Drain: <u>Crooked Creek arain</u>	Drain #: 2 <i>5</i> b
Improvement/Arm: THE PARK AT WES	TON PLACE - SECTION 2
Operator: <u> </u>	Date:_/2-/-43
Drain Classification: Urban/Rur	al Year Installed: 100/

# **GIS Drain Input Checklist**

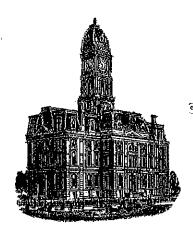
•	Pull Source Documents for Scanning	J4 1
•	Digitize & Attribute Tile Drains	NA
•	Digitize & Attribute Storm Drains	990 1

- Digitize & Attribute SSD
- Digitize & Attribute Open Ditch
- Stamp Plans
- Sum drain lengths & Validate
- Enter Improvements into Posse
- Enter Drain Age into Posse
- Sum drain length for Watershed in Posse

# Gasb 34 Footages for Historical Cost Drain Length Log

Drain-Improvement: CROOKED CREEK ORAIN-THE MAKE ATWESTEN PLACE -SECTION 2

Drain Type:	Size:	Length SURVEYORS (REPORT )	Length (DB Query)	Length Reconcile		
550	6"	7,628'	7,628'_	Reconcile	Price:	Cost:
RCP	1541	303'	363'			
	18"	576'	576'	6		
	214	7181	7181	8		
	24"	1881	1881	Ø		
	27"	399'	399'	ø		
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	Sum:	981Z	9812'	- X		<u> </u>
	oun.		7012	<del></del>	-	
inal Report:						
omments:						
						·





Kenton C. Ward, CFM Surveyor of Hamilton County Phone (317) 776-8495 Fax (317) 776-9628

Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

#### Map Correction-Field Verification

Drain Number: 250

Drain Length: 9812

Drain Name: Parks at Weston Section 2

**Change** + / -: -1094

Date: 9-23-2016

New Length: 8718

Verified By: 6LM

#### Notes & Sketch:

The final report dated September 2, 1997 had an error in the calculation of 6" SSD. The correct footage of 6" SSD is 6534 feet.

Suzanne L. Mills GIS Specialist





Kenton C. Ward, Surveyor

Phone (317) 776-8495 Fax (317) 776-9628

Suite 146 One Hamilton County Square Noblesville, Indiana 46060=2230 June 14, 1996

To: Hamilton County Drainage Board

Re: Crooked Creek Drain, The Park at Weston Place Section 2 Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Crooked Creek 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 benefited. The drain will consist of the following:

6" SSD-6026 ft 21" RCP 721 ft 15" RCP- 484 ft 24" RCP 186 ft 18" RCP- 415 ft 27" RCP 368 ft

The total length of the drain will be 8200 feet.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs and those main lines between lots or in rear yards. Only the main SSD lines which are located within the easement/right of way are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain. The portion of the SSD which will be regulated other than those under curbs are as follow:

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I also believe that no damages will result to landowners by the construction of this drain. I recommend a maintenance assessment of \$30.00 per lot, \$5.00 per acre for roadways, with assessment for this drain/this section will be \$ /79/.85

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

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement request. This request is for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for The Park at Weston Place Section 2 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for August 1996.

Kenton C. Ward

Hamilton County Surveyor

KCW/ndw

STATE OF INDIANA )
COUNTY OF HAMILTON )

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

In the matter of THE PARK CHESTON PLACE Subdivision,
Section 2 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 \_\_\_\_\_\_\_, 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. Petetioner 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 reproducable 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
PAUL F. RIOUX, VICE PRESIDENT
Printed Name
x taulf. Rioux
Signed
K.E. PROPERTIES, LLC
Printed Name
RECORDED OWNER(S) OF LAND INVOLVED
DATE 5/28/96

#### FINDINGS AND ORDER

#### CONCERNING THE MAINTENANCE OF THE

Crooked Creek Drain-The Park @ Weston Place Section 2 Arm

On this <u>26th</u> day of <u>August</u> 1996, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the <u>Crooked Creek Drain-The Park @ Weston Place</u>

Section 2 Arm

Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessments will be less than the benefits to the landowners and issues this order declaring that this <u>Maintenance Fund be</u> established.

HAMILTON COUNTY DRAINAGE, BOARD

President

Member

Member

ATTEST: Manual Cland Cong Administrative Secretary Revised 12/95



FILE

R.M. Stoeppelwerth, PE, PLS • David J. Stoeppelwerth, PE, PLS • Curtis C. Huff, PLS • Dennis D. Olmstead, PLS • Jeffory W. Darling, PLS

October 11, 1996

Hamilton County Surveyor 1 Hamilton County Square, Ste 146 Noblesville, IN 46060-2230

Attention: Kent Ward

Re:

Engineer's Estimate

Storm Sewer System & Monumentation The Park at Weston Place, Section 2

Dear Mr. Ward:

On behalf of the developers, Estridge Development Company, I wish to submit the following Engineer's Estimate of the storm sewer system and monumentation for The Park at Weston Place, Section 2.

Storm sewer system including pipe, inlets, manhole end sections, subsurface drains, rip-rap, bedding and backfill

\$126,200

**Erosion Control** 

\$ 10,000

Monuments & Markers

\$ 2,500 \$138,700

If you have any questions regarding this estimate, please contact Dennis Olmstead at 577-3400, ext. 37.

Very truly yours,

STOEPPELWERTH & ASSOCIATES, INC.

David J. Stoeppelwerth, P.E., P.L.S.

cc: Tim Walter, Estridge Development Co. DDO96/19584A

NOCKTHEL NEW YORK 12775-8000 (A Stock Company)



### SUBDIVISION DOND

Bond No.: 97026 Principal Amount: \$126,200.00
KNOW ALL MEN BY THESE PRESENTS, that we K.E. PROPERTIES L.L.C.  1041 W. Main Street, Carmel, IN 46032 as Principal, and
FRONTIER INSURANCE COMPANY a New York Corporation
de neid and firmly bound unto HAMILTON COUNTY COMMISSIONING
namilton County Square, Noblesville, IN 46040 in the penal sum of
One Hundred Twenty Six Thousand Two Hundred and 00/100 (Dollars
(\$_126.200.00), lawful money of the United States of America
the payment of which well and truly to be made, we hind
purselves, our heirs, executors, administrators, successors and
assigns, jointly and severally, firmly by these presents.
WHEREAS, K.E. PROPERTIES L.L.C. 1041 W. Main Street, Carmel, IN 46032
as agreed to construct in The Park at Weston Place, Section 2 Subdivision.
h Hamilton County the following
mprovements:
Storm Sewers

This copy printed from the Digital Archive of the Hamilton County Surveyor's Office; One Hamilton Co. Square, Ste. 188, Noblesville, In 46060

NOCK HILL NEW YORK 12775-8000 (A Stock Company)

# SUBDIVISION DOND

	Bond No.: 97027 Principal Amount: \$10,000.00
, T	KNOW ALL MEN BY THESE PRESENTS, that we K.E. PROPERTIES L.L.C.  1041 W. Main Street, Carmel, IN 46032 as Principal, and  FRONTIER INSURANCE COMPANY a New York Corporation,  as Surety, are held and firmly bound unto HAMILTON COUNTY COMMISSIONERS  The Hamilton County Square, Nathernille
_	ne Hamilton County Square, Noblesville, IN 46040 in the penal sum of Ten Thousand and 00/100
_	\$\frac{10,000.00}{10,000.00}, lawful money of the United States of America, or the payment of which well and truly to be made, we bind urselves, our heirs, executors, administrators, successors and
a	ssigns, jointly and severally, firmly by these presents.  WHEREAS, K.E. PROPERTIES L.L.C. 1041 W. Main Street, Carmel, IN 46032
h i	as agreed to construct in The Park at Weston Place, Section 2 Subdivision,  Hamilton County the following
i.ı	mprovements:  Erosion Control
	·

EFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that id Principal shall construct, or have constructed, the provements herein described and shall save the Obligee harmless from any loss, cost or damage by reason of its failure to complete said work, then this obligation shall be null and void, otherwise to remain in full force and effect, and the Surety, upon receipt of a resolution of the County Board indicating that the improvements have not been installed or completed, will complete the improvements or pay to the municipality such amount up to the Principal amount of this bond which will allow the municipality to complete the improvements. Signed, sealed and dated, this 11th day of October K.E. PROPERTIES L.L.C. FRONTIER INSURANCE COMPANY Principal Surety

#### WER OF ATTORNEY

RONTIER INSURANCE COMPANY, a New York Corporation, having its principal office in dopted by the Board of Directors of the Corporation on the 4th day of November, 1985:

soard, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-inif of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity reof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

tures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney it thereto by facelmile, and any such Power of Attorney or certificate bearing such facelmile signatures or facelmile d and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance or other contract of writing obligatory in the nature thereof;

OLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in Cuch certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact.

This Power of Attorney is signed and sealed in facsimile under and by the authority of the above Resolution.

**OES HEREBY MAKE, CONSTITUTE AND APPOINT:** 

Lewis James Scheer Michael J. Scheer Alice Rhoads

James I. Moore Bonnie Kruse Stephen T. Kazmer Dawn L. Morgan

in the State of Illinois its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred in its name, place and stead to sign, execute, acknowledge and deliver in its behalf, and as its act and deed, without power of redelegation, as follows:

Bonds guaranteeing the fidelity of persons holding places of public or private trust; guaranteeing the performance of contracts other than or quaranteeing bonds and undertakings required or permitted in all actions or proceedings or by law thousand (\$3,500,000.00) DOLLARS; and to bind FRONTIER

State of Illinois County of Cook

October 11,1996

nerein, duly commissioned and sworn, personally appeared Alice Rhoads , before me, a Notary Public in and for said County and State, residing

nown to me to be Attorney-in-Fact of

e comperation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the id instrument in behalf of the said corporation, and he duly acknowledged to me that such corporation executed the same. WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.

OFFICIAL SEAL DAWN L. MORGAN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 3/29/2000



CHRISTINE I. LANE Notary Public State of New York Sullivan County Clerk's No. 1996 Commission Expires May 2, 1998

#### CERTIFICATION

, JOSEPH P. LOUGHLIN, Secretary of FRONTIER INSURANCE COMPANY of Rock Hill, New York, do hereby certify that the foregoing Resolution adopted by the Board of Directors of this Corporation and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolution and the Powers of Attorney are in full force and effect.

Jn 測itness 測hereof, I have hereunto set my hand and affixed the facsimile seal of the corporation this

October

JOSEPH P. LOUGHLIN, Secretary

M 19-5002-A (4/96)

# CERTIFICATE OF COMPLETION AND COMPLIANCE

Address of premises on which land alteration was accomplished 106th Street and Mi	ichigan Road
Inspection Date(s):	Permit No
Relative to plans prepared by: Stoeppelwerth & on 3/15, 1996.	Associates, Inc.
I hereby certify that:	
To the best of my knowledge, information performed and completed in conformity with the i	and belief such land alteration has been improved plan, except
Signature Carl J Storppeliver	tt Date:11/11/96
Type Name: David J. Stoeppelwerth	Phone: (317) 849-5935
Business Address: 9940 Allisonville Road, Fisher	rs, IN 46038
Surv.X EngrArch Indiana Registration	on No. <u>R.L.S. S0474</u>
(SEA	AL)

FORMS/COMP&C







Kenton C. Ward, Surveyor Phone (317) 776-8495 Fax (317) 776-9628

Suite 146 One Hamilton County Square Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

September 2, 1997

Re: Crooked Creek Drain - Park @ Weston Sec.2

Attached are as-builts, certificate of completion & compliance, and other information for The Park @ Weston Sec. 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, changes were made to the drain which will alter the plans submitted with my report for this drain dated June 14, 1996. The changes are as follows:

Str.894-881 15"RCP shortened from 152' feet to 151' feet.

Str.880-879 18"RCP lengthened from 71' feet to 73' feet.

Str.878-ext 24"RCP lengthened from 164' feet to 166' feet.

Str.882-882A 18"RCP shortened from 59' feet to 58' feet. Links and the state of the

Str.890-889 21"RCP shortened from 135' feet to 133' feet.

Str.884A-884 18"RCP shortened from 160' feet to 159' feet. This segment was incorrectly reported as 15"RCP at 180' feet on the original report.

Str.884-885 18"RCP shortened from 62' feet to 61' feet.

Str.886-887 21"RCP lengthened from 313' feet to 314' feet.

Str.887-892 27"RCP shortened from 190' feet to 189' feet.

Str.893-ext 27"RCP lengthened from 148' feet to 180' feet.

The corrected length of 6"SSD is 7,628' feet.

The length of the drain due to the changes described above is now 9,812 feet.

The non-enforcement was approved by the Board at its meeting on August 26, 1996 and recorded under instrument #9609648475.

The bond or letter of credit from Frontier Insurance Co, number 97026 for storm sewers, 97027 for erosion control and 97028 for monumentation; dated October 11, 1996; in the amount

of \$126,200.00, \$10,000.00 and \$2,500.00; has been recommended for release in a letter to the Commissioners dated November 12, 1996.

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

Sincerely,

Kenton C. Ward.

