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October 8, 2020

To: Hamilton County Drainage Board

Re: Clara Knotts Drain, Park Broadway Avenue Arm

Attached are the petition, plans, drainage shed map and schedule of assessments for the construction of the Park/Broadway Avenue Arm to the Clara Knotts Regulated Drain. This drain was petitioned for by 36.8% of the property owners in the drainage shed (Hamilton County Drainage Board Minutes Book 17, Page 405). I have reviewed the petition and found it to be in proper form.

The project is located in Section 11 of Township 17 North, Range 3 East in Clay Township. The project is entirely located within the watershed of the Clara Knotts Regulated Drain and the Northridge subdivision. The boundary of the project is, generally, New Jersey Street to the west, College Avenue to the east,  $102^{nd}$  Street to the south, and the northern boundary of the Northridge Subdivision to the north.

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

The attached plans dated April 28, 2020 were prepared by HWC Engineering for the Hamilton County Drainage Board. The Sheets being used are G2, G3, PP5, PP6, PP10, PP11, PP12, PP13, PP-14, PP-18, PP-19, PP-20, PP-21, PP-22, PP-23, DT1, DT2, DT3, EC2, EC3, EC-5, EC-6, EC7, and EC8. These sheets represent the work associated with the Base Bid, Alternate Bid No.2, and Alternate Bid No.6 of the bids that were received by the Drainage Board on September 28, 2020.

The project will provide drainage for the north side of 103<sup>rd</sup> Street between Park Avenue and College Avenue, Broadway Avenue north of 103<sup>rd</sup> Street, Park Avenue north of 103<sup>rd</sup> Street, New Jersey Street between

 $102^{nd}$  Street and  $103^{rd}$  Street, provide a drainage outlet for the roadside swales of Broadway Avenue between  $102^{nd}$  Street and  $103^{rd}$  Street, and drain the intersection of  $102^{nd}$  Street and Broadway Avenue.

The project will be installed within the existing rights-of-way or  $103^{\rm rd}$  Street,  $102^{\rm nd}$  Street, Park Avenue, Broadway Avenue, College Avenue, and New Jersey Street.

Permits for this project will include approval from the City of Carmel for any roadway closures and roadway lane restrictions.

The cost of the project will include professional surveying services. These services will include construction staking, construction inspection, as-built survey, and as-built drawings.

The project is more particularly described as follows:

#### Park Broadway Avenue Arm

Station 29+51
of the College
Avenue Arm of
the Clara
Knotts Drain.
(Approximate).

The arm starts at approximately Station 29+51 (between Structures 116 and 117) of the College Avenue Arm of the Clara Knotts Drain. A manhole structure (Structure #201) will be installed on the existing 30"x48" regulated drain at this location. Structure #201 will include a solid casting and will be installed at Station 0+00 of the New Arm.

Station 2+91 Structure 202 The project will proceed west with 291-LF of 36" RCP and be connected to a manhole structure (Structure #202) at Station 2+91. Structure #202 will include a beehive casting and will be installed in the centerline of the roadside swale at the northeast corner of the intersection of 103<sup>rd</sup> Street and Broadway Avenue.

Station 3+28 Structure 203 The project will proceed west with 37-LF of 36" RCP and be connected to a manhole structure (Structure #203) at Station 3+28. Structure #203 will include a beehive casting and will be installed in the centerline of the roadside swale at the northwest corner of the intersection of 103<sup>rd</sup> Street and Broadway Avenue.

Station 6+07 Structure 204 The project will proceed west with 279-LF of 36" RCP and be connected to a manhole structure (Structure #204) at Station 6+07. Structure #204 will include a beehive casting and will be installed in the centerline of the roadside swale at the northeast corner of the intersection of 103rd Street and Park Avenue.

Station 6+49

Structure 205

The project will proceed west with 42-LF of 36" RCP and be connected to a manhole structure (Structure #205) at Station 6+49. Structure #205 will include a beehive casting and will be installed in the centerline of the roadside swale at the northwest

corner of the intersection of 103rd Street and Park Avenue.

Station 7+91

Structure 301

The project will proceed north with 142-LF of 24" RCP and be connected to a manhole structure (Structure #301) at Station 7+91. Structure #301 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Station 9+10

Structure 302

The project will proceed north with 119-LF of 24" RCP and be connected to a manhole structure (Structure #302) at Station 9+10. Structure #302 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Station 10+11

Structure 303

The project will proceed north with 101-LF of 18" RCP and be connected to a manhole structure (Structure #303) at Station 10+11. Structure #303 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Station 11+14

Structure 304

The project will proceed north with 103-LF of 18" RCP and be connected to a manhole structure (Structure #304) at Station 11+14. Structure #304 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Station 11+57

Structure 305

The project will proceed north with 43-LF of 18" RCP and be connected to a manhole structure (Structure #305) at Station 11+57. Structure #305 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Station 11+97

Structure 306

The project will proceed north with 40-LF of 12" RCP and be connected to an inlet structure (Structure #306) at Station 11+97. Structure #306 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Park Avenue.

Lateral Station 8+29

Structure 307

Starting at Structure #301, the project will proceed east with 38-LF of 12" PVC C900 and be connected to an inlet structure (Structure #307) at Station 8+29. Structure #307 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Park Avenue.

Lateral Station 9+49

Structure 308

Starting at Structure #302, the project will proceed east with 39-LF of 12" PVC C900 and be connected to an inlet structure (Structure #308) at Station 9+49. Structure #308 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Park Avenue.

Station 12+34

Structure 309

Starting at Structure #305, the project will proceed east with 37-LF of 12" PVC C900 and be connected to an inlet structure (Structure #309) at Station 12+34. Structure #309 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Park Avenue.

Lateral Station 6+86

Structure 310

Starting at Structure #205, the project will proceed south with 37-LF of 15" RCP and be connected to an inlet structure (Structure #310) at Station 6+86. Structure #310 will include a beehive casting and will be installed in the centerline of the roadside swale at the southwest corner of the intersection of 103rd Street and Park Avenue.

#### Broadway Avenue Lateral

Station 4+13

Structure 701

Starting at Structure #202, the project will proceed north with 122-LF of 15" RCP and be connected to a manhole structure (Structure #701) at Station 4+13. Structure #701 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Broadway Avenue.

Station 4+95

Structure 702

The project will proceed north with 82-LF of 15" RCP and be connected to a manhole structure (Structure #702) at Station 4+95. Structure #702 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Broadway Avenue.

Station 5+95

Structure 703

The project will proceed north with 100-LF of 12" RCP and be connected to an inlet structure (Structure #703) at Station 5+95. Structure #703 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Broadway Avenue.

Station 7+00

Structure 704

The project will proceed north with 105-LF of 12" RCP and be connected to an inlet structure (Structure #704) at Station 7+00. Structure #704 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Broadway Avenue.

Station 7+53

Structure 705

The project will proceed north with 53-LF of 12" RCP and be connected to an inlet structure (Structure #705) at Station 7+53. Structure #705 will include a beehive casting and will be installed in the centerline of the roadside swale on the east side of Broadway Avenue.

Station 7+74

Structure 706

The project will proceed north with 21-LF of 12" RCP and be connected to an inlet structure (Structure #706) at Station 7+74. Structure #706 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Broadway Avenue.

Lateral Station 4+48

Structure 707

Starting at Structure #701, the project will proceed west with 35-LF of 15" RCP and be connected to an inlet structure (Structure #707) at Station 4+48. Structure #707 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Broadway Avenue.

Lateral Station 5+32

Structure 708

Starting at Structure #702, the project will proceed west with 37-LF of 12" RCP and be connected to an inlet structure (Structure #708) at Station 5+32. Structure #708 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Broadway Avenue.

Lateral Station 6+26

Structure 709

Starting at Structure #703, the project will proceed west with 31-LF of 12" RCP and be connected to an inlet structure (Structure #709) at Station 6+26. Structure #709 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Broadway Avenue.

Lateral Station 7+31

Structure 710

Starting at Structure #704, the project will proceed west with 31-LF of 12" RCP and be connected to an inlet structure (Structure #710) at Station 7+31. Structure #710 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of Broadway Avenue.

#### 102nd Street and Broadway Arm

Station 22+54
of the College
Avenue Arm of
the Clara
Knotts Drain.
(Approximate).

The arm starts at an existing manhole structure (Structure 110) at approximately Station 22+54 of the College Avenue Arm of the Clara Knotts Drain. An opening for the new arm shall be core drilled into the existing manhole structure at this location. This structure will be Station 0+00 of the New Arm.

Station 0+51

The project will proceed northwest with 51-LF of 24" RCP and be connected to a manhole structure

Structure 401

(Structure #401) at Station 0+51. Structure #401 will include a beehive casting and will be installed in the centerline of the roadside swale on the southside of 102<sup>nd</sup> Street.

Station 0+83

Structure 402

The project will proceed west with 32-LF of 24" RCP and be connected to a manhole structure (Structure #402) at Station 0+83. Structure #402 will include a beehive casting and will be installed in the centerline of the roadside swale on the southside of 102nd Street.

Station 2+88

Structure 403

The project will proceed west with 205-LF of 24" RCP and be connected to a manhole structure (Structure #403) at Station 2+88. Structure #403 will include a beehive casting and will be installed in the centerline of the roadside swale at the southeast corner of the intersection of 102<sup>nd</sup> Street and Broadway Avenue.

Station 3+22

Structure 404

The project will proceed west with 34-LF of 18" RCP and be connected to a manhole structure (Structure #404) at Station 3+22. Structure #404 will include a beehive casting and will be installed in the centerline of the roadside swale at the southwest corner of the intersection of 102nd Street and Broadway Avenue.

Station 3+56

Structure 406

The project will proceed north with 34-LF of 18" RCP and be connected to an inlet structure (Structure #406) at Station 3+56. Structure #406 will include a beehive casting and will be installed in the centerline of the roadside swale at the northwest corner of the intersection of 102nd Street and Broadway Avenue.

Lateral Station 3+23 Structure 405

Starting at Structure #403, the project will proceed north with 35-LF of 18" RCP and be connected to an inlet structure (Structure #405) at Station 3+23. Structure #405 will include a beehive casting and will be installed in the centerline of the roadside swale at the northeast corner of the intersection of 102nd Street and Broadway Avenue.

#### 102nd Street and New Jersey Street Arm

Structure 702 of the Phase 1 Arm of the Clara Knotts Drain.

The arm starts at an existing manhole structure (Structure 702) at the southwest corner of the Reconstruction intersection of 102nd Street and New Jersey Street installed with the Clara Knotts Reconstruction Phase 1 Arm project in 1987. The existing manhole structure at this location will be replaced with a new manhole structure (Structure 600). Structure

#600 will include a beehive casting and will be installed in the centerline of the roadside swale at the southwest corner of the intersection of 102nd Street and New Jersey Street. This structure will be Station 0+00 of the New Arm.

Station 0+35

Structure 601

The project will proceed north with 35-LF of 18" RCP and be connected to a manhole structure (Structure #601) at Station 0+35. Structure #601 will include a beehive casting and will be installed in the centerline of the roadside swale at the northwest corner of the intersection of 102nd Street and New Jersey Street.

Station 2+99

Structure 602

The project will proceed north with 264-LF of 18" RCP and be connected to a manhole structure (Structure #602) at Station 2+99. Structure #602 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of New Jersey Street.

Station 5+44

Structure 603

The project will proceed north with 245-LF of 15" RCP and be connected to a manhole structure (Structure #603) at Station 5+44. Structure #603 will include a beehive casting and will be installed in the centerline of the roadside swale on the west side of New Jersey Street.

Station 6+68

Existing structure

The project will proceed north with 124-LF of 15" RCP and be connected to an existing manhole structure at the centerline of the roadside swale at the southwest corner of the intersection of 103<sup>rd</sup> Street and New Jersey Street at Station 6+68.

Lateral Station 0+36 Structure 405 Starting at Structure #600, the project will proceed east with 36-LF of 12" RCP and be connected to an inlet structure (Structure #604) at Station 0+36. Structure #604 will include a beehive casting and will be installed in the centerline of the roadside swale at the southeast corner of the intersection of 102nd Street and New Jersey Street.

Lateral Station 0+72 Structure 605 Starting at Structure #601, the project will proceed east with 37-LF of 12" PVC Pipe and be connected to an inlet structure (Structure #605) at Station 0+72. Structure #605 will include a beehive casting and will be installed in the centerline of the roadside swale at the northeast corner of the intersection of 102nd Street and New Jersey Street.

Lateral Station 3+29 Structure 606 Starting at Structure #602, the project will proceed east with 30-LF of 12" PVC Pipe and be connected to an inlet structure (Structure #606) at Station 3+29.

Structure #606 will include a beehive casting and will be installed in the centerline of the roadside swale at on the east side of New Jersey Street.

Lateral Station 5+76 Structure 607 Starting at Structure #603, the project will proceed east with 32-LF of 12" PVC Pipe and be connected to an inlet structure (Structure #607) at Station 5+76. Structure #607 will include a beehive casting and will be installed in the centerline of the roadside swale at on the east side of New Jersey Street.

The roadside ditches at several locations will be re-graded to provide positive drainage to the new inlets. The remaining roadside ditches will not be re-graded with this project. The proposed drainage system will provide an outlet for future ditch re-grading by the City of Carmel.

The driveways of the following parcels will be affected by the project. Several driveway culverts will be replaced with the project, but these replacements are incidental to the project and the culverts will not become part of the regulated drain.

Sweeney, Penny A.	10302 North College Avenue
Gangstad, Robert E. & Mary V	10303 Broadway Avenue
Myette, Ernest D Sr	10304 Broadway Avenue
Hansen, Katlynn	10303 Park Avenue North
Pierce, Nell R	10307 Broadway Avenue
Kilburn, David J & Holly E	10315 Broadway Avenue
Montes, Wanda Pabon & Jose F Blancas Baez	10327 Broadway Avenue
Taylor, Alberta J	10335 Broadway Avenue
Eggleston, Nicholas J & Amy Weller	10304 Park Avenue North
Wicker, Lester M & Keith O Mohler	10306 Park Avenue North
Payne, Randall A	10320 Park Avenue North
Timmons, Michael E & Heather E	10324 Park Avenue North
Gordon, Terry G & Mary Ann	10330 Park Avenue North
Carter, Meredith L & Nellie	10350 Park Avenue North
Hodge, David	10190 North College Avenue
Blue Horseshoe Property Management, LLC	10191 Broadway Avenue

Borthwick, David

Bourff, Sarah L.

