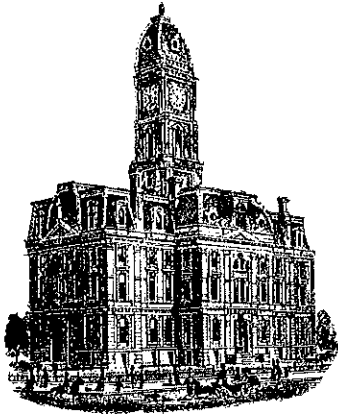


KCW



SURVEYOR'S OFFICE  
**H**amilton **C**ounty

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September 5, 2018

TO: Hamilton County Drainage Board

RE: William Krause Drain, Krause Drain Reconstruction Phase 3

Attached are the petition, plans, schedule of assessments and drainage shed map, for the William Krause Drain Phase 3. This petition was filed by the Town of Sheridan on December 15, 2016. The petition was referred to the Surveyor for report by the Drainage Board December 21, 2016. (See Hamilton County Drainage Board Minutes Book 17, page 237.) I have reviewed the petition and found it to be in proper form.

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

The attached plans were prepared for the Hamilton County Drainage Board by Banning Engineering. The Phase 3 plans are dated September 12, 2018, Project Number 11194KRUS.

The proposed project will improve the drainage in the southeastern portion of Sheridan. The drainage facilities will be placed in either existing street right of way or the existing drainage easement of the William Krause Drain.

The William Krause Drain is an existing tiled drain on the south and southeast side of the Town of Sheridan consisting of the Main Arm, Arms 1, 2, 3 and 4 and the Jacob Boyer Arm.

The drain is located in Adams Township, Section 32, Township 20 North, Range 3 East and Section 5, Township 19 North, Range 3 East. The drain starts approximately 920-feet east of the intersection of Jarit Drive and East 2<sup>nd</sup> Street and runs generally south and west into the south and southeast portion of the Town of Sheridan.

## History

The original drain petition was by Joseph Furnas and established as the West Cicero Ditch in 1877. [See Hamilton County Drainage Board Minutes Book 4, page 129]. In 1892, George Symonds petitioned for the drain consisting of a main drain and six arms. [See Hamilton County Drainage Board Minutes Book 4, page 129]

Many of the arms became other drains through the years including the Benton-Hinesley Drain, the William Krause Drain, and the George Beam Drain. In 1919-1920, approximately 2,215 of the George Symonds Drain was tiled as part of the William Krause Drain. [See Hamilton County Drainage Board Minutes Book 4, page 130].

The Jacob Boyer Drain was constructed and attached to the William Krause drain in 1923.

The first noted significant repair on the William Krause Drain occurred in 1945.

In 1952 work was completed on the downstream headwall outlet.

In 1952 the Town of Sheridan petitioned for a reconstruction/relocation of the drain along SR 47 near Park Avenue and Malott Street. 250-feet of the drain was relocated from the north side of SR47 to the south side of SR 47. This work added 100-feet to the drain. The work is described in a Viewers Report dated May 6, 1953. The matter was set for hearing on June 15, 1953 in the Circuit Court of Hamilton County under Cause No. A-9280.

The Jacob Boyer Drain and the William Krause Drain were officially separated from the George Symonds Drain and combined in to the William Krause Drain at the August 22, 1994 meeting of the Drainage Board. [See Hamilton County Drainage Board Minutes Book 3, pages 275-276] The William Krause Drain was placed on maintenance and classified as an Urban Drain at the August 22, 1994 meeting of the Drainage Board. [See Hamilton County Drainage Board Minutes Book 3, pages 275-276]

The Main Arm runs from where the tile discharges to the George Symonds Drain southwesterly crossing under SR 38 and then south to 8<sup>th</sup> Street to the Jacob Boyer Arm from the south/east. The Main Arm continues west along 8<sup>th</sup> Street to South Bailey Street where it then runs south along South Bailey Street to State 47 where it turns to the west.

At South Malott Avenue, the drain crosses to the south side of State Road 47 and then crosses back to the north side at South Park Avenue.

The drain then continues west to the alley between Main and Ohio Streets to the start of Arm 1.

The Main Arm consists of the following: 3,985-LF of 24" tile installed in 1920; 90-LF of 21" tile installed in 1953; 250-LF of 18" tile installed in 1953; 50-LF of 15" installed in 1953; 462-LF of 12-inch tile installed in 1920 and 478-LF of 8" tile installed in 1920. Portions of the Main Arm were recently

reconstructed as part of the OCRA Project and Phase 1 Project described later in this report. The final reports for these reconstruction projects have not yet been written.

Arm 1 stubs to the north from the Main Arm at the alley between Main and Ohio Streets a distance of 66-feet and is a 6-inch tile installed in 1920.

Arm 2 stubs to the north at the alley between Main and Georgia Streets a distance of 165-feet and is a 6-inch tile installed in 1920.

Arm 3 stubs to the south from the Main Arm on the west side of Georgia Street a distance of 660-feet and is an 8-inch tile installed in 1920.

Arm 4 stubs to the south a distance of 50-feet just east of Malott Avenue and is an 18-inch tile installed in 1920.

The Jacob Boyer Arm consists of 224-LF 12-inch, 26-LF 12-inch, 369-LF 10-inch, 162-LF 8-inch, 231-LF 8-inch, 48-LF 8-inch all installed in 1924. The total length of the arm is 1,060-feet.

The William Krause Drain – Krause Drain Reconstruction Phase 1 project, as described in a report dated May 5, 2017 and presented to the Drainage Board at the meeting of June 26, 2017 is presently under construction and will reconstruct the William Krause Drain downstream of Station 30+50. Please refer to this report for a detailed description of the project [See Hamilton County Drainage Board Minutes Book 17, Pages 384-391]. This project was approved by the Drainage Board at the October 23, 2017 meeting of the Drainage Board with the Contract being signed at the November 13, 2017 meeting of the Drainage Board [See Hamilton County Drainage Board Minutes Book 17, Page 517 and Page 537]. In this report, this project is referred to as the Phase 1 project. This project is substantially complete.

The William Krause Drain – Sheridan Stormwater Improvements project, as described in a report dated May 5, 2017 and presented to the Drainage Board at the meeting of June 26, 2017 is presently under construction and will reconstruct the William Krause Drain between Stations 23+38 and 30+50. Please refer to this report for a detailed description of the project. The project was approved at the June 26, 2017 meeting of the Drainage Board. [See Hamilton County Drainage Board Minutes Book 17, Pages 380-383]. In this report, this project is referred to as the OCRA project. This project is substantially complete.

The William Krause Drain – Krause Drain Reconstruction Phase 2 project, as described in a report dated January 25, 2018 and presented to the Drainage Board at the meeting of February 26, 2018 is presently under construction. The project includes the construction of a stormwater detention facility between Station 6+00 and 0+68 of the Phase 1 project and other ancillary construction. Please refer to the January 25, 2018 report for a detailed description of the project [See Hamilton County Drainage Board Minutes Book 18, Pages 55-60]. The project was approved by the Drainage Board at the June 11, 2018 meeting of the Drainage Board [See Hamilton County Drainage Board Minutes Book 18, Pages 177-178]. In this report, this project is referred to as the Phase 2 project.

## **Existing Condition**

A 2013 hydraulic study for the George Symonds and William Krause watershed by Banning Engineering identified that the hydraulic capacity of the 24" tile portion of the William Krause Drain is 10 cubic feet per second and is only adequate to convey the runoff from a 1% frequency storm event. The study identified that without significant upsizing or diversion, flooding in the area served by the Main Arm of the William Krause Drain generally between Fanning Street and Hudson Street and north of 8<sup>th</sup> Street to SR 38 would be expected to continue. This area experienced significant flooding on June 20, 2011 with water overtopping SR 38 near the Apostolic Faith Church.

## **Reconstruction Project Phase 3**

Phase 3 of this project will provide a higher capacity outlet for the segment of the William Krause Drain upstream of Station 16+02 of the 1920 William Krause Drain Description. The project includes the installation of tiled system that consists of a main arm, two secondary arms that drain to the main arm and several lateral inlets. The main arm shall be known as the William Krause Arm 5. The secondary arms shall be known as the William Krause Arm 6 and William Krause Arm 7.

This project is consistent with the February 2013 study completed for the William Krause and George Symonds Drains by Banning Engineering.

The tiled drainage system to be installed is described in detail in following sections and is not listed in this section.

The project also includes the installation of granular backfill material between Stations 5+80 and 6+10 (approximately) on Arm 5 for equipment accessing the adjacent agricultural field.

The project also includes the installation of ten (10) trees along, but offset from, the top of bank of the stormwater detention facility being constructed with Phase 2.

The project also includes the grading of surface drainage swales that are parallel with and directly above the tile alignment to better facilitate drainage in to Structures 303, 304 and 305.

The project also includes three sanitary sewer lateral repairs.

The project will be bid with a Base Bid and three Alternate bids. Structuring the bid in this manner will allow the Drainage Board discretion to approve construction contracts based on available funding.

The Base Bid includes the following: Construction of Arm 5 between Stations 0+00 (Structure Ex-1) and 13+50 (Structure 307), setting Structure 318, Construction of Arm 7 between Stations 0+00 (Structure 307) and 0+73 (Structure 314), removal of the Jacob Boyer Arm between Stations 3+81 and 4+61 (1924 Stationing), and grouting the existing Jacob Boyer Arm between Stations 3+06 and 3+81 (1924 Stationing).

The construction of Arm 5 between Stations 13+50 (Structure 307) and 21+64, setting Structure 319, and installing the two laterals will be bid as Alternate No. 1.

Construction of Arm 6 between Stations 0+00 and 4+33 will be bid as Alternate No. 2.

Construction of Arm 7 between Stations 0+73 (being Station 3+06 of the 1924 Stationing) and 4+47 (being Station 0+00 of the 1924 Stationing) will be bid as Alternate No. 3.

### **William Krause Arm 5**

Arm 5 will start at Structure EX1 identified on the Phase 3 Construction Plans (see Banning Construction Plans dated September 12, 2018). This is also Structure 101 identified on the Phase 1 Construction Plans (see Banning Construction Plans dated May 1, 2017). This structure is located at Station 23+85.01 of the Phase 1 Construction Plans. This project will connect to the 8-LF, 36" RCP stub pipe running south out of Structure 101 installed with the Phase 1 project. The 8-LF of 36-inch RCP installed with Phase 1 (between Station 0+00 to 0+08 of the Arm 5 stationing) shall be made part of Arm 5.