Hamilton County Surveyor

KCW/slm

#### **Asbuilt Structures**

Project: CROOKED Creek DRAIN- Park@ Weston Sec Z Structure: T.C.: 1.E.: Length: Original Plans: Difference: Pipe: 894 897,28 894.53 881 897.01 15" 894.09 151 FRM 1521 881 897.01 894.09 *8*80 899.01 1811 893.51 225 <u>880</u> 899.01 893.51 9379 18" 897,57 893,24 73' FRM 71' 879 897.57 893.24 878 21" 897.57 893,24 30' 878 897.57 893.24 EX 24" 897.18 892.53 166' FRM 164' 883 896.43 893.15 882 151 896.42 893.02 30' ८८८ 896.42 893.02 882A 895.97 092.83 18" 581 FRM 59' / OB2A 895, 97 892.83 EX 896.15 812.05 21" 181 890 898.68 896.37 889 899.27 894.02 21" 133' FRM 135' 6" SSD Streets: 6" SSD Lots: Total: Total: **RCP Pipe Totals:** Other Drain:

Total Length of Drain:

# **Asbuilt Structures**

Project: CROOKED Creek DRAIN - Parka Weston Sec. 2 Structure: T.C.: I.E.: Pipe: Length: Original Plans: Difference: 889 899,27 894,02 888 894.37 895,77 2111 30'-888 899.37 895.13 887 899 93 24" 895 43 22' 887 899.93 895.63 891 89856 15" 895.95 122' 884 A 899.77 897.46 901.37 884 896.97 18" 159' FRM 160' Incorrectly reported as 884 901.37 896.97 885 900.44 896,73 18" 'اما FRM 62 ଚଚ୍ଚଟ 900.64 890.73 886 900.57 21" 896.63 30' <u>886</u> 900.57 <del>89</del>6.63 887 899.93 895.63 21" 314' Fam 313 887 899.92 895.63 89Z 899.54 895.01 27" 189 Fam 190' 892 899.54 895,01 893 899.49 998.88 27" 30' 6" SSD Streets: 6" SSD Lots: Total: Total: **RCP Pipe Totals:** Other Drain: Total Length of Drain:

# **Asbuilt Structures**

Project: Crooked Crok Draw: Park @ Wosten Sec. 2

Structure:

T.C.:

I.E.:

Pipe:

Length: Original Plans: Difference:

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" SSD Streets								

6"	SSD	Stree	ts:

Constitution DR	870, 30	
Putnam Place	945,0	900
GeHysburg Place	1140,0	() io
Freeman Court	168.92	
	50,0	
Putnam Culdegac	U40'	530

6" SSD Lots:

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1	1

Total:

3814.27 × 26-7628,54

Total:

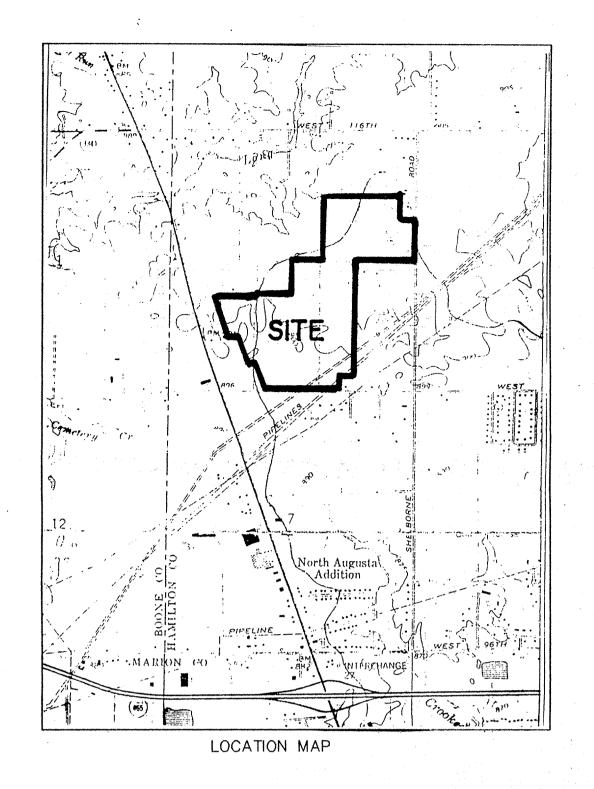
**RCP Pipe Totals:** 

15"	303'
19"	303' 576'
2) 1	718'
અપ્	718' 188' 399'
27"	399'

Total Length of Drain:

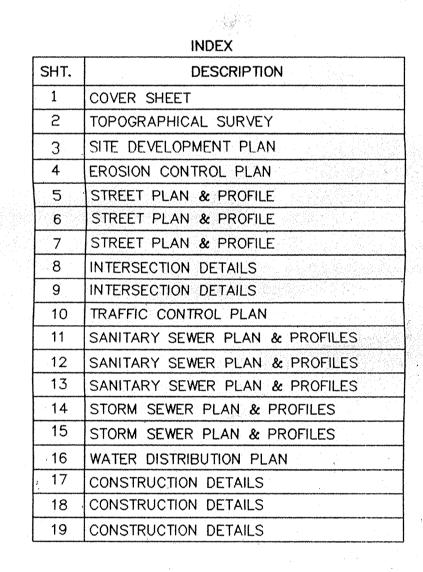
Other Drain:

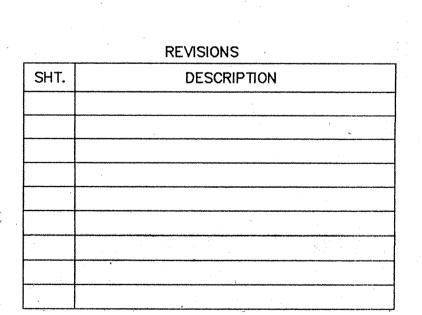
9812

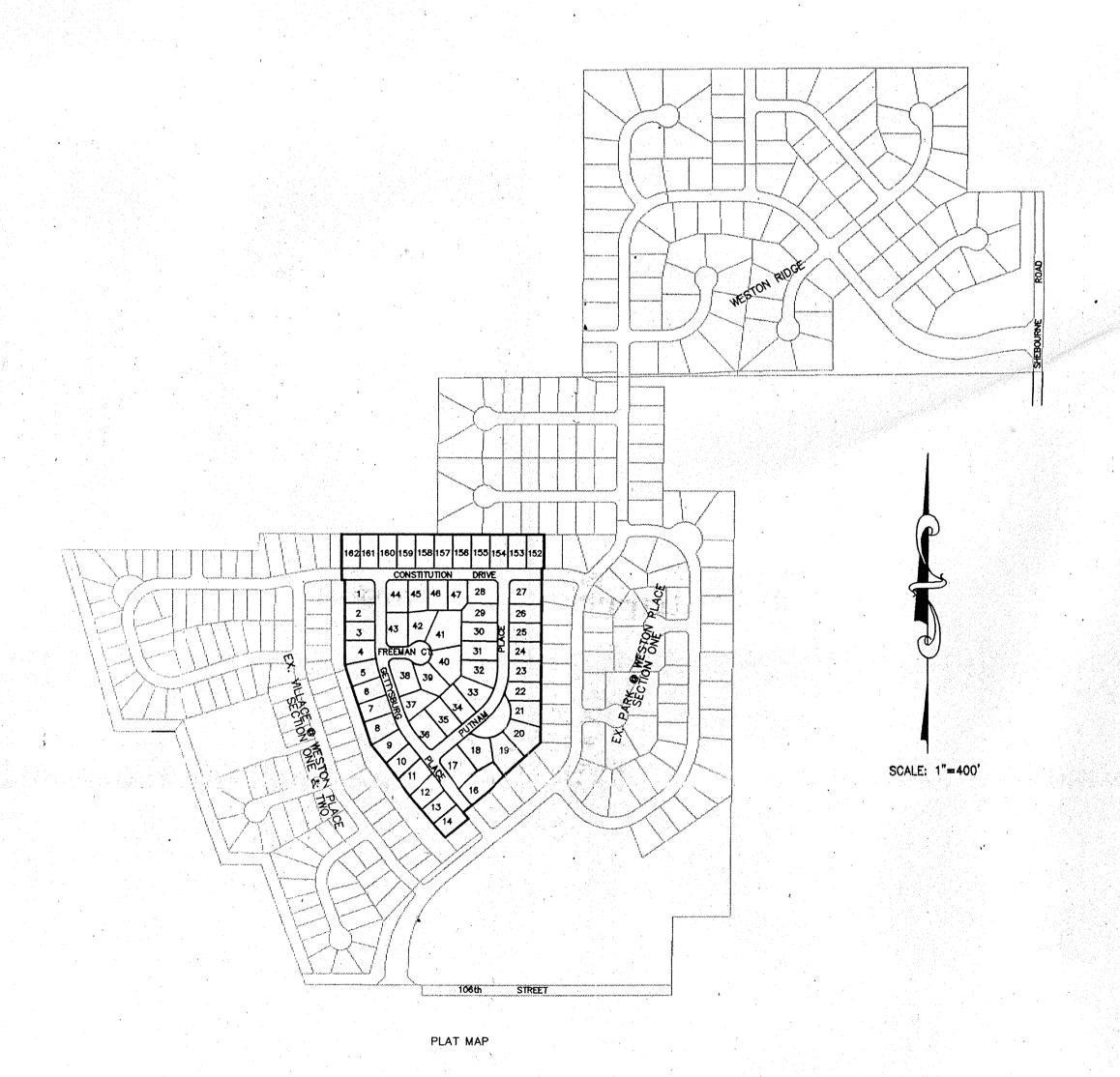


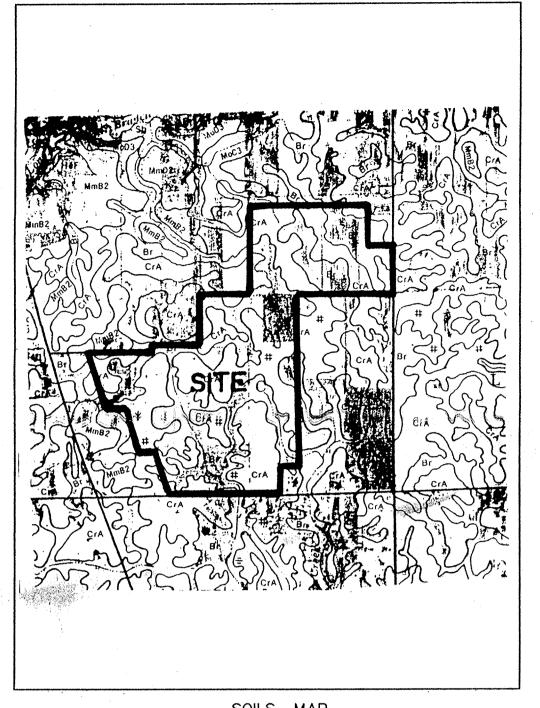
# THE PARK ® WESTON PLACE SECTION TWO

Developed by:
ESTRIDGE DEVELOPMENT CO., INC.
1041 WEST MAIN STREET
CARMEL, INDIANA 46032
(317)-846-7311









SOILS MA

MmB2 MIAMI Br BROOKSTO CrA CROSBY

N.O.I. LETTER OPERATOR:
KEN BRASSEUR
ESTRIDGE DEVELOPMENT COMPANY, INC

#### DESIGN DATA

= 2.8 LOTS/ACRE

57 LOTS

20.320 AC.

GETTYSBURG PLACE
FREEMAN COURT
CONSTITUTION DRIVE
PUTNAM PLACE

2.8 LOTS/ACRE
1064.74 L.F.
870.30 L.F.

# PLANS PREPARED BY:

STOEPPELWERTH & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
9940 ALLISONVILLE ROAD
P.O. BOX 509007
INDIANAPOLIS, INDIANA 46250
PHONE: (317)-849-5935
FAX: (317)-849-5942

PRINTED

APPROVAL PENDING Not For Construction

PLANS CERTIFIED BY:

