



Kenton C. Ward, CFM Surveyor of Hamilton County Phone (317) 776-8495 Fax (317) 776-9628 Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

August 4, 2017

To: Hamilton County Drainage Board

Re: Williams Creek Drain, Jackson's Grant Section 5 Arm

Attached is a petition filed by Jackson's Grant Real Estate Company, LLC., along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for Jackson's Grant Section 5 Arm, Williams Creek Drain to be located in Clay Township. I have reviewed the submittals and petition and have found each to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway, and be of public utility and that the costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited. The drain will consist of the following:

12" RCP	667 ft.	15" SSD	94 ft.
15" RCP	310 ft.	24" SSD	166 ft.
18" RCP	666 II.	6" SSD	6,405ft.
24" RCP	351 ft.	Open Ditch	356 ft.

The total length of the drain will be 9,015 feet.

The open ditch listed above in the natural swale from the 845 confour line in Common Area #28 to the south boundary line on Jackson Grant Section 5, which serves as the outlet conveyance for this section. Also included are the straight line distances between Structures 659 and 663, 660 and 661 and 643 and 662 through BMP 4A, 4B and 4D.

The dry detention basins (BMPs) located as listed below are not to be considered part of the regulated drain. Basin maintenance assumed by the Drainage Board shall only include the inlets and outlet as part of the regulated drain. The maintenance of the dry detention basins (BMPs) such as sediment removal and erosion control along the banks, mowing, aquatic vegetation maintenance and control, and anything required per the Storm Water Quality Maintenance and Operations Manual will be the responsibility of the Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the pand was designed will be retained. Thereby, allowing no fill or easement encroactments.

Basin	Location
BMP 4A	Common Area #28
BMP 4B	Common Area #28
BMP 4C	Common Area #28
BMP 4D	Common Area #28

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs, those main lines in front/rear yards, and those in common areas. Only the main SSD lines as described below, which are located within the easement or right of way are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain. The portions of the SSD which will be regulated and maintained are as follows:

Curbline SSD in Streets: Hobby Horse Drive	Front/Rear Yard SSDs: Rear yard lots 240 to 243 from Str. 650 running north
Otto Lane Almond Creek Drive	to riser. Rear yard lots 244 to 247 from Str. 650 running south
King Richard Drive Riffle Lane	to riser.  Rear yard lots 249 to 252 from Str. 633 running west to riser.
	Rear yard lots 253 & 254 from Str. 633 running east to riser.
	Rear yard lots 255 to 259 from Str. 641 running north to riser.
	Rear yard lots 276 to 279 from Str. 651 running east to riser.
	Rear yard lots 272 to 275 from Str. 647A to Str 651

Common Area #28 from Str. 664 to Str. 665

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I also believe that no damages will result to landowners by the construction of this drain. I recommend a maintenance assessment of \$65.00 per lot, \$10.00 per acre for common areas, with \$65.00 minimum, and \$10.00 per acre for roadways. With this assessment the total annual assessment for this drain will be \$2,891.60.

The petitioner has submitted surety for the proposed drain at this time. The sureties which are in the form of an Irrevocable Letter of Credit are as follows:

Agent: Standard Financial Corporation

Date: January 31, 2017 Number: 1256JG5 For: Storm Sewers Amount: \$442,165.80

I believe this proposed drain meets the requirements for Urban Drain Classification as set out in IC 36-9-27-67 to 69. Therefore, this drain shall be designated as an Urban Drain.

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement request. The request will be for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for Jackson's Grant, Section 5 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for October 23, 2017.

Kenton C. Ward, CFM Hamilton County Surveyor

KCW/pll

STATE OF INDIANA )

COUNTY OF HAMILTON )

TO: HAMILTON COUNTY DRAINAGE BOARD

% Hamilton County Surveyor

One Hamilton County Square, Suite 188

Noblesville, IN. 46060-2230

(Revised 06/08/04	)		-	D
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OFFICE OF HAMILTON COUNTY SURVEYOR

In the matter of \_\_\_\_\_\_ Jackson's Grant on Williams Creek \_\_\_\_\_ Subdivision, Section 5 \_\_\_\_\_\_ Drain Petition.

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in <u>Jackson's Grant on Williams Creek, Sec. 5</u>, a subdivision in Hamilton County, Indiana. The general route of such drainage shall be in existing easements and along public roads as shown in the plans on file in the Surveyor's Office.

Petitioner believes that the cost, damages and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land likely to be benefited thereby. Petitioner believes the proposed improvements will:

- (a) improve public health
- (b) benefit a public street
- (c) be of public utility

Petitioner agrees to pay the cost of construction of the drainage system and requests periodic maintenance assessments by the Board thereafter.

The Petitioner also agrees to the following:

- 1. To provide the Drainage Board a Performance Bond or Non-Revocable Letter of Credit for the portion of the drainage system which will be made a regulated drain. The bond will be in the amount of 120% of the Engineer's estimate. The bond will be in effect until construction of 100% of the system is completed and so certified by the Engineer.
- The Petitioner shall retain an Engineer throughout the construction phase.
   At completion of the project the Petitioner's Engineer shall certify that the drainage system which is to be maintained as a regulated drain has been constructed as per construction plans.
- 3. The Petitioner agrees to request in writing to the County Surveyor any changes from the approved plan and must receive written authorization from the County Surveyor prior to implementation of the change. All changes shall be documented and given to the Surveyor to be placed in the Drain file.
- 4. The Petitioner shall instruct his Engineer to provide a reproducible print on a 24" x 36" Mylar of the final design of the Drainage System. This shall be submitted to the County Surveyor prior to the release of the Performance Bond.
- 5. The Petitioner shall comply with the Erosion Control Plan as specified on the construction plans. Failure to comply with the Erosion Control Plan shall be determined by the Board as being an obstruction to the drainage system. The County Surveyor shall immediately install or repair the needed measures at Petitioners cost as per IC 36-9-27-46.

Adobe PDF Fillable Form

The Petitioner further requests that the Drain be classified as an Urban Drain as per IC 36-9-27-69(d).

RECORDED OWNER(S) OF LAND INVOLV	YED
Augus B. Wagner	. 440
Signed O	Signed
DOUBLAS B. WAGNER, ST.V.P. Printed Name JG DEV. Co. LU	Printed Name
<u>Остовек</u> 3, 2016 Date	Date
Signed	Signed
Printed Name	Printed Name
Date	Date

Adobe PDF Fillable Form

#### FINDINGS AND ORDER

#### CONCERNING THE MAINTENANCE OF THE

Williams Creek Drain, Jackson's Grant Section 5 Arm

On this  $23^{rd}$  day of October, 2017, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Williams Creek Drain, Jackson's Grant Section 5 Arm.

Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessment will be less than the benefits to the landowners and issues this order declaring that this Maintenance Fund be established.

HAMILTON COUNTY DRAINAGE BOARD

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President

Member

Member

Executive Secretary



December 12, 2016

Hamilton County Surveyor One Hamilton County Square, Suite 188 Noblesville, Indiana 46038

Attention: Greg Hoyes

DEC 14 2016

OFFICE OF HAMILTON COUNTY SURVEYOR

Re: Jackson's Grant on Williams Creek, Section 5

Dear Mr. Hoyes:

On behalf of the developer Jackson's Grant Real Estate Company, LLC by JG Development Company, LLC its manager, please accept this Engineer's Estimate for Jackson's Grant on Williams Creek, Section 5. The estimate is as follows:

### **Storm Sewer**

	QTY	UNIT	UNIT \$	TOTAL\$
Manholes Beehives Outlet Control Structures (incl. stone at base) Double Curb Inlet Curb Inlet Orifice Plates 12" RCP 15" RCP 21" RCP 24" RCP 24" RCP BMP 4C BMP 4D BMP 5 BMP Cleanout 27" BMP Cleanout 18"	5 6 5 4 12 2 944 438 173 414 351 285 91 437 4	LF LF EA EA	\$2,475.00 \$2,275.00 \$2,760.00 \$3,665.00 \$2,400.00 \$675.00 \$23.00 \$27.30 \$35.50 \$44.00 \$54.50 \$71.00 \$45.00 \$1,287.00 \$800.00 \$325.00	\$12,375.00 \$13,650.00 \$13,800.00 \$14,660.00 \$28,800.00 \$1,350.00 \$21,712.00 \$11,957.40 \$6,141.50 \$18,216.00 \$19,129.50 \$20,235.00 \$4,095.00 \$59,869.00 \$5,148.00 \$1,600.00 \$4,875.00
BMP 5 18" Tee				

