



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

September 25, 2014

To: Hamilton County Drainage Board

Re: Long Branch Drain, Sanctuary at 116th Street Section 6 Arm

Attached is a petition filed by Sanctuary Project 1, LLC., along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Sanctuary at 116<sup>th</sup> Street Section 6 Arm, Long Branch 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	797 ft.	15" RCP	276 ft.
18" RCP	256 ft.	21" RCP	71 ft.
24" RCP	373 ft.	27" RCP	224 ft.
30" RCP	342 ft.	6" SSD	4,890 ft.

The total length of the drain will be 7,229 feet.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs and those main lines in rear yards. Only the main SSD lines 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 portion of the SSD which will be regulated other than those under curbs are as follows:

Rear yard lots 194 to 195 from existing Str. 4702 to Str. 4703 Rear yard lots 195 to 196 from Str. 4703 to Str. 4704 Rear yard lots 196 to 198 from Str. 4704 running north to riser Rear yard lots 190 to 192 from existing Str. 4719 running north to riser Rear yard lots 213 to 214 from Str. 6709 running west to riser
Rear yard lots 208 to 212 from Str. 6703B running south to near Str. 6710
Rear yard lots 207 to 208 from Str. 6703A to Str. 6703B
Rear yard lots 206 to 207 from Str. 6703 to Str. 6703A
Rear yard lots 205 to 206 from Str. 6702 to Str. 6703
Rear yard lots 202 to 204 from Str. 6704 to Str. 6703
Rear yard lots 199 to 202 from Str. 6704 run east to riser

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 platted lot, \$10.00 per acre for common areas, with a \$65.00 minimum, and \$10.00 per acre for roadways. With this assessment the total annual assessment for this drain will be \$2,099.60.

The petitioner has submitted surety for the proposed drain at this time. The sureties which are in the form of a Performance Bond are as follows:

Agent: Philadelphia Indemnity Insurance Company

Date: June 24, 2014

Number: PB11328100044

For: Storm Sewers & Sub-Surface Drains

Amount: \$215,120.04

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 requests. The request will be for the reduction of the regulated drain easement to those easement widths as shown on the secondary plats for Sanctuary at 116<sup>th</sup> Street Section 6 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for November 24, 2014.

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

In the matter of Sanctuary at 116th Street
Six Drain Petition.

(Revised 06/08/04)

JUL 2 9 2013

OFFICE OF HAMILTON COUNTY SURVEYOR

OFFICE OF HAMILTON COUNTY SURVEYOR

Subdivision, Section

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in Sanctuary at 116th Street, 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 INVOLVED

Signed	Signed
David C. Oakes Printed Name	Printed Name
7/23/13 Date	Date
Signed	Signed
Printed Name	Printed Name
Data	Data

Adobe PDF Fillable Form

#### FINDINGS AND ORDER

#### CONCERNING THE MAINTENANCE OF THE

Long Branch Drain, Sanctuary at 116th Street Section 6 Arm

On this  $24^{\text{th}}$  day of November, 2014, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Long Branch Drain, Sanctuary at  $116^{\text{th}}$  Street Section 6 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

Member

Proj: Sanctuary @ 116th St Section 6

Proj No: W130200 2/14/2014 Date: Revised 6/2/14



#### **Revised Engineer Estimate for HCSO Bond**

STORM SEWER PIPE, STRUCTURES, SSD

ITEM	DESCRIPTION	QUANTITY	UNIT	U	NIT COST		<b>AMOUNT</b>
1	6" SSD Swales	2740	LF	\$	10.95	\$	30,003.00
2	6" SSD Curbs	2720	LF	\$	8.73	\$	23,745.60
3	12" RCP	665	LF	\$	22.50	\$	14,962.50
4	15" RCP	284	LF	\$	26.10	\$	7,412.40
5	18" RCP	256	LF	\$	30.25	\$	7,744.00
6	21" RCP	71	LF	\$	34.50	\$	2,449.50
7	24" RCP	373	LF	\$	37.30	\$	13,912.90
8	27" RCP	224	LF	\$	43.50	\$	9,744.00
9	30" RCP	342	LF	\$	50.40	\$	17,236.80
10	36" RCP	142	LF	\$	68.00	\$	9,656.00
11	Inlet Type A Neenah R3501-TR	3	EA	\$	1,500.00	\$	4,500.00
12	Inlet Type A Neenah R3501-TL	1	EA	\$	1,750.00	\$	1,750.00
13	Curb Inlet Double Castings	5	EA	\$	2,670.00	\$	13,350.00
14	MH w/Solid Lid (12" to 24" Pipe)	4	EA	\$	1,650.00	\$	6,600.00
15	MH w/Beehive Inlet (12" to 24" Pipe)	. 7	EA	\$	1,350.00	\$	9,450.00
16	MH w/Solid Lid (27" to 66" Pipe)	2	EA	\$	1,670.00	\$	3,340.00
17	MH w/Beehive Inlet (27" to 66" Pipe)	1	EA	\$	1,610.00	\$	1,610.00
18	Connect to Ex. CB	2	EA	\$	900.00	\$	1,800.00
					TOTAL	ć	170 266 70

TOTAL \$ 179,266.70

#### **MONUMENTATION**

QUANT.		UI	IIT COST	LINE COST
84	5/8 rebar with caps, lot prop. corners	\$	39.75	\$ 3,339.00
8	5/8 rebar with alum caps, street control	\$	79.50	\$ 636.00
11	4X4 concrete monuments, subd. prop. corners	\$	318.00	\$ 3,498.00
	.12884991500.		TOTAL	\$ 7,473.00



e Ave | Indianapolis, IN 46280 | www.weihe.net | (317) 846-6611 | (800) 452-6408 | Fax: (317) 843-0546 Allan H. Weihe, P.E., L.S., - Founder





JUN 3 0 2014

Subdivision Bondveyor
Faithful Performance

Bond No. <u>PB11328100044</u> Premium \$3,227.00/2 years

#### SUBDIVISION BOND

HCDD-2014-00028

KNOW ALL MEN BY THESE PRESENTS: That <u>Sanctuary Project I LLC</u> as Principal, and <u>Philadelphia Indemnity Insurance Company</u>, a corporation organized and existing under the laws of the State of <u>Pennsylvania</u> and authorized to transact surety business in the State of <u>Indiana</u>, as Surety are held and firmly bound unto <u>Hamilton County Board of Commissioners</u> in the sum of <u>Two Hundred Fifteen Thousand One Hundred Twenty and 04/100</u> Dollars (\$215,120.04), for the payment whereof, well and truly to be made, said Principal and Surety bind themselves, their heirs, administrators, successors and assigns, jointly and severally, firmly by these presents.

## THE CONDITION OF THE OBLIGATION IS SUCH THAT:

WHEREAS the above Named Principal has entered into an agreement, dated \_\_\_\_\_\_ with the Hamilton County Board of Commissioners to do and perform the following work, to wit:

Sanctuary at 116th Street Section 6 – Storm Sewer Pipe, Structures, SSD

NOW, THEREFORE, if the above-bounden Principal shall well and truly perform the work referred to in such agreement, then this obligation shall be void; otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the seal and signature of said Principal is hereto affixed and the corporate seal and the name of the said Surety is hereto affixed and attested by its duly authorized Attorney in Fact at Columbus, Ohio this 24th day of June, 2014.

Sanctuary Project I, LLC an Indiana limited liability co.

By: EBS Residential Development Fund, LLC An Ohio limited liability co., its Sole member

By: Eubel Brady & Suttman Asset Management, Inc., a Delaware corporation, its Manager

By: Mark E. Brady or Ronald L. Eubel, Its Co-CIO

Sanctuary Project I LLC
(Principal) (Seal)

Philadelphia Indemnity Insurance Company (Surety) (Seal)

Amy M. Perdue, Attorney-In-Fact



#### PHILADELPHIA INDEMNITY INSURANCE COMPANY

231 St. Asaph's Rd., Suite 100 Bala Cynwyd, PA 19004-0950

#### Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: that PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint: Jack E Kehl, Gregory R. Overmyer, Amy M. Perdue and Stephanie M. Fannin of OH-INS, LLC dba Overmyer Hall Associates, of the city of Columbus, state of Ohio. its true and lawful Attorney(s) in fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$7,500,000.00:

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY at a meeting duly called the 1st day of July, 2011.

