

Drain: SPRINGMILL STREAMS DRAIN **Drain #:** 159
Improvement/Arm: CLAYBRIDGE AT SPRINGMILL - SECTION 2
Operator: JDH **Date:** 7-13-04
Drain Classification: Urban/Rural **Year Installed:** 1989

GIS Drain Input Checklist

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

**Gasb 34 Footages for Historical Cost
Drain Length Log**

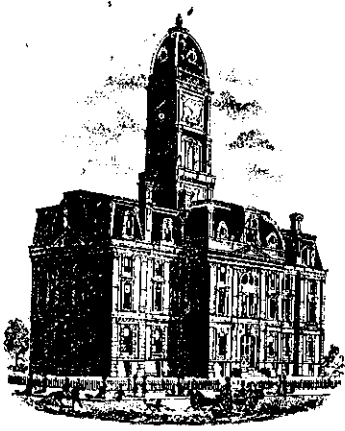
Drain-Improvement: SPRINGMILL STREAMS DRAIN - CLAY RIDGE AT SPRINGMILL - SECTION 9.

Drain Type:	Size:	Length <i>SURVEYOR'S REPORT</i>	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
SSD	6"	1835'	1835'	Ø		
	8"	512'	512'	Ø		
CMP	8"	10'	10'	Ø		
RCP	12"	1420'	1420'	Ø		
	15"	210'	210'	Ø		
	18"	1580'	1580'	Ø		
	24"	64'	64'	Ø		
CMP	72"	114'	114'	Ø		
OPEN DITCH		570'	570'	Ø		

Sum: 6815' 6815' Ø

Final Report: _____

Comments:



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

776-9626

942 Maple Avenue

Noblesville, Indiana 46060

March 7, 1990

TO: Hamilton County Drainage Board

RE: Springmill Streams Drain; Claybridge at Springmill Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Claybridge at Springmill Arm of the Springmill Streams Drain. 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:

6" SSD	2050 FT	18" RCP	1580 FT
8" SSD	370 FT	24" RCP	24 FT
8" CMP	10 FT ✓	Open Ditch	570 FT
12" RCP	1320 FT	72" 48" CMP	114 FT ✓
15" RCP	758 FT		

The total length of the drain will be 6796 Feet.

The portions of the open ditch listed above are those located downstream of the dam from the outlet of the 72" CMP to the east line of Block A on Elliot Creek between Lots 6 and 7 from STR 617 to the Almond Ditch; open ditch sections between lakes and between the east end of the structure under Clay Center Road to the first lake on Elliot Creek.

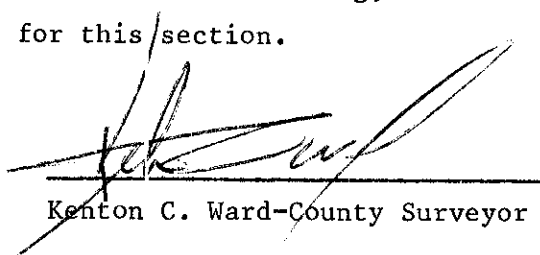
The Almond Drain, which is the open ditch along the east side of lots 6, 7, 15 to 19, is now classified as regulated drain. This was done as part of Section 2 and 3 of Springmill Streams. (See report dated July 9, 1984.)

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 \$20.00 per lot, \$2.00 per acre for roadways, with a \$20.00 minimum. With this assessment, the total annual assessment for the drain/this section will be 1293.78.

The dam located in Block A and the three lakes will not be part of the regulated drain. The maintenance of these facilities is the responsibility of the Homeowners Association. The 48" pipe through the dam will be part of the regulated drain along with storm drain outlets into the lakes.

The subsurface drains (SSD) which will become part of the regulated drain are those along the north line of lots 2 to 6; between lots 8, 9, 11, 12, and 14, along the south and east side of lot 44; along the north west line of lots 49, 50, and 51; along the west lines of lots 45, 46, 47 and 48; and along the south line of lots 38 and 39. The SSD laterals from the above described lines along with the SSD located along the streets and under the dam are not included as regulated drain. The existing field tile under Clay Center Road at lot 46 along with all culverts under Clay Center Road and culvert for the drive for lot 56 will not be included as part of the regulated drain.

I recommend a hearing be set for May 1990. If approved at the hearing, the Board should also approve the non-enforcement request for this section.



Kenton C. Ward-County Surveyor

KCW/jb

Fidelity and Deposit Company

HOME OFFICE

OF MARYLAND

BALTIMORE, MD. 21203

SUBDIVISION BOND #3029 59 86

*Has Expired not
Been Released*

KNOW ALL MEN BY THESE PRESENTS, That we, Central Engineering & Construction Corp. as Principal, and Fidelity and Deposit Company of Maryland, of Baltimore, Maryland, as Surety, are held and firmly bound unto the Hamilton County Board of Commissioners in the sum of One Hundred Twenty Three Thousand Nine Hundred Fifteen (\$123,915.00) Dollars for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, legatees, executors, administrators, personal representatives, successors and assigns firmly by these presents.

Sealed with our seals and dated this 15th day of November 1989.

THE CONDITIONS OF THE ABOVE OBLIGATION ARE SUCH THAT:

Whereas, the Hamilton County Board of Commissioners has granted Central Engineering & Construction Corp. a permit to construct Storm Sewer, Claybridge at Springmill

Now, if said Central Engineering & Construction Corp. shall improve said Storm Sewer, Claybridge at Springmill in accordance with specifications and regulations of the Hamilton County Board of Commissioners and comply with all of the provisions of said permit then this obligation to be void, otherwise to be and remain in full force and effect.

CENTRAL ENGINEERING & CONSTRUCTION CORP.

BY: 

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

BY: 

Jan L. Jacobs - Attorney-in-Fact


Power of Attorney
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
 HOME OFFICE, BALTIMORE, MD

KNOW ALL MEN BY THESE PRESENTS: That the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, a corporation of the State of Maryland, by C. M. PECOT, JR., Vice-President, and C. W. ROBBINS Assistant Secretary, in pursuance of authority granted by Article VI, Section 2, of the By-Laws of said Company, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, does hereby nominate, constitute and appoint Jan L. Jacobs, William E. Rick, Jr., Steven E. Wolf, Anthony E. Ortman, Delores Koch, Clara Lu Day and Andrew M. Hatheway, all of Indianapolis, Indiana EACH its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed, any and all bonds and undertakings.....

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Baltimore, Md., in their own proper persons. This power of attorney revokes that issued on behalf of Jan L. Jacobs, et al, dated, December 9, 1985.

The said Assistant Secretary does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article VI, Section 2, of the By-Laws of said Company, and is now in force.

IN WITNESS WHEREOF, the said Vice-President and Assistant Secretary have hereunto subscribed their names and affixed the Corporate Seal of the said FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 8th day of June, A.D. 19 87

ATTEST:  C. W. Robbins
 Assistant Secretary

By: [Signature]
 Vice-President

STATE OF MARYLAND }
 CITY OF BALTIMORE } SS:

On this 8th day of June, A.D. 19 87, before the subscriber, a Notary Public of the State of Maryland, in and for the City of Baltimore, duly commissioned and qualified, came the above-named Vice-President and Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and they each acknowledged the execution of the same, and being by me duly sworn, severally and each for himself deposed and saith, that they are the said officers of the Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and that the said Corporate Seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal, at the City of Baltimore, the day and year first above written.



[Signature]
 Notary Public Commission Expires July 1, 1990

CERTIFICATE

I, the undersigned, Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the Vice-President who executed the said Power of Attorney was one of the additional Vice-Presidents specially authorized by the Board of Directors to appoint any Attorney-in-Fact as provided in Article VI, Section 2, of the By-Laws of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND.

This Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 16th day of July, 1969.

RESOLVED: "That the facsimile or mechanically reproduced signature of any Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed."

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said Company, this 15th day of November, 19 89

044

[Signature]
 Assistant Secretary

CERTIFICATE OF COMPLETION AND COMPLIANCE

TO: HAMILTON COUNTY SURVEYOR

RE: Claybridge Subdivision

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 referenced 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 all plans and specifications, except as noted on the "Record Drawings".

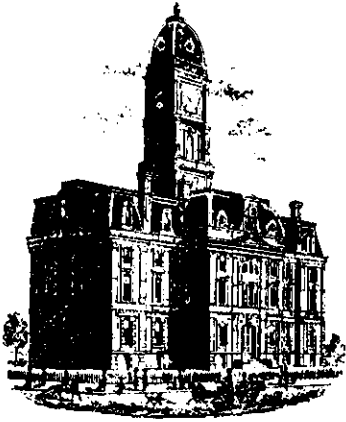
Signature: Joseph A. Sharp Date: October 23, 1989
 Type or Printed Name: Joseph A. Sharp

Business Address: 7172 Graham Road
Indianapolis, IN 46250

Telephone: (317) 842-6777

INDIANA REGISTERED NUMBER
15179

NOV 10



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
January 3, 1997

To: Hamilton County Drainage Board

**Re: Springmill Streams Drain - Claybridge at
Springmill Arm**

Attached are as-builts, certificate of completion & compliance, and other information for Claybridge at Springmill Sec. 1. 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 March 7, 1990. The changes are as follows:
The corrected totals are: 12" RCP - 1420 $\frac{1}{2}$ feet; 15" RCP - 710 $\frac{1}{2}$ feet; 24" RCP - 64 $\frac{1}{2}$ feet; 6" SSD - 1835 feet; 8" SSD - 512' feet. The 48" CMP is a 72" CMP at 114' feet in length. •

The length of the drain due to the changes described above is now **6,815 feet**.

The non-enforcement was approved by the Board at its meeting on May 21, 1990 and recorded under instrument #9016785.

The bond or letter of credit from Fidelity and Deposit Co. of Maryland, number 30295986, dated November 15, 1989, in the amount of \$123,915.00, has expired.

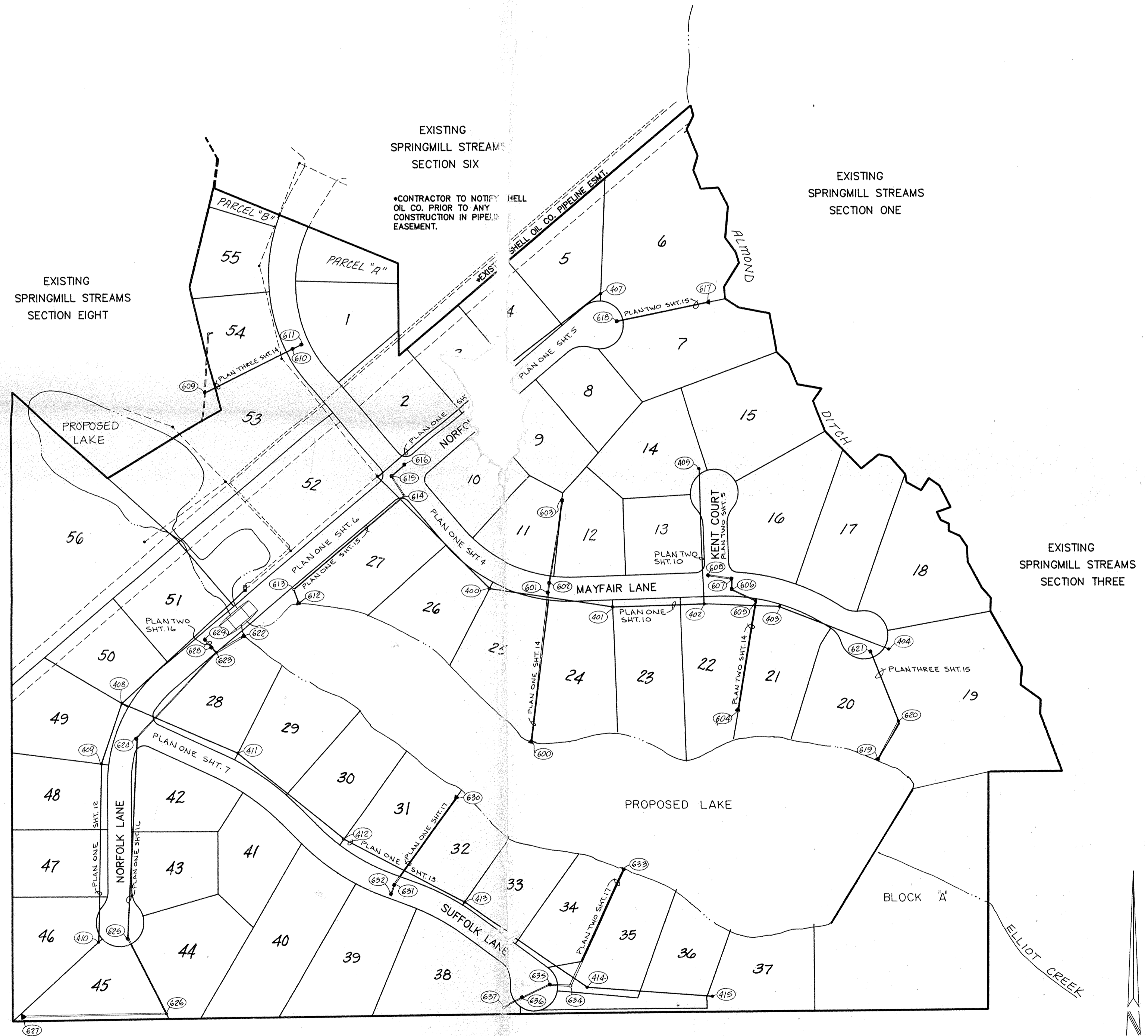
I recommend the Board approve the drains construction as complete and acceptable.

