



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

April 25, 2018

To: Hamilton County Drainage Board

Re: Long Branch Drain, Waterfront of West Clay Section 2C Arm

Attached is a petition filed by Paul Shoopman Home Building Group, along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Waterfront of West Clay Section 2C 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
 300 ft.
 15" RCP
 227 ft.

 18" RCP
 269 ft.
 6" SSD
 2,055 ft.

The total length of the drain will be 2,851 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:

Curbline SSD in Streets:
Prairie Falcon Drive
Eagleridge Lane
West Road loop around Block A

Rear Yard SSDs:

Rear yard lots 156 to 158 from Str. 3007 running west to riser Rear yard lot 72 from Str. 3007 to Str. 3005 Rear yard lots 70 to 71 from main line SSD running west to riser Rear yard lots 67 to 69 and side yard lot 71 from Str. 3005 running south to riser The temporary swales shown on the development plan on Sheet C300 of the plans at lots 67 and 72 are not included as part of the regulated drain. These will be replaced with storm sewer at the time the future section is developed.

The lots in this subdivision were originally platted as part of Sanctuary at 116th Street Section 2. However, due to the recession and changes in the developers of this subdivision it was not platted as per the assessment roll from the report approved in 2008. The original hearing for Long Branch Drain, Sanctuary at 116th Street Section 2, Lots 42 thru 84 & Blocks H thru L was held on January 28, 2008. On March 26, 2009, Lots 42-45 & 83-84 & Block M were platted. On October 6, 2017, Lots 42-45 were replatted as Waterfront of West Clay. In 2018, Lots 73-82 & Blocks A-B, will be platted as Sanctuary at 116th Street Section 2B. In this section, Lots 48-62 & Blocks A-D are proposed to be platted as Waterfront of West Clay Section 2C. After all this takes place, any remaining lots on the original Section 2 assessment roll should be removed and will be included in the future as part of a new hearing for Waterfront of West Clay, in the configuration and layout as proposed in those construction plans and secondary plat.

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 commen areas, with a \$65.90 minimum, and \$10.00 per acre for roadways. With this assessment the total annual assessment for this drain will be \$1,258.40.

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: Lexon Insurance Company

Date: March 14, 2018 Number: 1133427

For: Storm Sewers & Sub-Surface Drains

Amount: \$105,619.20

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 Waterfront of West Clay Section 2C as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for June 25, 2018.

Kenton C. Ward, CFM Hamilton County Surveyor

KCW/bil.

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

Long Branch Drain, Waterfront of West Clay Section 2C Arm

On this 25th day of June, 2018, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Long Branch Drain, Waterfront of West Clay Section 2C 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

President

Member

Member

Attest:

(Revised 06/08/04)

STATE OF INDIANA)
COUNTY OF HAMILTON)

FILTO

MARTY : 138

TO: HAMILTON COUNTY DRAINAGE BOARD

% Hamilton County Surveyor One Hamilton County Square, Suite 188 Noblesville, IN. 46060-2230

In the matter of	Waterfront of West Clay	Subdivision, Section
2C	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 _____ Waterfront of West Clay - Sect. 2C ____, 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.

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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

Co Pult MPS 1936	
Signed	Signed
Paul Shoopman	
Printed Name	Printed Name
January 22, 2018	
Date	Date
Signed	Signed
Printed Name	Printed Name
	D.
Date	Date

Adobe PDF Fillable Form







OFFICE OF HAMILTON COUNTY SURVEYOR

PROJECT: WATERFRONT OF WEST	TCLAY SEC 2C		DATE: March 14, 2	018
LOCATION: Carmel, IN	ITEM: SUMMARY		JOB #: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
MONUMENTATION				\$4,200
SANITARY SEWER				\$21,133
STORM SEWER				\$88,016
PAVEMENT				\$80,793
CURBS				\$25,725
WALKS				\$22,557
SIGNAGE				\$6,325
WATER				\$41,153
EROSION CONTROL				\$30,486
TOTAL				\$320,387

Note:

This cost opinion was generated from Construction Plans prepared by Weihe Engineers dated July 25, 2017, revised January 16, 2018

No.

890258
STATE OF

WDIANA

WDIANA

3/14/2018

Weihe Engineers 10505 N. College Avenue Indianapolis, IN 46280 317-846-6611

.OCATION: Carmel, IN	ITEM: MONUMENT	ATION	JOB #: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
MONUMENTS:				
STREET MARKERS	4	EA	\$150.00	\$600.0
BOUNDARY MARKERS @ R/W	12	EA	\$300.00	\$3,600.0

TOTAL MONUMENTATION

\$4,200.00

PROJECT: WATERFRONT OF WESTCLAY SEC 2C		DATE: March 14, 2018			
LOCATION: Carmel, IN	ITEM: SANITARY	LINUT	JOB #: W160409 UNIT PRICE	TOTAL	
DESCRIPTION	QUANTITY	UNIT		\$2,256.00	
8" SDR 35 PIPE - 6'-10'	141	LF	\$16.00		
6" PVC LATERALS 6'-10'	441	<u>LF</u>	\$12.00	\$5,292.00	
WYES	3	EA	\$160.00	\$480.00	
GRANULAR BACKFILL	389	CYDS	\$13.00	\$5,057.00	
MANHOLES 6'-8'	1	EA	\$2,400.00	\$2,400.00	
Withorthog					
TELEVISE SANITARY	403	LF	\$1.75	\$705.25	
MANHOLE TESTING	2	EΑ	\$110.00	\$220.00	
AIR & MANDREL TESTING	403	LF	\$1.00	\$403.00	
TYPE 3 CLEANOUT	2	EΑ	\$410.00	\$820.00	
CORE TO EX. MANHOLE	1	EA	\$3,500.00	\$3,500.00	
TOTAL SANITARY				\$21,133.25	

PROJECT: WATERFRONT OF WESTCLAY SEC 2C DATE: March 14, 2018

LOCATION: Carmel, IN	ITEM: STORM		JOB #: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
12" RCP PIPE	165	LF	\$25.00	\$4,125.00
15" RCP PIPE	227	LF	\$29.00	\$6,583.00
18" RCP PIPE	269	LF	\$35.00	\$9,415.00
21" RCP PIPE	20	LF	\$40.00	\$800.00
DOUBLE INLET	3	EA	\$3,600.00	\$10,800.00
INLET/BEEHIVES w/CSTG	2	EA	\$2,200.00	\$4,400.00
MANHOLES w/CSTG	1	ΕA	\$3,500.00	\$3,500.00
CURB INLET w/CSTG	1	EA	\$2,500.00	\$2,500.00
21" END SECTION	1	EA	\$1,400.00	\$1,400.00
GRANULAR BACKFILL	175	CYDS	\$13.00	\$2,275.00
6" SSD IN STREET	910	LF	\$12.00	\$10,920.00
6" SSD IN SWALE	1526	LF	\$14.00	\$21,364.00
6" SUBSURFACE RISERS	4	EA	\$400.00	\$1,600.00
4" SUBSURFACE LOT HOOKUPS	16	EA	\$300.00	\$4,800.00
TELEVISING STORM PIPE	681	LF	\$1.65	\$1,123.65
TELEVISING 6" STREET SSD	910	LF	\$1.00	\$910.00
CORE EXISTING STRUCTURE	1	EA	\$1,100.00	\$1,100.00
CONCRETE CRADLE	1	EA	\$400.00	\$400.00

