

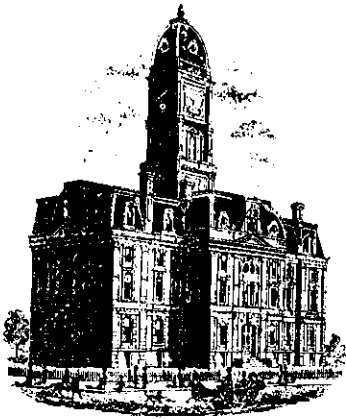
**Drain:** BRIDLEWOOD DRAIN **Drain #:** 66  
**Improvement/Arm:** BRIDLEWOOD - SECTION 4  
**Operator:** JPH **Date:** 10-30-03  
**Drain Classification:** Urban/Rural **Year Installed:** 1992

### GIS Drain Input Checklist

- Digitize & Attribute Tile Drains N/A
- Digitize & Attribute Storm Drains JRA 10-30
- Digitize & Attribute SSD JRA 10-30
- Digitize & Attribute Open Ditch JPH 11-21
- Sum drain lengths & Validate JRA 10-30
- Enter Improvements into Posse JRA 10-30
- Enter Drain Age into Posse JPH 11-21
- Sum drain length for Watershed in Posse JPH 11-21
- Stamp Plans JRA 10-30
- Pull Source Documents for Scanning JRA 10-30

9650  
 - 9200  
 4450





SURVEYOR'S OFFICE

# Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

Noblesville, Indiana 46060-2230

October 16, 1992

To: Hamilton County Drainage Board

Re: Bridlewood Drain Sec. 4 Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Bridlewood Drain, Section 4 Arm. I have reviewed the submittals and petition and have found each to be in proper form.

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

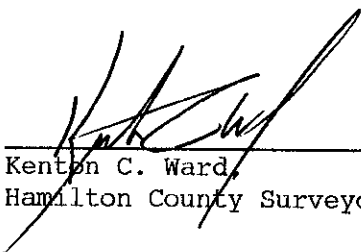
Open Ditch	598'	15" RCP	595'
6" SSD	7054'	18" RCP	410'
12" RCP	327'	21" RCP	218'

The total length of the drain will be 9202 feet.

Included in the above as open ditch is the portion of Cool Creek which borders this section of the subdivision. Also all of the 6" SSD was included including that under curbs. The length may change with the "as-builts".

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I recommend a maintenance assessment of \$50.00 per lot, \$5.00 per acres for roadways, with a \$50.00 minimum. With this assessment the total annual assessment for the drain this section will be 2,245.00 \$2,245.00.

I recommend a hearing be set for December 1992. If approved at hearing, I recommend the Board approve the attached non-enforcement for this section of Bridlewood. I further recommend the Board classify this as an urban drain.

  
 \_\_\_\_\_  
 Kenton C. Ward,  
 Hamilton County Surveyor

KCW/jh



2. The Petitioner shall retain the Engineer throughout the construction phase. At completion of the project the Petitioners Engineer shall certify that the drainage system which is to be maintained as a regulated drain has been constructed as per construction plans.
3. The Petitioner shall request all changes from the approved plan prior to implementation of the change. All changes shall be documented and given to the Surveyor to be placed in the Drain file.
4. The Petitioner shall instruct his Engineer to provide a reproducible print on a 24" x 36" mylar of the final design of the Drainage System. This shall be submitted prior to the release of the Performance Bond.
5. The Petitioner shall comply with the Erosion Control Plan as specified on the construction plans. Failure to comply with the Erosion Control Plan shall be determined by the Board as being an obstruction to the drainage system. The Surveyor shall immediately install or repair the needed measures as per IC 36-9-27-46.

The Petitioner further requests that the Drain be classified as an Urban Drain.

*R. N. Thompson*

\_\_\_\_\_  
SIGNED

R.N. Thompson

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
SIGNED

\_\_\_\_\_  
PRINTED NAME

RECORDED OWNER (S) OF LAND INVOLVED

DATE 9-30, 1992

**BRIDLEWOOD Sec. IV**Engineers Estimate for:  
Drainage

<b>Item No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Price</b>	<b>Amount</b>
1	Earthwork	44989	C.Y.	\$1.70	\$76,481.30
2	6" Sub Surface Drains	1390	L.F.	\$4.00	\$5,560.00
3	SSD Access	44	Ea.	\$25.00	\$1,100.00
4	SSD Riser	13	Ea.	\$75.00	\$975.00
5	12"RCP	1249	L.F.	\$17.22	\$21,507.78
6	15"RCP	595	L.F.	\$19.81	\$11,786.95
7	18"RCP	410	L.F.	\$22.82	\$9,356.20
8	21"RCP	218	L.F.	\$24.50	\$5,341.00
9	2' x 2' Inlet w/Casting	9	Ea.	\$450.00	\$4,050.00
10	3' x 3' Inlet w/Casting	11	Ea.	\$500.00	\$5,500.00
11	4' dia Manhole w/Cast.	2	Ea.	\$500.00	\$1,000.00
12	Straw Bales	198	Ea.	\$1.25	\$247.50
13	Grass and Mulch	13630	S.Y.	\$0.10	\$1,363.00
14	Erosion Control Blanket	2880	L.F.	\$1.25	\$3,600.00
<b>TOTAL</b>					<b>\$147,868.73</b>

**Irrevocable Letter of Credit**

INB National Bank  
One Indiana Square  
Indianapolis, Indiana 46266



**INB**

Date: September 25, 1992 cw  
Credit Number Advising Bank No.

SWIFT Address: INBI US 44	Telex Number 205615	Phone: 266-6153	INB NO. <b>SB 035900</b>
Advising Bank	Applicant Land Innovators 234 S. Franklin Road Indianapolis Indiana 46219		
Beneficiary Hamilton County Commissioners Hamilton County Drainage Board and the Westfield Town Board of Trustees One Hamilton County Square Noblesville, Indiana 46060	Amount USD 147,870.00		
	Expiration Date September 25, 1993		

We hereby issue in your favor this irrevocable letter of credit which is available against the following documents:

Drafts drawn at— sight

on INB National Bank, Indianapolis, Indiana

bearing the clause; "Drawn under irrevocable letter of credit No. **SB 035900**  
Other documents:

Beneficiary's signed certificate stating that drainage improvements in Bridlewood Section 4 have been completed in accordance to plans set forth under plat docket approval # \_\_\_\_\_, by and between Applicant and Beneficiary.

Special Conditions:

We hereby engage with  You  drawers and/or bona fide holders that drafts drawn and negotiated in conformity with the terms of this credit will be duly honored on presentation and that drafts accepted within the terms of this credit will be duly honored at maturity.

The amount of each draft must be endorsed on the reverse of this credit by the negotiating bank.

The Advising Bank is requested to notify the beneficiary without adding their confirmation.

Very truly yours,  
*Jurda Whisman*

Advising Bank's Notification

Place/date/name/signature of advising bank.

Except so far as otherwise expressly stated, this documentary credit is subject to the "Uniform Customs and Practice for Documentary Credits" (1983 Revision) International Chamber of Commerce (Publication No. 400) 320-6320 Revised 4/89

S/M OF USE 10/16/93

**CERTIFICATE OF COMPLETION AND COMPLIANCE**

TO: HAMILTON COUNTY SURVEYOR

RE: **Bridlewood Section 4**

I hereby certify that:

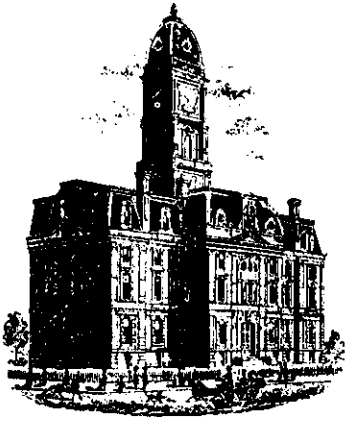
- 1.) I am a Registered Land Surveyor in the State of Indiana,
- 2.) I am familiar with the plans and specifications for the above reference subdivision.
- 3.) I have personally observed and supervised the completion of the Drainage Facilities for the above referenced subdivision and
- 4.) To the best of my knowledge, information and belief, the Drainage Facilities within the subdivision has been installed and completed in conformity with the plans and specifications.

Signature: Arthur L. Kaser Date: October 17, 1995  
 Type or Printed Name: Arthur L. Kaser  
 Business Address: 234 S. Franklin Road  
Indianapolis, Indiana 46219  
 Telephone: (317) 353-6161

INDIANA REGISTRATION NUMBER  
S0529







SURVEYOR'S OFFICE

# Hamilton County

*Kenton C. Ward, Surveyor*

Phone (317) 776-8495

Fax (317) 776-9628

Suite 146

One Hamilton County Square

Noblesville, Indiana 46060-2230

July 23, 1996

TO: Hamilton County Drainage Board

RE: Bridlewood Drain-Section 4

Attached are As-Builts, Certificate of Completion and Compliance, and other information for Bridlewood Drain-Section 4. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain which will alter the plans submitted with my report for this drain dated October 16, 1992. The changes are as followed:

STR 79 to 80	12"	RCP	lengthened	from	44'	to	47 feet	✓
STR 73 to 72	21"	RCP	shortened	from	58'	to	53 feet	✓
STR 72 to 71	18"	RCP	shortened	from	26'	to	24 feet	✓
STR 71 to 70	18"	RCP	lengthened	from	160'	to	161 feet	
STR 67 to 68	12"	RCP	lengthened	from	155'	to	226 feet	✓
STR 74 to 75	15"	RCP	lengthened	from	36'	to	38 feet	
STR 76 to 77	15"	RCP	lengthened	from	115'	to	117 feet	
STR 78 to 79	18"	RCP	shortened	from	32'	to	31 feet	
STR 79 to 47	18"	RCP	lengthened	from	192'	to	193 feet	

The six (6") inch SSD across the rear of Lots 45 through 48 and Lots 37 to 39 were replaced with twelve (12") inch RCP. The following structures and lengths were added accordingly:

STR 85 to 86	12"	RCP	at	200 feet	in length
STR 86 to 69	12"	RCP	at	235 feet	in length
STR 84 to 81	12"	RCP	at	89 feet	in length
STR 81 to 74	12"	RCP	at	216 feet	in length
STR 83 to 82	12"	RCP	at	24 feet	in length
STR 82 to 81	12"	RCP	at	160 feet	in length

The correct total of six (6") inch SSD is 6,504 feet. Structure 73 to 48 consists of twenty-four (24") inch RCP at 162 feet in length. This structure was upgraded from a twenty-one (21") inch RCP at 160 feet in length.


Page #2

The length of the drain due to the changes described above is now 9,650 feet.

The non-enforcement request was approved by the Board at its meeting on December 21, 1992.

The Bond of Letter of Credit from Indiana National Bank, number SB 035900 dated September 25, 1992, in the amount of \$147,870.00 has expired.

I recommend the Board approve the drains construction as complete and acceptable.



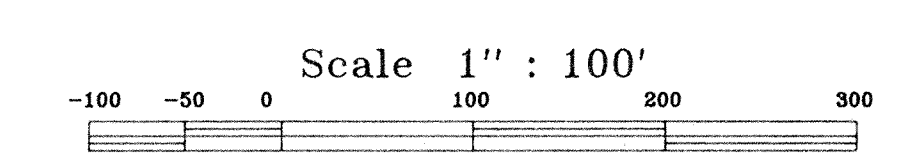
---

Kenton C. Ward  
Hamilton County Surveyor  
KCW/no

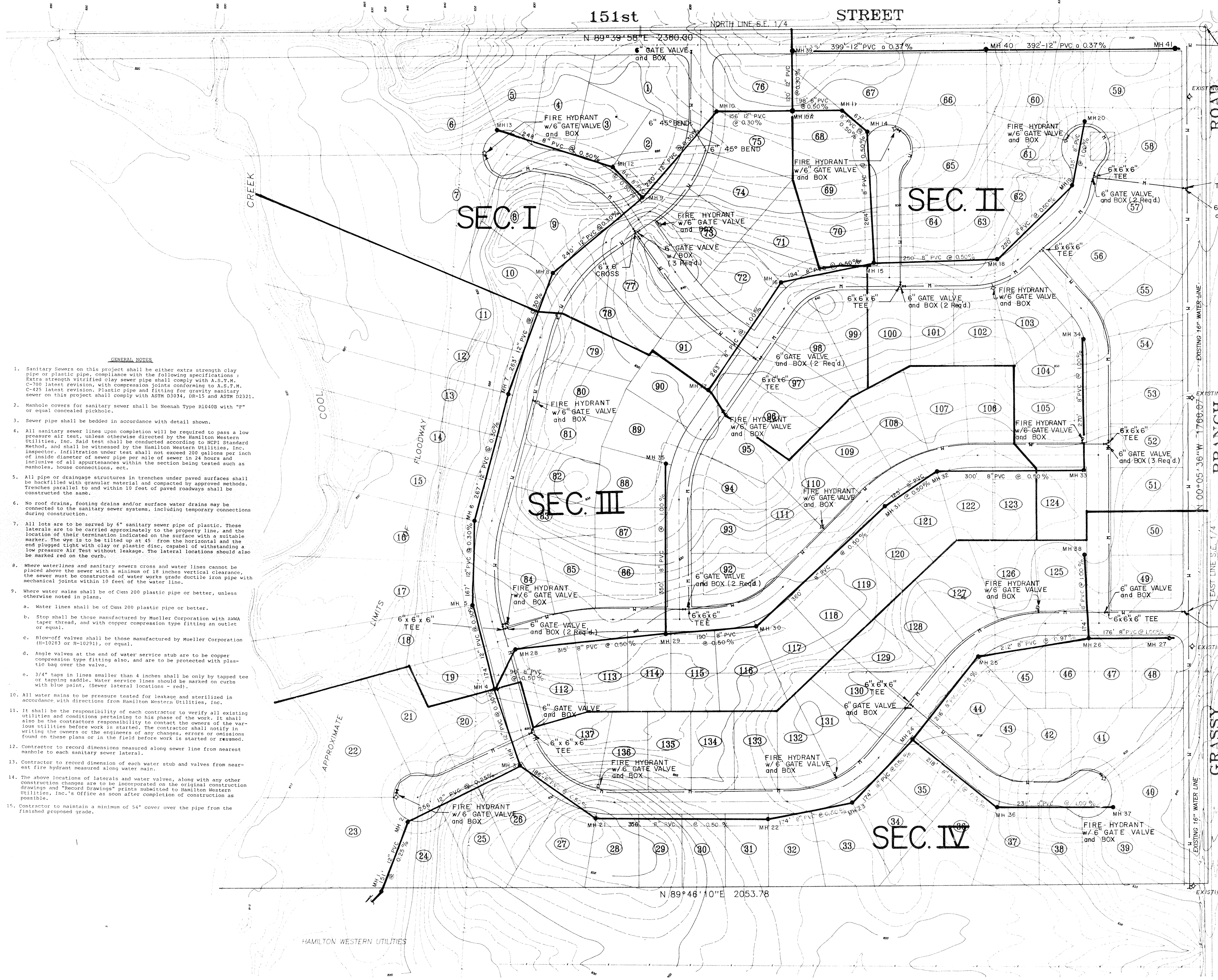
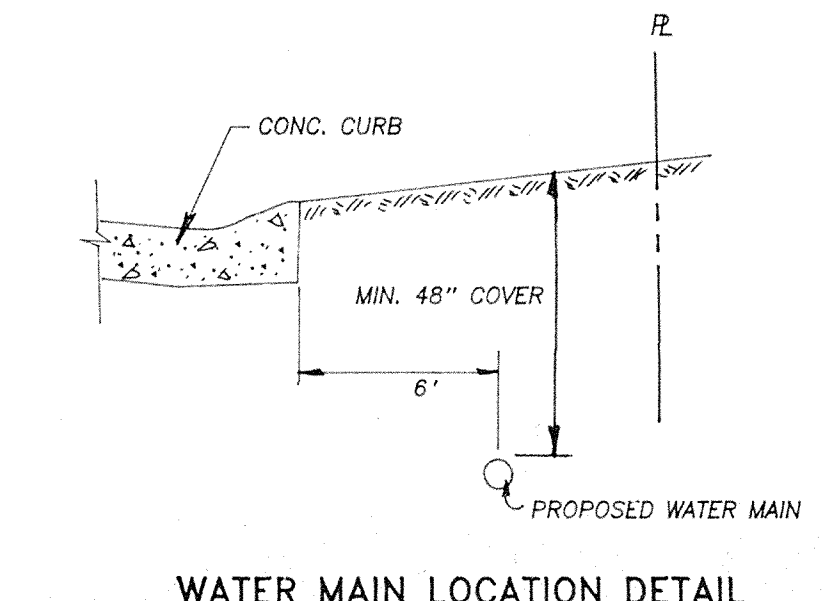




151st STREET NORTH LINE S.E. 1/4



- LEGEND**
- W — WATER MAIN (SIZE AS INDICATED)
  - ⊕ FIRE HYDRANT
  - +— M.J. GATE VALVE
  - +— M.J. TEE
  - +— MISC. WATER MAIN FITTING
  - S — SANITARY SEWER w/ MANHOLE
- NOTE:** ALL WATER MAINS TO BE 6" CLASS 200 PLASTIC PIPE OR EQUAL.



- GENERAL NOTES**
1. Sanitary Sewers on this project shall be either extra strength clay pipe or plastic pipe, compliance with the following specifications: Extra strength vitrified clay sewer pipe shall comply with A.S.T.M. C-700 latest revision, with compression joints conforming to A.S.T.M. C-425 latest revision. Plastic pipe and fitting for gravity sanitary sewer on this project shall comply with ASTM D3034, DR-15 and ASTM D2321.
  2. Manhole covers for sanitary sewer shall be Neenah Type R1040B with "P" or equal concealed pickhole.
  3. Sewer pipe shall be bedded in accordance with detail shown.
  4. All sanitary sewer lines upon completion will be required to pass a low pressure air test, unless otherwise directed by the Hamilton Western Utilities, Inc. Said test shall be conducted according to NCP1 Standard Method, and shall be witnessed by the Hamilton Western Utilities, Inc. inspector. Infiltration under test shall not exceed 200 gallons per inch of inside diameter of sewer pipe per mile of sewer in 24 hours and inclusive of all appurtenances within the section being tested such as manholes, house connections, etc.
  5. All pipe or drainage structures in trenches under paved surfaces shall be backfilled with granular material and compacted by approved methods. Trenches parallel to and within 10 feet of paved roadways shall be constructed the same.
  6. No roof drains, footing drains and/or surface water drains may be connected to the sanitary sewer systems, including temporary connections during construction.
  7. All lots are to be served by 6" sanitary sewer pipe of plastic. These laterals are to be carried approximately to the property line, and the location of their termination indicated on the surface with a suitable marker. The pipe is to be tilted up at 45° from the horizontal and the end plugged tight with clay or plastic disc, capable of withstanding a low pressure Air Test without leakage. The lateral locations should also be marked red on the curb.
  8. Where waterlines and sanitary sewers cross and water lines cannot be placed above the sewer with a minimum of 18 inches vertical clearance, the sewer must be constructed of water works grade ductile iron pipe with mechanical joints within 10 feet of the water line.
  9. Where water mains shall be of Class 200 plastic pipe or better, unless otherwise noted in plans.
    - a. Water lines shall be of Class 200 plastic pipe or better.
    - b. Stop shall be those manufactured by Mueller Corporation with ANM taper thread, and with copper compression type fitting an outlet of equal.
    - c. Blow-off valves shall be those manufactured by Mueller Corporation (H-10263 or H-10271), or equal.
    - d. Angle valves at the end of water service stub are to be copper compression type fitting also, and are to be protected with plastic bag over the valve.
    - e. 3/4" taps in lines smaller than 4 inches shall be only by tapped tee or tapping saddle. Water service lines should be marked on curbs with blue paint. (Sewer lateral locations - red).
  10. All water mains to be pressure tested for leakage and sterilized in accordance with directions from Hamilton Western Utilities, Inc.
  11. It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his phase of the work. It shall also be the contractor's responsibility to contact the owners of the various utilities before work is started. The contractor shall notify in writing the owners of any changes, errors or omissions found on these plans or in the field before work is started or resumed.
  12. Contractor to record dimensions measured along sewer line from nearest manhole to each sanitary sewer lateral.
  13. Contractor to record dimension of each water stub and valves from nearest fire hydrant measured along water main.
  14. The above locations of laterals and water valves, along with any other construction changes are to be incorporated on the original construction drawings and "Record Drawings" prints submitted to Hamilton Western Utilities, Inc.'s Office as soon after completion of construction as possible.
  15. Contractor to maintain a minimum of 54" cover over the pipe from the finished proposed grade.

N.E. COR. S.E. 1/4, SEC. 18-18-4E.

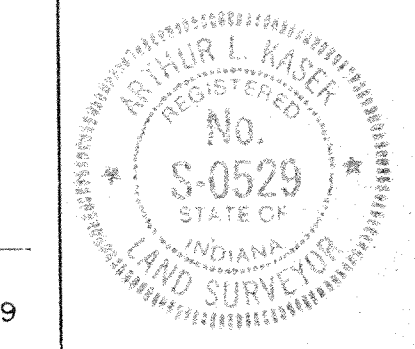
N.E. COR. S. 1/2, S.E. 1/4, SEC. 18-18-4E.