RESOLVED:

That the Board of Directors hereby authorizes the President or any Vice President of the Company to: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER

RESOLVED:

That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and biding upon the Company in the future with the respect to any bond or undertaking to which it is attached.

IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEALTO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 15<sup>TH</sup> DAY OF NOVEMBER 2012.



President

Sean S. Sweeney, President Philadelphia Indemnity Insurance Company

On this 15th day of November 2012, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.

COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL DANIELLE PORATH, Notary Public Lower Merion Twp., Montgomery County My Commission Expires March 22, 2016

(Notary Seal)

(Seal)

Notary Public:

residing at:

My commission expires:

Bala Cynwyd, PA

March 22, 2016

I, Craig P. Keller, Executive Vice President, Chief Financial Officer and Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do herby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto are true and correct and are still in full force and effect. I do further certify that Sean S. Sweeney, who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY,

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 244%



Craig P. Keller, Executive Vice President, Chief Financial Officer & Secretary

PHILADELPHIA INDEMNITY INSURANCE COMPANY





OF FIGURE OF HAMILTON COUNTY SURVEYOR Subdivision Bond Faithful Performance

Bond No. PB11328100045 Premium \$200.00/2 years

SUBDIVISION BOND
HCDB ⊋014、000&9 KNOW ALL MEN BY THESE PRESENTS: That <u>Sanctuary Project LLC</u> as Principal, and
Philadelphia Indemnity Insurance Company, a corporation organized and existing under the laws of
the State of Pennsylvania and authorized to transact surety business in the State of Indiana, as
Surety are held and firmly bound unto Hamilton County Board of Commissioners in the sum of <u>Eight</u>
Thousand Nine Hundred Sixty Seven and 60/100 Dollars (\$8,967.60), for the payment whereof, well
and truly to be made, said Principal and Surety bind themselves, their heirs, administrators,
successors and assigns, jointly and severally, firmly by these presents.
THE CONDITION OF THE OBLIGATION IS SUCH THAT:
WHEREAS the above Named Principal has entered into an agreement, dated,
with the Hamilton County Board of Commissioners to do and perform the following work, to wit:
Sanctuary at 116th Street Section 6 – Monumentation
NOW, THEREFORE, if the above-bounden Principal shall well and truly perform the work referred to

in such agreement, then this obligation shall be void; otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the seal and signature of said Principal is hereto affixed and the corporate seal and the name of the said Surety is hereto affixed and attested by its duly authorized Attorney in Fact at Columbus, Ohio this 24th day of June, 2014.

Sanctuary Project I, LLC an Indiana limited liability co. By: EBS Residential Development Fund, LLC An Ohio limited liability co., its Sole member

By: Eubel Brady & Suttman Asset Management, Inc., a

Delaware corporation, its Manager

By: Mark E. Brady or Ronald L. Eubel, Its Co-CIO

1	
Sanctuary Project I LLC (Principal)	(Seal)
11/21	Secure Security Secur
By: Mark Busy	
Philadelphia Indemnity Insurance Compa	
(Surety)	(Seal)
By: M. Padua	
Amy M. Perdue, Attorney-In-Fact	

#### PHILADELPHIA INDEMNITY INSURANCE COMPANY

231 St. Asaph's Rd., Suite 100 Bala Cynwyd, PA 19004-0950



#### Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: that PHILADELPHIA INDEMNITY INSURANCE COMPANY (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint: Jack E Kehl, Gregory R. Overmyer, Amy M. Perdue and Stephanie M. Fannin of OH-INS, LLC dba Overmyer Hall Associates, of the city of Columbus, state of Ohio. its true and lawful Attorney(s) in fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$7,500,000.00:

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY at a meeting duly called the 1st day of July, 2011.

RESOLVED:

That the Board of Directors hereby authorizes the President or any Vice President of the Company to: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

**FURTHER** 

That the signatures of such officers and the seal of the Company may be affixed to any RESOLVED:

such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and biding upon the Company in the future with the respect to any bond or

undertaking to which it is attached.

IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEALTO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 15<sup>TH</sup> DAY OF NOVEMBER 2012.



President

Sean S. Sweeney, President

Philadelphia Indemnity Insurance Company

On this 15th day of November 2012, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the PHILADELPHIA INDEMNITY INSURANCE COMPANY; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.

COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL:

DANIELLE PORATH, Notary Public
Lower Merion Twp., Montgomery County
My Commission Expires March 22, 2016

(Notary Seal)

(Seal)

Notary Public:

residing at:

My commission expires:

Bala Cynwyd, PA

March 22, 2016

I, Craig P. Keller, Executive Vice President, Chief Financial Officer and Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do herby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto are true and correct and are still in full force and effect. I do further certify that Sean S. Sweeney, who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY,

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this \_\_\_\_\_\_\_ day of \_\_\_

Craig P. Keller, Executive Vice President, Chief Financial Officer & Secretary

PHILADELPHIA INDEMNITY INSURANCE COMPANY

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

#### Long Branch Drain, Sanctuary at 116th Street Section 6 Arm

NOTICE

То	Whom	Ιt	May	Concern	and:	
					-	

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Long Branch Drain, Sanctuary at 116<sup>th</sup> Street Arm on November 24, 2014 at 9:30 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

#### Long Branch Drain, Sanctuary at 116th Street Section 6

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on November 24, 2014 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



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

To: Hamilton County Drainage Board

July 7, 2015

Re: Long Branch Drain: Sanctuary at 116<sup>th</sup> Street Sec. 6 Arm

Attached are as-builts, certificate of completion & compliance, and other information for Sanctuary at 116<sup>th</sup> Street Sec. 6 Arm. 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 September 25, 2014. The report was approved by the Board at the hearing held November 24, 2014. (See Drainage Board Minutes Book 16, Pages 38-40) The changes are as follows: the 6" SSD was shortened from 4890 to 4872 feet; the 12" RCP was shortened from 797 to 781 feet; the 15" RCP was shortened from 276 to 275 feet; the 18" RCP was lengthened from 256 to 261 feet; the 24" RCP was lengthened from 373 to 375 feet; the 27" RCP was lengthened from 224 to 231 feet; the 30" RCP was shortened from 342 to 340 feet. The length of the drain due to the changes described above is now **7206 feet**.

The non-enforcement was approved by the Board at its meeting on November 24, 2014 and recorded under instrument #2015007477. The following sureties were guaranteed by Philadelphia Indemnity Insurance Company and will be released by the Board on its July 13, 2015 meeting.