TOTAL STORM \$88,015.65

PROJECT: WATERFRONT OF WESTCLAY SEC 2C		DATE: March 14, 2018		
LOCATION: Carmel, IN	ITEM: PAVEMENT	•	JOB #: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
STONE SUB-BASE (#53 STONE)	440	TONS	\$8.00	\$3,520.00
ASPHALT - CUL-DE-LOOPS	1055	SYDS	\$40.00	\$42,200.00
ASPHALT - PRAIRIE FALCON DR.	704	SYDS	\$40.00	\$28,160.00
LIME STABILIZATION	1975	SYDS	\$3.50	\$6,912.50

TOTAL PAVEMENT

\$80,792.50

PROJECT: WATERFRONT OF WESTCLAY SEC 2C			DATE: March 14, 2	018	
LOCATION: Carmel, IN	ITEM: CURBS		JOB #: W160409		
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
2' CONCRETE ROLL CURB	962	LF	\$15.00	\$14,430.00	
2' CONC.CHAIRBACK CURB	753	LF	\$15.00	\$11,295.00	

TOTAL CURBS

\$25,725.00

			10D #: W460400	
LOCATION: Carmel, IN DESCRIPTION	ITEM: WALKS QUANTITY	UNIT	JOB #: W160409 UNIT PRICE	TOTAL
5' CONC. WALK	1049	LF	\$18.50	\$19,406.50
(IN FRONT OF LOTS)				
HANDICAP RAMP	4	EA	\$650.00	\$2,600.00
END OF STREET BARRICADE	1	EA	\$550.00	\$550.00

TOTAL WALKS

\$22,556.50

OCATION: Carmel, IN	ITEM: SIGNAGE		JOB #: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
STREET SIGNS	1	EA	\$925.00	\$925.00
TRAFFIC CONTROL SIGNS	8	EA	\$675.00	\$5,400.00

TOTAL SIGNAGE

\$6,325.00

PROJECT: WATERFRONT OF WESTCLAY SEC 2C		DATE: March 14, 2018			
LOCATION: Carmel, IN	ITEM: WATER		JOB #: W160409		
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
6" MAIN w/VALVES & FITTINGS	304	LF	\$25.00	\$7,600.00	
8" MAIN W/VALVES & FITTINGS	188	LF	\$36.00	\$6,768.00	
1" LATERAL - K COPPER	367	LF	\$12.00	\$4,404.00	
SERVICE TAPS	9	EA	\$110.00	\$990.00	
FLUSHING & TESTING	492	LF	\$1.10	\$541.20	
HYDRANTS W/ VALVES	3	EA	\$4,400.00	\$13,200.00	
METER PITS (SINGLES)	9	EA	\$850.00	\$7,650.00	
TOTAL WATER				\$41,153.20	

PROJECT: WATERFRONT OF WESTCLAY SEC 2C			DATE: March 14,	2018
LOCATION: Carmel, IN	ITEM: EROSION		JOB#: W160409	
DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
PERMANENT SEEDING	6950	SYDS	\$0.45	\$3,127.50
TEMPORARY SEEDING	20150	SYDS	\$0.25	\$5,037.50
EROSION BLANKETS	4350	SYDS	\$1.50	\$6,525.00
TEMP. CONST. ENTRANCE	335	SYDS	\$20.00	\$6,700.00
SILT FENCE	4533	LF	\$1.10	\$4,986.30
RIP RAP	250	SYDS	\$10.00	\$2,500.00
BEEHIVE INLET PROTECTION	4	EA	\$65.00	\$260.00
CURB INLET PROTECTION	7	EA	\$150.00	\$1,050.00
HC RAMP PROTECTION	4	EA	\$75.00	\$300.00
I	l l			

TOTAL EROSION \$30,486.30



LEXON INSURANCE COMPANY Mt. Juliet, TN 37122

MAR 1 9 2018

SUBDIVISION PERFORMANCE BOND

OFFICE OF HAMILTON COUNTY SURVEYOR

BOND #1133427

HCDB-2018-00011

KNOW ALL MEN BY THESE PRESENTS, That we, Paul Shoopman Home Building Group, Inc., 11731 Cold Creek Ct., Zionsville, IN 46077 as Principal, and Lexon Insurance Company, 12890 Lebanon Road, Mt. Juliet, TN 37122, as Surety, are held and firmly bound unto the Hamilton County Drainage Board, One Hamilton County Square, Suite188, Noblesville, IN 46060 as Owner, in the sum of ** One Hundred Five Thousand Six Hundred Nineteen and 20 /100 **Dollars (\$105,619.20) for payment of which we firmly bind ourselves, our heirs, executors, administrators, and assigns.

THE CONDITION OF THIS BOND is such that if the said Principal shall complete the construction of Waterfront of WestClay, Section 2C – Storm Sewer according to the approved plans and specifications on file with the Hamilton County Drainage Board, then this obligation is null and void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 14th Day of March, 2018.

Paul Shoopman Home Building Group, Inc.

Lexon Insurance Company

By:

Deborah M. Roth, Attorney-in-Fact

American Contracting Services, Inc. P.O. Box 691 Danville, IN 46122 (317) 563-3228

POWER OF ATTORNEY

LX-312703

Lexon Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that LEXON INSURANCE COMPANY, a Texas Corporation, with its principal office in Louisville, Kentucky, does hereby constitute and appoint: Anthony G. Balzano, Deborah M. Roth, Rosalie S. Smith, Ruth M. Pell, Sarah E. Scott, Jo Ann R. Smith its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of LEXON INSURANCE **COMPANY** on the 1st day of July, 2003 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed \$2,500,000.00, Two Million Five Hundred Thousand dollars, which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Assistant Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, LEXON INSURANCE COMPANY has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 5th day of August, 2015.

LEXON INSURANCE COMPANY

David E. Campbell President

ACKNOWLEDGEMENT

On this 5th day of August, 2015, before me, personally came David E. Campbell to me known, who be duly sworn, did depose and say that he is the President of LEXON INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.



AMY TAYLOR Notary Public- State of Tennessee **Davidson County** My Commission Expires 07-08-19

Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of LEXON INSURANCE COMPANY, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the forgoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Andrew Smith Assistant Secretary

"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files and application for insurance of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties."



APR 0 9 2018

BOND RIDER

OFFICE OF HAMILTON COUNTY SURVEYOR

HCDB- 2018- 00011

To be attached to and form a part of Subdivision Performance Bond # 1133427, Dated March 14, 2018, with Paul Shoopman Home Building Group, Inc., as Principal, and Lexon Insurance Company, as Surety, in favor of the Hamilton County Drainage Board, as Obligee.

It is understood and agreed that the Bond is changed or revised in the particulars as indicated below.

The Obligee be changed:

From: Hamilton County Drainage Board

TO: Hamilton County Board of Commissioners

Said Bond shall be subject to all its terms, conditions, and limitations, except as herein expressly modified.