From Phase 3 Structure EX1 (Phase 1 Structure 101), the drain runs south from its terminus at Station 0+00 to Station 0+08 as 8-LF of 36" RCP (installed with the Phase 1 project) and then as 202-LF of 36" HDPE Tile to Structure 301 (a 60" diameter manhole) at Station 2+10. The drain then runs east as 353-LF of 36" HDPE Tile to Structure 302 (a 60" diameter manhole) at Station 5+63. The drain then runs south as 216-LF of 36" HDPE tile to Structure 303 (a 60" diameter manhole) at Station 7+79. The drain then runs southwest as 231-LF of 36" HDPE tile to Structure 304 (a 60" diameter manhole) at Station 10+10. The drain then runs southeast, parallel to State Road 38/South White Avenue as 87-LF of 36" HDPE tile to Structure 305 (a 60" diameter manhole) at Station 10+97. The drain then runs southwest under State Road 38/South White Avenue as 133-LF of 36" PVC SDR 25 plastic tile within 90-LF of 48" Steel Casing to Structure 306 (a 60" diameter manhole) at Station 12+30. The drain then runs south as 120-LF of 36" RCP tile to Structure 307 (a 60" diameter manhole) at Station 13+50.

The drain then runs west as 207-LF of 24" RCP tile to Structure 308 (a 48" diameter manhole) at Station 15+57. The drain then runs west as 209-LF of 24" RCP to Structure 309 (a 48" diameter manhole) at Station 17+66 on the east side of Hudson Street. The drain then runs northwesterly as 54-LF of 24" RCP to Structure 310 (a 48" diameter manhole) at Station 18+20. The drain then runs west along the north side of 9<sup>th</sup> Street as 308-LF of 24" RCP to Structure 311 (a 48" diameter manhole) at Station 21+28 (being Station 16+38 of the 1920 Stationing). The drain then runs south on the west side of South Bailey Street along the existing alignment of the William Krause Drain as 36-LF of 24" RCP to Structure 321 (a 48" diameter manhole) at Station 21+64 (being Station 16+02 of the 1920 Stationing).

A new 48" manhole (Structure 319) will be installed on the existing William Krause Drain at Station 16+49 (1920 Drain Stationing).

Two lateral inlets shall be installed and made part of Arm 5. 33-LF of 18" RCP shall be installed between Structure 309 (at Station 17+66) and Structure 320 (a 24"x36" box inlet) on the west side of Hudson Street. 27-LF of 15" RCP shall be installed between Structure 321 (at Station 21+64) and Structure 322 (a 24"x24" box inlet) on the east side of Bailey Street.

This project removes 36-LF of 24" tile of the William Krause Drain installed in 1920 between Stations 16+02 and 16+49 (1920 Drain Stationing) and replaces the tile with new 24" RCP. This 36-LF is also referenced to be between Stations 21+28 and 21+64 of the new Arm 5. The project also permanently removes 11-LF of 24" tile of the William Krause Drain installed in 1920 between Stations 16+38 and 16+49 (1920 Stationing).

#### **William Krause Arm 6**

Arm 6 is located on the east side of State Road 38/South White Avenue. Arm 6 Starts at Structure 305. The drain runs southeast from its terminus at Station 0+00 at Structure 305 (being Station 10+97 of Arm 5) parallel to State Road 28/South White Avenue as 215-LF of 15" HDPE Pipe to Structure 312 (a 48" diameter manhole) at Stations 2+15. The drain then continues southeast parallel to State Road 28/South White Avenue as 218-LF of 15" HDPE to Structure 313 (a 48" diameter manhole) at Station 4+33. This is a new arm and consists of all new construction.

#### **William Krause Arm 7**

Arm 7 is located on the west side of State Road 38/South White Avenue. Arm 7 will replace a portion of the existing Jacob Boyer Arm of the William Krause Drain and provide a higher capacity drainage outlet for the area of the William Krause watershed south of State Road 47/East 10<sup>th</sup> Street.

The stationing of Arm 7 is the opposite of the stationing of the existing Jacob Boyer Arm.

Arm 7 Starts at Structure 307. The drain runs south from its terminus at Station 0+00 at Structure 307 (being Station 13+50 of Arm 5) as 73-LF of 18" RCP Pipe to Structure 314 at Station 0+73 of the new Arm 7 (being Station 3+06 of the 1924 Stationing). The drain then runs southeast along the alignment of the Jacob Boyer Arm as 190-LF of 18" RCP to Structure 315 (a 48" diameter manhole) at Station 2+63 of the new Arm 7 (being Station 1+16 of the 1924 Stationing). The drain then runs south as 139-LF of 18" PVC SDR 25 plastic tile to Structure 316 (a 48" diameter manhole) at Station 4+02. A portion of this segment will be installed within 60-LF of 30" Steel Casing Pipe under State Road 47/East 10<sup>th</sup> Street. The drain then runs east as 45-LF of 18" RCP to Structure 317 (a 24"x24" box inlet) at Station 4+47 of the new Arm 7. Structure 317 will be installed at the current end of the Jacob Boyer Drain on the south side of State Road 47/East 10<sup>th</sup> Street negating the need for the 48-LF of 8" tile between Stations 0+00 and 0+48 (1924 Stationing) of the Jacob Boyer Arm under State Road 47/East 10<sup>th</sup> Street.

A new 24"x24" inlet (Structure 318) will be installed on the existing Jacob Boyer Arm at Station 4+61 (1924 Stationing) of the Jacob Boyer Arm.

## Changes to the William Krause Drain

The existing William Krause Drain upstream of Station 16+02 (1920 Stationing) will remain in place and discharge to Structure 321 at Station 21+64 of Arm 5.

The existing William Krause Drain downstream of Station 16+49 (1920 Stationing) shall remain in place. A new structure, identified as Structure 319 on the Phase 3 plans, will be installed on the existing William Krause Drain at Station 16+49 (1920 Stationing).

The final length of the William Krause Drain will not be able to be determined until all phases of this project are complete and the as-built drawings are submitted.

Changes to the William Krause Drain include:

1. Delete 8-LF of 36" RCP tile installed in 2018 as part of the Phase 1 project from the total length of the William Krause Main Drain.
2. Remove 47-LF of 24" Tile installed in 1920 between Stations 16+02 and 16+49 (1920 Stationing) of the existing Main Arm and vacate the William Krause Drain between these Stations.
3. Add a 48" Manhole on the William Krause Drain at Station 16+49 (1920 Stationing) of the existing Main Arm.
4. Add a 24"x24" inlet on the Jacob Boyer Arm at Station 4+61 (1924 Stationing) of the Jacob Boyer Arm.
5. Add the following as Arm 5. The total length of Arm 5 is 2,224-LF.
  - a. 1,089-LF of 36" HDPE
  - b. 128-LF of 36" RCP (8-LF installed with Phase 1 Project from Station 0+00 to 0+08 and 120-LF installed with Phase 3 between Structures 306 at Station 12+30 and 307 at Station 13+50)
  - c. 133-LF of 36" PVC SDR 25; a portion of which is installed through 89-LF of 48" Steel Casing Pipe
  - d. 814-LF of 24" RCP
  - e. 33-LF of 18" RCP
  - f. 27-LF of 15" RCP
  - g. 7, 60" diameter manholes
  - h. 6, 48" diameter manholes
  - i. 1, 24"x24" box inlet
  - j. 1, 24"x36" box inlet
6. Add the following as Arm 6. The total length of Arm 6 is 433-LF.
  - a. 433-LF of 15" HDPE
  - b. 2, 48" diameter manholes
7. Add the following as Arm 7. The total length of Arm 7 is 447-LF.
  - a. 308-LF of 18" RCP.

- b. 139-LF of 18" PVC SDR 25; a portion of which is installed through 60-LF of 30" Steel Casing Pipe.
- c. 3, 48" diameter manholes
- d. 1, 24"x24" box inlet.

**Changes to the Jacob Boyer Arm**

1. Remove 20-LF of 10" tile installed in 1924 between Stations 4+41 and 4+61 (1924 Stationing), 60-LF of 8" tile installed in 1924 between Stations 3+81 and 4+41 (1924 Stationing), and 190-LF of 8" tile installed in 1924 between Stations 1+16 and 3+06 (1924 Stationing) of the Jacob Boyer Arm and vacate the Jacob Boyer Drain between these Stations.
2. Grout 75-LF of 8" tile installed in 1924 between Stations 3+06 and 3+81 (1924 Stationing) and 48-LF of 8" tile between Stations 0+00 and 0+48 (1924 Stationing) of the Jacob Boyer Arm and vacate the Jacob Boyer Drain between these Stations.
3. The existing portion of the Jacob Boyer Arm between Stations 0+48 to 1+16 will remain in place and discharge to Structure 315 at Station 2+63 of Arm 7.
4. The final length of the Jacob Boyer Arm will be 599-LF between Stations 4+61 and 10+60 of the Jacob Boyer Arm and 68-LF between Stations 0+48 and 1+16 of the Jacob Boyer Arm for a total length of 667-LF.

**Easements**

Regulated drain easement has been secured across the following parcels:

1. Parcel # 02-01-32-04-03-004.000; Fidelity Lodge No 309 FSAM; recorded as Instrument No.: 2017053017.
2. Parcel # 02-05-05-00-00-013.000; Town of Sheridan; recorded as Instrument No.: 2018007414.

The Surveyor is of the opinion that these easements are adequate for future maintenance of Arms 5 and 7 of the William Krause Drain.

**Project Cost**

The estimated construction cost of the project is as follows:

<b>CONSTRUCTION COST ESTIMATE – Base Bid</b>					
Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Traffic Control	1	LS	\$ 2,600.00	\$ 2,600.00



2	Erosion Control/Seeding	1	LS	\$ 1,950.00	\$ 1,950.00
3	Trees	10	EA	\$ 975.00	\$ 9,750.00
4	Swale	260	LFT	\$ 7.80	\$ 2,028.00
5	Camera and Grout Fill Existing Tile [Between Jacob Boyer Stations 3+06 to 3+81 (1924 Stationing)]	75	LFT	\$ 18.75	\$ 1,406.25
6	Remove Existing Tile [Between Jacob Boyer Stations 3+81 to 4+61 (1924 Stationing)]	80	LFT	\$ 13.00	\$ 1,040.00
7	#53 Stone [Backfill for field access]	42	TON	\$ 32.50	\$ 1,365.00
8	1" HMA Surface on 4" HMA Intermediate on 12" #53 Stone [Parking lot]	147	LFT	\$ 58.50	\$ 8,599.50
9	18" RCP with Granular Backfill [Arm 7 between Structures 307 and 314]	73	LFT	\$ 143.00	\$ 10,439.00
10	36" RCP with Granular Backfill	74	LFT	\$ 218.40	\$ 16,161.60
11	36" RCP with Standard Backfill	46	LFT	\$ 169.00	\$ 7,774.00
12	36" HDPE with Granular Backfill	30	LFT	\$ 162.50	\$ 4,875.00
13	36" HDPE with Standard Backfill	1,059	LFT	\$ 117.00	\$ 123,903.00
14	48" Manhole with Casting [Structure 314 on Arm 7]	1	EA	\$ 5,850.00	\$ 5,850.00
15	60" Manhole with Casting [Structures 301-304, 307]	5	EA	\$ 7,800.00	\$ 39,000.00
16	24"x24" Inlet with Casting [Structure 318 on Jacob Boyer Arm at Station 4+61 (1924 Stationing)]	1	EA	\$ 3,250.00	\$ 3,250.00
17	HDPE to RCP Concrete Encasement	1	EA	\$ 936.00	\$ 936.00
Sub-total (Not including INDOT):					\$ 240,927.35
15% Contingency:					\$ 36,139.10
<b>Total Base Bid (Not including INDOT):</b>					<b>\$ 277,066.45</b>