Sincerely,

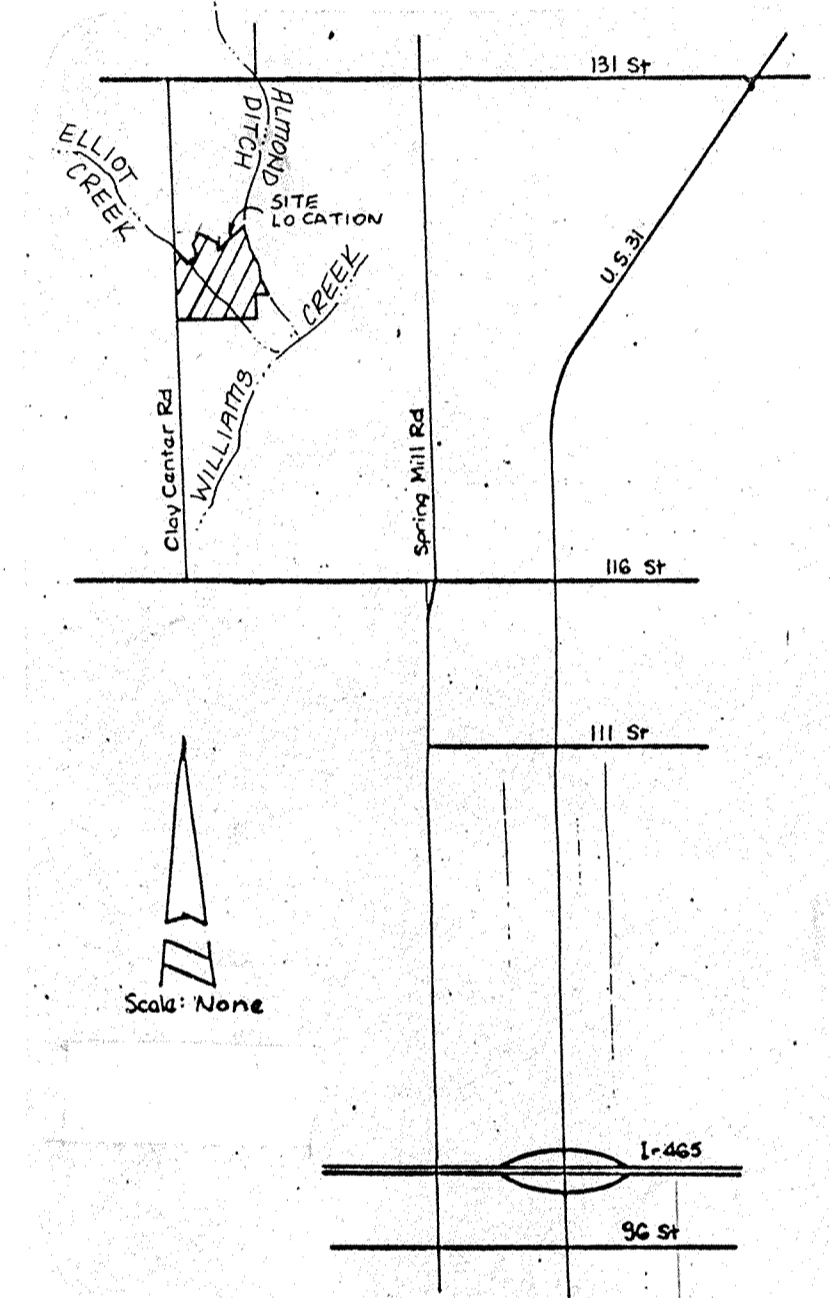
Kenton C. Ward,
Hamilton County Surveyor

KCW/slm

CONSTRUCTION PLANS FOR CLAY BRIDGE AT SPRINGMILL



SITE PLAN



LOCATION MAP

SITE WORK GENERAL NOTES AND SPECIFICATIONS

NOTICES AND PERMITS

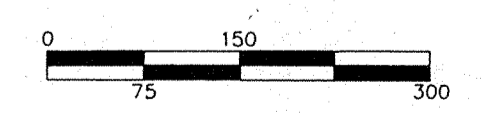
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.

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 AND COUNTY THAT CONSTRUCTION WAS DONE IN COMPLIANCE WITH THESE PLANS AND SPECIFICATIONS.



Shell emergency number: 1-800-634-4325 or 618-254-7467

Shell Maintenance Facility: 317-872-5113

Indiana One-Call System: 1-800-382-5544

INDEX	
SHT	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN N 1/2
3	SITE DEVELOPMENT PLAN S 1/2
4	STREET PLAN & PROFILE
5	STREET PLAN & PROFILE
6	STREET PLAN & PROFILE
7	STREET PLAN & PROFILE
8	STREET DETAILS
9	STREET DETAILS
10	SANITARY SEWER PLAN & PROFILE
11	SANITARY SEWER PLAN & PROFILE
12	SANITARY SEWER PLAN & PROFILE
13	SANITARY SEWER PLAN & PROFILE
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17	STORM SEWER PLAN & PROFILE
18	BRIDGE DETAILS - WOOD ALTERNATE
19	BRIDGE DETAILS - CONCRETE
20	PROPOSED DAM CROSS-SECTIONS
21	PROPOSED DAM CROSS-SECTIONS
22	STANDARD DETAILS
23	STANDARD SPECIFICATIONS
24	EROSION CONTROL PLAN N 1/2
25	EROSION CONTROL PLAN S 1/2
26	EROSION CONTROL DETAILS

BENCHMARKS

TBM - LARGE HINGE NAIL WEST SIDE OF POWER POLE #838-6186 4" UP POLE ON EAST SIDE OF SPRING MILL ROAD 1257' SOUTH OF 131ST STREET ELEVATION=848.20

REVISIONS

5-5-89 MISC. REVS. SHTS. 2, 3, 12, 18, 19, 20
5-22-89 REV SHT. 15, 23
8-15-89 REV. BOUNDARY, S. 17E 19

FILED

NOV 21 89
OFFICE OF HAMILTON COUNTY SURVEYOR

NOTE # SDP + ECP TUBE 1144

CERTIFIED BY:	REVISIONS
DATE	

PAUL I. CRIFE, INC.
7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
This copy printed 3/12/89 at 842m 6777 Hamilton County Surveyor's Office, One Hamilton Co. Square, Ste. 188, Noblesville, In 46060

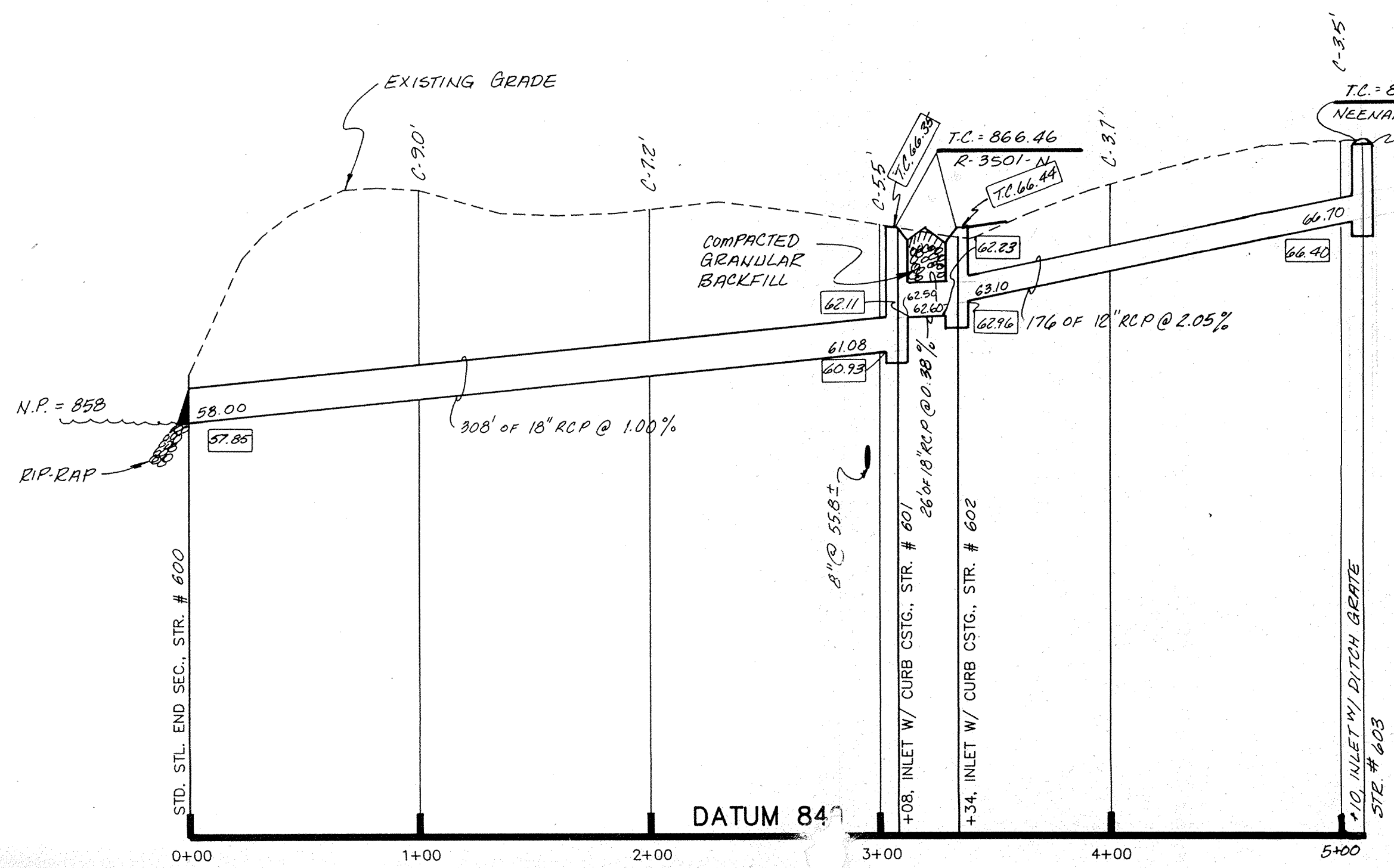
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

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DRAWN BY: B.T.
SCALE: As Noted
DATE: 3-20-89
CLIENT: BRENWICK DEV. CO.

