

Drain: HUNTERS CREEK SOUTH DRAIN **Drain #:** 188
Improvement/Arm: ROHRER MEADOWS-SECTION 1A, 1B, 2
Operator: JPH **Date:** 12-31-03
Drain Classification: Urban/Rural **Year Installed:** 1989

GIS Drain Input Checklist

- Pull Source Documents for Scanning JAA 12-31
- Digitize & Attribute Tile Drains N/A
- Digitize & Attribute Storm Drains JAA 1-2
- Digitize & Attribute SSD JAA 1-2
- Digitize & Attribute Open Ditch N/A
- Stamp Plans JAA 1-2
- Sum drain lengths & Validate JAA 1-2
- Enter Improvements into Posse JAA 1-2
- Enter Drain Age into Posse _____
- Sum drain length for Watershed in Posse _____
- Check Database entries for errors JAA 1-2



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

776-9626

942 Maple Avenue

Noblesville, Indiana 46060

April 16, 1992

July 20 9:00 AM

To: Hamilton County Drainage Board

Re: Hunters Creek South Drain
Rohrer Meadows Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Rohrer Meadows Arm, Hunters Creek South Drain. This arm consist of Rohrer Meadows Sections 1A, 1B and 2. I have reviewed the submittals and petition and have found each to be in proper form.

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

6" SSD	4370'	21" RCP	335'
12" RCP	793'	24" RCP	770'
15" RCP	241'	27" RCP	302'
18" RCP	834'		

The total length of the drain will be 7665 feet.

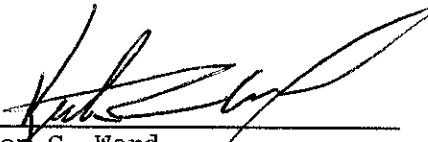
The pond located in the rear of lots 22, 23, and 24 will not be maintained as part of the regulated drain. The maintenance of the pond is the responsibility of those lot owners. The Board will however reserve the right to maintain the inlet and outlet of the pond and to ensure the required storage capacity is retained.

The SSD which is to become a part of the regulated drain is that portion of the main line located within easements and road right-of-way. Laterals will not be maintained as part of the regulated drain.

The offsite improvements include the installation of 509' of 6" SSD which replaces the existing 10" tile mentioned in my May 11, 1984 report for Hunters Creek South Section 1. Also replaced is the existing 15" RCP along Rohrer Road between Nevelle Lane and the detention area. This was replaced by 205' of 24" RCP. Neither of these are represented in the total length above as they are replacements of an existing portion of the regulated drain.

I have reviewed the plans and believe and drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I recommend a maintenance assessment of \$25.00 per lot, \$3.00 per acre for roadways. With this assessment the total annual assessment for the drain for this section will be 1,106.82.

I recommend a hearing be set for July 1992.



Kenton C. Ward,
Hamilton County Surveyor

KCW/jh

STATE OF INDIANA)
)
COUNTY OF HAMILTON)

TO: HAMILTON COUNTY DRAINAGE BOARD
% Hamilton County Surveyor, Courthouse, Noblesville, IN 46060

HAMILTON COUNTY
SECRETARY
SEP 18 1989

In the matter of Rohrer Meadows Subdivision,
Section One and Two Drain Petition.

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in Rohrer Meadows, a subdivision in Hamilton County, Indiana. The general route of such drainage shall be in existing easements and along public roads as shown in the plans on file in the Surveyor's Office.

Petitioner believes that the cost, damages and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land likely to be benefited thereby. Petitioner believes the proposed improvements will:

- (a) improve public health
- (b) benefit a public street
- (c) be of public utility


Petitioner agrees to pay the cost of construction of the drainage system and requests periodic maintenance assessments by the Board thereafter.

The Petitioner also agrees to the following:

1. To provide the Drainage Board a Performance Bond for the portion of the drainage system which will be made a regulated drain. The bond will be in the amount of 100% of the Engineers estimate. The bond will be in effect until construction of 100% of the system is completed and so certified by the Engineer.
2. The Petitioner shall retain an Engineer throughout the construction phase. At completion of the project the Petitioner's Engineer shall certify that the drainage system which is to be maintained as a regulated drain has been constructed as per construction plans.

3. The Petitioner agrees to request in writing to the County Surveyor any changes from the approved plan and must receive written authorization from the County Surveyor prior to implementation of the change. All changes shall be documented and given to the Surveyor to be placed in the Drain File.
4. The Petitioner shall instruct his Engineer to provide a reproducible print on a 24" x 36" mylar of the final design of the Drainage System. This shall be submitted to the County Surveyor prior to the release of the Performance Bond.
5. The Petitioner shall comply with the Erosion Control Plan as as specified on the construction plans. Failure to comply with the Erosion Control Plan shall be determined by the Board as being an obstruction to the drainage system. The County Surveyor shall immediately install or repair the needed measures at Petitioners cost as per IC 36-9-27-46.

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


Signed _____
V.P. The C.P. Morgan Co., Inc.

Mark Boyce
Printed Name _____

Signed _____

Printed Name _____

RECORDED OWNER(S) OF LAND INVOLVED

DATE _____

Amendment

INB National Bank
 One Indiana Square
 Indianapolis, Indiana 46266



INB

SWIFT Address: INBI US 44 Telex Number 205615 Phone: (317) 266-6153

Date November 13, 1989cw

Amendment To: IRREVOCABLE LETTER OF CREDIT	Credit Number Issuing Bank SB035000	Credit Number Advising Bank
Issuing/Advising Bank	Applicant The C.P. Morgan Co., Inc. 1980 E. 116th Street, Suite 125 Carmel Indiana 46032	
Beneficiary Hamilton County Commissioners/ Drainage Board 942 Maple Avenue Noblesville Indiana 46060	Original Amount U.S.D. \$77,000.00	


The Above Mentioned Credit is Amended As Follows: (Please Be Guided By Instructions Marked X)
 amendment number one

- Expiration Date Extended To
- Latest Shipping Date Extended To
- Amount Increased By
- Description Of Merchandise To Read

Rohrer Meadows

- Other
 Beneficiary name amended to read:
 Hamilton County Commissioners/Drainage Board

If you do not agree with this amendment, notification by mail or cable must be received by us no later than 15 days after the date of this amendment.

This Amendment Is To Be Considered As Part Of The Above Credit And Must Be Attached Thereto: <input type="checkbox"/> Confirmation Of Our Telephone Conversation With On _____ Yours Faithfully,  _____ Authorized Signature	Advising Bank Notification:
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This copy printed from the Digital Archive of the Hamilton County Surveyor's Office; One Hamilton Co. Square, Ste. 188, Noblesville, In 46060
 Place, Date, Name And 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) ICC Publication 400"

CERTIFICATE OF COMPLETION AND COMPLIANCE

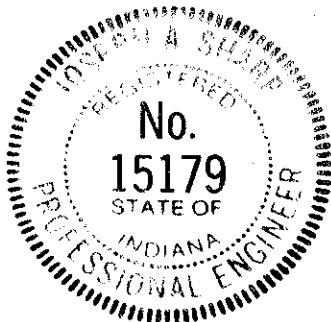
TO: COUNTY SURVEYOR'S OFFICE, HAMILTON COUNTY
ATTN: Mr. Kenton Ward
FROM: Paul I. Cripe, Inc., Engineers
SUBJECT: Rohrer Meadows, Section 1A

I hereby certify that

- 1) I am familiar with the plans and specifications for the above referenced project,
- 2) I have personally observed the completion of the above referenced project, and
- 3) To the best of my knowledge, information and belief, the above referenced project has been performed and completed in conformity with all plans and specifications, except _____

Signature Joseph A. Sharp Date January 3, 1990
Type or Printed Name Joseph A. Sharp
Business Address 7172 Graham Road
Indianapolis, IN 46250
Telephone 317-842-6777

Seal



Indiana Registration Number

15179

ADM:t1
1/13/84

CERTIFICATE OF COMPLETION AND COMPLIANCE

TO: COUNTY SURVEYOR'S OFFICE, HAMILTON COUNTY
ATTN: Mr. Kenton Ward
FROM: Paul I. Cripe, Inc., Engineers / Joe Sharp
SUBJECT: ROHRER MEADOWS SUBDIVISION, SECTION 1B

I hereby certify that

- 1) I am familiar with the plans and specifications for the above referenced project,
- 2) I have personally observed the completion of the above referenced project, and
- 3) To the best of my knowledge, information and belief, the above referenced project has been performed and completed in conformity with all plans and specifications, except _____

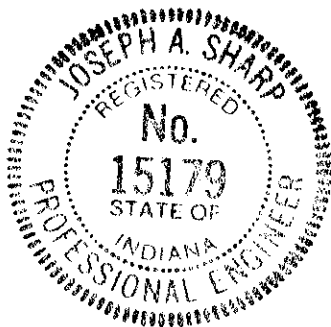
Signature Joseph A. Sharp Date June 3, 1992

Type or Printed Name Joseph A. Sharp

Business Address 7172 Graham Road
Indianapolis, IN 46250

Telephone 842-6777

Seal



Indiana Registration Number

15179

ADM:t1
1/13/84

CERTIFICATE OF COMPLETION AND COMPLIANCE

TO: COUNTY SURVEYOR'S OFFICE, HAMILTON COUNTY
ATTN: Mr. Kenton Ward
FROM: Paul I. Cripe, Inc., Engineers / Joe Sharp
SUBJECT: ROHRER MEADOWS SUBDIVISION, SECTION 2

I hereby certify that

- 1) I am familiar with the plans and specifications for the above referenced project,
- 2) I have personally observed the completion of the above referenced project, and
- 3) To the best of my knowledge, information and belief, the above referenced project has been performed and completed in conformity with all plans and specifications, except _____

Signature

Joseph A. Sharp

Date June 3, 1992

Type or Printed Name

Joseph A. Sharp

Business Address

7172 Graham Road

Indianapolis, IN 46250

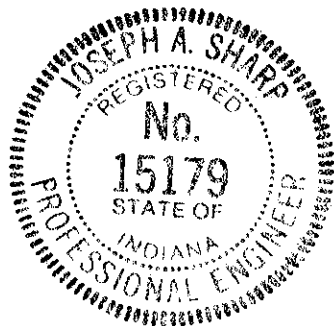
Telephone

842-6777

Seal

Indiana Registration Number

15179



ADM:t1
1/13/84



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square August 16, 1994
Noblesville, Indiana 46060-2230

TO: Hamilton County Drainage Board

RE: Hunter's Creek South Drain-Rohrer Meadows Sections 1a, 1b, 2

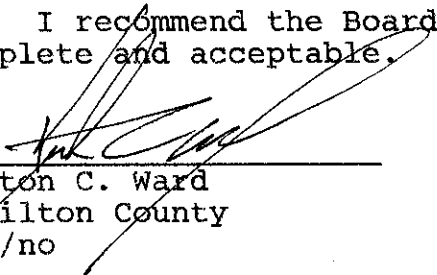
Attached are as-builts, certificate of completion and compliance and other information for Rohrer Meadows Sections 1a, 1b, 2. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction of the drain there were not any significant changes made to the plans submitted with my report dated April 16, 1992. Therefore, the length of the drain remains at 7665 feet.

The non-enforcement of easement was approved for all three (3) sections, by the Board at it's meeting on July 20, 1992.

The bond or letter of credit from INB, number 035000, dated November 8, 1989, in the amount of \$77,000.00, has been released.

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


Kenton C. Ward
Hamilton County
KCW/no

CONSTRUCTION PLANS FOR ROHRER MEADOWS SECTIONS ONE-A, ONE-B & TWO

Rohrer Meadows
Hamilton Co.'s jurisdiction
on drainage

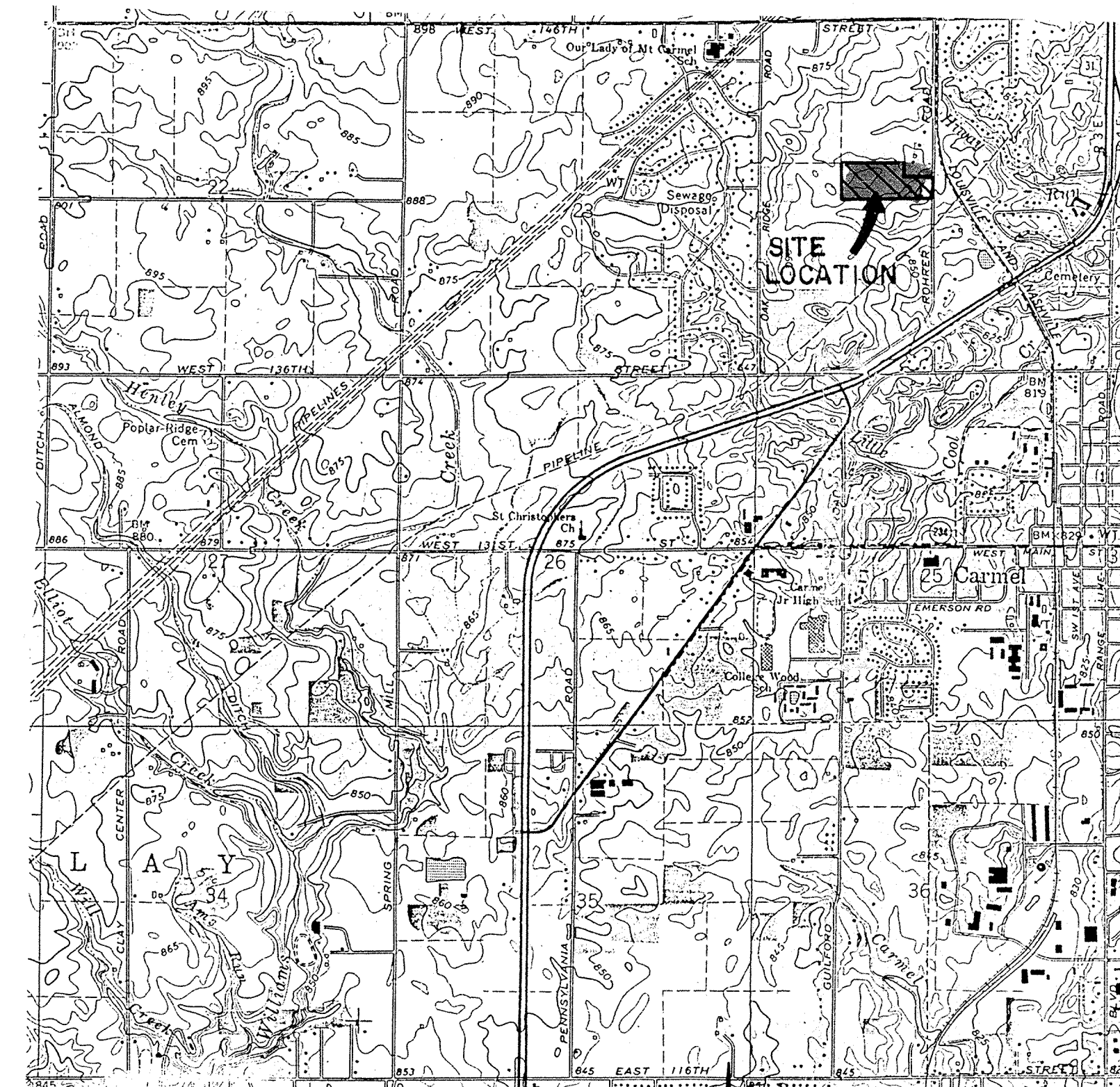
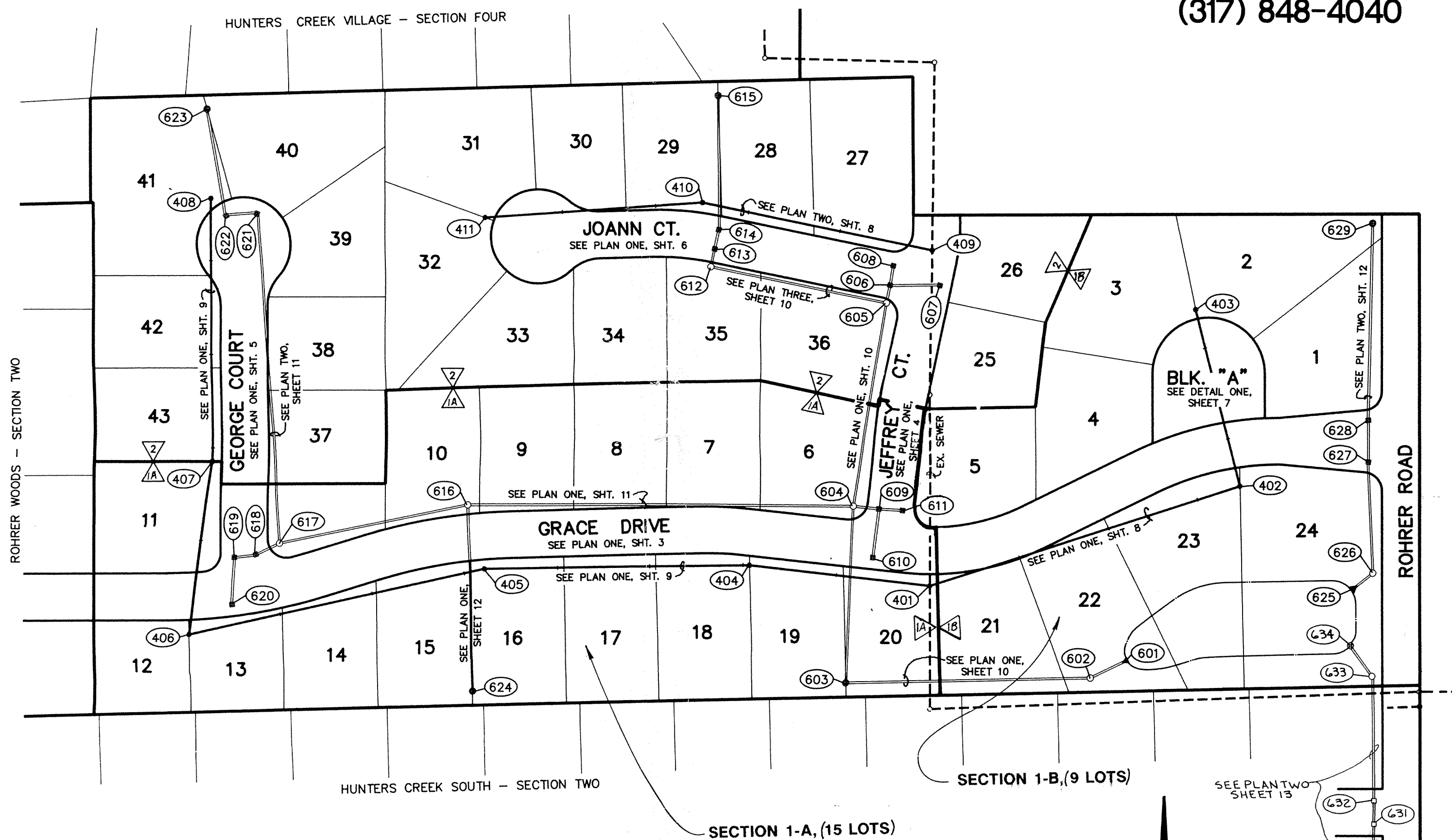
ROHRER
MEADOWS

DEVELOPED BY:

C. P. MORGAN CO., INC.
1980 116th STREET, SUITE 125
CARMEL, INDIANA 46032
(317) 848-4040

FILED
NOV 10 89
OFFICE OF HAMILTON COUNTY SURVEYOR

NOV 10 89



INDEX	
SHT	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	STREET - PLAN & PROFILE
4	STREET - PLAN & PROFILE
5	STREET - PLAN & PROFILE
6	STREET - PLAN & PROFILE
7	STREET DETAIL
8	SANITARY SEWER - PLAN & PROFILE
9	SANITARY SEWER - PLAN & PROFILE
10	STORM SEWER - PLAN & PROFILE
11	STORM SEWER - PLAN & PROFILE
12	STORM SEWER - PLAN & PROFILE
13	OFFSITE STORM SEWER - PLAN & PROFILE
14	EROSION CONTROL PLAN
15	WATER MAIN - DETAILS & SPECS.
16	STANDARD DETAILS
17	STANDARD SPECIFICATIONS

BENCHMARKS	

REVISIONS	
9-8-89	REV. PER T.A.C.
10-9-89	ADDITIONAL REV. PER T.A.C. & MISC. REV. PER DRAFT CHK.
10-11-89	REV. SEC. 1 - DIVIDE INTO 500' x 14' x 18' REV. SHTS. 1, 3, 4, 5, 8, 9, 10, 11, 14
10-12-89	REV. STREET GRDS & STORM INVERTS @ INTERSECTION OF JEFFREY CT & JOANN CT.
10-20-89	REV. PER T.A.C. (SHTS. 2 & 6)
11-9-89	REV. STR. GRDS. (SHTS. 2, 3 & 5)

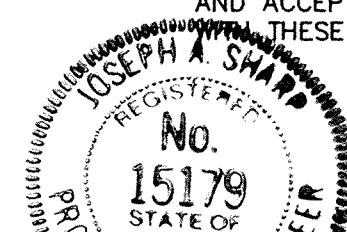
SITE WORK GENERAL NOTES AND SPECIFICATIONS

NOTICES AND PERMITS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
- B. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION.
- C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH RESPECTIVE UTILITY COMPANIES.
- D. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THE PROJECT; FAILURE TO DO SO MAY RESULT IN REMOVAL AND REPLACEMENT OF THE DEFECTIVE WORK. IT IS RECOMMENDED THAT THE DEVELOPER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
- E. IT IS ESSENTIAL THAT THE WORK TO BE DONE IN CONJUNCTION WITH THIS PROJECT SHALL BE INSTALLED ACCORDING TO THESE SPECIFICATIONS. THE ENGINEER WILL BE REQUIRED TO CERTIFY TO CERTAIN PORTIONS OF THIS PROJECT UPON COMPLETION. THEREFORE, IT IS NECESSARY TO OBTAIN APPROVAL AND ACCEPTANCE BY THE CITY THAT CONSTRUCTION WAS DONE IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.

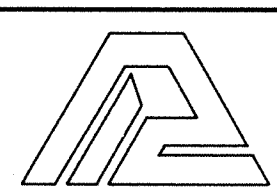
SCALE: 1" = 100'

FILE NAME: RM 89385A-1.dwg



CERTIFIED PROFESSIONAL ENGINEER
Joseph A. Shupe
9-15-89 DATE

REVISIONS	
10-10-89	Divide Sec. 1 into "14' x 18' TRS.



PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

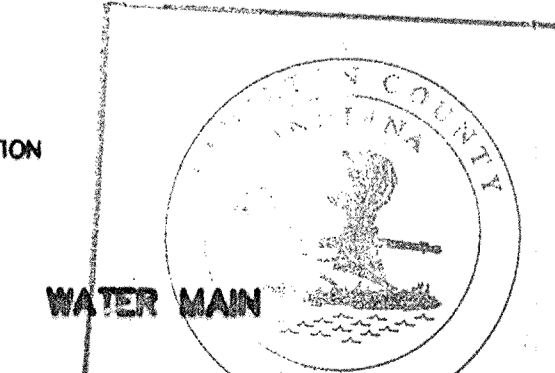
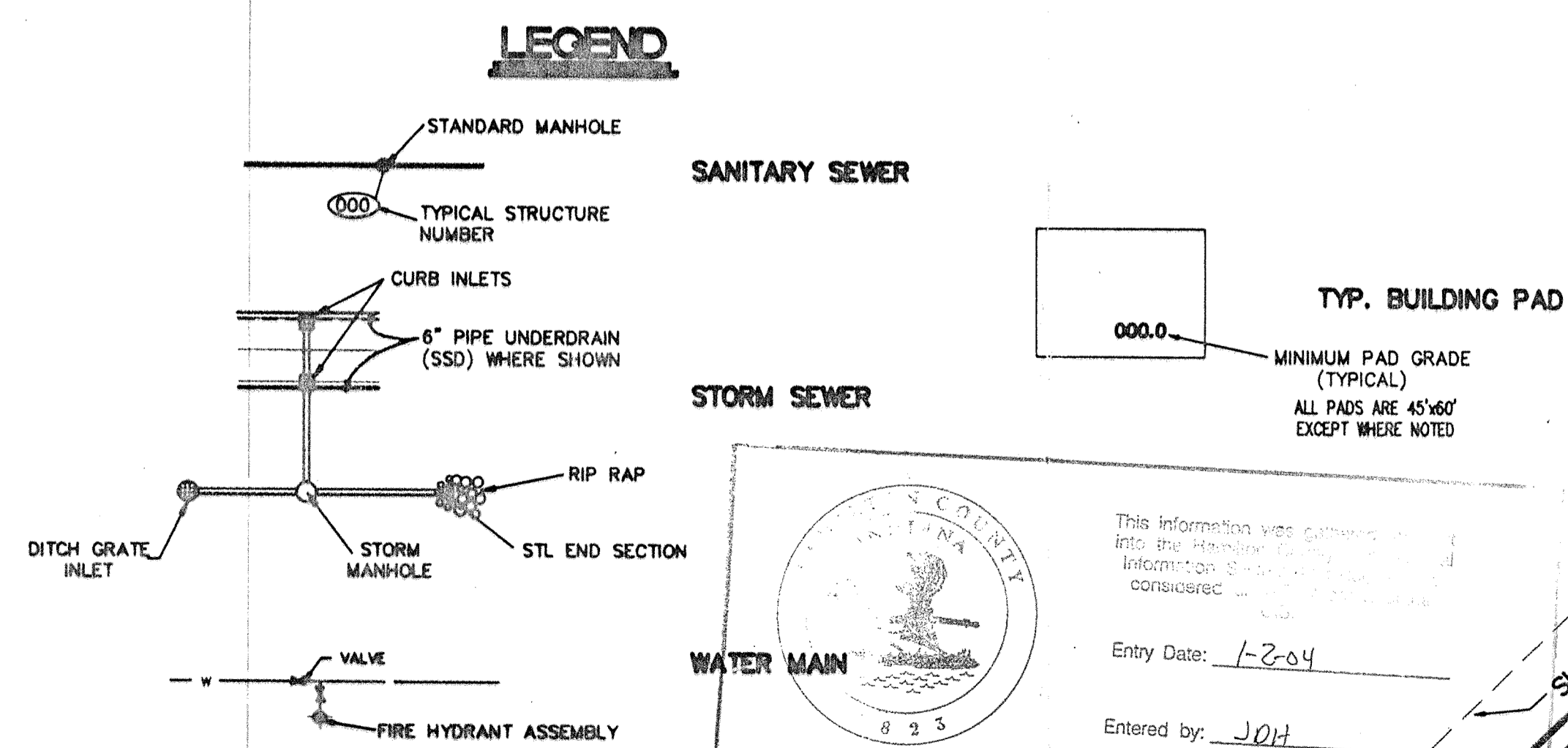
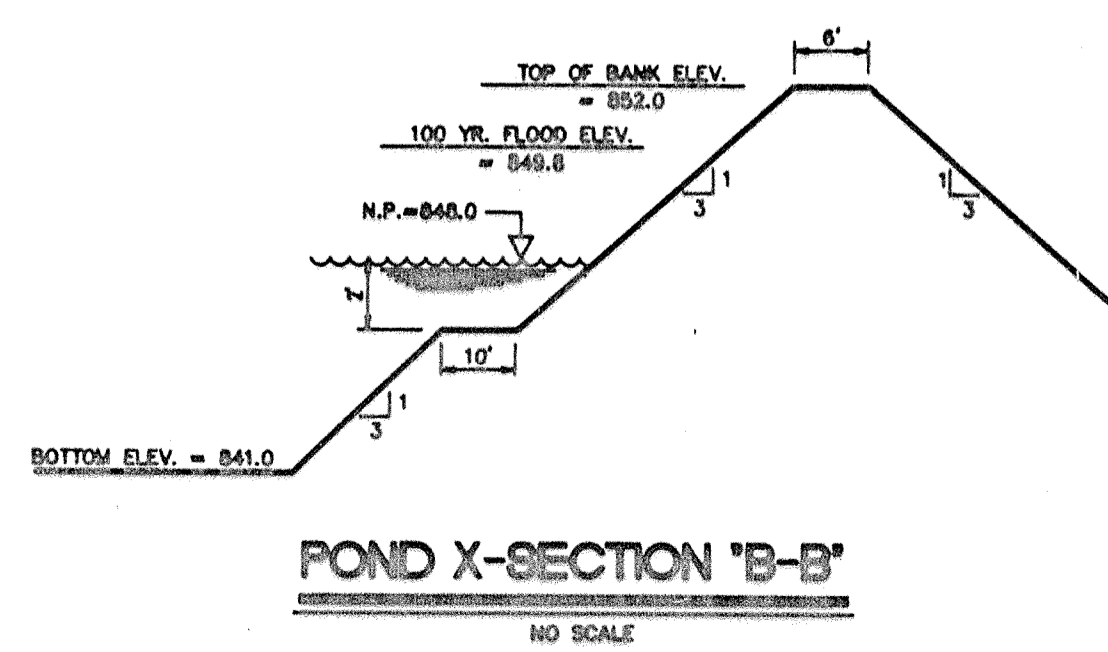
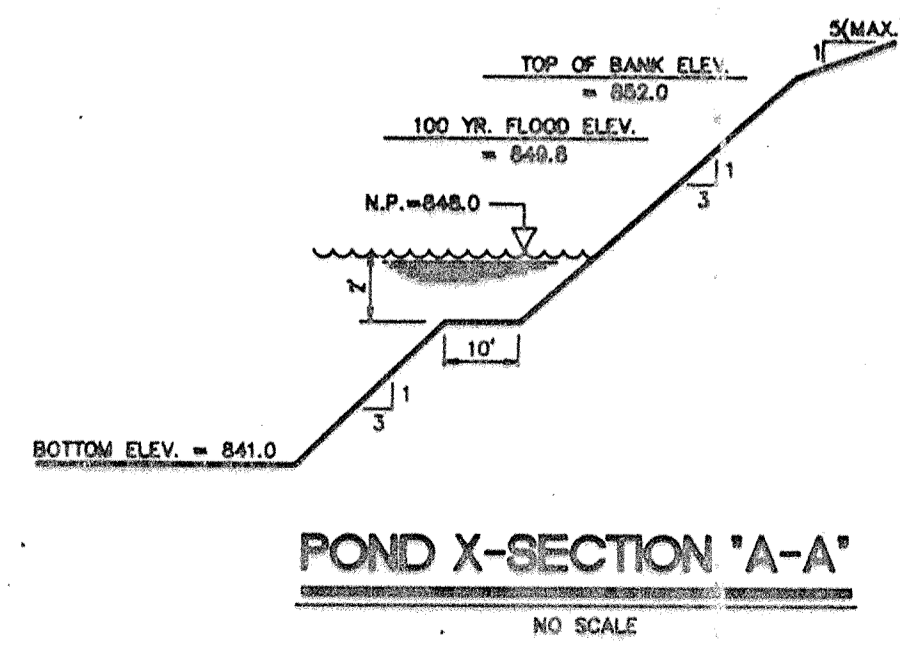
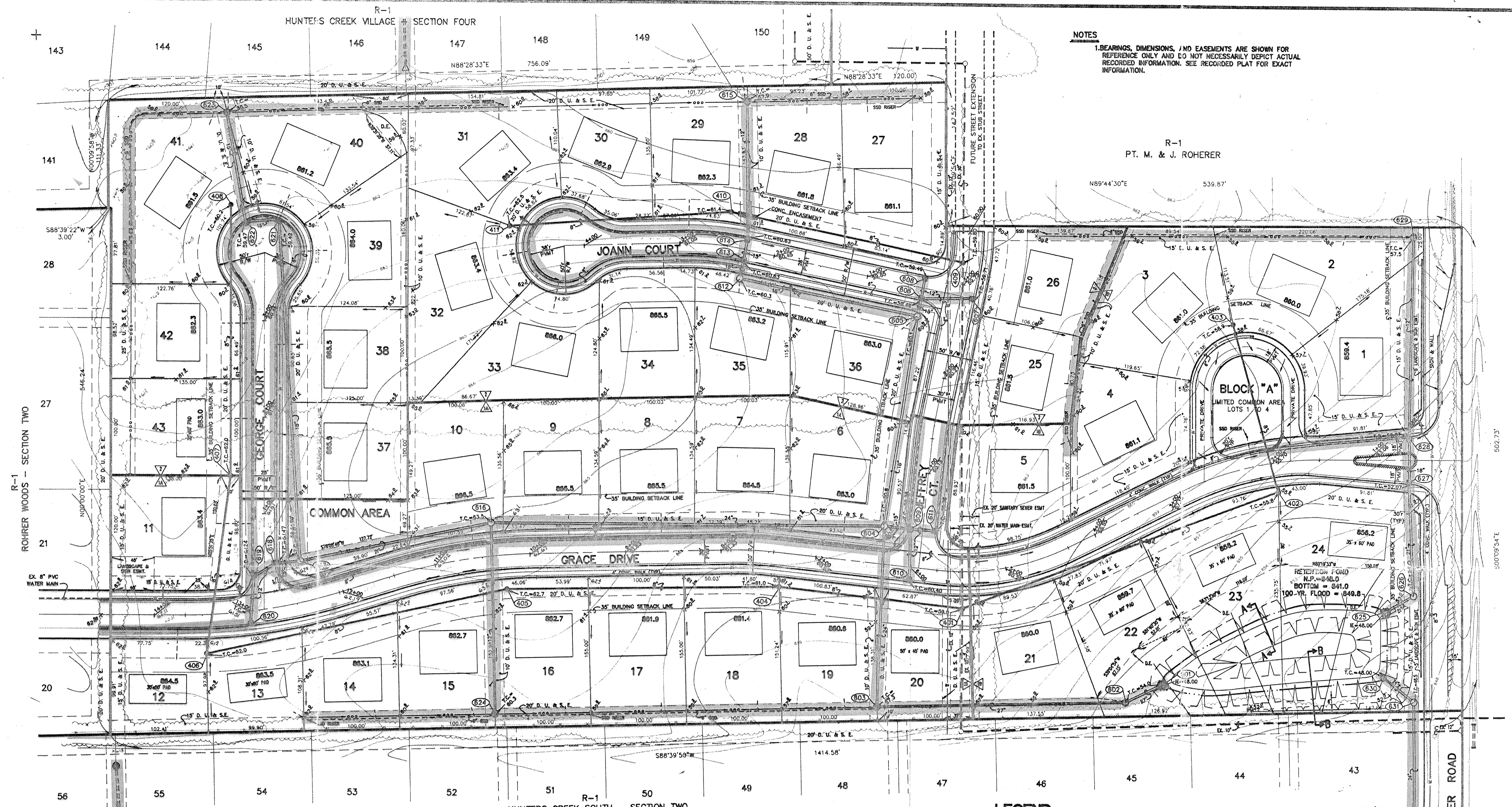
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK:	DRAWN BY: <i>JAS</i>	SCALE: AS NOTED	DATE: 8-17-89	CLIENT: C. P. MORGAN CO., INC.
DRAFTING. CHK:	DRAWING TITLE: COVER SHEET			

DWG. TYPE	FILE NUMBER
JOB NUMBER	
89385-000000	

NOTES
 1. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY AND DO NOT NECESSARILY DEPICT ACTUAL RECORDED INFORMATION. SEE RECORDED PLAT FOR EXACT INFORMATION.

