THIS INSTRUMENT PREPARED BY:
DENNIS D. OLMSTEAD, RLS
STOEPPELWERTH & ASSOCIATES, INC.
7965 E. 106TH STREET
FISHERS, INDIANA 46038
PHONE: (317) 849-5935

THIS INSTRUMENT PREPARED FOR:
WINDSTAR HOMES, LLC
5374 CAYMAN DRIVE
CARMEL, INDIANA 46033
PHONE: (317) 223-4257
CONTACT: MARK ALT

THE BLUFFS AT YOUNG CREEK
SECTION 1
MAJOR SUBDIVISION
SECONDARY PLAT

SUBDIVISION MONUMENTATION

AN AFFIDAVIT, CROSS-REFERENCED TO THIS RECORDED PLAT, WILL BE RECORDED AFTER THE SUBDIVISION MONUMENTATION HAS BEEN COMPLETED, PER STANDARDS SET FORTH IN TITLE 865 IAC 1-12-18 SUBSECTION (b)(3)(2). THE INSTALLATION OF BELOW MENTIONED MONUMENTS MAY BE DELAYED FOR UP TO TWO YEARS FROM RECORDATION OF PLAT.

○ A 5/8"x30" REBAR WITH CAP STAMPED "S&A FIRM #0008" SHALL BE SET AT ALL LOT OR PARCEL CORNERS, INCLUDING BEGINNING AND ENDING OF CURVES AND THE INTERSECTION OF LINES.

◉ DENOTES A 2" MAG NAIL WITH WASHER STAMPED "S&A FIRM #0008".

□ DENOTES A 4"x4"x36" LONG PRECAST CONCRETE MONUMENT WITH A CROSS CAST IN THE TOP, SET FLUSH WITH THE FINISH GRADE.

• DENOTES A STREET CENTERLINE MONUMENT. EITHER A "COPPERWELD", A 5/8" DIA. STEEL ROD 12" LONG WITH 1-1/2" DIA. TAPERED BRASS CAP HAVING A CUT "X" IN TOP, SET FLUSH WITH THE FINISHED SURFACE COAT OR A 2" MAG NAIL, TEMPORARILY SET FLUSH WITH THE INTERMEDIATE COAT (BINDER).

LEGEND

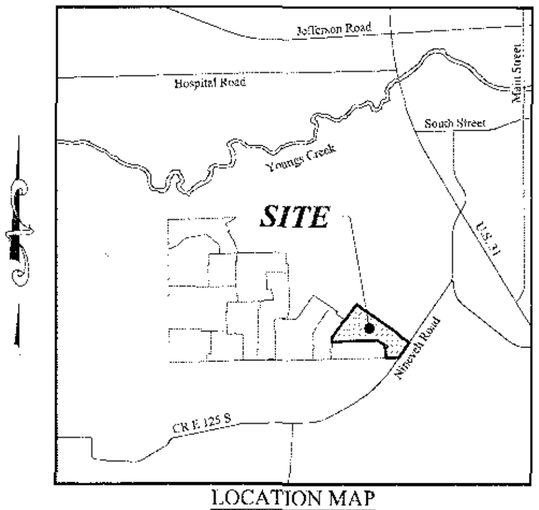
25	LOT NUMBER
VAR.	VARIABLE
R/W	RIGHT-OF-WAY
B.L.	BUILDING SETBACK LINE
C.A.	COMMON AREA
D.E.	DRAINAGE EASEMENT
D.&U.E.	DRAINAGE & UTILITY EASEMENT
D.U.&S.S.E.	DRAINAGE UTILITY & SANITARY SEWER EASEMENT
L.M.A.E.	LANDSCAPE MAINTENANCE ACCESS EASEMENT
△	SECTION CORNER

CURVE TABLE: CENTERLINE

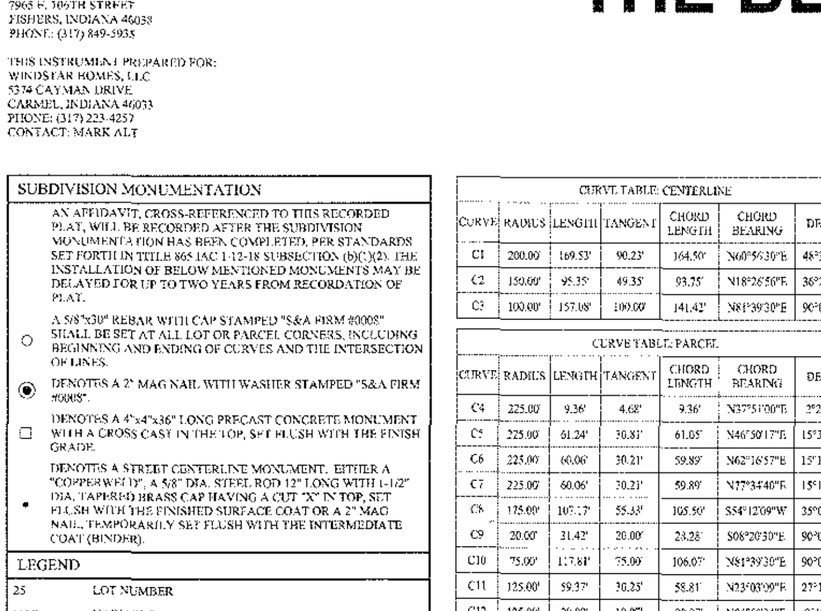
CURVE	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING	DELTA
C1	200.00'	169.53'	90.23'	164.50'	N60°56'30"E	48°34'01"
C2	150.00'	95.35'	49.35'	93.75'	N18°26'50"E	36°25'09"
C3	100.00'	157.08'	100.00'	141.42'	N81°39'30"E	90°00'00"

CURVE TABLE: PARCEL

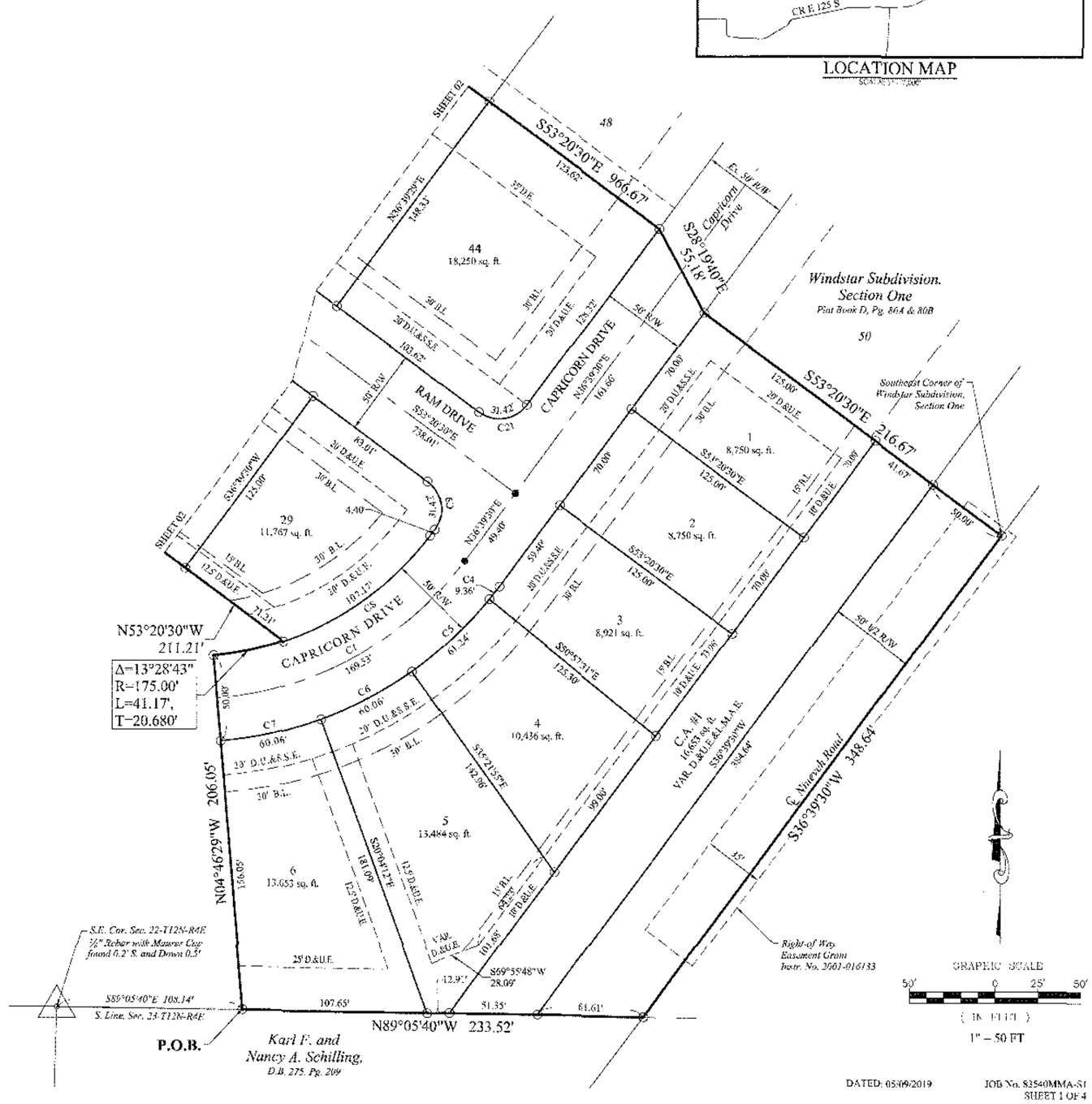
CURVE	RADIUS	LENGTH	TANGENT	CHORD LENGTH	CHORD BEARING	DELTA
C4	225.00'	9.36'	4.68'	9.36'	N37°51'00"E	2°23'59"
C5	225.00'	61.24'	30.81'	61.05'	N46°30'17"E	15°35'36"
C6	225.00'	60.06'	30.21'	59.89'	N62°16'57"E	15°17'43"
C7	225.00'	60.06'	30.21'	59.89'	N77°34'40"E	15°17'43"
C8	175.00'	107.17'	55.53'	105.50'	S54°12'09"W	35°05'18"
C9	20.00'	31.42'	20.00'	28.28'	S08°20'30"E	90°00'00"
C10	75.00'	117.81'	75.00'	106.07'	N81°39'30"E	90°00'00"
C11	125.00'	59.37'	30.25'	58.81'	N23°03'09"E	27°12'42"
C12	125.00'	20.09'	10.07'	20.07'	N04°50'34"E	9°12'27"
C13	175.00'	51.53'	25.95'	51.34'	S08°40'29"W	16°52'17"
C14	175.00'	55.72'	28.10'	55.49'	S26°13'57"W	18°14'38"
C15	175.00'	3.98'	1.99'	3.98'	S36°00'23"W	1°18'14"
C16	125.00'	24.63'	12.35'	24.59'	S42°18'08"W	11°17'17"
C17	125.00'	51.14'	25.93'	50.78'	S59°39'58"W	23°26'22"
C18	125.00'	51.14'	25.93'	50.78'	S83°06'20"W	23°26'22"
C19	125.00'	51.14'	25.93'	50.78'	N73°27'18"W	23°26'22"
C20	125.00'	18.31'	9.17'	18.30'	N57°32'18"W	8°23'36"
C21	20.00'	31.42'	20.00'	28.28'	S81°39'30"W	90°00'00"



LOCATION MAP
SCALE: 1" = 800'



KEY MAP
SCALE: 1" = 200'



DENNIS D. OLMSTEAD
REGISTERED
No. 900012
STATE OF INDIANA
LAND SURVEYOR

Dennis D. Olmstead
Registered Land Surveyor
No. 900012

DATED: 05/09/2019

JOB No. 83540MMA-SI
SHEET 1 OF 4

THIS INSTRUMENT PREPARED BY:
DENNIS D. OLMSTEAD, RLS
STOEPPELWERTH & ASSOCIATES, INC.
7965 E. 106TH STREET
FISHERS, INDIANA 46038
PHONE: (317) 849-5935

THIS INSTRUMENT PREPARED FOR:
WINDSTAR HOMES, LLC
5374 CAYMAN DRIVE
CARMEL, INDIANA 46033
PHONE: (317) 223-4257
CONTACT: MARK ALT

NOTE

REFER TO SHEET 1 FOR GENERAL NOTES, LEGEND, CURVE TABLES, AND ABBREVIATIONS.

