

**Drain:** BUCKHORN DRAIN **Drain #:** 271  
**Improvement/Arm:** BUCKHORN # - SECTION 2  
**Operator:** JDH **Date:** 11-3-03  
**Drain Classification:** Urban/Rural **Year Installed:** 1994

### GIS Drain Input Checklist

- Pull Source Documents for Scanning JRA 11-3
- Digitize & Attribute Tile Drains N/A
- Digitize & Attribute Storm Drains JRA 11-5
- Digitize & Attribute SSD JRA 11-5
- Digitize & Attribute Open Ditch N/A
- Stamp Plans JRA 11-5
- Sum drain lengths & Validate JRA 11-6
- Enter Improvements into Posse JRA 11-6
- Enter Drain Age into Posse Done ✓ s/m
- Sum drain length for Watershed in Posse Done ✓ s/m
- Check Database entries for errors JRA 11-6

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

Drain-Improvement: BUCKHORN DRAIN - SECTION 1

Drain Type:	Size:	Length (WORKING REAR AS BUILTS)	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
SSD	6"	14,965'	13,494'	-1,471'		
RCP	12"	1053'	1053'	∅		
	15"	484'	484'	∅		
	18"	1,211'	1,211'	∅		
	21"	682'	682'	∅		
	24"	197'	197'	∅		
	27"	266'	266'	∅		
	30"	616'	616'	∅		
	36"	437'	437'	∅		
CMP	8"	40'	40'	∅		

Sum: 19,951'    18,480'    -1,471'

Final Report: \_\_\_\_\_

Comments:

SURVEYOR'S REPORT SHOWS 14,965' OF 6" SSD.

AS BUILTS SHOW 13,494' OF 6" SSD.

SURVEYOR'S FINAL REPORT SHOWS INCORRECT LENGTH OF 19,723' FOR TOTAL LENGTH.



SURVEYOR'S OFFICE

# Hamilton County

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

Noblesville, Indiana 46060-2230

November 30, 1994

TO: Hamilton County Drainage Board

RE: Buckhorn Drain

Attached is a petition, non-enforcement request, plans, calculations, quantity summary, and assessment roll for the Buckhorn 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	14965 feet	21"	RCP	1372 feet
12"	RCP	1064 feet	24"	RCP	197 feet
15"	RCP	302 feet	27"	RCP	266 feet
18"	RCP	190 feet	30"	RCP	616 feet
8"	CMP	40 feet	36"	RCP	437 feet
14x23	ERCP	30 feet			

The total length of the drain will be 19,971 feet.

The retention pond (lake) located in the common areas is not to be considered part of the regulated drain. Only the inlet and outlet will be maintained as part of the regulated drain. The maintenance of the pond (lake) will be the responsibility of the Homeowners Association. The Board will however, retain jurisdiction for ensuring the storage volume for which the lake was designed will be retained. Thereby, allowing no fill or easement encroachments.

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 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 follows: Rear of Lots 1-3, 6-8, 44-46, Between Lots 26 and 17 & 18, Rear Lots 30, South side of Lots 17, 27, and 28, North side Lot 59, between Lots 39 and 37.

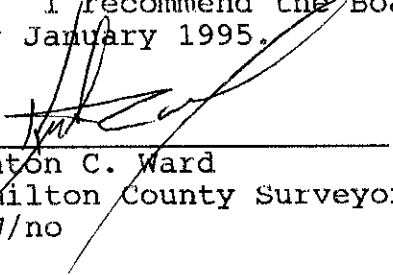
I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I also believe that no damages will result to landowners by the construction of this drain. I recommend a maintenance assessment of \$30.00 per lot, \$5.00 per acre for roadways, with a \$30.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$ 1966.50.

Parcels assessed for this drain may be assessed for the Osborn-Collins or Williams Creek Drain at sometime in the future. Lots 1-5 and 55 & 46 assessed for this drain will also be assessed for the O.F. Henley Drain.

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 Buckhorn as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for January 1995.

  
\_\_\_\_\_  
Kenton C. Ward  
Hamilton County Surveyor  
KCW/no



STANDBY LETTER OF CREDIT

Irrevocable Letter of Credit No. 1082

Date: October 6, 1994

BENEFICIARY

Hamilton County Commissioners  
Hamilton County Courthouse  
Noblesville, IN 46060

FOR ACCOUNT OF

Williams Creek Development Co.,  
606 Station Drive  
Carmel, IN 46032

Dear Commissioners:

We hereby establish our Irrevocable Letter of Credit No. 1082 in your favor, for the account indicated above, for a sum or sums not exceeding an aggregate amount of \$215,480.00 (Two Hundred Fifteen Thousand Four Hundred Eighty & 00/100 US Dollars).

Funds are available by your draft(s) at First Federal Savings Bank of Kokomo 200 W. Mulberry Kokomo, Indiana 46901, upon the presentation by the Board of Public Works acting under its authority, a letter signed by the Board of Public Works enumerating any and all improvements and costs thereof not completed as required in Buckhorn Subdivision for the construction or installation of storm sewers and erosion control.

Drafts are to be accompanied by:

1. The original of this letter of Credit No. 1082.
2. Beneficiary's signed statement stating that Williams Creek Development Co., Inc. has failed to complete the construction or installation of the storm sewers and erosion control in Buckhorn Subdivision.

All drafts drawn under this Letter of Credit are to be endorsed hereon and shall bear the clause; "Drawn under First Federal Savings Bank of Kokomo of Kokomo Indiana Letter of Credit No. 1082 and must be drawn and presented at this office on or before October 6, 1995.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this Letter of Credit will be duly honored upon proper presentation.

Except as other wise expressly stated herein, this credit is subject to the Uniform Customers and Practice for Documentary Credits (1993 Revision), International Chamber of Commerce, Publication No. 500.

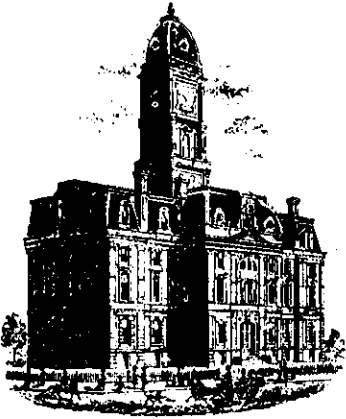
Very truly yours,

A handwritten signature in dark ink, appearing to read 'Duane A. Davis'.

Duane A. Davis

Vice President

Commercial/Consumer Loans



SURVEYOR'S OFFICE  
**Hamilton County**

Kenton C. Ward, Surveyor

Suite 146

776-8495

One Hamilton County Square

Noblesville, Indiana 46060-2230

October 5, 1995

TO: Hamilton County Drainage Board

RE: Buckhorn Drain  
Buckhorn Sec. 1

Attached are as-builts, certificate of completion & compliance, and other information for Buckhorn 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 November 30, 1994. The changes are as follows: STR 145 to 144 consists of 12" RCP that was shortened from 139' feet to 132' feet. STR 144 to 143 consists of 12" RCP which was shortened from 103' feet to 100' feet. STR 143 to 142, consists of 12" RCP which was shortened from 61' to 60' feet. STR 142 to 141 consists of 30' feet of 14x23 RCP which was replaced with 26' feet of 15" RCP. STR 141 to 140 consisted of 18" RCP at 161' feet. It was changed to 15" RCP at 156' feet. There were three typing errors on the original report. The correct 18" RCP length is 1372' feet. The 21" RCP total should have been 682' feet and the 6" SSD is regulated across lot 58 not 59.

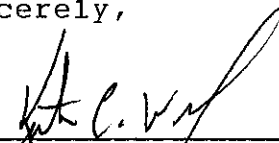
The length of the drain due to the changes described above is now 19,723 feet.

The non-enforcement was approved by the Board at its meeting on January 23, 1995.

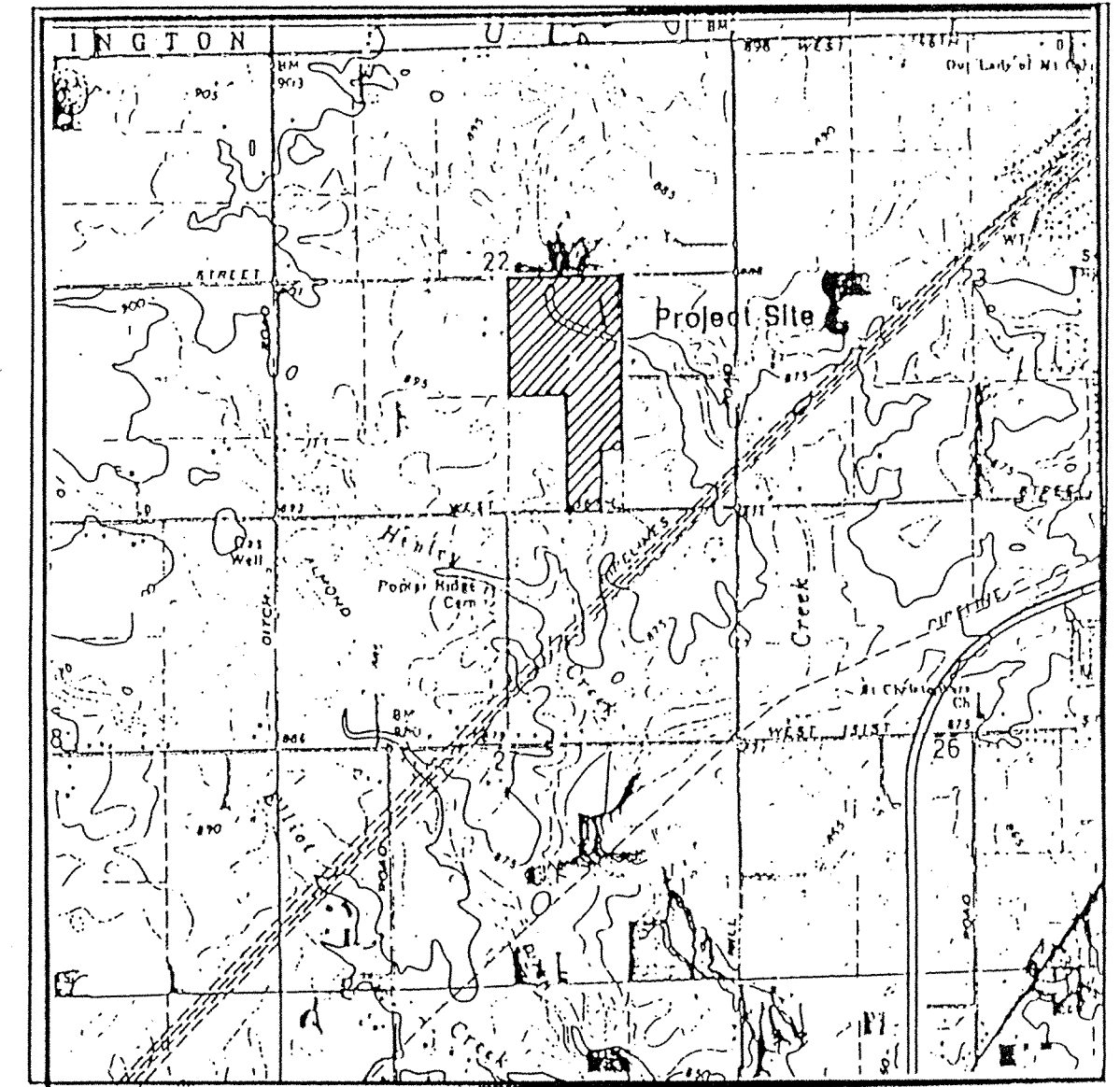
The bond or letter of credit from First Federal Savings Bank, number 1082, dated October 6, 1994, in the amount of \$215,480, has been released.

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

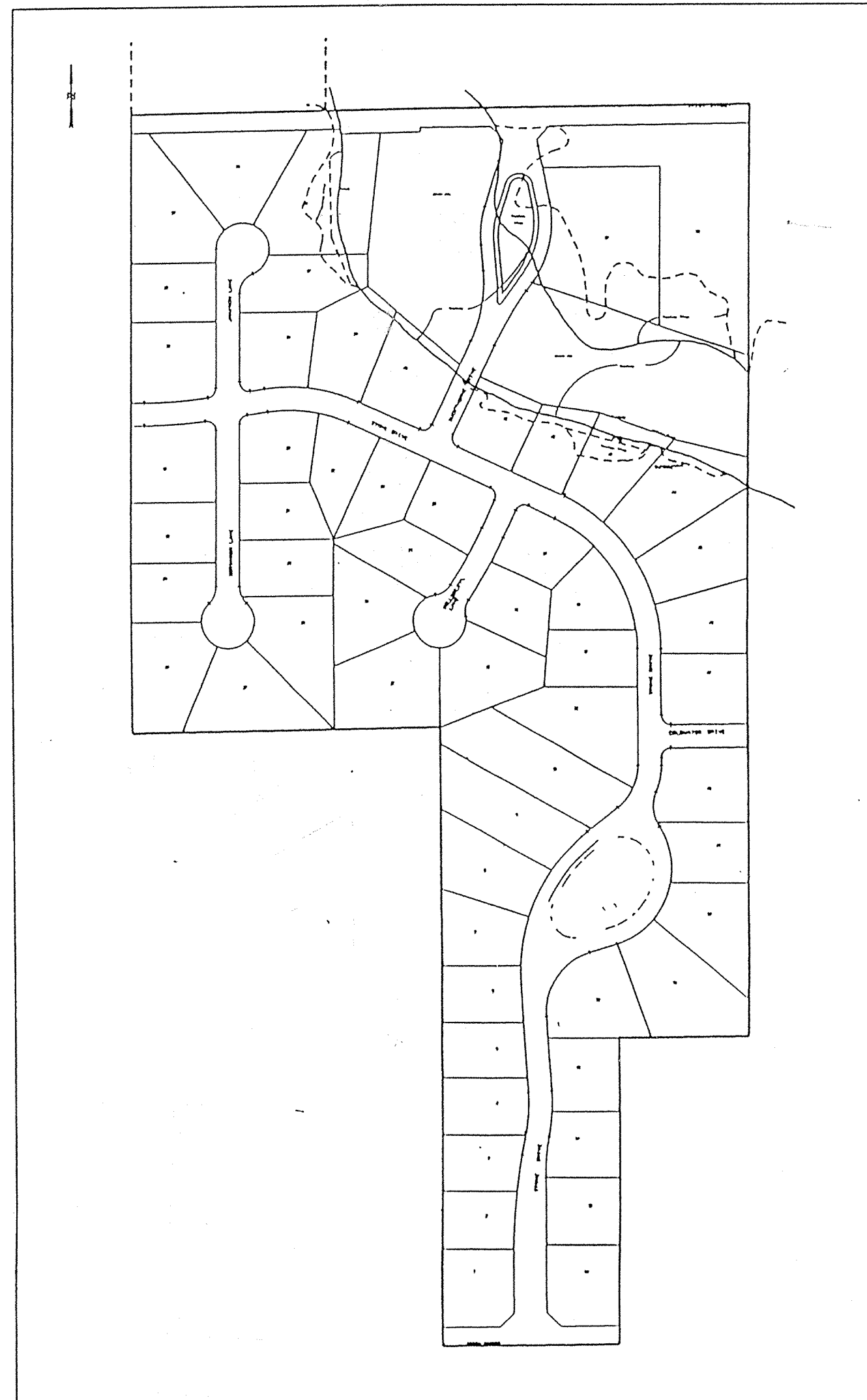
Sincerely,

  
Kenton C. Ward  
Hamilton County Surveyor

# CONSTRUCTION PLANS FOR BUCK HORN



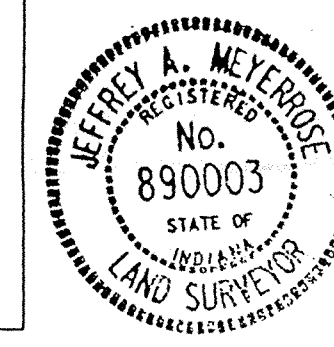
VICINITY MAP



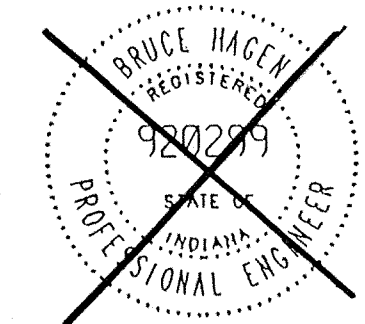
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SPECIFICATIONS
3-6	SITE UTILITY & GRADING PLANS
7-11	STREET PLAN & PROFILES
12-15	STORM PLAN & PROFILES
16-20	SANITARY PLAN & PROFILES
21	CUL-DE-SAC & INTERSECTION DETAILS
22-23	ENTRANCE DETAILS
24-27	EROSION CONTROL PLANS
28-29	DETAILS

SHEET NO.	REVISIONS
17	6/16/93 REVISED SANITARY INVERTS
18,19	6/16/93 REVISED SANITARY SLOPES
2	6/16/93 REVISED SANITARY SPECIFICATIONS
17	7/19/93 REVISED INV. STR. #216
17	7/29/93 ADD PROFILE 216 - 618
2,5,6 & 29	1/18/94 SEE SHEETS
17,18,20,28	2/15/94 See Sheets
15	2/23/94 See Sheet
4,19	3/27/94 See Sheets
3,4,23,29	3/9/94 See Sheets
3,4,23A	3/14/94 See Sheets

**Sanitary and Storm  
AS-BUILTS**



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of MAY, 1994  
 Jeffrey A. Meyerrose  
 Registered Land Surveyor No. 890003-IN



CERTIFIED THIS 21<sup>ST</sup> DAY OF January, 1994  
 Bruce Hagen  
 Registered Professional Engineer No. 920299 - Indiana

PLANS PREPARED FOR  
 WILLIAMS CREEK DEVELOPMENT CO. INC.  
 606 STATION DRIVE  
 CARMEL, IN 46032  
 (317) 844-3975

**As-Builts Information**

**Underdrain Laterals**  
 Added Info. 2-7-95

PROJECT DATA  
 ACRES : 55.659  
 LOTS : 58  
 LOTS/ACRE : 1.04

NOTES:  
 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.

ANY ALTERATIONS TO THESE PLANS NOT AUTHORIZED BY MSE ENGINEERING AND NOT IN ACCORDANCE WITH THE PLANS AND RECORDS ON FILE AT MSE ENGINEERING OFFICES SHALL RELIEVE MSE ENGINEERING OF RESPONSIBILITY FOR OVERALL ACCURACY OF PLANS.

PREPARED BY:  
**MSE Engineering**  
 MSE CORPORATION  
 941 NORTH MERIDIAN  
 INDIANAPOLIS, IN 46204  
 317 634-1000  
 317 634-3576 FAX

**FILED**  
 FEB 10 1995  
 OFFICE OF HAMILTON COUNTY SURVEYOR  
 JOB NO. 114-0497  
 SHEET 1 OF 29

STORM STRUCTURE DATA TABLE

SITE WORK GENERAL NOTES AND SPECIFICATIONS

- I. GENERAL CONDITIONS
  - 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 Contractor's responsibility to determine the exact location of all existing utilities in the vicinity of the construction area prior to starting construction.
  - C. The Contractor shall be responsible for notification and coordination of all construction with the 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 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 performed in conjunction with this project be installed according to these specifications. The Engineer will be required to certify that certain portions of this project were completed as per the construction plans. Therefore it is necessary to obtain approval and acceptance by the local, county, and state agencies that the construction was completed in compliance with these plans and specifications.
  - F. The designation A.S.T.M. shall refer to the American Society of Testing and Materials standards. The latest revision of listed A.S.T.M. standards shall prevail.
  - G. The designation I.N.D.O.T. shall refer to the Indiana Department of Transportation Standard Specifications dated 1988 and all subsequent revisions.
- II. CLEARING AND GRUBBING
  - A. Clearing and grubbing shall consist of cutting, removal and satisfactory disposal of all trees, down timber, brush, projecting roots, stumps, rubbish, boulders, broken concrete, fencing (as designated), and other material on the project site and within the boundary as shown on the Construction Documents and/or as designated by "construction limits".
  - B. Special care shall be taken to insure that trees to be left remaining in the project area shall not receive limb, bark or root injuries. When such injuries occur, all rough edges of severed areas shall be removed in accordance with accepted horticultural practice and the scars coated thoroughly with an asphaltum base tree paint.
  - C. All "unsuitable material" from clearing operations stated in Item II-A shall be removed to disposal areas off the project site; unless a Bury Pit is utilized. Bury Pits paved 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.
  - D. Materials shall not be disposed of by burning unless approved by the local Fire Marshal.
- III. TREE REMOVAL AND PROTECTION
  - A. Trees shall be removed from the project site only in areas occupied by roadway and surface areas in accordance with specifications of the City of Carmel.
  - 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 with the placement of storm or sanitary sewers.
  - 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 root 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 of protection of tops, trunks and roots of existing trees on the project site which are to remain. Existing trees exposed to potential damage shall be boxed, fenced or otherwise protected before any adjacent work is started. Earth, construction 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.
  - F. See note H-10.
- IV. STRIPPING OF TOPSOIL
  - A. The Contractor shall verify that all topsoil has been removed in the areas to be occupied by roads, walks and designated building areas. Topsoil shall be removed to a depth of 6 inches or deeper, if necessary, to assure the removal of vegetation 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. Topsoil storage areas shall be approved in writing by the Owner.
  - D. Topsoil shall be reasonably free from subsoil debris and stones.
- V. GRADING
  - A. The Contractor shall perform all grading operations to bring subgrades, after final compaction, to the grades required for site improvement.
  - B. Subgrade shall be proofrolled with appropriate equipment and all spongy and otherwise unsuitable material shall be removed and replaced with suitable material.
  - C. Subgrade for streets shall be prepared in compliance with the Ham. Co. Highway Dept. Subgrade for streets shall be compacted to 100% of standard proctor in the upper 6" of depth. Depths of embankment below the upper 6" shall be compacted to 95% of standard proctor. See Pavement Construction Section XI.
- D. 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.
- E. All fill material in areas outside of building and pavement areas shall be compacted lightly and protected from erosion. Areas of building construction shall not have unsuitable material placed in that location, and fill shall be compacted in accordance with the Soils Engineer's report (minimum of 95% standard proctor).

- VI. SANITARY SEWER CONSTRUCTION
  1. 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 715.
  2. Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (5-D.P. 35) or ASTM 2121. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic having a cell classification of 12454B.
  3. PVC sewer fittings shall conform to the requirements of ASTM D-3034 (5-D.P. 35) or ASTM 2121. 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. socket depths as specified in sections 6.2 and 7.3.2. fittings 10" and larger shall be manufactured standard pipe accordance with section 7.4.1 of the specifications. Gaskets shall be SOR bells and gaskets. Wall thickness of fittings shall be 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.
  4. 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.
  5. 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 precast plug material.
  6. 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 actual existing ground. New manhole ring and cover shall be installed to establish grade. Maximum height of adjusting rings shall be 12-inches.
  7. Backfill around all structures and all cuts under paved areas with granular material. Trenches excavated within 5-feet of paved 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.
  9. 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.
  10. All sanitary sewer lines upon completion will be required to pass an infiltration water 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 a representative of the Clay Waste District.
  11. Deflection tests shall be performed on all flexible pipe after the final backfill 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 pipe: concrete pipe, ductile iron pipe, and cast iron pipe.) The deflection test shall be performed with a nine-point mandrel. Proving rings shall be available.
  12. 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 plate, 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 6-inches 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.
  15. 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 properly protected and/or barricaded when left unattended.
  17. No water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump system during construction. Contractor shall utilize a pump system 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, 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 marked by the mainline Contractor.
  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 done on the sewer.
  20. Manhole castings shall be stamped "SANITARY SEWER" (Neenah Casting R 1642 or equal) and be self-sealing. All sanitary 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 are:
 

Size of Pipe	Minimum Constructed Slope
8-inch	0.20%
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 Engineer or his representative. 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.

- VII. EROSION PROTECTION DURING CONSTRUCTION
  - A. The Contractor shall provide adequate erosion protection measures during construction.
    1. Rip-rap at locations designated on the plans.
    2. Swales draining through site shall be mulch seeded and Contractor shall be responsible for establishing grass cover.
    3. Construction operations conducted on private or city-owned property shall be neatly finish graded and mulch seeded.
- VIII. STORM SEWER CONNECTION
  - A. Storm sewer structures shall comply with current specifications of the City, County and all agencies with respect to design and quality of construction.
  - B. All storm sewer construction inside public right-of-way, either existing or proposed, shall be in accordance with the Hamilton County specifications. Contractor shall notify the Hamilton County Surveyor forty-eight hours prior to commencement of storm sewer construction.
  - C. Where reinforced concrete pipe is shown on the construction plans, it shall be in accordance with A.S.T.M. C-76 Class III Wall "B", unless otherwise specified on the plans.
  - D. Where corrugated metal pipe is shown on the construction plans, it shall be 16 gauge unless otherwise specified and shall have the connecting bands and seals as specified by the manufacturer. C.M.P. may be either aluminum pipe or zinc coated steel sheets in accordance with A.S.T.M. A-444.
  - E. Manholes, catchbasins, and inlets may be precast concrete or poured in place concrete.
  - F. Precast concrete and steel for manholes and inlets shall be in accordance with A.S.T.M. C-478.
  - G. Castings shall be as shown on the Structure Data Table.
  - H. Granular backfill shall be required for all crossings under pavement areas, per the Hamilton County specifications.
- IX. UTILITIES
  - A. Water Line
    1. See Sanitary Sewers Notes for vertical and horizontal separations (Note VI-1 and 2).
    2. All water lines shall be in accordance with the Standards and Specifications of the Indiana State Board of Health and the Hamilton Western Utilities. Sterilization of water mains shall be in accordance with the Indiana State Board of Health and the Hamilton Western Utilities for procedures and time of treatment.
    3. Pressure tests for the water system shall be done in accordance with manufacturer's recommendations and the Hamilton Western Utilities specifications.
    4. Granular backfill shall be required for all utility crossings under pavement areas. See Section VI-V.
    5. Where private water lines are shown on the contract plans the pipe materials shall meet the Hamilton Western Utilities specifications.
    6. Thrust blocks shall be installed in accordance with the details contained within the plans or the Hamilton Western Utilities standard specifications as applicable.
    7. Felt material not to exceed 3/8 inch thick shall be placed between pipes and concrete thrust blocks.
    8. All valves and appurtenances for domestic and fire protection water mains shall be approved by the Underwriters Laboratories and Factory Mutual for critical use.
  - B. Electric and Telephone
    1. Conduit shall be required for all crossings under pavement areas.
    2. Granular backfill shall be required for all crossings under pavement areas and three feet beyond the edge of the pavement.
    3. Concrete pads for electric and telephone transformers shall be set at the approximate ground grade as shown on the Site Development Grading Plans.
- X. GRANULAR BACKFILL
  - A. Shall be in accordance with I.N.D.O.T. Standard Specifications.
- XI. PAVEMENT CONSTRUCTION
  - A. All pavement construction shall be in accordance with the plans and specifications and conform to the minimum standards of Hamilton County.
  - B. Subgrade shall be prepared in compliance with Section 207.02 of the I.N.D.O.T. 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 and shall conform to Hamilton County specifications.
  - D. Contractor shall notify Hamilton County forty-eight hours prior to commencement of construction within any existing or proposed right-of-way.