R-1
 PT. M. & J. ROHRER



This information was prepared into the drawings by the undersigned in accordance with the provisions of the Public Works Act, Chapter 127, Indiana Code, and is true and correct to the best of my knowledge and belief.
 Entry Date: 1-2-84
 Entered by: JOH

FILE NAME: R1A\SUBSET.dwg
 CERTIFIED BY: Joseph A. Slays
 5179
 9-15-89 DATE

REVISIONS	DATE	BY	DESCRIPTION
10-20-89 REV. PER T.A.C.			
10-20-89 REV. PER T.A.C.			
11-9-89 REV. PER T.A.C.			
12-6-89 REV. PER T.A.C.			
12-20-89 REV. PER T.A.C.			

PAUL I. CRIFE, INC.
 7172 GRAHAM ROAD
 INDIANAPOLIS, INDIANA 46250
 (317) 842-8777

CIVIL ENGINEERING	TECH. CHK:	DRAWN BY:	SCALE: 1" = 50'	DATE: 8-17-88	CLIENT: C. P. MORGAN CO., INC.	DWG. TYPE:	FILE NUMBER:	SHEET: 2
LAND SURVEYING								
ARCHITECTURE								
LAND PLANNING								
DRAWING TITLE: SITE DEVELOPMENT PLAN						JOB NUMBER: 89385-00000		OF 17

HUNTERS CREEK VILLAGE SECTION FOUR

NOTES
 1. BEARINGS, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY AND DO NOT NECESSARILY DEPICT ACTUAL RECORDED INFORMATION. SEE RECORDED PLAT FOR EXACT INFORMATION.

FILED
 NOV 10 89
 OFFICE OF HAMILTON COUNTY SURVEYOR

R-1
 PT. M. & J. ROHRER

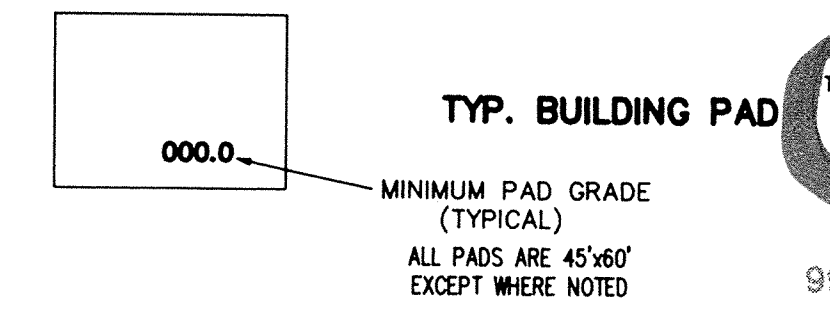
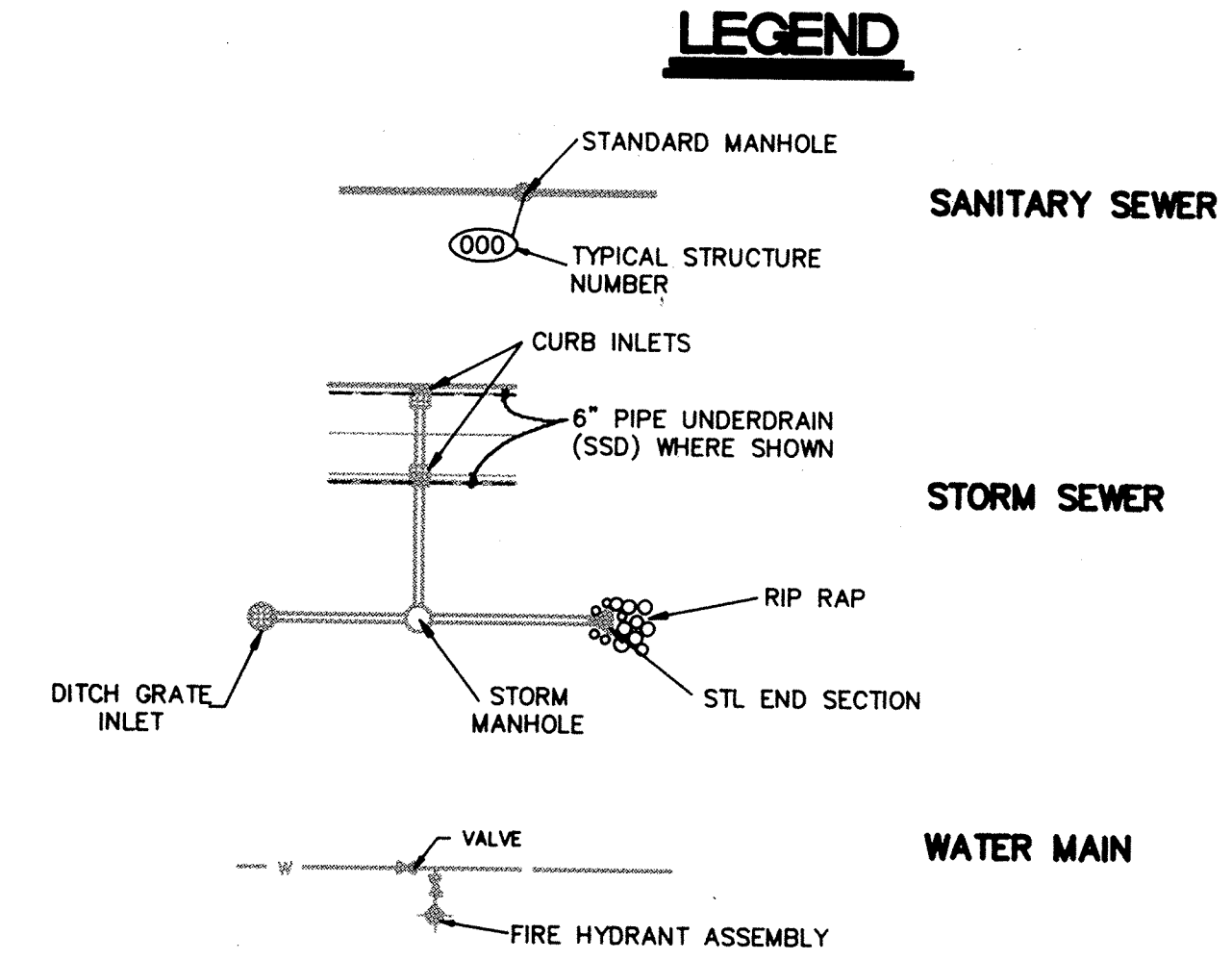
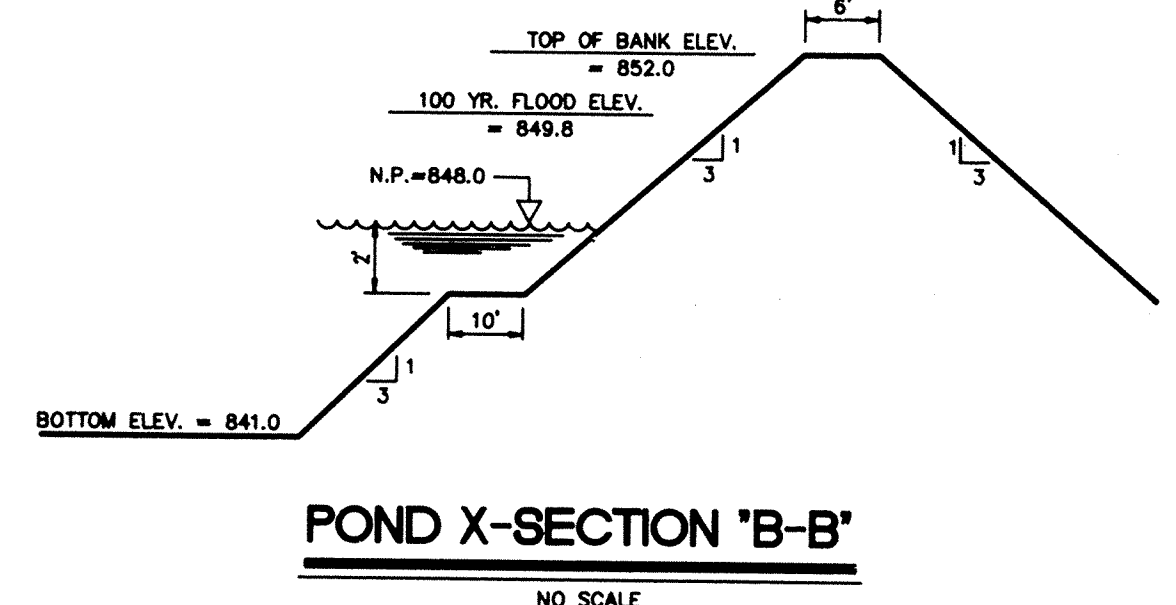
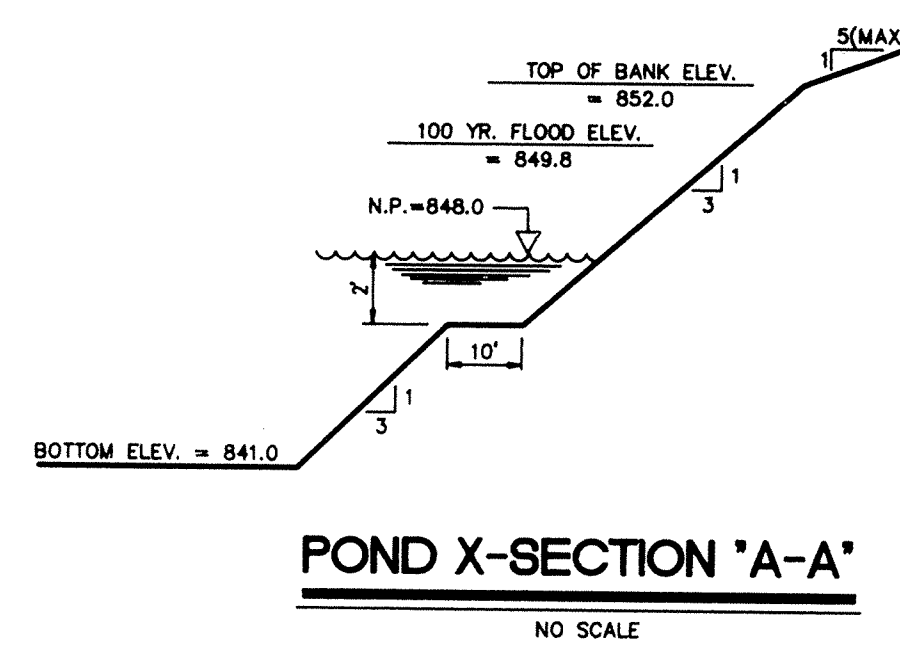
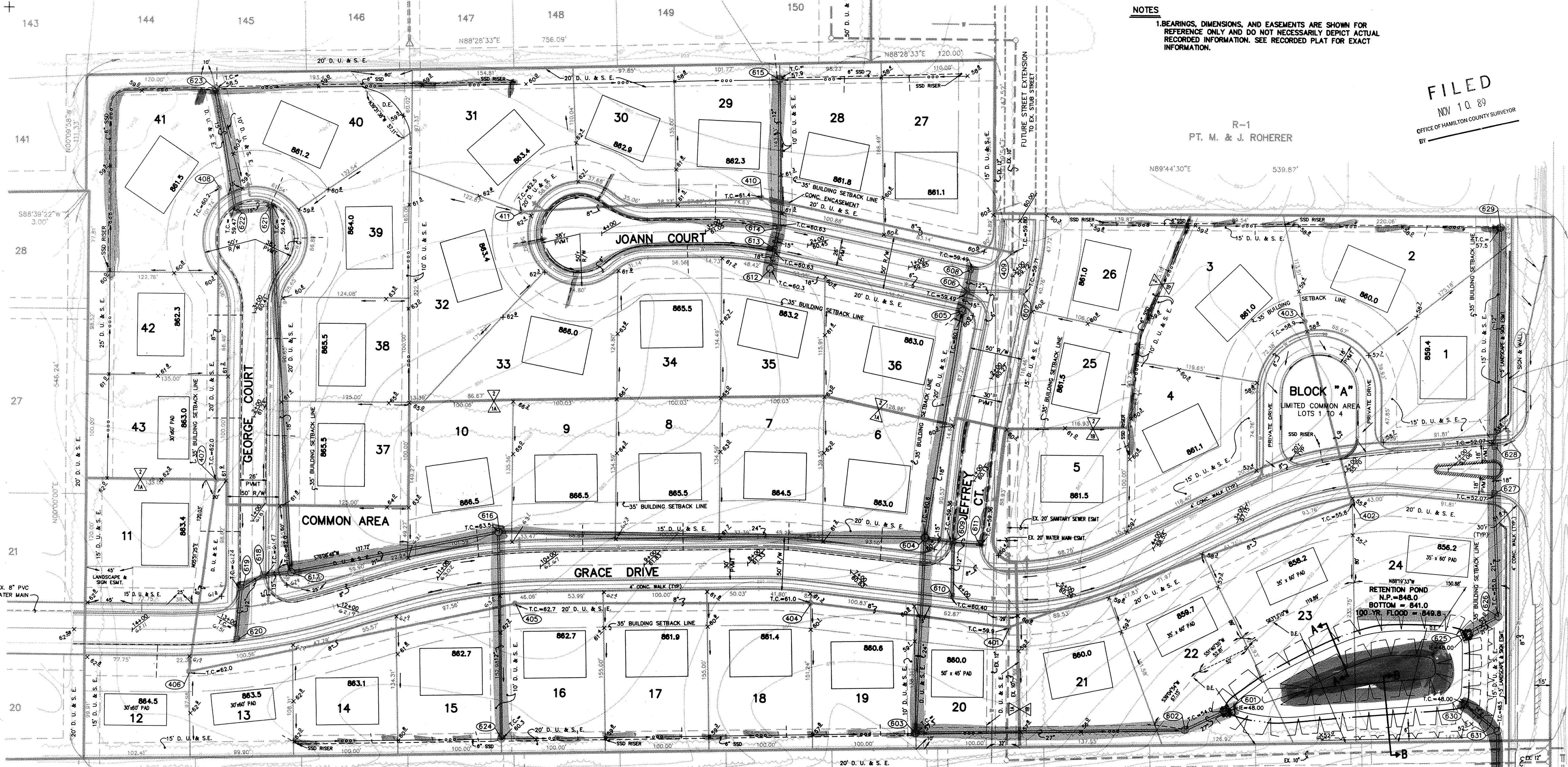
*Remove wall!!
 retaining wall in easement not allowed*

R-1
 PT. M. & J. ROHRER

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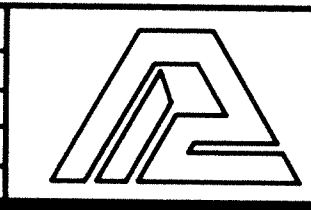
ROHRER MEADOWS
 SECTIONS "1A"-"1B" & 2



CERTIFIED BY: _____

DATE: _____

REVISIONS	
9-8-89 REV. PER T.A.C.	10-20-89 REV. PER T.A.C.
10-9-89 REV. POND - REV. STORM OUTLET LOCATION	11-9-89 REV. EXIST. (GRACE DR) STA 9+200 THRU 14+00
10-11-89 REV. SEC. 1 TO "1A" & "1B"	TRZ
10-12-89 REV. GRS. @ JEFFREY CT. & JOANN CT.	



PAUL I. CRIFE, INC.
 7172 GRAHAM ROAD
 INDIANAPOLIS, INDIANA 46250
 317-842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

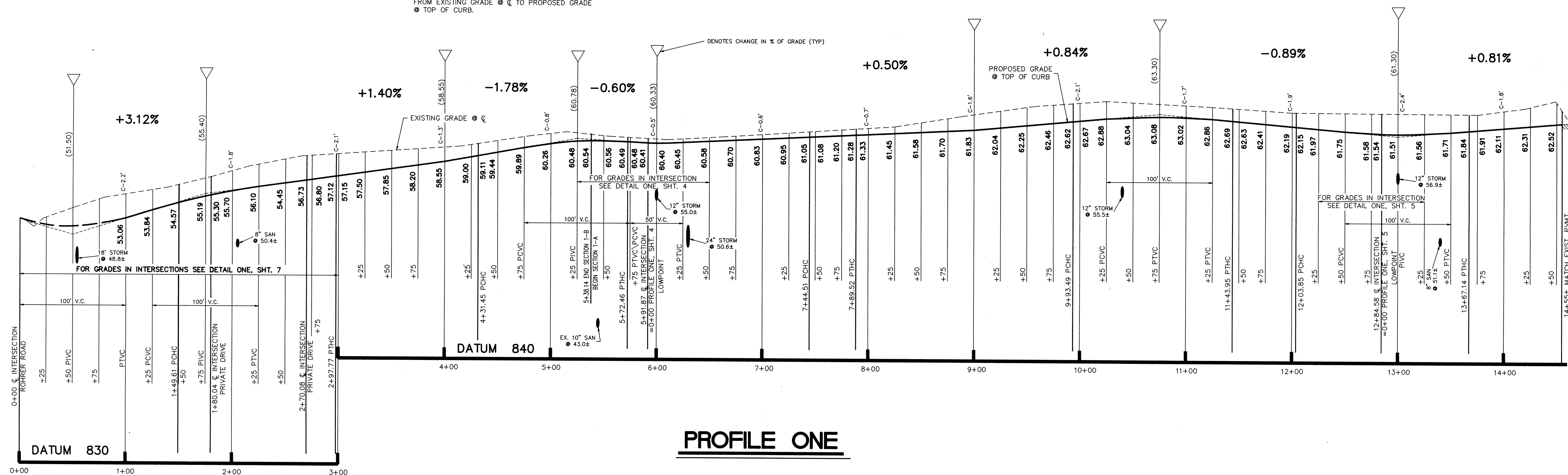
TECH. CHK: _____
 DRAWN BY: _____
 SCALE: 1" = 50'
 DATE: 8-17-89
 CLIENT: C. P. MORGAN CO., INC.

DWG. TYPE: _____
 FILE NUMBER: _____
 SHEET: **2**

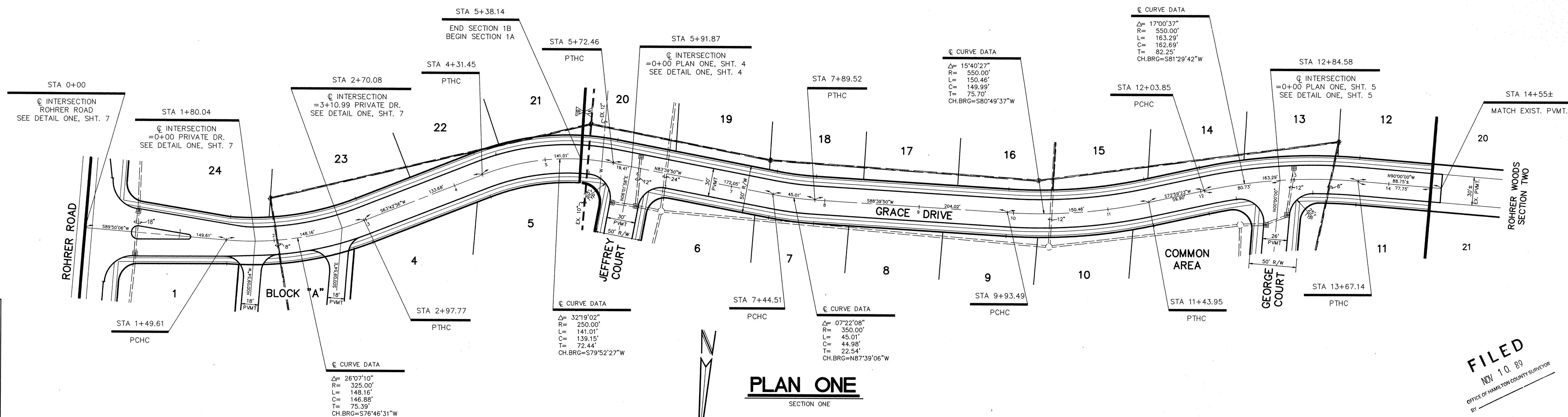
JOB NUMBER: 893185-1001010
 OF 17

SITE DEVELOPMENT PLAN

NOTE: CUTS OR FILLS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE @ C TO PROPOSED GRADE @ TOP OF CURB.



PROFILE ONE

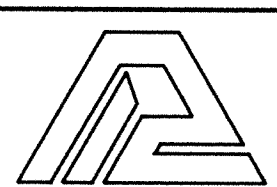


PLAN ONE

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CERTIFIED BY: _____
DATE: _____

REVISIONS
9-8-89 REV. GRDS. 4+00 thru 11+25
10-9-89 MISC. REV. PER DRAFT. CHK.
10-11-89 REV. SEC. ONE TO 1A & 1B
11-9-89 REV. GRDS. 9+00 thru 14+55



PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK: _____
DRAWING TITLE: _____

SCALE: _____
DATE: 8-17-89

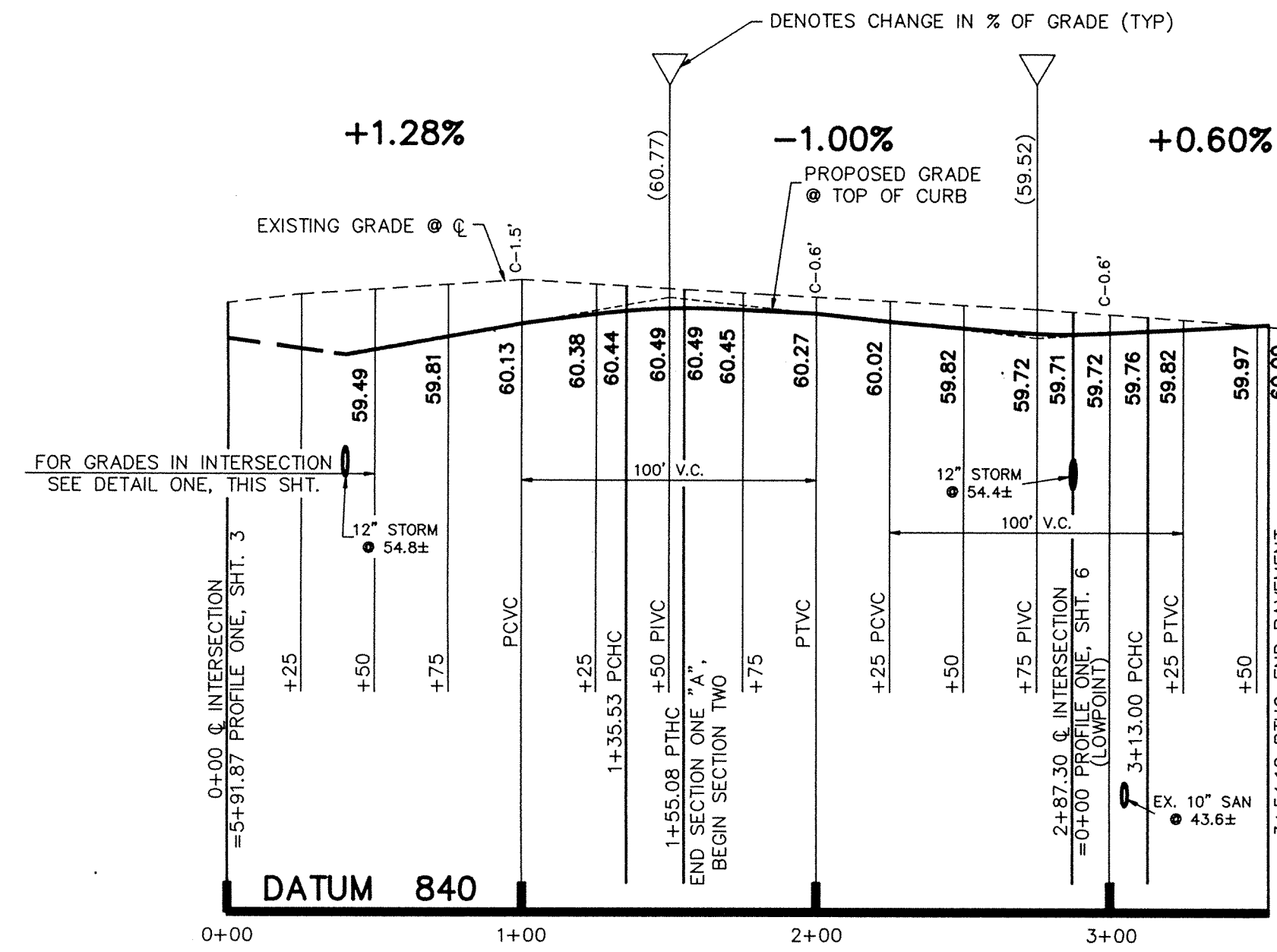
CLIENT: C. P. MORGAN CO., INC.

DWG. TYPE: _____
FILE NUMBER: _____

ROHRER MEADOWS - SECTIONS 1 & 2	
DWG. TYPE	FILE NUMBER
JOB NUMBER	SHEET: 3
89385-00000	OF 17

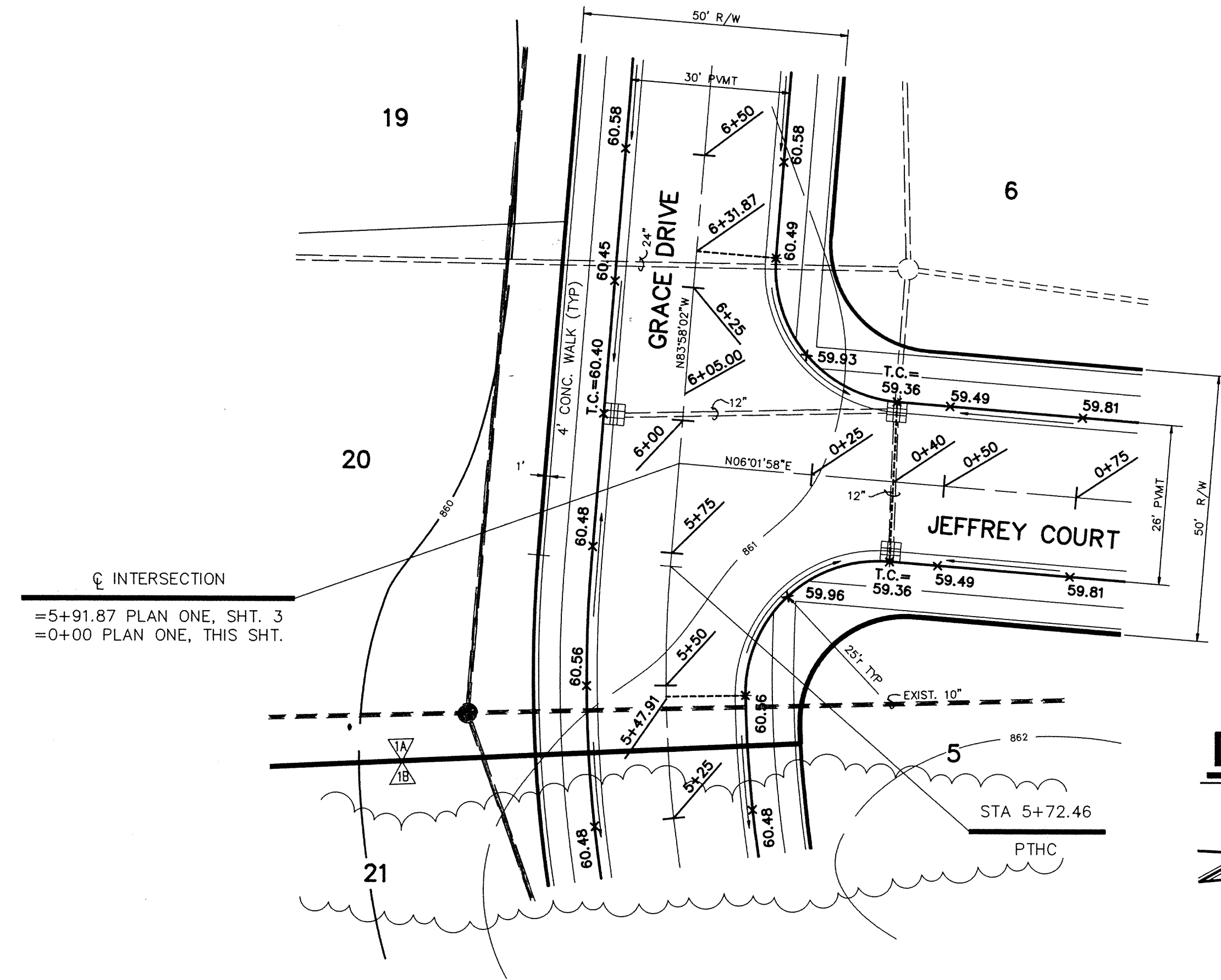
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NOTE: CUTS OR FILLS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE @ C TO PROPOSED GRADE @ TOP OF CURB.



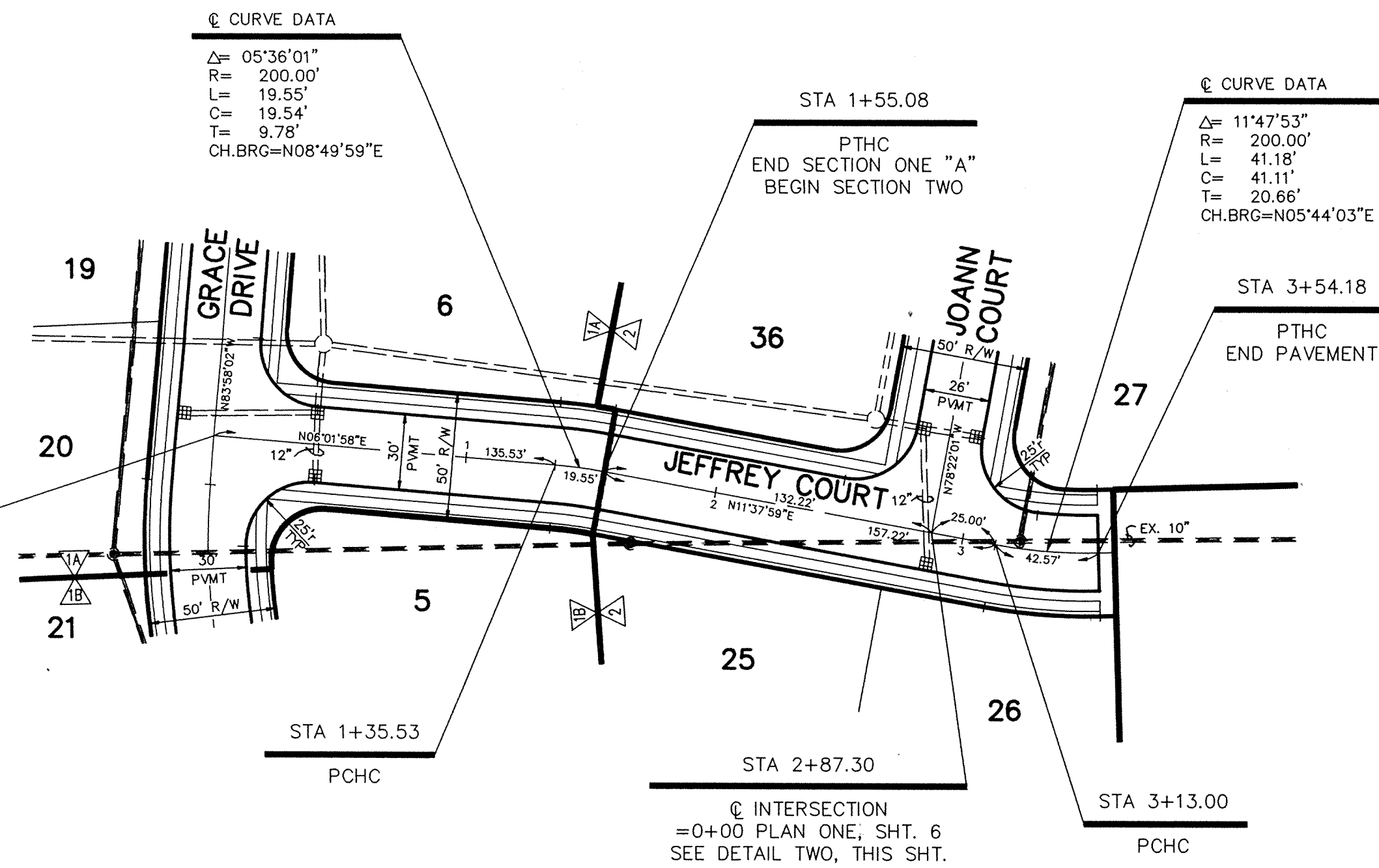
PROFILE ONE

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



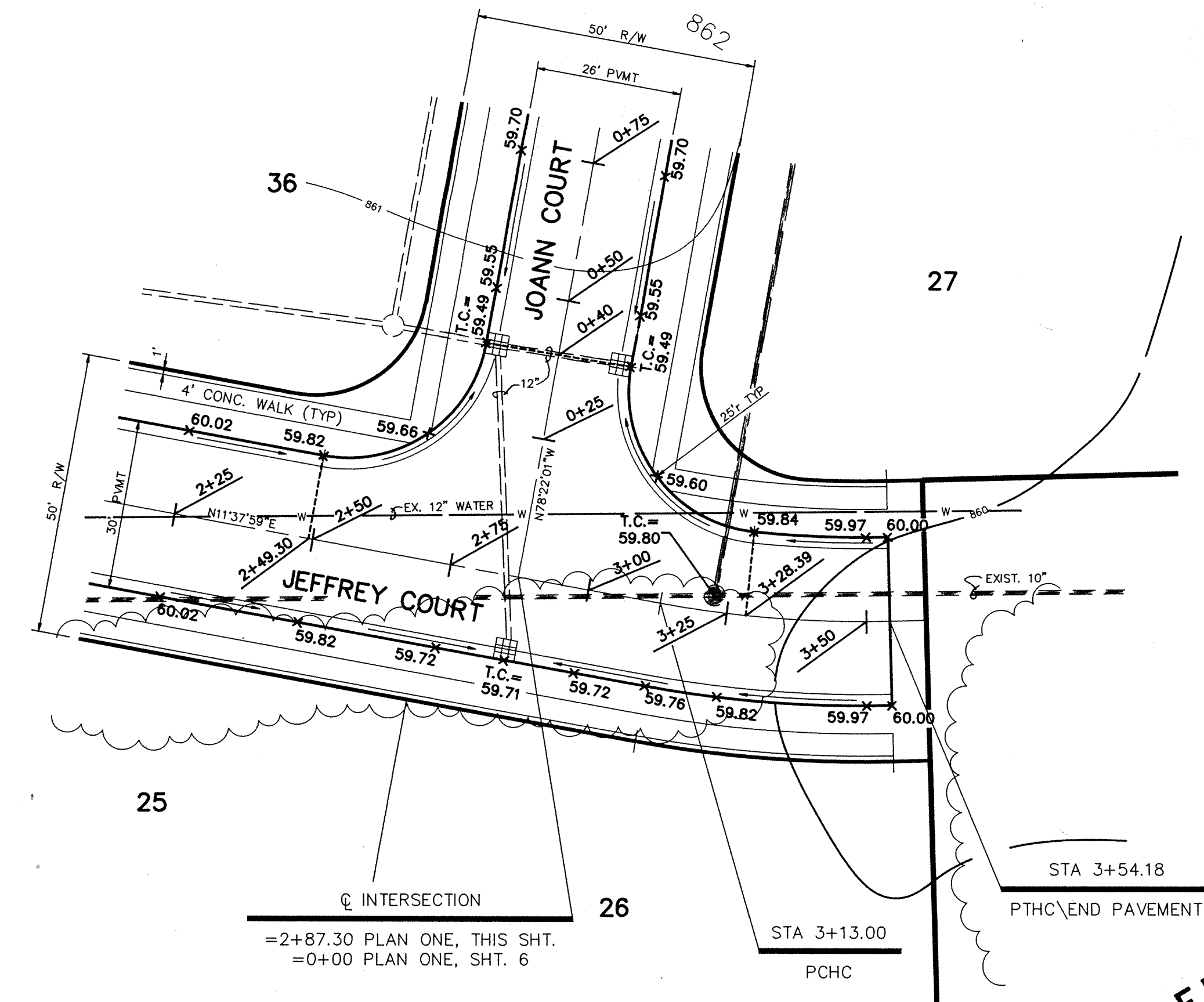
DETAIL ONE

SECTION ONE "A"
SCALE: 1" = 20'