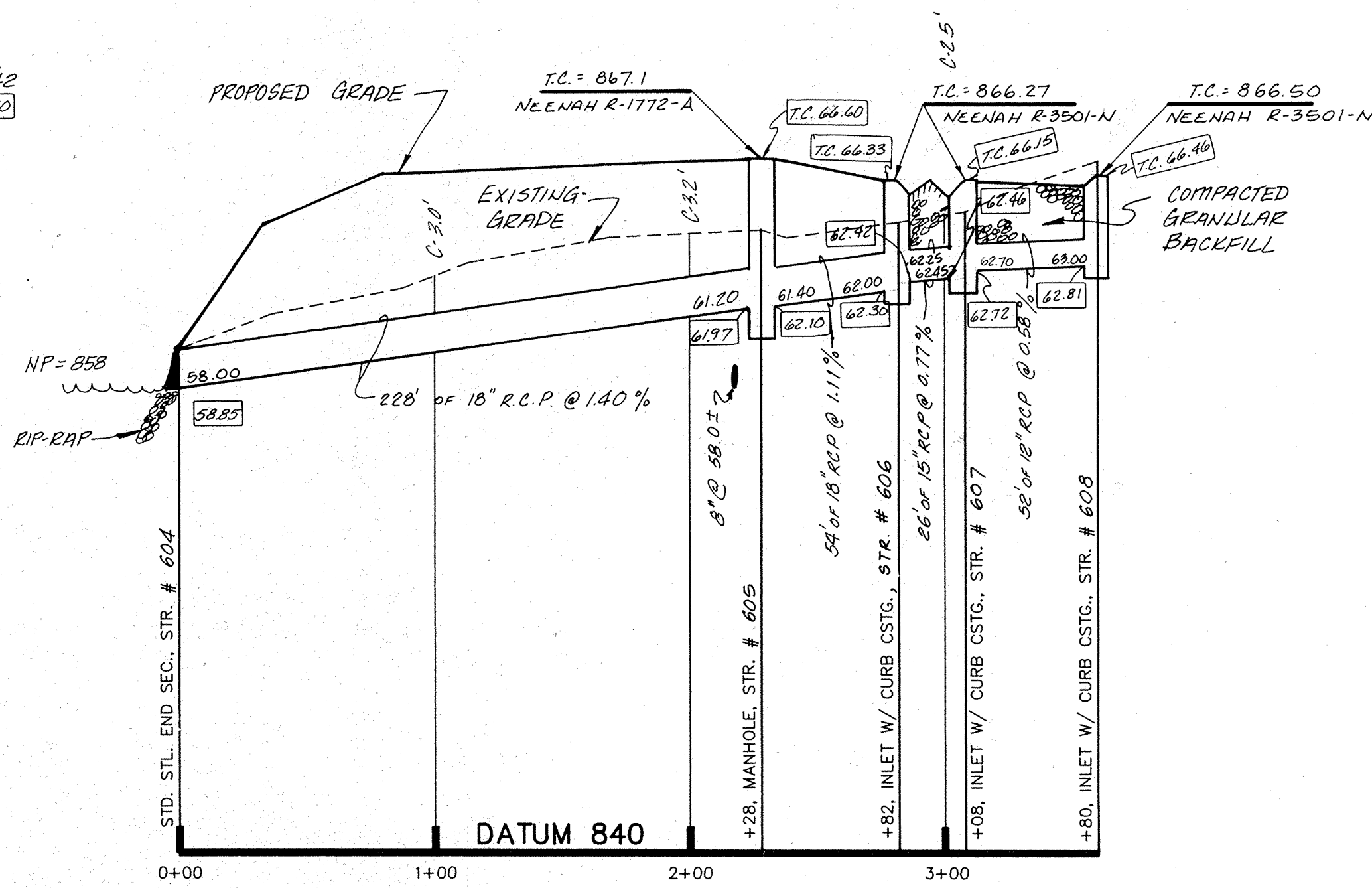
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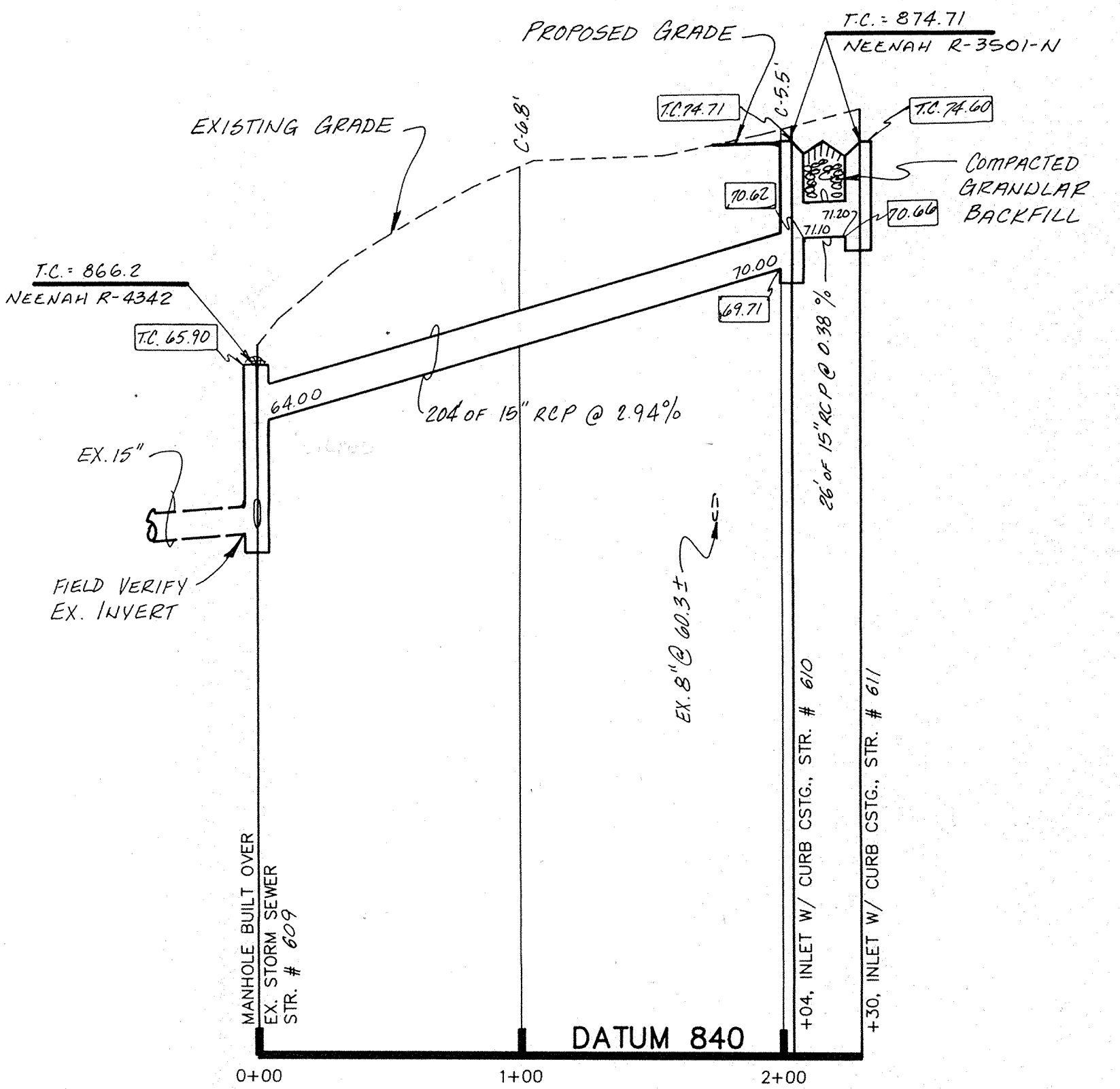
- NOTE:
- CUTS SHOWN ARE APPROXIMATE, TAKEN FROM EXISTING GRADE TO INVERT OF PIPE.
 - FIELD ADJUSTMENT BY ENGINEER MAY BE REQUIRED AT ALL OUTFALL POINTS TO INSURE PROPER OUTFALL CONDITIONS.




PROFILE ONE



PROFILE TWO

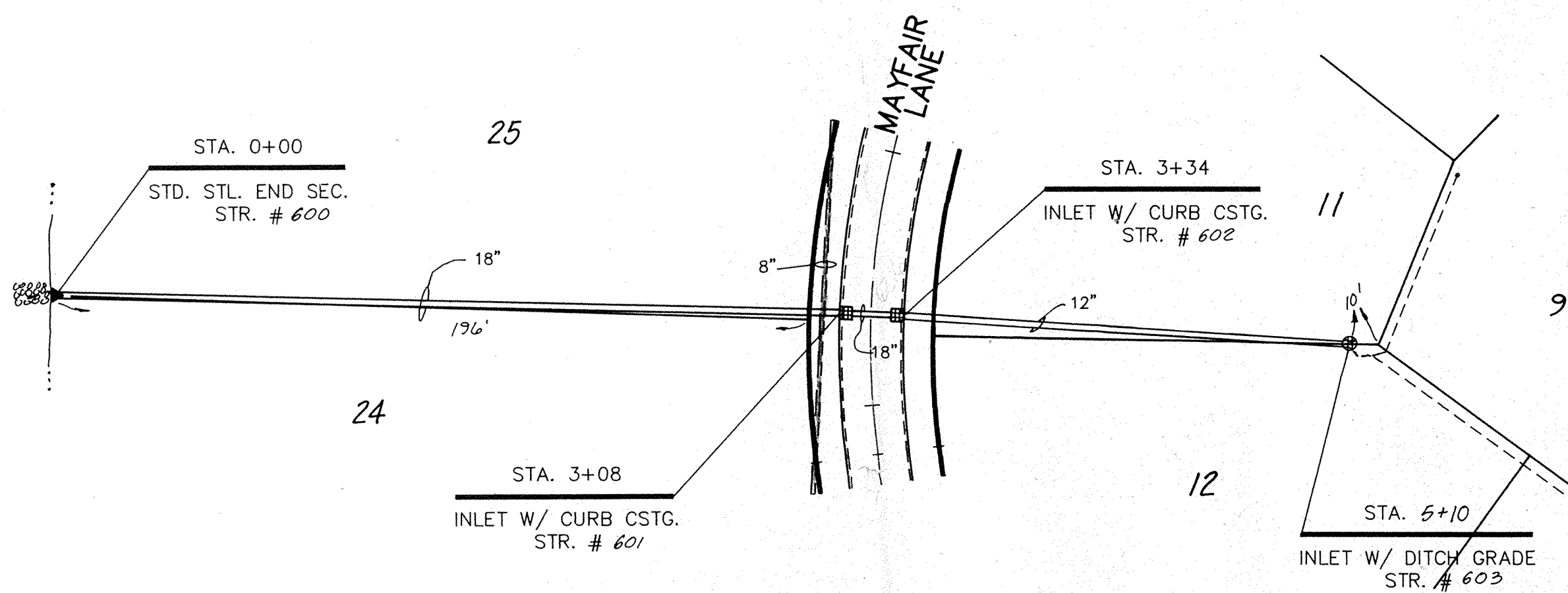


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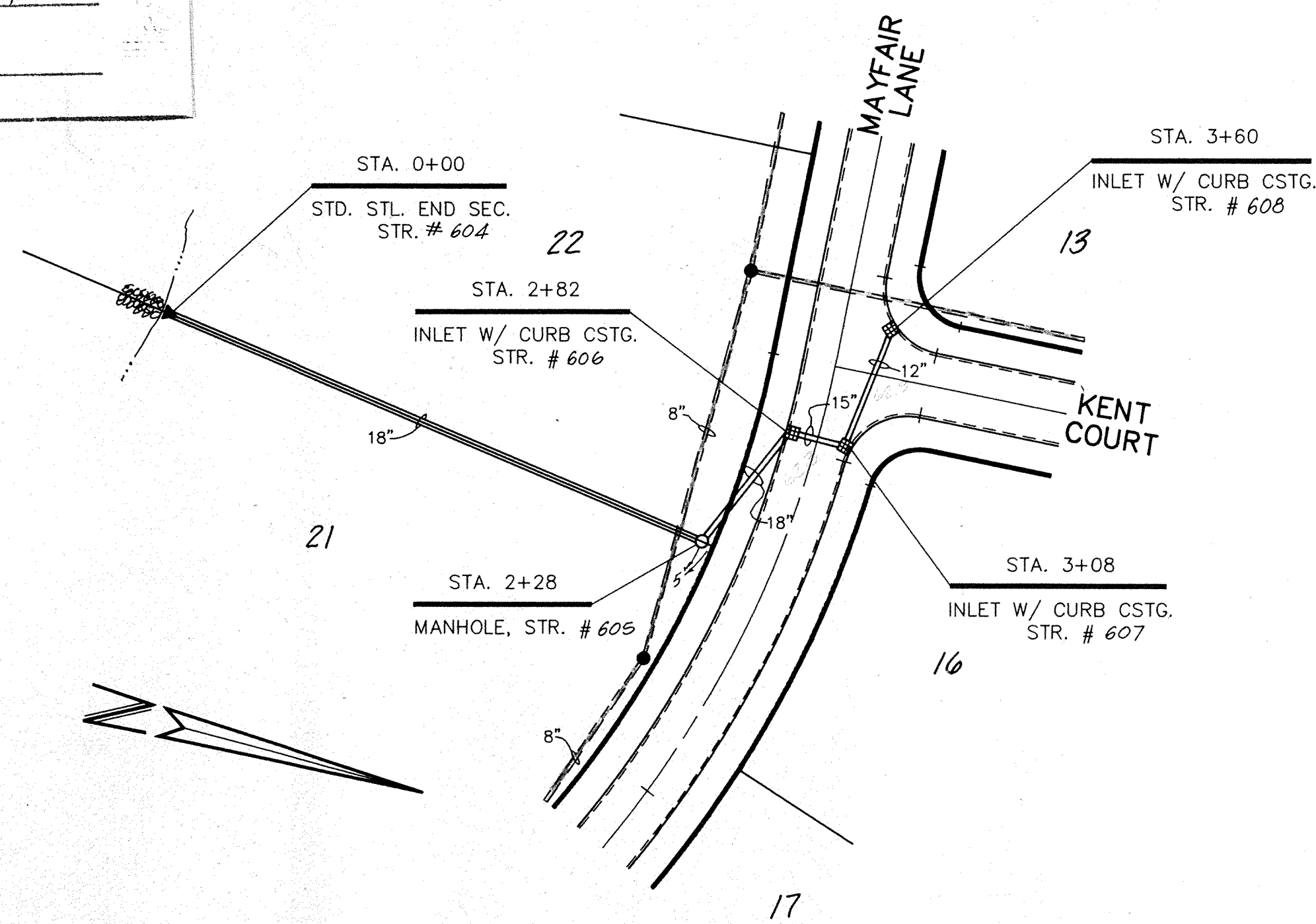