Structure No.	Description	Casting Type
100	Concrete End Section	---
101	Manhole Type "B"	R-1772-A
102	Inlet Type "B"	R-3501-N
103	Inlet Type "B"	R-3501-N
104	Inlet Type "A"	R-1772-A
105	Manhole Type "B"	R-4342
106	Manhole Type "B"	R-4342
107	Manhole Type "B"	R-4342
108	Manhole Type "B"	R-3501-N
109	Manhole Type "B"	R-4342
110	Inlet Type "B" Modified	R-3501-N
111	Inlet Type "B" Modified	R-4342
112	Manhole Type "B"	R-4342
113	Manhole Type "B"	R-4342
114	Inlet Type "B"	R-3501-N
115	Inlet Type "B"	R-3501-N
116	Inlet Type "A"	R-1772-A
120	Concrete End Section	---
121	Manhole Type "B"	R-1772-A
122	Manhole Type "B"	R-4342
123	Manhole Type "B"	R-3501-N
124	Inlet Type "B"	R-3501-N
125	Inlet Type "B"	R-1772-A
126	Manhole Type "B"	R-4342
127	Inlet Type "A"	R-3501-N
128	Inlet Type "B"	R-3501-N
129	Inlet Type "A"	R-3501-N
130	Concrete End Section	---
131	Inlet Type "B"	R-3501-N
132	Inlet Type "B"	R-4342
133	Inlet Type "A"	R-4342
140	Concrete End Section	---
141	Inlet Type "B"	R-3501-N
142	Inlet Type "B"	R-3501-N
143	Manhole Type "B"	R-4342
144	Manhole Type "B"	R-4342
145	Manhole Type "B"	R-4342
150	Concrete End Section	---
151	Inlet Type "B"	R-3501-N
152	Inlet Type "A"	R-3501-N
160	Manhole Type "B"	R-1772-A
161	Inlet Type "B"	R-3501-N
162	Inlet Type "B"	R-3501-N
170	Concrete End Section	---
171	Concrete End Section	---
180	Concrete End Section	---
181 - 185	Concrete End Section	---

SANITARY STRUCTURE DATA TABLE

Structure No.	Description	Casting Type
216	Sanitary Manhole by Others	---
217	Sanitary Manhole by Others	---
218	Sanitary Manhole by Others	---
219	Sanitary Manhole by Others	---
601	Manhole Type "C"	R-1642
602	Manhole Type "C"	R-1642
603	Manhole Type "C"	R-1642
604	Manhole Type "C"	R-1642
605	Manhole Type "C"	R-1642
606	Manhole Type "C"	R-1642
607	Manhole Type "C"	R-1642
608	Manhole Type "C"	R-1642
609	Manhole Type "C"	R-1642
610	Manhole Type "C"	R-1642
611	Sanitary Manhole by Others	---
612	Manhole Type "C"	R-1642
613	Manhole Type "C"	R-1642
614	Manhole Type "C"	R-1642
615	Manhole Type "C"	R-1642
616	Manhole Type "C"	R-1642
617	Manhole Type "C"	R-1642
618	Manhole Type "C"	R-1642

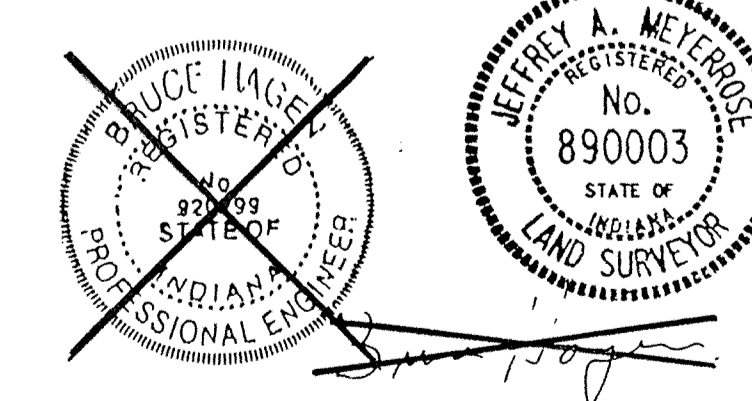
- XVI. REMOVAL OF PAVEMENT, SIDEWALKS, CURBS, ETC.
  - A. Pavement removal shall consist of the removal and satisfactory disposal of bituminous pavement or the total of any combination of base, binder and surface course of any pavement on a rigid base (including the base).
  - B. Prior to performing the work of pavement removal at locations indicated on the plans, or where directed, certain pavement to be removed shall be cured with a power driven concrete saw along designated lines. Sawing shall be such that any portion of the pavement to remain in place will not be damaged. Any portion that is damaged or removed outside the designated lines shall be replaced by the Contractor, at his expense.
- XVII. SEALING CRACKS AND JOINTS IN BITUMINOUS PAVEMENT
  - A. Reflection cracks and joints, both longitudinal and transverse, as well as checked, cracked and alligatored areas shall be sealed using from 0.10 to 0.15 gallon per square yard of AE-90 or AE-150 bituminous material and covering with either No. 14-2 or No. 17 sand. The cracks, joints and alligatored areas shall be cleaned by blowing with compressed air or other suitable means prior to the placing of the bituminous sealing material. The bituminous material shall be allowed to penetrate the cracks and joints to the existing surface and any surplus shall be swept back and forth over the surface to refill the voids. Any excess material shall be swept off the pavement. The sealed surface shall be covered with approximately 5 pounds of sand per square yard.

# Sanitary and Storm AS - BUILTS

As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994

**FILED**

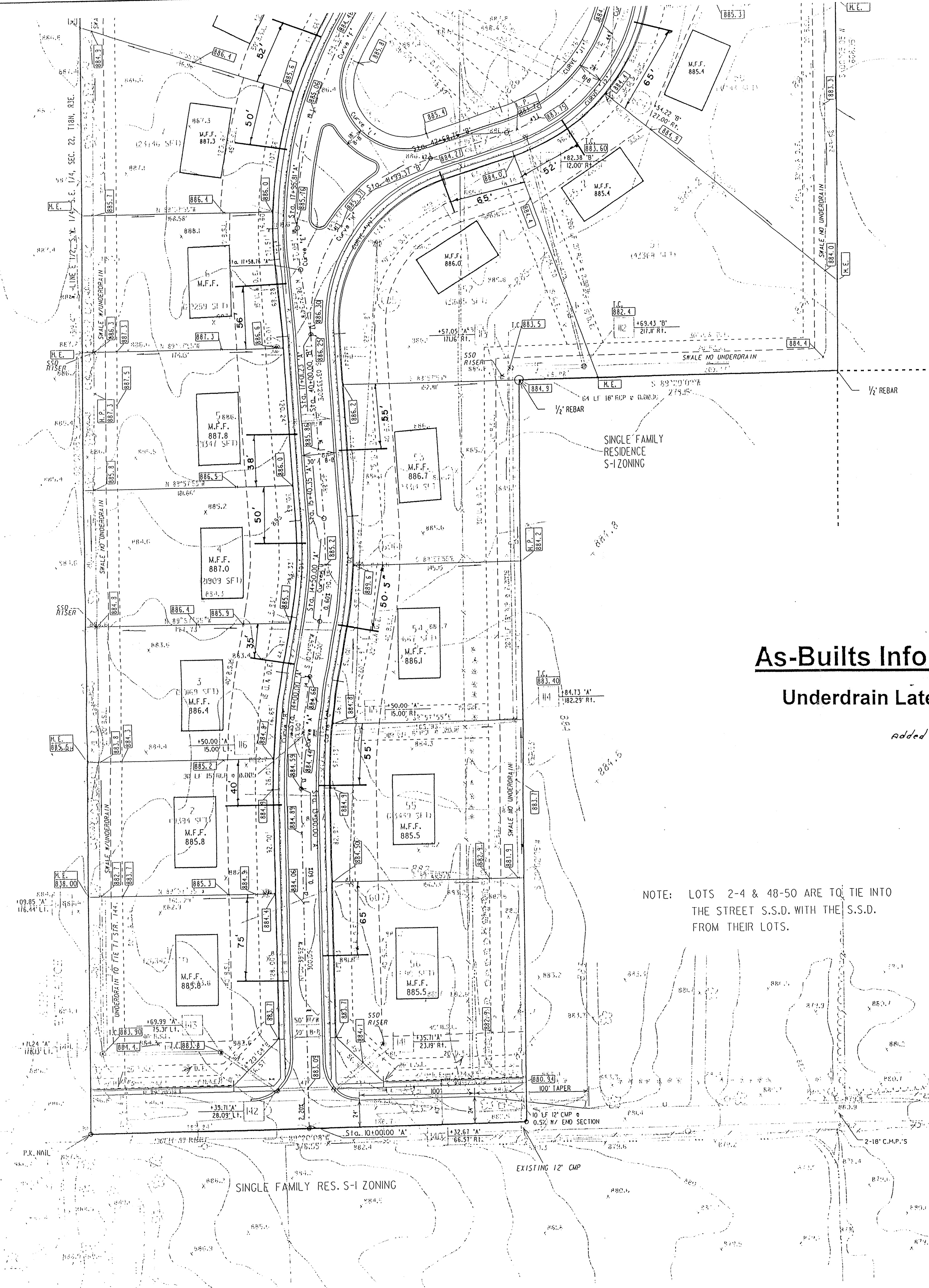
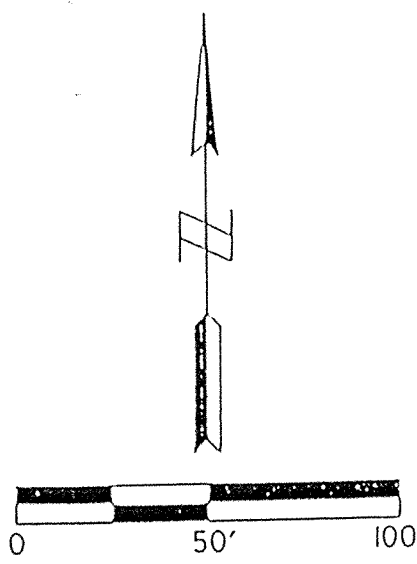
Jeffrey A. Meyers  
Registered Land Surveyor No. 890003-IN  
FOR INFORMATION PURPOSES, ONLY  
OFFICE OF HAMILTON COUNTY SURVEYOR  
FEB 10 1995



Revisions and Dates: 01/16/93 Revised Sanitary Specifications 01/19/93 Add Str 182-185 to Storm Data Table	Designed by: STEPHEN E. BOURGEOIS Professional Engineer	Drawn by: STEPHEN E. BOURGEOIS Professional Engineer	Checked by: STEPHEN E. BOURGEOIS Professional Engineer	Approved by: STEPHEN E. BOURGEOIS Professional Engineer	Date: 02/10/95
<b>MSE</b> Mid States Engineering, Inc. 501 Congressional Blvd., Suite 110 Carm 1, IN 46032 317-843-5080				Title: <h2 style="text-align: center;">SPECIFICATIONS</h2> Scale: Job No.: <u>11-062</u> Date: _____ Sheet No. <u>2</u> of <u>29</u>	

066 No 121-2181





### As-Builts Information

#### Underdrain Laterals

added 2-7-95

NOTE: LOTS 2-4 & 48-50 ARE TO TIE INTO THE STREET S.S.D. WITH THE S.S.D. FROM THEIR LOTS.

BUCK HORN CURVE DATA						
CURVE	DELTA	RADIUS	TANGENT	LENGTH	CHORD	BEARING
A	10°54'49"	525.00	50.15	100.00	99.85	N 04°41'32" E
B	10°54'13"	550.00	52.49	104.67	104.51	S 04°41'14" W
C	10°54'49"	500.00	47.76	95.24	95.09	S 04°41'32" W
D	13°48'16"	375.00	45.39	90.35	90.13	N 03°20'48" E
D1	13°48'16"	350.00	42.37	84.33	84.12	N 03°20'48" E
D2	13°48'16"	400.00	48.42	96.37	96.14	N 03°20'48" E
E	08°29'29"	250.00	18.56	37.05	37.02	S 04°09'49" E
E1	05°47'45"	272.00	13.77	27.51	27.50	S 02°48'57" E
F	51°18'44"	366.91	116.23	328.59	317.72	S 25°44'17" W
F1	27°44'49"	344.91	85.19	167.03	165.40	S 38°46'02" W
F2	51°18'44"	388.91	186.80	348.29	336.77	S 25°44'17" W
G	43°57'08"	150.00	60.53	115.07	112.21	N 22°00'39" E
G1	48°45'28"	110.06	49.88	93.66	90.86	N 30°02'05" E
G2	18°41'19"	202.00	33.42	66.24	65.94	S 09°25'43" W
H	76°09'12"	150.00	117.52	199.37	185.01	N 34°31'16" E
H1	76°09'12"	132.89	104.11	176.62	163.91	S 34°31'16" W
J	118°45'56"	150.00	253.46	310.93	258.18	N 13°12'54" E
J1	70°36'45"	126.00	89.23	155.29	145.64	N 37°18'16" E
J2	104°51'31"	172.00	223.58	314.78	272.65	N 20°10'07" E
K	129°21'27"	67.00	141.60	151.27	121.13	S 62°40'50" E
L	134°31'17"	47.00	112.14	110.35	86.69	S 42°22'00" E
M	51°05'01"	77.00	36.80	68.65	66.40	S 06°43'08" E
N	89°18'04"	20.00	19.76	31.17	28.11	N 44°41'07" E
P	90°41'56"	20.00	20.25	31.66	28.46	N 45°18'53" W
R	65°09'45"	330.00	210.89	375.31	355.41	N 32°32'48" W
R1	65°09'45"	305.00	194.92	346.88	328.48	N 32°32'48" W
R2	65°09'45"	355.00	226.87	403.74	382.33	N 32°32'48" W
S	90°00'00"	20.00	20.00	31.42	28.28	N 69°52'20" E
T	90°00'00"	20.00	20.00	31.42	28.28	N 20°01'40" W
U	12°36'51"	1000.00	110.53	220.16	219.71	S 31°10'45" W
U1	03°48'01"	975.00	32.35	136.16	64.65	N 26°46'20" E
U2	03°09'35"	1025.00	28.27	151.50	56.52	N 26°21'07" E
Y	43°39'22"	48.00	19.23	36.57	35.69	S 11°30'45" W
W	271°17'52"	56.50	-----	267.53	18.99	S 54°40'00" E
X	47°51'20"	48.00	21.35	40.18	39.01	S 57°00'15" W
Y	33°00'00"	330.00	97.75	190.07	181.45	S 81°31'40" E
Y1	33°00'00"	305.00	90.35	175.67	173.25	N 81°31'40" W
Y2	33°00'00"	355.00	105.16	204.47	201.65	N 81°31'40" W
Z	81°53'15"	20.00	17.35	28.58	26.21	N 40°55'42" E
AA	45°41'17"	48.00	20.22	38.28	37.27	S 22°51'34" E
BB	271°22'34"	56.50	-----	267.61	18.94	N 89°59'05" E
CC	45°41'17"	48.00	20.22	38.28	37.27	N 22°49'43" E
DD	97°12'34"	20.00	22.69	33.93	30.01	S 48°37'12" E
EE	08°06'45"	1000.00	70.91	141.59	141.47	S 85°55'42" W
EE1	07°53'35"	975.00	67.26	134.32	134.21	S 86°02'17" W
EE2	07°12'34"	1025.00	64.57	128.97	128.89	S 86°22'48" W
FF	82°06'25"	20.00	17.42	28.66	26.27	N 41°02'17" E
GG	246°35'09"	56.50	-----	243.16	94.45	N 56°42'25" W
HH	66°36'04"	48.00	31.53	55.80	52.71	S 33°11'01" W
JJ	98°06'45"	20.00	23.05	34.25	30.21	N 49°04'18" W
KK	90°00'00"	20.00	20.00	31.42	28.28	N 20°01'40" W
LL	10°42'21"	400.00	37.48	74.74	74.63	S 30°13'31" W
LL1	09°26'29"	716.00	59.13	117.98	117.85	S 30°51'27" W
MM	47°15'10"	200.00	87.49	164.94	160.31	N 11°57'06" E
MM1	47°15'10"	178.00	77.86	146.80	142.67	N 11°57'06" E
MM2	47°00'58"	222.00	96.57	182.17	177.10	N 11°50'00" E
NN	11°00'40"	300.00	28.92	57.65	57.56	S 06°10'09" E
PP	17°23'29"	300.00	45.88	91.06	90.71	S 08°01'56" W
PP1	09°44'40"	278.00	23.70	47.28	47.22	S 11°51'20" W
RR	21°52'06"	200.00	38.64	76.33	75.87	N 05°47'37" E
RR1	21°52'06"	178.00	34.39	67.94	67.53	N 05°47'37" E
RR2	21°52'06"	222.00	42.89	84.73	84.22	N 05°47'37" E
SS	30°00'45"	275.00	73.72	144.05	142.41	N 09°51'51" E
SS1	30°00'45"	290.00	77.74	151.91	150.18	S 09°51'51" W
SS2	04°13'44"	297.00	10.97	21.92	21.92	N 03°01'34" W
TT	151°35'51"	16.69	65.93	44.15	32.35	S 87°28'24" E
UU	90°00'00"	20.00	20.00	31.42	28.28	N 69°52'20" E
VV	76°09'12"	131.00	102.63	174.12	161.58	S 34°31'16" W

LEGEND	
EXISTING	PROPOSED
=====	STORM SEWER
-----	SANITARY SEWER
o	MANHOLE
□	INLET
—	END SECTION
---	STORM STR. NO.
---	SANITARY STR. NO.
---	FLOW ARROW
---	CONTOUR
---	SPOT ELEVATION

**Sanitary and Storm AS-BUILTS**



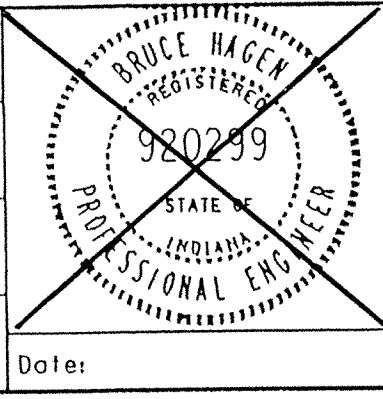
As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of MAY 1994

Jeffrey A. Metter  
Registered Land Surveyor No. 890003-IN

FOR INFORMATION PURPOSES ONLY

Revisions and Dates	
1/18/94	ADD CURVE TABLE AND INV. PIPE NOTE
3/9/94	DELETE ENTRANCE ISLAND
3/14/94	REV PAVEMENT BETWEEN ISLANDS

Designed by:	SOH
Drawn by:	DSC
Checked by:	SOH
Approved by:	
Date:	



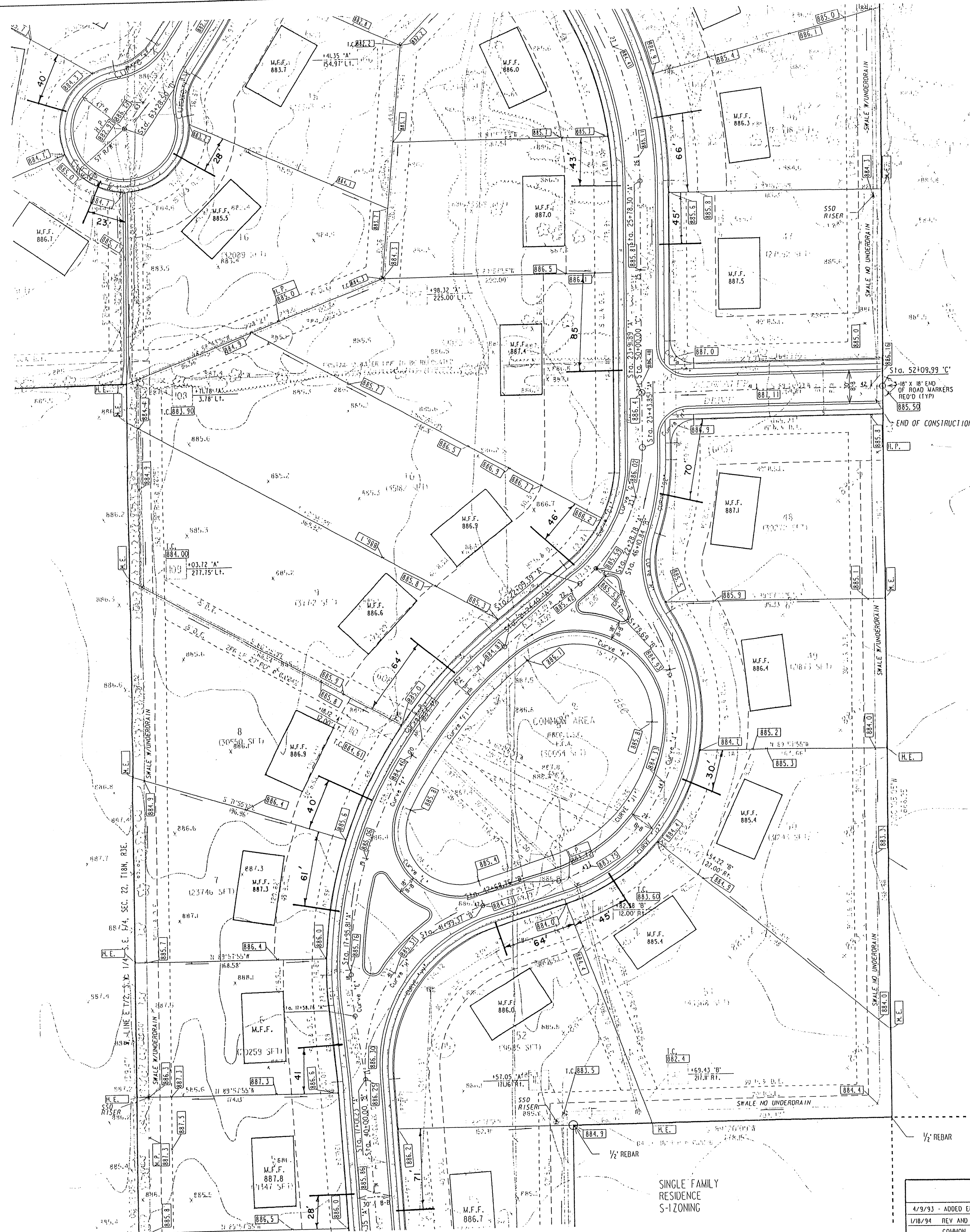
**MSE Engineering**  
MSE Corporation  
941 North Meridian Street  
Indianapolis, IN 46204-1061  
317 634-1000  
317 634-3576 FAX

Scale: 1" = 50'	Job No. H4-0157	Sheet No. 3 of 29
<b>SITE PLANNED</b>		
FEB 10 1995		
DIVISION OF HAMILTON COUNTY SURVEYOR		

Revised 2-7-95

Job No 121-2121

DCN: 4975I      PRT: 4975I

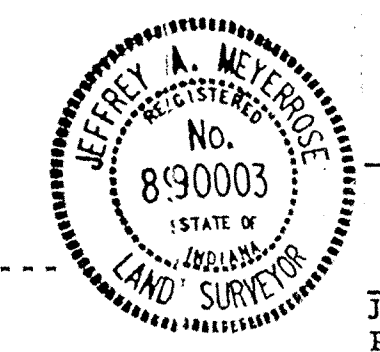


**As-Builts Information**  
**Underdrain Laterals**  
*Info Added 2-7-95*

**Sanitary and Storm  
 AS - BUILTS**

LEGEND

EXISTING	PROPOSED
=====	-----
-----	-----
○	●
□	■
—	—
—	—
—	—
—	—
—	—
—	—
—	—



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994  
 Jeffrey A. Meyer  
 Registered Land Surveyor No. 890003-IN

**FILED**  
 FEB 10 1995  
 OFFICE OF HAMILTON COUNTY SURVEYOR

AGRICULTURE S-1 ZONING

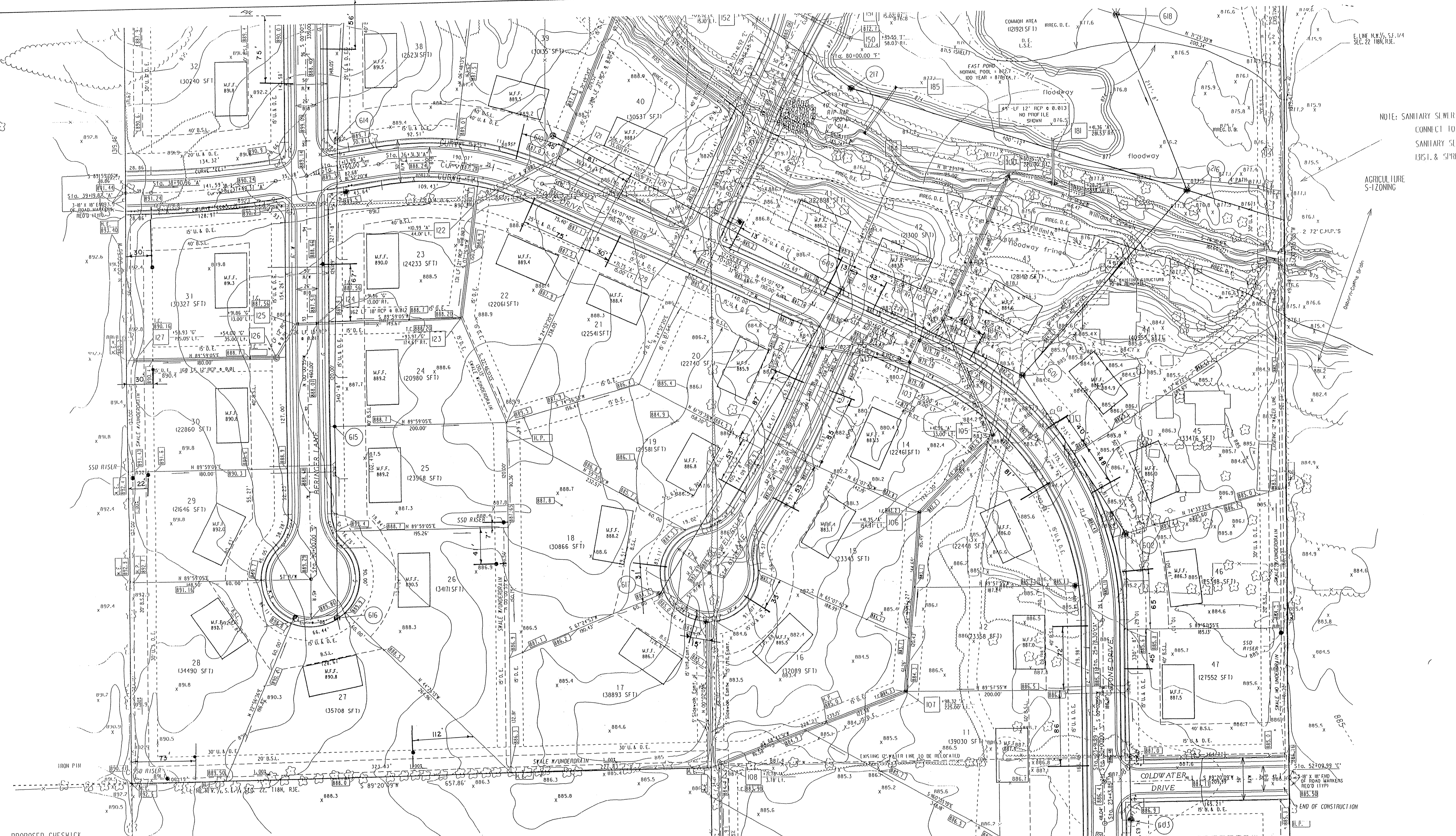
Revisions and Dates
4/9/93 - ADDED END OF ROAD MARKERS
1/18/94 - REV AND ADD GRADES AROUND COMMON AREA
COMMON AREA PAVEMENT TO 24" B-B
3/14/94 - REV PAVEMENT BETWEEN ISLANDS

Designed by: SDH
Drawn by: DSC
Checked by: SDH
Approved by:
Date:

**MSE Engineering**  
 MSE Corporation  
 941 North Meridian Street  
 Indianapolis, IN 46204-1061  
 317 634-1000  
 317 634-3576 FAX