PLAN ONE

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



DETAIL TWO

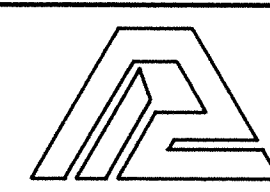
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NOV 10 89
OFFICE OF HAMILTON COUNTY SURVEYOR

FILE NAME: RM 69385C-4.dwg

CERTIFIED BY:	
DATE	

REVISIONS	
9-8-89 REV. PER T.A.C. - REV. GRDS. 0+00 THRU 1+75	RLS
10-9-89 MISC. REV. PER DRAFT. CHK.	TRZ
10-11-89 REV. SEC. 1 TO "A" & "B"	
10-12-89 REV. GRDS. PROFILE ONE & DETAIL TWO	



PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

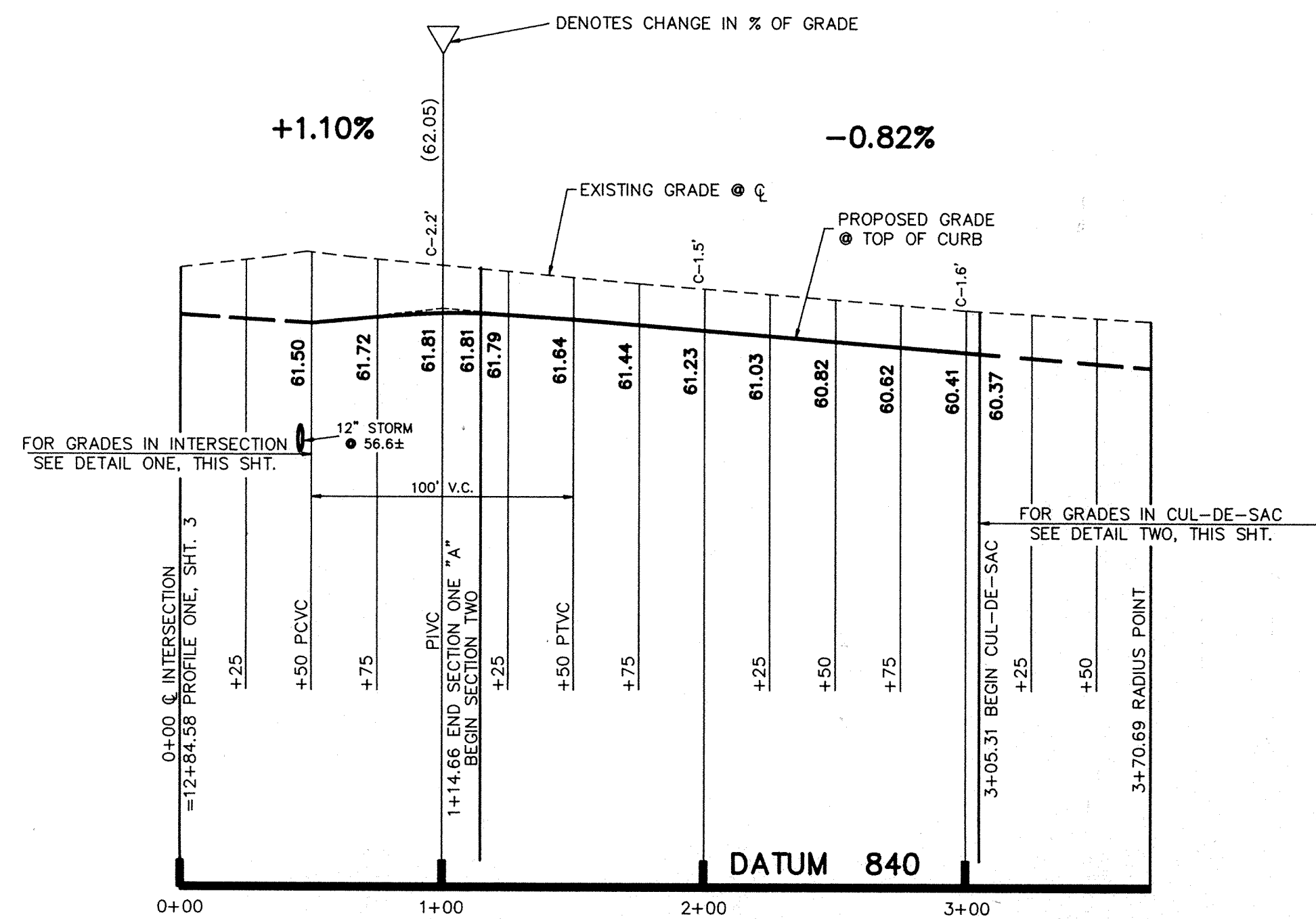
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:
		HORIZ. 1" = 50' VERT. 1" = 5'	8-17-89	C. P. MORGAN CO., INC.
DRFTNG. CHK:	DRAWING TITLE:			

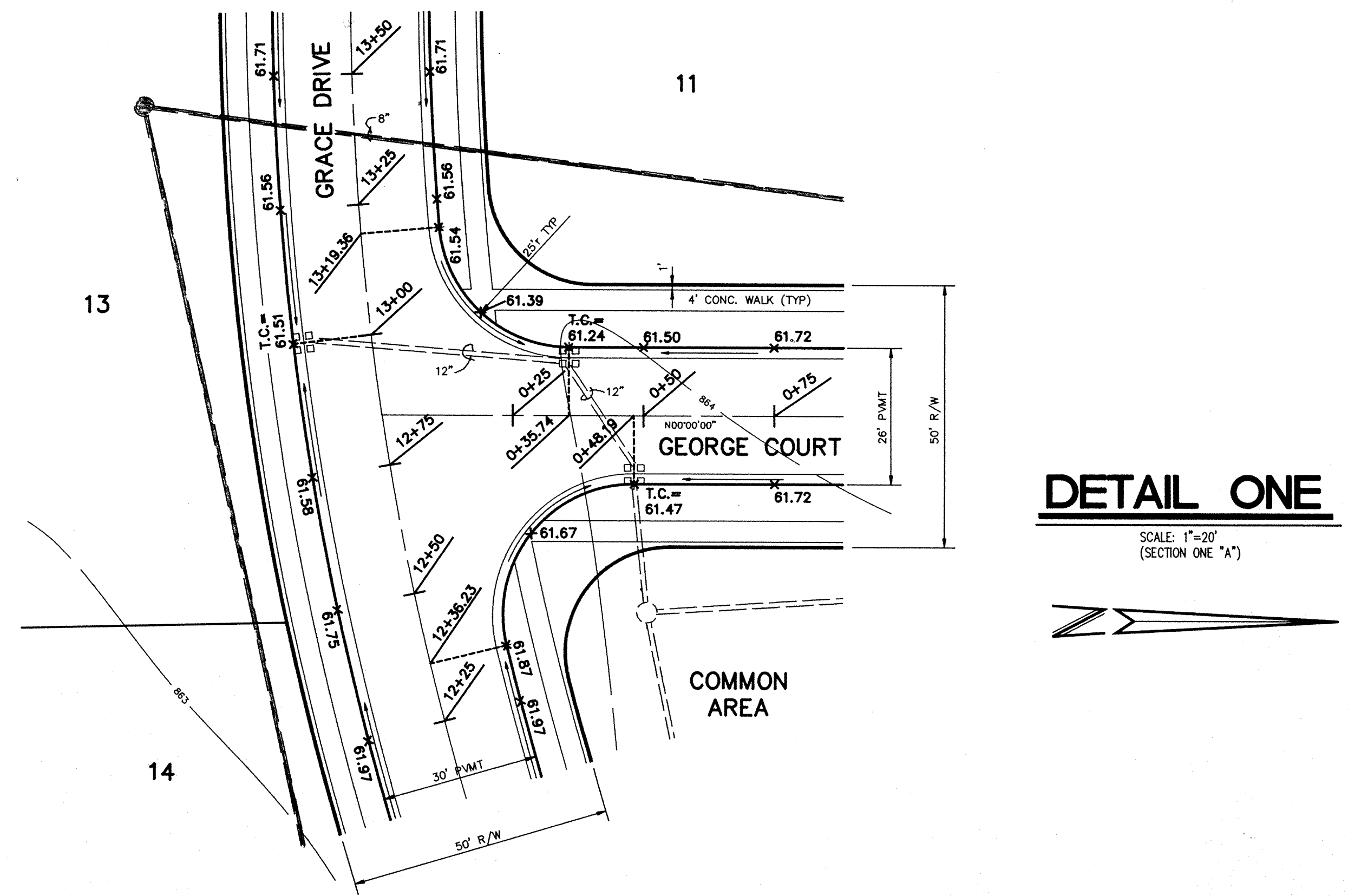
STREET - PLAN & PROFILE	
-------------------------	--

ROHRER MEADOWS - SECTION 1 & 2	
DWG. TYPE	FILE NUMBER
JOB NUMBER	
8 9 3 8 5 1 - 0 0 1 0 0 0	
SHEET:	4
OF 17	

NOTE: CUTS OR FILLS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE @ C TO PROPOSED GRADE @ TOP OF CURB.

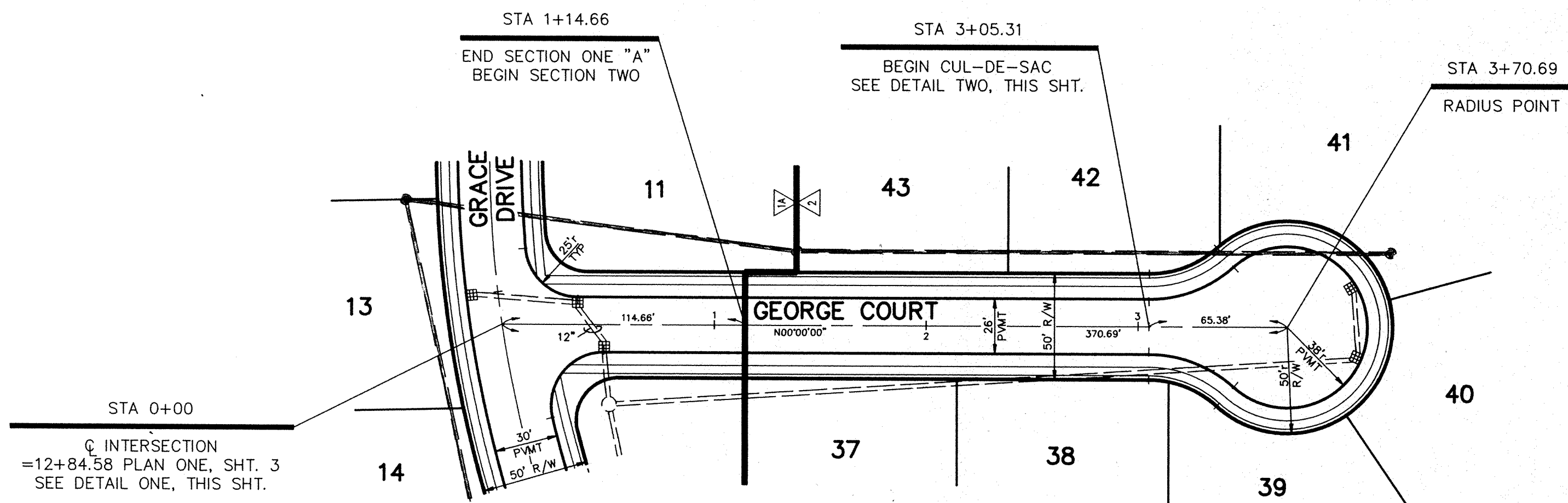


PROFILE ONE



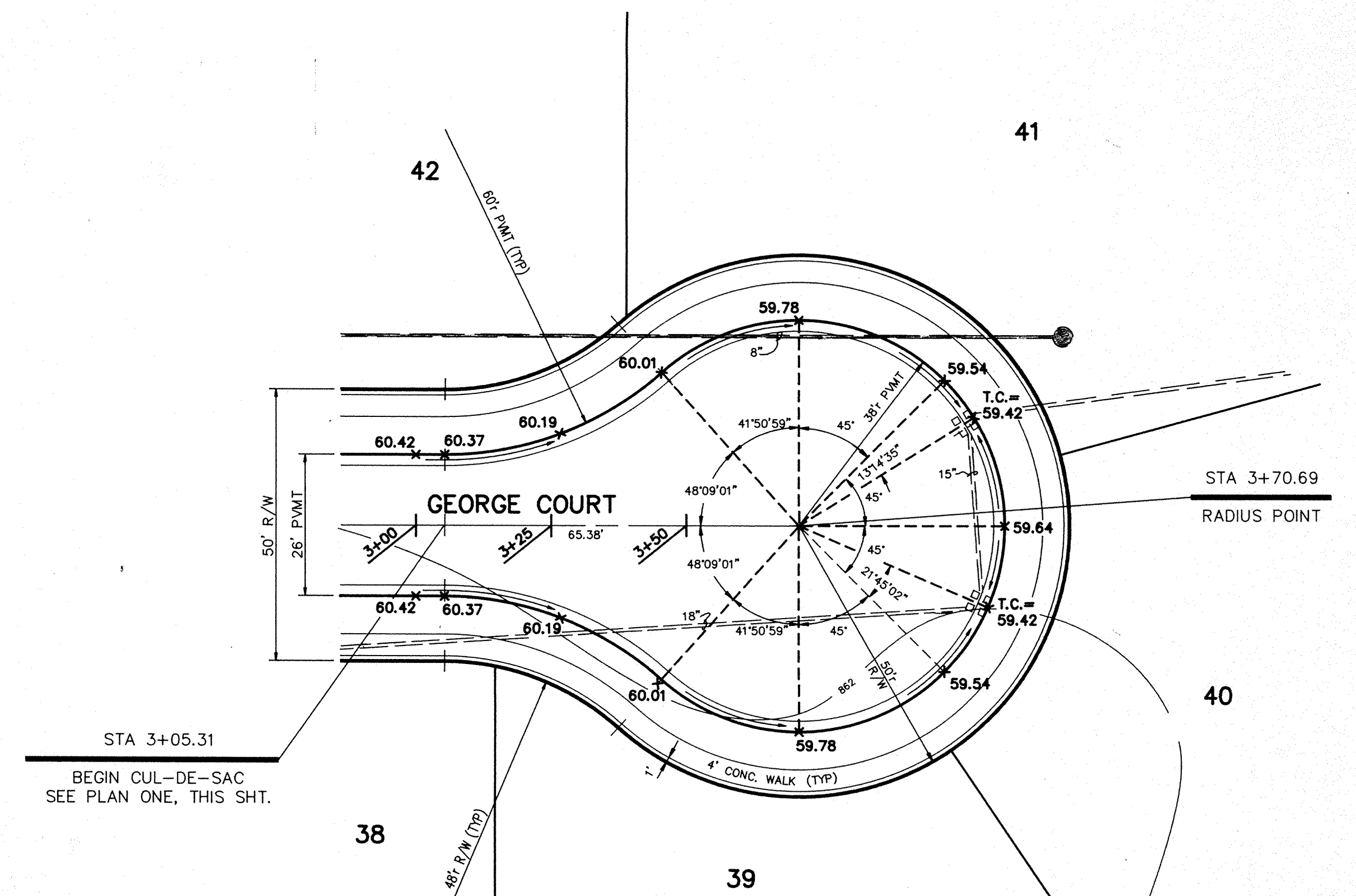
DETAIL ONE

SCALE: 1"=20'
(SECTION ONE "A")



PLAN ONE

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



DETAIL TWO

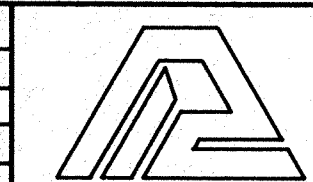
SCALE: 1"=20'
(SECTION TWO)

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NOV 10 89
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ROHRER MEADOWS - SECTIONS ONE "A" & "B" & TWO

CERTIFIED BY:	DATE:
---------------	-------

REVISIONS	
10-9-89 MISC. REV. PER DRAFT. CHK.	RJS
10-11-89 REV. SEC. 1 TO 1A & 1B	TRZ
11-9-89 REV. GRDS. 0+00 TO 1+75	JAC



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7172 GRAMAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK:
DRFTNG. CHK:

DRAWN BY:
DRAWING TITLE:

SCALE:
AS NOTED

DATE:
8-17-89

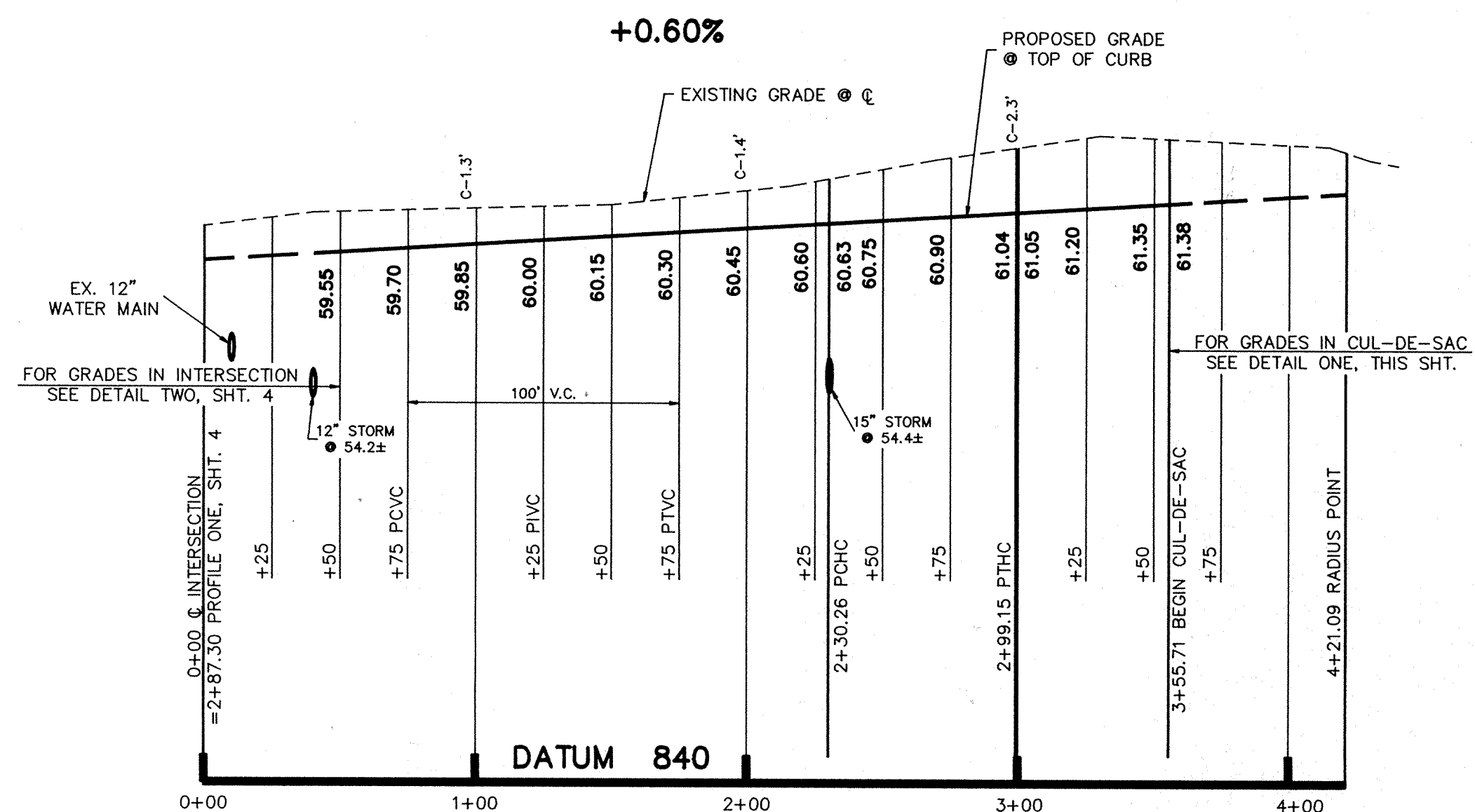
CLIENT:
C. P. MORGAN CO., INC.

STREET - PLAN & PROFILE

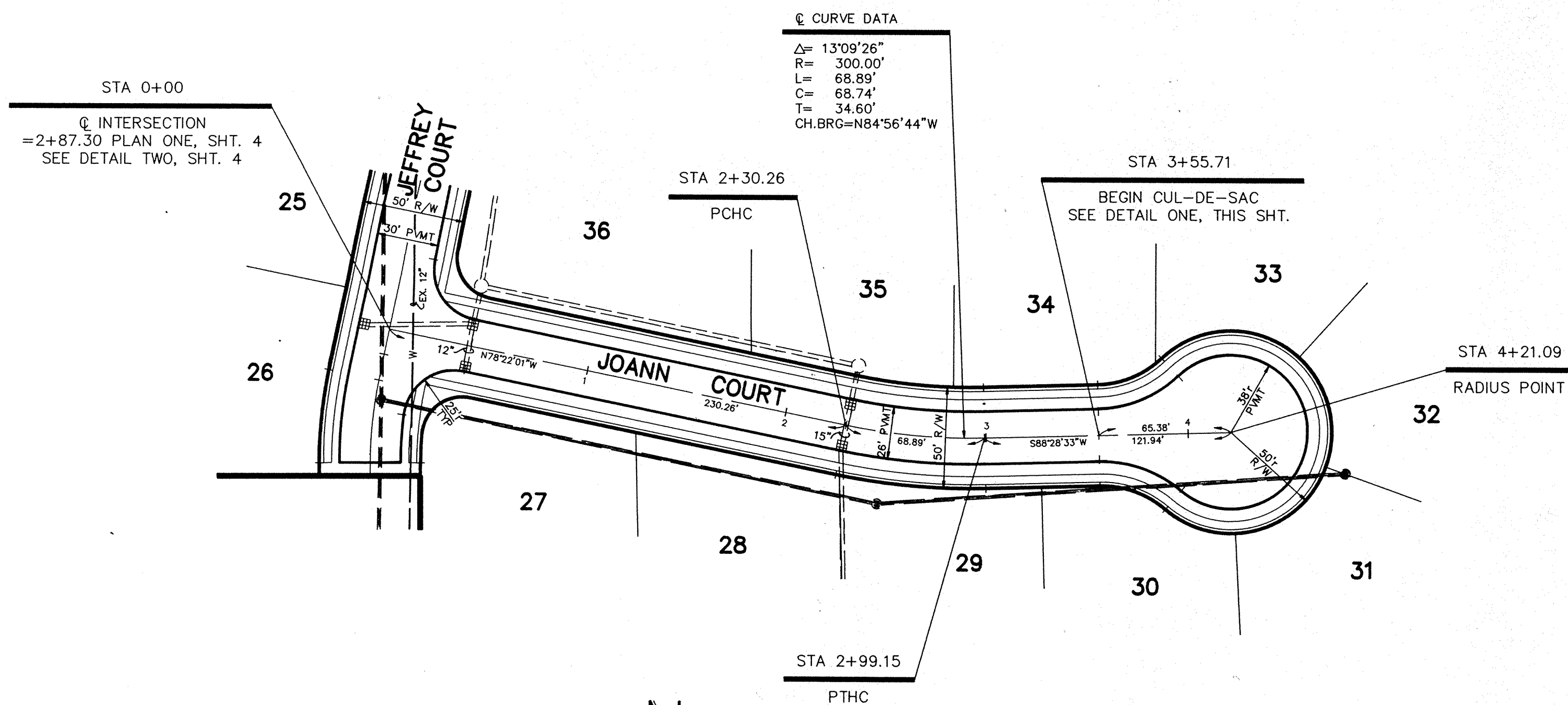
DWG. TYPE	FILE NUMBER
JOB NUMBER	893815-000000

SHEET:
5
OF 17

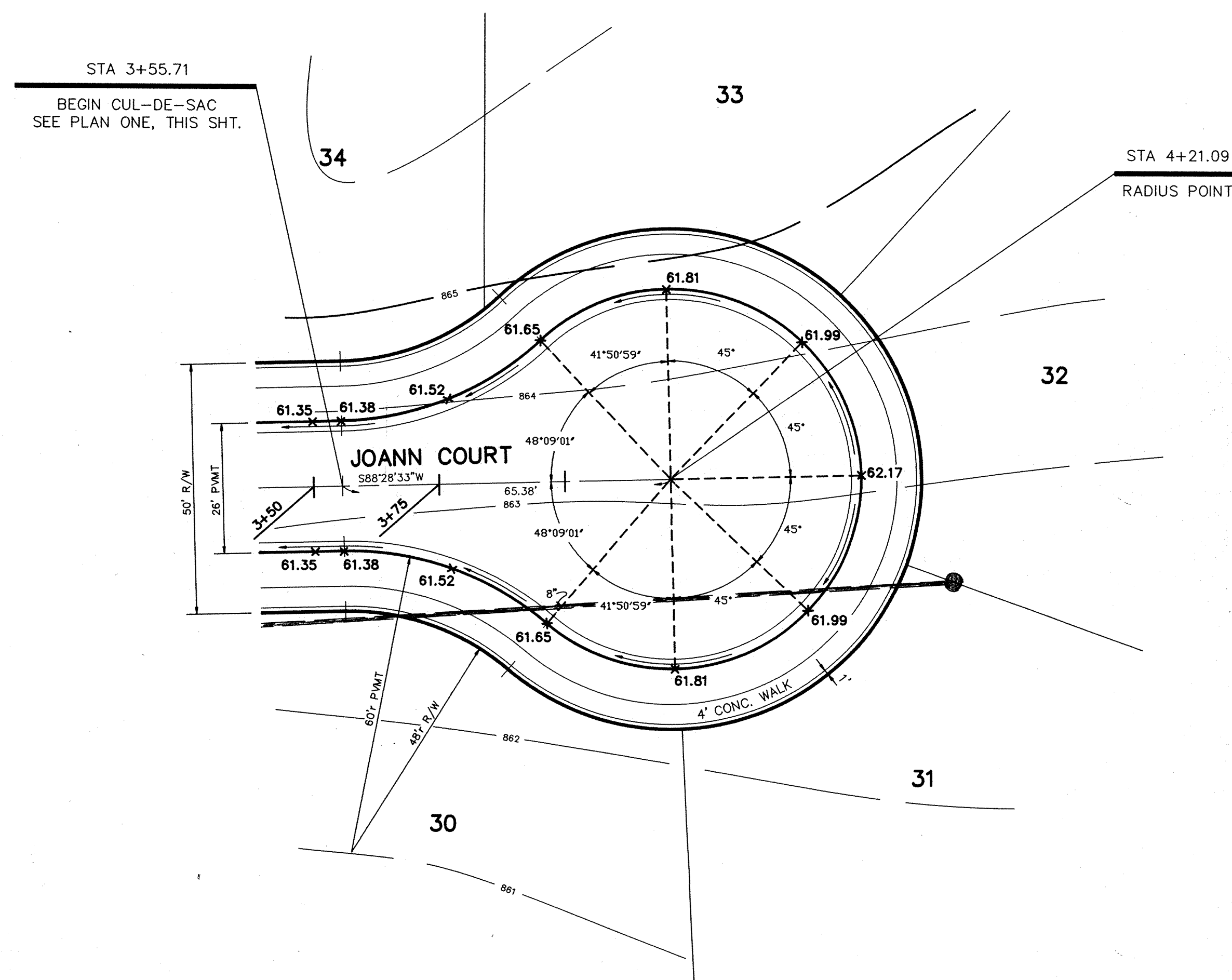
NOTE: CUTS OR FILLS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE @ C TO PROPOSED GRADE @ TOP OF CURB.



PROFILE ONE



PLAN ONE
SECTION TWO



DETAIL ONE
SECTION TWO

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CERTIFIED BY: _____
DATE: _____

REVISIONS	
10-9-89 MISC. REV. PER DRAFT. CHECK	RJS
10-12-89 REV. GRDS. 0+00 THRU 1+75	

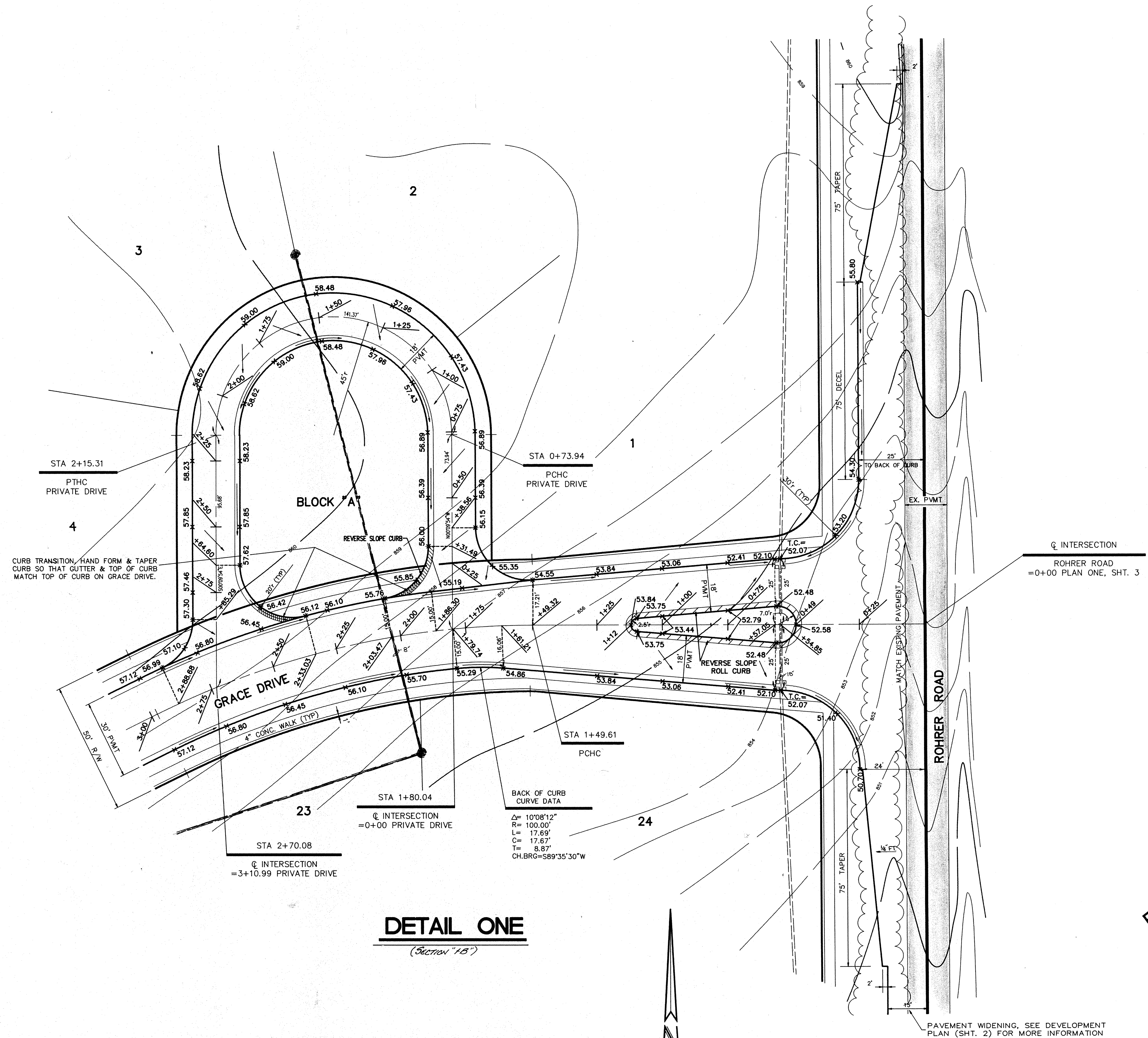
PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH CHK: _____
DRAWN BY: *ASD*
SCALE: HORZ. 1"=50'
VERT. 1"=5'
DATE: 8-17-89
CLIENT: C. P. MORGAN CO., INC.