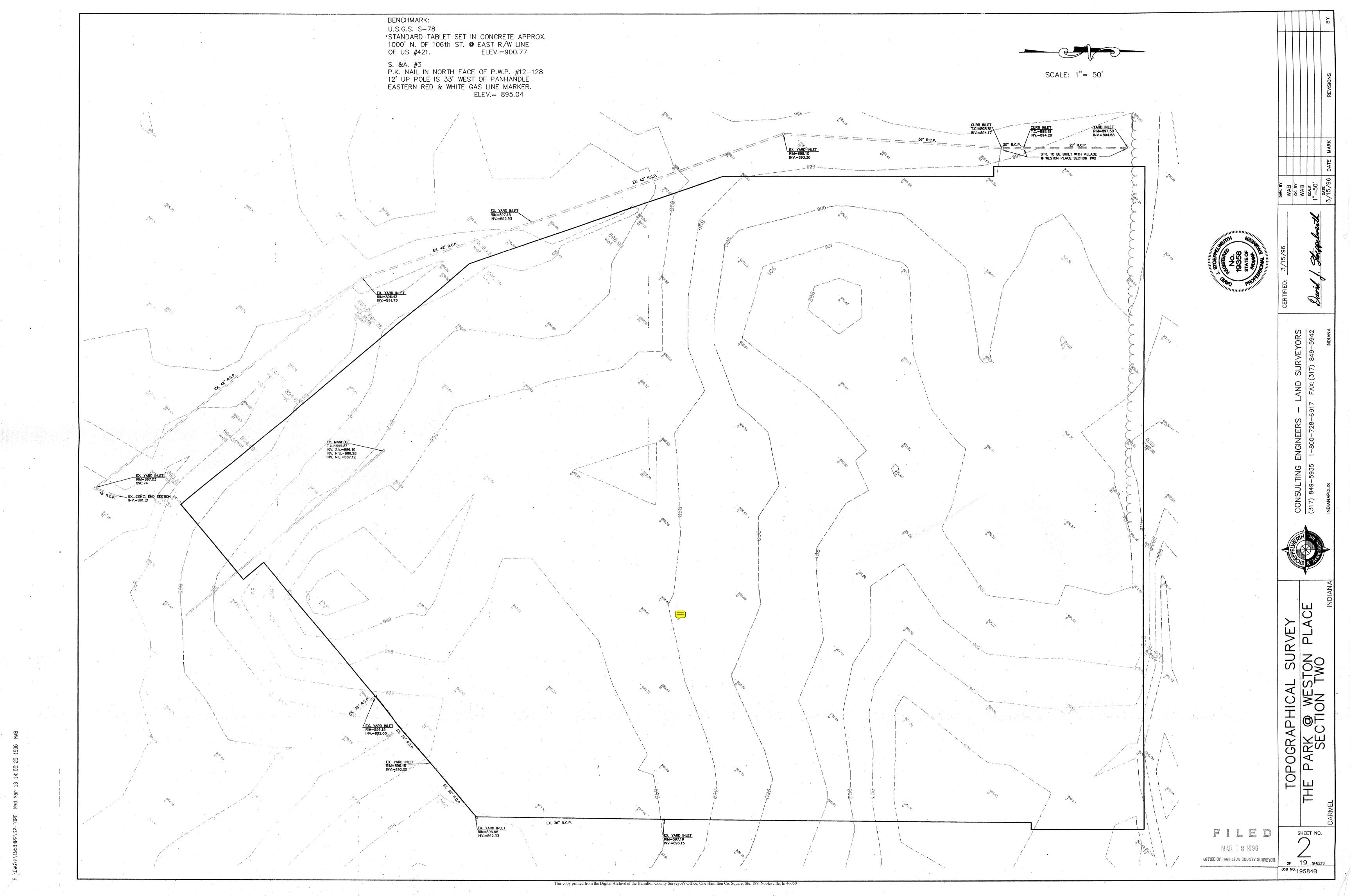
David J. Stocpathwesth 3/15/96

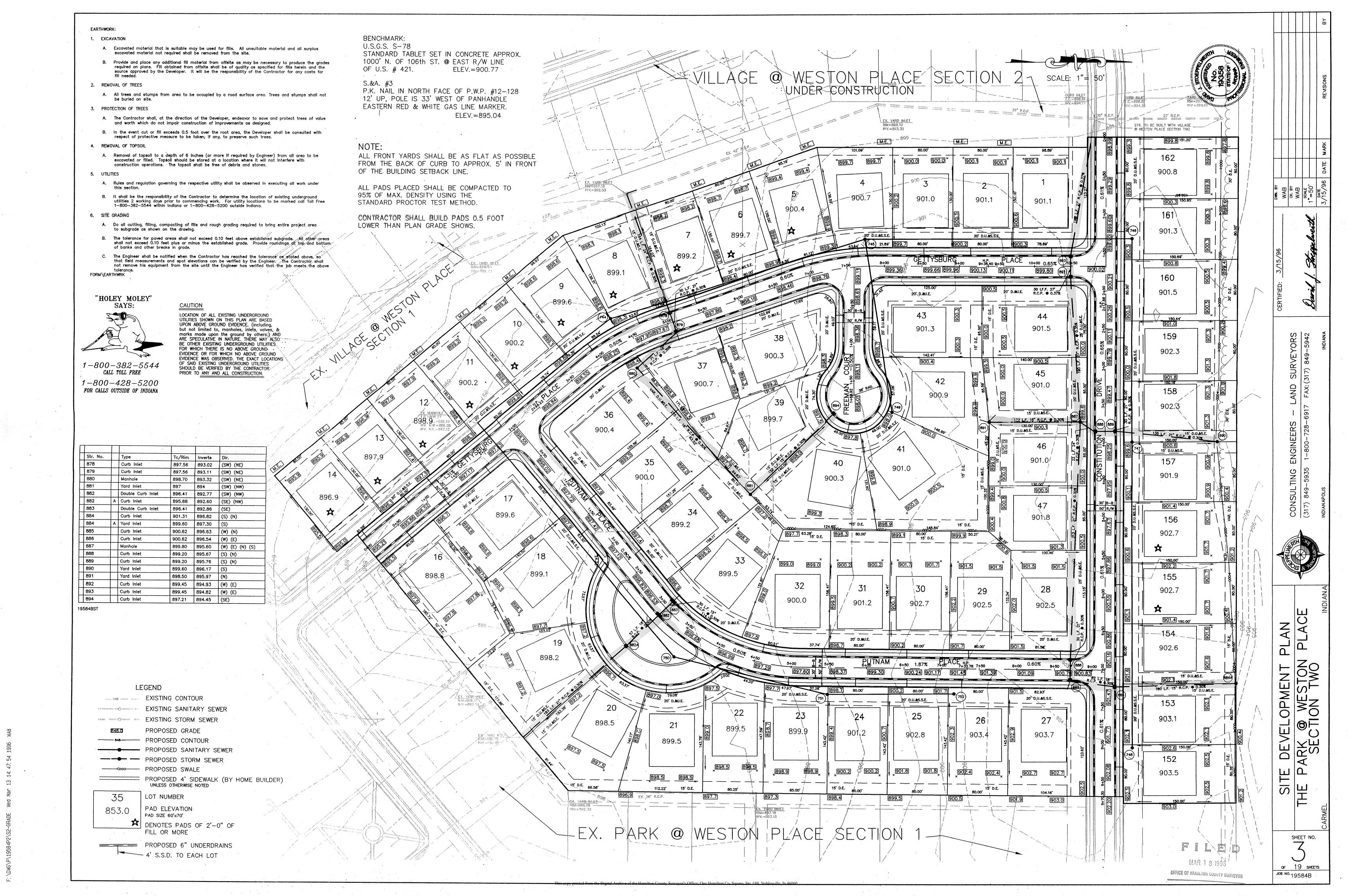
DAVID J. STOEPPELWERTH DATE
PROFESSIONAL ENGINEER
NO. 19358

FILED

MAR 1 8 1996

UFFICE OF HAMILTON COUNTY SURVEYOR





PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL: STEVE RANSHAW ESTRIDGE DEVELOPMENT CO., INC.

12'-0" MIN. WIDTH 2"-3" WASHED STONE

STONE ACCESS DRIVE DETAIL

#### NOTE: TO CONTRACTOR

(317) - 846 - 7311

- Prior to any work commencing contractor shall install stone drive at entrance, and all silt
- 2. Upon completion of the storm structure from being built the fabric drop inlet protection is to be installed ON curb inlets and straw bales on yard inlets immediately.
- 3. Upon completion of the swale construction, contractor shall notify engineer to as—built, upon review of as-built engineer shall notify contractor to install the erosion control blankets as soon as possible.

FORMS/22687

CONTRACTOR SHALL MAINTAIN EXISTING STREETS FROM DEBRIS OF DIRT, SAND, OR STONE AND SHALL BE RESPONSIBLE FOR THE CLEANING OF SUCH ITEMS. AFTER COMPLETION OF THE WORK, THE BUILDERS WILL BE REQUIRED TO KEEP STREETS FREE OF THE SAME, AT THE CITIES DISCRETION.

**EXISTING VEGETATION:** BRUSH TREES

#### EROSION CONTROL FOR INDIVIDUAL LOTS

- CONSTRUCT A GRAVEL DRIVE 2. CONFINE ALL TRAVEL TO THE GRAVEL DRIVE
- 3. PRESERVE AS MUCH OF THE EXISTING VEGETATION AS POSSIBLE 4. IF THERE ARE LARGE EXPOSED AREAS ON OR NEAR SLOPES A SILT FENCE
- 5. AFTER FINAL GRADING, SEED OR SOD THE YARD AS SOON AS POSSIBLE 6. AFTER A YARD IS RE-VEGETATED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES

ALL AREAS NOT DENOTING PERMANENT SEEDING OR FIBER BLANKETS SHALL BE TEMPORARILY

RECOMMENDED EROSION CONTROL MEASURES WERE TAKEN FROM CHAPTER 3 AS STATED IN THE INDIANA HANDBOOK FOR EROSION CONTROL IN DEVELOPING AREAS. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AS CONDITIONS WARRANT

#### Recommended Erosion Control Measures

Erosion Control Blanket: Recommend erosion control blankets such as North American Green S150 be installed as a temporary erosion control measure in the bottom of any swale with a concentrated surface water flow. Refer to erosion control practice number 3.17.

Straw Bale Drop inlet Protection: Recommend using straw bale drop inlet protection as per erosion control practice number 3.54 as a temporary erosion control measure until blankets are installed. Other drop inlet protection practices may become necessary upon the recommendation of the engineer or erosion control consultant if a specific need arises during construction.

Topsoil Salvage and Utilization: As per erosion control practice number 3.02. Removal of topsoil to a depth of six inches (or more if required by the engineer) from all areas to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations.

Temporary Seeding: Recommend temporary seeding as per erosion control practice number 3.11 if disturbed ground is to be left bare for two months or more. In addition, it is recommended red clover be added to the seeding mixture at a rate of 10 pounds per acre.

Dormant and Frost Seeding: As per practice number 3.13 attached to be applied if necessary. Surface Roughening: As per erosion control practice number 3.03, suggest using a bulldozer to track with cleats perpendicular to the slope of slopes on disturbed ground of six percent or greater and around the shore of the lakes as a temporary measure until ready for blankets.

Temporary Gravel Construction Entrance/Exit Pad: Recommended as per erosion control practice

Tree Conservation/Protection: As per erosion control practice number 3.83, the contractor shall, at the direction of the developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.

In the event cut or fill exceeds 0.5 foot over the root area, the developer shall be consulted with respect of protective measure to be taken, if any, to preserve such trees. Maintenance Schedule: Maintenance of all erosion control practices should be done as needed on

a weekly basis and after all large storms. A construction supervisor should be assigned the task of seeing that all practices are installed and maintained according to the design criteria. Maintenance for each erosion control practice should be conducted per maintenance schedule shown on each erosion control practice job sheet (attached). Construction Sequence Schedule:

Spring (Projected season to start): Locate areas of tree protection, install gravel construction entrance, install temporary silt fence, strip and stockpile topsoil. Excavate building areas and other earthwork (lakes, roads, swales, sewers, etc.)

Spring/Summer: Install strawbale inlet protection. Install rock chute outlet protection. Install temporary erosion control blankets as needed. Track in ridges with dozer cleats on all slopes greater than six percent and around side slopes of lakes.

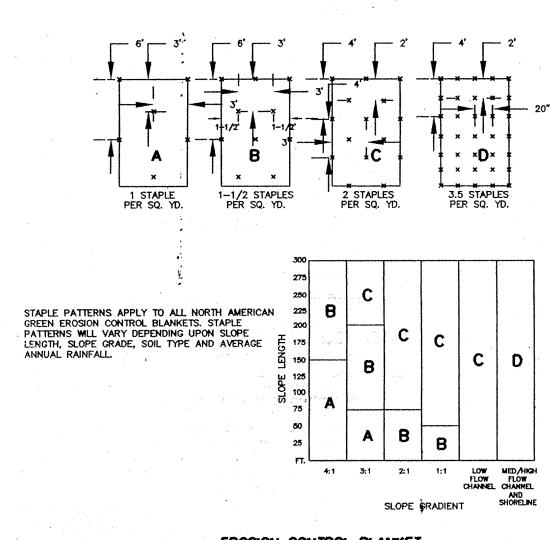
Summer/Fall: Apply sod in all areas that are finish graded. Apply temporary seeding in areas where

earthwork construction is halted and area will be bare and exposed for more than two months. Maintain erosion control practices as per erosion control maintenance schedule above. Remove temporary erosion control measures in stabilized areas that have been sodded.

Winter/Spring: Apply dormant seeding on any areas that show a need for it. Continue maintenance of existing erosion control practices.

Spring/Summer/Fall (following year): Stabilize all open ground and remove temporary erosion control practices. Implement final landscape plan.

FORMS\18545ECM



#### EROSION CONTROL BLANKET STAPLE PATTERN GUIDE

## Soil Erosion Control Summary

The following is a list in sequence of construction activities to

#### 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 ryearass, wheat or rye depending on time of year. Disturbed areas should be kept to a minimum at all times
- 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.
- 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. Payment for additional straw bales shall be at the Contractors expense. Payment for additional rip rap (not shown on plans) and seeding shall be paid for on a unit
- Contractor shall install all sanitary sewers, storm sewers, subsurface drains, and water mains. Straw bale filters shall be installed at all storm inlets (including street

#### Seeding Specifications:

Ditch Banks: shall be seeded and covered with North American Green fiber blanket #\$150 and #\$C150 (or Equal) or Hydroseeded with straw mulch. The Contractor shall follow the manufacturer's recommended guidelines for installation

#### Seeding rate: 110#/acre or 2.5#/1000 S.F. leeding mixture: 38% Kent. 31 Fescue 19% Perennial Rve 19% Annual Rye

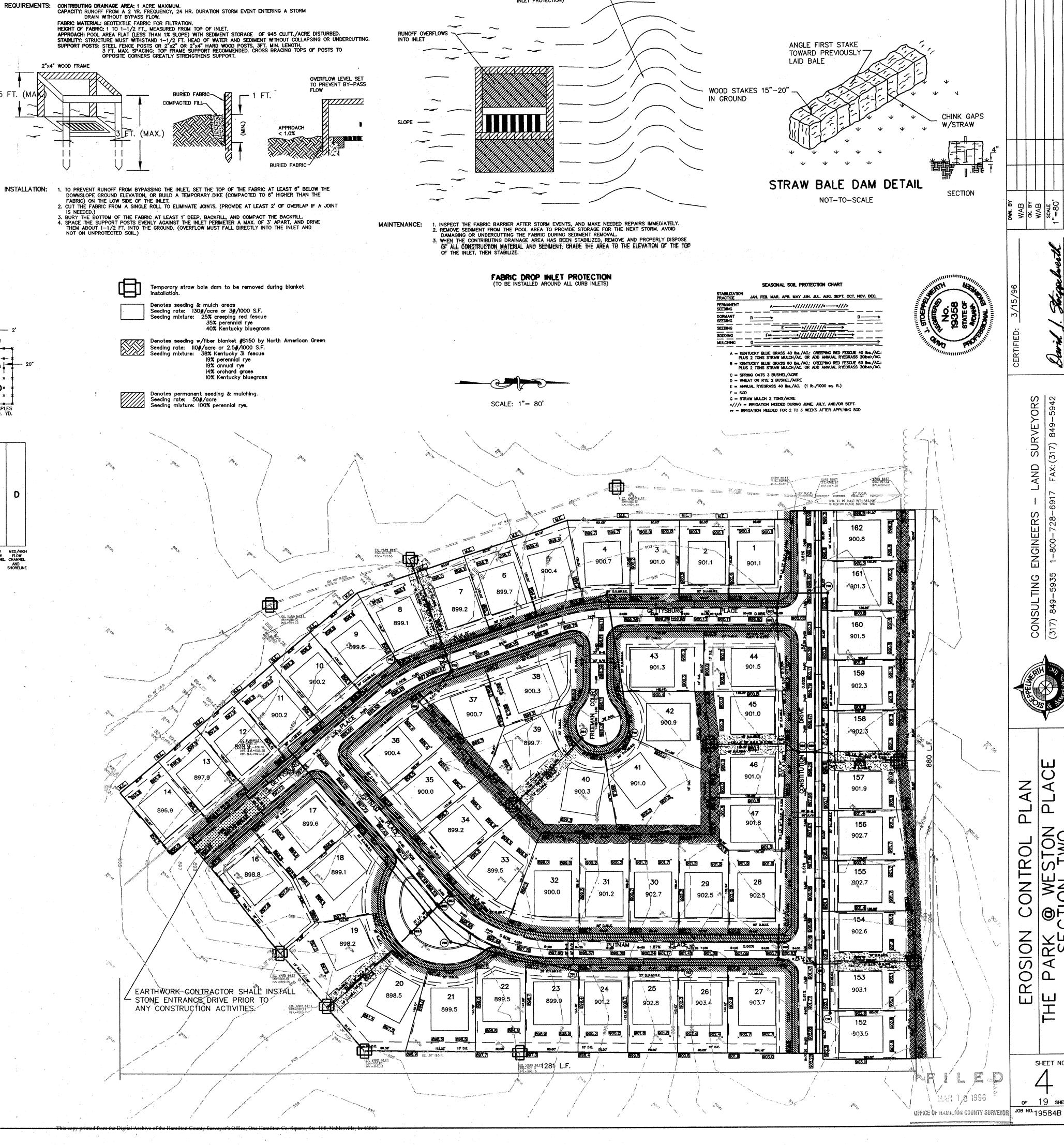
#### 2. 4" of topsoil (minimum) shall be placed prior to

3. If grades are established between May 15' and August 10, a temporary seeding consisting of 40# of Annual Ryegrass shall be planted per acre.