Scale: 1" = 50' Job No.: 44-0497 Sheet No.: 4 of 29  
**SITE PLAN**

Revised 2-7-95 666 #121-2121 DGN: 49T52 PRJ: 49T52

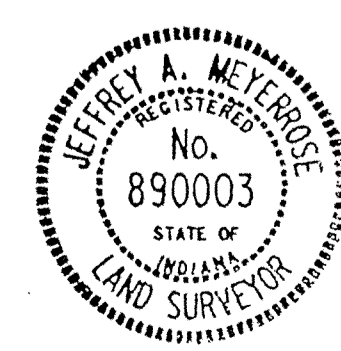


NOTE: SANITARY SEWER TO CONNECT TO EXIST. SANITARY SEWER AT 1851 & SPRINGMILL AGRICULTURE S-1 ZONING

PROPOSED CHESWICK S-1 ZONING

### As-Builts Information

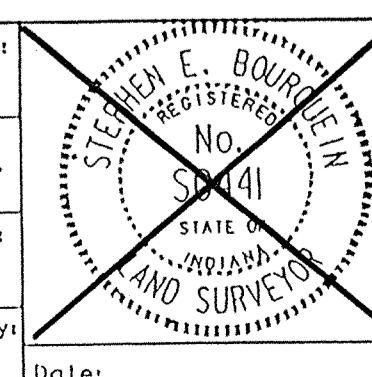
Underdrain Laterals *Info Added 2-7-95*



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994.  
 Jeffrey A. Meyerhose  
 Registered Land Surveyor No. 890003-IN

# Sanitary and Storm AS-BUILTS

Revisions and Dates	Designed by:
	SDH
	Drawn by:
	DSC
	Checked by:
	SDH
	Approved by:
	SEB
	Date:



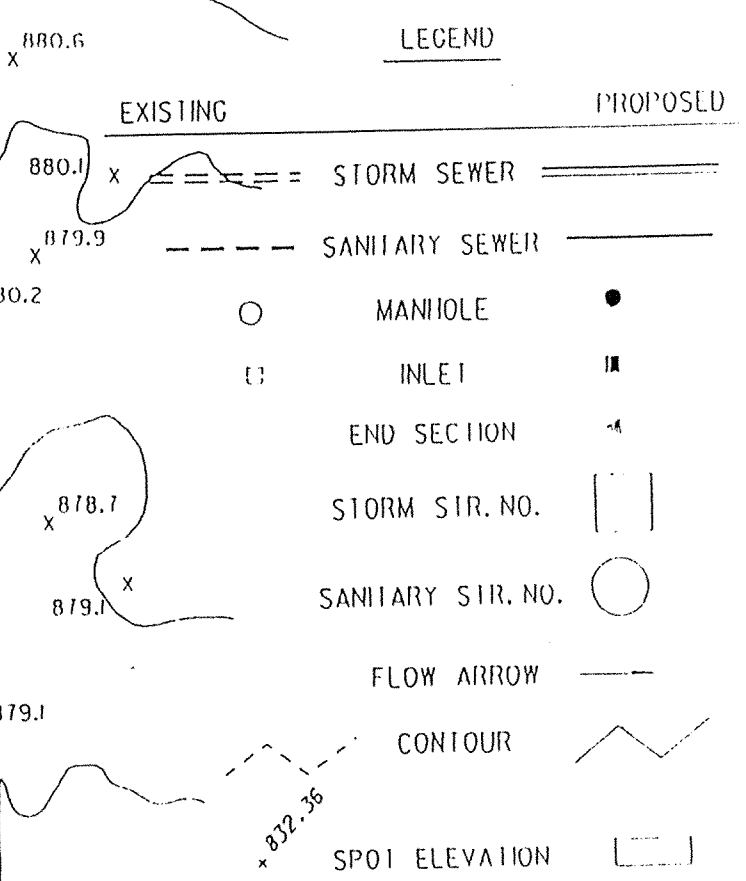
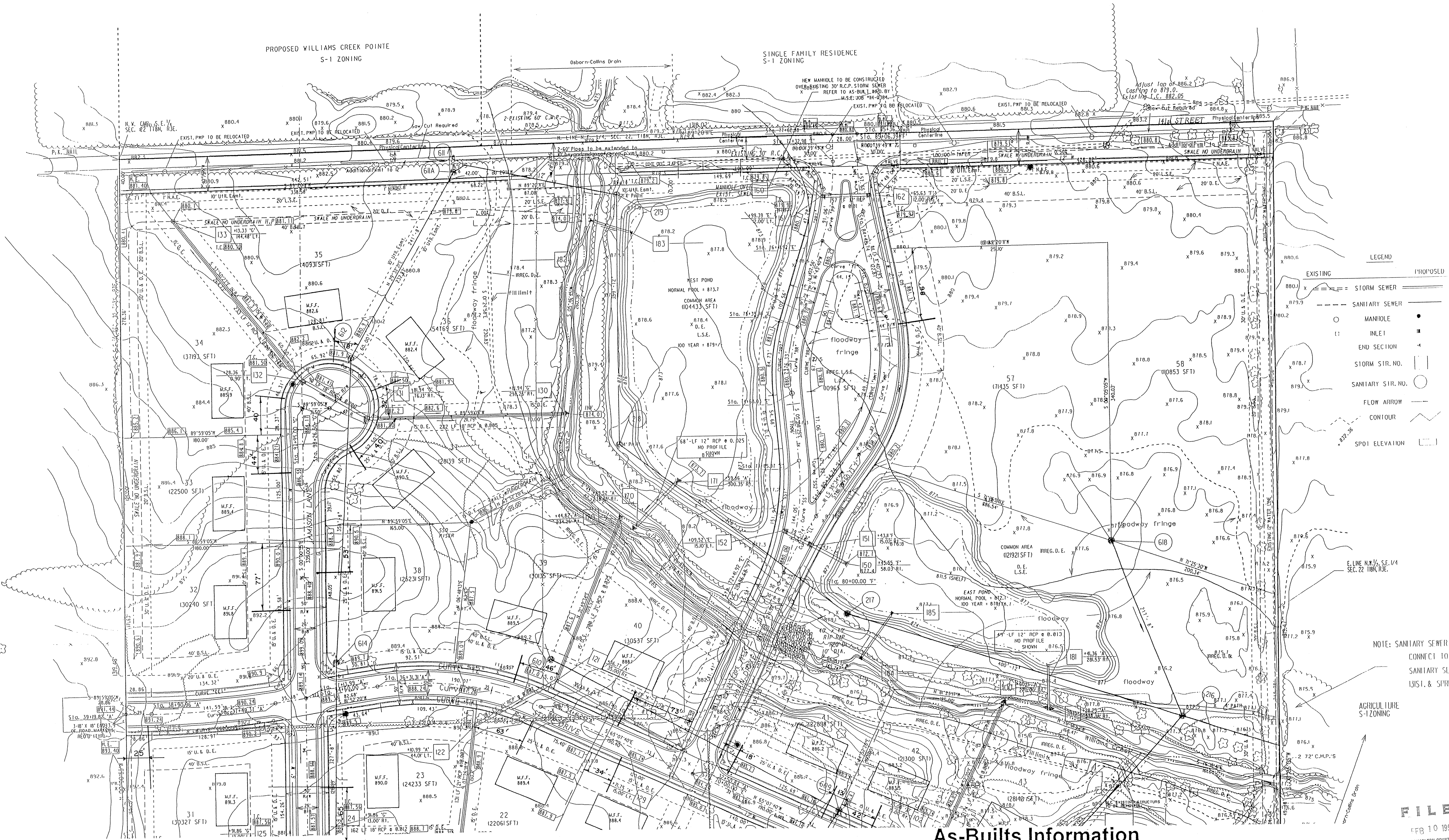
**MSE Engineering**  
 MSE Corporation  
 941 North Meridian Street  
 Indianapolis, IN 46201-1061  
 317 634-1000  
 317 634-3576 FAX

11111  
**SITE PLAN**  
 Scale: 1" = 50' Job No: 44-0497 Sheet No: 5 of 29  
 Date: Rev. 2-7-95 Job # 121-21e1 DGN: 49753 PRF: 49753

**FILED**  
 FEB 10 1995  
 OFFICE OF HAMILTON COUNTY SURVEYOR

PROPOSED WILLIAMS CREEK POINT  
S-1 ZONING

SINGLE FAMILY RESIDENCE  
S-1 ZONING



NOTE: SANITARY SEWER TO CONNECT TO EXISTING SANITARY SEWER AT 131ST & SPRINGMILL

AGRICULTURE S-1 ZONING

**FILED**  
FEB 10 1995  
OFFICE OF HAMILTON COUNTY SURVEYOR

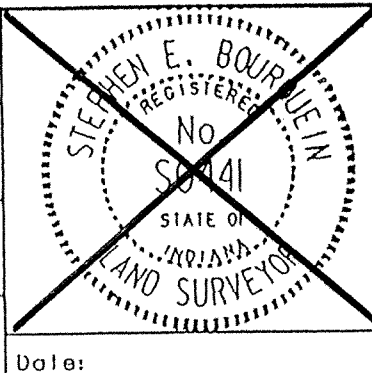
**As-Builts Information**  
Underdrain Laterals info. Added 2-7-95



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of MAY 1994  
Jeffrey A. McVey  
Registered Land Surveyor No. 890003-IN

**Sanitary and Storm AS-BUILTS**

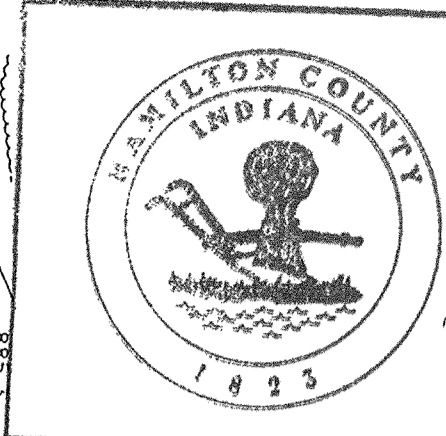
Revisions and Dates	Designed by
4/9/93 - ADDED END OF ROAD MARKERS	SDH
1/18/94 Rev Island Street to 24 <sup>th</sup> St	Drawn by:
4/25/94 Add Str G11A	OSC
3/9/94 Show PUMP Widening 14 <sup>th</sup> St	Checked by:
	SDH
	Approved by:
	SCD



**MSE Engineering**  
MSE Corporation  
941 North Meridian Street  
Indianapolis, IN 46204-1061  
317 634-1000  
317 634-3576 FAX

Title: **SITE PLAN**  
Scale: 1" = 50' Job No: 114-0497  
FOR INFORMATION PURPOSES ONLY

Rev. 2-7-95 Job No 121-2/21 DGN: 49T54 PRF: 49T54



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

Entry Date: 11-5-03

Entered by: JDH

NOTES:

LENGTHS OF PIPES INDICATED ARE FROM CENTER TO CENTER OF STRUCTURES AND ARE NOT ACTUAL PIPE LENGTHS.

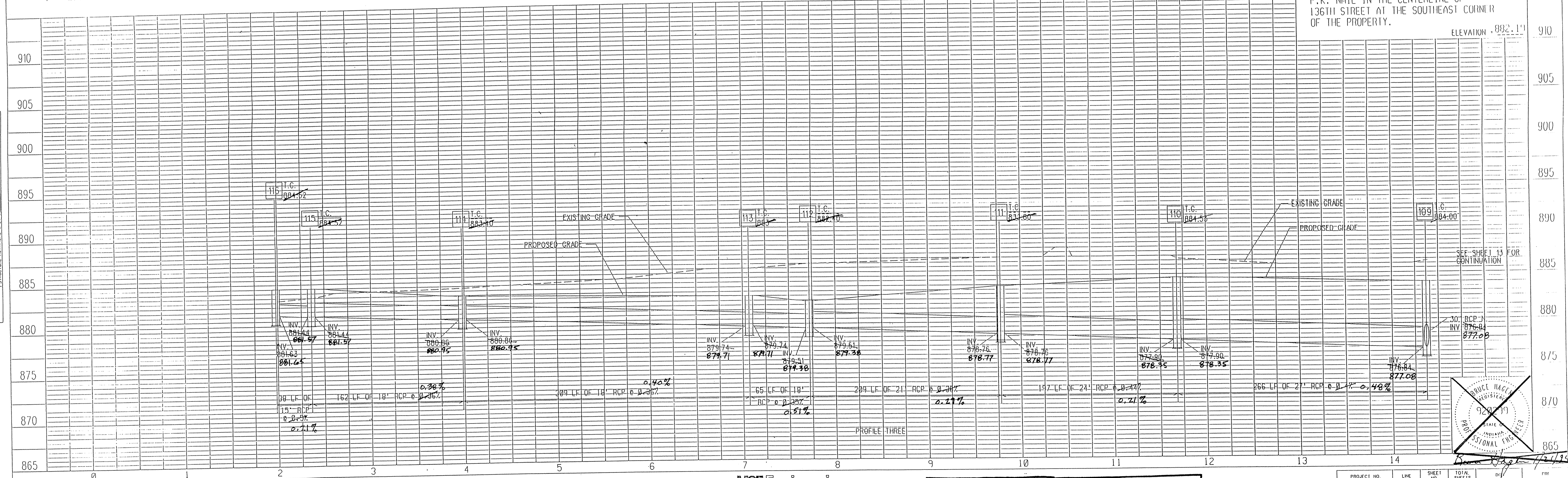
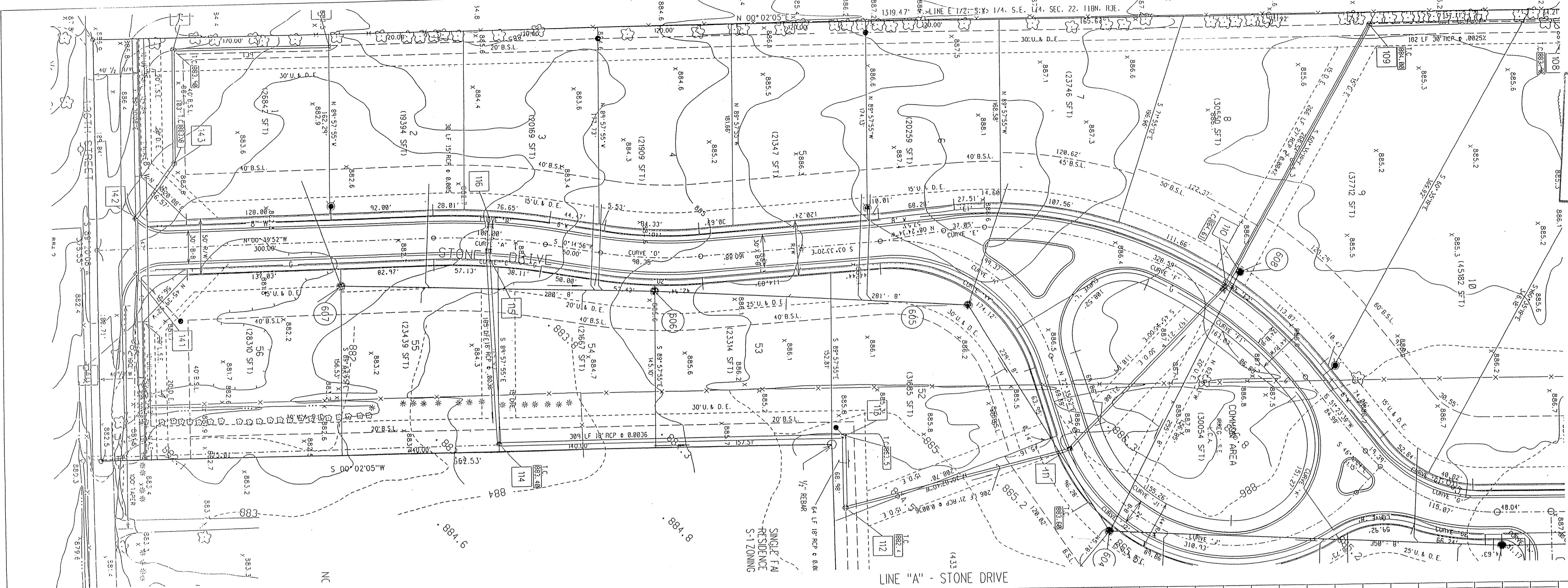
CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.

GRANULAR BACKFILL REQUIRED

SCALE:  
 PLAN: 1" = 50'  
 PROFILE: VERTICAL 1" = 5', HORIZONTAL 1" = 50'

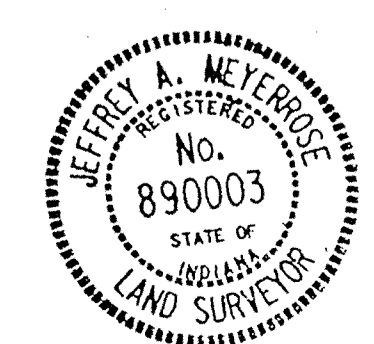
BENCH MARK DESCRIPTION

P.K. NAIL IN THE CENTERLINE OF 136TH STREET AT THE SOUTHEAST CORNER OF THE PROPERTY.



PLAN  
 SURVEYED, PLOTTED, ALIGNED, CHECKED, NOTE BOOK, BY, DATE

PROFILE  
 SURVEYED, PLOTTED, ALIGNED, CHECKED, NOTE BOOK, BY, DATE



As-built information provided by MSE Corporation, certified this 2<sup>nd</sup> day of Mar 1994

Jeffrey A. Meyerrose  
 Registered Land Surveyor No. 890003-IN

MSE Engineering

**Storm AS-BUILTS**

BUCK HORN

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DATE	PRJ
11-0497		12	29	4/25/01	49751M1

1-18-94 REVISED RUN STR. 109 - 112  
**FILED**  
 FEB 10 1995 STORM PLAN & PROFILE  
 OFFICE OF HAMILTON COUNTY SURVEYOR



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

Entry Date: 11-5-03

Entered by: JDH

NOTES:

LENGTHS OF PIPES INDICATED ARE FROM CENTER TO CENTER OF STRUCTURES AND ARE NOT ACTUAL PIPE LENGTHS.

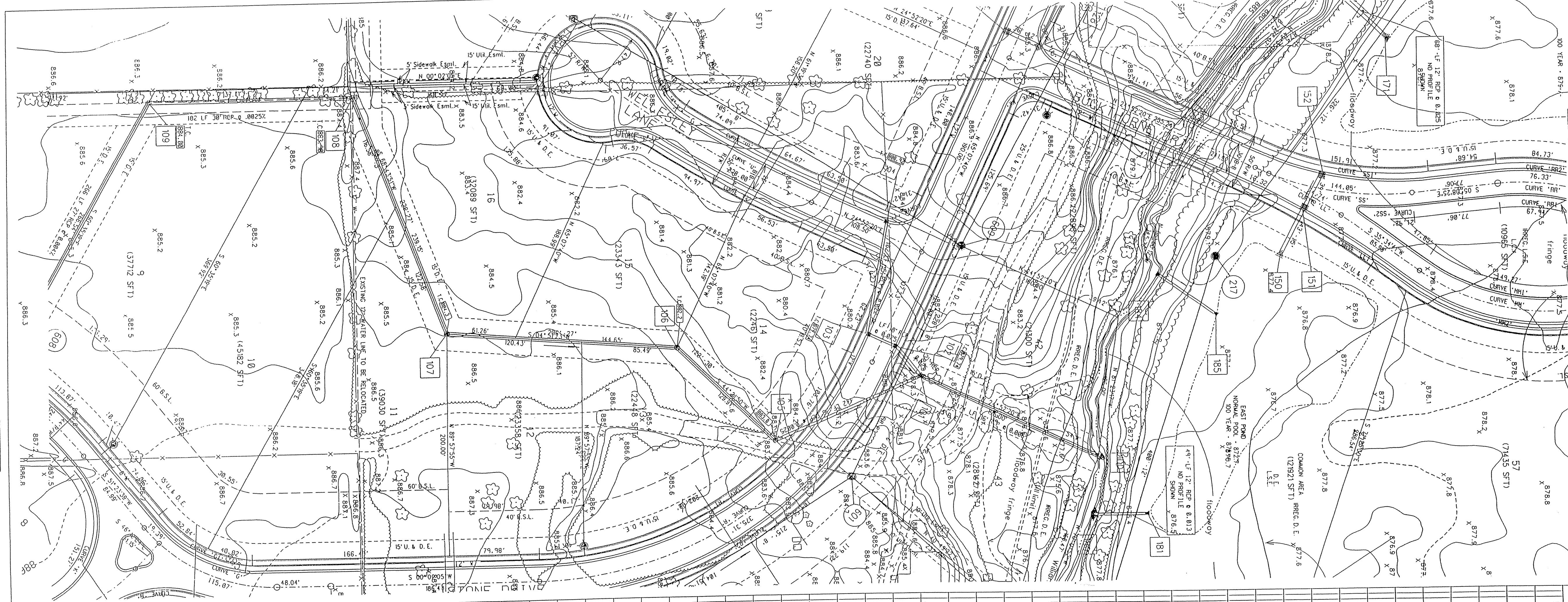
CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.



SCALE:  
 PLAN: 1" = 50'  
 PROFILE: 1" = 5'  
 VERTICAL: 1" = 5'  
 HORIZONTAL: 1" = 50'

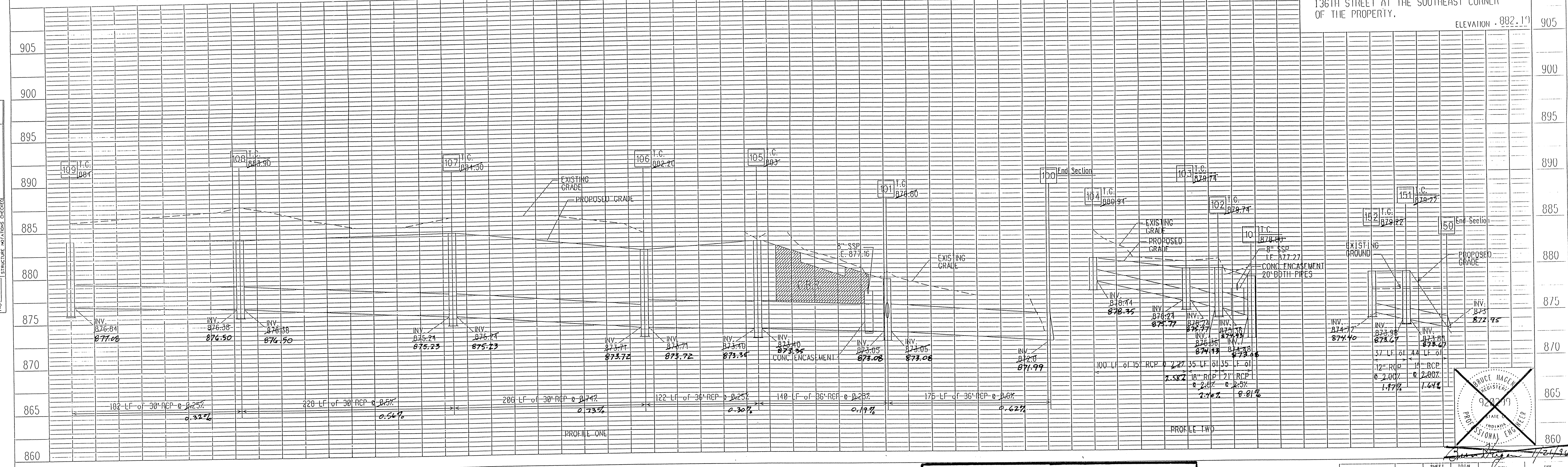
**BENCH MARK DESCRIPTION**

P.K. NAIL IN THE CENTERLINE OF 136TH STREET AT THE SOUTHEAST CORNER OF THE PROPERTY.  
 ELEVATION: 882.19



PLAN  
 SURVEYED, PLOTTED, AND CHECKED BY: [Blank]  
 DATE: [Blank]  
 NOTE BOOK GRABES CHECKED: [Blank]  
 NO. [Blank]

PROFILE  
 SURVEYED, PLOTTED, AND CHECKED BY: [Blank]  
 DATE: [Blank]  
 NOTE BOOK GRABES CHECKED: [Blank]  
 NO. [Blank]



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994

*Jeffrey A. Meyerrose*  
 Jeffrey A. Meyerrose  
 Registered Land Surveyor No. 890003-IN

MSE Engineering

**Storm AS-BUILTS**

BUCK HORN

Job No 121-2121

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DIST.	DATE
114-0197	13	29	49751M2	49751M2	4/9/93

REVISED 4/9/93 - ADDED RUN 150 - 152

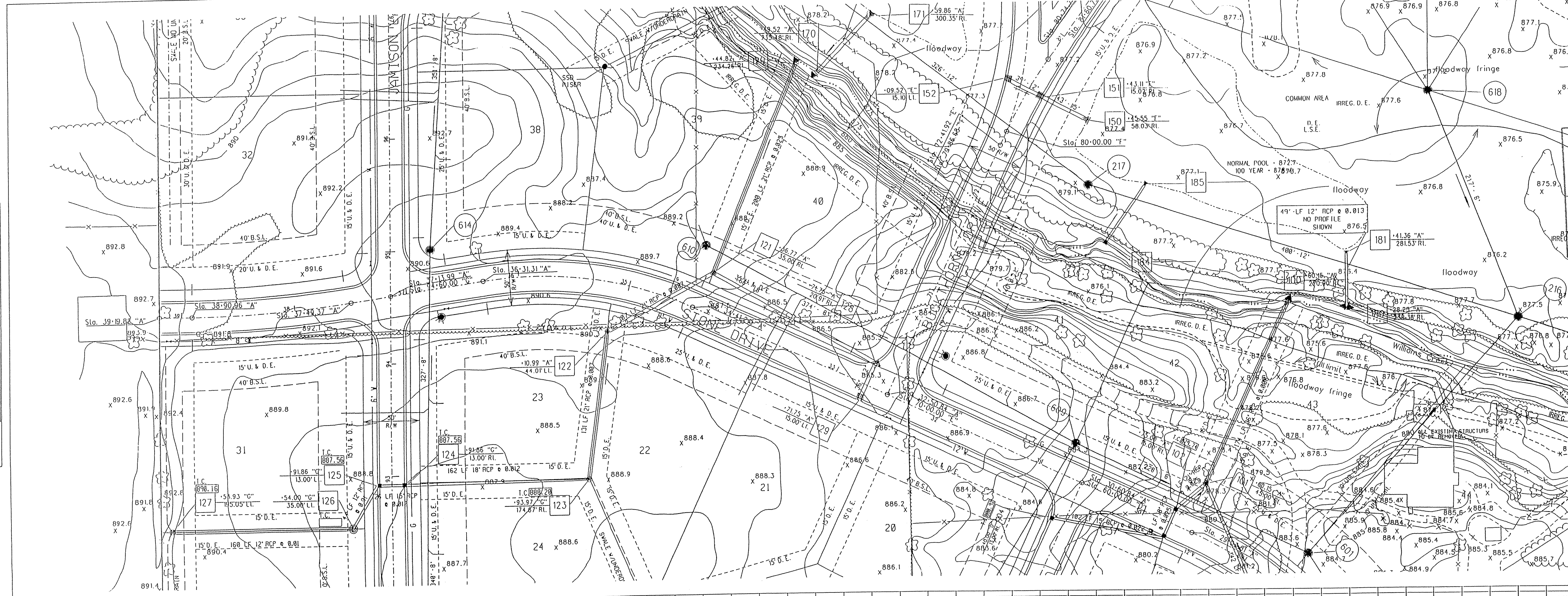
**FILED**

FEB 10 1995

OFFICE OF HAMILTON COUNTY SURVEYOR

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PLAN SUBMITTED: \_\_\_\_\_  
 PLAN CHECKED: \_\_\_\_\_  
 NOTE BOOK CHANGES CHECKED: \_\_\_\_\_  
 NO. \_\_\_\_\_

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 PROFILE SUBMITTED: \_\_\_\_\_  
 PROFILE CHECKED: \_\_\_\_\_  
 NOTE BOOK CHANGES CHECKED: \_\_\_\_\_  
 NO. \_\_\_\_\_



**HAMILTON COUNTY INDIANA**  
 This information was gathered for input into the Hamilton County Geographical Information System. This document is considered an official record of the GIS.  
 Entry Date: 11-5-03  
 Entered by: JDH

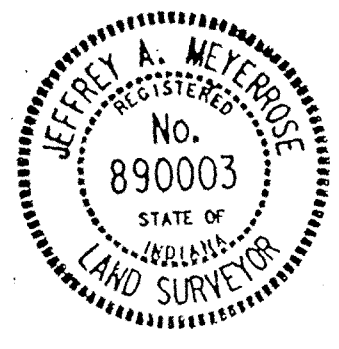
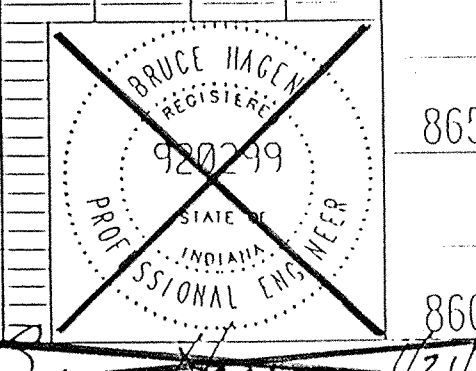
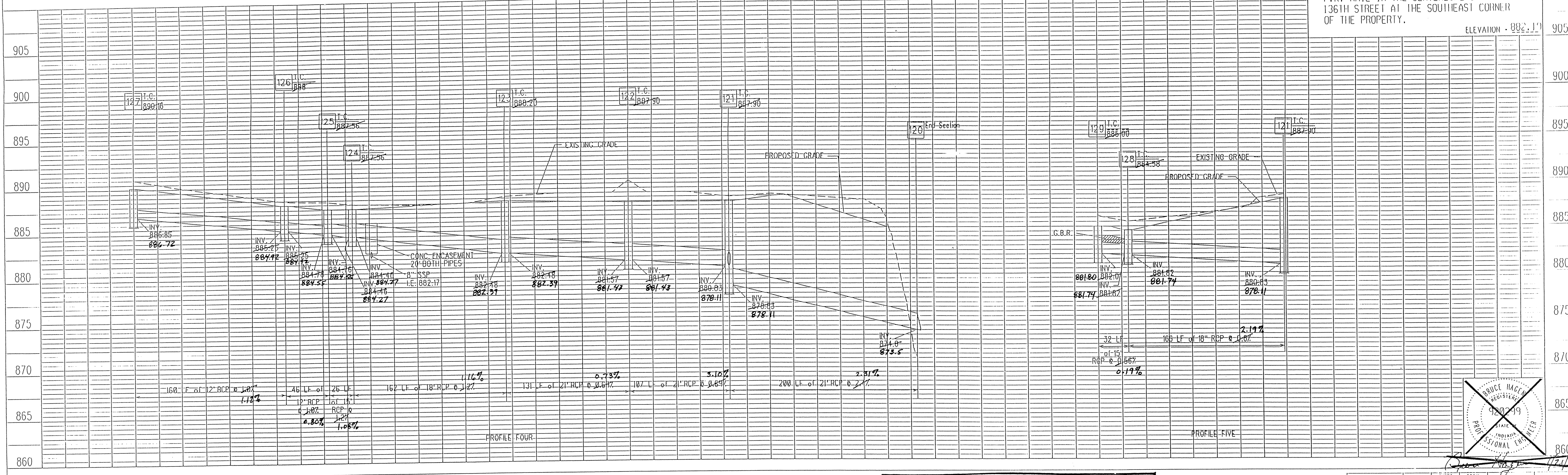
NOTES:  
 LENGTHS OF PIPES INDICATED ARE FROM CENTER TO CENTER OF STRUCTURES AND ARE NOT ACTUAL PIPE LENGTHS.  
 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.