THE BLUFFS AT YOUNG CREEK
SECTION 1
MAJOR SUBDIVISION
SECONDARY PLAT

DENNIS D. OLMSTEAD REGISTERED No. 900012 STATE OF INDIANA LAND SURVEYOR

Dennis D. Olmstead
Registered Land Surveyor
No. 900012

DATED: 05/09/2019

JOB No. 83540MMA-S1
SHEET 2 OF 4

THIS INSTRUMENT PREPARED BY:
DENNIS D. OLMSTEAD, RLS
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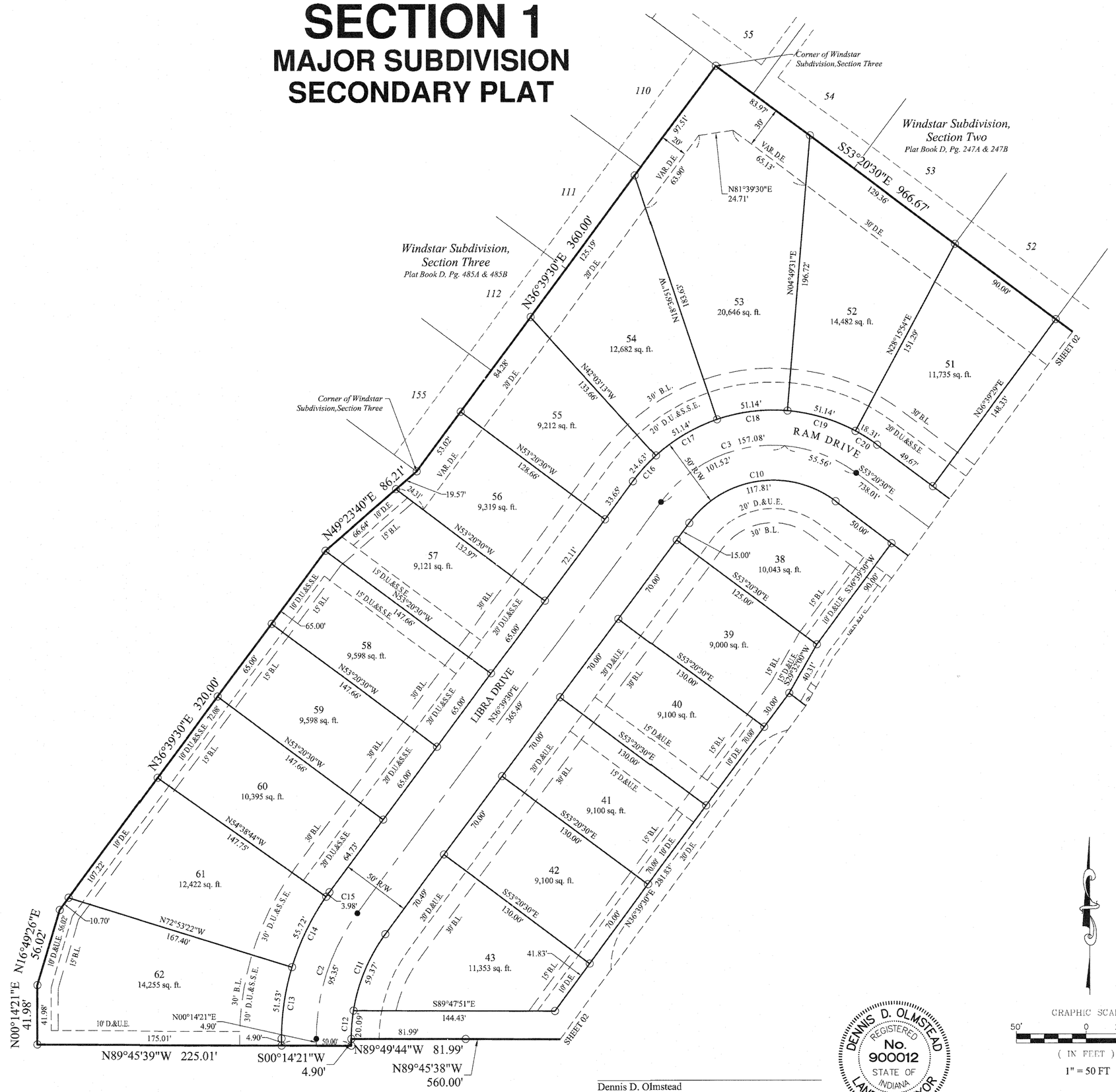
THE BLUFFS AT YOUNG CREEK
SECTION 1
MAJOR SUBDIVISION
SECONDARY PLAT



Dennis D. Olmstead
Registered Land Surveyor
No. 900012

DENNIS D. OLMSTEAD REGISTERED No. 900012 STATE OF INDIANA LAND SURVEYOR

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

DATED: 05/09/2019

JOB No. 83540MMA-S1
SHEET 3 OF 4

THIS INSTRUMENT PREPARED BY:
DENNIS D. OLMSTEAD, RLS
STOEPPELWERTH & ASSOCIATES, INC.
7965 E. 106TH STREET
FISHERS, INDIANA 46038
PHONE: (317) 849-5935

THIS INSTRUMENT PREPARED FOR:
WINDSTAR HOMES, LLC
5374 CAYMAN DRIVE
CARMEL, INDIANA 46033
PHONE: (317) 223-4257
CONTACT: MARK ALT

THE BLUFFS AT YOUNG CREEK
SECTION 1
MAJOR SUBDIVISION
SECONDARY PLAT

THE BLUFFS AT YOUNGS CREEK, SECTION 1

I, the undersigned Registered Land Surveyor hereby certify that the included plat correctly represents a subdivision of part of the Southeast Quarter of Section 22 and part of the Southwest Quarter of Section 23, Township 12 North, Range 4 East of the Second Principal Meridian, Johnson County, Indiana, being more particularly described as follows:

Commencing at the Southwest corner of the Southwest Quarter of Section 23, said corner also being the Southeast corner of the Southeast Quarter of Section 22; thence South 89 degrees 05 minutes 40 seconds East along the South line of the Southwest Quarter of said Section 23 a distance of 108.14 feet to the POINT OF BEGINNING of this description; thence North 04 degrees 46 minutes 29 seconds West 206.05 feet to a point on a curve concave northwesterly, the radius point of said curve being North 04 degrees 46 minutes 29 seconds West a distance of 175.00 feet from said point; thence easterly along said curve 41.17 feet to a point on said curve, said point being South 18 degrees 15 minutes 12 seconds East a distance of 175.00 feet from the radius point of said curve; thence North 53 degrees 20 minutes 30 seconds West 211.21 feet; thence South 62 degrees 05 minutes 31 seconds West 9.39 feet; thence North 89 degrees 45 minutes 38 seconds West 560.00 feet; thence North 89 degrees 49 minutes 44 seconds West 81.99 feet; thence South 00 degrees 14 minutes 21 seconds West 4.90 feet; thence North 89 degrees 45 minutes 39 seconds West 225.01 feet; thence North 00 degrees 14 minutes 21 seconds East 41.98 feet; thence North 16 degrees 49 minutes 26 seconds East 56.02 feet; thence North 36 degrees 39 minutes 30 seconds East 320.00 feet; thence North 49 degrees 23 minutes 40 seconds East 86.21 feet to a corner on the Southeast line of Windstar Subdivision, Section Three, as recorded in Plat Book D, Pages 485A and 485B in the Office of the Recorder for Johnson County, Indiana; thence North 36 degrees 39 minutes 30 seconds East along the Southeast line of said Windstar Subdivision, Section Three a distance of 360.00 feet to a point on the Southwest line of Windstar Subdivision, Section Two, as recorded in Plat Book D, Pages 247A and 247B in the Office of the Recorder for Johnson County, Indiana; thence South 53 degrees 20 minutes 30 seconds East along said Southwest line of said Windstar Subdivision, Section Two and the Southwest line of Windstar Subdivision, Section One, recorded in Plat Book D, Pages 80A and 80B in the Office of the Recorder for Johnson County, Indiana a distance of 966.67 feet to the Northwest right-of-way line of Capricorn Drive, as platted in said Windstar Subdivision, Section One; thence South 28 degrees 19 minutes 40 seconds East along said Southwest line a distance of 55.18 feet to the Southeast right-of-way line of said Capricorn Drive; thence South 53 degrees 20 minutes 30 seconds East along aforesaid Southwest line a distance of 216.67 feet to the approximate centerline of Nineveh Road; thence South 36 degrees 39 minutes 30 seconds West along said centerline a distance of 348.64 feet to the aforementioned South line of the Southwest Quarter of the aforementioned Section 23; thence North 89 degrees 05 minutes 40 seconds West along said South line a distance of 233.52 feet to the Point of Beginning, containing 14.571 acres, more or less, subject to all legal highways, rights-of-ways, easements, and restrictions of record.

This subdivision consists of 40 lots numbered 1 - 6, and 29 - 62 (all inclusive) and 2 Common Areas labeled C.A. #1 and C.A. #2. The size of lots and common areas and width of streets are shown in feet and decimal parts thereof.

Cross-Reference ins hereby made to a survey plat prepared by Stoeppelwerth & Associates, Inc. in accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code certified March 12, 2019 recorded as Instrument No. 219-004894 in the Office of the Recorder for Johnson County, Indiana.

I further certify that I am a Registered Land Surveyor, licensed in compliance with the laws of the State of Indiana and that the within plat represents a subdivision of the lands surveyed within the cross referenced survey plat, and that to the best of my knowledge and belief there has been no change from the matters of the survey revealed by the cross-reference survey on any lines that are common with the new subdivision.

Witness my signature this _____ day of _____ , 2019.

I affirm, under the penalties for purjery, that I have taken reasonable care to redact each social security number in this document, unless required by law.

Dennis D. Olmstead, PLS

_____
Dennis D. Olmstead
Registered Land Surveyor
No. 900012

DENNIS D. OLMSTEAD REGISTERED No. 900012 STATE OF INDIANA LAND SURVEYOR

CERTIFICATE OF APPROVAL

After having given public notice of the time, place and nature of hearing on the application for primary approval of this subdivision by publication in a newspaper of local circulation more than ten (10) days before the hearing thereon, under authority provided by the General Assembly of the State of Indiana, this plat was given approval by a majority of the members of the Franklin Plan Commission at a meeting held on the _____ day of _____ , 2019.

City of Franklin Plan Commission by:

_____ _____
President Secretary

This plat is hereby recommended for acceptance by the City of Franklin by:

_____ _____
Planning Director City Engineer

I, Mark Alt, President, Windstar Homes, LLC, do hereby lay off and plat the described real estate into the subdivision to be known as The Bluffs at Youngs Creek, Section 1 in Johnson County, Indiana. All streets shown and not herefore dedicated, are hereby dedicated to the City of Franklin, Johnson County, Indiana.

This plat is hereby made subject to the Declaration of Covenants, Conditions and Restrictions recorded as Instrument No. _____ and any amendments thereto.

In Testimony whereof, witness the signatures of Owner and Declarant this _____ day of _____ , 2019.

Owner:
Windstar Homes, LLC
5374 Cayman Drive
Carmel, Indiana 46033

_____
Mark Alt, President

State of Indiana)
) SS
County of _____)

Before me, the undersigned, a Notary Public in and for said County and State, personally appeared Matt Madison, President, of Madison Assets, LLC., and acknowledged the execution of this Instrument as his voluntary act and deed and affixed his signature thereto.

Witness my signature and seal this _____ day of _____ , 2019.

_____ _____
County of Residence Notary Public

_____ _____
My commission expires Printed Name

NOTARY PUBLIC SEAL INDIANA

REGISTERED LAND SURVEYOR'S CERTIFICATE

I, Dennis D. Olmstead, hereby certify that I am a Registered Land Surveyor, licensed in compliance with the laws of the State of Indiana:

That all the monuments shown hereon actually exist or bond has been posted to cover the later installation of these monuments, and that all other requirements specified herein, done by me, have been met.

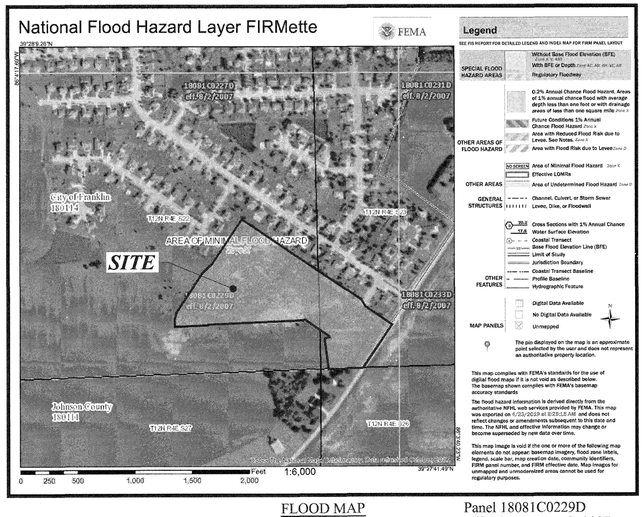
_____
Dennis D. Olmstead
Registered Land Surveyor
No. 900012

DENNIS D. OLMSTEAD REGISTERED No. 900012 STATE OF INDIANA LAND SURVEYOR

DATED: 05/09/2019

THE BLUFFS AT YOUNGS CREEK
Section 1

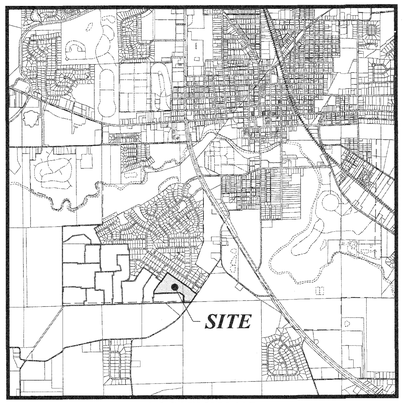
Developed by:
Windstar Homes, LLC
5374 Cayman Drive
Carmel, Indiana 46033
Contact: Mark Alt
Phone: (317) 223-4257



FLOOD MAP
NOT-TO-SCALE

Panel 18081C0229D
Effective August 2, 2007

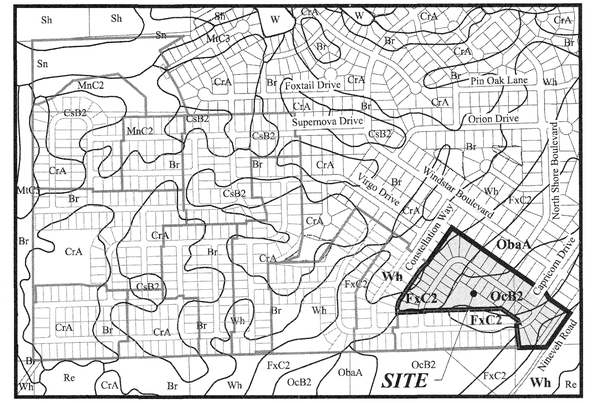
FLOOD STATEMENT
THIS IS TO CERTIFY THAT THE SUBJECT PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE "A" AS SAID TRACT PLOTS BY SCALE ON COMMUNITY PANEL 18081C0229D OF THE FLOOD INSURANCE RATE MAPS DATED AUGUST 2, 2007.