Bond-LC No: PB11328100044

Amount: \$215,120.04 For: Storm Sewers & SSD Issue Date: June 24, 2014

I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward, CFM Hamilton County Surveyor

#### CERTIFICATE OF COMPLETION AND COMPLIANCE

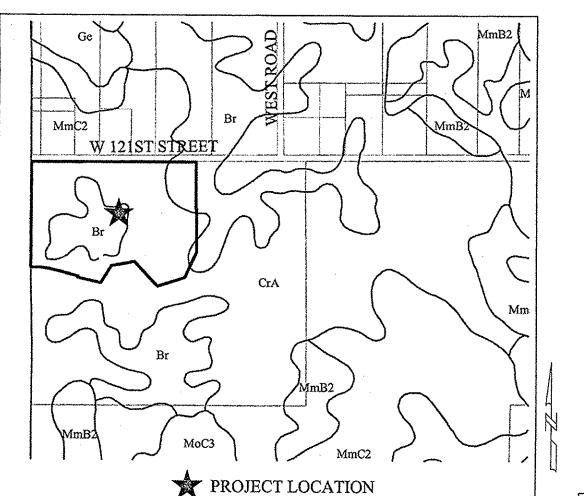
To: Hamilton County Surveyor Re: Sanctuary on 116th Street Section 6 I hereby certify that: 1. I am a Registered Land Surveyor or Engineer in the State of Indiana. 2. I am familiar with the plans and specifications for the above referenced subdivision. 3. I have personally observed and supervised the 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. 5. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been correctly represented on the Record Drawings, Digital Record Drawings and the Structure Data Spreadsheet. Date: 5/19/2015 Signature: Type or Print Name: Duane A. Sharrer, P.E. Business Address: Weihe Engineers, Inc. 10505 N College Ave., Indianapolis, IN 46280 Telephone Number: \_\_\_(317) 846-6611 INDIANA REGISTRATION NUMBER 890258

THE STONAL TO

# RECORD DRAWING FINAL CONSTRUCTION PLANS FOR SANCTUARY AT 116TH STREET

# SECTIONSIX

AND MASS GRADING OF SECTION FOUR B 4455 W. 121st STREET CARMEL, IN



## GENERAL NOTES

SOILS MAP

- EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL

- 8. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO
- 9. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS,
- 10. ANY FIELD TILES ENCOUNTERED DURING EXCAVATION SHALL BE REPAIRED AND CONNECTED TO NEW STORM SEWERS AND POSITIVE DRAINAGE PRESERVED.
- 11. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER THAT ALL LANDSCAPE REQUIREMENTS ARE MET AND CONFORM TO APPLICABLE LOCAL STANDARDS.
- 12. THE SITE DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18057C0205F, DATED FEBRUARY 19, 2003. THEREFORE THERE ARE NO 100 YR. FLOODPLAINS, FLOODWAY FRINGES, OR FLOODWAYS ON THIS SITE.
- 13. BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS & PLAT FOR EXACT INFORMATION.
- 14. THIS SITE DOES NOT CONTAIN ANY WETLANDS AT SHOWN ON THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE; CARMEL, INDIANA, NATIONAL WETLANDS INVENTORY MAP DATED 1990.

## OPERATING AUTHORITIES

CITY OF CARMEL ONE CIVIC SQUARE CARMEL, IN 46032 ASSISTANT PLANNER: ANGIE CONN 317-571-2417 DEPT. OF ENGINEERING: GARY DUNCAN 317-571-2441

CITY OF CARMEL FIRE DEPARTMENT TWO CIVIC SQUARE CARMEL, INDIANA 46032 CHRIS ELLISON 317-571-2600

CLAY TOWNSHIP REGIONAL WASTE DISTRICT 10701 N. COLLEGE AVENUE, SUITE A INDIANAPOLIS, IN 46280-1098 RYAN HARTMAN 317-844-9200

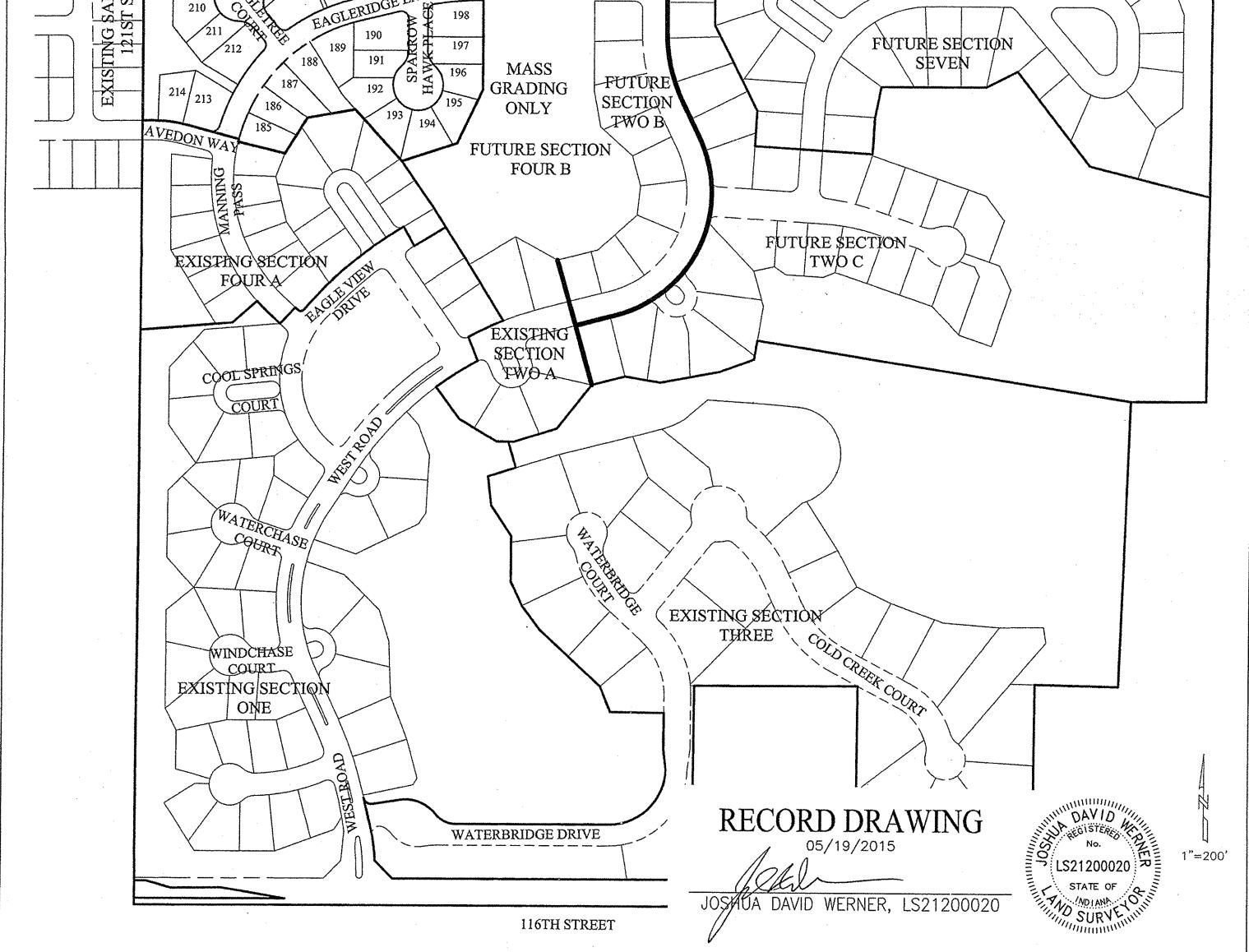
CARMEL CITY UTILITIES 760 3RD AVENUE S.W. CARMEL, INDIANA 46032 JOHN DUFFY 317-571-2443

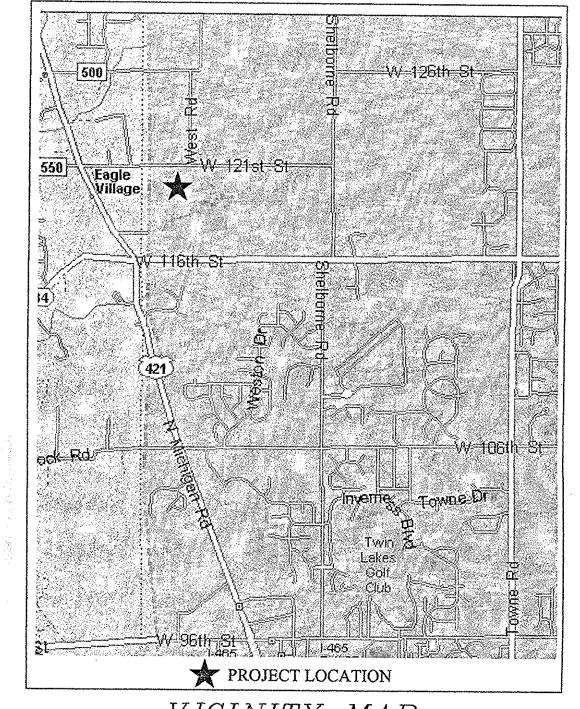
HAMILTON COUNTY SURVEYOR'S OFFICE ONE HAMILTON SQUARE, SUITE 188 HAMILTON COUNTY JUDICIAL CENTER NOBLESVILLE, INDIANA 46060 GREG HOYES 317-776-8495