This Bond Rider shall become effective: March 14, 2018

Signed, Sealed and Dated April 2, 2018

Paul Shoopman Home Building Group, Inc.
PRINCIPAL

Lexon Insurance Company SURETY

Deborah M. Roth, Attorney-in-Fact

Ву:__

American Contracting Services, Inc.

P.O. Box 691

Danville, IN 46122 (317) 563-3228

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF

Long Branch Drain, Waterfront of West Clay Section 2C 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, Waterfront of West Clay Section 2C Arm on June 25, 2018 at 9:00 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, Waterfront of West Clay Section 2C Arm

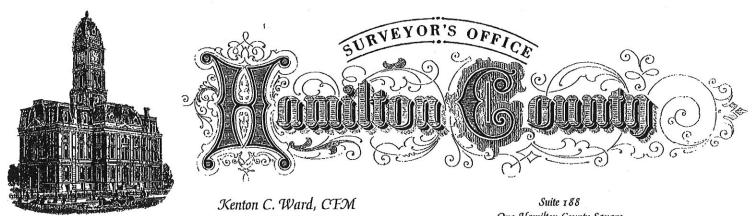
NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on June 25, 2018 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

September 23, 2020

Re: Long Branch Drain - Waterfront of West Clay Sec. 2C Arm

Attached are as-built, certificate of completion & compliance, and other information for Waterfront of West Clay Section 2C 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 April 25, 2018. The report was approved by the Board at the hearing held June 25, 2018. (See Drainage Board Minutes Book 18, Pages 185-187) The changes are as follows: the 12" RCP was shortened from 300 feet to 164 feet. The 15" RCP was lengthened from 227 feet to 427 feet. The 18" RCP was lengthened from 269 feet to 274 feet. The 6" SSD was lengthened from 2055 feet to 2078 feet. The length of the drain due to the changes described above is now **2943** feet.

The non-enforcement was approved by the Board at its meeting on April 25, 2018 and recorded under instrument #2018055029.

The following sureties were guaranteed by Lexon Insurance Company and released by the Board on its January 13, 2020 meeting.

Bond-LC No: 1133427 Amount: \$105,619.20 For: Storm Sewers & SSD Issue Date: March 14, 2018 I recommend the Board approve the drain's construction as complete and acceptable.

Kenton C. Ward, CFM Hamilton County Surveyor

CERTIFICATE OF COMPLETION AND COMPLIANCE



To: Hamilton County Surveyor

OFFICE OF HAMILTON COUNTY SURVEYOR

Re: WATERFRONT OF WEST CLAY SECTION 2C

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.

Signature: PE LEW	Date: 3-27-2019
Type or Print Name: JOSEPH TRTAN	
Business Address: 10505 North Cou	EGE AVENUE
INDIANAPOLIS, IN	
Telephone Number: 317-846-6611	



INDIANA REGISTRATION NUMBER

LS 21500003

AREA LOCATION MAP

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATIONS OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY AND COORDINATE CONSTRUCTION WITH ALL RESPECTIVE UTILITIES.
- 4) ALL QUANTITIES ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.
- 5) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH
- 6) EXCAVATIONS EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE A TRENCH SAFETY SYSTEM DESIGNED BY A
- 7) IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL
- 8) TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS
- 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 TO CONFIRM 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.
- 13) BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS & PLAT FOR EXACT INFORMATION.
- 14) THIS SITE DOES NOT CONTAIN WETLANDS AS SHOWN ON THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE; CARMEL, INDIANA, NATIONAL WETLANDS INVENTORY MAP. NO WETLANDS ARE IMPACTED BY THIS DEVELOPMENT.
- 15) ALL WATER MAINS, HYDRANTS, AND WATER VALVES SHALL BE INSPECTED AND SHALL COMPLY WITH BACKFILL, BEDDING, AND THRUST BLOCK REQUIREMENTS PER CITIZENS WESTFIELD DETAIL SHEETS.

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 "BOO 54 1989". ELEV.: 901.14 FEET (1929 DATUM) ELEV .: 900.76 FEET (1988 DATUM) THESE PLANS ARE ON 1988 DATUM

OPERATING AUTHORITIES

CITY OF CARMEL ONE CIVIC SQUARE CARMEL, IN 46032 317-571-2441 Attn: JEREMY KASHMAN

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

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

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

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

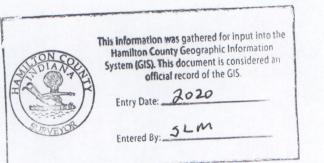
DUKE ENERGY 16475 SOUTHPORK DRIVE WESTFIELD, IN 46074 317-896-6711 Attn: Shirley Hunter

CARMEL UTILITES 760 3RD AVENUE S.W. CARMEL, IN 46032 317-571-2443 Attn: John Duffy