Water distribution system reviewed and certified by:

Kent F. Schuch RE. No. 17226

Sanitary sewer plans prepared by:

Arthur L. Kaser  
Registered Land Surveyor No. S-0529



DATES AND REVISIONS		TITLE			
		MASTER SEWER & WATER PLAN			
		BRIDLEWOOD			
DESIGN BY	DRAWN BY	CHECKED	APPROVED		
1-5-89 ADP/ML	ML	ML			
8-8-88	MOVED WATER LINE IN COU-DE-SACS				

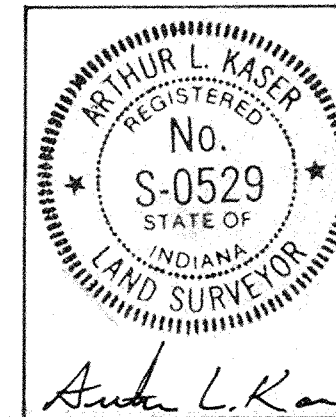
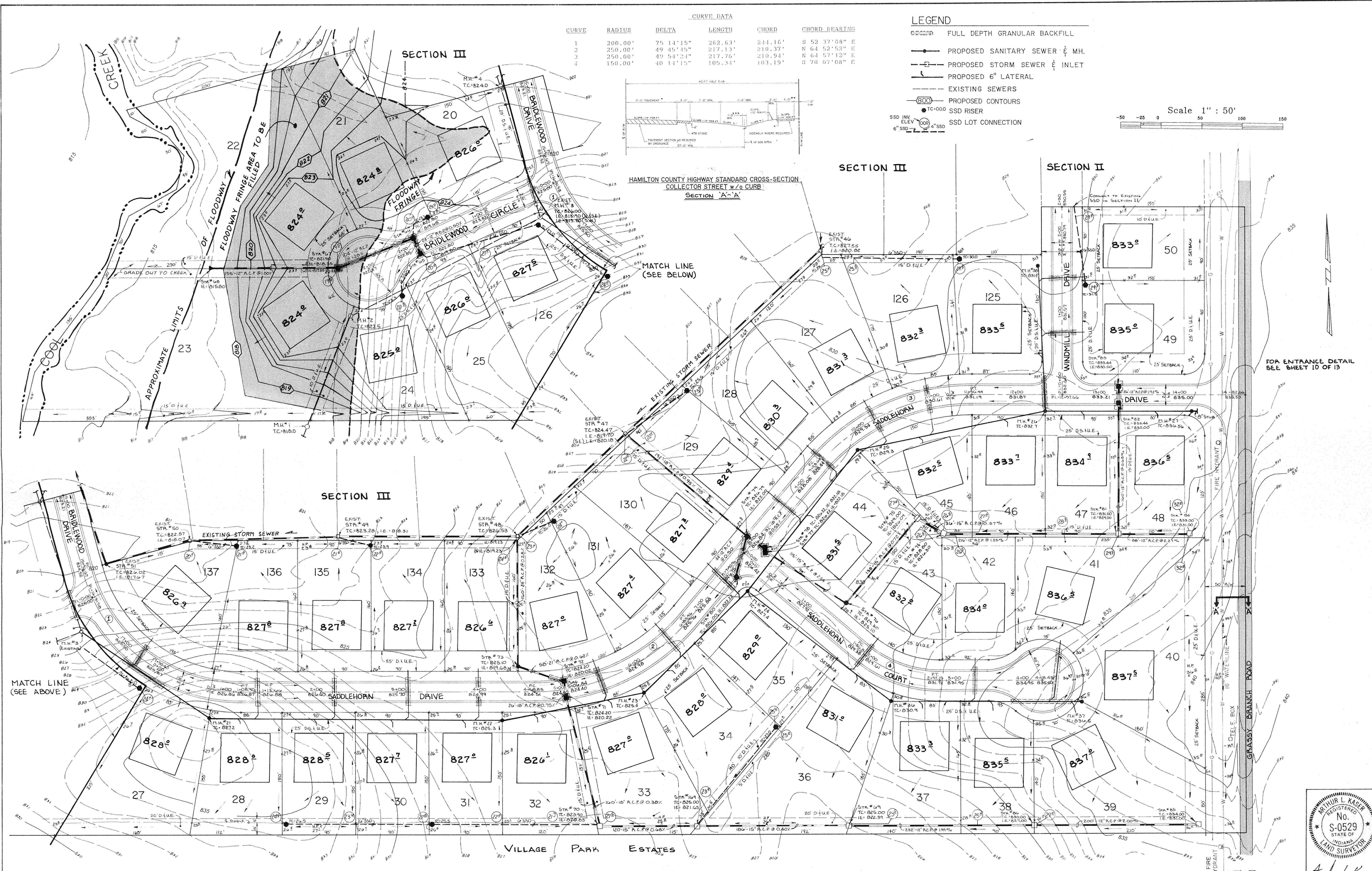
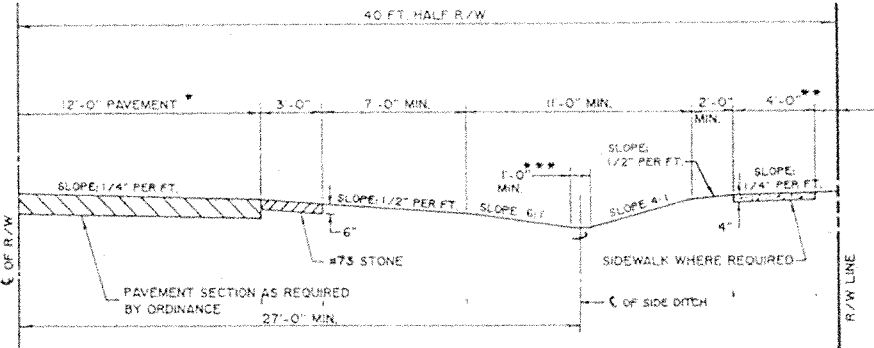
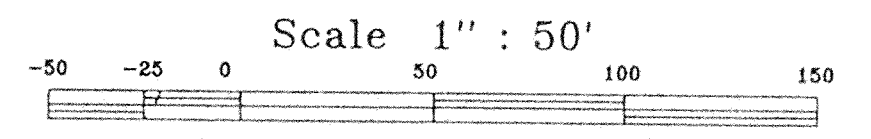
**Evergreen**  
Planners, Inc.  
OFFICE OF HAMILTON COUNTY SURVEYOR

234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
317/353-6161

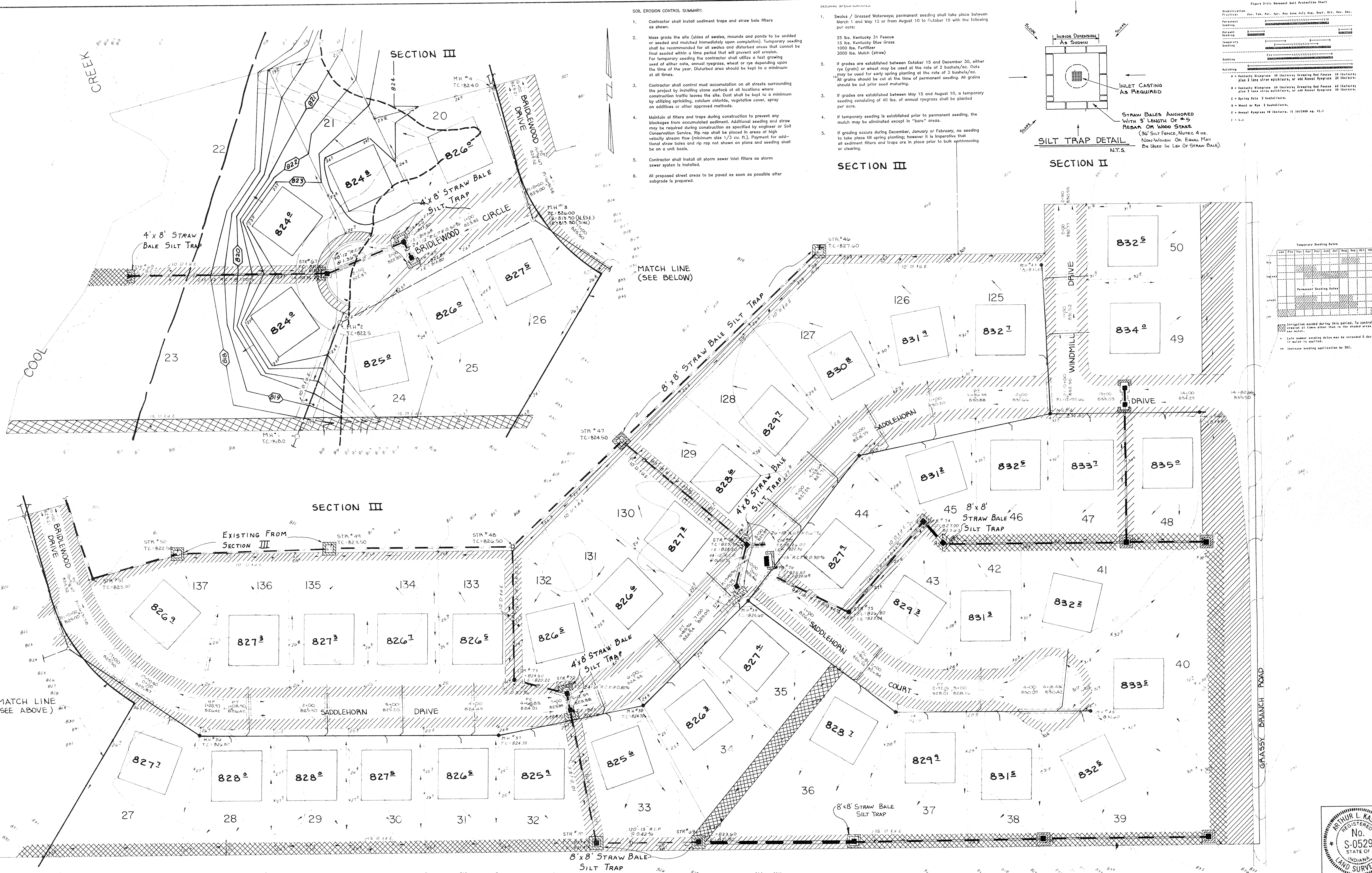
DATE	Dec. 1988
JOB NO.	87-84
SCALE	1" = 100'
SHEET NO.	3 of 13

CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
1	200.00'	75 14'15"	262.63'	214.16'	S 52 37'08" E
2	250.00'	49 45'15"	217.13'	210.37'	N 64 52'52" E
3	250.00'	49 51'33"	217.76'	210.94'	N 64 57'12" E
4	150.00'	40 14'15"	105.34'	103.19'	S 70 07'08" E

- LEGEND**
- FULL DEPTH GRANULAR BACKFILL
  - PROPOSED SANITARY SEWER 8" MH.
  - PROPOSED STORM SEWER 8" INLET
  - PROPOSED 6" LATERAL
  - EXISTING SEWERS
  - PROPOSED CONTOURS
  - SSD RISER
  - SSD LOT CONNECTION



DATES AND REVISIONS		TITLE		SITE PLAN		Evergreen		DATE	
		BRIDLEWOOD SEC IV				Planners, Inc.		JUNE 1992	
				DESIGN BY		DRAWN BY		JOB NO.	
						DTP		87-84	
						CHECKED		SCALE	
						APPROVED		1" = 50'	
								SHEET NO.	
								4 of 13	



**SOIL EROSION CONTROL SUMMARY:**

- Contractor shall install sediment traps and straw bale filters as shown.
- Mass grade the site (sides of swales, mounds and ponds to be added or seeded immediately upon completion). Temporary seeding shall be recommended for all swales and disturbed areas that cannot be final seeded within a time period that will prevent soil erosion. For temporary seeding the contractor shall utilize a fast growing seed of either oats, annual ryegrass, wheat or rye depending upon the time of the year. Disturbed area should be kept to a minimum at all times.
- Contractor shall control mud accumulation on all streets surrounding the project by installing stone surfaces at all locations where construction traffic leaves the site. Dust shall be kept to a minimum by utilizing sprinkling, calcium chloride, vegetative cover, spray on additives or other approved methods.
- Maintain all filters and traps during construction to prevent any blockages from accumulated sediment. Additional seeding and straw may be required during construction as specified by engineer or Soil Conservation Service. Rip rap shall be placed in areas of high-velocity stream flow (minimum size 1/3 cu. ft.). Payment for additional straw bales and rip rap not shown on plans and seeding shall be on a unit basis.
- Contractor shall install storm sewer inlet filters as storm sewer system is installed.
- All proposed street areas to be paved as soon as possible after subgrade is prepared.

**SEEDING SPECIFICATIONS:**

- Swales / Grassed Waterways: permanent seeding shall take place between March 1 and May 15 or from August 10 to October 15 with the following per acre:
  - 25 lbs. Kentucky 31 Fescue
  - 15 lbs. Kentucky Blue Grass
  - 1000 lbs. Fertilizer
  - 3000 lbs. Mulch (straw)
- If grades are established between October 15 and December 30, either rye (grass) or wheat may be used at the rate of 2 bushels/acre. Oats may be used for early spring planting at the rate of 3 bushels/acre. All grains should be cut at the time of permanent seeding. All grains should be cut prior seed maturing.
- If grades are established between May 15 and August 10, a temporary seeding consisting of 40 lbs. of annual ryegrass shall be planted per acre.
- If temporary seeding is established prior to permanent seeding, the mulch may be eliminated except in "bone" areas.
- If grading occurs during December, January or February, no seeding to take place till spring planting; however it is imperative that all sediment filters and traps are in place prior to bulk earthmoving or clearing.

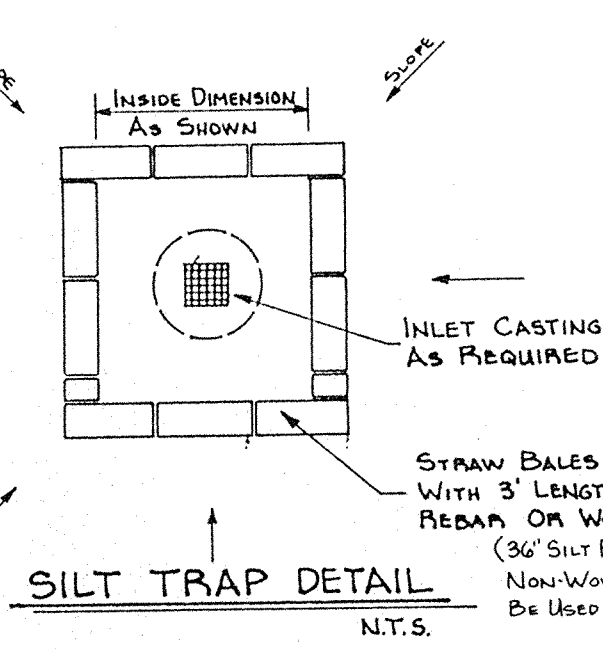


Figure 2-11a Seasonal Soil Protection Chart

Stabilization	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Perennial	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Annual	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Temporary	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Seeding

Seeding	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Perennial	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Annual	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Temporary	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Notes:

- 1 - Kentucky Bluegrass 40 lbs/acre; Fescue 20 lbs/acre; Ryegrass 40 lbs/acre; Rye 2 lbs/acre; Oats 2 lbs/acre; or 40 lbs/acre Annual Ryegrass 20 lbs/acre.
- 2 - 2 lbs/acre straw mulch/acre, or 400 lbs/acre Annual Ryegrass 20 lbs/acre.
- 3 - Annual Ryegrass 40 lbs/acre, or 100 lbs/acre Ryegrass 20 lbs/acre.
- 4 - 1/2"

Temporary Seeding Dates

Lot	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												

Notes:

- 1 - Irrigation seeded during this period. To control erosion at times other than in the above areas.
- 2 - Late summer seeding dates may be extended 2 days if weather is suitable.
- 3 - Increase seeding application by 50%.

**LEGEND**

- [Hatched Box] STRAW BALE SILT TRAP (SIZE AS INDICATED)
- [Diagonal Lines] AREA TO BE SEEDED W/PERENNIAL RYE GRASS AND MULCHED
- [Cross-hatched Box] AREA TO BE SEEDED W/PERENNIAL RYE GRASS & BLANKETED W/NORTH AMERICAN GREEN SISU OR EQUAL.

ALL OTHER DISTURBED AREAS TO BE SEEDDED WITH WHEAT OR RYE

DATES AND REVISIONS		TITLE			
		<b>EROSION CONTROL PLAN</b>			
		<b>BRIDLEWOOD SECTION IV</b>			
DESIGN BY	ALK/DTP	DRAWN BY	MFH	CHECKED	APPROVED
7-17-95	Revised Plan	7-17-95	Revised Plan	7-17-95	Revised Plan

**Evergreen** FILED  
Planners, Inc. DEC 06 1993

234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
317/353-6161

DATE: JUNE 1992  
JOB NO: 87-84  
SCALE: Horiz. 1" = 50'  
Vert. 1" = 5'  
SHEET NO: 5 of 13

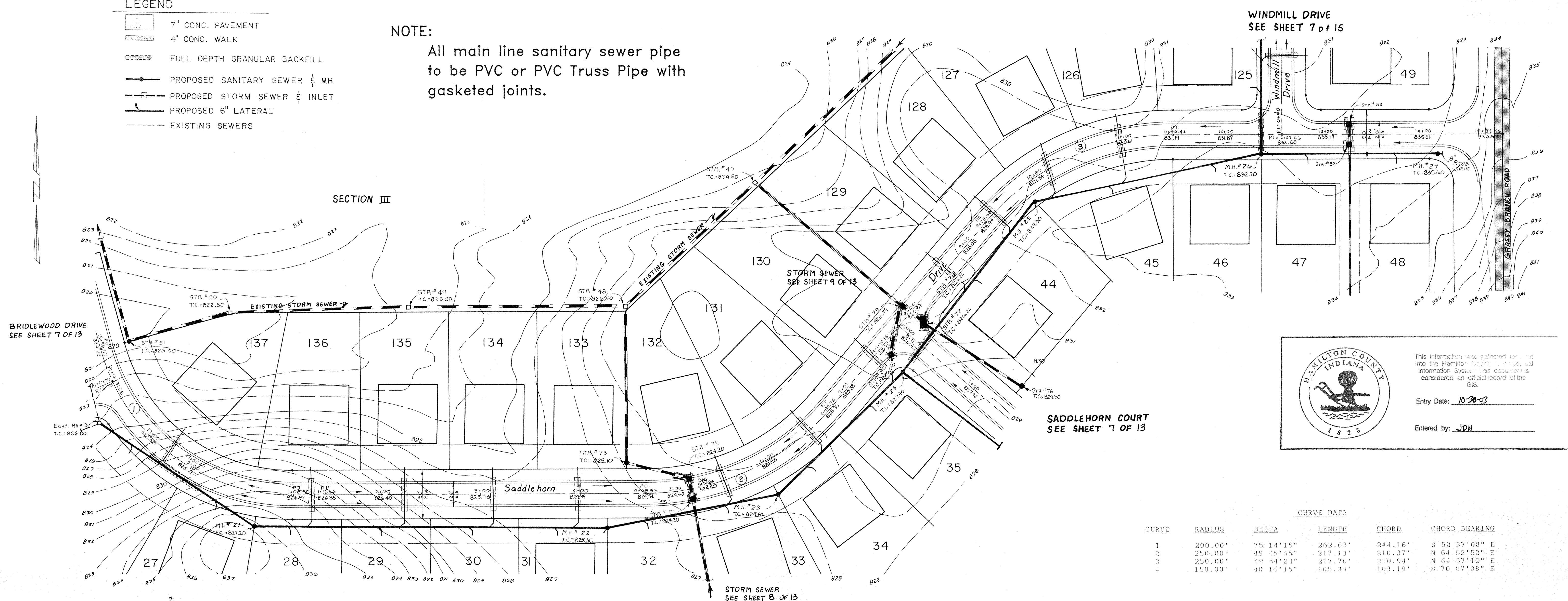
ARTHUR L. KASER REGISTERED PROFESSIONAL LAND SURVEYOR No. S-0529 STATE OF INDIANA

LEGEND

- 7" CONC. PAVEMENT
- 4" CONC. WALK
- FULL DEPTH GRANULAR BACKFILL
- PROPOSED SANITARY SEWER & MH.
- PROPOSED STORM SEWER & INLET
- PROPOSED 6" LATERAL
- EXISTING SEWERS

NOTE:

All main line sanitary sewer pipe to be PVC or PVC Truss Pipe with gasketed joints.



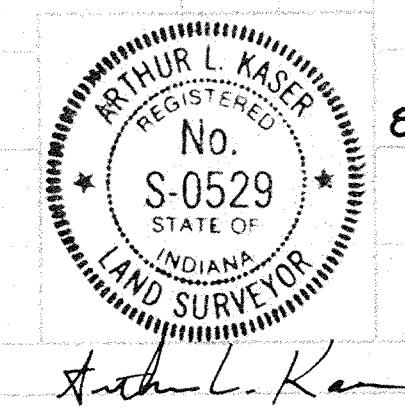
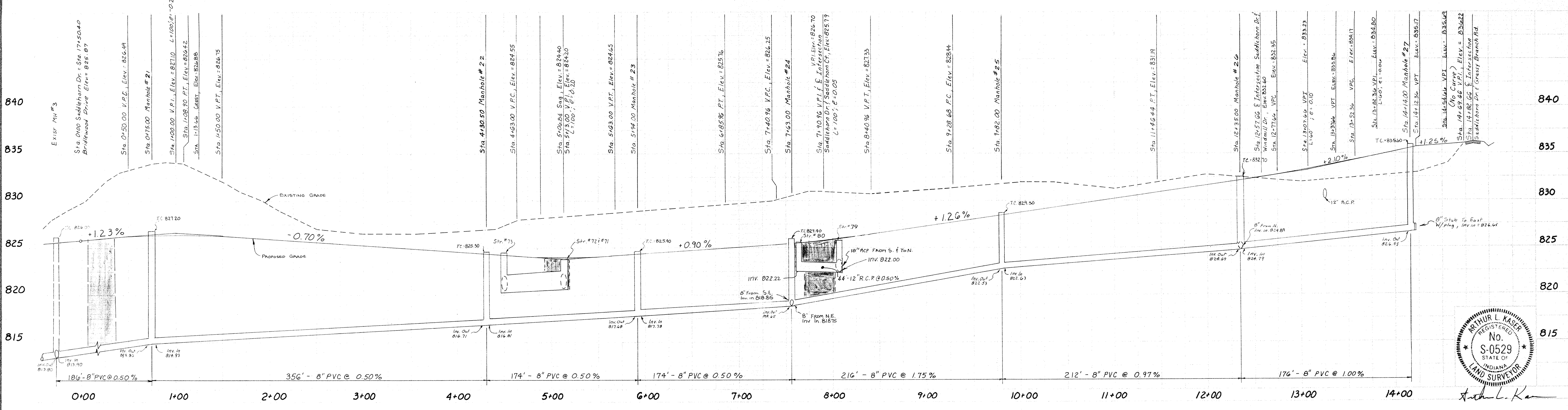
This information was gathered and input into the Hamilton County Geographic Information System. This document is considered an official record of the GIS.