# LAND DEVELOPMENT SUPPORT SOLUTIONS

Hamilton County Surveyor December 12, 2016 Page 2 of 2

BMP 5 6" Service  12" End Section w/ Debris Guard  15" End Section w/ Debris Guard  24" End Section w/ Debris Guard  Cap and Seal  Lot Services Each  Swale SSD  Street SSD  Risers  Bedding #8  Granular Fill #53  Rip-Rap	15 5 1 1 1 19 870 5572 5 540 660 85	EA EA EA EA EA LF LF EA TONS TONS	\$150.00 \$1,450.00 \$1,600.00 \$2,050.00 \$350.00 \$125.00 \$10.55 \$10.55 \$307.00 \$20.80 \$15.80 \$45.00	\$2,250.00 \$7,250.00 \$1,600.00 \$2,050.00 \$350.00 \$2,375.00 \$9,178.50 \$58,784.60 \$1,535.00 \$11,232.00 \$10,428.00 \$3,825.00
		Storm Se	ewer Subtotal	\$368,471.50

### Monumentation

	QTY		UNIT	UNIT\$	TOTAL\$
Lot Corners Centerline Monuments		48 14	EA EA	\$100.00 \$150.00	\$4,800.00 \$2,100.00
		M	onument	ation Subtotal	\$6,900.00
TOTAL					\$375,371.50

If you have any questions or comments regarding this estimate, please call Brett A. Huff at (317) 570-4841.

Witness my signature this 12<sup>th</sup> day of December, 2016.

David J. Stoeppelwerth Professional Engineer

No. 19358

Doug Wagner Cc:

BAH/meb





FEB 0 2 2017

January 31, 2017

OFFICE OF HAMILTON COUNTY SURVEYOR



#### Irrevocable Letter of Credit No.: 1256JG5

TO: Hamilton County Commissioners

1 Hamilton County Square, Suite 157

Noblesville, IN 46060

To Whom It May Concern:

We hereby authorize you to value on us for the account of:

Developer Name:

Jackson's Grant Real Estate Company, LLC

Developer Address:

3150 Republic Blvd. N., #3

Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of <u>Four Hundred Forty-Two Thousand One Hundred Sixty-Five and 80/100 Dollars (\$442,165.80)</u> by your draft(s) at sight.

The purpose of this Letter of Credit is for the performance of the installation of storm sewers in Jackson's Grant, Section 5.

The condition for payment of any drafts drawn against the Letter of Credit requires that the draft be accompanied by beneficiary's signed statement on Hamilton County Commissioners letterhead stating that Jackson's Grant Real Estate Company, LLC has not performed or complied with the terms of the construction plan requirements of said project. The statement must also outline the specific deficiencies in construction.

All drafts must be marked, "Drawn under Standard Financial Corporation Letter of Credit No. 1256JG5."

This credit is subject, so far as applicable, to "The Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Publication No. 600.

This Letter of Credit is effective as of January 31, 2017 and shall expire on January 31, 2018, but such expiration date shall be automatically extended for a period of one year on January 31, 2018, and on each successive expiration date, unless a release is received from the Hamilton County Commissioners or we notify both the Hamilton County Commissioners and Jackson's Grant Real Estate Company, LLC by certified mail, at least ninety (90) days before the current expiration date, that we have decided not to extend this Letter of Credit beyond the





OFFICE OF HAMILTON COUNTY SURVEYOR

current expiration date. In the event of such notification by us, the credit established by this Letter shall be available to the Hamilton County Commissioners upon its sight draft or demand for payment for ninety (90) days after receipt of such notice by the Hamilton County Commissioners as shown on the signed return receipt.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this credit shall be duly honored on due presentation to the main office of Standard Financial Corporation, 13578 E. 131<sup>st</sup> Street, Suite 200, Fishers, IN 46037.

Sincerely,	
STANDARD FINANCIAL CORPORATION	
Authorized Signature  Eric Roof, Treasurer	
Name and Title	

This Letter of Credit is not valid unless the seal of Standard Financial Corporation is affixed hereto.





FEB 0 2 2017

January 31, 2017

OSFICE OF HAMILTON COUNTY SURVEYOR

#### Irrevocable Letter of Credit No.: 1255JG5

TO: Hamilton County Commissioners 1 Hamilton County Square, Suite 157

Noblesville, IN 46060

To Whom It May Concern:

We hereby authorize you to value on us for the account of:

Developer Name:

Jackson's Grant Real Estate Company, LLC

Developer Address:

3150 Republic Blvd. N., #3

Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of <u>Eight Thousand Two Hundred Eighty and 00/100 Dollars (\$8,280.00)</u> by your draft(s) at sight.

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OFFICE OF HAMILTON COUNTY SURVEYOR

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Sincerely,	ě	~
STANDARD FINANCIAL CORPORATION		·
Authorized Signature		
Eric Roof, Treasurer Name and Title		

This Letter of Credit is not valid unless the seal of Standard Financial Corporation is affixed hereto.

# BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF

#### Williams Creek Drain, Jackson's Grant Section 5 Arm

NOTICE

То	Whom	It	Мау	Concern	and:	

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Williams Creek Drain, Jackson's Grant Section 5 Arm on October 23, 2017 at 9:05 A.M. in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana, and which construction and maintenance reports of the Surveyor and the Schedule of Assessments made by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

# BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF THE

#### Williams Creek Drain, Jackson's Grant Section 5 Arm

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on October 23, 2017 has issued an order adopting the Schedule of Assessments, filed the same and made public announcement thereof at the hearing and ordered publication. If judicial review of the findings and order of the Board is not requested pursuant to Article Eight of this code within twenty (20) days from the date of this publication, the order shall be conclusive.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY





Surveyor of Hamilton County Phone (317) 776-8495 Tax (317) 776-9628 Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

January 30, 2018

Re: Williams Creek Drain – Jackson's Grant Section 5

Attached are as-built, certificate of completion & compliance, and other information for Jackson's Grant Section 5. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated August 4, 2017. The report was approved by the Board at the hearing held October 23, 2017. (See Drainage Board Minutes Book 17, Pages 508-510) The changes are as follows: The 18" RCP was shortened from 666 feet to 213 feet. The 24" RCP was shortened to 350 feet from 351 feet. The 15" SSD was not installed. There was 529 feet of 18" SSD installed. The 24" SSD was shortened from 166 feet to 162 feet. The 6" SSD was lengthened from 6,405 feet to 6,617 feet. The open ditch was shortened from 356 feet to 236 feet. The open ditch in BMP 4D was replaced with 6" SSD. The length of the drain due to the changes described above is now **9,084 feet**.

The non-enforcement was approved by the Board at its meeting on October 23, 2017 and recorded under instrument #2017057048.

The following sureties were guaranteed by Standard Financial Corporation and released by the Board on its January 8, 2018 meeting.

Bond-LC No: 1256JG5 Amount: \$442,165.80 For: Storm Sewers & SSD Issue Date: January 31, 2017

I recommend the Board approve the drain's construction as complete and accep	table.
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Sincerely

Kenton C. Ward, CFM Hamilton County Surveyor

ofc: 317.849.5935 fax: 317.849.5942

7965 East 106th Street Fishers, IN 46038-2505 www.stoeppelwerth.com

#### CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Jackson's Grant on Williams Creek, Section 5

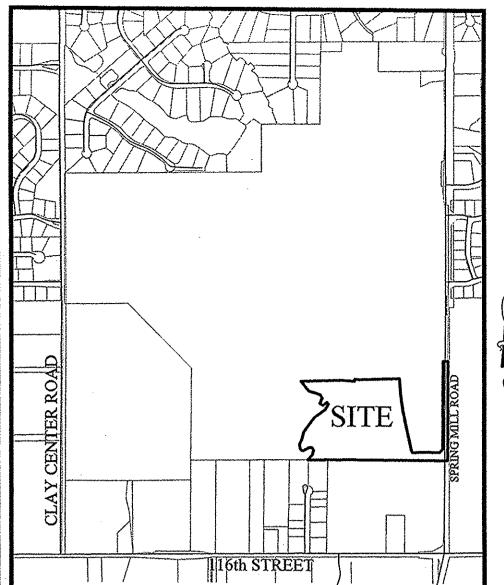
I hereby certify that:

- 1. I am a Registered Land Surveyor or Engineer in the State of Indiana.
- 2. I am familiar with the plans and specifications for the above referenced subdivision.
- 3. I have personally observed and supervised the completion of the drainage facilities for the above referenced subdivision.
- 4. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been installed and completed in conformity with all plans and specifications.