10% Kent. Bluegrass

4. 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. All grains should be mowed prior to

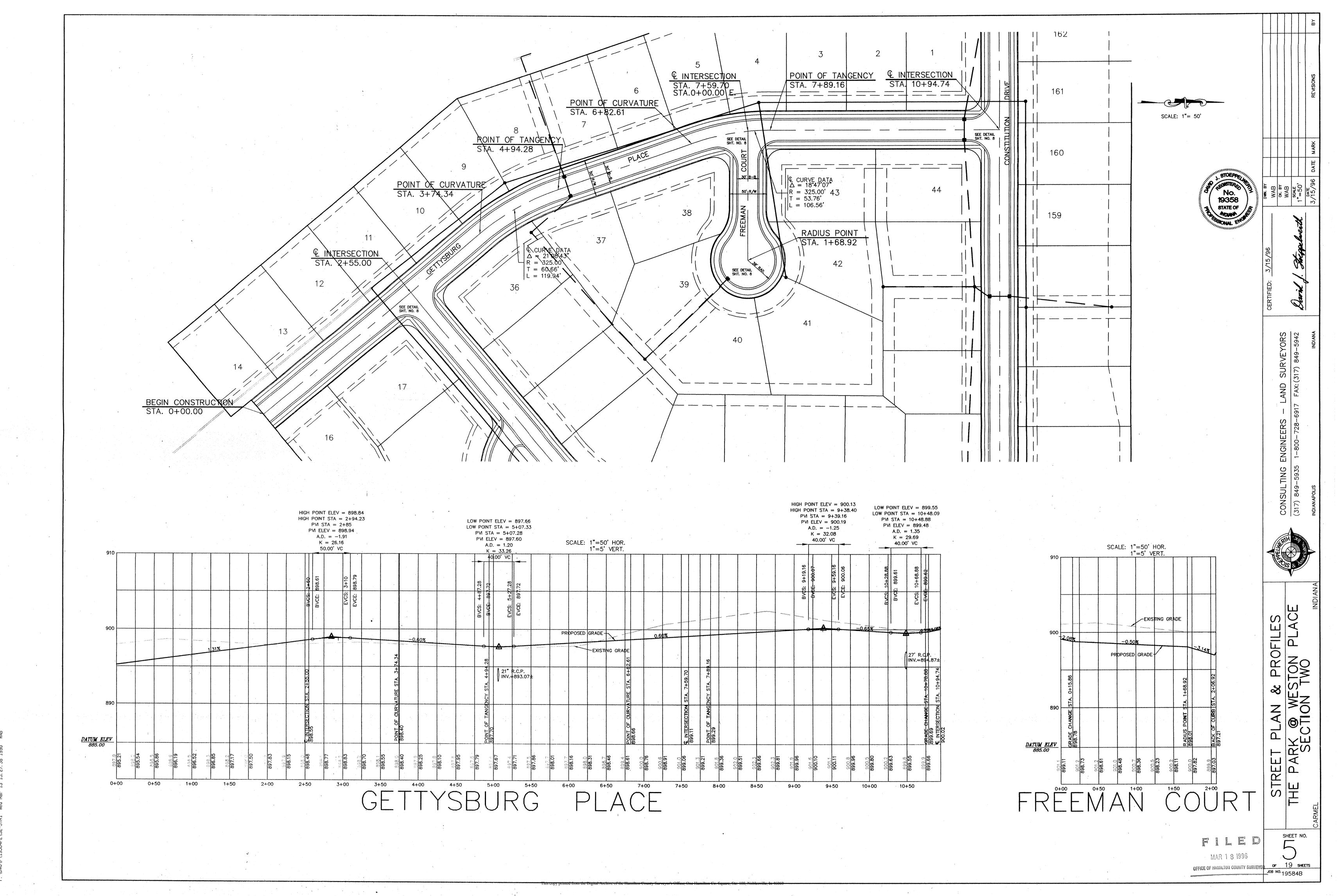
5. If temporary seeding is established prior to permanent seeding, the mulch may be eliminated except in "bare" areas. 6. If grading occurs during December, January, or February, use dormant seeding and it should be done within 7 days of last land disturbing activity.

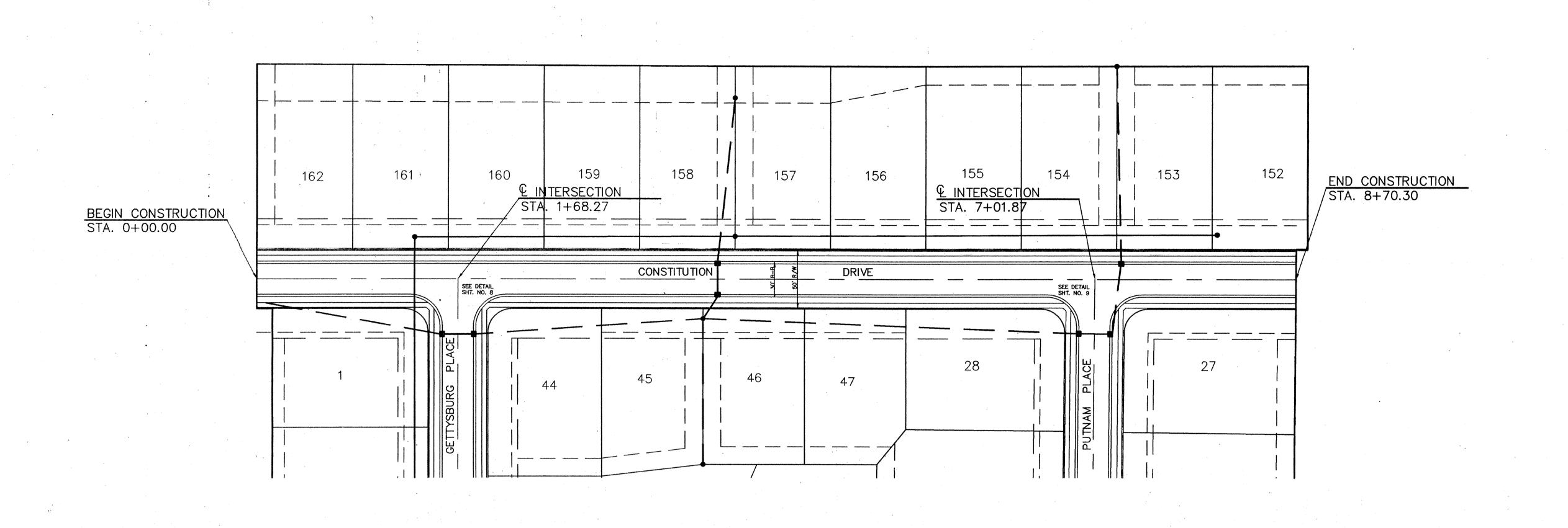


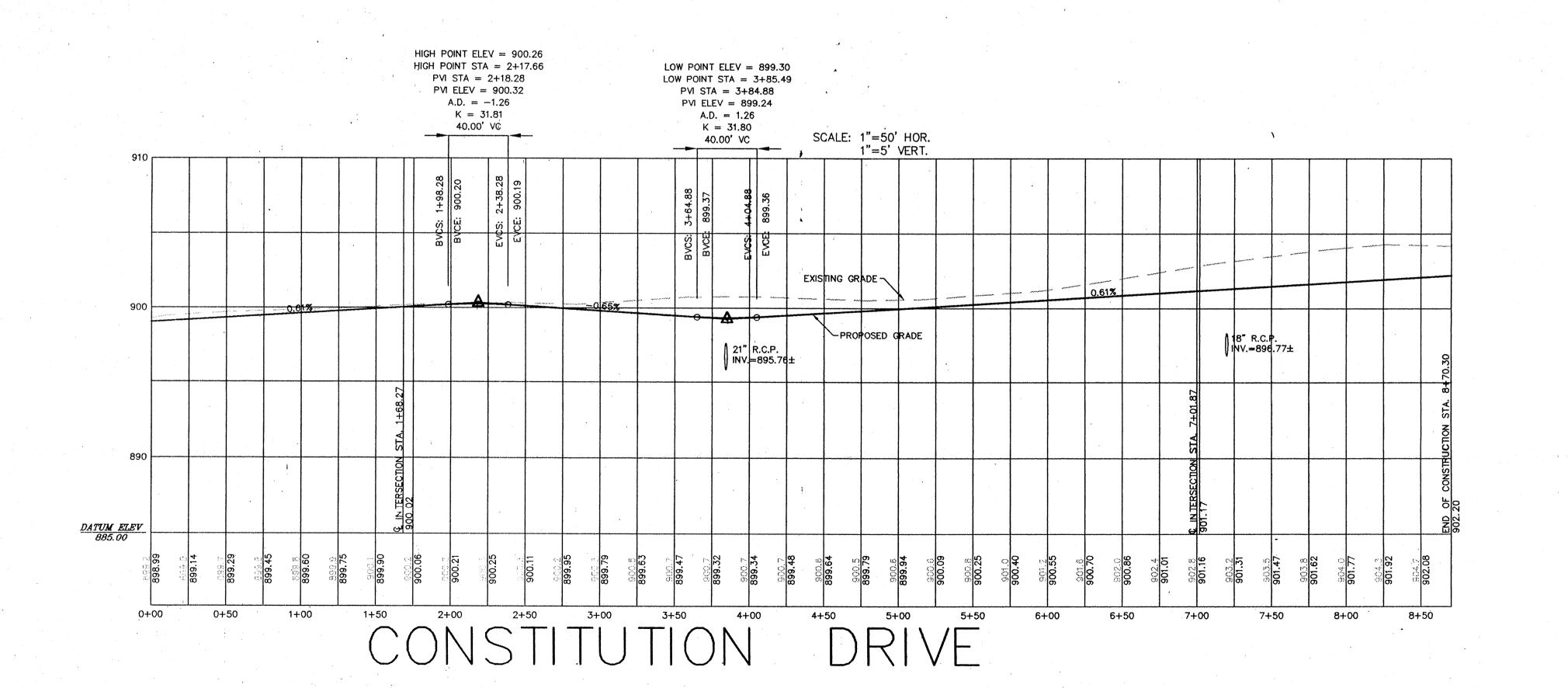
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COMPACTED DIKE TO PREVENT BY-PASS FLOW (6" HIGHER THAN -







SCALE: 1"= 50'

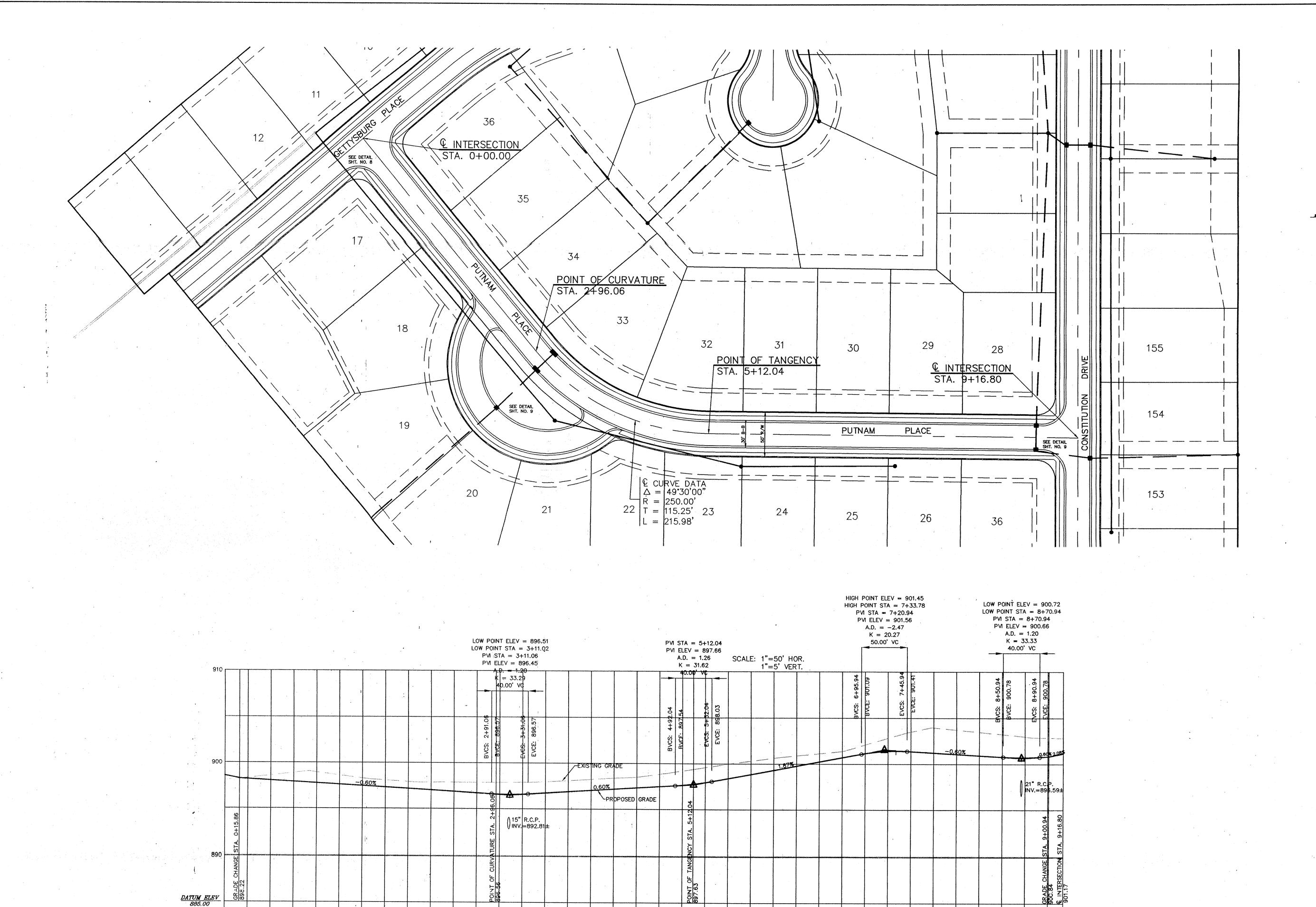
& PROFILES FSTON PLACE TWO

STREET PLAN & THE PARK @ WES

SHEET NO.

