

KCW

SURVEYOR'S OFFICE
Hamilton County

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

June 10, 2019

TO: Hamilton County Drainage Board

RE: Williams Creek Drain, Jackson's Grant Section 6 Arm

Attached is a petition filled by Jackson's Grant Real Estate Company, LLC., along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for Jackson's Grant Section 6 Arm, Williams Creek Drain to be located in Clay Township. I have reviewed the submittals and petition and have found each to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway, and be of a 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 the land likely to be benefited. The drain will consist of the following:

12" RCP – 1,153 Feet	15" RCP – 492 Feet
6" SSD – 3,419 Feet	12" SSD – 1,362 Feet
Open Drain – 1,184 Feet	

The total length of the drain will be 7,610 Feet.

The open ditch listed above are straight line distances between Structures 671 and 689, 681 and 671, 675 and 685, 686 and 687, 802 and 692, 692 and 667, 678 and 693, 694 and 695, 696 and 697 through BMP 14B, 14C, 13A, 13B, 15C and 13D.

The dry detention basins (BMPs) located as listed below are not to be considered part of the regulated drain. Basin maintenance assumed by the Drainage Board shall only include the inlets and out

as part of the regulated drain. The maintenance of the dry detention basins (BMPs) such as sediment removal and erosion control along the banks, mowing, aquatic vegetation maintenance and control, and anything required per the Storm Water Quality Maintenance and Operations Manual will be the responsibility of the Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the detention basins (BMPs) were designed will be retained. Thereby, allowing no fill or easement encroachments.

<u>Basin</u>	<u>Location</u>
BMP 13D	Common Area # 27
BMP 13A	Common Area # 27
BMP 13B	Common Area # 27
BMP 15C	Common Area # 29
BMP 14C	Common Area # 29
BMP 14B	Common Area # 29

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

Curbline SSD in Streets:

Northvale Blvd.
Almond Creek Drive
Mendenhall Drive

Front/Rear Yard SSDs:

Front of Yard Lots 307 to 309 from Structure 673 running East to riser.
Rear Yard Lots 312 to 315 from Structure 693 running East to riser.
Rear Yard Lots 315 to 316 from Structure 691 running West to riser.
SSD through BMP 14B and 14C.
SSD through BMP 15C.
SSD through BMP 13D.
SSD through BMP 13A and 13B.

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 the drain. I recommend a maintenance assessment of \$65.00 per lot, \$10.00 per acre for common areas, with \$65.00 minimum, and \$10.00 per acre for roadways. With this assessment the total annual assessment for this drain will be \$1,060.10.

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

Agent: Standard Financial Corporation
Date: April 30, 2019
Number: 1354JG6
For: Installation of Storm Sewers in Jackson's Grant Section 6
Amount: \$199,243.80

Agent: Standard Financial Corporation
Date: April 30, 2019
Number: 1355JG6

For: Monumentation in Jackson's Grant Section 6
Amount: \$4,248.00

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

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement request. The request will be for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for Jackson's Grant Section 6 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for September 23, 2019.



Kenton C. Ward
Hamilton County Surveyor

KCW/jll

FILED
APR 08 2019

STATE OF INDIANA)
)
COUNTY OF HAMILTON)

OFFICE OF HAMILTON COUNTY SURVEYOR

TO: HAMILTON COUNTY DRAINAGE BOARD
% Hamilton County Surveyor
One Hamilton County Square, Suite 188
Noblesville, IN. 46060-2230

In the matter of Jackson's Grant on Williams Creek Subdivision, Section
 6 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 Jackson's Grant on Williams Creek, S6 , 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.
2. 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

JACKSONS GRANT REAL ESTATE Co. LLC

Douglas B. Wagner
Signed

Douglas B. Wagner - Senior Vice President
Printed Name JG DEV. CO. LLC, Manager

January 28, 2019
Date

Signed

Printed Name

Date

Signed

Printed Name

Date

Signed

Printed Name

Date

FINDINGS AND ORDER

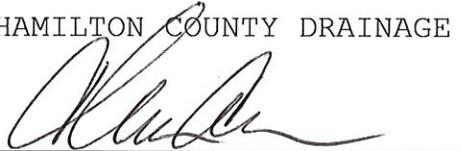
CONCERNING THE MAINTENANCE OF THE

Williams Creek Drain,
Jackson's Grant Section 6 Arm

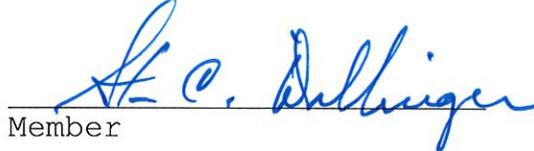
On this 23rd day of September, 2019, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the *Williams Creek Drain, Jackson's Grant Section 6 Arm*.

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



President



Member



Member

Attest:


Executive Secretary



STOEPPELWERTH

ALWAYS ON

ofc: 317 / 577-3402
mbl: 317 / 577-3402
fax: 317 / 577-3402

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

April 17, 2019

City of Carmel
Department of Engineering
One Civic Square
Carmel, Indiana 46032

Attention: Caleb Warner

Re: Jackson's Grant on Williams Creek, Section 6

Dear Mr. Warner:

On behalf of the developer Jackson's Grant Real Estate Company, LLC by JG Development Company, LLC its manager, please accept this Engineer's Estimate (opinions of cost representing our best judgement and not a guarantee of actual construction costs) for Jackson's Grant on Williams Creek, Section 6. The estimate is as follows:

Jackson's Grant on Williams Creek, Section 6

Earthwork	QTY	UNIT	UNITS	TOTALS
Cut	16,406	CYS	\$3.95	\$64,803.70
Topsoil	11,509	CYS	\$2.95	\$33,951.55
Construction Entrance Main Road Will Need More Stone	1	EA	\$4,500.00	\$4,500.00
Shortage	8,727	CYS	\$4.75	\$41,453.25
Respread Topsoil	5,254	CYS	\$2.95	\$15,499.30
Trail in Flood Plain Recessed, Prep, and Exported	1	LS	\$6,725.00	\$6,725.00
Backfill Sidewalks/Trail Throughout, Cut/Prep SW/Paths	1,769	LF	\$6.00	\$10,614.00
Remove Concrete Aprons at Houses and Dispose	2	EA	\$1,350.00	\$2,700.00
BMP Grading	1	LS	\$5,750.00	\$5,750.00
Temporary Sediment Basins and Horseshoes at Outlet	3	EA	\$3,250.00	\$9,750.00
Check Dams	3	EA	\$475.00	\$1,425.00
Traffic Control	1	LS	\$2,500.00	\$2,500.00
Entrance, Tie In Rd, First Section, Utilities Ect.	1	LS	\$10,500.00	\$10,500.00

LAND DEVELOPMENT SUPPORT SOLUTIONS

ENGINEERING | SURVEYING

Total Price for above Earthwork Items				\$210,171.80
On-Site Streets				
	QTY	UNIT	UNIT \$	TOTALS
Stone	4,372	SY	\$7.99	\$34,915.00
Base	4,372	SY	\$10.39	\$45,410.00
Binder	4,372	SY	\$7.89	\$34,510.00
Surface	4,372	SY	\$6.68	\$29,200.00
Temporary Cul-de-sac	775	SY	\$7.34	\$5,690.00
8' Asphalt Trail	1,257	SY	\$37.15	\$46,700.00
Total Price for above On Site Streets Items				\$196,425.00
Storm Sewer				
	QTY	UNIT	UNITS	TOTALS
Manholes	2	EA	\$2,475.00	\$4,950.00
Beehives	4	EA	\$2,275.00	\$9,100.00
Outlet Control Structures (Incl. Stone at Base)	4	EA	\$2,850.00	\$11,400.00
Large Curb Inlet	5	EA	\$2,820.00	\$14,100.00
Curb Inlet	3	EA	\$2,425.00	\$7,275.00
Remove and Replace Casting C200 W/ R3359	1	LS	\$950.00	\$950.00
12" RCP	1,160	LF	\$25.00	\$29,000.00
15" RCP	496	LF	\$28.00	\$13,888.00
BMP 13A	195	LF	\$57.00	\$11,115.00
BMP13B	150	LF	\$57.00	\$8,550.00
BMP 13D	250	LF	\$57.00	\$14,250.00
BMP 14B	300	LF	\$57.00	\$17,100.00
BMP 14C	350	LF	\$57.00	\$19,950.00
BMP 15A	460	LF	\$46.00	\$21,160.00
BMP 15B	140	LF	\$46.00	\$6,440.00
BMP 15C	220	LF	\$46.00	\$10,120.00
BMP 13-14 Cleanouts	21	EA	\$625.00	\$13,125.00
BMP 15 Cleanouts	4	EA	\$365.00	\$1,460.00
BMP 15 Tees and Lot Services	10	EA	\$185.00	\$1,850.00
12" End Section W/ Debris Guard	12	EA	\$1,650.00	\$19,800.00
15" End Section W/ Debris Guard	2	EA	\$1,700.00	\$3,400.00
Gabions/Bank Armorment	3	EA	\$11,000.00	\$33,000.00
Cap and Seal	3	EA	\$350.00	\$1,050.00
Lot Searvices Each	7	EA	\$135.00	\$945.00
Front Yard SSD	281	LF	\$11.50	\$3,231.50

Street SSD	2,738	LF	\$11.50	\$31,487.00
Long Service	60	LF	\$10.00	\$600.00
Risers	1	EA	\$350.00	\$350.00
Bedding #8	340	TONS	\$22.00	\$7,480.00
Granular Fill #53	370	TONS	\$19.00	\$7,030.00
Rip-Rap	200	TONS	\$48.00	\$9,600.00
Total Price for above Storm Sewer Items				\$333,756.50
Sanitary				
	QTY	UNIT	UNITS	TOTALS
Remove Cone and Coat New Sections and Reinstall	3	EA	\$600.00	\$1,800.00
Adjust TC on Existing Manholes New Sections	3	EA	\$1,450.00	\$4,350.00
6" PVC 8'-10'	362	LF	\$22.00	\$7,964.00
Dig Up/Tie Onto Existing Stub/Set Trench Box	6	EA	\$500.00	\$3,000.00
45 Degree Bends	6	EA	\$40.00	\$240.00
Chimney Seals	3	EA	\$385.00	\$1,155.00
Tracer Wire Laterals	362	LF	\$0.60	\$217.20
6" Caps	6	EA	\$17.50	\$105.00
Stone Bedding	180	TONS	\$22.50	\$4,050.00
Granular Fill	675	TONS	\$18.00	\$12,150.00
Manhole Testing	3	EA	\$125.00	\$375.00
Total Price for above Sanitary Items				\$35,406.20
Water Mains				
	QTY	UNIT	UNITS	TOTALS
6" Ductile	40.00	LF	\$31.00	\$1,240.00
8" Ductile	1,340.00	LF	\$39.00	\$52,260.00
8" Bore	100.00	LF	\$86.00	\$8,600.00
8" Bore Pipe	100.00	LF	\$23.00	\$2,300.00
Receiving Pit, #8 Stone, Ect.	1.00	LS	\$2,500.00	\$2,500.00
Hot Tap EJP	1.00	LF	\$2,785.00	\$2,785.00
Traffic Signage for Bore and Tap	1.00	LS	\$1,000.00	\$1,000.00
Fire Hydrant Mueller	4.00	EA	\$3,900.00	\$15,600.00
6" Valve Mueller	4.00	EA	\$1,117.00	\$4,468.00
8" Valve Mueller	3.00	EA	\$1,680.00	\$5,040.00
8" Tap Valve	1.00	EA	\$1,700.00	\$1,700.00
Service Taps on Main	12.00	EA	\$150.00	\$1,800.00
Trench Footage	429.00	LF	\$7.65	\$3,281.85
Valve Boxes Tyler	7.00	EA	\$350.00	\$2,450.00

Concrete	4.00	CYS	\$175.00	\$700.00
Assist EJP With Hot Tap on Springmill	1.00	EA	\$2,600.00	\$2,600.00
20" Tap Sleeve	1.00	EA	\$2,900.00	\$2,900.00
Sand	640.00	TONS	\$18.00	\$11,520.00
#8 Stone	80.00	TONS	\$22.00	\$1,760.00
Misc. Fittings	1.00	EA	\$21,750.00	\$21,750.00
Flushing & Testing	1,440.00	LF	\$1.25	\$1,800.00
Chlorinate and Dechlorinate	1,440.00	LF	\$1.25	\$1,800.00
Total Price for above Water Mains Items				\$149,854.85
Curbs				
	QTY	UNIT	UNITS	TOTALS
Standard Roll Curb	2,488	LF	\$8.90	\$22,143.20
Reverse Roll Curb	472	LF	\$11.15	\$5,262.80
Common Area Sidewalk	6,675	SF	\$4.50	\$30,037.50
ADA Ramps	12	EA	\$685.00	\$8,220.00
Total Price for above Curbs Items				\$65,663.50
Erosion Control				
	QTY	UNIT	UNITS	TOTALS
Silt Fence	3,250	LF	\$1.05	\$3,412.50
Silt Fence - additional	1,350	LF	\$1.05	\$1,417.50
Concrete Washout	1	EA	\$500.00	\$500.00
Drop Inlets	4	EA	\$90.00	\$360.00
Curb Inlets	15	EA	\$168.00	\$2,520.00
Permanent Seed	3,245	SY	\$0.42	\$1,362.90
Straw Blanket	2,000	SY	\$1.10	\$2,200.00
Roadside Seeding	3,156	SY	\$0.34	\$1,073.04
Temporary Seeding	5	AC	\$325.00	\$1,537.25
Mulching Temporary Seeded Areas	5	AC	\$775.00	\$3,681.25
Tree Protection Fence	600	LF	\$2.50	\$1,500.00
Engineered Soils Using Owners Topsoil	73	CY	\$50.00	\$3,650.00
Mesic Seeding	32,898	SF	\$0.13	\$4,276.74
Wet Seeding	51,913	SF	\$0.15	\$7,786.95
1 Gal Trees	206	EA	\$23.60	\$4,861.60
Protective Signage	6	EA	\$50.00	\$300.00
2.5" Trees (Street Trees)	42	EA	\$290.00	\$12,180.00
2.5" Trees (BMP's)	52	EA	\$290.00	\$15,080.00
Total Price for above Erosion Control				\$35,278.13

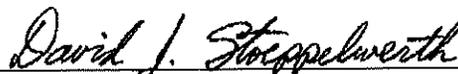


		Grand Total	\$1,026,555.98
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If you have any questions regarding these estimates, please contact Brett A. Huff at (317) 570-4841.

Very truly yours,

STOEPPELWERTH & ASSOCIATES, INC.