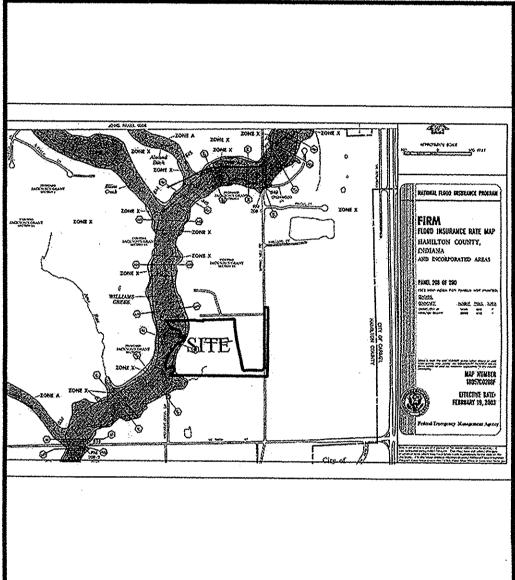
Signature:	Date: September 19, 2017
Type or Print Name:	
Business Address:	toeppelwerth & Associates, Inc.
	965 East 106th Street, Fishers, Indiana 46038
Telephone Number:	317) 849-5935
SEAL	INDIANA REGISTRATION NUMBER
gring D	OL M. 900012
Within D	TEAGO ARIA

# LAND DEVELOPMENT SUPPORT SOLUTIONS

ENGINEERING | SURVEYING



**LOCATION MAP** SCALE: 1"=1000'



FLOOD MAP N.T.S. FIRM #18057C0206F 18057C0208F

	INDEX
SHT.	DESCRIPTION
C001	COVER SHEET
C100-C101	TOPOGRAPHICAL SURVEY
C200-C203	SITE DEVELOPMENT PLAN & EMERGENCY FLOOD ROUTE
C300-C307	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-C409	STREET PLAN & PROFILES TRAFFIC PLANS/STRIPPING PLANS ENTRANCE AND INTERSECTION DETAILS PAVING & CURB POLICY
C500-C502	SANITARY SEWER PLAN & PROFILE
C600-C604	STORM SEWER PLAN & PROFILES & SUMP PLAN
C700-C702	WATER PLAN
C800-C806	CONSTRUCTION DETAILS SANITARY STORM STREET PEDESTRIAN BRIDGE CROSSING DETAILS
L1.0-L1.2	LANDSCAPE PLANS

REVISIONS	
SHT.	DESCRIPTION
ALL	REVISED PER TAC COMMENTS - 09/29/16 - PDR
C203 C804 C806	REVISED BMP5 FLOOD AREA - 11/07/16 - PDR ADDED TEMP. PAVER PROT. DETAIL - 11/07/16 - PDR ADDED PED. BRIDGE CROSSING DETAILS - 11/07/16 - PDR
C200's C500's C600's	REVISED PLANS PER GRADING CHANGES - 12/12/16 - JSM
ALL	REVISED PER COMMENTS - 1/26/17 - GEM
ALL	AS BUILTS - 09/29/17 - CCE

# JACKSON'S GRANT

**SECTION 5** 

**13578 East 131st Street** 

Developed by:

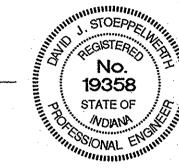
**Suite 200** 

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 PERSON: BRETT A. HUFF EMAIL: BHUFF@STOEPPELWERTH.COM

PLANS CERTIFIED BY:

PROFESSIONAL LAND SURVEYOR



**DESIGN DATA** 39 LOTS 16.205 AC.

= 2.41 LOTS/ACRE

HAMLET DRIVE 376.12 L.F. OTTO LANE 845.40 L.F. TERHUNE LANE 573.51 L.F. DICKSON LANE HOBBY HORSE DRIVE 589.82 L.F. TOTAL 2,824.51 L.F.

DESIGN SPEED LIMIT: 25 M.P.H

**OPERATING AUTHORITY** CITY OF CARMEL ONE CIVIC SOUARE CARMEL, INDIANA 46032

FLOOD STATEMENT THIS SITE DOES LIE WITHIN A FLOODWAY OR FLOOD PLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

UTILITY CONTACTS:

Clay Township Regional Waste District 10701 College Avenue Indianapolis, Indiana 46280

Carmel Water Utilities 3450 West 131st Street Westfield, IN 46074

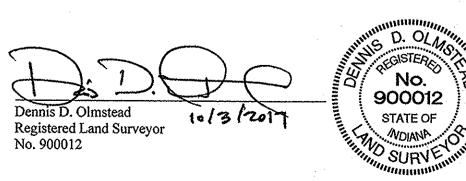
AT & T 5858 North College Avenue Indianapolis, Indiana 46220

Brighthouse Networks 3030 Roosevelt Avenue Indianapolis, Indiana 46218

Indianapolis Power & Light Company 3600 North Arlington Avenue Indianapolis, Indiana 46218

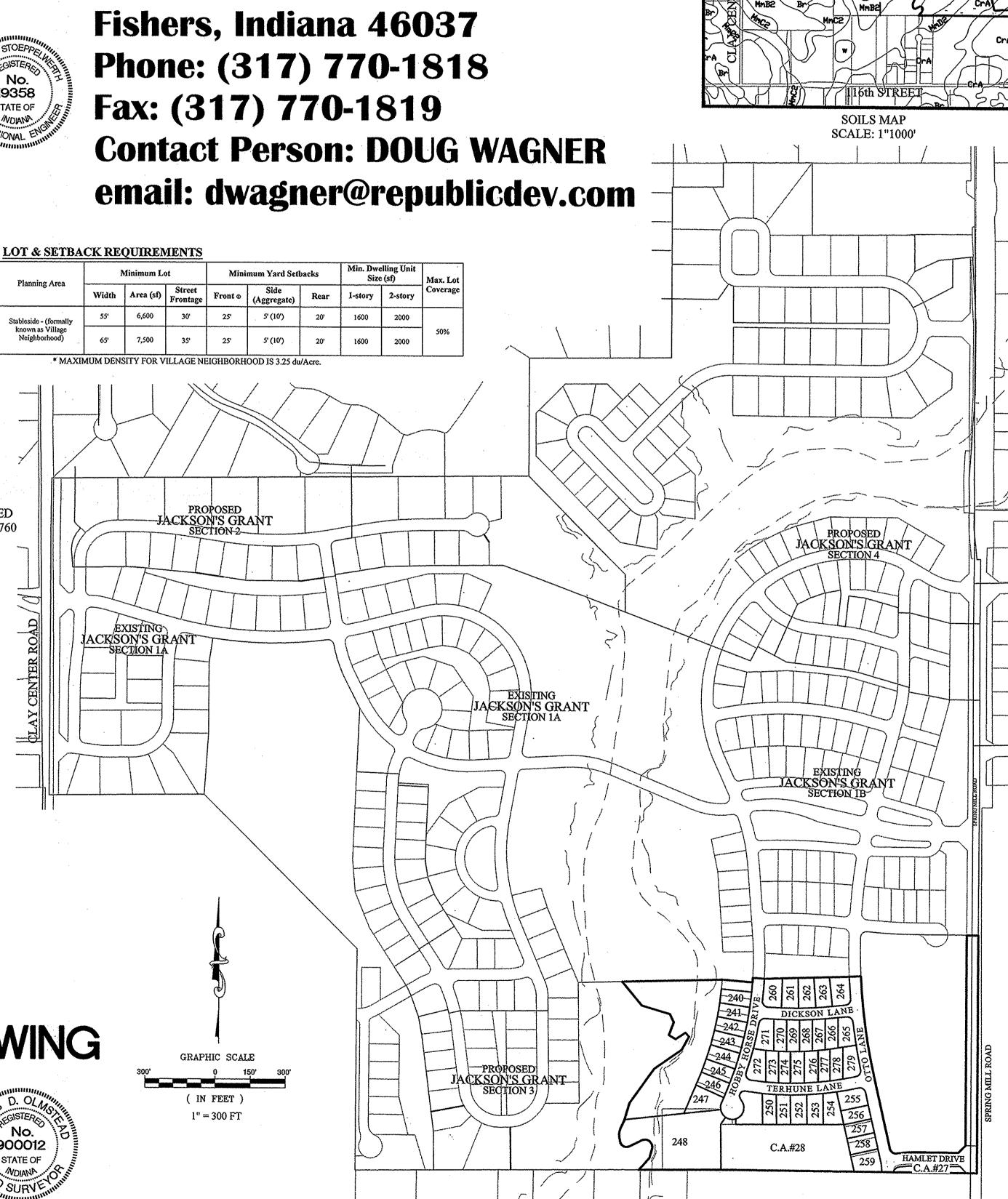
Vectren Energy 16000 Allisonville Road Noblesville, Indiana 46060