LOCATION MAP
SCALE: 1" = 2,600'

INDEX	
SHT. NO.	DESCRIPTION
C001	COVER SHEET
C100 - C101	TOPOGRAPHICAL SURVEY/DEMO PLAN
C200 - C203	SITE DEVELOPMENT PLAN EMERGENCY FLOOD ROUTE PLAN
C300 - C311	INITIAL STORM WATER POLLUTION & PREVENTION PLAN TEMPORARY STORM WATER POLLUTION & PREVENTION PLAN PERMANENT SEDIMENT & EROSION CONTROL PLAN STORM WATER POLLUTION & PREVENTION SPECIFICATIONS STORM WATER POLLUTION & PREVENTION DETAILS
C400 - C403	STREET PLAN & PROFILES INTERSECTION DETAIL STREET SIGN PLAN
C500 - C502	SANITARY PLAN & PROFILES
C600 - C602	STORM PLAN & PROFILES
C700	WATER PLAN
C800 - C803	CONSTRUCTION SPECIFICATIONS & DETAILS

PROJECT SITE MAP
SCALE: 1" = 250'



SOILS MAP
SCALE: 1" = 600'

SOILS LEGEND
Map Unit: FxC2 - Fox complex, 6 to 12 percent slopes, eroded The Fox component makes up 50 percent of the map unit. Slopes are 6 to 12 percent. This component is on outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Slziok-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 40 percent.
Map Unit: ObaA - Ockley loam, 0 to 2 percent slopes The Ockley component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces, outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 40 to 72 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria.
Map Unit: OcB2- Ockley loam, 2 to 6 percent slopes, eroded The Ockley component makes up 100 percent of the map unit. Slopes are 2 to 6 percent. This component is on stream terraces, outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 20 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.
Map Unit: Wh -Whitaker silt loam, 0 to 2 percent slopes The Whitaker component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on outwash plains on outwash plains. The parent material consists of silty outwash over loamy outwash. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 32 percent.

DESIGN DATA	
DESIGN SPEED LIMIT	25 M.P.H.
40 LOTS	
ACERAGE	14.571 AC. ±
DENSITY	2.75 LOTS/ACRE
CAPRICORN DRIVE	380.59 L.F.
RAM DRIVE	793.57 L.F.
LIBRA DRIVE	567.26 L.F.
TOTAL	1,741.43 L.F.

UTILITY CONTACTS	
City of Franklin - Stormwater 796 South State Street Franklin, Indiana 46131 Contact: Tyler Urban Ph: (888) 736-3640 x1213	City of Franklin - Wastewater 796 South State Street Franklin, Indiana 46131 Contact: Sally Brown Ph: (888) 736-3640
Johnson County REMC 750 International Drive Franklin, Indiana 46131 Contact: John Hendricks Ph: (317) 738-7618	Vectren Energy 600 Industrial Drive Franklin, Indiana 46131 Contact: Dave Sherry Ph: (317) 776-5585
Indiana American Water 153 East Emerson Avenue Greenwood, Indiana 46143 Contact: Tracy White Ph: (317) 885-2426	Comcast Cable 5330 East 65th Street Indianapolis, Indiana 46220 Contact: Matt Stringer Ph: (317) 275-6493
Century Link 50 North Jackson Street Franklin, Indiana 46131 Contact: Larry Talbot Ph: (317) 736-4863	

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS LATEST EDITION TO BE USED WITH THESE PLANS UNLESS ALTERNATE SPECIFICATIONS ARE SHOWN WITHIN.

REVISIONS			
SHT. NO.	DESCRIPTION	DATE	BY

PLANS PREPARED BY:
STOEPPELWERTH & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
7965 E. 106th STREET, FISHERS, INDIANA 46038
PHONE: (317) 849-5935
FAX: (317) 849-5942
CONTACT: BRIAN K. ROBINSON
EMAIL: brobinson@stoeppelwerth.com

PLANS CERTIFIED BY:

David J. Stoeppelwerth 05/09/19
DAVID J. STOEPPELWERTH
PROFESSIONAL ENGINEER

DAVID J. STOEPPELWERTH REGISTERED No. 19358 STATE OF INDIANA PROFESSIONAL ENGINEER

S & A JOB No. 83540MMA-S1

MATCHLINE "A" - SEE SHEET C101

Lot 110 | Lot 55 | Lot 54 | Lot 53 | Lot 52 | Lot 51 | Lot 43 | Lot 44 | Lot 45 | Lot 46 | Lot 47 | Lot 48 | Lot 49 | Lot 50

Windstar Subdivision, Section Two

Windstar Subdivision, Section One

WINDSTAR BOULEVARD

NORTH SHORE BOULEVARD

CAPRICORN DRIVE

NINEVEH ROAD

EX. END SECTION 30" R.C.P. NE INV.=738.50

EX. SANITARY MH TC=763.87 6" S.D.R. 35 P.V.C.W. INV.=748.32 8" S.D.R. 35 P.V.C.W. INV.=748.22

EX. 8" WATER MAIN

EX. 50' I.C.G. R/W

EX. END SECTION 29"x42" C.M.P. SE INV.=739.47

EX. 8" WATER MAIN

EX. 4' CONC. WALK

EX. DBL. SQUARE DI. TC=741.58 30"x47" C.M.P. SW INV.=738.38 30"x42" C.M.P. SE INV.=738.38

EX. END SECTION 29"x42" C.M.P. NW INV.=736.88

Right-of-Way Easement Grant Instr. No. 2001-016133

39 L.F. 12" R.C.P. @ 0.23%

Karl F. and Nancy A. Schilling

Karl F. and Nancy A. Schilling

MATCHLINE "A" - SEE SHEET C101

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- 870 — CONTOUR
- SWALE
- LAKE NORMAL POOL ELEVATION
- SANITARY SEWER (w/ LATERAL)
- STORM SEWER
- FM — FORCE MAIN
- W — WATER LINE
- G — GAS LINE
- X — FENCE LINE
- TREELINE
- LIGHT POLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- M.B. MAILBOX
- C.O. CLEANOUT
- T.P. TELEPHONE PEDESTAL
- TV P. CABLE TV PEDESTAL
- E.T. ELECTRIC TRANSFORMER
- CONTROL POINT
- DENOTES FEATURES TO BE REMOVED

UTILITY CROSSINGS

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

NOTES

1. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCHMARK DATA

ORIGINATING BENCHMARK
JOHNSON COUNTY BENCHMARK TTA5: A 4" COPPER PLATE, CENTER PUNCHED, STAMPED "VFITA5" SET ON A 36" IRON ROD SET IN 6"x36" CONCRETE, 6"± BELOW GROUND LEVEL. APPROXIMATELY 20 FEET FROM THE CENTER OF THE NORTHBOUND LANES OF U.S. 31 AND APPROXIMATELY 654' NORTHWEST OF ITS INTERSECTION OF NINEVEH ROAD.
BENCHMARK ELEVATION = 743.13 (NAVD 88)

BY	REVISIONS	MARK	DATE

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY. A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH & SONS
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

Know what's below. Call before you dig.

SITE DEVELOPMENT PLAN

THE BLUFFS AT YOUNGS CREEK SECTION 1

FRANKLIN, FRANKIN TOWNSHIP — JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C100

S & A JOB NO.
83540MMA-S1

File Name: S:\83540MMA-S01\DWG\C100 - Topographical Survey.dwg - C100
Modified / By: May 8, 2019 3:11:26 PM / prichards
Plotted / By: May 9, 2019 11:15:31 AM / Paul Richards

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- 870 — CONTOUR
- SWALE
- LAKE NORMAL POOL ELEVATION
- SANITARY SEWER (w/ LATERAL)
- STORM SEWER
- FM — FORCE MAIN
- W — WATER LINE
- G — GAS LINE
- X — FENCE LINE
- TREELINE
- LIGHT POLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- M.B. MAILBOX
- C.O. CLEANOUT
- T.P. TELEPHONE PEDESTAL
- TV P. CABLE TV PEDESTAL
- E. ELECTRIC TRANSFORMER
- CONTROL POINT
- DENOTES FEATURES TO BE REMOVED

UTILITY CROSSINGS

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

NOTES

1. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCHMARK DATA

ORIGINATING BENCHMARK
JOHNSON COUNTY BENCHMARK TTA5: A 4" COPPER PLATE, CENTER PUNCHED, STAMPED "TTA5" SET ON A 36" IRON ROD SET IN 6"x36" CONCRETE, 6"± BELOW GROUND LEVEL APPROXIMATELY 20 FEET FROM THE CENTER OF THE NORTHBOUND LANES OF U.S. 31 AND APPROXIMATELY 654' NORTHWEST OF ITS INTERSECTION OF NINEVEH ROAD.
BENCHMARK ELEVATION = 743.13 (NAVD 88)

BY	REVISIONS	MARK	DATE

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY. A ROUTE SURVEY OR A SURVEY FOR LOCATION REPORT

CERTIFIED: 05/09/19
David J. Stoeppelwerth

STOEPPELWERTH
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

Know what's below. Call before you dig.

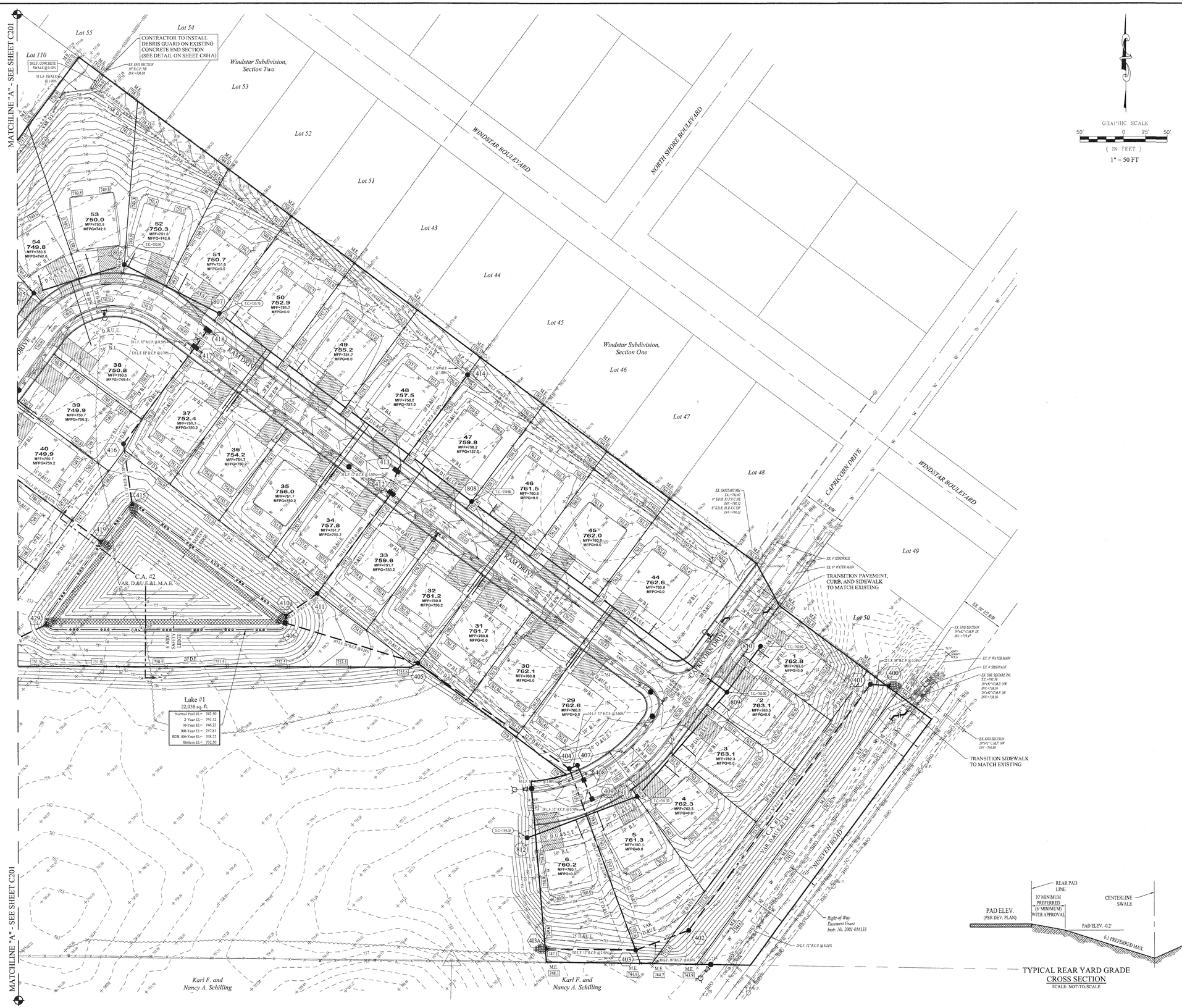
SITE DEVELOPMENT PLAN
THE BLUFFS AT YOUNGS CREEK
SECTION 1
JOHNSON COUNTY, INDIANA
FRANKLIN, FRANKIN TOWNSHIP

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C101

S & A JOB NO.
83540MMA-S1

File Name: S:\83540MMA-S01\DWG\C100 - Topographical Survey.dwg - C101
Modified / By: May 6, 2019 3:11:26 PM / prichards
Plotted / By: May 9, 2019 11:15:42 AM / Paul Richards



LEGEND

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- W — EXISTING WATER LINE
- 870 — EXISTING CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- 870 — PROPOSED CONTOUR
- W — PROPOSED WATER LINE
- PROPOSED SWALE
- PROPOSED LAKE NORMAL POOL ELEVATION
- 748.5 — PROPOSED GRADE ELEVATION
- PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
- PROPOSED CURB w/ 6" UNDERDRAIN
- PROPOSED 6" SUB-SURFACE DRAIN

10 / 750.2 / MFF=750.9 / MFPG=750.4	LOT NUMBER PAD GRADE MINIMUM FINISH FLOOR ELEVATION MINIMUM FLOOD PROTECTION GRADE
MFF=750.0	MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA: 1. 12" (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST. 2. 6" (0.5') ABOVE THE MFPG
MFPG	MINIMUM FLOOD PROTECTION GRADE (LAKE / FLOOD PROTECTION)
B.L.	BUILDING SETBACK LINE
M.E.	MATCH EXISTING
H.P.	HIGH POINT
L.P.	LOW POINT
P.V.I.	POINT OF VERTICAL INTERSECTION
GRD. CHG.	GRADE CHANGE

NOTES

1. SEE LAKE #1 CROSS SECTION ("A-A") ON SHEET C801B

UTILITY CROSSINGS

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

BENCHMARK DATA

ORIGINATING BENCHMARK
JOHNSON COUNTY BENCHMARK TTA5: A 4" COPPER PLATE, CENTER PUNCHED, STAMPED "YF|TTA5" SET ON A 36" IRON ROD SET IN 6"x36" CONCRETE. 6"± BELOW GROUND LEVEL APPROXIMATELY 20 FEET FROM THE CENTER OF THE NORTHBOUND LANES OF U.S. 31 AND APPROXIMATELY 654' NORTHWEST OF ITS INTERSECTION OF NINEVEH ROAD.
BENCHMARK ELEVATION = 743.13 (NAVD 88)

EARTHWORK NOTES

1. EXCAVATION
   - A. Excavated material that is suitable may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the site.
   - B. Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the responsibility of the Contractor for any costs for fill needed.
2. REMOVAL OF TREES
   - A. All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.
3. PROTECTION OF TREES
   - A. The Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.
   - B. In the event cut or fill exceeds 0.5 feet over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.
4. REMOVAL OF TOPSOIL
   - A. All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.
5. UTILITIES
   - A. Rules and regulation governing the respective utility shall be observed in executing all work under this section.
   - B. It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 811.
6. SITE GRADING
   - A. The Contractor shall do all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawing.
   - B. The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
   - C. The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove equipment from the site until the Engineer has verified that the job meets the above tolerance.