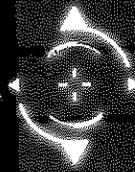
David J. Stoepfelwerth, P.E.
Professional Engineer
No. 19358



Cc: Doug Wagner

BAH/ads

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STOEPPELWERTH

ALWAYS ON

ofc: 317 / 577-3402
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7965 East 106th Street
Fishers, IN 46038-2505
www.stoepfelwerth.com

April 22, 2019

City of Carmel
Department of Engineering
One Civic Square
Carmel, Indiana 46032

Attention: Caleb Warner

Re: Revised Jackson's Grant on Williams Creek, Section 6

Dear Mr. Warner:

On behalf of the developer Jackson's Grant Real Estate Company, LLC by JG Development Company, LLC its manager, please accept this Revised Engineer's Estimate (opinions of cost representing our best judgement and not a guarantee of actual construction costs) for Jackson's Grant on Williams Creek, Section 6. The estimate is as follows:

Jackson's Grant on Williams Creek, Section 6

Earthwork

	QTY	UNIT	UNITS	TOTALS
Cut	16,406	CYS	\$3.95	\$64,803.70
Topsoil	11,509	CYS	\$2.95	\$33,951.55
Shortage	8,727	CYS	\$4.75	\$41,453.25
Respread Topsoil	5,254	CYS	\$2.95	\$15,499.30
Trail in Flood Plain Recessed, Prep, and Exported	1	LS	\$6,725.00	\$6,725.00
Backfill Sidewalks/Trail Throughout, Cut/Prep SW/Paths	1,769	LF	\$6.00	\$10,614.00
Remove Concrete Aprons at Houses and Dispose	2	EA	\$1,350.00	\$2,700.00
BMP Grading	1	LS	\$5,750.00	\$5,750.00
Traffic Control	1	LS	\$2,500.00	\$2,500.00
Entrance, Tie In Rd, First Section, Utilities Ect.	1	LS	\$10,500.00	\$10,500.00
Total Price for above Earthwork Items				\$194,496.80

On-Site Streets

	QTY	UNIT	UNIT \$	TOTALS
Stone	4,372	SY	\$7.99	\$34,915.00
Base	4,372	SY	\$10.39	\$45,410.00
Binder	4,372	SY	\$7.89	\$34,510.00
Surface	4,372	SY	\$6.68	\$29,200.00
Temporary Cul-de-sac	775	SY	\$7.34	\$5,690.00
8' Asphalt Trail	1,257	SY	\$37.15	\$46,700.00
Total Price for above On-Site Streets Items				\$196,425.00

LAND DEVELOPMENT SUPPORT SOLUTIONS

ENGINEERING | SURVEYING

Storm Sewer

	QTY	UNIT	UNITS	TOTALS
Manholes	2	EA	\$2,475.00	\$4,950.00
Beehives	4	EA	\$2,275.00	\$9,100.00
Outlet Control Structures (Incl. Stone at Base)	4	EA	\$2,850.00	\$11,400.00
Large Curb Inlet	5	EA	\$2,820.00	\$14,100.00
Curb Inlet	3	EA	\$2,425.00	\$7,275.00
Remove and Replace Casting C200 W/ R3359	1	LS	\$950.00	\$950.00
12" RCP	1,160	LF	\$25.00	\$29,000.00
15" RCP	496	LF	\$28.00	\$13,888.00
12" End Section W/ Debris Guard	12	EA	\$1,650.00	\$19,800.00
15" End Section W/ Debris Guard	2	EA	\$1,700.00	\$3,400.00
Cap and Seal	3	EA	\$350.00	\$1,050.00
Lot Searvices Each	7	EA	\$135.00	\$945.00
Front Yard SSD	281	LF	\$11.50	\$3,231.50
Street SSD	2,738	LF	\$11.50	\$31,487.00
Long Service	60	LF	\$10.00	\$600.00
Risers	1	EA	\$350.00	\$350.00
Bedding #8	340	TONS	\$22.00	\$7,480.00
Granular Fill #53	370	TONS	\$19.00	\$7,030.00
Total Price for above Storm Sewer Items				\$166,036.50

Sanitary

	QTY	UNIT	UNITS	TOTALS
Remove Cone and Coat New Sections and Reinstall	3	EA	\$600.00	\$1,800.00
Adjust TC on Existing Manholes New Sections	3	EA	\$1,450.00	\$4,350.00
6" PVC 8'-10'	362	LF	\$22.00	\$7,964.00
Dig Up/Tie Onto Existing Stub/Set Trench Box	6	EA	\$500.00	\$3,000.00
45 Degree Bends	6	EA	\$40.00	\$240.00
Chimney Seals	3	EA	\$385.00	\$1,155.00
Tracer Wire Laterals	362	LF	\$0.60	\$217.20
6" Caps	6	EA	\$17.50	\$105.00
Stone Bedding	180	TONS	\$22.50	\$4,050.00
Granular Fill	675	TONS	\$18.00	\$12,150.00
Manhole Testing	3	EA	\$125.00	\$375.00
Total Price for above Sanitary Items				\$35,406.20

Water Mains

	QTY	UNIT	UNITS	TOTALS
6" Ductile	40.00	LF	\$31.00	\$1,240.00

8" Ductile	1,340.00	LF	\$39.00	\$52,260.00
8" Bore	100.00	LF	\$86.00	\$8,600.00
8" Bore Pipe	100.00	LF	\$23.00	\$2,300.00
Receiving Pit, #8 Stone, Ect.	1.00	LS	\$2,500.00	\$2,500.00
Hot Tap EJP	1.00	LF	\$2,785.00	\$2,785.00
Traffic Signage for Bore and Tap	1.00	LS	\$1,000.00	\$1,000.00
Fire Hydrant Mueller	4.00	EA	\$3,900.00	\$15,600.00
6" Valve Mueller	4.00	EA	\$1,117.00	\$4,468.00
8" Valve Mueller	3.00	EA	\$1,680.00	\$5,040.00
8" Tap Valve	1.00	EA	\$1,700.00	\$1,700.00
Service Taps on Main	12.00	EA	\$150.00	\$1,800.00
Trench Footage	429.00	LF	\$7.65	\$3,281.85
Valve Boxes Tyler	7.00	EA	\$350.00	\$2,450.00
Concrete	4.00	CYS	\$175.00	\$700.00
Assist EJP With Hot Tap on Springmill	1.00	EA	\$2,600.00	\$2,600.00
20" Tap Sleeve	1.00	EA	\$2,900.00	\$2,900.00
Sand	640.00	TONS	\$18.00	\$11,520.00
#8 Stone	80.00	TONS	\$22.00	\$1,760.00
Misc. Fittings	1.00	EA	\$21,750.00	\$21,750.00
Flushing & Testing	1,440.00	LF	\$1.25	\$1,800.00
Chlorinate and Dechlorinate	1,440.00	LF	\$1.25	\$1,800.00
Total Price for above Water Mains Items				\$149,854.85

Curbs

	QTY	UNIT	UNITS	TOTALS
Standard Roll Curb	2,488	LF	\$8.90	\$22,143.20
Reverse Roll Curb	472	LF	\$11.15	\$5,262.80
Common Area Sidewalk	6,675	SF	\$4.50	\$30,037.50
ADA Ramps	12	EA	\$685.00	\$8,220.00
Total Price for above Curbs Items				\$65,663.50

Erosion Control

	QTY	UNIT	UNITS	TOTALS
Silt Fence	3,250	LF	\$1.05	\$3,412.50
Silt Fence - additional	1,350	LF	\$1.05	\$1,417.50
Concrete Washout	1	EA	\$500.00	\$500.00
Drop Inlets	4	EA	\$90.00	\$360.00
Curb Inlets	15	EA	\$168.00	\$2,520.00
Permanent Seed	3,245	SY	\$0.42	\$1,362.90
Straw Blanket	2,000	SY	\$1.10	\$2,200.00
Roadside Seeding	3,156	SY	\$0.34	\$1,073.04

Temporary Seeding	5	AC	\$325.00	\$1,537.25
Mulching Temporary Seeded Areas	5	AC	\$775.00	\$3,681.25
Tree Protection Fence	600	LF	\$2.50	\$1,500.00
Engineered Soils Using Owners Topsoil	73	CY	\$50.00	\$3,650.00
Mesic Seeding	32,898	SF	\$0.13	\$4,276.74
Wet Seeding	51,913	SF	\$0.15	\$7,786.95
1 Gal Trees	206	EA	\$23.60	\$4,861.60
Protective Signage	6	EA	\$50.00	\$300.00
2.5" Trees (Street Trees)	42	EA	\$290.00	\$12,180.00
2.5" Trees (BMP's)	52	EA	\$290.00	\$15,080.00
Construction Entrance Main Road Will Need More Stone	1	EA	\$4,500.00	\$4,500.00
Temporary Sediment Basins and Horshoes at Outlet	3	EA	\$3,250.00	\$9,750.00
Check Dams	3	EA	\$475.00	\$1,425.00
BMP 13A	195	LF	\$57.00	\$11,115.00
BMP 13B	150	LF	\$57.00	\$8,550.00
BMP 13D	250	LF	\$57.00	\$14,250.00
BMP 14B	300	LF	\$57.00	\$17,100.00
BMP 14C	350	LF	\$57.00	\$19,950.00
BMP 15A	460	LF	\$46.00	\$21,160.00
BMP 15B	140	LF	\$46.00	\$6,440.00
BMP 15C	220	LF	\$46.00	\$10,120.00
BMP 13-14 Cleanouts	21	EA	\$625.00	\$13,125.00
BMP 15 Cleanouts	4	EA	\$365.00	\$1,460.00
BMP 15 Tees and Lot Services	10	EA	\$185.00	\$1,850.00
Gabions/Bank Armorment	3	EA	\$11,000.00	\$33,000.00
Rip-Rap	200	TONS	\$48.00	\$9,600.00
Total Price for above Erosion Control				\$251,094.73
Grand Total				\$1,058,977.58

If you have any questions regarding these estimates, please contact Brett A. Huff at (317) 570-4841.

Very truly yours,

STOEPPELWERTH & ASSOCIATES, INC.

David J. Stoepfelwerth

David J. Stoepfelwerth, P.E.
 Professional Engineer
 No. 19358



Cc: Doug Wagner

BAH/ads

S:\60160REP-S6\Blue_Book\Agency_Correspondence\CarmelEngineeringBarnesEE04-09-19.doc

April 30, 2019

HCDB-2019-00020

Irrevocable Letter of Credit No.: 1354JG6

TO: Hamilton County Commissioners
1 Hamilton County Square, Suite 157
Noblesville, IN 46060

To Whom It May Concern:

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

Developer Name: Jackson's Grant Real Estate Company, LLC
Developer Address: 3150 Republic Blvd. N., #3
Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of **One Hundred Ninety-Nine Thousand Two Hundred Forty-Three and 80/100 Dollars (\$199,243.80)** by your draft(s) at sight.

The purpose of this Letter of Credit is for the performance of the installation of storm sewers in Jackson's Grant, Section 6.

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

All drafts must be marked, "Drawn under Standard Financial Corporation Letter of Credit No. 1354JG6."

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

This Letter of Credit is effective as of April 30, 2019 and shall expire on April 30, 2020, but such expiration date shall be automatically extended for a period of one year on April 30, 2020, and on each successive expiration date, unless a release is received from the Hamilton County Commissioners or we notify both the Hamilton County Commissioners and Jackson's Grant Real Estate Company, LLC by certified mail, at least ninety (90) days before the current expiration date, that we have decided not to extend this Letter of Credit beyond the

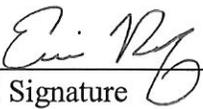


current expiration date. In the event of such notification by us, the credit established by this Letter shall be available to the Hamilton County Commissioners upon its sight draft or demand for payment for ninety (90) days after receipt of such notice by the Hamilton County Commissioners as shown on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

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

Sincerely,

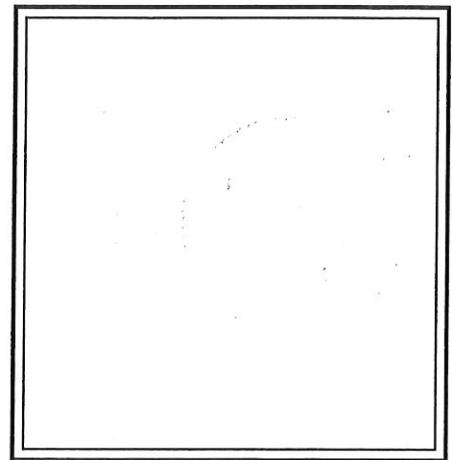
STANDARD FINANCIAL CORPORATION



Authorized Signature

Eric Roof, Treasurer

Name and Title



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



April 30, 2019

HCDG-2019-00019

Irrevocable Letter of Credit No.: 1355JG6

TO: Hamilton County Commissioners
1 Hamilton County Square, Suite 157
Noblesville, IN 46060

To Whom It May Concern:

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

Developer Name: Jackson's Grant Real Estate Company, LLC
Developer Address: 3150 Republic Blvd. N., #3
Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of **Four Thousand Two Hundred Forty-Eight and 00/100 Dollars (\$4,248.00)** by your draft(s) at sight.

The purpose of this Letter of Credit is for the performance of the installation of monumentation in Jackson's Grant, Section 6.

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

All drafts must be marked, "Drawn under Standard Financial Corporation Letter of Credit No. 1355JG6."

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

This Letter of Credit is effective as of April 30, 2019 and shall expire on April 30, 2020, but such expiration date shall be automatically extended for a period of one year on April 30, 2020, and on each successive expiration date, unless a release is received from the Hamilton County Commissioners or we notify both the Hamilton County Commissioners and Jackson's Grant Real Estate Company, LLC by certified mail, at least ninety (90) days before the current expiration date, that we have decided not to extend this Letter of Credit beyond the



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

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

Sincerely,

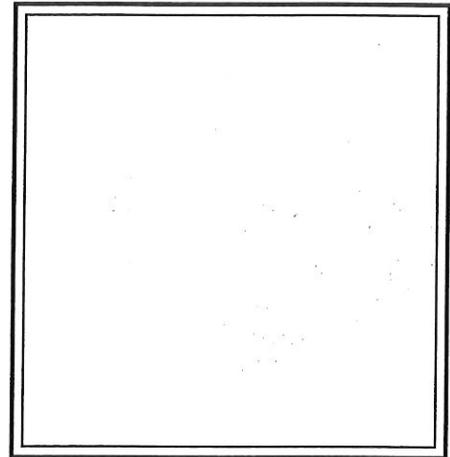
STANDARD FINANCIAL CORPORATION

A handwritten signature in dark ink, appearing to read 'Eric Roof', is written over a horizontal line.

Authorized Signature

Eric Roof, Treasurer

Name and Title



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

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

Williams Creek Drain, Jackson's Grant Section 6 Arm

NOTICE

To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the **Williams Creek Drain, Jackson's Grant Section 6 Arm** on **September 23, 2019** 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

Williams Creek Drainage Area, Jackson's Grant Section 6 Arm

NOTICE

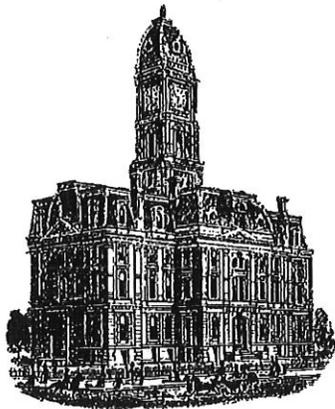
Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **September 23, 2019** has issued an order adopting the Schedule of Assessments, filed the same and made public announcement thereof at the hearing and ordered publication. 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

Rec'd



Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Tax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

November 24, 2020

Re: Williams Creek D.A. – Jackson’s Grant Section 6

Attached are as-built, certificate of completion & compliance, and other information for Jackson’s Grant Section 6. 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 June 10, 2019. The report was approved by the Board at the hearing held September 23, 2019. (See Drainage Board Minutes Book 19, Pages 1-3) The changes are as follows: The 12” RCP was shortened from 1,153 feet to 1,085 feet. The 15” RCP was shortened from 492 feet to 489 feet. The 6” SSD was lengthened from 3,419 feet to 4,770 feet. The 12” SSD was shortened from 1,362 to 215 feet. It should be noted that Structure 678 and the stub of 12” RCP was removed with the construction of Jackson’s Grant Section 7. The length of the drain due to the changes described above **7,770 feet**.

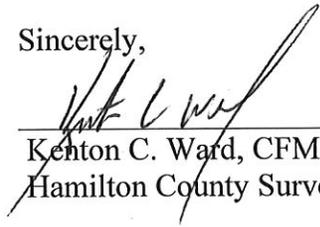
The non-enforcement was approved by the Board at its meeting on September 23, 2019 and recorded under instrument #2020084689.

The following sureties were guaranteed by Standard Financial Corporation and released by the Board on its October 28, 2020 meeting.

Bond-LC No: 1354JG6
Amount: \$199,243.8
For: Storm Sewers & SSD
Issue Date: April 30, 2019

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: Jacksons Grant on Williams Creek, 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.

Signature:  Date: 8/12/2020

Type or Print Name: Dennis D. Olmstead

Business Address: Stoepelwerth & Associates, Inc.
7965 East 106th Street, Fishers, Indiana 46038

Telephone Number: (317) 849-5935

SEAL

INDIANA REGISTRATION NUMBER



900012

JACKSON'S GRANT ON WILLIAMS CREEK

SECTION 6

Developed by:
Jacksons Grant Real Estate Co., LLC
13578 East 131st Street
Suite 200

Fishers, Indiana 46037

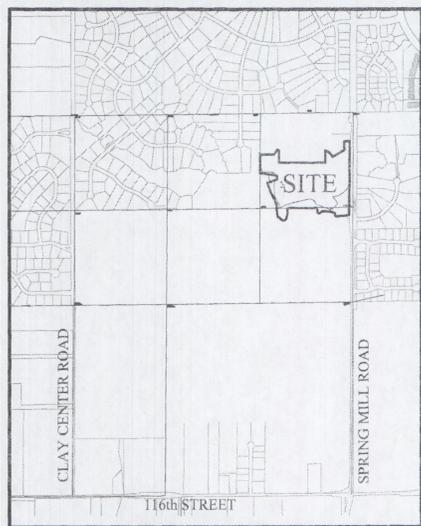
Phone: (317) 770-7011

Fax: (317) 770-1819

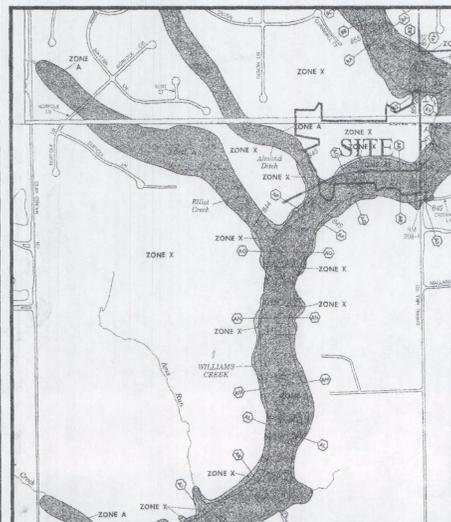
Contact Person: DOUG WAGNER

Senior Vice President

email: dwagner@republicdev.com



LOCATION MAP
SCALE: 1"=1200'



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

DESIGN DATA

12 LOTS
19,888 AC. = 0.60 LOTS/ACRE

RAYLEE DRIVE	960.23 L.F.
ALMOND CREEK DRIVE	104.10 L.F.
NORTHVALE BOULEVARD	219.06 L.F.
TOTAL	1,283.39 L.F.