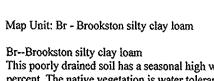
# RECORD DRAWING





Planning Area known as Village Neighborhood)





This poorly drained soil has a seasonal high watertable above the surface or within 1.0 ft. and is in depressions. Slopes are 0 to 2 percent. The native vegetation is water tolerant grasses and hardwoods. The surface layer is silty clay loam and has moderate or high organic matter content (2.0 to 5.0 percent). Permeability is moderately slow (0.2 to 0.6 in/hr) in the most restrictive layer above 60 inches. Available water capacity is high (10.0 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 6.1 to 7.3. This soil is hydric. Wetness is a management concern for crop production. This soil responds well to tile drainage.

Map Unit: CrA - Crosby silt loam, 0 to 2 percent slopes

CrA--Crosby silt loam, 0 to 2 percent slopes

This is a somewhat poorly drained soil and has a seasonal high watertable at 0.5 to 2.0 ft, and is on rises on uplands. Slopes are 0 to 2 percent. The native vegetation is hardwoods. The surface layer is silt loam and has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is very slow (< 0.06 in/hr) in the most restrictive layer above 60 inches. Available water capacity is moderate (6.2 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 5.1 to 6.0. Droughtiness and wetness are management concerns for crop production. This soil responds well to tile drainage.

MmB2 - Miami silt loam, 2 to 6 percent slopes, eroded

MmB2-Miami silt Loam, 2 to 6 percent slopes, eroded

This gently sloping, deep, well drained soil is on rises on till plains and along drainageways and streams. The mapped areas range from In a typical profile the surface layer is dark grayish brown silt loam about 7 inches thick. The subsoil is dark yellowish brown and brown, firm clay loam about 23 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam that contains free carbonates. In a few areas the lower part of the subsoil is stratified sandy loam, loamy sand and sandy clay loam. The depth to till is

Included with this soil in mapping are small areas of Crosby soils, small areas of severely eroded soils that have a surface layer of clay loam, small areas of soils have slopes of more than 6 percent, and small areas of soils that have gravel and cobbles on the surface.

MmC2 - Miami silt loam, 6 to 12 percent slopes

This moderate sloping, deep, well drained soil is on knobs and breaks along streams and drainageways on uplands. The mapped areas are irregular in shape and range from 3 to 25 acres in size. In a typical profile the surface layer is brown silt loam about 5 inches thick. The subsoil is brown or dark yellowish brown, firm clay loam about 22 inches thick. The substratum, to a depth of 60 inches, is yellowish brown calcareous loam. In many areas the solum is less than 24 inches thick. In some areas the subsoil is redder and contains more gravel.

MoC3 - Miami clay loam, 6 to 12 percent slopes, severely eroded

This moderately sloping, deep, well drained soil is on knobs and breaks along streams drainageways on uplands. The mapped areas are irregular in shape and range from 3 to 35 acres in size.

In a typical profile the surface layer is dark brown clay loam about 5 inches thick. The subsoil is dark vellowish brown, firm clay loam about 19 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam. Combined thickness of the surface layer and subsoil is less than 24 inches. Calcareous glacial till is at the surface on about 15 percent of the acreage of this map unit. In some areas cobbles and gravel are in the surface layer. In some small areas the surface layer is uneroded and is silt or loam.

MoD3 - Miami clay loam, 12 to 18 percent

This strongly sloping, deep, well drained soil is on breaks along streams and drainageways. The mapped areas are irregular in shape and range from 3 to 15 acres in size.

In a typical profile the surface layer is dark brown, clay loam about 5 inches thick. The subsoil is dark yellowish brown, firm clay loam about 19 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam. In some areas calcareous glacial till is at the surface. Cobbles and gravel are in the surface layer in most areas. In many areas the subsoil is gravelly loam or clay loam.

OcA - Ockley silt loam, 0 to 2 percent slopes

This nearly level, deep, well drained soil is mainly on broad terraces. It is also on small rises on uplands. Most of the mapped areas are elongated and are parallel to major streams. Some areas on uplands are irregular in shape. The mapped areas range from 2 to 250 acres in size.

In a typical profile the surface layer is dark yellowish brown silt loam about 10 inches thick. The subsoil is about 46 inches thick. The upper part of the subsoil is brown, friable loam; the next part is dark yellowish brown and brown, firm clay loam; the next part is dark yellowish brown, firm loam; and the lower part is dark reddish brown, firm gravelly sandy clay loam. The underlying material to a depth of 70 inches, is stratified sand and gravelly sand. The depth to loose sand and gravel is as much as 80 inches in places. The combined thickness of the surface layer and the part of the subsoil that formed in silty material is as much as 30 inches in some places. In the east-central part or the county, many limestone fragments that are as much as 12 inches in diameter are in the soil. In some areas on uplands, the underlying material is sand and silt and the subsoil has little or no gravel. Thickness of the sand and gravel ranges from a few feet along minor streams and on uplands to more than 50 feet along White River.

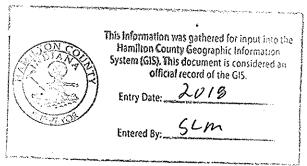
This nearly level, deep, and somewhat poorly drained soil is on floodplains. It is subject to frequent flooding. The mapped areas are mostly elongated and are parallel to streams. Many areas are in narrow valleys along small streams. The mapped areas range in size from 3 to 100 acres in size.

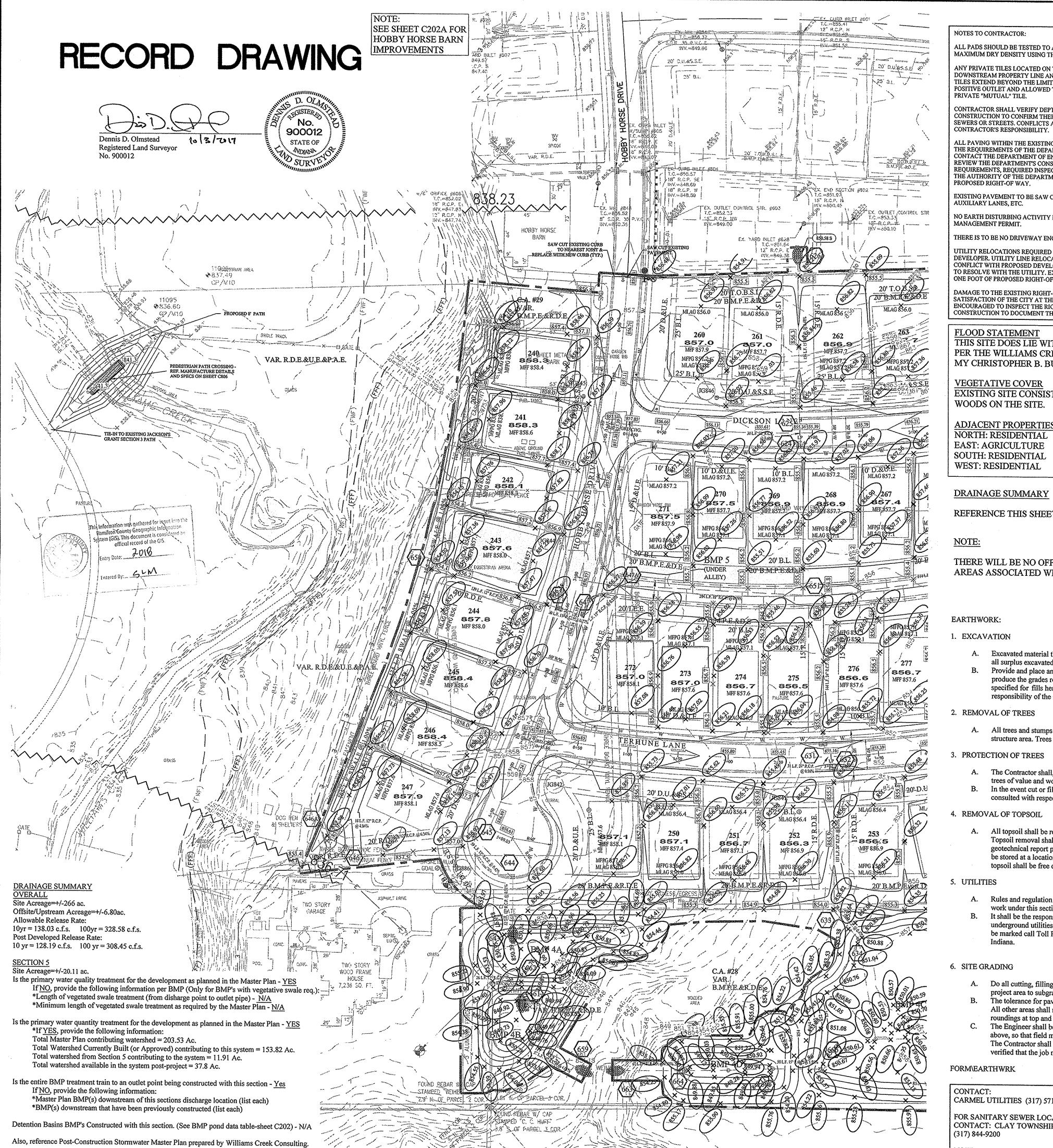
In a typical profile the surface layer is dark grayish brown silt loam about 11 inches thick. The underlying material, to a depth of 39 inches is dark grayish brown and grayish brown, mottled silt loam and loam. Below this to a depth of 56 inches, it is gray and very dark gray sandy loam and sandy clay loam. Below this, to a depth of 60 inches, it is grayish brown fine gravel and coarse sand. In small areas scattered throughout the county, this soil has darker surface layer; in some of these areas it is near Ross soils. In some places the underlying material has more gravel. This soil has carbonates throughout the profile in some areas. In some small areas in the upper reaches of small streams, this soil has firm loam till at a depth of 45 to 60 inches. In some small areas it has less clay and more sand between a depth of 10 and 40 inches. In some areas sand and gravelly sand are at a depth of only 40 inches.