Agan, Harrison Daniel & Erin Elizabeth

Wittmer, Joseph E & Ashley

The drain will consist of the following:

Inlet Structures 18

Manhole Structures 20

12" PVC C900

213-feet

Tile

12" RCP Tile

454-feet

15" RCP Tile

645-feet

18" RCP Tile

649-feet

24" RCP Tile

550-feet

36" RCP Tile

649-feet

The total length of the new drain will be 3,160-feet.

Bids received on 9/28/20 included the following costs for the Base Bid, Alternate Bid No.2, and Alternate Bid No.6.

10204 New Jersey Street

10214 New Jersey Street

10224 New Jersey Street

10234 New Jersey Street

	Base Bid						
Line Item No.	Description	Unit	Qua nti ty	Unit Price	Total Cost		
BB-1	Tree removal	EA	3	\$ 1,100.00	\$ 3,300.00		
BB-2	Asphalt Driveway removal and repair per detail M- 1	EA	8	\$ 1,000.00	\$ 8,000.00		
BB-3	Concrete Driveway removal and repair per detail M-2	EA	2	\$ 2,500.00	\$ 5,000.00		
BB-4	Gravel driveway removal and repair per detail M-3	EA	2	\$ 800.00	\$ 1,600.00		

BB-5	Parking area removal and repair per Detail M-1	LF	96	\$ 45.00	\$ 4,320.00
BB-6	Roadway removal and repair per Detail 10-24	LF	217	\$ 46.00	\$ 9,982.00
BB-7	ADA Ramp Removal and Repair	EA	2	\$ 2,800.00	\$ 5,600.00
BB-8	Erosion Control	LS	1	\$ 5,200.00	\$ 5,200.00
BB-9	Maintenance of Traffic	LS	1	\$ 16,000.00	\$ 16,000.00
BB-10	Inlet D-22 with casting	EA	12	\$ 1,700.00	\$ 20,400.00
BB-11	Manhole D-20, 48" Diameter with casting	EA	7	\$ 2,650.00	\$ 18,550.00
BB-12	Manhole D-21, 60" Diameter with casting	EA	5	\$ 3,500.00	\$ 17,500.00
BB-13	Pipe, Type 2, Circular, 12" PVC C900 with Flowable Fill Backfill	LF	60	\$ 135.00	\$ 8,100.00
BB-14	Pipe, Type 2, Circular, 12" PVC C900 with General Backfill	LF	54	\$ 70.00	\$ 3,780.00
BB-15	Pipe, Type 2, Circular, 12" RCP with Flowable Fill Backfill	LF	99	\$ 145.00	\$ 14,355.00
BB-16	Pipe, Type 2, Circular, 12" RCP with General Backfill	LF	262	\$ 66.00	\$ 17,292.00
BB-17	Pipe, Type 2, Circular, 12" RCP with Granular Backfill	LF	57	\$ 77.00	\$ 4,389.00
BB-18	Pipe, Type 2, Circular, 15" RCP with Flowable Fill Backfill	LF	72	\$ 134.00	\$ 9,648.00
BB-19	Pipe, Type 2, Circular, 15" RCP with General Backfill	LF	191	\$ 71.00	\$ 13,561.00
BB-20	Pipe, Type 2, Circular, 15" RCP with Granular Backfill	LF	13	\$ 84.00	\$ 1,092.00

BB-21	Pipe, Type 2, Circular, 18" RCP with General Backfill	LF	195	\$ 75.00	\$ 14,625.00		
BB-22	Pipe, Type 2, Circular, 18" RCP with Granular Backfill	LF	52	\$ 90.00	\$ 4,680.00		
BB-23	Pipe, Type 2, Circular, 24" RCP with General Backfill	LF	235	\$ 86.00	\$ 20,210.00		
BB-24	Pipe, Type 2, Circular, 24" RCP with Granular Backfill	LF	26	\$ 97.00	\$ 2,522.00		
BB-25	Pipe, Type 2, Circular, 36" RCP with Flowable Fill Backfill	LF	65	\$ 190.00	\$ 12,350.00		
BB-26	Pipe, Type 2, Circular, 36" RCP with General Backfill	LF	458	\$ 118.00	\$ 54,044.00		
BB-27	Pipe, Type 2, Circular, 36" RCP with Granular Backfill	LF	126	\$ 130.00	\$ 16,380.00		
BB-28	Concrete Cradle	EA	9	\$ 340.00	\$ 3,060.00		
BB-29	Grading at Inlets	EΑ	9	\$ 925.00	\$ 8,325.00		
BB-30	Swale Regrading at Inlets	EA	15	\$ 835.00	\$ 12,525.00		
BB-31	Proposed Drive Culvert	EA	6	\$ 1,400.00	\$ 8,400.00		
BB-32	Sanitary lateral Relocation	EA	3	\$ 1,500.00	\$ 4,500.00		
BB-33	Water service relocation	EA	9	\$ 1,000.00	\$ 9,000.00		
	Base Bid Construction Costs						
19	\$ 53,743.50						
	Base Bid Construction Subtotal						

#### Alternate Bid No.2

Line Item No.	Description	Unit	Quant ity	Unit Price	Total Cost
A2-1	Asphalt Driveway removal and repair per detail M-1	EA	1	\$ 1,400.00	\$ 1,400.00
A2-2	Concrete Driveway removal and repair per detail M-2	EA	1	\$ 2,835.00	\$ 2,835.00
A2 - 3	Roadway removal and repair per Detail 10- 24	LF	67	\$ 52.00	\$ 3,484.00
A2-4	Sidewalk Removal and Repair	EA	1	\$ 1,175.00	\$ 1,175.00
A2-5	Erosion Control	LS	1	\$ 1,791.00	\$ 1,791.00
A2-6	Maintenance of Traffic	LS	1	\$ 7,099.00	\$ 7,099.00
A2 - 7	Inlet D-22 with casting	EA	2	\$ 1,540.00	\$ 3,080.00
A2-8	Manhole D-20, 48" Diameter with casting	EA	1	\$ 2,537.00	\$ 2,537.00
A2-9	Manhole D-21, 60" Diameter with casting	EA	3	\$ 3,450.00	\$ 10,350.00
A2-10	Pipe, Type 2, Circular, 18" RCP with Flowable Backfill	LF	91	\$ 158.00	\$ 14,378.00
A2-11	Pipe, Type 2, Circular, 18" RCP with General Backfill	LF	12	\$ 73.00	\$ 876.00
A2-12	Pipe, Type 2, Circular, 24" RCP with General Backfill	LF	259	\$ 83.00	\$ 21,497.00
A2-13	Pipe, Type 2, Circular, 24" RCP with Granular Backfill	LF	30	\$ 97.00	\$ 2,910.00
A2-14	Grading at Inlets	EA	2	\$ 1,273.00	\$ 2,546.00
A2-15	Swale Regrading at Inlets	EA	2	\$ 940.00	\$ 1,880.00

A2-16	Proposed Drive Cul	vert EA	2	\$ 1,400.00	\$ 2,800.00		
	Alternate No.2 Construction Costs						
	15% Contingency						
	Alternate No.2 Construction Subtotal						

	Alternate Bid No.6							
Line Item No.	Description	Unit	Quant ity	Unit Price	Total Cost			
A6-1	Asphalt Driveway removal and repair per detail M-1	EA	2	\$ 1,400.00	\$ 2,800.00			
A6-2	Concrete Driveway removal and repair per detail M-2	EA	1	\$ 2,780.00	\$ 2,780.00			
A6-3	Roadway removal and repair per Detail 10- 24	LF	91	\$ 45.00	\$ 4,095.00			
A6-4	Sidewalk Removal and Repair	EA	2	\$ 1,177.00	\$ 2,354.00			
A6-5	ADA Ramp Removal and Repair	EA	1	\$ 2,800.00	\$ 2,800.00			
A6-6	Casting Remove and Replace	EA	2	\$ 1,000.00	\$ 2,000.00			
A6-7	Inlet Remove	EA	3	\$ 200.00	\$ 600.00			
A6-8	Erosion Control	LS	1	\$ 3,100.00	\$ 3,100.00			
A6-9	Maintenance of Traffic	LS	1	\$ 6,200.00	\$ 6,200.00			
A6-10	Inlet D-22 with casting	EA	4	\$ 1,500.00	\$ 6,000.00			
A6-11	Manhole D-20, 48" Diameter with casting	EA	4	\$ 2,500.00	\$ 10,000.00			
A6-12	Pipe, Type 2, Circular, 12" PVC C900	LF	60	\$ 170.00	\$ 10,200.00			

	with Flowable Fill Backfill						
A6-13	Pipe, Type 2, Circular, 12" PVC C900 with General Backfill	LF	39	\$ 68.00	\$ 2,652.00		
A6-14	Pipe, Type 2, Circular, 12" RCP with Flowable Fill Backfill	LF	20	\$ 144.00	\$ 2,880.00		
A6-15	Pipe, Type 2, Circular, 12" RCP with General Backfill	LF	16	\$ 63.00	\$ 1,008.00		
A6-16	Pipe, Type 2, Circular, 15" RCP with General Backfill	LF	316	\$ 68.00	\$ 21,488.00		
A6-17	Pipe, Type 2, Circular, 15" RCP with Granular Backfill	LF	53	\$ 81.00	\$ 4,293.00		
A6-18	Pipe, Type 2, Circular, 18" RCP with Flowable Backfill	LF	14	\$ 152.00	\$ 2,128.00		
A6-19	Pipe, Type 2, Circular, 18" RCP with General Backfill	LF	267	\$ 72.00	\$ 19,224.00		
A6-20	Pipe, Type 2, Circular, 18" RCP with Granular Backfill	LF	18	\$ 152.00	\$ 2,736.00		
A6-21	Grading at Inlets	EA	2	\$ 5,463.00	\$ 10,926.00		
A6-22	Proposed Drive Culvert	EA	3	\$ 1,270.00	\$ 3,810.00		
A6-23	Water service relocation	EA	3	\$ 1,000.00	\$ 3,000.00		
	\$ 127,074.00						
	15% Contingency						
	Alternate Bid No.6 Construction Subtotal						
4							

2	Total Project Costs	
Base Bid		\$ 412,033.50

Alternate Bid No.2	\$ 92,733.70
Alternate Bid No.6	\$146,135.10
Professional Survey Services	\$41,000.00
Total Project Cost	\$691,902.30

In an effort to offset the cost to the homeowners, funds from the HUD Community Development Block Grant program have been allocated to this project. The funds allocated total \$284,344.36.

In my opinion, the maintenance fund balance for the Clara Knotts Drain (#210) exceeds the amount reasonably needed in that fund for maintenance work in the foreseeable future. Therefore, I recommend that 39.80% of this balance be transferred to the reconstruction fund for this project. The maintenance fund transfer is as outlined in IC 36-9-27-45.5. The current maintenance fund balance for the Clara Knotts Drain is \$ 154,798.40 and \$ 61,606.79 will be transferred for this project.

The maintenance fund for the Clara Knotts drain presently receives \$17,878.66 per year.

Per IC-36-9-27-71, the costs for the section of the drain crossing under Park Avenue, Broadway Avenue, 103<sup>rd</sup> Street, 102<sup>nd</sup> Street, and New Jersey Street shall be assessed to the City of Carmel. These costs are as follows:

Line Item No.	Description	Unit	Quant ity	Unit Price	Total Cost
BB-6	Roadway Removal and Repair per Detail 10-24	LF	217	\$46.00	\$9,982.00
BB-10	Inlet D-22 with Casting	EA	9	\$1,700.00	\$15,300.00
BB-11	Manhole D-20 48" Diameter with Casting	EA	5	\$2,650.00	\$13,250.00
BB-12	Manhole D-21 60" Diameter with Casting	EA	4	\$3,500.00	\$14,000.00
BB-13	Pipe, Type 2, Circular, 12" PVC C900 with Flowable Fill Backfill	LF	60	\$135.00	\$8,100.00
BB-14	Pipe, Type 2, Circular, 12" PVC C900 with General Backfill	LF	54	\$70.00	\$3,780.00

				T.	
BB-15	Pipe, Type 2, Circular, 12" RCP with Flowable Fill Backfill	LF	99	\$145.00	\$14,355.00
BB-18	Pipe, Type 2, Circular, 15" RCP with Flowable Fill Backfill	LF	72	\$134.00	\$9,648.00
BB-25	Pipe, Type 2, Circular, 36" RCP with Flowable Fill Backfill	LF	56	\$190.00	\$10.640.00
BB-26	Pipe, Type 2, Circular, 36" RCP with General Backfill	LF	23	\$118.00	\$2,714.00
A2-3	Roadway Removal and Repair per Detail 10-24	LF	67	\$52.00	\$3,484.00
A2-7	Inlet D-22 with Casting	EA	2	\$1,540.00	\$3,080.00
A2-9	Manhole D-21 60" Diameter with Casting	EA	2	\$3,450.00	\$6,900.00
A2-10	Pipe, Type 2, Circular, 18" RCP with Flowable Fill Backfill	LF	91	\$158.00	\$14,378.00
A2-11	Pipe, Type 2, Circular, 18" RCP with General Backfill	LF	12	\$73.00	\$876.00
A6-3	Roadway Removal and Repair per Detail 10-24	LF	91	\$45.00	\$4,095.00
A6-10	Inlet D-22 with Casting	EA	4	\$1,500.00	\$6,000.00
A6-11	Manhole D-20 48" Diameter with Casting	EA	4	\$2,500.00	\$10,000.00
A6-12	Pipe, Type 2, Circular, 12" PVC C900 with Flowable Fill Backfill	LF	60	\$170.00	\$10,200.00
A6-13	Pipe, Type 2, Circular, 12" PVC C900 with General Backfill	LF	39	\$68.00	\$2,652.00
A6-14	Pipe, Type 2, Circular, 12" RCP with Flowable Fill Backfill	LF	20	\$144.00	\$2,880.00
A6-15	Pipe, Type 2, Circular, 12" RCP with General Backfill	LF	16	\$63.00	\$1,008.00

A6-18	Pipe, Type 2, Circular, 18" RCP with Flowable Fill Backfill	LF	14	\$152.00	\$2,128.00	
A6-19	Pipe, Type 2, Circular, 18" RCP with General Backfill	LF	21	\$72.00	\$1,512.00	
City of Carmel Construction Costs \$172,662						

At the meeting of the Hamilton County Drainage Board on October 12, 2020, the Board stated that additional funds should be requested from the City of Carmel. The additional amount requested is \$173,289.15. The total contribution from Carmel would then equal \$345,951.15 which represents 50% of the total project cost.