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

RECORD DRAWING CONSTRUCTION PLANS FOR

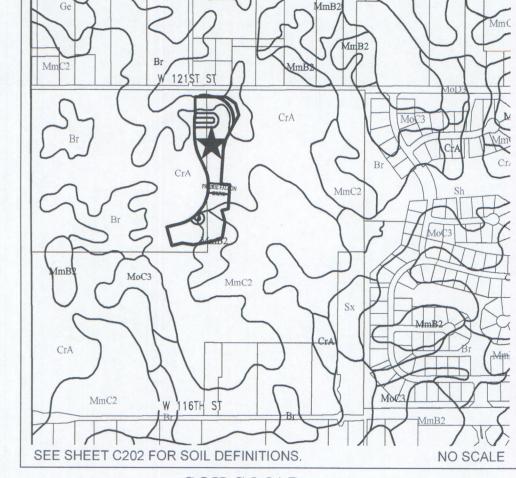
WATERFRONT OF WEST CLAY SECTION 2C



4455 W. 121ST STREET CARMEL, IN

RECORD DRAWING





SOILS MAP

- SOIL ARE SEASONAL HIGH WATER TABLE, HIGH POTENTIALFROST ACTION, MODERATE SHRINK-SWELL POTENTIAL. AND MODERATE PERMEABILITY. THIS SOIL HAS SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE ARTIFICIALLY DRAINED AND PROTECTED FROM FLOODING. DWELLINGS AND SMALL BUILDINGS WITH BASEMENTS SHOULD NOT BE CONSTRUCTED IN THIS SOIL. USING PROPERLY DESIGNED FOUNDATIONS AND FOOTINGS HELP PREVENT STRUCTURAL DAMAGE FROM FROST ACTION AND SHRINKING AND SWELLING OF THE SOIL. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS BECAUSE OF THE SEASONAL HIGH WATER TABLE AND HIGH POTENTIAL FROST ACTION. THE BASE MATERIAL FOR ROADS AND STREETS SHOULD BE REPLACED OR STRENGTHENED WITH SUITABLE MATERIAL
- PLANDS. IT IS DEEP AND SOMEWHAT POORLY DRAINED WITH SLOW PERMEABILITY. IT HAS HIGH AVAILABLE SLOW PERMEABILITY. THIS SOIL HAS SOME SEVERE LIMITATIONS FOR BUILDING SITES. THE SITES NEED TO BE THE SOIL. THIS SOIL HAS SEVERE LIMITATIONS FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR ROADS NEEDS TO BE STRENGTHENED OR REPLACED WITH SUITABLE MATERIAL
- MIAMI SILT LOAM, 2 TO 6 PERCENT SLOPES, ERODED THE MAIN SOIL FEATURES THAT ADVERSELY AFFECT NGINEERING USES OF THIS SOIL ARE MODERATE POTENTIAL FROST ACTION, MODERATELY SLOW PERMEABILITY STRENGTH ARE MODERATE LIMITATIONS THAT NEED TO BE OVERCOME. LOW STRENGTH IS A SEVERE LIMITATION TO THE USE OF THIS SOIL FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR ROADS AND STREETS NEEDS TO BE STRENGTHENED WITH SUITABLE MATERIAL.
- MODERATE. SURFACE RUNOFF IS MEDIUM. THIS SOIL IS SUITABLE FOR URBAN DEVELOPMENT. THE MAIN SOILD SEVERE DURING CONSTRUCTION. THIS SOILS HAS MODERATE LIMITATIONS FOR BUILDING SITES. USING PROPERLY DESIGNED FOUNDATIONS, FOOTINGS, AND BASEMENT WALLS AND USING FOUNDATION DRAIN TILE HELP TO REMOVE EXCESS WATER AND TO PREVENT STRUCTURAL DAMAGE FROM SHRINKING AND SWELLING AND LOW STRENGTH OF THE SOIL. THIS SOIL HAS SEVER LIMITATIONS FOR LOCAL ROADS AND STREETS. THE BASE MATERIAL FOR LOCAL ROADS AND STREETS NEEDS TO BE STRENGTHENED WITH SUITABLE MATERIAL. ROADS AND STREETS SHOULD BE CONSTRUCTD ON THE CONTOUR OF SLOPES.
- MoC3 Miami Clay loam, 6 to 12 percent slopes, severely eroded

SHEET INDEX

	SHEET INDEX
SHEET NO.	DESCRIPTION
C001	TITLE SHEET
C100	EXISTING CONDITIONS/ DEMOLITION PLAN
C200	STORMWATER POLLUTION PREVENTION PLAN PHASE 1
C201	STORMWATER POLLUTION PREVENTION PLAN PHASE 2
C202-C204	STORMWATER POLLUTION PREVENTION DETAILS & SPECS.
C300	DEVELOPMENT PLAN
C301	PONDING LIMITS/ FLOOD ROUTE PLAN
C302	UTILITY PLAN
C400	STREET PLAN & PROFILE
C401-C402	STREET DETAILS
C403	TRAFFIC CONTROL/SIGNAGE/SUMP PLAN
C500	SANITARY SEWER PLAN & PROFILE
C501	SANITARY SEWER DETAILS
C502	SANITARY SEWER DETAILS AND SPECIFICATIONS
C600-C601	STORM SEWER PLAN & PROFILE
C602-C603	STORM SEWER DETAILS
C700	WATER MAIN PLAN
C701	WATER PLAN DETAILS

PLANS PREPARED FOR

WATERFRONT HOMES 12080 ABNEY RUN DRIVE ZIONSVILLE, INDIANA 46077 TELEPHONE: (317) 714-2406 CONTACT PERSON: PAUL SHOOPMAN EMAIL: PAUL@SHOOPMANHOMES.COM

PLANS PREPARED BY

WEIHE ENGINEERS, INC. 10505 N. COLLEGE AVE. INDIANAPOLIS, INDIANA 46280 TELEPHONE: (317) 846-6611 FAX: (317) 843-0546 CONTACT PERSON: ALVIN E. SKOOG JR., P.E. EMAIL: SKOOGR@WEIHE.NET



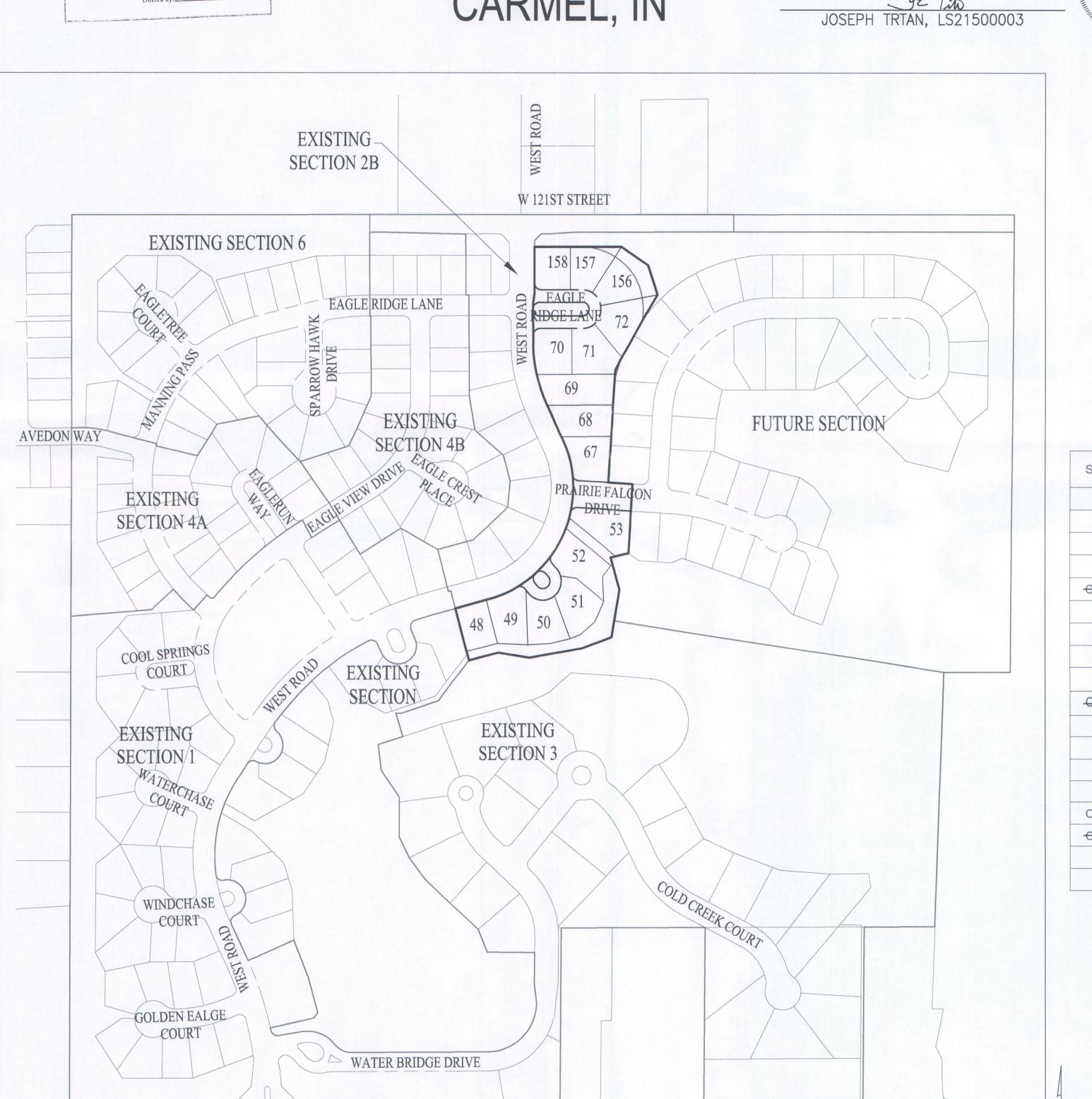
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WA SEC W160409