BY	REVISIONS	DATE	MARK

THIS DRAWING IS NOT INTENDED TO BE USED AS A BOUNDARY SURVEY, A ROUTE SURVEY, A RIGHT-OF-WAY SURVEY, A ROUTE ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

DAVID J. STOEPPELWERTH — REGISTERED — No. 19358 — STATE OF INDIANA — PROFESSIONAL ENGINEER

STOEPPELWERTH & SONS
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

SITE DEVELOPMENT PLAN
THE BLUFFS AT YOUNGS CREEK SECTION 1

JOHNSON COUNTY, INDIANA
FRANKLIN, FRANKLIN TOWNSHIP

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C200

S & A JOB NO.
83540MMA-S1

File Name: S:\83540MMA-S01\DWG\C200 - Site Development Plan.dwg - C200
Modified / By: May 9, 2019 12:52:32 PM / prichards
Plotted / By: May 9, 2019 12:58:22 PM / Paul Richards

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATER LINE
- 870 EXISTING CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- 870 PROPOSED CONTOUR
- W PROPOSED WATER LINE
- PROPOSED SWALE
- PROPOSED LAKE NORMAL POOL ELEVATION
- 748.5 PROPOSED GRADE ELEVATION
- PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
- PROPOSED CURB w/ 6" UNDERDRAIN
- RISER PROPOSED 6" SUB-SURFACE DRAIN
- 10 / 750.2 / MFF=750.9 / MFPG=750.4 LOT NUMBER, PAD GRADE, MINIMUM FINISH FLOOR ELEVATION, MINIMUM FLOOD PROTECTION GRADE
- MFF=750.0 MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA: 1. 12" (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST. 2. 6" (0.5') ABOVE THE MFPG
- MFPG MINIMUM FLOOD PROTECTION GRADE (LAKE / FLOOD PROTECTION)
- B.L. BUILDING SETBACK LINE
- M.E. MATCH EXISTING
- H.P. HIGH POINT
- L.P. LOW POINT
- P.V.I. POINT OF VERTICAL INTERSECTION
- GRD. CHG. GRADE CHANGE

NOTES

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JOHNSON COUNTY BENCHMARK TTA5: A 4" COPPER PLATE, CENTER PUNCHED, STAMPED "YFTTA5" SET ON A 36" IRON ROD SET IN 6"x36" CONCRETE, 6"± BELOW GROUND LEVEL APPROXIMATELY 20 FEET FROM THE CENTER OF THE NORTHBOUND LANES OF U.S. 31 AND APPROXIMATELY 654' NORTHWEST OF ITS INTERSECTION OF NINEVEH ROAD.
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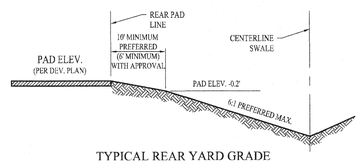

TYPICAL REAR YARD GRADE
CROSS SECTION
SCALE: NOT-TO-SCALE

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY. A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19
David J. Stoeppelwerth

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

BY	REVISIONS	MARK	DATE

STOEPPELWERTH & ASSOCIATES
ALWAYS ON
7965 East 106th Street Fishers, IN 46038 3505
phone: 317.849.5935 fax: 317.849.5942

SITE DEVELOPMENT PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C201

S & A JOB NO.
83540MMA-S1

File Name: S:\83540MMA-S01\DWG\C200 - Site Development Plan.dwg - C201
Modified / By: May 9, 2019 12:52:32 PM / prichards
Plotted / By: May 9, 2019 12:58:37 PM / Paul Richards

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- 870 EXISTING CONTOUR
- EXISTING SWALE
- EXISTING LAKE NORMAL POOL ELEVATION
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- 870 PROPOSED CONTOUR
- PROPOSED SWALE
- PROPOSED LAKE NORMAL POOL ELEVATION
- 748.5 PROPOSED GRADE ELEVATION
- 10 / 750.2 / MFF=750.9 / MFPG=750.4 LOT NUMBER, PAD GRADE, MINIMUM FINISH FLOOR ELEVATION, MINIMUM FLOOD PROTECTION GRADE
- MFF=750.0 MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA:
  1. 12" (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST.
  2. 6" (0.5') ABOVE THE MFPG
- EMERGENCY OVERFLOW PONDING (FOR 100-YEAR STORM, ASSUMING ALL INLETS ARE COMPLETELY CLOGGED.)
- EMERGENCY FLOOD ROUTING
- LOCATION OF STORMWATER DISCHARGE FROM SITE

THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.

BY	REVISIONS	MARK	DATE

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REGISTERED
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STATE OF INDIANA
PROFESSIONAL ENGINEER

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CERTIFIED: 05/09/19

David J. Stoeppelwerth

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phone: 317.849.5935 fax: 317.849.5942

EMERGENCY FLOOD ROUTE PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

JOHNSON COUNTY, INDIANA
FRANKLIN, FRANKIN TOWNSHIP

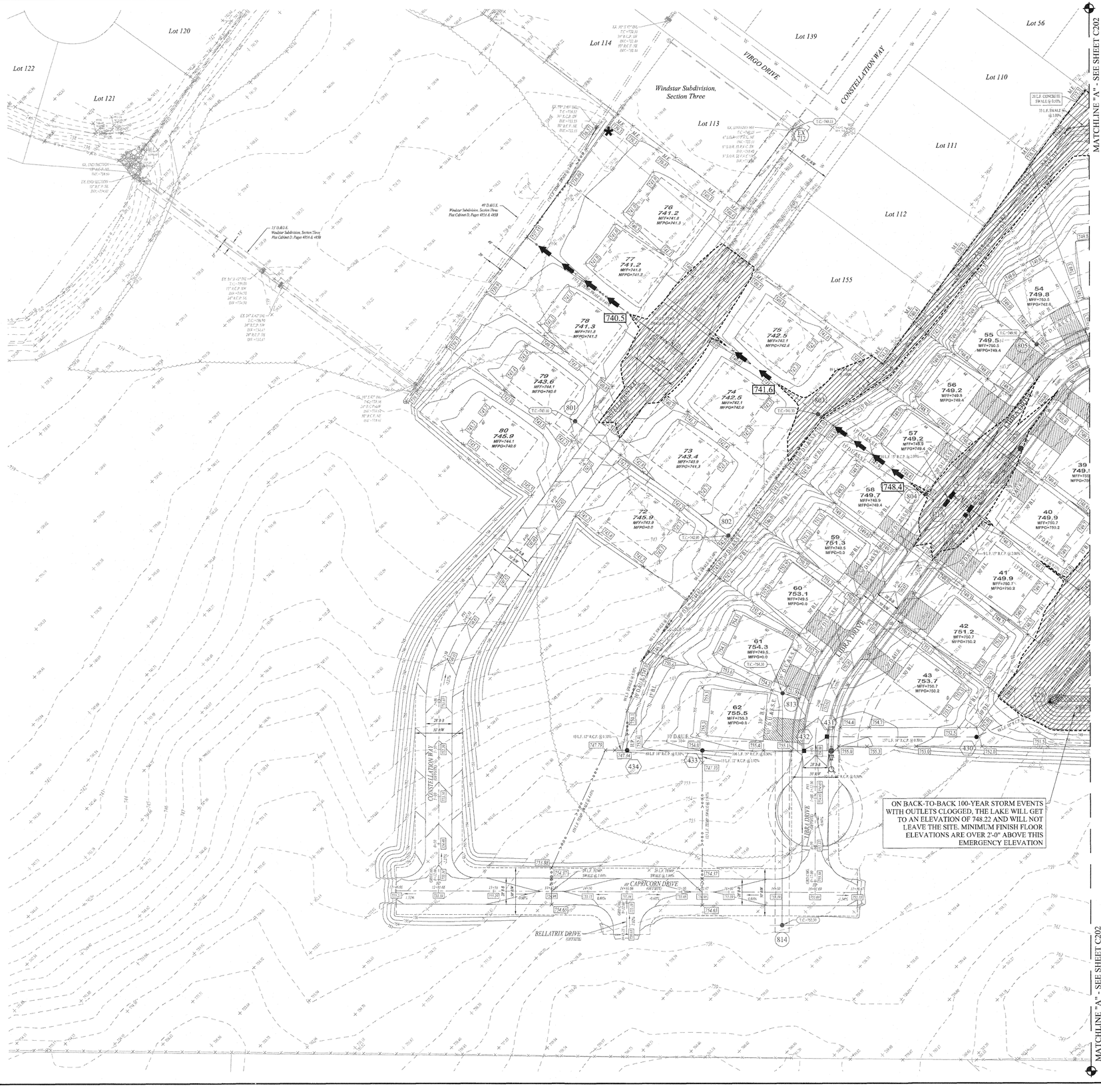
DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C202

S & A JOB NO.
83540MMA-S1

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

File Name: S:\83540MMA-S01\DWG\C202 - Emergency Flood Route.dwg - C202
Modified / By: May 8, 2019 3:17:10 PM / prichards
Plotted / By: May 9, 2019 11:20:39 AM / Paul Richards



GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- 870 — EXISTING CONTOUR
- >000 EXISTING SWALE
- 000 EXISTING LAKE NORMAL POOL ELEVATION
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- 870 PROPOSED CONTOUR
- >000 PROPOSED SWALE
- 000 PROPOSED LAKE NORMAL POOL ELEVATION
- 748.5 PROPOSED GRADE ELEVATION
- 10 / 750.2 / MFF=750.9 / MFPG=750.4 — LOT NUMBER, PAD GRADE, MINIMUM FINISH FLOOR ELEVATION, MINIMUM FLOOD PROTECTION GRADE
- MFF=750.0 — MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA:
  1. 12" (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST.
  2. 6" (0.5') ABOVE THE MFPG
- EMERGENCY OVERFLOW PONDING (FOR 100-YEAR STORM, ASSUMING ALL INLETS ARE COMPLETELY CLOGGED.)
- EMERGENCY FLOOD ROUTING
- LOCATION OF STORMWATER DISCHARGE FROM SITE

THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.

BY	REVISIONS	MARK	DATE

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A REPLACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH
ALWAYS ON
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phone: 317.849.5935 fax: 317.849.5942

EMERGENCY FLOOD ROUTE PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP — JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO
C203

S & A JOB NO.
83540MMA-S1

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

File Name: S:\83540MMA-S01\DWG\C202 - Emergency Flood Route.dwg - C203
Modified / By: May 8, 2019 3:17:10 PM / prichards
Plotted / By: May 9, 2019 11:20:53 AM / Paul Richards

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"
- TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"
- ROCK HORSE SHOE DAM
- LOCATION OF STORMWATER DISCHARGE FROM SITE

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
MARK ALT - WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

DATE	MARK	REVISIONS	BY

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A REAL ESTATE DEED, LEGAL DESCRIPTION, PROPERTY SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH & ASSOCIATES
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

INITIAL STORM WATER POLLUTION PREV. PLAN
THE BLUFFS AT YOUNGS CREEK SECTION 1

JOHNSON COUNTY, INDIANA
FRANKLIN, FRANKLIN TOWNSHIP

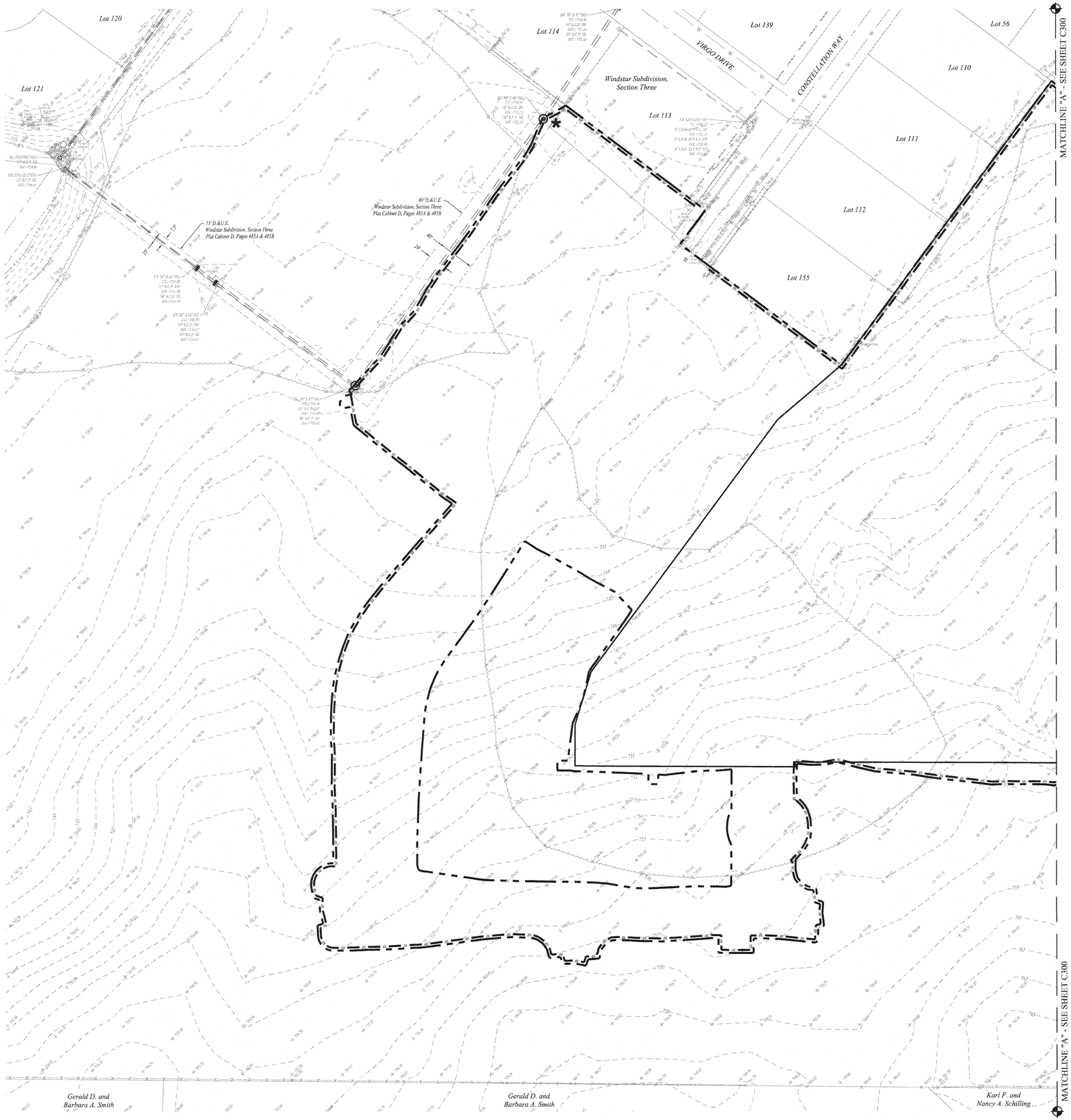
DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C300