> JACKSON'S GRANT ON WILLIAMS CREEK SECTION 5

I, the undersigned Registered Land Surveyor hereby certify that the included plat correctly represents a subdivision of part of the Northeast Quarter of Section 36, Township 18 North, Range 3 East, Clay Township, Hamilton County, Indiana, more particularly

Commencing at the Southeast corner of said Quarter Section; thence North 00 degrees 20 minutes 13 seconds East 977.77 feet along the East line of said Quarter Section to the POINT OF BEGINNING of this description; thence North 89 degrees 39 minutes 47 seconds West 1,070.69 feet; thence South 89 degrees 31 minutes 47 seconds West 375.79 feet; thence North 42 degrees 20 minutes 12 seconds East 67.46 feet; thence North 16 degrees 22 minutes 56 seconds East 39.35 feet to a point on a curve concave southwesterly, the radius point of said curve being North 73 degrees 37 minutes 04 seconds West 31.50 feet from said point; thence northwesterly along said curve 72.74 feet to the point of tangency of said curve, said point being North 25 degrees 56 minutes 14 seconds West 31.50 feet from the radius point of said curve; thence South 64 degrees 03 minutes 45 seconds West 59.71 feet to a point on a curve concave northeasterly, the radius point of said curve being North 25 degrees 56 minutes 15 seconds West 27.07 feet from said point; thence northwesterly along said curve 49.75 feet to the point of tangency of said curve, said point being South 79 degrees 21 minutes 05 seconds West 27.07 feet from the radius point of said curve; thence North 10 degrees 38 minutes 51 seconds West 17.03 feet to a point on a curve concave easterly, the radius point of said curve being North 79 degrees 21 minutes 09 seconds East 65.83 feet from said point; thence northerly along said curve 39.58 feet to the point of tangency of said curve, said point being North 66 degrees 11 minutes 49 seconds West 65.83 feet from the radius point of said curve; thence North 23 degrees 48 minutes 11 seconds East 42.36 feet; thence North 16 degrees 45 minutes 27 seconds East 74.39 feet; thence North 35 degrees 48 minutes 08 seconds East 179.97 feet; thence North 54 degrees 48 minutes 55 seconds East 143.72 feet; thence North 29 degrees 11 minutes 29 seconds East 64.63 feet; thence North 42 degrees 16 minutes 23 seconds West 22.86 feet; thence South 55 degrees 52 minutes 29 seconds West 50.12 feet; thence North 59 degrees 33 minutes 38 seconds West 34.08 feet; thence North 20 degrees 41 minutes 29 seconds East 58.61 feet; thence North 24 degrees 54 minutes 58 seconds West 38.68 feet; thence North 73 degrees 43 minutes 46 seconds West 125.35 feet; thence North 39 degrees 12 minutes 15 seconds West 131.97 feet; thence North 88 degrees 20 minutes 06 seconds East 428.70 feet; thence South 85 degrees 03 minutes 26 seconds East 129.05 feet; thence North 03 degrees 38 minutes 17 seconds East 19.68 feet; thence South 86 degrees 44 minutes 39 seconds East 50.00 feet; thence North 88 degrees 11 minutes 25 seconds East 363.49 feet; thence North 87 degrees 35 minutes 32 seconds East 50.00 feet; thence South 07 degrees 25 minutes 11 seconds East 432.46 feet; thence South 12 degrees 25 minutes 55 seconds East 314.73 feet to a point on a curve concave northeasterly, the radius point of said curve being North 77 degrees 34 minutes 05 seconds East 25.00 feet from said point; thence southeasterly along said curve 37.56 feet to the point of tangency of said curve, said point being South 08 degrees 30 minutes 31 seconds East 25.00 feet from the radius point of said curve, said point also being the point of curvature of a curve concave southerly, the radius point of said curve being South 08 degrees 30 minutes 31 seconds East 525.00 feet from said point; thence easterly along said curve 81.05 feet to the point of tangency of said curve, said point being North 00 degrees 20 minutes 13 seconds East 525.00 feet from the radius point of said curve; thence South 89 degrees 39 minutes 47 seconds East 183.33 feet; thence North 45 degrees 20 minutes 13 seconds East 43.39 feet; thence North 00 degrees 20 minutes 13 seconds East 899.26 feet; thence South 89 degrees 27 minutes 50 seconds East 49.49 feet; thence South 00 degrees 18 minutes 30 seconds West 1,015.45 feet to the POINT OF BEGINNING. Containing 876,228.49 square feet or 20.1154 acres, more or less, subject to all legal highways, rights-of-ways, easements, and restrictions of record.





ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A

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

ALL PAVING WITHIN THE EXISTING AND PROPOSED CITY RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF ENGINEERING. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF THE WORK AND TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING,

NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER

THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS

DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A CONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED TO WITHIN

DAMAGE TO THE EXISTING RIGHT-OF-WAY SHALL BE RESTORED/REPAIRED TO THE SATISFACTION OF THE CITY AT THE COMPLETION OF THE PROJECT. THE CONTRACTOR IS ENCOURAGED TO INSPECT THE RIGHT-OF-WAY WITH THE CITY PRIOR TO THE START OF CONSTRUCTION TO DOCUMENT THE EXISTING CONDITION OF THE RIGHT-OF-WAY.

THIS SITE DOES LIE WITHIN A FLOODWAY OR FLOOD PLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

**EXISTING SITE CONSIST MOSTLY OF GRASS AND WEEDS WITH** 

REFERENCE THIS SHEET FOR DRAINAGE SUMMARY INFORMATION.

THERE WILL BE NO OFF-SITE BORROW, STOCKPILE, OR DISPOSAL AREAS ASSOCIATED WITH THIS PROJECT.

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. 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.

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.

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.

In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.

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.

A. Rules and regulation governing the respective utility shall be observed in executing all work under this section.

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 1-800-382-5544 within Indiana or 1-800-428-5200 outside

A. 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 his equipment from the site until the Engineer has verified that the job meets the above tolerance.