Entry Date: 10-20-03

Entered by: JDH

CURVE DATA

CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
1	200.00'	75 14' 15"	262.63'	244.16'	S 52 37' 08" E
2	250.00'	49 35' 45"	217.13'	196.37'	N 64 52' 52" E
3	250.00'	49 34' 24"	217.76'	210.94'	N 64 57' 13" E
4	150.00'	40 14' 15"	105.34'	103.19'	S 70 07' 08" E

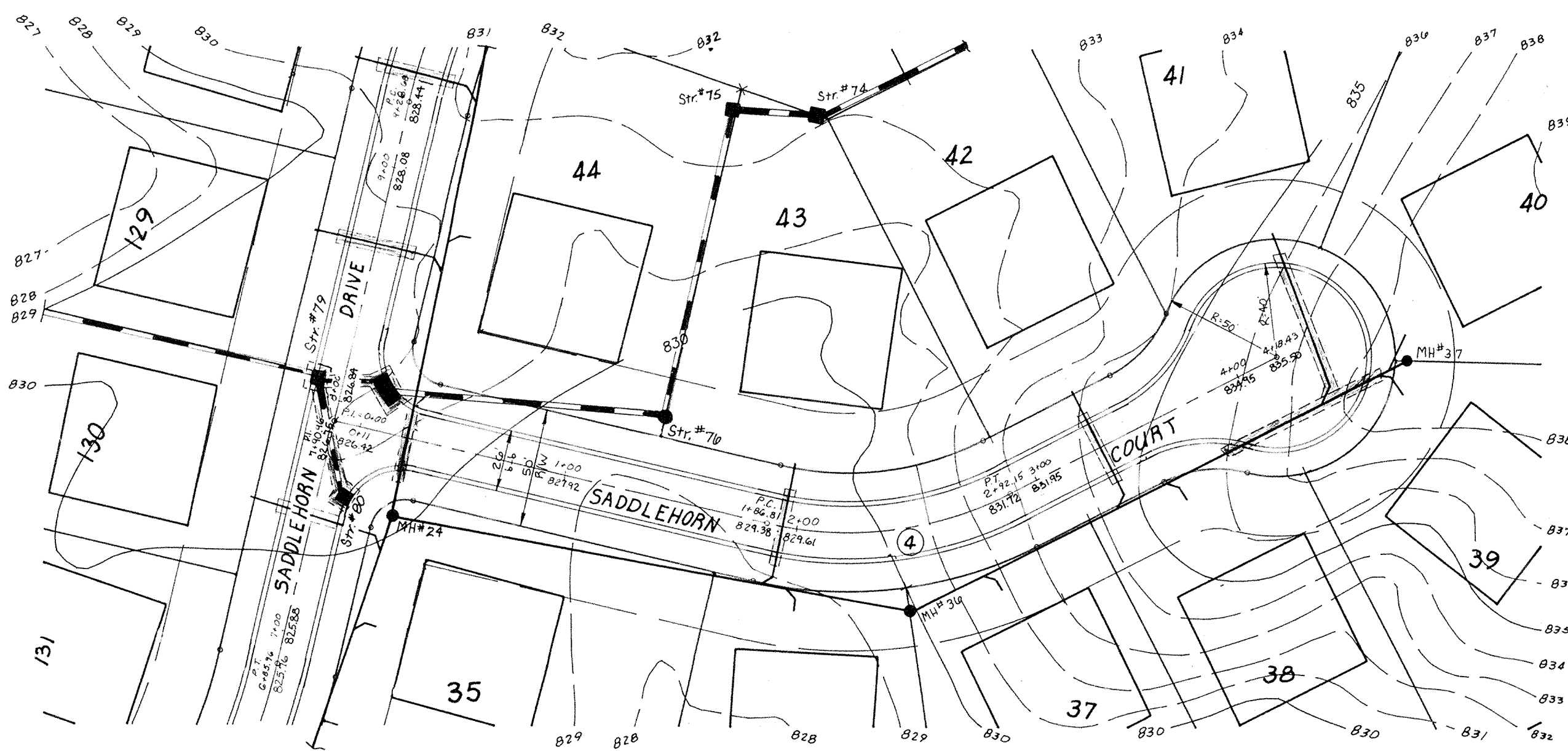


DATES AND REVISIONS		TITLE SADDLEHORN DRIVE BRIDLEWOOD SECTION IV		DATE JUNE 1992	
DESIGN BY ALK/DTP		DRAWN BY MFH		JOB NO. 87-84	
CHECKED DTP/AUC		APPROVED		SCALE Horiz. 1" = 50'	
T-17-92 App Storm Sewer @ Sta 13+25 (±)		234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219 317/353-6161		VERT. 1" = 5'	
				SHEET NO 6 of 13	



SEE SHEET 9 of 13

SEE SHEET 6 of 13

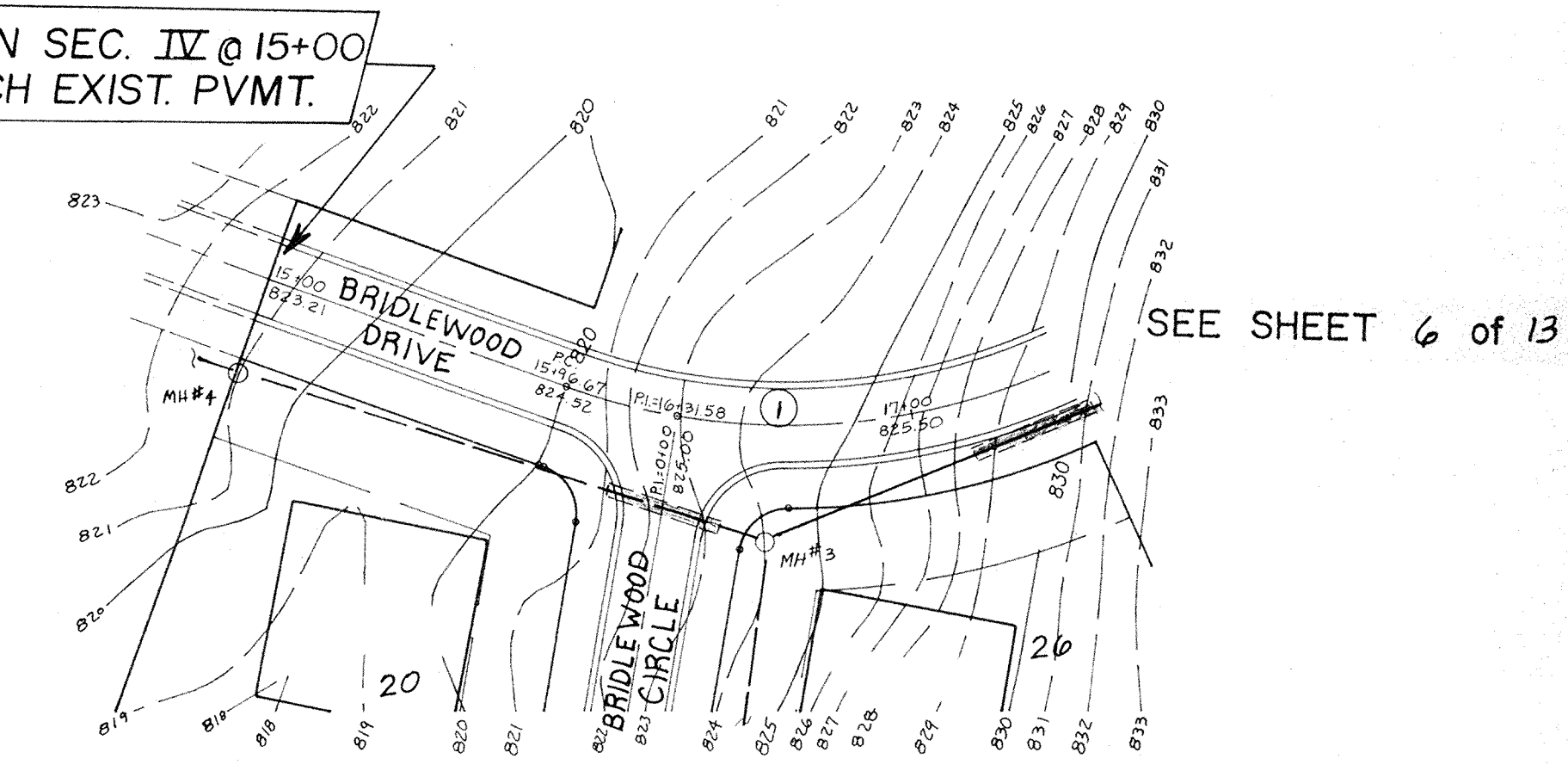
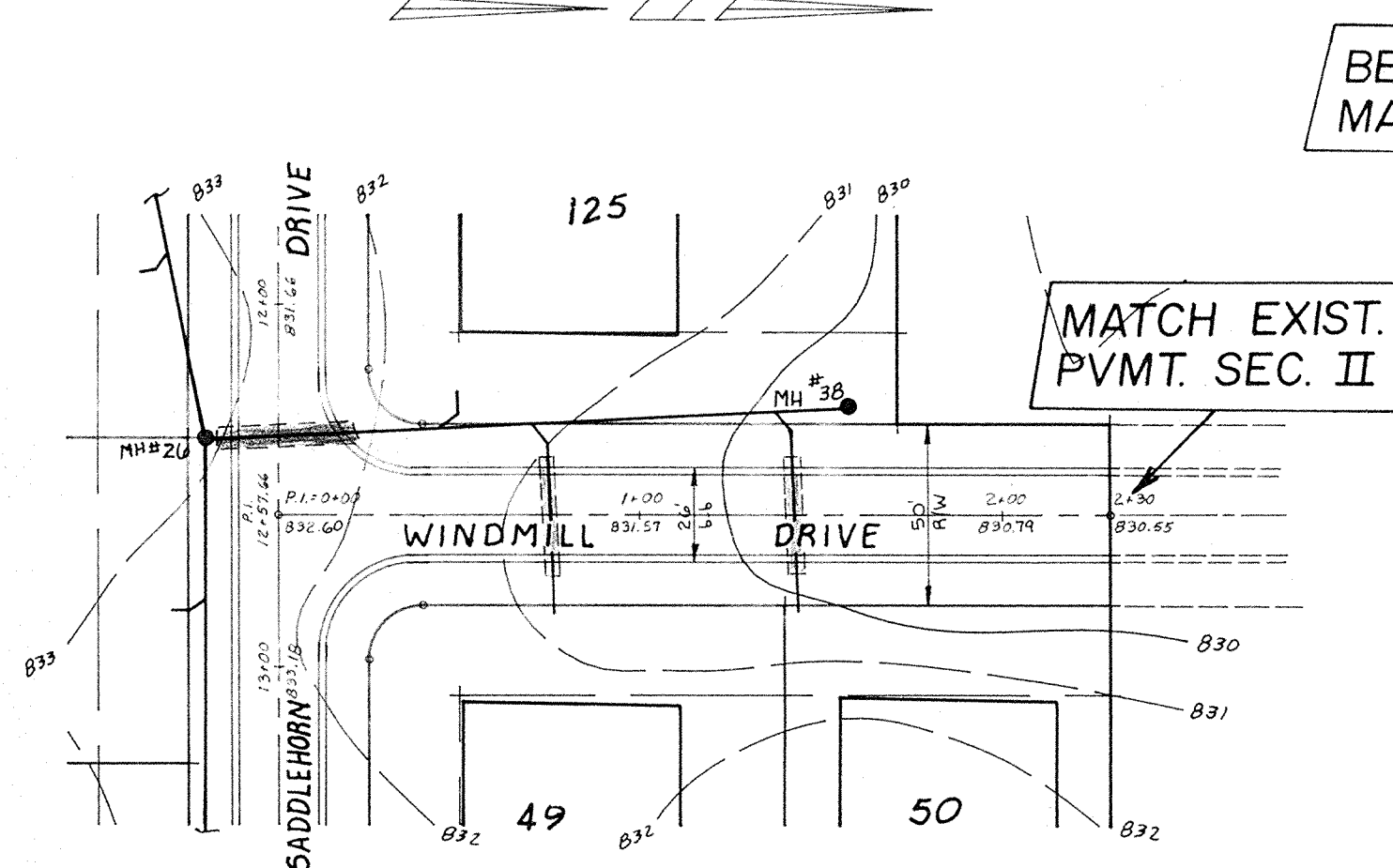


This information was gathered for use in the Hamilton County Geographical Information System. This document is considered an official record of the GIS.

Entry Date: 10-30-03

Entered by: JPH

- LEGEND**
- 7" CONC. PAVEMENT
  - 4" CONC. WALK
  - FULL DEPTH GRANULAR BACKFILL
  - PROPOSED SANITARY SEWER & MH.
  - PROPOSED STORM SEWER & INLET
  - PROPOSED 6" LATERAL
  - EXISTING SEWERS



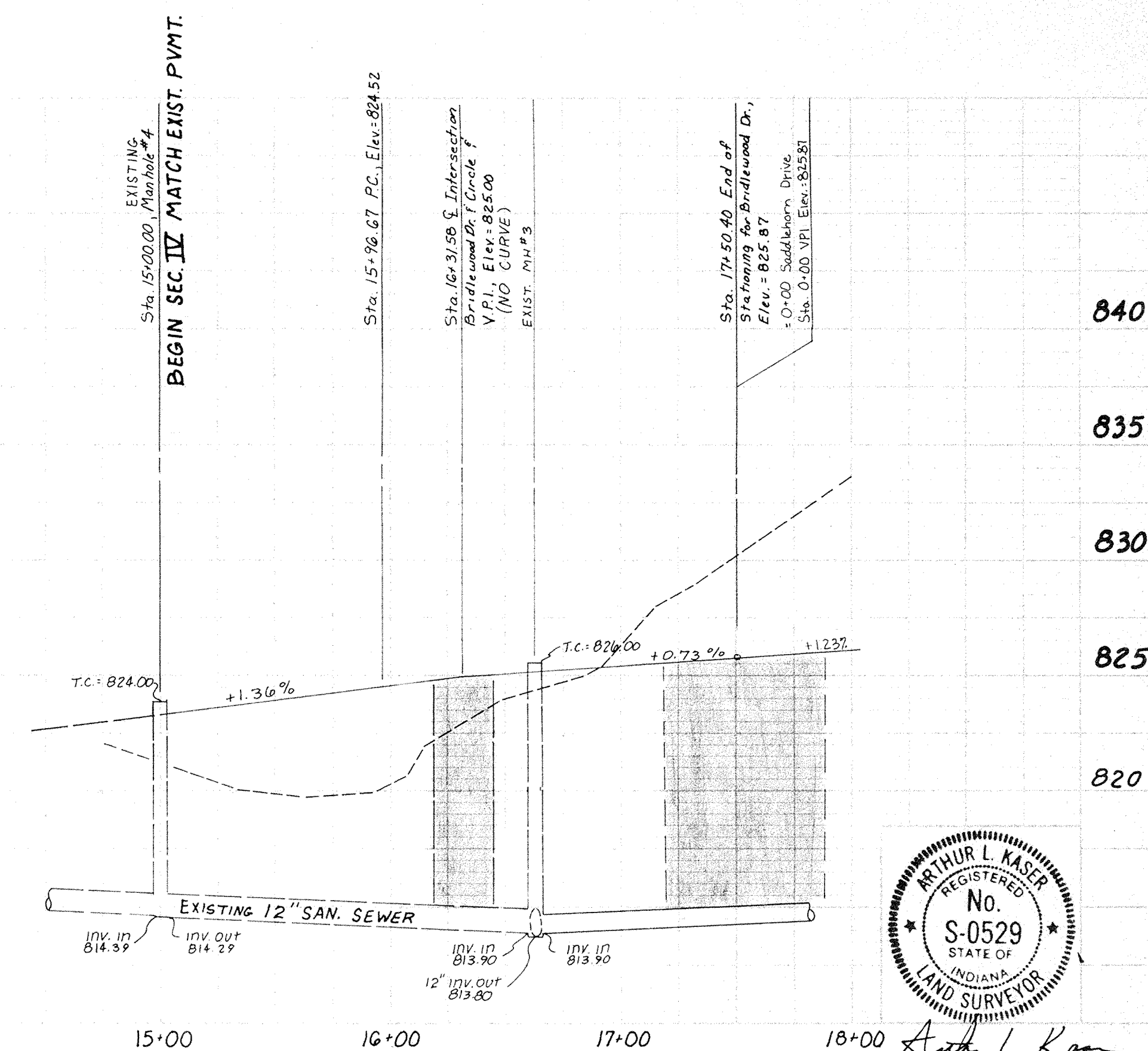
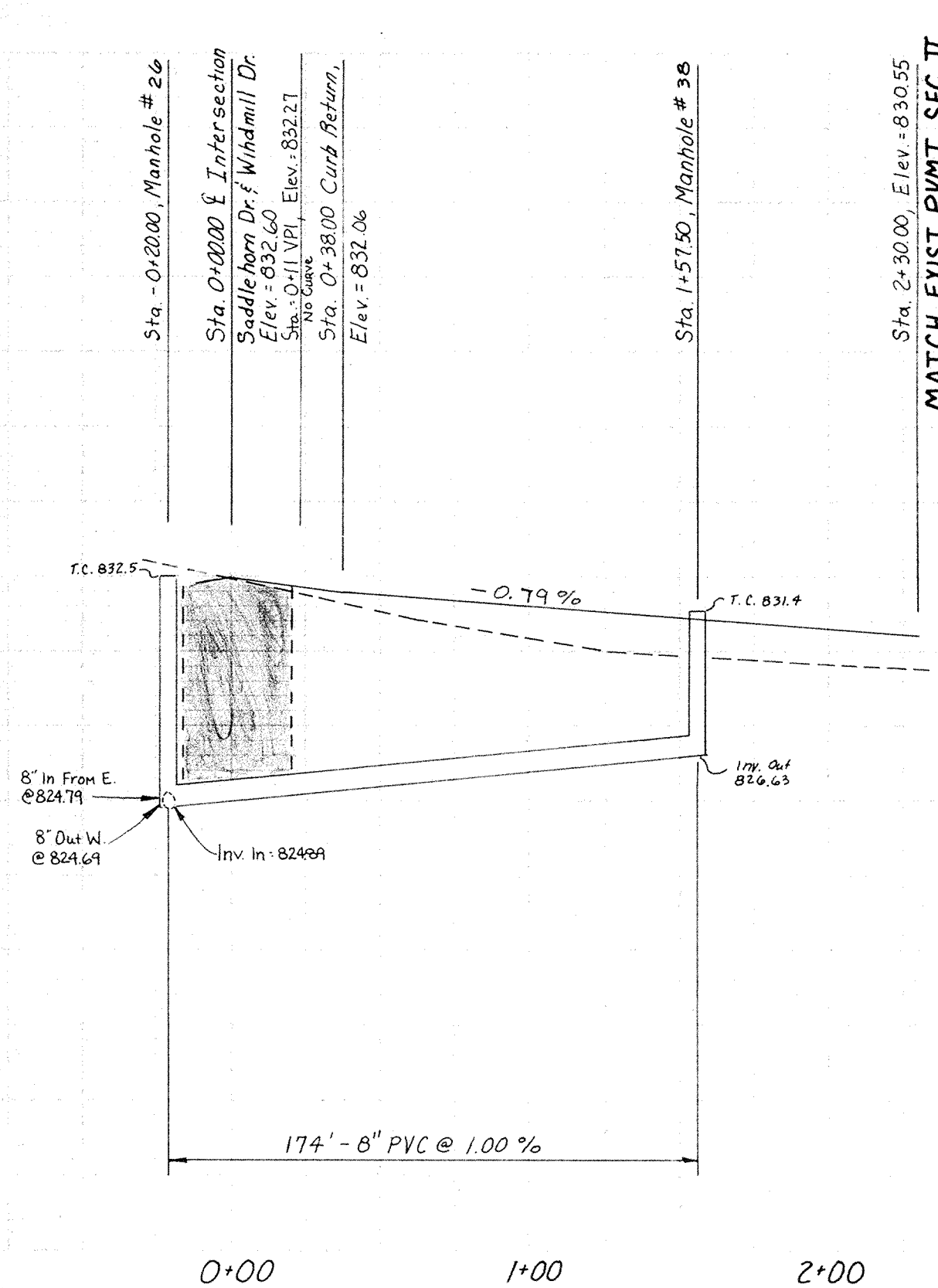
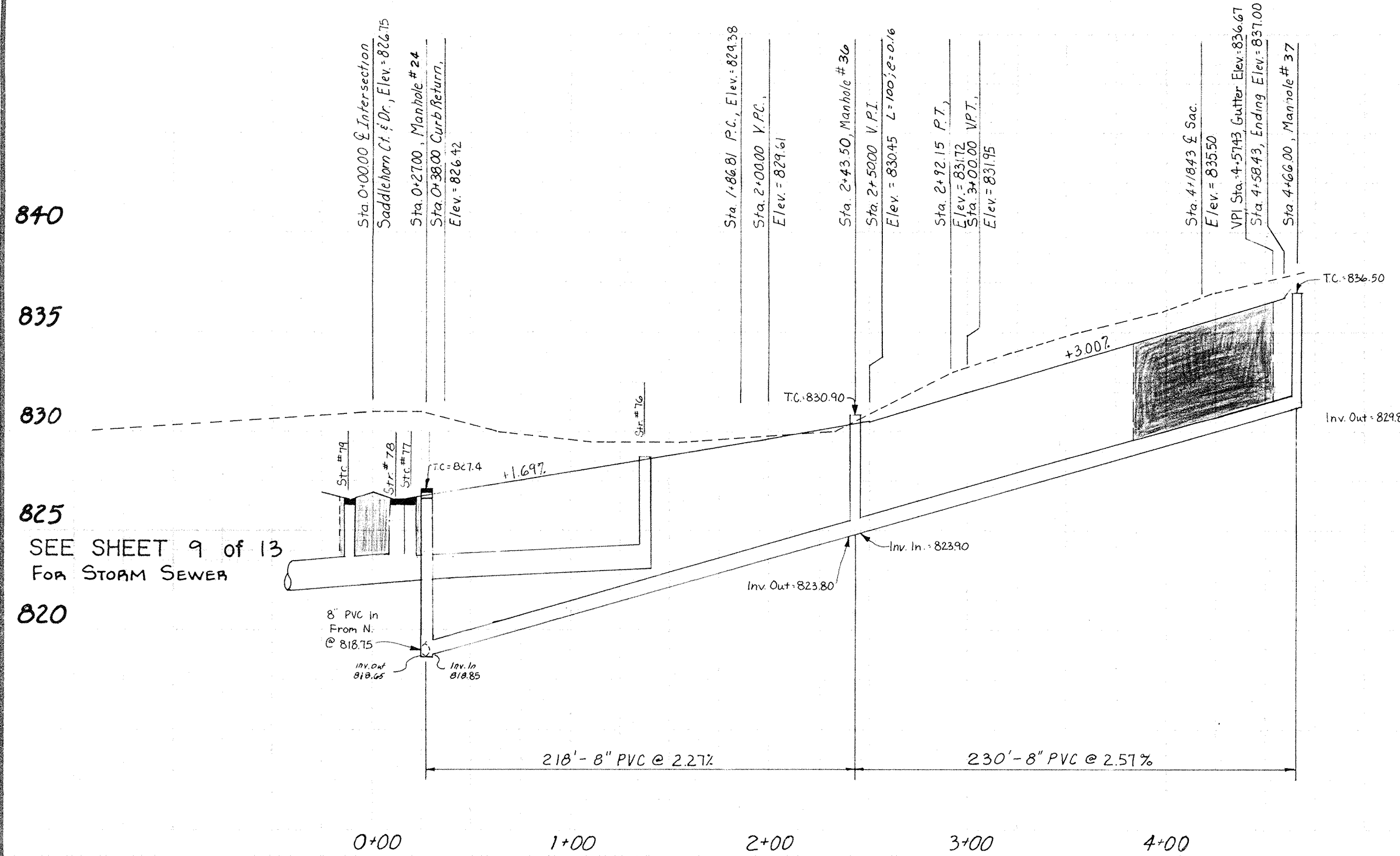
SEE SHEET 6 of 13

SEE SHEET 8 of 13

**CURVE DATA**

CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
1	200.00'	75 14' 15"	262.63'	244.16'	S 52 37' 08" E
2	250.00'	49 45' 45"	217.13'	210.37'	N 64 52' 52" E
3	250.00'	49 54' 24"	217.76'	210.94'	N 64 57' 12" E
4	150.00'	40 14' 15"	105.34'	103.19'	S 70 07' 08" E

**NOTE:**  
All main line sanitary sewer pipe to be PVC or PVC Truss Pipe with gasketed joints.



SEE SHEET 9 of 13 FOR STORM SEWER

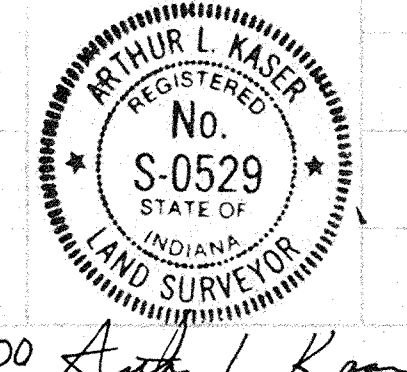
DATES AND REVISIONS		TITLE	
		SADDLEHORN CT. & WINDMILL DR. BRIDLEWOOD SEC. IV	
DESIGN BY	ALK / DTP	DRAWN BY	MFH
CHECKED	DTP / ALK	APPROVED	