S & A JOB NO.
83540MMA-S1

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

File Name: S:\83540MMA-S01\DWG\C300_Erosion Control.dwg - C300
Modified By: May 8, 2019 5:32:29 PM / pdrichards
Plotted By: May 9, 2019 11:23:32 AM / Paul Richards



GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"
- TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"
- ROCK HORSE SHOE DAM
- LOCATION OF STORMWATER DISCHARGE FROM SITE

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
MARK ALT - WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

BY	REVISIONS	MARK	DATE

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

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CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH & ASSOCIATES
ALWAYS ON
7965 East 106th Street Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

INITIAL STORM WATER POLLUTION PREV. PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C301

S & A JOB NO.
83540MMA-S1

Know what's below. Call before you dig.

File Name: S:\83540MMA-S01\DWG\C300 - Erosion Control.dwg - C301
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MATCHLINE "B" - SEE SHEET C303

MATCHLINE "B" - SEE SHEET C303

738.5

749.1

741.5

ROCK HORSE SHOE DAM (SEE DETAIL, SHEET C307)

ROCK HORSE SHOE DAM (SEE DETAIL, SHEET C307)

ROCK HORSE SHOE DAM (SEE DETAIL, SHEET C307)

Lot 110

Lot 54

Lot 53

Lot 52

Lot 51

Lot 43

Lot 44

Lot 45

Lot 46

Lot 47

Lot 48

Lot 49

Lot 50

Lot 55

Windstar Subdivision, Section Two

Windstar Subdivision, Section One

WINDSTAR BOULEVARD

NORTH SHORE BOULEVARD

CAPRICORN DRIVE

KAM DRIVE

WINDSTAR BOULEVARD

CAPRICORN DRIVE

KAM DRIVE

NINTH ROAD

53 750.0 MFF=750.5 MFPG=742.5

52 750.3 MFF=751.0 MFPG=742.6

54 749.8 MFF=750.5 MFPG=742.5

51 750.7 MFF=751.0 MFPG=0.0

50 752.9 MFF=751.7 MFPG=0.0

49 755.2 MFF=751.7 MFPG=0.0

38 750.8 MFF=750.5 MFPG=749.4

48 757.5 MFF=758.2 MFPG=757.0

39 749.9 MFF=750.7 MFPG=750.2

37 752.4 MFF=751.7 MFPG=750.2

47 759.8 MFF=759.2 MFPG=757.0

40 749.9 MFF=750.7 MFPG=750.2

36 754.2 MFF=751.7 MFPG=750.2

35 756.0 MFF=751.7 MFPG=750.2

46 761.5 MFF=760.8 MFPG=0.0

34 757.8 MFF=751.7 MFPG=750.2

45 762.0 MFF=760.8 MFPG=0.0

33 759.6 MFF=751.7 MFPG=750.2

44 762.6 MFF=760.8 MFPG=0.0

32 761.2 MFF=760.8 MFPG=750.2

31 761.7 MFF=760.8 MFPG=0.0

30 762.1 MFF=760.8 MFPG=0.0

29 762.6 MFF=760.8 MFPG=0.0

5 761.3 MFF=760.5 MFPG=0.0

6 760.2 MFF=760.5 MFPG=0.0

762.8 MFF=763.9 MFPG=0.0

763.1 MFF=763.9 MFPG=0.0

762.5 MFF=763.9 MFPG=0.0

C.A. #2 VAR. D.&U.E.&L.M.A.E.

Lake #1
22,038 sq. ft.
Normal Pool El.= 742.50
2-Year El.= 745.12
10-Year El.= 746.22
100-Year El.= 747.81
ISTB 100-Year El.= 748.22
Bottom El.= 732.50

CONSTRUCTION STAGING AREA GRADED @ 763.10

CONSTRUCTION DUMPSTER

CONCRETE WASH OUT AREA

FUEL OIL TANK (DOUBLE WALL)

PORT-O-LET

SHOWN GRADED TO PROPOSED @ 3:1 MAX.

POSTING SIGN LOCATION

102 L.F. TEMP. 12" R.C.P. CULVERT

EARTHWORK CONTRACTOR SHALL INSTALL 20'x150' MIN. STONE ACCESS DRIVE PRIOR TO CONSTRUCTION.

Karl F. and Nancy A. Schilling

Karl F. and Nancy A. Schilling

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"
- TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"
- ROCK HORSE SHOE DAM
- ROCK CHECK DAM
- LOCATION OF STORMWATER DISCHARGE FROM SITE

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
MARK ALT - WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

DATE	MARK	REVISIONS	BY

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

TEMPORARY STORM WATER POLLUTION PREV. PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C302

S & A JOB NO.
83540MMA-S1

Indiana 811
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GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"
- TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"
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BY	DATE	MARK	REVISIONS

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TEMPORARY STORM WATER POLLUTION PREV. PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP — JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C303

S & A JOB NO.
83540MMA-S1

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MATCHLINE "C" - SEE SHEET C305

MATCHLINE "C" - SEE SHEET C305

Lot 55 | Lot 54 | Lot 53 | Lot 52 | Lot 51 | Lot 43 | Lot 44 | Lot 45 | Lot 46 | Lot 47 | Lot 48 | Lot 49 | Lot 50

Windstar Subdivision, Section Two

Windstar Subdivision, Section One

WINDSTAR BOULEVARD

NORTH SHORE BOULEVARD

CAPRICORN DRIVE

VAN DRIVE

NINEPATH ROAD

Lot 110
20 L.F. CONCRETE SWALE @ 8.50%
31 L.F. SWALE @ 10.00%

EX. END SECTION 39" R.C.P. SE 734'+/- 738.50

C.A. #2
VAR. D.&U.E.&L.M.A.E.

Lake #1
22,038 sq. ft.

Normal Pool El.=	742.50
2-Year El.=	745.12
10-Year El.=	746.22
100-Year El.=	747.81
B2B 100-Year El.=	748.22
Bottom El.=	732.50

CONSTRUCTION STAGING AREA TO REMAIN

CONSTRUCTION DUMPSTER

CONCRETE WASH OUT AREA

FUEL OIL TANK (DOUBLE WALL)

PORT-O-LET

POSTING SIGN LOCATION

102 L.F. TEMP. 12" R.C.P. CULVERT

I.E.=742.49

I.E.=742.48

EARTHWORK CONTRACTOR SHALL INSTALL 20'x150' MIN. STONE ACCESS DRIVE PRIOR TO CONSTRUCTION.

Karl F. and Nancy A. Schilling

Karl F. and Nancy A. Schilling

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- DENOTES PERMANENT SEEDING & MULCH AREAS
- DENOTES SEEDING w/ FIBER BLANKET #S75 BY NORTH AMERICAN GREEN
- DENOTES TEMPORARY SEEDING & MULCH AREAS

REFER TO SHEETS C307 & C310 - C311 FOR SEEDING/MULCHING SPECIFICATIONS.

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
MARK ALT - WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

DATE	MARK.	REVISIONS	BY

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

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CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH
& ASSOCIATES, INC.
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

PERMANENT STORM WATER POLLUTION PREV. PLAN

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C304

S.B.A.30D NO.
83540MMA-S1

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GRAPHIC SCALE
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(IN FEET)
1" = 50 FT

LEGEND

- DENOTES CONSTRUCTION LIMITS
- SF SF DENOTES SILT FENCE
- DENOTES PERMANENT SEEDING & MULCH AREAS
- DENOTES SEEDING w/ FIBER BLANKET #S75 BY NORTH AMERICAN GREEN
- DENOTES TEMPORARY SEEDING & MULCH AREAS

REFER TO SHEETS C307 & C310 - C311 FOR SEEDING/MULCHING SPECIFICATIONS.

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MARK ALT
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PERMANENT STORM WATER POLLUTION PREV. PLAN
THE BLUFFS AT YOUNGS CREEK
SECTION 1
FRANKLIN, FRANKLIN TOWNSHIP — JOHNSON COUNTY, INDIANA

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C305

S & A JOB NO.
83540MMA-S1

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PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

THE BLUFFS AT YOUNGS CREEK, SECTION 1

SITE NAME
The area scheduled for construction is known as "The Bluffs at Youngs Ceek, Section 1" (hereinafter referred to as the "Project").

PROJECT LOCATION
The property is located south of the Windstar Subdivision along S Nineveh Road (Airport Road) and Windstar Blvd.
Latitude is 39° 27' 52" N
Longitude is 86° 03' 48" W

OWNER'S INFORMATION
Windstar Homes, LLC
5374 Cayman Drive
Carmel, Indiana 46033
Phone: (317) 223-4257
Contact Person: Mark Alt, Member

OPERATOR'S INFORMATION
Windstar Homes, LLC
5374 Cayman Drive
Carmel, Indiana 46033
Phone: (317) 223-4257
Contact Person: Mark Alt, Member

NOTICE OF INTENT
All parties defined as owners or operators must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOI's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an operator is defined as any party meeting either of the following requirements:

a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications.

b. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

A1 - Plan Index
Cover Sheet

A2 - 11" x 17" PLAT
This drawing is attached in the O & M Manual.

A3 - PROJECT NARRATIVE
This project includes the construction of 40 lots and 2 common areas, which consists of approximately 14.571 acres. Construction will include pad grades for homes, associated roadways, landscaping, and drainage infrastructure.

A4 - VICINITY MAP
A copy of the vicinity map is shown on the Cover Sheet.

A5 - LEGAL DESCRIPTION OF PROJECT SITE
The site is part of a tract of land as described on the Final Plat.

A6 - LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS
The site will be subdivided as shown on the Site Plans. Please refer to Sheets C200 - C201 for detail.

A7 - HYDROLOGIC UNIT CODE (HUC14)
Outlet 1 (South) 05120204090060, Youngs Creek - Buckhart Creek; Outlet 2 (North) 05120204090040, Youngs Creek - Ray Creek

A8 - STATE AND FEDERAL WATER QUALITY PERMITS
IDEM Rule 5

A9 - SPECIFIC POINT WHERE STORMWATER DISCHARGE WILL LEAVE THIS SITE
Stormwater will leave the site through proposed and existing storm sewers to outlet 1 to the east and to outlet 2 to the north.

A10 - LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON AND ADJACENT TO THIS SITE
Youngs Creek approximately 500' north of this site.

A11 - IDENTIFICATION OF ALL RECEIVING WATERS
The overall site outlets to existing storm sewer system ultimately an existing lake to the north within Windstar, Subdivision, and east under S Nineveh Road (Airport Road) to a road side ditch and ultimately Youngs Creek - Buckhart Creek.

A12 - IDENTIFICATION OF ALL POTENTIAL DISCHARGES TO GROUND WATER
None

A13 - 100-YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES
No portion of this site is located within a Special Flood Hazard Area (Zone AE). This information was obtained from Flood Insurance Rate Map (FIRM) Panel 18081C0229D for Johnson County, Indiana dated August 02, 2007.

A14 - PRE-CONSTRUCTION AND POST-CONSTRUCTION ESTIMATE OF PEAK DISCHARGE

Outlet 1 (South)

Allowable 2-year discharge:	7.74 cfs	Post-construction 2-year discharge:	5.25 cfs
Allowable 10-year discharge:	1.78 cfs	Post-construction 10-year discharge:	11.60 cfs
Allowable 100-year discharge:	28.04 cfs	Post-construction 100-year discharge:	19.63 cfs

Outlet 2 (North)

Allowable 2-year discharge:	8.24 cfs	Post-construction 2-year discharge:	3.18 cfs
Allowable 10-year discharge:	12.15 cfs	Post-construction 10-year discharge:	5.76 cfs
Allowable 100-year discharge:	20.72 cfs	Post-construction 100-year discharge:	10.01 cfs

A15 - ADJACENT LAND USE

North:	Residential
East:	Agricultural
South:	Agricultural
West:	Agricultural

A16 - LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS
See Sheets C200 - C201 and C300 - C303.

A17 - IDENTIFICATION OF EXISTING VEGETATIVE COVER
Existing site consists of vegetation and crops.

A18 - SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS
Soil information from the Johnson County Soil Survey is shown on the Cover Sheet and Sheet C307.

A19 - LOCATIONS, SIZE, AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS
Locations of stormwater systems: See Sheets C200 - C201 and C600 - C602.
Size of storm sewers: See Sheets C200 - C201 and C600 - C602.
Details of storm inlets and manholes: See Sheets C600 - C602 and details on Sheets C801A - C801B.

A20 - PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT
Additional grading and sanitary sewer to the northwest for connection to existing system.

A21 - LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS
None.