MAR 1 8 1996

MAR 1 8 1996 OF 19 SHEETS
OFFICE OF HAMILTON COUNTY SURVEYOR
JOB NO. 19584B



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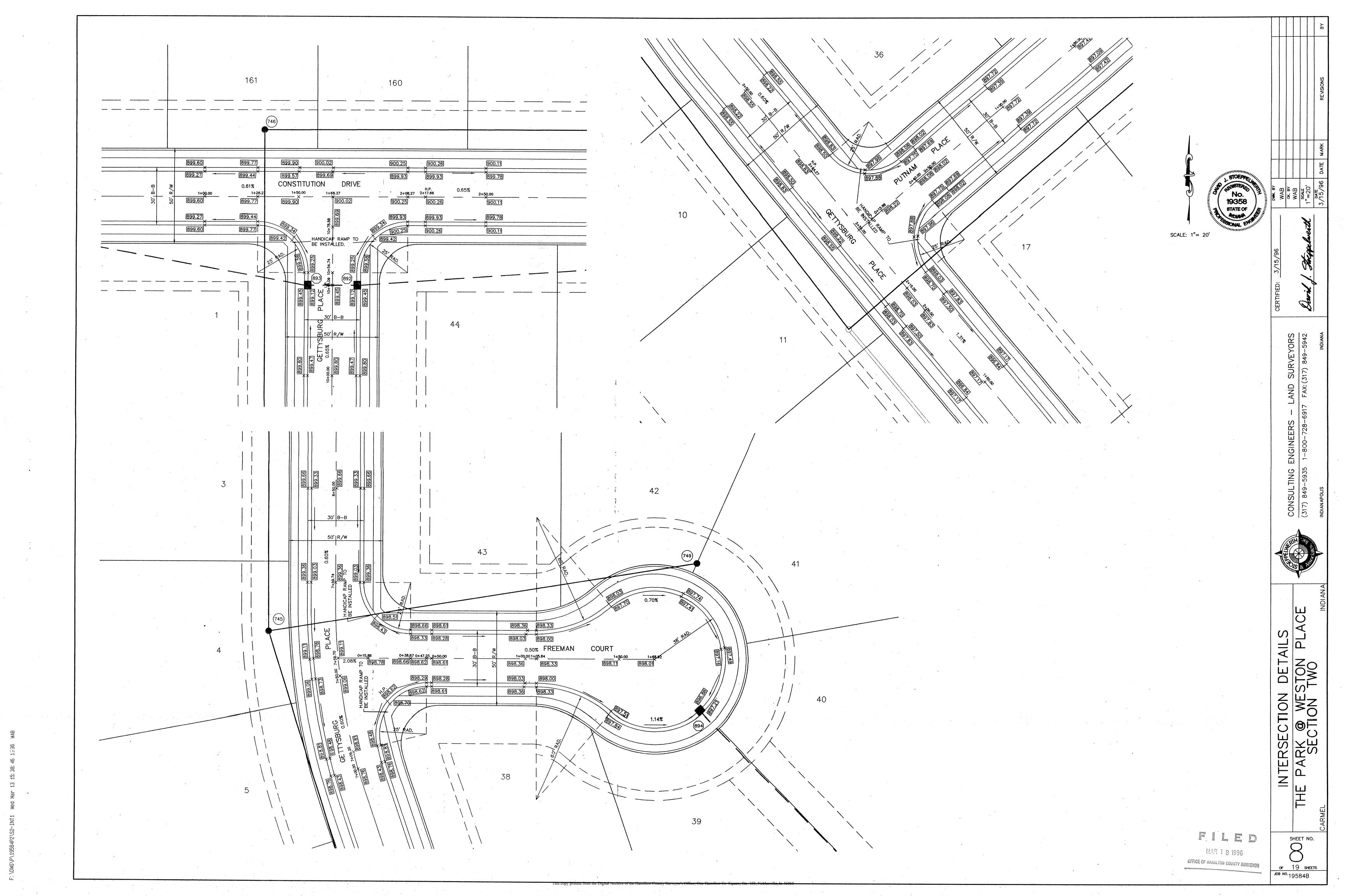
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CONSULTING (317) 849-5935

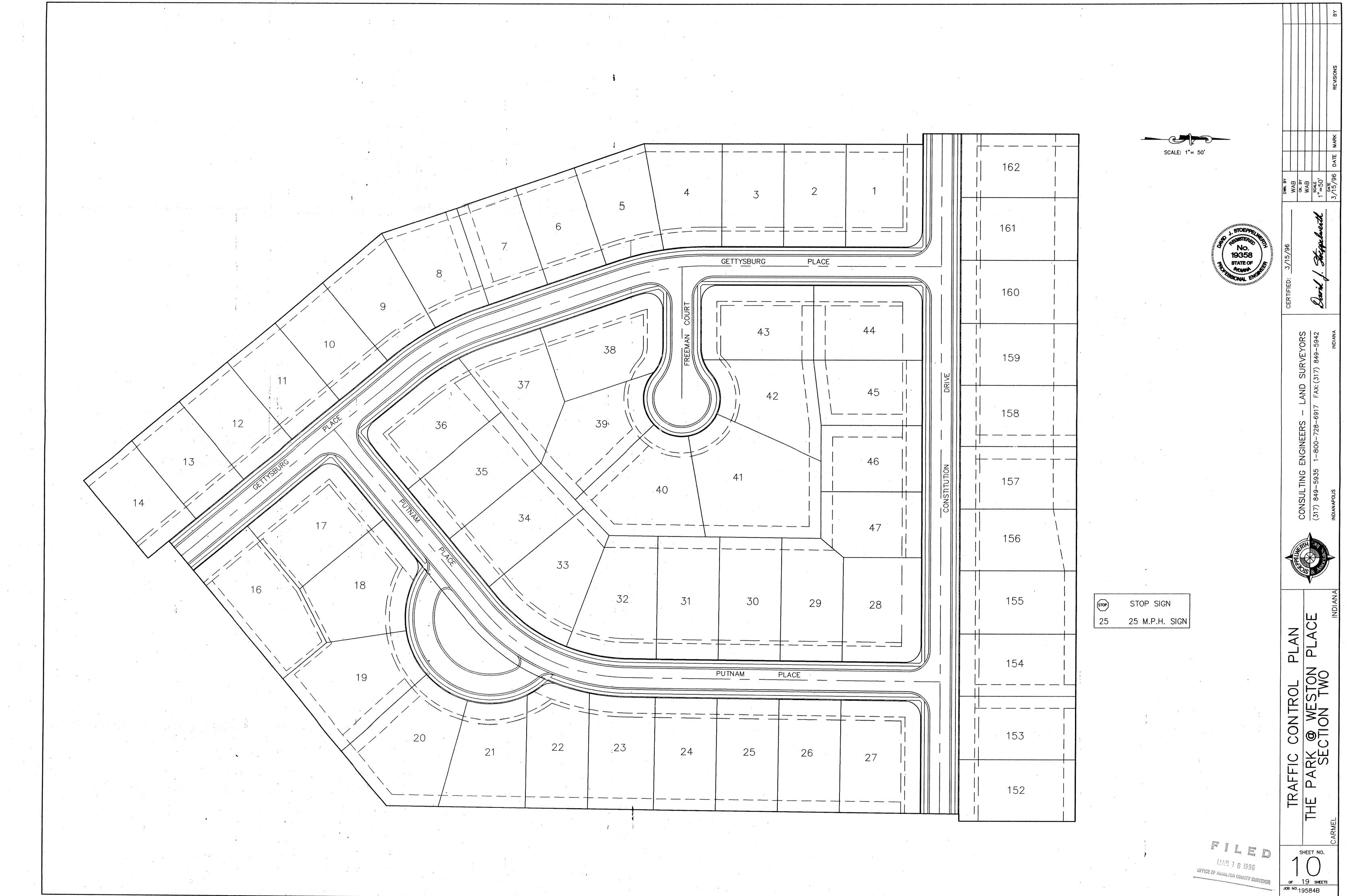
STREET PLAN & PROFILES
HE PARK @ WESTON PLAC
SECTION TWO

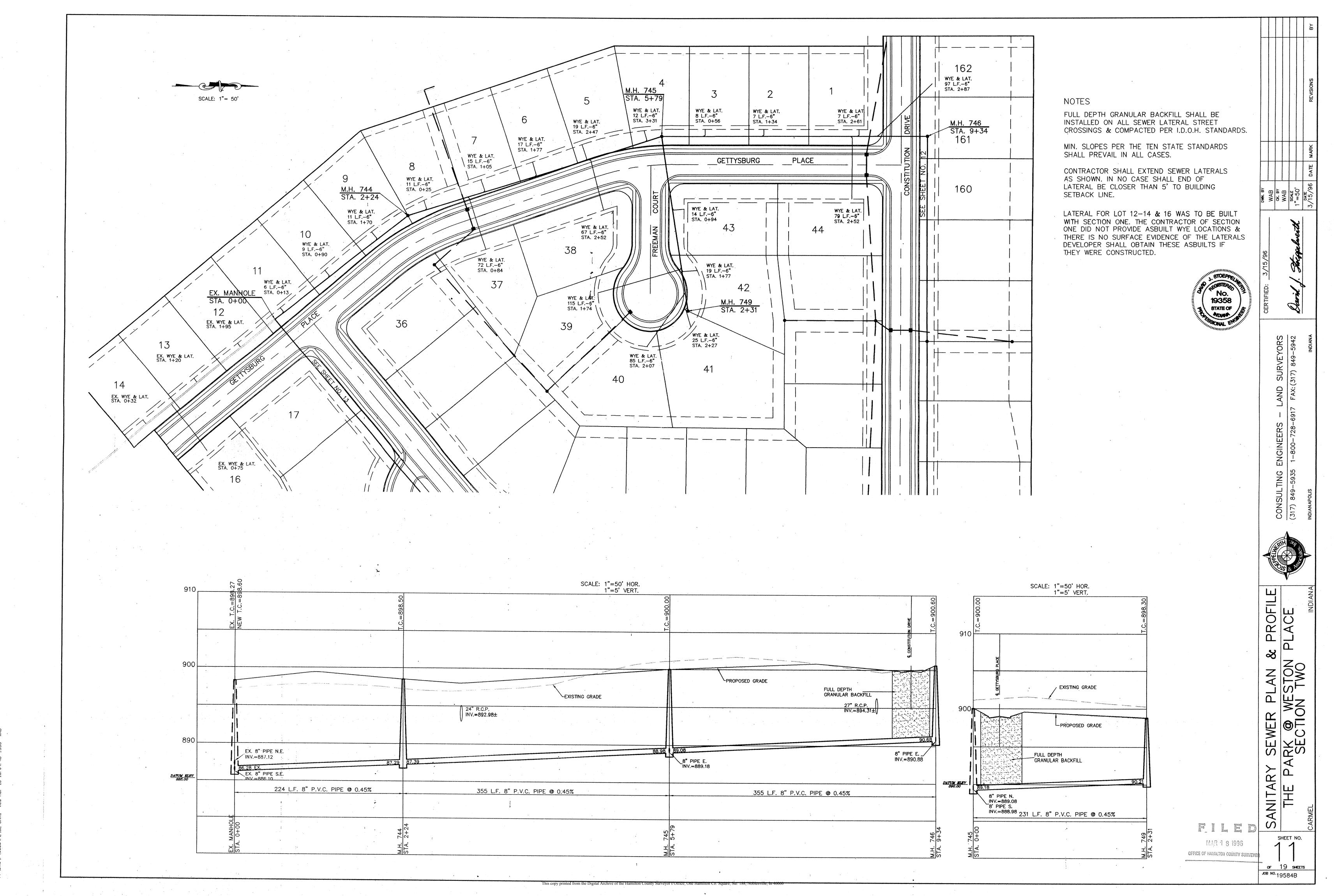
SHEET NO. OF 19 SHEETS <sup>JOB NO.</sup>19584B

OFFICE OF HAMILTON COUNTY SURVEYOR



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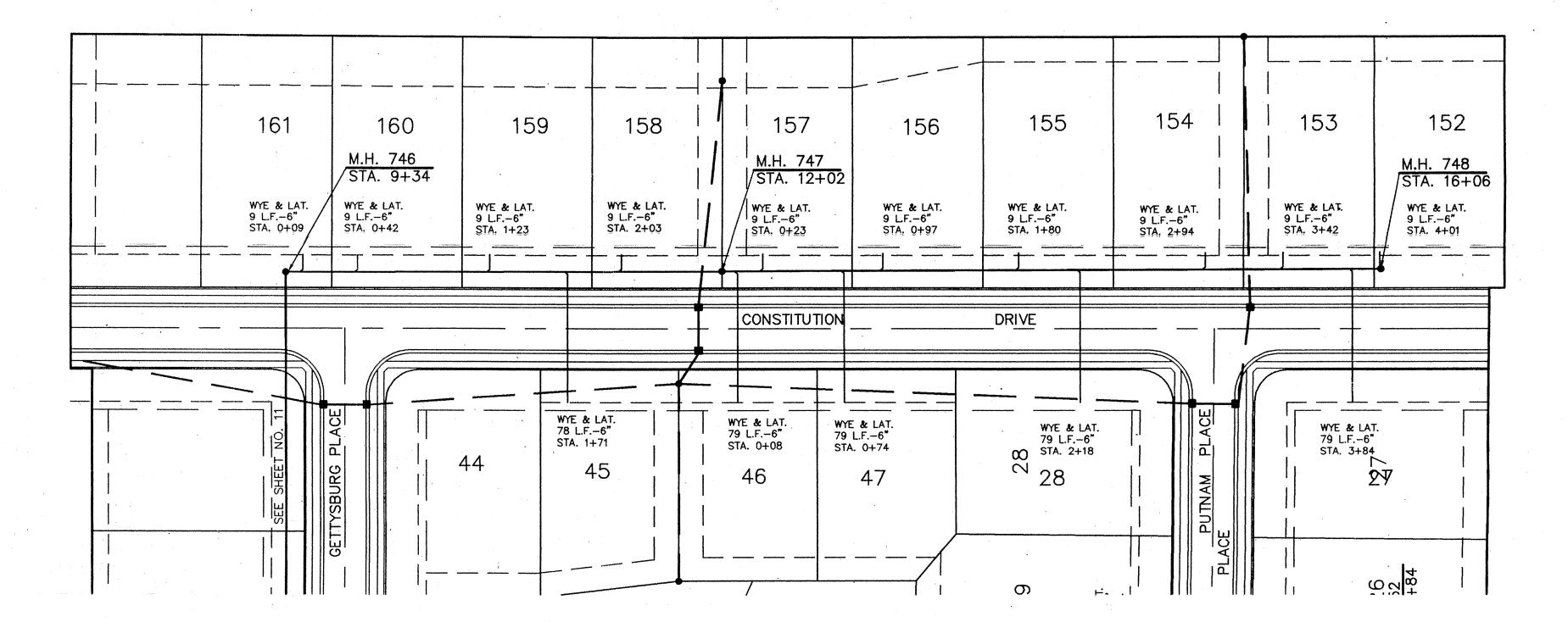


