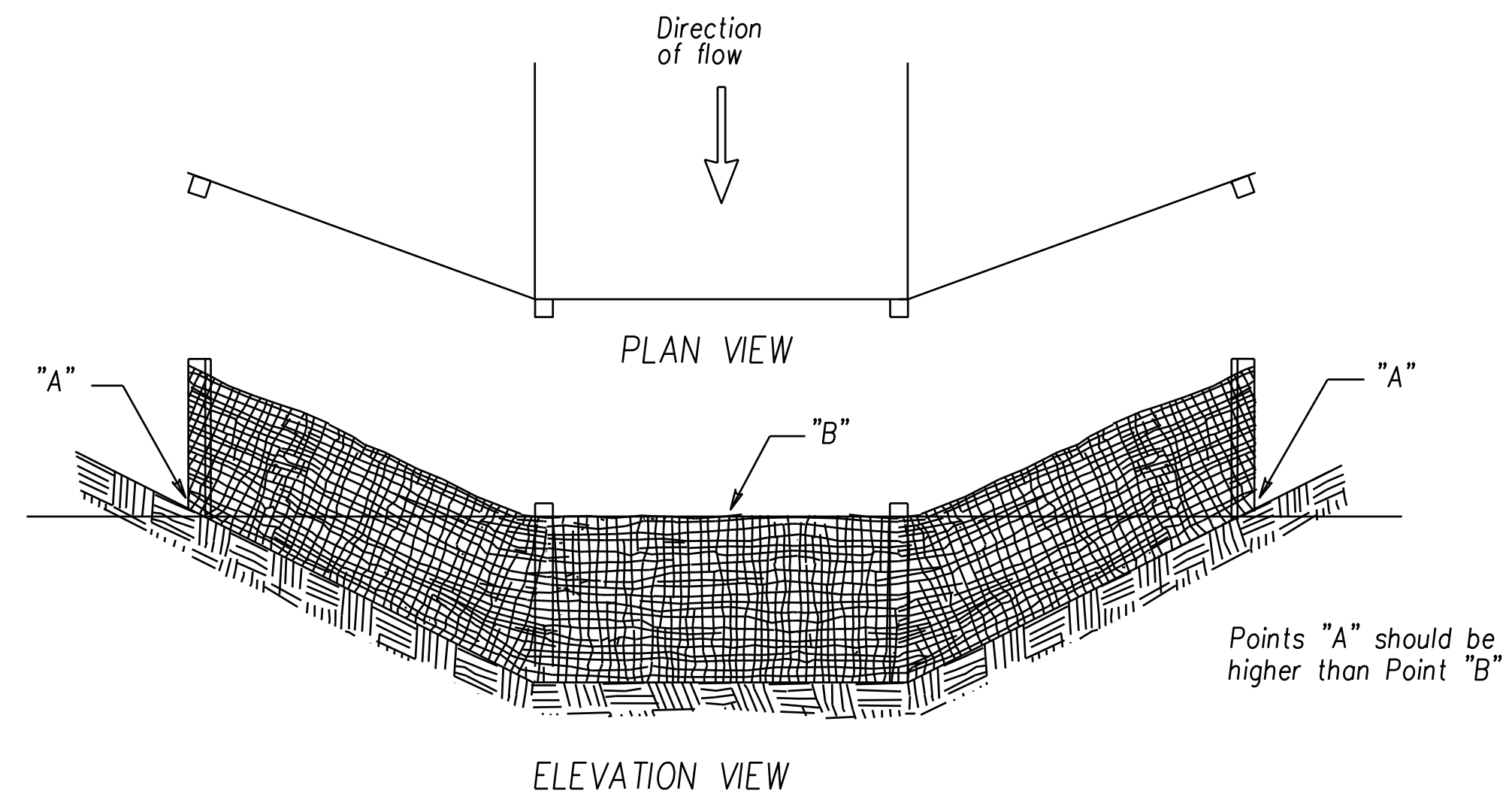
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

NOTES:

1. ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL FRAMING FOR PROLONGED PRODUCT LIFE.
2. TOTAL BYPASS CAPACITY WILL VARY WITH EACH SIZED DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE. CONCRETE STRUCTURES MAY REQUIRE ADDITIONAL REVIEW.
3. UPON ORDERING THE ADS P/N CONFIRMATION OF THE DOT CALLOUT, FLEXSTORM ITEM CODE, CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED.
4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ADS, INC. WWW.INLETFILTERS.COM (866) 287-8655 PH (630) 355-3477 FX INFO@INLETFILTERS.COM