<b>CONSTRUCTION COST ESTIMATE – Alternate Bid No. 1</b>					
Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Traffic Control	1	LS	\$ 2,600.00	\$ 2,600.00

2	Erosion Control / Seeding	1	LS	\$ 650.00	\$ 650.00
3	6" #53 stone [Driveway Repair]	88	LFT	\$ 32.50	\$ 2,860.00
4	1" HMA Surface on 4" HMA Intermediate on 12" #53 Stone [Roadway Repair]	532	LFT	\$ 52.00	\$ 27,664.00
5	15" RCP w/Granular Backfill	27	LFT	\$ 117.00	\$ 3,159.00
6	18" RCP w/Granular Backfill	33	LFT	\$ 143.00	\$ 4,719.00
7	24" RCP w/Granular Backfill	481	LFT	\$ 182.00	\$ 87,542.00
8	24" RCP w/Standard Backfill	333	LFT	\$ 149.50	\$ 49,783.50
9	48" Manhole with Casting [Structures 308-311, 319, 321]	6	EA	\$ 5,850.00	\$ 35,100.00
10	24" x 24" Inlet with Casting [Structure 322]	1	EA	\$ 3,250.00	\$ 3,250.00
11	24" x 36" Inlet with Casting [Structure 320]	1	EA	\$ 3,575.00	\$ 3,575.00
12	Concrete Cradle	1	EA	\$ 975.00	\$ 975.00
13	Sanitary Sewer Lateral Repair	3	EA	\$ 2,000.00	\$ 6,000.00
Sub-total:					\$ 227,877.50
15% Contingency:					\$ 34,181.63
<b>Total Alternate Bid No. 1:</b>					<b>\$ 262,059.13</b>

<b>CONSTRUCTION COST ESTIMATE – Alternate Bid No. 2</b>					
Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Erosion Control / Seeding	1	LS	\$ 2,600.00	\$ 2,600.00
2	Swale	50	LFT	\$ 7.80	\$ 390.00
3	15" HDPE w/Granular Backfill	433	LFT	\$ 97.50	\$ 42,217.50
4	48" Manhole with Casting [Structures 312, 313]	2	EA	\$ 5,850.00	\$ 11,700.00
Sub-total:					\$ 56,907.50
15% Contingency:					\$ 8,536.13
<b>Total Alternate Bid No. 2:</b>					<b>\$ 65,443.63</b>

<b>CONSTRUCTION COST ESTIMATE – Alternate Bid No. 3</b>					
Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Traffic Control	1	LS	\$ 1,300.00	\$ 1,300.00
2	Tree & Brush Removal	1	LS	\$ 6,500.00	\$ 6,500.00
3	Erosion Control / Seeding	1	LS	\$ 1,950.00	\$ 1,950.00
4	Remove Existing Tile [Between Jacob Boyer Stations 1+16 and 3+06 (1924 Stationing)]	190	LFT	\$ 13.00	\$ 2,470.00
5	18" RCP w/Standard Backfill	235	LFT	\$ 117.00	\$ 27,495.00
6	24" x 24" Inlet with Casting [Structure 317]	1	EA	\$ 3,250.00	\$ 3,250.00
Sub-total:					\$ 42,965.00
15% Contingency:					\$ 6,444.75
<b>Total Alternate Bid No. 3:</b>					<b>\$ 49,409.75</b>

<b>SR 38 INDOT-Arm 5</b>					
1	48" Casing pipe w/grout & bulkheads	90	LFT	\$ 812.50	\$ 73,125.00
2	36" PVC SDR 25	133	LFT	\$ 81.25	\$ 10,806.25
3	60" Manhole with Casting [Structures 305, 306]	2	EA	\$ 7,500.00	\$ 15,000.00
4	Dewatering	1	LS	\$ 12,500.00	\$ 12,500.00
Sub-Total:					\$ 111,431.25
15% Contingency:					\$ 16,714.69
<b>Total SR 38 INDOT – Arm 5:</b>					<b>\$ 128,145.94</b>

<b>SR 47 INDOT-Arm 7</b>					
1	30" Casing pipe w/grout & bulkheads	60	LFT	\$ 687.50	\$ 41,250.00
2	18" PVC SDR 25	139	LFT	\$ 50.00	\$ 6,950.00
3	48" Manhole with Casting [Structures 315, 316]	2	EA	\$ 5,625.00	\$ 11,250.00
4	Dewatering	1	LS	\$ 12,500.00	\$ 12,500.00

5	Camera and Grout Fill Existing Tile [Between Jacob Boyer Stations 0+00 to 0+48 (1924 Stationing)]	48	LFT	\$ 18.75	\$900.00
Sub-Total:					\$ 72,850.00
15% Contingency:					\$ 10,927.50
<b>Total SR 47 INDOT – Arm 7:</b>					<b>\$ 83,777.50</b>

The County has existing contracts for professional services associated with the overall project. These costs include the following:

1. A Contract with Banning Engineering for the Phase 3 Geotechnical And Utility Investigation within INDOT Right-of-Way in the amount of \$18,100.00 awarded on 8/28/17.
2. A Contract with Banning Engineering for the final survey of the Fox Property in the amount of \$7,750.00 awarded on 3/12/18.
3. A Contract with Banning Engineering for the Phase 2 Construction Staking and Construction Observation in the amount of \$27,625.00 awarded on February 12, 2018.
4. A Contract with Banning Engineering for the Phase 3 Construction Staking in the amount of \$7,500.00 awarded on 3/12/18.
5. A Contract with Banning Engineering for the Phase 3 Construction Observation in the amount of \$33,400 awarded on 3/12/18

The County incurred the following property/easement acquisition costs associated with the overall project:

1. Purchase of 1.208-acres on the Fox Property in fee: \$13,000.00. The 1.208-acres was included as part of the temporary construction easement for the Phase 2 project. The cost to obtain the temporary construction easement was \$4,274.16 per the Report of the Appraisers filed April 20, 2017. The cost to purchase this 1.208-acres in fee was appraised at \$16,645.02 based on information contained in the Report of the Appraisers filed April 20, 2017. The additional cost to be incurred is equal to \$12,370.86. The Agreement of Settlement dated March 7, 2018 established the value of this acquisition to be \$13,000.

The County will bid and administer the construction contract for the Phase 3 project.

The portion of the project that crosses State Road 38 and State Road 47 will be paid by INDOT as per IC-36-9-27-71. The work will occur between Structures 305 and 306 and between Structures 315 and 316. The cost for this work is estimated at \$230,023.44 and includes \$211,923.44 in construction and \$18,100 in geotechnical and utility location services.

The balance of the project, equal to \$743,253.96, will be paid by the Town of Sheridan through a Rural Development loan from the USDA. The loan will be repaid through the collection of Stormwater Fees by the Town of Sheridan. The mechanism for reimbursement from the USDA Grant for the cost of construction, property acquisition and for professional services is titled Stormwater Capacity Purchase Agreement that was approved on June 11, 2018 (See Hamilton County Drainage Board Minutes Book 18, pages 171, 172 and 181)

<b>TOTAL COST SUMMARY</b>	
Total Base Bid:	\$ 277,066.45
Total Alternate Bid No. 1:	\$ 262,059.13
Total Alternate Bid No. 2:	\$ 65,443.63
Total Alternate Bid No. 3:	\$ 49,409.75
Total Reimbursement from the INDOT:	\$ 230,023.44
Professional Services:	\$ 76,275.00
Acquisition Costs:	\$ 13,000.00
<b>Grand Total Phase 3</b>	<b>\$ 973,277.40</b>

A permit is required from the Indiana Department of Transportation to install the pipe under State Road 38 and State Road 47.

Parcels benefitted by this drain are currently assessed for the William Krause Drain. Therefore no changes in the current assessment shall be required.

I believe no damages will result to the landowners. Damages are set at zero (0).

I recommend that the Board set a hearing for this proposal for November 26, 2018.

Sincerely,

Kenton C. Ward, CFM  
Hamilton County Surveyor's Office

KCW/pll

DJK  
William Krause  
IN THE MATTER OF THE THORPE CREEK DRAIN  
HAMILTON COUNTY DRAINAGE BOARD

FILED  
DEC 15 2016  
OFFICE OF HAMILTON COUNTY SURVEYOR

Come now the Town Council of the Town of Sheridan, Indiana who petition the Hamilton County

Drainage Board as follows:

1. They are the duly elected Town Council of the Town of Sheridan, Indiana.
2. That in that capacity they are responsible for the drainage of public streets.
3. That they now desire that the William Krause regulated drain be reconstructed in Adams Township which Involves 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> Streets and various other streets within the Town and various areas surrounding these streets in the drainage shed.
4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in Section 32, Township 20 north, Range 3 east, Hamilton County, Indiana.
5. No other public lands or owners are located in the area which would affect improvement.
6. That the general route of the proposed drain is the construction of a regional detention facility between Stations 35+00 and 53+15 of the original William Krause Drain.
7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land to be benefited thereby.
8. That in the opinion of the Petitioner, the proposed improvement will benefit a public highway in the Town of Sheridan, Hamilton County, Indiana.
9. That the name of the attorney representing Petitioner in the drainage petition is Chou-il Lee, One Indiana Square, Suite 3500, Indianapolis, Indiana.
10. That Petitioners shall pay the cost of notice and all legal costs if the Petition is dismissed.
11. Petitioner shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Town Council, Sheridan,  
Hamilton County, Indiana

BY: David W. Kinkead  
David Kinkead, President

BY: [Signature]  
Member

BY: [Signature]  
Member

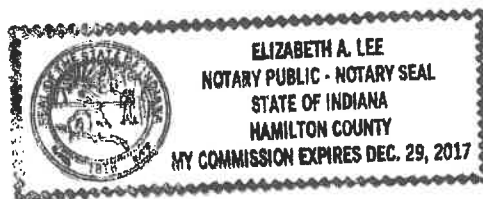
BY: [Signature]  
Member

BY: [Signature]  
Member

Attest:

Elizabeth A. Walden  
Elizabeth A. Walden/Clerk – Treasurer of Sheridan, Indiana

STATE OF INDIANA     )  
                                  ) SS:  
COUNTY OF HAMILTON)



Subscribed and sworn to before me, A Notary Public this 8 day of December 2016.