ALVIN E. SKOOG JR., P.E. 6088057

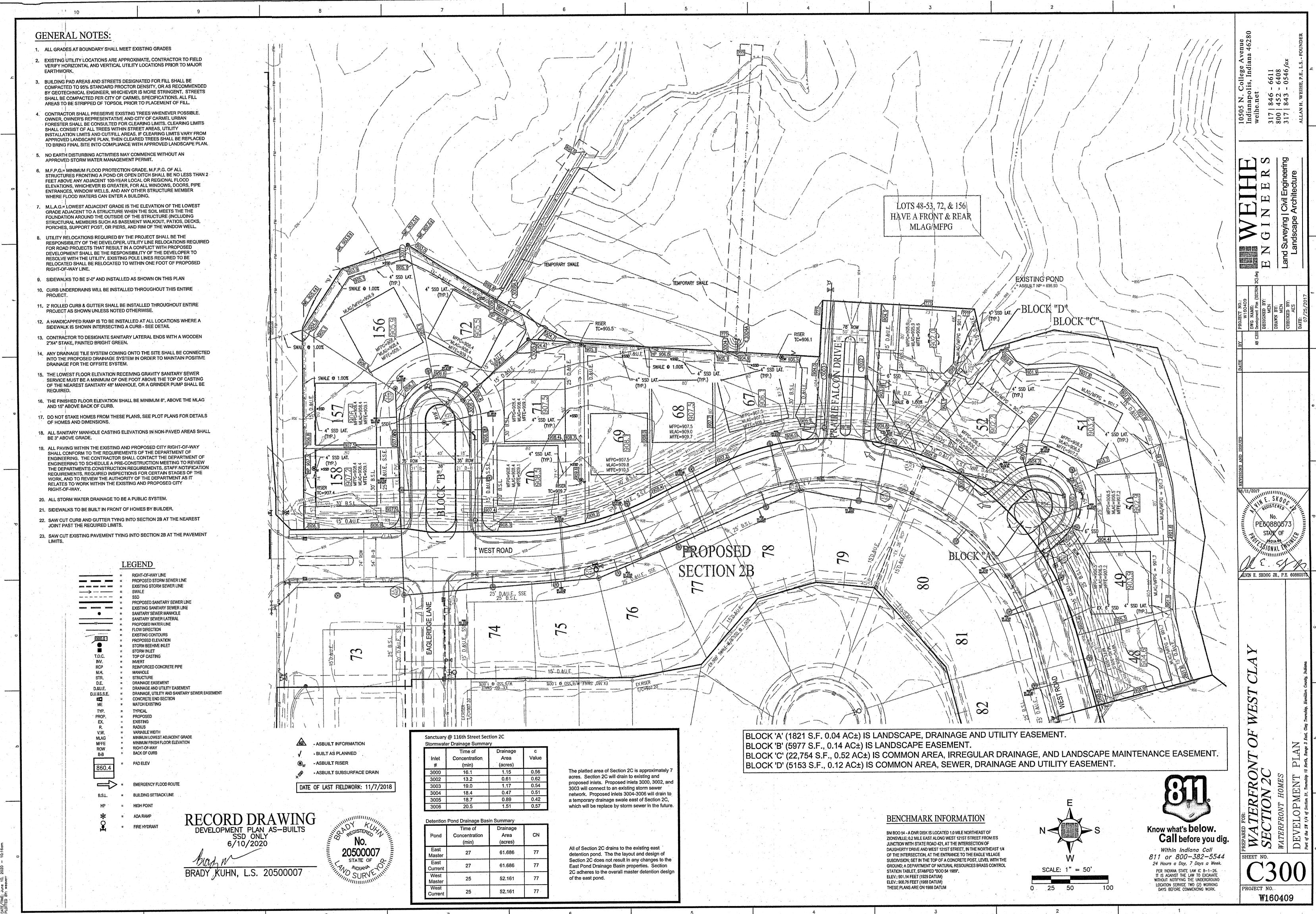
846 452 843



SITE MAP

W 116TH STREET

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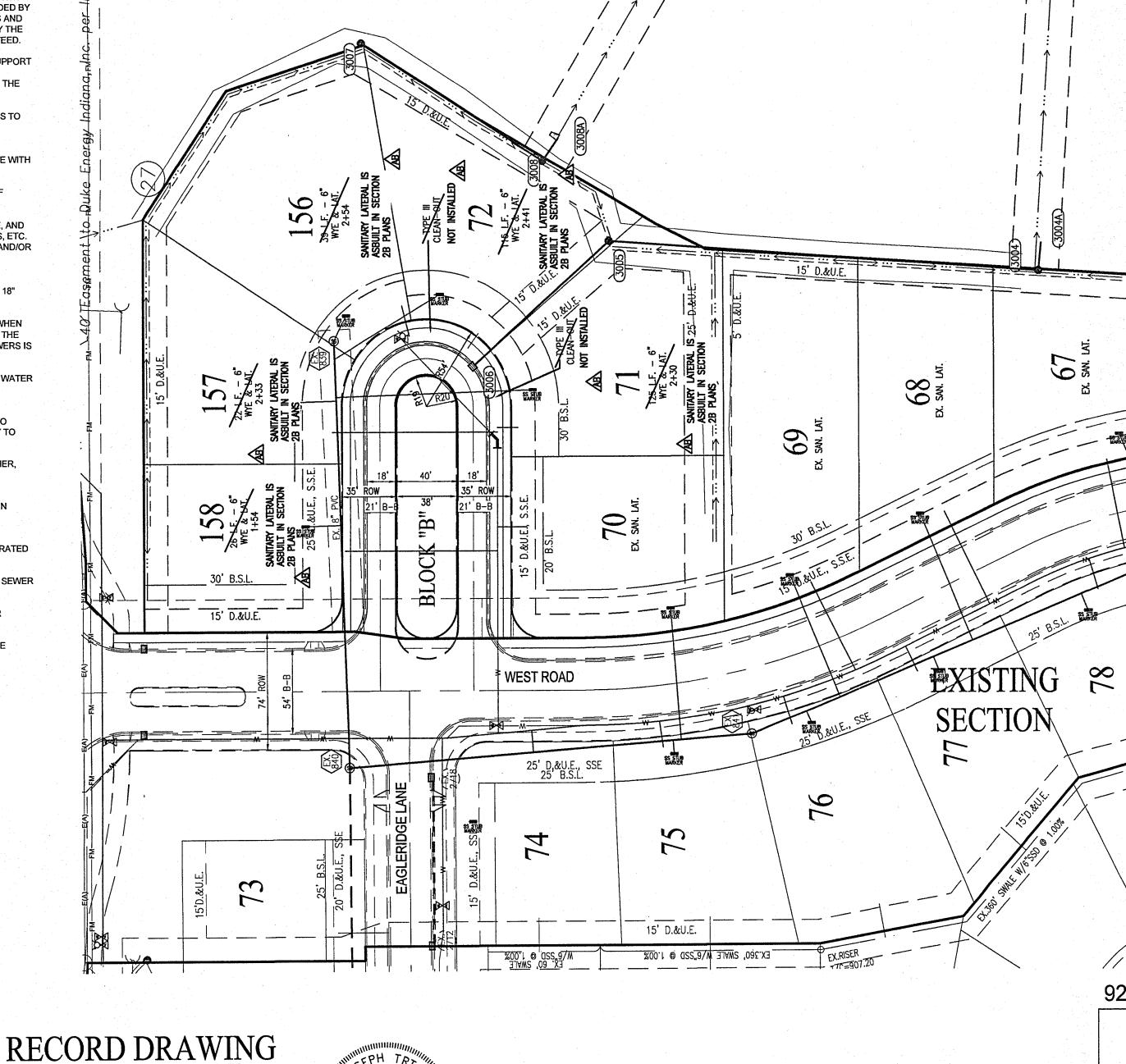
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SANITARY SEWER NOTES