SIZE C	DWG NO C-OH-SUBMIT	REV A
SCALE	SHEET 1 OF 1	



PLACEMENT AND CONSTRUCTION OF DITCH CHECK FILTER FABRIC FENCE

GENERAL NOTES:

STORMWATER POLLUTION PREVENTION PLAN (SWP3) NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH OHIO EPA NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (NO: OHCO00004). SOIL EROSION CONTROL MEASURES SHALL CONFORM WITH THE SPECIFICATIONS OF OHIO'S RAINWATER AND LAND DEVELOPMENT MANUAL BEST MANAGEMENT PRACTICES (BMP).
- AN SWP3 IS REQUIRED FOR ALL PROJECTS AND MUST BE MAINTAINED ON SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL PROVIDED COPY OF OHIO EPA PERMIT IN ONSITE SWPPP LOG BOOK OR ONSITE COMPUTER.
- A NOTICE OF INTENT (NOI) APPLICATION MUST BE FILED WITH THE OHIO EPA FOR ALL PROJECTS THAT DISTURB 1 ACRE OR MORE AT LEAST 21 DAYS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
 - ALL "OPERATORS" MUST OBTAIN PERMIT COVERAGE BEFORE BREAKING GROUND. THIS INCLUDES CONTRACTORS ASSOCIATED WITH AND RESPONSIBLE FOR THE SOIL EROSION ACTIVITIES.
 - ANY PARTY (TYPICALLY THE GENERAL CONTRACTOR) WHO HAS DAY-TO-DAY OPERATIONAL CONTROL OF ACTIVITIES AT THIS PROJECT, WHICH ARE NECESSARY TO ENSURE COMPLIANCE WITH THE SWP3 FOR THE SITE OR OTHER CONDITIONS AS SET FORTH IN THE PERMIT, MUST FILE A CO-PERMITTEE NOI WITH THE OHIO EPA. THIS IS THE SOLE RESPONSIBILITY OF THE CO-PERMITTEE AND SHALL BE DONE 21 DAYS BEFORE GROUND IS BROKEN.
- THE CONTRACTOR/BUILDER FOR HOUSES IN RESIDENTIAL SUBDIVISIONS MUST FILE AN INDIVIDUAL LOT NOI WITH THE OHIO EPA PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE REGULAR INSPECTIONS AND MAINTENANCE FOR ALL SOIL EROSION CONTROL PRACTICES.
- SOIL EROSION AND SEDIMENTATION BEST MANAGEMENT PRACTICE (BMP) MEASURES WILL BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND WILL BE MAINTAINED AT ALL TIMES UNTIL CONSTRUCTION HAS BEEN COMPLETED, INCLUDING ALL GRASS BEING WELL ESTABLISHED AND/OR PERMANENT EROSION AND SEDIMENTATION BMP MEASURES ARE IN PLACE. ALL BMP MEASURES WILL BE INSTALLED TO THE SATISFACTION OF WOOD COUNTY.
- CONTRACTOR SHALL INSTALL A STABILIZED CONSTRUCTION ENTRANCE TO CONTROL EROSION PRIOR TO COMMENCEMENT OF ANY EARTHWORK OPERATIONS. DRIVEWAY SURFACE SHALL BE COMPOSED OF 6" CLEAN AGGREGATE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THIS ACCESS ROUTE WHEN CONDITIONS WARRANT.
- SOLID, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. ALL CONSTRUCTION & DEMOLITION DEBRIS (C&DD) WASTE WILL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714. IT IS PROHIBITED TO BURN, BURY OR POUR ONTO THE GROUND OR INTO STORM SEWERS ANY SOLVENTS, PAINTS, STAINS, GASOLINE, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CEMENT CURING COMPOUNDS AND OTHER SUCH TOXIC OR HAZARDOUS WASTES.
- CONTRACTOR IS TO DESIGNATE A SITE DUMP/WASH AREA PRIOR TO STARTING CONSTRUCTION FOR SUCH PURPOSES AS WASHING OUT CONCRETE TRUCKS AND DUMPING NON-HAZARDOUS WASTE MATERIALS, SUBJECT TO THE SUPERVISION OF LOCAL GOVERNING AGENCIES. DUMPING OR DISCHARGE OF ANY WASTE MATERIALS INTO ANY SEWER IS PROHIBITED. HAZARDOUS WASTES ARE TO BE REMOVED OFF SITE AND PROPERLY DISPOSED OF CONSISTENT WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- ALL TEMPORARY AND PERMANENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED TO ENSURE CONTINUED PERFORMANCE.
- PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING.
- ALL DISTURBED AREAS THAT WILL REMAIN DORMANT FOR MORE THAN 14 DAYS MUST BE TEMPORARILY STABILIZED WITHIN 7 DAYS.
- TEMPORARY INLET PROTECTION SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION FOR ALL CATCH BASINS ON SITE.
- SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SEDIMENT BARRIERS.
- PERMANENT STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED AND FOR AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.
- CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
- CONTRACTOR SHALL PROVIDE ROUTINE STREET SWEEPING TO ENSURE MINIMAL EROSION INTO THE PUBLIC STORM SEWER SYSTEM AND ROADWAY.
- ALL DISTURBED AREAS THAT WILL BE LEFT IDLE OVER THE WINTER SHALL BE TEMPORARILY STABILIZED.
- A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED WITHIN 45 DAYS OF COMPLETING ALL LAND DISTURBANCE ACTIVITIES.
- POST-CONSTRUCTION STORM WATER MANAGEMENT: STORM WATER DRAINAGE WILL SURFACE DRAIN TO THE DETENTION AREAS FOR THE DEVELOPED AREAS. AREAS NOT DEVELOPED WILL HAVE PERMANENT SEEDING OR PLANTINGS. AREAS OF THE SITE WILL REMAIN UNTOUCHED AND IN ITS NATURAL STATE. THE ENTIRE SITE WILL DRAIN TO THE DETENTION BASIN. WHEN AREAS ARE STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE BASIN.