Elizabeth A. Lee  
Notary Public of Hamilton County

My Commission Expires:

12-29-2017

FINDINGS AND ORDER

CONCERNING THE PARTIAL VACATION OF THE

William Krause Drain, Krause Drain Reconstruction Phase 3

Station 4+41 to Station 4+61; Station 3+81 to Station 4+41;  
Station 1+16 to Station 3+06 of the Jacob Boyer Arm

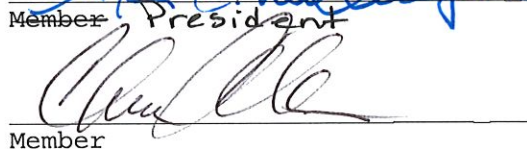
On this 26<sup>th</sup> day of November, 2018, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the William Krause Drain, Jacob Boyer Arm (Station 4+41 to Station 4+61; Station 3+81 to Station 4+41; and Station 1+16 to Station 3+06 of the Jacob Boyer Arm).

Evidence has been heard. Objections were presented and considered. The Board then adopted an order of action. The Board now finds that the costs of continued maintenance to the portion of the above drain exceed the benefits to the real estate benefited by the portion of the drain to be abandoned and issues this order vacating the above section of the William Krause Drain, Jacob Boyer Arm (Station 4+41 to Station 4+61; Station 3+81 to Station 4+41; and Station 1+16 to Station 3+06 of the Jacob Boyer Arm).

HAMILTON COUNTY DRAINAGE BOARD

  
\_\_\_\_\_  
President

  
\_\_\_\_\_  
Member

  
\_\_\_\_\_  
Member

Attest: 

STATE OF INDIANA     )  
                              ) ss:  
COUNTY OF HAMILTON )

BEFORE THE HAMILTON COUNTY  
DRAINAGE BOARD  
NOBLESVILLE, INDIANA

IN THE MATTER OF THE  
RECONSTRUCTION OF THE  
*William Krause Drain, Krause Drain Reconstruction Phase 3*

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the *William Krause Drain, Krause Drain Reconstruction Phase 3* came before the Hamilton County Drainage Board for hearing *on November 26, 2018*, 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.

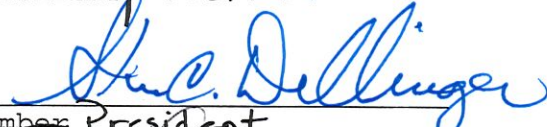
The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.


Wherefore, it is ORDERED, that the proposed Reconstruction of the *William Krause Drain, Krause Drain Reconstruction Phase 3* 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:

HAMILTON COUNTY DRAINAGE BOARD

  
\_\_\_\_\_  
PRESIDENT, Member

  
\_\_\_\_\_  
Member, President

  
\_\_\_\_\_  
Member

ATTEST:   
Executive Secretary



BEFORE THE HAMILTON COUNTY DRAINAGE BOARD  
IN THE MATTER OF

*William Krause Drain, Krause Drain Reconstruction Phase 3*

NOTICE

To Whom It May Concern and: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **William Krause Drain, Krause Drain Reconstruction Phase 3** on **November 26, 2018** 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

STATE OF INDIANA     )  
                          ) SS               BEFORE THE HAMILTON  
                          )  
COUNTY OF HAMILTON )               DRAINAGE BOARD

IN THE MATTER OF William Krause Drain, Krause Drain  
Reconstruction Phase 3

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **November 26, 2018** 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: Steven C. Dillinger  
PRESIDENT

ATTEST: Lynette Mosbaugh  
SECRETARY



K.C.W.

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*

To: Hamilton County Drainage Board

February 5, 2021

RE: William Krause Phase 3 Drain Reconstruction - Final Report

This is the inspector's final report on the William Krause Phase 3 Drain Reconstruction located in Section 32 of Township 20 North Range 3 East in Adams Township, Hamilton County, Indiana.

The Surveyor's Report for the William Krause Phase 3 Drain Reconstruction dated September 5, 2018 was presented to the Drainage Board and approved on November 26, 2018 (Hamilton County Drainage Board Minutes Book (Book) 18, Pages 285- 293). The reconstruction cost estimate was \$973,277.40 including professional services (Engineering, Surveying, Acquisition, Grant Preparation, Construction Staking, Construction Inspection, As-Built Documents). The contract was awarded to Millennium Construction for the base bid, Alternate Bid No. 1 and Alternate Bid #3 for the amount of \$735,885.00 on March 11, 2019 (Book 18 Pages 382-383).

Alternate Bid No. 2 which was not installed with this contract of the reconstruction will be required to be constructed by the Indiana Department of Transportation as part of their SR38 SR47 intersection improvement project. This will provide the outlet for the drainage of the project.

The deletion of the crossing under SR47 in Change Order #4 is the result of the contractor not being permitted to hydro-excavate under State Road 47 to investigate a possible fiberoptic line conflict. INDOT would not allow the contractor to excavate under the road. As part of the future proposed State Road 47 improvement through Sheridan, INDOT will be required to install this crossing which was deleted from the William Krause Phase 3 project.

The project was delayed from early February 2020 until July 1<sup>st</sup>, 2020. Initially the project was paused to allow for Vectren to replace a gas main at 9th Street & Bailey Street, during this time the COVID-19 pandemic began and Millennium Construction could not return to the project until July 2020.

There were 6 change orders on this project change order for additional work or field revisions on the project as allowed by IC 36-9-27-80.5. Those change orders are as follows:

**Change Order #1**

Change Order #1 was for additional 36" HDPE pipe that was required and or repairs to existing subsurface drains encountered during construction. Change Order #1 was approved by the Hamilton County Drainage Board (the Board) on 10/14/2019 (D.B. 19, Page 34)

**Change Order #1**

36" HDPE w/standard backfill 20 LF @ \$100.00 -----	\$2000.00
4" HDPE dual wall 80 LF @ \$18.00 -----	\$1,440.00
4" internal couplers 8 @ \$40.00 -----	\$320.00
8" HDPE dual wall 20 LF @ \$25.00 -----	\$500.00
8" internal couplers 2 @ \$60.00 -----	\$120.00
<u>Cost by Millennium Contractors of Change Order # 1 -----</u>	<u>\$4,380.00</u>

**Change Order #2**

Change Order #2 is for 8 feet additional 36" reinforced concrete pipe (RCP) that was required on the project due to adjustments made in the field. Change Order #2 was approved by the Hamilton County Drainage Board (the Board) on 11/12/2019 (D.B. 19, Page 62)

36" RCP w/standard backfill 8 LF @ \$200.00 -----	\$1,600.00
<u>Cost by Millennium Contractors of Change Order # 2 -----</u>	<u>\$1,600.00</u>

**Change Order #3**

Change Order #3 is for additional tree removal required on the north side of SR47 for the new placement of structure #316. Change Order #3 was approved by the Hamilton County Drainage Board (the Board) on 12/09/2019 (D.B. 19, Page 78)

Clearing 0.5 acre @ \$10,000.00 per acre -----	\$5,000.00
<u>Cost by Millennium Contractors of Change Order # 3 -----</u>	<u>\$5,000.00</u>

**Change Order #4**

Change Order #4 was for the deletion of the bore under SR47, deletion of structure #317, the new placement of structure #316 and the change of material from 18-inch SDR 35 to 18" RCP from structure #315 to structure #316. The 18" RCP utilized from structure #315 to structure #316 was the 45 feet of 18" RCP deleted from the original location of structure #316 to structure #317. There was no charge to relocate structure #316. The deletion of the crossing under SR47 is the result of INDOT issue with the crossing permit. Currently INDOT is working on plans for the improvement of SR47 through Town of Sheridan. As part of the SR47 improvement, INDOT will be required to install this crossing which was deleted from the William Krause Phase 3 project. Change Order #4 was approved by the Hamilton County Drainage Board (the Board) on 01-27/2020 (D.B. 19, Page 136)

**Change Order #4**

Delete STR#317 - 24" x 24" inlet w/casting -----	-\$4,000.00
Delete 30" casing pipe w/grout and bulkheads 60 LF @ \$850.00 -----	-\$51,000.00
Delete 18" SDR25 PVC 139 LF @ \$70.00 -----	-\$9,730.00
Delete dewatering for bore - 50% of Lump Sum -----	-\$2,500.00
<u>Delete Camera &amp; grout existing tile under SR47 -50% of Lump Sum -----</u>	<u>-\$720.00</u>
<u>Cost by Millennium Contractors of Change Order # 4 -----</u>	<u>-\$67,950.00</u>

**Change Order #5**

Change Order #5 is for the additional dewatering, hauling, time & materials required for removal of the existing unknown private 18” tile encountered on 9th Street in Sheridan. The 18” private tile was almost directly in the path of the new drain. The old 18” is believed to have been installed by the former milk canning plant in Sheridan. The tile was said to have run from the old canning plant site which is bounded by Park Street, SR47 and the Monon Railroad right-of-way to the old headwall at the headwaters of the Symonds ditch. This tile was previously encountered during the construction of Phase 1 of the William Krause drain. It was connected to Structure 103 of the William Krause drain. The old tile was hauled off site to Beaver Materials rather than being placed on the county property where the clean fill is being placed. The downstream end of old tile was plugged with concrete where it left the new construction trench near Structure #310. Change Order #5 was approved by the Hamilton County Drainage Board (the Board) on 02/10/2020 (D.B. 19, Pages 142-143)

Change Order #5

Labor & Equipment -----	\$7,480.00
Materials (stone, concrete) -----	\$2,956.43
Hauling -----	\$415.63
<u>Cost by Millennium Contractors of Change Order # 5 -----</u>	<u>\$10,852.06</u>

**Change Order #6**

Change Order #6 was for the additional asphalt required due to the additional width of the excavation trenches. The additional trench widths were needed due to re-alignment of the tile and because of poor soils. Additional #53 stone backfill was required due to the additional trench width. Change Order #6 was approved by the Hamilton County Drainage Board (the Board) on 10/12/2020 (D.B. 19, Page 359)

Change Order #6

#53 Stone 30 Tons @ \$50.00 per ton -----	\$1,500.00
<u>Time &amp; Materials for pavement repair -----</u>	<u>\$35,413.42</u>
Cost by Millennium Contractors of Change Order # 6 -----	\$36,913.42

Contractor’s Bid -----	\$735,885.00
Change Order #1 Total -----	\$4,380.00
Change Order #2 Total -----	\$1600.00
Change Order #3 Total -----	\$5,000.00
Change Order #4 Total -----	(-\$67,950.00)
Change Order #5 Total -----	\$10,852.06
<u>Change Order #6 Total -----</u>	<u>\$36,913.42</u>
Total Reconstruction Cost -----	\$726,680.48

Engineer’s Estimate -----	\$865,902.40
<u>Millennium Contractors Total Reconstruction Cost -----</u>	<u>\$726,680.48</u>
Difference -----	\$139,221.92

Partial Pay Requests for this project submitted and paid as allowed in IC 36-9-27-81 are as follows:

	Date Requested	Date Paid	Billed	Retained	Paid
Pay Request #1	07/31/19	08/27/19	\$71,825.00	\$10,773.75	\$61,051.25
Pay Request #2	08/31/19	09/24/19	\$99,600.00	\$14,940.00	\$84,660.00
Pay Request #3	09/16/19	10/29/19	\$56,725.00	\$8,508.75	\$48,216.25
Pay Request #4	10/01/19	10/29/19	\$85,730.00	\$12,859.50	\$72,870.50

Pay Request #5	10/31/19	10/26/19	\$91,795.00	\$13,769.25	\$78,025.75
Pay Request #6	11/27/19	12/20/19	\$85,860.00	\$12,879.00	\$72,981.00
Pay Request #7	12/16/19	01/14/20	\$17,470.00	\$2,620.50	\$14,849.50
Pay Request #8	01/31/20	02/25/20	\$76,117.06	\$11,417.56	\$64,699.50
Pay Request #9	10/05/20	10/27/20	\$136,558.42	\$20,483.76	\$116,074.66
Pay Request #10	11/09/20	12/15/20	\$5,000.00	\$750.00	\$4,250.00
Pay Request #11	01/08/21	01/26/21	\$109,002.07	\$0.00	\$109,002.07
Millennium Construction Totals:					\$726,680.48

Statement of All Incurred Expenses Paid signed by the contractor as required in IC 36-9-27-82(b) was received on November 10, 2020 notifying the Board that all expenses incurred for labor and materials have been paid in full

The engineering design, plans, construction staking and as-built (record) drawings were prepared by Banning Engineering. The final revision of the as-built drawings were reviewed by the office on January 7, 2021 and indicated that the work was complete and acceptable. The as-built drawings are attached.