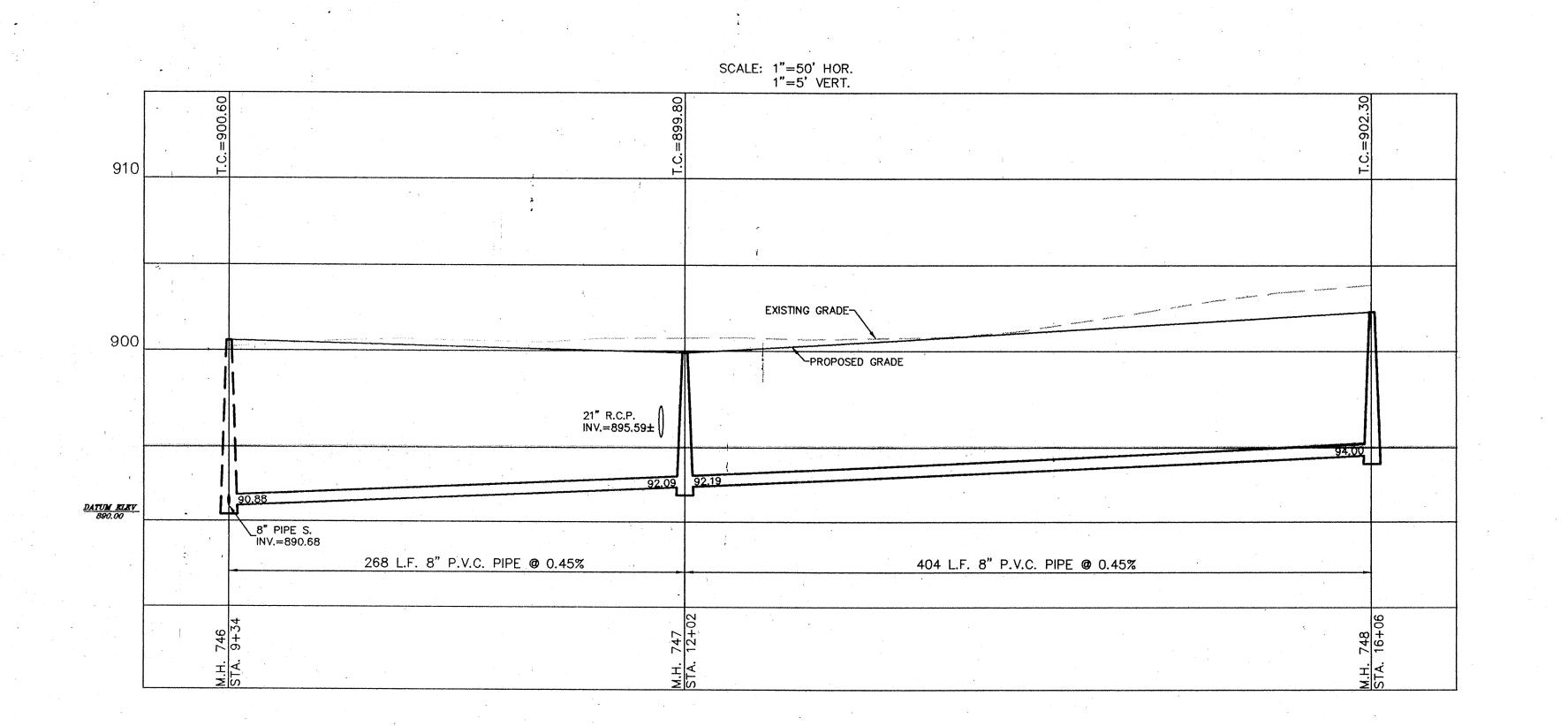
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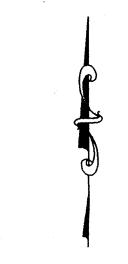
FULL DEPTH GRANULAR BACKFILL SHALL BE INSTALLED ON ALL SEWER LATERAL STREET CROSSINGS & COMPACTED PER I.D.O.H. STANDARDS.

MIN. SLOPES PER THE TEN STATE STANDARDS SHALL PREVAIL IN ALL CASES.

CONTRACTOR SHALL EXTEND SEWER LATERALS AS SHOWN. IN NO CASE SHALL END OF LATERAL BE CLOSER THAN 5' TO BUILDING SETBACK LINE.







SCALE: 1"= 50'



CERTII LAND SURVEYORS 17 FAX: (317) 849-5942

CONSULTING ENGINEERS - (317) 849-5935 1-800-728-69

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V PLACE

SECTION TWO

SANITARY SEWER PL THE PARK @ WES SECTION

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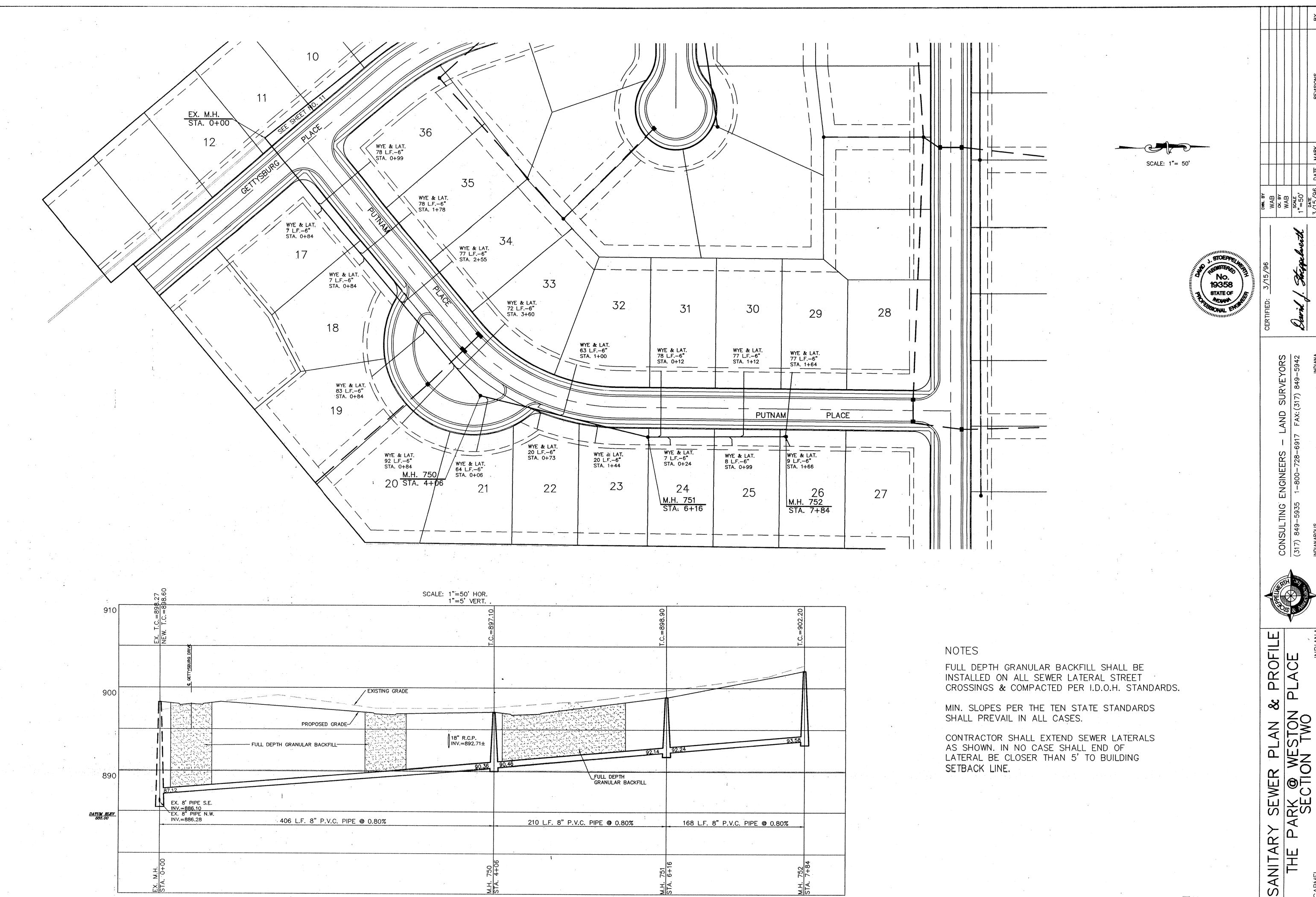
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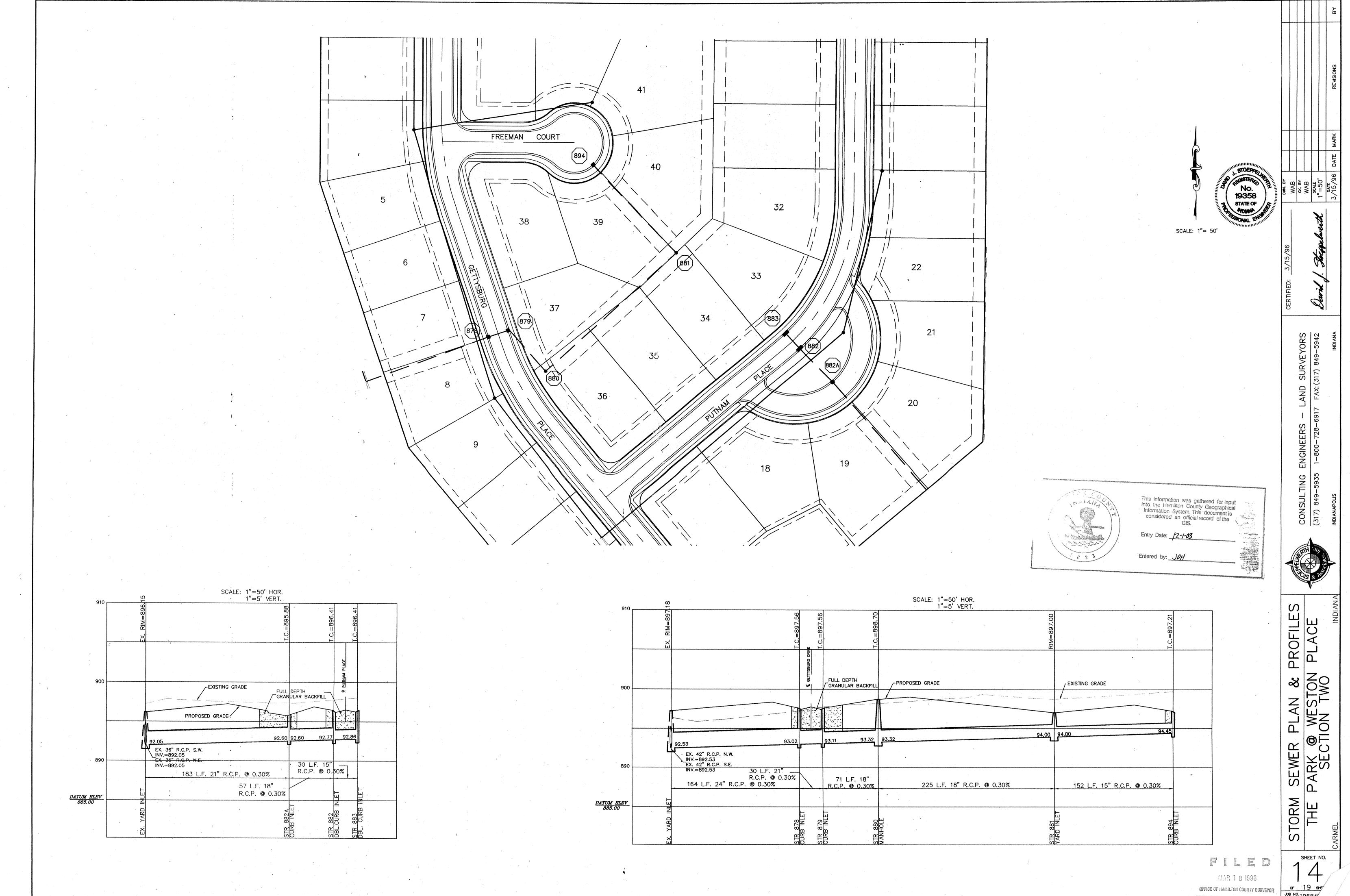
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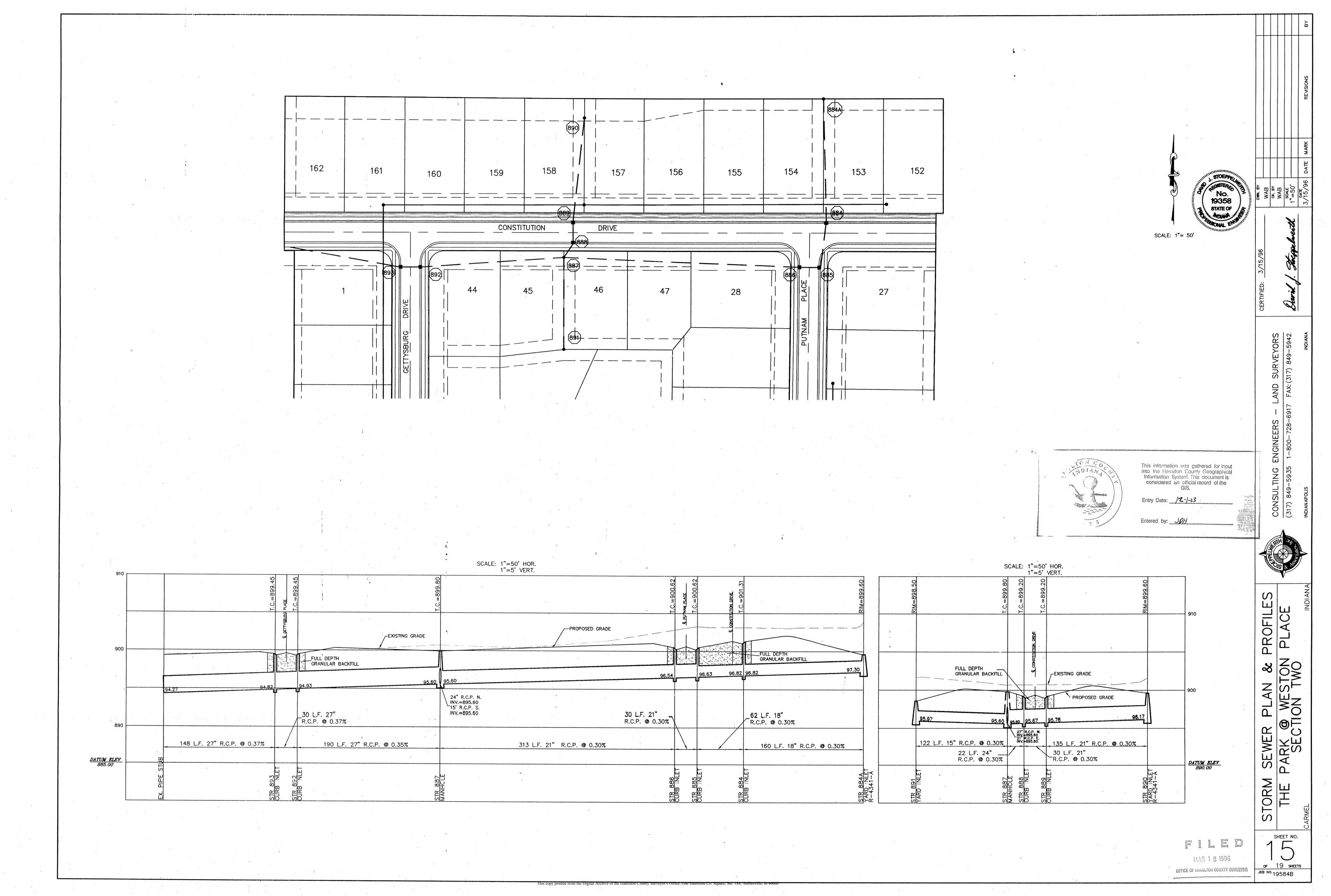