BRIGHTHOUSE NETWORKS 3030 ROOSEVELT AVE INDIANAPOLIS, IN 46218 JASON KIRKMAN 317-632-9077 EXT. 291

DUKE ENERGY 16475 SOUTHPORK DRIVE WESTFIELD, INDIANA 46074 SHIRELY HUNTER 317-896-6711

VECTREN ENERGY P.O. BOX 1700 NOBLESVILLE, INDIANA 46061-1700 JOANIE CLARK 317-776-5532





VICINITY MAP

	SHEET INDEX
SHEET NO.	DESCRIPTION
CO01	TITLE SHEET
	SITE PREPERATION / DEMOLITION PLAN
	STORMWATER POLLUTION PREVENTION PLAN PHASE 1
	STORMWATER POLLUTION PREVENTION PLAN PHASE 2
<del>C202 - C204</del> -	STORMWATER POLLUTION PREVENTION DETAILS & SPEC

+ OFFSITE DEVELOPMENT PLAN FMERGENCY OVERFLOW PLAN -C400 C401 | STREET PLAN & PROFILE -C402-C403 | STREET DETAILS & SPECIFICATIONS STREET INTERSECTION DETAILS

TRAFFIC CONTROL PLAN C500-C501 | SANITARY SEWER PLAN & PROFILE -C502 C503 | SANITARY SEWER DETAILS *<del>| SANITARY SEWER SPECIFICATIONS</del>* C600-C602 | STORM SEWER PLAN & PROFILE

-C603 C604 STORM SEWER DETAILS WATER MAIN PLAN + WATER MAIN DETAILS AND SPECIFICATIONS

PLANS PREPARED FOR

SANCTUARY PROJECT 1 LLC 8534 YANKEE STREET, SUITE 2B DAYTON, OH 45458 TELEPHONE: (937)435--8584 X 1281 CONTACT PERSON: DAVID OAKES

## PLANS PREPARED BY

WEIHE ENGINEERS, INC. 10505 N. COLLEGE AVE. INDIANAPOLIS, IN 46280 (317) 846-6611 PHONE (317) 843-0546 FAX CONTACT PERSON: EDWARD E. FLEMING



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LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK,

S

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- 2.53 LOTS/ACRE 175.68 SPARROW HAWK PLACE 229.32'

1226.02'

25 MPH

DESIGN DATA:

STREET LENGTH:

EAGLERIDGE LANE

TOTAL LENGTH

SPEED LIMIT:

EAGLE TREE COURT

TOTAL ACREAGE - 11.835 ACRES

NUMBER LOTS - 30 LOTS

SITE MAP

BENCHMARK INFORMATION

BM BOO 54 - A DNR DISK IS LOCATED 1.0 MILE NORTHEAST OF ZIONSVILLE; 0.2 MILE EAST ALONG WEST 121ST STREET FROM ITS JUNCTION WITH STATE ROAD 421. AT THE INTERSECTION OF DAUGHERTY DRIVE AND WEST 121ST STREET, IN THE NORTHEAST 1/4 OF THE INTERSECTION, AT THE ENTRANCE TO THE EAGLE VILLAGE SUBDIVISION; SET IN THE TOP OF A CONCRETE POST, LEVEL WITH THE GROUND; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED ELEV.: 900.76 FEET (1988 DATUM)

RECORD DRAWING FINAL CONSTRUCTION PLANS - DATED 06/13/2014

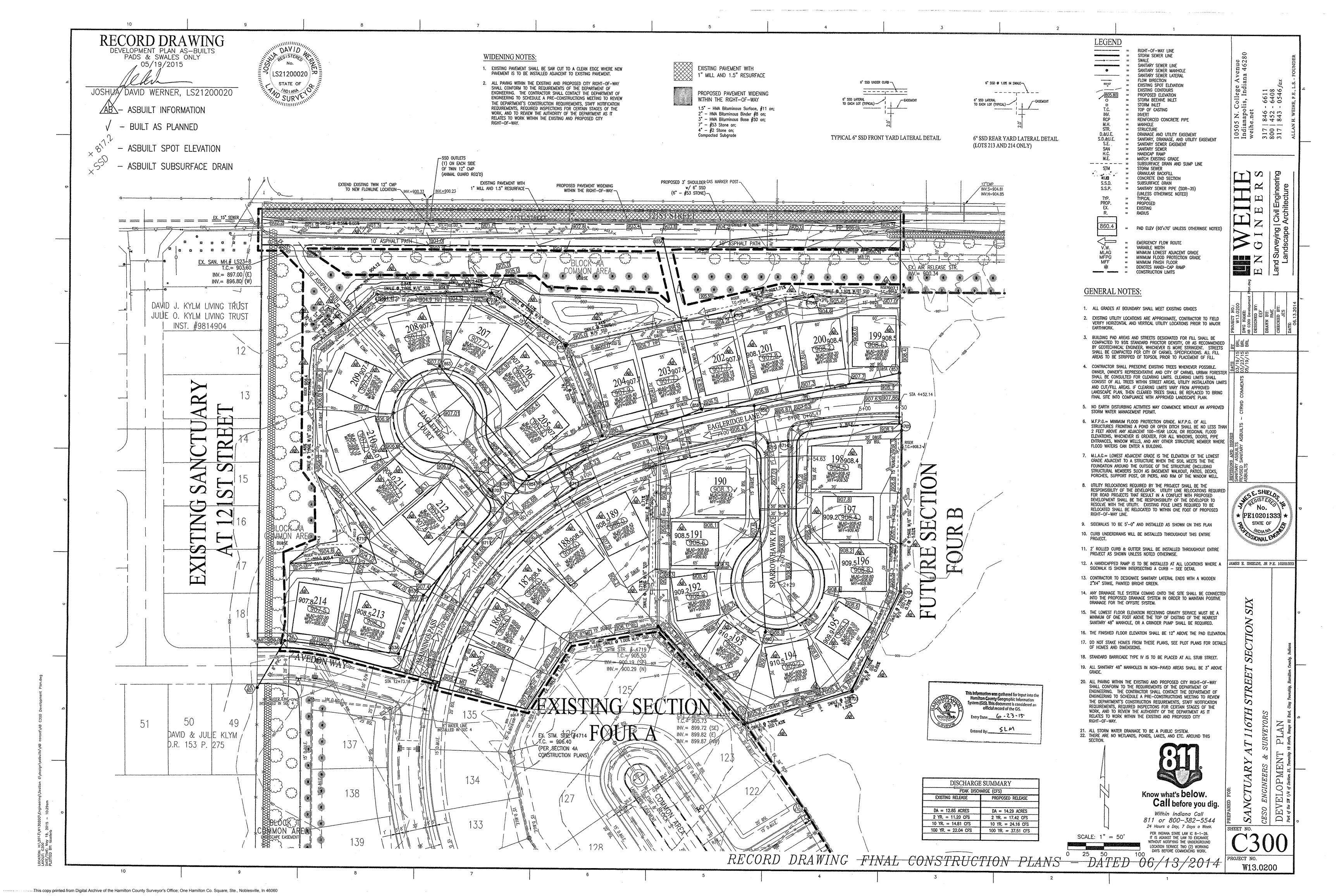
No. No. \* PE10201333 \* STATE OF NOIANA CHE

JAMES E. SHIELDS, JR P.E. 102013

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his information was gathered for input into the Hamilton County Geographic information System (GIS). This document is considered an official record of the GIS. Entry Date: 6-23-15