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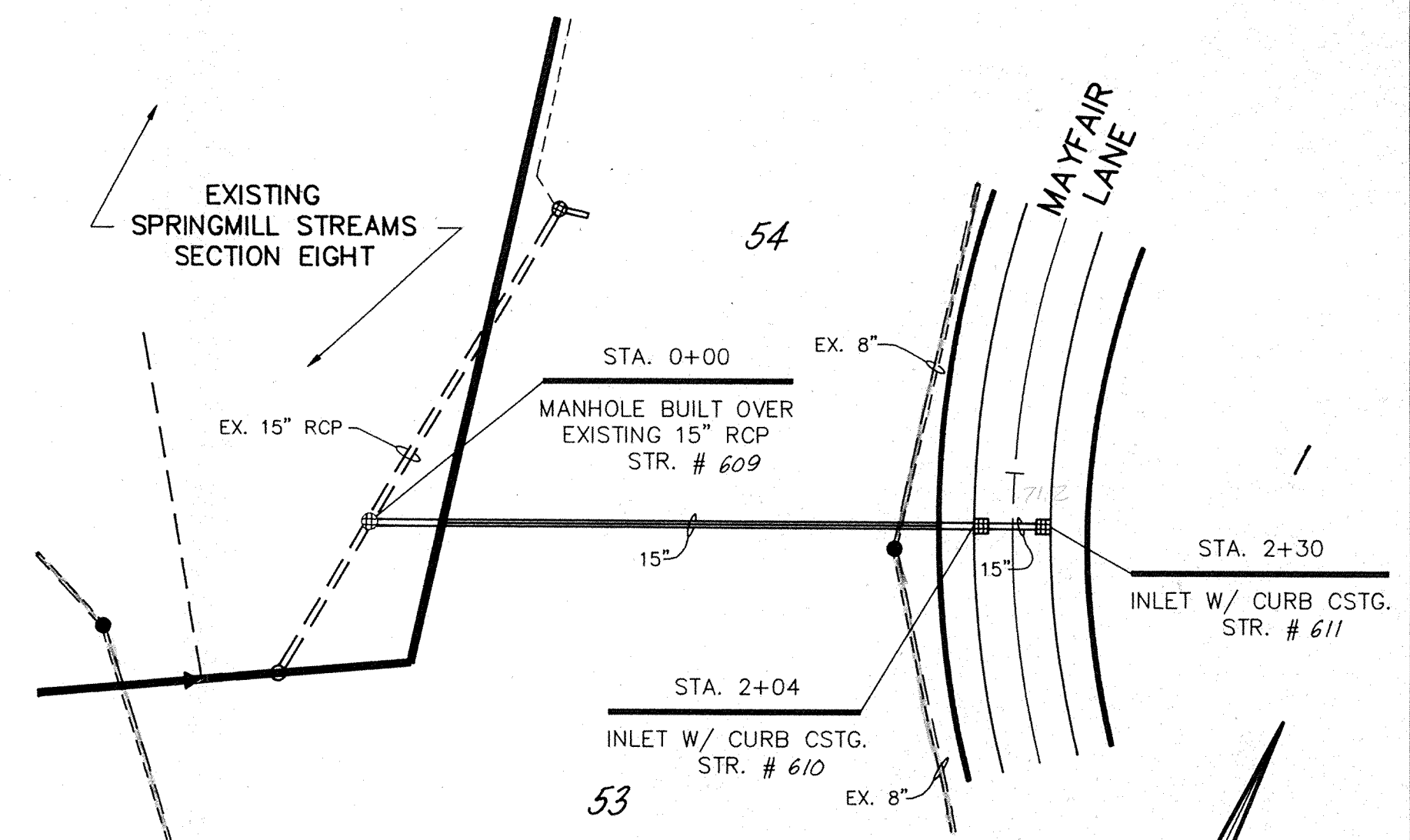
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 Entered by: JDH



PLAN ONE



PLAN TWO

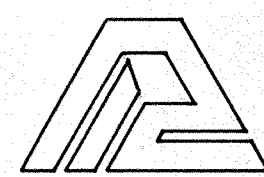


PLAN THREE

RECORD DRAWING

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	11-02-89 Add Record Information TRZ
DATE	



PAUL I. CRIFE, INC.
 7172 GRAHAM ROAD
 INDIANAPOLIS, INDIANA 46250

- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK:
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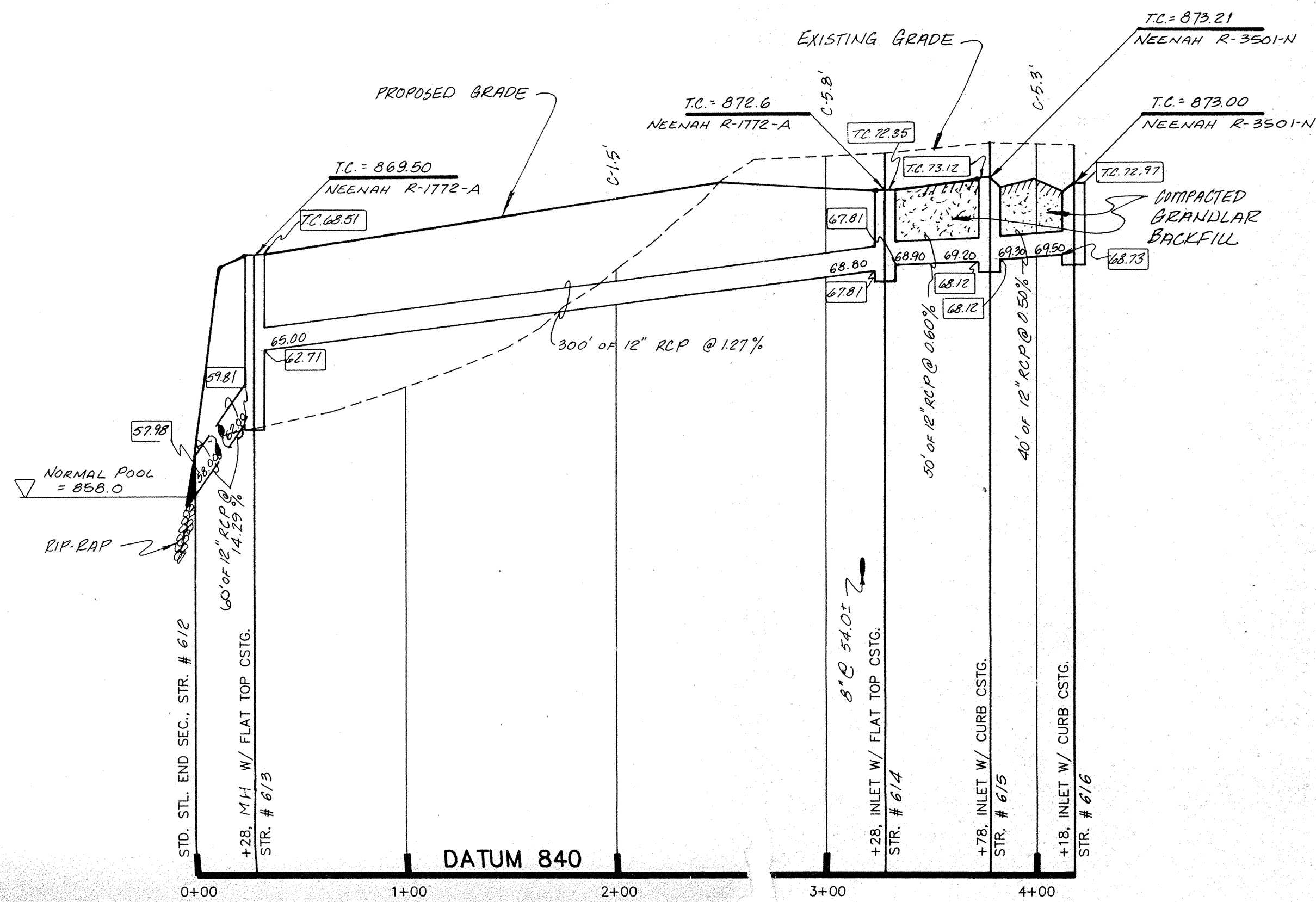
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 VERT. 1"=5'

DATE: 9/20/89

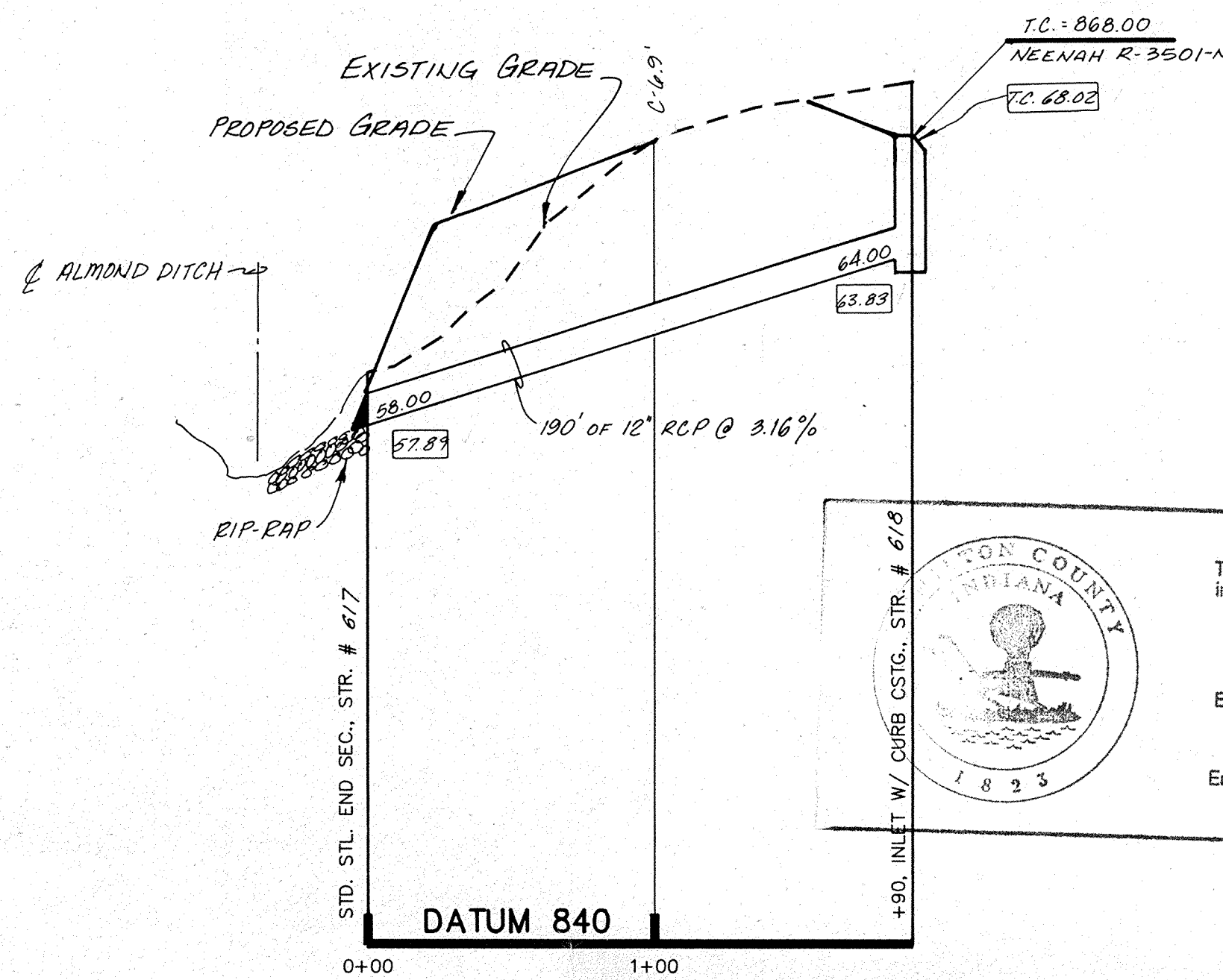
CLIENT: BRENWICK DEVELOPMENT CO.

DRAWING TITLE: STORM SEWER PLAN & PROFILE

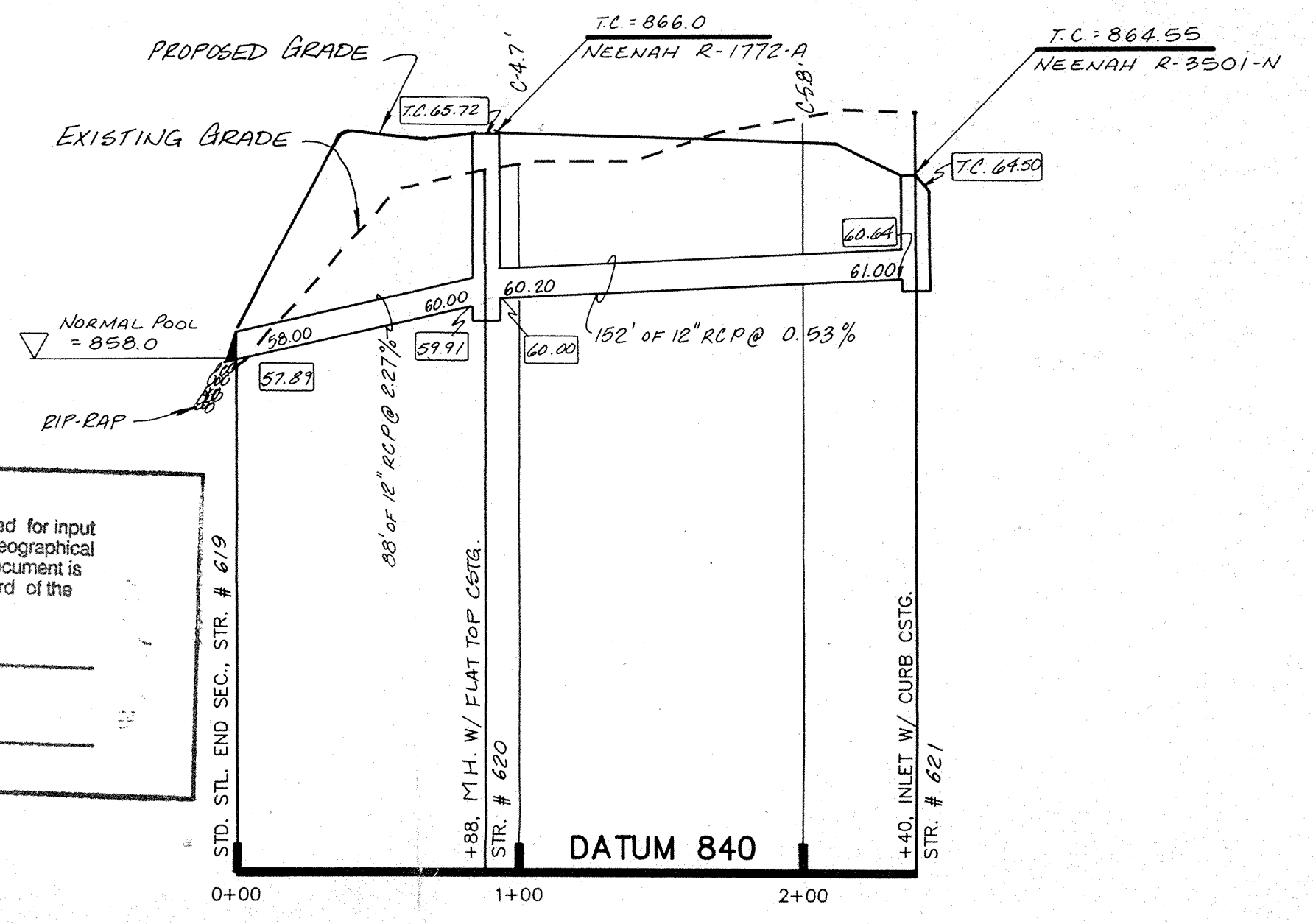
CLAYBRIDGE AT SPRINGMILL	
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SHEET:	14 OF 26