DWG. TYPE	FILE NUMBER	SHEET
		6
JOB NUMBER		
89385-00000		OF 15

ROHRER MEADOWS - SECTIONS 1 & 2



DETAIL ONE
(Section 1B)

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NOV 10 1989
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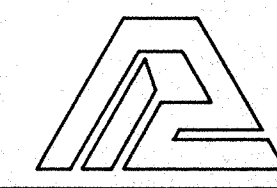
ROHRER MEADOWS - SECTIONS 1 & 2

FILE NAME: PIA\083350-7



CERTIFIED BY: *Joseph A. Sharp*
9-15-89 DATE

REVISIONS	DATE	BY
9-8-89 REV. PER T.A.C.		
10-9-89 MISC. REV. PER DRAFT CHECK		



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- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK:
DRFTNG. CHK:

DRAWN BY: *JAS*
DRAWING TITLE:

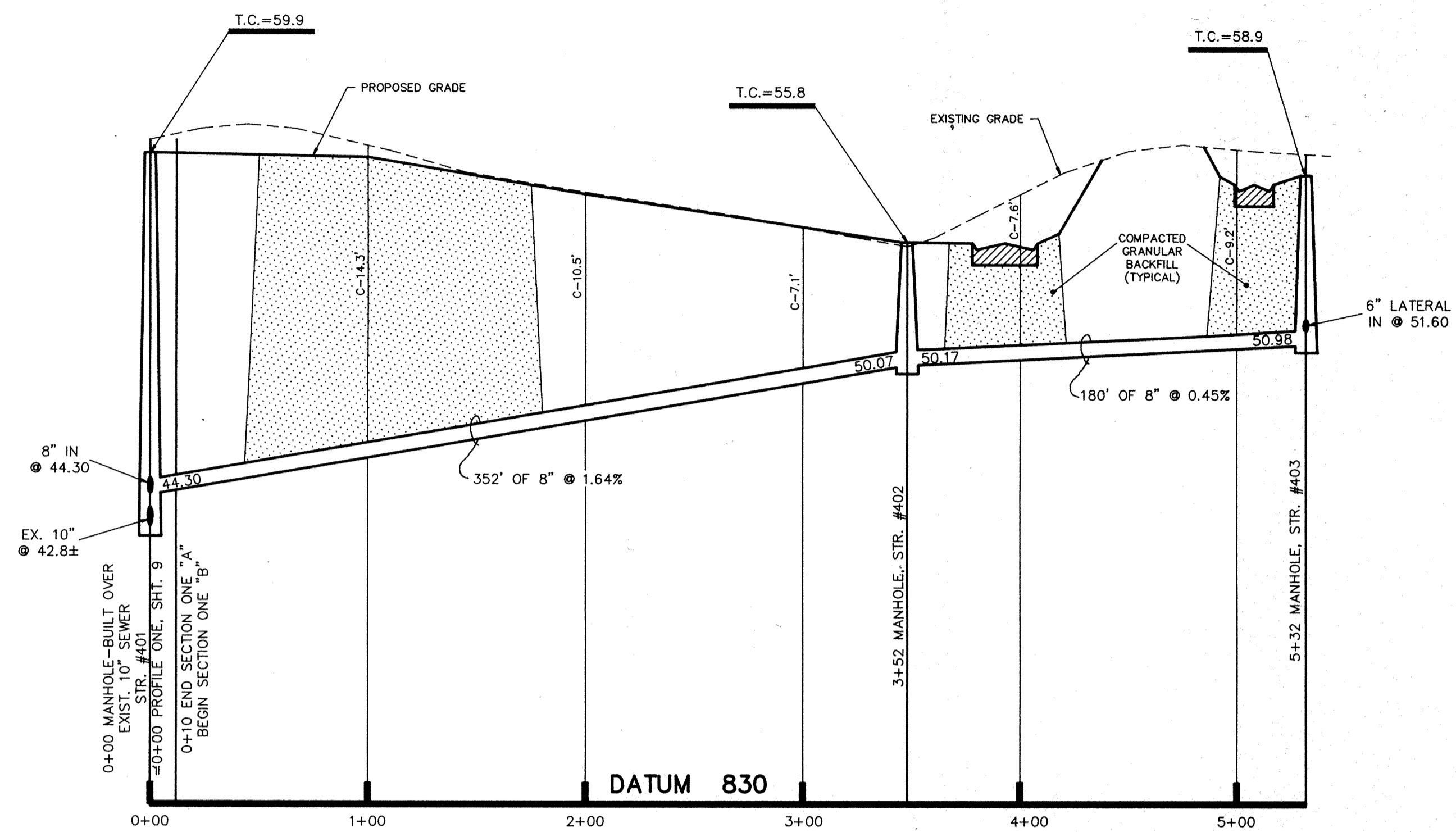
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DATE: 8-17-89

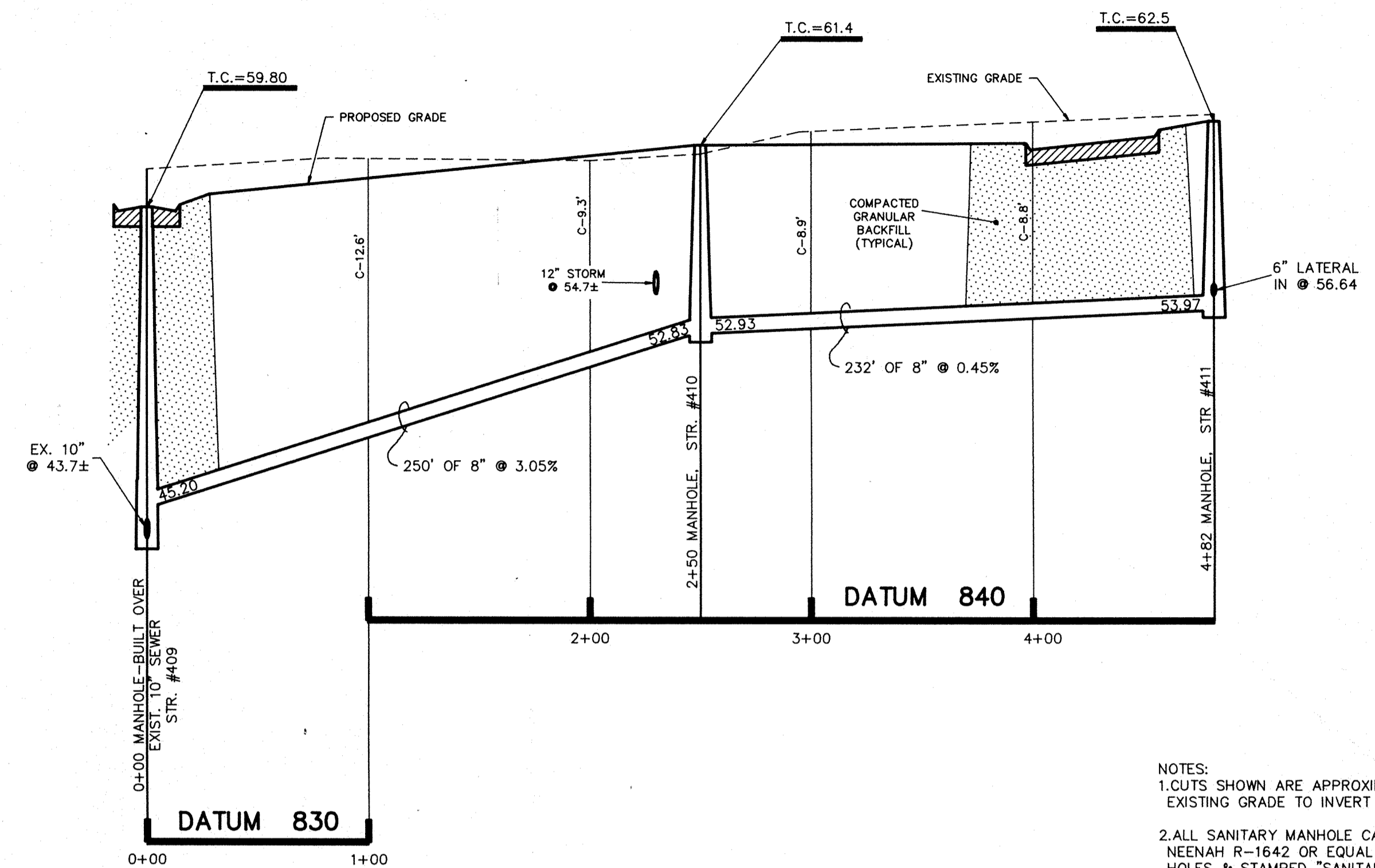
CLIENT: C. P. MORGAN CO., INC.

STREET DETAIL

DWG. TYPE	FILE NUMBER	SHEET
		7
JOB NUMBER		
8 9 3 8 5 - 0 0 0 0 0		
of 17		

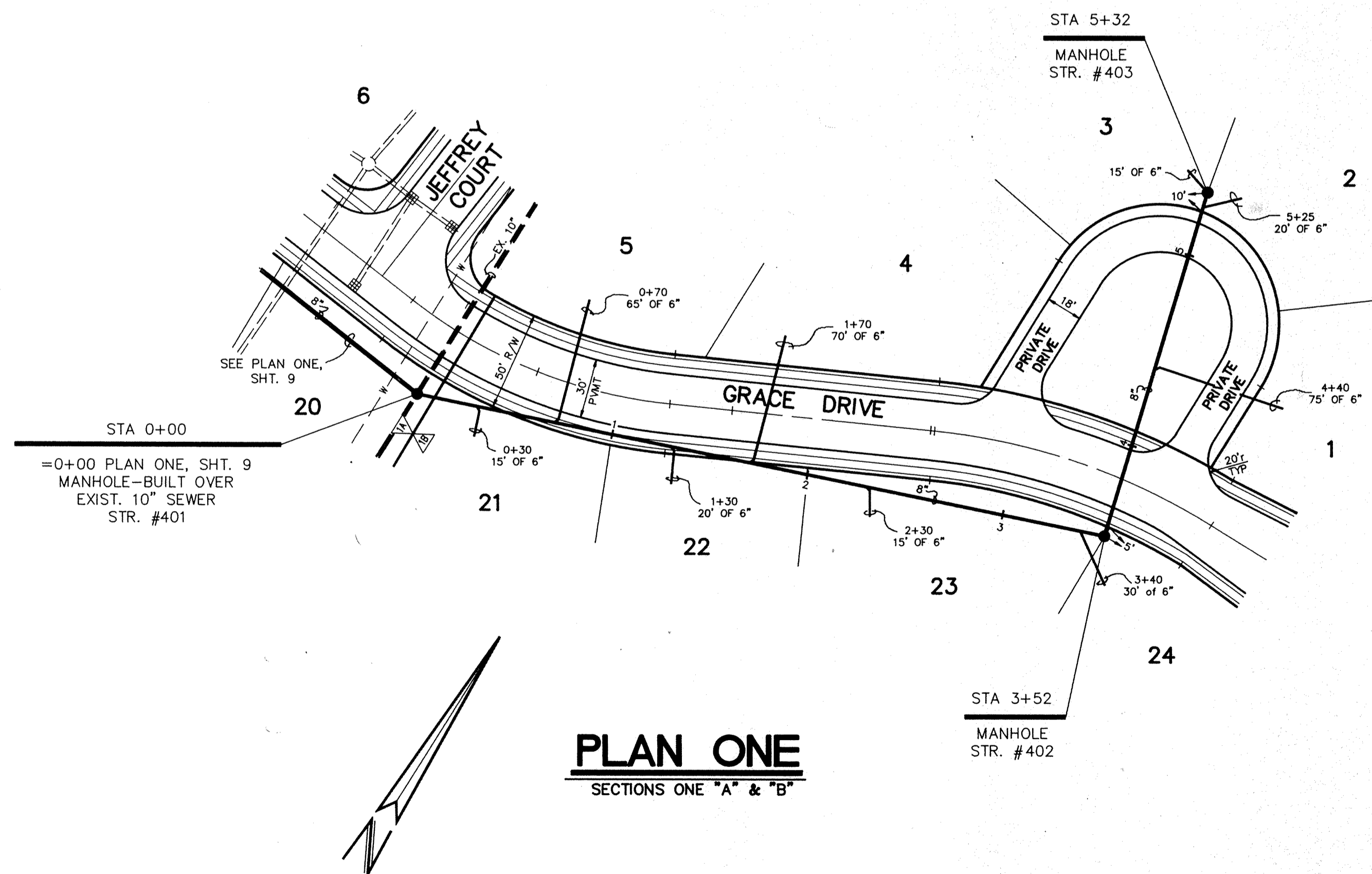


PROFILE ONE

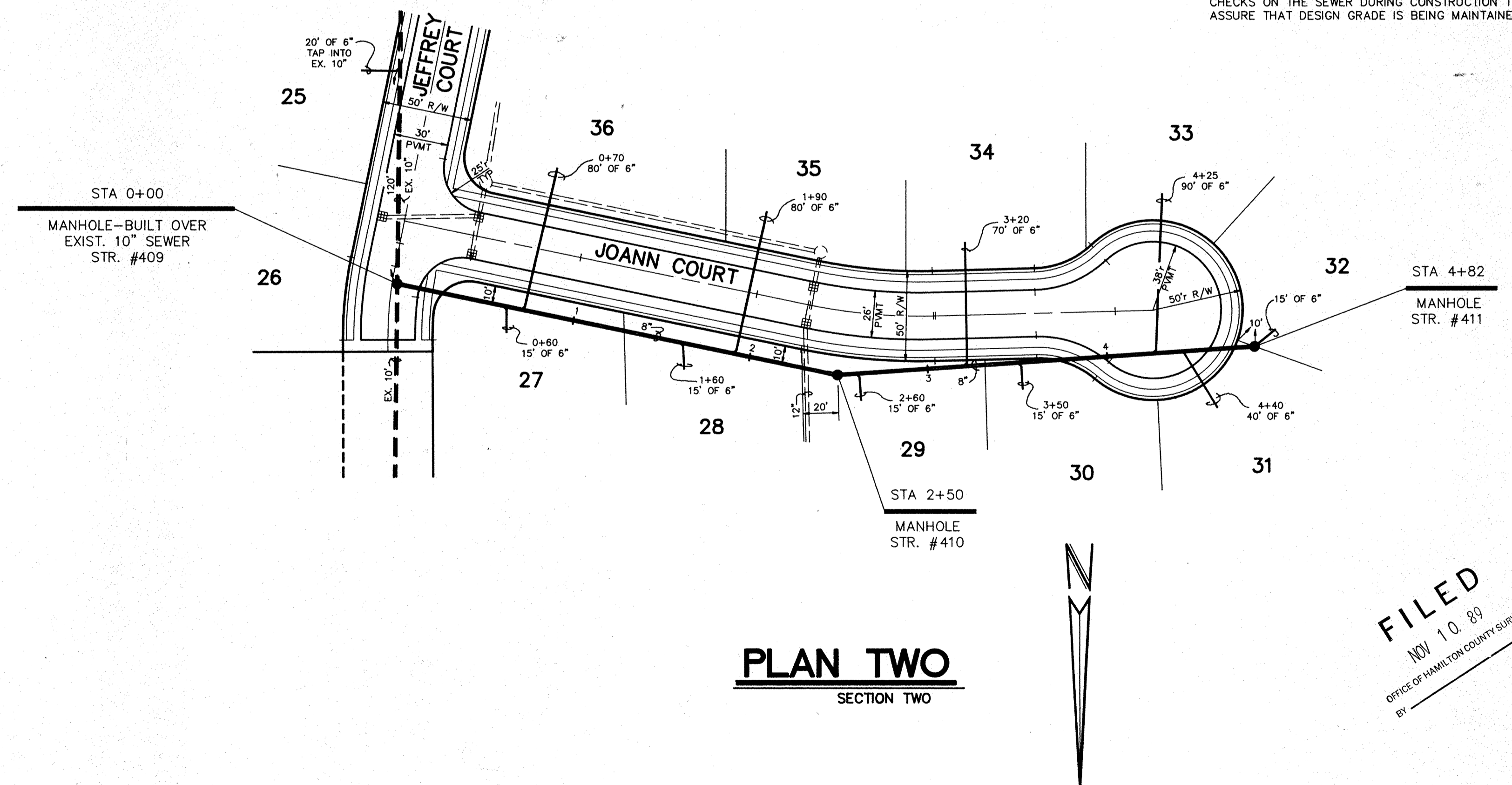


PROFILE TWO

- NOTES:
1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 2. ALL SANITARY MANHOLE CASTINGS SHALL BE: NEENAH R-1642 OR EQUAL W/ CONCEALED PICK HOLES & STAMPED "SANITARY".
 3. CONTRACTOR SHALL VERIFY LOCATION & INVERT ELEVATION OF EXIST. SANITARY SEWER PRIOR TO START OF CONSTRUCTION.
 4. A RED PAINTED STEEL FENCE POST IS TO BE PLACED @ FINISH GRADE DIRECTLY ABOVE END OF ALL LATERALS.
 5. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AS-BUILT DRAWINGS TO THE ACCEPTING AGENCY TO CERTIFY THE ELEVATION AND SLOPE OF SANITARY SEWERS. SEWERS INSTALLED AT A GRADE LESS THAN REQUIRED BY THE AGENCY WILL NOT BE ACCEPTED. CONTRACTOR SHALL PROVIDE FOR PERIODIC AS-BUILT CHECKS ON THE SEWER DURING CONSTRUCTION TO ASSURE THAT DESIGN GRADE IS BEING MAINTAINED.



PLAN ONE
SECTIONS ONE "A" & "B"



PLAN TWO
SECTION TWO

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REVISIONS	
10-9-89 REV. PER T.A.C. & DRAFT. O.K.	T.R.Z.
10-11-89 REV. SEC. ONE TO ONE "A" AND ONE "B" (DENOTED)	T.R.Z.
10-12-89 REV. T.C. OF STR. #409	T.R.Z.
10-20-89 REV. PER T.A.C.	T.R.Z.

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(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK: _____
DRAWN BY: _____
DRFTNG. CHK: _____

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

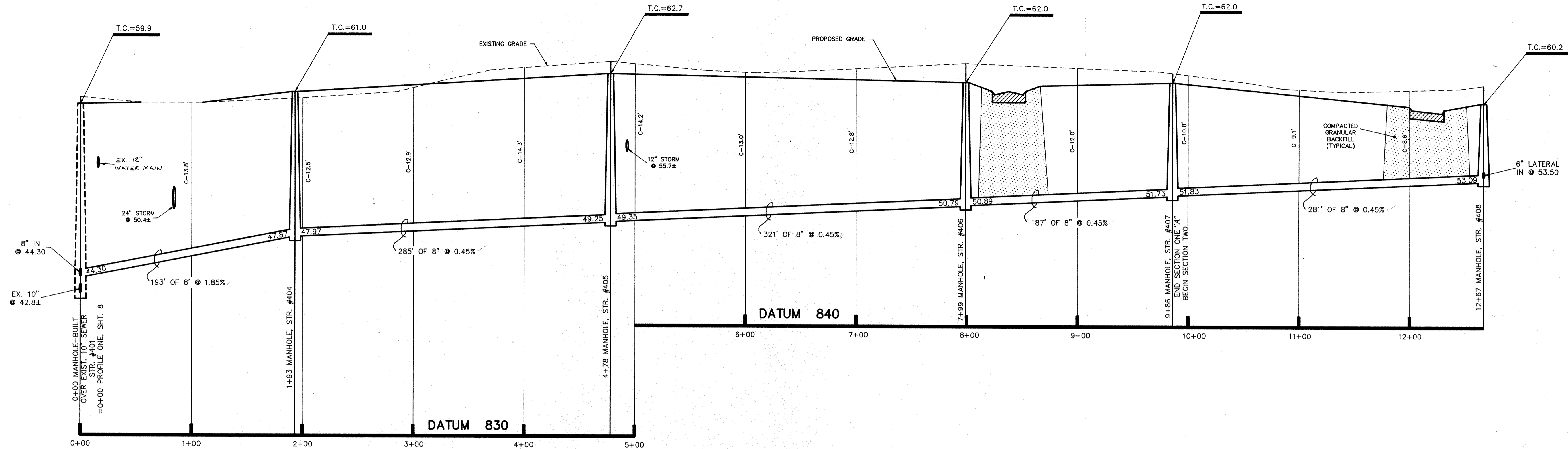
DATE: 8-17-89

CLIENT: C. P. MORGAN CO., INC.

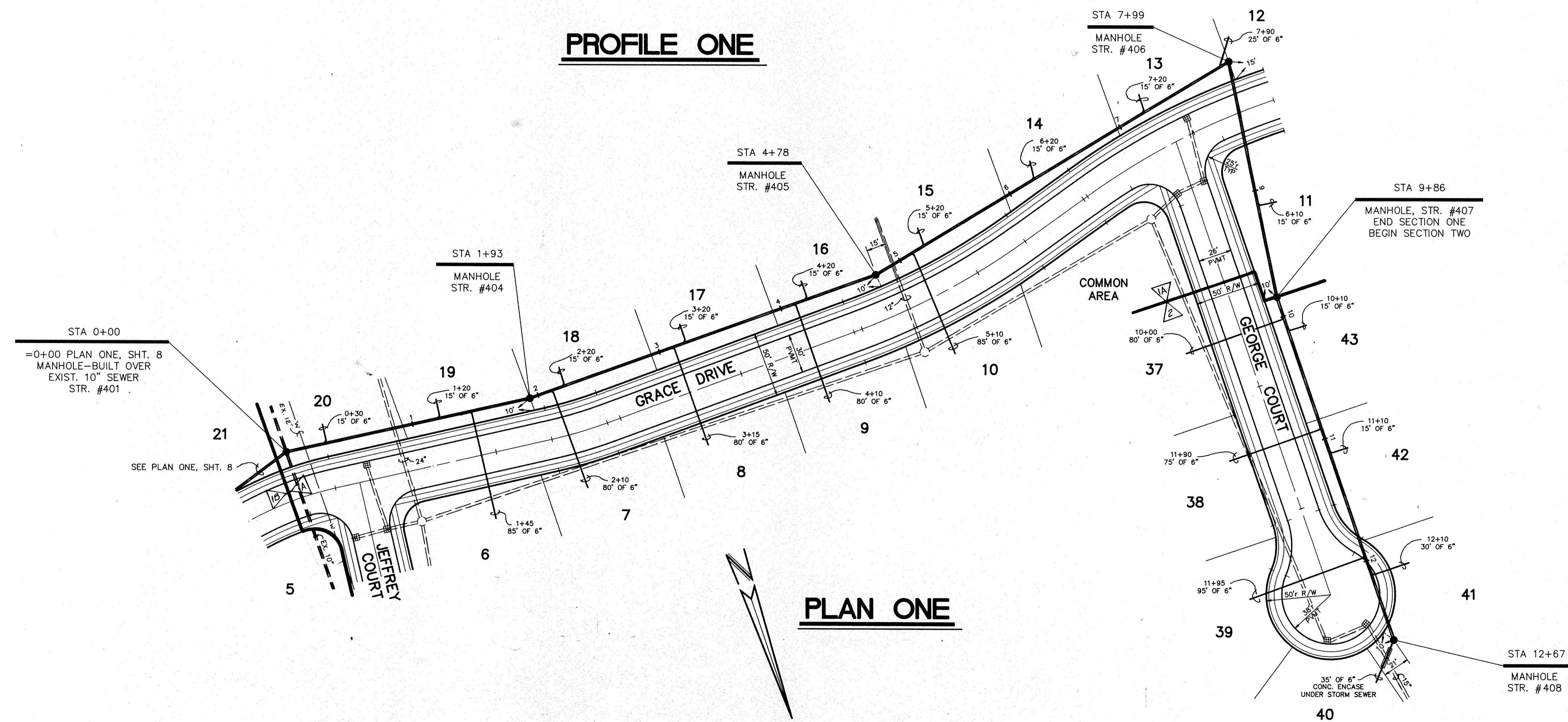
DRAWING TITLE: **SANITARY SEWER - PLAN & PROFILE**

ROHRER MEADOWS-SECTIONS 1 & 2	
DWG. TYPE	FILE NUMBER
JOB NUMBER	
89385-00000	
SHEET: 8	OF 17

FILE NAME: R:\030305E-8.dwg



PROFILE ONE



PLAN ONE

- NOTES:
1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 2. ALL SANITARY MANHOLE CASTINGS SHALL BE: NEENAH R-1642 OR EQUAL W/ CONCEALED PICK HOLES & STAMPED "SANITARY".
 3. CONTRACTOR SHALL VERIFY LOCATION & INVERT ELEVATION OF EXIST. SANITARY SEWER PRIOR TO START OF CONSTRUCTION.
 4. A RED PAINTED STEEL FENCE POST IS TO BE PLACED @ FINISH GRADE DIRECTLY ABOVE END OF ALL LATERALS.
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FILED
 NOV 10 89
 OFFICE OF HAMILTON COUNTY SURVEYOR
 BY

FILE NAME: R:\89335E-9.dwg

CERTIFIED BY:	REVISIONS
DATE	10-11-89 Rev. Sec's "14" & "15" (Detail) TRZ

10-9-89 REV. PER T.A.C. & DRAFT. CHK.
10-11-89 Rev. Sec's "14" & "15" (Detail) TRZ

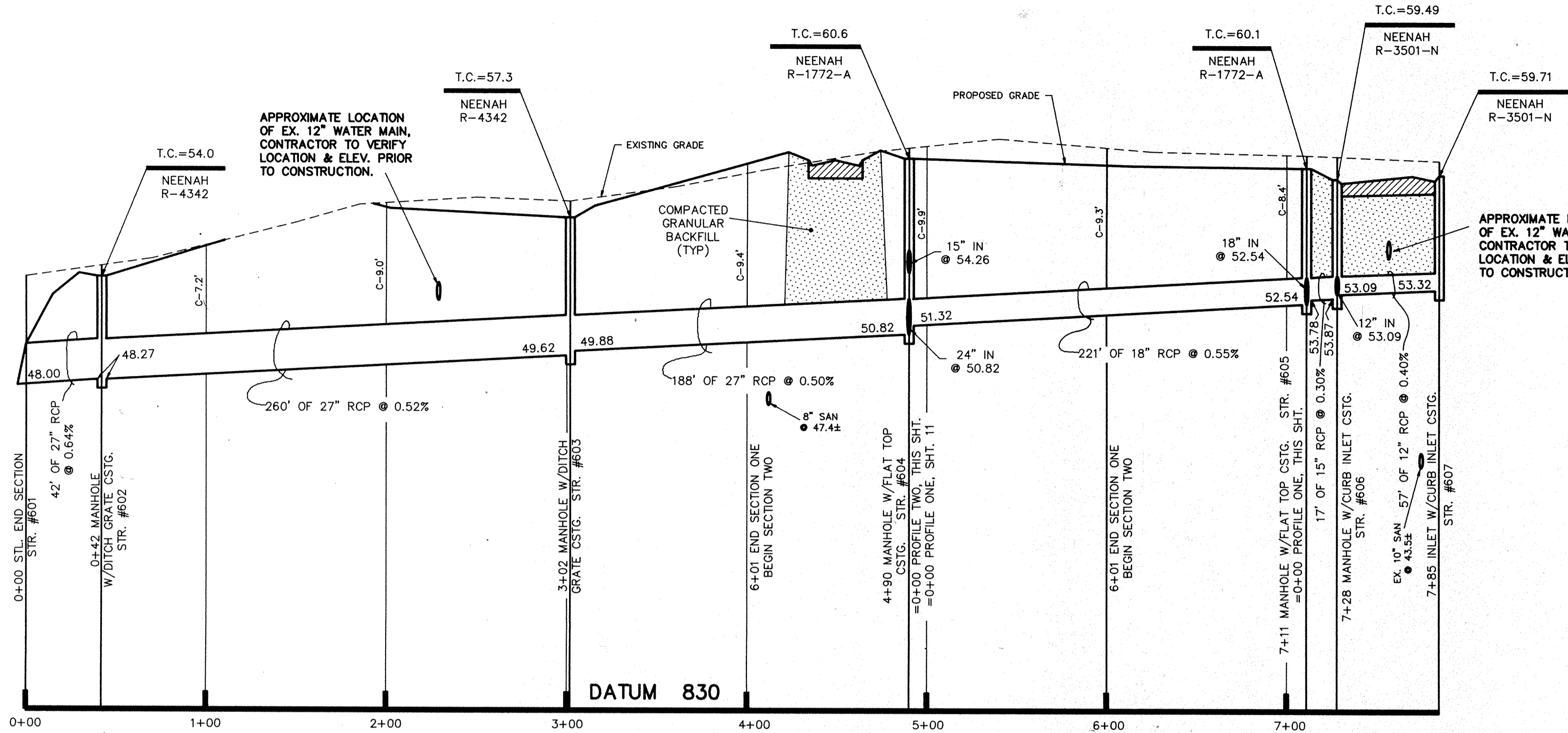
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 INDIANAPOLIS, INDIANA 46250
 (317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

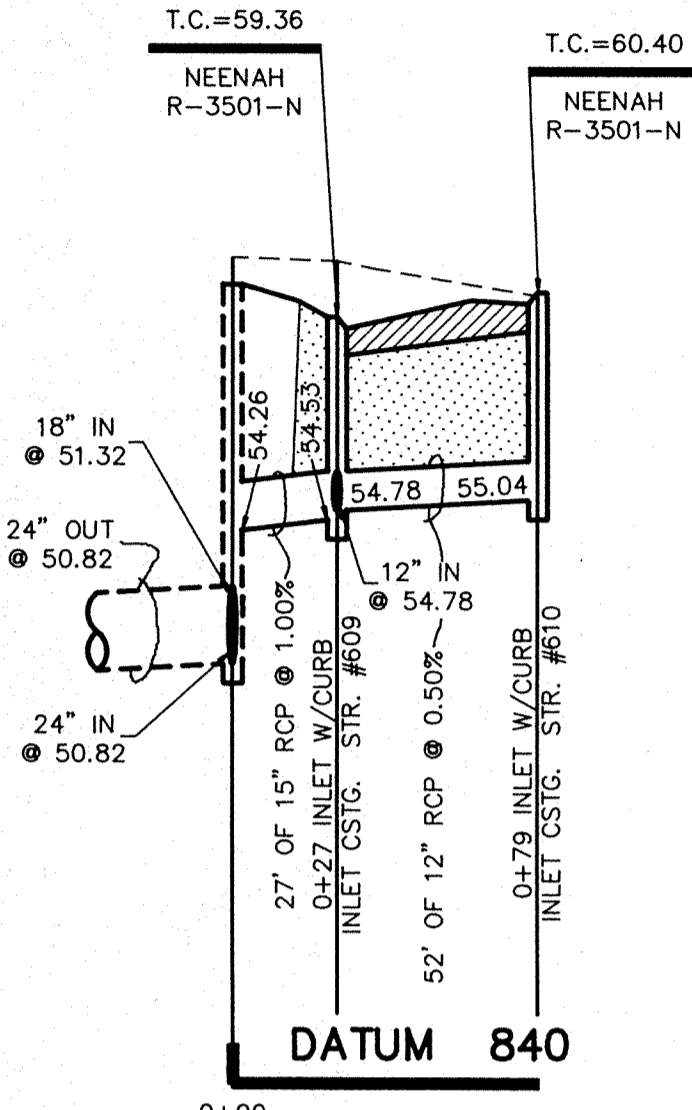
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DRFTNG. CHK:	DRAWING TITLE:	HORIZ. 1"=50'	8-14-89	C. P. MORGAN CO., INC.
		VERT. 1"=5'		

SANITARY SEWER - PLAN & PROFILE

ROHRER MEADOWS-SECTIONS 1 & 2	
DWG. TYPE	FILE NUMBER
JOB NUMBER	
89335E-000000	
SHEET:	9
	OF 17

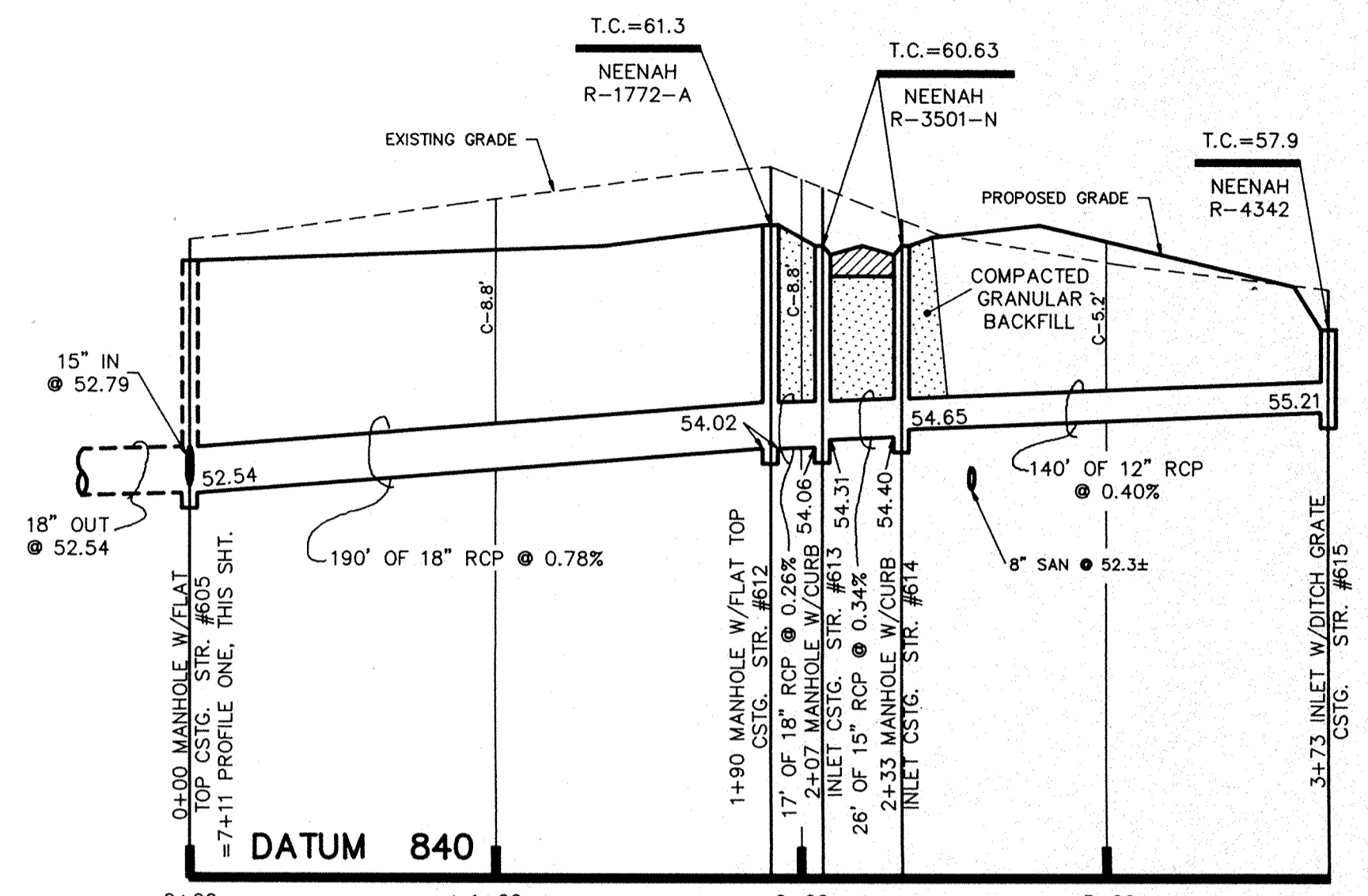


PROFILE ONE

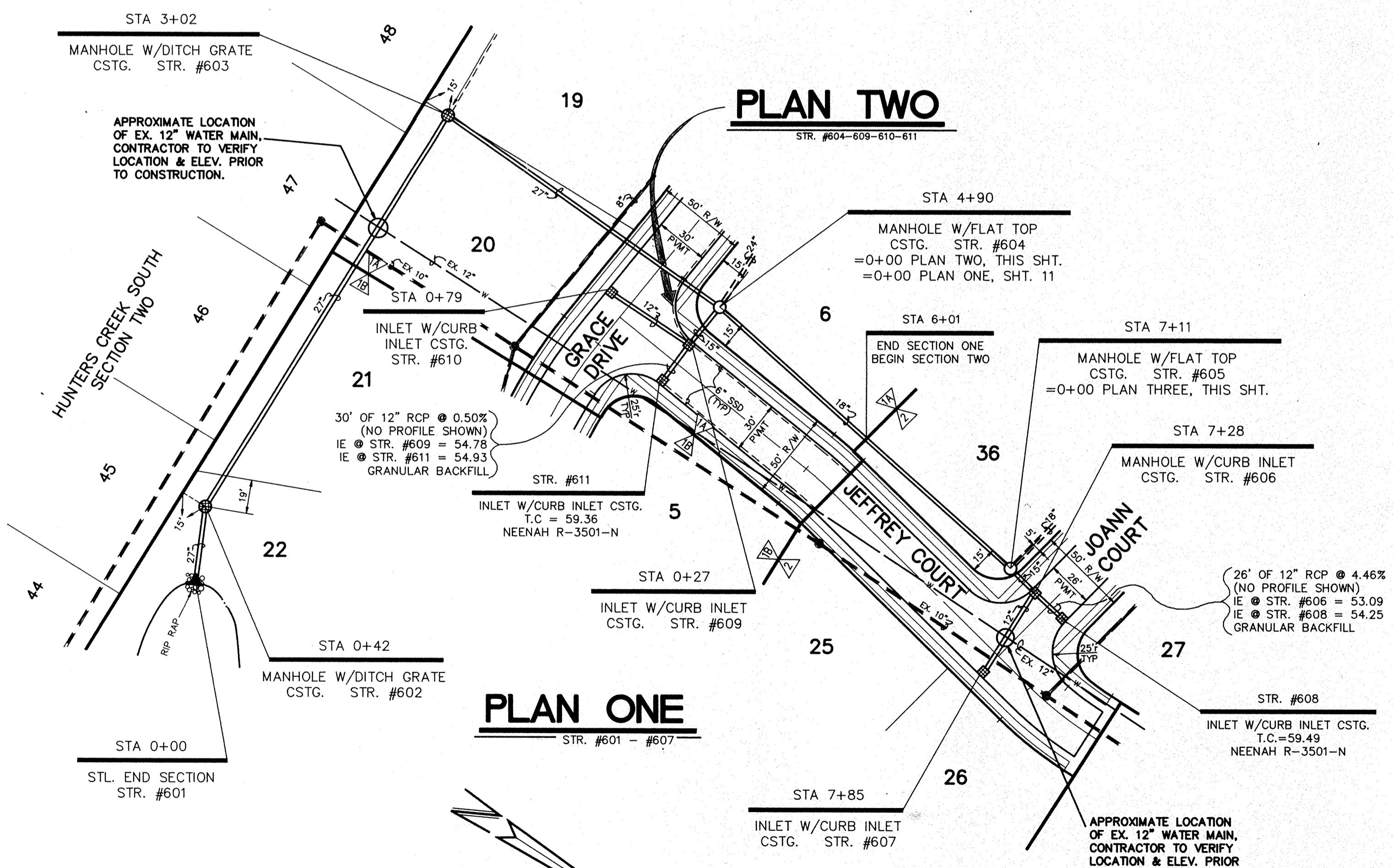


PROFILE TWO

NOTE:
 1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 2. FIELD ADJUSTMENT BY ENGINEER MAY BE REQUIRED AT ALL OUTFALL POINTS TO INSURE PROPER OUTFALL CONDITIONS.