- 1. THE CONTRACTOR SHALL CONTACT APPLICABLE UNDERGROUND-PLANT PROTECTION/LOCATION SERVICE AT LEAST 72 HOURS PRIOR TO ANY WORK.
- 2. THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR ENGINEER IF UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS
- THE PLANS SHOW THE LOCATION OF ALL KNOWN UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION ACCORDING TO INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES, PREVIOUS CONSTRUCTION PLANS AND AS EVIDENCED BY OBSERVATION OF ABOVE GROUND CONDITIONS BY THE SURVEYOR. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED.
- 4. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH APPLICABLE UTILITY COMPANY) IS THE EXPRESS RESPONSIBILITY OF THE
- 5. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY OWNERS TO VERIFY ANY AND ALL FEES ASSOCIATED WITH THE INSTALLATION OF
- 6. ALL CONSTRUCTION ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH O.S.H.A. STANDARDS FOR WORKER SAFETY.
- 7. ANY PART OF SANITARY TRENCHES RUNNING UNDER OR WITHIN 5' OF PAVEMENT TO BE BACKFILLED WITH GRANULAR MATERIAL
- 8. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY LOCATION, SIZE, AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, PIPES, PAVEMENTS, ETC. AS RELATED TO THEIR WORK. NOTIFY ENGINEER OF ANY CONFLICT AND/OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS.
- 9. CLEARANCE BETWEEN STORM / SANITARY SEWER SYSTEMS AND DOMESTIC/FIRE LINE SERVICE, SHALL MAINTAIN 10' HORIZONTAL AND 18"
- 10. CONTRACTOR TO INSTALL CONCRETE CRADLES AT PIPE CROSSING WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWERS, WATER MAINS AND STORM SEWERS IS
- 11. SANITARY SEWER LINE IN PROXIMITY OF WATER LINE SHALL BE C900 WATER MAIN GRADE PVC.
- 12. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO IT'S CONDITION PRIOR TO CONSTRUCTION.
- 13. WHEN PERFORMING EXCAVATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.
- 14. COMPACTED "B" BORROW BACK FILL REQUIRED OVER ALL UTILITIES IN
- 15. ALL UTILITY STRUCTURES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RINGS AND COVERS RATED
- 16. FOLLOW ALL LOCAL AND STATE CODES IN REFERENCE TO SANITARY SEWER
- 17. SANITARY SEWER LATERALS SHALL BE BACKFILLED WITH GRANULAR MATERIAL FOR THE ENTIRE LENGTH OF THE PIPE.
- 18. ALL EXISTING MANHOLES SHALL BE ADJUSTED TO NEW FINISH GRADE

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 "BOO 54 1989". ELEV.: 901.14 FEET (1929 DATUM) ELEV.: 900.76 FEET (1988 DATUM) THESE PLANS ARE ON 1988 DATUM



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

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

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

FINAL BACKFILL

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 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

	SANITARY S	EWER STRUCTUF	RE DATA TABLE	
STRUCTURE NUMBER	STRUCTURE TYPE	TOP OF CASTING	CASTING TYPE	INVERT
846	MANHOLE	906.96	NEENAH R-1642	INV IN = 898.52(E) INV OUT = 898.42(W)
900	MANHOLE	904.86	NEENAH R-1642	INV OUT - 899.08(W)
	[

No. LS21500003

STATE OF

SANITARY SEWER AS-BUILTS SANITARY SEWER STRUCTURES ONLY 12-20-2018

JOSEPH TRTAN, LS21500003

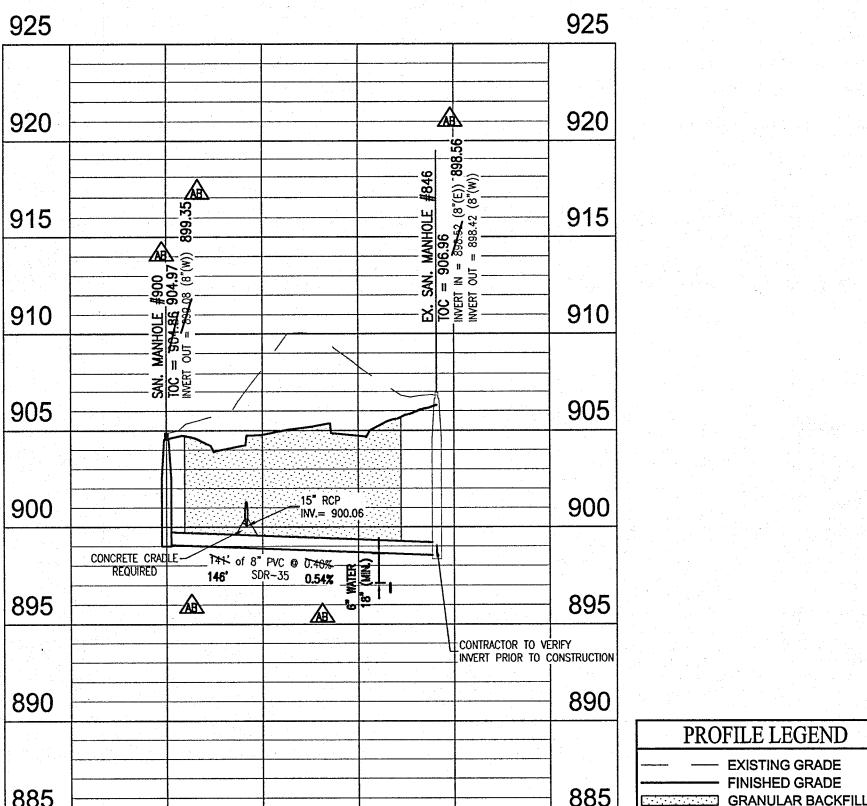
ABL - ASBUILT INFORMATION

- BUILT AS PLANNED

- ASBUILT SANITARY SEWER STUB

DATE OF LAST FIELDWORK: 11/7/2018

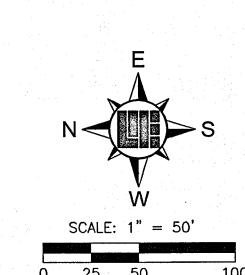
	STORM SEW	ER PIPI	E DATA TAB	LE	
DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH	SLOPE
900	846	8"	ROP	141	0.40%
		. 4	:		