William Krause Phase 3 Drain Reconstruction consisted 24 feet of 15" RCP, 335 feet of 18" RCP, 809 feet of 24" RCP, 129 feet of 36" RCP, 1086 feet of 36" HDPE, 117 feet of 36" SDR25, 16 manholes and 3 inlets.

The third phase of the William Krause reconstruction removed existing drain tile. The main William Krause was removed from Station 15+97 to Station 16+42. The Jacob Boyer Arm to the William Krause Drain was removed from Station 1+20 to Station 4+80. Therefore, 45 feet of existing 24" tile and 360 feet of 8" tile was removed with this project.

As part of the overall William Krause project, the portion of the William Krause main tile was removed from Station 46+36 to Station 53+15 and should be vacated. The main tile now outlets into the retention pond at Station 46+36 and was removed from this point to the old headwall at Station 53+15 at the start of the open ditch. This work was done with the William Krause Phase 2 project.

As of December 15, 2020, I hereby attest to and agree that the reconstruction was installed according to the specified plans and change orders and have approved such work under IC 36-9-27-82(a). All inspections have been completed. Final inspection was on December 8, 2020.

Phase 3 is the final phase of the overall William Krause Reconstruction.

The total construction cost for the William Krause Phase 3 was \$726,680.48. The soft costs associated with the construction of Phase 3 was a total of \$104,087.50 for total cost of \$830,767.98 for the project.

Soft costs for Phase 3:

Geotech	\$18,100.00
Fox property final survey	\$7,750.00
Fox -additional 1.2 acre purchase	\$13,000.00
Staking & Inspection Phase 2	\$27,550.00
<u>Staking &amp; Inspection Phase 3</u>	<u>\$37,687.50</u>
Phase 3 soft cost totals	\$104,087.50

The totals for all three phases are as follows:

The Drainage Board received \$2,205,265 from the Town of Sheridan on 6/13/2018 as payment for the Town's purchase of flow capacity in and into the William Krause Drain. The funds were received as part of the Stormwater Capacity Purchase Agreement entered on the 11th day of June 2018 between the Department of Stormwater Management of the Town of Sheridan and the Hamilton County Drainage Board. All costs associated with the reconstruction of the William Krause Phases 1, 2 & 3 was deducted from these funds. Phase 1 had \$544,829.07 of expenses associated with it, however \$92,632.50 will be added back as settlement for INDOT's assessment is paid back from 2019 to 2023. It is unknown how much interest will be paid. Phase 2 had \$1,055,254.08 of expenses. Phase 3 had \$830,767.98 of expenses and \$146,945.00 will be added back from INDOT's assessment 2020-2024. It is unknown how much interest will be paid. The total cost for the three phases of the William Krause reconstruction project was \$2,430,851.13. The total funding for the project was \$2,444,842.50. This total includes \$151,028.13 which was paid from the William Krause maintenance fund and \$3,625.00 paid from the George Symonds maintenance fund before the funding package was received. These maintenance funds should be reimbursed at this time. This leaves a total of unused funds of \$13,991.37 which will be transferred to the William Krause maintenance fund.

I recommend the Board approve the reconstruction as complete and acceptable.