**Evergreen** Planners, Inc.

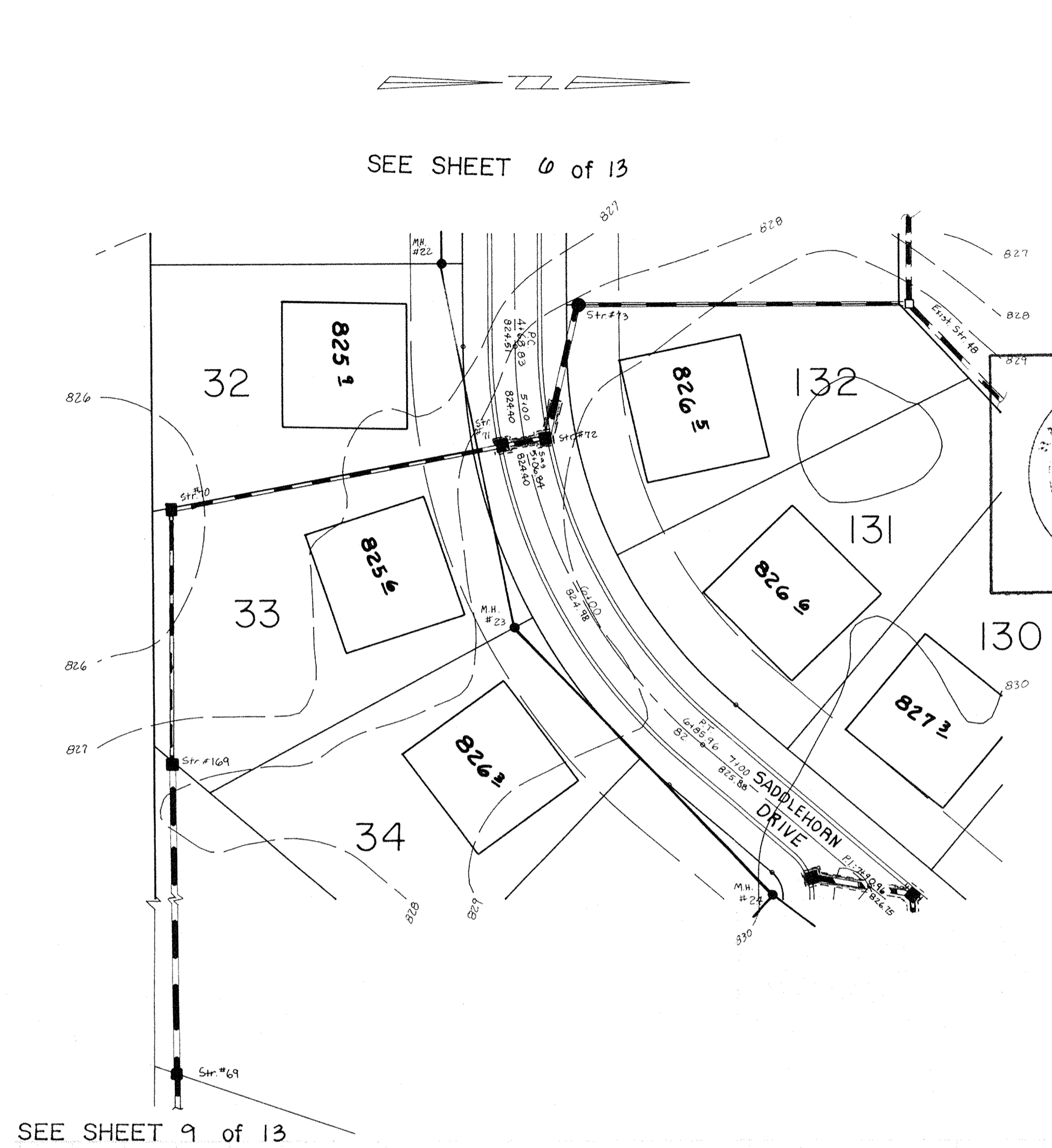
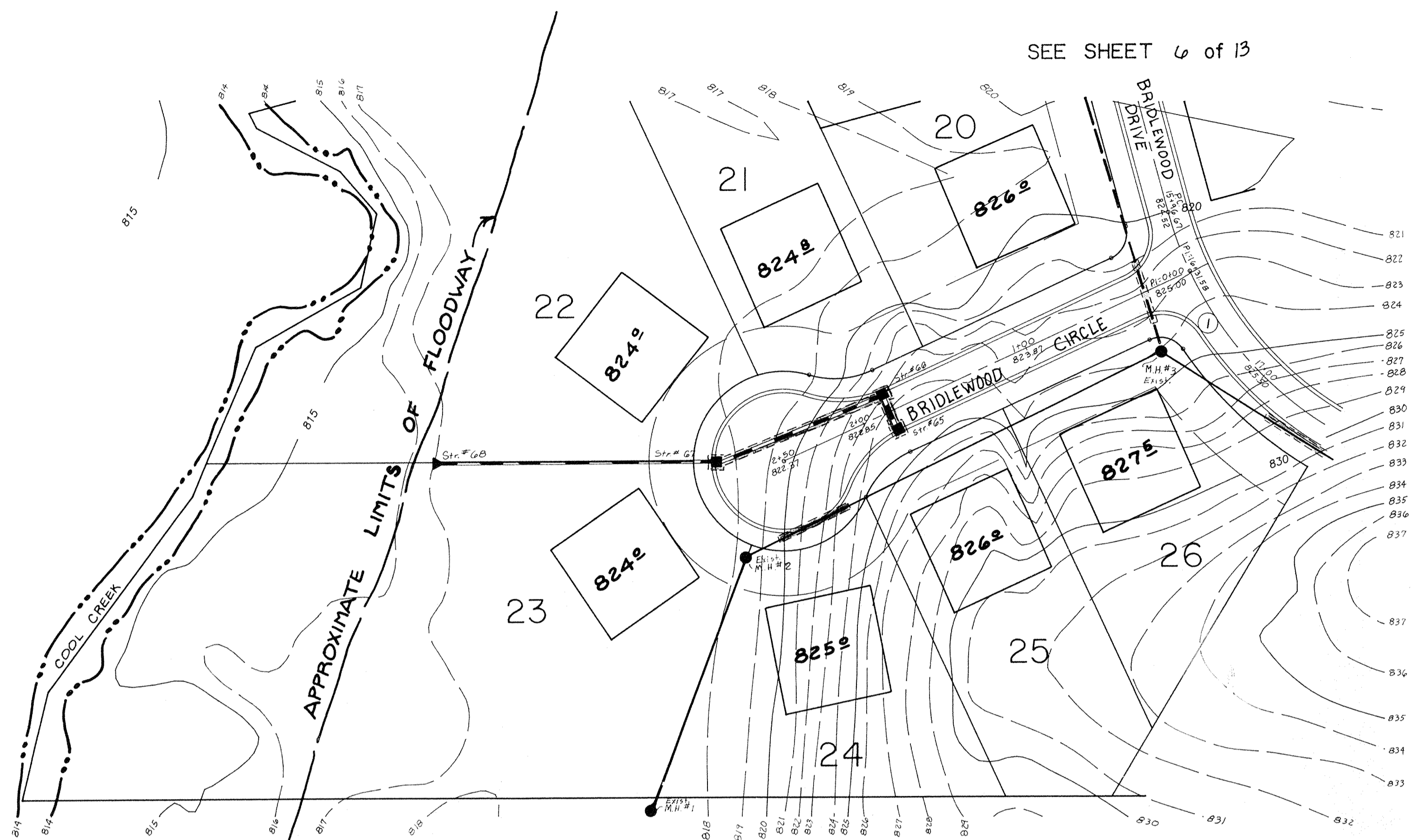
234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
317/353-6161


FILED  
DEC 06 1993  
OFFICE OF HAMILTON COUNTY SURVEYOR

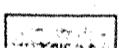

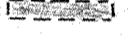




DATE	JUNE 1992
JOB NO	87 - 84
SCALE HORIZ.	1" = 50'
SCALE VERT.	1" = 5'
SHEET NO.	7 of 13

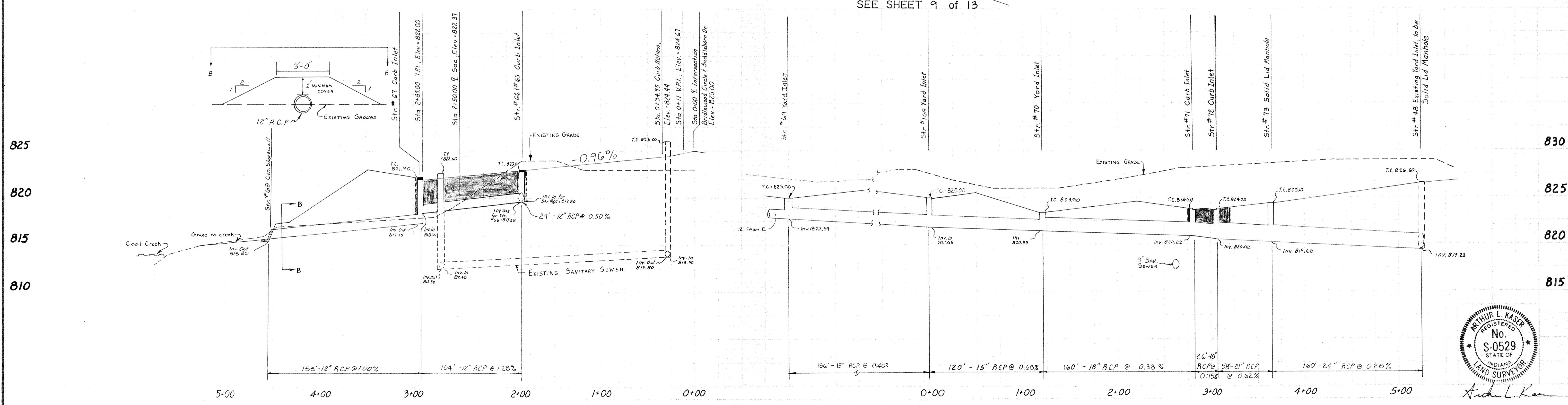


CURVE	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
1	200.00'	75 14' 15"	262.63'	244.16'	S 52 37' 08" E
2	250.00'	49 45' 45"	317.13'	210.37'	N 64 52' 52" E
3	250.00'	49 54' 21"	317.76'	210.94'	N 64 57' 12" E
4	150.00'	40 14' 15"	105.31'	103.19'	S 70 07' 08" E



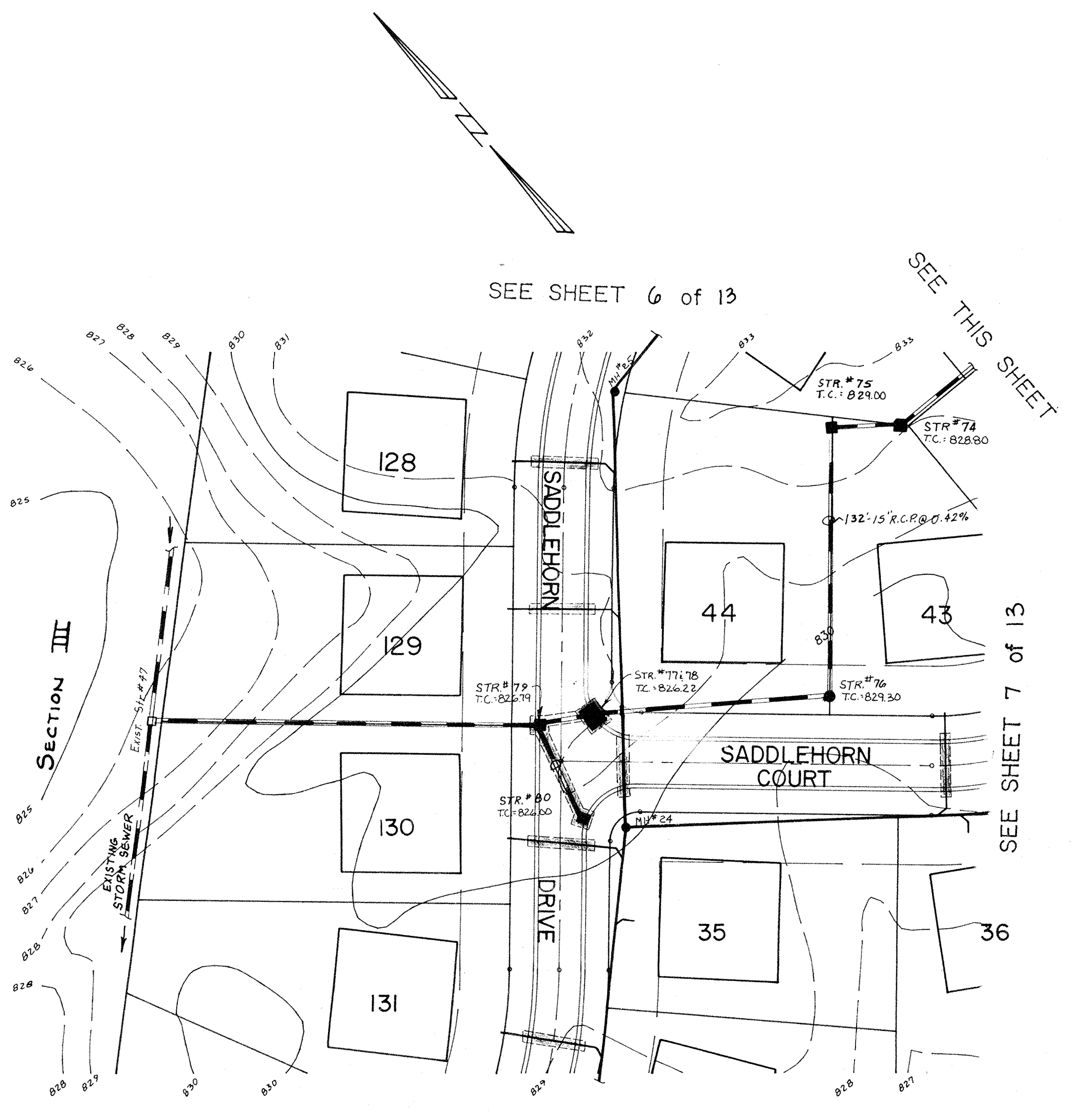

 This information was gathered for input into the Hamilton County Geographical Information System. This drawing is considered an official record of the GIS.  
 Entry Date: 10-30-03  
 Entered by: JDH

- LEGEND**
-  7" CONC. PAVEMENT
  -  4" CONC. WALK
  -  FULL DEPTH GRANULAR BACKFILL
  -  PROPOSED SANITARY SEWER 6" M.H.
  -  PROPOSED STORM SEWER 6" INLET
  -  PROPOSED 6" LATERAL
  -  EXISTING SEWERS



ARTHUR L. KASEY  
 REGISTERED  
 No. S-0529  
 STATE OF INDIANA  
 LAND SURVEYOR  
 Arthur L. Kasey

<b>DATES AND REVISIONS</b> _____ _____ _____		<b>TITLE</b> BRIDLEWOOD CIRCLE & STORM STRUCTURES No. 69-73,48 BRIDLEWOOD SEC. IV		<b>DATE</b> JUNE 1992	
<b>DESIGN BY</b> ALK/DTP	<b>DRAWN BY</b> MFH	<b>CHECKED</b> ALK	<b>APPROVED</b> _____	<b>JOB NO</b> 87-84	
<b>Evergreen Planners, Inc.</b> OFFICE OF HAMILTON COUNTY SURVEYOR 234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219 317/353-6161				<b>SCALE</b> HORIZ. 1" = 50' VERT. 1" = 5' <b>SHEET NO</b> 8 OF 13	

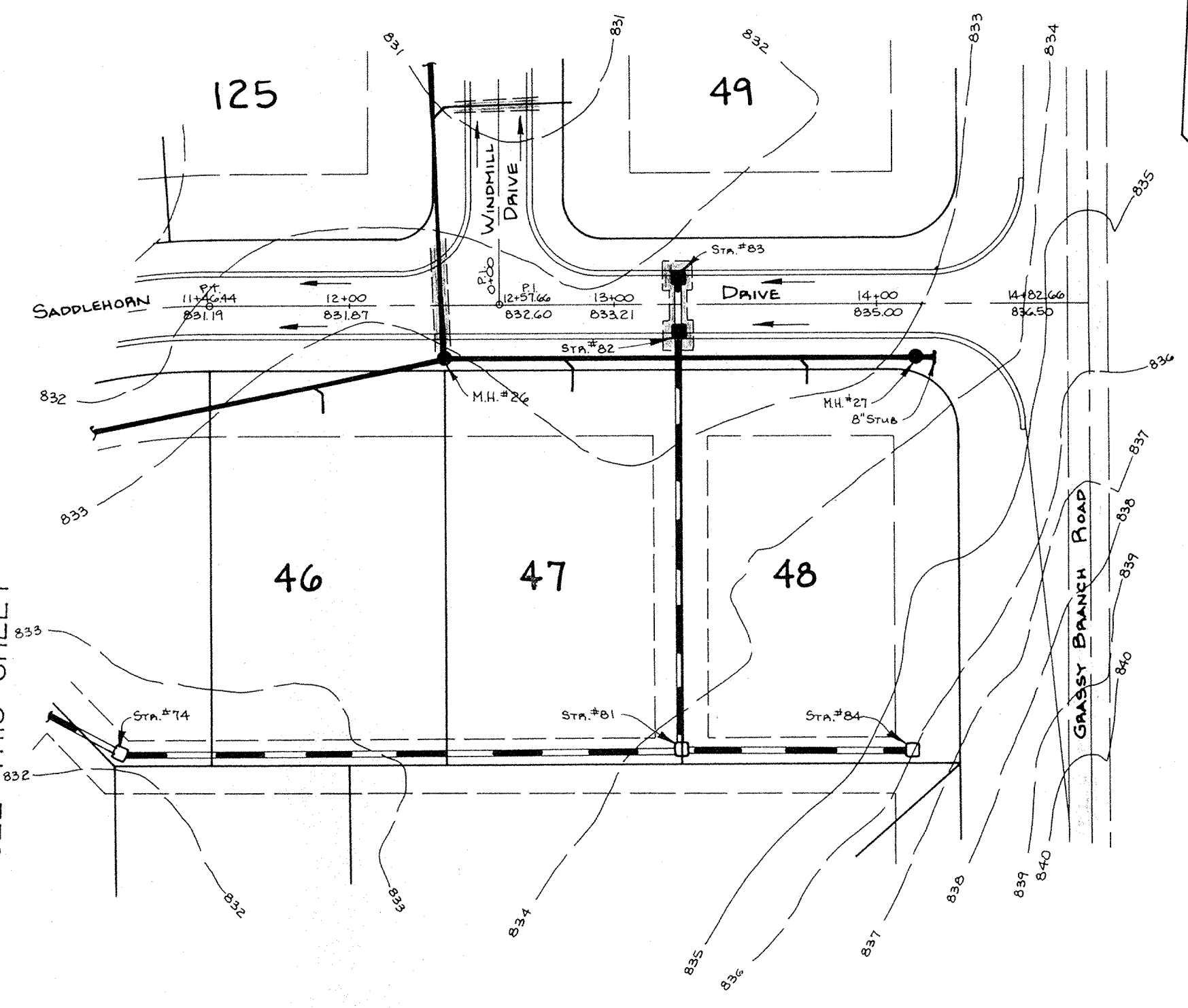


SEE SHEET 6 of 13

SEE THIS SHEET

SEE SHEET 7 of 13

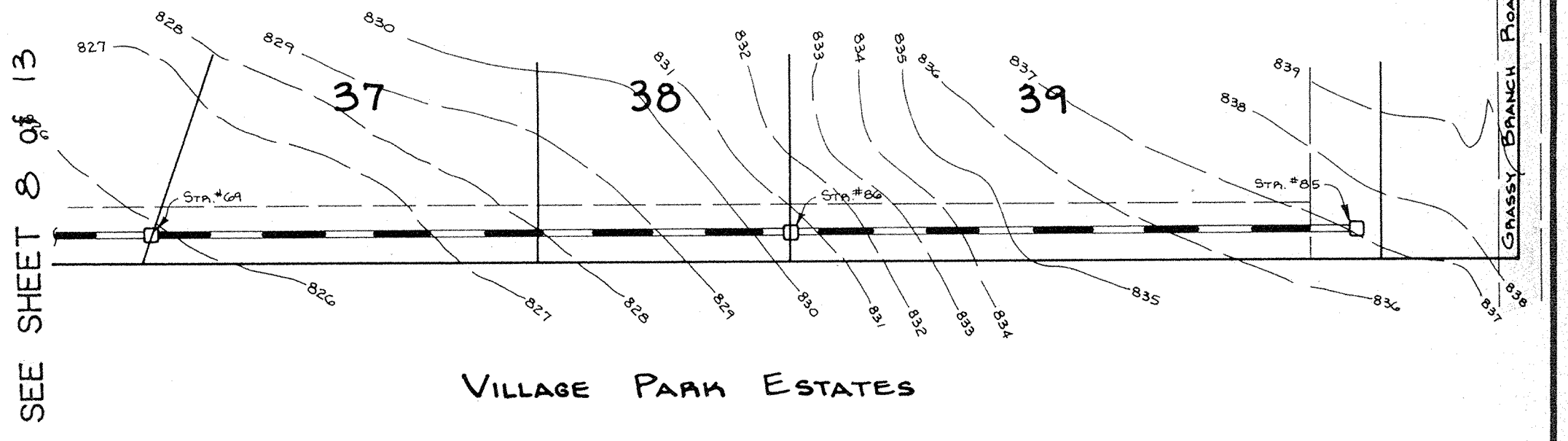
SEE SHEET 6 of 13



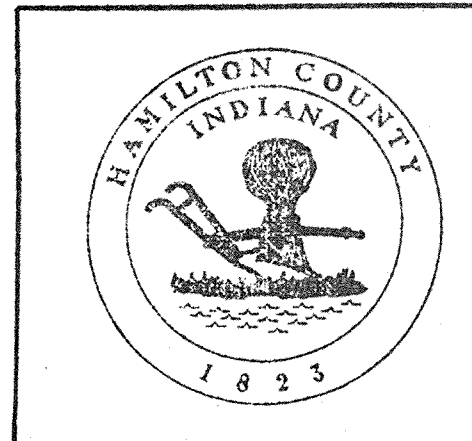
SEE THIS SHEET

SEE SHEET 8 of 13

- LEGEND**
- 7" Concrete Pavement
  - 4" Concrete Walk
  - Full Depth Granular Backfill
  - Proposed Sanitary Sewer & M.H.
  - Proposed Storm Sewer & Inlet
  - Proposed 6" Lateral
  - Existing Sewers