The costs for this project will be paid from the following sources:

Maintenance Fund Transfer \$ 61,606.79

Community Development Block Grant \$ 284,344.36

City of Carmel \$345,951.15

Total \$691,902.30

Parcels benefitted by this Drain are currently assessed for the Clara Knotts Drain. Therefore, no changes in the current maintenance assessment shall be required.

I have reviewed the drainage shed for the Clara Knotts Drain and upon considering each parcel individually, I believe each parcel within the sub-area of the drainage shed will have equal benefits, by land use, as provided by the drain. I believe that no damages will result to landowners by construction of this drain.

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

I recommend that the Board set a hearing for this proposal for November 23, 2020.

Kenton C. Ward, CFM

Hamilton County Surveyor's Office

KCW/pll

DEFICE OF HAMILTON COUNTY SURVEYOR

To:

Hamilton County Drainage Board

Re:

LARA KNOTTS

Date: 5-12-2015

		OFFICE OF	HAMILTON O.
MICHAEL GOODE	10340 BROADWAY	(Here-in-after "Petitioner"),	THE TON COUNTY SURVEYOR

hereby petitions the Hamilton County Drainage Board under IC 36-9-27-66 for an arm to be installed to the Chara Krieto Drain in order to serve the property of the petitioner. The petitioner, in support of said petition, advises the Board that:

- 1. The CLARA KNOTTS Drain is presently on a maintenance program and that land of the petitioner is assessed as benefited by the maintenance of the regulated drain
- 2. There is no known adequate open or tiled drain connecting the land of the petitioner with the regulated drain;
- 3. The waters from the petitioners land flow over or through land owned by others to reach the regulated drain;
- 4. The legal description of lands through which the new regulated drain will run along with the parcel numbers, name and address of each owner of that land is shown on Exhibit "A" which is attached;
- 5. The general route of the proposed new regulated drain and method of construction is shown on Exhibit "B" which is attached.

6. Petitioner agrees to pay all legal and construction costs involved with the construction of DOES NOT APPLY, PER ANDREW CONOVER JUNE 16 15 the proposed new regulated drain.

Printed Signed 10340 6-00 DE MICHAGL PRUADWAY 10304 BRUADWA BRUADWAY 10318 BAU ADWA 10349 Adobe PDF Fillable Form

This copy printed from Digital Alchive of the Hamilton County Surveyor's Office; One Hamilton Co. Square, Ste., Noblesville, In 46060

JUN 2.3 2017 Printed Address Printed Name OFFICE OF HAMILTON COUNTY SURVEYOR **Sgnature** 10330 N. PARK Ave. 10324 N Broadnay St. 10205 RUCKLE ST. 10146 RUCKIC St. 10237 N. Park Ave thes Jacqueline longs 10236 N. Pank Ave Jennifer Thomas

KNUTTS

Drain Petition

CLARA

Signature	Printed Name	Printed Addre	
Stuf (	Retben	10210	Bronoway 46280
,,,			mos mos
			FILED  JUN 2.3 2017
			OFFICE OF HAMILTON COUNTY SURVEYOR



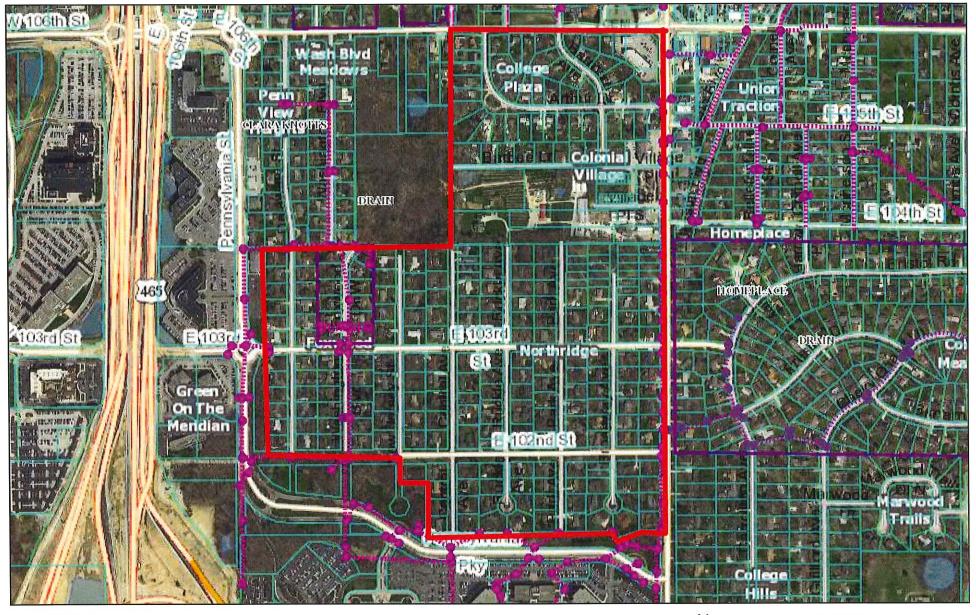
To: Hamilton County Drainage Board

Re: In the r	natter of the	Clara Knotts	Drain Petition	THAMILTON COUNTY SUP	01/1-14-
Comes r 9-27, for th	now the undersign e reconstruction o	ed individuals, who petiti f the above referenced reg	on the Hamilton County gulated drain. The under	Drainage Board, per IC 36- signed believe the following:	VEYOR
	they are owners of ffected by the dra		eage or more of land area	alleged by the petition to be	
2. T	hat as property or	wners within the drainage	shed, they are qualified p	petitioners.	
3. Т	hat they now desi	re that a regulated drain b	e reconstructed in	Clay Township.	
n a I	nade a part hereof rea is located in s ndiana.	, and marked Exhibit "A", ection11, township	which area of land invo	drainage are attached hereto, lved in the proposed drainage aeast, Hamilton County,	
<b>5.</b> T	hat the proposed	reconstruction consists of	Extending storm sewer to	serve area along 103rd, Park,	
В	roadway, Ruckle in	cluding 102nd, Central and	New Jersey.		
_					
i	That in the opinion i	n of the Petitioner, the cos be less than the benefits w	ts, damages, and expense which will result to the ov	es of the proposed wners of the land to be	
<b>7.</b> 1	That in the opinion benefit a public hi	n of the Petitioner, the pro ghway; and be of public u	posed improvement will tility.	improve the public health;	
	That Petitioners shoetition is dismiss		and all legal costs includ	ing engineering expense if the	
	Petitioners shall pemprovement is no		pay the cost of notice and	all legal costs in the case the	
Signatur Special	A Leuch	Printed Name Fred I Hand SANDRA AL	Printed Address  K 10302  Ley 10310 M	N. Rucke Ind	K. In
Jo	an In	ins Joan (	Joins 10330	Rucklest	
Res	uc Niller	, Robecca Nic	kless 10343	rucher St.	
860 8	M	Stephen Buckler	10346 R	include St.	
Muchan	M) dul	Michael Schul	1 10399 R	Luckle St.	
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Your	icie Great	apter fatrices	à Shea Capent	er 10305 knock	1C ST
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Adobe PDF Fillable Form

To: H	amilton County Dra	inage Board		JUN 23 2017
Re: Ir	n the matter of the	Clara Knotts	Drain Petition	OFFICE OF HAMILTON EQUIP
Co 9-27,	omes now the unders for the reconstructio	igned individuals, who petition of the above referenced reg	on the Hamilton County Julated drain. The unde	Drainage Board, per letter- ersigned believe the following:
	1. They are owners affected by the		age or more of land are	ea alleged by the petition to be
	2. That as property	owners within the drainage	shed, they are qualified	petitioners.
	3. That they now o	lesire that a regulated drain b	e reconstructed in	Clay Township.
	made a part here	eof, and marked Exhibit "A",	which area of land invo	c drainage are attached hereto, olved in the proposed drainage  3 east, Hamilton County,
	5. That the propos	ed reconstruction consists of	extending the drain to pro	ovide drainage for Central Avenue,
	103rd Street, 102	nd Street, Ruckle Avenue, New	Jersey Street, Broadway	Avenue, and Park Avenue.
		ion of the Petitioner, the cost ill be less than the benefits way.		
	*	ion of the Petitioner, the prophighway; and be of public ut	_	improve the public health;
	8. That Petitioners petition is dismi		nd all legal costs includ	ling engineering expense if the
		post a bond, if required, to p not established.	ay the cost of notice an	d all legal costs in the case the
Sig	nature	Printed Name	Printed Address	S
_	() De Tiller	David S. DeVilbiss	10301 Central Av	venue, Indianapolis IN 46280
21	heres PDeVille	Therese P. DeVilbiss	10301 Central Av	venue, Indianapolis IN 46280
Be	uerke Heide	Beverly Heid	er 10321 Cer	itral Ave Indianapolis
Of	The Sound	J.D. DIEDERIC	1 10328 Ce	MIRI Ave, Indpls IN 46280
lle	Whamor	Audrey Charpens	n 10365 G	ntral Ae Indpls/IM
_	Dislo Dislo	- Vesler MAN	1/W 10236 Co	Entral Fictions 16280
//	Soldinille	Bobbie Miller	10226 CEN	TRAL IN DPLS 46280
_6	Ida miller	Elda Miller	10226 CE/	NTRAL INDPLS 46280
In	Marin	Mark Garrison	10223 601	ntral Ave Indpls 46280
	Shan (mi	SHARON Cris	s 10219 Ce	whial Au Inelais 46280
6	MAIM	Mate Williams	10201 Ct	intral AV, Indepts 46280
L	120	W.R. Rice	407 E. 10	
5:/	-bull	Souja inclarrel	1.N F550)	Jew Jersey Indas 4,280

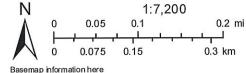
## Clara Knotts



June 27, 2017

All Other Structures
CLOSED DRAIN
SSD

Drain Name — OPEN DRAIN — Regulated Drains Drainage Pool



STATE OF INDIANA )

COUNTY OF HAMILTON )

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD NOBLESVILLE, INDIANA

IN THE MATTER OF THE RECONSTRUCTION OF THE

Clara Knotts Drain, Park Broadway Arm

### FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the Clara Knotts Drain, Park Broadway Arm came before the Hamilton County Drainage Board for hearing on November 23, 2020, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the Clara Knotts Drain, Park Broadway Arm be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:

AMILTON COUNTY DRAINAGE BOARD

(Inchil

Member

ATTEST

This copy printed from Digital Archive of the Hamilton County Surveyor's Office; One Hamilton Co. Square, Ste., Noblesville, In 46060

# BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF

#### Clara Knotts Drain, Park Broadway Avenue Arm

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LA	v	T	1	V.	ட்

То	Whom	It	May	Concern	and:	Meridian	Corporate	Plaza	Assn	Inc.

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the Clara Knotts Drain, Park Broadway Avenue Arm on November 23, 2020 at 9:00 A.M. in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed 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

Returned 11/4/20

# OFFICE OF HAMILTON COUNTY DRAINAGE BOARD October 23, 2020

Notice of Hearing on Reconstruction & Schedule of Assessments and Damages on the Clara Knotts Drain, Park Broadway.

Meridian Corporate Plaza Assn Inc. 201 103rd St W Indianapolis, IN 46290

Under the Indiana Drainage Code, all land which drains directly, or indirectly, may be assessed for either maintenance cost or reconstruction cost within the drain. In making the calculation for each parcel, the Drainage Board must calculate the percentage of the cost attributable to each parcel of land benefitted. The Drainage Board has received a reconstruction report and schedule of assessments which affects your land. The purpose of the reconstruction project is to perform work which will substantially improve the drainage for the entire watershed served by the drain.

You are hereby notified that the reconstruction report of the County 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 County Surveyor. The chart below contains your proposed assessment and your percentage of the total reconstruction assessment.

The reconstruction report of the Surveyor and schedule of damages and benefits as determined by the Drainage Board for the proposed improvement known as the **Clara Knotts Drain, Park Broadway** have been filed and are available for inspection in the office of the County Surveyor. The schedule of assessments shows the following lands in your name are affected as follows. This assessment is not a charge for services associated with regulating the quality of storm water within your city or town.

Description of Land 16-13-11-04-18-001.008	Acres Benefited	Damages	Reconst. Assmt.	% of Total	Maint. Assmt.	
S11 T17 R3 Northridge Lot 317331; 380385; 392395; 444447; 457460; 509&510	*	Zero	*	*	**	
*Cost of reconstruction to be paid with Grant Funds, Drain Maintenance Funds & City of Carmel Funds.  **No change in current maintenance assessment.						

The hearing on the Surveyor's reconstruction report and on the schedules of damages and assessments are set for hearing at 9:00 A.M. on November 23, 2020 in the Commissioner's Court. The law provides that objections must be written and filed not less than 5 days before the date of the hearing. Objections may be for causes as specified by law and which are available at the Surveyor's Office. Written evidence in support of objections may be filed. The failure to file objections constitutes a waiver of your right to thereafter object, either before the Board or in court on such causes, to any final action of the Board. On or before the day of the hearing before the Board, the Surveyor shall and any owner of affected lands may cause written evidence to be filed in support of or in rebuttal to any filed objections.

HAMILTON COUNTY DRAINAGE BOARD One Hamilton County Square, Ste. 188 Noblesville, IN 46060-2230

For a copy of the Surveyor's Report to the Drainage Board and a copy of the map, if applicable, please go to www.hamiltoncounty.in.gov/drainageboardnotices.

STATE	OF	INDIANA	)	SS	BEFORE	THE	HAMILTON
			)				
COUNTY	OF	' HAMILTON	)		DRAINAG	SE BO	DARD

IN THE MATTER OF Clara Knotts Drain, Park Broadway Avenue Arm

#### NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting November 23, 2020 adopted the reconstruction report of the Surveyor and the Amended Schedule of damages and assessments including annual assessment for periodic maintenance, finding that the costs, damages and expense of the proposed improvement would be less than the benefits which will result to the owner of lands benefited thereby.

The Board issued an order declaring the proposed improvement established. Such findings and order were marked filed and are available for inspection in the Office of the Hamilton County Surveyor.

If judicial review of the findings and order of the Board is not requested pursuant to Article VIII of the 1965 Indiana Drainage Code as amended within twenty (20) days from the date of publication of this notice, the findings and order shall become conclusive.