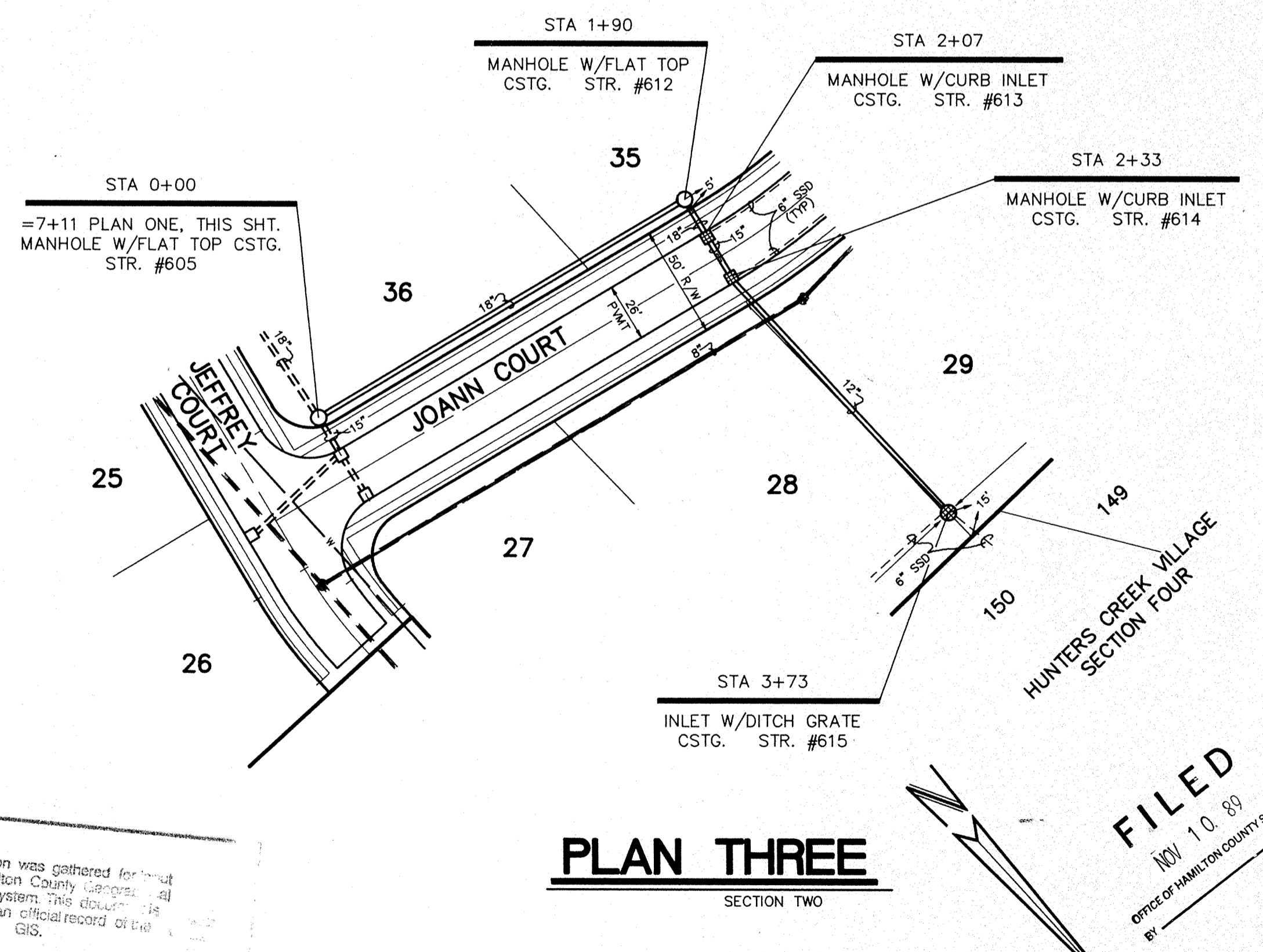


PROFILE THREE



PLAN ONE

PLAN TWO



PLAN THREE

HAMILTON COUNTY INDIANA
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 Entered by: JOr

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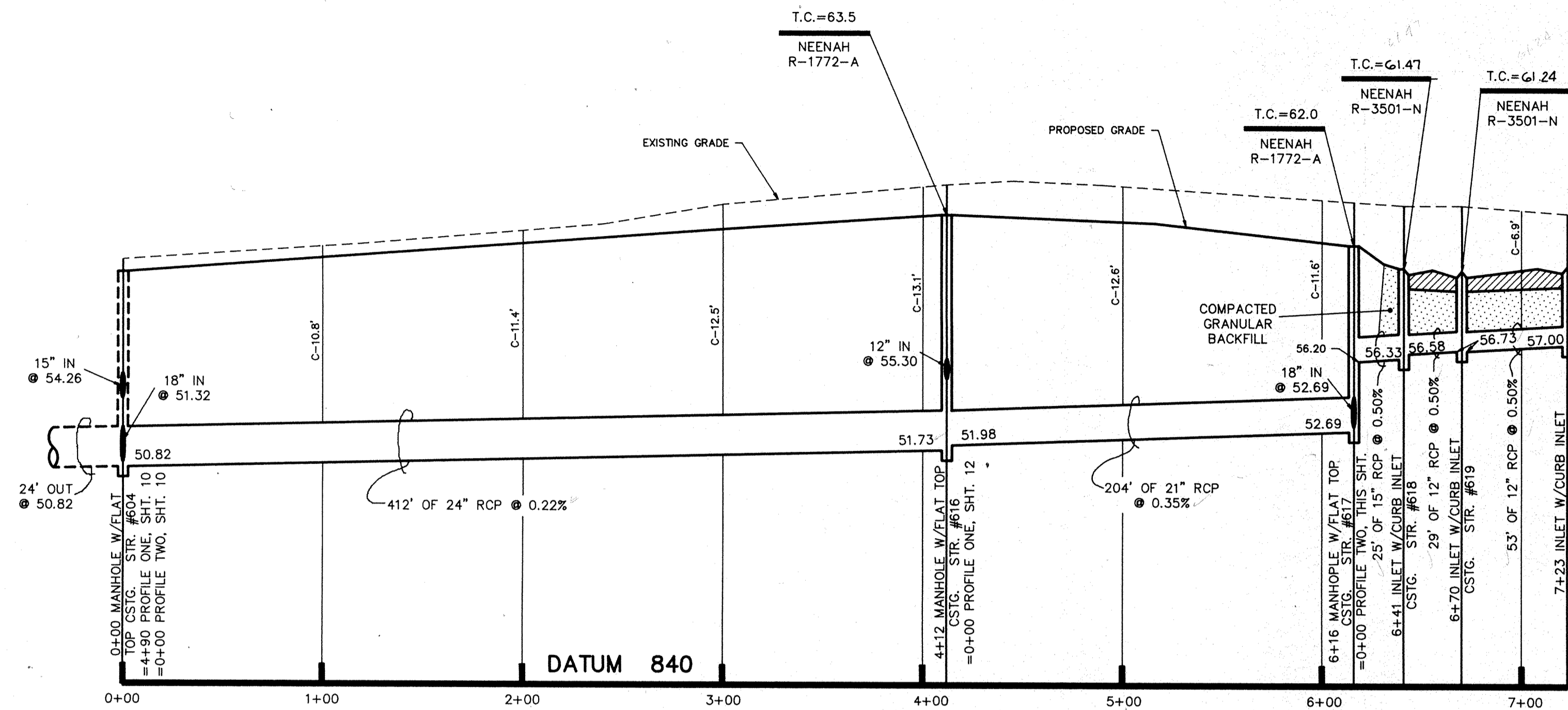
FILE NAME: RM\88385810.dwg

CERTIFIED BY:	REVISIONS
DATE	9-8-89 REV. PER T.A.C. 10-9-89 REV. PER DRAFT. CHK. 10-11-89 REV. SEC. 1 TO "A" & "B" 10-12-89 REV. INVERTS-STR. #606, #607, #608 (DUE TO EX. WATER MAIN)

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 7172 GRAHAM ROAD
 INDIANAPOLIS, INDIANA 46250
 (317) 842-6777

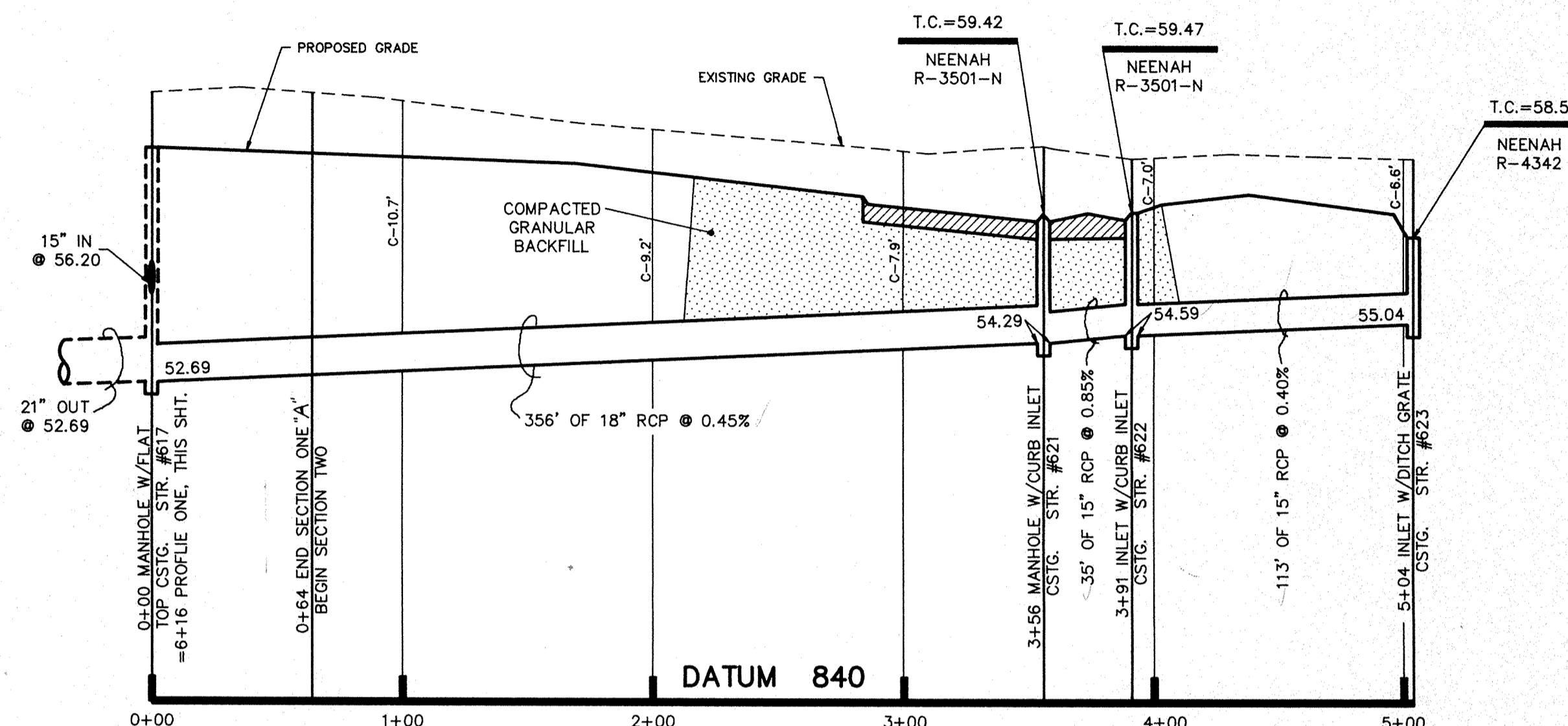
• CIVIL ENGINEERING	TECH. CHK.:	DRAWN BY:	SCALE:	DATE:	CLIENT:
• LAND SURVEYING			HORIZ. 1"=50'	8-17-89	C. P. MORGAN CO., INC.
• ARCHITECTURE	DRFTNG. CHK.:	DRAWING TITLE:	VERT. 1"=5'		
• LAND PLANNING		STORM SEWER - PLAN & PROFILE			

ROHRER MEADOWS - SECTIONS	
DWG. TYPE	FILE NUMBER
JOB NUMBER	SHEET:
893185-000000	10

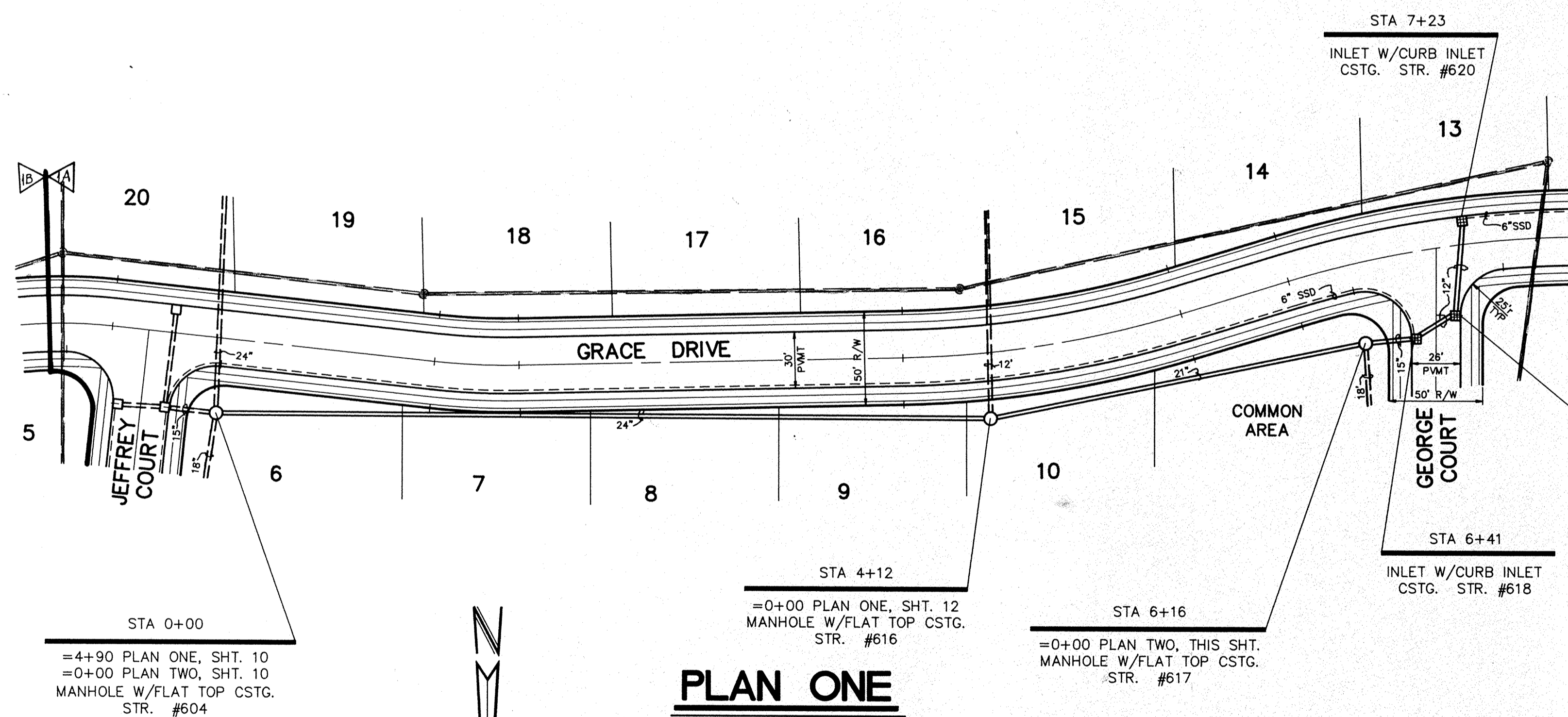


PROFILE ONE

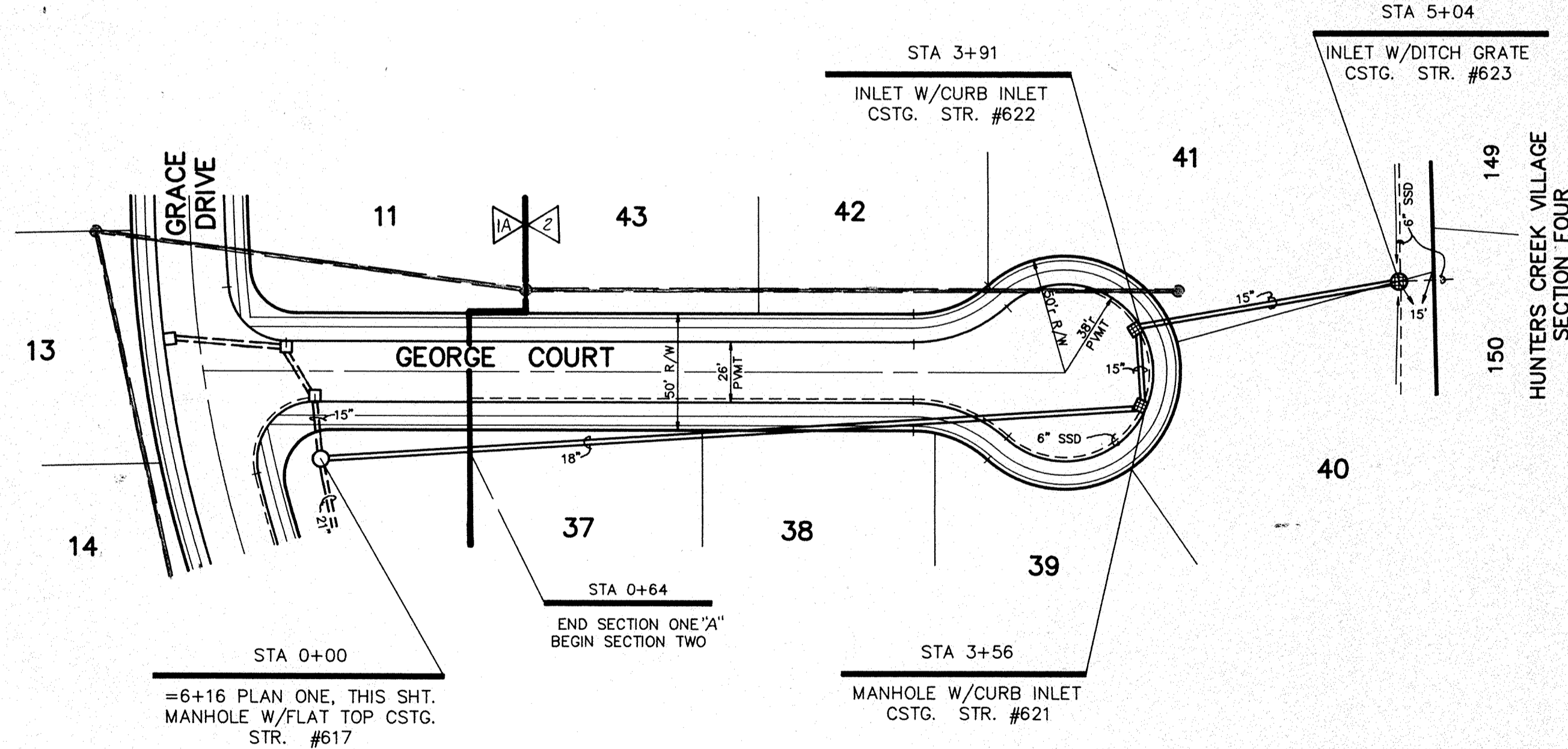
NOTE:
 1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 2. FIELD ADJUSTMENT BY ENGINEER MAY BE REQUIRED AT ALL OUTFALL POINTS TO INSURE PROPER OUTFALL CONDITIONS.



PROFILE TWO



PLAN ONE



PLAN TWO

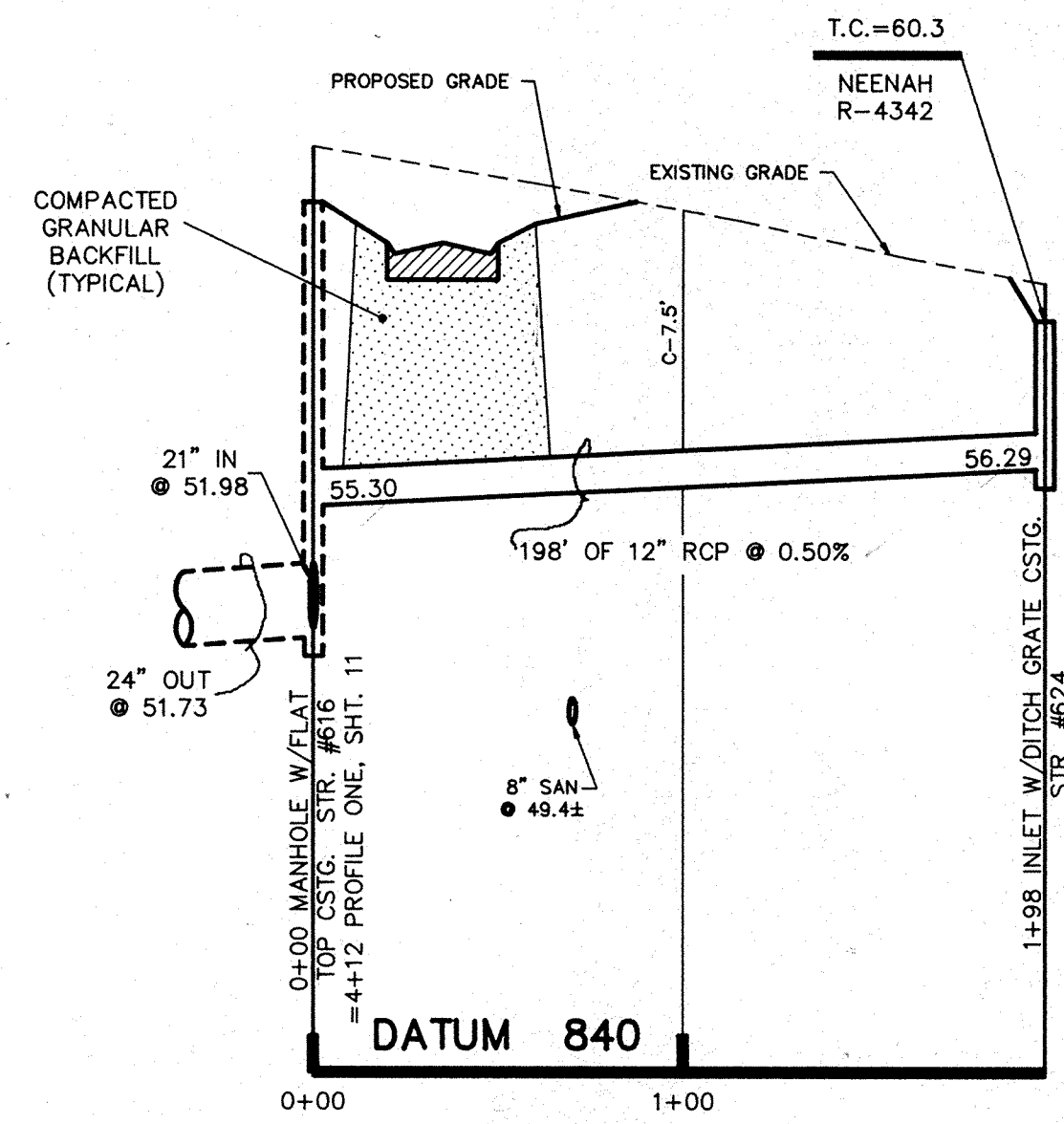
HAMILTON COUNTY INDIANA
 This information was gathered for input into the Hamilton County Geographical Information System. This drawing is considered an official record of the GIS.
 Entry Date: 12-31-03
 Entered by: JCH

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 BY: OFFICE OF HAMILTON COUNTY SUPERVISOR

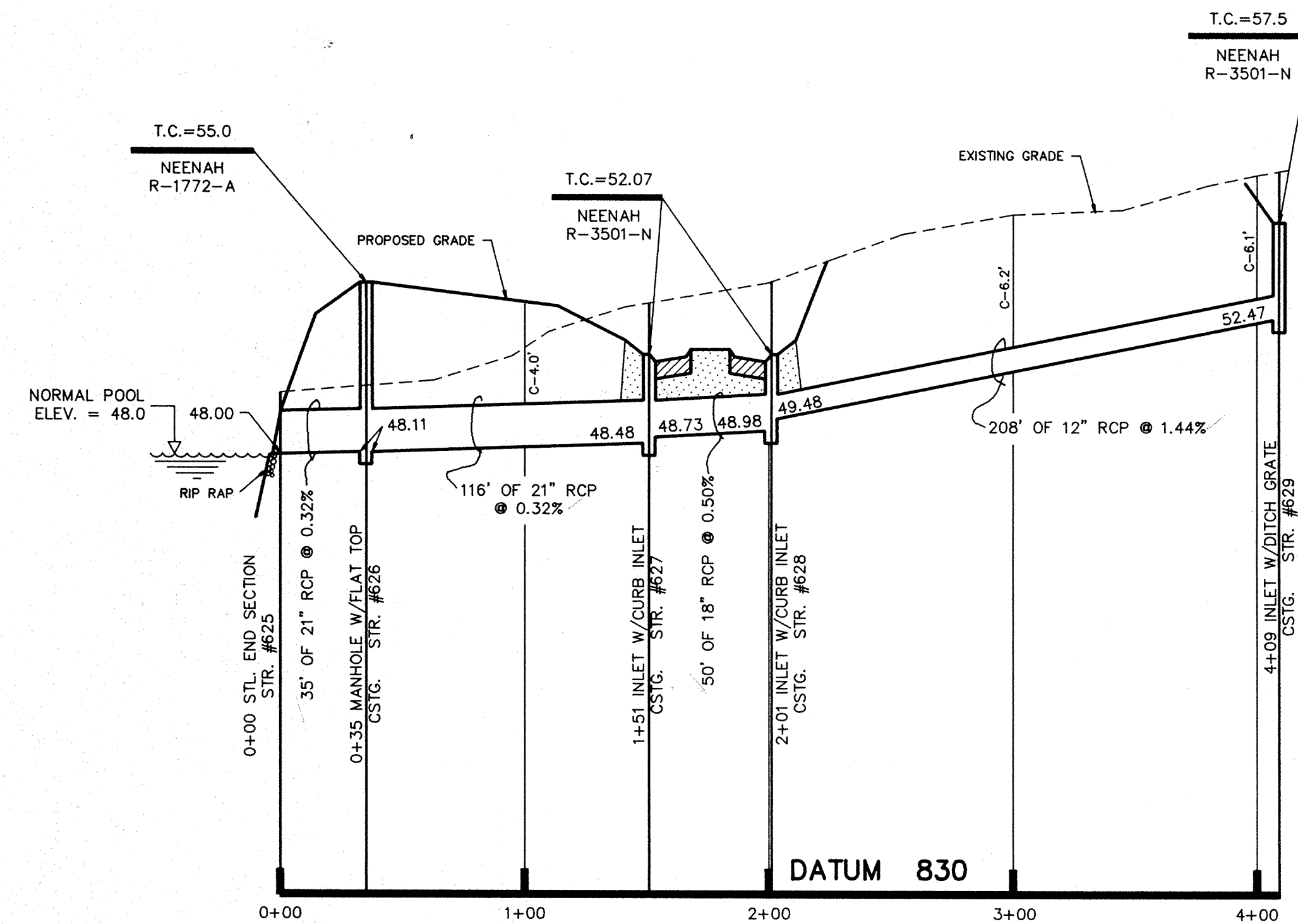
CERTIFIED BY:	REVISIONS	PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	● CIVIL ENGINEERING ● LAND SURVEYING ● ARCHITECTURE ● LAND PLANNING	TECH CHK:	DRAWN BY:	SCALE:	DATE:	CUSTOMER:	DWG. TYPE	FILE NUMBER	SHEET:	
	DATE					8-17-89	C. P. MORGAN CO., INC.			11		
ROHRER MEADOWS - SECTIONS 1 & 2										JOB NUMBER		OF 17
										893185-00000		

FILE NAME: RM\893185\1.dwg

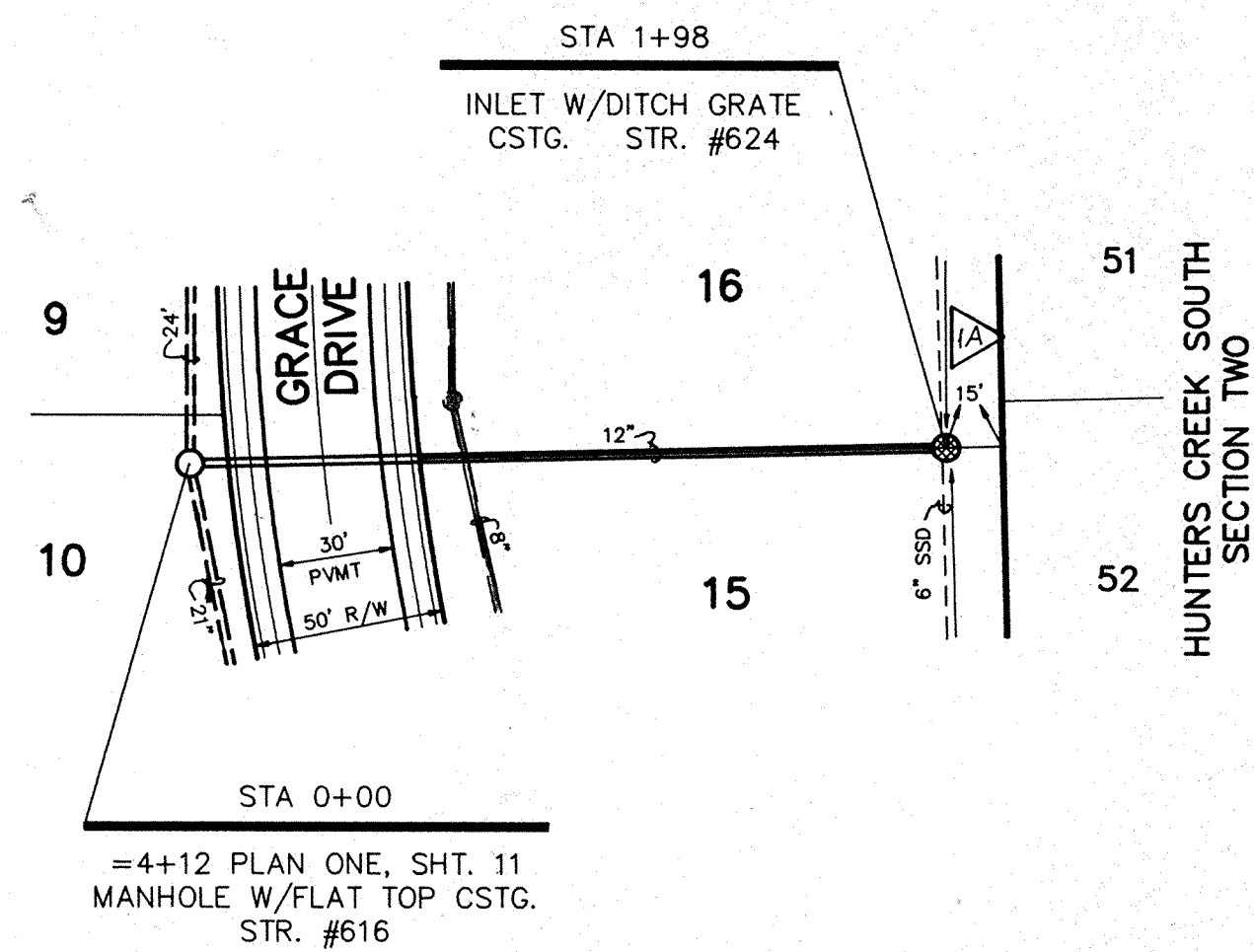
- NOTE:
1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 2. FIELD ADJUSTMENT BY ENGINEER MAY BE REQUIRED AT ALL OUTFALL POINTS TO INSURE PROPER OUTFALL CONDITIONS.