PROFILE ONE



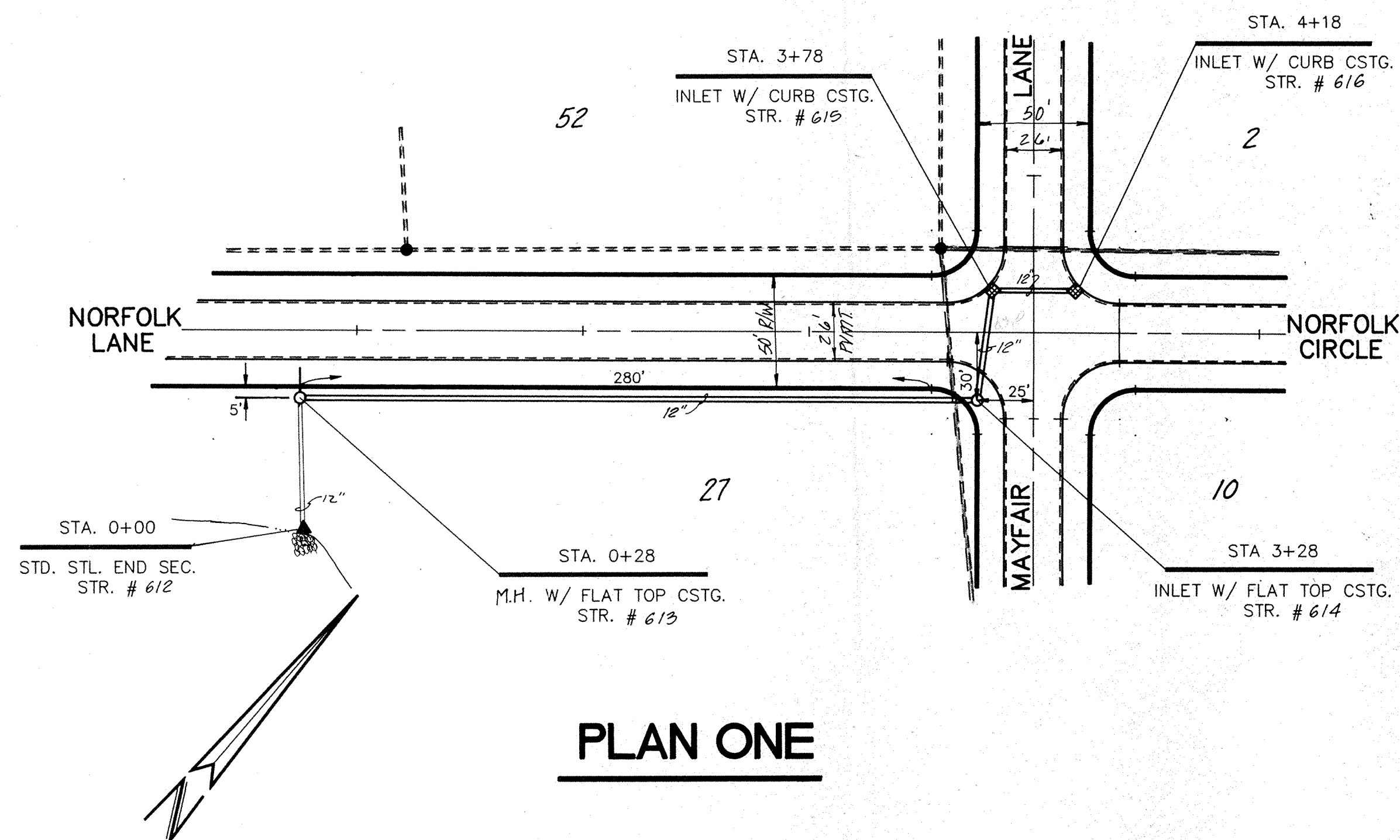
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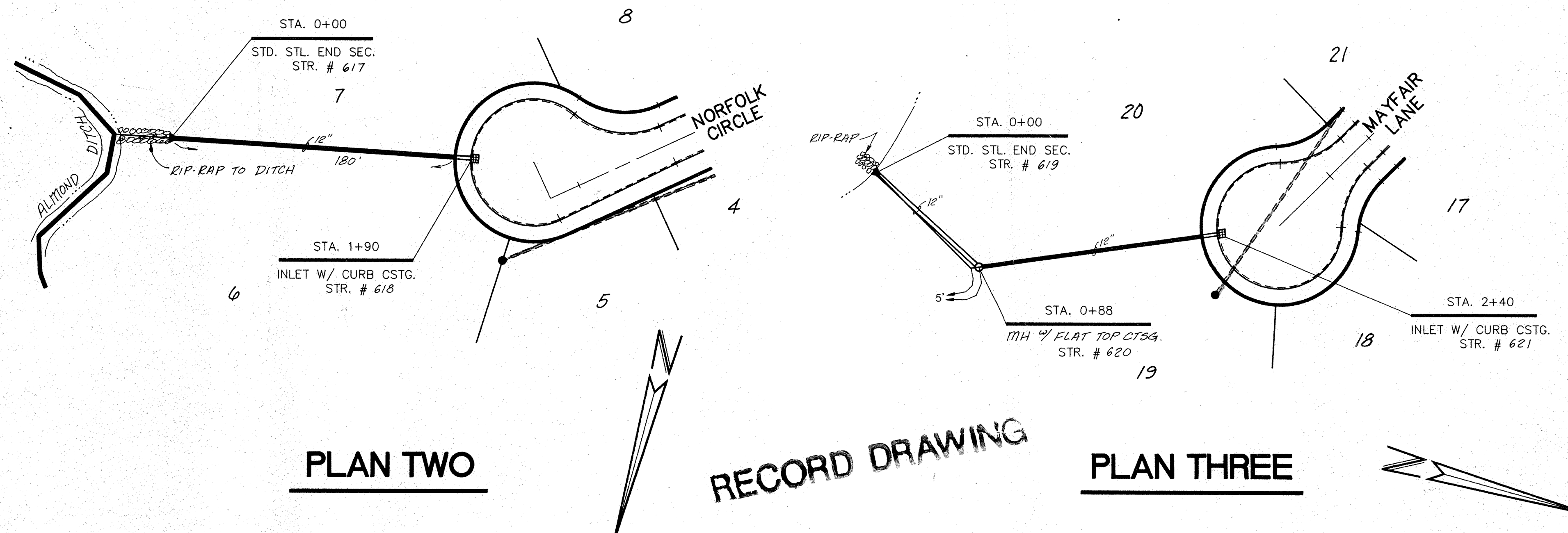
PROFILE THREE

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Hamilton County, Indiana
 Entry Date: 7-14-04
 Entered by: JDH



PLAN ONE



PLAN TWO

PLAN THREE

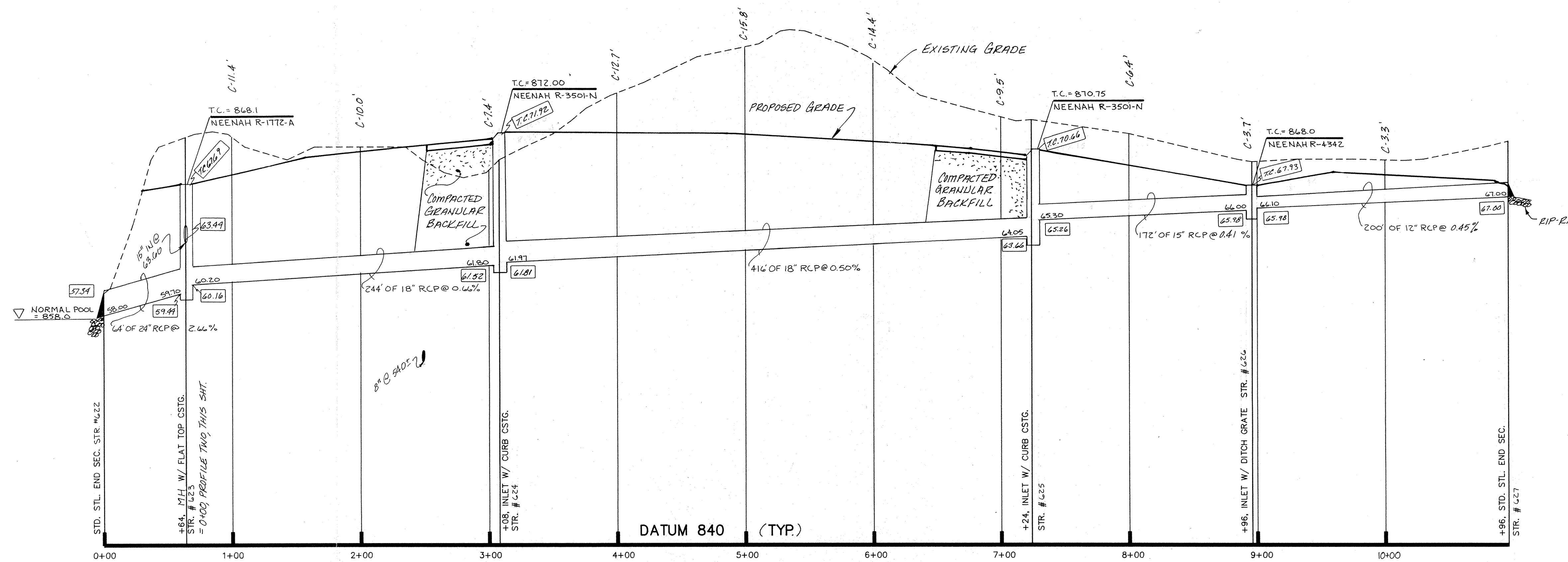
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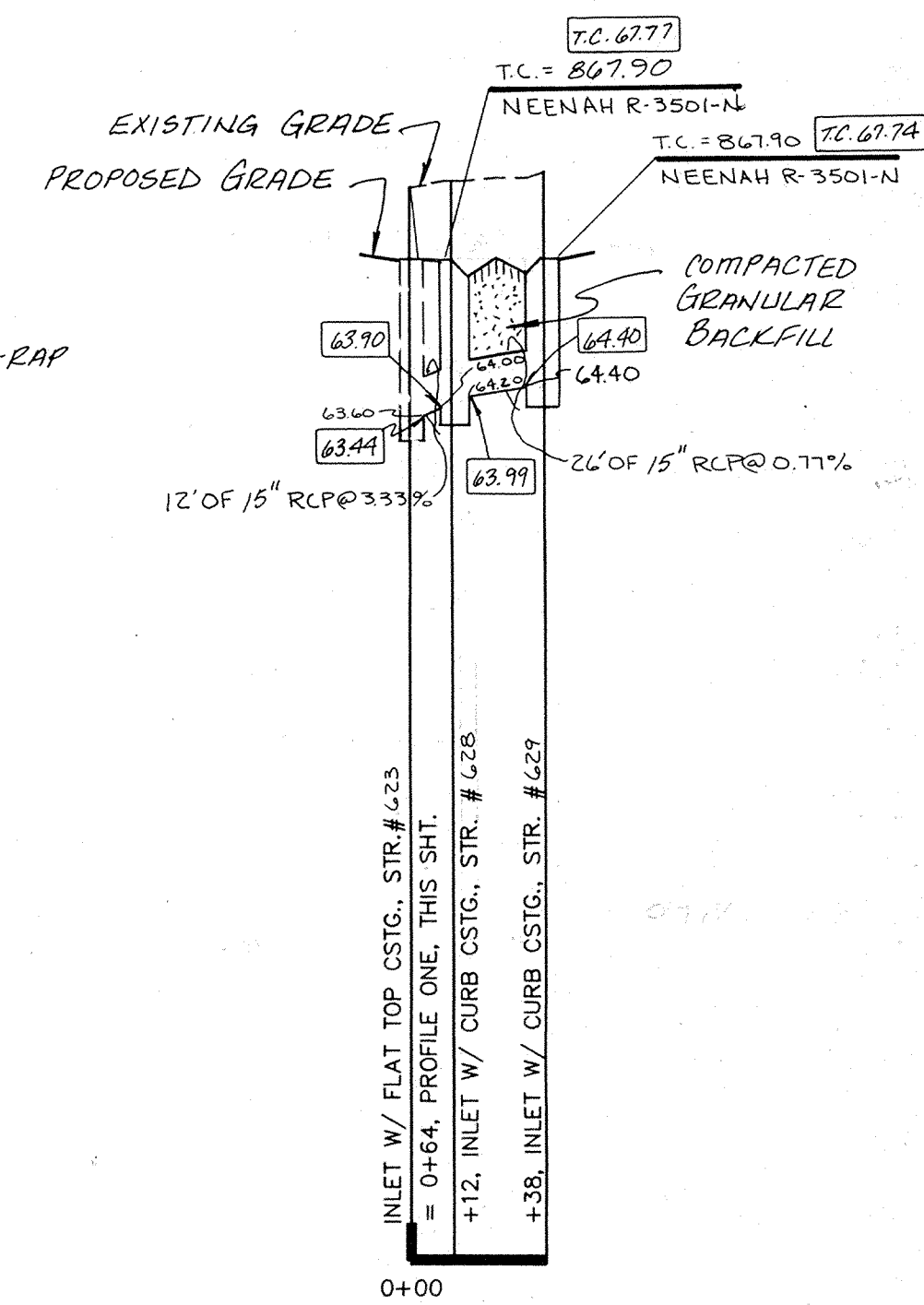
CERTIFIED BY:	REVISIONS	PAUL I. CRIFE, INC. 7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250 This copy print (317) 842-8777 The Hamilton County Surveyor's Office, One Hamilton Co. Courthouse, Noblesville, IN 46060	CIVIL ENGINEERING LAND SURVEYING ARCHITECTURE LAND PLANNING	TECH CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:	DWG. TYPE	FILE NUMBER	SHEET: 15 OF 26
	DATE			DRFTNG. CHK:	DRAWING TITLE:	3/20/89	BRENWICK DEVELOPMENT CO.			JOB NUMBER	