A22 - EXISTING SITE TOPOGRAPHY
Refer to Sheets C100 - C101 for the existing site topography plan.

A23 - PROPOSED FINAL SITE TOPOGRAPHY
Refer to Sheets C200 - C201 for the proposed final site topography plan.

B1 - DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
The following potential pollutant sources may be associated with construction activities on site:
1. Material storage areas (more specifically described below)
2. Construction waste material
3. Fuel storage areas and fueling stations
4. Exposed soils
5. Leaking vehicles and equipment
6. Sanitary waste from temporary toilet facilities
7. Litter
8. Windblown dust
9. Soil tracking off site from construction equipment
10. Water from concrete washout.

The following construction materials will be staged or stored on site at various points during development of the site.
1. Structural fill
2. Road base
3. Concrete drainage pipe
4. Concrete culverts
5. Precast concrete manholes

B2 - SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES
1. The Contractor shall schedule a Pre-construction meeting with the City of Franklin prior to any constructing on the site being started. The Contractor and/or Developer shall notify IDEM and the City of Franklin 48 hours prior to start of construction.
2. Following the required pre-construction meeting the Contractor shall install the "posting information center". The location of the posting information center is shown on Sheets C300 and C302. The posting information center is the location where a copy of the approved IDEM Rule 5 Permit, Approved SWPP Plan, signed O&M Manual and Maintenance Logs are to be located. The Contractor shall proceed to construct the construction entrance after all posting requirements have been met.
3. Immediately following the installation of the construction entrance, the Contractor shall construct the maintenance and refueling area. Please refer to the maintenance and refueling area details and specifications on Sheets C307 - C308.
4. Prior to any earth moving, the Contractor shall install all silt fence as shown on Sheets C300 - C301. The details and specifications for silt fence installation are located on Sheet C309.
10. The Contractor shall protect existing curb inlets with drop inlet protection baskets and end section inlets with rock horse shoe dams as shown on Sheets C300 - C301.
Refer to rock horseshoe dam detail on Sheet C307.
Refer to drop inlet protection basket details and specifications on Sheets C308.
11. When the "existing" site/construction limits are completely protected, the Contractor shall begin stripping the existing top soil within the construction limits and utilize in non-structural fill areas.
12. The Contractor shall install Lake outlet pipes from structures 400-406 and install associated erosion control methods as show on C302-C303 prior to excavating the proposed Lake #1 as shown on Sheets C200 - C201. Immediately following construction, the Contractor shall stabilize the banks with erosion control blanket as shown on Sheets C304 - C305.
Refer to erosion control blanket details and specifications on Sheet C307.
13. The Contractor shall install the proposed storm sewers and cut the proposed swales as shown on Sheets C200 - C201. Swales shall be stabilized with an erosion control blanket immediately following their construction.
14. All inlets shall be protected with drop inlet baskets immediately following their installation.
Refer to drop inlet protection basket details and specifications on Sheets C309.
15. The Contractor shall continue to grade the remainder of the site as shown on Sheets C200 - C201.
16. The Contractor shall excavate around the existing sanitary manholes and storm structures and expose the proposed connection points for the gravity sanitary sewer and storm sewer for this project.
17. The proposed onsite storm sewer and sanitary sewer shall be installed concurrently with each other when crossings are encountered.
18. The Contractor shall install water main.
19. The Contractor shall prepare the sub-grade for the proposed road system. If lime stabilization is the method chosen, dust shall be kept to a minimum. Dust shall be removed from the construction vehicles prior to leaving the site.
20. The Contractor shall install all concrete curb.
21. The Contractor shall have all other appropriate utilities installed. It is ultimately the responsibility of the Contractor to ensure that the trench area is seeded and mulched immediately following the installation of each utility.
22. The Contractor shall install all asphalt pavement.
23. The Contractor shall install the proposed erosion control blanket in the remaining swales as shown on Sheets C304 - C305.
22. The Contractor shall permanent seed all areas between the back of curb and the constructed pads and all other areas that are illustrated on Sheets C304 - C305.
Refer to the seed mixture details and specifications on Sheets C310 - C311.
23. The Contractor shall schedule a site inspection with the City of Franklin to ensure that the site is stabilized. After the Inspector approves the site conditions, the Contractor shall remove all temporary erosion control practices.
24. The post-construction erosion control practices then become the responsibility of the Developer of this project.
25. The Developer of this project shall continue to monitor this site for good house keeping on the post-construction BMP's until a NOT is filed with IDEM.

B3 - STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS
Construction entrance will be in place prior to this phase of construction. Entrance is shown for reference on Sheets C300 - C301.
Refer to Sheets C308 for details and specifications.

B4 - SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS
Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 3:1 (horizontal to vertical). Silt fencing will be utilized to minimize runoff from construction areas, as identified on Sheets C300 - C301.
Refer to Sheets C307 - C308 for details and specifications.

B5 - SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS
Erosion control blankets will be used in swales and the banks of Lake #1 as shown on Sheets C304 - C305. Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 3:1 (horizontal to vertical). Silt fencing will be utilized to minimize runoff from construction areas, as identified on Sheets C300 - C301.
Refer to erosion control blanket details and specifications on Sheet C307.

B6 - STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS
The Contractor has the option to use one of several storm sewer inlet protection methods, depending on the inlet location and the stage of construction. Manufactured products such as the Catch-All products may also be used at the Contractor's discretion. Manufactured products shall be installed in accordance with the manufacturer's specifications. Straw bales will not be allowed as inlet protection measures. Coconut fiber mats are recommended.
Refer to Sheets C300 - C301 for locations and refer to Sheets C307 - C308 for details and specifications.

B7 - RUNOFF CONTROL MEASURES
The silt fencing will be utilized to slow runoff and minimize sediment discharge.
Refer to Sheets C300 - C301 for additional information.

B8 - STORMWATER OUTLET PROTECTION SPECIFICATIONS
Rip-rap revetment will be used at each of the stormwater outlets where not connecting into existing manholes.
Refer to Sheets C302 - 303 for additional information.
Refer to Sheet C309 for details.

B9 - GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS
Erosion control blankets will be utilized as grade-stabilization structures.
Refer to Sheets C304 - C305 for additional information.

B10 - LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE
Temporary "Coconut Fiber Mat", Below Grade "Drop Inlet Protection Basket", Temporary "Drop Inlet Protection Basket", Sediment Control Devices". Each measure is shown on Sheets C300 - C305.
Refer to details and specifications on Sheets C309.

B11 - TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON
Refer to Sheets C308 - C309 for specifications.

B12 - PERMANENT SURFACE STABILIZATION SPECIFICATIONS
Refer to Sheets C308 - C309 for specifications.

B13 - MATERIAL HANDLING AND SPILL PREVENTION PLAN
Solid Waste Disposal

No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to the construction activity, must be collected in containers or closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.

Hazardous Waste

Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.

Use containment berms in fueling and maintenance areas and where potential for spills is high.

A foreman or supervisor should be designated in writing to oversee, enforce and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

Dust Control/Off-site Vehicle Tracking

During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should be stabilized to reduce dust.

Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked into existing streets. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.

Sanitary/Septic

Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors.

The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.

Water Source

Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

Equipment Fueling and Storage Areas

Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge into soil where they may be washed away during a rain event.

Equipment wash down (except for wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.

Hazardous Material Storage

Chemicals, paints, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resealable, store the products in clearly labeled, waterproof containers). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local regulations.

As may be required by federal, state, or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

Spill Response Directions

In the event of small spills, please contact the construction supervisor. In the event of spills that require removal of soils or other materials, please contact the construction supervisor, developer, County Surveyor's Office and the Local Fire Department.

In the event of spills that have potential groundwater or surface water contamination, please contact the construction supervisor, developer, County Surveyor's Office, Local Fire Department and IDEM.

Contact Numbers

Emergency Response	911
Franklin Fire Department	(888) 736-3650
Franklin Police Department	(317) 736-3670
Indiana Department of Natural Resources	(317) 477-8773
Indiana Department of Environmental Management	(317) 233-7745
Johnson County Soil and Water	(317) 736-9540
Windstar Homes, LLC	(317) 223-4257
Johnson County Surveyor's Office	(317) 346-4341

B14 - MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE
Inspection Schedule/Reporting

All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rainfall of 0.5 inch or greater. Where sites have been final or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at lease once every month.

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, and the Project.

Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether the site was in compliance or identify any incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local MS-4.

Construction Entrance

Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls.

Material Storage Inspections

Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely by the subject project are considered to be part of the project and must be included in the erosion control plans and the site inspection reports.

Soil Stabilization Inspections

Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement of have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

Erosion and Sediment Control Inspections

All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls:

1. Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored.
2. Inlet Protection: Sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.
3. Mulching: Inspected for thin or bare spots caused by natural decomposition or weather-related events. Mulch in high traffic area should be replaced on a regular basis to maintain uniform protection.
4. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-half the height of the fence.
5. Stabilized Construction Entrance: Periodic regarding and top dressing with additional stones.
6. Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish a watering and fertilizing schedule.
7. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter.

In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to users of public streets.

Material Handling and Spill Prevention

Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the

National Response Center (1-800-424-8802)

to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spills) to the local MS-4.

Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

All permittees must submit an NOT within thirty (30) days after one or more of the following conditions have been met:
1. Final stabilization has been achieved on all portions of the site for which the permittee was responsible.
2. Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.
3. In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.

B15 - EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS
Construction sequence for the site are shown on this sheet.

C1 - DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE
The proposed land use will consist of single family residential houses. The pollutants and sources of each pollutant normally expected from these types of land uses are listed below:

Pollutant Source: Passenger vehicles, delivery vehicles, and trucks
Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, brake dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.

Pollutant Source: Residence
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.

Pollutant Source: Trash dumpster
Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distributions operations), uneaten food products, bacteria.

Pollutant Source: Roadway
Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing and patching), pavement de-icing materials, paint fragments from parking stall stripes, concrete fragments, wind-blown litter from off-site sources, and elevated water temperatures from contact with impervious surfaces.

Pollutant Source: Lawn and landscape areas
Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings).

The anticipated pollution sources are the vehicles that will use these future facilities, including both truck and passenger vehicle traffic. Possible pollutants include oil, gasoline, anti-freeze and other pollutants associated with vehicular traffic.

C2 & C3 - SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION: DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES
1. Swales: The proposed grassed swales will collect storm water from sheet flow areas and convey them to the storm sewer. The design of the swales will allow sediment to be partially infiltrated before storm water enters the designed storm sewer system.
2. Inlets: The proposed inlets will prevent large debris such as paper, trash and construction material from entering the storm sewer. The curb inlets with direct discharge offsite will have a 2'-6" sump, which will serve as a sediment storage basin that can be accessed and cleaned out when necessary. The inlet castings are also stamped with an environmental protection stamp informing the public not to pollute the environment.
3. Inlets: The proposed inlets will prevent large debris such as paper, trash and construction material from entering the storm sewer. The inlet castings are also stamped with an environmental protection stamp informing the public not to pollute the environment.
4. Lake: The design of the lake will detain the "first flush" storm water and allow the suspended solids to settle prior to releasing the storm water.

C4 - LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURES
1. Inlets and inlet castings: The details and specifications for the storm inlet castings can be found on Sheets C600 - C602 and Sheets C801A - C801B.
2. Lake: The design for Lake #1 can be found on Sheets C200 - C201. The cross section can be found on Sheet C801B.

C5 - DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES
Maintenance requirements for the post-construction stormwater quality measures are described in the attached O&M Manual.

BY	REVISIONS	MARK	DATE

DAVID J. STOEPPELWERTH
REGISTERED
No. 19358
STATE OF INDIANA
PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RE-ENACTMENT OF ANY PREVIOUS SURVEY OR PLAT SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

David J. Stoeppelwerth

STOEPPELWERTH & SAYSON
ALWAYS ON TIME
7965 East 106th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

STORM WATER POLLUTION PREV. PLAN SPECS.

THE BLUFFS AT YOUNGS CREEK
SECTION 1

FRANKLIN, FRANKLIN TOWNSHIP — JOHNSON COUNTY, INDIANA

DRAWN BY: PDR
CHECKED BY: BKR

SHEET NO.
C306

S & A JOB NO.
83540MMA-S1

File Name: S:\83540MMA-S1\DWG\C306 - Erosion Details & Specifications.dwg - C306
Modified By: May 9, 2019 11:49:27 AM / pmiller
Plotted By: May 9, 2019 11:52:31 AM / Paul Richards

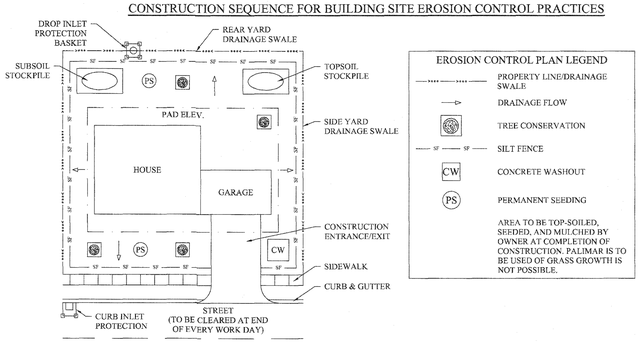
THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:
WINDSTAR HOMES, LLC
MARK ALT
PHONE: (317) 223-4257