W13.0200



RECORD DRAWING

DEVELOPMENT PLAN AS-BUILTS

STORM SEWER & SANITARY SEWER STRUCTURES ONLY

05/19/2015

JOSHUA DAVID WERNER, LS21200020

AB - ASBUILT INFORMATION

- BUILT AS PLANNED



	STOR	M SEWER	STRUCTURE DATA TA	ABLE			
STRUCTURE NUMBER	STRUCTURE TYPE	T.O.C.	CASTING TYPE	invert 🛦			
4701	MANHOLE	902.66	SOLID	INV IN = 899.08(NW)			
4702	MANHOLE	905.73	BEEHIVE	INV IN = 899.82(E) INV IN = 899.87(NW) INV OUT = 899.72(SE)	899.87		
4703	MANHOLE	<del>906.00</del> 906.20	BEEHIVE	INV IN = '900.22(NE) INV OUT = '900.12(W)	900.32 900.22		
4704	MANHOLE	905.50 905.53	BEEHIVE	INV IN = 900.71(N) INV OUT = 900.61(SW)	900.80		
4705	MANHOLE	<del>908.30</del> 908.15	SOLID	INV IN = '901-58(W) INV IN = '901-58(E) INV OUT = '901-48(S)	901.82 901.82 901.72		
4719	MANHOLE	905.50	BEEHIVE	INV IN = $900.29(N)$ INV OUT = $900.19(SE)$	900.34 900.26		
6701A	INLET TYPE A	9 <del>05:8</del> 8 905.73	NEENAH R-3501-TR	INV IN = 900.63(N) INV OUT = 900.63(S)	900.58 900.58		
6701B	INLET TYPE A	<del>905,8</del> 8 905.82	NEENAH R-3501-TL	INV IN = 900.66(W) INV OUT = 900.66(S)	900.65 900.65		
6702	MANHOLE	<del>906.00</del> 906.21	SOLID	INV IN = $900.73$ (N) INV IN = $900.73$ (SW) INV OUT = $900.73$ (E)	900.72 900.72 900.72		
6703	MANHOLE	905.00 904.06	BEEHIVE	INV IN = 900.97(NW) INV IN = 900.97(E) INV OUT = 900.97(S)	900.90 900.90 900.90		
6703A	INLET TYPE A	9 <del>03.85</del> 903.54	BEEHIVE	INV IN = '901.35(W) INV OUT = '901.35(SE)	901.33 901.33		
6703B	INLET TYPE A	904.40 904.23	BEEHIVE	INV OUT = '901.88(E)	901.9		
6704	INLET TYPE A	904.25 904.03	BEEHIVE	INV IN = $901.74(E)$ INV OUT = $901.74(W)$	901.88 901.78		
6704A	MANHOLE	904.60 904.91	BEEHIVE	INV OUT = $902.20(W)$	902.3		
6705	MANHOLE	<del>905.7</del> 0. 905.72	SOLID	INV IN = '900-82(SW) INV IN = '901-12(SE) INV OUT = '900-82(NE)	900.8 901.0 900.8		
6706	INLET TYPE A	904.80 904.87	NEENAH R-3501-TR	INV IN = 900.93(SW) INV OUT = 900.93(NE)	900.9		
6707	INLET TYPE A	904.80 904.87	NEENAH R-3501-TL	INV IN = 300.98(SW) INV OUT = 300.98(NE)	901.0 901.0		
6708	MANHOLE	<del>906.90</del> 907.23	SOLID	INV IN = 901.10(SW) INV IN = 902.65(SE) INV OUT = 901.10(NE)	901.1. V 901.1.		
6709	MANHOLE	90 <del>7.20</del> 907.26	SOLID	INV IN = 904.33(NW) INV OUT = 904.33(NE)	901.3 901.3		
6710	INLET TYPE A	904,12	BEEHIVE	INV OUT = '901.62(SE)	901.6		
## 1703 MANHOLE ## 1705 BEEHIVE   INV IN = 969-32(NE) 900.3   ## 1704 MANHOLE ## 1705 BEEHIVE   INV IN = 969-32(NE) 900.2   ## 1705 MANHOLE ## 1705 BEEHIVE   INV IN = 969-41(N) 900.8   ## 1705 MANHOLE ## 1705 BEEHIVE   INV IN = 969-41(N) 901.8   ## 1705 MANHOLE ## 1705 BEEHIVE   INV IN = 969-42(N) 901.8   ## 1706 MANHOLE ## 1705 BEEHIVE   INV IN = 969-42(N) 901.8   ## 1707 MANHOLE ## 1705-88   NEENAH R-3501-TR   INV IN = 969-42(N) 900.5   ## 1708 MANHOLE ## 1705-88   NEENAH R-3501-TR   INV IN = 969-43(N) 900.5   ## 1708 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-43(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-33(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TL   INV IN = 969-33(N) 900.5   ## 1709 MANHOLE ## 1705-88   NEENAH R-3501-TR   INV IN = 969-82(N) 900.8   ## 1709 MANHOLE ## 1705-89   NEENAH R-3501-TR   INV IN = 969-82(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-82(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.5   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80   NEENAH R-3501-TR   INV IN = 969-83(N) 900.8   ## 1709 MANHOLE ## 1706-80							

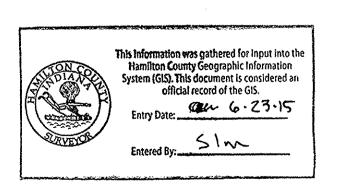
	STOR	M SEWER	STRUCTURE DATA TA	BLE
STRUCTURE NUMBER	STRUCTURE TYPE	T.O.C.	CASTING TYPE	INVERT 🚵
6711	INLET TYPE A	9 <del>06.43</del> 906.31	NEENAH R-3501-TR	INV OUT = 902:90(NW) 902.86
6712	INLET TYPE A	<del>905.10</del> 904.99	NEENAH R-3501-TR	INV IN = $96+30(SE)$ 901.34 INV OUT = $901.20(NW)$ 901.24
6713	INLET TYPE A	905.10. 905.06	NEENAH R-3501-TL	INV OUT = 901.38(NW) 901.56
6714	INLET TYPE A	906.40 906.34	NEENAH R-3501-TL	INV IN = $902.78(W)$ 902.82 INV OUT = $902.68(E)$ 902.72
6715	INLET TYPE A	906.40 906.39	NEENAH R-3501-TR	INV OUT = 902.90(E) 902.93

	SANITARY S	EWER STR	UCTURE I	DATA TABLE
STRUCTURE NUMBER	STRUCTURE TYPE	T.O.C.	CASTING TYPE	INVERT 🗥
807	MANHOLE	905.00 905.89	SOLID	INV IN = 889.21(NE)
853	MANHOLE	906.40 906.43	SOLID	INV IN = $889.96$ (E) $889.92$ INV OUT = $889.76$ (SW) $889.78$
853A	MANHOLE	<del>907.4</del> 0 907.42	SOLID	INV IN = $890.71(N)$ 890.57 INV OUT = $890.61(W)$ 890.55
853B	MANHOLE	907.90 907.91	SOLID	INV IN = $891.24$ (NE) 891.15 INV OUT = $891.14$ (S) 891.06
854	MANHOLE	905.30 905.42	SOLID	INV IN = $892.25(E)$ $$ INV IN = $898.66(NW)$ $898.63$ INV OUT = $892.45(SW)$ $892.12$
855	MANHOLE	<del>906.</del> 80. 906.70	SOLID	INV IN = 893.44(E) 893.54 INV OUT = 893.34(W) 893.44 INV OUT = 893.49(N) 893.54
855A	MANHOLE	904.50 904.45	SOLID	INV IN = 894.50(S) $\sqrt{}$
856	MANHOLE	906.77 907.01	SOLID	INV IN = 893.85(E) 893.98 INV IN = 898.89(S) 899.01 INV OUT = 893.75(W) 893.89
857	MANHOLE	908.40 908.79	SOLID	INV OUT = 894.71(W) 894.96
862	MANHOLE	<del>908.50</del> 908.92	SOLID	INV OUT = 901.70(N) 901.73
863	MANHOLE	90 <del>7.30</del> 907.35	SOLID	INV OUT = 900.60(SE) 900.54