STORM SEWER PLAN & PROFILE

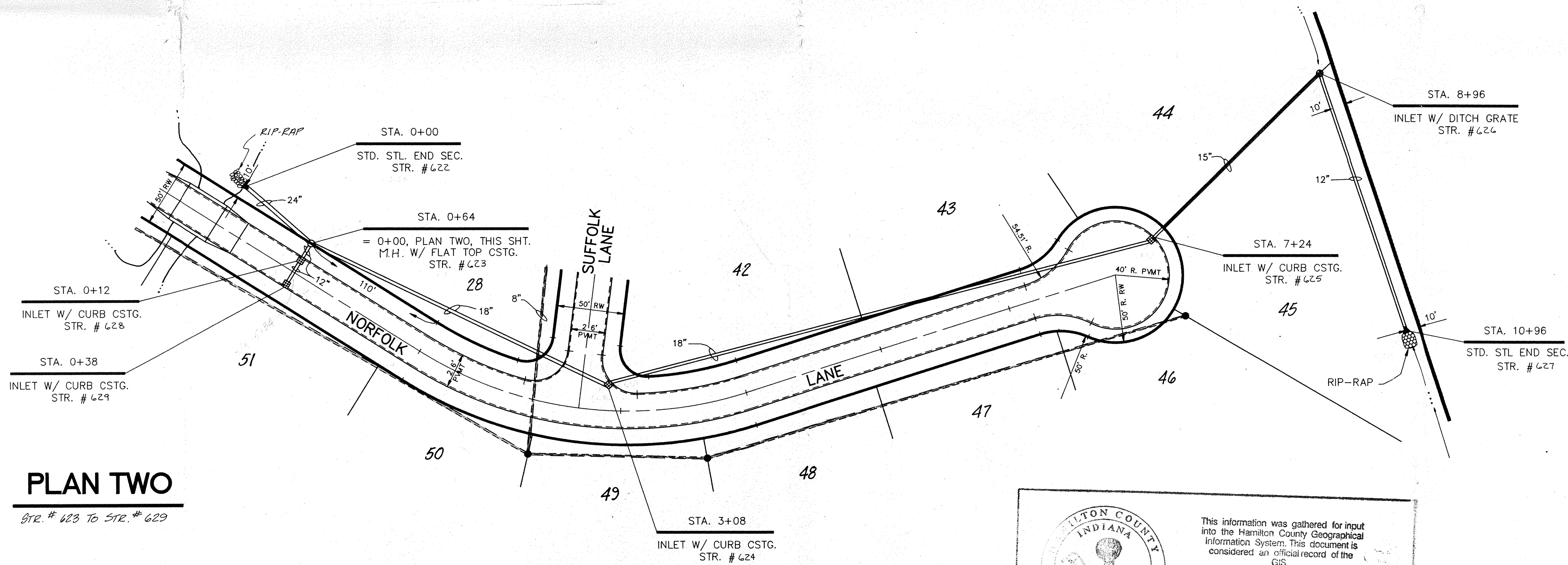
CLAYBRIDGE AT SPRINGMILL



PROFILE ONE



PROFILE TWO



PLAN TWO
STR. # 623 TO STR. # 629

PLAN ONE
STR. # 622 TO STR. # 627

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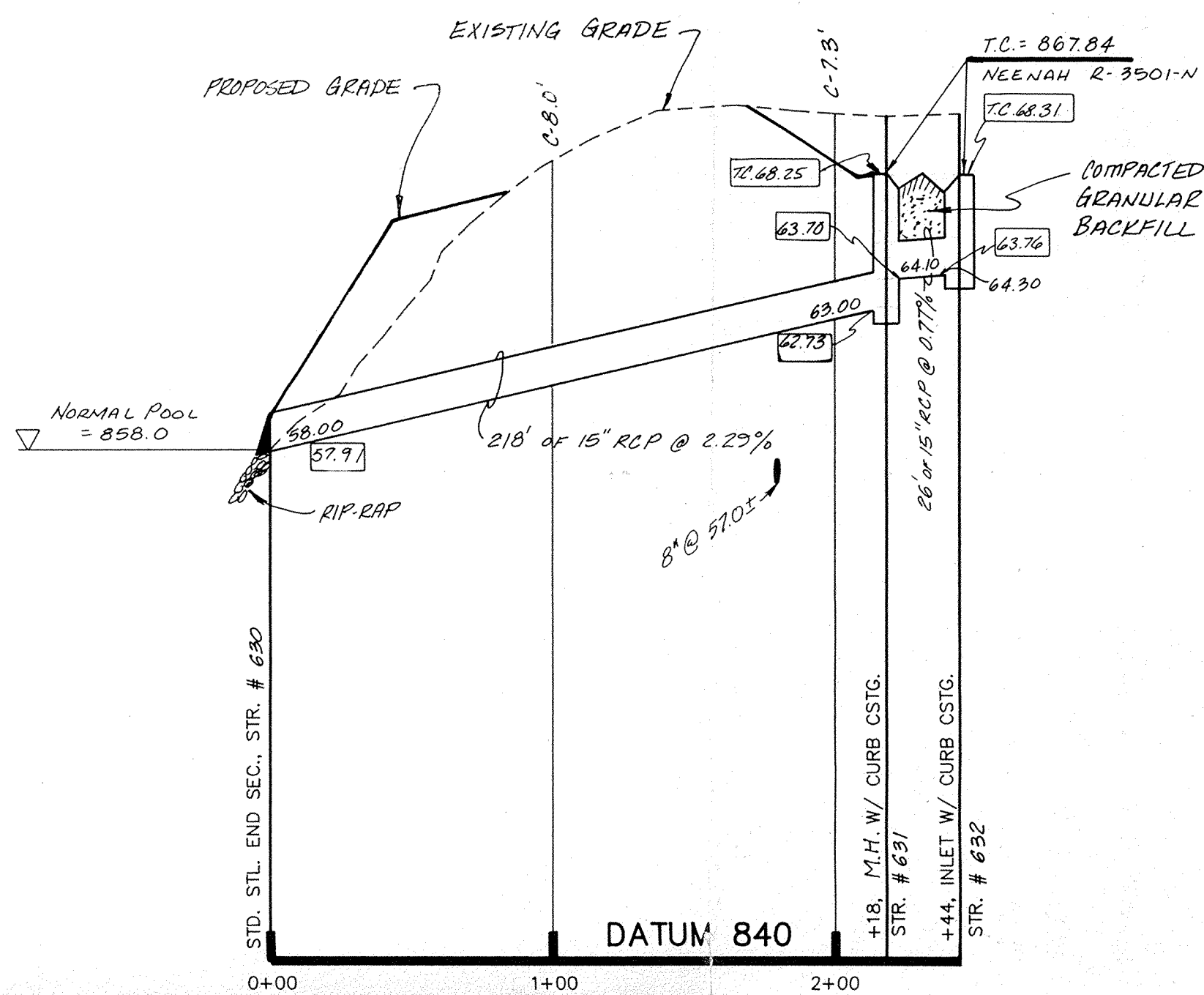
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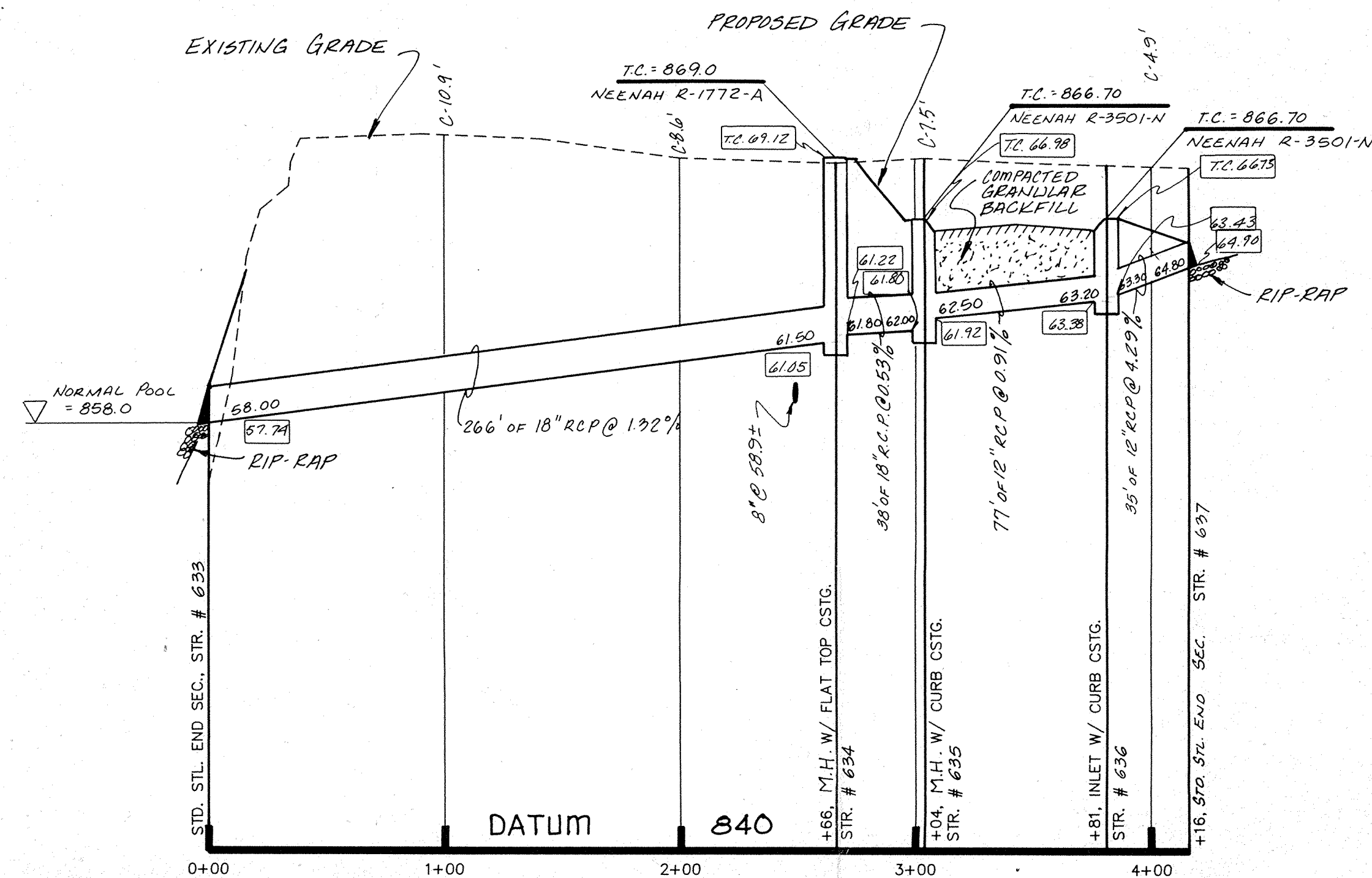
CLAYBRIDGE AT SPRINGMILL