HAMILTON COUNTY DRAINAGE BOARD

BY: Mark Heirbrandt
PRESIDENT

ATTEST: Lynette Mosbaugh
SECRETARY



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 1, 2023

To: Hamilton County Drainage Board

Re: Clara Knotts, Park and Broadway Reconstruction, Phase 1

Final Inspection Report

#### FINAL REPORT

This is the inspector's final report on the Clara Knotts Regulated Drain Reconstruction, Phase 1, located in Section 11, Township 17 North, Range 3 East, in Clay Township in Hamilton County, Indiana.

At the April 13, 2020 meeting of the Hamilton County Drainage Board the Community Development Block Grant (CDBG) Agreement between the Drainage Board and the County Commissioners was discussed and approved. The Surveyor stated that the agreement would provide funds for the lining of the CMP under College Ave. and 96<sup>th</sup> Street and will leave about \$400,000± after the pipe lining. That included the remaining of the Federal Grant money and what is in the maintenance fund for the Clara Knotts Regulated Drain. The Surveyor would like to set a bid date using a base bid for the 103rd St. and Park Ave portion and the alternate bids used for the remainder of the work and put a 120 day hold on it for the rest of the work on the Knotts Drain.(Hamilton County Drainage Board Minute Book 19, Pages 180-181.)

At the August 10, 2020 meeting of the Hamilton County Drainage Board, the Surveyor asked the Board to set September 28, 2020 as the date to receive bids for the reconstruction of the Clara Knotts, Park & Broadway Drain. (Hamilton County Drainage Board Minute Book 19, Page 287.)

At the September 28, 2020 meeting of the Hamilton County Drainage Board received and opened 2 bids for the reconstruction of the Clara Knotts Regulated Drain. The first bid was from Morphey Construction. Base Bid of \$358,290.00; Alternate Bid 1 at \$315,853.00; Alternate Bid 2 at \$374,381.00; Alternate Bid 3 at \$374,351.00; Alternate Bid 4 at \$354,315; Alternate Bid 5 at \$404,019.00; and Alternate 6 at \$127,074.00. The second bid was from 3D Company. The Base Bid of \$888,437.35; Alternate 2 at \$768,323.85; Alternate Bid 3 at \$232,189.45; Alternate Bid 4 at \$650,403.15; Alternate Bid 5 at \$784,966.1 and Alternate Bid 6 at \$425,073.25. The Board referred

the bids to the Surveyor's Office for review and recommendation at the October 12, 2020 meeting. (Hamilton County Drainage Board Minute Book 19, Page 331.)

At the October 12, 2020 meeting of the Hamilton County Drainage Board the Board received engineering quotes from 2 engineering companies for the Clara Knotts Reconstruction. The first quote from HWC Engineering was for \$12,000 lump sum for construction staking; and \$12,000 lump sum for asbuilt survey, field work and scope of services for field work and office work. Banning Engineering submitted the second quote for construction staking at \$5,500.00; survey grade checks at \$30,000.00 based on an hourly estimate and asbuilts at \$5,500. The Board referred the quotes to the Surveyor's Office for review and recommendation at the October 28, 2020 meeting. (Hamilton County Drainage Board Record Book 19, Page 361.)

Also, at the October 12, 2020 meeting of the Hamilton County Drainage Board the Surveyor's Office recommendation for the bids for the Clara Knotts Reconstruction was presented. The bids that were received were as follows:

	3D Company	Morphey Construction	Engineer's Estimate
Base Bid	\$888,437.35	\$358,290.00	\$599,432.17
Alternate 1	\$768,323.85	\$315,853.00	\$469,228.01
Alternate 2	\$232,189.45	\$80,638.00	\$129,347.32
Alternate 3	\$714,757.55	\$374,351.00	\$577,540.55
Alternate 4	\$650,403.15	\$354,315.00	\$369,648.64
Alternate 5	\$784,966.10	\$404,019.00	\$400,848.64
Alternate 6	\$425,076.25	\$127,074.00	\$187,389.31

The following funds were available for the project:

Maintenance Fund Transfer (75% of the current balance)	\$116,098.80
Community Development Block Grant	\$284,344.36
City of Carmel	\$101,769.00
Total	\$502,212.16

The Surveyor recommended that the Base Bid be awarded as the area served would resolve the most frequent drainage issues in the vicinity and is also the outlet for the area served with Alternate Bid 1. The cost of the Base Bid with 15% contingency is \$412,033.50. There would be additional costs, including Professional Surveying Services for construction staking, construction inspection and asbuilt survey.

The Notice to Bidders stated that the Drainage Board reserved the right to hold the bids for a period of 120-days after the bid was opened. The 120-day date was January 25, 2021.

Award of the bid would be subject to availability of funds, verification of Certificate of Insurance and submittal of requisite bonding.

The Surveyor asked the Board for a decision on which bids to award, which would allow the Surveyor to develop the final hearing report.

The Surveyor recommended the Board to hold the bid award until the public hearing was closed and the project approved.

After a discussion was then held as to whether any other Alternate Bids could or should be awarded with the Base Bid, the Board voted to approve and set a hearing date for November 23, 2020 for the Base Bid, Alternate 2 and Alternate 6. (Hamilton County Drainage Board Minute Book 19 Pages 361-364.)

At the November 23, 2020 meeting of the Hamilton County Drainage Board the hearing for the Clara Knotts Reconstruction, Base Bid, Alternate 2 and Alternate 6, hereafter known as Phase 1 of the Clara Knotts Reconstruction was held, and the Surveyor's Report was presented for Board approval. There were not landowners present nor objections on file.

The costs for Phase 1 would be paid from the following sources:

Maintenance Fund Transfer	\$ 61,606.79
Community Development Block Grant	\$284,344.36
City of Carmel	\$345,951.15
Total	\$691,902.30

After discussion the Surveyor recommended the Board award Phase 1 of the Clara Knotts Reconstruction to Morphey Construction and the Professional Services Agreement to Banning Engineering. The Board unanimously approved. (Hamilton County Drainage Board Minute Book 19 Pages 403-417.)

At the December 14, 2020 meeting of the Hamilton County Drainage Board the Surveyor informed the Board that the notification letters to the utilities were to go out this week. (Hamilton County Drainage Board Minute Book 19 Page 449.)

At the December 21, 2020 meeting of the Hamilton County Drainage Board the Board was informed that the preconstruction meeting was going to be held later in the day and that construction would most likely start after the first of the year. (Hamilton County Drainage Board Minute Book 19 Page 452.)

At the February 8, 2021 meeting of the Hamilton County Drainage Board the Surveyor informed the Board that on October 6, 2020 RFQs were sent out to Banning Engineering, HWC and Butler, Fairman & Seufert for a Professional Services Agreement to provide for staking, construction grade checks and asbuilts. Butler, Fairman & Seufert did not respond, HWC only partially responded. Banning Engineering gave a full response. The Surveyor then recommended to accept Banning Engineering's PSA in the amount of \$20,500. The Board approved the contract. (Hamilton County Drainage Board Minute Book 19 Page 484.)

Also, at the February 8, 2021 meeting of the Hamilton County Drainage Board was informed that Morphey, the contractor, had started the Clara Knotts project on the main trunk line along the north side of 103<sup>rd</sup> St only to find a utility conflict. The conflict was with an AT&T cable that appeared to have been installed in 2020. Morphey began looking at Alternate 2 and Alternate 6 to see if work could begin on one of those. (Hamilton County Drainage Board Minute Book 19 Pages 493-494.)

At the March 8, 2021 meeting of the Hamilton County Drainage Board the Board approved an amendment to the Community Development Block Grant to extend the completion date from June to August 31<sup>st</sup>. (Hamilton County Drainage Board Minute Book 19 Page 532.)

At the April 12, 2021 meeting of the Hamilton County Drainage Board the Board was informed that the Surveyor's Office was having email discussions with AT&T about getting their line moved. Until that happens the project is on hold. (Hamilton County Drainage Board Minute Book 19 Page 583.)

At the April 26, 2021 meeting of the Hamilton County Drainage Board the Surveyor informed the Board that although the Surveyor's Office had been busy trying to get AT&T to move their line there had been no movement on AT&T's end. The Surveyor asked the Board to do the same thing that was done to Frontier; hold up their permits for work done in the right-of-way. AT&T was first notified in 2016 of the project and numerous times since. The Board unanimously approved to withhold highway and drainage permits for AT&T until they moved the line obstructing the Clara Knotts Project. The Board also approved adopting new standards for dealing with utilities. (Hamilton County Drainage Board Minute Book 20 Pages 7-9.)

At the May 10, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that Morphey, the contractor for the Clara Knotts Project had met with AT&T on May 3, 2021 and determined that there were two (2) lines in the way of the project. No timetable has been determined as of this date. (Hamilton County Drainage Board Minute Book 20 Page 35.)

At the May 24, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that as of May 20<sup>th</sup> AT&T was working on relocation and had 3 to 4 weeks left to be clear of the project site. Carmel Water also has some conflicts and should be starting on relocation soon. CenterPoint Energy, formerly Vectren has notified the Surveyor's Office that they will be moving in next week to move any of their lines that are conflicting. (Hamilton County Drainage Board Minute Book 20 Page 48.)

At the June 28, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that CenterPoint Energy is busy lowering their lines and AT&T is still working on getting their lines out of the way. (Hamilton County Drainage Board Minute Book 20 Page 75.)

At the July 26, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that AT&T had finished moving their lines, CenterPoint is actively moving their lines and that we hadn't heard anything from Carmel Water. (Hamilton County Drainage Board Minute Book 20 Page 117.)

At the August 9, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that both AT&T and CenterPoint Energy had moved their lines in conflict with the project. Still no word from Carmel Water. (Hamilton County Drainage Board Minute Book 20 Page 127.)

At the November 22, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that the contractor, Morphey Construction, had began installing pipe along the north side of 103<sup>rd</sup> St. heading toward Park and Broadway. (Hamilton County Drainage Board Minute Book 20 Page 240.)

At the December 13, 2021 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that Morphey had been jumping around Carmel Water's lines when they were conflicting. They move on to the next structure on the line and start laying pipe again. (Hamilton County Drainage Board Minute Book 20 Page 258.)

At the January 24, 2022 meeting of the Hamilton County Drainage Board the Board approved a second amendment to the CDBG to extend the completion date to November 30, 2022. (Hamilton County Drainage Board Minute Book 20 Page 282.)

At the February 28, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that Morphey had completed the majority of the work along 103<sup>rd</sup> St and up Broadway Ave. and Park Ave. (Base Bid) and they are working on 102<sup>nd</sup> Street (Alternate 2) and then will move on to New Jersey St. (Alternate 6.) (Hamilton County Drainage Board Minute Book 20 Page 305.)

At the March 14, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office presented Change Order #1 for the Board's approval. The Change Order was for an additional sanitary lateral needing replaced.

#### Change Order #1

The following item are changes to the reconstruction of the Clara Knotts Drain Reconstruction:

1 additional sanitary lateral connection at \$1,500 each\$	1,500.00
Engineer's Estimate for Base Bid\$	599,432.17
Base Bid\$           Change Order #1\$           Total Base Bid Reconstruction Cost	
Difference\$	239,642.17

The Board approved Change Order #1. (Hamilton County Drainage Board Minute Book 20 Pages 317-318.)

At the March 28, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office presented the Board with Change Order #2 for the Clara Knotts Reconstruction. Change Order #2 was for 2 additional sanitary laterals that need replaced.

#### Change Order #2

The following item are changes to the reconstruction of the Clara Knotts Drain Reconstruction:

2 additional sanitary lateral connection at \$1,500 each	\$ 3,000.00
Engineer's Estimate for Base Bid	\$ 599,432.17

Base Bid	\$ 358,290.00
Change Order #1	\$ 1,500.00
Change Order #2	\$ 3,000.00
Total Base Bid Reconstruction Cost	\$ 362,790.00
	,
Difference	\$ 236,642.17

The Board approved Change Order #2. (Hamilton County Drainage Board Minute Book 20 Pages 351-352.)

At the March 28, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that Phase 1 of the Clara Knotts is close to being complete. Once the rain stops and it dries up some Morphey can get in and grade and level the working areas. (Hamilton County Drainage Board Minute Book 20 Page 354.)

At the May 23, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that there are 2 structures in Phase 1 that haven't been set yet because of a Carmel Water conflict and that grading hasn't been completed because of the wet weather. (Hamilton County Drainage Board Minute Book 20 Page 431.)

At the June 13, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office presented the Board with Change Order #3.

Change Order #3 was required for the following reasons:

2 additional gravel driveway and repair at \$800 each	\$	1,600.00
14 additional feet of 36" RCP with granular backfill	\$	1,820.00
Engineer's Estimate for Base Bid	\$	599,432.17
Base Bid	\$	358,290.00
Change Order #1		
Change Order #2	\$	3,000.00
Change Order #3	<u>\$</u>	3,420.00
Total Base Bid Reconstruction Cost	\$	366,210.00
Difference	\$	233,222.17

The Board approved the Change Order. (Hamilton County Drainage Board Minute Book 20 Page 437.)

At the August 8, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that a punch list had been developed for Phase 1 and Morphey was working on those items. (Hamilton County Drainage Board Minute Book 20 Page 508.)

At the September 12, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that Morphey had reseeded Phase 1 as the first seeding hadn't sprouted well. (Hamilton County Drainage Board Minute Book 20 Page 551.)

At the December 12, 2022 meeting of the Hamilton County Drainage Board the Surveyor's Office presented Change Order # 4 for the Board's review.

Change Order #4 was required due to additional changes required in the Base Bid & Alternate Bids 2 & 6.

The following items are changes to the reconstruction of the Clara Knotts Drain Reconstruction:

ADDITIONS	
2 additional concrete driveway removal and repair at \$2,500 each\$	5,000.00
6 additional tree removal at \$1,100 each\$	6,600.00
5 additional sanitary lateral relocations at \$1,500 each\$	7,500.00
2 additional sidewalk removal and repair at \$1,175 each\$	2,350.00
12 additional grading at inlets at \$925 each\$	11,100.00
20 additional regrading at inlets at \$835 each\$	16,700.00
2 additional drive culverts at \$1,400 each\$	2,800.00
1 additional regrading at inlet at \$1,273 each\$	1.273.00
TOTAL ADDITIONS\$	53,323.00
DELETIONS	
8 water service relocations at \$1,000 each\$	-8,000.00
1 drive culvert at \$2,400 each\$	
Total Change Order Amount\$	42,923.00
Engineer's Estimate and 15% Contingency\$	650,902.30
Total Contract Bid for Base Bid, Alternate 2 & Alternate 6\$	
Change Order #1\$	1,500.00
Change Order #2\$	3,000.00
Change Order #3\$	3,420.00
Change Order #4 <u>\$</u>	42,923.00
Total Base Bid Reconstruction Cost \$	616,845.00
Difference\$	34,057.30

Change Order #4 was approved. (Hamilton County Drainage Board Minute Book 21 Page 115.)