DESIGN SPEED LIMIT: 25 M.P.H.

ZONING = SILVARA PUD
TOTAL SITE DISTURBANCE = 15.9 Acres

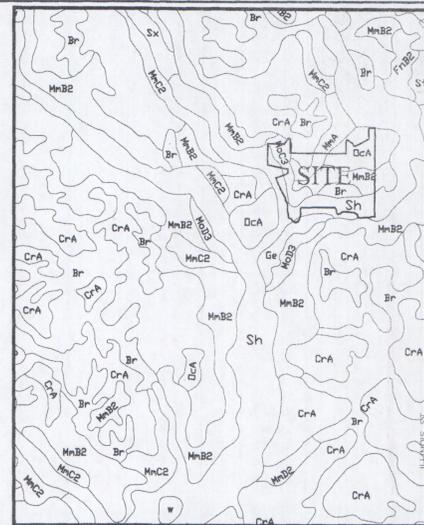
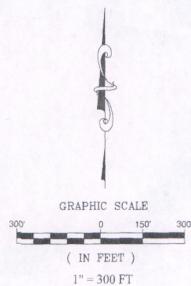
OPERATING AUTHORITY
CITY OF CARMEL (317) 571-2441
ONE CIVIC SQUARE
CARMEL, INDIANA 46032

FLOOD STATEMENT
THIS SITE DOES NOT LIE WITHIN A FLOODWAY OR FLOOD PLAIN
PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED
BY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

LOT & SETBACK REQUIREMENTS

Planning Area	Minimum Lot		Minimum Yard Setbacks				Min. Dwelling Unit Size (sf)		Max. Lot Coverage
	Width	Area (sf)	Street Frontage	Front	Side (Aggregate)	Rear	1-story	2-story	
Northvale (Formerly known as The Estates)	100'	15,000	50'	40'	10' (30')	20'	2,400	3,000	35%

The following technical setbacks shall apply for: (1) Drivings for rear, side, garage, 10' and (2) Drivings at cornered garage, 20'.
* Minimum Lot Width of 100' and (3) minimum Lot Depth of 150'. * Minimum Lot Width within the cross-hatched area shown on the Conceptual Plan shall also be subject to the following: (1) minimum Rear Lot Line width of 120'; and (2) minimum Lot Depth of 150'. * Minimum Lot Width within the cross-hatched area shown on the Conceptual Plan shall also be subject to the following: (1) Minimum Lot Line width of 100' and (2) minimum Lot Depth of 150'.



SOILS MAP
SCALE: 1"=1000'

Map Unit: Br - Brookston silty clay loam

Br - Brookston silty clay loam
This poorly drained soil has a seasonal high water table above the surface or within 1.0 ft. and is in depressions. Slopes are 0 to 2 percent. The native vegetation is water tolerant grasses and hardwoods. The surface layer is silty clay loam and has moderate to high organic matter content (2.0 to 6.0 percent). Permeability is moderately slow (0.2 to 0.6 in/hr) in the most restrictive layer above 60 inches. Available water capacity is high (10.0 inches in the upper 60 inches). The pH of the surface layer in non-irrigated areas is 6.1 to 7.3. This soil is acidic. Wetness is a management concern for crop production. This soil responds well to tile drainage.

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

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

Map Unit: MnB2 - Miami silt loam, 2 to 6 percent slopes, eroded

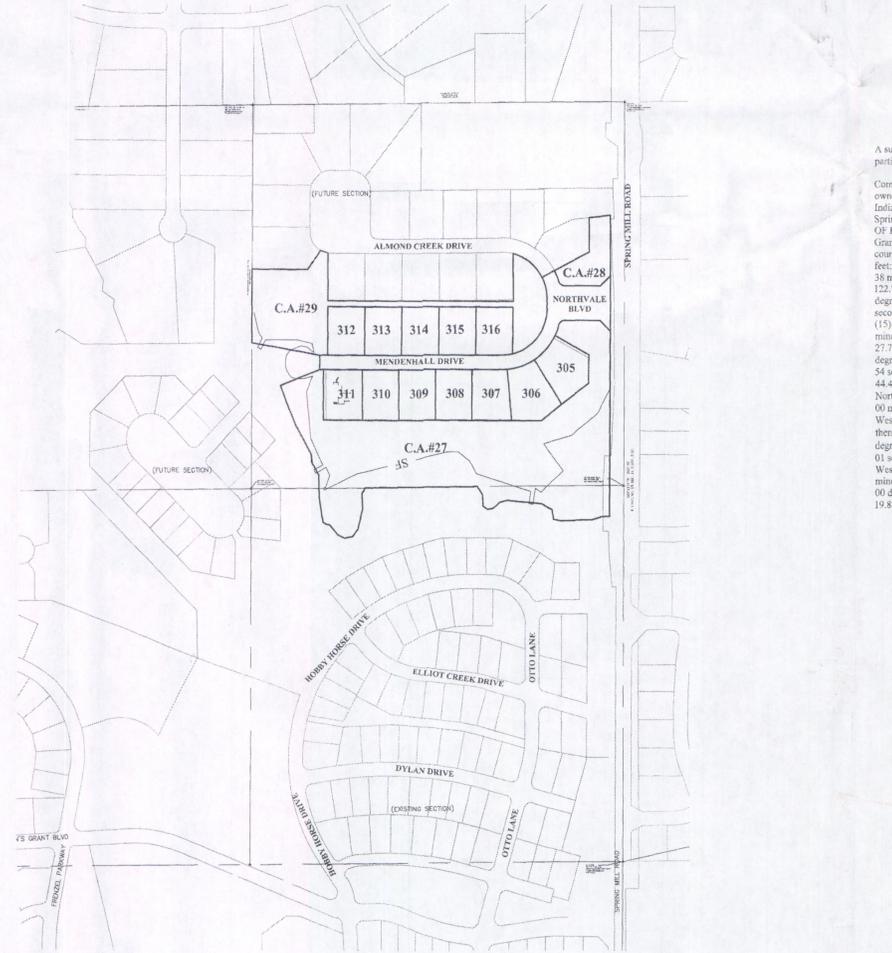
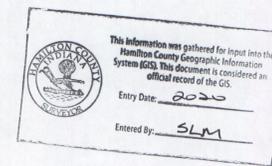
MnB2 - Miami silt loam, 2 to 6 percent slopes, eroded
This gently sloping, deep, well drained soil is on rises on till plains and along drainageways and streams. The mapped areas range from 3 to 50 acres in size. In a typical profile the surface layer is dark grayish brown silt loam about 7 inches thick. The subsoil is dark yellowish brown and brown, firm clay loam about 23 inches thick. The substratum is to a depth of 60 inches, is yellowish brown loam that contains free carbonates. In a few areas the lower part of the subsoil is stratified sandy loam, loamy sand and sandy clay loam. The depth to till is more than 40 inches in some areas. Included with this soil in mapping are small areas of Crosby soils, small areas of severely eroded soils that have a surface layer of clay loam, small areas of soils have slopes of more than 6 percent, and small areas of soils that have gravel and cobbles on the surface.

Map Unit: MoD3 - Miami clay loam, 12 to 18 percent

MoD3 - Miami clay loam, 12 to 18 percent
This strongly sloping, deep, well drained soil is on breaks along streams and drainageways. The mapped areas are irregular in shape and range from 3 to 15 acres in size. In a typical profile the surface layer is dark brown, clay loam about 5 inches thick. The subsoil is dark yellowish brown, firm clay loam about 19 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam. In some areas calcareous glacial till is at the surface. Cobbles and gravel are in the surface layer in most areas. In many areas the subsoil is gravelly loam or clay loam.

Map Unit: Sh - Shoals silt loam

Sh - Shoals silt loam
This nearly level, deep, and somewhat poorly drained soil is on floodplains. It is subject to frequent flooding. The mapped areas are mostly elongated and are parallel to streams. Many areas are in narrow valleys along small streams. The mapped areas range in size from 3 to 100 acres in size. In a typical profile the surface layer is dark grayish brown silt loam about 11 inches thick. The underlying material, to a depth of 39 inches is dark grayish brown and grayish brown, mottled silt loam and loam. Below this to a depth of 56 inches, it is gray and very dark gray sandy loam and sandy clay loam. Below this, to a depth of 60 inches, it is grayish brown fine gravel and coarse sand. In small areas scattered throughout the county, this soil has darker surface layer; in some of these areas it is near Ross soils. In some places the underlying material has more gravel. This soil has carbonates throughout the profile in some areas. In some small areas in the upper reaches of small streams, this soil has firm loam till at a depth of 45 to 60 inches. In some small areas it has less clay and more sand between a depth of 10 and 40 inches. In some areas sand and gravelly sand are at a depth of only 40 inches.



A subdivision of part of the Northeast Quarter of Section 34, Township 18 North, Range 3 East, Clay Township, Hamilton County, Indiana, more particularly described as follows:
Commencing at the Northeast corner of said Quarter Section; thence South 00 degrees 13 minutes 14 seconds West 388.05 feet to a point on a parcel owned by The Board of Commissioners of Hamilton County, recorded as Instrument #20411578 in the Office of the Recorder for Hamilton County, Indiana; thence South 83 degrees 45 minutes 53 seconds West 50.32 feet along the North boundary of said parcel to a point on the West right-of-way of Spring Mill Road, recorded as Instrument #2017002664 in the Office of the Recorder for Hamilton County, Indiana; said point also being the POINT OF BEGINNING of this description; thence South 00 degrees 13 minutes 14 seconds West 1028.77 feet to a point on the North boundary of Jacksons Grant, Section 4, recorded as Instrument #2018000544 in the Office of the Recorder for Hamilton County, Indiana; thence the following twenty-two (22) courses are along said boundary: (1) South 88 degrees 54 minutes 13 seconds West 29.45 feet; (2) South 71 degrees 41 minutes 58 seconds West 33.34 feet; (3) South 87 degrees 34 minutes 46 seconds West 113.65 feet; (4) North 78 degrees 42 minutes 00 seconds West 26.71 feet; (5) North 05 degrees 38 minutes 28 seconds West 33.31 feet; (6) North 60 degrees 35 minutes 55 seconds West 43.22 feet; (7) North 85 degrees 00 minutes 14 seconds West 122.72 feet; (8) South 75 degrees 02 minutes 44 seconds West 28.65 feet; (9) South 51 degrees 27 minutes 49 seconds West 10.91 feet; (10) South 79 degrees 14 minutes 40 seconds West 19.72 feet; (11) North 57 degrees 29 minutes 22 seconds West 18.71 feet; (12) North 03 degrees 40 minutes 21 seconds West 38.52 feet; (13) North 30 degrees 57 minutes 21 seconds West 33.92 feet; (14) South 89 degrees 30 minutes 51 seconds West 399.02 feet; (15) South 35 degrees 18 minutes 42 seconds West 23.60 feet; (16) South 03 degrees 37 minutes 02 seconds East 52.86 feet; (17) South 14 degrees 09 minutes 30 seconds West 70.51 feet; (18) South 36 degrees 29 minutes 39 seconds West 31.85 feet; (19) South 79 degrees 36 minutes 06 seconds West 27.76 feet; (20) North 65 degrees 23 minutes 47 seconds West 29.41 feet; (21) North 40 degrees 13 minutes 05 seconds West 42.28 feet; (22) North 83 degrees 03 minutes 12 seconds West 13.62 feet; thence North 57 degrees 17 minutes 07 seconds West 12.36 feet; thence North 08 degrees 53 minutes 54 seconds West 91.36 feet; thence North 00 degrees 40 minutes 16 seconds West 29.11 feet; thence North 00 degrees 36 minutes 05 seconds West 44.43 feet; thence North 29 degrees 07 minutes 36 seconds West 47.68 feet; thence North 05 degrees 33 minutes 20 seconds West 30.64 feet; thence North 30 degrees 36 minutes 24 seconds West 108.04 feet; thence North 22 degrees 31 minutes 53 seconds West 145.27 feet; thence North 69 degrees 00 minutes 23 seconds East 149.78 feet; thence North 00 degree 17 minutes 26 seconds East 50.00 feet; thence North 80 degrees 03 minutes 42 seconds West 244.11 feet; thence North 00 degrees 17 minutes 09 seconds East 253.43 feet; thence South 89 degrees 43 minutes 00 seconds East 107.17 feet; thence North 54 degrees 45 minutes 35 seconds East 79.77 feet; thence South 70 degrees 18 minutes 15 seconds East 27.97 feet; thence South 00 degrees 17 minutes 26 seconds West 165.83 feet; thence North 89 degrees 42 minutes 34 seconds East 662.17 feet; thence North 00 degrees 01 seconds West 164.57 feet to a point on a curve concave southeasterly, the radius point of said curve being South 14 degrees 10 minutes 48 seconds West 160.00 feet from said point; thence southeasterly along said curve 134.82 feet to a point on said curve, said point being North 62 degrees 27 minutes 30 seconds East 160.00 feet from the radius point of said curve; thence North 62 degrees 27 minutes 30 seconds East 190.79 feet; thence North 00 degrees 17 minutes 26 seconds East 119.51 feet; thence North 83 degrees 45 minutes 53 seconds East 75.66 feet to the place of beginning, containing 19,888 acres, more or less, subject to all legal highways, rights-of-ways, easements, and restrictions of record.

SHT.	DESCRIPTION
C001	COVER SHEET
C100-C101	TOPOGRAPHICAL SURVEY
C200-C202	SITE DEVELOPMENT PLAN EMERGENCY FLOOD ROUTE
C300-C305	INITIAL STORM WATER POLLUTION & PREVENTION PLAN TEMPORARY STORM WATER POLLUTION & PREVENTION PLAN PERMANENT SEDIMENT & EROSION CONTROL PLAN STORM WATER POLLUTION & PREVENTION SPECIFICATIONS STORM WATER POLLUTION & PREVENTION DETAILS
C400-C405	STREET PLAN & PROFILES INTERSECTION DETAILS SIGNAGE PLAN PAVING & CURB POLICY
C500	SANITARY SEWER PLAN & PROFILE
C600-C605	STORM SEWER PLAN & PROFILES SUB-SURFACE DRAIN PLAN
C700	WATER PLAN
C800-C804	CONSTRUCTION DETAILS SANITARY STORM STREET
C900	LANDSCAPE PLAN
LS1.1-LS1.6	V3 - DESIGN DEVELOPMENT DOCUMENTS BMP LANDSCAPE PLANS
LS2	TRAILHEAD PAVILION DETAILS

SHT.	DESCRIPTION
ALL	REVISED PER TAC COMMENTS 01/18/19 JAW
ALL	REVISED PER TAC COMMENTS 04/01/19 JAW
C700	REVISED WATER MAIN AROUND ENTRANCE P1LAR 08/27/19 DSM
ALL	AS BUILTS - 02/17/2020 - RBM

ALL SECTION 6 LOTS 305-316 FALL WITHIN THE ESTATES PLANNING AREA.
ALL PAVING WITHIN THE EXISTING AND PROPOSED CITY RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF ENGINEERING. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF THE WORK AND TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY.