CERTIFIED BY:	REVISIONS	PAUL I. CRIPE, INC.	CIVIL ENGINEERING	TECH CHK:	DRAWN BY:	SCALE:	DATE:	CLIENT:	DWG. TYPE	FILE NUMBER	SHEET:
	11-02-09 Add Record Information TRZ										
DATE		7172 GRAHAM ROAD INDIANAPOLIS, INDIANA 46250	LAND SURVEYING	DRFTNG. CHK:	DRAWING TITLE:	HORIZ. 1"=50'	3/20/09	BRENWICK DEVELOPMENT CO.	JOB NUMBER		16
		This copy printed by the Hamilton County Surveyor's Office, One Hamilton County Courthouse, Noblesville, IN 46060	ARCHITECTURE		STORM SEWER PLAN & PROFILE	VERT. 1"=5'			7 9 2 0 1 5 - 1 0 7 0 2		OF 26

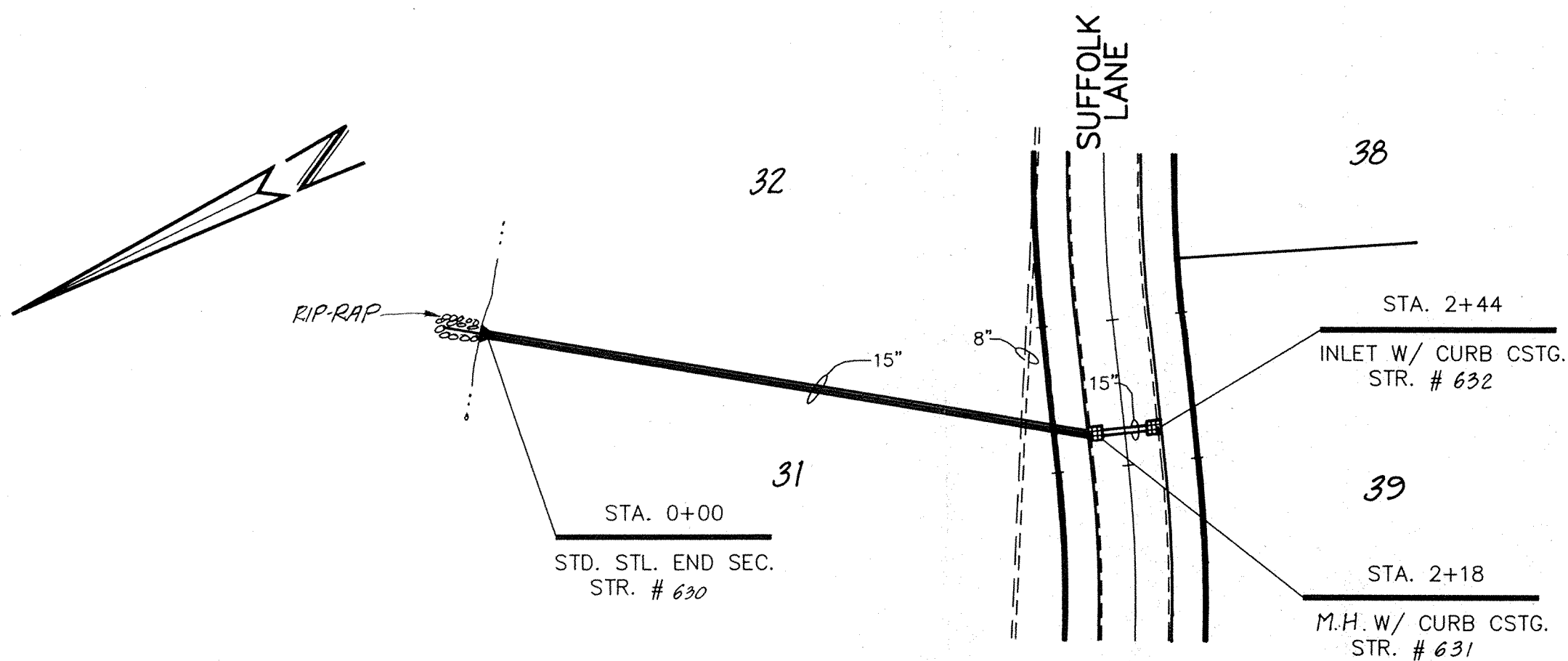
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PROFILE ONE



PROFILE TWO

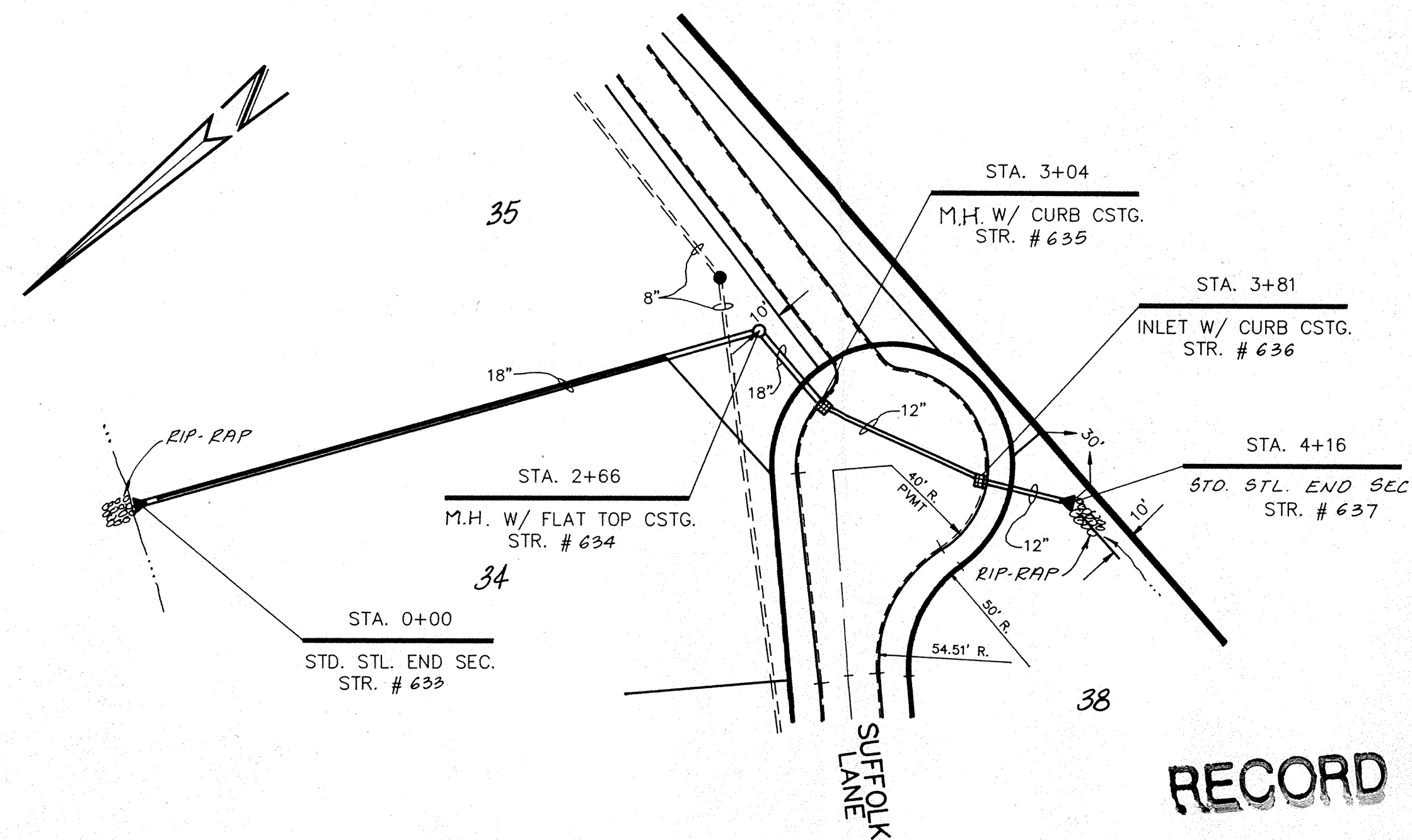


PLAN ONE

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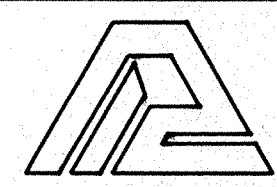


PLAN TWO

RECORD DRAWING

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	11-02-09 Add Record Information	TRZ
DATE		



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

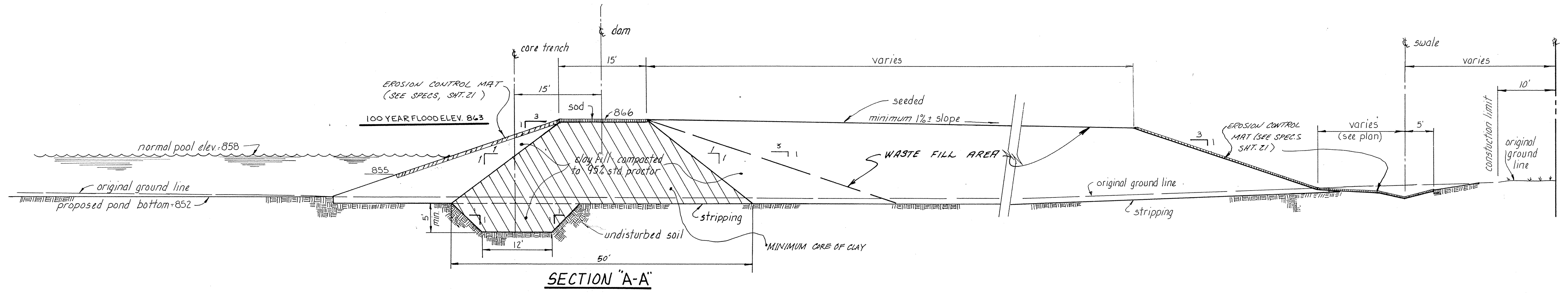
- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- LAND PLANNING

TECH. CHK.:
 DRAWN BY: BJD
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'
 DATE: 3/20/09
 CLIENT: BRENWICK DEVELOPMENT CO.
 DRAWING TITLE: STORM SEWER PLAN & PROFILE

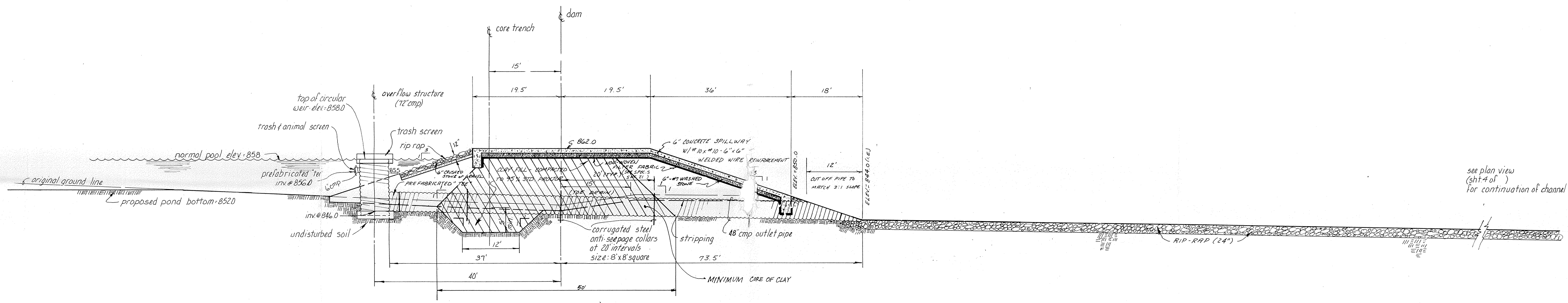
DWG. TYPE: _____ FILE NUMBER: _____
 JOB NUMBER: 79205-110702