At the February 13, 2023 meeting of the Hamilton County Drainage Board the Surveyor's Office presented the Board with Change Order #5.

#### Change Order #5

The following items are changes to the reconstruction of the Clara Knotts Drain Reconstruction:

#### **ADDITIONS**

Asphalt Repair – 276.52 SF at \$100 per SF ------\$ 27,652.00

C900 Cost Increase 213 LF of C900 at \$26.14 per LF		5,567.82
TOTAL ADDITIONS	\$	33,219.82
Engineer's Estimate and 15% Contingency	\$	650,902.30
Total Contract Bid for Base Bid, Alternate 2 & Alternate 6	\$	566,002.00
Change Order #1	\$	1,500.00
Change Order #2	\$	3,000.00
Change Order #3	\$	3,420.00
Change Order #4	\$	42,923.00
Change Order #5	\$	33,219.82
Total Base Bid Reconstruction Cost	\$	650,064.82
	,	,
Difference	\$	837.48

The Board approved Change Order #5. (Hamilton County Drainage Board Minute Book 21 Pages 170-171.)

At the March 13, 2023 meeting of the Hamilton County Drainage Board the Surveyor's Office informed the Board that the asbuilts for Phase 1 of the Clara Knotts Reconstruction had been received and were under review. (Hamilton County Drainage Board Minute Book 21 Page 212.)

Form E-1 stating that all expenses for labor & materials has been paid as required by IC 36-9-27-82(b) was received February 13, 2023.

Asbuilts from Banning Engineering were divided in two phases. Banning referred to Phase 1 as consisting of the Base Bid which includes the storm drains located along the north side 103<sup>rd</sup> St. from an existing structure in the northwest quadrant of College Ave. to the west side of Park Ave. Also, along the east side of Broadway Ave. north to the end of the street, and the west side of Park Ave. north to the end of the street.

Banning's Phase 1B consists of Alternate Bid 2 along south side of  $102^{nd}$  St from an existing structure in the southwest quadrant of College and  $102^{nd}$  St.; west to the west side of Broadway Ave. and Alternate Bid 6 along the west side New Jersey St. from an existing structure in the southwest quadrant of  $102^{nd}$  St. and New Jersey St. north to an existing structure in the southwest quadrant of  $103^{rd}$  St. and New Jersey St.

## Clara Knotts Drain, Park Broadway Phase 1 - Base Bid, Alt 2 & Alt 6

Morphey's Contract		Billed	Retained	Paid
PR 1-Pd 01/11/22		\$52,600.00	\$7,890.00	\$44,710.00
PR 2-Pd 02/15/22		\$76,761.00	\$11,514.15	\$65,246.85
PR 3-Pd 03/29/22		\$85,011.50	\$12,751.72	\$72,259.78
PR 4-Pd 04/12/22		\$86,898.50	\$13,034.77	\$73,863.73
PR 5-Pd 06/28/22		\$80,135.00	\$12,020.25	\$68,114.75
PR 6-Pd 07/12/22		\$11,577.00	\$1,736.55	\$9,840.45
PR 7-Pd 07/12/22		\$64,145.00	\$9,621.75	\$54,523.25
PR 8-Pd 08/09/22		\$102,774.00	\$15,416.10	\$87,357.90
PR 9-Pd 12/28/22		\$56,943.00	\$8,541.45	\$48,401.55
PR 10-Pd 3/14/23		\$33,219.82	\$4,982.97	\$28,236.85
PR 11-Pd 4/11/23	Retainage		-\$97,509.71	\$97,509.71
Totals:		\$650,064.82	\$0.00	\$650,064.82
		Bid	Contingency	Total
Marphay's Contract		\$566 002 00	\$94,000,20	¢650 000 20

	Bid	Contingency	Total
Morphey's Contract	\$566,002.00	\$84,900.30	\$650,902.30
Change Order #1	\$1,500.00		
Change Order #2	\$3,000.00		
Change Order #3	\$3,420.00		
Change Order #4	\$42,923.00		
Change Order #5	\$33,219.82		
Final Revised			
Contract	\$650,064.82		Savings
		Un-used	
		contingency	\$837.48

	Contract	Billed	Saving:
Banning's Contract	\$41,000.00	\$38,241.25	\$2,758.7
	****		
Total Project Cost	\$688,306.07		
Final Funding			
CDBG Agreement	\$114,053.85	3/4/2022	Q92884
CDBG Agreement	\$68,162.78	4/19/2022	Q93228
CDBG Agreement	\$73,863.73	5/2/2022	Q93340
CDBG Agreement	\$28,264.00	7/12/2022	Q93851
Total CDBG	\$284,344.36		
Carmel's 50%	\$344,153.04	3/27/2023	Q95707
Transfer from maintenance	\$59,808.67		
Total Funding:	\$688,306.07		

Phase 1 of the Clara Knotts Regulated Drain Reconstruction consists of the following:

12" RCP – 410 feet	24" RCP – 537 feet
15" RCP – 642 feet	36" RCP – 651 feet
18" RCP – 652 feet	12" PVC – 268 Feet

Total length of Phase 1 is 3,160 feet.

As of the date of this report, I hereby attest to and agree that the reconstruction of Phase 1 of the Clara Knotts Regulated Drain Reconstruction was completed according to the specified plans. All inspections have been completed. Construction staking was performed by and asbuilts were prepared by Banning Engineering. Asbuilt plans have been submitted and approved.

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

Respectfully

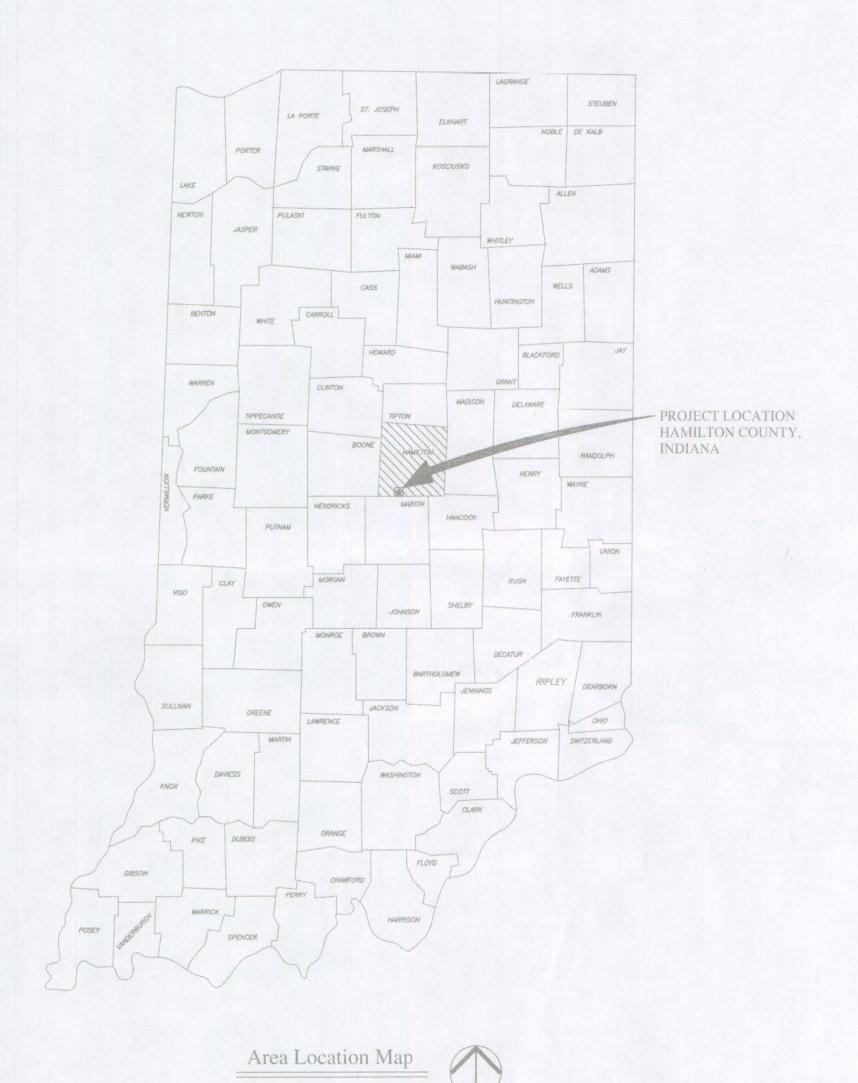
Luther M. Clare

Inspector

Hamilton County Surveyor's Office

## HAMILTON COUNTY CLARA KNOTTS DRAIN STORMWATER IMPROVEMENTS

APRIL 2020



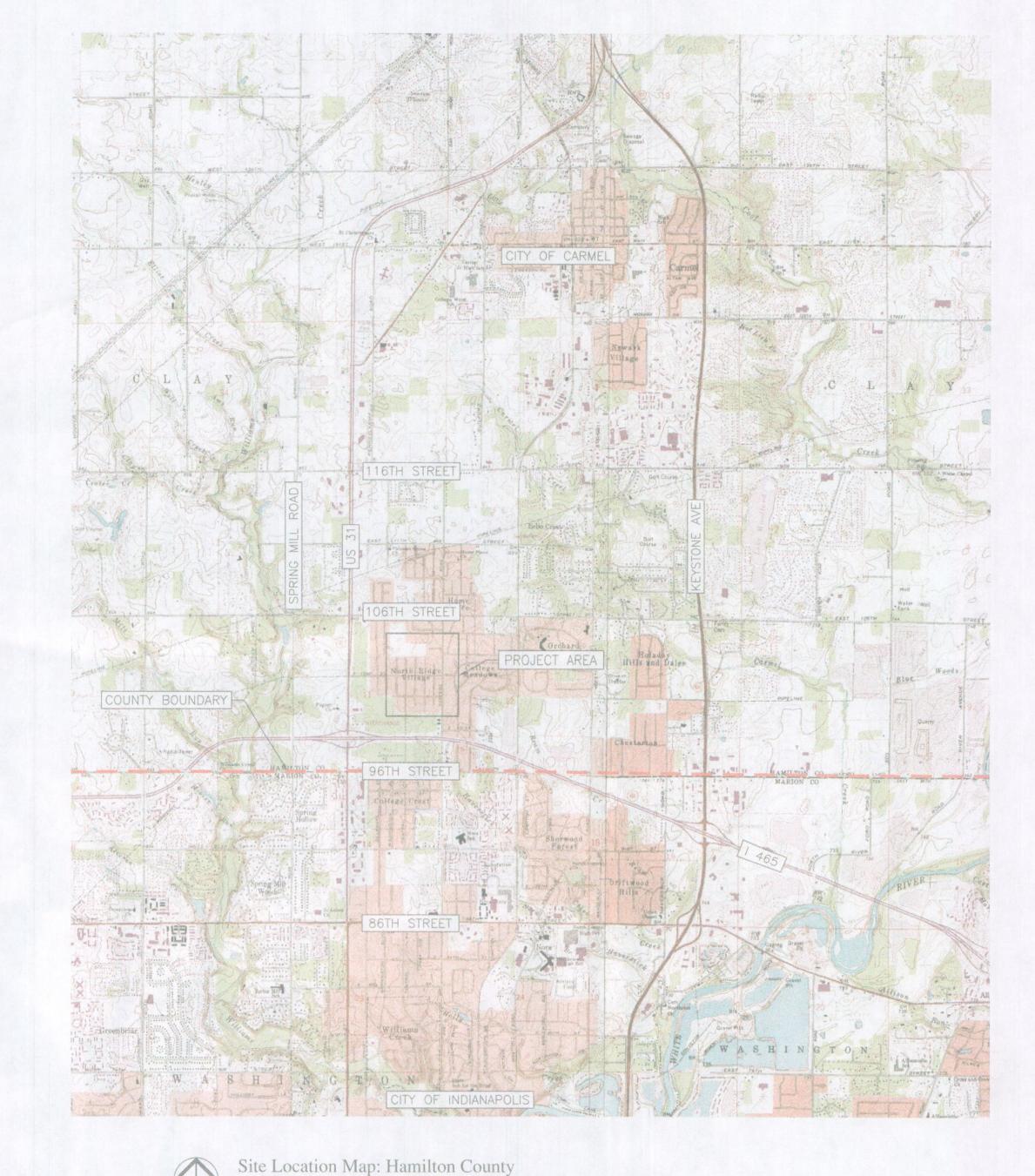
## HAMILTON COUNTY

MARK HEIRBRANDT CHRISTINE ALTMAN STEVEN C. DILLINGER

KENTON C. WARD

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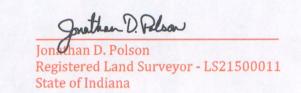
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## Certificate of Survey

I hereby state that the record information provided herein is true and correct to the best of my knowledge and belief and was collected under my supervision with the field data completed on December 14, 2022. The record information pertains to the location and elevation of the storm structures, the size and type of the storm pipes, and the slope of said pipes between structures. The elevations on top of casting of the structures and their accompanying pipe inverts are accurate to within 0.05 feet and were gathered using a total station applying standard radial surveying techniques.