UTILITY CONTACTS:

- Clay Township Regional Waste District
10701 College Avenue
Indianapolis, Indiana 46280
- Carmel Water Utilities
3450 West 131st Street
Westfield, IN 46074
- AT & T
240 N. Meridian St.
2nd Floor, Room 280
Indianapolis, Indiana 46220
- BrightHouse Networks
3030 Roosevelt Avenue
Indianapolis, Indiana 46218
- Indianapolis Power & Light Company
3600 North Arlington Avenue
Indianapolis, Indiana 46218
- Vectren Energy
16000 Allisonville Road
Noblesville, Indiana 46060

PLANS PREPARED BY:
STOEPPEL WERTH & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
7965 E. 106TH STREET, FISHERS, INDIANA 46038
PHONE: (317)-849-5935
FAX: (317)-849-5942
CONTACT PERSON: BRETT A. HUFF
EMAIL: BHUFF@STOEPPELWERTH.COM

PLANS CERTIFIED BY:
David J. Stoepfelwerth 12/07/2018
DAVID J. STOEPPELWERTH
PROFESSIONAL ENGINEER
No. 19358

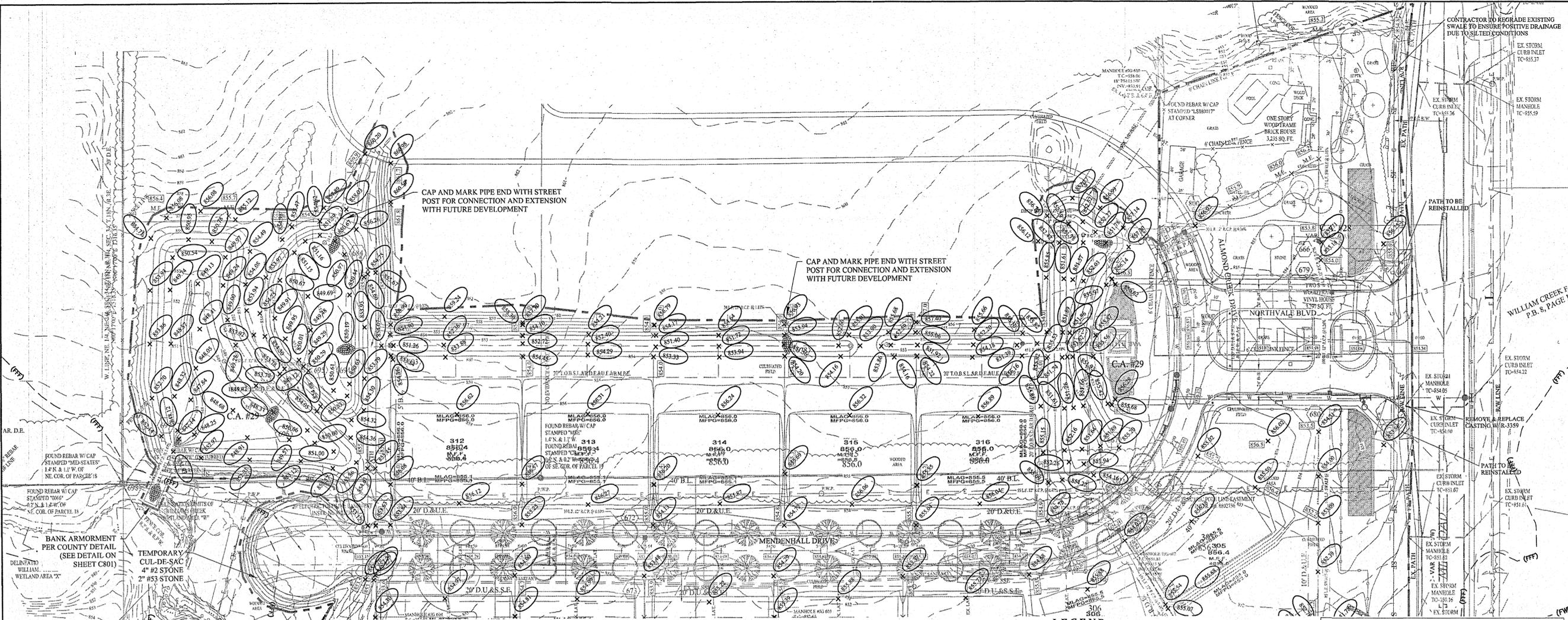
RECORD DRAWING

Dennis D. Olmstead 2/15/2020
Dennis D. Olmstead
Registered Land Surveyor
No. 900012



FILED
AUG 31 2020
OFFICE OF HAMILTON COUNTY SURVEYOR

File Name: S:\60160REP-S\DWG\C200 - Site Development Plan.dwg - C200
 Plotted By: JAW
 Date: February 17, 2020 11:31:28 AM
 Plotted By: JAW
 Date: February 18, 2020 7:24:14 AM / Raven Morris



STRUCTURE TABLE										
STR.#	TYPE	T.C.	CASTING TYPE	DIAMETER IN	DIRECTION IN	INV. IN	DIAMETER OUT	DIRECTION OUT	INV. OUT	SLOPE
666	YARD INLET	853.72	R-4342				12	S	850.16	2.47%
667	YARD INLET	851.17	R-4342				12	S	848.98	0.47%
668	CURB INLET	854.22	R-3501-TL/TR	12	N	848.72	12	SE	848.62	1.95%
669	CURB INLET W/ 2' SUMP	854.13	R-3501-TL/TR	12	NW	848.03	12	SE	847.63	0.48%
670	MANHOLE	851.23	R-1772	12	NW	846.72	12	S	846.62	0.55%
671	END SECTION	847.70		12	N	846.45				
672	CURB INLET	853.51	R-3501-TL/TR	12	N	849.41	15	S	848.54	0.64%
673	CURB INLET	853.62	R-3501-TL/TR	12	N	849.41	15	S	848.54	0.64%
674	MANHOLE	851.16	R-1772	15	N	847.40	15	W	847.30	0.44%
675	END SECTION	848.55		15	E	847.03				
678	END SECTION	854.27		15	N	853.02				
679	CURB INLET	853.20	R-3501-TL/TR	12	N	848.95	12	S	848.85	0.26%
680	CURB INLET W/ 2' SUMP	853.14	R-3501-TL/TR	12	N	848.59	15	S	848.49	0.67%
681	END SECTION	848.36		15	N	846.84				
684	END SECTION	852.09		12	NE	850.84				
685	END SECTION	845.58		12	S	844.33				1.19%
686	END SECTION	845.15		12	N	843.90				
687	OUTLET CTRL. STR.	846.34	CUSTOM				12	SW	840.89	1.31%
688	END SECTION	841.27		12	NE	840.02				
689	OUTLET CTRL. STR.	847.10	CUSTOM				12	S	841.66	0.28%
690	END SECTION	842.29		12	N	841.04				
691	YARD INLET	853.38	R-4342				12	E	849.96	2.48%
692	YARD INLET	851.84	R-4342	12	W	848.84				
693	OUTLET CTRL. STR.	853.31	CUSTOM				12	W	850.85	0.37%
694	END SECTION	851.94		12	E	850.69				
695	END SECTION	850.71		12	SW	849.46				0.91%
696	END SECTION	850.24		12	NE	848.99				
697	OUTLET CTRL. STR.	851.69	CUSTOM				12	SW	845.21	1.47%
698	END SECTION	845.66		12	NE	844.41				
800	CURB INLET	856.29	R-3501-TL/TR	12	SW	852.57	12	SW	852.57	0.26%
801	CURB INLET	856.31	R-3501-TL/TR	12	NE	852.49	12	W	852.39	0.89%
802	END SECTION	853.17		12	E	851.92				

PIPE TABLE									
NAME	SIZE	LENGTH	SLOPE	MATERIAL	UPSTREAM STR.#	DOWNSTREAM STR.#			
667-668	12"	55.34'	0.47%	R.C.P.	667	668			
668-669	12"	30.22'	1.95%	R.C.P.	668	669			
669-670	12"	191.03'	0.48%	R.C.P.	669	670			
670-671	12"	31.19'	0.55%	R.C.P.	670	671			
672-673	12"	30.24'	0.50%	R.C.P.	672	673			
673-674	15"	179.33'	0.64%	R.C.P.	673	674			
674-675	15"	61.93'	0.44%	R.C.P.	674	675			
679-680	12"	100.35'	0.26%	R.C.P.	679	680			
683-684	12"	23.84'	1.23%	R.C.P.	683	684			
685-686	12"	36.11'	1.19%	R.C.P.	685	686			
687-688	12"	66.39'	1.31%	R.C.P.	687	688			
689-690	12"	219.79'	0.28%	R.C.P.	689	690			
691-692	12"	45.15'	2.48%	R.C.P.	691	692			
693-694	12"	43.44'	0.37%	R.C.P.	693	694			
695-696	12"	51.91'	0.91%	R.C.P.	695	696			
697-698	12"	54.32'	1.47%	R.C.P.	697	698			
800-801	12"	30.40'	0.26%	R.C.P.	800	801			
801-802	12"	52.84'	0.89%	R.C.P.	801	802			
681A-681	15"	247.53'	0.67%	R.C.P.	680	681			
666-679	12"	48.90'	2.47%	R.C.P.	666	679			
STUB-678	15"	23.79'	1.11%	R.C.P.		678			

BMP POND DATA TABLE			
	2YR. ELEV.	10YR. ELEV.	100YR. ELEV.
BMP 13A	846.10	846.92	848.58
BMP 13B	846.00	846.57	846.70
BMP 13D	847.57	847.89	849.22
BMP 14B	851.70	852.69	853.90
BMP 14C	850.89	851.63	852.16
BMP 15A	853.40	853.71	853.93
BMP 15B	852.31	853.01	853.55
BMP 15C	852.29	852.89	853.53

DRAINAGE SUMMARY
 OVERALL
 Site Acreage=4-266 ac.
 OffSite/Upstream Acreage=4-6.80ac.
 Allowable Release Rate:
 10yr = 138.03 c.f.s. 100yr = 328.58 c.f.s.
 Post Developed Release Rate:
 10 yr = 133.35 c.f.s. 100 yr = 327.45 c.f.s.

SECTION 6
 Site Acreage=4-19.888 ac.
 Is the primary water quality treatment for the development as planned in the Master Plan - YES
 If NO, provide the following information per BMP (Only for BMP's with vegetative swale req.):
 *Length of vegetated swale treatment (from discharge point to outlet pipe) - N/A
 *Minimum length of vegetated swale treatment as required by the Master Plan - N/A

Is the primary water quantity treatment for the development as planned in the Master Plan - YES
 *If YES, provide the following information:
 Total Master Plan contributing watershed = 26.21 Ac.
 Total Watershed Currently Built (or Approved) contributing to this system = 0 Ac.
 Total watershed from Section 6 contributing to the system = 13.96 Ac.
 Total watershed available in the system post-project = 12.25 Ac.

Is the entire BMP treatment train to an outlet point being constructed with this section - Yes
 If NO, provide the following information:
 *Master Plan BMP(s) downstream of this sections discharge location (list each)
 *BMP(s) downstream that have been previously constructed (list each)

Detention Basins BMP's Constructed with this section. (See BMP pond data table-this sheet) - N/A
 Also, reference Post-Construction Stormwater Master Plan prepared by Williams Creek Consulting.

LEGEND

- EXISTING CONTOUR
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED GRADE
- PROPOSED CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED WATER LINE
- PROPOSED SWALE
- PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
- ADA RAMP TO BE INSTALLED
- REAR FL
- XXX XXX.X
- FRONT RW
- MPF XXX.X
- MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE BELOW
- 1. (1) FOOT ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST.
- 2. 15" (1.25) ABOVE THE ROAD ELEVATION
- 3. 6" (0.5) ABOVE THE MLAG
- MLAG 123.4
- MINIMUM LOWEST ADJACENT GRADE (FLOOD PROTECTION)
- * MLAG FOR ALL HOMES IN THIS PROJECT SHALL BE A MINIMUM OF 754.0 UNLESS OTHERWISE NOTED.
- MPF 123.4
- MINIMUM FLOOD PROTECTION GRADE
- CONSTRUCTION LIMITS
- FFW 840.28
- FWW
- FWT
- APPROXIMATE LIMITS OF FLOODPLAIN
- APPROXIMATE LIMITS OF FLOODWAY BOTH PER FIRM MAPS
- 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED BY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

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

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

ADJACENT PROPERTIES
 NORTH: GRASS/WEEDS
 EAST: RESIDENTIAL
 SOUTH: GRASS/WEEDS
 WEST: GRASS/WEEDS

DRAINAGE SUMMARY
 REFERENCE THIS SHEET FOR DRAINAGE SUMMARY INFORMATION.
 REFERENCE THIS SHEET FOR STRUCTURE DATA TABLE.

CONTACT: CARMEL UTILITIES
 (317) 571-2648
 FOR WATER LOCATES

CONTACT: TRICO REGIONAL SEWER UTILITY
 (317) 844-9200
 FOR SANITARY SEWER LOCATES

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

STORM WATER CONTROLS SHOWN ON THE INITIAL SWPPP (C300) SHOULD BE INSTALLED AS SOON AS PRACTICAL.

IF IT WILL BE NECESSARY TO RELOCATE EXISTING UTILITIES, THE EXPENSE OF SUCH RELOCATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. ALL UTILITY POLES SHALL BE LOCATED WITHIN ONE FOOT OF THE PROPOSED RIGHT-OF-WAY.

RECORD DRAWING

Denits D. Olmstead
 Registered Land Surveyor
 No. 900012
 2/18/2020

REGISTERED PROFESSIONAL ENGINEER
 No. 19358
 STATE OF INDIANA
 David J. Stappewert

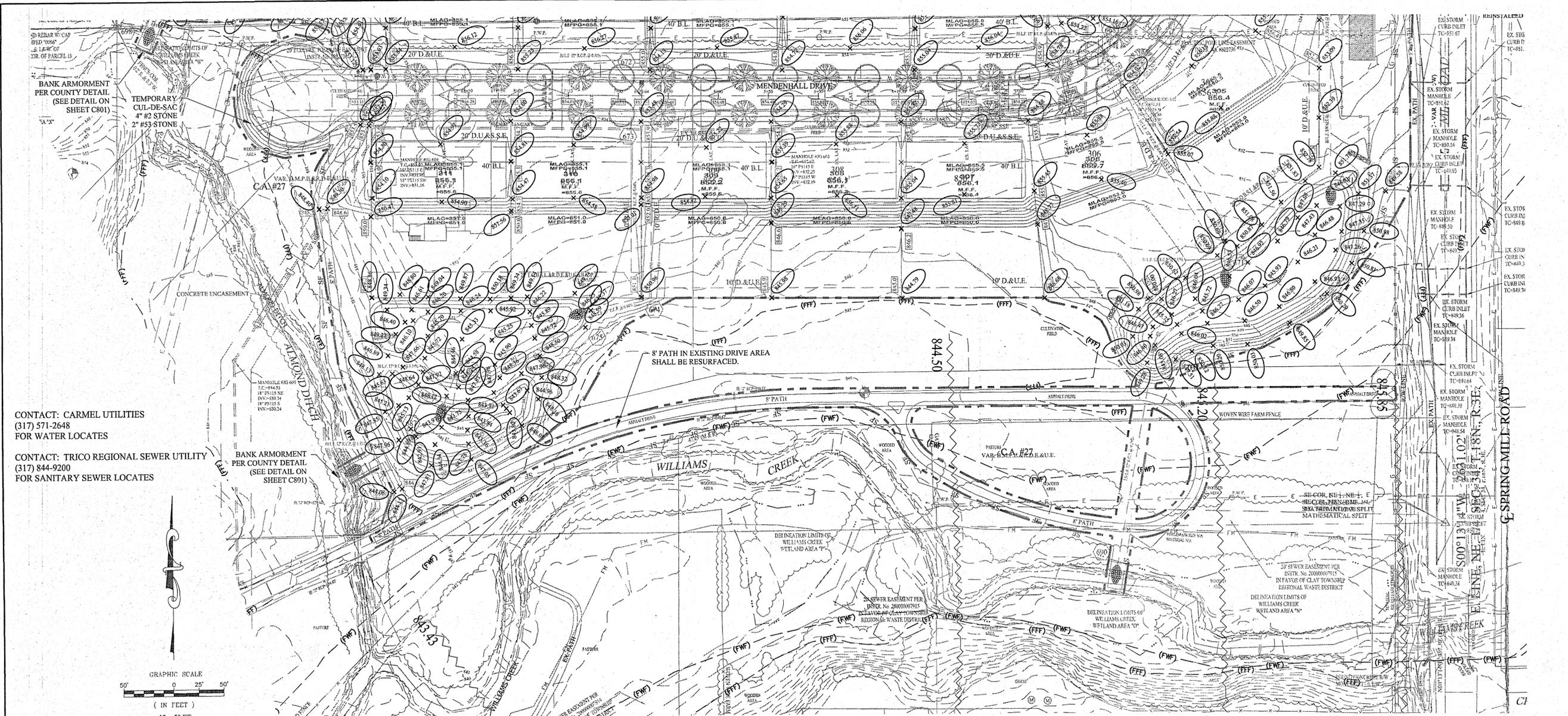
DATE: 02/18/20
 AS BUILTS: 02/18/20
 REVISED PER TAC COMMENTS: 02/18/20
 REVISED PER TAC COMMENTS: 02/18/20

FILED
 AUG 31 2020
 SHEET NO. C200
 S.A. JOB NO. 60160REP-S6

STOEPPELWERTH
 ALWAYS ON
 7905 East 100th Street, Fishers, IN 46038-2505
 phone: 317.845.2935 fax: 317.849.2942

SITE DEVELOPMENT PLAN
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
 HAMILTON COUNTY, INDIANA
 CARMEL

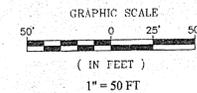
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CONTACT: CARMEL UTILITIES
(317) 571-2648
FOR WATER LOCATES

CONTACT: TRICO REGIONAL SEWER UTILITY
(317) 844-9200
FOR SANITARY SEWER LOCATES

BANK ARMORMENT
PER COUNTY DETAIL
(SEE DETAIL ON
SHEET C801)



NOTES TO CONTRACTOR:

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

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

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

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

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

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

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

IF IT WILL BE NECESSARY TO RELOCATE EXISTING UTILITIES, THE EXPENSE OF SUCH RELOCATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. ALL UTILITY POLES SHALL BE LOCATED WITHIN ONE-FOOT OF THE PROPOSED RIGHT-OF-WAY.