OTHER CONTROLS

- WASTE DISPOSAL: ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS OFTEN AS NECESSARY IN ACCORDANCE WITH STATE AND LOCAL CODES. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ONSITE.
- HAZARDOUS WASTE: ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. NO HAZARDOUS MATERIALS WILL LEAVE THE CONSTRUCTION SITE WITHOUT OWNER APPROVAL.
- SANITARY WASTE: ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME A WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATION.
- OFFSITE VEHICLE TRACKING: A STABILIZED CONSTRUCTION ENTRANCE HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE MAINTAINED TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPULIN.
- A SPILL POLLUTION CONTROL & COUNTERMEASURES PLAN SHALL BE DEVELOPED FOR ABOVE GROUND STORAGE TANK (AST) OF 660 GALLONS OR MORE, OR A TOTAL OF 1330 GALLONS OF STORAGE, OR BELOW GROUND STORAGE OF 42,000 GALLONS.
- MAINTENANCE/INSPECTION PROCEDURE
EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES: THE CONTRACTOR WILL PERFORM AND DOCUMENT THE FOLLOWING MAINTENANCE AND INSPECTION PROCEDURES:
 - LESS THAN ONE HALF OF THE SITE WILL BE DENUDED AT ONE TIME
 - ONLY QUALIFIED INSPECTION PERSONNEL WILL PERFORM THE INSPECTION
 - ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
 - ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF THE REPORT.
 - BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
 - SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
 - NON SEDIMENT POND BMP'S WILL BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT PONDS SHALL BE REPAIRED OR CLEANED OUT WITHIN 10 DAYS OF INSPECTION
 - BUILT UP SEDIMENT IN THE DRAINAGE SWALES WILL BE REMOVED.
 - TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
 - A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
 - THE INSPECTOR WILL BE RESPONSIBLE FOR THE INSPECTIONS, INFORMING THE CONTRACTOR OF NEEDED REPAIRS, SUPERVISING SUCH REPAIRS AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
 - THE INSPECTION AND MAINTENANCE REPORT WILL BE SIGNED BY THE QUALIFIED INSPECTION PERSONNEL AFTER EACH INSPECTION
 - MISSING OR NON-FUNCTIONAL BMP'S WILL BE INSTALLED OR CORRECTED WITHIN 10 DAYS OF THE INSPECTION.
 - THE PERMITTEE SHALL MAINTAIN FOR THREE YEARS FOLLOWING THE SUBMITTAL OF A NOTICE OF TERMINATION FORM, A RECORD SUMMARIZING THE RESULTS OF THE INSPECTIONS.
 - IF THE SITE WILL BE DORMANT FOR A LONG PERIOD, AND IS STABILIZED, A WAIVER REQUEST CAN BE SUBMITTED TO THE OEPA FOR A REDUCTION IN MONTHLY INSPECTIONS.
 - WATER QUALITY PONDS SHALL BE CLEANED OF TRASH AND DEBRIS MONTHLY.
 - WATER QUALITY PONDS SHALL BE INSPECTED ANNUALLY FOR OUTLET FLOW AND DAMAGE TO THE OUTLET STRUCTURE. REMOVE WOODY VEGETATION AND FIX ERODING AREAS.
 - WATER QUALITY PONDS SHALL BE MONITORED EVERY 15 TO 20 YEARS FOR SEDIMENT ACCUMULATIONS.
- SPILL CONTROL PRACTICES
 - MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
 - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
 - ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
 - SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
 - THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE

MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

- THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
- GOOD HOUSEKEEPING
 - AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB
 - ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE
 - PRODUCT WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL
 - SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER
 - WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER
 - MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED
 - THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE

- SEDIMENT SETTLING PONDS (WHEN REQUIRED) SHALL BE INSTALLED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRADING.
- CONCENTRATED STORM RUNOFF FROM DISTURBED AREAS FLOWING AT RATES WHICH EXCEED THE DESIGN CAPACITY OF SEDIMENT BARRIERS MUST PASS THROUGH A SEDIMENT SETTLING POND.

- DISTURBED AREAS IN RESIDENTIAL SUBDIVISIONS MUST BE STABILIZED AT LEAST 7 DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOTS.

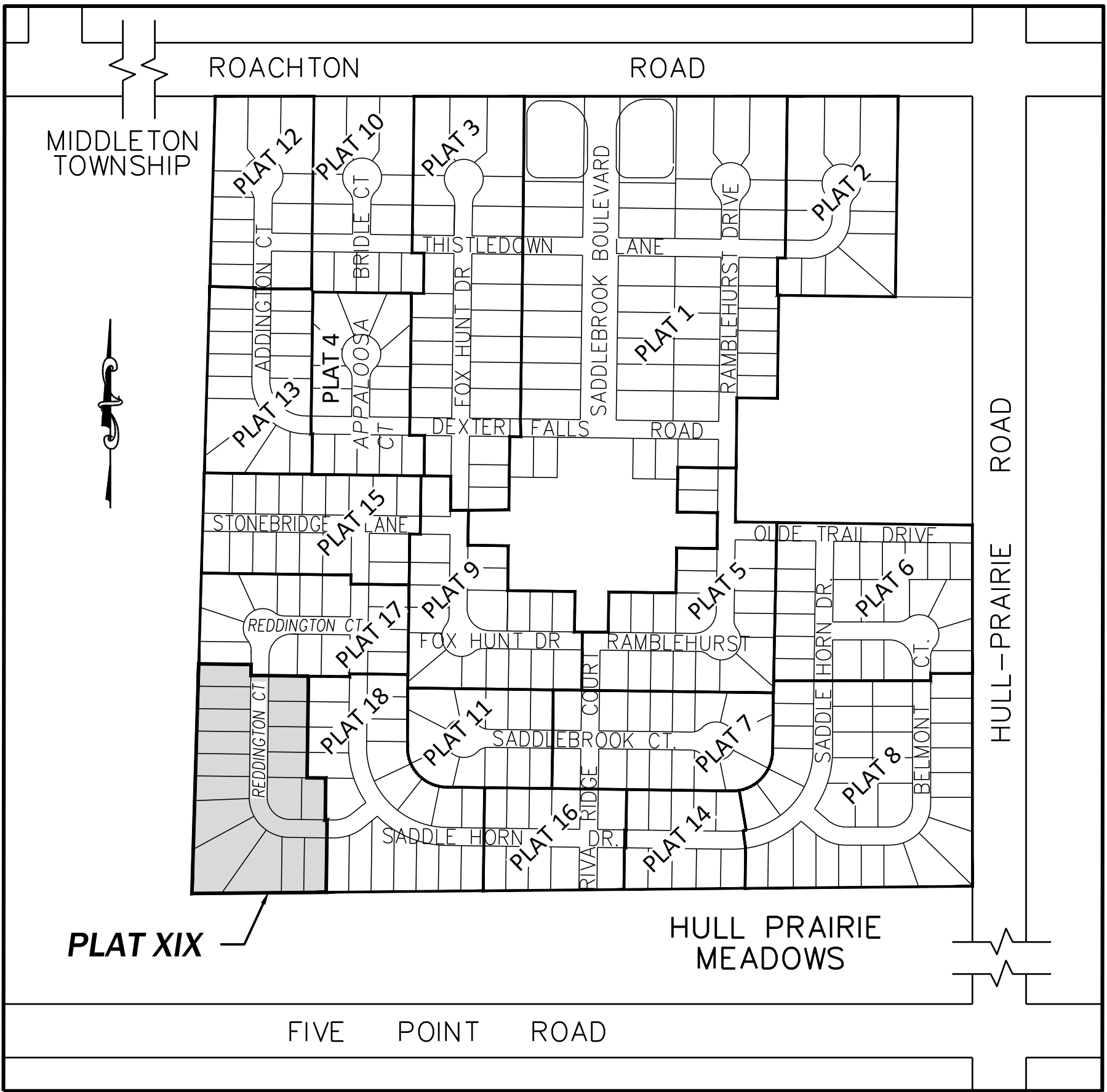
- SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT OPERATIONS WHICH PROMOTE EROSION.