EXISTING POND

·BLOCK "D"

° ASBUILT NP = 898.93





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W160409

REGISTEREN

ALVIN E. SKOOG JR., P.E. 60880

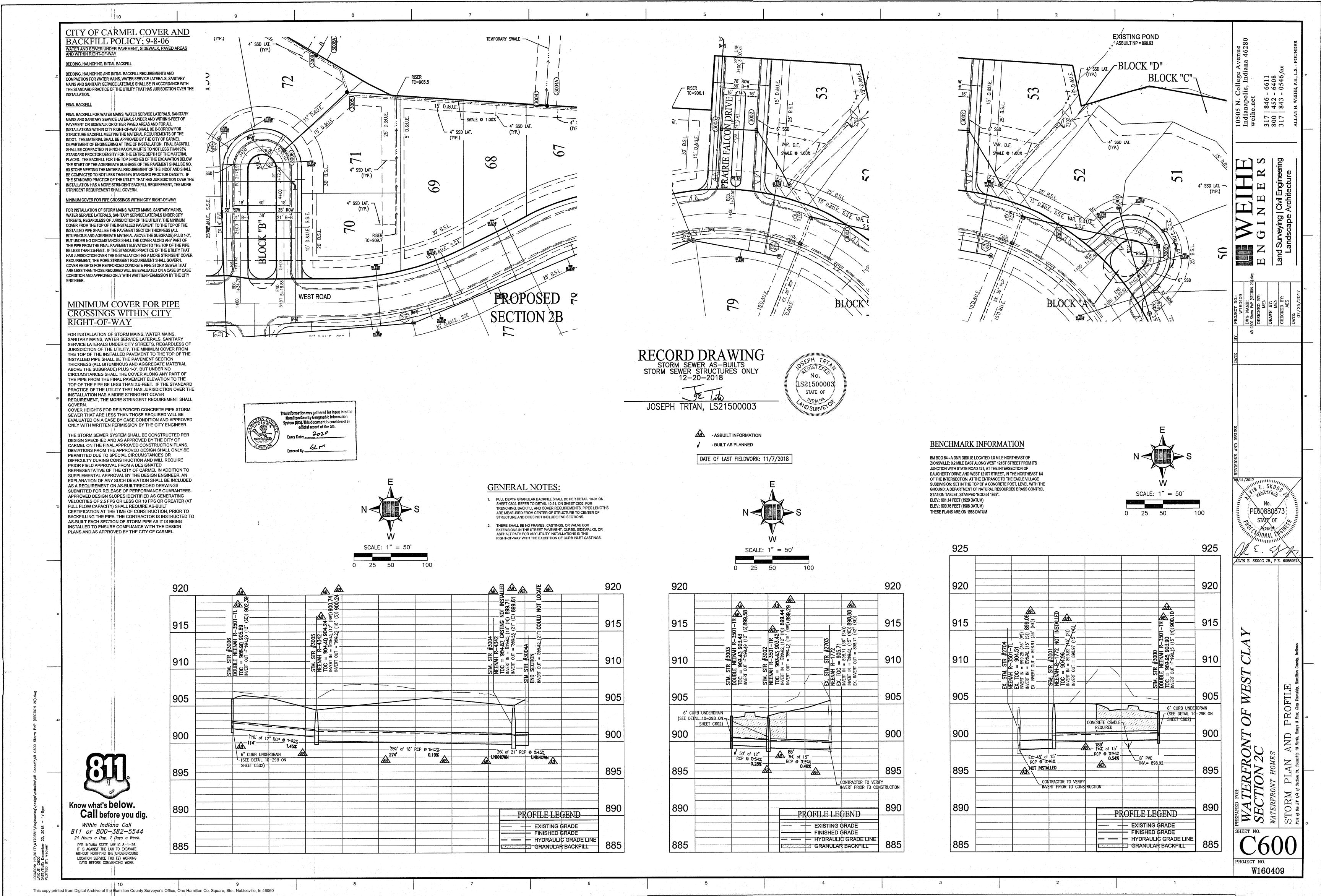
PROFILE Clay Founship, Hamilton (

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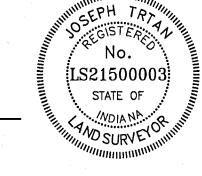
NOTE: REFER TO SHEET C602 FOR STORM SEWER DETAILS

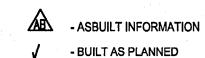
STORM SEWER STRUCTURE DATA TABLE						
	STORM SEW	ER STRUCTURE	DATA TABLE			
STRUCTURE NUMBER	STRUCTURE TYPE	TOP OF CASTING	CASTING TYPE	INVERT		
EX. 2703	ЕХМАННИСЕ.Е	905.71	NEENAH R-1772	INV IN = 898.71(SW) INV IN = 898.81(NE) INV OUT = 898.71(SE)		
EX. 2704	EXMANHADOLE	904.51	NEENAH R-3501-TL	INV IN = 899.25(W) INV IN = 898.78(S) INV OUT = 898.91(NE)		
3000	DOUBLE CURB INLET	903.95	NEENAH R-3501-TR	INV OUT = 900.15(N)		
3001	48" MANMANHOLE	904.96	NEENAH R-1772	INV IN = 899.82(S) INV OUT = 898.97(N)		
3002	INTAYUAGEG	903.43	NEENAH R-3501-TR	INV IN = 899.22(N) INV OUT = 899.12(SW)		
3003	DOUBLE CURB INLET	903.43	NEENAH R-3501-TR	INV OUT = 899.49(S)		
3004	48" MANMANHOLE	904.87	NEENAH R-4342	INV IN = 899.65(N) INV OUT = 899.55(E)		
3004A	TEMPORARYOUTLET	904/52	EMAD	INV IN = 899.52(W) INV OUT = 899.52(E)		
3005	48" MANHANHOLE	904.40	NEENAH R-4842	INV IN = 900.73(NW) INV OUT = 900.23(S)		
3006	DOUBLE CURB INLET	905.90	NEENAH R-3501-TL	INV OUT = 901.90(SE)		
3007	INLET TYPE J	902.99	NEENAH R-4342	INV QUT = 900.27(SW)		
3008	48" MANMANHOLE	904.30	NEENAH R-4342	INV IN = 899.89(NE) INV OUT = 899.79(SE)		
3008A	TEMPORAPOQUILET	9 0 14.95	s W AD	INV IN = 899.74(NW) INV OUT = 899.74(SE)		

STORM SEWER PIPE DATA TABLE							
DOWNSTREAM STRUCTURE	UPSTREAM STRUCTURE	SIZE	MATERIAL	LENGTH	SLOPE		
3000	3001	15"	RCP	143'	0.23%		
3002	2703	15"	RCP	84'	0.37%		
3003	3002	12"	RCP	50'	0.54%		
3004	3004A	21"	RCP	20'	0.15%		
3005	3804	18"	RCP	269'	0.22%		
3006	3005	12"	RCP	115'	1.02%		
3007	3008	15"	CLACRCP	135'	0.28%		
3008	3008A	15"	RCP	17'	0.30%		

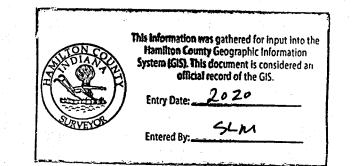


JOSEPH TRTAN, LS21500003





DATE OF LAST FIELDWORK: 11/7/2018



CITY OF CARMEL COVER AND BACKFILL POLICY; 9-8-06

WATER AND SEWER UNDER PAVEMENT, SIDEWALK, PAVED AREAS AND WITHIN RIGHT-OF-WAY

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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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 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.