	STORM SEWER PIPE DATA TABLE								
DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH AR	SLOPE	ABA_			
4701	4702	36"	RCP	142'	0.45%				
4702	4719	30"	RCP	181'	0.18%				
4702	4703	27"	RCP	154'156'	0:20%	0.22%			
4703	4704	24"	RCP	152,153	0.26%	0.25%			
4704	4705	24"	RCP	221, 222,	0.35%	0.41%			
4705		15"	RCP	8'	0.75%				
4705	6714	15"	RCP	156' 157'	0.70%	0.57%			
4719	6701A	30"	RCP	239, 238,	0.14%	0.10%			
6701A	6701B	30"	RCP	28' 28'	0.11%	0.25%			
6701B	6702	30"	RCP	75′. 74′	0:09%	0.10%			
6702	6705	27"	RCP	73'. 75'	0:12%	0.11%			
6702	6703	18"	RCP	132'134'	0.18%	<b>V</b>			
6703	6704	12"	RCP	233' √	0.33%	0.35%			
6703	6703A	12"	RCP	124'125'	0:32%	0.30%			
6703A	6703B	12"	RCP	161, 158,	2-33%	0.39%			
6704	6704A	12"	RCP	116'114'	0.40%	<b>V</b>			
6705	6712	18"	RCP	28' 30'	0:29%	0.50%			
6705	6706	21"	RCP	74' 71'	0:15%	0.20%			
6706	6707	18"	RCP	28' √	0.18%	<b>V</b>			
6707	6708	18"	RCP	68' 69'	0.18%	0.19%			

STORM SEWER PIPE DATA TABLE								
DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL.	LENGTH	SLOPE A			
6708	6711	12"	RCP	7 <b>25</b> , 26' <sub>12</sub>	1.00% 0.81%			
6708	6709	15"	RCP	.85, 80,	<del>0.25</del> % 0.26%			
6709	6710	12"	RCP	96′ √	<del>0.30%</del> 0.33%			
6712	6713	15"	RCP	28′ √	<del>0.29</del> % 0.79%			
6714	6715	12"	RCP	29' √	0.40% 0.38%			

SANITARY SEWER PIPE DATA TABLE							
DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH	SLOPE 🔬		
807	853	8"	PVC	75'	0.76%		
853	853A	8"	PVC	756'_ 158'	0.42% 0.40%		
853A	853B	8"	PVC	T <del>01'</del> 88'	0.42%_ 0.56%		
853B	854	8"	PVC	<del>216'</del> 219'	<del>0.42%</del> 0.44%		
854	863	8"	PVC .	T94'_ 195'	1.00%_ 0.98%		
854	855	8"	PVC	<del>258'</del> 256'	0.42% 0.46%		
855	855A	8"	PVC	240'_ 238'	0.42% 0.40%		
855	856	8"	PVC	73' √	0.42% 0.48%		
856	862	8"	PVC	312' 313'	0.90% 0.87%		
856	857	8"	PVC	205' √	0.42% 0.48%		





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SANCTUARY AT 116TH S

CESO ENGINEERS & SURVEYORS

DEVELOPMENT PLAN

Part of the SW 1/4 of Section 31, Township 18 North, Range 08 East, Clay

W13.0200

\* PE10201333 \*

JAMES E. SHIELDS, JR P.E. 1020133

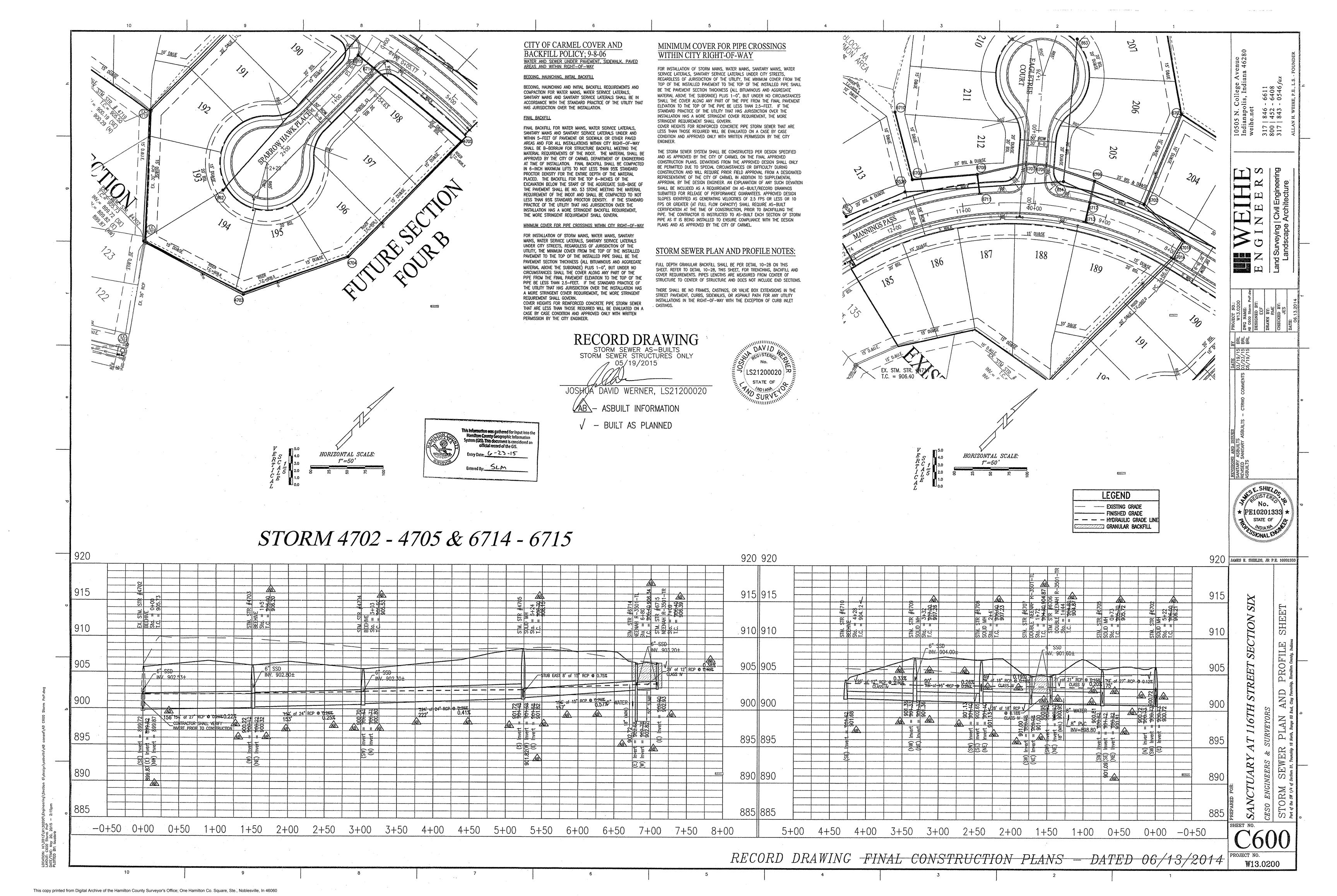
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SECTION