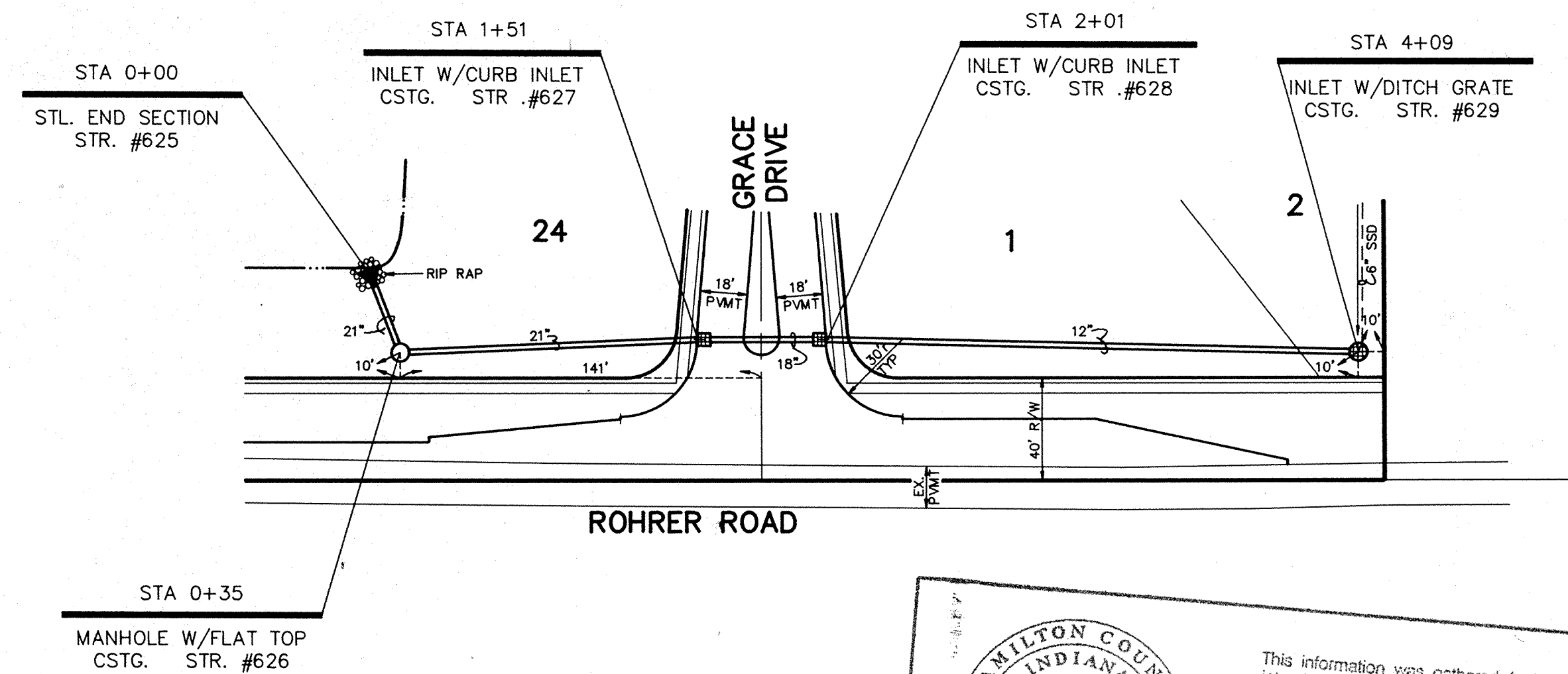
PROFILE ONE



PROFILE TWO



PLAN ONE



PLAN TWO

HAMILTON COUNTY INDIANA

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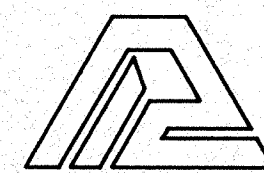
Entry Date: 12-31-89

Entered by: JQH

FILED
NOV 10 89
OFFICE OF HAMILTON COUNTY SURVEYOR

FILE NAME: RM 89355F12.dwg

CERTIFIED BY:	REVISIONS
	9-8-89 REV. PER T.A.C. (P-3)
	10-9-89 ADDITIONAL REV. PER T.A.C. & DRAFT. CHK.
DATE	



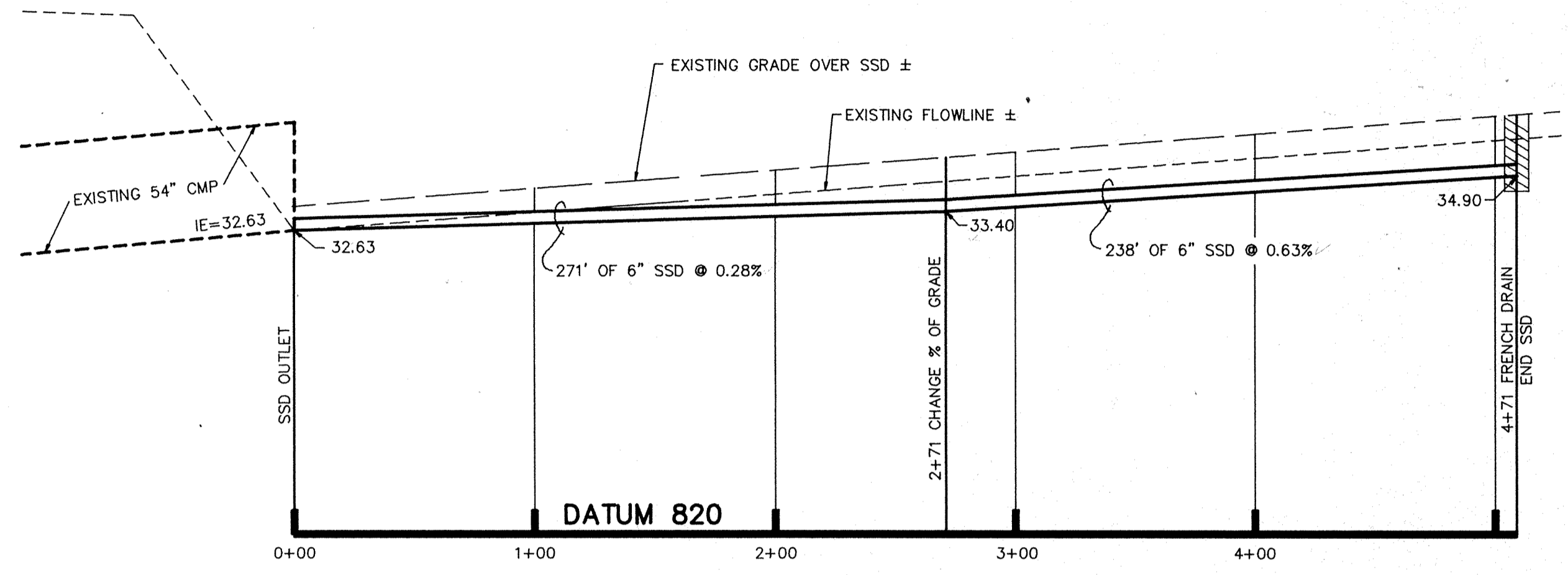
PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

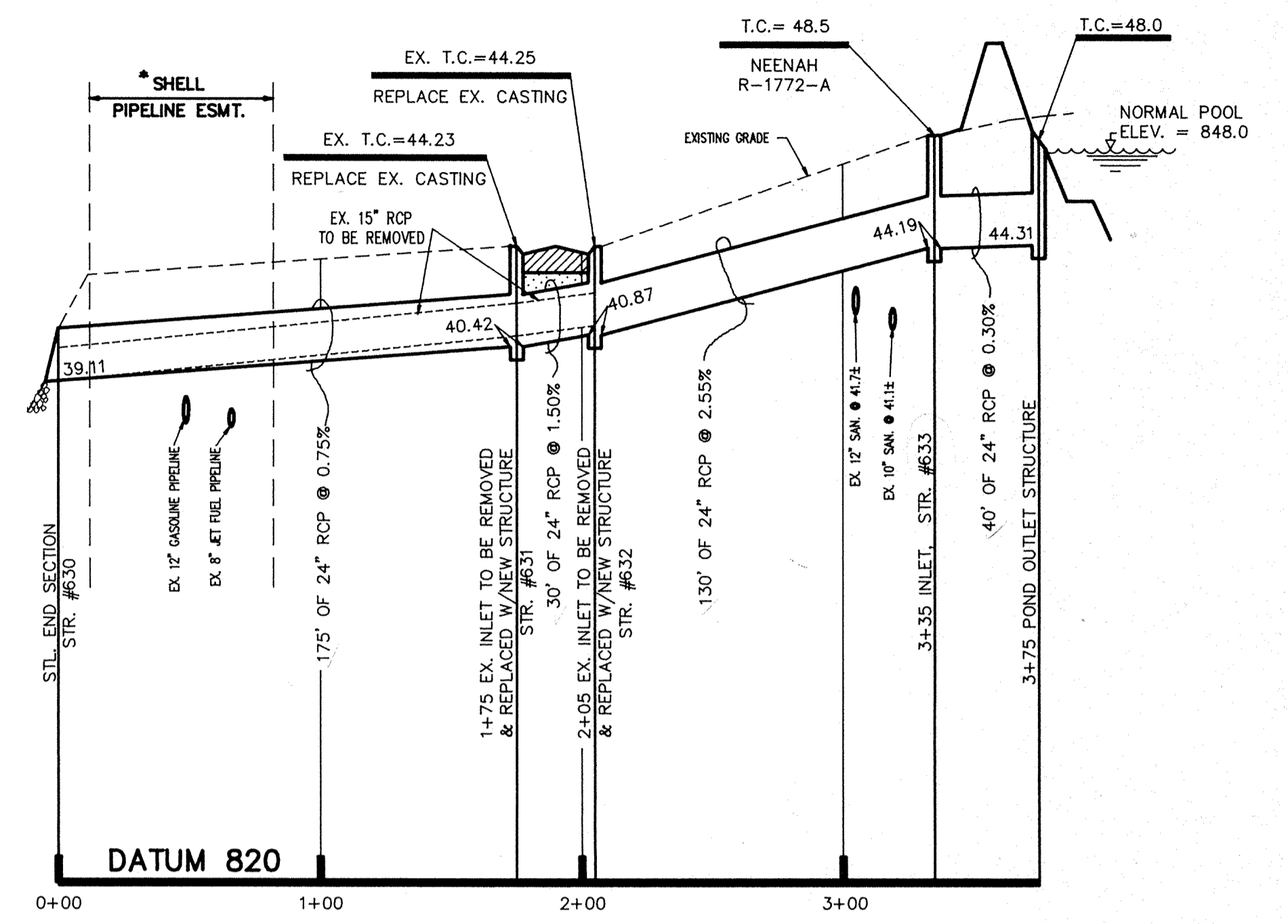
TECH. CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:	DWG. TYPE:	FILE NUMBER:	SHEET:	
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DRFTNG. CHK:	DRAWING TITLE:	STORM SEWER - PLAN & PROFILE					JOB NUMBER:	
							893815-000000	OF 17

ROHRER MEADOWS - SECTIONS 1 & 2

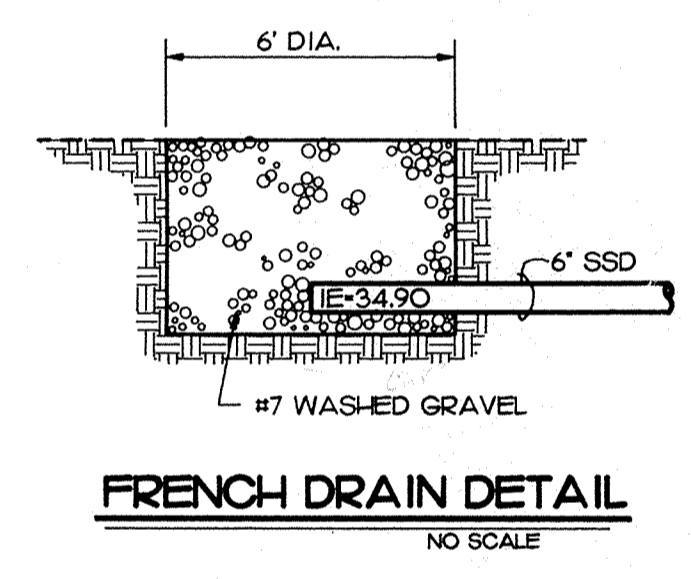
NOTE:
 1. CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
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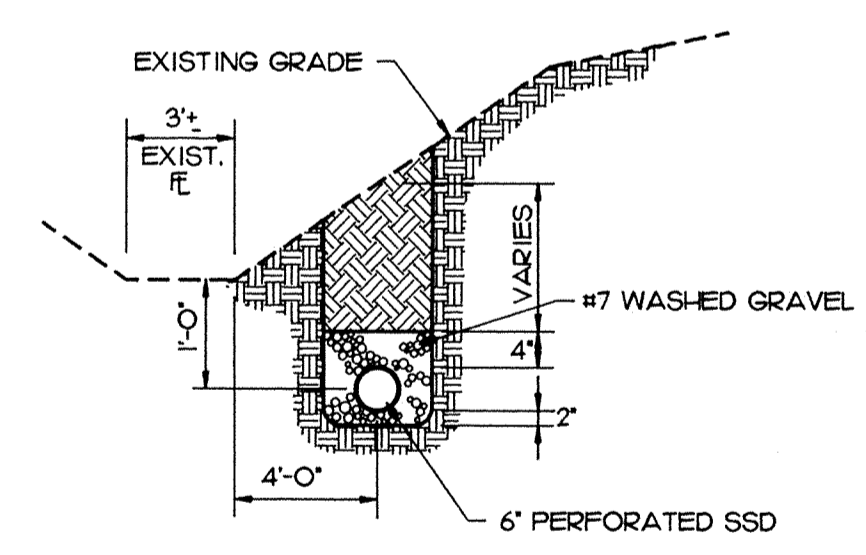
PROFILE ONE



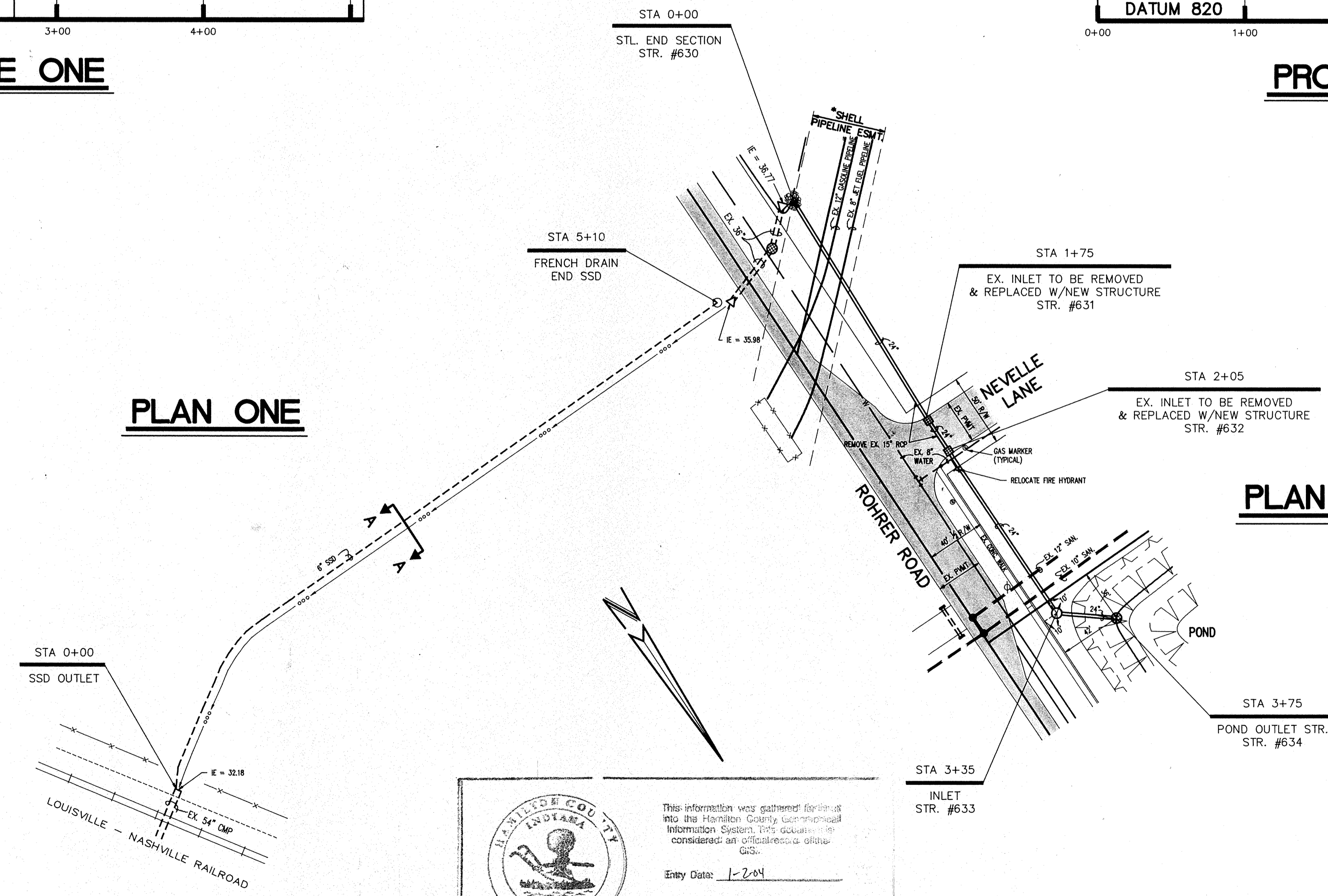
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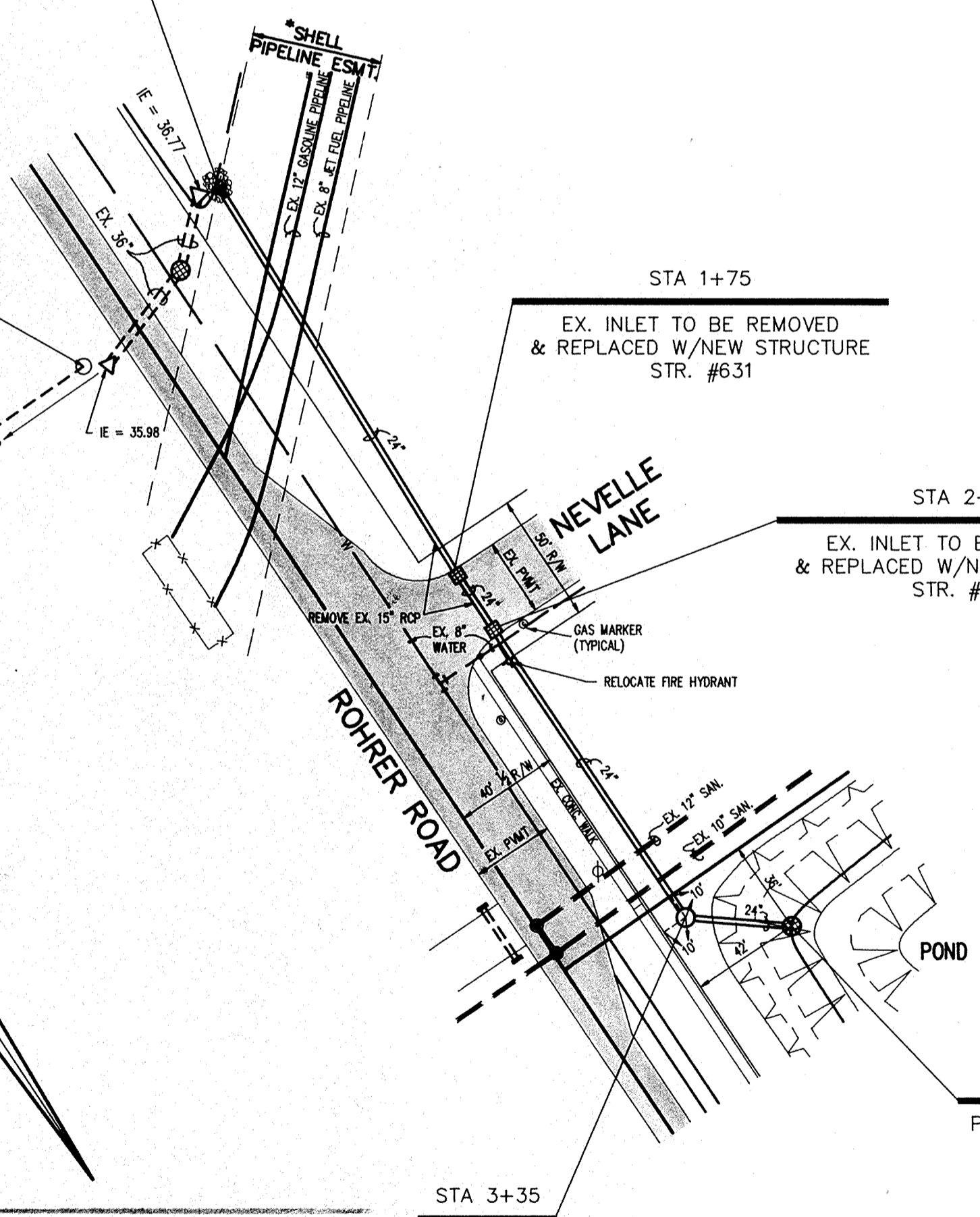
FRENCH DRAIN DETAIL
NO SCALE



SSD CROSS SECTION 'A-A'
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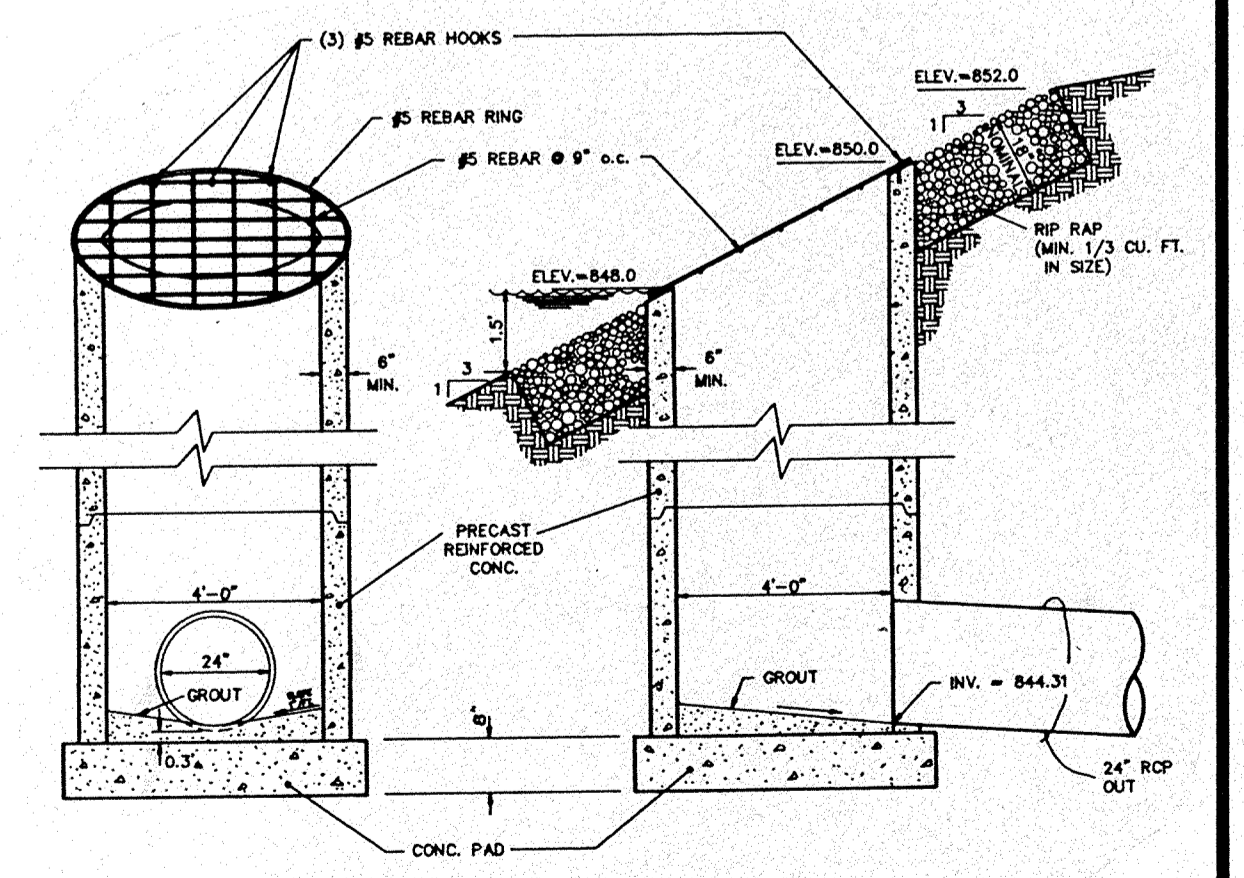
PLAN ONE



PLAN TWO

* NOTE: SHELL PIPE LINE CORPATION TO BE NOTIFIED AT LEAST 48 HRS. PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE VICINITY OF THE PIPELINES. CONTACT SHELL'S MAINTENANCE FOREMAN AT 1-317-872-5113 TO HAVE A REPRESENTATIVE PRESENT DURING CONSTRUCTION.

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 Nov 10 89
 OFFICE OF HAMILTON COUNTY SURVEYOR
 BY _____

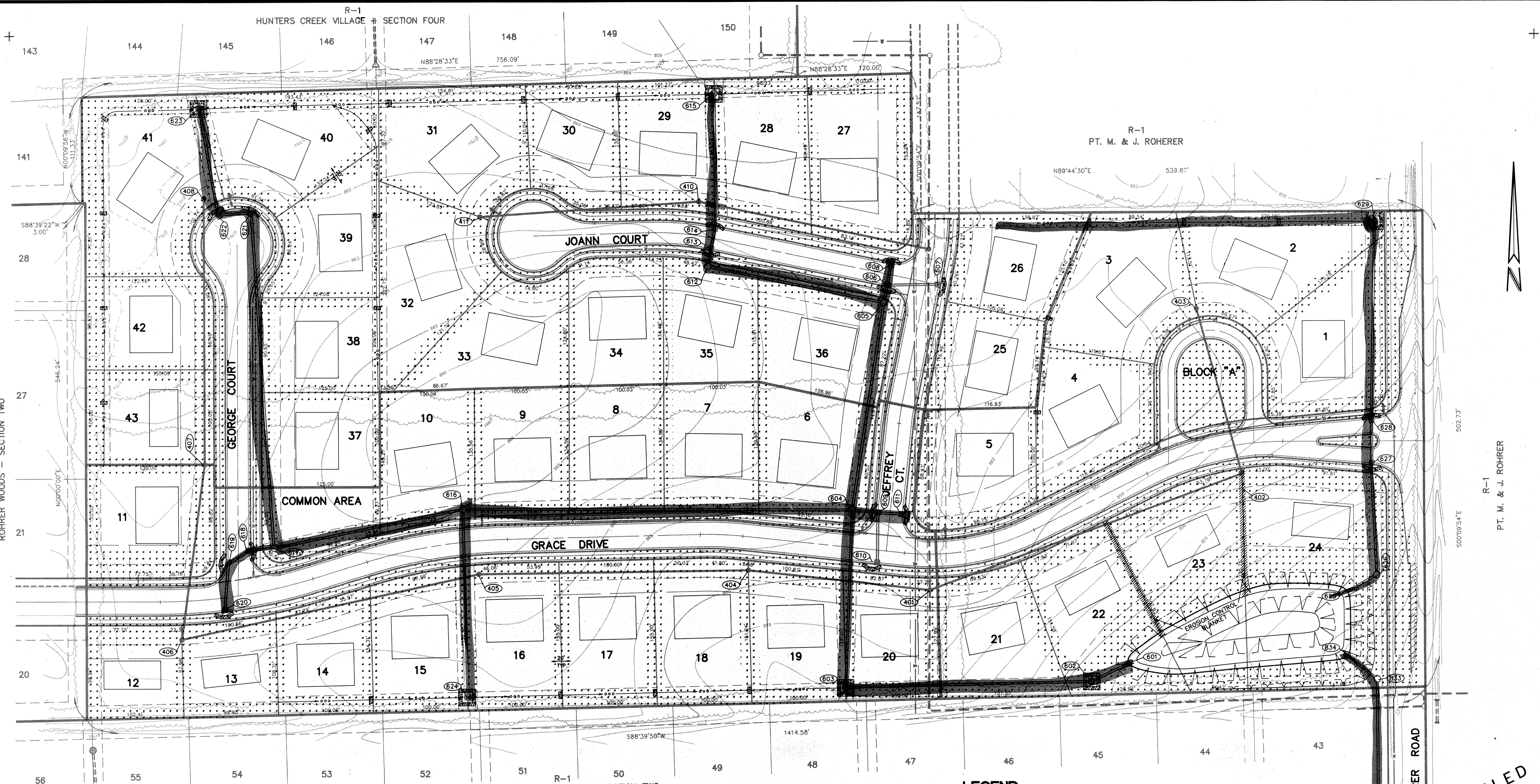


POND OUTLET STRUCTURE
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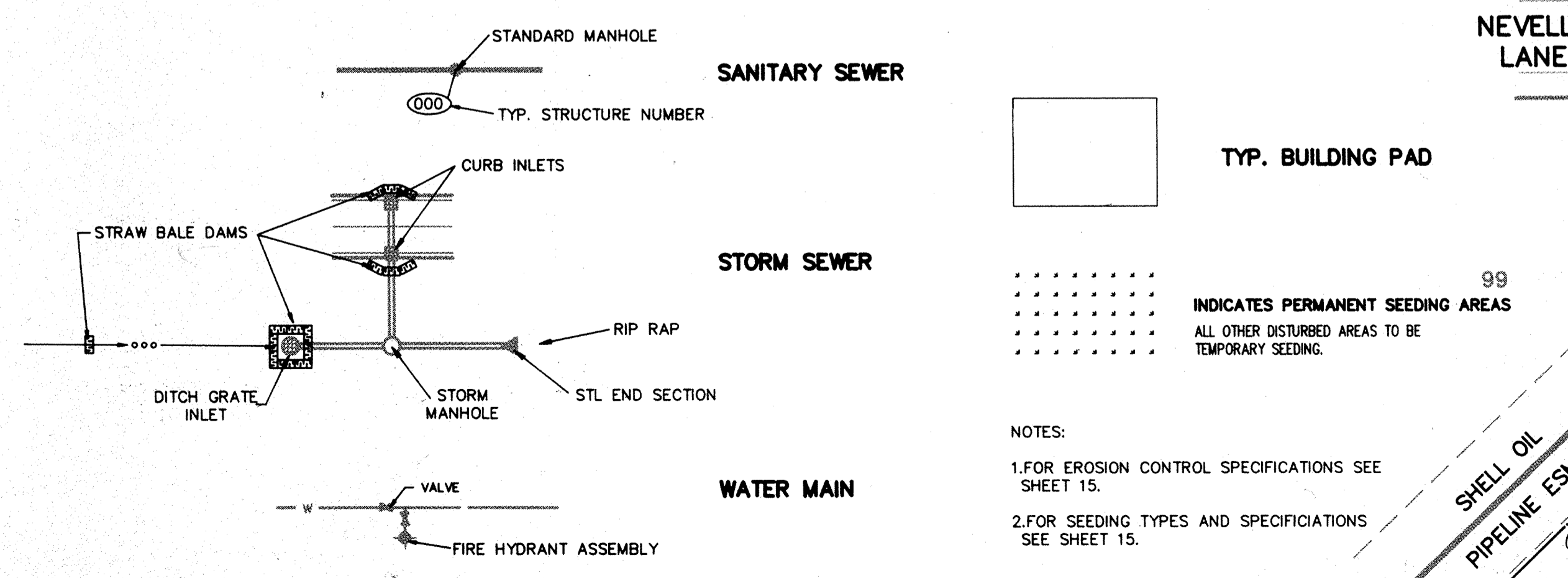
HAMILTON COUNTY INDIANA
 This information was gathered for use at into the Hamilton County Geographic Information System. It's accuracy is considered an official record of the GIS.
 Entry Date: 1-2-04
 Entered by: JCH

FILE NAME: RM\98385F15.dwg

CERTIFIED BY:	REVISIONS		PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777	CIVIL ENGINEERING LAND SURVEYING ARCHITECTURE LAND PLANNING	TECH CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:	DWG. TYPE	FILE NUMBER	SHEET: 13 OF 17
	DATE	10-9-88 REV. PER T.A.C.			AS NOTED	8-17-89	C. P. MORGAN CO., INC.					
OFFSITE STORM SEWER - PLAN & PROFILE										JOB NUMBER 89385-00000		



LEGEND



Erosion Control Blanket

Erosion control blanket shall be a machine-produced mat of 100% agricultural straw.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with polypropylene netting having an approximate 5/8" x 5/8" mesh, and on the bottom with a polypropylene netting with an approximate 1/4" x 1/4" mesh. The blanket shall be sewn together with cotton thread.

Straw erosion control blanket (or low velocity channel lining) shall be S150 as manufactured by North American Green, or equivalent. Erosion control blanket or channel lining shall have the following properties.