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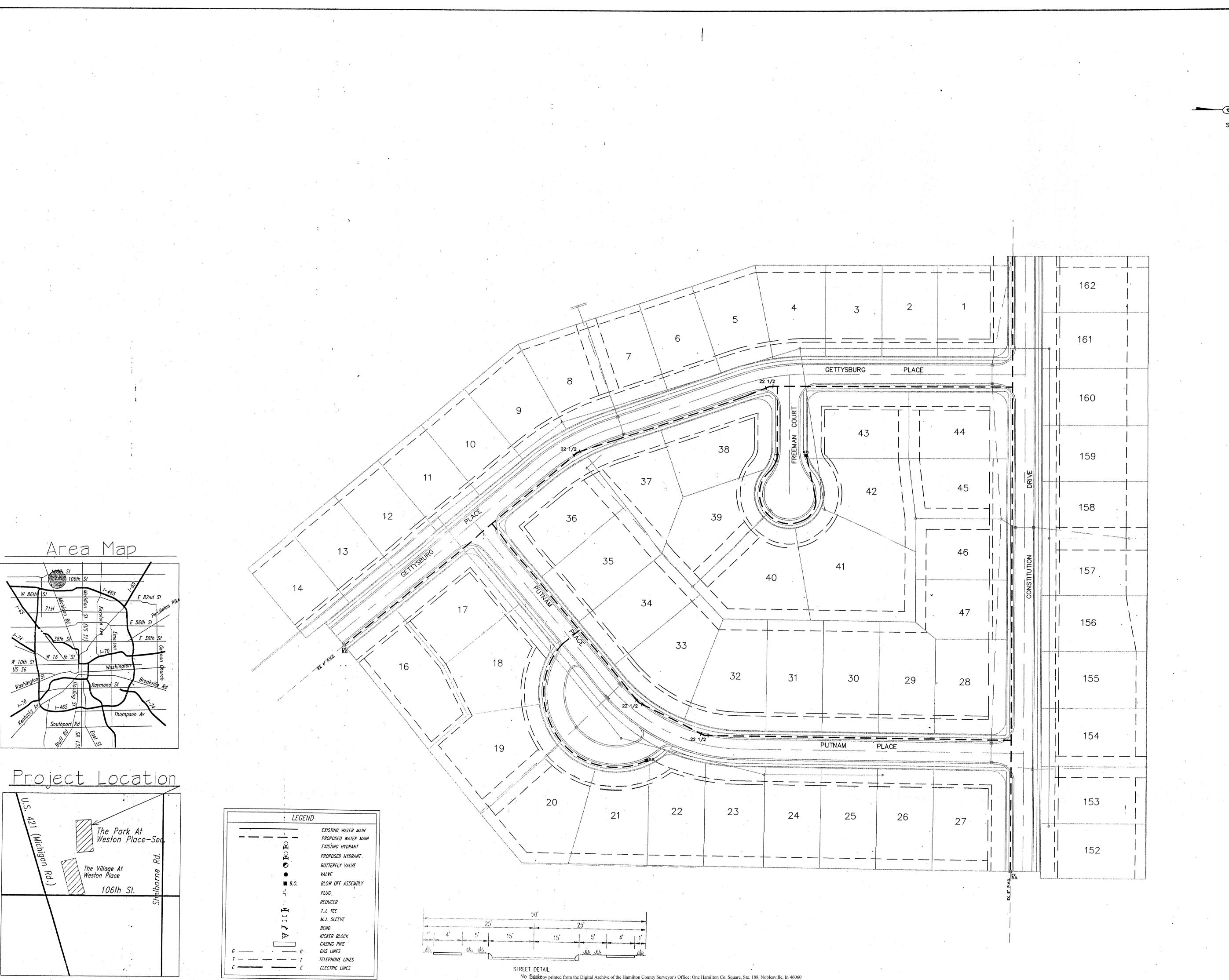
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PLAN PLACE WATER DISTRIBUTION
THE PARK @ WESTON
SECTION TWO

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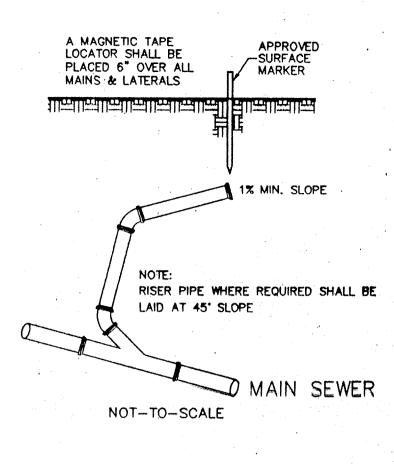
MAR 1 8 1996 OFFICE OF HAMILTON COUNTY SURVEYOR

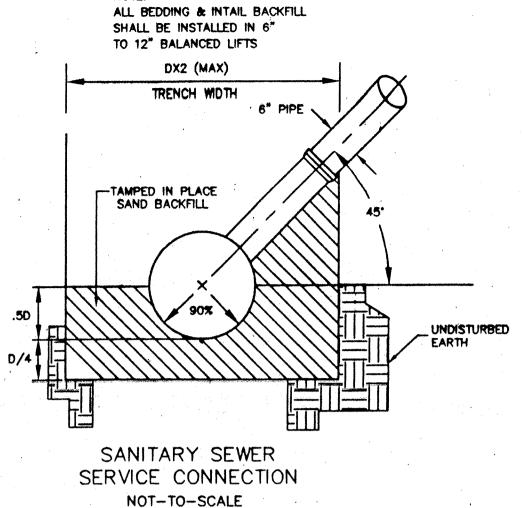
#### 'SANITARY SEWER SPECIFICATIONS

- Standard specifications of the Clay Waste District and Indiana Department of Highways shall apply for all work and materials. Pipe shall be installed in accordance with Section
- Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (S.D.R. 35) and ASTM 2321. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic having a cell classification of 12454B.
- PVC sewer fittings shall conform to the requirements of ASTM D-3034-89 specifications. Fittings in sizes through 8" shall be molded in one piece with elastomeric joints and minimum socket depths as specified in sections 6.2 and 7.3.2. Fittings 10" and larger shall be molded or fabricated in accordance with section 7.11 with manufacturers standard pipe bells and gaskets. Wall thickness of fittings shall be SDR 26 as defined in section 7.4.1 of the specifications. Gaskets for elastomeric joints shall be molded with a minimum cross-sectional area of 0.20 square inches and conform to ASTM F-477. specification. Fittings shall be manufactured by Harco or equal.
- All sanitary manholes shall be "precast concrete" manholes in accordance with ASTM C-478 and Section 720. O-Rings shall conform to C-443. Kent Seal or equivalent shall also be applied to all joints and between riser rings and castings. Manhole step spacing shall be no more than 16-inches.
- Butyl rubber coating shall be applied around each manhole joint from 6-inches above to 6 inches below each joint. The appropriate primer shall be applied prior to applying the rubber coating. Inside joints to be filled with precoat plug material.
- The casting elevations are set by plan. However, the castings are to 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 establish grade. Maximum height of adjusting rings shall be 12-inches.
- Backfill around all structures and all cuts under paved areas with granular material. Trenches opening within 5-feet of pave roadways shall be backfilled with granular material in accordance with Section 211. Backfill under sidewalks shall be granular, unless the walks are constructed a minimum of 6 months after backfill has been in-place.
- 8. The Contractor shall be responsible for verifying that all state highways, city and county permits have been obtained by the developer prior to start of construction.
- The Contractor shall be required to furnish the developer's 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.
- 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 NCPI Standard Method, and shall be witnessed by an Engineer and representative of the Clay Waste District.
- Deflection tests shall be performed on all flexible\* pipe after the final backful has been in-place at least 30 days. No pipe shall exceed a vertical deflection of 5 percent deflection test results. (\*The following are considered non-flexible pipes: concrete pipe, ductile iron pipe and cast iron pipe.) The deflection test shall be performed with a ninepoint mandrel. Proving rings shall be available.
- All mandrel testing shall be observed by a Professional Engineer for certification and a representative of the Clay Waste District.
- 13. The ends of laterals are to be plugged tight with a braced plastic disc or cap capable of withstanding a low pressure air test without leakage.
- 14. Bedding for flexible pipe shall be No. 8 crushed stone from 6-inches below the pipe to 12-inches above the pipe. Bedding for rigid pipe shall be No. 8 crushed stone from 6inches below the pipe to the spring line of the pipe and from this point to 12-inches above shall be fill sand or equivalent. Manholes shall be placed on no less than 6-inches of No. 8 crushed stone bedding.
- Water and sewer line crossings and separations shall be in accordance with Ten States' Standards.
- 16. Trench shall be opened sufficiently ahead of pipe laying to reveal obstructions, and shall be property protected and/or barricaded when left unattended
- No Water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet. Any pipe entering existing sewers shall be plugged with mechanical screw type, braced plugged until such time as all tests on the sewers have been completed and the lines have passed all punch lists.
- 18. All sewer laterals installed by the mainline Contractor shall be bedded the same as the main line sewer.
- 19. Forty-eight (48) hours notice shall be given to the Clay Regional Waste District prior to the start of sewer construction. Also, 48-hours notice shall be given prior to any testing
- Manhole castings shall be stamped "SANITARY SEWER" (Neenah Casting R 1642 or equal) and be self-sealing type. Waterproof castings shall be Neenah R-1916-F1 and stamped "Sanitary Sewer".
- 21. The minimum slope for sewer acceptance by the Clay Township Regional Waste District

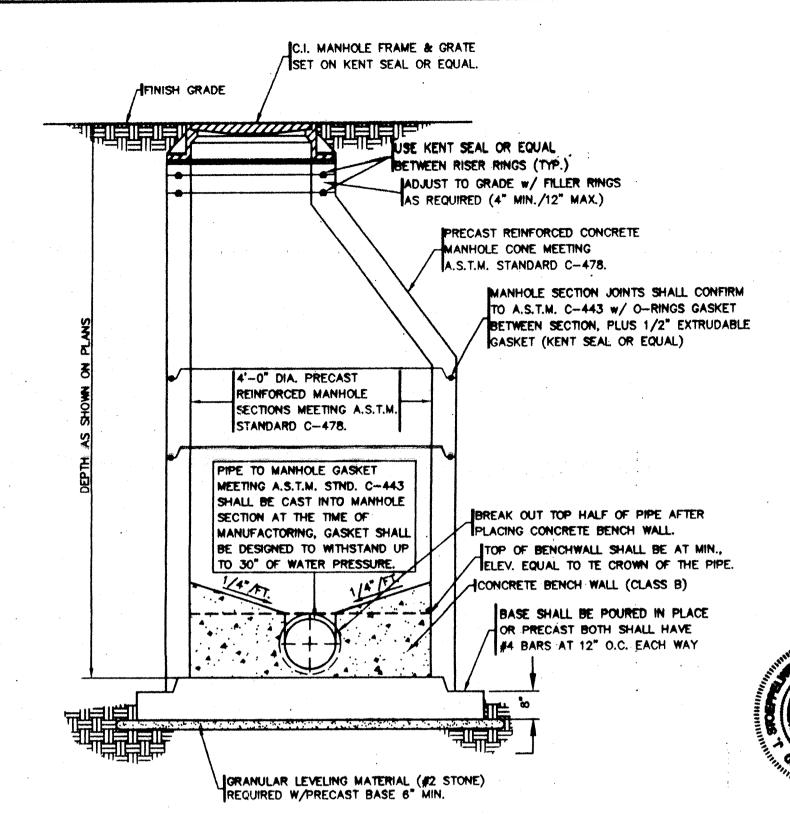
Circ of Dina	Minimum Constructed Sl
Size of Pipe 8-inch	0.40%
10 inch	0.28%
12 inch	0.22%
15 inch	0.15%
18 inch	0.12%

- 22. The Contractor shall provide measurements of the slope of the sewer for each manhole section as construction progresses. Such measurements shall be certified by a Registered Land Surveyor or Engineer and be available on-site for observation by the District's Inspector. No more than three manhole sections can be constructed in advance of such measurements.
- 23. In the event the Contractor does not meet the minimum slopes, the sewer section and any other affected sewer sections shall be reconstructed to meet such minimum slopes.

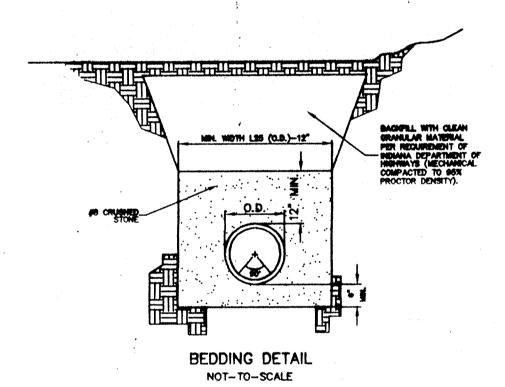




SANITARY SEWER SERVICE CONNECTION NOT-TO-SCALE



PRECAST REINFORCED CONCRETE MANHOLE FOR SANITARY SEWER NOT-TO-SCALE



RIGID PIPE BEDDING DETAIL

NOT-TO-SCALE

PRECAST REINFORCED CONC. MANHOLE W/DROP PIPE FOR SANITARY SEWER

FILED MAR 1 8 1996

OFFICE OF HAMILTON COUNTY SURVEYOR OF 19 SHEETS 0F 19584B

DETAILS

TRUCTION

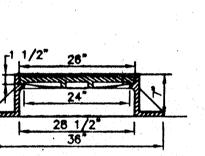
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ARK @ WES

DISTANCE BETWEEN PIPES CONCRETE CRADLE NOT-TO-SCALE

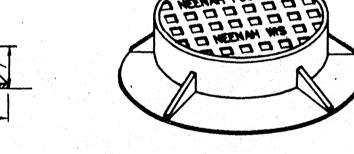
C.I. MANHOLE FRAME & COVER

SET ON KENT SEAL OR EQUAL



USE KENT SEAL OR EQUAL

BETWEEN RISER RINGS (TYP.)