- CLEANUP WILL BE CONDUCTED IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.

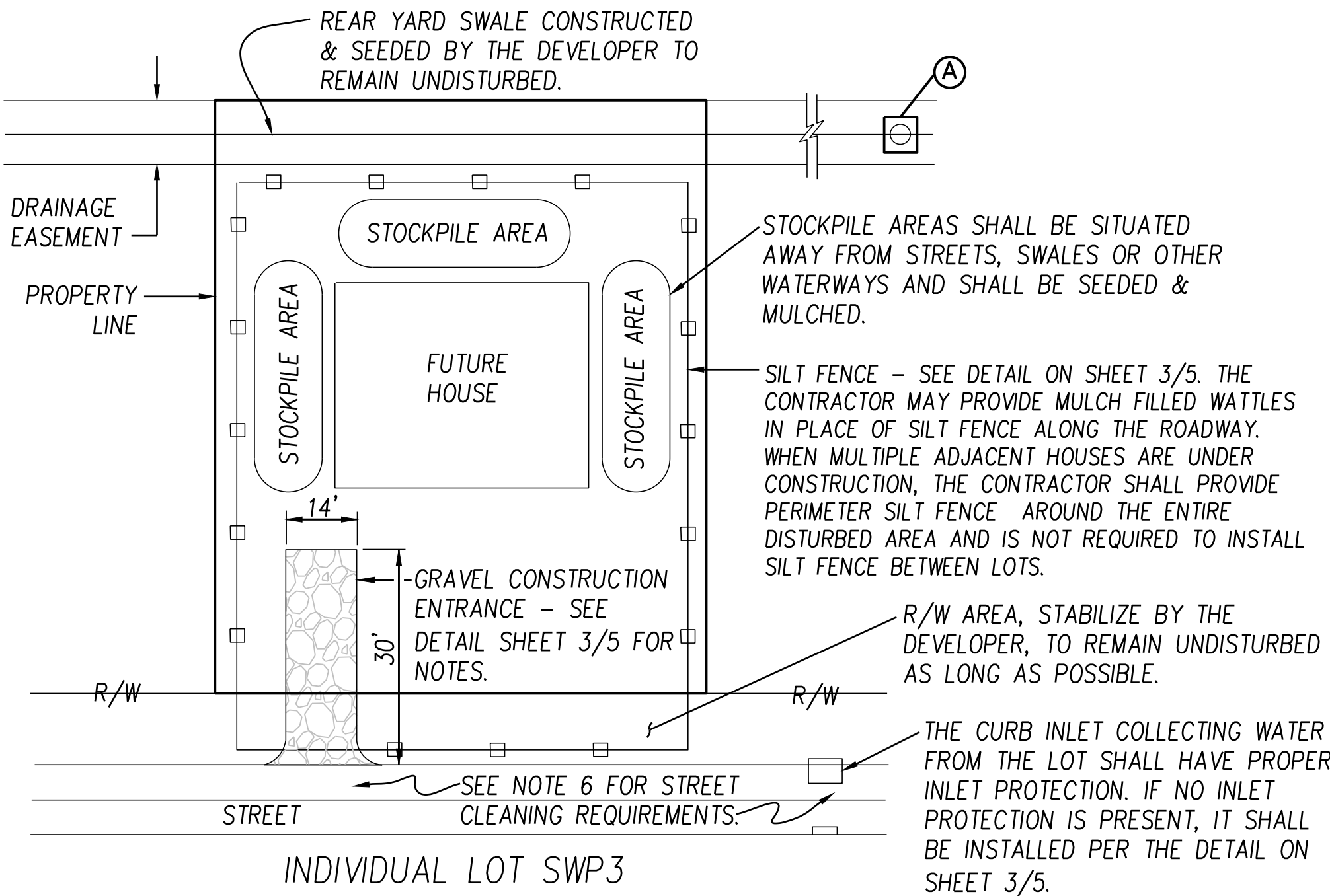
- STOCKPILED SOILS SHALL BE LEGALLY REMOVED FROM THE SITE OR SEEDED AND SURROUNDED WITH SILT FENCE UNTIL SUCH TIME THAT IT CAN BE REUSED ON SITE.