10505 N. College Avenue Indianapolis, Indiana 4628 weihe.net 317 | 846 - 6611 800 | 452 - 6408 317 | 843 - 0546 fax

- DATED 06/13/2014 RECORD DRAWING FINAL CONSTRUCTION PLANS

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RECORD DRAWING

STORM SEWER AS—BUILTS STORM SEWER STRUCTURES ONLY 0\$/19/2015

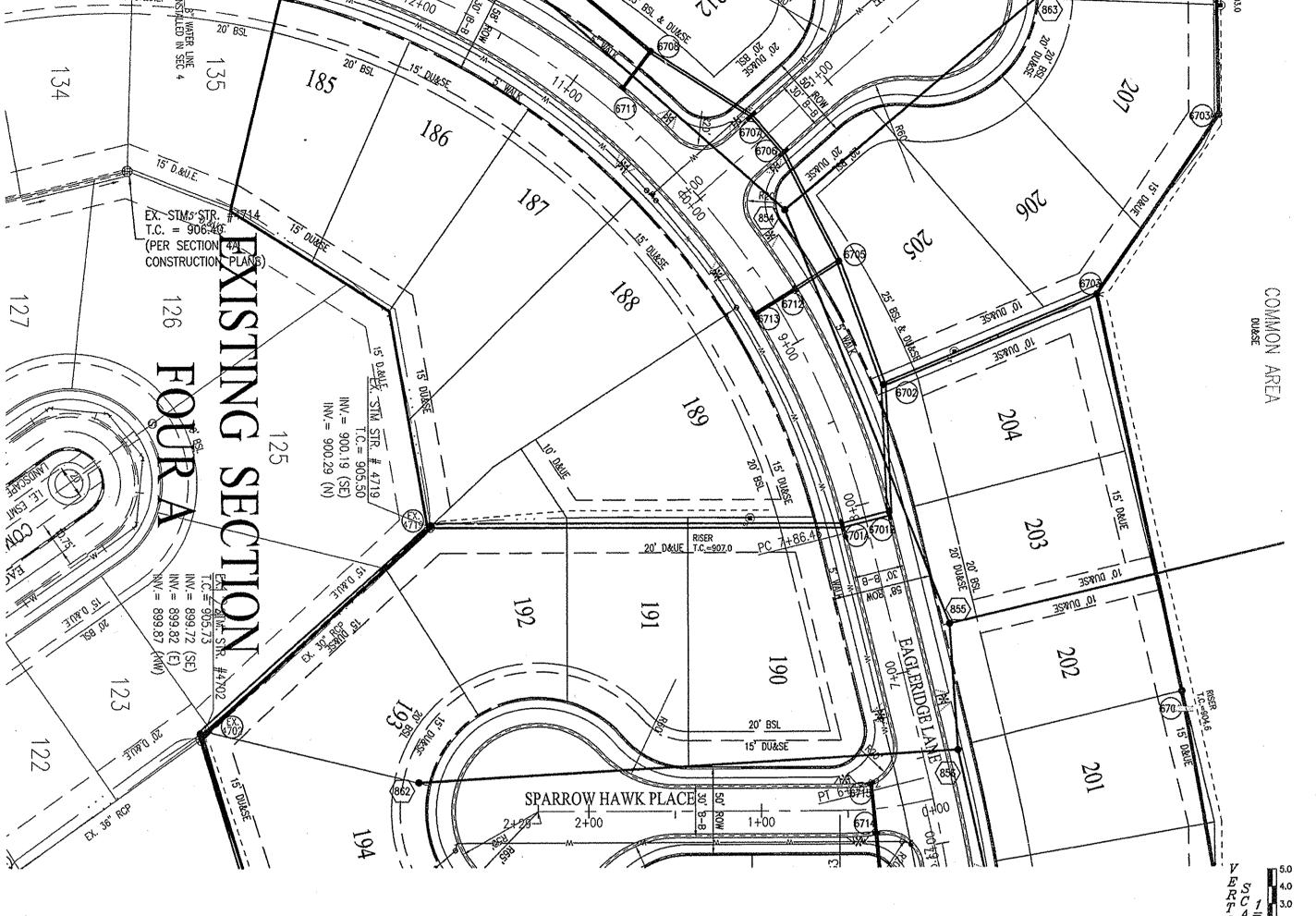
JOSHUA DAVID WERNER, LS21200020

AB - ASBUILT INFORMATION

√ - BUILT AS PLANNED

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MINIMUM COVER FOR PIPE **CROSSINGS WITHIN CITY RIGHT-OF-WAY** 

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF JURISDICTION OF THE UTILITY, 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 ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5-FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER 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 OF 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 OR 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 SEWER PLAN AND PROFILE

FULL DEPTH GRANULAR BACKFILL SHALL BE PER DETAIL 10-28 ON THIS SHEET. REFER TO DETAIL 10-28, THIS SHEET, FOR TRENCHING, BACKFILL AND COVER REQUIREMENTS. PIPES LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND DOES NOT INCLUDE END SECTIONS.

THERE SHALL BE NO FRAMES, CASTINGS, OR VALVE BOX EXTENSIONS IN THE STREET PAVEMENT, CURBS, SIDEWALKS, OR ASPHALT PATH FOR ANY UTILITY INSTALLATIONS IN THE RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLET CASTINGS.

HORIZONTAL SCALE:

BACKFILL POLICY; 9-8-06 WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN RIGHT-OF-WAY

CITY OF CARMEL COVER AND

BEDDING, HAUNCHING, INITIAL BACKFILL

BEDDING, HAUNCHING AND INITIAL BACKFILL REQUIREMENTS AND COMPACTION FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS SHALL BE IN ACCORDANCE WITH THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION.

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846 452 843

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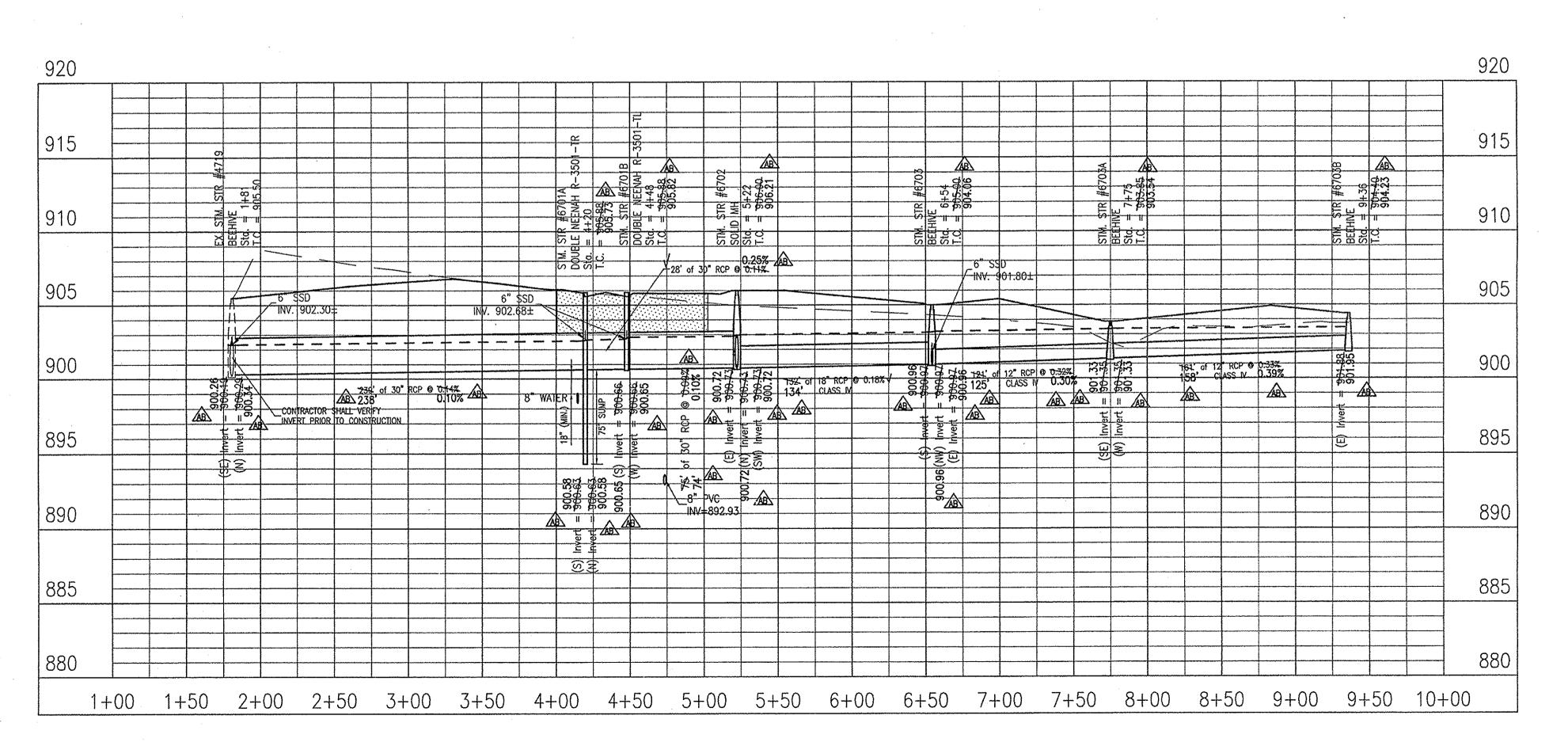
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FINAL BACKFILL FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS UNDER AND WITHIN 5-FEET OF PAVEMENT OR SIDEWALK OR OTHER PAVED AREAS AND FOR ALL INSTALLATIONS WITHIN CITY RIGHT-OF-WAY SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. THE MATERIAL SHALL BE APPROVED BY THE CITY OF CARMEL DEPARTMENT OF ENGINEERING AT TIME OF INSTALLATION. FINAL BACKFILL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6-INCHES OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUB-BASE OF THE PAVEMENT SHALL BE NO. 53 STONE MEETING THE MATERIAL REQUIREMENT OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

#### MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF JURISDICTION OF THE UTILITY. 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 ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5-FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

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LEGEND ---- EXISTING GRADE - FINISHED GRADE - - - HYDRAULIC GRADE LINE GRANULAR BACKFILL

SANCTUARY
CESO ENGINEERS &
STORM SEWEF SHEET NO. W13.0200

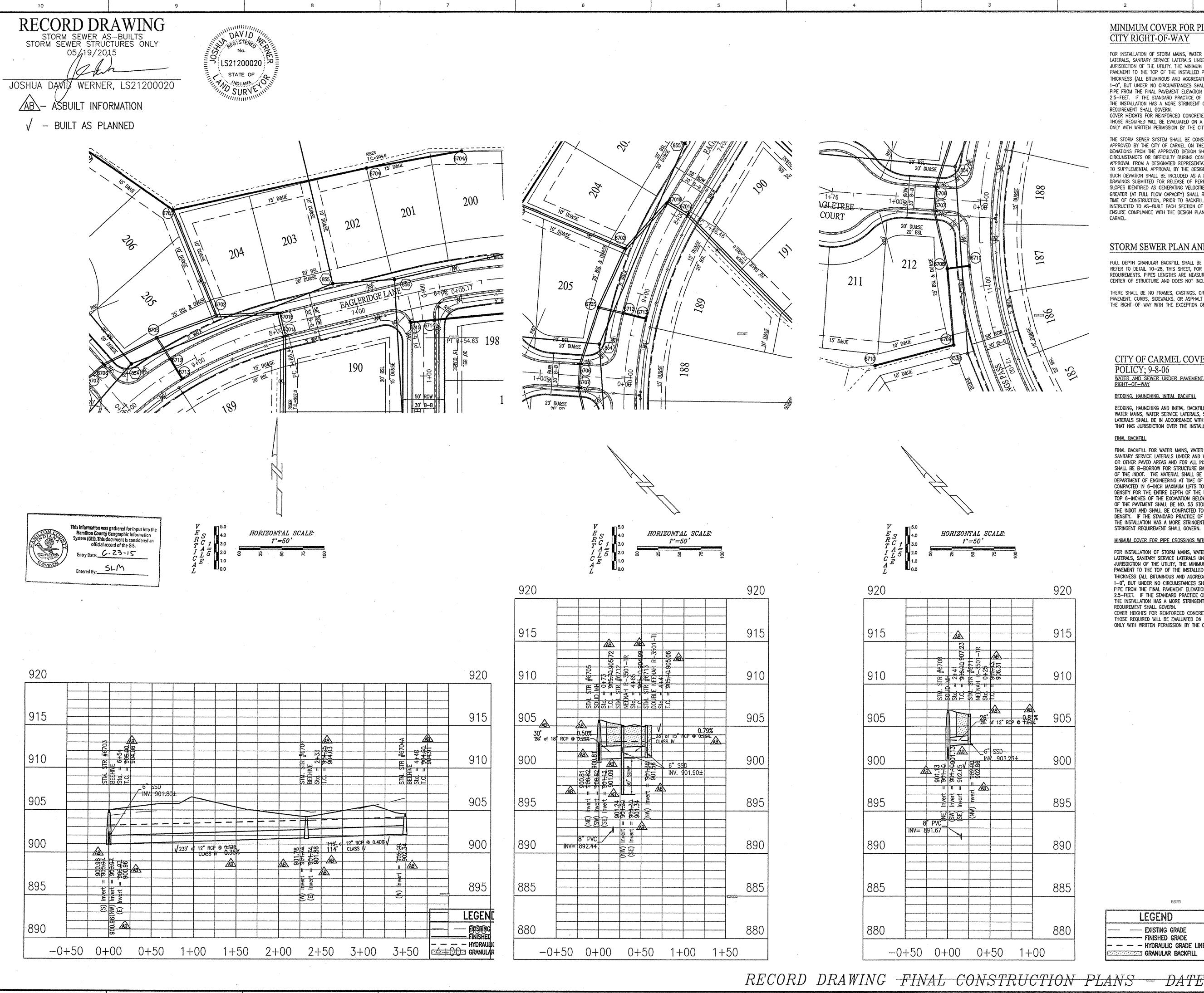
AT 116TH

\* PE10201333 \* STATE OF

JAMES E. SHIELDS, JR P.E. 1020133

SHE

PROFILE



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MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF JURISDICTION OF THE UTILITY, 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 ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5-FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN,

COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER 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 OF 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 OR 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

### STORM SEWER PLAN AND PROFILE NOTES:

FULL DEPTH GRANULAR BACKFILL SHALL BE PER DETAIL 10-28 ON THIS SHEET. REFER TO DETAIL 10-28, THIS SHEET, FOR TRENCHING, BACKFILL AND COVER REQUIREMENTS. PIPES LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND DOES NOT INCLUDE END SECTIONS.

THERE SHALL BE NO FRAMES, CASTINGS, OR VALVE BOX EXTENSIONS IN THE STREET PAVEMENT, CURBS, SIDEWALKS, OR ASPHALT PATH FOR ANY UTILITY INSTALLATIONS IN THE RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLET CASTINGS.

## CITY OF CARMEL COVER AND BACKFILL

WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN

BEDDING, HAUNCHING, INITIAL BACKFILL

BEDDING, HAUNCHING AND INITIAL BACKFILL REQUIREMENTS AND COMPACTION FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS SHALL BE IN ACCORDANCE WITH THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION.

FINAL BACKFILL FOR WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS AND SANITARY SERVICE LATERALS UNDER AND WITHIN 5-FEET OF PAVEMENT OR SIDEWALK OR OTHER PAVED AREAS AND FOR ALL INSTALLATIONS WITHIN CITY RIGHT-OF-WAY SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. THE MATERIAL SHALL BE APPROVED BY THE CITY OF CARMEL DEPARTMENT OF ENGINEERING AT TIME OF INSTALLATION. FINAL BACKFILL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6-INCHES OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUB-BASE OF THE PAVEMENT SHALL BE NO. 53 STONE MEETING THE MATERIAL REQUIREMENT OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

### MINIMUM COVER FOR PIPE CROSSINGS WITHIN CITY RIGHT-OF-WAY

LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF JURISDICTION OF THE UTILITY, 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 ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5-FEET. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN. COVER HEIGHTS FOR REINFORCED CONCRETE PIPE STORM SEWER THAT ARE LESS THAN

THOSE REQUIRED WILL BE EVALUATED ON A CASE BY CASE CONDITION AND APPROVED ONLY WITH WRITTEN PERMISSION BY THE CITY ENGINEER.

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PROFILE AND \* Clay Towns

SHIELDS No.

\* PE10201333 \*

STATE OF WOIANA CONTINUES ON ALERS

JAMES E. SHIELDS, JR P.E. 10201333

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RECORD DRAWING FINAL CONSTRUCTION PLANS - DATED 06/13/2014