GRANULAR BACKFILL REQUIRED  
 GBR

SCALE:  
 PLAN: 1" = 50'  
 PROFILE: VERTICAL 1" = 5'  
 HORIZONTAL 1" = 50'

**BENCH MARK DESCRIPTION**

P.K. NAIL IN THE CENTERLINE OF 136TH STREET AT THE SOUTHEAST CORNER OF THE PROPERTY.  
 ELEVATION: 882.11



As-built information provided by MSE Corporation, certified this 20th day of \_\_\_\_\_, 1994.  
 Jeffrey A. Meyer  
 Registered Land Surveyor No. 890003-IN

MSE Engineering

**Storm AS-BUILTS**

BUCK HORN

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DATE	BY
114 0497		14	29	4/27/04	JDH

**FILED**

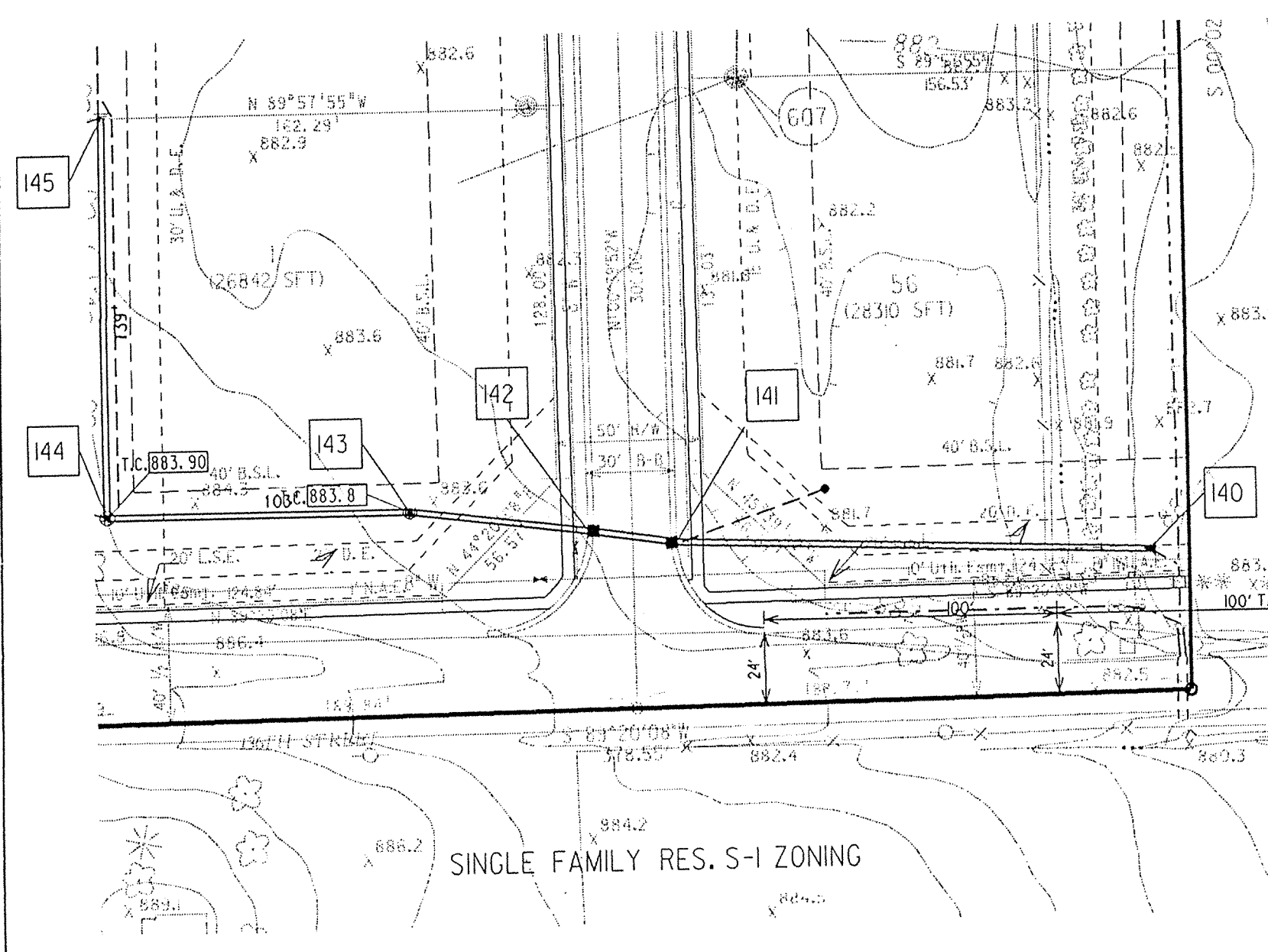
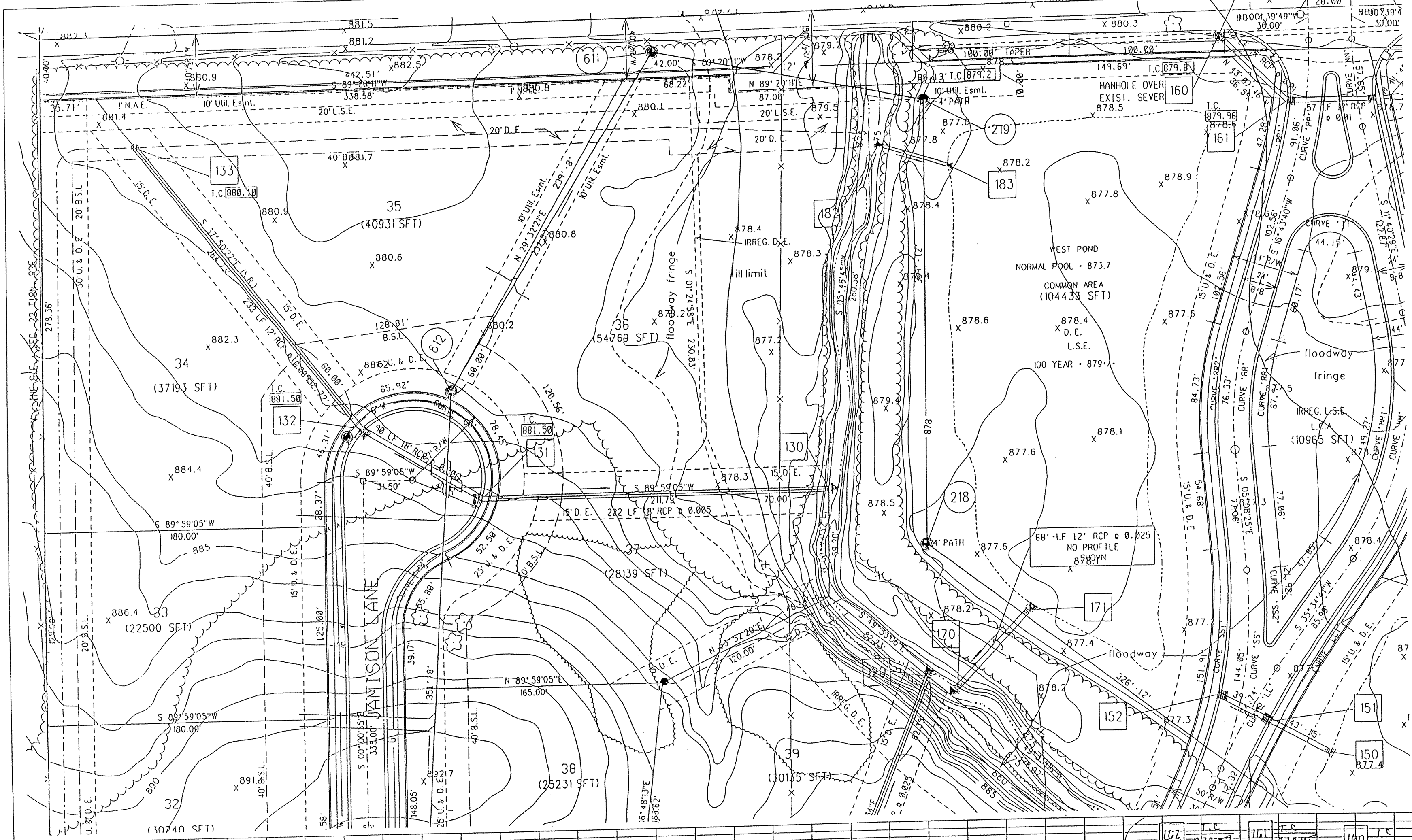
FEB 10 1995  
 OFFICE OF HAMILTON COUNTY SURVEYOR

STORM PLAN & PROFILE

Job No. 121-2121

PLAN  
 SURVEYED  
 PLOTTED  
 NOTE BOOK ADJUSTMENT CHECKED  
 NO. OF WAY CHECKED

PROFILE  
 SURVEYED  
 PLOTTED  
 NOTE BOOK GRADES CHECKED  
 STRUCTURE NOTATIONS CHECKED



**HAMILTON COUNTY INDIANA**  
 1823

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

Entry Date: 11-5-93

Entered by: JPH

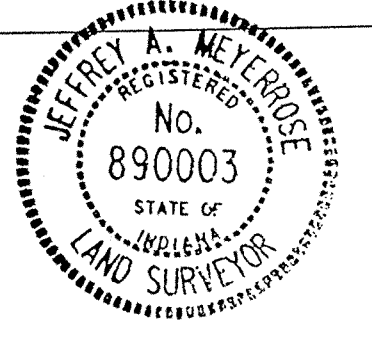
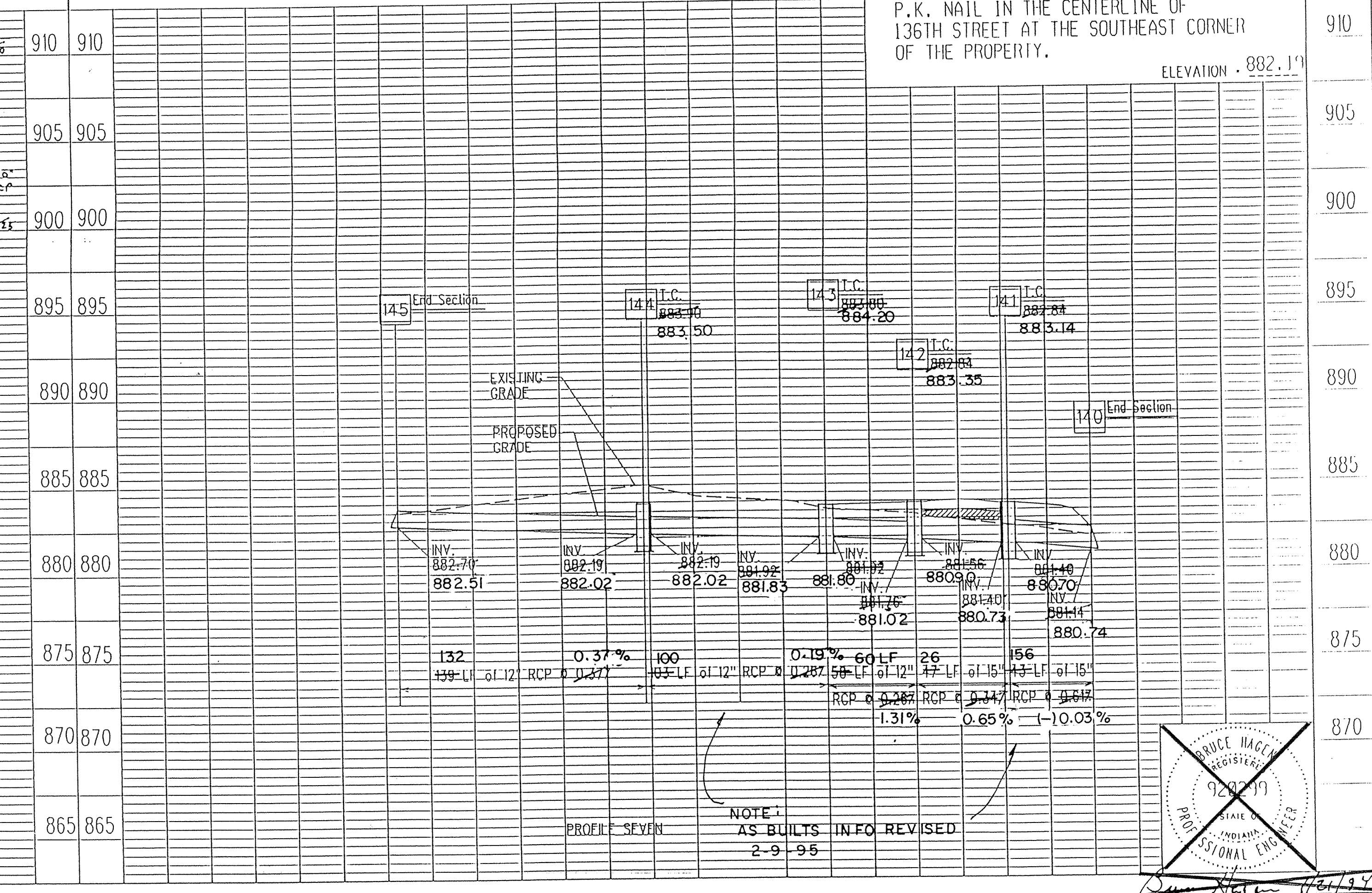
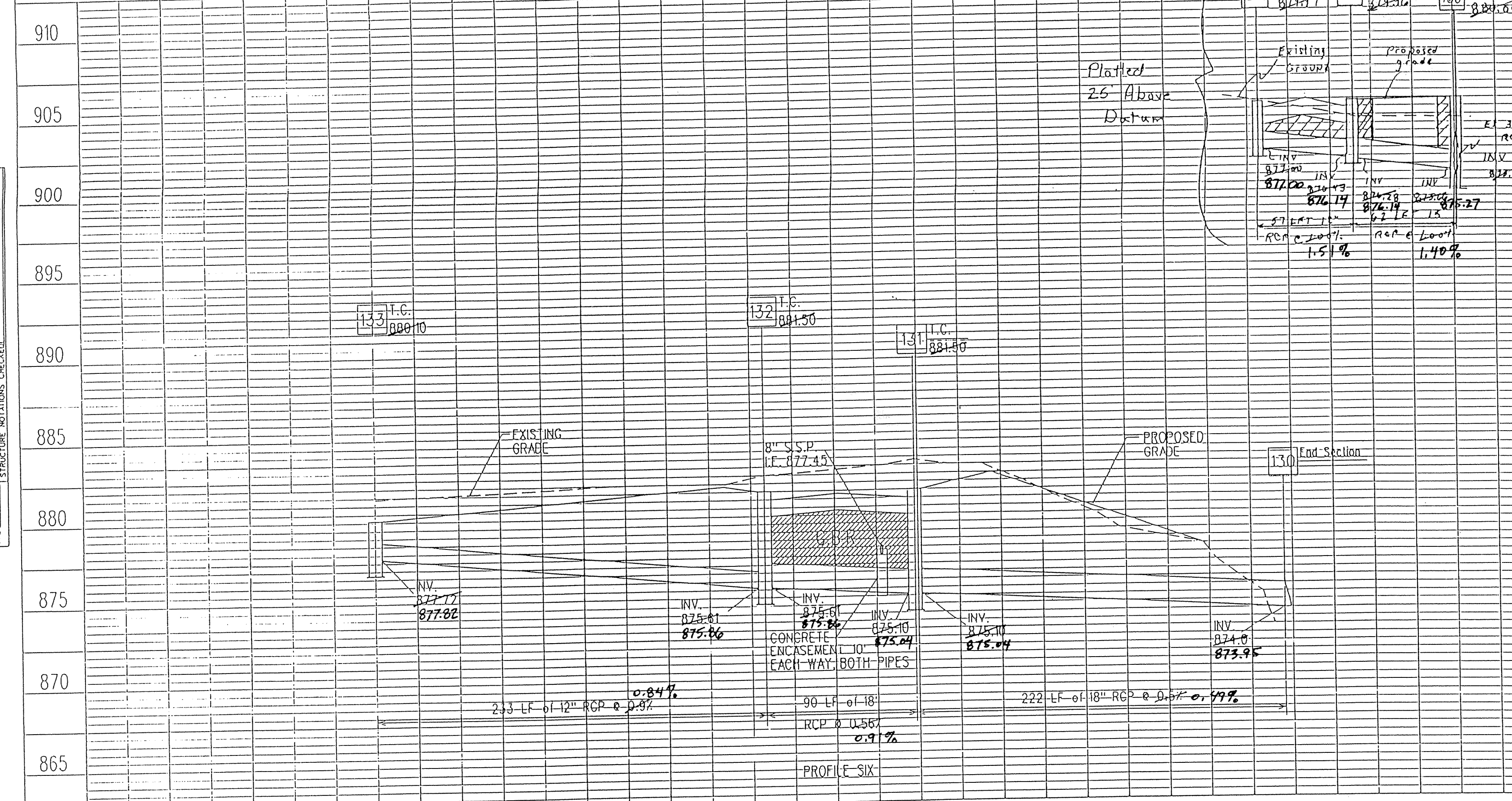
NOTES:  
 LENGTHS OF PIPES INDICATED ARE FROM CENTER TO CENTER OF STRUCTURES AND ARE NOT ACTUAL PIPE LENGTHS.  
 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.



SCALE:  
 PLAN: 1" = 50'  
 PROFILE: 1" = 5'  
 HORIZONTAL: 1" = 50'

**BENCH MARK DESCRIPTION**

P.K. NAIL IN THE CENTERLINE OF 136TH STREET AT THE SOUTHEAST CORNER OF THE PROPERTY.  
 ELEVATION - 882.11'



As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994

*Jeffrey A. Meyerrose*  
 Jeffrey A. Meyerrose  
 Registered Land Surveyor No. 890003-IN



**Storm AS-BUILTS**

BUCK HORN

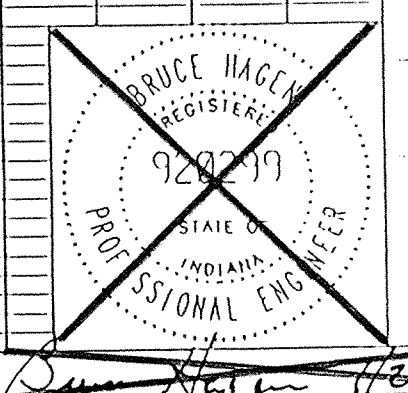
Job No 121-2121

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	DATE	PIF
114-0497		15	29	4/97/94	497/51M4

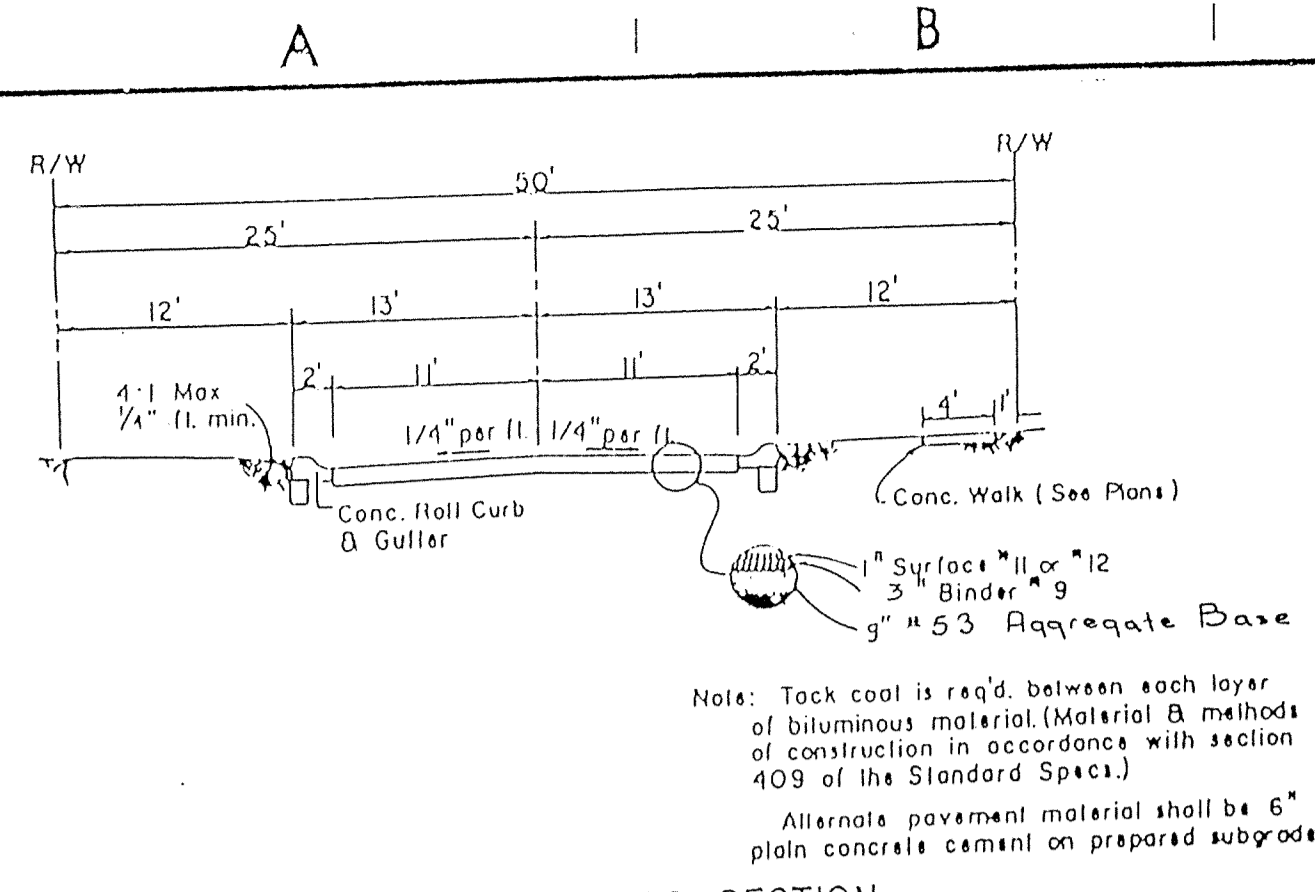
1-18-94 REVISED STORM RUN STR. #10 - #13  
 2-23-94 100' PROFILE STR. 160-142

**FILED**

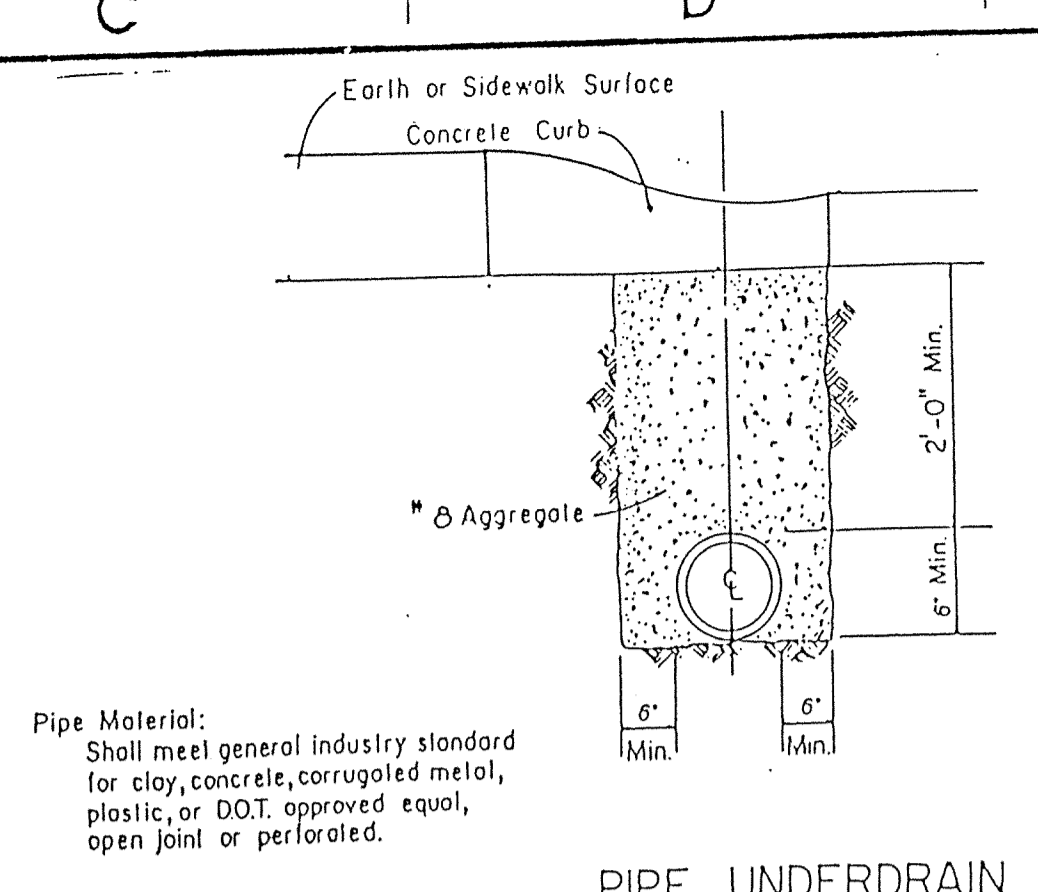
FEB 10 1995  
 OFFICE OF HAMILTON COUNTY SURVEYOR