SPECIFICATIONS FOR
SMALL LOT BUILDING SITES

- PREEXISTING VEGETATION SHALL BE RETAINED ON IDLE PORTIONS OF THE BUILDING LOT FOR AS LONG AS CONSTRUCTION OPERATIONS ALLOW. CLEARING SHALL BE DONE SO ONLY ACTIVE WORKING AREAS ARE BARE.
- TEMPORARY SEED (ANNUAL RYE, OATS, ETC.) AND/OR MULCH SHALL BE APPLIED TO AREAS, SUCH AS STOCKPILES, THAT ARE BARE AND NOT ACTIVELY BEING WORKED. THIS SHALL APPLY TO AREAS THAT WILL NOT BE REWORKED FOR 14 DAYS OR MORE.
- STOCKPILES EXCAVATED FROM BASEMENTS SHALL BE SITUATED AWAY FROM STREETS, SWALES, OR OTHER WATERWAYS AND SHALL BE SEEDED AND/OR MULCHED.
- SILT FENCE SHALL CONTROL SHEET FLOW RUNOFF FROM THE BUILDING LOT. IT SHALL NOT BE CONSTRUCTED IN CHANNELS OR AREAS OF CONCENTRATED FLOW. OTHER SEDIMENT CONTROLS SUCH AS INLET PROTECTION AND SEDIMENT TRAPS SHALL ALSO BE USED AS NEEDED TO CONTROL SEDIMENT RUNOFF.
- CONSTRUCTION VEHICLE ACCESS SHALL BE LIMITED TO ONE ROUTE, TO THE GREATEST EXTENT PRACTICAL. THE ACCESS SHALL BE GRAVEL OR CRUSHED ROCK APPLIED TO THE DRIVEWAY AREA.
- MUD TRACKED ONTO THE STREET OR SEDIMENT SETTLED AROUND CURB INLET PROTECTION SHALL BE REMOVED DAILY OR AS NEEDED TO PREVENT IT FROM ACCUMULATING. IT SHALL BE REMOVED BY SHOVELING AND SCRAPING AND SHALL NOT BE WASHED OFF PAVED SURFACES OR INTO STORM DRAINS.
- THE HOME BUILDER SHALL INSTALL AND MAINTAIN A "GRAVEL" CONSTRUCTION ENTRANCE TO CONTROL THE TRACKING OF DEBRIS ONTO PUBLIC ROADS. IT SHALL CONSIST OF A MINIMUM OF 6" OF 2" TO 3" SIZE STONE, 14 FEET WIDE AND 30 FEET IN LENGTH.