Respectfully,

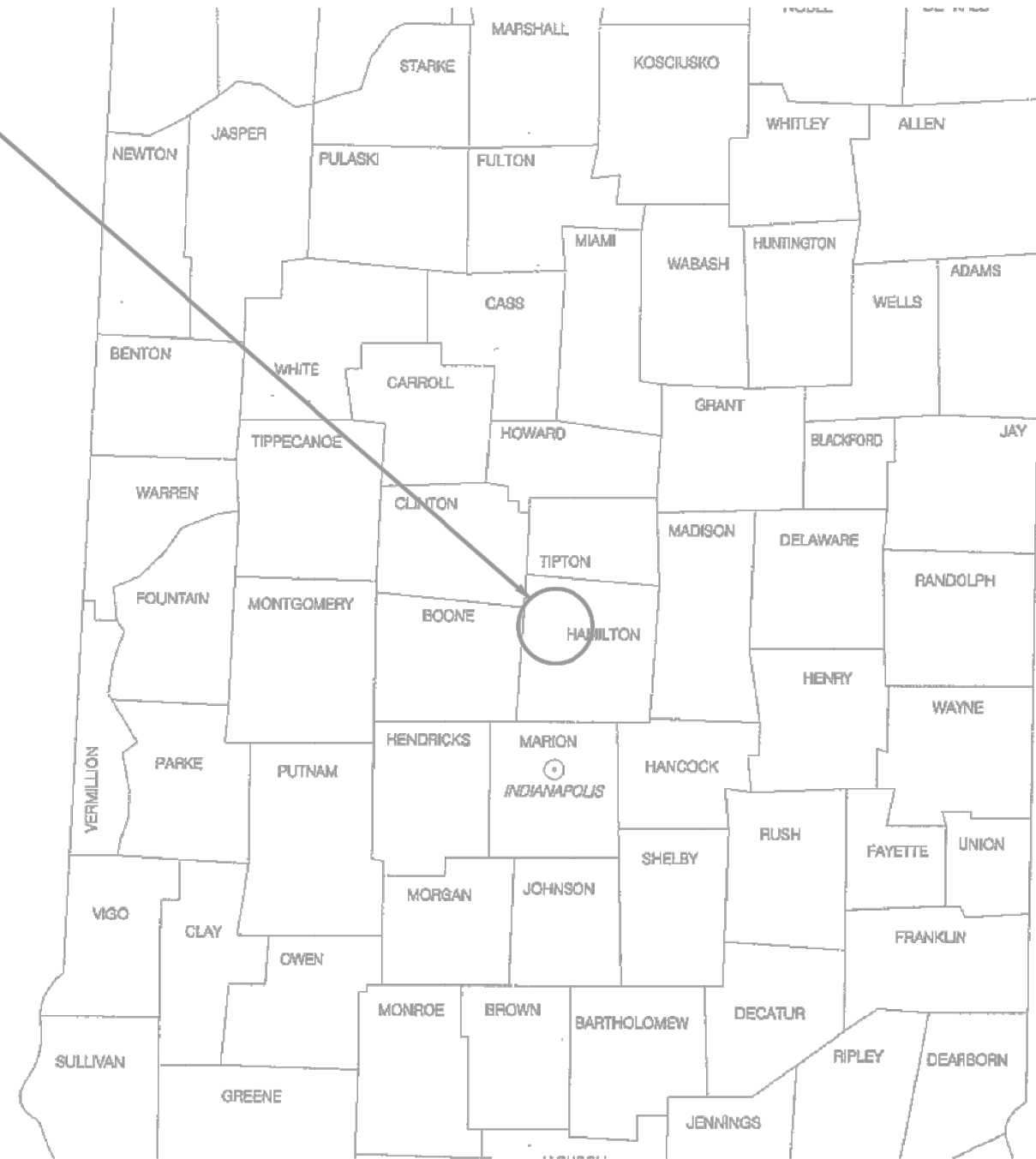


Andrew Conover  
Inspector

# KRAUSE DRAIN RECONSTRUCTION PHASE 3

SEC. 32-T20N-R3W & SEC. 05-T19N-R3E, HAMILTON COUNTY, ADAMS TOWNSHIP  
ZONED: C1 & C2

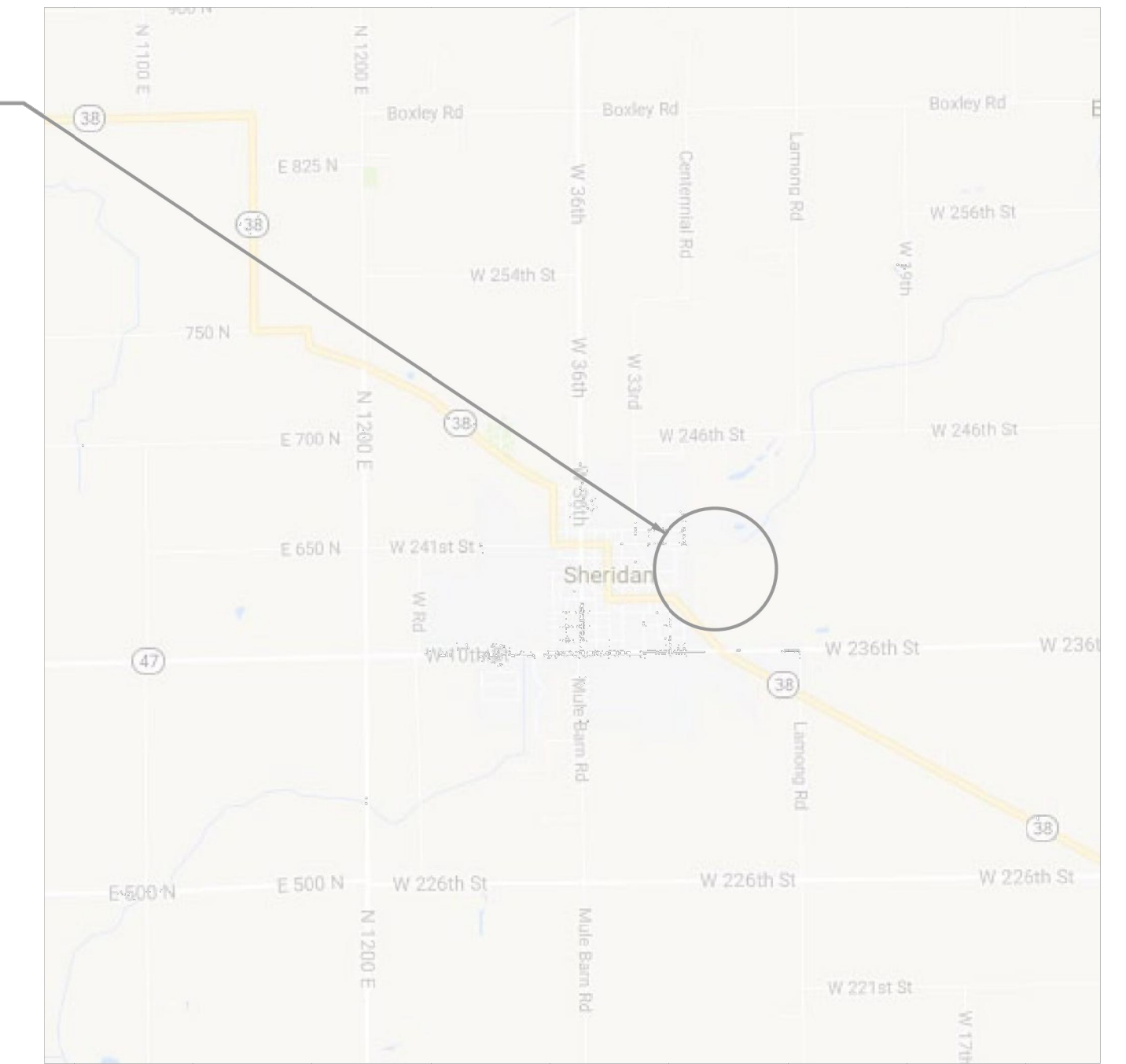
PROJECT LOCATION



VICINITY MAP  
NO SCALE

PLANS PREPARED FOR:  
HAMILTON COUNTY DRAINAGE BOARD  
1 HAMILTON COUNTY SQUARE, SUITE 188  
NOBLESVILLE, INDIANA 46060  
PHONE: 317-776-9628  
CONTACT: KENTON WARD

PROJECT LOCATION



LOCATION MAP  
NO SCALE



SITE MAP  
SCALE: 1" = 200'

### OPERATING AUTHORITIES

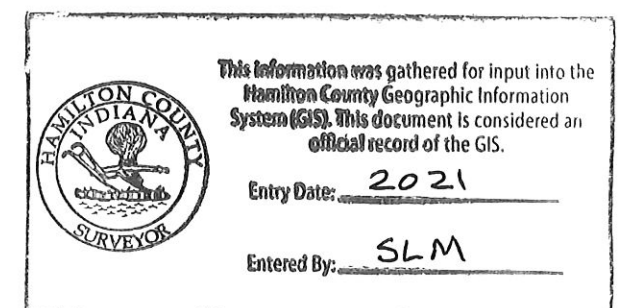
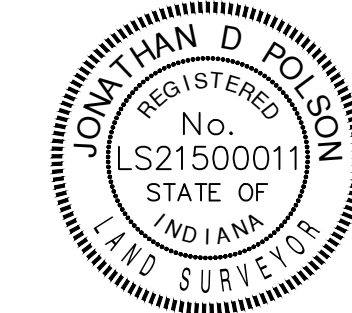
<b>GAS</b> VECTREN 16000 ALLISONVILLE ROAD NOBLESVILLE, IN 46061 317-776-5534	<b>ELECTRIC</b> DUKE ENERGY 390 N. MAIN STREET MARTINSVILLE, IN 46151 765-349-4012	<b>WATER</b> TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293
<b>SANITARY</b> TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293	<b>STORM</b> TOWN OF SHERIDAN WATER & SEWER UTILITIES 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-5293	<b>TELEPHONE</b> AT&T 240 N. MERIDIAN STREET INDIANAPOLIS, IN 46204 317-265-3050
<b>SCHOOL DISTRICT</b> SHERIDAN COMMUNITY SCHOOLS 24795 N. HINESLEY ROAD SHERIDAN, IN 46069 317-758-4172	<b>FIRE DEPARTMENT</b> SHERIDAN FIRE DEPARTMENT 506 S. MAIN STREET SHERIDAN, IN 46069 317-758-4561	

PLANS PREPARED BY:  
**BANNING ENGINEERING**  
853 COLUMBIA ROAD, SUITE #101  
PLAINFIELD, IN 46168  
BUS: (317) 707-3700, FAX: (317) 707-3800  
E-MAIL: [Banning@BanningEngineering.com](mailto:Banning@BanningEngineering.com)  
WEB: [www.BanningEngineering.com](http://www.BanningEngineering.com)  
CONTACT: JOSEPH L. MILLER

### 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 November 24, 2020. The record information pertains to the location and elevation of the sewer structures, the size and type of the sewer 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. The record locations of the subsurface drain laterals were located as marked by those responsible for construction of said sewer and are subject to the accuracy of the markings provided.

*Jonathan D. Polson* 1/6/21  
Jonathan D. Polson  
Registered Land Surveyor - LS21500011  
State of Indiana



SHEET INDEX	
SHEET NO	DESCRIPTION
C100	TITLE SHEET
C101	OVERALL PLAN
C300-C302	STORM SEWER PLAN AND PROFILE SHEETS
C600-C602	MISCELLANEOUS DETAILS
C603	SOIL BORINGS
L100	LANDSCAPE PLAN

REVISIONS		
NUMBER	DESCRIPTION	DATE
1	ALTERNATIVE	10-05-18

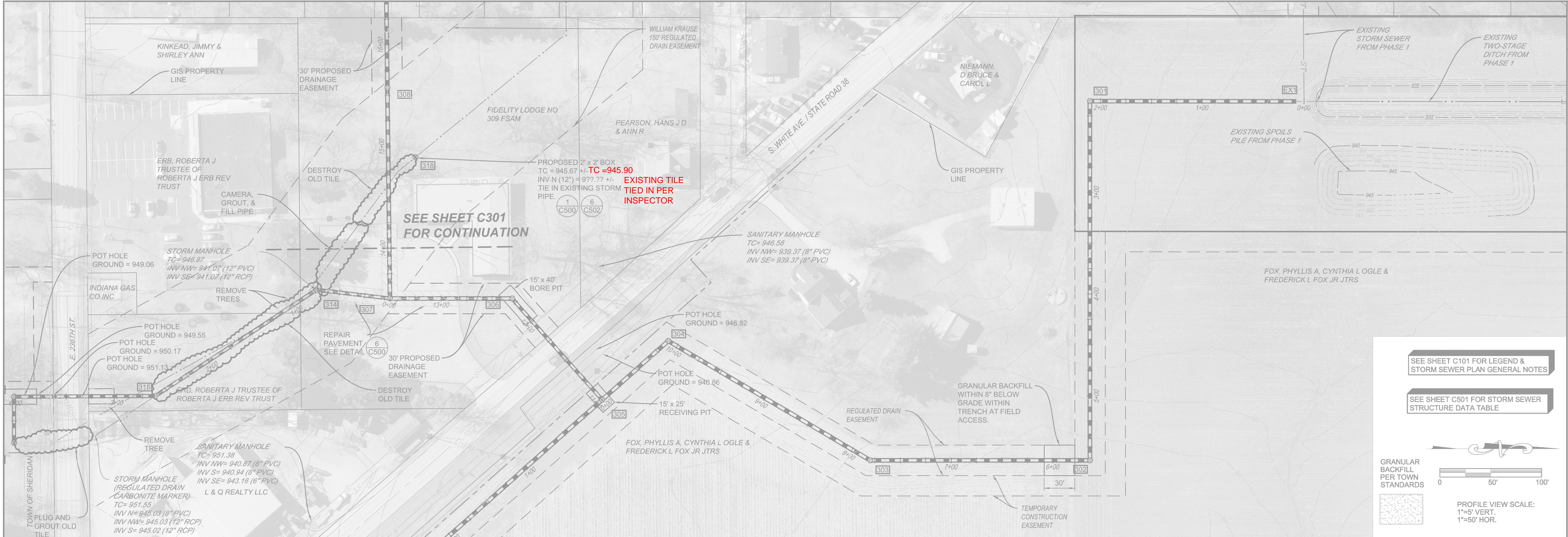


**RECORD DRAWINGS**

Date: 09-12-18  
Project No: 11194KRUS  
Sheet No: C100

KRAUSE DRAIN RECONSTRUCTION PHASE 3 / PROJECT NO. 11194KRUS





Designated:	JLM	ALTERNATIVE	Date:	10-05-18
Drawn:	TMF			
Checked:				
Scale:				
AsShown:				
Date:				09-12-18

SEE SHEET C101 FOR LEGEND & STORM SEWER PLAN GENERAL NOTES

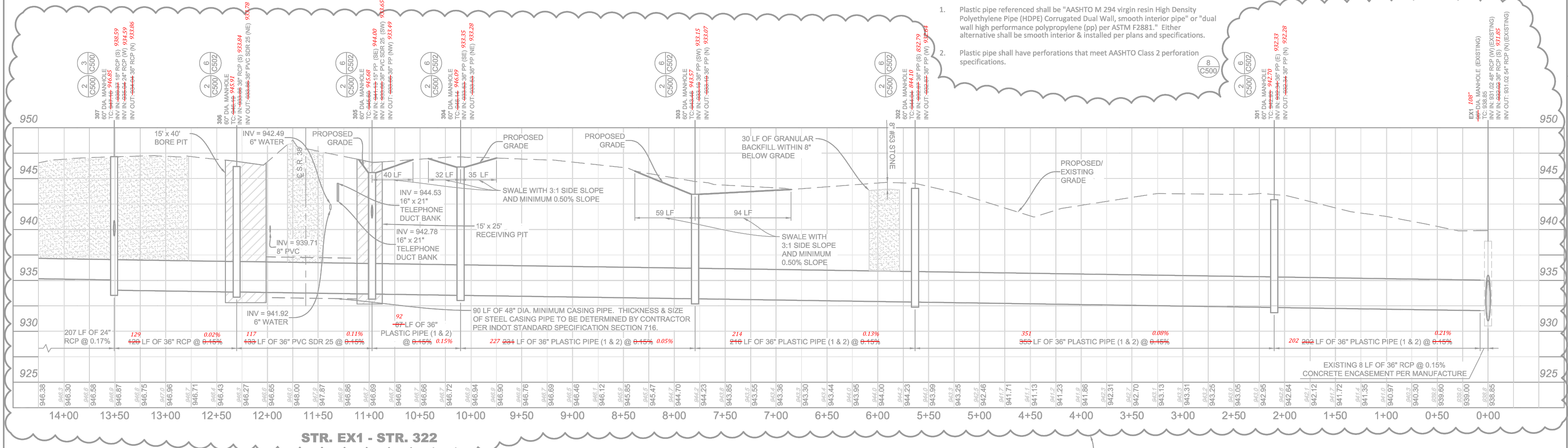
SEE SHEET C501 FOR STORM SEWER STRUCTURE DATA TABLE

GRANULAR BACKFILL PER TOWN STANDARDS

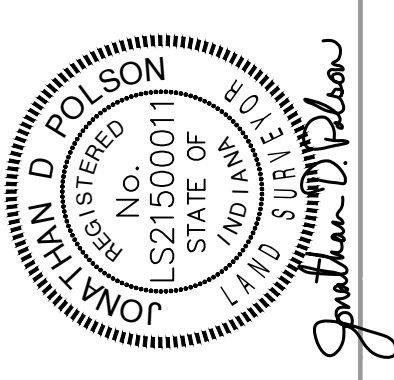
PROFILE VIEW SCALE:  
1"=5' VERT.  
1"=50' HOR.