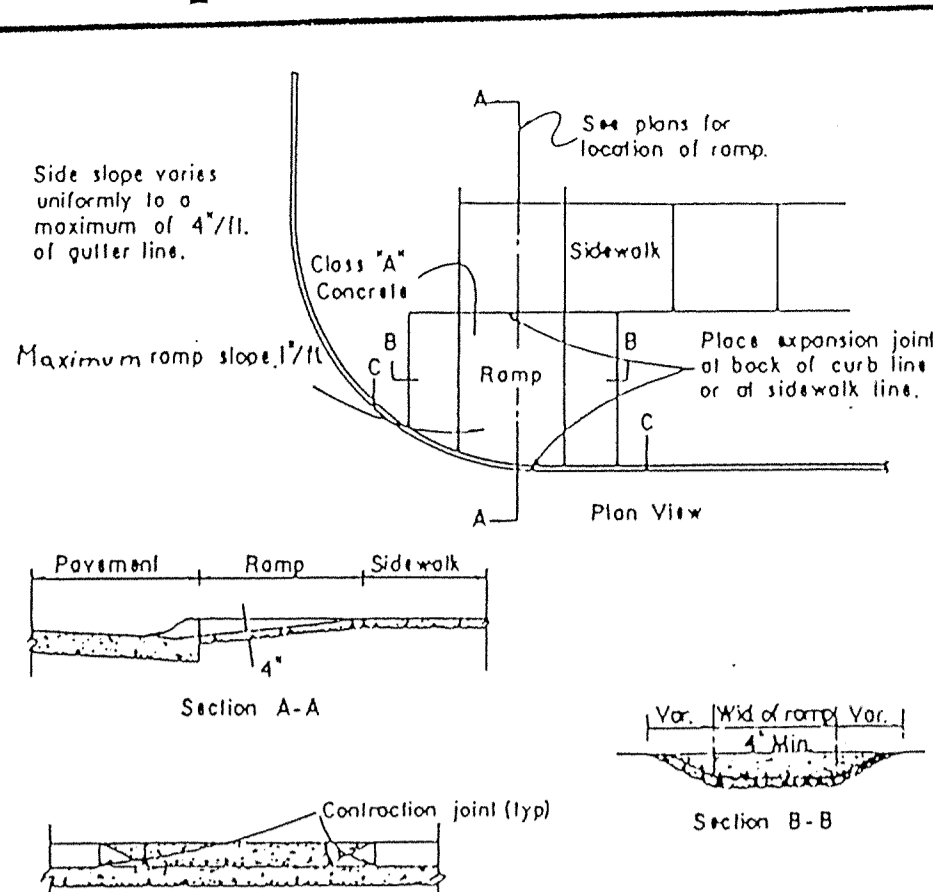




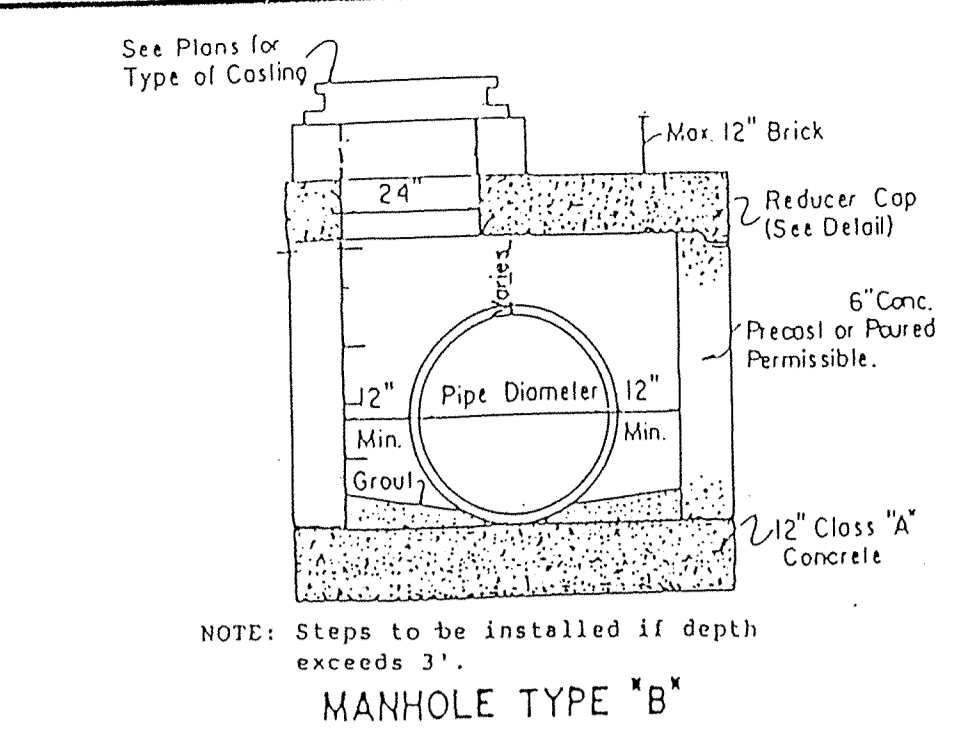
TYPICAL STREET CROSS SECTION



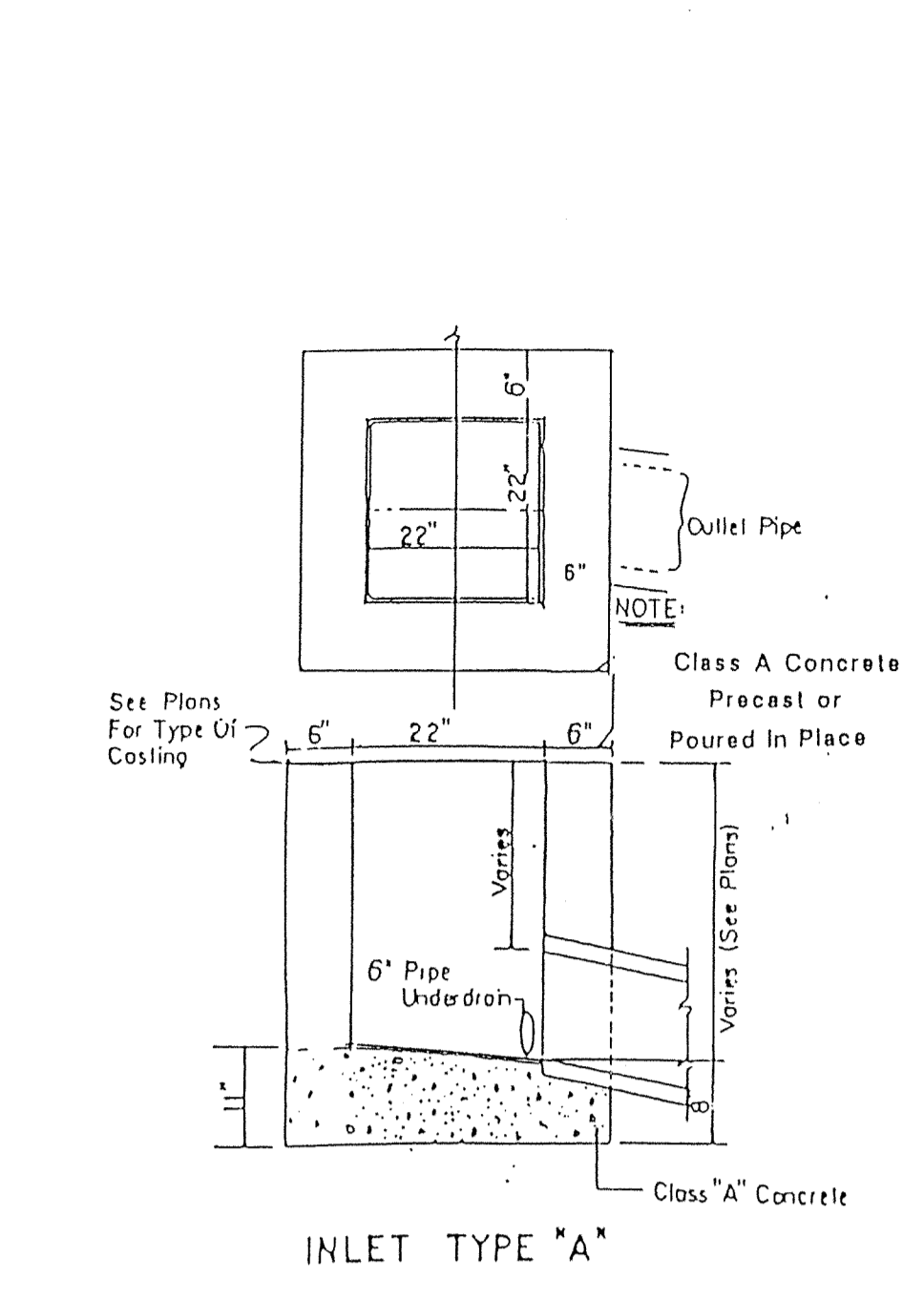
PIPE UNDERDRAIN



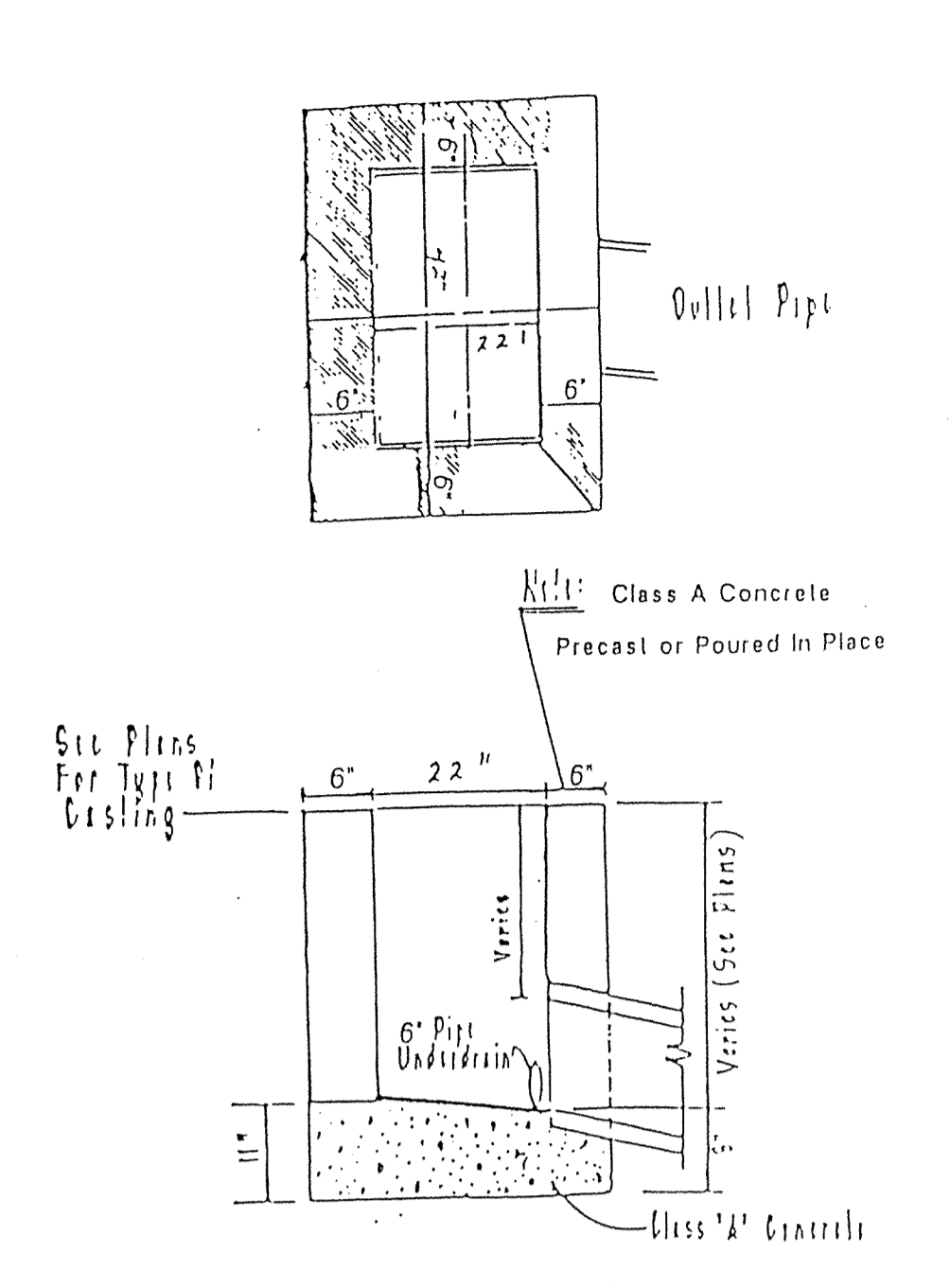
HANDICAP RAMP



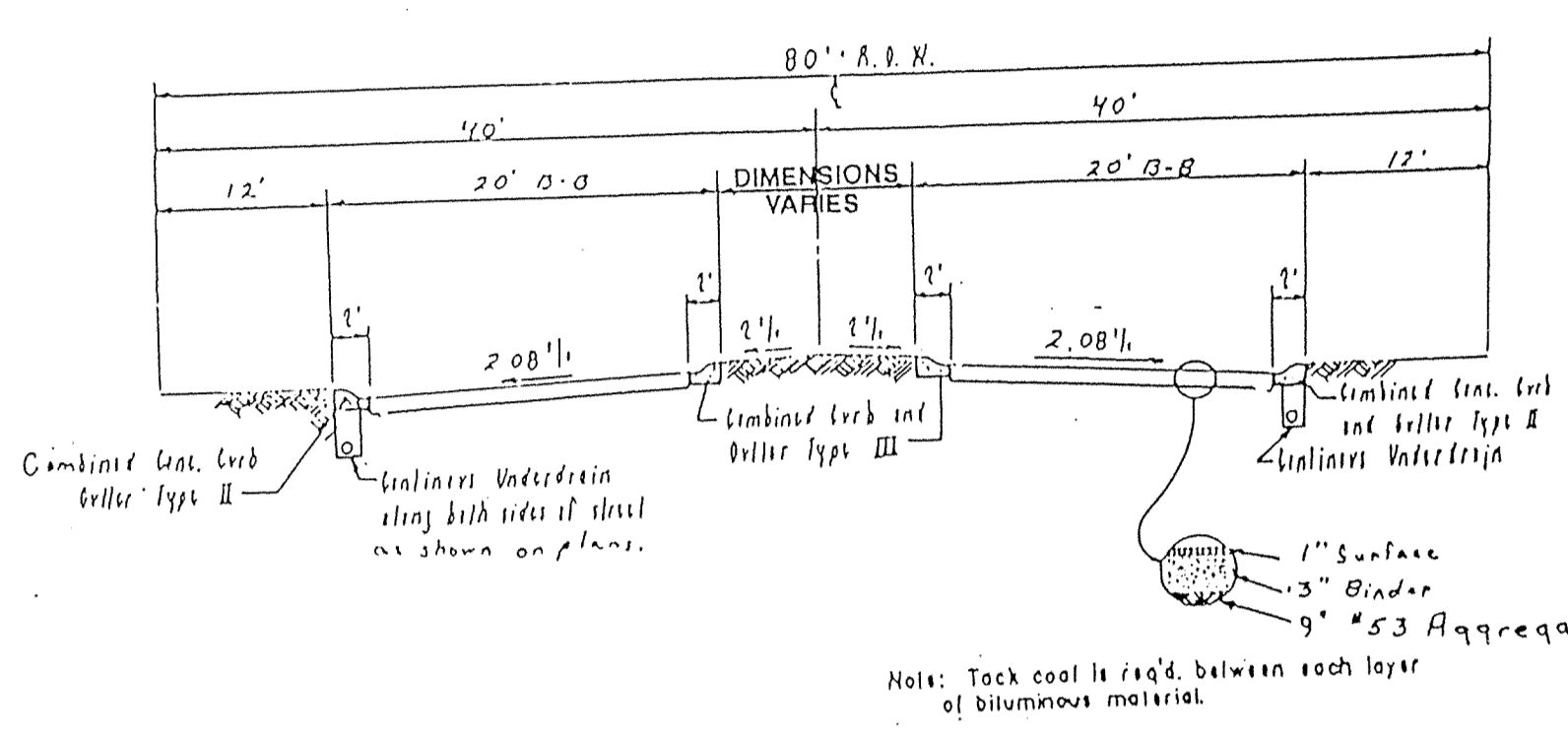
MANHOLE TYPE "B"



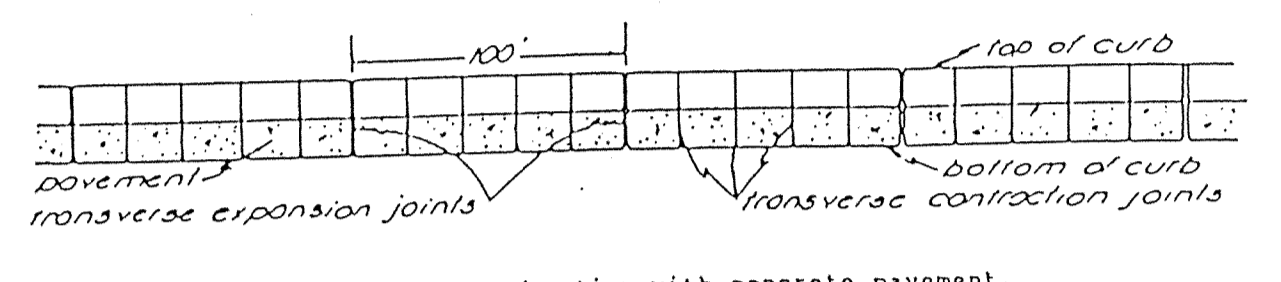
INLET TYPE "A"



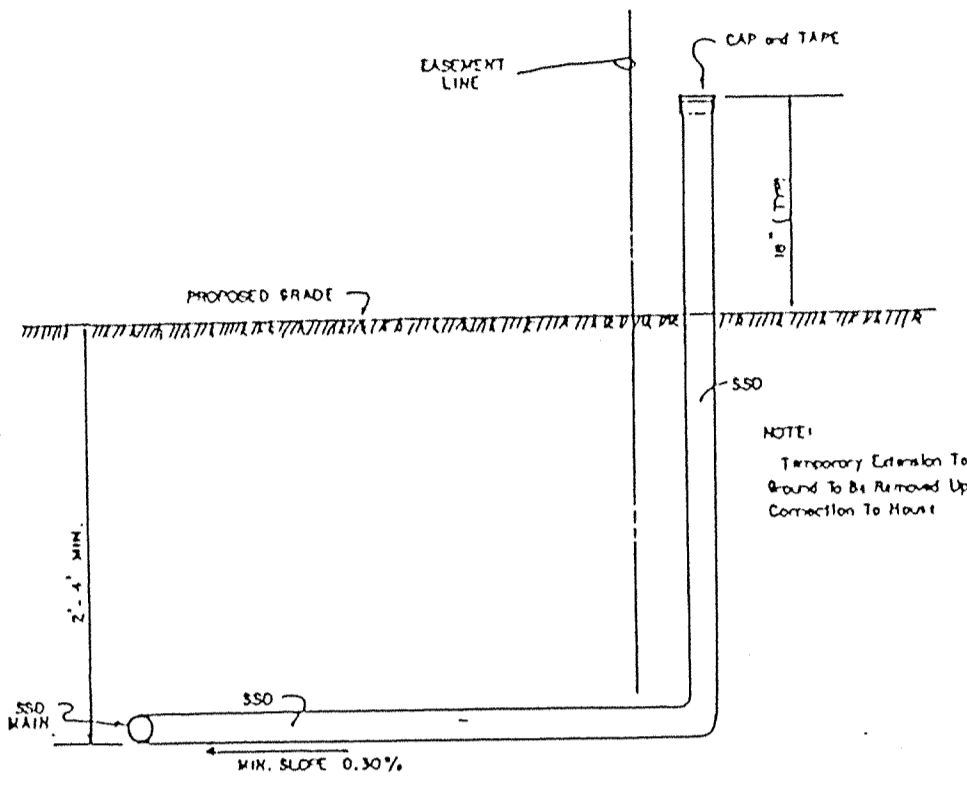
Inlet Type "A" (Modified) (No Sills)



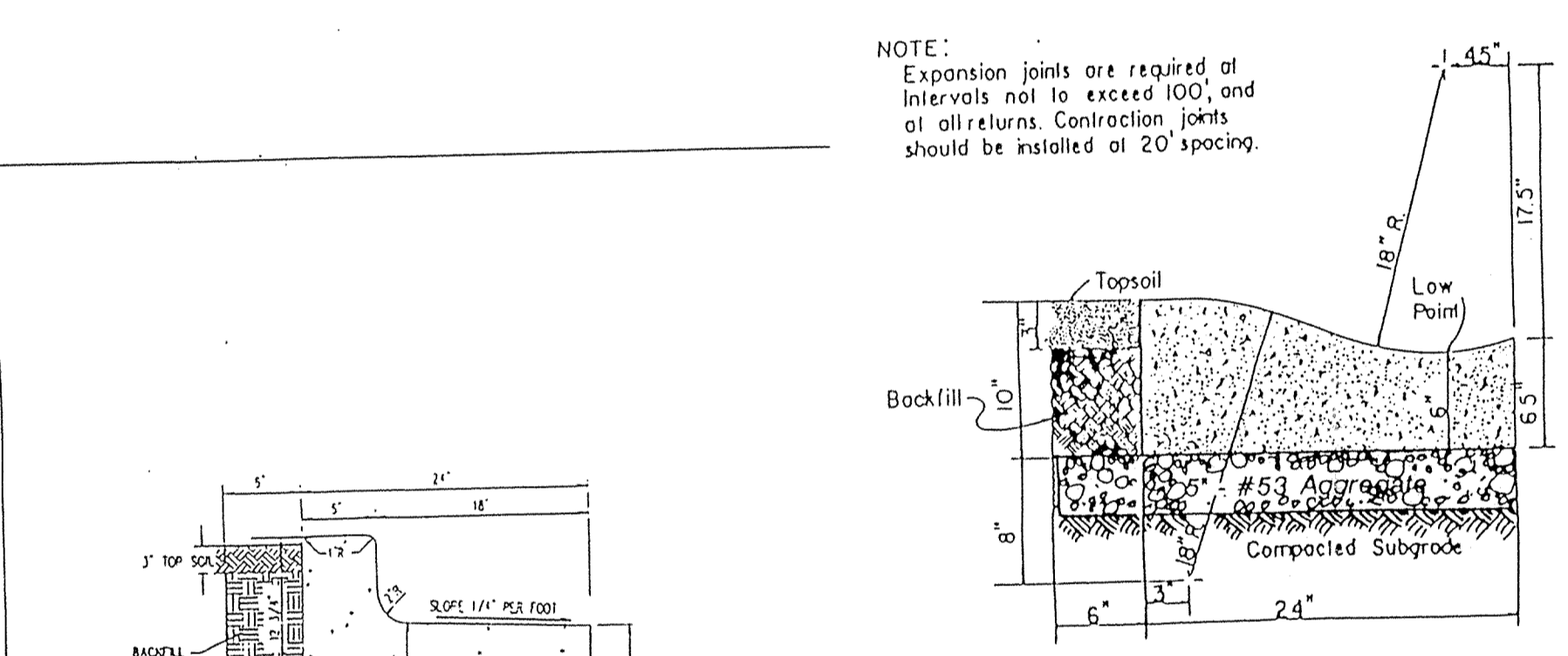
CROSS SECTION A-A



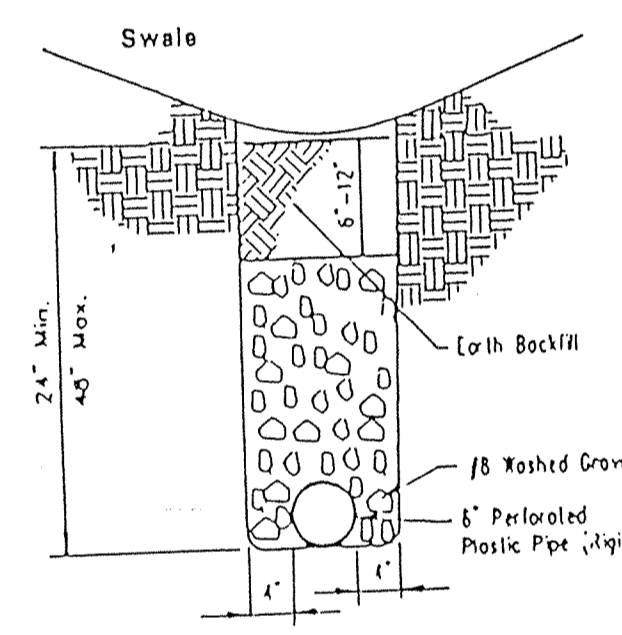
CURB JOINT DETAIL



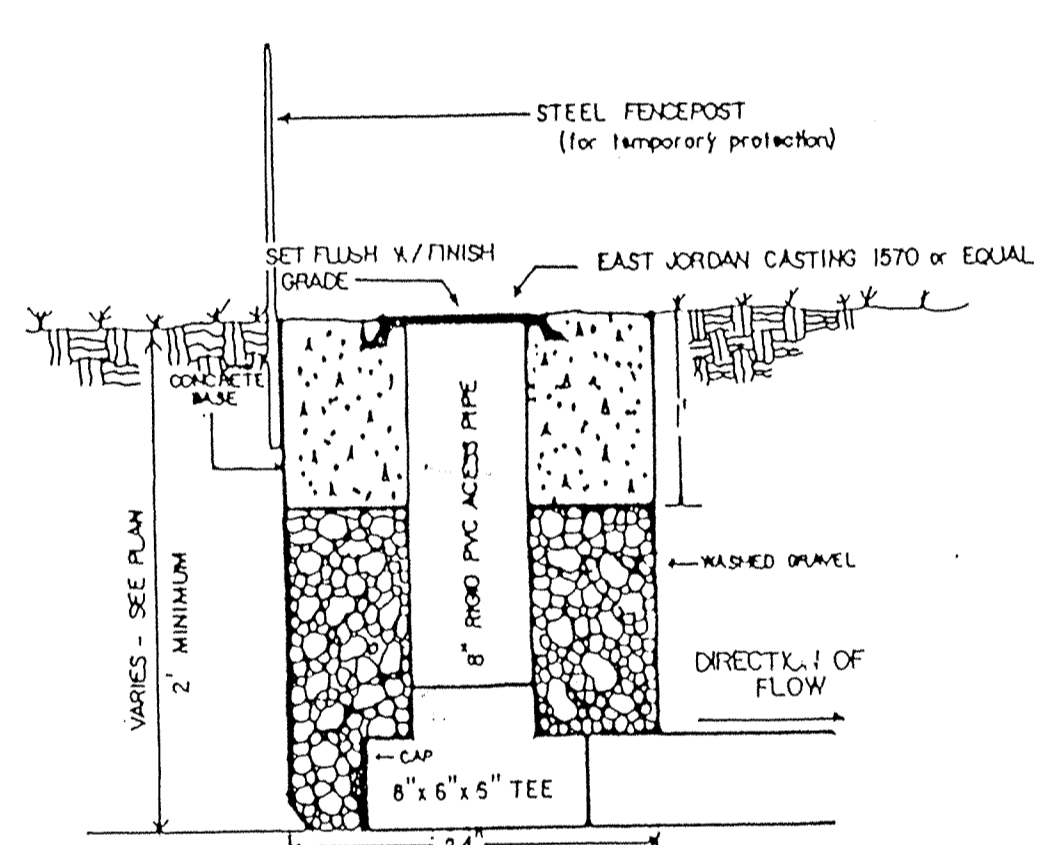
TYPICAL SSD CONNECTION TO INDIVIDUAL IOTS