CLAYBRIDGE AT SPRINGMILL

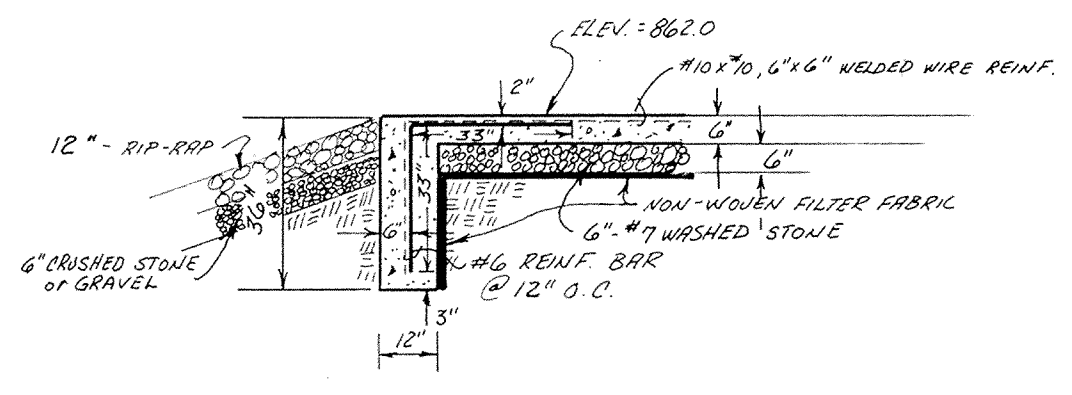
SHEET: **17**
 OF 20



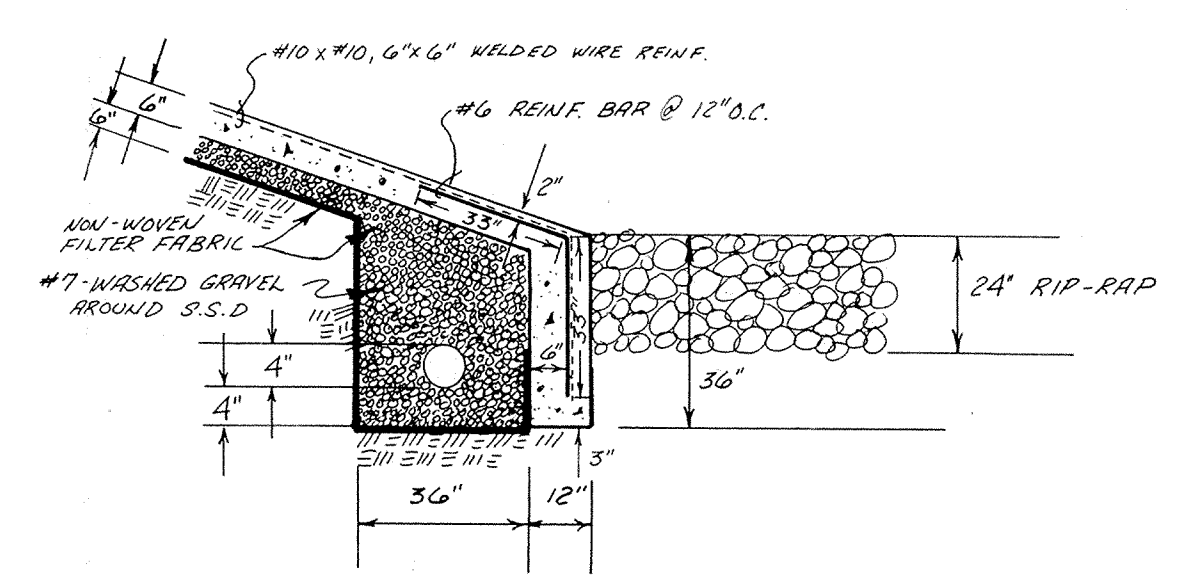
SECTION "A-A"



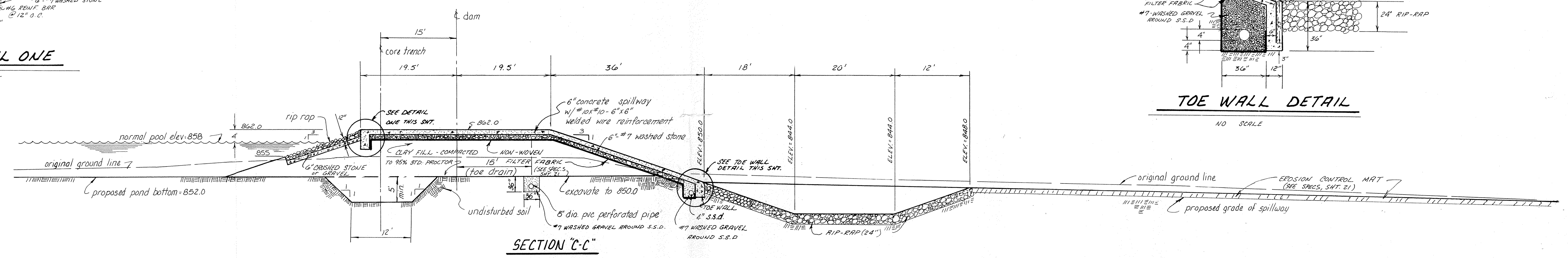
SECTION "B-B"



DETAIL ONE



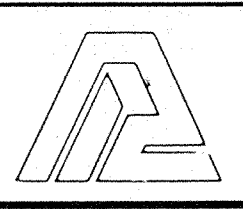
TOE WALL DETAIL



SECTION "C-C"

UNDER DNR PERMIT NO. D-8447

REVISIONS



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

TECH. CHK.
 DFTNG. CHK.

DRAWN BY
 R.J.S.

SCALE
 NONE

DATE
 3/20/89

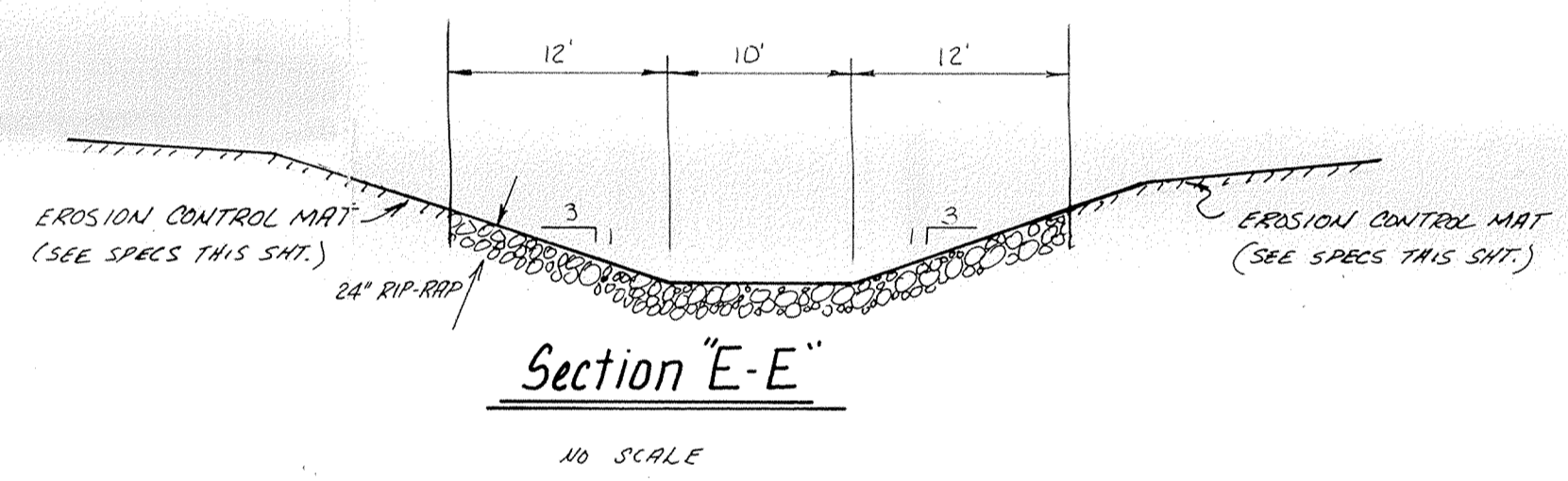
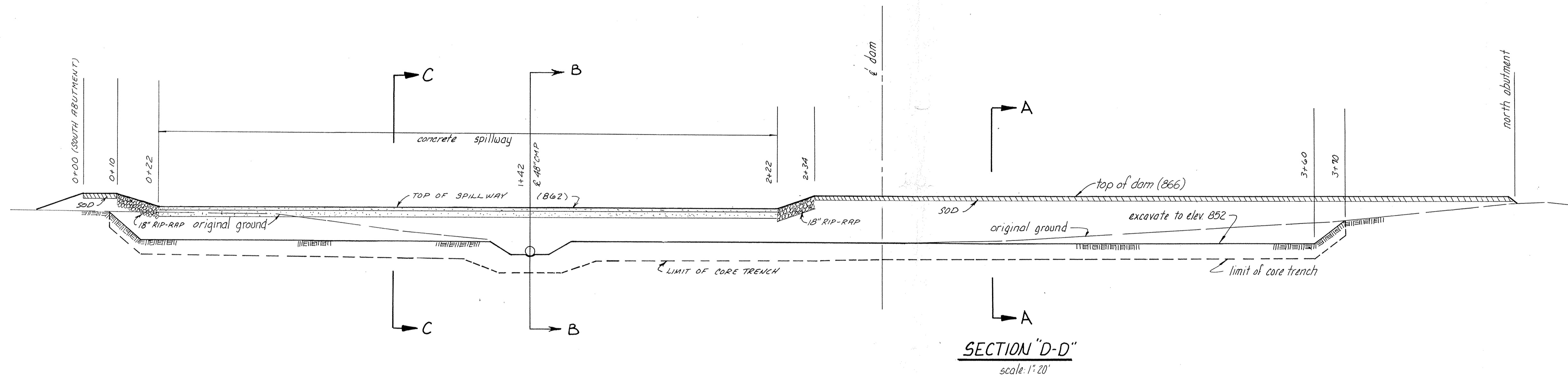
CLIENT
 BRENWICK DEVELOPMENT CO.

DWG. TYPE
 FILE NUMBER
 SHEET

79205-10702
 20
 OF 22

PROPOSED DAM CROSS SECTIONS

CLAYBRIDGE AT SPRINGMILL



SECTION "D-D"
scale: 1" = 20'

Section "E-E"
NO SCALE

- NON-WOVEN FILTER FABRIC NOTES:
1. The engineering fabric shall be a nonwoven fabric consisting only of continuous chain polymeric filaments or yards of polyester, formed into a stable network by needle punching. (TYPAR® 3401 or EQUAL)
 2. The engineering fabric shall be installed in accordance with the plans. Overlap when necessary shall be 12 inches minimum. Securing pins shall be used when necessary to insure proper anchoring of the engineering fabric.
 3. Securing pins for anchoring the fabric shall be 3/16 inch steel bars, pointed at one end and fabricated with a head to retain a steel washer having an outside diameter of not less than 1.5 inches. The pin length shall be not less than 18 inches. U-shaped pins shall be an acceptable option. (SEE MANUFACTURER'S SPECS FOR DIMENSIONS.)
 4. Engineering fabric to be used shall be DUPONT TYPAR® 3401 or EQUAL.

EROSION CONTROL MAT SHALL BE NORTH AMERICAN GREEN (TYPE SC150)

- Site Preparation**
- Smooth grade and compact all areas to be covered with mat.
 - Remove all rocks, dirt clods, grass clumps, trash, and other obstructions that will lift mat from ground surface.

- Anchor Trenches**
- The mat must be anchored at the upstream and downstream ends of the protected area and intermittently in between.
 - Excavate end trenches to a minimum of 12" deep and 6" wide before placing mat.
 - Dig intermittent check slots 6" deep by 6" wide transverse to mat at approximately 25' intervals.

- Seeding**
- Seed and fertilizer may be spread before or after mat installation. Seed type, fertilizer type, and rate of application should be specified by landscape contractor or owner.
 - Top soil may be broadcast over mat to provide added cover and protection (optional).

- Mat Placement**
- Unroll mat flat side against the ground. Unroll mat in direction parallel with direction of water flow.
 - Mat should lay flat. DO NOT PULL MAT TAUT over ground. Pulling taut may cause mat to bridge depressions in the surface and allow erosion underneath.
 - Beginning at up or downstream end bury transverse terminal end of mat to secure and prevent groove flow underneath.
 - Fold and secure mat snugly into all transverse check slots.
 - Backfill and compact trenches and check slots after staking the mat in bottom of trench...see "Ground Fastening."
 - Bury final terminal end as prescribed above.
 - Overlap roll ends by 3" (min.) with upslope mat on top to prevent uplift of mat end by water flow.
 - Overlap adjacent edges of mat by 3" (min.) and stake...see "Ground Fastening."

Ground Fastening

Metal pins or wood stakes are recommended for anchoring mat to the ground surface. Metal pins should be 3/16" diameter steel with 1-1/2" diameter steel washer secured at head of pin. Wood stakes should be 1"x3" nominal stock cut in a triangular shape. Stakes should be 9" to 18" long depending on soil density. Longer anchors are required for loose soils.

Note that ground fasteners different from those mentioned here may function adequately. Care must be taken to assure that fasteners hold mat securely at the surface and have sufficient ground penetration to resist pullout.

- Stake mat to ground on 3 to 5 foot centers. Add extra stakes at depressions in ground surface where mat bridges over to assure ground conformity.
- Drive wood stakes to within 3" of ground surface. Do not drive flush to surface. Steel or plastic pins should be driven flush to surface.
- In all transverse terminal trenches and check slots, stake each mat at its center and at overlapped edges before backfilling and compacting.
- Stake overlaps longitudinally at 3' intervals.

CERTIFIED BY _____
DATE _____

REVISIONS

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- CIVIL ENGINEERING
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- ARCHITECTURE
- LAND PLANNING

TECH. CHK. _____
DRAWN BY R.T.G.
SCALE NONE
DATE 3/20/89
CLIENT BRENWICK DEVELOPMENT CO.
DFTNG. CHK. _____
DRAWING TITLE

PROPOSED DAM CROSS SECTIONS

CLAYBRIDGE AT SPRINGMILL			
DWG. TYPE	FILE NUMBER	SHEET	
		21	
JOB NUMBER			
79205-10702			OF 26