CARMEL UTILITIES (317) 571-2648 FOR WATER LOCATES

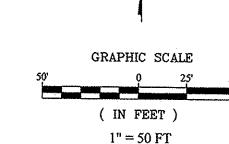
FOR SANITARY SEWER LOCATES CONTACT: CLAY TOWNSHIP REGIONAL WASTE DISTRICT

FOR STORM AND PIPE CHARTS SEE SHEET C201

EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC.

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.



No.

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LEGEND

**EXISTING CONTOUR EXISTING SANITARY SEWER EXISTING STORM SEWER** PROPOSED GRADE PROPOSED CONTOUR PROPOSED SANITARY SEWER PROPOSED STORM SEWER

> PROPOSED WATER LINE PROPOSED SWALE ADA RAMP TO BE INSTALLED

REAR PL MFPG=XXX.X XXX.X MFPG=XXX.X

FRONT R/W

DENOTES REAR PROTECTION GRADE

LOT NUMBER PAD ELEVATION

DENOTES FRONT PROTECTION GRADE

PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)

PROPOSDED 6" UNDERDRAINS MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF MFF XXX.X

> 1. (1) FOOT ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST.

2. 15" (1.25') ABOVE THE ROAD ELEVATION 3. 6" (0.5') ABOVE THE MLAG

MINIMUM LOWEST ADJACENT GRADE (FLOOD PROTECTION)

840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

4" SSD TO LOT RISER TC DUAL WALL, HANCOR HI-Q TYPE 4 SSD

(SIZE NOTED ON PLANS)

SEE SUMP PLAN SHEETS C602 FOR CLARITY & LABELS

Minimum Flood Protection Grades From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm Water Technical

a. Minimum Flood Protection Grade of all structures fronting a pond or open ditch shall be no less than 2 feet above any adjacent 100-year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where floodwaters can enter a building.

b. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the window well.

2. Standard: Lowest Adjacent Grade

i. The Lowest Adjacent Grade for residential, commercial, or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation under proposed conditions.

b. For areas outside a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain i. The Lowest Adjacent Grade for all residential, commercial, or industrial

buildings adjacent to ponds shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher.

ii. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a minimum of 2 feet above the highest noted overflow path/ponding elevation across the property frontage.

iii. In addition to the Lowest Adjacent Grade requirements, any basement floor must be at least a foot above the normal water level of any wet-bottom pond.

a. Each lot that is adjacent to a pond, open ditch or flooding source has a flood protection grade. There are instances where there are multiple different flooding sources for 1 structure. In this case, there should be a flood protection grade listed for each side of the structure in the event that piping from the structure discharge to either flood source.

b. Finished floor elevation or the lowest building entry elevation shall be no less than 6 inches above finished grade around the building. Also, the building's lowest entry elevation that is adjacent to and facing a road shall be a minimum of 15 inches above the road elevation.





ADG BAH 60160REP-S5

NOTES TO CONTRACTOR:

ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A PRIVATE "MUTUAL" TILE.

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

ALL PAVING WITHIN THE EXISTING AND PROPOSED CITY RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF ENGINEERING. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF THE WORK AND TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING, AUXILIARY LANES, ETC.

NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.

UTILITY RELOCATIONS REQUIRED BY THE PROJECT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A CONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED TO WITHIN ONE FOOT OF PROPOSED RIGHT-OF-WAY LINE.

DAMAGE TO THE EXISTING RIGHT-OF-WAY SHALL BE RESTORED/REPAIRED TO THE SATISFACTION OF THE CITY AT THE COMPLETION OF THE PROJECT. THE CONTRACTOR IS ENCOURAGED TO INSPECT THE RIGHT-OF-WAY WITH THE CITY PRIOR TO THE START OF CONSTRUCTION TO DOCUMENT THE EXISTING CONDITION OF THE RIGHT-OF-WAY.

THIS SITE DOES LIE WITHIN A FLOODWAY OR FLOOD PLAIN

PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

EXISTING SITE CONSIST MOSTLY OF GRASS AND WEEDS WITH WOODS ON THE SITE.

ADJACENT PROPERTIES **NORTH: RESIDENTIAL** EAST: AGRICULTURE SOUTH: RESIDENTIAL WEST: RESIDENTIAL

DRAINAGE SUMMARY

REFERENCE SHEET C200 FOR DRAINAGE SUMMARY INFORMATION.

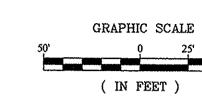
CARMEL UTILITIES (317) 571-2648 FOR WATER LOCATES

FOR SANITARY SEWER LOCATES CONTACT: CLAY TOWNSHIP REGIONAL WASTE DISTRICT (317) 844-9200

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

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC.

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.



1'' = 50 FT

LEGEND

---- EXISTING CONTOUR EXISTING SANITARY SEWER 
EXISTING STORM SEWER PROPOSED GRADE

> PROPOSED CONTOUR PROPOSED SANITARY SEWER PROPOSED STORM SEWER

PROPOSED WATER LINE PROPOSED SWALE

ADA RAMP TO BE INSTALLED

REAR PL MFPG=XXX.X XXX.X

DENOTES REAR PROTECTION GRADE

LOT NUMBER PAD ELEVATION

DENOTES FRONT PROTECTION GRADE

FRONT R/W

MFPG=XXX.X

PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON

PROPOSDED 6" UNDERDRAINS MFF XXX.X MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF

THE BELOW 1. (1) FOOT ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER

IS LOWEST. 2. 15" (1.25') ABOVE THE ROAD ELEVATION

3. 6" (0.5') ABOVE THE MLAG MINIMUM LOWEST ADJACENT GRADE (FLOOD MLAG XXX.X

CONSTRUCTION LIMITS

PROTECTION)

4" SSD TO LOT

DUAL WALL, HANCOR HI-Q TYPE 4 SSD (SIZE NOTED ON PLANS) SEE SUMP PLAN SHEETS C602 FOR CLARITY & LABELS

DEVELOPMENT

SITE

DRAWN BY:
ADG

JACKSONS GRASECTION 5

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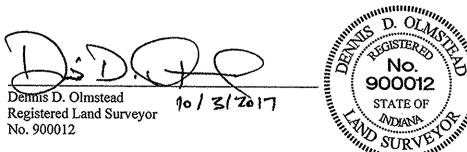
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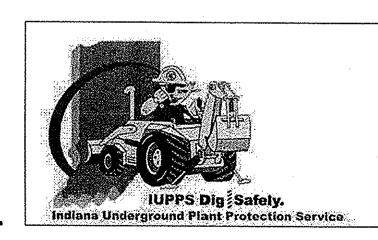
RECORD DRAWING





This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered as official record of the GIS.

Intered By: SLM



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s & a JOB NO. 60160REP-S5

снескед ву: ВАН

ALL STORM STRUCTURES TO RECEIVE SOLID LID CASTINGS ARE TO BE CONSTRUCTED TO PROVIDE ONE 4" RISER RING NO MORE, NO LESS TO ACHIEVE PLAN RIM GRADE.

ALL YARD INLETS ARE TO BE CONSTRUCTED AT A TOLERANCE OF +0.00' TO -0.20' OF PLAN GRADE.

ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY"

ALL SSD'S (SUBSURFACE DRAINS) WILL NEED TO BE DOUBLE WALL SMOOTH BORE PERFORATED (HDPE) PIPE.