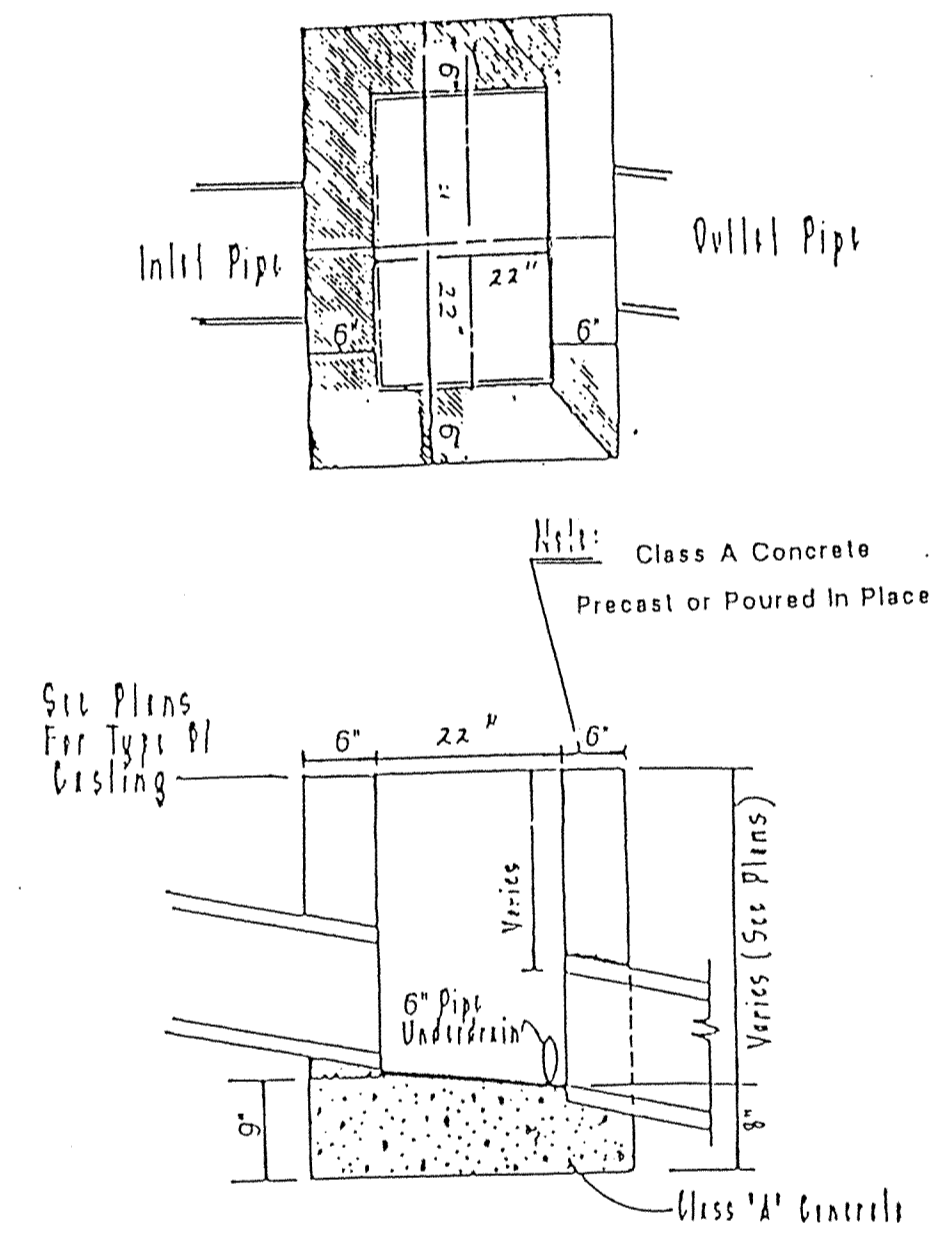
CONCRETE ROLL CURB & GUTTER



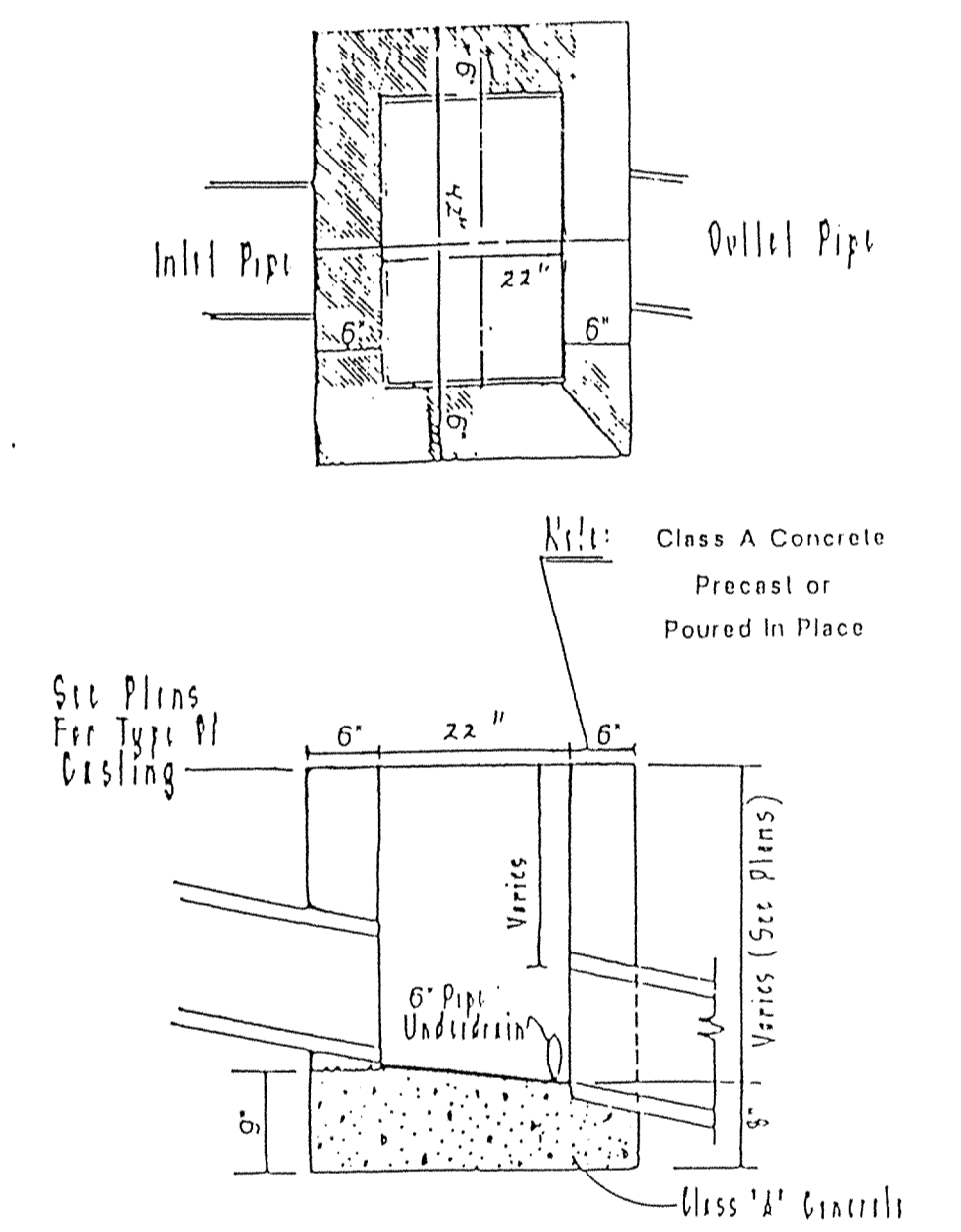
Subsurface Drain Section



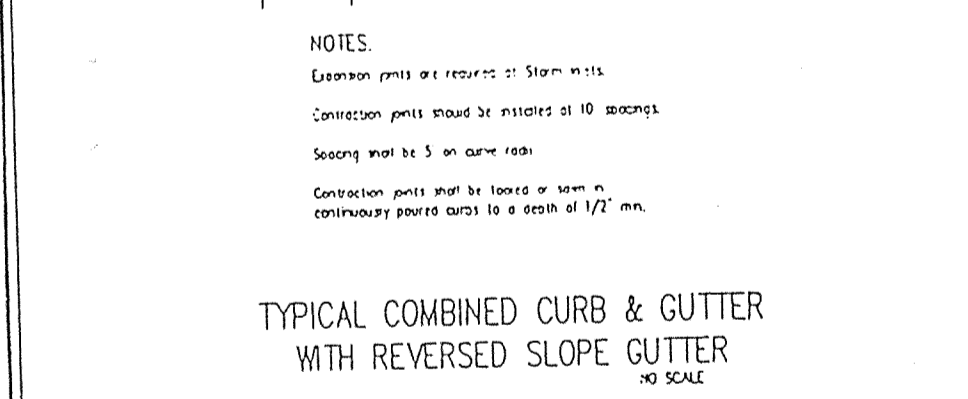
SUBSURFACE DRAIN (SSD) RISER DETAIL



Inlet Type "B"



Inlet Type "B" (Modified) (No Sills)



TYPICAL COMBINED CURB & GUTTER WITH REVERSED SLOPE GUTTER

HAMILTON COUNTY HIGHWAY DEPARTMENT

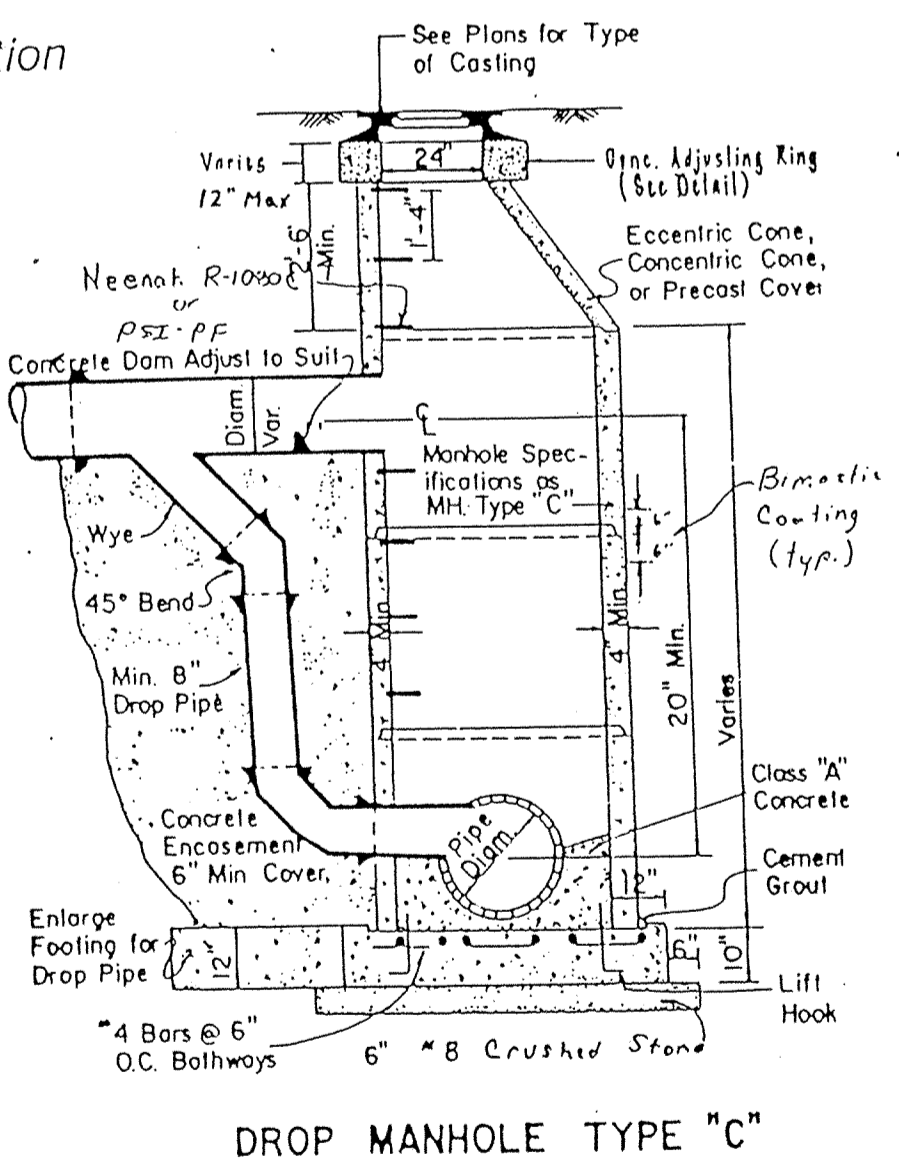
RECOMMENDED	REVISED
APPROVED	STANDARD PLAN
	C-5

# Sanitary and Storm AS-BUILTS

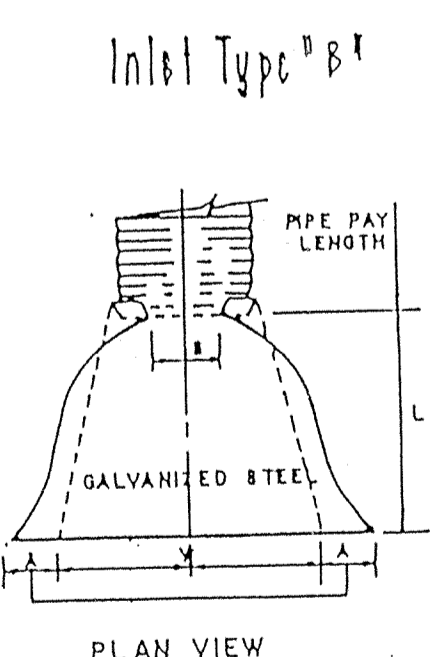
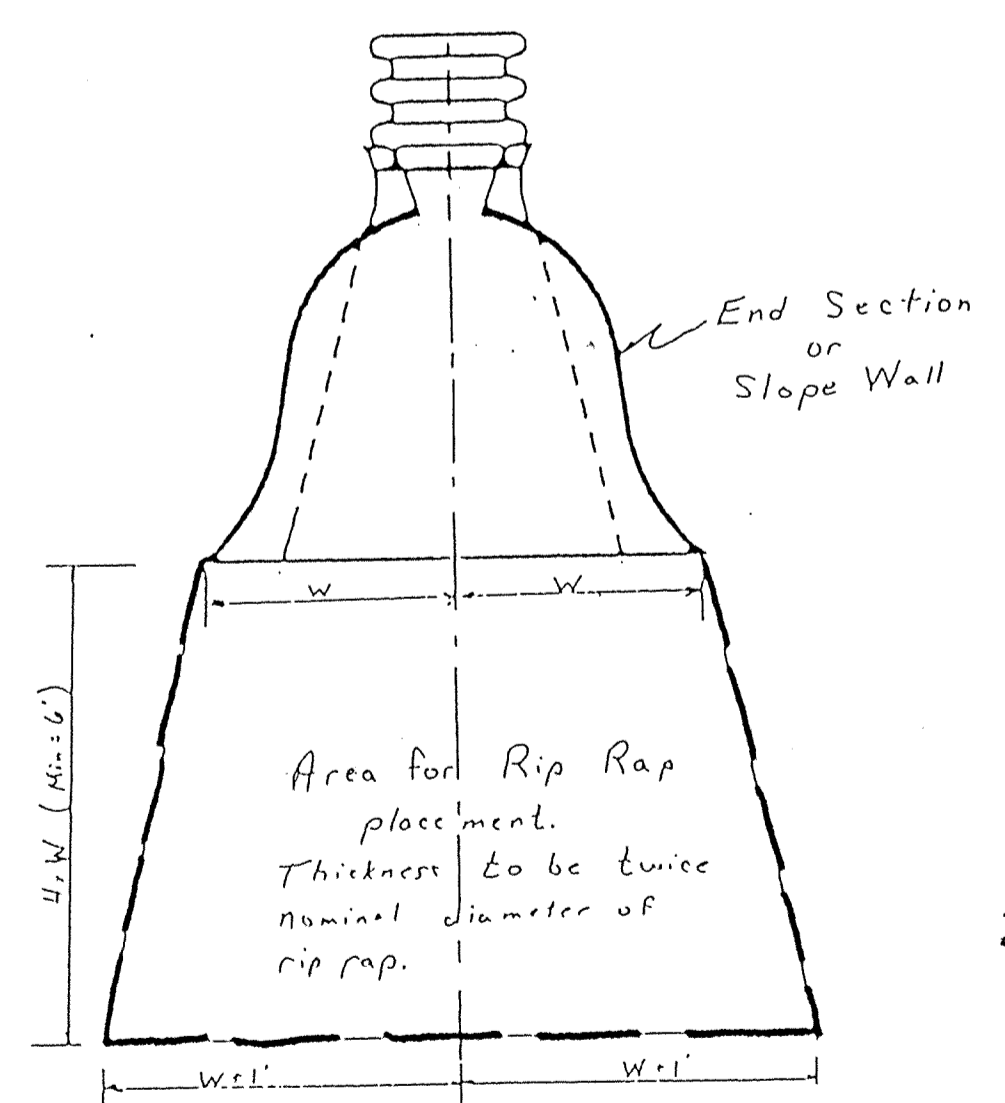
As-built information provided by MSE Corporation, certified this 20<sup>th</sup> day of May, 1994



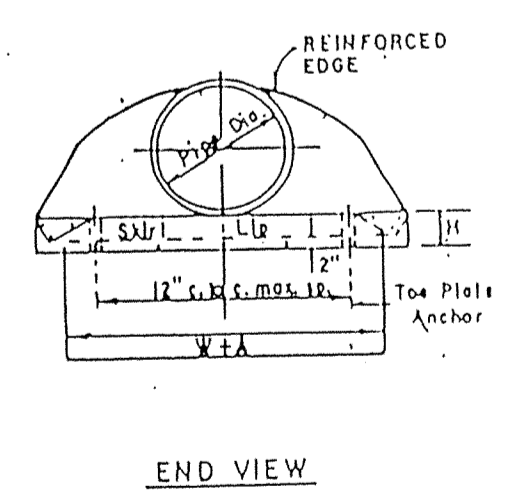
Jeffrey A. Meyerrose  
Registered Land Surveyor No. 890003-IN



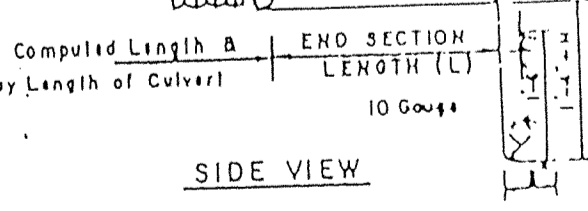
DROP MANHOLE TYPE "C"



PLAN VIEW



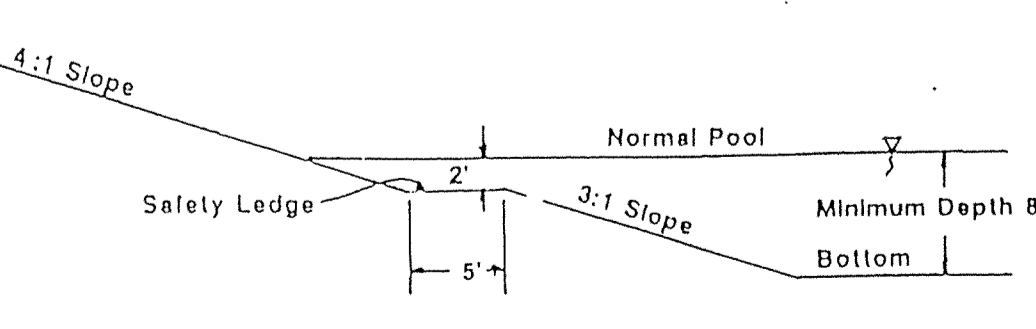
END VIEW



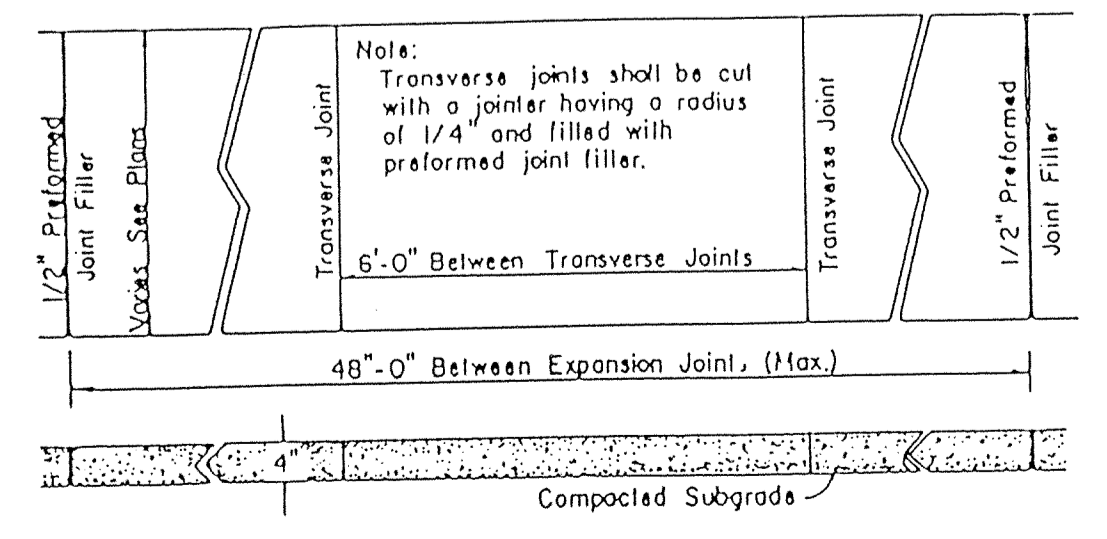
SIDE VIEW

PIPE DIA.	GA.	1' ±	2' ±	3' ±	4' ±	5' ±	6' ±	7' ±	8' ±	9' ±	10' ±
12"	16	6	6	6	6	6	6	6	6	6	6
18"	16	6	6	6	6	6	6	6	6	6	6
24"	16	6	6	6	6	6	6	6	6	6	6
30"	16	6	6	6	6	6	6	6	6	6	6

DETAIL - METAL END SECTION



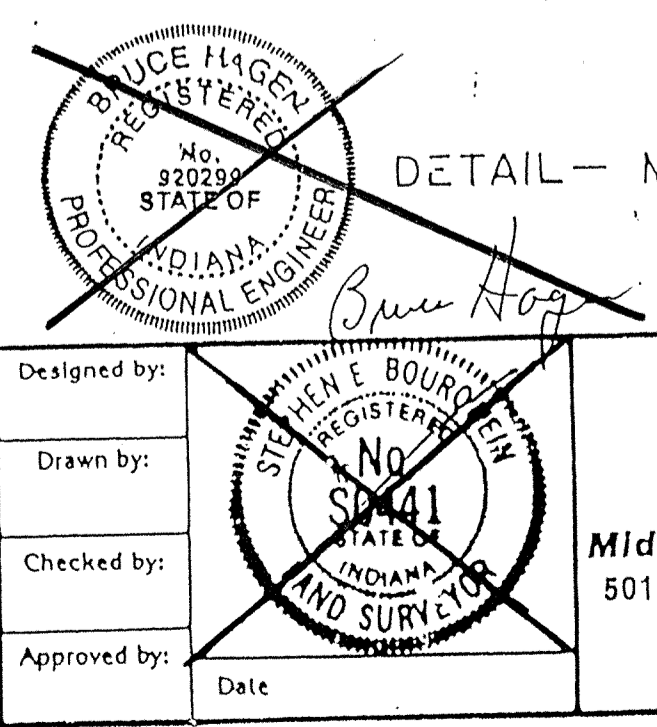
POND CROSS SECTION



CONCRETE WALK SECTION

FOR INFORMATION PURPOSES ONLY

Revisions and Dates:	Designed by:
2-15-94 Add Drop Manhole Detail	Drawn by:
	Checked by:
	Approved by:
	Date:



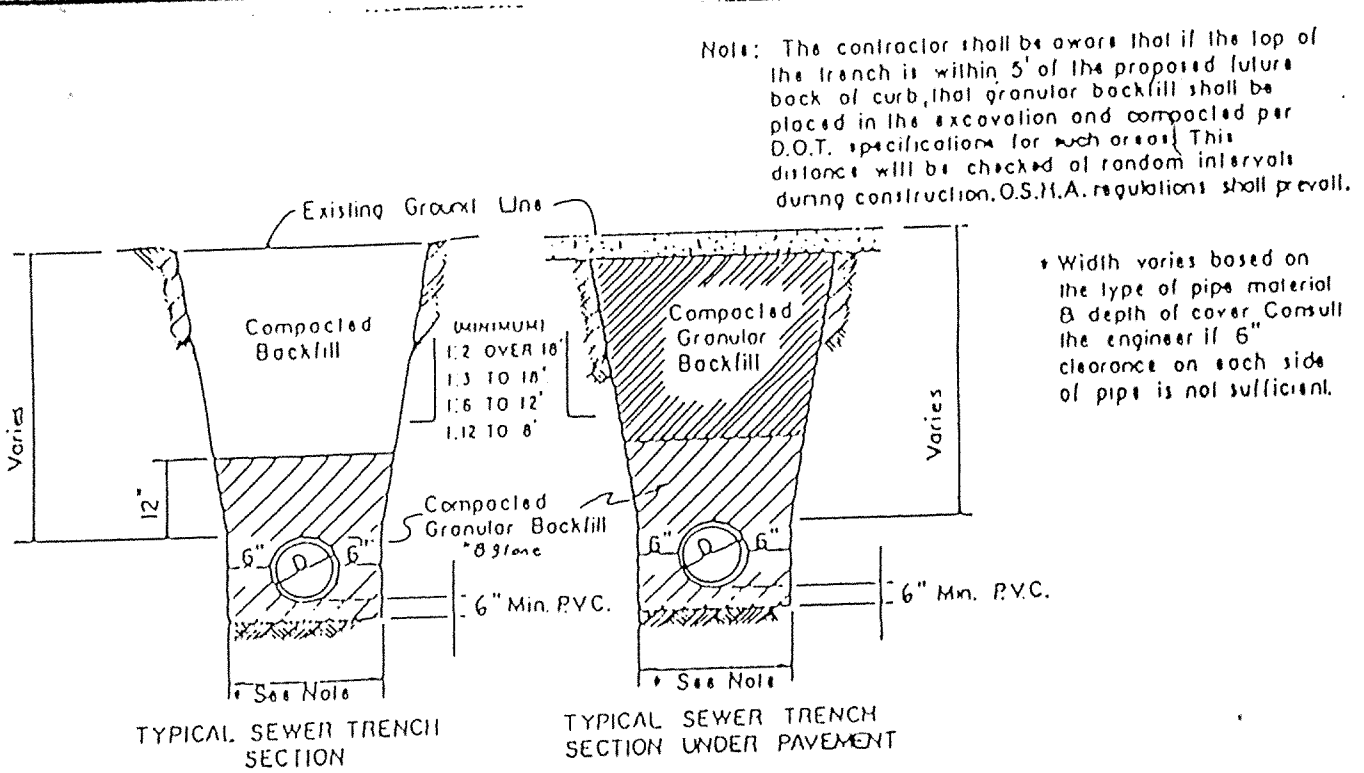
**MSE**  
Mid States Engineering, Inc.  
501 Congressional Blvd., Suite 110  
Carmel, IN 46032  
317-843-5080