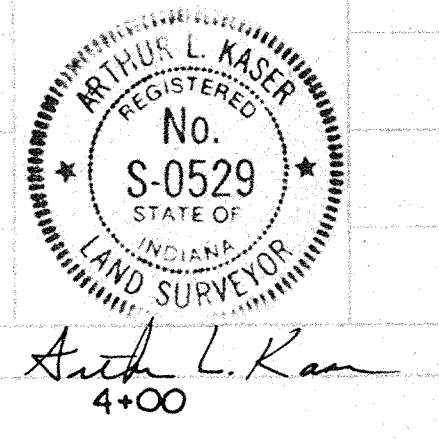
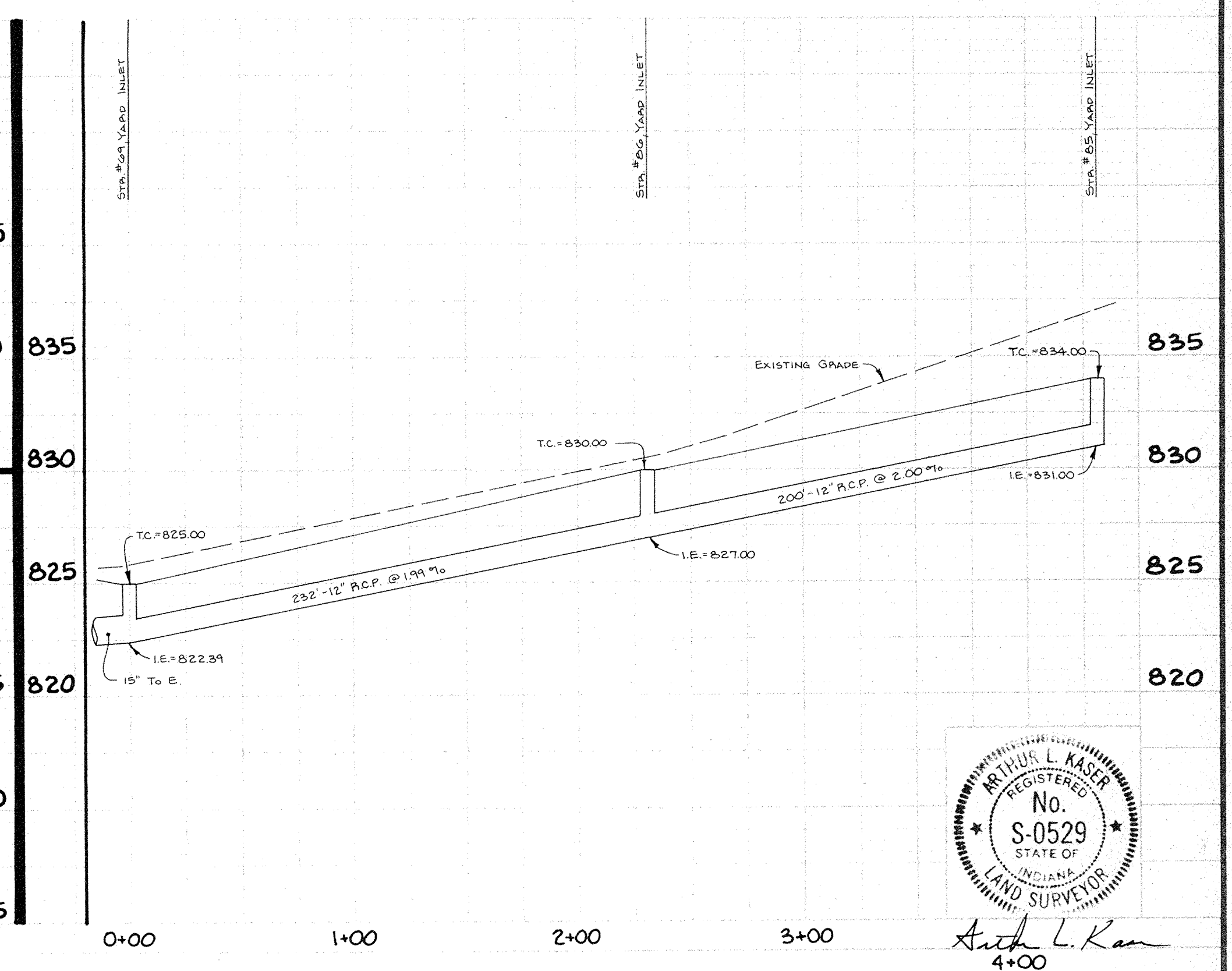
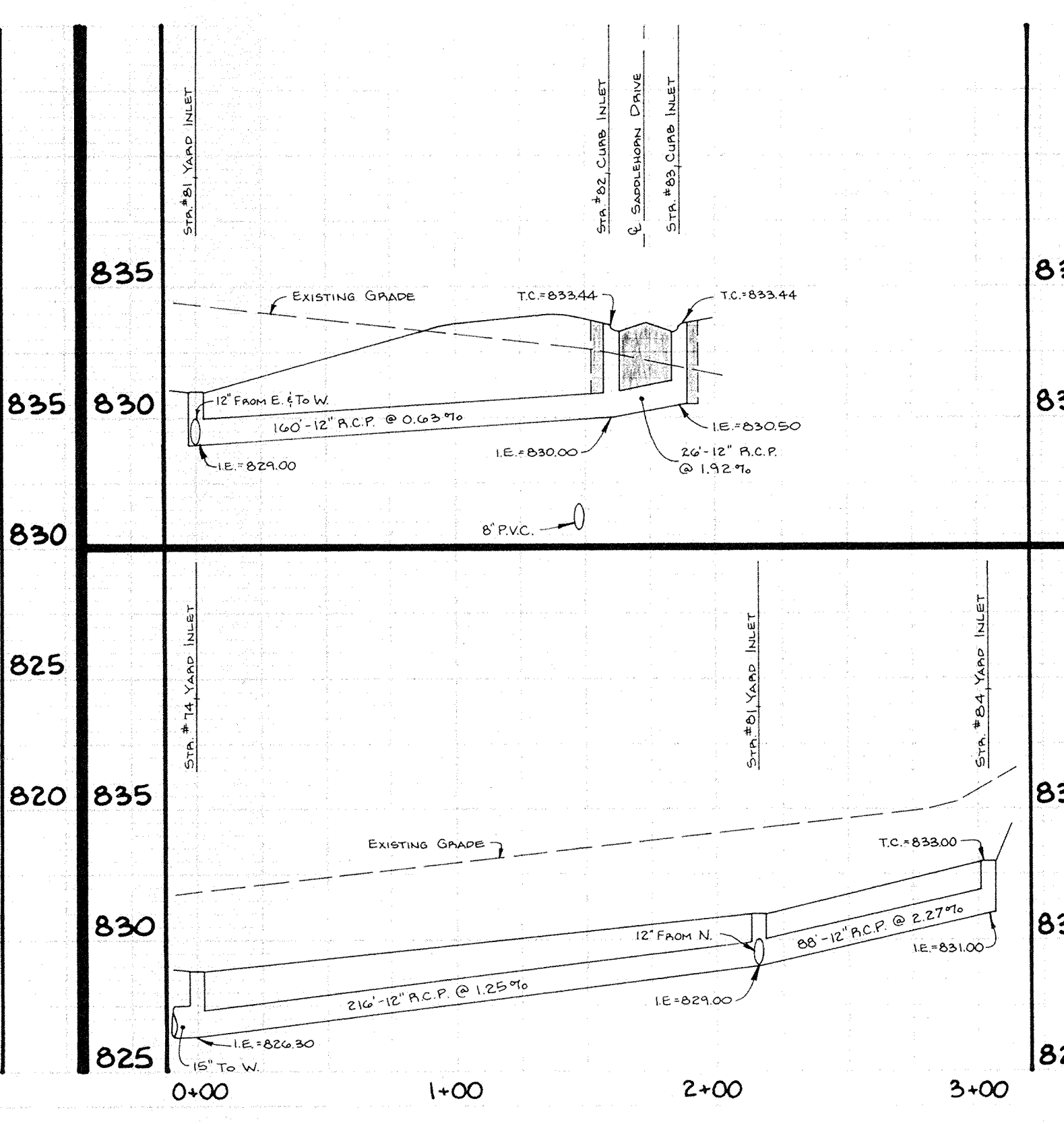
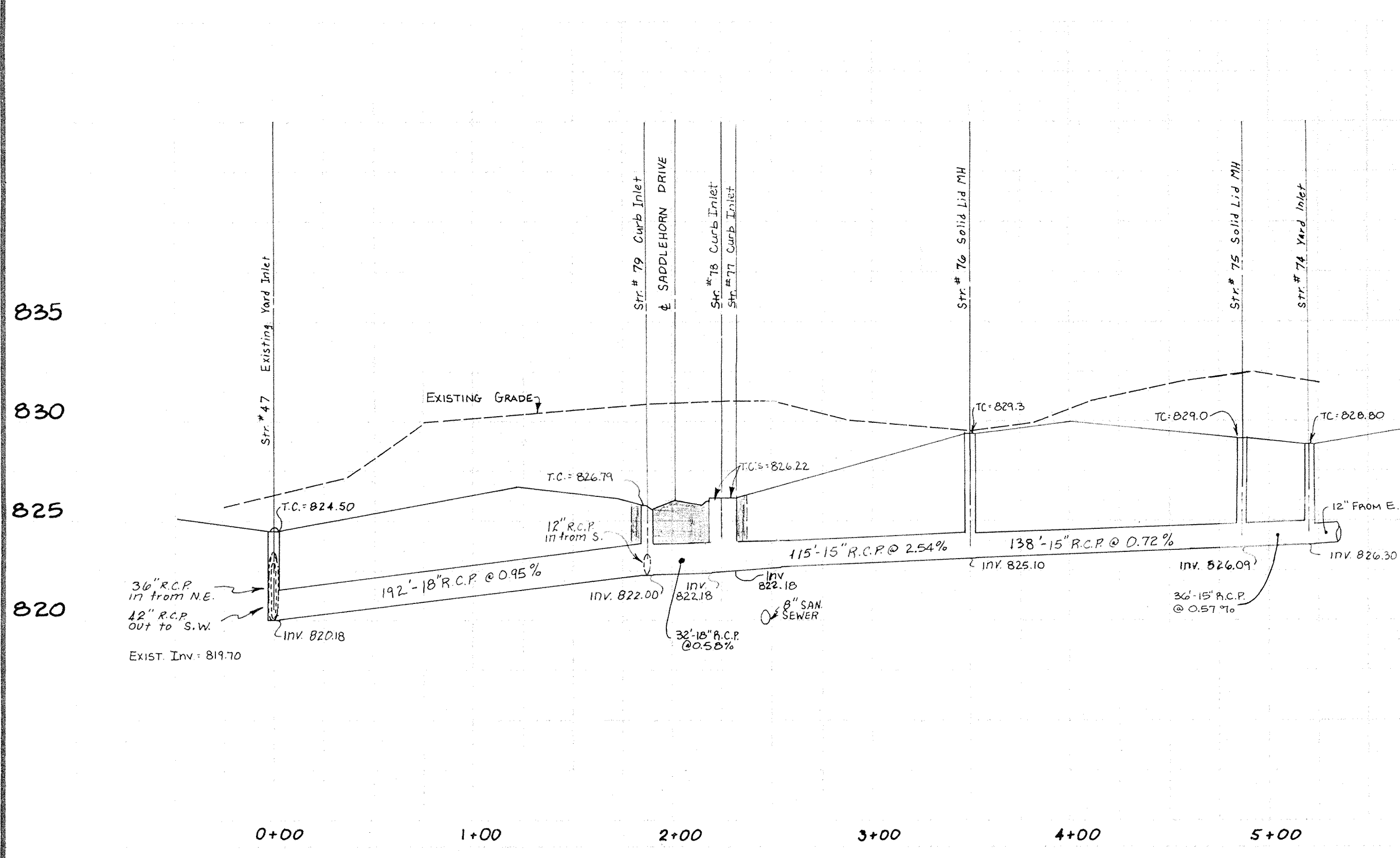
VILLAGE PARK ESTATES



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

Entry Date: 10-30-03

Entered by: JDH



Arthur L. Kasper  
4+00

DATE	REVISIONS

TITLE <b>STORM STRS. 47, 74-79, 80 BRIDLEWOOD SEC. IV</b>			
DESIGN BY ALK/DTP	DRAWN BY	CHECKED ALK	APPROVED

**Evergreen**  
Planners, Inc.

OFFICE OF HAMILTON COUNTY SURVEYOR

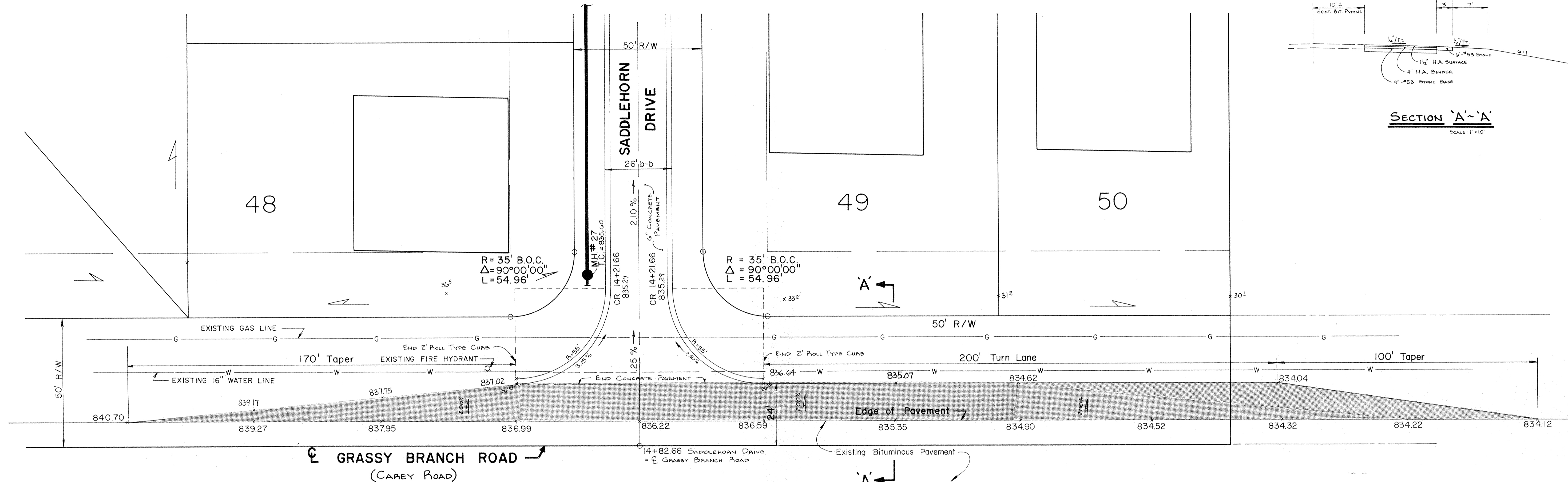
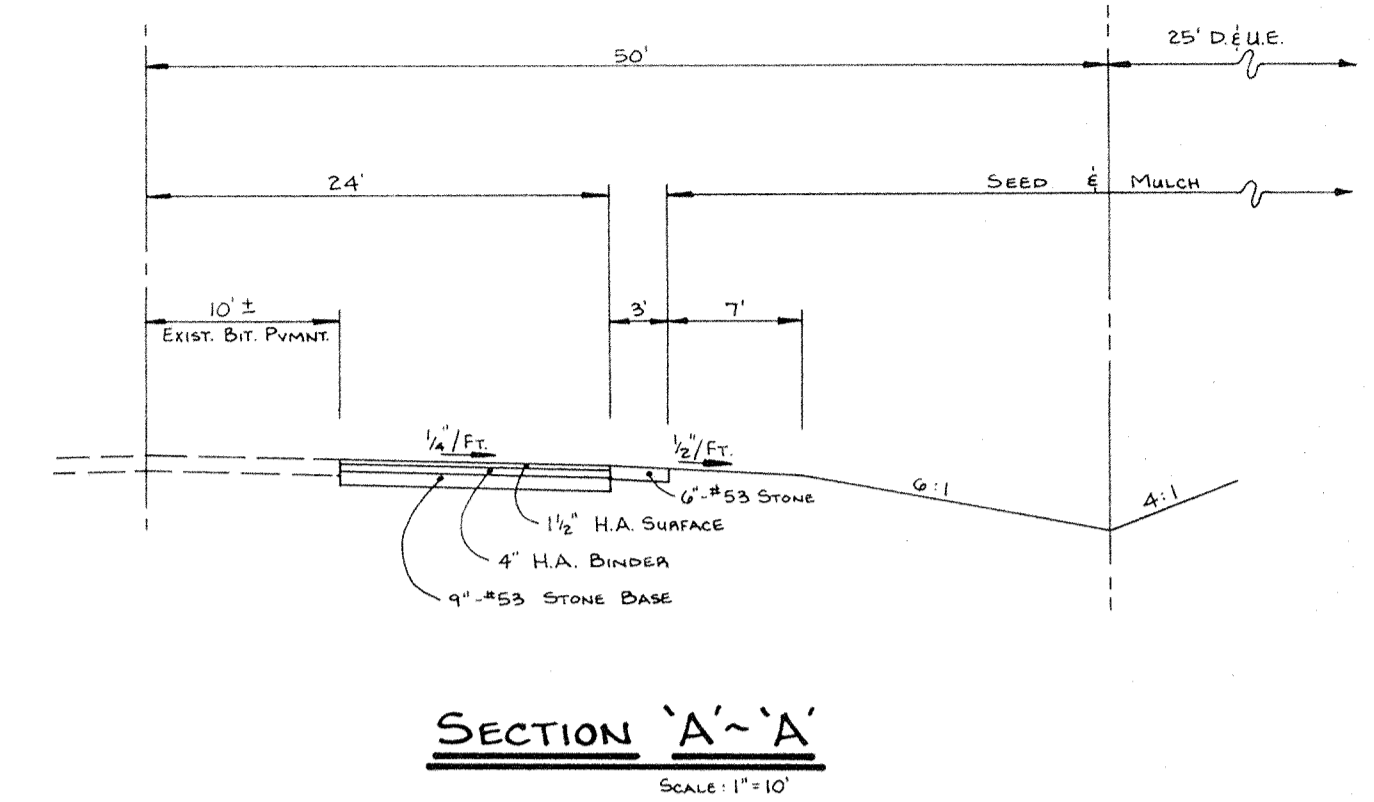
234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
317/353-6161

DATE	JUNE 1992
JOB NO	87-84
SCALE	HORIZ: 1" = 50' VERT: 1" = 5'
SHEET NO	9 of 13

TELEPHONE POST 100020P

SEE SHEET 6 of 13

SCALE: 1" = 20'



STRUCTURE CHART

Str. No.	Type	Casting No.*	T.C. El.	Inv. El.
65	Curb Inlet	R-3501-TR	822.80	819.80
66	Curb Inlet	R-3501-TL	822.80	819.68
67	Curb Inlet	R-3501-TR	821.90	818.35 (E) 817.35 (W)
68	Concrete Slopewall	----	----	815.80
69	Yard Inlet	R-4343	825.00	822.39
70	Yard Inlet	R-4343	823.90	820.83
71	Curb Inlet	R-3501-TL	824.20	820.22
72	Curb Inlet	R-3501-TR	824.20	820.02
73	Solid Lid Manhole	R-1077-A	825.10	819.68
74	Yard Inlet	R-4343	828.80	826.30
75	Yard Inlet	R-4343	829.00	826.09
76	Solid Lid Manhole	R-1077-A	829.30	825.10
77	Curb Inlet	R-3501-TL	826.22	822.18
78	Curb Inlet	R-3501-TR	826.22	822.18
79	Curb Inlet	R-3501-TL	826.79	822.00
80	Curb Inlet	R-3501-TR	826.00	822.22
81	Yard Inlet	R-4343	831.00	829.00
82	Curb Inlet	R-3501-TR	833.44	830.00
83	Curb Inlet	R-3501-TL	833.44	830.50
84	Yard Inlet	R-4343	833.00	831.00
85	Yard Inlet	R-4343	834.00	831.00
86	Yard Inlet	R-4343	830.00	827.00
169	Yard Inlet	R-4343	825.00	821.65

\* Neenah Cat. No. or Equal

M.H. Chart

M.H. No.	T.C.	Inv. In.	Inv. Out
21	827.20	814.93	814.83
22	825.30	816.81	816.71
23	825.40	817.78	814.68
24	827.40	818.75 (NE) 818.85 (SE)	818.65
25	829.30	822.63	822.53
26	832.70	824.79 (E) 824.89 (N)	824.69
27	835.60	826.65	826.55
36	830.90	823.90	823.80
37	836.50	----	829.80
38	831.40	----	826.63

\*Neenah Casting No. or Equal

DATES AND REVISIONS

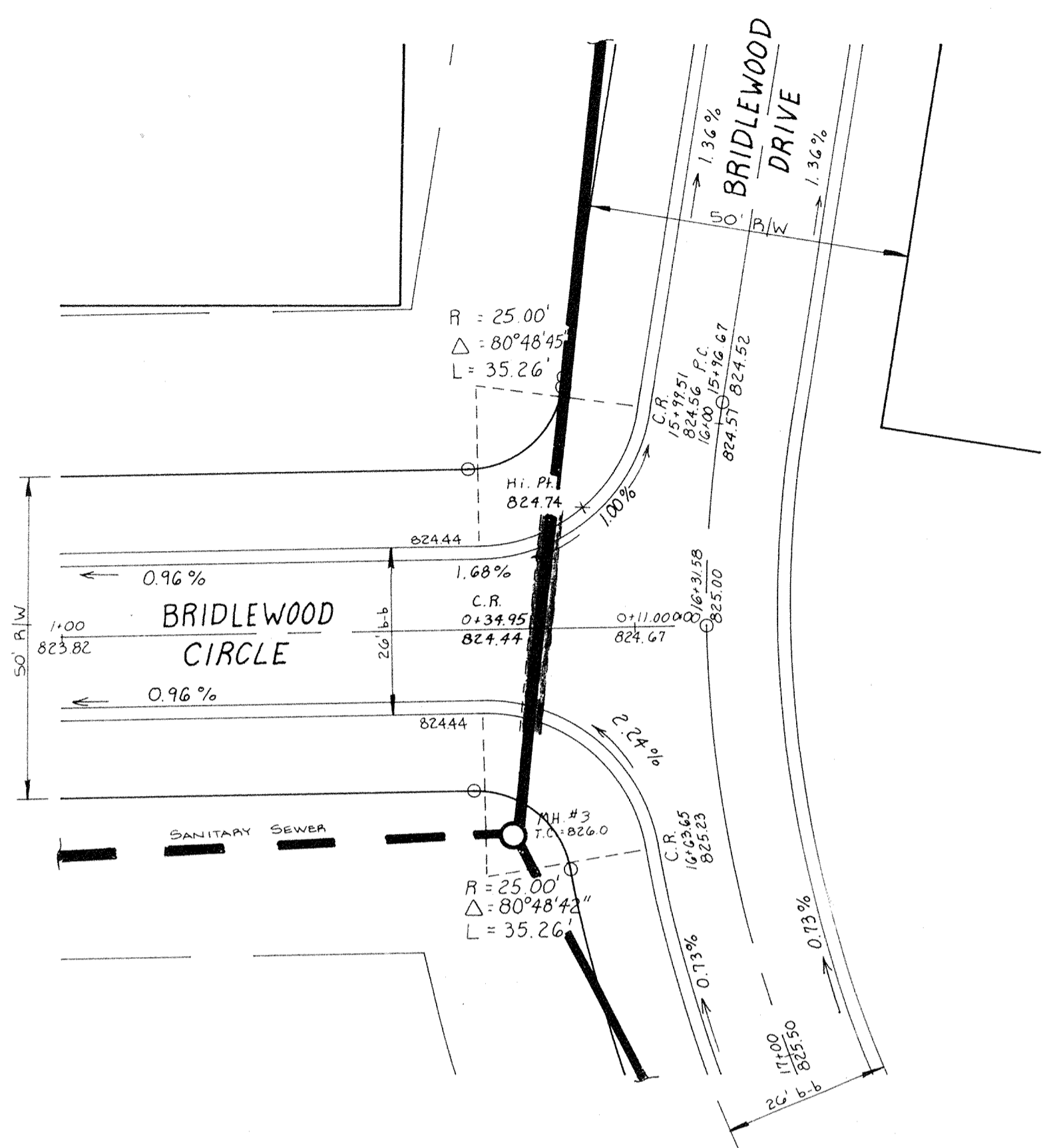
DATE	REVISION
11-10-92	ADD SECTION 'A-A' (NOTES)
7-17-92	REVISE STRUCTURE CHART

TITLE ENTRANCE DETAIL BRIDLEWOOD SEC. IV			
DESIGN BY ALK/DTP	DRAWN BY MFH	CHECKED	APPROVED

**Evergreen** Planners, Inc. **FILED**  
 234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
 317/353-6161

DATE: JUNE 1992  
 JOB NO: 87-84  
 SCALE: AS SHOWN  
 SHEET NO: 10 of 13

ARTHUR L. KASER  
 REGISTERED  
 No. S-0529  
 STATE OF INDIANA  
 LAND SURVEYOR



**GENERAL SITE WORK NOTES**

- All construction work and material shall meet the specifications of the Indiana Department of Highways 1988.
- All trenches under or within five (5) feet of the street pavement shall be backfilled to the subgrade with granular material as directed by the engineer. Backfill shall be compacted per Section 211.
- Before earthwork is commenced, the contractor shall remove the topsoil in the area of the street and house pads that require fill. This topsoil shall be stockpiled as directed by the engineer in sufficient quantity so as to allow for the placement of at least three (3) inches over all disturbed areas before mulch seeding. The remainder of the topsoil shall be distributed in the front and rear yards.
- All fills placed under paved areas and house pads are to be compacted to the following minimum standard proctor (ASTM D-698) in accordance with Section 207.
  - Minimum elevation for the top of the slab of slab type structures or
  - If a crawl space or basement is used, the flood protection grade
  - would pertain to the lowest land grade around the exterior of the building, is two (2) feet above the 100-year flood elevation.
- Temporary silt settlement basins, two feet in depth shall be excavated at the entrance to storm structures, as directed by the engineer.
- Storm and Sanitary sewer material and installation shall be in direct accordance with the STANDARD SPECIFICATIONS FOR STORM AND SANITARY SEWER CONSTRUCTION IN MARION COUNTY, INDIANA as approved on the 20th day of June, 1974. The sanitary sewer contractor shall furnish to the owner certified infiltration tests showing that the leakage outward or inward (exfiltration or infiltration), by an air test (ASTM C828 preferred) shall not exceed 200 gallons per inch of pipe diameter per mile per day and deflection tests for PVC or Truss pipe for 100% of the project and any other tests required for acceptance of sewers by the Department of Public Works.
- Pavement is to be placed on a prepared subgrade with no traffic on the sub-grade prior to paving, as per 1988 I.D.O.H. Specifications, Section 207.
- Concrete pavement to be placed as per 1988 I.D.O.H. Specifications, Section 500.  
Asphalt pavement to be placed as per 1988 I.D.O.H. Specifications, Section 400.  
For additional information see Street Detail Sheet.
- All construction within the dedicated right of way or in areas dedicated to the public shall conform to the City of Indianapolis, Department of Transportation's STANDARDS FOR STREET & BRIDGE DESIGN AND CONSTRUCTION as adopted on the 17th day of May 1972 and its periodic revisions.
- All natural areas which are disturbed by site development construction shall be seeded with a mixture of 60 pounds per acre of Perennial Rye grass and 60 pounds per acre of Kentucky 31, Paspalum or Alta Paspalum.
- Driveways and sidewalks, unless otherwise noted, are not to be installed as part of these plans and are the responsibility of the individual home builder.
- Prior to start of construction, a pre-construction conference shall be scheduled on site with Contractor, Subcontractor, Developer, Engineer for the Developer, or City Engineer (344-8900), and Utilities Department.
- All City of Lawrence permits shall be obtained prior to start of construction.