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

ALL PAVING WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF ENGINEERING.

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

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

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

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

STORM WATER CONTROLS SHOWN ON THE INITIAL SWPPP (C300) SHOULD BE INSTALLED AS SOON AS PRACTICAL.

IF IT WILL BE NECESSARY TO RELOCATE EXISTING UTILITIES, THE EXPENSE OF SUCH RELOCATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. ALL UTILITY POLES SHALL BE LOCATED WITHIN ONE FOOT OF THE PROPOSED RIGHT-OF-WAY.

SEE SHEET C200 FOR LEGEND & STORM DATA TABLES.

EARTHWORK:

- EXCAVATION**
 - Excavated material that is suitable may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the site.
 - Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the responsibility of the Contractor for any costs for fill needed.
- REMOVAL OF TREES**
 - All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.
- PROTECTION OF TREES**
 - The Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.
 - In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.
- REMOVAL OF TOPSOIL**
 - All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.
- UTILITIES**
 - Rules and regulation governing the respective utility shall be observed in executing all work under this section.
 - It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside Indiana.
- SITE GRADING**
 - Do all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawing.
 - The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
 - The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.

FORMEARTHWRK

REFERENCE BENCHMARK:

HAM G-53 - A bronze disk on a concrete post projecting 1.5 feet out of the ground along U.S. Highway 31, 1.4 miles north of Interstate-465, 0.4 miles south of 116th Street, 100 feet west of the centerline of the south bound lane of U.S. Highway 31 and 2 feet east of the right-of-way fence.
Elevation: 844.04' (NGVD 1929)

TEMPORARY BENCHMARKS:

- TBM # 1** - A cut "X" found at the top of curb on the east side of the round-a-bout at 116th Street and Spring Mill Road.
Elevation: 855.05' (NGVD 1929)
- TBM # 2** - A railroad spike set one foot above the ground in the north side of power pole number 21 104-B, said pole being on the south side of 116th Street and 21 feet east of the drive to 951 116th Street.
Elevation: 859.30' (NGVD 1929)
- TBM # 3** - A cut Square at the southeast corner of south concrete handrail on the 116th Street bridge over Williams Creek.
Elevation: 841.65' (NGVD 1929)
- TBM # 4** - A railroad spike set one foot above the ground in the east side of power pole number 18-103A, said pole being on the west side of Clay Center Road and 4 feet north of the drive to 11824 Clay Center Road.
Elevation: 867.10' (NGVD 1929)
- TBM # 5** - A cut Square in the top of curb at the east end of center island at the entrance to Clay Springs Subdivision at the intersection of Clay Spring Drive and Clay Center Road.
Elevation: 873.07' (NGVD 1929)
- TBM # 6** - A cut Square in the concrete walk in the west side of Clay Center Road, 550 feet north of entrance to Claridge Farms Subdivision.
Elevation: 873.39' (NGVD 1929)
- TBM # 7** - The top of a concrete monument found near the Northeast corner of the Southeast Quarter of the Northwest Quarter of Section 34, township 18 North, Range 3 East, 32 feet south of the west drive to 660 Suffolk Lane.
Elevation: 869.27' (NGVD 1929)
- TBM # 8** - A railroad spike set one foot above the ground in the west side of power pole number 8386177, said pole being on the east side of Spring Mill Road at 12435 Spring Mill Road.
Elevation: 856.00' (NGVD 1929)
- TBM # 9** - A railroad spike set one foot above the ground in the west side of power pole number 8386169, said pole being on the east side of Spring Mill Road and 90 feet south of the intersection of Mallard Court and Spring Mill Road.
Elevation: 860.92' (NGVD 1929)

TO CONVERT THE 1929 BENCHMARK TO NAVD88, SUBTRACT 0.43 FEET FROM ALL ELEVATIONS. NGVD29 - 0.43' = NAVD88"

FLOOD STATEMENT

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

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

ADJACENT PROPERTIES
NORTH: GRASS/WEEDS
EAST: RESIDENTIAL
SOUTH: GRASS/WEEDS
WEST: GRASS/WEEDS

DRAINAGE SUMMARY

REFERENCE SHEET C200 FOR DRAINAGE SUMMARY INFORMATION.
REFERENCE SHEET C200 FOR STRUCTURE DATA TABLE.

RECORD DRAWING

Dennis D. Olmstead
Registered Land Surveyor
No. 900012

2/18/2020



AUG 31 2020

C201

DATE	BY	REVISIONS
07/18/20	BAH	AS BUILT
01/18/19	BAH	REVISED PER IAC COMMENTS
		REVISED PER IAC COMMENTS



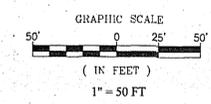
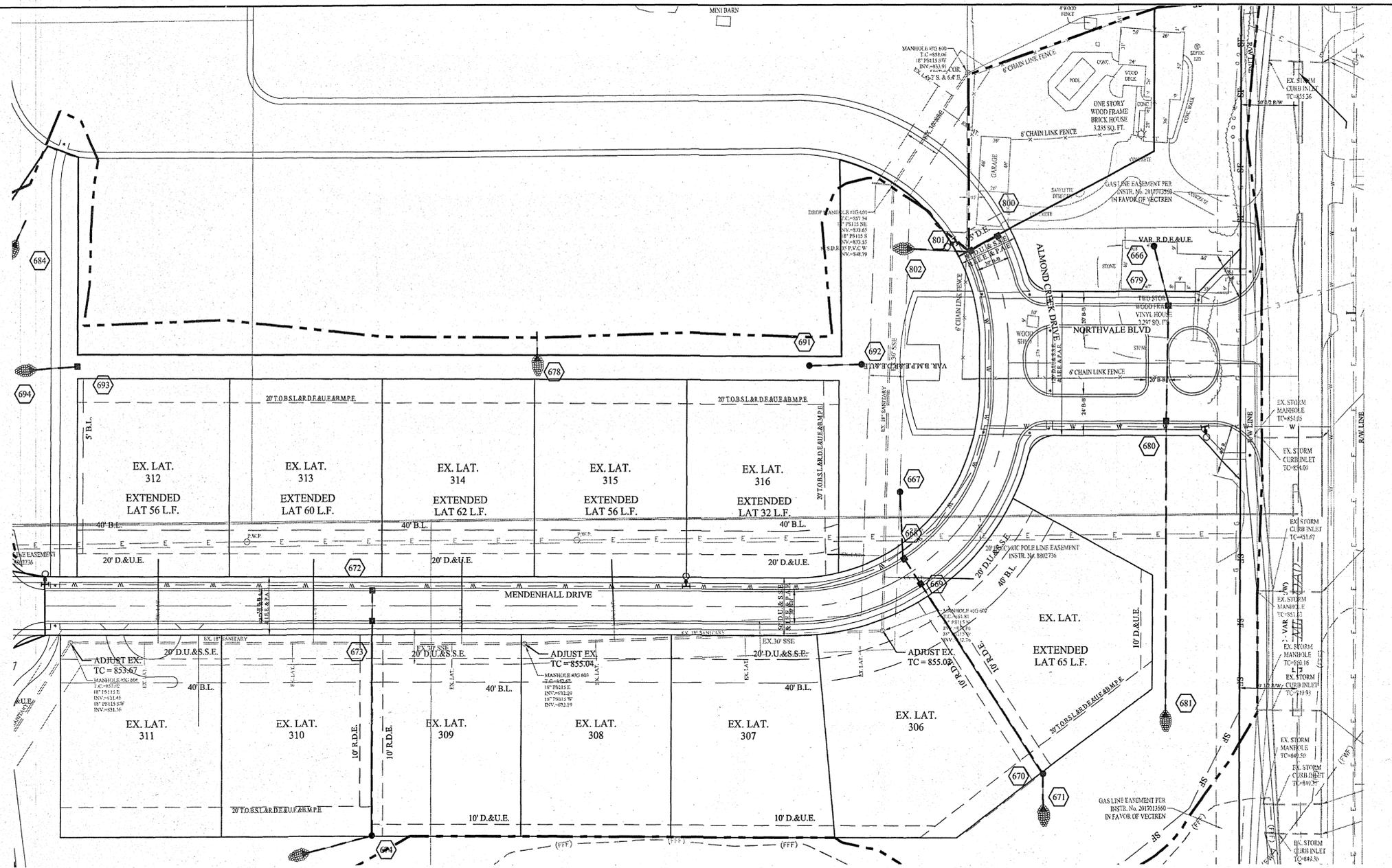
THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACTION OR SURVEY OR A SURVEYOR LOCATION REPORT.
CERTIFIED: 12/07/18
David J. Stoepelwerth

STOEPPELWERTH
ALWAYS ON
7965 East 106th Street, Fishers, IN 46038-2305
phone: 317.849.2953 fax: 317.849.5942

SITE DEVELOPMENT PLAN
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
HAMILTON COUNTY, INDIANA
CARMEL

File Name: S:\60160REP-SD\W\G\C200 - Site Development Plan.dwg - C201
 Modified / By: February 18, 2020 7:23:30 AM / Dennis D. Olmstead
 Plotted / By: February 18, 2020 7:23:30 AM / Forest Morris

File Name: S:\60160REP-S50\DWG\C500 - Sanitary Plan & Profile.dwg - C500
 Modified / By: December 12, 2018 10:42:58 AM / Willis
 Plotted / By: February 14, 2020 9:51:53 AM / Raven Morris



FULL DEPTH GRANULAR BACKFILL

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

MIN. SLOPES PER THE TEN STATE STANDARDS SHALL PREVAIL IN ALL CASES.

THE EXTERIORS OF ALL MANHOLES NEED TO BE COATED PER CLAY TOWNSHIP REGIONAL WASTE STANDARDS.

THERE ARE TO BE NO WATER VALVES OR MANHOLES WITHIN THE PAVEMENT, CURB, OR SIDEWALK WITH THE EXCEPTION OF CURB INLETS.

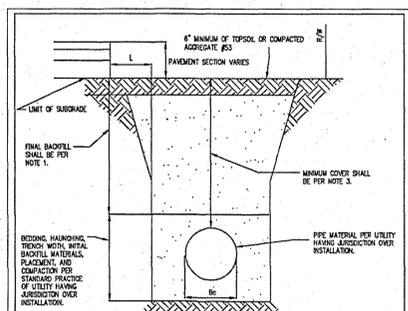
INSTALL A TRACER WIRE WITH ALL SERVICE CONNECTIONS.

FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF THE 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 3.0 FEET.

REFER TO THIS SHEET FOR SANITARY TRENCH DETAIL WITHIN CITY RIGHT-OF-WAY.

CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE PROPERLY SEALED, CORED-DRILLED INSTALLATIONS.

NOTE:
 ALL FINAL STRUCTURE GRADES ARE TO BE WITHIN PLUS OR MINUS ONE TENTH (0.1') OF A FOOT OF DESIGN GRADE, AND ARE TO BE ESTABLISHED UTILIZING 1-4" RISER RING, NO MORE NO LESS, ON EACH STRUCTURE.



WATER & SEWER MAIN AND LATERAL TRENCH DETAIL FOR UTILITY INSTALLATIONS WITHIN CITY R/W
 NO SCALE

NOTES:

1. FINAL BACKFILL FOR UTILITY INSTALLATIONS WHERE "T" IS 5' OR LESS SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE FOOT AND SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN ONE STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN THE BACKFILL. FOR THE TOP 6" OF THE EXCAVATION BELOW THE LIMIT OF SUBGRADE SHALL BE #3 STONE MEETING THE MATERIAL REQUIREMENTS OF THE FOOT AND SHALL BE COMPACTED TO NOT LESS THAN 90% STANDARD DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT FINAL BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT WILL GOVERN. CONTRACTOR SHALL PROVIDE A 3rd PARTY TESTING AGENCY TO PROVIDE COMPACTION TESTING AS NECESSARY.
2. THIS REQUIREMENT SHALL APPLY FOR ALL UTILITY INSTALLATIONS (INCLUDING BUT NOT LIMITED TO WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS, SANITARY SERVICE LATERALS, GAS PIPING, POWER, TELECOM AND CABLE CONDUITS OR DUCT BANKS) WITHIN EXISTING AND PROPOSED CITY OF CARMEL R/W LIMITS.
3. FOR UTILITY INSTALLATIONS UNDER CITY STREETS, REGARDLESS OF THE 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 3.0 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.
4. IF EXISTING SUBGRADE HAS BEEN LIME STABILIZED, BACKFILL WITH B-BORROW TO BOTTOM OF EXISTING SUBGRADE AND FILL TO THE LIMIT OF TREATED SUBGRADE WITH COMPACTED AGGREGATE, NO SL.

CITY OF CARMEL STANDARDS
 WATER & SEWER MAIN AND LATERAL TRENCH DETAIL FOR UTILITY INSTALLATIONS WITHIN CITY R/W

STANDARD DRAWING 10-32

RECORD DRAWING
 FILE

Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012
 2/18/2020



AUG 31 2020

STOEPPELWERTH
 ALWAYS ON
 7905 East 104th Street, Fishers, IN 46038-2905
 phone: 317.895.5955 fax: 317.895.5942

SANITARY SEWER PLAN & PROFILE
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
 HAMILTON COUNTY, INDIANA
 CARMEL

REGISTERED PROFESSIONAL ENGINEER
 No. 19358
 STATE OF INDIANA
 CERTIFIED: 12/07/18
 David J. Stappeler

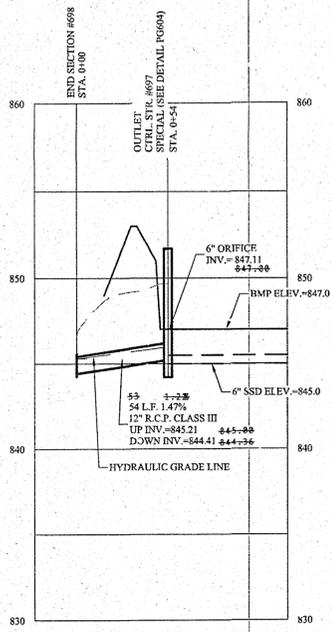
THIS DRAWING IS NOT INTENDED TO BE USED FOR ANY OTHER PROJECT OR SURVEY OR AS A SURVEYOR LOCATION REPORT.