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.

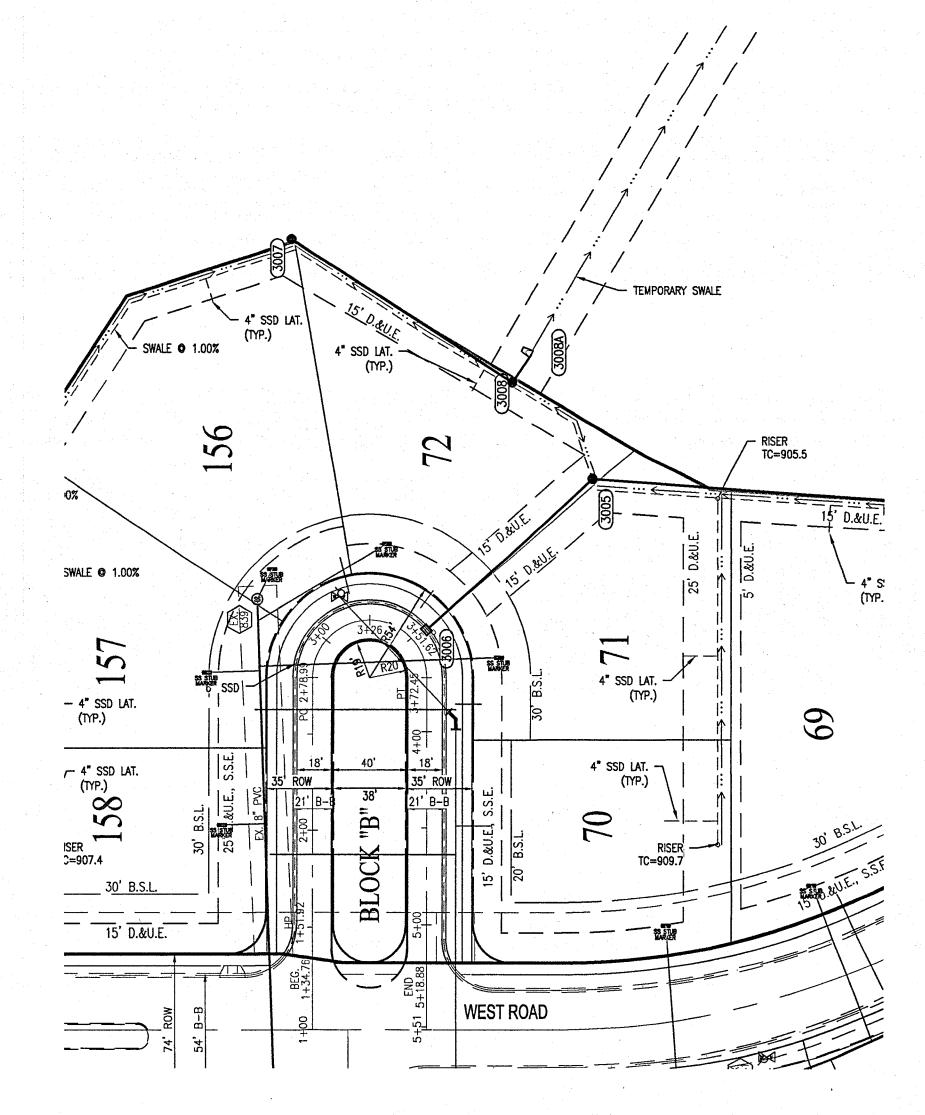
THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL 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

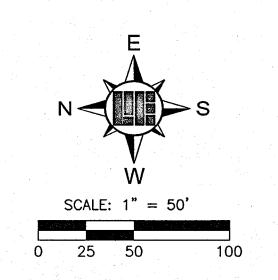
GENERAL NOTES:

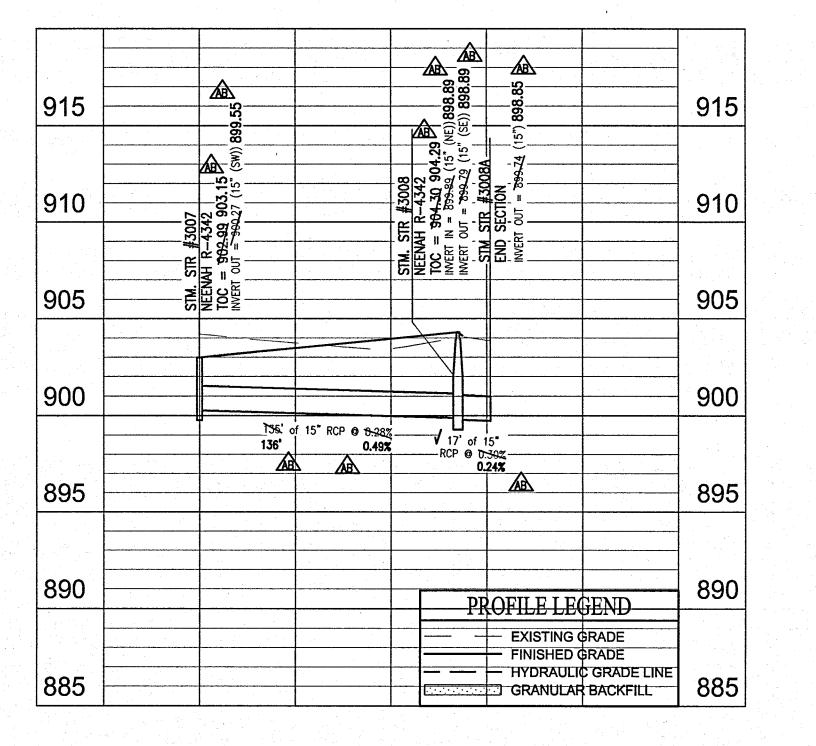
- 1. FULL DEPTH GRANULAR BACKFILL SHALL BE PER DETAIL 10-31 ON SHEET C602. REFER TO DETAIL 10-31, ON SHEET C602, FOR TRENCHING, BACKFILL AND COVER REQUIREMENTS. PIPES LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND DOES NOT INCLUDE END
- 2. THERE SHALL BE NO FRAMES, CASTINGS, 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.

BENCHMARK INFORMATION

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 "BOO 54 1989". ELEV.: 901.14 FEET (1929 DATUM) ELEV.: 900.76 FEET (1988 DATUM) THESE PLANS ARE ON 1988 DATUM







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IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND

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

TERFRON TION 2C O] PROJECT NO. W160409

ALVIN E. SKOOG JR., P.E. 608805

317 | 846 - 6611 800 | 452 - 6408 317 | 843 - 0546

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