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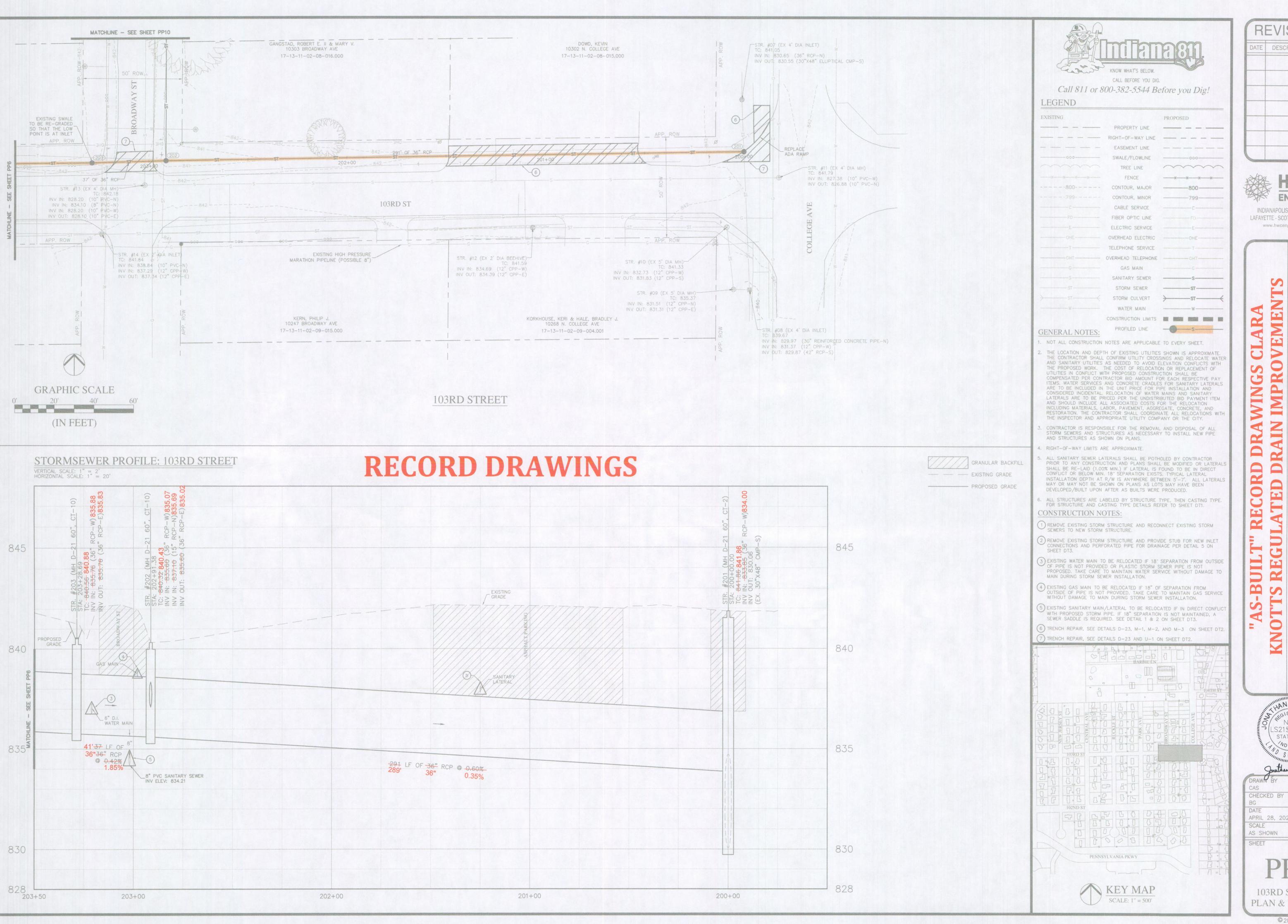
This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.

Entry Date: 2023

Entered By: 5LM

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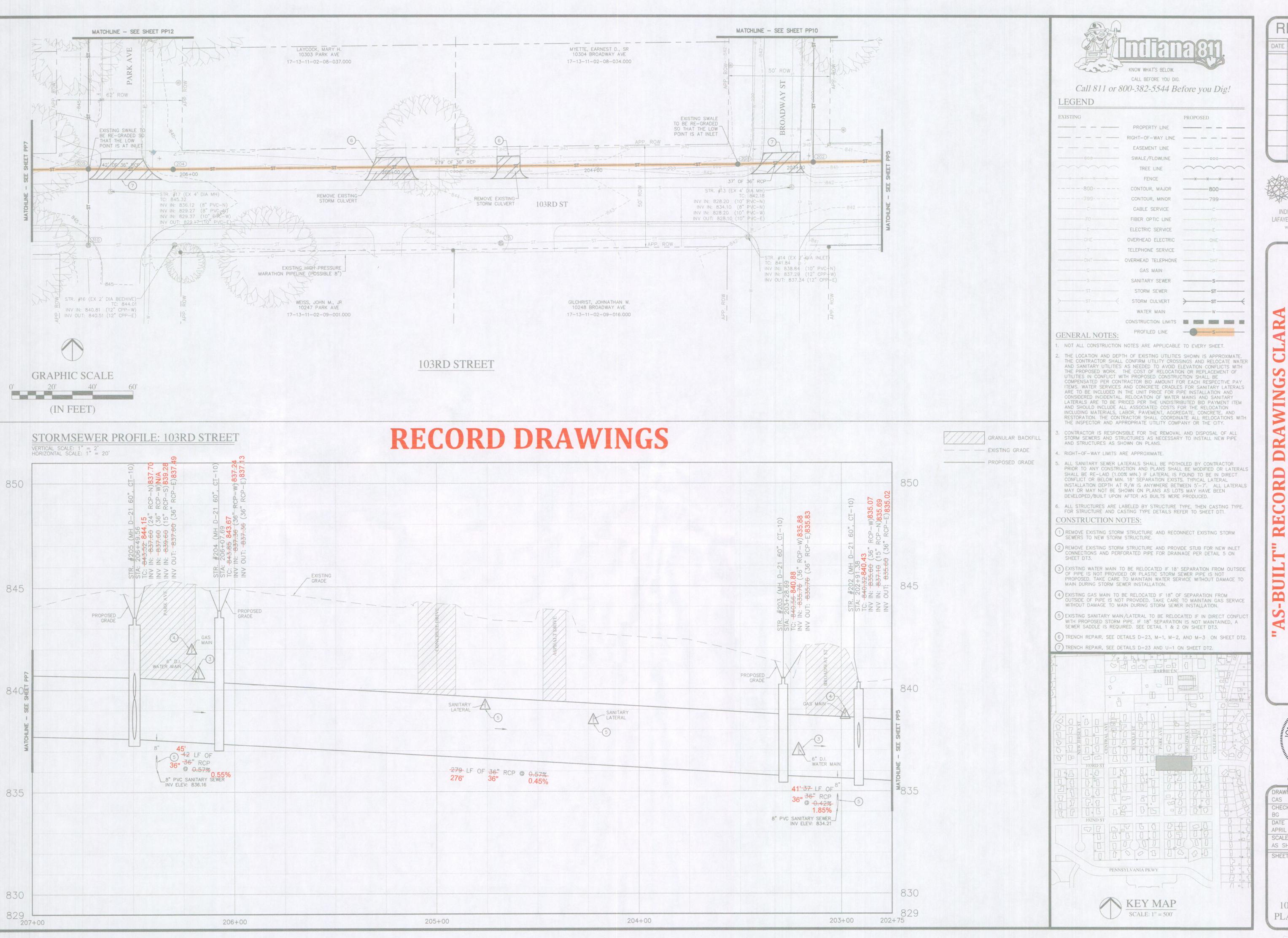
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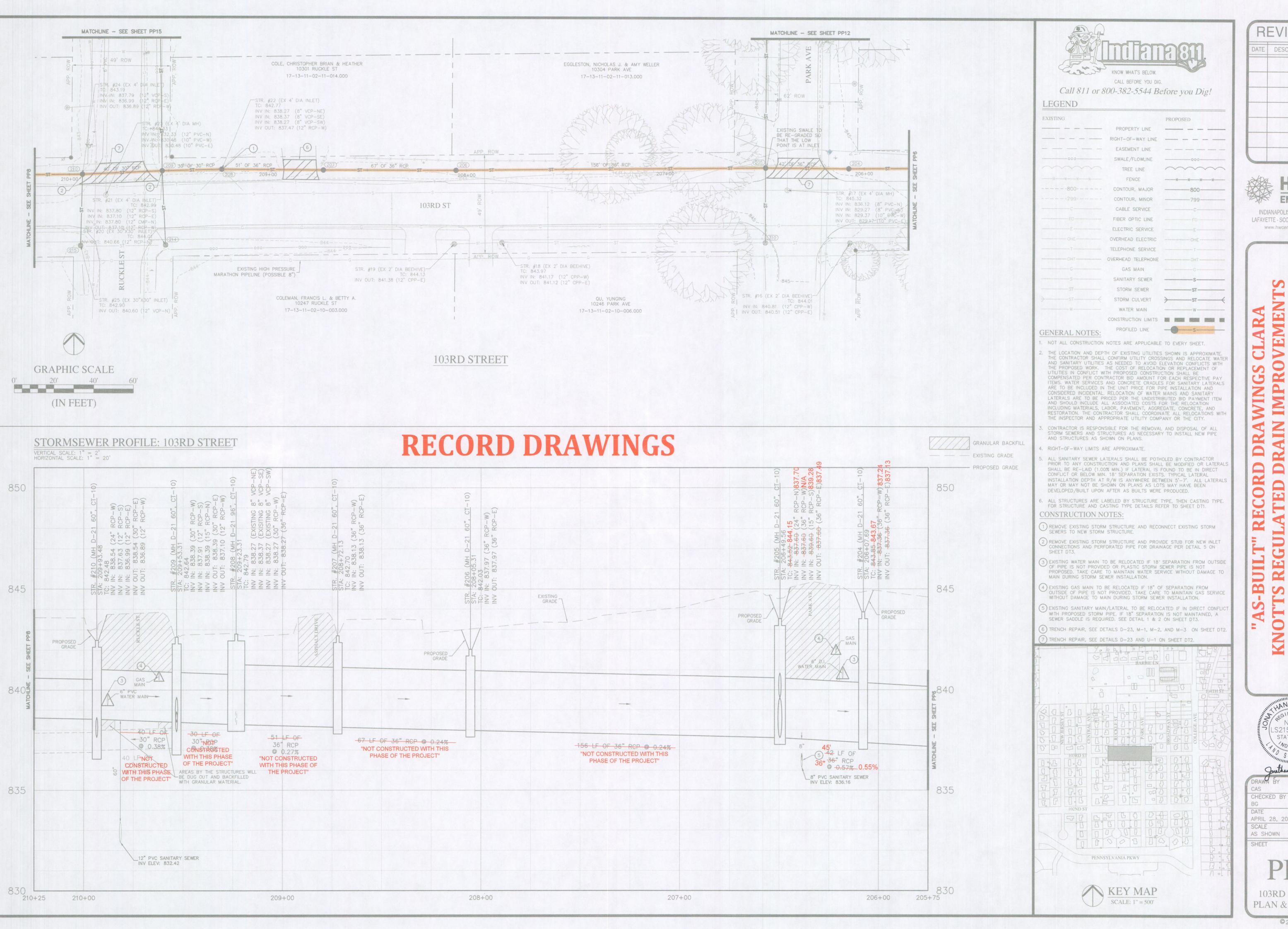
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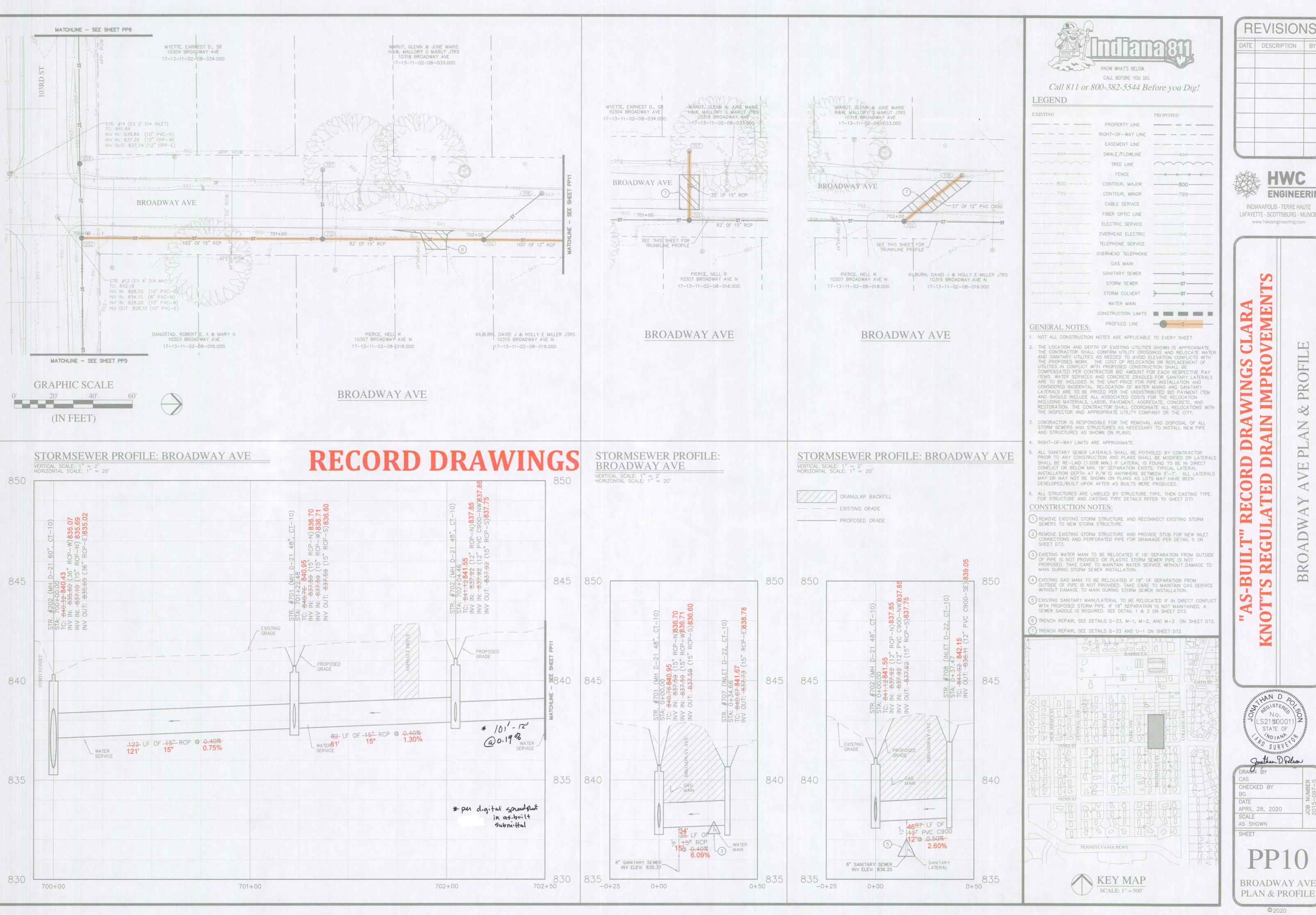
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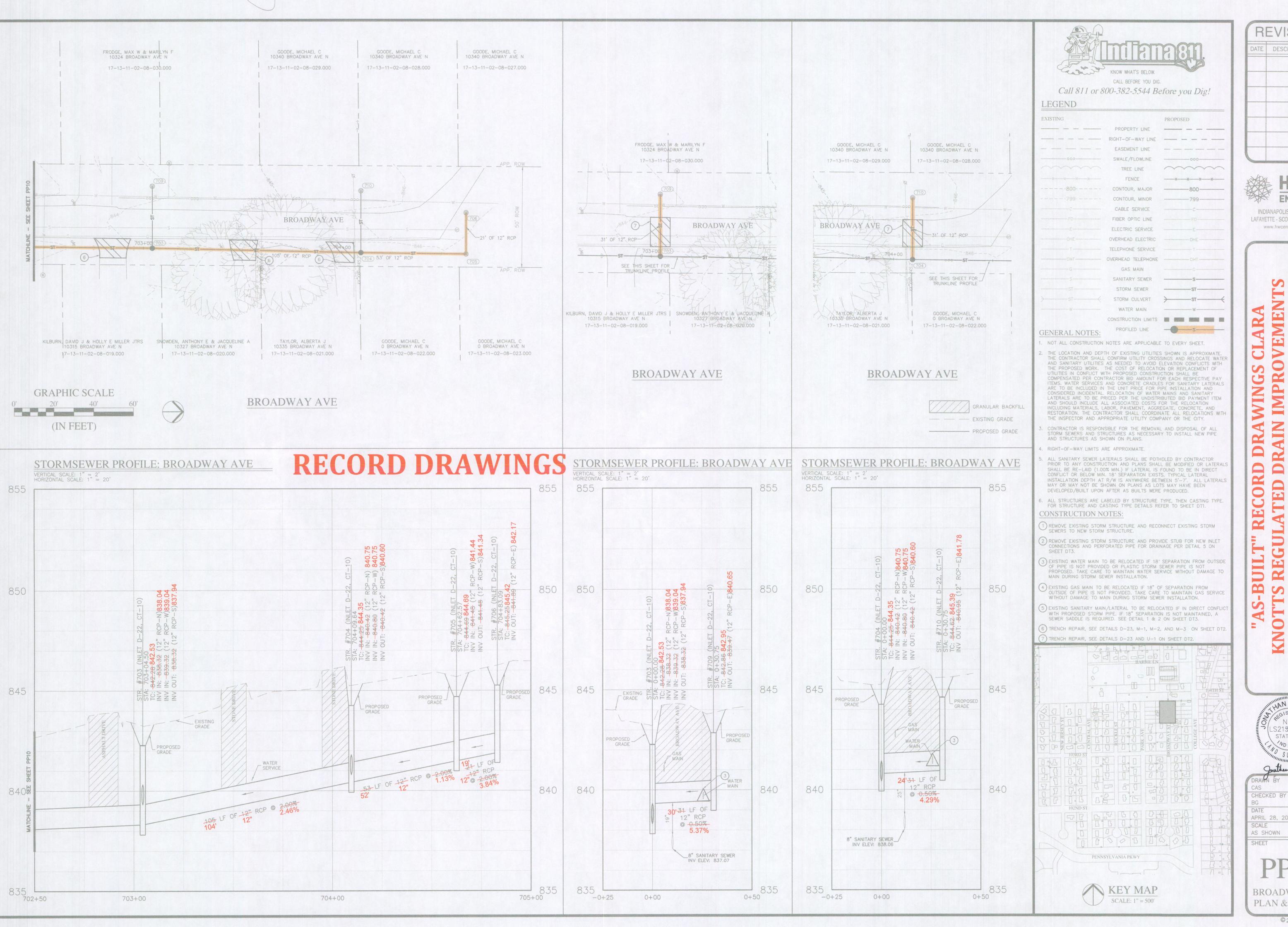
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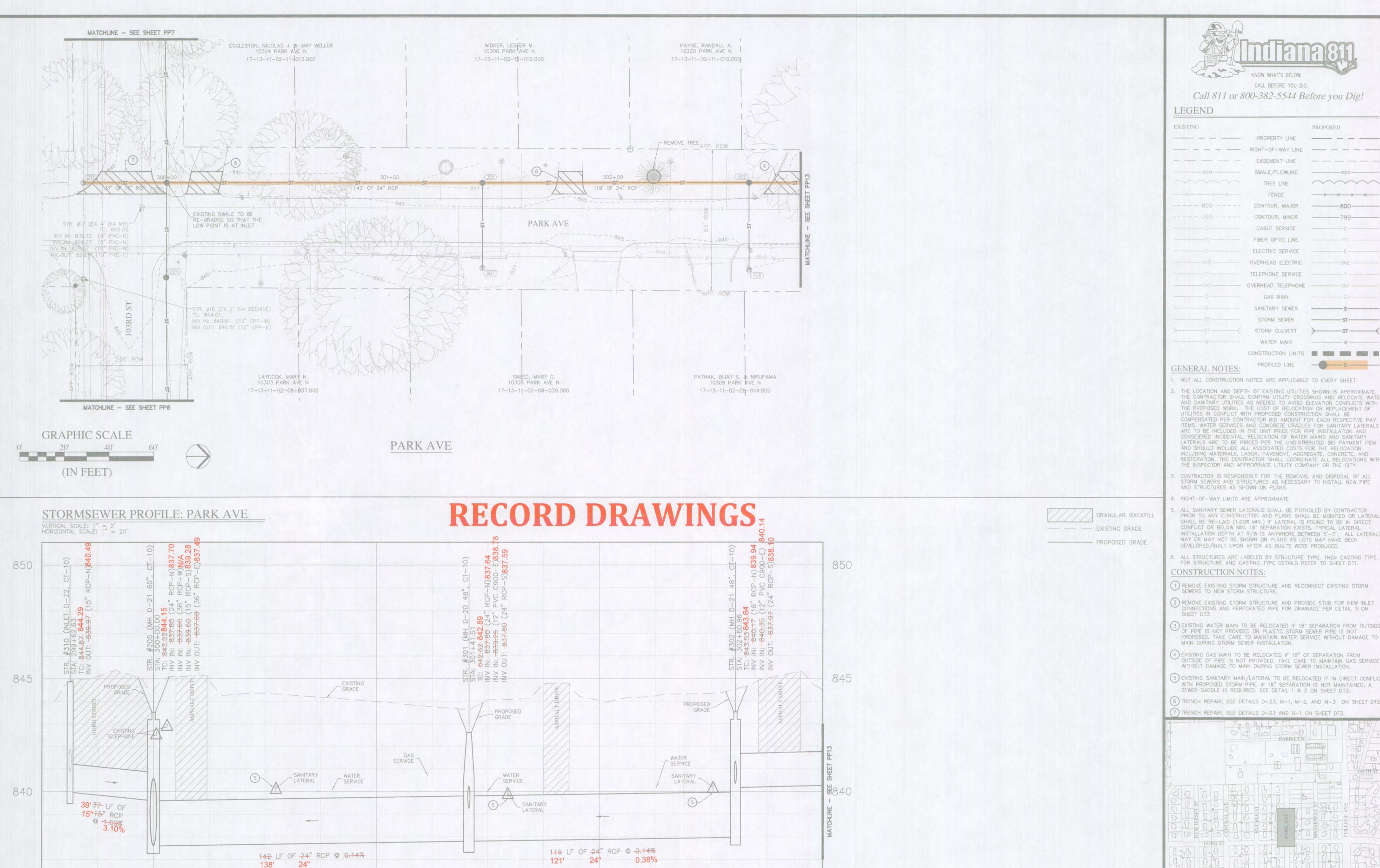
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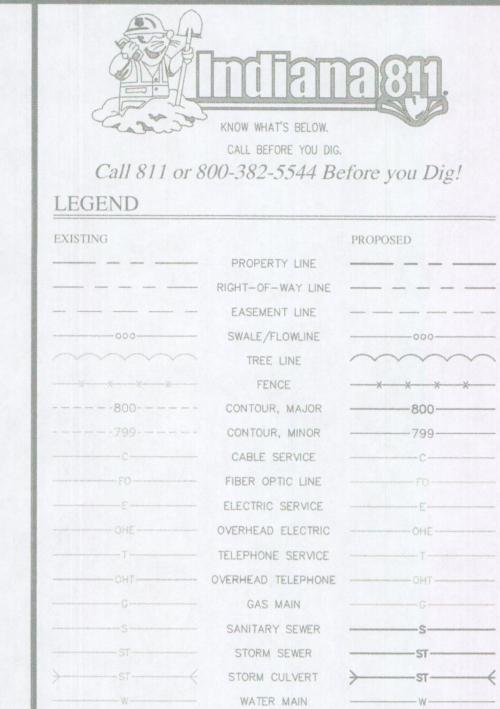
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. NOT ALL CONSTRUCTION NOTES ARE APPLICABLE TO EVERY SHEET.

. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL CONFIRM UTILITY CROSSINGS AND RELOCATE WATER AND SANITARY UTILITIES AS NEEDED TO AVOID ELEVATION CONFLICTS WITH THE PROPOSED WORK. THE COST OF RELOCATION OR REPLACEMENT OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE COMPENSATED PER CONTRACTOR BID AMOUNT FOR EACH RESPECTIVE PAY ITEMS. WATER SERVICES AND CONCRETE CRADLES FOR SANITARY LATERALS ARE TO BE INCLUDED IN THE UNIT PRICE FOR PIPE INSTALLATION AND CONSIDERED INCIDENTAL. RELOCATION OF WATER MAINS AND SANITARY LATERALS ARE TO BE PRICED PER THE UNDISTRIBUTED BID PAYMENT ITEM AND SHOULD INCLUDE ALL ASSOCIATED COSTS FOR THE RELOCATION INCLUDING MATERIALS, LABOR, PAVEMENT, AGGREGATE, CONCRETE, AND RESTORATION. THE CONTRACTOR SHALL COORDINATE ALL RELOCATIONS WITH THE INSPECTOR AND APPROPRIATE UTILITY COMPANY OR THE CITY.

- . CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL STORM SEWERS AND STRUCTURES AS NECESSARY TO INSTALL NEW PIPE
- ALL SANITARY SEWER LATERALS SHALL BE POTHOLED BY CONTRACTOR PRIOR TO ANY CONSTRUCTION AND PLANS SHALL BE MODIFIED OR LATERALS SHALL BE RE-LAID (1.00% MIN.) IF LATERAL IS FOUND TO BE IN DIRECT CONFLICT OR BELOW MIN. 18" SEPARATION EXISTS. TYPICAL LATERAL MAY OR MAY NOT BE SHOWN ON PLANS AS LOTS MAY HAVE BEEN DEVELOPED/BUILT UPON AFTER AS BUILTS WERE PRODUCED.
- 5. ALL STRUCTURES ARE LABELED BY STRUCTURE TYPE, THEN CASTING TYPE. FOR STRUCTURE AND CASTING TYPE DETAILS REFER TO SHEET DT1.
- 2 REMOVE EXISTING STORM STRUCTURE AND PROVIDE STUB FOR NEW INLET CONNECTIONS AND PERFORATED PIPE FOR DRAINAGE PER DETAIL 5 ON
- 3 EXISTING WATER MAIN TO BE RELOCATED IF 18" SEPARATION FROM OUTSIDE OF PIPE IS NOT PROVIDED OR PLASTIC STORM SEWER PIPE IS NOT PROPOSED. TAKE CARE TO MAINTAIN WATER SERVICE WITHOUT DAMAGE TO MAIN DURING STORM SEWER INSTALLATION.
- 4 EXISTING GAS MAIN TO BE RELOCATED IF 18" OF SEPARATION FROM OUTSIDE OF PIPE IS NOT PROVIDED. TAKE CARE TO MAINTAIN GAS SERVICE WITHOUT DAMAGE TO MAIN DURING STORM SEWER INSTALLATION.
- 5 EXISTING SANITARY MAIN/LATERAL TO BE RELOCATED IF IN DIRECT CONFLICT WITH PROPOSED STORM PIPE. IF 18" SEPARATION IS NOT MAINTAINED, A SEWER SADDLE IS REQUIRED. SEE DETAIL 1 & 2 ON SHEET DT3.
- 6 TRENCH REPAIR, SEE DETAILS D-23, M-1, M-2, AND M-3 ON SHEET DT2. 7) TRENCH REPAIR, SEE DETAILS D-23 AND U-1 ON SHEET DT2.