TITLE: **STONEBRIDGE DETAILS**

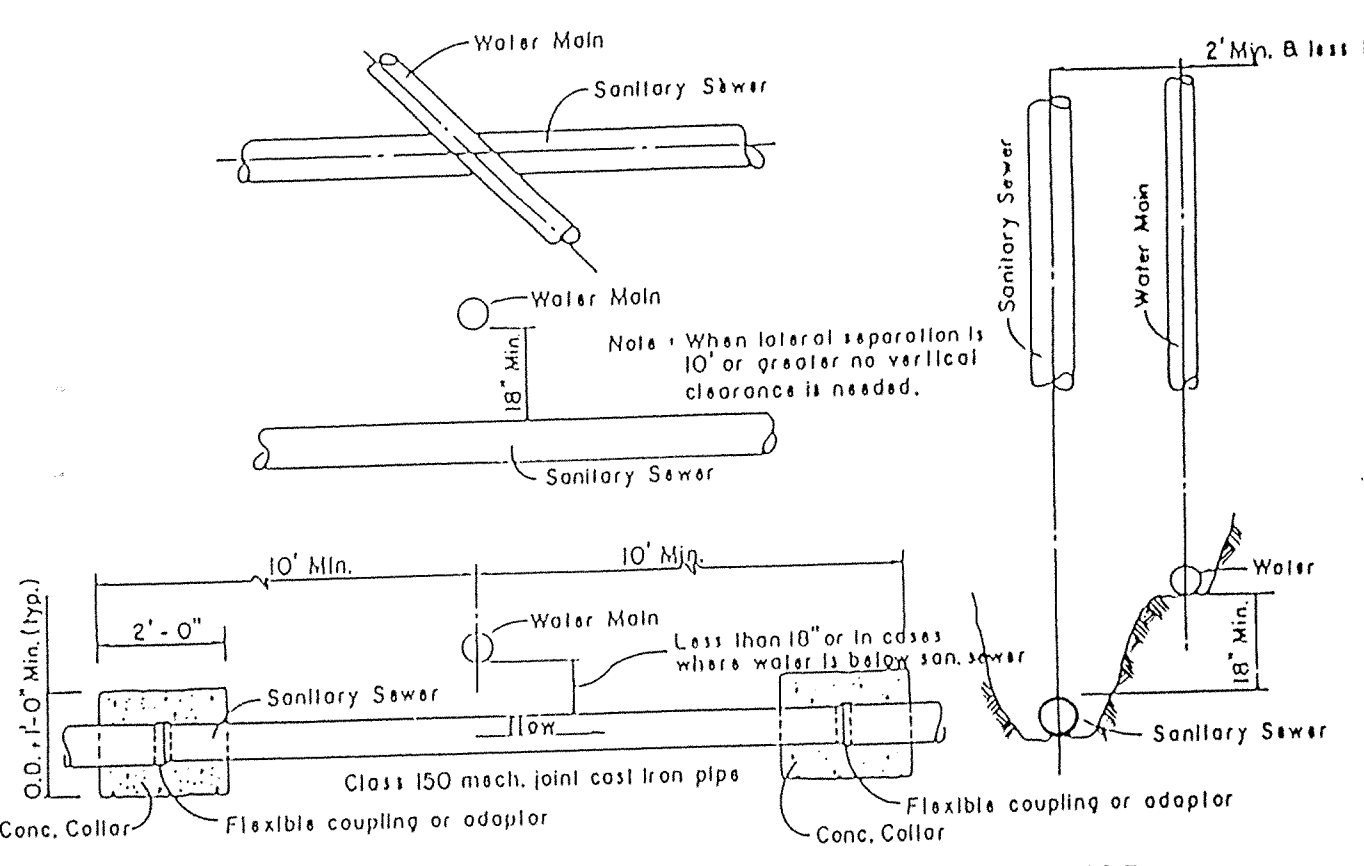
Scale: **FILED** Sheet No. 28 of 29

Job No. 121--21-21

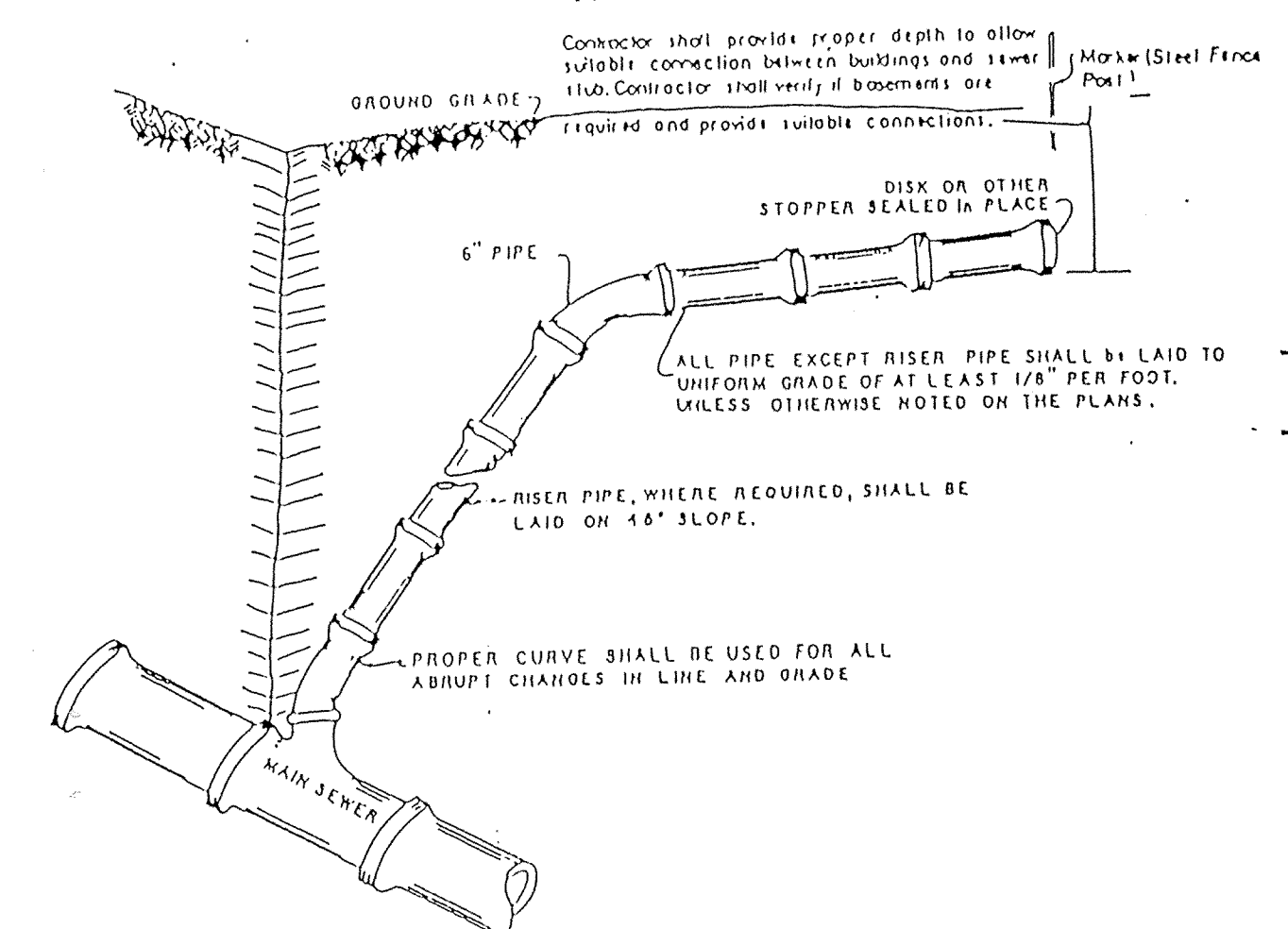
FEB 10 1995  
OFFICE OF HAMILTON COUNTY SURVEYOR



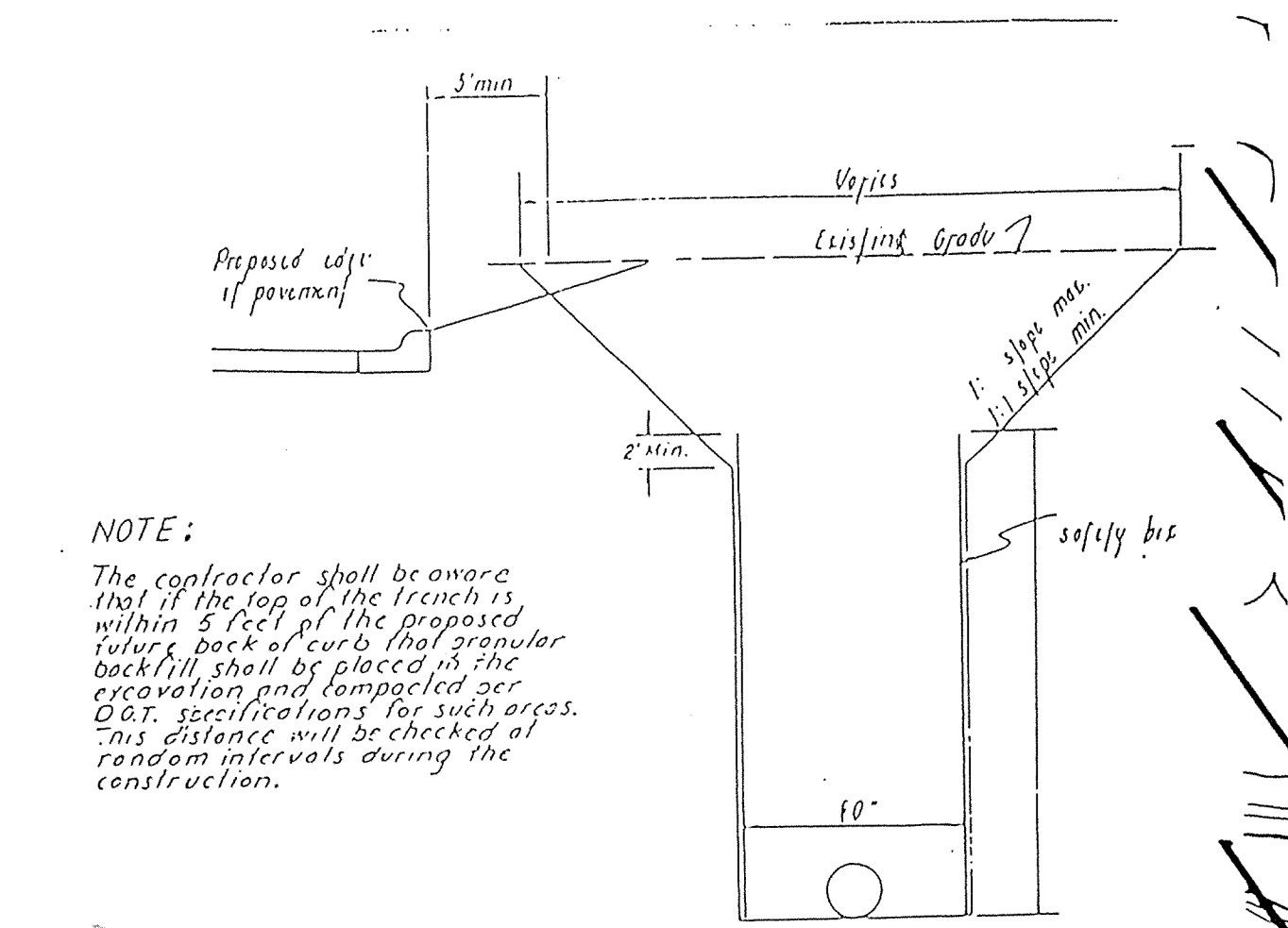
SANITARY SEWER TRENCH DETAILS



MIN. CROSSOVER & SEPARATION REQUIREMENTS FOR WATER MAINS & SANITARY SEWERS

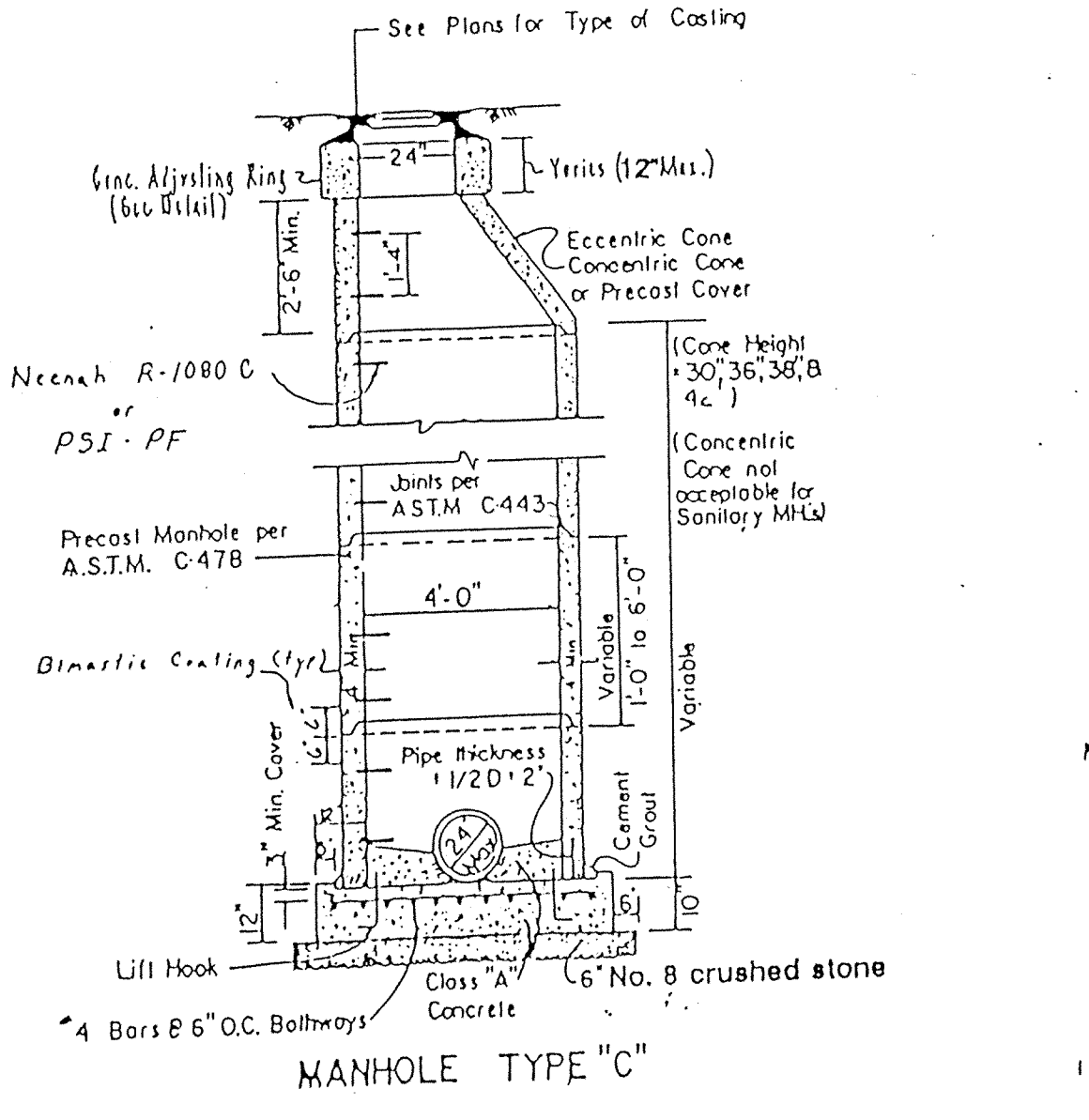


LATERAL CONNECTION DETAIL

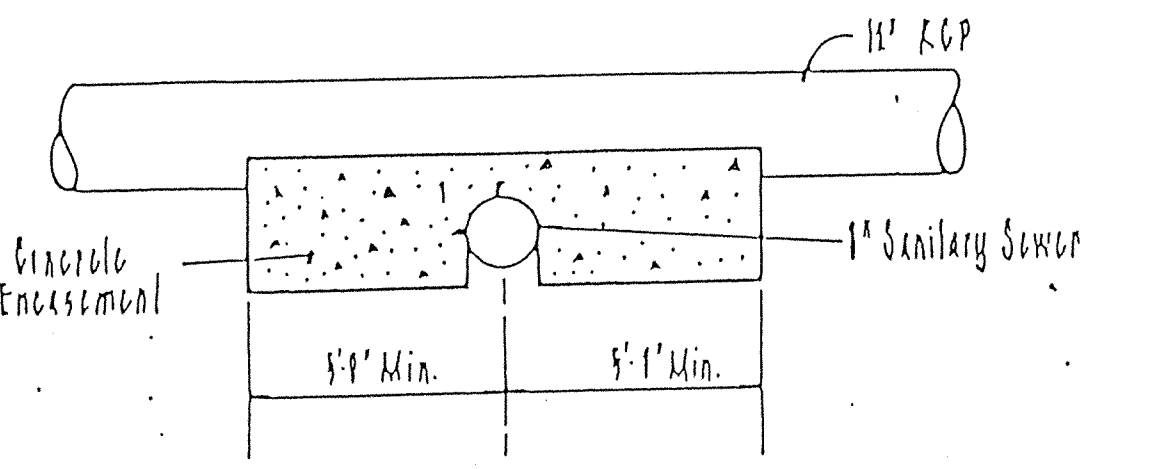


NOTE: The contractor shall be aware that if the top of the trench is within 5' of the proposed future back of curb that granular backfill shall be placed in the excavation and compacted per D.O.T. specifications for such areas. This distance will be checked at random intervals during construction. O.S.H.A. regulations shall prevail.

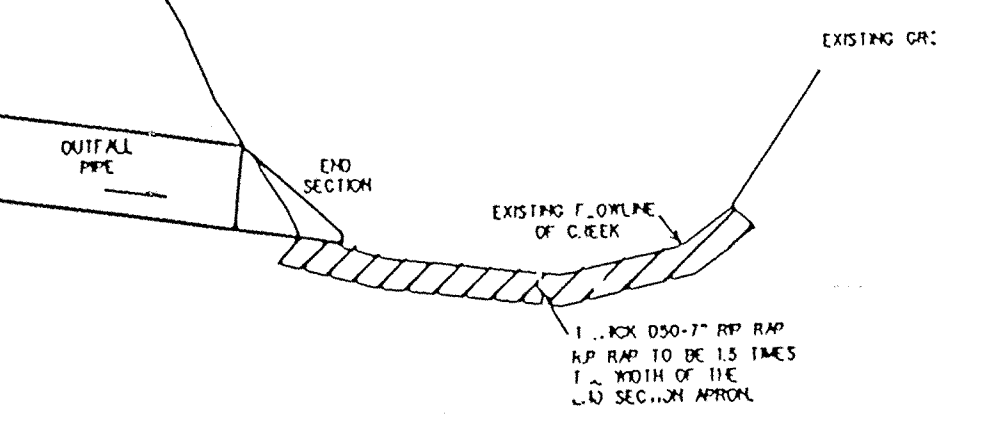
Recommended Trench Detail with Safety Box



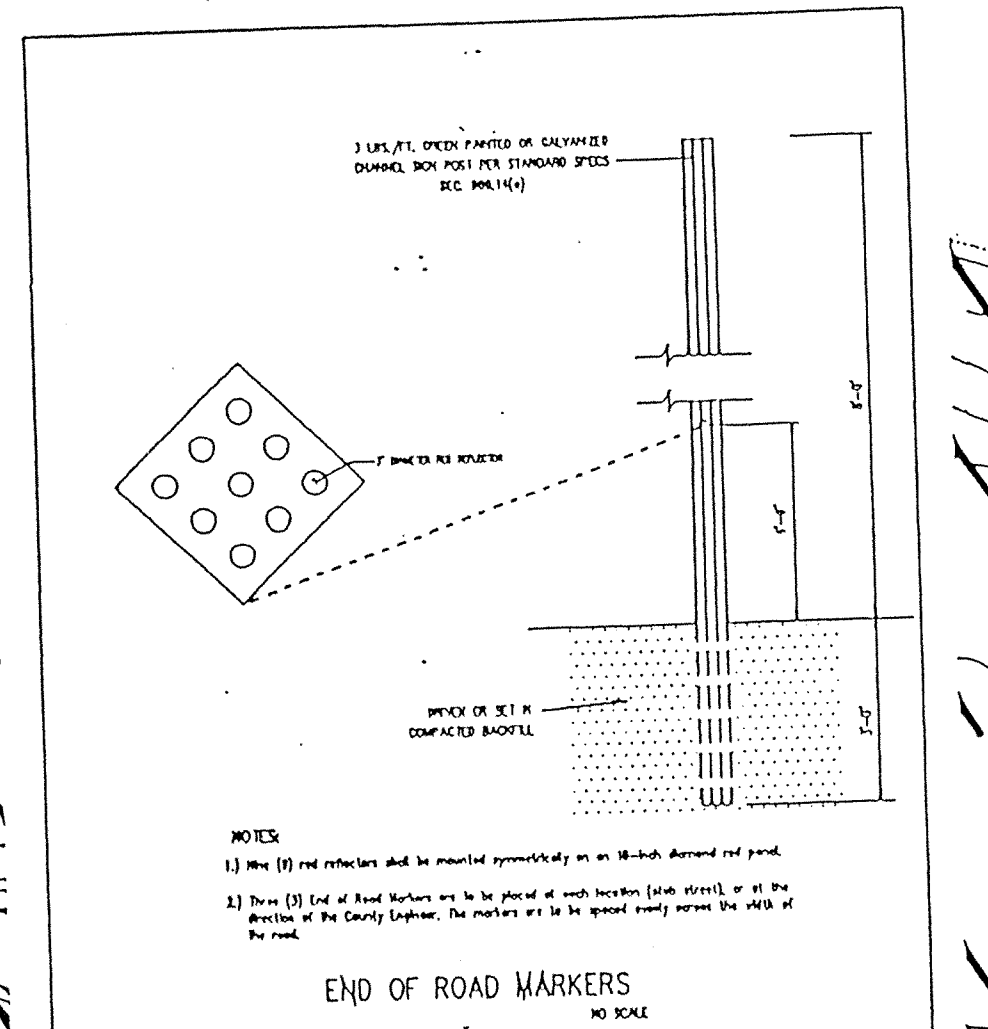
MANHOLE TYPE "C"



SANITARY SEWER CONCRETE ENCASEMENT DETAIL

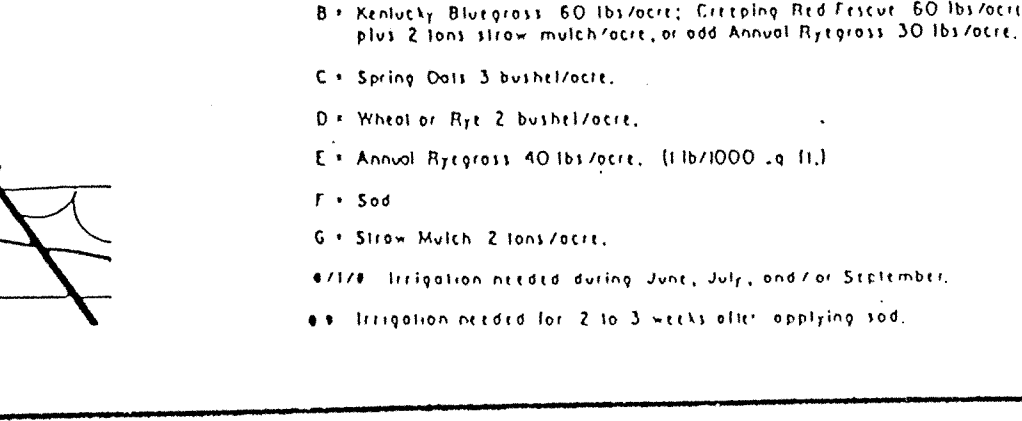


STORM SEWER 'IT'FALL AT EXISTING STREAM



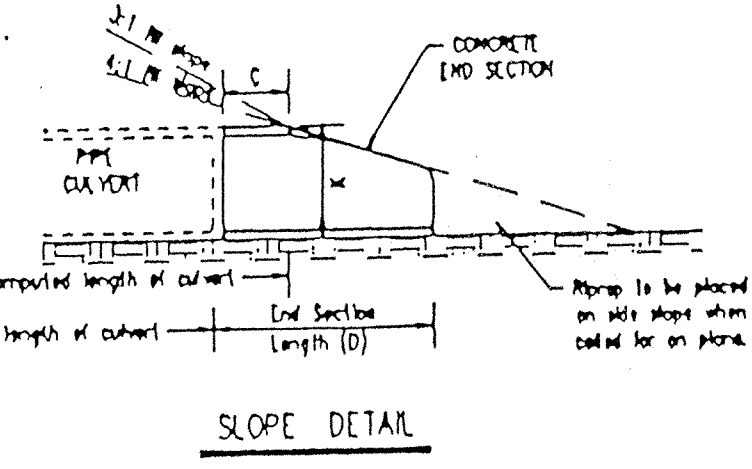
TEMPORARY SILTATION SUMP W/ RISER DETAIL

Seasonal Soil Protection Chart table with columns for months (Jan-Dec) and rows for practices (Stabilization, Permanent Seeding, Dormant Seeding, Temporary Seeding, Mulching).

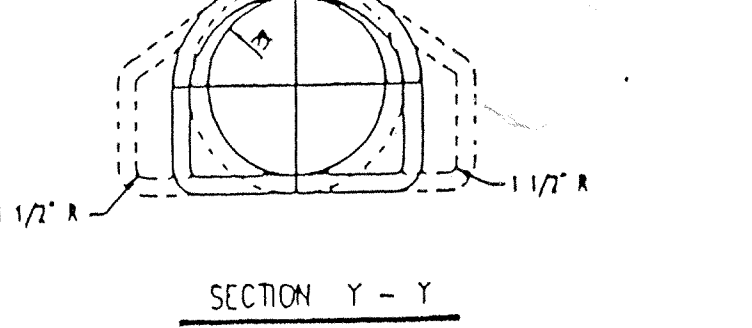


END OF ROAD MARKERS

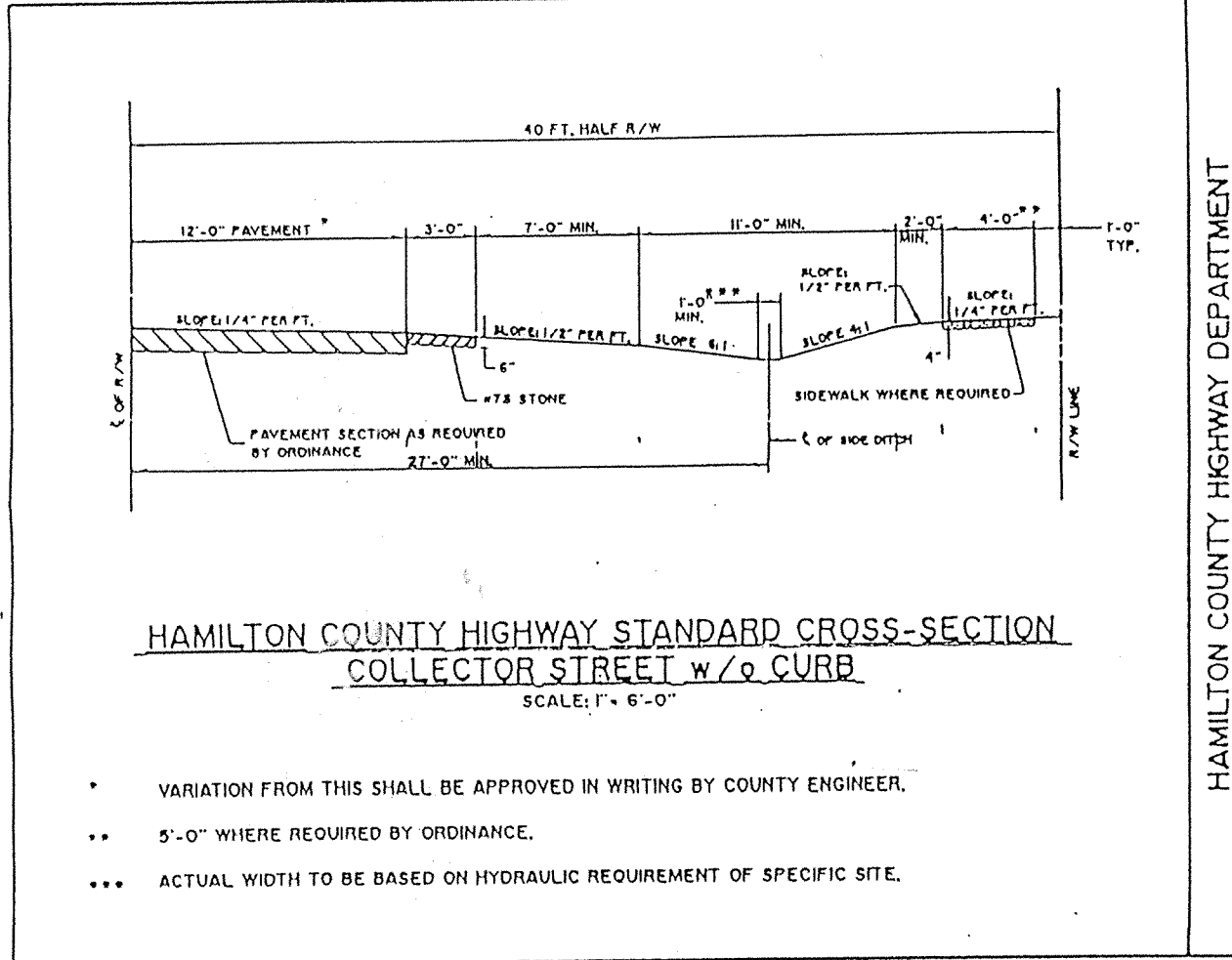
Table with columns: DIA. (T, Mn.), A, C, D, E, K, R1, R2, Approx. Weight. Rows list various pipe diameters and weights.