**PLASTIC PIPE SPECIFICATIONS:**

- Plastic pipe referenced shall be "AASHTO M 294 virgin resin High Density Polyethylene Pipe (HDPE) Corrugated Dual Wall, smooth interior pipe" or "dual wall high performance polypropylene (pp) per ASTM F2881." Either alternative shall be smooth interior & installed per plans and specifications.
- Plastic pipe shall have perforations that meet AASHTO Class 2 perforation specifications.

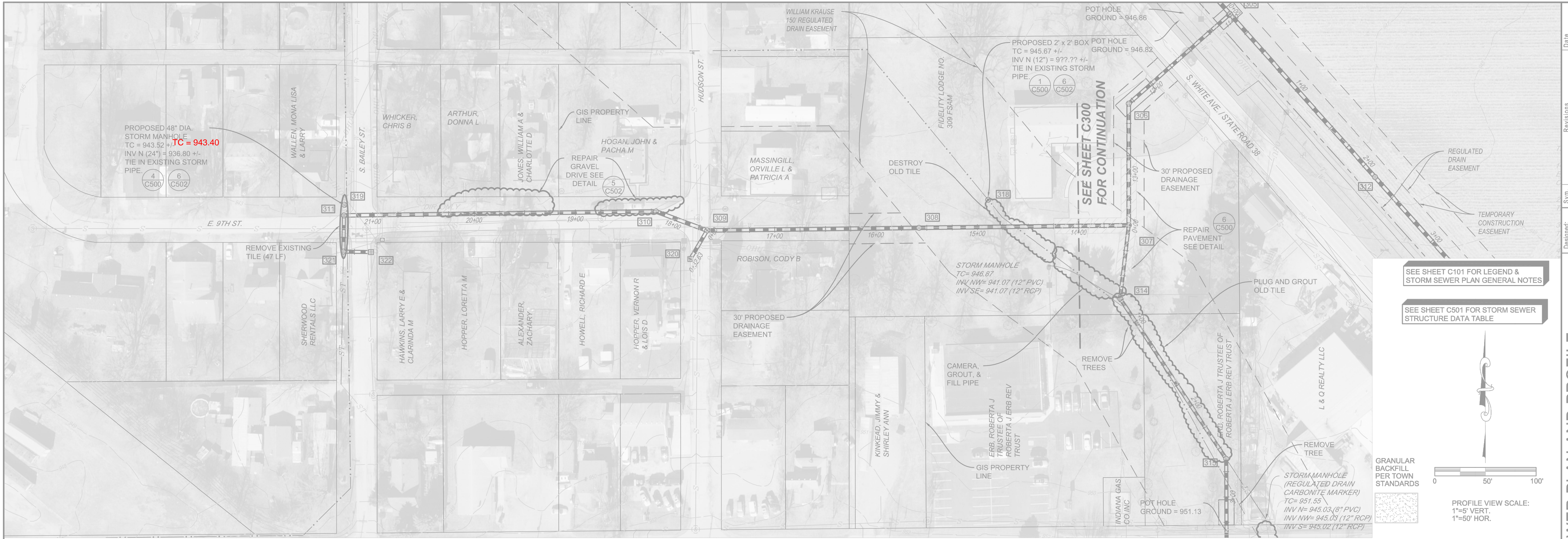


STORM SEWER PLAN AND PROFILE  
 KRAUSE DRAIN RECONSTRUCTION PHASE 3  
 ADAMS TOWNSHIP  
 SHERIDAN, INDIANA



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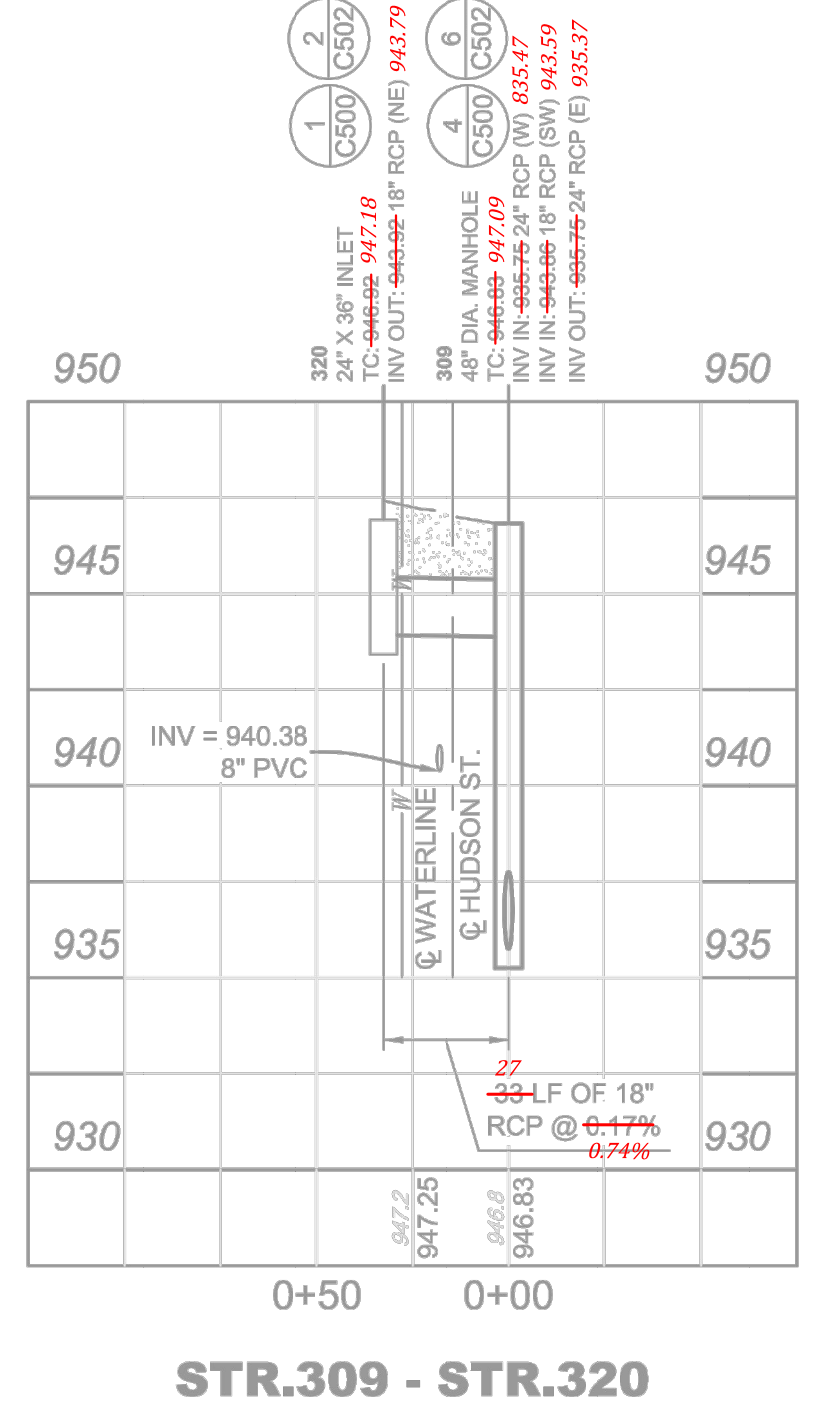
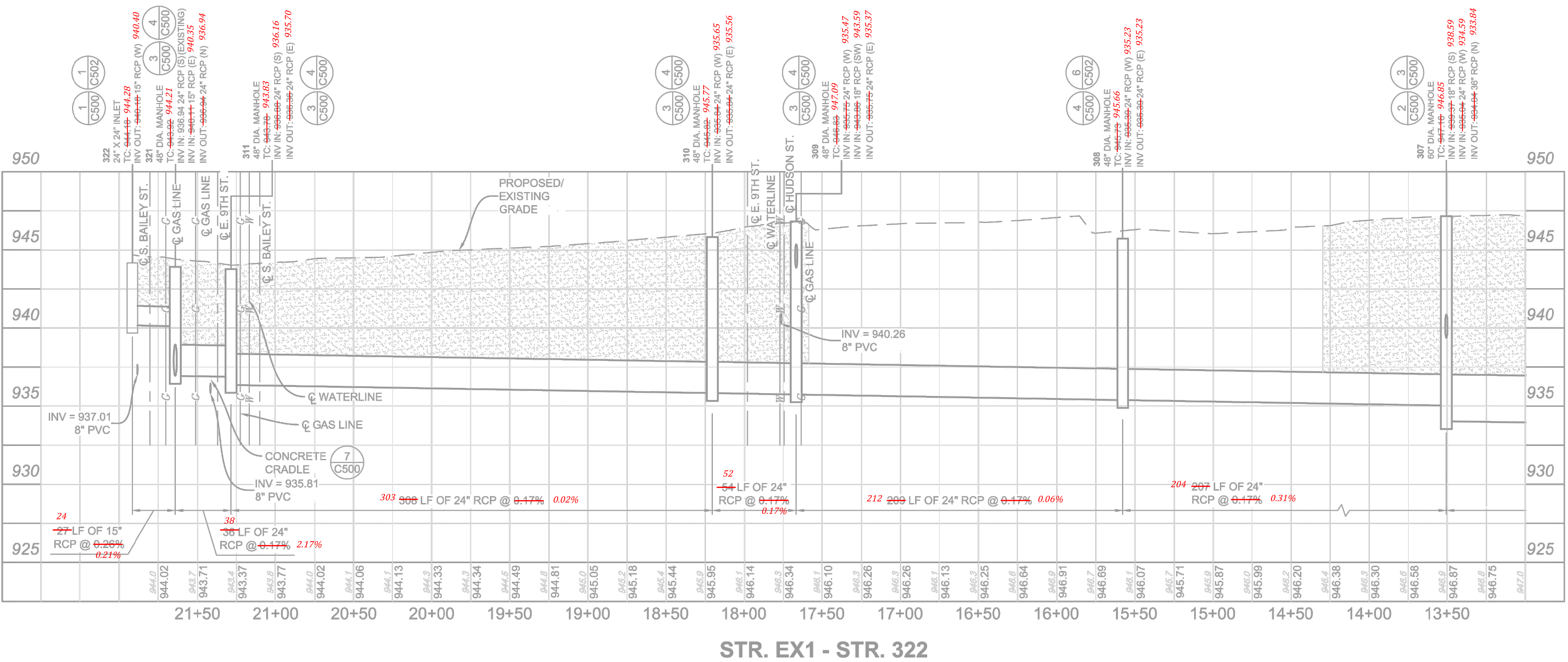
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Revisions:	
Designated:	JLM
Drawn:	TMF
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Date:	09-12-18

STORM SEWER PLAN AND PROFILE  
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SEE SHEET C101 FOR LEGEND & STORM SEWER PLAN GENERAL NOTES