**ELECTRIC AND TELEPHONE**

- Conduit shall be required for all crossings under pavement areas.
- Granular backfill shall be required for all crossings under pavement areas and compacted per Section 211.
- Concrete pads for electric and telephone transformers shall be set at the approximate ground grade as shown on the Site Development Grading Plans for the respective locations.

**CONCRETE CURS AND WALKS**

- See Detail Sheet for type and details. Curs and walks within existing or proposed right of way shall be constructed in accordance with General Ordinance No. 49, 1972.
- Concrete shall be ready mix Portland cement conforming to A.S.T.M. C-150, and water. Aggregate shall conform to A.S.T.M. C-33. Compressive strength of concrete at 28 days shall be 4000 p.s.i. Where required, reinforcement shall be welded steel wire fabric conforming to A.S.T.M. A-185.
- Application.
  - Place concrete only on a moist, compact subgrade or base free from loose material. Place no concrete on sandy or frozen subgrade.
  - Concrete shall be deposited so as to require as little rehandling as practical. When concrete is to be placed at an atmospheric temperature of 35 F. or less, Paragraph 702.10 of the I.D.O.H. Specifications, 1985 edition, shall apply.
  - Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the I.D.O.H. Specifications, 1985 edition.

**SANITARY SEWER SPECIFICATIONS**

- Current City of Indianapolis Sanitary Sewer District, County and State specifications shall prevail as to materials and methods of construction.
- Sanitary sewers shall be installed in accordance with the Indiana State Board of Health requirements.
- Sanitary sewers shown on the construction plans may be Poly-Vinyl Chlorine Pipe in accordance with A.S.T.M. D-3034 (S.D.R. 35), or A.B.S. Truss Pipe, where applicable, in accordance with A.S.T.M. D-2680 (8"-15" pipe and fittings), D-2751 (6" pipe and fittings).
- Construction of the sanitary sewers will not be allowed to commence until a valid SPC-15 permit is obtained from the Department of Environmental Management.
- Sanitary manholes shall be precast concrete in accordance with A.S.T.M. C-478. Manhole joints shall be O-RING type.
- Plastic sanitary sewers shall be marked for easy identification.
- Water and sewer line crossings and separations shall be in accordance with Ten States Standards and local codes.
  - Where water lines and sewer lines cross and the water line cannot be placed above the sewer line a minimum of 18" with a minimum cover of 48", the sewer line shall be constructed of waterworks grade cast iron pipe with mechanical joints.
  - Where water lines and sanitary sewer lines run parallel to one another, a minimum of 10' horizontal separation shall be maintained.
- Buildings shall be serviced by a 6" minimum sanitary sewer lateral. The sewer laterals' termination shall be indicated on the surface with a post set immediately above said termination point. The ends shall be plugged and sealed with a water tight clay or plastic disc. Wyes are to be tilted up to 45 degrees from the horizontal, with suitable fittings for all changes in direction, identified with locator tape.
- The Contractor shall provide the Engineer with "as-built" locations and information for all sanitary sewers and laterals including elevations within ten days after completion.
- Manhole sections shall have "O" rings in case of wet conditions. Larger slope shall be used for bedding.
- Truss Pipe To Have Gasket Type Joints. No Glue Joints Allowed.

**STORM SEWERS**

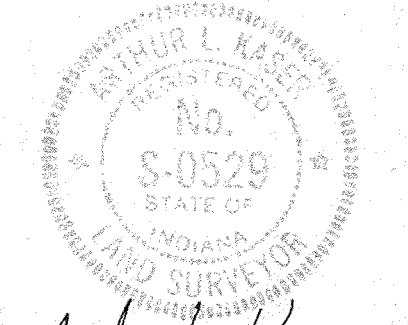
- Storm sewer structures shall comply with current specifications of the City, County and all agencies in respect to design and quality of construction.
- All storm sewer construction inside public right of way, either existing or to be dedicated, shall be in accordance with General Ordinance 49, 1972. Contractor shall notify the Indianapolis Department of Transportation, forty-eight hours prior to commencement of storm sewer construction.
- Where reinforced concrete pipe is shown on the construction plans it shall be in accordance with A.S.T.M. C-76 Class III wall "B", unless otherwise specified on the plans.
- Where corrugated metal pipe is shown on the construction plans, it shall be 16 gauge unless otherwise specified and shall have the connecting bands and seals as specified by the manufacturer. C.M.P. may be either aluminum pipe or zinc coated steel sheets in accordance with A.S.T.M. A-444.
- Manholes, catchbasins, and inlets may be precast concrete, brick or block.
- Precast concrete and steel for manholes and inlets shall be in accordance with A.S.T.M. C-478.
- Castings shall be as shown on the Structure Data Table for the manufacturer, type, and model number.
- Granular Backfill shall be required for all crossings under pavement areas per D.O.T. Standard 19-61. Granular Backfill shall be compacted per Section 211.

NOTE: Section References refer to 1988 IDOH Standard Specifications.

DATE	REVISIONS	TITLE
5-6-88	Rev. Notes 3, 4 & 10: San. Sewer Spans	1/2"
7-20-88	Rev. Notes 4, 5 & 10: San. Sewer Spans (272)	
10-20-88	Rev. Notes 24, 28 & 11-D: Special: Storm Sew. & Sew.	
1/24-89	Rev. Notes 4 Telephone, Rev. Storm Sew. "B" (242)	

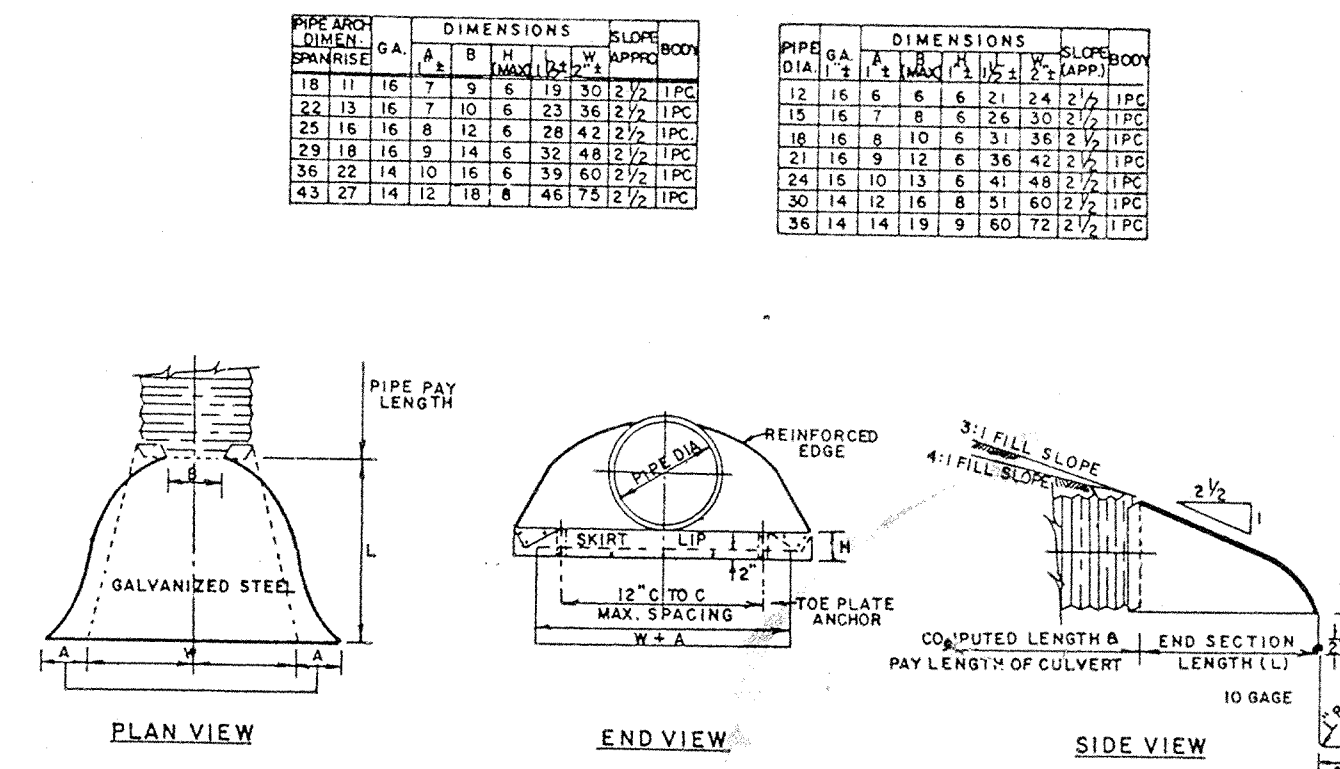
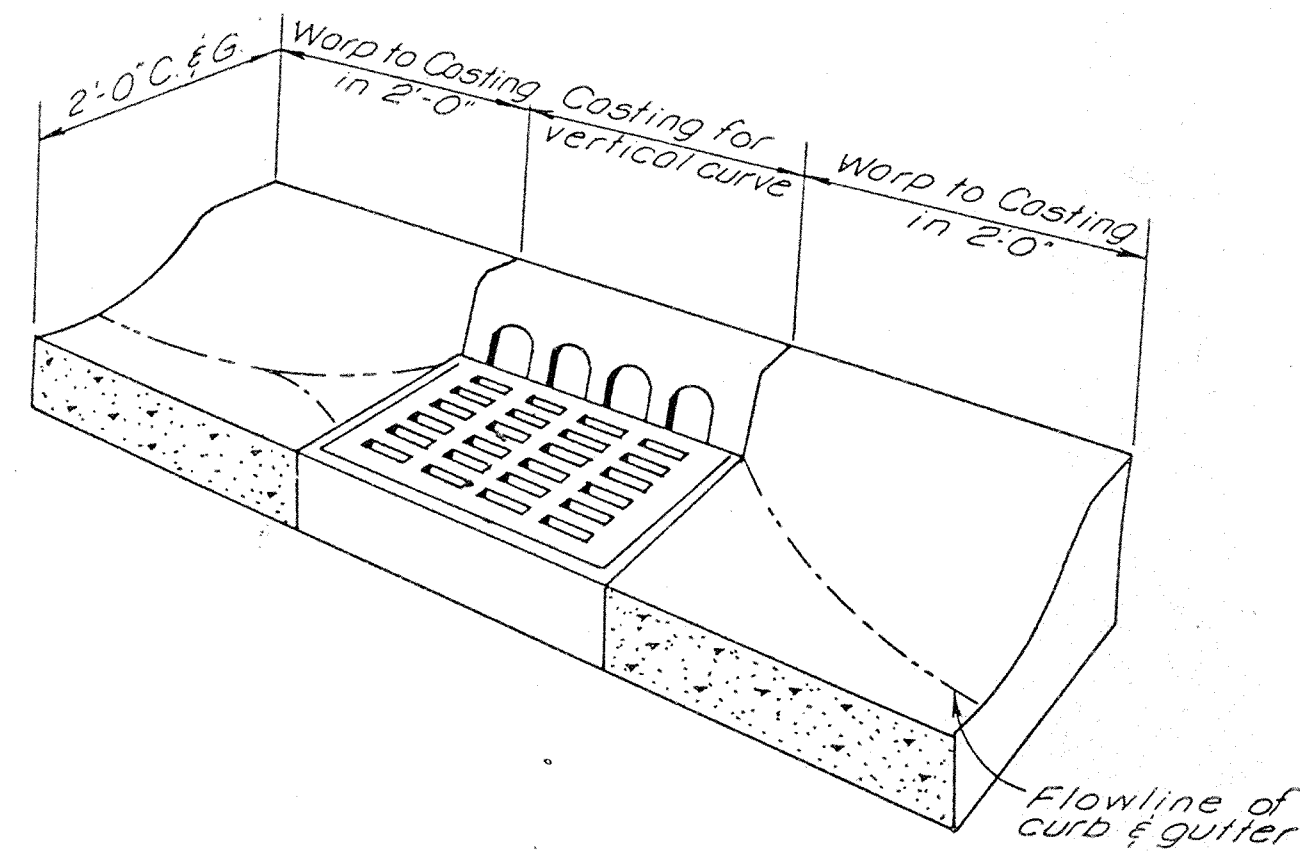
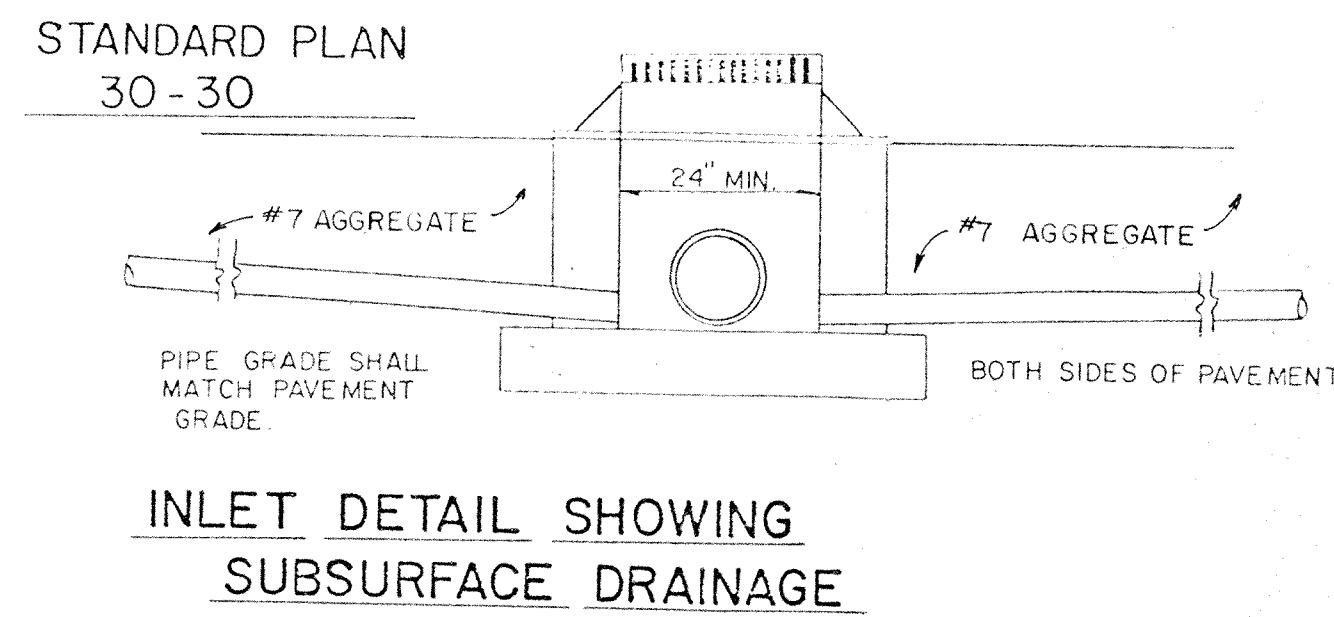
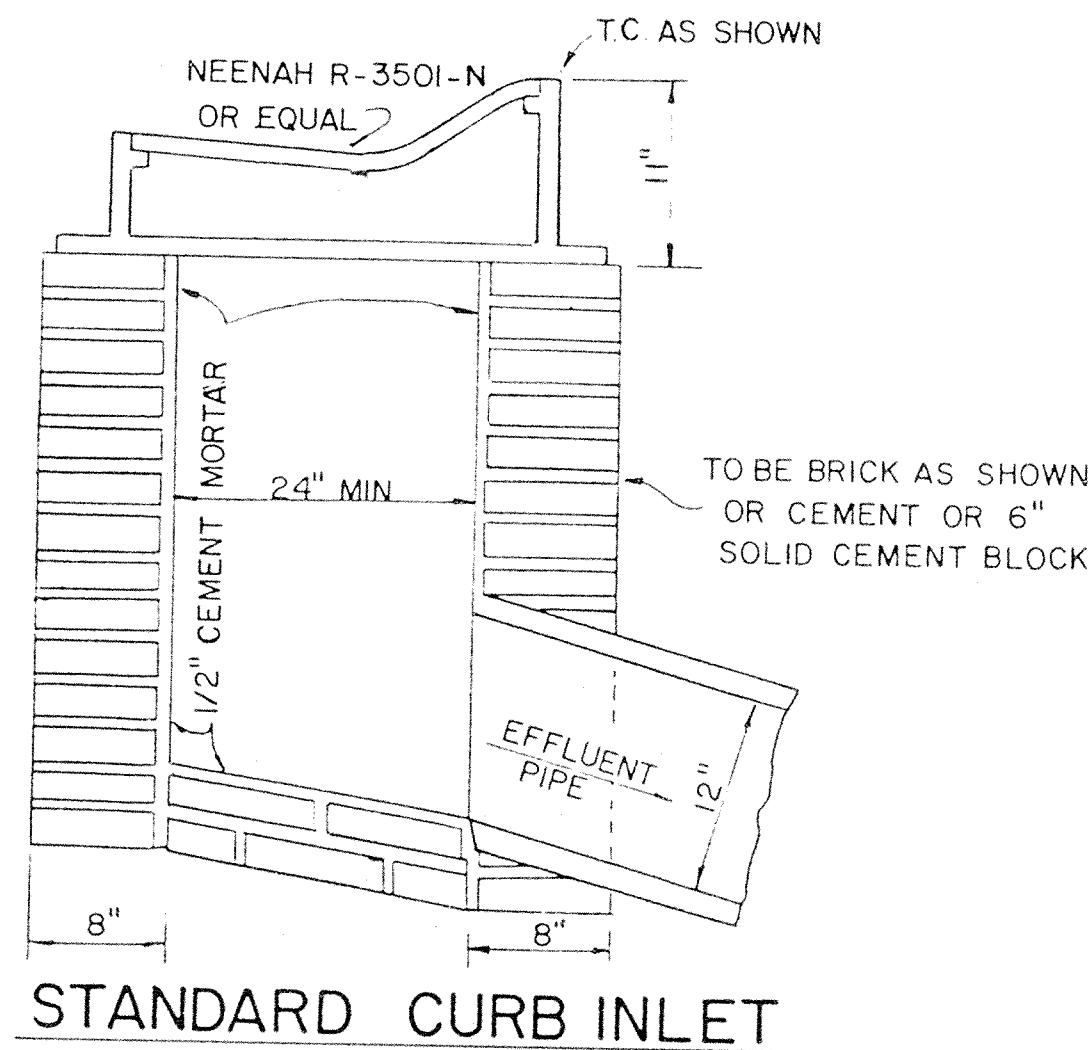
DESIGN BY	DRAWN BY	CHECKED	APPROVED
		HASP	

**Evergreen** FILED  
Development Corporation  
OFFICE OF HAMILTON COUNTY SURVEYOR  
234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
317-353-6161  
DEC 06 1993