Material Content

Straw	100% (.5 lb/sq. yd.) (.27 kg/m2)
Netting	One side lightweight photodegradable (1 lb/1000 sq. ft. approx. wt.)
	One side heavyweight photodegradable (3 lb/1000 sq. ft. approx. wt.)
Thread	Cotton
Physical Specifications (Roll)	
Width	6.5 feet (2m)
Length	83.5 feet (25.4m)
Weight	30 lbs + 10% (13.6 kg)
Area	60 sq. yds. (50m2)

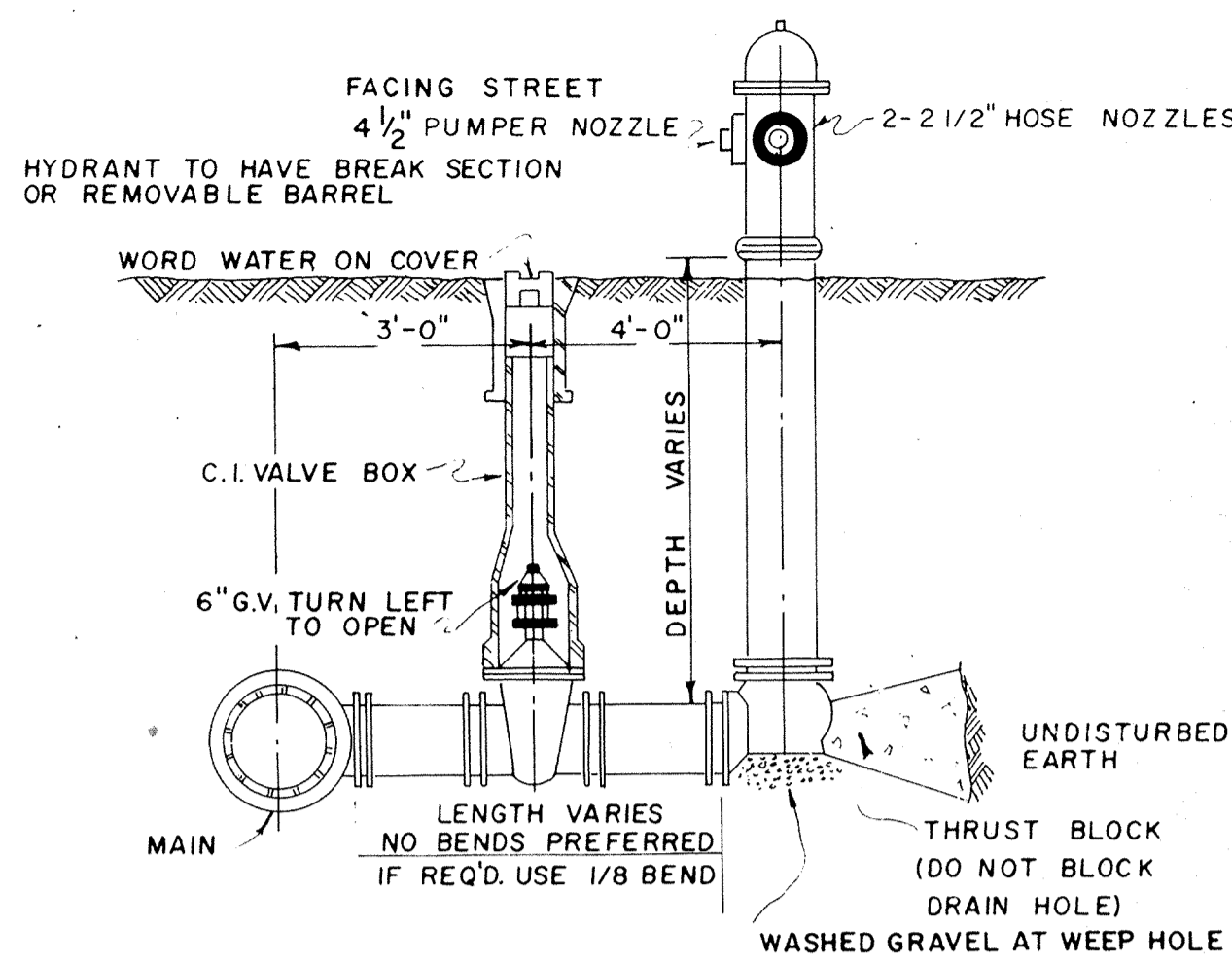
NOTES:

1. FOR EROSION CONTROL SPECIFICATIONS SEE SHEET 15.
2. FOR SEEDING TYPES AND SPECIFICATIONS SEE SHEET 15.

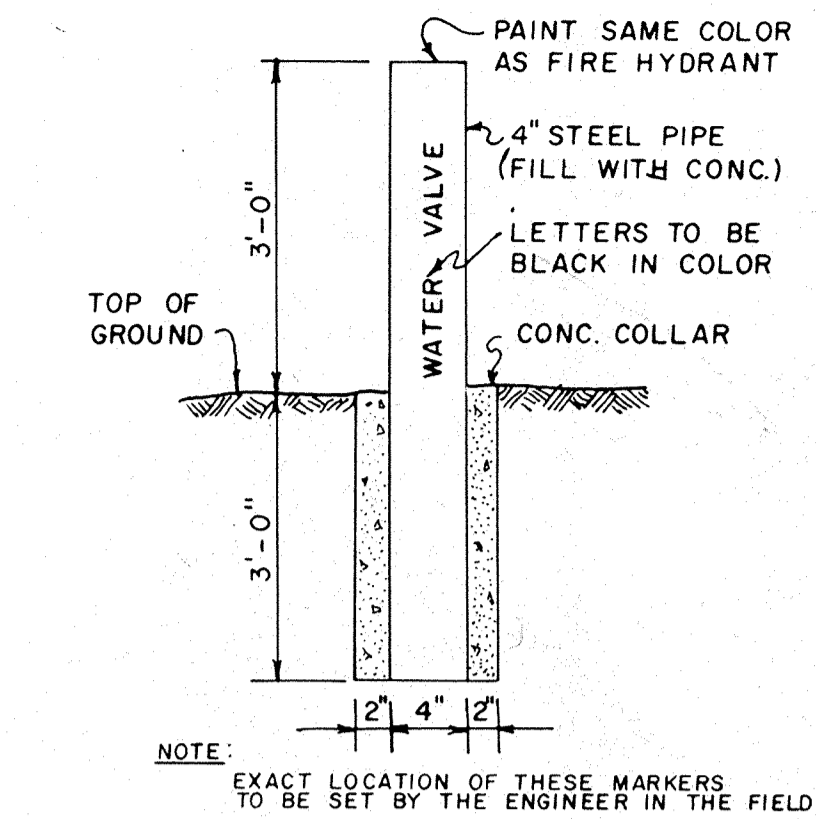
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ROHRER MEADOWS SECTIONS 1 & 2

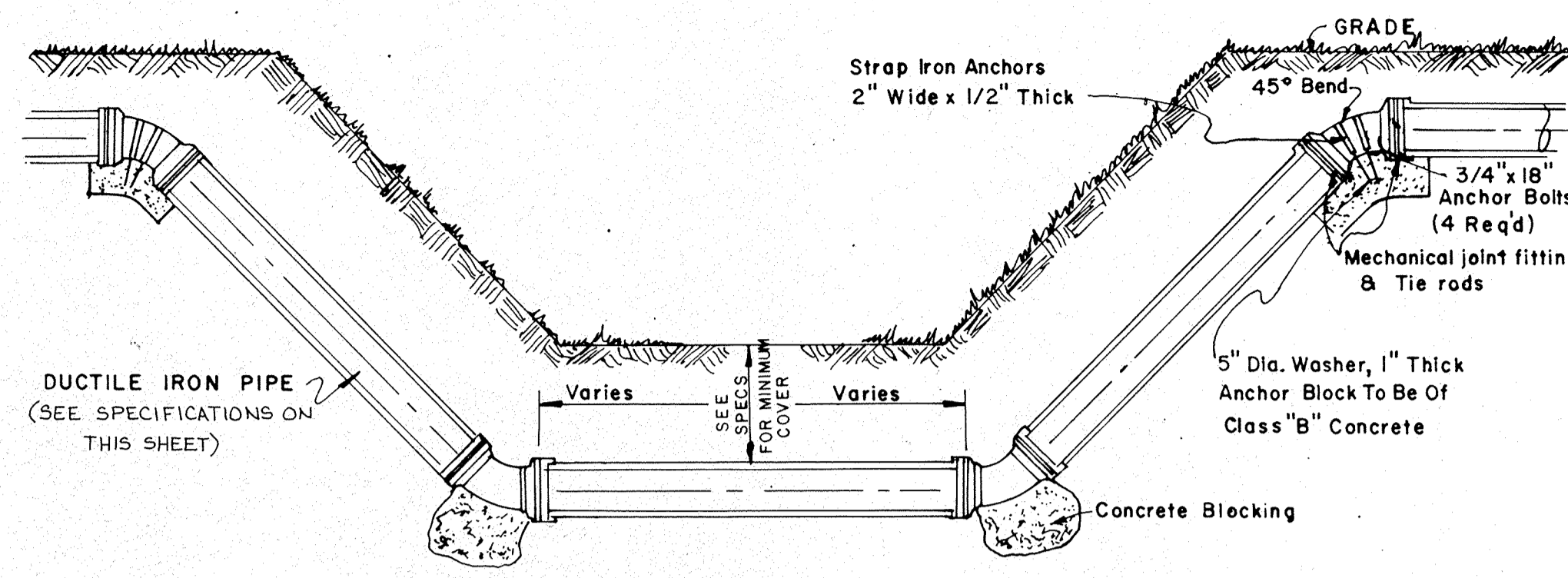
CERTIFIED BY:	REVISIONS 9-8-89 REV. PER T.A.C. 10-9-89 REV. POND & STORM OUTLET 10-11-81 Rev. Misc. Drafting	<p>PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 (317) 842-6777</p>	<ul style="list-style-type: none"> ● CIVIL ENGINEERING ● LAND SURVEYING ● ARCHITECTURE ● LAND PLANNING 	TECH. CHK: DRFTNG. CHK:	DRAWN BY: DRAWING TITLE:	SCALE: DATE:	CLIENT:	DWG. TYPE FILE NUMBER JOB NUMBER 8 9 3 1 8 5 1 - 1 0 0 0 1 0 0	SHEET: 14 OF 17
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FIRE HYDRANT DETAIL

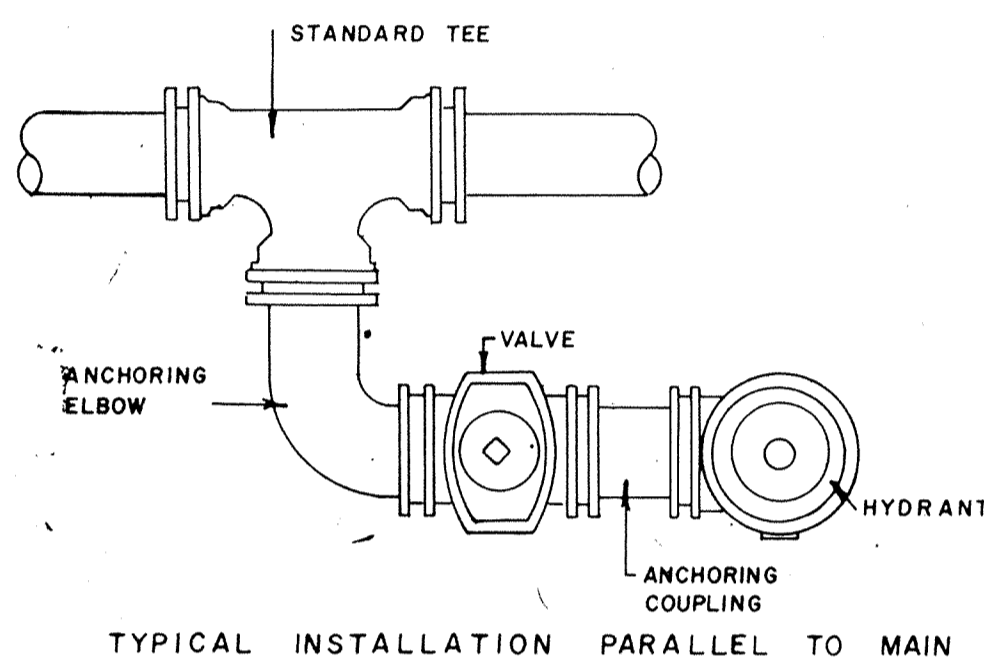


WATER VALVE MARKER DETAIL

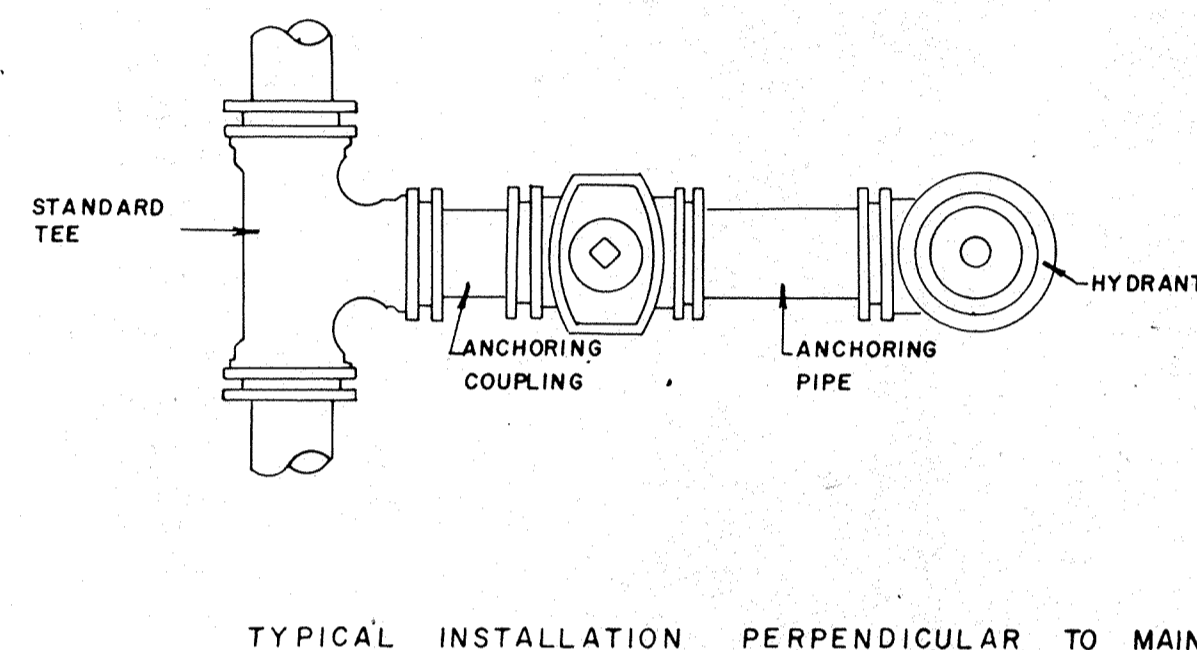


TYPICAL DETAIL FOR INSTALLING MAIN UNDER STREAM OR CULVERT

ALSO FOR SPECIAL SEWER AND WATER CROSSINGS. NO SCALE



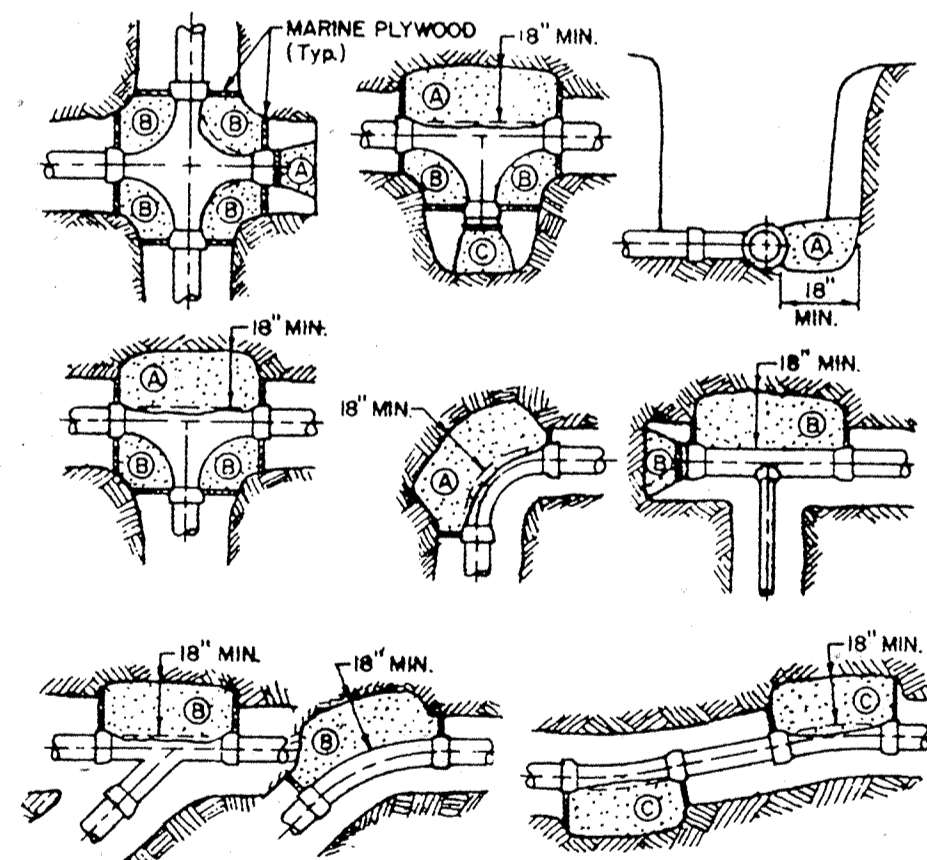
TYPICAL INSTALLATION PARALLEL TO MAIN



TYPICAL INSTALLATION PERPENDICULAR TO MAIN

HYDRANT INSTALLATION DETAILS

(DETAILS SHOWN IN PLAN VIEW)

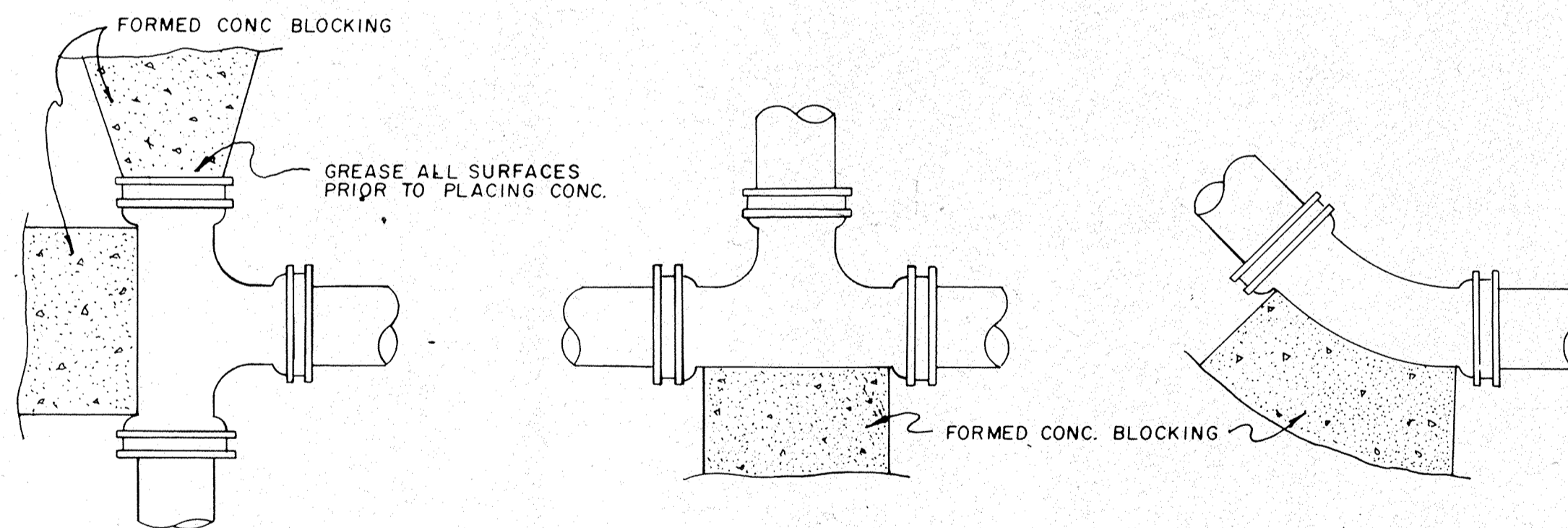


MARK	POTABLE & NON-POTABLE SYSTEM - 50PSI TEST PRES					
	4"	6"	8"	10"	12"	16"
A (90°)	1.1	2.6	4.6	7.5	10.4	18.2
B (45°)	0.7	1.4	2.5	4.0	5.7	9.3
C (22 1/2°)	0.3	0.8	1.3	2.0	2.9	5.3

1. ABOVE TABLE INDICATES CU. FT. OF CONC. REQUIRED WITH 4 SOIL PRESSURE OF 2000 P.S.F. MIN.
2. PLACE PAPER OR PLASTIC BETWEEN FITTING & CONCRETE.

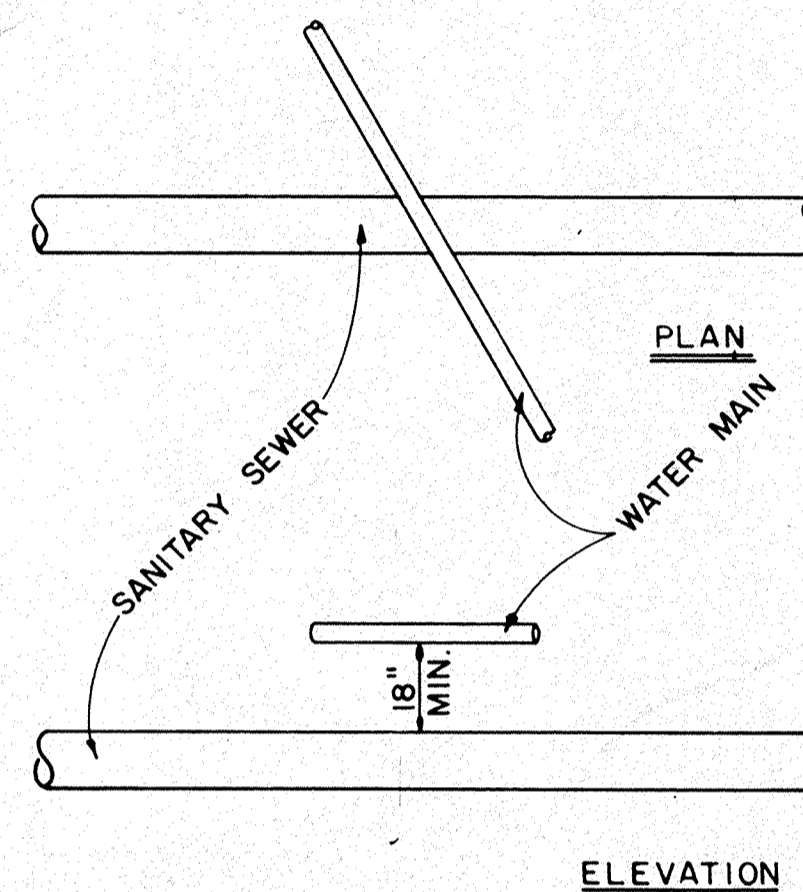
THRUST BLOCK TABLE

8

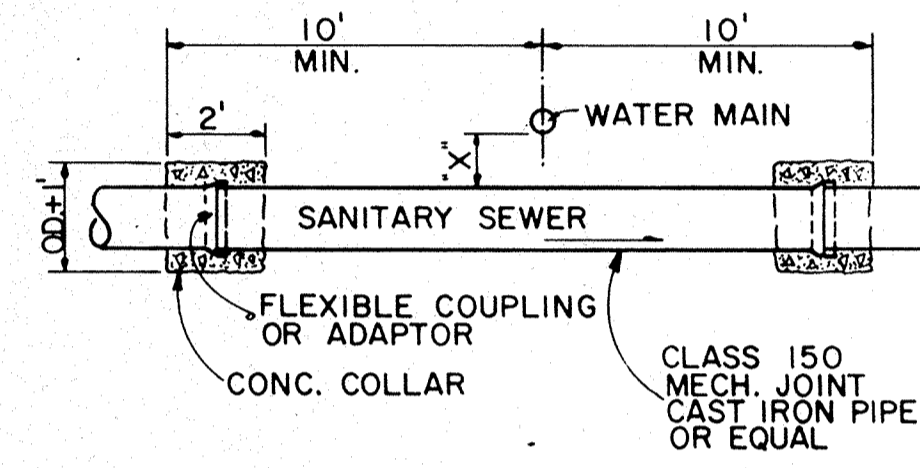


TYPICAL THRUST BLOCKING INSTALLATION

(DETAILS SHOWN IN PLAN VIEW)



NORMAL CROSSING



SPECIAL CROSSING

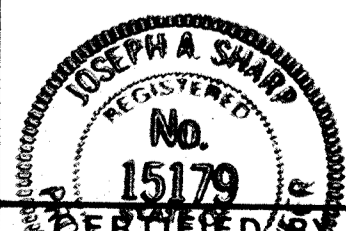
MINIMUM SEPARATION & CROSSOVER REQUIREMENTS FOR SANITARY SEWERS & WATER MAINS

NOTE: Above specification applies when dimension "X" is less than 18" or water main lies below sanitary sewer.

- SCOPE**
Furnishing and installing all specified pipe, valves, valve boxes, hydrants and fittings.
- MATERIALS**
 - Pipe:**
Pipe may be ductile iron or PVC. Ductile iron pipe shall be in accordance with AWWA C-150. Pipe shall be tar coated and cement lined in accordance with AWWA C-104. Pipes shall have a 150 psi working pressure. PVC pipe shall be in accordance with ASTM D 2241 and AWWA C-900, SDR 18 maximum. Working pressure shall be 150psi, SF to 250psi.
 - Joints:**
Ductile Iron pipe joints shall be super bell-tite push-on joint conforming to AWWA C-111, except where mechanical joints are specified.
 - Fittings:**
Fittings for ductile iron shall be super bell-tite joints. Fittings for PVC shall conform to all pipe specifications mentioned above.
 - Gate Valves:**
Gate valves shall conform to AWWA C-500. Valves shall be double disk, non-rising stem with O-ring stuffing box and opening counterclockwise. Each valve shall be enclosed by a cast iron valve box which extends to finish grade. All valve covers shall have the designation "water" cast in it.
 - Hydrants:**
Hydrants shall be installed with 6" gate valve. Hydrant shall have one 4-1/2" and two 2-1/2" nozzles. Hydrant shall have 4-1/2" main valve and a 6" flanged connection. Hydrant shall open counterclockwise and conform with the majority of existing hydrants.
- RESPONSIBILITY**
Contractor shall be responsible for all materials involved with water system and shall replace at his own expense all material found to be defective.

Contractor shall check with Engineer prior to start of construction to verify date of plans. Minor changes may be made if all reviewing agency approvals are not granted before bidding. Changes in cost shall be negotiated prior to physical construction based on unit prices submitted on the contract documents.

The Contractor shall contact all utility companies to locate all mains, conduits, service lines, etc. in the construction affected area. Existing utility structures are shown here in accordance with available information. The location and protection of utility structures and facilities, their support and maintenance during construction (in cooperation with applicable utility), is the express responsibility of the Contractor in the performance of the Contract and in the preparation of the bid.
- TRENCH**
The top of pipe shall be a minimum 4'0" below finish grade.
- EXISTING UNDERGROUND STRUCTURES**
 - Existing underground utilities are located on plans according to the best available information.
 - Contractor is responsible for contacting necessary individual(s) for determining exact locations and coordinating construction accordingly.
- MAINTAINING TRAFFIC**
Contractor shall perform construction in such a manner as to provide at least one traffic lane open to travel during construction activity. When construction activity ends for a day, all traffic lanes will be made passable. Warning signs alerting drivers to road condition will be placed beside all approaching lanes if road has not been restored to original conditions at the end of construction for any day.
- INSTALLATION**
All pipe work construction will conform to AWWA C-600.
- BACKFILL**
Trenches passing under a driving surface shall be backfilled with granular material.
- DISINFECTION**
 - Prior to being placed in service, all new water lines shall be disinfected in accordance with AWWA C-601.
 - Spot disinfection will be required at connections to existing mains.
 - Samples must be submitted to the State Board of Health Laboratory for acceptance. This procedure shall be repeated at no additional cost to owner until acceptance is granted.



Joseph A. Shays
9-15-89 DATE

REVISIONS	DATE
9-2-89 REV PER TAC	

PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK.	DRAWN BY	SCALE	DATE	CLIENT
DFTNG. CHK.			8-17-89	C.P. MORGAN CO., INC.

ROHRER MEADOWS - SEC. 142		
DWG. TYPE	FILE NUMBER	SHEET
		45
JOB NUMBER		
89385	00000	OF 17

WATER MAIN - DETAILS & SPECS.

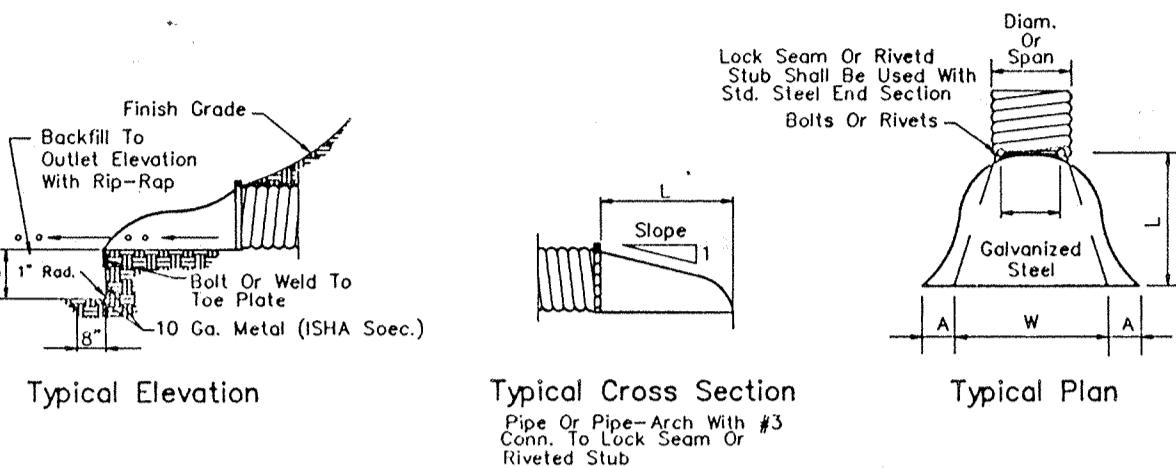
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DIMENSIONS OF GALVANIZED STEEL END SECTIONS FOR ROUND PIPE

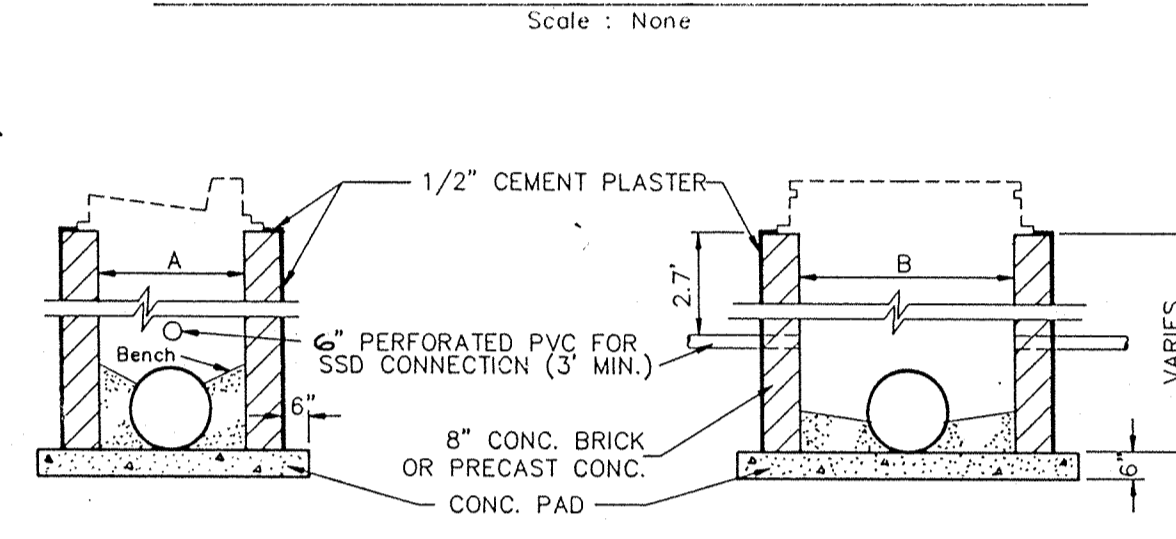
DIMENSIONS IN INCHES			DIMENSIONS IN INCHES			DIMENSIONS IN INCHES		
PIPE DIA.	APPROX. SLOPE	BODY	PIPE DIA.	GAGE	"A"	"B"	"C"	"D"
12	2 1/2	1 pc.	12	16	6	6	6	6
15	3	1 pc.	15	16	7	7	7	7
18	3 1/2	1 pc.	18	16	8	8	8	8
21	4	1 pc.	21	16	9	9	9	9
24	4 1/2	1 pc.	24	16	10	10	10	10
30	5 1/2	1 pc.	30	14	12	12	12	12
36	6 1/2	1 pc.	36	14	14	14	14	14
42	7 1/2	1 pc.	42	12	16	16	16	16
48	8 1/2	1 pc.	48	12	18	18	18	18
54	10 1/2	1 pc.	54	12	20	20	20	20
60	11 1/2	1 pc.	60	12	22	22	22	22
66	12 1/2	1 pc.	66	12	24	24	24	24
72	13 1/2	1 pc.	72	12	26	26	26	26
78	14 1/2	1 pc.	78	12	28	28	28	28
84	15 1/2	1 pc.	84	12	30	30	30	30

STANDARD CONNECTIONS: Type # 1 Shall be Connector Lug With Threaded Rod. Type # 2 Shall be Threaded Rod With Rod Holder. Type # 3 Shall be Riveted or Bolted Connection.

NOTE: Standard Dimensions For Galvanized Steel End Sections For Pipe-Arch May Be Found On Misc. Standards Sheet E, Dated July, 1972, The Indiana State Highway Standard Specifications.



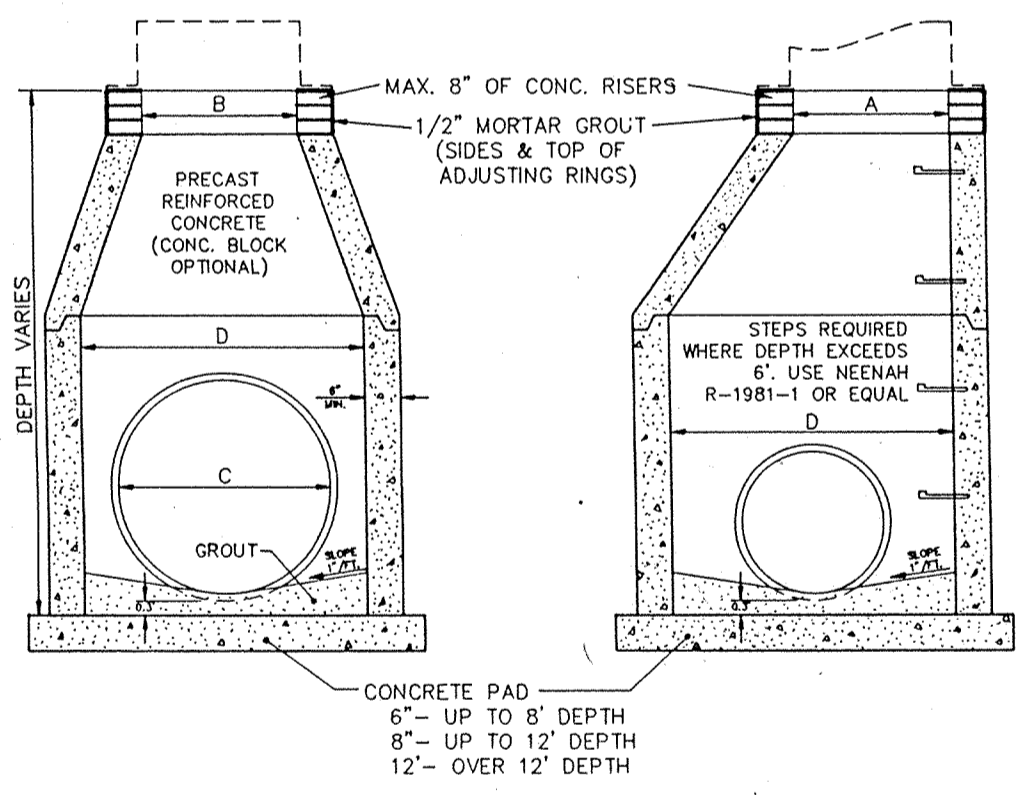
STANDARD STEEL END SECTION DETAIL



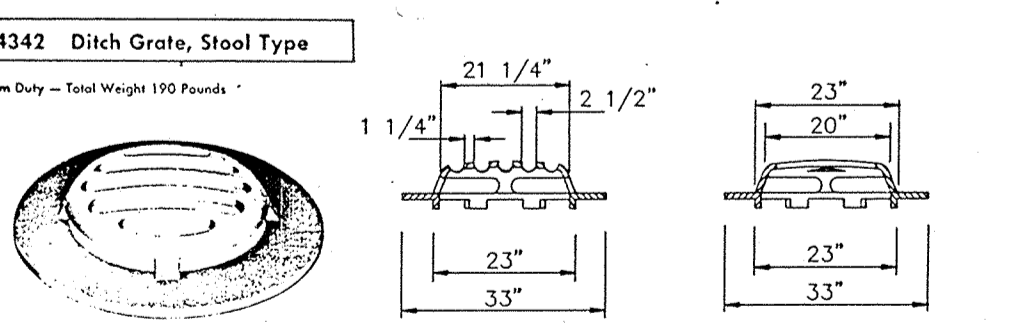
SHALLOW INLET DETAIL

CASTING	A	B	C	D
R-3501-N	24"	24"	21" 4'-0"	24" 4'-0"
R-1642	27"	27"	27" 4'-0"	30" 4'-4"
R-1772-A	25"	25"	26" 5'-0"	30" 5'-0"
R-4342	24"	24"	48" 6'-0"	54" 8'-6"

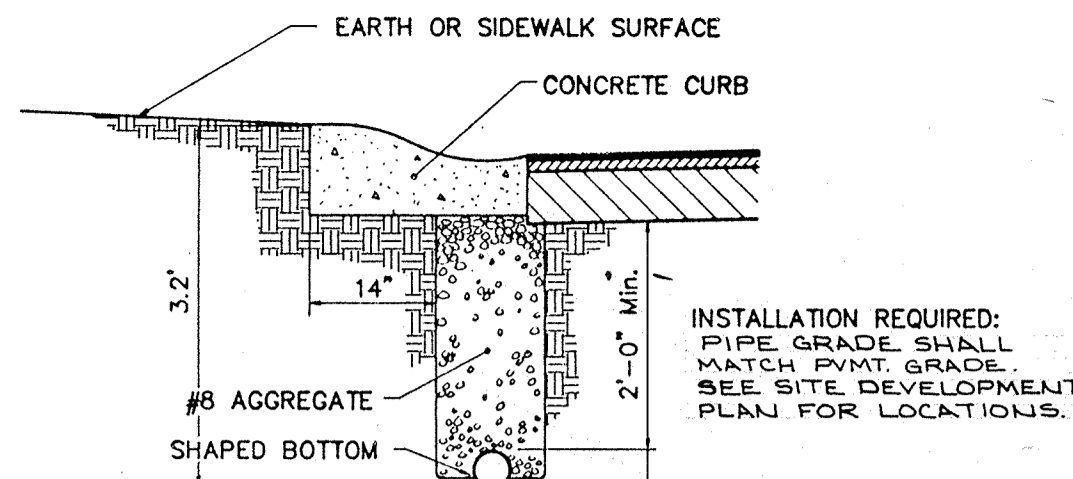
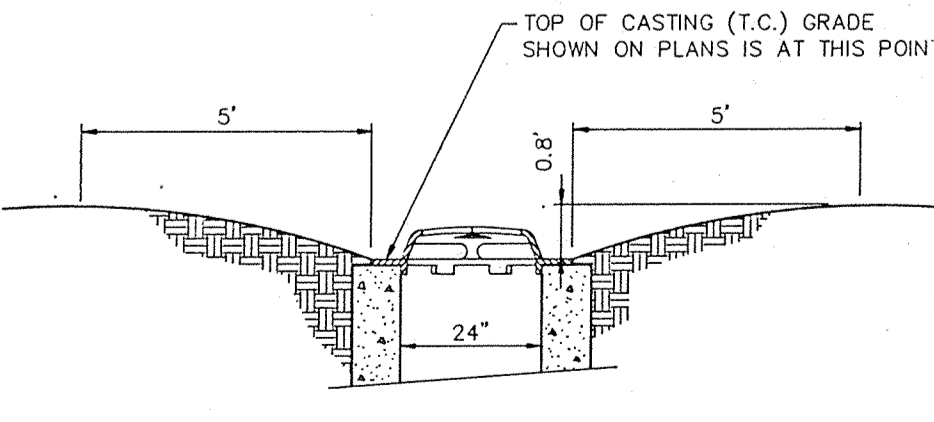
NOTE: STRUCTURES TO BE CIRCULAR UNLESS OTHERWISE SPECIFIED.