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01/18/19	JAW	REVISED PER TAC COMMENTS

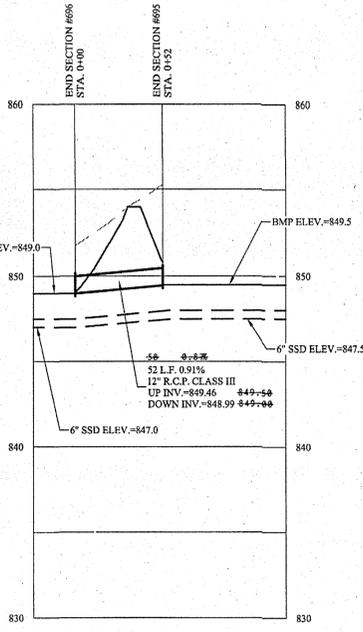
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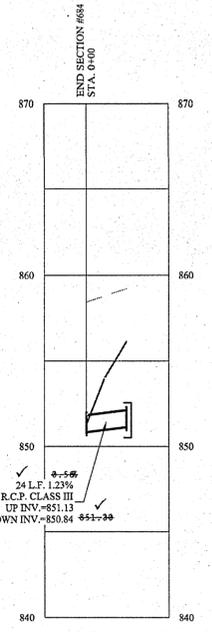
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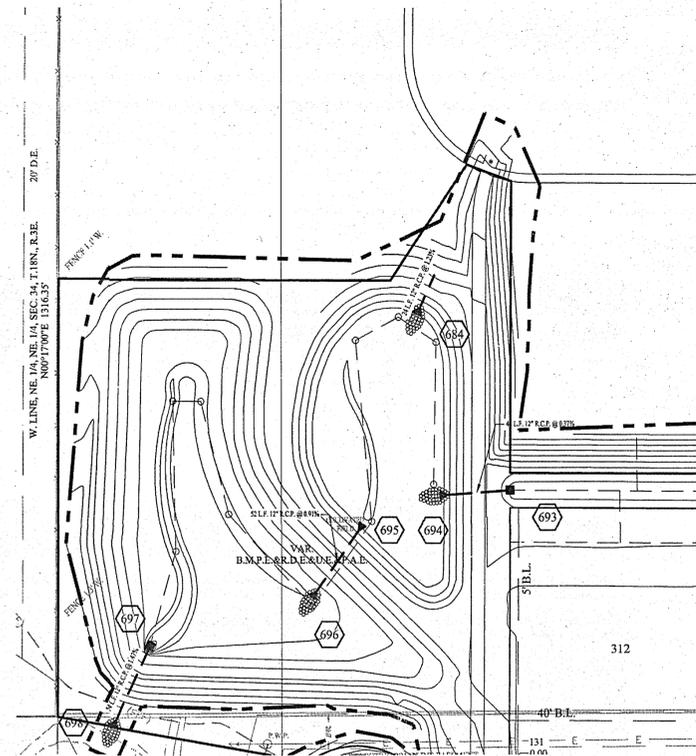
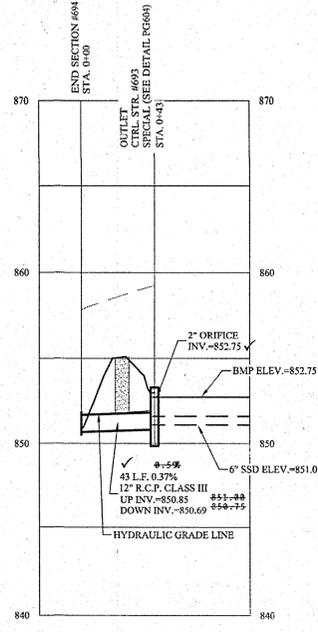
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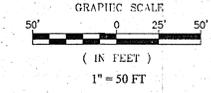


FULL DEPTH GRANULAR BACKFILL
 (SEE RCP TRENCH DETAIL 10-31 ON SHEET C802
 FOR MATERIAL AND SPECIFICATIONS.)

STORM SYSTEM
 STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS:
 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.

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



NOTES:
 ALL STORM STRUCTURES TO RECEIVE SOLID LID
 CASTINGS ARE TO BE CONSTRUCTED TO PROVIDE ONE 4"
 RISER RING NO MORE, NO LESS TO ACHIEVE PLAN RIM
 GRADE.
 ALL YARD INLETS ARE TO BE CONSTRUCTED AT A
 TOLERANCE OF +0.00' TO -0.20' OF PLAN GRADE.
 ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP
 NO WASTE-DRAINS TO WATERWAY"
 ALL SSD'S (SUBSURFACE DRAINS) WILL NEED TO BE
 DOUBLE WALL SMOOTH BORE PERFORATED (HDPE) PIPE.
 DEBRIS GUARDS ARE TO BE INSTALLED ON ALL OPEN
 ENDED INLETS.
 FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE
 DETAIL D-18 ON SHEET C802.
 ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY
 SHALL BE RCP CLASS III.
 FOR INSTALLATION OF STORM UNDER CITY STREETS AND
 COVER REQUIREMENTS, SEE SHEET No. C802 ON THE
 TRENCH DETAIL.
 ALL TOP OF CASTING ELEVATIONS FOR STORM SEWERS
 SHALL BE CONSTRUCTED WITH A TOLERANCE OF 0.10 FT.±

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

DATE	MARK	REVISIONS
02/14/20		AS BUILTS
06/10/20		REVISED PER TAC COMMENTS
04/01/19		REVISED PER TAC COMMENTS
01/18/19		REVISED PER TAC COMMENTS

THIS DRAWING IS NOT INTENDED TO BE
 REPRESENTED AS A RETRACEMENT OR
 SURVEY OR A SURVEYOR LOCATION
 REPORT.
 CERTIFIED: 12/07/18

 David J. Stoeppelwerth

STOEPELWERTH
 ALL WAYS ON
 745 East 10th Street, Fishers, IN 46038-2585
 phone: 317.840.5935 fax: 317.840.5942

STORM PLAN & PROFILE
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
 HAMILTON COUNTY, INDIANA
 CARMEL

RECORD DRAWING

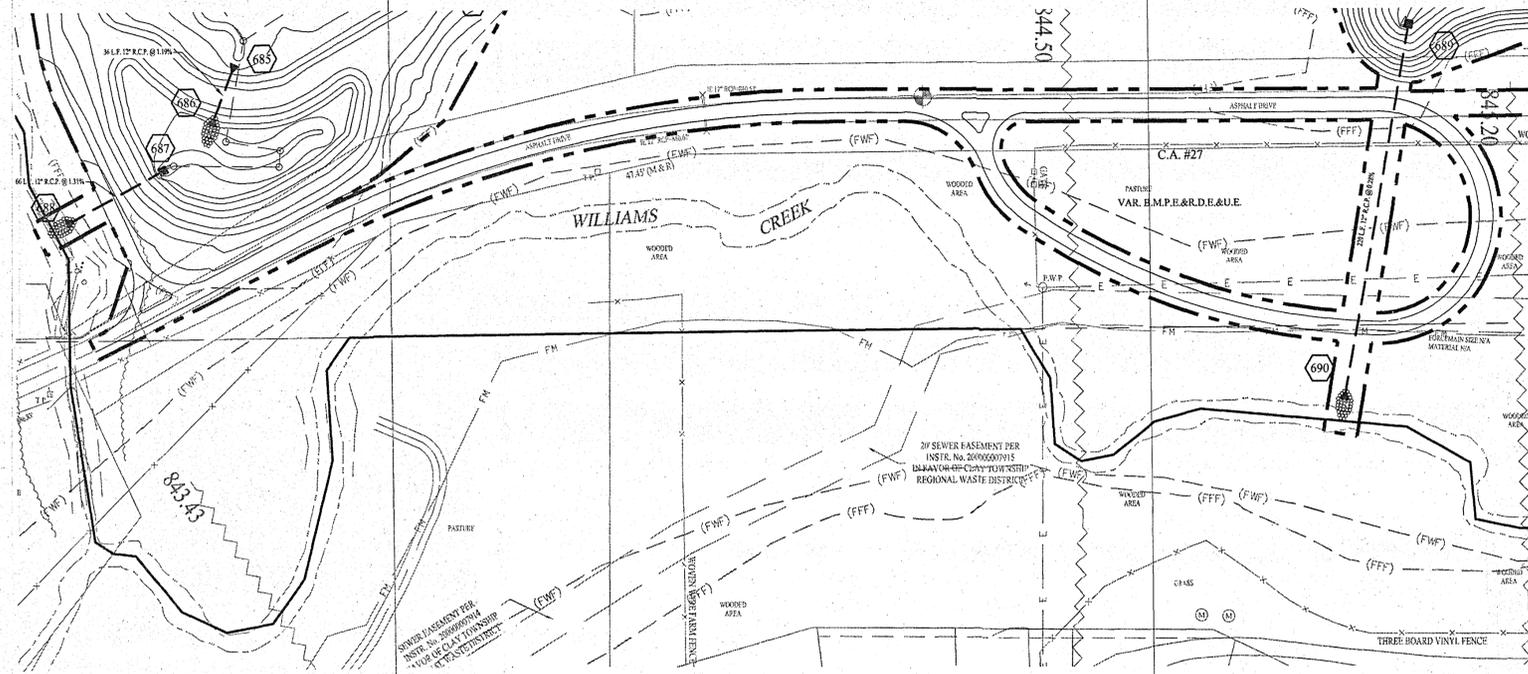
Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012
 8/25/2020

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

CHECKED BY:	DATE:
JAW	8/25/2020

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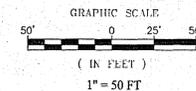


FULL DEPTH GRANULAR BACKFILL
 (SEE RCP TRENCH DETAIL 10-31 ON SHEET C802
 FOR MATERIAL AND SPECIFICATIONS.)

STORM SYSTEM
 STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS:
 THE MINIMUM COVER FROM THE TOP OF THE INSTALLED
 PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE
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NOTES:

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FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE
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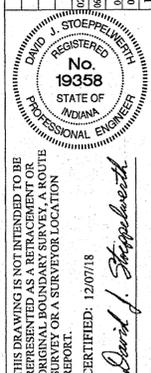
ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY
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FOR INSTALLATION OF STORM UNDER CITY STREETS AND
 COVER REQUIREMENTS, SEE SHEET No. C802 ON THE
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ALL TOP OF CASTING ELEVATIONS FOR STORM SEWERS
 SHALL BE CONSTRUCTED WITH A TOLERANCE OF 0.10 FT. ±

STORM SEWER NOTE

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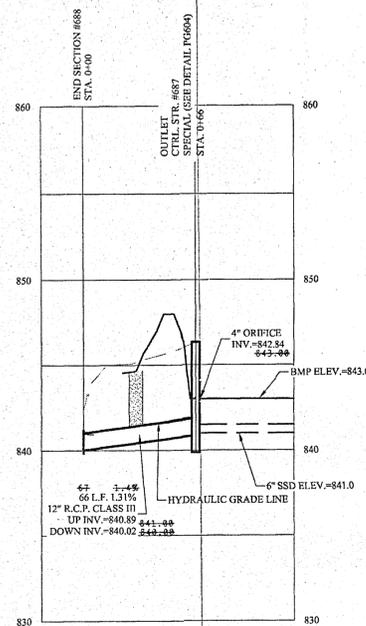
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 ORIGINAL BOUNDARY SURVEY. A ROUTE
 REPORT OR A SURVEYOR LOCATION
 REPORT.
 CERTIFIED: 12/07/18
 David J. Stoepelwerth

STOEPPELWERTH
 ALWAYS ON
 7916 East 10th Street, Fishers, IN 46038-5305
 Phone: 317.849.2585 Fax: 317.849.2942

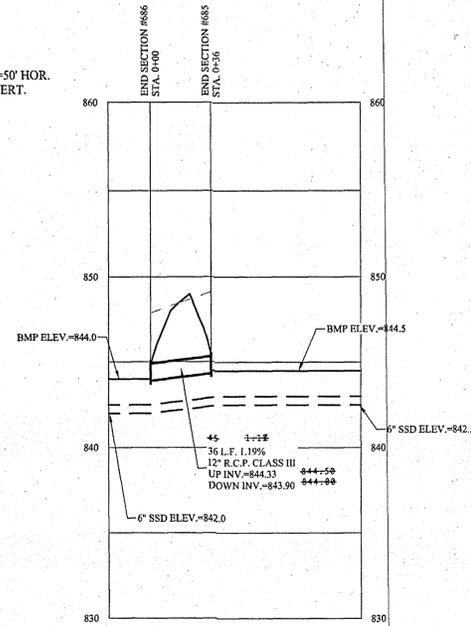


STORM PLAN & PROFILE
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
 HAMILTON COUNTY, INDIANA
 CARMEL

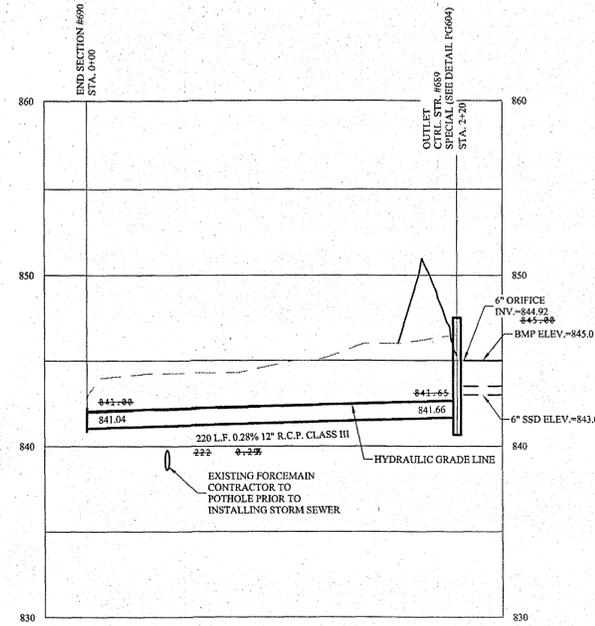
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SCALE: 1"=50' HOR.
 1"=5' VERT.



SCALE: 1"=50' HOR.
 1"=5' VERT.



RECORD DRAWING

Dennis D. Olmstead
 Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012
 8/25/2020

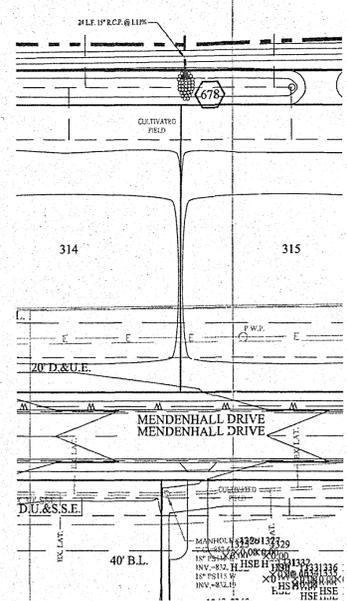


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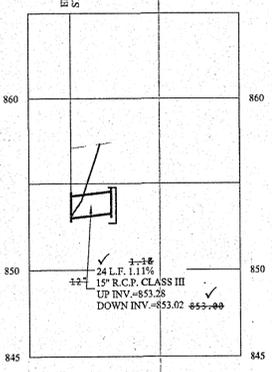
AUG 31 2020