SEE SHEET C501 FOR STORM SEWER STRUCTURE DATA TABLE

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

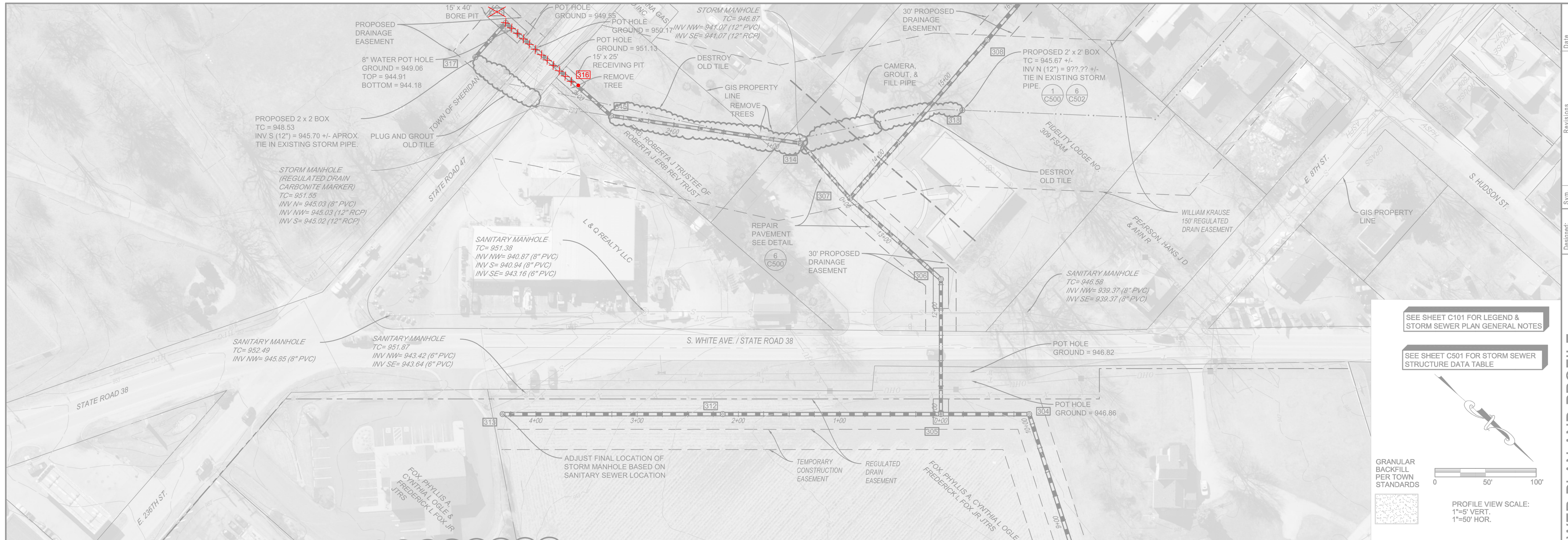


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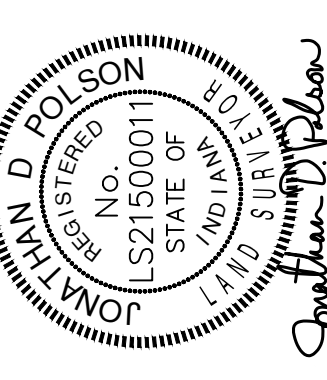
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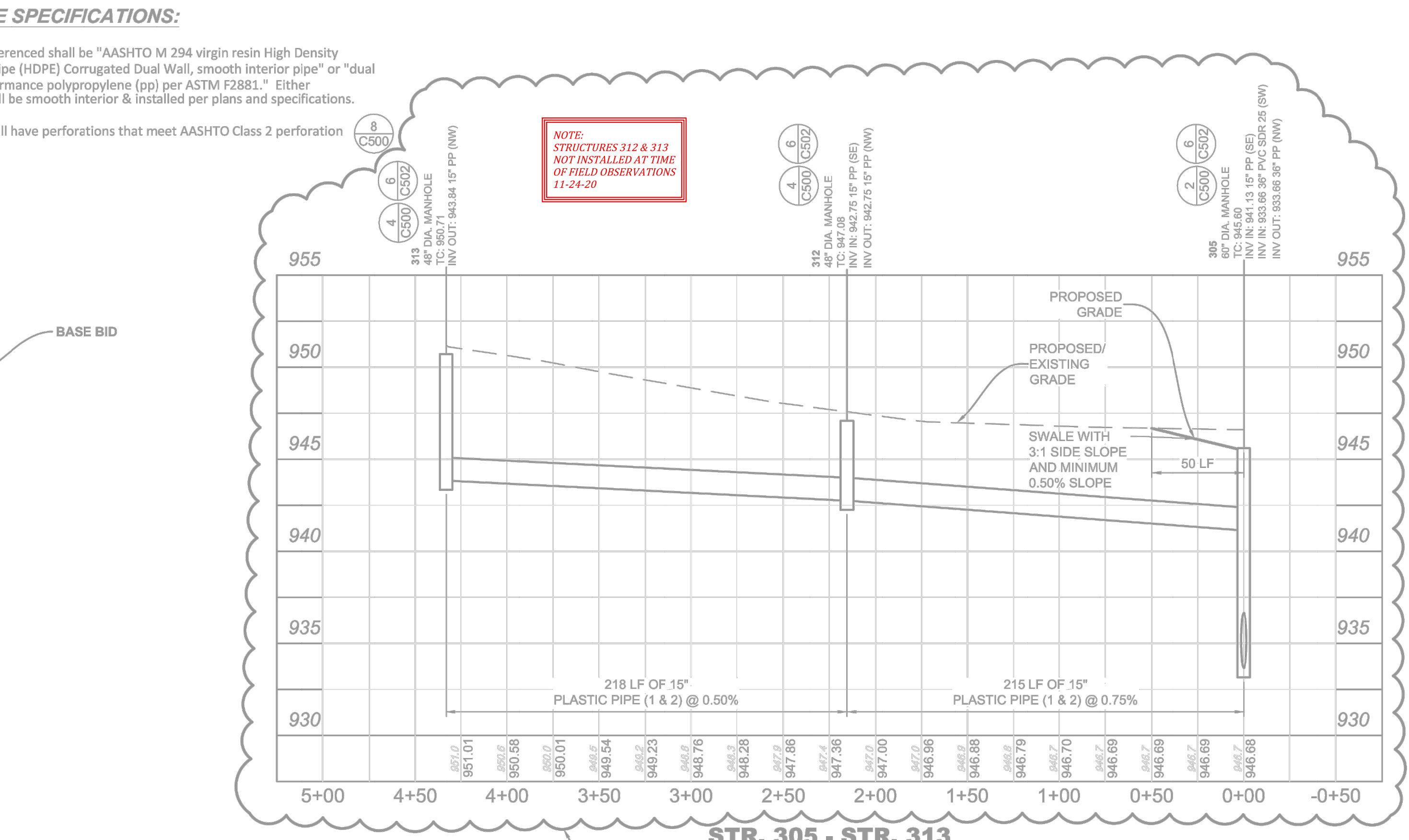
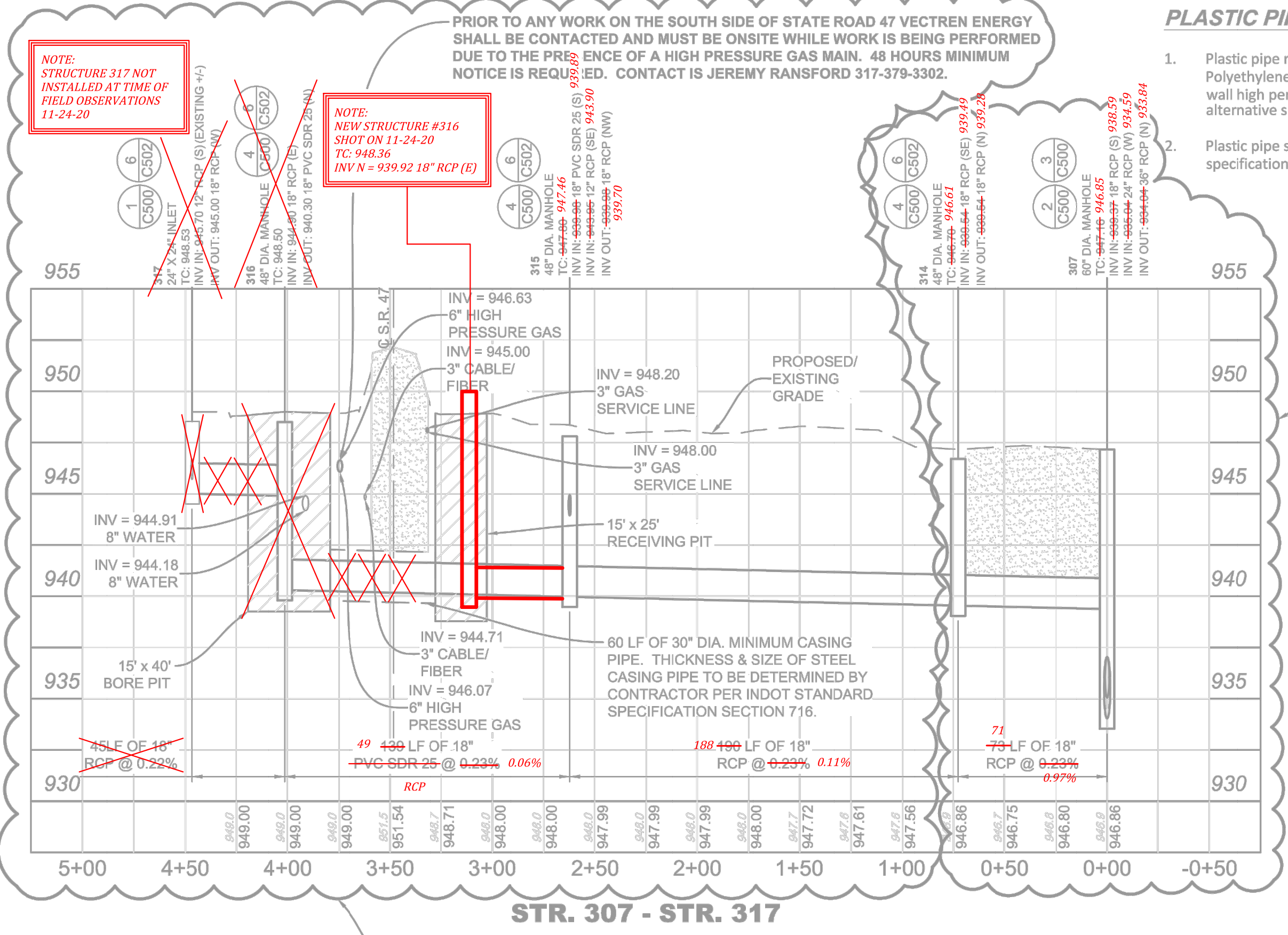
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