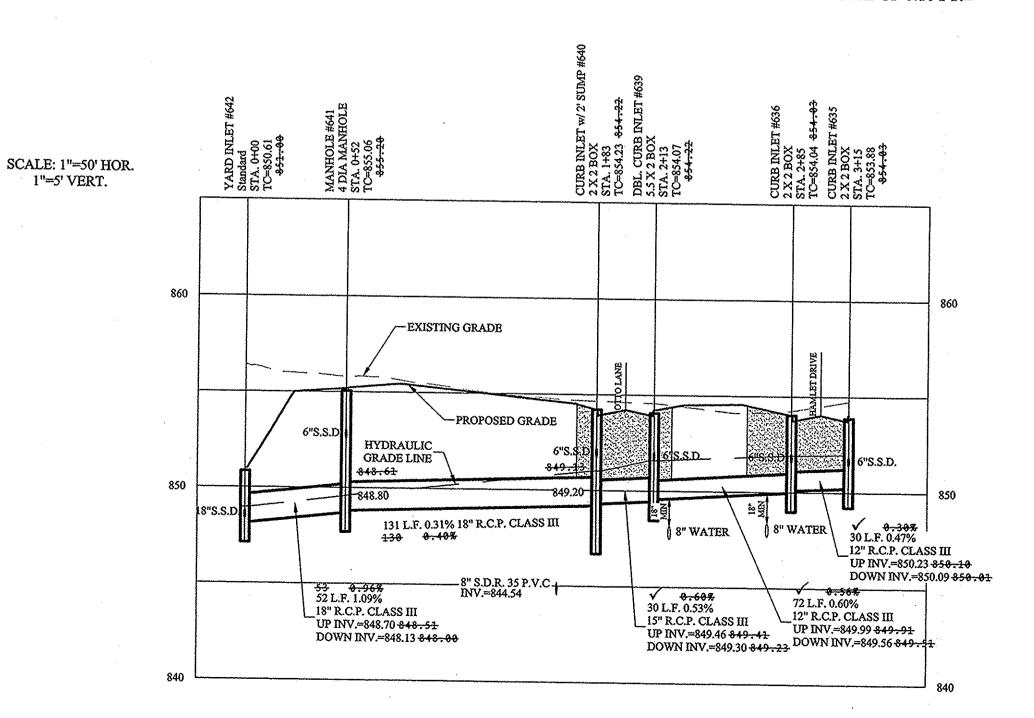
DEBRIS GUARDS ARE TO BE INSTALLED ON ALL OPEN ENDED INLETS.

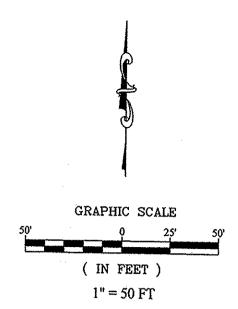
FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE DETAIL D-18 ON SHEET C801.

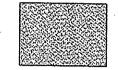
ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

FOR INSTALLATION OF STORM UNDER CITY STREETS AND COVER REQUIREMENTS, SEE SHEET No. C801 ON THE TRENCH DETAIL.

ALL TOP OF CASTING ELEVATIONS FOR STORM SEWERS SHALL BE CONSTRUCTED WITH A TOLERANCE OF 0.10 FT. $\pm$ 







DENOTES FULL DEPTH GRANULAR BACKFILL SEE RCP TRENCH **DETAIL SHEET C802** 

# STORM SEWER NOTE

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OR CARMEL IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER. AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS AND 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS. AND AS APPROVED BY THE CITY OF CARMEL.

STORM SYSTEM WITH THE EXCEPTION OF REAR YARD SSDs, STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE: THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION, THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT OR FINAL GROUND SURFACE ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.

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.

STOEPPA No. 19358

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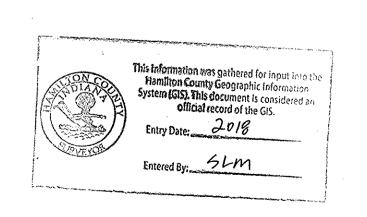
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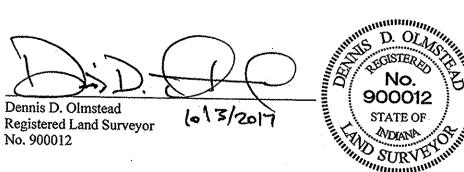
PROFILE \$

STORM SEWER PLAN

DRAWN BY: CHECKED BY:

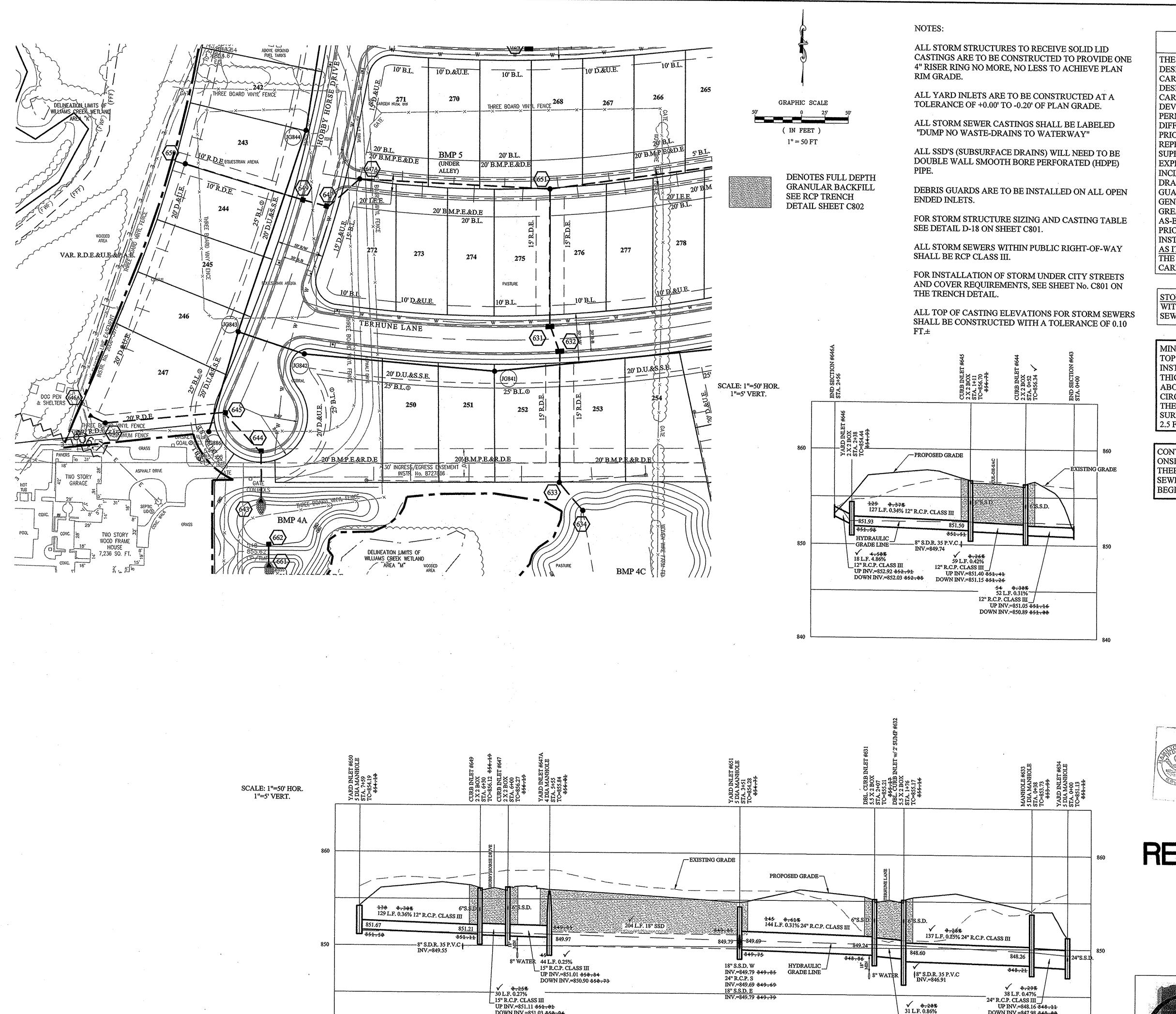


# RECORD DRAWING





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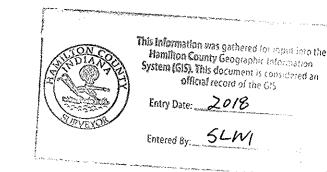
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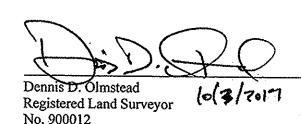
STORM SYSTEM WITH THE EXCEPTION OF REAR YARD SSDs, STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE: THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION, THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT OR FINAL GROUND SURFACE ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.

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.



# RECORD DRAWING



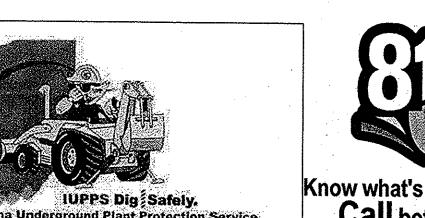
UP INV.=848.16 848.11

DOWN INV.=847.98 <del>848.00</del>

\_24" R.C.P. CLASS III UP INV.=849.14 <del>848.76</del>

DOWN INV.=848.87 848-70







ADG CHECKED BY:

ADG BAH \$ & A JOB NO. 60160REP-S5

STOEPP

No.