OFFICE OF HAMILTON COUNTY SURVEYOR

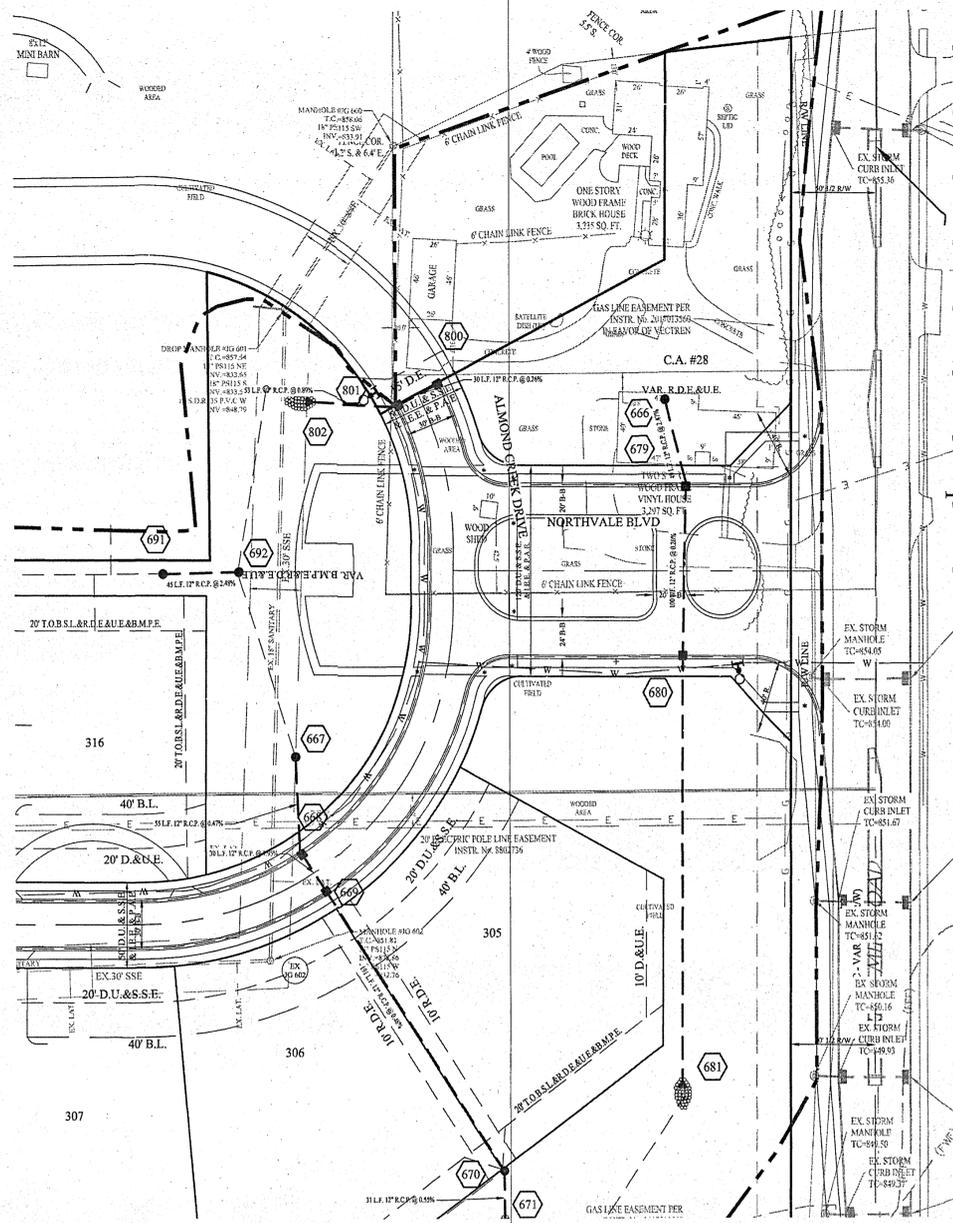
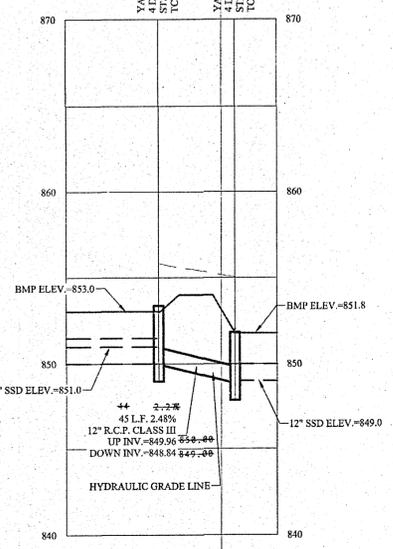
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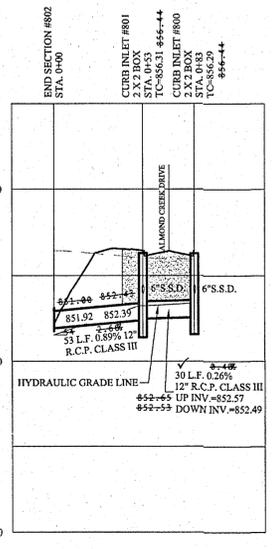
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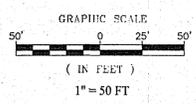
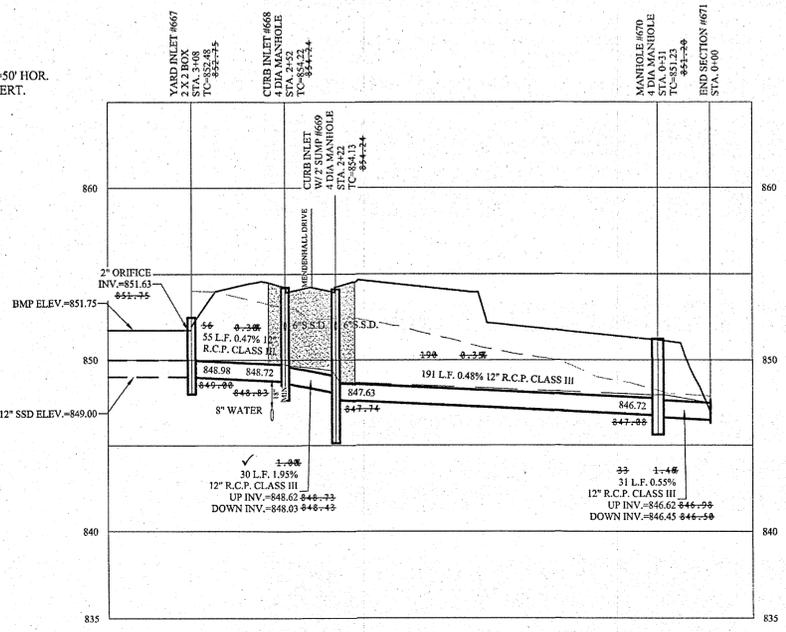
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FULL DEPTH GRANULAR BACKFILL
(SEE RCP TRENCH DETAIL 10-31 ON SHEET C802
FOR MATERIAL AND SPECIFICATIONS.)

STORM SYSTEM
STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS:
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
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OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP
OF THE PIPE BE LESS THAN 2.5 FEET.

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

NOTES:

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

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

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

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

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

FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE DETAIL D-18 ON SHEET C802.

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

FOR INSTALLATION OF STORM UNDER CITY STREETS AND COVER REQUIREMENTS, SEE SHEET No. C802 ON THE TRENCH DETAIL.

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

STORM SEWER NOTE

THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY 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 AND 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS. AND AS APPROVED BY THE CITY OF CARMEL.

REV	DATE	BY	REVISIONS
1	06/19/20	JAW	AS BUILTS
2	07/14/20	JAW	REVISED PER UPDATED SSD SIZES
3	06/10/20	JAW	REVISED PER TRENCH COMMENTS
4	01/18/19	JAW	REVISED PER TAC COMMENTS
5		JAW	REVISIONS

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A REFERENCE FOR THE SURVEY OR A SURVEYOR LOCATION REPORT.

DAVID J. STOEPPELWERTH
REGISTERED PROFESSIONAL ENGINEER
No. 19358
STATE OF INDIANA
CERTIFIED: 12/07/18
David J. Stoepfelwerth

STOEPPELWERTH
ALWAYS ON
7945 East 10th Street, Fishers, IN 46038-2505
phone: 317.849.5935 fax: 317.849.5942

STORM PLAN & PROFILE
JACKSONS GRANT ON WILLIAMS CREEK
SECTION 6
HAMILTON COUNTY, INDIANA
CARMEL

RECORD DRAWING
FILED
AUG 31 2020

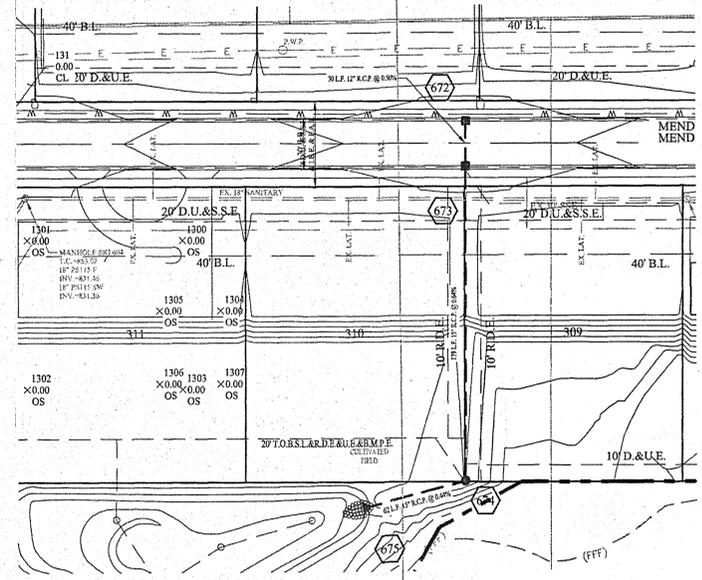
D. D. O.
Dennis D. Olmstead
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No. 900012
8/25/20

DENNIS D. OLMSTEAD
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STATE OF INDIANA

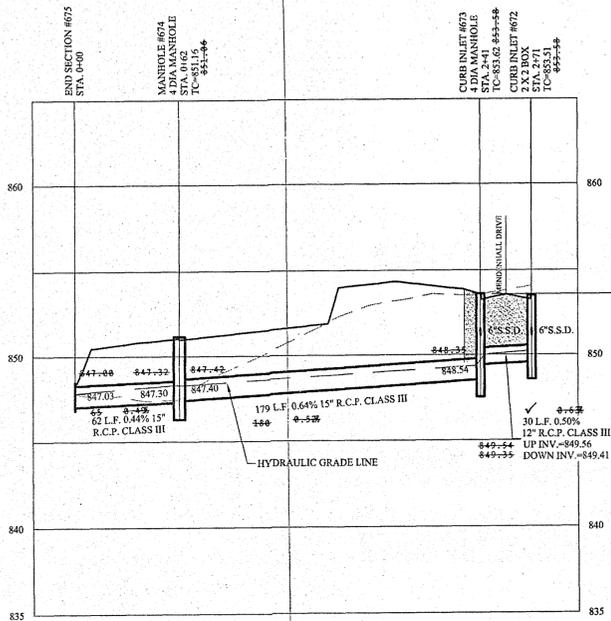
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JAW	BAH
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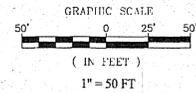
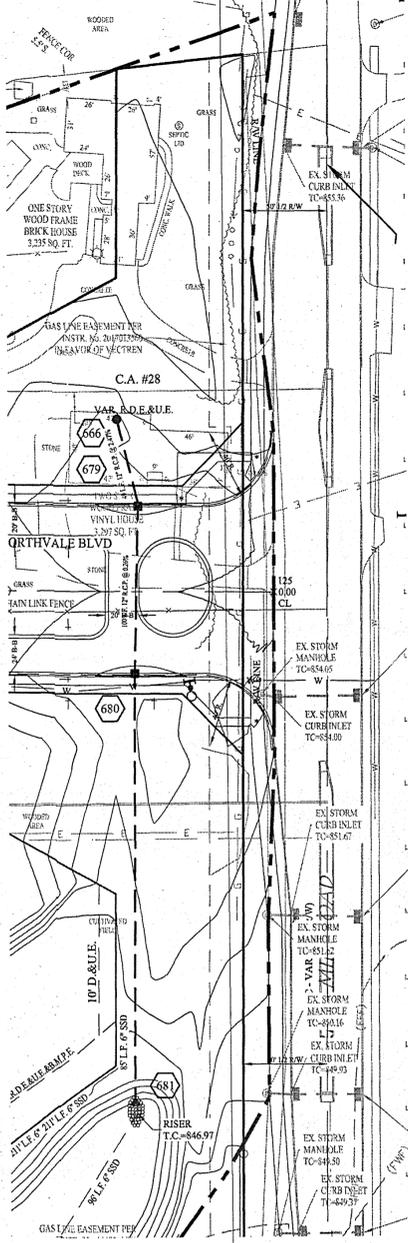
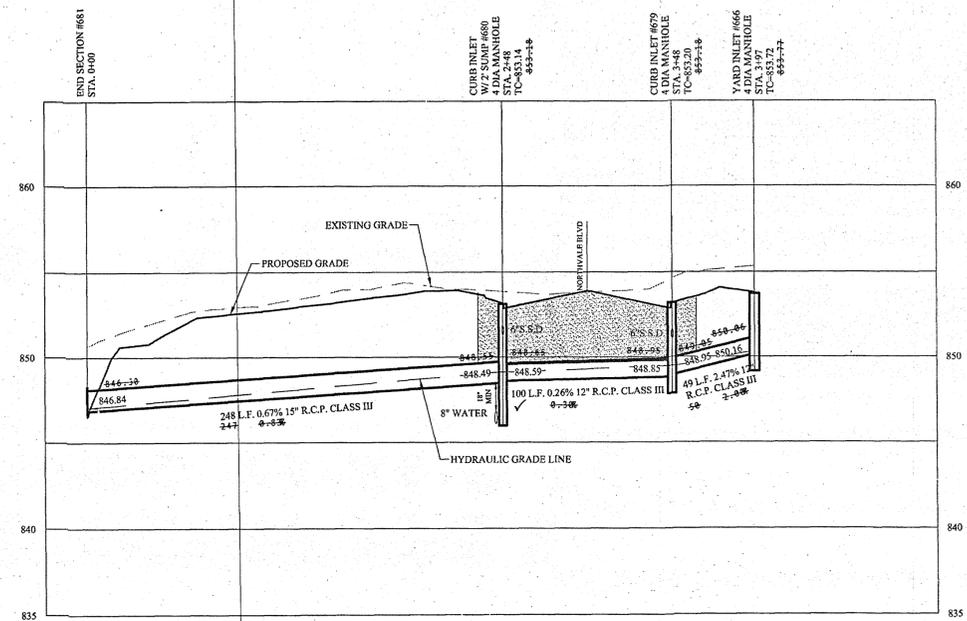
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SCALE: 1"=50' HOR.
 1"=5' VERT.



SCALE: 1"=50' HOR.
 1"=5' VERT.



FULL DEPTH GRANULAR BACKFILL
 (SEE RCP TRENCH DETAIL 10-31 ON SHEET C802
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STORM SYSTEM
 STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC.

MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS:
 THE MINIMUM COVER FROM THE TOP OF THE INSTALLED
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 PAVEMENT SECTION, THICKNESS (ALL BITUMINOUS AND
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NOTES:

- ALL STORM STRUCTURES TO RECEIVE SOLID LID CASTINGS ARE TO BE CONSTRUCTED TO PROVIDE ONE 4" RISER RING NO MORE, NO LESS TO ACHIEVE PLAN RIM GRADE.
- ALL YARD INLETS ARE TO BE CONSTRUCTED AT A TOLERANCE OF +0.00' TO -0.20' OF PLAN GRADE.
- ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY"
- ALL SSD'S (SUBSURFACE DRAINS) WILL NEED TO BE DOUBLE WALL SMOOTH BORE PERFORATED (HDPE) PIPE.
- DEBRIS GUARDS ARE TO BE INSTALLED ON ALL OPEN ENDED INLETS.
- FOR STORM STRUCTURE SIZING AND CASTING TABLE SEE DETAIL D-18 ON SHEET C802.
- ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.
- FOR INSTALLATION OF STORM UNDER CITY STREETS AND COVER REQUIREMENTS, SEE SHEET No. C802 ON THE TRENCH DETAIL.
- ALL TOP OF CASTING ELEVATIONS FOR STORM SEWERS SHALL BE CONSTRUCTED WITH A TOLERANCE OF 0.10 FT.±

STORM SEWER NOTE

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

RECORD DRAWING

Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012



FILED
 AUG 31 2020

STORM PLAN & PROFILE

JACKSONS GRANT ON WILLIAMS CREEK
 SECTION 6

C603
 S & A JOB NO.
 60160REP-S6



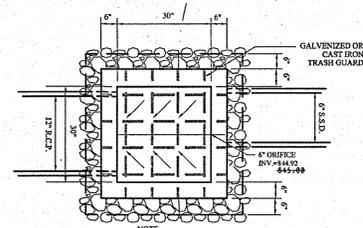
THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY. A ROUTE REPORT OR A SURVEYOR LOCATION REPORT.
 CERTIFIED: 12/07/18
 David J. Stoepfelwerth

STOEPPELWERTH

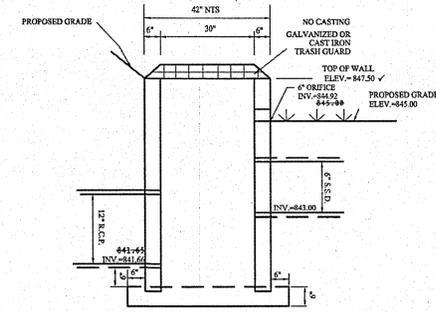
ALWAYS ON
 7905 East 100th Street, Fishers, IN 46038-2905
 Phone: 317.949.5955 Fax: 317.949.2942

DRAWN BY: JAW
 CHECKED BY: BAH
 SHEET NO.
 C603
 S & A JOB NO.
 60160REP-S6

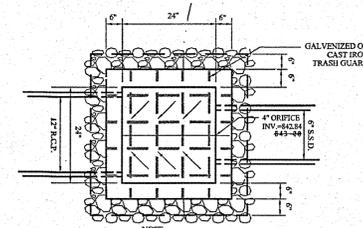
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 Modified / By: August 12, 2020 11:46:19 AM / mevens
 Plotted / By: August 12, 2020 11:52:14 AM / Michael Evans



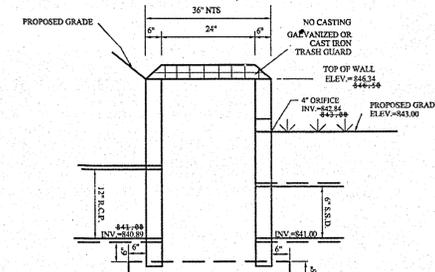
NOTE
 CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION



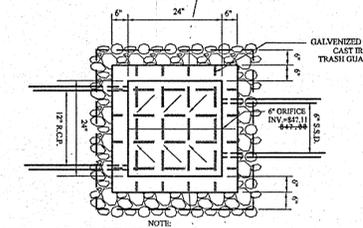
OUTLET CONTROL STRUCTURE #689 DETAIL
 NOT TO SCALE



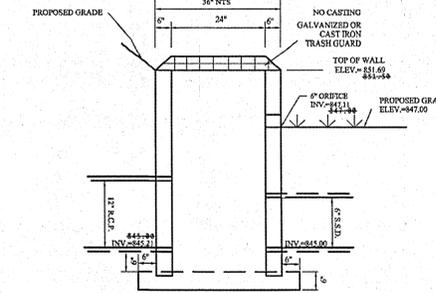
NOTE
 CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION



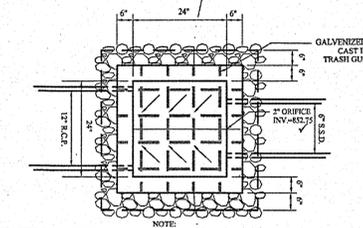
OUTLET CONTROL STRUCTURE #687 DETAIL
 NOT TO SCALE