SANITARY MANHOLE CASTING NEENAH R-1642 (OR EQUAL) SELF SEALING WITH CONCEALED PICK HOLES

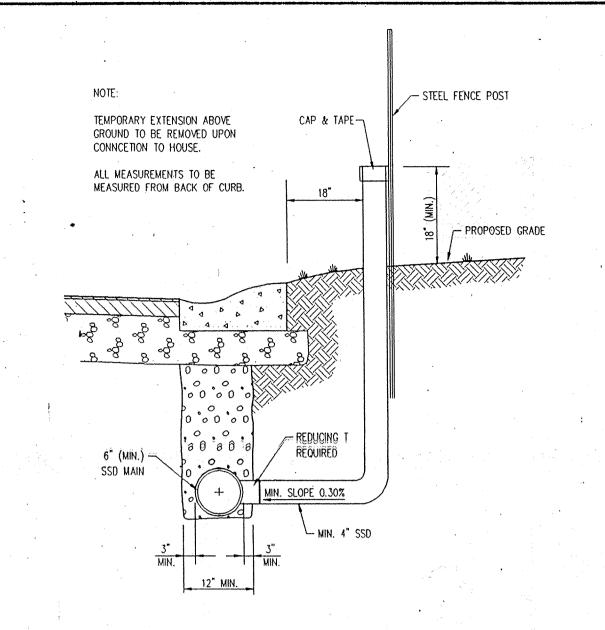
NOT-TO-SCALE

ADJUST TO GRADE W/ FILLER RINGS AS REQUIRED (MAX. 12") TAR COAT EXTERIOR PRECAST REINFORCED CONC. MANHOLE CONE MEETING ASTM STANDARD C-478 CAST ALUM. OR FIBERGLASS MANHOLE SECTION JOINTS SHALL HAVE "O" RING GASKETS -16" O.C. STAGGERED. SECTION 4'-0" DIA. PRECAST REINFORCED P.V.C. MANHOLE SECTIONS MEETING A.S.T.M. STANDARD C-478 - SUPPORT EVERY 2'-0" MIN. PIPE TO MANHOLE GASKET MEETING ASTM STND, C-443 SHALL BE CAST INTO MANHOLE SECTION AT TIME TOP OF BENCH WALL SHALL BE AT MIN. ELEV. TO THE — CROWN OF THE PIPE. (AS SHOWN) - CONC. ENCASEMENT SHALL BE DESIGNED TO WITHSTAND UP TO 30 PSI CONCRETE BENCH WALL OF WATER PRESSURE. BASE SHALL BE POURED IN PLACE OR PRECAST BOTH SHALL HAVE #4 BARS AT

#### Material Specifications:

GENERAL NOTES

- Reinforced Concrete Pipe (RCP) shall conform to ASTM C76-70, Class III latest revision, with joints conforming to ASTM C-443 latest revision.
- Corrugated Metal Pipe (CMP) shall be standard helical pipe with a minimum thickness of 0.05 inches. CMP shall only be used to extend existing CMP to the nearest proposed structure.
- All manholes and inlets shall be precast concrete conforming to ASTM C-478 latest revision.
- Castings shall conform to ASTM-48 latest revision.
- 2. Subsurface drains shall be 6-inches in diameter located directly below the pavement/eurb joint and shall run continuously at a minimum 0.20% slope along both sides of the street and shall be connected only into storm sewer structures.
- There shall be a subsurface drain connection provided for each lot.





HAMILTON COUNTY SURVEYORS OFFICE

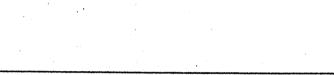
# ALL STRUCTURES GREATER THAN THREE FEET IN DEPTH MUST BE ACCESSIBLE AND HAVE STEPS. THE FIRST STEP FROM TOP OF CASTING TO BE THEN 24" MAX., THEN 16" Not recommended for bicycle traffic. For safety standards see pages 88 to 93.

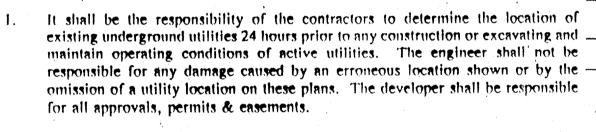
COMPLETELY SEAL CASTING BEARING SURFACE WITH 31 MIXTURE OF SAND AND PORTLAND CEMENT.

CONCRETE

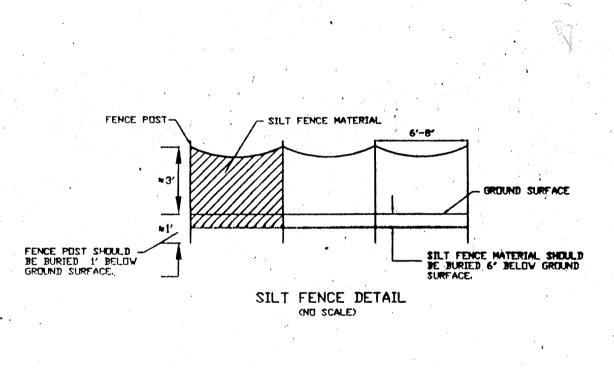
VARIES



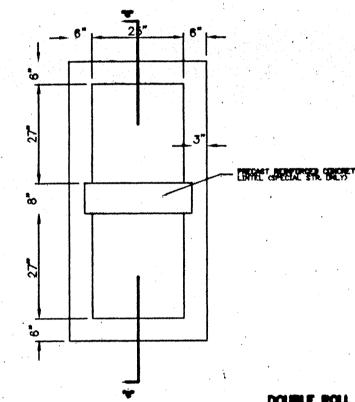


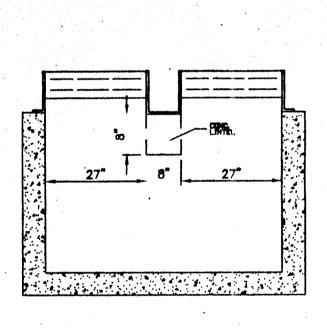


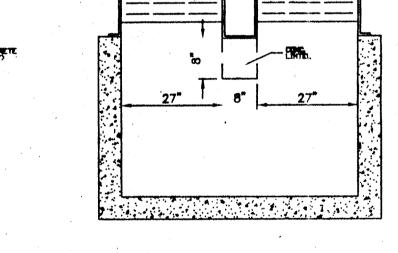
- Construction of private driveways is not included in this project
- The contractor shall, at the direction of the developer, endeavor to save and protect all trees of value and worth which do not impair construction of improvements as designed. In the event cut or fill exceeds 0.5 foot over the root area, the developer shall be consulted with respect to protective measures to be taken, if any, to preserve such trees.
- 4. Remove topsoil to a depth determined by the soils report from all street rights-ofway and building pad areas. Topsoil shall be stored at a location designated by the engineer.
- The casting elevations are set by plan. However, the castings are to 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 establish grade. Maximum height of adjusting rings shall be 12-inches.
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- Water and sewer line crossings and separations shall be in accordance with Ten States' Standards.

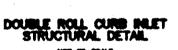


STANDARD PLAN

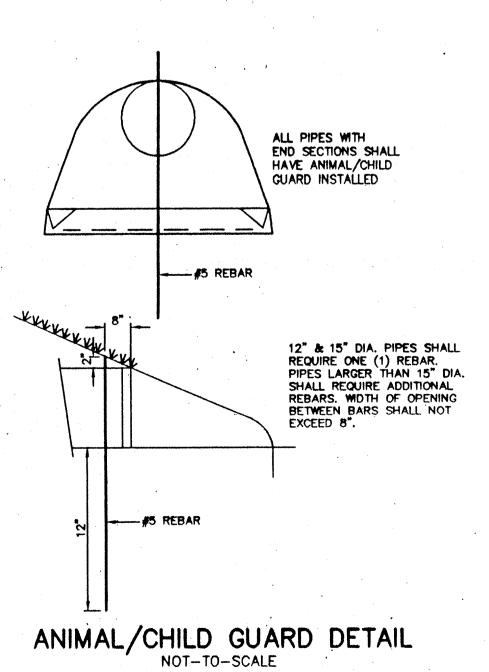








TOP VIEW





ADJUST TO GRADE W/ FILLER THEN 24" MAX., THEN 16" RINGS AS REQUIRED (MAX. 12") FINISH GRADE PRECAST REINFORCED CONC. MANHOLE CONE MEETING ASTM STANDARD C-478 MANHOLE SECTION JOINTS SHALL HAVE "O" RING GASKETS CAST ALUM. OR FIBERGLASS MANHOLE STEPS SET AT 16" O.C. STAGGERED. ALL LIFT HOLES ARE TO BE GROUTED SHUT. CONCRETE BENCH WALL (CLASS "B") BASE SHALL BE SHALL HAVE #4 BARS AT 12 O.C. EACH WAY GRANULAR LEVELING MATERIAL # REQUIRED FOR PRECAST BASE PRECAST REINFORCED CONC. MANHOLE FOR STORM SEWER NOT-TO-SCALE

USE KENT SEAL OR EQUAL

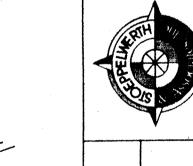
BETWEEN RISER RINGS (TYP.)

C.I. MANHOLE FRAME & COVER

SET ON KENT SEAL OR EQUAL

Machined Horizontol Vertical Bearing STORM MANHOLE DETAIL R-1772-C

TYPICAL SWALE DETAIL

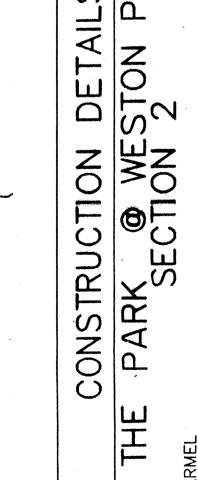


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ALL STRUCTURES GREATER THAN THREE FEET IN DEPTH MUST BE ACCESSIBLE AND

HAVE STEPS. THE FIRST STEP

FROM TOP OF CASTING TO BE



DITCH GRATE CASTING SETTING DETAIL

MAR 18

NEENAH R-4342 STOOL TYPE DITCH GRATE

NOT-TO-SCALE

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RIP-RAP DETAIL

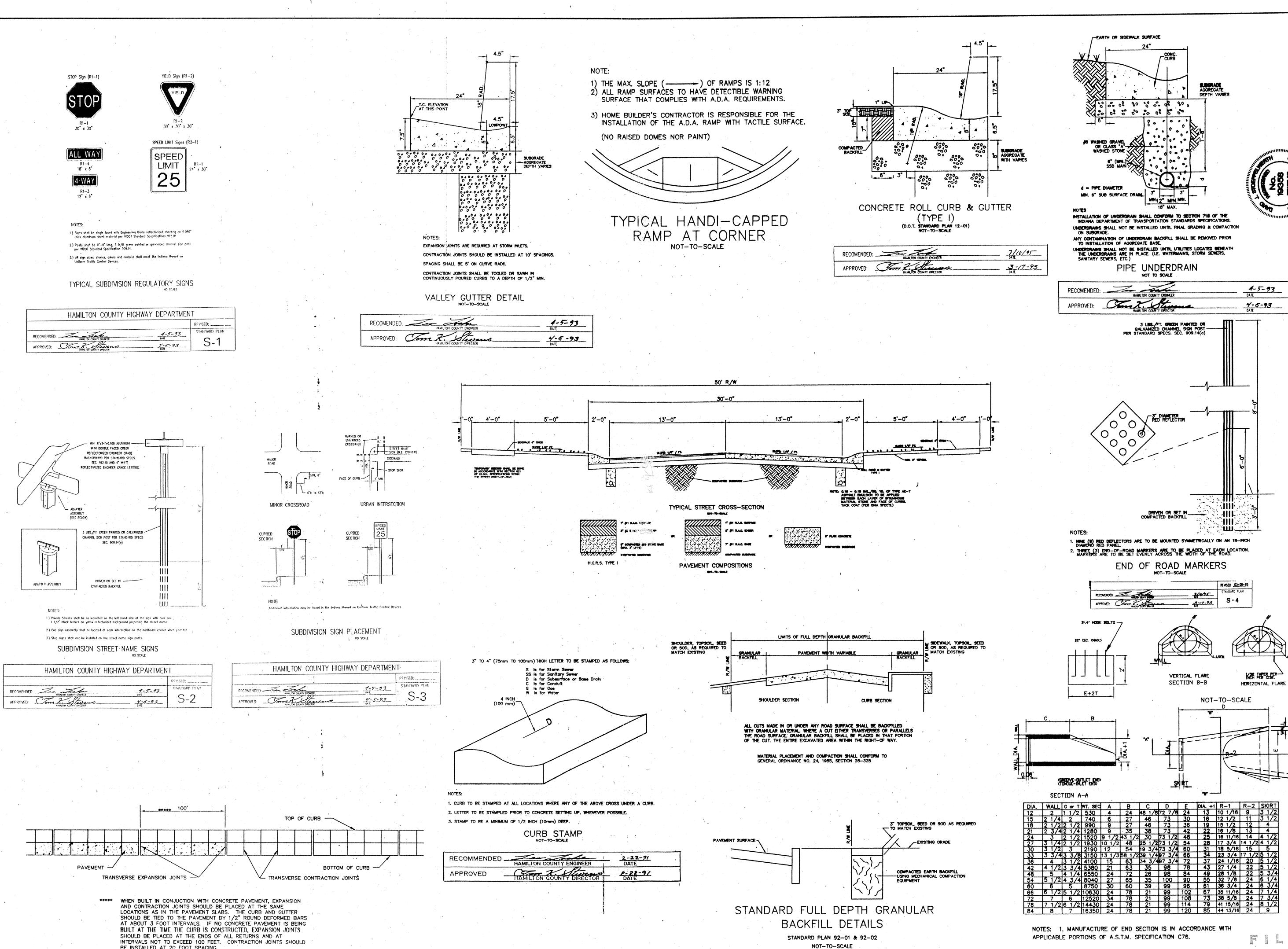
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ALL STRUCTURES GREATER THAN THREE FEET IN DEPTH MUST BE ACCESSIBLE AND

HAVE STEPS. THE FIRST STEP FROM TOP OF CASTING TO BE THEN 24" MAX., THEN 16"

NOT-- TO - SCALE

OFFICE OF HAMILTON COUNTY SURGEYOR 9 SHEETS JOB NO. -19584B



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BE INSTALLED AT 20 FOOT SPACING. CURB JOINT DETAIL

PRECAST CONCRETE END SECTION DETAIL

FILED OFFICE OF HAMILTON COUNTY SURVEYOR JOB NO.

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