19358

STATE OF

MOIANA

S DRAWING IS NOT I RESENTED AS A RET SINAL BOUNDARY S VEY OR A SIRVEY

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STORM SEWER PLAN & PROFILE

ACKSONS GRANT SECTION 5

SCALE: 1"=50' HOR

1"=5' VERT.

-EXISTING GRADE

18" S.S.D. W INV.=849.79 849.85

24" R.C.P. S

18" S.S.D. E

INV.=849.69 849.69

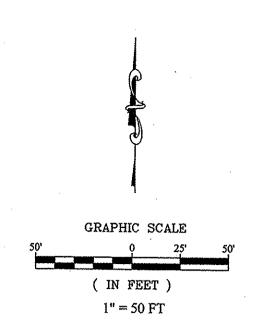
PROPOSED GRADE-

HYDRAULIC

8" S.D.R. 35 P.V.C INV.=846.55

30 L.F. 0.60%-18" R.C.P. CLASS III

UP INV.=850.06 850.01 DOWN INV.=849.88 849.95





DENOTES FULL DEPTH GRANULAR BACKFILL SEE RCP TRENCH DETAIL SHEET C802

### NOTES:

ALL STORM STRUCTURES TO RECEIVE SOLID LID CASTINGS ARE TO BE CONSTRUCTED TO PROVIDE ONE 4" RISER RING NO MORE, NO LESS TO ACHIEVE PLAN RIM GRADE.

ALL YARD INLETS ARE TO BE CONSTRUCTED AT A TOLERANCE OF +0.00' TO -0.20' OF PLAN GRADE.

ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY"

+CAP & SEAL

16 L.F. 0.21%

18" R.C.P. CLASS III

UP INV.=850.19 <del>850.14</del>

DOWN INV.=850.16 850.11

ALL SSD'S (SUBSURFACE DRAINS) WILL NEED TO BE DOUBLE WALL SMOOTH BORE PERFORATED (HDPE) PIPE.

DEBRIS GUARDS ARE TO BE INSTALLED ON ALL OPEN ENDED INLETS.

FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE DETAIL D-18 ON SHEET C801.

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

FOR INSTALLATION OF STORM UNDER CITY STREETS AND COVER REQUIREMENTS, SEE SHEET No. C801 ON THE TRENCH DETAIL.

ALL TOP OF CASTING ELEVATIONS FOR STORM SEWERS SHALL BE CONSTRUCTED WITH A TOLERANCE OF 0.10 FT.±

# STORM SEWER NOTE

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OR CARMEL IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER. AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS AND 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS. AND AS APPROVED BY THE CITY OF CARMEL.

### STORM SYSTEM

WITH THE EXCEPTION OF REAR YARD SSDs, STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC

MINIMUM COVER FOR PIPE: THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION, THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT OR FINAL GROUND SURFACE ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.

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.

STATE OF MOIANA

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PLAN & PROFILE

STORM SEWER

DRAWN BY:
ADG

снескед ву ВАН

SHEET NO.

\$&A JOB NO. 60160REP-S5

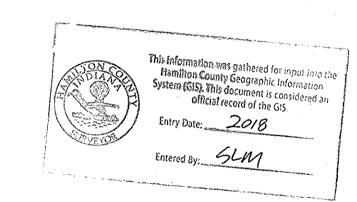
JACKSONS GRANT SECTION 5

STOEPP

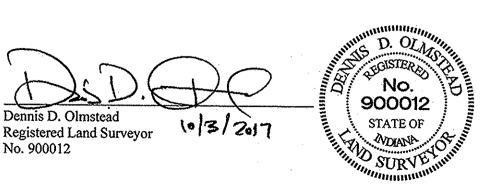
No.

19358

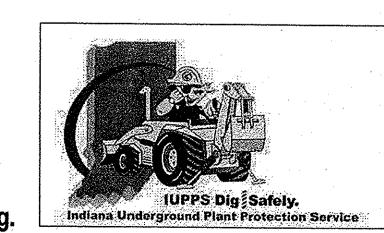
CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING



# RECORD DRAWING







Know what's **below**.

Call before you dig.

SCALE: 1"=50' HOR

1"=5' VERT.

EXISTING GRADE-

8" S.D.R. 35 P.V.C INV.=848.78

12" R.C.P. CLASS III

UP INV.=851.61 851.53

DOWN INV.=851.43 851.38

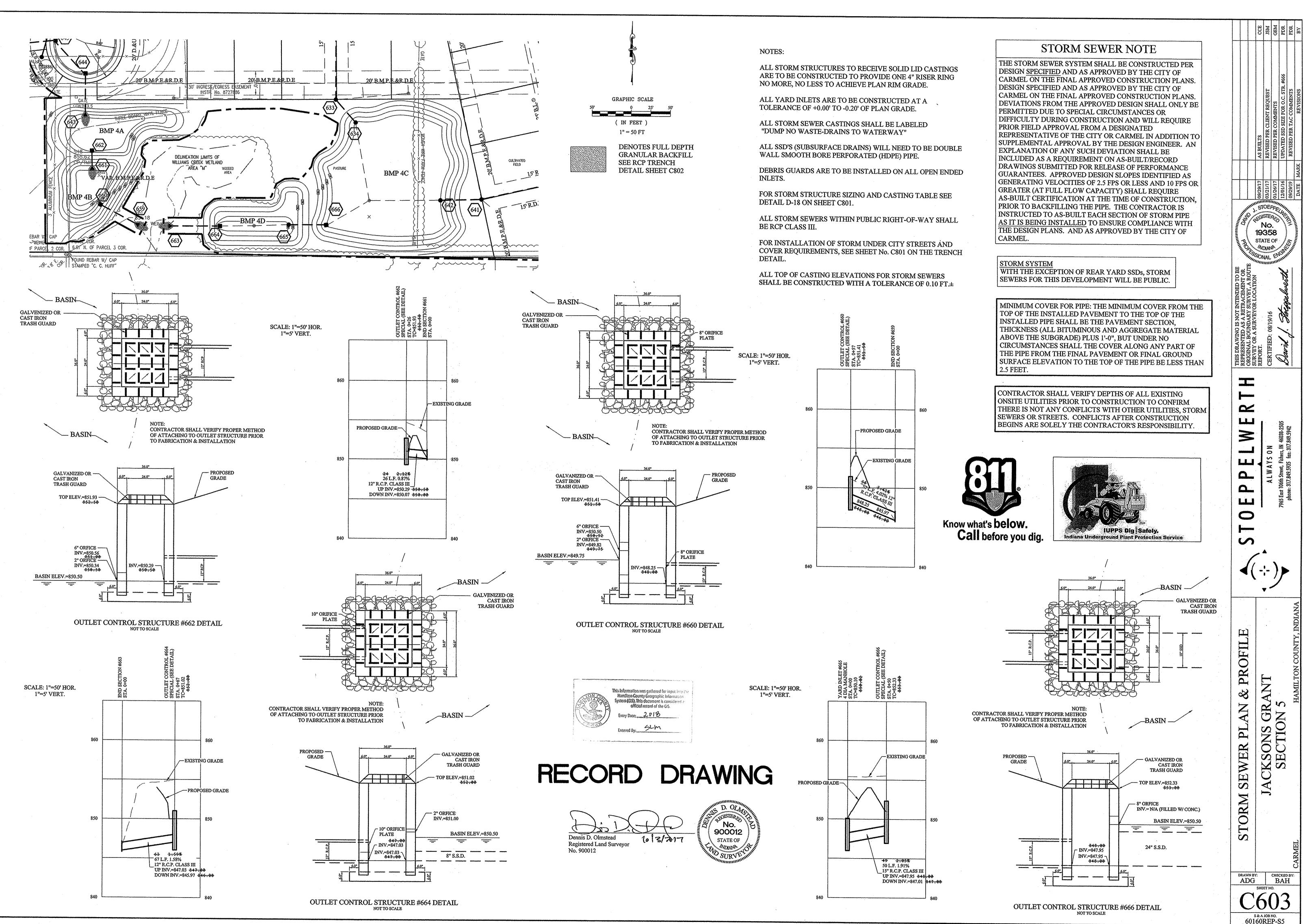
HYDRAULIC\_

GRADE LINE

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S:\60160REP-S5\DV\G\C600 Storm Plan October 2, 2017 4:11:45 PM / cesposito October 2, 2017 4:22:11 PM / Christian E

File Name: Modified / By ما^^^\*



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