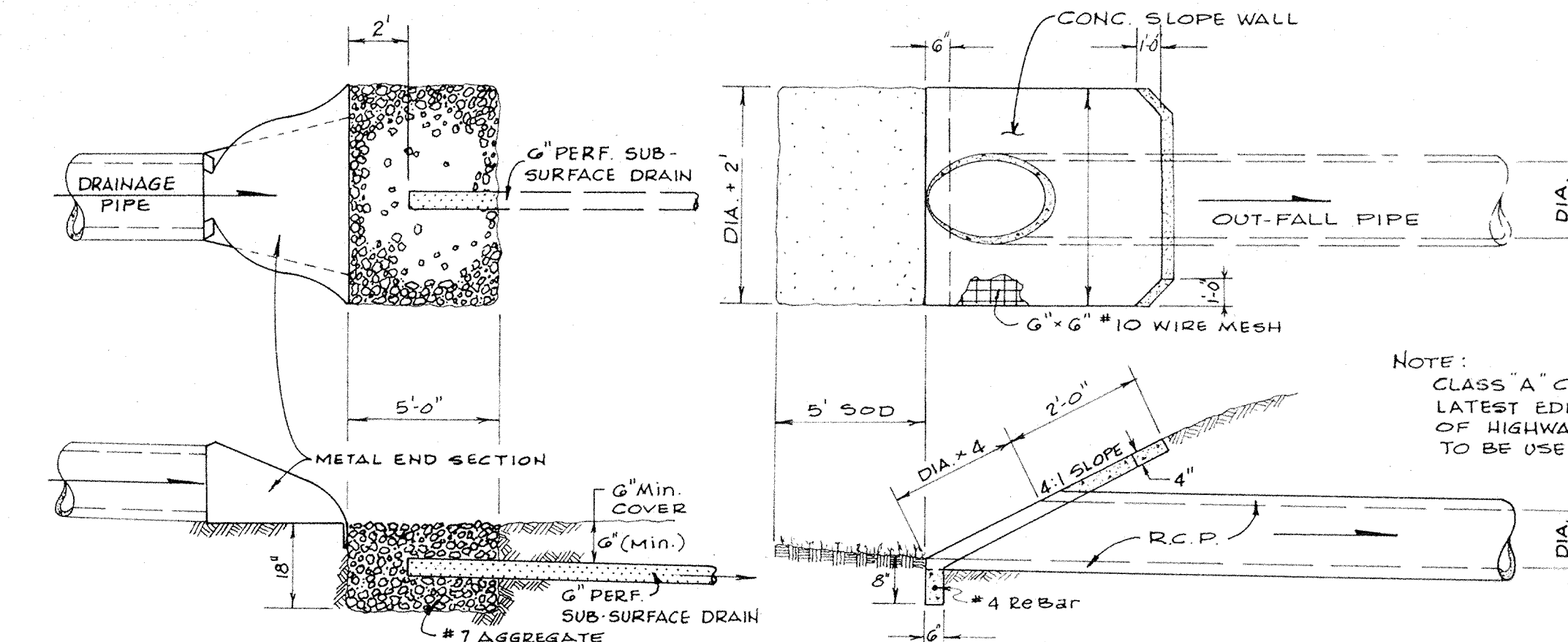
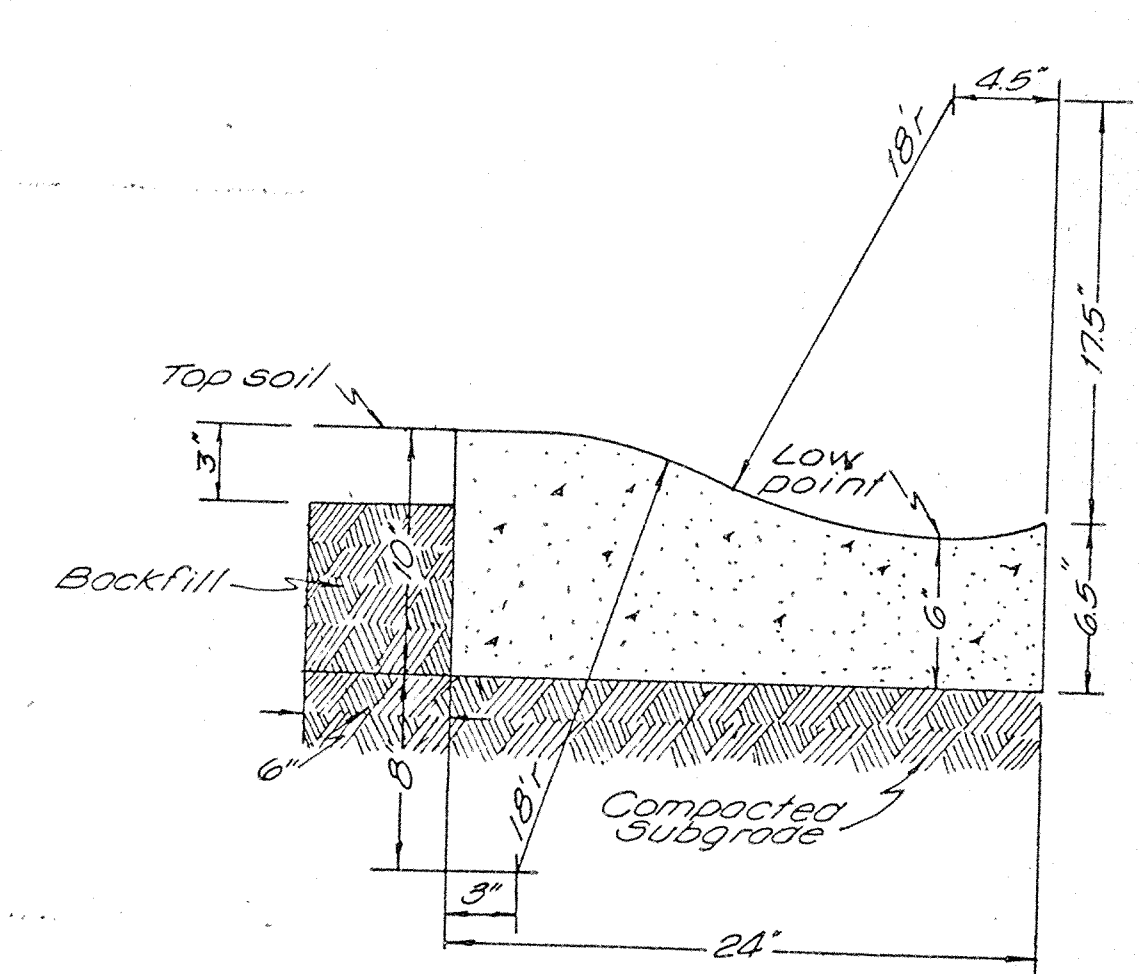
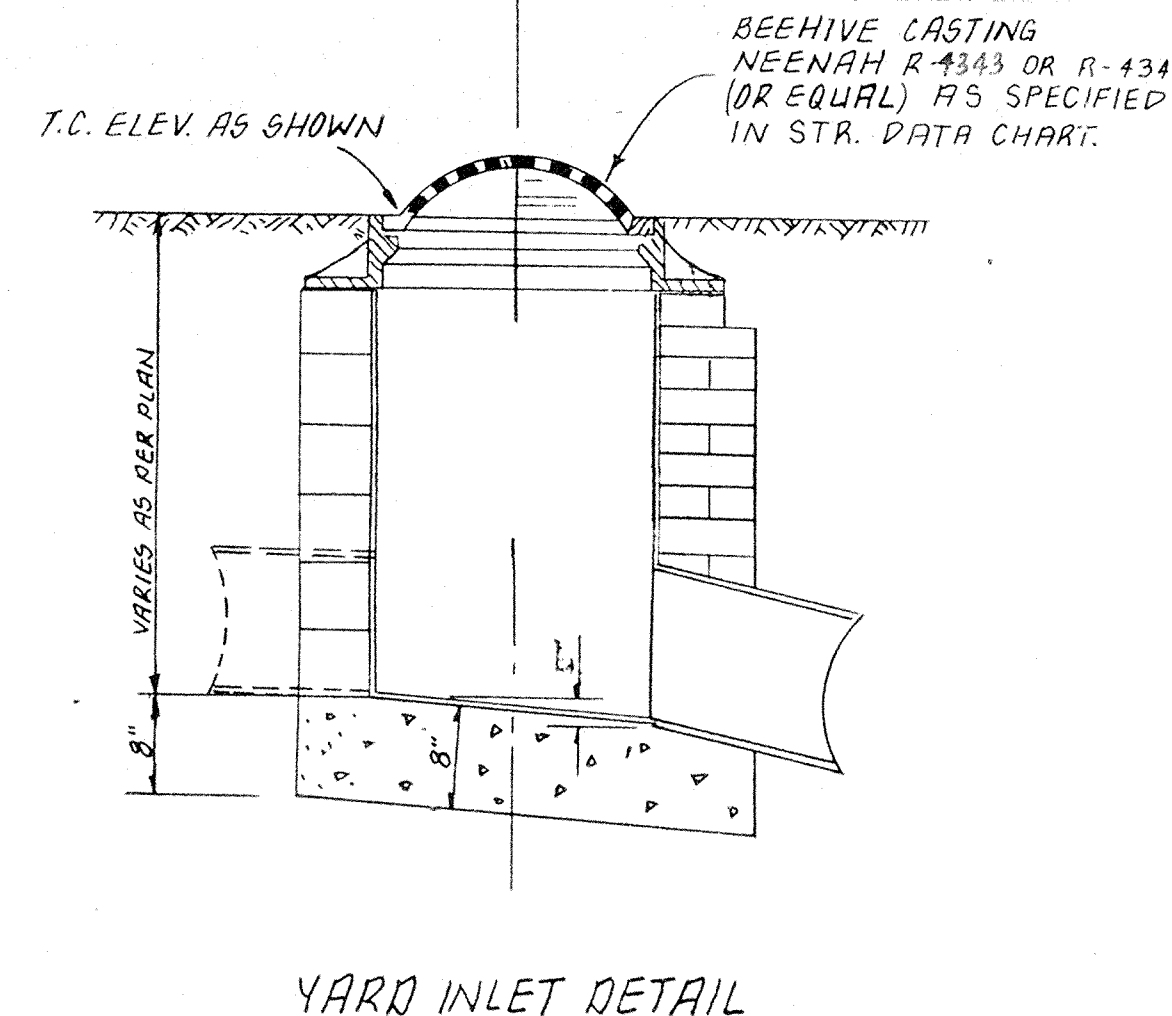
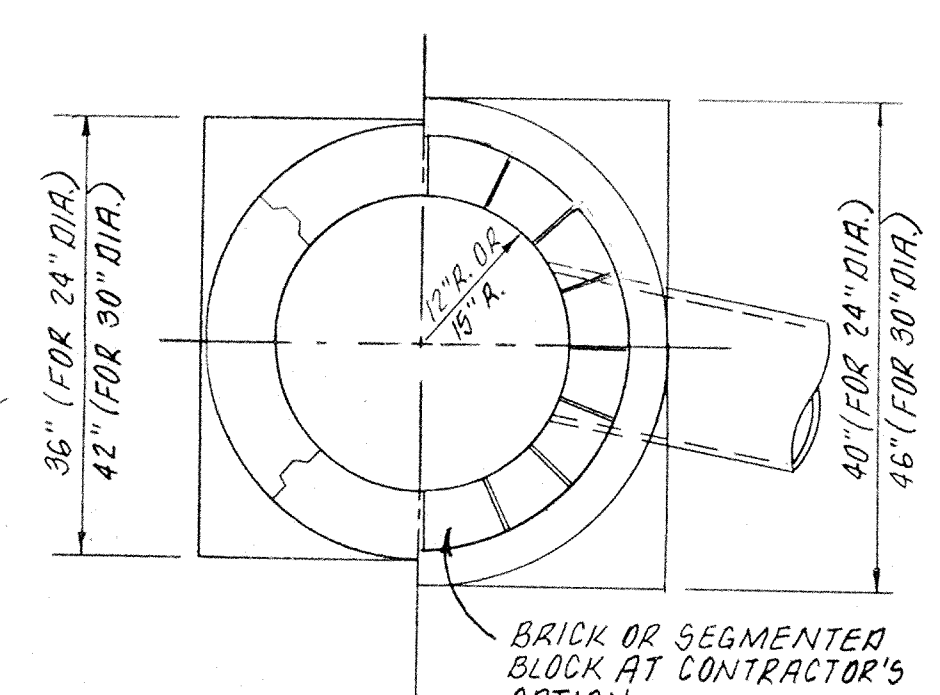
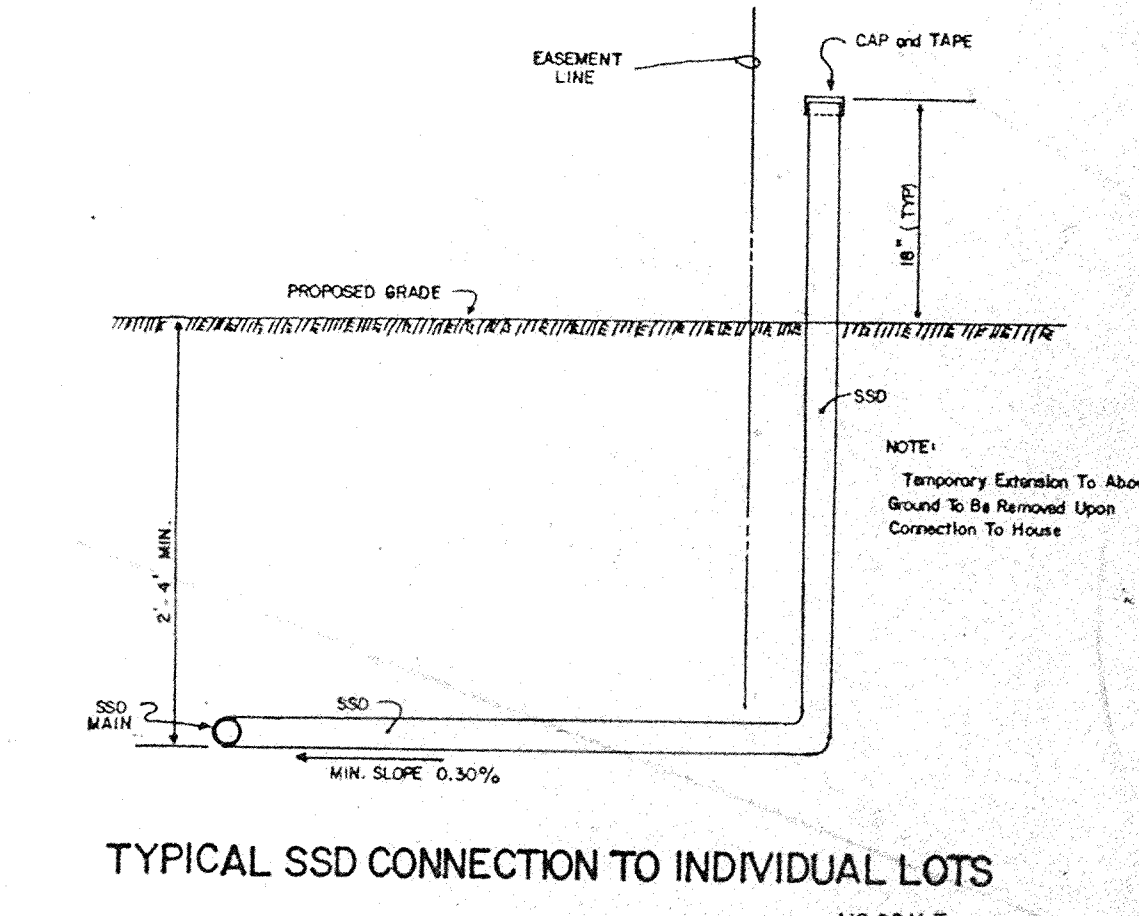
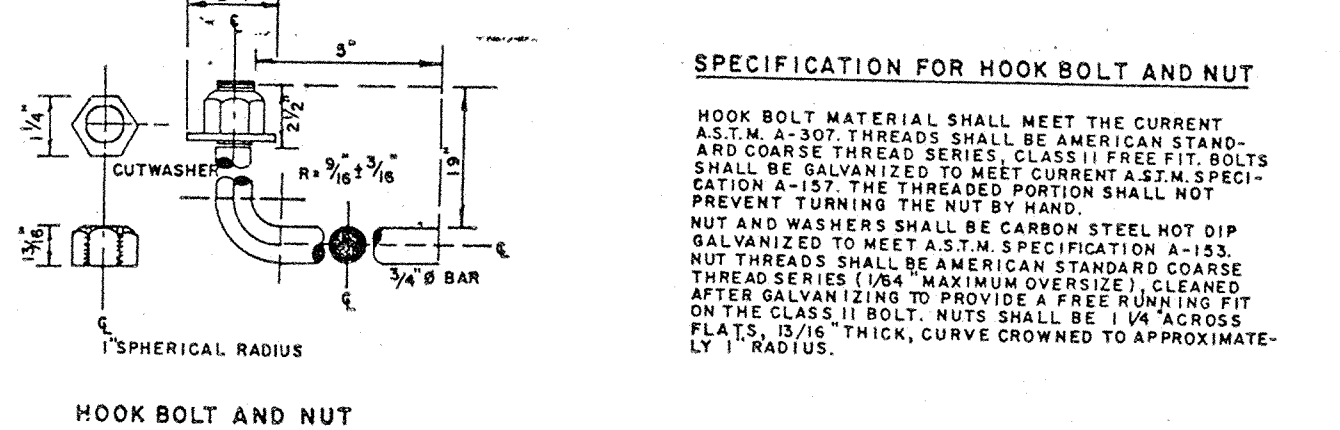


Arthur L. Kasec  
No. S-0529  
STATE OF INDIANA  
LICENSED SURVEYOR

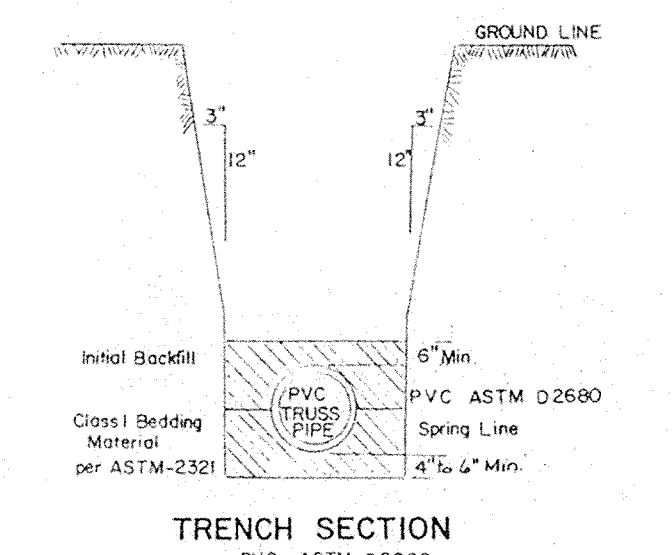
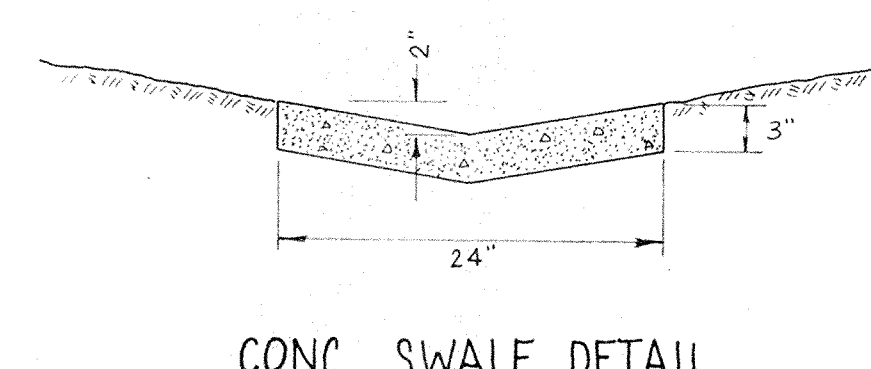
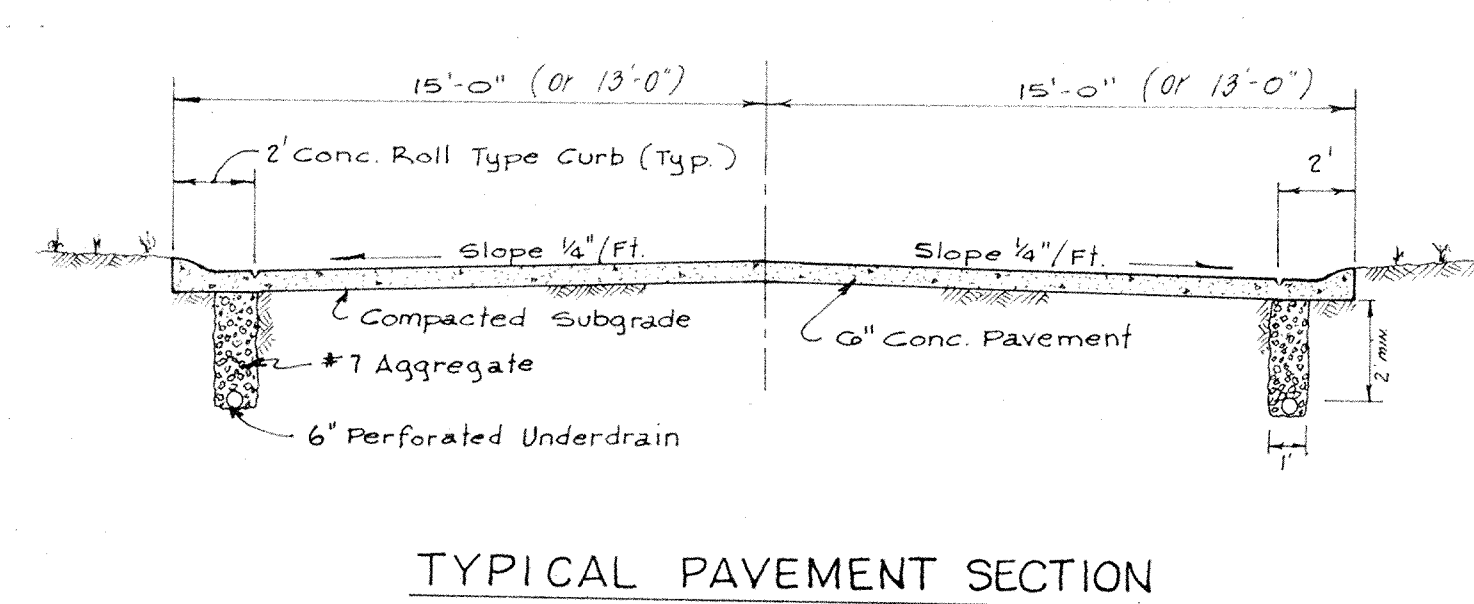
DATE	JUNE 1992
JOB NO.	87-84
SCALE	No Scale
SHEET NO.	12 OF 13



**NOTES:**  
 END SECTIONS AND TOE PLATE ANCHORS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS AS SET OUT IN THE STANDARD SPECIFICATIONS.  
 IF ALUMINUM ALLOY PIPE CULVERT IS FURNISHED, ALUMINUM ALLOY END SECTIONS SHALL ALSO BE USED AND ALL COMPONENT PARTS SHALL BE ALUMINUM ALLOY AS SET OUT IN THE STANDARD SPECIFICATIONS.  
 MULTIPLE PANEL BODIES SHALL HAVE LAP SEAMS WHICH SHALL BE TIGHTLY JOINTED WITH 3/8" GALVANIZED RIVETS OR BOLTS.  
 THE TOE PLATE ANCHOR SHALL BE CONSTRUCTED OF 10 GAUGE GALVANIZED STEEL AND BE REQUIRED ON ALL STEEL PIPE END GALVANIZED BOLTS. COST THEREOF SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR "PIPE END SECTION".  
 WHERE VITRIFIED CLAY CULVERT OR CAST IRON CULVERT PIPE IS USED A "PIPE END SECTION" COMPARABLE TO THAT AS SHOWN FOR METAL OR CONCRETE SHALL BE FURNISHED AND SHALL BE AS APPROVED BY THE ENGINEER.  
 END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "PIPE END SECTION" COMPLETE IN PLACE AND ACCEPTED.  
 PIMPLED CONNECTION BAND MAY BE USED TO CONNECT PIPE END SECTION TO HELICALLY CORRUGATED PIPE.



**NOTE:**  
 FOR SAFETY REASONS:  
 Contractor will be responsible to either use shoring, sheeting or a sewer box on all sewer construction deeper than 5 feet.