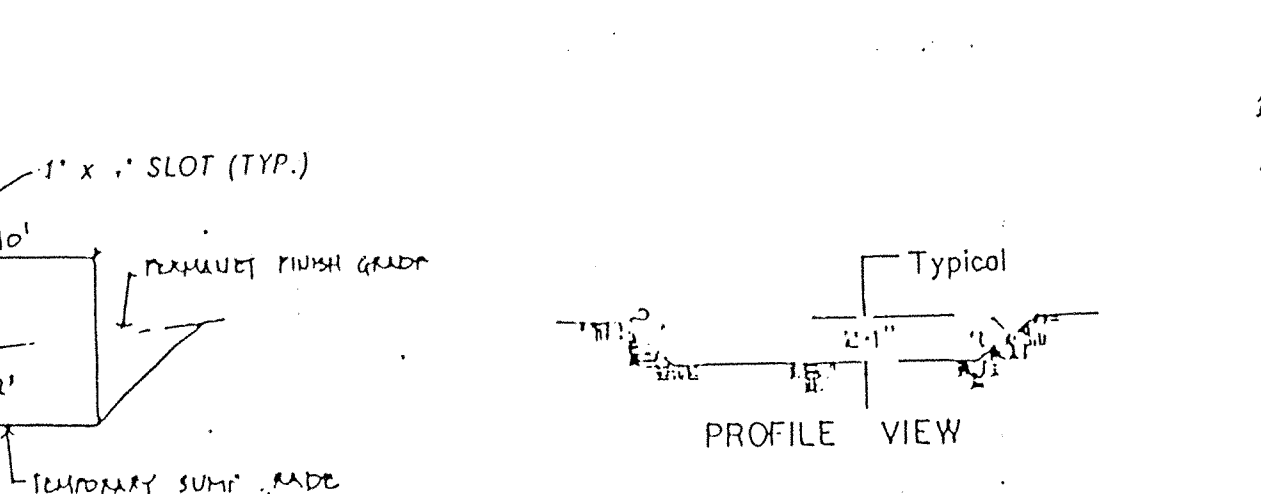
SLOPE DETAIL



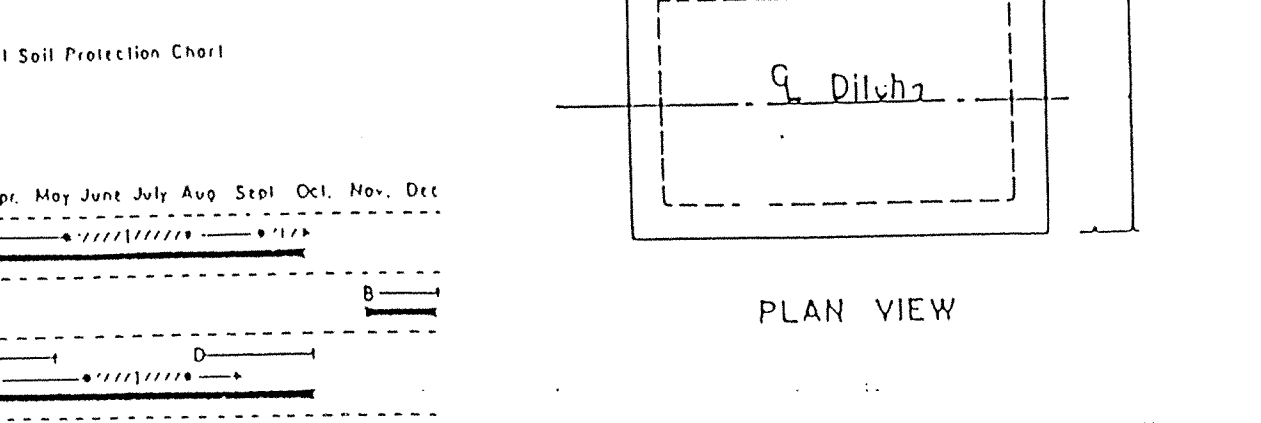
SECTION Y - Y



HAMILTON COUNTY HIGHWAY STANDARD CROSS-SECTION COLLECTOR STREET w/o CURB

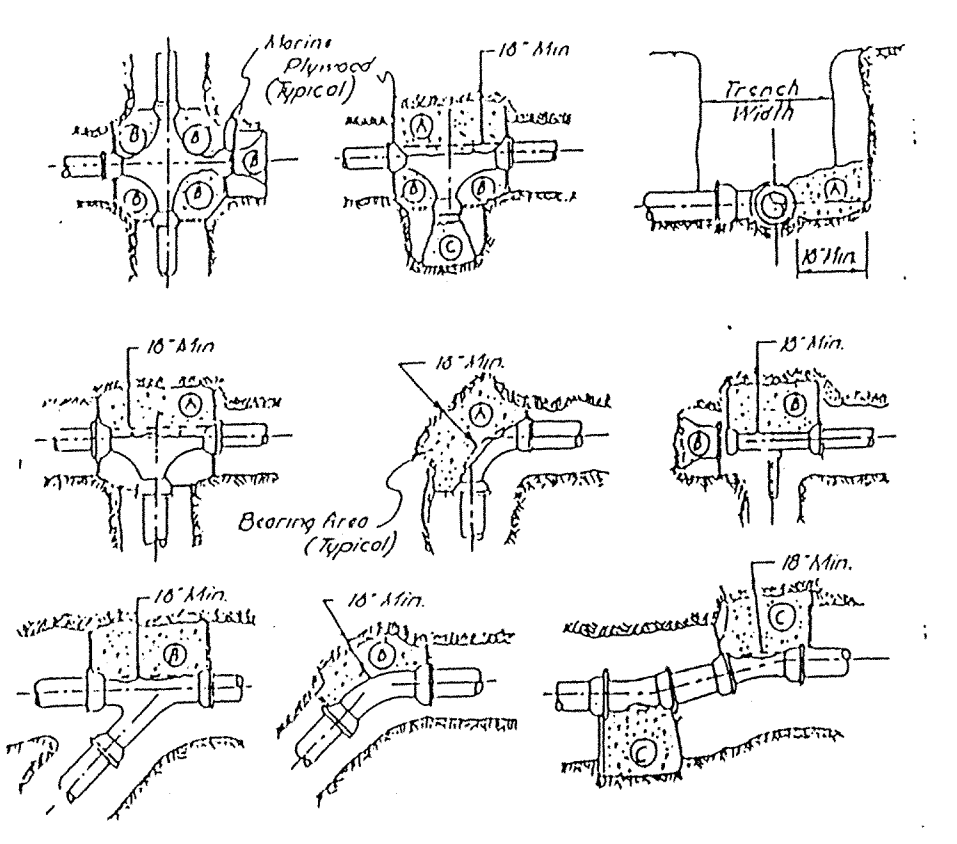
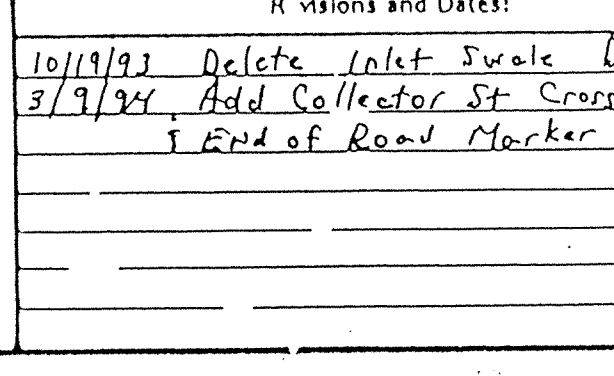


TEMPORARY SILTING PIT (Periodic Clearing Required)



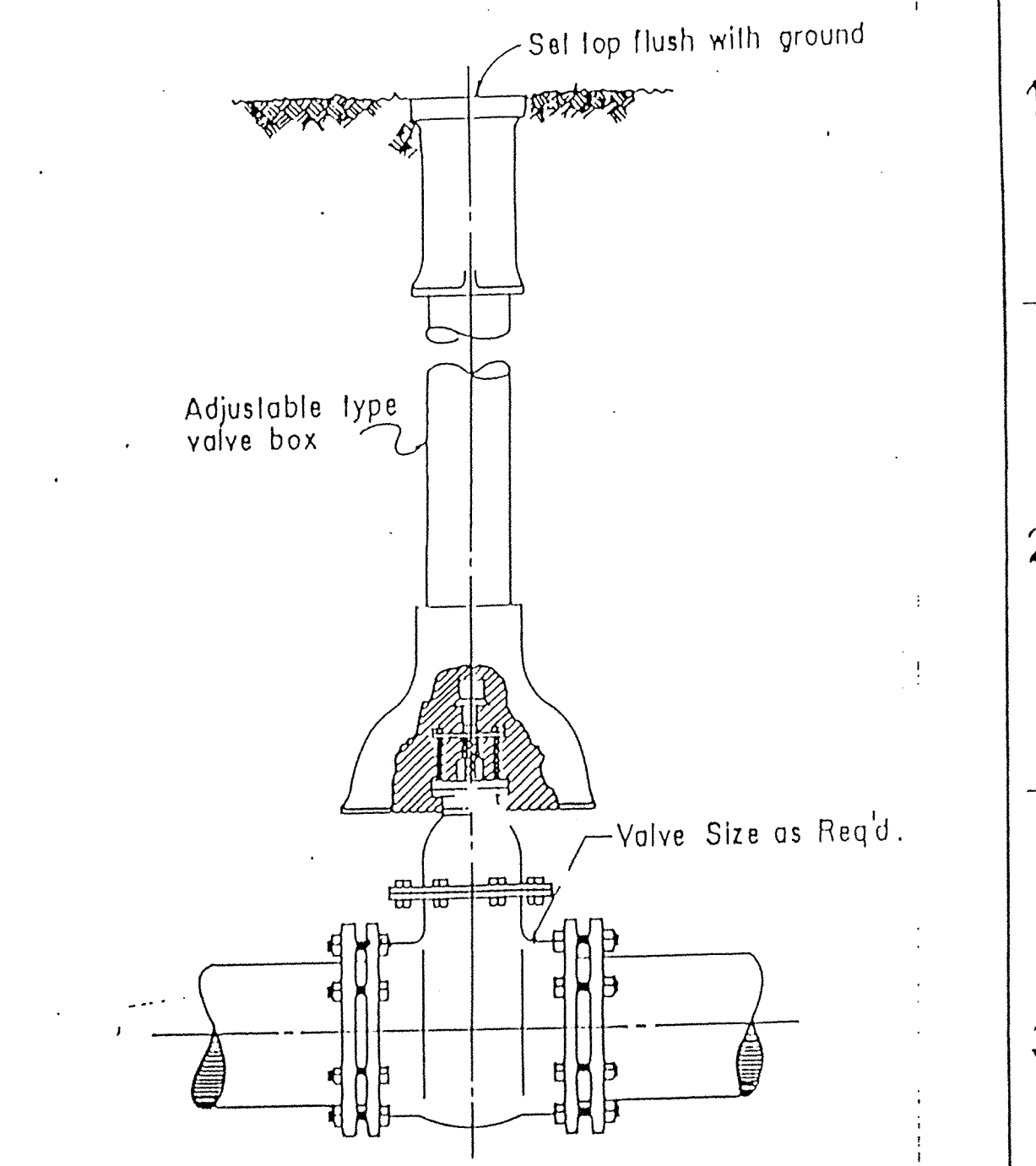
TEMPORARY SILTING PIT (Periodic Clearing Required)

Table with columns: Revisions and Dates, Designed by, Drawn by, Checked by, Approved by. Includes dates and names.



THRUST BLOCK TABLE with columns: Mark, Available for Non-Potable System (80 PSI Test Pressure), and values for marks A, B, and C.

1. Above table indicates cu ft of concrete required with a soil pressure of 2000 P.S.F. minimum. 2. Place paper or plastic between filling & concrete.

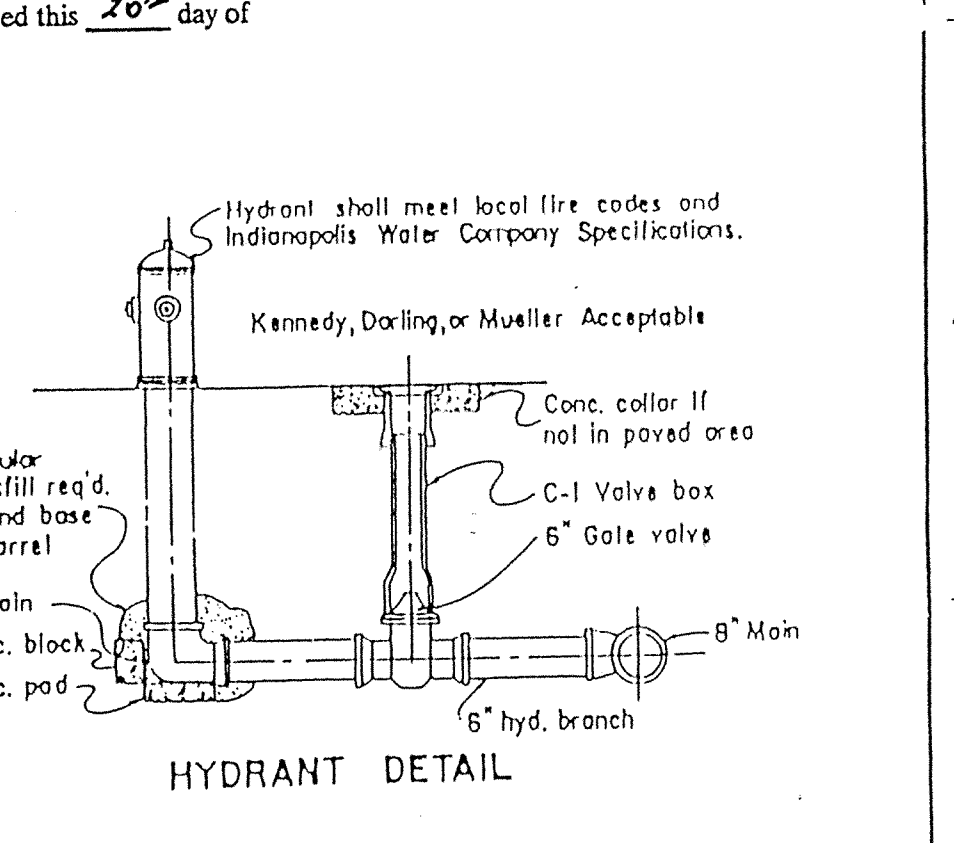
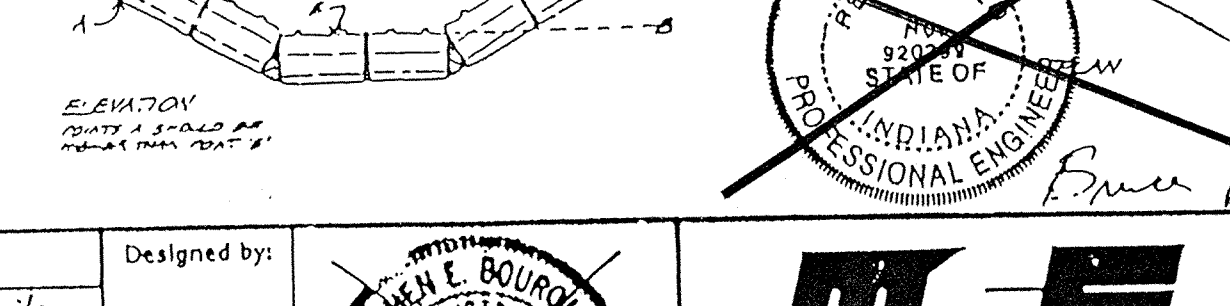
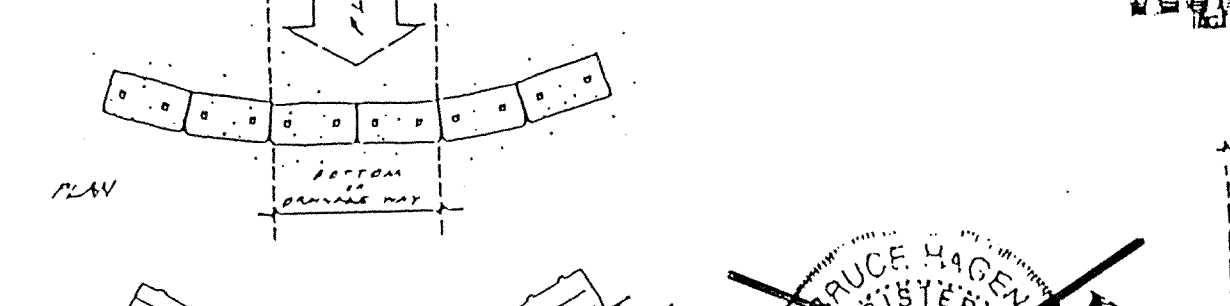
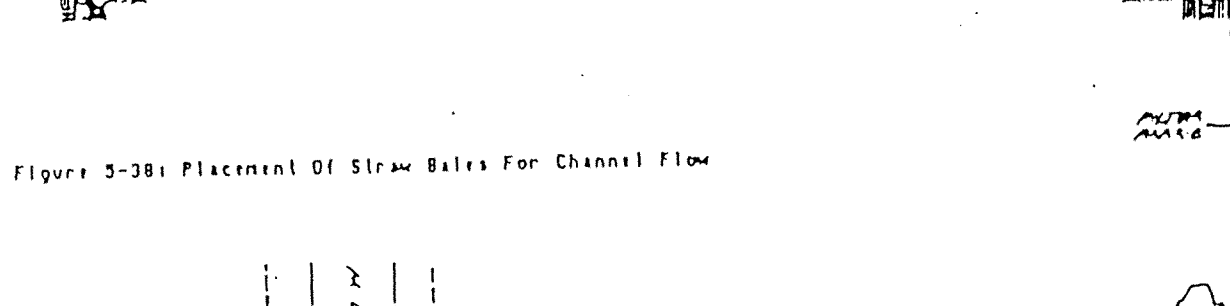
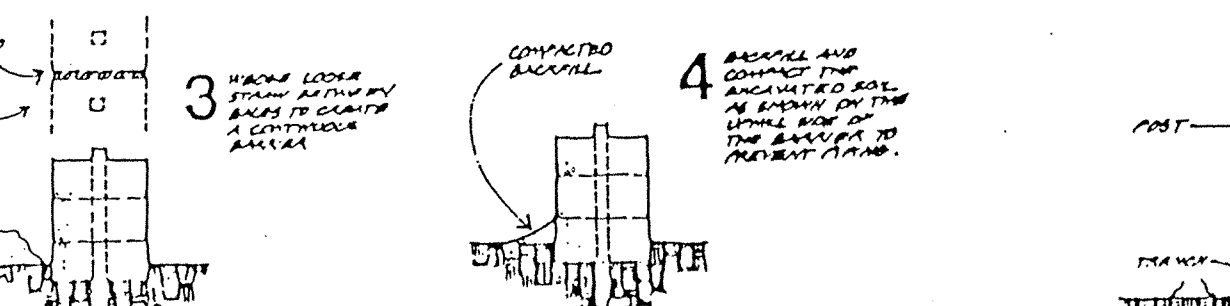
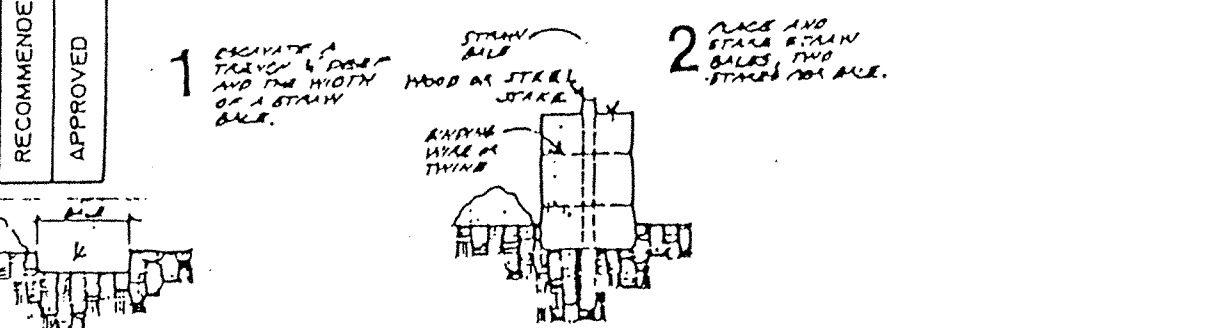


TYPICAL GATE VALVE & VALVE BOX

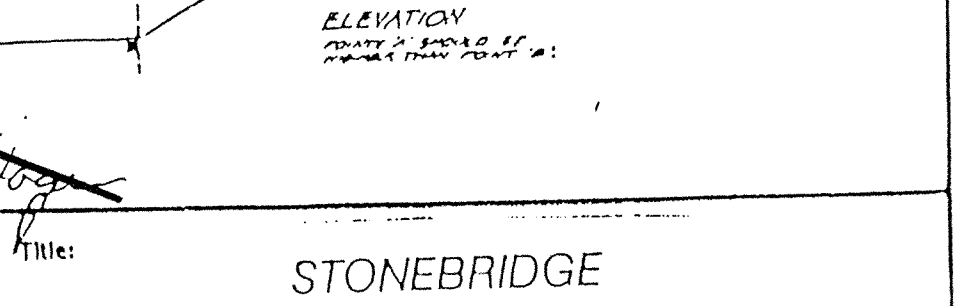
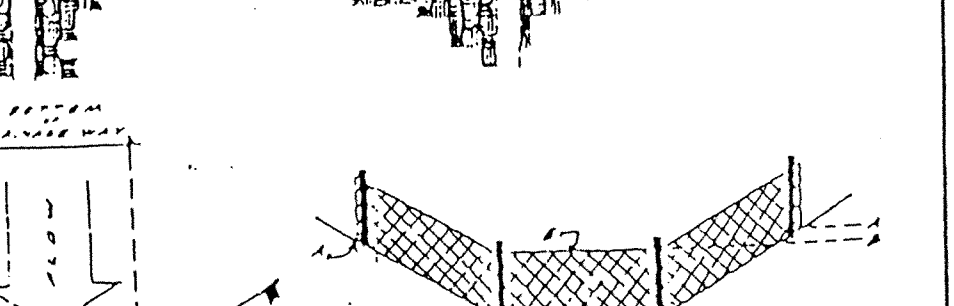
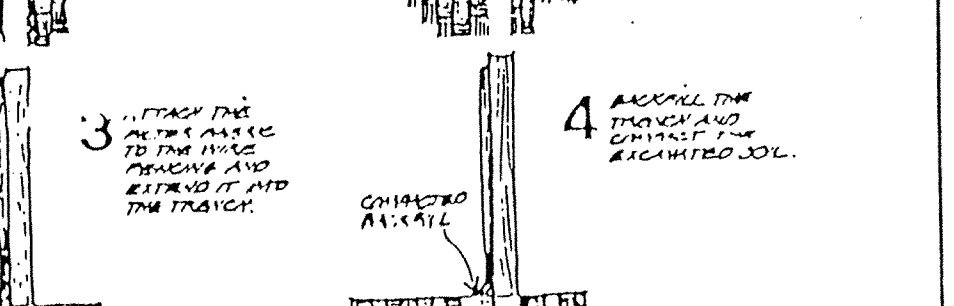
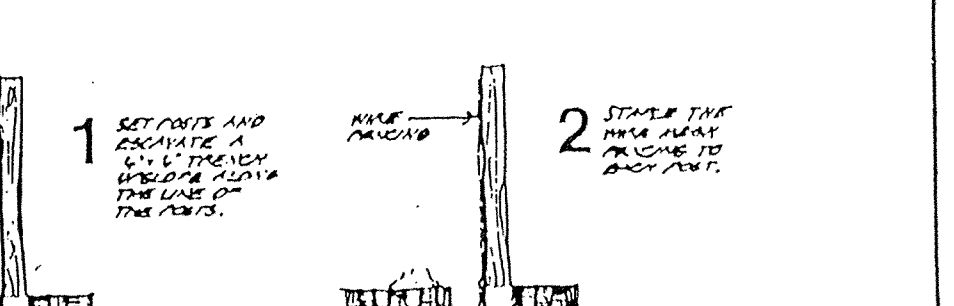
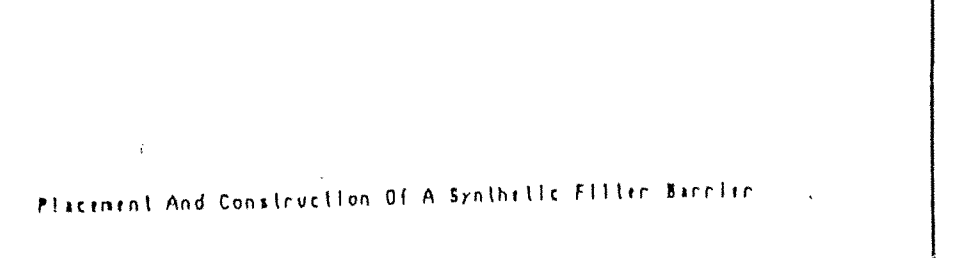
As-built information provided by MSE Corporation, certified this 20th day of May, 1994. Jeffrey A. Meyers, Registered Land Surveyor No. 890003-IN.

Sanitary and Storm AS-BUILTS

Construction of A Storm Bilt Barrier



HYDRANT DETAIL



Hamilton County Highway Department logo and seal.

M-E MIJ States Engineering, Inc. 501 Congress St., Blvd., Suite 110, Carroll, IN 46032, 317 843-5080

STONEBRIDGE DETAILS, Job No. 121-2121, FILED FEB 10 1995, OFFICE OF HAMILTON COUNTY SURVEYOR