EROSION CONTROL NOTES

EROSION CONTROL MEASURE	INSTALLATION SEQUENCE	MAINTENANCE
STONE ENTRANCE	PRIOR TO CLEANING AND GRADING	• INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE. • RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. • TOPDRESS WITH CLEAN STONE AS NEEDED. • IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN. • REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
SILT FENCE	PRIOR TO CLEANING AND GRADING	• INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT. • IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. • REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE. • TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. • AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.
TOPSOIL STOCKPILE	PRIOR TO CLEANING AND GRADING	• DETERMINE DEPTH AND SUITABILITY OF TOPSOIL AT THE SITE. (FOR HELP, CONTACT YOUR LOCAL SWCD OFFICE TO OBTAIN A COUNTY SOIL SURVEY REPORT OR CONSULT WITH A SOIL SCIENTIST.) • PRIOR TO STOCKPILING TOPSOIL, INSTALL ANY SITE-SPECIFIC DOWNSLOPE PRACTICES NEEDED TO CONTROL RUNOFF AND SEDIMENTATION. • REMOVE THE SOIL MATERIAL NO DEEPER THAN WHAT THE COUNTY SOIL SURVEY DESCRIBES AS "SURFACE SOIL" (I.E., A OR AP HORIZON). • STOCKPILE THE MATERIAL IN ACCESSIBLE LOCATIONS THAT NEITHER INTERFERE WITH OTHER CONSTRUCTION ACTIVITIES NOR BLOCK NATURAL DRAINAGE. AND INSTALL SILT FENCES OR OTHER BARRIERS TO TRAP SEDIMENT (SEE EXHIBIT 3-05-B1 (SEVERAL SMALL PILES AROUND THE CONSTRUCTION SITE ARE USUALLY MORE EFFICIENT AND EASIER TO CONTAIN THAN ONE LARGE PILE.) • IF SOIL IS STOCKPILED FOR MORE THAN 6 MO., IT SHOULD BE TEMPORARILY SEEDED OR COVERED WITH A TARP OR SURROUNDED BY A SEDIMENT BARRIER.
TEMPORARY DIVERSIONS	AFTER ROUGH GRADING	• INSPECT WEEKLY AND FOLLOWING EACH STORM EVENT. • REMOVE SEDIMENT FROM THE CHANNEL AND REINFORCE THE RIDGE AS NEEDED. • CHECK THE OUTLETS AND MAKE NECESSARY REPAIRS IMMEDIATELY. • REMOVE SEDIMENT FROM TRAPS WHEN THEY ARE 50% FULL. • WHEN THE WORK AREA HAS BEEN STABILIZED, REMOVE THE RIDGE, FILL THE CHANNEL TO BLEND WITH THE NATURAL GROUND, REMOVE TEMPORARY SLOPE DRAINS, AND STABILIZE ALL DISTURBED AREAS.
ROCK DAM	AFTER ROUGH GRADING	• INSPECT THE ROCK DAM AND BASIN FOLLOWING EACH STORM EVENT. • REMOVE SEDIMENT WHEN IT ACCUMULATES TO HALF THE DESIGN VOLUME (MARKED BY STAKE) • CHECK THE DAM AND ABUTMENTS FOR EROSION, PIPING, AND ROCK DISPLACEMENT, AND REPAIR IMMEDIATELY IF THE BASIN DOES NOT DRAIN BETWEEN STORMS, REPLACE THE STONE ON THE UPSTREAM FACE OF DAM IF THE BASIN DRAINS TO RAPIDLY FOLLOWING A STORM.(LESS THAN 6 HRS.), AND INDOT CA NO. 5 GRAVEL ON THE UPSTREAM FACE OF THE DAM. • ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, a. REMOVE WATER AND SEDIMENT FROM THE BASIN, b. REMOVE THE DAM, DISPOSING OF THE ROCK IN DESIGNATED DISPOSAL AREAS, c. SMOOTH THE SITE TO BLEND THE SURROUNDING AREA, d. STABILIZE
TEMPORARY SEEDING	AFTER ROUGH GRADING	• INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED; RE-SEED IF NECESSARY. • CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR; RESEED AND MULCH IF NECESSARY. • TOPDRESS FALL SEEDED WHEAT OR RYE SEEDINGS WITH 50 LBS./ACRE OF NITROGEN IN FEBRUARY OR MARCH IF NITROGEN DEFICIENCY IS APPARENT; (EXHIBIT 3.11-B SHOWS ONLY WHEAT/RYE FALL SEEDED.)
PERMANENT SEEDING	AFTER FINISH GRADING	• INSPECT PERIODICALLY, ESPECIALLY STORM EVENTS, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED. (CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE: VIGOROUS DARK GREEN OR BLUISH-GREEN SEEDLINGS; UNIFORM DENSITY WITH NURSE PLANTS, LEGUMES, AND GRASSES WELL INTERMIXED; GREEN LEAVES AND THE PERENNIALS REMAINING GREEN THROUGHOUT THE SUMMER, AT LEAST AT THE PLANT BASE.) • PLAN TO ADD FERTILIZER THE FOLLOWING SEASON ACCORDING TO SOIL TEST RECOMMENDATIONS. • REPAIR DAMAGED, BARE, OR SPARSE OR PATCHY, BY FILLING ANY GULLIES, RE-FERTILIZING, OVER - OR RE- SEEDING AND MULCHING AFTER RE-PREPARING THE SEEDBED. • IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE ACIDITY OR NUTRIENT DEFICIENCY PROBLEMS. (CONTACT YOUR SWCD OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE.) • IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.
EROSION CONTROL MATTING	AFTER FINISH GRADING	• DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET. • IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET. • AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.
INLET PROTECTION	AFTER EACH INLET IS PLACED	• INSPECT FREQUENTLY FOR DAMAGE BY VEHICULAR TRAFFIC, AND REPAIR IF NEEDED. • INSPECT AFTER EACH STORM EVENT. • REMOVE SEDIMENT (BUT NOT BY FLUSHING) WHEN IT REACHES HALF THE HEIGHT OF THE BARRIER. • DEPOSIT REMOVED SEDIMENT WHERE IT WILL NOT ENTER STORM DRAINS.
REMOVAL OF INLET PROTECTION	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	• N/A
REMOVAL OF SILT FENCE	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	• N/A

CONSTRUCTION SEQUENCE FOR BUILDING SITE EROSION CONTROL PRACTICES



EROSION CONTROL PLAN LEGEND

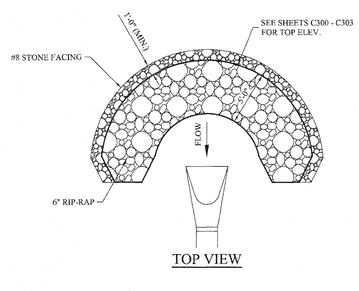
- PROPERTY LINE/DRAINAGE SWALE
- DRAINAGE FLOW
- TREE CONSERVATION
- SILT FENCE
- CW — CONCRETE WASHOUT
- PS — PERMANENT SEEDING

AREA TO BE TOP-SOILED, SEEDED, AND MULCHED BY OWNER AT COMPLETION OF CONSTRUCTION. PALIMAR IS TO BE USED OF GRASS GROWTH IS NOT POSSIBLE.

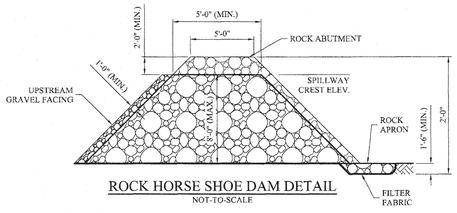
NOTES:
1. EROSION/ SEDIMENT CONTROL MEASURES MUST BE FUNCTIONAL AND BE MAINTAINED THROUGHOUT CONSTRUCTION.
2. MAINTAIN POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.
3. CONTRACTOR TO CLEAN STREETS WHEN DIRT AND CONSTRUCTION DEBRIS IS EVIDENT.
4. PERIMETER PROTECTION SHOULD BE INSTALLED BEFORE EXCAVATION OF BASEMENT/FOUNDATION HAS BEGUN. PERIMETER PROTECTION ON LOTS SHALL REMAIN IN PLACE UNTIL THE LOT IS STABILIZED WITH AT LEAST 70% COVER. ALL TRASH AND CONSTRUCTION DEBRIS SHALL BE DISPOSED PROPERLY INTO AN ENCLOSED WASTE RECEPTACLE.

STORM WATER POLLUTION & PREVENTION NOTES:
- A. ALL STORM WATER QUALITY MEASURES, INCLUDING EROSION AND SEDIMENT CONTROL, NECESSARY TO COMPLY WITH THIS RULE MUST BE IMPLEMENTED IN ACCORDANCE WITH THE PLAN AND SUFFICIENT TO SATISFY SUBSECTION (B).
- B. PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL BUILDING LOTS REGULATED UNDER THE ORIGINAL PERMIT OF A PROJECT SITE OWNER MUST INCLUDE THE FOLLOWING REQUIREMENTS:
  - B.1. THE INDIVIDUAL LOT OPERATOR, WHETHER OWNING THE PROPERTY OR ACTING AS THE AGENT OF THE PROPERTY OWNER, SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL REQUIREMENTS ASSOCIATED WITH ACTIVITIES ON INDIVIDUAL LOTS.
  - B.2. INSTALLATION AND MAINTENANCE OF A STABLE CONSTRUCTION SITE ACCESS.
  - B.3. INSTALLATION AND MAINTENANCE OF APPROPRIATE PERIMETER EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO LAND DISTURBANCE.
  - B.4. SEDIMENT DISCHARGE AND TRACKING FROM EACH LOT MUST BE MINIMIZED THROUGHOUT THE LAND DISTURBING ACTIVITIES ON THE LOT UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
  - B.5. CLEAN-UP OF SEDIMENT MUST BE REDISTRIBUTED OR DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL APPLICABLE STATUTES AND RULES.
  - B.6. ADJACENT LOTS DISTURBED BY AND INDIVIDUAL LOT OPERATOR MUST BE REPAIRED AND STABILIZED WITH TEMPORARY OR PERMANENT SURFACE STABILIZATION.
  - B.7. FOR INDIVIDUAL RESIDENTIAL LOTS, FINAL STABILIZATION MEETING THE CRITERIA IN SECTION 7(B)(20) OR THIS RULE WILL BE ACHIEVED WHEN THE INDIVIDUAL LOT OPERATOR:
    - B.7.A. COMPLETES FINAL STABILIZATION; OR
    - B.7.B. HAS INSTALLED APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES FOR AN INDIVIDUAL LOT PRIOR TO OCCUPATION OF THE HOME BY THE HOMEOWNER AND HAS INFORMED THE HOMEOWNER OF THE REQUIREMENT FOR, AND BENEFITS OF, FINAL STABILIZATION. 7(B)(20) FINAL STABILIZATION OF A PROJECT SITE IS ACHIEVED WHEN:
      - B.7.1.A. ALL LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM (FOR EXAMPLE, EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF SEVENTY PERCENT (70%) HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED; AND
      - B.7.1.B. CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES ARE RETURNED TO ITS PRECONSTRUCTION AGRICULTURAL USE OR DISTURBED AREAS, NOT PREVIOUSLY USED FOR AGRICULTURAL PRODUCTION, SUCH AS FILTER STRIPS AND AREAS THAT ARE NOT BEING RETURNED TO THEIR PRECONSTRUCTION AGRICULTURAL USE, MEET THE FINAL STABILIZATION REQUIREMENTS IN CLAUSE (A).
  - B.8. THE PERMIT HOLDER/OWNER NEEDS TO CONDUCT AN ONSITE E.C. EVALUATION AFTER EVERY MEASURABLE RAIN FALL EVENT OF 5" OR GREATER. THESE MUST BE FILED FOR A MINIMUM OF THREE YEARS.

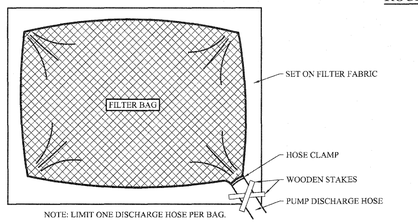
INDIVIDUAL LOT STORM WATER POLLUTION & PREVENTION DETAIL
NOT-TO-SCALE



TOP VIEW

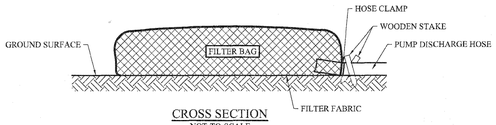


ROCK HORSE SHOE DAM DETAIL
NOT-TO-SCALE



NOTE: LIMIT ONE DISCHARGE HOSE PER BAG.

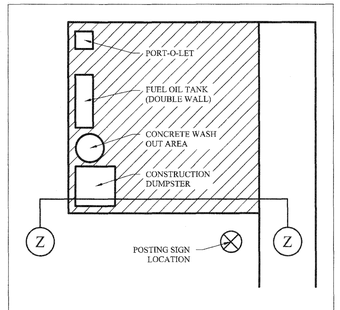
PLAN VIEW
NOT-TO-SCALE

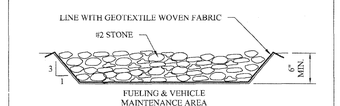


CROSS SECTION
NOT-TO-SCALE

DEWATERING FILTER BAG DETAIL
NOT-TO-SCALE

NOTES:
1. TO BE USED WHEN PUMPING DIRTY WATER.
2. ANY DISCHARGE OF CONTAMINATED WATER DUE TO DEWATERING SHALL OUTLET THROUGH EXISTING VEGETATION OR FILTER BAGS THAT WILL NOT ADVERSELY IMPACT STORM WATER QUALITY.

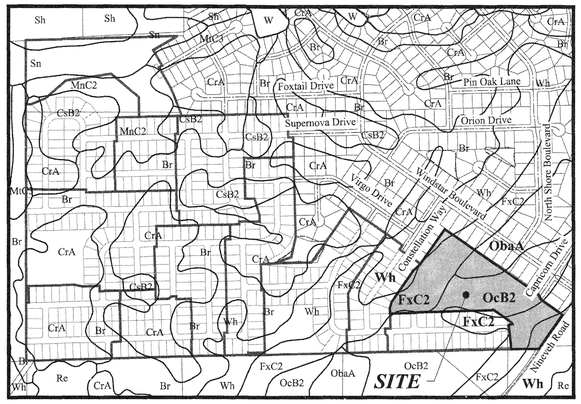




FUELING & VEHICLE MAINTENANCE AREA

SECTION "Z - Z"

CONSTRUCTION ENTRANCE DETAIL
NOT-TO-SCALE



SOILS MAP
SCALE: 1" = 600'

SOILS LEGEND

Map Unit: FxC2 - Fox complex, 6 to 12 percent slopes, eroded

The Fox component makes up 50 percent of the map unit. Slopes are 6 to 12 percent. This component is on outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 40 percent.

Map Unit: ObaA - Ockley loam, 0 to 2 percent slopes

The Ockley component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on stream terraces, outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 40 to 72 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria.