**Evergreen Development Corporation**  
 OFFICE OF HAMILTON COUNTY SURVEYOR  
 234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219  
 317.353-6161

**FILED**  
 DEC 06 1993

**ARTHUR L. KARR**

**MISC. DETAILS**

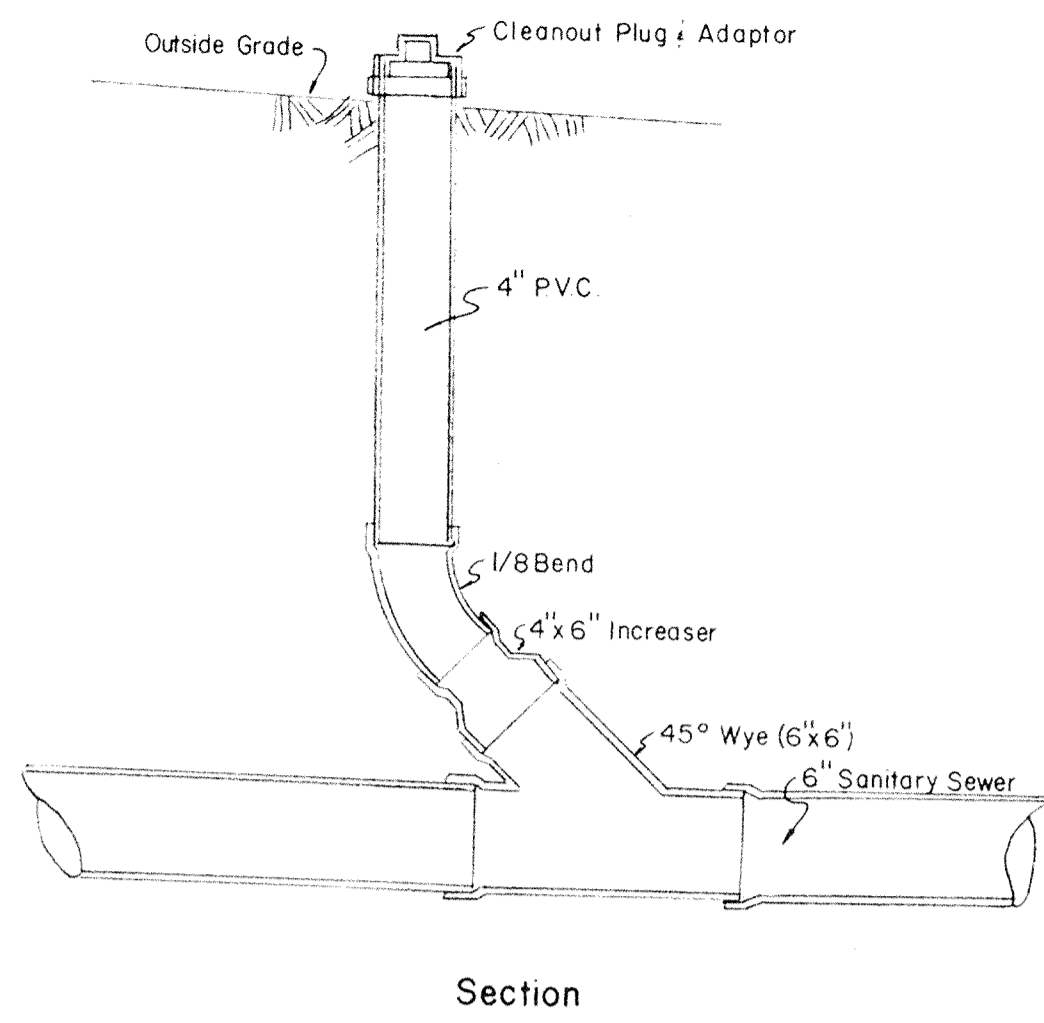
DESIGN BY	DRAWN BY	CHECKED	APPROVED
JK	EM		

DATE: JUNE 1992  
 JOB NO:  
 SCALE: As Shown  
 SHEET NO: 13 of 13

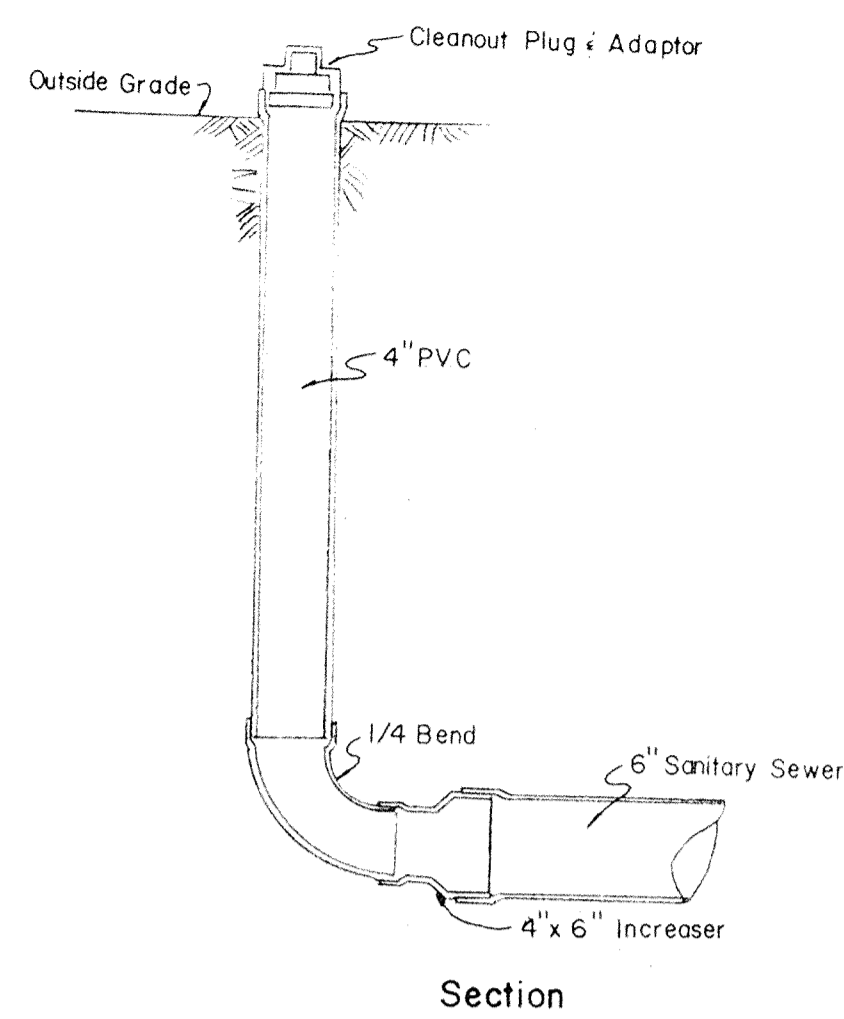
PVC ASTM D2689  
 Class I Bedding Material as per ASTM-2321  
 Bedding and Initial Backfill Material will extend from a minimum of 4" below bottom of pipe to a minimum of 6" above the top of the pipe.

8/13/92 CHANGED 4" SSD TO 6" SSD DUE TO  
 8/8/88 ADDED TRENCH DETAIL  
 2/27/87 CHANGE YARD INLET CASTING NO.  
 2/27/87 ADDED SSD RISER DETAIL & L.C.  
 6/3/86 REVISED TYP. RIVET SECT. CMB

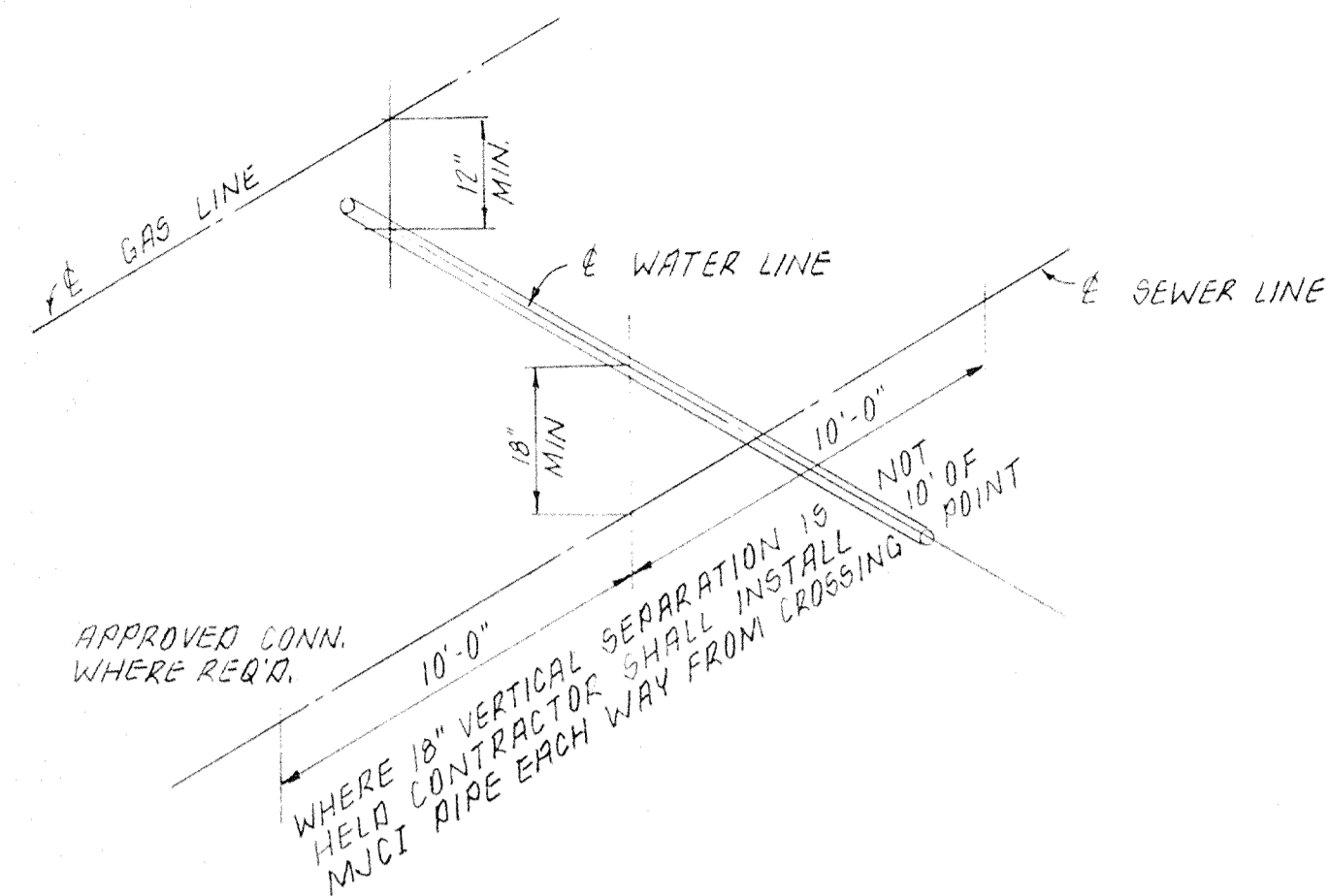
This copy printed from the Digital Archive of the Hamilton County Surveyors' Office.



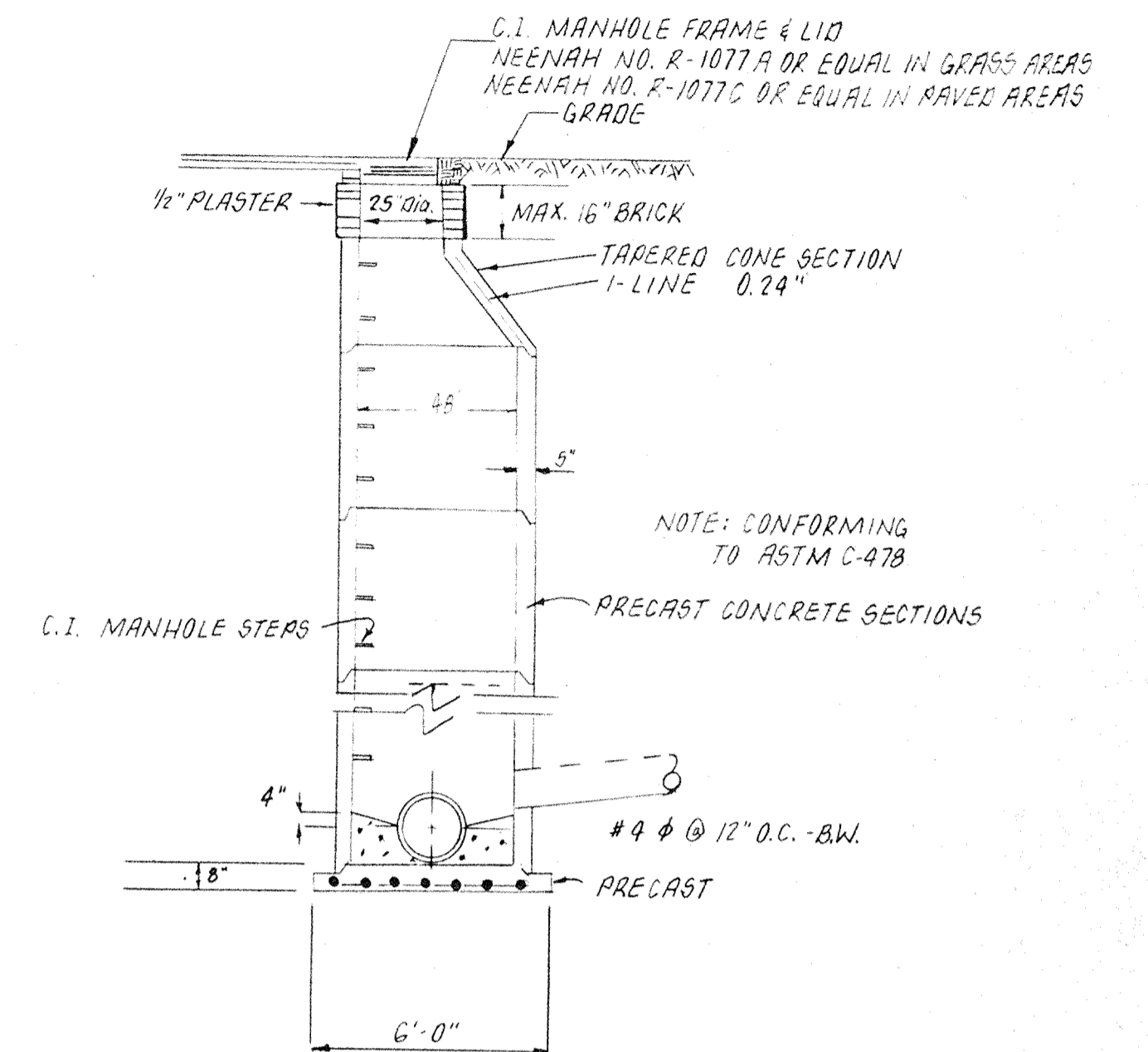
**CLEAN OUT - TYPE I**



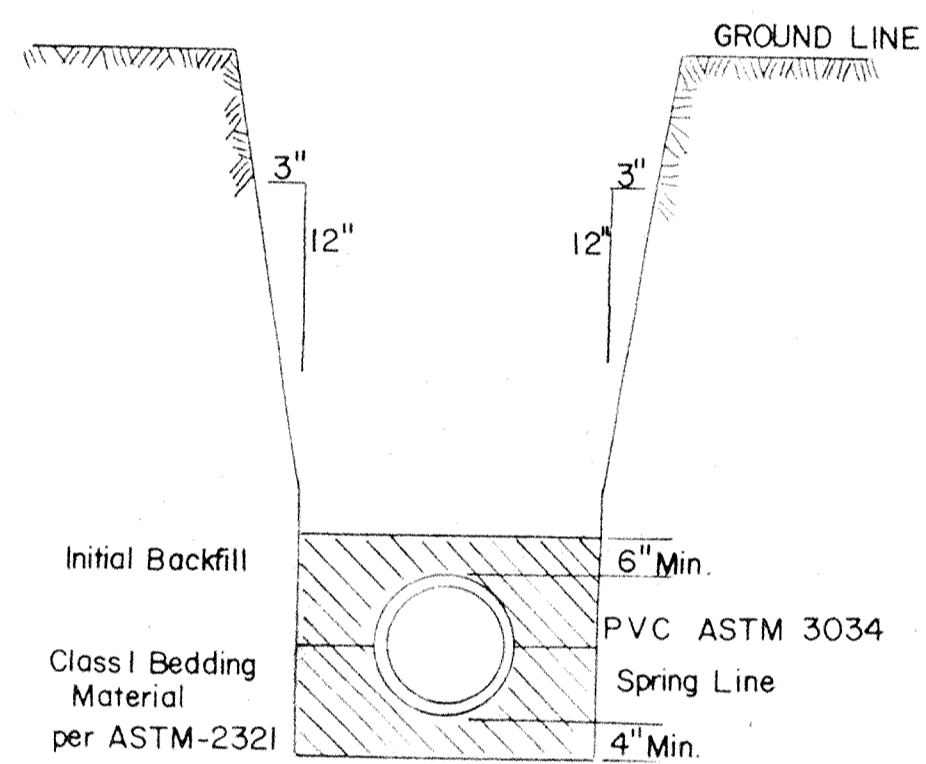
**CLEAN OUT - TYPE II**



**UTILITY CROSSING DETAIL**

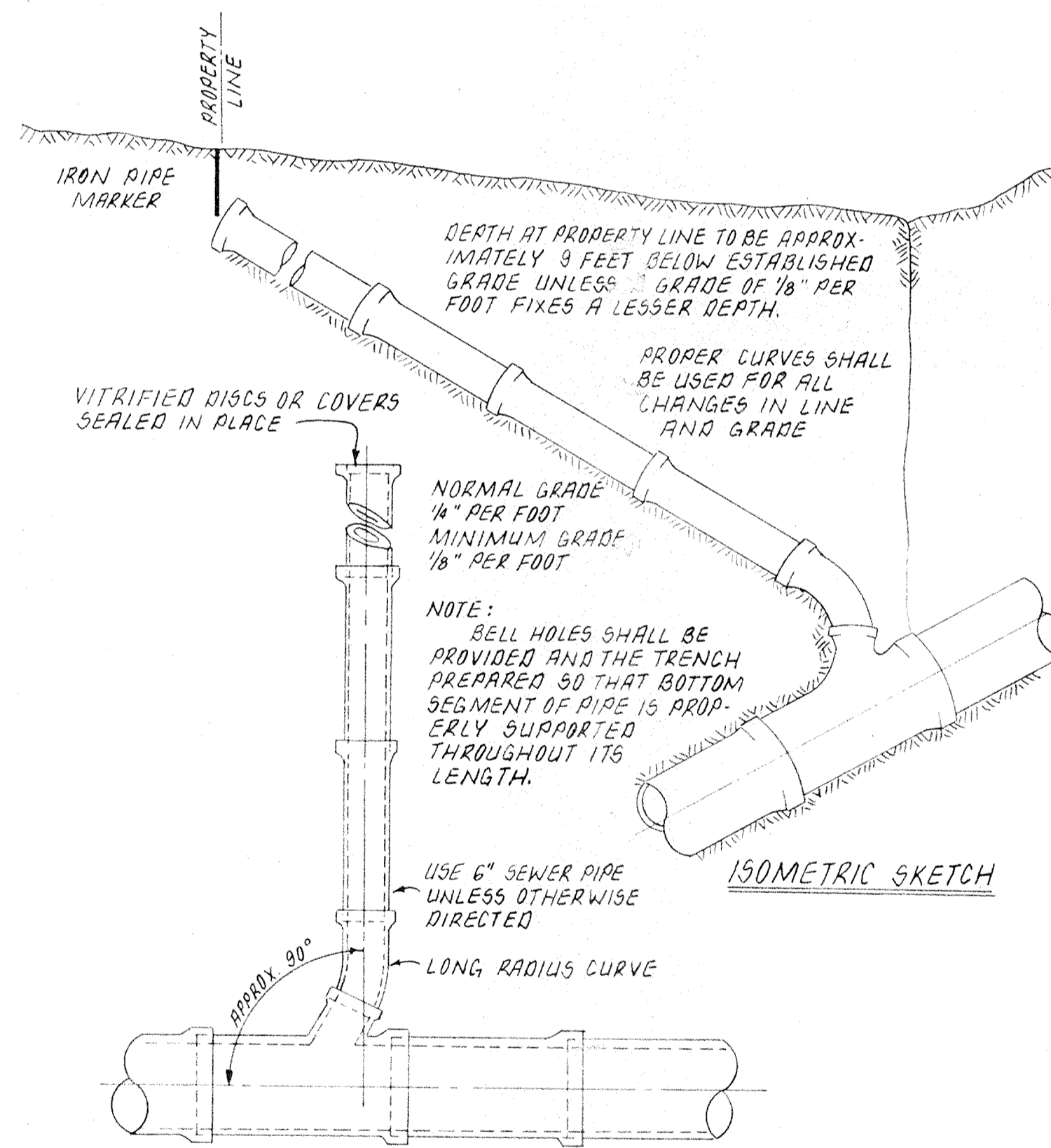


**STANDARD MANHOLE FOR SEWERS LESS THAN 24\"/>**



**TRENCH SECTION**

PVC ASTM 3034 is an acceptable alternative to VCP. If flexible conduit shall be Class I Bedding Material as per ASTM-2321 (I.D.O.T. No. 4 stone is acceptable class I Bedding Material). Bedding and Initial Backfill Material will extend from a minimum of 4\"/>

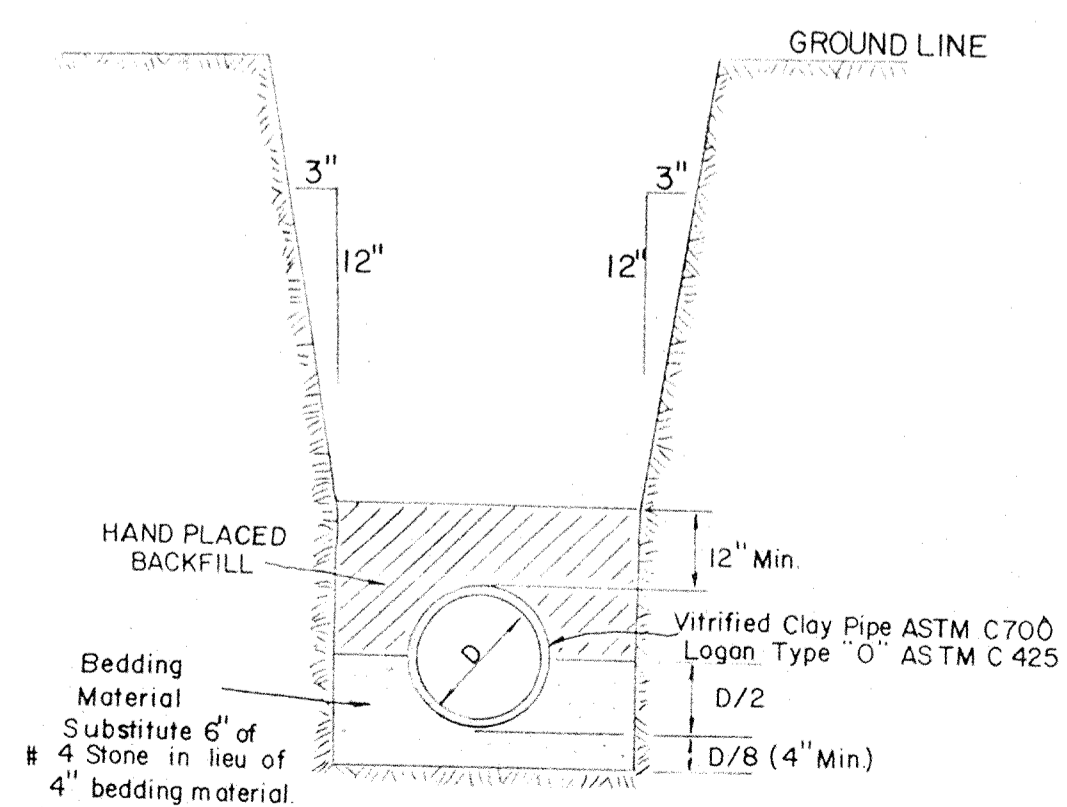


**PLAN VIEW**

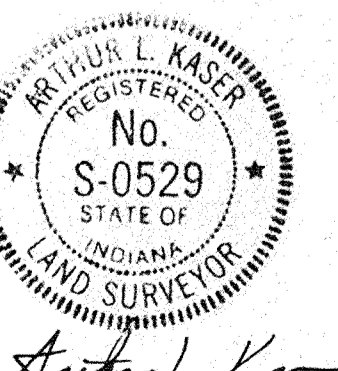
**HOUSE CONNECTION TO MAIN SEWER**

**GENERAL NOTES:**

- Utility Companies
  - Electric - Public Service Indiana General Office 839-9611
  - Water and Sewer - Hamilton Western Utilities 846-6561
  - Telephone - Indiana Bell Telephone Company Buried Cable 800-382-5544
  - Gas - Indiana Gas General Office 926-3351  
Citizens Gas - Attention Max Howard General Office 924-3341  
Underground Location 800-382-5544
- Contractor shall contact all utility companies to have underground facilities located prior to any excavation work.
- Elevations at structures are pipe inverts (Inv) or top of casting (T.C.).
- Infiltration/exfiltration testing shall be performed in accordance with the requirements of the Indiana State Board of Health.
- Granular backfill is required for all utility trenches under paved areas.



**TRENCH SECTION**



DATES AND REVISIONS		TITLE		DATE	
		<b>SEWER DETAILS</b>		JUNE 1992	
		DESIGN BY		JOB NO. 87-84	
		DRAWN BY		SCALE As shown	
		CHECKED		SHEET NO. 13A of 13	
		APPROVED			
<b>Evergreen</b> Development Corporation 234 SOUTH FRANKLIN RD., INDIANAPOLIS, INDIANA 46219 317/353-6161				FILED DEC 06 1993 OFFICE OF HAMILTON COUNTY SURVEYOR	