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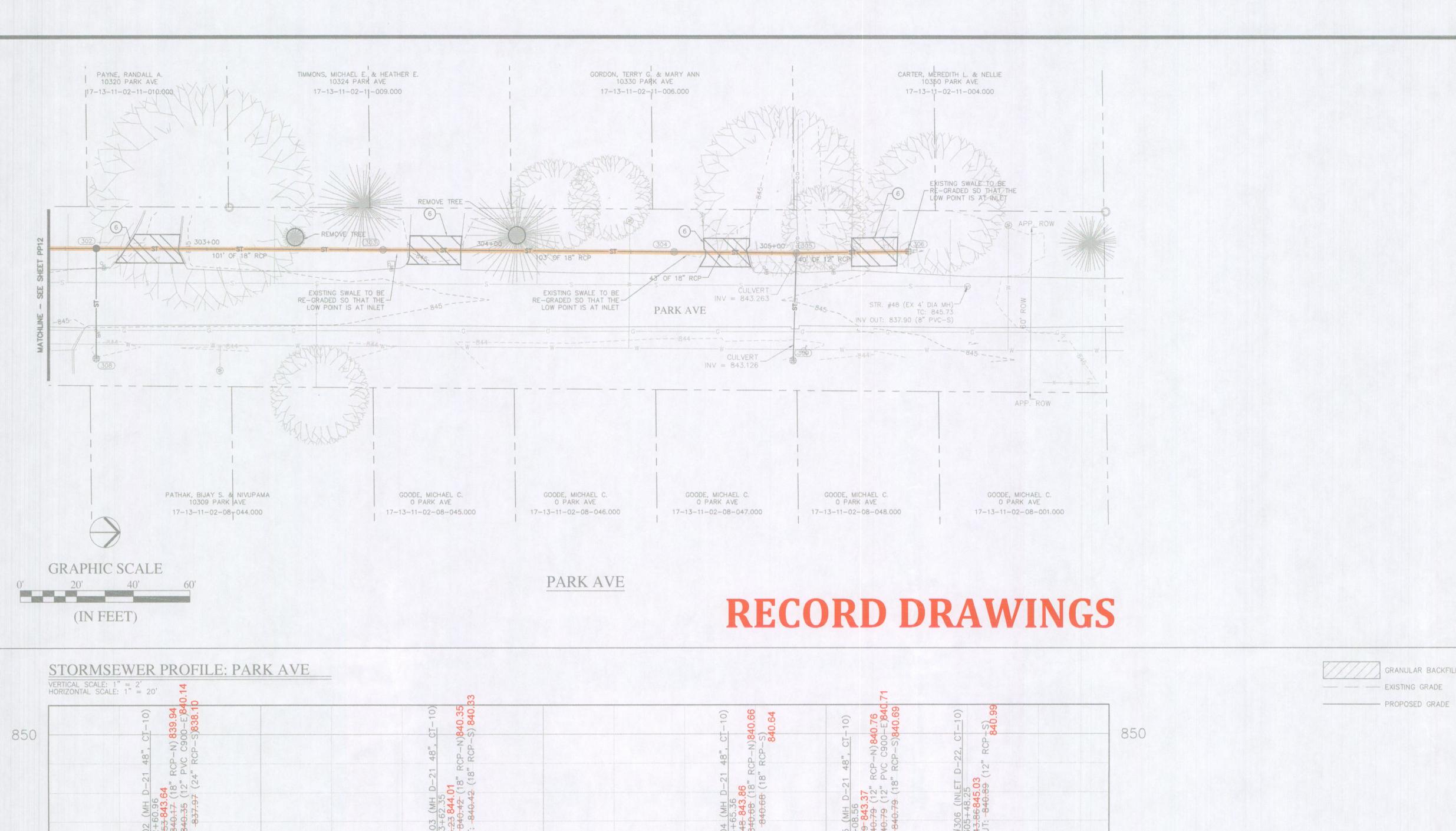
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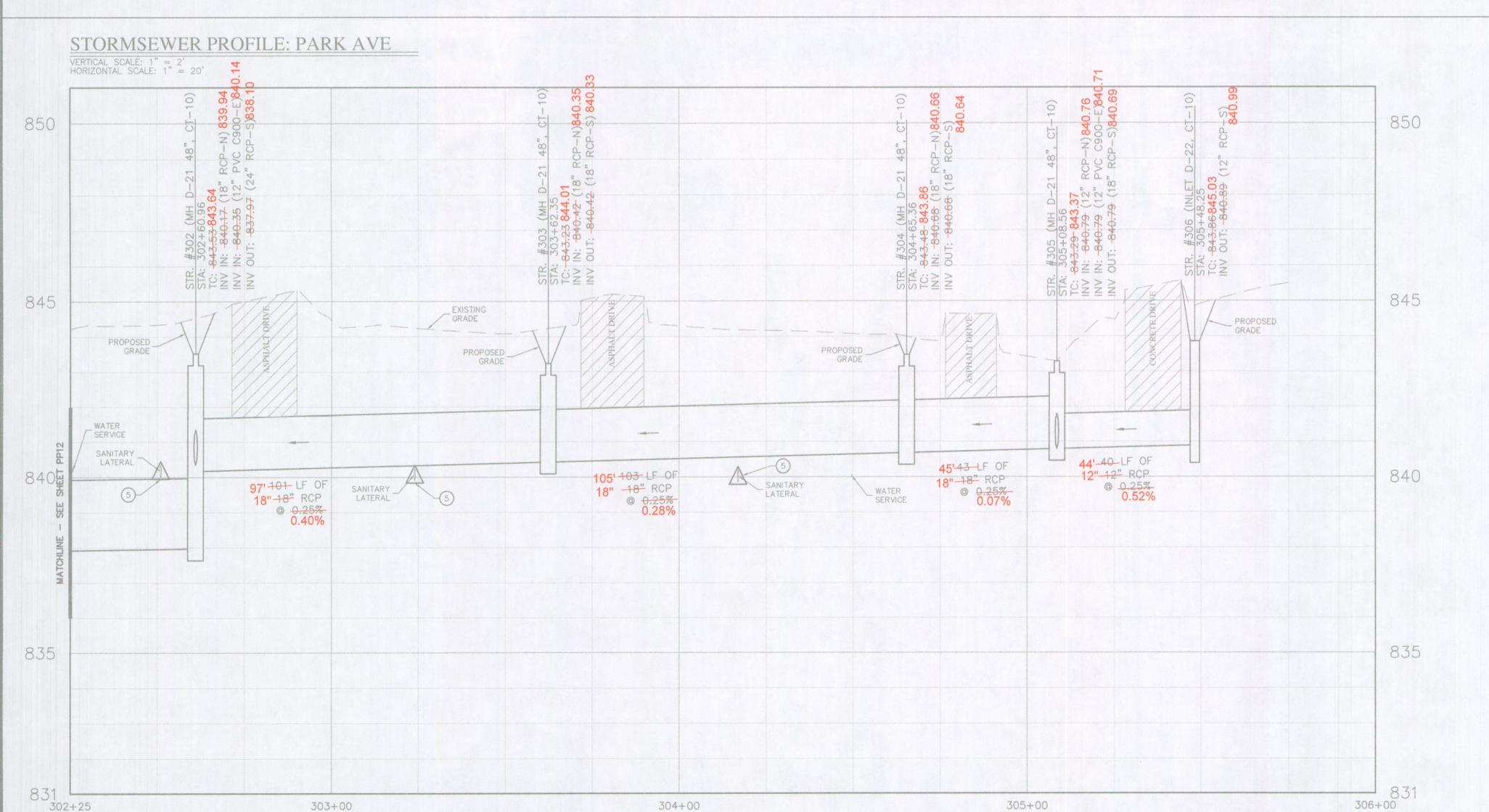
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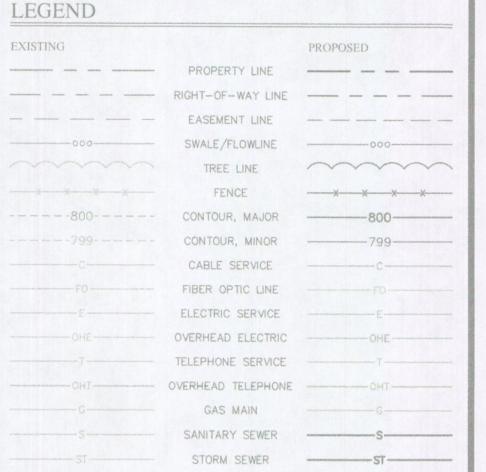
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GENERAL NOTES:

NOT ALL CONSTRUCTION NOTES ARE APPLICABLE TO EVERY SHEET.

. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN IS APPROXIMATE. THE CONTRACTOR SHALL CONFIRM UTILITY CROSSINGS AND RELOCATE WATER AND SANITARY UTILITIES AS NEEDED TO AVOID ELEVATION CONFLICTS WITH THE PROPOSED WORK. THE COST OF RELOCATION OR REPLACEMENT OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE COMPENSATED PER CONTRACTOR BID AMOUNT FOR EACH RESPECTIVE PAY ITEMS, WATER SERVICES AND CONCRETE CRADLES FOR SANITARY LATERALS ARE TO BE INCLUDED IN THE UNIT PRICE FOR PIPE INSTALLATION AND CONSIDERED INCIDENTAL. RELOCATION OF WATER MAINS AND SANITARY LATERALS ARE TO BE PRICED PER THE UNDISTRIBUTED BID PAYMENT ITEM AND SHOULD INCLUDE ALL ASSOCIATED COSTS FOR THE RELOCATION INCLUDING MATERIALS, LABOR, PAVEMENT, AGGREGATE, CONCRETE, AND RESTORATION. THE CONTRACTOR SHALL COORDINATE ALL RELOCATIONS WITH THE INSPECTOR AND APPROPRIATE UTILITY COMPANY OR THE CITY.

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CONSTRUCTION LIMITS

- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL STORM SEWERS AND STRUCTURES AS NECESSARY TO INSTALL NEW PIPE AND STRUCTURES AS SHOWN ON PLANS.
- . RIGHT-OF-WAY LIMITS ARE APPROXIMATE.
- ALL SANITARY SEWER LATERALS SHALL BE POTHOLED BY CONTRACTOR PRIOR TO ANY CONSTRUCTION AND PLANS SHALL BE MODIFIED OR LATERAL SHALL BE RE-LAID (1.00% MIN.) IF LATERAL IS FOUND TO BE IN DIRECT CONFLICT OR BELOW MIN. 18" SEPARATION EXISTS. TYPICAL LATERAL MAY OR MAY NOT BE SHOWN ON PLANS AS LOTS MAY HAVE BEEN DEVELOPED/BUILT UPON AFTER AS BUILTS WERE PRODUCED.
- 5. ALL STRUCTURES ARE LABELED BY STRUCTURE TYPE, THEN CASTING TYPE. FOR STRUCTURE AND CASTING TYPE DETAILS REFER TO SHEET DT1. CONSTRUCTION NOTES:
- 1) REMOVE EXISTING STORM STRUCTURE AND RECONNECT EXISTING STORM SEWERS TO NEW STORM STRUCTURE.
- 2 REMOVE EXISTING STORM STRUCTURE AND PROVIDE STUB FOR NEW INLET CONNECTIONS AND PERFORATED PIPE FOR DRAINAGE PER DETAIL 5 ON
- 3 EXISTING WATER MAIN TO BE RELOCATED IF 18" SEPARATION FROM OUTSIDE OF PIPE IS NOT PROVIDED OR PLASTIC STORM SEWER PIPE IS NOT PROPOSED. TAKE CARE TO MAINTAIN WATER SERVICE WITHOUT DAMAGE TO MAIN DURING STORM SEWER INSTALLATION.
- 4 EXISTING GAS MAIN TO BE RELOCATED IF 18" OF SEPARATION FROM OUTSIDE OF PIPE IS NOT PROVIDED. TAKE CARE TO MAINTAIN GAS SERVICE WITHOUT DAMAGE TO MAIN DURING STORM SEWER INSTALLATION.
- (5) EXISTING SANITARY MAIN/LATERAL TO BE RELOCATED IF IN DIRECT CONFLICT WITH PROPOSED STORM PIPE. IF 18" SEPARATION IS NOT MAINTAINED, A SEWER SADDLE IS REQUIRED. SEE DETAIL 1 & 2 ON SHEET DT3.
- (6) TRENCH REPAIR, SEE DETAILS D-23, M-1, M-2, AND M-3 ON SHEET DT2. 7) TRENCH REPAIR, SEE DETAILS D-23 AND U-1 ON SHEET DT2.



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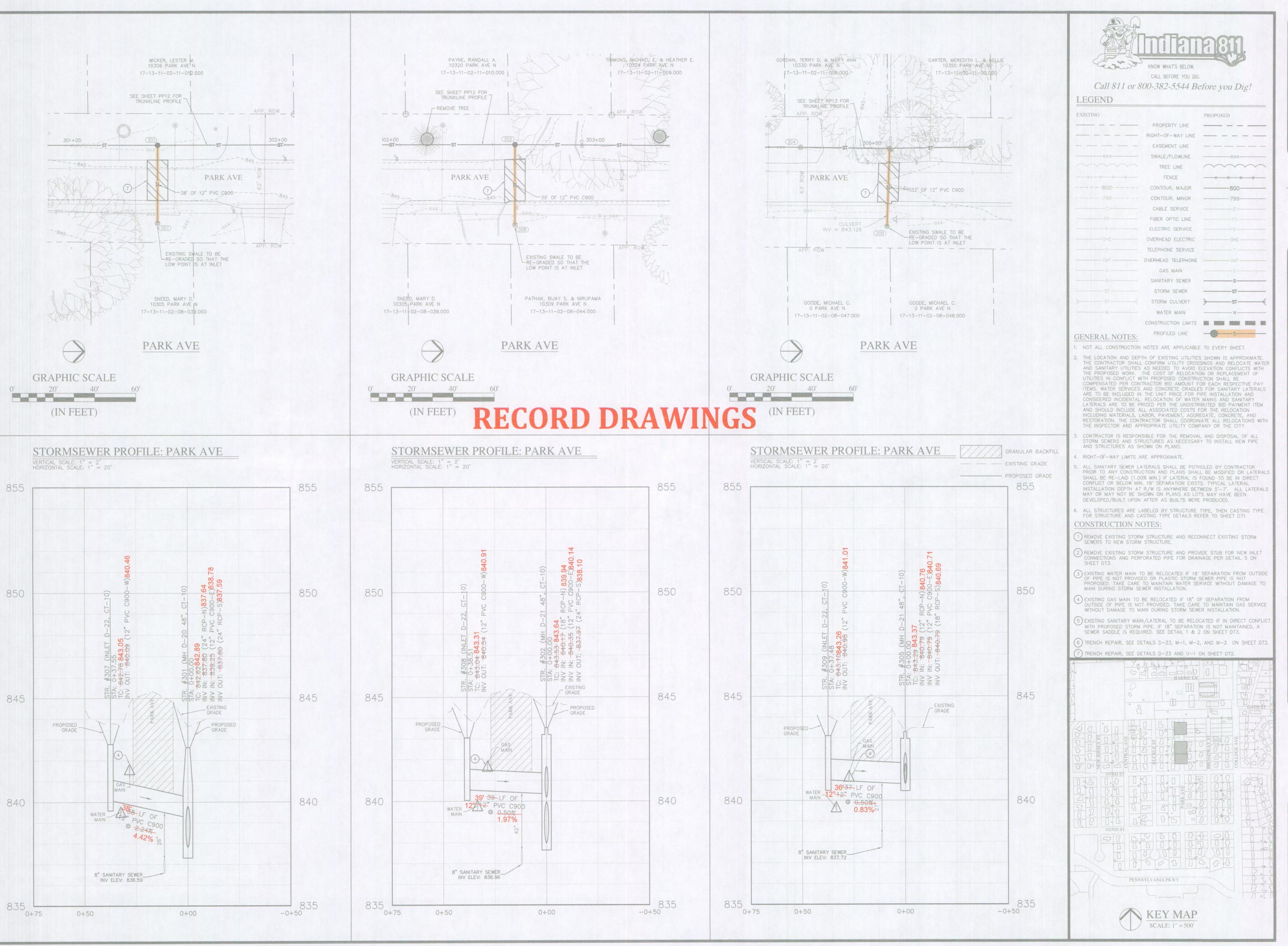
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