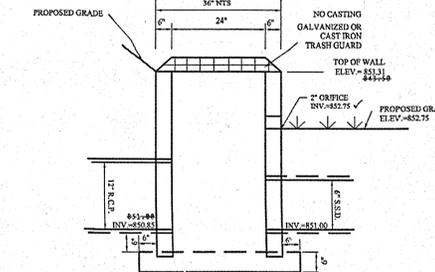
NOTE
 CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION



OUTLET CONTROL STRUCTURE #697 DETAIL
 NOT TO SCALE



NOTE
 CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION



OUTLET CONTROL STRUCTURE #693 DETAIL
 NOT TO SCALE

RECORD DRAWING

DDOE
 Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012
 8/12/2020



FILED
 AUG 31 2020
 OFFICE OF HAMILTON COUNTY CLERK

STORM PLAN & PROFILE
 JACKSONS GRANT ON WILLIAMS CREEK
 SECTION 6
 CARMEL
 HAMILTON COUNTY, INDIANA

David J. Stoppelwerth
 CERTIFIED: 12/07/18
 PROFESSIONAL ENGINEER
 No. 19358
 STATE OF INDIANA
 REGISTERED PROFESSIONAL ENGINEER

DATE	MARK	REVISIONS	BY
01/18/19		REVISED PER TAC COMMENTS	JAW
04/02/20		REVISED PER UPDATED SSD SIZES	JAW
06/12/20		AS BUILTS	RBM
06/12/20		UPDATE STR #689 AS BUILTS	RBM

STOEPPELWERTH
 ALWAYS ON
 7945 East 104th Street, Fishers, IN 46038-2505
 phone: 317.846.5925 fax: 317.846.5942

60160REP-S6

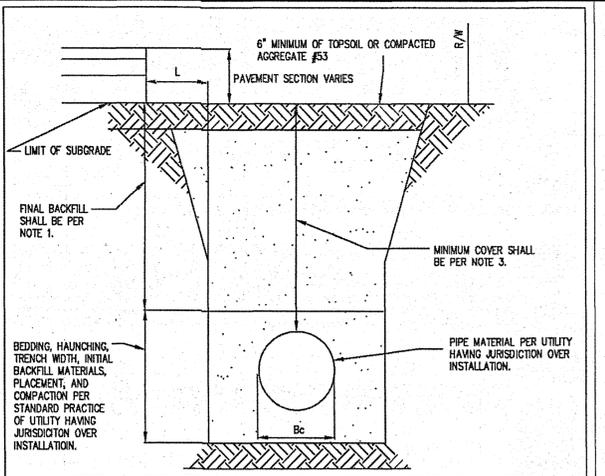
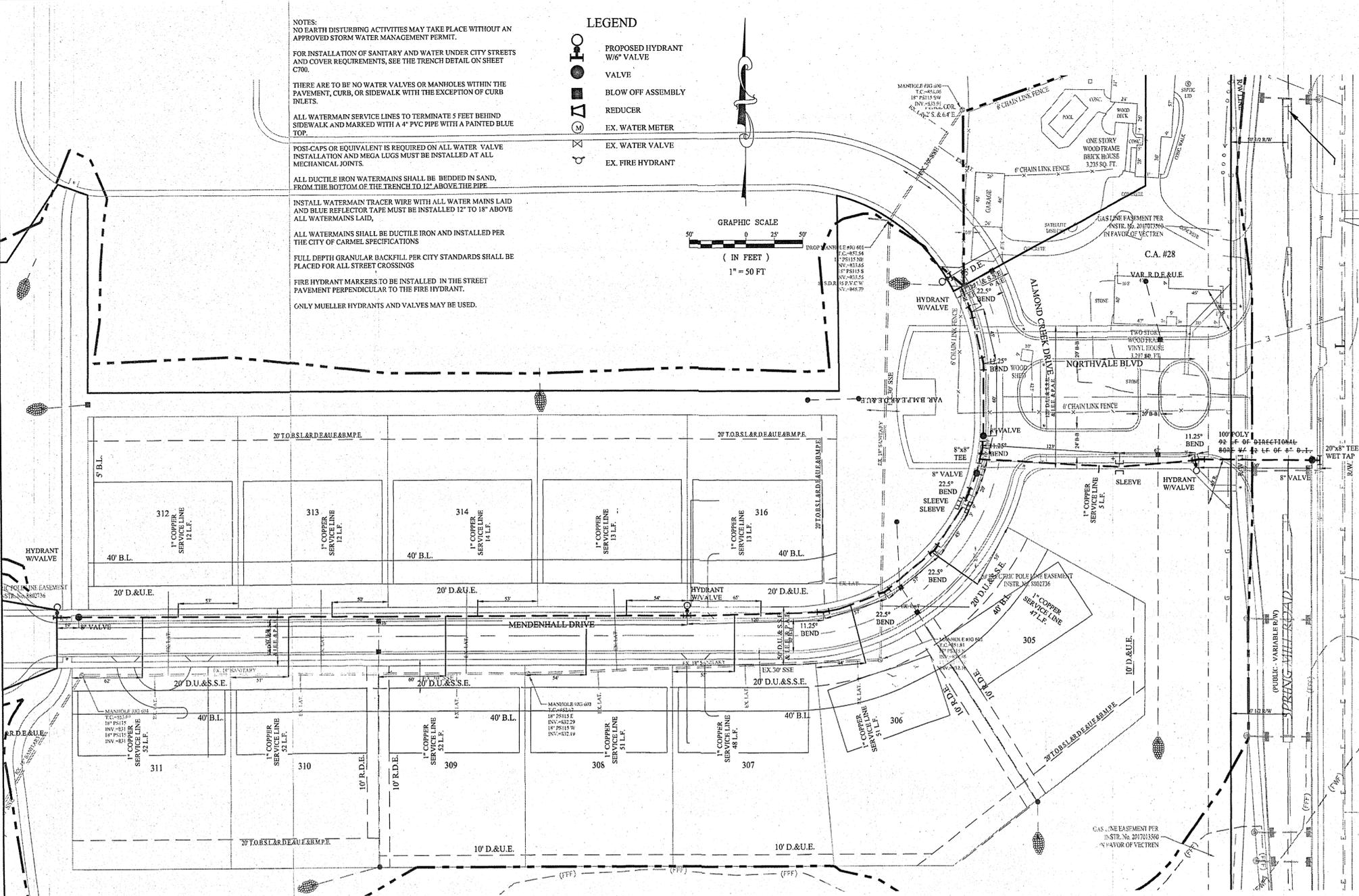
S:\6016REP-SSD\WCS700 Water Plan.dwg - C700
 Modified By: [Redacted]
 Plotted By: [Redacted]

NOTES:
 NO EARTH DISTURBING ACTIVITIES MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.
 FOR INSTALLATION OF SANITARY AND WATER UNDER CITY STREETS AND COVER REQUIREMENTS, SEE THE TRENCH DETAIL ON SHEET C700.
 THERE ARE TO BE NO WATER VALVES OR MANHOLES WITHIN THE PAVEMENT, CURB, OR SIDEWALK WITH THE EXCEPTION OF CURB INLETS.
 ALL WATERMAIN SERVICE LINES TO TERMINATE 5 FEET BEHIND SIDEWALK AND MARKED WITH A 4" PVC PIPE WITH A PAINTED BLUE TOP.
 POST-CAPS OR EQUIVALENT IS REQUIRED ON ALL WATER VALVE INSTALLATION AND MEGA LOGS MUST BE INSTALLED AT ALL MECHANICAL JOINTS.
 ALL DUCTILE IRON WATERMANS SHALL BE BEDDED IN SAND, FROM THE BOTTOM OF THE TRENCH TO 12" ABOVE THE PIPE.
 INSTALL WATERMAIN TRACER WIRE WITH ALL WATER MAINS LAID AND BLUE REFLECTOR TAPE MUST BE INSTALLED 12" TO 18" ABOVE ALL WATERMANS LAID.
 ALL WATERMANS SHALL BE DUCTILE IRON AND INSTALLED PER THE CITY OF CARMEL SPECIFICATIONS
 FULL DEPTH GRANULAR BACKFILL PER CITY STANDARDS SHALL BE PLACED FOR ALL STREET CROSSINGS
 FIRE HYDRANT MARKERS TO BE INSTALLED IN THE STREET PAVEMENT PERPENDICULAR TO THE FIRE HYDRANT.
 ONLY MUELLER HYDRANTS AND VALVES MAY BE USED.

LEGEND

- PROPOSED HYDRANT
- VALVE
- VALVE
- ⊠ BLOW OFF ASSEMBLY
- △ REDUCER
- ⊗ EX. WATER METER
- ⊙ EX. WATER VALVE
- ⊕ EX. FIRE HYDRANT

GRAPHIC SCALE
 (IN FEET)
 1" = 50 FT

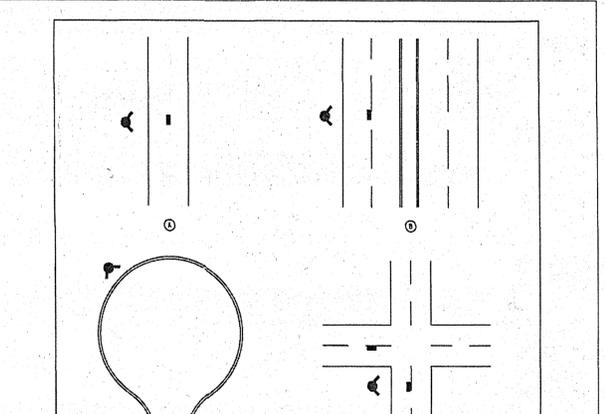


WATER & SEWER MAIN AND LATERAL TRENCH DETAIL FOR UTILITY INSTALLATIONS WITHIN CITY R/W
 NO SCALE

NOTES:

- FINAL BACKFILL FOR UTILITY INSTALLATIONS WHERE "L" IS 5' OR LESS SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6" OF THE EXCAVATION BELOW THE LIMIT OF SUBGRADE SHALL BE 3/4" STONE MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT FINAL BACKFILL REQUIREMENT, THE MORE STRINGENT REQUIREMENT WILL GOVERN. CONTRACTOR SHALL PROVIDE A 3rd PARTY TESTING AGENCY TO PROVIDE COMPACTION TESTING AS NECESSARY.
- THIS REQUIREMENT SHALL APPLY FOR ALL UTILITY INSTALLATIONS (INCLUDING BUT NOT LIMITED TO WATER MAINS, WATER SERVICE LATERALS, SANITARY MAINS, SANITARY SERVICE LATERALS, GAS PIPING, POWER, TELECOMM AND CATV CONDUITS OR DUCT BANK) WITHIN EXISTING AND PROPOSED CITY OF CARMEL R/W LIMITS.
- FOR UTILITY INSTALLATIONS UNDER CITY STREETS, REGARDLESS OF THE JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT OR FINAL GROUND ELEVATION TO THE TOP OF THE INSTALLED PIPE CONDUIT OR DUCT BANK SHALL BE NO 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.
- IF EXISTING SUBGRADE HAS BEEN LIME STABILIZED, BACKFILL WITH B-BORROW TO BOTTOM OF EXISTING SUBGRADE AND FILL TO THE LIMIT OF TREATED SUBGRADE WITH COMPACTED AGGREGATE, NO 53.

CITY OF CARMEL STANDARDS
 WATER & SEWER MAIN AND LATERAL TRENCH DETAIL FOR UTILITY INSTALLATIONS WITHIN CITY R/W
 STANDARD DRAWING 10-32



CITY OF CARMEL STANDARDS
 FIRE HYDRANT MARKER PLACEMENT
 STANDARD DRAWING 10-41

NOTES:

- FOR PAVED UNDIVIDED ROAD SURFACES PLACEMENT SHALL BE IN THE CENTER OF THE STREET.
- FOR DIVIDED MULTI-LANE ROAD SURFACES PLACEMENT SHALL BE IN CENTER DIVIDER LANE CLOSEST TO HYDRANT LOCATION.
- FOR CUL-DE-SAC APPLICATIONS PLACEMENT SHALL BE AT THE BEGINNING OF THE CUL-DE-SAC OR IN THE CENTER OF THE STREET.
- FOR INTERSECTION APPLICATIONS PLACEMENT SHALL BE CENTER SURFACE DIVIDER CLOSEST TO HYDRANT LOCATION IN EITHER TRAVEL DIRECTION.

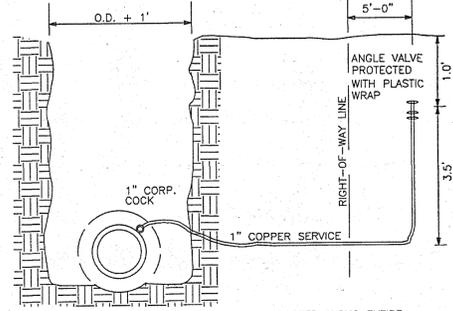
RECORD DRAWING
 AUG 31 2020

Dennis D. Olmstead
 Registered Land Surveyor
 No. 900012
 5/14/2020

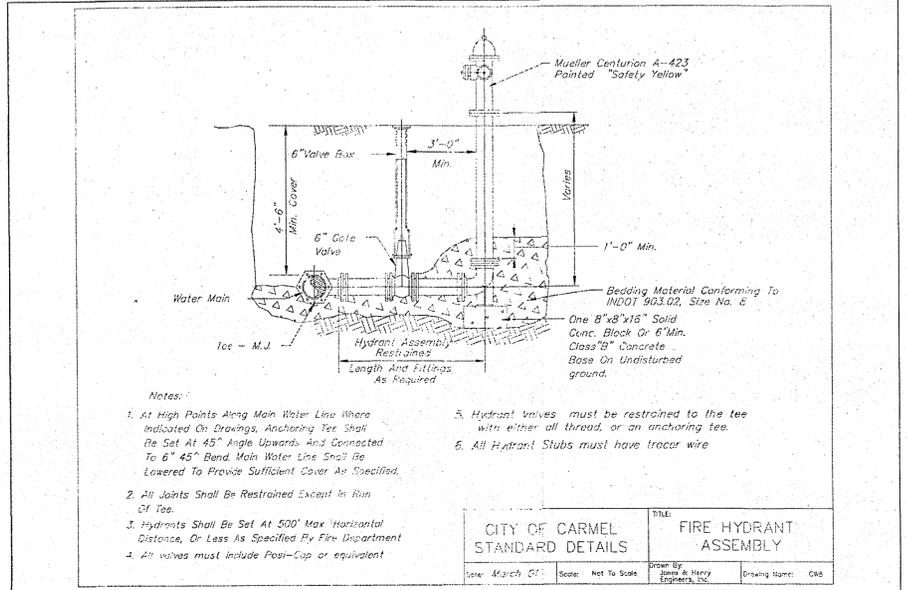
PRESSURE PIPE JOINT RESTRAINT TABLE

LENGTH OF PIPE TO BE RESTRAINED IN EACH DIRECTION FROM 1/4 OF BEND BASED ON 150 PSI TEST PRESSURE

DEGREE OF BEND	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"
90°, TEES & PLUGS	27'	35'	42'	50'	58'	65'	73'	80'	95'	115'
45°	7'	9'	11'	13'	15'	17'	19'	21'	24'	29'
22-1/2°	3'	4'	5'	6'	7'	8'	9'	10'	12'	14'
11-1/4°	2'	2'	3'	3'	4'	4'	4'	5'	6'	7'



WATER SERVICE INSTALLATION
 (NO SCALE)



CITY OF CARMEL STANDARD DETAILS
 FIRE HYDRANT ASSEMBLY

RESTRAINED JOINTS SHALL BE MECHANICAL JOINT WITH RETAINER GLANDS, US PIPE TR FLEX JOINT SYSTEM, US PIPE FIELD LOK GASKET SYSTEM.
 NOTE: THE ABOVE RESTRAINED JOINT LENGTHS ARE MINIMUM LENGTHS THE DESIGN ENGINEER SHALL DETERMINE IF LONGER LENGTHS ARE REQUIRED.

STOEPPELWERTH
 ALWAYS ON
 796 East 10th Street, Fishers, IN 46038-2505
 phone: 317.691.5905 fax: 317.691.5942

WATER PLAN
 JACKSONS GRANT ON WILLIAMS CREEK
 SECTION 6
 HAMILTON COUNTY, INDIANA
 CARMEL

C700
 S & A JOB NO. 60160REP-S6

REGISTERED LAND SURVEYOR
 No. 900012
 STATE OF INDIANA

DATE: 5/14/2020
 MARK: [Redacted]

REVISIONS:
 BY: [Redacted]
 DATE: [Redacted]
 COMMENTS: [Redacted]