VICINITY MAP
1"=400'



TYPICAL MAINTENANCE ACTIVITIES FOR WATER QUALITY PONDS

SCHEDULE	ACTIVITY
MONTHLY	MOW EMBANKMENT AND CLEAN TRASH AND DEBRIS FROM OUTLET STRUCTURE. ADDRESS ANY ACCUMULATION OF HYDROCARBONS.
ANNUALLY	INSPECT EMBANKMENT AND OUTLET STRUCTURE FOR DAMAGE AND PROPER FLOW. REMOVE WOODY VEGETATION AND FIX ANY ERODING AREAS. MONITOR SEDIMENT ACCUMULATIONS IN FOREBAY AND MAIN POOL.
SEMI-ANNUALLY	INSPECT WETLAND AREAS FOR INVASIVE PLANTS.
3-7 YEARS	REMOVE SEDIMENT FROM FOREBAYS.
15-20 YEARS	MONITOR SEDIMENT ACCUMULATIONS IN THE MAIN POOL AND CLEAN AS POND BECOMES EUTROPHIC OR POND VOLUME IS REDUCED SIGNIFICANTLY.

CONSTRUCTION SEEDING & MULCHING

Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1000 ft2	Lb/Acre
March 1 to August 15	Oats	3	128 (4 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Perennial Ryegrass	1	40
	Tall Fescue	1	40
August 16th to November	Annual Ryegrass	1	40
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Annual Ryegrass	1.25	55
	Perennial Ryegrass	3.25	142
November 1 to Feb. 29	Creeping Red Fescue	0.4	17
	Kentucky Bluegrass	0.4	17
	Oats	3	128 (3 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
August 16th to November	Rye	3	112 (2 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Wheat	3	120 (2 Bushel)
	Tall Fescue	1	40
November 1 to Feb. 29	Annual Ryegrass	1	40
	Perennial Ryegrass	1	40
	Annual Ryegrass	1	40
	Perennial Ryegrass	1.25	40
	Creeping Red Fescue	3.25	40
November 1 to Feb. 29	Kentucky Bluegrass	0.4	40
	Perennial Ryegrass	0.4	40
	Annual Ryegrass	0.4	40
	Perennial Ryegrass	0.4	40
	Kentucky Bluegrass	0.4	40
Use mulch only or dormant seeding			

Note: Other approved species may be substituted.

1. 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.

2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 14 days or greater. These idle areas shall be seeded within 7 days after grading.

3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is not possible.

Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedlings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.

2. Materials:

• Straw—If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2-3 bales)

• Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000-sq.-ft.

• Other—Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 ton/ ac.

4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.

5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

3. 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 left to a length of approximately 6 inches.

• Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.

• Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.

• Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

PERMANENT SEEDING & MULCHING

Site Preparation

1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.

2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.

3. Topsoil shall be applied where needed to establish vegetation.

Seedbed Preparation

1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.

2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analyses.

3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the above specified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

Dormant Seedings

1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.

2. The following methods may be used for "Dormant Seeding":

• From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.

• From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.

• Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.

• Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

Mulching

1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.

2. Materials

• Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied 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.

• Hydroseeders—If wood cellulose fiber is used, it shall be applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft.

• Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.

3. Straw and Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

• 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 inches.

• Mulch Netting—Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.

• Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacture or at the rate of 160 gallons per acre.

• Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.

• Wood Cellulose Fiber—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

Permanent Seeding

Seed Mix	Seeding Rate		Notes:
	Lbs./acre	Lbs./1,000 Sq. Feet	
	General Use		
Creeping Red Fescue	20-40	1/2-1	For close mowing & for waterways with <2.0 ft/sec velocity
Domestic Ryegrass	10-20	1/4- 1/2	
Kentucky Bluegrass	20-40	1/2-1	
Tall Fescue	40-50	1-1 1/4	
Turf-type (dwarf) Fescue	90	2 1/4	
Steep Banks or Cut Slopes			
Tall Fescue	40-50	1-1 1/4	Do not seed later than August
Crown Vetch	10-20	1/4- 1/2	
Tall Fescue	20-30	1/2-3/4	
Flat Pea	20-25	1/2-3/4	Do not seed later than August
Tall Fescue	20-30	1/2-3/4	
Road Ditches and Swales			
Tall Fescue	40-50	1-1 1/4	
Turf-type (Dwarf) Fescue	90	2 1/4	
Kentucky Bluegrass	5	0.1	
Lawns			
Kentucky Bluegrass	100-120	2	
Perennial Ryegrass		2	
Kentucky Bluegrass	100-120	2	For Shaded Areas
Creeping Red Fescue		1-1/2	