STORM MANHOLE



DITCH GRATE CASTING SETTING DETAIL



TYPICAL CURB DETAIL WITH VALLEY GUTTER

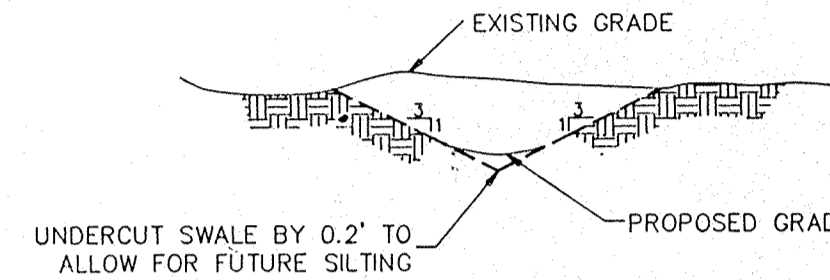
NO SCALE

INSTALLATION REQUIRED: PIPE GRADE SHALL MATCH FINISH GRADE. SEE SITE DEVELOPMENT PLAN FOR LOCATIONS.

PIPE MATERIAL: SHALL MEET GENERAL INDUSTRY STANDARD FOR CLAY, CONCRETE, CORRUGATED METAL, PLASTIC, OR APPROVED EQUAL, OPEN JOINT OR PERFORATED.

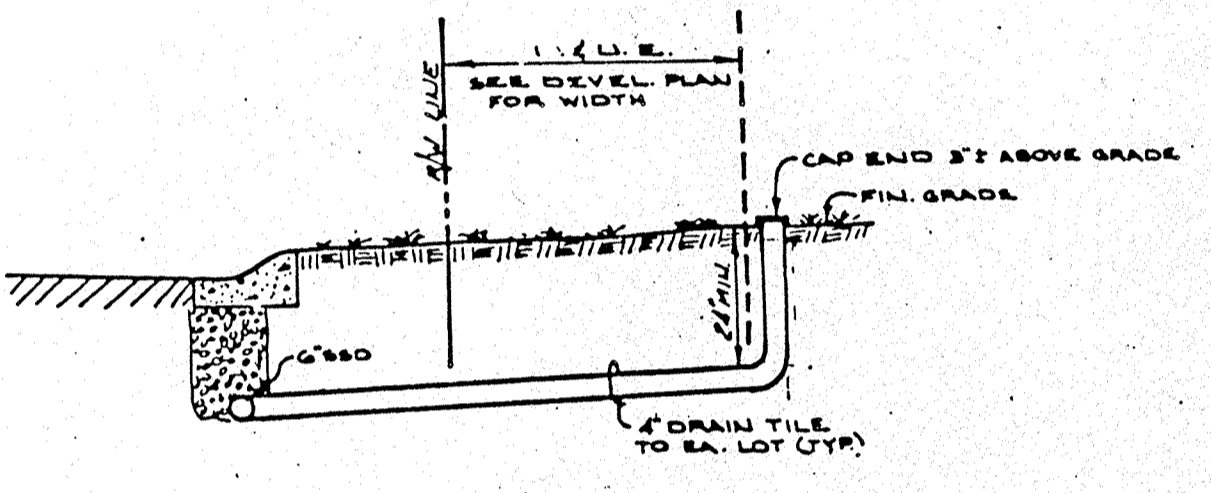
PIPE UNDERDRAIN DETAIL

NO SCALE



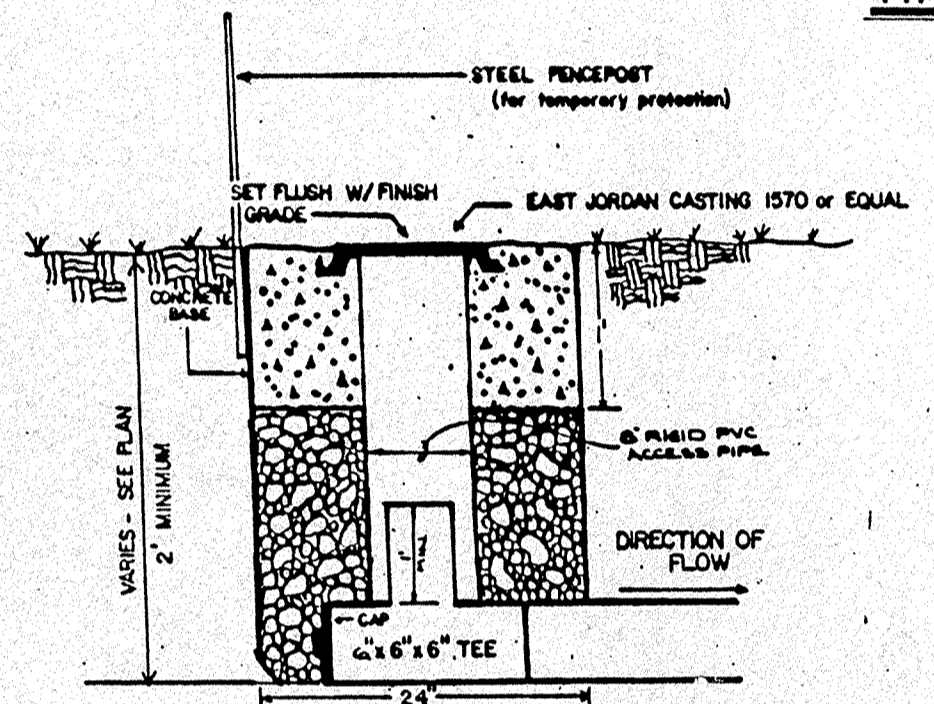
TYPICAL SWALE DETAIL

NO SCALE



TYPICAL UNDERDRAIN LATERAL

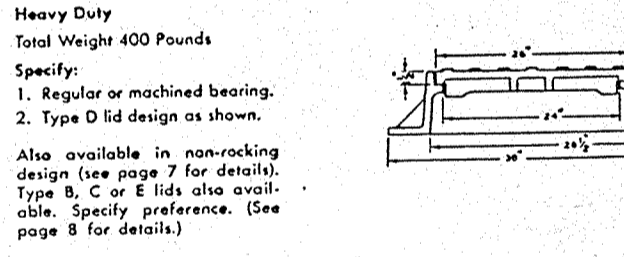
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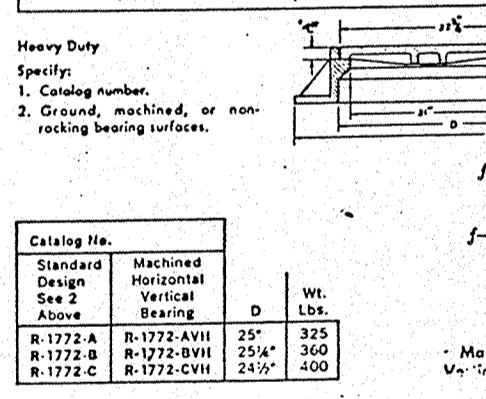
SUBSURFACE DRAIN (SSD) RISER DETAIL

NO SCALE

R-1642 Manhole Frame, Solid Lid

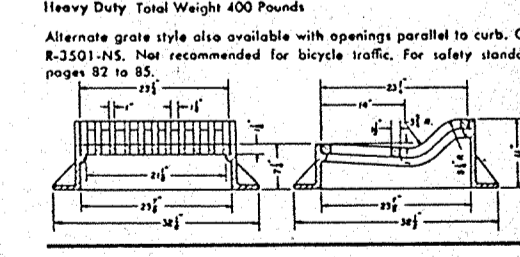


R-1772 Series Manhole Frames, Solid Lids



Casting No.	Machined Horizontal Bearing	Weight (lbs.)
R-1772-A	25"	335
R-1772-B	25"	300
R-1772-C	25"	400

R-3501-N Inlet for Roll Type Curb

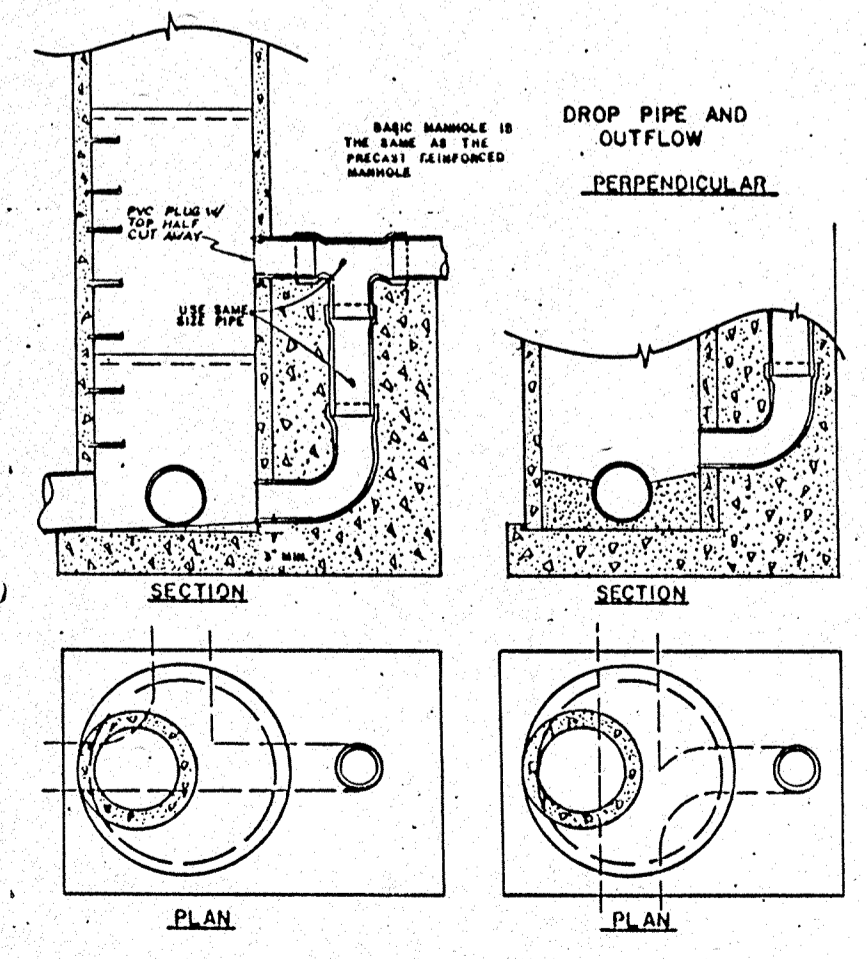


CASTING NOTE:

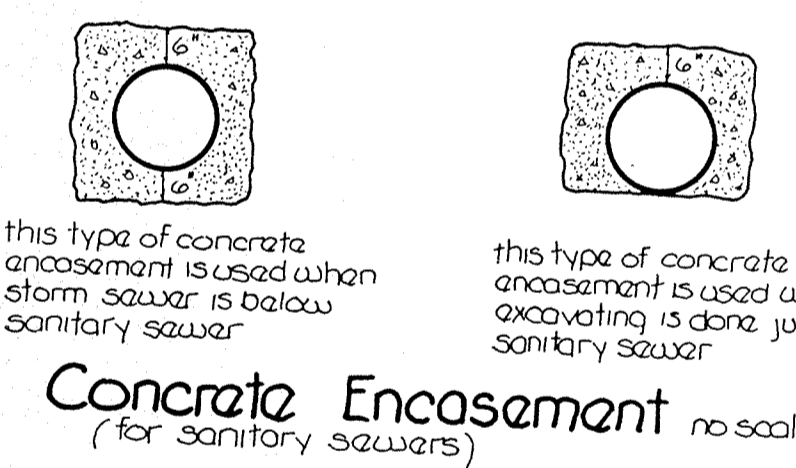
SEWER CASTINGS SPECIFIED IN THESE PLANS ARE NEENAH FOUNDRY CO. CASTINGS. EQUAL CASTING TYPES BY EAST JORDAN IRON WORKS, INC. MAY BE SUBSTITUTED. LISTED BELOW ARE ACCEPTABLE E.J.I.W. SUBSTITUTIONS.

NEENAH	E.J.I.W.
R-3501-N	7490M1
R-1642	1040
R-1772-A	1022-1HD
R-4342	648A

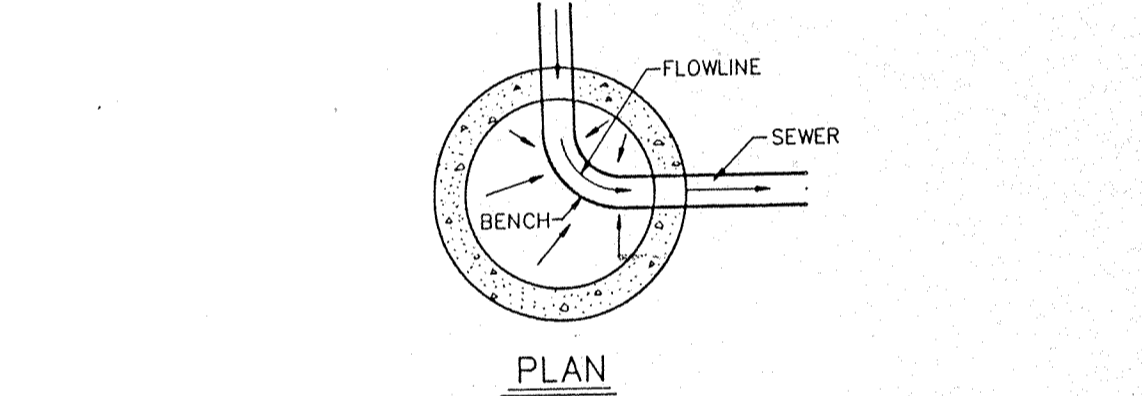
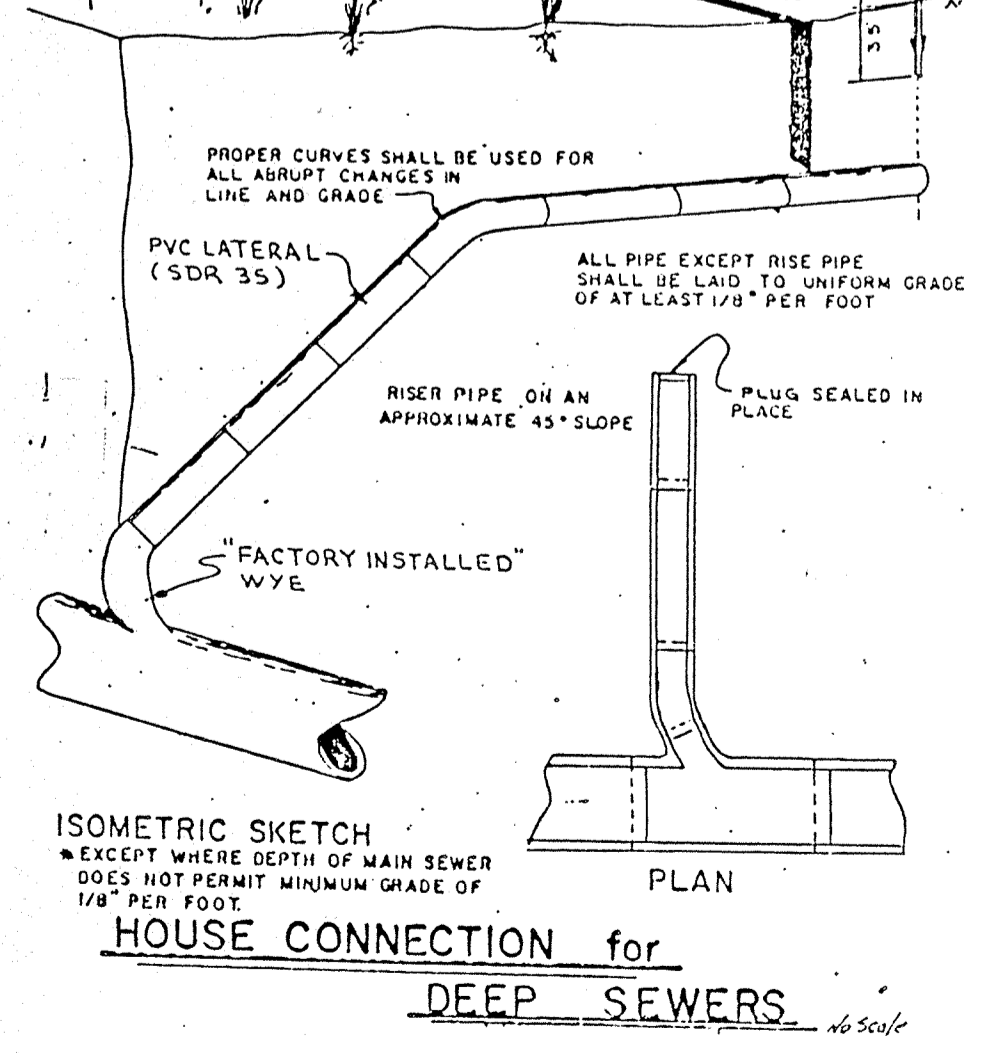
DROP PIPE AND OUTFLOW



PRECAST DROP MANHOLE

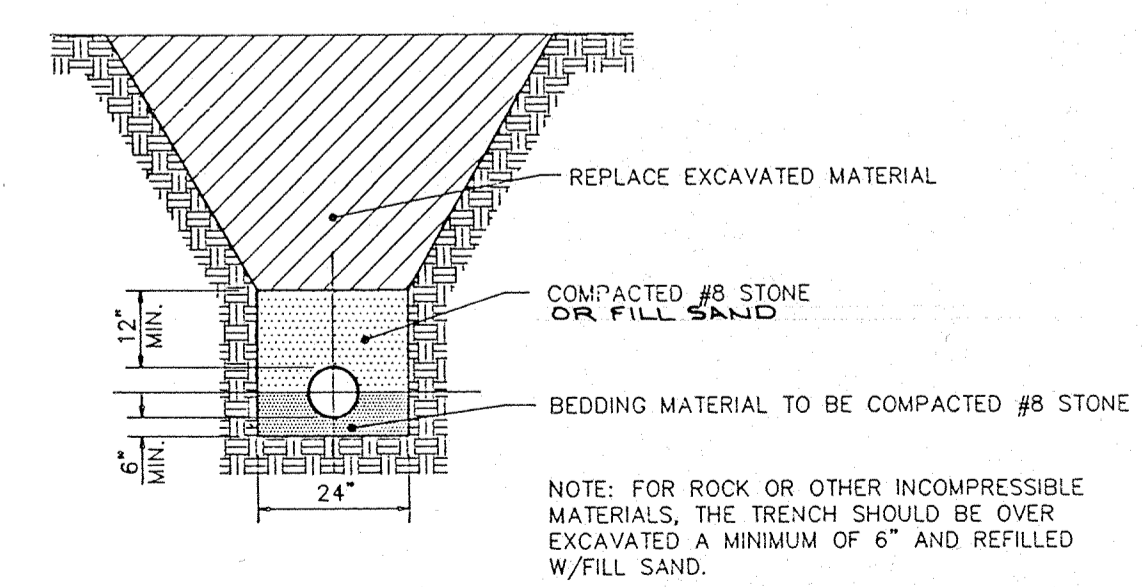


HOUSE CONNECTION for DEEP SEWERS



STANDARD MANHOLE

FOR SANITARY SEWERS AS ILLUSTRATED

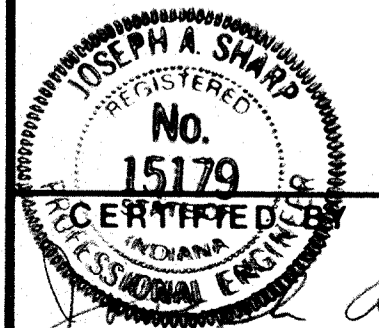


SANITARY SEWER PIPE BEDDING

(FOR FLEXIBLE PIPE, INCLUDING LATERALS)

NO SCALE

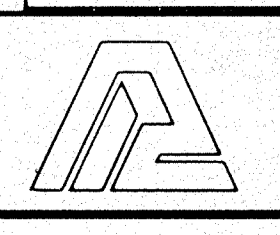
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OFFICE OF HAMILTON COUNTY SURVEYOR



J. A. Sharp
9-15-89 DATE

REVISIONS
9.0.89 KEY PER TAC
10.9.89 ADDITIONAL REV PER TAC

NO.	DATE	BY	REVISIONS
1			



PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

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DRAWN BY	SCALE
DATE	CLIENT

DATE	CLIENT
C.P. MORGAN CO., INC.	

DWG. TYPE	FILE NUMBER	SHEET
		16
JOB NUMBER		OF 17
89	385	0000

STANDARD DETAILS

CLEARING AND GRUBBING

- A. Clearing and grubbing shall consist of cutting, removal and satisfactory disposal of all trees, down timber, brush, projecting roofs, stumps, rubbish, boulders, broken concrete, fencing (as designated), and other material on the project site and within and boundary as shown on the Construction Documents and/or as designated by "construction limits".
- B. All "unsuitable material" from clearing operations stated above shall be removed to disposal area(s) off of the project site; unless a "Bury Pit" shall be utilized in an area where it shall not be beneath building areas and/or pavement areas and shall not be located in an area where storm drainage structures shall be located or where impoundment of surface drainage may occur.
- C. Materials shall not be disposed of by burning unless approved by the local Fire Marshall.

TREE REMOVAL AND PROTECTION

- A. Trees shall be removed from the project site only where the area is to be occupied by road and surfaced areas
- B. Trees shall be removed from the project site as directed by the developer, and so designated.
- C. Trees shall be removed from the project site where they interfere directly with the placement of storm or sanitary sewers, and that such excavation is or will be fatal to such adjacent trees.
- D. The Contractor shall endeavor to save and protect trees of value and worth which do not impair construction of improvements as designated. In the event cut or fill exceeds 0.5 foot over the roof area, the developer shall be consulted with respect to protective measures to be taken, if any, to preserve such trees.
- E. The Contractor shall be responsible for determining the method for protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any adjacent work is started. Earth or material and equipment shall not be stockpiled or stored within the spread of branches. Branches which need to be removed or are broken shall be neatly trimmed and scars shall be covered with tree paint.

STRIPPING OF TOPSOIL

- A. The Contractor shall verify that all topsoil has been removed in the areas to be occupied by road, walks and designated building areas. Topsoil shall be removed to a depth of six (6) inches or deeper, if necessary, to remove vegetative matter where required.
- B. Topsoil shall be kept separated from suitable fill materials and shall not be used as fill under pavement and/or building areas.
- C. Topsoil shall be stored at a location where it does not interfere with construction operations. Excess topsoil shall be removed from the site.
- D. Topsoil shall be reasonably free from subsoil debris and stones.

GRADING

- A. The Contractor shall perform all grading operations to bring subgrades, after final compaction, to the required grades and sections for site improvement.
- B. Subgrade shall be proofrolled with suitable equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.
- C. Subgrade shall be prepared in compliance with Section 207.02 of the I.S.H.C. standard specifications for all areas of street construction.
- D. **SEE PAVEMENT CONSTRUCTION**
- E. All fill material shall be formed from soil free of deleterious material. Prior to placement of fill, a sample of the proposed fill material should be submitted to the soils engineer for his approval. The fill material should be placed in layers not to exceed eight (8") inches in loose thickness and should be spread and dried to a moisture content which will permit proper compaction.

SANITARY SEWER SPECIFICATIONS

1. Standard specifications of the City of Carmel shall apply for all work and materials.
2. Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (S.D.R. 35) and ASTM 2321. PVC shall have grooved bell and gasket.
3. All sanitary manholes shall be "precast concrete" manholes in accordance with ASTM C-478. Number 8 stone shall be used as a leveling bed under manholes.
4. The type of new manhole ring and cover shall be as specified on the standard detail sheet of these plans. Bismatic Coating shall be applied around each manhole joint from 6" above to 6" below each joint.
5. The casting elevations are set by plan. However, the castings may be adjusted in the field by the Engineer's representative should a discrepancy occur between plan grade and existing grade. New manhole ring and cover shall be installed to established grade.
6. Backfill around all structures and all cuts under paved areas with granular material. Trenches opening within 5 feet of paved roadways shall be backfilled with granular material. Backfill under sidewalks shall be granular unless the walks are constructed a minimum of 6 month after backfill has been in place.
7. The Contractor shall be responsible for verifying that all State Highways, City and County permits have been obtained by developer prior to start of construction.
8. The Contractor shall be required to furnish the Engineer with a set of prints, marked in red pencil, showing actual sewer location and invert, to include lateral location, depth and length. Such "as-built" prints must be received by the Engineer before the final contract payment can be authorized. The sanitary sewer laterals and stubs termination shall be indicated on the surface with a metal fence post set immediately above said termination point. Post shall be painted RED.
9. All sanitary sewer lines upon completion will be required to pass an infiltration weir test and a low pressure air test, unless otherwise directed by the Engineer. Said test shall be conducted according to NCP1 Standard Method, and shall be witnessed by an Engineer. 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.
10. Deflection tests shall be performed on all flexible pipe after the final backfill has been in place at least 90 days. No pipe shall exceed a vertical deflection of 5%. Deflection tests shall be observed by the engineer.
11. All testing shall be observed by a Professional Engineer for certification to the City of Carmel.
12. The ends of laterals are to be plugged tight with plastic disc or cap capable of withstanding a low pressure air test without leakage.
13. Bedding shall be as shown on detail sheet.
14. Water and sewer line crossings and separations shall be in accordance with Ten States Standards as shown on the detail. Maintain a minimum 10" separation between Water Mains and Sanitary Sewers.
15. Trench shall be opened sufficiently ahead of pipe laying to reveal obstructions, and shall be properly protected and/or barricaded when left unattended.
16. No water shall be permitted to flow into the sanitary sewer system. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet.
17. All sewer laterals shall be bedded the same as the main line sewer.
18. 48 hour notice shall be given prior to any testing on the sewer.
19. Manhole castings shall be stamped "SANITARY SEWER" (Neenah Casting R 1642 or equal).
20. All connections to existing manholes shall be core drilled.
21. All pipe openings in manholes, including laterals, shall be fitted with rubber rings or gaskets.

SPECIFICATIONS

The standard specifications for the City of Carmel shall apply for all work and materials.

STORY

1. Storm sewer pipes shall be reinforced concrete (R.C.P.) in accordance with ASTM-C-76, or corrugated metal pipe (CMP) one size larger in accordance with AASH spec. M-36.
2. Exceptional areas may require additional subsurface drainage. Street and storm sewer contractors shall include in their bids a unit cost per foot of installation of perforated plastic underdrain (see detail sheet 15). Location of such underdrain will be at the direction of the owner, or the engineer.
3. Rip-rap shall be installed at pipe inlets or outlets as the owner/engineer directs. Contractor shall include unit price for rip-rap, min 1/3 c.f. rock size, installed.
4. Storm sewer discharge areas and inverts are tentative and are subject to field modifications according to the unit prices submitted by the Contractor on the contract documents.
5. The Contractor shall provide at least 2' of cover over all storm sewers.
6. All drainage pipe and ditch outfalls to receiving streams shall be constructed in accordance with drawings, subject however, to any modification required by City of Carmel at the time installation is completed and to any adjustments needed for field conditions not adequately anticipated by the design drawings.
7. Casting Elevations are set by plan. However, the casting elevations are to be adjusted in the field by the Engineer's representative should a discrepancy occur between plan grade and existing grade.
8. All structures and all cuts under proposed paved areas shall be backfilled with granular material in addition to areas specifically noted on the plans. The granular material shall completely fill the trench in the area under the proposed pavement and shall extend at a one-to-one slope from the proposed pavement edge.
9. The Contractor shall contact all utility companies before any construction is started. He shall obtain the exact location of any utility lines and shall protect these lines during construction.
10. The Contractor shall be responsible for obtaining all State, Highway, City and County permits.
11. The Contractor shall be required to furnish the Engineer with a set of prints, marked in red, showing actual sewer location and invert, to include lateral location, depth and length. Such "as built" prints must be received by the Engineer before the final contract payment can be authorized.
12. The Contractor will be reimbursed for any additional labor and/or materials arising from the changes other than minor adjustments to manholes authorized by the Engineer. Reimbursement will be in accordance with unit prices submitted by the Contractor on the contract documents.

UTILITIES

- A. Conduit shall be required for all electric and telephone lines under paved areas.
- B. Granular backfill shall be required for all crossing of paved areas.

CONCRETE CURB AND WALKS

- A. See Detail Sheet for type and details.
- B. Concrete shall be ready mixed Portland cement conforming to ASTM C-150, and water. Aggregate shall conform to ASTM 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 ASTM A-185.
- C. Application
 1. Place concrete only on a moist, compacted subgrade or base free from loose material. Place no concrete on muddy or frozen subgrade.
 2. Concrete shall be deposited so as to require as little rehandling as practicable. When concrete is to be placed at an atmospheric temperature of 35 degrees or less, Paragraph 702.10 of the I.S.H.C. Specifications, 1978 edition, shall apply.
 3. Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the I.S.H.C. Specifications, 1978 edition.

PAVEMENT CONSTRUCTION

- A. All street construction shall be in accordance with the plans and specifications and conform to the minimum standards of General Ordinance 49, 1972, "Standards for Acceptance of Street and Bridges".
- B. Subgrade shall be prepared in compliance with Section 207.02 of the I.S.H.C. standard specifications. No traffic shall be permitted on the prepared subgrade prior to paving.
- C. Backfilling of utility trenches with granular material under pavement areas is required.

Soil Erosion Control Summary

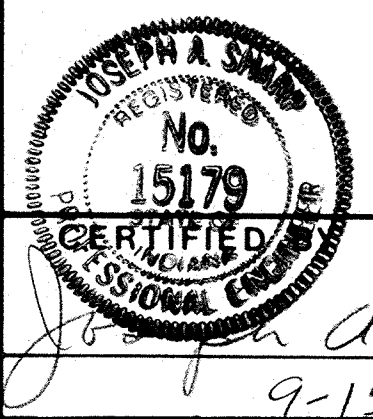
The following is a list in sequence of construction activities to control soil erosion:

1. Contractor shall install sediment traps and straw bale filters, as shown.
2. Grade the site (sides of swales, mounds and ponds to be seeded and mulched 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 slope erosion. For temporary seeding the contractor shall utilize a fast growing seed of either oats, annual ryegrass, wheat or rye depending on time of year. Disturbed areas should be kept to a minimum at all times.
3. Contractor shall control mud accumulation on all streets surrounding project by installing stone surface 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 adhesives or other approved methods.
4. Maintain all filters and traps during construction to prevent any blockages from accumulated sediment. Additional seeding and straw bales 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 shall be at the Contractor's expense. Payment for additional rip rap (not shown on plans) and seeding shall be paid for on a unit basis.
5. Straw bale filters shall be installed at all storm inlets (including street inlets).
6. All proposed street areas shall be paved as soon as possible after subgrade is prepared.
7. All disturbed areas shall be seeded and mulched as specified below. This shall include all building pad fill areas.
8. Contractor shall remove all temporary erosion and sediment controls only when there is a sufficient growth of ground cover to prevent further erosion.

Seeding Specifications:

1. 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:
 - 270# Adventure Fescue
 - 30# Creeping Red Fescue
 - 350# 12-12-12 Fertilizer
 - 4000# Mulch (Straw)
2. If grades are established between May 15 and August 10, a temporary seeding consisting of 40# of Annual Ryegrass, 25# Perennial Ryegrass, 35# Kentucky 31 Fescue and 10# Kentucky Bluegrass be planted per acre.
3. If grades are established between October 15 and December 30, either Rye (grain) or Wheat may be used at the rate of 2 bushels/Ac. Oats may be used for early spring planting at the rate of 3 bushels/Ac. All grains should be cut at time of permanent seeding. All grains should be cut prior to seed maturing.
4. If temporary seeding is established prior to permanent seeding, the mulch may be eliminated except in "bare" areas.
5. If grading occurs during December, January, or February, no seeding to take place till spring planting time; however, it is imperative that all sediment filters and traps are in place prior to bulk earthmoving or clearing.
6. All areas along street (approximately 15 foot behind curb) shall be seeded with temporary seed mixture.
7. All dates shown are nominal and may be varied with concurrence of the Engineer or the Local Soil Conservationist.

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NOV 10 89
OFFICE OF HAMILTON COUNTY SURVEYOR



REVISIONS	
9-8-89	REV. PER T.A.C.
9-15-89	DATE

PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-6777

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK.	DRAWN BY <i>GP</i>	SCALE NONE	DATE 8-17-89	CLIENT C.P. MORGAN CO., INC.
DFTNG. CHK.	DRAWING TITLE STANDARD SPECIFICATIONS			

ROHRER MEADOWS - SEC. 1 & 2			
DWG. TYPE	FILE NUMBER	SHEET	
		17	
JOB NUMBER			
89385	00000	OF 17	