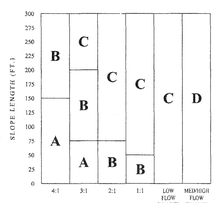
Map Unit: OcB2- Ockley loam, 2 to 6 percent slopes, eroded

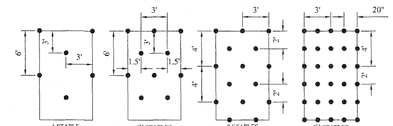
The Ockley component makes up 100 percent of the map unit. Slopes are 2 to 6 percent. This component is on stream terraces, outwash plains. The parent material consists of loamy outwash over sandy and gravelly outwash. Depth to a root restrictive layer, strongly contrasting textural stratification, is 20 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit: Wh -Whitaker silt loam, 0 to 2 percent slopes

The Whitaker component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on outwash plains on outwash plains. The parent material consists of silty outwash over loamy outwash. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 32 percent.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS WILL VARY DEPENDING UPON SLOPE LENGTH, SLOPE GRADE, SOIL TYPE, AND AVERAGE ANNUAL RAINFALL.





EROSION CONTROL BLANKET STAPLE PATTERN GUIDE
NOT-TO-SCALE

File Name: S:\83540MMA-S1\DWG\C306 - Erosion Details & Specifications.dwg - C307
Modified By: May 9, 2019 11:49:27 AM / prichards
Plotted By: May 9, 2019 11:52:47 AM / Paul Richards

BY	REVISIONS	MARK	DATE

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REGISTERED
No. 19358
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PROFESSIONAL ENGINEER

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR BOUNDARY SURVEY. REFER TO BOUNDARY SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 05/09/19

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STORM WATER POLLUTION PREV. PLAN SPECS.

THE BLUFFS AT YOUNGS CREEK SECTION 1

JOHNSON COUNTY, INDIANA

FRANKLIN, FRANKLIN TOWNSHIP

DRAWN BY:	CHECKED BY:
PDR	BKR

SHEET NO.
C307

S.& A JOB NO.
83540MMA-S1

SITE ACCESS & PREPARATION

Temporary Construction Ingress/Egress Pad (Large Sites—Two Acres or Larger)

*A **temporary construction ingress/egress pad** is a sediment control measure consisting of a stabilized aggregate pad with geotextile underlayment that is used at any point where construction traffic will be traversing between a large construction site and adjoining public right-of-way, street, alley, sidewalk, or parking areas.*

Purpose

To provide ingress/egress to a construction site and minimize tracking of mud and sediment onto public roadways.

Specifications

Location

- Avoid locating on steep slopes or at curves in public roads.

Dimensions

- Width – 20 feet minimum or full width of entrance/exit roadway, whichever is greater.
- Length – 150 feet minimum (length can be shorter for small sites).
- Thickness – eight inches minimum.

Washing Facility (optional)

- Level area with three inch, or larger, washed aggregate or install a commercial wash rack.
- Divert waste water to a sediment trap or basin.

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Materials

- One to two and one-half inch diameter washed aggregate [Indiana Department of Transportation Course Aggregate No. 2 (see Appendix D)].
- One-half to one and one-half inch diameter washed aggregate [INDOT CA No. 53 (see Appendix D)].
- Geotextile fabric underlayment (see Appendix C) (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a seasonal high water table limitation).

Installation

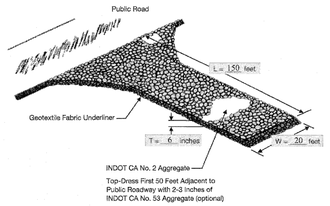
1. Remove all vegetation and other objectionable material from the foundation area.
2. Grade foundation and crown for positive drainage. If the slope of the construction entrance is toward a public road and exceeds two percent, construct an eight inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area about 15 feet from the entrance to divert runoff away from the road (see Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet).
3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
6. Top-dress the first 50 feet adjacent to the public roadway with two to three inches of washed aggregate (INDOT CA No. 53) [optional, used primarily where the purpose of the pad is to keep soil from adhering to vehicle tires].
7. Where possible, divert all storm water runoff and drainage from the ingress/egress pad to a sediment trap or basin.

Maintenance

- Inspect daily.
- Reshape pad as needed for drainage and runoff control.
- Top dress with clean aggregate as needed.
- Immediately remove mud and sediment tracked or washed onto public roads.
- Flushing should only be used if the water can be conveyed into a sediment trap or basin.

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Temporary Construction Ingress/Egress Pad
Plan View Worksheet
(large sites—two acres or larger)



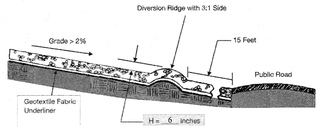
L = Ingress/Egress Pad Length
W = Ingress/Egress Pad Width
T = Aggregate Thickness

(Note: For minimum dimensions, see the "Specifications" section of this measure.)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Temporary Construction Ingress/Egress Pad
Cross-Section View Worksheet
(large sites two acres or larger)



H = Height of Diversion Ridge
(Note: 8 inches minimum)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

SURFACE STABILIZATION

Erosion Control Blanket

*An **erosion control blanket** is a biodegradable, organic or synthetic mulch incorporated with a biodegradable, photodegradable, or permanent polypropylene, natural fiber, or similar netting material. It is an alternative to mulch and normally used on slopes and in concentrated flow channels.*

Purpose

- To prevent erosion by protecting the soil from rainfall impact, overland water flow, concentrated runoff, or wind.
- To provide temporary surface stabilization.
- To anchor mulch in critical areas, including slopes and concentrated flow conveying systems.
- To reduce soil crusting.
- To conserve soil moisture and increase seed germination and seedling growth.

Specifications

Effective Life

The functional life of an erosion control blanket is dependent on the materials used.

Anchoring

Staples, pins or stakes used to prevent movement or displacement of blanket. (Follow manufacturer's recommendations for specific applications.)

Materials

- Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material. (The netting may be biodegradable, photodegradable or permanent.)

EROSION CONTROL BLANKET

Note: **Some erosion control blanket nettings may pose a threat to certain species of wildlife if they become entangled in the netting matrix.**

- Six to 12-inch staples, pins, or stakes.

Installation

1. Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Prepare the seedbed, add soil amendments, and permanently seed (see **Permanent Seeding** on page 35) the area immediately following seedbed preparation.
3. Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations.
4. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
5. Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement of the blanket.
- If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.

SURFACE STABILIZATION

Riprap Slope Protection

***Riprap slope protection** is an erosion control measure consisting of geotextile fabric and stone riprap that is placed on an unvegetated slope to protect the soil from erosive forces.*

Purpose

To protect slopes or similar areas subject to erosion by water.

Specifications

Slope

A ratio of 2:1 or flatter (designed by a qualified individual/professional engineer; slopes exceeding 2:1 may require additional design considerations).

Minimum Thickness

Two times the designed d_{50} (see Appendix A – Glossary) stone diameter plus the depth of the bedding material.

Materials

- Riprap
  - Hard, angular, and weather resistant.
  - Specific gravity of at least 2.5.
  - Size and gradation that will withstand velocities of storm water discharge flow design.
  - Well-graded mixture of stone with 50 percent of the stone pieces, by weight, larger than the designed d_{50} size.
  - Largest pieces should not exceed two times the designed d_{50} and no more than 15 percent of the pieces (by weight) should be less than three inches.

RIPRAP SLOPE PROTECTION

- Bedding Material – Geotextile fabric, sand, or crushed aggregate [Indiana Department of Transportation CA No. 9, 11, or 12 (see Appendix D)].

Installation

Subgrade Preparation

1. Remove brush, trees, stumps, and other debris and dispose of in designated areas.
2. Excavate foundation subgrade below design elevation to allow for thickness of the bedding material and riprap.
3. Compact any fill material to the density of the surrounding undisturbed soil.
4. Cut a keyway in stable material at the slope base to reinforce the toe; keyway depth should be one and one-half times the design thickness of the stone and should extend a horizontal distance equal to the design thickness (see Riprap Slope Protection Worksheet).
5. Smooth the graded foundation.

Placement of Bedding Material

1. If using geotextile fabric, place on the smoothed foundation, overlap the edges at least 12 inches and secure with anchor pins spaced every three feet along the overlap. (For large riprap, consider a four inch layer of sand to protect the fabric.)
2. If using sand or aggregate bedding material, spread the well-graded bedding material in a uniform layer to the required thickness (six inches minimum). If two or more layers are specified, place the layer of the smaller gradation first and avoid mixing the layers.

   Note: **Omission of the bedding material or damage to it may result in erosion and/or piping beneath the riprap or movement of the underlying soil through the voids in the riprap.**

Riprap Placement

1. Immediately after installing the bedding material, add riprap to the lines and elevations shown in the construction plans. Place the riprap in one operation, taking care not to damage the bedding material. (Do not dump through chutes or use any method that causes segregation of stone sizes or that will dislodge or damage the underlying bedding material.)
2. If geotextile fabric tears when placing riprap, repair immediately by laying and stapling a piece of fabric over the damaged area, overlapping the undamaged areas by at least 12 inches.

RIPRAP SLOPE PROTECTION

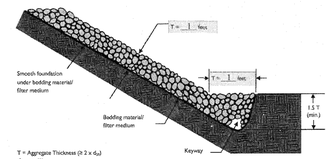
3. Place smaller stone in voids to form a dense, uniform, well-graded riprap mass. (Selective loading at the quarry and some hand placement may be needed to ensure an even distribution of stone material.)
4. Blend the riprap surface smoothly with the surrounding area to eliminate protrusions or overfalls.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for displacement of riprap material, slumping, and erosion along the edges, especially on the down-slope side. (Properly designed and installed riprap usually requires very little maintenance.)

RIPRAP SLOPE PROTECTION

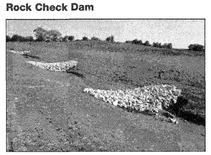
Riprap Slope Protection Worksheet



Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

RUNOFF CONTROL

Rock Check Dam



*A **rock check dam** is a series of runoff control structures, consisting of geotextile fabric and aggregate, placed across drainage channels to slow storm water runoff. This measure may also provide limited effectiveness as a sediment control measure.*

Purpose

- To reduce erosion in a drainage channel by slowing velocity of flow. (Check dams are commonly used (a) in channels that are eroding, but where permanent stabilization is impractical due to their short period of usefulness, and (b) in eroding channels where construction delays or weather conditions prevent timely installation of erosion-resistant linings.)
- To reduce flow velocities in a drainage channel.

  Note: **Do not use check dams in perennial streams.**

Specifications

Contributing Drainage Area

Two acres maximum.

Riprap Check Dam

- Dam height.
  - Two feet maximum.
  - center of the dam at least nine inches lower than the points of contact between the uppermost points of the riprap dam and channel banks.
- Side slope – ratio of 2:1 or flatter.
- Spacing – toe of the upstream dam at same elevation as overflow weir of the downstream dam.

ROCK CHECK DAM

Overflow Areas

Stabilized to reduce scour/erosion along sides and below the dam.

Filter Medium

- Placed on up-slope side of dam.
- Height – to base of overflow weir notch.

Materials

- Geotextile fabric (8 ounce or heavier; nonwoven).
- Indiana Department of Transportation Revetment riprap (see Appendix D) for dam.
- INDOT CA No. 5 aggregate (see Appendix D) for use as filter medium (Aggregate must be well-graded).

  Note: **INDOT CA No. 8 aggregate is acceptable if No. 5 aggregate is not available. The use of No. 8 aggregate may result in more frequent overtopping of the structure and will increase the frequency of structure maintenance.**

Installation

1. Lay out the location of the check dam.
2. Excavate a cutoff trench into the channel bottom and ditch banks, extending it a minimum of 18 inches beyond the top of the ditch bank.
3. Install and anchor filter fabric in the channel and cutoff trench.
4. Place riprap in the cutoff trench and channel to the lines and dimensions shown in the construction plans. The center of each dam must be at least nine inches lower than the uppermost points of contact between the riprap dam and channel banks (see Rock Check Dam Worksheet on page 101).
5. Extend the riprap at least 18 inches beyond the top of the channel banks to keep overflow water from eroding areas adjacent to the channel banks before it re-enters the channel.
6. Place filter medium (INDOT CA No. 5 aggregate) on the up-slope side of the dam. Place filter medium over the entire face of the dam up to the base of the overflow weir notch.
7. Stabilize the channel above the uppermost dam.
8. Install an erosion-resistant lining in the channel below the lowermost dam. The lining should extend a minimum distance of six feet below the dam.

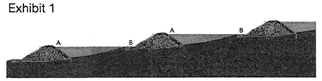
ROCK CHECK DAM

9. Additional sediment storage can be provided by excavating a small sediment trap on the upstream side of the check dam.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- If significant erosion occurs between dams, install an erosion-resistant liner in that portion of the channel.
- Remove accumulated sediment when it reaches one-half the height of the dam to maintain channel capacity, allow drainage through the dam, and prevent large flow from displacing sediment.
- Add riprap and aggregate as needed to maintain design height and cross section of the dams.
- When dams are no longer needed, remove the riprap and aggregate and stabilize the channel, using an erosion-resistant lining if necessary. (Riprap and aggregate from the dam may be removed or utilized to stabilize the channel.)

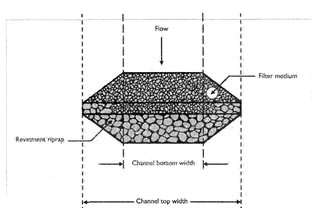
Exhibit 1



A = Crest of Dam
B = Toe of Dam

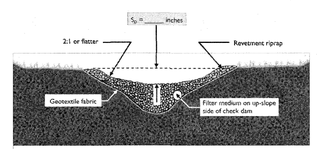
ROCK CHECK DAM

Exhibit 2



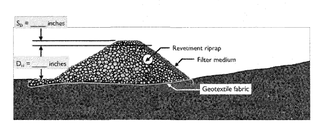
ROCK CHECK DAM

Rock Check Dam Worksheet



S_D = Spillway Depth

NOTE: For minimum dimensions see the "Specifications" section of this measure.



D_H = Dam Height
S_D = Spillway Depth

NOTE: For minimum dimensions see the "Specifications" section of this measure.

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

BY	REVISIONS	MARK	DATE

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REGISTERED
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